


 Applies To: **2006 Civic** – See VEHICLES AFFECTED

April 6, 2007

Engine Oil Leaks and Power Steering Fluid Leak

(Supersedes 06-020, dated June 20, 2006, to update the information marked by the black bars)

SYMPTOM

The engine leaks oil, or the power steering inlet pipe leaks fluid.

PROBABLE CAUSE

Some engine block sealing bolts may have been mismanufactured, causing the engine oil to leak when the engine is running. The power steering inlet pipe may have been mismanufactured, causing a power steering leak.

VEHICLES AFFECTED

2006 Civic

4-Door – From VIN 1HGFA1...6L000001
thru 1HGFA1...6L058027

From VIN 2HGFA1...6H500001
thru 2HGFA1...6H505400

From VIN JHMFA1...6S000001
thru JHMFA1...6S005042

2-Door – From VIN 2HGFG1...6H500001
thru 2HGFG1...6H523216

CORRECTIVE ACTION

Replace the affected engine block sealing bolt(s) and washer(s), and/or replace the power steering pump inlet pipe, O-ring, and hose clamp.

PARTS INFORMATION

Drive Belt Auto Tensioner Bolt:
P/N 96700-10055-18, H/C 8114506

Sealing Bolt (24 mm):
P/N 11107-RNA-A00, H/C 8160657

Sealing Washer (24 mm):
P/N 11107-PWA-300, H/C 7006919

Sealing Bolt (20 mm):
P/N 11105-RNA-A00, H/C 8160632

Washer (20 mm):
P/N 11106-RNA-A00, H/C 8160640

Transmission End Crankshaft Oil Seal:
P/N 91214-RTA-004, H/C 8113060

Inlet Pipe:
P/N 56123-RNA-A01, H/C 8051088

O-Ring:
P/N 91345-PAA-A01, H/C 5430681

Hose Clamp:
P/N 19513-REA-Z01, H/C 8570624

WARRANTY CLAIM INFORMATION

In warranty: The normal warranty applies.

OP#	Description	FRT
111155	Repair Procedure A	0.9
111156	Repair Procedure B (A/T-equipped)	4.9
111157	Repair Procedure B (M/T-equipped)	5.1
111158	Repair Procedure C	1.2
111159	Repair Procedure D	1.0
512116	Repair Procedure E (Submit a separate warranty claim for this repair.)	0.4

Failed Part: P/N 11107-RNA-A00,
H/C 8160657
(Repair Procedures A and B)

P/N 11106-RNA-A00,
H/C 8160640
(Repair Procedures C and D)

P/N 56123-RNA-A01,
H/C 8051088
(Repair Procedure E)

Defect Code: 07701

Symptom Code: 05101

Skill Level: Repair Technician

Out of warranty: Any repair performed after warranty expiration may be eligible for goodwill consideration by the District Parts and Service Manager or your Zone Office. You must request consideration, and get a decision, before starting work.

DIAGNOSIS

The oil leaks can be in up to these five places:

- The 24-mm sealing bolt on the timing chain end of the engine.



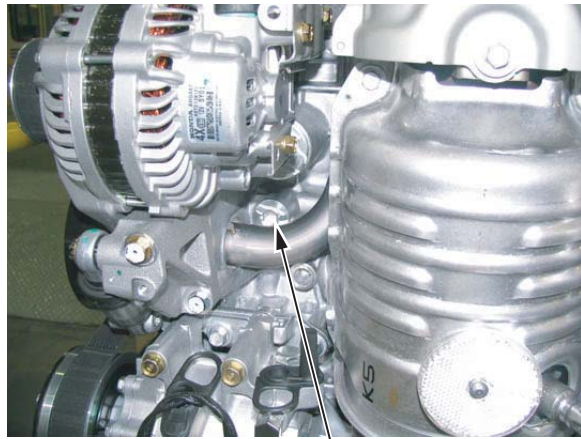
24-mm SEALING BOLT

- The 24-mm sealing bolt on the transmission end of the engine.



24-mm SEALING BOLT

- The 20-mm sealing bolt behind the alternator.



