

Preliminary Check

1. CHECK FLUID LEVEL

(Transmission and transfer case)

HINT:

- The vehicle must have been driven so that the engine and transmission are at normal operating temperature. (Fluid temperature: 70–80°C or 158–176°F)
- Only use the COOL range on the dipstick as a rough reference when the fluid is replaced or the engine does not run.

- Park the vehicle on a level surface, set the parking brake.
- With the engine idling, shift the shift lever into all positions from P to L position and return to P position.
- Pull out the transmission dipstick and wipe it clean.
- Push it back fully into the tube.
- Pull it out and check that the fluid level is in the HOT range.

If the level is at the low side, add fluid.

Fluid type: ATF DEXRON® II

NOTICE: Do not overfill.

(Transfer chain case)

Remove the filler plug and feel inside the hole with your finger. Check that the oil comes to within 10 mm (0.39 in.) of the bottom edge of the hole.

If the level is low, add fluid until it begins to run out of the filler hole.

Fluid type: ATF DEXRON® II

2. CHECK FLUID CONDITION

If the fluid smells burnt or is black, replace it as following procedures.

(Transmission and transfer case)

- Remove the drain plugs and drain the fluid.
- Reinstall the drain plugs securely.
- With the engine OFF, add new fluid through the oil filler tube.

Fluid type: ATF DEXRON® II

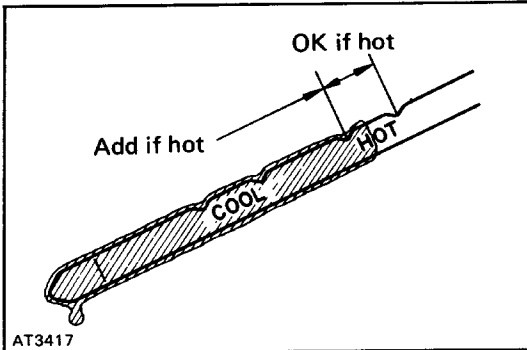
Capacity: liter (US qts, Imp. qts)

	Transmission	Transfer
Drain and refill	4.5 (4.8, 4.0)	
	*3.8 (4.0, 3)	*1.2 (1.3, 1.1)
Total	10.3 (10.9, 9.1)	

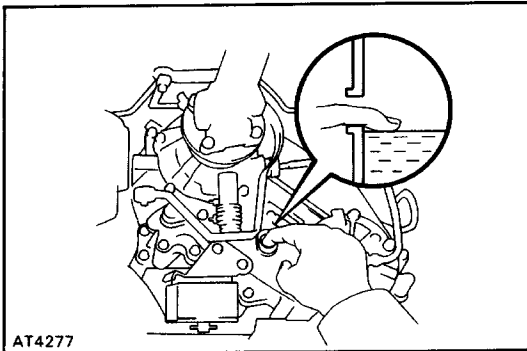
*: Reference capacity when replacing transmission or transfer valve body.

- Start the engine and shift the shift lever into all positions from P to L position and then shift into P position.

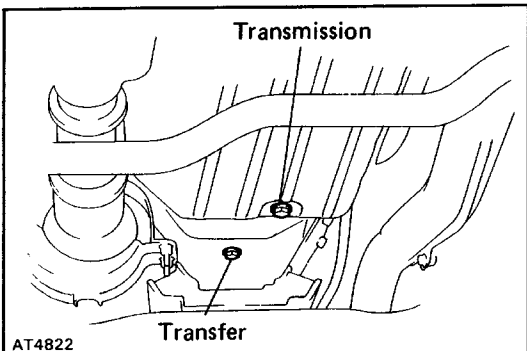
- With the engine idling, check the fluid level. Add fluid up to the COOL level on the dipstick.



