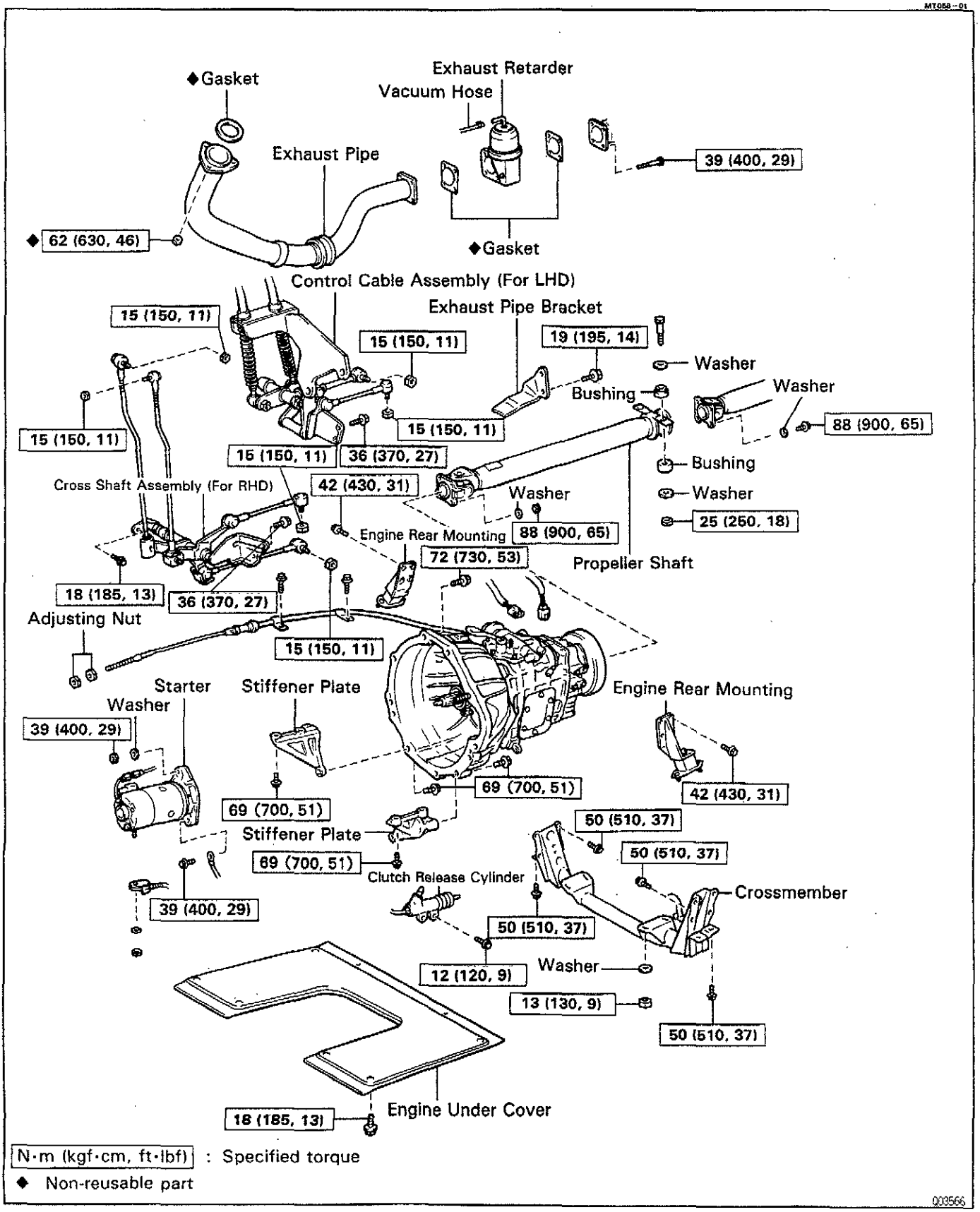
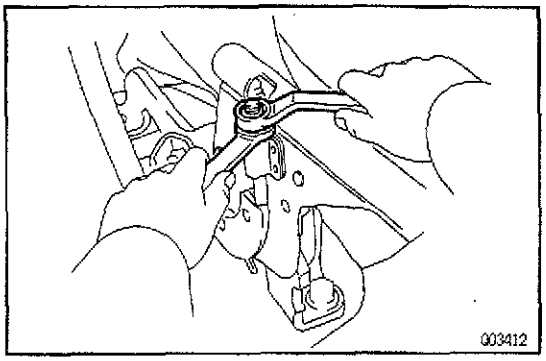
ASSEMBLY REMOVAL AND INSTALLATION (1HZ Engine)



