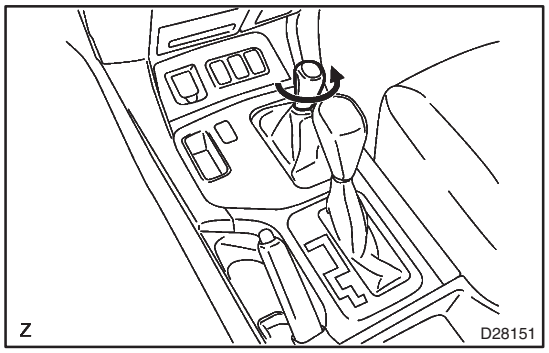
401H3–01

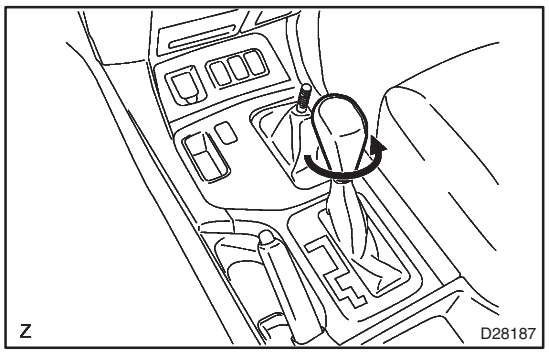
REPLACEMENT

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL (SEE PAGE14–116)



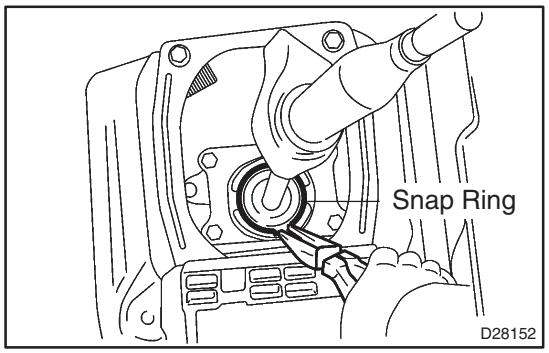
2. REMOVE SHIFT LEVER KNOB SUB–ASSY

(a) Remove the floor shift shift lever knob sub–assy.



(b) Remove the shift lever knob sub–assy.

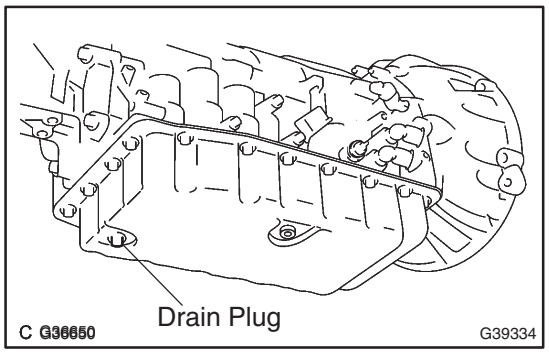
3. REMOVE CONSOLE UPPER PANEL GARNISH NO.1 (See Pub. No. RM990E, page 71–13)
4. REMOVE CONSOLE UPPER PANEL GARNISH NO.2 (See Pub. No. RM990E, page 71–13)
5. REMOVE CONSOLE PANEL UPPER ASSY (See Pub. No. RM990E, page 71–13)



6. REMOVE TRANSFER HIGH & LOW SHIFT LEVER ASSY

(a) Using needle nose pliers, remove the snap ring and pull out the transfer high & low shift lever assy from the transfer assy.

7. REMOVE ENGINE UNDER COVER SUB–ASSY NO.1 (SEE PAGE 14–116)
8. REMOVE ENGINE UNDER COVER ASSY REAR (SEE PAGE 14–116)
9. DISCONNECT SENSOR, OXYGEN (See Pub. No. RM1017E, page 15–3)
10. REMOVE EXHAUST PIPE ASSY (See Pub. No. RM1017E, page 15–3)
11. REMOVE PROPELLER SHAFT ASSY FRONT (See Pub. No. RM990E, page 30–4)
12. REMOVE PROPELLER SHAFT ASSY (See Pub. No. RM990E, page 30–12)



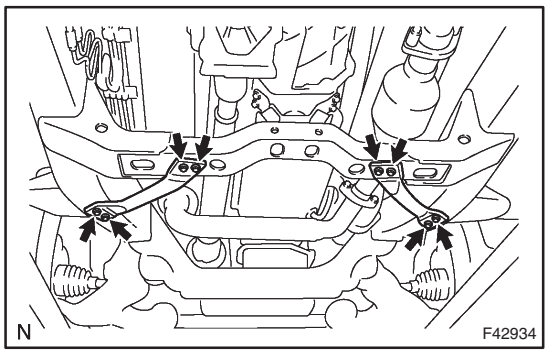
13. DRAIN AUTOMATIC TRANSMISSION FLUID

(a) Remove the drain plug and gasket, and drain the ATF.

