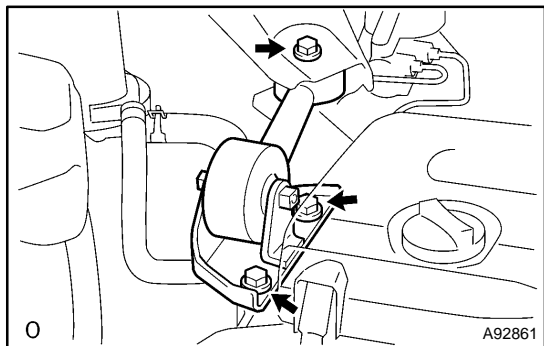


REPLACEMENT

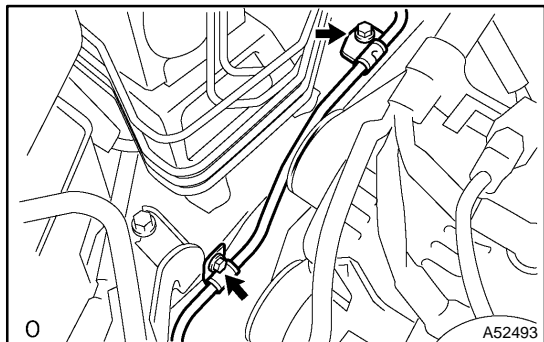
1. WORK FOR PREVENTING GASOLINE FROM SPILLING OUT (See page 11-1)
2. REMOVE FRONT WHEEL
3. REMOVE ENGINE UNDER COVER NO.1
4. REMOVE FRONT FENDER SPLASH SHIELD FRONT RH
5. REMOVE FRONT FENDER SPLASH SHIELD FRONTR LH
6. REMOVE FRONT FENDER APRON SEAL RH
7. DRAIN COOLANT (See page 16-6)
8. DRAIN AUTOMATIC TRANSAXLE FLUID
 - (a) Using a 10 mm hexagon wrench, remove the drain plug and gasket. Drain automatic transaxle fluid.
 - (b) Install a new gasket and the drain plug.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)
9. DRAIN TRANSFER OIL (4WD TYPE)
10. REMOVE BATTERY
11. REMOVE AIR CLEANER ASSY
12. DISCONNECT RADIATOR HOSE INLET
13. DISCONNECT RADIATOR HOSE OUTLET
14. DISCONNECT OIL COOLER INLET HOSE
15. DISCONNECT OIL COOLER OUTLET HOSE
16. REMOVE ENGINE MOUNTING STAY NO.2 RH



17. REMOVE ENGINE MOVING CONTROL ROD W/BRACKET

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

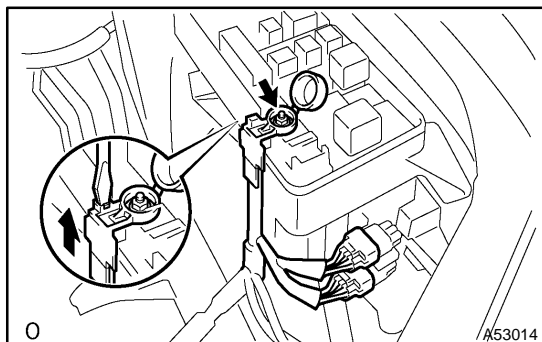
18. REMOVE ENGINE MOUNTING BRACKET NO.2 RH
19. REMOVE FAN AND GENERATOR V BELT (See page 14-5)
20. DISCONNECT VANE PUMP OIL RESERVOIR ASSY



21. DISCONNECT RETURN TUBE SUB-ASSY

- (a) Remove the 2 bolts and disconnect the return tube.

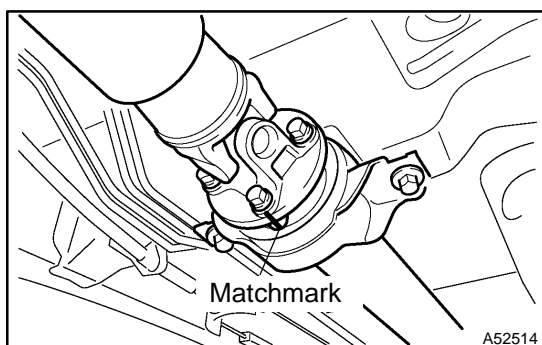
22. DISCONNECT UNION TO CHECK VALVE HOSE
23. DISCONNECT TRANSMISSION CONTROL CABLE ASSY (See page 40-34)
24. DISCONNECT HEATER INLET WATER HOSE
25. DISCONNECT HEATER OUTLET WATER HOSE
26. DISCONNECT FUEL TUBE SUB-ASSY (See page 11-1)



27. DISCONNECT ENGINE ROOM MAIN WIRE

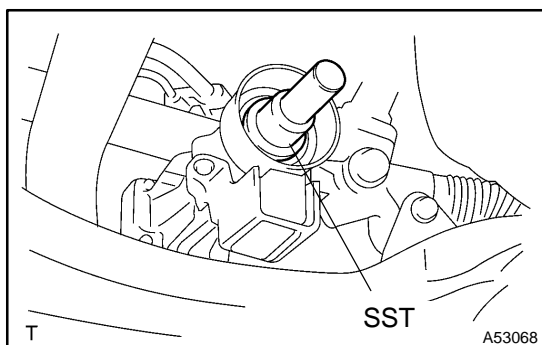
- (a) Disconnect the engine wire from the ECM and J/B.
- (b) Disconnect the engine wire from the engine room J/B.
 - (1) Remove the nut fixing the wire harness.
 - (2) Using a screwdriver, unlock the engine room J/B. Disconnect the engine wire by pulling it upward.
 - (3) Disconnect the connectors.
 - (4) Remove the body ground.

28. REMOVE EXHAUST PIPE ASSY FRONT (See page 15-2)



29. REMOVE PROPELLER SHAFT (4WD TYPE)

- (a) Place the matchmarks on both of the flanges.
- (b) Remove the 4 nuts, 4 bolts and 4 washers.



- (c) Insert SST after removing the propeller shaft.
SST 09325-20010

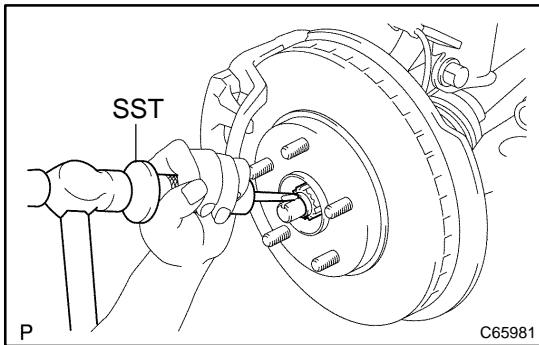
30. REMOVE FRONT STABILIZER LINK ASSY LH

- (a) Using a 6 mm socket hexagon wrench, fix the stud bolt.
- (b) Remove the nut and disconnect the stabilizer link.

