

ON-VEHICLE REPAIR

Transmission Valve Body

REMOVAL OF VALVE BODY AND/OR SOLENOID VALVE

1. CLEAN TRANSMISSION EXTERIOR

To prevent contamination, clean the exterior of the transmission.

2. DRAIN TRANSMISSION FLUID

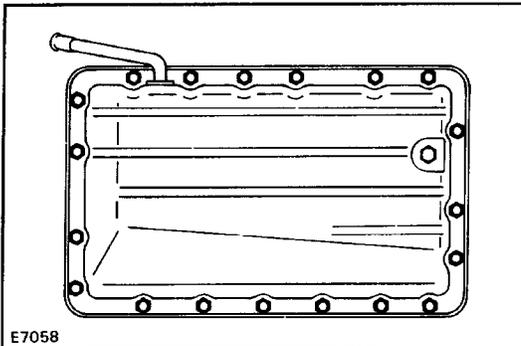
Remove the drain plug and drain the fluid into a suitable container.

3. REMOVE FRONT STABILIZER BAR

(See page [SA-123](#))

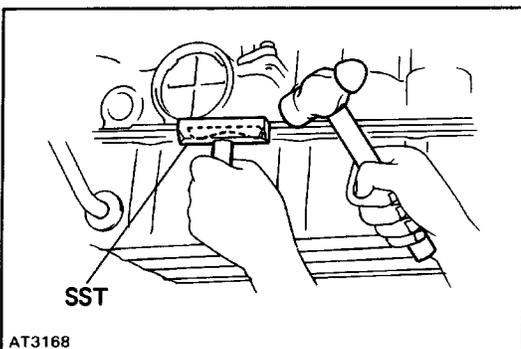
4. REMOVE FRONT PROPELLER SHAFT

(See page [PR-4](#))



5. REMOVE TRANSMISSION OIL PAN

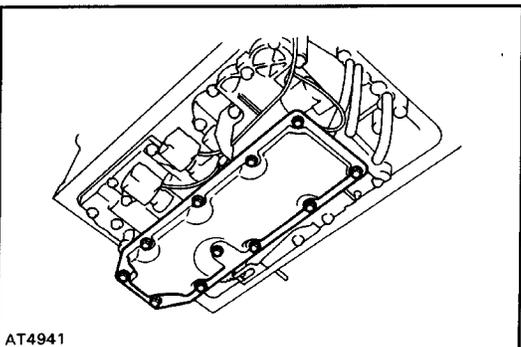
(a) Remove the nineteen bolts.



(b) Install the blade of SST between the transmission case and oil pan, cut off applied sealer.
SST 09032-00100

NOTICE: Be careful not to damage the oil pan flange.

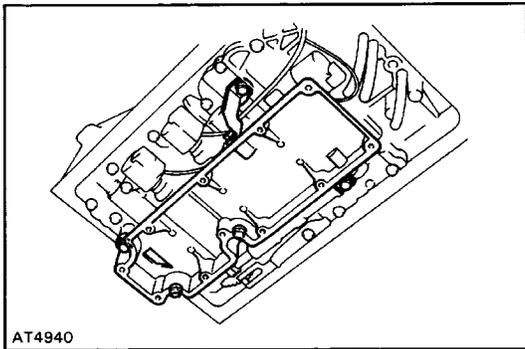
(c) Remove pan by lifting the transmission case.



6. REMOVE OIL STRAINER AND GASKETS

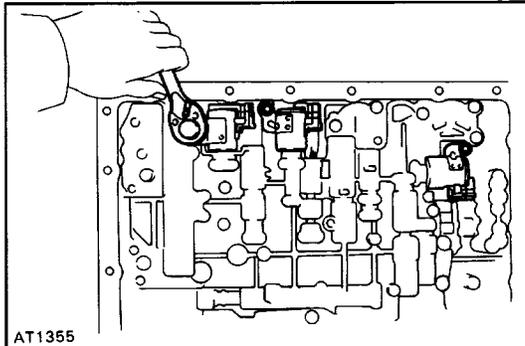
(a) Remove the eleven bolts holding the oil strainer to the oil strainer case.

(b) Remove the oil strainer and gasket.



AT4940

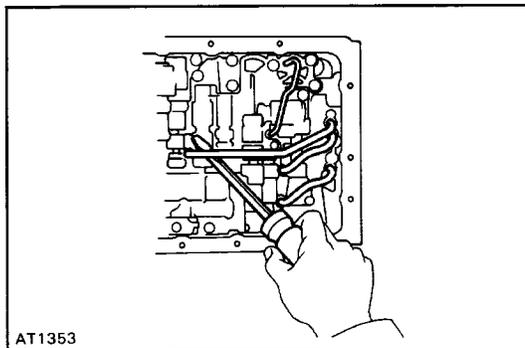
- (c) Remove the five bolts and oil strainer case.
- (d) Remove the two gaskets from the case.



AT1355

7. WHEN REPLACING SOLENOIDS

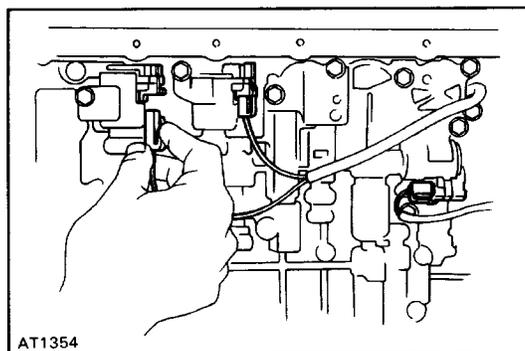
- (a) Disconnect the connectors from the solenoids.
- (b) Remove the solenoid mounting bolts.
- (c) Remove the solenoids.



