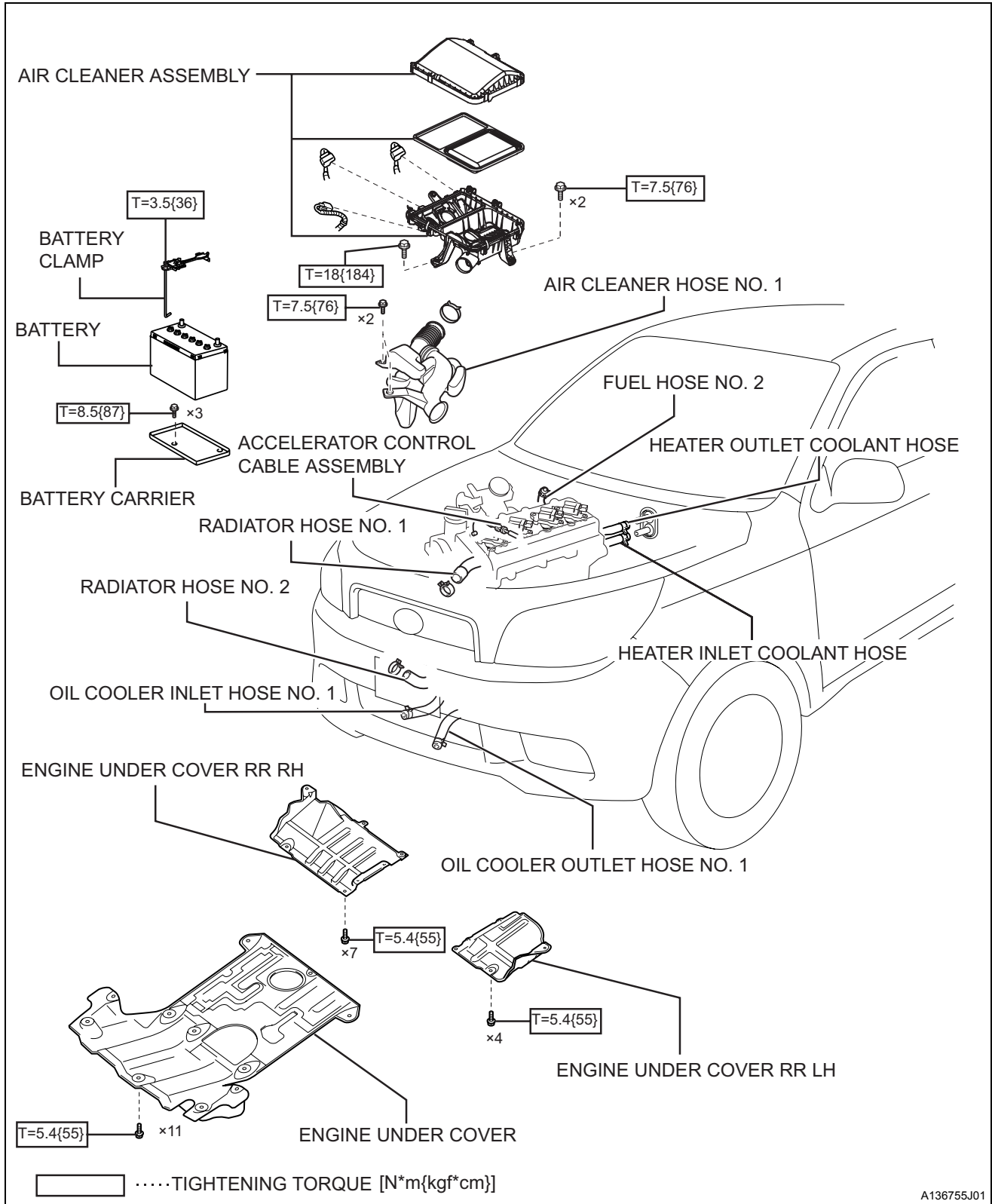
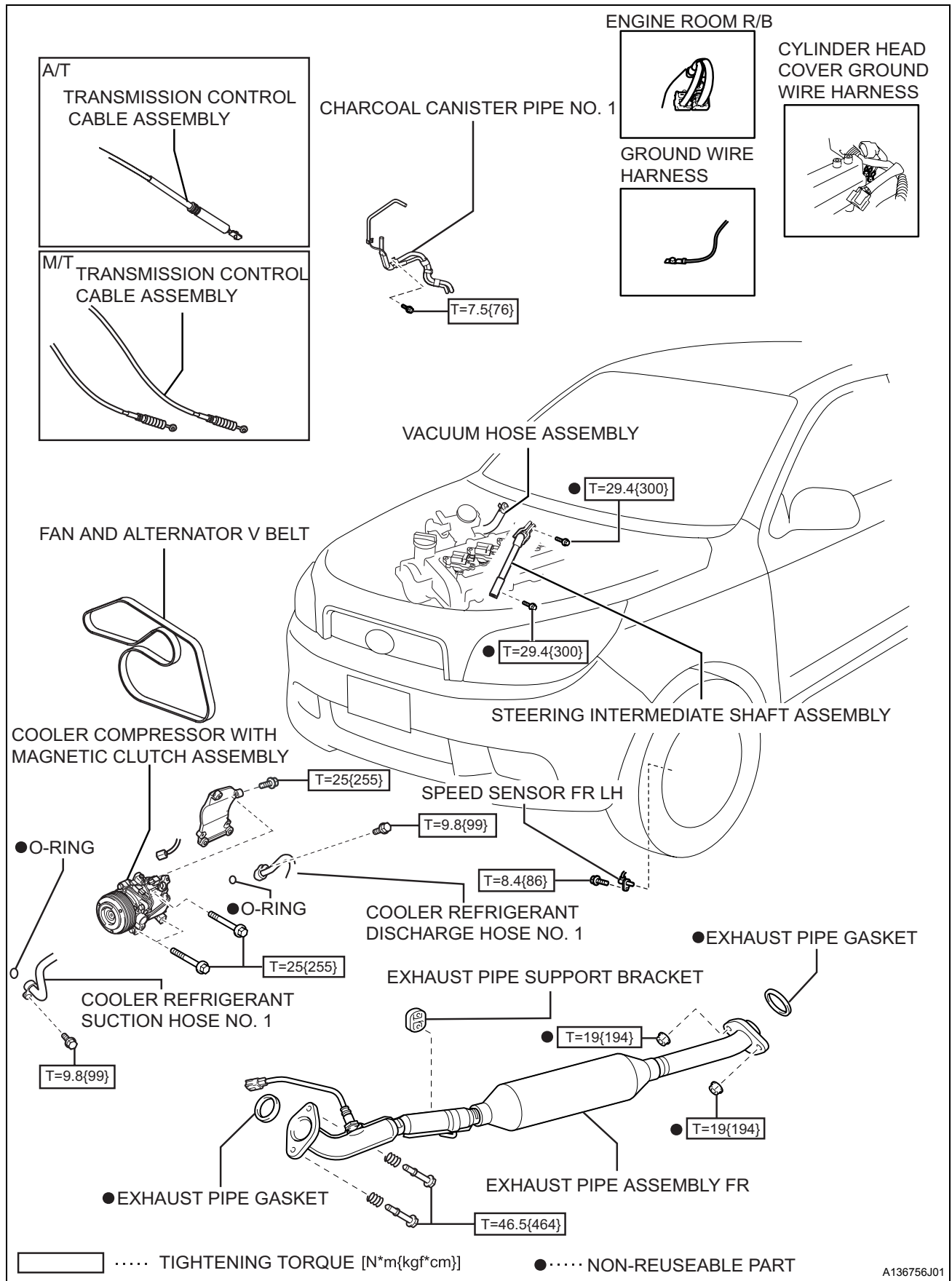


PARTIAL ENGINE ASSEMBLY (K3-VE)

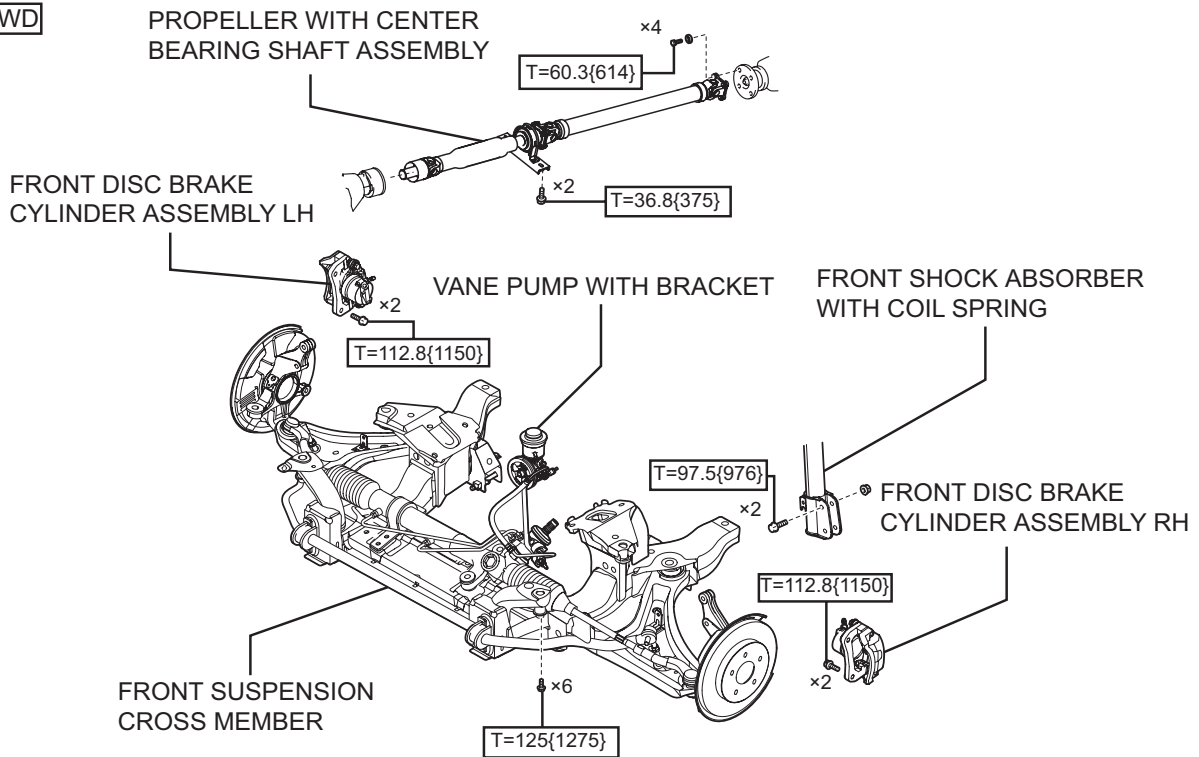
COMPONENTS



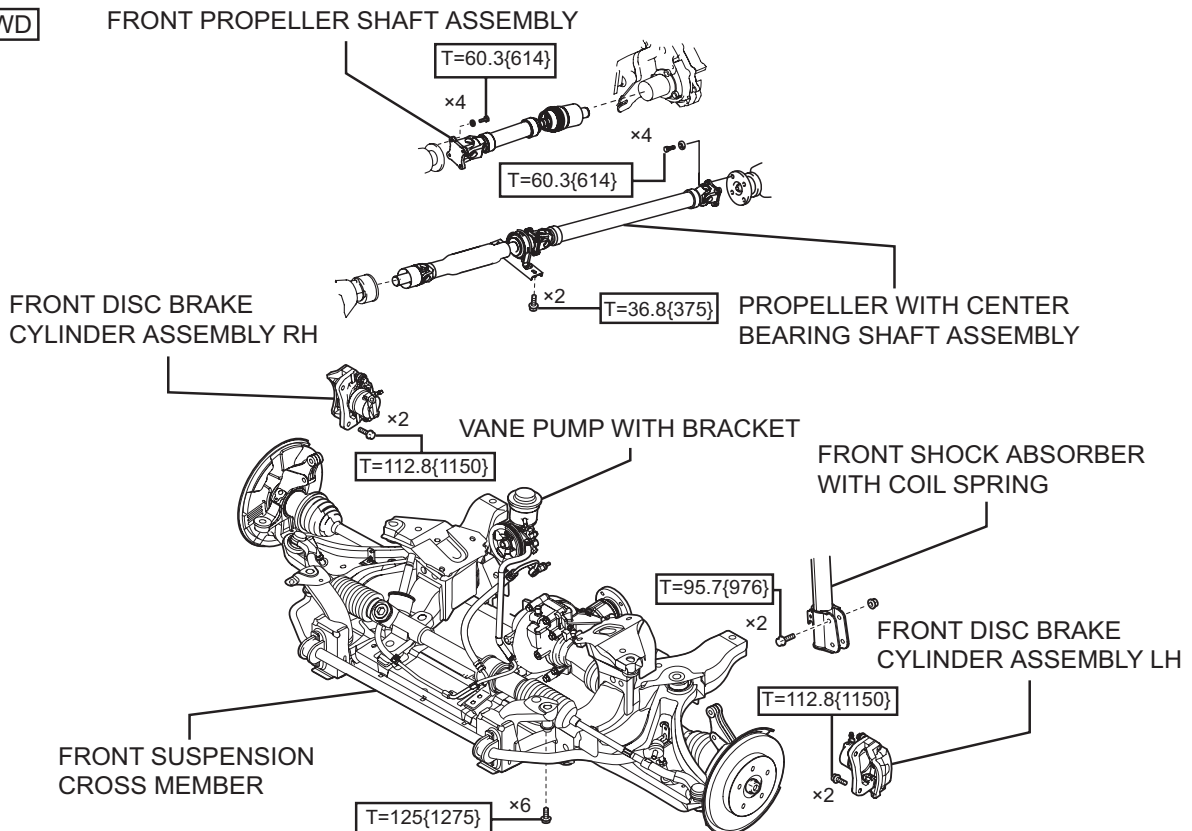


EM

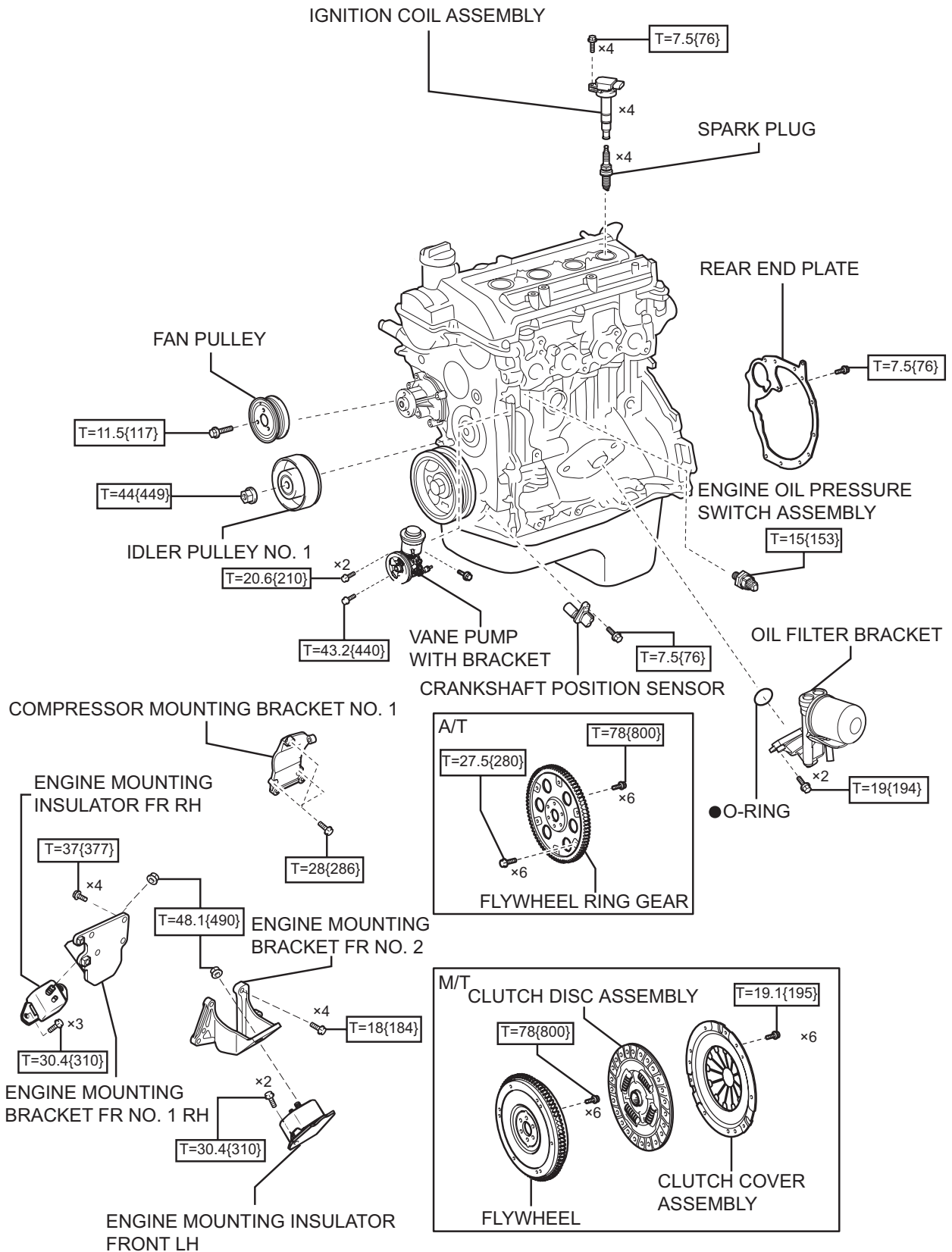
2WD



4WD



..... TIGHTENING TORQUE [N*m{kgf*cm}]



