

Transaxle

Clutch

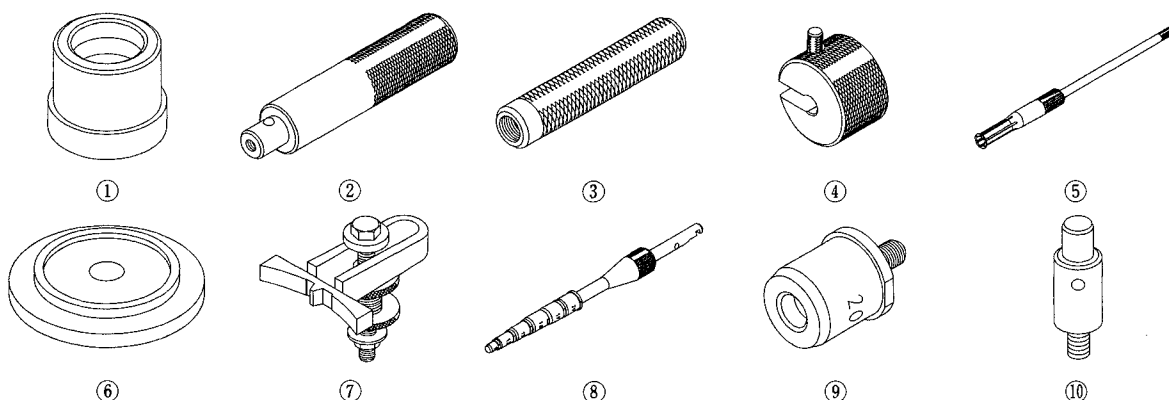
Special Tools	12-2
Component Location Index	12-3
System Description	12-4
Clutch Hydraulic System Bleeding	12-5
Clutch Pedal, Clutch Pedal Position Switch A, and Clutch Pedal Position Switch B Adjustment	12-6
Clutch Pedal Assembly Replacement	12-8
Clutch Master Cylinder Replacement	12-9
Slave Cylinder Replacement	12-12
Clutch Hose Replacement	12-14
Clutch Replacement	12-16



Clutch

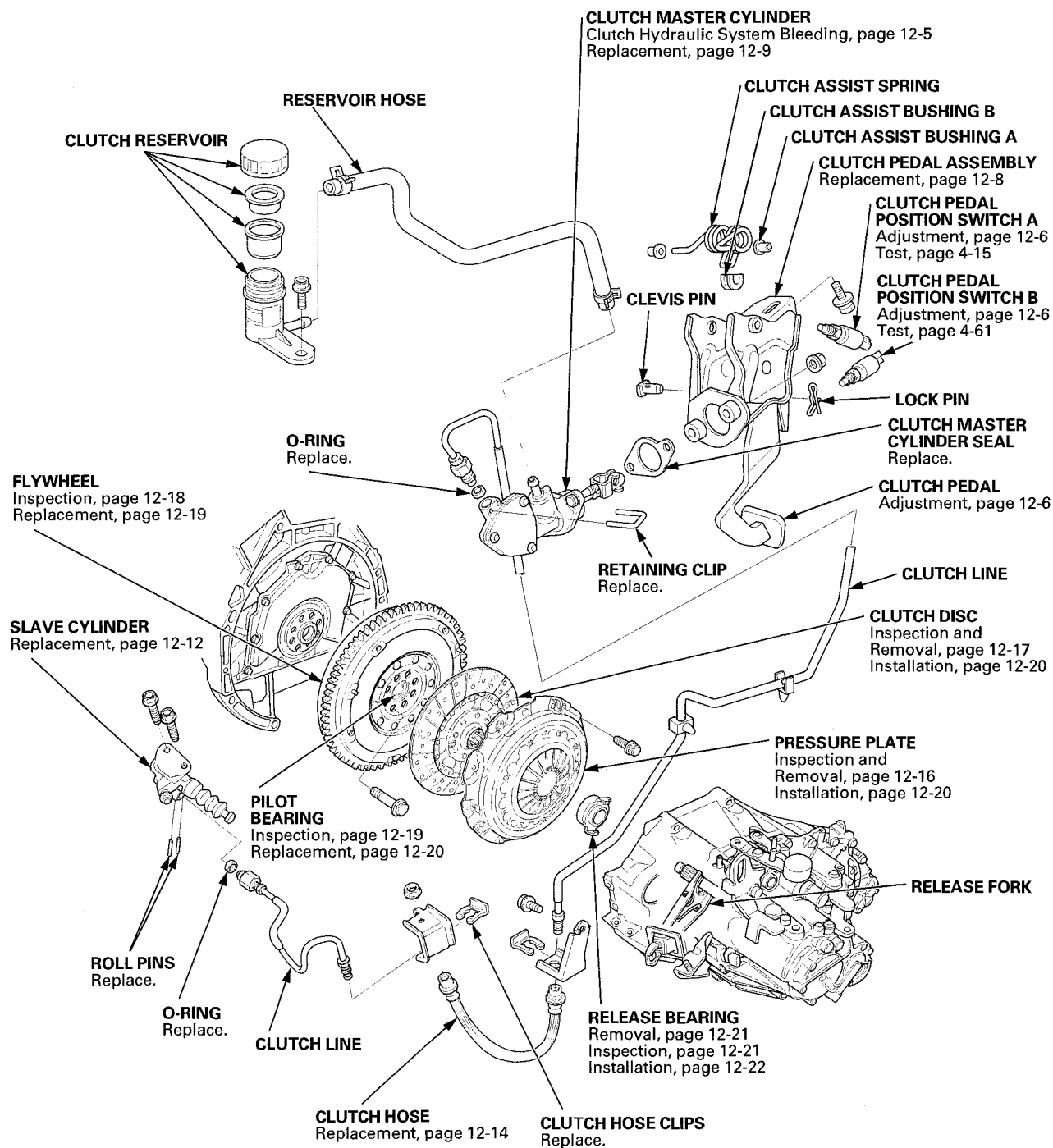
Special Tools

Ref.No.	Tool Number	Description	Qty
①	07746-0010800	Attachment, 22 x 24 mm	1
②	07749-0010000	Driver Handle, 15 x 135L	1
③	07936-3710100	Remover Handle	1
④	07936-371020A	Slide Hammer	1
⑤	07936-3710600	Bearing Remover Shaft Set, 20 mm	1
⑥	07JAF-PM7011A	Clutch Alignment Disc	1
⑦	07LAB-PV00100 or 07924-PD20003	Ring Gear Holder	1
⑧	07PAF-0020000	Clutch Alignment Tool Set	1
⑨	07PAF-0020360	Clutch Alignment Pilot, 20 mm	1
⑩	07ZAF-PR8A100	Clutch Alignment Shaft	1





Component Location Index



Clutch

System Description

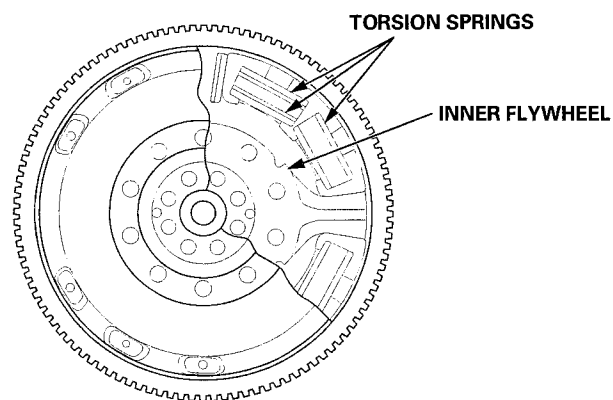
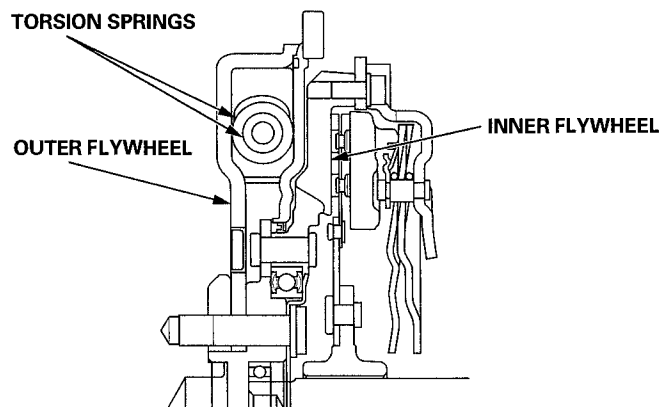
Dual Mass Flywheel

Function

The dual mass flywheel is designed to reduce the noise and vibration produced by the engine, clutch, and transmission during acceleration and cruising.

