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Introduction

CALIFORNIA Proposition 65 Warning

WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. In addition, 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.

CONGRATULATIONS

Congratulations on acquiring your new Ford. Please take the time to get well acquainted with your vehicle by reading this handbook. The more you know and understand about your vehicle the greater the safety and pleasure you will derive from driving it.

For more information on Ford Motor Company and its products visit the following website:

- In the United States: www.ford.com
- In Canada: www.ford.ca
- In Australia: www.ford.com.au
- In Mexico: www.ford.com.mx

Additional owner information is given in separate publications.

This Owner's Guide describes every option and model variant available and therefore some of the items covered may not apply to your particular vehicle. Furthermore, due to printing cycles it may describe options before they are generally available.

Remember to pass on the Owner's Guide when reselling the vehicle. It is an integral part of the vehicle.

Fuel pump shut-off switch In the event of an accident the safety switch will automatically cut off the fuel supply to the engine. The switch can also be activated through sudden vibration (e.g. collision when parking). To reset the switch, refer to the *Fuel pump shut-off switch* in the *Roadside emergencies* chapter.

SAFETY AND ENVIRONMENT PROTECTION

Warning symbols in this guide

How can you reduce the risk of personal injury and prevent possible damage to others, your vehicle and its equipment? In this guide, answers to such questions are contained in comments highlighted by the warning triangle symbol. These comments should be read and observed.

Warning symbols on your vehicle

When you see this symbol, it is imperative that you consult the relevant section of this guide before touching or attempting adjustment of any kind.



Protecting the environment

We must all play our part in protecting the environment. Correct vehicle usage and the authorized disposal of waste cleaning and lubrication materials are significant steps towards this aim. Information in this respect is highlighted in this guide with the tree symbol.



BREAKING-IN YOUR VEHICLE

There are no particular guidelines for breaking-in your vehicle. During the first 1,600 km (1,000 miles) of driving, vary speeds frequently. This is recommended to give the moving parts a chance to break in.

SPECIAL NOTICES

Emission warranty

The New Vehicle Limited Warranty includes Bumper-to-Bumper Coverage, Safety Restraint Coverage, Corrosion Coverage, and 7.3L Power Stroke Diesel Engine Coverage. In addition, your vehicle is eligible for Emissions Defect and Emissions Performance Warranties. For a detailed description of what is covered and what is not covered, refer to the *Warranty Guide* that is provided to you along with your Owner's Guide.

Special instructions

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

Introduction

Please read the section *Air bag* in the *Seating and safety restraints* chapter. 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 used in front of a passenger side air bag unless the air bag can be and is turned OFF.

Snowplowing

Ford recommends the following specifications for low speed, personal use snow removal:

- F-150 4x4 (except F-150 Supercrew, Lightning and Harley-Davidson models)
- 5.4L engine
- Heavy-duty service package
- Super engine cooling
- Heavy-duty front suspension package
- Automatic transmission with auxiliary automatic transmission fluid cooling
- All-terrain tires
- Limited slip and optional axle ratio.

Do not install a snowplow and plow with your vehicle until it has been driven at least 800 km (500 miles).

F150 SuperCrew, F150 5.4L Supercharged "Lightning" and Harley-Davidson F-150 Owners: Snowplowing

Your vehicle is not recommended for snowplowing. Ford makes no representation as to the suitability of your vehicle for snowplowing, in particular regarding the potential for exceeding vehicle weight limits, airbag (SRS) deployment sensitivity, vehicle crash integrity, or powertrain durability. The Snowplow Package Option is not available.

Using your vehicle as an ambulance



Do not use this vehicle as an ambulance.

Your vehicle is not equipped with the Ford Ambulance Preparation Package.

Notice to owners of pickup trucks and utility type vehicles



Utility vehicles have a significantly higher rollover rate than other types of vehicles.

Before you drive your vehicle, please read this Owner's Guide carefully. Your vehicle is not a passenger car. As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of vehicle control, vehicle rollover, personal injury or death.

Be sure to read *Driving off road* in the *Driving* chapter.

Notice to owners of natural gas fueled vehicles

Before you drive your vehicle, be sure to read the *Dedicated Natural Gas Vehicle* supplement. This book contains important operation and maintenance information.

Notice to owners of F150 5.4L Supercharged "Lightning" vehicles

Before you drive your vehicle, be sure to read the "SVT Lightning Truck Owner's Guide Supplement." This book contains important operation and maintenance information.

Notice to owners of the Harley-Davidson F-150

Note: Your vehicle is not designed to be operated off-road.

The undercab chrome bars are for decorative purposes only. Do not step on these bars to enter or exit the vehicle.

Harley-Davidson F-150 vehicles are equipped with high performance tires. When first driving the vehicle after is has been parked, you may experience a temporary ride disturbance. This is a characteristic of the tires used on the Harley-Davidson vehicles and should be no reason for concern. The condition should correct itself within 10–15 miles of driving.

Introduction

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

Vehicle Symbol Glossary

Safety Alert		See Owner's Guide	
Fasten Safety Belt		Air Bag-Front	
Air Bag-Side		Child Seat	
Child Seat Installation Warning		Child Seat Lower Anchor	
Child Seat Tether Anchor		Brake System	
Anti-Lock Brake System		Brake Fluid - Non-Petroleum Based	
Traction Control		AdvanceTrac	
Master Lighting Switch		Hazard Warning Flasher	
Fog Lamps-Front		Fuse Compartment	
Fuel Pump Reset		Windshield Wash/Wipe	
Windshield Defrost/Demist		Rear Window Defrost/Demist	

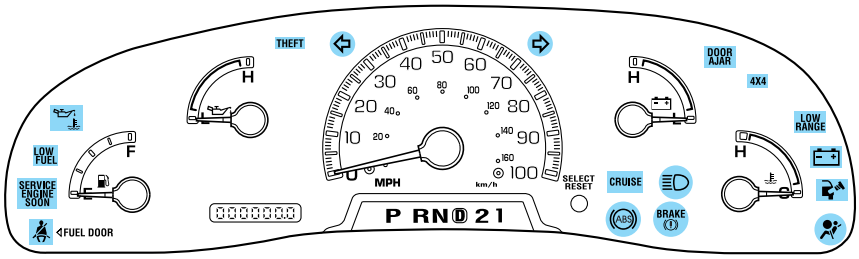
Vehicle Symbol Glossary

Power Windows Front/Rear		Power Window Lockout	
Child Safety Door Lock/Unlock		Interior Luggage Compartment Release Symbol	
Panic Alarm		Engine Oil	
Engine Coolant		Engine Coolant Temperature	
Do Not Open When Hot		Battery	
Avoid Smoking, Flames, or Sparks		Battery Acid	
Explosive Gas		Fan Warning	
Power Steering Fluid		Maintain Correct Fluid Level	
Emission System/Check Engine/Service Engine Soon		Engine Air Filter	
Passenger Compartment Air Filter		Jack	
Check fuel cap		Low tire warning	

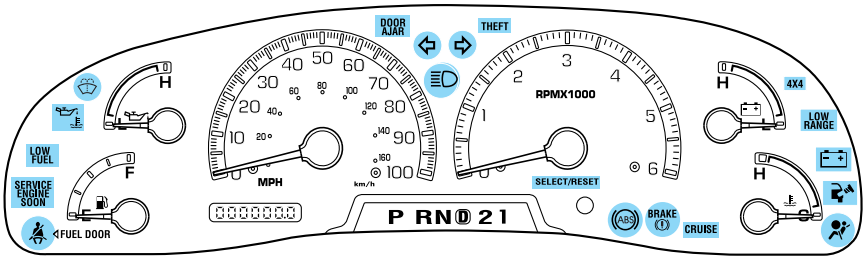
Instrument Cluster

WARNING LIGHTS AND CHIMES

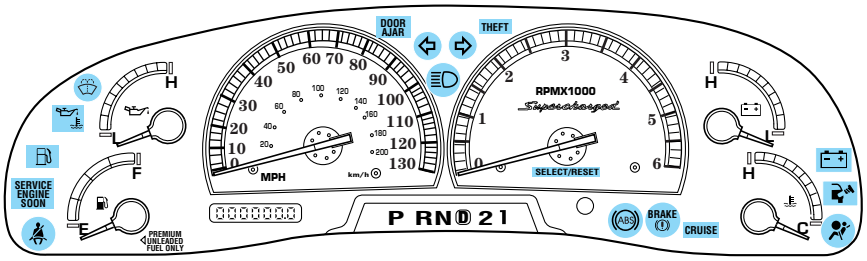
Standard instrument cluster



Optional instrument cluster



Harley-Davidson instrument cluster



Warning lights and gauges can alert you to a vehicle condition that may become serious enough to cause expensive repairs. A warning light may illuminate when a problem exists with one of your vehicle's functions.

Many lights will illuminate when you start your vehicle to make sure the bulb works. **If any light remains on after starting the vehicle, have the respective system inspected immediately.**

Service engine soon



Illuminates briefly to ensure the system is functional. If it comes on after the engine is started, one of the engine's emission control systems may be malfunctioning. The light may illuminate without a driveability concern being noted. The vehicle will usually be drivable and will not require towing.

Light turns on solid:

Temporary malfunctions may cause the light to illuminate. Examples are:

1. The vehicle has run out of fuel.

2. Poor fuel quality or water in the fuel.

3. The fuel cap may not have been properly installed and securely tightened.

These temporary malfunctions can be corrected by filling the fuel tank with high quality fuel of the recommended octane and/or properly installing and securely tightening the fuel cap. After three driving cycles without these or any other temporary malfunctions present, the light should turn off. (A driving cycle consists of a cold engine startup followed by mixed city/highway driving.) No additional vehicle service is required.

If the light remains on, have your vehicle serviced at the first available opportunity.

Light is blinking:

Engine misfire is occurring which could damage your catalytic converter. You should drive in a moderate fashion (avoid heavy acceleration and deceleration) and have your vehicle serviced at the first available opportunity.

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.

Check fuel cap



Illuminates when the fuel cap is not installed correctly. Check the fuel cap for proper installation. When the fuel filler cap is properly re-installed, the light(s) will turn off after a period of normal driving. Continuing to operate the vehicle with the check fuel cap light on, or a mis-installed fuel cap can activate the *Service Engine Soon/Check Engine* warning light.

It may take a long period of time for the system to detect an improperly installed fuel filler cap.

For more information, refer to *Fuel filler cap* in the *Maintenance and specifications* chapter.

Brake system warning



To confirm the brake system warning light is functional, it will momentarily illuminate when the ignition is turned to the ON position (alternatively for some vehicles when the ignition is moved from the ON position to START position, the light will momentarily illuminate prior to reaching the START position). It also illuminates if the parking brake is engaged. If the brake system warning light does not illuminate as described, seek service immediately. Illumination after the parking brake is released indicates low brake fluid level or a brake system malfunction and the brake system should be serviced immediately by a qualified technician.

Refer to *Brakes* in the *Driving* chapter for more information.

Anti-lock brake system (ABS)



To confirm the anti-lock brake system (ABS) warning light is functional it will momentarily illuminate when the ignition is turned to the ON position (alternatively for some vehicles when the ignition is moved from the ON position to the START position, the light will momentarily illuminate just prior to reaching the START position). If the light remains on, continues to flash or fails to illuminate, have the ABS serviced immediately. If the ABS light remains on, it means the anti-lock brake system has

malfunctioned and is disabled, however, the normal brake system will still function unless the brake warning light also remains illuminated and parking brake is off. Refer to *Brakes* in the *Driving* chapter for more information.

Safety belt

Illuminates to remind you to fasten your safety belts. For more information, refer to the *Seating and safety restraints* chapter.



Air bag readiness

Illuminates to confirm that the air bags (front or side) are operational. If the light fails to illuminate, continues to flash or remains on, have the system serviced immediately.



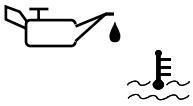
Charging system

Illuminates when the battery is not charging properly.



Oil pressure/Engine coolant

Illuminates when the engine coolant temperature is above the normal range or the engine oil pressure is outside normal range. Check the engine oil and coolant level refer to *Adding engine oil* and *Adding coolant* in the *Maintenance and specifications chapter.*



Low fuel

Illuminates when the fuel level in the fuel tank is at, or near, empty (refer to *Fuel gauge* in this chapter for more information).

LOW FUEL

Low washer fluid (if equipped)

Illuminates when the windshield washer fluid is low.



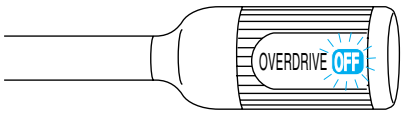
Speed control (if equipped)

Illuminates when the speed control is activated.

CRUISE

Transmission control indicator light (TCIL)

Illuminates when the overdrive function of the transmission has been turned OFF using the Transmission Control Switch (TCS). Refer to the *Driving* chapter for transmission function and operation.



If the light does not come on or if the light flashes steadily, have your vehicle serviced as soon as possible, damage to the transmission could occur.

Turn signals

Illuminates when the turn signals or the hazard lights are turned on. If the lights stay on continuously or flash faster, check for a burned-out bulb.



High beams

Illuminates when the high beam headlamps are turned on.



Door ajar

Illuminates when any door is open (or not fully closed).

DOOR AJAR

Anti-theft system (if equipped)

Refer to *SecuriLock™ passive anti-theft system* in the *Locks and Security* chapter.

THEFT

Four wheel drive low (if equipped)

Illuminates when four-wheel drive low is is engaged. If the light continues to flash have the system serviced.

LOW RANGE

Four wheel drive indicator (if equipped)

Illuminates when the four-wheel drive is engaged. If the light continues to flash have the system serviced.

4x4

Safety belt warning chime

Sounds to remind you to fasten your safety belts.

BeltMinder™ chime

Sounds intermittently to remind you to fasten your safety belts.

Supplemental restraint system (SRS) warning chime

Sounds when a malfunction in the supplemental restraint system (front or side airbags) has been detected. Have the supplemental restraint system inspected immediately.

Headlamps on warning chime

Sounds when the headlamps or parking lamps are on, the key is removed from the ignition and the driver's door is opened.

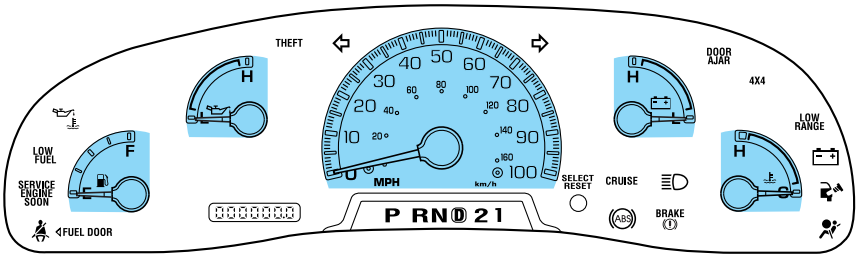
Key-in-ignition warning chime

Sounds when the key is left in the ignition and the driver's door is opened.

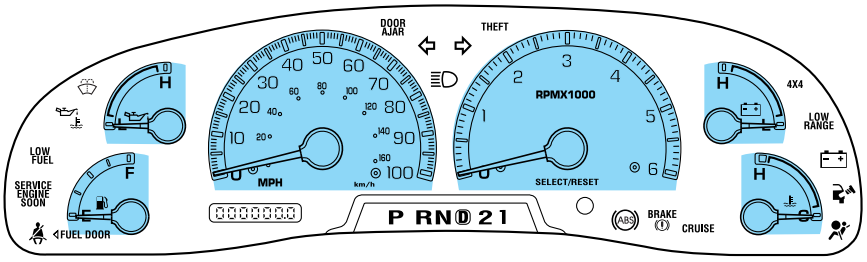
Instrument Cluster

GAUGES

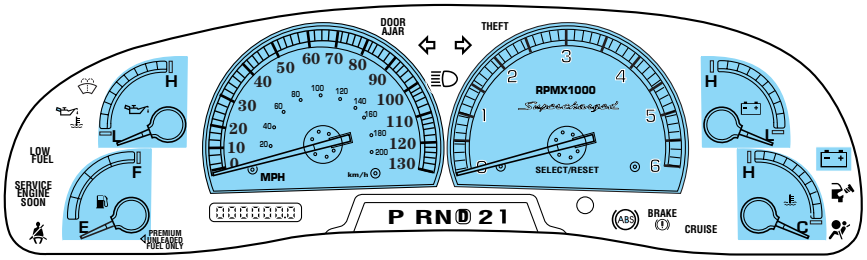
Standard instrument cluster gauges



Optional instrument cluster gauges

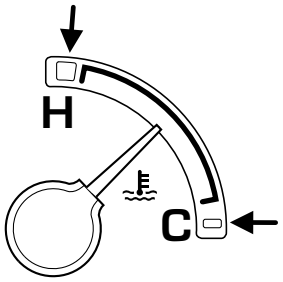


Harley-Davidson instrument cluster gauges



Engine coolant temperature gauge

Indicates the temperature of the engine coolant. At normal operating temperature, the needle remains within the normal area (the area between the “H” and “C”). If it enters the red section, the engine is overheating. Stop the vehicle as soon as safely possible, switch off the engine immediately and let the engine cool. Refer to *Engine coolant* in the *Maintenance and specifications* chapter.

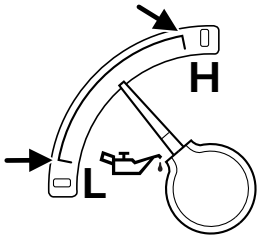


Never remove the coolant reservoir cap while the engine is running or hot. Steam and scalding liquid from a hot cooling system can burn you badly.

This gauge indicates the temperature of the engine coolant, not the coolant level. If the coolant is not at its proper level the gauge indication will not be accurate. If the gauge enters the red section, the oil pressure/engine coolant and *Check Engine/Service Engine Soon* indicators illuminate, refer to *What you should know about fail-safe cooling* in the *Maintenance and specifications* chapter.

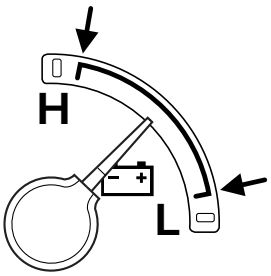
Engine oil pressure gauge

Indicates engine oil pressure. At normal operating temperature, the needle will be in the normal range (the area between the “L” and “H”); if the needle goes below the normal range, stop the vehicle as soon as safely possible and switch off the engine immediately. Check the oil level. Add oil if needed (refer to *Engine oil* in the *Maintenance and specifications* chapter). If the oil level is correct, have your vehicle checked at your dealership or by a qualified technician.



Battery voltage gauge

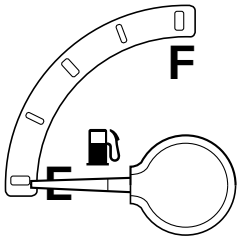
Indicates battery voltage. If the pointer moves and stays outside the normal operating range, have the vehicle's electrical system checked as soon as possible.



Fuel gauge

Displays approximately how much fuel is in the fuel tank. The fuel gauge may vary slightly when the vehicle is in motion or on a grade.

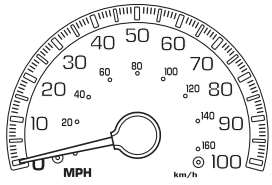
When refueling the vehicle from empty indication, the amount of fuel that can be added will be less than the advertised capacity due to the reserve fuel.



A minimum of 22.2 L (six gallons) must be added to the fuel tank in order for the gauge to instantaneously update. If less than six gallons is the change, the gauge will take between five to twenty minutes to update.

Speedometer

Indicates the current vehicle speed.

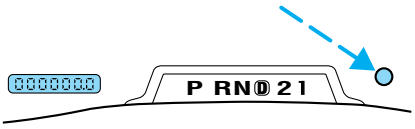


Odometer

Registers the total kilometers (miles) of the vehicle.

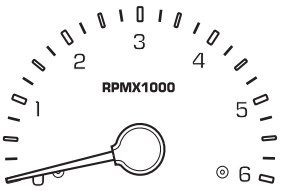


Trip odometer



Registers the kilometers (miles) of individual journeys. Press and release the reset button until a 'T' appears in the display (this represents the trip mode). Press and hold the button for three seconds to reset.

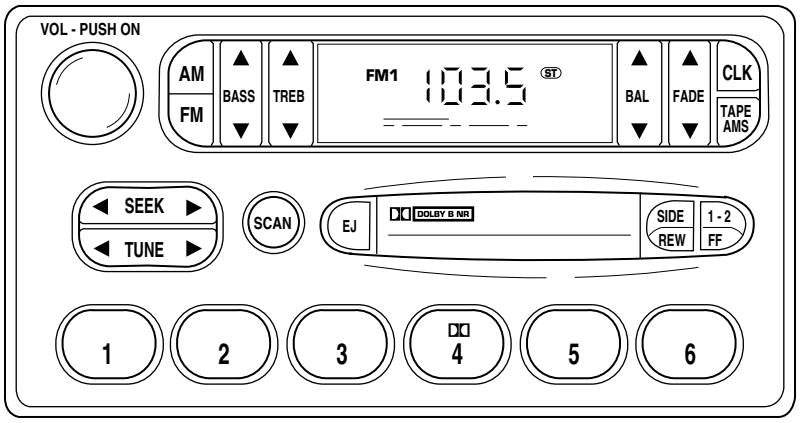
Tachometer (if equipped)



Indicates the engine speed in revolutions per minute.

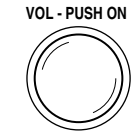
Driving with your tachometer pointer at the top of the scale may damage the engine.

AM/FM STEREO CASSETTE



Volume/power control

Press the control to turn the audio system on or off.



Turn the control to raise or lower volume.



If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

Bass adjust

The bass adjust control allows you to increase or decrease the audio system's bass output.



Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.



Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers



Speaker fade adjust

Speaker sound can be adjusted between the front and rear speakers.

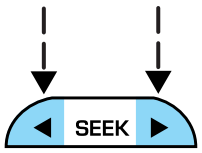


Seek function

The seek function control works in radio mode.

Seek function in radio mode

- Press ◀ to find the next listenable station down the frequency band.
- Press ▶ to find the next listenable station up the frequency band.



Scan function

The scan function works in radio mode.

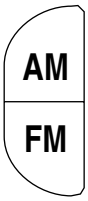


Scan function in radio mode

Press the SCAN control to hear a brief sampling of all listenable stations on the frequency band. Press the SCAN control again to stop the scan mode.

AM/FM select

The AM/FM select control works in radio and tape modes.



AM/FM select in radio mode

This control allows you to select AM or FM frequency bands. Press the AM control to select from AM selections, and press the FM control to select from FM1 or FM2 memory preset stations.

AM/FM select in tape mode

Press this control to stop tape play and begin radio play.

Radio station memory preset

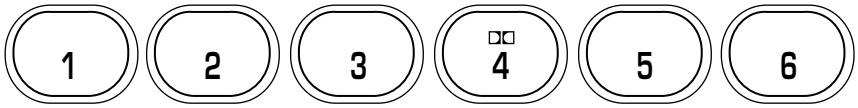
The radio is equipped with six station memory preset controls. These controls can be used to select up to six preset AM stations and twelve FM stations (six in FM1 and six in FM2).

Setting memory preset stations

1. Select the frequency band with the AM or the FM select control.

2. Select a station. Refer to *Tune adjust* or *Seek function* for more information on selecting a station.

3. Press and hold a memory preset control until the sound returns, indicating the station is held in memory on the control you selected.



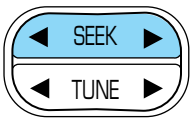
Setting the clock

Press CLK to toggle between listening frequencies and clock mode while in radio mode.

To set the hour, press and hold the CLK control and press the SEEK control:



- ◀ to decrease hours and
- ▶ to increase hours.



To set the minute, press and hold the CLK control and press the TUNE control:



- ◀ to decrease minutes and
- ▶ to increase minutes.



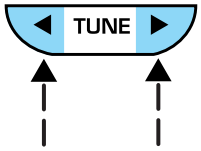
The CLK control will allow you to switch between media display mode (radio station, stereo information, etc.) and clock display mode (time).

When in clock mode, the media information will display for 10 seconds, when the radio is turned on, and then revert to clock information. Any time that the media is changed, (new radio station, etc.), the media information will again display for 10 seconds before reverting back to the clock. In media mode, the media information will always be displayed.

Tune adjust

The tune control works in radio mode.

Tune adjust in radio mode



- Press ◀ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.
- Press ▶ to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Tape select

- To enter tape mode while in radio mode, press the TAPE AMS control.



Automatic Music Search

The Automatic Music Search feature allows you to quickly locate the beginning of the tape selection being played or to skip to the next selection.



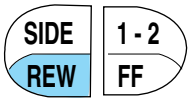
To activate the feature, momentarily depress the TAPE AMS button. Then, press either REW (for the beginning of the current selection) or FF (to advance to the next selection). The tape deck stops and returns to play mode when the AMS circuit senses a blank section on the tape.

In order to ensure proper operation of the AMS feature, the tape MUST have a blank section of at least four seconds duration between programs.

Rewind

The rewind control works in tape mode.

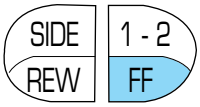
To rewind in tape mode, press the REW control.



Fast forward

The fast forward control works in tape mode.

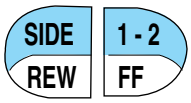
To fast forward in tape mode, press the FF control.



In the tape mode, tape direction will automatically reverse when the end of the tape is reached.

Tape direction select

Press SIDE and 1–2 at the same time to play the alternate side of a tape.



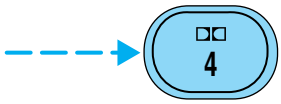
Eject function

Press the control to stop and eject a tape.



Dolby® noise reduction

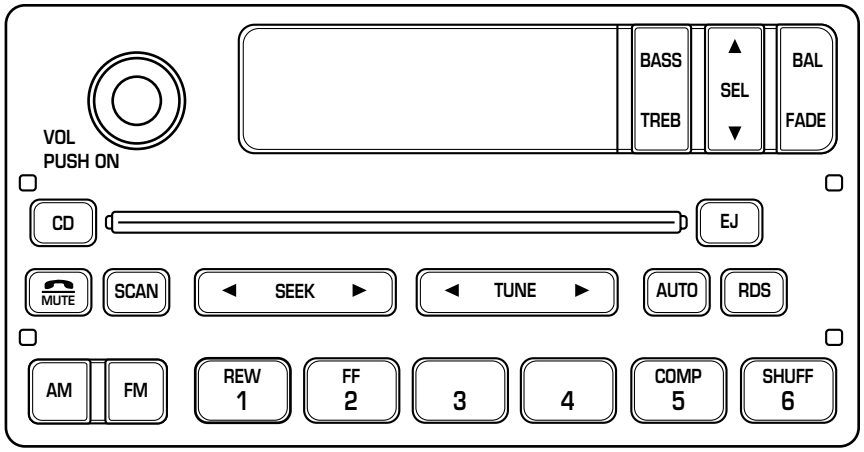
Dolby® noise reduction operates only in tape mode. Dolby® noise reduction reduces the amount of hiss and static during tape playback.



Press the control to activate (and deactivate) Dolby® noise reduction.

Dolby® noise reduction is manufactured under license from Dolby® Laboratories Licensing Corporation. “Dolby®” and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.

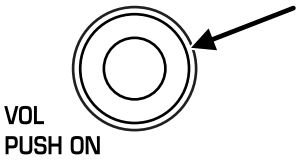
PREMIUM AM/FM STEREO/SINGLE CD RADIO



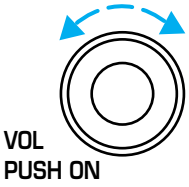
Your audio system is equipped with selective lighting, a unique lighting strategy. This lighting feature is operable when the headlamps are illuminated. During the operation of any selected mode, lighting for the individual function controls will either illuminate or turn off. Those controls which have a function for the specific mode of operation selected will be lit, while the controls which have no function for that mode will be turned off.

Volume/power control

Press the control to turn the audio system on or off.



Turn the control to raise or lower volume.



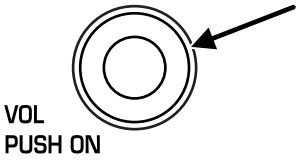
If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

Speed sensitive volume (if equipped)

With this feature, radio volume changes automatically and slightly with vehicle speed to compensate for road and wind noise.

The recommended level for speed sensitive volume is from level 1 through level 3. Level 0 turns the speed sensitive volume off and level 7 is the maximum setting.

With the radio on, press and hold the volume control for five seconds, then press:

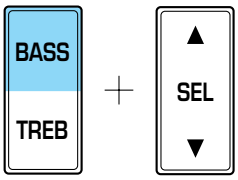


- ▲ to increase volume compensation
- ▼ to decrease or shut off the volume compensation



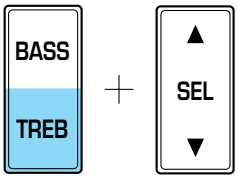
Bass adjust

The bass adjust control allows you to increase or decrease the audio system’s bass output.



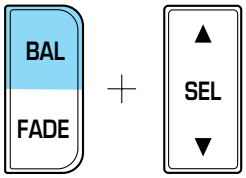
Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.



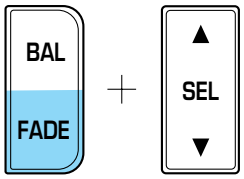
Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers.



Speaker fade adjust

Speaker sound can be adjusted between the front and rear speakers.



Seek function

The seek function control works in radio, CD and CD changer mode (if equipped).

Seek function in radio mode

- Press ◀ to find the next listenable station down the frequency band.



- Press ▶ to find the next listenable station up the frequency band.

Seek function for CD or CD changer (if equipped)

- Press ◀ to seek to the previous track of the current disc. If a selection has been playing for



three seconds or more and you press ◀, the CD changer will replay that selection from the beginning.

- Press ▶ to seek forward to the next track of the current disc. After the last track has been completed, the first track of the current disc will automatically replay.

Scan function

The scan function works in radio, CD and CD changer mode (if equipped).



Scan function in radio mode

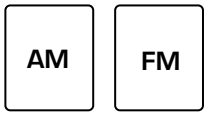
Press the SCAN control to hear a brief sampling of all listenable stations on the frequency band. Press the SCAN control again to stop the scan mode.

Scan function in CD mode

Press the SCAN control to hear a short sampling of all selections on the CD (The CD scans in a forward direction, wrapping back to the first track at the end of the CD.). To stop on a particular selection, press the control again.

AM/FM select

The AM/FM select control works in radio, CD and CD changer modes (if equipped).



AM/FM select in radio mode

This control allows you to select AM or FM frequency bands. Press the control to switch between AM, FM1 or FM2 memory preset stations.

AM/FM select in CD or CD changer mode (if equipped)

Press this control to stop CD play and begin radio play.

Radio station memory preset

The radio is equipped with six station memory preset controls. These controls can be used to select up to six preset AM stations and twelve FM stations (six in FM1 and six in FM2).

Setting memory preset stations

1. Select the frequency band with the AM/FM select control.

2. Select a station. Refer to *Tune adjust* or *Seek function* for more information on selecting a station.
3. Press and hold a memory preset control until the sound returns, indicating the station is held in memory on the control you selected.



Autoset memory preset

Autoset allows you to set strong radio stations without losing your original manually set preset stations. This feature is helpful on trips when you travel between cities with different radio stations.

Starting autoset memory preset

1. Select a frequency using the AM/FM select controls.
2. Press the AUTO control.



3. When the first six strong stations are filled, the station stored in memory preset control 1 will start playing.

If there are less than six strong stations available on the frequency band, the remaining memory preset controls will all store the last strong station available.

To deactivate autoset and return to your audio system's manually set memory stations, press the AUTO control again.

Setting the clock

Press the RDS control until SELECT HOUR or SELECT MINS is displayed.



Use the SEL control to manually set the time.



- Press ▲ to increase hours/minutes.
- Press ▼ to decrease hours/minutes.

Tune adjust

The tune control works in radio or CD changer mode (if equipped).

Tune adjust in radio mode



- Press ◄ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.
- Press ► to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Tune adjust for CD changer



- Press ◄ to select the previous disc in the CD changer. (Play will begin on the first track of the disc unless the CD changer is in shuffle mode.) Refer to *Shuffle feature* for more information. Hold the control to continue reversing through the disc.
- Press ► to select the next disc in the CD changer. Hold the control to fast-forward through the remaining discs.

CD select

To begin CD play (if CD[s] are loaded), press the CD control. The first track of the disc will begin playing. After that, CD play will begin where it stopped last. Press the CD control again to toggle between CD and CD changer mode (if equipped).

CD units are designed to play commercially pressed 12 cm (4.75 in) 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. Irregular shaped CDs, CDs with a scratch protection film attached, and CDs with homemade paper (adhesive) labels should not be inserted into the CD player. The label may peel and cause the CD to become jammed. It is recommended that homemade CDs be identified with permanent felt tip marker rather than adhesive labels. Ball point pens may damage CDs. Please contact your dealer for further information.

Rewind

The rewind control works in CD mode.



- In CD mode, pressing the REW control for less than three seconds results in slow rewind. Pressing the control for more than three seconds results in fast rewind.

Fast forward

The fast forward control works in CD mode.



- In CD mode, pressing the control for less than three seconds results in slow forward action. Pressing the control for more than three seconds results in fast forward action.

Eject function

Press the control to stop and eject a CD.



Compression feature (if equipped)

Compression adjust brings soft and loud CD passages together for a more consistent listening level.



Press the COMP control to activate and deactivate compression adjust.

Shuffle feature (if equipped)

The shuffle feature operates in CD changer mode and plays all tracks on the current disc in random order. The shuffle feature continues to the next disc after all tracks are played.



Press the SHUFFLE control to start this feature. Random order play will continue until the SHUFFLE control is pressed again.

Mute mode

Press the control to mute the playing media. Press the control again to return to the playing media.



Radio data system (RDS) feature

This feature allows your audio system to receive station identification or program type from RDS-equipped FM radio station.



The Federal Communications Commission (FCC) and the Canadian Radio and Telecommunications Commission (CRTC) recommend FM radio broadcasters to use RDS technology to transmit information. FM radio stations are independently operated and individually elect to use RDS technology to transmit station ID and program type as desired.

Press the RDS control until RDS ON or RDS OFF appear in the display. Use the SEL control to enable (ON) or disable (OFF) the feature. Once activated, you can choose from the following items:

Traffic

- Press the RDS control until TRAFFIC is displayed.



- Use the SEL control to select ON or OFF. With the feature on, use the SEEK or SCAN control to find a radio station broadcasting a traffic report (if it is broadcasting RDS data).



Program type

- Press the RDS control until FIND program type is displayed.



- Use the SEL control to select the program type. With the feature on, use the SEEK or SCAN control to find the desired program type from the following selections:



- Classic
- Country
- Info
- Jazz
- Oldies
- R & B
- Religious
- Rock
- Soft
- Top 40

Show

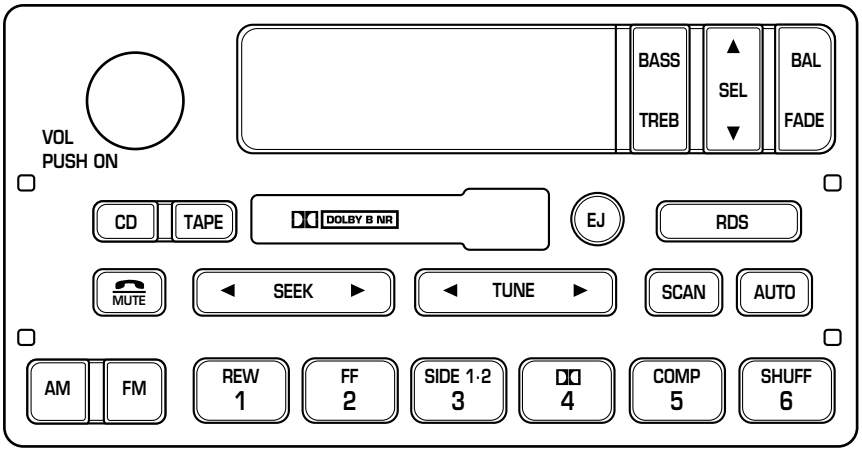
- With RDS activated, press the RDS control until SHOW is displayed.



- Use the SEL control to select TYPE, NAME or NONE.



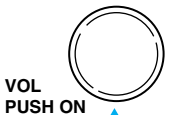
PREMIUM AM/FM STEREO/CASSETTE (CD CHANGER COMPATIBLE)



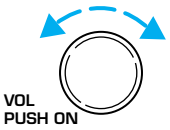
Your audio system is equipped with selective lighting, a unique lighting strategy. This lighting feature is operable when the headlamps are illuminated. During the operation of any selected mode, lighting for the individual function controls will either illuminate or turn off. Those controls which have a function for the specific mode of operation selected will be lit, while the controls which have no function for that mode will be turned off.

Volume/power control

Press the control to turn the audio system on or off.



Turn the control to raise or lower volume.



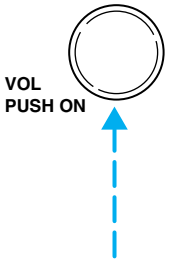
If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

Speed sensitive volume (if equipped)

With this feature, radio volume automatically changes slightly with vehicle speed to compensate for road and wind noise.

The recommended level for speed sensitive volume is from level 1 through level 3. Level 0 turns the speed sensitive volume off and level 7 is the maximum setting.

With the radio on, press and hold the volume control for five seconds, until the display reads SPEED VOL, then press:



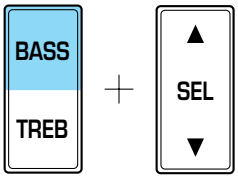
- ▲ to increase volume compensation
- ▼ to decrease or shut off the volume compensation



Bass adjust

The bass adjust control allows you to increase or decrease the audio system’s bass output.

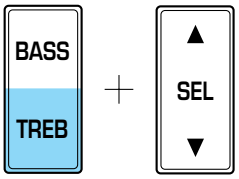
Press the BASS control. Use the SEL control to increase or decrease the amount of bass.



Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.

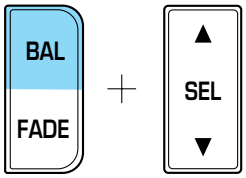
Press the TREB control. Use the SEL control to increase or decrease the amount of treble.



Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers.

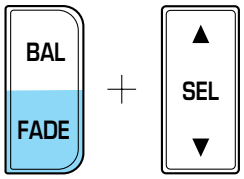
Press the BAL control. Use the SEL control to adjust the sound between the speakers.



Speaker fade adjust

Speaker sound can be adjusted between the front and rear speakers.

Press the FADE control. Use the SEL control to adjust the sound between the front and rear speakers.



Seek function

The seek function control works in radio, tape or CD mode (if equipped).

Seek function in radio mode

- Press ◄ to find the next listenable station down the frequency band.



- Press ► to find the next listenable station up the frequency band.

Seek function in tape mode

- Press ◄ to listen to the previous selection on the tape or return to the beginning of the current selection.



- Press ► to listen to the next selection on the tape.

Seek function for CD changer

- Press ◄ to seek to the previous track of the current disc. If a selection has been playing for three seconds or more and you press ◄ , the CD changer will replay that selection from the beginning.



- Press ► to seek forward to the next track of the current disc. After the last track has been completed, the first track of the current disc will automatically replay.

Scan function

The scan function works in radio, tape or CD mode (if equipped).



Scan function in radio mode

Press the SCAN control to activate scan mode and to hear a brief sampling of all listenable stations on the frequency band.

Press the SCAN control again to disengage scan mode.

Scan function in tape mode

Press the SCAN control to hear a short sampling of all selections on the tape. The tape will scan in a forward direction. At the end of the tape's first side, direction automatically reverses to the opposite side of the tape.

To stop on a particular selection, press the SCAN control again.

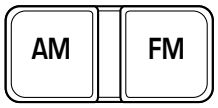
Scan function in CD mode

Press the SCAN control to hear a short sampling of all selections on the CD. The CD will scan in a forward direction, wrapping back to the first track at the end of the CD.

To stop on a particular selection, press the control again.

AM/FM select

The AM/FM select control works in radio, tape and CD modes (if equipped).



AM/FM select in radio mode

The AM/FM control allows you to select AM or FM frequency bands.

Press the control to toggle between AM, FM1 or FM2 memory preset stations.

AM/FM select in tape mode

Press this control to stop tape play and begin radio play.

AM/FM select in CD mode

Press this control to stop CD play and begin radio play.

Radio station memory preset

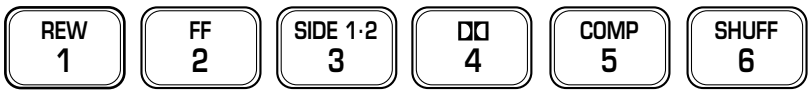
The radio is equipped with six station memory preset controls. These controls can be used to select up to six preset AM stations and twelve FM stations (six in FM1 and six in FM2).

Setting memory preset stations

1. Select the frequency band with the AM/FM select control.

2. Select a station. Refer to *Tune adjust* or *Seek function* for more information on selecting a station.

3. Press and hold a memory preset control until the sound returns, indicating the station is held in memory on the control you selected.



Autoset memory preset

Autoset allows you to set strong radio stations without losing your original manually set preset stations. This feature is helpful on trips when you travel between cities with different radio stations.

Starting autoset memory preset

1. Select a frequency using the AM/FM select controls.
2. Press the AUTO control.
3. When the first six strong stations are filled, the station stored in memory preset control 1 will start playing.



If there are less than six strong stations available on the frequency band, the remaining memory preset controls will all store the last strong station available.

To deactivate autoset and return to your audio system's manually set memory stations, press the control again.

Setting the clock with radio data system (RDS) feature

Press the RDS control until SELECT HOUR or SELECT MINS is displayed.



Use the SEL control to manually set the time.

- Press ▲ to increase hours/minutes.
- Press ▼ to decrease hours/minutes.



Tune adjust

The tune control works in radio or CD mode (if equipped).

Tune adjust in radio mode

- Press ◄ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.



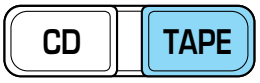
- Press ► to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Tune adjust for CD changer



- Press ◄ to select the previous disc in the CD changer. (Play will begin on the first track of the disc unless the CD changer is in shuffle mode.) Refer to *Shuffle feature* for more information. Hold the control to continue reversing through the discs.
- Press ► to select the next disc in the CD changer. Hold the control to fast-forward through the remaining discs.

Tape/CD select



- To begin tape play (with a tape loaded into the audio system) while in the radio or CD mode, press the TAPE control. Press the button during rewind or fast forward to stop the rewind or fast forward function.



- To begin CD play (if equipped with CD changer), ensure that the CDs are loaded. Press the CD control. The first track of the disc will begin playing. After that, CD play will begin where it stopped last.

Rewind



The rewind control works in tape and CD modes.

- In tape mode, radio play will continue until rewind is stopped (with the TAPE control) or the beginning of the tape is reached.
- In CD mode, pressing the REW control for less than three seconds results in slow rewind. Pressing the control for more than three seconds results in fast rewind.

Fast forward



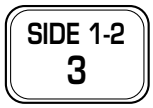
The fast forward control works in tape and CD modes (if equipped).

- In the tape mode, tape direction will automatically reverse when the end of the tape is reached.

- In CD mode, pressing the control for less than three seconds results in slow forward action. Pressing the control for more than three seconds results in fast forward action.

Tape direction select

Press SIDE 1–2 to play the alternate side of a tape.



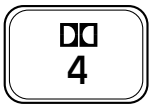
Eject function

Press the control to stop and eject a tape.



Dolby® noise reduction

Dolby® noise reduction operates only in tape mode. Dolby® noise reduction reduces the amount of hiss and static during tape playback.



Press the DD control to activate (and deactivate) Dolby® noise reduction.

The Dolby® noise reduction system is manufactured under license from Dolby Laboratories Licensing Corporation. Dolby® and the double-D symbol are registered trademarks of Dolby® Laboratories Licensing Corporation.

Compression feature

Compression adjust brings soft and loud CD passages together for a more consistent listening level.

Press the COMP control to activate and deactivate compression adjust.



The effect of the feature varies with the music content.

Shuffle feature

The shuffle feature operates in CD mode and plays all tracks on the current disc in random order. If equipped with the CD changer, the shuffle feature continues to the next disc after all tracks are played.



Press the SHUFFLE control to start this feature. Random order play will continue until the SHUFFLE control is pressed again.

Mute mode

Press the control to mute the playing media. Press the control again to return to the playing media.



Radio data system (RDS) feature

This feature allows your audio system to receive station identification or program type from RDS-equipped FM radio stations.

The Federal Communications Commission (FCC) and the Canadian Radio and Telecommunications Commission (CRTC) recommend FM radio broadcasters to use RDS technology to transmit information. FM radio stations are independently operated and individually elect to use RDS technology to transmit station ID and program type as desired.

Press the RDS control until RDS ON or RDS OFF appears in the display.



Use the SEL control to enable (ON) or disable (OFF) the feature. With the RDS activated, press the SEL control to scroll through the following selections:



Traffic

- Press the RDS control until TRAFFIC is displayed.



- Use the SEL control to select ON or OFF. With the feature on, use the SEEK or SCAN control to find a radio station broadcasting a traffic report (if it is broadcasting RDS data).



Traffic information is not available in most U.S. markets.

Program type

- Press the RDS control until the FIND program type is displayed.



- Use the SEL control to select the program type. With the feature on, use the SEEK or SCAN control to find the desired program type from the following selections:



- Classic
- Country
- Info
- Jazz
- Oldies
- R & B
- Religious
- Rock
- Soft
- Top 40

Show

- With RDS activated, press the RDS control until SHOW is displayed.

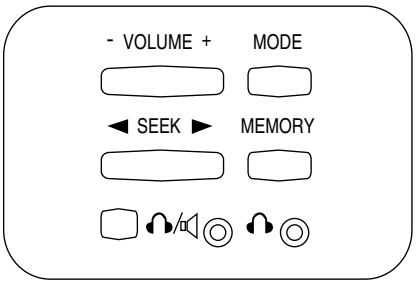


- Use the SEL control to select TYPE (the display shows the program type), NAME (the display shows the call letters of the station) or NONE.



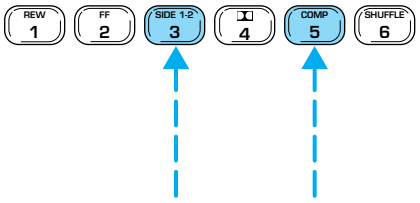
HARLEY-DAVIDSON REAR SEAT CONTROLS (IF EQUIPPED)

The rear seat controls allow the middle seat passengers to operate the radio, tape, CD or CD changer (if equipped).



To turn on the rear seat controls, press the memory preset controls 3 and 5 at the same time. The will appear in the display.

Pressing 3 and 5 at the same time again will turn the rear seat controls off.

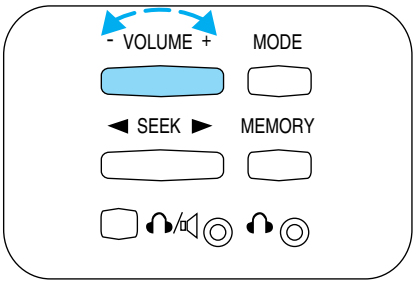


If there is a discrepancy between the rear seat and the front audio controls, (such as both trying to listen to the same playing media), the front audio system will receive the desired selection.

ADJUSTING THE VOLUME

Press the + control to increase volume.

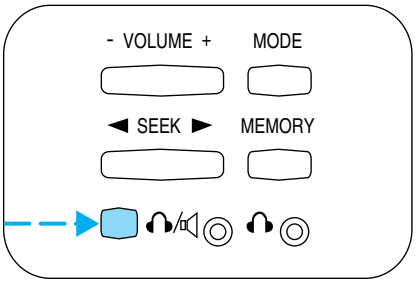
Press the - control to decrease volume.



From the rear seat controls, volume control can be set no higher than the current radio setting unless the speakers are turned off. Refer to *Turning speakers on and off.*

TURNING THE SPEAKERS ON AND OFF

Press to turn all speakers on or off.



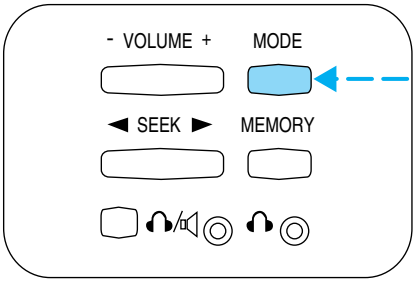
USING HEADPHONES

Plug a 3.5 mm headphone (not included) into the jack. Press the speaker on/off control to operate the headphones.

The speakers will cut out once the speaker on/off control is pressed. Press the control again to deactivate the headphones.

MODE SELECT

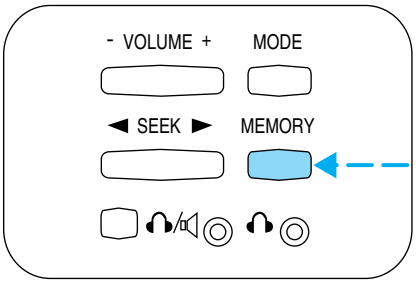
Push the MODE control to toggle between AM, FM1, FM2, tape, CD or CD changer (if equipped).



MEMORY PRESET CONTROL

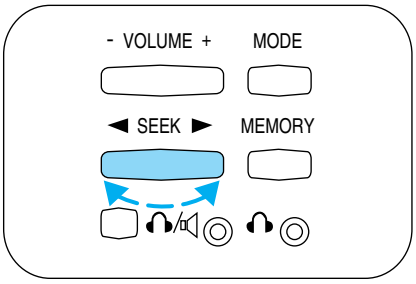
Push the MEMORY control successively to allow rear seat passengers to scroll through the 6 memory presets in AM, FM1 or FM2.

Push the MEMORY control in CD changer mode (if equipped) to advance to the next disc.



SEEK FUNCTION

- In radio mode, press ◄ to find the next listenable station down the frequency band.
- In radio mode, press ► to find the next listenable station up the frequency band.
- In tape mode, use the SEEK function to access the next ► or previous ◄ selection.



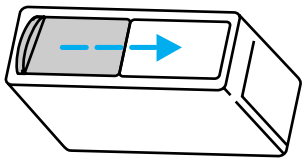
- In CD mode (if equipped), use the SEEK function to access the next ► or previous ◄ selection.