(b) Install a new gasket and the drain plug.
Torque: 28 N·m (285 kgf·cm, 21 ft·lbf)

14. REMOVE PROPELLER SHAFT HEAT INSULATOR

(a) Remove the 2 bolts and propeller shaft heat insulator.

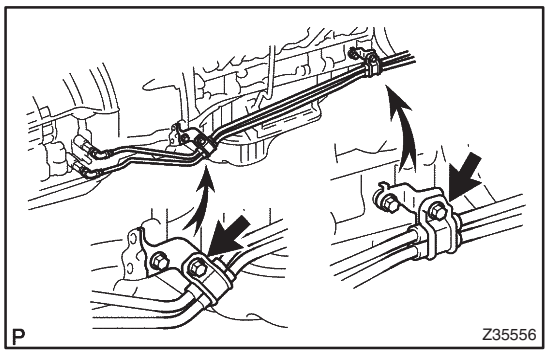


15. REMOVE FRONT SUSPENSION MEMBER BRACKET

(a) Remove the 4 bolts and front suspension member bracket.

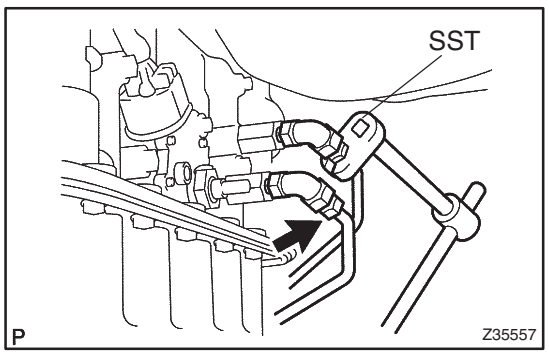
16. REMOVE FRONT SUSPENSION MEMBER BRACKET LH

(a) Remove the 4 bolts and front suspension member bracket LH.



17. DISCONNECT OIL COOLER OUTLET TUBE NO.1

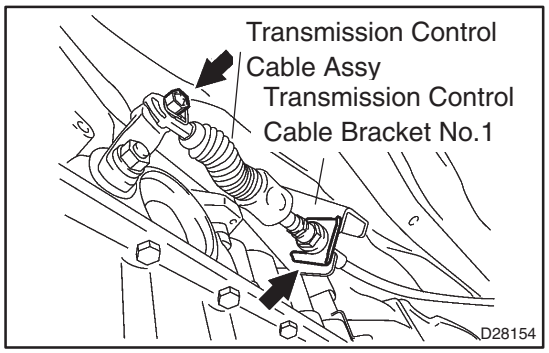
(a) Remove the 2 bolts and 2 clamps.



(b) Using SST, disconnect the oil cooler outlet tube No.1.
SST 09023–12701

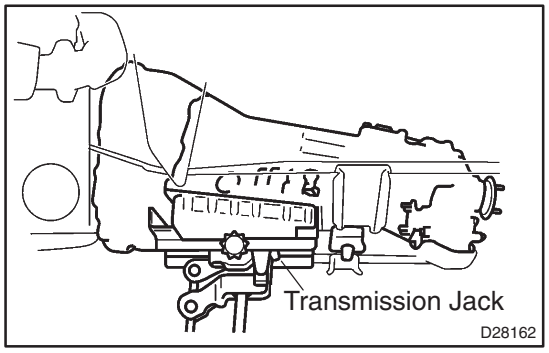
18. REMOVE OIL COOLER INLET TUBE NO.1

(a) Using SST, disconnect the oil cooler inlet tube No.1.
SST 09023–12701



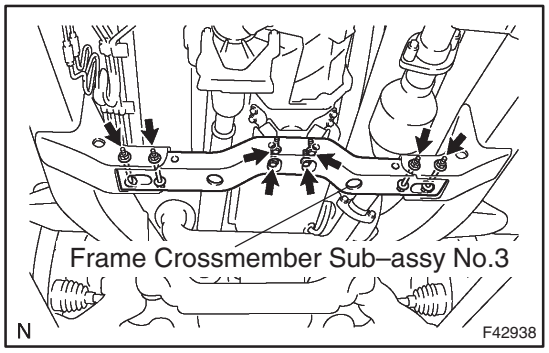
19. DISCONNECT TRANSMISSION CONTROL CABLE ASSY

(a) Remove the nut and clip, and disconnect the transmission control cable assy from the transmission control cable bracket No.1.



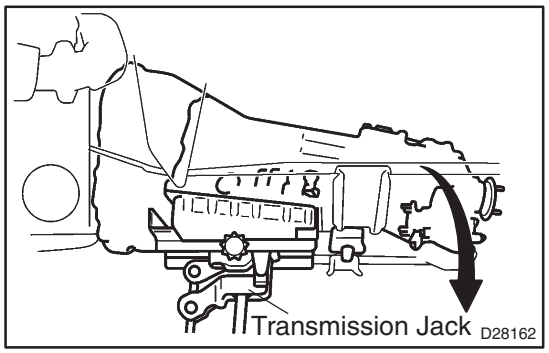
20. SUPPORT AUTOMATIC TRANSMISSION ASSY

(a) Support the transmission with a transmission jack.