Construction

The flywheel assembly is actually two flywheels in one, which raises the inertial mass on both the engine and transmission when the clutch is engaged. The inner and outer flywheels are connected by torsion springs. This combination effectively dampers changes in engine speed before they are transmitted to the transmission. Since there are torsion springs between the flywheels, none are used in the clutch disc, which reduces the inertial mass on the mainshaft when the clutch is disengaged. This reduction of the rotating inertial mass reduces the load on the synchro rings, allowing the transmission to shift smoothly.



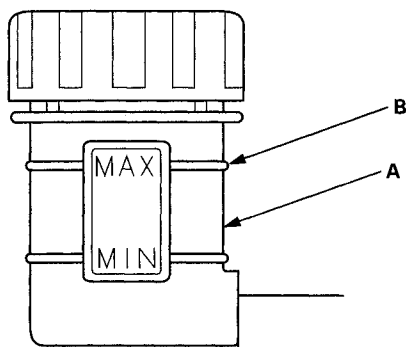


Clutch Hydraulic System Bleeding

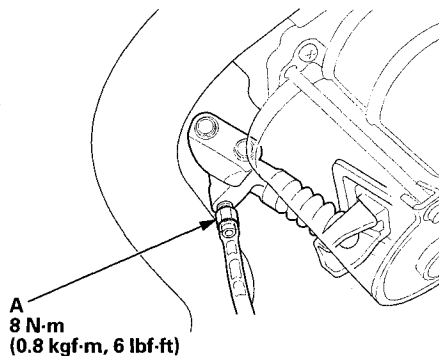
NOTE:

- Do not reuse the drained fluid. Always use Acura DOT 3 Brake Fluid from an unopened container. Using a non-Acura brake fluid can cause corrosion and shorten the life of the system.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic. If brake fluid does contact the paint or plastic, wash it off immediately with water.
- It may be necessary to limit the movement of the release fork with a block of wood to remove all the air from the system.
- Use fender covers to avoid damaging painted surfaces.

1. Make sure the brake fluid level in the clutch reservoir (A) is at the MAX (upper) level line (B).



2. Attach one end of a clear tube to the bleeder screw (A), and put the other end into a container. Loosen the bleeder screw to allow air to escape from the system.



3. Make sure there is an adequate supply of fluid in the reservoir, then slowly push the clutch pedal all the way down. Before releasing the pedal, have an assistant temporarily tighten the bleeder screw. Loosen the bleeder screw, and push the clutch pedal down again. Repeat this step until no more bubbles appear at the clear tube.

NOTE: Make sure the fluid level on the reservoir does not go below MIN.

4. Tighten the bleeder screw securely.
5. Refill the brake fluid in the reservoir to the MAX (upper) level line.

Clutch

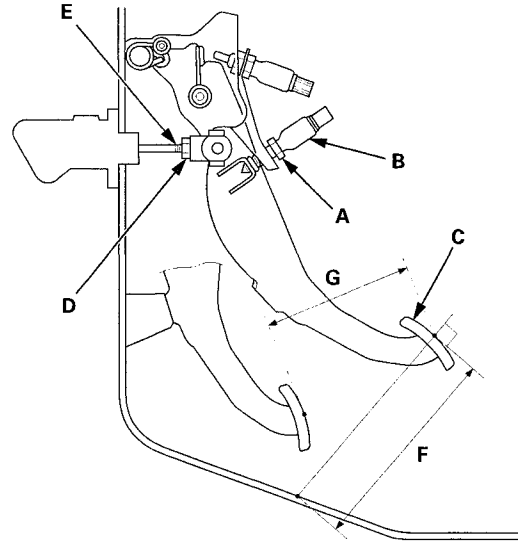
Clutch Pedal, Clutch Pedal Position Switch A, and Clutch Pedal Position Switch B Adjustment

NOTE:

- For a cruise control problem, check clutch pedal position switch B (see page 4-61).
- For a clutch pedal position switch operation problem, check clutch pedal position switch A (see page 4-15).
- Remove the driver's floor mat before adjusting the clutch pedal.
- If there is no clearance between the master cylinder piston and the pushrod, the release bearing will be held against the diaphragm spring, which can result in clutch slippage or other clutch problems.

1. Disconnect the clutch pedal position switch A connector and the clutch pedal position switch B connector.

2. Loosen the clutch pedal position switch B locknut (A), and back off clutch pedal position switch B until it no longer touches the clutch pedal (C).



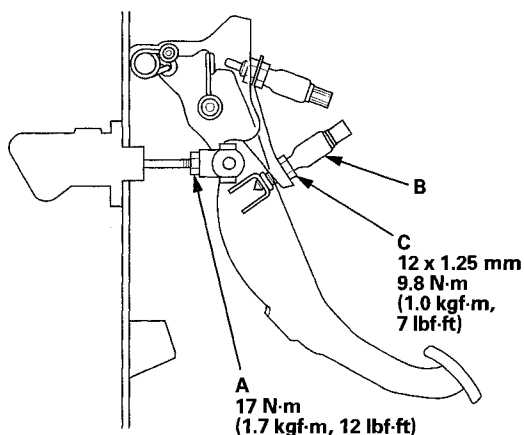
3. Loosen the clutch pushrod locknut (D), and turn the pushrod (E) in or out to get the specified height (F), and the stroke (G) at the clutch pedal. If adjusting the pushrod causes the clutch pedal to contact clutch pedal position switch B, back off the switch further.

F Clutch Pedal Height: 156 mm (6.14 in)

G Clutch Pedal Stroke: 130—140 mm (5.1—5.5 in)

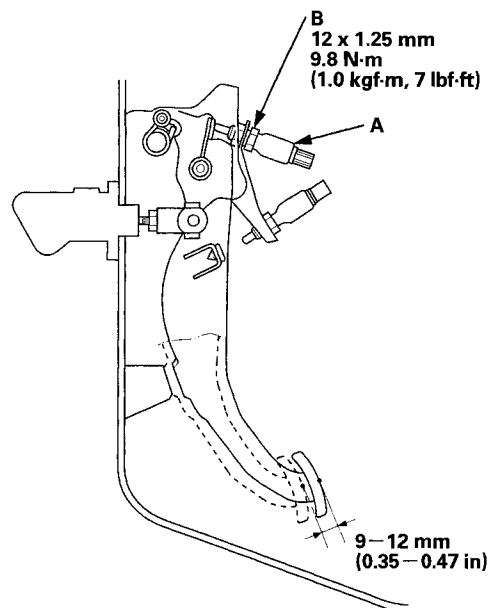


4. Tighten the clutch pushrod locknut (A).



5. With the clutch pedal released, turn in clutch pedal position switch B until it contacts the clutch pedal.
6. Turn in clutch pedal position switch B an additional 3/4 to 1 turn. Make sure the clutch pedal height did not change.
7. While holding clutch pedal position switch B, tighten the locknut (C).

8. Loosen the clutch pedal position switch A locknut (B).

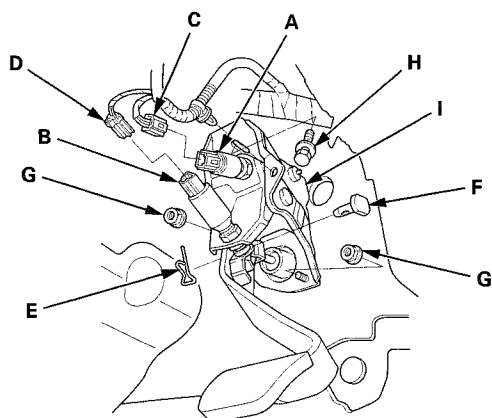


9. Fully press the clutch pedal to the floor, then release the clutch pedal 9–12 mm (0.35–0.47 in) and hold it there.
10. Adjust the position of clutch pedal position switch A so the engine starts with the clutch pedal in this position.
11. While holding clutch pedal position switch A, tighten the locknut.
12. Check the clutch operation.
13. Connect the clutch pedal position switch A connector and the clutch pedal position switch B connector, then check the cruise control and the clutch pedal position switch operation.