CD CHANGER (IF EQUIPPED)

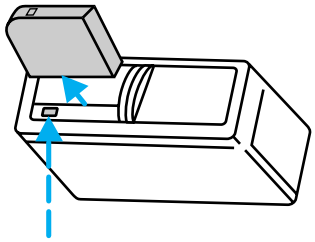
The CD changer is in one of the following locations:

- behind the passenger's seat (Regular Cab only)
- in the center console (SuperCab/SuperCrew with Captain's chairs)
- under the rear bench on the driver's side (see instructions below) (SuperCab with bench seats)
- in the stowage bin on the passenger's side (SuperCrew with bench seats)

1. Slide the door to access the CD changer magazine.

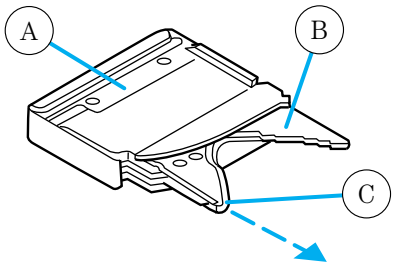


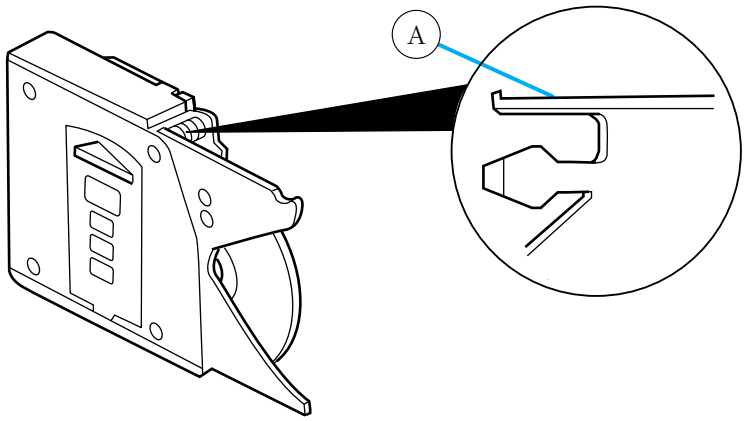
2. Press ⏏ to eject the magazine.



3. Turn the magazine (A) over.

4. Using the disc holder release knob (C), pull the disc holder (B) out of the magazine.

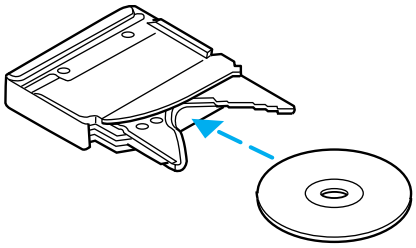




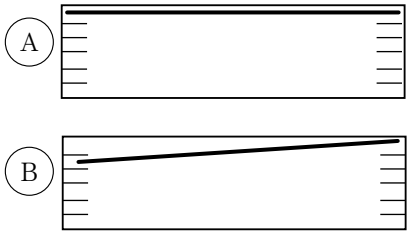
If you pull too hard on the disc holder, the disc holder may come completely out of the magazine. If this happens, reinsert the disc holder back into the magazine while pressing on the lever (A).

5. Line up the CD with the groove of the disc holder. Ensure that the label on the CD faces downwards.

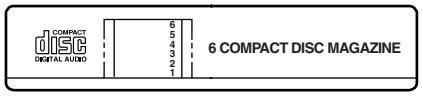
6. Press in on the disc holder until it locks securely into the magazine. If the disc holders are not fully locked into the magazine, the unit will not operate.



Ensure that the disc holder is evenly inserted and at the same level as the magazine (A). The unit will not operate if the disc holder is not inserted at the same level (B).



If your CD changer is located under the rear bench, the following instructions apply for loading discs:



1. The holders DO NOT pull out. Load the discs into the magazine slots (numbered 1 through 6 on the window) one at a time with labeled surfaces upward.

2. Start with the bottom slot number 1.

3. Insert the loaded magazine into the CD changer with the arrow on the top of the magazine pointing toward the changer.



To remove discs:

1. Slide the corresponding lever on the opposite side of the magazine window. The disc will partially eject.

2. Remove the disc.

Radio power must be turned on to play the CDs in the changer. The magazine may be stored in the glove box when not being used.

The CD magazine may be inserted or ejected with the radio power off.

ONLY use the magazine supplied with the CD changer, other types will damage the unit.

Keep the CD changer door closed. Coins and foreign objects will damage the CD player and void your audio system warranty.

CD units are designed to play commercially pressed 12 cm (4.75 in) 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. Irregular shaped CDs, CDs with a scratch protection film attached, and CDs with homemade paper (adhesive) labels should not be inserted into the CD player. The label may peel and cause the CD to become jammed. It is recommended that homemade CDs be identified with permanent felt tip marker rather than adhesive labels. Ball point pens may damage CDs. Please contact your dealer for further information.

TROUBLESHOOTING THE CD CHANGER (IF EQUIPPED)

The laser beam used in the compact disc player is harmful to the eyes. Do not attempt to disassemble the case.

If sound skips:

- You may be traveling on a rough road, playing badly scratched discs or the disc may be dirty. Skipping will not scratch the discs or damage the player.

If your changer does not work, it may be that:

- A disc is already loaded where you want to insert a disc.
- The disc is inserted with the label surface downward.
- The disc is dusty or defective.
- The player's internal temperature is above 60°C (140°F). Allow the player to cool down before operating.
- A disc with format and dimensions not within industry standards is inserted.

CLEANING COMPACT DISCS

Inspect all discs for contamination before playing. If necessary, clean discs only with an approved CD cleaner and wipe from the center out to the edge. Do not use circular motion.

CD AND CD CHANGER CARE

- Handle discs by their edges only. Never touch the playing surface.
- Do not expose discs to direct sunlight or heat sources for extended periods of time.
- Do not insert more than one disc into each slot of the CD changer magazine.

CD units are designed to play commercially pressed 12 cm (4.75 in) 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. Irregular shaped CDs, CDs with a scratch protection film attached, and CDs with homemade paper (adhesive) labels should not be inserted into the CD player. The label may peel and cause the CD to become jammed. It is recommended that homemade CDs be identified with permanent felt tip marker rather than adhesive labels. Ball point pens may damage CDs. Please contact your dealer for further information.

CLEANING CASSETTE PLAYER (IF EQUIPPED)

Clean the tape player head with a cassette cleaning cartridge after 10 to 12 hours of play in order to maintain the best sound and operation.

CASSETTE AND CASSETTE PLAYER CARE

- Use only cassettes that are 90 minutes long or less.
- Do not expose tapes to direct sunlight, high humidity, extreme heat or extreme cold. Allow tapes that may have been exposed to extreme temperatures to reach a moderate temperature before playing.
- Tighten very loose tapes by inserting a finger or pencil into the hole and turning the hub.
- Remove loose labels before inserting tapes.
- Do not leave tapes in the cassette player for a long time when not being played.

RADIO FREQUENCY INFORMATION

The Federal Communications Commission (FCC) and the Canadian Radio and Telecommunications Commission(CRTC) establish the frequencies AM and FM stations may use for their broadcasts. Allowable frequencies are:

AM 530, 540–1600, 1610 kHz

FM 87.7, 87.9–107.7, 107.9 MHz

Not all frequencies are used in a given area.

RADIO RECEPTION FACTORS

Three factors can affect radio reception:

- **Distance/strength.** The further an FM signal travels, the weaker it is. The listenable range of the average FM station is approximately 40 km (24 miles). This range can be affected by “signal modulation.” Signal modulation is a process radio stations use to increase their strength/volume relative to other stations.
- **Terrain.** Hills, mountains and tall buildings between your vehicle’s antenna and the radio station signal can cause FM reception problems. Static can be caused on AM stations by power lines, electric fences, traffic lights and thunderstorms. Moving away from an interfering structure (out of its “shadow”) returns your reception to normal.

- **Station overload.** Weak signals are sometimes captured by stronger signals when you pass a broadcast tower. A stronger signal may temporarily overtake a weaker signal and play while the weak station frequency is displayed.

The audio system automatically switches to single channel reception if it will improve the reception of a station normally received in stereo.

AUDIO SYSTEM WARRANTIES AND SERVICE

Refer to the *Warranty Guide* for audio system warranty information.

If service is necessary, see your dealer or a qualified technician.

HEATER ONLY SYSTEM (IF EQUIPPED)



Fan speed control

Controls the volume of air circulated in the vehicle.



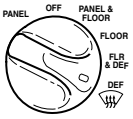
Temperature control knob

Controls the temperature of the airflow inside the vehicle. On heater-only systems, the air cannot be cooled below the outside temperature.



Mode selector control

Controls the direction of the airflow to the inside of the vehicle.



- PANEL – Distributes outside air through the instrument panel registers.
- OFF – Outside air is shut out and the fan will not operate. For short periods of time only, use this mode to prevent undesirable odors from entering the vehicle.
- PANEL & FLOOR – Distributes outside air through the instrument panel registers and the floor ducts.
- FLOOR – Distributes outside air through the floor ducts.
- FLOOR & DEF – Distributes outside air through the floor ducts and the windshield defroster ducts.
- DEF – Distributes outside air through the windshield defroster ducts. It can be used to clear ice or fog from the windshield.

Operating tips

- In humid weather, place the climate control system in Defrost ( ) before driving. This will reduce fogging on your windshield. Once the windshield has been cleared, select any desired position.

- To reduce humidity buildup inside the vehicle, do not drive with the climate control system in the OFF position.
- Under normal weather conditions, your vehicle's climate control system should be left in any position other than OFF position when the vehicle is parked. This allows the vehicle to "breathe" through the outside air inlet duct.
- Under snowy or dirty weather conditions, your vehicle's climate control system should be left in the OFF position when the vehicle is parked. This allows the climate control system to be free from contamination of outside pollutants.
- Do not place objects under the front seat which may interfere with the airflow to the rear seats (if equipped).
- Remove any snow, ice, or leaves from the air intake area (at the base of the windshield and underneath the hood).
- Do not place objects over the defroster outlets. These objects may block airflow and reduce your visibility through the windshield. Avoid placing small objects on top of the instrument panel. These objects can fall into the defroster outlets and block airflow, in addition to, damaging your climate control system.

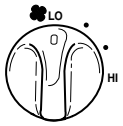
Do not place objects on top of the instrument panel, as these objects may become projectiles in a collision or sudden stop.

MANUAL HEATING AND AIR CONDITIONING SYSTEM (IF EQUIPPED)



Fan speed control

Controls the volume of air circulated in the vehicle.



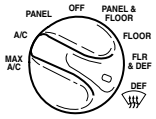
Temperature control knob

Controls the temperature of the airflow inside the vehicle.



Mode Selector Control

Controls the direction of the airflow to the inside of the vehicle.



The air conditioning compressor can operate in all modes except PANEL and FLOOR. However, the air conditioning will only function if the outside temperature is about 6°C (43°F) or higher.

Since the air conditioner removes considerable moisture from the air during operation, it is normal if clear water drips on the ground under the air conditioner drain while the system is working and even after you have stopped the vehicle.

- MAX A/C – Uses recirculated air to cool the vehicle. MAX A/C is noisier than A/C but more economical and will cool the inside of the vehicle faster. Airflow will be from the instrument panel registers. This mode can also be used to prevent undesirable odors from entering the vehicle.
- A/C – Uses outside air to cool the vehicle. It is quieter than MAX A/C but not as economical. Airflow will be from the instrument panel registers.
- PANEL – Distributes outside air through the instrument panel registers. However, the air will not be cooled below the outside temperature because the air conditioning does not operate in this mode.
- OFF – Outside air is shut out and the fan will not operate. For short periods of time only, use this mode to prevent undesirable odors from entering the vehicle.
- PANEL & FLOOR – Distributes outside air through the instrument panel registers and the floor ducts. Heating and air conditioning capabilities are provided in this mode. For added customer comfort, when the temperature control knob is anywhere in between the full hot and full cold positions, the air distributed through the floor ducts will be slightly warmer than the air sent to the instrument panel registers.

- FLOOR – Allows for maximum heating by distributing outside air through the floor ducts. However, the air will not be cooled below the outside temperature because the air conditioning does not operate in this mode.
- FLR & DEF – Distributes outside air through the windshield defroster ducts and the floor ducts. Heating and air conditioning capabilities are provided in this mode. For added customer comfort, the air distributed through the floor ducts will be slightly warmer than the air sent to the windshield defroster ducts. If the temperature is about 6°C (43°F) or higher, the air conditioner will automatically dehumidify the air to reduce fogging.
- DEF  – Distributes outside air through the windshield defroster ducts. It can be used to clear ice or fog from the windshield. If the temperature is about 6°C (43°F) or higher, the air conditioner will automatically dehumidify the air to reduce fogging.

Operating tips

- In humid weather conditions, place the climate control system in Defrost mode before driving. This will reduce fogging on your windshield. Once the windshield has been cleared, operate the climate control system as desired.
- To reduce humidity buildup inside the vehicle in cold weather conditions, don't drive with the climate control system in the OFF or MAX A/C position.
- To reduce humidity buildup inside the vehicle in warm weather conditions, don't drive with the climate control system in the OFF position.
- Under normal weather conditions, your vehicle's climate control system should be left in any position other than the MAX A/C or OFF when the vehicle is parked. This allows the vehicle to "breathe" through the outside air inlet duct.
- Under snowy or dirty weather conditions, your vehicle's climate control system should be left in the OFF position when the vehicle is parked. This allows the climate control system to be free from contamination of outside pollutants.
- If your vehicle has been parked with the windows closed during warm weather conditions, the air conditioner will perform more efficiently in cooling the vehicle if driven for two or three minutes with the windows open. This will force most of the hot, stale air out of the vehicle. Once the vehicle has been "aired out", operate the climate control system as desired.

- Do not put objects under the front seat which may interfere with the airflow to the rear seats (if equipped).
- Remove any snow, ice or leaves from the air intake area (at the bottom of the windshield and underneath the hood).
- Do not place objects over the defroster outlets. These objects can block airflow and reduce visibility through your windshield. Avoid placing small objects on top of the instrument panel. These objects may fall down into the defroster outlets and block airflow, in addition to, damaging the climate control system.

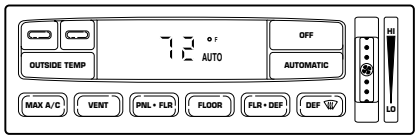
To aid in side window defogging/demisting in cold weather conditions:

1. Select the position that distributes air through the Panel and Floor.
2. Set the temperature control to full heat.
3. Set the fan speed to full fan.
4. Direct the outer panel vents towards the side windows.
5. To increase airflow to the outer panel vents, close the central panel vents.

Do not place objects on top of the instrument panel as these objects may become projectiles in a collision or sudden stop.

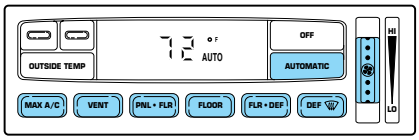
ELECTRONIC AUTOMATIC TEMPERATURE CONTROL (EATC) SYSTEM (IF EQUIPPED)

The EATC system will maintain a selected temperature and automatically control airflow. You can override automatic operation with any of the override controls, the fan speed control or the steering wheel controls (if equipped).



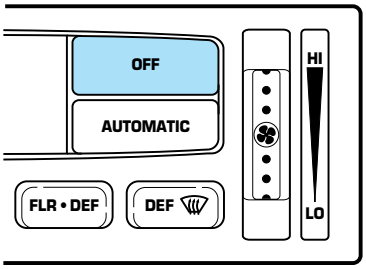
Turning the EATC on

Press AUTOMATIC, any of the override controls or the fan speed control. The EATC will only operate when the vehicle is running.



Turning the EATC system off

Press OFF. The outside temperature function will continue to operate until the ignition is turned off.



Automatic operation

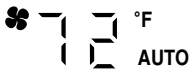
Press AUTOMATIC and select the desired temperature. The selected temperature and the word AUTO will appear in the display window. The EATC system will either heat or cool to achieve the selected temperature. The system will automatically determine fan speed, airflow location and if outside air or recirculated air is required. Fan speed remains automatic unless the fan speed thumbwheel is turned or the steering wheel fan speed control (if equipped) is pressed.

When in AUTOMATIC and weather conditions require heat, air will be sent to the floor. However, if the engine is not warm enough to provide heat, the fan will be at a low speed and the air will be directed to the windshield. In approximately 3½ minutes or less, the fan speed will start to increase and the airflow location will change to the floor area.

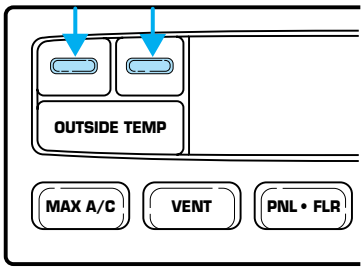
If unusual conditions exist (i.e.-window fogging, etc.), the manual override controls allow you to select airflow locations and the fan control allows you to adjust fan speed as necessary.

Temperature selection

The display window indicates the selected temperature, function (AUTO or one of the override controls) and manual control of fan speed ( ) if automatic fan speed is not desired.



To control the temperature, select any temperature between 18°C (65°F) and 29°C (85°F) by pressing the blue (cooler) or red (warmer) buttons.

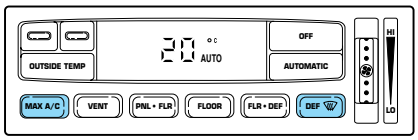


For continuous maximum cooling, push the blue button until 16°C (60°F) is shown in the display window. The EATC will continue maximum cooling (disregarding the displayed temperature) until a warmer temperature is selected by pressing the red control.

For continuous maximum heating, push the red button until 32°C (90°F) is shown in the display window. The EATC will continue maximum heating (disregarding the displayed temperature) until a cooler temperature is selected by pressing the blue control.

Temperature conversion

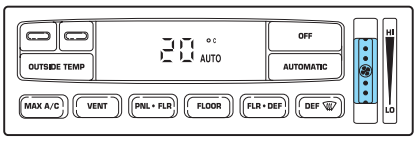
Press MAX A/C and DEF at the same time (for one second) to switch between Fahrenheit and Celsius.



The English/Metric (E/M) control on the trip computer and message center (if equipped) will not change temperature display.

Fan speed ( )

When AUTOMATIC is pressed, fan speed is adjusted automatically for existing conditions. You can override fan speed at any time. To control fan speed manually, use the thumbwheel to cancel automatic fan speed operation. Rotate the thumbwheel or press the steering wheel controls (if equipped) up for higher fan speed or down for lower fan speed.



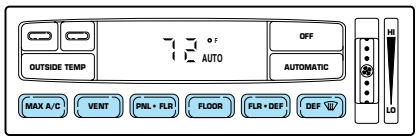
The display will show to indicate manual fan operation.



To return to automatic fan operation, press AUTOMATIC.

Manual override controls

The manual override controls allow you to determine where airflow is directed. To return to full automatic control, press AUTOMATIC.



The air conditioning compressor can operate in all modes except FLOOR and VENT. It will also operate only when required when AUTOMATIC has been selected. However, the air conditioning will only function if the outside temperature is about 6°C (43°F) or higher.

Since the air conditioner removes considerable moisture from the air during operation, it is normal if clear water drips on the ground under the air conditioner drain while the system is working and even after you have stopped the vehicle.

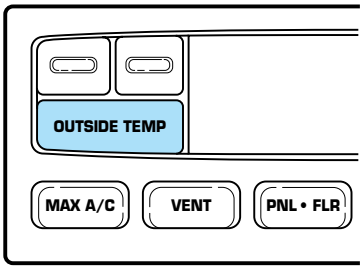
- MAX A/C - Uses recirculated air to cool the vehicle. The temperature will display 16°C (60°F). To exit, press AUTOMATIC or any other override controls. MAX A/C is louder than normal A/C but more economical and will cool the inside of the vehicle faster. Airflow is from the instrument panel registers. This mode can also be used to prevent undesirable odors from entering the vehicle.
- VENT - Distributes outside air through the instrument panel registers. However, the air cannot be cooled below the outside temperature because the air conditioning does not operate in this mode.
- PNL•FLR - Distributes outside air through the instrument panel registers and the floor ducts. Heating and air conditioning capabilities are provided in this mode. The air will be heated or cooled based on the temperature selection. For added customer comfort, the air distributed through the floor ducts will be slightly warmer than the air sent to the instrument panel registers.
- FLOOR - Distributes outside air through the floor ducts. However, the air cannot be cooled below the outside temperature because the air conditioning does not operate in this mode.
- FLR•DEF - Distributes outside air through the windshield defroster ducts and the floor ducts. Heating and air conditioning capabilities are provided

in this mode. The air will be heated or cooled based on the temperature selection. For added customer comfort, the air distributed through the floor ducts will be slightly warmer than the air sent to the windshield defroster ducts. If the temperature is about 6°C (43°F) or higher, the air conditioner will automatically dehumidify the air to reduce fogging.

- DEF - Distributes outside air through the windshield defroster ducts. It can be used to clear ice or fog from the windshield. If the outside air temperature is about 6°C (43°F) or higher, the air conditioner will automatically dehumidify the air to reduce fogging.
- OFF-Outside air is shut out and the fan will not operate. For short periods of time only, use this mode to reduce undesirable odors from entering the vehicle.

Displaying outside temperature

Press OUTSIDE TEMP to display the outside air temperature. It will be displayed until OUTSIDE TEMP is pressed again.



If the selected temperature is changed while the outside temperature is displayed, the new temperature will be displayed for four seconds after it is changed, then the outside temperature will return to the window.

If a manual override function is selected while the outside temperature is displayed, the new function will be displayed for four seconds after it is changed, then the outside temperature will return to the window along with the override selection.

The outside temperature reading is most accurate when the vehicle is moving. Higher readings may be obtained when the vehicle is not moving. The readings that you get may not agree with temperatures given on the radio due to differences in vehicle and station locations.

Operating tips

- In humid weather conditions, place the climate control system in DEF before driving. This will reduce fogging on your windshield. Once the windshield has been cleared, operate the climate control system as desired.

- To reduce humidity buildup inside the vehicle in cold weather conditions, don't drive with the climate control system in the OFF or MAX A/C position.
- To reduce humidity buildup inside the vehicle in warm weather conditions, don't drive with the climate control system in the OFF position.
- Under normal weather conditions, your vehicle's climate control system should be left in any position other than MAX A/C or OFF when the vehicle is parked. This allows the vehicle to "breathe" through the outside air inlet duct.
- Under snowy or dirty weather conditions, your vehicle's climate control system should be left in the OFF position when the vehicle is parked. This allows the climate control system to be free from contamination of outside pollutants.
- If your vehicle has been parked with the windows closed during warm weather conditions, the air conditioner will perform more efficiently in cooling the vehicle if driven for two or three minutes with the windows open. This will force most of the hot, stale air out of the vehicle. Once the vehicle has been "aired out", operate the climate control system as desired.
- Don't put objects under the front seat that will interfere with the airflow to the rear seats.
- Remove any snow, ice or leaves from the air intake area at the base of the windshield.
- Do not place objects over the defroster outlets. These objects can block airflow and reduce your ability to see through your windshield. Avoid placing small objects on top of the instrument panel. These objects may fall down into the defroster outlets and block airflow, in addition to damaging the climate control system.

To aid in side window defogging/demisting in cold weather conditions:

1. Select PNL • FLR
2. Set the temperature control to full heat
3. Set the fan speed control to HI
4. Direct the outer panel vents towards the side windows.

To increase airflow to the outer panel vents, close the central panel vents.

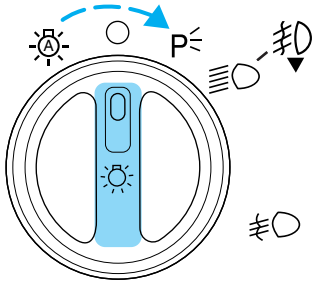


Do not place objects on top of the instrument panel, as these objects may become projectiles in a collision or sudden stop.

HEADLAMP CONTROL

Rotate the headlamp control to the first position to turn on the parking lamps.

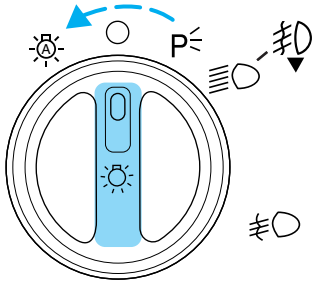
Rotate to the second position to turn on the headlamps.



Autolamp control (if equipped)

The autolamp system provides light sensitive automatic on-off control of the exterior lights normally controlled by the headlamp control.

The autolamp system also keeps the lights on for approximately 20 seconds after the ignition switch is turned to the OFF position.

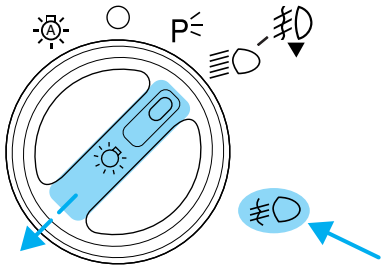


- To turn autolamps on, rotate the control counterclockwise.
- To turn autolamps off, rotate the control clockwise to the OFF position.
- Foglamps are not controlled by the autolamps. In order to turn on the foglamps, you must turn the lamp switch to the position and pull toward you for foglamps.

Foglamp control (if equipped)

The headlamp control also operates the foglamps. The foglamps can be turned on only when the headlamp control is in the position and the high beams are not turned on.

Pull headlamp control towards you to turn foglamps on. The foglamp indicator light will illuminate.



Daytime running lamps (DRL) (if equipped)

Turns the headlamps on with a reduced output.

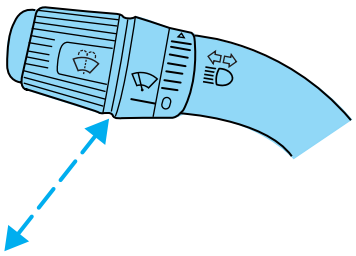
To activate:

- the ignition must be in the ON position and
- the headlamp control is in the OFF, parking lamp or autolamp position.

Always remember to turn on your headlamps at dusk or during inclement weather. The Daytime Running Lamp (DRL) system does not activate with your tail lamps and generally may not provide adequate lighting during these conditions. Failure to activate your headlamps under these conditions may result in a collision.

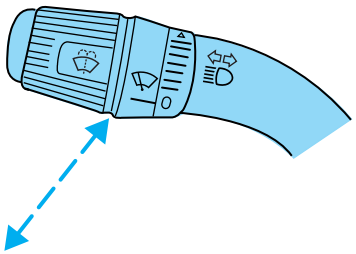
High beams

Push the lever toward the instrument panel to activate. Pull the lever towards you to deactivate.

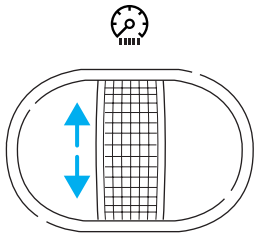


Flash to pass

Pull toward you slightly to activate and release to deactivate.



PANEL DIMMER CONTROL



Use to adjust the brightness of the instrument panel and all applicable switches in the vehicle during headlamp and parklamp operation.

Move the control to the full upright position, past detent, to turn on the interior lamps.

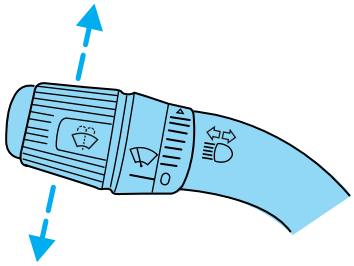
Move the control to the full down position, past detent, to prevent the interior lights from illuminating when the doors are opened.

AIMING THE HEADLAMPS

The headlamps on your vehicle are properly aimed at the assembly plant. If your vehicle has been in an accident the alignment of your headlamps should be checked by a qualified service technician.

TURN SIGNAL CONTROL

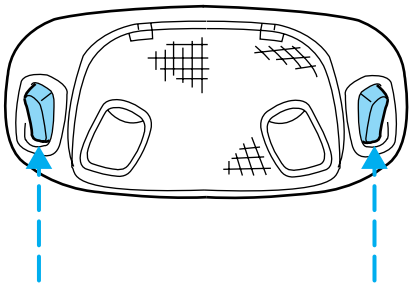
- Push down to activate the left turn signal.
- Push up to activate the right turn signal.



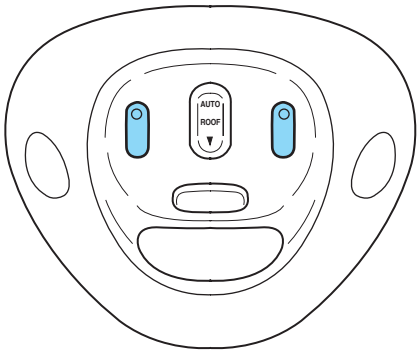
INTERIOR LAMPS

Map lamps

To turn on the map lamps, press the control next to each lamp.

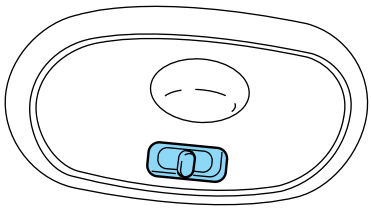


If equipped with a moon roof, the map lamps are located on the moon roof control panel. Press the control next to the map lamp to illuminate the lamp.



Rear dome lamp (if equipped)

The dome lamp lights when the control is in the DOOR (left) position and:



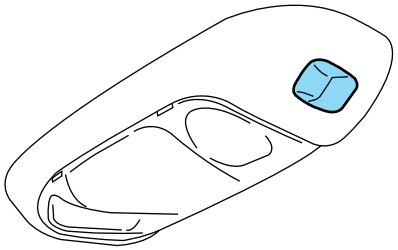
- any door is opened.
- the instrument panel dimmer switch is held up until the courtesy lamps come on.
- any of the remote entry controls are pressed and the ignition is OFF.

The rear dome lamp can be turned ON (center) or OFF (right) by sliding the control.

Courtesy/reading lamps

The courtesy lamp lights when:

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

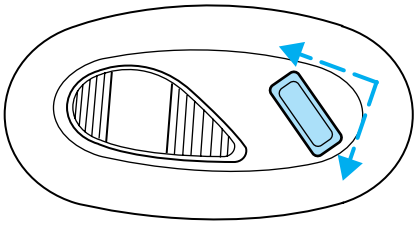


The reading lamps can be turned on by pressing the rocker controls next to each lamp.

Rear door lamps (if equipped)

The rear door lamps lights when:

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



The rear door lamps can be turned on by pressing the rocker controls next to each lamp.

BULBS

Replacing exterior bulbs

Check the operation of the following lamps frequently:

- Headlamps
- Foglamps (if equipped)
- High-mount brakelamp
- Brakelamps
- Turn signal lamps
- License plate lamp
- Tail lamps
- Back-up lamps

Do not remove lamp bulbs unless they can be replaced immediately with new ones. If a bulb is removed for an extended period of time, contaminants may enter the lamp housings and affect lamp performance.

Using the right bulbs

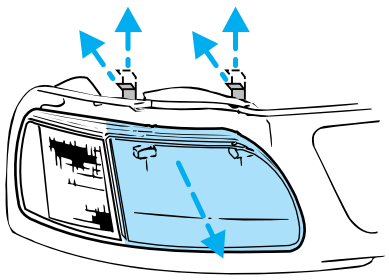
Replacement bulbs are specified in the chart below. Headlamp bulbs must be marked with an authorized "D.O.T." for North America and an "E" for Europe to assure lamp performance, light brightness and pattern and safe visibility. The correct bulbs will not damage the lamp assembly or void the lamp assembly warranty and will provide quality bulb burn time.

Function	Number of bulbs	Trade number
Headlamps	2	9007
Front park/turn lamps	2	3157AK (amber)
Foglamps	2	9145[1]
Backup lamp	2	3156K
Rear stop/turn/sidemarker/tail lamp	2	3457K
High-mount brakelamp	1	912
Cargo lamp	2	912
License plate lamp	2	168
Signal mirror lamp (if equipped)	2	906/921
Running board lamp (if equipped)	4	168
All replacement bulbs are clear in color except where noted.		
To replace all instrument panel lights - see your dealer		

[1]Harley Davidson package uses bulb number H1 12V

Replacing headlamp bulbs

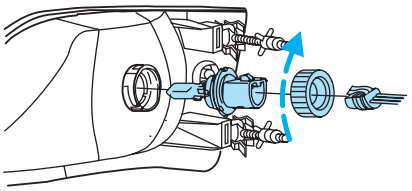
1. Make sure that the headlamp control is in the OFF position.
2. Open the hood.
3. If equipped, remove headlamp covers.
4. At the back of the headlamp, pull clips rearward and up (about ¾ inch) to release the headlamp assembly.
5. Slide headlamp assembly forward and off of guide ribs to expose the back of the bulb and wiring connector.



6. Disconnect the electrical connector from the bulb by pulling rearward.

7. Remove bulb retainer ring by turning it counterclockwise, then slide the ring off the plastic base.

8. Without turning, carefully pull bulb assembly out of headlamp assembly and replace.



Handle a halogen headlamp bulb carefully and keep out of children's reach. Grasp the bulb only by its plastic base and do not touch the glass. The oil from your hand could cause the bulb to break the next time the headlamps are operated.

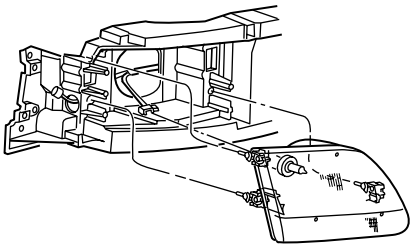
9. Insert the glass end of the new bulb into the headlamp assembly. When the grooves in the plastic base are aligned, push the bulb into the lamp assembly until the plastic base contacts the rear of the lamp assembly.

10. Install bulb retaining ring over the plastic base and lock the ring into the socket by turning it clockwise until you feel a "stop."

11. Connect the electrical connector into the plastic base until it "snaps."

12. Straighten alignment pins, making them parallel with the outer edges of the attachment standoff.

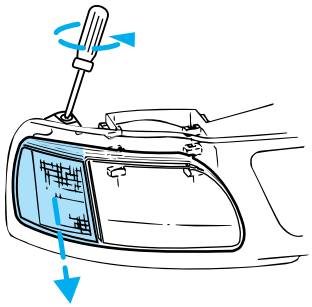
13. Carefully insert the headlamp assembly into the vehicle making sure the alignment pins are inserted into the proper holes and into the guide ribs.



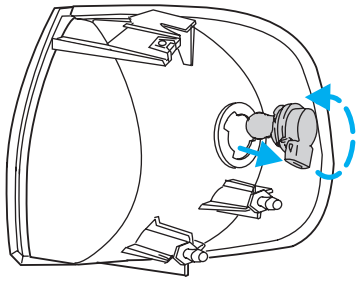
14. Hold the headlamp assembly snugly against the vehicle and push down on the clips to lock the lamp into place.

Replacing front parking lamp/turn signal bulbs

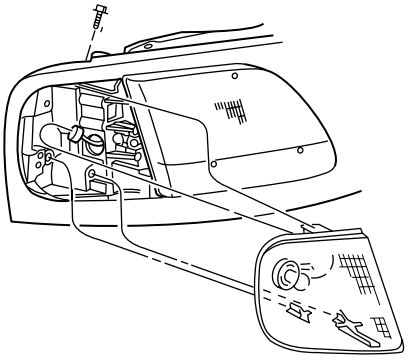
1. Remove screw from the lamp assembly.
2. Disengage lamp assembly (it has a snap fit) by pulling straight forward.



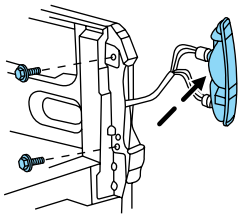
3. Remove bulb socket from the parking lamp assembly by turning it counterclockwise.
4. Pull bulb straight out of socket and press in the new bulb.
5. Install the bulb socket into the lamp assembly by turning clockwise.



6. Align top and bottom ribs of parking lamp assembly with corresponding slots on front of vehicle.
7. Push gently until parking lamp assembly seats (you will hear a snap).
8. Install screw on lamp assembly.



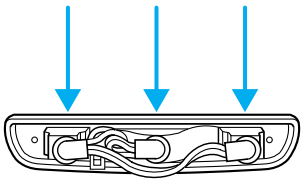
Replacing tail/brake/turn signal/backup lamp bulbs

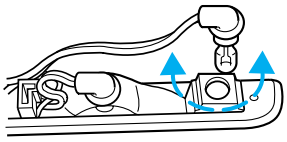


The tail/brake/turn signal and backup lamp bulbs are located in the tail lamp assembly, one just below the other. Follow the same steps to replace either bulb:

1. If equipped, remove tail lamp covers.
2. Open the liftgate to expose the lamp assembly screws.
3. Remove the two bolts from the tail lamp assembly.
4. Carefully pull the lamp assembly from the tailgate pillar to disengage two hidden snap-in retainers. (Flare side and Super Crewtail lamps are not equipped with snap-in retainers.)
5. Remove bulb socket from the lamp assembly by turning it counterclockwise.
6. Pull bulb straight out of socket and press in the new bulb.
7. Install the bulb socket into the lamp assembly by turning clockwise.
8. Carefully install the tail lamp assembly on tailgate pillar snapping the two snap-in retainers into place. (Flare side and Super Crewtail lamps do not snap into place but have two tabs which fit into slots.)
9. Secure the tail lamp on the vehicle with two bolts.

Replacing high-mount brake and cargo lamp bulbs





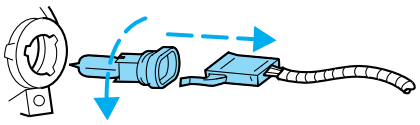
To remove the lamp assembly:

1. Remove the two screws and move the lamp assembly away from the vehicle to expose the bulb sockets.
2. Remove the bulb socket by rotating counterclockwise and pulling it out of the lamp assembly.
3. Pull the bulb straight out of the socket and push in the new bulb.

To install the lamp assembly:

1. Install the bulb into the lamp assembly and rotate clockwise.
2. Install the lamp assembly on the vehicle with two screws.

Replacing foglamp bulbs (if equipped)

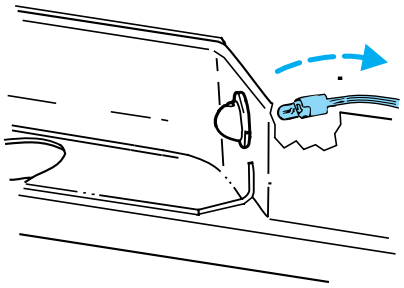


1. Remove the bulb socket from the foglamp by turning counterclockwise.
2. Disconnect the electrical connector from the foglamp bulb.
3. Connect the new foglamp bulb to the electrical connector.
4. Install the bulb socket in the foglamp by turning clockwise.

Replacing signal mirror lamp bulbs (if equipped)

For bulb replacement, see a dealer or qualified technician.

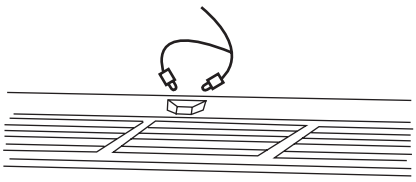
Replacing license plate lamp bulbs



The license plate bulbs are located behind the rear bumper. To change the license plate lamp bulbs:

1. Reach behind the rear bumper to locate the bulb.
2. Twist the bulb socket counterclockwise and carefully pull to remove it from the lamp assembly.
3. Pull out the old bulb from the socket and push in the new bulb.
4. Install the bulb socket in lamp assembly by turning it clockwise.

Replacing running board lamp bulbs (if equipped)



The running board bulbs are located behind the running board.

1. Reach behind the center bracket of running board to locate the bulb.
2. Twist the bulb socket counterclockwise and carefully pull to remove it from the lamp assembly.
3. Pull out the old bulb from the socket and push in the new bulb.

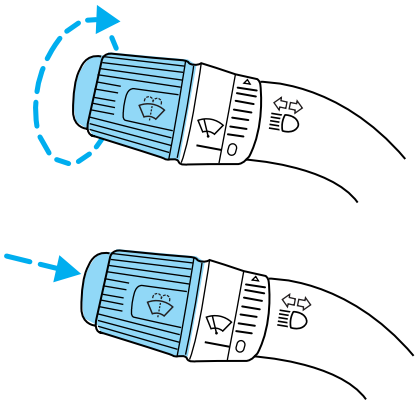
Install the new bulb in reverse order.

WINDSHIELD WIPER/WASHER CONTROLS

Rotate the windshield wiper control to the desired interval, low or high speed position.

The bars of varying length are for intermittent wipers. When in this position rotate the control upward for fast intervals and downward for slow intervals.

Push (tap) the end of the stalk briefly for a single swipe (no wash). Push and hold for three swipes with wash. Push and hold for a longer wash (up to ten seconds).



Speed dependent wipers (if equipped)

When the windshield wiper control is set on the intermittent settings, speed-sensitive front wipers automatically adjust as the vehicle's speed changes.

Checking the wiper blades

If the wiper blades do not wipe properly, clean both the windshield and wiper blades using undiluted windshield wiper solution or a mild detergent. Rinse thoroughly with clean water. To avoid damaging the blades, do not use fuel, kerosene, paint thinner or other solvents.

Windshield wiper blades

Check the wiper blades for wear at least twice a year or when they seem less effective. Substances such as tree sap and some hot wax treatments used by commercial car washes reduce the effectiveness of wiper blades.

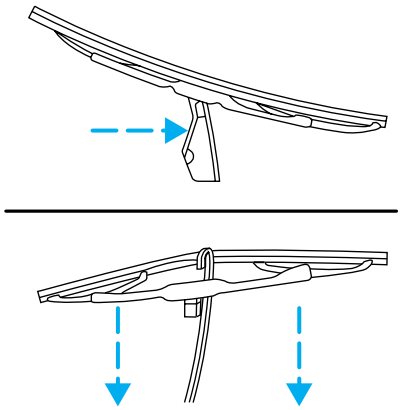
Changing the wiper blades

To replace the wiper blades:

1. Pull the wiper arm away from the windshield and lock into the service position.

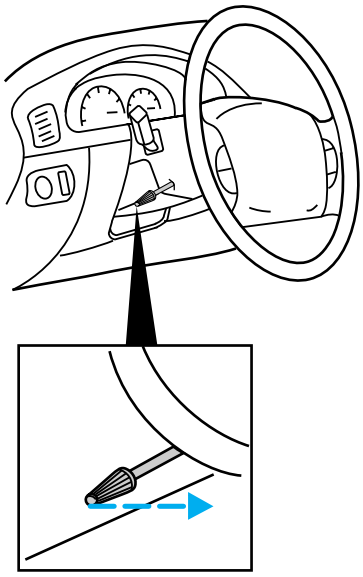
2. Turn the blade at an angle from the wiper arm. Push the lock pin manually to release the blade and pull the wiper blade down toward the windshield to remove it from the arm.

3. Attach the new wiper to the wiper arm and press it into place until a click is heard.



TILT STEERING WHEEL (IF EQUIPPED)

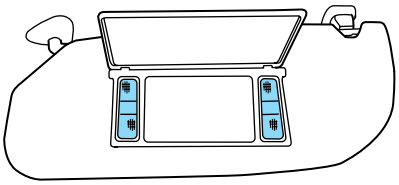
Pull the tilt steering control toward you to move the steering wheel up or down. Hold the control while adjusting the wheel to the desired position, then release the control to lock the steering wheel in position.



Never adjust the steering wheel when the vehicle is moving.

ILLUMINATED VISOR MIRROR (IF EQUIPPED)

Lift the mirror cover to turn on the visor mirror lamps.



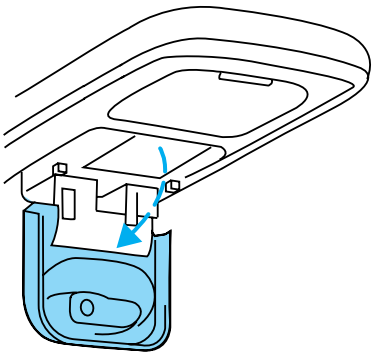
OVERHEAD CONSOLE (IF EQUIPPED)

The appearance of your vehicle's overhead console will vary according to your option package.

Storage compartment (if equipped)

Press the OPEN control to open the storage compartment. The door will open slightly and can be moved to full open.

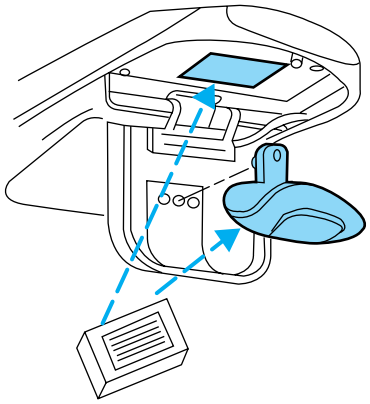
The storage compartment may be used to secure sunglasses or a similar object.



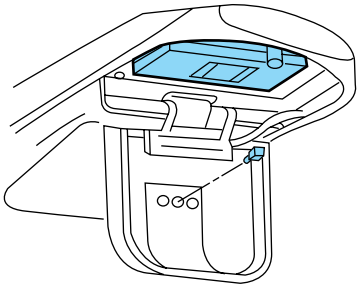
Installing a garage door opener (if equipped)

The storage compartment can be converted to accommodate a variety of aftermarket garage door openers:

1. Remove the storage clip from the door.
2. Place Velcro hook onto side of aftermarket transmitter opposite of actuator control.
3. Place the transmitter into storage compartment, control down.

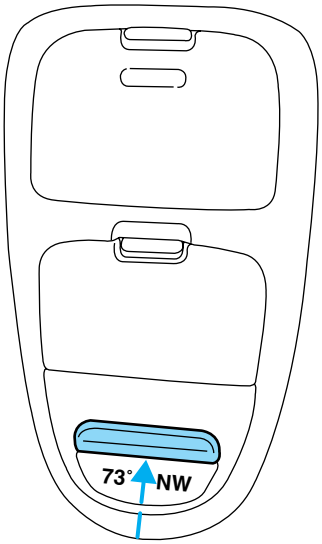


4. Place the provided height adaptors onto the back of the GARAGE control as needed.
5. Press the GARAGE control to activate the transmitter.



Electronic compass/temperature display (if equipped)

Outside air temperature



The outside temperature display is contained in the overhead console unless the vehicle is equipped with an EATC system. Refer to *Electric automatic temperature control* in the *Climate controls* chapter.

The temperature display can be turned off and on by pressing the SELECT control on the overhead console. The temperature can be displayed in Centigrade or Fahrenheit by pressing the SELECT control. The ignition key must be in the ON or ACC position.

If the outside temperature falls below 3°C (38°F), the display will alternate from “ICE” to the outside temperature at a two second rate for one minute.

Compass

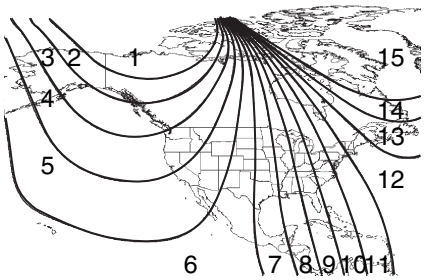
The compass display is contained in the overhead console. The vehicle heading is displayed as one of N, NE, E, SE, S, SW, W and NW.

The compass reading may be affected when you drive near large buildings, bridges, power lines and powerful broadcast antenna. Magnetic or metallic objects placed in or on the vehicle may also affect compass accuracy. Adjustments may need to be made to the zone and calibration of the compass.

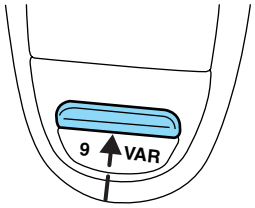
Compass zone adjustment

1. Determine which magnetic zone you are in by referring to the zone map.

2. Turn the ignition to the ON position.



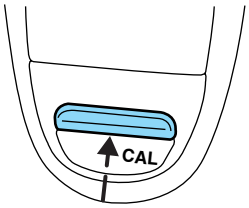
3. Press and hold the SELECT control until VAR appears in the display, then release. The display should show the current zone number.



4. Press the SELECT control until the desired zone number appears. The display will flash and then return to normal operation. The zone is now updated.

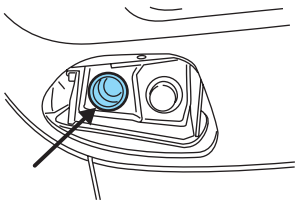
Compass calibration adjustment

Perform this adjustment in an open area free from steel structures and high voltage lines:



- Press and hold the SELECT control until CAL appears in the display (approximately eight seconds) and release.
- Drive the vehicle slowly (less than 5 km/h [3 mph]) in circles until CAL indicator turns off in about 2–3 complete circles.
- The compass is now calibrated.

AUXILIARY POWER POINT 12V



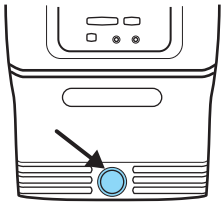
Power outlets are designed for accessory plugs only. Do not hang any type of accessory or accessory bracket from the plug. Improper use of the power outlet can cause damage not covered by your warranty.

The auxiliary power point is located on the instrument panel.

Do not plug optional electrical accessories into the cigarette lighter. Use the power point.

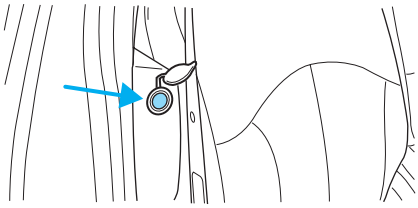
Harley-Davidson F-150 only

A second auxiliary power point is located on the lower rear side of the console. The power point is accessible from the rear seats.



Auxiliary power point (SuperCrew only)

An additional auxiliary power point is located on the right side rear trim panel next to the rear seat.



CENTER CONSOLE (IF EQUIPPED)

Your vehicle may be equipped with a variety of console features. These include:

- Utility compartment
- Cupholders
- Coin holder slots
- Compact disc changer (if equipped)

- Rear audio controls
- Power point

Use only soft cups in the cupholder. Hard objects can injure you in a collision.

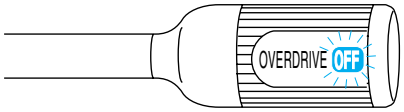
OVERDRIVE CONTROL

Activating overdrive

(D) (Overdrive) is the normal drive position for the best fuel economy.

The overdrive function allows automatic upshifts and downshifts through all available gears.

Deactivating overdrive



Press the Transmission Control Switch (TCS) located on the end of the gearshift lever. The Transmission Control Indicator Light (TCIL) (the word OFF) will illuminate on the end of the gearshift lever. The transmission will operate in all gears except overdrive.



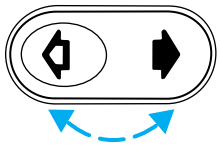
To return to normal overdrive mode, press the Transmission Control Switch again. The TCIL (the word OFF) will no longer be illuminated.

When you shut off and re-start your vehicle, the transmission will automatically return to normal (D) (Overdrive) mode.

For additional information about the gearshift lever and the transmission control switch operation refer to the *Automatic Transmission Operation* section of the *Driving* chapter.

POWER REAR SLIDER WINDOW (IF EQUIPPED)

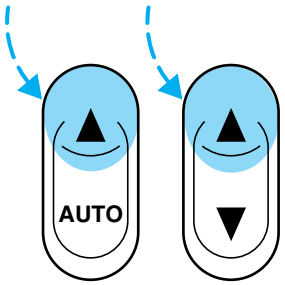
- Press and hold the open arrow side of control to open window.
- Press and hold the closed arrow side of control to close window.



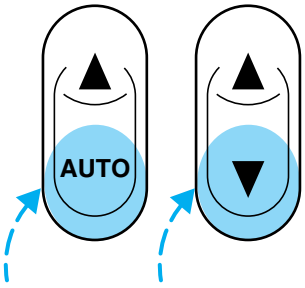
POWER WINDOWS (IF EQUIPPED)

Press and hold the rocker switches to open and close windows.