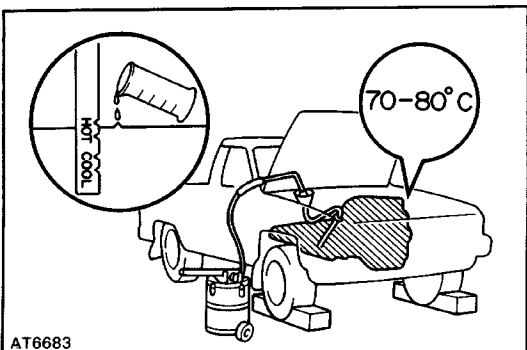
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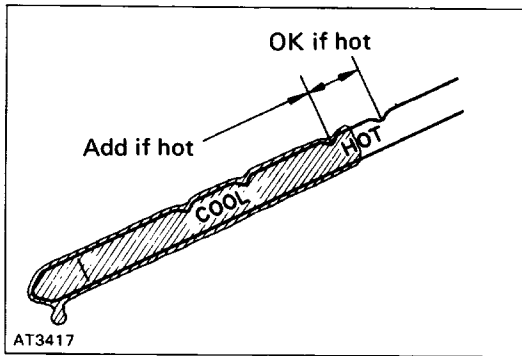
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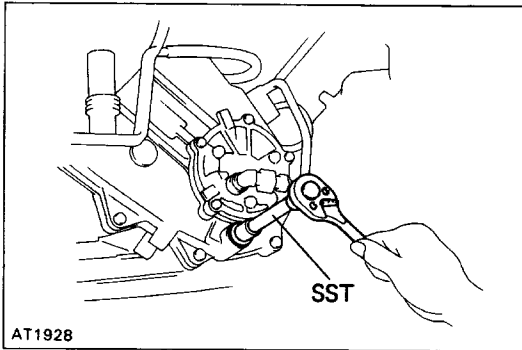


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- (f) Check the fluid level with the normal operating temperature (70–80°C or 158–176°F) and add as necessary.

NOTICE: Do not overfill.



(Transfer chain case)

- Remove the transfer under cover.
- Remove the drain plug with SST and drain the fluid.
SST 09043-38 100
- Reinstall the drain plug securely with SST.
- With the engine OFF, add new fluid through the filler hole.

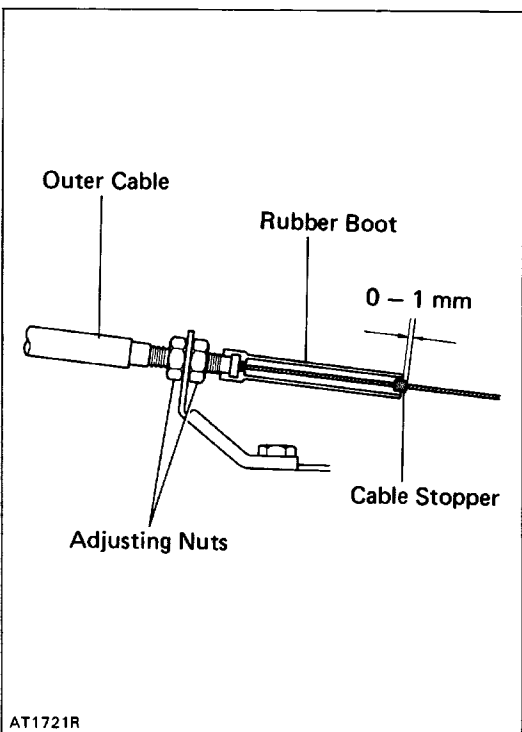
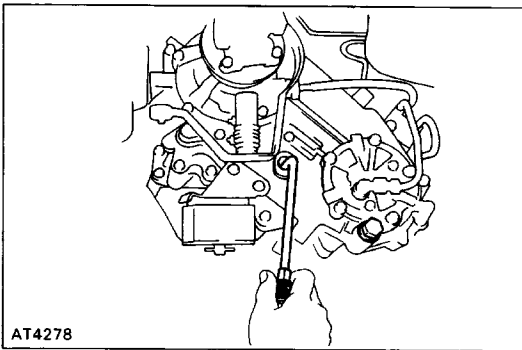
Fluid type: ATF DEXRON® II

Capacity:

Total **1.1 liters**
 (1.2 US qts, 1.0 Imp. qts)

Drain and refill 0.8 liters
 (0.8 US qts, 0.7 Imp. qts)

- Check the fluid level.
- Install the transfer under cover.



