

Component Procedures: Timing Cover

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Component Procedures: Timing Cover

Parts and Labor (itype_189)

Parts

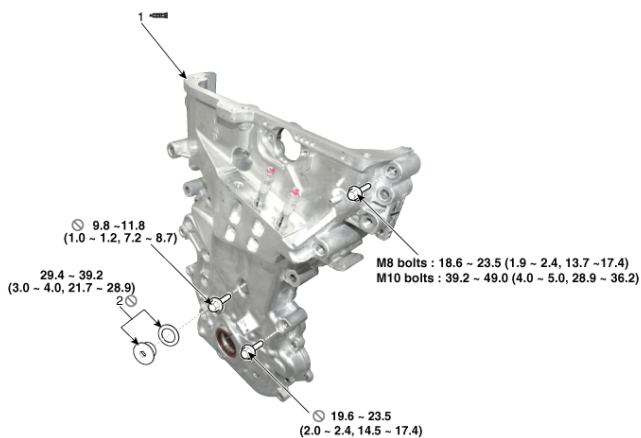
| Qualifier | Part # | Name | Price | Note |
|-------------------------------|------------|-----------------------|--------|----------------------------|
| Camshaft & Timing > Front Co? | 213502E740 | 18 - Front Cover | 519.10 | Includes Front Crank Seal. |
| Crankshaft & Bearings > Fron? | 214212E300 | 27 - Front Crank Seal | 13.58 | |

Labor

| Operation | Qualifier Path | Skill | Std Hrs | Wty Hrs |
|------------------|---|-------|---------|---------|
| Remove & Replace | Camshaft & Timing > Front Cover Gasket, R&R | B | 6.3 | 0.0 |
| Remove & Replace | Camshaft & Timing > Front Cover, R&R | B | 6.3 | 0.0 |
| Remove & Replace | Crankshaft & Bearings > Front Crank Seal, R&R | B | 1.5 | 0.0 |

Timing Chain Cover - Components and Components Location (Article 45334)

- Components



Tightening torque : N.m (kgf.m, lb-ft)

1. Timing chain cover
2. Service plug bolt & gasket

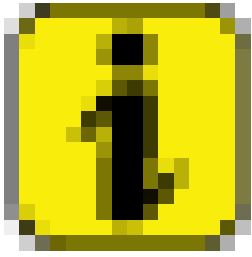
Timing Chain Cover - Repair Procedures (Article 45335)

- Removal

Use fender covers to avoid damaging painted surfaces. To avoid damage, unplug the wiring connectors carefully while holding the connector portion.

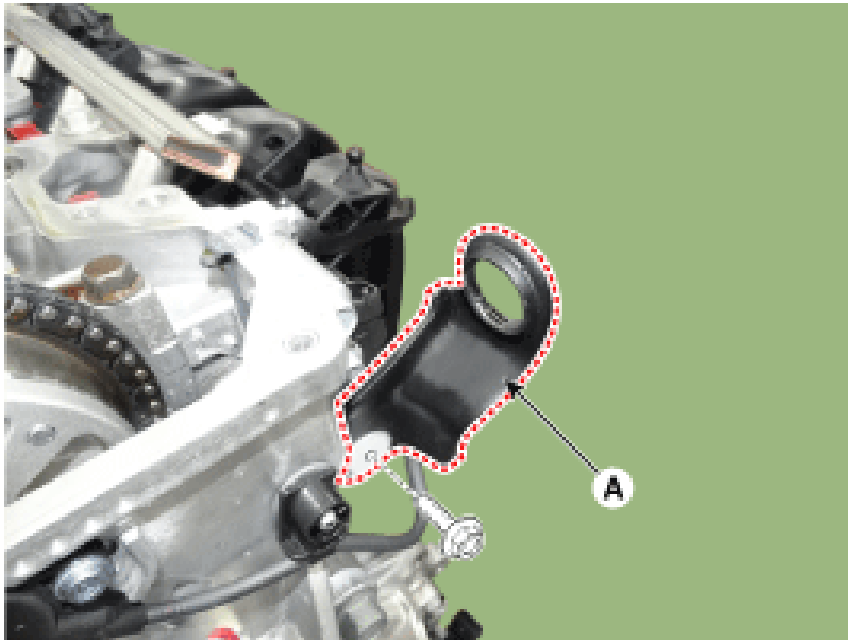
NOTICE

- Use fender covers to avoid damaging painted surfaces.
 - To avoid damage, unplug the wiring connectors carefully while holding the connector portion.
- Mark all wiring and hoses to avoid misconnection.