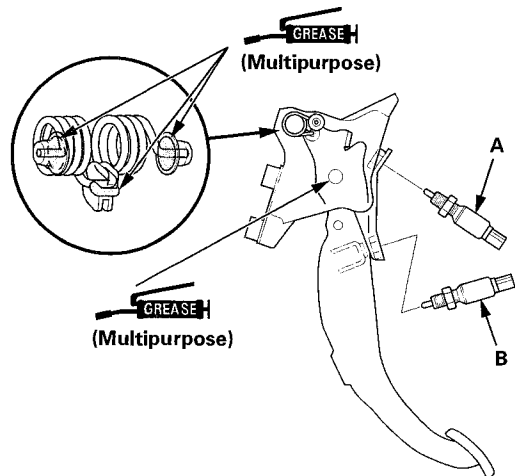
Clutch

Clutch Pedal Assembly Replacement

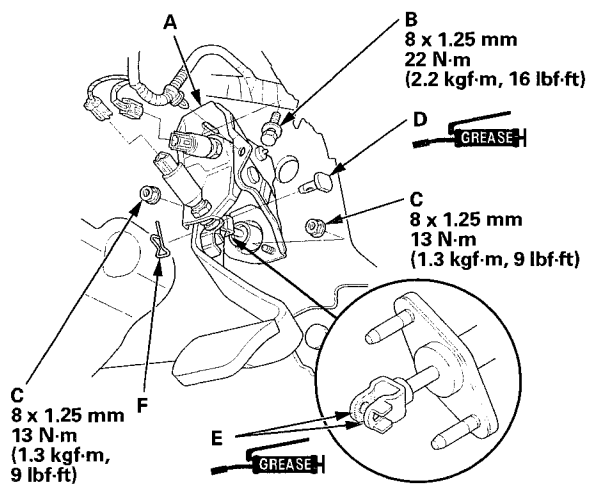
1. Remove the driver's dashboard undercover (see page 20-118).
2. Disconnect the clutch pedal position switch A connector (C) and the clutch pedal position switch B connector (D).



3. Pry out the lock pin (E), and pull the clevis pin (F) out of the clevis.
4. Remove the master cylinder mounting nuts (G) and the clutch pedal mounting bolt (H).
5. Remove the clutch pedal assembly (I).
6. Remove clutch pedal position switch A and clutch pedal position switch B.
7. Loosely install clutch pedal position switch A and clutch pedal position switch B.



8. Install the clutch pedal assembly (A).



9. Install the clutch pedal mounting bolt (B) and the master cylinder mounting nuts (C).
10. Apply multipurpose grease to the clevis pin (D), and the mating surfaces (E) of the clevis and the pedal. Slide the clevis pin into the clevis, then install the lock pin (F).
11. Adjust the clutch pedal, clutch pedal position switch B, and clutch pedal position switch A (see page 12-6).
NOTE: Connect the switch connectors after adjusting them.
12. Check the clutch operation.
13. Reinstall the driver's dashboard undercover (see page 20-118).



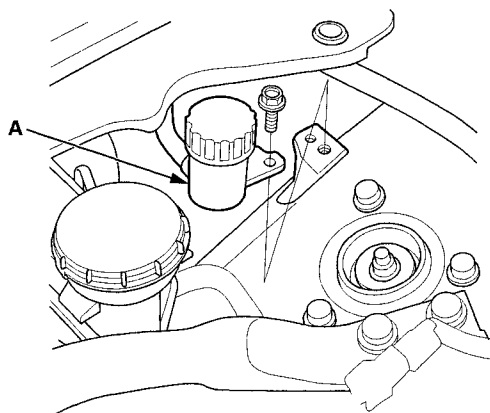
Clutch Master Cylinder Replacement

NOTE:

- Use fender covers to avoid damaging painted surfaces.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic. If brake fluid does contact the paint or plastic, wash it off immediately with water.

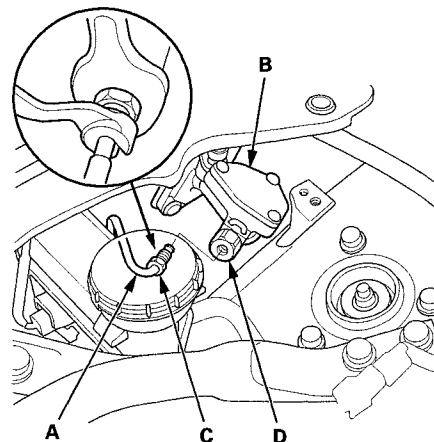
1. Remove and discard the brake fluid from the clutch master cylinder reservoir with a syringe or other suitable device.

2. Remove the clutch reservoir (A).



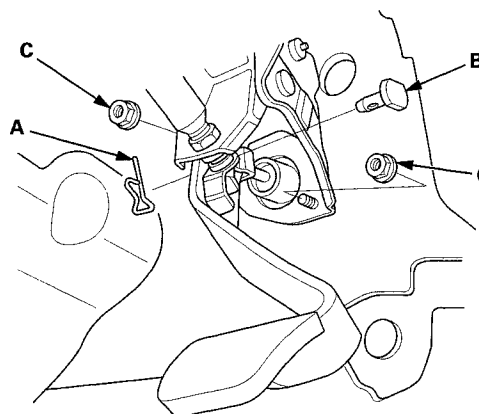
3. Disconnect the clutch line (A) from the clutch master cylinder (B). To prevent spills, cover the line joint with rags or shop towels.

NOTE: Loosen the flare nut (C) while holding the clutch line connector (D) using a wrench.



4. Remove the driver's dashboard undercover (see page 20-118).

5. Pry out the lock pin (A), and pull the clevis pin (B) out of the clevis. Remove the master cylinder mounting nuts (C).

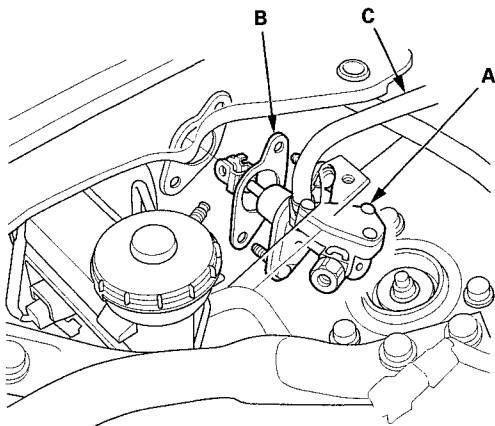


(cont'd)

Clutch

Clutch Master Cylinder Replacement (cont'd)

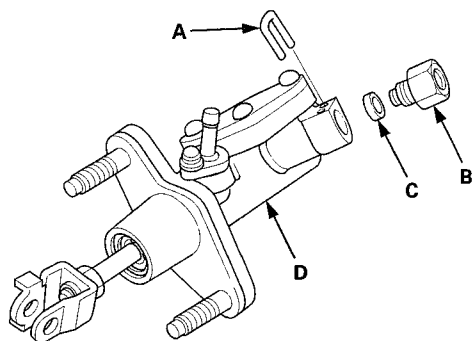
6. Remove the clutch master cylinder (A) and the master cylinder seal (B).



7. Remove the reservoir hose (C).

NOTE: Inspect the hose. If the hose has damage, leaks, interference, or twisting, replace it.

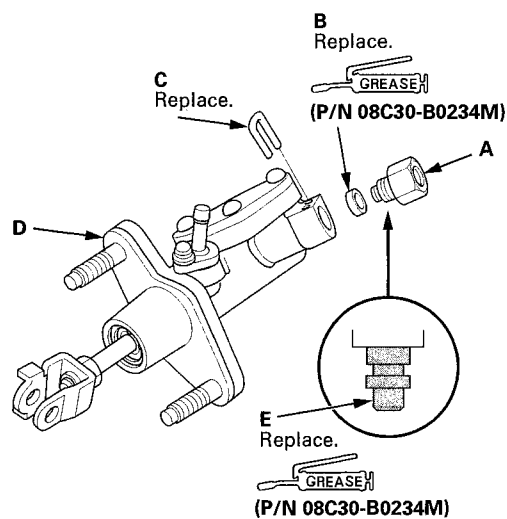
8. Remove the retaining clip (A), then remove the clutch line connector (B) and the O-ring (C) from the master cylinder (D).