AT1353

8. REMOVE OIL TUBES

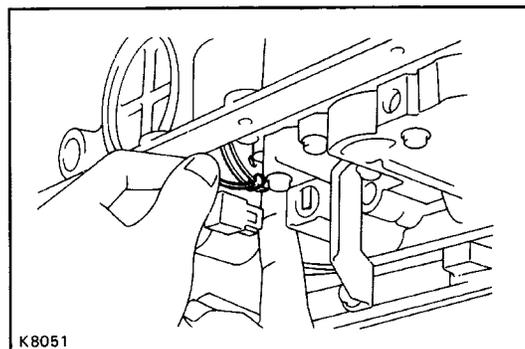
Pry up both tube ends with a large screwdriver and remove the three tubes.



AT1354

9. DISCONNECT SOLENOID CONNECTORS

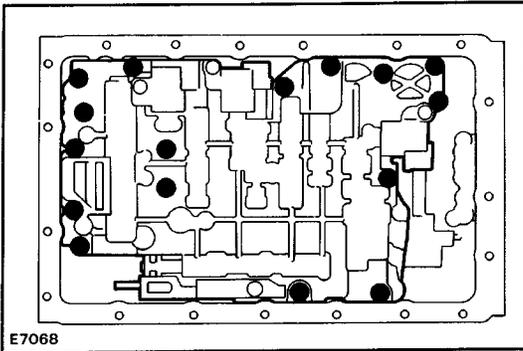
Disconnect the three connectors from No.1, No. 2 and lock-up solenoids.



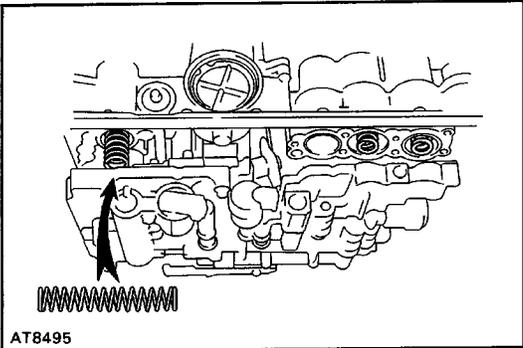
K8051

10. REMOVE VALVE BODY

- (a) Disconnect the throttle cable from the cam.

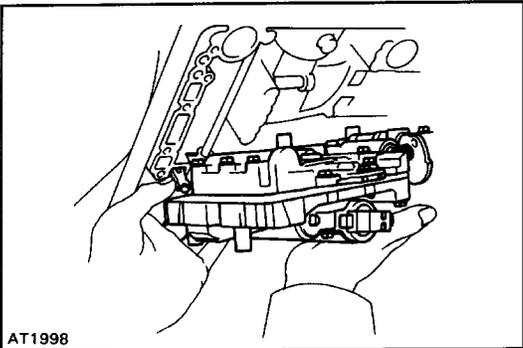


(b) Remove the sixteen bolts.



(c) Remove the two Co accumulator piston springs.
 (d) Remove the valve body.

HINT: Be careful not to drop the check ball body and spring.

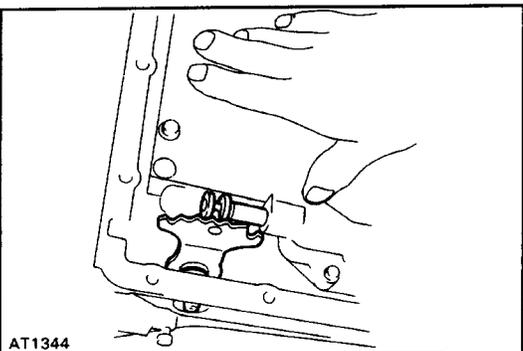


INSTALLATION OF VALVE BODY AND/OR SOLENOID VALVE

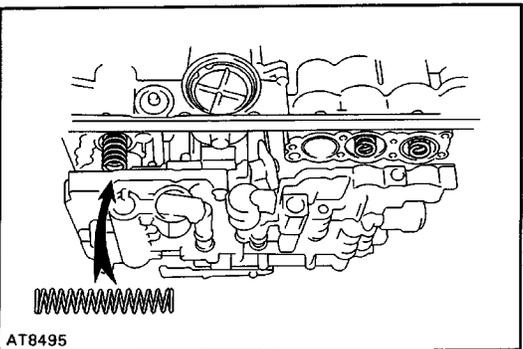
1. INSTALL VALVE BODY

(a) Install the valve body together the check ball body and spring.

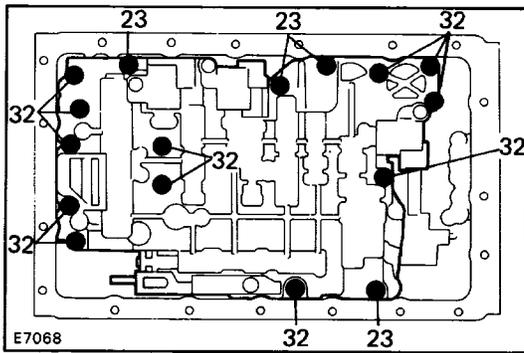
HINT: Align the groove of the manual valve to the pin of the lever.



(b) Align the groove of the manual valve to the pin of the lever.



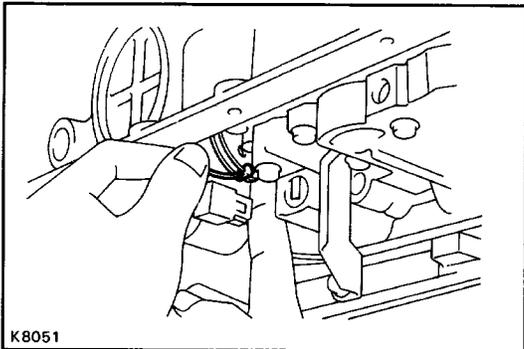
(c) Install the two Co accumulator piston springs.



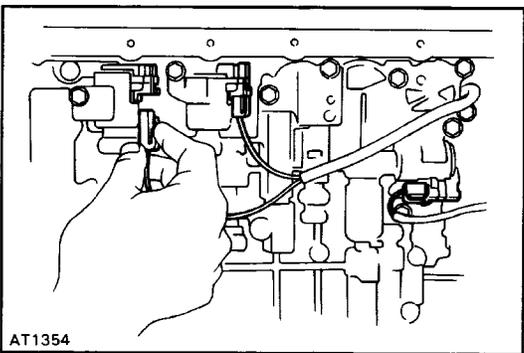
(d) Install the sixteen bolts.