21. REMOVE FRAME CROSSMEMBER SUB–ASSY NO.3

(a) Remove the 4 nuts, 8 bolts and frame crossmember sub–assy No.3.

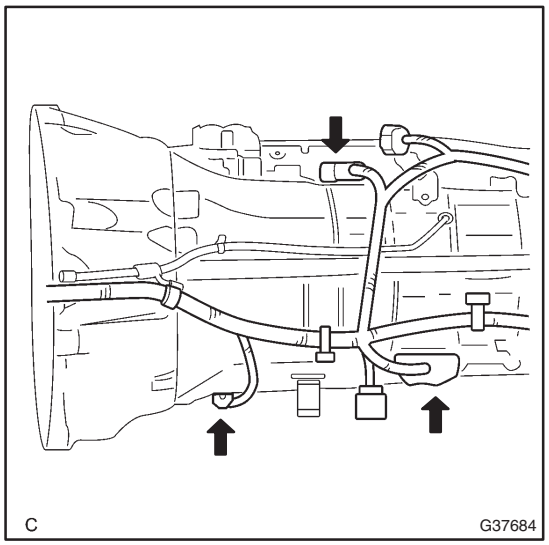


22. DISCONNECT CONNECTOR

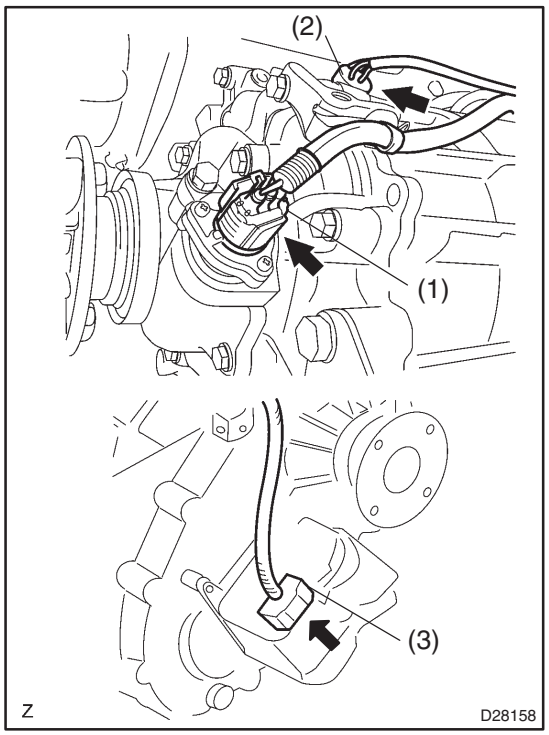
(a) Tilt down the transmission.

NOTICE:

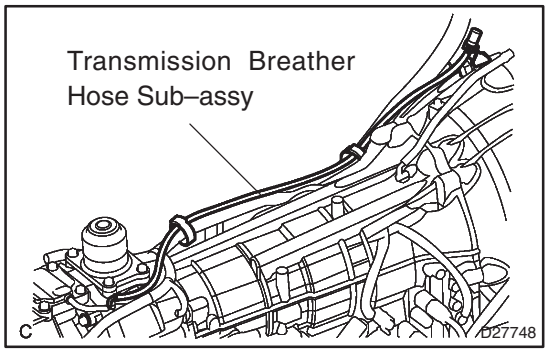
Take care so that the cooling fan does not come in contact with the fan shroud.



(b) Transmission side:
(1) Disconnect the park/neutral position switch connector.
(2) Disconnect the transmission wire connector.
(3) Disconnect the speed sensor NCO connector.
(4) Remove the 3 bolts and wire harness from the transmission and transfer.



(c) Transfer side:
(1) Disconnect the speedometer sensor connector.
(2) Disconnect the indicator No.3 switch connector. (Diff. lock)
(3) Disconnect the transfer shift actuator connector. (w/ transfer shift actuator)
(4) Disconnect the indicator No.1 switch connector. (Low)
(5) Disconnect the indicator No.2 switch connector. (Neutral)



23. SEPARATE TRANSFER BREATHER HOSE SUB–ASSY

(a) Separate the transfer breather hose sub–assy from the transmission assy.

HINT:

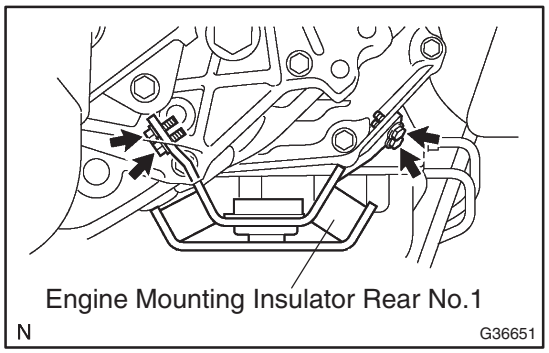
The breather hose bracket is tightened together with the transmission housing.