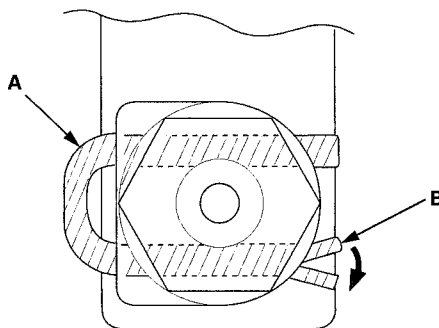
9. Install the clutch line connector (A) with a new O-ring (B), then set in a new retaining clip (C) to the master cylinder (D).

NOTE:

- Apply the silicone grease (P/N 08C30-B0234M) on the O-ring and the joint part (E) of the clutch line connector.
- Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.



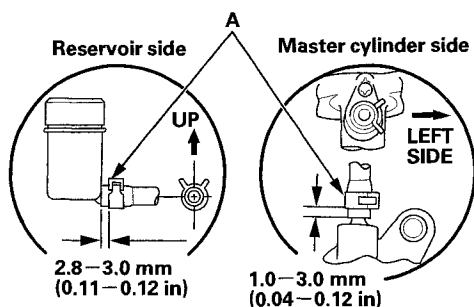
10. To prevent the retaining clip (A) from coming off, pry apart the tip (B) of the clip with a screwdriver.



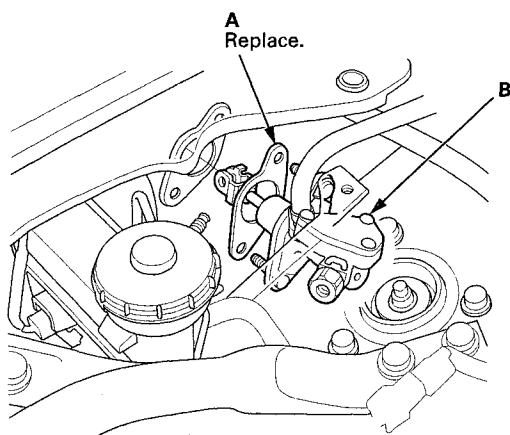


11. Install the reservoir hose, and adjust the hose clamp (A) positions and its direction.

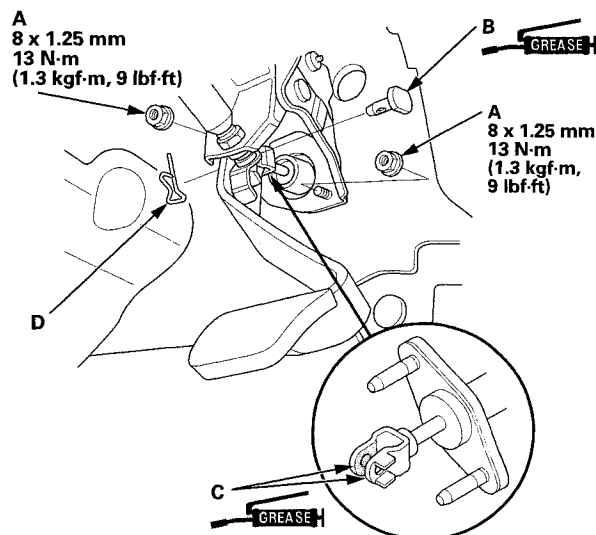
NOTE: When attaching the reservoir hose, align the yellow mark on the hose to the rib on reservoir connection area, and the blue mark on the hose to the rib on the clutch master cylinder connection area.



12. Install a new master cylinder seal (A) and the clutch master cylinder (B).



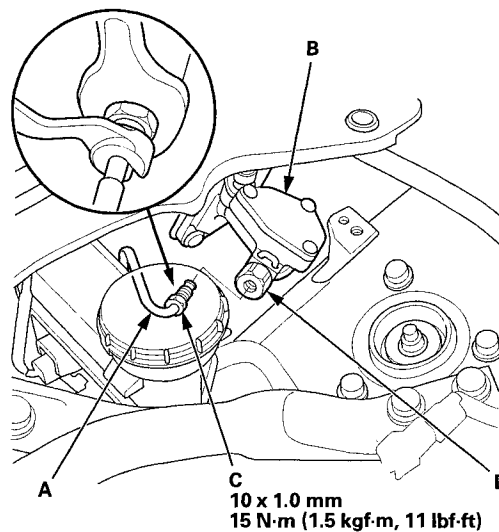
13. Install the master cylinder mounting nuts (A).



14. Apply multipurpose grease to the clevis pin (B), and the mating surfaces (C) of the clevis and the pedal. Slide the clevis pin into the clevis, then install the lock pin (D).

15. Connect the clutch line (A) to the clutch master cylinder (B).

NOTE: Tighten the flare nut (C) while holding the clutch line connector (D) using a wrench.

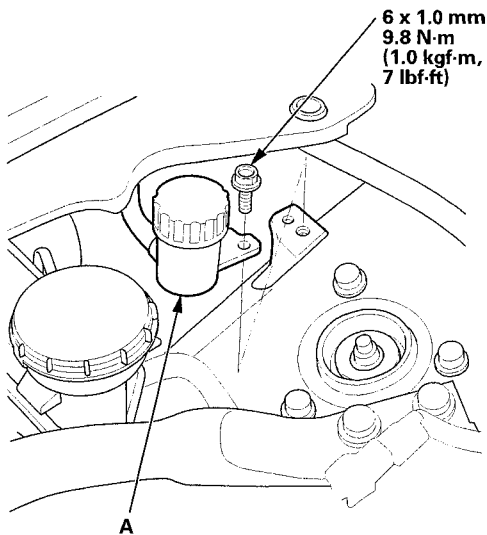


(cont'd)

Clutch

Clutch Master Cylinder Replacement (cont'd)

16. Install the clutch reservoir (A).



17. Bleed the clutch hydraulic system (see page 12-5).
18. Adjust the clutch pedal, clutch pedal position switch B, and clutch pedal position switch A (see page 12-6).
19. Check the clutch operation and check for leaks.
20. Reinstall the driver's dashboard undercover (see page 20-118).
21. Test-drive the vehicle.

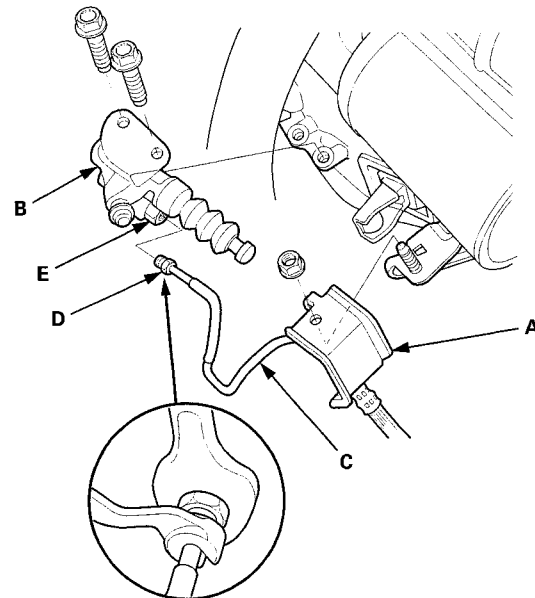
Slave Cylinder Replacement

NOTE:

- Use fender covers to avoid damaging painted surfaces.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic. If brake fluid does contact the paint or plastic, wash it off immediately with water.
- Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.

