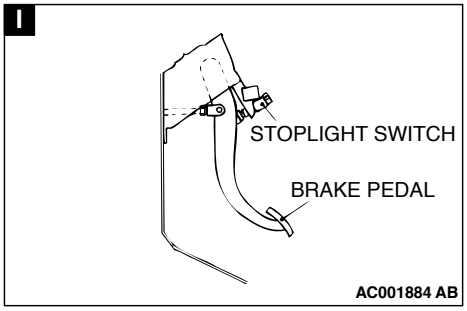
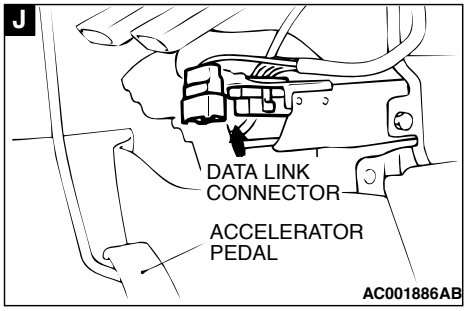
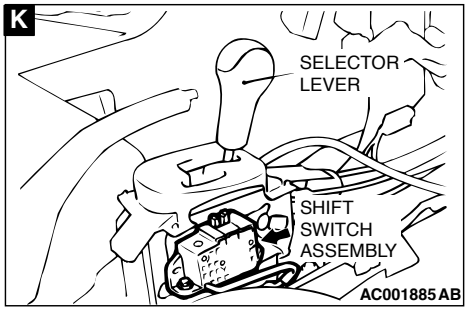






ESSENTIAL SERVICE

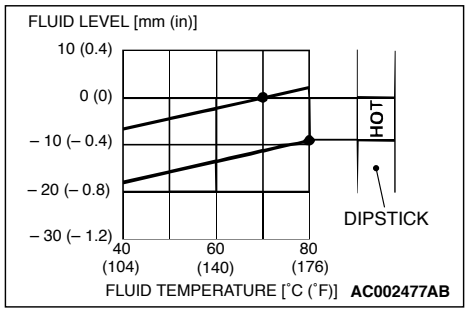
A/T FLUID CHECK

M1231000900049

1. Drive the vehicle until the A/T fluid temperature rises to the normal temperature [70 – 80°C (158 – 176°F)].

   NOTE: The A/T fluid temperature is measured with scan tool (MUT-II).

   NOTE: If it takes some amount of time until the A/T fluid reaches its normal operating temperature [70 – 80°C (158 – *176°F)], check the A/T fluid level by referring to the left diagram.*
2. Park the vehicle on a level surface.
3. Move the selector lever through all positions to fill the torque converter and the hydraulic circuits with fluid, and then move the selector lever to the "N" position.
4. After wiping off any dirt around the dipstick, remove the dipstick and check the condition of the A/T fluid.



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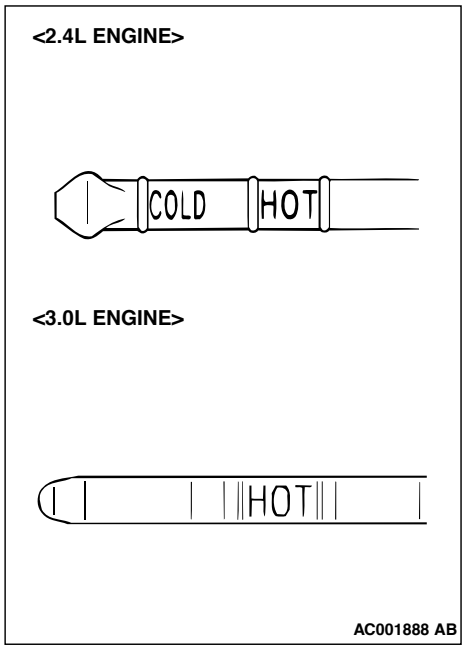

NOTE: If the A/T fluid smells as if it is burnt, it means that the A/T fluid has been contaminated by fine particles from the bushings and friction materials, a transaxle overhaul and flashing the cooler line flushing may be necessary.

