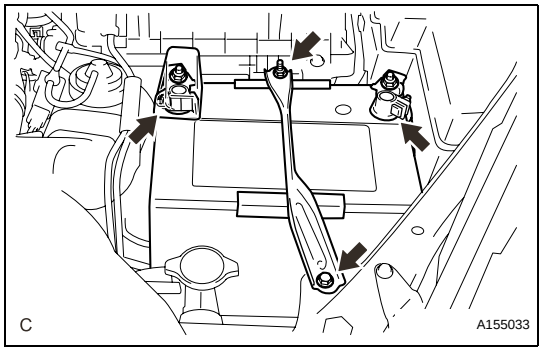
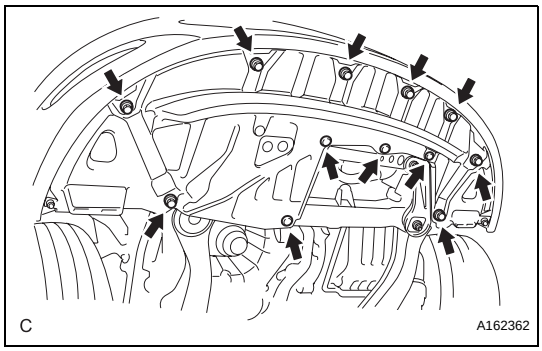
EM

REMOVAL

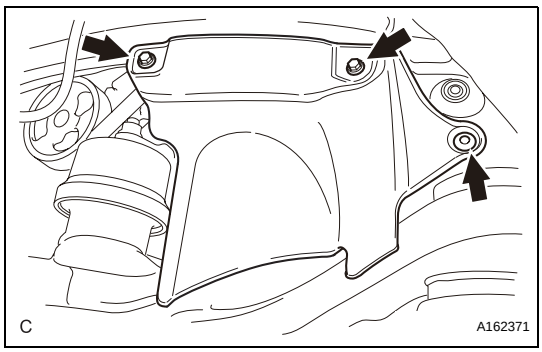
1. **DISCHARGE FUEL SYSTEM PRESSURE (See page FU-13)**
2. **DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM (See page AC-172)**
3. **REMOVE BATTERY**
   (a) Disconnect the negative battery terminal.
   (b) Disconnect the positive battery terminal.
   (c) Loosen the nut, and remove the bolt and battery clamp.
   (d) Remove the battery and battery tray.
4. **PLACE FRONT WHEELS FACING STRAIGHT AHEAD**
5. **REMOVE FRONT WHEELS**



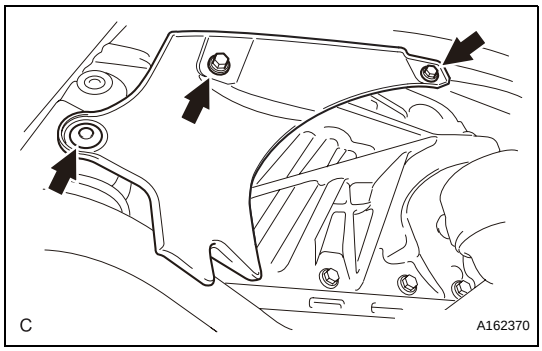
6. **REMOVE NO. 1 ENGINE UNDER COVER ASSEMBLY**
   (a) Remove the 8 bolts, 4 clips and No. 1 engine under cover assembly.



7. **REMOVE FRONT FENDER APRON SEAL RH**
   (a) Remove the 2 bolts, clip and front fender apron seal RH.



8. **REMOVE FRONT FENDER APRON SEAL LH**
   (a) Remove the 2 bolts, clip and front fender apron seal LH.
9. **DRAIN ENGINE OIL (See page LU-4)**
10. **DRAIN ENGINE COOLANT (See page CO-6)**
11. **DRAIN AUTOMATIC TRANSAXLE FLUID (See page AX-159)**
12. **REMOVE FRONT WIPER ARM HEAD CAP (See page WW-4)**
13. **REMOVE WINDSHIELD WIPER ARM AND BLADE ASSEMBLY RH (See page WW-4)**



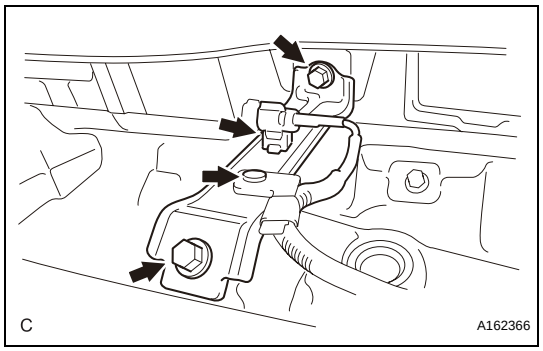
14. **REMOVE WINDSHIELD WIPER ARM AND BLADE ASSEMBLY LH (See page WW-4)**

15. **REMOVE COWL TOP VENTILATOR LOUVER SUB-ASSEMBLY (See page WW-4)**

16. **REMOVE FRONT WIPER MOTOR AND LINK ASSEMBLY (See page WW-4)**

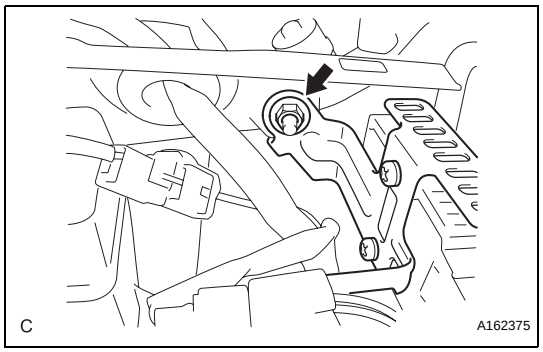
17. **REMOVE NO. 1 COWL TOP TO COWL BRACE INNER**

(a) Remove the 2 bolts, 2 clips and No. 1 cowl top to cowl brace inner.

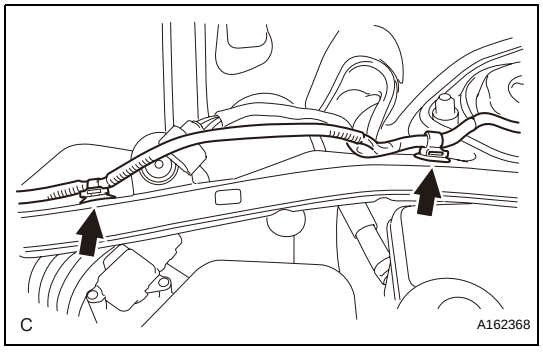


18. **REMOVE FRONT OUTER COWL TOP PANEL SUB-ASSEMBLY**

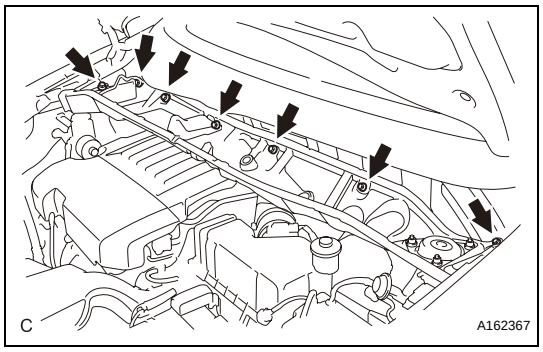
(a) Remove the nut, and separate the fuel pump resistor.

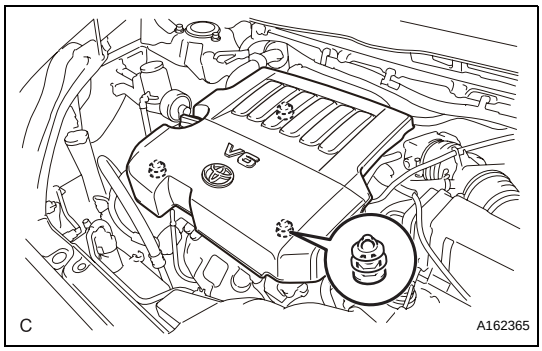


(b) Remove the 2 clips, and separate the engine wire.