31. REMOVE FRONT STABILIZER LINK ASSY RH

HINT:

Use the same procedures described for the LH side.

**32. REMOVE FRONT AXLE HUB RH NUT**

- (a) Using SST and a hammer, strike the lock nut covering to remove it.

SST 09930-00010

NOTICE:

- Set the drive shaft's groove so that it faces up. Then use the SST and a hammer.
 - Remove the covering from the lock nut completely or the screw of the drive shaft may be damaged.
 - Do not sharpen the tip of the SST.
- (b) Using a 30 mm socket wrench, remove the lock nut.

33. REMOVE FRONT AXLE HUB LH NUT**HINT:**

Use the same procedures described for the LH side.

34. DISCONNECT SPEED SENSOR FRONT LH

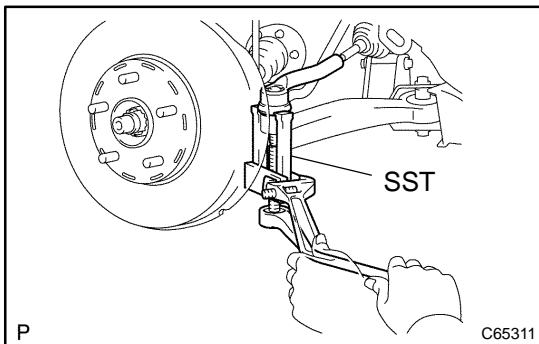
- (a) Remove the bolt and disconnect the speed sensor from the steering knuckle.

NOTICE:

Keep the speed sensor tip and connection free from a foreign matter.

35. DISCONNECT SPEED SENSOR FRONT RH**HINT:**

Use the same procedures described for the LH side.

**36. DISCONNECT TIE ROD ASSY LH**

- (a) Remove the cotter pin and castle nut.
- (b) Using SST, disconnect the tie rod end from the steering knuckle.

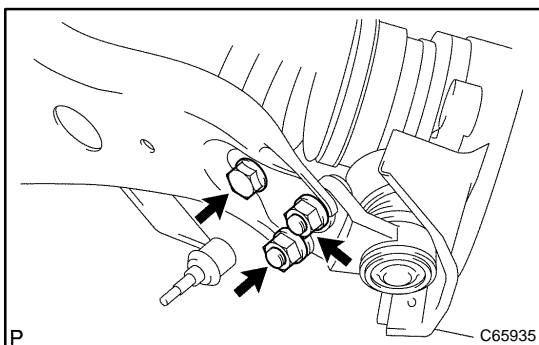
SST 09628-6201 1

NOTICE:

Be careful not to damage the cover of the ball joint.

37. DISCONNECT TIE ROD ASSY RH**HINT:**

Use the same procedures described for the LH side.

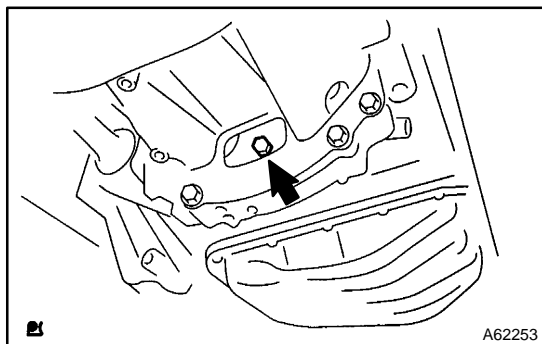
**38. DISCONNECT FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 LH**

- (a) Fix the crankshaft and remove the 6 setting bolts.

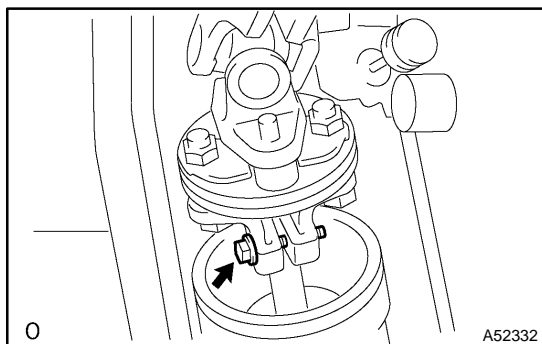
39. DISCONNECT FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 RH

HINT:

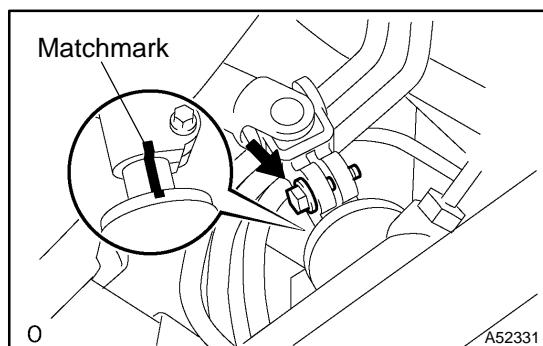
Use the same procedures described for the LH side.

**40. REMOVE DRIVE PLATE & TORQUE CONVERTER CLUTCH SETTING BOLT**

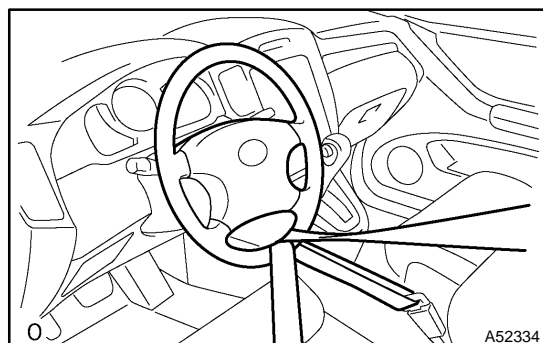
- (a) Fix the crankshaft and remove the 6 setting bolts.

**41. DISCONNECT STEERING INTERMEDIATE SHAFT SUB-ASSY**

- (a) Loosen the sliding yoke bolt.



- (b) Place matchmarks on the intermediate shaft and control valve shaft.
(c) Remove the bolt and the steering intermediate shaft.



- (d) To prevent the steering wheel from rotating, fix the wheel with the seat belt.

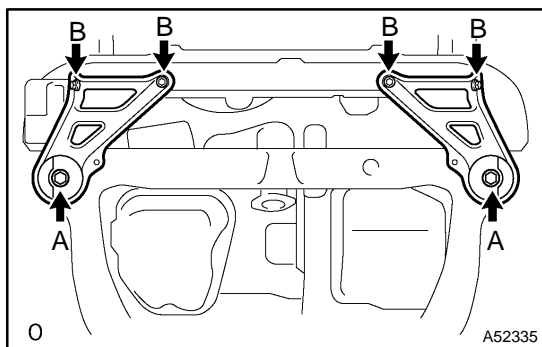
NOTICE:

If the steering wheel is not fixed, the spiral cable will be damaged.