5. Check that the A/T fluid level is at the "HOT" mark on the dipstick. If the A/T fluid level is lower than this, pour in more DIAMOND ATF SP III, ATF SP II M or equivalent until the level reaches the "HOT" mark.

   NOTE: If the A/T fluid level is too low, the oil pump will draw in air along with the A/T fluid, which will cause bubbles to form. This will in turn cause the hydraulic pressure to drop, which will result in late shifting and slipping of the clutches and brakes.

   NOTE: In either case, air bubbles can interfere with normal valve, clutch, and brake operation. Foaming can cause A/T fluid to escape from the transaxle vent, in which case it may be mistake for a leak.

6. Securely insert the dipstick.

   NOTE: The A/T fluid should always be replaced in the following conditions:

   - *When trouble shooting the transaxle*
   - *When overhauling the transaxle*
   - *When the A/T fluid is noticeably dirty or burnt (driving under severe conditions)*

A/T FLUID REPLACEMENT

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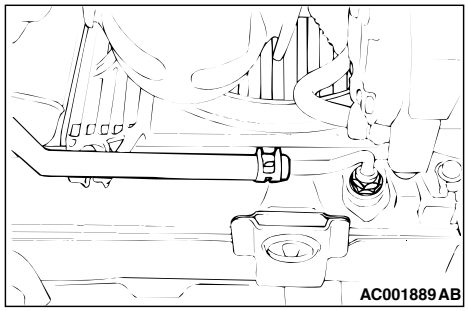


If you have a A/T fluid changer, use this changer to replace the A/T fluid. If you do not have a A/T fluid changer, replace the A/T fluid by the following procedure.

1. Disconnect the hose shown in the illustration which connects the transaxle and the oil cooler (inside the radiator). Place a container under the hose to collect the discharge.

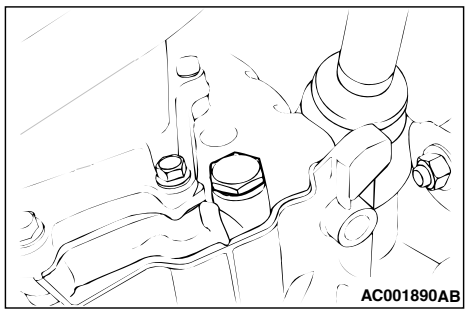
⚠ CAUTION

The engine should be stopped within one minute after it is started. If the A/T fluid has all drained out before then, the engine should be stopped at that point.

Discharge volume: Approximately 3.5 dm^3 (3.7 quarts)

2. Start the engine and let the A/T fluid drain out.

   Running conditions: "N" range with engine idling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3. Remove the drain plug from the bottom of the transaxle case to drain the A/T fluid.

Discharge volume: Approximately 2.0 dm^3 (2.1 quarts)

4. Install the drain plug with a new gasket, and tighten it to the specified torque.

Tightening torque: 32 ± 2 N·m (24 ± 1 ft-lb)

⚠ CAUTION
Stop pouring if the full volume of A/T fluid cannot be poured in.

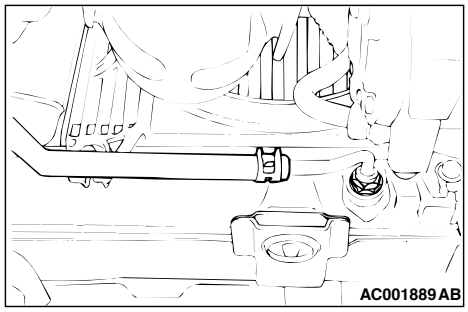
5. Pour new A/T fluid in through the oil filter tube.

Adding volume: Approximately 5.5 dm^3 (5.8 quarts)

6. Repeat the procedure in Step 2. (to pump out the rest of the contaminated A/T fluid)
7. Pour the new A/T fluid in through the oil filler tube.