(c) Remove the 7 bolts and front outer cowl top panel sub-assembly.



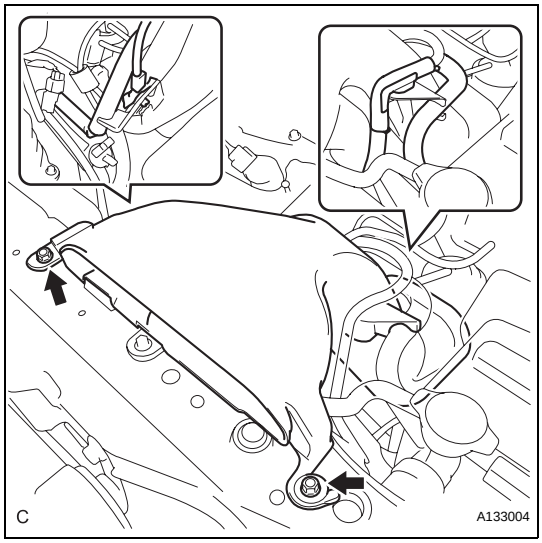


19. REMOVE V-BANK COVER SUB-ASSEMBLY

(a) Hold the front of the V-bank cover and raise it to disengage the 2 clips on the front of the cover. Continue to raise the cover to disengage the clip on the rear of the cover and remove the cover.

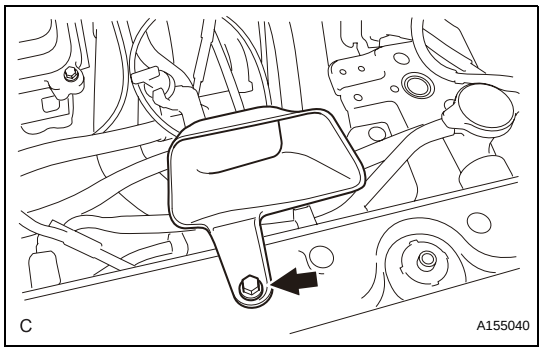
NOTICE:

Attempting to disengage both front and rear clips at the same time may cause the cover to break.



20. REMOVE NO. 2 AIR CLEANER INLET

(a) Disconnect the vacuum switching valve clamp.
(b) Disconnect the 2 vacuum hoses.
(c) Remove the 2 bolts and No. 2 air cleaner inlet.



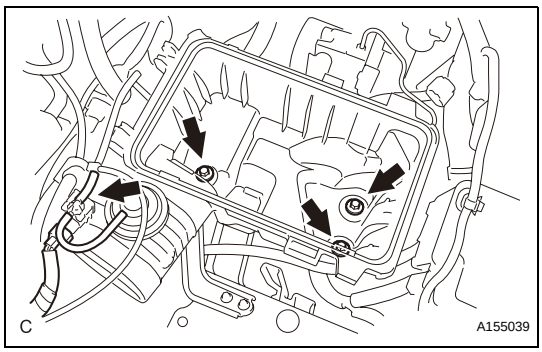
21. REMOVE NO. 1 AIR CLEANER INLET

(a) Remove the bolt and No. 1 air cleaner inlet.

22. REMOVE AIR CLEANER CAP SUB-ASSEMBLY (See page IT-4)

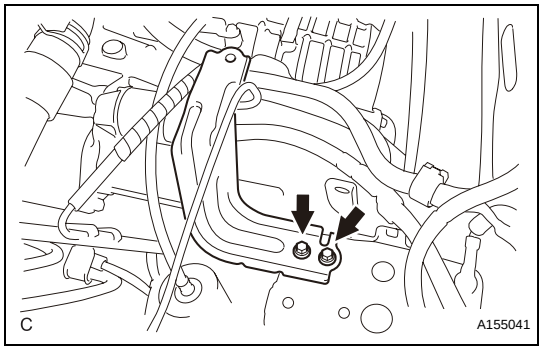
23. REMOVE AIR CLEANER FILTER ELEMENT SUB-ASSEMBLY

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



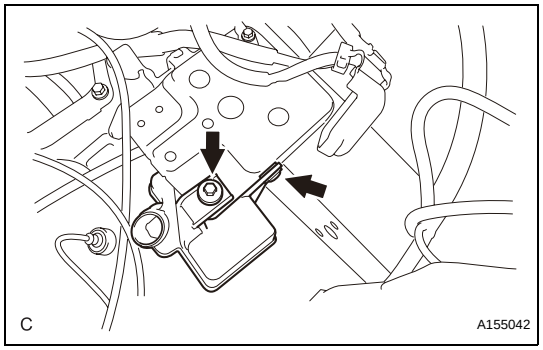
24. REMOVE AIR CLEANER CASE SUB-ASSEMBLY

(a) Disconnect the vacuum switching valve connector.
(b) Disconnect the vacuum hose.
(c) Remove the 3 bolts and air cleaner case.



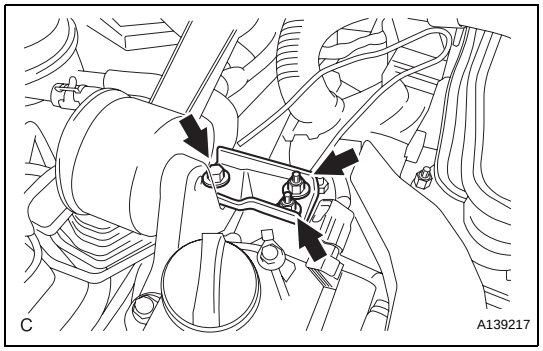
25. REMOVE AIR CLEANER BRACKET

(a) Remove the 2 bolts and air cleaner bracket.



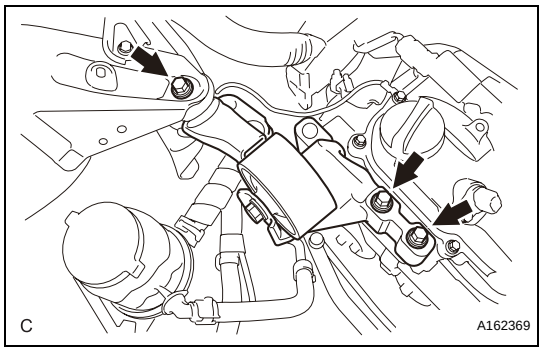
26. REMOVE INTAKE AIR RESONATOR SUB-ASSEMBLY

(a) Remove the clip, bolt and intake air resonator.



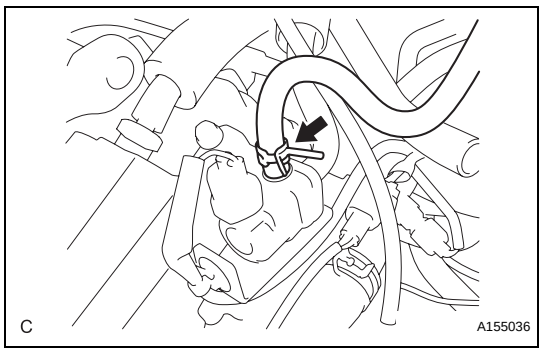
27. REMOVE NO. 2 ENGINE MOUNTING STAY RH

(a) Remove bolt, 2 nuts and No. 2 engine mounting stay RH.



