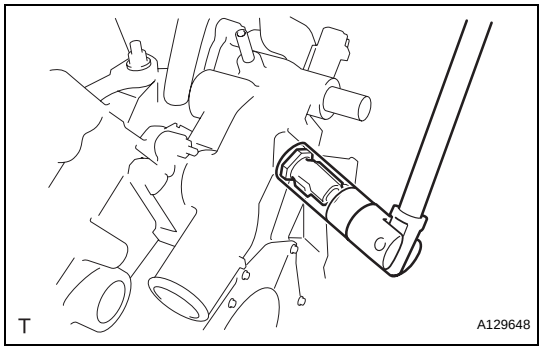
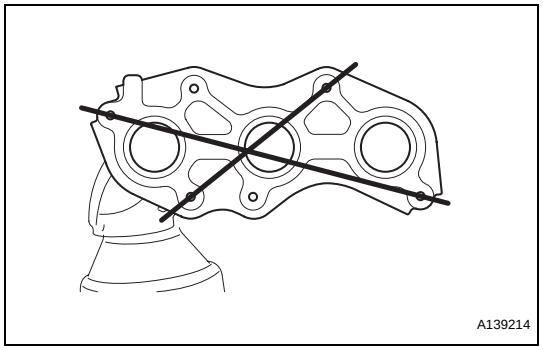


104. REMOVE ENGINE COOLANT TEMPERATURE SENSOR

(a) Using a 19 mm deep socket wrench, remove the EFI engine coolant temperature sensor and gasket.

INSPECTION



1. INSPECT EXHAUST MANIFOLD SUB-ASSEMBLY LH

(a) Using a precision straightedge and feeler gauge, measure the warpage on the contact surface of the cylinder head.

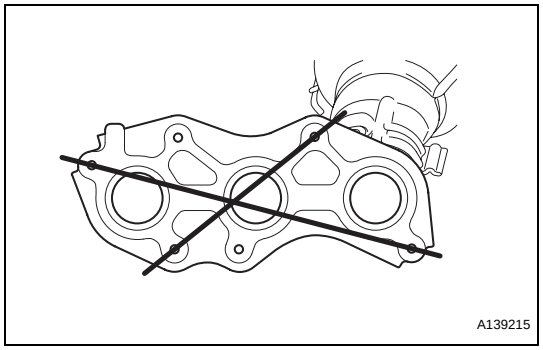
Maximum warpage:

0.7 mm (0.028 in.)

HINT:

The maximum allowable warpage of each installation surface is 0.3 mm (0.012 in.).

If the warpage is greater than the maximum, replace the manifold.



2. INSPECT EXHAUST MANIFOLD SUB-ASSEMBLY RH

(a) Using a precision straightedge and feeler gauge, measure the warpage on the contact surface of the cylinder head.

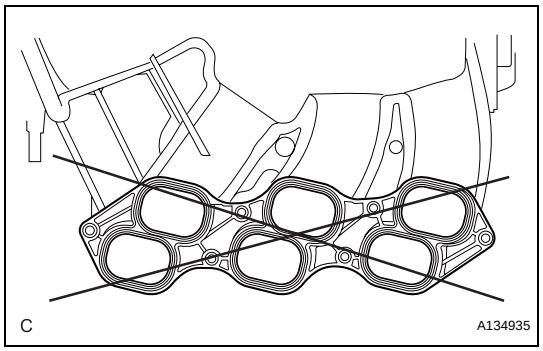
Maximum warpage:

0.7 mm (0.028 in.)

HINT:

The maximum allowable warpage of each installation surface is 0.3 mm (0.012 in.).

If the warpage is greater than the maximum, replace the manifold.



3. INSPECT INTAKE AIR SURGE TANK ASSEMBLY

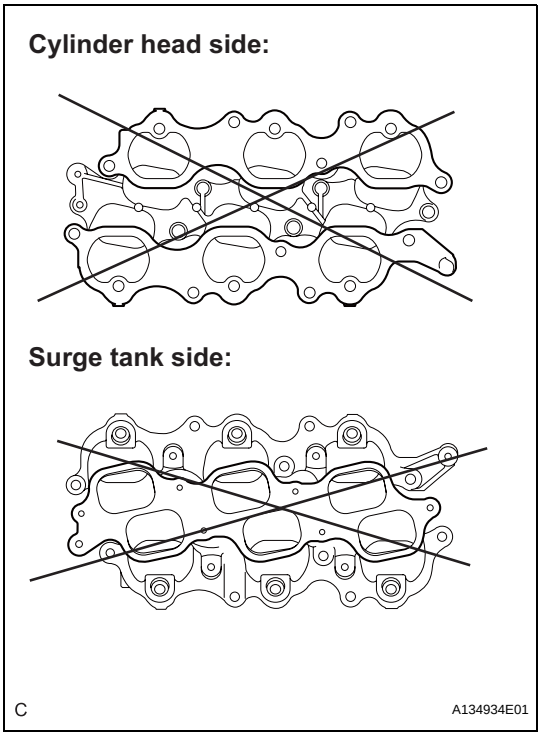
(a) Using a precision straightedge and feeler gauge, measure the warpage on the contact surface of the intake manifold.

Maximum warpage:

2.5 mm (0.098 in.)

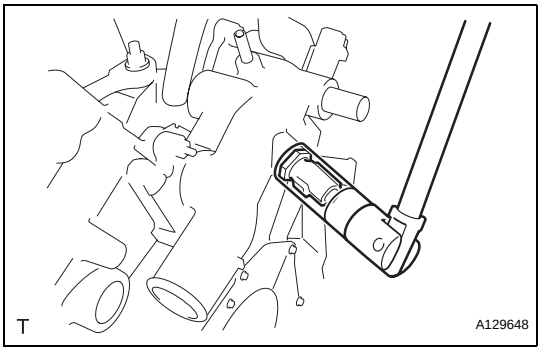
If the warpage is greater than the maximum, replace the surge tank.

EM



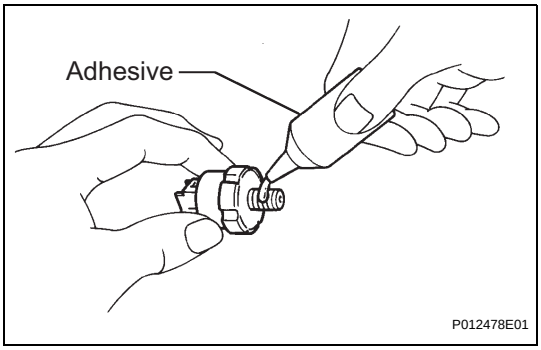
4. **INSPECT INTAKE MANIFOLD**
   (a) Cylinder head side:
      (1) Using a precision straightedge and feeler gauge, measure the surface contacting the cylinder head for warpage.
      Maximum warpage:
      0.1 mm (0.003 in.)
      If the warpage is greater than the maximum, replace the intake manifold.
   (b) Surge tank side:
      (1) Using a precision straightedge and feeler gauge, measure the surface contacting the surge tank for warpage.
      Maximum warpage:
      0.1 mm (0.003 in.)
      If the warpage is greater than the maximum, replace the intake manifold.

INSTALLATION

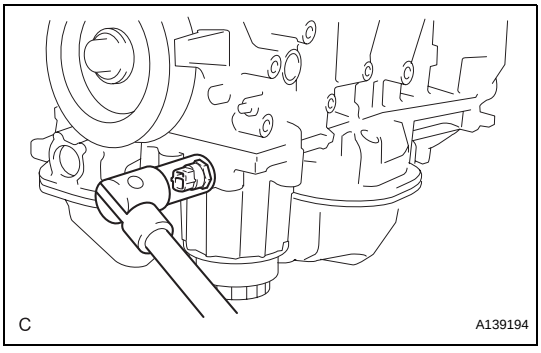


1. **INSTALL ENGINE COOLANT TEMPERATURE SENSOR**
   (a) Using a 19 mm deep socket wrench, install the engine coolant temperature sensor and a new gasket.
   Torque: 20 N*m (200 kgf*cm, 14 ft.*lbf)

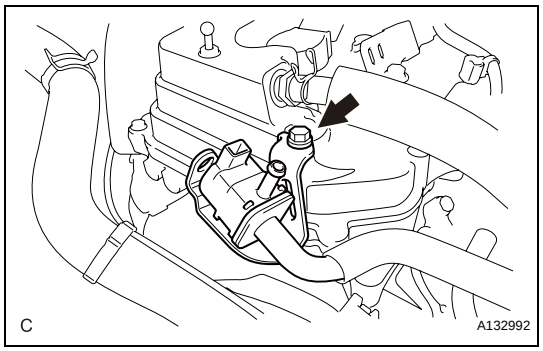
2. **INSTALL KNOCK CONTROL SENSOR (See page ES-522)**



3. **INSTALL ENGINE OIL PRESSURE SWITCH ASSEMBLY**
   (a) Clean the threads of the oil pressure switch. Apply adhesive to 2 or 3 threads of the oil pressure switch.
   Adhesive:
   Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

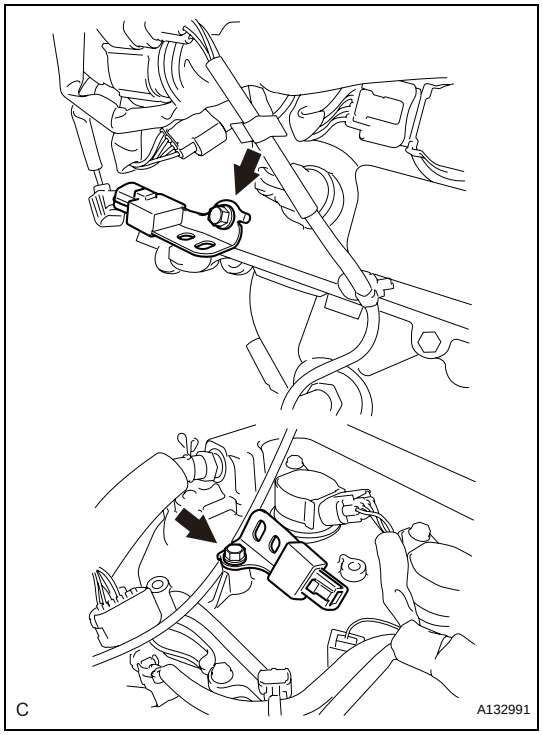


   (b) Using a 24 mm deep socket wrench, install the oil pressure switch.
   Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)
   NOTICE:
   Do not start the engine within 1 hour after installation to prevent oil leaks.



