

c

REMOVAL

1. REMOVE CAMSHAFT HOUSING SUB-ASSEMBLY

(a) Remove the camshaft housing sub-assembly INFO.

2. REMOVE NO. 1 EXHAUST MANIFOLD HEAT INSULATOR INFO

3. REMOVE MANIFOLD STAY INFO

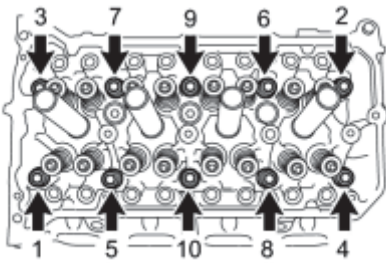
4. REMOVE EXHAUST MANIFOLD INFO

5. REMOVE NO. 1 VALVE ROCKER ARM SUB-ASSEMBLY INFO

6. REMOVE VALVE LASH ADJUSTER ASSEMBLY INFO

7. REMOVE VALVE STEM CAP INFO

8. REMOVE CYLINDER HEAD SUB-ASSEMBLY



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

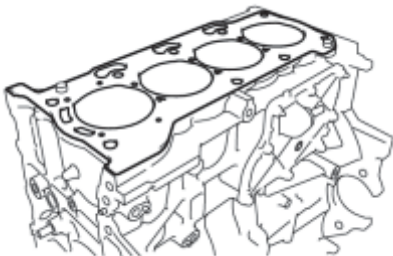
- Be careful not to drop washers into the cylinder head.
- Head warpage or cracking could result from removing the bolts in the wrong order.

(b) Using a screwdriver with its tip wrapped with tape, pry between the cylinder head and cylinder block, and remove the cylinder head.

NOTICE:

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

9. REMOVE CYLINDER HEAD GASKET



(a) Remove the cylinder head gasket.

INSTALLATION

1. INSPECT NO. 1 VALVE ROCKER ARM SUB-ASSEMBLY_ INFO

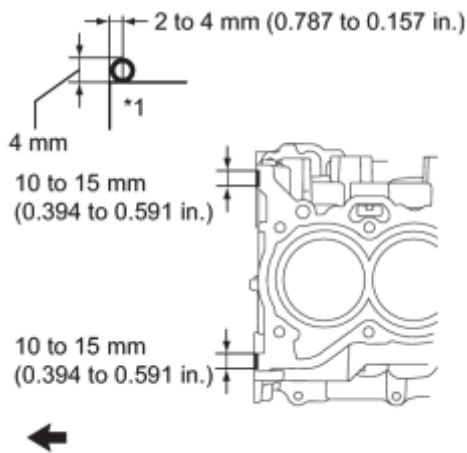
2. INSPECT VALVE LASH ADJUSTER ASSEMBLY_ INFO

3. INSPECT CYLINDER HEAD SET BOLT_ INFO

4. INSPECT CYLINDER HEAD_ INFO

5. INSTALL CYLINDER HEAD GASKET

(a) Apply seal packing (Diameter 4.0 mm (0.157 in.)) to the cylinder block as shown in the illustration.



Text in Illustration

*1	Cylinder Block
➔	Engine Front

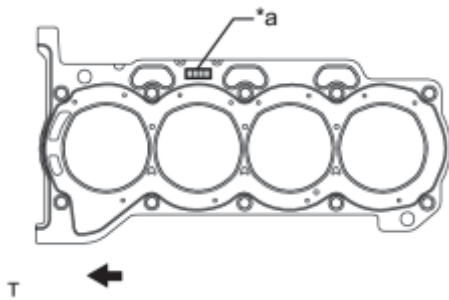
Seal packing:

Toyota Genuine Seal Packing Black, Three Bond 1207B or equivalent

NOTICE:

Remove any oil from the cylinder block.

(b) Place a new cylinder head gasket on the cylinder block with the Lot No. stamp facing upward.