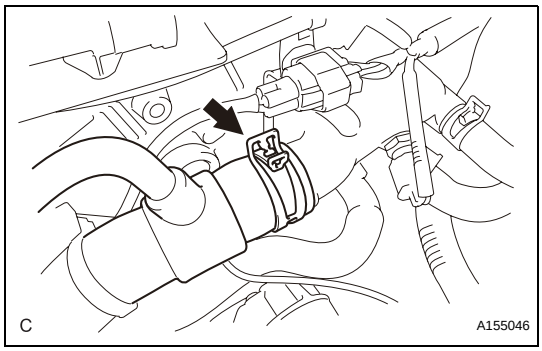
28. REMOVE ENGINE MOVING CONTROL ROD

(a) Remove the 3 bolts and engine moving control rod.



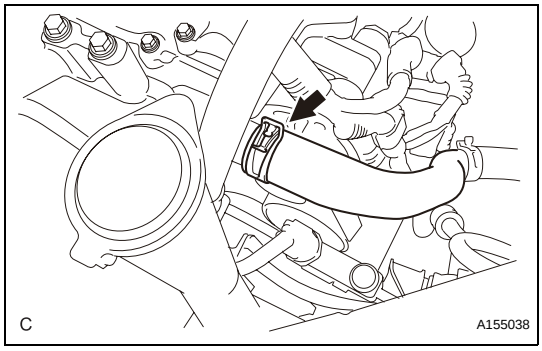
29. DISCONNECT NO. 1 FUEL VAPOR FEED HOSE

(a) Remove the clamp and disconnect the No. 1 fuel vapor feed hose.



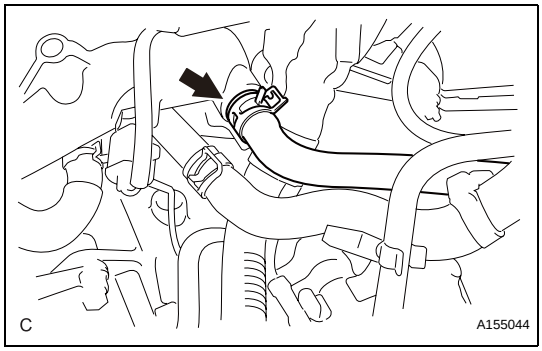
30. DISCONNECT RADIATOR INLET HOSE

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



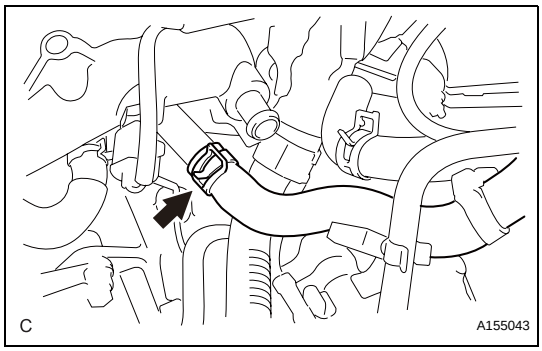
31. DISCONNECT RADIATOR OUTLET HOSE

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



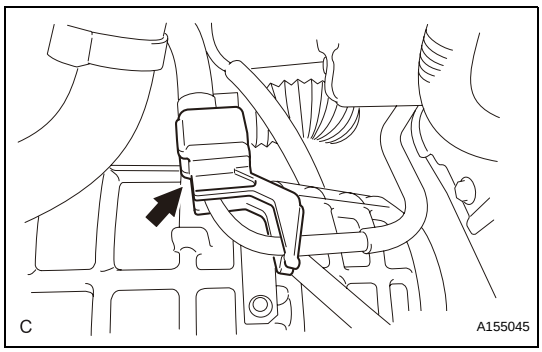
32. DISCONNECT HEATER WATER OUTLET HOSE B

(a) Using pliers, grip the claws of the clip and slide the clip to disconnect heater water inlet hose B from the water inlet.



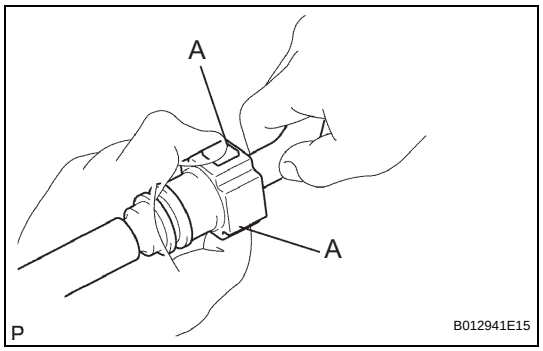
33. DISCONNECT HEATER WATER INLET HOSE B

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



34. DISCONNECT FUEL TUBE SUB-ASSEMBLY

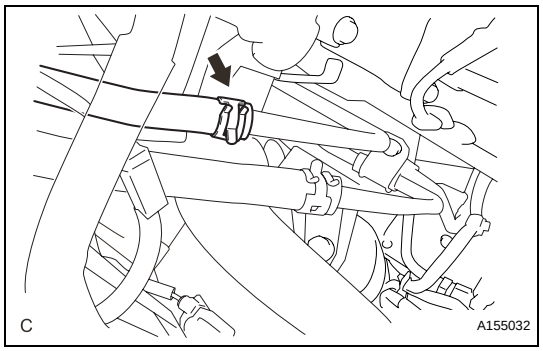
(a) Remove the No. 1 fuel pipe clamp.



(b) Disconnect the fuel tube from the fuel pipe while pinching part A with your fingers as shown in the illustration.

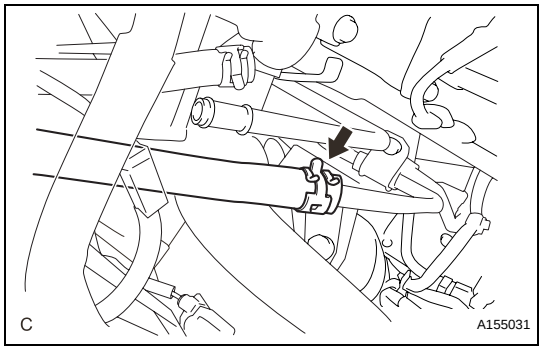
NOTICE:

- **Check for contamination in the pipe and around the connector. Clean if necessary and then disconnect the connector.**
- **Disconnect the connector by hand.**
- **Do not bend, fold or rotate the nylon tube.**
- **If the pipe and connector are stuck together, push and pull the connector until it becomes free.**
- **Put the pipe and connector ends in vinyl bags to prevent damage and contamination.**



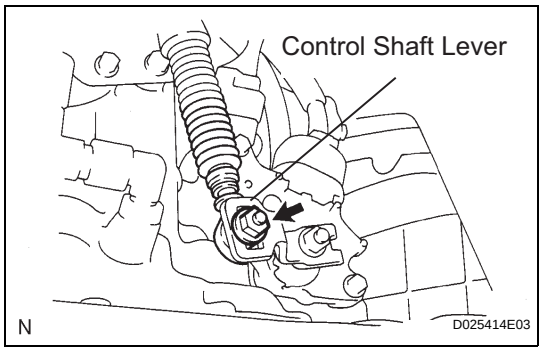
35. DISCONNECT NO. 1 OIL COOLER INLET HOSE

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



36. REMOVE NO. 1 OIL COOLER OUTLET HOSE

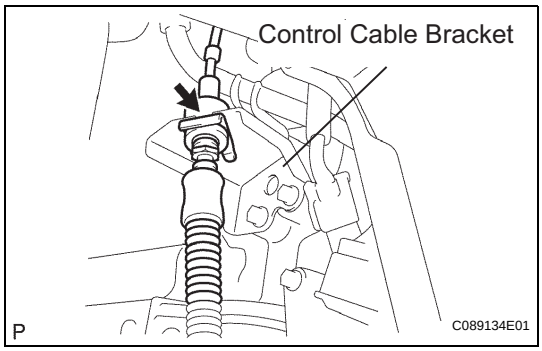
(a) Using pliers, grip the claws of the clip and slide the clip to disconnect the No. 1 oil cooler outlet hose from the No. 1 oil cooler outlet tube.



