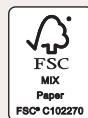




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2016 NAVIGATOR



Owner's Manual

2016 NAVIGATOR



## Owner's Manual



THE LINCOLN MOTOR COMPANY

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# Introduction

## ABOUT THIS MANUAL

Thank you for choosing Lincoln. We recommend that you take some time to get to know your vehicle by reading this manual. The more that you know about it, the greater the safety and pleasure you will get from driving it.

### WARNING



Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation of your vehicle. We recommend against the use of any handheld device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.

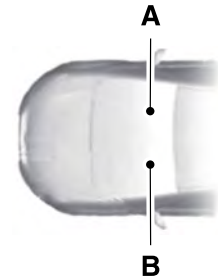
**Note:** *This manual describes product features and options available throughout the range of available models, sometimes even before they are generally available. It may describe options not fitted to your vehicle.*

**Note:** *Some of the illustrations in this manual may show features as used in different models, so may appear different to you on your vehicle.*

**Note:** *Always use and operate your vehicle in line with all applicable laws and regulations.*

**Note:** *Pass on this manual when selling your vehicle. It is an integral part of the vehicle.*

This manual may qualify the location of a component as left-hand side or right-hand side. The side is determined when facing forward in the seat.



E154903

- A Right-hand side
- B Left-hand side

## Protecting the Environment

You must play your part in protecting the environment. Correct vehicle usage and the authorized disposal of waste, cleaning and lubrication materials are significant steps toward this aim.

## SYMBOLS GLOSSARY

These are some of the symbols you may see on your vehicle.

# Introduction



Safety alert



See Owner's Manual



Air conditioning system



Anti-lock braking system



Avoid smoking, flames or sparks



Battery



Battery acid



Brake fluid - non petroleum based



Brake system



Cabin air filter



Check fuel cap



Child safety door lock or unlock



Child seat lower anchor



Child seat tether anchor



Cruise control



Do not open when hot



Engine air filter



Engine coolant



Engine coolant temperature



Engine oil



Explosive gas



Fan warning



Fasten seatbelt



Front airbag



Front fog lamps



Fuel pump reset



Fuse compartment

# Introduction



Hazard warning flashers



Heated rear window



Heated windshield



Interior luggage compartment release



Jack



Keep out of reach of children



Lighting control



Low tire pressure warning



Maintain correct fluid level



Note operating instructions



Panic alarm



Parking aid



Parking brake



Power steering fluid



Power windows front/rear



Power window lockout



Service engine soon



Side airbag



Shield the eyes



Stability control



Windshield wash and wipe

## DATA RECORDING

### Service Data Recording

Service data recorders in your vehicle are capable of collecting and storing diagnostic information about your vehicle. This potentially includes information about the performance or status of various systems and modules in the vehicle, such as engine, throttle, steering or brake systems. In order to properly diagnose and service your vehicle, Ford Motor Company, Ford of Canada, and service and repair facilities may access or share among them vehicle diagnostic information received through a direct connection to your vehicle when diagnosing or servicing your vehicle.

# Introduction

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Additionally, when your vehicle is in for service or repair, Ford Motor Company, Ford of Canada, and service and repair facilities may access or share among them data for vehicle improvement purposes. For U.S. only (if equipped), if you choose to use the SYNC Vehicle Health Report, you consent that certain diagnostic information may also be accessed electronically by Ford Motor Company and Ford authorized service facilities, and that the diagnostic information may be used for any purpose.

## Event Data Recording

**This vehicle is equipped with an event data recorder. The main purpose of an event data recorder is to record, in certain crash or near crash-like situations, such as an airbag deployment or hitting a road obstacle; this data will assist in understanding how a vehicle's systems performed. The event data recorder is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less.**

**The event data recorder in this vehicle is designed to record such data as:**

- **How various systems in your vehicle were operating;**
- **Whether or not the driver and passenger safety belts were buckled/fastened;**
- **How far (if at all) the driver was depressing the accelerator and/or the brake pedal; and**
- **How fast the vehicle was traveling; and**
- **Where the driver was positioning the steering wheel.**

**This data can help provide a better understanding of the circumstances in which crashes and injuries occur.**

***Note: Event data recorder data is recorded by your vehicle only if a non-trivial crash situation occurs; no data is recorded by the event data recorder under normal driving conditions and no personal data or information (e.g., name, gender, age, and crash location) is recorded (see limitations regarding 911 Assist and Traffic, directions and Information privacy below). However, parties, such as law enforcement, could combine the event data recorder data with the type of personally identifying data routinely acquired during a crash investigation.***

**To read data recorded by an event data recorder, special equipment is required, and access to the vehicle or the event data recorder is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have such special equipment, can read the information if they have access to the vehicle or the event data recorder. Ford Motor Company and Ford of Canada do not access event data recorder information without obtaining consent, unless pursuant to court order or**

# Introduction

where required by law enforcement, other government authorities or other third parties acting with lawful authority. Other parties may seek to access the information independently of Ford Motor Company and Ford of Canada.

**Note:** *Including to the extent that any law pertaining to Event Data Recorders applies to SYNC or its features, please note the following: Once 911 Assist (if equipped) is enabled (set ON), 911 Assist may, through any paired and connected cell phone, disclose to emergency services that the vehicle has been in a crash involving the deployment of an airbag or, in certain vehicles, the activation of the fuel pump shut-off. Certain versions or updates to 911 Assist may also be capable of being used to electronically or verbally provide to 911 operators the vehicle location (such as latitude and longitude), and/or other details about the vehicle or crash or personal information about the occupants to assist 911 operators to provide the most appropriate emergency services. If you do not want to disclose this information, do not activate the 911 Assist feature.*

Additionally, when you connect to Traffic, Directions and Information (if equipped, U.S. only), the service uses GPS technology and advanced vehicle sensors to collect the vehicle's current location, travel direction, and speed ("vehicle travel information"), only to help provide you with the directions, traffic reports, or business searches that you request. If you do not want Ford or its vendors to receive this information, do not activate the service. For more information, see Traffic, Directions and Information, Terms and Conditions.

## CALIFORNIA PROPOSITION 65

### WARNING



Some constituents of engine exhaust, certain vehicle components, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## PERCHLORATE

Certain components in your vehicle such as airbag modules, safety belt pretensioners and remote control batteries may contain perchlorate material. Special handling may apply for service or vehicle end of life disposal.

For more information visit:

Web Address
<a href="http://www.dtsc.ca.gov/hazardouswaste/perchlorate">www.dtsc.ca.gov/hazardouswaste/perchlorate</a>

## LINCOLN AUTOMOTIVE FINANCIAL SERVICES

Lincoln Automotive Financial Services offers a full range of financing and lease plans to help you acquire your vehicle. We are dedicated to providing answers, information and a truly extraordinary experience.

# Introduction

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**Use the options below to contact us with questions about your account or financing and we will respond promptly:**

Web Address
<a href="http://www.LincolnAFS.com">www.LincolnAFS.com</a>

Phone: 1-888-498-8801

Mail: Lincoln Automotive Financial Services

P.O. Box 542000

Omaha, NE 68154-8000

## **REPLACEMENT PARTS RECOMMENDATION**

Your vehicle has been built to the highest standards using quality parts. We recommend that you demand the use of genuine Ford and Motorcraft parts whenever your vehicle requires scheduled maintenance or repair. You can clearly identify genuine Ford and Motorcraft parts by looking for the Ford, FoMoCo or Motorcraft branding on the parts or their packaging.

### **Scheduled Maintenance and Mechanical Repairs**

One of the best ways for you to make sure that your vehicle provides years of service is to have it maintained in line with our recommendations using parts that conform to the specifications detailed in this Owner's Manual. Genuine Ford and Motorcraft parts meet or exceed these specifications.

## **Collision Repairs**

We hope that you never experience a collision, but accidents do happen. Genuine Ford replacement collision parts meet our stringent requirements for fit, finish, structural integrity, corrosion protection and dent resistance. During vehicle development we validate these parts deliver the intended level of protection as a whole system. A great way to know for sure you are getting this level of protection is to use genuine Ford replacement collision parts.

## **Warranty on Replacement Parts**

Genuine Ford and Motorcraft replacement parts are the only replacement parts that benefit from a Lincoln Warranty. Damage caused to your vehicle as a result of the failure of non-Ford parts may not be covered by the Lincoln Warranty. For additional information, refer to the terms and conditions of the Lincoln Warranty.

# Introduction

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## SPECIAL NOTICES

### New Vehicle Limited Warranty

For a detailed description of what is covered and what is not covered by your vehicle's New Vehicle Limited Warranty, refer to the Warranty Manual that is provided to you along with your Owner's Manual.

### Special Instructions

For your added safety, your vehicle is fitted with sophisticated electronic controls.

#### WARNINGS



You risk death or serious injury to yourself and others if you do not follow the instruction highlighted by the warning symbol. Failure to follow the specific warnings and instructions could result in personal injury.



Front seat mounted rear-facing child or infant seats should **NEVER** be placed in front of an active passenger airbag.

### On-board Diagnostics (OBD-II)

Your vehicle's On-board Diagnostics (OBD-II) system has a data port for diagnostics, repair and reprogramming services with diagnostic scan tools. Installing a non-Ford-approved aftermarket OBD plug-in device that uses the port during normal driving, for example remote insurance company monitoring, remote vehicle diagnostics, telematics or engine reprogramming, may cause interference or damage to vehicle systems. We do not recommend or endorse the use of any non-Ford-approved aftermarket OBD plug-in devices. The vehicle Warranty may not cover damage caused by any non-Ford-approved aftermarket OBD plug-in device.

### MOBILE COMMUNICATIONS EQUIPMENT

Using mobile communications equipment is becoming increasingly important in the conduct of business and personal affairs. However, you must not compromise your own or others' safety when using such equipment. Mobile communications can enhance personal safety and security when appropriately used, particularly in emergency situations. Safety must be paramount when using mobile communications equipment to avoid negating these benefits. Mobile communication equipment includes, but is not limited to, cellular phones, pagers, portable email devices, text messaging devices and portable two-way radios.



# Introduction

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## WARNING



Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation of your vehicle. We recommend against the use of any hand-held device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.

This Owner's Manual is written primarily for the U.S. and Canadian Markets. Features or equipment listed as standard may be different on units built for Export. **Refer to this Owner's Manual for all other required information and warnings.**

## EXPORT UNIQUE OPTIONS

For your particular global region, your vehicle may be equipped with features and options that are different from the features and options that are described in this Owner's Manual. A market unique supplement may be supplied that complements this book. By referring to the market unique supplement, if provided, you can properly identify those features, recommendations and specifications that are unique to your vehicle.

## **PROTECTING THE ENVIRONMENT**


You must play your part in protecting the environment. Correct vehicle usage and the authorized disposal of waste, cleaning and lubrication materials are significant steps toward this aim.

# Child Safety

## GENERAL INFORMATION

See the following sections for directions on how to properly use safety restraints for children.

### WARNINGS


 Always make sure your child is secured properly in a device that is appropriate for their height, age and weight. Child safety restraints must be bought separately from your vehicle. Failure to follow these instructions and guidelines may result in an increased risk of serious injury or death to your child.

### WARNINGS

 All children are shaped differently. The recommendations for safety restraints are based on probable child height, age and weight thresholds from National Highway Traffic Safety Administration and other safety organizations, or are the minimum requirements of law. Ford recommends checking with a NHTSA Certified Child Passenger Safety Technician (CPST) and consult your pediatrician to make sure your child seat is appropriate for your child, and is compatible with and properly installed in your vehicle. To locate a child seat fitting station and CPST, contact the NHTSA toll free at 1-888-327-4236 or go to <http://www.nhtsa.dot.gov>. In Canada, check with your local St. John Ambulance office for referral to a CPST or for further information, contact your provincial ministry of

### WARNINGS

transportation, locate your local St. John Ambulance office by searching for St. John Ambulance on the internet, or Transport Canada at 1-800-333-0371 (<http://www.tc.gc.ca>). Failure to properly restrain children in safety seats made especially for their height, age, and weight may result in an increased risk of serious injury or death to your child.

 Do not leave children or animals unattended in the vehicle. On hot days, the temperature in the trunk or vehicle interior can rise very quickly. Exposure of people or animals to these high temperatures for even a short time can cause death or serious heat-related injuries, including brain damage. Small children are particularly at risk.

# Child Safety

## Recommendations for Safety Restraints for Children

Child	Child size, height, weight, or age	Recommended restraint type
Infants or toddlers	Children weighing 40 lb (18 kg) or less (generally age four or younger).	Use a child safety seat (sometimes called an infant carrier, convertible seat, or toddler seat).
Small children	Children who have outgrown or no longer properly fit in a child safety seat (generally children who are less than 4 ft. 9 in. (1.45 m) tall, are greater than age four and less than age 12, and between 40 lb (18 kg) and 80 lb (36 kg) and upward to 100 lb (45 kg) if recommended by your child restraint manufacturer).	Use a belt-positioning booster seat.
Larger children	Children who have outgrown or no longer properly fit in a belt-positioning booster seat (generally children who are at least 4 ft. 9 in. (1.45 m) tall or greater than 80 lb (36 kg) or 100 lb (45 kg) if recommended by child restraint manufacturer).	Use a vehicle safety belt having the lap belt snug and low across the hips, shoulder belt centered across the shoulder and chest, and seat back upright.

# Child Safety

- You are required by law to properly use safety seats for infants and toddlers in the United States and Canada.
- Many states and provinces require that small children use approved booster seats until they reach age eight, a height of 4 feet 9 inches (1.45 meters) tall, or 80 pounds (36 kilograms). Check your local and state or provincial laws for specific requirements about the safety of children in your vehicle.
- When possible, always properly restrain children 12 years of age and under in a rear seating position of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in a front seating position.

## INSTALLING CHILD RESTRAINTS

### Child Seats



E142594

Use a child safety seat (sometimes called an infant carrier, convertible seat, or toddler seat) for infants, toddlers, or children weighing 40 pounds (18 kilograms) or less (generally age four or younger).

## Using Lap and Shoulder Belts

### WARNINGS



Airbags can kill or injure a child in a child seat. Never place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the vehicle seat upon which the seat is installed all the way back.



Airbags can kill or injure a child in a child seat. Children 12 and under should be properly restrained in the rear seat whenever possible.



Depending on where you secure a child restraint, and depending on the child restraint design, you may block access to certain safety belt buckle assemblies and LATCH lower anchors, rendering those features potentially unusable. To avoid risk of injury, occupants should only use seating positions where they are able to be properly restrained.

# Child Safety

When installing a child safety seat with combination lap and shoulder belts:

- Use the correct safety belt buckle for that seating position.
- Insert the belt tongue into the proper buckle until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.
- Keep the buckle release button pointing up and away from the safety seat, with the tongue between the child seat and the release button, to prevent accidental unbuckling.
- Place the vehicle seat upon which the child seat will be installed in the upright position.
- Put the safety belt in the automatic locking mode. This vehicle does not require the use of a locking clip.

Perform the following steps when installing the child seat with combination lap and shoulder belts:

**Note:** Although the child seat illustrated is a forward facing child seat, the steps are the same for installing a rear facing child seat.



E142528

1. Position the child safety seat in a seat with a combination lap and shoulder belt.



E142529

2. Pull down on the shoulder belt and then grasp the shoulder belt and lap belt together.



E142530

3. While holding the shoulder and lap belt portions together, route the tongue through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.

# Child Safety



E206121

4. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) for that seating position until you hear a snap and feel the latch engage. Make sure the tongue is latched securely by pulling on it.



E142875

5. To put the retractor in the automatic locking mode, grasp the shoulder portion of the belt and pull downward until all of the belt is pulled out.

**Note:** *The automatic locking mode is available on the front passenger and rear seats. This vehicle does not require the use of a locking clip.*

6. Allow the belt to retract to remove slack. The belt will click as it retracts to indicate it is in the automatic locking mode.

7. Try to pull the belt out of the retractor to make sure the retractor is in the automatic locking mode (you should not be able to pull more belt out). If the retractor is not locked, unbuckle the belt and repeat Steps 5 and 6.



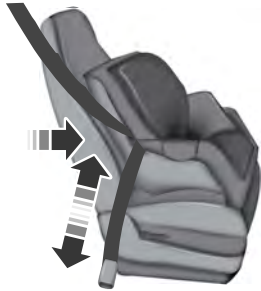
E142533

8. Remove remaining slack from the belt. Force the seat down with extra weight, for example, by pressing down or kneeling on the child restraint while pulling up on the shoulder belt in order to force slack from the belt. This is necessary to remove the remaining slack that will exist once the extra weight of

# Child Safety

the child is added to the child restraint. It also helps to achieve the proper snugness of the child seat to your vehicle. Sometimes, a slight lean toward the buckle will help to remove remaining slack from the belt.

9. Attach the tether strap (if the child seat is equipped).



E142534

10. Before placing the child in the seat, forcibly move the seat forward and back to make sure the seat is securely held in place.

To check this, grab the seat at the belt path and attempt to move it side to side and forward and back. There should be no more than 1 in (2.5 cm) of movement for proper installation.

We recommend checking with a NHTSA Certified Child Passenger Safety Technician to make certain the child restraint is properly installed. In Canada, check with your local St. John Ambulance office for referral to a Certified Passenger Seat Technician.

## Using Lower Anchors and Tethers for Children (LATCH)

### WARNING



Never attach two child safety seats to the same anchor. In a crash, one anchor may not be strong enough to hold two child safety seat attachments and may break, causing serious injury or death.

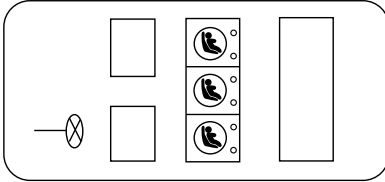
The LATCH system is composed of three vehicle anchor points: two lower anchors located where the vehicle seatback and seat cushion meet (called the seat bight) and one top tether anchor located behind that seating position.

LATCH compatible child safety seats have two rigid or webbing mounted attachments that connect to the two lower anchors at the LATCH equipped seating positions in your vehicle. This type of attachment method eliminates the need to use safety belts to attach the child seat, however the safety belt can still be used to attach the child seat if the lower anchors are not used. For forward-facing child seats, the top tether strap must also be attached to the proper top tether anchor, if a top tether strap has been provided with your child seat. We recommend the use of a child safety seat having a top tether strap. See Using Tether Straps in this chapter.

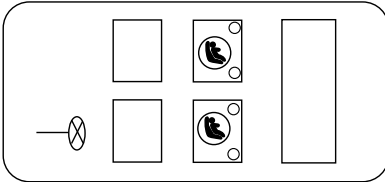
Your vehicle has LATCH lower anchors for child seat installation at the seating positions marked with the child seat symbol.



# Child Safety



E205021



E206122

The LATCH anchors are located at the rear section of the rear seat between the cushion and seatback, below the locator symbols on the seatback. Follow the child seat manufacturer's instructions to properly install a child seat with LATCH attachments.



E144054

The locator symbols are on round plastic buttons for the center seat and on rectangular tags for the outboard seats.

Follow the instructions on attaching child safety seats with tether straps. See Using Tether Straps in this chapter.

Attach LATCH lower attachments of the child seat only to the anchors shown.

Each time you use the safety seat, check that the seat is properly attached to the lower anchors and tether anchor, if applicable. Tug the child seat from side to side and forward and back where it is secured to the vehicle. The seat should move less than one inch when you do this for a proper installation.

If the safety seat is not anchored properly, the risk of a child being injured in a crash greatly increases.

## Combining Safety Belt and LATCH Lower Anchors for Attaching Child Safety Seats

When used in combination, either the safety belt or the LATCH lower anchors may be attached first, provided a proper installation is achieved. Attach the tether strap afterward, if included with the child seat.

# Child Safety

## Using Tether Straps

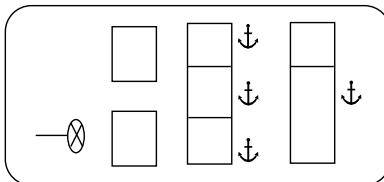
Many forward-facing child safety seats include a tether strap which extends from the back of the child safety seat and hooks to an anchoring point called the top tether anchor. Tether straps are available as an accessory for many older safety seats. Contact the manufacturer of your child seat for information about ordering a tether strap, or to obtain a longer tether strap if the tether strap on your safety seat does not reach the appropriate top tether anchor in the vehicle.

Some of the rear seats of your vehicle are equipped with built-in tether strap anchors located behind the seats as described below.

In the third row center seating position, the tether anchor is a loop at the bottom of the seatback.

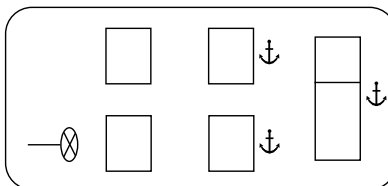
The tether strap anchors in your vehicle are in the following positions (shown from top view).

### Second row bench seat



E205023

### Second row bucket seats



E205024

Attach the tether strap only to the appropriate tether anchor as shown. The tether strap may not work properly if attached somewhere other than the correct tether anchor.

Once the child safety seat has been installed using either the safety belt, the lower anchors of the LATCH system, or both, you can attach the top tether strap.

If you install a child seat with rigid LATCH attachments, do not tighten the tether strap enough to lift the child seat off the vehicle seat cushion when the child is seated in it. Keep the tether strap just snug without lifting the front of the child seat. Keeping the child seat just touching the vehicle seat gives the best protection in a severe crash.

Perform the following steps to install a child safety seat with tether anchors:

# Child Safety

## Second row outboard seating positions



E205025

## Second row center seating position (if equipped)



E205026

1. For center seating positions, route the child safety seat tether strap over the back of the seat. For outboard seating positions, route the tether strap under the head restraint and between the head restraint posts. If the top of the safety seat hits the head restraint, recline the seat back slightly to obtain proper fit.
2. Locate the correct anchor for the selected seating position.



E205027

3. Grasp the tether strap and position it to the seat frame.



E205028

4. Rotate the tether strap, and clip the tether strap to the anchor on the seat frame.



E205029

5. Rotate the tether strap clip.

# Child Safety

6. Tighten the child safety seat tether strap according to the manufacturer's instructions.

## Third row center seating position

1. Route the child safety seat tether strap over the back of the seat.



E205030

2. Locate the anchor webbing loop for the seating position. You may need to pull back the top of the hinged panel along the bottom of the seatback to access the tether anchor.



E205032

3. Clip the tether strap through the anchor loop as shown. If the tether strap is clipped incorrectly, the child safety seat may not be retained properly in the event of a crash.



E205033


4. Tighten the child safety seat tether strap according to the manufacturer's instructions. If the safety seat is not anchored properly, the risk of a child being injured in a crash greatly increases.

If your child restraint system is equipped with a tether strap, and the child restraint manufacturer recommends its use, we also recommend its use.

# Child Safety

## BOOSTER SEATS

### WARNING

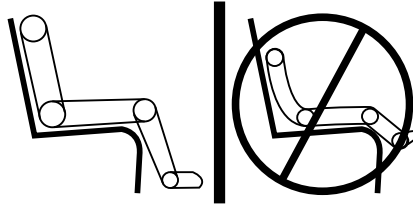
 Never place, or allow a child to place, the shoulder belt under a child's arm or behind the back because it reduces the protection for the upper part of the body and may increase the risk of injury or death in a crash.

**Note:** *Some booster seat safety belt guides may not accommodate the shoulder portion of the inflatable safety belt.*

Use a belt-positioning booster seat for children who have outgrown or no longer properly fit in a child safety seat (generally children who are less than 4 feet 9 inches (1.45 meters) tall, are greater than age four (4) and less than age twelve (12), and between 40 pounds (18 kilograms) and 80 pounds (36 kilograms) and upward to 100

pounds (45 kilograms) if recommended by your child restraint manufacturer). Many state and provincial laws require that children use approved booster seats until they reach age eight, a height of 4 feet 9 inches (1.45 meters) tall, or 80 pounds (36 kilograms).

Booster seats should be used until you can answer YES to ALL of these questions when seated without a booster seat:



E142595

- Can the child sit all the way back against their vehicle seat back with knees bent comfortably at the edge of the seat cushion?
- Can the child sit without slouching?

- Does the lap belt rest low across the hips?
- Is the shoulder belt centered on the shoulder and chest?
- Can the child stay seated like this for the whole trip?

Always use booster seats in conjunction with your vehicle lap and shoulder belt.

### Types of Booster Seats



E68924

- Backless booster seats

## Child Safety

If your backless booster seat has a removable shield, remove the shield. If a vehicle seating position has a low seat back or no head restraint, a backless booster seat may place your child's head (as measured at the tops of the ears) above the top of the seat. In this case, move the backless booster to another seating position with a higher seat back or head restraint and lap and shoulder belts, or consider using a high back booster seat.



E70710

- High back booster seats

If, with a backless booster seat, you cannot find a seating position that adequately supports your child's head, a high back booster seat would be a better choice.

Children and booster seats vary in size and shape. Choose a booster that keeps the lap belt low and snug across the hips, never up across the stomach, and lets you adjust the shoulder belt to cross the chest and rest snugly near the center of the shoulder. The following drawings compare the ideal fit (center) to a shoulder belt uncomfortably close to the neck and a shoulder belt that could slip off the shoulder. The drawings also show how the lap belt should be low and snug across the child's hips.

## Child Safety



E142596



E142597

# Child Safety

If the booster seat slides on the vehicle seat upon which it is being used, placing a rubberized mesh sold as shelf or carpet liner under the booster seat may improve this condition. Do not introduce any item thicker than this under the booster seat. Check with the booster seat manufacturer's instructions.

## CHILD RESTRAINT POSITIONING

### WARNINGS



Airbags can kill or injure a child in a child seat. Never place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the vehicle seat upon which the child seat is installed all the way back. When possible, all children age 12 and under should be properly restrained in a rear seating position. If all children cannot be seated and restrained properly in a rear seating position, properly restrain the largest child in the front seat.

### WARNINGS



Always carefully follow the instructions and warnings provided by the manufacturer of any child restraint to determine if the restraint device is appropriate for your child's size, height, weight, or age. Follow the child restraint manufacturer's instructions and warnings provided for installation and use in conjunction with the instructions and warnings provided by your vehicle manufacturer. A safety seat that is improperly installed or utilized, is inappropriate for your child's height, age, or weight or does not properly fit the child may increase the risk of serious injury or death.



Never let a passenger hold a child on his or her lap while your vehicle is moving. The passenger cannot protect the child from injury in a crash, which may result in serious injury or death.

### WARNINGS



Never use pillows, books, or towels to boost a child. They can slide around and increase the likelihood of injury or death in a crash.



Always restrain an unoccupied child seat or booster seat. These objects may become projectiles in a crash or sudden stop, which may increase the risk of serious injury.



Never place, or allow a child to place, the shoulder belt under a child's arm or behind the back because it reduces the protection for the upper part of the body and may increase the risk of injury or death in a crash.



To avoid risk of injury, do not leave children or pets unattended in your vehicle.



# Child Safety

## Recommendations for attaching child safety restraints for children

Restraint Type	Combined weight of child and child seat	Use any attachment method as indicated below by X				
		LATCH (lower anchors and top tether anchor)	LATCH (lower anchors only)	Safety belt and top tether anchor	Safety belt and LATCH (lower anchors and top tether anchor)	Safety belt only
Rear facing child seat	Up to 65 lb (29.5 kg)		X			X
Rear facing child seat	Over 65 lb (29.5 kg)					X
Forward facing child seat	Up to 65 lb (29.5 kg)	X		X	X	
Forward facing child seat	Over 65 lb (29.5 kg)			X	X	

**Note:** *The child seat must rest tightly against the vehicle seat upon which it is installed. It may be necessary to lift or remove the head restraint. See **Seats** (page 132).*

## CHILD SAFETY LOCKS

When these locks are set, the rear doors cannot be opened from the inside.

## Child Safety

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E205034


The locks are located on the rear edge of each rear door and must be set separately for each door.


Move the lock control up to engage the lock.  
Move it down to disengage the lock.


# Seatbelts


## PRINCIPLE OF OPERATION

### WARNINGS


 Always drive and ride with your seatback upright and the lap belt snug and low across the hips.


 To reduce the risk of injury, make sure children sit where they can be properly restrained.


 Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a crash, which may result in serious injury or death.

 All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an airbag supplemental restraint system is provided. Failure to properly wear your safety belt could seriously increase the risk of injury or death.


### WARNINGS


 It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a crash, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.


 In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a safety belt.

 Each seating position in your vehicle has a specific safety belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair. 1) Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. 2) Never swing the safety belt around your neck over the inside shoulder. 3) Never use a single belt for more than one person.

### WARNINGS

 When possible, all children 12 years old and under should be properly restrained in a rear seating position. Failure to follow this could seriously increase the risk of injury or death.

 Safety belts and seats can become hot in a vehicle that has been closed up in sunny weather; they could burn a small child. Check seat covers and buckles before you place a child anywhere near them.

 Front and rear seat occupants, including pregnant women, should wear safety belts for optimum protection in an accident.

All seating positions in this vehicle have lap and shoulder safety belts. All occupants of the vehicle should always properly wear their safety belts, even when an airbag supplemental restraint system is provided.

The safety belt system consists of:

- Lap and shoulder safety belts.
- Shoulder safety belt with automatic locking mode, (except driver safety belt).

# Seatbelts

- Height adjuster at the front outboard seating positions.
- Safety belt pretensioner at the front outboard seating positions.



- Safety belt warning light and chime.



- Crash sensors and monitoring system with readiness indicator.

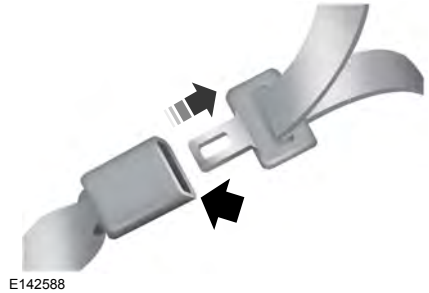
The safety belt pretensioners at the front seating positions are designed to tighten the safety belts when activated. In frontal and near-frontal crashes, the safety belt pretensioners may be activated alone or, if the crash is of sufficient severity, together with the front airbags. In side crashes and rollovers, the pretensioners will be activated when the Safety Canopy is activated.

## FASTENING THE SEATBELTS

The front outboard and rear safety restraints in the vehicle are combination lap and shoulder belts.




1. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.



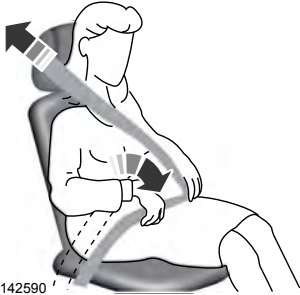
2. To unfasten, press the release button and remove the tongue from the buckle.

## Using Safety Belts During Pregnancy

### WARNING

 Always ride and drive with your seatback upright and the safety belt properly fastened. The lap portion of the safety belt should fit snug and be positioned low across the hips. The shoulder portion of the safety belt should be positioned across the chest. Pregnant women should also follow this practice. See the following figure.

# Seatbelts



E142590

Pregnant women should always wear their safety belt. The lap belt portion of a combination lap and shoulder belt should be positioned low across the hips below the belly and worn as tight as comfort will allow. The shoulder belt should be positioned to cross the middle of the shoulder and the center of the chest.

## Safety Belt Locking Modes

### WARNINGS



After any vehicle crash, the safety belt system at all passenger seating positions must be checked by an authorized dealer to verify that the automatic locking retractor feature for child seats is still functioning properly. In addition, all safety belts should be checked for proper function.



The belt and retractor assembly must be replaced if the safety belt assembly automatic locking retractor feature or any other safety belt function is not operating properly when checked by an authorized dealer. Failure to replace the belt and retractor assembly could increase the risk of injury in crashes.

All safety restraints in the vehicle are combination lap and shoulder belts. The driver safety belt has the first type of locking mode. The front outboard passenger and rear seat safety belts have both types of locking modes described as follows:

## Vehicle Sensitive Mode

This is the normal retractor mode, which allows free shoulder belt length adjustment to your movements and locking in response to vehicle movement. For example, if the driver brakes suddenly or turns a corner sharply, or the vehicle receives an impact of about 5 mph (8 km/h) or more, the combination safety belts will lock to help reduce forward movement of the driver and passengers.

In addition, the retractor is designed to lock if the webbing is pulled out too quickly. If this occurs, let the belt retract slightly and pull webbing out again in a slow and controlled manner.

## Automatic Locking Mode

In this mode, the shoulder belt is automatically pre-locked. The belt will still retract to remove any slack in the shoulder belt. The automatic locking mode is not available on the driver safety belt.

# Seatbelts

## When to Use the Automatic Locking Mode

This mode should be used any time a child safety seat, except a booster, is installed in passenger front or rear seating positions. Children 12 years old and under should be properly restrained in a rear seating position whenever possible. See **Child Safety** (page 16).

## How to Use the Automatic Locking Mode



E142591

1. Buckle the combination lap and shoulder belt.

2. Grasp the shoulder portion and pull downward until the entire belt is pulled out.

Allow the belt to retract. As the belt retracts, you will hear a clicking sound. This indicates the safety belt is now in the automatic locking mode.

## How to Disengage the Automatic Locking Mode

Unbuckle the combination lap and shoulder belt and allow it to retract completely to disengage the automatic locking mode and activate the vehicle sensitive (emergency) locking mode.

## Safety Belt Extension Assembly

### WARNING



Do not use extensions to change the fit of the shoulder belt across the torso.

If the safety belt is too short when fully extended, a safety belt extension assembly can be obtained from an authorized dealer.

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is on a label located either at the end of the webbing or on the retractor behind the trim. Also, use the safety belt extension only if the safety belt is too short for you when fully extended.

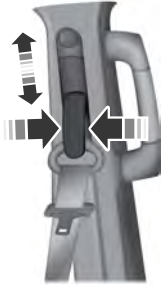
## SEATBELT HEIGHT ADJUSTMENT

### WARNING



Position the safety belt height adjuster so that the belt rests across the middle of your shoulder. Failure to adjust the safety belt properly could reduce the effectiveness of the safety belt and increase the risk of injury in a crash.

# Seatbelts



E205035

Adjust the height of the shoulder belt so the belt rests across the middle of your shoulder.

To adjust the shoulder belt height:

1. Press the side release buttons and slide the height adjuster up or down.
2. Release the buttons and pull down on the height adjuster to make sure it is locked in place.

## Second Row Comfort Guide

### WARNING



Position the safety belt comfort guide so that the belt rests across the middle of your shoulder. Failure to adjust the safety belt properly could reduce the effectiveness of the safety belt and increase the risk of injury in a crash.



E205036

The second row outboard lap and shoulder belt is equipped with a belt comfort guide. This guide is attached to the quarter trim panel. Use it to adjust the comfort of the shoulder belt for smaller occupants in the outboard second row seats.



E205037

To adjust the comfort guide:

1. Slip the shoulder belt into the belt guide (the portion of the belt between the latch tongue and the D-ring, not the portion where the belt exits from the quarter trim panel).
2. Slide the guide up or down along the webbing so that the belt is centered on the occupant's shoulder.

# Seatbelts

## SEATBELT WARNING LAMP AND INDICATOR CHIME



This lamp illuminates and an audible warning will sound if the driver's safety belt has not been fastened when the vehicle's ignition is turned on.

### Conditions of operation

If...	Then...
The driver's safety belt is not buckled before the ignition switch is turned to the on position...	The safety belt warning light illuminates 1-2 minutes and the warning chime sounds 4-8 seconds.
The driver's safety belt is buckled while the indicator light is illuminated and the warning chime is sounding...	The safety belt warning light and warning chime turn off.
The driver's safety belt is buckled before the ignition switch is turned to the on position...	The safety belt warning light and indicator chime remain off.



# Seatbelts

## SEATBELT REMINDER

### Belt-Minder™

This feature supplements the safety belt

warning function by providing additional reminders that intermittently sound a tone and illuminate the safety belt warning light when you are in the driver seat and a safety belt is unbuckled.

If...	Then...
You buckle your safety belt before you switch the ignition on or less than 1-2 minutes elapse after you switch the ignition on...	The Belt-Minder feature will not activate.
You do not buckle your safety belt before your vehicle reaches at least 6 mph (9.7 km/h) and 1-2 minutes elapse after you switch the ignition on...	The Belt-Minder feature activates, the safety belt warning light illuminates and a warning tone sounds for 6 seconds every 25 seconds, repeating for about 5 minutes or until you buckle your safety belt.
The driver safety belt is unbuckled for about 1 minute while the vehicle is traveling at least 6 mph (9.7 km/h) and more than 1-2 minutes elapse after you switch the ignition on...	The Belt-Minder feature activates, the safety belt warning light illuminates and a warning tone sounds for 6 seconds every 25 seconds, repeating for about 5 minutes or until you buckle your safety belt.

# Seatbelts

## Deactivating and Activating the Belt-Minder Feature

### WARNING



While the system allows you to deactivate it, this system is designed to improve your chances of being safely belted and surviving an accident. We recommend you leave the system activated for yourself and others who may use the vehicle.

Read Steps 1 - 4 thoroughly before proceeding with the programming procedure.

Before following the procedure, make sure that:

- The parking brake is set.
  - The transmission is in park (P).
  - The ignition is off.
  - All vehicle doors are closed.
  - The driver safety belt is unbuckled.
1. Switch the ignition on. Do not start the engine.

2. Wait until the safety belt warning light turns off (about one minute). After Step 2, wait an additional 5 seconds before proceeding with Step 3. Once you start Step 3, you must complete the procedure within 60 seconds.
3. Buckle then unbuckle the safety belt three times at a moderate speed, ending in the unbuckled state. After Step 3, the safety belt warning light turns on.
4. While the safety belt warning light is on, buckle then unbuckle the safety belt. After Step 4, the safety belt warning light flashes for confirmation.
  - This will switch the feature off if it is currently on.
  - This will switch the feature on if it is currently off.

## CHILD RESTRAINT AND SEATBELT MAINTENANCE

Inspect the vehicle safety belts and child safety seat systems periodically to make sure they work properly and are not damaged. Inspect the vehicle and child seat safety belts to make sure there are no nicks, tears or cuts. Replace if necessary. All vehicle safety belt assemblies, including retractors, buckles, front safety belt buckle assemblies, buckle support assemblies (slide bar-if equipped), shoulder belt height adjusters (if equipped), shoulder belt guide on seat back (if equipped), child safety seat LATCH and tether anchors, and attaching hardware, should be inspected after a crash. Read the child restraint manufacturer's instructions for additional inspection and maintenance information specific to the child restraint.

# Seatbelts

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Ford Motor Company recommends that all safety belt assemblies in use in vehicles involved in a crash be replaced. However, if the crash was minor and an authorized dealer finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a crash should also be inspected and replaced if either damage or improper operation is noted.


Properly care for safety belts. See **Vehicle Care** (page 286).


# Supplementary Restraints System


## PRINCIPLE OF OPERATION

### WARNINGS


 Airbags do not inflate slowly or gently, and the risk of injury from a deploying airbag is the greatest close to the trim covering the airbag module.


 All occupants of your vehicle, including the driver, should always properly wear their safety belts, even when an airbag supplemental restraint system is provided. Failure to properly wear your safety belt could seriously increase the risk of injury or death.


 Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints. Failure to follow this could seriously increase the risk of injury or death.


 Never place your arm over the airbag module as a deploying airbag can result in serious arm fractures or other injuries.

### WARNINGS

 Airbags can kill or injure a child in a child seat. Never place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the seat upon which the child seat is installed all the way back.

 Do not attempt to service, repair, or modify the airbag supplemental restraint systems or its fuses as you could be seriously injured or killed. Contact your authorized dealer as soon as possible.

 Several airbag system components get hot after inflation. To avoid risk of injury, do not touch them after inflation.

 If the airbag has deployed, the airbag will not function again and must be replaced immediately. If the airbag is not replaced, the unrepaired area will increase the risk of injury in a crash.

The airbags are a supplemental restraint system and are designed to work with the safety belts to help protect the driver and right front passenger from certain upper body injuries. Airbags do not inflate slowly; there is a risk of injury from a deploying airbag.

**Note:** *You will hear a loud bang and see a cloud of harmless powdery residue if an airbag deploys. This is normal.*

The airbags inflate and deflate rapidly upon activation. After airbag deployment, it is normal to notice a smoke-like, powdery residue or smell the burnt propellant. This may consist of cornstarch, talcum powder (to lubricate the bag) or sodium compounds (for example, baking soda) that result from the combustion process that inflates the airbag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.

# Supplementary Restraints System

---

While the system is designed to help reduce serious injuries, contact with a deploying airbag may also cause abrasions or swelling. Temporary hearing loss is also a possibility as a result of the noise associated with a deploying airbag. Because airbags must inflate rapidly and with considerable force, there is the risk of death or serious injuries such as fractures, facial and eye injuries or internal injuries, particularly to occupants who are not properly restrained or are otherwise out of position at the time of airbag deployment. Thus, it is extremely important that occupants be properly restrained as far away from the airbag module as possible while maintaining vehicle control.

Routine maintenance of the airbags is not required.

## Restraint Safety System

The restraint safety system provides an improved overall level of frontal crash protection to front seat occupants and is designed to help further reduce the risk of airbag-related injuries. The system is able to analyze different occupant conditions and crash severity before activating the appropriate safety devices to help better protect a range of occupants in a variety of frontal crash situations.

Your vehicle restraint safety system consists of:

- Driver and passenger dual-stage airbag supplemental restraints.
- Front outboard safety belts with pretensioners, energy management retractors (first row only), and safety belt usage sensors.
- Driver seat position sensor.
- Front crash severity sensors.
- Restraints control module with impact and safing sensors.

- Restraint system warning light and backup tone.
- The electrical wiring for the airbags, crash sensor(s), safety belt pretensioners, front safety belt usage sensors, driver seat position sensor, and indicator lights.

## How does the restraint safety system work?

The restraint safety system can adapt the deployment strategy of your vehicle's safety devices according to crash severity and occupant conditions. A collection of crash and occupant sensors provides information to the restraints control module. During a crash, the restraints control module may activate the safety belt pretensioners and/or either one or both stages of the dual-stage airbag supplemental restraints based on crash severity and occupant conditions.

# Supplementary Restraints System

## DRIVER AND PASSENGER AIRBAGS

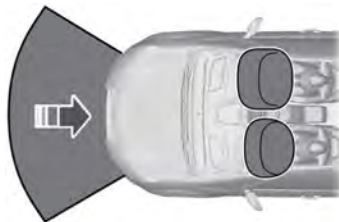
### WARNINGS



Never place your arm or any objects over an airbag module. Placing your arm over a deploying airbag can result in serious arm fractures or other injuries. Objects placed on or over the airbag inflation area may cause those objects to be propelled by the airbag into your face and torso causing serious injury.



Airbags can kill or injure a child in a child seat. Never place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the seat upon which the child seat is installed all the way back.



E151127

The driver and passenger front airbags will deploy during significant frontal and near frontal crashes.

The driver and passenger front airbag system consists of:

- Driver and passenger airbag modules.



• Crash sensors and monitoring system with readiness indicator. See **Crash Sensors and Airbag Indicator** (page 47).

## Proper Driver and Front Passenger Seating Adjustment

### WARNING



The National Highway Traffic Safety Administration recommends a minimum distance of at least 10 in (25 cm) between an occupant's chest and the driver airbag module.

To properly position yourself away from the airbag:

- Move your seat to the rear as far as you can while still reaching the pedals comfortably.
- Recline the seat slightly (one or two degrees) from the upright position.


After all occupants have adjusted their seats and put on safety belts, it is very important that they continue to sit properly. Properly seated occupants sit upright, lean against the seat back, and center themselves on the seat cushion, with their feet comfortably extended on the floor. Sitting improperly can

# Supplementary Restraints System

increase the chance of injury in a crash event. For example, if an occupant slouches, lies down, turns sideways, sits forward, leans forward or sideways, or puts one or both feet up, the chance of injury during a crash is greatly increased.

## Children and Airbags

### WARNING

 Airbags can kill or injure a child in a child seat. Never place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the seat upon which the child seat is installed all the way back.





E142846


Children must always be properly restrained. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating position. Failure to follow these instructions may increase the risk of injury in a crash.


## SIDE AIRBAGS

### WARNINGS

 Do not place objects or mount equipment on or near the airbag cover, on the side of the seatbacks (of the front seats), or in front seat areas that may come into contact with a deploying airbag. Failure to follow these instructions may increase the risk of personal injury in the event of a crash.

 Do not use accessory seat covers. The use of accessory seat covers may prevent the deployment of the side airbags and increase the risk of injury in an accident.

 Do not lean your head on the door. The side airbag could injure you as it deploys from the side of the seatback.

 Do not attempt to service, repair, or modify the airbag, its fuses or the seat cover on a seat containing an airbag as you could be seriously injured or killed. Contact your authorized dealer as soon as possible.

# Supplementary Restraints System

## WARNINGS



If the side airbag has deployed, the airbag will not function again. The side airbag system (including the seat) must be inspected and serviced by an authorized dealer. If the airbag is not replaced, the unrepaired area will increase the risk of injury in a crash.

The side airbags are located on the outboard side of the seatbacks of the front seats. In certain sideways crashes, the airbag on the side affected by the crash will be inflated. The airbag was designed to inflate between the door panel and occupant to further enhance the protection provided occupants in side impact crashes.



E152533

The system consists of the following:

- A label or embossed side panel indicating that side airbags are found on your vehicle.
- Side airbags located inside the seatback of the driver and front passenger seats.



• Crash sensors and monitoring system with readiness indicator. See **Crash Sensors and Airbag**

**Indicator** (page 47).

The design and development of the side airbag system included recommended testing procedures that were developed by a group of automotive safety experts known as the Side Airbag Technical Working Group. These recommended testing procedures help reduce the risk of injuries related to the deployment of side airbags.

## SAFETY CANOPY™

### WARNINGS



Do not place objects or mount equipment on or near the headliner at the siderail that may come into contact with a deploying curtain airbag. Failure to follow these instructions may increase the risk of personal injury in the event of a crash.





Do not lean your head on the door. The curtain airbag could injure you as it deploys from the headliner.





# Supplementary Restraints System

## WARNINGS

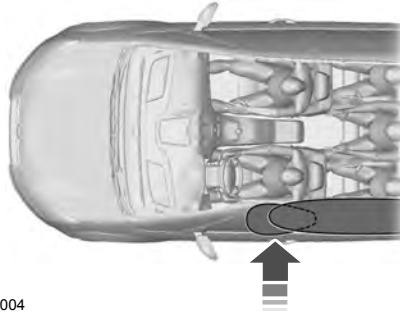
 Do not attempt to service, repair, or modify the curtain airbags, its fuses, the A, B, or C pillar trim, or the headliner on a vehicle containing curtain airbags as you could be seriously injured or killed. Contact your authorized dealer as soon as possible.

 All occupants of your vehicle including the driver should always wear their safety belts even when an airbag supplemental restraint system and curtain airbag is provided. Failure to properly wear your safety belt could seriously increase the risk of injury or death.

 To reduce risk of injury, do not obstruct or place objects in the deployment path of the curtain airbag.

 If the curtain airbags have deployed, the curtain airbags will not function again. The curtain airbags (including the A, B and C pillar trim and headliner) must be inspected and serviced by an authorized dealer. If the curtain airbag is not replaced, the unrepaired area will increase the risk of injury in a crash.

The Safety Canopy will deploy during significant side crashes or when a certain likelihood of a rollover event is detected by the rollover sensor. The Safety Canopy is mounted to the roof side-rail sheet metal, behind the headliner, above each row of seats. In certain sideways crashes or rollover events, the Safety Canopy will be activated, regardless of which seats are occupied. The Safety Canopy is designed to inflate between the side window area and occupants to further enhance protection provided in side impact crashes and rollover events.



E75004

The system consists of the following:

- Safety canopy curtain airbags located above the trim panels over the front and rear side windows identified by a label or wording on the headliner or roof-pillar trim.
- A flexible headliner which opens above the side doors to allow air curtain deployment



• Crash sensors and monitoring system with a readiness indicator. See **Crash Sensors and Airbag Indicator** (page 47).

Children 12 years old and under should always be properly restrained in the rear seats. The Safety Canopy will not interfere with children restrained using a properly installed child or booster seat because it is designed to inflate downward from the headliner above the doors along the side window opening.

# Supplementary Restraints System

The design and development of the Safety Canopy included recommended testing procedures that were developed by a group of automotive safety experts known as the Side Airbag Technical Working Group. These recommended testing procedures help reduce the risk of injuries related to the deployment of side airbags (including the Safety Canopy).

## CRASH SENSORS AND AIRBAG INDICATOR

### WARNING



Modifying or adding equipment to the front end of the vehicle (including frame, bumper, front end body structure and tow hooks) may affect the performance of the airbag system, increasing the risk of injury. Do not modify the front end of the vehicle.

Your vehicle has a collection of crash and occupant sensors which provide information to the restraints control module which deploys (activates) the front safety belt pretensioners, driver airbag, passenger airbag, seat mounted side airbags, and the Safety Canopy®. Based on the type of crash (frontal impact, side impact or rollover), the restraints control module will deploy the appropriate safety devices.

The restraints control module also monitors the readiness of the above safety devices plus the crash and occupant sensors. The readiness of the safety system is indicated by a warning indicator light in the instrument cluster or by a backup tone if the warning light is not working. See **Instrument Cluster** (page 99). Routine maintenance of the airbag is not required.

A difficulty with the system is indicated by one or more of the following:



The readiness light will not illuminate immediately after the ignition is turned on.

- The readiness light will either flash or stay lit.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem, the light or both are repaired.

If any of these things happen, even intermittently, have the supplemental restraint system serviced at an authorized dealer immediately. Unless serviced, the system may not function properly in the event of a crash.

# Supplementary Restraints System

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The fact that the safety belt pretensioners or front airbags did not activate for both front seat occupants in a crash does not mean that something is wrong with the system. Rather, it means the restraints control module determined the accident conditions (crash severity, belt usage) were not appropriate to activate these safety devices.

- The design of the front airbags is to activate only in frontal and near-frontal crashes (not rollovers, side impacts or rear impacts) unless the crash causes sufficient frontal deceleration.
- The design of the safety belt pretensioners is to activate in frontal, near-frontal and side crashes, and in rollovers.

- The design of the side airbags is to inflate in certain side impact crashes. Side airbags may activate in other types of crashes if the vehicle experiences sufficient sideways motion or deformation.
- The design of the Safety Canopy is to inflate in certain side impact crashes or rollover events. The Safety Canopy may activate in other types of crashes if the vehicle experiences sufficient sideways motion or deformation, or a certain likelihood of rollover.

## **AIRBAG DISPOSAL**

Contact your authorized dealer as soon as possible. Airbags must be disposed of by qualified personnel.

# Keys and Remote Controls

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## GENERAL INFORMATION ON RADIO FREQUENCIES

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

**Note:** *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The term **IC** before the radio certification number only signifies that Industry Canada technical specifications were met.*

The typical operating range for your transmitter is approximately 33 feet (10 meters). Vehicles with the remote start feature will have a greater range. One of the following could cause a decrease in operating range:

- Weather conditions.
- Nearby radio towers.
- Structures around the vehicle.
- Other vehicles parked next to your vehicle.

The radio frequency used by your remote control can also be used by other radio transmitters, for example amateur radios, medical equipment, wireless headphones, wireless remote controls, cell phones, battery chargers and alarm systems. If the frequencies are jammed, you will not be able to use your remote control. You can lock and unlock the doors with the key.

**Note:** *Make sure to lock your vehicle before leaving it unattended.*

**Note:** *If you are in range, the remote control will operate if you press any button unintentionally.*

## Intelligent Access (If Equipped)

The system uses a radio frequency signal to communicate with your vehicle and authorize your vehicle to unlock when one of the following conditions are met:

- You press any button on the keyless entry keypad within 3 ft (1 m) proximity of an intelligent access key.
- You press the luggage compartment button.
- You press a button on the transmitter.

If excessive radio frequency interference is present in the area or if the transmitter battery is low, you may need to mechanically unlock your door. You can use the mechanical key blade in your intelligent access key to open the driver door in this situation. See **Remote Control** (page 50).

# Keys and Remote Controls

## REMOTE CONTROL

### Intelligent Access Key



The intelligent access keys operate the power locks and the remote start system. The key must be in your vehicle to use the push button start.



E142431

The intelligent access key also contains a removable key blade that you can use to unlock your vehicle. Slide the release on the back of the remote control to release the key blade, then pull the blade out.



E138618

**Note:** Your vehicle keys came with a security label that provides important key cut information. Keep the label in a safe place for future reference.

### Replacing the Battery

**Note:** Refer to local regulations when disposing of transmitter batteries.

**Note:** Do not wipe off any grease on the battery terminals or on the back surface of the circuit board.

**Note:** Replacing the battery does not erase the programmed key from your vehicle. The transmitter should operate normally.

The remote control uses one coin-type three-volt lithium battery CR2032 or equivalent.

1. Remove the key blade from the transmitter.



E142432

2. Twist a thin coin under the tab hidden behind the key blade head to remove the battery cover. Do not use the key blade to remove the cover or you could damage it.

## Keys and Remote Controls



E138622

3. Remove the old battery.
4. Insert a new battery with the + facing downward. Press the battery down to make sure it is fully in the housing.
5. Reinstall the battery housing cover onto the transmitter and install the key blade.

### Car Finder



Press the button twice within three seconds.

The horn sounds and the direction indicators flash. We recommend you use this method to locate your vehicle, rather than using the panic alarm.

**Note:** If any door or the liftgate is open, or if the hood is open on vehicles with an anti-theft alarm or remote start, the horn will sound twice and the direction indicators will not flash.

### Sounding the Panic Alarm



Press the button to sound the panic alarm. Press the button again or switch the ignition on to turn it off.

**Note:** The panic alarm only operates when the ignition is off.

### Remote Start (If Equipped)

#### WARNING



To avoid exhaust fumes, do not use remote start if your vehicle is parked indoors or in areas that are not well ventilated.

**Note:** Do not use remote start if your fuel level is low.



The remote start button is on the transmitter.

This feature allows you to start your vehicle from the outside. The transmitter has an extended operating range.

Vehicles with automatic climate control can be configured to operate when the vehicle is remote started. See **Automatic Climate Control** (page 125).

Many states and provinces have restrictions for the use of remote start. Check your local and state or provincial laws for specific requirements regarding remote start systems.

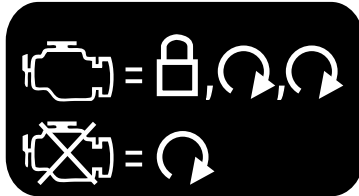
The remote start system does not work if any of the following occur:

- The ignition is on.
- The anti-theft alarm triggers.
- You switch off the feature.
- The hood is open.
- The transmission is not in park (P).
- The battery voltage is below the minimum operating voltage.
- The service engine soon indicator was on the last time your vehicle was driven.

# Keys and Remote Controls

## Remote Starting your Vehicle

**Note:** *You must press each button within three seconds of each other. If you do not follow this sequence, your vehicle does not start remotely, the direction indicators do not flash twice and the horn does not sound.*



E138626

The label on your transmitter details the starting procedure.

To start your vehicle remotely:

1. Press the lock button to lock all the doors.
2. Press the remote start button twice. The exterior lamps flash twice.

The horn sounds if the system fails to start, unless quiet start is on. Quiet start runs the blower fan at a slower speed to reduce noise. You can switch this feature on or off in the information display. See **General Information** (page 105).

**Note:** *You must press the push button ignition switch on the instrument panel once while applying the brake pedal before driving your vehicle.*

The power windows do not work during remote start and the radio does not turn on automatically.

The parking lamps remain on and the vehicle runs for 5, 10 or 15 minutes, depending on the setting.

## Extending the Engine Running Time

To extend the engine running time duration of your vehicle during remote start, repeat steps 1 and 2 while the engine is running. If the duration is set to 10 minutes, the duration extends by another 10 minutes. For example, if your vehicle had been running from the first remote start for 5 minutes, your vehicle continues to run now for a total of 20 minutes. You can extend the remote start up to a maximum of 35 minutes.

Wait at least five seconds before remote starting after the engine stops running.

## Turning Your Vehicle Off After Remote Starting



Press the button once. The parking lamps turn off.

You may have to be closer to your vehicle to remotely switch off your vehicle after remote starting. This is due to the added noise of your running vehicle.

You can switch this feature on or off in the information display. See **General Information** (page 105).

# Keys and Remote Controls

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## **Memory Feature** (If Equipped)

You can use the intelligent access key to recall memory settings for the driver seat, power mirrors, power steering column and power adjustable foot pedals. Unlock your vehicle with the intelligent access key to recall the memory positions. You can program the intelligent access key to recall memory positions. See **Memory Function** (page 135).

## **REPLACING A LOST KEY OR REMOTE CONTROL**

Replacement keys or remote controls can be purchased from an authorized dealer. Authorized dealers can program remote controls for your vehicle. See **Passive Anti-Theft System** (page 73).



## PRINCIPLE OF OPERATION

MyKey allows you to program keys with restricted driving modes to promote good driving habits. All but one of the keys programmed to the vehicle can be activated with these restricted modes.

Any keys that have not been programmed are referred to as administrator keys or admin keys. They can be used to:

- Create a MyKey.
- Program configurable MyKey settings.
- Clear all MyKey features.

When you have programmed a MyKey, you can access the following information using the information display:

- How many admin keys and MyKeys are programmed to your vehicle.
- The total distance your vehicle has traveled using a MyKey.

**Note:** *All MyKeys are programmed to the same settings. You cannot program them individually.*

## Non-configurable Settings

The following settings cannot be changed by an admin key user:

- Belt-Minder or safety belt reminder. You cannot disable this feature. The audio system will mute when the front seat occupants' safety belts are not fastened.
- Early low fuel. The low fuel warning is activated earlier, giving the MyKey user more time to refuel.
- Driver assist features, if equipped on your vehicle, are forced on: parking aid, blind spot information system (BLIS) with cross traffic alert, lane departure warning and forward collision warning system.
- Satellite radio adult content restrictions (available only in some markets).

## Configurable Settings

With an admin key, you can configure certain MyKey settings when you first create a MyKey and before you recycle the key or restart the vehicle. You can also change the settings afterward with an admin key:

- A vehicle speed limit can be set. Warnings will be shown in the display, followed by an audible tone when your vehicle reaches the set speed. You cannot override the set speed by fully depressing the accelerator pedal or by setting cruise control.

### WARNING



Do not set MyKey maximum speed limit to a limit that will prevent the driver from maintaining a safe speed considering posted speed limits and prevailing road conditions. The driver is always responsible to drive in accordance with local laws and prevailing conditions. Failure to do so could result in accident or injury.

- Various vehicle speed minders can be set. Once you select a speed, it will be shown in the display, followed by an audible tone when the preselected vehicle speed is exceeded.
  - Audio system maximum volume of 45%. A message will be shown in the display when you attempt to exceed the limited volume. Also, the speed-sensitive or compensated automatic volume control will be disabled.
  - Always on setting. When this is selected, you will not be able to turn off Advance Trac or traction control, 911 Assist or Emergency Assistance, or Do Not Disturb (if your vehicle is equipped with these features).
- CREATING A MYKEY**
- Use the information display to create a MyKey:

1. Insert the key you want to program into the ignition. If your vehicle is equipped with a push-button start, place the remote control into the backup slot. The location of your backup slot is in another chapter. See **Starting a Gasoline Engine** (page 157).
2. Switch the ignition on.
3. Access the main menu on the information display controls. Use the arrow keys to get to the following menu selections:

Message	Action and Description
Settings	Press the <b>OK</b> button or the right arrow key.
MyKey	Press the <b>OK</b> button or the right arrow key.
Create MyKey	Press the <b>OK</b> button or the right arrow key.

When prompted, hold the **OK** button until you see a message informing you to label this key as a MyKey. The key will be restricted at the next start.

MyKey is successfully created. Make sure you label it so you can distinguish it from the admin keys.

You can also program configurable settings for the key(s). See **Programming/Changing Configurable Settings**.

**Programming/Changing Configurable Settings**

Use the information display to access your configurable MyKey settings.

1. Switch the ignition on using an admin key or remote control.

2. Access the main menu on the information display controls. Use the arrow keys to

get to the following menu selections:

Message	Action and Description
Settings	Press the <b>OK</b> button or the right arrow key.
MyKey	Press the <b>OK</b> button or the right arrow key.

**Note:** You can clear or change your MyKey settings at any time during the same key cycle as you created the MyKey. Once you have switched the vehicle off, however, you will need an admin key to change or clear your MyKey settings.

## CLEARING ALL MYKEYS

You can clear or change your MyKey settings using the information display control on the steering wheel. See **Information Displays** (page 105).

Switch the ignition on using an admin key or remote control.

**To clear all MyKeys of all MyKey settings, press the left arrow button to access the main menu and scroll to:**

Message	Action and Description
Settings	Press the <b>OK</b> button.
MyKey	Press the <b>OK</b> button.
Clear MyKey	Press and hold the <b>OK</b> button until the following message displays.

Message	Action and Description
All MyKeys Cleared	

**Note:** *When you clear your MyKeys, you remove all restrictions and return all MyKeys to their original admin key status.*

## CHECKING MYKEY SYSTEM STATUS

You can find information on programmed MyKey(s) using the information display control on the steering wheel. See **Information Displays** (page 105).

To find information on programmed MyKey(s), press the left arrow button to access the main menu and scroll to:

Message	Description
Settings	Press the <b>OK</b> button.
MyKey	Press the <b>OK</b> button.
<b>Select one of the following:</b>	
MyKey Dist.	Tracks the distance when drivers use a MyKey. The only way to delete the accumulated distance is by using an admin key to clear your MyKeys. If the distance does not accumulate as expected, then the intended user is not using the MyKey, or an admin key user recently cleared and then recreated a MyKey.
{0} MyKeys	Indicates the number of MyKeys programmed to your vehicle. Use this feature to detect how many MyKeys you have for your vehicle and determine when a MyKey has been deleted.
{0} Admin Keys	Indicates how many admin keys are programmed to your vehicle. Use this feature to determine how many unrestricted keys you have for your vehicle, and detect if an additional MyKey has been programmed.

## USING MYKEY WITH REMOTE START SYSTEMS

### Vehicles With Ford-Approved Aftermarket Remote Start Systems

When using a Ford-approved aftermarket remote start system, the vehicle recognizes the remote start system transmitter as an additional admin key. It is the vehicle's default setting.

When you start your vehicle with a Ford-approved aftermarket remote start system transmitter, the system shuts the vehicle off after you open the door or shift your vehicle into gear. This is intentional. When you restart your vehicle, it reads the vehicle key fob status instead of the remote start system transmitter status.

With a Ford-approved aftermarket remote start system, it is possible to program all key fobs as MyKeys unintentionally. If this happens, then the remote start system transmitter is the admin key. If you want to have only one key fob as a MyKey, or do not want to have any MyKeys, then you need to use your remote start system transmitter to clear all MyKeys. In that case, follow these steps:

1. Enter your vehicle and close all doors.
2. Start your vehicle using your remote start system transmitter.
3. See **Clearing All MyKeys** (page 56). Follow Steps 1-3.

After clearing your MyKeys, you can create a new MyKey. See **Creating a MyKey** (page 55).

**Note:** *With push-button start, you cannot program the remote start system transmitter as a MyKey. Always treat the remote start system transmitter as you would any other admin key.*

### Vehicles With Non-Ford-Approved Aftermarket Remote Start Systems

MyKey is not compatible with non-Ford-approved aftermarket remote start systems. If you choose to install a remote start system, see an authorized dealer for a Ford-approved remote start system.

The following information may help if you choose to install a non-Ford-approved remote start system. The actions provided below do not make MyKey compatible with non-Ford-approved remote start systems, but may help you retain some MyKey functions.

When using a non-Ford-approved remote start system, the vehicle may recognize the remote start system as an additional admin key with its associated privileges. If you restart the vehicle by powering it off and waiting a few seconds, and then powering the vehicle back on, you may retain some MyKey functions. This action forces your vehicle to read the vehicle key fob instead of the remote start system transmitter and then uses the MyKey associated privileges.