Removal/Installation

1. Remove the clutch line bracket (A) and the slave cylinder (B).

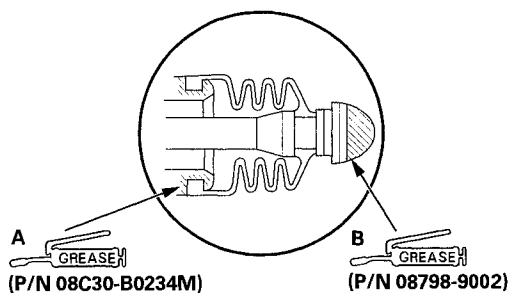
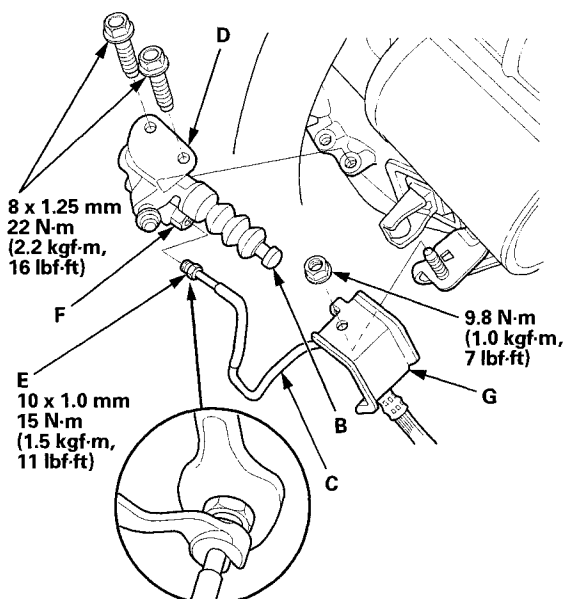


2. Disconnect the clutch line (C) from the slave cylinder. To prevent spills, cover the line joint with rags or shop towels.

NOTE: Loosen the flare nut (D) while holding the clutch line connector (E) using a wrench.



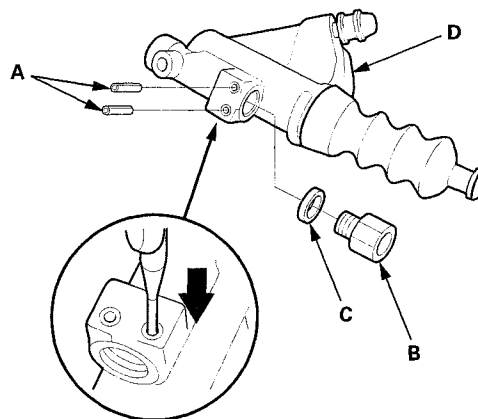
3. Pull back the boot (A), and apply silicone grease (P/N 08C30-B0234M) to the boot and slave cylinder. Reinstall the boot.



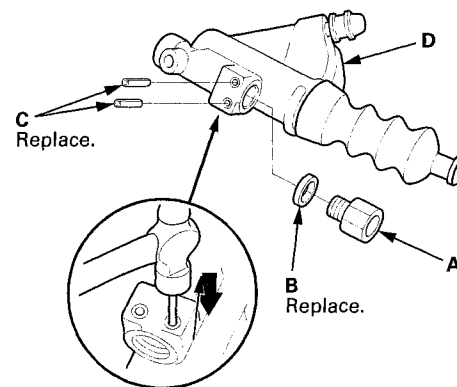
4. Apply a light coat of super high temp urea grease (P/N 08798-9002) to the pushrod (B) of the slave cylinder.
 5. Connect the clutch line (C) to the slave cylinder (D), and tighten the flare nut (E).
- NOTE:** Tighten the flare nut while holding the clutch line connector (F) using a wrench.
6. Install the slave cylinder and the clutch line bracket (G).
 7. Bleed the clutch hydraulic system (see page 12-5).
 8. Check the clutch operation, and check for leaks.
 9. Test-drive the vehicle.

O-ring Replacement

1. Remove the slave cylinder.
2. Remove the roll pins (A), then remove the clutch line connector (B) and the O-ring (C) from the slave cylinder (D).



3. Install the clutch line connector (A) with a new O-ring (B), then set in new roll pins (C) to the slave cylinder (D).



4. Install the slave cylinder.

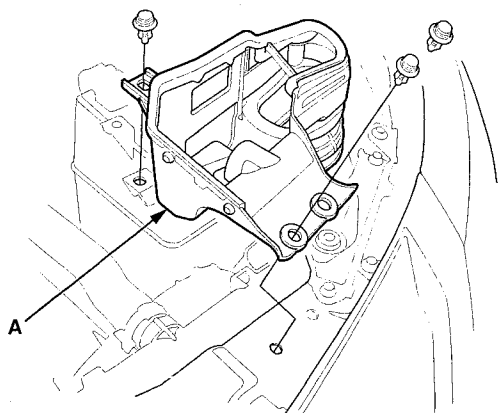
Clutch

Clutch Hose Replacement

NOTE:

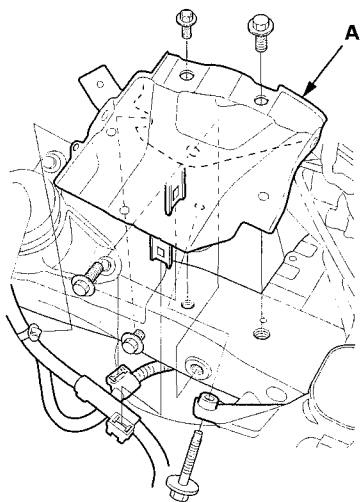
- Replace the clutch hose if it is twisted, cracked, or leaks.
- Use fender covers to avoid damaging painted surfaces.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic; if brake fluid does contact the paint or plastic, wash it off immediately with water.

1. Remove the air intake duct splash separator (A).

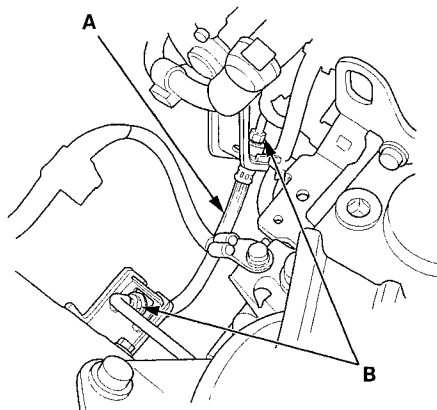


2. Do the battery removal procedure (see page 22-87).

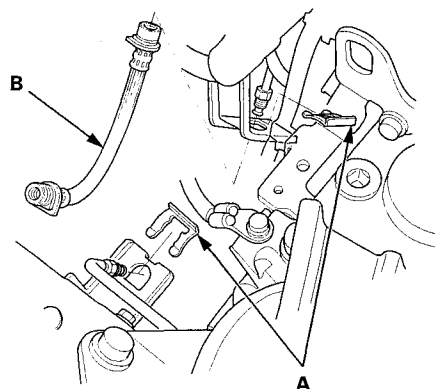
3. Remove the battery base (A).



4. Disconnect the clutch hose (A) from the clutch lines (B).



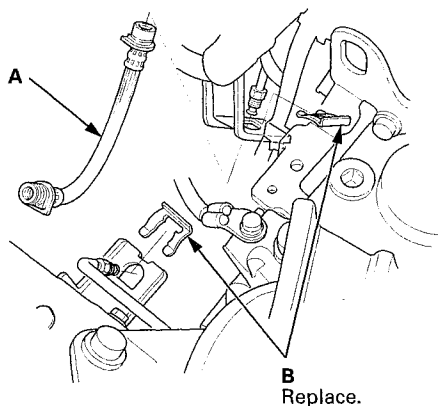
5. Remove and discard the clutch hose clips (A) from the clutch hose (B).



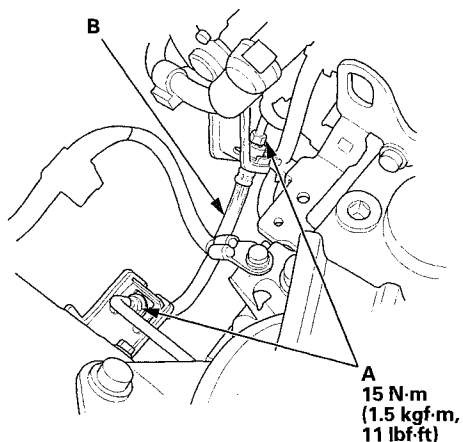
6. Remove the clutch hose from the clutch hose brackets.