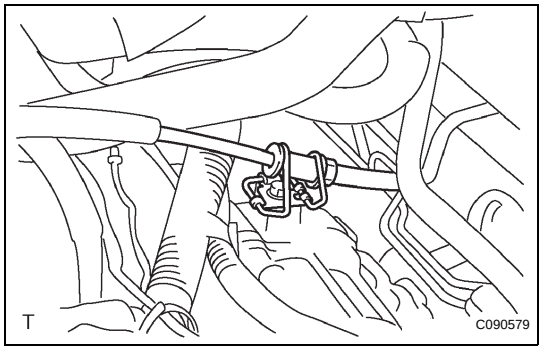
37. DISCONNECT TRANSMISSION CONTROL CABLE ASSEMBLY

(a) Remove the nut from the control shaft lever.

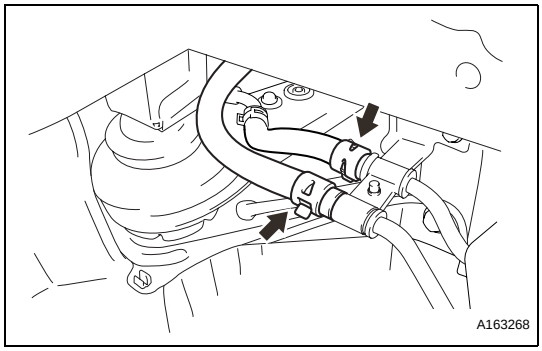
(b) Disconnect the transmission control cable assembly from the control shaft lever.



(c) Remove the clip and disconnect the transmission control cable assembly from the control cable bracket.



(d) Disconnect the control cable from the control cable clamp.



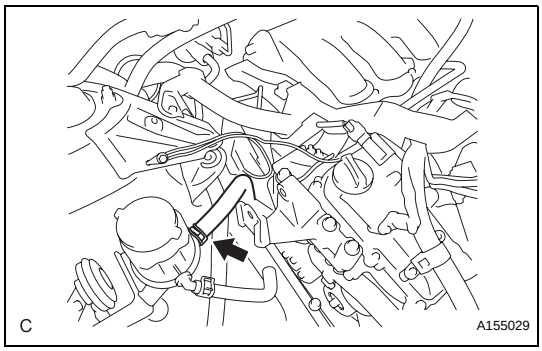
38. DISCONNECT RETURN TUBE SUB-ASSEMBLY

(a) Using pliers, grip the claws of the 2 clips and slide the 2 clips to disconnect the 2 return tube sub-assemblies.

(b) Drain the power steering fluid.

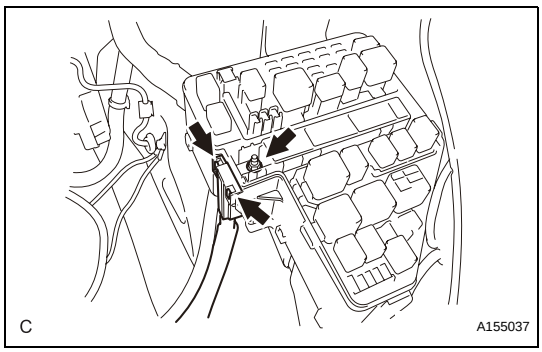
NOTICE:

Take care not to damage the hose protector.



39. DISCONNECT NO. 1 OIL RESERVOIR TO PUMP HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to disconnect the No. 1 oil reservoir to pump hose from the oil reservoir tank.

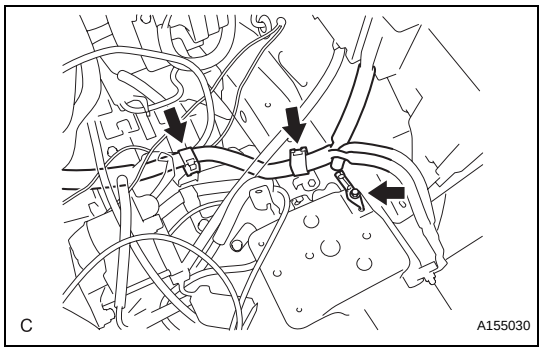


40. DISCONNECT ENGINE WIRE

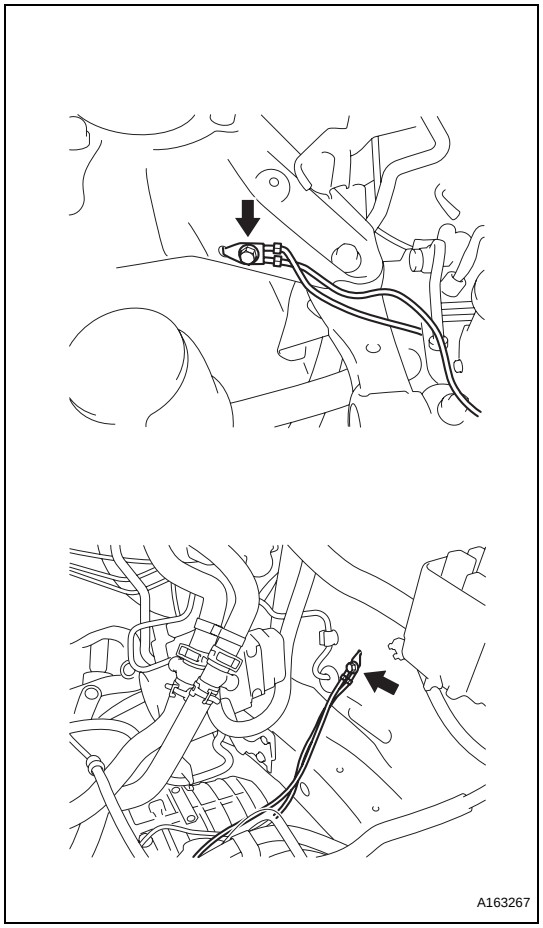
(a) Disconnect the engine wire from the engine room junction block.

(1) Remove the nut and separate the wire harness.

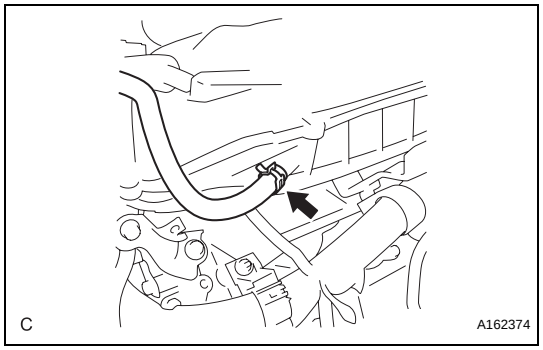
(2) Using a screwdriver, unlock the engine room junction block. Pull the engine room junction block upward.



(b) Remove the bolt and 2 clamps from the body.



(c) Remove the 2 bolts and 2 ground cables.
(d) Disconnect the engine wire from the ECM and passenger side junction block.



41. DISCONNECT UNION TO CHECK VALVE HOSE

(a) Using pliers, grip the claws of the clip and slide the clip to disconnect the union to check valve hose.

42. REMOVE CENTER EXHAUST PIPE ASSEMBLY (for 4WD)

(a) Remove the center exhaust pipe assembly (See page EX-8).

43. REMOVE FRONT EXHAUST PIPE ASSEMBLY (for 4WD)

(a) Remove the front exhaust pipe assembly (See page EX-9).

44. REMOVE FRONT EXHAUST PIPE ASSEMBLY (for 2WD)

(a) Remove the front exhaust pipe assembly (See page EX-3).

45. **REMOVE PROPELLER WITH CENTER BEARING SHAFT ASSEMBLY (See page PR-3)**

46. **DISCONNECT FRONT STABILIZER LINK ASSEMBLY LH (See page DS-5)**

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

48. **REMOVE FRONT AXLE HUB NUT LH (See page DS-5)**

49. **REMOVE FRONT AXLE HUB NUT RH**
HINT:
Use the same procedures described for the LH side.

