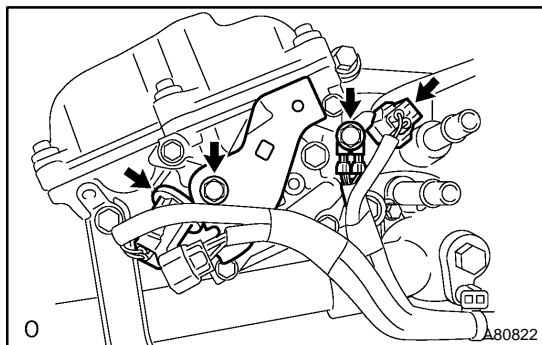


CYLINDER HEAD GASKET NO.2 (1MZ-FE/3MZ-FE)

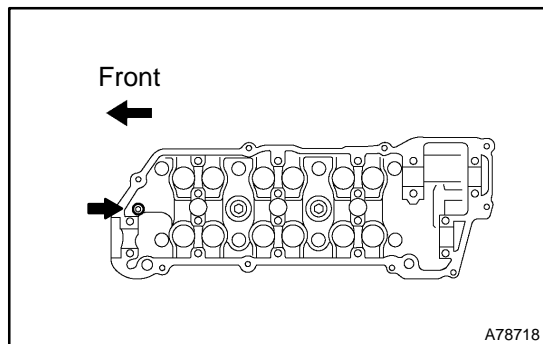
REPLACEMENT

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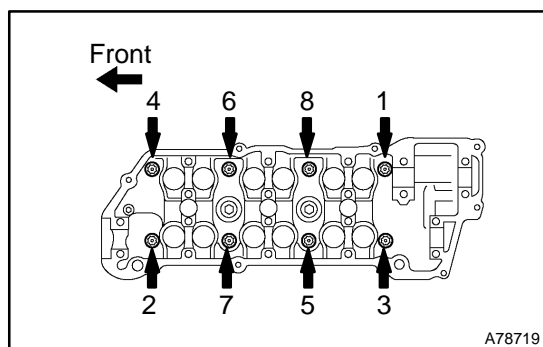
1. WORK FOR PREVENTING GASOLINE FROM SPILLING OUT (See page 11-26)
2. DRAIN ENGINE COOLANT (See page 16-27)
3. DRAIN ENGINE OIL
4. REMOVE MANIFOLD STAY NO.2
5. DISCONNECT EXHAUST MANIFOLD CONVERTER SUB-ASSY NO.2
 - (a) Remove the 2 nuts, and disconnect the exhaust manifold converter from the front exhaust pipe.
6. REMOVE V-BANK COVER SUB-ASSY (See page 14-164)
7. REMOVE FRONT SUSPENSION UPPER BRACE CENTER (W/ FRONT SUSPENSION BRACE UPPER CENTER)
8. REMOVE AIR CLEANER ASSEMBLY WITH HOSE
9. REMOVE INTAKE AIR SURGE TANK (See page 14-142)
10. DISCONNECT FUEL PIPE SUB-ASSY NO.1 (See page 11-38)
11. DISCONNECT HEATER INLET WATER HOSE
12. REMOVE INTAKE MANIFOLD (See page 14-239)
13. REMOVE RADIATOR HOSE INLET
14. REMOVE WATER OUTLET (See page 14-239)
15. DISCONNECT RADIATOR HOSE OUTLET
16. REMOVE WATER INLET PIPE
17. REMOVE OIL LEVEL GAGE SUB-ASSY
18. REMOVE OIL LEVEL GAGE GUIDE
19. REMOVE FRONT WHEEL RH
20. REMOVE FRONT FENDER APRON SEAL RH
21. REMOVE V (COOLER COMPRESSOR TO CRANKSHAFT PULLEY) BELT NO.1 (See page 14-140)
22. REMOVE VANE PUMP V BELT (See page 14-140)
23. REMOVE ENGINE MOVING CONTROL ROD (See page 14-164)
24. REMOVE ENGINE MOUNTING STAY NO.2 RH (See page 14-164)
25. REMOVE GENERATOR BRACKET NO.2
26. REMOVE CRANKSHAFT PULLEY (See page 14-186)
27. REMOVE TIMING BELT NO.1 COVER (See page 14-186)
28. REMOVE TIMING BELT NO.2 COVER (See page 14-186)
29. REMOVE ENGINE MOUNTING BRACKET RH
30. REMOVE TIMING BELT GUIDE NO.2 (See page 14-186)
31. REMOVE TIMING BELT (See page 14-186)
32. REMOVE TIMING BELT IDLER SUB-ASSY NO.2
33. REMOVE CAMSHAFT TIMING PULLEY (See page 14-186)
34. REMOVE TIMING BELT NO.3 COVER (See page 14-186)
35. REMOVE IGNITION COIL ASSY
36. REMOVE CYLINDER HEAD COVER SUB-ASSY LH (See page 14-186)
37. REMOVE NO.3 CAMSHAFT SUB-ASSY (See page 14-186)
38. REMOVE NO.4 CAMSHAFT SUB-ASSY (See page 14-186)