● OIL COOLER HOSE

T=36.8{375}

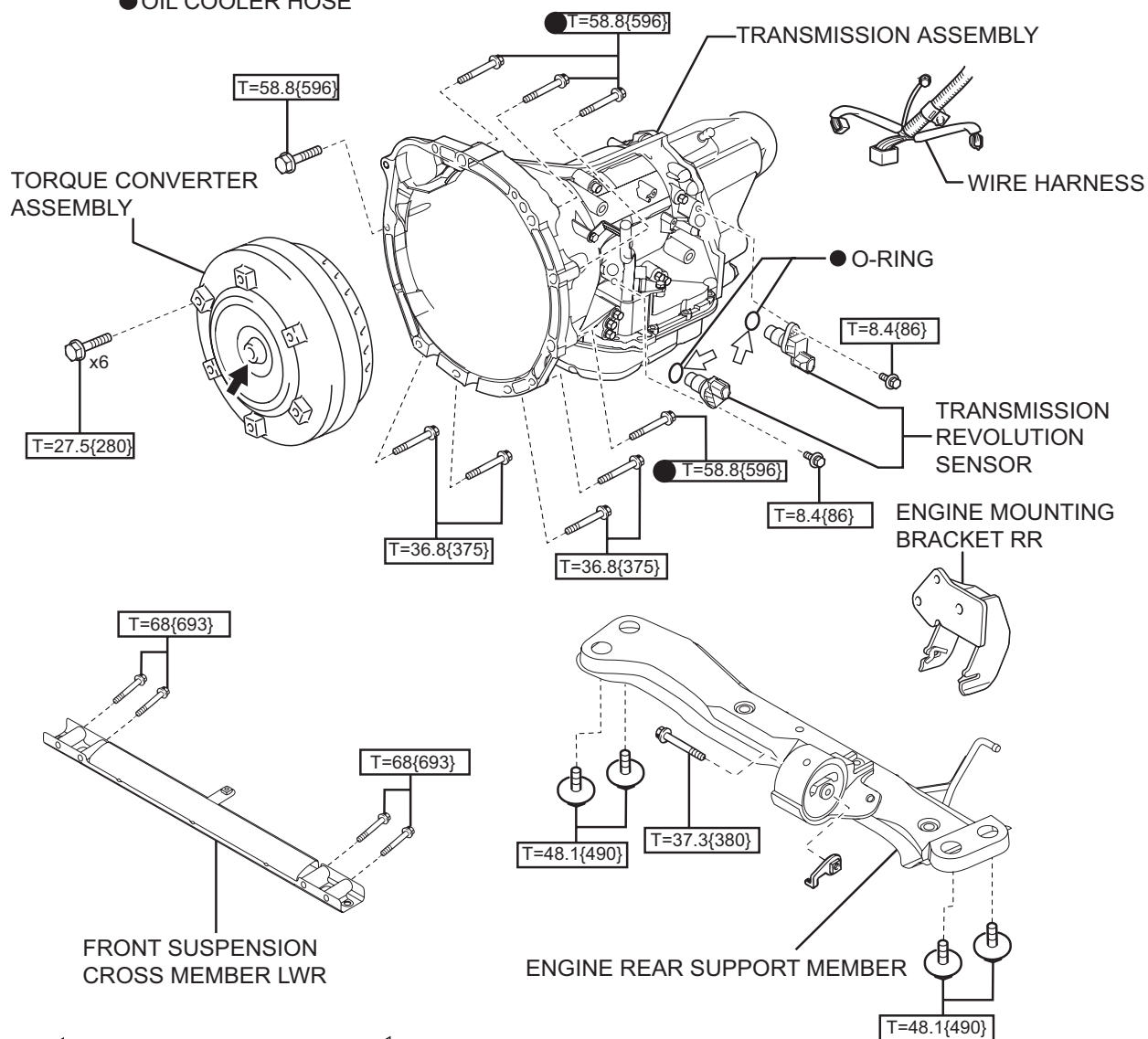
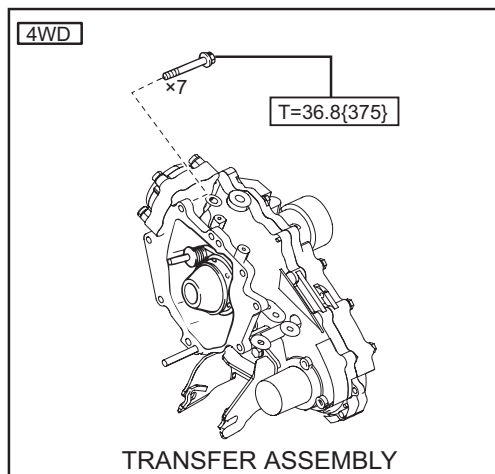
T=8.4{86}

OIL COOLER HOSE

OIL COOLER TUBE

T=34.3{349}

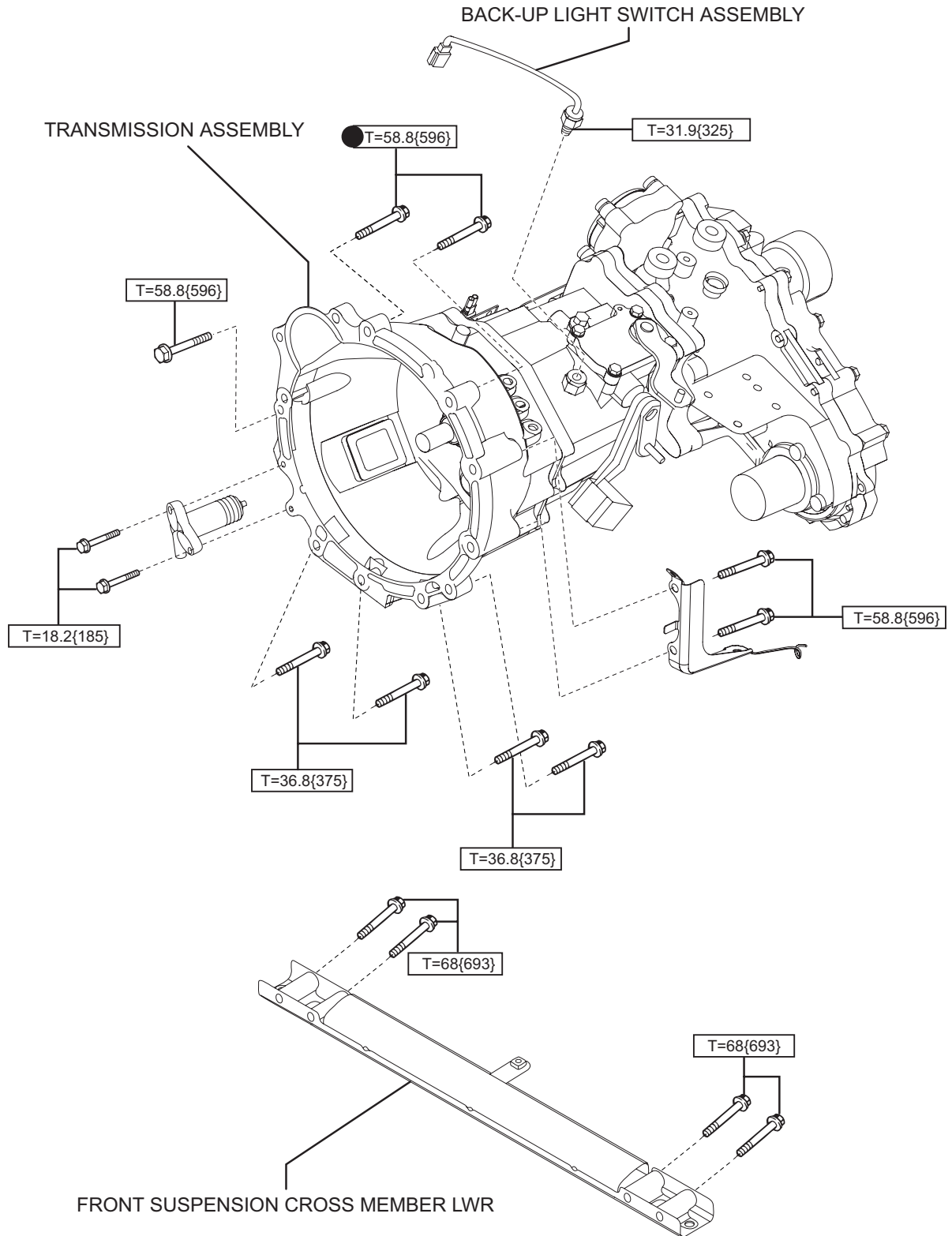
● GASKET x2

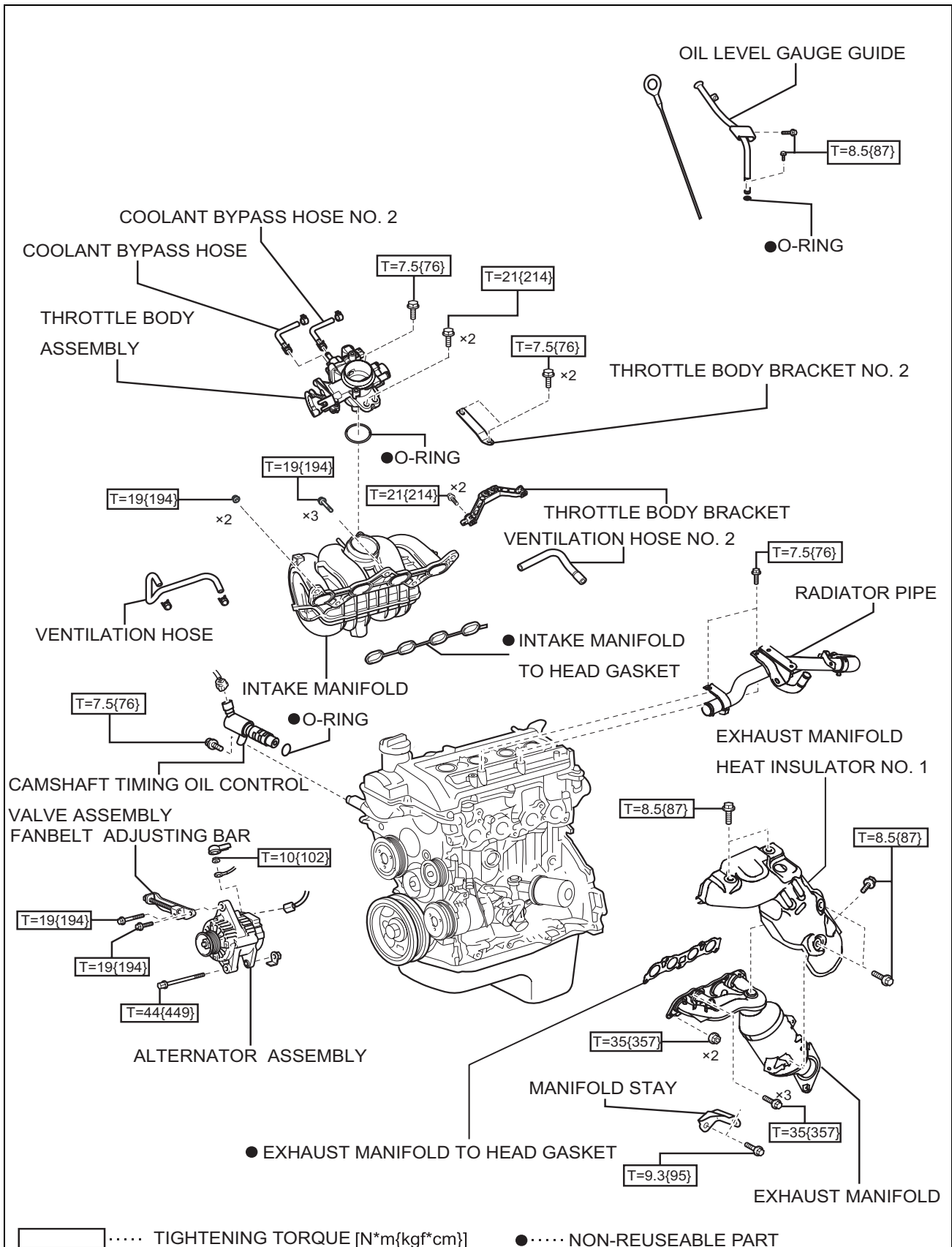


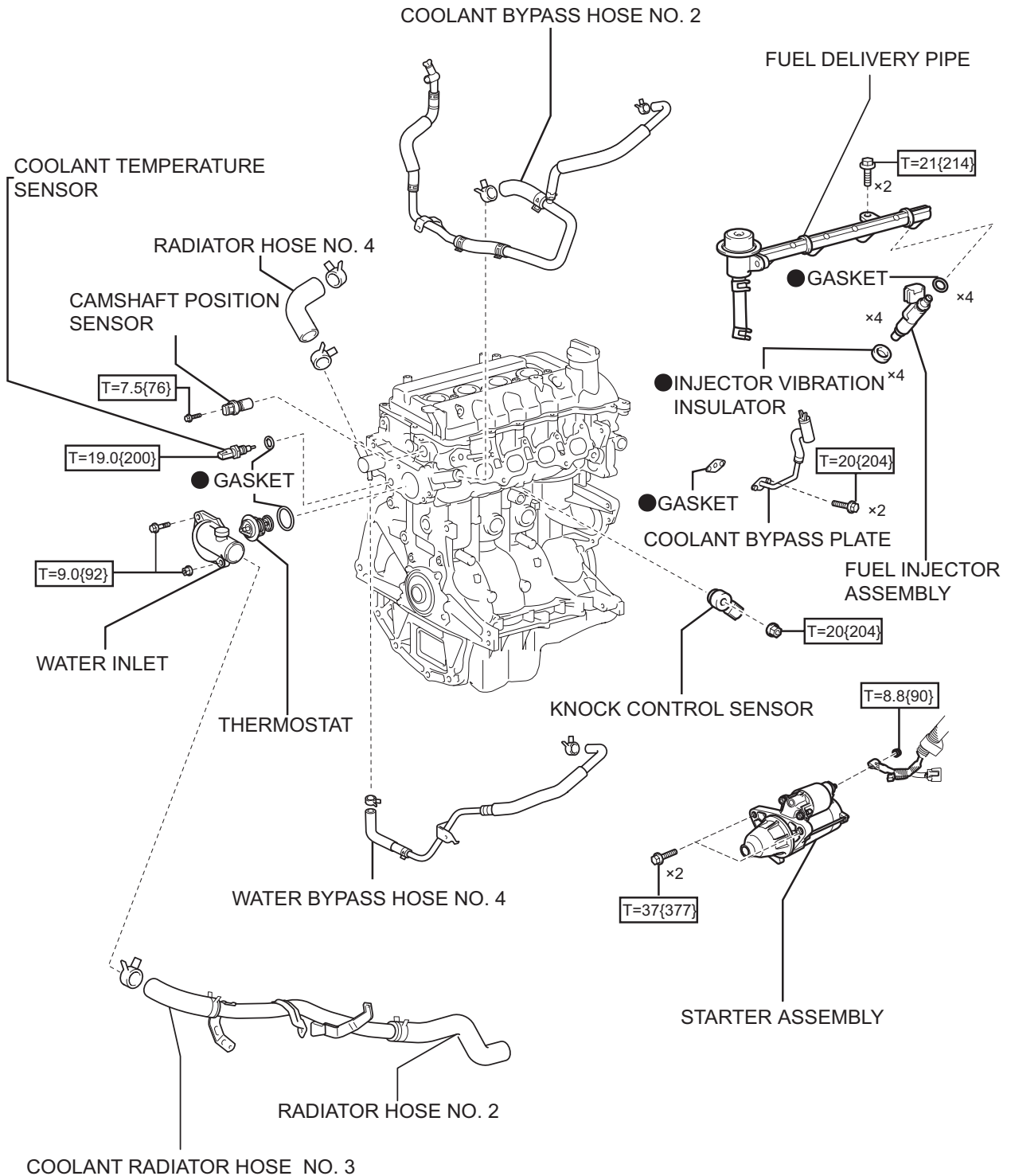
←.....APPLY MP GREASE ←.....APPLY ATF

..... TIGHTENING TORQUE [N*m{kgf*cm}]

