

2005 Ford Focus ZX4 S

2005 STEERING Power Steering - Focus

2005 STEERING**Power Steering - Focus****SPECIFICATIONS****GENERAL SPECIFICATIONS****GENERAL SPECIFICATIONS**

Item	Specification
Lubricants	
MERCON® Multi-Purpose (ATF) Transmission Fluid XT-2-QDX	MERCON®
Steering Gear Insulator Bushing	
Distance from the bottom of the steering gear housing to the bottom of the bushing	4.5 mm (0.17 in) +/- 0.5 mm (0.01 inch)

TORQUE SPECIFICATIONS**TORQUE SPECIFICATIONS**

Description	Nm	lb-ft	lb-in
Power steering fluid cooler bolts	3	-	27
Power steering line clamp plate bolt	18	13	-
Power steering pressure line bracket nuts	11	8	-
Power steering pressure line fitting nut	65	48	-
Power steering pump mounting bolts	25	18	-
Steering gear bolts	80	59	-
Steering column shaft-to-steering gear pinion bolt	28	21	

DESCRIPTION AND OPERATION**POWER STEERING****NOTE:** The power steering pump cannot be disassembled. A new unit

must be installed.

NOTE: The steering gear cannot be disassembled. A new unit must be installed.

The power steering system consists of the following components:

- Power steering pump
- Power steering pump reservoir
- Steering gear
- Power steering pressure line
- Power steering return hose
- Power steering fluid cooler
- Power steering low pressure hose (late build only)
- Power steering fluid supply hose (early build only)

DIAGNOSIS AND TESTING

POWER STEERING

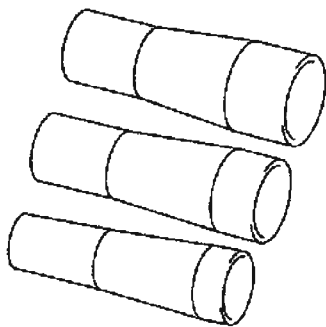
Refer to STEERING SYSTEM-GENERAL INFORMATION .

REMOVAL AND INSTALLATION

POWER STEERING PUMP

Special Tool(s)

SPECIAL TOOLS DESCRIPTION



ST2787-A

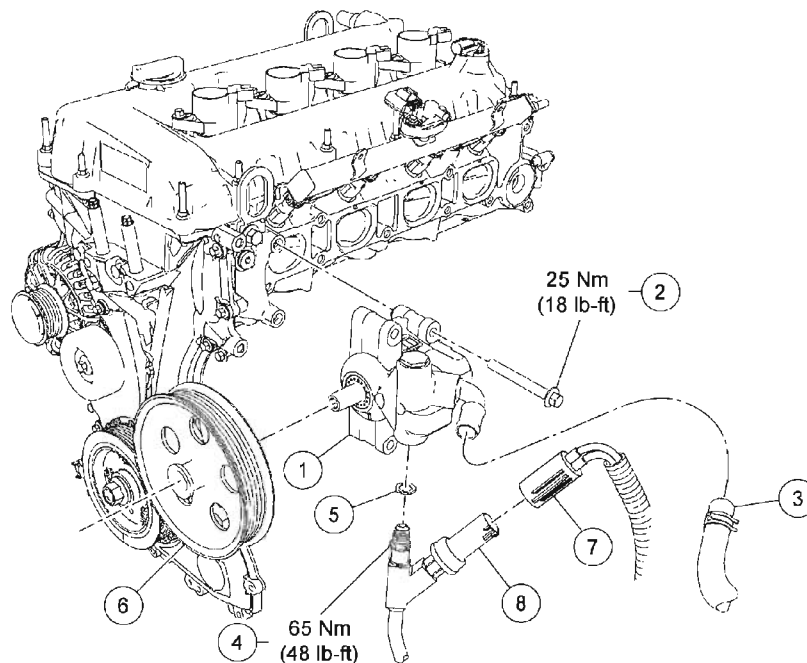
Installer Set, Teflon® Seal 211-D207
(D90P-3517-A)

2005 Ford Focus ZX4 S

2005 STEERING Power Steering - Focus

MATERIAL SPECIFICATIONS

Item	Specification
MERCON® Multi-Purpose ATF Transmission Fluid XT-2-QDX	MERCON®



N0044371

Item	Part Number	Description
1	3A764	Power steering pump
2	W500315	Power steering pump bolt (4 required)
3	3691	Power steering fluid supply hose
4	3F784	Power steering pressure line

Item	Part Number	Description
5	3F886	Power steering pressure line Teflon® O-ring seal
6	3A733	Power steering pump pulley
7	—	Power steering pressure switch electrical connector
8	3K215	Power steering pressure switch

Fig. 1: Removing Power Steering Pump
Courtesy of FORD MOTOR CO.

Removal and Installation

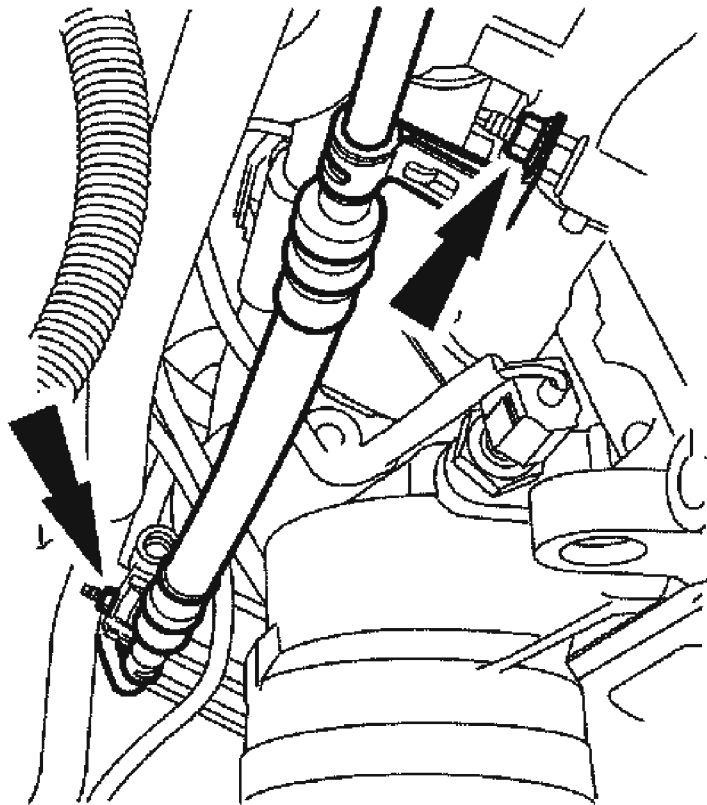
CAUTION: While repairing the power steering system, care should be taken to prevent the entry of contaminants, or premature failure of the power steering components can result.

NOTE: Whenever the hoses are disconnected from the power steering pump. Make sure the accessory drive belt is not contaminated with power steering fluid.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer

to **JACKING AND LIFTING**.

2. Siphon the power steering fluid from the power steering reservoir.
3. Remove the power steering pump pulley. For additional information, refer to **POWER STEERING PUMP PULLEY**.
4. Disconnect the power steering pressure switch electrical connector.
5. Remove the power steering line bracket nuts.
 - To install, tighten to 11 Nm (8 lb-ft).