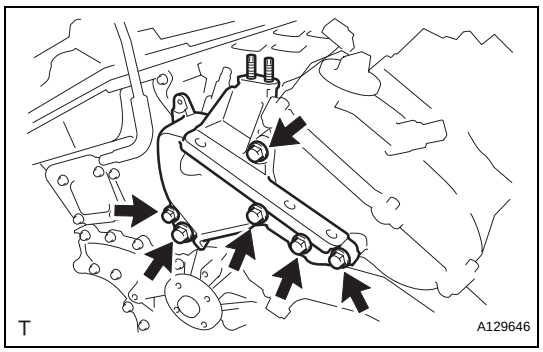
4. INSTALL NO. 1 VACUUM SWITCHING VALVE ASSEMBLY

(a) Install the bolt and No. 1 vacuum switching valve.
Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)



5. INSTALL RADIO SETTING CONDENSER

(a) Install the 2 bolts and 2 radio setting condensers.
Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

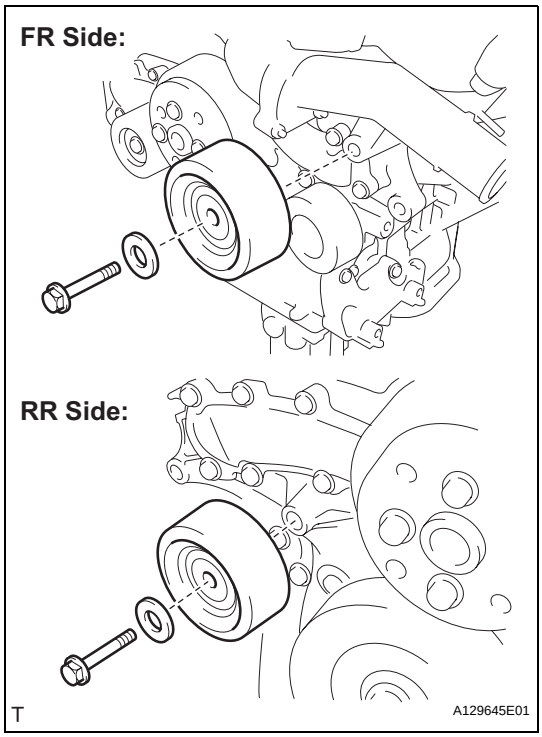


6. INSTALL NO. 1 ENGINE FRONT MOUNTING BRACKET LH

(a) Install the No. 1 engine front mounting bracket LH with the 6 bolts.
Torque: 54 N*m (551 kgf*cm, 40 ft.*lbf)

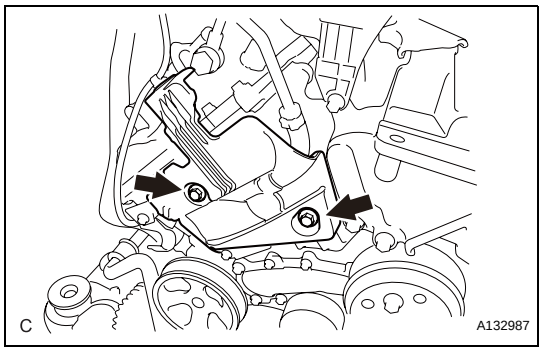
7. INSTALL WATER PUMP PULLEY (See page CO-13)

EM



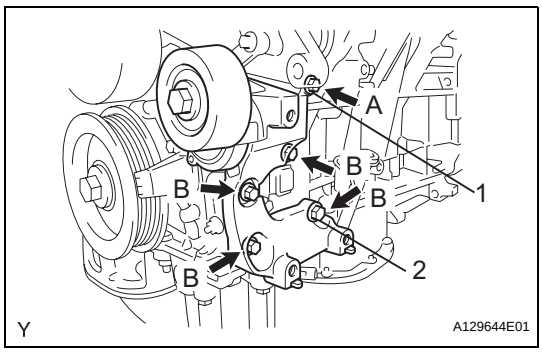
8. INSTALL NO. 2 IDLER PULLEY SUB-ASSEMBLY

(a) Install the No. 2 idler pulley sub-assembly and cover plate with the bolt.
Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)



9. INSTALL NO. 2 TIMING GEAR COVER

(a) Install the No. 2 timing gear cover with the 2 bolts.
Torque: 6.0 N*m (61 kgf*cm, 53 in.*lbf)



10. INSTALL V-RIBBED BELT TENSIONER ASSEMBLY

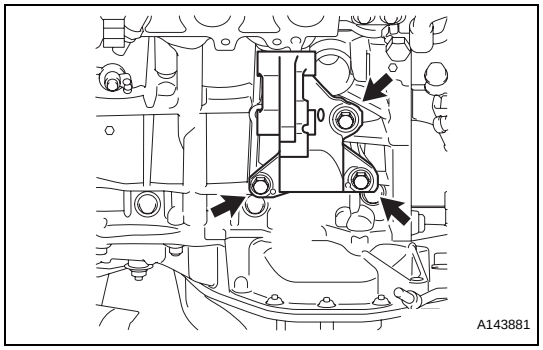
(a) Temporarily install the V-ribbed belt tensioner with the 5 bolts.
HINT:
Each bolt length is as follows:
A: 70 mm (2.76 in.)
B: 33 mm (1.30 in.)

(b) Install the V-ribbed belt tensioner by tightening the bolt 1 and bolt 2 in the order shown in the illustration.
Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

(c) Tighten the other bolts.
Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

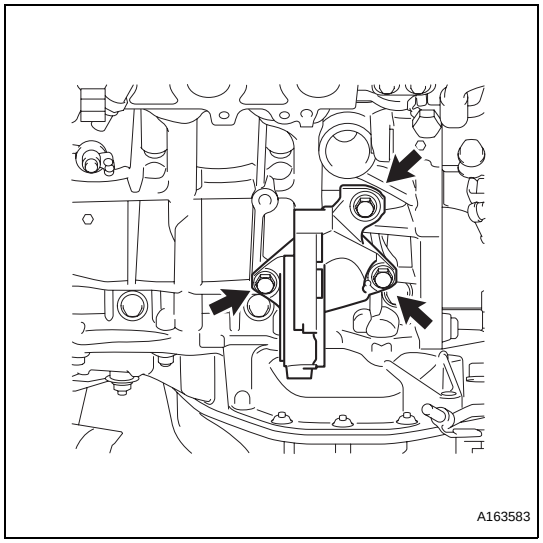
11. INSTALL GENERATOR ASSEMBLY (See page CH-26)

12. INSTALL COOLER COMPRESSOR ASSEMBLY (See page AC-231)



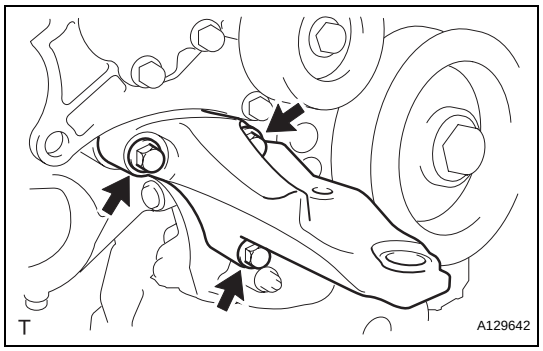
13. INSTALL ENGINE MOUNTING BRACKET RR (for 4WD)

(a) Install the engine mounting bracket RR with the 3 bolts.
Torque: 64 N*m (650 kgf*cm, 47 ft.*lbf)



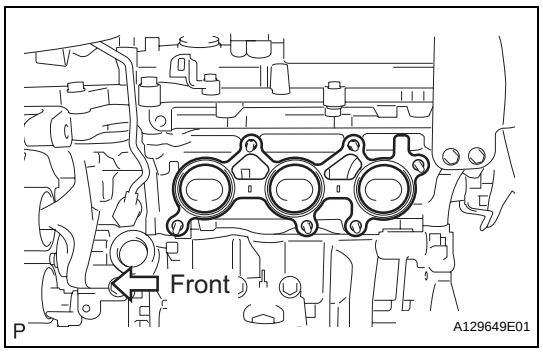
14. INSTALL DRIVE SHAFT BEARING BRACKET (for 2WD)

(a) Install the drive shaft bearing bracket with the 3 bolts.
Torque: 64 N*m (650 kgf*cm, 47 ft.*lbf)



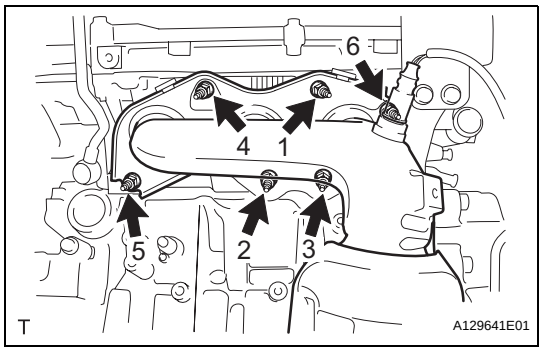
15. INSTALL ENGINE MOUNTING BRACKET RH

(a) Install the engine mounting bracket RH with the 3 bolts.
Torque: 54 N*m (551 kgf*cm, 40 ft.*lbf)

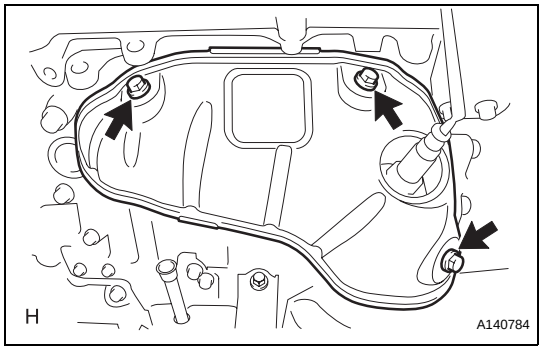


16. INSTALL EXHAUST MANIFOLD SUB-ASSEMBLY LH

(a) Install a new gasket as shown in the illustration.