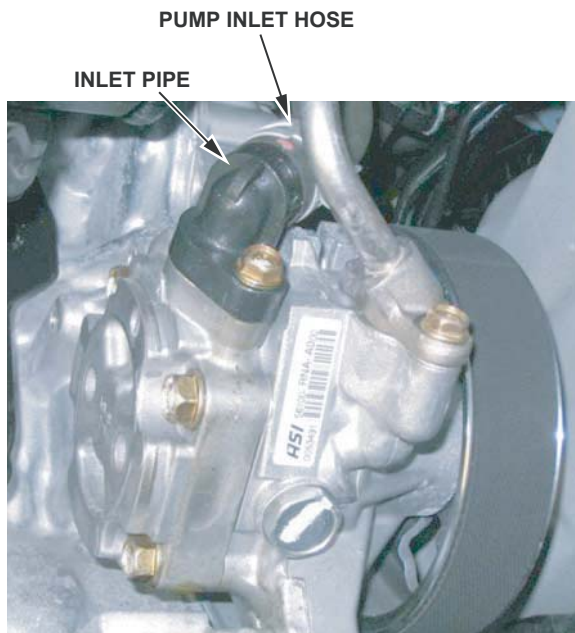
20-mm SEALING BOLT

- The 20-mm sealing bolt behind the power steering pump.



20-mm SEALING BOLT

- The inlet pipe on the power steering pump.



Inspect the leaking area(s), then use the chart to determine the appropriate repair procedures.

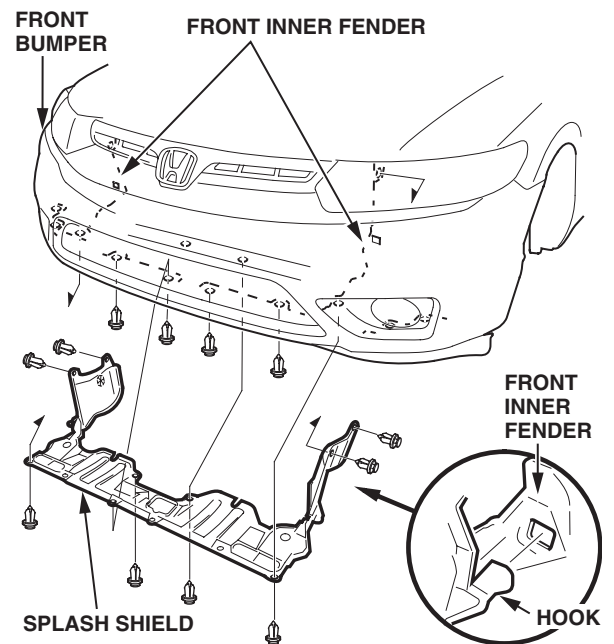
Repair Procedure	Description
A	Replace the 24-mm sealing bolt on the timing chain end of the engine. From VIN 1HGFA1...6L000001 thru 1HGFA1...6L020977 From VIN 2HGFA1...6H500001 thru 2HGFA1...6H502850 From VIN 2HGFG1...6H500001 thru 2HGFG1...6H520655 From VIN JHMFA1...6S000001 thru JHMFA1...6S005042
B	Replace the 24-mm sealing bolt on the transmission end of the engine. From VIN 1HGFA1...6L000001 thru 1HGFA1...6L020977 From VIN 2HGFA1...6H500001 thru 2HGFA1...6H502850 From VIN 2HGFG1...6H500001 thru 2HGFG1...6H520655 From VIN JHMFA1...6S000001 thru JHMFA1...6S005042
C	Replace the 20-mm sealing bolt behind the alternator. From VIN 1HGFA1...6L000001 thru 1HGFA1...6L025717 From VIN 2HGFA1...6H500001 thru 2HGFA1...6H505400 From VIN 2HGFG1...6H500001 thru 2HGFG1...6H523216 From VIN JHMFA1...6S000001 thru JHMFA1...6S005042

Repair Procedure	Description
D	Replace the 20-mm sealing bolt behind the power steering pump. From VIN 1HGFA1...6L000001 thru 1HGFA1...6L025717 From VIN 2HGFA1...6H500001 thru 2HGFA1...6H505400 From VIN 2HGFG1...6H500001 thru 2HGFG1...6H523216 From VIN JHMFA1...6S000001 thru JHMFA1...6S005042
E	Replace the inlet pipe on the power steering pump. From VIN 1HGFA1...6L000001 thru 1HGFA1...6L058027 From VIN 2HGFA1...6H500001 thru 2HGFA1...6H516515 From VIN 2HGFG1...6H500001 thru 2HGFG1...6H501591 From VIN JHMFA1...6S000001 thru JHMFA1...6S005042

NOTE: The sealing bolts leak very little oil so you can miss the oil leak if you don't look carefully. Often the oil runs down the engine and accumulates in other places, leading to misdiagnosis and failure to repair the leak.