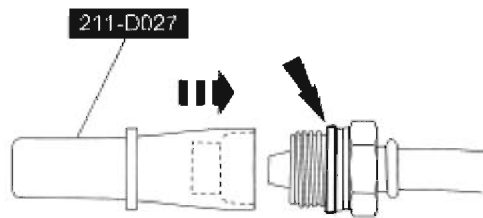
N0028758

Fig. 2: Removing Power Steering Line Bracket Nuts
Courtesy of FORD MOTOR CO.

NOTE: A new Teflon® O-ring seal must be installed any time the power steering pressure line is disconnected from the power steering pump.

6. Disconnect the power steering pressure line from the power steering pump.
 - Remove and discard the Teflon® O-ring seal

- To install, tighten to 65 Nm (48 lb-ft).
- 7. Release the clamp and disconnect the power steering fluid supply hose.
- 8. Remove the 2 lower power steering pump mounting bolts.
 - To install, tighten to 25 Nm (18 lb-ft).
- 9. Remove the 2 upper power steering pump mounting bolts and the power steering pump.
 - To install, tighten to 25 Nm (18 lb-ft).
- 10. To install, reverse removal procedure.
 - Using the special tool, install a new Teflon® O-ring seal to the power steering pressure line.



N0032102

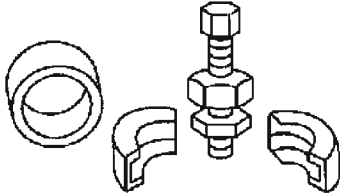
Fig. 3: Installing Teflon(R) Seal Using Special Tool
Courtesy of FORD MOTOR CO.

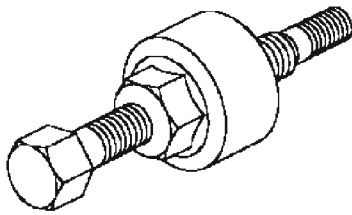
11. Fill and check the power steering system. For additional information, refer to **STEERING SYSTEM-GENERAL INFORMATION** .

POWER STEERING PUMP PULLEY

Special Tool(s)

SPECIAL TOOLS DESCRIPTION

 <p>ST1290-B</p>	<p>Steering Pump Pulley Remover 211-016 (T69L-10300-B)</p>
	<p>Steering Pump Pulley Installer 211-185 (T91P-3A733-A)</p>



ST1586-A

Removal

1. Remove the accessory drive belt. For additional information, refer to **ACCESSORY DRIVE**.
2. Lower the vehicle.
3. Using the special tool, remove the power steering pump pulley.

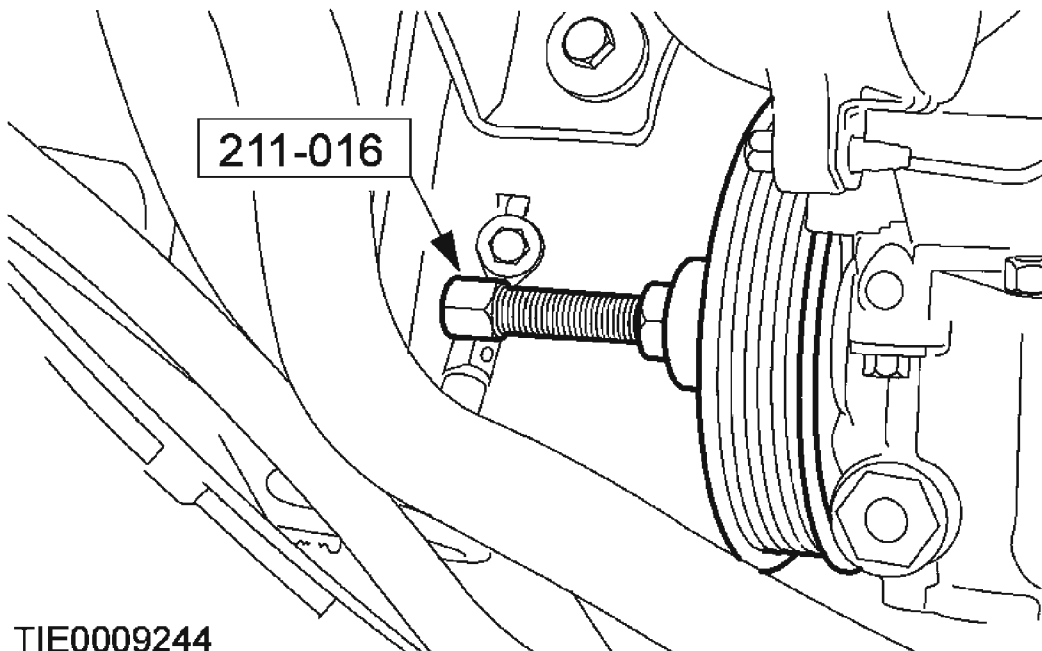


Fig. 4: Removing Power Steering Pump Pulley Using Special Tool
Courtesy of FORD MOTOR CO.

Installation

NOTE: Make sure the pulley is flush with the end of the power

steering pump shaft.

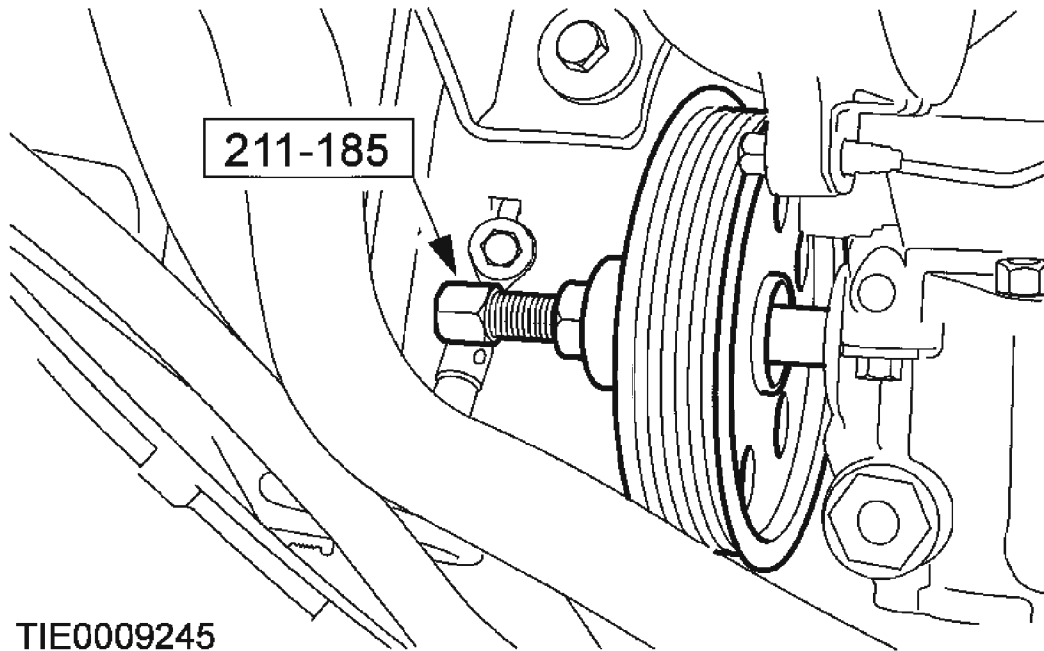


Fig. 5: Installing Power Steering Pump Pulley Using Special Tool
Courtesy of FORD MOTOR CO.