**Note:** *The MyKey system status menu display may include the remote start system as an additional key in the total count of programmed keys. See **Checking MyKey System Status** (page 58).*

With a non-Ford-approved aftermarket remote start system, it is possible to program all key vehicle key fobs as MyKeys unintentionally. If this happens, then the remote start system transmitter is the admin key. If you want to have only one vehicle key fob as a MyKey, or do not want to have any MyKeys, then you need to use your remote start system transmitter to clear all MyKeys. In that case, follow these steps:

1. Enter your vehicle and close all doors.

2. Start your vehicle using your non-Ford-approved remote start system transmitter.
3. See **Clearing All MyKeys** (page 56). Follow Steps 1-3.

After clearing your MyKeys, you can create a new MyKey. See **Creating a MyKey** (page 55).

**Note:** *With push-button start, you cannot program the remote start system transmitter as a MyKey. Always treat the remote start system transmitter as you would any other admin key.*

MYKEY TROUBLESHOOTING

Condition	Potential Causes
I cannot create a MyKey.	The transmitter used to start the vehicle is not an admin key. The transmitter used to start the vehicle is the only admin key. There always has to be at least one admin key. The transmitter is not in its backup position. See <b>Starting a Gasoline Engine</b> (page 157). The passive anti-theft system is disabled or in unlimited mode.

Condition	Potential Causes
	The vehicle has been started using a remote start system transmitter that is not an admin key. See <b>Using MyKey With Remote Start Systems</b> (page 59).
I cannot program the configurable settings.	The transmitter used to start your vehicle is not an admin key. There are no MyKeys programmed to your vehicle. See <b>Creating a MyKey</b> (page 55). The vehicle has been started using a remote start system transmitter that is not an admin key. See <b>Using MyKey With Remote Start Systems</b> (page 59).
I cannot clear the MyKeys.	The transmitter used to start your vehicle is not an admin key. There are no MyKeys programmed to your vehicle. See <b>Creating a MyKey</b> (page 55). The vehicle has been started using a remote start system transmitter that is not an admin key. See <b>Using MyKey With Remote Start Systems</b> (page 59).
I lost the only admin key.	Purchase a new transmitter from an authorized dealer.
I lost a key.	Program a spare transmitter. See <b>Passive Anti-Theft System</b> (page 73).
I accidentally programmed all keys as MyKeys.	The vehicle has a remote start system transmitter that is recognized as an admin key. Clear all MyKeys by using the remote start transmitter. See <b>Using MyKey With Remote Start Systems</b> (page 59). The vehicle's system does not recognize any programmed MyKeys. See <b>Creating a MyKey</b> (page 55).
MyKey total includes one additional key.	An unknown transmitter has been created as a MyKey. The vehicle has a remote start system. See <b>Using MyKey With Remote Start Systems</b> (page 59).
Admin key total includes one additional key.	An unknown transmitter has been programmed to the vehicle as an admin key.



Condition	Potential Causes
	The vehicle has a remote start system. See <b>Using MyKey With Remote Start Systems</b> (page 59).
The MyKey distance does not accumulate.	The MyKey is not being used by the intended user. The MyKeys have been cleared and the MyKey system has been reset.
No MyKey functions with the transmitter.	An admin transmitter is present at vehicle start. There are no MyKeys programmed to your vehicle. See <b>Creating a MyKey</b> (page 55).

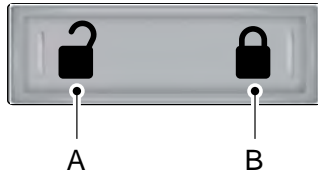
# Locks

## LOCKING AND UNLOCKING

You can use the power door lock control or the remote control to lock and unlock your vehicle.

### Power Door Locks

The power door lock control is on the driver and front passenger door panels.



E163049

- A    Unlock.
- B    Lock.

### Door Lock Switch Inhibitor

When you electronically lock your vehicle, the power door lock switch no longer operates after 20 seconds. You must unlock your vehicle with the remote control or keyless keypad, or switch the ignition on, to restore function to these switches. You can switch this feature on or off in the information display. See **Information Displays** (page 105).

### Rear Door Unlocking and Opening

Pull the interior door handle twice to unlock and open a rear door. The first pull unlocks the door and the second pull opens the door.

### Remote Control

You can use the remote control at any time. The liftgate release button only operates when your vehicle's speed is less than 5 mph (8 km/h).

### Unlocking the Doors (Two-Stage Unlock)



Press the button to unlock the driver door.

Press the button again within three seconds to unlock all doors. The direction indicators will flash.

**Note:** *If the system does not function, use the key blade to lock and unlock your vehicle.*

Press and hold both the lock and unlock buttons on the remote control for three seconds to change between driver door or all doors unlock mode. The direction indicators flash twice to indicate a change to the unlocking mode. Driver door unlock mode only unlocks the driver door when you press the unlock button once. All door unlock mode unlocks all doors when you press the unlock button once. The unlocking mode applies to the remote control, keyless entry keypad and intelligent access. You can also change between the unlocking modes using the information display. See **Information Displays** (page 105).

### Reprogramming the Unlocking Function

**Note:** *When you press the unlock button, either all the doors are unlocked or only the driver door is unlocked. Pressing the unlock button again unlocks all the doors.*

# Locks

Press and hold the unlock and lock buttons on the remote control simultaneously for at least four seconds with the ignition off. The direction indicators flash twice to confirm the change.

To return to the original unlocking function, repeat the process.

## Locking the Doors



Press the button to lock all doors. The direction indicators will flash.

Press the button again within three seconds to confirm that all the doors are closed. The doors will lock again, the horn will sound and the direction indicators will flash if all the doors and the liftgate are closed.

**Note:** *If the system does not function, use the key blade to lock and unlock your vehicle.*

## Mislock

If any door or the liftgate is open, or if the hood is open on vehicles with an anti-theft alarm or remote start, the horn sounds twice and the direction indicators do not flash. You can switch this feature on or off in the information display. See **Information Displays** (page 105).

## Opening the Liftgate



Press twice within three seconds to open the liftgate.

## Activating Intelligent Access

The intelligent access key must be within 3 ft (1 m) of the driver door or liftgate.

## At a Door

You can use the keyless entry keypad to lock and unlock the doors. See **Keyless Entry** (page 70).

## At the Liftgate

The liftgate unlocks and opens automatically when you press the liftgate release button. See **Power Liftgate** (page 66).

## Smart Unlocks for Intelligent Access Keys

This helps to prevent you from locking your key inside the passenger compartment or rear cargo area.

When you electronically lock your vehicle with any door open, the transmission is in park (P) and the ignition is off, the system searches for an intelligent access key inside your vehicle after you close the last door. If the system finds a key, all of the doors will immediately unlock and the horn will sound twice, indicating that a key is inside.

You can override the smart unlock feature and intentionally lock the intelligent access key inside your vehicle.

# Locks

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To do this, lock your vehicle after you have closed all the doors by:

- Using the keyless entry keypad.
- Pressing the lock button on another intelligent access key.

When you open one of the front doors and lock your vehicle using the power door lock control, all doors will lock then unlock if:

- The ignition is on.
- The ignition is off and the transmission is not in park (P).

## Auto Relock

If you press the unlock button on the remote control and do not open a door within 45 seconds, your vehicle will lock and the alarm will arm. You can switch this feature on or off in the information display. See **Information Displays** (page 105).

## Autolock

Autolock locks all the doors when all of the following occur:

- All doors are closed.
- The ignition is on.

- You shift into any gear putting your vehicle in motion.
- Your vehicle's speed is greater than 12 mph (20 km/h).

Autolock repeats when:

- You open then close any door while the ignition is on and your vehicle's speed is less than 9 mph (15 km/h).
- Your vehicle's speed is greater than 12 mph (20 km/h).

## Enabling or Disabling

To enable or disable the autolock feature, contact an authorized dealer.

## Autounlock

Autounlock unlocks all the doors when all of the following occur:

- The ignition is on, all the doors are closed, and your vehicle has been moving at a speed greater than 12 mph (20 km/h).
- You stop your vehicle and switch the ignition off or to accessory.
- You open the driver door within 10 minutes of switching the ignition off or to accessory.

**Note:** *The doors do not autounlock if you electronically lock your vehicle after you switch the ignition off and before you open the driver door.*

## Enabling or Disabling

You can enable or disable the autounlock feature in the information display or an authorized dealer can do it for you. See **General Information** (page 105).

# Locks

## Illuminated Entry

The interior lamps and some exterior lamps illuminate when you unlock the doors with the remote control.

The lamps turn off if:

- The ignition is on.
- You press the remote control lock button.
- 25 seconds have elapsed.

The lamps do not turn off if:

- You turn them on with the lamp control.
- Any door is open.

## Illuminated Exit

The interior lamps and some exterior lamps illuminate when all doors are closed and you switch the ignition off.

The lamps will turn off if all the doors remain closed and:

- 25 seconds have elapsed.
- You press the push button ignition switch.

## Battery Saver

If you leave the courtesy lamps, interior lamps or headlamps on, the battery saver shuts them off 10 minutes after you switch the ignition off.

### Battery Saver for Intelligent Access Keys

If you leave the ignition switched on, it shuts off when it detects a certain amount of battery drain, or after 45 minutes.

## POWER LIFTGATE

### WARNINGS



It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a crash, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Make sure everyone in your vehicle is in a seat and properly using a safety belt. Failure to follow this warning could result in serious personal injury or death.

### WARNINGS



Make sure to close and latch the liftgate to prevent drawing exhaust fumes into your vehicle. This will also prevent passengers and cargo from falling out. If you must drive with the liftgate open, keep the vents or windows open so outside air comes into your vehicle. Failure to follow this warning could result in serious personal injury.



Keep keys out of reach of children. Do not allow children to operate or play near an open or moving power liftgate. You should supervise the operation of the power liftgate at all times.

**Note:** Make sure that you close the liftgate before operating or moving your vehicle, especially in an enclosure, like a garage or a parking structure. This could damage the liftgate and its components.

**Note:** Do not hang anything, for example a bike rack, from the glass or liftgate. This could damage the liftgate and its components.

# Locks

The liftgate only operates with the transmission in park (P).

Three warning tones sound as the liftgate begins to power close. If there is a problem with the open or close request, one of the following may occur:

- One chime sounds if the ignition is on and the transmission is not in park (P).
- Three chimes sound if the battery voltage is below the minimum operating voltage.
- One chime sounds if the vehicle speed is at or above 3 mph (5 km/h).

If the liftgate starts to close after it has fully opened, this indicates there may be excessive weight on the liftgate or a possible gas strut failure. A repetitive tone sounds and the liftgate closes under control. Remove any excessive weight from the liftgate. If the liftgate continues to close after opening, have the system checked by an authorized dealer.

## Opening and Closing the Liftgate

### WARNING



Make sure all persons are clear of the power liftgate area before using the power liftgate control.

**Note:** *Be careful when opening or closing the liftgate in a garage or other enclosed area to avoid damaging the liftgate.*

**Note:** *Do not leave the liftgate open while driving. This could damage the liftgate and its components.*

### From the Instrument Panel



Press the button on the instrument panel.

### With the Remote Control



Press the button twice within three seconds.

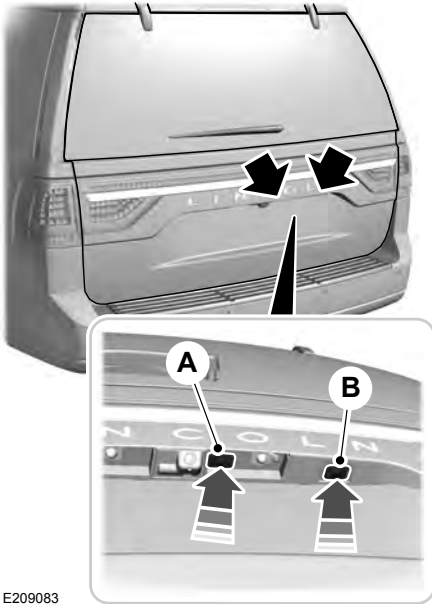
## With the Outside Control Button

### Opening the Liftgate

1. Unlock the liftgate with the remote control or power door unlock control. If an intelligent access key is within 3 ft (1 m) of the liftgate, the liftgate unlocks when you press the liftgate release button.

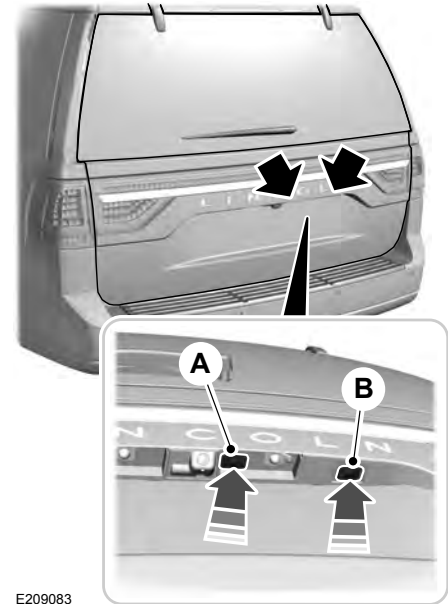
## Locks

**Note:** Allow the system to open the liftgate. Manually pushing or pulling the liftgate may turn on obstacle detection and stop the power operation or reverse its direction. Manually interfering with the liftgate motion may also replicate a gas strut failure.



2. Press button A.

### Opening the Liftgate Window



1. Press button B.
2. Pull the liftgate glass upward.

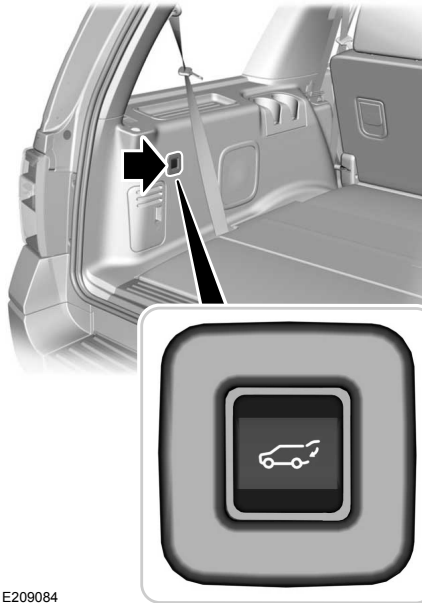
# Locks

## Closing the Liftgate

### WARNING



Keep clear of the liftgate when activating the rear switch.



E209084

Press and release the button in the rear cargo area.

## Stopping the Liftgate Movement

You can stop the liftgate movement by doing any of the following:

- Pressing the liftgate control button.
- Pressing the liftgate button on the remote control twice.
- Pressing the liftgate button on the instrument panel.
- Activating the obstacle detection feature.

## Obstacle Detection

### When Closing

The system stops when it detects an obstacle. Three chimes sound and the system reverses to open. Once you remove the obstacle, you can power close the liftgate.



# Locks

**Note:** *Entering your vehicle while the liftgate is closing can cause your vehicle to bounce and activate obstacle detection. To prevent this, let the power liftgate close completely before you enter your vehicle. Before driving off, check the instrument cluster for a liftgate or door ajar message or warning indicator. Failure to do this could result in unintentionally leaving the liftgate open while driving.*

## When Opening

The system stops when it detects an obstacle and two short tones sound. Remove the obstacle to operate the liftgate.

## KEYLESS ENTRY

### SECURICODE™ KEYLESS ENTRY KEYPAD

The keypad is located near the driver window.

**Note:** *If you enter your entry code too fast on the keypad, the unlock function may not work. Re-enter your entry code more slowly.*



E163050

You can use the keypad to lock or unlock the doors without using a key.

For vehicles without intelligent access, you can operate the keypad with the factory-set 5-digit entry code. The code is located on the owner's wallet card in the glove box and is available from an authorized dealer. You can also create up to five of your own 5-digit personal entry codes.

For vehicles with intelligent access, you do not need to enter a 5-digit entry code. Press any button on keyless entry keypad once to unlock all doors.

**Note:** *You must have an intelligent access key within 3 ft (1 m) of your vehicle.*

## Programming a Personal Entry Code

To create your own personal entry code:

1. Enter the factory-set code.
2. Press **1-2** on the keypad within five seconds.
3. Enter your personal 5-digit code. You must enter each number within five seconds of each other.
4. Press **1-2** on the keypad to save personal code 1.

The doors will lock then unlock to confirm that programming was successful.

To program additional personal entry codes, repeat Steps 1-3, then for Step 4:

- press **3-4** to save personal code 2
- press **5-6** to save personal code 3
- press **7-8** to save personal code 4
- press **9-0** to save personal code 5.

You may also program a personal entry code through the information display.

# Locks

## Tips:

- Do not set a code that uses five of the same number.
- Do not use five numbers in sequential order.
- The factory-set code will work even if you have set your own personal code.

## Recalling Memory Positions (If Equipped)

The programmed entry codes will recall driver memory positions as follows:

- Entry code 1 will recall driver 1 memory positions.
- Entry code 2 will recall driver 2 memory positions.

**Note:** *Personal entry codes 3, 4 and 5 will not recall memory positions.*

## Erasing a Personal Code

1. Enter the factory-set 5-digit code.
2. Press and release **1-2** on the keypad within five seconds.

3. Press and hold **1-2** for two seconds. You must do this within five seconds of completing Step 2.

All personal codes will erase and only the factory-set 5-digit code will work.

## Anti-Scan Feature

The keypad will go into an anti-scan mode if you enter the wrong code seven times (35 consecutive button presses). This mode disables the keypad for one minute and the keypad lamp will flash.

The anti-scan feature will turn off after:

- one minute of keypad inactivity
- pressing the unlock button on the remote control
- switching the ignition on.

## Displaying the Factory Set Code

**Note:** *You will need to have two programmed passive anti-theft keys for this procedure.*

To display the factory-set code in the information display:

1. Insert a key into the ignition and switch the ignition on for a few seconds.
2. Switch the ignition off and remove the key.
3. Insert the second key into the ignition and switch the ignition on.

The factory-set code will display for a few seconds.

**Note:** *The code may not display until after any other warning messages first display.*

## Unlocking and Locking the Doors

### Vehicles Without Intelligent Access

#### To Unlock the Driver Door

Enter the factory-set 5-digit code or your personal code. You must press each number within five seconds of each other. The interior lamps will illuminate.

**Note:** *All doors will unlock if you disable the two-stage unlocking mode. See **Locking and Unlocking** (page 63).*

# Locks

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## ***To Unlock All Doors***

Enter the factory-set code or your personal code, then press **3•4** within five seconds.

## ***To Lock All Doors***

Press and hold **7•8** and **9•0** at the same time (with the driver door closed). You do not need to enter the keypad code first.

## **Vehicles With Intelligent Access**

Press any button on keyless entry keypad once to unlock all doors.

**Note:** *You must have an intelligent access key within 3 ft (1 m) of your vehicle.*

# Security

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## PASSIVE ANTI-THEFT SYSTEM

**Note:** *The system is not compatible with non-Ford aftermarket remote start systems. Use of these systems may result in vehicle starting problems and a loss of security protection.*

**Note:** *Metallic objects, electronic devices or a second coded key on the same key chain may cause vehicle starting problems if they are too close to the key when starting the engine. Prevent these objects from touching the coded key while starting the engine. Switch the ignition off, move all objects on the key chain away from the coded key and restart the engine if a problem occurs.*

**Note:** *Do not leave a duplicate coded key in the vehicle. Always take your keys and lock all doors when leaving the vehicle.*

## SecuriLock™

The system is an engine immobilization system. The intended design is to help prevent the engine from starting unless a coded key programmed to your vehicle is used. Using the wrong key may prevent the engine from starting. A message may appear in the information display.

If you are unable to start the engine with a correctly coded key, a malfunction has happened and a message may appear in the information display.

### Automatic Arming

The vehicle arms immediately after you switch the ignition off.

### Automatic Disarming

If you switch the ignition on with a coded key you disarm the vehicle. If you unlock the doors with the touch handle you disarm the alarm.

## Replacement Keys

**Note:** *Your vehicle comes equipped with two intelligent access keys.*

The intelligent access key functions as a programmed key that operates the driver door lock and activates the intelligent access with push button start system, as well as a remote control.

If your programmed transmitters are lost or stolen and you do not have an extra coded key, you will need to have your vehicle towed to an authorized dealer. You need to erase the key codes from your vehicle and program new coded keys.

Store an extra programmed key away from the vehicle in a safe place to help prevent any inconveniences. See your authorized dealer to purchase additional spare or replacement keys.

### Programming a Spare Intelligent Access Key

See your authorized dealer to have additional keys programmed to your vehicle.

# Security

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## ANTI-THEFT ALARM

The system will warn you of an unauthorized entry to your vehicle. It will be triggered if any door, the luggage compartment or the hood is opened without using the key, remote control or keyless entry keypad.

The direction indicators will flash and the horn will sound if unauthorized entry is attempted while the alarm is armed.

Take all remote controls to an authorized dealer if there is any potential alarm problem with your vehicle.

## Arming the Alarm

The alarm is ready to arm when there is not a key in your vehicle. Electronically lock your vehicle to arm the alarm.

## Disarming the Alarm

Disarm the alarm by any of the following actions:


- Unlock the doors or luggage compartment with the remote control or keyless entry keypad.
- Switch your vehicle on or start your vehicle.
- Use a key in the driver door to unlock your vehicle, then switch your vehicle on within 12 seconds.


**Note:** *Pressing the panic button on the remote control will stop the horn and signal indicators, but will not disarm the system.*

# Power Running Boards

## USING POWER RUNNING BOARDS

### WARNINGS

 In extreme climates, excessive ice buildup may occur, causing the running boards not to deploy. Make sure that the running boards have deployed, and have finished moving before attempting to step on them. The running boards will resume normal function once the blockage is cleared.

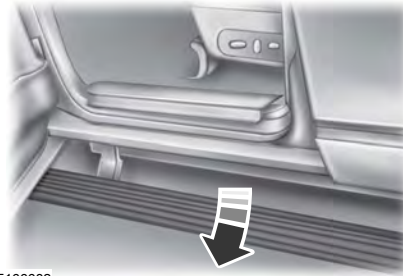
 Turn off the running boards before jacking or placing any object under your vehicle. Never place your hand between the extended running board and your vehicle. A moving running board may cause injury.

**Note:** Do not use the running boards, front and rear hinge assemblies, running board motors, or the running board underbody mounts to lift your vehicle when jacking. Always use proper jacking points.

**Note:** The running boards may operate more slowly in cool temperatures.

**Note:** The running board mechanism may trap debris such as mud, dirt, snow, ice and salt. This may cause unwanted noise. If this happens, manually set the running boards to the deployed position. Then, wash the system, in particular the front and rear hinge arms, with a high-pressure car wash wand.

### Automatic Power Deploy



E166682

The running boards automatically extend down and out when you open the door. This can help you enter and exit your vehicle.

### Automatic Power Stow

When you close the doors, the running boards return to the stowed position after a two-second delay.

### Manual Power Deploy

You can manually operate the running boards in the information display. See **General Information** (page 105).

Set the running boards in the deployed position to access the roof.

The running boards return to the stowed position and enter automatic mode when the vehicle speed exceeds 5 mph (8 km/h).

### Enabling and Disabling

You can enable and disable the power running board feature in the information display. See **General Information** (page 105).

# Power Running Boards

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- When disabled (**OFF**), the running boards move to the stowed position regardless of the door position.
- When enabled (**AUTO**), the running boards move back to the correct positions based on the door position.

## **Bounce-back**


The running board will reverse direction and move to the end of travel if it encounters an object while moving.

# Steering Wheel

## ADJUSTING THE STEERING WHEEL

**Note:** Make sure that you are sitting in the correct position. See **Sitting in the Correct Position** (page 132).

### WARNING

 Do not adjust the steering wheel when your vehicle is moving.



E161834

Use the control on the side of the steering column to adjust the position.

To adjust:

- Tilt: Press the top or bottom of the control.
- Telescope: Press the front or rear of the control.

### End of Travel Position

The steering column sets a stopping position just short of the end of the column position to prevent damage to the steering column. A new stopping position sets if the steering column encounters an object when tilting or telescoping.

To reset the steering column to its normal stopping position:

1. Confirm there is nothing obstructing the motion of the steering column.
2. Press and hold the steering column control until the steering column stops moving.
3. Press the steering column control again. The steering column may begin to move again.

4. When the steering column stops, continue holding the control for an additional few seconds.

5. Repeat for each direction as necessary.

A new stopping position is set. The next time you tilt or telescope the steering column, it will stop just short of the end of the column position.

### Memory Feature

You can save and recall the steering column position with the memory function. See

**Memory Function** (page 135).

**Note:** Pressing the adjustment control during memory recall cancels the operation.

### Easy Entry and Exit Feature

When you switch the ignition off, the steering column will move to allow extra room to exit your vehicle. The column will return to the previous setting when you switch the ignition on. You can enable or disable this feature in the information display. See **Information Displays** (page 105).



# Steering Wheel

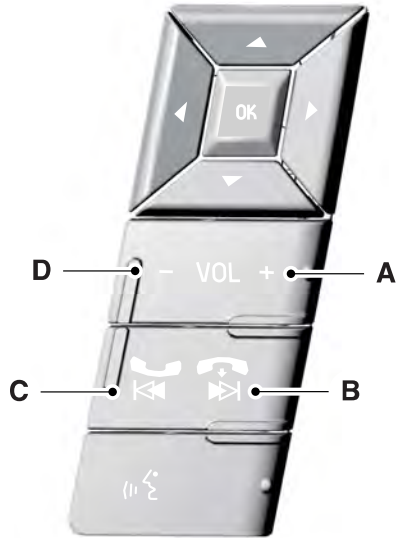
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## **AUDIO CONTROL**

Operate the following functions with the control:

# Steering Wheel

## Type One



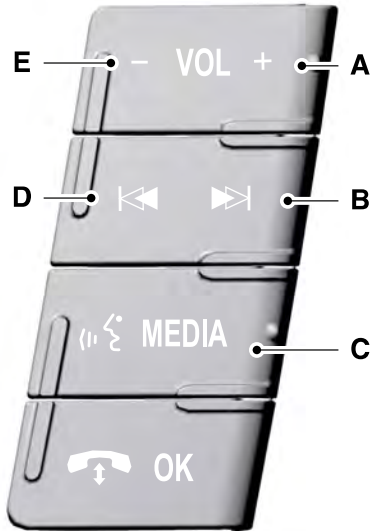
- B Seek up or next.
- C Seek down or previous.
- D Volume down.

A Volume up.

E205755

# Steering Wheel

## Type Two



E205756

A Volume up.

- B Seek up or next.
- C Media.
- D Seek down or previous.
- E Volume down.

### Media

Press repeatedly to scroll through available audio sources.

### Seek, Next or Previous

Press the seek button to:

- Tune the radio to the next or previous stored preset.
- Play the next or the previous track.

Press and hold the seek button to:

- Tune the radio to the next station up or down the frequency band.
- Seek through a track.

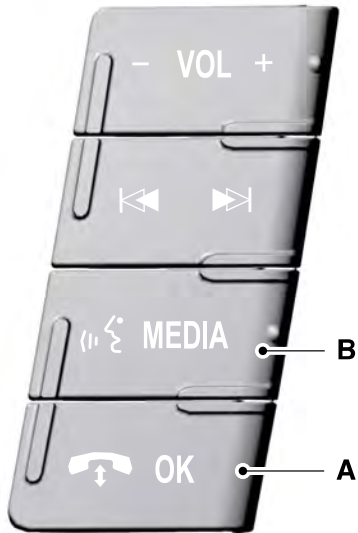
# Steering Wheel

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## VOICE CONTROL

### Type One

- A Phone mode.
- B Voice recognition.



E205757

# Steering Wheel

## Type Two

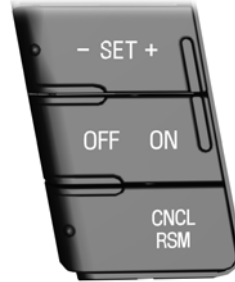


E205758

A Phone mode.

B Voice recognition.

## CRUISE CONTROL



E205805

See **Cruise Control** (page 200).

## INFORMATION DISPLAY CONTROL



E205806

See **Information Displays** (page 105).

## HEATED STEERING WHEEL (If Equipped)

See your MyLincoln Touch information.

# Pedals

## ADJUSTING THE PEDALS

### WARNING

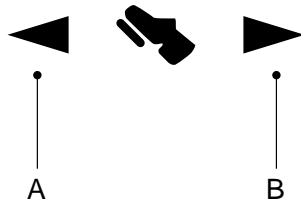


Never use the controls while your feet are on the accelerator and brake pedals and the vehicle is moving.

You can find the control on the left side of the steering column. Press and hold the appropriate side of the control to move the pedals.

You can save and recall the pedal positions with the memory feature. See **Memory Function** (page 135).

**Note:** *Adjust the pedals only when your vehicle is in **P** (Park).*



E162916

A. Farther

B. Closer

# Wipers and Washers

## WINDSHIELD WIPERS

**Note:** Fully defrost the windshield before you switch the windshield wipers on.

**Note:** Make sure you switch the windshield wipers off before entering a car wash.

**Note:** Clean the windshield and wiper blades if they begin to leave streaks or smears. If that does not resolve the issue, install new wiper blades. See **Changing the Wiper Blades** (page 278).

**Note:** Do not operate the wipers on a dry windshield. This may scratch the glass, damage the wiper blades or cause the wiper motor to burn out. Always use the windshield washers before wiping a dry windshield.



E205527

Rotate the end of the control:

- Away from you to increase the wiper speed.
- Toward you to decrease the wiper speed.

## Speed Dependent Wipers

When your vehicle speed increases, the interval between wipes decreases.

## AUTOWIPERS

**Note:** Fully defrost the windshield before switching on the windshield wipers.

**Note:** Make sure you switch off the windshield wipers before entering a car wash.

**Note:** Clean the windshield and wiper blades if they begin to leave streaks or smears. If that does not resolve the issue, install new wiper blades. See **Changing the Wiper Blades** (page 278).

Wet or winter driving conditions with ice, snow or salty road mist can cause inconsistent and unexpected wiping or smearing. In these conditions, you can do the following to help keep your windshield clear:

- Lower the sensitivity of the autowipers to reduce the amount of smearing.
- Switch to normal or high-speed wipe.
- Switch the autowipers off.

The autowipers feature uses a rain sensor, located in the area around the interior mirror. The rain sensor monitors the amount of moisture on the windshield and automatically turns on the wipers. It adjusts the wiper speed by the amount of moisture that the sensor detects on the windshield.

**Note:** This autowiper feature is automatically set to on and remains on until you switch it off in the information display. You can also switch the feature back on at any time. See **General Information** (page 105).

# Wipers and Washers

Use the rotary control to adjust the sensitivity of the rain sensor. Set the control to low sensitivity, and the wipers will turn on when the rain sensor detects a large amount of moisture on the windshield. Set the control to high sensitivity, and the wipers will turn on when the rain sensor detects a small amount of moisture on the windshield.

**Note:** When you set the wiper system to intermittent wipe and the autowiper system is on, the autowiper sensitivity setting adjusts the wiper speed according to the moisture on the windshield only. Use the wiper lever to wipe the windshield on-demand.

Keep the outside of the windshield clean. The rain sensor is very sensitive. If the area around the mirror is dirty, then the wipers may operate if dirt, mist or insects hit the windshield.

## WINDSHIELD WASHERS

**Note:** Do not operate the wipers on a dry windshield. This may scratch the glass, damage the wiper blades or cause the wiper motor to burn out. Always use the windshield washers before wiping a dry windshield.

**Note:** Do not operate the washers when the washer reservoir is empty. This may cause the washer pump to overheat.



E205528

Press the end of the wiper lever to activate the washer:

- A brief press causes a single wipe without washer fluid.
- A quick press and hold causes the wipers to swipe the windshield three times with washer fluid.
- A long press and hold activates the wipers and washer fluid for up to 10 seconds.

A wipe occurs a few seconds after washing to clear any remaining washer fluid. You can switch this feature on and off through the information display. See **Information Displays** (page 105).

## REAR WINDOW WIPER AND WASHERS

### Rear Window Wiper

**Note:** Make sure you switch off the wiper system before using an automatic car wash.



# Wipers and Washers



E205529

Rotate the control to select:

- 2 Intermittent operation - the shortest pause between wipes.
- 1 Intermittent operation - the longest pause between wipes.
- 0 Off.

## Rear Window Washer



E205529

# Lighting

## GENERAL INFORMATION

### Condensation in Lamp Assemblies

Exterior lamps have vents to accommodate normal changes in air pressure.

Condensation can be a natural by-product of this design. When moist air enters the lamp assembly through the vents, there is a possibility that condensation can occur when the temperature is cold. When normal condensation occurs, a fine mist can form on the interior of the lens. The fine mist eventually clears and exits through the vents during normal operation.

Clearing time may take as long as 48 hours under dry weather conditions.

Examples of acceptable condensation are:

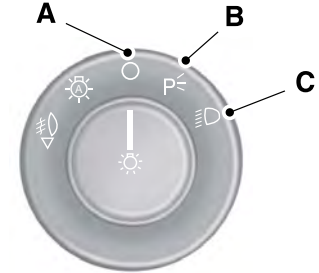
- The presence of a fine mist (no streaks, drip marks or large droplets).
- A fine mist covers less than 50% of the lens.

Examples of unacceptable condensation are:

- A water puddle inside the lamp.
- Streaks, drip marks or large droplets present on the interior of the lens.

If you see any unacceptable condensation, have your vehicle checked by an authorized dealer.

## LIGHTING CONTROL

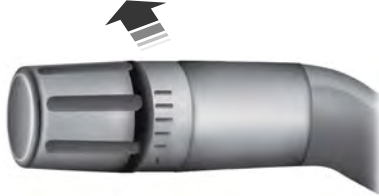


E173257

- A Off.
- B Parking lamps, instrument panel lamps, license plate lamps and tail lamps.
- C Headlamps.

# Lighting

## High Beams

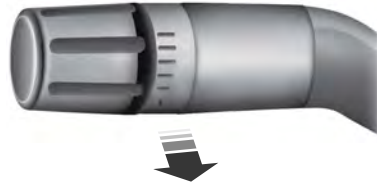


E167827

Push the lever away from you to switch the high beam on.

Push the lever away from you again or pull the lever toward you to switch the high beam off.

## Headlamp Flasher



E163268

Slightly pull the lever toward you and release it to flash the headlamps.

## AUTOLAMPS

### WARNING



The autolamps switch position may not activate the headlamps in all low visibility conditions, such as daytime fog. Make sure the headlamps are switched to auto or on, as appropriate, during all low visibility conditions. Failure to do so may result in a crash.



E173258

When the lighting control is in the autolamps position, the headlamps automatically turn on in low light situations or when the wipers activate.

If equipped, the following also activate when the lighting control is in the autolamps position and you switch them on in the information display:

- Configurable daytime running lamps.
- Automatic high beam control.
- Adaptive headlamp control.

# Lighting

The headlamps remain on for a period of time after you switch the ignition off. Use the information display controls to adjust the period of time that the headlamps remain on. See **Information Displays** (page 105).

**Note:** *With the headlamps in the autolamps position, you cannot switch the high beam headlamps on until the autolamps system turns the low beam headlamps on.*

## Windshield Wiper Activated Headlamps

The windshield wiper activated headlamps turn on within 10 seconds when you switch the windshield wipers on and the lighting control is in the autolamps position. They turn off approximately 60 seconds after you switch the windshield wipers off.

The headlamps do not turn on by wiper activation:

- During a mist wipe.
- When the wipers are on to clear washer fluid during a wash condition.
- If the wipers are in intermittent mode.

**Note:** *If you switch autolamps and autowipers on, the headlamps will automatically turn on when the windshield wipers continuously operate.*

## INSTRUMENT LIGHTING DIMMER



E163270

Use to adjust the brightness of the instrument panel and all applicable lit components in the vehicle during headlamp and parking lamp operation.

- Tap the top or bottom of the control to brighten/dim all interior lit components incrementally, or
- Press and hold at the first position the top or bottom of the control until the desired lighting level is reached.
- Press and hold the top of the control to the full on position to activate the “dome on” feature. This will turn on the interior courtesy lights. The lights will remain on until the bottom of the control is pressed.

## DAYTIME RUNNING LAMPS

### WARNING



The daytime running lamps system does not activate the rear lamps and may not provide adequate lighting during low visibility driving conditions. Also, the autolamps switch position may not activate the headlamps in all low visibility conditions, such as daytime fog. Make sure the headlamps are switched to auto or on, as appropriate, during all low visibility conditions. Failure to do so may result in a crash.

# Lighting

## Type 1 - Conventional (Non-Configurable)

The daytime running lamps turn on when:

1. The ignition is switched to the on position.
2. The transmission is not in park (P) for vehicles with automatic transmissions or the parking brake is released for vehicles with manual transmissions.
3. The lighting control is in the off, parking lamp or autolamps positions.
4. The headlamps are off.

## Type 2 - Configurable

Switch the daytime running lamps on or off using the information display controls. See **Information Displays** (page 105).

The daytime running lamps turn on when:

1. They are switched on in the information display. See **Information Displays** (page 105).
2. The ignition is switched to the on position.

3. The transmission is not in park (P) for vehicles with automatic transmissions or the parking brake is released for vehicles with manual transmissions.
4. The lighting control is in the autolamps position.
5. The headlamps are off.

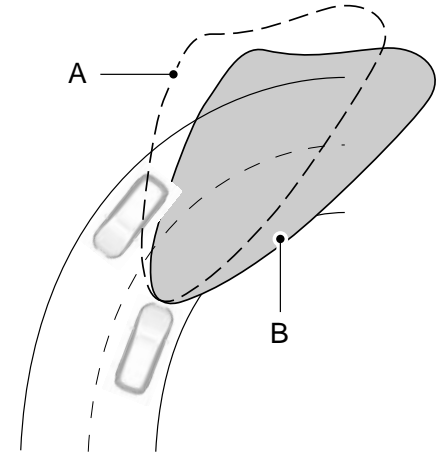
The other lighting control switch positions do not activate the daytime running lamps, and you can use them to temporarily override autolamp control.

When switched off in the information display, the daytime running lamps are off in all lighting control switch positions.

## ADAPTIVE HEADLAMPS

The headlamp beams move in the same direction as the steering wheel. This provides more visibility when driving around curves.

- A. Without adaptive headlamps.
- B. With adaptive headlamps.



E161714

The system only works with the lighting control in the autolamp position.

# Lighting

**Note:** *There is a delay of two to five seconds before the system operates when you drive your vehicle.*

**Note:** *The system is only active at speeds above 3 mph (5 km/h).*

The system has a power-up movement check feature. When you start your vehicle, the lamps track left to right, then back to center to alert the driver that the system is working properly.

## DIRECTION INDICATORS



E163272

- To operate the left-hand direction indicator, push the lever down until it stops.
- To operate the right-hand direction indicator, push the lever up until it stops.
- To manually cancel direction indicator operation, push the lever again in either direction.

## Lane Change

To indicate a left or right lane change:

- Push the lever up or down to the first stop position and release. The direction indicator will flash three times and stop.
- Push the lever up or down to the first stop position and hold. The direction indicator will flash for as long as you hold the lever in this position.

## WELCOME LIGHTING

The Lincoln welcome mat projection lights are on the bottom of the exterior mirror housings. They will project an image onto the ground a short distance from your vehicle when welcome lighting or lighted entry turns on.

**Note:** *Moisture, frost and ice build-up or other types of contamination on the surface of the light lens can cause non-permanent distortion or reduced brightness of the image. Do not use abrasive materials to clean the lens.*

## INTERIOR LAMPS

### Front Map Lamps (If equipped)

The map lamps are located on the overhead console. Press the controls on either side of each map lamp to turn on the lamps. The map lamps also light when:

# Lighting

- any door is opened.
- the instrument panel dimmer switch is pressed up until the courtesy lamps come on.
- any of the remote entry controls are pressed and the ignition is off.



E163273

## Rear Dome and Map Lamps



E163274

Your vehicle may have map lamps within the rear dome lamp. Press the switches on either side of the dome lamp to turn the lamps on.


## AMBIENT LIGHTING


Adjust the ambient lighting using the touchscreen.

# Windows and Mirrors

## POWER WINDOWS

### WARNINGS

 Do not leave children unattended in your vehicle and do not let them play with the power windows. They may seriously injure themselves.

 When closing the power windows, you should verify they are free of obstructions and make sure that children and pets are not in the proximity of the window openings.



E163056

**Note:** You may hear a pulsing noise when just one of the windows is open. Lower the opposite window slightly to reduce this noise.

Press the control to open the window.

Lift the control to close the window.

### One-Touch Down

Press the control fully and release it. Press again or lift it to stop the window.

### One-Touch Up


Lift the control fully and release it. Press again or lift it to stop the window.

### Bounce-Back

The window will automatically stop and reverse some distance if it detects an obstacle while closing.

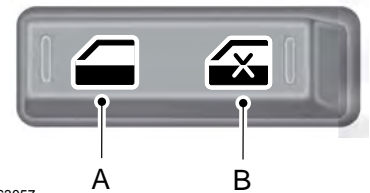
### Overriding the Bounce-Back Feature

#### WARNING

 When you override the bounce-back feature the window will not reverse if it detects an obstacle. Take care when closing the windows to avoid personal injury or damage to your vehicle.

Pull up the window switch and hold within a few seconds of the window reaching the bounce-back position. The window travels up with no bounce-back protection. The window will stop if you release the switch before the window fully closes.

### Window Lock



E163057

- A Unlock.
- B Lock.

Press the control to lock or unlock the rear window controls.



# Windows and Mirrors


## Accessory Delay

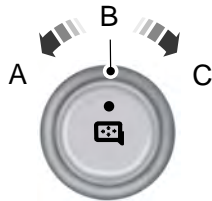
The window switches remain operational for several minutes when you switch the ignition off or until you open either front door.

## EXTERIOR MIRRORS

### Power Exterior Mirrors

#### WARNING

 Do not adjust the mirrors when your vehicle is moving.



E163059

- A Left-hand mirror.
- B Off.
- C Right-hand mirror.

To adjust a mirror:

1. Select the mirror you want to adjust.
2. Move the control in the direction you want to tilt the mirror.
3. Return the control to the center position to lock the mirrors in place.

### Fold-Away Exterior Mirrors

Push the mirror toward the door window glass. Make sure that you fully engage the mirror in its support when returning it to its original position.

### Power-Folding Mirrors



E163060

**Note:** Moving the mirrors 10 or more times within one minute, or repeated folding and unfolding of the mirrors while holding the control down during full travel, may disable the system to protect the motors from overheating. Wait approximately three minutes with the vehicle running, and up to 10 minutes with the vehicle off, for the system to reset and for function to return to normal.

Pull the control back to fold the mirrors in or out.

### Loose Mirror

If you manually fold your power-folding mirrors, they may not work properly even after you re-position them. You need to reset them if:

- The mirrors vibrate when you drive.
- The mirrors feel loose.
- The mirrors do not stay in the folded or unfolded position.
- One of the mirrors is not in its normal driving position.

# Windows and Mirrors

To reset the power-fold feature, use the power-folding mirror control to fold and unfold the mirrors. You may hear a loud noise as you reset the power-folding mirrors. This sound is normal. Repeat this process as needed each time you manually fold the mirrors.

## Heated Exterior Mirrors

See **Heated Windows and Mirrors** (page 130).

## Memory Mirrors

You can save and recall the mirror positions through the memory function. See **Memory Function** (page 135).

## Auto-Dimming Feature

The driver exterior mirror automatically dims with the auto-dimming interior mirror.

## Signal Indicator Mirrors

The outer portion of the appropriate mirror housing blinks when you switch on the direction indicator.

## Blind Spot Monitor

See **Blind Spot Information System** (page 202).

## INTERIOR MIRROR

### WARNING



Do not adjust the mirror when your vehicle is moving.

**Note:** Do not clean the housing or glass of any mirror with harsh abrasives, fuel or other petroleum or ammonia-based cleaning products.

You can adjust the interior mirror to your preference. Some mirrors also have a second pivot point. This lets you move the mirror head up or down and from side to side.

## Auto-Dimming Mirror

**Note:** Do not block the sensors on the front and back of the mirror. Mirror performance may be affected. A rear center passenger or raised rear center head restraint may also block light from reaching the sensor.

The mirror will dim automatically to reduce glare when bright lights are detected from behind your vehicle. It will automatically return to normal reflection when you select reverse gear to make sure you have a clear view when backing up.

## CHILDMINDER MIRROR

On double bin overhead consoles, the conversation mirror allows the driver to view the rear seating area.

### WARNING



Do not use the childminder mirror to view rearward traffic, do not allow rear passengers to distract you from the driving task, and make sure the rear view mirror has a clear view of rearward traffic. Failure to do so could increase the risk of a crash from an unseen vehicle, which may result in serious injury.

# Windows and Mirrors




E205354

Press the release area on the rear edge of the bin door to open the childminder mirror. The door will open to full open position.


The rear view mirror may have to be adjusted to its lower arm position to prevent interference when the childminder mirror is extended down.

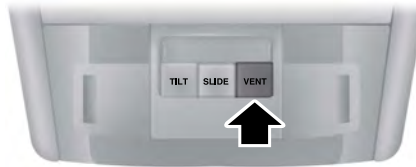
## REAR QUARTER WINDOWS

### WARNINGS

 Do not leave children unattended in your vehicle and do not let them play with the power windows. They may seriously injure themselves.

### WARNINGS

 When closing the power windows, you should verify they are free of obstructions and make sure that children and pets are not in the proximity of the window openings.



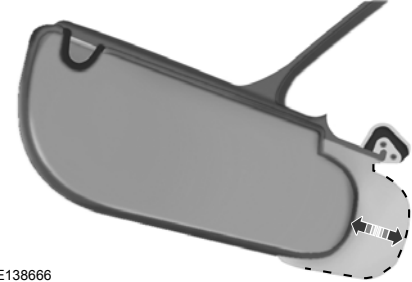
E205283

Press and hold the **VENT** control to open the rear quarter windows.

Pull and hold the **VENT** control to close the rear quarter windows.

**Note:** *Vehicles without a moonroof will only have the **VENT** control.*

## SUN VISORS

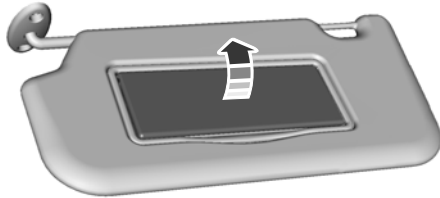


E138666

Rotate the sun visor toward the side window and extend it rearward for extra shade.

# Windows and Mirrors

## Illuminated Vanity Mirror




E162197


Lift the cover to switch the lamp on.

## MOONROOF (If Equipped)

### WARNINGS

 Do not let children play with the moonroof or leave them unattended in the vehicle. They may seriously hurt themselves.

### WARNINGS

 When closing the moonroof, you should verify that it is free of obstructions and make sure that children and pets are not in the proximity of the roof opening.

You can manually open or close the sliding shade when the moonroof is closed. Pull the shade toward the front of your vehicle to close it.

The moonroof controls are located on the overhead console and have a one-touch open and close feature. To stop it during one-touch operation, press the control a second time.

## Opening and Closing the Moonroof



E163063

Press and release the **SLIDE** control to open the moonroof. The moonroof will stop short of the fully opened position.

**Note:** *This position helps to reduce wind noise or rumbling which may happen with the moonroof fully open. Press and release the control again to fully open the moonroof.*

Pull and release the **SLIDE** control to close the moonroof.

# Windows and Mirrors

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## Bounce-Back

The moonroof will stop automatically while closing. It will reverse some distance if there is an obstacle in the way.

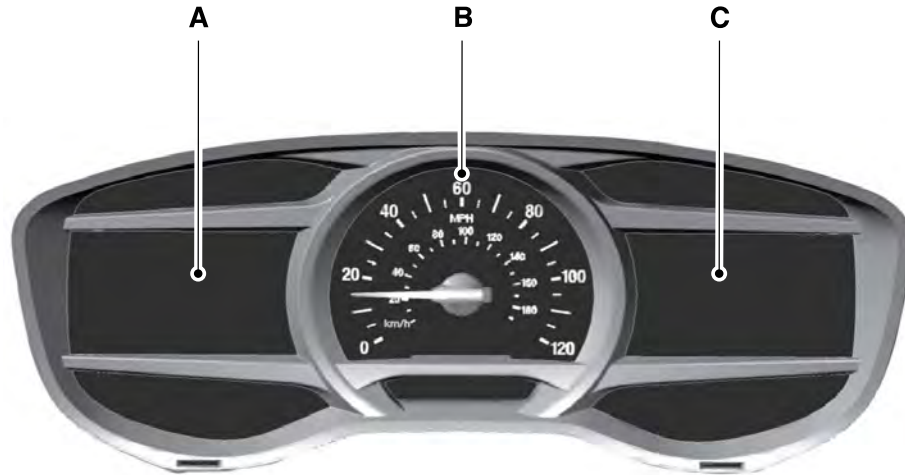
Pull and hold the **SLIDE** control within two seconds of a bounce-back event to override this function. While bounce-back is active, the closing force increases for each of the next three times that you close the moonroof.

## Venting the Moonroof

Press and release the **TILT** control to vent the moonroof. Pull and hold the **TILT** control to close the moonroof.

# Instrument Cluster

## GAUGES



E205350

# Instrument Cluster

---

- A Left Information Display.
- B Speedometer.
- C Right Information Display.

## Left Information Display

### **Odometer**

Located in the bottom of the information display. Registers the accumulated distance your vehicle has traveled.

### **Outside Air Temperature**

Shows the outside air temperature.

### **Trip Computer**

See **General Information** (page 105).

### **Vehicle Settings and Personalization**

See **General Information** (page 105).

### **Fuel Gauge**

**Note:** The fuel gauge may vary slightly when your vehicle is moving or on a gradient.

Switch the ignition on. The fuel gauge indicates approximately how much fuel remains in the fuel tank. The arrow adjacent to the fuel pump symbol indicates on which side of your vehicle the fuel filler door is located.

The needle should move toward F when you refuel your vehicle. If the needle points to E after adding fuel, this indicates your vehicle needs service soon.

After refueling, the needle may not always return to the exact same position. This is normal.

**Note:** It may take a short time for the needle to reach F after leaving the gas station. This is normal and depends upon the slope of pavement at the gas station.

**Note:** The fuel amount dispensed into the tank is a little less or more than the gauge indicated. This is normal and depends upon the slope of pavement at the gas station.

**Note:** If the gas station nozzle shuts off before the tank is full, try a different gas pump nozzle.

**Note:** There is a small reserve left in the tank when the fuel gauge reaches empty.

### **Low Fuel Reminder**

A low reminder displays when the distance to empty reaches 50 miles (80 km) to empty.

**Note:** The low fuel reminder can appear at different fuel gauge positions depending on fuel economy conditions. This variation is normal.

# Instrument Cluster

## WARNING LAMPS AND INDICATORS

The following warning lamps and indicators alert you to a vehicle condition that may become serious. Some lamps illuminate when you start your vehicle to make sure they work. If any lamps remain on after starting your vehicle, refer to the respective system warning lamp for further information.

**Note:** *Some warning indicators appear in the information display and function the same as a warning lamp but do not display when you start your vehicle.*

### Anti-Lock Braking System



If it illuminates when you are driving, this indicates a malfunction. You continue to have the normal braking system (without ABS) unless the brake warning lamp is also illuminated. Have the system checked by an authorized dealer.

### Battery



If it illuminates while driving, it indicates a malfunction. Switch off all unnecessary electrical equipment and have the system checked by an authorized dealer.

### Brake System



It illuminates when you engage the parking brake and the ignition is on.

If it illuminates when you are driving, check that the parking brake is not engaged. If the parking brake is not engaged, this indicates low brake fluid level or a brake system malfunction. Have the system checked immediately by an authorized dealer.

## WARNING



Driving a vehicle with the brake system warning light on is dangerous. A significant decrease in braking performance may occur. It will take you longer to stop the vehicle. Have the vehicle checked by your authorized dealer as soon as possible. Driving extended distances with the parking brake engaged can cause brake failure and the risk of personal injury.

### Cruise Control



It illuminates when you switch this feature on. See **Using Cruise Control** (page 200).

### Direction Indicator



Illuminates when you switch the left or right direction indicator or the hazard warning flasher on. If the indicators stay on or flash faster, check for a burned out bulb.



# Instrument Cluster

## Door Ajar



Displays when the ignition is on and any door is not completely closed.

## Engine Coolant Temperature



Illuminates when the engine coolant temperature is high. Stop the vehicle as soon as possible, switch off the engine and let cool. See **Engine Coolant Check** (page 269).

## Engine Oil



If it illuminates with the engine running or when you are driving, this indicates a malfunction. Stop your vehicle as soon as it is safe to do so and switch the engine off. Check the engine oil level. See **Engine Oil Check** (page 268).

**Note:** Do not resume your journey if it illuminates despite the level being correct. Have the system checked by an authorized dealer.

## Fasten Safety Belt



It illuminates and a chime sounds to remind you to fasten your safety belt.

## Front Airbag



If it fails to illuminate on startup, continues to flash or remains on, it indicates a malfunction. Have the system checked by an authorized dealer. A chime sounds when there is a malfunction in the indicator light.

## High Beam



It illuminates when the headlamp high beam is switched on. It flashes when you use the headlamp flasher.

## Hill Descent (If Equipped)



Illuminates when you switch hill descent on.

## Liftgate Ajar



Lights when the liftgate is not completely closed.

## Low Fuel Level



It illuminates when the fuel level is low or near empty. Refuel as soon as possible.

## Low Tire Pressure Warning



It illuminates when your tire pressure is low. If the lamp remains on with the engine running or when driving, check your tire pressure as soon as possible.

The lamp also illuminates momentarily when you switch the ignition on to confirm the lamp is functional. If it does not illuminate when you switch the ignition on, or begins to flash at any time, have the system checked by an authorized dealer.

# Instrument Cluster

## Low Washer Fluid



It illuminates when the windshield washer fluid is low.

## Parking Lamps



It illuminates when you switch the parking lamps on.

## Powertrain Fault



Illuminates when a powertrain fault has been detected. Contact an authorized dealer as soon as possible.

## Service Engine Soon



If the service engine soon indicator light stays illuminated after you start the engine, it indicates that the On Board Diagnostics system (OBD) has detected a malfunction of the vehicle emissions control system. Refer to On Board Diagnostics (OBD) in the Fuel and Refueling chapter for more information about having your vehicle serviced. See **Emission Control System** (page 168).

If the light is blinking, engine misfire is occurring which could damage your catalytic converter. Drive in a moderate fashion (avoid heavy acceleration and deceleration) and have your vehicle serviced immediately.

### WARNING



Under engine misfire conditions, excessive exhaust temperatures could damage the catalytic converter, the fuel system, interior floor coverings or other vehicle components, possibly causing a fire. Have an authorized dealer service your vehicle immediately.

The service engine soon indicator light illuminates when you first switch on the ignition before engine start to check the bulb and to indicate whether the vehicle is ready for Inspection/Maintenance (I/M) testing.

Normally, the service engine soon light stays on until you crank the engine, then turns itself off if no malfunctions are present. However, if after 15 seconds the service engine soon light blinks eight times, it means that the vehicle is not ready for I/M testing. See **Emission Control System** (page 168).

## Stability Control System



Displays when the AdvanceTrac®/Traction control is active. If the light remains on, have the system serviced immediately. See **Using Stability Control** (page 190).

## Stability Control System Off



Illuminates when you disable AdvanceTrac™/Traction control. See **Using Stability Control** (page 190).

# Instrument Cluster

## Transmission Tow/Haul (If Equipped)

**TOW  
HAUL**

Illuminates when you activate the tow/haul feature. If the light flashes steadily, have the system serviced immediately. Damage to the transmission could occur. See **Automatic Transmission** (page 171).

## 4X2

**4x2**

Illuminates momentarily when you engage two-wheel drive high. If the light fails to display or remains on when the ignition is on, have the system serviced immediately by an authorized dealer.

## 4X4 Auto

**4x4  
AUTO**

Illuminates when you engage the four-wheel drive system. If the light fails to display or remains on when the ignition is on, have the system serviced immediately by an authorized dealer.

## 4X4 HIGH

**4x4  
HIGH**

Illuminates when you engage four-wheel drive high. If the light fails to display or remains on when the ignition is on, have the system serviced immediately by an authorized dealer.

## AUDIBLE WARNINGS AND INDICATORS

### Key in Ignition Warning Chime

Sounds when you leave the key in the ignition and the driver door open.

### Headlamps On Warning Chime

Sounds when the headlamps or parking lamps are on, the ignition is off (the key is not in the ignition) and the driver door is open.

## Parking Brake On Warning Chime

Sounds when you have left the parking brake on and drive your vehicle. If the warning chime remains on after you have released the parking brake, have the system checked by an authorized dealer immediately.

## Direction Indicator Chime

Sounds when you leave the direction indicator on after signaling a turn and driving the vehicle more than 1.5 miles (2.4 km).

# Information Displays

## GENERAL INFORMATION

### WARNING



Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation of your vehicle. We recommend against the use of any handheld device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.

You can control various systems on your vehicle using the information display controls on the steering wheel. Corresponding information shows in the information display.



E205352

- Press the up and down arrow buttons to scroll through and highlight the options within a menu.
- Press the right arrow button to enter a sub-menu.
- Press the left arrow button to exit a menu.
- Press the **OK** button to choose and confirm a setting or message.

The arrows in the upper left corner of the display indicate additional content available when lit.

### Main menu

From the main menu bar on the left side of the information display, you can choose from the following categories:

- Display Mode.
- Trip/Fuel.
- Towing.
- Off Road.
- Settings.

Scroll up/down to highlight one of the categories, then press the right arrow key or OK to enter into that category. Press the left arrow key as needed to exit back to the main menu.

### Display Mode

Use the arrow buttons to choose between the following display options.

# Information Displays

Display Mode
Digital tachometer and fuel level gauge
Digital tachometer, fuel level gauge and engine coolant temperature gauge
Gauge Detail (Oil pressure, Oil temperature and Transmission temperature)
Engine Hours (Engine hours and Engine idle hours)
Oil Life
Distance to Empty
Digital Speedometer - Press OK to change the currently units displayed

## Trip/Fuel

**Note:** Press and hold **OK** to reset the currently displayed information.

Use the arrow buttons to choose between the following trip and fuel options.

Trip/Fuel
Trip 1 or Trip 2
Fuel Economy
Fuel History

# Information Displays

- Fuel Economy - Shows your instantaneous fuel usage as a bar graph and average mpg.
- Fuel History - Shows your fuel usage based on time. The graph is updated each minute with the fuel economy that you achieved during 30 minutes of driving.

## Towing

Use the arrow buttons to configure different towing setting choices.

**Note:** Some options may appear slightly different or not at all if the items are optional.

Towing		
Trailer Status	Trailer disconnected	
	Active trailer name or Default Trailer	
	Accumulated trailer miles	
	Trailer brake gain	
Trailer Options	Trailer Sway Control - check enabled or uncheck disabled	
	Trailer Brake Mode	Elect. Surge, None or Elec. Over Hydraulic
	Change Trailer Selected	Trailers Created
		Default Trailer
		No active trailer
		Press <b>OK</b> to change the selected trailer
	Change Trailer Settings	Rename Trailer
		Reset Trailer Mileage

# Information Displays

Towing		
		Delete Trailer
		Add Trailer
Trailer Setup	Add Trailer	Naming Editor
Connection Checklist	Ball Coupler Connected and locked?	
	Electrical Wiring Connect?	
	Lights Function Correctly?	
	Safety Chains Connected?	
	Tongue Jack Raised?	
	Mirrors Adjusted?	
	TBC gain setting adjusted?	
	Trailer disconnected?	

## Off Road

In this mode, you can view different off road information.

# Information Displays

Off Road
Off Road Status (Pitch, Roll, Wheel Angle)
Power Distribution Gauge – Displays the power distribution to the front and rear axles. The display varies based on 4x4 configuration and driving conditions.

## Settings

**Note:** Some items are optional and may not appear.

In this mode, you can configure different driver setting choices.

Blindspot - check enabled or uncheck disabled				
Cross Traffic Alert - check enabled or uncheck disabled				
Driver Select Suspension		Sport, Normal or Comfort		
DTE Calculation		Normal or Towing		
Front Park Aid - check enabled or uncheck disabled				
Rear Park Aid - check enabled or uncheck disabled				
Advanced Settings	Vehicle	Easy Entry / Exit - check enabled or uncheck disabled		
		Lighting	Autolamp Delay	Select time interval
		Locks	Autolock - check enabled or uncheck disabled	



## Information Displays

			Autounlock - check enabled or uncheck disabled	
			Remote Unlock	All Doors or Driver
		Oil Life	Remaining Life XXX% - Hold OK to reset	
		Power Liftgate	Enable or Disable switch	
		Pwr Running Boards	Auto, Off or Out	
		Remote Start	Climate Control	Auto or Last Setting
			Seats	Auto or Off
			Duration	5, 10 or 15 minutes
			System - check enabled or uncheck disabled	
		Wipers	Courtesy Wipe - check enabled or uncheck disabled	
			Rain Sensing - check enabled or uncheck disabled	
	MyKey*	MyKey Status	Number of Admin Keys, MyKeys and MyKey Mileage	
		Create MyKey	Hold <b>OK</b> to Create MyKey	
		911 Assist	Always On or User Selectable	
		Do Not Disturb	Always On or User Selectable	
		Traction Control	Always On or User Selectable	

# Information Displays

		Max Speed	65 MPH (105 km/h), 70 MPH (110 km/h), 75 MPH (120 km/h), 80 MPH (130 km/h) or Off
		Speed Minder	45 mph (72 km/h), 55 mph (89 km/h), 65 mph (105 km/h) or Off
		Volume Limiter - check enabled or uncheck disabled	
		Clear MyKeys	Hold <b>OK</b> to Clear All MyKeys
	Display Setup	Distance	Miles & GAL, L/100km or km/L
		Temperature	°Fahrenheit or °Celsius
		Gauge Display	Fuel Gauge or Fuel + Tach
		Language	Select Language - Hold OK to Set

\*Some MyKey items will only appear if a MyKey is set.

## INFORMATION MESSAGES

**Note:** Depending on the vehicle options equipped with your vehicle, not all of the messages display or are available. Certain messages may be abbreviated or shortened depending upon which cluster type you have.

# Information Displays



E205353

Press the **OK** button to acknowledge and remove some messages from the information display. Other messages automatically clear after a short time.

You need to confirm certain messages before you can access the menus.

## AdvanceTrac™ / Traction Control Messages

Message	Action
Traction control off/Traction control on	Displays when you switch the traction control system off or on. See <b>Using Traction Control</b> (page 187).
Service AdvanceTrac	Displays when the system detects a condition that requires service. Contact an authorized dealer as soon as possible.
AdvanceTrac Off	Displays when you switch AdvanceTrac off.
AdvanceTrac On	Displays when you switch AdvanceTrac on.

# Information Displays

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## Alarm Messages

Message	Action
Vehicle Alarm to Stop Alarm, Start Vehicle	Displays when unauthorized entry into the vehicle occurs. Switch the ignition on to stop the alarm.

## Battery and Charging System Messages

Message	Action
Check Charging System	Stop your vehicle as soon as it is safe to do so and switch off the ignition. Contact an authorized dealer.
Turn Power Off to Save Battery	Displays to warn of a low 12-volt battery condition. Switch off all unneeded electrical accessories. Contact an authorized dealer.
Low Battery Features Temporarily Turned Off	Displays to warn of a low 12-volt battery condition. Switch off all unneeded electrical accessories.

# Information Displays

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## Blind Spot Information System Messages

Message	Action
Blindspot Not Available Sensor Blocked See Manual	Displays when the blind spot information system/cross traffic alert system sensors are blocked. Driver can typically clean the sensor to resolve.
Blindspot System Fault	Displays when a fault with the blind spot information system occurs. Contact an authorized dealer as soon as possible.
Cross Traffic Not Available Sensor Blocked See Manual	Displays when the blind spot information system/cross traffic alert system sensors are blocked. Driver can typically clean the sensor to resolve.
Cross Traffic System Fault	Displays when a fault with the cross traffic alert system occurs. Contact an authorized dealer as soon as possible.
Cross Traffic Vehicle Coming From X	Displays when the blind spot information system with cross traffic alert (CTA) system is operating and senses a vehicle.