3. INSPECT THROTTLE CABLE

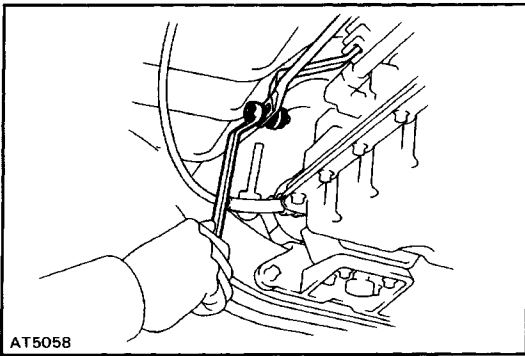
- Depress the accelerator pedal all the way and check that the throttle valve opens fully.

HINT: If the valve does not open fully, adjust the accelerator cable.

- Fully depress the accelerator pedal.
- Measure the distance between the end of the boot and stopper on the cable.

Standard distance: 0–1 mm (0–0.04 in.)

If the distance is not standard, adjust the cable by the adjusting nuts.

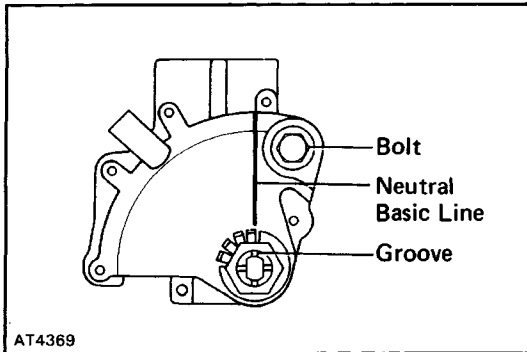


4. INSPECT TRANSMISSION SHIFT LEVER POSITION

When shifting the shift lever from the IV position to other positions, check that the lever can be shifted smoothly and accurately to each position and that the position indicator correctly indicates the position.

If the indicator is not aligned with the correct position, carry out the following adjustment procedures.

- (a) Loosen the nut on the transmission control rod.
- (b) Push the control shaft lever fully rearward.
- (c) Return the control shaft lever two notches to N position.
- (d) Set the shift lever to N position.
- (e) While holding the shift lever lightly toward the R position side, tighten the nut.
- (f) Start the engine and make sure that the vehicle moves forward when shifting the lever from the N to D position and reverse when shifting it to the R position.



5. INSPECT PARK/ NEUTRAL POSITION SWITCH

Check that the engine can be started with the shift lever only in the N or P position, but not in other positions.

If not as stated above, carry out the following adjustment procedures.

- (a) Loosen the park/neutral position switch bolt and set the shift lever to the N position.
- (b) Align the groove and neutral basic line.
- (c) Hold in position and tighten the bolt.

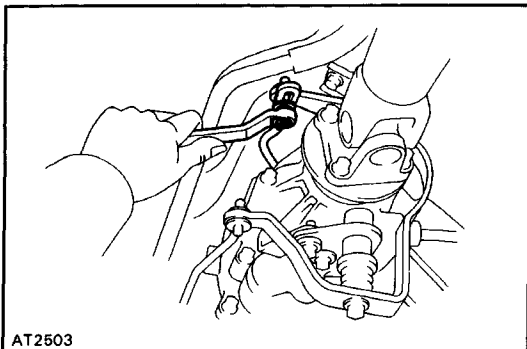
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