REPAIR PROCEDURE A - REPLACE THE 24-MM SEALING BOLT ON THE TIMING CHAIN END OF THE ENGINE

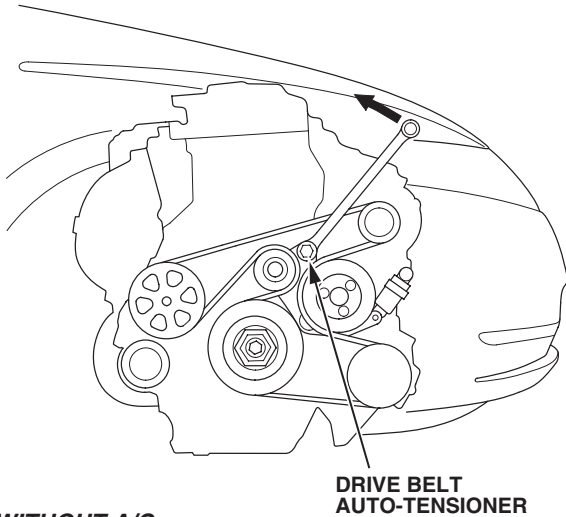
1. Raise the vehicle on a hoist.
2. Remove the right front tire.
3. Remove the splash shield.



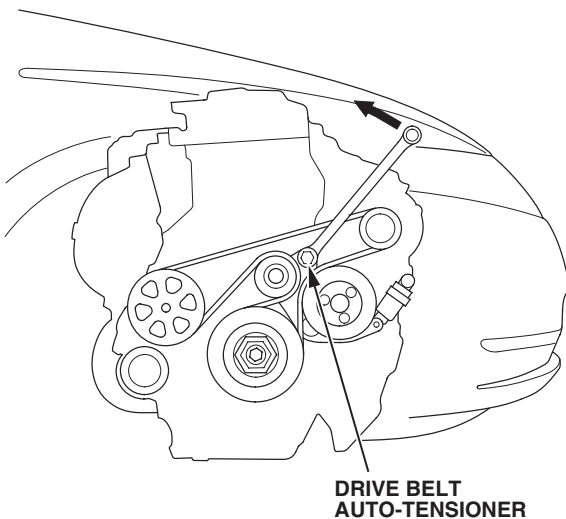
4. Remove the drive belt:
 - Set a long-handled, box-end wrench on the drive belt auto-tensioner from above the engine.
 - Slowly turn the wrench in the direction shown, then remove the drive belt.

NOTE: This is a hydraulic type auto-tensioner; you must turn the wrench slowly to avoid damaging the auto-tensioner.

