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**Document ID# 713637**  
**2001 Cadillac Seville**

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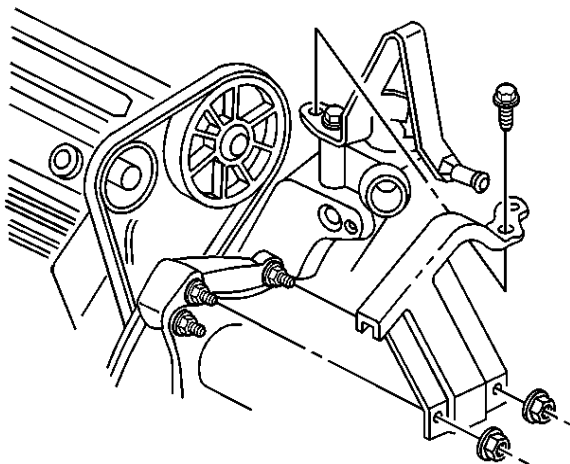
# Water Pump Replacement

## Tools Required

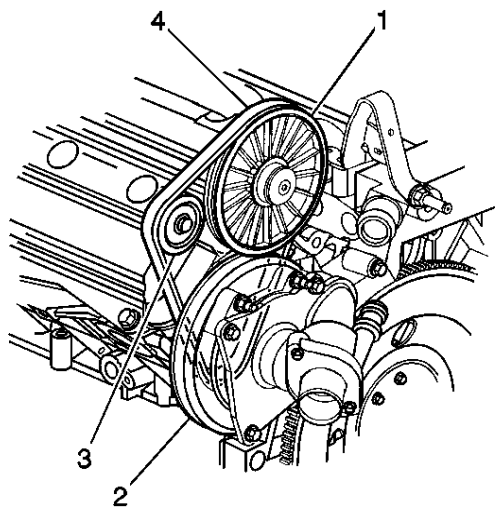
1. [J 38816-A](#) Water Pump Remover & Installer
2. [J 38185](#) Hose Clamp Pliers

## Removal Procedure

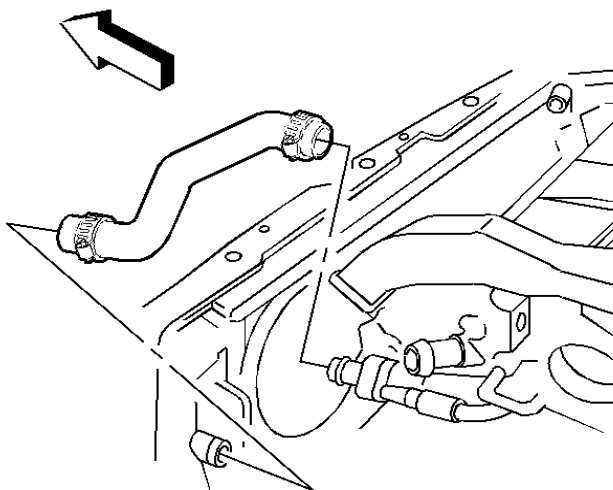
1. Drain the cooling system. Refer to [Draining and Filling Cooling System](#) .
2. Remove the upper filler panel. Refer to [Filler Panel Replacement - Upper](#) in Body Front End.
3. Remove the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#) in Engine Controls-4.6L.
4. Remove the secondary AIR injection control valve. Refer to [Secondary Air Injection \(AIR\) Shut-Off Valve Replacement - Bank 2](#) in Engine Controls-4.6L.
5. Remove the oil level indicator tube nut.



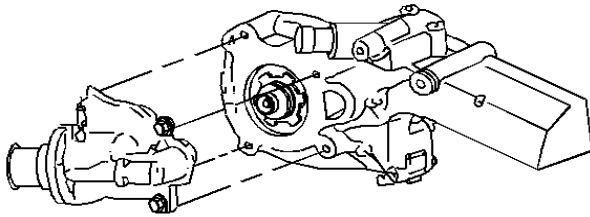
6. Remove the water pump belt shield fasteners.  
Remove the water pump belt shield.



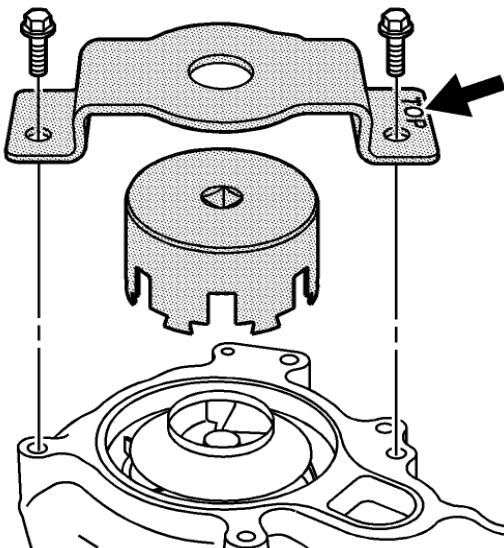
7. Remove the water pump drive belt (4).