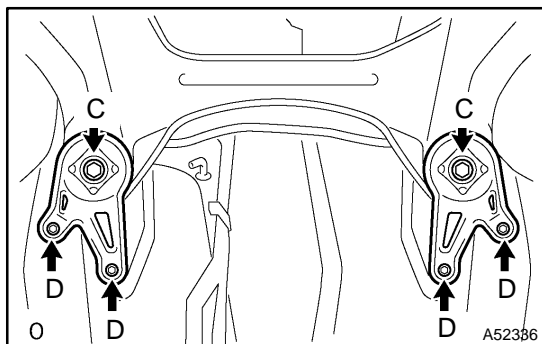
42. DISCONNECT COMPRESSOR AND MAGNETIC CLUTCH

HINT:

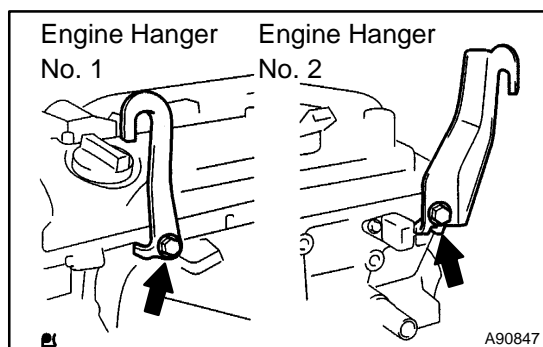
Hung up the hoses instead of detaching.

**43. REMOVE ENGINE ASSEMBLY WITH TRANSAXLE**

- (a) Set the engine lifter.
- (b) Remove the 6 bolts and frame side rail plate RH and LH.



- (c) Remove the 6 bolts and front suspension member brace rear RH and LH.
- (d) Carefully remove the engine assembly from the vehicle.

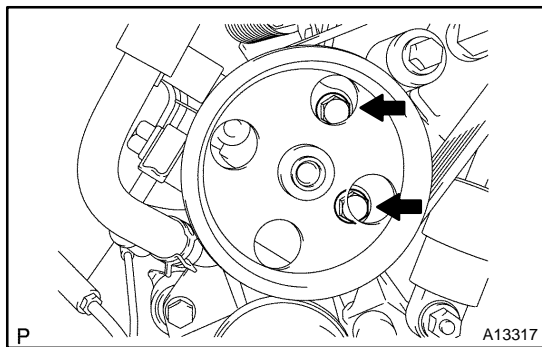


- (e) Install the 2 engine hangers as shown in the illustration. Parts No.:

Engine hanger No. 1	12281-28010
Engine hanger No. 2	12282-28010
Bolt	91512-61020

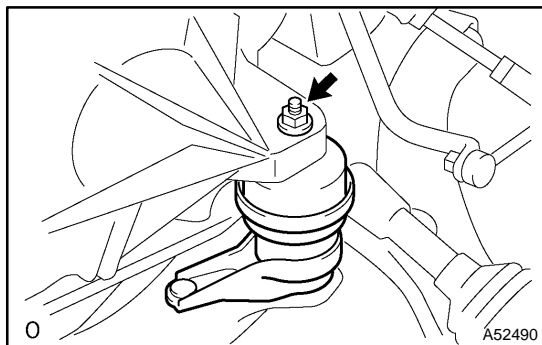
Torque: 38 N·m (387 kgf·cm, 28 ft lbf)

- (f) Using a chain block and an engine sling device, hang the engine assembly.

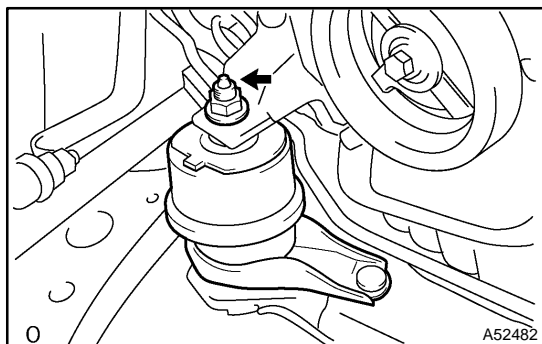
**44. REMOVE VANE PUMP ASSY**

- (a) Disconnect the PS oil pressure switch connector.
- (b) Remove the 2 bolts and vane pump from the engine.

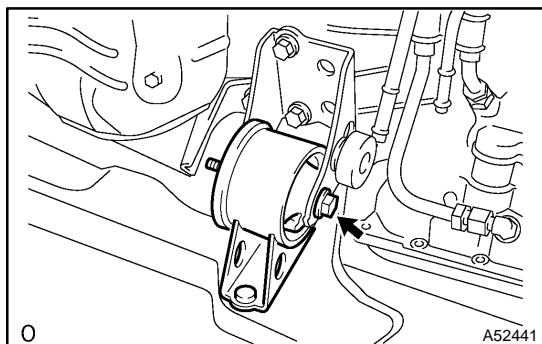
45. REMOVE STABILIZER BAR FRONT (4WD TYPE)**46. REMOVE RACK & PINION POWER STEERING GEAR ASSY (4WD TYPE)**

**47. REMOVE FRONT FRAME ASSY**

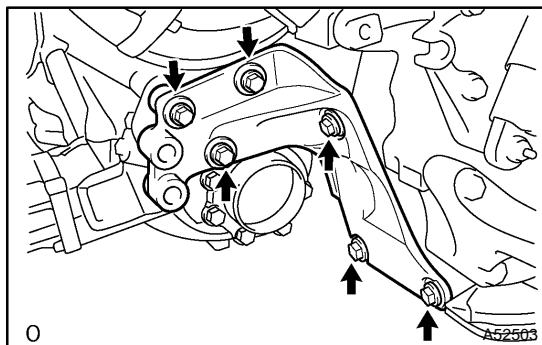
- (a) Remove the nut installing the engine mounting insulator LH.



- (b) Remove the nut installing the engine mounting insulator RH.

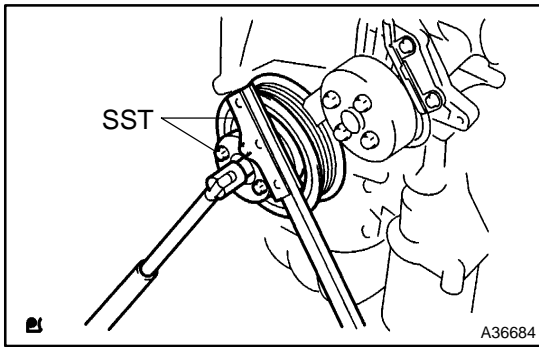


- (c) Remove the nut installing the engine mounting insulator FR.

