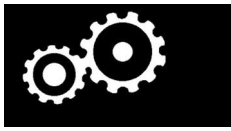
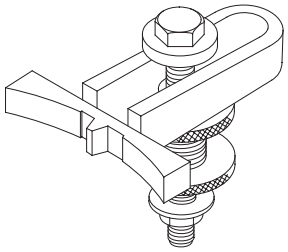
12

Clutch

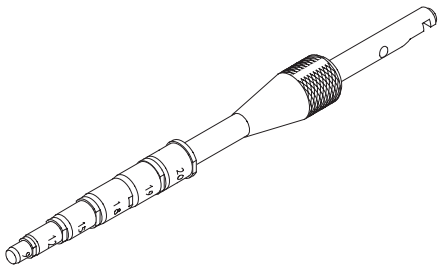


Special Tools

Ref. No.	Tool Number	Description	Qty
1	07LAB-PV00100 or 07924-PD20003	Ring Gear Holder	1
2	07PAF-0020000	Clutch Alignment Tool Set	1

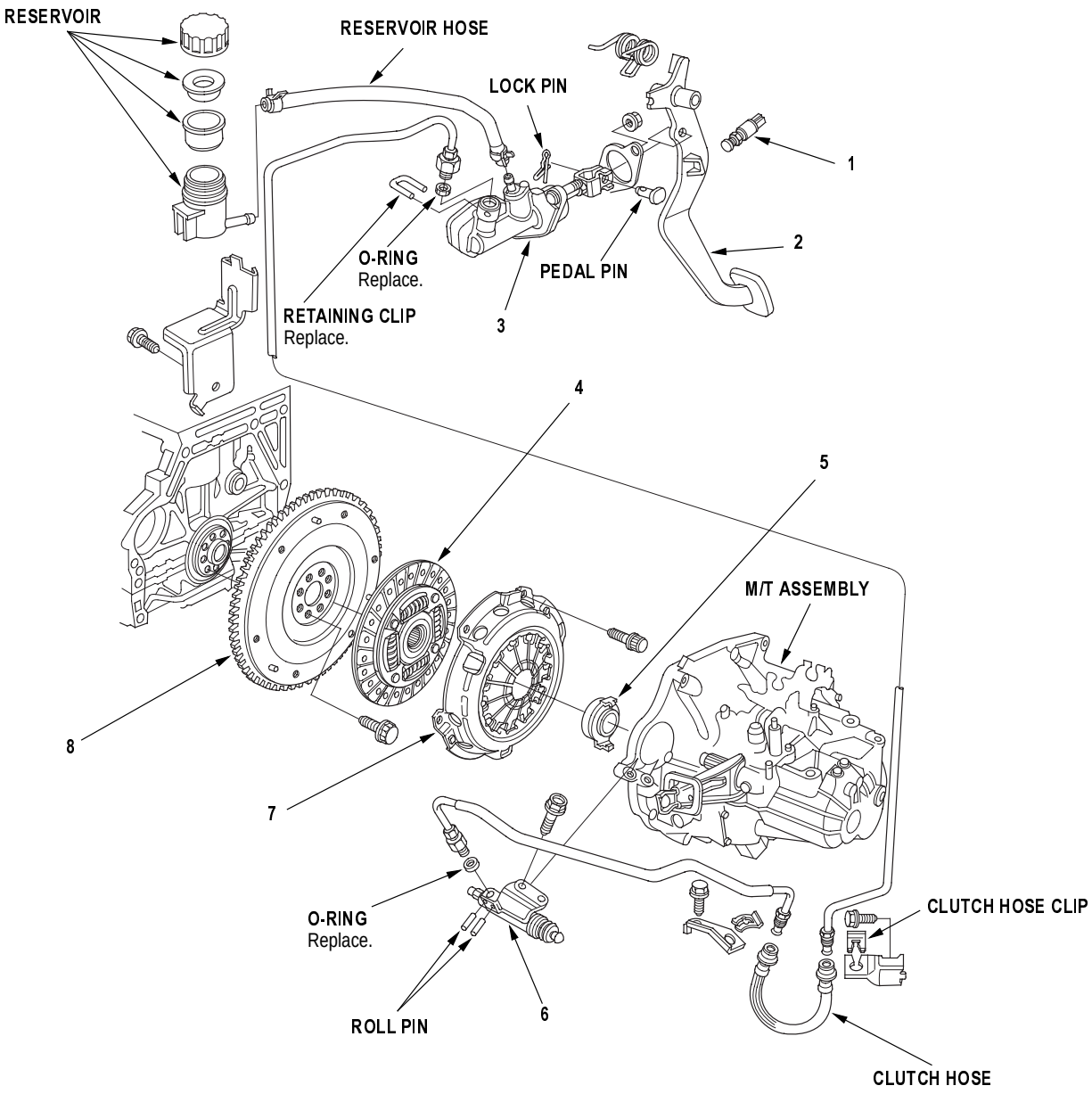


1



2

Component Location Index

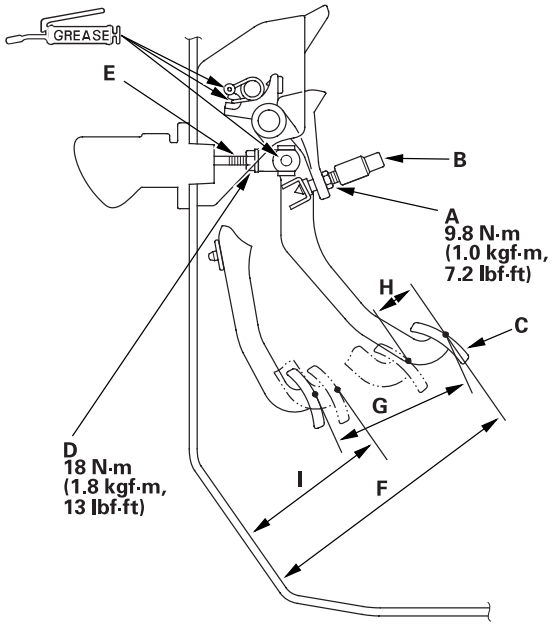


1	CLUTCH PEDAL POSITION SWITCH	Adjustment, page 12-4
2	CLUTCH PEDAL	Adjustment, page 12-4
3	CLUTCH MASTER CYLINDER	Replacement, page 12-5; Overhaul, page 12-6
4	CLUTCH DISC	Removal, page 12-11; Installation, page 12-14
5	RELEASE BEARING	Replacement, page 12-15
6	SLAVE CYLINDER	Replacement, page 12-8; Overhaul, page 12-10
7	PRESSURE PLATE	Removal, page 12-11; Installation, page 12-14
8	FLYWHEEL	Inspection, page 12-13; Replacement, page 12-13

Clutch Pedal and Clutch Pedal Position Switch Adjustment

NOTE:
- To check the clutch pedal position switch (see page 04-49).
- Remove the driver's side floor mat before adjusting the clutch pedal.
- The clutch is self-adjusting to compensate for wear.
- If there is no clearance between the master cylinder piston and push rod, the release bearing will be held against the diaphragm spring, which can result in clutch slippage or other clutch problems.

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