7. Install the clutch hose (A) into the clutch hose brackets with the new clutch hose clips (B).



8. Connect the clutch lines (A) to the clutch hose (B).

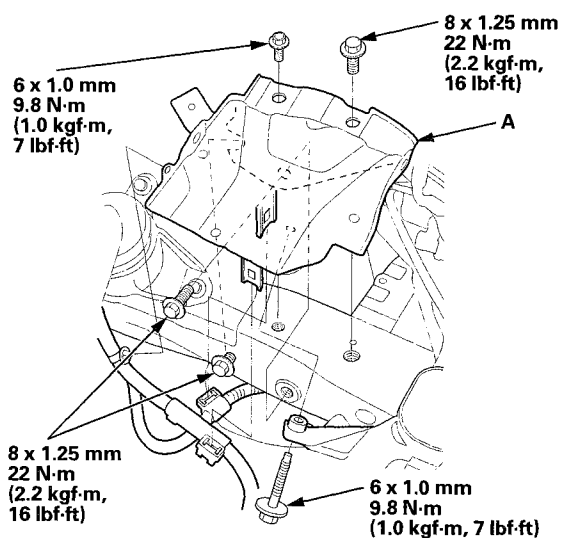


9. Bleed the clutch hydraulic system (see page 12-5).

10. Do the following checks:

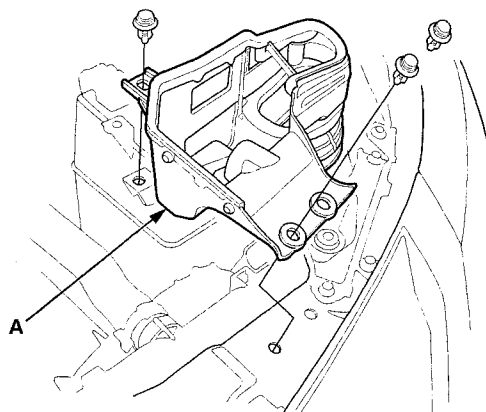
- Check the clutch hose and line joint for leaks, and tighten if necessary.
- Check the clutch hose for interference and twisting.

11. Install the battery base (A).



12. Do the battery installation procedure (see page 22-87).

13. Install the air intake duct splash separator (A).



14. Test-drive the vehicle.

Clutch

Clutch Replacement

Special Tools Required

- Clutch Alignment Disc 07JAF-PM7011A
- Ring Gear Holder 07LAB-PV00100 or 07924-PD20003
- Clutch Alignment Tool Set 07PAF-0020000
- Clutch Alignment Pilot, 20 mm 07PAF-0020360
- Clutch Alignment Shaft 07ZAF-PR8A100
- Attachment, 22 x 24 mm 07746-0010800
- Driver Handle, 15 x 135L 07749-0010000
- Remover Handle 07936-3710100
- Bearing Remover Shaft Set, 20 mm 07936-3710600
- Slide Hammer 07936-371020A

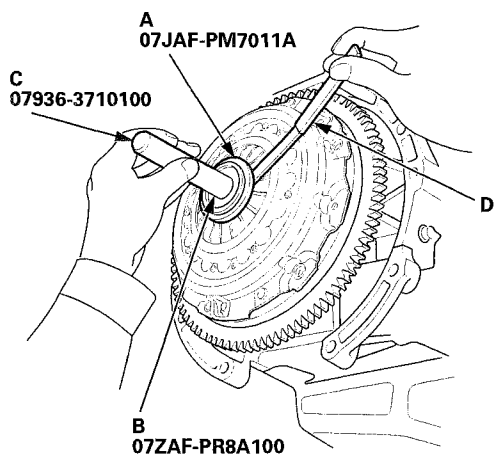
Engine Side

Pressure Plate Inspection and Removal

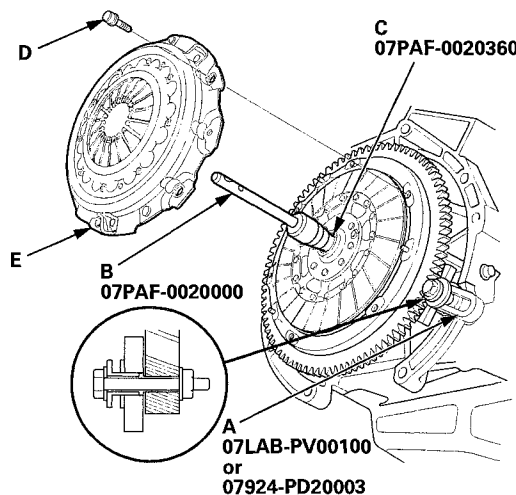
1. Remove the transmission (see page 13-18).
2. Check the evenness of the height of the diaphragm spring fingers using the clutch alignment disc (A), the clutch alignment shaft (B), the remover handle (C), and a feeler gauge (D). If the height difference is more than the service limit, replace the pressure plate.

Standard (New): 0.6 mm (0.02 in) max.

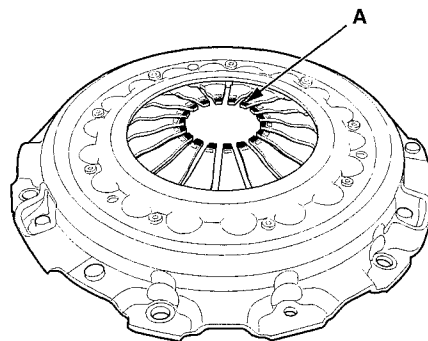
Service Limit: 0.8 mm (0.03 in)



3. Install the ring gear holder (A), the clutch alignment tool set (B), and the 20 mm clutch alignment pilot (C).

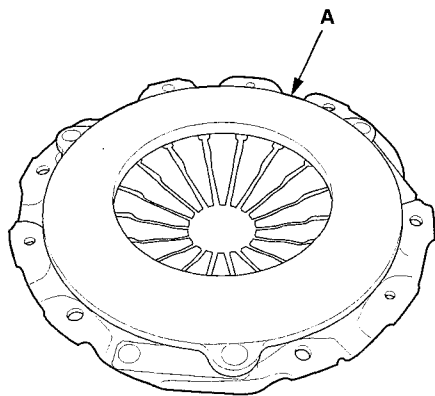


4. To prevent warping, loosen the pressure plate mounting bolts (D) in a crisscross pattern in several steps, then remove the pressure plate (E).
5. Inspect the fingers of the diaphragm spring (A) for wear at the release bearing contact area.





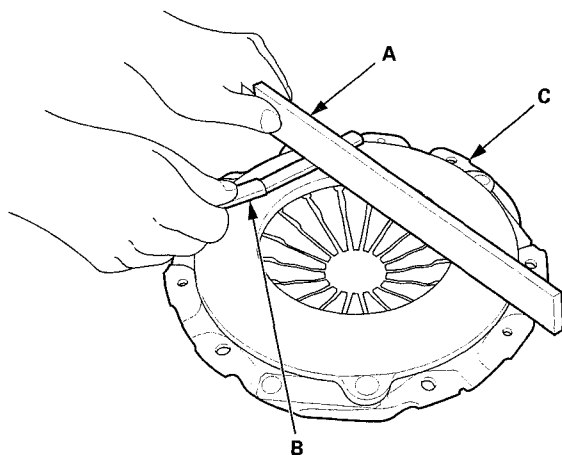
6. Inspect the pressure plate surface (A) for wear, cracks, and burning.



7. Inspect for warpage using a straight edge (A) and a feeler gauge (B). Measure across the pressure plate (C). If the most measurement difference is more than the service limit, replace the pressure plate.

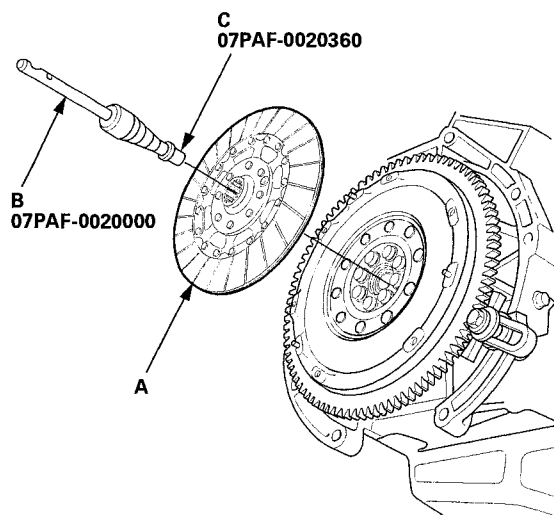
Standard (New): 0.02 mm (0.001 in) max.