24. REMOVE STARTER ASSY (See Pub. No. RM1017E, page 19–4)

25. REMOVE MANIFOLD STAY

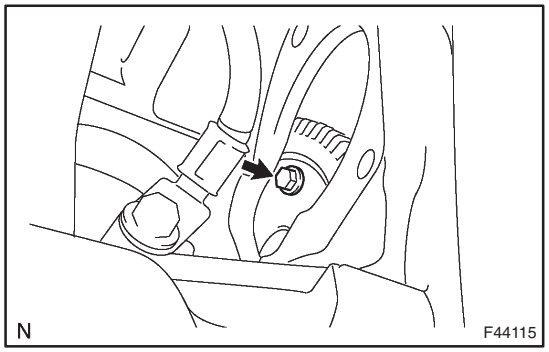
26. REMOVE MANIFOLD STAY NO.2

27. SEPARATE FRONT DIFFERENTIAL ASSY (See Pub. No. RM990E, page 29–13)



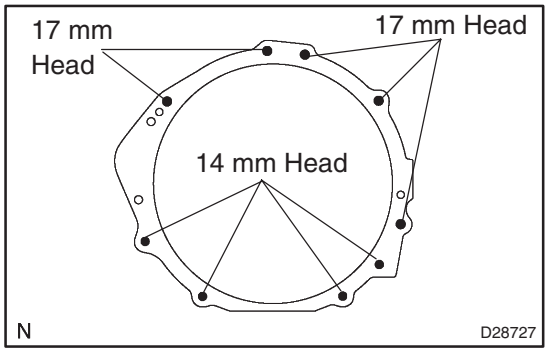
28. REMOVE ENGINE MOUNTING INSULATOR REAR NO.1

(a) Remove the 4 bolts and engine mounting insulator rear No.1.

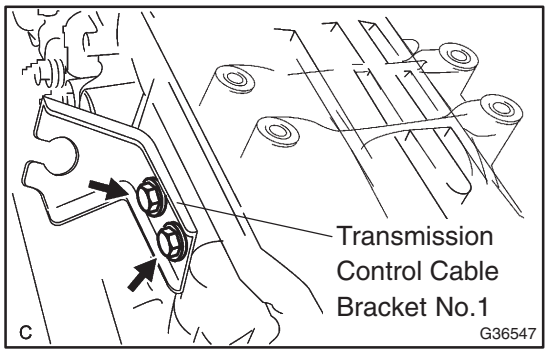


29. REMOVE AUTOMATIC TRANSMISSION ASSY

(a) Remove the flywheel housing side cover from the engine.
(b) Turn the crankshaft to gain access to each bolt.
(c) Hold the crankshaft pulley nut with a wrench and remove the 6 bolts.



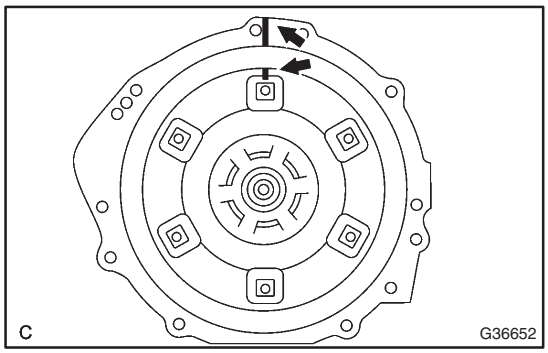
(d) Remove the 9 bolts and transfer breather hose bracket.
(e) Separate and remove the automatic transmission assy.



30. REMOVE TRANSMISSION CONTROL CABLE BRACKET NO.1

(a) Remove the 2 bolts and transmission control cable bracket No.1 from the transmission assy.

31. REMOVE TRANSFER ASSY (See Pub. No. RM990E, page 31–18)



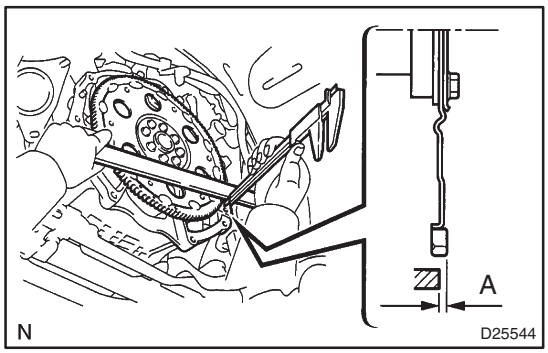
32. REMOVE TORQUE CONVERTER CLUTCH ASSY

(a) Put matchmarks on the transmission case and torque converter clutch assy.

(b) Remove the torque converter clutch assy from the automatic transmission assy.