Adding volume: Approximately 3.5 dm^3 (3.7 quarts)

NOTE: Check the A/T fluid for contamination or burnt smell. If fluid is still contaminated or burnt, repeat Steps 6 and 7 before proceeding to Step 8.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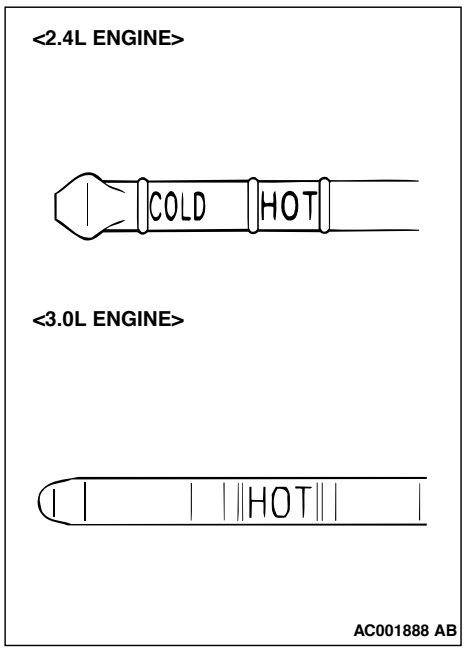
8. Reconnect the hose which was disconnected in step 1 above, and firmly replace the dipstick.
9. Start the engine and run it at idle for one to two minutes.
10. Move the selector lever through all positions, and then move it to the "N" position.



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11. Check that the A/T fluid level is at the "COLD" mark on the dipstick. If the level is lower than this, pour in more A/T fluid.
12. Drive the vehicle until the A/T fluid temperature rises to the normal temperature [70 – 80°C (158 – 176°F)], and then check the A/T fluid level again. The A/T fluid level must be at the "HOT" mark.

NOTE: The A/T fluid temperature is measured with scan tool (MUT-II).

NOTE: The "COLD" level is for reference only; the "HOT" level should be regarded as the standard level.

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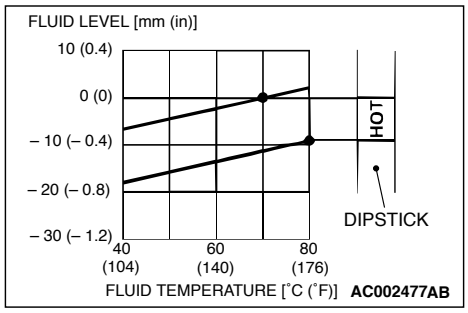

NOTE: If it takes some amount of time until the A/T fluid reaches its normal operating temperature [70 – 80°C (158 - 176°F)], check the A/T fluid level by referring to the left diagram.

13. Firmly insert the dipstick into the oil filler tube.

FLUSHING COOLERS AND TUBES

M1231013000046

Required Special Tool:
MB995062: Flushing Tool

⚠ WARNING

- ***Wear protective eye wear that meets the requirements of OSHA and ANSI Z87.1 - 1968. Wear standard industrial rubber gloves.***
- ***Keep lighted cigarettes, sparks, flames, and other ignition sources away from the area to prevent the ignition of combustible liquids and gases. Keep a class (B) fire extinguisher in the area where the flushing tool will be used. Keep the area well ventilated. Do not let flushing solvent come in contact with water for 15 to 20 seconds. Remove contaminated clothing and wash affected skin with soap and water. Seek medical attention.***

When a transaxle failure has contaminated the A/T fluid, the oil cooler(s) must be flushed. The cooler by-pass valve in the transaxle must also be replaced. The torque converter must also be replaced with an exchange unit. This will ensure that metal particles or sludged A/T fluid are not later transferred back into the reconditioned (or replaced) transaxle. There are two different procedures for flushing coolers and lines. The recommended procedure is to use Tool MB995062 Cooler Flusher. The other procedure is to use a hand suction gun and mineral spirits.