50. **DISCONNECT FRONT SPEED SENSOR LH (See page DS-5)**

51. **DISCONNECT FRONT SPEED SENSOR RH**
HINT:
Use the same procedures described for the LH side.

52. **DISCONNECT TIE ROD ASSEMBLY LH (See page DS-6)**

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

54. **SEPARATE FRONT SUSPENSION LOWER NO. 1 ARM LH (See page DS-6)**

55. **SEPARATE FRONT SUSPENSION LOWER NO. 1 ARM RH**
HINT:
Use the same procedures described for the LH side.

56. **SEPARATE FRONT AXLE ASSEMBLY LH (See page DS-6)**

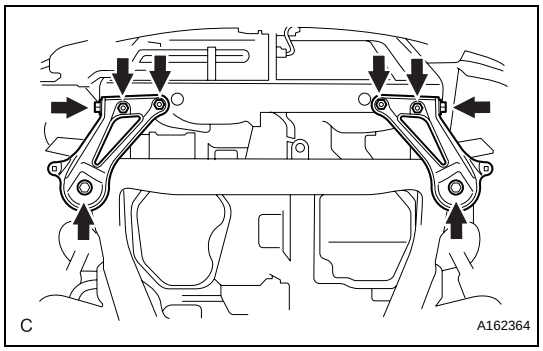
57. **SEPARATE FRONT AXLE ASSEMBLY RH**
HINT:
Use the same procedures described for the LH side.

58. **DISCONNECT STEERING INTERMEDIATE SHAFT SUB-ASSEMBLY**

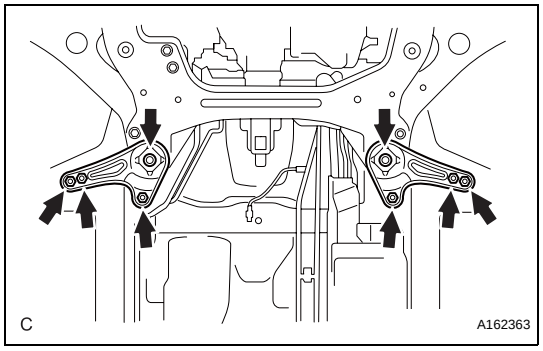
59. **DISCONNECT DISCHARGE HOSE SUB-ASSEMBLY (See page AC-227)**

60. **DISCONNECT SUCTION HOSE SUB-ASSEMBLY (See page AC-227)**

61. **REMOVE ENGINE ASSEMBLY WITH TRANSAXLE**
(a) Set the engine lifter.



(b) Remove the 6 bolts, 2 nuts, and frame side rail plates RH and LH.



(c) Remove the 6 bolts, 2 nuts, and front suspension member brace rear RH and LH.

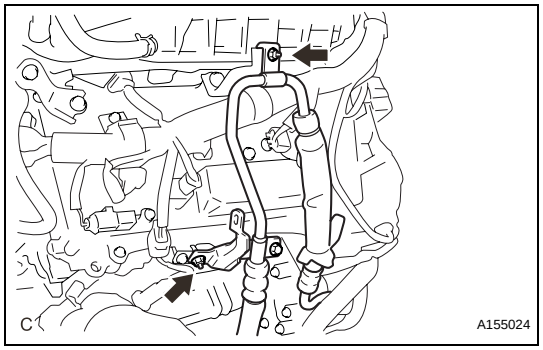
(d) Operate the engine lifter, then remove the engine assembly from the vehicle.

NOTICE:
Make sure that the engine is clear of all wiring and hoses.

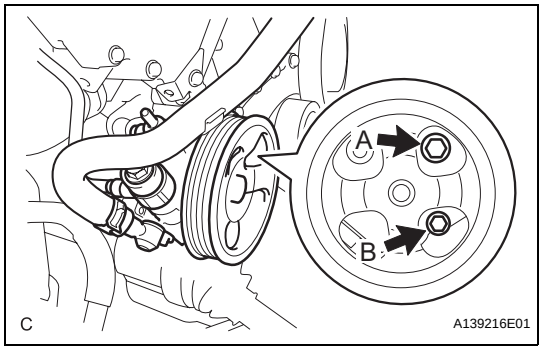
62. REMOVE V-RIBBED BELT (See page EM-6)

63. REMOVE VANE PUMP ASSEMBLY

(a) Disconnect the power steering oil pressure switch connector.



(b) Remove the 2 nuts.



(c) Loosen the bolt A.

(d) Remove the bolt B.

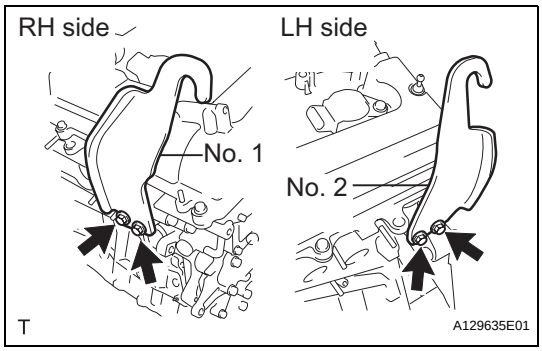
(e) Remove the bolt A and vane pump assembly.

64. REMOVE FRONT STABILIZER BAR (for 4WD)

HINT:
See page SP-35.

65. REMOVE POWER STEERING LINK

(a) Remove the 2 bolts and power steering link with vane pump.



66. INSTALL ENGINE HANGERS

(a) Install the 2 engine hangers with the 4 bolts as shown in the illustration.

Part No.:

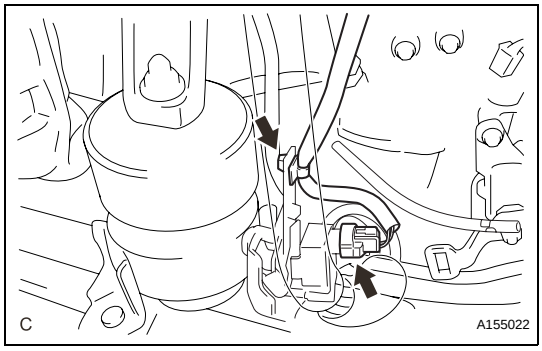
No. 1 Engine hanger 12281-31120

No. 2 Engine hanger 12282-31100

Bolts 91671-10825

Torque: 33 N*m (337 kgf*cm, 24 ft.*lbf)

(b) Attach the engine sling device and hang the engine with the chain block.

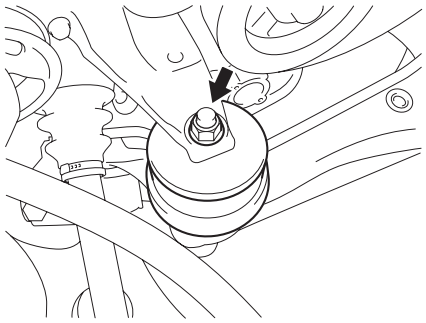


67. REMOVE FRONT FRAME ASSEMBLY

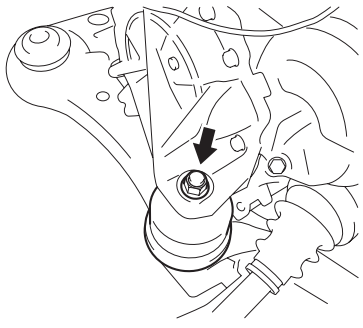
(a) Disconnect the active mount VSV connector and harness clamp.