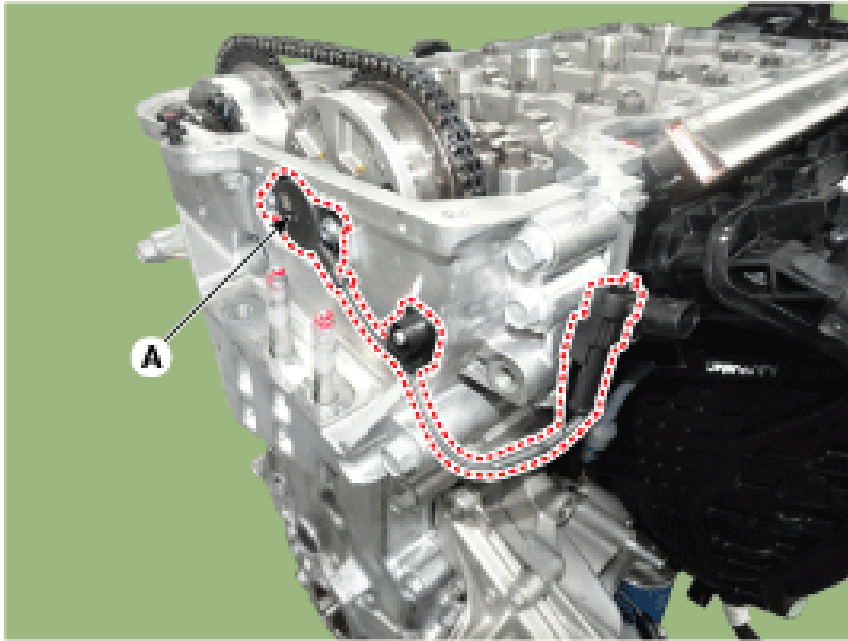


Information

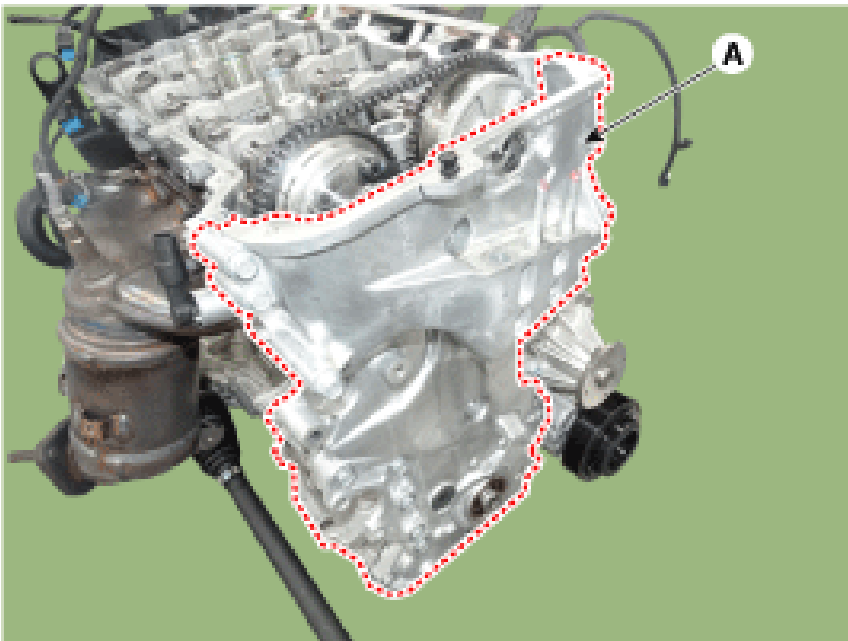
- Mark all wiring and hoses to avoid misconnection.
- Disconnect the battery negative terminal.
- Remove the RH front wheel. (Refer to Suspension System - "Wheel")
- Remove the engine room under cover . (Refer to Engine and Transaxle Assembly - "Engine Room Under Cover")
- Remove the engine cover . (Refer to Engine and Transaxle Assembly - "Engine Cover")
- Remove the cylinder head cover . (Refer to Cylinder Head Assembly – "Cylinder Head Cover")
- Drain engine oil and remove the oil pan . (Refer to Lubrication System – "Oil Pan") (Refer to Lubrication System - "Engine Oil")
- Remove the engine mounting support bracket. (Refer to Engine and Transaxle Assembly - "Engine Mounting")
- Remove the crankshaft damper pulley. (Refer to Timing System – "Crankshaft Damper Pulley")
- Remove the water pump pulley. (Refer to Cooling System - "Water pump")
- Remove the idler. (Refer to Timing System - "Idler")
- Remove the alternator. (Refer to Engine Electrical System – "Alternator")
- Remove the front engine hanger (A).



- Remove the intermediate lock CVVT actuator (A).



- Remove the timing chain cover (A) by gently prying the gaps between the cylinder head and cylinder block .
Be careful not to damage the contact surfaces of cylinder block, cylinder head and timing chain cover.