MT050-01

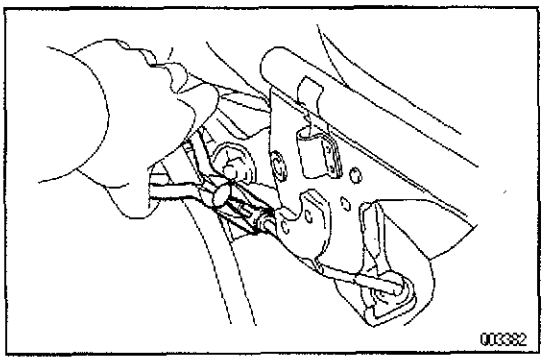
TRANSMISSION REMOVAL



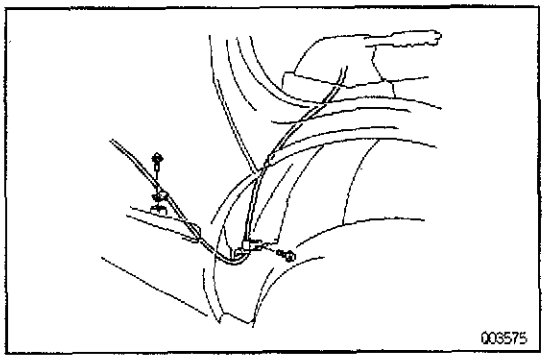
1. **DISCONNECT BATTERY CABLE FROM NEGATIVE TERMINAL**
2. **DISCONNECT PARKING BRAKE CABLE**

(a) Remove the 3 screws and parking brake lever dust cover.

(b) Remove the adjusting nuts and disconnect parking brake cable from lever.



(c) Using pliers, unstake the cable bracket.



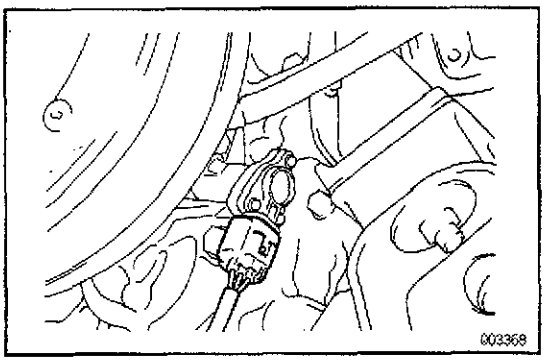
(d) Remove the 2 bolts and cable clamps.

3. **RAISE VEHICLE AND DRAIN TRANSMISSION OIL**

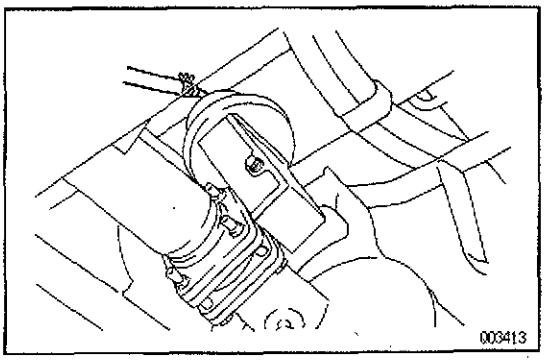
NOTICE: Be sure the vehicle is securely supported.

4. **DISCONNECT PROPELLER SHAFT**

(See page PR–8)

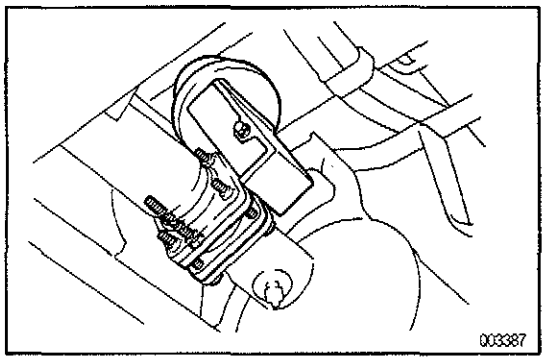


5. **DISCONNECT SPEED SENSOR CONNECTOR**

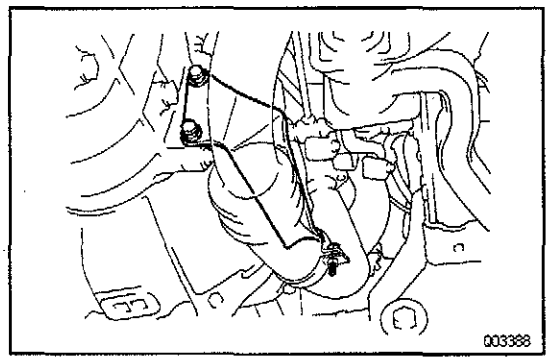


6. **REMOVE EXHAUST RETARDER**

(a) Disconnect the vacuum hose from the exhaust retarder.



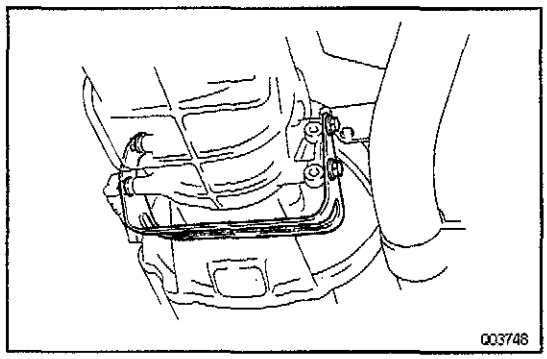
(b) Remove the 4 bolts, exhaust retarder and 2 gaskets.



7. REMOVE EXHAUST PIPE BRACKET

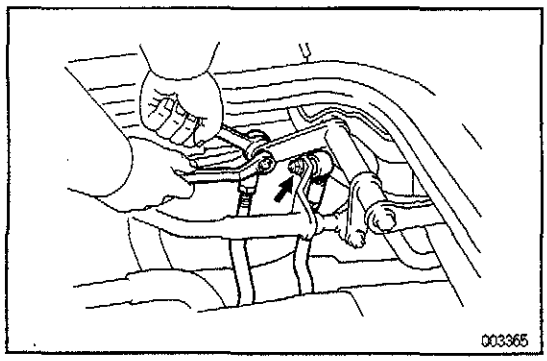
(a) Remove the 2 bolts and loosen the clamp bolt.