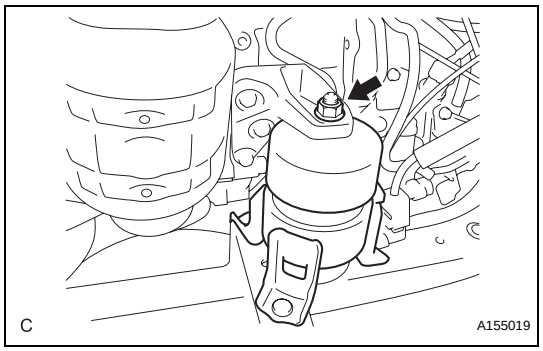
(b) Remove the 2 nuts and disconnect the engine mounting insulators RH and LH.

RH Side:

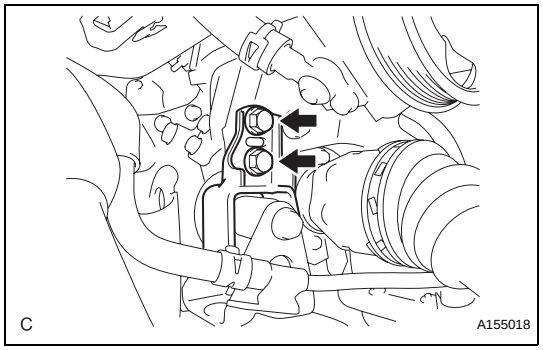


LH Side:





(c) Remove the bolt and disconnect the engine mounting insulator FR.



(d) Remove the 2 bolts and separate the engine mounting insulator RR (for 4WD).

68. REMOVE FRONT DRIVE SHAFT ASSEMBLY LH (See page DS-6)

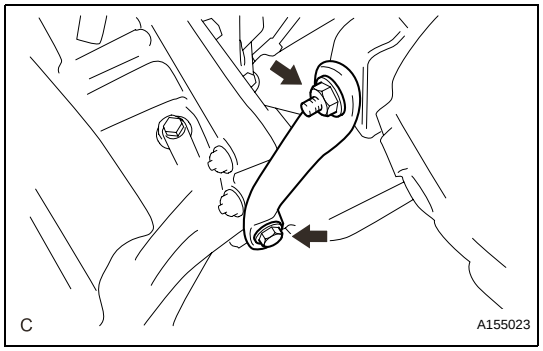
69. REMOVE FRONT DRIVE SHAFT ASSEMBLY RH (for 2WD) (See page DS-6)

70. REMOVE FRONT DRIVE SHAFT ASSEMBLY RH (for 4WD) (See page DS-7)

71. REMOVE ENGINE WIRE

72. REMOVE STARTER ASSEMBLY (See page ST-5)

73. REMOVE ENGINE FRONT MOUNTING BRACKET (See page AX-165)



74. REMOVE MANIFOLD STAY

(a) Remove the bolt, nut, and manifold stay.

75. REMOVE TRANSFER STIFFENER PLATE RH (See page AX-166)

76. REMOVE AUTOMATIC TRANSAXLE ASSEMBLY (for 2WD)

HINT:

See page AX-165.

77. REMOVE AUTOMATIC TRANSAXLE ASSEMBLY (for 4WD)

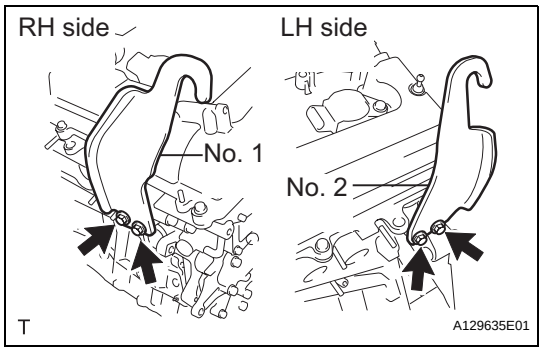
AX-166

78. REMOVE DRIVE PLATE AND RING GEAR SUB-ASSEMBLY (See page EM-12)

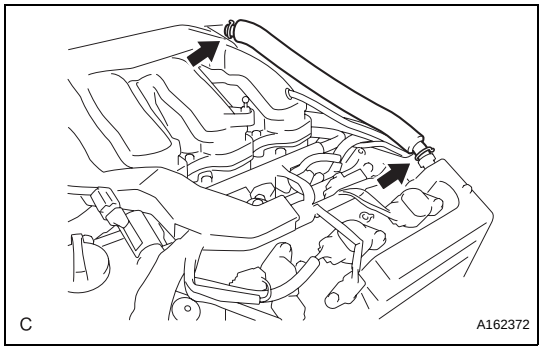
79. SECURE ENGINE

(a) Secure the engine onto an engine stand with the bolts.

EM

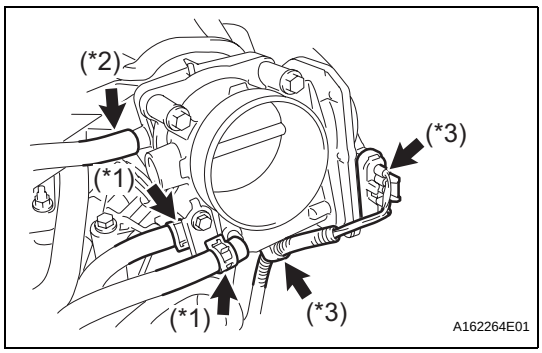


(b) Remove the engine hangers.



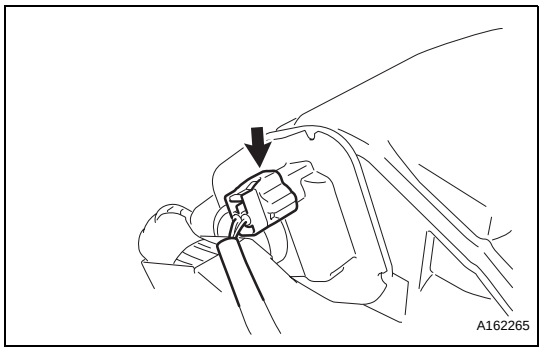
80. REMOVE VENTILATION HOSE

(a) Using pliers, grip the claws of the 2 clips and slide the 2 clips to remove the ventilation hose.

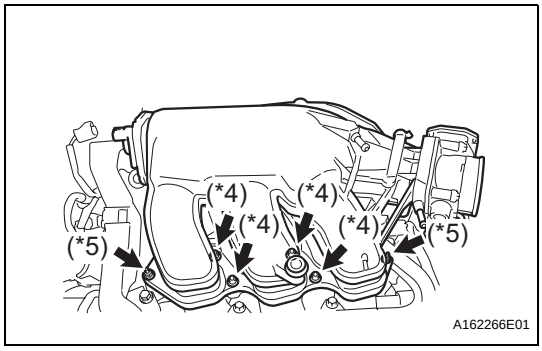


81. REMOVE INTAKE AIR SURGE TANK ASSEMBLY

(a) Disconnect the 2 water by-pass hoses from the throttle with motor body assembly (*1).
(b) Disconnect the vapor feed hose (*2).
(c) Disconnect the throttle with motor body assembly connector and clamp (*3).
(d) Disconnect the No. 1 ventilation hose.



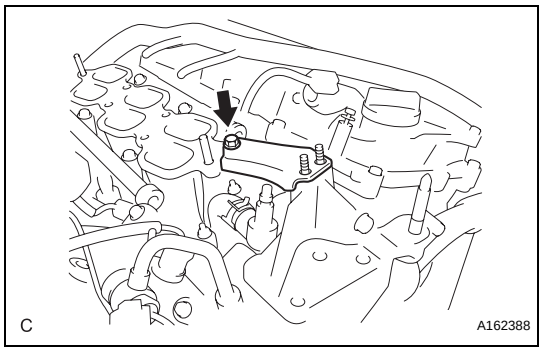
(e) Disconnect the connector.
(f) Remove the 4 bolts, No. 1 surge tank stay and throttle body bracket.



