

SECTION : 6B

POWER STEERING PUMP

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SPECIFICATIONS

GENERAL SPECIFICATIONS

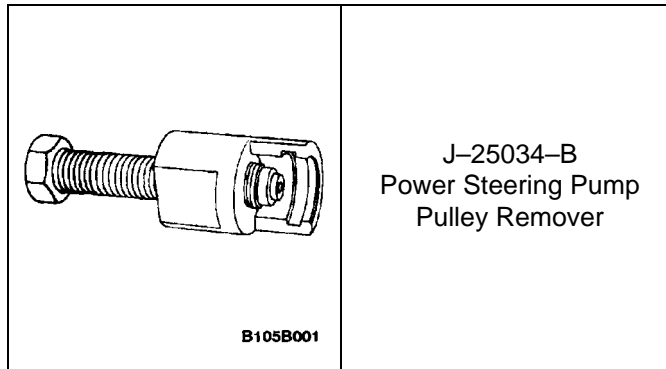
Application	Description
Lubricant	Power Steering Fluid DEXRON®-III
Pressure	7 500 kPa (1088 psi)

FASTENER TIGHTENING SPECIFICATIONS

Application	N•m	Lb-Ft	Lb-In
Accessory Mounting Bracket Bolt 35 26			-
Air Conditioning Compressor Bolts 35		26	-
Air Conditioning Compressor Rear Bracket Bolts	20	15	-
Air Conditioning Refrigerant Line Clamp Bolts	4	-	35
Air Filter Enclosure Bolts	4	-	35
High-Pressure Hose Fitting	28	21	-
Power Steering Pump Nuts	20	15	-
Power Steering Pump Bolts (Upper and Lower) 20		15	-
Power Steering Upper Bracket Link Bolts (Front and Rear)	25	18	-
Serpentine Accessory Drive Belt Tensioner Pulley Bolt	20	15	-

SPECIAL TOOLS

SPECIAL TOOLS TABLE



DIAGNOSIS

POWER STEERING PUMP DIAGNOSIS

Foaming or Milky Power Steering Fluid (Air in Fluid)

Checks	Action
Check for internal leakage in the power steering pump, causing an overflow.	Repair the internal pump leakage. Bleed the system.
Check for a low fluid level.	Repair the internal pump leakage. Bleed the system. Cold temperatures will cause the air bubbles in the system if the fluid level is low.

Low Pressure Due to Power Steering Pump

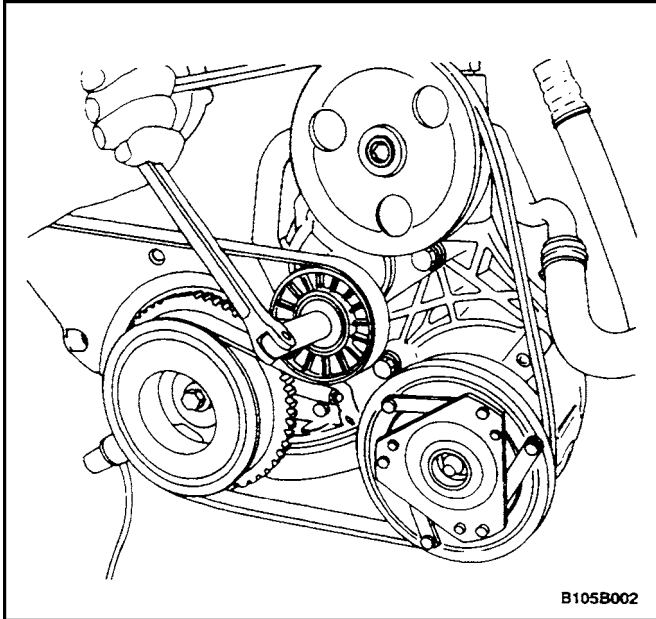
Checks	Action
Check for an external leakage of the power steering pump at the seals.	Replace the seals. Repair the leak. Bleed the system.
Check for a worn serpentine accessory drive belt.	Replace the serpentine accessory drive belt.

Low Pressure Due to Power Steering Gear

Checks	Action
Check for a scored housing bore.	Replace the housing bore.
Check for leakage at the valve rings or the seals.	Repair the leak. Bleed the system.

Groaning Noise in the Power Steering Pump

Checks	Action
Check for air in the power steering fluid.	Perform the checks listed in "Foaming or Milky Power Steering Fluid (Air in Fluid)" above.
Check for a low level of power steering fluid.	Repair any internal or external leaks. Bleed the system.
Check for a loose mounting of the power steering pump.	Tighten the pump mounting to specifications.