HINT: Each bolt length (mm) is indicated in the figure.

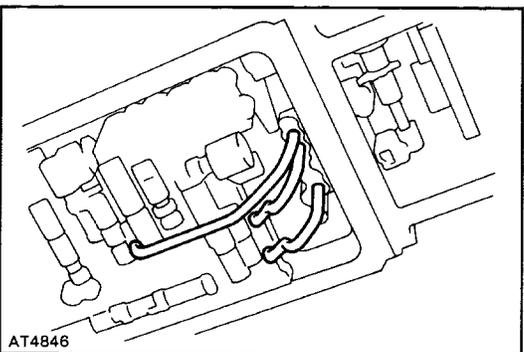
Torque: 10 N-m (0.00 kgf-cm, 7 ft-lbf)



(e) Connect the throttle cable to the cam.



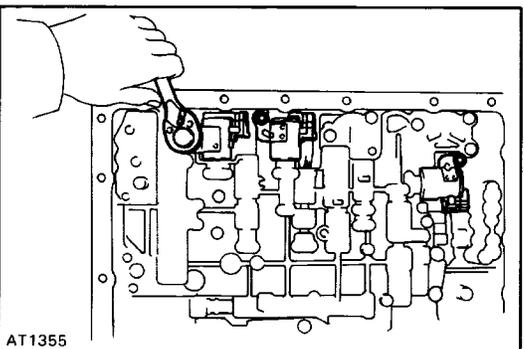
2. CONNECT CONNECTORS TO EACH SOLENOID



3. INSTALL OIL TUBES

Using a plastic hammer, install the three tubes into position shown in the figure.

NOTICE: Be careful not to bend or damage the tubes.



4. WHEN REPLACING SOLENOID

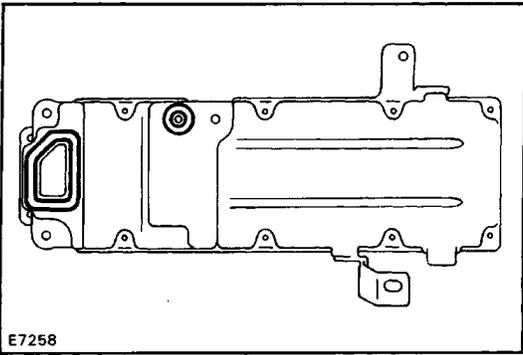
- Install a new O-ring to the solenoid.
- Install the solenoid and torque the bolt.

Torque: 10 N-m (100 kgf-cm, 7 ft-lbf)

- Connect the connector to the solenoid.
- Clamp the solenoid wire.

5. INSTALL OIL STRAINER AND GASKETS

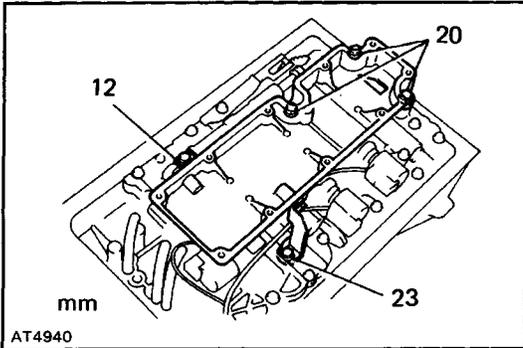
(a) Install two new gaskets to the oil strainer case.



(b) Install the oil strainer case and torque the five bolts.

Torque: 10 N-m (100 kgf-cm, 7 ft-lbf)

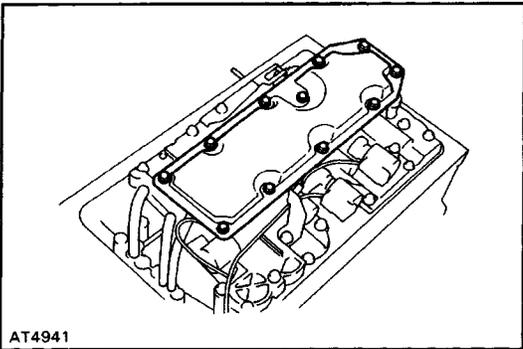
HINT: Each bolt length (mm) is indicated in the figure.



(c) Install a new gasket to the oil strainer case.

(d) Install the oil strainer and torque the eleven bolts.

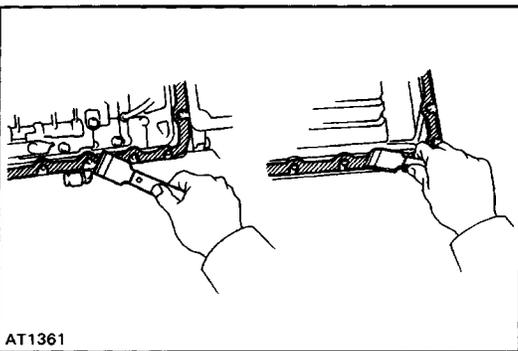
Torque: 6.9 N-m (70 kgf-cm, 61 in.-lbf)



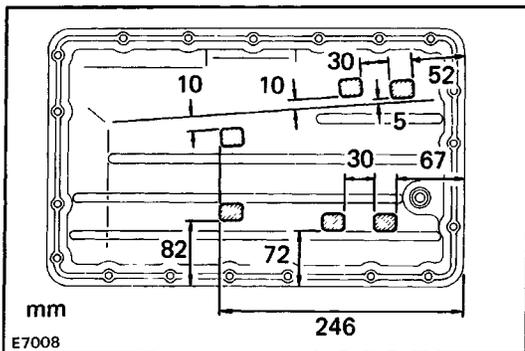
6. INSTALL OIL PAN

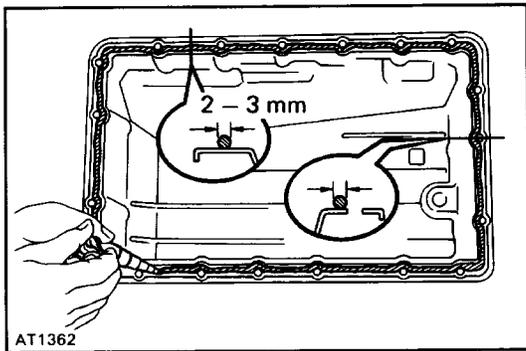
(a) Remove any packing material and be careful not to drop the oil on the contacting surfaces of the oil pan and transmission case.