Service Limit: 0.15 mm (0.006 in)



Clutch Disc Inspection and Removal

8. Remove the clutch disc (A), the clutch alignment tool set (B), and the 20 mm clutch alignment pilot (C).

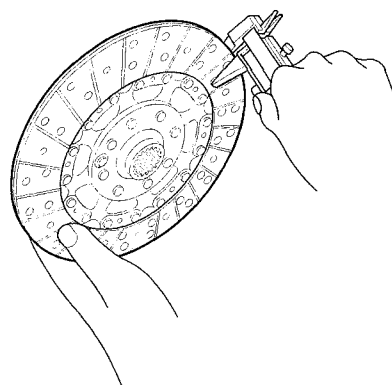


9. Inspect the lining of the clutch disc for signs of slippage or oil. If the clutch disc looks burnt or is oil soaked, replace the clutch disc. If the clutch disc is oil soaked, find and repair the source of the oil leak.

10. Measure the clutch disc thickness. If the measurement is less than the service limit, replace the clutch disc.

Standard (New): 7.9–8.5 mm (0.31–0.33 in)

Service Limit: 6.0 mm (0.24 in)



(cont'd)

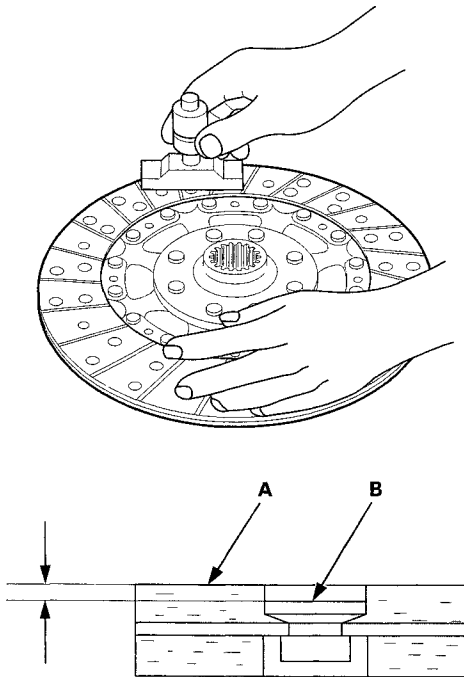
Clutch

Clutch Replacement (cont'd)

11. Measure the depths of the rivets from the clutch disc lining surface (A) to the rivets (B) on both sides. If the measurement is less than the service limit, replace the clutch disc.

Standard (New): 1.35—1.95 mm (0.053—0.077 in)

Service Limit: 0.7 mm (0.03 in)

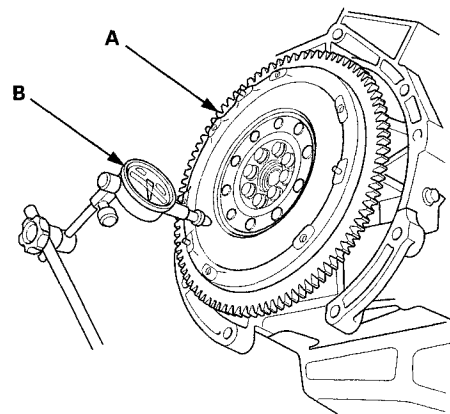


Flywheel Inspection

12. Remove the ring gear holder.
13. Inspect the ring gear teeth for wear and damage.
14. Inspect the clutch disc mating surface on the flywheel for wear, cracks, and burning.
15. Measure the flywheel (A) runout using a dial indicator (B). Through at least two full turns with pushing against the flywheel each time you turn it to take up the crankshaft thrust washer clearance. If the measurement is not within the standard, replace the flywheel, and recheck the runout; go to step 16.

Standard (New): 0.3 mm (0.01 in) max.

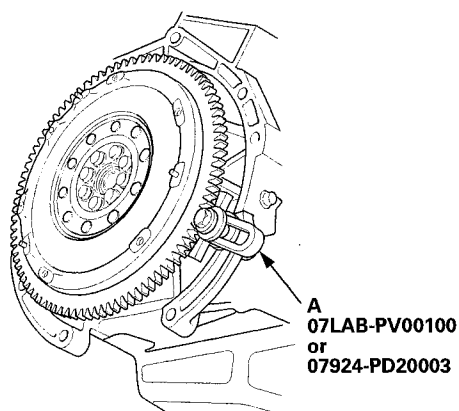
Service Limit: 0.4 mm (0.02 in)





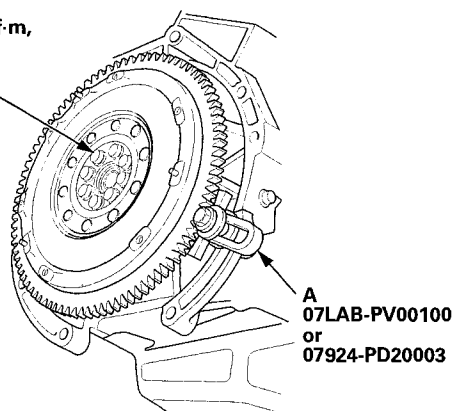
Flywheel Replacement

16. Install the ring gear holder (A).



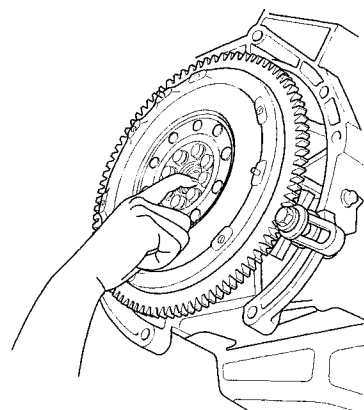
17. Loosen the flywheel mounting bolts in a crisscross pattern in several steps. Remove the bolts, then remove the flywheel and the ring gear holder.
18. Install the flywheel on the crankshaft, and install the mounting bolts finger-tight.
19. Install the ring gear holder (A), then torque the flywheel mounting bolts (B) in a crisscross pattern in several steps.

B
12 x 1.0 mm
103 N·m
(10.5 kgf·m,
76 lbf·ft)



Pilot Bearing Inspection

20. Turn the inner race of the pilot bearing with your finger. The pilot bearing should turn smoothly and quietly. Check that the pilot bearing outer race fits tightly in the flywheel. If the race does not turn smoothly, quietly, or fit tight in the flywheel, replace the pilot bearing; go to step 21.

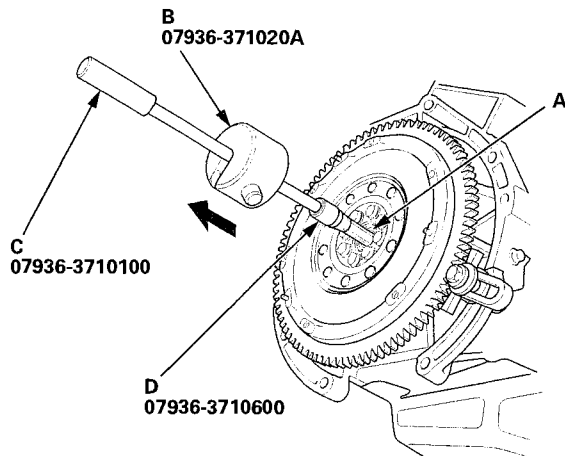


Clutch

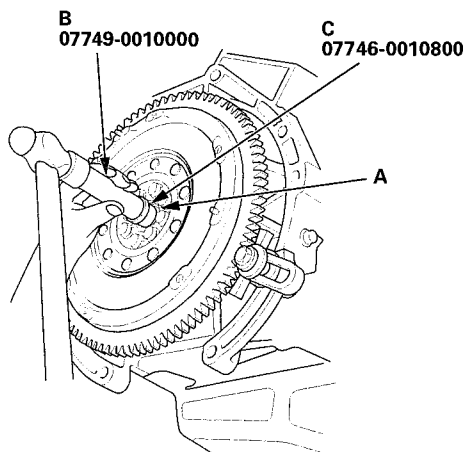
Clutch Replacement (cont'd)

Pilot Bearing Replacement

21. Remove the pilot bearing (A) using the slide hammer (B), the remover handle (C), and the 20 mm bearing remover shaft set (D).

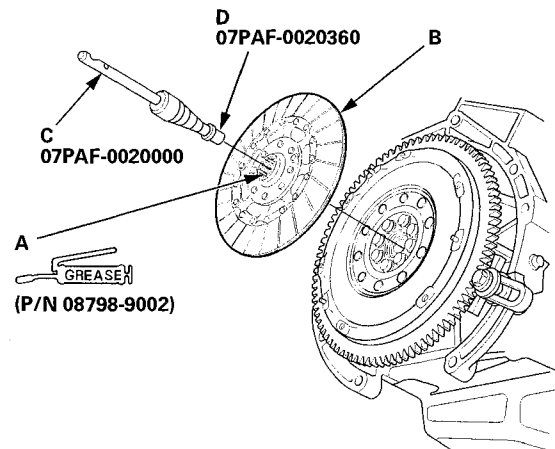


22. Install a new pilot bearing (A) into the crankshaft using the 15 x 135L driver handle (B) and the 22 x 24 mm attachment (C).