MAINTENANCE AND REPAIR

ON-VEHICLE SERVICE

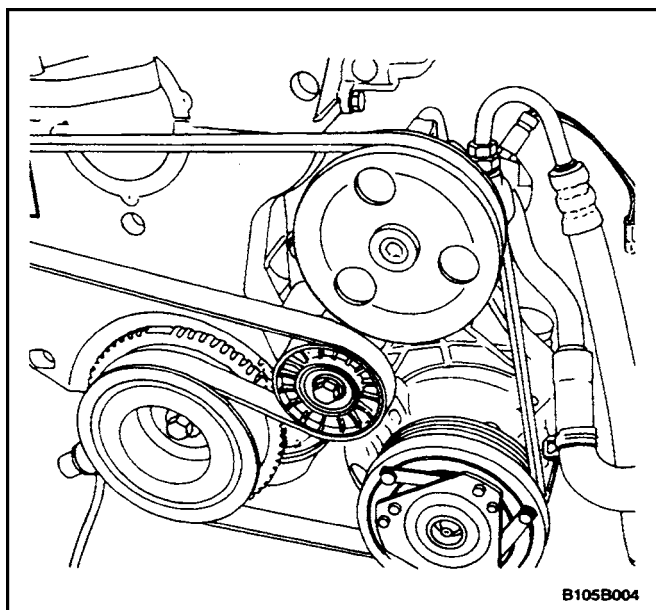
SERPENTINE ACCESSORY DRIVEBELT

Removal Procedure

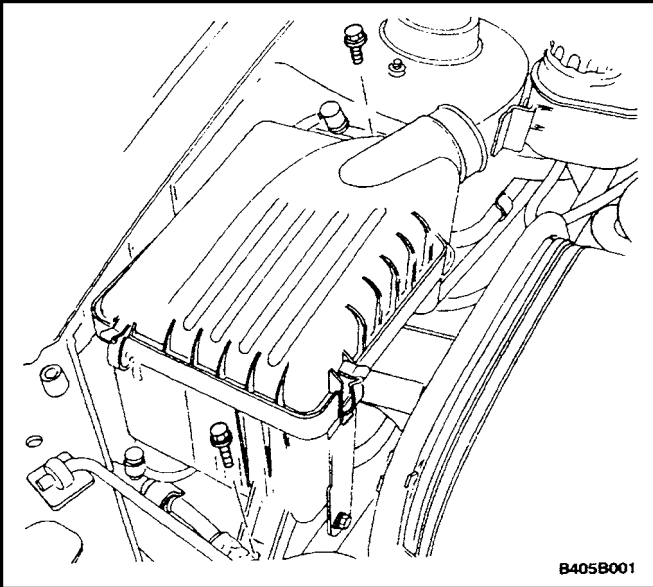
1. Remove the splash shield from the right front wheel well to gain access to the tensioner.
2. Use a wrench to turn the tensioner bolt clockwise, compressing the tensioner, and releasing the tension on the serpentine accessory drive belt.
3. Remove the serpentine accessory drive belt.

Installation Procedure

1. Use a wrench to turn the tensioner bolt clockwise, compressing the tensioner, and releasing the tension on the serpentine accessory drive belt.
2. With the wrench in place on the tensioner bolt, have an assistant loop the serpentine accessory drive belt loosely over the pulleys.



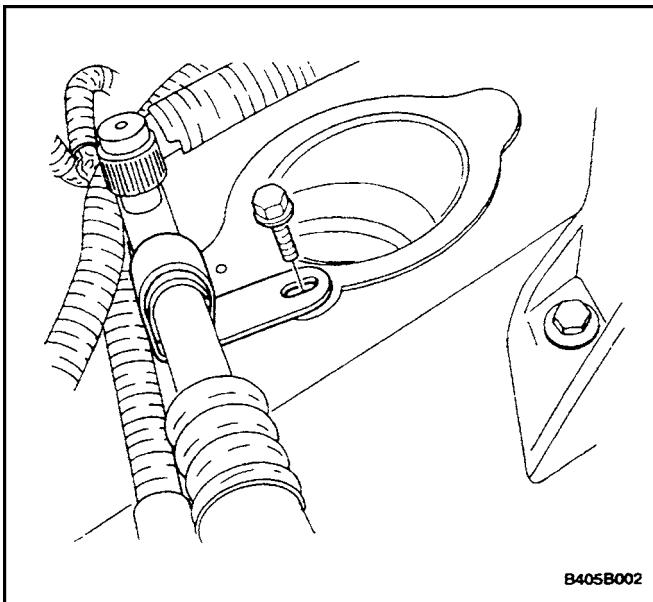
3. Slip the serpentine accessory drive belt over the tensioner.
4. Remove the wrench from the tensioner bolt and the belt will tighten itself.