(b) Remove the exhaust pipe bracket.



8. REMOVE AIR GUIDE (FOR AUSTRALIA AND M/EAST)

Remove the 4 bolts and air guide.

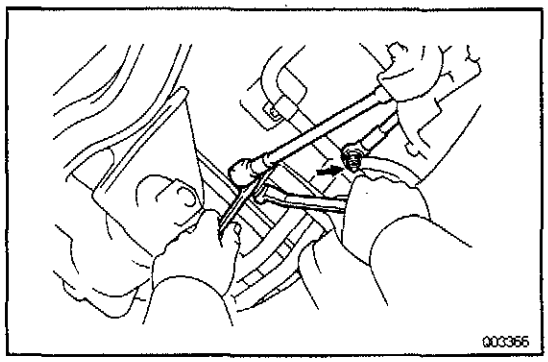


9. RHD:

REMOVE CROSS SHAFT ASSEMBLY

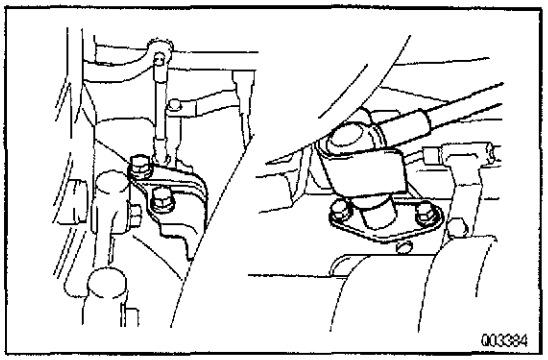
(a) Shift Lever Side:

Remove the 2 nuts and disconnect the control links.

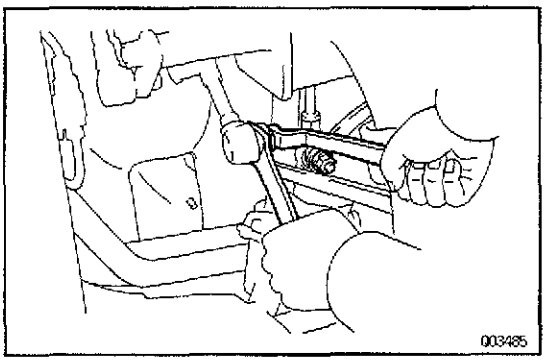


(b) Transmission Side:

Remove the 2 nuts and disconnect the control links.

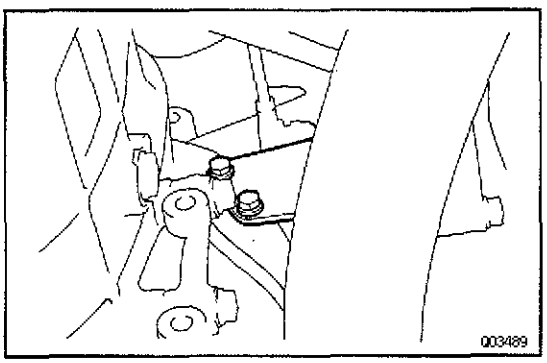


(c) Remove the 4 bolts and cross shaft assembly.

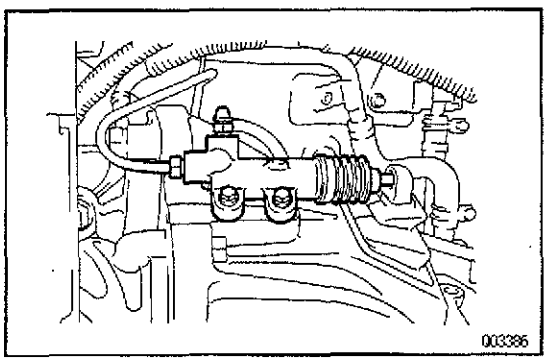


10. LHD:
DISCONNECT CONTROL CABLES

(a) Remove the 2 nuts and disconnect the control cables.

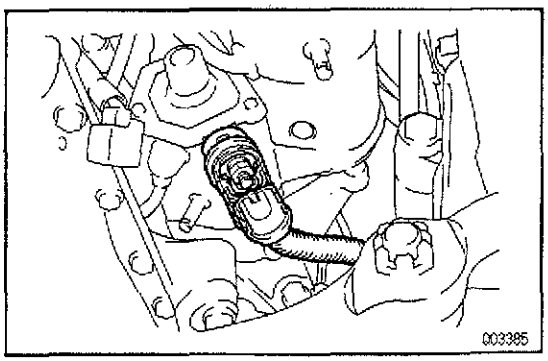


(b) Remove the 2 bolts and control cable bracket.