WITH A/C

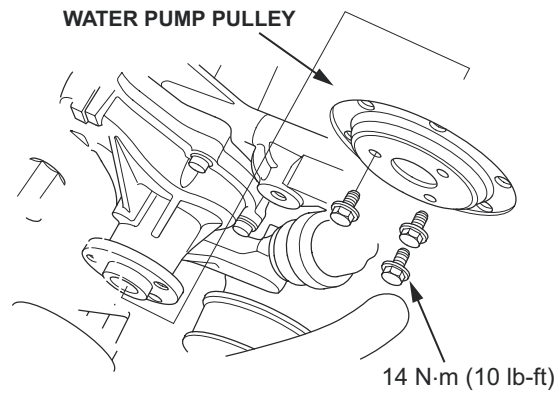


WITHOUT A/C

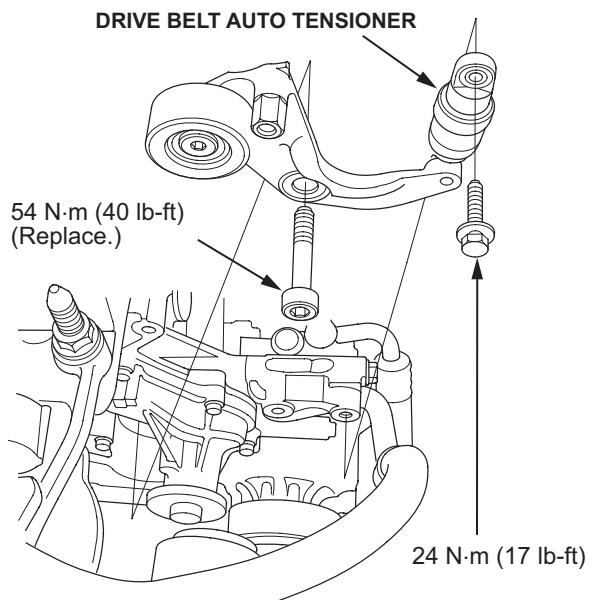


5. Remove the crankshaft pulley:
 - Refer to page 6-10 of the *2006–07 Civic Service Manual*, or
 - Online, enter keyword **PULLEY**, then select **Crankshaft Pulley Removal and Installation** from the list.

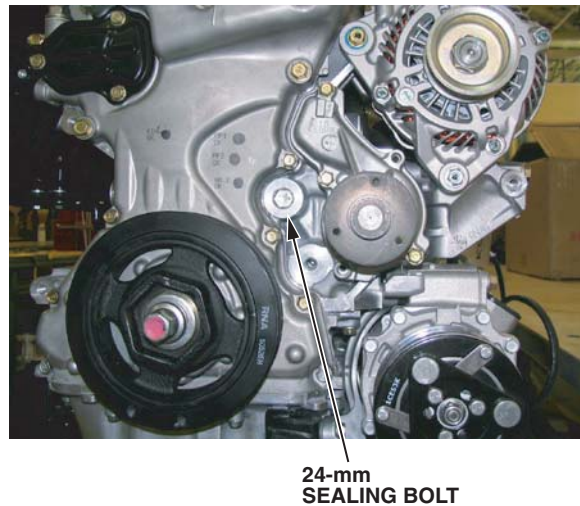
6. Remove the water pump pulley.



7. Remove the drive belt auto tensioner assembly, and store it vertically to prevent oil leakage that may change the dampening specification.



8. Remove the 24-mm sealing bolt and its washer.



9. Clean the sealer out of the block threads by running a pick tool or a toothbrush along the threads.
NOTE: Pull any material from the threads out of the engine block. **Do not** push it in.
10. Coat the sealing surface on the engine block with clean engine oil.
11. Install a new sealing bolt and washer. Torque the sealing bolt to **60 N·m (45 lb-ft)**.
12. Reinstall the drive belt auto tensioner, the water pump pulley, and the drive belt in the reverse order of removal.

NOTE:

- Use a new bolt to install the drive belt auto tensioner.
- The bolt is located in a difficult location. Use Snap-on 8 mm hex socket (T/N FAM8E) and 3/8 flex ratchet torque wrench (T/N QD2FR75), or equivalent, to properly torque the bolt.

REPAIR PROCEDURE B - REPLACE THE 24-MM BOLT ON THE TRANSMISSION END OF THE ENGINE

NOTE: Because it is difficult to determine if the transmission end crankshaft oil seal or the sealing bolt is causing the leak, replace both parts.

1. M/T models: Remove the transmission.
 - Refer to page 13-7 of the service manual, or
 - Online, enter keywords **TRANS REMOV** and select **Manual Transmission Removal** from the list.

A/T models: Remove the transmission.

 - Refer to page 14-236 of the service manual, or
 - Online, enter keywords **TRANS REMOV** and select **Automatic Transmission Removal** from the list.
2. M/T models: Remove the pressure plate, the clutch disc, and the flywheel.
 - Refer to page 12-17 of the service manual, or
 - Online, enter keywords **PRESS PLATE** and select **Clutch Replacement** from the list.

A/T models: Remove the drive plate.

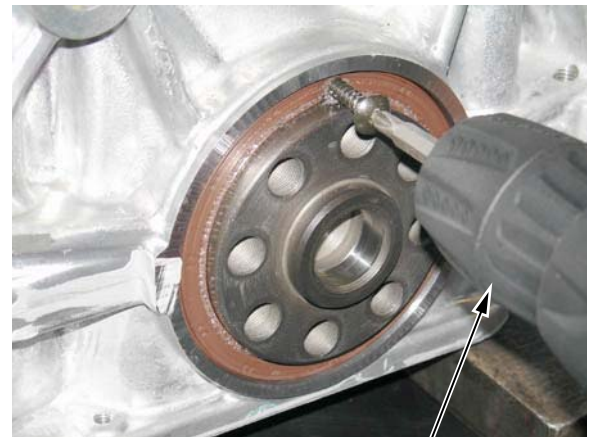
 - Refer to page 14-256 of the service manual, or
 - Online, enter keywords **DRIVE PLATE** and select **Drive Plate Removal and Installation** from the list.