- Press the top portion of the rocker switch to close.



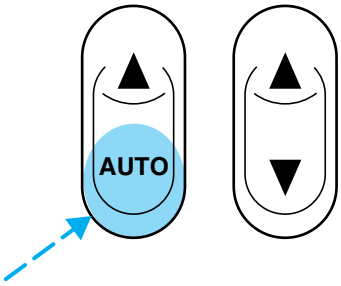
- Press the bottom portion of the rocker switch to open.



One touch down

- Press AUTO completely down and release quickly. The driver's window will open fully. Depress again to stop window operation.

One touch down can be deactivated during operation by pushing down on the top part of the driver power window control.



Accessory delay (if equipped)

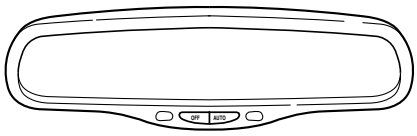
With accessory delay, the window switches may be used for up to ten minutes after the ignition switch is turned to the OFF position or until any door is opened.

MIRRORS

Automatic dimming rear view mirrors (if equipped)

Your vehicle is equipped with an inside rear view mirror with an auto-dimming function. The electronic day/night mirror will change from the normal state to the non-glare state when bright lights (glare) reach the inside rear view mirror. When the inside rear view mirror detects bright light from behind the vehicle, the inside rear view mirror will automatically adjust (darken) to minimize glare.

Do not block the sensor on the backside of the inside rear view mirror since this may impair proper system performance.



Press the control to turn the mirror OFF or AUTO.

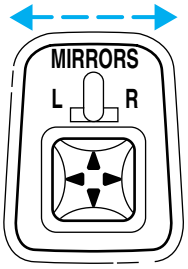
The mirror will automatically return to the normal state whenever the vehicle is placed in R (Reverse)(when the mirror is on) to ensure a bright clear view when backing up.

Power side view mirrors (if equipped)

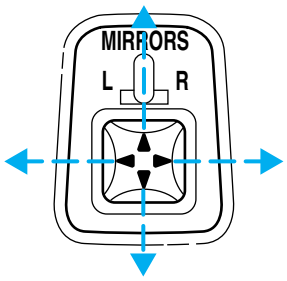
The ignition can be in any position to adjust the power side view mirrors.

To adjust your mirrors:

1. Select L to adjust the left mirror or R to adjust the right mirror.



2. Move the control in the direction you wish to tilt the mirror.



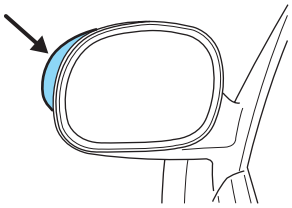
3. Return to the center position to lock mirrors in place.

4. Adjust spotter mirrors (if equipped) manually.

Signal mirrors (if equipped)

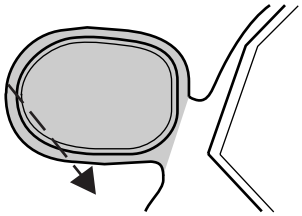
When the turn signal is activated, the outer portion of the appropriate mirror housing will blink red.

This provides an additional warning to other drivers that your vehicle is about to turn.



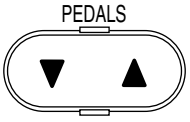
Fold-away mirrors

Pull the side mirrors in carefully when driving through a narrow space, like an automatic car wash.



POWER ADJUSTABLE FOOT PEDALS (IF EQUIPPED)

The accelerator and brake pedal should only be adjusted when the vehicle is stopped and the gearshift lever is in the P(Park) position.



Press and hold the rocker control to adjust accelerator and brake pedal toward you or away from you.

The adjustment allows for approximately 76 mm (3 inches) of maximum travel.

Never adjust the accelerator and brake pedal with feet on pedals or while the vehicle is moving.

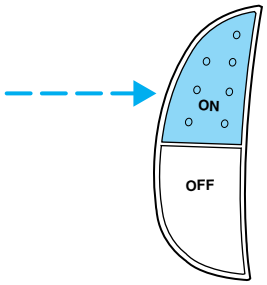
SPEED CONTROL (IF EQUIPPED)

To turn speed control on

- Press ON.

Vehicle speed cannot be controlled until the vehicle is traveling at or above 48 km/h (30 mph).

Do not shift the gearshift lever into N (Neutral) with the speed control on.

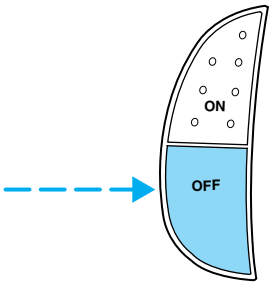


Do not use the speed control in heavy traffic or on roads that are winding, slippery, or unpaved.

To turn speed control off

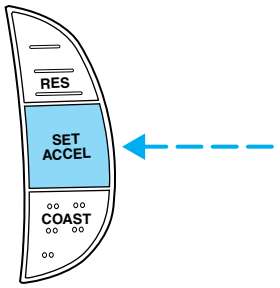
- Press OFF or
- Turn off the vehicle ignition.

Once speed control is switched off, the previously programmed set speed will be erased.



To set a speed

- Press SET ACCEL. For speed control to operate, the speed control must be ON and the vehicle speed must be greater than 48 km/h (30 mph).

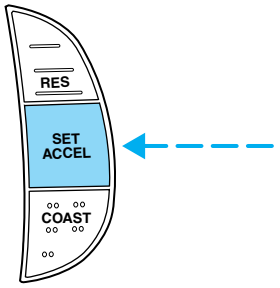


If you drive up or down a steep hill, your vehicle speed may vary momentarily slower or faster than the set speed. This is normal.
Speed control cannot reduce the vehicle speed if it increases above the set speed on a downhill. If your vehicle speed is faster than the set speed while driving on a downhill, you may want to shift to the next lower gear or apply the brakes to reduce your vehicle speed.
If your vehicle slows down more than 16 km/h (10 mph) below your set speed on an uphill, your speed control will disengage. This is normal. Pressing RES will re-engage it.

Do not use the speed control in heavy traffic or on roads that are winding, slippery, or unpaved.

To set a higher set speed

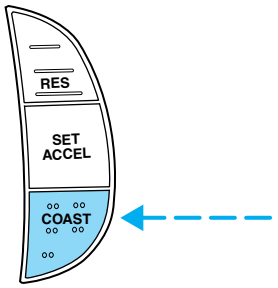
- Press and hold SET ACCEL. Release the control when the desired vehicle speed is reached or
- Press and release SET ACCEL to operate the Tap-Up function. Each press will increase the set speed by 1.6 km/h (1 mph) or
- Accelerate with your accelerator pedal. When the desired vehicle speed is reached, press and release SET ACCEL.



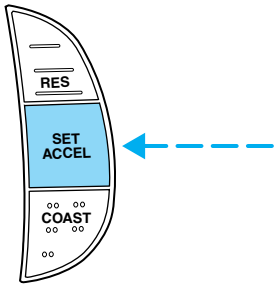
You can accelerate with the accelerator pedal at any time during speed control usage. Releasing the accelerator pedal will return your vehicle to the previously programmed set speed.

To set a lower set speed

- Press and hold COAST. Release the control when the desired speed is reached or
- Press and release COAST to operate the Tap-Down function. Each press will decrease the set speed by 1.6 km/h (1 mph) or

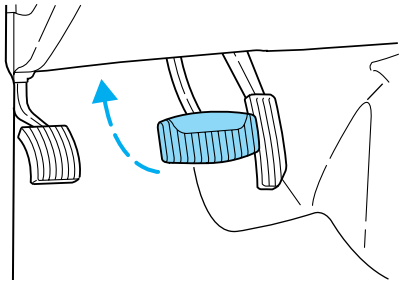


- Depress the brake pedal. When the desired vehicle speed is reached, press SET ACCEL.



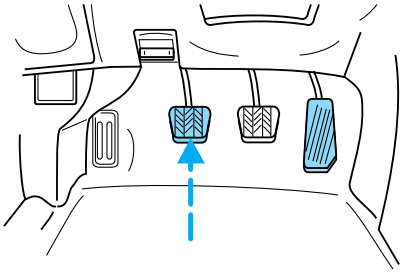
To disengage speed control

- Depress the brake pedal or

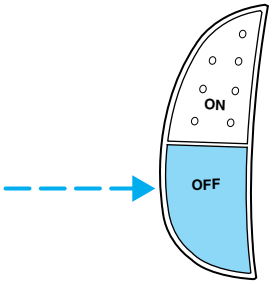


- Depress the clutch pedal (if equipped).

Disengaging the speed control will not erase the previously programmed set speed.

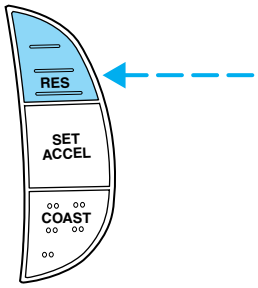


Pressing OFF will erase the previously programmed set speed.



To return to a previously set speed

- Press RES. For RES to operate, the vehicle speed must be faster than 48 km/h (30 mph).

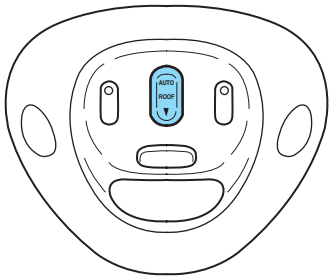


Indicator light

This light comes on when either the SET ACCEL or RES controls are pressed. The vehicle speed must be at or above 48 km/h (30 mph). It turns off when the speed control OFF control is pressed, the brake or clutch is applied, or the ignition is turned to the OFF position.

CRUISE

ONE-TOUCH MOON ROOF (IF EQUIPPED)



- To open, press and release the rear portion of the moon roof control.
- To close, press and hold (as desired) the front portion of the moon roof control.
- To halt motion at any point during one-touch opening, press the control a second time.
- To tilt into the vent position (when the glass panel is closed), press and hold the front portion of the moon roof control. To close from the vent position, press and hold the rear portion of the control until the glass panel stops moving.
- The moon roof has a sliding shade that can be manually opened or closed when the glass panel is shut.
- To close the shade, pull it toward the front of the vehicle.

Do not let children play with the moon roof. They may seriously hurt themselves.

HOMELINK® UNIVERSAL TRANSCEIVER WITH TRAVELNOTE® (IF EQUIPPED)

The HomeLink® Universal Transceiver, located on the driver's visor, provides a convenient way to replace up to three hand-held transmitters with a single built-in device. This feature will learn the radio frequency codes of most current transmitters to operate garage doors, entry gate operators, security systems, entry door locks, and home or office lighting.

When programming your HomeLink® Universal Transceiver to a garage door or gate, be sure that people and objects are out of the way to prevent potential harm or damage.

Do not use the HomeLink® Universal Transceiver with any garage door opener that lacks safety stop and reverse features as required by U.S. federal safety standards (this includes any garage door opener model manufactured before April 1, 1982). A garage door which cannot detect an object, signaling the door to stop and reverse, does not meet current U.S. federal safety standards. For more information, contact HomeLink® at: **www.homelink.com** or **1–800–355–3515.**

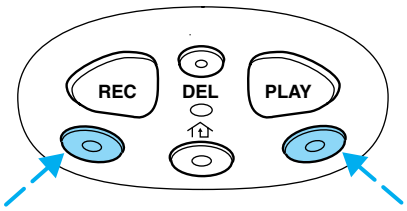
Retain the original transmitter for use in other vehicles as well as for future programming procedures (i.e. new HomeLink® equipped vehicle purchase). It is also suggested that upon the sale of the vehicle, the programmed Homelink® Universal Transceiver buttons be erased for security purposes, refer to *Programming* in this section.

Programming

Do not program the HomeLink® Universal Transceiver with the vehicle parked in the garage.

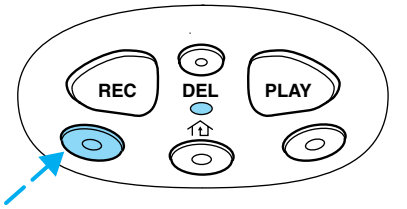
Note: Your vehicle may require the ignition switch to be turned to the ACC position for programming and/or operation of the HomeLink®. It is also recommended that a new battery be placed in the hand-held transmitter of the device being programmed to HomeLink® for quicker training and accurate transmission of the radio-frequency signal.

1. Press and hold the two outside buttons releasing only when the red light begins to flash after 20 seconds. **Do not** repeat step one to program additional hand-held transmitters to the remaining two HomeLink® buttons. This will erase previously programmed hand-held transmitter signals into HomeLink®.



2. Position the end of your hand-held transmitter 2–8 cm (1–3 inches) away from the HomeLink® Universal Transceiver surface (located on your visor) while keeping the red light in view.

3. Simultaneously press and hold both the HomeLink® and hand-held transmitter button. **Do not release the buttons until step 4 has been completed.**



Some entry gates and garage door openers may require you to replace step 3 with procedures noted in the "Gate Operator and Canadian Programming" section for Canadian residents.

4. The red light will flash slowly and then rapidly. Release both buttons when the red light flashes rapidly. (The rapid flashing light indicates acceptance of the hand-held transmitters' radio frequency signals.)

5. Press and hold the just-trained HomeLink® button and observe the red light. If the light is a constant red, programming is complete and your

device should activate when the HomeLink® button is pressed and released. **Note:** To program the remaining two HomeLink® buttons, begin with step 2 in the "Programming" section — **do not** repeat step 1. If the red light blinks rapidly for two seconds and then turns to a continuous red, proceed with steps 6 through 8 to complete programming of a rolling code equipped device.

6. At the garage door opener receiver (motor-head unit) in the garage, locate the "learn" or "smart" button (usually near where the hanging antenna wire is attached to the unit).

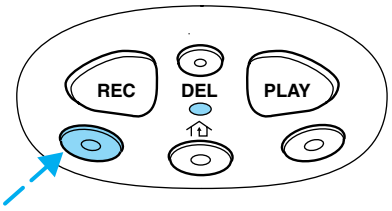
7. Press and release the "learn" or "smart" button. (The name and color of the button may vary by manufacturer.)

Note: There are 30 seconds in which to initiate step eight.

8. Return to the vehicle and firmly press, hold for two seconds and release the HomeLink® button. Repeat the press/hold/release sequence again, and, depending on the brand of the garage door opener (or other rolling code equipped device), repeat this sequence a third time to complete the programming.

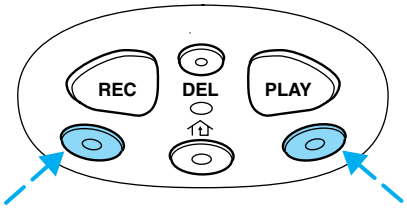
HomeLink® should now activate your rolling code equipped device. To program additional HomeLink® buttons begin with step 2 in the "Programming" section. For questions or comments, please contact HomeLink at **www.homelink.com** or **1–800–355–3515.**

Operating the HomeLink® Universal Transceiver



To operate, simply press and release the appropriate HomeLink® button. Activation will now occur for the trained product (garage door, gate operator, security system, entry door lock, or home or office lighting etc.). For convenience, the hand-held transmitter of the device may also be used at any time. In the event that there are still programming difficulties, contact Homelink® at **www.homelink.com** or **1–800–355–3515.**

Erasing HomeLink® buttons



To erase the three programmed buttons (individual buttons cannot be erased):

- Press and hold the two outer HomeLink® buttons until the red indicator light begins to flash-after 20 seconds. Release both buttons. Do not hold for longer that 30 seconds.

HomeLink® is now in the train (or learning) mode and can be programmed at any time beginning with step 2 in the *"Programming"* section.

Reprogramming a single HomeLink® button

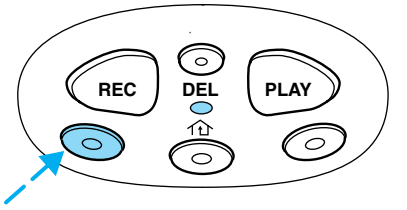
To program a device to HomeLink® using a HomeLink® button previously trained, follow these steps:

1. Press and hold the desired HomeLink® button. **Do NOT** release the button.

2. The red indicator light will begin to flash after 20 seconds. Without releasing the HomeLink® button, follow step 2 in the "Programming" section.

For questions or comments, contact HomeLink® at **www.homelink.com** or **1–800–355–3515.**

Gate Operator & Canadian Programming



During programming, your hand-held transmitter may automatically stop transmitting — not allowing enough time for HomeLink® to accept the signal from the hand-held transmitter.

After completing steps 1 and 2 outlined in the *"Programming"* section, replace step 3 with the following:

Note: If programming a garage door opener or gate operator, it is advised to unplug the device during the "cycling" process to prevent overheating.

- Continue to press and hold the HomeLink® button (note step 3 in the "Programming" section) while you press and release — **every two**

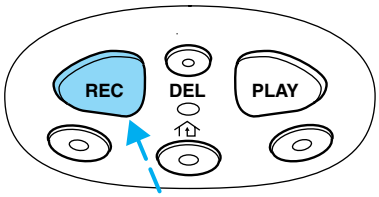
seconds (“cycle”) your hand-held transmitter until the frequency signal has been accepted by the HomeLink®. The red indicator light will flash slowly and then rapidly after HomeLink® accepts the radio frequency signal.

- Proceed with step 4 in the “Programming” section.

Operating TravelNote®

TravelNote® records and stores messages for up to three minutes in total length with simple controls. When you get an idea or remember something important while you’re driving, you don’t have to try to scribble it down or pull off the side of the road. All you have to do is push a button and begin speaking.

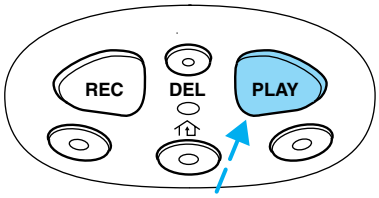
To record a message:



1. Press and release the **REC** button *one time* to start recording. (An audible tone will sound, confirming the onset of recording).
2. Press and release the **REC** button *a second time* to end recording. (An audible tone will sound again, confirming the end of recording and the red indicator light will turn off.)
3. While a message is being recorded, the indicator light will be a solid red.
4. If the message exceeds the available memory space, two tones will sound, the indicator light will flash amber and recording will end.

The indicator light will flash amber and an “error” tone will sound if the **REC** button is pressed when memory is full.

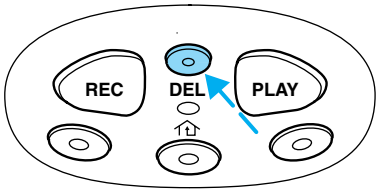
To play a message:



1. Press and release the **PLAY** button to play the message.
2. Press and hold the **PLAY** button to hear all the messages in consecutive order starting with the most recent.
3. If the **PLAY** button is pressed while a message is being listened to, TravelNote® will skip to the beginning of the next message.
4. During all **PLAY** functions, the indicator light will be a solid green.

The indicator light will flash amber and an “error” tone will sound if the **PLAY** button is pressed but no message is currently in memory.

To delete a message:



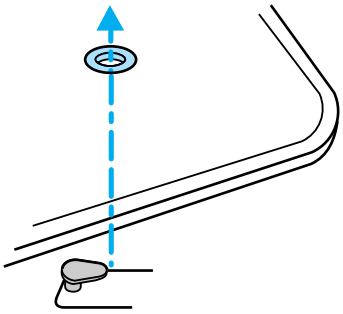
1. Press and release the **DEL** button while listening to a message or shortly after. The indicator light will flash green twice.

2. To delete all recorded messages, simultaneously press and release the **PLAY** and **REC** buttons at the same time. The indicator light will flash green twice.

If the **DEL** button is inadvertently pressed or the time allotted (five seconds) has passed, the indicator light will flash amber and an "error" tone will sound.

POSITIVE RETENTION FLOOR MAT (IF EQUIPPED)

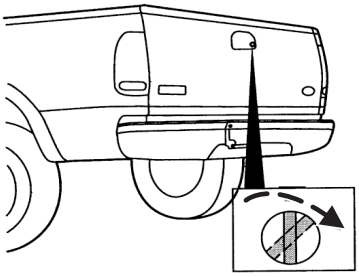
Position the floor mat so that the eyelet is over the pointed end of the retention post and rotate forward to lock in. Make sure that the mat does not interfere with the operation of the accelerator or the brake pedal. To remove the floor mat, reverse the installation procedure.



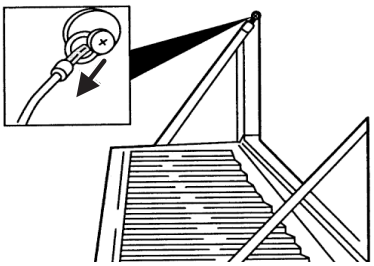
TAILGATE LOCK (IF EQUIPPED)

Your vehicle may be equipped with a tailgate lock designed to prevent theft of the tailgate.

- Insert ignition key and turn to the right to engage lock.
- Turn ignition key to the left to unlock.



TAILGATE REMOVAL



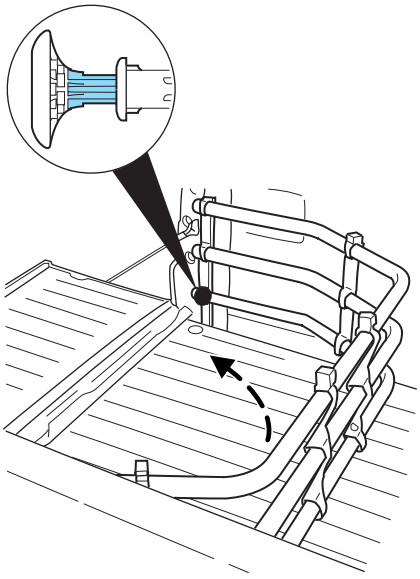
Your tailgate is removable to allow more room for loading.

1. Lower the tailgate.
2. Use a screwdriver to pry the spring clip (on each connector) past the head of the support screw. Disconnect cable.
3. Disconnect the other cable.
4. Lift tailgate to a 45 degree angle.
5. Lift right side off of its hinge.
6. Lift left side off of its hinge.

To install, follow the removal procedures in reverse order.

BED EXTENDER (IF EQUIPPED)

Your vehicle may be equipped with a bed extender designed to extend the pickup box for longer loads.



To extend the bed extender:

1. Lower tailgate.
2. Pull the round knobs on each side of the extender to release it from the pickup box.
3. Pivot extender on to the tailgate.

4. Evenly push down on the extender and push the round knobs in on each side locking it in place.

Green markings on the shaft indicate the locked position. The locking clip screws below the middle bar can be tightened counterclockwise for extra security.

Note: If the red marking on the shaft is visible, the bed extender is not locked or properly secured.

To stow the bed extender, follow steps one through four in reverse order.

The bed extender may be used to secure a load of up to 46 kg (100 lbs.) on the tailgate.

The bed extender should always be kept in the stowed position with the tailgate closed when not in use.

To remove the bed extender:

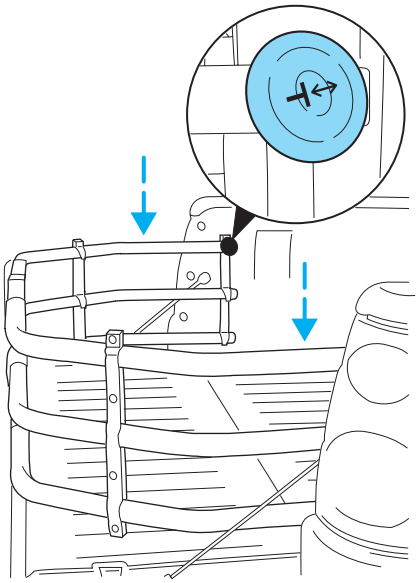
1. Extend the bed extender.

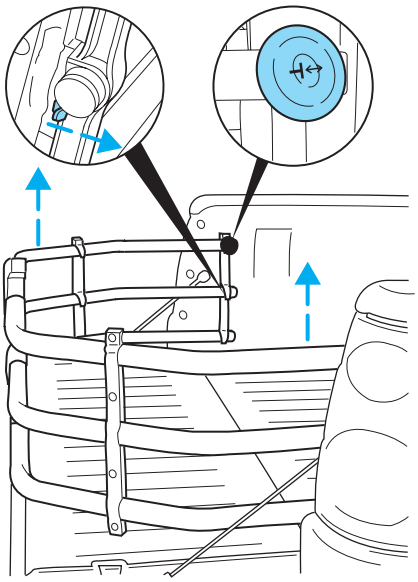
2. Pull the round knobs on each side of the extender to unlock it.

Make sure the locking clip screws are loose before removing the extender.

1. Press the locking clips below the middle bar on each side and lift the extender out of the bed.

To install the bed extender, follow the removal procedure in reverse order.





TONNEAU COVER (IF EQUIPPED)

The tonneau cover has been designed to maximize fuel economy and should be fully installed whenever possible.

The cover can be rolled up and stowed behind the cab, or removed completely from the vehicle.

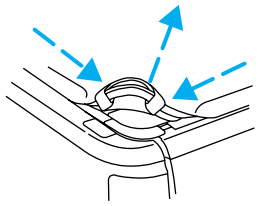
• To avoid damage to the cover, do not operate the vehicle unless the cover is fully installed, or securely stowed.

The removal and stowage for styleside and flareside vehicles are basically the same except where noted.

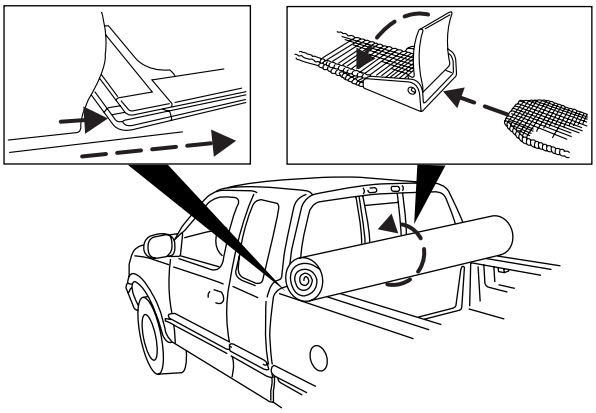
To remove or stow the cover:

1. **Styleside only:** In cold weather lower tailgate and release the levers on each side of the rear rail to release tension on the cover.

2. Pull the rear corner assist loops of the cover, outward, then upward to release the tension. Lift up on the rear edge of the cover to remove it from the rear rail.



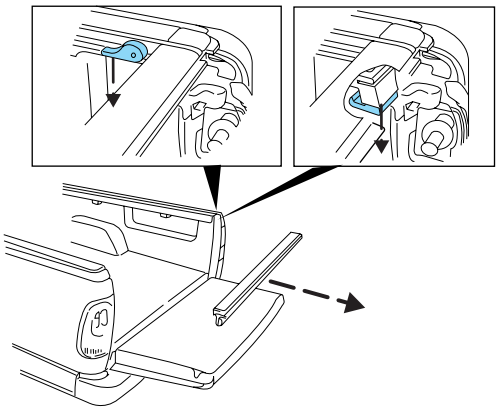
3. Pull one side of the cover outward and upward away from the side rail working from the rear to the front.



4. Starting from the opposite side of the vehicle, pull cover away from the side rail and roll the cover from rear to front.

5. Secure the cover behind the cab with two straps.

The cover may be removed from the vehicle by sliding it sideways out of the front rail.

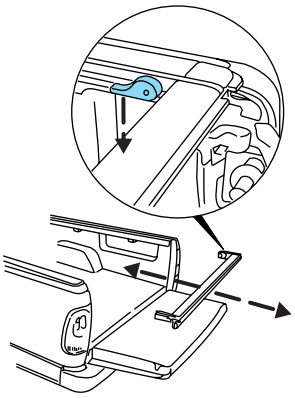


Flareside only:

- Remove two cross bars from pickup box by pushing towards either side to release tension.
- Lower tailgate, depress the levers on each side of the rear rail and remove rear rail from pickup box.

Styleside only:

- Remove three cross bars from pickup box by pushing towards either side to release tension. Stow the cross bars in the notches behind the rolled cover in the pickup box.
- Lower tailgate, depress the levers on each side of the rear rail and push rear rail towards the front of the pickup box securing it behind the cross bars and cover.



For installation of the cover, follow the removal procedure in reverse order.

Make sure the crossbows are locked in the notches in the side rails and the rear rails are locked in position prior to cover installation.

HARD TONNEAU COVER (IF EQUIPPED)

The tonneau cover has been designed to maximize fuel economy.

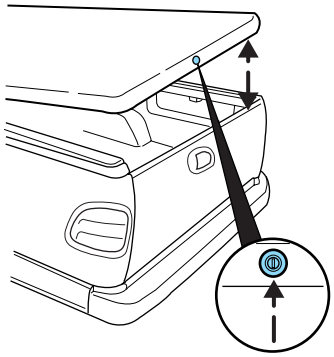
- To avoid damage to the cover, do not operate the vehicle unless the cover is fully secured.

To open the cover:

- Unlock the cover (with the key) and lift the cover up for access to the pickup box.

To close the cover:

- Close the cover on pickup box.



KEYS

The key operates all locks on your vehicle. In case of loss, replacement keys are available from your dealer.

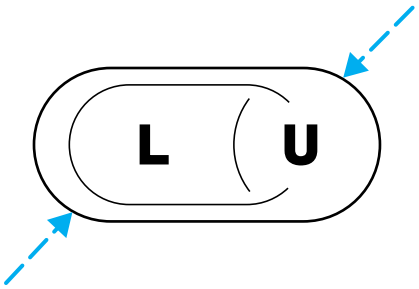
You should always carry a second key with you in a safe place in case you require it in an emergency.

Refer to *SecuriLock™ Passive Anti-Theft System* for more information.

POWER DOOR LOCKS (IF EQUIPPED)

If the door does not unlock when the U is pressed, see *Interior power door disable feature* in the *Remote entry section* in this chapter.

Press U to unlock all doors and L to lock all doors.

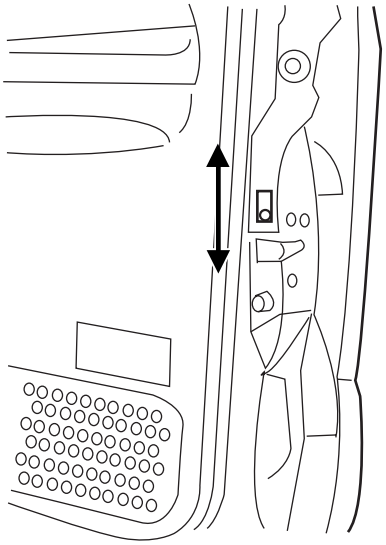


Childproof door locks (if equipped)

When these locks are set, the rear doors cannot be opened from the inside. The rear doors can be opened from the outside when the doors are unlocked.

The childproof locks are located on rear edge of each rear door and must be set separately for each door. Setting the lock for one door will not automatically set the lock for both doors.

Move lock control up to engage the childproof lock. Move control down to disengage childproof locks.



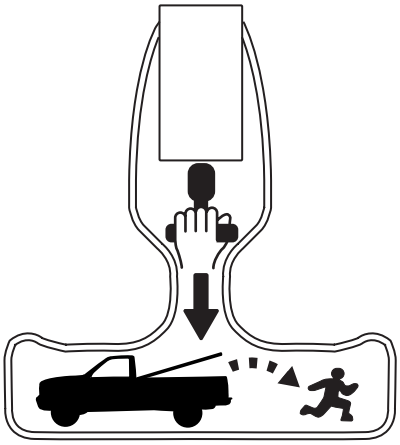
INTERIOR TONNEAU COVER RELEASE (IF EQUIPPED)

Your vehicle is equipped with a mechanical interior tonneau cover release handle that provides a means of escape for children and adults in the event they become locked inside the pickup box.

Adults are advised to familiarize themselves with the operation and location of the release handle.

To open the tonneau cover from the inside, pull the “T” shaped handle and push up on the tonneau cover panel. The handle is composed of a material that will glow for hours in darkness following brief exposure to ambient light.

The “T” shaped handle is located on the tonneau cover panel.



Keep vehicle doors and tonneau cover locked and keep keys and remote transmitters out of a child’s reach. Unsupervised children could lock themselves in the box and risk injury. Children should be taught not to play in vehicles.

On hot days, the temperature in the pickup box 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.

REMOTE ENTRY SYSTEM (IF EQUIPPED)

This device complies with part 15 of the FCC rules and with RS-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 not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Your vehicle is equipped with a remote entry system which allows you to:

- unlock the vehicle doors without a key.
- lock all the vehicle doors without a key.
- activate the personal alarm.

Depending upon when your vehicle was manufactured, the remote entry features may operate differently:

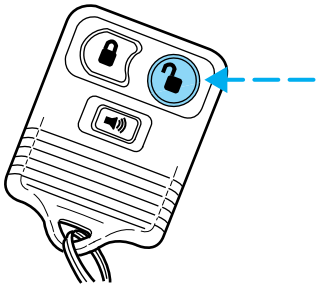
- the remote entry features will only operate with the ignition in the LOCK position. Additionally, this system will disable the power door lock controls, which will remain inoperative until the vehicle is disarmed. Or,
- the remote entry features, with the exception of the PANIC control, will operate in all ignition positions; the PANIC alarm only operates with the ignition in the LOCK position.

If there is any potential remote keyless entry problem with your vehicle, ensure **ALL remote entry transmitters** are brought to the dealership, to aid in troubleshooting.

Unlocking the doors

Press this control to unlock the driver's door. The interior lamps will illuminate.

Press the control a second time within three seconds to unlock all doors.

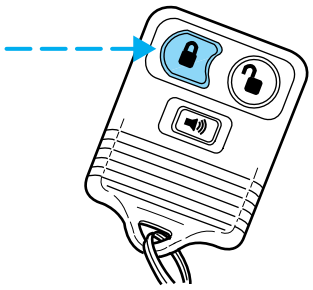


Locking the doors

Press this control to lock all doors.

To confirm doors are closed and locked, press this control a second time within three seconds. The door(s) will lock again, the horn will chirp once and the lamps will flash.

If any of the doors are open or ajar, the horn will make two quick chirps, reminding you to properly close the doors.



Power door lock disable feature

This feature will help protect your vehicle from unauthorized entry.

The UNLOCK function on the power door control will not operate with the ignition OFF and twenty seconds after the doors are closed and electronically locked by the remote entry transmitter, key pad, or power door control (if pressed while the door was open).

The UNLOCK function will operate again after you unlock the vehicle using the remote entry transmitter or key pad, turn the ignition to ON, or open the door from inside of the vehicle.

Deactivating/activating power door lock disable feature

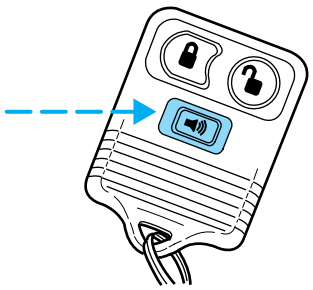
This feature may be deactivated/activated by an authorized dealer.

Sounding a panic alarm

Press this control to activate the alarm.

To deactivate the alarm, press the control again or turn the ignition to ACC or ON.

Panic alarm will only operate with the ignition in the OFF position.



Replacing the battery

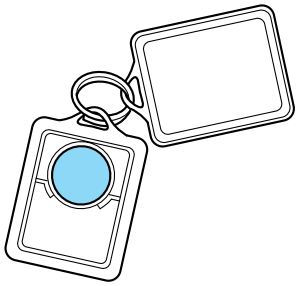
The remote transmitter is powered by one coin type three-volt lithium battery CR2032 or equivalent. Typical operating range will allow you to

be up to 10 meters (33 feet) away from your vehicle. A decrease in operating range can be caused by the following factors:

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

To replace the battery:

1. Twist a thin coin between the two halves of the transmitter near the key ring. DO NOT TAKE THE FRONT PART OF THE TRANSMITTER APART.



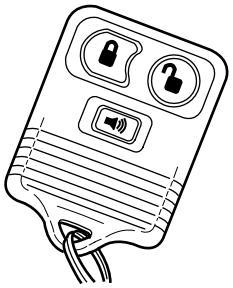
2. Place the positive (+) side of new battery in the same orientation. Refer to the diagram inside the transmitter unit.

3. Snap the two halves back together.

Replacement of the battery will **not** cause the remote transmitter to become deprogrammed from your vehicle. The remote transmitter should operate normally after battery replacement.

Replacing lost transmitters

If a remote transmitter has been lost and you would like to remove it from the vehicle's memory, or you would like to purchase additional remote transmitters and have them programmed to your vehicle:

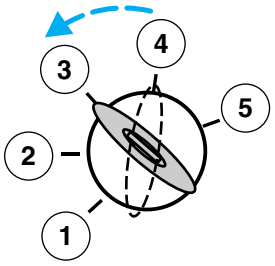


- Take **all** your vehicle's transmitters to your dealer for programming, or
- Perform the programming procedure yourself.

Programming remote transmitters

It is necessary to have **all** (maximum of four — original and/or new) of your remote transmitters available prior to beginning this procedure.

To program the transmitters yourself:



- Place the key in the ignition and turn from 2 (LOCK) to 3 (OFF) and cycle between 3 (OFF) and 4 (ON) eight times in rapid succession (within 10 seconds) with the eighth turn ending in the 4 (ON) position. The doors will lock/unlock to confirm that programming mode has been entered.
- Within 20 seconds, program a remote transmitter by pressing any button on a transmitter. The doors will lock/unlock to confirm that the remote transmitter has been programmed. (If more than 20 seconds pass before pressing a remote transmitter button, the programming mode will exit and the procedure will have to be repeated.)
- Repeat the previous step to program additional remote transmitters. The doors will lock/unlock to confirm that each remote transmitter has been programmed.
- When you have completed programming the remote transmitters, turn the ignition to 3 (OFF). Again the doors will lock/unlock to confirm programming has been completed.

Illuminated entry

The illuminated entry system will turn on the interior lights when the remote transmitter unlock control is pressed.

The illuminated entry system will turn off the interior lights if the ignition is turned to the ON position, or if the remote transmitter lock control is pressed, or after 25 seconds of illumination.

The inside lights will not turn off if:

- they have been turned on with the dimmer control, or
- any door is open.

The battery save feature will turn off the interior lights 45 minutes after the last door is closed, even if the dimmer control is on.

Autolock (if equipped)

This feature automatically locks all vehicle doors when:

- all doors are closed,

- the brake is depressed,
- the ignition is in the RUN position and the vehicle is traveling more than 8 km/h (5 mph).

Relock

The autolock feature repeats when:

- any door is opened then closed while the ignition is in the RUN position, and
- the vehicle is traveling more than 8 km/h (5 mph).

Deactivating/activating the autolock feature

Before following the procedure, make sure that the ignition is OFF and all vehicle doors are closed.

You must complete steps 1-7 within 30 seconds or the procedure will have to be repeated. If the procedure needs to be repeated, you must wait 30 seconds.

1. Turn the ignition key to ON.
2. Press the power door unlock control three times.
3. Turn the ignition key from ON to OFF.
4. Press the power door unlock control three times.
5. Turn the ignition back to ON. The horn will chirp.
6. Press the unlock control, then press the lock control. The horn will chirp once if autolock was deactivated or twice (one short and one long chirp) if autolock was activated.
7. Turn the ignition to OFF. The horn will chirp once to confirm the procedure is complete.

Keyless entry system (if equipped)

With the keyless entry keypad, you can:

- lock or unlock the vehicle doors without using the key.

Your vehicle has a factory set 5 digit code that operates the keyless entry system. You can also program your own 5 digit personal entry code. The factory-set code is located:

- on the owner's wallet card in the glove compartment
- taped to the computer module
- or at your dealer.

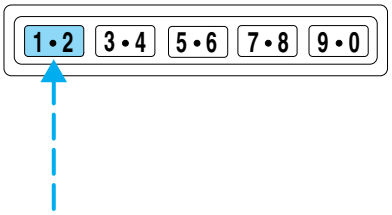
When pressing the controls on the keyless entry keypad, press the middle of the controls to ensure a good activation.

This system will disable the power door lock controls. These will not work until the vehicle is disarmed.

Programming your own personal entry code

To program your own code:

1. Enter factory set code (keypad will illuminate when pressed).
2. Press 1/2 control within five seconds of step 1.
3. Enter your personal 5 digit code. Enter each digit within five seconds of previous one.



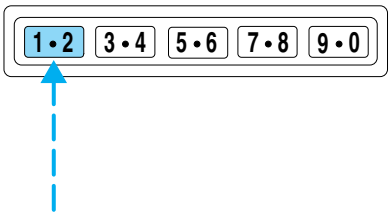
Do not set a code that includes five of the same number or presents them in sequential order. Thieves can easily figure out these types of codes.

Your personal code does not replace the permanent code that the dealership gave you. You can use either code to unlock your vehicle. If a second personal code is entered, the module will erase it in favor of the new code.

If you wish to erase your personal code, use the following instructions:

Erasing personal code

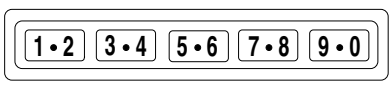
1. Enter factory set code.
2. Press 1/2 control within five seconds of step one.
3. Press 7/8 control and 9/0 control at the same time within five seconds of step 2.



The system will now only respond to the factory set code.

Anti-scan feature

The anti-scan feature prevents repeated attempts at arriving at a valid key code.



The keyless entry pad is disabled for 1 minute after 7 unsuccessful attempts at entering a valid key code. The keypad will flash during this 1 minute mode. However, the 7/8 and 9/0 controls will still lock the vehicle.

Anti-scan will be turned off after:

- one minute of keypad inactivity.
- the remote entry transmitter UNLOCK button is pressed.
- the ignition is turned to the ON position.

Unlocking the doors with the keyless entry system

To unlock the driver door, enter either the factory set code or the personal code (each digit must be pressed within five seconds of the prior digit). The interior lamps will also illuminate.

To unlock all doors, enter the factory set code or personal code (driver door unlocks) and press the 3/4 control within five seconds.

Locking the doors with the keyless entry system

It is not necessary to enter the factory or personal code prior to locking all doors. To lock the doors:

- Press the 7/8 control and the 9/0 control at the same time.

Activating/deactivating autolock with the keyless entry system

Before following the activation or deactivation procedures, make sure that the anti-theft system (if equipped) is not armed, ignition is off, and all vehicle doors and liftgate window are closed.

1. Enter 5 digit entry code
2. Press and hold 7/8 control
3. Press and release 3/4 control while holding 7/8 control
4. Release 7/8 control.

The horn will chirp once if autolock was deactivated or twice (one short and one long chirp) if autolock was activated.

To re-activate autolock, repeat steps 1–4.

SECURILOCK™ PASSIVE ANTI-THEFT SYSTEM

SecuriLock™ passive anti-theft system is an engine immobilization system. This system is designed to prevent the engine from being started unless a **coded key programmed to your vehicle** is used.

The SecuriLock™ passive anti-theft 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.

THEFT INDICATOR

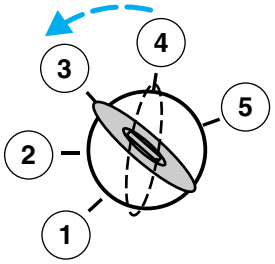
The theft indicator is the flashing red indicator located on the dash panel.

- When the ignition is in the OFF position, the indicator will flash once every 2 seconds to indicate the SecuriLock™ system is functioning as a theft deterrent.
- When the ignition is in the ON position, the indicator will glow for 3 seconds to indicate normal system functionality.

If a problem occurs with the SecuriLock™ system, the indicator will flash rapidly or glow steadily when the ignition is in the ON position. If this occurs, the vehicle should be taken to an authorized dealer for service.

Automatic arming

The vehicle is armed immediately after switching the ignition to the 3 (OFF) position. The **THEFT** indicator in the instrument cluster will flash every two seconds when the vehicle is armed.



Automatic disarming

Switching the ignition to the 4 (ON) position with a **coded key** disarms the vehicle. The **THEFT** indicator will illuminate for three seconds and then go out. If the **THEFT** indicator stays on for an extended period of time or flashes rapidly, have the system serviced by your dealership or a qualified technician.

Key information

Your vehicle is supplied with **two coded keys.** Only a **coded key** will start your vehicle. Spare coded keys can be purchased from your dealership. Your dealership can program your key or you can “do it yourself.” Refer to *Programming spare keys.*

The following items may prevent the vehicle from starting:

- Large metallic objects
- Electronic devices on the key chain that can be used to purchase gasoline or similar items

- A second key on the same key ring as the **coded key**

If any of these items are present, you need to keep these objects from touching the **coded key** while starting the engine. These objects and devices cannot damage the **coded key,** but can cause a momentary "no start" condition if they are too close to the key during engine start. If a problem occurs, turn ignition OFF and restart the engine with all other objects on the key ring held away from the ignition key. Check to make sure the **coded key** is an approved Ford **coded key.**

If your keys are lost or stolen you will need to do the following:

- Use your spare key to start the vehicle, or
- Have your vehicle towed to a dealership or a locksmith. The key codes will need to be erased from your vehicle and new key codes will need to be re-coded.

Replacing coded keys can be very costly and you may want to store an extra programmed key away from the vehicle in a safe place to prevent an unforeseen inconvenience.

The correct **coded key** must be used for your vehicle. The use of the wrong type of **coded key** may lead to a "no start" condition.

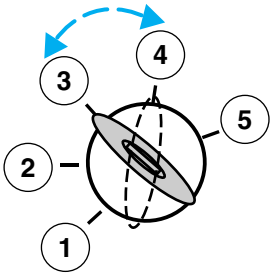
If an unprogrammed key is used in the ignition it will cause a "no start" condition.

Programming spare keys

A maximum of eight keys can be coded to your vehicle. Only SecuriLock™ keys can be used. To program a **coded key** yourself, you will need two previously programmed **coded keys** (keys that already operate your vehicle's engine) and the new unprogrammed key(s) readily accessible for timely implementation of each step in the procedure.

If two previously programmed coded keys are not available, you must bring your vehicle to your dealership to have the spare coded key(s) programmed.

Please read and understand the entire procedure before you begin.



1. Insert the first previously programmed **coded key** into the ignition and turn the ignition from 1 (OFF) to 3 (ON) (maintain ignition in 3 (ON) for at least one second, but no more than ten seconds).

2. Turn ignition to 1 (OFF) then 2 (ACC) and remove the first **coded key** from the ignition.

3. Within ten seconds of removing the first **coded key,** insert the second previously programmed **coded key** into the ignition and turn the ignition from 1 (OFF) to 3 (ON) (maintain ignition in 3 (ON) for at least one second but no more than ten seconds).

4. Turn the ignition to 1 (OFF) then 2 (ACC) and remove the second **coded key** from the ignition.

5. Within 10 seconds of removing the second **coded key,** insert the new unprogrammed key (new key/valet key) into the ignition and turn the ignition from 1 (OFF) to 3 (ON) (maintain ignition in 3 (ON) for at least one second, but no more than ten seconds). This step will program your new key to a coded key.

6. To program additional new unprogrammed key(s), repeat this procedure from step 1.

If successful, the new coded key(s) will start the vehicle's engine and the theft indicator will illuminate for three seconds and then go out.

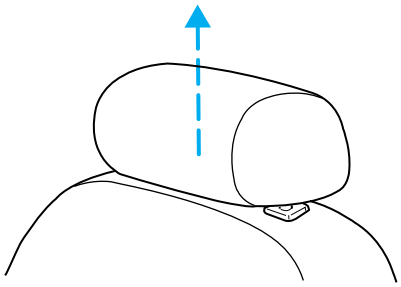
If not successful, the new coded key(s) will not start the vehicle's engine and the theft indicator will flash on and off and you may repeat steps 1 through 5. If failure repeats, bring your vehicle to your dealership to have the new spare key(s) programmed.

SEATING

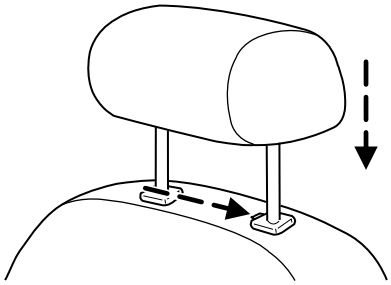
Adjustable head restraints (if equipped)

Your vehicle's seats may be equipped with head restraints which are vertically adjustable. The purpose of these head restraints is to help limit head motion in the event of a rear collision. To properly adjust your head restraints, lift the head restraint so that it is located directly behind your head or as close to that position as possible. Refer to the following to raise and lower the head restraints.

The head restraints can be moved up and down.

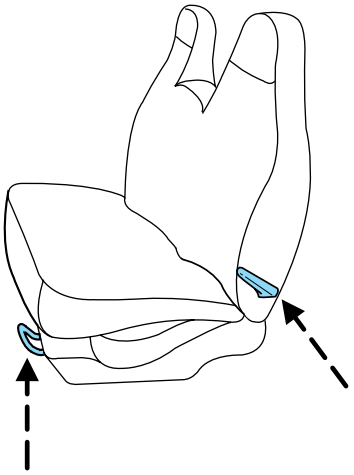


Push control to lower head restraint.



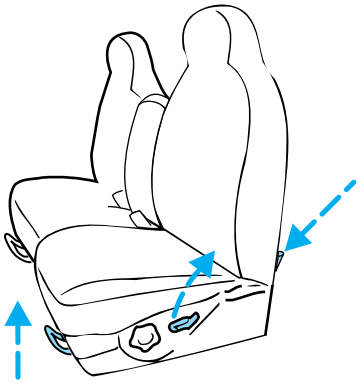
Full bench seat (if equipped)

- Lift the track release bar to move the seat forward or backward. Ensure that the seat is relatched into place.
- Pull up on the release lever located at the bottom of the seatback to quickly fold the seatback forward.



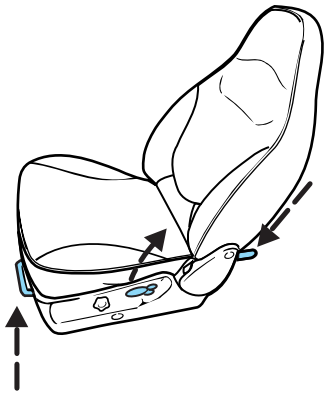
60/40 split bench seat (if equipped)

- Lift the release bar to move the seat forward or backward. Ensure the seat is relatched into place.
- Pull the seatback handle up to move the seat back forward or backward.
- Push down the release lever (if equipped) located on the back of the seat to quickly fold the seatback forward.



Captain's chair (if equipped)

- Lift the track release bar to move the seat forward or rearward. Make sure that the seat is relatched into place.
- Pull the release lever handle located on the side of the seat up to move the seat back forward or backward.
- Push down the release lever (if equipped) located at the bottom of the seatback to quickly fold the seatback forward.



Adjusting the front manual seat

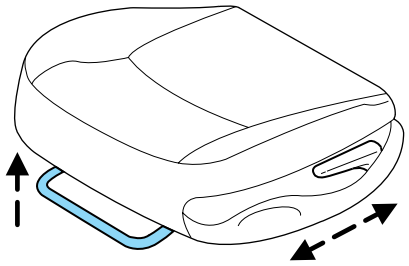
Never adjust the driver's seat or seatback when the vehicle is moving.