(b) Clean contacting surfaces of any residual packing material using gasoline or alcohol.



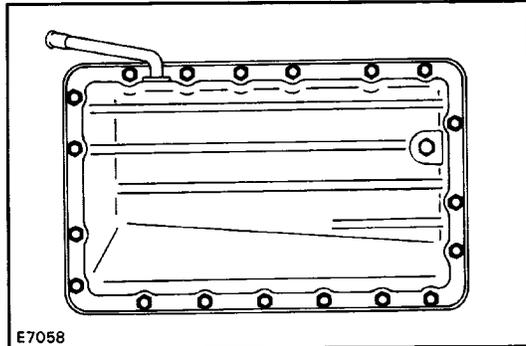
(c) Install the six magnets as shown in the figure.





(d) Apply seal packing to the oil pan as shown in the figure.

Seal packing: Part No. 08826-00090, THREE BOND 1281 or equivalent



(e) Install and torque the nineteen bolts.

Torque: 7.4 N-m (75 kgf-cm, 61 in.·lbf)

7. INSTALL OIL PAN DRAIN PLUG

Torque the drain plug.

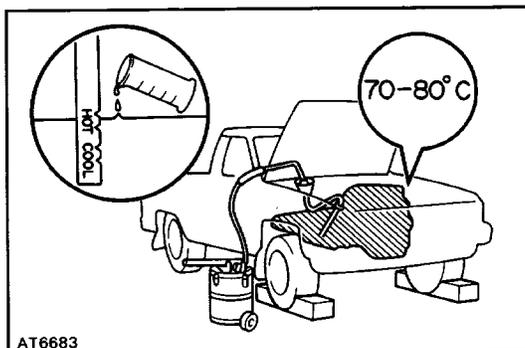
Torque: 20 N-m (205 kgf-cm, 15 ft-lbf)

8. INSTALL FRONT PROPELLER SHAFT

(See page [PR-4](#))

9. INSTALL FRONT STABILIZER BAR

(See page [SA-123](#))



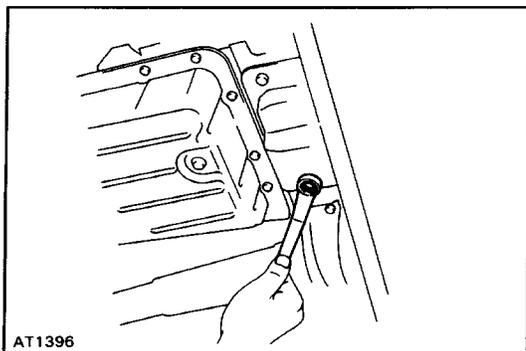
10. FILL TRANSMISSION WITH ATF

(See page [AT-1 14](#))

NOTICE: Do not overfill.

Fluid type: ATF DEXRON® II

11. CHECK FLUID LEVEL



Transfer Valve Body REMOVAL OF VALVE BODY AND/OR SOLENOID

VALVE

1. CLEAN TRANSFER EXTERIOR

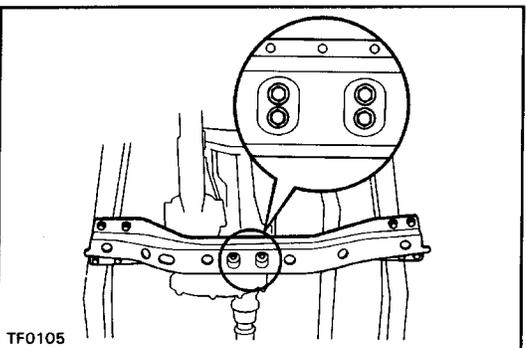
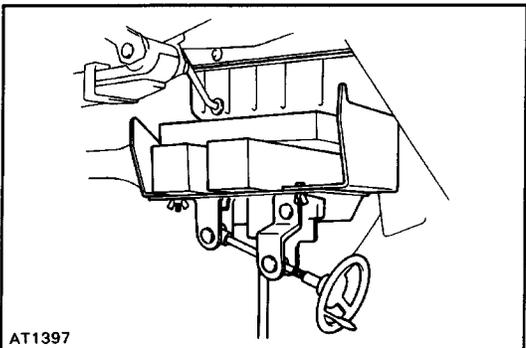
To prevent contamination, clean the exterior of the transfer.

2. DRAIN TRANSFER CASE FLUID

Remove the drain plug and drain fluid into a suitable container.

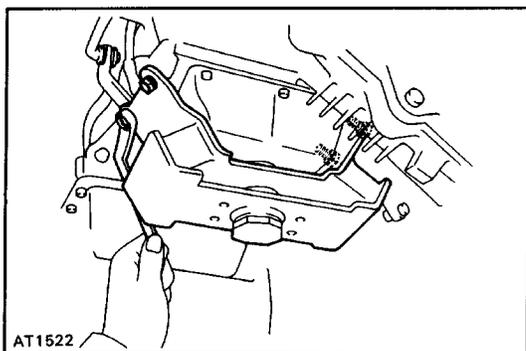
3. SUPPORT TRANSMISSION

Using a transmission jack, support the transmission.



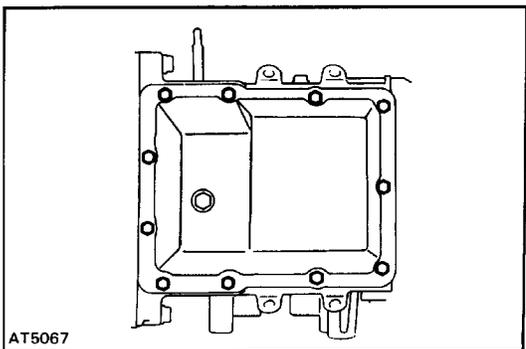
4. REMOVE REAR SUPPORT MEMBER FROM SIDE FRAME

- (a) Remove the four bolts from the engine rear mounting.
- (b) Raise the transmission slightly with a jack.
- (c) Remove the eight bolts from the side frame and remove the rear support member.