2. Loosen locknut (D), and turn the push rod (E) in or out to get the specified height (F), stroke (G), free play (H) and disengagement height (I) at the clutch pedal.

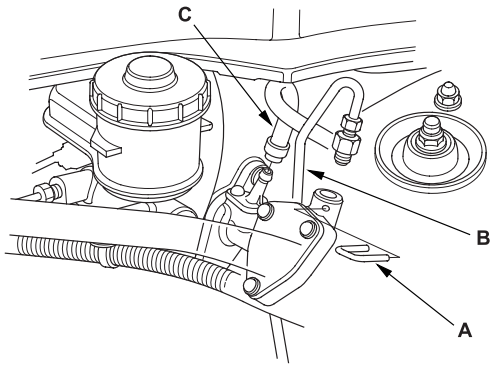
Clutch Pedal Stroke:	**125 - 135 mm (4.92 - 5.31 in.)**
Clutch Pedal Free Play:	**6 - 17 mm (0.24 - 0.67 in.)**
Clutch pedal Height:	**200 mm (7.87 in.)**
Clutch pedal Disengagement Height:	**112 mm (4.41 in.)**

3. Tighten locknut (D).
4. With the clutch pedal released, turn the clutch pedal position switch or clutch pedal adjusting bolt (B) in until it contacts the clutch pedal (C).
5. Turn the clutch pedal position switch or clutch pedal adjusting bolt (B) in an additional 3/4 to 1 turn.
6. Tighten locknut (A).
7. Press the clutch pedal to the floor.
8. Release the clutch pedal 10 - 16 mm (0.39 - 0.63 in.) from the fully depressed position, and hold it there. Adjust the position of the clutch interlock switch (K) so that the engine will start with the clutch pedal in this position.
9. Tighten locknut (J).

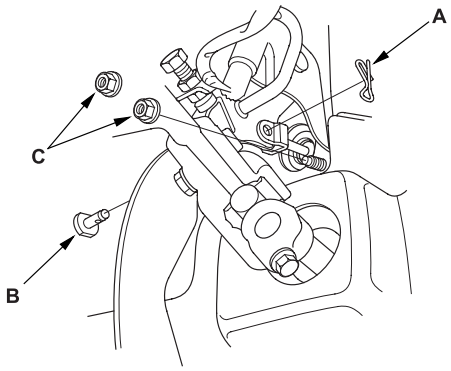
Clutch Master Cylinder Replacement

NOTE: Do not spill brake fluid on the vehicle; it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.

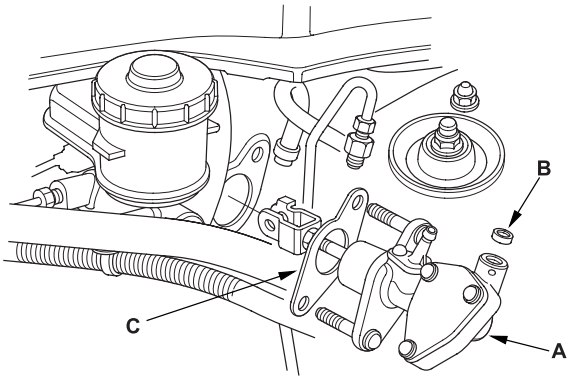
1. Remove the brake fluid from the clutch master cylinder reservoir with a syringe.
2. Remove the retaining clip (A). Disconnect the clutch line (B). Plug the end of the clutch line with a shop towel to prevent brake fluid from coming out.