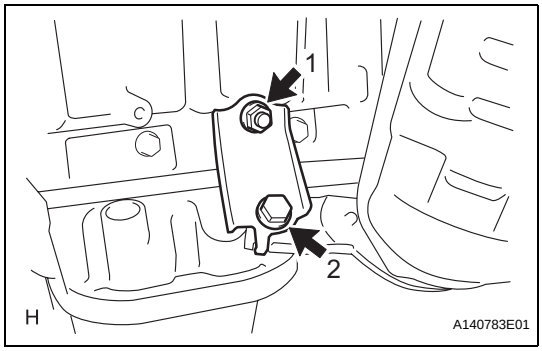


(b) Install the exhaust manifold sub-assembly LH with the 6 nuts in the order shown in the illustration.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)



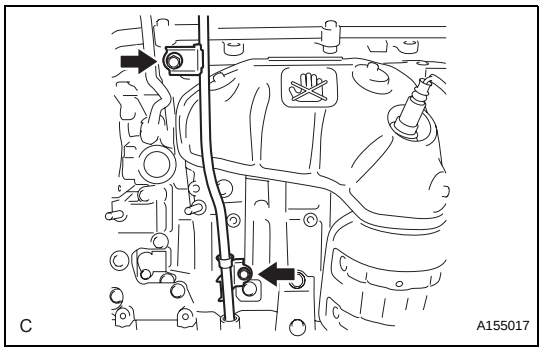
17. INSTALL NO. 2 EXHAUST MANIFOLD HEAT INSULATOR

(a) Install the No. 2 insulator with the 3 bolts.
Torque: 8.5 N*m (87 kgf*cm, 75 in.*lbf)



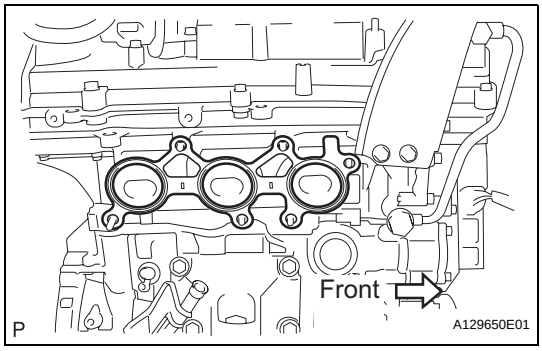
18. INSTALL NO. 2 MANIFOLD STAY

(a) Install the No. 2 manifold stay with the bolt and nut in the order shown in the illustration.
Torque: 34 N*m (347 kgf*cm, 25 ft.*lbf)



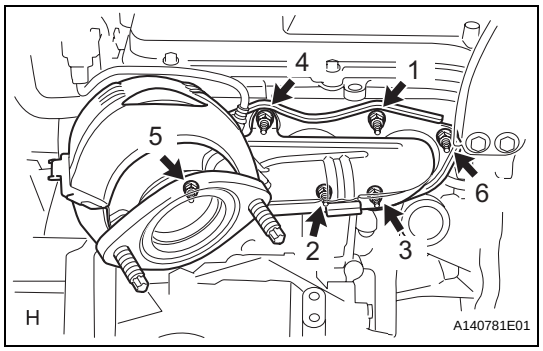
19. INSTALL OIL LEVEL GAUGE GUIDE SUB-ASSEMBLY

(a) Install 2 new O-rings to the oil level gauge guide.
(b) Apply a light coat of engine oil to the O-rings.
(c) Push in the oil level gauge guide end into the guide hole.
(d) Install the No. 1 oil level gauge guide with the bolt.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)
(e) Install the No. 2 oil level gauge guide with the bolt.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)
(f) Install the oil level gauge.



20. INSTALL EXHAUST MANIFOLD SUB-ASSEMBLY RH

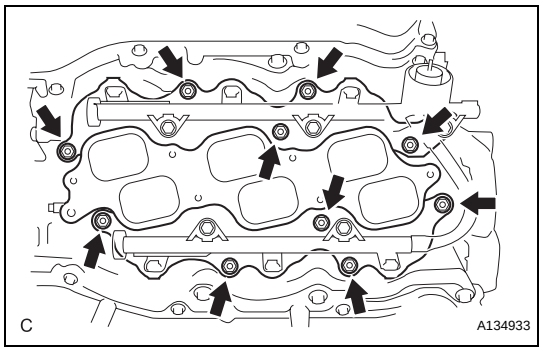
(a) Install a new gasket as shown in the illustration.



(b) Install the exhaust manifold sub-assembly RH with the 6 nuts in the order shown in the illustration.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)

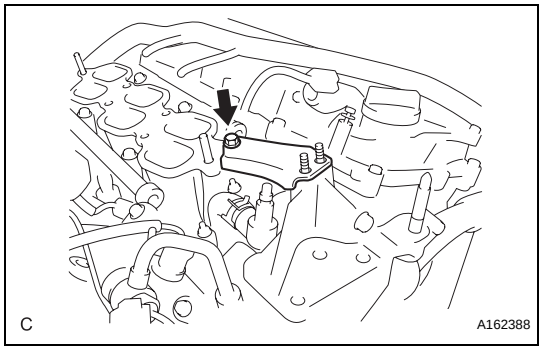
21. INSTALL INTAKE MANIFOLD
NOTICE:
DO NOT apply oil to the bolts listed below:

Tightening Parts
Intake Manifold and Cylinder Head Sub-assembly RH
Intake Manifold and Cylinder Head Sub-assembly LH



(a) Set a new gasket on each cylinder head.
NOTICE:
- **Align the port holes of the gasket and cylinder head.**
- **Make sure that the gasket is installed in the correct direction.**

(b) Set the intake manifold on the cylinder heads.
(c) Install and tighten the 6 bolts and 4 nuts uniformly in several steps.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)



22. INSTALL NO. 2 ENGINE MOUNTING STAY RH
(a) Install the No. 2 mounting stay RH with the bolt.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)

23. INSTALL IGNITION COIL ASSEMBLY
(a) Install the 6 ignition coil assemblies with the 6 bolts.
Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

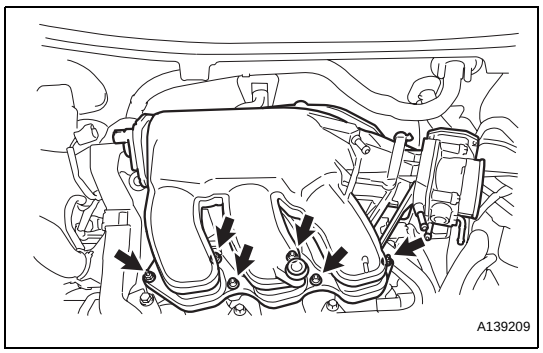
24. INSTALL INTAKE AIR SURGE TANK ASSEMBLY
NOTICE:
DO NOT apply oil to the bolts listed below:

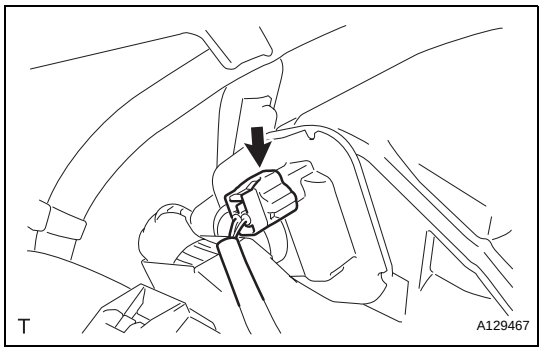
Tightening Parts
Surge Tank and Intake Manifold
No. 1 Surge Tank Stay and Cylinder Head Cover
No. 1 Surge Tank Stay and Surge Tank
Throttle Body Bracket and Cylinder Head Cover
Throttle Body Bracket and Surge Tank

(a) Install a new gasket to the intake air surge tank.

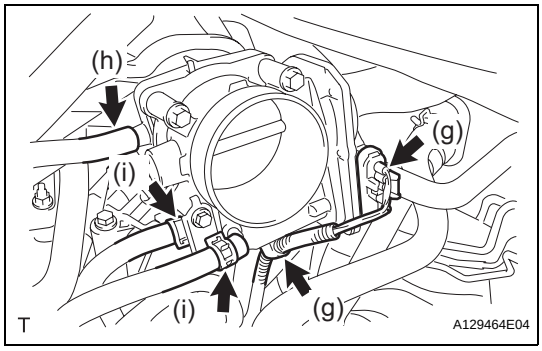
(b) Using a 5 mm hexagon socket wrench, install the 4 bolts and 2 nuts.
Torque: Bolt
18 N*m (184 kgf*cm, 13 ft.*lbf)
Nut
16 N*m (163 kgf*cm, 12 ft.*lbf)

(c) Install the throttle body bracket, No. 1 surge tank stay and 4 bolts.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)

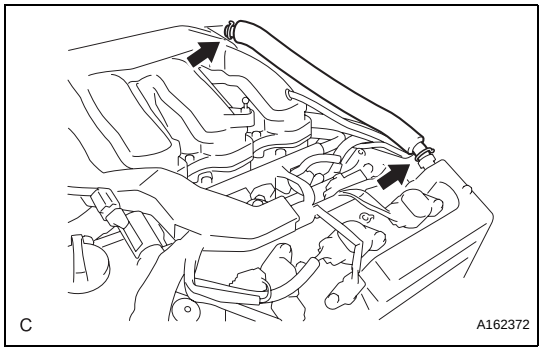




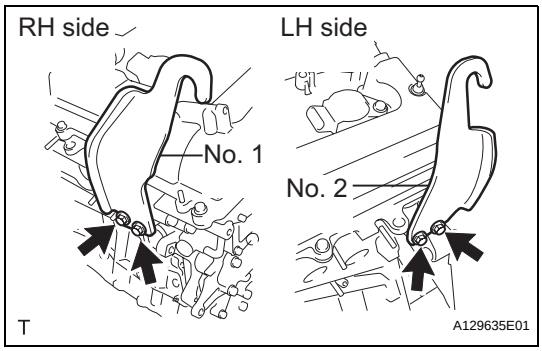
(d) Connect the connector.
(e) Connect the No. 1 ventilation hose.