# Information Displays

## Brake System Messages

Message	Action
Brake Fluid Level Low	Indicates the brake fluid level is low and the brake system should be inspected immediately.
Check Brake System	Displays when the brake system needs servicing. If the warning stays on or continues to come on, contact an authorized dealer as soon as possible.
Park Brake Engaged	Displays when the parking brake is set, the vehicle is in ready to drive and the vehicle is driven more than 3 mph (5 km/h). If the warning stays on after you release the parking brake, contact an authorized dealer as soon as possible.

## Door Messages

Message	Action
X Door Ajar	Displays when the door listed is not completely closed.
Liftgate Ajar	Displays when the liftgate or liftglass is not completely closed.
Factory Keypad Code XXXXX	Displays the factory keypad code after the keypad resets.

# Information Displays

## Engine Messages

Message	Action
Power Reduced to Lower Engine Temp	Displays when the engine has reduced power to help reduce high engine temperature.
Engine On	Informs you that you are exiting your vehicle and the engine is on.

## Fuel Messages

Message	Action
Check Fuel Fill Inlet	Displays when the fuel fill inlet may not be properly closed.
Fuel Level Low	Displays as an early reminder of a low fuel condition.

# Information Displays

## Keys and Intelligent Access Messages

Message	Action
No Key Detected	Displays if the system does not detect the intelligent access key in the following three scenarios: When you press the start/stop button in an attempt to either start the engine or cycle through the ignition states. When the engine is running and a door is opened then closed. When the vehicle's speed exceeds 10 mph (16 km/h) for the first time after starting.
Key Programmed x Keys Total	Displays during spare key programming, when an intelligent access key is programmed to the system.
Max Number of Keys Programmed	Displays during spare key programming when the maximum number of keys have been programmed.
Press Brake to Start	Displays when you press the start/stop button without applying the brake pedal. This is a reminder that you must apply the brake pedal when pressing the start/stop button in order to start the engine.
Restart Now or Key is Needed	Displays when you press the start/stop button to shut off the engine and an Intelligent Access Key is not detected inside the vehicle.
Accessory Power Active	Displays when the vehicle is in the accessory ignition state.
Starting System Fault	This message displays when there is a problem with your vehicle's starting system. Contact an authorized dealer for service.



# Information Displays

## Maintenance Messages

Message	Action
LOW Engine Oil Pressure	Stop the vehicle as soon as safely possible and switch off the engine. Check the oil level. If the warning stays on or continues to come on with your engine running, contact an authorized dealer as soon as possible.
Change Engine Oil Soon	Displays when the engine oil life remaining is 10% or less.
Oil Change Required	Displays when the oil life left reaches 0%.
Engine Coolant Overtemperature	Displays when the engine coolant temperature is excessively high.
See Manual	The powertrain needs service due to a powertrain malfunction.
Washer Fluid Level LOW	Displays when the washer fluid is low and needs to be refilled.
Factory Mode Contact Dealer	Your vehicle is still in Factory mode. This may not allow some features to operate properly. Contact an authorized dealer.
Transport Mode Contact Dealer	Your vehicle is still in Transport mode. This may not allow some features to operate properly. Contact an authorized dealer.

# Information Displays

## MyKey™ Messages

Message	Action
MyKey active Drive Safely	Displays when MyKey is active.
Speed Limited to xx MPH/km/h	Displays when starting the vehicle and MyKey is in use and the MyKey speed limit is on.
Near Vehicle Top Speed	Displays when a MyKey is in use and the MyKey speed limit is on and the vehicle speed is approaching 80 mph (130 km/h).
Check Speed Drive Safely	Displays when a MyKey is in use and the optional setting is on and the vehicle exceeds a preselected speed.
Buckle Up to Unmute Audio	Displays when a MyKey is in use and Belt-Minder activates.
Could Not Program Integrated Key	Displays when attempting to program a spare key using two existing MyKeys.
Vehicle at Top Speed of MyKey Setting	You have reached the speed limit set for your MyKey.
AdvanceTrac On MyKey Setting	With a MyKey in use, AdvanceTrac turns on.
Traction Control On MyKey Setting	With a MyKey in use, traction control turns on.
MyKey Park Aid Cannot be Deactivated	MyKey park aid cannot be deactivated with a MyKey in use, park aid is always on.

# Information Displays

## Off Road Messages

Message	Action
For Off Road Slow to 5MPH	Displays when your vehicle speed requirement for off road mode entry has not been met.
Enter Off Road Mode Enabled	Displays when off road mode becomes active.
Exiting Off Road Mode	Displays when off road mode becomes inactive.
Hill Descent Control Off	Displays when hill descent control mode deactivates.
For Hill Descent Reduce Speed	Displays when hill descent speed exceeds 20 MPH (32 KM/H).
For Hill Descent Select Gear	Displays when hill descent control mode requires driver shift transmission into gear.
Hill Descent Driver Resume Control	Displays when the hill control mode requires the driver to resume control.
Hill Descent Control FAULT	Displays when a hill descent system fault is present.
Hill Descent Control OFF System Cooling	Displays when hill descent control mode disables to cool the brake system.
Hill Descent Control Ready	Displays when hill descent control mode activates.

# Information Displays

## Park Aid Messages

Message	Action
Check Park Aid	Displays when the transmission is in reverse (R) and the park aid disables.
Rear Park Aid On Off	Displays the park aid status.
Check Rear Park Aid	Displays when the transmission is in reverse (R) and the park aid disables.
Check Front Park Aid	Displays when the system detects a condition that requires service. See <b>Parking Aids</b> (page 195).
Front Park Aid On Off	Displays the park aid status.

## Power Steering Messages

Message	Action
Steering loss Stop safely	The power steering system detects a condition that requires service. Contact an authorized dealer.
Steering fault Service now	The power steering system detects a condition within the power steering system that requires service immediately. Contact an authorized dealer.
Steering assist fault Service required	The power steering system disables power steering assist due to a system error. Contact an authorized dealer.

# Information Displays

## Remote Start Messages

Message	Action
To Drive: Turn Key to On	Displays as a reminder to turn the key to on to drive the vehicle after a remote start.
To Drive: Press Brake and START Button	Displays as a reminder to apply the brake and the start button to drive the vehicle after a remote start.

## Suspension System Messages

Message	Action
Driver Select Susp. malfunction Service required	Displays when there is a problem with your vehicle's suspension system. Contact an authorized dealer for service.

# Information Displays

## Tire Messages

Message	Action
Tire Pressure LOW	Displays when one or more tires on your vehicle have low tire pressure.
Tire Pressure Monitor Fault	Displays when the tire pressure monitoring system is malfunctioning. If the warning stays on or continues to come on, contact an authorized dealer.
Tire Pressure Sensor Fault	Displays when a tire pressure sensor is malfunctioning or your spare tire is in use. See <b>Wheels and Tires</b> (page 295). If the warning stays on or continues to come on, contact an authorized dealer.

## Trailer Messages

Message	Action
Trailer Brake Gain: XX.X No Trailer	Displays the current gain setting for the trailer brake when a trailer is not connected.
Trailer Brake Module Fault	Displays and a chime sounds in response to faults sensed by the TBC.
Trailer Connected	Displays when a correct trailer connection is sensed during a given ignition cycle.
Trailer Disconnected	Displays when a trailer connection becomes disconnected, either intentionally or unintentionally, and the system senses it during a given ignition cycle. Disregard this status if your vehicle is not equipped with a factory installed trailer brake controller. This message may appear when an aftermarket TBC is used even when the trailer is connected.

## Information Displays

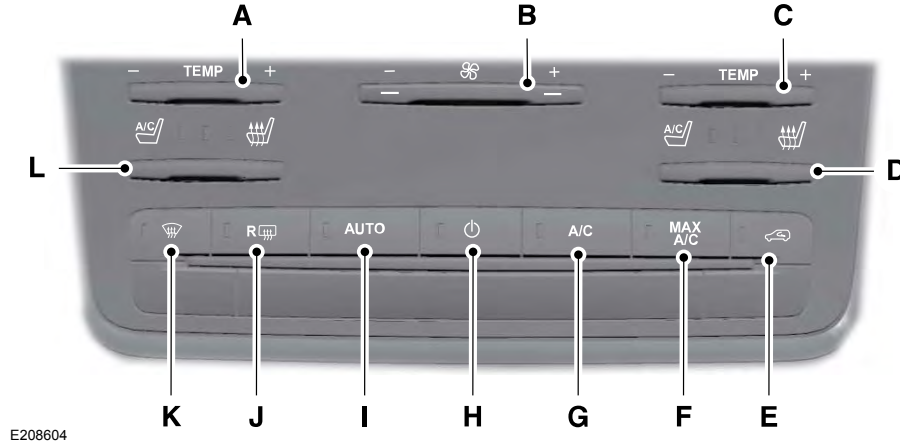
Message	Action
Trailer Sway Reduce Speed	Displays when the trailer sway control detects trailer sway.
Wiring Fault On Trailer	Displays if there are certain faults in your vehicle wiring and the trailer wiring or brake system.
Trailer Brake Gain XX.X	Displays the current gain setting from the trailer brake.
Trailer Lighting Module Fault See Manual	There is a fault with your vehicle trailer lighting module. See <b>Towing a Trailer</b> (page 222).
Trailer Stop Lamps Fault Check Lamps	There is a fault with your trailer stop lamp. Check your lamp.
Trailer Left Turn Lamps Fault Check Lamps	There is a fault with your trailer turn lamp. Check your lamp.
Trailer Right Turn Lamps Fault Check Lamps	There is a fault with your trailer turn lamp. Check your lamp.
Trailer Park Lamps Fault Check Lamps	There is a fault with your trailer park lamp. Check your lamp.
Trailer Battery Not Charging See Manual	There is a fault with your trailer battery. See <b>Towing a Trailer</b> (page 222).

### Transmission Messages

Message	Action
Transmission not in Park	Displays as a reminder to shift into park (P).

# Climate Control

## AUTOMATIC CLIMATE CONTROL



- A **Driver temperature control:** Adjusts the temperature setting using the control on the driver side.
- B **Fan speed control:** Adjusts the volume of air circulated in the vehicle.
- C **Passenger temperature control:** Adjusts the temperature on the passenger side.
- D **Heated seats:** Press the button to switch the heated seats on and off. See **Heated Seats** (page 144).



# Climate Control

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- E **Recirculated air:** Press the button to switch between outside air and recirculated air. The air currently in the passenger compartment recirculates. This can reduce the time needed to cool the interior and reduce unwanted odors from entering your vehicle.  
**Note:** Recirculated air may also turn on and off automatically in instrument panel or instrument panel and floor airflow modes during hot weather to improve cooling efficiency.
- F **MAX A/C:** Press the button for maximum cooling. Recirculated air flows through the instrument panel vents, air conditioning automatically turns on and the fan automatically adjusts to the highest speed.
- G **A/C:** Press the button to switch the air conditioning on or off. Air conditioning cools your vehicle using outside air. To improve the time to reach a comfortable temperature in hot weather, drive with the windows open until you feel cold air through the air vents.  
**Note:** In certain conditions (for example, maximum defrost), the air conditioning compressor may continue to operate even though the air conditioning is switched off.
- H **Power:** Press the button to switch the system on and off. When the system is off, it prevents outside air from entering the vehicle.
- I **AUTO:** Press the button to switch on automatic operation. Adjust to select the desired temperature. Fan speed, air distribution, air conditioning operation, and outside or recirculated air are automatically adjusted to heat or cool the vehicle to maintain the desired temperature. You can also switch off dual zone mode by pressing and holding the button for more than two seconds.
- J **Heated rear window:** Press the button to switch the heated rear window on and off. See **Heated Windows and Mirrors** (page 130).
- K **Defrost:** Select to distribute air through the windshield air vents. Air distribution to the instrument panel and footwell vents turns off. You can also use this setting to defrost and clear the windshield of a thin covering of ice.
- L **Climate controlled seats:** Press the button to switch the climate controlled seats on and off. See **Climate Controlled Seats** (page 145).

# Climate Control

## HINTS ON CONTROLLING THE INTERIOR CLIMATE

### General Hints

**Note:** Prolonged use of recirculated air may cause the windows to fog up.

**Note:** You may feel a small amount of air from the footwell air vents regardless of the air distribution setting.

**Note:** To reduce humidity build-up inside your vehicle, do not drive with the system switched off or with recirculated air always switched on.

**Note:** Do not place objects under the front seats as this may interfere with the airflow to the rear seats.

**Note:** Remove any snow, ice or leaves from the air intake area at the base of the windshield.

**Note:** To improve the time to reach a comfortable temperature in hot weather, drive with the windows open until you feel cold air through the air vents.

### Automatic Climate Control

**Note:** Adjusting the settings when your vehicle interior is extremely hot or cold is not necessary. The system automatically adjusts to heat or cool the cabin to your selected temperature as quickly as possible. For the system to function efficiently, the instrument panel and side air vents should be fully open.

**Note:** If you select **AUTO** during cold outside temperatures, the system directs airflow to the windshield and side window vents. In addition, the fan may run at a slower speed until the engine warms up.

**Note:** If you select **AUTO** during hot outside temperatures, or when the inside of the vehicle is hot, the system automatically uses recirculated air to maximize interior cooling. When the interior reaches the selected temperature, the system automatically switches to using outside air.

### Heating the Interior Quickly

1. Select the **AUTO** function.

2. Adjust the temperature function to the desired setting.

### Recommended Settings for Heating

1. Select the **AUTO** function.
2. Adjust the temperature function to the desired setting. Use 72°F (22°C) as a starting point, then adjust the setting as necessary.

### Cooling the Interior Quickly

1. Select the **MAX A/C** function.

### Recommended Settings for Cooling

1. Select the **AUTO** function.
2. Adjust the temperature function to the desired setting. Use 72°F (22°C) as a starting point, then adjust the setting as necessary.

### Side Window Defogging in Cold Weather

1. Press the defrost button.

# Climate Control

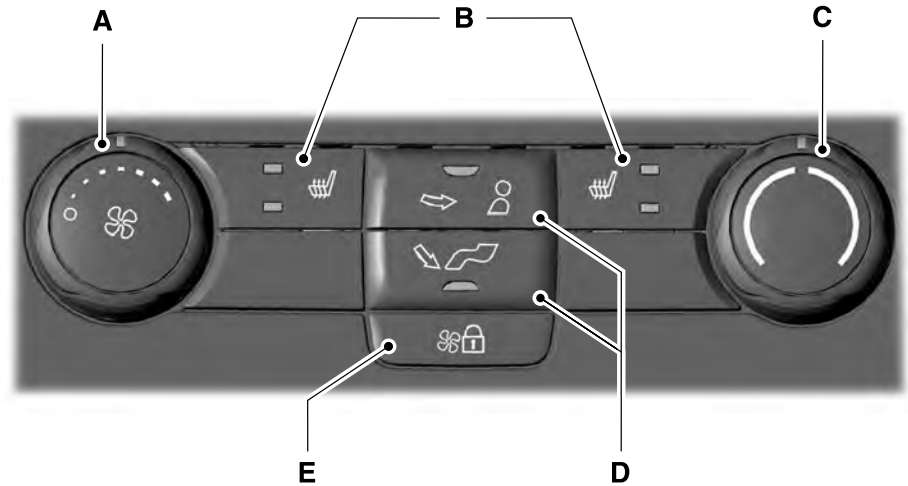
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2. Adjust the temperature control to the desired setting. Use 72°F (22°C) as a

starting point, then adjust the setting as necessary.

# Climate Control

## REAR PASSENGER CLIMATE CONTROLS



E188689

# Climate Control

- A **Fan speed control:** Adjust the volume of air circulated in the vehicle.
- B **Heated seats (if equipped):** Press the button to switch the heated seats on and off. See **Heated Seats** (page 144).
- C **Temperature control:** Control the temperature of the air circulated in your vehicle.
- D **Air distribution control:** Adjust the control to turn airflow from the instrument panel or footwell vents on or off. You can distribute air through any combination of these vents.
- E **Fan speed control lock:** When illuminated, you can only operate the rear passenger settings through the front controls.

## HEATED WINDOWS AND MIRRORS

### Heated Rear Window

**Note:** Make sure the engine is running before operating the heated windows.



Press the button to clear the heated rear window of thin ice and fog. The heated rear window will automatically turn off after a short period of time. Start the engine before you switch the heated rear window on.

**Note:** Do not use razor blades or other sharp objects to clean or remove decals from the inside of the heated rear window. The vehicle warranty does not cover damage caused to the heated rear window grid lines.

### Heated Exterior Mirror (If Equipped)

When you switch the heated rear window on, the heated exterior mirrors will automatically turn on.

**Note:** Do not remove ice from the mirrors with a scraper or adjust the mirror glass when it is frozen in place.

**Note:** Do not clean the mirror housing or glass with harsh abrasives, fuel or other petroleum-based cleaning products.

## REMOTE START

The remote start feature allows you to pre-condition the interior of your vehicle. The climate control system works to achieve comfort according to your previous settings.

**Note:** You cannot adjust the system during remote start operation.

Turn the ignition on to return the system to its previous settings. You can now make adjustments normally, but you need to turn certain vehicle-dependent features back on, such as:

- Heated seats.
- Cooled seats.
- Heated steering wheel.

# Climate Control

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- Heated mirrors.
- Heated rear window.

You can adjust the default remote start settings using the information display controls. See **Information Displays** (page 105).

## Automatic Settings

In hot weather, the system is set to 72°F (22°C). The cooled seats are set to high (if available, and selected to AUTO in the information display).


In moderate weather, the system either heats or cools (based on previous settings). The rear defroster, heated mirrors and heated seats do not automatically turn on.


In cold weather, the system is set to 72°F (22°C). The heated seats are set to high (if available, and selected to AUTO in the information display). The rear defroster and heated mirrors automatically turn on.


# Seats

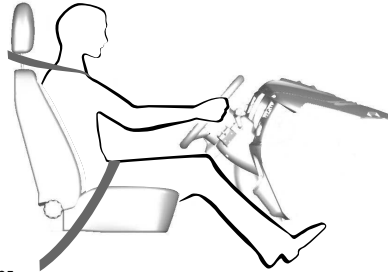
## SITTING IN THE CORRECT POSITION

### WARNINGS

 Sitting improperly, out of position or with the seatback reclined too far can take weight off the seat cushion and affect the decision of the passenger sensing system, resulting in serious injury or death in the event of a crash. Always sit upright against your seat back, with your feet on the floor.

 Do not recline the seatback as this can cause the occupant to slide under the safety belt, resulting in serious injury in the event of a crash.

 Do not place objects higher than the seatback to reduce the risk of serious injury in the event of a crash or during heavy braking.



E68595

When you use them properly, the seat, head restraint, safety belt and airbags will provide optimum protection in the event of a crash.

We recommend that you follow these guidelines:


- Sit in an upright position with the base of your spine as far back as possible.
- Do not recline the seatback more than 30 degrees.
- Adjust the head restraint so that the top of it is level with the top of your head and as far forward as possible. Make sure that you remain comfortable.

- Keep sufficient distance between yourself and the steering wheel. We recommend a minimum of 10 in (25 cm) between your breastbone and the airbag cover.
- Hold the steering wheel with your arms slightly bent.
- Bend your legs slightly so that you can press the pedals fully.
- Position the shoulder strap of the safety belt over the center of your shoulder and position the lap strap tightly across your hips.

Make sure that your driving position is comfortable and that you can maintain full control of your vehicle.

## HEAD RESTRAINTS

### WARNINGS

 Fully adjust the head restraint before you sit in or operate your vehicle. This will help minimize the risk of neck injury in the event of a crash. Do not adjust the head restraint when your vehicle is moving.

# Seats

## WARNINGS

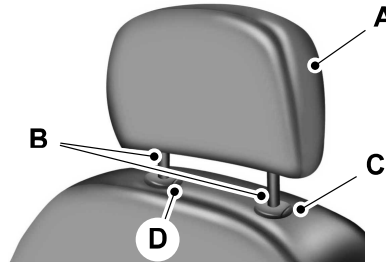


The head restraint is a safety device. Whenever possible it should be installed and properly adjusted when the seat is occupied. Failure to adjust the head restraint properly could reduce its effectiveness during certain impacts.



Install the head restraint properly to help minimize the risk of neck injury in the event of a crash.

**Note:** *Adjust the seatback to an upright driving position before adjusting the head restraint. Adjust the head restraint so that the top of it is level with the top of your head and as far forward as possible. Make sure that you remain comfortable. If you are extremely tall, adjust the head restraint to its highest position.*



E138642

The head restraints consist of:

- A An energy absorbing head restraint.
- B Two steel stems.
- C Guide sleeve adjust and release button.
- D Guide sleeve unlock and remove button.

## Adjusting the Head Restraint

### Raising the Head Restraint

Pull the head restraint up.

### Lowering the Head Restraint

1. Press and hold button C.
2. Push the head restraint down.

### Removing the Head Restraint

1. Pull the head restraint up until it reaches its highest position.
2. Press and hold buttons C and D.
3. Pull the head restraint up.

### Installing the Head Restraint

Align the steel stems into the guide sleeves and push the head restraint down until it locks.

### Second Row Outboard Head Restraints

The outboard head restraints are non-adjustable, but you can fold them.



# Seats



E205038

The non-adjustable head restraints consist of:

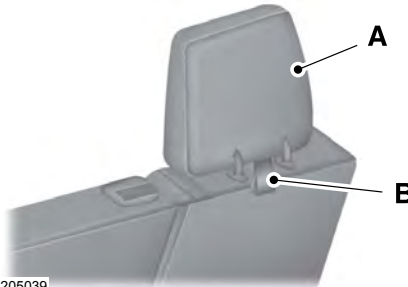
- A trimmed energy absorbing foam and structure (A).
  - A fold strap (B).
1. Pull the strap to fold the outboard head restraint.
  2. Pull the head restraint up to place the head restraint back to the upright position.

## Second Row Center Seat Head Restraint

The center rear head restraint is fixed and non-adjustable. The head restraint consists of a trimmed foam covering over the upper structure of the seatback.

## Third Row Head Restraints

The third row head restraints are non adjustable, but you can fold them.



E205039

The non-adjustable head restraints consist of:

- A trimmed energy absorbing foam and structure (A).
- A fold strap (B).

1. Pull the strap to fold the head restraint.
2. Pull the head restraint up to place the head restraint back to the upright position.

## POWER SEATS

### WARNINGS

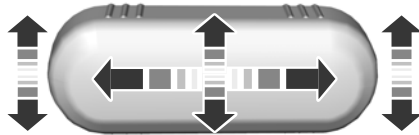


Before returning the seatback to its original position, make sure that cargo or any objects are not trapped behind the seatback.



Do not adjust the driver seat or seatback when your vehicle is moving. Adjusting your seatback while your vehicle is in motion may cause loss of control of your vehicle.

# Seats



E181777

The control is located on the outboard side of the seat. Move the switch in the direction of the arrow to raise or lower the seat cushion or to move the seat forward, backward, up or down.

## Power Recline



E162731

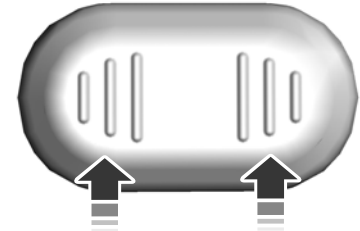
Move the control to recline the seatback forward or rearward.

**Note:** On vehicles with memory seats, to prevent damage to the seat, the power seats are designed to set a stopping position just short of the end of the seat track. If the seat encounters an object while moving forward or backward, a new stopping position will be set.

To reset the seat to its normal stopping position:

1. After encountering the new stopping position, press the power seat control again to override.
2. Continue pressing the control until it reaches the end of the seat track.
3. Continue pressing the control for about two seconds. You will feel the seat bounce back slightly.

## Power Lumbar



E164101

The control is located on the outboard side of the seat. Press the forward or rearward side of the control for more or less support.

## MEMORY FUNCTION

### WARNINGS



Before activating the seat memory, make sure that the area immediately surrounding the seat is clear of obstructions and that all occupants are clear of moving parts.

# Seats

## WARNINGS



Do not use the memory function when your vehicle is moving.

This feature automatically recalls the position of the following:

- Driver seat.
- Power mirrors.
- Power steering column.
- Power adjustable foot pedals.

The memory control is located on the left side of the driver seat.



E205043

## Saving a PreSet Position

1. Switch the ignition on.
2. Adjust the memory features to your desired position.
3. Press and hold the desired preset button until you hear a single tone.

You can save up to two preset memory positions.

You can save a memory preset at any time.

## Recalling a PreSet Position

Switch the ignition on.

Press and release the preset button associated with your desired driving position. The memory features will move to the position stored for that preset.

**Note:** You can only recall preset memory position when you switch the ignition off, or when you place the transmission in park (P) or neutral (N) if you switch the ignition on.

**Note:** If you enable Easy Exit, a memory recall when the ignition is off will move to the easy exit position.

You can also recall a preset memory position by:

- Pressing the unlock button on your remote control if it is linked to a preset position.
- Unlocking the intelligent driver door handle if a linked key fob is present.
- Entering a personal entry code on the Securicode keypad. See **Locks** (page 63).

**Note:** Using a linked key fob to recall your memory position when the ignition is off moves the seat and steering column to the Easy Entry position.

**Note:** Pressing any active memory feature control - power seat, mirror (or steering column switch) (or any memory button) during a memory recall cancels the operation.

## Linking a PreSet Position to your Remote Control or Intelligent Access Key Fob

Your vehicle can save the preset memory positions for up to two remote controls.

# Seats

1. With the ignition on, move the memory positions to the desired positions.
2. Press and hold the desired preset button for about five seconds. A tone will sound after about two seconds. Continue holding until a second tone is heard.
3. Within three seconds, press the lock button on the remote control you are linking.

To unlink a remote control, follow the same procedure – except in step 3, press the unlock button on the remote control.

**Note:** *If more than one linked remote control or intelligent access key is in range, the memory function moves to the settings of the first key to initiate a memory recall.*

## Easy Entry and Exit Feature (If Equipped)

This feature adjusts the position of the seat and steering column to allow easier exit and entry to the vehicle.

The driver seat automatically moves 2 inches (5 centimeters) rearward when the transmission is in park (P) and you remove the key from the ignition or you switch the ignition off.

The driver seat returns to the previous position when you put the key in the ignition or switch the ignition on.

You can enable or disable this feature in the information display. See **Information Displays** (page 105).

## REAR SEATS

### Folding Down the Second Row 40% Seat



Use caution when folding the seatback to the flat back position as the system will move forward when you lift the release handle.

## WARNINGS



Before returning the seatback to its original position, make sure that cargo or any objects are not trapped behind the seatback. After returning the seatback to its original position, pull on the seatback to make sure that it has fully latched. An unlatched seat may become dangerous in the event of a sudden stop or crash.

Make sure that the head restraint is in the down position and no objects such as books, purses or briefcases are on the floor in front of the second row seats before folding them down.

Move the front passenger seat forward so that the second row seat head restraint clears the front seat.

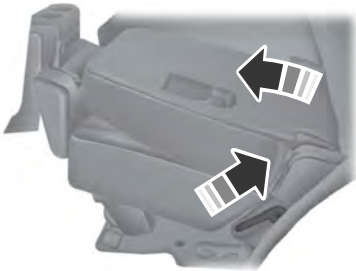
## WARNINGS

## Seats



E190842

1. Lower the head restraints by pulling on the strap.



E205044

2. Locate the handle on the side of the seat cushion by the door.

3. Pull up on the handle and push the seatback forward toward the front of the vehicle.

To return the seat to the upright position:



E205045

1. Lift the seatback toward the rear of the vehicle.
2. Rotate the seatback until you hear a click, locking it in the upright position.





E205046

3. Lift up on the head restraint until it locks into its original position.

### Placing the Second Row Outboard 40% Seats in Cargo Mode

#### WARNINGS

 Use caution when folding the seatback to the flat back position as the system will move forward when you lift the release handle.

 Always return the seat from the kneel position prior to raising the seatback. Failure to do so could result in personal injury.

# Seats

Place the second-row seats in a kneel down load floor position to allow more cargo space.

To place the seats in the cargo mode:

1. Fold down the second row seat.



E205047

2. Pull the cargo mode lever up to release the seat into a kneel down load floor position.

## Returning to the Upright Position from the Full Lowered Load Floor Position

You cannot return the seatback to the upright position until the seat is returned from the kneel down position.

To return the seat to the upright position:



E205048

1. Push the seat rearward until the latch is engaged.
2. Return the seatback to the upright position.

## Adjusting the Second Row Outboard 40% Seat for E-Z Entry

### WARNINGS



Always latch the vehicle seat to the floor, whether the seat is occupied or empty. If not latched, the seat may cause injury during a sudden stop.

### WARNINGS



After using the E-Z Entry feature, make sure there are not any objects, cargo or the feet of a third row passenger under the second row seat when latching the seat to the floor. Injury to the third row passengers feet or damage to the seat may occur.

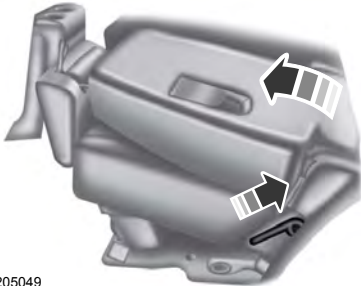


Before returning the seatback to its original position, make sure that cargo or any objects are not trapped behind the seatback. After returning the seatback to its original position, pull on the seatback to make sure that it has fully latched. An unlatched seat may become dangerous in the event of a sudden stop or crash.

The E-Z entry seat allows for easier entry and exit to and from the third row seat.

To enter the third row seat:

## Seats



E205049

1. Fold down the second row seat and release the handle.
2. Pull the handle up again until the seat releases from the floor.
3. Push the seat upward and fold it away from the third row.

To return the seat to a seating position:



E205050

1. Push the seat down and latch to the floor.
2. Bring the seatback to an upright position. The seatback should lock into position.

**Note:** If the seatback will not return to the upright position, tumble the seat again and re-latch it to the floor. Be sure that cargo or other objects are not trapped underneath the seatback.



E205051

**Note:** If a squeak is heard from the latch area, the latch striker pin should be wiped clean of dust or debris.

# Seats

## Exiting the Third Row




E205052

1. Pull the strap located at the bottom outboard of the seatback to release the seat from the floor, and rotate the seat up toward the front seat.
2. Follow the directions above to return the seat from the E-Z entry to the upright position.

## Reclining the Second Row Outboard 40% Seatback

### WARNING

 Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a crash.





E205053

The release handle is located on the outboard side of the seat cushion. Lift it to adjust the seatback to your desired position.

## Folding the Second Row Center 20% Seat (If Equipped)

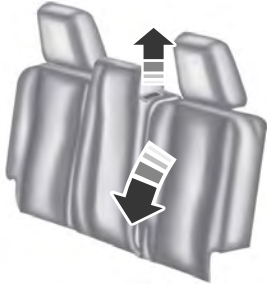
### WARNINGS

 To prevent possible damage to the seat or safety belts, make sure that the safety belts are not buckled when moving the seat to the load floor position.

 Before returning the seatback to its original position, make sure that cargo or any objects are not trapped underneath the seatback. After returning the seatback to its original position, pull on the seatback to make sure that it has fully latched. An unlatched seat may become dangerous in the event of a sudden stop or crash.



## Seats



E205054

1. Locate the release handle in the upper left seatback. Pull the handle to release the folding seat latch.



E205055

2. With the latch released, lower the seatback into the load floor position.



E205056

3. To return the seat to the upright position, lift the seatback until the latch is fully engaged.

### Adjusting the Second Row Center 20% Seat (If Equipped)

**Note:** Move this seat forward to keep a child in a child restraint close to the front seat occupants. Move the seat to the full rearward position when it is occupied by older children or adults, including children in booster seats.



E205057

Lift the handle to move the seat forward or backward.

### PowerFold™ Third Row Seat

**Note:** The power fold down seats operate for 10 minutes after you switch the ignition off. The transmission must be in park (P) and the liftgate, or liftgate glass must be open. Similar to the battery saver feature, the power third row seat disables 10 minutes after you switch the ignition off.

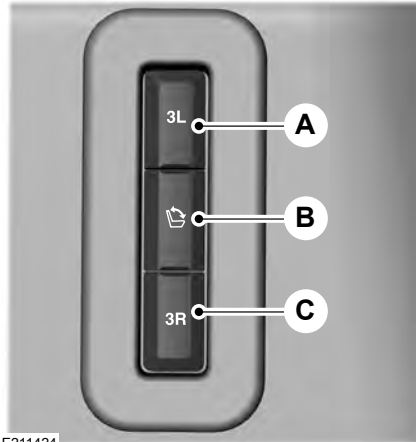
**Note:** Be sure that the head restraints are folded down before powering the third row seat down.

## Seats



E205060

The control buttons are located on the right-hand rear quarter trim panel (accessible from the liftgate area).



E211424

- A Press to fold the third row left side seatback down.
- B Press to fold both seatbacks down.
- C Press to fold the third row right side seatback down.

To return the seatback(s) to the original position(s), press the corresponding control again.

If the power third row seat is disabled after 10 minutes, you can enable the seat by:


- Opening any door.
- Pressing the unlock button on the key fob.
- Pressing any keyless entry keypad button.

# Seats

## HEATED SEATS

### Front Seats

#### WARNING

 People who are unable to feel pain to their skin because of advanced age, chronic illness, diabetes, spinal cord injury, medication, alcohol use, exhaustion or other physical conditions, must exercise care when using the heated seat. The heated seat may cause burns even at low temperatures, especially if used for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket or cushion. This may cause the heated seat to overheat. Do not puncture the seat with pins, needles or other pointed objects. This may damage the heating element which may cause the heated seat to overheat. An overheated seat may cause serious personal injury.

Do not do the following:

- Place heavy objects on the seat.
- Operate the heated seat if water or any other liquid spills on the seat. Allow the seat to dry thoroughly.
- Operate the heated seats unless the engine is running. Doing so can cause the battery to lose charge.




E146322

Press the heated seat symbol to cycle through the various heat settings and off. More indicator lights indicate warmer settings.

### Rear Seats (If Equipped)

#### WARNING

 Persons who are unable to feel pain to the skin because of advanced age, chronic illness, diabetes, spinal cord injury, medication, alcohol use, exhaustion, or other physical conditions, must exercise care when using the seat heater. The seat heater may cause burns even at low temperatures, especially if used for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket or cushion, because this may cause the seat heater to overheat. Do not puncture the seat with pins, needles, or other pointed objects because this may damage the heating element which may cause the seat heater to overheat. An overheated seat may cause serious personal injury.

# Seats

Do not do the following:

- Place heavy objects on the seat.
- Operate the seat heater if water or any other liquid is spilled on the seat. Allow the seat to dry thoroughly.
- Operate the heated seats unless the engine is running. Doing so can cause the battery to lose charge.

The rear seat heat controls are located on the rear of the center console.



E146322

Press the heated seat symbol to cycle through the various heat settings and off. More indicator lights indicate warmer settings.

The heated seat module resets at every ignition run cycle. While the ignition is on, press the high or low heated seat switch to enable heating mode. When activated, they will turn off automatically when you turn the engine off.

## CLIMATE CONTROLLED SEATS

### Heated Seats

### WARNING



Persons who are unable to feel pain to the skin because of advanced age, chronic illness, diabetes, spinal cord injury, medication, alcohol use, exhaustion, or other physical conditions, must exercise care when using the seat heater. The seat heater may cause burns even at low temperatures, especially if used for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket or cushion, because this may cause the seat heater to overheat. Do not puncture the seat with pins, needles, or other pointed objects because this may damage the heating element which may cause the seat heater to overheat. An overheated seat may cause serious personal injury.

**Note:** Do not do the following:

- Place heavy objects on the seat.
- Operate the seat heater if water or any other liquid spill on the seat. Allow the seat to dry thoroughly.

The heated seats will only function when the engine is running.

# Seats



E146322

Press the heated seat symbol to cycle through the various heat settings and off. More indicator lights indicate warmer settings.

## Cooled Seats

The cooled seats will only function when the engine is running.



E146309

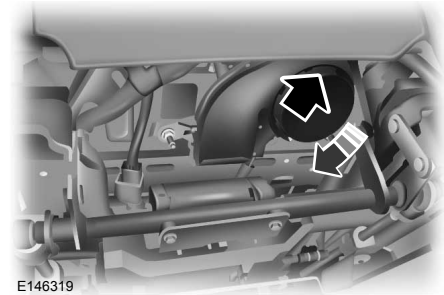
Press the cooled seat symbol to cycle through the various cooling settings and off. More indicator lights indicate cooler settings.

If the engine falls below 350 RPM while the cooled seats are on, the feature will turn itself off. You will need to reactivate it.

## Climate Controlled Seat Air Filter Replacement

The climate controlled seat system includes air filters. You must replace them periodically. See **Scheduled Maintenance** (page 353).

Locate the filters under each front seat and access them from the second-row footwell area. Move the front seats all the way forward and to the full up positions to ease access.



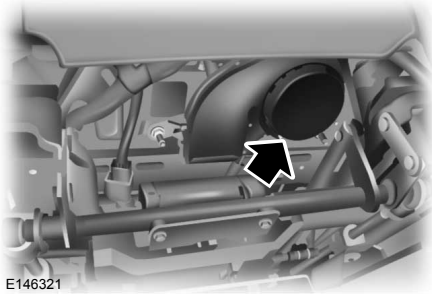
E146319

To remove a filter:

1. Switch the ignition off.
2. Press up on the outside rigid edge of the filter and rotate counterclockwise once the tabs are released, then remove the filter.

# Seats

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To install a filter:


1. First, position the filter in its housing making sure that the far forward end is all the way up in the housing.
2. Push in on the center of the outside edge of the filter and rotate up into the housing until it clips into position.

# Universal Garage Door Opener

## HomeLink Wireless Control System

### WARNINGS

 Make sure that the garage door and security device are free from obstruction when you are programming. Do not program the system with the vehicle in the garage.

 Do not use the system with any garage door opener that does not have the safety stop and reverse feature as required by U.S. Federal Safety Standards (this includes any garage door opener manufactured before April 1, 1982). A garage door opener which cannot detect an object, signaling the door to stop and reverse, does not meet current federal safety standards. Using a garage door opener without these features increases the risk of serious injury or death.

**Note:** Make sure you keep the original remote control transmitter for use in other vehicles as well as for future system programming.

**Note:** We recommend that upon the sale or lease termination of your vehicle, you erase the programmed function buttons for security reasons. See **Erasing the Function Button Codes**.

**Note:** You can program a maximum of three devices. To change or replace any of the three devices after it has been initially programmed, you must first erase the current settings. See **Erasing the Function Button Codes**.



E142657

The universal garage door opener replaces the common hand-held garage door opener with a three-button transmitter that is integrated into the driver's sun visor.

The system includes two primary features, a garage door opener and a platform for remote activation of devices within the home. As well as being programmed for garage doors, the system transmitter can be programmed to operate entry gate operators, security systems, entry door locks and home or office lighting.

Additional system information can be found online at [www.homelink.com](http://www.homelink.com), [www.youtube.com/HomeLinkGentex](http://www.youtube.com/HomeLinkGentex) or by calling the toll-free help line on 1-800-355-3515.

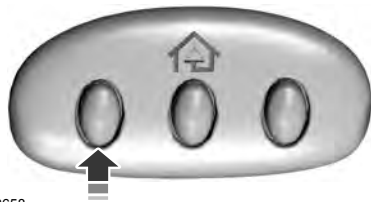
### In-Vehicle Programming

This process is to program your hand-held transmitter and your in-vehicle HomeLink button.

**Note:** The programming steps below assume you will be programming HomeLink that was not previously programmed.

**Note:** Put a new battery in the hand-held transmitter. This will ensure quicker training and accurate transmission of the radio-frequency signal.

# Universal Garage Door Opener



E142658

1. With your vehicle parked outside of the garage, turn your ignition to the **on** position, but do not start your vehicle.
2. Hold your hand-held garage door transmitter 2–6 in (5–14 cm) away from the HomeLink button you want to program.
3. Using both hands, simultaneously, press and hold the desired HomeLink button and the hand-held transmitter button. DO NOT release either one until the HomeLink indicator light flashes slowly and then rapidly. When the indicator light flashes rapidly, both buttons may be released. The rapid flashing indicates successful training.

**Note:** You may need to use a different method if you live in Canada or have difficulties programming your gate operator or garage door opener. See **Gate Operator / Canadian Programming**.

4. Press and hold the HomeLink button you programmed for two seconds, then release. You may need to do this twice to activate the door. If your garage door does not operate, watch the HomeLink indicator light.

**If the indicator light stays on, the programming is complete. No further action is needed.**

If the indicator light flashes rapidly for 2 seconds and then turns to a constant light, the HomeLink button is not programmed yet. See **Programming Your Garage Door Opener Motor**.

To program additional buttons, repeat Steps 1 – 4.

For questions or comments, please contact HomeLink at [www.homelink.com](http://www.homelink.com), [www.youtube.com/HomeLinkGentex](http://www.youtube.com/HomeLinkGentex) or 1-800-355-3515.

## Programming Your Garage Door Opener Motor

**Note:** You may need a ladder to reach the unit and you may need to remove the cover or lamp lens on your garage door opener.

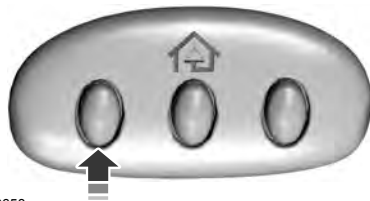


E142659

1. Press the learn button on the garage door opener motor and then you have 30 seconds to complete the next two steps.
2. Return to your vehicle.



# Universal Garage Door Opener



E142658

3. Press and hold the function button you want to program for 2 seconds, then release. Repeat this step. Depending on your brand of garage door opener, you may need to repeat this sequence a third time.

## Gate Operator / Canadian Programming

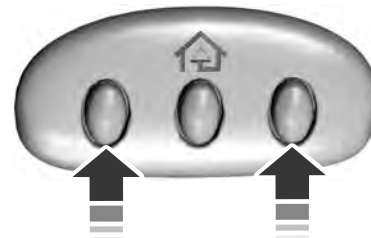
Canadian radio-frequency laws require transmitter signals to “time-out” (or quit) after several seconds of transmission – which may not be long enough for HomeLink to pick up the signal during programming. Similar to this Canadian law, some U.S. gate operators are designed to “time-out” in the same manner.

**Note:** If programming a garage door opener or gate operator, it is advised to unplug the device during the “cycling” process to prevent possible overheating.

1. Press and hold the HomeLink button while you press and release, **every two seconds**, your hand-held transmitter until the HomeLink indicator light changes from a slow to a rapidly blinking light.
2. Release both the HomeLink and hand-held transmitter buttons.
3. Continue programming HomeLink. See **In-Vehicle Programming**.

## Erasing the Function Button Codes

**Note:** You cannot erase individual buttons.



E142660

1. Press and hold the outer two function buttons simultaneously for approximately 20 seconds until the indicator lights above the buttons flash rapidly.
2. When the indicator lights flash, release the buttons. The codes for all buttons are erased.

## Reprogramming a Single Button

To program a device to a previously trained button, follow these steps:

1. Press and hold the desired button. Do NOT release the button.

# Universal Garage Door Opener

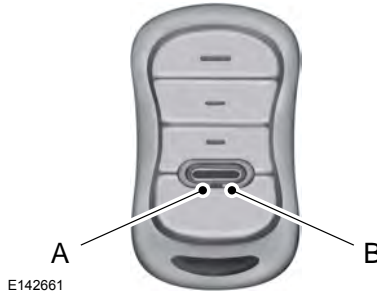
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, follow Step 1 in the Programming section.

For questions or comments, contact HomeLink at [www.homelink.com](http://www.homelink.com), [www.youtube.com/HomeLinkGentex](http://www.youtube.com/HomeLinkGentex) or 1-800-355-3515.

## Programming to a Genie Intellicode 2 Garage Door Opener

**Note:** The Genie Intellicode 2 transmitter must already be programmed to operate with the garage door opener.

**Note:** To program HomeLink to the transmitter you must first put the transmitter into programming mode.



- A. Red indicator light
- B. Green indicator light

1. Press and hold one of the buttons on the hand-held transmitter for 10 seconds. The indicator light will change from green to red and green.
2. Press the same button twice to confirm the change to programming mode. If done properly the indicator light will appear red.
3. Hold the transmitter within 1–3 inches (2–8 centimeters) of the button on the visor you want to program.

4. Press and hold both the programmed Genie button on the hand-held transmitter and the button you want to program. The indicator light on the visor will flash rapidly when the programming is successful.

**Note:** The Genie transmitter will transmit for up to 30 seconds. If HomeLink does not program within 30 seconds the Genie transmitter will need to be pressed again. If the Genie transmitter indicator light displays green and red, release the button until the indicator light turns off before pressing the button again.

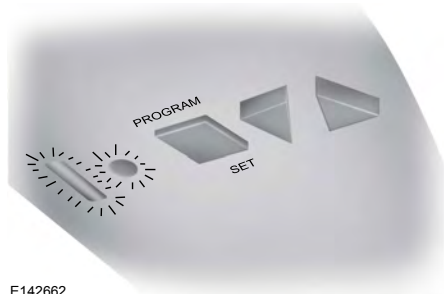
Once HomeLink has been programmed successfully, the Genie transmitter must be changed out of program mode. To do this:

1. Press and hold the previously programmed Genie button on the hand-held transmitter for 10 seconds. The indicator light will change from red to red and green.
2. Press the same button twice to confirm the change. If done correctly the indicator light will turn green.

# Universal Garage Door Opener

## Programming HomeLink to the Genie Intellicode Garage Door Opener Motor

**Note:** You may need a ladder to access the garage door opener motor.



E142662

1. Press and hold the program button on the garage door opener motor until both blue indicator lights turn on.
2. Release the program button. Only the smaller round indicator light should be on.
3. Press and release the program button. The larger purple indicator light will flash.

**Note:** The next two steps must be completed in 30 seconds.

4. Press and release the Genie Intellicode 2 hand-held transmitter's previously programmed button. Both indicator lights on the garage door opener motor unit should now flash purple.
5. Press and hold the previously programmed button on the visor for 2 seconds. Repeat this step up to 3 times until the garage door moves.

Programming is now complete.

### Clearing a HomeLink Device

To erase programming from the three HomeLink buttons press and hold the two outer HomeLink buttons until the indicator light begins to flash. The indicator light will begin flashing in 10 to 20 seconds, at which time both buttons should be released. Programming has now been erased, and the indicator light should blink slowly to indicate the device is in train mode when any of the three HomeLink buttons are pressed.

## FCC and RSS-210 Industry Canada Compliance

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications to your device not expressly approved by the party responsible for compliance can void the user's authority to operate the equipment.

# Auxiliary Power Points

## 12 Volt DC Power Point

### WARNINGS



Do not plug optional electrical accessories into the cigar lighter socket. Incorrect use of the cigar lighter can cause damage not covered by the vehicle warranty, and can result in fire or serious injury.



Do not use a power point for operating a cigar lighter. Incorrect use of the power points can cause damage not covered by the vehicle warranty, and can result in fire or serious injury.

**Note:** When you switch the ignition on, you can use the socket to power 12 volt appliances with a maximum current rating of 15 amps.

If the power supply does not work after you switch the ignition off, switch the ignition on.

**Note:** Do not hang any accessory from the accessory plug.

**Note:** Do not use the power point over the vehicle capacity of 12 volt DC 180 watts or a fuse may blow.

**Note:** Always keep the power point caps closed when not in use.

Do not insert objects other than an accessory plug into the power point. This will damage the power point and blow the fuse.

Run the vehicle for full capacity use of the power point.

To prevent the battery from running out of charge:

- Do not use the power point longer than necessary when the vehicle is not running.
- Do not leave devices plugged in overnight or when you park your vehicle for extended periods.

### Locations

Power points may be in the following locations:

- On the lower instrument panel.
- Inside the center console.
- On the rear of the center console.
- In the rear cargo area.
- On the passenger side floor panel.

## 110 Volt AC Power Point (If Equipped)

### WARNING

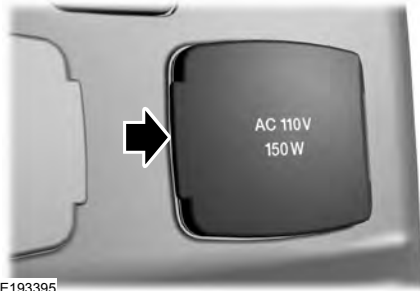


Do not keep electrical devices plugged in the power point whenever the device is not in use. Do not use any extension cord with the 110 volt AC power point, since it will defeat the safety protection design. Doing so may cause the power point to overload due to powering multiple devices that can reach beyond the 150 watt load limit and could result in fire or serious injury.

**Note:** The power point will turn off when the ignition is switched off or the battery voltage drops below 11 volts.

Use the power point for powering electric devices that require up to 150 watts. It is on the rear of the center console.

## Auxiliary Power Points



**Note:** Depending on your vehicle, the power point cover may open to the right or upward.

When the indicator light on the power point is:

- On: The power point is working, the ignition is on and a device is plugged in.
- Off: The power point is off, the ignition is off or no device is plugged in.
- Flashing: The power point is in fault mode.

The power outlet temporarily turns off power when in fault mode if the device exceeds the 150 watt limit. Unplug your device and switch the ignition off. Switch the ignition back on, but do not plug your device back in. Let the system cool off and switch the ignition off to reset the fault mode. Switch the ignition back on and make sure the indicator light remains on.

Do not use the power point for certain electric devices, including:

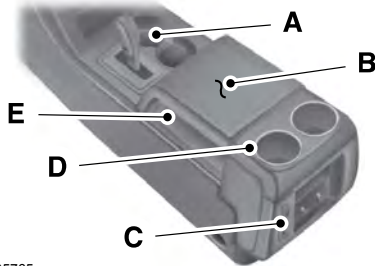
- Cathode-ray, tube-type televisions.
- Motor loads, such as vacuum cleaners, electric saws and other electric power tools or compressor-driven refrigerators.
- Measuring devices, which process precise data, such as medical equipment or measuring equipment.
- Other appliances requiring an extremely stable power supply such as microcomputer-controlled electric blankets or touch-sensor lamps.

# Storage Compartments

## CENTER CONSOLE

Stow items in the cup holder carefully as items may become loose during hard braking, acceleration or crashes, including hot drinks which may spill.

Available console features include:



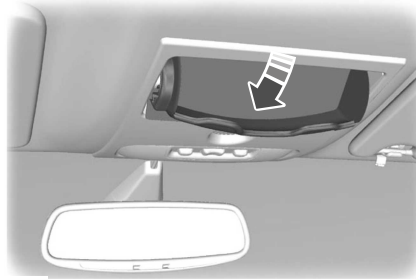
E205765

- A Cup holder.
- B Storage compartment, coin holder, tissue box holder, and USB ports.
- C Power point, rear climate controls, and 110 volt AC power point.

D Rear cup holders.

E Side storage.

## OVERHEAD CONSOLE




E75193


Press near the rear edge of the door to open it.


# Starting and Stopping the Engine


## GENERAL INFORMATION

### WARNINGS

 Extended idling at high engine speeds can produce very high temperatures in the engine and exhaust system, creating the risk of fire or other damage.

 Do not park, idle or drive your vehicle on dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, creating the risk of fire.

 Do not start the engine in a closed garage or in other enclosed areas. Exhaust fumes can be toxic. Always open the garage door before you start the engine.

 If you smell exhaust fumes inside your vehicle, have your vehicle checked by an authorized dealer immediately. Do not drive your vehicle if you smell exhaust fumes.

If you disconnect the battery, your vehicle may exhibit some unusual driving characteristics for approximately 5 miles (8 kilometers) after you reconnect it. This is because the engine management system must realign itself with the engine. You can disregard any unusual driving characteristics during this period.

The powertrain control system meets all Canadian interference-causing equipment standard requirements regulating the impulse electrical field or radio noise.

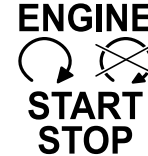
When you start the engine, avoid pressing the accelerator pedal before and during operation. Only use the accelerator pedal when you have difficulty starting the engine.

## KEYLESS STARTING

**Note:** *The keyless starting system may not function if the key is close to metal objects or electronic devices such as cellular phones.*

**Note:** *A valid key must be located inside your vehicle to switch the ignition on and start the engine.*

## Ignition Modes



E191075

The keyless starting system has three modes:

**Off:** Turns the ignition off.

- Without applying the brake pedal, press and release the button once when the ignition is in the on mode, or when the engine is running but the vehicle is not moving.

**On:** All electrical circuits are operational and the warning lamps and indicators illuminate.

- Without applying the brake pedal, press and release the button once.

# Starting and Stopping the Engine

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**Note:** You may have to press the push button ignition switch twice to switch the ignition on.

**Start:** Starts the engine.

- Press the brake pedal, and then press the button for any length of time. An indicator light on the button illuminates when then ignition is on and when the engine starts.

## STARTING A GASOLINE ENGINE

When you start the engine, the idle speed increases. This helps to warm up the engine. If the engine idle speed does not slow down automatically, have your vehicle checked by an authorized dealer.

**Note:** You can crank the engine for a total of 60 seconds without the engine starting before the starting system temporarily disables. The 60 seconds does not have to be all at once. For example, if you crank the engine three times for 20 seconds each time, without the engine starting, you reached the 60-second time limit. A message appears in the information display alerting you that you exceeded the cranking time. You cannot attempt to start the engine for at least 15 minutes. After 15 minutes, you are limited to a 15-second engine cranking time. You need to wait 60 minutes before you can crank the engine for 60 seconds again.

Before starting your vehicle, check the following:

- Make sure all occupants have fastened their safety belts.
- Make sure the headlamps and electrical accessories are off.
- Make sure the parking brake is on.
- Make sure the transmission is in park (P).

**Note:** Do not touch the accelerator pedal.

**Note:** You must have your intelligent access key in your vehicle to shift the transmission out of park (P).

1. Fully depress the brake pedal.
2. Press the push button ignition switch.

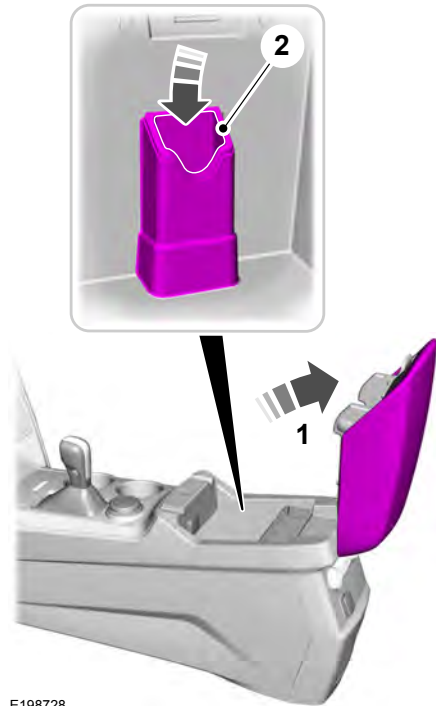
The system does not function if:

- The passive key frequencies are jammed.
- The key battery has no charge.

If you are unable to start your vehicle, do the following:



# Starting and Stopping the Engine



1. Open the floor console storage compartment lid.
2. Insert the passive key into the backup slot.
3. With the passive key in this position, you can use the push button ignition switch to switch the ignition on and start your vehicle.

## Fast Restart

The fast restart feature allows you to restart your vehicle within 20 seconds of switching it off, even if it does not detect a valid passive key.

Within 20 seconds of switching the engine off, press the brake pedal and press the push button ignition switch. After 20 seconds, you can no longer start your vehicle if it does not detect a valid passive key.

Once your vehicle starts, it remains running until you press the push button ignition switch, even if your vehicle does not detect a valid passive key. If you open and close a door while your vehicle is running, the system searches for a valid passive key. You cannot start your vehicle if the system does not detect a valid passive key within 20 seconds.

## Failure to Start

If you cannot start the engine after three attempts, wait 10 seconds and follow this procedure:

1. Fully depress the brake pedal.
2. Shift into park (P).
3. Fully press the accelerator pedal and hold it there.
4. Start the engine.

# Starting and Stopping the Engine

## Automatic Engine Shutdown

For vehicles with a keyless ignition, this feature automatically shuts down the engine if it has been idling for an extended period. The ignition also turns off to save battery power. Before your vehicle shuts down, a message appears in the information display showing a timer counting down. If you do not intervene within 30 seconds, your vehicle shuts down. Another message appears in the information display to inform you that your vehicle has shut down to save fuel. Start your vehicle as normal.

## Automatic Engine Shutdown Override

**Note:** *You cannot permanently switch off the automatic shutdown. When you switch it off temporarily, it turns on at the next ignition cycle.*

You can stop the shutdown, or reset the timer, at any point before the 30-second countdown has expired by doing any of the following:

- Interacting with your vehicle, for example pressing the brake or accelerator pedal.
- You can temporarily switch off the shutdown feature any time the ignition is on using the information display. See **Information Displays** (page 105). The feature only remains off for the current ignition cycle.
- During the 30-second countdown, the system prompts you to press OK or RESET to temporarily switch the feature off for the current ignition cycle only.

## Stopping the Engine When Your Vehicle is Stationary

1. Shift into park (P).
2. Press the push button ignition switch.
3. Apply the parking brake.

**Note:** *The ignition, all electrical circuits and all warning lamps and indicators will be turned off.*

**Note:** *If the engine is idling for 30 minutes, the ignition and engine automatically shuts down.*

## Stopping the Engine When Your Vehicle is Moving

### WARNING



Switching off the engine when the vehicle is still moving will result in a loss of brake and steering assistance. The steering will not lock, but higher effort will be required. When the ignition is switched off, some electrical circuits, including air bags, warning lamps and indicators may also be off. If the ignition was turned off accidentally, you can shift into neutral (N) and re-start the engine.

1. Shift into neutral and use the brakes to bring your vehicle to a safe stop.
2. When your vehicle has stopped, shift into park (P).
3. Press and hold the push button ignition switch, or press it three times within two seconds.

# Starting and Stopping the Engine

4. Apply the parking brake.

## Guarding Against Exhaust Fumes

### WARNING



If you smell exhaust fumes inside your vehicle, have your vehicle checked by your authorized dealer immediately. Do not drive your vehicle if you smell exhaust fumes. Carbon monoxide is present in exhaust fumes. Take precautions to avoid its dangerous effects.

## Important Ventilating Information

If you stop your vehicle and then leave the engine idling for long periods, we recommend that you do one of the following:

- Open the windows at least 1 in (3 cm).
- Set your climate control to outside air.

## ENGINE BLOCK HEATER (If Equipped)

### WARNINGS



Failure to follow engine block heater instructions could result in property damage or serious personal injury.



Do not use your heater with ungrounded electrical systems or two-pronged adapters. There is a risk of electrical shock.



Do not fully close the hood, or allow it to drop under its own weight when using the engine block heater. This could damage the power cable and may cause an electrical short resulting in fire, injury and property damage.

**Note:** *The heater is most effective when outdoor temperatures are below 0°F (-18°C).*

The heater acts as a starting aid by warming the engine coolant. This allows the climate control system to respond quickly. The equipment includes a heater element (installed in the engine block) and a wire harness. You can connect the system to a grounded 120-volt AC electrical source.

We recommend that you do the following for a safe and correct operation:

- Use a 16-gauge outdoor extension cord that is product certified by Underwriter's Laboratory (UL) or Canadian Standards Association (CSA). This extension cord must be suitable for use outdoors, in cold temperatures, and be clearly marked Suitable for Use with Outdoor Appliances. Do not use an indoor extension cord outdoors. This could result in an electric shock or become a fire hazard.
- Use as short an extension cord as possible.
- Do not use multiple extension cords.
- Make sure that when in operation, the extension cord plug and heater cord plug connections are free and clear of water. This could cause an electric shock or fire.
- Make sure your vehicle is parked in a clean area, clear of combustibles.
- Make sure the heater, heater cord and extension cord are firmly connected.

# Starting and Stopping the Engine

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- Check for heat anywhere in the electrical hookup once the system has been operating for approximately 30 minutes.
- Make sure the system is unplugged and properly stowed before starting and driving your vehicle. Make sure the protective cover seals the prongs of the block heater cord plug when not in use.
- Make sure the heater system is checked for proper operation before winter.

## Using the Engine Block Heater

Make sure the receptacle terminals are clean and dry prior to use. Clean them with a dry cloth if necessary.

The heater uses 0.4 to 1.0 kilowatt-hours of energy per hour of use. The system does not have a thermostat. It achieves maximum temperature after approximately three hours of operation. Using the heater longer than three hours does not improve system performance and unnecessarily uses electricity.

# Fuel and Refueling

## SAFETY PRECAUTIONS

### WARNINGS



Do not overfill the fuel tank. The pressure in an overfilled tank may cause leakage and lead to fuel spray and fire.



The fuel system may be under pressure. If you hear a hissing sound near the fuel filler door (Easy Fuel capless fuel system), do not refuel until the sound stops. Otherwise, fuel may spray out, which could cause serious personal injury.



Automotive fuels can cause serious injury or death if misused or mishandled.



Flow of fuel through a fuel pump nozzle can produce static electricity. This can cause a fire if you are filling an ungrounded fuel container.



Fuel ethanol and gasoline may contain benzene, which is a cancer-causing agent.

### WARNINGS



When refueling always shut the engine off and never allow sparks or open flames near the filler neck. Never smoke or use a cell phone while refueling. Fuel vapor is extremely hazardous under certain conditions. Avoid inhaling excess fumes.

Observe the following guidelines when handling automotive fuel:

- Extinguish all smoking materials and any open flames before refueling your vehicle.
- Always turn off the vehicle before refueling.
- Automotive fuels can be harmful or fatal if swallowed. Fuel such as gasoline is highly toxic and if swallowed can cause death or permanent injury. If fuel is swallowed, call a physician immediately, even if no symptoms are immediately apparent. The toxic effects of fuel may not be visible for hours.

- Avoid inhaling fuel vapors. Inhaling too much fuel vapor of any kind can lead to eye and respiratory tract irritation. In severe cases, excessive or prolonged breathing of fuel vapor can cause serious illness and permanent injury.
- Avoid getting fuel liquid in your eyes. If fuel is splashed in the eyes, remove contact lenses (if worn), flush with water for 15 minutes and seek medical attention. Failure to seek proper medical attention could lead to permanent injury.

# Fuel and Refueling

- Fuels can also be harmful if absorbed through the skin. If fuel is splashed on the skin, clothing or both, promptly remove contaminated clothing and wash skin thoroughly with soap and water. Repeated or prolonged skin contact with fuel liquid or vapor causes skin irritation.
- Be particularly careful if you are taking “Antabuse” or other forms of disulfiram for the treatment of alcoholism. Breathing gasoline vapors, or skin contact could cause an adverse reaction. In sensitive individuals, serious personal injury or sickness may result. If fuel is splashed on the skin, promptly wash skin thoroughly with soap and water. Consult a physician immediately if you experience an adverse reaction.

## FUEL QUALITY

### Choosing the Right Fuel



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We recommend regular unleaded gasoline with a pump (R+M)/2 octane rating of 87. Some fuel stations offer fuels posted as regular unleaded gasoline with an octane rating below 87, particularly in high altitude areas. We do not recommend fuels with an octane rating below 87.

For vehicles with EcoBoost engines, to provide improved performance, we recommend premium fuel for severe duty usage such as trailer tow.

Do not use any fuel other than those recommended because they could lead to engine damage that may not be covered by the vehicle Warranty.

**Note:** *Use of any fuel other than those recommended can impair the emission control system and cause a loss of vehicle performance.*

Do not use:

- Diesel fuel.
- Fuels containing kerosene or paraffin.
- Fuel containing more than 15% ethanol or E85 fuel.
- Fuels containing methanol.
- Fuels containing metallic-based additives, including manganese-based compounds.
- Fuels containing the octane booster additive, methylcyclopentadienyl manganese tricarbonyl (MMT).
- Leaded fuel (using leaded fuel is prohibited by law).