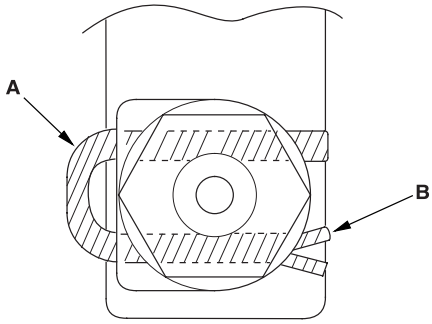
3. Disconnect the reservoir hose (C) from the clutch master cylinder reservoir. Plug the end of the reservoir hose with a shop towel to prevent brake fluid from coming out.
4. Pry out the lock pin (A), and pull the pedal pin (B) out of the yoke. Remove the master cylinder mounting nuts (C).



5. Remove the clutch master cylinder (A).



6. Remove the O-ring (B) and the clutch master cylinder seal (C) from the master cylinder.
7. Install the clutch master cylinder in the reverse order of removal. Install a new O-ring. Tighten the master cylinder mounting nuts to 13 N•m (1.3 kgf•m, 9.4 lbf•ft). Make sure the tabs on the master cylinder hose clamps are pointed in the directions shown.
8. To prevent the retaining clip (A) from coming off, pry to open the tip of the retaining clip (B) with a screwdriver.



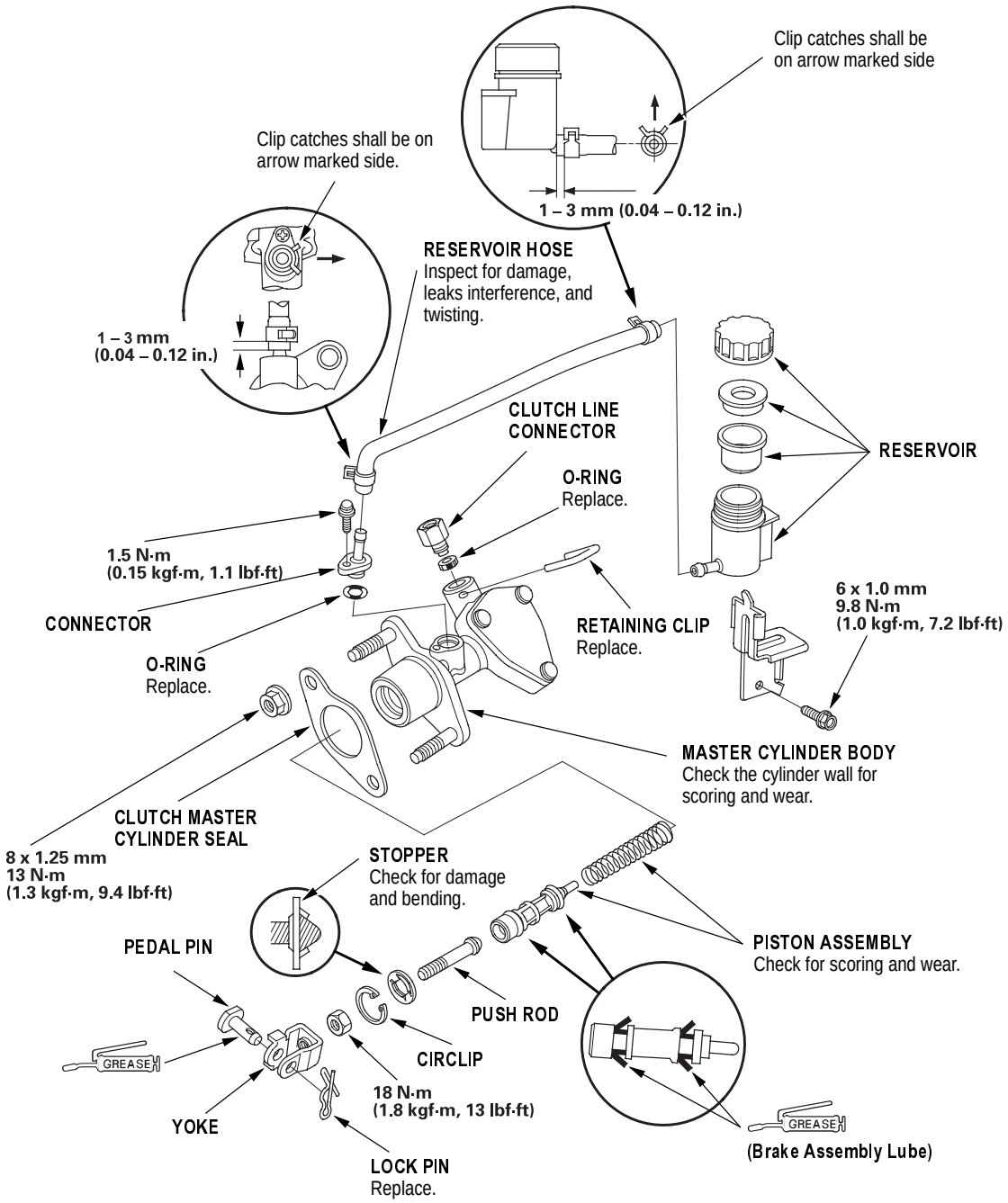
9. Bleed the clutch master hydraulic system (see step 11 on page 12-9).