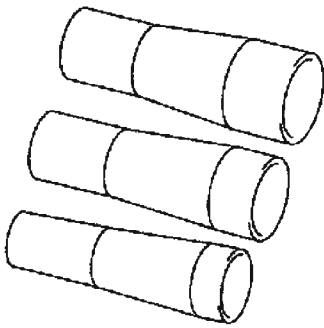
1. Using the special tool, install the power steering pump pulley.
2. Install the accessory drive belt. For additional information, refer to **ACCESSORY DRIVE** .

POWER STEERING PUMP TO STEERING GEAR PRESSURE LINE

Special Tool(s)

SPECIAL TOOLS DESCRIPTION

	Installer Set, Teflon® Seal 211-D027 (D90P-3517-A) or equivalent
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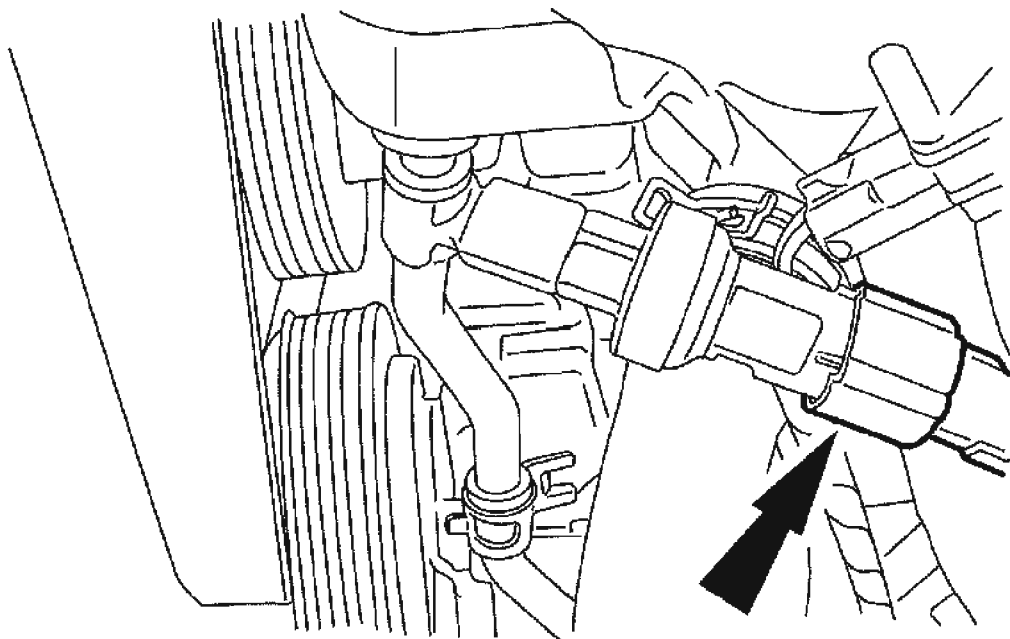
ST2787-A

Removal and Installation

CAUTION: While repairing the power steering system, care should be taken to prevent the entry of contaminants or premature failure of the power steering components can result.

NOTE: Whenever the hoses are disconnected from the power steering pump, make sure the accessory drive belt is not contaminated with power steering fluid.

1. Disconnect the battery. For additional information, refer to **BATTERY, MOUNTING AND CABLES**.
2. Disconnect the power steering pressure (PSP) switch electrical connector.



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Fig. 6: Disconnecting Power Steering Pressure (PSP) Switch Electrical Connector
Courtesy of FORD MOTOR CO.

3. Raise and support the vehicle. For additional information, refer to **JACKING AND LIFTING** .
4. Remove the power steering pressure line bracket nuts.

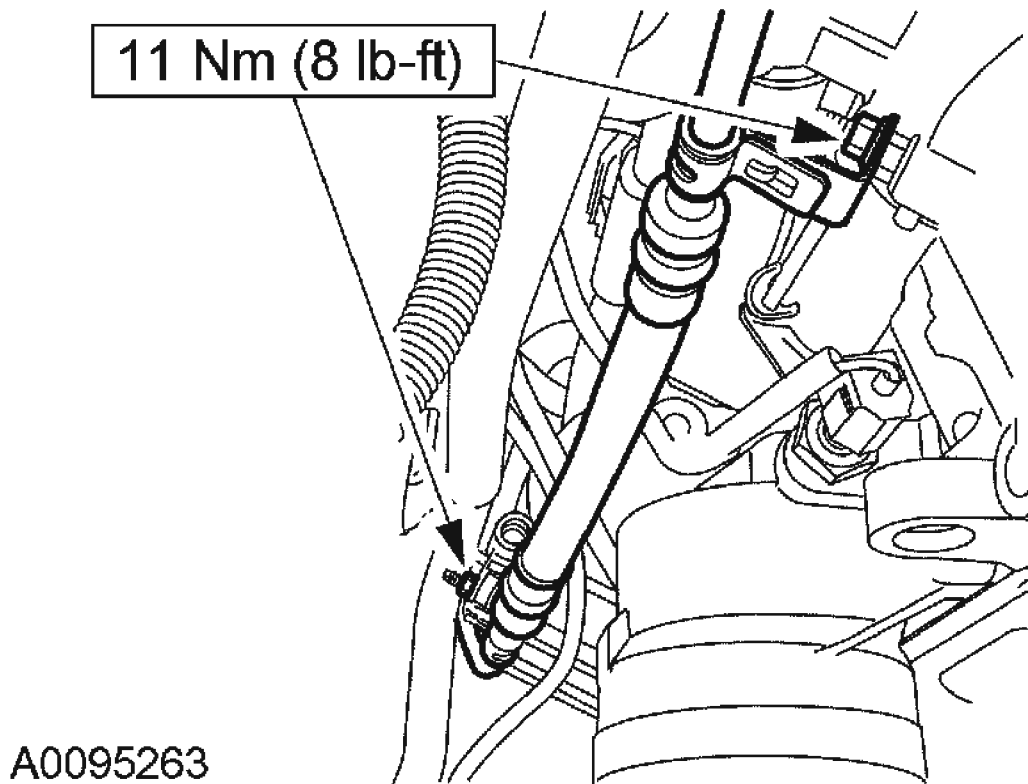


Fig. 7: Removing Power Steering Pressure Line Bracket Nuts
Courtesy of FORD MOTOR CO.