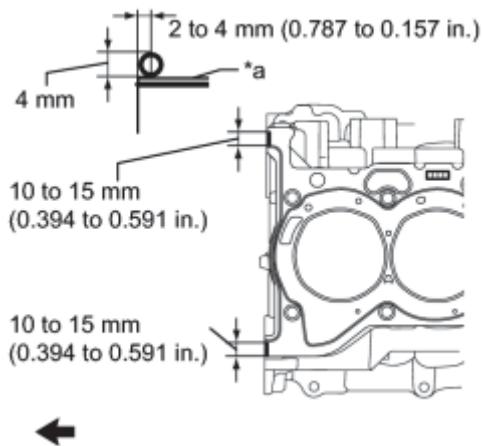
Text in Illustration

*a	Lot No.
➔	Engine Front

NOTICE:

Install the cylinder head gasket within 3 minutes after applying seal packing.

(c) Apply seal packing (Diameter 4.0 mm (0.157 in.)) to the new cylinder head gasket as shown in the illustration.



Text in Illustration

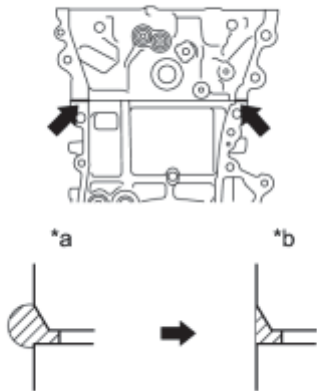
*1	Cylinder Head Gasket
➔	Engine Front

Seal packing:

Toyota Genuine Seal Packing Black, Three Bond 1207B or equivalent
 2010 Toyota Prius

NOTICE:

- Remove any oil from the cylinder head gasket and cylinder head.
- Install the cylinder head gasket within 3 minutes and tighten the bolts within 15 minutes of applying seal packing.



(d) After tightening the cylinder head bolts, wipe off the seal packing material seeped out from the contact surfaces between the cylinder head and cylinder block.

Text in Illustration

*a	Before wiping off:
*b	After wiping off:

6. INSTALL CYLINDER HEAD SUB-ASSEMBLY

HINT:

The cylinder head bolts are tightened in 3 progressive steps.

(a) Place the cylinder head on the cylinder block.

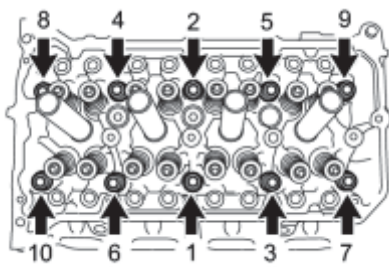
NOTICE:

- Make sure that no oil is on the mounting surface of the cylinder head.
- Place the cylinder head on the cylinder block gently in order not to damage the gasket with the bottom part of the head.

(b) Install the plate washers to the cylinder head bolts.

(c) Apply a light coat of engine oil to the threads and under the heads of the cylinder head bolts.

(d) Step 1:



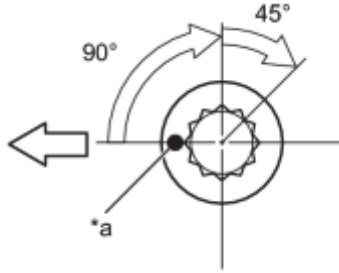
(1) Using a 10 mm bi-hexagon wrench, install and uniformly tighten the 10 cylinder head bolts in several steps, in the sequence shown in the illustration.

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

NOTICE:

Do not drop the plate washers into the cylinder head.

(e) Step 2:



0

Text in Illustration

*a	Paint Mark
➔	Engine Front

(1) Mark each cylinder head bolt head with paint as shown in the illustration.

(2) Tighten the cylinder head bolts 90° in the sequence shown in step 1.

(f) Step 3:

(1) Tighten the cylinder head bolts another 45° in the sequence shown in step 1.

(g) Check that the paint mark is now at a 135° angle to the front.

7. INSTALL VALVE STEM CAP_ [INFO](#)

8. INSTALL VALVE LASH ADJUSTER ASSEMBLY_ [INFO](#)

9. INSTALL NO. 1 VALVE ROCKER ARM SUB-ASSEMBLY_ [INFO](#)

10. INSTALL EXHAUST MANIFOLD_ [INFO](#)

11. INSTALL MANIFOLD STAY_ [INFO](#)

12. INSTALL NO. 1 EXHAUST MANIFOLD HEAT INSULATOR_ [INFO](#)

13. INSTALL CAMSHAFT HOUSING SUB-ASSEMBLY

(a) Install the camshaft housing sub-assembly_ [INFO](#) .