**39. REMOVE CYLINDER HEAD LH**

- Disconnect the VVT sensor connector.
- Disconnect the camshaft timing oil control valve connector.
- Remove the bolt and disconnect the ground cable.
- Remove the bolt and the wire harness clamp bracket.



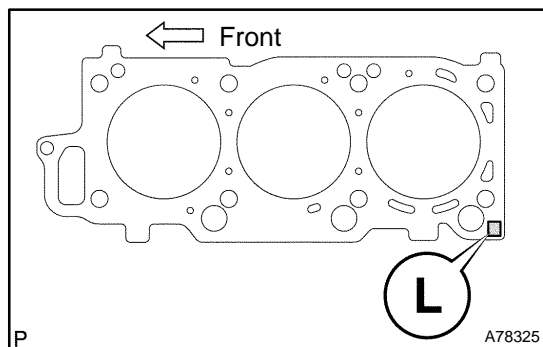
- Using a socket hexagon wrench 8, remove the hexagon bolt.



- Uniformly loosen the 8 cylinder head bolts in the sequence shown in the illustration. Remove the 8 cylinder head bolts and plate washers.

NOTICE:

- Be careful not to drop the washers into the cylinder head.
- Head warpage or cracking could result from removing bolts in an incorrect order.

40. REMOVE CYLINDER HEAD GASKET NO.2**41. INSPECT CYLINDER HEAD SET BOLT (See page 14-186)****42. INSTALL CYLINDER HEAD GASKET NO.2**

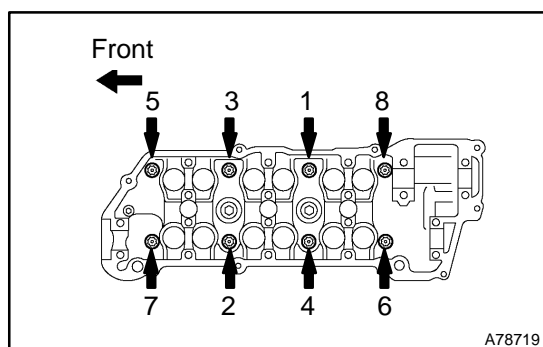
- Place a new cylinder head gasket on the cylinder block with the L mark as shown in the illustration.

NOTICE:

- Remove any oil from the contact surface.
- Be careful of the installation direction.
- To avoid damage to the gasket, place the cylinder head on the gasket carefully.

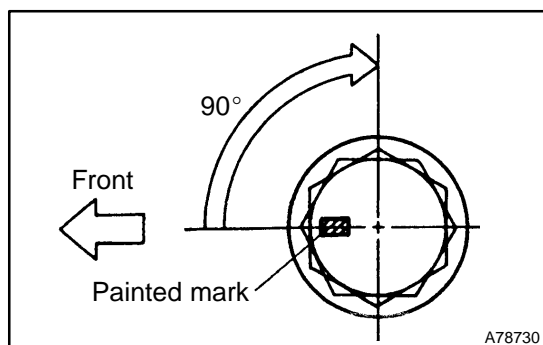
43. INSTALL CYLINDER HEAD LH**NOTICE:**

The cylinder head bolts are tightened in 2 successive steps.

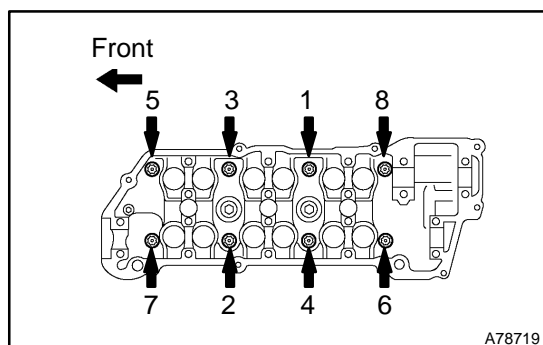


- (a) Apply a light coat of engine oil on the threads of the cylinder head bolts.
- (b) Install the plate washer to the cylinder head bolt.
- (c) Uniformly install and tighten the 8 cylinder head bolts in the sequence shown in the illustration.