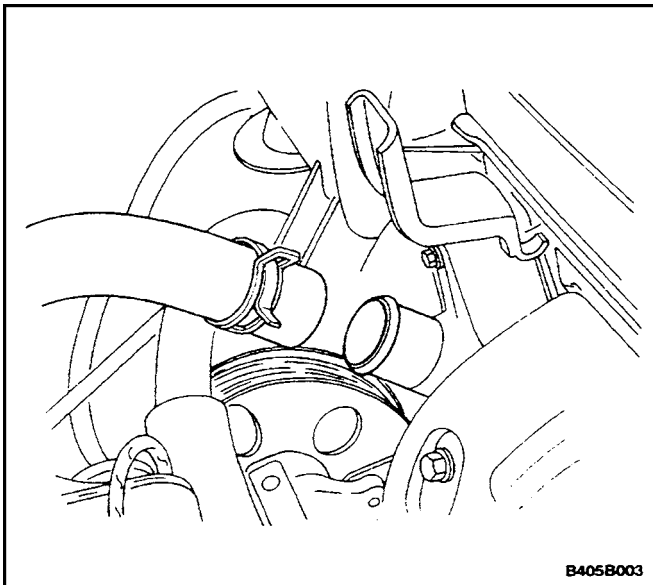
PUMP ASSEMBLY

Removal Procedure

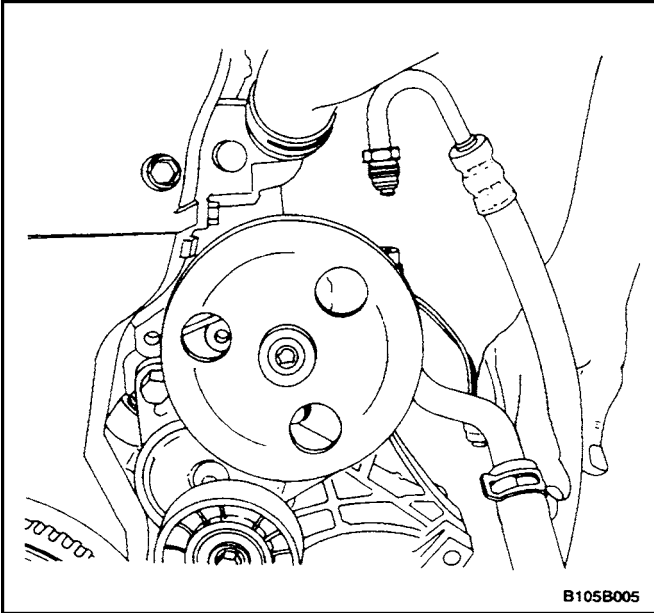
1. Remove the air filter enclosure.



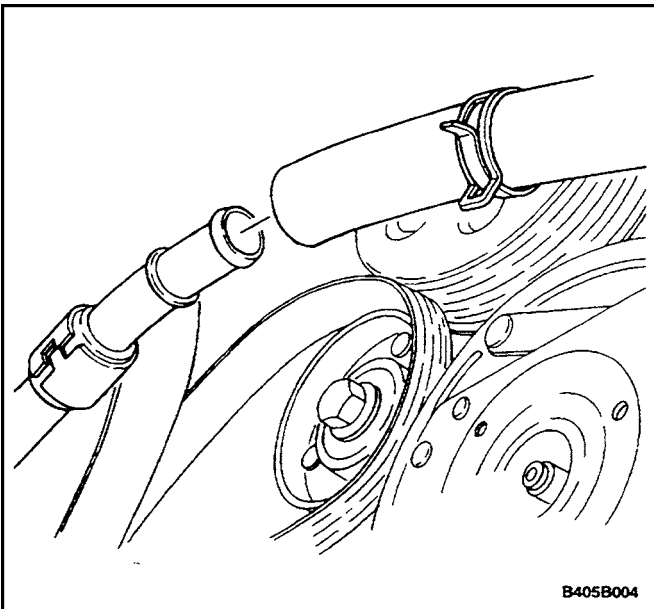
2. Remove the bolt from the A/C refrigerant line clamp.