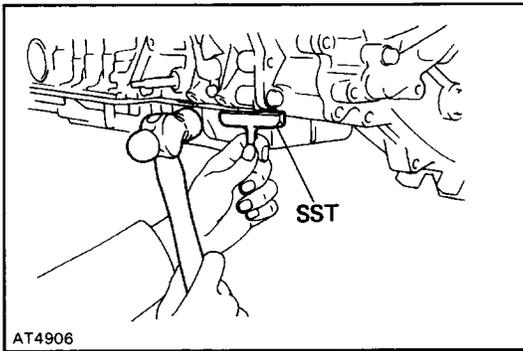
5. REMOVE MEMBER BRACKET FROM TRANSFER

Remove the four bolts and member bracket from the transfer.



6. REMOVE TRANSFER OIL PAN

- (a) Remove the eleven bolts.

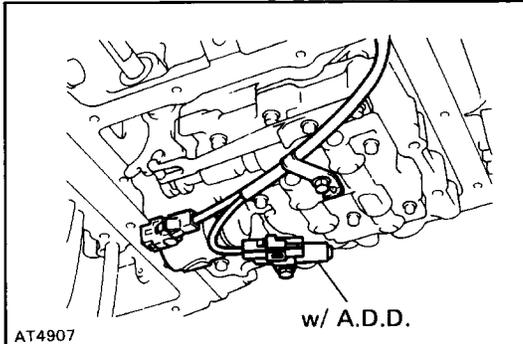


- (b) Install the blade of SST between the transfer case and oil pan, cut off applied sealer.

SST 09032-00100

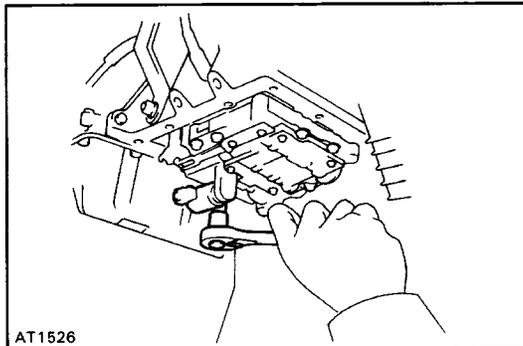
NOTICE: Be careful not to damage the oil pan flange.

- (c) Remove the transfer oil pan.



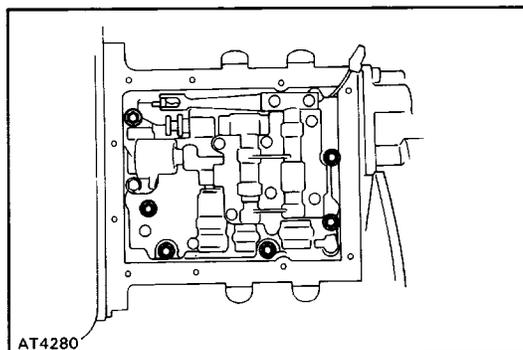
7. DISCONNECT SOLENOID CONNECTOR

Disconnect the connectors from No.4 solenoid and transfer pressure switch.



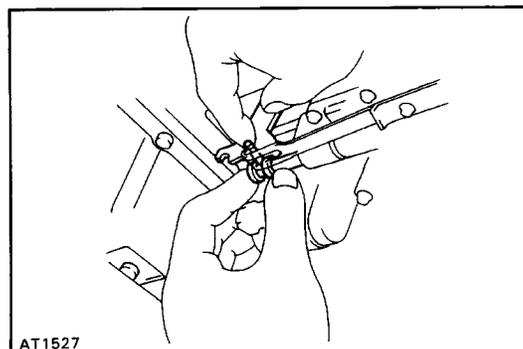
8. WHEN REPLACING SOLENOID

- (a) Remove the solenoid mounting bolt.
 (b) Remove the solenoid.



9. REMOVE VALVE BODY

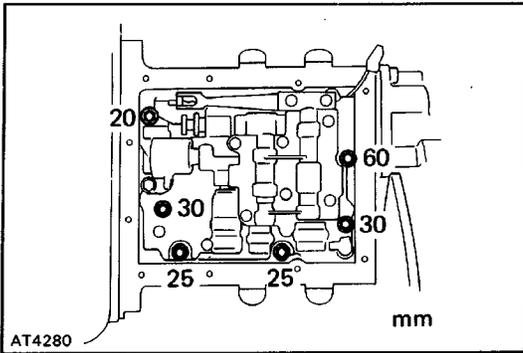
Remove the six bolts and valve body.



INSTALLATION OF VALVE BODY AND/OR SOLENOID VALVE

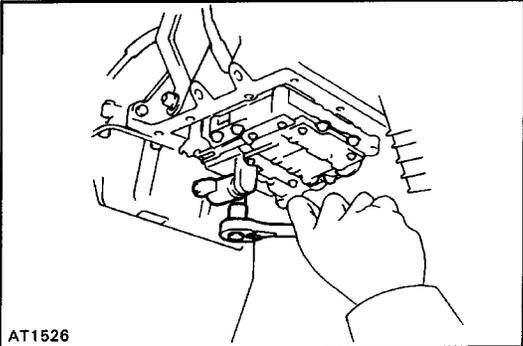
1. INSTALL VALVE BODY

- (a) Align the manual valve lever with the manual valve.



(b) Install the bolts as shown. Torque the bolts evenly.