Do not pile cargo higher than the seatbacks to reduce the risk of injuring people in a collision or sudden stop.

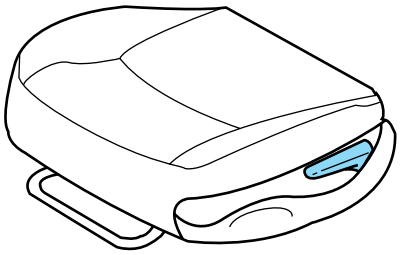
Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

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 collision.

Lift handle to move seat forward or backward.



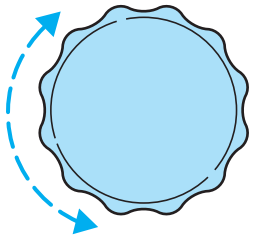
Pull lever up to adjust seatback.



Using the manual lumbar support

Turn the lumbar support control toward the front of vehicle to move the lumbar support forward for more direct support.

Turn the lumbar support control toward the rear of vehicle to move the lumbar support back for less direct support.



Adjusting the front power seat (if equipped)

Never adjust the driver's seat or seatback when the vehicle is moving.

Do not pile cargo higher than the seatbacks to avoid injuring people in a collision or sudden stop.

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

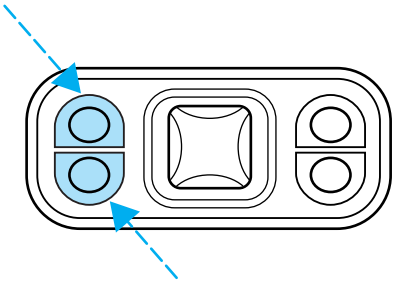
Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a collision.

The control is located on the outboard side of the seat cushion.

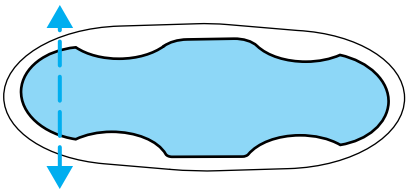
Your vehicle will only be equipped with one of the two controls shown.

Press to raise or lower the front portion of the seat cushion.

- Type A

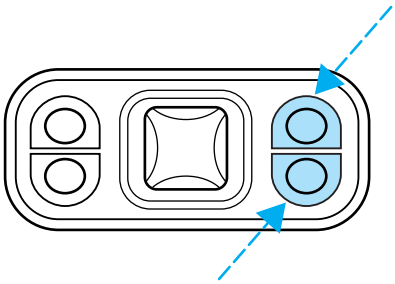


- Type B

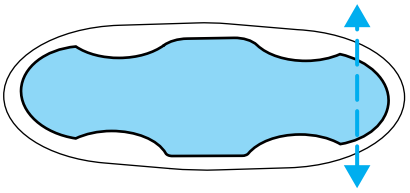


Press to raise or lower the rear portion of the seat cushion.

- Type A

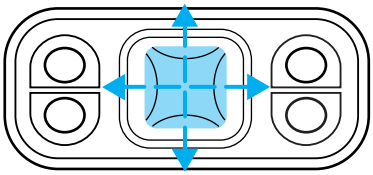


- Type B

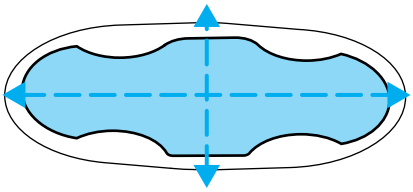


Press the control to move the seat forward, backward, up or down.

- Type A



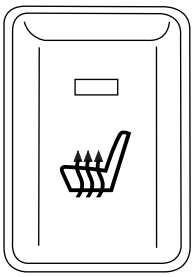
- Type B



Heated seats (if equipped)

To operate the heated seats:

- Push control located on the side of the seat to activate.
- Push again to deactivate.



The indicator light on the control will illuminate when activated.

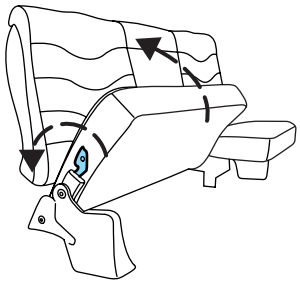
REAR SEATS

Folding up the rear seats (if equipped — SuperCab only)

The rear seatback has a split 60/40 seat. Each seat cushion can be flipped up into the seatback position.

1. Pull control to release seat cushion.

2. Rotate seat cushion up until it locks into vertical storage position.



Returning the seat to seating position

Always be sure that the seat is in a latched position, whether the seat is occupied or empty. If not latched, the seat may cause injury during a sudden stop.

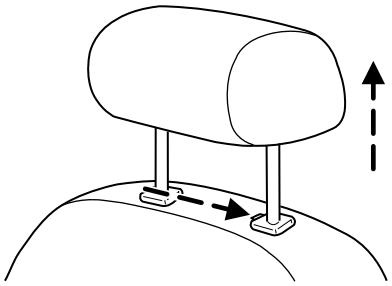
1. Pull control on the side of the seat to release seat cushion from storage position.

2. Push seat cushion down until it locks into horizontal position.

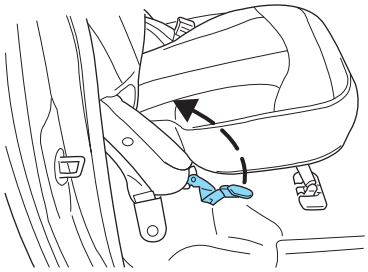
Folding down the rear seats (SuperCrew only)

The rear seatback has a split 60/40 seat. Each seat can be folded down into the load floor position.

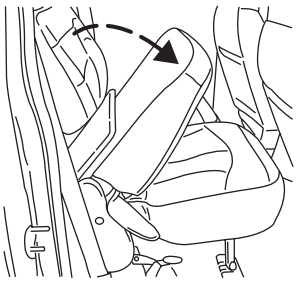
1. Remove the head restraint. Push the release button at the base of the head restraint post and pull the head restraint up and out.



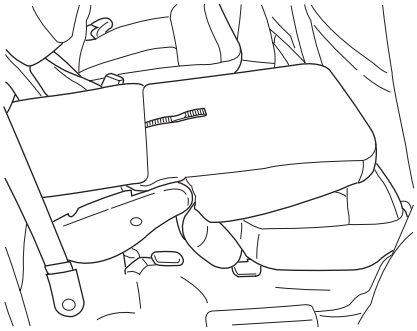
2. Pull control to release seat.



3. Pull seatback toward front seat and down into load floor position.



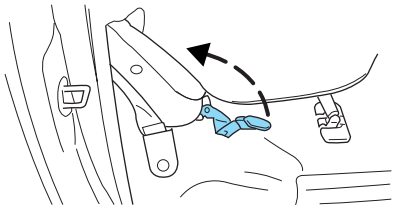
4. Make sure seat is pushed all the way down and locks into position.



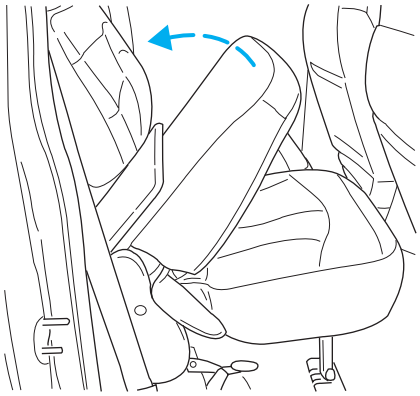
Returning the seat to seating position

Always be sure that the seat is in a latched position, whether the seat is occupied or empty. If not latched, the seat may cause injury during a sudden stop.

1. Pull control on the side of the seat to release seat cushion from the load floor position.

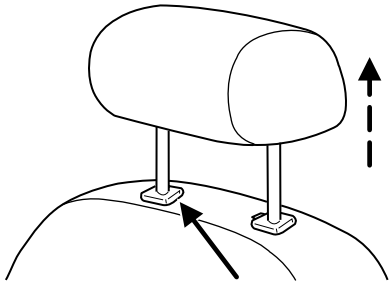


2. Lift seatback up until it locks into vertical position.



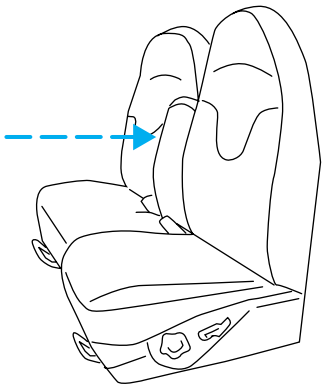
3. Return the head restraint to its original position.

If the head restraint is inserted backwards, it may lock and not be removable by using the release button. If this happens use a stiff piece of wire such as a paper clip, and insert the wire into the hole on the opposite side of the release button. Depress the release button and remove the head restraint.



Using the armrest (if equipped)

Push the release control to move the armrest up or down.



SAFETY RESTRAINTS

Safety restraints precautions

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 collision.

All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag (SRS) is provided.

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, 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.

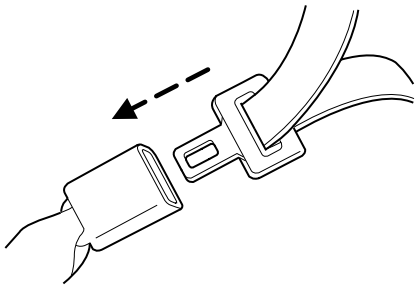
Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints.

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.

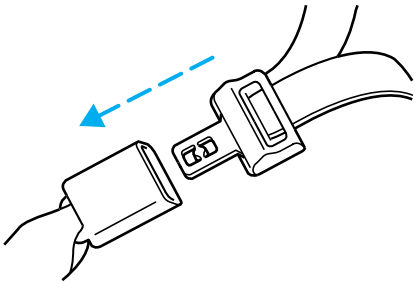
Combination lap and shoulder belts

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.

- Front seats

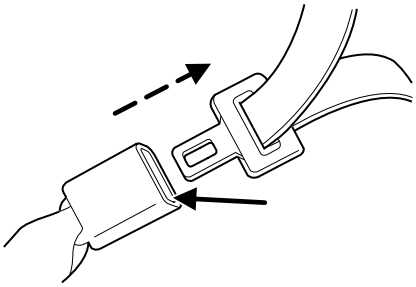


- Rear seats (if equipped)

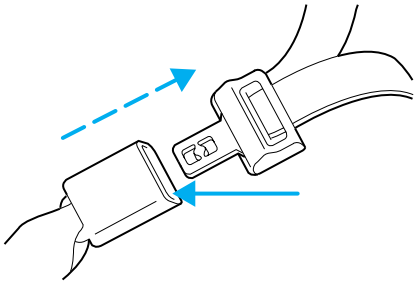


2. To unfasten, push the release button and remove the tongue from the buckle.

- Front seats



- Rear seats (if equipped)



The front and rear outboard safety restraints in the vehicle are combination lap and shoulder belts. The front passenger and rear seat outboard safety belts have two types of locking modes described below:

Vehicle sensitive mode

The vehicle sensitive mode is the normal retractor mode, allowing 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 approximately 8 km/h (5 mph) or more, the combination safety belts will lock to help reduce forward movement of the driver and passengers.

The front seat belt system can also be made to lock manually by quickly pulling on the shoulder belt. Rear seat belts (if equipped) cannot be made to lock up by pulling quickly on the belt.

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.

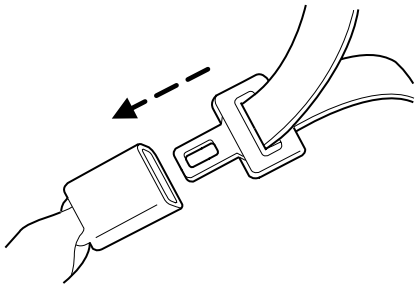
When to use the automatic locking mode

- **Anytime** a child safety seat is installed in a passenger front or outboard rear seating position with Regular Cab or SuperCab. SuperCrew models include the center seating position of the second row. Children 12 years old and under should be properly restrained in the rear seat whenever possible. Refer to *Safety Restraints for Children* or *Safety Seats for Children* later in this chapter.

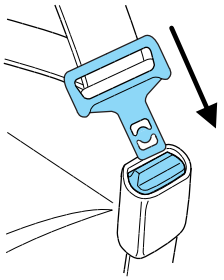
How to use the automatic locking mode

1. Buckle the combination lap and shoulder belt.

- Front seats



- Rear seats (if equipped)



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



3. 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

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

Ford recommends that all safety belt assemblies and attaching hardware should be inspected by a qualified technician after any collision. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

After any vehicle collision, the front passenger and rear outboard seat belt systems must be checked by a qualified technician to verify that the “automatic locking retractor” feature for child seats is still functioning properly. In addition, all seat belts should be checked for proper function.

BELT AND RETRACTOR ASSEMBLY MUST BE REPLACED if the seat belt assembly "automatic locking retractor" feature or any other seat belt function is not operating properly when checked according to the procedures in Workshop Manual.

Failure to replace the Belt and Retractor assembly could increase the risk of injury in collisions.

Safety belt pretensioner (if equipped)

Your vehicle is equipped with safety belt pretensioners at the driver and front outboard passenger seating positions.

The Seat Integrated Restraints (SIR) seat is equipped with a buckle pretensioner. Do NOT place objects between the seats, this could interfere with the functioning of the pretensioner. For the SuperCab and CrewCab base bench seats and all Regular Cab seating positions, the seatbelts are equipped with a retractor pretensioner.

The safety belt pretensioners are designed to activate only during certain frontal or near-frontal collisions with sufficient longitudinal deceleration. A safety belt pretensioner is a device which tightens the webbing of the lap and shoulder belts in such a way that they fit more snugly against the body.

The driver and front outboard passenger safety belt system (including retractors, buckles and height adjusters) must be replaced if the vehicle is involved in a collision that results in the activation of the safety belt pretensioners. Refer to the *Safety belt maintenance* section in this chapter.

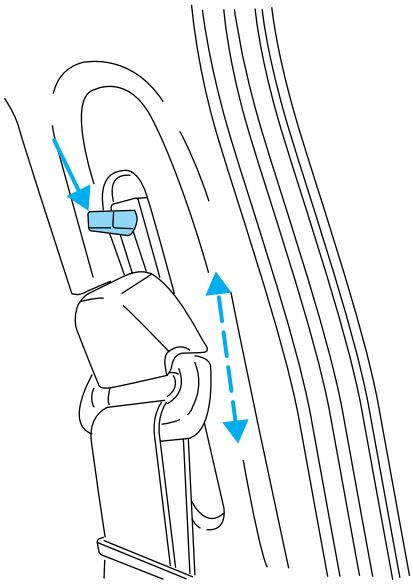
Failure to replace the safety belt assembly under the above conditions could result in severe personal injuries in the event of a collision.

Front safety belt height adjustment (if equipped)

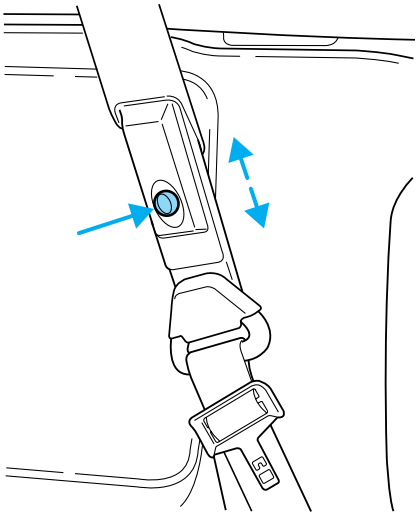
If your vehicle has seat integrated restraints you will not have a safety belt height adjuster.

Regular Cab and SuperCab vehicles have safety belt height adjustments for the driver and front passenger. SuperCrew vehicles have these adjustments for the driver, front passenger and rear outboard passengers. Adjust the height of the shoulder belt so the belt rests across the middle of your shoulder.

- Regular Cab/4–door SuperCrew



- 4–door SuperCab (Bench seats only)



To lower the shoulder belt height, push the button and slide the height adjuster down. To raise the height of the shoulder belt, slide the height adjuster up. Pull down on the height adjuster to make sure it is locked in place.

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

Lap belts

Adjusting the lap belt

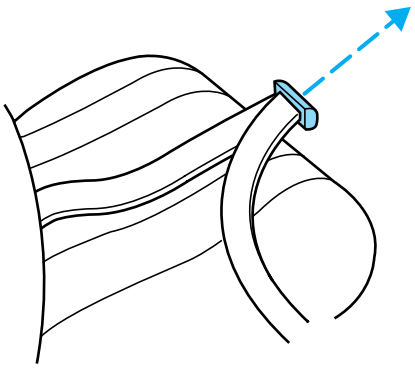
The lap belt should fit snugly and as low as possible around the hips, not across the waist.

The center lap belt tongues are designed to fit only in the correct buckle. The tongue will not securely latch if you attempt to use it in any of the outboard seating position buckles. To ensure that you have used the correct buckle you should hear a snap and feel it latch.

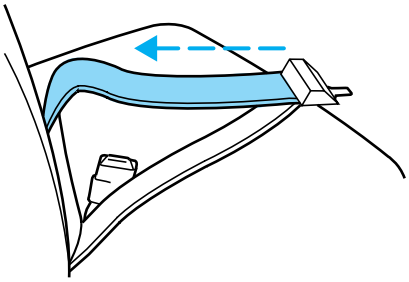
- **1st row center and 2nd row center (SuperCab) seating position**

The lap belt does not adjust automatically.

Insert the tongue into the correct buckle (the buckle closest to the direction the tongue is coming from). To lengthen the belt, turn the tongue at a right angle to the belt and pull across your lap until it reaches the buckle. To tighten the belt, pull the loose end of the belt through the tongue until it fits snugly across the hips.



Shorten and fasten the belt when not in use.



- **2nd row center seating position (SuperCrew)**

The lap belt will adjust automatically. To fasten, grasp the tongue, and with a continuous motion, pull out enough webbing to buckle the tongue into the correct buckle (the buckle closest to the direction the tongue is coming from). If you did not pull out enough webbing to reach the buckle, allow the tongue to retract fully before trying to pull it out again. The belt should fit snugly and as low as possible around your hips. Do not wear the lap belt around your waist.

Safety belt warning light and indicator chime

The safety belt warning light illuminates in the instrument cluster and a chime sounds to remind the occupants to fasten their safety belts.

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.

BeltMinder (if equipped)

The BeltMinder feature is a supplemental warning to the safety belt warning function. This feature provides additional reminders to the driver that the driver's safety belt is unbuckled by intermittently sounding a chime and illuminating the safety belt warning lamp in the instrument cluster.

If...	Then...
The driver's safety belt is not buckled approximately 5 seconds after the safety belt warning light has turned off...	The BeltMinder feature is activated - the safety belt warning light illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until safety belt is buckled.
The driver's safety belt is buckled while the safety belt indicator light is illuminated and the safety belt warning chime is sounding...	The BeltMinder feature will not activate.
The driver's safety belt is buckled before the ignition switch is turned to the ON position...	The BeltMinder feature will not activate.

The purpose of the BeltMinder is to remind occasional wearers to wear safety belts all of the time.

The following are reasons most often given for not wearing safety belts: (All statistics based on U.S. data)

Reasons given...	Consider...
"Crashes are rare events"	**36700 crashes occur every day.** The more we drive, the more we are exposed to "rare" events, even for good drivers. *1 in 4 of us will be seriously injured in a crash during our lifetime.*
"I'm not going far"	**3 of 4** fatal crashes occur within **25** miles of home.
"Belts are uncomfortable"	We design our safety belts to enhance comfort. If you are uncomfortable - try different positions for the safety belt upper anchorage and seatback which should be as upright as possible; this can improve comfort.
"I was in a hurry"	**Prime time for an accident.** BeltMinder reminds us to take a few seconds to buckle up.
"Seat belts don't work"	**Safety belts,** when used properly, **reduce risk of death** to front seat occupants by **45% in cars,** and by **60% in light trucks.**
"Traffic is light"	**Nearly 1 of 2 deaths occur in single-vehicle crashes,** many when no other vehicles are around.
"Belts wrinkle my clothes"	Possibly, but a serious crash can do much more than wrinkle your clothes, particularly if you are unbelted.
"The people I'm with don't wear belts"	Set the example, teen deaths occur 4 times more often in vehicles with TWO or MORE people. Children and younger brothers/sisters imitate behavior they see.

Reasons given...	Consider...
"I have an air bag"	Air bags offer greater protection when used with safety belts. Frontal airbags are not designed to inflate in rear and side crashes or rollovers.
"I'd rather be thrown clear"	Not a good idea. **People** who are **ejected are 40 times more likely to DIE.** Safety belts help prevent ejection, WE CAN'T "PICK OUR CRASH".

Do not sit on top of a buckled safety belt to avoid the Belt Minder chime. Sitting on the safety belt will increase the risk of injury in an accident. To disable (one-time) or deactivate the Belt Minder feature please follow the directions stated below.

One time disable

Any time the safety belt is buckled and then unbuckled during an ignition ON cycle, BeltMinder will be disabled for that ignition cycle only.

Deactivating/activating the BeltMinder feature

Read steps 1 - 9 thoroughly before proceeding with the deactivation/activation programming procedure.

The BeltMinder feature can be deactivated/activated by performing the following procedure:

Before following the procedure, make sure that:

- The parking brake is set.
- The gearshift is in P (Park) (automatic transmission) or the neutral position (manual transmission).
- The ignition switch is in the OFF position.
- All vehicle doors are closed.
- The driver's safety belt is unbuckled.
- The parklamps/headlamps are in OFF position (If vehicle is equipped with Autolamps, this will not affect the procedure).

To reduce the risk of injury, do not deactivate/activate the Belt Minder feature while driving the vehicle.

BeltMinder activation and deactivation procedure

1. Turn the ignition switch to the RUN (or ON) position. (DO NOT START THE ENGINE.)

2. Wait until the safety belt warning light turns off. (Approximately 1–2 minutes.)

- Steps 3–5 must be completed within 60 seconds or the procedure will have to be repeated.

3. Buckle then unbuckle the safety belt three times, ending with the safety belt unbuckled. This can be done before or during BeltMinder warning activation.

4. Turn on the parklamps/headlamps, turn off the parklamps/headlamps.

5. Buckle then unbuckle the safety belt three times, ending with the safety belt unbuckled.

- After step 5 the safety belt warning light will be turned on for three seconds.

6. Within seven seconds of the safety belt warning light turning off, buckle then unbuckle the safety belt.

- This will disable BeltMinder if it is currently enabled, or enable BeltMinder if it is currently disabled.

7. Confirmation of disabling BeltMinder is provided by the safety belt warning light flashing four times per second for three seconds.

8. Confirmation of enabling BeltMinder is provided by:

- The safety belt warning light flashing four times per second for three seconds.
- Followed by three seconds with the safety belt warning light off.
- Once again, the safety belt warning light will flash four times per second for three seconds.

9. After receiving confirmation, the deactivation/activation procedure is complete.

Safety belt extension assembly

If the safety belt is too short when fully extended, there is a 20 cm (8 inch) safety belt extension assembly that can be added (part number 611C22). This assembly can be obtained from your dealer at no cost.

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on

the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended.

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

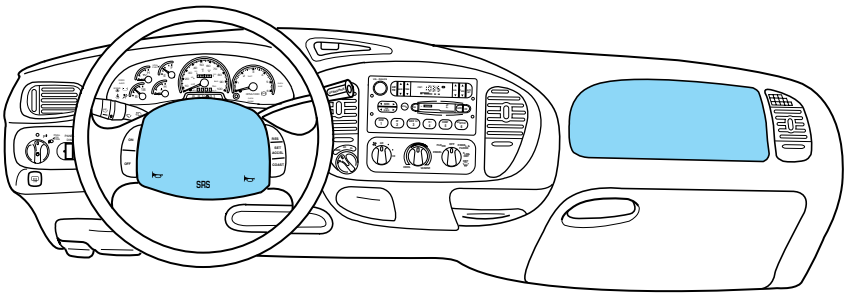
Safety belt maintenance

Inspect the safety belt systems periodically to make sure they work properly and are not damaged. Inspect the safety belts to make sure there are no nicks, tears or cuts. Replace if necessary. All safety belt assemblies, including retractors, buckles, front seat belt buckle assemblies, buckle support assemblies (slide bar-if equipped), shoulder belt height adjusters (if equipped), shoulder belt guide on seatback (if equipped), child safety seat tether bracket assemblies (if equipped), LATCH child seat tether anchors and lower anchors (if equipped), and attaching hardware, should be inspected after a collision. Ford Motor Company recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision was minor and a qualified technician 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 collision should also be inspected and replaced if either damage or improper operation is noted.

Failure to inspect and if necessary replace the safety belt assembly under the above conditions could result in severe personal injuries in the event of a collision.

Refer to *Interior* in the *Cleaning* chapter.

AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



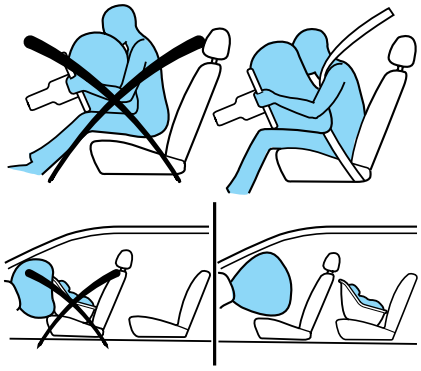
Your vehicle is equipped with a crash sensing and diagnostic module which records information about the air bag and sensor systems. In the event of a collision this module may save information related to the

collision including information about the air bag system and impact severity. This information will assist Ford Motor Company in servicing the vehicle and in helping to better understand real world collisions and further improve the safety of future vehicles.

Important supplemental restraint system (SRS) precautions

The supplemental restraint system is designed to work with the safety belt to help protect the driver and right front passenger from certain upper body injuries.

Air bags DO NOT inflate slowly or gently and the risk of injury from a deploying air bag is greatest close to the trim covering the air bag module.



All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag (SRS) is provided.

Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints.

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

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

Steps you can take to properly position yourself away from the air bag:

- 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.

Do not put anything on or over the air bag module. Placing objects on or over the air bag inflation area may cause those objects to be propelled by the air bag into your face and torso causing serious injury.

Do not attempt to service, repair, or modify the air bag supplemental restraint systems or its fuses. See your Ford or Lincoln Mercury dealer.

The front passenger air bag is not designed to offer protection to an occupant in the center front seating position.

Modifications to the front end of the vehicle, including frame, bumper, front end body structure and tow hooks may affect the performance of the air bag sensors increasing the risk of injury. Do not modify the front end of the vehicle.

Additional equipment such as snowplow equipment may effect the performance of the air bag sensors increasing the risk of injury. Please refer to the Body Builders Layout Book for instructions about the appropriate installation of additional equipment.

Removing the blocker beam without installing snow plow attachment hardware may effect air bag deployment in a crash. Do not operate the truck unless either the blocker beam or snow plow attachment hardware is installed on the vehicle.

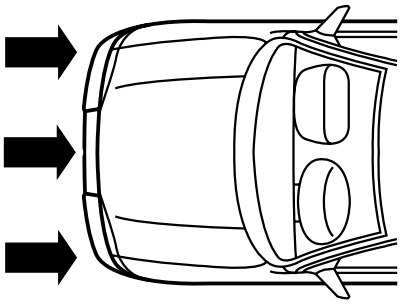
Children and air bags

For additional important safety information, read all information on safety restraints in this guide.

Children must always be properly restrained. Failure to follow these instructions may increase the risk of injury in a collision.

An infant in a rear-facing seat faces a high risk of serious or fatal injuries from a deploying passenger air bag. Rear facing infant seats should NEVER be placed in the front seats, unless the passenger air bag is turned off. See *Passenger air bag ON/OFF switch.*

How does the air bag supplemental restraint system work?



The air bag SRS is designed to activate when the vehicle sustains sufficient longitudinal deceleration.

The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Air bags are designed to inflate in frontal and near-frontal collisions, not rollover, side-impact, or rear-impacts.



The air bags inflate and deflate rapidly upon activation. After air bag 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 (e.g., baking soda) that result from the combustion process that inflates the air bag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.

While the system is designed to help reduce serious injuries, it may also cause minor abrasions, swelling or temporary hearing loss. Because air bags 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 air bag deployment. Thus, it is extremely important that occupants be properly restrained as far away from the air bag module as possible while maintaining vehicle control.

Several air bag system components get hot after inflation. Do not touch them after inflation.

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

The SRS consists of:

- driver and passenger air bag modules (which include the inflators and air bags),
- one or more impact and safing sensors, passenger air bag deactivation switch and diagnostic monitor (RCM)
- a readiness light and tone,
- and the electrical wiring which connects the components.

The RCM (restraints control module) monitors its own internal circuits and the supplemental air bag electrical system warning (including the passenger air bag deactivation switch, the impact sensors, the system wiring, the air bag system readiness light, the air bag back up power and the air bag ignitors).

Determining if the system is operational

The SRS uses readiness lights in the instrument cluster and the passenger air bag deactivate switch or a tone to indicate the condition of the system. Refer to the *Air bag readiness* section in the *Instrument cluster* chapter or *Passenger air bag on/off switch* section in this chapter. Routine maintenance of the air bag is not required.

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

- The readiness lights will either flash or stay lit.
- The readiness lights will not illuminate immediately after ignition is turned on.



- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and/or light are repaired.

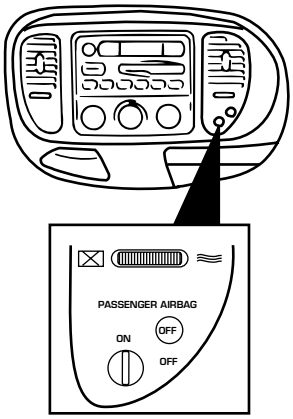
If any of these things happen, even intermittently, have the SRS serviced at your dealership or by a qualified technician immediately. Unless serviced, the system may not function properly in the event of a collision.

Disposal of air bags and air bag equipped vehicles (including pretensioners)

For disposal of air bags or air bag equipped vehicles, see your local dealership or qualified technician. Air bags MUST BE disposed of by qualified personnel.

Passenger air bag ON/OFF switch (if equipped)

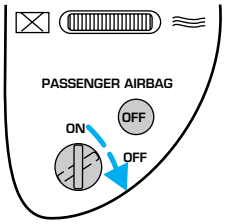
An air bag ON/OFF switch has been installed in this vehicle. Before driving, *always* look at the face of the switch to be sure the switch is in the proper position in accordance with these instructions and warnings. Failure to put the switch in a proper position can increase the risk of serious injury or death in a collision.



Turning the passenger air bag off

1. Insert the ignition key, turn the switch to OFF position and hold in OFF position while removing the key.

2. When the ignition is turned to the ON position the OFF light illuminates briefly, momentarily shuts off and then turns back on. This indicates that the passenger air bag is deactivated.



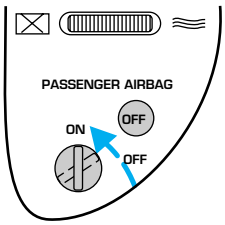
If the OFF light fails to illuminate when the passenger air bag switch is in the OFF position and the ignition switch is in ON, have the passenger air bag switch serviced at your Ford or Lincoln-Mercury dealer immediately.

In order to avoid inadvertent activation of the switch, always remove the ignition key from the passenger air bag ON/OFF switch.

Turning the passenger air bag back on

The passenger air bag remains OFF until you turn it back ON.

1. Insert the ignition key and turn the switch to ON.
2. The OFF light will briefly illuminate when the ignition is turned to ON. This indicates that the passenger air bag is operational.



If the OFF light is illuminated when the passenger air bag ON/OFF switch is in the ON position and the ignition switch is ON, have the passenger air bag ON/OFF switch serviced at your Ford or Lincoln-Mercury dealer immediately.

The passenger side air bag should always be ON (the air bag OFF light should *not* be illuminated) unless the passenger is a person who meets the requirements stated either in Category 1, 2 or 3 of the NHTSA/Transport Canada deactivation criteria which follows.

The safety belts for the driver and right front passenger seating positions have been specifically designed to function together with the air bags in certain types of crashes. When you turn OFF your air bag, you not only lose the protection of the air bag, you also may reduce the effectiveness of your safety belt system, which was designed to work with the air bag. If you are not a person who meets the requirements stated in the NHTSA/Transport Canada deactivation criteria turning OFF the air bag can increase the risk of serious injury or death in a collision.

Always transport children who are 12 and younger in the rear seat. Always use safety belts and child restraints properly. If a child in a rear facing infant seat must be transported in front, the passenger air bag *must* be turned OFF. This is because the back of the infant seat is too close to the inflating air bag and the risk of a fatal injury to the infant when the air bag inflates is substantial.

The vast majority of drivers and passengers are much safer with an air bag than without. To do their job and reduce the risk of life threatening injuries, air bags must open with great force, and this force can pose a potentially deadly risk in some situations, particularly when a front seat occupant is not properly buckled up. The most effective way to reduce the risk of unnecessary air bag injuries without reducing the overall safety of the vehicle is to make sure all occupants are properly restrained in the vehicle, especially in the front seat. This provides the protection of safety belts and permits the air bags to provide the additional protection they were designed to provide. If you choose to deactivate your air bag, you are losing the very significant risk reducing benefits of the air bag and you are also reducing the effectiveness of the safety belts, because safety belts in modern vehicles are designed to work as a safety system with the air bags.

Read all air bag Warning labels in the vehicle as well as the other important air bag instructions and Warnings in this Owner's Guide.

NHTSA deactivation criteria (excluding Canada)

1. **Infant.** An infant (less than 1 year old) must ride in the front seat because:

- the vehicle has no rear seat;
- the vehicle has a rear seat too small to accommodate a rear-facing infant seat; or

- the infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front so that the driver can constantly monitor the child's condition.

2. **Child age 1 to 12.** A child age 1 to 12 must ride in the front seat because:

- the vehicle has no rear seat;
- although children ages 1 to 12 ride in the rear seat(s) whenever possible, children ages 1 to 12 sometimes must ride in the front because no space is available in the rear seat(s) of the vehicle; or
- the child has a medical condition which, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can constantly monitor the child's condition.

3. **Medical condition.** A passenger has a medical condition which, according to his or her physician:

- causes the passenger air bag to pose a special risk for the passenger; and
- makes the potential harm from the passenger air bag in a crash greater than the potential harm from turning OFF the air bag and allowing the passenger, even if belted, to hit the dashboard or windshield in a crash.

Transport Canada deactivation criteria (Canada Only)

1. **Infant:** An infant (less than 1 year old) must ride in the front seat because:

- my vehicle has no rear seat;
- the rear seat in my vehicle cannot accommodate a rear-facing infant seat; or
- the infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front seat so that the driver can monitor the infant's condition.

2. **Child age 12 or under:** A child age 12 or under must ride in the front seat because:

- my vehicle has no rear seat;
- although children age 12 and under ride in the rear seat whenever possible, children age 12 and under have no option but to sometimes ride in the front seat because rear seat space is insufficient; or
- the child has a medical condition that, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can monitor the child's condition.

3. **Medical condition:** A passenger has a medical condition that, according to his or her physician:

- poses a special risk for the passenger if the air bag deploys; and
- makes the potential harm from the passenger air bag deployment greater than the potential harm from turning OFF the air bag and experiencing a crash without the protection offered by the air bag

SAFETY RESTRAINTS FOR CHILDREN

See the following sections for directions on how to properly use safety restraints for children. Also see *Air bag supplemental restraint system (SRS)* in this chapter for special instructions about using air bags.

Important child restraint precautions

You are required by law to use safety restraints for children in the U.S. and Canada. If small children ride in your vehicle (generally children who are four years old or younger and who weigh 18 kg [40 lbs] or less), you must put them in safety seats made especially for children. Check your local and state or provincial laws for specific requirements regarding the safety of children in your vehicle.


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 collision.

Always follow the instructions and warnings that come with any infant or child restraint you might use.

When possible, always place children under age 12 in the rear seat of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating positions.

Children and safety belts

If the child is the proper size, restrain the child in a safety seat. Children who are too large for child safety seats (as specified by your child safety seat manufacturer) should always wear safety belts.

Follow all the important safety restraint and air bag precautions that apply to adult passengers in your vehicle.

If the shoulder belt portion of a combination lap and shoulder belt can be positioned so it does not cross or rest in front of the child's face or neck, the child should wear the lap and shoulder belt. Moving the child closer to the center of the vehicle may help provide a good shoulder belt fit.

Do not leave children, unreliable adults, or pets unattended in your vehicle.

Child booster seats

Children outgrow a typical convertible or toddler seat when they weigh 40 pounds and are around 4 years of age. Although the lap/shoulder belt will provide some protection, these children are still too small for lap/shoulder belts to fit properly, which could increase the risk of serious injury.

To improve the fit of both the lap and shoulder belt on children who have outgrown child safety seats, Ford Motor Company recommends use of a belt-positioning booster.

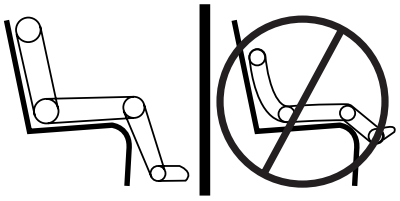
Booster seats position a child so that safety belts fit better. They lift the child up so that the lap belt rests low across the hips and the knees bend comfortably. Booster seats also make the shoulder belt fit better and more comfortably for growing children.

When children should use booster seats

Children need to use booster seats from the time they outgrow the toddler seat until they are big enough for the vehicle seat and lap/shoulder belt to fit properly. Generally this is when they weigh about 80 lbs (about 8 to 12 years old).

Booster seats should be used until you can answer YES to ALL of these questions:

- Can the child sit all the way back against the vehicle seat back with knees bent comfortably at the edge of the seat 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?

Types of booster seats

There are two types of belt-positioning booster seats:

- Those that are backless.



If your backless booster seat has a removable shield, remove the shield and use the lap/shoulder belt. If a seating position has a low seat back and no head restraint, a backless booster seat may place your child's head (top of ear level) above the top of the seat. In this case, move the backless booster to another seating position with a higher seat back and lap/shoulder belts.

- Those with a high back.



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.

Both can be used in any vehicle in a seating position equipped with lap/shoulder belts if your child is over 40 lbs.

The shoulder belt should cross the chest, resting snugly on the center of the shoulder. The lap belt should rest low and snug across the hips, never up high across the stomach.

If the booster seat slides on the vehicle seat, placing a rubberized mesh sold as shelf or carpet liner under the booster seat may improve this condition.

The importance of shoulder belts

Using a booster without a shoulder belt increases the risk of a child's head hitting a hard surface in a collision. For this reason, you should never use a booster seat with a lap belt only. It is best to use a booster seat with lap/shoulder belts in the back seat- the safest place for children to ride.

Follow all instructions provided by the manufacturer of the booster seat.

Never put the shoulder belt under a child's arm or behind the back because it eliminates the protection for the upper part of the body and may increase the risk of injury or death in a collision.

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

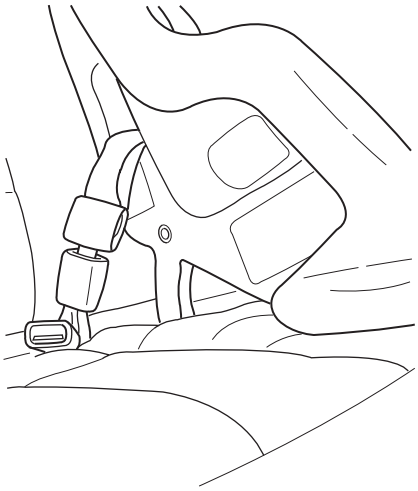
SAFETY SEATS FOR CHILDREN



Child and infant or child safety seats

Use a safety seat that is recommended for the size and weight of the child. Carefully follow all of the manufacturer's instructions with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

When installing a child safety seat:



- Review and follow the information presented in the *Air Bag Supplemental Restraint System* section in this chapter.
- Use the correct safety belt buckle for that seating position (the buckle closest to the direction the tongue is coming from).
- 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 seat back in upright position.
- Put the safety belt in the automatic locking mode. Refer to *Automatic locking mode* (passenger side front and outboard rear seating positions-Regular Cab and SuperCab) (passenger side front and rear seating positions-SuperCrew) (if equipped).

Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position which is capable of providing a tether anchorage. For more information on top tether straps, refer to *Attaching safety seats with tether straps.*

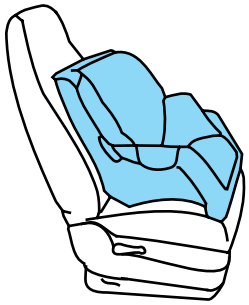
Carefully follow all of the manufacturer's instructions included with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

Installing child safety seats in combination lap and shoulder belt seating positions

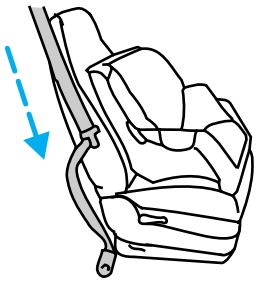
Air bags can kill or injure a child in a child seat. **NEVER** place a rear-facing child seat in front of an active air bag. If you must use a forward-facing child seat in the front seat, move the seat all the way back.

Children 12 and under should be properly restrained in the rear seat whenever possible.

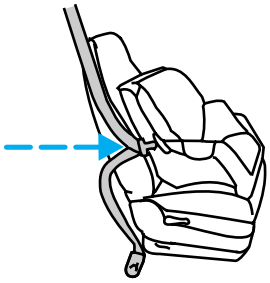
1. Position the child safety seat in a seat with a combination lap and shoulder belt.



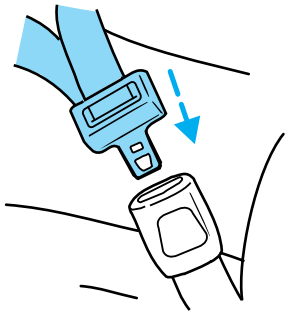
2. Pull down on the shoulder belt and then grasp the shoulder belt and lap belt together.



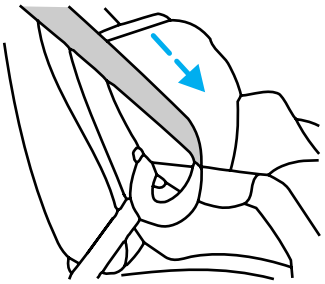
3. While holding the shoulder and lap belt portions together, route the tongue through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.



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.

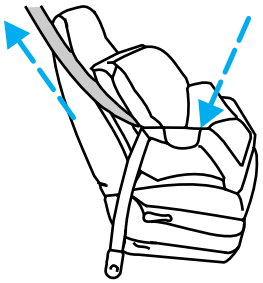


5. To put the retractor in the automatic locking mode, grasp the shoulder portion of the belt and pull downward until all of the belt is pulled out and a click is heard.

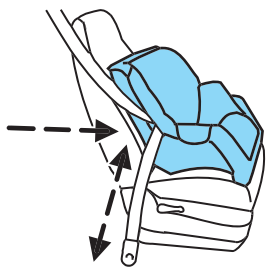


6. Allow the belt to retract. The belt will click as it retracts to indicate it is in the automatic locking mode.

7. Pull the lap belt portion across the child seat toward the buckle and pull up on the shoulder belt while pushing down with your knee on the child seat.



8. Allow the safety belt to retract to remove any slack in the belt.



9. Before placing the child in the seat, forcibly tilt 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 one inch of movement for proper installation.

10. 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 two through nine.

Check to make sure the child seat is properly secured before each use.

Installing child safety seats in the front row lap belt seating positions

1. Lengthen the lap belt. To lengthen the belt, hold the tongue so that its bottom is perpendicular to the direction of webbing while sliding the tongue up the webbing.

2. Place the child safety seat in the center seating position.

3. Route the tongue and webbing through the child seat according to the child seat manufacturer's instructions.

4. Insert the belt tongue into the proper buckle for the center seating position until you hear a snap and feel it latch. Make sure the tongue is securely fastened to the buckle by pulling on tongue.

5. Push down on the child seat while pulling on the loose end of the lap belt webbing to tighten the belt.

6. Before placing the child into the child seat, forcibly tilt the child seat from side to side and in forward direction to make sure that the seat is held securely in place. If the child seat moves excessively, repeat steps 5 through 6, or properly install the child seat in a different position.

Installing child safety seat in the second row center seating position with an automatic locking retractor

1. Place the child safety seat in the center seating position.

2. In a continuous motion, pull out enough webbing from the retractor to route the tongue through the child seat.

3. While holding the webbing to prevent it from retracting, route the webbing through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.

4. Insert the tongue into the correct buckle for that seating position until you hear and feel the buckle engage. Make sure the buckle is latched securely by pulling on the webbing.

5. If you have not pulled out enough webbing to reach, allow the webbing to fully retract before attempting to pull it out again and repeat steps 2 through 4.

6. Pull the webbing through the child seat toward the retractor while pushing down with your knee on the child seat.

7. Allow the safety belt to retract to remove any slack in the belt. It will make a clicking noise while doing this.

8. Before placing the child in the seat, forcibly move the seat forward and side-to-side to make sure the seat is securely held in place.

9. Check to make sure the child seat is properly secured before each use.

Attaching child safety seats with tether straps

Most new forward-facing child safety seats include a tether strap which goes over the back of the seat and hooks to an anchoring point. 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.

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

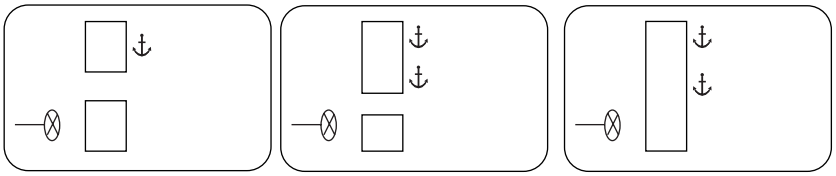
The tether anchors in your vehicle may be straps on the seatback or an anchor bracket on the rear edge of the seat cushion.

The rear seat of the SuperCab has three straps behind the top of the seatback that function as both routing loops for the tether straps and anchor loops.

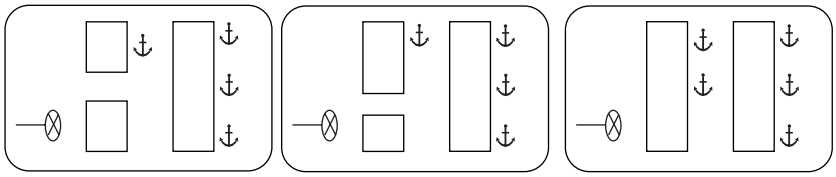
The tether strap anchors in your vehicle are in the following positions (shown from top view):

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.

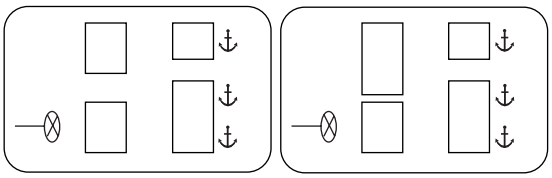
- **F150 Regular Cab**



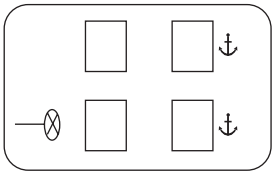
- **F150 SuperCab**



- **F150 SuperCrew**



- **F150 SuperCrew with quad buckets**



Tether strap attachment

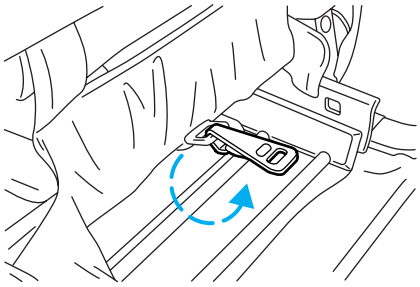
1. Position the child safety seat on the seat cushion.
2. Route the child safety seat tether strap over the back of the seat.
3. Locate the correct anchor for the selected seating position.

- You may need to pull the seatback forward to access the tether anchors. Make sure the seatback is locked in the upright position

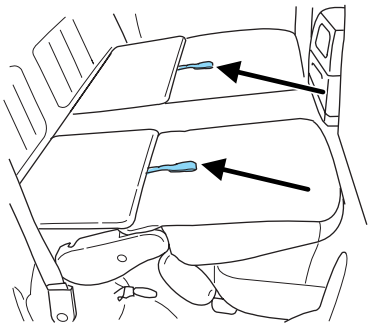
before installing the child seat. Refer to the *Folding Down The Rear Seats* section in this chapter for information on how to operate the rear seats.

4. Clip the tether strap to the anchor as shown.

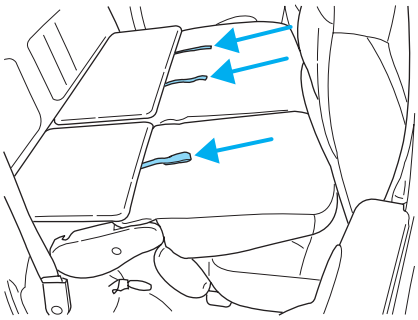
- Front seat (Regular Cab and SuperCab only)



- Rear seats (with quad buckets only)



- Rear seats (SuperCrew only)

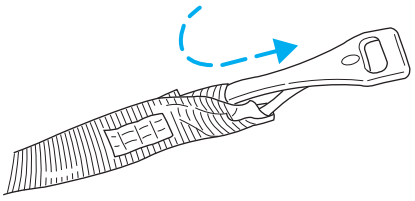


If the tether strap is clipped incorrectly, the child safety seat may not be retained properly in the event of a collision.



5. Refer to the *Installing child safety seats in combination lap and shoulder belt seating positions* section of this chapter for further instructions to secure the child safety seat.

6. 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 collision greatly increases.

Tether strap attachment rear SuperCab only

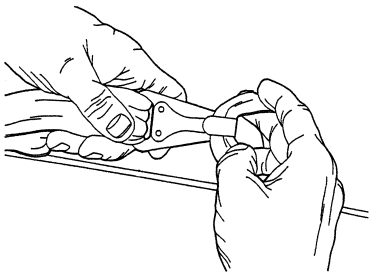
There are three loops of webbing just above the back of the rear seat (along the bottom edge of the rear window) in the SuperCab. These loops are to be used as both routing loops and anchor loops for child safety seat tether straps. For example, the center loop can be used as a routing loop for a child safety seat in the center rear seat and as an anchoring loop for child seats installed in the outboard rear seats.

Many tether straps cannot be tightened if the tether strap is hooked to the loop directly behind the child seat. To provide a tight tether strap:

1. Route the tether strap through the loop directly behind the child seat.

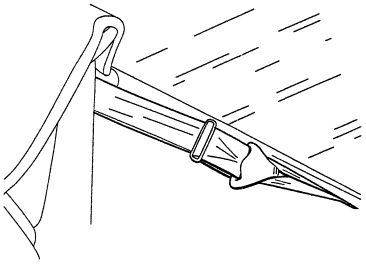


2. Attach the strap hook onto the loop behind an adjacent seating position.



3. Install the child safety seat tightly using the safety belts. Follow the instructions in this chapter.

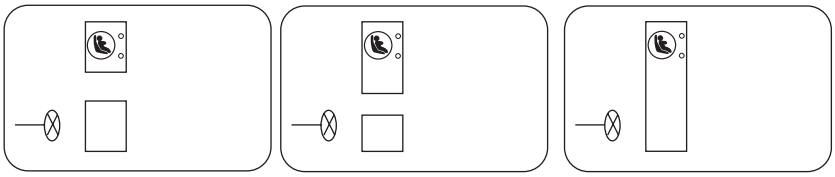
4. Tighten the tether strap according to the child seat manufacturer's instructions.