3. Remove the transmission end crankshaft oil seal:
 - If you can see the leak, mark the location with a paint marker before removing the seal.
 - Remove the seal:
 - Use a hammer to firmly tap a small, 4 x 20-mm Phillips-head sheet metal screw into the metal part of the seal. If you marked the leak location, make sure you tap the screw into the seal directly across from the paint mark.



TRANSMISSION
END CRANKSHAFT
OIL SEAL

- Use a cordless screwdriver or another suitable tool to firmly drive the screw into the oil seal so it won't come out.



CORDLESS DRILL
(Carefully drive in the screw.)

- Use a pair of diagonal cutters to grip the screw under its head. While carefully prying up with the cutters, grab the screw with your other hand and gently pull out the seal.

DIAGONAL CUTTERS
(Pry out oil seal.)



- Slip the seal (with the screw attached) into a resealable plastic bag. Avoid touching any surfaces that may have contamination on them.
- Tag the plastic bag, and set it on the warranty parts shelf.

- Clean the oil off the engine.
- Install a new transmission end crankshaft oil seal:
 - Refer to page 7-33 of the service manual, or
 - Online, enter the keywords **TRANS SEAL** and select **Transmission End Crankshaft Oil Seal Installation - in car** from the list.
- Remove the 24-mm sealing bolt and its washer.



24-mm SEALING BOLT

- Clean the sealer out of the block threads by running a pick tool or a toothbrush along the threads.

NOTE: Pull any material from the threads out of the engine block. **Do not** push it in.
- Coat the sealing surface on the engine block with clean engine oil.

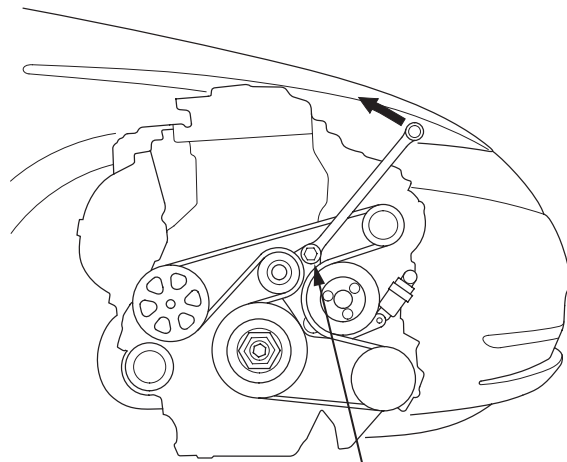
- Install a new sealing bolt and washer. Torque the sealing bolt to **54 N·m (40 lb-ft)**.
- Reinstall the transmission:
 - Refer to page 13-13 (M/T models), or 14-246 (A/T models) of the service manual, or
 - Online, enter keywords **TRANS INSTALL**, and select **Manual Transmission Installation** (M/T models) or **Automatic Transmission Installation** (A/T models) from the list.

REPAIR PROCEDURE C - REPLACE THE 20-MM SEALING BOLT BEHIND THE ALTERNATOR

- Remove the drive belt:
 - Set a long-handled, box-end wrench on the drive belt auto-tensioner from above the engine.
 - Slowly turn the wrench in the direction shown, then remove the drive belt.

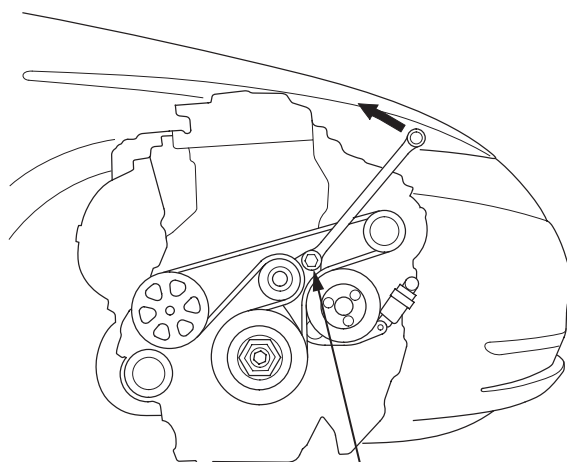
NOTE: This is a hydraulic type auto-tensioner; you must turn the wrench slowly to avoid damaging the auto-tensioner.