# Fuel and Refueling

The use of fuels with metallic compounds such as methylcyclopentadienyl manganese tricarbonyl (commonly known as MMT), which is a manganese-based fuel additive, will impair engine performance and affect the emission control system.

Do not be concerned if the engine sometimes knocks lightly. However, if the engine knocks heavily while using fuel with the recommended octane rating, contact an authorized dealer to prevent any engine damage.

## FUEL FILLER FUNNEL LOCATION

The fuel filler funnel is located in the spare wheel storage tray.

## RUNNING OUT OF FUEL

Running out of fuel can cause damage not covered by the vehicle Warranty.

If your vehicle runs out of fuel:

- Add a minimum of 1.3 gal (5 L) of fuel to restart the engine. If your vehicle is out of fuel and on a steep slope, more fuel may be required.
- You may need to switch the ignition from off to on several times after refueling to allow the fuel system to pump the fuel from the tank to the engine. When restarting, cranking time takes a few seconds longer than normal.

## Filling a Portable Fuel Container

Use the following guidelines to avoid electrostatic charge build-up when filling an ungrounded fuel container:

- Only use an approved fuel container to transfer fuel to your vehicle. Place the container on the ground when filling it.
- Do not fill a fuel container when it is inside your vehicle (including the cargo area).
- Keep the fuel pump nozzle in contact with the fuel container when filling it.
- Do not use a device that holds the fuel pump nozzle lever in the fill position.

## Adding Fuel From a Portable Fuel Container

### WARNINGS



Do not insert the nozzle of a fuel container or an aftermarket funnel into the fuel system filler neck. This may damage the fuel system filler neck or its seal and cause fuel to run onto the ground.



Do not try to pry open or push open the capless fuel system with foreign objects. This could damage the fuel system and its seal and cause injury to you or others.



Do not dispose of fuel in the household refuse or the public sewage system. Use an authorized waste disposal facility.

When refueling the vehicle fuel tank from a fuel container, use the plastic funnel included with your vehicle. See **Fuel Filler Funnel Location** (page 164).

**Note:** *Do not use aftermarket funnels as they will not work with the capless fuel system and can damage it.*

When refueling the vehicle fuel tank from a fuel container, do the following:

# Fuel and Refueling

1. Fully open the fuel tank filler door until it engages and remove the fuel tank filler cap.

**Note:** Capless fuel systems do not have a fuel tank filler cap.

2. Fully insert the plastic funnel into the fuel tank filler pipe opening.



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3. Add fuel to your vehicle from the fuel container.
4. Remove the plastic funnel from the fuel tank filler pipe opening.

5. Replace the fuel tank filler cap and close the fuel tank filler door.
6. Clean the plastic funnel and place it back in your vehicle or properly dispose of it.

**Note:** Extra funnels can be purchased from an authorized dealer if you choose to dispose of the funnel.

## REFUELING

### WARNINGS

- ⚠ Fuel vapor burns violently and a fuel fire can cause severe injuries.
- ⚠ Read and follow all the instructions on the pump island.
- ⚠ When refueling always shut the engine off and never allow sparks or open flames near the fuel tank filler valve. Never smoke or use a cell phone while refueling. Fuel vapor is extremely hazardous under certain conditions. Avoid inhaling excess fumes.

### WARNINGS

- ⚠ Stay outside your vehicle and do not leave the fuel pump unattended when refueling your vehicle. This is against the law in some places.
- ⚠ Keep children away from the fuel pump; never let children pump fuel.
- ⚠ Wait at least 10 seconds before removing the fuel pump nozzle to allow any residual fuel to drain into the fuel tank.
- ⚠ Stop refueling after the fuel pump nozzle automatically shuts off for the second time. Failure to follow this will fill the expansion space in the fuel tank and could lead to fuel overflowing.
- ⚠ Do not remove the fuel pump nozzle from its fully inserted position when refueling.




# Fuel and Refueling

Use the following guidelines to avoid electrostatic charge build-up, which can produce a spark, when filling an ungrounded fuel container:

- Place approved fuel container on the ground.
- Do not fill a fuel container while it is in the vehicle (including the cargo area).
- Keep the fuel pump nozzle in contact with the fuel container while filling.
- Do not use a device that would hold the fuel pump handle in the fill position.

## Easy Fuel™ Capless Fuel System

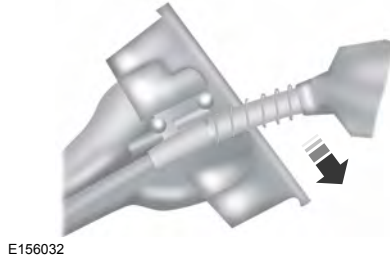
### WARNING

 The fuel system may be under pressure. If you hear a hissing sound near the fuel filler door, do not refuel until the sound stops. Otherwise, fuel may spray out, which could cause serious personal injury.

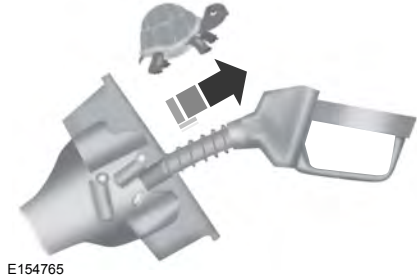
When fueling your vehicle:

1. When your vehicle has stopped, shift into park (P) and switch the ignition off.

2. Fully open the fuel tank filler door until it engages.



3. Insert the fuel pump nozzle up to the first notch on the nozzle. Hold handle higher during insertion for easier access. Leave the fuel pump nozzle fully inserted until you are done pumping.



4. Remove the fuel filler nozzle and fully close the fuel tank filler door.

**Note:** A fuel spillage concern may occur if overfilling the fuel tank. Do not overfill the tank. The fill pipe is equipped with a drain hole. Excess fuel due to overfill may drain through the drain hole and drip onto the ground.

If the fuel fill inlet was not properly closed, a service engine warning lamp may appear on the instrument cluster.

At the next opportunity, do the following:

# Fuel and Refueling

---

1. Stop your vehicle as soon as safely possible and shift the transmission into park (P).
2. Switch the ignition off.
3. Open the fuel filler door and remove any visible debris from the fuel fill opening.
4. Insert either the fuel fill nozzle or the fuel fill funnel provided with the vehicle several times to allow the inlet to close properly. This will dislodge any debris preventing the inlet from sealing.

If this action corrects the problem, the message may not reset immediately. It may take several driving cycles for the message to turn off. A driving cycle consists of an engine start-up (after 4 or more hours with the engine off) followed by city or highway driving. Continuing to drive with the message on may cause the service engine soon lamp to turn on as well.

## FUEL CONSUMPTION

Empty reserve is the amount of fuel remaining in the tank after the fuel gauge indicates empty. The amount of usable fuel in the empty reserve varies and should not be relied upon to increase driving range.

- The usable capacity of the fuel tank is the amount of fuel that can be added into the tank after the gauge indicates empty
- The advertised capacity is the total fuel tank size. See **Capacities and Specifications** (page 328). It is the combined usable capacity plus the empty reserve.
- Due to the empty reserve, you may not be able to refuel the full amount of the advertised capacity of the fuel tank even when the fuel gauge reads empty.

## Filling the Tank

For consistent results when refueling:

- Turn the ignition off before fueling; an inaccurate reading results if the engine is left running.
- Use the same fill rate (low-medium-high) each time the tank is filled.
- Allow no more than two automatic click-offs when filling.

Results are most accurate when the filling method is consistent.

## Calculating Fuel Economy

Do not measure fuel economy during the first 1,000 mi (1,600 km) of driving (this is your engine's break-in period). A more accurate measurement is obtained after 2,000 mi (3,200 km) to 3,000 mi (4,800 km). Also, fuel expense, frequency of fill ups or fuel gauge readings are not accurate ways to measure fuel economy.

1. Fill the fuel tank completely and record the initial odometer reading.

# Fuel and Refueling

2. Each time you fill the fuel tank, record the amount of fuel added.
3. After at least three fill ups, fill the fuel tank and record the current odometer reading.
4. Subtract your initial odometer reading from the current odometer reading.

To calculate L/100 km (liters per 100 kilometers) fuel consumption, multiply the liters used by 100, then divide by kilometers traveled. To calculate MPG (miles per gallon) fuel consumption, divide miles traveled by gallons used.

Keep a record for at least one month and record the type of driving (city or highway). This provides an accurate estimate of your vehicle's fuel economy under current driving conditions. Keeping records during summer and winter will show how temperature impacts fuel economy.

## Conditions

- Heavily loading your vehicle reduces fuel economy.
- Carrying unnecessary weight in your vehicle may reduce fuel economy.
- Adding certain accessories to your vehicle such as bug deflectors, rollbars or light bars, running boards and ski racks may reduce fuel economy.
- Using fuel blended with alcohol may lower fuel economy.
- Fuel economy may decrease with lower temperatures.
- Fuel economy may decrease when driving short distances.
- You will get better fuel economy when driving on flat terrain than when driving on hilly terrain.

## EMISSION CONTROL SYSTEM

### WARNINGS



Do not park, idle, or drive your vehicle in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, which can start a fire.



Exhaust leaks may result in entry of harmful and potentially lethal fumes into the passenger compartment. If you smell exhaust fumes inside your vehicle, have your dealer inspect your vehicle immediately. Do not drive if you smell exhaust fumes.

Your vehicle is equipped with various emission control components and a catalytic converter that will enable your vehicle to comply with applicable exhaust emission standards. To make sure that the catalytic converter and other emission control components continue to work properly:

- Use only the specified fuel listed.
- Avoid running out of fuel.

# Fuel and Refueling

- Do not turn off the ignition while your vehicle is moving, especially at high speeds.
- Have the items listed in scheduled maintenance information performed according to the specified schedule.

The scheduled maintenance items listed in scheduled maintenance information are essential to the life and performance of your vehicle and to its emissions system.

If you use parts other than Ford, Motorcraft or Ford-authorized parts for maintenance replacements, or for service of components affecting emission control, such non-Ford parts should be the equivalent to genuine Ford Motor Company parts in performance and durability.

Illumination of the service engine soon indicator, charging system warning light or the temperature warning light, fluid leaks, strange odors, smoke or loss of engine power could indicate that the emission control system is not working properly.

An improperly operating or damaged exhaust system may allow exhaust to enter the vehicle. Have a damaged or improperly operating exhaust system inspected and repaired immediately.

Do not make any unauthorized changes to your vehicle or engine. By law, vehicle owners and anyone who manufactures, repairs, services, sells, leases, trades vehicles, or supervises a fleet of vehicles are not permitted to intentionally remove an emission control device or prevent it from working. Information about your vehicle's emission system is on the Vehicle Emission Control Information Decal located on or near the engine. This decal also lists engine displacement

Please consult your warranty information for complete details.

## On-Board Diagnostics (OBD-II)

Your vehicle has a computer known as the on-board diagnostics system (OBD-II) that monitors the engine's emission control system. The system protects the environment by making sure that your vehicle continues to meet government emission standards. The OBD-II system also assists a service technician in properly servicing your vehicle.



When the service engine soon indicator illuminates, the OBD-II system has detected a malfunction. Temporary malfunctions may cause the service engine soon indicator to illuminate.

Examples of temporary malfunctions are:

- the vehicle has run out of fuel—the engine may misfire or run poorly
- poor fuel quality or water in the fuel—the engine may misfire or run poorly
- the fuel fill inlet may not have closed properly. See **Refueling** (page 165).
- driving through deep water—the electrical system may be wet.

# Fuel and Refueling

You can correct these temporary malfunctions by filling the fuel tank with good quality fuel, properly closing the fuel fill inlet or letting the electrical system dry out. After three driving cycles without these or any other temporary malfunctions present, the service engine soon indicator should stay off the next time you start the engine. A driving cycle consists of a cold engine startup followed by mixed city/highway driving. No additional vehicle service is required.

If the service engine soon indicator remains on, have your vehicle serviced at the first available opportunity. Although some malfunctions detected by the OBD-II may not have symptoms that are apparent, continued driving with the service engine soon indicator on can result in increased emissions, lower fuel economy, reduced engine and transmission smoothness, and lead to more costly repairs.

## Readiness for Inspection/Maintenance (I/M) Testing

Some state/provincial and local governments may have Inspection/Maintenance (I/M) programs to inspect the emission control equipment on your vehicle. Failure to pass this inspection could prevent you from getting a vehicle registration.



If the service engine soon indicator is on or the bulb does not work, you may need to have the vehicle serviced. See On-Board Diagnostics (OBD-II).

Your vehicle may not pass the I/M test if the service engine soon indicator is on or not working properly (bulb is burned out), or if the OBD-II system has determined that some of the emission control systems have not been properly checked. In this case, your vehicle is not ready for I/M testing.

If the vehicle's engine or transmission has just been serviced, or the battery has recently run down or been replaced, the OBD-II system may indicate that the vehicle is not ready for I/M testing. To determine if the vehicle is ready for I/M testing, turn the

ignition key to the on position for 15 seconds without cranking the engine. If the service engine soon indicator blinks eight times, it means that the vehicle is not ready for I/M testing; if the service engine soon indicator stays on solid, it means that the vehicle is ready for I/M testing.

The OBD-II system monitors the emission control system during normal driving. A complete check may take several days. If the vehicle is not ready for I/M testing, you may need to perform the following driving cycle consisting of mixed city and highway driving:

Drive on an expressway or highway for a steady 15 minutes, followed by 20 minutes of stop-and-go driving with at least four 30-second idle periods.

Allow the vehicle to sit for at least eight hours without starting the engine. Then, start the engine and complete the above driving cycle. The engine must warm up to its normal operating temperature. Once started, do not turn off the engine until the above driving cycle is complete. If the vehicle is still not ready for I/M testing, you will have to repeat the above driving cycle.

# Transmission

## AUTOMATIC TRANSMISSION

### WARNINGS



Always set the parking brake fully and latch the gearshift in park (P). Turn the ignition to the off position and remove the key whenever you leave your vehicle.



Do not use the tow/haul feature when driving in icy or slippery conditions as the increased engine braking can cause the rear wheels to slide and your vehicle to swing around with the possible loss of vehicle control.

### Selector Lever Positions



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#### Putting your vehicle in or out of gear:

1. Fully press down the brake pedal.
2. Move the gearshift lever into the desired gear.
3. Come to a complete stop.
4. Move the gearshift lever and securely latch it in park (P).

#### Park (P)

This position locks the transmission and prevents the rear wheels from turning.

#### Reverse (R)

With the gearshift lever in reverse (R), your vehicle will move backward. Always come to a complete stop before shifting into and out of reverse (R).

#### Neutral (N)

With the gearshift lever in neutral (N), your vehicle can be started and is free to roll. Hold the brake pedal down while in this position.

#### Drive (D)

Drive (D) is the normal driving position for the best fuel economy. The overdrive function allows automatic upshifts and downshifts through gears one through six.

#### Manual (M)

With the gearshift lever in manual (M), you can change gears up or down as desired by using buttons on the shift lever. See Understanding your SelectShift Automatic™ transmission later in this section.

# Transmission

## Second (2)

Transmission operates in second (2) gear only. Use second (2) gear to start-up on slippery roads.

## First (1)

- Transmission operates in first (1) gear only.
- Provides maximum engine braking.
- Allows upshifts by moving gearshift lever.
- Will not downshift into first (1) gear at high speeds; allows for first (1) gear when vehicle reaches slower speeds.

## Tow/Haul Mode



To activate tow/haul, press the button on the gearshift lever once. The TOW HAUL indicator light will illuminate in the instrument cluster.

The tow/haul feature:

- Delays upshifts to reduce the frequency of transmission shifting.
- Provides engine braking in all forward gears, which will slow your vehicle and assist you in controlling your vehicle when descending a grade.
- Depending on driving conditions and load conditions, may downshift the transmission, slow your vehicle and control your vehicle speed when descending a hill, without pressing the accelerator pedal. The amount of downshift braking provided will vary based upon the amount the brake pedal is pressed.

The tow/haul feature improves transmission operation when towing a trailer or a heavy load. All transmission gear ranges are available when using tow/haul.

To deactivate the tow/haul feature and return to normal driving mode, press the button on the gearshift lever twice. The TOW HAUL light will deactivate. Tow/haul will also deactivate when you power down your vehicle.

## WARNING



Do not use the tow/haul feature when driving in icy or slippery conditions as the increased engine braking can cause the rear wheels to slide and your vehicle to swing around with the possible loss of vehicle control.

## Forced Downshifts

- Allowed in drive (D) with the tow/haul feature on or off.
- Press the accelerator to the floor.
- Allows transmission to select an appropriate gear.

## Automatic Transmission Adaptive Learning

This feature may increase durability and provide consistent shift feel over the life of your vehicle. A new vehicle or transmission may have firm shifts, soft shifts or both. This operation is considered normal and will not affect function or durability of the transmission. Over time, the adaptive learning process will fully update transmission operation.

# Transmission

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## Understanding your SelectShift Automatic™ Transmission (If Equipped)

Your vehicle is equipped with a SelectShift Automatic transmission gearshift lever. The SelectShift Automatic transmission gives you the ability to change gears up or down (without a clutch) as desired.

In order to prevent the engine from running at too low an RPM, which may cause it to stall, SelectShift will still automatically make some downshifts if it has determined that you have not downshifted in time. Although SelectShift will make some downshifts for you, it will still allow you to downshift at any time as long as the SelectShift determines that damage will not be caused to the engine from over-revving.

SelectShift will not automatically upshift, even if the engine is approaching the RPM limit. It must be shifted manually by pressing the + button.

**Note:** *Engine damage may occur if you maintain excessive engine revving without shifting.*

The SelectShift Automatic transmission feature has two modes: PRS and M mode.

### Progressive Range Selection (PRS)

Progressive Range Selection gives you the ability to lockout gears from the automatic shifting range. This may provide you with an improved driving experience (for example, in slippery conditions or when experiencing a steep grade).

With the gearshift lever in drive (D), press the – button to active PRS. The available and selected gears are indicated on the instrument cluster.

All available gears will display with the current gear indicated. Press the – button again to lock out gears beginning with the highest gear. Example: press the – button twice to lock out 6th and 5th gears. Only the available gears will display and the

transmission will automatically shift between the available gears. Press the + button to unlock gears to allow the transmission to shift to higher gears. The transmission will shift automatically within the gear range you select.

### Manual (M)

Moving the gearshift lever to the manual (M) position will allow you to manually select the gear you desire. Only the current gear will display. Use the buttons on the gearshift lever to manually select gears. Press the + button to upshift or the – button to downshift. Return the transmission to a different gearshift position to deactivate manual control.

Upshift to the recommended shift speeds according to the following chart:



# Transmission

Upshifts when accelerating (recommended for best fuel economy)	
Shift from:	
1 – 2	15 mph (24 km/h)
2 – 3	25 mph (40 km/h)
3 – 4	40 mph (64 km/h)
4 – 5	45 mph (72 km/h)
5 – 6	50 mph (80 km/h)

## Brake-Shift Interlock

### WARNINGS



Do not drive your vehicle until you verify that the brake lamps are working.



When doing this procedure, you will be taking your vehicle out of park (P) which means your vehicle can roll freely. To avoid unwanted vehicle movement, always fully set the parking brake prior to doing this procedure. Use wheel chocks if appropriate.

### WARNINGS



If you fully release the parking brake and the brake warning lamp remains illuminated, the brakes may not be working properly. See your authorized dealer.

Your vehicle is equipped with a brake-shift interlock feature that prevents moving the gearshift lever from park (P) when the ignition is in the on position and the brake pedal is not pressed.

If you cannot move the gearshift lever out of park (P) position with the ignition in the on position and the brake pedal pressed, a malfunction may have occurred. It is possible that a fuse has blown or your vehicle's brake lamps are not operating properly. See **Fuse Specification Chart** (page 250).

If the fuse is not blown and the brake lamps are working properly, the following procedure will allow you to move the gearshift lever from park (P):

1. Apply the parking brake. Turn the ignition key to the off position, then remove the key.

# Transmission

2. Move the steering column to the full down and full rearward position (toward the driver's seat).
3. Remove the gearshift lever boot.
4. Place fingers into gearshift lever boot hole and pull top half of shroud up and forward to separate it from the lower half of the shroud. There is a hinge at the forward edge of the top shroud. Roll the top half of the shroud upward on the hinge point to clear the hazard flasher button, then pull straight rearward toward the driver's seat to remove.
5. Remove the top half of the shroud.
6. Remove the three fasteners under the column that secure the lower shroud half to the column.



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7. Pull the lock lever into the full unlocked position and remove the lower shroud cover by pulling the lever handle through the slot in the cover.



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8. Apply the brake, pull the white disk then move the shifter to neutral (N).
9. Start your vehicle.

Perform Steps 4 through 8 in reverse order, making sure to engage the hinge pivots between the upper and lower halves of the shroud. Keep slight pressure in the forward direction as the halves rotate together.

## If Your Vehicle Gets Stuck In Mud or Snow

**Note:** Do not rock your vehicle if the engine is not at normal operating temperature or damage to the transmission may occur.


**Note:** Do not rock your vehicle for more than a minute or damage to the transmission and tires may occur, or the engine may overheat.

If your vehicle gets stuck in mud or snow, you may rock it out by shifting between forward and reverse gears, stopping between shifts in a steady pattern. Press lightly on the accelerator in each gear.

## Four-Wheel Drive (If Equipped)

### USING FOUR-WHEEL DRIVE

#### WARNING

 For important information regarding safe operation of this type of vehicle, see General Information in the Wheels and Tires chapter.

**Note:** Do not use 4X4 mode on dry, hard surfaced roads. Doing so will produce excessive noise, increase tire wear and may damage drive components. 4X4 mode is only intended for consistently slippery or loose surfaces.

Your four-wheel drive vehicle features the heavy-duty Control Trac® 4WD system. This unique system is interactive with the road, continually monitoring and adjusting torque delivery to the front and rear wheels to optimize vehicle control.

### 4WD Indicator Lights

The indicator lights illuminate in the information display in the reconfigurable telltale (RTT) location under the following conditions. See **Warning Lamps and Indicators** (page 101).

**Note:** When a 4X4 system fault is present, the system will typically remain in whichever 4X4 mode was selected prior to the fault condition occurring. It will not default to 4X2 in all circumstances. When this warning is displayed, have your vehicle serviced by an authorized dealer.

#### 4X2

4x2

Momentarily illuminates when 4X2 is selected.

#### 4X4 AUTO

4A

Continuously illuminates when 4X4 AUTO is selected.

### 4X4

4x4

Continuously illuminates when 4X4 is selected.

### CHECK 4X4



Displays when a 4X4 fault is present.

### 4WD Switch Positions

#### WARNING



Utility and four-wheel drive vehicles are not designed for cornering at speeds as high as passenger cars any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions. Avoid sharp turns or abrupt maneuvers in these vehicles.

## Four-Wheel Drive (If Equipped)

**Note:** The AdvanceTrac® with RSC® stability enhancement system can be turned off manually by pressing the AdvanceTrac button. See **Using Traction Control** (page 187). This will disable the engine management feature, allowing the vehicle to maintain full power and enhanced momentum through the obstacle.

**Note:** The Control Trac® selector switch should not be changed while the rear wheels are slipping.



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The Control Trac® system functions in three modes:

- **4X2** delivers power to the rear wheels only. The information display will momentarily display 4x2 when this mode is selected. This mode is appropriate for normal on-road driving on dry pavement and provides the best fuel economy.
- **4X4 AUTO** provides electronic control four-wheel drive with power delivered to all four wheels, as required, for increased traction. The information display will display 4A when this mode is selected. This mode is appropriate for all on-road driving conditions, such as dry road surfaces, wet pavement, snow, or gravel.
- **4X4** provides electronically locked four-wheel drive power to front and rear wheels. The information display will display 4X4 when this mode is selected. This mode is not recommended for use on dry pavement. This mode is only intended for severe winter or off-road conditions, such as deep snow, ice or shallow sand.

### Shifting between system modes

**Note:** Momentarily releasing the accelerator pedal while a shift in progress message displays will improve engagement/disengagement performance.

**Note:** Do not perform this operation if the rear wheels are slipping.

**Note:** Some noise may be heard as the system shifts or engages; this is normal.

Press any button (4X2, 4X4 AUTO or 4X4) at a stop or while driving. The information display may display a message indicating a 4X4 shift is in progress. Once the shift is complete the information display will then display the system mode selected.

## Four-Wheel Drive (If Equipped)

### How Your Vehicle Differs From Other Vehicles

#### WARNING



Vehicles with a higher center of gravity such as utility and four-wheel drive vehicles handle differently than vehicles with a lower center of gravity. Utility and four-wheel drive vehicles are not designed for cornering at speeds as high as passenger cars any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions. Avoid sharp turns, excessive speed and abrupt maneuvers in these vehicles. Failure to drive cautiously could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death.

Truck and utility vehicles can differ from some other vehicles. Your vehicle may be higher to allow it to travel over rough terrain without getting hung up or damaging underbody components.

The differences that make your vehicle so versatile also make it handle differently than an ordinary passenger car.

Maintain steering wheel control at all times, especially in rough terrain. Since sudden changes in terrain can result in abrupt steering wheel motion, make sure you grip the steering wheel from the outside. Do not grip the spokes.

Drive cautiously to avoid vehicle damage from concealed objects such as rocks and stumps.

You should either know the terrain or examine maps of the area before driving. Map out your route before driving in the area. To maintain steering and braking control of your vehicle, you must have all four wheels on the ground and they must be rolling, not sliding or spinning.

### Driving Off-Road With Truck and Utility Vehicles

**Note:** *On some models, the initial shift from two-wheel drive to four-wheel drive while the vehicle is moving can cause some momentary clunk and ratcheting sounds. This is the front drivetrain coming up to speed and the automatic locking hubs engaging and is not cause for concern.*

**Note:** *Your vehicle may be equipped with a front air dam that can become damaged (due to reduced ground clearance) when taking your vehicle off-road. This air dam can be taken off by removing two bolts.*

Four-wheel drive vehicles are specially equipped for driving on sand, snow, mud and rough terrain and have operating characteristics that are somewhat different from conventional vehicles, both on and off the road.

Power is supplied to all four wheels through a transfer case. On Four-wheel drive vehicles, the transfer case allows you to select different 4WD modes when necessary. Information on transfer case operation and shifting procedures can be found in this chapter. Information on transfer case maintenance can be found in the Maintenance chapter. You should become thoroughly familiar with this information before you operate your vehicle.

## Four-Wheel Drive (If Equipped)

Four-wheel drive (when you select a 4WD mode) uses all four wheels to power the vehicle. This increases traction, enabling you to drive over terrain and road conditions that a conventional two-wheel drive vehicle cannot.

### Basic Operating Principles

- Do not use 4X4 mode on dry, hard surfaced roads. Doing so will produce excessive noise, increase tire wear and may damage drive components. 4X4 mode is only intended for consistently slippery or loose surfaces.
- Drive slower in strong crosswinds which can affect the normal steering characteristics of your vehicle.
- When driving your vehicle on surfaces made slippery by loose sand, water, gravel, snow or ice proceed with care.

### If Your Vehicle leaves the Road

If your vehicle leaves the road, reduce your vehicle speed and avoid severe braking. When your vehicle speed has been reduced ease your vehicle back onto the road. Do not turn the steering wheel sharply while returning your vehicle to the road.

It may be safer to stay on the shoulder of the road and slow down gradually before returning to the road. You may lose control if you do not slow down or if you turn the steering wheel too sharply or abruptly.

It may be less risky to strike small objects, such as freeway reflectors, with minor damage to your vehicle rather than attempt a sudden return to the road which could cause your vehicle to slide sideways out of control or roll over. Remember, your safety and the safety of others should be your primary concern.

### If your vehicle gets stuck

#### WARNING



Do not spin the wheels at over 35 mph (56 km/h). The tires may fail and injure a passenger or bystander.

**Note:** Do not rock your vehicle if the engine is not at normal operating temperature, damage to the transmission may occur.

**Note:** Do not rock your vehicle for more than a minute, damage to the transmission and tires may occur or the engine may overheat.

If your vehicle gets stuck in mud or snow it may be rocked out by shifting between forward and reverse gears, stopping between shifts, in a steady pattern. Press lightly on the accelerator in each gear.

### Emergency Maneuvers

In an unavoidable emergency situation where a sudden sharp turn must be made, remember to avoid over-driving your vehicle (i.e. turn the steering wheel only as rapidly and as far as required to avoid the emergency). Excessive steering can result

## Four-Wheel Drive (If Equipped)

in loss of vehicle control. Apply smooth pressure to the accelerator pedal or brake pedal when changes in vehicle speed are required. Avoid abrupt steering, acceleration and braking. This could result in an increased risk of vehicle roll over, loss of vehicle control and personal injury. Use all available road surface to bring your vehicle to a safe direction of travel.

In the event of an emergency stop, avoid skidding the tires and do not attempt any sharp steering wheel movements.

If your vehicle goes from one type of surface to another (i.e. from concrete to gravel) there will be a change in the way your vehicle responds to a maneuver (i.e. steering, acceleration or braking).

### Sand

When driving over sand, try to keep all four wheels on the most solid area of the trail. Avoid reducing the tire pressures but shift to a lower gear and drive steadily through the terrain. Apply the accelerator slowly and avoid excessive wheel slip.

Avoid driving at excessive speeds, this causes vehicle momentum to work against you and your vehicle could become stuck to the point that assistance may be required from another vehicle. Remember, you may be able to back out the way you came if you proceed with caution.

### Mud and Water

**Note:** *Driving through deep water may damage the vehicle.*

If you must drive through high water, drive slowly. Traction or brake capability may be limited.

When driving through water, determine the depth and avoid water higher than the bottom of the hubs. If the ignition system gets wet, your vehicle may stall.

Once through water, always try the brakes. Wet brakes do not stop your vehicle as effectively as dry brakes. Drying can be improved by applying light pressure to the brake pedal while moving slowly.

Be cautious of sudden changes in vehicle speed or direction when you are driving in mud. Even 4WD vehicles can lose traction in slick mud. As when you are driving over sand, apply the accelerator slowly and avoid spinning your wheels. If the vehicle does slide, steer in the direction of the slide until you regain control of the vehicle.

If the transmission, transfer case or front axle are submerged in water, their fluids should be checked and changed, if necessary.

If the front or rear axle is submerged in water, the axle lubricant should be replaced.

After driving through mud, clean off residue stuck to rotating driveshafts and tires. Excess mud stuck on tires and rotating driveshafts causes an imbalance that could damage drive components.



E143950

## Four-Wheel Drive (If Equipped)

“Tread Lightly” is an educational program designed to increase public awareness of land-use regulations and responsibilities in our nations wilderness areas. Ford Motor Company joins the U.S. Forest Service and the Bureau of Land Management in encouraging you to help preserve our national forest and other public and private lands by “treading lightly”.

### Driving on Hilly or Sloping Terrain

**Note:** Avoid driving crosswise or turning on steep slopes or hills.

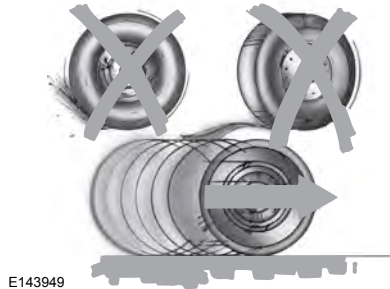
**Note:** Avoid turning on steep slopes or hills. A danger lies in losing traction, slipping sideways and possible vehicle roll over. Whenever driving on a hill, determine beforehand the route you will use. Do not drive over the crest of a hill without seeing what conditions are on the other side. Do not drive in reverse over a hill without the aid of an observer.

Although natural obstacles may make it necessary to travel diagonally up or down a hill or steep incline, you should always try to drive straight up or straight down.

When climbing a steep slope or hill, start in a lower gear rather than downshifting to a lower gear from a higher gear once the ascent has started. This reduces strain on the engine and the possibility of stalling.

If your vehicle stalls, do not try to turn around because this could cause vehicle roll over. It is better to reverse back to a safe location.

Apply just enough power to the wheels to climb the hill. Too much power will cause the tires to slip, spin or lose traction, resulting in loss of vehicle control.




Descend a hill in the same gear you would use to climb up the hill to avoid excessive brake application and brake overheating. Do not descend in neutral. Disengage overdrive or move the transmission selector lever to a lower gear. When descending a steep hill, avoid sudden hard braking as you could lose control. The front wheels have to be turning in order to steer your vehicle.

If your vehicle has anti-lock brakes, apply the brakes steadily. Do not pump the brakes.

### Driving on Snow and Ice

#### WARNING

 If you are driving in slippery conditions that require tire chains or cables, then it is critical that you drive cautiously. Keep speeds down, allow for longer stopping distances and avoid aggressive steering to reduce the chances of a loss of vehicle control which can lead to serious injury or death. If the rear end of your vehicle slides while cornering, steer in the direction of the slide until you regain control of your vehicle.



## Four-Wheel Drive (If Equipped)

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**Note:** *Excessive tire slippage can cause transmission damage.*

Four-wheel drive vehicles have advantages over two-wheel drive vehicles in snow and ice but can skid like any other vehicle. Should you start to slide while driving on snowy or icy roads, turn the steering wheel in the direction of the slide until you regain control.

Avoid sudden applications of power and quick changes of direction on snow and ice. Apply the accelerator slowly and steadily when starting from a full stop.

Avoid sudden braking. Although a four-wheel drive vehicle may accelerate better than a two-wheel drive vehicle in snow and ice, it will not stop any faster as braking occurs at all four wheels. Do not become overconfident as to road conditions.

Make sure you allow sufficient distance between you and other vehicles for stopping. Drive slower than usual and consider using one of the lower gears. In emergency stopping situations, apply the brake steadily. Do not pump the brake pedal. See **Hints on Driving With Anti-Lock Brakes** (page 184).

### Maintenance and Modifications

The suspension and steering systems on your vehicle have been designed and tested to provide predictable performance whether loaded or empty. For this reason, we strongly recommend that you do not make modifications such as adding or removing parts (i.e. lift kits or stabilizer bars) or by using replacement parts not equivalent to the original factory equipment.

We recommend that you use caution when your vehicle has either a high load or device (i.e. ladder or luggage racks). Any modifications to your vehicle that raise the center of gravity may cause your vehicle to roll over when there is a loss of vehicle control.

Failure to maintain your vehicle correctly may void the warranty, increase your repair cost, reduce vehicle performance and operational capabilities and adversely affect you and your passenger's safety. We recommend you frequently inspect your vehicle's chassis components when your vehicle is subject to off road usage.

## LIMITED SLIP DIFFERENTIAL

This axle provides added traction on slippery surfaces, particularly when one wheel is on a poor traction surface. Under normal conditions, the limited-slip axle functions like a standard rear axle. The axle may exhibit a slight noise or vibration during tight turns with low vehicle speed. This is normal behavior and indicates the axle is working.

# Brakes

## GENERAL INFORMATION

**Note:** Occasional brake noise is normal. If a metal-to-metal, continuous grinding or continuous squeal sound is present, the brake linings may be worn-out and an authorized dealer should check them. If the vehicle has continuous vibration or shudder in the steering wheel while braking, an authorized dealer should check your vehicle.

**Note:** Brake dust may accumulate on the wheels, even under normal driving conditions. Some dust is inevitable as the brakes wear and does not contribute to brake noise. See **Cleaning the Alloy Wheels** (page 292).



See **Warning Lamps and Indicators** (page 101).

Wet brakes result in reduced braking efficiency. Gently press the brake pedal a few times when driving from a car wash or standing water to dry the brakes.

## Brake Over Accelerator

In the event the accelerator pedal becomes stuck or entrapped, apply steady and firm pressure to the brake pedal to slow the vehicle and reduce engine power. If you experience this condition, apply the brakes and bring your vehicle to a safe stop. Switch the engine off, move the transmission to park (P) and apply the parking brake. Inspect the accelerator pedal and the area around it for any items or debris that may be obstructing its movement. If none are found and the condition persists, have your vehicle towed to the nearest authorized dealer.

## Emergency Brake Assist

Emergency brake assist detects when you brake heavily by measuring the rate at which you press the brake pedal. It provides maximum braking efficiency as long as you press the pedal. Emergency brake assist can reduce stopping distances in critical situations.

## Anti-lock Brake System

This system helps you maintain steering control during emergency stops by keeping the brakes from locking.



This lamp momentarily illuminates when you switch the ignition on. If the light does not illuminate during start up, remains on or flashes, the anti-lock braking system may be disabled. Have the system checked by an authorized dealer. If the anti-lock brake system is disabled, normal braking is still effective.



If the brake warning lamp illuminates with the parking brake released, have your brake system serviced immediately.

## HINTS ON DRIVING WITH ANTI-LOCK BRAKES

**Note:** When the system is operating, the brake pedal will pulse and may travel further. Maintain pressure on the brake pedal. You may also hear a noise from the system. This is normal.

# Brakes

The anti-lock braking system will not eliminate the risks when:

- You drive too closely to the vehicle in front of you.
- Your vehicle is hydroplaning.
- You take corners too fast.
- The road surface is poor.

## PARKING BRAKE

### WARNING



Always set the parking brake fully and make sure the transmission is placed in park (P). Failure to set the parking brake and engage park could result in vehicle roll-away, property damage or bodily injury. Turn the ignition to the lock position and remove the key whenever you leave your vehicle.

Apply the parking brake whenever your vehicle is parked. Press the pedal downward to set the parking brake. The brake warning lamp in the instrument cluster will illuminate and remains illuminated until the parking brake is released.

To release, pull the brake release lever located at the lower left side of the instrument panel.

If you are parking your vehicle on a grade or with a trailer, press and hold the brake pedal down, then set the parking brake. There may be a little vehicle movement as the parking brake sets to hold the vehicle's weight. This is normal and should be no reason for concern. If needed, press and hold the service brake pedal down, then try reapplying the parking brake. Chock the wheels if required. If the parking brake cannot hold the weight of the vehicle, the parking brake may need to be serviced or the vehicle may be overloaded.

## HILL START ASSIST

### WARNINGS



The system does not replace the parking brake. When you leave your vehicle, always apply the parking brake and shift the transmission into park (P) (automatic transmission) or first gear (1) (manual transmission).



You must remain in your vehicle once you have activated the system.



During all times, you are responsible for controlling your vehicle, supervising the system and intervening, if required.



If the engine is revved excessively, or if a malfunction is detected, the system will be deactivated.

The system makes it easier to pull away when your vehicle is on a slope without the need to use the parking brake.

# Brakes

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When the system is active, your vehicle will remain stationary on the slope for two to three seconds after you release the brake pedal. This allows you time to move your foot from the brake to the accelerator pedal. The brakes release automatically when the engine has sufficient torque to prevent your vehicle from rolling down the grade. This is an advantage when pulling away on a slope, for example from a car park ramp, traffic lights or when reversing uphill into a parking space.

The system will activate automatically on any slope that will cause significant vehicle rollback. For vehicles with a manual transmission, you can switch this feature off using the information display. See **Information Displays** (page 105). The system will remain on or off depending on how it was last set.

**Note:** *There is no warning lamp to indicate the system is either on or off.*

**Note:** *If your vehicle is equipped with Auto Hold, Hill Start Assist will not be available while Auto Hold is active.*

## Using Hill Start Assist

1. Bring your vehicle to a complete standstill. Keep the brake pedal pressed and select an uphill gear (for example, first (1) when facing uphill or reverse (R) when facing downhill).
2. If the sensors detect that your vehicle is on a slope, the system will activate automatically.
3. When you remove your foot from the brake pedal, your vehicle will remain on the slope without rolling away for about two or three seconds. This hold time will automatically be extended if you are in the process of driving off.
4. Drive off in the normal manner. The brakes will release automatically.

## Switching the System On and Off

You can switch this feature on or off if your vehicle is equipped with a manual transmission and an information display. See **General Information** (page 105). The system remembers the last setting when you start your vehicle.

If your vehicle is not equipped with a manual transmission and an information display, you cannot turn the system on or off. When you switch the ignition on, the system automatically turns on.

# Traction Control

## PRINCIPLE OF OPERATION

The traction control system helps avoid drive wheel spin and loss of traction.

If your vehicle begins to slide, the system applies the brakes to individual wheels and, when needed, reduces engine power at the same time. If the wheels spin when accelerating on slippery or loose surfaces, the system reduces engine power in order to increase traction.

## USING TRACTION CONTROL

### WARNING



The stability and traction control light illuminates steadily if the system detects a failure. Make sure you did not manually disable the traction control system using the switch. If the stability control and traction control light is still illuminating steadily, have the system serviced by an authorized dealer immediately. Operating your vehicle with traction control disabled could lead to an increased risk of loss of vehicle control, vehicle rollover, personal injury and death.

The system automatically turns on each time you switch the ignition on.

If your vehicle is stuck in mud or snow, switching traction control off may be beneficial as this allows the wheels to spin.

**Note:** *When you switch traction control off, stability control remains fully active.*

## Switching the System Off



E166706

The switch for the stability and traction control system is on the instrument panel.

When you switch the system off, a message and an illuminated icon appear on the instrument cluster.

Use the switch again to return the traction control system to normal operation.

Your vehicle may have MyKey restrictions regarding this feature. See **Principle of Operation** (page 54).

# Traction Control

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## System Indicator Lights and Messages



The stability and traction control light temporarily illuminates on engine start-up and flashes when a driving condition activates either of the systems.



The stability and traction control off light temporarily illuminates on engine start-up and stays on:

- When you switch the traction control system off.
- If a problem occurs in either of the systems.

# Stability Control

## PRINCIPLE OF OPERATION

### WARNINGS



Vehicle modifications involving braking system, aftermarket roof racks, suspension, steering system, tire construction and wheel and tire size may change the handling characteristics of your vehicle and may adversely affect the performance of the electronic stability control system. In addition, installing any stereo loudspeakers may interfere with and adversely affect the electronic stability control system. Install any aftermarket stereo loudspeaker as far as possible from the front center console, the tunnel, and the front seats in order to minimize the risk of interfering with the electronic stability control sensors. Reducing the effectiveness of the electronic stability control system could lead to an increased risk of loss of vehicle control, vehicle rollover, personal injury and death.

### WARNINGS



Remember that even advanced technology cannot defy the laws of physics. It's always possible to lose control of a vehicle due to inappropriate driver input for the conditions. Aggressive driving on any road condition can cause you to lose control of your vehicle increasing the risk of personal injury or property damage. Activation of the electronic stability control system is an indication that at least some of the tires have exceeded their ability to grip the road; this could reduce the operator's ability to control the vehicle potentially resulting in a loss of vehicle control, vehicle rollover, personal injury and death. If your electronic stability control system activates, **SLOW DOWN**.

The system automatically turns on each time you switch the ignition on.

If a driving condition activates either the stability control or the traction control system you may experience the following conditions:

- The stability and traction control light flashes.
- Your vehicle slows down.

- Reduced engine power.
- A vibration in the brake pedal.
- The brake pedal is stiffer than usual.
- If the driving condition is severe and your foot is not on the brake, the brake pedal may move as the systems applies higher brake forces.

The stability control system has several features built into it to help you maintain control of your vehicle:

### Electronic Stability Control

The system enhances your vehicle's ability to prevent skids or lateral slides by applying brakes to one or more of the wheels individually and, if necessary, reducing engine power.

### Roll Stability Control

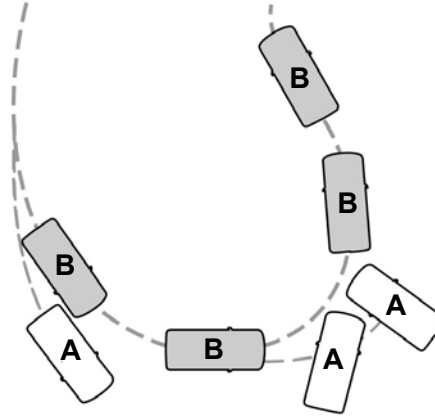
The system enhances your vehicle's ability to prevent rollovers by detecting your vehicle's roll motion and the rate at which it changes by applying the brakes to one or more wheels individually.



# Stability Control

## Traction Control

The system enhances your vehicle's ability to maintain traction of the wheels by detecting and controlling wheel spin. See **Using Traction Control** (page 187).



E72903

- A Vehicle without stability control skidding off its intended route.
- B Vehicle with stability control maintaining control on a slippery surface.

## USING STABILITY CONTROL

### Stability Control and Traction Control with Roll Stability Control™ (RSC™)

The system automatically activates when you start your engine. You can switch off the electronic stability control and roll stability control portions of the system below 35 mph (56 km/h). When the transmission is in reverse (R), they are disabled. You can switch off the traction control portion of the system independently. See **Using Traction Control** (page 187).

# Stability Control

Stability Control and Traction Control with RSC Features				
Button functions	Stability control OFF light	Roll stability control	Electronic stability control	Traction control system
Default at start-up	Illuminated during bulb check	Enabled	Enabled	Enabled
Button pressed momentarily	Illuminated	Enabled	Enabled <sup>1</sup>	Disabled <sup>1</sup>
Button pressed and held for more than 5 seconds at vehicle speed under 35 mph (56 km/h)	Flashes then illuminated solid <sup>2</sup>	Disabled	Disabled	Disabled <sup>4</sup>
Vehicle speed exceeds 35 mph (56 km/h) after button is pressed and held for more than 5 seconds	Illuminated	Enabled	Enabled <sup>1</sup>	Disabled <sup>1</sup>

# Stability Control

Stability Control and Traction Control with RSC Features				
Button pressed again after deactivation	Not illuminated	Enabled	Enabled	Enabled
Button not pressed and the transfer case is switched to 4WD Low <sup>3</sup>	Illuminated	Disabled	Disabled	Disabled <sup>4</sup>

<sup>1</sup> The traction control system may still be enabled but with higher entry thresholds compared to the full system. The electronic stability control entry thresholds are higher compared to the full system.

<sup>2</sup> When you press and hold the button for more than 5 seconds the indicator lamp blinks for three seconds.

<sup>3</sup> Your vehicle may or may not have this feature available. When you select 4WD low the stability control light illuminates and all stability control with RSC features are disabled.

<sup>4</sup> Engine traction control and two-wheel spin brake traction control functions are disabled. Single wheel spin traction control is always enabled.

## Terrain Response (If Equipped)

### USING HILL DESCENT CONTROL

#### Principle of Operation

##### WARNINGS



Hill descent control cannot control descent in all surface conditions and circumstances, such as ice or extremely steep grades. Hill descent control is a driver assist system and cannot substitute for good judgment by the driver. Failure to do so may result in loss of vehicle control, crash or serious injury.



Hill descent control does not provide hill hold at 0 mph (0 km/h). When stopped, the parking brake must be applied or the vehicle must be placed in park (P) or it may roll away.

Hill descent control allows the driver to set and maintain vehicle speed while descending steep grades in various surface conditions.

Hill descent control can maintain vehicle speeds on downhill grades between 3 mph (5 km/h) and 20 mph (32 km/h). Above 20 mph (32 km/h), the system remains armed, but descent speed cannot be set or maintained.

Hill descent control requires a cooling down interval after sustained use. The amount of time that the feature can remain active before cooling varies with conditions. The system provides a warning in the message center and a chime sounds when the system is about to disengage for cooling. At this time, manually apply the brakes to maintain descent speed.

#### Using Hill Descent Control



Press and release the hill descent button in the center of the terrain management control. The button illuminates and a chime sounds when you switch this feature on.

To increase descent speed, press the accelerator pedal until you reach the desired speed. To decrease descent speed, press the brake pedal until you reach the desired speed.

Whether accelerating or decelerating, once you reach the desired descent speed, remove your feet from the pedals and hill descent control maintains the chosen vehicle speed.

**Note:** You may observe noise from the ABS pump motor during hill descent control operation. This is a normal characteristic of the ABS and should be no reason for concern.

# Terrain Response (If Equipped)

## Hill Descent Modes

Information Display Message	Description
Hill Descent Control Active	Displays at speeds below 20 mph (32 km/h) when you press the Hill Descent Control and Hill Descent Control activates.
Hill Descent Control Ready	Displays at speeds below 20 mph (32 km/h) when you press the Hill Descent Control switch and conditions are not correct for hill descent activation.
For Hill Descent Reduce Speed 20MPH or Less	Displays at speeds above 20 mph (32 km/h) when you press the Hill Descent Control switch.
For Hill Descent Select Gear	Displays when you press the Hill Descent Control switch and the vehicles is in park (P) or neutral (N).

Refer to the Information Displays for additional Hill Descent Control messages.  
See **Information Messages** (page 111).

# Parking Aids

## PRINCIPLE OF OPERATION

### WARNINGS



To help avoid personal injury, please read and understand the limitations of the system as contained in this section. Sensing is only an aid for some (generally large and fixed) objects when moving on a flat surface at parking speeds. Certain objects with surfaces that absorb ultrasonic waves, surrounding vehicle's parking aid systems, traffic control systems, fluorescent lamps, inclement weather, air brakes, and external motors and fans may also affect the function of the sensing system; this may include reduced performance or a false activation.



To help avoid personal injury, always use caution when in reverse (R) and when using the sensing system.

### WARNINGS



This system is not designed to prevent contact with small or moving objects. The system is designed to provide a warning to assist the driver in detecting large stationary objects to avoid damaging your vehicle. The system may not detect smaller objects, particularly those close to the ground.



Certain add-on devices such as large trailer hitches, bike or surfboard racks and any device that may block the normal detection zone of the system, may create false beeps.

**Note:** *Keep the sensors, located on the bumper or fascia, free from snow, ice and large accumulations of dirt. If the sensors are covered, the system's accuracy can be affected. Do not clean the sensors with sharp objects.*

**Note:** *If your vehicle sustains damage to the bumper or fascia, leaving it misaligned or bent, the sensing zone may be altered causing inaccurate measurement of obstacles or false alarms.*

**Note:** *The sensing system cannot be turned off when a MyKey is present. See **Principle of Operation** (page 54).*

**Note:** *If you attach certain add-on devices such as a trailer or bike rack, the rear sensing system may detect that add-on device and therefore provide warnings. It is suggested that you disable the rear sensing system when you attach an add-on device to your vehicle to prevent these warnings.*

The sensing system warns the driver of obstacles within a certain range of your vehicle. The system turns on automatically whenever you switch the ignition on.

The system can be switched off through the information display menu or from the pop-up message that appears once you shift the transmission into reverse (R). See **General Information** (page 105).

**Note:** *On vehicles with front parking aid you can use the parking aid switch to switch the system off.*

If a fault is present in the system, a warning message appears in the information display. See **Information Messages** (page 111).

# Parking Aids

## REAR PARKING AID

The rear sensors are only active when the transmission is in reverse (R). As your vehicle moves closer to the obstacle, the rate of the audible warning increases. When the obstacle is less than 10 in (25 cm) away, the warning sounds continuously. If the system detects a stationary or receding object farther than 10 in (25 cm) from the corners of the bumper, the tone sounds for only three seconds. Once the system detects an object approaching, the warning sounds again.



E130178

Coverage area of up to 6 ft (1.8 m) from the rear bumper. There may be decreased coverage area at the outer corners of the bumper.

The system detects certain objects while the transmission is in reverse (R) :

- Your vehicle is moving toward a stationary object at a speed of 3 mph (5 km/h) or less.
- Your vehicle is not moving, but a moving object is approaching the rear of your vehicle at a speed of 3 mph (5 km/h) or less.
- Your vehicle is moving at a speed of less than 3 mph (5 km/h) and a moving object is approaching the rear of your vehicle at a speed of less than 3 mph (5 km/h).

## FRONT PARKING AID

The front sensors are active when the transmission is in any position other than park (P) and the vehicle speed is below 8 mph (13 km/h).



E187330

Coverage area of up to 28 in (70 cm) from the front bumper. There is decreased coverage area at the outer corners.

The system sounds an audible warning when obstacles are near either bumper in the following manner:



- Objects detected by the front sensors are indicated by a high-pitched tone from the front of the vehicle.
- Objects detected by the rear sensors are indicated by a lower pitched tone from the rear of the vehicle.

# Parking Aids




- The sensing system reports the obstacle which is closest to the front or rear of the vehicle. For example, if an obstacle is 12 in (30 cm) from the front of the vehicle and, at the same time, an obstacle is only 6 in (15 cm) from the rear of the vehicle, the lower pitched tone sounds.
- An alternating warning sounds from the front and rear if there are objects at both bumpers that are closer than 10 in (25 cm).

## REAR VIEW CAMERA

### WARNINGS

-  The rear view camera system is a reverse aid supplement device that still requires the driver to use it in conjunction with the interior and exterior mirrors for maximum coverage.
-  Objects that are close to either corner of the bumper or under the bumper, might not be seen on the screen due to the limited coverage of the camera system.

### WARNINGS

-  Back up as slow as possible since higher speeds might limit your reaction time to stop your vehicle.
-  Use caution when using the rear video camera and the luggage compartment door is ajar. If the luggage compartment door is ajar, the camera will be out of position and the video image may be incorrect. All guidelines disappear when the luggage compartment door is ajar.
-  Use caution when turning camera features on or off. Make sure your vehicle is not moving.

The rear view camera system provides a video image of the area behind your vehicle. During operation, lines appear in the display which represent your vehicle's path and proximity to objects behind your vehicle.



E162528

The camera is located on the luggage compartment door.

## Using the Rear View Camera System

The rear view camera system displays what is behind your vehicle when you place the transmission in reverse (R).



# Parking Aids

The system uses two types of guides to help you see what is behind your vehicle:

- Fixed guidelines: Show the actual path your vehicle is moving in while reversing in a straight line. This can be helpful when backing into a parking space or aligning your vehicle with another object behind you.
- Centerline: Helps align the center of your vehicle with an object (for example, a trailer).

**Note:** The image may remain on momentarily when you shift the transmission out of reverse (R). If your vehicle speed reaches 6 mph (10 km/h) or 10 seconds elapse and the image remains on, have your system inspected by an authorized dealer.

**Note:** When towing, the camera only sees what you are towing behind your vehicle. This might not provide adequate coverage as it usually provides in normal operation and you might not see some objects. In some vehicles, the guidelines may disappear once you engage the trailer tow connector.

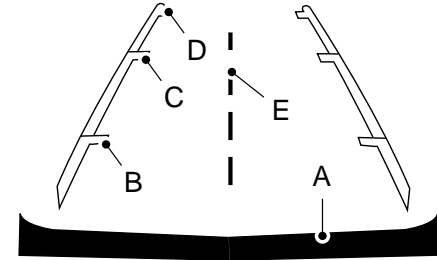
The camera may not operate correctly under the following conditions:

- Nighttime or dark areas if one or both reverse lamps are not operating.
- Mud, water or debris obstructs the camera's view. Clean the lens with a soft, lint-free cloth and non-abrasive cleaner.
- The camera is misaligned due to damage to the rear of your vehicle.

## Camera Guidelines

**Note:** Fixed guidelines are only available when the transmission is in reverse (R).

**Note:** The centerline is only available if fixed guidelines are on.



- A Rear bumper
- B Fixed guideline: Red Zone
- C Fixed guideline: Yellow zone
- D Fixed guideline: Green zone
- E Centerline

# Parking Aids

Always use caution while reversing. Objects in the red zone are closest to your vehicle and objects in the green zone are farther away. Objects are getting closer to your vehicle as they move from the green zone to the yellow or red zones. Use the side view mirrors and rear view mirror to get better coverage on both sides and rear of the vehicle.

## Camera System Settings

Rear view camera system settings can be accessed through the multifunctional display. See **General Information** (page 105).

## Enhanced Park Aids or Park Pilot

Selectable settings for this feature are ON and OFF.

The system uses red, yellow and green highlights which appear on top of the video image when an object is detected by the reverse sensing system. The alert highlights the closest object detected. The reverse sensing alert can be disabled and if visual park aid alert is enabled, highlighted areas are still displayed.

## Manual Zoom

### WARNING



When manual zoom is on, the full area behind your vehicle is not shown. Be aware of your surroundings when using the manual zoom feature.

**Note:** Manual zoom is only available when the transmission is in reverse (R).

**Note:** Only the centerline shows when you enable manual zoom.

Selectable settings for this feature are Zoom in (+) and Zoom out (-). Press the symbol on the camera screen to change the view. The default setting is Zoom OFF.

This allows you to get a closer view of an object behind your vehicle. The zoomed image keeps the bumper in the image to provide a reference. The zoom is only active while the transmission is in reverse (R).

## Rear Camera Delay

Selectable settings for this feature are ON and OFF. The default setting for the rear camera delay is OFF.

When shifting the transmission out of reverse (R) and into any gear other than park (P), the camera image remains in the display until:

- Your vehicle speed sufficiently increases.
- You shift your vehicle into park (P).


# Cruise Control


## PRINCIPLE OF OPERATION

Cruise control lets you maintain a set speed without keeping your foot on the accelerator pedal. You can use cruise control when your vehicle speed is greater than 20 mph (30 km/h).

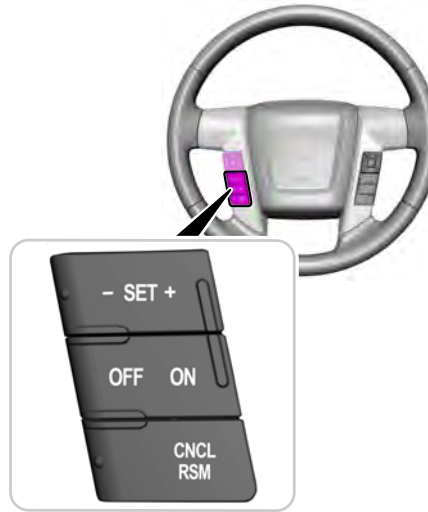
## USING CRUISE CONTROL

### WARNINGS

 Do not use cruise control on winding roads, in heavy traffic or when the road surface is slippery. This could result in loss of vehicle control, serious injury or death.

 When you are going downhill, your vehicle speed may increase above the set speed. The system will not apply the brakes but a warning displays. Failure to follow this warning could result in serious personal injury or death.

**Note:** Cruise control will disengage if the vehicle speed decreases more than 10 mph (16 km/h) below the set speed while driving uphill.



E208730

The cruise controls are on the steering wheel.

## Switching Cruise Control On and Off

### Switching Cruise Control On

Press and release **ON**.



The indicator appears in the instrument cluster.

### Setting the Cruise Speed

1. Drive to desired speed.
2. Press and release **SET+**.
3. Take your foot off the accelerator pedal.

The indicator changes color in the instrument cluster.

### Changing the Set Speed

**Note:** If you accelerate by pressing the accelerator pedal, the set speed will not change. When you release the accelerator pedal, your vehicle returns to the speed that you previously set.

# Cruise Control

---

- Press and release **SET+** or **SET-**. When you select km/h as the display measurement in the Information display the set speed changes in approximately 2 km/h increments. When you select mph as the display measurement in the information display the set speed changes in approximately 1 mph increments.
- Press the accelerator or brake pedal until you reach the desired speed. Press and release **SET +**.
- Press and hold **SET+** or **SET-**. Release the control when you reach the desired speed.

**Note:** *You erase the set speed when you switch the system off.*

## Canceling the Set Speed

Press and release **CNCL** or tap the brake pedal. The set speed does not erase.

## Resuming the Set Speed

Press and release **RSM**.


## Switching Cruise Control Off

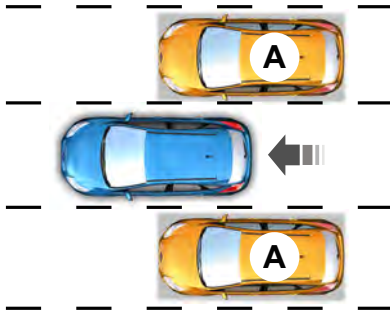
Press and release **OFF** when the system is in stand by mode or switch the ignition off.

# Driving Aids

## BLIND SPOT INFORMATION SYSTEM

### WARNING

 To help avoid injuries, NEVER use the Blind Spot Information System as a replacement for using the interior and exterior mirrors or looking over your shoulder before changing lanes. The Blind Spot Information System is not a replacement for careful driving.



E124788

The Blind Spot Information System is designed to aid you in detecting vehicles that may have entered the blind spot zone (A). The detection area is on both sides of your vehicle, extending rearward from the exterior mirrors to approximately 13 ft (4 m) beyond the bumper. The system is designed to alert you if certain vehicles enter the blind spot zone while driving.

**Note:** *The Blind Spot Information System does not prevent contact with other vehicles or objects; nor detect parked vehicles, people, animals or infrastructure (fences, guardrails, trees). It's only designed to alert you to vehicles in the blind spot zones.*

**Note:** *When a vehicle passes quickly through the blind spot zone, typically fewer than two seconds, the system does not trigger.*

### Using the System

The Blind Spot Information System turns on when you start the engine and you drive your vehicle forward above 5 mph (8 km/h).

For automatic transmissions, the Blind Spot Information System remains on while the transmission is in drive (D). If shifted into reverse (R) or park (P) the Blind Spot Information System turns off. Once shifted back into drive (D), the Blind Spot Information System turns back on when you drive your vehicle above 5 mph (8 km/h).

For manual transmissions, the Blind Spot Information System is on for all gears except the reverse (R).

**Note:** *The Blind Spot Information System does not function in reverse (R) or park (P).*

### System Lights and Messages



E142442

## Driving Aids

The Blind Spot Information System illuminates an amber alert indicator in the outside mirror on the side of your vehicle the approaching vehicle is coming from. When the Blind Spot Information System is alerting on a vehicle and the corresponding turn signal is ON, the Blind Spot Information System alert indicator flashes as an increased warning level.

The alert indicator dims when the system detects nighttime darkness.

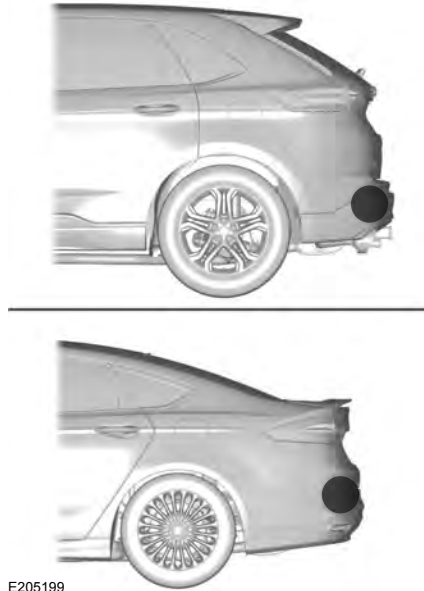
**Note:** *The alert indicator flashes in case of an alert and the turn signal is set to that side at the same time.*

### System Sensor Blockage

#### WARNING



To help avoid injuries, NEVER use the Blind Spot Information System as a replacement for using the interior and exterior mirrors or looking over your shoulder before changing lanes. The Blind Spot Information System is not a replacement for careful driving.



The system uses radar sensors that are located behind the bumper fascia on each side of your vehicle. Any dirt, mud and snow in front of the sensors and/or driving in heavy rain can cause system degradation. Also, other types of obstructions in front of the sensor can cause system degradation. This is referred to as a 'blocked' condition.

**Note:** *Do not apply bumper stickers and/or repair compound to these areas, this can cause degraded system performance.*

If the system detects a degraded performance condition, a message warning of a blocked sensor will appear in the information display. Also the BLIS alert indicators will remain ON and BLIS will no longer provide any vehicle warnings. You can clear the information display warning but the alert indicators will remain illuminated.

# Driving Aids

A "blocked" condition can be cleared in two ways:

- After the blockage in front of the sensors is removed or the rainfall/snowfall rate decreases or stops, drive for a few minutes in traffic to allow the sensors to detect passing vehicles.
- By cycling the ignition from ON to OFF and then back ON.

**Note:** *If your vehicle has a tow bar with a factory equipped trailer tow module and it is towing a trailer, the sensors will automatically turn the Blind Spot Information System off. If your vehicle has a tow bar but no factory equipped trailer tow module, it is recommended to turn the Blind Spot Information System off manually. Operating the Blind Spot Information System with a trailer attached will cause poor system performance.*

## System Errors

If the system senses a problem with the left or right sensor, the telltale will illuminate and a message will appear in the information display. See **Information Messages** (page 111).

## Switching the System Off and On

You can temporarily switch the Blind Spot Information System off in the information display. See **General Information** (page 105). When the Blind Spot Information System switches off, you will not receive alerts and the information display shows a system off message. The telltale in the cluster also illuminates. When you switch the Blind Spot Information System on or off, the alert indicators flash twice.