5. Disconnect the power steering pressure line from the support clamp.

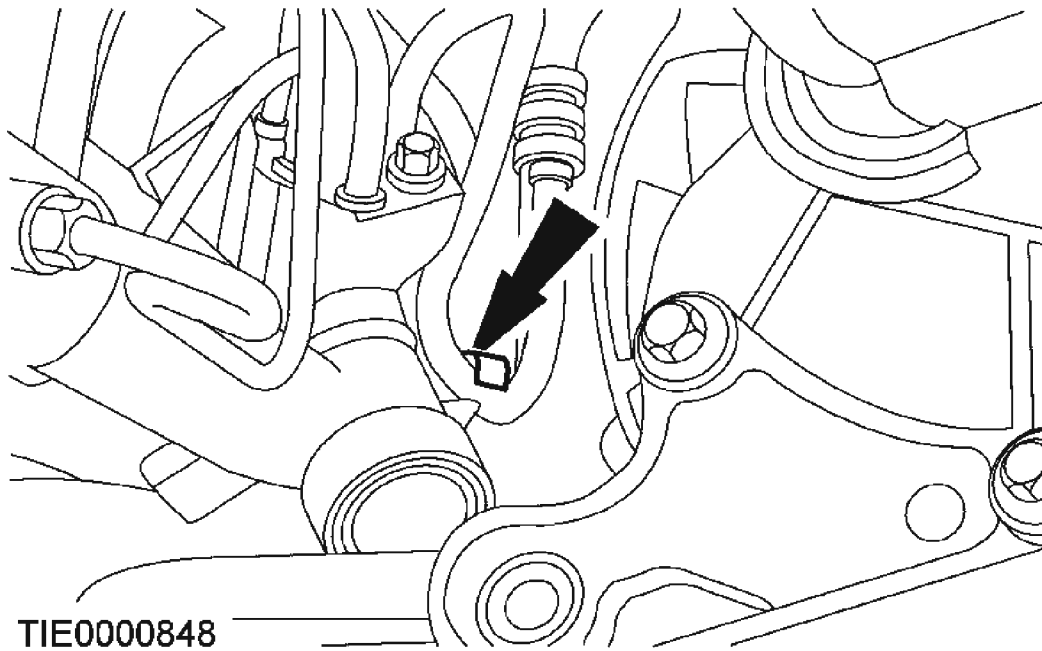


Fig. 8: Disconnecting Power Steering Pressure Line From Support Clamp
Courtesy of FORD MOTOR CO.

6. Remove the power steering line clamp plate bolt.
 - Rotate the clamp plate.
 - Disconnect the power steering lines.
 - Allow the fluid to drain into a suitable container.
 - Discard the O-ring seals.

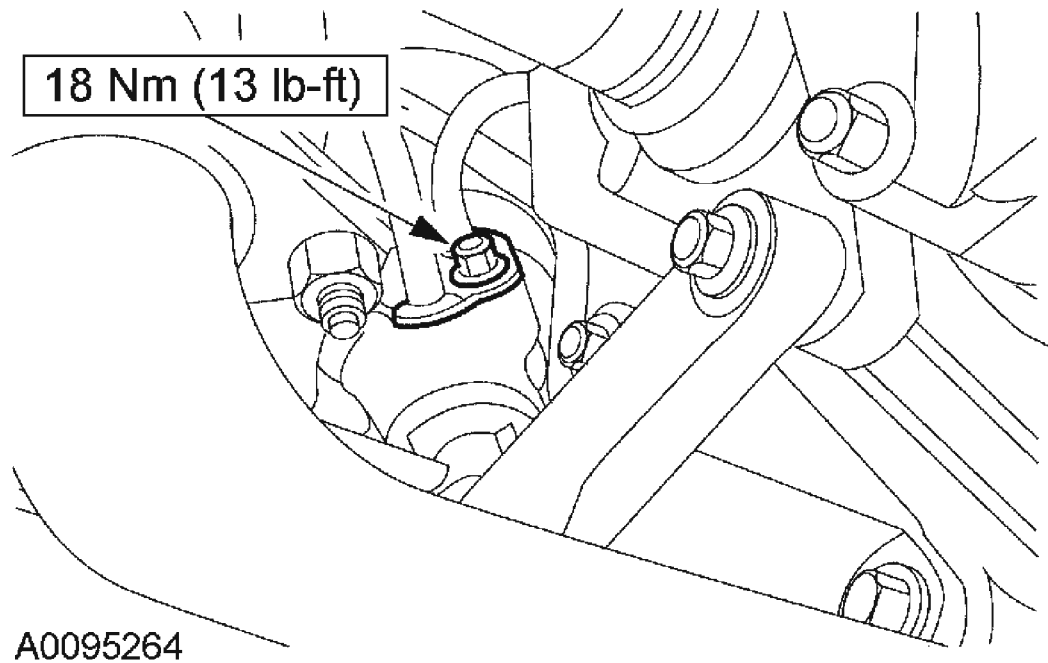


Fig. 9: Removing Power Steering Line Clamp Plate Bolt
Courtesy of FORD MOTOR CO.

NOTE: New O-ring seals must be installed any time the power steering hoses are disconnected from the steering gear.

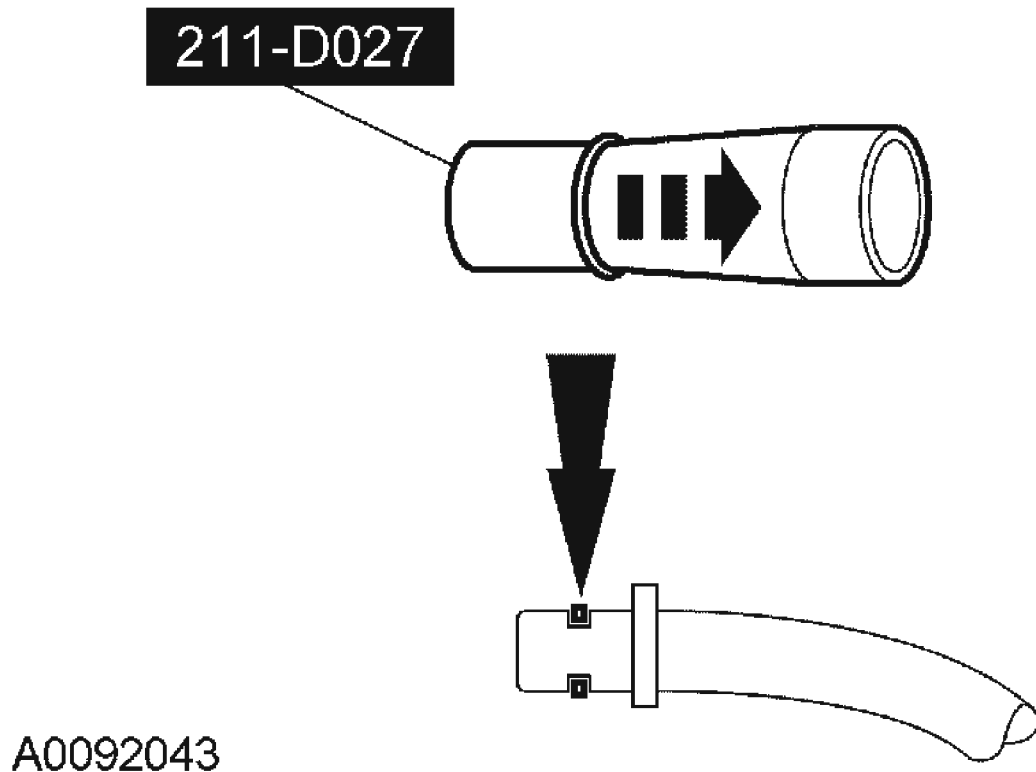


Fig. 10: Installing Pressure Line And Return Line O-Ring Seal Using Special Tool
Courtesy of FORD MOTOR CO.

7. Using the special tool, install a new pressure line and a new return line O-ring seal.
8. Remove the power steering pump pulley. For additional information, refer to **POWER STEERING PUMP PULLEY**.
9. Disconnect the power steering pressure line fitting nut from the power steering pump.