● NON-REUSEABLE PART

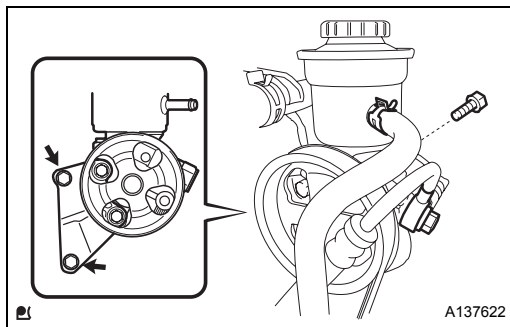




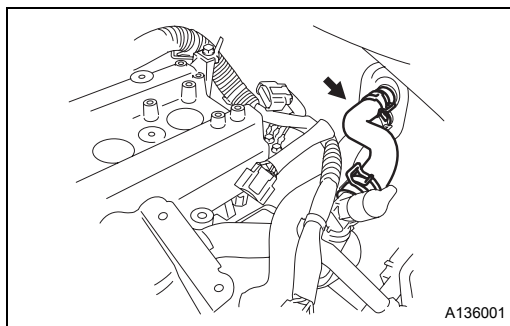


REMOVAL

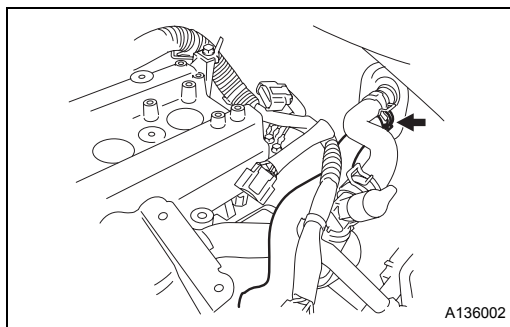
1. DISCHARGE FUEL SYSTEM PRESSURE (See page EM-173)
2. CHECK THAT FRONT TIRES FACE STRAIGHT AHEAD
3. DISCONNECT NEGATIVE BATTERY TERMINAL
See page RS-164.
4. REMOVE FRONT TIRE
5. REMOVE ENGINE UNDER COVER
6. REMOVE ENGINE UNDER COVER RR RH
7. REMOVE ENGINE UNDER COVER RR LH
8. REMOVE REFRIGERANT HFC - 134a (R134a) (Steering type: LHD) (See page AC-27)
9. DRAIN ENGINE COOLANT (See page CO-9)
10. DRAIN ENGINE COOLANT (See page CO-11)
11. DRAIN ENGINE OIL
 - (a) After draining the engine oil, install the drain plug using a new gasket.
Torque: 29.5 N*m (301 kgf*cm)
12. DRAIN AUTOMATIC TRANSMISSION FLUID (AUTOMATIC TRANSMISSION) (See page AT-69)
13. DRAIN MANUAL TRANSMISSION OIL (MANUAL TRANSMISSION) (See page MT-9)
14. DRAIN TRANSFER OIL (for 4WD) (See page TF-7)
15. REMOVE RADIATOR HOSE NO. 2 (See page CO-22)
16. DISCONNECT FUEL HOSE NO. 2 (See page EM-175)
17. DISCONNECT OIL COOLER INLET HOSE NO. 1 (AUTOMATIC TRANSMISSION) (See page CO-22)
18. DISCONNECT OIL COOLER OUTLET HOSE NO. 1 (AUTOMATIC TRANSMISSION) (See page CO-22)
19. REMOVE BATTERY
 - (a) Remove the battery clamp.
 - (b) Remove the battery.
20. REMOVE BATTERY CARRIER (See page EM-173)
21. REMOVE AIR CLEANER HOSE NO. 1 (See page CO-22)
22. DISCONNECT RADIATOR HOSE NO.1(See page CO-22)
23. REMOVE AIR CLEANER ASSEMBLY (See page EM-173)
24. REMOVE FAN AND ALTERNATOR BELT (See page EM-12)

**25. REMOVE VANE PUMP WITH BRACKET**

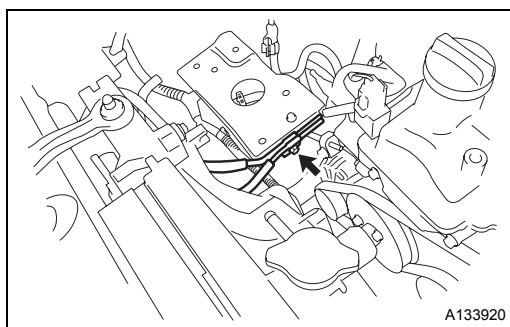
- (a) Remove the 3 bolts and the vane pump with bracket.

26. DISCONNECT COOLER REFRIGERANT DISCHARGE HOSE NO. 1 (STEERING TYPE: LHD) (See page AC-51)**27. DISCONNECT COOLER REFRIGERANT SUCTION HOSE NO. 1 (STEERING TYPE: LHD) (See page AC-51)****28. DISCONNECT COOLER COMPRESSOR WITH MAGNETIC CLUTCH ASSEMBLY (See page AC-51)****29. DISCONNECT HEATER INLET WATER HOSE**

- (a) Detach the clamp and disconnect the heater inlet water hose.

**30. DISCONNECT HEATER OUTLET WATER HOSE**

- (a) Detach the clamp and disconnect the heater outlet water hose.

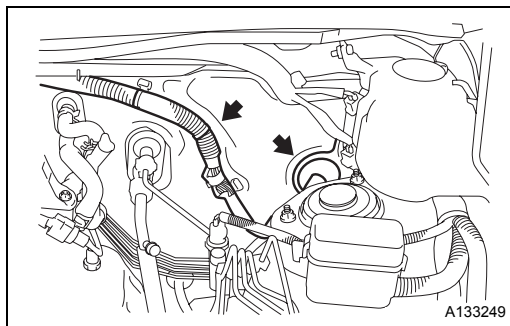
**31. REMOVE CHARCOAL CANISTER PIPE NO. 1**

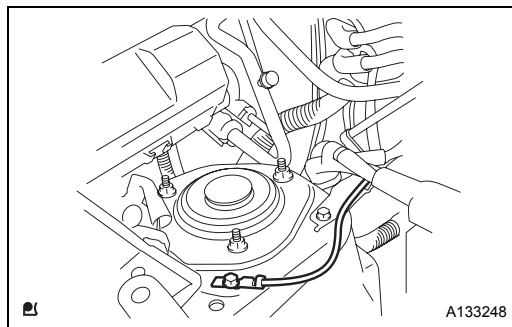
- (a) Remove the bolt and the charcoal canister pipe No. 1.

32. DISCONNECT ACCELERATOR CONTROL CABLE ASSEMBLY (See page EM-175)**33. DISCONNECT VACUUM HOSE ASSEMBLY (See page EM-175)****34. DISCONNECT ENGINE WIRE HARNESS**

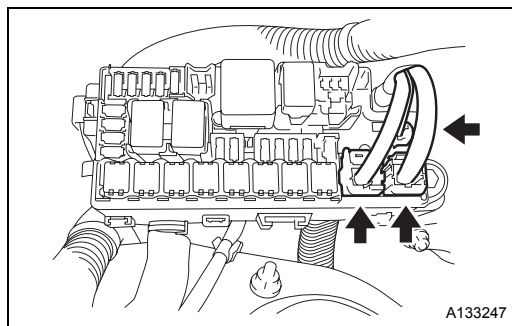
- (a) Remove the glove compartment door assembly and then disconnect the connectors of the engine control computer.

- (b) Pull the wire harness out through the engine room side.

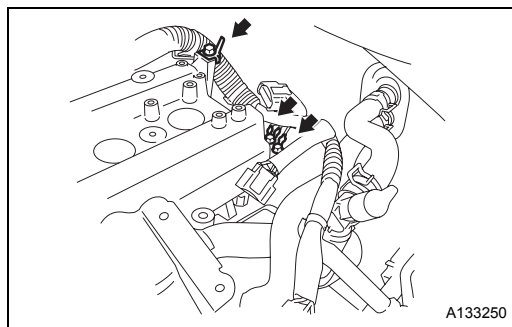




- (c) Remove the bolt and disconnect the ground wire harness.

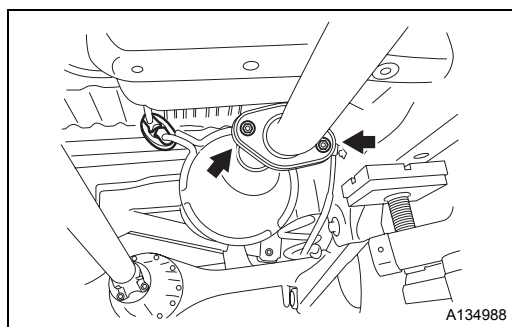


- (d) Remove the connectors and clamps from the engine room R/B, and then disconnect the wire harness.



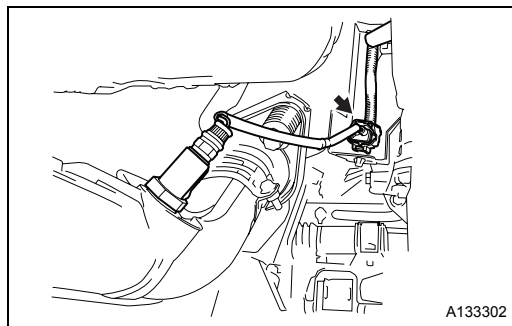
- (e) Disconnect the ground connector of the cylinder head cover.
 (f) Remove the bolt and disconnect the ground wire harness.
 (g) Disconnect all the wire harnesses and connectors, and check that the wire harness is not connected between the body and the engine.

35. REMOVE STEERING SHAFT UNIVERSAL JOINT ASSEMBLY (See page PS-11)

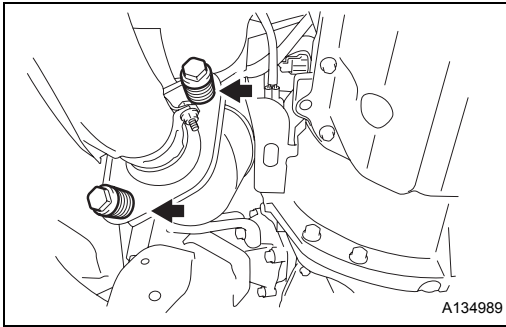


36. REMOVE EXHAUST PIPE ASSEMBLY FR

- (a) Remove the 2 nuts.



- (b) Disconnect the oxygen sensor No. 2 connector.



- (c) Remove the 2 bolts and 2 springs.
- (d) Remove the exhaust support cushion, and then remove the exhaust pipe assembly FR.

37. REMOVE PROPELLER WITH CENTER BEARING SHAFT ASSEMBLY (See page PR-6)

38. REMOVE FRONT SUSPENSION CROSS MEMBER LWR (for 4WD) (See page PR-3)

39. REMOVE FRONT PROPELLER SHAFT ASSEMBLY (for 4WD) (See page PR-3)

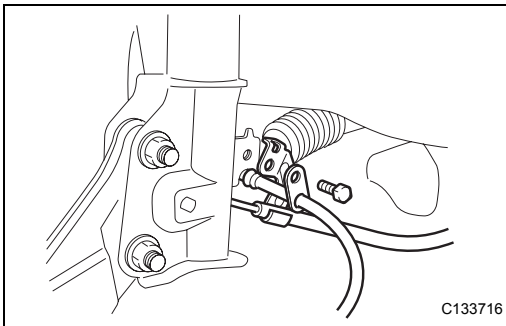
40. DISCONNECT TRANSMISSION CONTROL CABLE ASSEMBLY (AUTOMATIC TRANSMISSION) (See page AT-70)

41. DISCONNECT TRANSMISSION CONTROL CABLE ASSEMBLY (MANUAL TRANSMISSION) (See page MT-12)

EM

42. DISCONNECT SPEED SENSOR FR LH

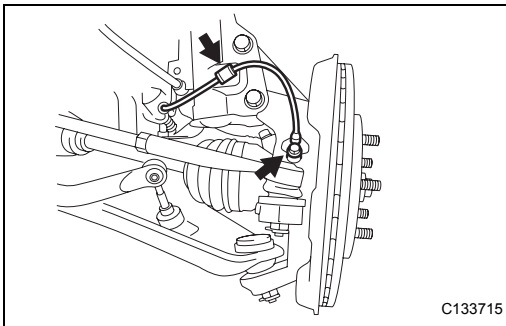
- (a) Remove the bolt, and disconnect the speed sensor FR LH from the steering knuckle.



- (b) Remove the bolt and nut, and disconnect the wire harness clamp from the shock absorber.

43. DISCONNECT SPEED SENSOR FR RH

- (a) Perform the same procedure for the RH as for the LH.

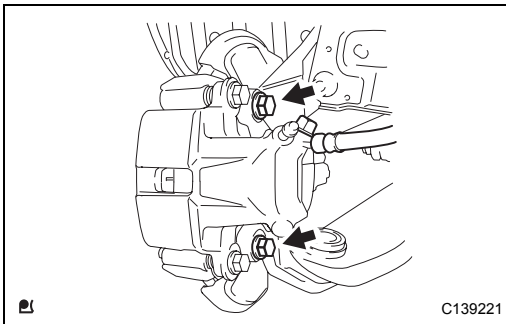


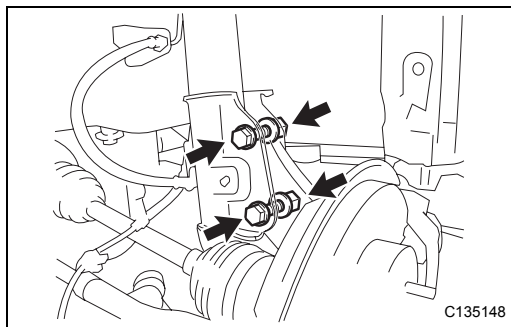
44. SEPARATE FRONT DISC BRAKE CYLINDER ASSEMBLY LH

- (a) Remove the 2 bolts, and disconnect the front disc brake cylinder assembly LH.
- (b) Hang the disconnected front disc brake cylinder assembly LH with wire or similar.

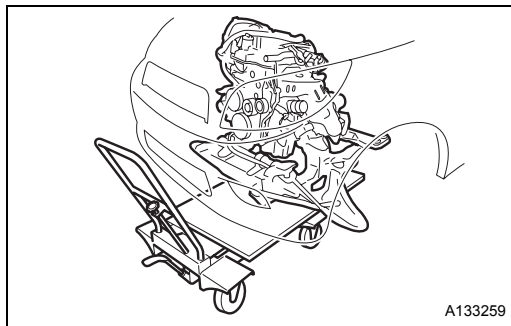
45. SEPARATE FRONT DISC BRAKE CYLINDER ASSEMBLY RH

- (a) Perform the same procedure for the RH as for the LH.