48. REMOVE FRONT DRIVE SHAFT ASSY RH (4WD TYPE) (See page 30-21)**49. REMOVE ENGINE MOUNTING BRACKET RR (4WD TYPE)**

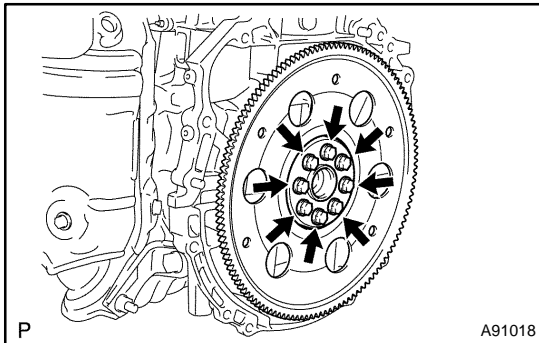
- (a) Remove the 6 bolts and engine mounting bracket RR.

50. REMOVE TRANSFER ASSY (4WD TYPE) (See page 31-9)**51. REMOVE FRONT DRIVE SHAFT ASSY LH (See page 30-21)****52. REMOVE FRONT DRIVE SHAFT ASSY RH (2WD TYPE) (See page 30-21)****53. REMOVE STARTER ASSY (See page 19-4)****54. REMOVE AUTOMATIC TRANSAXLE ASSY (See page 40-12)**

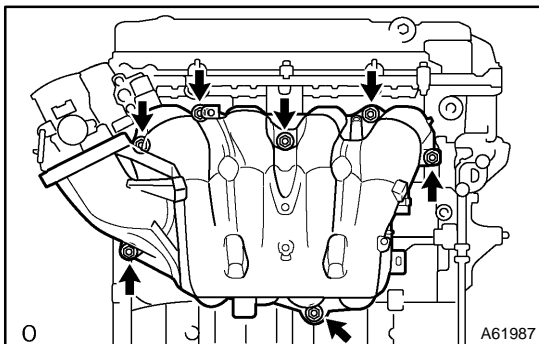
**55. REMOVE DRIVE PLATE & RING GEAR SUB-ASSY**

(a) Using SST, fix the crankshaft.

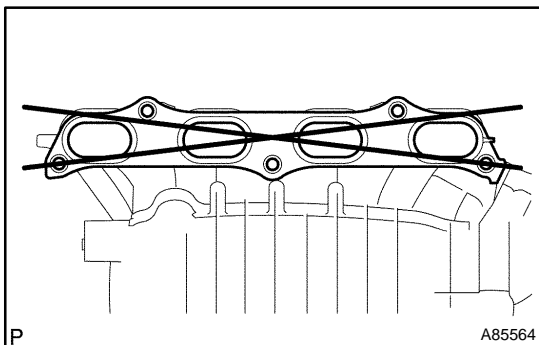
SST 09213-54015 (91651-60855), 09330-00021



(b) Remove the 8 bolts, rear spacer, drive plate and front spacer.

56. INSTALL ENGINE STAND**57. REMOVE ENGINE COVER SUB-ASSY NO.1****58. REMOVE INTAKE MANIFOLD**

(a) Remove the 5 bolts, 2 nuts, intake manifold and gasket.

**59. INSPECT INTAKE MANIFOLD**

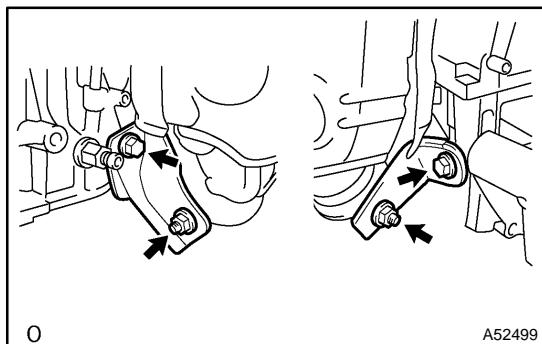
(a) Using a precision straight edge and feeler gauge, measure the surface contacting the cylinder head for warpage.

Maximum warpage: 2.0 mm (0.079 in.)

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

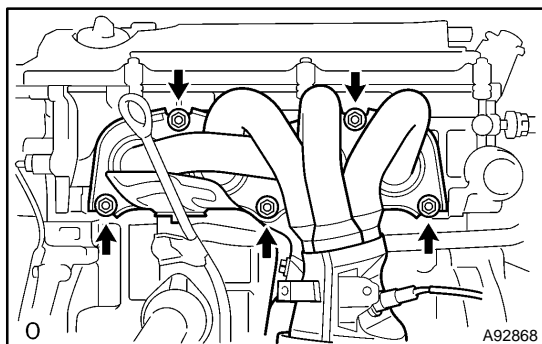
60. REMOVE VENTILATION HOSE No.1**61. REMOVE VENTILATION HOSE NO.2****62. REMOVE ENGINE WIRE****63. REMOVE INTAKE MANIFOLD INSULATOR NO.1****64. REMOVE GENERATOR ASSY**

65. REMOVE OIL LEVEL GAGE SUB-ASSY
66. REMOVE OIL LEVEL GAGE GUIDE
67. REMOVE MANIFOLD CONVERTER INSULATOR NO.1

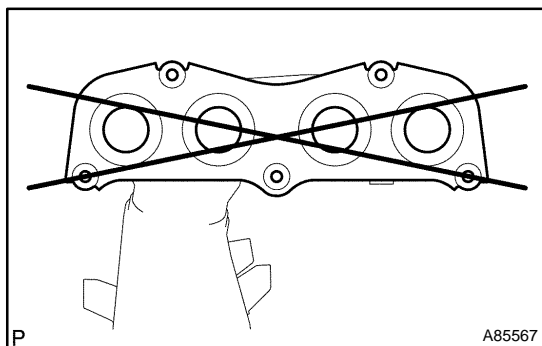


68. REMOVE EXHAUST MANIFOLD CONVERTER SUB-ASSY

- (a) Remove the 3 bolts, 2 nuts, and the No. 1 and No. 2 exhaust manifold stays.



- (b) Remove the 5 nuts, exhaust manifold converter and gasket.



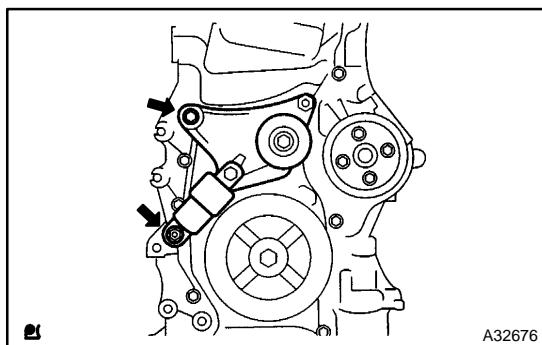
69. INSPECT EXHAUST MANIFOLD CONVERTER SUB-ASSY

- (a) Using a precision straight edge and feeler gauge, measure the surface contacting the cylinder head for warpage.

Maximum warpage: 0.70 mm (0.0276 in.)