**Note:** *The Blind Spot Information System remembers the last selected on or off setting.*

You can also have the Blind Spot Information System switched off permanently at an authorized dealer. Once switched off permanently, the system can only be switched back on at an authorized dealer.

## CROSS TRAFFIC ALERT

### WARNING



To help avoid personal injury, **NEVER** use the Cross Traffic Alert system as a replacement for using the interior and exterior mirrors and looking over your shoulder before backing out of a parking space. Cross Traffic Alert is not a replacement for careful driving.

Cross Traffic Alert is designed to warn you of vehicles approaching from the sides when the transmission is in reverse (R).

## Using the System

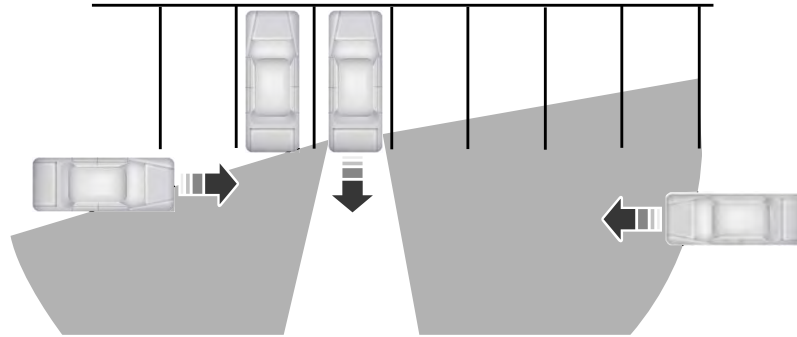
Cross Traffic Alert turns on when you start the engine and you shift into reverse (R). Once shifted out of reverse (R), Cross Traffic Alert turns off.

**Note:** *Cross Traffic Alert only functions while your transmission is in reverse (R).*

# Driving Aids

Cross Traffic Alert is designed to detect vehicles that approach with a speed up to 37 mph (60 km/h). Coverage decreases when

the sensors are partially, mostly or fully obstructed. Reversing slowly helps increase the coverage area and effectiveness.



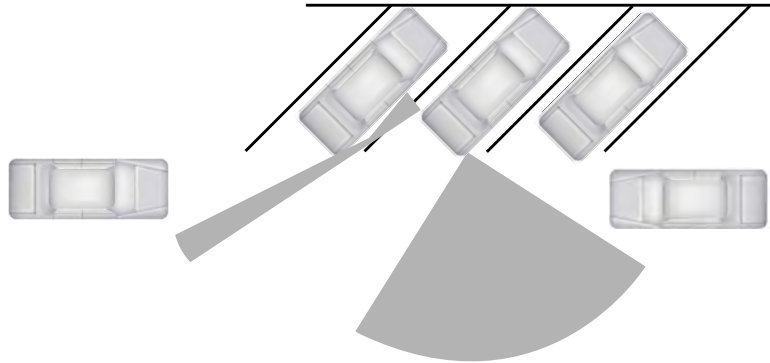
E142440

In this first example, the left sensor is only partially obstructed; zone coverage to the right is nearly maximized.



# Driving Aids

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E142441

Zone coverage also decreases when parking at shallow angles. Here, the left sensor is mostly obstructed; zone coverage on that side is severely limited.

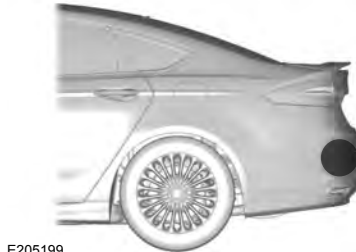
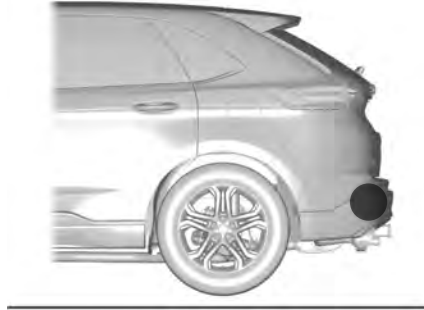
# Driving Aids

## System Lights, Messages and Audible Alerts



E142442

The Cross Traffic Alert illuminates an amber alert indicator in the outside mirror on the side of your vehicle the approaching vehicle is coming from. Cross Traffic Alert also sounds an audible alert and a message appears in the information display indicating a vehicle is coming from the right or left. Cross Traffic Alert works with the reverse sensing system that sounds its own series of tones. See **Rear Parking Aid** (page 196).



E205199

The system uses radar sensors that are located behind the bumper fascia on each side of your vehicle. Do not allow mud, snow or bumper stickers to obstruct these areas, this can cause degraded system performance. See **Blind Spot Information System** (page 202). If the Blind Spot Information System is blocked, Cross Traffic Alert is also blocked. A corresponding message appears in the information display as soon as you shift the transmission into reverse (R).

## System Limitations

Cross Traffic Alert has its limitations; situations such as severe weather conditions or debris build-up on the sensor area may limit vehicle detection.

The following are other situations that may limit the Cross Traffic Alert performance:

- Adjacent parked vehicles or objects obstructing the sensors.
- Approaching vehicles passing at speeds greater than 37 mph (60 km/h).

# Driving Aids

- Driving in reverse faster than 7 mph (12 km/h).
- Backing out of an angled parking spot.

## False Alerts

**Note:** *If your vehicle has a tow bar with a factory equipped trailer tow module and it is towing a trailer, the sensors will automatically turn the Cross Traffic Alert off. If your vehicle has a tow bar but no factory equipped trailer tow module, it is recommended to turn the Cross Traffic Alert off manually. Operating Cross Traffic Alert with a trailer attached will cause poor Cross Traffic Alert performance.*

There may be certain instances when there is a false alert by the Cross Traffic Alert system that illuminates the alert indicator with no vehicle in the coverage zone. Some amount of false alerts are normal; they are temporary and self-correct.

## System Errors

If Cross Traffic Alert senses a problem with the left or right sensor a message will appear in the information display. See **Information Messages** (page 111).

## Switching the System Off and On

You can temporarily switch Cross Traffic Alert off in the information display. See **General Information** (page 105). When you switch Cross Traffic Alert off, you will not receive alerts and the information display will display a system off message.

**Note:** *The Cross Traffic Alert switches on whenever the ignition is switched on and ready to provide appropriate alerts when the transmission is in reverse (R). Cross Traffic Alert will not remember the last selected on or off setting.*

You can also have Cross Traffic Alert switched off permanently at an authorized dealer. Once switched off permanently, the system can only be switched back on at an authorized dealer.

## STEERING

### Electric Power Steering

#### WARNINGS



The electric power steering system has diagnostic checks that continuously monitor the system. If a fault is detected, a message displays in the information display. Stop your vehicle as soon as it is safe to do so. Switch the ignition off. After at least 10 seconds, switch the ignition on and watch the information display for a steering system warning message. If a steering system warning message returns, have the system checked by an authorized dealer.



If the system detects an error, you may not feel a difference in the steering, however a serious condition may exist. Obtain immediate service from an authorized dealer, failure to do so may result in loss of steering control.

Your vehicle has an electric power steering system. There is no fluid reservoir. No maintenance is required.

# Driving Aids

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If your vehicle loses electrical power while you are driving, electric power steering assistance is lost. The steering system still operates and you can steer your vehicle manually. Manually steering your vehicle requires more effort.

Extreme continuous steering may increase the effort required for you to steer your vehicle. This increased effort prevents overheating and permanent damage to the steering system. You do not lose the ability to steer your vehicle manually. Typical steering and driving maneuvers allow the system to cool and return to normal operation.

## Steering Tips

If the steering wanders or pulls, check for:

- Correct tire pressures.
- Uneven tire wear.
- Loose or worn suspension components.
- Loose or worn steering components.
- Improper vehicle alignment.

**Note:** *A high crown in the road or high crosswinds may also make the steering seem to wander or pull.*

## Adaptive Learning

The electronic power steering system adaptive learning helps correct road irregularities and improves overall handling and steering feel. It communicates with the brake system to help operate advanced stability control and accident avoidance systems. Additionally, whenever the battery is disconnected or a new battery installed, you must drive your vehicle a short distance before the system relearns the strategy and reactivates all systems.

## DRIVE CONTROL

### LINCOLN DRIVE CONTROL

Lincoln Drive Control delivers the Lincoln driving experience through a suite of sophisticated electronic vehicle systems. These systems continuously monitor your driving inputs and the road conditions to optimize ride comfort, steering, handling,

powertrain response and sound. You can preset your preferences for these systems within the information display. Lincoln Drive Control will respond to your preferences based on what gear position you select. This provides a single location to control multiple systems performance settings.

Lincoln Drive Control consists of the following systems:

- Continuously controlled damping dynamically adjusts the shock absorbers stiffness in real time to match the road surface and driver inputs. This system continuously monitors your vehicle's motion (roll, pitch, bounce), suspension position, load, speed, road conditions, and steering to adjust the suspension damping for optimal vehicle control.
- Electronically power-assisted steering adjusts steering effort and feel based on your vehicle speed and your inputs.
- Adaptive steering optimizes your vehicle's steering response based on your steering wheel input, changes in vehicle speed and other conditions.

# Driving Aids

- Active noise control utilizes your vehicle electronics to enhance the acoustic experience.
- Electronic stability control and traction control maintain your vehicle control in adverse conditions or high performance driving.
- Electronic throttle control enhances the powertrain response to your inputs.

## Using Lincoln Drive Control

You can configure which of the Drive Control modes are active when your vehicle is in drive (D) or in Sport (S). The configuration remains active until modified from the main menu on the information display.

These systems have a range of modes which you can choose from in order to customize your ideal driving experience:

- Comfort – Provides a more relaxed driving experience, maximizing comfort. Your steering effort decreases and the suspension movement is more fluid. Comfort mode is ideal when you desire enhanced traveling comfort.
- Normal – Delivers a balanced combination of comfortable, controlled ride and confident handling. This mode provides an engaging drive experience and a direct connection to the road without sacrificing any of the composure demanded from a luxury vehicle.
- Sport – Provides a sportier driving experience. The suspension stiffens, with an emphasis on handling and control. The engine responds more directly to your inputs and takes on a more powerful tone. Sport mode is ideal for use during more spirited driving.

**You can change your vehicle's Drive Control settings from the main menu on the information display:**

Settings	
Vehicle	Drive Control

**Note:** Not all settings may be available.

**Note:** Lincoln Drive Control has diagnostic checks that continuously monitor the system to ensure proper operation. Certain types of system errors will gray out the mode selections within the information display, preventing you from changing states when the gear position is changed. Other types of errors will produce a temporary message that states Drive Control Malfunction. If either condition persists for multiple key cycles, have your vehicle checked by an authorized dealer.

# Driving Aids

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## **SELF-LEVELING SUSPENSION**

The self-leveling suspension system is designed to improve ride, handling and general vehicle performance during:

- Certain road conditions
- Steering maneuvers
- Braking
- Acceleration
- Towing

This system keeps the rear of your vehicle at a constant level through a hydraulic pump inside each rear shock. Depending on the payload or road surface conditions it will take approximately 2 mi (3.2 km) for the leveling to complete.

If the loaded vehicle is not moved for approximately 12 hours, the leveling system may bleed down to a lower height. This can be especially apparent if a trailer is left attached to the parked vehicle for long periods of time. You must drive your vehicle in order to re-level the suspension.

If a self-equalizing hitch is used, your vehicle should be driven approximately 2 mi (3.2 km) with the trailer prior to adjusting (leveling) the hitch.

# Load Carrying

## REAR UNDER FLOOR STORAGE

### Cargo Management System





A storage compartment is located in the floor of the rear cargo area.

Lift up on the handle to open the cover.

To close, lower the cover and press down on the handle until the latch clicks.

### Cargo Shelf and Divider (If Equipped)

#### WARNINGS

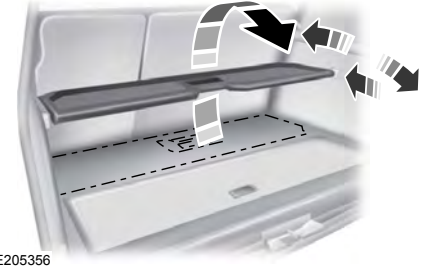
-  Do not load any objects on the shelf that may obstruct your vision or strike occupants of the vehicle in the case of a sudden stop or collision.
-  Do not place people or pets on or under the parcel shelf.

**Note:** Do not put more than 30 lb (14 kg) on shelf.

The cargo shelf and divider is located behind the rear seat of your vehicle and has two positions:

- A flat shelf, which pivots up and snaps into place.
- A divider, which pivots up and snaps vertically into place.

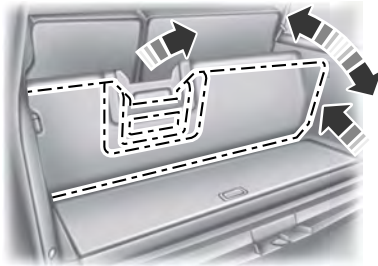
To move the shelf to the shelf position:



Pull up and pivot the shelf over the channels on the side trim panels and snap the shelf ends in the channels.

# Load Carrying

To move the shelf to the divider position:



E205357

Pull up and pivot the shelf over the channels on the side trim panels and snap vertically in place.

## ROOF RACKS AND LOAD CARRIERS

### WARNING



When loading the roof racks, we recommend you evenly distribute the load, as well as maintain a low center of gravity. Loaded vehicles, with higher centers of gravity, may handle differently than unloaded vehicles. Take extra precautions, such as slower speeds and increased stopping distance, when driving a heavily loaded vehicle.

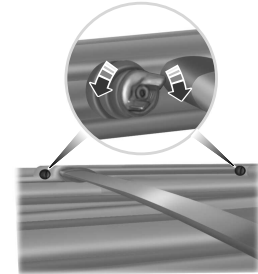
The maximum recommended load, evenly distributed on the crossbars, is 200 lb (90 kg).

**Note:** *Never place loads directly on the roof panel. The roof panel is not designed to directly carry a load.*

For correct roof rack system function, you must place loads directly on crossbars affixed to the roof rack side rails. When using the roof rack system, we recommend you use Ford Genuine Accessory crossbars designed specifically for your vehicle.

Make sure that you securely fasten the load. Check the tightness of the load before driving and at each fuel stop.

### Adjusting the Crossbar



E142448

1. Loosen the thumbwheels at both ends of the crossbar by turning them counterclockwise (both crossbars are adjustable).
2. Slide the crossbar to the desired location.
3. Tighten the thumbwheels at both ends of the crossbar by turning them clockwise.



# Load Carrying

Make sure to check that the thumbwheels are tight each time you add or remove load from the roof rack, and periodically while traveling. Make sure that the load is secure before traveling.

## LOAD LIMIT

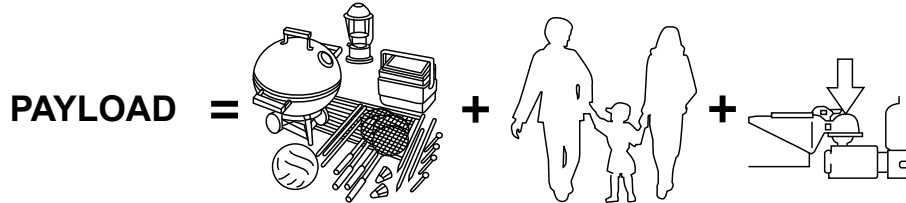
### Vehicle Loading - with and without a Trailer

This section will guide you in the proper loading of your vehicle, trailer or both, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of vehicle design performance. Before

loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Tire Label or Safety Compliance Certification Label:

**Base Curb Weight** - is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

**Vehicle Curb Weight** - is the weight of your new vehicle when you picked it up from your authorized dealer plus any aftermarket equipment.



E143816

# Load Carrying

**Payload** - is the combined weight of cargo and passengers that the vehicle is carrying. The maximum payload for your vehicle can be found on the Tire Label on the B-Pillar or the edge of the driver door (vehicles exported outside the US and Canada may not have a Tire Label). Look for **“THE COMBINED WEIGHT OF OCCUPANTS AND CARGO SHOULD NEVER EXCEED XXX kg OR XXX lb.”** for maximum payload. The payload listed on the Tire Label is the maximum payload for the vehicle as built by the assembly plant. If you install any aftermarket or authorized-dealer installed equipment on the vehicle, you must subtract the weight of the equipment from the payload listed on the Tire Label in order to determine the new payload.

## WARNING



The appropriate loading capacity of your vehicle can be limited either by volume capacity (how much space is available) or by payload capacity (how much weight the vehicle should carry). Once you have reached the maximum payload of your vehicle, do not add more cargo, even if there is space available. Overloading or improperly loading your vehicle can contribute to loss of vehicle control and vehicle rollover.

Example only:

## TIRE AND LOADING INFORMATION


SEATING CAPACITY      TOTAL 5      FRONT 2      REAR 3

The combined weight of occupants and cargo should never exceed : XXX kg or XXX lbs.

TIRE	SIZE	COLD TIRE PRESSURE	SEE OWNERS MANUAL FOR ADDITIONAL INFORMATION
FRONT	LT225/75R 16.5E	200 KPA, 29 PSI	
REAR	LT225/75R 16.5E	200 KPA, 29 PSI	
SARE	T145/80D16 P225/60R17	400 KPA, 60 PSI 200 KPA, 29 PSI	

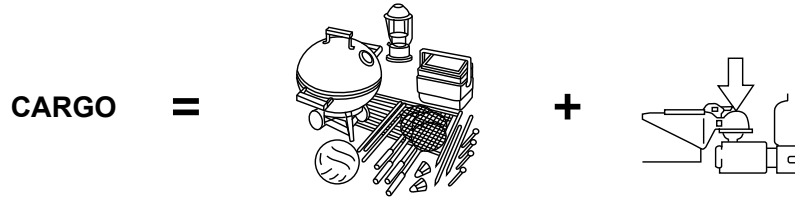
SEATING CAPACITY: 5 TOTAL, 2 FRONT, 3 REAR

E210944

TIRE AND LOADING INFORMATION					
RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT					
	SEATING CAPACITY NOMBRE DE PLACES		TOTAL 5	FRONT 2 AVANT	REAR 3 ARRIERE
	The combined weight of occupants and cargo should never exceed 492 kg or 1085 lbs. Le poids total des occupants et du chargement ne doit jamais dépasser 492 kg ou 1085 lbs.				
TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS A FROID		SEE OWNERS MANUAL FOR ADDITIONAL INFORMATION  VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS	
FRONT AVANT	P235/70R16	240 KPA, 35 PSI			
REAR ARRIERE	P235/70R16	240 KPA, 35 PSI			
SPARE SECOURS	T145/90R17	415 KPA, 60 PSI			

E210945

# Load Carrying



E143817

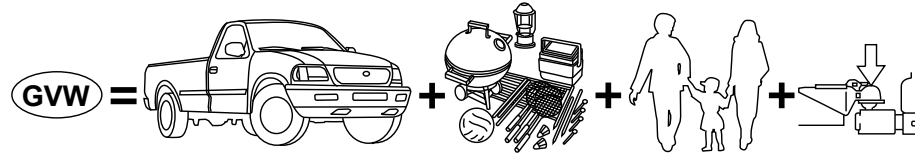
**Cargo Weight** - includes all weight added to the Base Curb Weight, including cargo and optional equipment. When towing, trailer tongue load or king pin weight is also part of cargo weight.

**GAW (Gross Axle Weight)** - is the total weight placed on each axle (front and rear) including vehicle curb weight and all payload.

**GAWR (Gross Axle Weight Rating)** - is the maximum allowable weight that can be carried by a single axle (front or rear). These numbers are shown on the Safety Compliance Certification Label. The label shall be affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver seating position. **The total load on each axle must never exceed its Gross Axle Weight Rating.**

**Note:** For trailer towing information refer to the *RV and Trailer Towing Guide* available at an authorized dealer.

# Load Carrying



E143818

**GVW (Gross Vehicle Weight)** - is the Vehicle Curb Weight, plus cargo, plus passengers.

**GVWR (Gross Vehicle Weight Rating)** - is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). It is shown on the Safety Compliance Certification Label. The label shall be affixed to either the door

hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver seating position. **The Gross Vehicle Weight must never exceed the Gross Vehicle Weight Rating.**

# Load Carrying

Example only:

MFD. BY FORD MOTOR CO.

DATE: XX/XX GVWR: XXXX KG (XXXX LB)

FRONT GAWR: XXXX KG (XXXX LB) WITH REAR GAWR: XXXX KG (XXXX LB)

XXXXXXXXXXXXXXXXX Tires XXXXXXXXXXXXXXXX WITH


XXXXXXXXX RIMS XXXXXXXX Tires

AT XXXX kPa/ XXX PSI COLD AT XXXX kPa/ XXX PSI COLD RIMS

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: XXXXXXXXXXXXXXXXXX XXXXX

TYPE: XXXX XXXXX



EXT PNT: XX XXXXXX RC: XX DSO: XXXX

WB INT TR TP/PS R AXLE TR SPR XXXX

XXX XX XXX X XX X XXXX XXXX

XXXXXXXXXXXXXXX XXX XXXX-XXXXXXXX-XX

MFD. BY FORD MOTOR CO.

DATE: XX/XX GVWR/PNBV: XXXX LB/XXXXKG

FRONT GAWR/PNBE AV / REAR GAWR/PNBE AR

XXXX /XXXX B / XXXX KG/XXXX B

WITH/AVEC TIRES/PNEUS

XXXX /XXXXX


XXXX /XXXXX

XXXXXX RIMS/JANTES XX XXXX

AT/A kPa/PSI/LPC XXX/XX COLD/A FROID XXX/XX

VIN: XXXXXXXXXXXXXXXXXX

TYPE: XXX/XXXX COMPLIES:XXXX/XXX-XXX XXXXX



EXT PNT: U RC: XX DSO:

WB INT TR TP/PS R AXLE TR SPR XXXXX

XXX XX X XX X XXXX XXX

XXXXXXXXXXXXXXX XXX XXXX-XXXXXXXX-XX

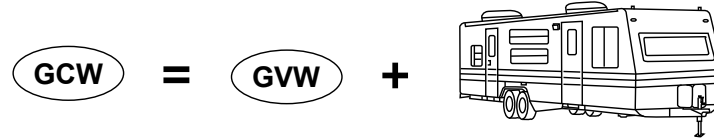
E198828

## WARNING



Exceeding the Safety Compliance Certification Label vehicle weight rating limits could result in substandard vehicle handling or performance, engine, transmission and/or structural damage, serious damage to the vehicle, loss of control and personal injury.

# Load Carrying



E143819

**GCW (Gross Combined Weight)** - is the Gross Vehicle Weight plus the weight of the fully loaded trailer.

**GCWR (Gross Combined Weight Rating)** - is the maximum allowable weight of the vehicle and the loaded trailer, including all cargo and passengers, that the vehicle can handle without risking damage. (Important: The towing vehicle's braking system is rated for operation at Gross Vehicle Weight Rating, not at Gross Combined Weight Rating.) Separate functional brakes should be used for safe control of towed vehicles and for trailers where the Gross

Combined Weight of the towing vehicle plus the trailer exceed the Gross Vehicle Weight Rating of the towing vehicle. **The Gross Combined Weight must never exceed the Gross Combined Weight Rating.**

**Maximum Loaded Trailer Weight** - is the highest possible weight of a fully loaded trailer the vehicle can tow. It assumes a vehicle with mandatory options, driver and front passenger weight (150 pounds [68 kilograms] each), no cargo weight (internal or external) and a tongue load of 10–15%

(conventional trailer) or king pin weight of 15–25% (fifth wheel trailer). Consult an authorized dealer (or the RV and Trailer Towing Guide available at an authorized dealer) for more detailed information.

**Tongue Load or Fifth Wheel King Pin Weight** - refers to the amount of the weight that a trailer pushes down on a trailer hitch.

# Load Carrying

**Examples:** For a 5000 pound (2268 kilogram) conventional trailer, multiply 5000 by 0.10 and 0.15 to obtain a proper tongue load range of 500 to 750 pounds (227 to 340 kilograms). For an 11500 pound (5216 kilogram) fifth wheel trailer, multiply by 0.15 and 0.25 to obtain a proper king pin load range of 1725 to 2875 pounds (782 to 1304 kilograms).

## WARNINGS



Do not exceed the GVWR or the GAWR specified on the Safety Compliance Certification Label.



Do not use replacement tires with lower load carrying capacities than the original tires because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the original tires do not increase the GVWR and GAWR limitations.



Exceeding any vehicle weight rating limitation could result in serious damage to the vehicle and/or personal injury.

## Steps for determining the correct load limit:

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lb." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lb.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1,400 lb. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lb. (1400-750 (5 x 150) = 650 lb.).

5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

The following gives you a few examples on how to calculate the available amount of cargo and luggage load capacity:

\*Suppose your vehicle has a 1400-pound (635-kilogram) cargo and luggage capacity. You decide to go golfing. Is there enough load capacity to carry you, four of your friends and all the golf bags? You and four friends average 220 pounds (99 kilograms) each and the golf bags weigh approximately 30 pounds (13.5 kilograms) each. The calculation would be:  $1400 - (5 \times 220) - (5 \times 30) =$

# Load Carrying

$1400 - 1100 - 150 = 150$  pounds. Yes, you have enough load capacity in your vehicle to transport four friends and your golf bags. In metric units, the calculation would be:  $635 \text{ kilograms} - (5 \times 99 \text{ kilograms}) - (5 \times 13.5 \text{ kilograms}) = 635 - 495 - 67.5 = 72.5 \text{ kilograms}$ .

\*Suppose your vehicle has a 1400-pound (635-kilogram) cargo and luggage capacity. You and one of your friends decide to pick up cement from the local home improvement store to finish that patio you have been planning for the past two years. Measuring the inside of the vehicle with the rear seat folded down, you have room for twelve 100-pound (45-kilogram) bags of cement. Do you have enough load capacity to transport the cement to your home? If you and your friend each weigh 220 pounds (99 kilograms), the calculation would be:  $1400 - (2 \times 220) - (12 \times 100) = 1400 - 440 - 1200 = -240$  pounds. No, you do not have enough cargo capacity to carry that much weight. In metric units, the calculation would be:  $635 \text{ kilograms} - (2 \times 99$

$\text{kilograms}) - (12 \times 45 \text{ kilograms}) = 635 - 198 - 540 = -103 \text{ kilograms}$ . You will need to reduce the load weight by at least 240 pounds (104 kilograms). If you remove three 100-pound (45-kilogram) cement bags, then the load calculation would be:  $1400 - (2 \times 220) - (9 \times 100) = 1400 - 440 - 900 = 60$  pounds. Now you have the load capacity to transport the cement and your friend home. In metric units, the calculation would be:  $635 \text{ kilograms} - (2 \times 99 \text{ kilograms}) - (9 \times 45 \text{ kilograms}) = 635 - 198 - 405 = 32 \text{ kilograms}$ .

The above calculations also assume that the loads are positioned in your vehicle in a manner that does not overload the Front or the Rear Gross Axle Weight Rating specified for your vehicle on the Safety Compliance Certification Label. The label shall be affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver seating position.

## Special Loading Instructions for Owners of Pick-up Trucks and Utility-type Vehicles

### WARNING



Loaded vehicles may handle differently than unloaded vehicles. Extra precautions, such as slower speeds and increased stopping distance, should be taken when driving a heavily loaded vehicle.

Your vehicle can haul more cargo and people than most passenger cars. Depending upon the type and placement of the load, hauling cargo and people may raise the center of gravity of the vehicle.



# Towing

## TOWING A TRAILER

### WARNINGS



Do not exceed the GVWR or the GAWR specified on the certification label.



Towing trailers beyond the maximum recommended gross trailer weight exceeds the limit of the vehicle and could result in engine damage, transmission damage, structural damage, loss of vehicle control, vehicle rollover and personal injury.

Your vehicle may have electrical items, such as fuses or relays, related to towing. See the **Fuses** chapter.

Your vehicle's load capacity designation is by weight, not by volume, so you cannot necessarily use all available space when loading a vehicle or trailer.

Towing a trailer places an extra load on your vehicle's engine, transmission, axle, brakes, tires and suspension. Inspect these components periodically during, and after, any towing operation.

### Load Placement

To help minimize how trailer movement affects your vehicle when driving:

- Load the heaviest items closest to the trailer floor.
- Load the heaviest items centered between the left and right side trailer tires.

- Load the heaviest items above the trailer axles or just slightly forward toward the trailer tongue. Do not allow the final trailer tongue weight to go above or below 10-15% of the loaded trailer weight.
- Select a tow bar with the correct rise or drop. When both the loaded vehicle and trailer are connected, the trailer frame should be level, or slightly angled down toward your vehicle, when viewed from the side.

When driving with a trailer or payload, a slight takeoff vibration or shudder may be present due to the increased payload weight. Additional information regarding proper trailer loading and setting your vehicle up for towing is located in another chapter of this manual. See **Load Limit** (page 214).

You can also find information in the **RV & Trailer Towing Guide** available at your authorized dealer, or online.

# Towing

## RV & Trailer Towing Guide Online

Website

<http://www.fleet.ford.com/towing-guides/>

### TRAILER SWAY CONTROL

#### WARNING



Turning off trailer sway control increases the risk of loss of vehicle control, serious injury or death. Ford does not recommend disabling this feature except in situations where speed reduction may be detrimental (such as hill climbing), the driver has significant trailer towing experience, and can control trailer sway and maintain safe operation.

**Note:** This feature does not prevent trailer sway, but reduces it once it begins.

**Note:** This feature cannot stop all trailers from swaying.

**Note:** In some cases, if vehicle speed is too high, the system may activate multiple times, gradually reducing vehicle speed.

This feature applies your vehicle brakes at individual wheels and, if necessary, reduces engine power. If the trailer begins to sway, the stability control light flashes and the message **TRAILER SWAY REDUCE SPEED** appears in the information display. The first thing to do is slow your vehicle down, then pull safely to the side of the road and check for proper tongue load and trailer load distribution. See **Load Carrying** (page 212).

### RECOMMENDED TOWING WEIGHTS

**Note:** Do not exceed the trailer weight for your vehicle configuration listed in the chart below.

**Note:** Make sure to take into consideration trailer frontal area. Do not exceed 36.5 feet<sup>2</sup> (3.39 meters<sup>2</sup>) if your vehicle is equipped with the standard towing package, or 60 feet<sup>2</sup> (5.57 meters<sup>2</sup>) if your vehicle is equipped with the optional heavy duty package.

**Note:** Exceeding this limitation may significantly reduce the performance of your towing vehicle. Selecting a trailer with a low aerodynamic drag and rounded front design helps optimize performance and fuel economy.

**Note:** For high altitude operation, reduce the gross combined weight by 2% per 1000 feet (300 meters) starting at the 1000 foot (300 meter) elevation point.

# Towing

**Note:** Certain states require electric trailer brakes for trailers over a specified weight. Be sure to check state regulations for this specified weight. The maximum trailer weights listed may be limited to this specified weight, as the vehicle's electrical system may not include the wiring connector needed to activate electric trailer brakes.

Your vehicle may tow a trailer provided the maximum trailer weight is less than or equal to the maximum trailer weight listed for your vehicle configuration on the following chart.

To calculate the maximum loaded trailer weight for your vehicle:

1. Start with the gross combined weight rating for your vehicle model and axle ratio. See the following chart.
2. Subtract all of the following that apply to your vehicle:
  - Vehicle curb weight
  - Hitch hardware weight, such as a draw bar, ball, locks or weight distributing
  - Driver weight
  - Passenger(s) weight
  - Payload, cargo and luggage weight
  - Aftermarket equipment weight.
3. This equals the maximum loaded trailer weight for this combination.

**Note:** The trailer tongue load figures into the payload for your vehicle. Reduce the total payload by the final trailer tongue weight.

Consult an authorized dealer to determine the maximum trailer weight allowed for your vehicle if you are not sure.

Vehicle Type	Towing Package	Maximum GCWR
Two-wheel drive (except L)	Standard	12300 lb (5579 kg)
Two-wheel drive L		12600 lb (5715 kg)
Four-wheel drive (except L)		12500 lb (5669 kg)

# Towing

Vehicle Type	Towing Package	Maximum GCWR
Four-wheel drive L		12800 lb (5806 kg)
Two-wheel drive (except L)	Optional Heavy Duty	15100 lb (6849 kg)
Two-wheel drive L		14900 lb (6758 kg)
Four-wheel drive (except L)		15100 lb (6849 kg)
Four-wheel drive L		14900 lb (6758 kg)

# Towing

## ESSENTIAL TOWING CHECKS

Follow these guidelines for safe towing:

- Do not tow a trailer until you drive your vehicle at least 1000 miles (1600 kilometers).
- Consult your local motor vehicle laws for towing a trailer.
- See the instructions included with towing accessories for the proper installation and adjustment specifications.
- Service your vehicle more frequently if you tow a trailer. See your scheduled maintenance information.
- If you use a rental trailer, follow the instructions the rental agency gives you.

You can find information on load specification terms found on the tire label and Safety Compliance label as well as instructions on calculating your vehicle's load in the Load Carrying chapter. See **Load Limit** (page 214).

Remember to account for the trailer tongue weight as part of your vehicle load when calculating the total vehicle weight.

## Trailer Towing Connector (Vehicles with a Trailer Towing Package and 7-Pin Connector)



E163167

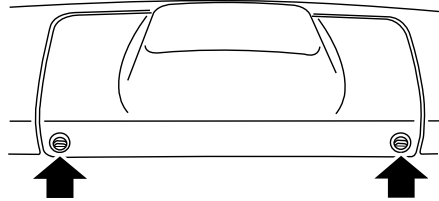
When attaching the trailer wiring connector to your vehicle, only use a proper fitting connector that works with the vehicle and trailer functions. Some seven-position connectors may have the SAE J2863 logo, which confirms that it is the proper wiring connector and works correctly with your vehicle.

Color	Function
Yellow	Left turn signal and stop lamp
White	Ground (-)
Blue	Electric brakes
Green	Right turn signal and stop lamp
Orange	Battery (+)
Brown	Running lights
Grey	Reverse lights

## Trailer Hitch Cover

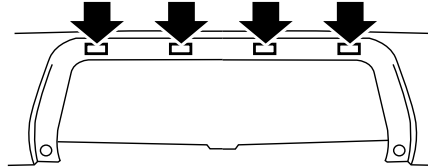
Your vehicle is equipped with a removable trailer hitch trim cover. To remove the trim cover:

# Towing



E208902

Loosen the two quarter-turn fasteners in the bottom of the cover by turning them counterclockwise. Pull the cover downward to remove it. The fasteners remain attached to the cover.



E208903

To reinstall the cover, insert the four plastic tabs on top of the cover into the corresponding slots, as shown in the illustration and push the cover up into the bumper trim.

Hold the cover against the bumper trim and reinstall the two quarter-turn fasteners by turning them clockwise.

## Hitches

### WARNING



The trailer hitch on this vehicle is part of the vehicle rear crash safety structure. Do not remove the trailer hitch. Failure to follow this warning could compromise vehicle crash structure and increase the risk of injury in a rear end crash.

Do not use a hitch that either clamps onto the bumper or attaches to the axle.

Distribute the trailer load so 10-15% of the total trailer weight is on the tongue.

### Integrated Hitch Rating

### WARNING



Towing trailers beyond the maximum tongue weight exceeds the limit of the towing system and could result in vehicle structural damage, loss of vehicle control and personal injury.

# Towing

The standard integrated hitch has two ratings depending on mode of operation:

- Weight-carrying mode requires a draw bar and hitch ball. The draw bar supports all the vertical tongue load of the trailer.
- Weight-distributing mode requires an aftermarket weight-distributing system, which includes draw bar, hitch ball, spring bars and snap-up brackets. This system distributes the vertical tongue load of the trailer between the truck and the trailer.

Mode	Maximum Trailer Weight	Maximum Tongue Weight
Weight carrying	6000 lb (2722 kg)	600 lb (272 kg)
Weight distributing	9000 lb (4082 kg)	900 lb (408 kg)

**Note:** *These are hitch ratings only. Actual vehicle ratings are dependent on engine, transmission and axle combinations.*

## Weight-distributing Hitch - Vehicles without Automatic Leveling Suspension

### WARNING



Do not adjust a weight-distributing hitch to any position where the rear bumper of the vehicle is higher than it was before attaching the trailer. Doing so will defeat the function of the weight-distributing hitch, which may cause unpredictable handling, and could result in serious personal injury.

When hooking-up a trailer using a weight-distributing hitch, always use the following procedure:

1. Park the loaded vehicle, without the trailer, on a level surface.
2. Measure the height to the top of your vehicle's front wheel opening on the fender. This is H1.
3. Attach the loaded trailer to your vehicle without the weight-distributing bars connected.
4. Measure the height to the top of your vehicle's front wheel opening on the fender a second time. This is H2.

# Towing

5. Install and adjust the tension in the weight-distributing bars so that the height of your vehicle's front wheel opening on the fender is approximately half the way down from H2, toward H1.
6. Check that the trailer is level or slightly nose down toward your vehicle. If not, adjust the ball height accordingly and repeat Steps 2-6.

When the trailer is level or slightly nose down toward the vehicle:

- Lock the bar tension adjuster in place.
- Check that the trailer tongue securely attaches and locks onto the hitch.
- Install safety chains, lighting, and trailer brake controls as required by law or the trailer manufacturer.

## Weight-distributing Hitch - Vehicles with Automatic Leveling Suspension

### WARNING



Do not adjust a weight-distributing hitch to any position where the rear bumper of the vehicle is higher than it was before attaching the trailer. Doing so will defeat the function of the weight-distributing hitch, which may cause unpredictable handling, and could result in serious personal injury.

**Note:** *If you do not move the loaded vehicle for approximately 12 hours, the leveling system may bleed down to a lower height. This can be especially apparent if you leave a trailer attached to the parked vehicle for long periods. You must drive your vehicle in order to re-level the suspension.*

When hooking-up a trailer using a weight-distributing hitch, always use the following procedure:

1. Load the interior of the vehicle to a weight similar to that which you intend to carry when towing. This includes things such as passenger weight and cargo.
2. Drive the vehicle for approximately 2 miles (3 kilometers) to re-level the suspension.
3. Park the loaded vehicle, without the trailer, on a level surface.
4. Measure the height to the top of your vehicle's front wheel opening on the fender. This is H1.
5. Attach the loaded trailer to your vehicle without the weight-distributing bars connected.
6. Make sure you securely attach and lock the trailer tongue to the hitch.
7. Install safety chains, lighting, and trailer brake controls as required by law or the trailer manufacturer.
8. Drive the vehicle and trailer at 20–25 mph (32–40 km/h) for approximately 2 miles (3 kilometers) to re-level the suspension.



# Towing

9. Park your vehicle and trailer on a level surface.
10. Measure the height to the top of your vehicle's front wheel opening on the fender a second time. This is H2.
11. Install and adjust the tension in the weight-distributing bars so that the height of your vehicle's front wheel opening on the fender is approximately half the way down from H2, toward H1.
12. Check that the trailer is level or slightly nose down toward your vehicle. If not, remove the trailer, adjust the ball height accordingly and repeat Steps 5-11.

When the trailer is level or slightly nose down toward the vehicle:

- Lock the bar tension adjuster in place.
- Check that the trailer tongue securely attaches and locks onto the hitch.
- Install safety chains, lighting, and trailer brake controls as required by law or the trailer manufacturer.

## Safety Chains

**Note:** *Never attach safety chains to the bumper.*

Always connect the safety chains to the hook retainers of your vehicle hitch.

To connect the trailer's safety chains, cross them under the trailer tongue and allow enough slack for turning tight corners. Do not allow the chains to drag on the ground.

## Trailer Brakes (If Equipped)

### WARNING



Do not connect a trailer's hydraulic brake system directly to your vehicle's brake system. Your vehicle may not have enough braking power and your chances of having a collision greatly increase.

Electric brakes and manual, automatic or surge-type trailer brakes are safe if you install them properly and adjust them to the manufacturer's specifications. The trailer brakes must meet local and federal regulations.

**The rating for the tow vehicle's braking system operation is at the gross vehicle weight rating, not the gross combined weight rating.**

**Separate functioning brake systems are required for safe control of towed vehicles and trailers weighing more than 1500 pounds (680 kilograms) when loaded.**

## Trailer Lamps

### WARNING



Never connect any trailer lamp wiring to the vehicle's tail lamp wiring; this may damage the electrical system resulting in fire. Contact your authorized dealer as soon as possible for assistance in proper trailer tow wiring installation. Additional electrical equipment may be required.

Trailer lamps are required on most towed vehicles. Make sure all running lights, brake lights, turn signals and hazard lights are working.

# Towing

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## Before Towing a Trailer

Practice turning, stopping and backing up to get the feel of your vehicle-trailer combination before starting on a trip. When turning, make wider turns so the trailer wheels clear curbs and other obstacles.

## When Towing a Trailer

- Do not drive faster than 70 mph (113 km/h) during the first 500 miles (800 kilometers).
- Do not make full-throttle starts.
- Check your hitch, electrical connections and trailer wheel lug nuts thoroughly after you have traveled 50 miles (80 kilometers).
- When stopped in congested or heavy traffic during hot weather, place the gearshift in position **P** to aid engine and transmission cooling and to help A/C performance.
- Turn off the speed control with heavy loads or in hilly terrain. The speed control may turn off automatically when you are towing on long, steep grades.
- Shift to a lower gear when driving down a long or steep hill. Do not apply the brakes continuously, as they may overheat and become less effective.
- If your transmission is equipped with a Grade Assist or Tow/Haul feature, use this feature when towing. This provides engine braking and helps eliminate excessive transmission shifting for optimum fuel economy and transmission cooling.
- If your vehicle is equipped with AdvanceTrac with RSC, this system may turn on during typical cornering maneuvers with a heavily loaded trailer. This is normal. Turning the corner at a slower speed while towing may reduce this tendency.
- If your vehicle is equipped with Continuous Controlled Damping Suspension (CCD Suspension), you can select NORMAL or SPORT drive control modes for better experience while towing a trailer. See **Information Displays** (page 105).
- If you are towing a trailer frequently in hot weather, hilly conditions, at the gross combined weight rating (or any combination of these factors), consider refilling your rear axle with synthetic gear lubricant (if the axle is not already filled with it). See **Capacities and Specifications** (page 328).
- Allow more distance for stopping with a trailer attached. Anticipate stops and brake gradually.
- Avoid parking on a grade. However, if you must park on a grade:
  1. Turn the steering wheel to point your vehicle tires away from traffic flow.
  2. Set your vehicle parking brake.
  3. Place the automatic transmission in position **P**.
  4. Place wheel chocks in front and back of the trailer wheels. (Chocks not included with vehicle.)

# Towing

Your vehicle may be equipped with a temporary or conventional spare tire. A “temporary” spare tire is different in size (diameter or width), tread-type (All-Season or All-Terrain) or is from a different manufacturer than the road tires on your vehicle. Consult information on the tire label or Safety Compliance label for limitations when using.

## Launching or Retrieving a Boat or Personal Watercraft (PWC)

**Note:** *Disconnect the wiring to the trailer **before** backing the trailer into the water.*

**Note:** *Reconnect the wiring to the trailer **after** removing the trailer from the water.*

When backing down a ramp during boat launching or retrieval:

- Do not allow the static water level to rise above the bottom edge of the rear bumper.
- Do not allow waves to break higher than 6 inches (15 centimeters) above the bottom edge of the rear bumper.

Exceeding these limits may allow water to enter vehicle components:

- Causing internal damage to the components.
- Affecting driveability, emissions, and reliability.

Replace the rear axle lubricant anytime the rear axle has been submerged in water. Water may have contaminated the rear axle lubricant, which is not normally checked or changed unless a leak is suspected or other axle repair is required.

## TOWING POINTS

### WARNINGS



Using recovery hooks is dangerous and should only be done by a person familiar with proper vehicle recovery safety practices. Improper use of recovery hooks may cause hook failure or separation from the vehicle and could result in serious injury or death.

### WARNINGS



Always slowly remove the slack from the recovery strap prior to pulling. Failure to do so can introduce significantly higher loads which can cause the recovery hooks to break off, or the recovery strap to fail which can cause serious injury or death.



Never link two straps together with a clevis pin. These heavy metal objects could become projectiles if the strap breaks and can cause serious injury or death.

Your vehicle comes equipped with frame-mounted front recovery hooks. These hooks should never have a load applied to them greater than the gross vehicle weight rating of your vehicle.

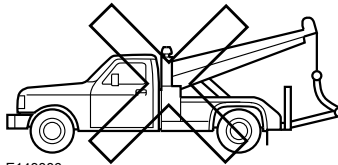
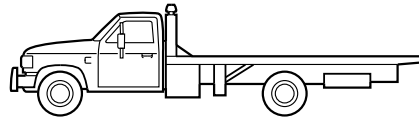
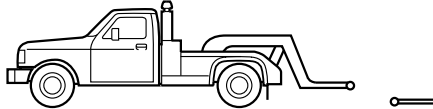
Before using recovery hooks:

- Make sure all attaching points are secure and capable of withstanding the applied load.
- Never use chains, cables or tow straps with metal hook ends.

# Towing

- Only use recovery straps that have a minimum breaking strength two to three times the gross vehicle weight of the stuck vehicle.
- Make sure the recovery strap is in good condition and free of visible cuts, tears or damage.
- Use a damper device such as a tarp, heavy blanket or piece of carpet draped over the recovery strap to help absorb the energy in the event the strap breaks.
- Make sure the stuck vehicle is not loaded heavier than its gross vehicle weight rating specified on the certification label.
- Always align the tow vehicle and stuck vehicle in a straight line (within 10 degrees).
- Keep bystanders to the **sides** of the vehicle, at a distance of at least twice the length of the recovery strap. This helps avoid injury from the hazard of a recovery hook or strap breaking, or a vehicle lurching into their path.

## TRANSPORTING THE VEHICLE



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If you need to have your vehicle towed, contact a professional towing service or, if you are a member of a roadside assistance program, your roadside assistance service provider.

We recommend the use of a wheel lift and dollies or flatbed equipment to tow your vehicle. Do not tow with a slingbelt. Ford Motor Company has not approved a slingbelt towing procedure. Vehicle damage may occur if towed incorrectly, or by any other means.

Ford Motor Company produces a towing manual for all authorized tow truck operators. Have your tow truck operator refer to this manual for proper hook-up and towing procedures for your vehicle.

It is acceptable to have your two-wheel drive vehicle towed with the front wheels on the ground (without dollies) and the rear wheels off the ground.

We recommend towing a four-wheel drive vehicle with all wheels off the ground, such as using a wheel lift and dollies or flatbed equipment.

## TOWING THE VEHICLE ON FOUR WHEELS

### WARNING



If your vehicle has a steering wheel lock make sure the ignition is in the accessory or on position when being towed.

### Emergency Towing

If your vehicle becomes inoperable (without access to wheel dollies, car-hauling trailer, or flatbed transport vehicle), it can be flat-towed (all wheels on the ground, regardless of the powertrain and transmission configuration) under the following conditions:

- Your vehicle is facing forward for towing in a forward direction.
- Place the transmission in position **N**. If you cannot move the transmission into **N**, you may need to override it. See **Transmission** (page 171).
- Maximum speed is 35 mph (56 km/h).
- Maximum distance is 50 mi (80 km).

# Driving Hints

## BREAKING-IN

You need to break in new tires for approximately 300 miles (480 kilometers). During this time, your vehicle may exhibit some unusual driving characteristics.

Avoid driving too fast during the first 1000 miles (1600 kilometers). Vary your speed frequently and change up through the gears early. Do not labor the engine.

Do not tow during the first 1000 miles (1600 kilometers).

## REDUCED ENGINE PERFORMANCE

### WARNING



Continued operation will increase the engine temperature and cause the engine to shut down completely.

If the engine coolant temperature gauge needle moves to the upper limit position, the engine is overheating. See **Gauges** (page 99).

You must only drive your vehicle for a short distance if the engine overheats. The distance you can travel depends on ambient temperature, vehicle load and terrain. The engine will continue to operate with limited power for a short time.

If the engine temperature continues to rise, the fuel supply to the engine will reduce. The air conditioning will switch off and the engine cooling fan will operate continually.

1. Reduce your speed gradually and stop your vehicle as soon as it is safe to do so.
2. Switch the engine off immediately to prevent severe engine damage.
3. Wait for the engine to cool down.
4. Check the coolant level. See **Engine Coolant Check** (page 269).
5. Have your vehicle checked by an authorized dealer as soon as possible.

## ECONOMICAL DRIVING

Fuel economy is affected by several things such as how you drive, the conditions you drive under and how you maintain your vehicle.

There are some things to keep in mind that may improve your fuel economy:

- Accelerate and slow down in a smooth, moderate fashion.
- Drive at steady speeds.
- Anticipate stops; slowing down may eliminate the need to stop.
- Combine errands and minimize stop-and-go driving (When running errands, go to the furthest destination first and then work your way back home).
- Close the windows for high-speed driving.
- Drive at reasonable speeds.
- Keep the tires properly inflated and use only the recommended size.
- Use the recommended engine oil.
- Perform all regularly scheduled maintenance.

# Driving Hints

There are also some things you may want to avoid doing because they reduce your fuel economy:

- Avoid sudden or hard accelerations.
- Avoid revving the engine before turning off the car.
- Avoid long idle periods.
- Do not warm up your vehicle on cold mornings.
- Reduce the use of air conditioning and heat.
- Avoid using speed control in hilly terrain.
- Do not rest your foot on the brake pedal while driving.
- Avoid carrying unnecessary weight.
- Avoid adding particular accessories to your vehicle (e.g. bug deflectors, rollbars/light bars, running boards, ski racks).
- Avoid driving with the wheels out of alignment.

## DRIVING THROUGH WATER

### WARNING

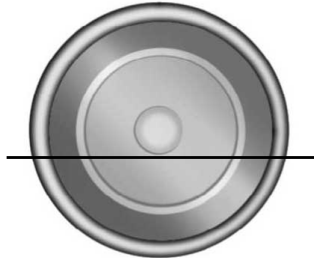


Do not drive through flowing or deep water as you may lose control of your vehicle.

**Note:** *Driving through standing water can cause vehicle damage.*

**Note:** *Engine damage can occur if water enters the air filter.*

Before driving through standing water, check the depth. Never drive through water that is higher than the bottom of the wheel hubs.



E176913

When driving through standing water, drive very slowly and do not stop your vehicle. Your brake performance and traction may be limited. After driving through water and as soon as it is safe to do so:

- Lightly press the brake pedal to dry the brakes and to check that they work.
- Check that the horn works.
- Check that the exterior lights work.
- Turn the steering wheel to check that the steering power assist works.

## FLOOR MATS

### WARNINGS



Always use floor mats that are designed to fit the foot well of your vehicle. Only use floor mats that leave the pedal area unobstructed. Only use floor mats that are firmly secured to retention posts so that they cannot slip out of position and interfere with the pedals or impair safe operation of your vehicle in other ways.

## Driving Hints

### WARNINGS



Pedals that cannot move freely can cause loss of vehicle control and increase the risk of serious personal injury.



Always make sure that the floor mats are properly attached to the retention posts in the carpet that are supplied with your vehicle. Floor mats must be properly secured to both retention posts to make sure mats do not shift out of position.



Never place floor mats or any other covering in the vehicle foot well that cannot be properly secured to prevent them from moving and interfering with the pedals or the ability to control the vehicle.



Never place floor mats or any other covering on top of already installed floor mats. Floor mats should always rest on top of vehicle carpeting surface and not another floor mat or other covering. Additional floor mats or any other covering will reduce the pedal clearance and potentially interfere with pedal operation.

### WARNINGS



Check attachment of floor mats on a regular basis. Always properly reinstall and secure floor mats that have been removed for cleaning or replacement.



Always make sure that objects cannot fall into the driver foot well while the vehicle is moving. Objects that are loose can become trapped under the pedals causing a loss of vehicle control.



Failure to properly follow floor mat installation or attachment instructions can potentially cause interference with pedal operation causing a loss of vehicle control.

To install floor mats, position the floor mat so that the eyelet is over the retention post and press down to lock in.

To remove the floor mat, reverse the installation procedure.





# Roadside Emergencies

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## ROADSIDE ASSISTANCE

### Vehicles Sold In the United States: Getting Roadside Assistance

If you ever need help on the road, the Lincoln Motor Company is there for you with nationwide, 24-hours-a-day, seven-days-a-week assistance.

The service is available:

- Throughout the life of the vehicle for original owners.
- For six years or 70,000 mi (112,654.08 km) (whichever comes first) within the extended powertrain warranty coverage period for subsequent owners.
- For the coverage period listed on the Roadside Assistance Card included in your Owner's Manual portfolio.

This complimentary Roadside Assistance program is separate from the New Vehicle Limited Warranty, and includes:

- A flat tire change with a good spare (except vehicles supplied with a tire inflation kit).
- Battery jump start.

- Lock-out assistance (key replacement cost is the client's responsibility).
- Fuel delivery — independent service contractors, if not prohibited by state, local or municipal law shall deliver up to 2.0 gal (7.5 L) of gasoline or 5.0 gal (18.9 L) of diesel fuel to a disabled vehicle. Roadside Assistance limits fuel delivery service to two no-charge occurrences within a 12-month period.
- Winch out — available within 100 ft (30.48 m) of a paved or county maintained road, no recoveries.
- Towing — independent service contractors, if not prohibited by state, local or municipal law shall tow Lincoln eligible vehicles to the client's selling or preferred dealer within 100 mi (161 km) of the disablement location or to the nearest Lincoln dealer. If a client requests a tow to a selling or preferred dealer that is more than 100 mi (161 km) from the disablement location, the client shall be responsible for any mileage costs in excess of 100 mi (161 km).

Roadside Assistance includes up to \$200 coverage for a towed trailer if the disabled eligible vehicle requires service at the nearest authorized dealer. If the towing vehicle is operational but the trailer is not, then the trailer does not qualify for any roadside services.

### Vehicles Sold In the United States: Using Roadside Assistance

United States Lincoln vehicle clients who require Roadside Assistance, call 1-800-521-4140.

If you need to arrange roadside assistance for yourself, Ford Motor Company will reimburse a reasonable amount for towing to the nearest Lincoln dealership within 100 mi (161 km). To obtain reimbursement information, United States Lincoln vehicle clients, call 1-800-521-4140. Ford Motor Company will ask you to submit your original receipts.

# Roadside Emergencies

## Vehicles Sold In Canada: Getting Roadside Assistance

Canadian clients who require roadside assistance, call 1-800-387-9333.

Sykes Assistance Services Corporation administers the Roadside Assistance program. You must receive covered services in Canada or the continental United States. Coverage extends to vehicles that use public, non-seasonal, annually traveled roadways. Roadside Assistance coverage does not extend to vehicles involved in cross-country driving, logging, autocross and any other form of off-road use. Well maintained roads and surfaces help ensure safe travel for the Supplier, and allow their representatives to perform service as per the standard operating procedures.

### In Remote Locations

If our supplier cannot take your vehicle by road to the nearest authorized dealership, transportation by rail or water may be necessary. The program covers a tow to the dock or rail terminal and also to the dealership at the end of the trip.

For rail or water transportation, however, contact your authorized dealer to confirm if you are eligible for additional coverage before you authorize or pay for the service.

Call Lincoln Roadside Assistance at 1-800-387-9333 for additional information.

## Vehicles Sold In Canada: Using Roadside Assistance

Canadian Roadside coverage and benefits may differ from the United States coverage. Please refer to your warranty information or visit our website at [www.lincolncanada.com](http://www.lincolncanada.com) for information on Canadian services and benefits.

Canadian clients who need to obtain roadside information, call 1-800-387-9333 or visit our website at [www.lincolncanada.com](http://www.lincolncanada.com).

## HAZARD WARNING FLASHERS

**Note:** *If used when the vehicle is not running, the battery will lose charge. There may be insufficient power to restart your vehicle.*



The hazard warning button is located on the instrument panel. Use it when your vehicle is creating a safety hazard for other motorists.

- Press the button to turn on the hazard warning function, and the front and rear direction indicators will flash.
- Press the button again to turn them off.

## FUEL SHUTOFF

### WARNING



Failure to inspect and, if necessary, repair fuel leaks after a collision may increase the risk of fire and serious injury. Ford Motor Company recommends that the fuel system be inspected by an authorized dealer after any collision.

In the event of a moderate to severe collision, this vehicle includes a fuel pump shutoff feature that stops the flow of fuel to the engine. Not every impact will cause a shutoff.

# Roadside Emergencies

Should your vehicle shut off after a collision, you may restart your vehicle. For vehicles equipped with a key system:

1. Switch off the ignition.
2. Switch on the ignition.
3. Repeat Steps 1 and 2 to re-enable the fuel pump.

For vehicles equipped with a push button start system:

1. Press the **START/STOP** button to switch off the ignition.
2. Press the brake pedal and press the **START/STOP** button to switch on the ignition.
3. Remove your foot from the brake pedal and press the **START/STOP** button to switch off the ignition.
4. You can either attempt to start the engine by pressing the brake pedal and the **START/STOP** button, or switch on the ignition only by pressing the **START/STOP** button without pressing the brake pedal. Both ways re-enable the fuel system.

**Note:** *When you try to restart your vehicle after a fuel shutoff, the vehicle makes sure that various systems are safe to restart. Once your vehicle determines that the systems are safe, then the vehicle will allow you to restart.*

**Note:** *In the event that your vehicle does not restart after your third attempt, contact an authorized dealer.*

## JUMP STARTING THE VEHICLE

### WARNINGS



Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks or lighted substances to come near the battery. When working near the battery, always shield your face and protect your eyes. Always provide correct ventilation.

### WARNINGS



Keep batteries out of reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Shield your eyes when working near the battery to protect against possible splashing of acid solution. In case of acid contact with skin or eyes, flush immediately with water for a minimum of 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately.



Use only adequately sized cables with insulated clamps.

## Preparing Your Vehicle

Do not attempt to push-start your automatic transmission vehicle.

**Note:** *Attempting to push-start a vehicle with an automatic transmission may cause transmission damage.*

**Note:** *Use only a 12-volt supply to start your vehicle.*


**Note:** *Do not disconnect the battery of the disabled vehicle as this could damage the vehicle electrical system.*


# Roadside Emergencies


Park the booster vehicle close to the hood of the disabled vehicle, making sure the two vehicles do not touch.

## Connecting the Jumper Cables

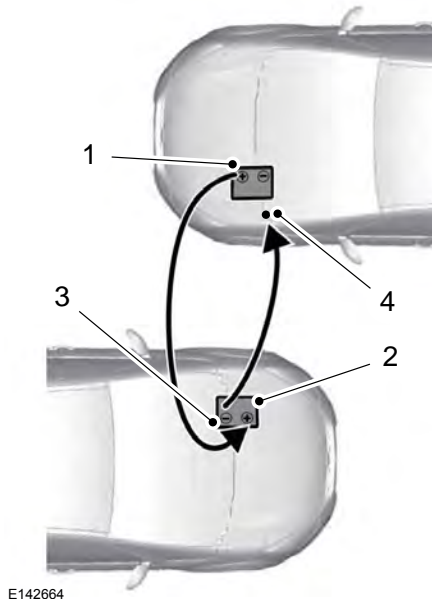
### WARNINGS

 Do not attach the cables to fuel lines, engine rocker covers, the intake manifold or electrical components as grounding points. Stay clear of moving parts. To avoid reverse polarity connections, make sure that you correctly identify the positive (+) and negative (-) terminals on both the disabled and booster vehicles before connecting the cables.

 Do not attach the end of the positive cable to the studs or L-shaped eyelet located above the positive (+) terminal of your vehicle's battery. High current may flow through and cause damage to the fuses.

 Do not connect the end of the second cable to the negative (-) terminal of the battery to be jumped. A spark may cause an explosion of the gases that surround the battery.

**Note:** In the illustration, the bottom vehicle represents the booster vehicle.



E142664

1. Connect the positive (+) jumper cable to the positive (+) terminal of the discharged battery.
2. Connect the other end of the positive (+) cable to the positive (+) terminal of the booster vehicle battery.
3. Connect the negative (-) cable to the negative (-) terminal of the booster vehicle battery.
4. Make the final connection of the negative (-) cable to an exposed metal part of the stalled vehicle's engine, away from the battery and the fuel injection system, or connect the negative (-) cable to a ground connection point if available.

## Jump Starting

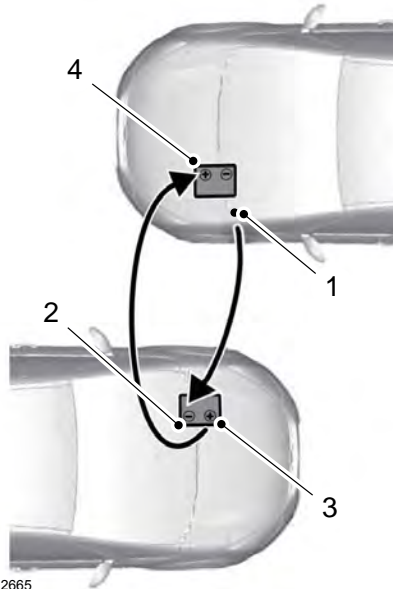
1. Start the engine of the booster vehicle and rev the engine moderately, or press the accelerator gently to keep your engine speed between 2000 and 3000 RPM, as shown in your tachometer.
2. Start the engine of the disabled vehicle.

# Roadside Emergencies

3. Once the disabled vehicle has been started, run both vehicle engines for an additional three minutes before disconnecting the jumper cables.

## Removing the Jumper Cables

Remove the jumper cables in the reverse order that they were connected.



E142665

1. Remove the negative (-) jumper cable from the disabled vehicle.

2. Remove the jumper cable on the negative (-) terminal of the booster vehicle battery.
3. Remove the jumper cable from the positive (+) terminal of the booster vehicle battery.
4. Remove the jumper cable from the positive (+) terminal of the disabled vehicle battery.
5. Allow the engine to idle for at least one minute.

# Customer Assistance

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## GETTING THE SERVICES YOU NEED

Warranty repairs to your vehicle must be performed by an authorized dealer. While any authorized dealer handling your vehicle line will provide warranty service, we recommend you return to your selling authorized dealer who wants to ensure your continued satisfaction.

Please note that certain warranty repairs require special training and equipment, so not all authorized dealers are authorized to perform all warranty repairs. This means that, depending on the warranty repair needed, you may have to take your vehicle to another authorized dealer.

A reasonable time must be allowed to perform a repair after taking your vehicle to the authorized dealer. Repairs will be made using Ford or Motorcraft parts, or remanufactured or other parts that are authorized by Ford.

## Away From Home

If you are away from home when your vehicle needs service, contact the Ford Customer Relationship Center or use the online resources listed below to find the nearest authorized dealer.

In the United States:

### Mailing address

Ford Motor Company  
Customer Relationship Center  
P.O. Box 6248  
Dearborn, MI 48121

### Telephone

1-800-521-4140  
(TDD for the hearing impaired:  
1-800-232-5952)

### Online

Additional information and resources are available online at [www.lincolnowner.com](http://www.lincolnowner.com)

These are some of the items that can be found online:

- U.S. dealer locator by Dealer Name, City/State, or Zip Code
- Owner Manuals
- Maintenance Schedules
- Recalls
- Ford Extended Service Plans
- Ford Genuine Accessories
- Service specials and promotions.

In Canada:

### Mailing address

Lincoln Customer Relationship Centre  
Ford Motor Company of Canada, Limited  
P.O. Box 2000  
Oakville, Ontario L6J 5E4

### Telephone

1-800-387-9333

### Online

[www.ford.ca](http://www.ford.ca)

### Twitter English

@LincolnMotorCA

# Customer Assistance

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## Twitter French

@LincolnQC

## Instagram

@LincolnMotorCA

## Facebook

/LincolnMotorCA

## Additional Assistance

If you have questions or concerns, or are unsatisfied with the service you are receiving, follow these steps:

1. Contact your Sales Representative or Service Advisor at your selling/servicing authorized dealer.
2. If your inquiry or concern remains unresolved, contact the Sales Manager, Service Manager or Customer Relations Manager.
3. If you require assistance or clarification on Ford Motor Company policies, please contact the Ford Customer Relationship Center.