WITH A/C



**DRIVE BELT
AUTO-TENSIONER**

WITHOUT A/C



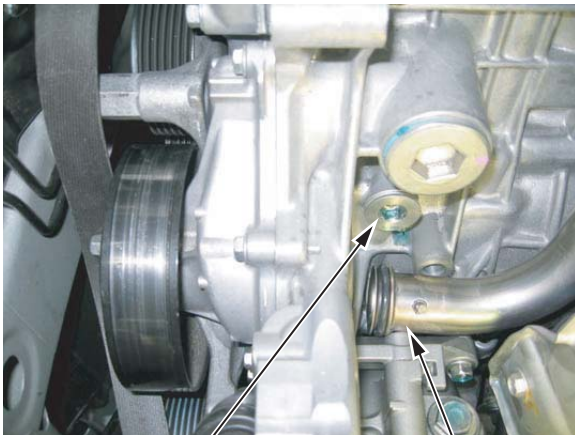
**DRIVE BELT
AUTO-TENSIONER**

2. Remove the alternator. Do not disconnect its electrical connections, or damage the wires:
 - Refer to page 4-44 of the service manual, or
 - Online, enter keyword **ALT**, and select **Alternator Removal and Installation** from the list.
3. Drain the engine coolant.
4. Remove the EGR pipe from the thermostat housing.



EGR PIPE THERMOSTAT HOUSING

5. Remove the EGR pipe and thermostat housing from the cylinder head.
6. Disconnect the water pipe, then lower it so you can access the 20-mm sealing bolt.



20-mm SEALING BOLT WATER PIPE

7. Remove the original sealing bolt and its washer.
8. Clean the sealer out of the block threads by running a pick tool or a toothbrush along the threads.

NOTE: Pull any material from the threads out of the engine block. Do not push it in.
9. Coat the sealing surface on the engine block with clean engine oil.
10. Install a new sealing bolt and washer. Torque the sealing bolt to **34 N.m (25 lb-ft)**.
11. Reinstall the parts in the reverse order of removal.
12. Refill the radiator, then bleed the cooling system.

REPAIR PROCEDURE D - REPLACE THE 20-MM BOLT BEHIND THE POWER STEERING PUMP

Verify if the oil leak is from the oil sealing bolt or the power steering system:

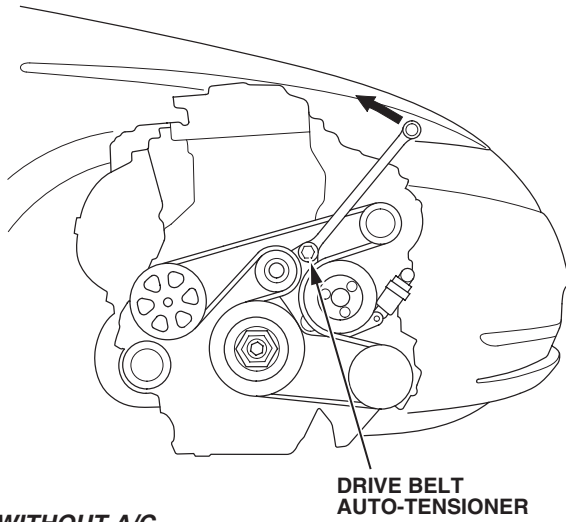
- Oil leaks from the 20-mm sealing bolt tend to collect on the lower engine block and oil pan.
- Oil leaks from the right rear cover of the power steering pump tend to collect on the pump, but not on the pump inlet pipe.
- Oil leaks from the power steering pump inlet pipe tend to collect on the inlet pipe, but are not found on the right rear cover of the power steering pump.

If the power steering system is leaking from the inlet pipe area, go to **REPAIR PROCEDURE E - POWER STEERING PUMP LEAK**. For other power steering leaks, refer to the service manual.

