

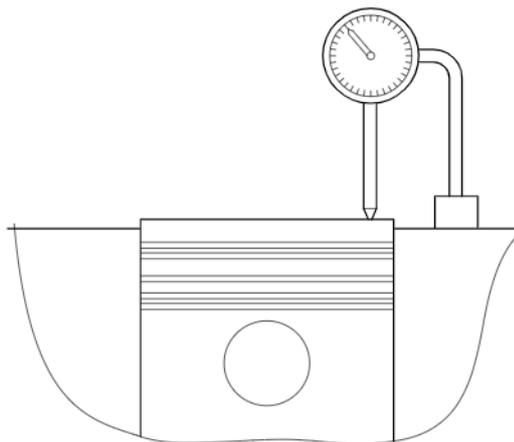
INSTALLATION E4F40791

Install the cylinder head in the reverse order of removal :

NOTE

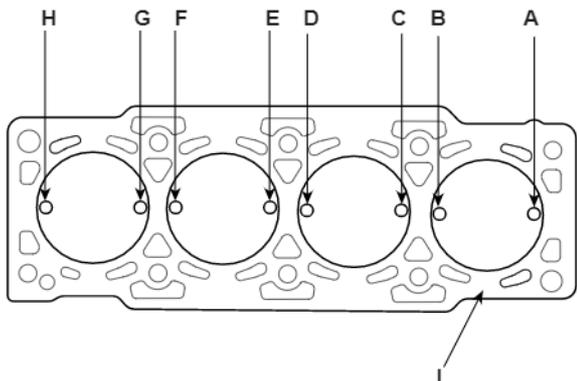
- Always use a new head gasket.
- Cylinder head and cylinder block surface must be clean.
- Turn the crankshaft so the No.1 piston is at TDC(Top Dead Center).

1. Cylinder head dowel pins must be aligned.
2. Select the cylinder head gasket.
 - a. Measure the piston protrusion from the upper cylinder block face (I) on 8 places (A ~ H) at T.D.C. Measure on the crankshaft center line considering the piston migration.

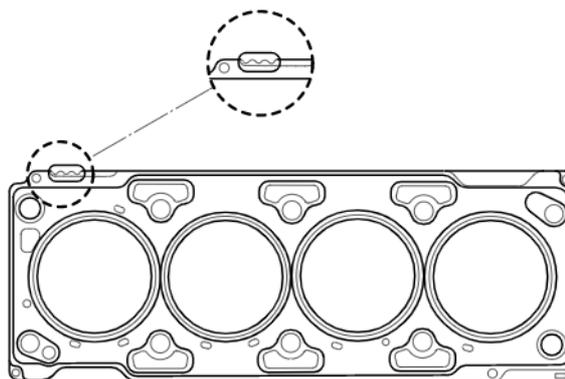


ACIE089A

- b. Select the gasket in the table below using the average value of piston protrusions. Although even the only 1 point is over than the each rank limit, use 1 rank upper gasket than specified in the table below.



ACIE088A



ACIE090A

Displacement	2.2 L		
	Average of piston protrusion	0.194 ~ 0.337mm (0.0079 ~ 0.013in.)	0.337 ~ 0.440mm (0.013 ~ 0.017in.)
Gasket thickness	1.1 ± 0.05mm (0.0433 ± 0.0020in.)	1.2 ± 0.05mm (0.0472 ± 0.0020in.)	1.3 ± 0.05mm (0.0512 ± 0.0020in.)
Limit of each rank extant	0.43mm (0.0169in.)	0.53mm (0.0208in.)	-
Identification code	 SCMEM6102D	 SCMEM6103D	 SCMEM6104D

- c. Install the gasket so that the identification mark faces toward the flywheel side.

3. Position the cylinder head assembly over the gasket.
4. Tighten the cylinder head bolts slightly.
5. Install the camshaft sprocket, aligning the timing mark.