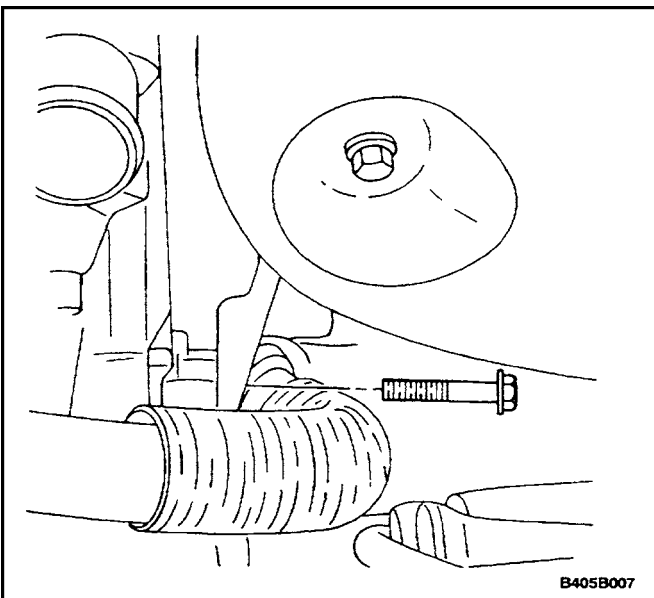
3. Position a drain pan to catch coolant that will drain from the radiator drain cock.
4. partially open the coolant reservoir cap to vent the system. Open the radiator drain cock and drain the coolant until it is below the level of the thermostat opening. Refer to *Section 1D, Engine Cooling*.
5. Place shop rags in position to absorb spills from the coolant hose and the thermostat housing.
6. Remove the coolant hose from the thermostat housing.



7. Remove the thermostat housing. Refer to *Section 1D, Engine Cooling*.
8. Position a drain pan to catch the fluid that will drain from the power steering pump hoses.
9. Disconnect the high-pressure hose from the power steering pump.

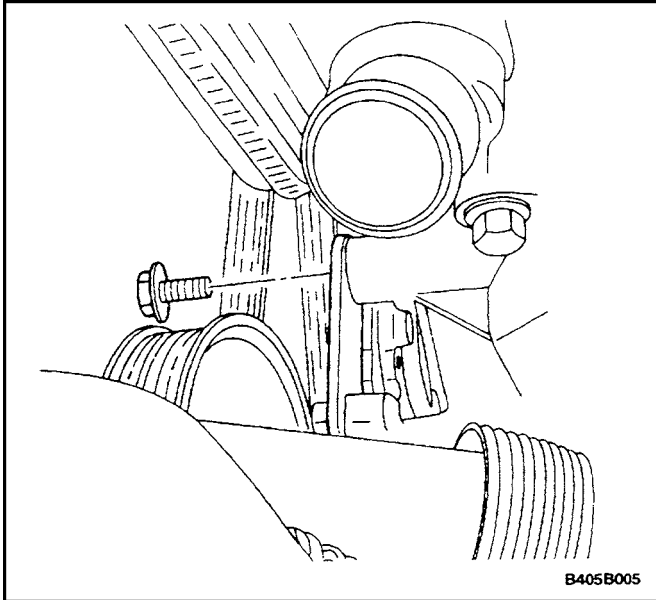


10. Remove the serpentine accessory drive belt. Refer to "Serpentine Accessory Drive Belt" in this section.
11. Raise and suitably support the vehicle.
12. Remove the engine under cover. Refer to *Section 9N, Frame and Underbody*.
13. Remove the rubber supply hose from the metal supply pipe.

