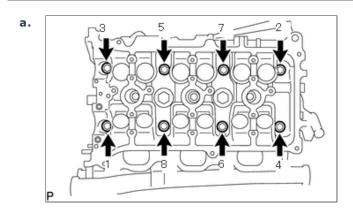
1GR-FE ENGINE MECHANICAL CYLINDER HEAD GASKET REMOVAL

PROCEDURE

1.REMOVE TIMING CHAIN COVER SUB-ASSEMBLY	11302
Click hereEngine / Hybrid System>1GR-FE LUBRICATION>OIL PUMP>REMOVAL	
2.SET NO. 1 CYLINDER TO TDC/COMPRESSION	
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>REASSEMBLY	
3.REMOVE NO. 1 CHAIN TENSIONER ASSEMBLY	13540
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
4.REMOVE CHAIN TENSIONER SLIPPER	13559
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
5.REMOVE IDLE SPROCKET ASSEMBLY	13530
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
6.REMOVE NO. 2 CHAIN VIBRATION DAMPER	13562
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
7.REMOVE CHAIN SUB-ASSEMBLY	13506
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
8.REMOVE CRANKSHAFT TIMING SPROCKET	13521
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
9.REMOVE NO. 1 CHAIN VIBRATION DAMPER	13561
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
10.REMOVE CAMSHAFT TIMING GEARS AND NO. 2 CHAIN (for Bank 1)	
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
11.REMOVE NO. 2 CHAIN TENSIONER ASSEMBLY	13550
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
12.REMOVE CAMSHAFT TIMING GEARS AND NO. 2 CHAIN (for Bank 2)	
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
■ 13.REMOVE NO. 3 CHAIN TENSIONER ASSEMBLY	13560A
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
14.REMOVE CAMSHAFT BEARING CAP (for Bank 1)	
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
15.REMOVE CAMSHAFT	13511

16.REMOVE NO. 2 CAMSHAFT	13512
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
☐ 17.REMOVE NO. 1 CAMSHAFT BEARING	11811
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
18.REMOVE NO. 2 CAMSHAFT BEARING	11821
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
19.REMOVE CAMSHAFT BEARING CAP (for Bank 2)	
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
20.REMOVE NO. 3 CAMSHAFT SUB-ASSEMBLY	13053
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
21.REMOVE NO. 4 CAMSHAFT SUB-ASSEMBLY	13054
Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>ENGINE UNIT>DISASSEMBLY	
22.REMOVE CYLINDER HEAD SUB-ASSEMBLY	11101



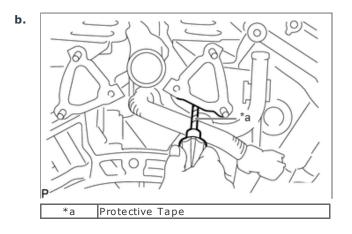
Using a 10 mm bi-hexagon wrench, uniformly loosen the 8 cylinder head set bolts in the sequence shown in the illustration and remove the 8 cylinder head set bolts and 8 plate washers.

NOTICE:

- \cdot Be careful not to drop the plate washers into the cylinder head sub-assembly.
- Cylinder head sub-assembly warpage or cracking could result from removing bolts in the incorrect order.

HINT:

Be sure to keep the removed parts separate for each installation position.



Remove the cylinder head sub-assembly.

NOTICE:

Be careful not to damage the contact surfaces of the cylinder head sub-assembly and cylinder block sub-assembly.

HINT:

- · If the cylinder head sub-assembly is difficult to lift off, pry between the cylinder head sub-assembly and cylinder block sub-assembly with a screwdriver.
- · Tape the screwdriver tip before use.

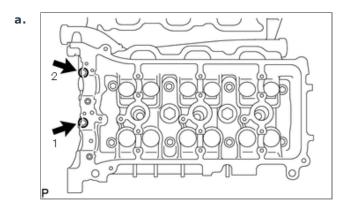
23.REMOVE CYLINDER HEAD GASKET

11115

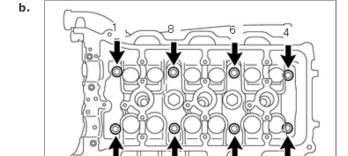
a. Remove the cylinder head gasket.

24.REMOVE CYLINDER HEAD LH

11102



Uniformly loosen the 2 bolts in the sequence shown in the illustration and remove the 2 bolts.



Using a 10 mm bi-hexagon wrench, uniformly loosen the 8 cylinder head set bolts in the sequence shown in the illustration and remove the 8 cylinder head set bolts and 8 plate washers.

NOTICE:

- · Be careful not to drop the plate washers into the cylinder head LH.
- · Cylinder head LH warpage or cracking could result from removing bolts in the incorrect order.

HINT:

Be sure to keep the removed parts separate for each installation position.

*a Protective Tape

Remove the cylinder head LH.

NOTICE:

Be careful not to damage the contact surfaces of the cylinder head LH and cylinder block sub-assembly.

HINT:

- · If the cylinder head LH is difficult to lift off, pry between the cylinder head LH and cylinder block subassembly with a screwdriver.
- · Tape the screwdriver tip before use.



11116

- **a.** Remove the No. 2 cylinder head gasket.
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