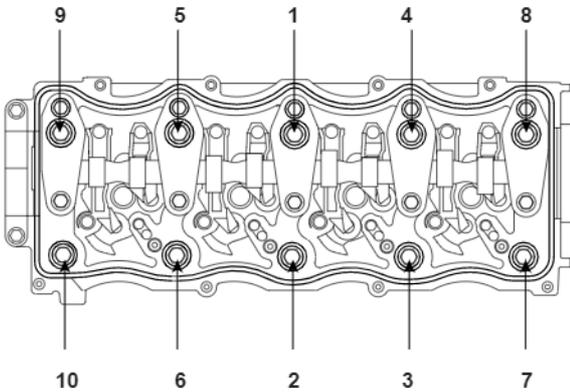
Tightening torque

122.6 ~ 137.3N.m (12.5 ~ 14.0kgf.m, 90.4 ~ 101.3lb-ft)

6. Tighten the bolts to the specified torque

Tightening torque

63.7N.m (6.5kgf.m, 47.0lb-ft) + 120° + 120°



ACIE094A

NOTE

- Tightening sequence of cylinder head bolt should be confirmed to the upper drawing.
- Cylinder head bolt must be replaced.

7. Install the fuel pump assembly.
8. Install the intake/exhaust manifold assemblies.
9. Install the hose between the vacuum pump and the cylinder head.
10. If it is necessary to replace the oil seals on the cylinder head cover for injectors, use the SST(09351-27401).
11. Install the head cover gasket in the groove of the cylinder head cover.

NOTE

- Cylinder head cover gasket must be replaced.
- Before installing the head cover gasket, thoroughly clean the seal and the groove.
- When installing, make sure the head cover gasket is seated securely in the corners of the recesses with no gap.

12. Apply liquid gasket to the head cover gasket at the four corners of the recesses.

NOTE

- Use liquid gasket LOCTITE 5699 or TH1212D.
- Check that the mating surface are clean and dry before applying liquid gasket.
- Do not install the parts if five minutes or more have elapsed since applying liquid gasket. Instead, reapply liquid gasket after removing old residue.
- After assembly, wait at least 30 minutes before filling the engine with oil.

13. When installing the cylinder head cover, hold the head cover gasket in the groove by placing your fingers on the camshaft holder contacting surfaces (top of the semicircles).
Once the cylinder head cover is on the cylinder head, slide the cover slightly back and forth to seat the head cover gasket.

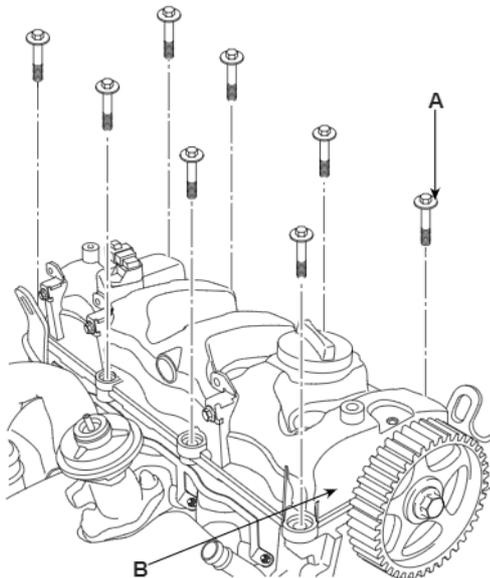
NOTE

- Before installing the cylinder head cover, clean the cylinder head contacting surfaces with a shop towel.
- Do not touch the parts where liquid gasket was applied.
- Take care not to damage the oil seals when installing the cylinder head cover.
- Visually check the oil seals for damage.
- Replace any washer that is damaged or deteriorated.