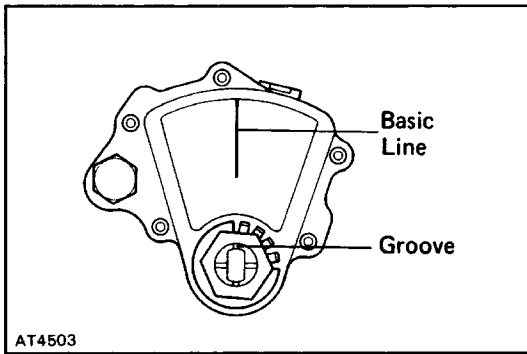
6. INSPECT TRANSFER SHIFT LEVER POSITION

When shifting the shift lever from H2 position to H4 and L4 positions, check that the lever can be shifted smoothly and accurately to each position and that the position indicator correctly indicates the position.

If the indicator is not aligned with the correct position, carry out the following adjustment procedures.

- (a) Loosen the nut on the cross shaft.
- (b) Push the control shaft lever fully forward.
- (c) Return the control shaft lever one notch to H4 position.
- (d) Set the shift lever H4 position.
- (e) While holding the shift lever lightly toward the L4 position side, tighten the nut.



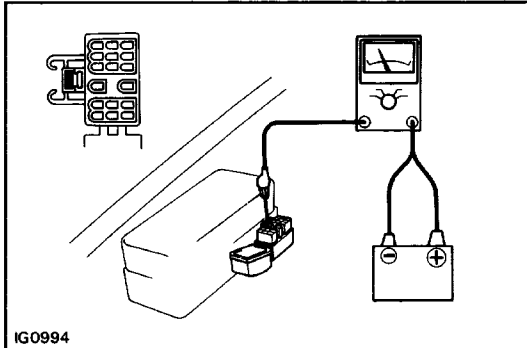


7. INSPECT TRANSFER POSITION SWITCH

If necessary, carry out the following adjustment procedures.

- (a) Loosen the transfer position switch bolt and set the transfer shift lever to the H4 position.
- (b) Align the groove and H4 basic line.
- (c) Hold in position and tighten the bolt.

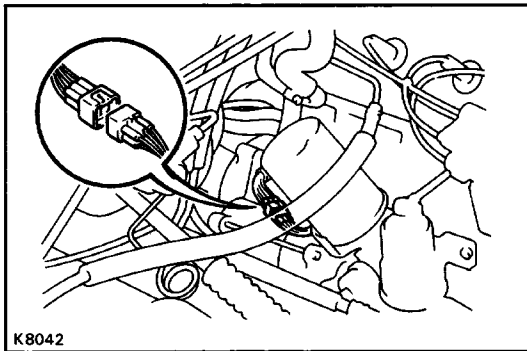
Torque: 13 N. m (130 kgf.cm, 9 ft. lbf)



8. INSPECT IDLE SPEED (N POSITION)

Connect a tachometer test probe to the data link connector 1 terminal IG (3, inspect the idle speed.

Idle speed: 800 RPM



Manual Shifting Test

HINT: With this test, it can be determined whether the trouble lies within the electrical circuit or is a mechanical problem in the transmission.

- 1. DISCONNECT SOLENOID WIRE**
- 2. INSPECT MANUAL DRIVING OPERATION**

Check that the shift and gear positions correspond with the table below.

Shift position	Transmission					Transfer (Reference)		
	D position	2 position	L position	R position	P position	H2 position	H4 position	L4 position
Gear position	O/D	3rd	1 st	Reverse	Pawl Lock	High Gear 2W D	High Gear 4WD	High Gear 4WD

HINT: If the L, 2 and D position gear positions are difficult to distinguish, perform the following road test.

- While driving, shift through the L, 2 and D positions. Check that the gear change corresponds to the shift position.
- If any abnormality is found in the above test, the problem lies in transmission itself.

- 3. CONNECT SOLENOID WIRE**
- 4. CANCEL OUT DIAGNOSTIC TROUBLE CODE**
(See page AT-111)