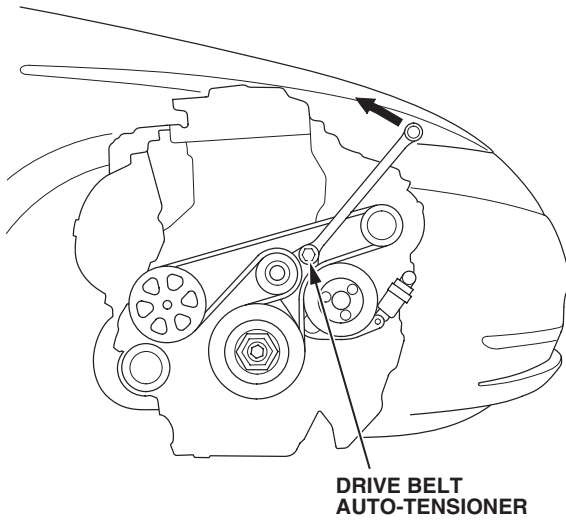
1. Remove the cowl cover.
 - Refer to page 20-229 of the service manual, or
 - Online, enter keyword **COWL**, then select **Cowl Cover Replacement** from the list.
2. Remove the drive belt:
 - Set a long-handled, box-end wrench on the drive belt auto-tensioner from above the engine.
 - Slowly turn the wrench in the direction shown, then remove the drive belt.

NOTE: This is a hydraulic type auto-tensioner; you must turn the wrench slowly to avoid damaging the auto-tensioner.

WITH A/C



WITHOUT A/C



3. Disconnect the power steering pump inlet hose from its holder on the right inner strut tower.



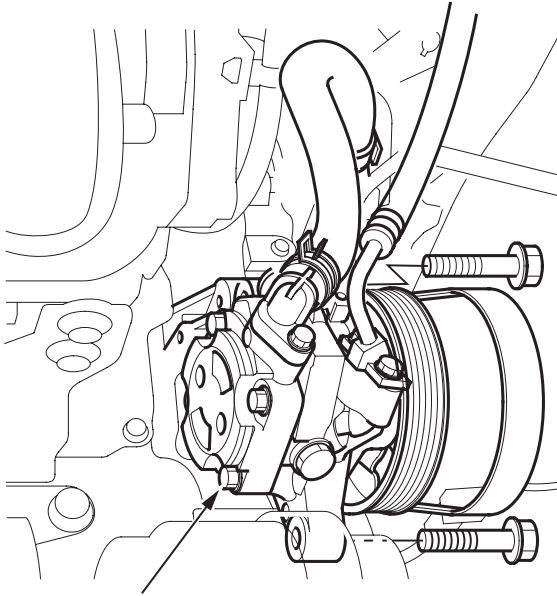
**POWER STEERING
PUMP INLET HOSE
(Unclip.)**

4. Remove the pump outlet hose bracket from the back of the intake manifold.



**PUMP OUTLET HOSE POWER
STEERING MOUNTING BRACKET
(Unbolt.)**

5. Remove the two power steering pump mounting bolts, then lower the pump so you can access the 20-mm sealing bolt.



POWER STEERING PUMP

6. Remove and discard the original sealing bolt and its washer.

20-mm SEALING BOLT

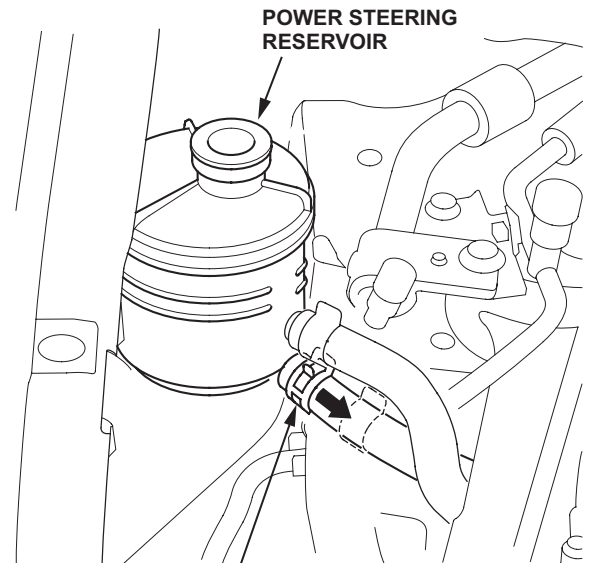


7. Clean the sealer out of the block threads by running a pick tool or a toothbrush along the threads.
NOTE: Pull any material from the threads out of the engine block. **Do not** push it in.
8. Coat the sealing surface on the engine block with clean engine oil.
9. Install a new sealing bolt and washer. Torque the sealing bolt to **34 N·m (25 lb-ft)**.
10. Reinstall the parts in the reverse order of removal.