(f) Install the clamp and connect the throttle with motor body assembly connector.
(g) Connect the vapor feed hose.
(h) Connect the 2 water by-pass hoses to the throttle with motor body assembly.



25. INSTALL VENTILATION HOSE
(a) Using pliers, grip the claws of the 2 clips and slide the 2 clips to the intake air surge tank assembly and ventilation valve.



26. INSTALL ENGINE HANGERS
(a) Install the 4 bolts, and 2 engine hangers.

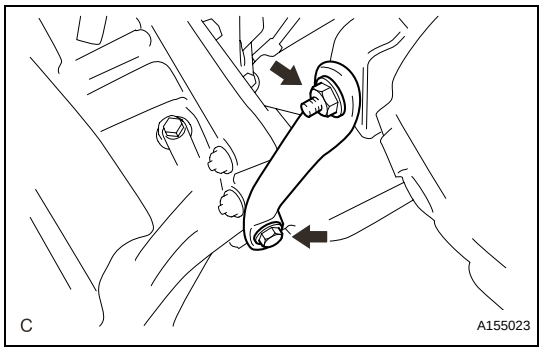
27. REMOVE ENGINE STAND

28. INSTALL DRIVE PLATE AND RING GEAR SUB-ASSEMBLY (See page EM-13)

29. INSTALL AUTOMATIC TRANSAXLE ASSEMBLY (for 2WD)
HINT:
See page AX-166.

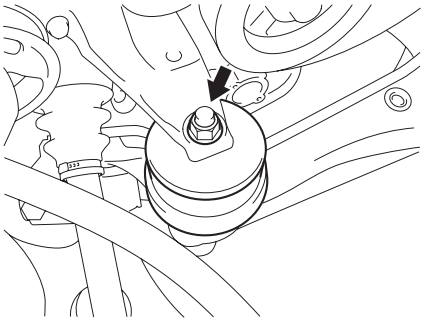
30. INSTALL AUTOMATIC TRANSAXLE ASSEMBLY (for 4WD)
HINT:
(See page AX-167).

31. INSTALL TRANSFER STIFFENER PLATE RH (See page AX-168)

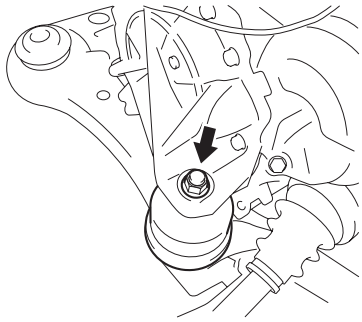


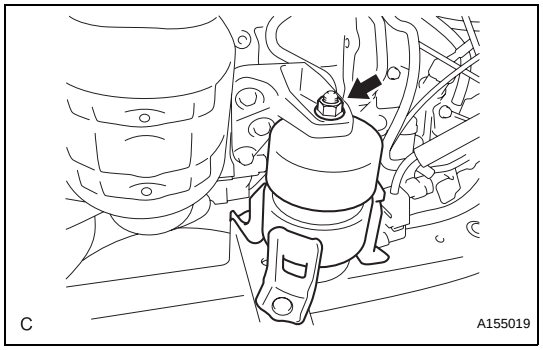
32. **INSTALL MANIFOLD STAY**
    (a) Install the bolt, nut, and manifold stay.
    Torque: 34 N*m (347 kgf*cm, 25 ft.*lbf)
33. **INSTALL ENGINE FRONT MOUNTING BRACKET (See page AX-167)**
34. **INSTALL STARTER ASSEMBLY (See page ST-13)**
35. **INSTALL ENGINE WIRE**
36. **INSTALL FRONT DRIVE SHAFT ASSEMBLY LH (See page DS-17)**
37. **INSTALL FRONT DRIVE SHAFT ASSEMBLY RH (for 2WD) (See page DS-17)**
38. **INSTALL FRONT DRIVE SHAFT ASSEMBLY RH (for 4WD) (See page DS-17)**
39. **INSTALL FRONT FRAME ASSEMBLY**
    (a) Install the engine mounting insulators RH and LH with the 2 nuts.
    Torque: 95 N*m (969 kgf*cm, 70 ft.*lbf)

RH Side:

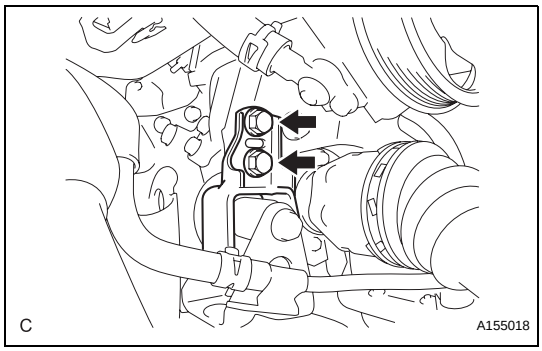


LH Side:

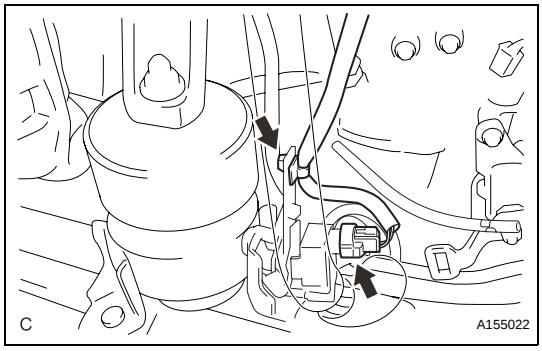




(b) Install the engine mounting insulator FR with the bolt.
Torque: 87 N*m (887 kgf*cm, 64 ft.*lbf)



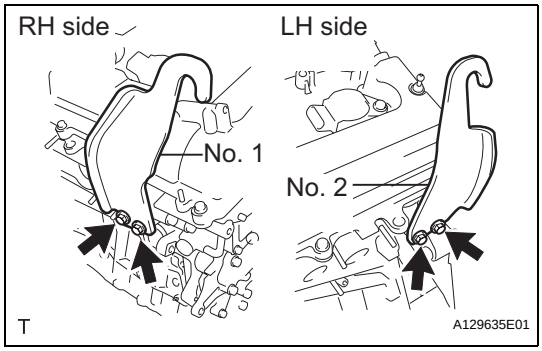
(c) Install the engine mounting insulator RR with the 2 bolts.
Torque: 78 N*m (795 kgf*cm, 58 ft.*lbf)



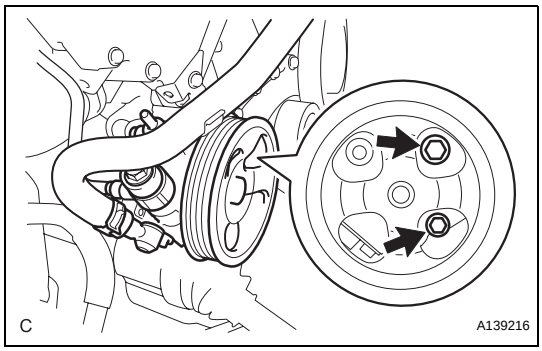
(d) Connect the connector and clamp.

40. INSTALL POWER STEERING LINK (See page PS-39)

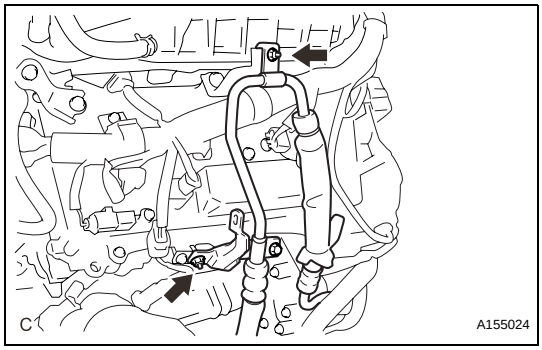
41. INSTALL FRONT STABILIZER BAR
HINT:
(See page SP-36).



42. REMOVE ENGINE HANGERS
(a) Remove the 4 bolts and 2 engine hangers.

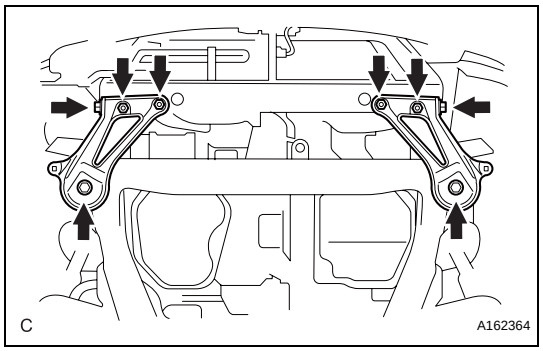


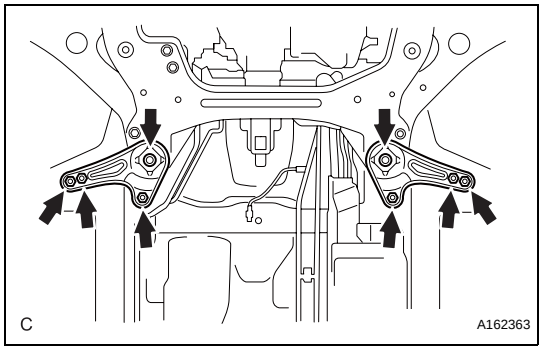
43. INSTALL VANE PUMP ASSEMBLY
(a) Install the vane pump with the 2 bolts and nut.
Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)



(b) Install the 2 pressure feed tube clamp nuts.
Torque: 7.8 N*m (80 kgf*cm, 69 in.*lbf)
(c) Connect the power steering oil pressure switch connector.

44. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE
(a) Set the engine assembly with transaxle on the engine lifter.
(b) Install the engine assembly to the vehicle.





(c) Install the frame side rail plates RH and LH with the 6 bolts and 2 nuts.
Torque: A
85 N*m (867 kgf*cm, 63 ft.*lbf)
B
32 N*m (329 kgf*cm, 24 ft.*lbf)

(d) Install the front suspension member brace rear RH and LH with the 6 bolts and 2 nuts.
Torque: A
85 N*m (867 kgf*cm, 63 ft.*lbf)
B
32 N*m (329 kgf*cm, 24 ft.*lbf)

45. RECONNECT SUCTION HOSE SUB-ASSEMBLY (See page AC-231)

46. RECONNECT DISCHARGE HOSE SUB-ASSEMBLY (See page AC-232)

47. INSTALL STEERING INTERMEDIATE SHAFT SUB-ASSEMBLY (See page SR-10)

48. INSTALL FRONT AXLE ASSEMBLY LH (See page DS-18)

49. INSTALL FRONT AXLE ASSEMBLY RH
HINT:
Use the same procedures described for the LH side.

50. INSTALL FRONT SUSPENSION LOWER NO. 1 ARM LH (See page DS-18)

51. INSTALL FRONT SUSPENSION LOWER NO. 1 ARM RH
HINT:
Use the same procedures described for the LH side.

52. INSTALL TIE ROD ASSEMBLY LH (See page DS-18)

53. INSTALL TIE ROD ASSEMBLY RH
HINT:
Use the same procedures described for the LH side.

54. INSTALL FRONT SPEED SENSOR LH (See page DS-18)

55. INSTALL FRONT SPEED SENSOR RH
HINT:
Use the same procedures described for the LH side.

56. INSTALL FRONT AXLE HUB NUT LH (See page DS-19)

57. INSTALL FRONT AXLE HUB NUT RH
HINT:
Use the same procedures described for the LH side.

58. **INSTALL FRONT STABILIZER LINK ASSEMBLY LH (See page DS-19)**

59. **INSTALL FRONT STABILIZER LINK ASSEMBLY RH**
HINT:
Use the same procedures described for the LH side.

60. **INSTALL PROPELLER WITH CENTER BEARING SHAFT ASSEMBLY (See page PR-9)**

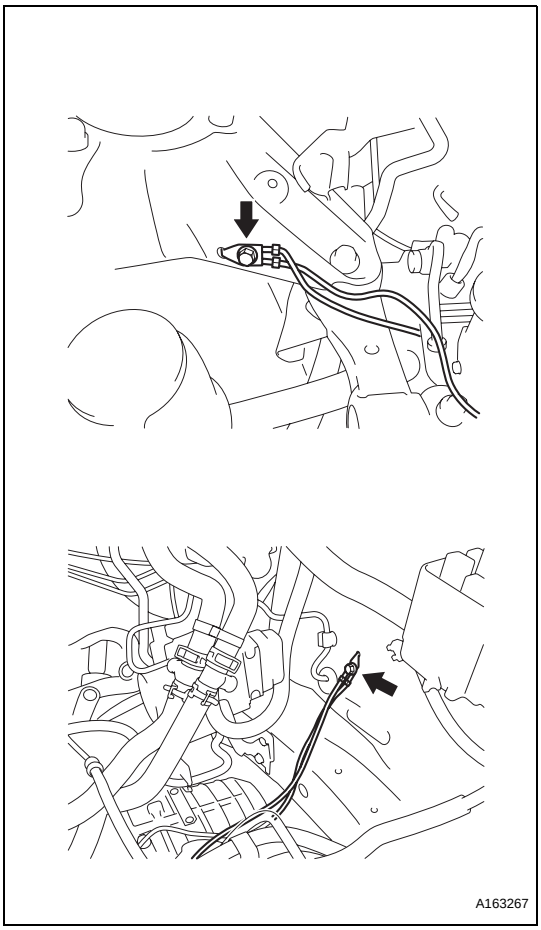
61. **FULLY TIGHTEN PROPELLER WITH CENTER BEARING SHAFT ASSEMBLY (See page PR-10)**

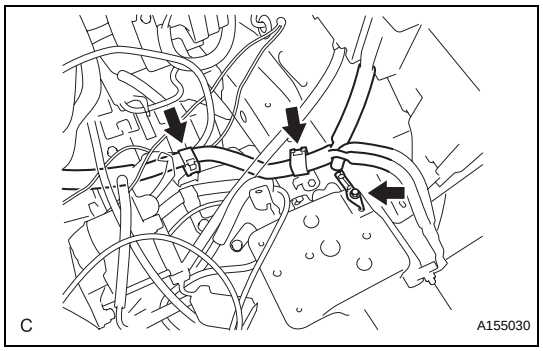
62. **INSTALL FRONT EXHAUST PIPE ASSEMBLY (for 2WD)**
(a) Install the front exhaust pipe assembly (See page EX-4).

63. **INSTALL FRONT EXHAUST PIPE ASSEMBLY (for 4WD)**
(a) Install front exhaust pipe assembly (See page EX-10).

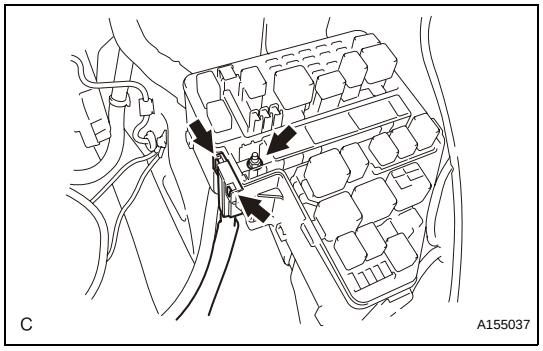
64. **INSTALL CENTER EXHAUST PIPE ASSEMBLY**
(a) Install center exhaust pipe assembly (See page EX-10).

65. **CONNECT ENGINE WIRE**
(a) Install the 2 bolts and 2 ground cables.
Torque: 8.4 N*m (85 kgf*cm, 74 in.*lbf)



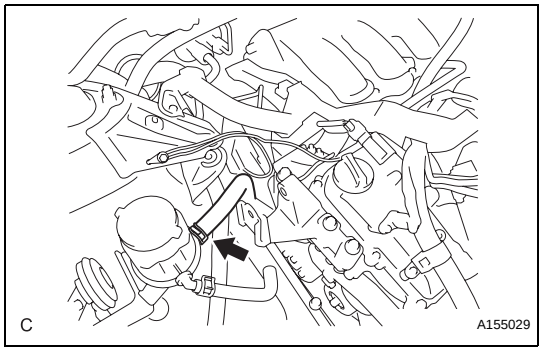


(b) Install the bolt and 2 clamps to the body.
Torque: 8.4 N*m (85 kgf*cm, 74 in.*lbf)

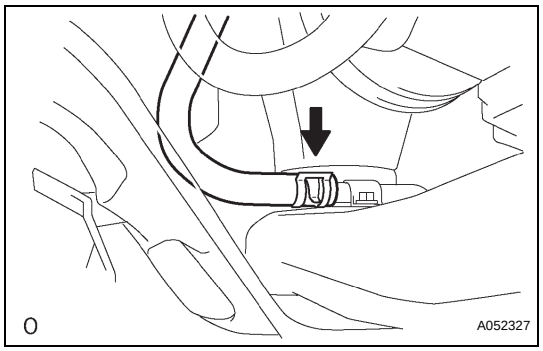


(c) Connect the wire to the engine room junction block. Then, install it with the nut.
Torque: 8.4 N*m (85 kgf*cm, 74 in.*lbf)
(d) Install the engine wire to the body with the 2 nuts.
Torque: 8.4 N*m (85 kgf*cm, 74 in.*lbf)

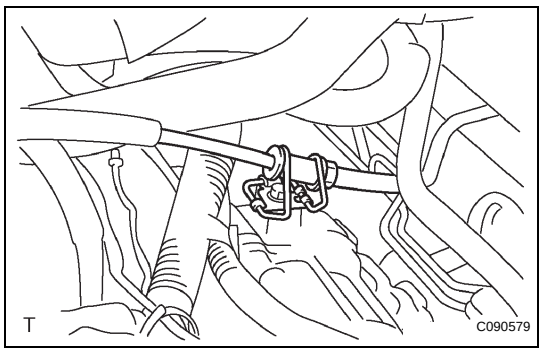
EM



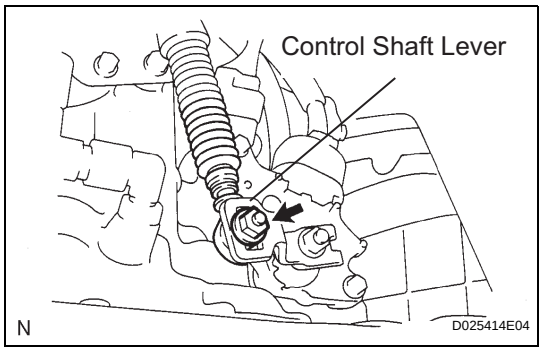
66. CONNECT NO. 1 OIL RESERVOIR TO PUMP HOSE
(a) Using pliers, grip the claws of the clip and slide the clip to connect the No. 1 oil reservoir to pump hose to the oil reservoir tank.



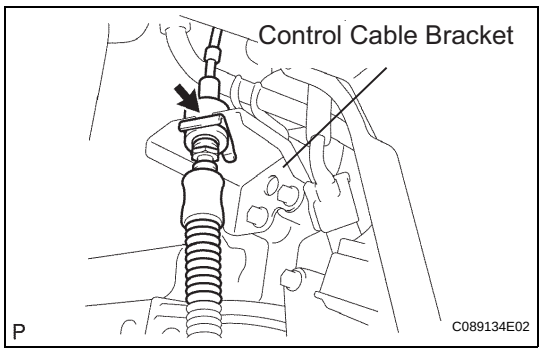
67. CONNECT RETURN TUBE SUB-ASSEMBLY
(a) Using pliers, grip the claws of the 2 clips and slide the 2 clips to connect 2 return tube sub-assemblies.
NOTICE:
Take care not to damage the hose protector.