In order to help us serve you better, please have the following information available when contacting a Customer Relationship Center:

- Vehicle Identification Number.
- Your telephone number (home and business).
- The name of the authorized dealer and city where located.
- The vehicle's current odometer reading.

In some states, you must directly notify Ford in writing before pursuing remedies under your state's warranty laws. Ford is also allowed a final repair attempt in some states.

In the United States, a warranty dispute must be submitted to the BBB AUTO LINE before taking action under the Magnuson-Moss Warranty Act, or to the extent allowed by state law, before pursuing replacement or repurchase remedies provided by certain state laws. This dispute handling procedure is not required prior to enforcing state created rights or other rights which are independent of the Magnuson-Moss Warranty Act or state replacement or repurchase laws.

## IN CALIFORNIA (U.S. ONLY)

California Civil Code Section 1793.2(d) requires that, if a manufacturer or its representative is unable to repair a motor vehicle to conform to the vehicle's applicable express warranty after a reasonable number of attempts, the manufacturer shall be required to either replace the vehicle with one substantially identical or repurchase the vehicle and reimburse the buyer in an amount equal to the actual price paid or payable by the consumer (less a reasonable allowance for consumer use). The consumer has the right to choose whether to receive a refund or replacement vehicle.

California Civil Code Section 1793.22(b) presumes that the manufacturer has had a reasonable number of attempts to conform the vehicle to its applicable express warranties if, within the first 18 months of ownership of a new vehicle or the first 18000 miles (29 000 km), whichever occurs first:

1. Two or more repair attempts are made on the same non-conformity likely to cause death or serious bodily injury OR

## Customer Assistance

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2. Four or more repair attempts are made on the same nonconformity (a defect or condition that substantially impairs the use, value or safety of the vehicle) OR
3. The vehicle is out of service for repair of nonconformities for a total of more than 30 calendar days (not necessarily all at one time).

In the case of 1 or 2 above, the consumer must also notify the manufacturer of the need for the repair of the nonconformity at the following address:

Ford Motor Company  
16800 Executive Plaza Drive  
Mail Drop 3NE-B  
Dearborn, MI 48126

You are required to submit your warranty dispute to BBB AUTO LINE before asserting in court any rights or remedies conferred by California Civil Code Section 1793.22(b). You are also required to use BBB AUTO LINE before exercising rights or seeking remedies created by the Federal Magnuson-Moss

Warranty Act, 15 U.S.C. sec. 2301 et seq. If you choose to seek redress by pursuing rights and remedies not created by California Civil Code Section 1793.22(b) or the Magnuson-Moss Warranty Act, resort to BBB AUTO LINE is not required by those statutes.

### **THE BETTER BUSINESS BUREAU (BBB) AUTO LINE PROGRAM (U.S. ONLY)**

Your satisfaction is important to Ford Motor Company and to your dealer. If a warranty concern has not been resolved using the three-step procedure outlined earlier in this chapter in the Getting the Services you need section, you may be eligible to participate in the BBB AUTO LINE program.

The BBB AUTO LINE program consists of two parts – mediation and arbitration. During mediation, a representative of the BBB will contact both you and Ford Motor Company to explore options for settlement of the claim. If an agreement is not reached during mediation or you do not want to participate in mediation, and if your claim is eligible, you

may participate in the arbitration process. An arbitration hearing will be scheduled so that you can present your case in an informal setting before an impartial person. The arbitrator will consider the testimony provided and make a decision after the hearing.

Disputes submitted to the BBB AUTO LINE program are usually decided within forty days after you file your claim with the BBB. You are not bound by the decision, and may reject the decision and proceed to court where all findings of the BBB Auto Line dispute, and decision, are admissible in the court action. Should you choose to accept the BBB AUTO LINE decision, Ford is then bound by the decision, and must comply with the decision within 30 days of receipt of your acceptance letter.

**BBB AUTO LINE Application:** Using the information provided below, please call or write to request a program application. You will be asked for your name and address, general information about your new vehicle, information about your warranty concerns, and any steps you have already taken to try



## Customer Assistance

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to resolve them. A Customer Claim Form will be mailed that will need to be completed, signed and returned to the BBB along with proof of ownership. Upon receipt, the BBB will review the claim for eligibility under the Program Summary Guidelines.

**You can get more information by calling BBB AUTO LINE at 1-800-955-5100, or writing to:**

**BBB AUTO LINE  
3033 Wilson Boulevard, Suite 600  
Arlington, Virginia 22201**

BBB AUTO LINE applications can also be requested by calling the Ford Motor Company Customer Relationship Center at 1-800-392-3673.

**Note:** *Ford Motor Company reserves the right to change eligibility limitations, modify procedures, or to discontinue this process at any time without notice and without obligation.*

### **UTILIZING THE MEDIATION/ARBITRATION PROGRAM (CANADA ONLY)**

For vehicles delivered to authorized Canadian dealers. In those cases where you continue to feel that the efforts by Ford of Canada and the authorized dealer to resolve a factory-related vehicle service concern have been unsatisfactory, Ford of Canada participates in an impartial third party mediation/arbitration program administered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP).

The CAMVAP program is a straight forward and relatively speedy alternative to resolve a disagreement when all other efforts to produce a settlement have failed. This procedure is without cost to you and is designed to eliminate the need for lengthy and expensive legal proceedings.

In the CAMVAP program, impartial third-party arbitrators conduct hearings at mutually convenient times and places in an informal environment. These impartial arbitrators review the positions of the parties, make decisions and, when appropriate, render awards to resolve disputes. CAMVAP decisions are fast, fair, and final as the arbitrator's award is binding on both you and Ford of Canada.

CAMVAP services are available in all Canadian territories and provinces. For more information, without charge or obligation, call your CAMVAP Provincial Administrator directly at 1-800-207-0685 or visit [www.camvap.ca](http://www.camvap.ca).

### **GETTING ASSISTANCE OUTSIDE THE U.S. AND CANADA**

Before exporting your vehicle to a foreign country, contact the appropriate foreign embassy or consulate. These officials can inform you of local vehicle registration regulations and where to find unleaded fuel.

## Customer Assistance

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If you cannot find unleaded fuel or can only get fuel with an anti-knock index lower than is recommended for your vehicle, contact our Customer Relationship Center.

The use of leaded fuel in your vehicle without proper conversion may damage the effectiveness of your emission control system and may cause engine knocking or serious engine damage. Ford Motor Company or Ford of Canada is not responsible for any damage caused by use of improper fuel. Using leaded fuel may also result in difficulty importing your vehicle back into the United States.

If your vehicle must be serviced while you are traveling or living in Asia-Pacific Region, Sub-Saharan Africa, U.S. Virgin Islands, Central America, the Caribbean, and Israel, contact the nearest authorized dealer. If the authorized dealer cannot help you, contact:

FORD MOTOR COMPANY  
Customer Relationship Center  
1555 Fairlane Drive  
Fairlane Business Park #3  
Allen Park, Michigan 48101  
U.S.A.  
Telephone: (313) 594-4857  
Fax: (313) 390-0804  
Email: [expcac@ford.com](mailto:expcac@ford.com)

For customers in Guam, the Commonwealth of the Northern Mariana Islands (CNMI), America Samoa, and the U.S. Virgin Islands, please feel free to call our Toll-Free Number: (800) 841-FORD (3673).

If your vehicle must be serviced while you are traveling or living in Puerto Rico, contact the nearest authorized dealer. If the authorized dealer cannot help you, contact:

FORD MOTOR COMPANY  
Customer Relationship Center  
1555 Fairlane Drive  
Fairlane Business Park #3  
Allen Park, Michigan 48101  
U.S.A.  
Telephone: (800) 841-FORD (3673)  
FAX: (313) 390-0804  
Email: [prcac@ford.com](mailto:prcac@ford.com)  
[www.ford.com.pr](http://www.ford.com.pr)

If your vehicle must be serviced while you are traveling or living in the Middle East, contact the nearest authorized dealer. If the authorized dealer cannot help you, contact:

FORD MOTOR COMPANY  
Customer Relationship Center  
1555 Fairlane Drive  
Fairlane Business Park #3  
Allen Park, Michigan 48101  
U.S.A.

**Ford:** 80004443673

**Lincoln:** 80004441067

**If calling from the UAE:** 80004441066

**If calling from the Kingdom of Saudi Arabia:**  
8008443673

**If calling from Kuwait:** 22280384

## Customer Assistance

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FAX: +971 4 3327266  
Email: [menacac@ford.com](mailto:menacac@ford.com)  
[www.me.ford.com](http://www.me.ford.com)

If you buy your vehicle in North America and then relocate to any of the above locations, register your vehicle identification number (VIN) and new address with Ford Motor Company Export Operations & Global Growth Initiatives by emailing **[expcac@ford.com](mailto:expcac@ford.com)**.

If you are in another foreign country, contact the nearest authorized dealer. In the event your inquiry is unresolved, communicate your concern with the dealership's Sales Manager, Service Manager or Customer Relations Manager. If you require additional assistance or clarification, please contact the respective Customer Relationship Center as previously listed.

**Customers in the U.S. should call  
1-800-392-3673.**

### ORDERING ADDITIONAL OWNER'S LITERATURE

To order the publications in this portfolio, contact Helm, Incorporated at:

HELM, INCORPORATED  
47911 Halyard Drive  
Plymouth, Michigan 48170  
Attention: Customer Service

Or to order a free publication catalog, call toll free: 1-800-782-4356

Monday-Friday 8:00 a.m. - 6:00 p.m. EST

Helm, Incorporated can also be reached by their website:

[www.helminc.com](http://www.helminc.com)

(Items in this catalog may be purchased by credit card, check or money order.)

### Obtaining a French Owner's Manual

French Owner's Manual can be obtained from your authorized dealer or by contacting Helm, Incorporated using the contact information listed previously in this section.

### REPORTING SAFETY DEFECTS (U.S. ONLY)



E142557

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Ford Motor Company.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Ford Motor Company.

# Customer Assistance

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to:

Administrator

1200 New Jersey Avenue, Southeast  
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

## REPORTING SAFETY DEFECTS (CANADA ONLY)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Transport Canada.

Transport Canada Contact Information	
Website	<a href="http://www.tc.gc.ca/eng/roadsafety/menu.htm">http://www.tc.gc.ca/eng/roadsafety/menu.htm</a>
Phone	1-800-333-0510

# Fuses

## FUSE SPECIFICATION CHART

### Power Distribution Box

#### WARNINGS



Always disconnect the battery before servicing high current fuses.

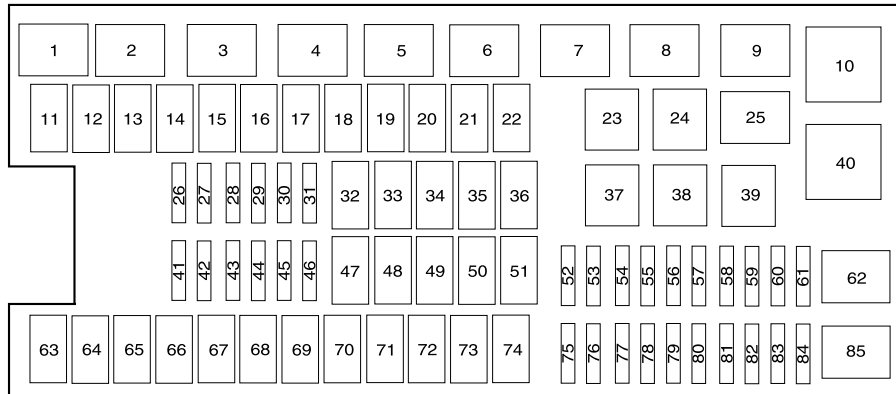
#### WARNINGS



To reduce risk of electrical shock, always replace the cover to the power distribution box before reconnecting the battery or refilling fluid reservoirs.

The power distribution box is located in the engine compartment. It has high-current fuses that protect your vehicle's main electrical systems from overloads.

If you disconnect and reconnect the battery, you need to reset some features. See **Changing the 12V Battery** (page 276).



E166589

The high-current fuses are coded as follows:

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
1	Relay	Rear washer relay.
2	Relay	Starter relay.
3	Relay	Blower motor relay.
4	Relay	Rear wiper relay.
5	Relay	Fuel pump relay.
6	Relay	Electronic cooling fan.
7	Relay	Rear window defroster. Heated mirror relay.
8	Relay	Electronic cooling fan.
9	Relay	Run/start relay.
10	Relay	Power distribution box relay.
11	40A*	Power running boards. Heated seats.
12	40A*	Run/start relay.
13	30A*	Starter relay.
14	50A*	Electronic cooling fan.

# Fuses

Fuse or relay number	Fuse amp rating	Protected components
15	20A*	RH HID headlamp.
16	50A*	Electronic fan.
17	20A*	LH HID headlamp.
18	30A*	Trailer brake.
19	20A*	Power point (console).
20	—	Not used.
21	30A*	Trailer tow module.
22	30A*	Passenger power seat.
23	Relay	Air conditioner clutch relay.
24	Relay	Trailer tow park lamp relay.
25	—	Not used.
26	10A**	ALT sensor.
27	20A**	4x4 all wheel drive module.
28	25A**	Trailer tow park lamp relay.
29	10A**	Integrated wheel end solenoid.
30	10A**	Air conditioner clutch relay.

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
31	15A**	Trailer tow back up lamp.
32	40A*	Blower motor relay.
33	40A*	110-volt AC power point.
34	30A*	Auxiliary blower motor.
35	50A*	Powertrain control module relay.
36	30A*	Power liftgate.
37	—	Not used.
38	—	Not used.
39	Relay	Trailer tow backup lamps relay.
40	Relay	Electronic fan 2 relay.
41	10A**	Powertrain control module keep-alive power.
42	5A**	Run/start relay.
43	10A**	Brake on/off switch.
44	20A**	Fuel pump relay.
45	10A**	Not used (spare).
46	15A**	Front/rear washer pump.



## Fuses

Fuse or relay number	Fuse amp rating	Protected components
47	30A*	Rear wiper motor.
48	40A*	Trailer tow module.
49	—	Not used.
50	30A*	Front wiper motor relay.
51	40A*	Rear window defroster and heated mirror relay.
52	10A**	Anti-lock brake system run/start feed.
53	5A**	Powertrain control module ISP.
54	5A**	Power steering.
55	15A**	Headlamp control module.
56	30A**	Passenger compartment fuse panel run/start feed.
57	5A**	Blower motor run/start.
58	—	Not used.
59	15A**	Heated mirrors.
60	—	Not used.
61	—	Not used.
62	—	Not used.

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
63	25A*	Electronic fan.
64	30A*	Moonroof.
65	20A*	Auxiliary power point (instrument panel valance panel).
66	20A*	Auxiliary power point (rear of center console).
67	40A*	Front row climate controlled seats.
68	30A*	Anti-lock brake system valves.
69	60A*	Anti-lock brake system pump.
70	30A*	Third row power fold seat.
71	20A*	Auxiliary power point/cigar lighter.
72	20A*	Auxiliary power point (right rear quarter panel).
73	20A*	Rear seat climate module.
74	30A*	Driver power seat.
75	25A**	Vehicle power 1 – powertrain control module.
76	20A**	Vehicle power 2 – powertrain control module.
77	20A**	Vehicle power 4 – ignition coils.
78	—	Not used.

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
79	15A**	Vehicle power 3 – powertrain control module.
80	—	Not used.
81	—	Not used.
82	5A**	Rain sensor.
83	—	Not used.
84	—	Not used.
85	Relay	Wiper motor relay.

\*Cartridge fuses.

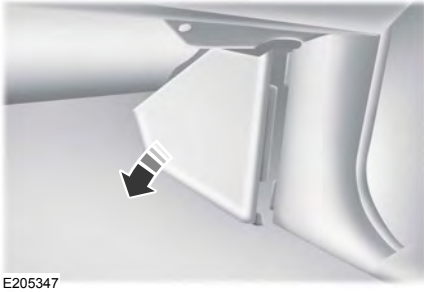
\*\*Mini fuses.

### Passenger Compartment Fuse Panel

The fuse panel is located under the right-hand side of the instrument panel.

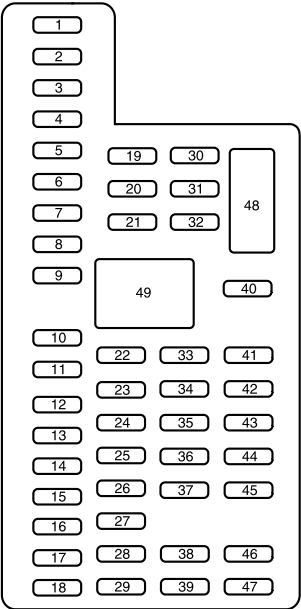
## Fuses

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To remove the trim panel for access to the fuse box, pull the panel toward you and swing it out away from the side and remove it. To reinstall it, line up the tabs with the grooves on the panel, then push it shut.

# Fuses



E163102

The fuses are coded as follows:

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
1	30A	Driver window.
2	15A	Rear seat control. Multimedia gateway module.
3	30A	Passenger window.
4	10A	Demand lamps.
5	20A	Amplifier.
6	5A	Rear electronic automatic temperature control.
7	7.5A	Power mirror. Driver seat memory switch.
8	—	Not used.
9	10A	SYNC. Power lift gate. Electric finish panel. Display.
10	10A	Run accessory relay.
11	10A	Passive entry/start module.
12	15A	Interior lighting. Puddle lamps.

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
13	15A	Right turn and stop/turn signals.
14	15A	Left turn and stop/turn signals.
15	15A	Reverse lamp. Center high mount stop lamp. EC mirror.
16	10A	Right front low beam.
17	10A	Left front low beam.
18	10A	Brake shift interlock/start button LED/keypad illumination. Third row power folding seat. Passive entry touch start.
19	20A	Subwoofer amplifier. THX amplifier.
20	20A	Lock/unlock relays.
21	—	Not used.
22	20A	Horn.
23	15A	Steering wheel control module. Cluster.
24	15A	Adjustable pedals/power adjustable column. Datalink.

## Fuses

Fuse or relay number	Fuse amp rating	Protected components
25	15A	Liftgate release decklid. Liftglass release motor.
26	5A	Push to start switch.
27	20A	Passive entry/start module.
28	15A	Ignition switch. Key inhibit switch.
29	20A	Radio. GPS.
30	15A	Front park lamps.
31	5A	Trailer brake on/off.
32	15A	Power vent. Rear windows. Power inverter.
33	10A	CCD suspension module.
34	10A	Rear park assist. Rear camera. BLIS. Heated seat.
35	5A	Climate module.



# Fuses

Fuse or relay number	Fuse amp rating	Protected components
		O/D switch.
36	—	Not used.
37	10A	4X4 module.
38	10A	EC mirror. Moonroof. DVD.
39	15A	Left and right front high beams.
40	10A	Rear park/tail lamps.
41	7.5A	Restraints control module.
42	—	Not used.
43	—	Not used.
44	—	Not used.
45	5A	Not used (spare).
46	10A	Climate control.
47	—	Not used.
48	—	Not used.
49	—	Not used.

## CHANGING A FUSE

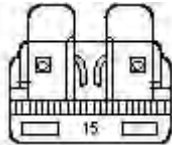
### Fuses

#### WARNING



You must replace a failed fuse with one that has the specified amperage rating. If you use a fuse with a higher amperage rating, you may cause severe wire damage and may start a fire.

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E142430

A fuse may fail if electrical components in the vehicle are not properly working. A broken wire inside the fuse indicates a failed fuse. Check the appropriate fuses before replacing any electrical components.

# Maintenance

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## GENERAL INFORMATION

Have your vehicle serviced regularly to help maintain its roadworthiness and resale value. There is a large network of authorized dealers that are there to help you with their professional servicing expertise. We believe that their specially trained technicians are best qualified to service your vehicle properly and expertly. They are supported by a wide range of highly specialized tools developed specifically for servicing your vehicle.

If your vehicle requires professional service, an authorized dealer can provide the necessary parts and service. Check your warranty information to find out which parts and services are covered.

Use only recommended fuels, lubricants, fluids and service parts conforming to specifications. Motorcraft® parts are designed and built to provide the best performance in your vehicle.

## Precautions

- Do not work on a hot engine.
- Make sure that nothing gets caught in moving parts.
- Do not work on a vehicle with the engine running in an enclosed space, unless you are sure you have enough ventilation.
- Keep all open flames and other burning material (such as cigarettes) away from the battery and all fuel related parts.

## Working with the Engine Off

1. Set the parking brake and shift to park (P).
2. Switch off the engine.
3. Block the wheels.

## Working with the Engine On

### WARNING



To reduce the risk of vehicle damage and/or personal burn injuries, do not start your engine with the air cleaner removed and do not remove it while the engine is running.

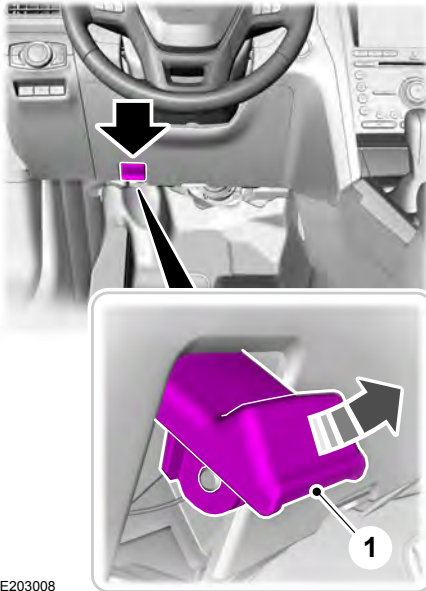
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1. Set the parking brake and shift to park (P).
2. Block the wheels.

## OPENING AND CLOSING THE HOOD

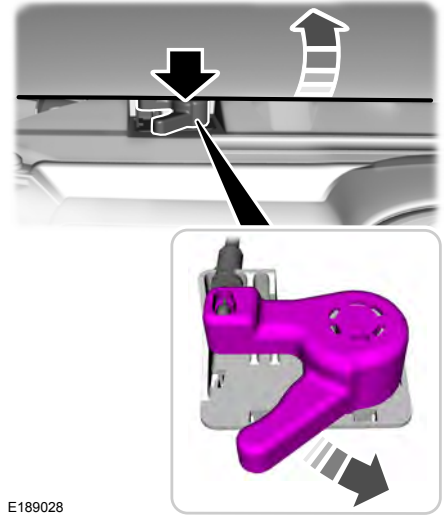
1. Inside the vehicle, pull the hood release handle located under the left-hand side of the instrument panel.

## Maintenance



E203008

2. Go to the front of your vehicle and locate the secondary release lever under the front of the hood on the left-hand side. Release the hood latch by pushing the secondary release lever toward the center of your vehicle.

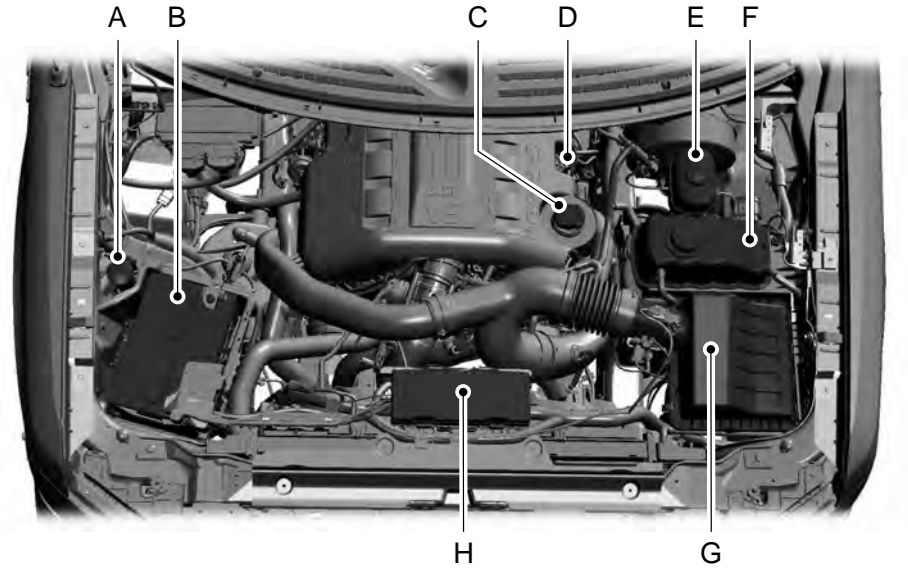


E189028

3. Lift the hood until the lift cylinders hold it open.
4. To close, lower the hood and make sure that it is closed properly and fully latched.

# Maintenance

## UNDER HOOD OVERVIEW - 3.5L ECOBOOST™



E166496

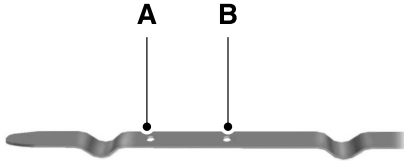
# Maintenance

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- A. Windshield washer fluid reservoir. See **Washer Fluid Check** (page 275).
- B. Battery. See **Changing the 12V Battery** (page 276).
- C. Engine oil filler cap. See **Engine Oil Check** (page 268).
- D. Engine oil dipstick. See **Engine Oil Dipstick** (page 268).
- E. Brake fluid reservoir. See **Brake Fluid Check** (page 274).
- F. Engine coolant reservoir. See **Engine Coolant Check** (page 269).
- G. Air filter assembly. See **Changing the Engine Air Filter** (page 284).
- H. Power distribution box. See **Fuses** (page 250).

# Maintenance

## ENGINE OIL DIPSTICK



E146429

A MIN  
B MAX

## ENGINE OIL CHECK

1. Make sure that your vehicle is on level ground.
2. Switch the engine off and wait 15 minutes for the oil to drain into the oil pan.
3. Set the parking brake and ensure the gearshift is in park (P).

4. Open the hood. Protect yourself from engine heat.
5. Locate and carefully remove the engine oil level dipstick. See **Under Hood Overview** (page 266).
6. Wipe the dipstick clean. Insert the dipstick fully, then remove it again.
  - If the oil level is between the lower and upper holes, the oil level is acceptable. DO NOT ADD OIL.
  - If the oil level is below the lower hole, add enough oil to raise the level within the lower and upper holes.
  - Oil levels above the upper hole may cause engine damage. Some oil must be removed from the engine by an authorized dealer.
7. Put the oil level dipstick back into the oil dipstick tube and ensure it is fully seated.

### Adding Engine Oil

**Note:** Do not remove the filler cap when the engine is running.

**Note:** Do not remove the engine oil level dipstick when the engine is running.

**Note:** Do not add oil further than the MAX mark. Oil levels above the MAX mark may cause engine damage.



E142732

Only use oils certified for gasoline engines by the American Petroleum Institute (API). An oil with this trademark symbol conforms to the current engine and emission system protection standards and fuel economy requirements of the International Lubricants Specification Advisory Council (ILSAC), comprised of U.S. and Japanese automobile manufacturers.

# Maintenance

1. Check the engine oil level.
2. If the engine oil level is not within the normal range, add engine oil that meets Ford specifications. See **Capacities and Specifications** (page 328).
3. Remove the engine oil filler cap and use a funnel to pour the engine oil into the opening.
4. Wipe off any spilled oil.
5. Recheck the engine oil level. Make sure the oil level is not above the normal operating range on the engine oil level dipstick.
6. Install the engine oil level dipstick and ensure it is fully seated.
7. Fully install the engine oil filler cap by turning the filler cap clockwise until three clicks are heard or until the cap is fully seated.

## OIL CHANGE INDICATOR RESET

Use the information display controls on the steering wheel to reset the oil change indicator.


### From the main menu scroll to:


Message	Action and description
Settings	Press the right arrow button, then from this menu scroll to the following message.
Vehicle	Press the right arrow button, then from this menu scroll to the following message.
Oil Life	Press the right arrow button, then from this menu scroll to the following message.
Hold OK to Reset	Press and hold the <b>OK</b> button until the instrument cluster displays the following message.  Reset Successful
	When the oil change indicator resets the instrument cluster displays 100%.  Remaining Life {00}%

Message	Action and description
	If the instrument cluster displays one of the following messages, repeat the process.  Not Reset  Reset Cancelled

## ENGINE COOLANT CHECK

### WARNINGS

 Do not add engine coolant when the engine is hot. Steam and scalding liquids released from a hot cooling system can burn you badly. Also, spilling coolant on hot engine parts can burn you.

 Do not put engine coolant in the windshield washer fluid container. If sprayed on the windshield, engine coolant could make it difficult to see through the windshield.



# Maintenance

## WARNINGS



To reduce the risk of personal injury, make sure the engine is cool before unscrewing the coolant pressure relief cap. The cooling system is under pressure. Steam and hot liquid can come out forcefully when you loosen the cap slightly.



Do not add coolant further than the **MAX** mark.

## Checking the Engine Coolant

When the engine is cold, check the concentration and level of the engine coolant at the intervals listed in the scheduled maintenance information. See **Scheduled Maintenance** (page 353).

**Note:** Make sure that the coolant level is between the **MIN** and **MAX** marks on the coolant reservoir.

**Note:** Coolant expands when it is hot. The level may extend beyond the **MAX** mark.

**Note:** If the level is at the **MIN** mark, below the **MIN** mark, or empty, add coolant immediately.

Maintain coolant concentration within 48% to 50%, which equates to a freeze point between -30°F (-34°C) and -34°F (-37°C).

**Note:** For best results, coolant concentration should be tested with a refractometer such as Robinair® Coolant and Battery Refractometer 75240. We do not recommend the use of hydrometers or coolant test strips for measuring coolant concentrations.

**Note:** Automotive fluids are not interchangeable. Do not use engine coolant, antifreeze or windshield washer fluid outside of its specified function and vehicle location.

## Adding Engine Coolant

**Note:** Do not use stop leak pellets, cooling system sealants or additives as they can cause damage to the engine cooling or heating systems. Your warranty may not cover these damages.

**Note:** During normal vehicle operation, the coolant may change color from orange to pink or light red. As long as the coolant is clear and uncontaminated, this color change does not indicate the coolant has degraded nor does it require the coolant to be drained, the system to be flushed, or the coolant to be replaced.

Do not mix different colors or types of coolant in your vehicle. Mixing of engine coolants may harm your engine's cooling system. Use prediluted engine coolant meeting the correct specification. See **Capacities and Specifications** (page 328). The use of an incorrect coolant may harm the engine or cooling system components and may not be covered by the vehicle Warranty.

In case of emergency, you can add a large amount of water without engine coolant in order to reach a vehicle service location. In this instance, qualified personnel:

1. Must drain the cooling system.
2. Chemically clean the cooling system with Motorcraft Premium Cooling System Flush.

# Maintenance

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3. Refill with engine coolant as soon as possible.

Water alone, without engine coolant, can cause engine damage from corrosion, overheating or freezing.

Do not use the following as a coolant substitute:

- Alcohol.
- Methanol.
- Brine.
- Any engine coolant mixed with alcohol or methanol antifreeze or coolant.

Alcohol and other liquids can cause engine damage from overheating or freezing.

Do not add extra inhibitors or additives to the coolant. These can be harmful and compromise the corrosion protection of the engine coolant.

When adding coolant:

1. Unscrew the cap slowly. Any pressure will escape as you unscrew the cap.
2. Add prediluted engine coolant meeting the correct specification. See **Capacities and Specifications** (page 328).

3. Check the coolant level in the coolant reservoir the next few times you drive your vehicle.
4. If necessary, add enough prediluted engine coolant to bring the coolant level to the proper level.

## Recycled Engine Coolant

We do not recommend the use of recycled engine coolant as an approved recycling process is not yet available.

Used engine coolant should be disposed of in an appropriate manner. Follow your community's regulations and standards for recycling and disposing of automotive fluids.

## Severe Climates

If you drive in extremely cold climates:

- It may be necessary to have an authorized dealer increase the coolant concentration above 50%.
- A coolant concentration of 60% provides improved freeze point protection. Engine coolant concentrations above 60% decrease the overheat protection characteristics of the engine coolant and may cause engine damage.

If you drive in extremely hot climates:

- It may be necessary to have an authorized dealer decrease the coolant concentration to 40%.
- A coolant concentration of 40% provides improved overheat protection. Engine coolant concentrations below 40% decrease the freeze and corrosion protection characteristics of the engine coolant and may cause engine damage.

Vehicles driven year-round in non-extreme climates should use prediluted engine coolant for optimum cooling system and engine protection.

# Maintenance

## What You Should Know About Fail-Safe Cooling

If you deplete the engine coolant supply, fail-safe cooling allows you to temporarily drive your vehicle before you incur incremental component damage. The fail-safe distance depends on ambient temperatures, vehicle load and terrain.

### How Fail-Safe Cooling Works

If the engine begins to overheat, the engine coolant temperature gauge will move to the red (hot) area and:



the coolant temperature warning light will illuminate



the service engine soon indicator will illuminate.

If the engine reaches a preset over-temperature condition, the engine automatically switches to alternating cylinder operation. Each disabled cylinder acts as an air pump and cools the engine.

When this occurs, your vehicle will still operate. However:

- The engine power will be limited.
- This will disable the air conditioning system.

Continued operation increases the engine temperature, causing the engine to completely shut down. Your steering and braking effort increases in this situation.

When the engine temperature cools, you can re-start your engine. Take your vehicle to an authorized dealer as soon as possible to minimize engine damage.

### When Fail-Safe Mode Is Activated

#### WARNINGS



Fail-safe mode is for use during emergencies only. Operate your vehicle in fail-safe mode only as long as necessary to bring your vehicle to rest in a safe location and seek immediate repairs. When in fail-safe mode, your vehicle will have limited power, will not be able to maintain

#### WARNINGS

high-speed operation, and may completely shut down without warning, potentially losing engine power, power steering assist, and power brake assist, which may increase the possibility of a crash resulting in serious injury.



Never remove the coolant reservoir cap while the engine is running or hot.

You have limited engine power when in the fail-safe mode, so drive your vehicle with caution. Your vehicle will not maintain high-speed operation and the engine will operate poorly.

Remember that the engine is capable of automatically shutting down to prevent engine damage. In this situation:

1. Pull off the road as soon as safely possible and switch off the engine.
2. Tow your vehicle to an authorized dealer.
3. If this is not possible, wait a short period for the engine to cool.
4. Check the coolant level and add if low.

# Maintenance

5. Re-start the engine and drive your vehicle to an authorized dealer.

**Note:** *Driving your vehicle without repair increases the chance of engine damage. Contact an authorized dealer as soon as possible.*

## Engine Fluid Temperature Management (If Equipped)

### WARNINGS



To reduce the risk of crash and injury, be prepared that the vehicle speed may reduce and the vehicle may not be able to accelerate with full power until the fluid temperatures reduce.



Never remove the coolant reservoir cap while the engine is running or hot.

Your vehicle can pull a trailer, but because of the added load, your vehicle's engine may temporarily reach higher temperatures during severe operating conditions such as ascending a long or steep grade while pulling a trailer in high temperatures.

At this time, you may notice your engine coolant temperature gauge needle move toward the **H** and the **POWER REDUCED TO LOWER TEMP** message may appear in the information display.

You may notice a reduction in vehicle speed caused by reduced engine power. In order to manage the engine fluid temperatures, your vehicle may enter this mode if certain high-temperature and high-load conditions take place. The amount of speed reduction depends on many factors such as vehicle loading, towing, grade and ambient temperature. If this occurs, there is no need to pull off the road. You can continue to drive your vehicle while this message is active.

The air conditioning may also cycle on and off during severe operating conditions to protect overheating of the engine. When the engine coolant temperature decreases to a normal operating temperature, the air conditioning will turn on once again.

If the engine coolant temperature gauge moves fully into the red (hot) area, or if the coolant temperature warning or service engine soon messages appear in your information display:

1. Pull off the road as soon as safely possible and shift the transmission into **P**.
2. Leave the engine running until the coolant temperature gauge needle moves away from the red (hot) area. After several minutes, if the temperature does not drop, follow the remaining steps.
3. Switch the engine off and wait for it to cool before checking the coolant level.
4. If the coolant level is normal, restart your engine and continue.
5. If the coolant is low, add coolant, and restart the engine. See **Adding Engine Coolant** or **How Fail-Safe Cooling Works** in this chapter for more information.

# Maintenance

## AUTOMATIC TRANSMISSION FLUID CHECK

If required, have an authorized dealer check and change the transmission fluid at the correct service interval. See **Scheduled Maintenance** (page 353).

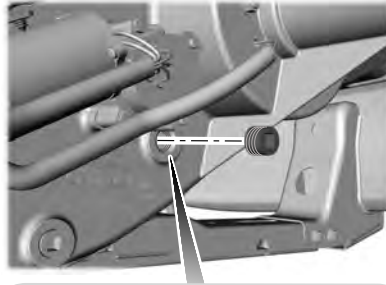
The automatic transmission does not have a transmission fluid dipstick.

Refer to your scheduled maintenance information for scheduled intervals for fluid checks and changes. Your transmission does not consume fluid. However, if the transmission slips, shifts slowly or if you notice a sign of leaking fluid, contact an authorized dealer.

Do not use supplemental transmission fluid additives, treatments or cleaning agents. The use of these materials may affect transmission operation and result in damage to internal transmission components.

## TRANSFER CASE FLUID CHECK (if

Equipped)



E170444

1. Clean the area around the filler plug.
2. Remove the filler plug.
3. Inspect the fluid level. The fluid level should be within 0.20 in (5mm) from the bottom of the hole.
4. Add fluid through the filler opening. Fill to the bottom of the opening.

Use only fluid that meets Ford specifications. See **Capacities and Specifications** (page 328).

## BRAKE FLUID CHECK


### WARNINGS





Do not use any fluid other than the recommended brake fluid as this will reduce brake efficiency. Use of incorrect fluid could result in the loss of vehicle control, serious personal injury or death.

# Maintenance

## WARNINGS

 Only use brake fluid from a sealed container. Contamination with dirt, water, petroleum products or other materials may result in brake system damage or failure. Failure to adhere to this warning could result in the loss of vehicle control, serious personal injury or death.

 Do not allow the fluid to touch your skin or eyes. If this happens, rinse the affected areas immediately with plenty of water and contact your physician.

 A fluid level between the **MAX** and **MIN** lines is within the normal operating range and there is no need to add fluid. A fluid level not in the normal operating range could compromise the performance of the system. Have your vehicle checked immediately.




E170684

To avoid fluid contamination, the reservoir cap must remain in place and fully tight, unless you are adding fluid.

Only use fluid that meets Ford specifications. See **Capacities and Specifications** (page 328).

## WASHER FLUID CHECK

### WARNING

 If you operate your vehicle in temperatures below 40°F (5°C), use washer fluid with antifreeze protection. Failure to use washer fluid with antifreeze protection in cold weather could result in impaired windshield vision and increase the risk of injury or accident.

**Note:** *The front and rear washer systems are supplied from the same reservoir.*

Add fluid to fill the reservoir if the level is low. Only use a washer fluid that meets Ford specifications. See **Capacities and Specifications** (page 328).

State or local regulations on volatile organic compounds may restrict the use of methanol, a common windshield washer antifreeze additive. Washer fluids containing non-methanol antifreeze agents should be used only if they provide cold weather protection without damaging the vehicle's paint finish, wiper blades or washer system.


# Maintenance


## FUEL FILTER

Your vehicle is equipped with a lifetime fuel filter that is integrated with the fuel tank. Regular maintenance or replacement is not needed.


## CHANGING THE 12V BATTERY


### WARNINGS


 Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks or lighted substances to come near the battery. When working near the battery, always shield your face and protect your eyes. Always provide correct ventilation.

 When lifting a plastic-cased battery, excessive pressure on the end walls could cause acid to flow through the vent caps, resulting in personal injury and damage to the vehicle or battery. Lift the battery with a battery carrier or with your hands on opposite corners.

### WARNINGS

 Keep batteries out of reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Shield your eyes when working near the battery to protect against possible splashing of acid solution. In case of acid contact with skin or eyes, flush immediately with water for a minimum of 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately.

 Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

 This vehicle may be fitted with more than one battery. Removing the battery cables from only one battery does not disconnect your vehicle electrical system. Make sure you disconnect the battery cables from all batteries when disconnecting power. Failure to do so may cause serious personal injury or property damage.

Your vehicle is fitted with a Motorcraft maintenance-free battery which normally does not require additional water.

When a battery replacement is required, you must use a recommended replacement battery that matches the electrical requirements of the vehicle.

**Note:** *After cleaning or replacing the battery, make sure you reinstall the battery cover or shield.*

**Note:** *If you add electrical accessories or components to the vehicle, it may adversely affect the low voltage battery performance and durability. This may also affect the performance of other electrical systems in the vehicle.*

For longer, trouble-free operation, keep the top of the battery clean and dry.

If you see any corrosion on the battery or terminals, remove the cables from the terminals and clean with a wire brush. You can neutralize the acid with a solution of baking soda and water.

# Maintenance

Because your vehicle's engine is electronically controlled by a computer, some control conditions are maintained by power from the battery. When the battery is disconnected or a new battery is installed, the engine must relearn its idle and fuel trim strategy for optimum driveability and performance. Flexible fuel vehicles (FFV) must also relearn the ethanol content of the fuel for optimum driveability and performance.

To restore the settings, do the following:

1. Apply the parking brake.
2. Shift into park (P) or neutral (N).
3. Switch off all accessories.
4. Press the brake pedal and start your vehicle.
5. Run the engine until it reaches normal operating temperature. While the engine is warming up, complete the following:  
Reset the clock. See **Audio System** (page 340). Reset the power windows bounce-back feature. See **Windows and Mirrors** (page 93). Reset the radio station presets. See **Audio System** (page 340).

6. Allow the engine to idle for at least one minute.
7. Drive the vehicle at least 10 mi (16 km) to completely relearn the idle trim and fuel trim strategy.

**Note:** *If you do not allow the engine to relearn the idle and fuel trim strategy, the idle quality of your vehicle may be adversely affected until the engine computer eventually relearns the idle trim and fuel trim strategy.*

**Note:** *For flexible fuel vehicles, if you are operating on E85, you may experience poor starts or an inability to start the engine and driveability problems until the fuel trim and ethanol content have been relearned.*

Make sure that you dispose of old batteries in an environmentally friendly way. Seek advice from your local authority about recycling old batteries.

If storing your vehicle for more than 30 days without recharging the battery, we recommend that you disconnect the battery cables to maintain battery charge for quick starting.

## Battery Management System (If Equipped)

The battery management system monitors battery conditions and takes actions to extend battery life. If excessive battery drain is detected, the system temporarily disables some electrical systems to protect the battery.

Systems included are:

- Heated rear window.
- Heated seats.
- Climate control.
- Heated steering wheel.
- Audio unit.
- Navigation system.

A message may appear in the information displays to alert you that battery protection actions are active. These messages are only for notification that an action is taking place, and not intended to indicate an electrical problem or that the battery requires replacement.



# Maintenance

After battery replacement, or in some cases after charging the battery with an external charger, the battery management system requires eight hours of vehicle sleep time to relearn the battery state of charge. During this time your vehicle must remain fully locked with the ignition switched off.

**Note:** *Prior to relearning the battery state of charge, the battery management system may temporarily disable some electrical systems.*

## Electrical Accessory Installation

To make sure the battery management system works correctly, do not connect an electrical device ground connection directly to the battery negative post. This can cause inaccurate measurements of the battery condition and potential incorrect system operation.

**Note:** *If you add electrical accessories or components to the vehicle, it may adversely affect battery performance and durability. This may also affect the performance of other electrical systems in the vehicle.*

## CHECKING THE WIPER BLADES



E142463

Run the tip of your fingers over the edge of the blade to check for roughness.

Clean the wiper blades with washer fluid or water applied with a soft sponge or cloth.

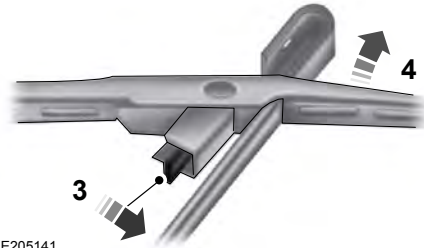
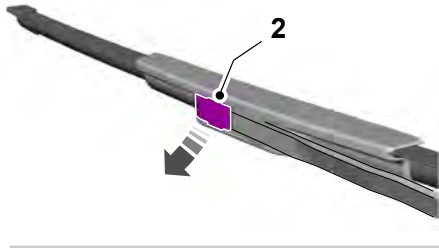
## CHANGING THE WIPER BLADES

**Note:** *Do not hold the wiper blade when lifting the wiper arm.*



1. Pull the wiper blade and arm away from the glass.

# Maintenance



E205141

2. Lift the wiper blade primary locking clip.
3. Press the wiper blade secondary locking clip.
4. Remove the wiper blade.

**Note:** Make sure that the wiper arm does not spring back against the glass when the wiper blade is not attached.

5. Install in the reverse order.

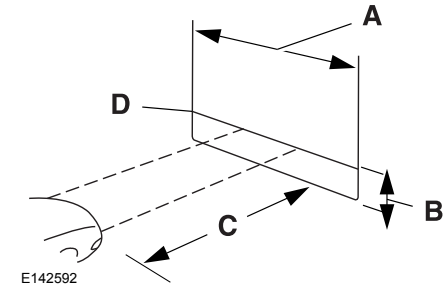
**Note:** Make sure that the wiper blade locks into place.

## ADJUSTING THE HEADLAMPS

### Vertical Aim Adjustment

The headlamps on your vehicle are properly aimed at the assembly plant. If your vehicle has been in an accident, contact an authorized dealer to check and realign your headlamps.

### Headlamp Aiming Target



- A 8 feet (2.4 meters).
- B Center height of lamp to ground.
- C 25 feet (7.6 meters).
- D Horizontal reference line.

### Vertical Aim Adjustment

1. Park your vehicle directly in front of a wall or screen on a level surface, approximately 25 feet (7.6 meters) away.

# Maintenance

2. Measure the height from the center of your headlamp (indicated by a 3.0 millimeter circle on the lens) to the ground and mark an 8 foot (2.4 meter) horizontal reference line on the vertical wall or screen at this height (a piece of masking tape works well).

**Note:** To see a clearer light pattern for adjusting, you may want to block the light from one headlamp while adjusting the other.

3. Switch on the low beam headlamps to illuminate the wall or screen and open the hood. Cover one of the headlamps so no light hits the wall.



E167358

4. **For halogen or LED headlamps:** On the wall or screen you will observe a light pattern with a distinct horizontal edge toward the right. If this edge is not at the horizontal reference line, you will need to adjust the beam so the edge is at the same height as the horizontal reference line.



E163806

5. Locate the vertical adjuster on each headlamp. Use a #2 Phillips screwdriver to turn the adjuster either counterclockwise or clockwise in order to adjust the vertical aim of the headlamp.

6. Repeat Steps 3 through 7 to adjust the other headlamp.
7. Close the hood and turn off the lamps.

## Horizontal Aim Adjustment

Horizontal aim is not required for this vehicle and is not adjustable.

## CHANGING A BULB

### WARNING



Bulbs can become hot. Let the bulb cool down before removing it. Failure to do so could result in personal injury.

**Note:** If the bulb is accidentally touched, clean it with rubbing alcohol before installing it.

## HID Headlamp Bulbs

Your vehicle has high intensity discharge lamps. These lamps operate at a high voltage. Contact an authorized dealer.

# Maintenance

## LED Lamps

These lamps operate at a high voltage. Contact an authorized dealer.

The following lamps are LED:

- Front parking lamps.
- Front side marker lamps.
- Daytime running lamps.
- Front direction indicators.
- Rear direction indicators.
- Brake and rear lamps.
- Reversing lamps

## Central High-mounted Brake Lamp

1. Switch all of the lamps and the ignition off.



E205572

2. Remove the retaining bolts from the lamp assembly.



E205573

3. Remove the lamp and unclip the bulb holder.
4. Remove the bulb by pulling it straight out.

## License Plate Lamp Bulbs



E205571

1. Use a suitable tool, for example a screwdriver, to carefully remove the lamp.
2. Turn the bulb holder counterclockwise and remove it.
3. Remove the bulb by pulling it straight out.

# Maintenance

## BULB SPECIFICATION CHART

Replacement bulbs are specified in the chart below. Headlamp bulbs must be marked with an authorized “D.O.T.” for North America and

an “E” for Europe to ensure lamp performance, light brightness and pattern and safe visibility. The correct bulbs will not damage the lamp assembly or void the lamp assembly warranty and will provide quality bulb illumination time.

### Exterior Lamps

Lamp	Specification	Power (Watt)
Front direction indicator.	LED	LED
Daytime running lamps.	LED	LED
Headlamp low beam.	HID	HID
Headlamp high beam.	HID	HID
Front side marker lamps.	LED	LED
Side direction indicator.	LED	LED
Welcome lighting lamps.	LED	LED
Rear lamp, brake lamp and rear direction indicator.	LED	LED
Central high mounted brake lamp.	W5W	--

# Maintenance

Lamp	Specification	Power (Watt)
Reversing lamps.	LED	LED
License plate lamp.	168	--

HID and LED lamps are not serviceable. Contact an authorized dealer if they fail.

## Interior Lamps


Lamp	Specification	Power (Watt)
Glove compartment lamp.	194	3.5
Vanity mirror lamp.	A6224PF	--
Map lamp.	1600XB	6
Second row lamp.	1600XB	6
Rear dome lamp.	211-2XB	12

LED lamps are not serviceable. Contact an authorized dealer if they fail.

# Maintenance

## CHANGING THE ENGINE AIR FILTER

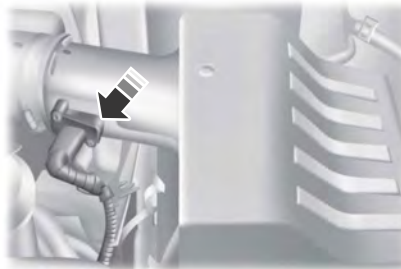
### WARNING

 To reduce the risk of vehicle damage and personal burn injuries, do not start your engine with the air cleaner removed and do not remove it while the engine is running.

**Note:** *Failure to use the correct air filter element may result in severe engine damage. Resulting component damage may not be covered by the vehicle Warranty.*

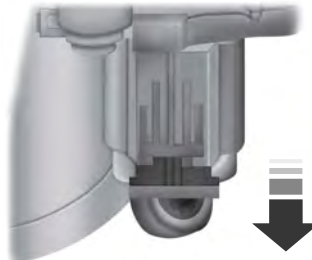
When changing the air filter element, use only the air filter element listed. See **Motorcraft Parts** (page 329).

Change the air filter element at the correct interval. See **Scheduled Maintenance** (page 353).



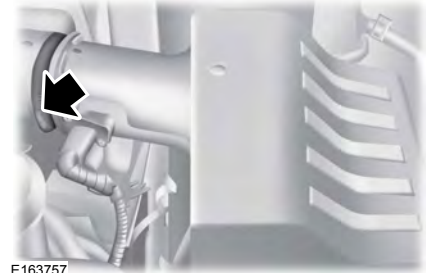
E163755

1. Locate the mass air flow sensor electrical connector on the air outlet tube. Disconnect the mass air flow sensor electrical connector.



E163756

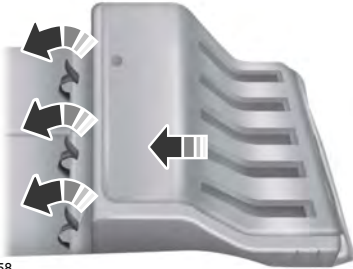
2. Reposition the locking clip on the connector (connector shown from below for clarity), squeeze the connector and pull it off of the air outlet tube.



E163757

3. Clean the area from around the air tube to the air cover connection to prevent debris from entering the system. Next, loosen the bolt on the air tube clamp so the clamp is no longer snug to the air tube. It is not necessary to completely remove the clamp.
4. Pull the air tube off from the air cleaner housing.

## Maintenance



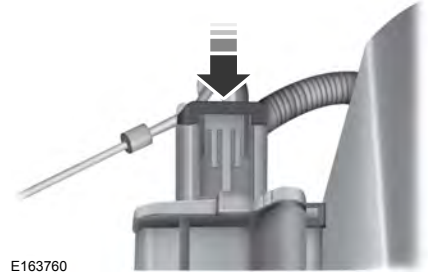
E163758

5. Release the three clamps that secure the cover to the air filter housing. Push the air filter cover toward the center of the vehicle and up slightly to release it.
6. Remove the air filter element from the air filter housing.
7. Install the new air filter element.



E163759

8. Replace the air filter housing cover and secure all the clamps. Be careful not to crimp the filter element edges between the air filter housing and cover and ensure that you properly align the tabs on the edge into the slots.
9. Slip the air tube onto the air filter housing and tighten the air-tube clamp bolt snugly. Do not over tighten air-tube clamp bolt.



E163760

10. Reconnect the mass air flow sensor electrical connector to the outlet tube. Make sure the locking tab on the connector is in the locked position (connector shown from below for clarity).



# Vehicle Care

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## GENERAL INFORMATION

Your Ford or Lincoln authorized dealer has many quality products available to clean your vehicle and protect its finishes.

## CLEANING PRODUCTS

For best results, use the following products or products of equivalent quality:

- Motorcraft Bug and Tar Remover (ZC-42)
- Motorcraft Custom Bright Metal Cleaner (ZC-15)
- Motorcraft Detail Wash (ZC-3-A)
- Motorcraft Dusting Cloth (ZC-24)
- Motorcraft Engine Shampoo and Degreaser (U.S. only) (ZC-20)
- Motorcraft Engine Shampoo (Canada only) (CXC-66-A)
- Motorcraft Multi-Purpose Cleaner (Canada only) (CXC-101)
- Motorcraft Premium Glass Cleaner (Canada only) (CXC-100)

- Motorcraft Premium Quality Windshield Washer Fluid (Canada only) [CXC-37-(A, B, D or F)]
- Motorcraft Premium Windshield Wash Concentrate with Bitterant (U.S. only) (ZC-32-B2)
- Motorcraft Professional Strength Carpet & Upholstery Cleaner (ZC-54)
- Motorcraft Premium Leather and Vinyl Cleaner (ZC-56)
- Motorcraft Spot and Stain Remover (U.S. only) (ZC-14)
- Motorcraft Ultra-Clear Spray Glass Cleaner (ZC-23)
- Motorcraft Wheel and Tire Cleaner (ZC-37-A)

## CLEANING THE EXTERIOR

Wash your vehicle regularly with cool or lukewarm water and a neutral pH shampoo, we recommend Motorcraft Detail Wash.

- Never use strong household detergents or soap, for example dish washing or laundry liquid. These products can discolor and spot painted surfaces.
- Never wash your vehicle when is hot to the touch, or during strong or direct sunlight.
- Dry your vehicle with a chamois or soft terry cloth towel to eliminate water spotting.
- Immediately remove fuel spillages, bird droppings, insect deposits and road tar. These may cause damage to your vehicle's paintwork or trim over time. We recommend Motorcraft Bug and Tar Remover.
- Remove any exterior accessories, for example antennas, before entering a car wash.

**Note:** *Suntan lotions and insect repellents can damage painted surfaces. If these substances come in contact with your vehicle, wash the affected area as soon as possible.*

# Vehicle Care

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## Exterior Chrome Parts

- Apply a high quality-cleaning product to bumpers and other chrome parts. Follow the manufacturer's instructions. We recommend Motorcraft Custom Bright Metal Cleaner.
- Do not apply the cleaning product to hot surfaces. Do not leave the cleaning product on chrome surfaces longer than the time recommended.
- Using other non-recommended cleaners can result in severe and permanent cosmetic damage.

**Note:** *Never use abrasive materials, for example steel wool or plastic pads as they can scratch the chrome surface.*

**Note:** *Do not use chrome cleaner, metal cleaner or polish on wheels or wheel covers.*

## Exterior Plastic Parts

For routine cleaning we recommend Motorcraft Detail Wash. If tar or grease spots are present, we recommend Motorcraft Bug and Tar Remover.

## Stripes or Graphics (If Equipped)

Do not use a commercial or high-pressure sprayer on the surface or edge of stripes and graphics. This can damage them and cause the edges to peel away from the vehicle surface.

## Underbody

Flush the complete underside of your vehicle frequently. Keep body and door drain holes free of debris or foreign material.

## WAXING

Regular waxing is necessary to protect your car's paint from the elements. We recommend that you wash and wax the painted surface once or twice a year.

When washing and waxing, park your vehicle in a shaded area out of direct sunlight. Always wash your vehicle before applying wax.

- Use a quality wax that does not contain abrasives.
- Follow the manufacturer's instructions to apply and remove the wax.
- Apply a small amount of wax in a back-and-forth motion, not in circles.
- Do not allow wax to come in contact with any non-body (low-gloss black) colored trim. The wax will discolor or stain the parts over time.
  - Roof racks.
  - Bumpers.
  - Grained door handles.
  - Side moldings.
  - Mirror housings.
  - Windshield cowl area.
- Do not apply wax to glass areas.
- After waxing, your car's paint should feel smooth, and be free of streaks and smudges.

# Vehicle Care

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## CLEANING THE ENGINE

Engines are more efficient when they are clean because grease and dirt buildup keep the engine warmer than normal.

When washing:

- Take care when using a power washer to clean the engine. The high-pressure fluid could penetrate the sealed parts and cause damage.
- Do not spray a hot engine with cold water to avoid cracking the engine block or other engine components.
- Spray Motorcraft Engine Shampoo and Degreaser on all parts that require cleaning and pressure rinse clean. In Canada, use Motorcraft Engine Shampoo.
- Never wash or rinse the engine while it is hot or running; water in the running engine may cause internal damage.

- Never wash or rinse any ignition coil, spark plug wire or spark plug well, or the area in and around these locations.
- Cover the battery, power distribution box, and air filter assembly to prevent water damage when cleaning the engine.

## CLEANING THE WINDOWS AND WIPER BLADES

Car wash chemicals and environmental fallout can result in windshield and wiper blade contamination. Dirty windshield and wipers will result in poor windshield wiper operation. Keep the windshield and wiper blades clean to maintain windshield wiper performance.

To clean the windshield and wiper blades:

- Clean the windshield with a non-abrasive glass cleaner. When cleaning the interior of the windshield, avoid getting any glass cleaner on the instrument panel or door panels. Wipe any glass cleaner off these surfaces immediately.
- For windshields contaminated with tree sap, chemicals, wax or bugs, clean the entire windshield using steel wool (no greater than 0000 grade) in a circular motion and rinse with water.
- Clean the wiper blades with isopropyl rubbing alcohol or windshield washer concentrate.

**Note:** *Do not use razor blades or other sharp objects to clean or remove decals from the inside of the heated rear window. The vehicle warranty does not cover damage caused to the heated rear window grid lines.*

# Vehicle Care

## CLEANING THE INTERIOR

### WARNINGS



Do not use cleaning solvents, bleach or dye on the vehicle's safety belts, as these actions may weaken the belt webbing.



On vehicles equipped with seat-mounted airbags, do not use chemical solvents or strong detergents. Such products could contaminate the side airbag system and affect performance of the side airbag in a collision.

**Note:** Follow the same procedure for cleaning leather seats when cleaning leather interior. See **Cleaning Leather Seats** (page 291).

**Note:** Do not use household cleaning products or glass cleaners, which can stain and discolor the fabric and affect the flame retardant abilities of the seat materials.

For fabric, carpets, cloth seats, safety belts and seats equipped with side airbags:

- Remove dust and loose dirt with a vacuum cleaner.
- Remove light stains and soil with Motorcraft Professional Strength Carpet & Upholstery Cleaner.

For grease or tar stains:

- Spot clean the area with Motorcraft Spot and Stain Remover (Motorcraft Multi-Purpose Cleaner in Canada).
- If a ring forms on the fabric after spot cleaning, clean the entire area immediately (but do not oversaturate) or the ring will set.

## Cleaning Black Label or Presidential Interior (If Equipped)

**Note:** Alcantara microfiber cloth fabric is made of polyester microfiber with micro-porous polyurethane. Using commercially available fabric cleaners can cause permanent damage.

**Note:** Do not use commercially available leather and vinyl cleaning products on Alcantara microfiber cloth fabric.

**Note:** Lincoln Black Label or Presidential vehicles may have Alcantara microfiber cloth fabric on the seats, headliner, floor mats and door panels.

Depending on the type of stain, use water, lemon juice or pure ethyl alcohol when cleaning. For cleaning Alcantara microfiber cloth, refer to the following chart:

## Vehicle Care

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Type of Stain	Cleaning Procedure
Fruit juice, jam, jelly, syrup or ketchup.	Use lukewarm water and rinse by dabbing with clean water.
Blood, egg, excrement or urine.	Use cold water and rinse by dabbing with clean water. Avoid warm water because it makes these substances coagulate.
Liquor, alcoholic beverages, wine, beer, cola and tea.	Use lukewarm water. If the color remains, treat with lemon juice and then rinse.
Indelible pencil, cocoa, chocolate, pastry with cream or chocolate, ice cream or mustard.	Use lukewarm water and rinse by dabbing with clean water.
Vinegar, hair gel, tomato sauce or coffee with sugar.	Use lemon juice, wipe with lukewarm water and rinse by dabbing with clean water.
Dye transfer and all other stains.	Use ethyl alcohol, then dab with water.

# Vehicle Care

## CLEANING THE INSTRUMENT PANEL AND INSTRUMENT CLUSTER LENS

### WARNING



Do not use chemical solvents or strong detergents when cleaning the steering wheel or instrument panel to avoid contamination of the airbag system.

**Note:** Follow the same procedure as cleaning leather seats for cleaning leather instrument panels and leather interior trim surfaces. See **Cleaning Leather Seats** (page 291).

Clean the instrument panel and cluster lens with a clean, damp and soft cloth, then use a clean, dry and soft cloth to dry these areas.

- Avoid cleaners or polishes that increase the gloss of the upper portion of the instrument panel. The dull finish in this area helps protect you from undesirable windshield reflection.
- Do not use any household cleaning products or glass cleaners as these may damage the finish of the instrument panel, interior trim and cluster lens.
- Wash or wipe your hands clean if you have been in contact with certain products such as insect repellent and suntan lotion to avoid possible damage to the interior painted surfaces.
- Do not allow air fresheners and hand sanitizers to spill onto interior surfaces. If a spill occurs, wipe off immediately. Your warranty may not cover these damages.

If a staining liquid like coffee or juice has been spilled on the instrument panel or on interior trim surfaces:

1. Wipe up spilled liquid using a clean, soft cloth as quickly as possible.

2. Use Motorcraft Premium Leather and Vinyl Cleaner or a commercially available leather cleaning product for automotive interiors. Test any cleaner or stain remover on an inconspicuous area.
3. Alternatively, wipe the surface with a clean, soft cloth and a mild soap and water solution. Dry the area with a clean, soft cloth.
4. If necessary, apply more soap and water solution or cleaning product to a clean, soft cloth and press it onto the soiled area. Allow this to set at room temperature for 30 minutes.
5. Remove the soaked cloth, then with a clean, damp cloth, use a rubbing motion for 60 seconds on the soiled area.
6. Dry the area with a clean, soft cloth.

## CLEANING LEATHER SEATS

**Note:** Follow the same procedure as cleaning leather seats for cleaning leather instrument panels and leather interior trim surfaces.

# Vehicle Care

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For routine cleaning, wipe the surface with a soft, damp cloth and a mild soap and water solution. Dry the area with a clean, soft cloth.

For cleaning and removing stains such as dye transfer, use Motorcraft Premium Leather and Vinyl Cleaner or a commercially available leather cleaning product for automotive interiors.

**Note:** Test any cleaner or stain remover on an inconspicuous area.

You should:

- Remove dust and loose dirt with a vacuum cleaner.
- Clean and treat spills and stains as soon as possible.

Do not use the following products as these may damage the leather:

- Oil and petroleum or silicone-based leather conditioners.
- Household cleaners.
- Alcohol solutions.
- Solvents or cleaners intended specifically for rubber, vinyl and plastics.

## REPAIRING MINOR PAINT DAMAGE

Authorized dealers have touch-up paint to match your vehicle's color. Your vehicle color code is printed on a sticker on the front, left-hand side door jamb. Take your color code to your authorized dealer to make sure you get the correct color.