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

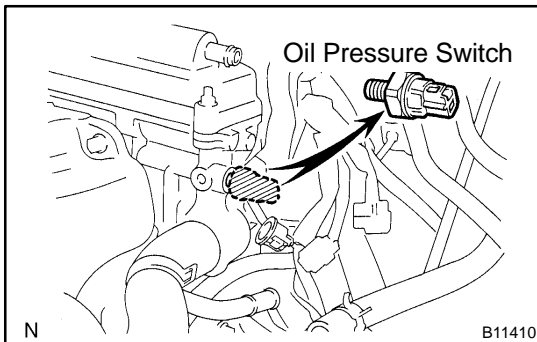
70. REMOVE WATER INLET
71. REMOVE THERMOSTAT
72. REMOVE IGNITION COIL ASSY
73. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSY



74. REMOVE V-RIBBED BELT TENSIONER ASSY

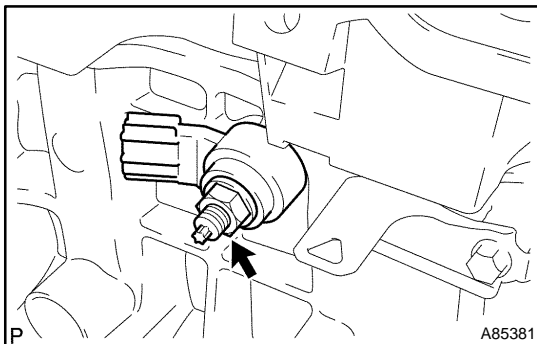
- (a) Remove the bolt, nut and belt tensioner.

75. REMOVE DRIVE SHAFT BEARING BRACKET (2WD TYPE)
76. REMOVE ENGINE MOUNTING BRACKET RH
77. REMOVE FUEL DELIVERY PIPE W/INJECTOR (See page 11-10)
78. REMOVE WATER BY-PASS PIPE NO.1
79. REMOVE OIL COOLER PIPE (W/ OIL COOLER)
80. REMOVE OIL COOLER HOSE (W/ OIL COOLER)



81. REMOVE ENGINE OIL PRESSURE SWITCH ASSY

- (a) Remove the oil pressure switch.



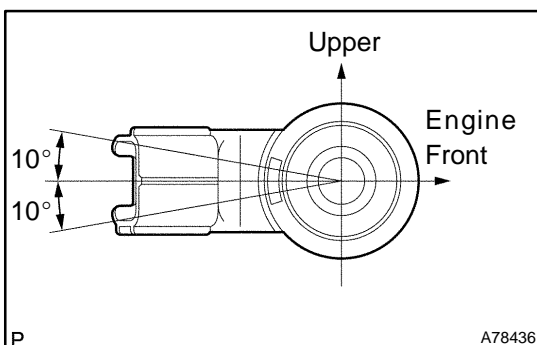
82. REMOVE KNOCK SENSOR

- (a) Remove the nut and the sensor.

83. REMOVE ENGINE COOLANT TEMPERATURE SENSOR
84. REPLACE PARTIAL ENGINE ASSY
85. INSTALL ENGINE COOLANT TEMPERATURE SENSOR

- (a) Install a new gasket to the sensor.
- (b) Install the sensor.

Torque: 20 N·m (204 kgf·cm, 15 ft·lbf)



86. INSTALL KNOCK SENSOR

- (a) Install the sensor with the nut.

Torque: 20 N·m (204 kgf·cm, 15 ft·lbf)

HINT:

Angling the knock sensor below the horizontal (below 0°) is recommended.

87. INSTALL ENGINE OIL PRESSURE SWITCH ASSY

- (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 or equivalent

- (b) Install the oil pressure switch.

Torque: 15 N·m (153 kgf·cm, 11 ft·lbf)

88. INSTALL OIL COOLER PIPE (W/ OIL COOLER)

- (a) Install a new gasket and the oil cooler pipe with the bolt and 2 nuts.

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

89. INSTALL WATER BY-PASS PIPE NO.1

- (a) Install a new gasket and the by-pass pipe with the bolt and 2 nuts.

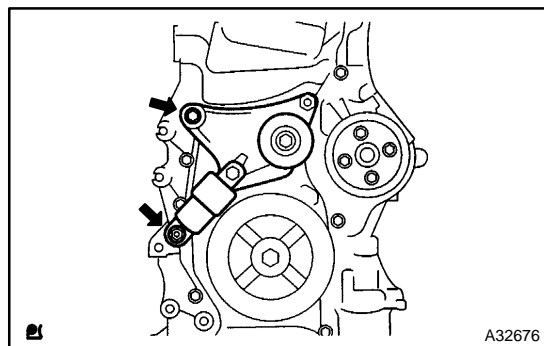
Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

90. INSTALL FUEL DELIVERY PIPE W/INJECTOR (See page 11-10)**91. INSTALL ENGINE MOUNTING BRACKET RH**

Torque: 64 N·m (653 kgf·cm, 47 ft·lbf)

92. INSTALL DRIVE SHAFT BEARING BRACKET (2WD TYPE)

Torque: 64 N·m (653 kgf·cm, 47 ft·lbf)

**93. INSTALL V-RIBBED BELT TENSIONER ASSY**

- (a) Install the belt tensioner with the bolt and nut.

Torque: 60 N·m (612 kgf·cm, 44 ft·lbf)

94. INSTALL CAMSHAFT TIMING OIL CONTROL VALVE ASSY

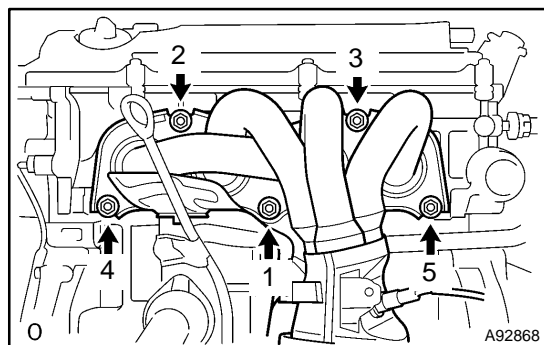
Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

95. INSTALL IGNITION COIL ASSY

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

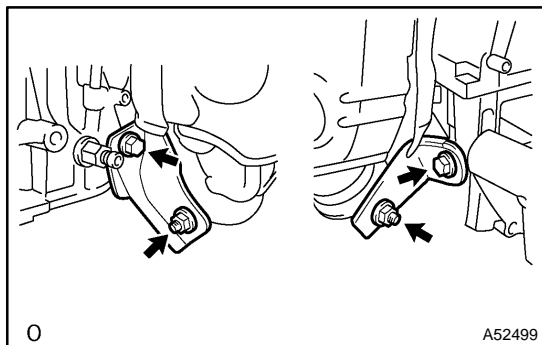
96. INSTALL THERMOSTAT (See page 16-11)**97. INSTALL WATER INLET**

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

**98. INSTALL EXHAUST MANIFOLD CONVERTER SUB-ASSY**

- (a) Install a new gasket and the exhaust manifold converter. Uniformly tighten the 5 nuts in the sequence shown in the illustration.

Torque: 37 N·m (377 kgf·cm, 27 ft·lbf)



- (b) Install the No. 1 and No. 2 exhaust manifold stays with the 2 bolts and 2 nuts.