   NOTE: The reservoir filling is covered in the bleeding procedure.

Clutch Master Cylinder Overhaul

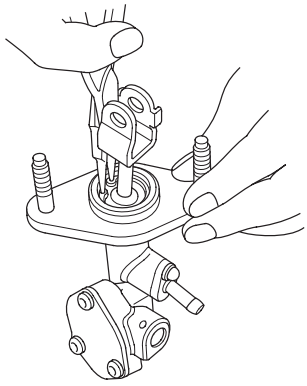
Exploded view

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

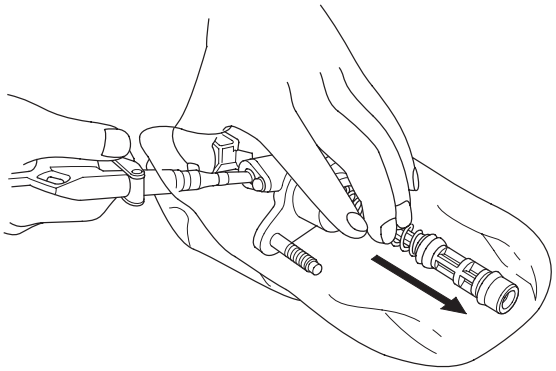


NOTE:
- Refer to the Exploded View, as needed during this procedure.
- Do not spill brake fluid on the vehicle; it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.
- Clean all parts in brake fluid and air dry; blow out all passages with compressed air.
- Before reassembling, check that all part are free of dust and other foreign particles.
- Replace parts with new ones whenever specified to do so.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.
- Do not mix different brands of brake fluid as they may not be compatible.
- Do not reuse the drained fluid. Use only clean DOT 3 or 4 brake fluid.

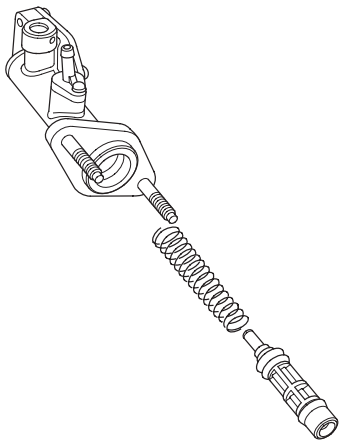
1. Pry the circlip off the clutch master cylinder.



2. Carefully remove the piston by applying air pressure through the clutch line hole.



3. Slide the piston assembly into the clutch master cylinder.

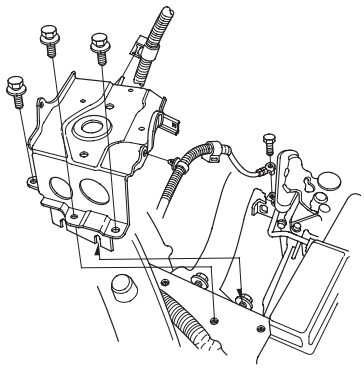


4. Install the circlip in the groove of the clutch master cylinder.

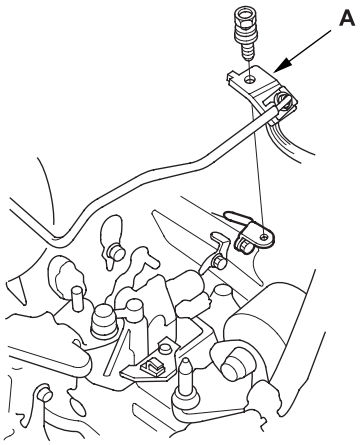
Slave Cylinder Replacement

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

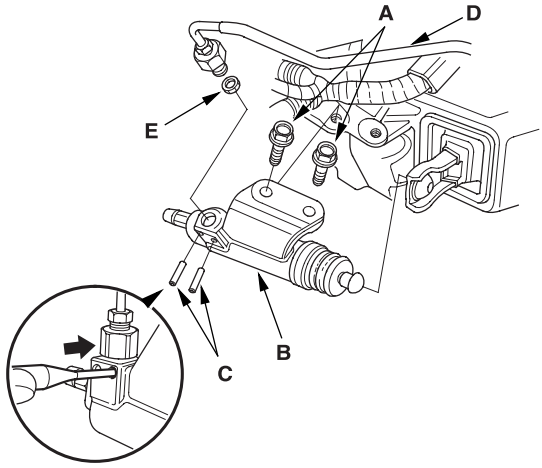
1. Write down the frequencies for the radio's preset buttons. Disconnect the negative (-) cable first, then the positive (+) cable from the battery. Remove the battery.
2. Remove the air cleaner housing (see step 5 on page 05-3).
3. Remove the intake air duct (see step 6 on page 05-3).
4. Remove the battery tray.