14. Tighten the nuts in two or three steps. In the final step, tighten all bolts, in sequence.

Tighten torque

8 ~ 10N.m (0.8 ~ 1.0kgf.m, 5.90 ~ 7.38lb-ft)

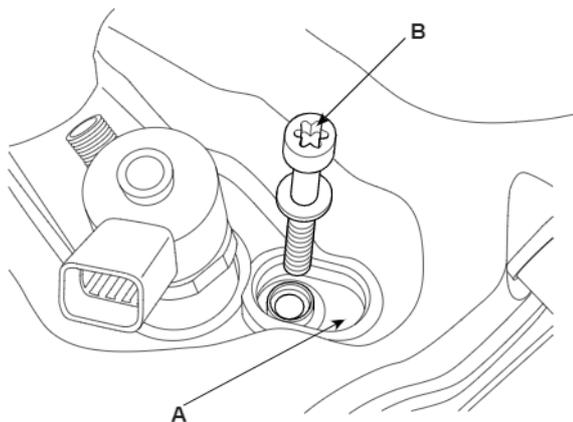


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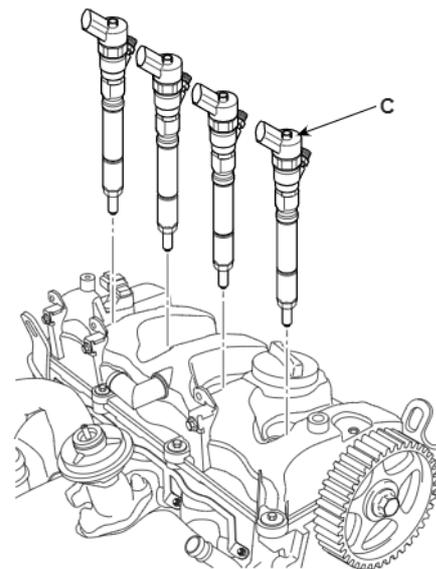
NOTE

After assembly, wait at least 30 minutes before filling the engine with oil.

15. After installing, check that all tubes, hoses and connectors are installed correctly.
16. Insert the injectors (C), moving back the injector holders (A) with the bolts (B).

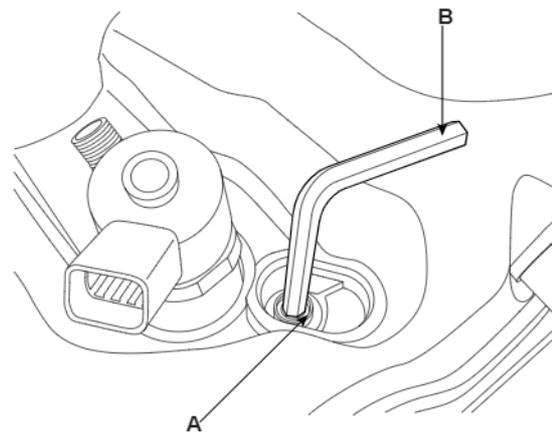


ACIE096A



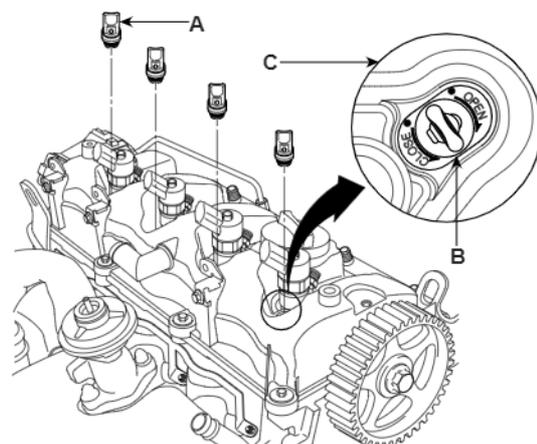
ACIE095A

17. Tighten the injector holder bolts (A) with 5mm hexagonal wrench (B).



ACIE095A

18. Install the injector plug (A).



ACIE097A

- a. Make sure that the stopper of the plug faces 'OPEN' side. Otherwise pull and rotate the plug clockwise so the stopper should face 'OPEN' side.
- b. Apply the engine oil on the head cover mating surface or the gasket of the plug.
- c. Insert the plugs in the head cover.
- d. Rotate the plug inserted counterclockwise 90° .
- e. After installation, rotate the plug clockwise. If it is rotated, repeat the step a ~ d.

 **NOTE**

Plug gasket must be replaced.