Torque: 44 N·m (449 kgf·cm, 32 ft·lbf)

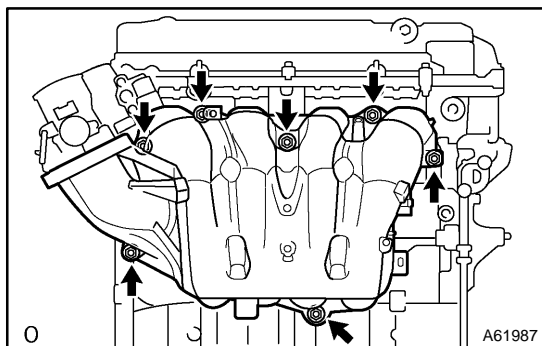
99. INSTALL MANIFOLD CONVERTER INSULATOR NO.1

100. INSTALL OIL LEVEL GAGE GUIDE

- (a) Apply a light coat of the engine oil to the O-ring and install it to the guide.
 (b) Install the oil level gage and guide with the bolt.

Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)

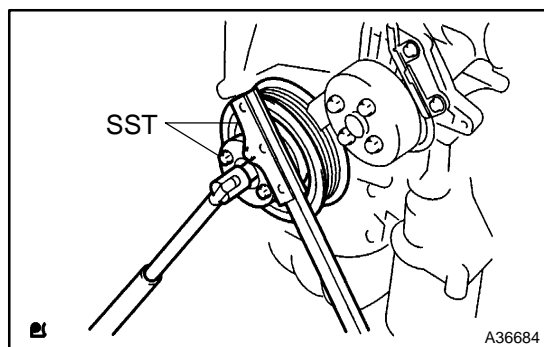
101. INSTALL GENERATOR ASSY (See page 19-40)



102. INSTALL INTAKE MANIFOLD

- (a) Install a new gasket and the intake manifold with the 5 bolts and 2 nuts. Uniformly tighten the bolts in several passes.

Torque: 30 N·m (306 kgf·cm, 22 ft·lbf)

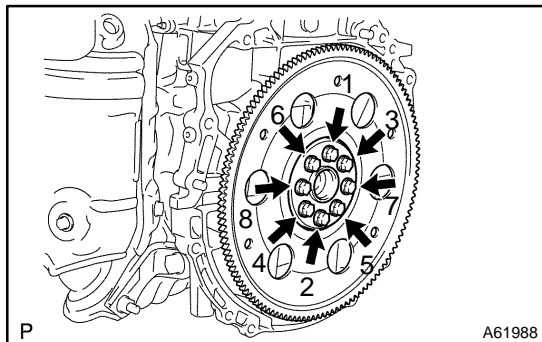


103. INSTALL DRIVE PLATE & RING GEAR SUB-ASSY

- (a) Using SST, fix the crankshaft.
 SST 09213-54015 (91651-60855), 09330-00021
 (b) Apply adhesive to 2 or 3 threads of the bolt end.

Adhesive:

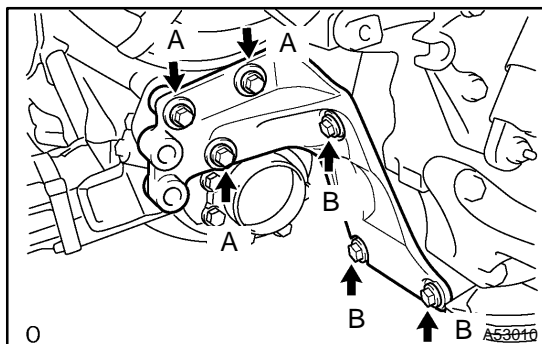
Part No. 08833-00070, THREE BOND or equivalent.



- (c) Install the front spacer, drive plate and rear spacer with 8 bolts. Uniformly tighten the 8 bolts in the sequence shown in the illustration.

Torque: 98 N·m (1,000 kgf·cm, 72 ft·lbf)

104. INSTALL AUTOMATIC TRANSAXLE ASSY (See page 40-12)
105. INSTALL STARTER ASSY (See page 19-4)
Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)
106. INSTALL FRONT DRIVE SHAFT ASSY RH (2WD TYPE) (See page 30-21)
107. INSTALL FRONT DRIVE SHAFT ASSY LH (See page 30-21)
108. INSTALL TRANSFER ASSY (4WD TYPE) (See page 31-9)



109. INSTALL ENGINE MOUNTING BRACKET RR (4WD TYPE)

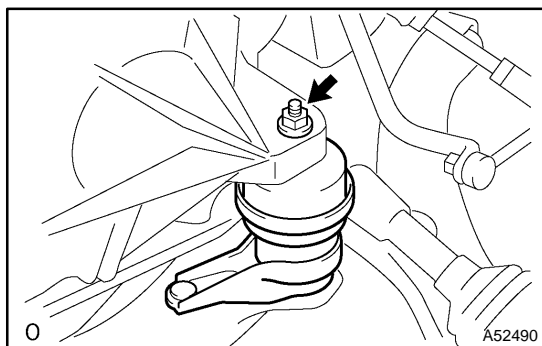
- (a) Install the mounting bracket with the 6 bolts.

Torque:

34 N·m (347 kgf·cm, 25 ft·lbf) for bolt A

64 N·m (653 kgf·cm, 47 ft·lbf) for bolt B

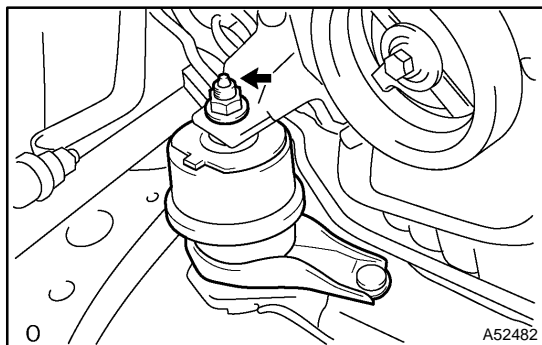
110. INSTALL FRONT DRIVE SHAFT ASSY RH (4WD TYPE) (See page 30-21)



111. INSTALL FRONT FRAME ASSY

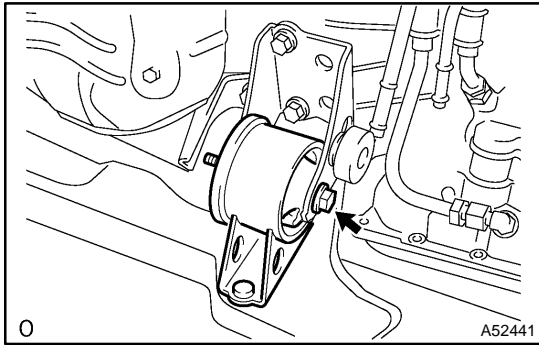
- (a) Install the engine mounting insulator LH with the nut.

