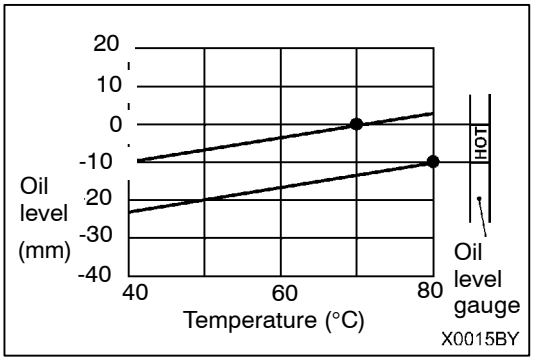
ON-VEHICLE SERVICE

BASIC ADJUSTMENT PROCEDURES

AUTOMATIC TRANSMISSION FLUID (ATF) CHECK

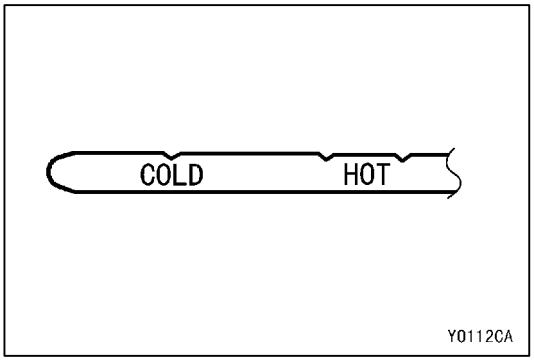
NOTE
When replacing the transmission with a new one, overhauling the existing transmission, or driving in a harsh condition, the ATF cooler line should always be flushed out and ATF should be replaced with a new one.



1. Drive the vehicle until the ATF temperature reaches the normal temperature (70 - 80°C).

   NOTE
   1) Measure ATF temperature using MUT-II.
   2) Check the oil level referring to the characteristics chart shown at left if it takes some time to reach the normal operation temperature of ATF (70 - 80°C.)
2. Park the vehicle on a level surface.
3. Move the selector lever to all positions to fully charge the torque converter and the fluid lines with ATF, and then move the selector lever to the “N” position.
4. After wiping away any dirt from around the oil level gauge, pull out the oil level gauge and check the level of ATF.

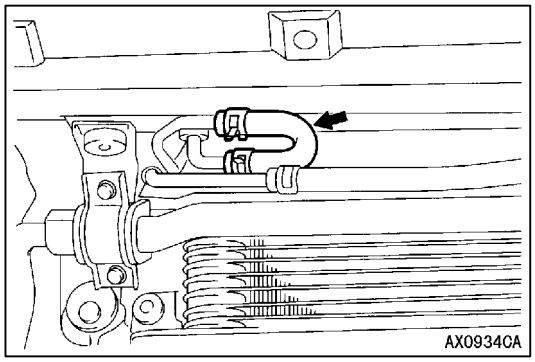
   NOTE
   If the ATF has a burnt smell, or if it has become very contaminated or dirty, it means that the ATF has become contaminated by minute particles from bushings (metal) or worn parts. In such a case, the transmission needs to be overhauled and the ATF cooler line needs to be flushed out.



5. Check that the ATF level is between the “HOT” marks on the oil level gauge. If the ATF level is too low, add more ATF until the level reaches between the “HOT” marks.

   Automatic transmission fluid:
   DIA QUEEN ATF SP II M, SP III or equivalent

   NOTE
   If the ATF level is too low, the oil pump draws air into the system along with the ATF, and air bubbles will thus form in the fluid circuit. This will cause a drop in fluid pressure and cause the shift points to change and the clutches and brakes to slip.
   If the ATF level is too high, the gear will churn the ATF and cause bubbles to develop, which can then cause the same problems as when the ATF fluid is too low. In either case, the air bubbles can cause overheating and oxidation of the ATF, and also prevent the valves, clutches and brakes from operating normally. In addition, if bubbles develop in the ATF, the ATF can overflow from the transmission vent holes and be mistaken for leaks.
6. Securely re-insert the oil level gauge.