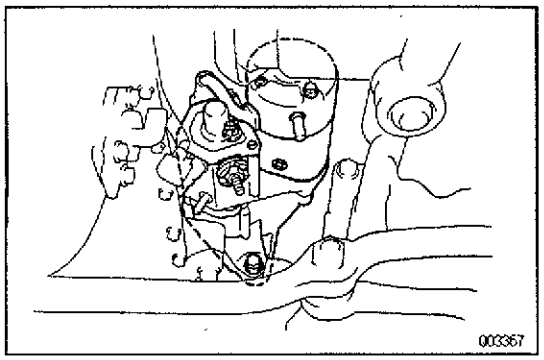
11. REMOVE CLUTCH RELEASE CYLINDER

Remove the 2 bolts and clutch release cylinder.

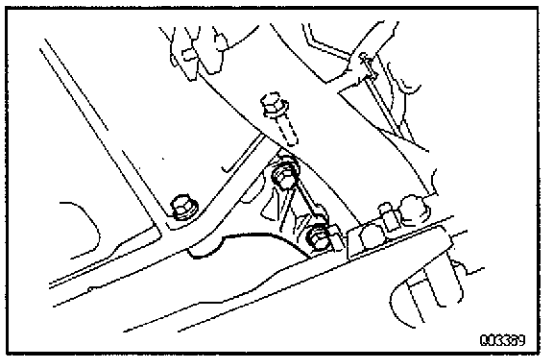


12. REMOVE STARTER

(a) Disconnect the cable and connector.



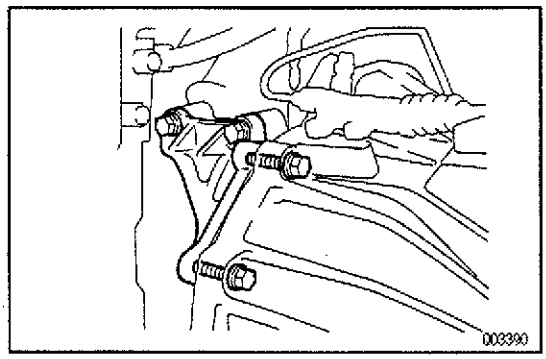
(b) Remove the bolt, nut, washer and starter.



13. REMOVE STIFFENER PLATE

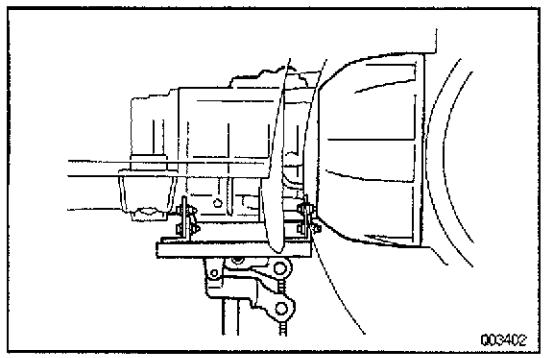
RH Side:

Remove the 4 bolts and stiffener plate.



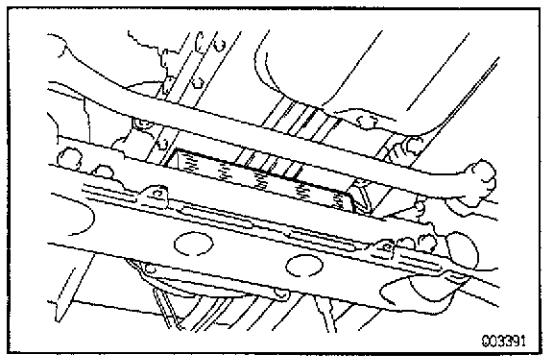
LH Side:

Remove the 4 bolts and stiffener plate.

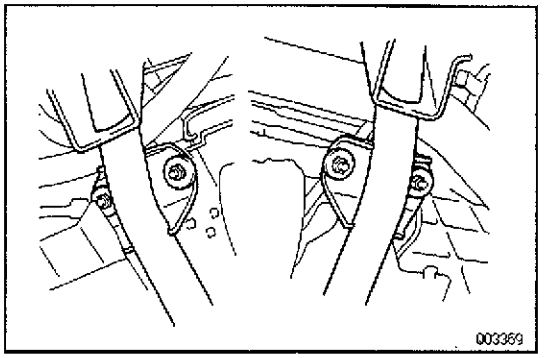


14. SUPPORT TRANSMISSION

Using a transmission jack, support the transmission.

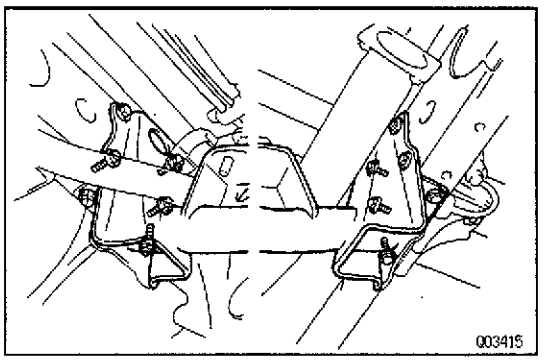


15. INSTALL WOODEN BLOCK BETWEEN ENGINE OIL PAN AND FRONT SUSPENSION MEMBER

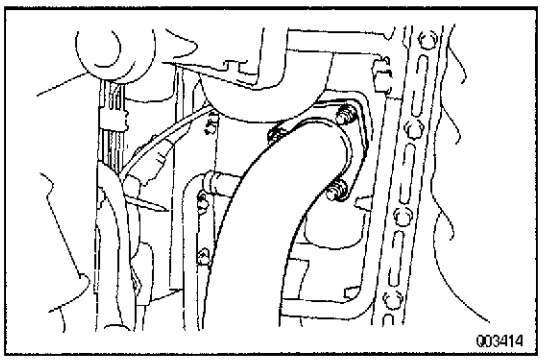


16. REMOVE CROSSMEMBER

(a) Remove the 4 nuts and washers.