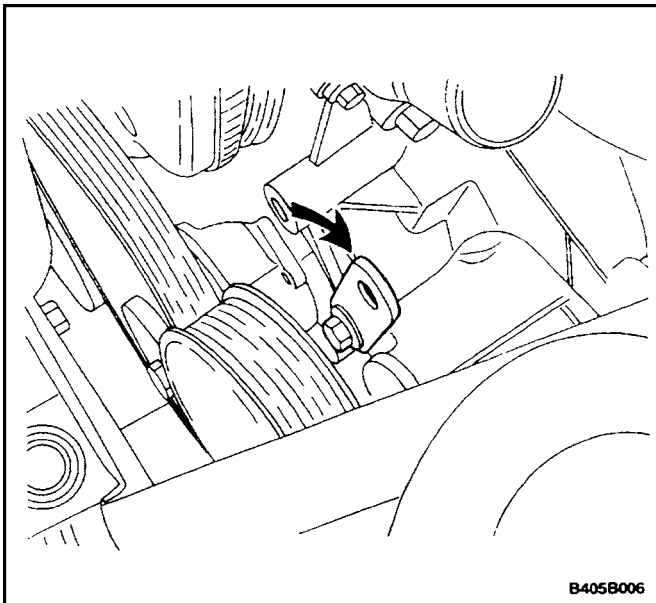


14. Remove the lower bolt from the pump bracket.

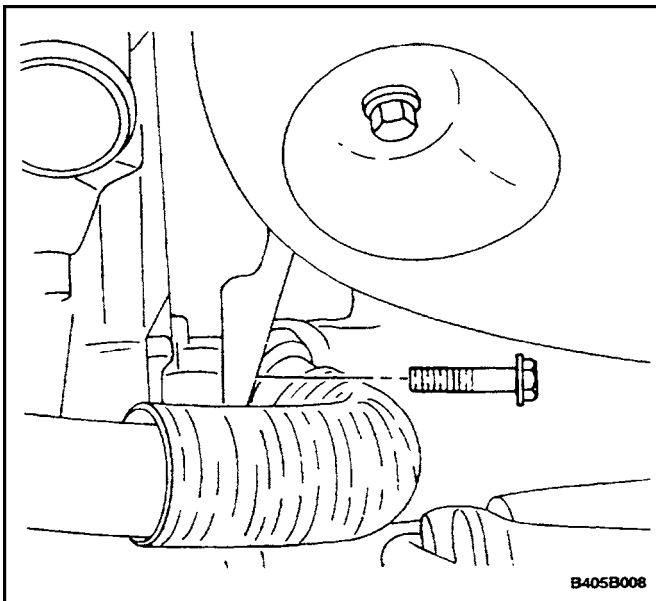
6B – 6 POWER STEERING PUMP



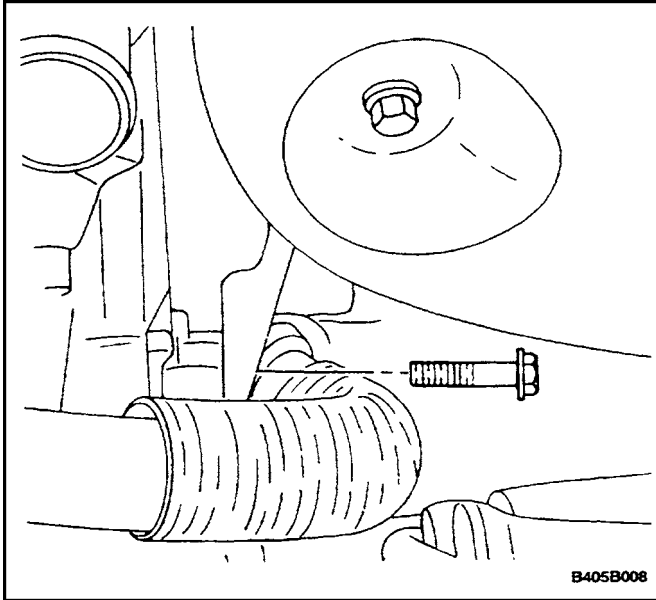
15. Lower the vehicle.
16. Remove the bolt from the rear hole of the upper bracket link.



17. Loosen, but do not remove, the bolt at the front of the upper bracket link.
18. Swing the upper bracket link to a vertical position to remove the pump easier.



19. Remove the upper bolt from the pump bracket.
20. Remove the pump.

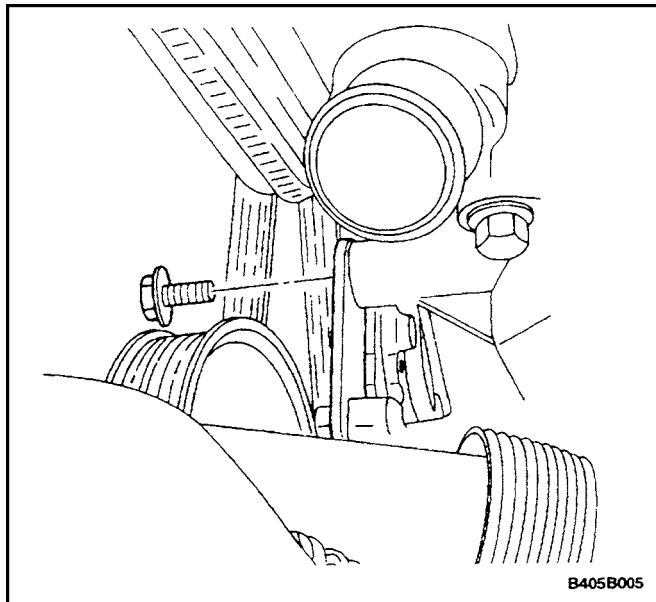


Installation Procedure

1. Lower the pump into the vehicle, to a point just below its final mounting position.
2. Install the thermostat housing. Refer to *Section 1D, Engine Cooling*.
3. Install the pump to the pump bracket.
4. Install the upper bolt to the pump bracket.