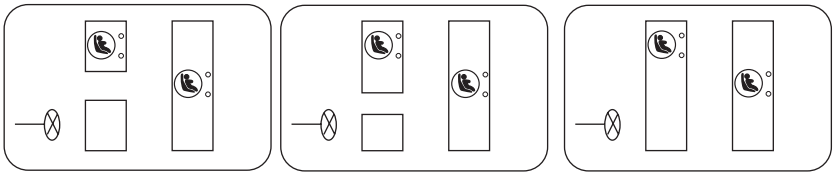
Attaching safety seats with LATCH (Lower Anchors and Tethers for Children) attachments for child seat anchors (if equipped)

Some child safety seats have two rigid or webbing mounted attachments that connect to two anchors at certain seating positions in your vehicle. This type of child seat eliminates the need to use seat belts to attach the child seat. For forward-facing child seats, the tether strap must also be attached to the proper tether anchor. See *Attaching safety seats with tether straps* in this chapter.

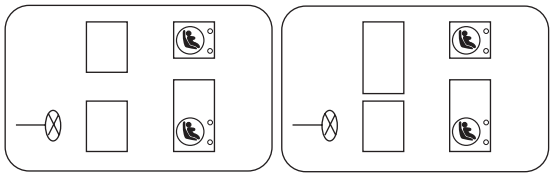
Your vehicle be equipped with LATCH anchors for child seat installation at the following seating positions:



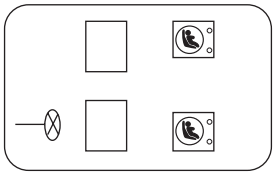
- F150 Regular Cab



- F150 Supercab



- F150 SuperCrew



- F150 SuperCrew with Quad Buckets

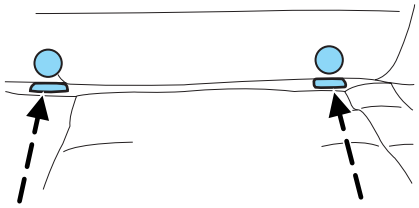
The anchors on both sides of the center of the SuperCrew rear seat are provided only for child seats at the outboard seats. These anchors are further apart than the pairs of lower anchors for child seat installation at other seats. DO NOT install child seats with LATCH attachments (rigid or mounted on belt webbing) to the lower anchors at the center rear

seat. If you install a child seat at the center rear position, use the vehicle lap belt and the top tether anchor.

Connectors on the LATCH child seat and the child seat instructions may use the symbol shown here. Your vehicle seat may have plain buttons, instead of this symbol, to indicate the location of the LATCH lower anchors.

Never attach two LATCH 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 lower anchors for child seat installation are located at the rear section of the seat between the cushion and seat back. The LATCH anchors are below the locator buttons (if provided) on the seat back.



Follow the child seat manufacturer's instructions to properly install a child seat with LATCH attachments.

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

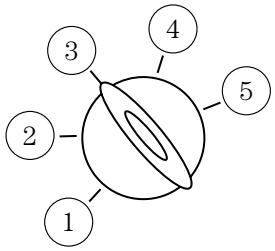
If you install a child seat with rigid LATCH attachments, do not tighten the tether strap enough to lift the child seat off the vehicle seat cushion when the child is seated in it. Keep the tether strap just snug without lifting the front of the child seat. Keeping the child seat just touching the vehicle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

Each time you use the safety seat, check that the seat is properly attached to the lower anchors and tether anchor. Try to tilt the child seat from side to side. Also try to tug the seat forward. Check to see if the anchors hold the seat in place.

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

STARTING

Positions of the ignition



1. ACCESSORY, allows the electrical accessories such as the radio to operate while the engine is not running.

2. LOCK, locks the steering wheel, automatic transmission gearshift lever and allows key removal.

3. OFF, shuts off the engine and all accessories without locking the steering wheel. This position also allows the automatic transmission shift lever to be moved from the P (Park) position without the brake pedal being depressed.

In the ignition OFF position, the automatic transmission shift lever can be moved from the P (Park) position without the brake pedal depressed. To avoid unwanted vehicle movement, always set the parking brake.

4. ON, all electrical circuits operational. Warning lights illuminated. Key position when driving.

5. START, cranks the engine. Release the key as soon as the engine starts.

Preparing to start your vehicle

Engine starting is controlled by the powertrain control system. This system meets all Canadian Interference-Causing Equipment standard requirements regulating the impulse electrical field strength of radio noise.

When starting a fuel-injected engine, avoid pressing the accelerator before or during starting. Only use the accelerator when you have difficulty starting the engine. For more information on starting the vehicle, refer to *Starting the engine* in this chapter.

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 in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, which can start a fire.

Do not start your vehicle in a closed garage or in other enclosed areas. Exhaust fumes can be toxic. Always open the garage door before you start the engine. See *Guarding against exhaust fumes* in this chapter for more instructions.

If you smell exhaust fumes inside your vehicle, have your dealer inspect your vehicle immediately. Do not drive if you smell exhaust fumes.

Important safety precautions

A computer system controls the engine's idle revolutions per minute (RPM). When the engine starts, the idle RPM runs higher than normal in order to warm the engine. If the engine idle speed does not slow down automatically, have the vehicle checked. Do not allow the vehicle to idle for more than 10 minutes at high engine RPM.

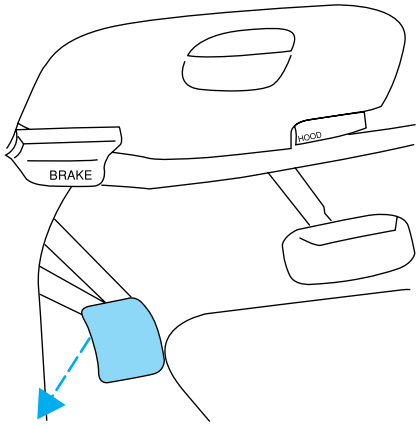
Before starting the vehicle:

1. Make sure all vehicle occupants have buckled their safety belts. For more information on safety belts and their proper usage, refer to the *Seating and safety restraints* chapter.

2. Make sure the headlamps and vehicle accessories are off.

If starting a vehicle with an automatic transmission:

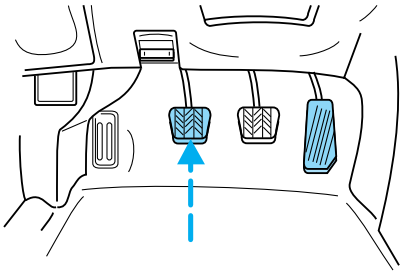
- Make sure the parking brake is set.



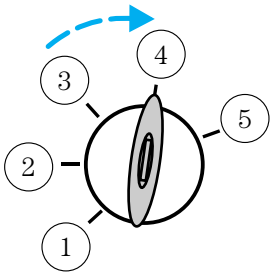
- Make sure the gearshift is in P (Park).

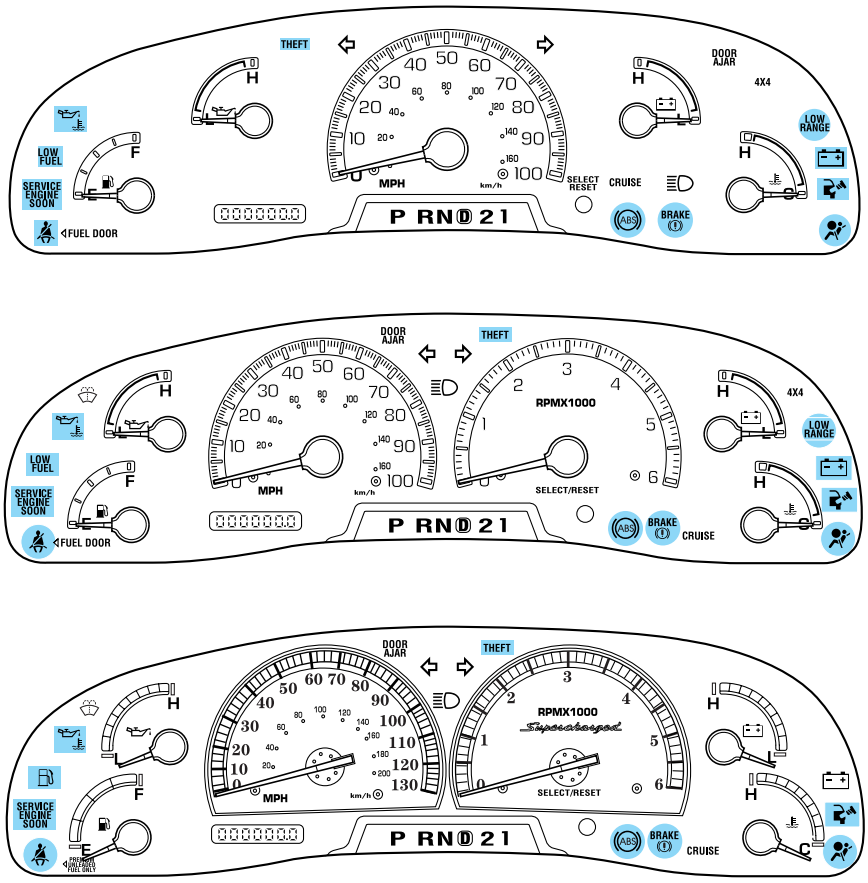
If starting a vehicle with a manual transmission:

- Make sure the parking brake is set.
- Push the clutch pedal to the floor.



3. Turn the key to 4 (ON) without turning the key to 5 (START).



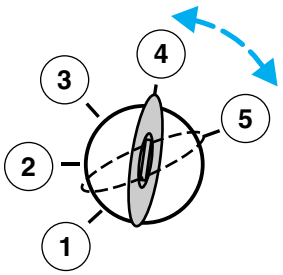


Make sure the corresponding lights illuminate or illuminate briefly. If a light fails to illuminate, have the vehicle serviced.

- If the driver's safety belt is fastened, the light may not illuminate.

Starting the engine

Note: Whenever you start your vehicle, release the key as soon as the engine starts. Excessive cranking could damage the starter.



1. Turn the key to 5 (START) without pressing the accelerator pedal and release as soon as the engine starts. The key will return to 4 (ON).

2. If the temperature is above –12° C (10° F) and the engine does not start within five seconds on the first try, turn the key to OFF, wait 10 seconds and try again. If the engine does not start in two attempts, press the accelerator all the way to the floor and hold. Turn the key to the START position.

3. If the temperature is below -12° C (10° F) and the engine does not start in 15 seconds on the first try, turn the key OFF and wait 10 seconds and try again. If the engine does not start in two attempts, press the accelerator pedal all the way to floor and hold. Turn the key to START position.

4. When the engine starts, release the key, then release the accelerator pedal gradually as the engine speeds up.

5. After idling for a few seconds, apply the brake, shift into gear and drive.

Using the engine block heater (if equipped)

An engine block heater warms the engine coolant, which improves starting, warms up the engine faster and allows the heater-defroster system to respond quickly. Use of an engine block heater is strongly recommended if you live in a region where temperatures reach -23° C (-10° F) or below.

For best results, plug the heater in at least three hours before starting the vehicle. Using the heater for longer than three hours will not harm the engine, so the heater can be plugged in the night before starting the vehicle.

To prevent electrical shock, do not use your heater with ungrounded electrical systems or two-pronged (cheater) adapters.

Guarding against exhaust fumes

Although odorless and colorless, carbon monoxide is present in exhaust fumes. Take precautions to avoid its dangerous effects.

If you ever smell exhaust fumes of any kind inside your vehicle, have your dealer inspect and fix your vehicle immediately. Do not drive if you smell exhaust fumes. These fumes are harmful and could kill you.

Have the exhaust and body ventilation systems checked whenever:

- the vehicle is raised for service.
- the sound of the exhaust system changes.
- the vehicle has been damaged in a collision.

WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. In addition, 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.

Important ventilating information

If the engine is idling while the vehicle is stopped in an open area for long periods of time, open the windows at least 2.5 cm (one inch).

Adjust the heating or air conditioning (if equipped) to bring in fresh air.

Improve vehicle ventilation by keeping all air inlet vents clear of snow, leaves and other debris.

BRAKES

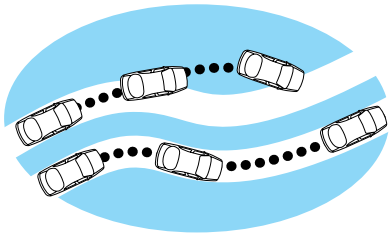
Your service brakes are self-adjusting. Refer to the scheduled maintenance guide for scheduled maintenance.

Occasional brake noise is normal and often does not indicate a performance concern with the vehicle's brake system. In normal operation, automotive brake systems may emit occasional or intermittent squeal or groan noises when the brakes are applied. Such noises are usually heard during the first few brake applications in the morning; however, they may be heard at any time while braking and can be aggravated by environmental conditions such as cold, heat, moisture, road dust, salt or mud. If a "metal-to-metal," "continuous grinding" or "continuous squeal" sound is present while braking, the brake linings may be worn-out and should be inspected by a qualified service technician.

If you are driving down a long or steep hill, shift to a lower gear. Do not apply your brakes continuously, as they may overheat and become less effective.

Anti-lock brake system (ABS)

This vehicle is equipped with an anti-lock braking system (ABS). A noise from the hydraulic pump motor and pulsation in the pedal may be observed during ABS braking events. Pedal pulsation coupled with noise while braking under panic conditions or on loose gravel, bumps, wet or snowy roads is normal and indicates proper functioning of the vehicle's anti-lock brake system. If the vehicle has continuous vibration or shudder in the steering wheel while braking, the vehicle should be inspected by a qualified service technician.



The ABS operates by detecting the onset of wheel lockup during brake applications and compensates for this tendency. The wheels are prevented from locking even when the brakes are firmly applied. The accompanying illustration depicts the advantage of an ABS equipped vehicle (on bottom) to a non-ABS equipped vehicle (on top) during hard braking with loss of front braking traction.

Using ABS

- In an emergency or when maximum efficiency from the four-wheel ABS is required, apply continuous force on the brake. The four wheel ABS will be activated immediately, thus allowing you to retain full steering control of your vehicle and, providing there is sufficient space, will enable you to avoid obstacles and bring the vehicle to a controlled stop.
- The anti-lock system does not reduce stopping distance. Always leave enough room between your vehicle and the vehicle in front of you to stop.
- We recommend that you familiarize yourself with this braking technique. However, avoid taking any unnecessary risks.

ABS warning lamp (ABS)

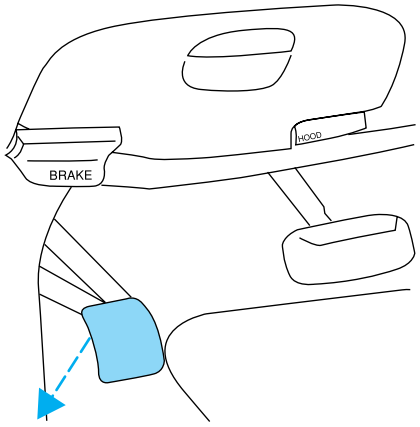
The (ABS) warning lamp in the instrument cluster momentarily illuminates when the ignition is turned to the ON position. If the light does not illuminate momentarily at start up, remains on or continues to flash, the ABS needs to be serviced.

With the ABS light on, the anti-lock brake system is disabled and normal braking is still effective unless the brake warning light also remains illuminated with parking brake released. (If your brake warning lamp illuminates, have your vehicle serviced immediately.)

BRAKE

Parking brake (P)

Apply the parking brake whenever the vehicle is parked. To set the parking brake, press the parking brake pedal down until the pedal stops.



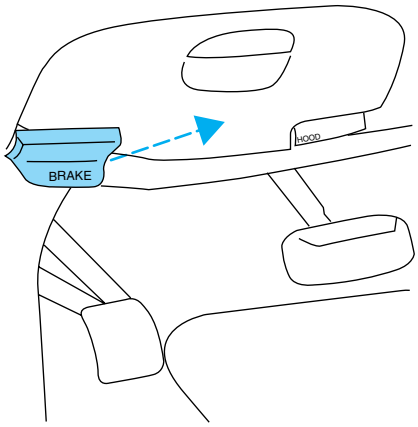
The BRAKE warning lamp in the instrument cluster illuminates and remains illuminated (when the ignition is turned ON) until the parking brake is released.

BRAKE

Always set the parking brake fully and make sure that the gearshift is securely latched in P (Park) (automatic transmission) or in 1 (First) (manual transmission).

The parking brake is not recommended to stop a moving vehicle. However, if the normal brakes fail, the parking brake can be used to stop your vehicle in an emergency. Since the parking brake applies only the rear brakes, the vehicle's stopping distance will increase greatly and the handling of your vehicle will be adversely affected.

Pull the release lever to release the brake. Driving with the parking brake on will cause the brakes to wear out quickly and reduce fuel economy.



STEERING

Your vehicle is equipped with power steering. Power steering uses energy from the engine to decrease the driver's effort in steering the vehicle.

To prevent damage to the power steering pump:

- Never hold the steering wheel to the extreme right or the extreme left for more than a few seconds when the engine is running.
- Do not operate the vehicle with the power steering pump fluid level below the MIN mark on the reservoir.

If the power steering system breaks down (or if the engine is turned off), you can steer the vehicle manually, but it takes more effort.

If the steering wanders or pulls, check for:

- Underinflated tire(s) on any wheel(s)
- Uneven vehicle loading
- High crown in center of road
- High crosswinds
- Wheels out of alignment
- Loose or worn suspension components

TRACTION-LOK AXLE (IF EQUIPPED)

This axle provides added traction on slippery surfaces, particularly when one wheel is on a poor traction surface. Under normal conditions, the Traction-Lok axle functions like a standard rear axle.

Extended use of other than the manufacturer's specified size tires on a Traction-Lok rear axle could result in a permanent reduction in effectiveness. This loss of effectiveness does not affect normal driving and should not be noticeable to the driver.

To reduce the risk of injury, never run the engine with one wheel off the ground, such as when changing a tire.

PREPARING TO DRIVE YOUR VEHICLE

Utility vehicles have a significantly higher rollover rate than other types of vehicles.

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

Your vehicle has special design and equipment features to make it capable of performing in a wide variety of circumstances. These special design features, such as larger tires and increased ground clearance, give the vehicle a higher center of gravity than a passenger car.

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.

Loaded vehicles, with a higher center of gravity, 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 has the capability to haul more cargo and people than most passenger cars. Depending upon the type and placement of the load, hauling people and cargo may raise the center of gravity of the vehicle. Use extra caution while becoming familiar with your vehicle. Know the capabilities and limitations of both you as a driver and your vehicle.

AUTOMATIC TRANSMISSION OPERATION (IF EQUIPPED)

Brake-shift interlock

This vehicle is equipped with a brake-shift interlock feature that prevents the gearshift lever from being moved from P (Park) when the ignition is in the ON position unless the brake pedal is depressed.

If you cannot move the gearshift lever out of P (Park) with ignition in the ON position and the brake pedal depressed:

1. Apply the parking brake, turn ignition key to LOCK, then remove the key.

2. Insert the key and turn it to OFF. **Apply the brake pedal and shift to N (Neutral)**.

In the ignition OFF position, the automatic transmission shift lever can be moved from the P (Park) position without the brake pedal depressed. To avoid unwanted vehicle movement, always set the parking brake.

3. Start the vehicle.

If it is necessary to use the above procedure to move the gearshift lever, it is possible that a fuse has blown or the vehicle's brakelamps are not operating properly. Refer to *Fuses and relays* in the *Roadside emergencies* chapter.

Do not drive your vehicle until you verify that the brakelamps are working.

If your vehicle gets stuck in mud or snow it may be rocked out by shifting from forward and reverse gears, stopping between shifts, in a steady pattern. Press lightly on the accelerator in each gear.

Do not rock the vehicle if the engine is not at normal operating temperature or damage to the transmission may occur.

Do not rock the vehicle for more than a few minutes or damage to the transmission and tires may occur or the engine may overheat.

Always set the parking brake fully and make sure the gearshift is latched in P (Park). Turn the ignition to the LOCK position and remove the key whenever you leave your vehicle.

If the parking brake is fully released, but the brake warning lamp remains illuminated, the brakes may not be working properly. See your dealer or a qualified service technician.

Driving with a 4–speed automatic transmission

Understanding gearshift positions

To put your vehicle in gear, start the engine, depress the brake pedal, then move gearshift lever out of P (Park).

Hold the brake pedal down while you move the gearshift lever from P (Park) to another position. If you do not hold the brake pedal down, your vehicle may move unexpectedly and injure someone.

P (Park)

Always come to a complete stop before shifting into P (Park). Make sure the gearshift lever is securely latched in P (Park). This position locks the transmission and prevents the rear wheels from turning.



Always set the parking brake fully and make sure the gearshift lever is latched in P (Park). Turn off the ignition whenever you leave your vehicle.

R (Reverse)

With the gearshift lever in R (Reverse), the vehicle will move backward. Always come to a complete stop before shifting into and out of R (Reverse).



N (Neutral)

With the gearshift lever in N (Neutral), the vehicle can be started and is free to roll. Hold the brake pedal down while in this gear.

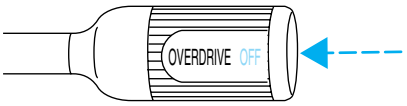


D (Overdrive)

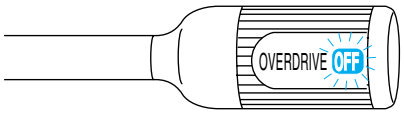
The normal driving position for the best fuel economy. Transmission operates in gears one through four.



D (Overdrive) can be deactivated by pressing the transmission control switch (TCS) on the end of the gearshift lever.



The transmission control indicator light (TCIL) (the word OFF) on the end of the gearshift lever will illuminate.



Drive – Not shown on the display. Activate by pressing the transmission control switch (TCS) on the end of the gearshift lever with the gearshift in the D position. The TCIL (the word OFF) will illuminate on the gearshift lever. Transmission operates in gears one through three. D (Drive) provides more engine braking than D (Overdrive) and is useful when:

- driving with a heavy load.
- towing a trailer up or down steep hills.
- additional engine downhill braking is desired. If towing a trailer, refer to *Driving while you tow* in the *Trailer towing* section.

To return to D (Overdrive) mode, press the transmission control switch (TCS). The TCIL (the word OFF) will no longer be illuminated.

Each time the vehicle is started, the transmission will automatically return to normal overdrive mode.

Every time the vehicle is shut off and restarted, you must press the transmission control switch to cancel overdrive operation if driving in overdrive is not desired.

2 (Second)

Use 2 (Second) to start-up on slippery roads or to provide additional engine braking on downgrades.



1 (First)



Use 1 (Low) to provide maximum engine braking on steep downgrades. Upshifts can be made by shifting to 2 (Second) or to D (Overdrive). Selecting 1 (Low) at higher speeds causes the transmission to shift to a lower gear, and will shift to 1 (Low) after vehicle decelerates to the proper speed.

Forced Downshifts

To gain acceleration in D (Overdrive) or Drive (O/D OFF) when passing another vehicle, push the accelerator to the floor. The transmission will downshift to the appropriate gear: third, second or first gear.

Shift strategy (4R100 automatic transmission)

To account for customer driving habits and conditions, your 4R100 automatic transmission electronically controls the shift quality by using an adaptive learning strategy. The adaptive learning strategy is maintained by power from the battery. When the battery is disconnected or a new battery is installed, the transmission must relearn its adaptive strategy. Optimal shifting will resume within a few hundred kilometers (miles) of operation.

If the shift quality does not improve within a few hundred kilometers (miles) of operation, or if the downshifts and other throttle conditions do not function normally, see your dealer or a qualified service technician as soon as possible.

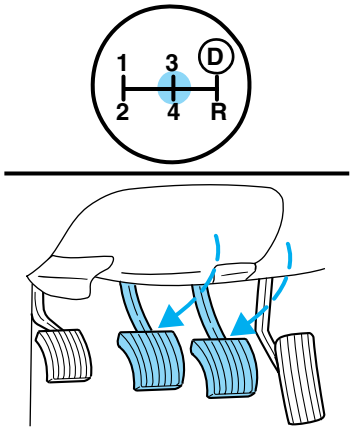
MANUAL TRANSMISSION OPERATION (IF EQUIPPED)

Using the clutch

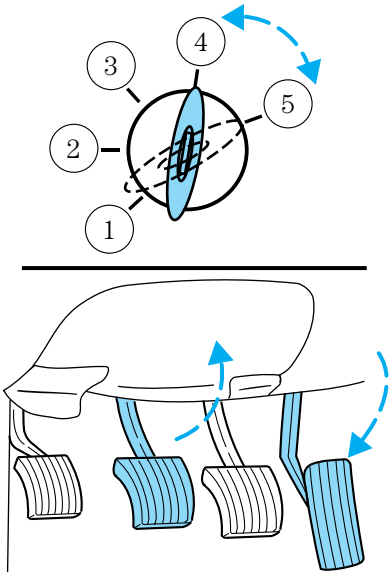
Vehicles equipped with a manual transmission have a starter interlock that prevents cranking of the engine unless the clutch pedal is fully depressed.

When starting a vehicle with a manual transmission, you must:

1. Make sure the parking brake is fully set.
2. Depress the clutch pedal fully.
3. Put the gearshift lever in neutral.



4. Start the engine and let it idle for a few seconds.
5. Depress the brake pedal.
6. Release the parking brake.
7. Move the gearshift lever to the desired gear.
8. Release the brake pedal.
9. Slowly release the clutch pedal while slowly pressing down on the accelerator pedal.



- Do not drive with your foot resting on the clutch pedal and do not use the clutch to hold your vehicle at a standstill while waiting on a hill. These actions will greatly reduce clutch life.

Recommended shift speeds

Upshift and downshift according to the following charts for your specific engine/drivetrain combination:

- ***4.2L V6 engine (4x2 and 4x4)***

Upshifts when accelerating (recommended for best fuel economy)		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
1 - 2	24 km/h (15 mph)	14 km/h (9 mph)
2 - 3	40 km/h (25 mph)	19 km/h (12 mph)
3 - 4	60 km/h (37 mph)	24 km/h (15 mph)
4 - Ⓓ (Overdrive)	72 km/h (45 mph)	29 km/h (18 mph)

Upshifts when cruising (recommended for best fuel economy)		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
1 - 2	18 km/h (11 mph)	8 km/h (5 mph)
2 - 3	34 km/h (21 mph)	18 km/h (11 mph)
3 - 4	50 km/h (31 mph)	23 km/h (14 mph)
4 - Ⓓ (Overdrive)	69 km/h (43 mph)	27 km/h (17 mph)

- ***4.6L V8 engine (4x2 and 4x4 with 3.08:1 rear axle ratio)***

Upshifts when accelerating (recommended for best fuel economy)		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
1 - 2	24 km/h (15 mph)	14 km/h (9 mph)
2 - 3	40 km/h (25 mph)	19 km/h (12 mph)
3 - 4	58 km/h (36 mph)	23 km/h (14 mph)
4 - Ⓓ (Overdrive)	72 km/h (45 mph)	27 km/h (17 mph)

Upshifts when cruising (recommended for best fuel economy)		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
1 - 2	16 km/h (10 mph)	6 km/h (4 mph)
2 - 3	34 km/h (21 mph)	16 km/h (10 mph)
3 - 4	51 km/h (32 mph)	21 km/h (13 mph)
4 - Ⓓ (Overdrive)	72 km/h (45 mph)	27 km/h (17 mph)

- ***4.6L V8 engine (4x2 with optional rear axle ratio)***

Upshifts when accelerating (recommended for best fuel economy)		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
1 - 2	14 km/h (9 mph)	5 km/h (3 mph)
2 - 3	32 km/h (20 mph)	11 km/h (7 mph)
3 - 4	50 km/h (31 mph)	19 km/h (12 mph)
4 - Ⓓ (Overdrive)	71 km/h (44 mph)	27 km/h (17 mph)

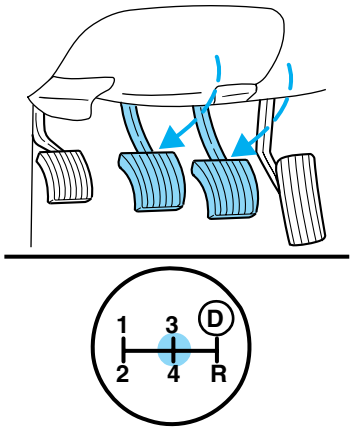
Upshifts when cruising (recommended for best fuel economy)		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
1 - 2	16 km/h (10 mph)	6 km/h (4 mph)
2 - 3	26 km/h (16 mph)	10 km/h (6 mph)
3 - 4	43 km/h (27 mph)	16 km/h (10 mph)
4 - Ⓓ (Overdrive)	68 km/h (42 mph)	26 km/h (16 mph)

- ***All applications***

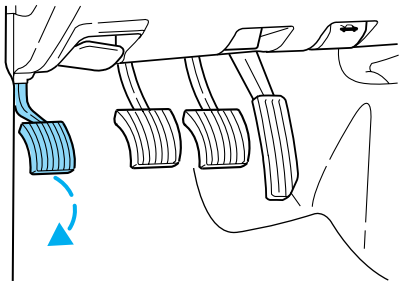
Maximum downshift speeds[1]		
Shift from:	Transfer case position (if equipped)	
	2H or 4H	4L
Ⓓ (Overdrive) - 4	89 km/h (55 mph)	34 km/h (21 mph)
4 - 3	72 km/h (45 mph)	27 km/h (17 mph)
3 - 2	56 km/h (35 mph)	21 km/h (13 mph)
2 - 1	32 km/h (20 mph)	11 km/h (7 mph)
[1]Downshift at lower speeds when driving on slippery surfaces.		

Parking your vehicle

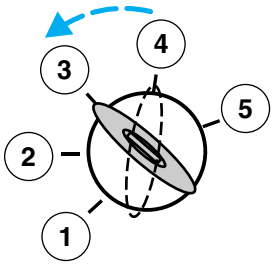
1. Disengage the clutch, apply brake and shift into Neutral.



2. Set parking brake.
3. Shift into 1 (First).



4. Turn the ignition key to position 3 (OFF).



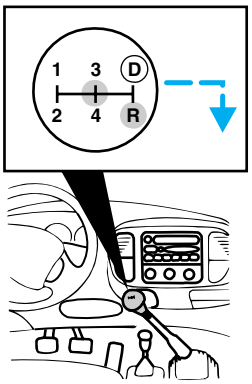
Do not park your vehicle in Neutral, it may move unexpectedly and injure someone. Use 1 (First) gear and set the parking brake fully.

Reverse

Make sure that your vehicle is at a complete stop before you shift into R (Reverse). Failure to do so may damage the transmission.

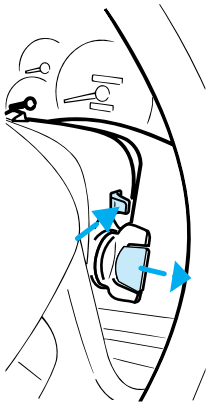
Put the gearshift in N (Neutral) and wait at least three seconds before shifting into R (Reverse).

You can shift into R (Reverse) only by moving the gearshift lever from left of 3 (Third) and 4 (Fourth) gears before you shift into R (Reverse). This is a special lockout feature that protects you from accidentally shifting into R (Reverse) when you downshift from Ⓓ (Overdrive).



Removing key from ignition

- Turn the ignition key to position 2.
- Push the release lever forward and rotate the key towards you and remove.



FOUR-WHEEL DRIVE (4WD) OPERATION (IF EQUIPPED)

For important information regarding safe operation of this type of vehicle, see **Preparing to drive your vehicle** in this chapter.

When four–wheel drive (4WD) is engaged, power is supplied to all four wheels through a transfer case. 4WD can be selected when additional driving power is desired.

If equipped with the Electronic Shift 4WD System, and 4WD Low is selected while the vehicle is moving, the 4WD system will not engage. This is normal and should be no reason for concern. Before 4WD Low can be engaged, the vehicle must be brought to a complete stop, the brake pedal depressed and the transmission placed in neutral (or the clutch pedal depressed on manual transmissions).

4WD operation is not recommended on dry pavement. Doing so could result in difficult disengagement of the transfer case, increased tire wear and decreased fuel economy.

4WD system indicator lights

The 4WD system indicator lights illuminate only under the following conditions. If these lights illuminate when driving in 2WD, contact your Ford dealer as soon as possible.

- **4X4** - momentarily illuminates after the engine is started. Illuminates when 4H (4WD High) is engaged.

4x4

- **LOW RANGE** - momentarily illuminates with the key in the ON position and after the engine is started. Illuminates when 4L (4WD Low) is engaged.

LOW
RANGE

Using a manual 4WD system (if equipped)

2H (2WD High) – Power to rear axle only.

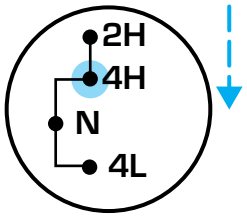
4H (4WD High) – Power to front and rear axles.

N (Neutral) – No power to either axle.

4L (4WD Low)– Power to front and rear axles at reduced speed.

Shifting from 2H (2WD high) to 4H (4WD high)

Move the transfer case lever to 4H (4WD High) at a stop or any forward speed up to 88 km/h (55 mph).

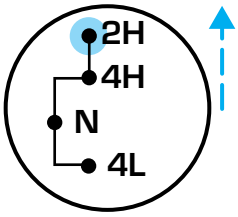


- At temperatures below 0°C (32°F), shifts from 2H (2WD High) to 4H (4WD High) should not be performed above 72 km/h (45 mph).

Do not shift into 4H (4WD High) with the rear wheels slipping.

Shifting from 4H (4WD high) to 2H (2WD high)

Move the transfer case lever to 2H (2WD High) at a stop or any forward speed up to 88 km/h (55 mph).

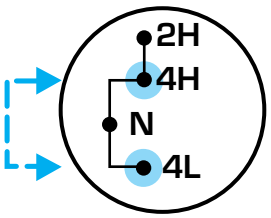


Shifting from 4H (4WD high) to 4L (4WD low)

1. Bring the vehicle to a complete stop.
2. Depress the brake.

3. Place the gearshift lever in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).

4. Move the transfer case shift lever through N (Neutral) directly to 4L (4WD Low) and hold the shift lever in 4L (4WD Low) until the transfer case has fully engaged (up to 15 seconds).



5. If the transfer case **does not** engage into 4L (4WD Low), repeat steps 1 through 4.

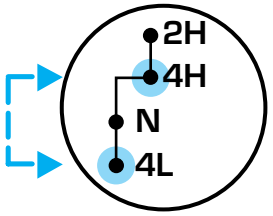
Shifting from 4L (4WD low) to 4H (4WD high) or 2H (2WD high)

1. Bring the vehicle to a complete stop.

2. Depress the brake.

3. Place the gearshift lever in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).

4. Move the transfer case shift lever through N (Neutral) directly to 4H (4WD High) or 2H (2WD high) and hold the shift lever in position until the transfer case has fully engaged (up to 15 seconds).

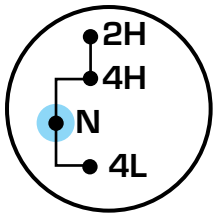


5. If the transfer case **does not** engage, repeat steps 1 through 4.

Using the N (Neutral) position

The transfer case N (Neutral) position overrides the transmission and puts the vehicle in neutral regardless of transmission gearshift lever position. The vehicle can move forward or backward.

This position should only be used when towing the vehicle.



Do not leave the vehicle unattended with the transfer case in the N (Neutral) position. Always set the parking brake fully and turn off the ignition when leaving the vehicle.

Using the electronic shift 4WD system (if equipped)

Positions of the electronic shift system

2H (2WD High) – Power to rear axle only.

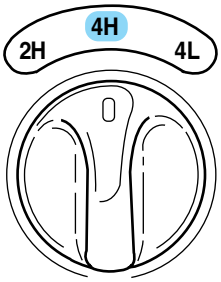
4H (4WD High) – Power delivered to front and rear axles for increased traction.

4L (4WD Low) – Power to front and rear axles at low speeds.

Shifting from 2H (2WD high) to 4H (4WD high)

Move the 4WD control to the 4H (4WD High) at a stop or up to 88 km/h (55 mph).

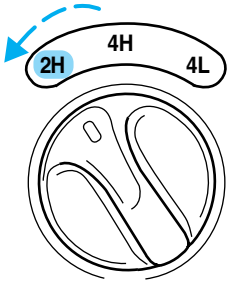
- At temperatures below 0°C (32°F), shifts from 2H (2WD) to 4H (4WD High) should not be performed above 72 km/h (45 mph).



Do not shift into 4H with the rear wheels slipping.

Shifting from 4H (4WD high) to 2H (2WD high)

Move the 4WD control to 2H at any forward speed.

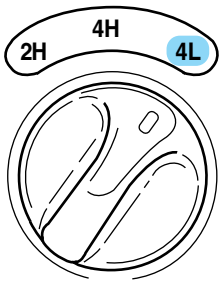


Shifting between 4H (4WD high) and 4L (4WD low)

1. Bring the vehicle to a stop.
2. Depress the brake.

3. Place the gearshift in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).

4. Move the 4WD control to the 4H or 4L position.



Driving off-road with truck and utility vehicles

4WD 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.

How your vehicle differs from other vehicles

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.

Basic operating principles

- Do not use 4WD on dry, hard surfaced roads. Doing so will produce excessive noise, increase tire wear and may damage drive components. 4WD modes are only intended for consistently slippery or loose surfaces.

- Drive slower in strong crosswinds which can affect the normal steering characteristics of your vehicle.
- Be extremely careful when driving on pavement made slippery by loose sand, water, gravel, snow or ice.

If your vehicle goes off the edge of the pavement

- If your vehicle goes off the edge of the pavement, slow down, but avoid severe brake application, ease the vehicle back onto the pavement only after reducing your speed. Do not turn the steering wheel too sharply while returning to the road surface.
- It may be safer to stay on the apron or shoulder of the road and slow down gradually before returning to the pavement. You may lose control if you do not slow down or if you turn the steering wheel too sharply or abruptly.
- It often may be less risky to strike small objects, such as highway reflectors, with minor damage to your vehicle rather than attempt a sudden return to the pavement which could cause the vehicle to slide sideways out of control or roll over. Remember, your safety and the safety of others should be your primary concern.

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.

If your vehicle gets stuck

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.

Do not rock the vehicle if the engine is not at normal operating temperature or damage to the transmission may occur.

Do not rock the vehicle for more than a few minutes or damage to the transmission and tires may occur or the engine may overheat.

Always set the parking brake fully and make sure the gearshift is latched in P (Park). Turn the ignition to the LOCK position and remove the key whenever you leave your vehicle.

If the parking brake is fully released, but the brake warning lamp remains illuminated, the brakes may not be working properly. See your dealer or a qualified service technician.

Do not spin the wheels at over 56 km/h (35 mph). The tires may fail and injure a passenger or bystander.

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 will result in less vehicle control, not more. Additionally, smooth variations of the accelerator and/or brake pedal pressure should be utilized if changes in vehicle speed are called for. Avoid abrupt steering, acceleration or braking which could result in an increased risk of loss of vehicle control, vehicle rollover and/or personal injury. Use all available road surface to return the 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.

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.

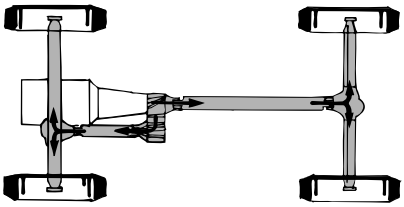
- If the vehicle goes from one type of surface to another (i.e., from concrete to gravel) there will be a change in the way the vehicle responds to a maneuver (steering, acceleration or braking). Again, avoid these abrupt inputs.

Parking

On some 4WD vehicles, when the transfer case is in the N (Neutral) position, the engine and transmission are disconnected from the rest of the driveline. Therefore, the vehicle is free to roll even if the automatic transmission is in P (Park) or the manual transmission is in gear. Do not leave the vehicle unattended with the transfer case in the N (Neutral) position. Always set the parking brake fully and turn off the ignition when leaving the vehicle.

4WD Systems

4WD (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 can not.



Power is supplied to all four wheels through a transfer case. On 4WD vehicles, the transfer case allows you to select 4WD when necessary. Information on transfer case operation and shifting procedures can be found in the *Driving* chapter. Information on transfer case maintenance can be found in the *Maintenance and specifications* chapter. You should become thoroughly familiar with this information before you operate your vehicle.

Normal characteristics

On some 4WD models, the initial shift from two-wheel drive to 4x4 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.

Sand

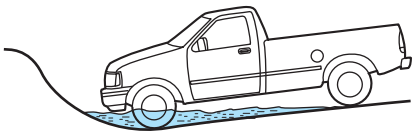
When driving over sand, try to keep all four wheels on the most solid area of the trail. Avoid reducing the tire pressures but shift to a lower gear and drive steadily through the terrain. Apply the accelerator slowly and avoid spinning the wheels.

If you must reduce the tire pressure for whatever reason in sand, make sure you re-inflate the tires as soon as possible.

Avoid excessive speed because vehicle momentum can work against you and cause the vehicle to 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

If you must drive through high water, drive slowly. Traction or brake capability may be limited.



When driving through water, determine the depth; avoid water higher than the bottom of the hubs (if possible) and proceed slowly. If the ignition system gets wet, the vehicle may stall.

Once through water, always try the brakes. Wet brakes do not stop the vehicle as effectively as dry brakes. Drying can be improved by moving your vehicle slowly while applying light pressure on the brake pedal.

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.

Driving through deep water may damage the transmission.

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.



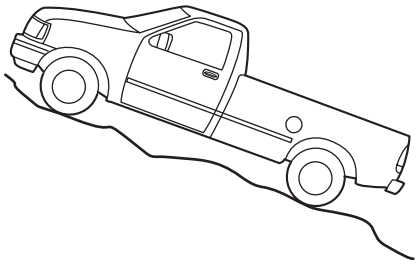
"Tread Lightly" is an educational program designed to increase public awareness of land-use regulations and responsibilities in our nations wilderness areas. Ford Motor Company joins the U.S. Forest Service and the Bureau of Land Management in encouraging you to help preserve our national forest and other public and private lands by "treading lightly."

Driving on hilly or sloping terrain

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. **Avoid driving crosswise or turning on steep**

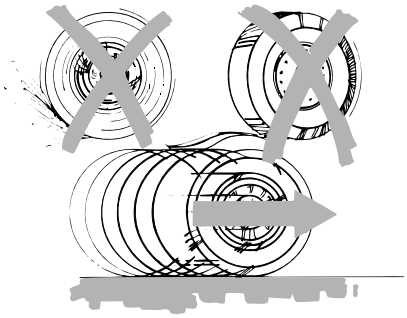
slopes or hills. A danger lies in losing traction, slipping sideways and possibly rolling over. Whenever driving on a hill, determine beforehand the route you will use. Do not drive over the crest of a hill without seeing what conditions are on the other side. Do not drive in reverse over a hill without the aid of an observer.

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 you do stall out, do not try to turn around because you might roll over. It is better to back down 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; instead, disengage overdrive or manually shift to a lower gear. When descending a steep hill, avoid sudden hard braking as you could lose control. When you brake hard, the front wheels can't turn and if they aren't turning, you won't be able to steer. The front wheels have to be turning in order to steer the vehicle. Rapid pumping of the brake pedal will help you slow the vehicle and still maintain steering control.

If your vehicle has anti-lock brakes, apply the brakes steadily. Do not "pump" the brakes.

Driving on snow and ice

4WD vehicles have advantages over 2WD 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 as well. Although a 4WD vehicle may accelerate better than a two-wheel drive vehicle in snow and ice, it won't stop any faster, because as in other vehicles, 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, avoid locking of the wheels. Use a "squeeze" technique, push on the brake pedal with a steadily increasing force which allows the wheels to brake yet continue to roll so that you may steer in the direction you want to travel. If you lock the wheels, release the brake pedal and repeat the squeeze technique. If your vehicle is equipped with a Four Wheel Anti-Lock Brake System (ABS), apply the brake steadily. Do not "pump" the brakes. Refer to the *Brakes* section of this chapter for additional information on the operation of the anti-lock brake system.

Never drive with chains on the front tires of 4WD vehicles without also putting them on the rear tires. This could cause the rear to slide and swing around during braking.

Tires, Replacement Requirements

Do not use a size and type of tire and wheel other than that originally provided by Ford Motor Company because it can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, and/or serious personal injury or death.

Make sure all tires and wheels on the vehicle are of the same size, type, tread design, brand and load-carrying capacity. If you have questions regarding tire replacement, see an authorized Ford or Lincoln/Mercury dealer.

If you nevertheless decide to equip your 4WD for off-road use with tires larger than what Ford Motor Company recommends, you should not use these tires for highway driving.

If you use any tire/wheel combination not recommended by Ford Motor Company, it may adversely affect vehicle handling and could cause steering, suspension, axle or transfer case failure.

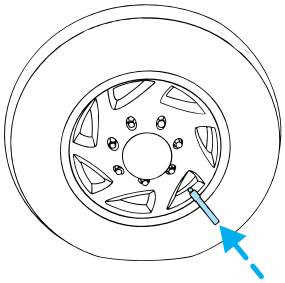
Do not use “aftermarket lift kits” or other suspension modifications, whether or not they are used with larger tires and wheels.

These “aftermarket lift kits” could adversely affect the vehicle’s handling characteristics, which could lead to loss of vehicle control or rollover and serious injury.

Tires can be damaged during off-road use. For your safety, tires that are damaged should not be used for highway driving because they are more likely to blow out or fail.

You should carefully observe the recommended tire inflation pressure found on the safety compliance certification label attached to the left front door lock facing or door latch post pillar. Failure to follow tire pressure recommendations can adversely affect the way your vehicle handles. Do not exceed the Ford Motor Company recommended pressure even if it is less than the maximum pressure allowed for the tire.

Each 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. Check tire pressure with a tire gauge every few weeks (including spare). Safe operation requires tires that are neither underinflated nor a vehicle which is overloaded.



Periodically inspect the tire treads and remove stones, nails, glass or other objects that may be wedged in the tread grooves. Check for holes or cuts that may permit air leakage from the tire and make necessary repairs.

Inspect the tire side walls for cuts, bruises and other damage. If internal damage to the tire is suspected, have the tire demounted and inspected in case it needs to be repaired or replaced.

Maintenance and Modifications

The suspension and steering systems on your vehicle have been designed and tested to provide both reliable and reasonably predictable performance whether loaded or empty and durable load carrying capability. For this reason, Ford Motor Company strongly recommends that you do not make modifications such as adding or removing parts (such as lift kits or stabilizer bars) or by using replacement parts not equivalent to the original factory equipment.

Any modifications to a vehicle that raise the center of gravity can make it more likely the vehicle will roll over as a result of a loss of control. Ford Motor Company recommends that caution be used with any vehicle equipped with a high load or device (such as ladder racks or pickup box cover).

Failure to maintain your vehicle properly may void the warranty, increase your repair cost, reduce vehicle performance and operational capabilities and adversely affect driver and passenger safety. Frequent inspection of vehicle chassis components is recommended if the vehicle is subjected to heavy off-road usage.

DRIVING THROUGH WATER

Do not drive quickly through standing water, especially if the depth is unknown. Traction or brake capability may be limited and if the ignition system gets wet, your engine may stall. Water may also enter your engine's air intake and severely damage your engine.

If driving through deep or standing water is unavoidable, proceed very slowly. Never drive through water that is higher than the bottom of the hubs (for trucks) or the bottom of the wheel rims (for cars).

Once through the water, always try the brakes. Wet brakes do not stop the vehicle as effectively as dry brakes. Drying can be improved by moving your vehicle slowly while applying light pressure on the brake pedal.

Driving through deep water where the transmission vent tube is submerged may allow water into the transmission and cause internal transmission damage. Have the fluid checked and, if water is found, replace the fluid.

VEHICLE LOADING

Before loading a vehicle, familiarize yourself with the following terms:

- **Base Curb Weight:** Weight of the vehicle including any standard equipment, fluids, lubricants, etc. It does not include occupants or aftermarket equipment.
- **Payload:** Combined maximum allowable weight of cargo, occupants and optional equipment. The payload equals the gross vehicle weight rating minus base curb weight.
- **GVW (Gross Vehicle Weight):** Base curb weight plus payload weight. The GVW is not a limit or a specification.
- **GVWR (Gross Vehicle Weight Rating):** Maximum permissible total weight of the base vehicle, occupants, optional equipment and cargo.

The GVWR is specific to each vehicle and is listed on the Safety Certification Label on the driver's door pillar.

- **GAWR (Gross Axle Weight Rating):** Carrying capacity for each axle system. The GAWR is specific to each vehicle and is listed on the Safety Certification Label on the driver's door pillar.
- **GCW (Gross Combined Weight):** The combined weight of the towing vehicle (including occupants and cargo) and the loaded trailer.
- **GCWR (Gross Combined Weight Rating):** Maximum permissible combined weight of towing vehicle (including occupants and cargo) and the loaded trailer
- **Maximum Trailer Weight Rating:** Maximum weight of a trailer the vehicle is permitted to tow. The maximum trailer weight rating is determined by subtracting the vehicle curb weight for each engine/transmission combination, any required option weight for trailer towing and the weight of the driver from the GCWR for the towing vehicle.
- **Maximum Trailer Weight:** Maximum weight of a trailer the loaded vehicle (including occupants and cargo) is permitted to tow. It is determined by subtracting the weight of the loaded trailer towing vehicle from the GCWR for the towing vehicle.
- **Trailer Weight Range:** Specified weight range that the trailer must fall within that ranges from zero to the maximum trailer weight rating.

Remember to figure in the tongue load of your loaded trailer when figuring the total weight.



Do not exceed the GVWR or the GAWR specified on the certification label.

Do not use replacement tires with lower load carrying capacities than the originals because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the originals do not increase the GVWR and GAWR limitations.

The Safety Certification Label, found on the driver's door pillar, lists several important vehicle weight rating limitations. Before adding any additional equipment, refer to these limitations. If you are adding weight to the front of your vehicle, (potentially including weight added to the cab), the weight added should not exceed the front axle reserve capacity (FARC). Additional frontal weight may be added to the front axle reserve capacity provided you limit your payload in other ways (i.e. restrict the number of occupants or amount of cargo carried).

Always ensure that the weight of occupants, cargo and equipment being carried is within the weight limitations that have been established for your vehicle including both gross vehicle weight and front and rear gross axle weight rating limits. Under no circumstance should these limitations be exceeded.

Exceeding any vehicle weight rating limitation could result in serious damage to the vehicle loss of vehicle control, vehicle rollover, and/or personal injury.

Special loading instructions for owners of pickup trucks and utility-type vehicles

For important information regarding safe operation of this type of vehicle, see the *Preparing to drive your vehicle* section in this chapter.