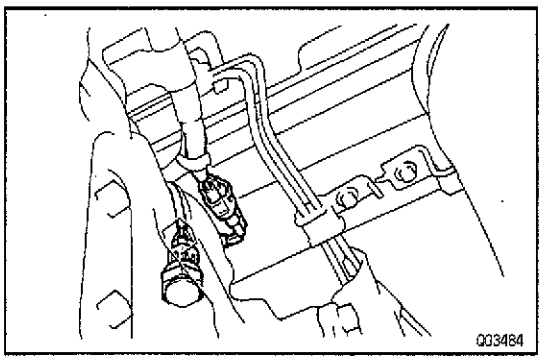


(b) Remove the 12 bolts and crossmember.



17. REMOVE EXHAUST PIPE

Remove the 3 nuts, exhaust pipe and gasket.



18. DISCONNECT BACK – UP LIGHT SWITCH AND NEUTRAL SWITCH CONNECTORS

19. REMOVE TRANSMISSION

(a) Lower the transmission and engine.

(b) Remove the remaining transmission mounting bolts.

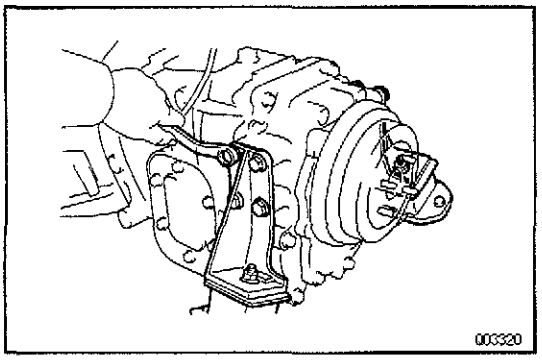
(c) Pull and the transmission down and toward the rear.

20. REMOVE ENGINE REAR MOUNTING BRACKET

Remove the 8 bolts and 2 brackets.

MT05A–01

TRANSMISSION INSTALLATION

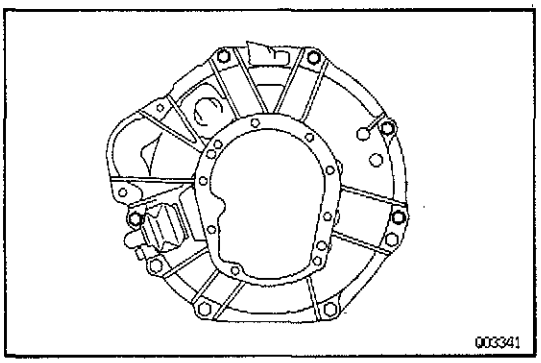


1. INSTALL ENGINE REAR MOUNTING BRACKET

Install the brackets and torque the 8 bolts.

Torque: 42 N·m (430 kgf·cm, 31 ft·lbf)

MT

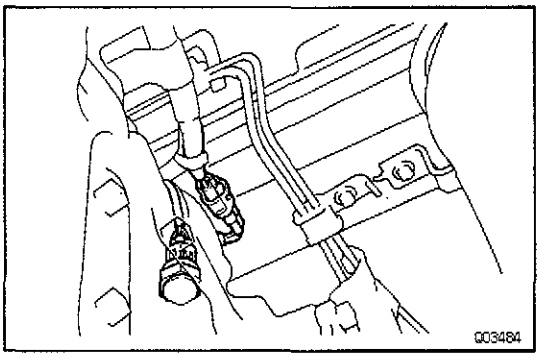


2. INSTALL TRANSMISSION TO ENGINE

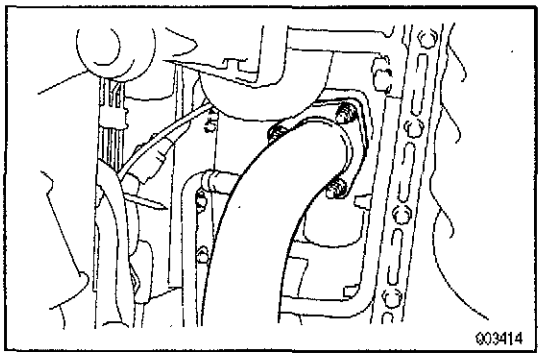
(a) Align the input shaft spline with the clutch disc and install the transmission to the engine.

(b) Install and torque the 5 bolts.

Torque: 72 N·m (730 kgf·cm, 53 ft·lbf)



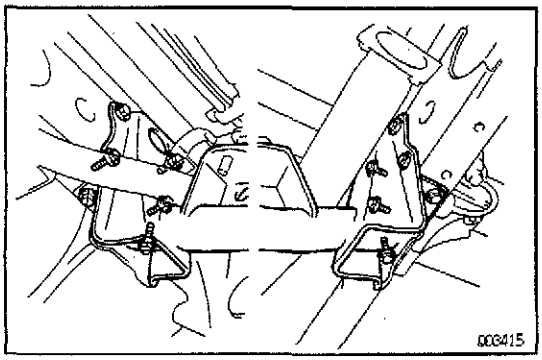
3. CONNECT BACK–UP LIGHT SWITCH AND NEUTRAL SWITCH CONNECTORS



4. INSTALL EXHAUST PIPE

Install a new gasket, exhaust pipe and torque the 3 nuts.