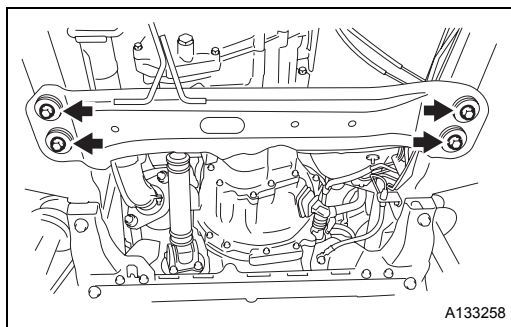


**46. SEPARATE FRONT SHOCK ABSORBER WITH COIL SPRING**

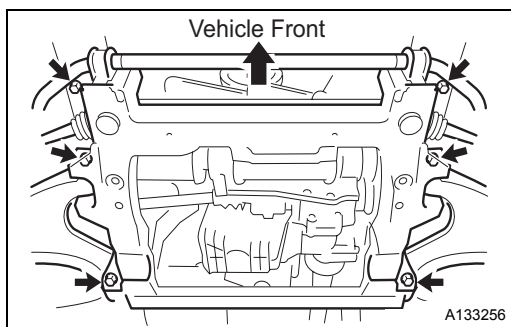
- (a) Remove the 4 bolts and 4 nuts, and disconnect the front shock absorber with coil spring LH and RH from the steering knuckle.

**47. REMOVE ENGINE ASSEMBLY WITH TRANSMISSION**

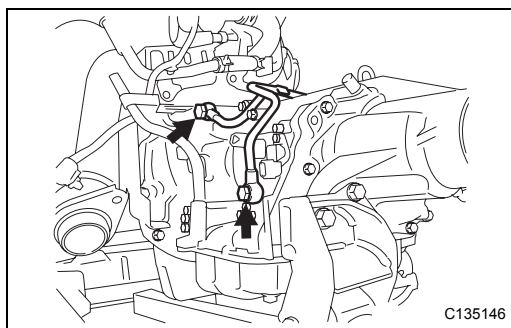
- (a) Set the engine lifter.



- (b) Remove the 4 bolts and disconnect the engine rear support member.



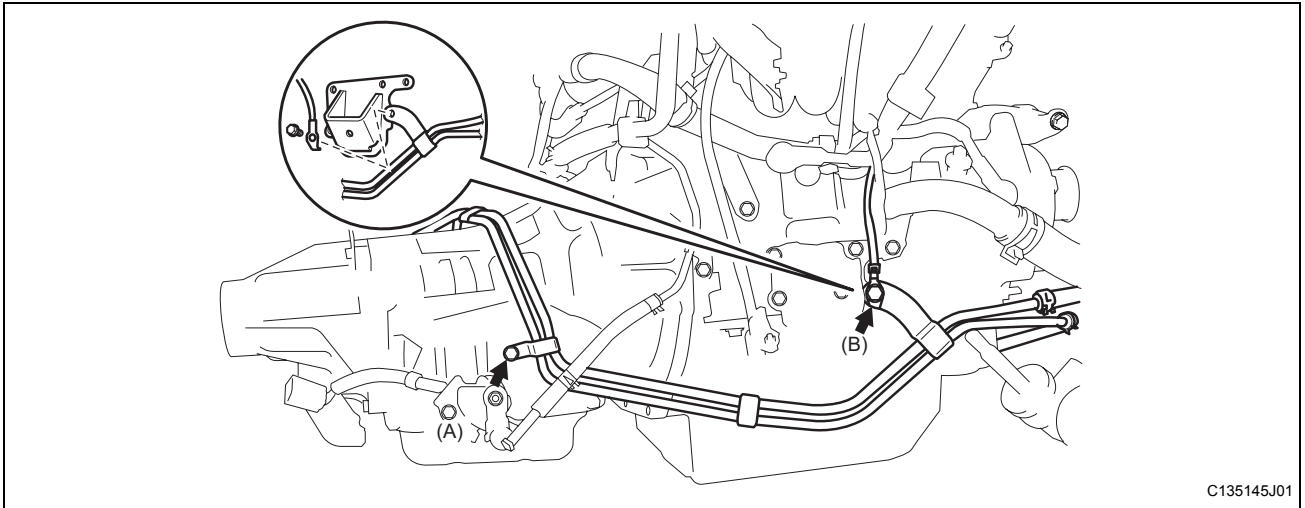
- (c) Remove the 6 bolts, operate the engine lifer, and then remove the engine assembly with transaxle and the front suspension crossmember from the vehicle.

**48. REMOVE OIL COOLER TUBE (AUTOMATIC TRANSMISSION)**

- (a) Remove the 2 union bolts and disconnect the oil cooler tube.
 (b) Remove the bolt and disconnect the clamp (A) from the transmission assembly.
 (c) Remove the bolt, and then remove the clamp (B) from the engine mount bracket.

HINT:

The clamp (B) is tightened together with the ground cable.



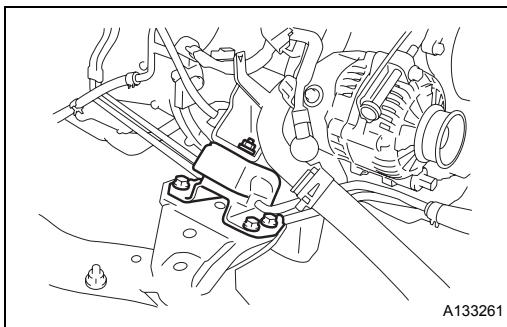
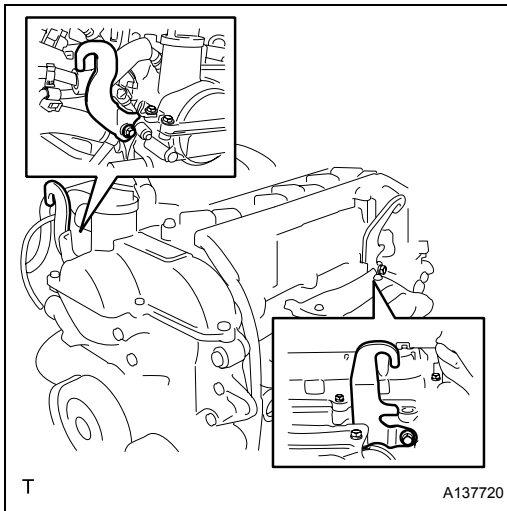
EM

49. REMOVE FRONT SUSPENSION CROSS MEMBER

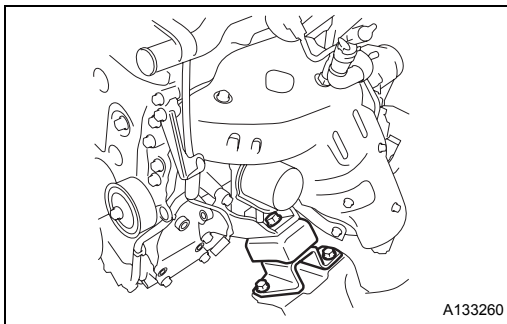
- (a) Install the engine hanger No. 1 and No. 2 to the locations shown in the illustration.

Torque: 20 N*m (204 kgf*cm)

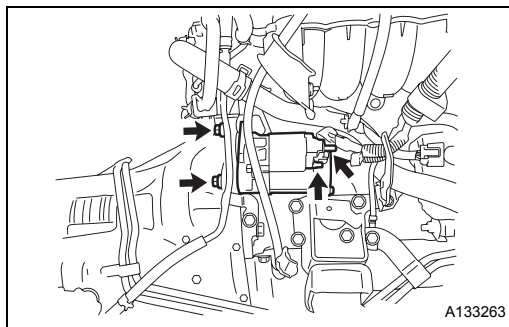
- (b) Use an engine sling device and chain block to hold the engine assembly with transaxle and the front suspension cross member.



- (c) Remove the 3 bolts and nuts and disconnect the engine mounting insulator FR RH.



- (d) Remove the 2 bolts and nut. Then disconnect the engine mounting bracket FR RH and remove the front suspension cross member.

**50. REMOVE STARTER ASSEMBLY**

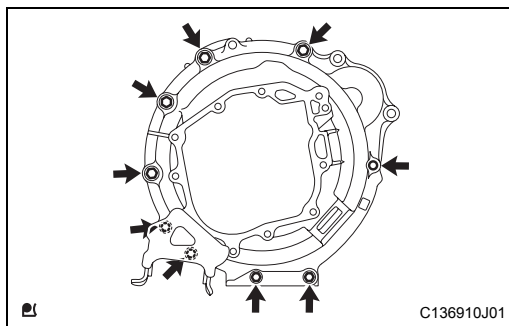
- (a) Remove the terminal cap.
- (b) Remove the nut, then remove terminal 30.
- (c) Disconnect the connector.
- (d) Remove the 2 bolts and then remove the starter assembly.

51. REMOVE TORQUE CONVERTER SET BOLT (AUTOMATIC TRANSMISSION) (See page AT-69)**52. SUPPORT TRANSMISSION ASSEMBLY (AUTOMATIC TRANSMISSION)****53. REMOVE TRANSMISSION ASSEMBLY (AUTOMATIC TRANSMISSION)**

- (a) Remove the 9 bolts and the transmission assembly.

NOTICE:

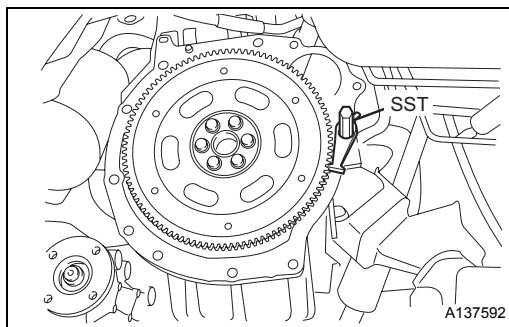
To avoid damage to the knock pin, do not pry the contact surfaces of the automatic transmission assembly and the engine.

**54. REMOVE FLYWHEEL RING GEAR (AUTOMATIC TRANSMISSION)**

- (a) Using the SST, secure the flywheel ring gear.

SST 09210-87701

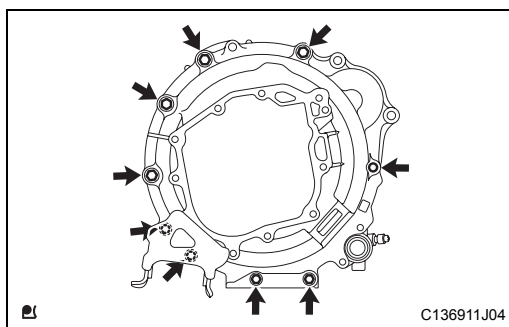
- (b) Remove the 6 bolts and the flywheel ring gear.

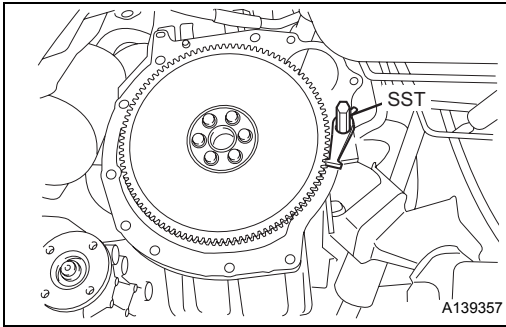
**55. SUPPORT TRANSMISSION ASSEMBLY (MANUAL TRANSMISSION)****56. REMOVE TRANSMISSION ASSEMBLY (MANUAL TRANSMISSION)**

- (a) Remove the 9 bolts and the transmission assembly.

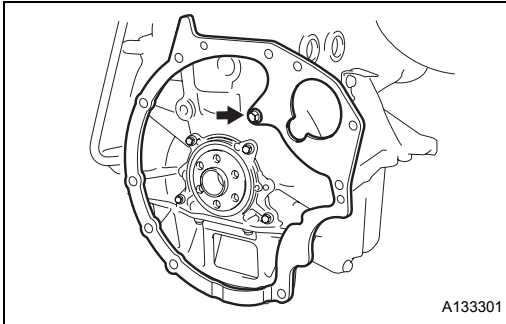
NOTICE:

Do not jolt the transmission assembly to avoid a damage to the input shaft.

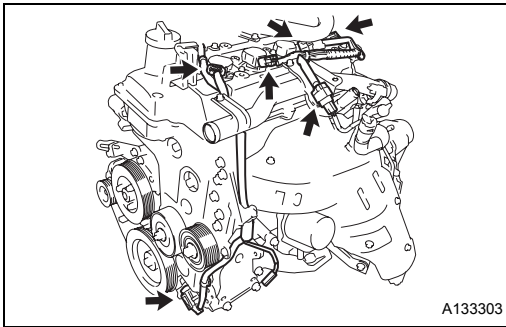
**57. REMOVE CLUTCH COVER ASSEMBLY (MANUAL TRANSMISSION) (See page CL-20)****58. REMOVE CLUTCH DISC ASSEMBLY (MANUAL TRANSMISSION) (See page CL-20)**

**59. REMOVE FLYWHEEL (MANUAL TRANSMISSION)**

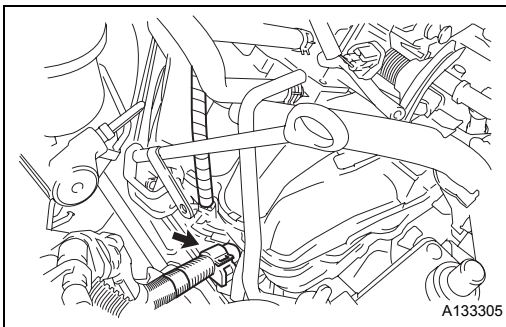
- (a) Using the SST, secure the flywheel.
SST 09210-87701
- (b) Remove the 6 bolts and the flywheel.

**60. REMOVE REAR END PLATE**

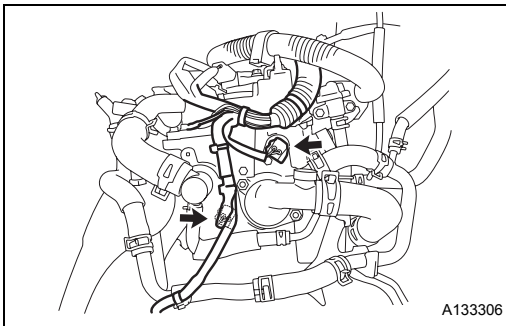
- (a) Remove the bolt and the rear end plate.

**61. REMOVE ENGINE WIRE HARNESS**

- (a) Disconnect the connectors and the wire harness clamps from the engine assembly, and remove the engine wire harness.



- (b) Detach the alternator connector and then disconnect the wire harness clamp.

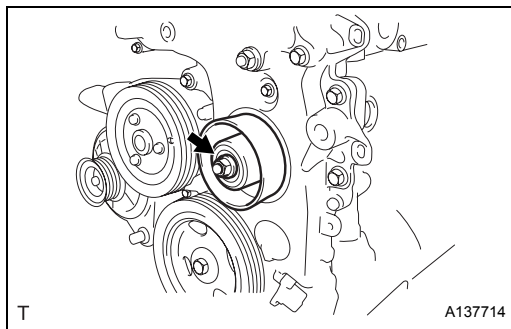
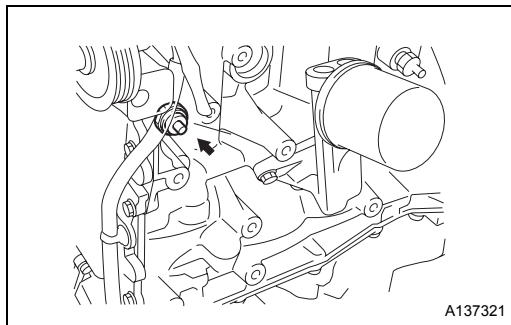


- (c) Remove the cam position sensor and the water temperature sensor connectors and then disconnect the wire harness clamp bracket.

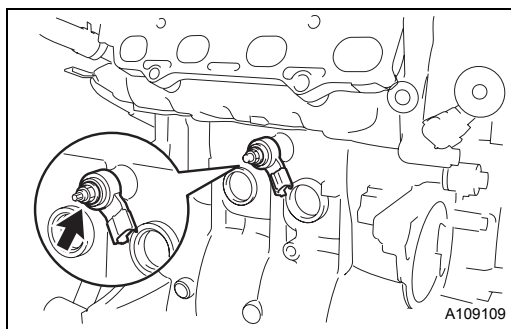
62. REMOVE RADIATOR PIPE (See page EM-174)**63. REMOVE EXHAUST MANIFOLD HEAT INSULATOR NO. 1 (See page EM-177)****64. REMOVE MANIFOLD STAY (See page EM-177)****65. REMOVE EXHAUST MANIFOLD (See page EM-178)**

- 66. REMOVE OIL LEVEL GAUGE GUIDE (See page EM-175)
- 67. REMOVE VENTILATION HOSE (See page EM-174)
- 68. REMOVE VENTILATION HOSE NO. 2 (See page EM-174)
- 69. REMOVE FUEL DELIVERY PIPE (See page FU-15)
- 70. REMOVE FUEL INJECTOR ASSEMBLY (See page FU-15)
- 71. REMOVE THROTTLE BODY ASSEMBLY (See page EM-176)
- 72. REMOVE THROTTLE BODY BRACKET (See page EM-176)
- 73. REMOVE INTAKE MANIFOLD (See page EM-176)
- 74. REMOVE ENGINE OIL PRESSURE SWITCH ASSEMBLY
 - (a) Using a deep socket wrench (24 mm), remove the engine oil pressure switch.