Loaded vehicles, with a higher center of gravity, 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 has the capability to 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.

Calculating the load your vehicle can carry/tow

1. Use the appropriate maximum gross combined weight rating (GCWR) chart (in the *Trailer Towing* section) to find the maximum GCWR for your type engine and rear axle ratio.
2. Weigh your vehicle as you customarily operate the vehicle without cargo. To obtain correct weights, try taking your vehicle to a shipping company or an inspection station for trucks.
3. Subtract your loaded vehicle weight from the maximum GCWR on the following charts. This is the maximum trailer weight your vehicle can tow and must fall below the maximum shown under maximum trailer weight on the chart.

TRAILER TOWING

Your vehicle may tow a class I, II or III trailer provided the maximum trailer weight is less than or equal to the maximum trailer weight listed for your engine and rear axle ratio on the following charts.

Your vehicle's load capacity is designated by weight, not by volume, so you cannot necessarily use all available space when loading a vehicle.

Towing a trailer places an additional load on your vehicle's engine, transmission, axle, brakes, tires and suspension. Inspect these components carefully periodically during, and after any towing operation.

Exceeding the maximum GCWR could result in extensive damage to your vehicle and personal injury.

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.

Engine	Rear axle ratio	Maximum GCWR-kg (lbs.)	Maximum trailer weight-kg (lbs.)
Regular Cab 4x2 w/automatic transmission			
4.2L	3.31	4077 (9000)	2132 (4700)
4.2L	3.55	4530 (10000)	2585 (5700)
4.6L	3.08	4530 (10000)	907 (2000)
4.6L	3.31	4763 (10500)	2812 (6200)
4.6L	3.55	5209 (11500)	3261 (7200)
5.4L	3.31	5443 (12000)	3447 (7600)
5.4L	3.55	5897 (13000)	3900 (8600)
5.4L	3.73	6124 (13500)	3992 (8800)
5.4L	4.10	6803 (15000)	3991 (8800)
SuperCab/Super Crew 4x2 w/automatic transmission			
4.2L	3.55	4530 (10000)	2495 (5500)
4.6L	3.08	4530 (10000)	907 (2000)
4.6L	3.31	4763 (10500)	2676 (5900)

Engine	Rear axle ratio	Maximum GCWR-kg (lbs.)	Maximum trailer weight-kg (lbs.)
4.6L	3.55	5216 (11500)	3130 (6900)/ 2994 (6600)
5.4L	3.31	5443 (12000)	3311 (7300)
5.4L	3.55	5897 (13000)	3765 (8300)/ 3628 (8000)
5.4L	3.73	6124 (13500)	3900 (8600)
5.4L	4.10	6803 (15000)	3900 (8600)

Engine	Rear axle ratio	Maximum GCWR-kg (lbs.)	Maximum trailer weight-kg (lbs.)
Regular Cab 4x2 w/manual transmission			
4.2L	3.08	2944 (6500)	907 (2000)
4.2L	3.55	3538 (7800)	1588 (3500)
4.6L	3.08	2944 (6500)	907 (2000)
4.6L	3.31	3265 (7200)	1315 (2900)
4.6L	3.55	3538 (7800)	1588 (3500)
SuperCab 4x2 w/manual transmission			
4.2L	3.08	2944 (6500)	907 (2000)
4.2L	3.55	3538 (7800)	1497 (3300)
4.6L	3.08	2944 (6500)	907 (2000)
4.6L	3.31	3265 (7200)	1179 (2600)
4.6L	3.55	3538 (7800)	1452 (3200)

Engine	Rear axle ratio/tire size - cm (inches)	Maximum GCWR-kg (lbs.)	Maximum trailer weight-kg (lbs.)
Regular Cab 4x4 w/automatic transmission			
4.2L	3.55/40.6 (16)	4536 (10000)	2449 (5400)
4.6L	3.31/40.6 (16)	4763 (10500)	2630 (5800)
4.6L	3.55/40.6 (16)	5216 (11500)	3084 (6800)

Engine	Rear axle ratio/tire size - cm (inches)	Maximum GCWR-kg (lbs.)	Maximum trailer weight-kg (lbs.)
4.6L	3.55/43.2 (17)	4990 (11000)	2858 (6300)
5.4L	3.31/40.6 (16)	5443 (12000)	3266 (7200)
5.4L	3.55/40.6 (16)	5897 (13000)	3720 (8200)
5.4L	3.55/43.2 (17)	5670 (12500)	3493 (7700)
5.4L	3.73/40.6 (16)	6124 (13500)	3810 (8400)
SuperCab/Super Crew 4x4 w/automatic transmission			
4.6L	3.31/40.6 (16)	4763 (10500)	2540 (5600)
4.6L	3.55/40.6 (16)	5216 (11500)	2994 (6600)/ 2812 (6200)
4.6L	3.55/43.2 (17)	4990 (11000)	2767 (6100)/ 2585 (5700)
5.4L	3.31/40.6 (16)	5443 (12000)	3175 (7000)
5.4L	3.55/40.6 (16)	5897 (13000)	3628 (8000)/ 3447 (7600)
5.4L	3.55/43.2 (17)	5670 (12500)	3401 (7500)/ 3221 (7100)
5.4L	3.73/40.6 (16)	6124 (13500)	3719 (8200)

Engine	Rear axle ratio	Maximum GCWR - kg (lbs.)	Maximum trailer weight - kg (lbs.)
Regular Cab 4x4 w/manual transmission			
4.2L	3.31	3265 (7200)	1179 (2600)
4.2L	3.55	3538 (7800)	1452 (3200)
4.6L	3.31	3265 (7200)	1134 (2500)
4.6L	3.55	3538 (7800)	1406 (3100)
SuperCab 4x4 w/manual transmission			
4.6L	3.31	3265 (7200)	1043 (2300)
4.6L	3.55	3533 (7800)	1315 (2900)

Harley-Davidson F-150 4x2 w/automatic transmission			
Engine	**Rear axle ratio**	**Maximum GCWR-kg (lbs.)**	**Maximum trailer weight-kg (lbs.)**
5.4L Supercharged	3.73	4536 (10000)	2041 (4500)

Trailer frontal area considerations:

- Not to exceed towing vehicle frontal area without Class III trailer towing package
- Not to exceed 5.52 square meters (60 square feet) with Class III trailer towing package

Preparing to tow

Use the proper equipment for towing a trailer and make sure it is properly attached to your vehicle. See your dealer or a reliable trailer dealer if you require assistance.

Hitches

Do not use hitches that clamp onto the vehicle's bumper or attach to the axle. You must distribute the load in your trailer so that 10%–15% of the total weight of the trailer is on the tongue.

Load equalizing hitch

When hooking up a trailer using a load equalizing hitch, always use the following procedure:

1. Park the unloaded vehicle on a level surface. With the ignition on and all doors closed, allow the vehicle to stand for several minutes so that it can level.

2. Measure the height of a reference point on the front and rear bumpers at the center of the vehicle.

3. Attach the trailer to the vehicle and adjust the hitch equalizers so that the front bumper height is within 0–13 mm (0.5 in) of the reference point. After proper adjustment, the rear bumper should be no higher than in Step 2.

Note: Adjusting an equalizing hitch so the rear bumper of the vehicle is higher than it was unloaded will defeat the function of the load equalizing hitch and may cause unpredictable handling.

Safety chains

Always connect the trailer's safety chains to the frame or hook retainers of the vehicle hitch. To connect the trailer's safety chains, cross the chains under the trailer tongue and allow slack for turning corners.

If you use a rental trailer, follow the instructions that the rental agency gives to you.

Do not attach safety chains to the bumper.

Trailer brakes

Electric brakes and manual, automatic or surge-type trailer brakes are safe if installed properly and adjusted to the manufacturer's specifications. The trailer brakes must meet local and Federal regulations.

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.

The braking system of the tow vehicle is rated for operation at the GVWR not GCWR.

Trailer lamps

Trailer lamps are required on most towed vehicles. Make sure your trailer lamps conform to local and Federal regulations. See your dealer or trailer rental agency for proper instructions and equipment for hooking up trailer lamps.

Using a step bumper (if equipped)

The rear bumper is equipped with an integral hitch and only requires a ball with a 25.4 mm (one inch) shank diameter. The bumper has a 2,270 kg (5,000 lb.) trailer weight and 227 kg (500 lb.) tongue weight capacity.

If it is necessary to relocate the trailer hitch ball position, a frame-mounted trailer hitch must be installed.

Driving while you tow

When towing a trailer:

- Turn off the speed control. The speed control may shut off automatically when you are towing on long, steep grades.
- Consult your local motor vehicle speed regulations for towing a trailer.

- To eliminate excessive shifting, use a lower gear. This will also assist in transmission cooling. (For additional information, refer to the *Driving with a 4–speed automatic transmission* section in this chapter.
- Anticipate stops and brake gradually.
- Do not exceed the GCWR rating or transmission damage may occur.

Servicing after towing

If you tow a trailer for long distances, your vehicle will require more frequent service intervals. Refer to your scheduled maintenance guide for more information.

Trailer towing tips

- Practice turning, stopping and backing up before starting on a trip to get the feel of the vehicle trailer combination. When turning, make wider turns so the trailer wheels will clear curbs and other obstacles.
- Allow more distance for stopping with a trailer attached.
- The trailer tongue weight should be 10–15% of the loaded trailer weight.
- After you have traveled 80 km (50 miles), thoroughly check your hitch, electrical connections and trailer wheel lug nuts.
- To aid in engine/transmission cooling and A/C efficiency during hot weather while stopped in traffic, place the gearshift lever in P (Park) (automatic transmission) or N (Neutral) (manual transmissions).
- Vehicles with trailers should not be parked on a grade. If you must park on a grade, place wheel chocks under the trailer's wheels.

Launching or retrieving a boat

Disconnect the wiring to the trailer before backing the trailer into the water. Reconnect the wiring to the trailer after the trailer is removed 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 15 cm (6 inches) 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 any time the axle has been submerged in water. Rear axle lubricant quantities are not to be checked or changed unless a leak is suspected or repair required.

RECREATIONAL TOWING (ALL WHEELS ON THE GROUND)

An example of recreational towing would be towing your vehicle behind a motorhome. Follow these guidelines if you have the need for recreational towing your vehicle with all four wheels on the ground. These guidelines are designed to ensure that your transmission is not damaged.

2WD vehicles (with automatic transmissions):

- Place the transmission in N (Neutral)
- Maximum speed is 56 km (35 mph)
- Maximum distance is 80 km (50 miles)

If a distance of 80 km (50 miles) or a speed of 56 km (35 mph) must be exceeded, the drive shaft will have to be removed before the vehicle is towed.

Ford recommends the driveshaft be removed/installed only by a qualified technician. See your local dealer for driveshaft removal/installation.

Improper removal/installation of the driveshaft can cause transmission fluid loss, damage to the driveshaft and internal transmission components.

4WD vehicles electronic shift transfer case (with automatic transmissions):

4x4 vehicles with electronic shift on the fly cannot be towed with any wheels on the ground.

SNOWPLOWING

Ford recommends the following specifications for low speed, personal use snow removal:

- F-150 4x4 (except F-150 Supercrew, Lightning and Harley-Davidson models)
- 5.4L engine
- Heavy-duty service package
- Super engine cooling
- Heavy-duty front suspension package

- Automatic transmission with auxiliary automatic transmission fluid cooling
- All-terrain tires
- Limited slip and optional axle ratio.

Do not install a snowplow and plow with your vehicle until it has been driven at least 800 km (500 miles).

Installing the snowplow

Read the following instructions before installing a snowplow:

- Front GAWR must not exceed 63% of the GVW. Add ballast weight to the back of the vehicle, if necessary. Refer to the Safety Compliance Certification Label to find Front GAWR.
- The Front Axle Accessory Reserve Capacity and the TARC listed on the bottom right of the Safety Compliance Certification Label will determine whether or not the addition of a snowplow will overload your vehicle.
- The weight of the snowplow and supporting components distributed to the front axle must not exceed the front accessory reserve capacity.
- The total weight of the snowplow and aftermarket equipment must not exceed the TARC.
- The weight of the installed snowplow and aftermarket equipment must not load the vehicle beyond the GAWR (front/rear) and GVWR listed on the Safety Compliance Certification Label.
- The total weight of the snowplow and aftermarket equipment must be considered part of the payload and must not exceed the GCWR for towing.
- Federal and most local regulations require additional exterior lamps for snowplow-equipped vehicles. Consult your dealer for additional information.
- After installing a snowplow to the vehicle, ensure the vehicle's front toe alignment and front ride height are within specification (reset if required). These specifications are located in the vehicle's Workshop Manual. Adherence to the toe, tire pressures and ride height specification is important for proper tire wear, ride, handling and headlight aim. Also, maintain the engine oil and transmission fluid change intervals following the severe duty schedule.

Note: Do not exceed the GVWR or the GAWR specified on the certification label.

Removing snowplow

After removing a snowplow from the vehicle, ensure the vehicle's front toe alignment and front ride height are within specification (reset if required).

Snowplowing with your air bag equipped vehicle

Your vehicle is equipped with a driver and passenger air bag Supplemental Restraint System (SRS) The SRS is designed to activate in certain frontal and offset frontal collisions when the vehicle sustains sufficient longitudinal deceleration.

Careless or high speed driving while plowing snow which results in sufficient vehicle decelerations can deploy the air bag. Such driving also increases the risk of accidents.

All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag (SRS) is provided.

Never remove or defeat the "tripping mechanisms" designed into the snow removal equipment by its manufacturer. Doing so may cause damage to the vehicle and the snow removal equipment as well as possible air bag deployment.

Do not attempt to service, repair, or modify the Air Bag Supplemental Restraint System or its fuses. See your Ford or Lincoln Mercury dealer.

Additional equipment such as snowplow equipment may effect the performance of the air bag sensors increasing the risk of injury. Please refer to the Body Builders Layout Book for instructions about the appropriate installation of additional equipment.

Engine temperature while plowing

When driving with a plow, your engine may run at a higher temperature than normal because the attached snowplow blade will restrict airflow to the radiator.

If you are driving more than 24 km (15 miles) at temperatures above freezing, angle the plow blade either full left or full right to provide maximum airflow to the radiator.

If you are driving less than 24 km (15 miles) at speeds up to 64 km/h (40 mph) in cold weather, you will not need to worry about blade position to provide maximum airflow.

Transmission operation while plowing

- Shift transfer case to 4L (4WD Low) when plowing in small areas at speeds below 8 km/h (5 mph).
- Shift transfer case to 4H (4WD High) when plowing larger areas or light snow at higher speeds. Do not exceed 24 km/h (15 mph).
- Do not shift the transmission from a forward gear to R (Reverse) until the engine is at idle and the wheels are stopped.
- If the vehicle is stuck, shift the transmission in a steady motion between forward and reverse gears. Do not rock the vehicle for more than a few minutes. The transmission and tires may be damaged or the engine can overheat.

Do not rock the vehicle if the engine is not at operating temperature. Do not rock the vehicle for more than a minute. The transmission and tires may be damaged or the engine may overheat.



Do not spin the wheels at over 35 mph (55 km/h). The tires may fail and injure a passenger or bystander.

GETTING ROADSIDE ASSISTANCE

To fully assist you should you have a vehicle concern, Ford Motor Company offers a complimentary roadside assistance program. This program is separate from the New Vehicle Limited Warranty. The service is available:

- 24–hours, seven days a week
- for the New Vehicle Limited Warranty period of three years or 60,000 km (36,000 miles), whichever occurs first on Ford and Mercury vehicles, and four years or 80,000 km (50,000 miles) on Lincoln vehicles.

Roadside assistance will cover:

- changing a flat tire
- jump-starts
- lock-out assistance
- limited fuel delivery
- towing of your disabled vehicle to the nearest Ford Motor Company dealership, or your selling dealer if within 56.3 km (35 miles) of the nearest Ford Motor Company dealership (one tow per disablement). Even non-warranty related tows, like accidents or getting stuck in the mud or snow, are covered (some exclusions apply, such as impound towing or repossession).

Canadian customers refer to your Owner Information Guide for information on:

- coverage period
- exact fuel amounts
- towing of your disabled vehicle
- emergency travel expense reimbursement
- travel planning benefits

USING ROADSIDE ASSISTANCE

Complete the roadside assistance identification card and place it in your wallet for quick reference. In the United States, this card is found in the Owner Guide portfolio in the glove compartment in Ford vehicles and is mailed to you if you own a Mercury or Lincoln. In Canada, the card is found in the Owner Information Guide in the glove compartment.

U.S. Ford or Mercury vehicle customers who require roadside assistance, call 1–800–241–3673; Lincoln vehicle customers call 1–800–521–4140.

Canadian customers who require roadside assistance, call 1–800–665–2006.

If you need to arrange roadside assistance for yourself, Ford Motor Company will reimburse a reasonable amount. To obtain reimbursement information, U.S. Ford or Mercury vehicles customers call 1-800-241-3673; Lincoln vehicle customers call 1–800–521–4140.

Canadian customers who need to obtain reimbursement information, call 1–800–665–2006.

ROADSIDE COVERAGE BEYOND BASIC WARRANTY

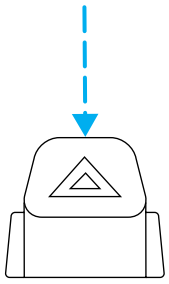
In the United States, you may purchase additional roadside assistance coverage beyond this period through the Ford Auto Club by contacting your Ford or Lincoln Mercury dealer.

Similarly in Canada, for uninterrupted Roadside Assistance coverage, you may purchase extended coverage prior to your Basic Warranty's Roadside Assistance expiring. For more information and enrollment, contact 1–877–294–2582 or visit our website at www.ford.ca.

HAZARD FLASHER

Use only in an emergency to warn traffic of vehicle breakdown, approaching danger, etc. The hazard flashers can be operated when the ignition is off.

- The hazard lights control is located on top of the steering column.
- Depress hazard lights control to activate all hazard flashers simultaneously.
- Depress control again to turn the flashers off.

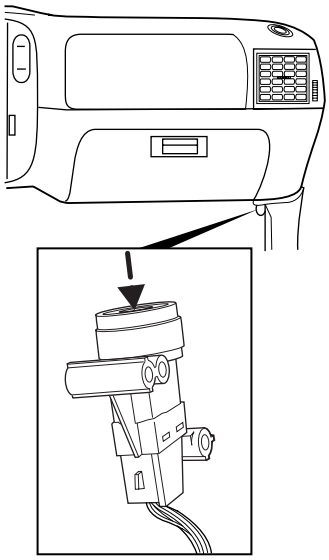


FUEL PUMP SHUT-OFF SWITCH FUEL RESET

The fuel pump shut-off switch is a device intended to stop the electric fuel pump when your vehicle has been involved in a substantial jolt.

After a collision, if the engine cranks but does not start, the fuel pump shut-off switch may have been activated.

The fuel pump shut-off switch is located in the passenger's foot well, by the kick panel.



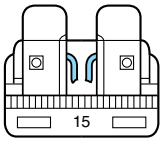
Use the following procedure to reset the fuel pump shut-off switch.

1. Turn the ignition to the OFF position.
2. Check the fuel system for leaks.
3. If no fuel leak is apparent, reset the fuel pump shut-off switch by pushing in on the reset button.
4. Turn the ignition to the ON position. Pause for a few seconds and return the key to the OFF position.
5. Make a further check for leaks in the fuel system.

FUSES AND RELAYS

Fuses

If electrical components in the vehicle are not working, a fuse may have blown. Blown fuses are identified by a broken wire within the fuse. Check the appropriate fuses before replacing any electrical components.



Note: Always replace a fuse with one that has the specified amperage rating. Using a fuse with a higher amperage rating can cause severe wire damage and could start a fire.

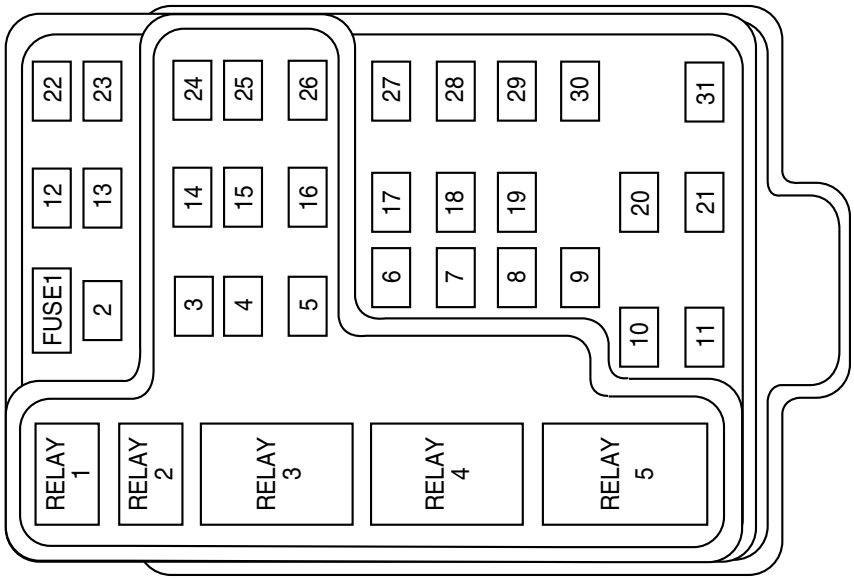
Standard fuse amperage rating and color

COLOR					
Fuse rating	**Mini fuses**	**Standard fuses**	**Maxi fuses**	**Cartridge maxi fuses**	**Fuse link cartridge**
2A	Grey	Grey	—	—	—
3A	Violet	Violet	—	—	—
4A	Pink	Pink	—	—	—
5A	Tan	Tan	—	—	—
7.5A	Brown	Brown	—	—	—
10A	Red	Red	—	—	—
15A	Blue	Blue	—	—	—
20A	Yellow	Yellow	Yellow	Blue	Blue
25A	Natural	Natural	—	—	—
30A	Green	Green	Green	Pink	Pink
40A	—	—	Orange	Green	Green
50A	—	—	Red	Red	Red
60A	—	—	Blue	—	Yellow
70A	—	—	Tan	—	Brown
80A	—	—	Natural	—	Black

Passenger compartment fuse panel

The fuse panel is located below and to the left of the steering wheel by the brake pedal. Remove the panel cover to access the fuses.

To remove a fuse use the fuse puller tool provided on the fuse panel cover.



The fuses are coded as follows.

Fuse/Relay Location	Fuse Amp Rating	Passenger Compartment Fuse Panel Description
1	15A	Audio
2	5A	Powertrain Control Module (PCM), Cluster
3	20A	Cigar lighter, Data link connector
4	5A	Power mirror switch, Mirror turn signal relays
5	15A	Speed control module, Reverse lamp, Climate mode switch, Daytime Running Lamps (DRL) relay, Digital Transmission Range (DTR) sensor
6	5A	Cluster, Brake shift interlock solenoid, GEM

Fuse/Relay Location	Fuse Amp Rating	Passenger Compartment Fuse Panel Description
7	—	Not used
8	5A	Radio, Remote entry module, GEM, In-vehicle entertainment system (SuperCrew only)
9	—	Not used
10	—	Not used
11	30A	Front washer pump relay, Wiper run/park relay, Wiper HI/LO relay, Windshield wiper motor
12	—	Not used
13	20A	Stop lamp switch (Lamps), Turn/Hazard flasher
14	15A	Battery saver relay, Interior lamp relay
15	5A	Stop lamp switch (speed control, brake shift interlock), GEM, Rear Anti-lock Brake System (RABS) module
16	20A	Headlamps (hi beams), Cluster (hi beam indicator)
17	—	Not used
18	5A	Instrument illumination (dimmer switch power)
19	—	Not used
20	5A	Audio, GEM, PCM, Transmission range sensor
21	15A	DTR sensor, Clutch switch, Starter relay, I/P fuse 20
22	10A	Air bag module, Passenger air bag deactivation module

Fuse/Relay Location	Fuse Amp Rating	Passenger Compartment Fuse Panel Description
23	10A	Trailer tow battery Charge relay, Turn/Hazard flasher, 4x4 solenoids, 4x4 relays, Overhead console, 4–Wheel Anti-lock Brake System (4WABS) module, EC mirror, Heated seats
24	10A	Function selector switch assembly
25	—	Not used
26	10A	Right-hand low beam headlamp
27	5A	Foglamp relay and foglamp indicator, Main light switch (upstream)
28	10A	Left-hand low beam headlamp
29	5A	Autolamp module, Transmission overdrive control switch, Central security module, Beltminder
30	30A	Passive Anti-theft transceiver, Cluster, Ignition coils, PCM relay, Coil on plugs, Radio noise capacitor, ECC diode
31	—	Not used
Relay 1	—	Interior lamp relay
Relay 2	—	Battery saver relay
Relay 3	—	Not used
Relay 4	—	One-touch down window relay
Relay 5	—	Accessory delay relay

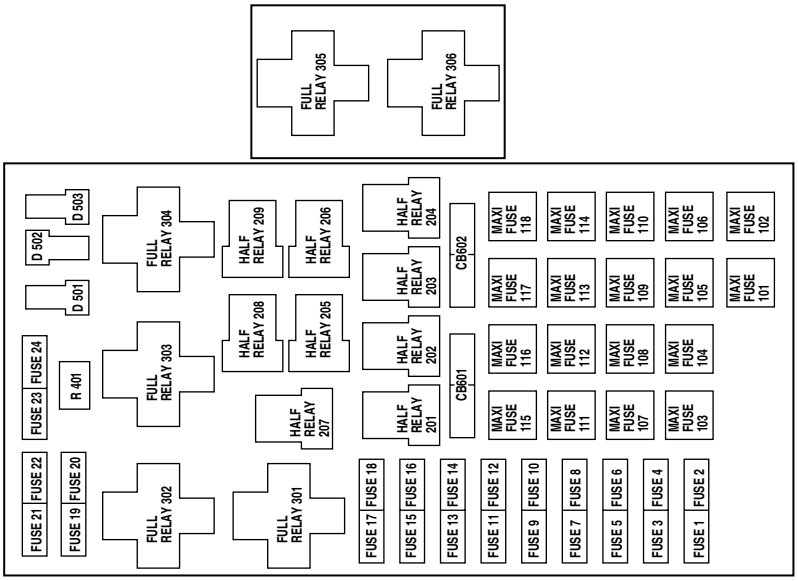
Power distribution box

The power distribution box is located in the engine compartment. The power distribution box contains high-current fuses that protect your vehicle's main electrical systems from overloads.

Always disconnect the battery before servicing high current fuses.

Always replace the cover to the power distribution box before reconnecting the battery or refilling fluid reservoirs

If the battery has been disconnected and reconnected, refer to the *Battery* section of the *Maintenance and specifications* chapter.



The high-current fuses are coded as follows.

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
1	20A *	Power point
2	30A*	Powertrain Control Module (PCM)
3	30A*	Main light switch, Headlamp relay, Multifunction switch
4	—	Not used
5	20A*	Trailer tow back-up/park lamps
6	15A*	Main light switch, Park lamp relay
7	20A*	Horn

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
8	15A*	Power door locks, Central Security Module (CSM), Lock relays (not used on SuperCrew)
9	15A*	Daytime Running Lamps (DRL), Fog lamps
10	20A*	Fuel pump
11	20A*	Alternator field
12	20A*	Rear auxiliary power point (SuperCrew only)
13	15A*	A/C clutch
14	—	Not used
15	10A	Running board lamps
16	—	Not used
17	—	Not used
18	15A*	PCM, Fuel injectors, Fuel pump relay, Mass air flow sensor
19	10A*	Trailer/Camper adapter (right stop/turn lamp)
20	10A*	Trailer/Camper adapter (left stop/turn lamp)
21	—	Not used
22	—	Not used
23	15A*	HEGO sensor, Automatic transmission
24	—	Not used
101	30A**	Trailer tow battery charge
102	50/20A**	Four-wheel Anti-lock Brake System (4WABS) module/Rear-wheel Anti-lock Brake System (RABS) module, Ignition switch
103	50A**	Central junction box

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
104	30A**	4x4 shift motor & clutch
105	40A**	Climate control front blower
106	20A**	Intercooler pump (supercharged engine only)
107	—	Not used
108	30A**	Trailer tow electric brake
109	—	Not used
110	30A**	Accessory delay relay (Not used on SuperCrew)
111	40A**	Ignition switch battery feed (start and run circuits)
112	30A**	Drivers power seat, Adjustable pedal switch
113	40A**	Ignition switch battery feed (run and accessory circuits)
114	—	Not used
115	20A**	Power door locks (SuperCrew only)
116	—	Not used
117	—	Not used
118	30A**	Heated seats
201	—	Trailer tow park lamp relay
202	—	Front wiper run/park relay
203	—	Trailer tow backup lamp relay
204	—	A/C clutch relay
205	—	Horn relay
206	—	Fog lamp relay
207	—	Front washer pump relay
208	—	Intercooler pump relay (supercharged engine only)
209	—	Front wiper HI/LO relay
301	—	Fuel pump relay

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
302	—	Trailer tow battery charge relay
303	—	Not used
304	—	PCM relay
305	—	Fuel pump HI/LO relay (supercharged engine only)
306	—	Inertia switch relay (supercharged engine only)
401	—	Not used
501	—	PCM diode
502	—	A/C compressor diode
503	—	Not used
601	CB	Power windows, Moonroof (SuperCrew only)
602	—	Not used
*Mini fuses **Maxi fuses		

CHANGING THE TIRES

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.

Harley-Davidson vehicles are equipped with a spare tire with a different speed rating than the road tires. It is not recommended that you exceed 112 km/h (70 mph) when the spare tire is in use. Though the spare tire is rated for 112 km/h (70 mph), always obey the local speed limits.

The use of tire sealants is not recommended and may compromise the integrity of your tires. The use of tire sealants may also affect your tire pressure monitoring system (if equipped).

Spare tire information

Your vehicle is equipped with a spare tire that may be used as a spare or a regular tire. The spare tire wheel may not match the road wheel, and is not equipped with wheel trim. The wheel trim from the wheel/tire may be used on the spare if the wheels match.

If your vehicle is equipped with 4WD, a spare tire of a different size than the road tires should not be used. Use of such a tire could result in damage to driveline components and an increased risk of loss of vehicle control, vehicle rollover, personal injury or death.

If your vehicle is equipped with a tire pressure monitoring system, refer to Tire Pressure Monitoring System (if equipped) in the Maintenance and specifications section for important information before changing your tires. If the tire pressure monitoring system becomes damaged, it will no longer function.

Location of the spare tire and tools

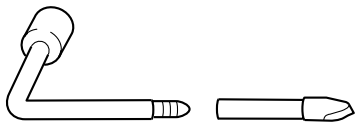
The spare tire and tools for your vehicle are stowed in the following locations:

Tool	Location
Spare tire	Under the vehicle, just forward of the rear bumper
Jack, lug nut wrench	Regular cab: Under the seat on the passenger side
	Super Cab: Under the front or rear seat on the passenger side
	Super Crew cab: In the passenger side rear storage compartment
Jack handle	On top of the radiator support at the front of the engine compartment
Key, spare tire lock (if equipped)	In the glove box

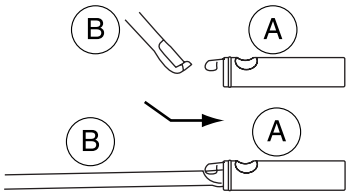
Removing the spare tire

1. If equipped with a two piece lug wrench, assemble the lug wrench as shown in the illustration.

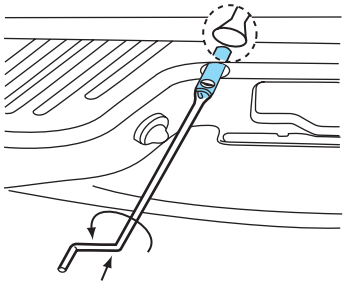
- To assemble, screw the parts together. To disassemble, unscrew.



2. Attach the spare tire lock key (A) to the jack handle (B).



3. Fully insert the jack handle through the bumper hole and into the guide tube. The key and lock will engage with a slight push and counterclockwise turn. Some resistance will be felt when turning the jack handle assembly.



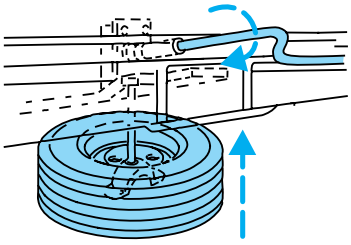
4. Turn the handle counterclockwise until tire is lowered to the ground, the tire can be slid rearward and the cable is slightly slack.

5. Remove the retainer from the spare tire.

Stowing the spare tire

1. Lay the tire on the ground with the valve stem facing up.

2. Slide the wheel under the vehicle and install the retainer through the wheel center.



3. Turn the jack handle clockwise until the tire is raised to its original position underneath the vehicle. The jack handle ratchets when the tire is raised to the stowed position. It will not allow you to overtighten.

Tire change procedure

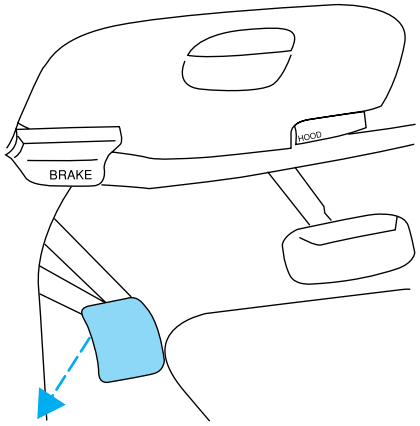
To prevent the vehicle from moving when you change a tire, be sure the parking brake is set, then block (in both directions) the wheel that is diagonally opposite (other side and end of the vehicle) to the tire being changed.

If the vehicle slips off the jack, you or someone else could be seriously injured.

Refer to the instruction sheet (located with the jack) for detailed tire change instructions.

1. Park on a level surface, activate hazard flashers and set the parking brake.

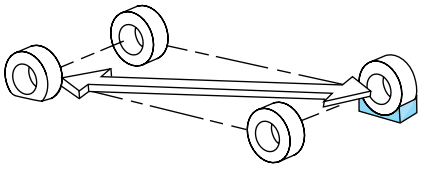
2. Place gearshift lever in P (Park) (automatic transmission) or in the reverse gear (manual transmission)and turn engine OFF.



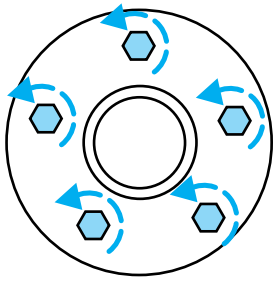
3. Block the diagonally opposite wheel.

4. Obtain the spare tire and jack from their storage locations.

5. Use the tip of the lug wrench to remove any wheel trim.



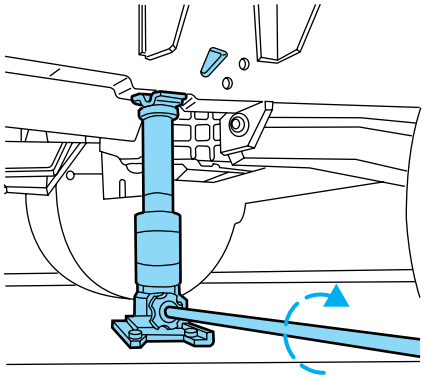
6. Loosen each wheel lug nut one-half turn counterclockwise but do not remove them until the wheel is raised off the ground.



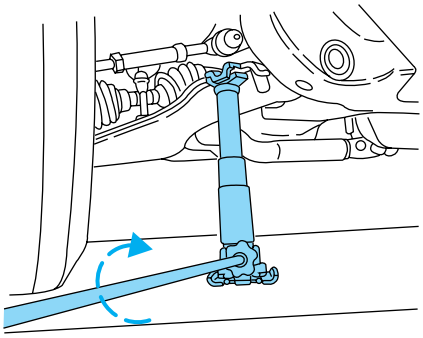
7. Position the jack according to the following guides and turn the jack handle clockwise until the wheel is completely off the ground.

When one of the rear wheels is off the ground, the transmission alone will not prevent the vehicle from moving or slipping off the jack, even if the transmission is in P (Park) or in the reverse gear (manual transmission). To prevent the vehicle from moving when you change the tire, be sure that the parking brake is set and the diagonally opposite wheel is blocked. If the vehicle slips off the jack, someone could be seriously injured.

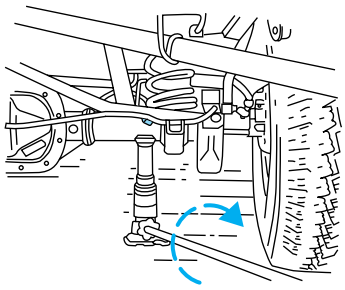
- Front (4x2)

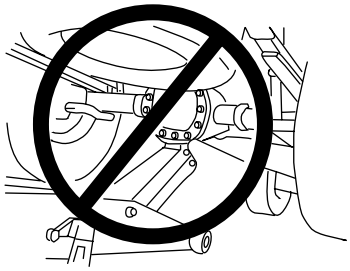


- Front (4x4)



- Rear





To lessen the risk of personal injury, do not put any part of your body under the vehicle while changing a tire. Do not start the engine when your vehicle is on the jack. The jack is only meant for changing the tire.

- **Never use the front or rear differential as a jacking point.**

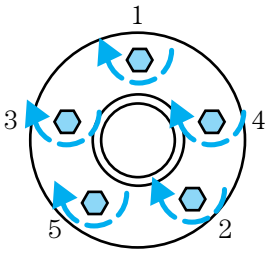
8. Remove the lug nuts with the lug wrench.

9. Replace the flat tire with the spare tire, making sure the valve stem is facing outward. 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.

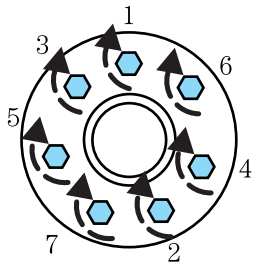
10. Lower the wheel by turning the jack handle counterclockwise.

11. Remove the jack and fully tighten the lug nuts in the order shown.

- Five lug nut wheel



- Seven lug nut wheel



12. Stow the flat tire. Refer to *Stowing the flat/spare tire.*

13. Stow the jack and lug wrench. Make sure the jack is fastened so it does not rattle when you drive.

14. Unblock the wheels.

Bolt size	Wheel lug nut torque*	
	Nm	Lb-ft
F-150 (five lug nut wheel): M14 x 2.0	200	150
F-150 with Heavy Payload Package (seven lug nut wheel): M12 x 1.75	135	100
* Torque specifications are for nut and bolt threads free of dirt and rust. Use only Ford recommended replacement fasteners.		

JUMP STARTING YOUR VEHICLE

The gases around the battery can explode if exposed to flames, sparks, or lit cigarettes. An explosion could result in injury or vehicle damage.

Batteries contain sulfuric acid which can burn skin, eyes and clothing, if contacted.

Do not attempt to push-start your vehicle. Automatic transmissions do not have push-start capability; also, the catalytic converter may become damaged.

Preparing your vehicle

When the battery is disconnected or a new battery is installed, the transmission must relearn its shift strategy. As a result, the transmission may have firm and/or soft shifts. 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.

1. **Use only a 12–volt supply to start your vehicle.**

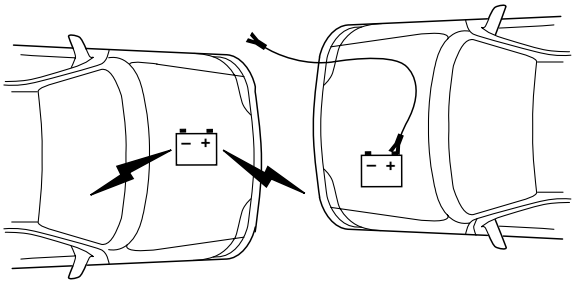
2. Do not disconnect the battery of the disabled vehicle as this could damage the vehicle's electrical system.

3. Park the booster vehicle close to the hood of the disabled vehicle making sure the two vehicles **do not** touch. Set the parking brake on both vehicles and stay clear of the engine cooling fan and other moving parts.

4. Check all battery terminals and remove any excessive corrosion before you attach the battery cables. Ensure that vent caps are tight and level.

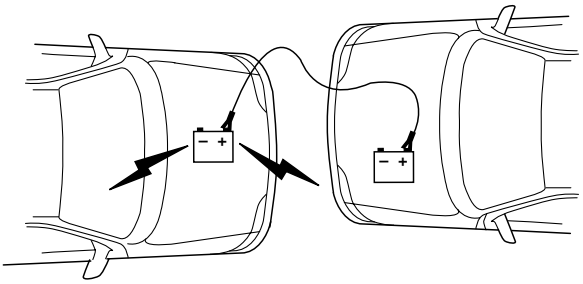
5. Turn the heater fan on in both vehicles to protect any electrical surges. Turn all other accessories off.

Connecting the jumper cables

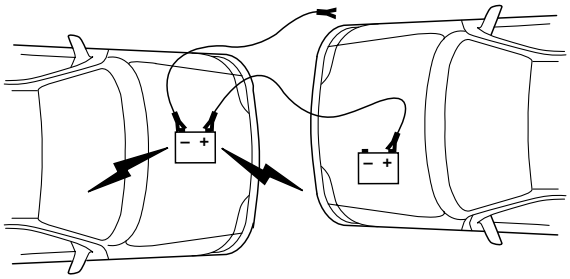


1. Connect the positive (+) booster cable to the positive (+) terminal of the discharged battery.

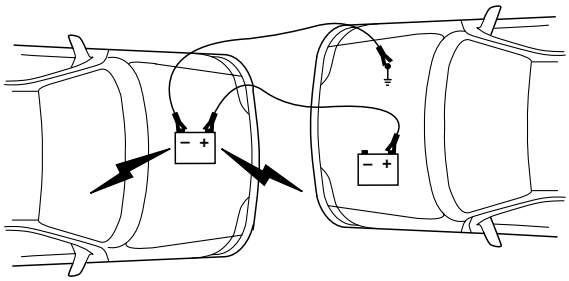
Note: In the illustrations, *lightning bolts* are used to designate the assisting (boosting) battery.



2. Connect the other end of the positive (+) cable to the positive (+) terminal of the assisting battery.



3. Connect the negative (-) cable to the negative (-) terminal of the assisting 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 carburetor/fuel injection system. **Do not** use fuel lines, engine rocker covers or the intake manifold as *grounding* points.

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.

5. Ensure that the cables are clear of fan blades, belts, moving parts of both engines, or any fuel delivery system parts.

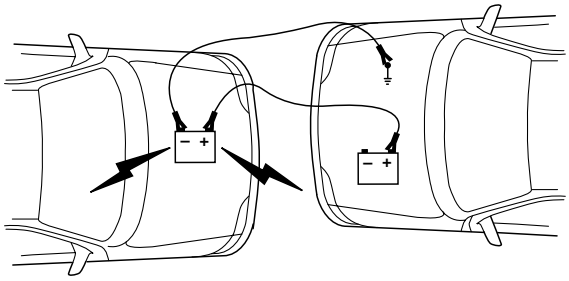
Jump starting

1. Start the engine of the booster vehicle and run the engine at moderately increased speed.

2. Start the engine of the disabled vehicle.

3. Once the disabled vehicle has been started, run both engines for an additional three minutes before disconnecting the jumper cables.

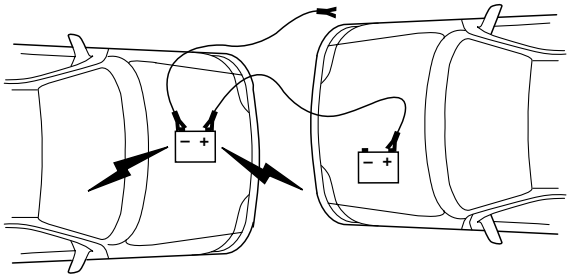
Removing the jumper cables



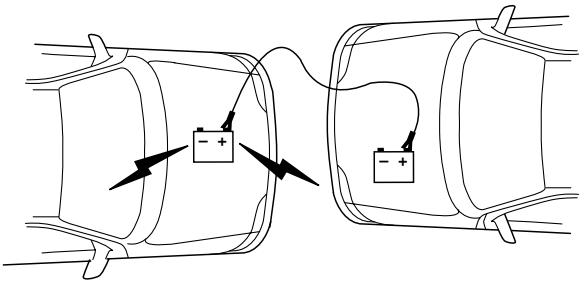
Remove the jumper cables in the reverse order that they were connected.

1. Remove the jumper cable from the *ground* metal surface.

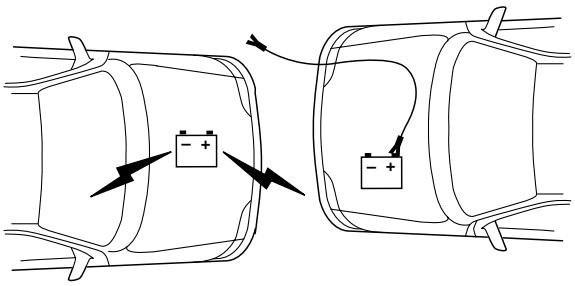
Note: In the illustrations, *lightning bolts* are used to designate the assisting (boosting) battery.



2. Remove the jumper cable on the negative (-) connection of the booster vehicle's battery.



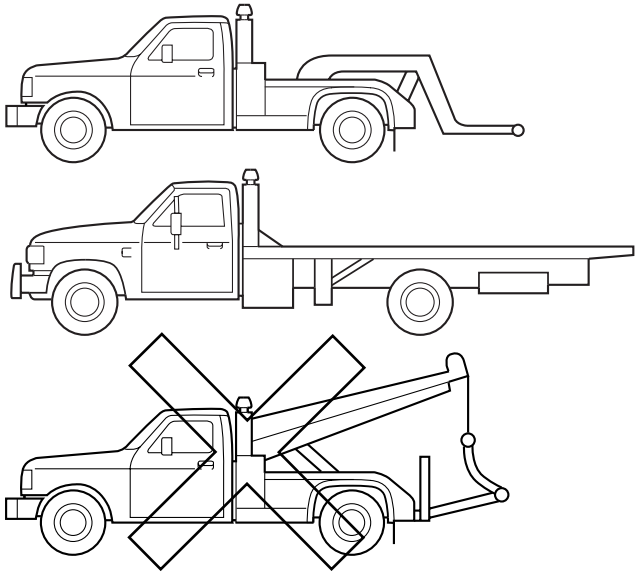
3. Remove the jumper cable from the positive (+) terminal of the booster vehicle's battery.



4. Remove the jumper cable from the positive (+) terminal of the disabled vehicle's battery.

After the disabled vehicle has been started and the jumper cables removed, allow it to idle for several minutes so the engine computer can *relearn* its idle conditions.

WRECKER TOWING



If you need to have your vehicle towed, contact a professional towing service or, if you are a member, your roadside assistance center.

It is recommended that your vehicle be towed with a wheel lift or flatbed equipment. Do not tow with a slingbelt. Ford Motor Company has not approved a slingbelt towing procedure.

If equipped with air suspension, the air suspension control must be turned to the OFF position.

On 4x2 vehicles, it is acceptable to tow the vehicle with the front wheels on the ground (without dollies) and the rear wheels off the ground.

On 4x4 vehicles, it is recommended that your vehicle be towed with a wheel lift and dollies or flatbed equipment with all the wheels off the ground.

If you are towing a NASCAR Special Edition F-150 or a Harley-Davidson F-150 using flatbed equipment, you must place two 4X4 boards at the end of the ramp to allow for bumper clearance.

If the vehicle is towed by other means or incorrectly, vehicle

damage may occur.

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.

GETTING THE SERVICES YOU NEED

At home

Ford Motor Company and Ford of Canada have authorized dealerships to service your vehicle. It is preferred that you return to the authorized dealer where your vehicle was purchased when warranty repairs are needed. However, you may also take your vehicle to another Ford Motor Company or Ford of Canada dealership authorized for warranty repairs. Certain warranty repairs require special training though, so not all dealers are authorized to perform all warranty repairs. That means that depending on the warranty repair needed, the vehicle may need to be taken to another dealer. If a particular dealership cannot assist you, then contact the Customer Relationship Center.

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 dealership.

2. If your inquiry or concern remains unresolved, contact the Sales Manager or Service Manager at the dealership.

3. If the inquiry or concern cannot be resolved at the dealership level, please contact the Ford Customer Relationship Center.

Away from home

If you own a Ford or Mercury vehicle and are away from home when your vehicle needs service, or if you need more help than the dealership could provide, after following the steps described above, contact the Ford Customer Relationship Center to find an authorized dealership to help you.

In the United States:

Ford Motor Company
Customer Relationship Center
16800 Executive Plaza Drive
P.O. Box 6248
Dearborn, Michigan 48121
1-800-392-3673 (FORD)
(TDD for the hearing impaired: 1-800-232-5952)
www.ford.com

Customer Assistance

In Canada:
Customer Relationship Centre
Ford Motor Company of Canada, Limited
P.O. Box 2000
Oakville, Ontario L6J 5E4
1-800-565-3673 (FORD)
www.ford.ca

If you own a Lincoln vehicle and are away from home when your vehicle needs service, or if you need more help than the dealership could provide, after following the steps described above, contact the Ford Customer Relationship Center to find an authorized dealership to help you.

In the United States:
Ford Motor Company
Customer Relationship Center
16800 Executive Plaza Drive
P.O. Box 6248
Dearborn, Michigan 48121
1-800-521-4140
(TDD for the hearing impaired: 1-800-232-5952)
www.ford.com

In Canada:
Customer Relationship Centre
Ford Motor Company of Canada, Limited
P.O. Box 2000
Oakville, Ontario L6J 5E4
1-800-565-3673 (FORD)
www.ford.ca

In order to help you service your Ford or Lincoln Mercury vehicle, please have the following information available when contacting a Customer Relationship Center:

- Your telephone number (home and business)
- The name of the dealer and the city where the dealership is located
- The year and make of your vehicle
- The date of vehicle purchase
- The current odometer reading
- The vehicle identification number (VIN)

If you still have a complaint involving a warranty dispute, you may wish to contact the Dispute Settlement Board (U.S.).

In some states (in the U.S.) 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 Dispute Settlement Board 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.

FORD EXTENDED SERVICE PLAN

You can get more protection for your new car or light truck by purchasing Ford Extended Service Plan (Ford ESP) coverage. Ford ESP is an optional service contract which is backed by Ford Motor Company or Ford Motor Service Company (in the U.S.) and Ford of Canada (in Canada). It provides the following:

- Benefits during the warranty period depending on the plan you purchase (such as: reimbursement for rentals; coverage for certain maintenance and wear items).
- Protection against covered repair costs after your Bumper-to-Bumper Warranty expires.

You may purchase Ford ESP from any participating Ford and Lincoln Mercury and Ford of Canada dealer. There are several plans available in various time, distance and deductible combinations which can be tailored to fit your own driving needs. Ford ESP also offers reimbursement benefits for towing and rental coverage.

When you buy Ford ESP, you receive Peace-of-Mind protection throughout the United States and Canada, provided by a network of more than 5,000 participating Ford or Lincoln Mercury and Ford of Canada dealers.