Torque: 62 N·m (630 kgf·cm, 46 ft·lbf)



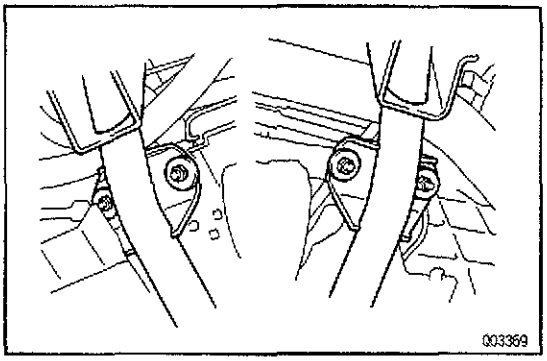
5. INSTALL CROSSMEMBER

(a) *Raise the transmission slightly with a jack.*

(b) Install the crossmember and torque the 12 bolts.

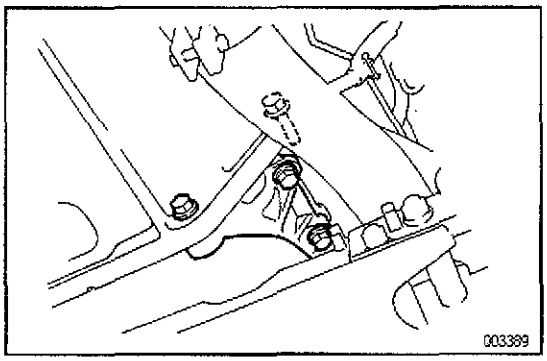
Torque: 50 N·m (510 kgf·cm, 37 ft·lbf)

(c) Lower the transmission.

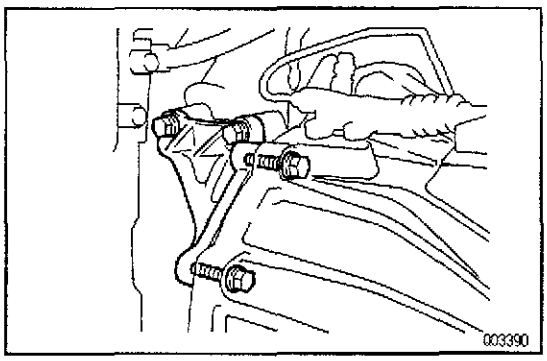


(d) Install the 4 washers and torque the 4 nuts.
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

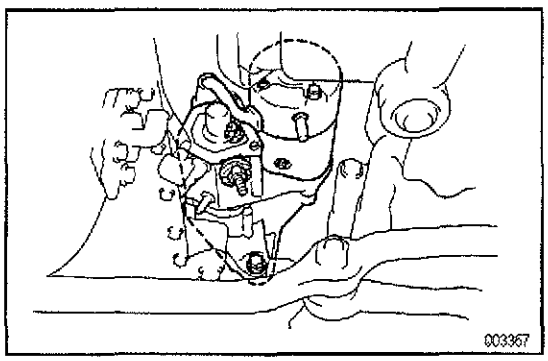
6. REMOVE WOODEN BLOCK



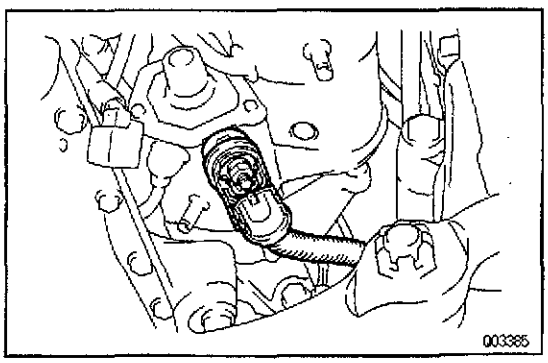
7. INSTALL STIFFENER PLATE
RH Side:
Install the stiffener plate and torque the 4 bolts.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)



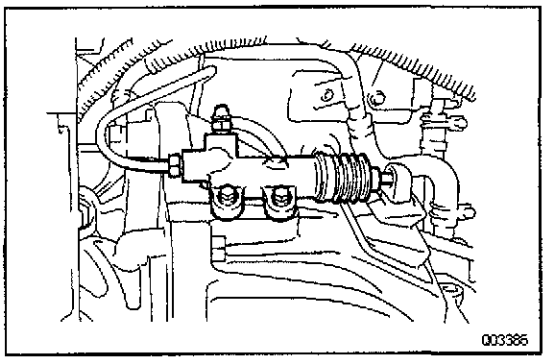
LH Side:
Install the stiffener plate and torque the 4 bolts.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)



8. INSTALL STARTER
(a) Install the starter, washer and torque the bolt and nut.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)



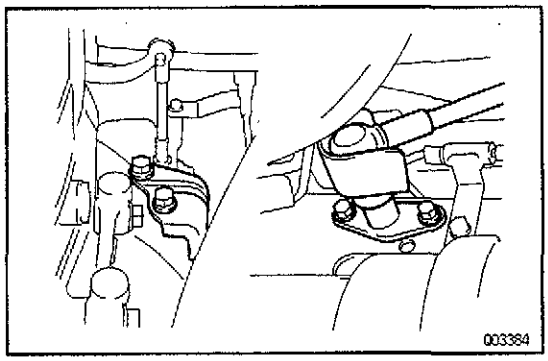
(b) Connect the connector and wire to the starter.