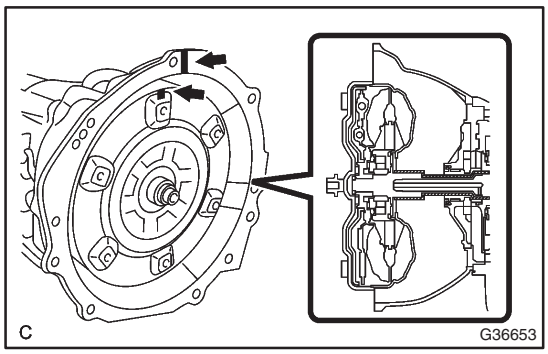
33. INSPECT TORQUE CONVERTER CLUTCH ASSY (SEE PAGE 40–64)

SST 09350–32014 (09351–32010, 09351–32020)

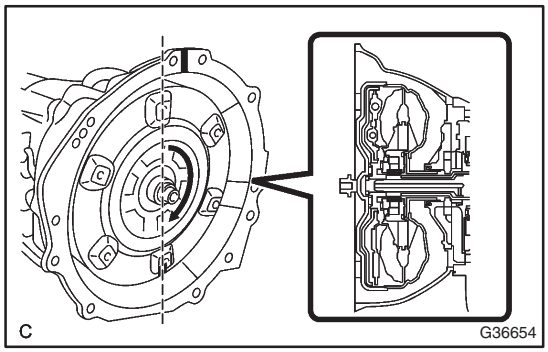


34. INSTALL TORQUE CONVERTER CLUTCH ASSY

(a) Using calipers and a straight edge, measure dimension A between the transmission and the end surface of the drive plate.



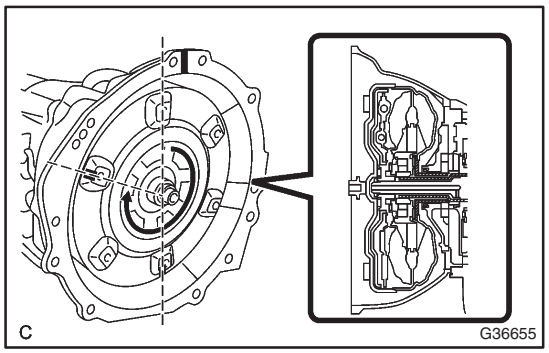
(b) Aligning the matchmarks on the transmission case and torque converter clutch assy, engage the splines of the input shaft and turbine runner.



(c) Engage the splines of the stator shaft and stator while turning the torque converter clutch assy.

HINT:

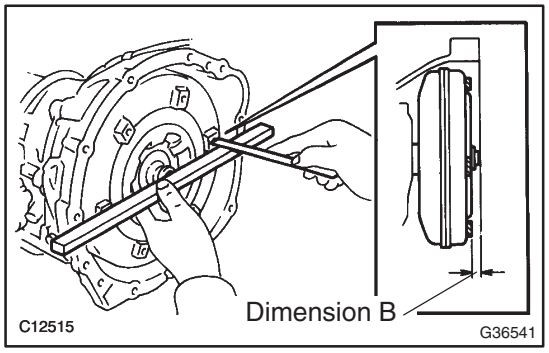
Turn the torque converter clutch assy approximately 180°.



(d) Turn the torque converter clutch assy and align the matchmarks on the torque converter clutch assy and transmission case to engage the key of the oil pump drive gear into the slot on the torque converter clutch assy.

NOTICE:

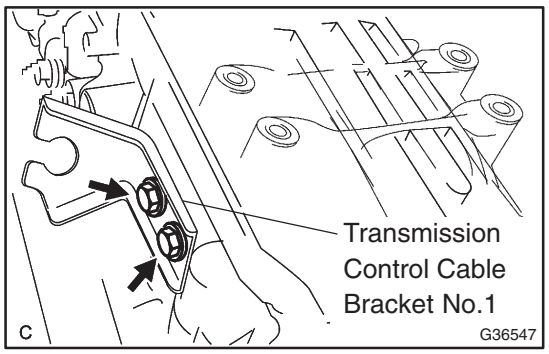
Do not push on the torque converter when aligning the matchmarks.



(e) Using calipers and a straight edge, measure the dimension B shown in the illustration and check that B is greater than A measured in step (a).

Standard: A + 1 mm (0.03937 in.) or more

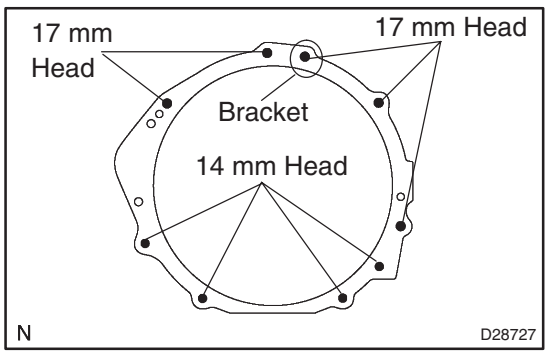
35. INSTALL TRANSFER ASSY (See Pub. No. RM990E, page 31–18)



36. INSTALL TRANSMISSION CONTROL CABLE BRACKET NO.1

(a) Install the transmission control cable bracket No.1 to the transmission assy with the 2 bolts.