Before repairing minor paint damage, use a cleaner such as Motorcraft Bug and Tar Remover to remove particles such as bird droppings, tree sap, insect deposits, tar spots, road salt and industrial fallout.

Always read the instructions before using cleaning products.

## CLEANING THE ALLOY WHEELS

**Note:** Do not apply a cleaning chemical to warm or hot wheel rims and covers.

**Note:** Some automatic car washes may cause damage to the finish on your wheel rims and covers.

**Note:** Industrial-strength or heavy-duty cleaners in combination with brush agitation to remove brake dust and dirt, could wear away the clear coat finish over a period time.

**Note:** Do not use hydrofluoric acid-based or high caustic-based wheel cleaners, steel wool, fuels or strong household detergents.

**Note:** If you intend parking your vehicle for an extended period after cleaning the wheels with a wheel cleaner, drive your vehicle for a few minutes before doing so. This will reduce the risk of increased corrosion of the brake discs.

Alloy wheels and wheel covers are coated with a clear coat paint finish. To maintain their condition we recommend that you:

- Clean the wheels weekly using Motorcraft Wheel and Tire Cleaner. Apply using manufacturer's instructions.
- Use a sponge to remove heavy deposits of dirt and brake dust accumulation.

# Vehicle Care

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- Rinse thoroughly with a strong stream of water when you have completed the cleaning process.
- To remove tar and grease, use Motorcraft Bug and Tar Remover.

## VEHICLE STORAGE

If you plan on storing your vehicle for 30 days or more, read the following maintenance recommendations to make sure your vehicle stays in good operating condition.

We engineer and test all motor vehicles and their components for reliable, regular driving. Under various conditions, long-term storage may lead to degraded engine performance or failure unless you use specific precautions to preserve engine components.

### General

- Store all vehicles in a dry, ventilated place.
- Protect from sunlight, if possible.
- If vehicles are stored outside, they require regular maintenance to protect against rust and damage.

### Body

- Wash your vehicle thoroughly to remove dirt, grease, oil, tar or mud from exterior surfaces, rear-wheel housing and the underside of front fenders.
- Periodically wash your vehicle if it is stored in exposed locations.
- Touch-up exposed or primed metal to prevent rust.
- Cover chrome and stainless steel parts with a thick coat of auto wax to prevent discoloration. Re-wax as necessary when you wash your vehicle.
- Lubricate all hood, door and luggage compartment hinges and latches with a light grade oil.

- Cover interior trim to prevent fading.
- Keep all rubber parts free from oil and solvents.

### Engine

- Change the engine oil and filter prior to storage because used engine oil contains contaminants which may cause engine damage.
- Start the engine every 15 days for a minimum of 15 minutes. Run at fast idle with the climate controls set to defrost until the engine reaches normal operating temperature.
- With your foot on the brake, shift through all the gears while the engine is running.
- We recommend that you change the engine oil before you use your vehicle again.

### Fuel system

- Fill the fuel tank with high-quality fuel until the first automatic shutoff of the fuel pump nozzle.



# Vehicle Care

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## Cooling system

- Protect against freezing temperatures.
- When removing your vehicle from storage, check coolant fluid level. Confirm that there are no cooling system leaks and that fluid is at the recommended level.

## Battery

- Check and recharge as necessary. Keep connections clean.
- If storing your vehicle for more than 30 days without recharging the battery, we recommend that you disconnect the battery cables to maintain battery charge for quick starting.

**Note:** *It is necessary to reset memory features if battery cables are disconnected.*

## Brakes

- Make sure the brakes and parking brake release fully.

## Tires

- Maintain recommended air pressure.

## Miscellaneous

- Make sure all linkages, cables, levers and pins under your vehicle are covered with grease to prevent rust.
- Move vehicles at least 25 ft (7.5 m) every 15 days to lubricate working parts and prevent corrosion.

## Removing Vehicle From Storage

When your vehicle is ready to come out of storage, do the following:

- Wash your vehicle to remove any dirt or grease film build-up on window surfaces.
- Check windshield wipers for any deterioration.
- Check under the hood for any foreign material that may have collected during storage such as mice or squirrel nests.
- Check the exhaust for any foreign material that may have collected during storage.
- Check tire pressures and set tire inflation per the Tire Label.

- Check brake pedal operation. Drive your vehicle 15 ft (4.5 m) back and forth to remove rust build-up.
- Check fluid levels (including coolant, oil and gas) to make sure there are no leaks, and fluids are at recommended levels.
- If you remove the battery, clean the battery cable ends and check for damage.

Contact an authorized dealer if you have any concerns or issues.

# Wheels and Tires

## GENERAL INFORMATION

Use only approved wheel and tire sizes, using other sizes could damage your vehicle. If you change the diameter of the tires from that fitted at the factory, the speedometer may not display the correct speed. Take your vehicle to an authorized Ford dealer to have the system reprogrammed. If you intend to change the size of the wheels from that fitted by the manufacturer, you can check the suitability with an authorized dealer.

Additional information related to the functionality and maintenance of your tires can be found later in this chapter. See **Tire Care** (page 298).

The Ford recommended tire inflation pressures can be found on the Tire Label, which is located on the B-pillar or the edge of the driver's door. This information can also be found on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door last post; next to the driver's seating position).

Ford strongly recommends maintaining these tire pressures at all times. Failure to follow the tire pressure recommendations can cause uneven treadwear patterns, reduced fuel economy, and adversely affect the way your vehicle handles.

**Note:** *Check and set the tire pressure at the ambient temperature in which you are intending to drive your vehicle and when the tires are cold.*

**Note:** *Check your tire pressures at least once per month.*

Set the pressure for your spare tire to the highest value given for your vehicle and tire size combination (if equipped).

## Notice to utility vehicle and truck owners

### WARNINGS



Utility vehicles have a significantly higher rollover rate than other types of vehicles. To reduce the risk of serious injury or death from a rollover or other crash you must avoid sharp turns and abrupt maneuvers, drive at safe speeds for the conditions, keep tires inflated to Ford recommended pressures, never overload or improperly load your vehicle, and make sure every passenger is properly restrained.



In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. All occupants must wear seat belts and children/infants must use appropriate restraints to minimize the risk of injury or ejection.



Do not become overconfident in the ability of four-wheel drive vehicles. Although a four-wheel drive vehicle may accelerate better than a two-wheel drive vehicle in low traction situations, it won't stop any faster than two-wheel drive vehicles. Always drive at a safe speed.

# Wheels and Tires



E145298

Utility vehicles and trucks handle differently than passenger cars in the various driving conditions that are encountered on streets, highways and off-road. Utility vehicles and trucks are not designed for cornering at speeds as high as passenger cars any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions.

Study your owner's manual and any supplements for specific information about equipment features, instructions for safe driving and additional precautions to reduce the risk of an accident or serious injury.

## Four-wheel drive system (If Equipped)

### WARNING



Do not become overconfident in the ability of four-wheel drive vehicles. Although a four-wheel drive vehicle may accelerate better than a two-wheel drive vehicle in low traction situations, it won't stop any faster than two-wheel drive vehicles. Always drive at a safe speed.

A vehicle equipped with four-wheel drive (when selected) has the ability to use all four wheels to power itself. This increases traction which may enable you to safely drive over terrain and road conditions that a conventional two-wheel drive vehicle cannot.

Power is supplied to all four wheels through a transfer case or power transfer unit. Four-wheel drive vehicles allow you to select different modes as necessary. For information on transfer case operation and shifting procedures, See **Four-Wheel Drive** (page 176). For information on transfer case maintenance, See **Maintenance** (page 264). You should become thoroughly familiar with this information before you operate your vehicle.

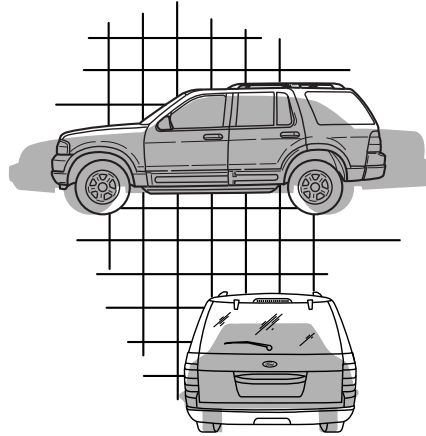
On some four-wheel drive vehicles, the initial shift from two-wheel to four-wheel drive while the vehicle is moving can cause a momentary clunk and ratcheting sound. These sounds are normal and are not cause for concern.

For four-wheel drive vehicles, a spare tire of a different size other than the tire provided should never be used. A dissimilar spare tire size (other than the spare tire provided) or major dissimilar tire sized between the front and rear axles could cause the four-wheel drive system to stop functioning and default to front-wheel drive. See **Using Four-Wheel Drive** (page 176).

# Wheels and Tires

## How your vehicle differs from other vehicles

Sport utility vehicles and trucks can differ from some other vehicles in a few noticeable ways. Your vehicle may be:



E145299

- Higher - to allow higher load carrying capacity and to allow it to travel over rough terrain without getting hung up or damaging underbody components.
- Shorter - to give it the capability to approach inclines and drive over the crest of a hill without getting hung up or damaging underbody components. All other things held equal, a shorter wheelbase may make your vehicle quicker to respond to steering inputs than a vehicle with a longer wheelbase.
- Narrower - to provide greater maneuverability in tight spaces, particularly in off-road use.

# Wheels and Tires

As a result of the above dimensional differences, Sport utility vehicles and trucks often will have a higher center of gravity and a greater difference in center of gravity between the loaded and unloaded condition. These differences that make your vehicle so versatile also make it handle differently than an ordinary passenger car.

## TIRE CARE

### Information About Uniform Tire Quality Grading



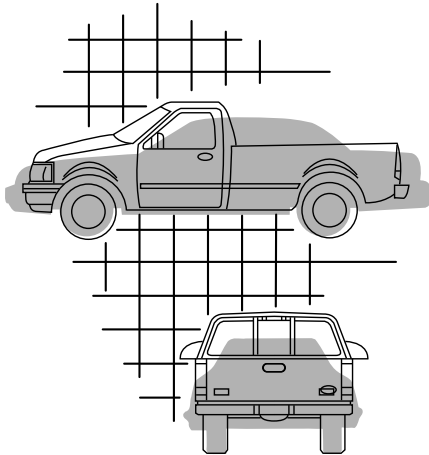
E142542

Tire Quality Grades apply to new pneumatic passenger car tires. The Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example: **Treadwear 200 Traction AA Temperature A.**

These Tire Quality Grades are determined by standards that the United States Department of Transportation has set.

Tire Quality Grades apply to new pneumatic passenger car tires. They do not apply to deep tread, winter-type snow tires, space-saver or temporary use spare tires, light truck or LT type tires, tires with nominal rim diameters of 10 to 12 inches or limited production tires as defined in Title 49 Code of Federal Regulations Part 575.104 (c)(2).

**U.S. Department of Transportation Tire quality grades:** The U.S. Department of Transportation requires Ford Motor Company to give you the following information about tire grades exactly as the government has written it.



E168583

# Wheels and Tires

## Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1 ½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

## Traction AA A B C

### WARNING



The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning or peak traction characteristics.

The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

## Temperature A B C

### WARNING



The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause

the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 139. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

## Glossary of Tire Terminology

**\*Tire label:** A label showing the original equipment tire sizes, recommended inflation pressure and the maximum weight the vehicle can carry.

**\*Tire Identification Number (TIN):** A number on the sidewall of each tire providing information about the tire brand and manufacturing plant, tire size and date of manufacture. Also referred to as DOT code.

**\*Inflation pressure:** A measure of the amount of air in a tire.

# Wheels and Tires

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**\*Standard load:** A class of P-metric or Metric tires designed to carry a maximum load at set pressure. For example: For P-Metric tires 35 psi (2.4 bar) or 36 psi (2.5 bar) depending on tire size and for Metric 36 psi (2.5 bar). Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.

**\*Extra load:** A class of P-metric or Metric tires designed to carry a heavier maximum load at 42 psi (2.9 bar). Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.

**\*kPa:** Kilopascal, a metric unit of air pressure.

**\*PSI:** Pounds per square inch, a standard unit of air pressure.

**\*Cold tire pressure:** The tire pressure when the vehicle has been stationary and out of direct sunlight for an hour or more and prior to the vehicle being driven for 1 mile (1.6 kilometers).

**\*Recommended inflation pressure:** The cold inflation pressure found on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door.

**B-pillar:** The structural member at the side of the vehicle behind the front door.

**\*Bead area of the tire:** Area of the tire next to the rim.

**\* Sidewall of the tire:** Area between the bead area and the tread.

**\*Tread area of the tire:** Area of the perimeter of the tire that contacts the road when mounted on the vehicle.

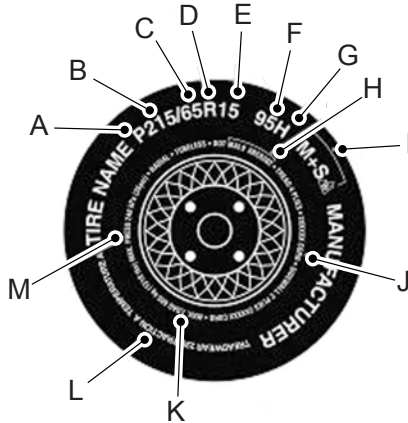
**\*Rim:** The metal support (wheel) for a tire or a tire and tube assembly upon which the tire beads are seated.

## Information Contained on the Tire Sidewall

Both United States and Canada Federal regulations require tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a U.S. DOT Tire Identification Number for safety standard certification and in case of a recall.

# Wheels and Tires

## Information on P Type Tires



E142543

P215/65R15 95H is an example of a tire size, load index and speed rating. The definitions of these items are listed below. (Note that the tire size, load index and speed rating for your vehicle may be different from this example.)

A. **P:** Indicates a tire, designated by the Tire and Rim Association, that may be used for service on cars, sport utility vehicles, minivans and light trucks. **Note:** If your tire size does not begin with a letter this may mean it is designated by either the European Tire and Rim Technical Organization or the Japan Tire Manufacturing Association.

B. **215:** Indicates the nominal width of the tire in millimeters from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

C. **65:** Indicates the aspect ratio which gives the tire's ratio of height to width.

D. **R:** Indicates a radial type tire.

E. **15:** Indicates the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

F. **95:** Indicates the tire's load index. It is an index that relates to how much weight a tire can carry. You may find this information in your owner's manual. If not, contact a local tire dealer.

**Note:** You may not find this information on all tires because it is not required by federal law.

G. **H:** Indicates the tire's speed rating. The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time under a standard condition of load and inflation pressure. The tires on your vehicle may operate at different conditions for load and inflation pressure. These speed ratings may need to be adjusted for the difference in conditions. The ratings range from 81 mph (130 km/h) to 186 mph (299 km/h). These ratings are listed in the following chart.

**Note:** You may not find this information on all tires because it is not required by federal law.



# Wheels and Tires

Letter rating	mph ( km/h)
M	81 (130)
N	87 (140)
Q	99 (159)
R	106 (171)
S	112 (180)
T	118 (190)
U	124 (200)
H	130 (210)
V	149 (240)

Letter rating	mph ( km/h)
W	168 (270)
Y	186 (299)

**Note:** For tires with a maximum speed capability over 149 mph (240 km/h), tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 186 mph (299 km/h), tire manufacturers always use the letters ZR.

**H. U.S. DOT Tire Identification Number:** This begins with the letters DOT and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code designating where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, the numbers 317 mean the 31st week of 1997. After 2000 the numbers go to four

digits. For example, 2501 means the 25th week of 2001. The numbers in between are identification codes used for traceability. This information is used to contact customers if a tire defect requires a recall.

I. **M+S or M/S:** Mud and Snow, or

**AT:** All Terrain, or

**AS:** All Season.

**J. Tire Ply Composition and Material Used:** Indicates the number of plies or the number of layers of rubber-coated fabric in the tire tread and sidewall. Tire manufacturers also must indicate the ply materials in the tire and the sidewall, which include steel, nylon, polyester, and others.

# Wheels and Tires

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**K. Maximum Load:** Indicates the maximum load in kilograms and pounds that can be carried by the tire (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door.

## **L. Treadwear, Traction and Temperature Grades:**

**\*Treadwear:** The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear 1½ times as well on the government course as a tire graded 100.

**\*Traction:** The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

**\*Temperature:** The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

**M. Maximum Inflation Pressure:** Indicates the tire manufacturers' maximum permissible pressure or the pressure at which the maximum load can be carried by the tire. This pressure is normally higher than the vehicle manufacturer's recommended cold inflation pressure which can be found on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to

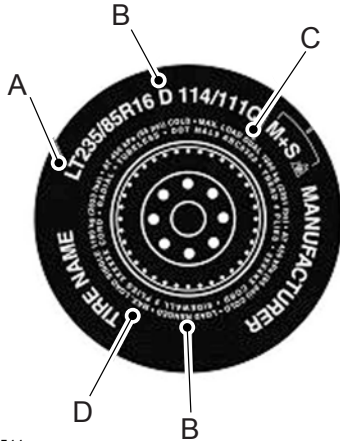
the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door. The cold inflation pressure should never be set lower than the recommended pressure on the vehicle label.

The tire suppliers may have additional markings, notes or warnings such as standard load or radial tubeless.

## **Additional Information Contained on the Tire Sidewall for LT Type Tires**

**Note:** *Tire Quality Grades do not apply to this type of tire.*

# Wheels and Tires



E142544

LT type tires have some additional information beyond those of P type tires. These differences are described below.

**A. LT:** Indicates a tire, designated by the Tire and Rim Association, that is intended for service on light trucks.

## B. Load Range and Load Inflation

**Limits:** Indicates the tire's load-carrying capabilities and its inflation limits.

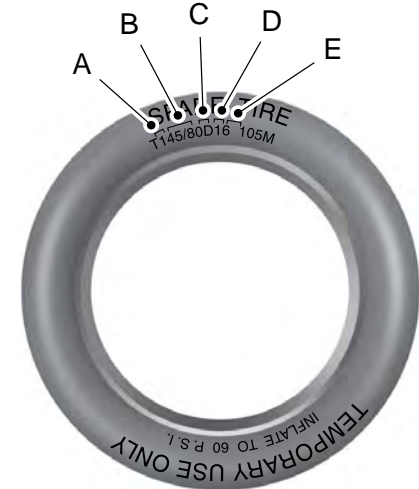
**C. Maximum Load Dual lb (kg) at psi (kPa) cold:** Indicates the maximum load and tire pressure when the tire is used as a dual; defined as four tires on the rear axle (a total of six or more tires on the vehicle).

**D. Maximum Load Single lb (kg) at psi (kPa) cold:** Indicates the maximum load and tire pressure when the tire is used as a single; defined as two tires (total) on the rear axle.

## Information on T Type Tires

T145/80D16 is an example of a tire size.

**Note:** *The temporary tire size for your vehicle may be different from this example. Tire Quality Grades do not apply to this type of tire.*



E142545

T type tires have some additional information beyond those of P type tires. These differences are described below:

# Wheels and Tires

**A. T:** Indicates a type of tire, designated by the Tire and Rim Association, that is intended for temporary service on cars, sport utility vehicles, minivans and light trucks.

**B. 145:** Indicates the nominal width of the tire in millimeters from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

**C. 80:** Indicates the aspect ratio which gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall.

**D. D:** Indicates a diagonal type tire.

**R:** Indicates a radial type tire.

**E. 16:** Indicates the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

## Location of the Tire Label

You will find a Tire Label containing tire inflation pressure by tire size and other important information located on the B-Pillar or the edge of the driver's door. See **Load Carrying** (page 212).

## Inflating Your Tires

Safe operation of your vehicle requires that your tires are properly inflated. Remember that a tire can lose up to half of its air pressure without appearing flat.

Every day before you drive, check your tires. If one looks lower than the others, use a tire gauge to check pressure of all tires and adjust if required.

At least once a month and before long trips, inspect each tire and check the tire pressure with a tire gauge (including spare, if equipped). Inflate all tires to the inflation pressure recommended by Ford Motor Company.

You are strongly urged to buy a reliable tire pressure gauge, as automatic service station gauges may be inaccurate. Ford recommends the use of a digital or dial-type tire pressure gauge rather than a stick-type tire pressure gauge.

Use the recommended cold inflation pressure for optimum tire performance and wear. Under-inflation or over-inflation may cause uneven treadwear patterns.

## WARNING



Under-inflation is the most common cause of tire failures and may result in severe tire cracking, tread separation or blowout, with unexpected loss of vehicle control and increased risk of injury. Under-inflation increases sidewall flexing and rolling resistance, resulting in heat buildup and internal damage to the tire. It also may result in unnecessary tire stress, irregular wear, loss of vehicle control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!

# Wheels and Tires

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Always inflate your tires to the Ford recommended inflation pressure even if it is less than the maximum inflation pressure information found on the tire. The Ford recommended tire inflation pressure is found on the Safety Compliance Certification Label or Tire Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door. Failure to follow the tire pressure recommendations can cause uneven treadwear patterns and adversely affect the way your vehicle handles.

**Note:** *Do not reduce tire pressure to change the ride characteristics of the vehicle. If you do not maintain the inflation pressure at the levels specified by Ford, your vehicle may experience a condition known as shimmy. Shimmy is a severe vibration and oscillation in the steering wheel after the vehicle travels over a bump or dip in the road that does not dampen out by itself. Shimmy may result from significant under-inflation of the tires, improper tires (load range, size, or type), or vehicle modifications such as lift-kits. In the event that your vehicle experiences shimmy, you should slowly reduce speed by either lifting off the accelerator pedal or lightly applying the brakes. The shimmy will cease as the vehicle speed decreases.*

**Maximum Inflation Pressure** is the tire manufacturer's maximum permissible pressure and the pressure at which the maximum load can be carried by the tire. This pressure is normally higher than the manufacturer's recommended cold inflation pressure which can be found on the Safety Compliance Certification

Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door. The cold inflation pressure should never be set lower than the recommended pressure on the Safety Compliance Certification Label or Tire Label.

When weather temperature changes occur, tire inflation pressures also change. A 10°F (6°C) temperature drop can cause a corresponding drop of 1 psi (7 kPa) in inflation pressure. Check your tire pressures frequently and adjust them to the proper pressure which can be found on the Safety Compliance Certification Label or Tire Label.

To check the pressure in your tire(s):

1. Make sure the tires are cool, meaning they are not hot from driving even a mile.

# Wheels and Tires

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**Note:** *If you are checking tire pressure when the tire is hot, (for example, driven more than 1 mile [1.6 kilometers]), never bleed or reduce air pressure. The tires are hot from driving and it is normal for pressures to increase above recommended cold pressures. A hot tire at or below recommended cold inflation pressure could be significantly under-inflated.*

**Note:** *If you have to drive a distance to get air for your tire(s), check and record the tire pressure first and add the appropriate air pressure when you get to the pump. It is normal for tires to heat up and the air pressure inside to go up as you drive.*

2. Remove the cap from the valve on one tire, then firmly press the tire gauge onto the valve and measure the pressure.

3. Add enough air to reach the recommended air pressure.

**Note:** *If you overfill the tire, release air by pressing on the metal stem in the center of the valve. Then recheck the pressure with your tire gauge.*

4. Replace the valve cap.

5. Repeat this procedure for each tire, including the spare.

**Note:** *Some spare tires operate at a higher inflation pressure than the other tires. For T type mini-spare tires, see the Dissimilar spare wheel and tire assembly information for a description. Store and maintain at 60 psi (4.15 bar). For full-size and dissimilar spare tires, see the Dissimilar spare wheel and tire assembly information for a description. Store and maintain at the higher of the front and rear inflation pressure as shown on the Safety Compliance Certification Label or Tire Label.*

6. Visually inspect the tires to make sure there are no nails or other objects embedded that could poke a hole in the tire and cause an air leak.

7. Check the sidewalls to make sure there are no gouges, cuts or bulges.

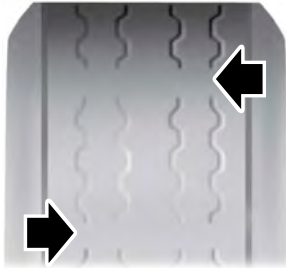
## Inspecting Your Tires and Wheel Valve Stems

Periodically inspect the tire treads for uneven or excessive wear and remove objects such as stones, nails or glass that may be wedged in the tread grooves. Check the tire and valve stems for holes, cracks, or cuts that may permit air leakage and repair or replace the tire and replace the valve stem. Inspect the tire sidewalls for cracking, cuts, bruises and other signs of damage or excessive wear. If internal damage to the tire is suspected, have the tire demounted and inspected in case it needs to be repaired or replaced. For your safety, tires that are damaged or show signs of excessive wear should not be used because they are more likely to blow out or fail.

# Wheels and Tires

Improper or inadequate vehicle maintenance can cause tires to wear abnormally. Inspect all your tires, including the spare, frequently, and replace them if one or more of the following conditions exist:

## Tire Wear



E142546

When the tread is worn down to one sixteenth of an inch (2 millimeters), tires must be replaced to help prevent your vehicle from skidding and hydroplaning. Built-in treadwear indicators, or wear bars, which look like narrow strips of smooth rubber across the tread will appear on the tire when the tread is worn down to one sixteenth of an inch (2 millimeters).

When the tire tread wears down to the same height as these wear bars, the tire is worn out and must be replaced.

## Damage

Periodically inspect the tire treads and sidewalls for damage (such as bulges in the tread or sidewalls, cracks in the tread groove and separation in the tread or sidewall). If damage is observed or suspected have the tire inspected by a tire professional. Tires can be damaged during off-road use, so inspection after off-road use is also recommended.

## Age

### WARNING



Tires degrade over time depending on many factors such as weather, storage conditions, and conditions of use (load, speed, inflation pressure) the tires experience throughout their lives.

In general, tires should be replaced after six years regardless of tread wear. However, heat caused by hot climates or frequent high loading conditions can accelerate the aging process and may require tires to be replaced more frequently.

You should replace your spare tire when you replace the road tires or after six years due to aging even if it has not been used.

# Wheels and Tires

## U.S. DOT Tire Identification Number

Both United States and Canada Federal regulations require tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a U.S. DOT Tire Identification Number for safety standard certification and in case of a recall.

This begins with the letters DOT and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code designating where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, the numbers 317 mean the 31st week of 1997. After 2000 the numbers go to four digits. For example, 2501 means the 25th week of 2001. The numbers in between are identification codes used for traceability. This information is used to contact customers if a tire defect requires a recall.

## Tire Replacement Requirements

Your vehicle is equipped with tires designed to provide a safe ride and handling capability.

### WARNINGS



Only use replacement tires and wheels that are the same size, load index, speed rating and type (such as P-metric versus LT-metric or all-season versus all-terrain) as those originally provided by Ford. The recommended tire and wheel size may be found on either the Safety Compliance Certification Label or the Tire Label. If this information is not found on these labels then you should contact your authorized dealer as soon as possible. Use of any tire or wheel not recommended by Ford can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death. Additionally the use of

### WARNINGS

non-recommended tires and wheels could cause steering, suspension, axle, transfer case or power transfer unit failure. If you have questions regarding tire replacement, contact your authorized dealer as soon as possible.



To reduce the risk of serious injury, when mounting replacement tires and wheels, you should not exceed the maximum pressure indicated on the sidewall of the tire to set the beads without additional precautions listed below. If the beads do not seat at the maximum pressure indicated, re-lubricate and try again.

When inflating the tire for mounting pressures up to 20 psi (1.38 bar) greater than the maximum pressure on the tire sidewall, the following precautions must be taken to protect the person mounting the tire:

1. Make sure that you have the correct tire and wheel size.



# Wheels and Tires

## WARNINGS

2. Lubricate the tire bead and wheel bead seat area again.
3. Stand at a minimum of 12 ft (3.6 m) away from the wheel and tire assembly.
4. Use both eye and ear protection.

For a mounting pressure more than 20 psi (1.38 bar) greater than the maximum pressure, a Ford dealer or other tire service professional should do the mounting.

Always inflate steel carcass tires with a remote air fill with the person inflating standing at a minimum of 12 ft (3.6 m) away from the wheel and tire assembly.

**Important:** Remember to replace the wheel valve stems when the road tires are replaced on your vehicle.

The two front tires or two rear tires should generally be replaced as a pair.

The tire pressure sensors mounted in the wheels are not designed to be used in aftermarket wheels.

The use of wheels or tires not recommended by Ford Motor Company may affect the operation of your tire pressure monitoring system.

If the tire pressure monitoring system indicator is flashing, the system is malfunctioning. Your replacement tire might be incompatible with your tire pressure monitoring system, or some component of the system may be damaged.

## Safety Practices

### WARNINGS



If your vehicle is stuck in snow, mud, or sand, do not rapidly spin the tires; spinning the tires can tear the tire and cause an explosion. A tire can explode in as little as three to five seconds.

## WARNINGS



Do not spin the wheels at over 35 mph (56 km/h). The tires may fail and injure a passenger or bystander.

## Driving habits have a great deal to do with your tire mileage and safety.

- \*Observe posted speed limits
- \*Avoid fast starts, stops and turns
- \*Avoid potholes and objects on the road
- \*Do not run over curbs or hit the tire against a curb when parking

## Highway Hazards

No matter how carefully you drive there's always the possibility that you may eventually have a flat tire on the highway. Drive slowly to the closest safe area out of traffic. This may further damage the flat tire, but your safety is more important.

# Wheels and Tires

If you feel a sudden vibration or ride disturbance while driving, or you suspect your tire or vehicle has been damaged, immediately reduce your speed. Drive with caution until you can safely pull off the road. Stop and inspect the tires for damage. If a tire is under-inflated or damaged, deflate it, remove wheel and replace it with your spare tire and wheel. If you cannot detect a cause, have the vehicle towed to the nearest repair facility or tire dealer to have the vehicle inspected.

## Tire and Wheel Alignment

A bad jolt from hitting a curb or pothole can cause the front end of your vehicle to become misaligned or cause damage to your tires. If your vehicle seems to pull to one side when you're driving, the wheels may be out of alignment. Have an authorized dealer check the wheel alignment periodically.

Wheel misalignment in the front or the rear can cause uneven and rapid treadwear of your tires and should be corrected by an authorized dealer. Front-wheel drive vehicles and those with an independent rear suspension may require alignment of all four wheels.

The tires should also be balanced periodically. An unbalanced tire and wheel assembly may result in irregular tire wear.

## Tire Rotation

### WARNING



If the tire label shows different tire pressures for the front and rear tires and the vehicle is equipped with a tire pressure monitoring system, then the settings for the system sensors need to be updated. Always perform the system reset procedure after tire rotation. If the system is not reset, it may not provide a low tire pressure warning when necessary. See the tire pressure monitoring system reset procedure in this chapter.

**Note:** If your tires show uneven wear ask an authorized dealer to check for and correct any wheel misalignment, tire imbalance or mechanical problem involved before tire rotation.

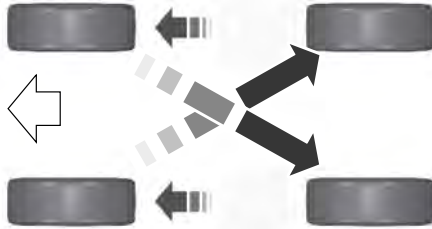
**Note:** Your vehicle may be equipped with a dissimilar spare wheel and tire assembly. A dissimilar spare wheel and tire assembly is defined as a spare wheel and tire assembly that is different in brand, size or appearance from the road tires and wheels. If you have a dissimilar spare wheel and tire assembly it is intended for temporary use only and should not be used in a tire rotation.

**Note:** After having your tires rotated, inflation pressure must be checked and adjusted to the vehicle requirements.

Rotating your tires at the recommended interval (as indicated in the Scheduled Maintenance chapter) will help your tires wear more evenly, providing better tire performance and longer tire life.

Rear-wheel drive vehicles and four-wheel drive vehicles (front tires at left of diagram)

# Wheels and Tires



E142548

Sometimes irregular tire wear can be corrected by rotating the tires.

## USING SNOW CHAINS

### WARNING



Snow tires must be the same size, load index, speed rating as those originally provided by Ford. Use of any tire or wheel not recommended by Ford can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death. Additionally, the use of non-recommended tires and wheels could cause steering, suspension, axle, transfer case or power transfer unit failure.

**Note:** *The suspension insulation and bumpers will help prevent vehicle damage. Do not remove these components from your vehicle when using snow tires and chains.*

The tires on your vehicle have all-weather treads to provide traction in rain and snow. However, in some climates, you may need to use snow tires and cables. If you need to use cables, it is recommended that steel wheels (of the same size and specifications) be used, as cables may chip aluminum wheels.

Follow these guidelines when using snow tires and chains:

- If possible, avoid fully loading your vehicle.
- Use only cable type chains or chains offered by Ford/Lincoln as an accessory or equivalent. Other conventional link type chains may contact and cause damage to the vehicle's wheel house and/or body.
- Do not install chains on the front tires as this may interfere with suspension components.
- Only certain snow cables or chains have been approved by Ford/Lincoln as safe for use on your vehicle with the following tires: 265/70R17 and 275/65R18.

# Wheels and Tires

- You should install snow cables or chains that have been rated as SAE Class S.
- Install chains securely, verifying that the chains do not touch any wiring, brake lines, or fuel lines.
- Do not exceed 31 mph (50 km/h) or less if recommended by the chain manufacturer while using snow chains.
- Drive cautiously. If you hear the chains rub or bang against your vehicle, stop and retighten the chains. If this does not work, remove the chains to prevent damage to your vehicle.
- Remove the tire chains when they are no longer needed. Do not use tire chains on dry roads.
- Purchase chains or cables from a manufacturer that clearly labels body to tire dimension restrictions. The snow chains or cables must be mounted in pairs on the rear tires only.

If you have any questions regarding snow chains or cables, please contact your Ford/Lincoln authorized dealer.

## TIRE PRESSURE MONITORING SYSTEM

### WARNING



The tire pressure monitoring system is not a substitute for manually checking the tire pressure. The tire pressure should be checked periodically (at least monthly) using a tire pressure gauge. Failure to properly maintain your tire pressure could increase the risk of tire failure, loss of control, vehicle rollover and personal injury.



Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a Tire Pressure Monitoring System (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

# Wheels and Tires

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

The tire pressure monitoring system complies with part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This device complies with part 15 of the FCC Rules and with Licence exempt RSS Standards of Industry Canada. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

## Changing Tires With a Tire Pressure Monitoring System



E142549

**Note:** Each road tire is equipped with a tire pressure sensor located inside the wheel and tire assembly cavity. The pressure sensor is attached to the valve stem. The pressure sensor is covered by the tire and is not visible unless the tire is removed. Take care when changing the tire to avoid damaging the sensor.

You should always have your tires serviced by an authorized dealer.

# Wheels and Tires

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Check the tire pressure periodically (at least monthly) using an accurate tire gauge. See [Inflating Your Tires](#) in this chapter.

## **Understanding Your Tire Pressure Monitoring System**

The tire pressure monitoring system measures pressure in your four road tires and sends the tire pressure readings to your vehicle. The low tire pressure warning light will turn on if the tire pressure is significantly low. Once the light is illuminated, your tires are under-inflated and need to be inflated to the manufacturer's recommended tire pressure. Even if the light turns on and a short time later turns off, your tire pressure still needs to be checked.

## **When Your Temporary Spare Tire is Installed**

When one of your road tires needs to be replaced with the temporary spare, the system will continue to identify an issue to remind you that the damaged road wheel and tire assembly needs to be repaired and put back on your vehicle.

To restore the full function of the tire pressure monitoring system, have the damaged road wheel and tire assembly repaired and remounted on your vehicle.

## **When You Believe Your System is Not Operating Properly**

The main function of the tire pressure monitoring system is to warn you when your tires need air. It can also warn you in the event the system is no longer capable of functioning as intended. See the following chart for information concerning your tire pressure monitoring system:

# Wheels and Tires

Low tire pressure warning light	Possible cause	Customer action required
Solid warning light	Tire(s) under-inflated	Make sure tires are at the proper pressure. See Inflating your tires in this chapter. After inflating your tires to the manufacturer's recommended pressure as shown on the Tire Label (located on the edge of driver's door or the B-Pillar), the vehicle must be driven for at least two minutes over 20 mph (32 km/h) before the light turns off.
	Spare tire in use	Repair the damaged road wheel and tire assembly and reinstall it on the vehicle to restore system function. For a description on how the system functions, see <b>When your temporary spare tire is installed</b> in this section.
	Tire pressure monitoring system malfunction	If the tires are properly inflated and the spare tire is not in use but the light remains on, contact your authorized dealer as soon as possible.

# Wheels and Tires

Low tire pressure warning light	Possible cause	Customer action required
	Tire rotation without sensor training	On vehicles with different front and rear tire pressures, the system must be retrained following every tire rotation. See <b>Tire Care</b> (page 298).
Flashing warning light	Spare tire in use	Repair the damaged road wheel and tire assembly and reinstall it on the vehicle to restore system function. For a description on how the system functions, see <b>When your temporary spare tire is installed</b> in this section.
	Tire pressure monitoring system malfunction	If the tires are properly inflated and the spare tire is not in use but the light remains on, contact your authorized dealer as soon as possible.

## When Inflating Your Tires

When putting air into your tires (such as at a gas station or in your garage), the tire pressure monitoring system may not respond immediately to the air added to your tires.

It may take up to two minutes of driving over 20 mph (32 km/h) for the light to turn off after you have filled your tires to the recommended inflation pressure.

## How Temperature Affects Your Tire Pressure

The tire pressure monitoring system monitors tire pressure in each pneumatic tire. While driving in a normal manner, a typical passenger tire inflation pressure may increase about 2 to 4 psi (14 to 28 kPa) from a cold start situation. If the vehicle is stationary overnight with the outside temperature significantly lower than the daytime temperature, the tire pressure may decrease about 3 psi (21 kPa) for a drop of

30°F (17°C) in ambient temperature. This lower pressure value may be detected by the tire pressure monitoring system as being significantly lower than the recommended inflation pressure and activate the system warning light for low tire pressure.



# Wheels and Tires

If the low tire pressure warning light is on, visually check each tire to verify that no tire is flat. If one or more tires are flat, repair as necessary. Check the air pressure in the road tires. If any tire is under-inflated, carefully drive the vehicle to the nearest location where air can be added to the tires. Inflate all the tires to the recommended inflation pressure.

## Tire Pressure Monitoring System Reset Procedure

### WARNING



To determine the required pressure(s) for your vehicle, see the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-Pillar or the edge of the driver's door.

**Note:** You need to perform the tire pressure monitoring system reset procedure after each tire rotation on vehicles that require different recommended tire pressures in the front tires as compared to the rear tires.

## Overview

To provide the vehicle's load carrying capability, some vehicles require different recommended tire pressures in the front tires as compared to the rear tires. The tire pressure monitoring system equipped on these vehicles is designed to illuminate the low tire pressure warning light at two different pressures; one for the front tires and one for the rear tires.

Since tires need to be rotated to provide consistent performance and maximum tire life, the tire pressure monitoring system needs to know when the tires are rotated to determine which set of tires are on the front and which are on the rear. With this information, the system can detect and properly warn of low tire pressures.

System reset tips:

- To reduce the chances of interference from another vehicle, perform the system reset procedure at least three feet (one meter) away from another Ford Motor Company vehicle undergoing the system reset procedure at the same time.
- Do not wait more than two minutes between resetting each tire sensor or the system will time-out and the entire procedure will have to be repeated on all four wheels.
- A double horn will sound indicating the need to repeat the procedure.

## Performing the System Reset Procedure

Read the entire procedure before attempting.

1. Drive the vehicle above 20 mph (32 km/h) for at least two minutes, then park in a safe location where you can easily get to all four tires and have access to an air pump.
2. Place the ignition in the off position and keep the key in the ignition.
3. Cycle the ignition to the on position with the engine off.

## Wheels and Tires

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4. Turn the hazard flashers on then off three times. You must accomplish this within 10 seconds. If the reset mode has been entered successfully, the horn will sound once, the system indicator will flash and a message is shown in the information display. If this does not occur, please try again starting at Step 2. If after repeated attempts to enter the reset mode, the horn does not sound, the system indicator does not flash and no message is shown in the information display, seek service from your authorized dealer.
5. Train the tire pressure monitoring system sensors in the tires using the following system reset sequence starting with the left front tire in the following clockwise order: Left front (driver's side front tire), Right front (passenger's side front tire), Right rear (passenger's side rear tire), Left rear (driver's side rear tire).
6. Remove the valve cap from the valve stem on the left front tire. Decrease the air pressure until the horn sounds. **Note:** The single horn chirp confirms that the sensor identification code has been learned by the module for this position. If a double horn is heard, the reset procedure was unsuccessful, and you must repeat it.
7. Remove the valve cap from the valve stem on the right front tire. Decrease the air pressure until the horn sounds.
8. Remove the valve cap from the valve stem on the right rear tire. Decrease the air pressure until the horn sounds.
9. Remove the valve cap from the valve stem on the left rear tire. Decrease the air pressure until the horn sounds. Training is complete after the horn sounds for the last tire trained (driver's side rear tire), the system indicator stops flashing, and a message is shown in the information display.
10. Turn the ignition off. If two short horn beeps are heard, the reset procedure was unsuccessful and you must repeat it. If after repeating the procedure and two short beeps are heard when the ignition is turned to off, seek assistance from your authorized dealer.
11. Set all four tires to the recommended air pressure as indicated on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position) or Tire Label located on the B-Pillar or the edge of the driver's door.

# Wheels and Tires

## CHANGING A ROAD WHEEL

### WARNINGS



The use of tire sealant may damage your tire pressure monitoring system and should only be used in roadside emergencies. If you must use a sealant, the Ford Tire Mobility Kit sealant should be used. The tire pressure monitoring system sensor and valve stem on the wheel must be replaced by an authorized dealer after use of the sealant.



If the tire pressure monitor sensor becomes damaged, it will no longer function. See **Tire Pressure Monitoring System** (page 313).

**Note:** *The tire pressure monitoring system indicator light will illuminate when the spare tire is in use. To restore the full function of the monitoring system, all road wheels equipped with tire pressure monitoring sensors must be mounted on this vehicle.*

If you get a flat tire while driving, do not apply the brake heavily. Instead, gradually decrease your speed. Hold the steering wheel firmly and slowly move to a safe place on the side of the road.

Have a flat serviced by an authorized dealer in order to prevent damage to the system sensors. See **Tire Pressure Monitoring System** (page 313). Replace the spare tire with a road tire as soon as possible. During repairing or replacing of the flat tire, have the authorized dealer inspect the system sensor for damage.

### Dissimilar Spare Wheel and Tire Assembly Information

#### WARNING



Failure to follow these guidelines could result in an increased risk of loss of vehicle control, injury or death.

If you have a dissimilar spare wheel and tire, then it is intended for temporary use only. This means that if you need to use it, you should replace it as soon as possible with a road wheel and tire assembly that is the same size and type as the road tires and wheels that were originally provided by Ford. If the dissimilar spare tire or wheel is damaged, it should be replaced rather than repaired.

A dissimilar spare wheel and tire assembly is defined as a spare wheel and tire assembly that is different in brand, size or appearance from the road tires and wheels and can be one of three types:

- 1. T-type mini-spare:** This spare tire begins with the letter T for tire size and may have Temporary Use Only molded in the sidewall.
- 2. Full-size dissimilar spare with label on wheel:** This spare tire has a label on the wheel that states: THIS WHEEL AND TIRE ASSEMBLY FOR TEMPORARY USE ONLY

# Wheels and Tires

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When driving with one of the dissimilar spare tires listed above, do not:

- Exceed 50 mph (80 km/h).
- Load the vehicle beyond maximum vehicle load rating listed on the Safety Compliance Label.
- Tow a trailer.
- Use snow chains on the end of the vehicle with the dissimilar spare tire.
- Use more than one dissimilar spare tire at a time.
- Use commercial car washing equipment.
- Try to repair the dissimilar spare tire.

Use of one of the dissimilar spare tires listed above at any one wheel location can lead to impairment of the following:

- Handling, stability and braking performance.
- Comfort and noise.
- Ground clearance and parking at curbs.

- Winter weather driving capability.
- Wet weather driving capability.
- All-wheel driving capability.

### 3. Full-size dissimilar spare without label on wheel

When driving with the full-size dissimilar spare wheel and tire assembly, do not:

- Exceed 70 mph (113 km/h).
- Use more than one dissimilar spare wheel and tire assembly at a time.
- Use commercial car washing equipment.
- Use snow chains on the end of the vehicle with the dissimilar spare wheel and tire assembly.

The usage of a full-size dissimilar spare wheel and tire assembly can lead to impairment of the following:

- Handling, stability and braking performance.
- Comfort and noise.

- Ground clearance and parking at curbs.
- Winter weather driving capability.
- Wet weather driving capability.
- All-wheel driving capability.

When driving with the full-size dissimilar spare wheel and tire assembly additional caution should be given to:

- Towing a trailer.
- Driving vehicles equipped with a camper body.
- Driving vehicles with a load on the cargo rack.

Drive cautiously when using a full-size dissimilar spare wheel and tire assembly and seek service as soon as possible.

### Location of the Spare Tire and Tools


The spare tire is located under the vehicle, just forward of the rear bumper. The jack, jack handle and lug wrench are located in the following locations:


# Wheels and Tires


Item	Location
Spare tire	Under the vehicle, just forward of the rear bumper
Jack tools	Under the access panel located in the floor compartment behind the rear seat

## Tire Change Procedure


### WARNINGS


 When one of the front wheels is off the ground, the transmission alone will not prevent the vehicle from moving or slipping off the jack.

 To help prevent the vehicle from moving when you change a tire, be sure to place the transmission in park (P), set the parking brake and block (in both directions) the wheel that is diagonally opposite (other side and end of the vehicle) to the tire being changed.


 Never get underneath a vehicle that is supported only by a jack. If the vehicle slips off the jack, you or someone else could be seriously injured.


### WARNINGS

 Do not attempt to change a tire on the side of the vehicle close to moving traffic. Pull far enough off the road to avoid the danger of being hit when operating the jack or changing the wheel.

 Always use the jack provided as original equipment with your vehicle. If using a jack other than the one provided as original equipment with your vehicle, make sure the jack capacity is adequate for the vehicle weight, including any vehicle cargo or modifications.

### WARNINGS

 Disable the power running boards before jacking, lifting, or placing any object under the vehicle. Never place your hand between the power running board and the vehicle as extended power running boards will retract when the doors are closed. Failure to follow these instructions may result in personal injury.

 Failure to follow these instructions when using the spare tire carrier could cause loss of the wheel and tire and lead to personal injury: Only use the spare tire carrier to stow the tire and wheel combination specified on the Tire Label or Safety Compliance Certification Label on the B-Pillar or the edge of the driver door. Other tire and wheel combinations could cause the carrier to fail if it does not fit securely or is too

# Wheels and Tires

## WARNINGS

heavy. Do not use impact tools or power tools operating over 200 RPM, which may cause winch malfunction and prevent a secure fit. Override the winch at least three times (there will be an audible click each time) to ensure a tight secure fit of the wheel and tire.

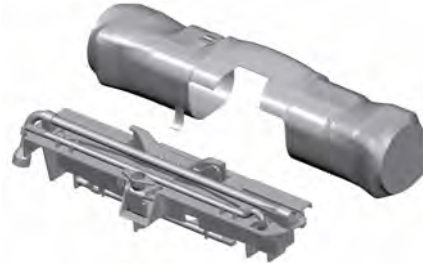
**Note:** *Passengers should not remain in the vehicle when the vehicle is being jacked.*

Park on a level surface, activate the hazard flashers and set the parking brake. Then, place the transmission in park (P) and turn the engine off.

## Removing the Jack and Tools

**Note:** *Pay close attention to the orientation of the bag, because it will have to be reinstalled after changing the tire.*

1. Open the liftgate, then locate the access panel on the floor behind the third row seat. Unlatch and remove the panel.



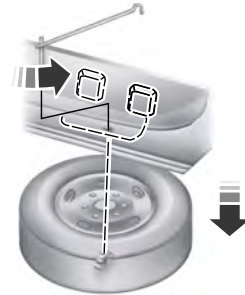
E208640

2. Remove the jack and tools assembly tray from the compartment by turning the wing-nut counterclockwise. Remove the bag from the jack and tools assembly tray by loosening the strap.
3. Unsnap the wheel lug nut wrench, jack extension and handle from the plastic tray.
4. Remove the hack from the tray assembly.

## Removing the Spare Tire

1. Remove the jack handle and winch extension from the tray and assemble them.

2. Open the spare tire winch access plug at the bottom of the compartment for the jack and tools tray.
3. Insert the winch extension tool assembly through the access hole in the floor and engage the winch.



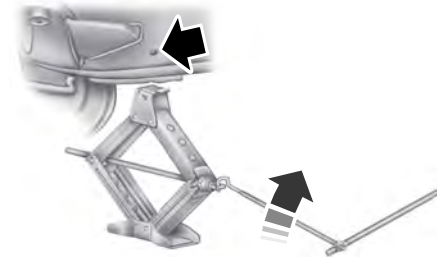
E208655

4. To remove the spare tire, turn the handle counterclockwise until the tire is lowered to the ground and the cable is slightly slack.
5. Slide the retainer through the center of the spare tire wheel and remove the spare tire.

# Wheels and Tires

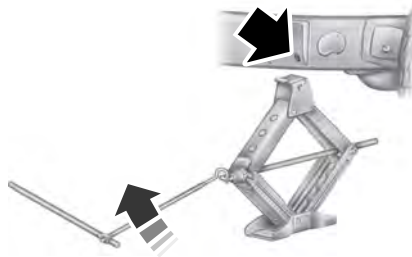
## Jacking the Vehicle

**Note:** Jack at the specified locations to avoid damaging your vehicle.



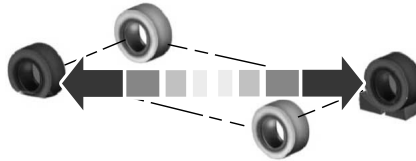
E208656

Front jacking point



E208657

Rear jacking point



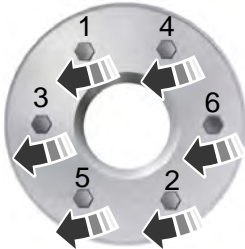
E175447

1. With the vehicle on level ground, block both sides of the wheel diagonally opposite (other side and end of the vehicle) to the wheel being changed. Do not jack the vehicle on a hill or incline.
2. Obtain the spare tire and jack tools from their storage locations.
3. Use the tip of the jack handle to remove any wheel trim.
4. Loosen each wheel lug nut one-half turn counterclockwise but do not remove them until the wheel is raised off the ground.
5. Position the jack according to the jack locator arrows found on the frame and turn the jack handle and extension tool assembly clockwise.
6. Raise the vehicle to provide sufficient ground clearance when installing the spare tire, about 1/4 inch (6 millimeters).
7. Remove the lug nuts with the lug wrench.

# Wheels and Tires

## Installing the Spare Tire

1. Replace the flat tire with the spare tire, making sure the valve stem is facing outward.
2. Reinstall the lug nuts until the wheel is snug against the hub. Do not fully tighten the lug nuts until the wheel has been lowered.
3. Lower the wheel by turning the jack handle counterclockwise.



E166719

4. Remove the jack and fully tighten the lug nuts in the order shown. See **Technical Specifications** (page 326).

## Stowing the Flat or Spare Tire

1. Lay the tire on the ground, near the rear of the vehicle, with the valve stem side facing up.
2. Slide the wheel partially under the vehicle and install the retainer through the wheel center. If equipped, you may have to remove the wheel center cap prior to pushing the retainer through the center of the wheel. To remove the center cap, press it off with the jack tool from the inner side of the wheel. Pull on the cable to align the components at the end of the cable.
3. Assemble the jack handle and winch extension, then insert the winch extension through the access hole behind the third row seat and engage the winch.

4. Turn the jack handle clockwise until the tire is raised to its stowed position underneath the vehicle. The wrench will become harder to turn and the spare tire winch will ratchet or slip when the tire is raised to maximum tightness. A clicking sound will be heard from the winch indicating that the tire is properly stowed.
5. Disassembly the jack tool and winch extension and snap them back into the tool tray.
6. Reinstall the jack bag properly around the jack and tool assembly tray, making sure the strap is fastened.
7. Close the access hole with the rubber plug.
8. Reinstall the tray into the vehicle and secure it with the wing nut.




# Wheels and Tires

## TECHNICAL SPECIFICATIONS

### Wheel Lug Nut Torque Specifications

#### WARNING

 When a wheel is installed, always remove any corrosion, dirt or foreign materials present on the mounting surfaces of the wheel or the surface of the wheel hub, brake drum or brake disc that contacts the wheel. Make sure that any fasteners that attach the rotor to the hub are secured so they do not interfere with the mounting surfaces of the wheel. Installing wheels without correct metal-to-metal contact at the wheel mounting surfaces can cause the wheel nuts to loosen and the wheel to come off while your vehicle is in motion, resulting in loss of control.

Bolt size	lb.ft (Nm)
M14 x 1.5	150 lb.ft (204 Nm)

Torque specifications are for nut and bolt threads free of dirt and rust. Use only Ford recommended replacement fasteners.

Retighten the lug nuts to the specified torque within 100 miles (160 kilometers) after any wheel disturbance (such as tire rotation, changing a flat tire, wheel removal).

# Wheels and Tires

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E145950

## A Wheel pilot bore

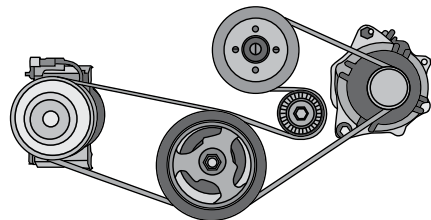
Inspect the wheel pilot hole and mounting surface prior to installation. Remove any visible corrosion or loose particles.

# Capacities and Specifications

## ENGINE SPECIFICATIONS

Engine	3.5L Ecoboost
Cubic inches	214
Firing order	1-4-2-5-3-6
Ignition system	Coil on plug
Compression ratio	10.0:1
Spark plug gap	0.030 in (0.75 mm) - 0.033 in (0.85 mm)

## Drivebelt Routing



E167467

## Capacities and Specifications

### MOTORCRAFT PARTS

Component	Part Number
Air filter element	FA-1883
Oil filter	FL-500-S
Battery	BXT-65-750
Spark plugs	SP-534
Windshield wiper blade	WW-2234
Rear window wiper blade	WW-1612
Transmission filter	BL3Z-7A098-A

We recommend Motorcraft replacement parts available at your Ford dealer or at [fordparts.com](http://fordparts.com) for scheduled maintenance. These parts meet or exceed Ford Motor Company's specifications and are engineered for your vehicle. Use of other parts may impact vehicle performance, emissions and durability. Your warranty may be void for any damage related to use of other parts.

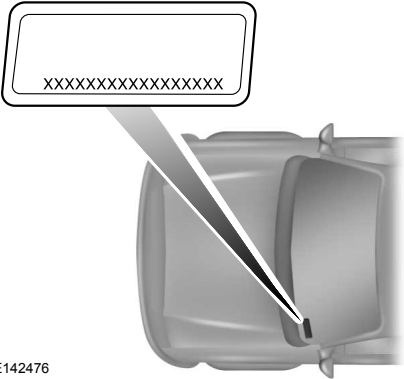
If a Motorcraft oil filter is not available, use an oil filter that meets industry performance specification SAE/USCAR-36.

For spark plug replacement, contact an authorized dealer. Replace the spark plugs at the appropriate intervals. See **Scheduled Maintenance** (page 353).

# Capacities and Specifications

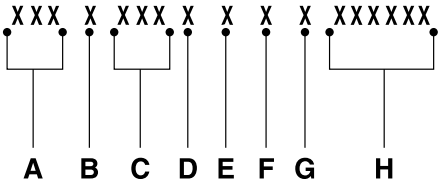
## VEHICLE IDENTIFICATION NUMBER

The vehicle identification number is located on the left-hand side of the instrument panel.



Please note that in the graphic, XXXX is representative of your vehicle identification number.

The Vehicle Identification Number contains the following information:



E142477

- A World manufacturer identifier
- B Brake system, Gross Vehicle Weight Rating, Restraint Devices and their locations
- C Make, vehicle line, series, body type
- D Engine type
- E Check digit
- F Model year
- G Assembly plant
- H Production sequence number

## VEHICLE CERTIFICATION LABEL

MFD. BY FORD MOTOR CO.			
DATE: XX/XX	GVWR: XXXX KG (XXXX LB)		
FRONT GAWR: XXXX KG (XXXX LB)	WITH REAR GAWR: XXXX KG (XXXX LB)		
XXXXXX	WITH TRES XXXX		
XXXXXX	RIMS XXXX		
AT XXXX kPa/ XXX PSI COLD	AT XXXX kPa/ XXX PSI COLD		
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.			
VIN: XXXXXXXXXXXXXXXXX		XXXXX	
TYPE: XXXX		XXXXX	
EXT PNT: XX	XXXXXX	RC: XX	DSO: XXXX
WB	INT TR	TP/PS	TR
XXX	XX	XXX X	XX X
XXXXXXXXXXXXXX		XXX	XXXX-XXXXXX-XX

E167469

The National Highway Traffic Safety Administration Regulations require that a Safety Compliance Certification Label be affixed to a vehicle and prescribe where the Safety Compliance Certification Label may be located. The Safety Compliance Certification Label shall be affixed to either the door hinge pillar, the door latch post, or the edge of the door near the door latch, next to the driver's seating position.



# Capacities and Specifications

## CAPACITIES AND SPECIFICATIONS - 3.5L ECOBOOST™

### Capacities

#### WARNING



The air conditioning refrigerant system contains refrigerant R-134a under high pressure. Opening the air conditioning refrigerant system can cause personal injury. Have the air conditioning refrigerant system serviced only by qualified personnel.

Item	Capacity
Engine oil	6.0 qt (5.7 L)
Engine coolant (Base radiator with auxiliary rear heat)	18.5 qt (17.5 L)
Engine coolant (Heavy duty trailer towing with auxiliary rear heat)	18.0 qt (17 L)
Brake fluid	Between MIN and MAX on brake fluid reservoir <sup>1</sup>
Front axle	3.5 pt (1.7 L)
Rear axle	4.5 pt (2.1 L) <sup>2</sup>
Automatic transmission fluid	13.1 qt (12.4 L) <sup>3</sup>
Transfer case fluid (Four Wheel Drive with Electronic Shift On the Fly)	1.6 qt (1.5 L) - 1.8 qt (1.7 L)
Transfer case fluid (Four Wheel Drive with Torque On Demand)	1.5 qt (1.4 L)
Windshield washer fluid	Fill as required

## Capacities and Specifications

Item	Capacity
Fuel tank	28.0 gal (106 L)
Fuel tank (Navigator L)	33.5 gal (126.8 L)
A/C refrigerant	44 oz (1.25 kg)
A/C refrigerant (Navigator L)	40 oz (1.13 kg)
A/C refrigerant compressor oil	7.1 fl oz (210 ml)

<sup>1</sup> Reference the reservoir cap for proper fluid.

<sup>2</sup> The rear axle is filled with synthetic rear axle lubricant, and it is considered lubricated for life. Do not check or change the lubricant unless you suspect a leak or submerge the axle in water. Contact an authorized dealer.

<sup>3</sup> Approximate dry fill capacity. Actual amount may vary during fluid changes.



# Capacities and Specifications

## Specifications

### Materials

Name	Specification
Recommended motor oil (U.S.): Motorcraft SAE 5W-30 Premium Synthetic Blend Motor Oil XO-5W30-QSP	WSS-M2C946-A
Recommended motor oil (Canada): Motorcraft SAE 5W-30 Super Premium Motor Oil CXO-5W30-LSP12	WSS-M2C946-A
Recommended motor oil (Mexico): Motorcraft SAE 5W-30 Synthetic Motor Oil MXO-5W30-QSP	WSS-M2C946-A
Optional motor oil (U.S. and Mexico): Motorcraft SAE 5W-30 Full Synthetic Motor Oil XO-5W30-QFS	WSS-M2C946-A
Optional motor oil (Canada): Motorcraft SAE 5W-30 Synthetic Motor Oil CXO-5W30-LFS12	WSS-M2C946-A
Engine coolant (U.S. and Mexico): Motorcraft Orange Antifreeze/Coolant Prediluted VC-3DIL-B	WSS-M97B44-D2

## Capacities and Specifications

Name	Specification
Engine coolant (Canada): Motorcraft Orange Antifreeze/Coolant Prediluted CVC-3DIL-B	WSS-M97B44-D2
Brake fluid (U.S. and Mexico): Motorcraft DOT 3 Motor Vehicle Brake Fluid PM-1-C	WSS-M6C65-A1
Brake fluid (Canada): High Performance DOT 3 Motor Vehicle Brake Fluid CPM-1-C	WSS-M6C65-A1
Brake fluid (U.S., Canada and Mexico): Motorcraft® DOT 4 LV High Performance Motor Vehicle Brake Fluid PM-20	WSS-M6C65-A2
Automatic transmission fluid (U.S. and Mexico): Motorcraft MERCON LV Automatic Transmission Fluid XT-10-QLVC	WSS-M2C938-A MERCON LV
Automatic transmission fluid (Canada): Motorcraft MERCON LV Automatic Transmission Fluid XT-10-QLVC	WSS-M2C938-A MERCON LV
Front axle fluid: Motorcraft SAE 75W-85 Hypoid Gear Lube XY-75W85-QL	WSS-M2C942-A

## Capacities and Specifications

Name	Specification
Rear axle fluid: Motorcraft SAE 75W-85 Hypoid Gear Lube XY-75W85-QL	WSS-M2C942-A
Transfer case fluid (Four Wheel Drive with Electronic Shift On the Fly) (U.S. and Mexico): Motorcraft Transfer Case Fluid XL-12	ESP-M2C166-H
Transfer case fluid (Four Wheel Drive with Electronic Shift On the Fly) (Canada): Motorcraft Transfer Case Fluid CXL-12	ESP-M2C166-H
Transfer case fluid (Four Wheel Drive with Torque On Demand) (U.S. and Mexico): Motorcraft Transfer Case Fluid XT-10-QLVC	WSS-M2C938-A MERCON® LV
Transfer case fluid (Four Wheel Drive with Torque On Demand) (Canada): Motorcraft Transfer Case Fluid CXT-10-LV12	WSS-M2C938-A MERCON® LV
Windshield washer fluid (U.S. and Mexico): Motorcraft Premium Windshield Wash Concentrate with Bitterant ZC-32-B2	WSB-M8B16-A2
Windshield washer fluid (Canada): Motorcraft Premium Quality Windshield Washer Fluid CXC-37-(A, B, D, F)	WSB-M8B16-A2

## Capacities and Specifications

Name	Specification
A/C refrigerant (U.S.): Motorcraft R-134a Refrigerant YN-19	WSH-M17B19-A
A/C refrigerant (Canada): Motorcraft R-134a Refrigerant CYN-16-R	WSH-M17B19-A
A/C refrigerant (Mexico): Motorcraft R-134a Refrigerant MYN-19	WSH-M17B19-A
A/C refrigerant compressor oil: Motorcraft PAG Refrigerant Compressor Oil YN-12-D	WSH-M1C231-B
Multi-purpose grease: Motorcraft Multi-Purpose Grease Spray XL-5	CRC SL3151ESB ESB-M1C93-B

## Capacities and Specifications

Name	Specification
Lock cylinders (U.S.): Penetrating and Lock Lubricant XL-1	--
Lock cylinders (Canada): Penetrating Fluid CXC-51-A	--
Lock cylinders (Mexico): Penetrating and Lock Lubricant MXL-1	--

If you use oil and fluids that do not meet the defined specification and viscosity grade, this may lead to:

- Component damage which is not covered by the vehicle warranty.
- Longer engine cranking periods.
- Increased emission levels.
- Reduced engine performance.
- Reduced fuel economy.
- Degraded brake performance.

We recommend Motorcraft motor oil for your vehicle. If Motorcraft oil is not available, use motor oils of the recommended viscosity grade that meet API SN requirements and display the API Certification Mark for gasoline engines. Do not use oil labeled with API SN service category unless the label also displays the API certification mark.