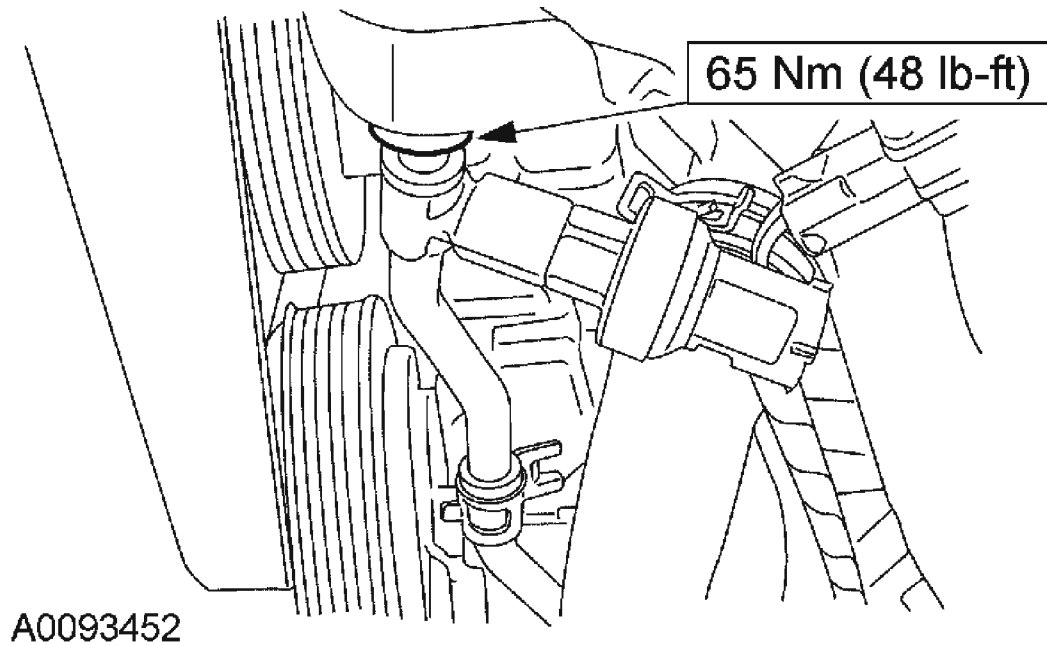


Fig. 11: Disconnecting Power Steering Pressure Line Fitting Nut From Power Steering Pump
 Courtesy of FORD MOTOR CO.

10. Remove the power steering pump to steering gear pressure line.

CAUTION: Make sure the line is routed correctly.

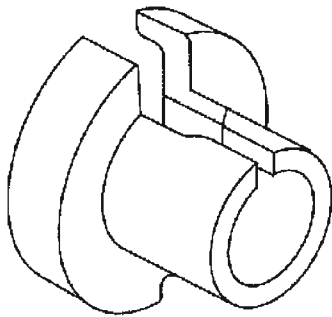
11. To install, reverse the removal procedure.
12. Fill and leak check the power steering system. For additional information, refer to **STEERING SYSTEM-GENERAL INFORMATION** .

POWER STEERING FLUID COOLER

Special Tool(s)

SPECIAL TOOLS DESCRIPTION

	Disconnect Tool, Spring Lock Coupling 310-041 (T90T-9550-C)
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310-041

Removal and Installation

CAUTION: While repairing the power steering system, care should be taken to prevent the entry of contaminants or premature failure of the power steering components can result.

1. Position aside the coolant expansion tank.
 - Remove the bolt.

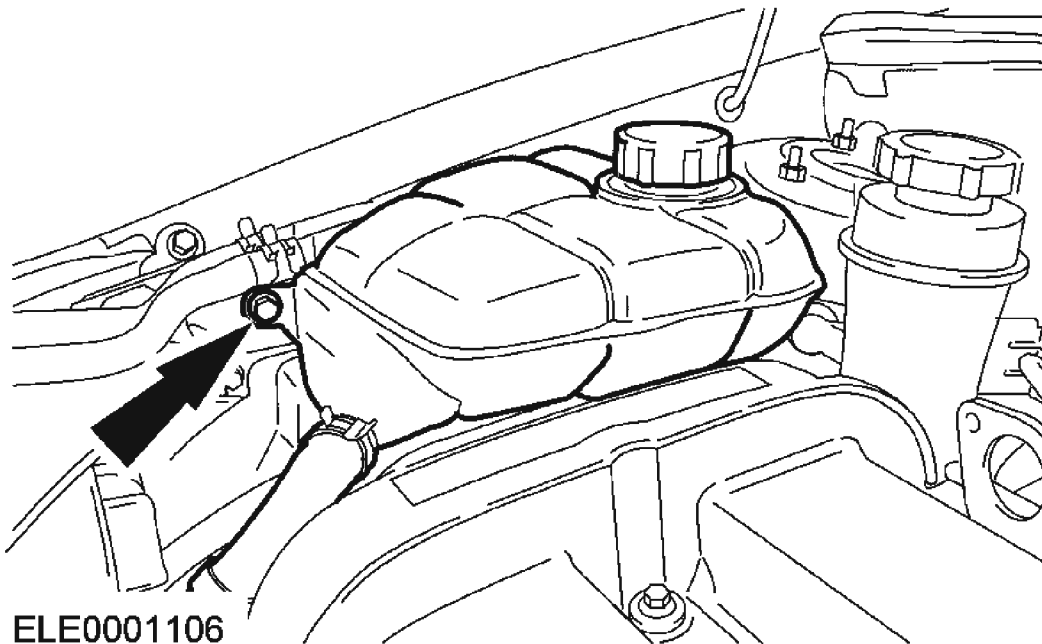


Fig. 12: Removing Coolant Expansion Tank Bolt
Courtesy of FORD MOTOR CO.

2. Remove the power steering fluid return hose from the fluid reservoir.
 - Remove the reservoir from the bracket.
 - Disconnect the clamp.
 - Allow the fluid to drain into a suitable container.

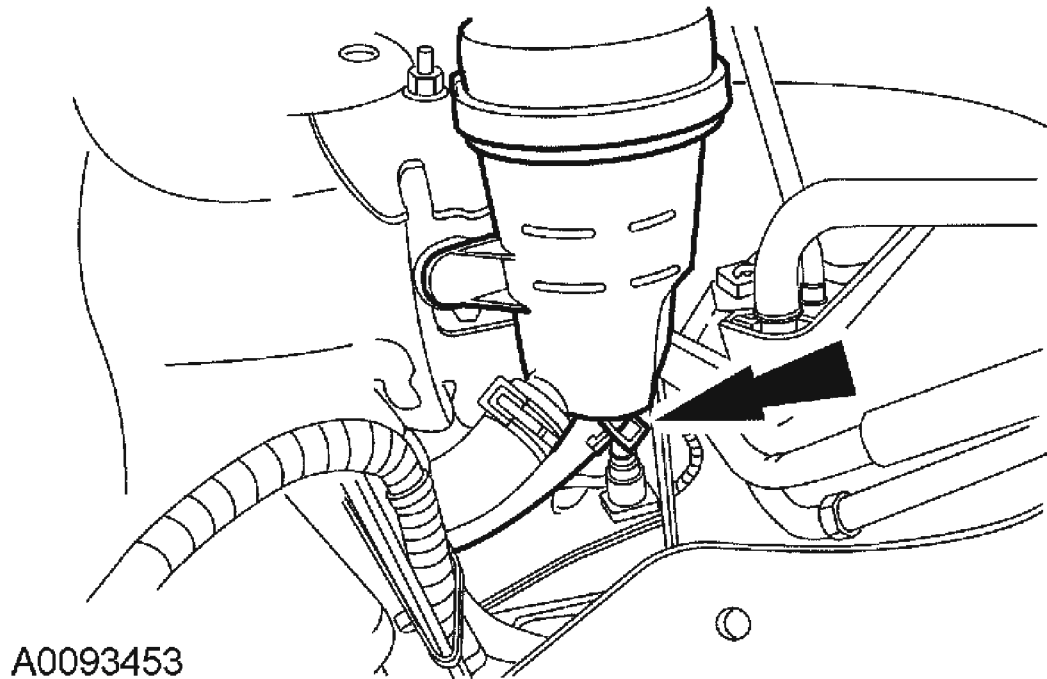


Fig. 13: Removing Power Steering Fluid Return Hose From Fluid Reservoir
Courtesy of FORD MOTOR CO.