Tighten

Tighten the power steering pump upper bolt to 20 N•m (15 lb–ft).



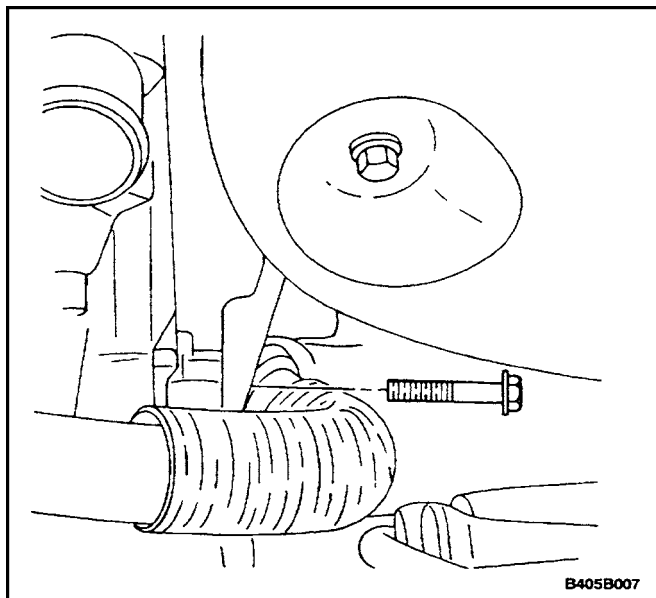
5. Swing the upper bracket link to its original position.
6. Install the bolt to the rear hole of the upper bracket link.

Tighten

Tighten the rear power steering upper bracket link bolt to 25 N•m (18 lb–ft).

Tighten

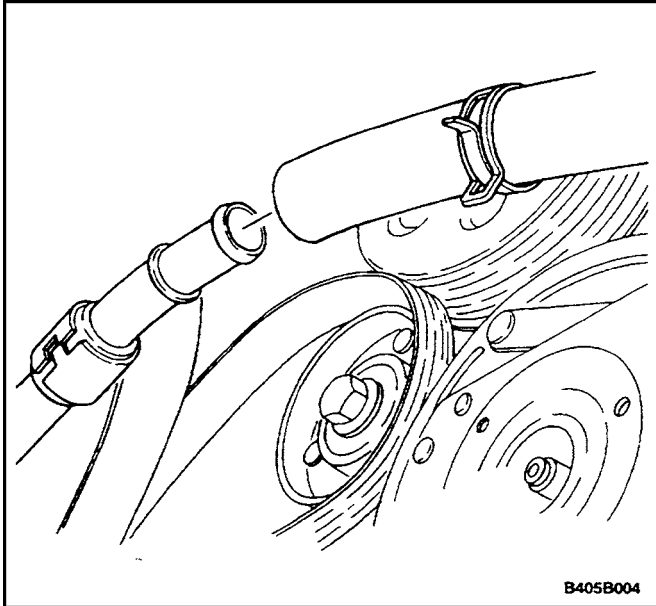
Tighten the front power steering upper bracket link bolt (not removed) to 25 N•m (18 lb–ft).



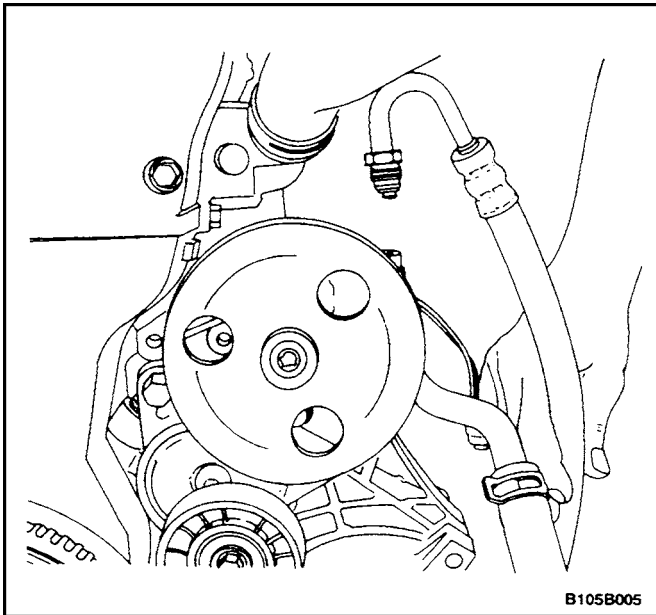
7. Raise and suitably support the vehicle.
8. Install the lower bolt to the pump bracket.