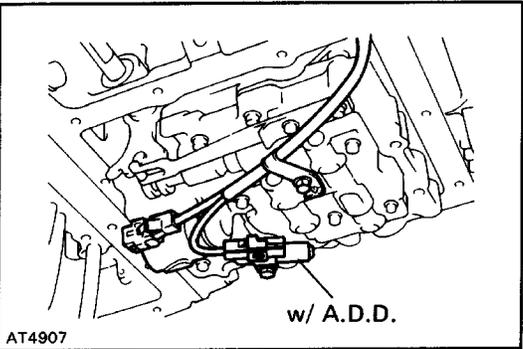
Torque: 10 N-m (100 kgf-cm, 7 ft-lbf)



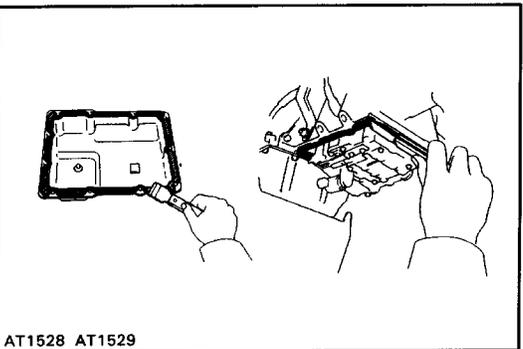
2. WHEN REPLACING SOLENOID

Install the solenoid and torque the bolt.

Torque: 10 N-m (100 kgf-cm, 7 ft-lbf)

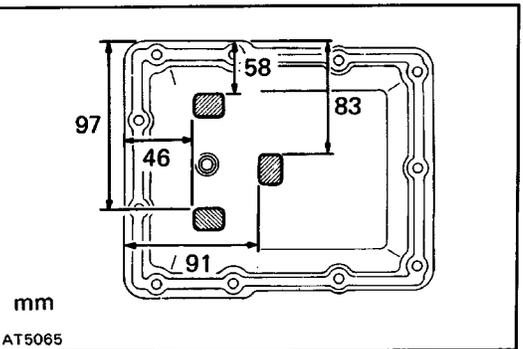


3. CONNECT CONNECTOR TO SOLENOID

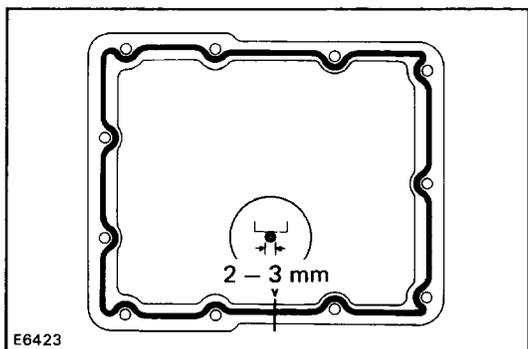


4. INSTALL TRANSFER OIL PAN

- (a) Remove any packing material and be careful not to drop the oil on the contacting surfaces of the oil pan and transfer case.
- (b) Clean contacting surfaces of any residual packing material, using gasoline or alcohol.

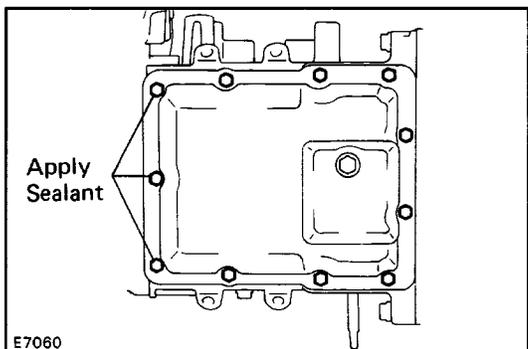


(c) Install the three magnets as shown in the figure.



(d) Apply seal packing to the oil pan as shown in the figure.

Seal packing: Part No. 08826-00090, THREE BOND 1281 or equivalent



(e) Apply sealant to the threads of the three bolts.

Sealant: Part No. 08833-00070, THREE BOND 1324 or equivalent

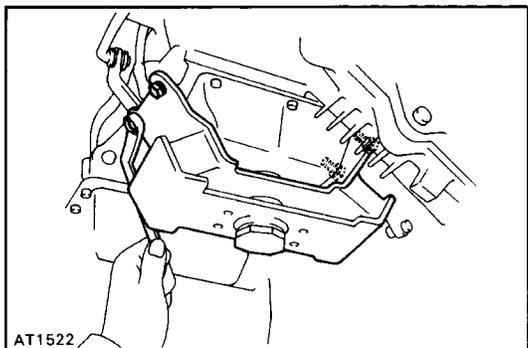
(f) Install the oil pan and torque the eleven bolts.

Torque: 7.4 N-m (75 kgf-cm, 65 in.-lbf)

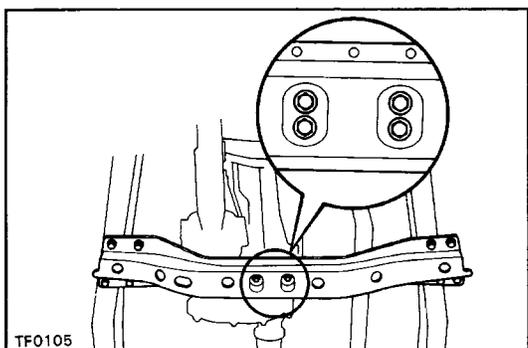
5. INSTALL DRAIN PLUG

Torque the drain plug

Torque: 20 N-m (205 kgf-cm, 15 ft-lbf)



6. INSTALL MEMBER BRACKET TO TRANSFER



7. INSTALL REAR SUPPORT MEMBER

(a) Raise the transmission slightly with a jack.

(b) Install the rear support member to the side frame with the bolts. Torque the bolts.

Torque: 95 N-m (970 kgf-cm, 70 ft-lbf)

(c) Lower the transmission and transfer.

(d) Install the four mounting bolts to the engine rear mounting. Torque the bolts.