3. Raise and support the vehicle. For additional information, refer to **JACKING AND LIFTING**.
4. Disconnect the power steering fluid cooler hose.
 1. Using the special tool, disconnect the power steering fluid cooler hose spring lock connector.
 2. Remove the power steering fluid cooler hose.

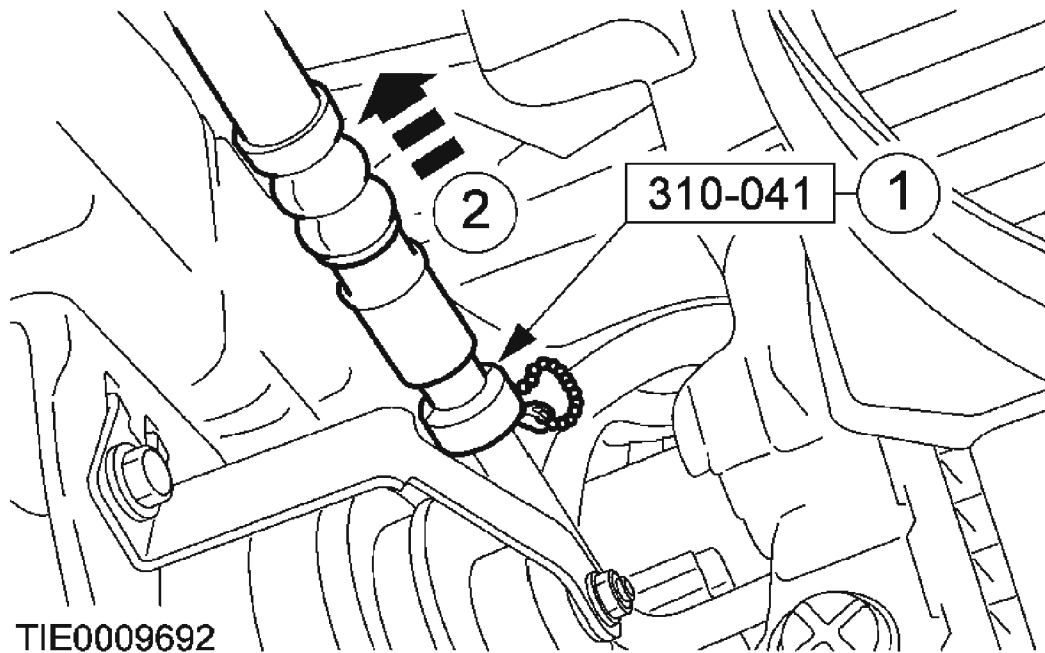
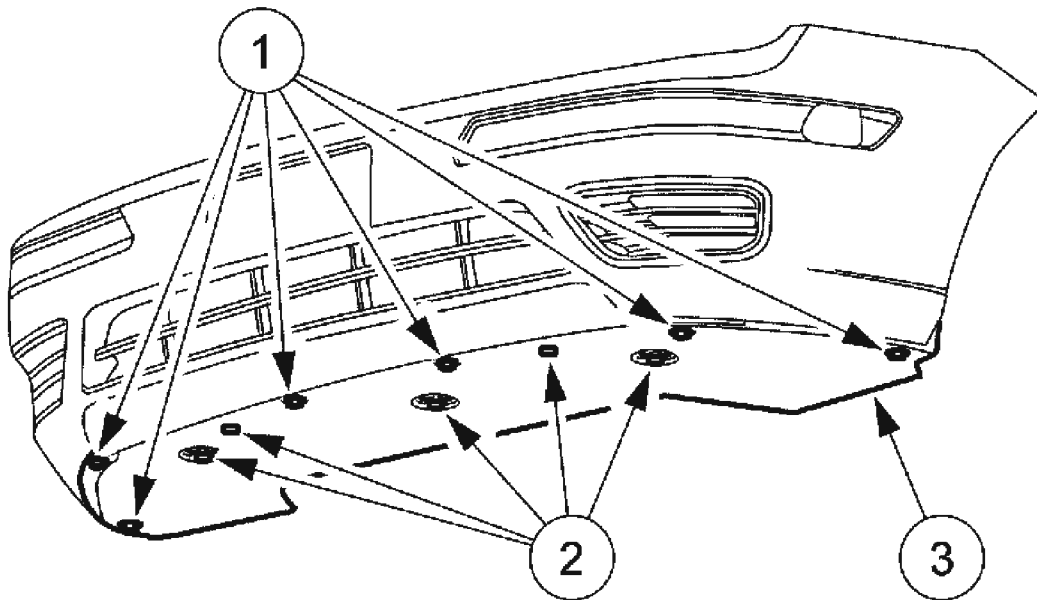


Fig. 14: Disconnecting Power Steering Fluid Cooler Hose
Courtesy of FORD MOTOR CO.

5. Remove the lower air deflector.
 1. Remove the bolts.
 2. Remove the pin-type retainers.
 3. Position the lower air deflector aside.



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Fig. 15: Removing Lower Air Deflector
Courtesy of FORD MOTOR CO.

6. Remove the power steering fluid cooler bolts.
 - Remove the power steering fluid cooler.

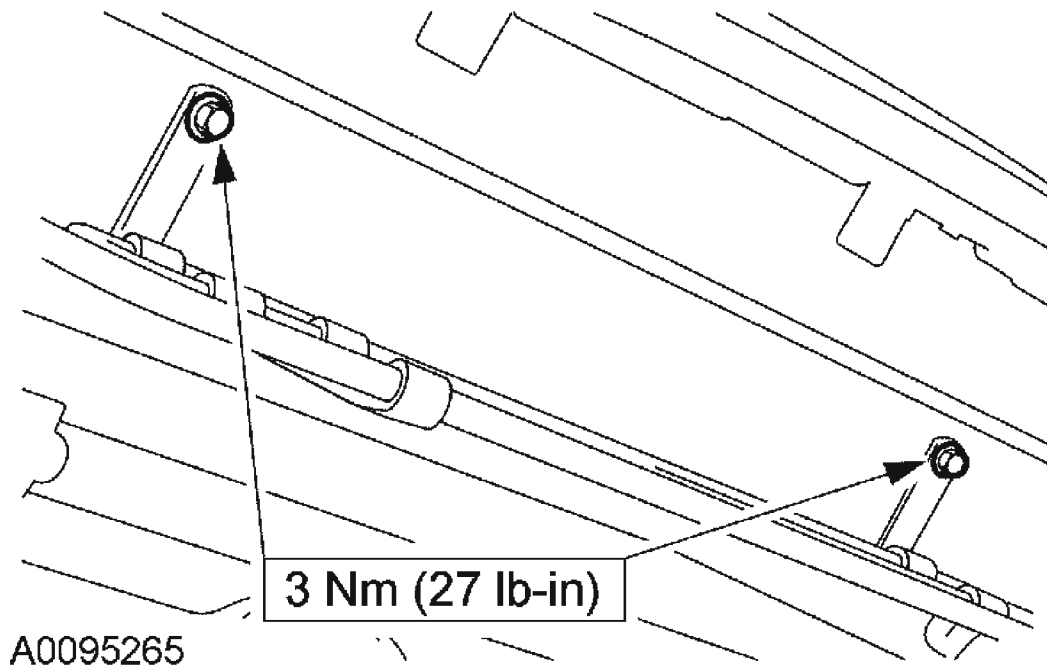


Fig. 16: Removing Power Steering Fluid Cooler Bolts
Courtesy of FORD MOTOR CO.