Torque: 95 N·m (969 kgf·cm, 70 ft·lbf)

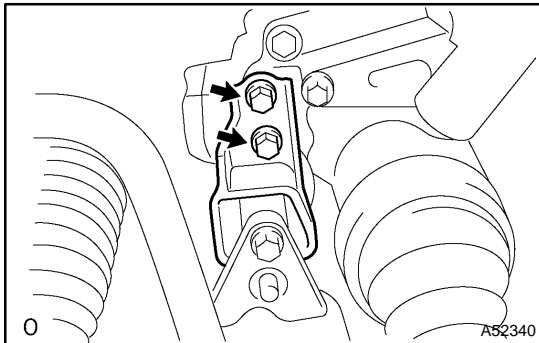


- (b) Install the engine mounting insulator RH with the nut.

Torque: 95 N·m (969 kgf·cm, 70 ft·lbf)



- (c) Install the engine mounting insulator FR with the nut.
Torque: 87 N·m (887 kgf·cm, 64 ft·lbf)



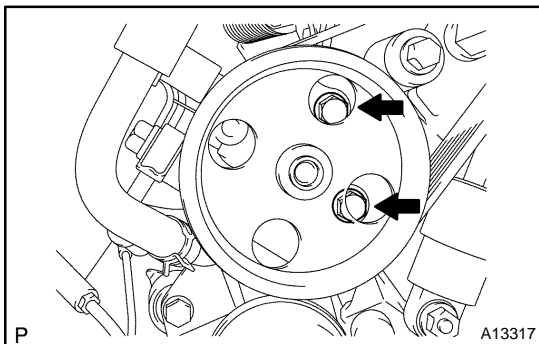
- (d) 4WD type:
 Install the engine mounting insulator RR with 2 nuts.
Torque: 75 N·m (765 kgf·cm, 55 ft·lbf)

112. INSTALL RACK & PINION POWER STEERING GEAR ASSY (4WD TYPE)

Torque: 70 N·m (714 kgf·cm, 52 ft·lbf)

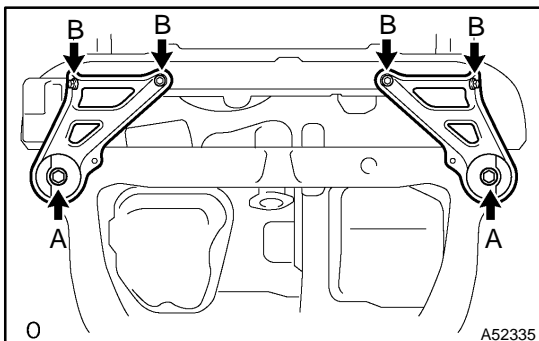
113. INSTALL STABILIZER BAR FRONT (4WD TYPE)

Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)



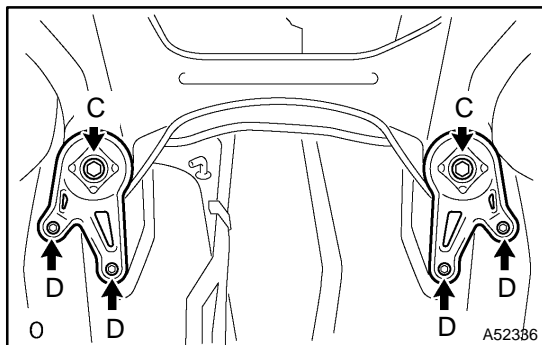
114. INSTALL VANE PUMP ASSY

- (a) Install the vane pump to the engine with the 2 bolts.
 (b) Connect the PS oil pressure switch connector.
Torque: 43 N·m (438 kgf·cm, 31 ft·lbf)



115. 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 plate LH and RH with the 6 bolts.
Torque:
86 N·m (877 kgf·cm, 63 ft·lbf) for bolt A
32 N·m (326 kgf·cm, 24 ft·lbf) for bolt B and nut



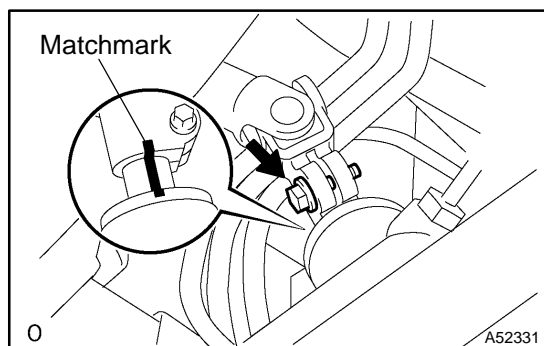
- (d) Install the front suspension member brace rear RH and LH with the 6 bolts.

Torque:

86 N·m (877 kgf·cm, 63 ft·lbf) for bolt C

32 N·m (326 kgf·cm, 24 ft·lbf) for bolt D and nut

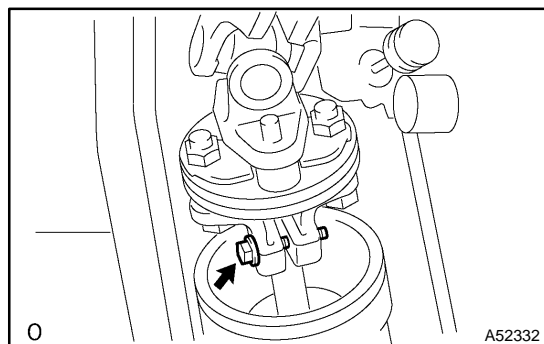
116. INSTALL COMPRESSOR AND MAGNETIC CLUTCH (See page 55-45)



117. INSTALL STEERING INTERMEDIATE SHAFT SUB-ASSY

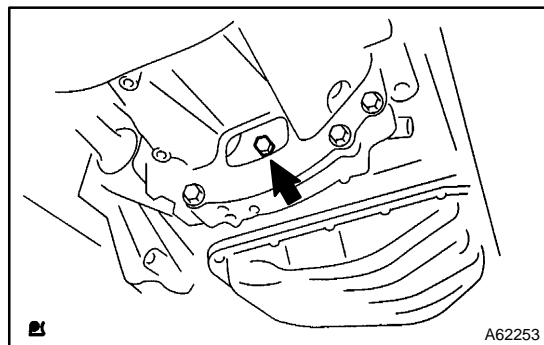
- (a) Align the matchmarks on the intermediate shaft and control valve shaft.

Torque: 35 N·m (357 kgf·cm, 26 ft·lbf)



- (b) Tighten the bolt.

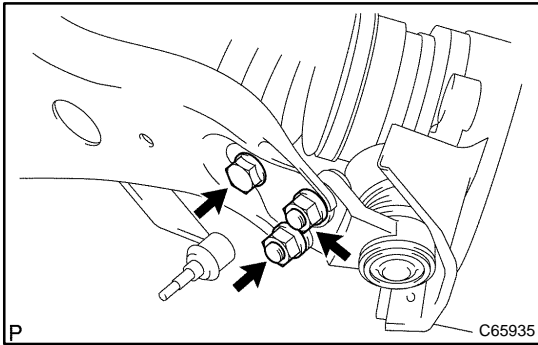
Torque: 35 N·m (357 kgf·cm, 26 ft·lbf)



118. INSTALL BOLT, W/WASHER

- (a) Fix the crankshaft, and install the 6 setting bolts.