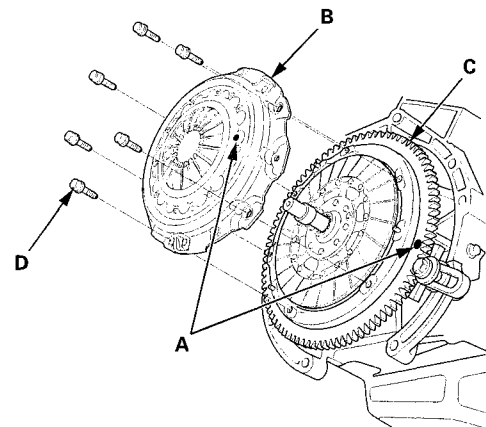


Clutch Disc and Pressure Plate Installation

23. Temporarily install the clutch disc onto the splines of the transmission mainshaft. Make sure the clutch disc slides freely on the mainshaft.
24. Apply super high temp urea grease (P/N 08798-9002) to the splines (A) of the clutch disc (B), then install the clutch disc using the clutch alignment tool set (C) and the 20 mm clutch alignment pilot (D).



25. Align (± 60 degrees) the point marks (A) across the pressure plate (B) and the flywheel (C).

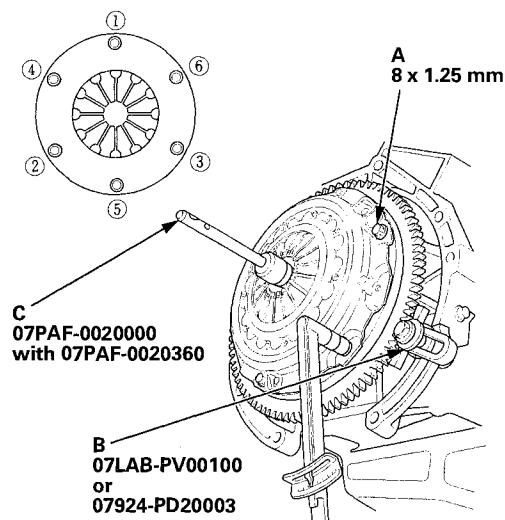


26. Install the pressure plate and the mounting bolts (D), finger-tight.



27. Torque the mounting bolts (A) in a crisscross pattern. Tighten the bolts in several steps to prevent warping the diaphragm spring. Make sure that there is not clearance between the pressure plate and the flywheel.

Specified Torque: 25 N·m (2.6 kgf·m, 19 lbf·ft)

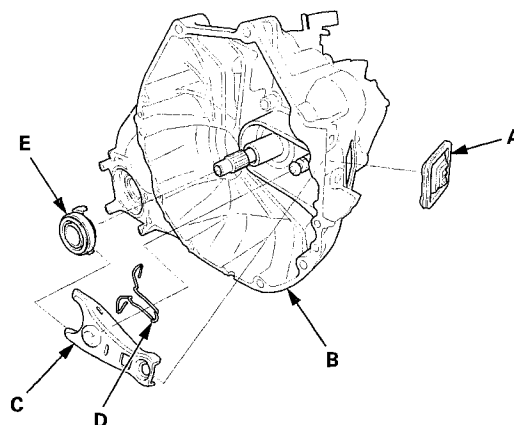


28. Remove the ring gear holder (B), the clutch alignment tool set (C), and the 20 mm clutch alignment pilot.
29. Make sure the diaphragm spring fingers are all the same height.
30. Do the release bearing inspection, and replace it if necessary.
31. Install the transmission (see page 13-28).

Transmission Side

Release Bearing Removal

1. Remove the transmission (see page 13-18).
2. Remove the release fork boot (A) from the clutch housing (B).

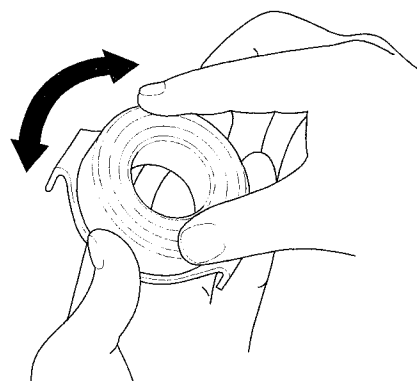


3. Remove the release fork (C) from the clutch housing by squeezing the release fork set spring (D). Remove the release bearing (E).

Release Bearing Inspection

4. Check the play of the release bearing by spinning it by hand. If there is excessive play or noise, replace the release bearing.

NOTE: The release bearing is packed with grease. Do not wash it in solvent.



(cont'd)

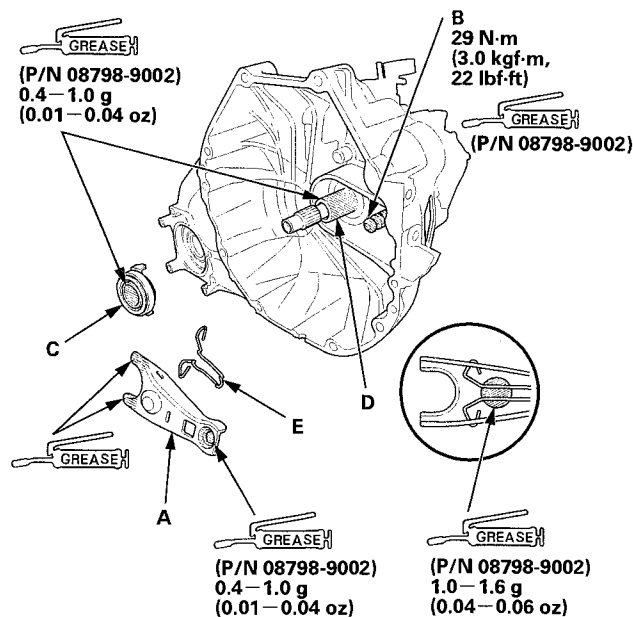
Clutch

Clutch Replacement (cont'd)

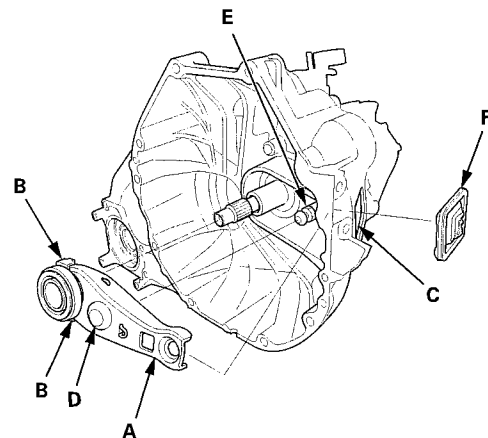
Release Bearing Installation

5. Apply super high temp urea grease (P/N 08798-9002) to the release fork (A), the release fork bolt (B), the release bearing (C), and the release bearing guide (D) in the shaded areas, then set the release fork set spring (E).

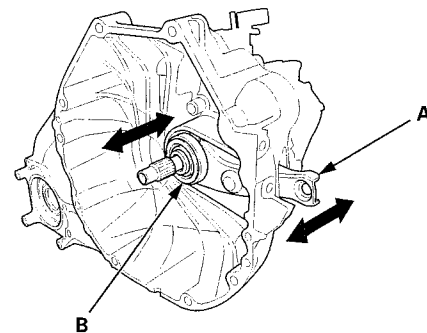
NOTE: Replace the release fork bolt if necessary.



6. With the release fork (A) slide between the release bearing pawls (B), install the release bearing on the mainshaft while inserting the release fork through the hole (C) in the clutch housing.



7. Align the detent (D) of the release fork with the release fork bolt (E), then press the detent of the release fork over the release fork bolt squarely.
8. Install the release fork boot (F). Make sure the boot seals around the release fork and the clutch housing.
9. Move the release fork (A) right and left to make sure that it fits properly against the release bearing (B) and that the release bearing slides smoothly. Wipe off any excess grease.



10. Install the transmission (see page 13-28).