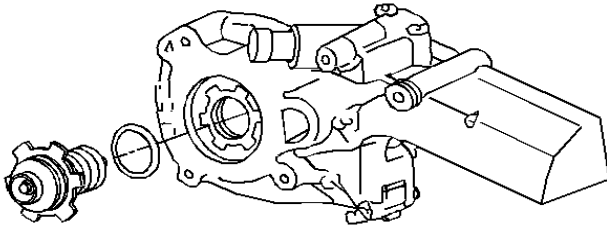
8. Position the [J 38185](#) to the clamp in order to remove the radiator outlet hose from the thermostat housing.



9. Remove the water pump cover bolts.
10. Remove the water pump cover.
11. Disconnect the heater return hose.

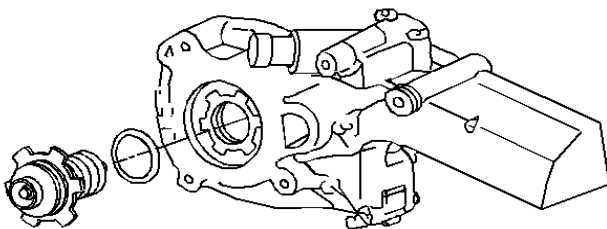


12. Position the [J 38816-A](#) to the water pump locking ears.
13. Fasten the support plate to the water housing crossover, to ensure proper engagement of the tool to the water pump locking ears.
14. Using the [J 38816-A](#) , turn the pump clockwise in order to remove the pump from the housing.
15. Remove the support plate from the water housing crossover.

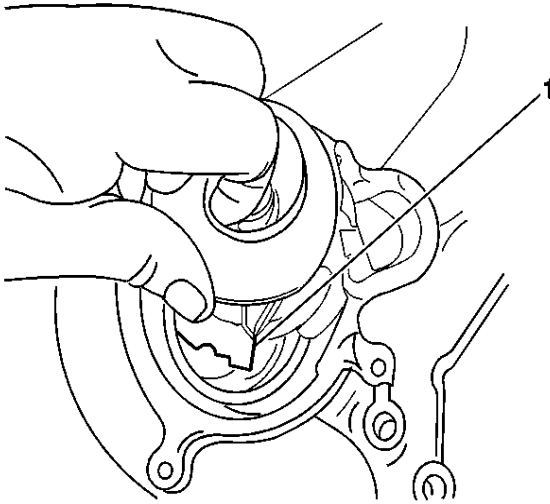


16. Remove the water pump from the vehicle.
17. Remove the seal from the water crossover.
18. Clean the sealing surfaces of the water housing crossover and the pump cover.
19. Clean and inspect the water pump. Refer to [Water Pump Cleaning and Inspection](#) in Engine Mechanical 4.6L-Unit Repair.

#### Installation Procedure



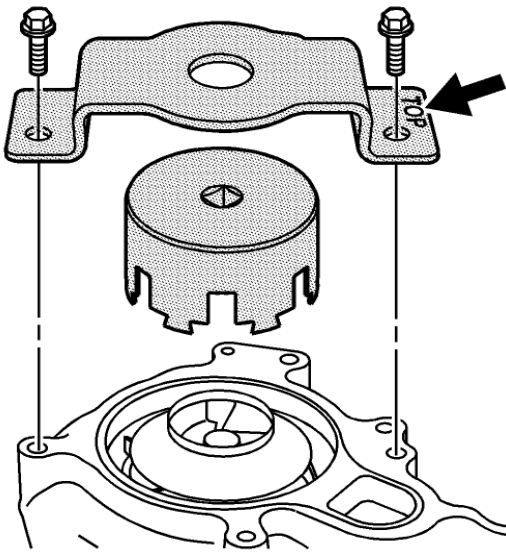
1. Insert the seal into the recessed portion of the water crossover.



### Important

The notched locking ear (1) must be in the 7 o'clock position.

2. Index the water pumps locking ears with the tangs in the water crossover.



3. Position the [J 38816-A](#) to the water pump locking ears.
4. Fasten the support plate to the water housing crossover, to ensure proper engagement of the tool to the water pump locking ears.