If you did not take advantage of the Ford Extended Service Plan at the time of purchasing your vehicle, you may still be eligible. Please contact your dealer for further information. Since this information is subject to change, please ask your dealer for complete details about Ford Extended Service Plan coverage options, or visit the Ford ESP website at www.ford-esp.com.

THE DISPUTE SETTLEMENT BOARD (U.S. ONLY)

The Dispute Settlement Board is:

- an independent, third-party arbitration program for warranty disputes.

- available free to owners and lessees of qualifying Ford Motor Company vehicles.

The Dispute Settlement Board may not be available in all states. Ford Motor Company reserves the right to change eligibility limitations, modify procedures and/or to discontinue this service without notice and without incurring obligations per applicable state law.

What kinds of cases does the Board review?

Unresolved warranty repair concerns or vehicle performance concerns as on Ford and Lincoln Mercury cars and Ford and Lincoln Mercury light trucks which are within the terms of any applicable written new vehicle warranty are eligible for review, except those involving:

- a non-Ford product
- a non-Ford dealership
- sales disputes between customer and dealer except those associated with warranty repairs or concerns with the vehicle's performance as designed
- a request for reimbursement of consequential expenses unless a service or product concern is being reviewed
- items not covered by the New Vehicle Limited Warranty (including maintenance and wear items)
- alleged personal injury/property damage claims
- cases currently in litigation
- vehicles not used primarily for family, personal or household purposes (except in states where the Dispute Settlement Board is required to review commercial vehicles)
- vehicles with non-U.S. warranties

Concerns are ineligible for review if the New Vehicle Limited Warranty has expired at receipt of your application and, in certain states eligibility is dependent upon the customer's possession of the vehicle.

Eligibility may differ according to state law. For example, see the unique brochures for California, West Virginia, Georgia and Wisconsin purchasers/lessees.

Board membership

The Board consists of:

- Three consumer representatives

- A Ford or Lincoln Mercury dealership representative

Consumer candidates for Board membership are recruited and trained by an independent consulting firm. The dealership Board member is chosen from Ford and Lincoln Mercury dealership management, recognized for their business leadership qualities.

What the Board needs

To have your case reviewed you must complete the application in the DSB brochure and mail it to the address provided on the application form. Some states will require you to use certified mail, with return receipt requested.

Your application is reviewed and, if it is determined to be eligible, you will receive an acknowledgment indicating:

- The file number assigned to your application.
- The toll-free phone number of the DSB's independent administrator.

Your dealership and a Ford Motor Company representative will then be asked to submit statements.

To properly review your case, the Board needs the following information:

- Legible copies of all documents and maintenance or repair orders relevant to the case.
- The year, make, model, and Vehicle Identification Number (VIN) listed on your vehicle ownership license.
- The date of repair(s) and mileage at the time of occurrence(s).
- The current mileage.
- The name of the dealer(s) who sold or serviced the vehicle.
- A brief description of your unresolved concern.
- A brief summary of the action taken by the dealer(s) and Ford Motor Company.
- The names (if known) of all the people you contacted at the dealership(s).
- A description of the action you expect to resolve your concern.

You will receive a letter of explanation if your application does not qualify for Board review.

Oral presentations

If you would like to make an oral presentation, indicate YES to question 6 on the application. While it is your right to make an oral presentation

before the Board, this is not a requirement and the Board will decide the case whether or not an oral presentation is made. An oral presentation may be requested by the Board as well.

Making a decision

Board members review all available information related to each complaint, including oral presentations, and arrive at a fair and impartial decision. Board review may be terminated at any time by either party.

Every effort is made to decide the case within 40 days of the date that all requested information is received by the Board. Since the Board generally meets once a month, it may take longer for the Board to consider some cases.

After a case is reviewed, the Board mails you a decision letter and a form on which to accept or reject the Board's decision. The decisions of the Board are binding on Ford (and, in some cases, on the dealer) but not on consumers who are free to pursue other remedies available to them under state or federal law.

To request a DSB Brochure/Application

For a brochure/application, speak to your dealer or write/call to the Board at the following address/phone number:

Dispute Settlement Board
P.O. Box 5120
Southfield, MI 48086–5120
1–800–428–3718

You may also contact the North American Customer Relationship Center at 1-800-392-3673 (Ford), TDD for the hearing impaired: 1-800-232-5952 or by writing to the Center at the following address:

Ford Motor Company
Customer Relationship Center
16800 Executive Plaza Drive
P.O. Box 6248
Dearborn, Michigan 48121

UTILIZING THE MEDIATION/ARBITRATION PROGRAM (CANADA ONLY)

In those cases where you continue to feel that the efforts by Ford and the 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; the arbitrator's award is binding both to you and Ford of Canada.

CAMVAP services are available in all territories and provinces. For more information, without charge or obligation, call your CAMVAP Provincial Administrator directly at 1-800-207-0685.

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.

If you cannot find unleaded fuel or can only get fuel with an anti-knock index lower than is recommended for your vehicle, contact a district or owner relations/customer relationship office.

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/Ford of Canada is not responsible for any damage caused by use of improper fuel.

In the United States, using leaded fuel may also result in difficulty importing your vehicle back into the U.S.

If your vehicle must be serviced while you are traveling or living in Central or South America, the Caribbean, or the Middle East, contact the nearest Ford dealership. If the dealership cannot help you, write or call:

FORD MOTOR COMPANY
WORLDWIDE DIRECT MARKET OPERATIONS
1555 Fairlane Drive
Fairlane Business Park #3
Allen Park, Michigan 48101
U.S.A.
Telephone: (313) 594-4857
FAX: (313) 390-0804

If you are in another foreign country, contact the nearest Ford dealership. If the dealership employees cannot help you, they can direct you to the nearest Ford affiliate office.

If you buy your vehicle in North America and then relocate outside of the U.S. or Canada, register your vehicle identification number (VIN) and new address with Ford Motor Company Worldwide Direct Market Operations.

ORDERING ADDITIONAL OWNER'S LITERATURE

To order the publications in this portfolio, contact Helm, Incorporated at:

HELM, INCORPORATED
P.O. Box 07150
Detroit, Michigan 48207

Or call:

For a free publication catalog, order 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.

(Items in this catalog may be purchased by credit card, check or money order.)

Obtaining a French owner's guide

French Owner's Guides can be obtained from your dealer or by writing to Ford Motor Company of Canada, Limited, Service Publications, P.O. Box 1580, Station B, Mississauga, Ontario L4Y 4G3.

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 29,000 km (18,000 miles), whichever occurs first:

1. Two or more repair attempts are made on the same nonconformity likely to cause death or serious bodily injury OR

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

REPORTING SAFETY DEFECTS (U.S. 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 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.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1–800–424–9393 (or 366–0123 in the Washington D.C. area) or write to:

NHTSA
U.S. Department of Transportation
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from the Hotline.

Cleaning

WASHING THE EXTERIOR

Wash your vehicle regularly with cool or lukewarm water and a neutral Ph shampoo, such as Motorcraft Detail Wash (ZC-3–A), which is available from your dealer.

- Never use strong household detergents or soap, such as dish washing or laundry liquid. These products can discolor and spot painted surfaces.
- Never wash a vehicle that is “hot to the touch” or during exposure to strong, direct sunlight.
- Always use a clean sponge or carwash mitt with plenty of water for best results.
- Dry the vehicle with a chamois or soft terry cloth towel in order to eliminate water spotting.
- It is especially important to wash the vehicle regularly during the winter months, as dirt and road salt are difficult to remove and cause damage to the vehicle.
- Immediately remove items such as gasoline, diesel fuel, bird droppings and insect deposits because they can cause damage to the vehicle’s paintwork and trim over time.
- Remove any exterior accessories, such as antennas, before entering a car wash.
- **Suntan lotions and insect repellents can damage any painted surface; if these substances come in contact with your vehicle, wash off as soon as possible.**
- **If your vehicle is equipped with running boards, do not use rubber, plastic and vinyl protectant products on the running board surface, as the area may become slippery.**

WAXING

Applying a polymer paint sealant to your vehicle every six months will assist in reducing minor scratches and paint damage.

- Wash the vehicle first.
- Do not use waxes that contain abrasives.
- Do not allow paint sealant to come in contact with any non-body (low-gloss black) colored trim, such as grained door handles, roof racks, bumpers, side moldings, mirror housings or the windshield cowl area. The paint sealant will “gray” or stain the parts over time.

PAINT CHIPS

Your dealer has touch-up paint and sprays to match your vehicle's color. Take your color code (printed on a sticker in the driver's door jam) to your dealer to ensure you get the correct color.

- Remove particles such as bird droppings, tree sap, insect deposits, tar spots, road salt and industrial fallout before repairing paint chips.
- Always read the instructions before using the products.

ALUMINUM WHEELS AND COVERS

Aluminum wheel rims or covers are coated with a clearcoat paint finish. In order to maintain their shine:

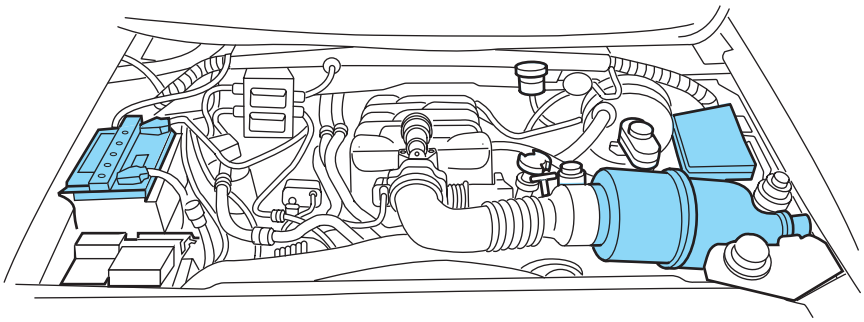
- Clean with Motorcraft Wheel and Tire Cleaner (ZC-37–A), which is available from your dealer.
- Never apply any cleaning chemical to hot or warm wheel rims or covers.
- Some automatic car washes may cause damage to the finish on your wheel rims or covers. Chemical-strength cleaners, or cleaning chemicals, in combination with brush agitation to remove brake dust and dirt, could wear away the clearcoat finish over time.
- Do not use hydrofluoric acid-based or high caustic-based wheel cleaners, steel wool, fuels or strong household detergent.
- To remove tar and grease, use Ford Extra Strength Tar and Road Oil Removal (B7A-19520–AA), available from your dealer.

ENGINE

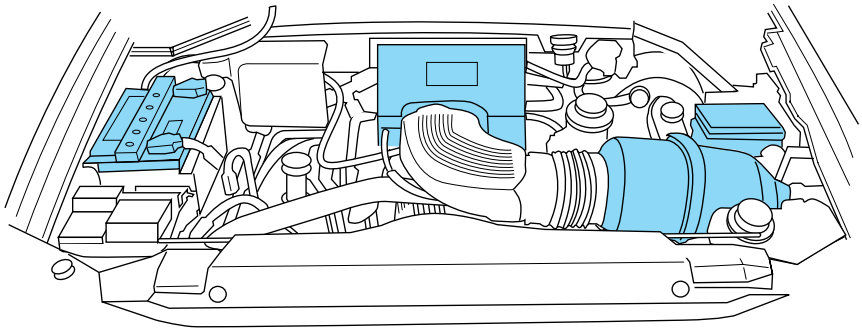
Engines are more efficient when they are clean because grease and dirt buildup keep the engine warmer than normal. When washing:

- 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 (ZC-20) on all parts that require cleaning and pressure rinse clean.
- Cover the highlighted areas to prevent water damage when cleaning the engine.

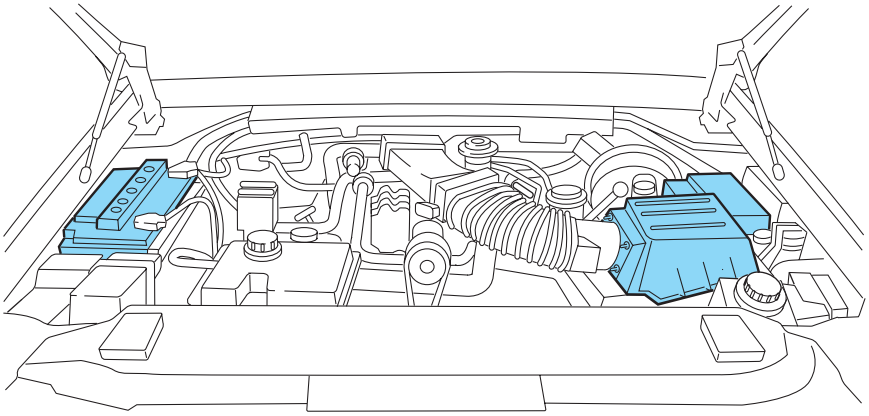
Cleaning



- **4.2L V6 engine**



- **4.6L V8 and 5.4L V8 engine**



- **5.4L Supercharged V8 engine**
- Never wash or rinse the engine while it is running; water in the running engine may cause internal damage.

PLASTIC (NON-PAINTED) EXTERIOR PARTS

Use only approved products to clean plastic parts. These products are available from your dealer.

- For routine cleaning, use Motorcraft Detail Wash (ZC-3–A).
- If tar or grease spots are present, use Ford Extra Strength Tar and Road Oil Removal (B7A-19520–AA).

WINDOWS AND WIPER BLADES

The windshield, rear window and wiper blades should be cleaned regularly. If the wiper does not wipe properly, substances on the windshield, rear window or the wiper blades may be the cause. These may include hot wax treatments used by commercial car washes, tree sap, or other organic contamination. To clean these items, please follow these tips:

- The windshield or rear window may be cleaned with a non-abrasive cleaner such as Motorcraft Ultra Clear Spray Glass Cleaner (ZC-23), available from your dealer.
- Do not use abrasives, as they may cause scratches.
- Do not use fuel, kerosene, or paint thinner to clean any parts.
- Wiper blades can be cleaned with isopropyl (rubbing) alcohol or windshield washer solution. Be sure to replace wiper blades when they appear worn or do not function properly.

Cleaning

INSTRUMENT PANEL AND CLUSTER LENS

Clean the instrument panel with a damp cloth, then dry with a dry cloth.

- Avoid cleaners or polish that increase the gloss of the upper portion of the instrument panel. The dull finish in this area helps protect the driver from undesirable windshield reflection.

Do not use chemical solvents or strong detergents when cleaning the steering wheel or instrument panel to avoid contamination of the air bag system.

- Be certain to wash or wipe your hands clean if you have been in contact with certain products such as insect repellent and suntan lotion in order to avoid possible damage to the painted surfaces.

INTERIOR TRIM

- Clean the interior trim areas with a damp cloth, then dry by wiping with a dry, soft, clean cloth.
- Do not use household or glass cleaners as these may damage the finish.

INTERIOR

For fabric, carpets, cloth seats and safety belts:

- Remove dust and loose dirt with a vacuum cleaner.
- Remove light stains and soil with Ford Extra Strength Upholstery Cleaner (E8AZ-19523–AA).
- If grease or tar is present on the material, spot-clean the area first with Motorcraft Spot and Stain Remover (ZC-14).
- Never saturate the seat covers with cleaning solution.
- 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.

Do not use cleaning solvents, bleach or dye on the vehicle's seatbelts, as these actions may weaken the belt webbing.

LEATHER SEATS (IF EQUIPPED, EXCEPT FOR THE KING RANCH SUPERCREW)

Your leather seating surfaces have a clear, protective coating over the leather.

For King Ranch F-150 SuperCrew leather seats, refer to separate section in this chapter.

- To clean, use a soft cloth with Motorcraft Deluxe Leather and Vinyl Cleaner (ZC-11–A). Dry the area with a soft cloth.
- To help maintain its resiliency and color, use the Motorcraft Deluxe Leather Care Kit (ZC-11–D), available from your authorized dealer.
- Do not use household cleaning products, alcohol solutions, solvents or cleaners intended for rubber, vinyl and plastics, or oil/petroleum-based leather conditioners. These products may cause premature wearing of the clear, protective coating.

LEATHER SEATS FOR THE KING RANCH F-150 SUPERCREW ONLY (IF EQUIPPED)

Your vehicle is equipped with seating covered in premium, top-grain leather which is extremely durable, but still requires special care and maintenance in order to ensure longevity and comfort.

Regular cleaning and conditioning will maintain the appearance of the leather. Failure to care for the leather can result in drying out and fading of the material.

CLEANING

For dirt, use a vacuum cleaner then use a clean, damp cloth or soft brush.

For spills, first use a dry cloth then wipe with a damp cloth. Allow the area to dry, then apply conditioner.

STAINS

For stains, use Motorcraft Deluxe Leather and Vinyl Cleaner (ZC-11–A) or the Motorcraft Deluxe Leather and Vinyl Cleaner Kit (ZC-11–D) and a dry, soft cloth.

- Clean spills as quickly as possible.
- Test any stain remover on an inconspicuous part of the leather as cleaners may darken the leather.
- Coffee, ketchup, mustard, orange juice and oil-based product stains are especially difficult to remove and will stay in the leather for life.
- Do not use household cleaning products, alcohol solutions, solvents or cleaners intended for rubber, vinyl or plastics.

SCRATCHES

In order to lessen the appearance of certain scratches and other wear marks, apply conditioner on the affected area following the same instructions as in the *Conditioning* section.

Cleaning

CONDITIONING

Bottles of King Ranch F-150 Leather Conditioner are available at the King Ranch Saddle Shop. Visit the Web site at *www.krsaddleshop.com*, or telephone (in the United States) 1–800–282–KING (5464). If you are unable to obtain King Ranch F-150 Leather Conditioner, use another premium leather conditioner.

- Apply your first conditioning treatment within six months of taking delivery of your vehicle. Condition twice yearly in order to replenish lost oils and revitalize the aroma, suppleness and resilience of the leather.
- Clean the surfaces using the steps outlined in the *Cleaning* section.
- Ensure the leather is dry then apply a nickel-sized amount of conditioner to a clean, dry cloth
- Rub the conditioner into leather until it disappears. Allow the conditioner to dry and repeat the process for the entire interior. If a film appears, wipe off film with a dry, clean cloth.

UNDERBODY

Flush the complete underside of your vehicle frequently. Keep body and door drain holes free from packed dirt.

TONNEAU COVER (IF EQUIPPED)

Wash with Motorcraft Triple Clean (ZC-13), which is available from your dealer.

- Do not use any silicone based cleaner or conditioner.
- Do not use stiff bristle brushes or abrasive materials or cleaners.
- Hot waxes applied by commercial car washes can affect the cleanability of vinyl material.
- Using high water pressure or wand-type car washes against the vinyl cover and tonneau frame rails may cause water leaks and possible seal damage.

FORD, LINCOLN AND MERCURY CAR CARE PRODUCTS

Your Ford, Lincoln or Mercury dealer has many quality products available to clean your vehicle and protect its finishes. These quality products have been specifically engineered to fulfill your automotive needs; they are custom designed to complement the style and appearance of your vehicle. Each product is made from high quality materials that meet or exceed rigid specifications. For best results, use the following products or products of equivalent quality:

Motorcraft Custom Clearcoat Polish (ZC–8–A)

Ford Custom Vinyl Protectant* (not available in Canada) (F2AZ—19530–A)

Motorcraft Vinyl Cleaner (Canada only) (CXC-93)

Motorcraft Vinyl Conditioner (Canada only) (CXC-94)

Motorcraft Deluxe Leather and Vinyl Cleaner (not available in Canada) (ZC-11–A)

Ford Extra Strength Tar and Road Oil Remover* (not available in Canada) (B7A-19520–AA)

Ford Extra Strength Upholstery Cleaner (not available in Canada) (E8AZ-19523–AA)

Motorcraft Custom Bright Metal Cleaner (ZC-15)

Motorcraft Wheel and Tire Cleaner (ZC-37–A)

Motorcraft Dash and Vinyl Cleaner (ZC-38–A)

Motorcraft Car Care Kit (ZC-26)

Ford Premium Car Wash Concentrate (F2SZ-19523–WC)

Motorcraft Carlite Glass Cleaner (Canada only) (CXC-100)

Motorcraft Spot and Stain Remover (ZC-14)

Motorcraft Detail Wash (ZC-3–A)

Motorcraft Tire Detailer (ZC-28)

Motorcraft Triple Clean (ZC-13)

Motorcraft Ultra-Clear Spray Glass Cleaner (not available in Canada) (ZC-23)

Motorcraft Engine Shampoo and Degreaser (ZC-20)

* May be sold with the Motorcraft name

SERVICE RECOMMENDATIONS

To help you service your vehicle:

- We highlight do-it-yourself items in the engine compartment for easy location.
- We provide a scheduled maintenance guide which makes tracking routine service easy.

If your vehicle requires professional service, your dealership can provide the necessary parts and service. Check your *Warranty Guide/Owner Information Guide* 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 WHEN SERVICING YOUR VEHICLE

Be especially careful when inspecting or servicing your vehicle.

- Do not work on a hot engine.
- When the engine is running, keep loose clothing, jewelry or long hair away from 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 lit cigarettes, open flames and other lit material away from the battery and all fuel related parts.

If you disconnect the battery, the engine must “relearn” its idle conditions before your vehicle will drive properly, as explained in the *Battery* section in this chapter.

Working with the engine off

- Automatic transmission:

1. Set the parking brake and ensure the gearshift is securely latched in P (Park).
2. Turn off the engine and remove the key.
3. Block the wheels to prevent the vehicle from moving unexpectedly.

- Manual transmission:

1. Set the parking brake.
2. Depress the clutch and place the gearshift in 1 (First).
3. Turn off the engine and remove the key.

4. Block the wheels to prevent the vehicle from moving unexpectedly.

Working with the engine on

- Automatic transmission:

1. Set the parking brake and ensure the gearshift is securely latched in P (Park).

2. Block the wheels to prevent the vehicle from moving unexpectedly.

Note: Do not start your engine with the air cleaner removed and do not remove it while the engine is running.

- Manual transmission:

1. Set the parking brake, depress the clutch and place the gearshift in neutral.

2. Block the wheels to prevent the vehicle from moving unexpectedly.

Note: Do not start your engine with the air cleaner removed and do not remove it while the engine is running.

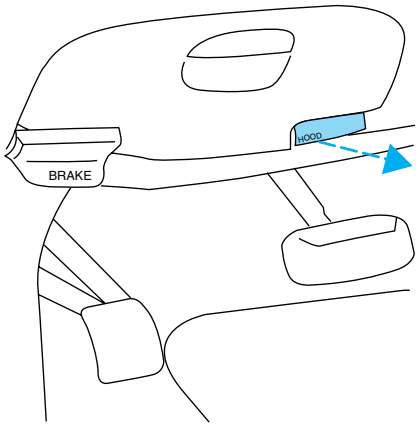
The cooling fan is automatic and may come on at any time. Always disconnect the negative terminal of the battery before working near the fan.

OPENING THE HOOD

1. Inside the vehicle, pull the hood release handle located under the bottom of the instrument panel.

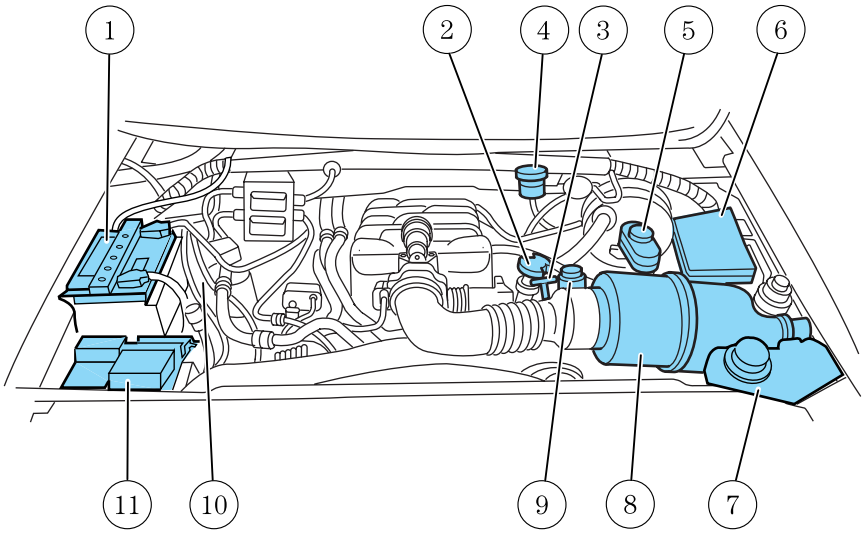
2. Go to the front of the vehicle and release the auxiliary latch that is located under the front center of the hood.

3. Lift the hood until the lift cylinders hold it open.



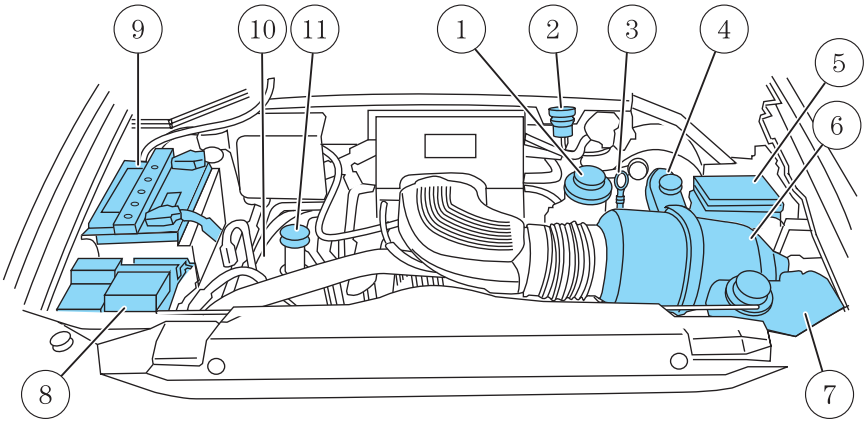
IDENTIFYING COMPONENTS IN THE ENGINE COMPARTMENT

4.2L V6 engine



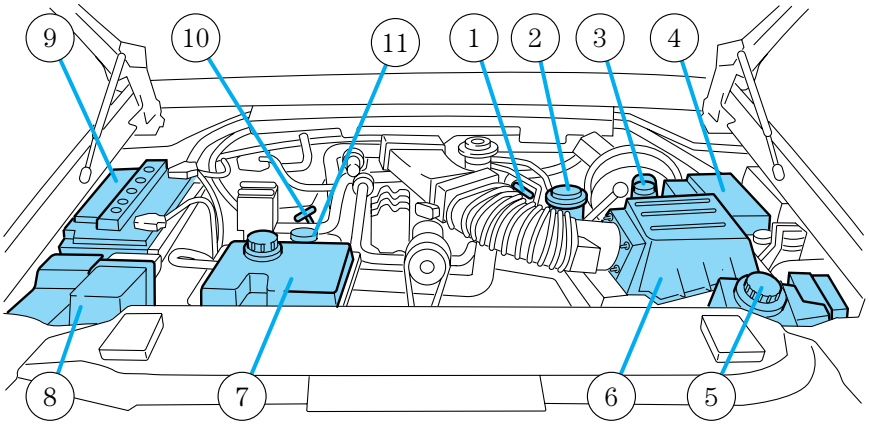
1. Battery
2. Engine oil filler cap
3. Engine oil dipstick
4. Clutch fluid reservoir (manual transmission)
5. Brake fluid reservoir
6. Power distribution box
7. Engine coolant reservoir
8. Air filter assembly
9. Power steering fluid reservoir
10. Transmission fluid dipstick (automatic transmission)
11. Windshield washer fluid reservoir

4.6L V8/5.4L V8 engines



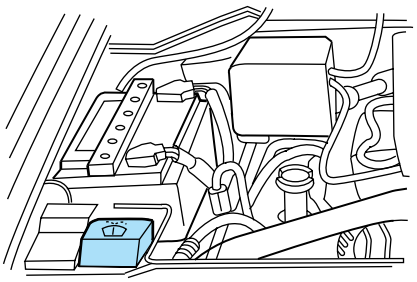
1. Power steering fluid reservoir
2. Clutch fluid reservoir (manual transmission)
3. Engine oil dipstick
4. Brake fluid reservoir
5. Power distribution box
6. Air filter assembly
7. Engine coolant reservoir
8. Windshield washer fluid reservoir
9. Battery
10. Transmission fluid dipstick (automatic transmission)
11. Engine oil filler cap

5.4L Supercharged V8 engine



1. Engine oil dipstick
2. Power steering fluid reservoir
3. Brake fluid reservoir
4. Power distribution box
5. Engine coolant reservoir
6. Air filter assembly
7. Intercooler coolant reservoir
8. Windshield washer fluid reservoir
9. Battery
10. Transmission fluid dipstick
11. Engine oil filler cap

WINDSHIELD WASHER FLUID



Check the washer fluid whenever you stop for fuel. The reservoir is highlighted with a symbol.

Add fluid to fill the reservoir if the level is low. In very cold weather, do not fill the reservoir completely.

Only use a washer fluid that meets Ford specification ESR-M17P5–A . Refer to *Lubricant specifications* in this chapter.

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.

If you operate your vehicle in temperatures below 4.5° C (40° F), 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: Do not put washer fluid in the engine coolant reservoir. Washer fluid placed in the cooling system may harm engine and cooling system components.

ENGINE OIL

Checking the engine oil

Refer to the scheduled maintenance guide for the appropriate intervals for checking the engine oil.

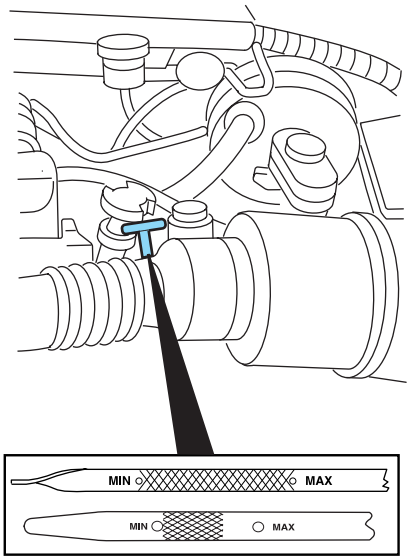
1. Make sure the vehicle is on level ground.

2. Turn the engine off and wait a few minutes for the oil to drain into the oil pan.

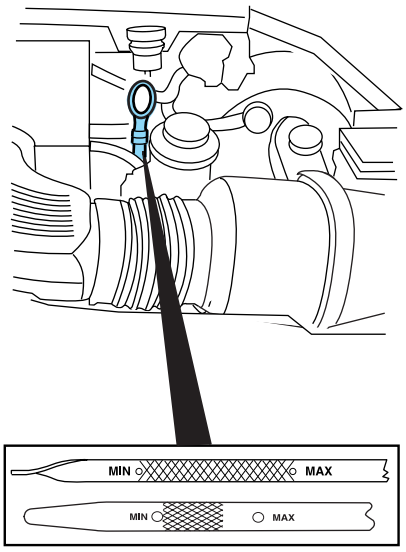
3. Set the parking brake and ensure the gearshift is securely latched in P (Park) (automatic transmission) or 1 (First) (manual transmission).

4. Open the hood. Protect yourself from engine heat.

- 4.2L engine



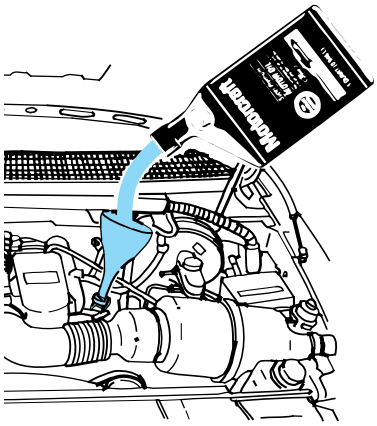
- 4.6L/5.4L engine



5. Locate and carefully remove the engine oil level indicator (dipstick).

6. Wipe the indicator clean. Insert the indicator fully, then remove it again.

- If the oil level is **between the MIN and MAX marks,** the oil level is acceptable. **DO NOT ADD OIL.**
- If the oil level is below the MIN mark, add enough oil to raise the level within the MIN-MAX range.



- Oil levels above the MAX mark may cause engine damage. Some oil must be removed from the engine by a service technician.

7. Put the indicator back in and ensure it is fully seated.

Adding engine oil

1. Check the engine oil. For instructions, refer to *Checking the engine oil* in this chapter.

2. If the engine oil level is not within the normal range, add only certified engine oil of the recommended viscosity. Remove the engine oil filler cap and use a funnel to pour the engine oil into the opening.

3. Recheck the engine oil level. Make sure the oil level is not above the MAX mark on the engine oil level indicator (dipstick).

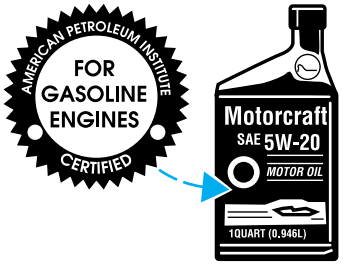
4. Install the indicator and ensure it is fully seated.

5. Fully install the engine oil filler cap by turning the filler cap clockwise 1/4 of a turn until three clicks are heard or until the cap is fully seated.

To avoid possible oil loss, DO NOT operate the vehicle with the engine oil level indicator and/or the engine oil filler cap removed.

Engine oil and filter recommendations

Look for this certification trademark.



SAE 5W-20 engine oil is recommended.

Only use oils "Certified For Gasoline Engines" by the American Petroleum Institute (API). Use Motorcraft or an equivalent oil meeting Ford specification WSS-M2C153–H. **SAE 5W-20 oil provides optimum fuel economy and durability performance meeting all requirements for your vehicle's engine**.

Do not use supplemental engine oil additives, oil treatments or engine treatments. They are unnecessary and could, under certain conditions, lead to engine damage which is not covered by your warranty.

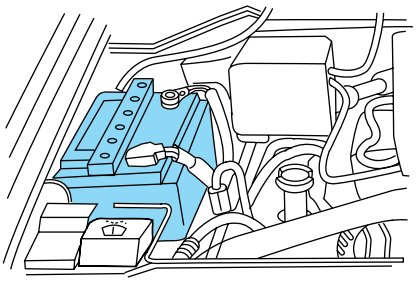
Change your engine oil and filter according to the appropriate schedule listed in the scheduled maintenance guide.

Ford production and aftermarket (Motorcraft) oil filters are designed for added engine protection and long life. If a replacement oil filter is used that does not meet Ford material and design specifications, start-up engine noises or knock may be experienced.

It is recommended you use the appropriate Motorcraft oil filter (or another brand meeting Ford specifications) for your engine application.

BATTERY

Your vehicle is equipped with a Motorcraft maintenance-free battery which normally does not require additional water during its life of service.



However, for severe usage or in high temperature climates, check the battery electrolyte level. Refer to the scheduled maintenance guide for the service interval schedules.

Keep the electrolyte level in each cell up to the "level indicator". Do not overfill the battery cells.

If the electrolyte level in the battery is low, you can add plain tap water to the battery, as long as you do not use hard water (water with a high mineral or alkali content). If possible, however, try to only fill the battery cells with distilled water. If the battery needs water often, have the charging system checked.

If your battery has a cover/shield, make sure it is reinstalled after the battery has been cleaned or replaced.

For longer, trouble-free operation, keep the top of the battery clean and dry. Also, make certain the battery cables are always tightly fastened to the battery terminals.

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.

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 proper 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/or damage to the vehicle or battery. Lift the battery with a battery carrier or with your hands on opposite corners.

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.**

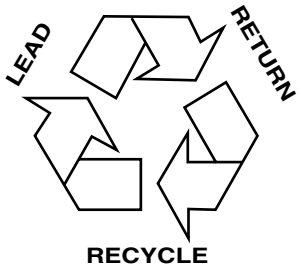
Because your vehicle's engine is also electronically controlled by a computer, some control conditions are maintained by power from the battery. When the battery is disconnected or a new battery is installed, the engine must relearn its idle and fuel trim strategy for optimum driveability and performance. To begin this process:

1. With the vehicle at a complete stop, set the parking brake.
2. Put the gearshift in P (Park) (automatic transmission) or the neutral position (manual transmission), turn off all accessories and start the engine.
3. Run the engine until it reaches normal operating temperature.
4. Allow the engine to idle for at least one minute.
5. Turn the A/C on and allow the engine to idle for at least one minute.
6. Drive the vehicle to complete the relearning process.

- The vehicle may need to be driven 16 km (10 miles) or more to relearn the idle and fuel trim strategy.
- **If you do not allow the engine to relearn its idle trim, the idle quality of your vehicle may be adversely affected until the idle trim is eventually relearned.**

If the battery has been disconnected or a new battery has been installed, the clock and the preset radio stations must be reset once the battery is reconnected.

- Always dispose of automotive batteries in a responsible manner. Follow your local authorized standards for disposal. Call your local authorized recycling center to find out more about recycling automotive batteries.



ENGINE COOLANT

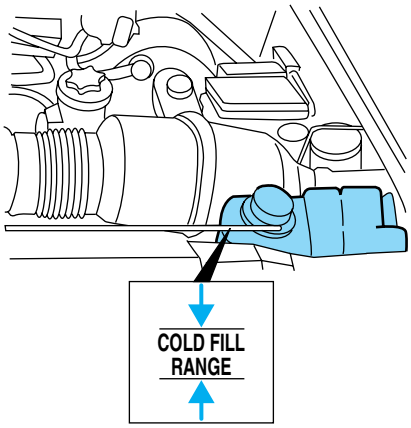
Checking engine coolant

The concentration and level of engine coolant should be checked at the mileage intervals listed in the scheduled maintenance guide. The coolant concentration should be maintained at 50/50 coolant and distilled water, which equates to a freeze point of -36° C (-34° F). Coolant concentration testing is possible with a hydrometer or antifreeze tester (such as the Rotunda Battery and Antifreeze Tester, 014–R1060). The level of coolant should be maintained at the “cold full” of “cold fill range” level in the coolant reservoir. If the level falls below, add coolant per the instructions in the *Adding engine coolant* section.

Your vehicle was factory-filled with a 50/50 engine coolant and water concentration. If the concentration of coolant falls below 40% or above 60%, the engine parts could become damaged or not work properly. **A 50–50 mixture of coolant and water provides the following:**

- **Freeze protection down to -36° C (-34° F).**
- **Boiling protection up to 129° C (265° F).**
- **Protection against rust and other forms of corrosion.**
- **Enables calibrated gauges to work properly.**

When the engine is cold, check the level of the engine coolant in the reservoir.



- The engine coolant should be at the “cold fill level” or within the “cold fill range” as listed on the engine coolant reservoir (depending upon application).
- Refer to the Scheduled Maintenance Guide for service interval schedules.
- Be sure to read and understand *Precautions when servicing your vehicle* in this chapter.

If the engine coolant has not been checked at the recommended interval, the engine coolant reservoir may become low or empty. If the reservoir is low or empty, add engine coolant to the reservoir. Refer to *Adding engine coolant* in this chapter.

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

When adding coolant, make sure it is a 50/50 mixture of engine coolant and distilled water. Add the mixture to the coolant reservoir, **when the engine is cool**, until the appropriate fill level is obtained.

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, you can be burned if you spill coolant on hot engine parts.

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.

The cooling system in your vehicle is filled with either green-colored Motorcraft Premium Engine Coolant meeting Ford specification ESE-M97B44–A or yellow-colored Motorcraft Premium Gold Engine Coolant meeting Ford Specification WSS-M97B51–A1. To determine your vehicle's coolant type (color), check your coolant reservoir.

- **Add Motorcraft Premium Engine Coolant (green-colored), VC-4–A (U.S.) or CXC-10 (Canada) or Motorcraft Premium Gold Engine Coolant (yellow-colored), VC-7–A (VC-7–B in Oregon), depending on the type of coolant originally equipped in your vehicle.** If you are unsure which type of coolant your vehicle requires, check your coolant reservoir or contact your local dealer.

Note: Use of Motorcraft Cooling System Stop Leak Pellets, VC-6, darkens the color of Motorcraft Premium Gold Engine Coolant from yellow to golden tan.

- **Do not add/mix an orange-colored, extended life coolant such as Motorcraft Speciality Orange Engine Coolant, VC-2 (US) or CXC-209 (Canada), meeting Ford specification WSS-M97B44–D with the factory-filled coolant.** Mixing Motorcraft Speciality Orange Engine Coolant or any orange-colored extended life product with your factory filled coolant can result in degraded corrosion protection.
- A large amount of water without engine coolant may be added, in case of emergency, to reach a vehicle service location. In this instance, the cooling system must be drained and refilled with a 50/50 mixture of engine coolant and distilled water as soon as possible. Water alone (without engine coolant) can cause engine damage from corrosion, overheating or freezing.
- **Do not use alcohol, methanol, brine or any engine coolants mixed with alcohol or methanol antifreeze (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.
- **Do not mix with recycled coolant unless from a Ford-approved recycling process (see** *Use of Recycled engine coolant* **section).**

For vehicles with overflow coolant systems with a non-pressurized cap on the coolant recovery system, add coolant to the coolant recovery reservoir when the engine is cool. Add the proper mixture of coolant and water to the “cold full” level. For all other vehicles, which have a coolant degas system with a pressurized cap, or if it is necessary to remove the coolant pressure relief cap on the radiator of a vehicle with an overflow system, follow these steps to add engine coolant.


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 the cap is loosened slightly.

1. Before you begin, turn the engine off and let it cool.

2. When the engine is cool, wrap a thick cloth around the coolant pressure relief cap on the coolant reservoir (an opaque plastic bottle). Slowly turn cap counterclockwise (left) until pressure begins to release.

3. Step back while the pressure releases.

4. When you are sure that all the pressure has been released, use the cloth to turn it counterclockwise and remove the cap.

5. Fill the coolant reservoir slowly with the proper coolant mixture (see above), to within the “cold fill range” or the “cold full” level on the reservoir. If you removed the radiator cap in an overflow system, fill the radiator until the coolant is visible and radiator is almost full.

6. Replace the cap. Turn until tightly installed. (Cap must be tightly installed to prevent coolant loss.)

After any coolant has been added, check the coolant concentration, refer to *Checking Engine Coolant* section. If the concentration is not 50/50 (protection to –34° F/–36° C), drain some coolant and adjust the concentration. It may take several drains and additions to obtain a 50/50 coolant concentration.

Whenever coolant has been added, the coolant level in the coolant reservoir should be checked the next few times you drive the vehicle. If necessary, add enough 50/50 concentration of engine coolant and distilled water to bring the liquid level to the proper level.

If you have to add more than 1.0 liter (1.0 quart) of engine coolant per month, have your dealer check the engine cooling system. Your cooling system may have a leak. Operating an engine with a low level of coolant can result in engine overheating and possible engine damage.

Recycled engine coolant

Ford Motor Company recommends the use of a recycled engine coolant produced by Ford-approved processes in vehicles originally equipped with Motorcraft Premium Engine Coolant (green-colored). However, not all coolant recycling processes produce coolant that meets Ford specification ESE-M97B44–A. Use of such coolant may harm the engine and cooling system components.

Ford Motor Company does NOT recommend the use of recycled engine coolant in vehicles originally equipped with Motorcraft Premium Gold Engine Coolant since a Ford-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.

Coolant refill capacity

To find out how much fluid your vehicle's cooling system can hold, refer to *Refill capacities* in this chapter.

Fill your engine coolant reservoir as outlined in *Adding engine coolant* in this chapter.

Severe climates

If you drive in extremely cold climates (less than –36° C [–34° F]):

- **It may be necessary to increase the coolant concentration above 50%.**
- **NEVER increase the coolant concentration above 60%.**
- **Increased engine coolant concentrations above 60% will decrease the overheat protection characteristics of the engine coolant and may cause engine damage.**
- **Refer to the chart on the coolant container to ensure the coolant concentration in your vehicle will provide adequate freeze protection at the temperatures in which you drive in the winter months.**

If you drive in extremely hot climates:

- **It is still necessary to maintain the coolant concentration above 40%.**
- **NEVER decrease the coolant concentration below 40%.**

- **Decreased engine coolant concentrations below 40% will decrease the corrosion protection characteristics of the engine coolant and may cause engine damage.**
- **Decreased engine coolant concentrations below 40% will decrease the freeze protection characteristics of the engine coolant and may cause engine damage.**
- **Refer to the chart on the coolant container to ensure the coolant concentration in your vehicle will provide adequate protection at the temperatures in which you drive.**

Vehicles driven year-round in non-extreme climates should use a 50/50 mixture of engine coolant and distilled water for optimum cooling system and engine protection.

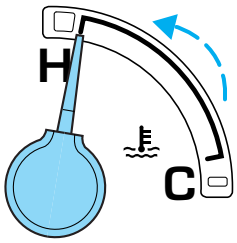
What you should know about fail-safe cooling (if equipped)

If the engine coolant supply is depleted, this feature allows the vehicle to be driven temporarily before incremental component damage is incurred. 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.
- The and the symbol will illuminate.
- The "Service Engine Soon" indicator light will illuminate.



If the engine reaches a preset over-temperature condition, the engine will automatically switch to alternating cylinder operation. Each disabled cylinder acts as an air pump and cools the engine.

When this occurs the vehicle will still operate. However:

- The engine power will be limited.
- The air conditioning system will be disabled.

Continued operation will increase the engine temperature:

- The engine will completely shut down.
- Steering and braking effort will increase.

Once the engine temperature cools, the engine can be re-started. Take your vehicle to a service facility as soon as possible to minimize engine damage.

When fail-safe mode is activated

You have limited engine power when in the fail-safe mode, so drive the vehicle with caution. The vehicle will not be able to maintain high speed operation and the engine will run rough. Remember that the engine is capable of completely shutting down automatically to prevent engine damage, therefore:

1. Pull off the road as soon as safely possible and turn off the engine.
2. Arrange for the vehicle to be taken to a service facility.
3. If this is not possible, wait a short period for the engine to cool.
4. Check the coolant level and replenish if low.

Never remove the coolant reservoir cap while the engine is running or hot.

5. Restart the engine and take your vehicle to a service facility.

Driving the vehicle without repairing the engine problem increases the chance of engine damage. Take your vehicle to a service facility as soon as possible.

WHAT YOU SHOULD KNOW ABOUT AUTOMOTIVE FUELS

Important safety precautions

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 the fuel filler cap is venting vapor or if you hear a hissing sound, wait until it stops before completely removing the fuel filler cap. Otherwise, fuel may spray out and injure you or others.

If you do not use the proper fuel filler cap, excessive pressure or vacuum in the fuel tank may damage the fuel system or cause the fuel cap to disengage in a collision, which may result in possible personal injury.

Automotive fuels can cause serious injury or death if misused or mishandled.

Gasoline may contain benzene, which is a cancer-causing agent.

Observe the following guidelines when handling automotive fuel:



- Extinguish all smoking materials and any open flames before fueling your vehicle.
- Always turn off the vehicle before fueling.
- 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.
- Fuels can also be harmful if absorbed through the skin. If fuel is splashed on the skin and/or clothing, 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.

When refueling always shut the engine off and never allow sparks or open flames near the filler neck. Never smoke while refueling. Fuel vapor is extremely hazardous under certain conditions. Care should be taken to avoid inhaling excess fumes.

The flow of fuel through a fuel pump nozzle can produce static electricity, which can cause a fire if fuel is pumped into an ungrounded fuel container.

Use the following guidelines to avoid static build-up 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.

Fuel Filler Cap

Your fuel tank filler cap has an indexed design with a 1/8 turn on/off feature.

When fueling your vehicle:

1. Turn the engine off.
2. Carefully turn the filler cap counterclockwise 1/8 of a turn until it stops.
3. Pull to remove the cap from the fuel filler pipe.
4. To install the cap, align the tabs on the cap with the notches on the filler pipe.
5. Turn the filler cap clockwise 1/8 of a turn until it stops.

If the “Check Fuel Cap” indicator comes on or if “Service Engine Soon/Check Engine” indicator comes on and stays on when you start the engine, the fuel filler cap may not be properly installed. Turn off the engine, remove the fuel filler cap, align the cap properly and reinstall it.

If you must replace the fuel filler cap, replace it with a fuel filler cap that is designed for your vehicle. The customer warranty may

be void for any damage to the fuel tank or fuel system if the correct genuine Ford or Motorcraft fuel filler cap is not used.

The fuel system may be under pressure. If the fuel filler cap is venting vapor or if you hear a hissing sound, wait until it stops before completely removing the fuel filler cap. Otherwise, fuel may spray out and injure you or others.

If you do not use the proper fuel filler cap, excessive pressure or vacuum in the fuel tank may damage the fuel system or cause the fuel cap to disengage in a collision, which may result in possible personal injury.

Choosing the right fuel

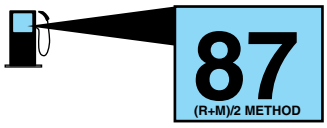
Use only UNLEADED FUEL. The use of leaded fuel is prohibited by law and could damage your vehicle.

Do not use fuel containing methanol. It can damage critical fuel system components.

Your vehicle was not designed to use fuel or fuel additives with metallic compounds, including manganese-based compounds containing MMT.

Repairs to correct the effects of using a fuel for which your vehicle was not designed may not be covered by your warranty.

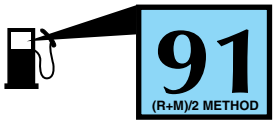
Octane recommendations



Your vehicle is designed to use "Regular" unleaded gasoline with pump (R+M)/2 octane rating of 87. We do not recommend the use of gasolines labeled as "Regular" that are sold with octane ratings of 86 or lower in high altitude areas.

Do not be concerned if your engine sometimes knocks lightly. However, if it knocks heavily under most driving conditions while you are using fuel with the recommended octane rating, see your dealer or a qualified service technician to prevent any engine damage.

Supercharged engines



Your vehicle is designed to use "Premium" unleaded gasoline with an (R+M)/2 octane rating of 91 or higher for optimum performance. The use of gasolines with lower octane ratings may degrade performance. We do not recommend the use of gasolines labeled as "Premium" in high altitude areas that are sold with octane ratings of less than 91.

If your engine knocks under any driving conditions while you are using fuel with the recommended octane rating, see your dealer or a qualified service technician to prevent any engine damage.

Fuel quality

If you are experiencing starting, rough idle or hesitation driveability problems during a cold start, try a different brand of "Regular" unleaded gasoline. "Premium" unleaded gasoline is not recommended (particularly in the United States) because it may cause these problems to become more pronounced. If the problems persist, see your dealer or a qualified service technician.

It should not be necessary to add any aftermarket products to your fuel tank if you continue to use high quality fuel of the recommended octane rating. Aftermarket products could cause damage to the fuel system. Repairs to correct the effects of using an aftermarket product in your fuel may not be covered by your warranty.



Many of the world's automakers issued the World-wide Fuel Charter that recommends gasoline specifications to provide improved performance and emission control system protection for your vehicle. Gasolines that meet the World-wide Fuel Charter should be used when available. Ask your fuel supplier about gasolines that meet the World-wide Fuel Charter. In Canada, look for fuels that display the **Auto Makers' Choice**™ logo.

Cleaner air

Ford endorses the use of reformulated "cleaner-burning" gasolines to improve air quality.

Running out of fuel

Avoid running out of fuel because this situation may have an adverse affect on powertrain components.