7. To install, reverse the removal procedure.
8. Fill and leak check the power steering system. For additional information, refer to **STEERING SYSTEM-GENERAL INFORMATION**.

STEERING GEAR

Removal and Installation

CAUTION: Do not allow the steering wheel to rotate while the intermediate shaft is disconnected or damage to the clockspring can result. If there is evidence that the shaft has rotated, the clockspring must be removed and recentered. For additional information, refer to **SUPPLEMENTAL RESTRAINT SYSTEM**.

CAUTION: While repairing the power steering system, care should be taken to prevent the entry of contaminants or premature failure of the power steering system components can result.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer

to **JACKING AND LIFTING** .

2. Remove the front subframe. For additional information, refer to **UNI-BODY, SUBFRAME AND MOUNTING SYSTEM** .
3. Remove the dash panel seal boot, the steering column shaft bolt and the steering column shaft.
 - Discard the bolt.

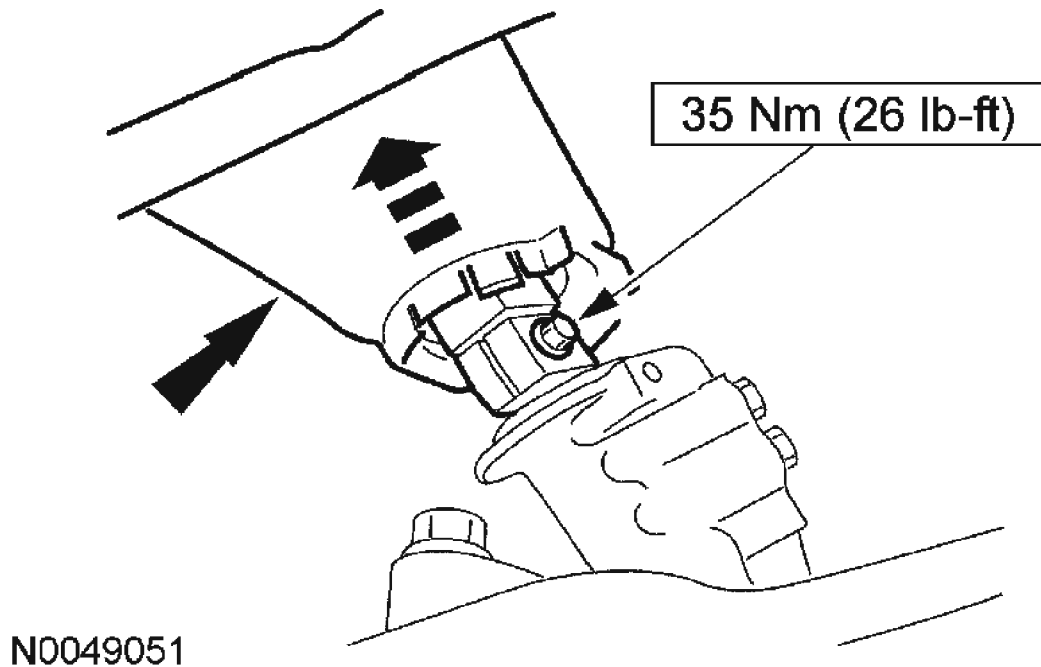


Fig. 17: Removing Dash Panel Seal Boot, Steering Column Shaft Bolt And Steering Column Shaft
Courtesy of FORD MOTOR CO.

4. Remove the steering gear bolts and the steering gear.

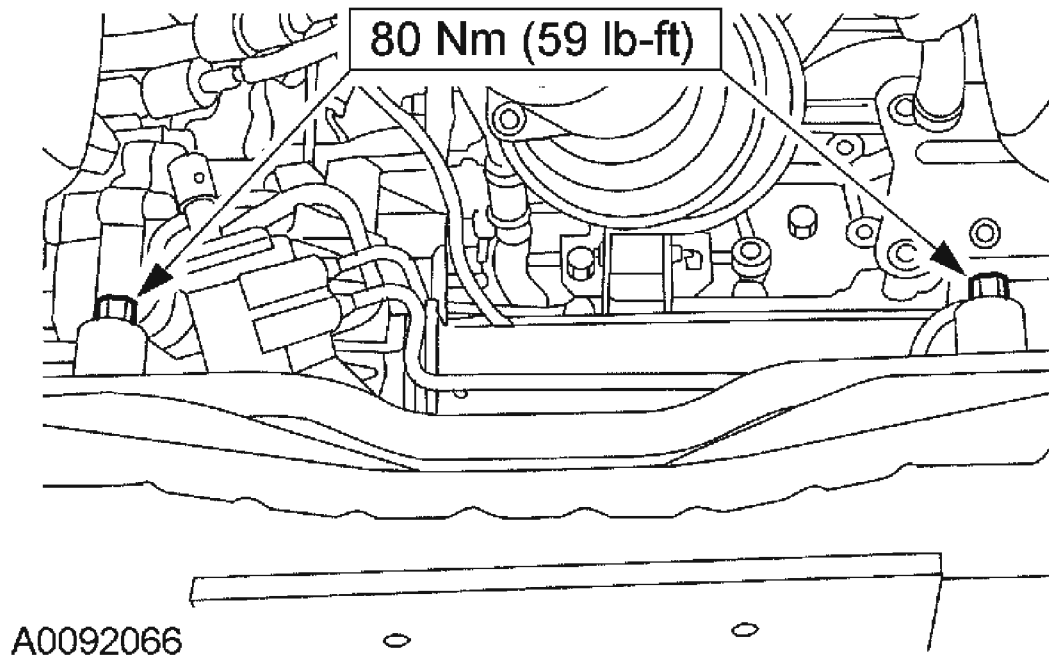


Fig. 18: Removing Steering Gear Bolts And Steering Gear
Courtesy of FORD MOTOR CO.

CAUTION: New O-ring seals must be installed any time the lines are disconnected from the steering gear.

5. To install, reverse the removal procedure.
6. Fill and leak check the power steering system. For additional information, refer to **STEERING SYSTEM-GENERAL INFORMATION**.
7. Check and, if necessary, align the front end. For additional information, refer to **SUSPENSION SYSTEM-GENERAL INFORMATION**.

STEERING GEAR BUSHING

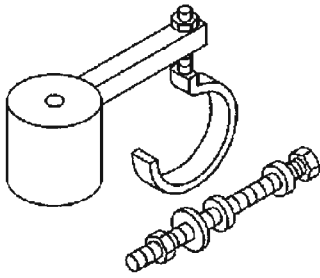
Special Tool(s)

SPECIAL TOOLS DESCRIPTION

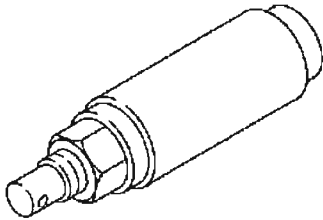
	Remover/Installer, Pivot Bushing 205-297
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2005 Ford Focus ZX4 S

2005 STEERING Power Steering - Focus



15086



14037

Installer, Wheel Hub 204-148

Removal

1. Remove the steering gear. For additional information, refer to **STEERING GEAR**.
2. Using the special tools, remove the insulator bushings.