Torque: 14 N·m (143 kgf·cm, 10 ft·lbf)



37. INSTALL AUTOMATIC TRANSMISSION ASSY

(a) Install the automatic transmission assy and bracket to the engine with the 9 bolts.

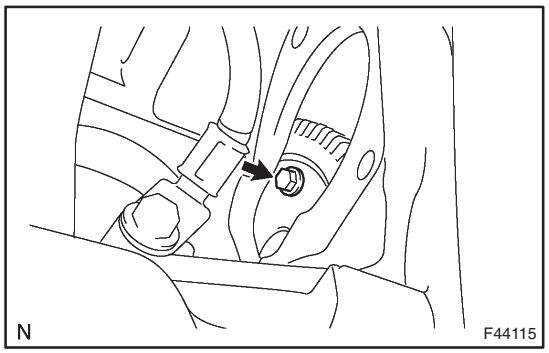
Torque:

17 mm head: 71 N·m (720 kgf·cm, 53 ft·lbf)

14 mm head: 37 N·m (380 kgf·cm, 27 ft·lbf)

HINT:

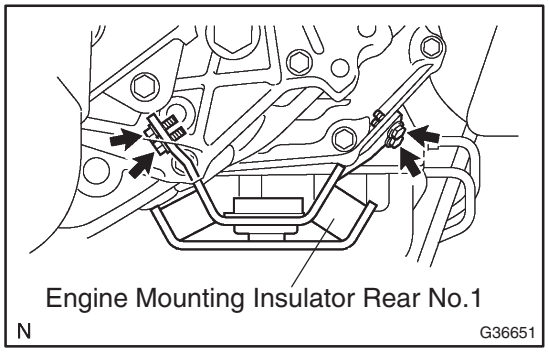
The breather hose bracket is tightened together with the transmission housing.



(b) Install the 6 torque converter clutch mounting bolts.
Torque: 48 N·m (490 kgf·cm, 35 ft·lbf)

HINT:
First install the black colored bolt and then the remaining 5 bolts.

(c) Install the flywheel housing side cover to the engine.



38. INSTALL ENGINE MOUNTING INSULATOR REAR NO.1

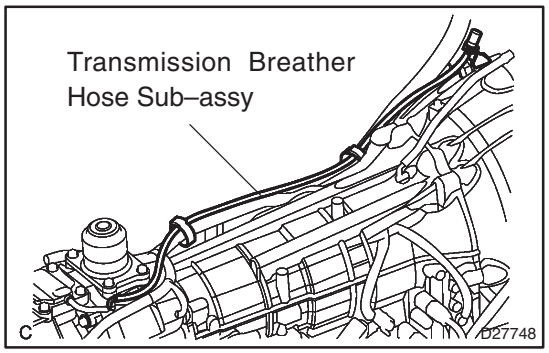
(a) Install the engine mounting insulator rear No.1 to the automatic transmission with the 4 bolts.
Torque: 65 N·m (663 kgf·cm, 48 ft·lbf)

39. INSTALL FRONT DIFFERENTIAL ASSY (See Pub. No. RM990E, page 29–13)

40. INSTALL MANIFOLD STAY NO.2
Torque: 40 N·m (408 kgf·cm, 30 ft·lbf)

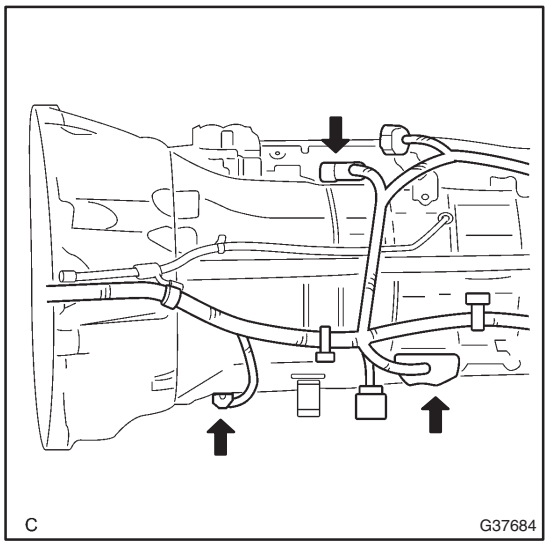
41. INSTALL MANIFOLD STAY
Torque: 40 N·m (408 kgf·cm, 30 ft·lbf)