Tighten

Tighten the power steering pump lower bolts to 20 N•m (15 lb–ft).



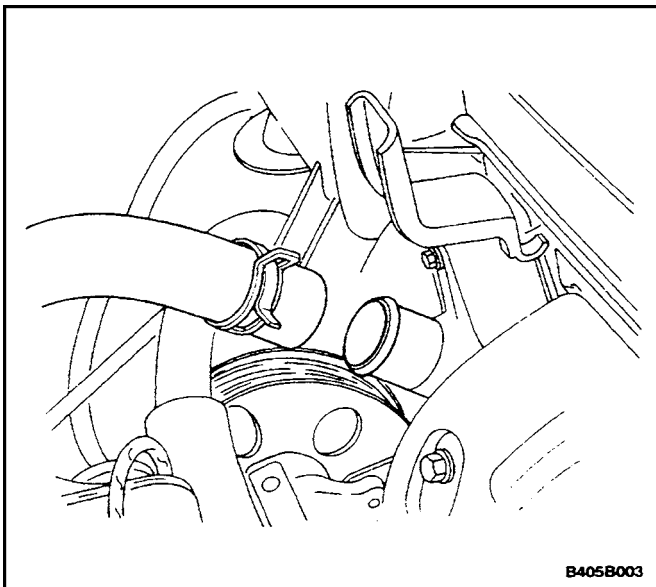
9. Install the rubber supply hose to the metal supply pipe.



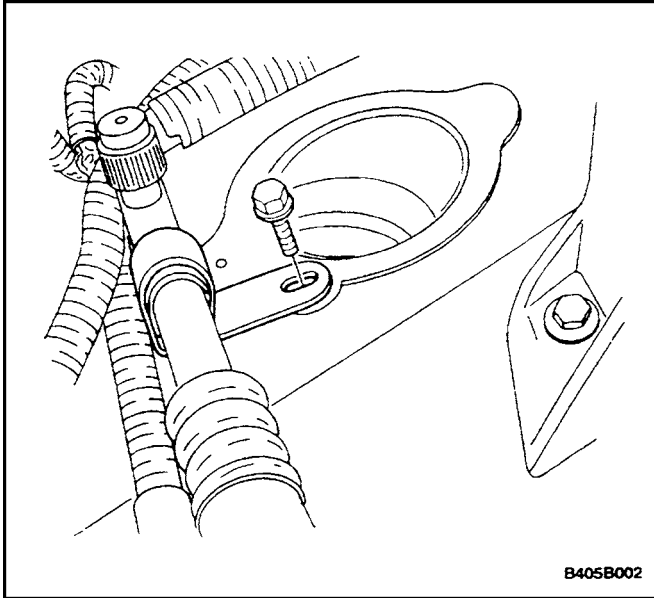
10. Install the engine under cover. Refer to *Section 9N, Frame and Underbody*.
11. Lower the vehicle.
12. Install the serpentine accessory drive belt. Refer to *"Serpentine Accessory Drive Belt"*
13. Connect the high-pressure hose to the power steering pump.

Tighten

Tighten the high-pressure hose fitting to 28 N•m (21 lb–ft).



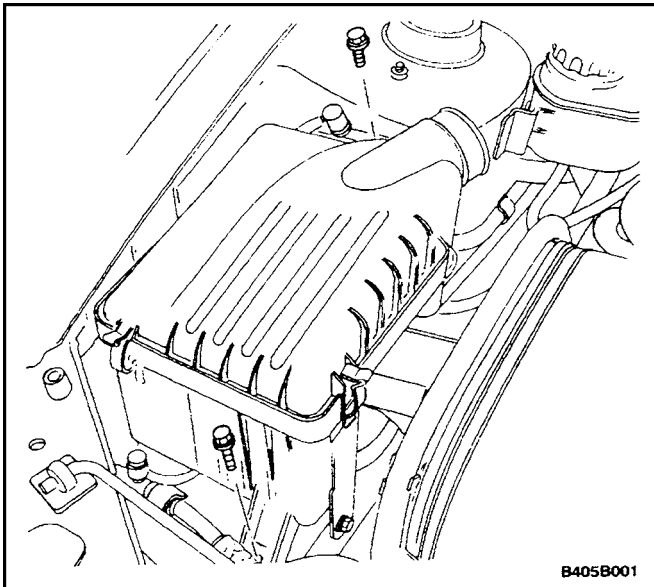
14. Install the coolant hose to the thermostat housing.