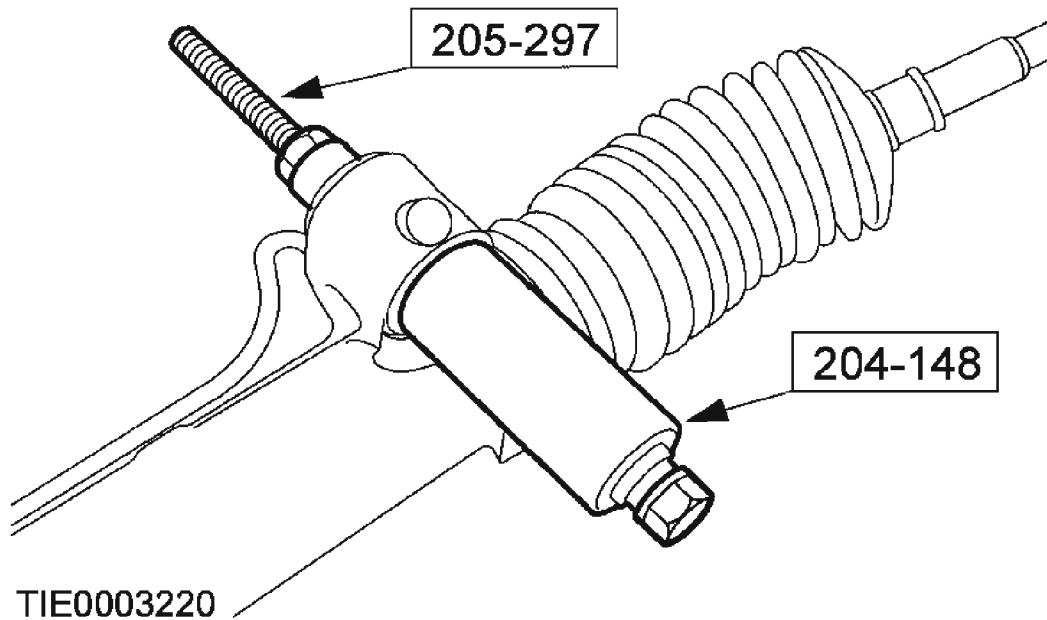


Fig. 19: Removing Insulator Bushings Using Special Tools
Courtesy of FORD MOTOR CO.

3. Thoroughly clean and visually inspect the steering gear housing for signs of damage. If the housing is damaged, install a new steering gear. For additional information, refer to **STEERING GEAR**.

Installation

NOTE: Lubricate the new bushing with a suitable rubber lubricant.

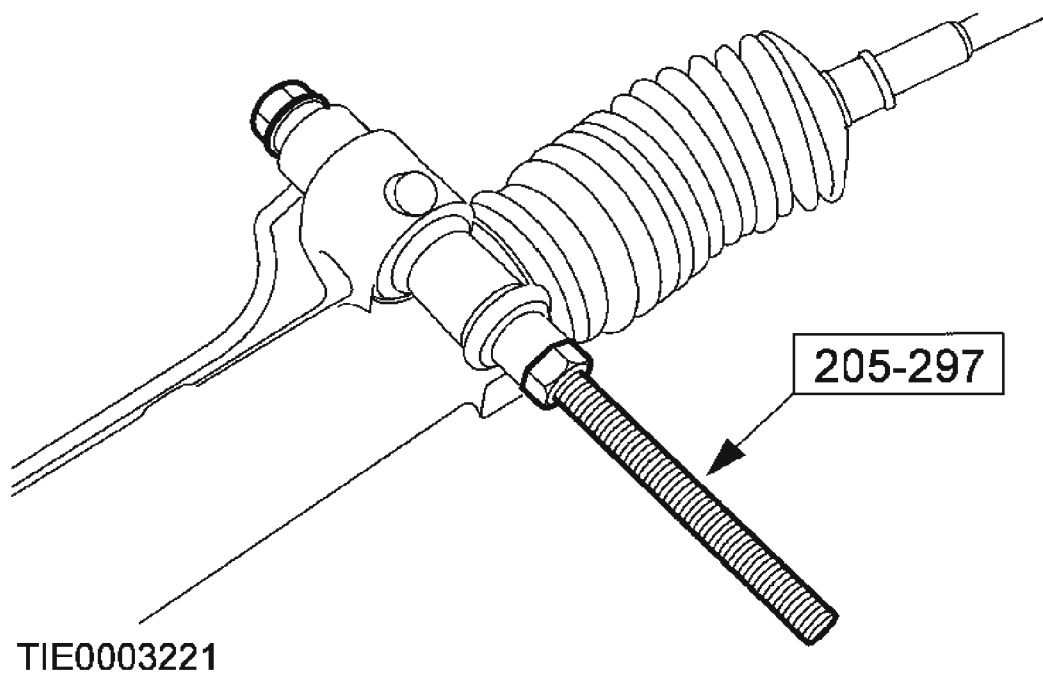


Fig. 20: Installing Insulator Bushings Using Special Tool
Courtesy of FORD MOTOR CO.

1. Using the special tool, install the insulator bushings.
2. Using the special tools, install the steering gear insulator bushings to the correct depth.

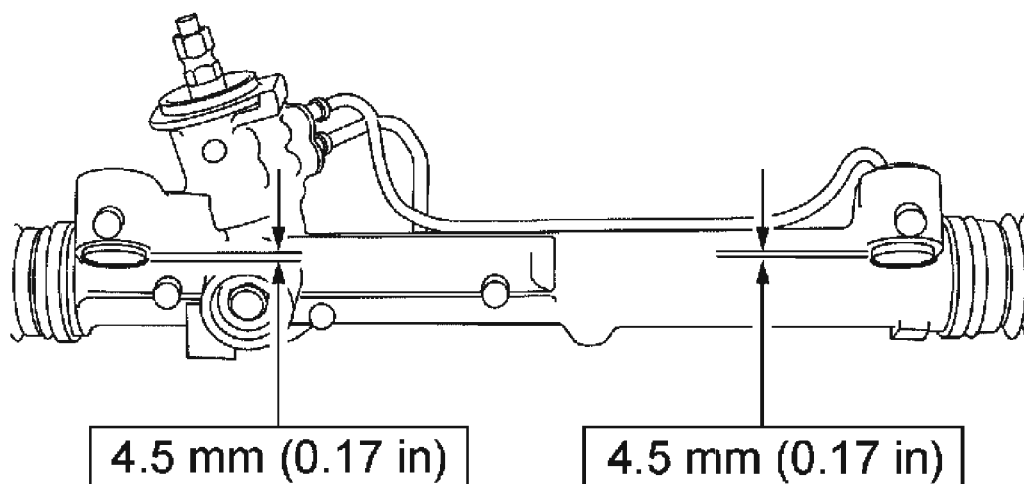


Fig. 21: Installing Steering Gear Insulator Bushings Using Special Tools
Courtesy of FORD MOTOR CO.

3. Install the steering gear. For additional information, refer to **STEERING GEAR**.