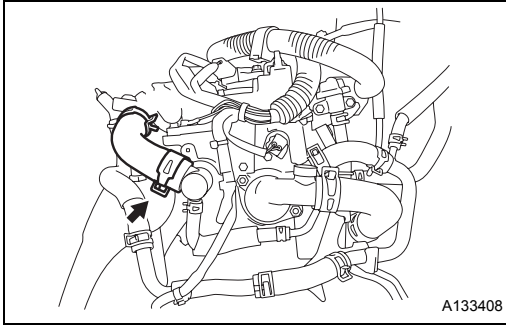
EM



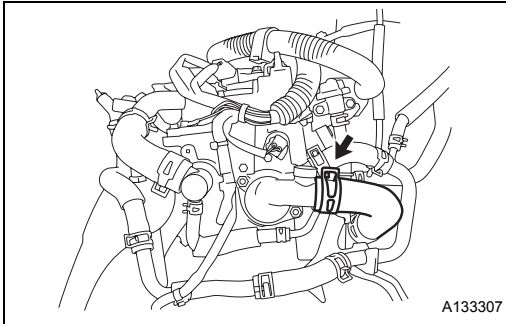
- 75. REMOVE IDLER PULLEY NO. 1
 - (a) Remove the nut, then remove idler pulley No. 1.
- 76. REMOVE CRANK POSITION SENSOR (See page IG-16)
- 77. REMOVE FAN PULLEY (See page CO-33)
- 78. REMOVE ALTERNATOR ASSEMBLY (See page CH-13)



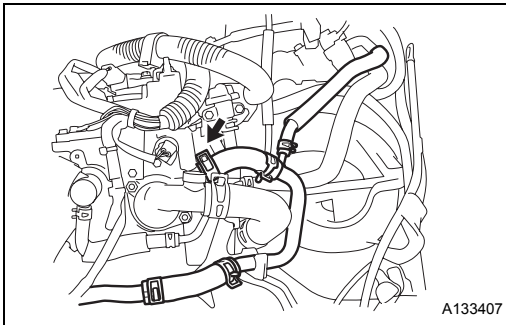
- 79. REMOVE KNOCK CONTROL SENSOR
 - (a) Remove the nut, then remove the knock control sensor.

**80. REMOVE RADIATOR HOSE NO. 4**

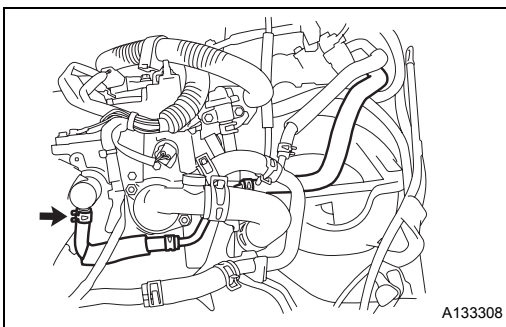
- (a) Remove the clamp and then remove radiator hose No. 4.

**81. REMOVE RADIATOR HOSE NO. 3**

- (a) Remove the clamp and then remove radiator hose No. 3.

**82. REMOVE WATER BY-PASS HOSE NO. 2**

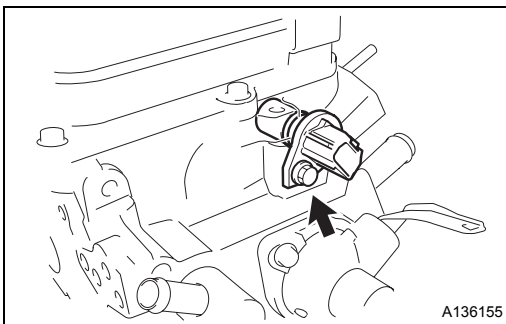
- (a) Remove the clamp and then remove the water by-pass hose No. 2.

**83. REMOVE WATER BY-PASS HOSE NO. 4**

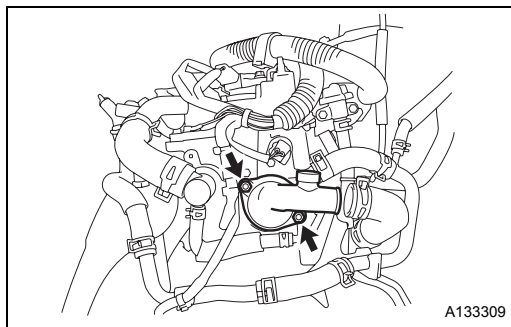
- (a) Remove the clamp and then remove the water by-pass hose No. 4.

84. REMOVE WATER BY-PASS PLATE

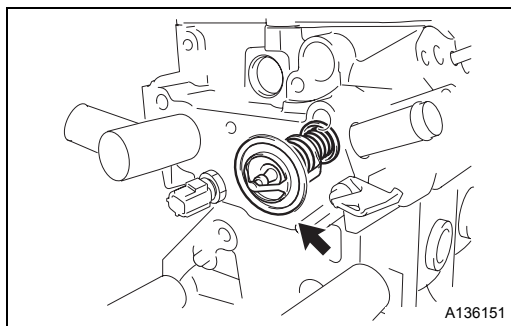
- (a) Remove the 2 bolts and the water by-pass plate.

**85. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY
(See page EM-180)****86. REMOVE CAM POSITION SENSOR**

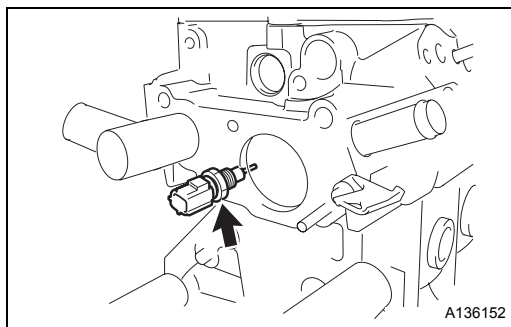
- (a) Remove the bolt, then remove the cam position sensor.

**87. REMOVE WATER INLET**

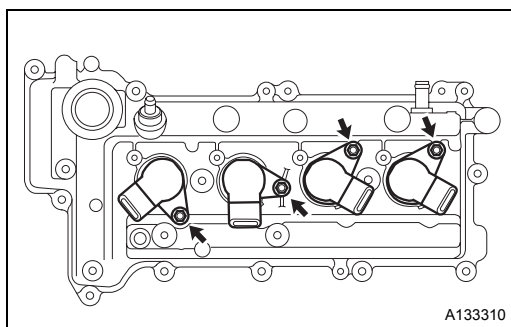
- (a) Remove the bolt and nut and then remove the water inlet.

**88. REMOVE THERMOSTAT**

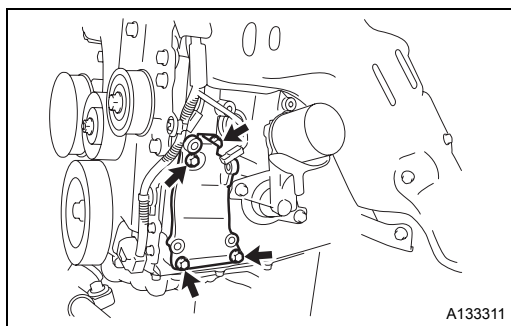
- (a) Remove the thermostat.

**89. REMOVE WATER TEMPERATURE SENSOR**

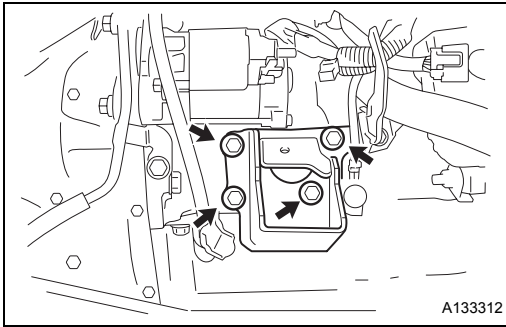
- (a) Using a 19 mm deep socket wrench, remove the water temperature sensor.

**90. REMOVE IGNITION COIL ASSEMBLY**

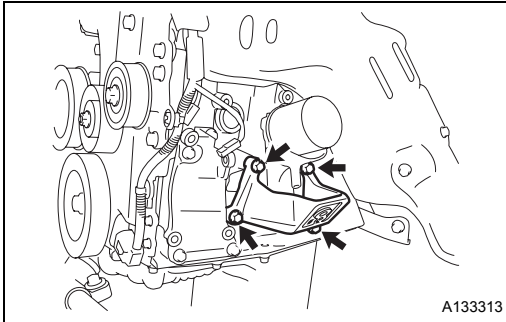
- (a) Remove the bolt and the ignition coil assembly.

**91. REMOVE COMPRESSOR MOUNTING BRACKET NO. 1**

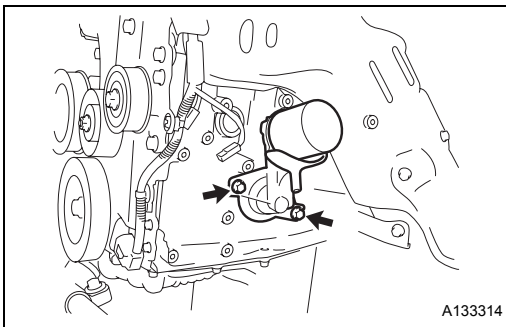
- (a) Remove the 4 bolts and the compressor mounting bracket No. 1.

**92. REMOVE ENGINE MOUNTING BRACKET FR NO. 1 RH**

- (a) Remove the 4 bolts and the engine mounting bracket FR No. 1 RH.

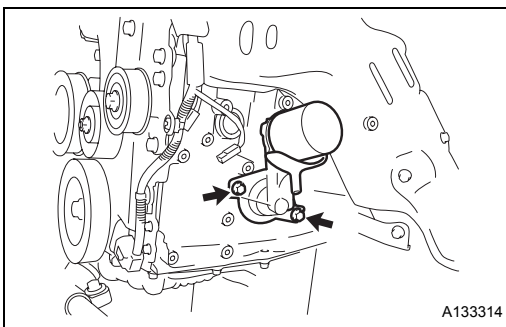
**93. REMOVE ENGINE MOUNTING BRACKET FR NO. 2**

- (a) Remove the 4 bolts and the engine mounting bracket FR No. 2.

**94. REMOVE OIL FILTER BRACKET**

- (a) Remove the 2 bolts and the oil filter bracket.
(b) Remove the oil filter bracket gasket.

INSTALLATION

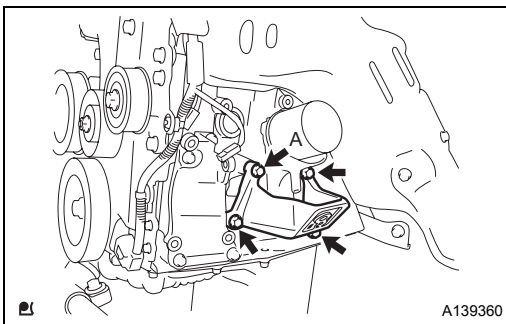
**1. INSTALL OIL FILTER BRACKET**

- (a) Install the oil filter bracket with new O-rings attached by the 2 bolts. to the cylinder block.

Torque: 19 N*m (194 kgf*cm)

HINT:

Apply a light coat of engine oil to the oil filter bracket union insertion part.

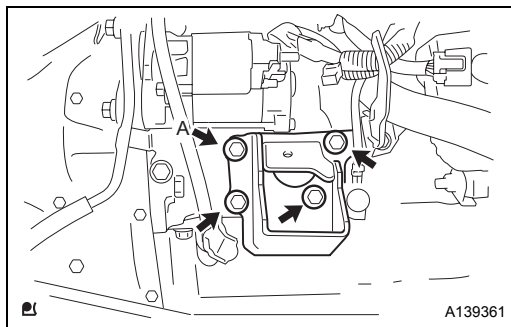
**2. INSTALL ENGINE MOUNTING BRACKET FR NO. 2**

- (a) Install the engine mounting bracket FR No. 2 with the 4 bolts.

Torque: 18 N*m (184 kgf*cm)

HINT:

Tighten part A temporarily, and then tighten it fully after fully tightening the other 3 bolts.



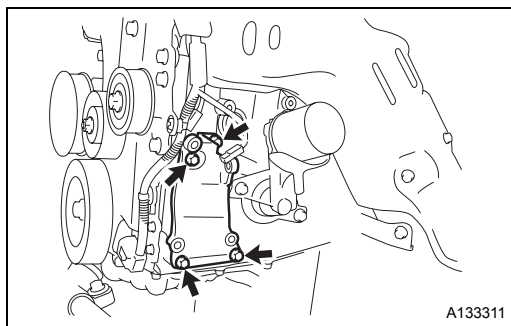
3. INSTALL ENGINE MOUNTING BRACKET FR NO. 1 RH

- (a) Install the engine mounting bracket FR No. 1 RH with the 4 bolts.

Torque: 37 N*m (377 kgf*cm)

HINT:

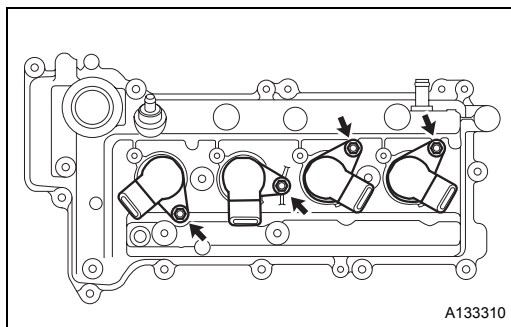
Tighten part A temporarily, and then tighten it fully after fully tightening the other 3 bolts.



4. INSTALL COMPRESSOR MOUNTING BRACKET NO. 1

- (a) Install the compressor mounting bracket No. 1 with the 3 bolts.

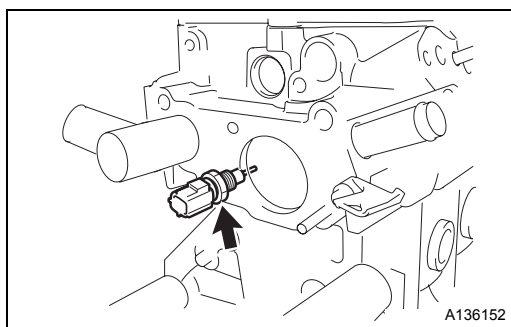
Torque: 28 N*m (286 kgf*cm)



5. INSTALL IGNITION COIL ASSEMBLY

- (a) Install the ignition coil assembly with the bolt.

Torque: 7.5 N*m (76 kgf*cm)



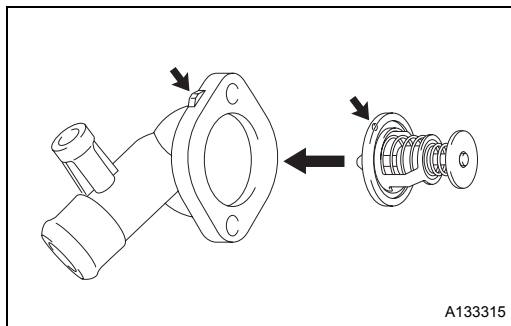
6. INSTALL WATER TEMPERATURE SENSOR

- (a) Using a new gasket and a 19 mm deep socket wrench, install the water temperature sensor.

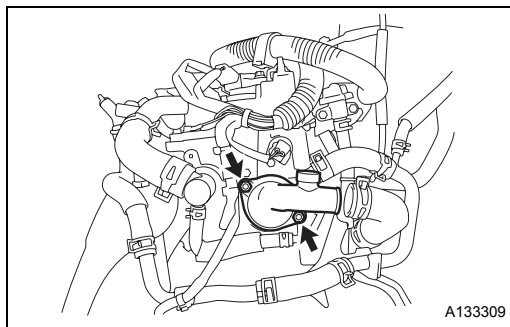
Torque: 20 N*m (203 kgf*cm)

7. INSTALL THERMOSTAT

- (a) Install a new gasket to the thermostat.



- (b) Align the water inlet matchmark and the thermostat jiggle valve, and install the thermostat.

**8. INSTALL WATER INLET**

- (a) Install the water inlet with the bolt and nut.