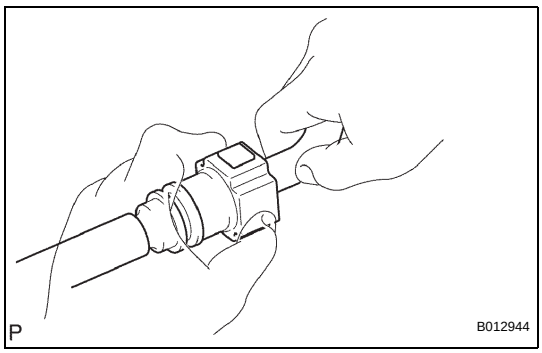
68. CONNECT TRANSMISSION CONTROL CABLE ASSEMBLY
(a) Connect the control cable to the control cable clamp.



(b) Install the transmission control cable assembly to the control shaft lever with the nut.
Torque: 12 N*m (122 kgf*cm, 9 ft.*lbf)

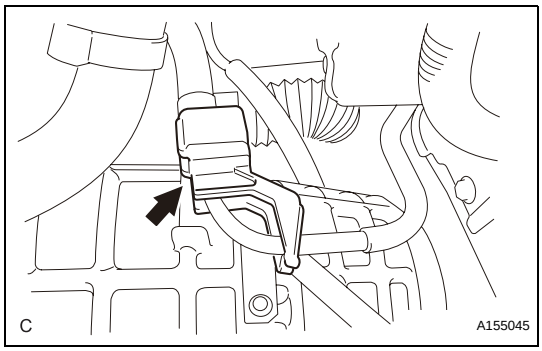


(c) Connect the transmission control cable assembly to the bracket with a new clip.

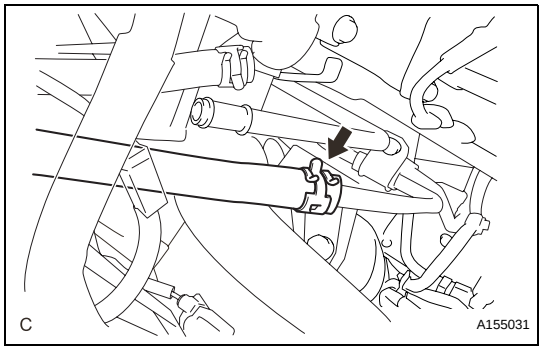


69. CONNECT FUEL TUBE SUB-ASSEMBLY

(a) Push in the fuel tube connector to the fuel pipe until the fuel tube makes a "click" sound.
NOTICE:
- **Check for damage or contamination on the connected part of the pipe.**
- **Check if the pipe and the connector are securely connected by trying to pull them apart.**

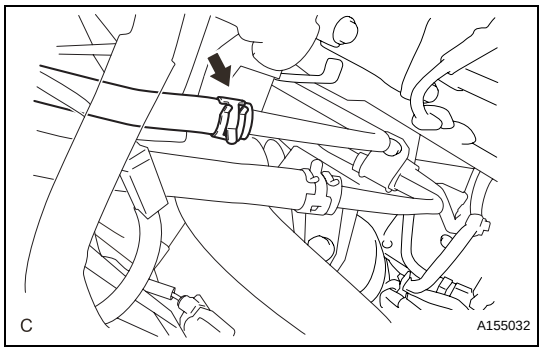


(b) Install the No. 1 fuel pipe clamp.



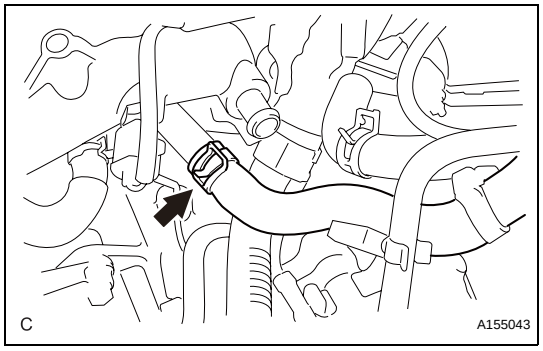
70. CONNECT NO. 1 OIL COOLER OUTLET HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to connect the No. 1 oil cooler outlet hose to the No. 1 oil cooler outlet tube.



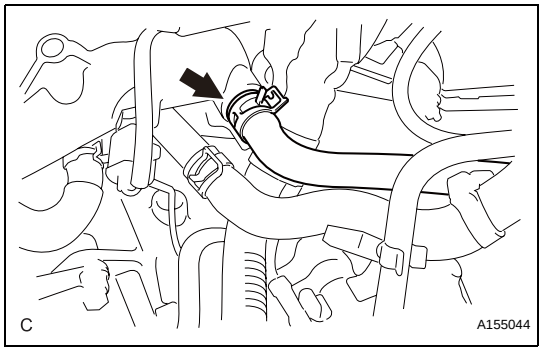
71. CONNECT NO. 1 OIL COOLER INLET HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to connect the No. 1 oil cooler inlet hose to the No. 1 oil cooler inlet tube.



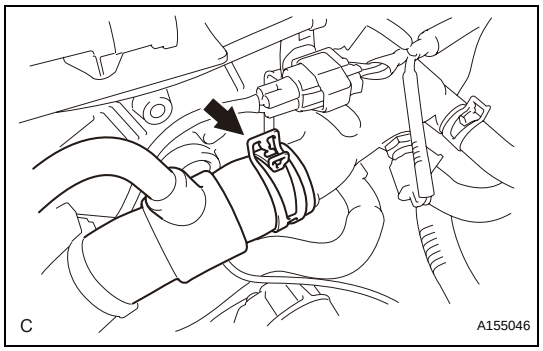
72. CONNECT HEATER WATER INLET HOSE B

(a) Using pliers, grip the claws of the clip and slide the clip to connect the heater water inlet hose to water outlet.



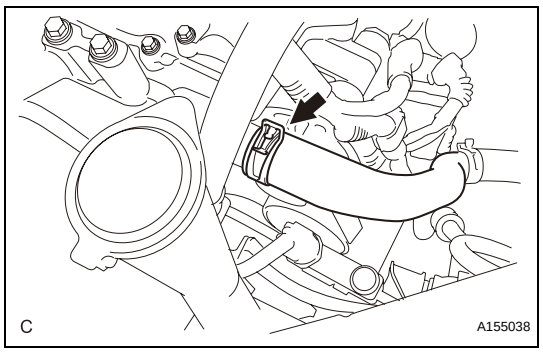
73. CONNECT HEATER WATER OUTLET HOSE B

(a) Using pliers, grip the claws of the clip and slide the clip to connect the heater water outlet hose to water outlet.



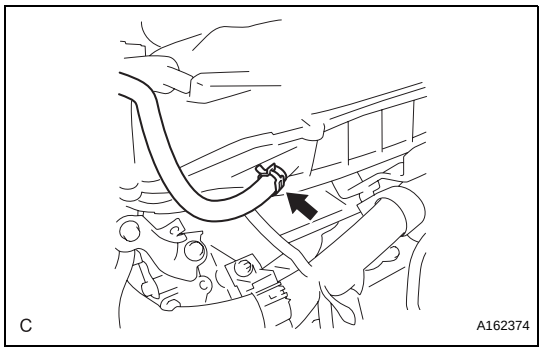
74. INSTALL RADIATOR INLET HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to connect the radiator inlet hose to the water outlet.



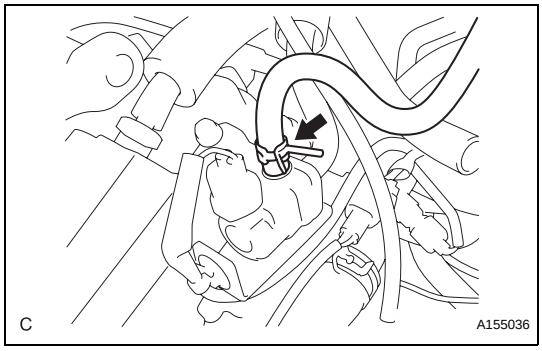
75. INSTALL RADIATOR OUTLET HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to connect the radiator outlet hose to the water inlet.



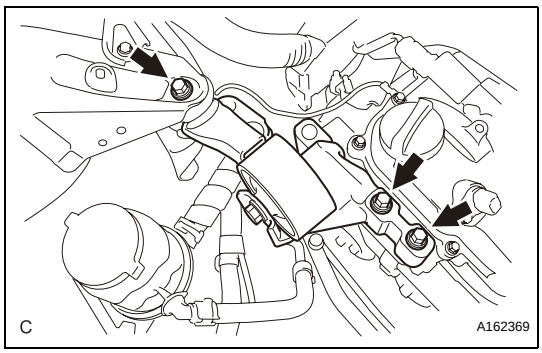
76. CONNECT UNION TO CHECK VALVE HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to connect the union to check valve hose to the intake air surge tank assembly.



77. CONNECT NO. 1 FUEL VAPOR FEED HOSE

(a) Install the clamp and connect the No. 1 fuel vapor feed hose.

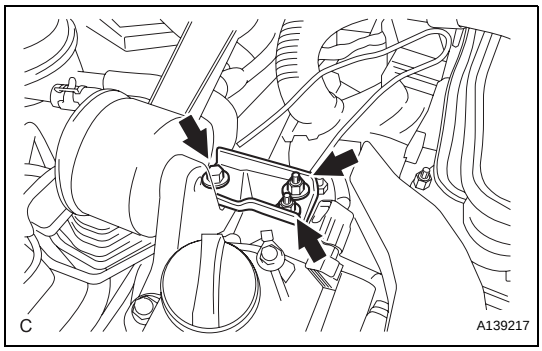


78. INSTALL ENGINE MOVING CONTROL ROD

(a) Temporarily install the engine moving control rod with the 3 bolts.