42. INSTALL STARTER ASSY (See Pub. No. RM1017E, page 19–4)



43. INSTALL TRANSFER BREATHER HOSE SUB–ASSY

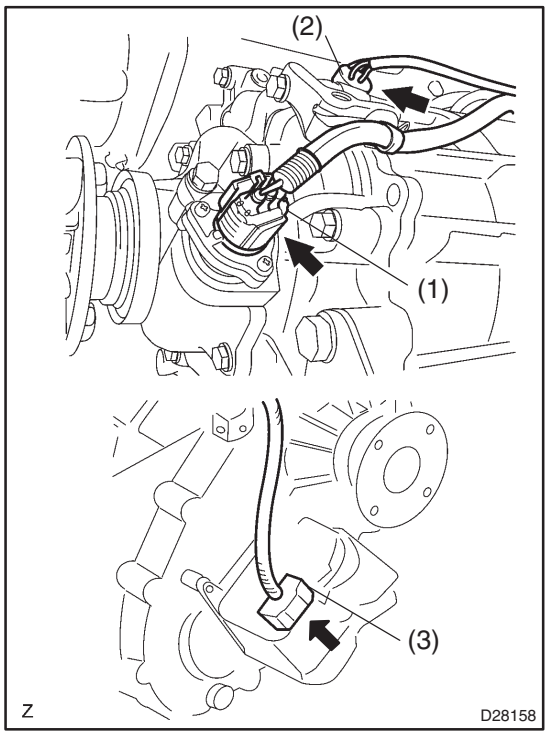
(a) Install the transfer breather hose sub–assy.



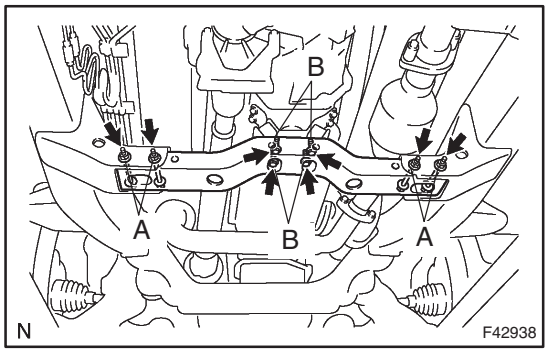
44. CONNECT CONNECTOR

(a) Transmission side:
- (1) Connect the speed sensor NCO connector.
- (2) Connect the transmission wire connector.
- (3) Connect the park/neutral position switch assy connector.
- (4) Install the wire harness with the 3 bolts.

Torque: 8.0 N·m (83 kgf·cm, 71 in.·lbf)



(b) Transfer side:
- (1) Connect the speedometer sensor connector.
- (2) Connect the indicator No.3 switch connector. (Diff. lock)
- (3) Connect the transfer shift actuator connector. (w/ transfer shift actuator)
- (4) Connect the indicator No.1 switch connector. (Low)
- (5) Connect the indicator No.2 switch connector. (Neutral)



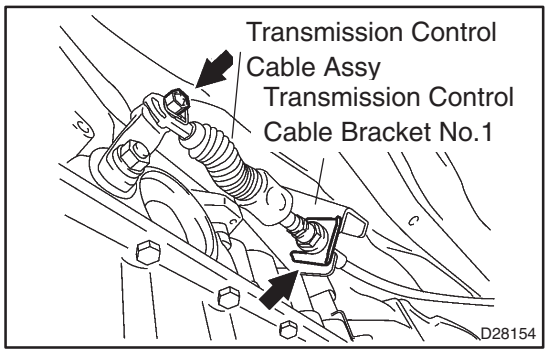
45. INSTALL FRAME CROSSMEMBER SUB–ASSY NO.3

(a) Install the frame crossmember sub–assy No.3 with the 4 bolts and 4 nuts.

Torque: 72 N·m (735 kgf·cm, 53 ft·lbf) (A)

(b) Tighten the 4 bolts to the frame crossmember sub–assy No.3 and engine mounting insulator rear No.1.

Torque: 18 N·m (184 kgf·cm, 13 ft·lbf) (B)



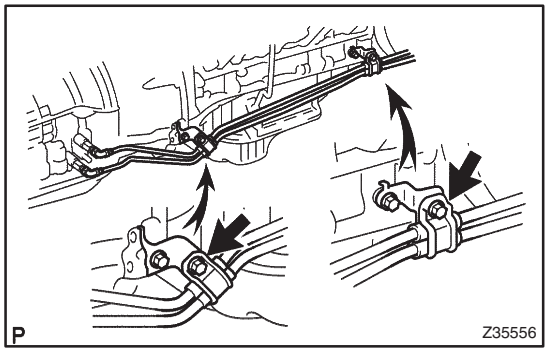
46. CONNECT TRANSMISSION CONTROL CABLE ASSY

(a) Install the transmission control cable with the nut and clip on the transmission control cable assy.
Torque: 14 N·m (143 kgf·cm, 10 ft·lbf)

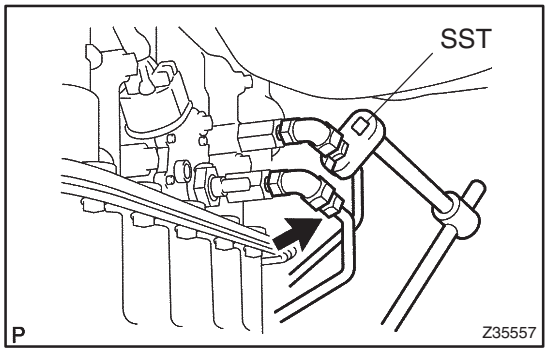
47. INSTALL OIL COOLER OUTLET TUBE NO.1

(a) Temporarily install the oil cooler outlet tube No.1.