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

8. REMOVE TRANSMISSION JACK

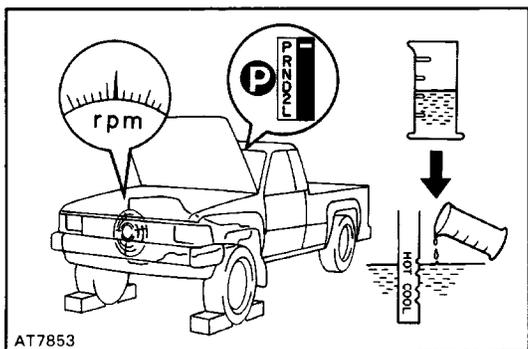
9. FILL TRANSMISSION WITH ATF

(See page [AT-115](#))

NOTICE: Do not overfill.

Fluid type: ATF DEXRON® II

10. CHECK FLUID LEVEL



Throttle Cable

REMOVAL OF THROTTLE CABLE

1. DISCONNECT THROTTLE CABLE FROM THROTTLE LINKAGE

2. DRAIN TRANSMISSION FLUID

Remove the drain plug and drain the fluid into a suitable container.

3. REMOVE FRONT STABILIZER BAR

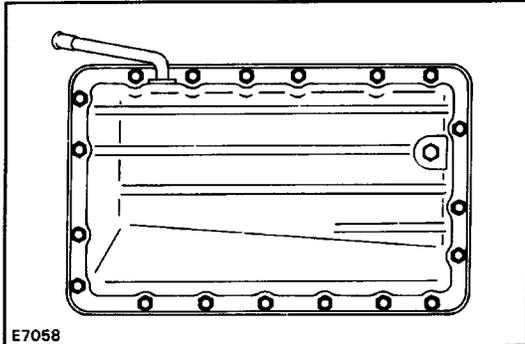
(See page SA-123)

4. REMOVE FRONT PROPELLER SHAFT

(See page PR-4)

5. REMOVE TRANSMISSION OIL PAN

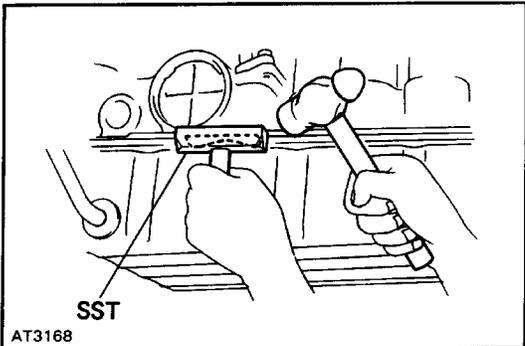
(a) Remove the nineteen bolts.



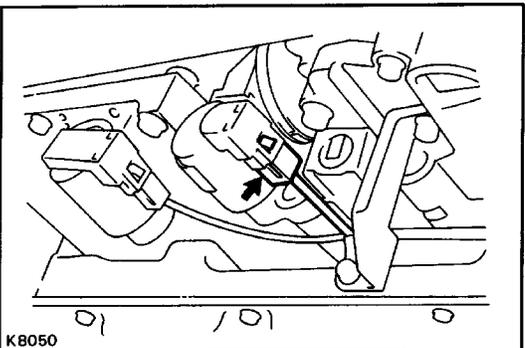
1bf Insert the blade of SST between the transmission case and oil pan, cut off applied sealer.
SST 09032-00100

NOTICE: Be careful not to damage the oil pan flange.

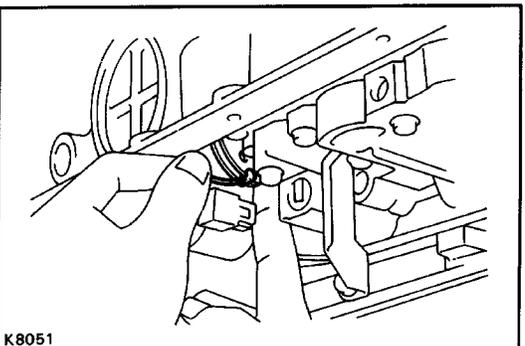
(c) Remove pan by lifting the transmission case.

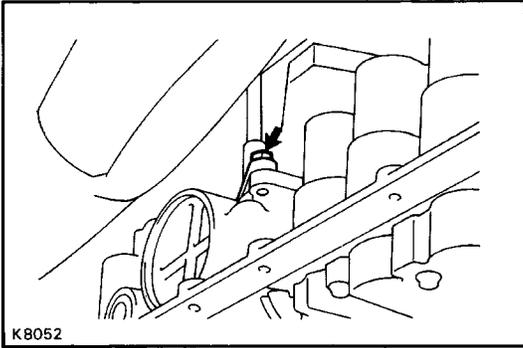


6. DISCONNECT SOLENOID CONNECTOR



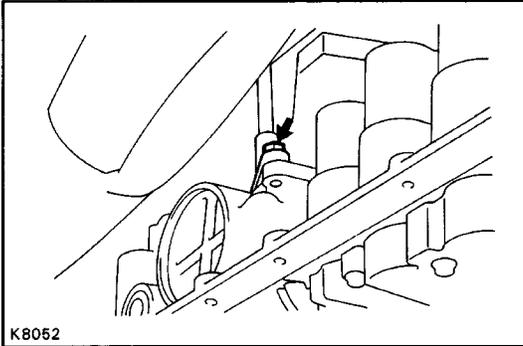
7. DISCONNECT THROTTLE CABLE FROM VALVE BODY





8. REMOVE THROTTLE CABLE

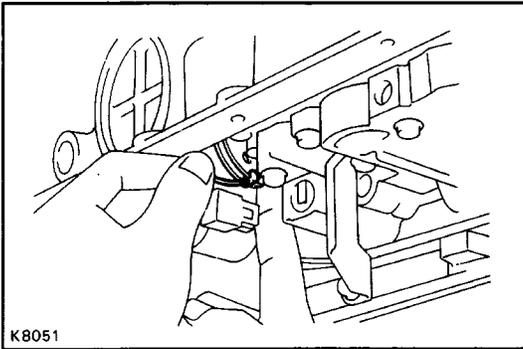
Remove the bolt and pull out the cable from the transmission case.