(b) First install the bolts A, and then the remaining bolt B.

Torque: 38 N*m (388 kgf*cm, 28 ft.*lbf)



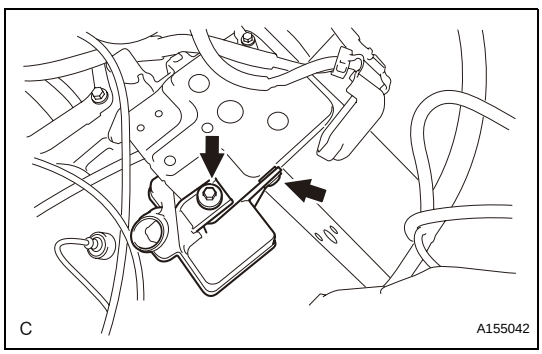
79. INSTALL NO. 2 ENGINE MOUNTING STAY RH

(a) Temporarily install the No. 2 engine mounting stay RH with the bolt.

Torque: 38 N*m (388 kgf*cm, 28 ft.*lbf)

(b) Tighten the 2 nuts.

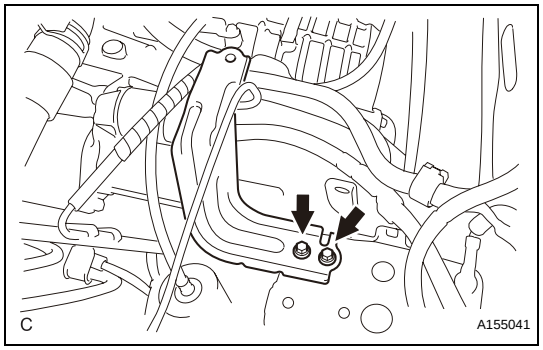
Torque: 23 N*m (235 kgf*cm, 17 ft.*lbf)



80. INSTALL INTAKE AIR RESONATOR SUB-ASSEMBLY

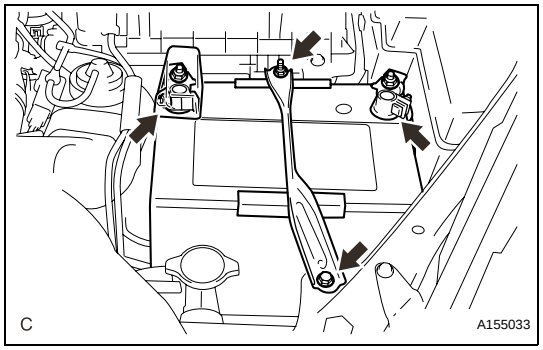
(a) Install the intake air resonator with the bolt and clip.

Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)



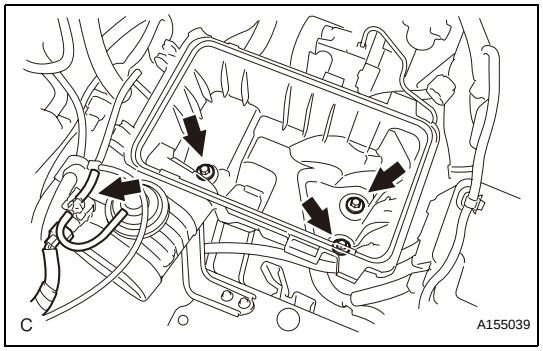
81. INSTALL AIR CLEANER BRACKET

(a) Remove the 2 bolts and air cleaner bracket.
Torque: 12 N*m (122 kgf*cm, 9 ft.*lbf)



82. INSTALL BATTERY

(a) Install the battery and battery tray.
(b) Install the battery clamp with the bolt and nut.
Torque: Bolt
9.0 N*m (92 kgf*cm, 80 in.*lbf)
Nut
3.5 N*m (36 kgf*cm, 31 in.*lbf)
(c) Connect the positive battery terminal.
(d) Connect the negative battery terminal.



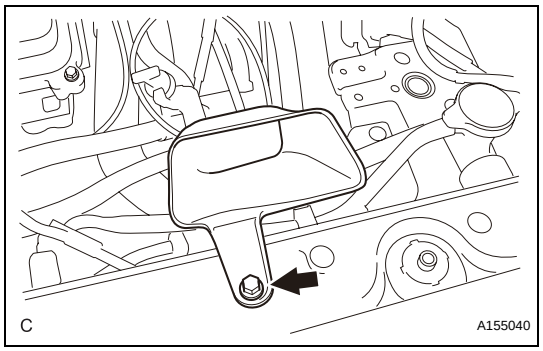
83. INSTALL AIR CLEANER CASE SUB-ASSEMBLY

(a) Install the air cleaner case with the 3 bolts.
Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)
(b) Connect the vacuum hose.
(c) Connect the vacuum switching valve connector.

84. INSTALL AIR CLEANER FILTER ELEMENT SUB-ASSEMBLY

(a) Install the air cleaner filter element sub-assembly.

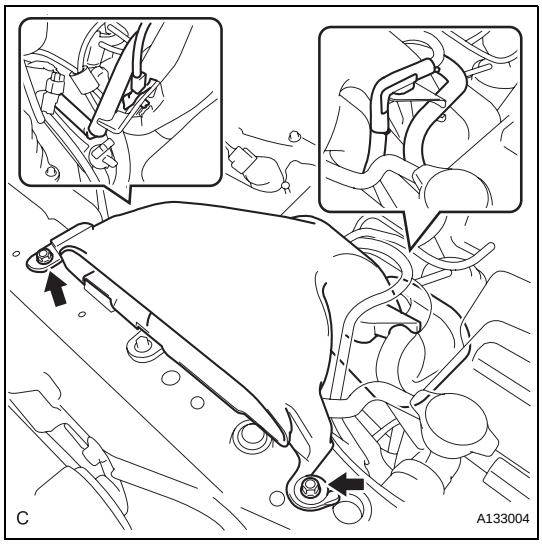
85. INSTALL AIR CLEANER CAP SUB-ASSEMBLY (See page IT-5)



86. INSTALL NO. 1 AIR CLEANER INLET

(a) Install the No. 1 air cleaner inlet with the bolt.
Torque: 7.0 N*m (71 kgf*cm, 62 in.*lbf)

EM



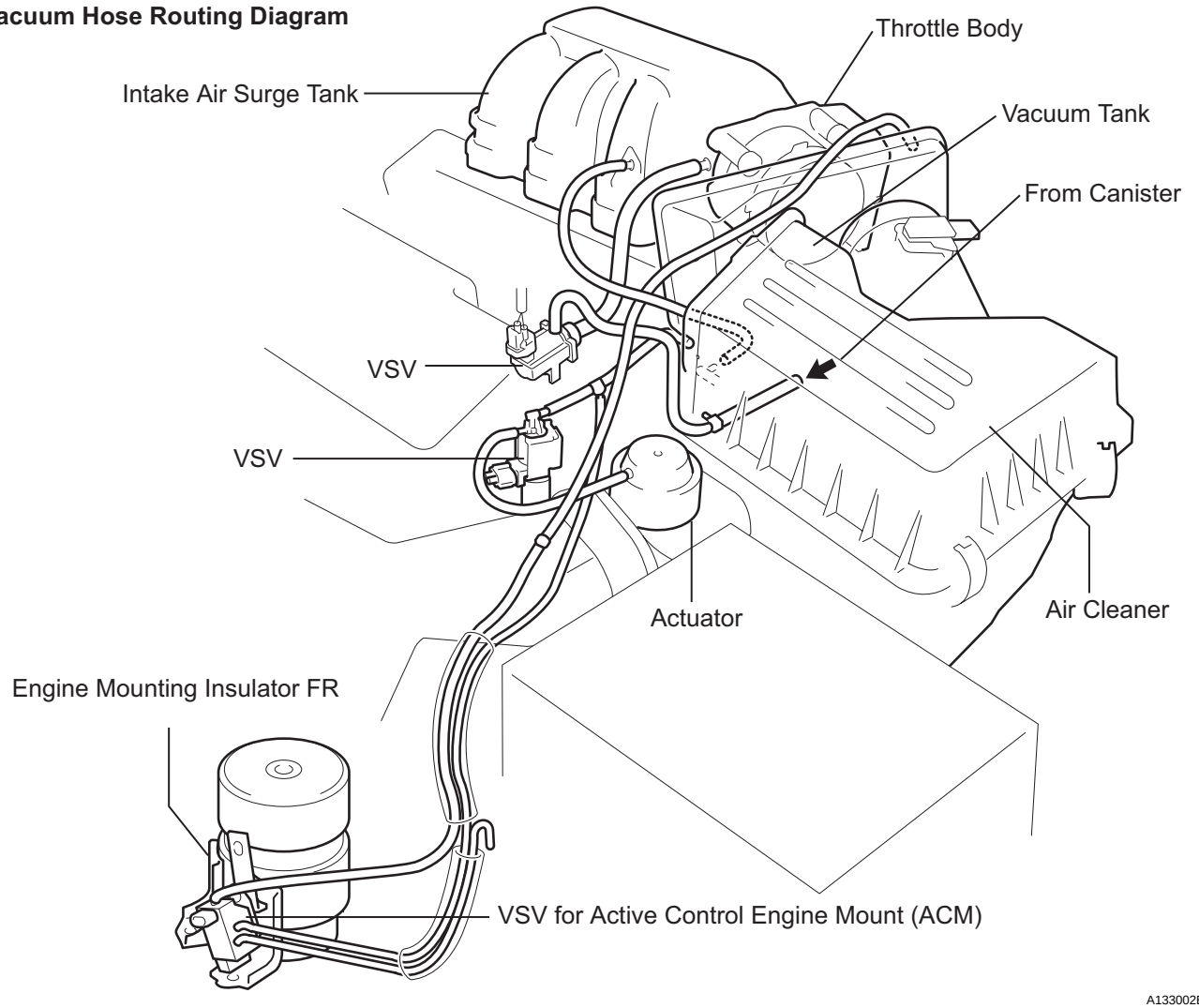
87. INSTALL NO. 2 AIR CLEANER INLET

(a) Install the No. 2 air cleaner inlet with the 2 clamps and 2 bolts.
Torque: 7.0 N*m (71 kgf*cm, 62 in.*lbf)