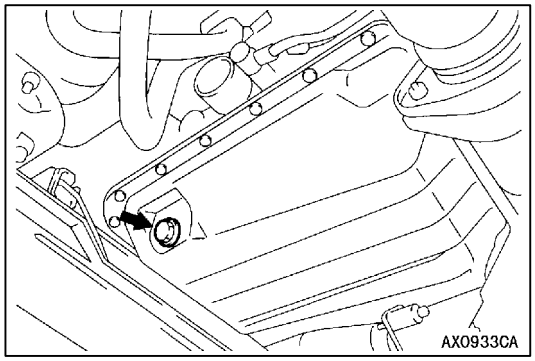


AUTOMATIC TRANSMISSION FLUID (ATF) REPLACEMENT

NOTE
Before replacing the transmission with a new one, overhauling the existing transmission, or connecting the cooler pipe to the transmission, the ATF cooler line should always be flushed out.
If you have an ATF changer, use the ATF changer to flush the ATF. If you do not have an ATF changer, follow the procedure given below.

1. Remove the hose shown in the illustration which allows the ATF to flow from the ATF cooler (built into the radiator) to the transmission.
2. Start the engine and discharge the ATF.
   Driving conditions: N range, idling

   NOTE
   The engine should be stopped within one minute of it being started. If the ATF has all been discharged before this, stop the engine at that point.
   Discharge amount: Approx. 4.0 L



3. Remove the drain plug at the bottom of the transmission case to drain out the remaining ATF.

   Discharge amount: Approx. 2.0 L
4. Install the drain plug with a gasket in between, and tighten it to the specified torque.

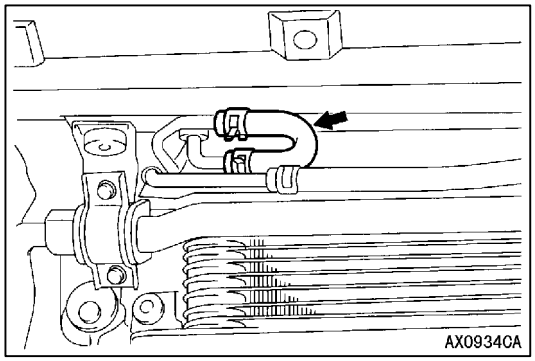
   Tightening torque: 32 ± 2 N·m
5. Pour in new ATF through the oil filler tube.

   Amount to add: Approx. 6.0 L

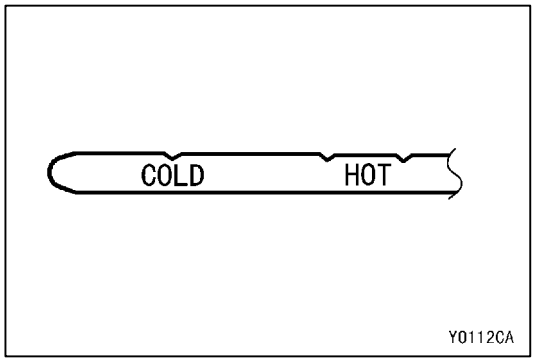
   NOTE
   Stop pouring in the ATF once 6.0 litre has been poured in.
6. Repeat the operation in step 2.

   NOTE
   Carry out steps 2 and 6 so that at least 8.0 litre has been discharged from the cooler hose. After this, discharge a small quantity of ATF and check for contamination. If the ATF is contaminated, repeat steps 5 and 6.
7. Pour in new ATF through the oil filler tube.

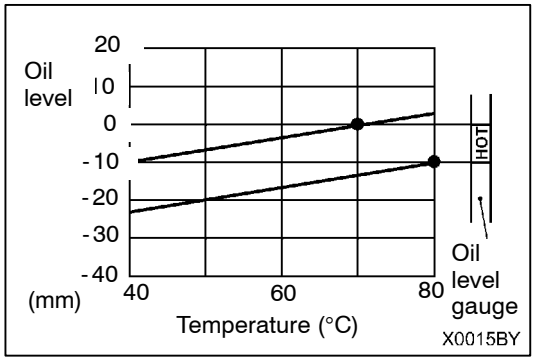
   Amount to add: Approx. 4.0 L



8. Connect the hose which was disconnected in step 1, and then securely re-insert the oil level gauge.
9. Start the engine, and let it run at idle for 1 - 2 minutes.
10. Move the selector lever to all positions once, and then return it to the N position.