Torque: 9.0 N*m (92 kgf*cm)

9. INSTALL CAM POSITION SENSOR

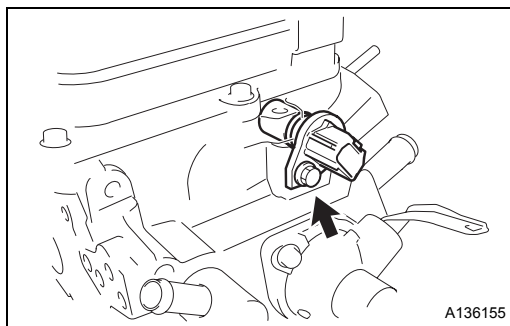
- (a) Apply a light coat of engine oil to the O-ring.

- (b) Install the cam position sensor with the bolt.

Torque: 7.5 N*m (76 kgf*cm)

NOTICE:

Install the sensor so that the O-ring is not cut or pinched.

**10. INSTALL CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY (See page EM-189)****11. INSTALL WATER BY-PASS PLATE**

- (a) Install the water by-pass plate to the cylinder head with a gasket and 2 bolts.

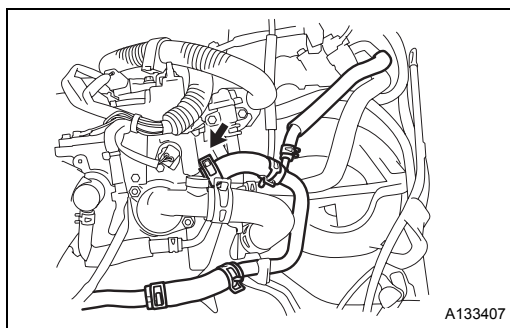
Torque: 20 N*m (204 kgf*cm)

- (b) Install the water by-pass plate to the water valve bracket with the bolt.

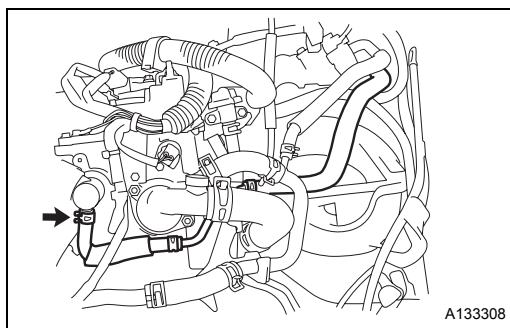
Torque: 7.5 N*m (76 kgf*cm)

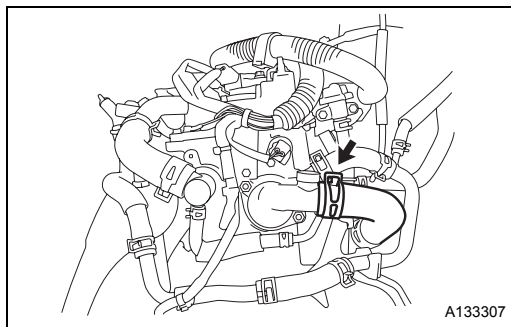
12. INSTALL WATER BY-PASS HOSE NO. 2

- (a) Install the water by-pass hose No. 2 with the clamp.

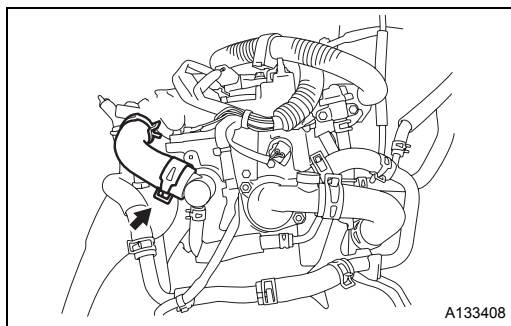
**13. INSTALL WATER BY-PASS HOSE NO. 4**

- (a) Install the water by-pass hose No. 4 with the clamp.

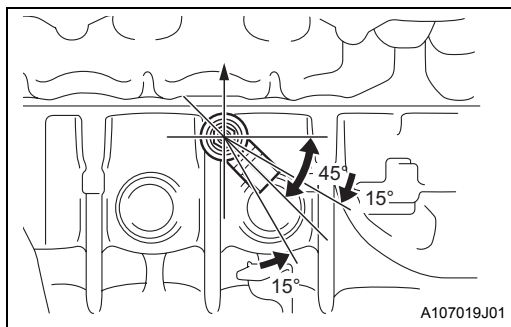


**14. INSTALL RADIATOR HOSE NO. 3**

- (a) Install the radiator hose No. 3 with the clamp.

**15. INSTALL RADIATOR HOSE NO. 4**

- (a) Install the radiator hose No. 4 with the clamp.

**16. INSTALL KNOCK CONTROL SENSOR**

- (a) Install the knock control sensor with the nut in the direction shown in the illustration.

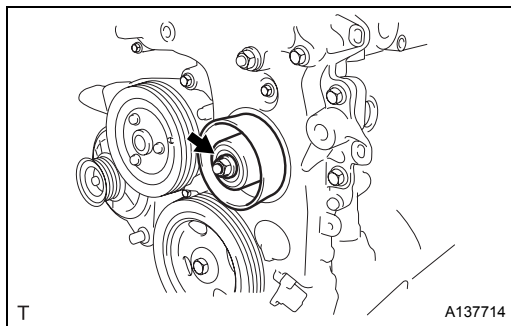
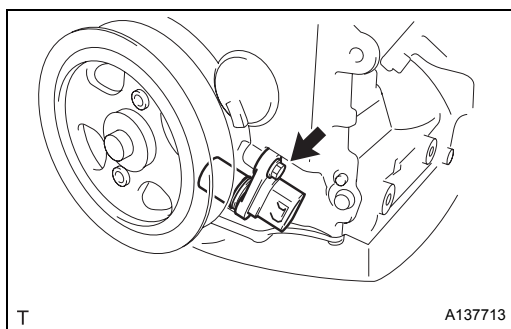
Torque: 20 N*m (204 kgf*cm)

17. INSTALL ALTERNATOR ASSEMBLY (See page CH-13)**18. INSTALL FAN PULLEY (See page CO-33)****19. INSTALL CRANK POSITION SENSOR**

- (a) Apply a light coat of engine oil to the O-ring.

- (b) Install the crank position sensor with the bolt.

Torque: 7.5 N*m (76 kgf*cm)

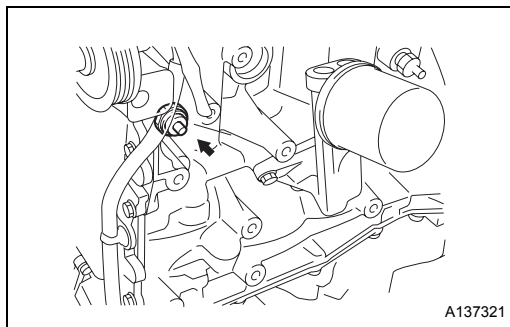
**20. INSTALL IDLER PULLEY NO. 1**

- (a) Install the idler pulley No. 1 with the nut.

Torque: 44 N*m (449 kgf*cm)

21. INSTALL ENGINE OIL PRESSURE SWITCH ASSEMBLY

- (a) Apply Three Bond TB1324 to the first 2 to 3 threads of the engine oil pressure switch assembly.



- (b) Using a deep socket wrench (24 mm), install the engine oil pressure switch assembly.

Torque: 15 N*m (153 kgf*cm)

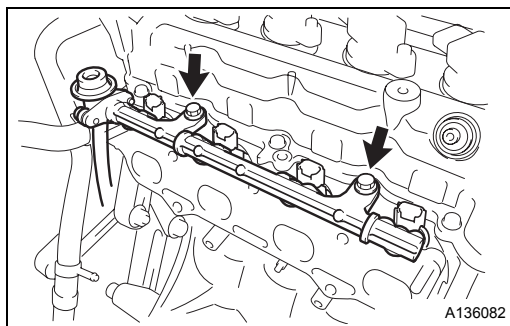
NOTICE:

Do not start the engine within 1 hour of installation.

22. INSTALL INTAKE MANIFOLD (See page EM-191)

23. INSTALL THROTTLE BODY ASSEMBLY (See page EM-192)

24. INSTALL FUEL INJECTOR ASSEMBLY (See page FU-16)



25. INSTALL FUEL DELIVERY PIPE

- (a) Temporarily install the fuel delivery pipe with the 2 bolts.

NOTICE:

Do not drop the fuel injector when installing the fuel delivery pipe.

- (b) Check that the fuel delivery pipe rotates smoothly.

NOTICE:

If the fuel delivery pipe does not rotate smoothly, reinstall it with a new O-ring.

- (c) Tighten the 2 bolts.

Torque: 21 N*m (214 kgf*cm)

26. INSTALL OIL LEVEL GAUGE GUIDE

- (a) Apply engine oil to a new O-ring, then install it to the oil level gauge guide.

- (b) Install the oil level gauge guide with the 2 bolts.

Torque: 8.5 N*m (87 kgf*cm)

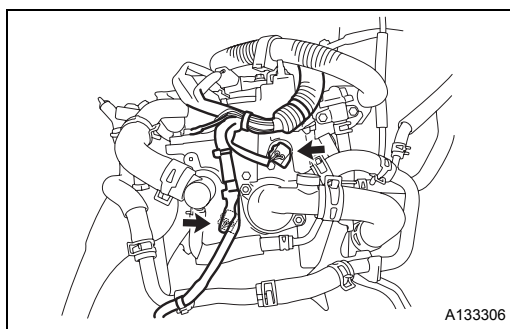
27. INSTALL EXHAUST MANIFOLD (See page EM-190)

28. INSTALL MANIFOLD STAY (See page EM-191)

29. INSTALL EXHAUST MANIFOLD HEAT INSULATOR NO. 1 (See page EM-191)

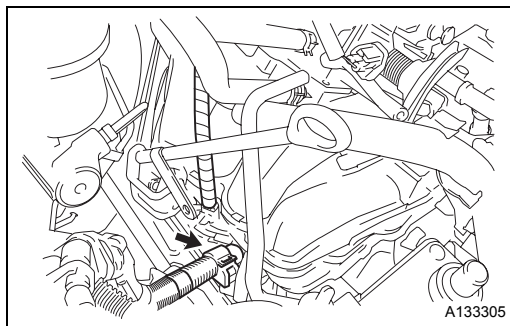
30. INSTALL ENGINE WIRE HARNESS

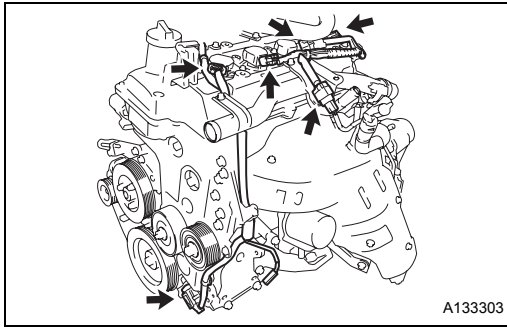
- (a) Install the cam position sensor and the water temperature sensor connectors, and then install the wire harness clamp bracket.



- (b) Install the alternator connector, and then install the wire harness clamp.

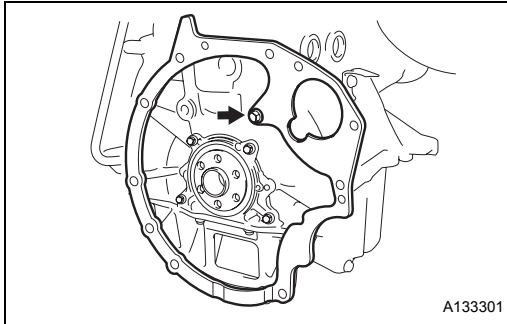
Torque: 9.8 N*m (99 kgf*cm) (Terminal B)





- (c) Install the sensor connectors and wire harness clamps, and then install the engine wire harness.

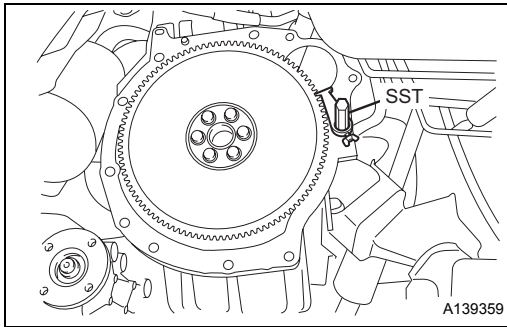
31. INSTALL RADIATOR PIPE (See page EM-194)
32. INSTALL VENTILATION HOSE (See page EM-193)
33. INSTALL VENTILATION HOSE NO. 2 (See page EM-193)



34. INSTALL REAR END PLATE

- (a) Install the rear end plate with the bolt.

Torque: 7.5 N*m (76 kgf*cm)



35. INSTALL FLYWHEEL (MANUAL TRANSMISSION)

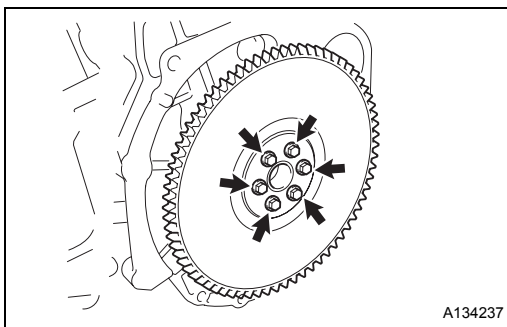
- (a) Using SST, hold the crankshaft.

SST 09210-87701

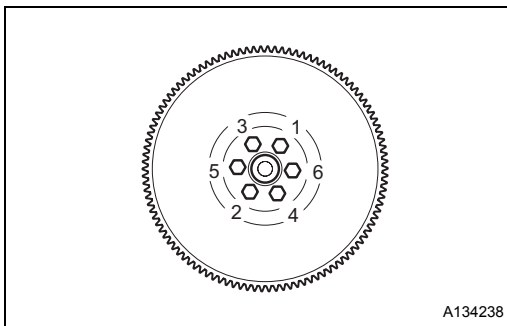
- (b) Apply Three Bond TB1324 to the first 2 to 3 threads of the flywheel installation bolt.

NOTICE:

Clean and degrease the flywheel installation bolt and bolt hole.



- (c) Temporarily install the flywheel with the 6 bolts.



- (d) Tighten the 6 bolts in the order shown in the illustration.

Torque: 78 N*m (800 kgf*cm)

NOTICE:

Do not start the engine within 1 hour of installation.

36. INSTALL CLUTCH DISC ASSEMBLY (MANUAL TRANSMISSION) (See page CL-21)
37. INSTALL CLUTCH COVER ASSEMBLY (MANUAL TRANSMISSION) (See page CL-22)

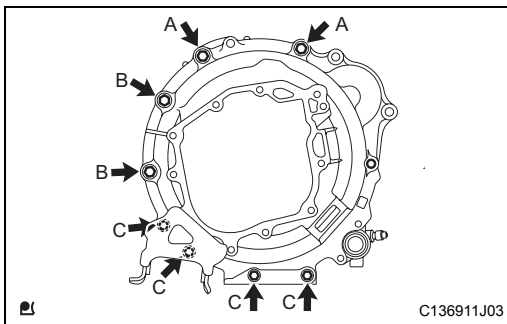
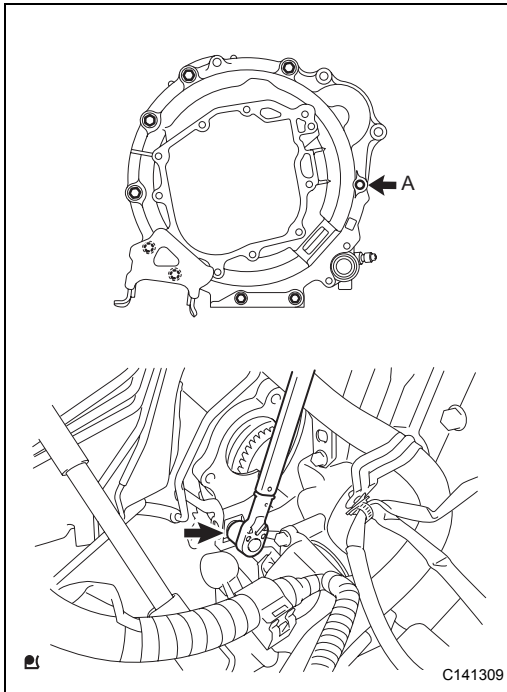
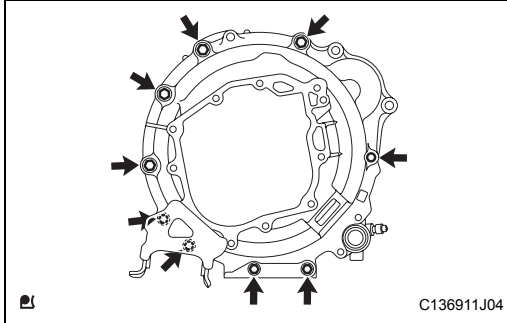
38. SUPPORT TRANSMISSION ASSEMBLY (MANUAL TRANSMISSION)

39. INSTALL TRANSMISSION ASSEMBLY (MANUAL TRANSAXLE)

- Ensure that the 2 knock pins are installed on the engine side.
- Using a high-mission jack, horizontally align the engine and the automatic transmission assembly and then insert the knock pin in the knock pin hole.
- Temporarily install the transmission assembly with the 9 bolts.