9. INSTALL CLUTCH RELEASE CYLINDER

Install the clutch release cylinder and torque the 2 bolts.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)



10. RHD:

INSTALL CROSS SHAFT ASSEMBLY

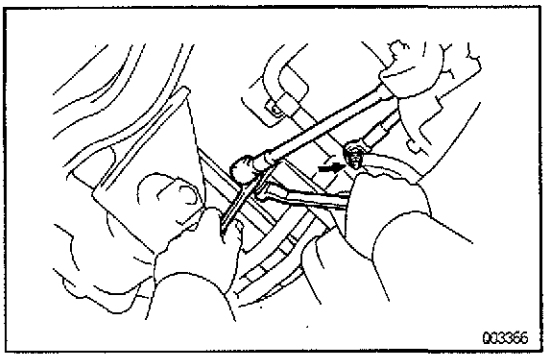
(a) Install the cross shaft assembly and torque the 4 bolts.

Transmission side

Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)

Body side

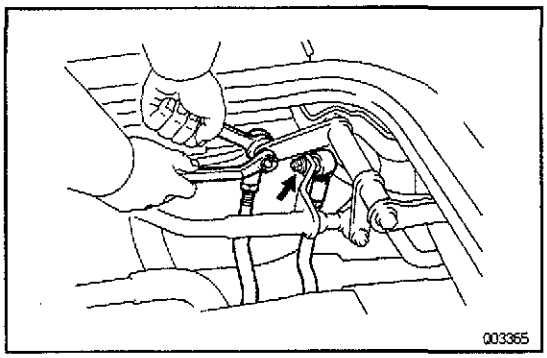
Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



(b) Transmission Side:

Connect the 2 control links and torque the 2 nuts.

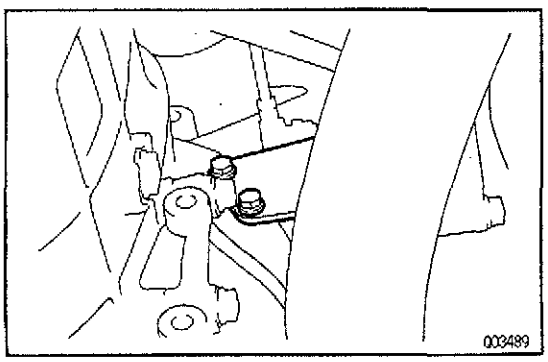
Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)



(c) Shift Lever Side:

Connect the 2 control links and torque the 2 nuts.

Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)

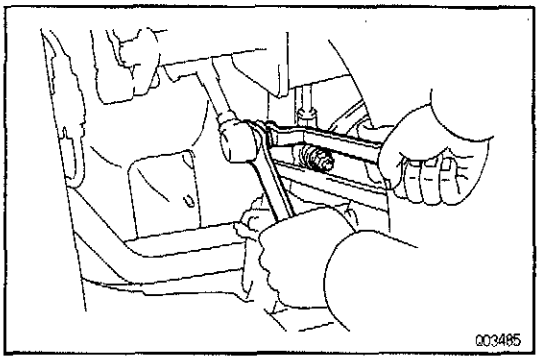


11. LHD:

CONNECT CONTROL CABLES

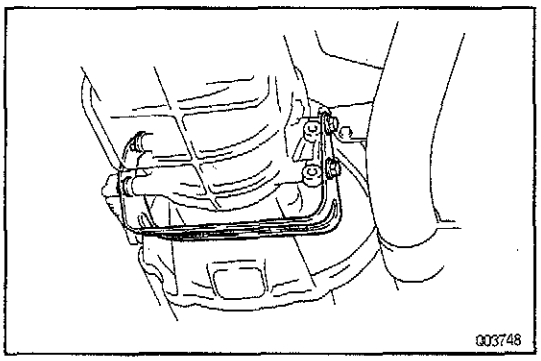
(a) Install the control cable bracket and torque the 2 set bolts.

Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)

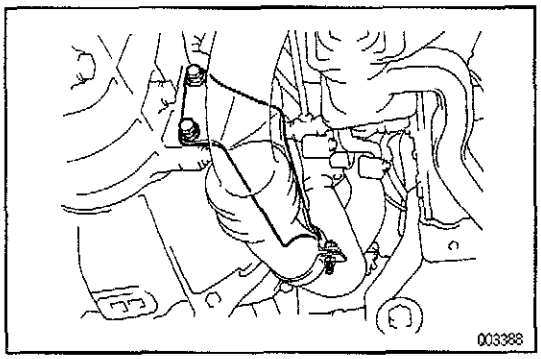


(b) Connect the 2 control cables and torque the 2 set nuts.
Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)