(g) Using a 5 mm socket hexagon wrench, remove the 4 bolts.
(h) Remove the 2 nuts and intake air surge tank (*4).
(i) Remove the gasket from the intake air surge tank (*5).

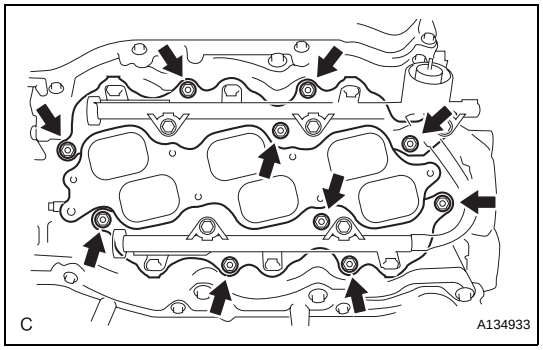
82. REMOVE IGNITION COIL ASSEMBLY

(a) Remove the 6 bolts and 6 ignition coils.



83. REMOVE NO. 2 ENGINE MOUNTING STAY RH

(a) Remove the bolt and No. 2 engine mounting stay RH.

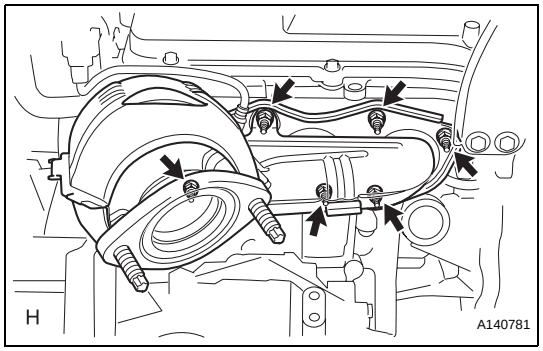


84. REMOVE INTAKE MANIFOLD

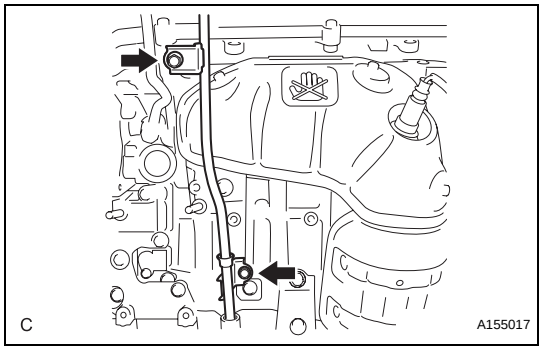
(a) Uniformly loosen and remove the 6 bolts and 4 nuts.
(b) Remove the intake manifold and 2 gaskets.

85. REMOVE EXHAUST MANIFOLD SUB-ASSEMBLY RH

(a) Disconnect the A/F sensor connector clamp.

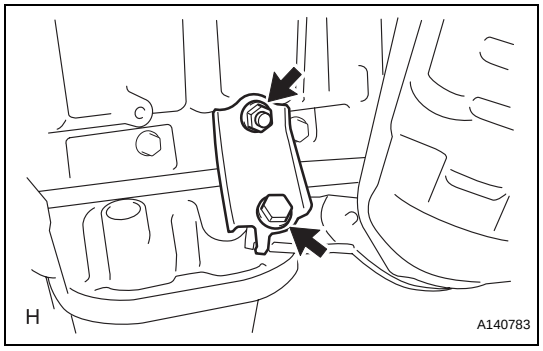


(b) Uniformly loosen and remove the 6 nuts.
(c) Remove the manifold and gasket.



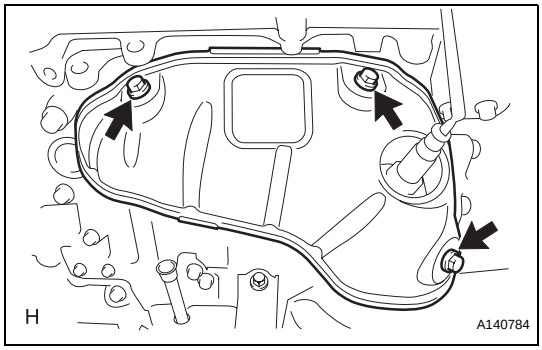
86. REMOVE OIL LEVEL GAUGE GUIDE SUB-ASSEMBLY

(a) Remove the oil level gauge.
(b) Remove the 2 bolts, No. 1 and No. 2 oil level gauge guides.
(c) Remove the O-rings from the oil level gauge guide.



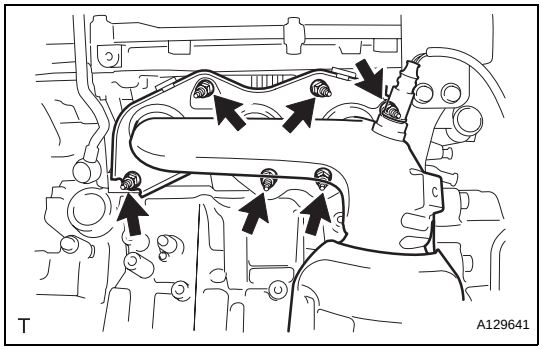
87. REMOVE NO. 2 MANIFOLD STAY

(a) Remove the bolt, nut and No. 2 manifold stay.



88. REMOVE NO. 2 EXHAUST MANIFOLD HEAT INSULATOR

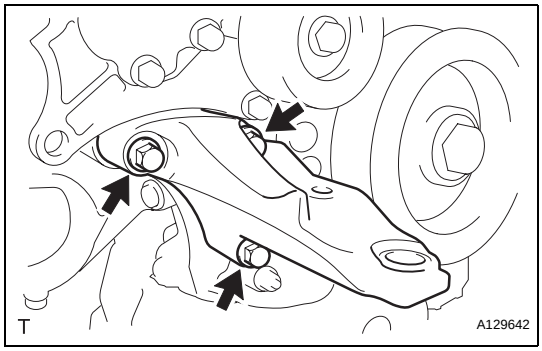
(a) Remove the 3 bolts and No. 2 insulator.



89. REMOVE EXHAUST MANIFOLD SUB-ASSEMBLY LH

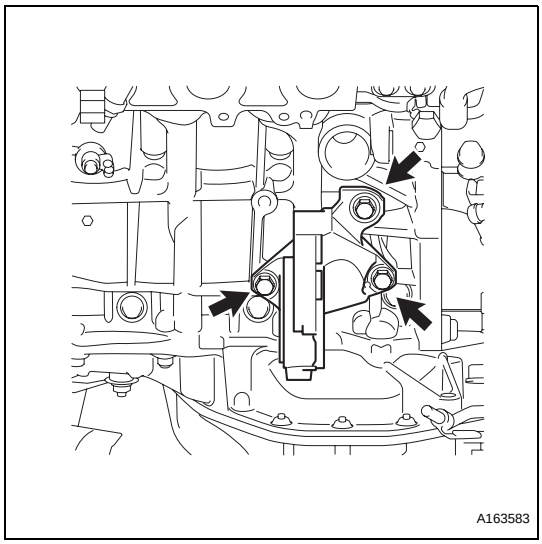
(a) Uniformly loosen and remove the 6 nuts.

(b) Remove the manifold and gasket.



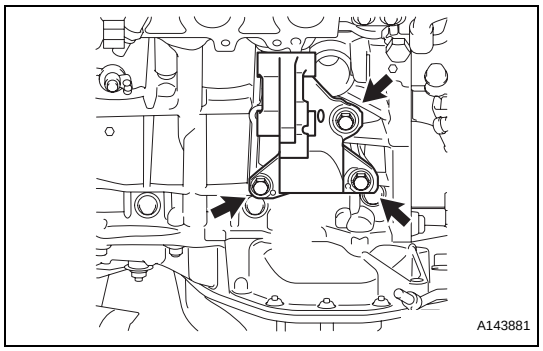
90. REMOVE ENGINE MOUNTING BRACKET RH

(a) Remove the engine mounting bracket and 3 bolts.