NOTICE:

- Do not jolt the transmission unit assembly to avoid a damage to the input shaft.



- Using a pri set torque wrench, tighten the transmission assembly installation bolt A.

Torque: 58.8 N*m (599 kgf*cm)

- Tighten the transmission assembly installation bolts A, B and C in order.

- Tighten bolt A.

Torque: 58.8 N*m (599 kgf*cm)

NOTICE:

Tighten bolt A together with the water by-pass pipe No. 2 clamp.

HINT:

Bolt A part number: 91619-61250 (Length under neck 57m)

- Tighten bolt B.

Torque: 58.8 N*m (599 kgf*cm)

HINT:

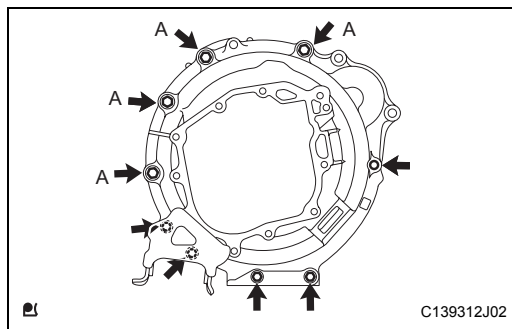
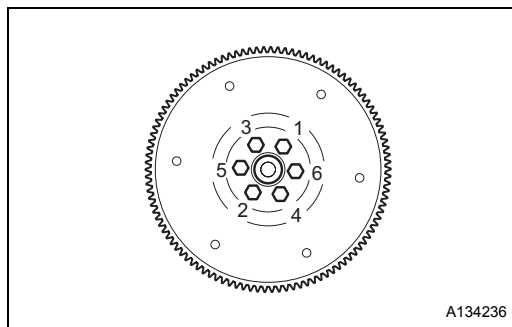
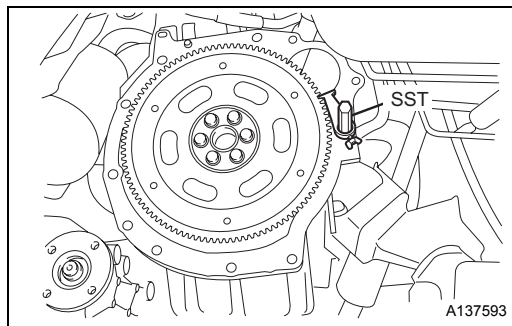
Bolt B part number: 91619-61250 (Length under neck 57 mm)

- (3) Tighten bolt C.

Torque: 36.8 N*m (375 kgf*cm)

HINT:

Bolt C part number: 90119-10260 (Length under neck 40 mm)



40. INSTALL FLYWHEEL RING GEAR (AUTOMATIC TRANSMISSION)

- (a) Using SST, hold the crankshaft.

SST 09330-00021, 09213-54015 (91651-60855)

- (b) Apply Three Bond TB1324 to the first 2 to 3 threads of the flywheel ring gear installation bolt.

NOTICE:

Clean and degrease the flywheel ring gear installation bolt and bolt hole.

- (c) Temporarily install the flywheel ring gear with the 6 bolts.

- (d) Tighten the 6 bolts in the order shown in the illustration.

Torque: 78 N*m (800 kgf*cm)

NOTICE:

Do not start the engine within 1 hour of installation.

41. SUPPORT TRANSMISSION ASSEMBLY (AUTOMATIC TRANSMISSION)

42. INSTALL TRANSMISSION ASSEMBLY (AUTOMATIC TRANSMISSION)

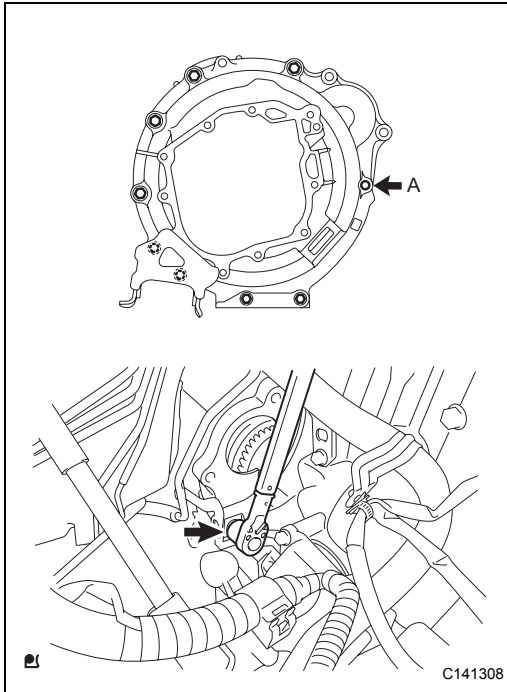
- (a) Ensure that the 2 knock pins are installed on the engine side.

- (b) Using a high-mission jack, horizontally align the engine and the automatic transmission assembly and then insert the knock pin in the knock pin hole.

- (c) Temporarily install the transmission assembly with the 9 bolts.

NOTICE:

Do not jolt the transmission unit assembly to avoid a damage to the input shaft.

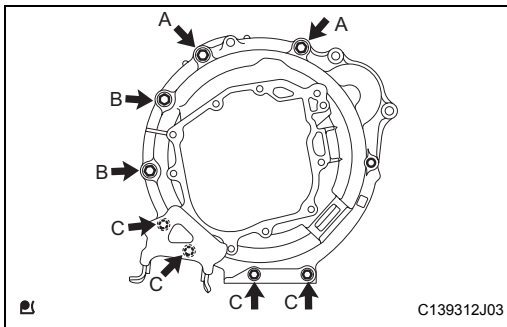


- (d) Using a torque wrench (QL-100), tighten a new transmission assembly installation bolt A.

Torque: 58.8 N*m (599 kgf*cm)

HINT:

Bolt A part number: 91619-61250 (Length under neck 50 mm)



- (e) Tighten the transmission assembly installation bolts A, B and C in order.

Torque: 58.8 N*m (599 kgf*cm) New bolt A

58.8 N*m (599 kgf*cm) Bolt B

36.8 N*m (375 kgf*cm) Bolt C

HINT:

- Bolt A part number: 90041-19968 (Length under neck 57 mm)
- Bolt A and B part number: 90041-19968 (Length under neck 57 mm)
- Bolt C part number: 91612-61040 (Length under neck 40 mm)

43. INSTALL TORQUE CONVERTER SET BOLT (AUTOMATIC TRANSMISSION) (See page AT-73)

44. INSTALL STARTER ASSEMBLY

- (a) Install the starter assembly with 2 bolts.

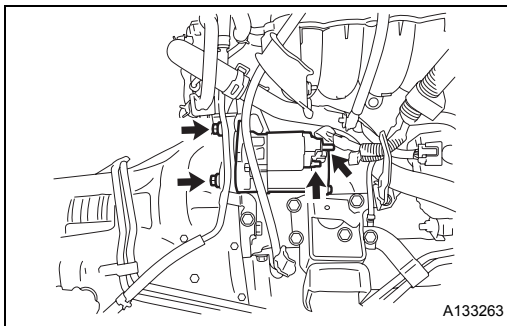
Torque: 37 N*m (377 kgf*cm)

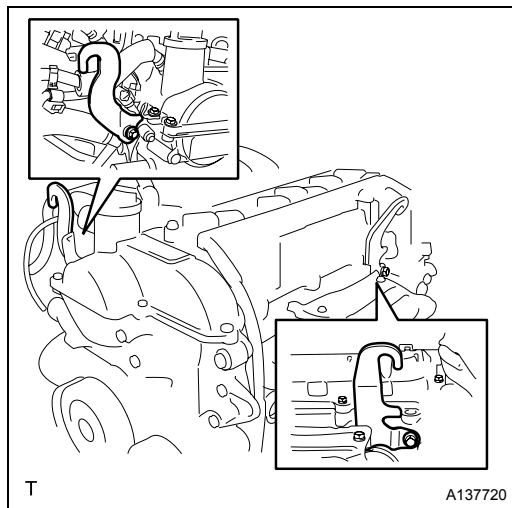
- (b) Connect the connector.

- (c) Install terminal 30 with the nut.

Torque: 8.8 N*m (90 kgf*cm)

- (d) Close the terminal cap.



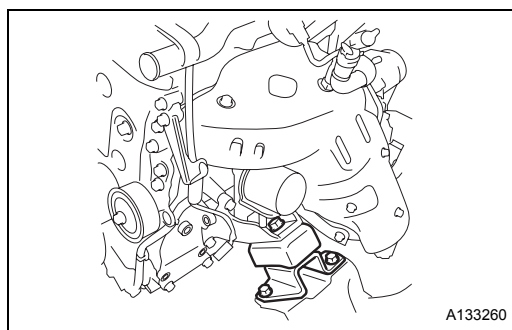


45. INSTALL FRONT SUSPENSION CROSS MEMBER

- (a) Install the engine hanger No. 1 and No. 2 to the locations shown in the illustration.

Torque: 20 N*m (204 kgf*cm)

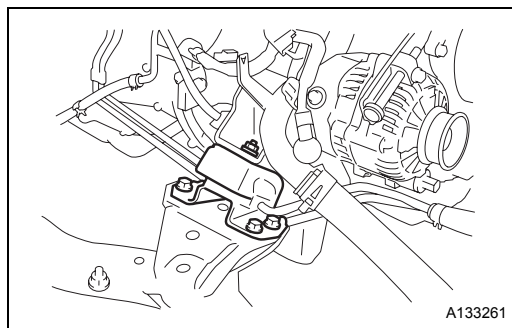
- (b) Use an engine sling device and chain block to hold the engine assembly with transmission.



- (c) Install the left side front suspension cross member to the engine assembly with transmission with the 2 bolts and nut.

Torque: 48.1 N*m (490 kgf*cm) (nut)

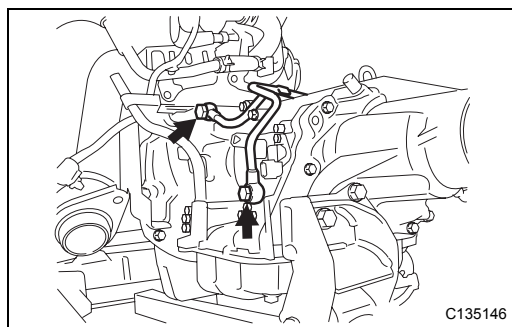
30.4 N*m (310 kgf*cm) (bolt)



- (d) Install the right side front suspension cross member to the engine assembly with transmission with the 3 bolts and nut.

Torque: 48.1 N*m (490 kgf*cm) (nut)

30.4 N*m (310 kgf*cm) (bolt)



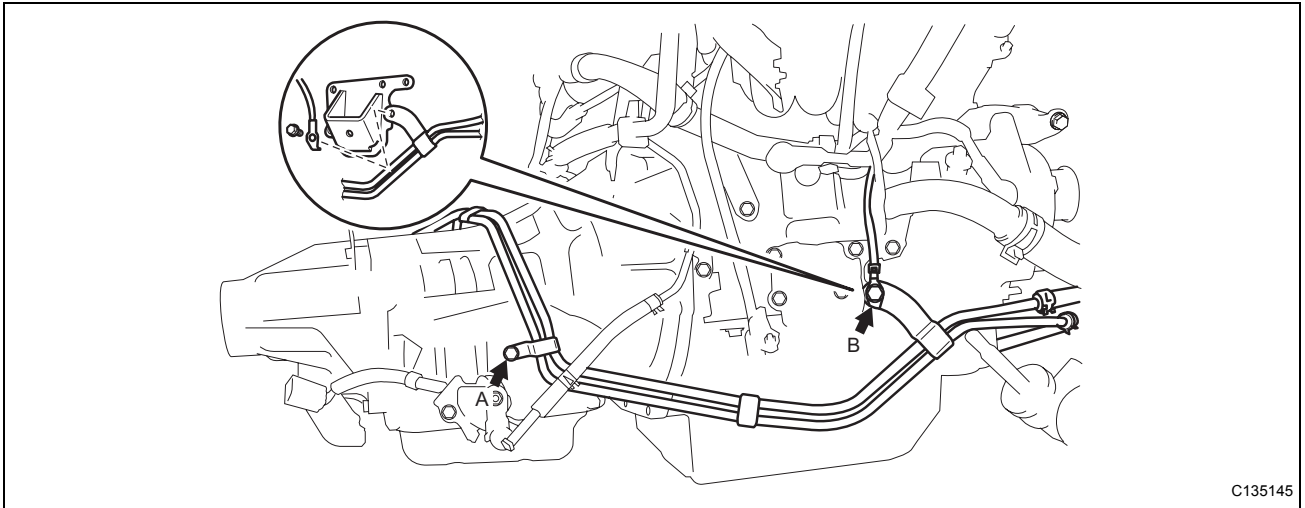
46. INSTALL OIL COOLER TUBE (AUTOMATIC TRANSMISSION)

- (a) Temporarily install the oil cooler tube to the transmission assembly with the 2 union bolts.

- (b) Temporarily install clamp A and B with the 2 bolts.

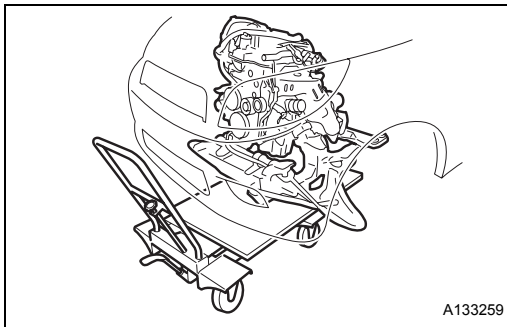
NOTICE:

The clamp (B) is tightened together with the ground wire, and the ground wire comes on top.



C135145

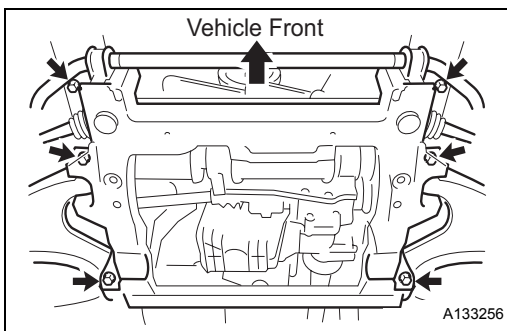
- (c) Tighten the 2 union bolts.
Torque: 34.3 N*m (349 kgf*cm)
- (d) Tighten the bolts of clamp A and B.
Torque: 8.4 N*m (85 kgf*cm) (A)
Torque: 36.8 N*m (375 kgf*cm) (B)



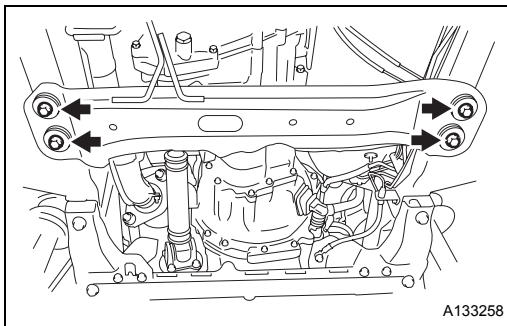
A133259

47. INSTALL ENGINE ASSEMBLY WITH TRANSMISSION

- (a) Set the engine lifter.
- (b) Operate the engine lifer, and then temporarily install the engine assembly with transmission and the front suspension cross member to the vehicle with the 6 bolts.
- (c) Tighten the bolts to the specified torque in several passes.
Torque: 125 N*m (1275 kgf*cm)

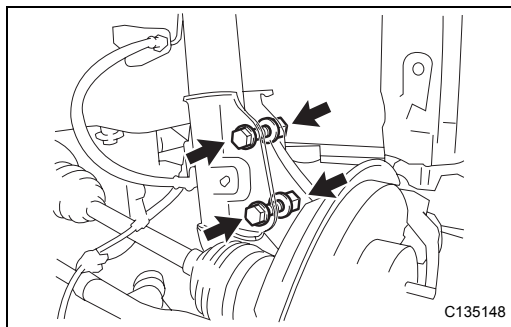


A133256



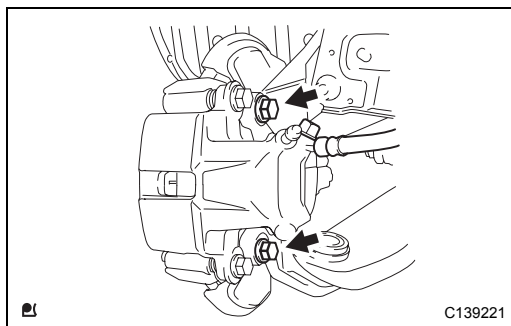
A133258

- (d) Install the engine rear support member to the vehicle with the 4 bolts.
- (e) Tighten the bolts to the specified torque in several passes.
Torque: 48.1 N*m (490 kgf*cm)

**48. INSTALL FRONT SHOCK ABSORBER WITH COIL SPRING**

- (a) Connect the front shock absorber with coil spring to the suspension knuckle assembly with the 2 bolts and nuts.