E142732

## Capacities and Specifications

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An oil that displays this symbol conforms to current engine, emission system and fuel economy performance standards of the International Lubricants Specification Advisory Council (ILSAC).

Do not use supplemental engine oil additives because they are unnecessary and could lead to engine damage that may not be covered by your vehicle warranty.

**Note:** *We recommend using DOT 3 or DOT 4 Low Viscosity (LV) High Performance Brake Fluid or equivalent meeting WSS-M6C65-A1 or WSS-M6C65-A2. Please refer to the brake reservoir cap for the proper brake fluid. Use of any fluid other than the recommended fluid may cause degraded brake performance and not meet the Ford performance standards. Keep brake fluid clean and dry. Contamination with dirt, water, petroleum products or other materials may result in brake system damage and possible failure.*

**Note:** *Automatic transmissions that require MERCON LV transmission fluid should only use MERCON LV transmission fluid. The use of any other fluid may cause transmission damage.*

# Audio System

## GENERAL INFORMATION

### Radio Frequencies and Reception Factors

AM and FM frequencies are established by the Federal Communications Commission (FCC) and the Canadian Radio and Telecommunications Commission (CRTC). Those frequencies are:

- AM: 530, 540-1700, 1710 kHz
- FM: 87.9-107.7, 107.9 MHz

Radio Reception Factors	
Distance and strength	The further you travel from an AM or FM station, the weaker the signal and the weaker the reception.
Terrain	Hills, mountains, tall buildings, bridges, tunnels, freeway overpasses, parking garages, dense tree foliage and thunderstorms can interfere with the reception.
Station overload	When you pass a ground-based broadcast repeating tower, a stronger signal may overtake a weaker one and result in the audio system muting.

### CD and CD Player Information

**Note:** CD units play commercially pressed 4.75-inch (12 centimeter) audio compact discs only. Due to technical incompatibility, certain recordable and re-recordable compact discs may not function correctly when used in Ford CD players.

**Note:** Do not insert CDs with homemade paper (adhesive) labels into the CD player as the label may peel and cause the CD to become jammed. You should use a permanent felt tip marker rather than adhesive labels on your homemade CDs. Ballpoint pens may damage CDs. Please contact an authorized dealer for further information.

**Note:** Do not use any irregularly shaped discs or discs with a scratch protection film attached.

Always handle discs by their edges only. Clean the disc with an approved CD cleaner only. Wipe it from the center of the disc toward the edge. Do not clean in a circular motion.

# Audio System

Do not expose discs to direct sunlight or heat sources for extended periods.

## MP3 and WMA Track and Folder Structure

Audio systems capable of recognizing and playing MP3 and WMA individual tracks and folder structures work as follows:

- There are two different modes for MP3 and WMA disc playback: MP3 and WMA track mode (system default) and MP3 and WMA folder mode.
- MP3 and WMA track mode ignores any folder structure on the MP3 and WMA disc. The player numbers each MP3 and WMA track on the disc (noted by the MP3 or WMA file extension) from T001 to a maximum of T255. The maximum number of playable MP3 and WMA files may be less depending on the structure of the CD and exact model of radio present.

- MP3 and WMA folder mode represents a folder structure consisting of one level of folders. The CD player numbers all MP3 and WMA tracks on the disc (noted by the MP3 or WMA file extension) and all folders containing MP3 and WMA files, from F001 (folder) T001 (track) to F253 T255.
- Creating discs with only one level of folders helps with navigation through the disc files.

If you are burning your own MP3 and WMA discs, it is important to understand how the system reads the structures you create. While various files may be present (files with extensions other than MP3 and WMA), only files with the MP3 and WMA extension are played; other files are ignored by the system. This enables you to use the same MP3 and WMA disc for a variety of tasks on your work computer, home computer and your in-vehicle system.

In track mode, the system displays and plays the structure as if it were only one level deep (all MP3 and WMA files play, regardless of being in a specific folder). In folder mode, the system only plays the MP3 and WMA files in the current folder.

## AUDIO UNIT

### WARNING

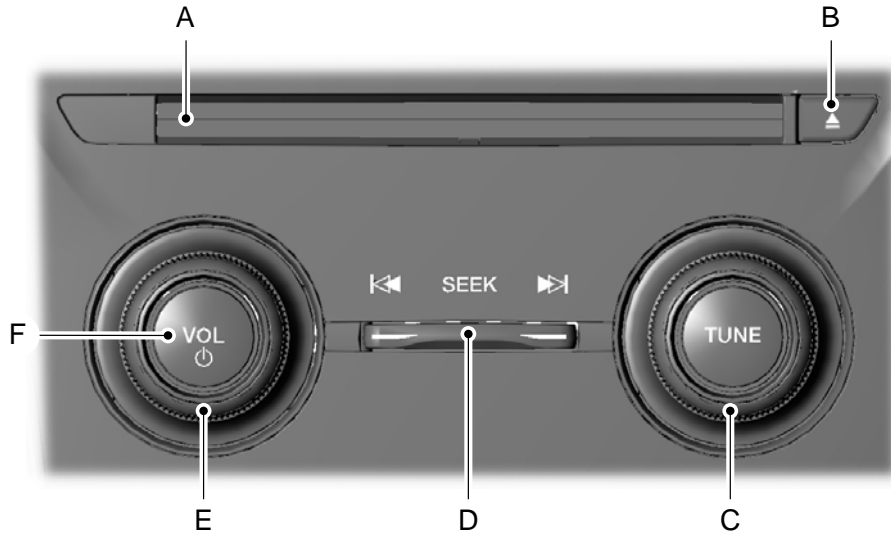


Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation of your vehicle. We recommend against the use of any hand-held device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.



# Audio System

**Note:** The touchscreen system controls most of the audio features. See SYNC Supplement.

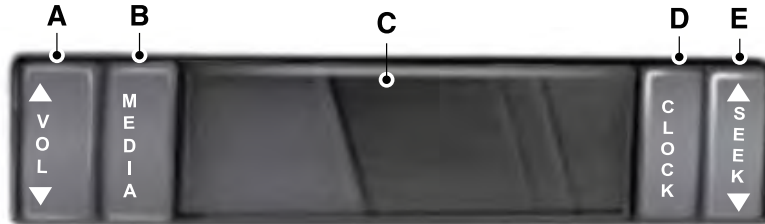


E171512

# Audio System

- A **CD slot:** Insert a CD.
- B **Eject:** Press the control to eject a CD.
- C **TUNE:** Turn the control to search manually through the radio frequency band. The system stops at the first station it finds in that direction. In SIRIUS mode, the system selects the previous or next channel. If you select a specific category (Jazz, Rock, News, etc.), turn the TUNE control to find the previous or next channel in the selected category.
- D **Seek/Fast Forward/Reverse:** Press the control to go to the previous or next track or available radio station. Press and hold to either reverse or fast forward through the current track or to quickly reverse or advance through the radio bands in individual increments.
- E **Volume:** Turn the control to adjust the volume level on your system.
- F **Power:** Press the control to switch the audio system on and off.

## Rear Seat Audio Controls



E182082

# Audio System

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- A **VOL:** Adjust radio volume.
- B **MEDIA:** Scroll through available audio system modes.
- C **Rear audio display:** See displayed time, radio frequency, Sirius radio channel or CD track.
- D **CLOCK:** Press to display the current time in 12-hour format. The time displays for a few seconds or you can press the **CLOCK** button again to switch immediately back to the last media state.
- E **SEEK:** Select the next or previous stored radio frequency station, Sirius radio channel or CD track.

**Note:** *This receiver includes the eCos real-time operating system. eCos is published under the eCos License.*

## **SATELLITE RADIO** (If Equipped)

SIRIUS® broadcasts a variety of music, news, sports, weather, traffic and entertainment satellite radio channels. For more information and a complete list of SIRIUS satellite radio channels, visit [www.siriusxm.com](http://www.siriusxm.com) in the United States, [www.siriusxm.ca](http://www.siriusxm.ca) in Canada, or call SIRIUS at 1-888-539-7474.

# Audio System

## Satellite Radio Reception Factors

Potential satellite radio reception issues	
Antenna obstructions	For optimal reception performance, keep the antenna clear of snow and ice build-up and keep luggage and other material as far away from the antenna as possible.
Terrain	Hills, mountains, tall buildings, bridges, tunnels, freeway overpasses, parking garages, dense tree foliage and thunderstorms can interfere with your reception.
Station overload	When you pass a ground-based broadcast-repeating tower, a stronger signal may overtake a weaker one and the audio system may mute.
Satellite radio signal interference	Your display may show ACQUIRING . . . to indicate the interference and the audio system may mute.

## SIRIUS® Satellite Radio Service

**Note:** SIRIUS reserves the unrestricted right to change, rearrange, add or delete programming including canceling, moving or adding particular channels, and its prices, at any time, with or without notice to you. Ford Motor Company shall not be responsible for any such programming changes.



E208625

SIRIUS satellite radio is a subscription-based satellite radio service that broadcasts a variety of music, sports, news, weather, traffic and entertainment programming. Your factory-installed SIRIUS satellite radio system includes hardware and a limited subscription term, which begins on the date of sale or lease of your vehicle. See an authorized dealer for availability.

# Audio System

For more information on extended subscription terms (a service fee is required), the online media player and a complete list of SIRIUS satellite radio channels, and other features, please visit [www.siriusxm.com](http://www.siriusxm.com) in

the United States, [www.siriusxm.ca](http://www.siriusxm.ca) in Canada, or call SIRIUS at 1-888-539-7474.

## Satellite Radio Electronic Serial Number (ESN)

You need your ESN to activate, modify or track your satellite radio account. When in satellite radio mode, tune to channel 0.

## Troubleshooting

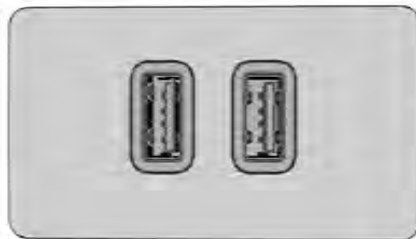
Message	Condition	Action
Acquiring...	Radio requires more than two seconds to produce audio for the selected channel.	No action required. This message should disappear shortly.
Satellite antenna fault SIRIUS system failure	There is an internal module or system failure present.	If this message does not clear shortly, or with an ignition key cycle, your receiver may have a fault. See an authorized dealer for service.
Invalid Channel	The channel is no longer available.	Tune to another channel or choose another preset.
Unsubscribed Channel	Your subscription does not include this channel.	Contact SIRIUS at 1-888-539-7474 to subscribe to the channel, or tune to another channel.
No Signal	The signal is lost from the SIRIUS satellite or SIRIUS tower to your vehicle antenna.	The signal is blocked. When you move into an open area, the signal should return.
Updating...	Update of channel programming in progress.	No action required. The process may take up to three minutes.

## Audio System

Message	Condition	Action
Questions? Call 1-888-539-7474	Your satellite service is no longer available.	Contact SIRIUS at 1-888-539-7474 to resolve subscription issues.
None found Check Channel Guide	All the channels in the selected category are either skipped or locked.	Use the channel guide to turn off the Lock or Skip function on that station.
Subscription Updated	SIRIUS has updated the channels available for your vehicle.	No action required.

### MEDIA HUB

The media hub may be located on the instrument panel or center console.



E207805

See your SYNC information.

# Accessories

**For a complete listing of the accessories that are available for your vehicle, please contact your authorized dealer or visit our online store at:**

Web Address (United States)
<a href="http://www.Accessories.Lincoln.com">www.Accessories.Lincoln.com</a>

Web Address (Canada)
<a href="http://www.LincolnCanada.com">www.LincolnCanada.com</a>

Lincoln Motor Company will repair or replace any properly authorized dealer-installed Lincoln Original Accessory found to be defective in factory-supplied materials or workmanship during the warranty period, as well as any component damaged by the defective accessories.

Lincoln Motor Company will warrant your Lincoln accessory through the warranty that provides the greatest benefit:

- 24 months, unlimited mileage.
- The remainder of your new vehicle limited warranty.

Contact an authorized dealer for details and a copy of the warranty.

## Exterior Style

- Side window deflectors.
- Splash guards.

## Interior Style

- Floor mats.
- Rear seat entertainment system\*.

## Lifestyle

- Ash cup or coin holder.
- Cargo organization and management.
- Roof rack and carriers\*.
- SUV camping tent\*.
- Trailer hitches, wiring harnesses and accessories.

## Peace of Mind

- Bumper protector.
- Car cover\*.
- Cargo area protector.

- Cargo security shade.
- Vehicle security.
- Wheel locks.

\*Lincoln Licensed Accessory. The accessory manufacturer designs, develops and therefore warrants Lincoln Licensed Accessories, and does not design or test these accessories to Lincoln Motor Company engineering requirements. Contact an authorized Lincoln dealer for the accessory manufacturer's limited warranty details and request a copy of the Lincoln Licensed Accessories product limited warranty from the accessory manufacturer.

## Accessories

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For maximum vehicle performance, keep the following information in mind when adding accessories or equipment to your vehicle:

- When adding accessories, equipment, passengers and luggage to your vehicle, do not exceed the total weight capacity of the vehicle or of the front or rear axle (GVWR or GAWR as indicated on the Safety Compliance Certification label). Ask an authorized dealer for specific weight information.
- The Federal Communications Commission (FCC) and Canadian Radio Telecommunications Commission (CRTC) regulate the use of mobile communications systems that are equipped with radio transmitters, for example, two-way radios, telephones and theft alarms. Any such equipment installed in your vehicle should comply with Federal Communications Commission (FCC) and Canadian Radio Telecommunications Commission (CRTC) regulations and should be installed only by an authorized dealer.
- Mobile communications systems may harm the operation of your vehicle, particularly if their manufacturer did not design them specifically for automotive use.
- If you or an authorized Lincoln dealer add any non-Lincoln electrical or electronic accessories or components to your vehicle, you may adversely affect battery performance and durability. In addition, you may also adversely affect the performance of other electrical systems in the vehicle.



# Extended Service Plan (ESP)

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PROTECT YOURSELF FROM THE RISING COST OF VEHICLE REPAIRS WITH A LINCOLN EXTENDED SERVICE PLAN.

## SERVICE PLANS (U.S. Only)

Lincoln owners have discovered the powerful protection of Lincoln Extended Service Plan. It is the only extended service plan backed by Lincoln Motor Company, and provides peace of mind protection beyond the New Vehicle Limited Warranty coverage.

### Lincoln ESP Can Quickly Pay for Itself

One service bill – the cost of parts and labor – can easily exceed the price of your Lincoln Extended Service Plan. With Lincoln ESP, you minimize your risk for unexpected repair bills and rising repair costs.

### Up to 1000+ Covered Vehicle Components

There are four Extended Service Plans with different levels of coverage. Ask your authorized dealer for details.

1. PremiumCARE - Our most comprehensive coverage. With over 1000 covered components, this plan is so complete that we generally only discuss what's not covered.
2. ExtraCARE - Covers 113 components, and includes many high-tech items.
3. BaseCARE - Covers 84 components.
4. PowertrainCARE - Covers 29 critical components.

Lincoln Extended Service Plan is honored by all authorized Lincoln and Ford dealers in the United States, Canada and Mexico. It is the only extended service plan authorized and backed by Lincoln Motor Company.

That means you get:

- Reliable, quality service at any Lincoln or Ford dealership.
- Repairs performed by factory trained technicians, using genuine parts.

## Rental Car Reimbursement

### 1st day Rental Benefit

You take advantage of replacement transportation if your vehicle is at your authorized dealer for same day covered repairs.

### Extended Rental Benefits

If your vehicle is kept overnight for covered repairs, you are eligible for rental car coverage, including bumper to bumper warranty repairs, and Field Service Actions.

## Roadside Assistance

Exclusive 24/7 roadside assistance, including:

- Towing, flat-tire change and battery jump starts.
- Out of fuel and lock-out assistance.
- Travel expense reimbursement for lodging, meals and rental car.
- Destination assistance for taxi, shuttle, rental car coverage and emergency transportation.

# Extended Service Plan (ESP)

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## Transferable Coverage

If you sell your vehicle before your Lincoln Extended Service Plan coverage expires, you can transfer any remaining coverage to the new owner. Whenever you sell your vehicle, prospective buyers may have a higher degree of confidence that vehicle was properly maintained with Lincoln ESP, thereby improving resale value.

## Avoid the Rising Cost of Properly Maintaining Your Vehicle!

Lincoln Extended Service Plan also offers a Premium Maintenance Plan that covers all scheduled maintenance, and select items that routinely wear out. The coverage is prepaid, so you never have to worry about affording your vehicle maintenance. It covers regular checkups, routine inspections, preventive care and replacement of select items that require periodic attention for normal wear:

- Windshield wiper blades.
- Spark plugs.
- The clutch disc.

- Brake pads and linings.
- Shock absorbers and struts.
- Engine cooling hoses, clamps and o-rings.
- Engine belts.
- Diesel exhaust fluid replenishment.

## Interest Free Finance Options Available

Take advantage of our interest free installment payment plan. Just a 10% down payment will provide you with an affordable, no interest, no fee payment program allowing you all the security and benefits Lincoln ESP has to offer while paying over time. You are pre-approved with no credit checks, no hassles! To learn more, call our Lincoln ESP specialists at 800-367-3377.

Complete the information below and mail to:

Ford ESP  
P.O. Box 321067  
Detroit, MI 48232

## SERVICE PLANS (CANADA ONLY)

You can get more protection for your vehicle by purchasing a Lincoln Extended Service Plan. Lincoln Extended Service Plan is the only service contract backed by Lincoln Motor Company of Canada, Limited. Depending on the plan you purchase, Lincoln Extended Service Plan provides benefits such as:

- Rental reimbursement.
- Coverage for certain maintenance and wear items.
- Protection against repair costs after your New Vehicle Limited Warranty Coverage expires.
- Roadside Assistance benefits.

## Extended Service Plan (ESP)

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There are several Lincoln Extended Service Plans available in various time, distance and deductible combinations. Each plan is tailored to fit your own driving needs, including reimbursement for towing and rental. When you purchase Lincoln Extended Service Plan, you receive added peace-of-mind protection throughout Canada, the United States and Mexico, provided by a network of participating authorized Lincoln Motor Company dealers.

**Note:** *Repairs performed outside of Canada, the United States and Mexico are not eligible for Lincoln Extended Service Plan coverage.*

This information is subject to change. For more information, visit your local Lincoln of Canada dealer or [www.Lincoln.ca](http://www.Lincoln.ca) to find the Lincoln Extended Service Plan that is right for you.

# Scheduled Maintenance

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## GENERAL MAINTENANCE INFORMATION

### Why Maintain Your Vehicle?

Carefully following the maintenance schedule helps protect against major repair expenses resulting from neglect or inadequate maintenance and may help to increase the value of your vehicle when you sell or trade it. Keep all receipts for completed maintenance with your vehicle.

We have established regular maintenance intervals for your vehicle based upon rigorous testing. It is important that you have your vehicle serviced at the proper times. These intervals serve two purposes; one is to maintain the reliability of your vehicle and the second is to keep your cost of owning your vehicle down.

It is your responsibility to have all scheduled maintenance performed and to make sure that the materials used meet the specifications identified in this owner's manual. See **Capacities and Specifications** (page 328).

Failure to perform scheduled maintenance invalidates warranty coverage on parts affected by the lack of maintenance.

### Why Maintain Your Vehicle at Your Dealership?

#### Factory-Trained Technicians

Service technicians participate in extensive factory-sponsored certification training to help them become experts on the operation of your vehicle. Ask your dealership about the training and certification their technicians have received.

#### Genuine Ford and Motorcraft® Replacement Parts

Dealerships stock Ford, Motorcraft and Ford-authorized branded re-manufactured replacement parts. These parts meet or exceed our specifications. Parts installed at your dealership carry a nationwide 24-month or unlimited mile (kilometer) parts and labor limited warranty.

If you do not use Ford authorized parts they may not meet our specifications and depending on the part, it could affect emissions compliance.

#### Convenience

Many dealerships have extended evening and Saturday hours to make your service visit more convenient and they offer one stop shopping. They can perform any services that are required on your vehicle, from general maintenance to collision repairs.

**Note:** *Not all dealers have extended hours or body shops. Please contact your dealer for details.*

#### Protecting Your Investment

Maintenance is an investment that pays dividends in the form of improved reliability, durability and resale value. To maintain the proper performance of your vehicle and its emission control systems, make sure you have scheduled maintenance performed at the designated intervals.

# Scheduled Maintenance

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Your vehicle is equipped with the Intelligent Oil-Life Monitor system, which displays a message in the information display at the proper oil change interval. This interval may be up to one year or 10000 miles (16000 kilometers).

When the oil change message appears in the information display, it is time for an oil change. Make sure you perform the oil change within two weeks or 500 miles (800 kilometers) of the message appearing. Make sure you reset the Intelligent Oil-Life Monitor after each oil change. See **Oil Change Indicator Reset** (page 269).

If your information display resets prematurely or becomes inoperative, you should perform the oil change interval at six months or 5000 miles (8000 kilometers) from your last oil change. Never exceed one year or 10000 miles (16000 kilometers) between oil change intervals.

Your vehicle is very sophisticated and built with multiple, complex, performance systems. Every manufacturer develops these systems using different specifications and performance features. That is why it is important to rely upon your dealership to properly diagnose and repair your vehicle.

Ford Motor Company has recommended maintenance intervals for various parts and component systems based upon engineering testing. Ford Motor Company relies upon this testing to determine the most appropriate mileage for replacement of oils and fluids to protect your vehicle at the lowest overall cost to you and recommends against maintenance schedules that deviate from the scheduled maintenance information.

We strongly recommend the use of only genuine Ford, Motorcraft or Ford-authorized re-manufactured replacement parts engineered for your vehicle.

## Additives and Chemicals

This owner's manual and the Ford Workshop Manual list the recommended additives and chemicals for your vehicle. We do not recommend using chemicals or additives not approved by us as part of your vehicle's normal maintenance. Please consult your warranty information.

## Oils, Fluids and Flushing

In many cases, fluid discoloration is a normal operating characteristic and, by itself, does not necessarily indicate a concern or that the fluid needs to be changed. However, a qualified expert, such as the factory-trained technicians at your dealership, should inspect discolored fluids that also show signs of overheating or foreign material contamination immediately.

# Scheduled Maintenance

Make sure to change your vehicle's oils and fluids at the specified intervals or in conjunction with a repair. Flushing is a viable way to change fluid for many vehicle sub-systems during scheduled maintenance.

It is critical that systems are flushed only with new fluid that is the same as that required to fill and operate the system or using a Ford-approved flushing chemical.

## Owner Checks and Services

Make sure you perform the following basic maintenance checks and inspections every month or at six-month intervals.

Check every month
Engine oil level.
Function of all interior and exterior lights.
Tires (including spare) for wear and proper pressure.
Windshield washer fluid level.

Check every six months
Battery connections. Clean if necessary.
Body and door drain holes for obstructions. Clean if necessary.
Cooling system fluid level and coolant strength.
Door weatherstrips for wear. Lubricate if necessary.
Hinges, latches and outside locks for proper operation. Lubricate if necessary.
Parking brake for proper operation.

# Scheduled Maintenance

Check every six months
Safety belts and seat latches for wear and function.
Safety warning lamps (brake, ABS, airbag and safety belt) for operation.
Washer spray and wiper operation. Clean or replace blades as necessary.

## Multi-Point Inspection

In order to keep your vehicle running right, it is important to have the systems on your vehicle checked regularly. This can help identify potential issues and prevent major problems. We recommend having the following multi-point inspection performed at every scheduled maintenance interval to help make sure your vehicle keeps running great.

Multi-Point inspection	
Accessory drive belt(s)	Hazard warning system operation
Battery performance	Horn operation
Engine air filter	Radiator, cooler, heater and air conditioning hoses
Exhaust system	Suspension components for leaks or damage

# Scheduled Maintenance

Multi-Point inspection	
Exterior lamps operation	Steering and linkage
Fluid levels ; fill if necessary	Tires (including spare) for wear and proper pressure **
For oil and fluid leaks	Windshield for cracks, chips or pits
Half-shaft dust boots	Washer spray and wiper operation

Brake, coolant recovery reservoir, automatic transmission and window washer

\*\* If your vehicle is equipped with a temporary mobility kit, check the tire sealant expiration Use By date on the canister. Replace as needed.

Be sure to ask your dealership service advisor or technician about the multi-point vehicle inspection. It is a comprehensive way to perform a thorough inspection of your vehicle. Your checklist gives you immediate feedback on the overall condition of your vehicle.

## NORMAL SCHEDULED MAINTENANCE

### Intelligent Oil-Life Monitor

Your vehicle is equipped with an Intelligent Oil-Life Monitor that determines when you should change the engine oil based on how your vehicle is used. By using several important factors in its calculations, the monitor helps reduce the cost of owning your vehicle and reduces environmental waste at the same time.

This means you do not have to remember to change the oil on a mileage-based schedule. Your vehicle lets you know when an oil change is due by displaying a message in the information display.

The following table provides examples of vehicle use and its impact on oil change intervals. It is a guideline only. Actual oil change intervals depend on several factors and generally decrease with severity of use.



# Scheduled Maintenance

When to expect the message prompting you to change your oil	
Interval	Vehicle use and example
7500-10000 miles (12000-16000 km)	Normal
	Normal commuting with highway driving No, or moderate, load or towing Flat to moderately hilly roads No extended idling
5000-7499 miles (8000-11999 km)	Severe
	Moderate to heavy load or towing Mountainous or off-road conditions Extended idling Extended hot or cold operation
3000-4999 miles (4800-7999 km)	Extreme
	Maximum load or towing Extreme hot or cold operation

# Scheduled Maintenance

## Normal Maintenance Intervals

At every oil change interval as indicated by the information display <sup>*</sup>
Change engine oil and filter. <sup>**</sup>
Rotate tires, inspect tire wear and measure tread depth.
Perform a multi-point inspection (recommended).
Inspect the automatic transmission fluid level (if equipped with dipstick). Consult your dealer for requirements.
Inspect the brake pads, rotors, hoses and parking brake.
Inspect the engine cooling system strength and hoses.
Inspect the exhaust system and heat shields.
Inspect front axle and U-joints.
Inspect the half-shaft boots.
Inspect the steering linkage, ball joints, suspension, tire-rod ends, driveshaft and U-joints.
Inspect the wheels and related components for abnormal noise, wear, looseness or drag.

<sup>\*</sup> Do not exceed one year or 10000 miles (16000 kilometers) between service intervals.

<sup>\*\*</sup> Reset the Intelligent Oil-Life Monitor after engine oil and filter changes.

# Scheduled Maintenance

Other maintenance items <sup>1</sup>	
Every 30000 miles (48000 km)	Replace engine air filter.
At 100000 miles (160000 km)	Change engine coolant. <sup>2</sup>
Every 100000 miles (160000 km)	Replace spark plugs.
	Inspect accessory drive belt(s). <sup>3</sup>
Every 150000 miles (240000 km)	Change automatic transmission fluid.
	Change front axle fluid (Four-wheel drive vehicles).
	Change rear axle fluid.
	Change transfer case fluid (Four-wheel drive vehicles).
	Replace accessory drive belt(s).

<sup>1</sup> Perform these maintenance items within 3000 miles (4800 kilometers) of the last engine oil and filter change. Do not exceed the designated distance for the interval.

<sup>2</sup> Initial replacement at six years or 100000 miles (160000 kilometers), then every three years or 50000 miles (80000 kilometers).

<sup>3</sup> After initial inspection, inspect every other oil change until replaced.

# Scheduled Maintenance

## SPECIAL OPERATING CONDITIONS SCHEDULED MAINTENANCE

If you operate your vehicle **primarily** in any of the following conditions, you need to perform extra maintenance, as indicated. If you operate your vehicle **occasionally** under any of these conditions, it is not necessary to perform the extra maintenance. For

specific recommendations, see your dealership service advisor or technician.

Perform the services shown in the following tables when specified or within 3,000 mi (4,800 km) of the message appearing in the information display prompting you to change your oil.

- **Example 1:** The message comes on at 28,751 mi (46,270 km). Perform the 30,000 mi (48,000 km) automatic transmission fluid replacement.
- **Example 2:** The message has **not** come on, but the odometer reads 30,000 mi (48,000 km) (for example, the Intelligent Oil-Life Monitor was reset at 25,000 mi (40,000 km)). Perform the engine air filter replacement.

Towing a trailer or using a car-top carrier	
As required	Change engine oil and filter as indicated by the information display and perform services listed in the Normal Scheduled Maintenance chart.
Inspect frequently, service as required	Inspect and lubricate U-joints (if equipped with grease fittings).
	See axle maintenance items under <b>Exceptions</b> .
Every 60,000 mi (96,000 km)	Change transfer case fluid (Four-wheel drive vehicles).
	Replace spark plugs.

## Scheduled Maintenance

Extensive idling or low-speed driving for long distances, as in heavy commercial use	
As required	Change engine oil and filter as indicated by the information display and perform services listed in the Normal Scheduled Maintenance chart.
Inspect frequently, service as required	Replace engine air filter.
Every 60,000 mi (96,000 km)	Change transfer case fluid (Four-wheel drive vehicles).
	Replace spark plugs.

Operating in dusty or sandy conditions (such as unpaved or dusty roads)	
Inspect frequently, service as required	Replace engine air filter.
Every 5,000 mi (8,000 km)	Inspect the wheels and related components for abnormal noise, wear, looseness or drag.
	Rotate tires, inspect tires for wear and measure tread depth.
Every 5,000 mi (8,000 km) or six months	Change engine oil and filter.
Every 60,000 mi (96,000 km)	Change transfer case fluid (Four-wheel drive vehicles).

Reset your Intelligent Oil-Life Monitor after each engine oil and filter change.

## Scheduled Maintenance

Off-road operation	
Inspect frequently, service as required	Inspect steering linkage, ball joints and U-joints. Lubricate if equipped with grease fittings.
	Replace engine air filter.
Every 5,000 mi (8,000 km) or six months	Change engine oil and filter.
	Inspect the wheels and related components for abnormal noise, wear, looseness or drag.
	Rotate tires, inspect tires for wear and measure tread depth.
Every 30,000 mi (48,000 km)	Replace front wheel bearing grease and grease seals if non-sealed bearings are used (Two-wheel drive vehicles).
Every 60,000 mi (96,000 km)	Change transfer case fluid (Four-wheel drive vehicles).

Reset your Intelligent Oil-Life Monitor after each engine oil and filter change.

### Exceptions

There are several exceptions to the Normal Schedule.

### Normal Vehicle Axle Maintenance

Rear axles and power take-off units with synthetic fluid and light-duty trucks equipped with Ford-design axles are lubricated for life; do not check or change fluid unless a leak is suspected, service is required or the assembly has been submerged in water. During long periods of trailer towing with

# Scheduled Maintenance

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outside temperatures above 70°F (21°C) and at wide-open throttle for long periods above 45 mph (72 km/h), change non-synthetic rear axle fluid every 3,000 mi (4,800 km) or three months, whichever comes first. This interval can be waived if the axle is filled with 75W140 synthetic gear fluid meeting Ford specification WSL-M2C192-A, part number F1TZ-19580-B, or equivalent. Add friction modifier XL-3 (EST-M2C118-A) or equivalent for complete refill of Traction-Lok rear axles.

## Axle Maintenance

Change the axle fluid anytime an axle is submerged in water.

## California Fuel Filter Replacement

If you register your vehicle in California, the California Air Resources Board has determined that the failure to perform this maintenance item does not nullify the emission warranty or limit recall liability before the completion of your vehicle's useful life. Ford Motor Company, however, urges you to have all recommended maintenance services performed at the specified intervals and to record all vehicle service.

## Hot Climate Oil Change Intervals

Vehicles operating in the Middle East, North Africa, Sub-Saharan Africa or locations with similar climates using an American Petroleum Institute (API) Certified for Gasoline Engines (Certification mark) oil of SM or SN quality, the normal oil change interval is 3,000 mi (4,800 km).

If the available API SM or SN oils are not available, then the oil change interval is 1,800 mi (2,900 km).

## Engine Air Filter Replacement

The life of the engine air filter is dependent on exposure to dusty and dirty conditions. Vehicles operated in these conditions require frequent inspection and replacement of the engine air filter.

# Scheduled Maintenance

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## SCHEDULED MAINTENANCE RECORD

<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
<input type="radio"/> Distance:	
<input type="radio"/> Engine hours (optional):	
<input type="radio"/> Multi-point inspection (recommended): <input type="checkbox"/>	
<input type="radio"/> Signature:	



# Scheduled Maintenance

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<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
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<input type="radio"/> Engine hours (optional):	
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## Scheduled Maintenance

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<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
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# Scheduled Maintenance

☐ Repair Order #:

☐ Distance:

☐ Engine hours (optional):

☐ Multi-point inspection (recommended): ☐

Dealer stamp

☐ Signature:

## Scheduled Maintenance

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# Scheduled Maintenance

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## Scheduled Maintenance

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# Scheduled Maintenance

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## Scheduled Maintenance

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# Scheduled Maintenance

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# Scheduled Maintenance

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# Scheduled Maintenance

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☐ Repair Order #:

☐ Distance:

☐ Engine hours (optional):

☐ Multi-point inspection (recommended): ☐

Dealer stamp

☐ Signature:

## Scheduled Maintenance

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<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
<input type="radio"/> Distance:	
<input type="radio"/> Engine hours (optional):	
<input type="radio"/> Multi-point inspection (recommended): <input type="checkbox"/>	
<input type="radio"/> Signature:	



# Scheduled Maintenance

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<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
<input type="radio"/> Distance:	
<input type="radio"/> Engine hours (optional):	
<input type="radio"/> Multi-point inspection (recommended): <input type="checkbox"/>	
<input type="radio"/> Signature:	

## Scheduled Maintenance

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<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
<input type="radio"/> Distance:	
<input type="radio"/> Engine hours (optional):	
<input type="radio"/> Multi-point inspection (recommended): <input type="checkbox"/>	
<input type="radio"/> Signature:	

# Scheduled Maintenance

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<input type="radio"/> Repair Order #:	<div>Dealer stamp</div>
<input type="radio"/> Distance:	
<input type="radio"/> Engine hours (optional):	
<input type="radio"/> Multi-point inspection (recommended): <input type="checkbox"/>	
<input type="radio"/> Signature:	

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## END USER LICENSE AGREEMENT

### VEHICLE SOFTWARE END USER LICENSE AGREEMENT (EULA)

- You ("You" or "Your" as applicable) have acquired a vehicle having several devices, including SYNC ® and various control modules, ("DEVICES") that include software licensed or owned by Ford Motor Company and its affiliates ("FORD MOTOR COMPANY"). Those software products of FORD MOTOR COMPANY origin, as well as associated media, printed materials, and "online" or electronic documentation ("SOFTWARE") are protected by international intellectual property laws and treaties. The SOFTWARE is licensed, not sold. All rights reserved.
- The SOFTWARE may interface with and/or communicate with, or may be later upgraded to interface with and/or communicate with additional software and/or systems provided by FORD MOTOR COMPANY.

**IF YOU DO NOT AGREE TO THIS END USER LICENSE AGREEMENT ("EULA") DO NOT USE THE DEVICES OR COPY THE SOFTWARE. ANY USE OF THE SOFTWARE, INCLUDING BUT NOT LIMITED TO USE ON THE DEVICES, WILL CONSTITUTE YOUR AGREEMENT TO THIS EULA (OR RATIFICATION OF ANY PREVIOUS CONSENT).**

**GRANT OF SOFTWARE LICENSE:** This EULA grants you the following license:

- You may use the SOFTWARE as installed on the DEVICES and as otherwise interfacing with systems and/or services provide by or through FORD MOTOR COMPANY or its third party software and service providers.

#### Description of Other Rights and Limitations

- **Speech Recognition:** If the SOFTWARE includes speech recognition component(s), you should understand that speech recognition is an inherently statistical process and that recognition errors are inherent in the process. Neither FORD MOTOR COMPANY nor

its suppliers shall be liable for any damages arising out of errors in the speech recognition process. It is your responsibility to monitor any speech recognition functions included in the system.

- **Limitations on Reverse Engineering, Decompilation and Disassembly:** You may not reverse engineer, decompile, translate, disassemble or attempt to discover any source code or underlying ideas or algorithms of the SOFTWARE nor permit others to reverse engineer, decompile or disassemble the SOFTWARE, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation or to the extent as may be permitted by the licensing terms governing use of any open source components included with the SOFTWARE.

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- **Limitations on Distributing, Copying, Modifying and Creating Derivative Works:** You may not distribute, copy, make modifications to or create derivative works based on the SOFTWARE, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation or to the extent as may be permitted by the licensing terms governing use of any open source components included with the SOFTWARE.
- **Single EULA:** The end user documentation for the DEVICES and related systems and services may contain multiple EULAs, such as multiple translations and/or multiple media versions (e.g., in the user documentation and in the software). Even if you receive multiple EULAs, you are licensed to use only one (1) copy of the SOFTWARE.
- **SOFTWARE Transfer:** You may permanently transfer your rights under this EULA only as part of a sale or transfer of the DEVICES, provided you retain no copies, you transfer all of the SOFTWARE (including all component parts, the media and printed materials, any upgrades, and, if applicable, the Certificate(s) of Authenticity), and the recipient agrees to the terms of this EULA. If the SOFTWARE is an upgrade, any transfer must include all prior versions of the SOFTWARE.
- **Termination:** Without prejudice to any other rights, FORD MOTOR COMPANY may terminate this EULA if you fail to comply with the terms and conditions of this EULA.
- **Internet-Based Services Components:** The SOFTWARE may contain components that enable and facilitate the use of certain Internet-based services. You acknowledge and agree that FORD MOTOR COMPANY, third party software and service suppliers, its affiliates and/or its designated agent may automatically check the version of the SOFTWARE and/or its components that you are utilizing and may provide upgrades or supplements to the SOFTWARE that may be automatically downloaded to your DEVICES.
- **Additional Software/Services:** The SOFTWARE may permit FORD MOTOR COMPANY, third party software and service suppliers, its affiliates and/or its designated agent to provide or make available to you SOFTWARE updates, supplements, add-on components, or Internet-based services components of the SOFTWARE after the date you obtain your initial copy of the SOFTWARE ("Supplemental Components"). SOFTWARE updates may cause you to incur additional charges from your wireless service provider. If FORD MOTOR COMPANY or third party software and services suppliers provide or make available to you Supplemental Components and no other EULA terms are provided along with the Supplemental Components, then the terms of this EULA shall apply. FORD

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MOTOR COMPANY, its affiliates and/or its designated agent reserve the right to discontinue without liability any Internet-based services provided to you or made available to you through the use of the SOFTWARE.

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- **Links to Third Party Sites:** The SOFTWARE may provide you with the ability to link to third party sites. The third party sites are not under the control of FORD MOTOR COMPANY, its affiliates and/or its designated agent. Neither FORD MOTOR COMPANY nor its affiliates nor its designated agent are responsible for (i) the contents of any third party sites, any links contained in third party sites, or any changes or updates to third party sites, or (ii) webcasting or any other form of transmission received from any third party sites. If the SOFTWARE provides links to third party sites, those links are provided to you only as a convenience, and the inclusion of any link does not imply an endorsement of the third party site by FORD MOTOR COMPANY, its affiliates and/or its designated agent.
- **Obligation to Drive Responsibly:** You recognize your obligation to drive responsibly and keep attention on the road. You will read and abide with the DEVICES operating instructions particularly as they pertain to safety and you agree to assume any risk associated

with the use of the DEVICES.

**UPGRADES AND RECOVERY MEDIA:** If the SOFTWARE is provided by FORD MOTOR COMPANY separate from the DEVICES on media such as a ROM chip, CD ROM disk(s) or via web download or other means, and is labeled "For Upgrade Purposes Only" or "For Recovery Purposes Only" you may install one (1) copy of such SOFTWARE onto the DEVICES as a replacement copy for the existing SOFTWARE, and use it in accordance with this EULA, including any additional EULA terms accompanying the upgrade SOFTWARE.

**INTELLECTUAL PROPERTY RIGHTS:** All title and intellectual property rights in and to the SOFTWARE (including but not limited to any images, photographs, animations, video, audio, music, text and "applets" incorporated into the SOFTWARE), the accompanying printed materials, and any copies of the SOFTWARE, are owned by FORD MOTOR COMPANY, or its affiliates or suppliers. The SOFTWARE is licensed, not sold. You may not copy the printed materials accompanying the SOFTWARE. All title and intellectual property rights in and to the content which

may be accessed through use of the SOFTWARE is the property of the respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants you no rights to use such content outside its intended use. All rights not specifically granted under this EULA are reserved by FORD MOTOR COMPANY, its affiliates, and third party software and service providers and suppliers. Use of any on-line services which may be accessed through the SOFTWARE may be governed by the respective terms of use relating to such services. If this SOFTWARE contains documentation that is provided only in electronic form, you may print one copy of such electronic documentation.

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**EXPORT RESTRICTIONS:** You acknowledge that the SOFTWARE is subject to U.S. and European Union export jurisdiction. You agree to comply with all applicable international and national laws that apply to the SOFTWARE, including the U.S. Export Administration Regulations, as well as end-user, end-use and destination restrictions issued by U.S. and other governments.

**TRADEMARKS:** This EULA does not grant you any rights in connection with any trademarks or service marks of FORD MOTOR COMPANY, its affiliates, and third party software and service providers.

**PRODUCT SUPPORT:** Please refer to FORD MOTOR COMPANY instructions provided in the documentation for the DEVICES product support, such as the vehicle owner guide.

Should you have any questions concerning this EULA, or if you desire to contact FORD MOTOR COMPANY for any other reason, please refer to the address provided in the documentation for the DEVICES.

**No Liability for Certain Damages:** EXCEPT AS PROHIBITED BY LAW, FORD MOTOR COMPANY, ANY THIRD PARTY SOFTWARE OR SERVICES SUPPLIERS, AND THEIR AFFILIATES SHALL HAVE NO LIABILITY FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE SOFTWARE. THIS LIMITATION SHALL APPLY EVEN IF ANY REMEDY FAILS OF ITS ESSENTIAL PURPOSE. THERE ARE NO WARRANTIES OTHER THAN THOSE THAT MAY BE EXPRESSLY PROVIDED FOR YOUR NEW VEHICLE.

**SYNC® Automotive Important Safety Information Read and follow instructions:**

- Before using your SYNC® system, read and follow all instructions and safety information provided in this end user manual ("Owner Guide".) Not following precautions found in the Owner Guide can lead to an accident or other serious injuries.

General Operation

- **Voice Command Control:** Certain functions within the SYNC® system may be accomplished using voice commands. Using voice commands while driving helps you to operate the system without removing your hands from the wheel or eyes from the road.
- **Prolonged Views of Screen:** Do not access any function requiring a prolonged view of the screen while you are driving. Pull over in a safe and legal manner before attempting to access a function of the system requiring prolonged attention.
- **Volume Setting:** Do not raise the volume excessively. Keep the volume at a level where you can still hear outside traffic and emergency signals while driving. Driving while unable to hear these sounds could cause an accident.



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- **Navigation Features:** Any navigation features included in the system are intended to provide turn by turn instructions to get you to a desired destination. Please make certain all persons using this system carefully read and follow instructions and safety information fully.
- **Distraction Hazard:** Any navigation features may require manual (non-verbal) setup. Attempting to perform such set-up or insert data while driving can distract your attention and could cause an accident or other serious injury. Stop the vehicle in a safe and legal manner before attempting these operations.
- **Let Your Judgment Prevail:** Any navigation features are provided only as an aid. Make your driving decisions based on your observations of local conditions and existing traffic regulations. Any such feature is not a substitute for your personal judgment. Any route suggestions made by this system should never replace any local traffic regulations or your personal judgment or knowledge of safe driving practices.
- **Route Safety:** Do not follow the route suggestions if doing so would result in an unsafe or illegal maneuver, if you would be placed in an unsafe situation, or if you would be directed into an area that you consider unsafe. The driver is ultimately responsible for the safe operation of the vehicle and therefore, must evaluate whether it is safe to follow the suggested directions.
- **Potential Map Inaccuracy:** Maps used by this system may be inaccurate because of changes in roads, traffic controls or driving conditions. Always use good judgment and common sense when following the suggested routes.
- **Emergency Services:** Do not rely on any navigation features included in the system to route you to emergency services. Ask local authorities or an emergency services operator for these locations. Not all emergency services such as police, fire stations, hospitals and clinics are likely to be contained in the map database for such navigation features.

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Your Responsibilities and Assumptions of  
Risk

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- You agree to each of the following:(a) Any use of the SOFTWARE while driving an automobile or other vehicle in violation of applicable law or otherwise driving in an unsafe manner presents a significant risk of distracted driving and should not be attempted under any circumstances;(b) Use of the SOFTWARE at excessive volume poses a significant risk of hearing damage and should not be attempted under any circumstances;(c) The SOFTWARE may not be compatible with new or different versions of an operating system, third party software, or third party services, and the SOFTWARE may potentially cause a critical failure of an operating system, third party software, or third party service.(d) Any third party service accessed by or third party software used with the SOFTWARE (i) may charge an additional fee for access, (ii) may not work correctly, on an uninterrupted basis, or error free, (iii) may change streaming formats or discontinue operation, (iv) may contain adult, profane or offensive content; and (v) may contain inaccurate, false or misleading traffic, weather,

financial or safety information or other content; and (e) Use of the SOFTWARE may cause you to incur additional charges from your wireless service provider (WSP) and any data or minute calculators that may be included in the software program are for reference only, are not warranted in any way and should not be relied upon in anyway.

- When using the SOFTWARE, you agree to be responsible for and assume the entire risk to the items set forth in Section (a) – (e) above.

### **Disclaimer of Warranty**

YOU EXPRESSLY ACKNOWLEDGE AND AGREE THAT USE OF THE DEVICES AND SOFTWARE IS AT YOUR SOLE RISK AND THAT THE ENTIRE RISK AS TO SATISFACTORY QUALITY, PERFORMANCE, COMPATIBILITY, ACCURACY AND EFFORT IS WITH YOU. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE SOFTWARE AND ANY THIRD PARTY SOFTWARE OR THIRD-PARTY SERVICES ARE PROVIDED "AS IS" AND "AS AVAILABLE", WITH ALL FAULTS AND

WITHOUT WARRANTY OF ANY KIND, AND FORD MOTOR COMPANY HEREBY DISCLAIMS ALL WARRANTIES AND CONDITIONS WITH RESPECT TO THE SOFTWARE, THIRD PARTY SOFTWARE, AND THIRD-PARTY SERVICES, EITHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES AND/OR CONDITIONS OF MERCHANTABILITY, OF SATISFACTORY QUALITY, OF FITNESS FOR AN ARTICULAR PURPOSE, OF ACCURACY, OF QUIET ENJOYMENT, AND NON-INFRINGEMENT OF THIRD-PARTY RIGHTS. FORD MOTOR COMPANY DOES NOT WARRANT (a) AGAINST INTERFERENCE WITH YOUR ENJOYMENT OF THE SOFTWARE, THIRD PARTY SOFTWARE, OR THIRD-PARTY SERVICES, (b) THAT THE SOFTWARE, THIRD PARTY SOFTWARE, OR THIRD-PARTY SERVICES WILL MEET YOUR REQUIREMENTS, (c) THAT THE OPERATION OF THE SOFTWARE, THIRD PARTY SOFTWARE, OR THIRD-PARTY SERVICES WILL BE UNINTERRUPTED OR ERROR-FREE, (d) OR THAT DEFECTS IN THE SOFTWARE, THIRD PARTY SOFTWARE, OR THIRD-PARTY SERVICES WILL BE CORRECTED. NO ORAL

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OR WRITTEN INFORMATION OR ADVICE GIVEN BY FORD MOTOR COMPANY OR ITS AUTHORIZED REPRESENTATIVE SHALL CREATE A WARRANTY. SHOULD THE SOFTWARE, THIRD PARTY SOFTWARE, OR THIRD-PARTY SERVICES PROVE DEFECTIVE, YOU ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION. SOME JURISDICTIONS DO NOT ALLOW THE DISCLAIMER OF IMPLIED WARRANTIES OR LIMITATIONS ON APPLICABLE STATUTORY RIGHTS OF A CONSUMER, SO THE ABOVE DISCLAIMER MAY NOT FULLY APPLY TO YOU. THE SOLE WARRANTY PROVIDED BY FORD MOTOR COMPANY SHALL BE FOUND IN THE WARRANTY INFORMATION INCLUDING WITH YOUR OWNER GUIDE. TO THE EXTENT THAT THERE IS ANY CONFLICT BETWEEN THE TERMS OF THIS SECTION AND THE WARRANTY BOOKLET, THE WARRANTY BOOKLET SHALL CONTROL.

### **Applicable Law, Venue, Jurisdiction**

- The laws of the State of Michigan govern this EULA and Your use of the SOFTWARE. Your use of the SOFTWARE may also be subject to other local, state, national, or international laws. Any litigation arising out of or related to this EULA shall be brought and maintained exclusively in a court of the State of Michigan located in Wayne County or in the United States District Court for the Eastern District of Michigan. You hereby consent to submit to the personal jurisdiction of a court in the State of Michigan located in Wayne County and the United States District Court for the Eastern District of Michigan for any dispute arising out of or relating to this EULA.

### **Binding Arbitration and Class Action Waiver**

**(a) Application.** This Section applies to any dispute EXCEPT IT DOES NOT INCLUDE A DISPUTE RELATING TO COPYRIGHT INFRINGEMENT, OR TO THE ENFORCEMENT OR VALIDITY OF YOUR, FORD MOTOR COMPANY, OR ANY OF

FORD MOTOR COMPANY'S LICENSORS' INTELLECTUAL PROPERTY RIGHTS. Dispute means any dispute, action, or other controversy between You and FORD MOTOR COMPANY, other than the exceptions listed above, concerning the SOFTWARE (including its price) or this EULA, whether in contract, warranty, tort, statute, regulation, ordinance, or any other legal or equitable basis.

**(b) Notice of Dispute.** In the event of a Dispute, You or FORD MOTOR COMPANY must give the other a "Notice of Dispute", which is a written statement of the name, address, and contact information of the party giving it, the facts giving rise to the dispute, and the relief requested. You and FORD MOTOR COMPANY will attempt to resolve any dispute through informal negotiation within 60 days from the date the Notice of Dispute is sent. After 60 days, You or FORD MOTOR COMPANY may commence arbitration.

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**(c) Small claims court.** You may also litigate any dispute in small claims court in your county of residence or FORD MOTOR COMPANY'S principal place of business, if the dispute meets all requirements to be heard in the small claims court. You may litigate in small claims court whether or not You negotiated informally first.

**(d) Binding arbitration.** If You and FORD MOTOR COMPANY, do not resolve any dispute by informal negotiation or in small claims court, any other effort to resolve the dispute will be conducted exclusively by binding arbitration. You are giving up the right to litigate (or participate in as a party or class member) all disputes in court before a judge or jury. Instead, all disputes will be resolved before a neutral arbitrator, whose decision will be final except for a limited right of appeal under the Federal Arbitration Act. Any court with jurisdiction over the parties may enforce the arbitrator's award.

**(e) Class action waiver.** Any proceedings to resolve or litigate any dispute in any forum will be conducted solely on an individual basis. Neither you nor FORD MOTOR COMPANY, will seek to have any dispute heard as a class action, as a private attorney general action, or in any other proceeding in which any party acts or proposes to act in a representative capacity. No arbitration or proceeding will be combined with another without the prior written consent of all parties to all affected arbitrations or proceedings.

**(f) Arbitration procedure.** Any arbitration will be conducted by the American Arbitration Association (the "AAA"), under its Commercial Arbitration Rules. If You are an individual and use the SOFTWARE for personal or vehicle use, or if the value of the dispute is \$75,000 or less whether or not You are an individual or how You use the SOFTWARE, the AAA Supplementary Procedures for Consumer-Related Disputes will also apply. To commence arbitration, submit a Commercial Arbitration Rules Demand for Arbitration form to the AAA. You may request a telephonic or in-person hearing by following the AAA rules. In a

dispute involving \$10,000 or less, any hearing will be telephonic unless the arbitrator finds good cause to hold an in-person hearing instead. For more information, see [adr.org](http://adr.org) or call 1-800-778-7879. You agree to commence arbitration only in your county of residence or FORD MOTOR COMPANY'S principal place of business. The arbitrator may award the same damages to You individually as a court could. The arbitrator may award declaratory or injunctive relief only to You individually, and only to the extent required to satisfy Your individual claim. **Arbitration fees and incentives.**

- i. Disputes involving \$75,000 or less. FORD MOTOR COMPANY will promptly reimburse your filing fees and pay the AAA's and arbitrator's fees and expenses. If you reject FORD MOTOR COMPANY'S last written settlement offer made before the arbitrator was appointed ("last written offer"), your dispute goes all the way to an arbitrator's decision (called an "award"), and the arbitrator awards you more than the last written offer, FORD MOTOR COMPANY will give

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you three incentives: (1) pay the greater of the award or \$1,000; (2) pay twice your reasonable attorney's fees, if any; and (3) reimburse any expenses (including expert witness fees and costs) that your attorney reasonably accrues for investigating, preparing, and pursuing your claim in arbitration. The arbitrator will determine the amounts.

- ii. Disputes involving more than \$75,000. The AAA rules will govern payment of filing fees and the AAA's and arbitrator's fees and expenses.
- iii. Disputes involving any amount. In any arbitration you commence, FORD MOTOR COMPANY will seek its AAA or arbitrator's fees and expenses, or Your filing fees it reimbursed, only if the arbitrator finds the arbitration frivolous or brought for an improper purpose. In any arbitration FORD MOTOR COMPANY commences, it will pay all filing, AAA, and arbitrator's fees and expenses. It will not seek its attorney's fees or expenses from you in any arbitration. Fees and expenses are not counted in determining how much a dispute involves.

**(h) Claims or disputes must be filed within one year.** To the extent permitted by law, any claim or dispute under this EULA to which this Section applies must be filed within one year in small claims court (Section c) or in arbitration (Section d). The one-year period begins when the claim or dispute first could be filed. If such a claim or dispute is not filed within one year, it is permanently barred.

**(i) Severability.** If the class action waiver (Section e) is found to be illegal or unenforceable as to all or some parts of a dispute, then that portion of Section e will not apply to those parts. Instead, those parts will be severed and proceed in a court of law, with the remaining parts proceeding in arbitration. If any other provision of that portion Section e is found to be illegal or unenforceable, that provision will be severed with the remainder of Section e remaining in full force and effect.

## **Telenav Software End User License Agreement**

Please read these terms and conditions carefully before you use the TeleNav Software. Your use of the TeleNav Software indicates that you accept these terms and conditions. If you do not accept these terms and conditions, do not break the seal of the package, launch, or otherwise use the TeleNav Software. TeleNav may revise this Agreement and the privacy policy at any time, with or <http://www.telenav.com> from time to time to review the then current version of this Agreement and of the privacy policy.

### **1. Safe and Lawful Use**

You acknowledge that devoting attention to the TeleNav Software may pose a risk of injury or death to you and others in situations that otherwise require your undivided attention, and you therefore agree to comply with the following when using the TeleNav Software:

- (a) observe all traffic laws and otherwise drive safely;

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(b) use your own personal judgment while driving. If you feel that a route suggested by the TeleNav Software instructs you to perform an unsafe or illegal maneuver, places you in an unsafe situation, or directs you into an area that you consider to be unsafe, do not follow such instructions;

(c) do not input destinations, or otherwise manipulate the TeleNav Software, unless your vehicle is stationary and parked;

(d) do not use the TeleNav Software for any illegal, unauthorized, unintended, unsafe, hazardous, or unlawful purposes, or in any manner inconsistent with this Agreement;

(e) arrange all GPS and wireless devices and cables necessary for use of the TeleNav Software in a secure manner in your vehicle so that they will not interfere with your driving and will not prevent the operation of any safety device (such as an airbag).

You agree to indemnify and hold TeleNav harmless against all claims resulting from any dangerous or otherwise inappropriate use of the TeleNav Software in any moving vehicle, including as a result of your failure to comply with the directions above.

## 2. Account Information

You agree: (a) when registering the TeleNav Software, to provide TeleNav with true, accurate, current, and complete information about yourself, and (b) to inform TeleNav promptly of any changes to such information, and to keep it true, accurate, current and complete.

## 3. Software License

- Subject to your compliance with the terms of this Agreement, TeleNav hereby grants to you a personal, non-exclusive, non-transferable license (except as expressly permitted below in connection with your permanent transfer of the TeleNav Software license), without the right to sublicense, to use the TeleNav Software (in object code form only) in order to access and use the TeleNav Software. This license shall terminate upon any termination or expiration of this Agreement. You agree that you will use the TeleNav Software only for your personal business or leisure purposes, and not to provide commercial navigation services to other parties.

## 3.1 License Limitations

- **(a)** reverse engineer, decompile, disassemble, translate, modify, alter or otherwise change the TeleNav Software or any part thereof; **(b)** attempt to derive the source code, audio library or structure of the TeleNav Software without the prior express written consent of TeleNav; **(c)** remove from the TeleNav Software, or alter, any of TeleNav's or its suppliers' trademarks, trade names, logos, patent or copyright notices, or other notices or markings; **(d)** distribute, sublicense or otherwise transfer the TeleNav Software to others, except as part of your permanent transfer of the TeleNav Software; or **(e)** use the TeleNav Software in any manner that
  - i. infringes the intellectual property or proprietary rights, rights of publicity or privacy or other rights of any party,
  - ii. violates any law, statute, ordinance or regulation, including but not limited to laws and regulations related to spamming, privacy, consumer and child protection, obscenity or defamation, or

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iii. is harmful, threatening, abusive, harassing, tortuous, defamatory, vulgar, obscene, libelous, or otherwise objectionable; and (f) lease, rent out, or otherwise permit unauthorized access by third parties to the TeleNav Software without advanced written permission of TeleNav.

## 4. Disclaimers

- To the fullest extent permissible pursuant to applicable law, in no event will TeleNav, its licensors and suppliers, or agents or employees of any of the foregoing, be liable for any decision made or action taken by you or anyone else in reliance on the information provided by the TeleNav Software. TeleNav also does not warrant the accuracy of the map or other data used for the TeleNav Software. Such data may not always reflect reality due to, among other things, road closures, construction, weather, new roads and other changing conditions. You are responsible for the entire risk arising out of your use of the TeleNav Software. For example but without limitation, you agree not to rely

on the TeleNav Software for critical navigation in areas where the well-being or survival of you or others is dependent on the accuracy of navigation, as the maps or functionality of the TeleNav Software are not intended to support such high risk applications, especially in more remote geographical areas.

- TELENAV EXPRESSLY DISCLAIMS AND EXCLUDES ALL WARRANTIES IN CONNECTION WITH THE TELENAV SOFTWARE, WHETHER STATUTORY, EXPRESS OR IMPLIED, INCLUDING ALL WARRANTIES WHICH MAY ARISE FROM COURSE OF DEALING, CUSTOM OR TRADE AND INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS WITH RESPECT TO THE TELENAV SOFTWARE.
- Certain jurisdictions do not permit the disclaimer of certain warranties, so this limitation may not apply to you.

## 5. Limitation of Liability

- TO THE EXTENT PERMITTED UNDER APPLICABLE LAW, UNDER NO CIRCUMSTANCES SHALL TELENAV OR ITS LICENSORS AND SUPPLIERS BE LIABLE TO YOU OR TO ANY THIRD PARTY FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR EXEMPLARY DAMAGES (INCLUDING IN EACH CASE, BUT NOT LIMITED TO, DAMAGES FOR THE INABILITY TO USE THE EQUIPMENT OR ACCESS DATA, LOSS OF DATA, LOSS OF BUSINESS, LOSS OF PROFITS, BUSINESS INTERRUPTION OR THE LIKE) ARISING OUT OF THE USE OF OR INABILITY TO USE THE TELENAV SOFTWARE, EVEN IF TELENAV HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING ANY DAMAGES THAT YOU MIGHT INCUR FOR ANY REASON WHATSOEVER (INCLUDING, WITHOUT LIMITATION, ALL DAMAGES REFERENCED HEREIN AND ALL DIRECT OR GENERAL DAMAGES IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR



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OTHERWISE), THE ENTIRE LIABILITY OF TELENAV AND OF ALL OF TELENAV'S SUPPLIERS SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE TELENAV SOFTWARE. SOME STATES AND/OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

## **6. Arbitration and Governing Law**

- You agree that any dispute, claim or controversy arising out of or relating to this Agreement or the TeleNav Software shall be settled by independent arbitration involving a neutral arbitrator and administered by the American Arbitration Association in the County of Santa Clara, California. The arbitrator shall apply the Commercial Arbitration Rules of the American Arbitration Association, and the judgment upon the award rendered by the arbitrator may be entered by any court having jurisdiction. Note that there is no judge or jury in an

arbitration proceeding and the decision of the arbitrator shall be binding upon both parties. You expressly agree to waive your right to a jury trial. This Agreement and performance hereunder will be governed by and construed in accordance with the laws of the State of California, without giving effect to its conflict of law provisions. To the extent judicial action is necessary in connection with the binding arbitration, both TeleNav and you agree to submit to the exclusive jurisdiction of the courts of the County of Santa Clara, California. The United Nations Convention on Contracts for the International Sale of Goods shall not apply.

## **7. Assignment**

- You may not resell, assign, or transfer this Agreement or any of your rights or obligations, except in totality, in connection with your permanent transfer of the TeleNav Software, and expressly conditioned upon the new user of the TeleNav Software agreeing to be bound by the terms and conditions of this

Agreement. Any such sale, assignment or transfer that is not expressly permitted under this paragraph will result in immediate termination of this Agreement, without liability to TeleNav, in which case you and all other parties shall immediately cease all use of the TeleNav Software. Notwithstanding the foregoing, TeleNav may assign this Agreement to any other party at any time without notice, provided the assignee remains bound by this Agreement.

## **8. Miscellaneous**

### **8.1**

This Agreement constitutes the entire agreement between TeleNav and you with respect to the subject matter hereof.

### **8.2**

Except for the limited licenses expressly granted in this Agreement, TeleNav retains all right, title and interest in and to the TeleNav Software, including without limitation all related intellectual property rights. No licenses or other rights which are

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not expressly granted in this Agreement are intended to, or shall be, granted or conferred by implication, statute, inducement, estoppel or otherwise, and TeleNav and its suppliers and licensors hereby reserve all of their respective rights other than the licenses explicitly granted in this Agreement.

## 8.3

By using the TeleNav Software, you consent to receive from TeleNav all communications, including notices, agreements, legally required disclosures or other information in connection with the TeleNav Software (collectively, "Notices") electronically. TeleNav may provide such Notices by posting them on TeleNav's Website or by downloading such Notices to your wireless device. If you desire to withdraw your consent to receive Notices electronically, you must discontinue your use of the TeleNav Software.

## 8.4

TeleNav's or your failure to require performance of any provision shall not affect that party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this Agreement constitute a waiver of any subsequent breach or default or a waiver of the provision itself.

## 8.5

If any provision herein is held unenforceable, then such provision will be modified to reflect the intention of the parties, and the remaining provisions of this Agreement will remain in full force and effect.

## 8.6

The headings in this Agreement are for convenience of reference only, will not be deemed to be a part of this Agreement, and will not be referred to in connection with the construction or interpretation of this Agreement. As used in this Agreement, the words "include" and "including" and variations thereof, will not be deemed to be terms of limitation, but rather will be deemed to be followed by the words "without limitation".

## 9. Other Vendors Terms and Conditions

- The Telenav Software utilizes map and other data licensed to Telenav by third party vendors for the benefit of you and other end users. This Agreement includes end-user terms applicable to these companies (included at the end of this Agreement), and thus your use of the Telenav Software is also subject to such terms. You agree to comply with the following additional terms and conditions, which are applicable to Telenav's third party vendor licensors::

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## 9.1 End User Terms Required by HERE North America, LLC

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IC: 216B-SYNCG3-L

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- (1)** This device may not cause harmful interference, and
- (2)** this device must accept any interference received, including interference that may cause undesired operation.

## WARNING



Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The term "IC" before the radio certification number only signifies that Industry Canada technical specifications were met.

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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