Torque: 54 N·m (550 kgf·cm, 40 ft·lbf)



- (d) Mark the front side of each cylinder head bolt head with paint as shown in the illustration.
- (e) Retighten the cylinder head bolts by 90° in the same sequence as step (c).
- (f) Check that each painted mark is now at a 90° angle to the front.



- (g) Using a socket hexagon wrench 8, install the hexagon bolt.

Torque: 19 N·m (189 kgf·cm, 14 ft·lbf)

- (h) Install the wire harness clamp bracket with the bolt.

Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)

- (i) Connect the ground cable with the bolt.

Torque: 5.4 N·m (55 kgf·cm, 48 in·lbf)

44. INSTALL NO.4 CAMSHAFT SUB-ASSY (See page 14-186)
45. INSTALL NO.3 CAMSHAFT SUB-ASSY (See page 14-186)
46. INSTALL CYLINDER HEAD COVER SUB-ASSY LH (See page 14-186)
47. INSTALL IGNITION COIL ASSY
Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)
48. INSTALL TIMING BELT NO.3 COVER (See page 14-186)
49. INSTALL CAMSHAFT TIMING PULLEY (See page 14-186)
50. INSTALL TIMING BELT IDLER SUB-ASSY NO.2
Torque: 43 N·m (438 kgf·cm, 32 ft·lbf)
51. INSPECT TIMING BELT (See page 14-186)
52. INSTALL TIMING BELT (See page 14-186)
53. INSTALL TIMING BELT TENSIONER ASSY (See page 14-186)
54. INSTALL TIMING BELT GUIDE NO.2 (See page 14-186)
55. INSTALL ENGINE MOUNTING BRACKET RH
Torque: 28 N·m (286 kgf·cm, 21 ft·lbf)
56. INSTALL TIMING BELT NO.2 COVER (See page 14-186)
57. INSTALL TIMING BELT NO.1 COVER (See page 14-186)
58. INSTALL CRANKSHAFT PULLEY (See page 14-186)
59. INSTALL GENERATOR BRACKET NO.2
Torque: 28 N·m (286 kgf·cm, 21 ft·lbf)

60. INSTALL ENGINE MOUNTING STAY NO.2 RH (See page [14-164](#))
61. INSTALL ENGINE MOVING CONTROL ROD (See page [14-164](#))
62. INSTALL VANE PUMP V BELT (See page [14-140](#))
63. INSTALL V (COOLER COMPRESSOR TO CRANKSHAFT PULLEY) BELT NO.1
(See page [14-140](#))
64. INSPECT DRIVE BELT TENSION (See page [14-136](#))
65. INSTALL OIL LEVEL GAGE GUIDE (See page [17-41](#))
66. INSTALL WATER INLET PIPE (See page [16-32](#))
67. INSTALL WATER OUTLET (See page [14-239](#))
68. INSTALL INTAKE MANIFOLD (See page [14-164](#))
69. CONNECT FUEL PIPE SUB-ASSY NO.1 (See page [11-38](#))
70. INSTALL INTAKE AIR SURGE TANK (See page [14-142](#))
71. INSTALL AIR CLEANER ASSEMBLY WITH HOSE
72. CONNECT VACUUM HOSES (See page [14-164](#))
73. INSTALL FRONT SUSPENSION UPPER BRACE CENTER (W/ FRONT SUSPENSION BRACE UPPER CENTER)
Torque: 80 N·m (816 kgf·cm, 59 ft·lbf)
74. INSTALL V-BANK COVER SUB-ASSY (See page [14-164](#))
75. INSTALL EXHAUST MANIFOLD CONVERTER SUB-ASSY NO.2
 - (a) Install a new gasket and the exhaust manifold converter to the front exhaust pipe.
Torque: 62 N·m (633 kgf·cm, 46 ft·lbf)
76. INSTALL MANIFOLD STAY NO.2 (See page [14-164](#))
77. INSTALL FRONT WHEEL RH
78. ADD ENGINE OIL
79. ADD ENGINE COOLANT (See page [16-27](#))
80. CHECK FOR ENGINE OIL LEAKS
81. CHECK FOR ENGINE COOLANT LEAKS (See page [16-21](#))
82. CHECK FOR FUEL LEAKS
83. CHECK FOR EXHAUST GAS LEAKS
84. INSPECT IGNITION TIMING (See page [14-136](#))
85. INSPECT ENGINE IDLE SPEED (See page [14-136](#))
86. INSPECT COMPRESSION (See page [14-136](#))
87. INSPECT CO/HC (See page [14-136](#))