(b) Temporarily install the oil cooler inlet tube No.1.



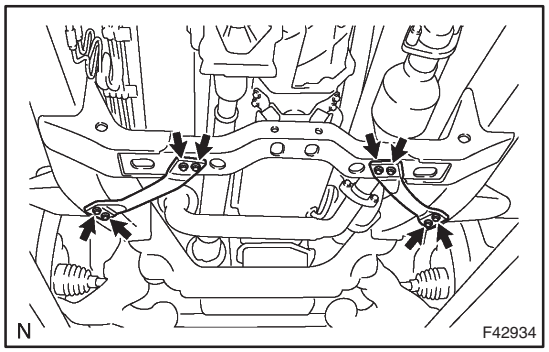
(c) Install the 2 clamps with the 2 bolts.
Torque: 5 N·m (50 kgf·cm, 43 in.·lbf)



(d) Using SST, tighten the oil cooler outlet tube No.1.
SST 09023–12701
Torque: 34 N·m (346 kgf·cm, 25 ft·lbf)

48. INSTALL OIL COOLER INLET TUBE NO.1

(a) Using SST, tighten the oil cooler inlet tube No.1.
SST 09023–12701
Torque: 34 N·m (346 kgf·cm, 25 ft·lbf)



49. INSTALL FRONT SUSPENSION MEMBER BRACKET LH

(a) Install the front suspension member bracket LH with the 4 bolts.
Torque: 33 N·m (336 kgf·cm, 24 ft·lbf)

50. INSTALL FRONT SUSPENSION MEMBER BRACKET

(a) Install the front suspension member bracket with the 4 bolts.
Torque: 33 N·m (336 kgf·cm, 24 ft·lbf)

51. INSTALL PROPELLER SHAFT HEAT INSULATOR

(a) Install the propeller shaft heat insulator with the 2 bolts.
Torque: 16 N·m (163 kgf·cm, 12 ft·lbf)

52. INSTALL PROPELLER SHAFT ASSY (See Pub. No. RM990E, page 30–12)

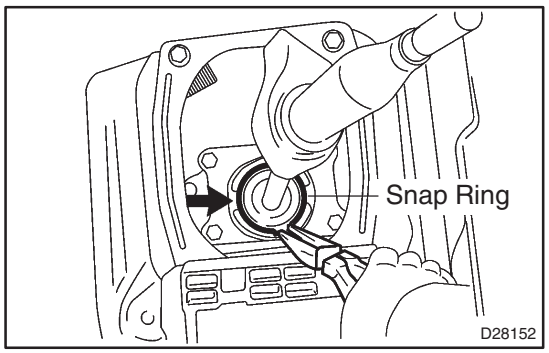
53. INSTALL PROPELLER SHAFT ASSY FRONT (See Pub. No. RM990E, page 30–4)

54. INSTALL EXHAUST PIPE ASSY (See Pub. No. RM1017E, page 15–3)

55. INSTALL SENSOR, OXYGEN(See Pub. No. RM1017E, page 15–3)

56. INSTALL ENGINE UNDER COVER SUB–ASSY NO.1
Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)

57. INSTALL ENGINE UNDER COVER ASSY REAR
Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)



58. INSTALL TRANSFER HIGH & LOW SHIFT LEVER ASSY

(a) Using needle nose pliers, install the transfer high & low shift lever assy with the snap ring.

HINT:
Apply MP grease to the transfer shift lever.

59. INSTALL CONSOLE PANEL UPPER ASSY (See Pub. No. RM990E, page 71–13)

60. INSTALL CONSOLE UPPER PANEL GARNISH NO.2 (See Pub. No. RM990E, page 71–13)

61. INSTALL CONSOLE UPPER PANEL GARNISH NO.1 (See Pub. No. RM990E, page 71–13)

62. INSTALL SHIFT LEVER KNOB SUB–ASSY

(a) Install the shift lever knob on the shift lever.

(b) Install the floor shift shift lever knob on the shift lever.

63. ADD AUTOMATIC TRANSMISSION FLUID (SEE PAGE 40–2)

64. INSPECT AUTOMATIC TRANSMISSION FLUID (SEE PAGE 40–2)

65. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL (SEE PAGE14–116)

66. ADJUST SHIFT LEVER POSITION (SEE PAGE 40–84)

67. INSPECT SHIFT LEVER POSITION (SEE PAGE 40–84)

68. CHECK FOR EXHAUST GAS LEAKS (See Pub. No. RM1017E, page 15–3)

69. RESET MEMORY

NOTICE:

Perform the RESET MEMORY (AT initialization) when replacing the automatic transmission assy, engine assy or ECM (see page 05–1026).

HINT:
RESET MEMORY can not be completed by only disconnecting the battery terminal.