15. Install the bolt to the A/C refrigerant line clamp.

Tighten

Tighten the A/C refrigerant line clamp bolt to 4 N•m (35 lb–ft).

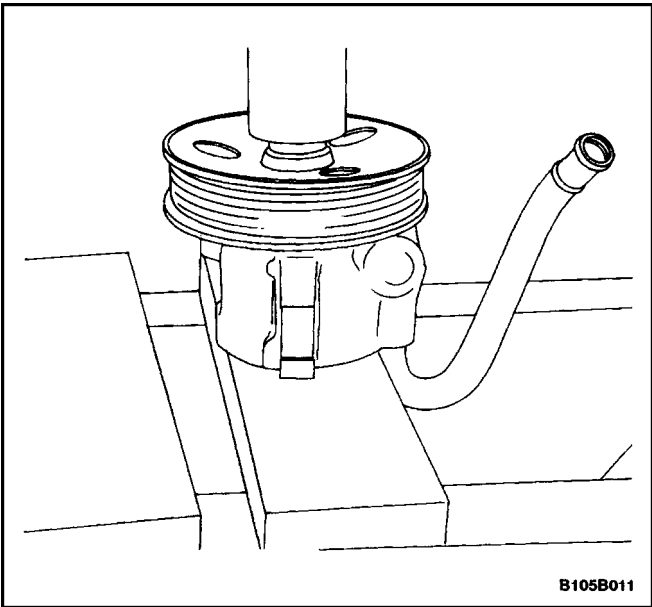
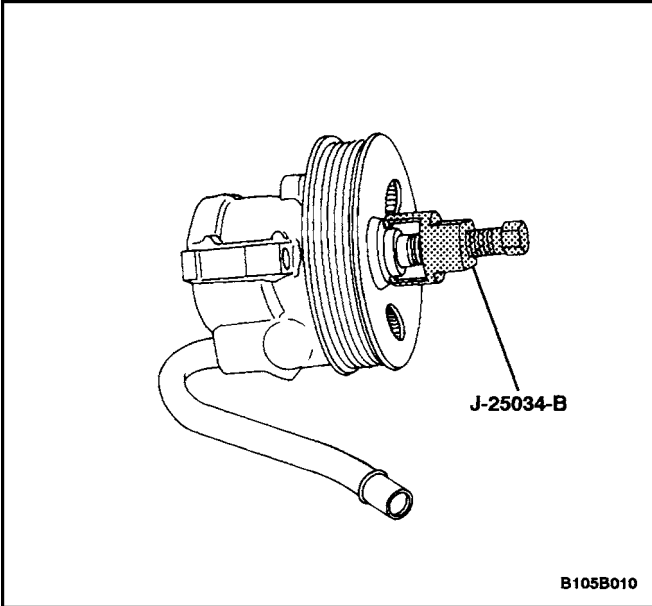


16. Install the air filter enclosure.

Tighten

Tighten the air filter enclosure bolts to 4 N•m (35 lb–in).

17. Refill the engine coolant and tighten the coolant reservoir cap.
18. Refill the power steering fluid. Refer to *Section 6A, Power Steering System*.
19. Bleed the power steering system. Refer to *Section 6A, Power Steering System*.



UNIT REPAIR

PUMP

Tools Required

J 25034–B Power Steering Pump Pulley Remover

Disassembly Procedure

Important : The power steering pump in this vehicle is not serviceable. Replace, do not repair, a faulty power steering pump. Refer to "Power Steering Pump Diagnosis" in this section.

1. For vehicles equipped with the EVO only, remove the power steering pump from the vehicle. Refer to "Pump Assembly" in this section.
2. Using the power steering pump pulley remover J 25034–B, press the power steering pump from the pulley.

Assembly Procedure

1. Press the power steering pump pulley onto the power steering pump using a hydraulic press.
2. Install the power steering pump onto the vehicle. Refer to "Pump Assembly" in this section.

GENERAL DESCRIPTION AND SYSTEM OPERATION

POWER STEERING PUMP

The power steering pump is a multivaned hydraulic pump. The serpentine accessory drive belt on the engine drives the power steering pump.

The power steering pump provides the hydraulic pressure to the power steering gear.

The power steering gear uses the hydraulic pressure to assist in steering the vehicle.

The power steering system uses a remote reservoir in order to make available more space in the engine compartment.