REPAIR PROCEDURE E - POWER STEERING PUMP LEAK

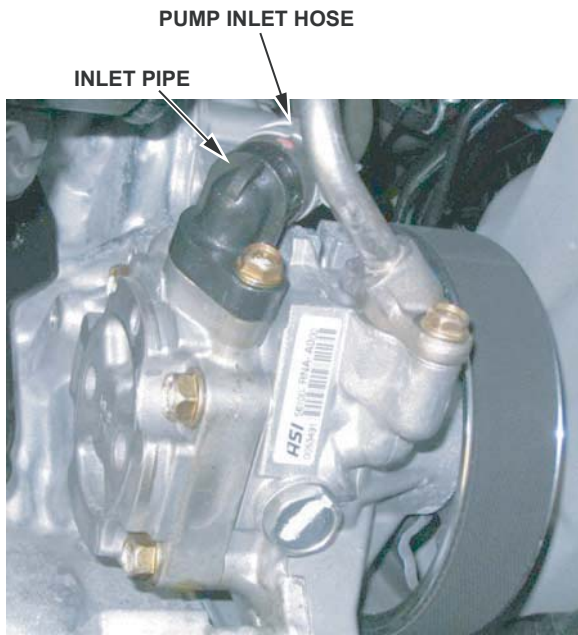
NOTE: During an engine oil leak inspection, if you discover the power steering pump is leaking from the inlet pipe area, replace the inlet pipe, O-ring, and hose clamp.

1. Drain the fluid from the power steering reservoir.
 - Refer to page 17-30 of the service manual, or
 - Online, enter keywords **POWER FLUID**, then select **Power Steering Fluid Replacement** from the list.
2. Squeeze the spring clamp, and slide it back on the pump inlet hose so it clears the reservoir spigot.



3. Raise the vehicle on a hoist.
4. Place a drain pan under the power steering reservoir.

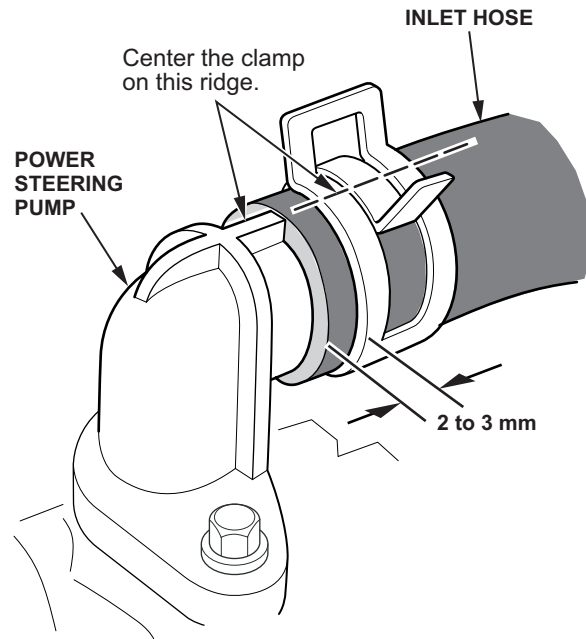
- Remove the 10-mm bolt that attaches the inlet pipe to the power steering pump.



- Lower the vehicle, then remove the pump inlet hose from the reservoir. Remove the pump inlet hose and inlet pipe from the vehicle.

- On your workbench, replace the inlet pipe, O-ring, and hose clamp with new parts.

NOTE: The pump inlet hose is shown attached to the power steering pump to show the proper position of the clamp. Position the clamp directly in front of the ridge on the inlet pipe before installation. It is easier to set the clamp before installation.



- Attach the pump inlet hose to the reservoir.
- Install the inlet pipe on the power steering pump.
 - Raise the vehicle.
 - Install a new O-ring on the inlet pipe.
 - Coat the O-ring with clean power steering fluid.
- Install the 10-mm bolt. Torque the 10-mm bolt to **10 N·m (8 lb-ft)**.
- Lower the vehicle, then fill the reservoir.
 - Refer to page 17-30 of the service manual, or
 - Online, enter keywords **POWER FLUID**, then select **Power Steering Fluid Replacement** from the list.