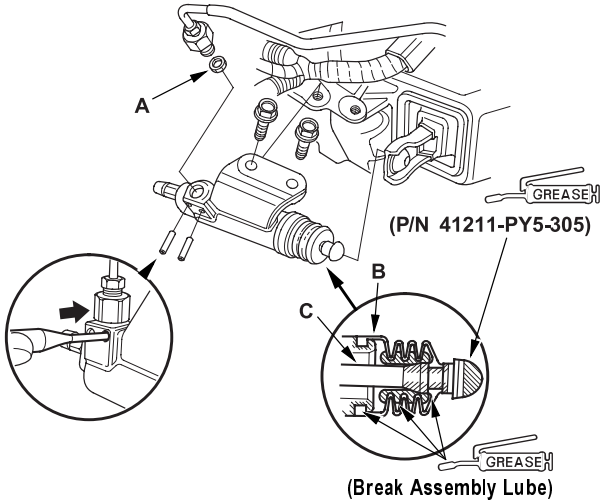
5. Remove the clutch line bracket (A).



6. Remove the mounting bolts (A) and the slave cylinder (B).



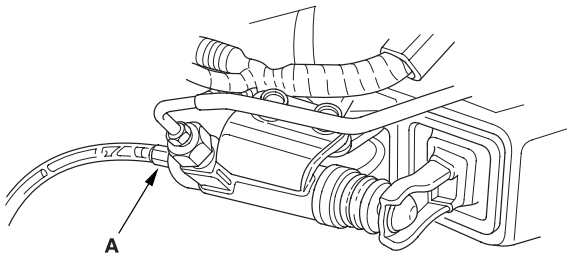
7. Remove the roll pins (C). Disconnect the clutch line (D), and remove the O-ring (E). Plug the end of the clutch line with a shop towel to prevent brake fluid from coming out.
8. Install the slave cylinder in the reverse order of removal. Install a new O-ring (A).



9. Pull the boot (B) back, and apply brake assembly lube to the boot and slave cylinder rod (C). Reinstall the boot.
10. Apply Urea Grease UM264 (P/N 41211-PY5-305) to the push rod of the slave cylinder. Tighten the slave cylinder mounting bolts to 22 N•m (2.2 kgf•m, 16 lbf•ft).

11. Bleed the clutch hydraulic system.

- Attach a hose to the bleeder screw (A), and suspended the hose in a container of brake fluid.
- Make sure there is an adequate supply of fluid at the clutch master cylinder, then slowly pump the clutch pedal until no more bubbles appear at the bleeder hose.
- Tighten the bleed screw to 8 N•m (0.8 kgf•m, 6 lbf•ft); do not overtighten it.
- Refill the clutch master cylinder with fluid when done.
- Always use only Genuine Honda DOT 3 or 4 brake fluid.