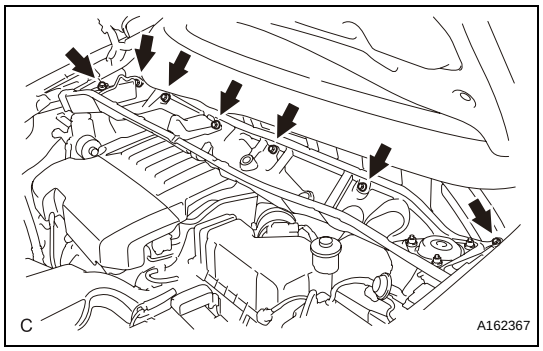
88. CONNECT VACUUM HOSES

EM

Vacuum Hose Routing Diagram

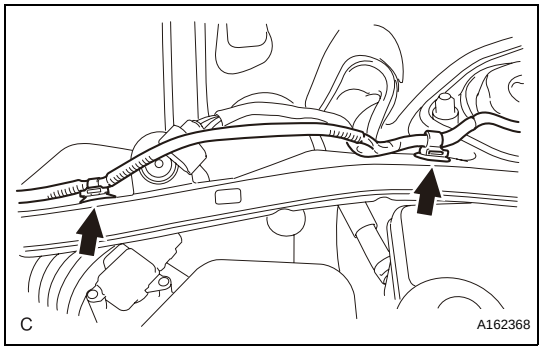


89. INSTALL V-RIBBED BELT (See page EM-7)

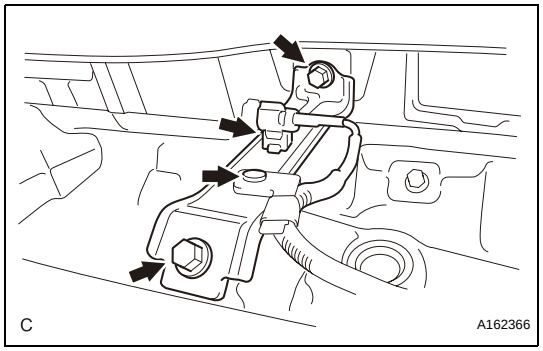


90. INSTALL FRONT OUTER COWL TOP PANEL SUB-ASSEMBLY

(a) Install the front outer cowl top panel sub-assembly with the 7 bolts.
Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf)



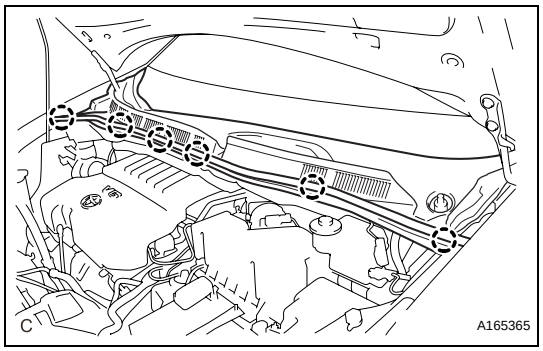
(b) Install the 2 clips.
(c) Install the fuel pump resistor with the nut.
Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf)



91. INSTALL NO. 1 COWL TOP TO COWL BRACE INNER

(a) Install the No. 1 cowl top to cowl brace inner.
Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf)

92. INSTALL FRONT WIPER MOTOR AND LINK (See page WW-6)

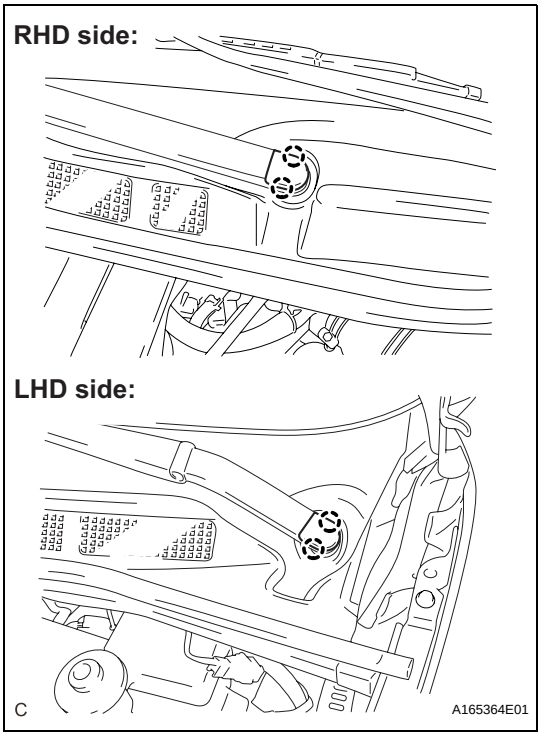


93. INSTALL COWL TOP VENTILATOR LOUVER SUB-ASSEMBLY

(a) Push the ventilator louver in the direction indicated by the arrow in the illustration. Attach the 6 claws to install the ventilator louver.

94. INSTALL WINDSHIELD WIPER ARM AND BLADE ASSEMBLY LH (See page WW-6)

95. INSTALL WINDSHIELD WIPER ARM AND BLADE ASSEMBLY RH (See page WW-7)



96. INSTALL FRONT WIPER ARM HEAD CAP
(a) Install the front wiper arm head caps.

97. INSTALL FRONT WHEELS
Torque: 103 N*m (1050 kgf*cm, 76 ft.*lbf)

98. ADD ENGINE OIL (See page LU-6)

99. ADD ENGINE COOLANT (See page CO-7)

100. ADD AUTOMATIC TRANSAXLE FLUID

101. CHECK AUTOMATIC TRANSAXLE FLUID (See page AX-123)

102. ADD POWER STEERING FLUID

103. BLEED POWER STEERING FLUID (See page PS-6)

104. INSPECT FOR FUEL LEAK (See page FU-7)

105. INSPECT FOR ENGINE OIL LEAK

106. INSPECT FOR ENGINE COOLANT LEAK (See page CO-1)

107. INSPECT FOR EXHAUST GAS LEAK

108. CHECK SHIFT LEVER POSITION (See page AX-127)

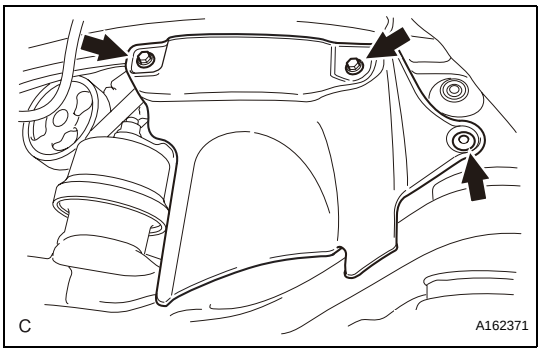
109. CHECK AND ADJUST FRONT WHEEL ALIGNMENT
HINT:
(See page SP-4).

110. CHECK IGNITION TIMING (See page EM-1)

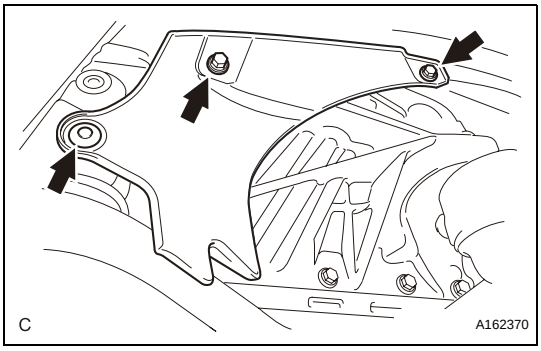
111. CHECK ENGINE IDLE SPEED (See page EM-2)

112. CHECK CO/HC (See page EM-4)

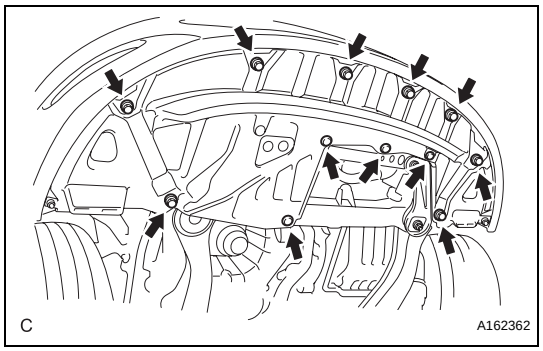
113. CHECK FUNCTION OF THROTTLE BODY ASSEMBLY (See page ES-493)



114. INSTALL FRONT FENDER APRON SEAL RH
(a) Install the front fender apron seal RH with the 2 bolts and clip.

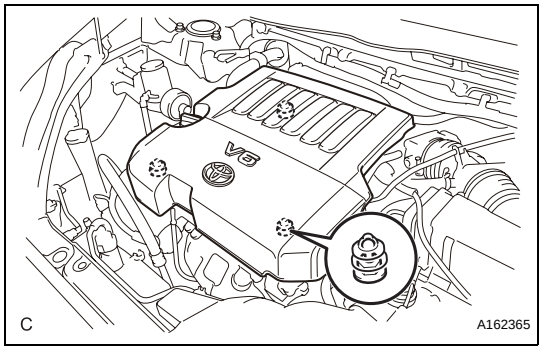


115. INSTALL FRONT FENDER APRON SEAL LH
(a) Install the front fender apron seal LH with the 2 bolts and clip.



116. INSTALL NO. 1 ENGINE UNDER COVER ASSEMBLY

(a) Install the No. 1 engine under cover sub-assembly with the 8 bolts and 4 clips.



117. INSTALL V-BANK COVER SUB-ASSEMBLY

(a) Fit the 3 retainers and install the V-bank cover.

118. CHECK ABS SPEED SENSOR SIGNAL

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119. RESET MEMORY

HINT:

See page AX-16.

EM