1. Remove the cover plate filler plug on special tool MB995062. Fill the reservoir 1/2 to 3/4 full of fresh flushing solution. Flushing solvents are petroleum based solutions generally used to clean transaxle components. Do not use solvents containing acids, water, gasoline, or any other corrosive liquids.
2. Reinstall filler plug on special tool MB995062.
3. Verify the pump power switch is turned "OFF." Connect the red alligator clip to the positive battery terminal. Connect the black alligator clip to a good ground.
4. Disconnect the cooler lines at the transaxle.

   NOTE: When flushing the transaxle cooler and lines, always reverse flush.

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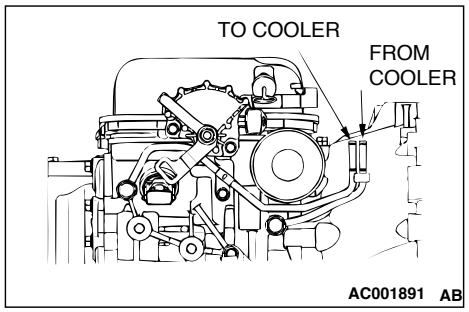

5. Connect the BLUE pressure line to the OUTLET (From) cooler line.
6. Connect the CLEAR return line to the INLET (To) cooler line.
7. Turn the pump "ON" for two to three minutes to flush the cooler(s) and lines. Monitor pressure readings and clear the return lines. Pressure readings should stabilize below 138 kPa (20 psi) for vehicles equipped with a single cooler and 208 kPa (30 psi) for vehicles equipped with dual coolers. If flow is intermittent or exceeds these pressures, replace the cooler.
8. Turn the pump "OFF."
9. Disconnect the CLEAR suction line from the reservoir at cover plate. Disconnect the CLEAR return line at the cover plate, and place it in a drain pan.
10. Turn the pump "ON" for 30 seconds to purge flushing solution from the cooler and lines. Turn the pump "OFF."
11. Place the CLEAR suction line into a one quart container of DIAMOND ATF SP III, ATF SP II M or equivalent A/T fluid.
12. Turn the pump "ON" until all A/T fluid is removed from the one quart container and lines. This purges any residual cleaning solvent from the transaxle cooler and lines. Turn the pump "OFF."
13. Disconnect the alligator clips from the battery. Reconnect the flusher lines to the cover plate, and remove the flushing adapters from the cooler lines. Reconnect the cooler lines.

OIL COOLER FLOW CHECK

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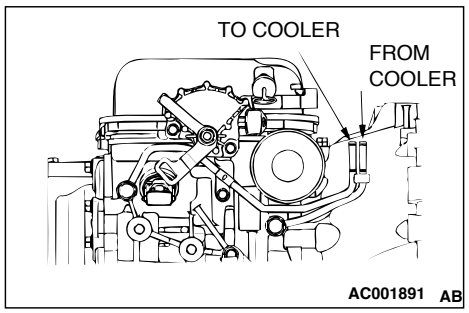

After the new or repaired transaxle has been installed, fill to the proper level with DIAMOND ATF SP III, ATF SP II M or equivalent A/T fluid. The flow should be checked using the following procedure:

⚠ CAUTION

With the fluid set at the proper level, A/T fluid collection should not exceed one quart or internal damage to the transaxle may occur.

1. Disconnect the OUTLET (From) cooler line at the transaxle and place a collecting container under the disconnected line.
2. Run the engine at curb idle speed, with the shift selector in neutral.
3. If A/T fluid flow is intermittent or it takes more than 20 seconds to collect one quart of A/T fluid, replace the cooler.
4. If flow is found to be within acceptable limits, reconnect the cooler line. Then fill the transaxle to the proper level, using the approved type of A/T fluid.

THROTTLE POSITION SENSOR ADJUSTMENT

M1231001900042

Refer to GROUP 13A <2.4L Engine>, On-vehicle Service – Throttle Position Sensor Adjustment P.13A-473.
Refer to GROUP 13B <3.0L Engine>, On-vehicle Service – Throttle Position Sensor Adjustment P.13B-552.

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