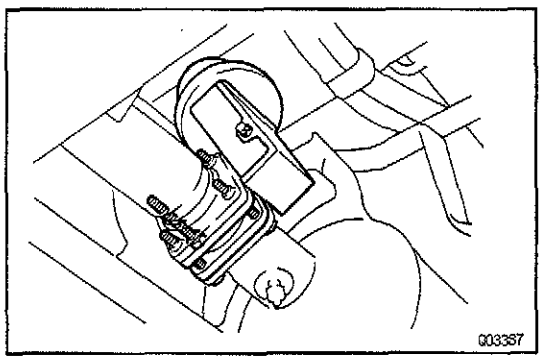
MT



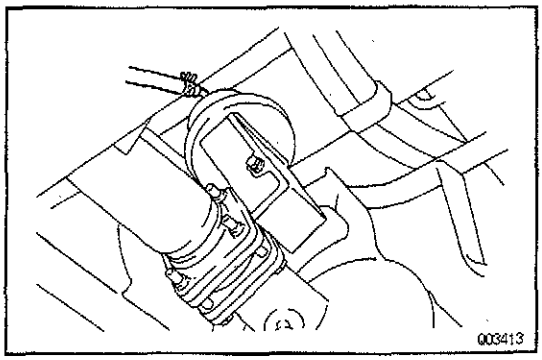
12. INSTALL AIR GUIDE (FOR AUSTRALIA AND M/EAST)
Install the air guide and torque the 4 bolts.
Torque: 24 N·m (240 kgf·cm, 17 ft·lbf)



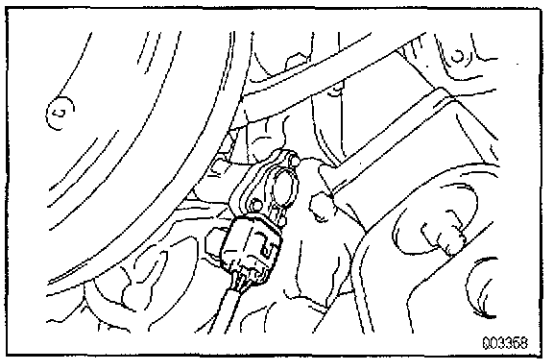
13. INSTALL EXHAUST PIPE BRACKET
(a) Install the exhaust pipe bracket and torque the 2 bolts.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)
(b) Tighten the clamp bolt.
Torque: 19 N·m (195 kgf·cm, 14 ft·lbf)



14. INSTALL EXHAUST RETARDER
(a) Install the exhaust retarder and 2 new gaskets.
(b) Install and torque the 4 bolts.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

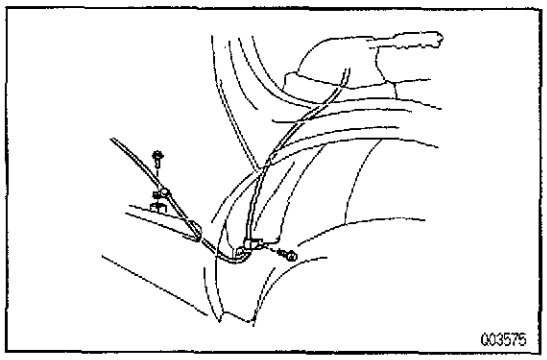


(c) Connect the vacuum hose from the exhaust retarder.

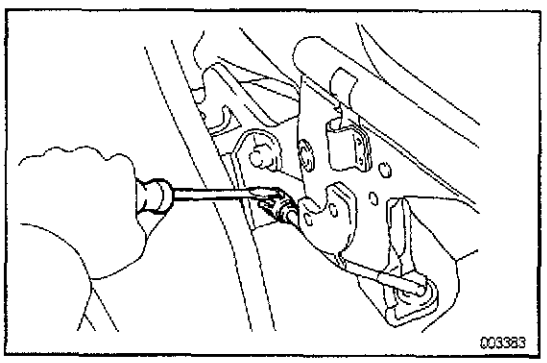


15. CONNECT SPEED SENSOR CONNECTOR
16. CONNECT PROPELLER SHAFT
(See page PR–20)

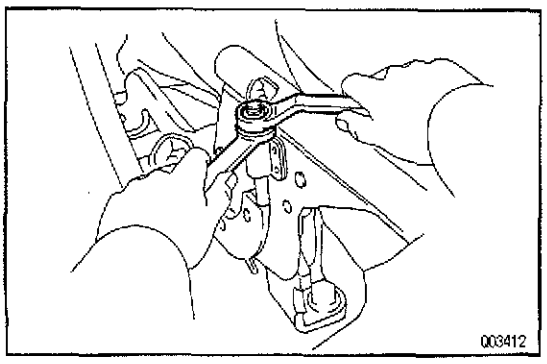
17. FILL TRANSMISSION GEAR OIL
Oil grade:
API GL–3
Viscosity:
SAE 75W–90
Capacity:
3.2 liters (3.4 US qts, 2.8 Imp.qts)
18. LOWER VEHICLE



19. CONNECT PARKING BRAKE CABLE
(a) Install the 2 cable clamps with the bolts.



(b) Connect the control cable to the lever bracket.
(c) Using a screwdriver, stake the bracket.



(d) Install the parking brake cable to the lever and install the adjusting nuts.
(See page BR–11)
(e) Install the parking brake lever dust cover with the 3 screws.

20. **INSTALL NEGATIVE BATTERY CABLE**
21. **PERFORM ROAD TEST**
    Check for abnormal noise and smooth shifting.