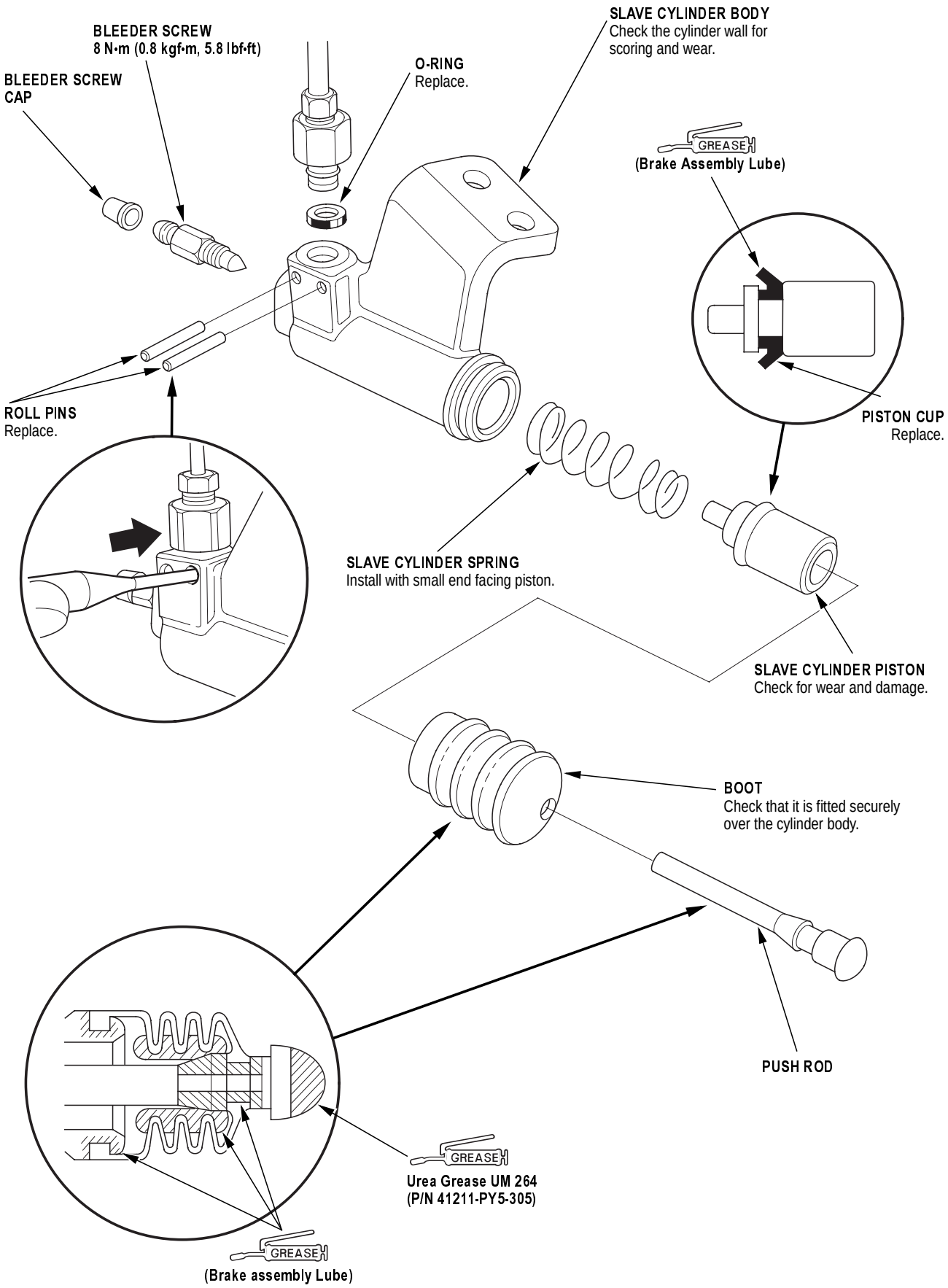


12. Install the clutch line bracket and battery tray.

13. Install the intake air duct (see step 38 on page 05-16).

14. Install the air cleaner housing (see step 39 on page 05-17).

Slave Cylinder Overhaul



Clutch Replacement

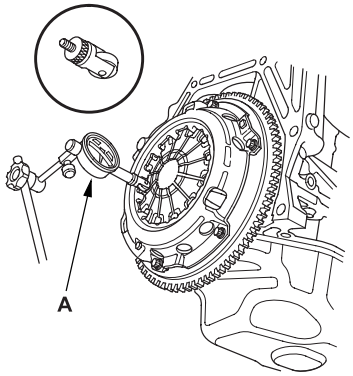
Special Tools Required
- Clutch alignment tool set 07PAF-0020000
- Ring gear holder 07LAB-PV00100 or 07924-PD20003

Pressure Plate and Clutch Disc Removal

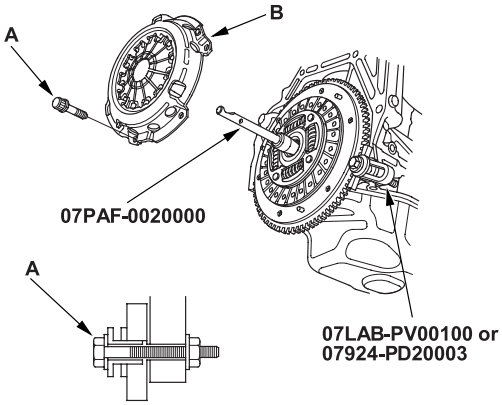
1. Check the diaphragm spring fingers for height using the dial indicater (A). If the height is more than the service limit, replace the pressure plate.

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

Service Limit: 0.8 mm (0.03 in.)

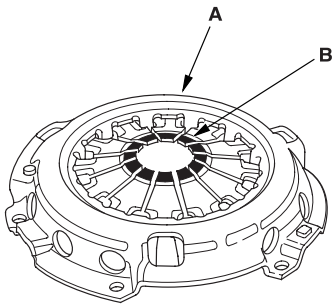


2. Install the special tools.



3. To prevent warping, unscrew the pressure plate mounting bolts (A) in a crisscross pattern in several steps, then remove the pressure plate (B).

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



5. Inspect the fingers of the diaphragm spring (B) for wear at the release bearing contact area.

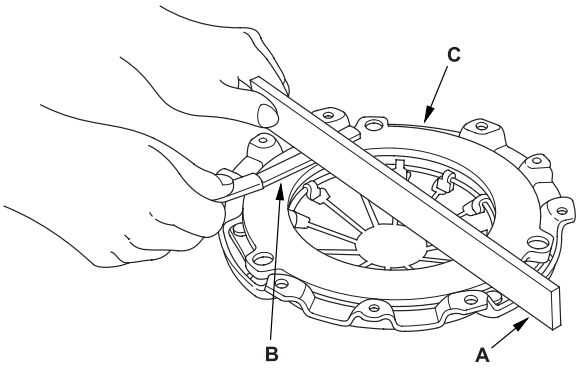
(cont'd)

Clutch Replacement (cont'd)

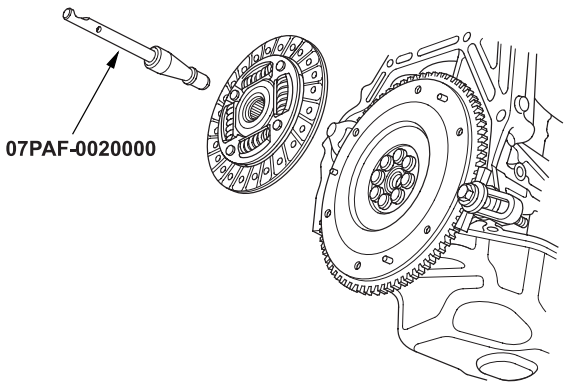
Pressure Plate and Clutch Disc Removal (cont'd)

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

Standard (New): 0.03 mm (0.001 in.) max.
Service Limit: 0.15 mm (0.006 in.)