INSTALLATION OF THROTTLE CABLE

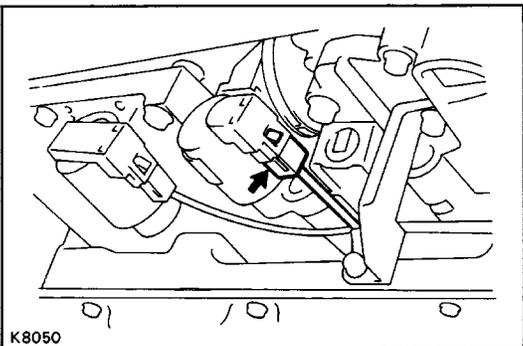
1. INSTALL CABLE INTO TRANSMISSION CASE

- (a) Be sure to push it in all the way.
- (b) Install the bolt.



2. CONNECT THROTTLE CABLE TO VALVE BODY

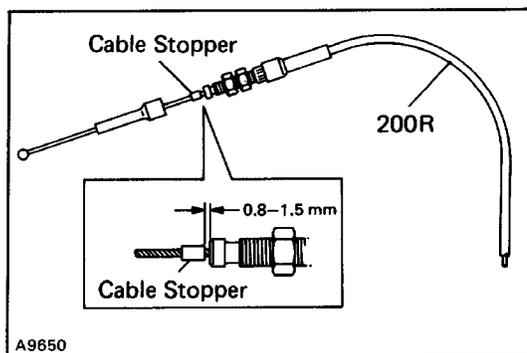
Connect throttle cable to the cam.



3. CONNECT SOLENOID CONNECTOR

4. INSTALL OIL PAN AND OIL PAN DRAIN PLUG

(See pages [AT-150](#) and [AT-151](#))



5. IF THROTTLE CABLE IS NEW, STAKE STOPPER ON INNER CABLE

HINT: New cable do not have a cable stopper staked.

- (a) Bend the cable so there is a radius of about 200 mm (7.87 in.).
- (b) Pull the inner cable lightly until a slight resistance is felt, and hold it.
- (c) Stake the stopper, 0.8–1.5 mm (0.031–0.059 in.) from the end of outer cable.

6. INSTALL FRONT PROPELLER SHAFT

(See page [PR-4](#))

7. INSTALL FRONT STABILIZER BAR

(See page [SA-123](#))

8. CONNECT THROTTLE CABLE TO THROTTLE LINKAGE

9. ADJUST THROTTLE CABLE

(See page [AT-116](#))

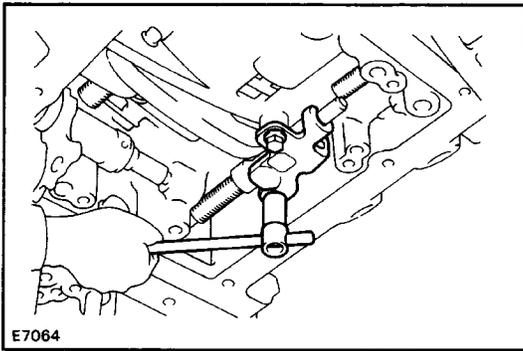
10. FILL TRANSMISSION WITH ATF

(See page [AT-115](#))

NOTICE: Do not overfill.

Fluid type: ATF DEXRON® II

11. CHECK FLUID LEVEL



E7064

Parking Lock Pawl

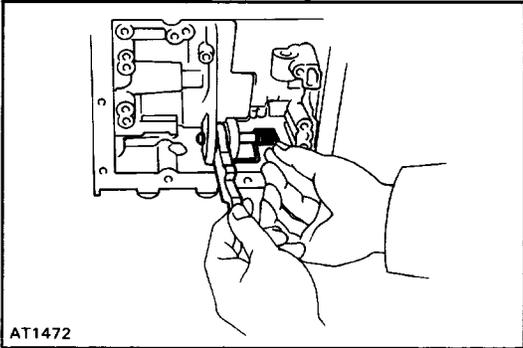
REMOVAL OF PARKING LOCK PAWL

1. REMOVE TRANSFER VALVE BODY

(See page [AT-151](#))

2. REMOVE PARKING LOCK PAWL BRACKET

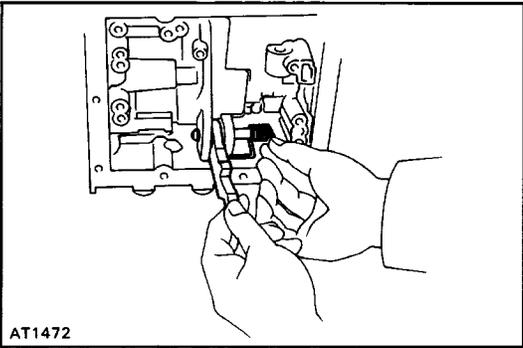
Remove the two bolts and bracket.



AT1472

3. REMOVE SPRING, SHAFT AND PARKING LOCK PAWL

Remove the spring, shaft and parking lock pawl.

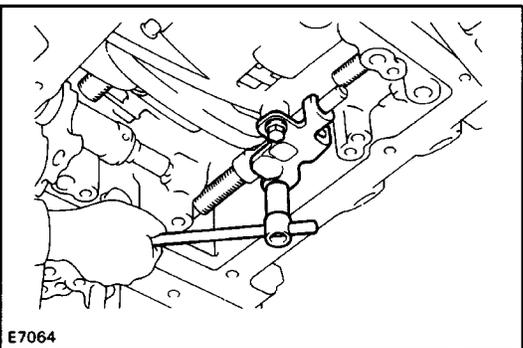


AT1472

INSTALLATION OF PARKING LOCK PAWL

1. INSTALL PARKING LOCK PAWL, SHAFT AND SPRING

Install the parking lock pawl, shaft and spring.



E7064

2. INSTALL PARKING LOCK PAWL BRACKET

- (a) Install two bolts finger tight.
- (b) Check that the parking lock pawl operates smoothly.
- (c) Torque the bolts.

Torque: 6.9 N-m (70 kgf-cm, 61 in.·lbf)

3. INSTALL TRANSFER VALVE BODY

(See page [AT-152](#))