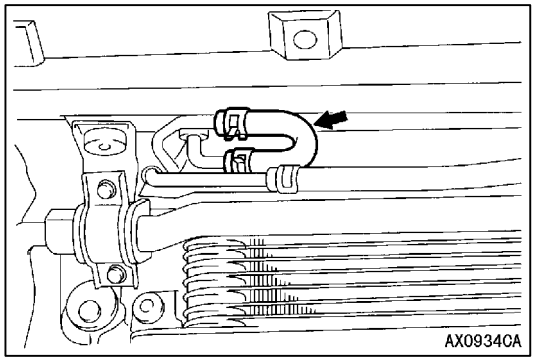


11. Check that the ATF level on the oil level gauge is at the "COLD" mark. If it is not up to this mark, add more ATF.



12. Drive the vehicle until the ATF temperature reaches the normal temperature (70 - 80°C), and then re-check the ATF level.
    The ATF level must be between the HOT marks.

    NOTE
    (1) The "COLD" mark is for reference only; the "HOT" marks should be used as the standard for judgment.
    (2) Measure ATF temperature using MUT-II.
    (3) Check the oil level referring to the characteristics chart shown at left if it takes some time until reaching the normal operation temperature of ATF (70 - 80C.)
13. Securely insert the oil level gauge into the oil filler tube.



ATF COOLER LINE FLUSHING PROCEDURE

NOTE
If replacing the transmission with a new one, if overhauling the existing transmission, or if the ATF has deteriorated or is contaminated, the ATF cooler line must always be flushed out.

1. Remove the hose shown in the illustration which allows the ATF to flow from the ATF cooler (built into the radiator) to the transmission.
2. Start the engine and discharge the ATF.
   Driving conditions: N range, idling

   NOTE
   The engine should be stopped within one minute of it being started.If the ATF has all been discharged before this, stop the engine at that point.

   Discharge amount: Approx. 4.0 L
3. Pour in new ATF through the oil filler tube.

   Amount to add: Approx. 4.0 L

NOTE
Stop pouring in the ATF once 4.0 litre has been poured in.

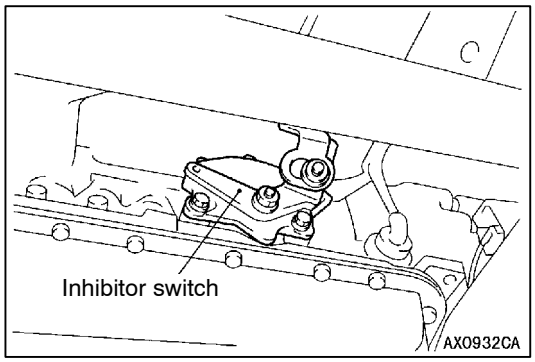
4. Repeat the operation in step 2.

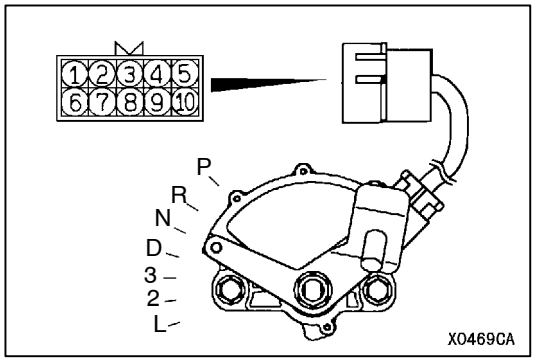
NOTE
Carry out steps 2 and 6 so that at least 8.0 L has been discharged from the cooler hose.After this, discharge a small quantity of ATF and check for contamination.If the ATF is contaminated, repeat steps 3 and 4.

5. Carry out the procedure in "Automatic Transmission Fluid (ATF) Replacement" from step 3 onwards.

ACCELERATOR PEDAL POSITION SENSOR (APS) ADJUSTMENT

Refer to GROUP 13 - On-vehicle Service.





INHIBITOR SWITCH CONTINUITY CHECK

Item	Terminal No.						
	1	2	3	7	8	9	10
P	○			○		○	○
R				○	○		
N		○		○		○	○
D			○	○			

NOTE
The inhibitor switch has 7 positions, but only four positions (P, R, N and D) are used.