Torque: 41 N·m (418 kgf·cm, 30 ft·lbf)



119. INSTALL FRONT SUSPENSION ARM SUB- ASSY LOWER NO.1 LH

- Install the drive shaft to the steering knuckle.
- Install the suspension lower arm with the bolt and the 2 nuts.

Torque: 127 N·m (1,295 kgf·cm, 94 ft·lbf)

120. INSTALL FRONT SUSPENSION ARM SUB-ASSY LOWER NO.1 RH

HINT:

Use the same procedures described for the LH side.

121. INSTALL TIE ROD ASSY LH

- Connect the tie rod end to the steering knuckle and install a new castle nut.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

NOTICE:

- Prevent any lubricant from contacting the thread and the taper portions.
 - After tightening the castle nut, tighten it to the additional direction within 60° to put into a cotter pin.
- Insert a new cotter pin.

122. INSTALL TIE ROD ASSY RH

HINT:

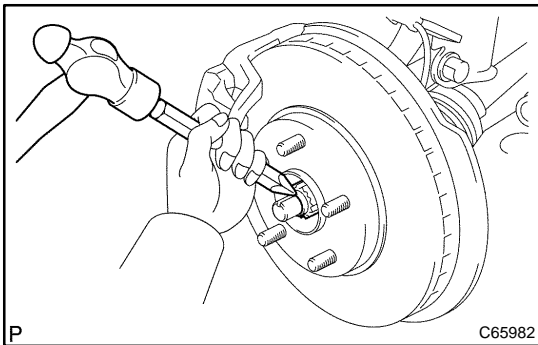
Use the same procedures described for the LH side.

123. INSTALL SPEED SENSOR FRONT LH

Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

124. INSTALL SPEED SENSOR FRONT RH

Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)



125. INSTALL FRONT AXLE HUB LH NUT

- Using a 30 mm socket wrench, install a new hub nut.
Torque: 294 N·m (3,000 kgf·cm, 217 ft·lbf)
- Using a chisel and hammer, tapped the front axle hub LH nut.

126. INSTALL FRONT AXLE HUB RH NUT

HINT:

Use the same procedures described for the LH side.

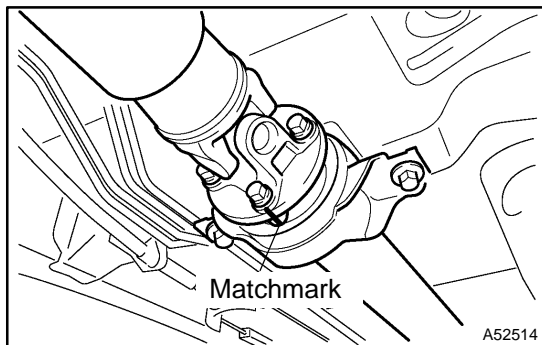
127. INSTALL FRONT STABILIZER LINK ASSY LH

- Using a 5 mm socket hexagon wrench, fix the stud bolt and install the nut.
Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)

128. INSTALL FRONT STABILIZER LINK ASSY RH

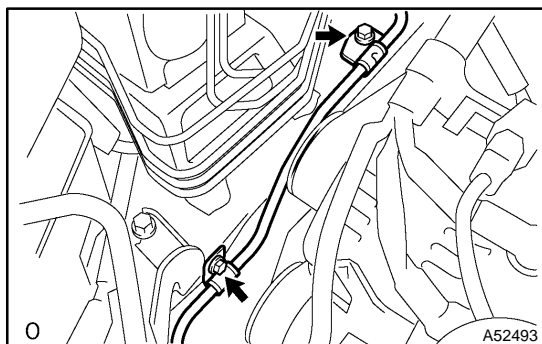
HINT:

Use the same procedures described for the LH side.

**129. INSTALL PROPELLER SHAFT (4WD TYPE)**

- (a) Align the matchmarks on both the flanges of the front propeller shaft and intermediate shaft, then install and tighten the 4 bolts, 4 washers and 4 nuts.

Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)

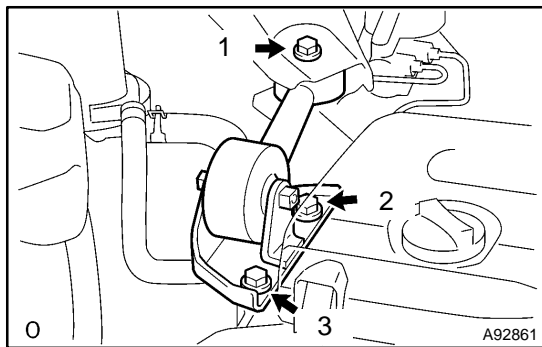
130. INSTALL EXHAUST PIPE ASSY FRONT (See page 15-2)**131. CONNECT FUEL TUBE SUB-ASSY (See page 11-1)****132. INSTALL RETURN TUBE SUB-ASSY**

- (a) Install the return tube with 2 bolts.

Torque: 20 N·m (204 kgf·cm, 15 ft·lbf)

133. INSTALL FAN AND GENERATOR V BELT (See page 14-5)**134. INSTALL ENGINE MOUNTING BRACKET NO.2 RH**

Torque: 52 N·m (530 kgf·cm, 38 ft·lbf)

**135. INSTALL ENGINE MOVING CONTROL ROD W/BACKET**

- (a) Install the engine mounting control rod with the 3 bolts.

Torque: 64 N·m (653 kgf·cm, 47 ft·lbf)

HINT:

First, loosely install bolts (1) and (2) with your hand. Then use a wrench to install bolt (3). Finally, tighten bolt (2) and (1), in that order.

136. INSTALL ENGINE MOUNTING STAY NO.2 RH

Torque: 64 N·m (653 kgf·cm, 47 ft·lbf)

137. INSTALL AIR CLEANER ASSY

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

138. ADD TRANSFER OIL

- (a) Install a new gasket and the filler plug.

Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

139. ADD AUTOMATIC TRANSAXLE FLUID**140. ADD ENGINE OIL****141. ADD COOLANT (See page 16-6)**

- 142. CHECK FOR ENGINE OIL LEAKS
- 143. CHECK FOR ENGINE COOLANT LEAKS (See page [16-6](#))
- 144. INSPECT FOR FUEL LEAKS (See page [11-1](#))
- 145. INSTALL FRONT WHEEL
- 146. ADJUST FRONT WHEEL ALIGNMENT (See page [26-7](#))
- 147. CHECK IDLE SPEED AND IGNITION TIMING (See page [14-1](#))
- 148. INSPECT CO/HC (See page [14-1](#))
- 149. CHECK ABS SPEED SENSOR SIGNAL (See page [05-765](#))