Torque: 95.7 N*m (956 kgf*cm)

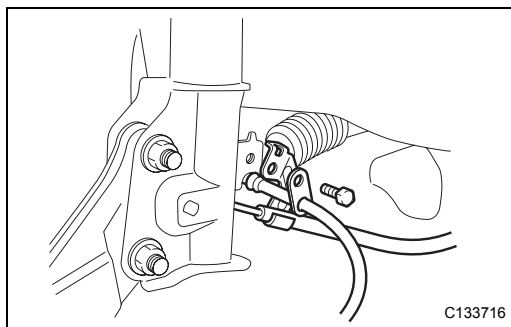
**49. INSTALL FRONT DISC BRAKE CYLINDER ASSEMBLY LH**

- (a) Connect the disc brake cylinder assembly with the 2 bolts.

Torque: 112.8 N*m (1150 kgf*cm)

50. INSTALL FRONT DISC BRAKE CYLINDER ASSEMBLY RH

- (a) Perform the same procedure for the RH as for the LH.

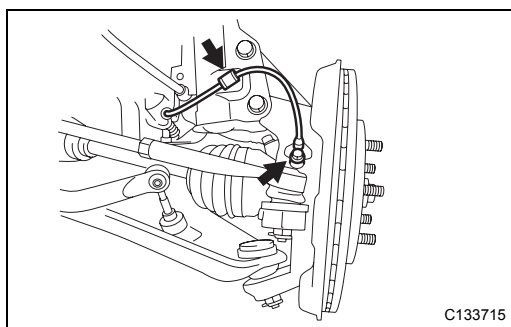
**51. INSTALL SPEED SENSOR FR LH**

- (a) Install the speed sensor FR LH to the steering knuckle with the bolt.

Torque: 18.2 N*m (185.5 kgf*cm)

NOTICE:

Tighten it together with the brake flexible hose clamp with the bolt, with the flexible hose clamp on the top.



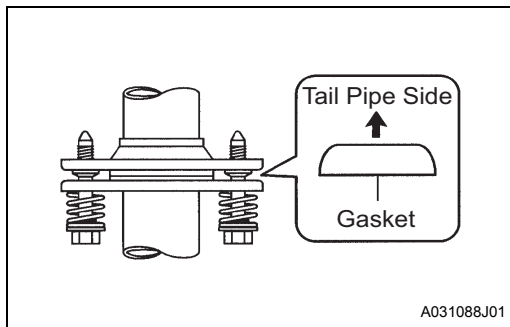
- (b) Install the bolt and wire harness clamp to the shock absorber.

Torque: 8.4 N*m (85.5 kgf*cm)

52. INSTALL SPEED SENSOR FR RH

- (a) Perform the same procedure for the RH as for the LH.

53. CONNECT TRANSMISSION CONTROL CABLE ASSEMBLY (AUTOMATIC TRANSMISSION) (See page AT-75)**54. CONNECT TRANSMISSION CONTROL CABLE ASSEMBLY (MANUAL TRANSMISSION) (See page MT-16)****55. INSTALL FRONT PROPELLER SHAFT ASSEMBLY (for 4WD) (See page PR-4)****56. INSTALL FRONT SUSPENSION CROSS MEMBER LWR (See page PR-4)****57. INSTALL PROPELLER WITH CENTER BEARING SHAFT ASSEMBLY (See page PR-7)**

**58. INSTALL EXHAUST PIPE ASSEMBLY FR**

- (a) With a new gasket inserted, install the exhaust pipe assembly FR to the exhaust manifold with the 2 compression springs and 2 bolts.

Torque: 46.5 N*m (474 kgf*cm)

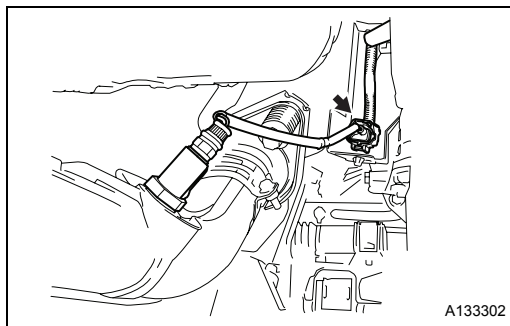
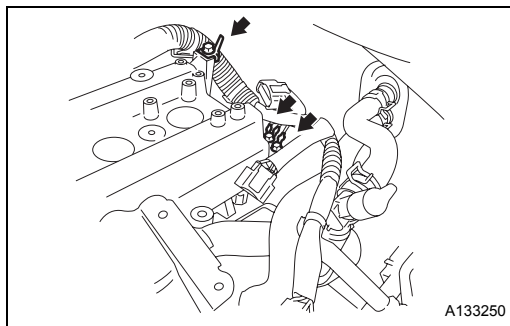
NOTICE:

- Make sure the gasket is installed in the correct direction.
- Dropping the gasket may damage it.
- Do not damage the sliding parts of the gasket.

- (b) Using a new gasket, install the exhaust tail pipe assembly to the exhaust pipe assembly FR with the 2 new nuts.

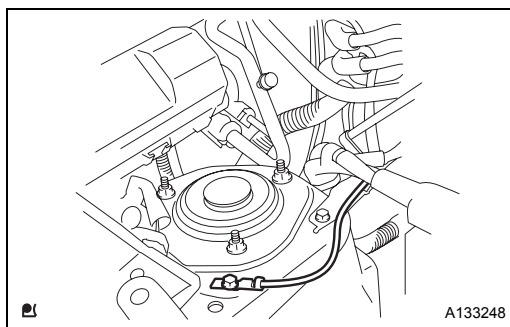
Torque: 19 N*m (193 kgf*cm)

- (c) Connect oxygen sensor No. 2 connector.

EM**59. INSTALL STEERING SHAFT UNIVERSAL JOINT ASSEMBLY (See page PS-25)****60. CONNECT ENGINE WIRE HARNESS**

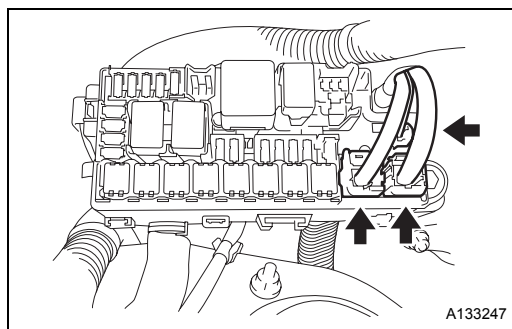
- (a) Connect the cylinder head cover ground connector, and then install the ground wire harness with the 3 bolts.

Torque: 7.5 N*m (76 kgf*cm)

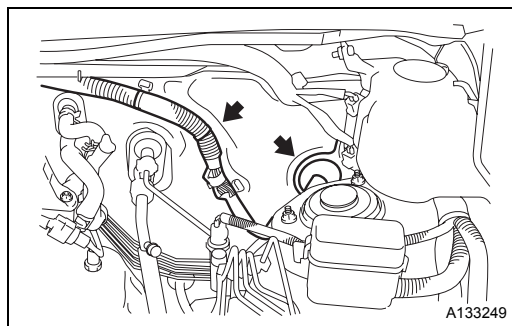


- (b) Connect the ground wire harness with the bolt.

Torque: 8.0 N*m (85 kgf*cm)



(c) Connect the 3 engine room R/B connectors and clamp.

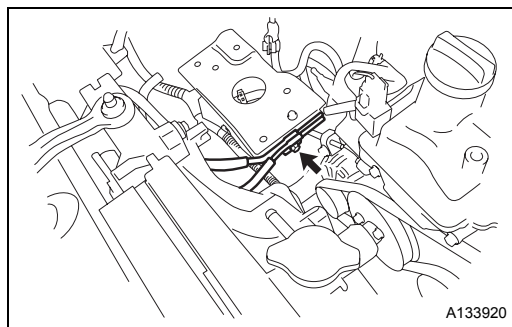


(d) Install the wire harness inside the engine room.

(e) Connect the engine control computer connector, and then install the glove compartment door assembly.

61. CONNECT VACUUM HOSE ASSEMBLY (See page EM-193)

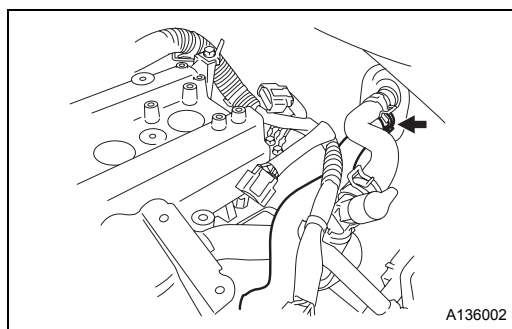
62. CONNECT ACCELERATOR CONTROL CABLE ASSEMBLY (See page EM-193)



63. INSTALL CHARCOAL CANISTER PIPE NO. 1

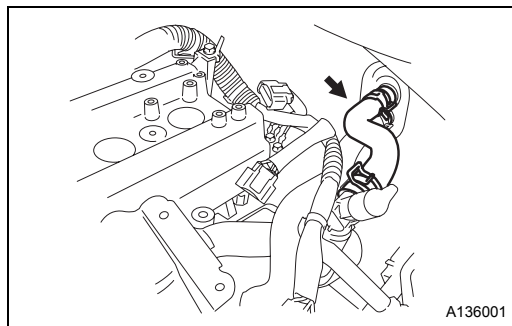
(a) Install the charcoal canister pipe No. 1 with the bolt.

Torque: 7.5 N*m (76 kgf*cm)



64. CONNECT HEATER OUTLET WATER HOSE

(a) Connect the heater outlet water hose.



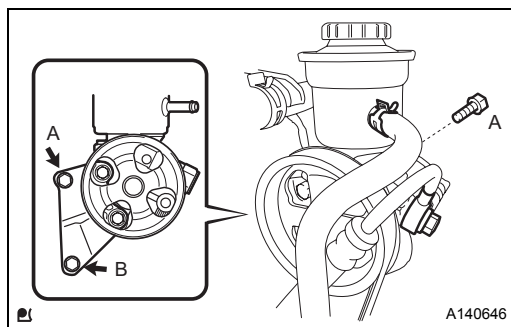
65. CONNECT HEATER INLET WATER HOSE

(a) Connect the heater inlet water hose.

66. INSTALL COOLER COMPRESSOR WITH MAGNETIC CLUTCH ASSEMBLY (See page AC-54)

67. INSTALL COOLER REFRIGERANT SUCTION HOSE NO. 1 (STEERING TYPE: LHD) (See page AC-54)

68. INSTALL COOLER REFRIGERANT DISCHARGE HOSE NO. 1 (STEERING TYPE: LHD) (See page AC-55)

**69. INSTALL VANE PUMP WITH BRACKET**

- (a) Install the vane pump with bracket with the 3 bolts.

Torque: 20.6 N*m (210 kgf*cm) (Bolt A)

43.2 N*m (440 kgf*cm) (Bolt B)

70. INSTALL FAN AND ALTERNATOR V BELT (See page EM-12)**71. ADJUST FAN AND ALTERNATOR V BELT (See page EM-13)****72. CHECK FAN AND ALTERNATOR V BELT (See page EM-13)****73. INSTALL AIR CLEANER ASSEMBLY (See page EM-194)****74. CONNECT RADIATOR HOSE NO. 1 (See page CO-18)****75. INSTALL AIR CLEANER HOSE NO. 1 (See page CO-26)****76. INSTALL BATTERY CARRIER (See page EM-194)****77. CONNECT OIL COOLER OUTLET HOSE NO. 1 (AUTOMATIC TRANSMISSION)(See page CO-25)****78. CONNECT OIL COOLER INLET HOSE NO. 1 (AUTOMATIC TRANSMISSION) (See page CO-25)****79. CONNECT FUEL HOSE NO. 2 (See page EM-193)****80. CONNECT RADIATOR HOSE NO. 2**

- (a) Connect the radiator hose No. 2 with the clamp.

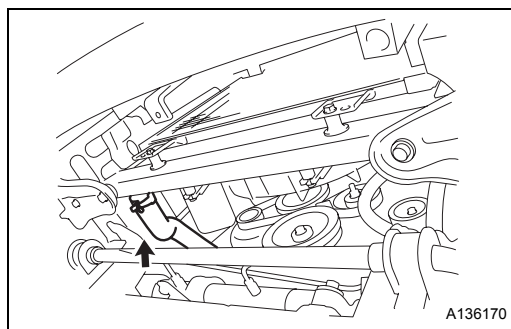
81. INSTALL BATTERY**82. CONNECT NEGATIVE BATTERY TERMINAL**

- (a) Connect the negative terminal with the nut and clamp.

Torque: 5.4 N*m (55 kgf*cm)

83. INSTALL FRONT TIRE

Torque: 103 N*m (1050 kgf*cm)

84. CHECK THAT FRONT TIRES FACE STRAIGHT AHEAD**85. ADD ENGINE OIL****86. ADD ENGINE COOLANT (See page CO-11)****87. ADD AUTOMATIC TRANSMISSION FLUID (AUTOMATIC TRANSMISSION)****88. ADD MANUAL TRANSMISSION OIL (MANUAL TRANSMISSION)****89. ADD TRANSFER OIL (for 4WD)****90. CHARGE REFRIGERANT HFC - 134a [R134a] (STEERING TYPE: LHD) (See page AC-27)****91. WARM UP ENGINE (STEERING TYPE: LHD) (See page AC-28)****92. CHECK FOR REFRIGERANT LEAKS (STEERING TYPE: LHD) (See page AC-28)****93. CHECK FOR ENGINE COOLANT LEAKS (See page CO-12)****94. CHECK COOLANT LEVEL (See page CO-12)****95. CHECK FOR FUEL LEAKS (See page EM-195)****96. CHECK FOR EXHAUST GAS LEAKS****97. CHECK FOR OIL LEAKS****98. CHECK ENGINE OIL LEVEL (See page EM-195)**

99. CHECK ENGINE IDLE SPEED (See page EM-5)
100. CHECK IGNITION TIMING (See page EM-4)
101. CHECK DENSITY OF CO AND HC (See page EM-6)
102. INITIALIZE LEARNED VALUE IN DS-II (AUTOMATIC TRANSMISSION)
See page AT-15.
103. CHECK AND ADJUST FRONT WHEEL ALIGNMENT
See page SP-4.
104. INSTALL ENGINE UNDER COVER RR LH
 - (a) Install the engine under cover RR LH with the 4 bolts.
Torque: 5.4 N*m (55 kgf*cm)
105. INSTALL ENGINE UNDER COVER RR RH
 - (a) Install the engine under cover RR RH with the 7 bolts.
Torque: 5.4 N*m (55 kgf*cm)
106. INSTALL ENGINE UNDER COVER
 - (a) Install the engine under cover with the 11 bolts.
Torque: 5.4 N*m (55 kgf*cm)
107. TEST MODE INSPECTION (SPEED SENSOR)
(See page BC-9.)
(See page BC-65.)

EM