91. REMOVE DRIVE SHAFT BEARING BRACKET (for 2WD)

(a) Remove the 3 bolts and drive shaft bearing bracket.

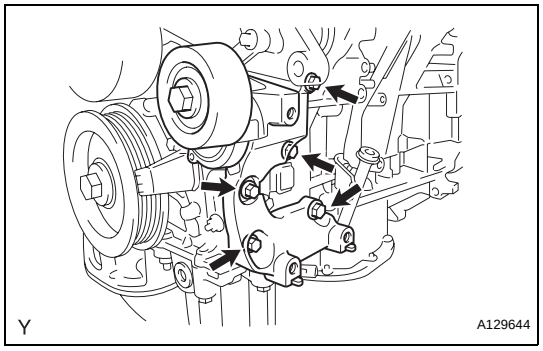


92. REMOVE ENGINE MOUNTING BRACKET RR (for 4WD)

(a) Remove the 3 bolts and engine mounting bracket RR.

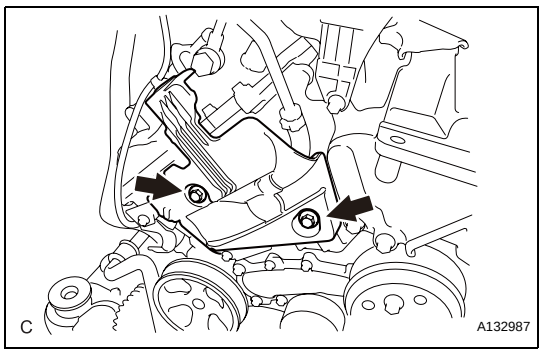
93. REMOVE GENERATOR ASSEMBLY (See page CH-17)

94. REMOVE COOLER COMPRESSOR ASSEMBLY



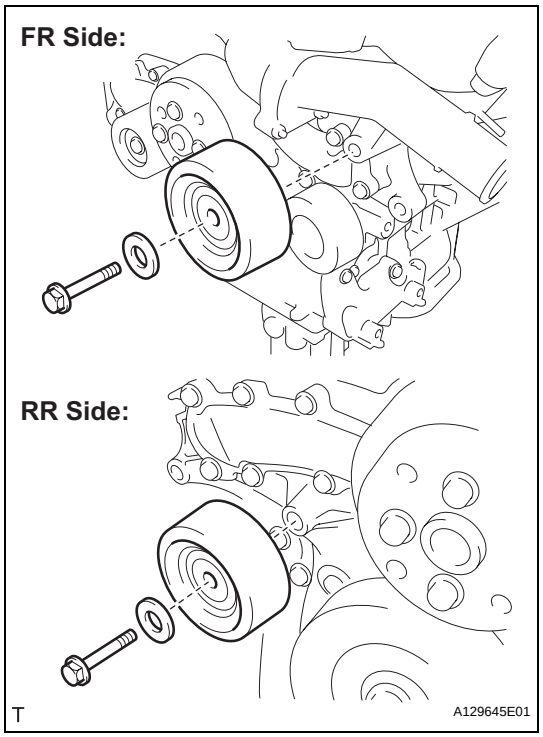
95. REMOVE V-RIBBED BELT TENSIONER ASSEMBLY

(a) Remove the 5 bolts and V-ribbed belt tensioner assembly.



96. REMOVE NO. 2 TIMING GEAR COVER

(a) Remove the 2 bolts and No. 2 timing gear cover.

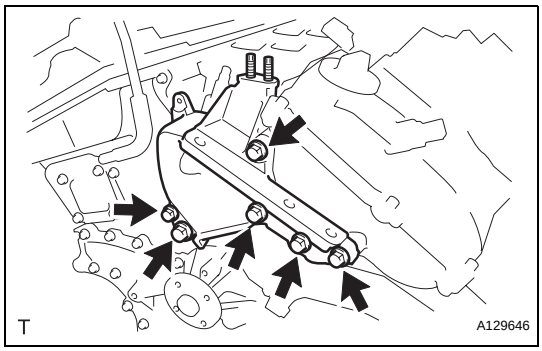


97. REMOVE NO. 2 IDLER PULLEY SUB-ASSEMBLY

(a) Remove the bolt, plate and No. 2 idler pulley sub-assembly.

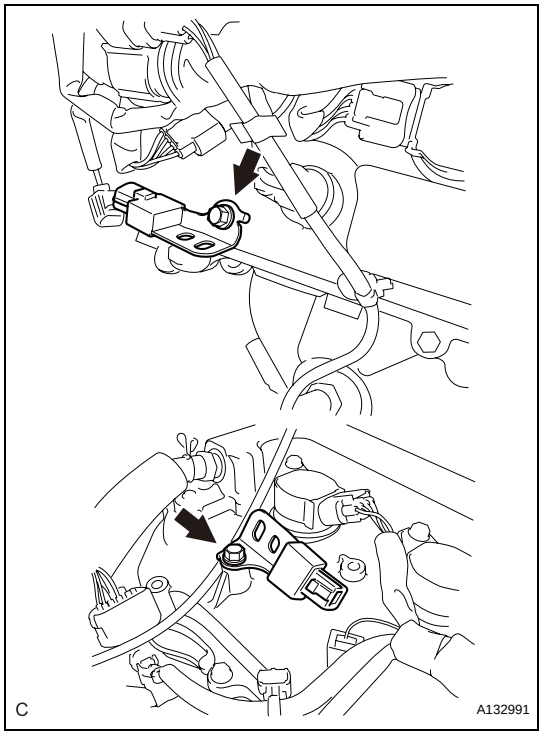
98. REMOVE WATER PUMP PULLEY (See page CO-12)

EM



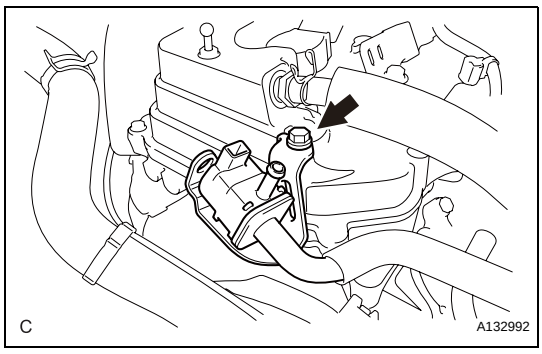
99. REMOVE NO. 1 ENGINE FRONT MOUNTING BRACKET LH

(a) Remove the 6 bolts and No. 1 engine front mounting bracket LH.



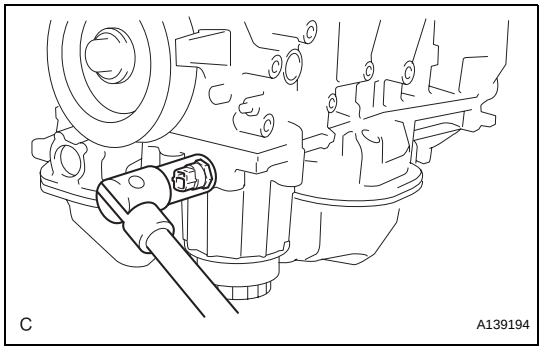
100. REMOVE RADIO SETTING CONDENSER

(a) Remove the 2 bolts and 2 radio setting condensers.



101. REMOVE NO. 1 VACUUM SWITCHING VALVE ASSEMBLY

(a) Remove the bolt and No. 1 vacuum switching valve.



102. REMOVE ENGINE OIL PRESSURE SWITCH ASSEMBLY

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

103. REMOVE KNOCK CONTROL SENSOR (See page ES-522)