### Notice

Use the correct fastener in the correct location. Replacement fasteners must be the correct

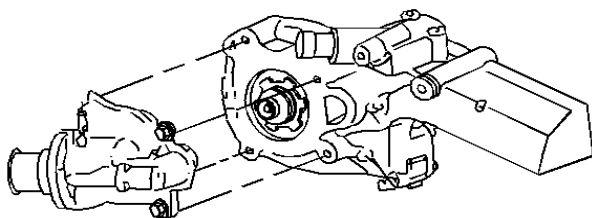
part number for that application. Fasteners requiring replacement or fasteners requiring the use of thread locking compound or sealant are identified in the service procedure. Do not use paints, lubricants, or corrosion inhibitors on fasteners or fastener joint surfaces unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems.

5. Turn the [J 38816-A](#) counterclockwise.

**Tighten**

Tighten the water pump to 100 N·m (74 lb ft).

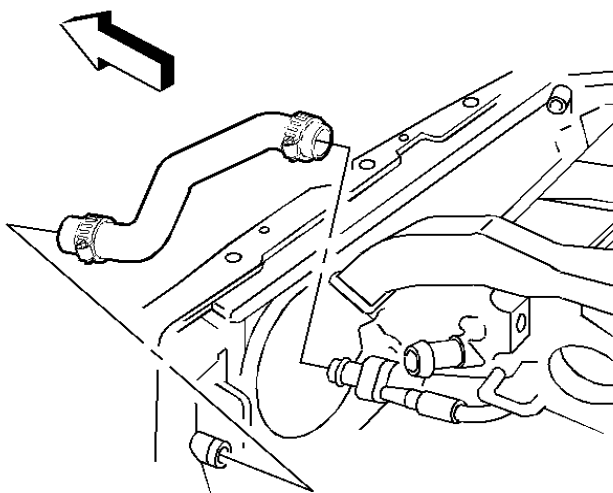
6. Remove the support plate from the water housing crossover.



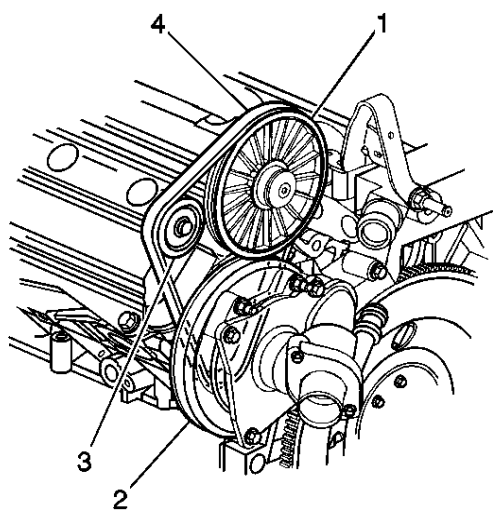
7. Connect the water pump cover to the heater return hose.
8. Install the water pump cover to the water housing crossover.
9. Install the water pump cover bolts.

**Tighten**

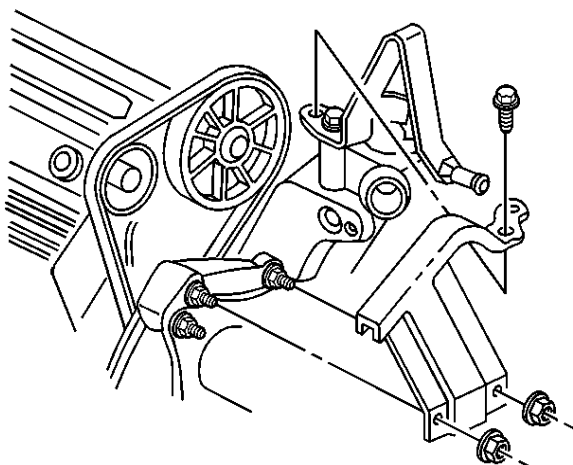
Tighten the water pump cover bolts to 10 N·m (89 lb in).



10. Position the [J 38185](#) to the clamp in order to connect the radiator outlet hose to the thermostat housing.



11. Install the water pump drive belt (4).



12. Place the water pump belt shield in position.
13. Install the water pump belt shield fasteners.

**Tighten**

Tighten the water pump belt shield fasteners to 10 N·m (89 lb in).

14. Install the oil level indicator tube nut.

**Tighten**

Tighten the oil level indicator tube nut to 10 N·m (89 lb in).

15. Install the secondary AIR injection control valve. Refer to [Secondary Air Injection \(AIR\) Shut-Off Valve Replacement - Bank 2](#) in Engine Controls-4.6L.
16. Install the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#) in Engine Controls-4.6L.
17. Install the upper filler panel. Refer to [Filler Panel Replacement - Upper](#) in Body Front End.
18. Fill the cooling system. Refer to [Draining and Filling Cooling System](#) .

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