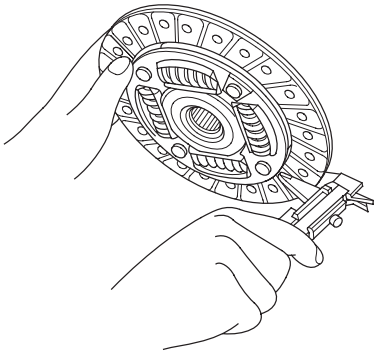
7. Remove the clutch disc and special tools.



8. Inspect the lining of the clutch disc for signs of slipping or oil. If the clutch disc is burned black or oil soaked, replace it.

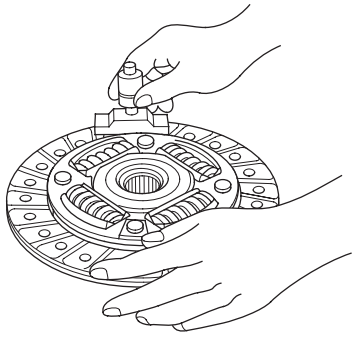
9. Measure the clutch disc thickness. If the thickness is less than the service limit, replace the clutch disc.

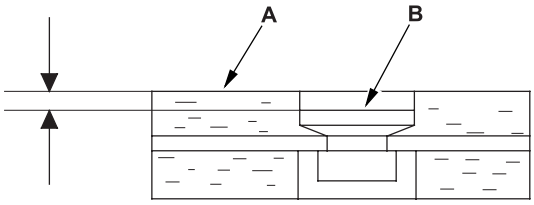
Standard (New): 8.7 - 9.3 mm (0.343 - 0.366 in.) max.
Service Limit: 6.0 mm (0.24 in.)



10. Measure the rivet depth from the clutch disc lining surface (A) to the rivets (B) on both sides. If the rivet depth is less than the service limit, replace the clutch disc.

Standard (New): 1.65 - 2.25 mm (0.065 - 0.089 in.) max.
Service Limit: 0.7 mm (0.03 in.)

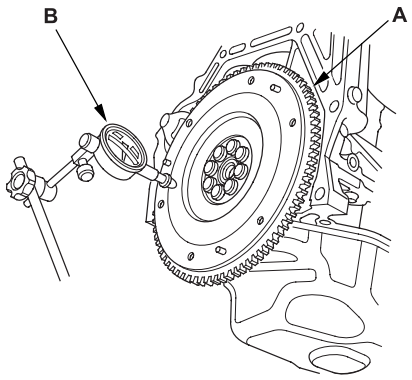




Flywheel Inspection

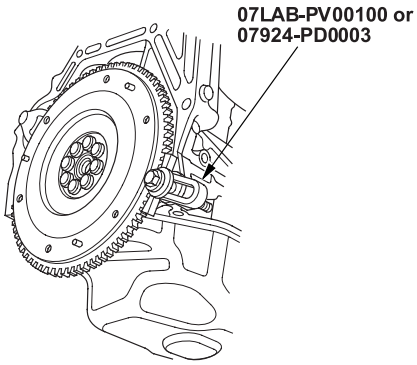
1. Inspect the ring gear teeth for wear and damage.
2. Inspect the clutch disc mating surface on the flywheel for wear, cracks and burning.
3. Measure the flywheel (A) runout using a dial indicator (B) through at least two full turns with the engine installed. Push against the flywheel each time you turn it to take up the crankshaft thrust washer clearance. If the runout is more than the service limit, replace the flywheel and recheck the runout. Resurfacing the flywheel is not recommended.

Standard (New): 0.05 mm (0.002 in.) max.
Service Limit: 0.15 mm (0.006 in.)

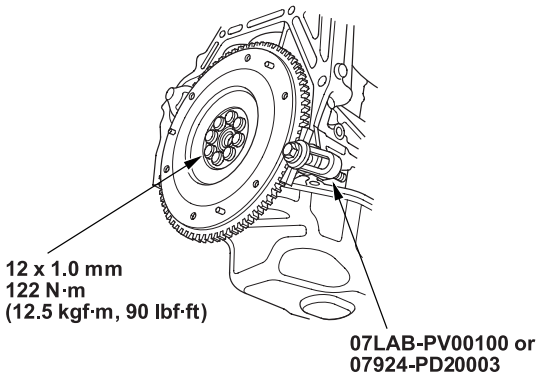


Flywheel Replacement

1. Install the special tool.



2. Remove the flywheel mounting bolts in a crisscross pattern in several steps, then remove the flywheel.
3. Install the flywheel on the crankshaft, and install the mounting bolts finger-tight.
4. Install the special tool, then torque the flywheel mounting bolts in a crisscross pattern in several steps.