If you have run out of fuel:

- You may need to cycle 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.
- Your "Service Engine Soon" indicator may come on. For more information on the "Service Engine Soon" indicator, refer to the *Instrument cluster* chapter.

Fuel Filter

For fuel filter replacement, see your dealer or a qualified service technician. Refer to the scheduled maintenance guide for the appropriate intervals for changing the fuel filter.

Replace the fuel filter with an authorized Motorcraft part. The customer warranty may be void for any damage to the fuel system if an authorized Motorcraft fuel filter is not used.

ESSENTIALS OF GOOD FUEL ECONOMY

Measuring techniques

Your best source of information about actual fuel economy is you, the driver. You must gather information as accurately and consistently as possible. Fuel expense, frequency of fill-ups or fuel gauge readings are NOT accurate as a measure of fuel economy. We do not recommend taking fuel economy measurements during the first 1,600 km (1,000 miles) of driving (engine break-in period). You will get a more accurate measurement after 3,000 km–5,000 km (2,000 miles-3,000 miles).

Filling the tank

The advertised fuel capacity of the fuel tank on your vehicle is equal to the rated refill capacity of the fuel tank as listed in the *Refill capacities* section of this chapter.

The advertised capacity is the amount of the indicated capacity and the empty reserve combined. Indicated capacity is the difference in the amount of fuel in a full tank and a tank when the fuel gauge indicates empty. Empty reserve is the small amount of fuel remaining in the fuel 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. When refueling your

vehicle after the fuel gauge indicates empty, you might not be able to refuel the full amount of the advertised capacity of the fuel tank due to the empty reserve still present in the tank.

For consistent results when filling the fuel tank:

- Turn the engine/ignition switch to the off position prior to refueling, an error in the reading will result if the engine is left running.
- Use the same filling rate setting (low — medium — high) each time the tank is filled.
- Allow no more than 2 automatic click-offs when filling.
- Always use fuel with the recommended octane rating.
- Use a known quality gasoline, preferably a national brand.
- Use the same side of the same pump and have the vehicle facing the same direction each time you fill up.
- Have the vehicle loading and distribution the same every time.

Your results will be most accurate if your filling method is consistent.

Calculating fuel economy

1. Fill the fuel tank completely and record the initial odometer reading (in kilometers or miles).
2. Each time you fill the tank, record the amount of fuel added (in liters or gallons).
3. After at least three to five tank fill-ups, fill the fuel tank and record the current odometer reading.
4. Subtract your initial odometer reading from the current odometer reading.
5. Follow one of the simple calculations in order to determine fuel economy:

   Calculation 1: **Multiply liters used by 100, then divide by total kilometers traveled.**

   Calculation 2: **Divide total miles traveled by total gallons used.**

Keep a record for at least one month and record the type of driving (city or highway). This will provide an accurate estimate of the vehicle's fuel economy under current driving conditions. Additionally, keeping records during summer and winter will show how temperature impacts fuel economy. In general, lower temperatures give lower fuel economy.

Driving style — good driving and fuel economy habits

Give consideration to the lists that follow and you may be able to change a number of variables and improve your fuel economy.

Habits

- Smooth, moderate operation can yield up to 10% savings in fuel.
- Steady speeds without stopping will usually give the best fuel economy.
- Idling for long periods of time (greater than one minute) may waste fuel.
- Anticipate stopping; slowing down may eliminate the need to stop.
- Sudden or hard accelerations may reduce fuel economy.
- Slow down gradually.
- Driving at reasonable speeds (traveling at 88 km/h [55 mph] uses 15% less fuel than traveling at 105 km/h [65 mph]).
- Revving the engine before turning it off may reduce fuel economy.
- Using the air conditioner or defroster may reduce fuel economy.
- You may want to turn off the speed control in hilly terrain if unnecessary shifting between third and fourth gear occurs. Unnecessary shifting of this type could result in reduced fuel economy.
- Warming up a vehicle on cold mornings is not required and may reduce fuel economy.
- Resting your foot on the brake pedal while driving may reduce fuel economy.
- Combine errands and minimize stop-and-go driving.

Maintenance

- Keep tires properly inflated and use only recommended size.
- Operating a vehicle with the wheels out of alignment will reduce fuel economy.
- Use recommended engine oil. Refer to *Lubricant specifications* in this chapter.
- Perform all regularly scheduled maintenance items. Follow the recommended maintenance schedule and owner maintenance checks found in your vehicle scheduled maintenance guide.

Conditions

- Heavily loading a vehicle or towing a trailer may reduce fuel economy at any speed.
- Carrying unnecessary weight may reduce fuel economy (approximately 0.4 km/L [1 mpg] is lost for every 180 kg [400 lb] of weight carried).

- Adding certain accessories to your vehicle (for example bug deflectors, rollbars/light bars, running boards, ski/luggage racks) may reduce fuel economy.
- To maximize the fuel economy, drive with the tonneau cover installed (if equipped).
- Using fuel blended with alcohol may lower fuel economy.
- Fuel economy may decrease with lower temperatures during the first 12–16 km (8–10 miles) of driving.
- Driving on flat terrain offers improved fuel economy as compared to driving on hilly terrain.
- Transmissions give their best fuel economy when operated in the top cruise gear and with steady pressure on the gas pedal.
- Four-wheel-drive operation (if equipped) is less fuel efficient than two-wheel-drive operation.
- Close windows for high speed driving.

EPA window sticker

Every new vehicle should have the EPA window sticker. Contact your dealer if the window sticker is not supplied with your vehicle. The EPA window sticker should be your guide for the fuel economy comparisons with other vehicles.

It is important to note the box in the lower left corner of the window sticker. These numbers represent the Range of L/100 km (MPG) expected on the vehicle under optimum conditions. Your fuel economy may vary depending upon the method of operation and conditions.

EMISSION CONTROL SYSTEM 

Your vehicle is equipped with various emission control components and a catalytic converter which 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.
- Do not turn off the ignition while your vehicle is moving, especially at high speeds.
- Have the items listed in your scheduled maintenance guide performed according to the specified schedule.

The scheduled maintenance items listed in the scheduled maintenance guide are essential to the life and performance of your vehicle and to its emissions system.

If other than Ford, Motorcraft or Ford-authorized parts are used for maintenance replacements or for service of components affecting emission control, such non-Ford parts should be equivalent to genuine Ford Motor Company parts in performance and durability.


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.

Illumination of the "Service Engine Soon" light, 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.


Exhaust leaks may result in entry of harmful and potentially lethal fumes into the passenger compartment.

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 identifies engine displacement and gives some tune up specifications.

Please consult your *Warranty Guide* for complete emission warranty information.

Readiness for Inspection/Maintenance (I/M) testing

In some localities, it may be a legal requirement to pass an I/M test of the on-board diagnostics system. If your "Service Engine Soon" light is on, refer to the description in the *Warning lights and chimes* section of the *Instrument Cluster* chapter. Your vehicle may not pass the I/M test with the "Service Engine Soon" light on.

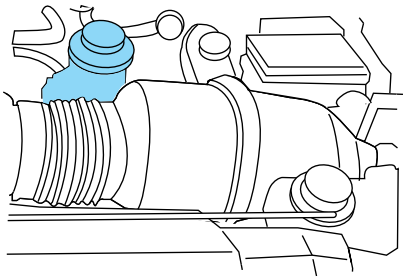
If the vehicle's powertrain system or its battery has just been serviced, the on-board diagnostics system is reset to a "not ready for I/M test" condition. To ready the on-board diagnostics system for I/M testing, a minimum of 30 minutes of city and highway driving is necessary as described below:

- First, at least 10 minutes of driving on an expressway or highway.
- Next, at least 20 minutes driving in stop-and-go, city-type traffic with at least four 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.

CHECKING AND ADDING POWER STEERING FLUID

Check the power steering fluid. Refer to the scheduled maintenance guide for the service interval schedules. If adding fluid is necessary, use only MERCON® ATF.

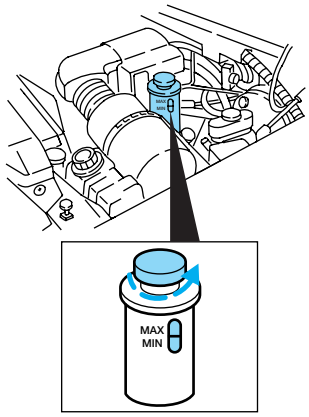


1. Start the engine and let it run until it reaches normal operating temperature (the engine coolant temperature gauge indicator will be near the center of the normal area between H and C).

2. While the engine idles, turn the steering wheel left and right several times.

3. Turn the engine off.

4. Check the fluid level in the reservoir. It should be between the MIN and MAX lines. Do not add fluid if the level is in this range.

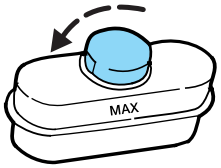


5. If the fluid is low, add fluid in small amounts, continuously checking the level until it reaches the range between the MIN and MAX lines. Be sure to put the cap back on the reservoir.

BRAKE FLUID

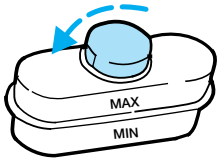
Checking and adding brake fluid

Brake fluid should be checked and refilled as needed. Refer to the scheduled maintenance guide for the service interval schedules.



1. Clean the reservoir cap before removal to prevent dirt or water from entering the reservoir.

2. Visually inspect the fluid level.



3. If necessary, add brake fluid from a clean un-opened container until the level reaches MAX. Do not fill above this line.

4. Use only a DOT 3 brake fluid certified to meet Ford specification ESA-M6C25–A. Refer to *Lubricant specifications* in this chapter.

Brake fluid is toxic. If brake fluid contacts the eyes, flush eyes with running water for 15 minutes. Seek medical attention if irritation persists. If taken internally, drink water and induce vomiting. Seek medical attention immediately.

If you use a brake fluid that is not DOT 3, you will cause permanent damage to your brakes.

Do not let the fluid level in the reservoir for the master cylinder fall below the MIN mark. If master cylinder runs dry, this may cause the brakes to fail.

CLUTCH FLUID (IF EQUIPPED)

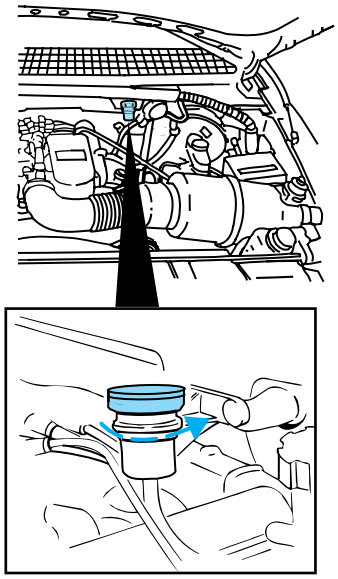
Check the fluid level. Refer to the scheduled maintenance guide for the service interval schedules.

During normal operation, the fluid level in the clutch reservoir should remain constant. If the fluid level drops, refill the fluid level to the step in the reservoir.

Use only a DOT 3 brake fluid designed to meet Ford specification ESA-M6C25–A. Refer to *Lubricant Specifications* in this chapter.

Brake fluid is toxic. If brake fluid contacts the eyes, flush eyes with running water for 15 minutes. Seek medical attention if irritation persists. If taken internally, drink water and induce vomiting. Seek medical attention immediately.

1. Clean the reservoir cap before removal to prevent dirt and water from entering the reservoir.
2. Remove cap and rubber diaphragm from reservoir.
3. Add fluid until the level reaches the step in the reservoir.
4. Reinstall rubber diaphragm and cap onto reservoir.



TRANSMISSION FLUID

Checking automatic transmission fluid (if equipped)

Refer to your scheduled maintenance guide for scheduled intervals for fluid checks and changes. Your transmission does not consume fluid. However, the fluid level should be checked if the transmission is not working properly, i.e., if the transmission slips or shifts slowly or if you notice some sign of fluid leakage.

Automatic transmission fluid expands when warmed. To obtain an accurate fluid check, drive the vehicle until it is at normal operating temperature (approximately 30 km [20 miles]). If your vehicle has been operated for an extended period at high speeds, in city traffic during hot weather or pulling a trailer, the vehicle should be turned off for about 30 minutes to allow fluid to cool before checking.

1. Drive the vehicle 30 km (20 miles) or until it reaches normal operating temperature.
2. Park the vehicle on a level surface and engage the parking brake.
3. With the parking brake engaged and your foot on the brake pedal, start the engine and move the gearshift lever through all of the gear ranges. Allow sufficient time for each gear to engage.

4. Latch the gearshift lever in P (Park) and leave the engine running.

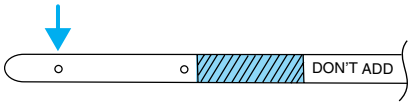
5. Remove the dipstick, wiping it clean with a clean, dry lint free rag. If necessary, refer to *Identifying components in the engine compartment* in this chapter for the location of the dipstick.

6. Install the dipstick making sure it is fully seated in the filler tube.

7. Remove the dipstick and inspect the fluid level. The fluid should be in the designated area for normal operating temperature or ambient temperature.

Low fluid level

Do not drive the vehicle if the fluid level is at the bottom of the dipstick and the ambient temperature is above 10°C (50°F).



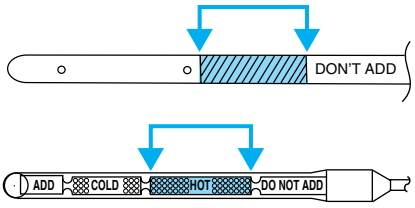
Correct fluid level



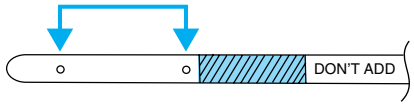
The transmission fluid should be checked at normal operating temperature 66°C-77°C (150°F-170°F) on a level surface. The normal operating temperature can be reached after approximately 30 km (20 miles) of driving.

You can check the fluid without driving if the ambient temperature is above 10°C (50°F). However, if fluid is added at this time, an overfill condition could result when the vehicle reaches normal operating temperature.

The transmission fluid should be in this range if at normal operating temperature (66°C-77°C [150°F-170°F]).



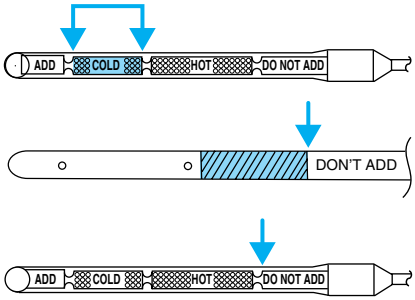
The transmission fluid should be in this range if at ambient temperature (10°C-35°C [50°F-95°F]).



High fluid level

Fluid levels above the safe range may result in transmission failure. An overfill condition of transmission fluid may cause shift and/or engagement concerns and/or possible damage.

High fluid levels can be caused by an overheating condition.



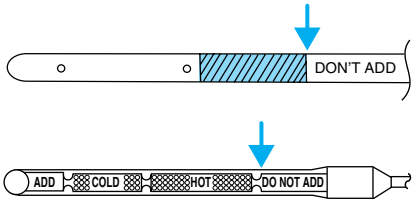
Adjusting automatic transmission fluid levels

Before adding any fluid, make sure the correct type is used. The type of fluid used is normally indicated on the dipstick and also in the *Lubricant specifications* section in this chapter.

Use of a non-approved automatic transmission fluid may cause internal transmission component damage.

If necessary, add fluid in 250 ml (1/2 pint) increments through the filler tube until the level is correct.

If an overfill occurs, excess fluid should be removed by a qualified technician.

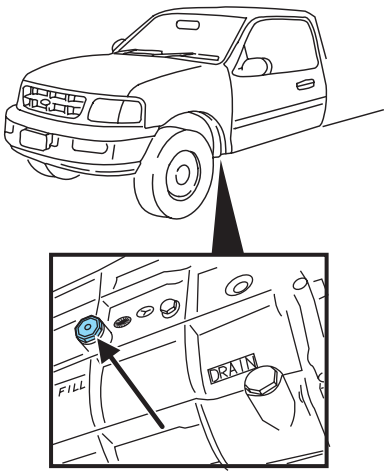


An overfill condition of transmission fluid may cause shift and/or engagement concerns and/or possible damage.

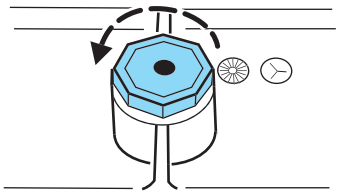
Do not use supplemental transmission fluid additives, treatments or cleaning agents. The use of these materials may affect transmission operation and result in damage to internal transmission components.

Checking and adding manual transmission fluid (if equipped)

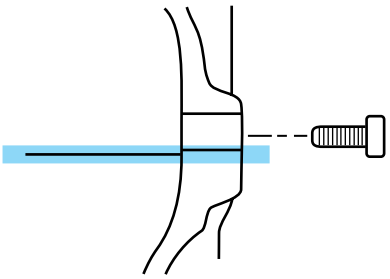
1. Clean the filler plug.



2. Remove the filler plug and inspect the fluid level.



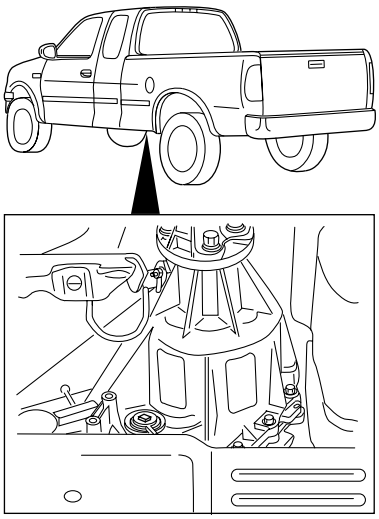
3. Fluid level should be at bottom of the opening.
4. Add enough fluid through the filler opening so that the fluid level is at the bottom of the opening.
5. Install and tighten the fill plug securely.



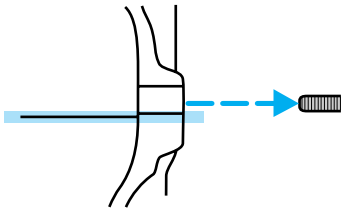
Use only fluid that meets Ford specifications. Refer to *Lubricant Specifications* in this chapter.

Checking and adding transfer case fluid (if equipped)

1. Clean the filler plug.
2. Remove the filler plug and inspect the fluid level.



3. Add only enough fluid through the filler opening so that the fluid level is at the bottom of the opening.



Use only fluid that meets Ford specifications. Refer to *Lubricant Specifications* in this chapter.

DRIVELINE UNIVERSAL JOINT AND SLIP YOKE

Your vehicle may be equipped with universal joints that require lubrication. Refer to the scheduled maintenance guide for maintenance intervals. If the original universal joints are replaced with universal joints equipped with grease fittings, lubrication will also be necessary.

AIR FILTER MAINTENANCE

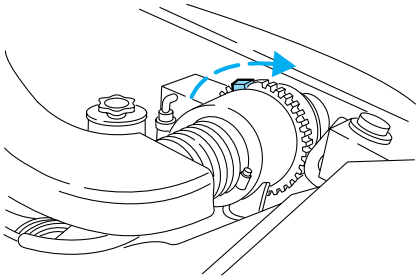
Refer to the scheduled maintenance guide for the appropriate intervals for changing the air filter element.

When changing the air filter element, use only the Motorcraft air filter element listed. Refer to *Motorcraft Part Numbers*.

Note: Do not start your engine with the air cleaner removed and do not remove it while the engine is running.

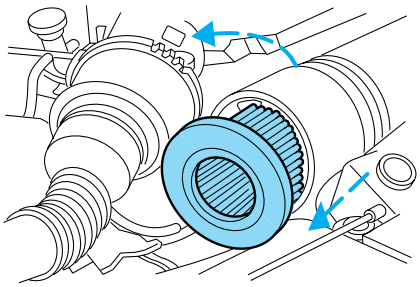
Changing the air filter element

1. Loosen the clamp that secures the air filter element in place.



2. Carefully separate the two halves of the air filter housing.

3. Remove the air filter element from the open end of the air filter housing.

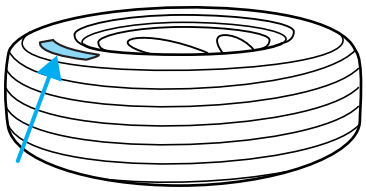


4. Install a new air filter element, ensuring the notch on the top half of the air filter housing lines up with the notch on the bottom half of air filter housing. Be careful not to crimp the filter element edges between the air filter housing. This could cause filter damage and allow unmetered air to enter the engine if not properly seated.

5. Replace the two halves of the air filter housing and secure the clamp.

INFORMATION ABOUT UNIFORM TIRE QUALITY GRADING

New vehicles are fitted with tires that have a rating on them called Tire Quality Grades. 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 tires for use on passenger cars. They do not apply to deep tread, winter-type snow tires, space-saver or temporary use spare 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 to give you the following information about tire grades exactly as the government has written it.

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 1/2) 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 climates.

Traction AA A B C

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.

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.

Temperature A B C

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. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

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.

SERVICING YOUR TIRES

Checking the tire pressure

- Use an accurate tire pressure gauge.
- Check the tire pressure when tires are cold, after the vehicle has been parked for at least one hour or has been driven less than 5 km (3 miles).
- Adjust tire pressure to recommended specifications found on the Certification Label inside of driver's door. Tire pressure information can also be found on the Tire Information label located on the inside of the fuel filler door.

Improperly inflated tires can affect vehicle handling and can fail suddenly, possibly resulting in loss of vehicle control, vehicle rollover and/or personal injury.

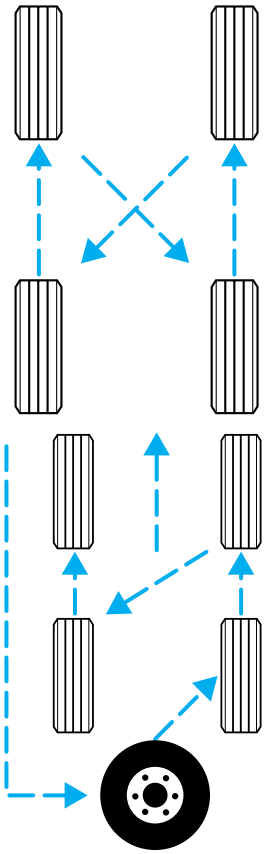
Tire rotation

Because your vehicle's tires perform different jobs, they often wear differently. To make sure your tires wear evenly and last longer, rotate

them as indicated in the scheduled maintenance guide. If you notice that the tires wear unevenly, have them checked.

The following procedure applies to vehicles equipped with single rear wheels, if your vehicle is equipped with dual rear wheels it is recommended that only the front wheels be rotated (side to side).

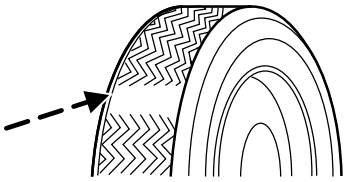
- Four tire rotation



- Five tire rotation

Replacing the tires

Replace the tires when the wear band is visible through the tire treads. Due to exposure to the elements and exhaust you should replace the spare tire when you replace the other tires.



When replacing full size tires, never mix radial bias-belted, or bias-type tires. Use only the tire sizes that are listed on the Certification Label. Make sure that all tires are the same size, speed rating, and load-carrying capacity. Use only the tire combinations recommended on the label. If you do not follow these precautions, your vehicle handling may be affected which can lead to loss of vehicle control, vehicle rollover and/or personal injury.

Make sure that all replacement tires are of the same size, type, speed rating, load-carrying capacity and tread design (e.g., "All Terrain", "Touring", etc.), as originally offered by Ford.

Do not replace your tires with "high performance" tires or larger size tires.

Failure to follow these precautions, your vehicle handling may be adversely effected which can lead to loss of vehicle control, vehicle rollover and/or personal injury.

Tires that are larger or smaller than your vehicle's original tires may also affect the accuracy of your speedometer.

SNOW TIRES AND CHAINS

Snow tires must be the same size and grade as the tires you currently have on your vehicle.

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 chains. If you need to use chains, it is recommended that steel wheels (of the same size and specifications) be used, as chains may chip aluminum wheels.

Follow these guidelines when using snow tires and chains:

- Use only SAE Class S chains.
- Install chains securely, verifying that the chains do not touch any wiring, brake lines or fuel lines.
- Drive cautiously. If you hear the chains rub or bang against your vehicle, stop and re-tighten the chains. If this does not work, remove the chains to prevent damage to your vehicle.
- If possible, avoid fully loading your vehicle.
- Remove the tire chains when they are no longer needed. Do not use tire chains on dry roads.
- The suspension insulation and bumpers will help prevent vehicle damage. Do not remove these components from your vehicle when using snow tires and chains.

MOTORCRAFT PART NUMBERS

Component	4.2L V6 engine	4.6L V8 engine	5.4L V8 engine	5.4L Supercharged V8 engine
Air filter element	FA-1634	FA-1634	FA-1634	FA-1634
Fuel filter	FG-986B	FG-986B	FG-986B	FG-986B
Oil filter	FL-400-S	FL-820-S	FL-820-S	FL-820-S
PCV valve	EV-251	EV-243	EV-233	EV-233
Battery (standard)	BXT-59	BXT-59	BXT-59	–
Battery (heavy duty)	BXT-65-650	BXT-65-650	BXT-65-650	BXT-65-650
Spark plugs-platinum[1]	AGSF-34EE [2]	AWSF-32P	AGSF-22W	AGSF-12E or AGSF-12FM1[2, 3]

[1] Refer to Vehicle Emissions Control Information (VECI) decal for spark plug gap information.

[2] If a spark plug is removed for inspection and replaced, it must be reinstalled in the same cylinder. If a spark plug needs to be replaced, use only spark plugs with the service number suffix letter as shown above.

[3]Use only AGSF-12FM1 spark plugs for replacement.

REFILL CAPACITIES

Fluid	Ford Part Name	Application	Capacity
Brake fluid and clutch fluid	Motorcraft High Performance DOT 3 Motor Vehicle Brake Fluid	All	Fill to line or step (for clutch) on reservoir
Engine coolant [1]	Motorcraft Premium Engine Coolant (green-colored) **or** Motorcraft Premium Gold Engine Coolant (yellow-colored)	4.2L V6 engine with 1 row radiator	19.0L (20.1 quarts)
		4.2L V6 engine with 2 row radiator	20.4L (21.6 quarts)
		4.6L V8 engine with 1 row radiator	19.5L (20.6 quarts)
		4.6L V8 engine with 2 row radiator	21.9L (23.1 quarts)
		5.4L V8 engine with 1 row radiator	22.6L (23.9 quarts)
		5.4L V8 engine with 2 row radiator	24.1L (25.5 quarts)

Fluid	Ford Part Name	Application	Capacity
Intercooler coolant[1]	Motorcraft Premium Engine Coolant (green-colored) **or** Motorcraft Premium Gold Engine Coolant (yellow-colored)	5.4L Supercharged V8 engine	4.0L (4.2 quarts)
Engine oil (includes filter change)	Motorcraft SAE 5W-20 Premium Synthetic Blend Motor Oil	All	5.7L (6.0 quarts)
Fuel tank	N/A	4x4 Reg. Cab with short wheelbase	92.7L (24.5 gallons)
		4x2 Regular Cab, SuperCab and SuperCrew with short wheelbase	94.6L (25.0 gallons)
		All long Wheelbase	113.6L (30.0 gallons)
Power steering fluid	Motorcraft MERCON® ATF	All	Fill to between MIN and MAX lines on reservoir
Transfer case fluid	Motorcraft MERCON® ATF	4x4 vehicles	1.9L (2.0 quarts) [2]

Fluid	Ford Part Name	Application	Capacity
Transmission fluid [3]	Motorcraft MERCON® ATF	5-speed manual	3.5L (3.75 quarts) [4]
		Automatic- 4R100 (4x2)	16.1L (17.0 quarts) [4]
		Automatic- 4R100 (4x4)	16.7L (17.7 quarts) [4]
	Motorcraft MERCON®V ATF	Automatic- 4R70W	13.2L (13.9 quarts) [4]
Front axle	Motorcraft SAE 75W-90 Premium 4x4 Front Axle Lubricant	4x4 vehicles	2.0L (3.7 pints)
Rear axle [5]	Motorcraft SAE 75W-140 Synthetic Rear Axle Lubricant	8.8/9.75 inch axle	2.6L (5.5 pints) [6]
Rear axle [5]	Motorcraft SAE 75W-140 Synthetic Rear Axle Lubricant	10.25 inch axle	3.3L (6.9 pints) [7]
Windshield washer fluid	Ultra-Clear Windshield Washer Concentrate	All	4.0L (4.25 quarts)

[1]Add the coolant type originally equipped in your vehicle.

[2]Service refill capacity is determined by filling the transfer case to the bottom of the filler hole with the vehicle on a level surface.

[3]Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick handle. Check the container to verify the fluid being added is of the correct type. Refer to your scheduled maintenance guide to determine the correct service interval.

Some transmission fluids may be labeled as dual usage, such as MERCON® and MERCON® V. These dual usage fluids are not to be used

in an automatic transmission that requires use of the MERCON® type fluid. However, these dual usage fluids may be used in transmissions that require the MERCON® V type fluid.

MERCON® and MERCON® V type fluids are not interchangeable. DO NOT mix MERCON® and MERCON® V. Use of a transmission fluid that indicates dual usage (MERCON® and MERCON® V) in an automatic transmission application requiring MERCON® may cause transmission damage. Use of any fluid other than the recommended fluid may cause transmission damage.

[4]Approximate dry fill capacity including transmission fluid cooling system, actual refill capacities will vary based on vehicle application and transmission fluid cooling system (i.e. coolers size, cooling lines. auxiliary cooler capacities). The amount of transmission fluid and fluid level should be set by the indication on the dipstick's normal operating range.

[5]Your vehicle's rear axle is filled with a synthetic rear axle lubricant and is considered lubricated for life. These lubricants do not need to be checked or changed unless a leak is suspected, service is required or the axle assembly has been submerged in water. The axle lubricant should be changed any time the rear axle has been submerged in water.

[6]Service refill capacity is determined by filling the axle to 6-14 mm (1/4-9/16 inch) below the bottom of the filler hole with the vehicle on a level surface.

Add 118 ml (4 oz.) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford specification EST-M2C118–A, for complete fill of 8.8 inch and 9.75 inch Traction-Lok axles.

[7]Service refill capacity is determined by filling the axle to the bottom of the filler hole with the vehicle on a level surface.

For 10.25 inch Traction-Lok axles, use 3.1L (6.5 pints) of Motorcraft SAE 75W-140 Synthetic Rear Axle Lubricant and 236 ml (8 oz.) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford Specification EST-M2C118-A.

LUBRICANT SPECIFICATIONS

Item	Ford part name or equivalent	Ford part number	Ford specification
Front axle (4X4)	Motorcraft SAE 75W-90 Premium 4x4 Front Axle Lubricant	XY-75W90-TQL	WSP-M2C201-A
Rear axle	Motorcraft SAE 75W-140 High Performance Synthetic Rear Axle Lube [1]	XY-75W140–QL	WSL-M2C192-A
Brake fluid and clutch fluid	Motorcraft High Performance DOT 3 Motor Vehicle Brake Fluid	PM-1	ESA-M6C25-A and DOT 3
Engine coolant	Motorcraft Premium Engine Coolant (green-colored)	VC-4–A (US) or CXC-10 (Canada)	ESE-M97B44-A
	Motorcraft Premium Gold Engine Coolant (yellow-colored)	VC-7–A	WSS-M97B51-A1
Engine oil	Motorcraft SAE 5W-20 Premium Synthetic Blend Motor Oil	XO-5W20-QSP	WSS-M2C153-H and API Certification Mark

Item	Ford part name or equivalent	Ford part number	Ford specification
Hinges, latches, striker plates, fuel filler door hinge and seat tracks.	Multi-Purpose Grease	XG-4 or XL-5	ESR-M1C159-A or ESB-M1C93-B
Lock cylinders	Motorcraft penetrating and lock lubricant	Motorcraft XL-1	none
Transmission /steering/parking brake linkages and pivots, brake and clutch pedal shaft (if equipped)	Premium Long-Life Grease	XG-1-C or XG-1-K	ESA-M1C75-B
Power steering fluid, transfer case fluid (4X4) and transmission fluid (manual)	Motorcraft MERCON® ATF	XT-2-QDX	MERCON®
Automatic transmission (4R100) [2]	Motorcraft MERCON® ATF	XT-2-QDX	MERCON®
Automatic transmission (4R70W) [2]	Motorcraft MERCON®V ATF	XT-5-QM	MERCON®V
Windshield washer fluid	Motorcraft Premium Windshield Washer Concentrate	ZC-32–A	WSB-M8B16–A2

[1]Add 118 ml (4 oz) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford specification EST-M2C118-A for complete refill

of Traction-Lok axles. Add 236 ml (8 oz.) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford specification EST-M2C118-A for complete refill of 10.25 and 10.5 inch Traction-Lok axles.

[2]Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick handle. Check the container to verify the fluid being added is of the correct type. Refer to your scheduled maintenance guide to determine the correct service interval.

Some transmission fluids may be labeled as dual usage, such as MERCON® and MERCON® V. These dual usage fluids are not to be used in an automatic transmission that requires use of the MERCON® type fluid. However, these dual usage fluids may be used in transmissions that require the MERCON® V type fluid.

MERCON® and MERCON® V type fluids are not interchangeable. DO NOT mix MERCON® and MERCON® V. Use of a transmission fluid that indicates dual usage (MERCON® and MERCON® V) in an automatic transmission application requiring MERCON® may cause transmission damage. Use of any fluid other than the recommended fluid may cause transmission damage.

ENGINE DATA

Engine	4.2L V6 engine	4.6L V8 engine	5.4L V8 engine	5.4L Supercharged V8 engine
Cubic inches	256	281	330	330
Required fuel	87 octane	87 octane	87 octane	91 octane
Firing order	1-4-2-5-3-6	1-3-7-2-6-5-4-8	1-3-7-2-6-5-4-8	1-3-7-2-6-5-4-8
Spark plug gap	1.3-1.4 mm (0.052-0.056 inch)	1.3-1.4 mm (0.052-0.056 inch)	1.3-1.4 mm (0.052-0.056 inch)	1.3-1.4 mm (0.052-0.056 inch)
Ignition system	EDIS	Coil on plug	Coil on plug	Coil on plug
Compression ratio	9.3:1	9.37:1	9.0:1	9.0:1

VEHICLE DIMENSIONS

Styleside

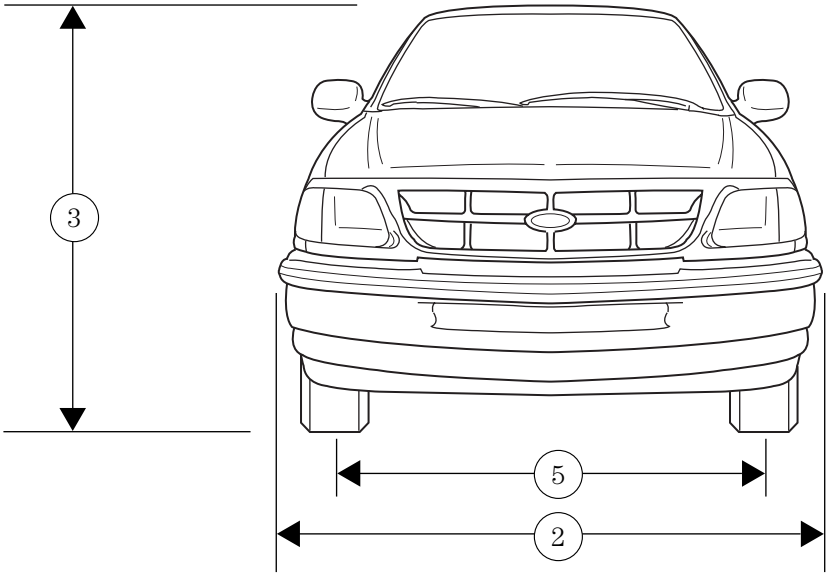
Dimension	Body Style			
	Regular Cab 4x2	Regular Cab 4x4	Super Cab 4x2	Super Cab 4x4
(1) Overall length	5256 mm (206.9 in) (SWB) 5729 mm (225.5 in) (LWB)	5264 mm (207.2 in) (SWB) 5736 mm (225.8 in) (LWB)	5728 mm (225.5 in) (SWB) 6201 mm (244.1 in) (LWB)	5735 mm (225.8 in) (SWB) 6208 mm (244.4 in) (LWB)
(2) Overall width	1989mm (78.3 in)[1]	2019 mm (79.5 in)[1]	1989 mm (78.3 in)[1]	2019 mm (79.5 in)[1]
(3) Overall height	1846 mm (72.7 in) (SWB) 1838 mm (72.4 in) (LWB)	1915 mm (75.4 in) (SWB) 1907 mm (75.1 in) (LWB)	1849 mm (72.8 in) (SWB) 1841 mm (72.5 in) (LWB)	1918 mm (75.5 in) (SWB) 1907 mm (75.1 in) (LWB)
(4) Wheel base	3045 mm (119.9 in) (SWB) 3518 mm (138.5 in) (LWB)	3053 mm (120.2 in) (SWB) 3526 mm (138.8 in) (LWB)	3518 mm (138.5 in) (SWB) 3990 mm (157.1 in) (LWB)	3526 mm (138.8 in) (SWB) 3998 mm (157.4 in) (LWB)
(5)Track front/rear	1661 mm (65.4 in) 1661 mm (65.4 in)	1661 mm (65.4 in) 1661 mm (65.4 in)	1661 mm (65.4 in) 1661 mm (65.4 in)	1661 mm (65.4 in) 1661 mm (65.4 in)

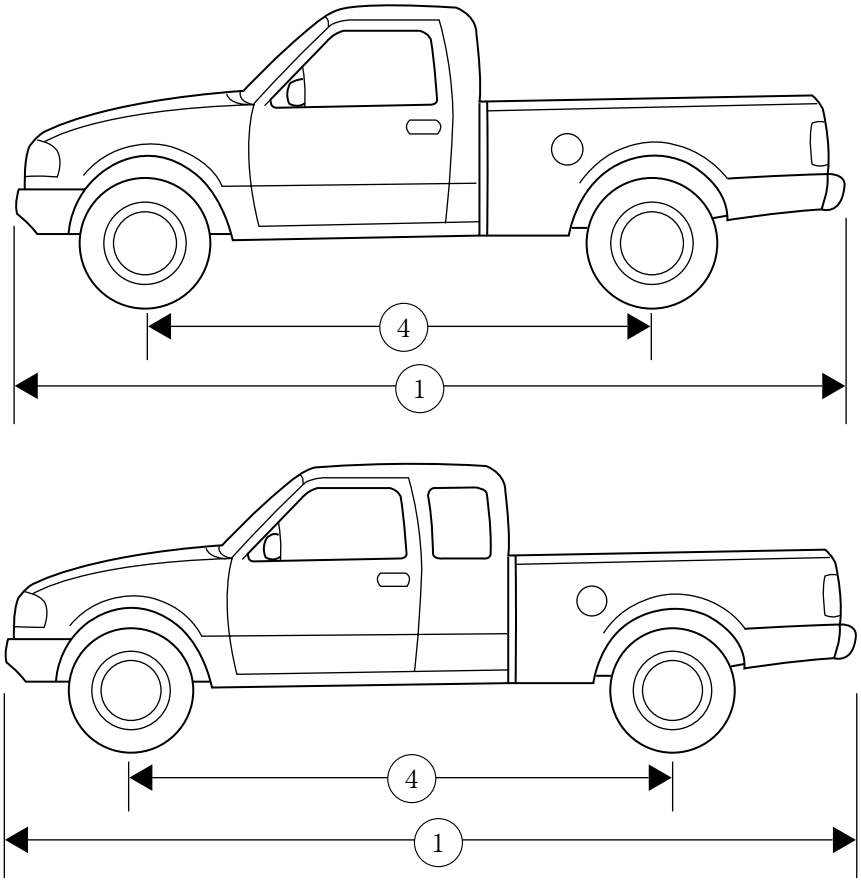
[1] Vehicle width, including mirrors: 2279 mm (89.7 in)

Flareside

Dimension	Body Style			
	Regular Cab 4x2	Regular Cab 4x4	Super Cab 4x2	Super Cab 4x4
(1) Overall length	5255 mm (206.9 in)	5263 mm (207.2 in)	5728 mm (225.5 in)	5735 mm (225.8 in)
(2) Overall width	2014 mm (79.3 in)[1]	2030 mm (79.9 in)[1]	2014 mm (79.3 in)[1]	2030 mm (79.9 in)[1]
(3) Overall height	1846 mm (72.7 in)	1915 mm (75.4 in)	1849 mm (72.8 in)	1918 mm (75.5 in)
(4) Wheel base	3046 mm (119.9 in)	3053 mm (120.2 in)	3518 mm (138.5 in)	3526 mm (138.8 in)
(5) Track front/rear	1661 mm (65.4 in)	1661 mm (65.4 in)	1661 mm (65.4 in)	1661 mm (65.4 in)

[1] Vehicle width, including mirrors: 2279 mm (89.7 in)



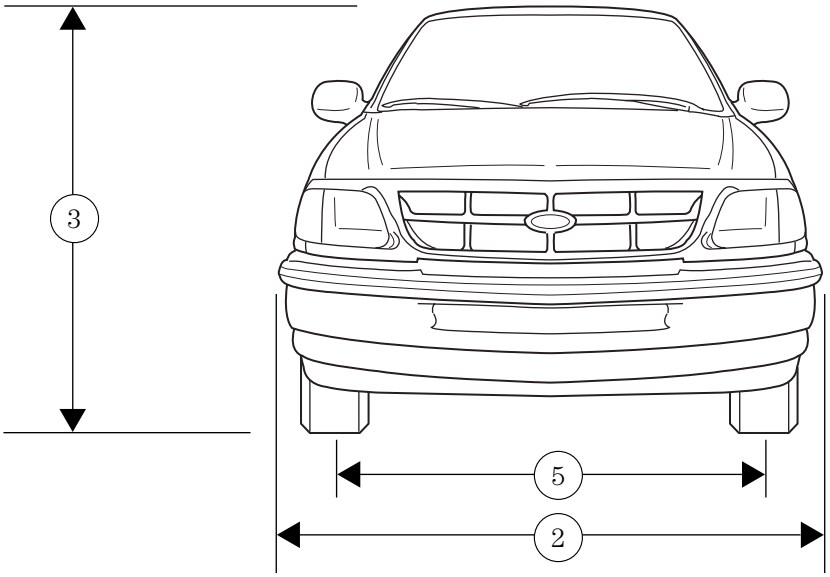

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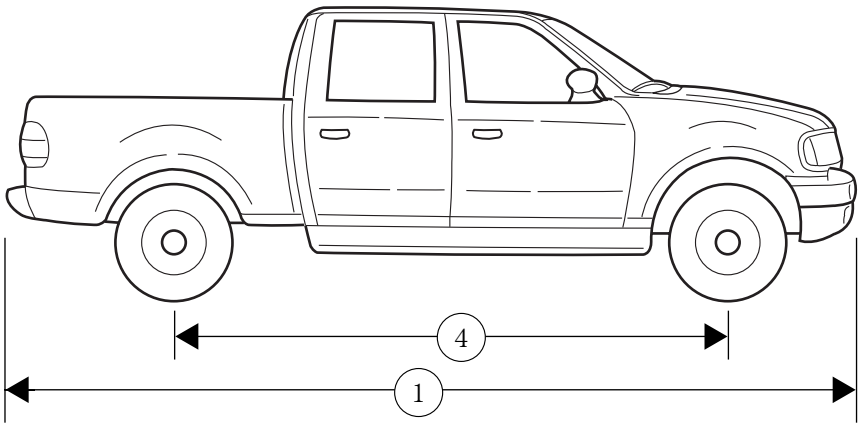
F-150 SuperCrew

Dimension	Body Style	
	SuperCrew 4x2 mm (in)	SuperCrew 4x4mm (in)
(1) Overall length	5738 (225.9)	5745 (226.2)
(2) Overall width	2009 (79.1)[1]	2029 (79.9)[1]
(3) Overall height	1878 (73.9)[2]	1953 (76.9)
(4) Wheel base	3518 (138.5)	3525 (138.8)
(5)Track front/rear	1661 (65.4)	1 661 (65.4)

[1] Vehicle width, including mirrors: 2293 mm (90.3 in)

[2]Harley-Davidson height is 1852 mm (72.9 in)





IDENTIFYING YOUR VEHICLE

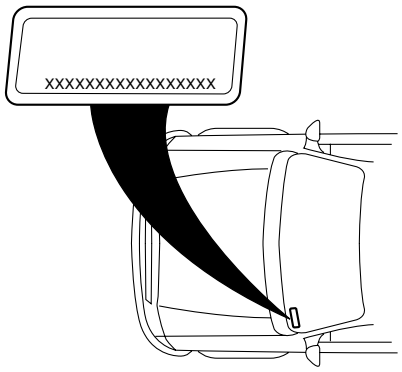
Certification label

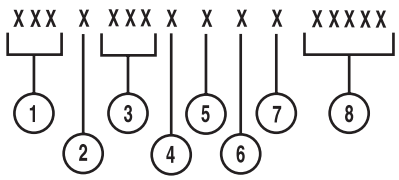
The National Highway Traffic Safety Administration Regulations require that a Certification label be affixed to a vehicle and prescribe where the Certification label may be located. The Certification label is located on the front door latch pillar on the driver's side.


MFD. BY FORD MOTOR CO. IN U.S.A.
DATE: XXXXX GVWR:XXXXX LB/ XXXXX KG
FGAWR: XXXXXX/XXXXXXX RGAWR: XXXXXXX/XXXXXXX
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
VIN: XXXXXXXXXXXXXXXXX TYPE: XXXXXXXXXXXXXXX
MAXIMUM LOAD=OCCUPANTS + LUGGAGE=XXXKG/XXXXLB
OCCUPANTS: X TOTAL X FR X 2ND X RR OCCUPANTS LUGGAGE
XX XXXKG/XXXXLB
TIRE: XXXX/XXXXX XXX X XXXKG/XXXXLB
PRESSURE (FR) XXX kPa/ XX PSI COLD
PRESSURE (RR) XXX kPa/ XX PSI COLD
TRAILER TOWING - SEE OWNER GUIDE
EXT PNT: XXXXXX XXXXXX | RC: XX | DSO: XXXX | F0000
BAR | INT TR | TP/PS | R | AXLE | TR | SPR | T0000
X XX XXX X XX X XXXX
UTC ∇FOHT-15294A10-GA

Vehicle identification number (VIN)

The vehicle identification number is attached to a metal tag and is located on the driver side instrument panel. (Please note that in the graphic XXXX is representative of your vehicle identification number.)





1. World manufacturer identifier
2. Brake type and gross vehicle weight rating (GVWR)
3. Vehicle line, series, body type
4. Engine type
5. Check digit
6. Model year
7. Assembly plant
8. Production sequence number

Engine number

The engine number (the last eight numbers of the vehicle identification number) is stamped on the engine block and transmission.

Harley-Davidson serialization plate

The Harley-Davidson Edition contains a serialization plate that is unique and custom made for each Harley-Davidson vehicle. The serialization plate contains the model year, vehicle identification number and build sequence number. This information is added to the plate at the time of vehicle build. Since plate is custom made, it is **not a serviceable part**.

Accessories

FORD ACCESSORIES FOR YOUR VEHICLE

A wide selection of genuine Ford accessories are available for your vehicle through your local authorized Ford, Lincoln, Mercury or Ford of Canada dealer. These quality accessories have been specifically engineered to fulfill your automotive needs; they are custom designed to complement the style and aerodynamic appearance of your vehicle. In addition, each accessory is made from high quality materials and meets or exceeds Ford's rigorous engineering and safety specifications. Ford Motor Company will repair or replace any properly dealer-installed Ford accessory found to be defective in factory-supplied materials or workmanship during the warranty period, as well as any component damaged by the defective accessory. The accessory will be warranted for whichever provides you the greatest benefit:

- 12 months or 20,000 km (12,000 miles) (whichever occurs first), or
- the remainder of your new vehicle limited warranty.

This means that genuine Ford accessories purchased along with your new vehicle and installed by the dealer are covered for the full length of your New Vehicle's Limited Warranty — 3 years or 60,000 km (36,000 miles) (whichever occurs first). Contact your dealer for details and a copy of the warranty.

Not all accessories are available for all models.

Vehicle Security

Styled wheel locks

Vehicle security systems

Comfort and convenience

Air filtration systems

Automatic Headlamp System with Daytime Running Lights (DRL)

Battery warmer/blanket

Cargo organizers (interior)

Cargo storage bin (regular cab)

Cargo trays (interior)

Cellular phone holder

Daytime running lights (DRL)

Dash trim (wood grain)

Engine block heaters

Manual sliding rear window
Power sliding rear window
Remote start system
Tire step

Travel equipment

Cargo cage (SuperCrew only)
Bed mount bike carrier
Bed tent
Fog lights
Hitch mount bike carrier
Inside mirror with compass display
Inside mirror with compass and temperature display
Off road lights
Outside signal mirror (available only with power mirrors)
Pickup box rails
Retractable bed hooks
Running boards (molded, diamond plate, tubular and stirrup step)
Seatback organizer
Speed control
Towing mirrors
Trailer hitch (Class III)
Trailer hitch bars and balls
Trailer hitch wiring adaptor
Trailer swivel hitch

Protection and appearance equipment

Bed mat/bedliner tailgate covers
Bed mats
Bedliners
Bull bar (chrome & black)
Cap (hard, color keyed — Leer supplier branded)
Commercial Cap (Leer supplier branded)

Accessories

Cargo cover
Cargo liner
Chrome grill insert
Diamond plate, bed rail caps
Diamond plate, front box protector
Diamond plate, splash guards
Diamond plate, tool box
Door edge guards
Carpet floor mats
Fender flares
Flat splash guards
Front end covers (full)
Grill guard/brush guard
Hood deflectors
Leather wrapped steering wheel
Molded splash guards
Molded “all weather” vinyl floor mats
Side window air deflectors
Tailgate covers, diamond plate
Tonneau covers (hard, color keyed — Leer supplier branded)
Tonneau covers (soft)
Truck cover
Universal floor mats
Wheels

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). Consult your dealer for specific weight information.
- The Federal Communications Commission (FCC) and Canadian Radio Telecommunications Commission (CRTC) regulate the use of mobile

communications systems - such as two-way radios, telephones and theft alarms - that are equipped with radio transmitters. Any such equipment installed in your vehicle should comply with FCC or CRTC regulations and should be installed only by a qualified service technician.

- Mobile communications systems may harm the operation of your vehicle, particularly if they are not properly designed for automotive use or are not properly installed. When operated, such systems may cause the engine to stumble or stall or cause the transmission to be damaged or operate improperly. In addition, such systems may be damaged or their performance may be affected by operating your vehicle. (Citizens band [CB] transceivers, garage door openers and other transmitters with outputs of five watts or less will not ordinarily affect your vehicle's operation.)
- Ford cannot assume responsibility for any adverse effects or damage that may result from the use of such equipment.

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