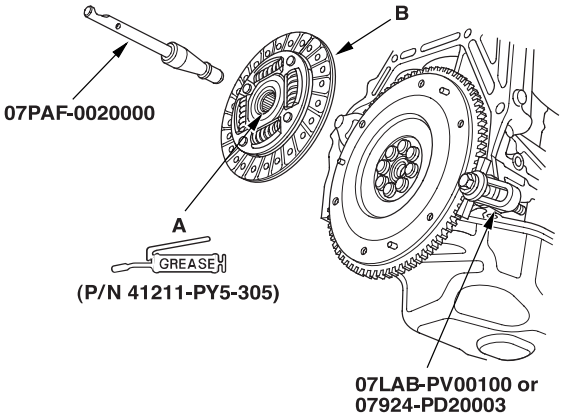


(cont'd)

Clutch Replacement (cont'd)

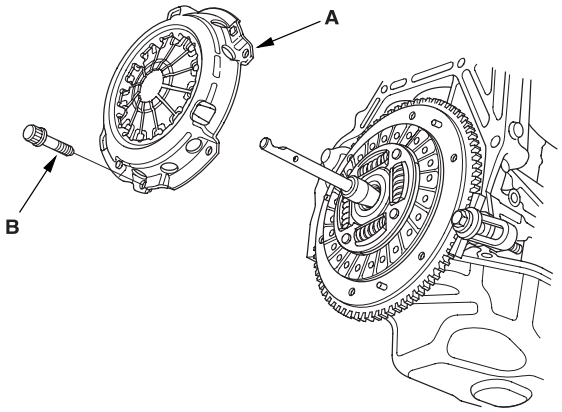
Clutch Disc and Pressure Plate Installation

1. Install the ring gear holder.



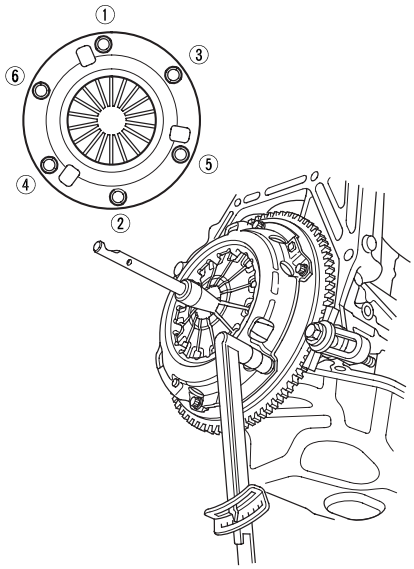
2. Apply Urea Grease UM264 (P/N 41211-PY5-305) to the splines (A) of the clutch disc (B), then install the clutch disc using the special tools.

3. Install the pressure plate (A) and the mounting bolts (B) finger-tight.



4. Torque the mounting bolts in a crisscross pattern. Tighten the bolts in several steps to prevent warping the diaphragm spring.

PRESSURE PLATE MOUNTING BOLT TORQUE:
25 N•m (2.6 kgf•m, 19 lbf•ft)

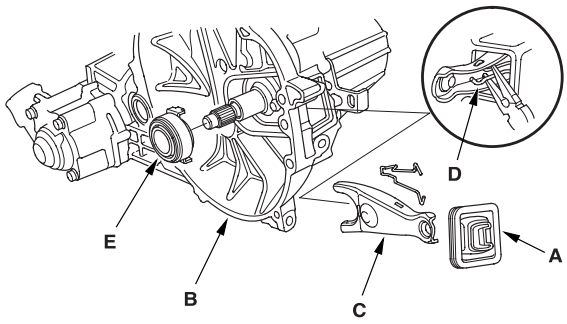


5. Remove the special tools.

6. Make sure the diaphragm spring fingers are all the same height.

Release Bearing Replacement

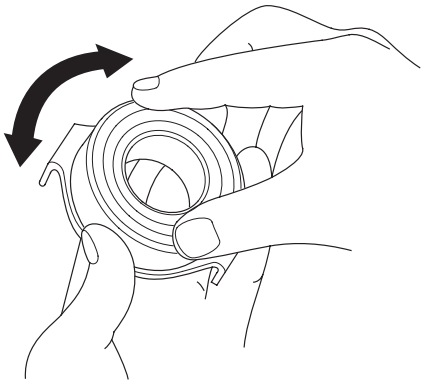
1. Remove the release fork boot (A) from the clutch housing (B).



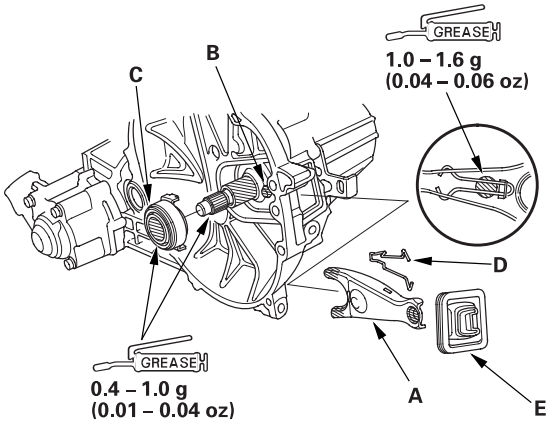
2. Remove the release fork (C) from the clutch housing (B) by squeezing the release fork set spring (D) with pliers. Remove the release bearing (E).

3. Check the release bearing for play by spinning it by hand. If there is excessive play, replace the release bearing with a new one.

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



4. Apply Urea Grease UM264 (P/N 41211-PY5-305) to the release fork (A), the release fork bolt (B), the release bearing (C), and the release bearing guide (D) in the shaded areas.



5. With the release fork slid between the release bearing pawls, install the release bearing on the mainshaft while inserting the release fork through the hole in the clutch housing.

6. Align the detent of the release fork with the release fork bolt, then press the release fork over the release fork bolt squarely.

7. Install the release fork boot (E), make sure the boot seals around the release fork and clutch housing.

8. 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.