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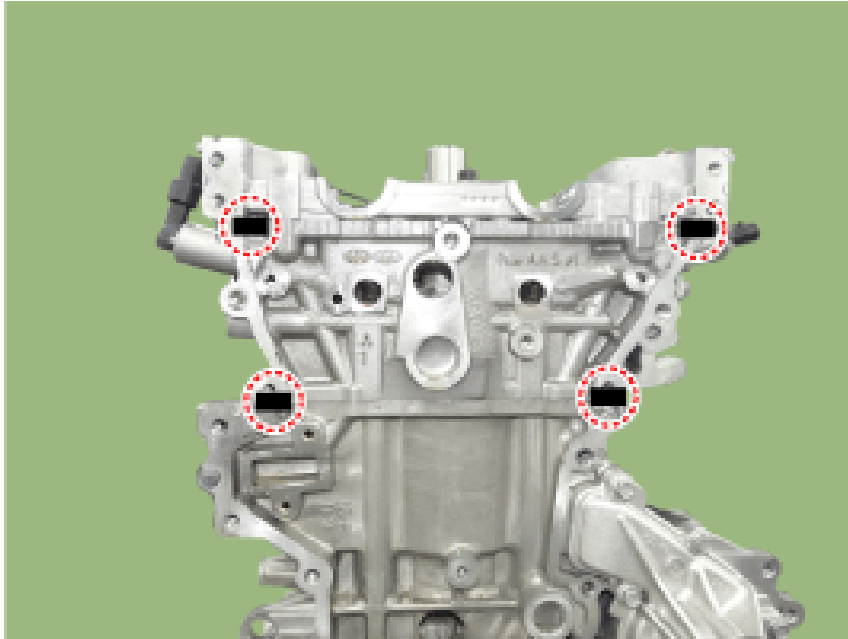
- Installation

- Install the timing chain cover. Using a gasket scraper, remove all the old packing material from the gasket surfaces. The sealant locations on the chain cover and the counter parts (cam carrier, cylinder head, cylinder block, and lower crankcase) must be free of harmful foreign materials, oil, dust and moisture. Spraying cleaner on the surface and wiping with a clean duster. Before assembling the timing chain cover, liquid sealant should be applied on the gap between cam carrier, cylinder head and cylinder block. Bead width : 3.0 - 5.0 mm (0.11 - 0.20 in.) Sealant : Threebond 1217H or equivalent After applying liquid sealant on the timing chain cover, assemble the cover within 5 minutes after sealant was applied. Continuous bead of sealant should be applied to prevent any path from oil leakage. Bead width Whole section : 2.5 - 3.5 mm (0.10 - 0.14 in.) Section A : 4.5 - 5.5 mm (0.18 - 0.22 in.) Section B : 8.0 - 9.0 mm (0.32 - 0.35 in.) Sealant : Threebond 1217H or equivalent Install the timing chain cover. The dowel pins on the cylinder block and holes on the timing chain cover should be used as a reference in order to assemble the timing chain cover in exact position. Tightening torque Bolts (A, B) : 18.6 - 23.5 N.m (1.9 - 2.4 kgf.m, 13.7 - 17.4 lb-ft) Bolt (C) : 19.6 - 23.5 N.m (2.0 - 2.4 kgf.m, 14.5 - 17.4 lb-ft) Bolts (D, E) : 39.2 - 49.0 N.m (4.0 - 5.0 kgf.m, 28.9 -

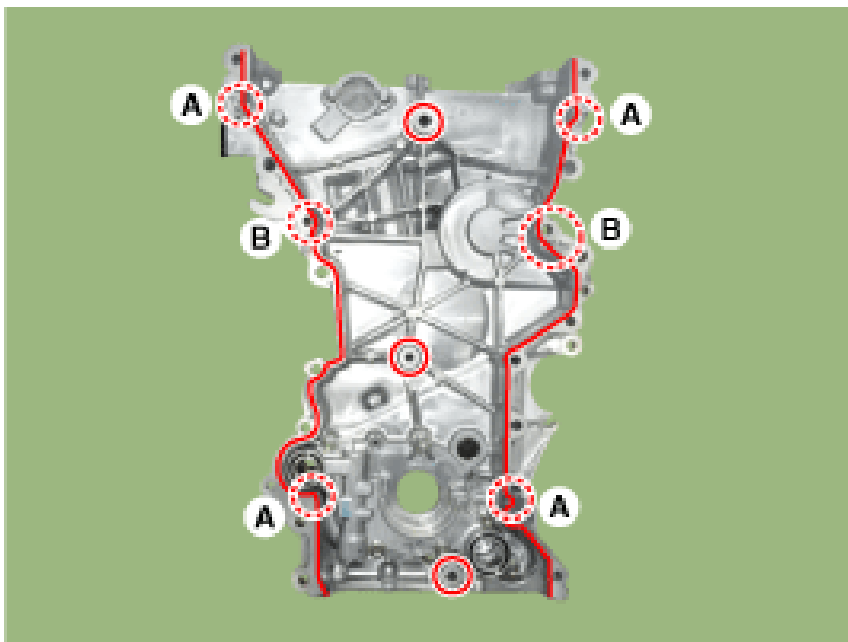
36.2 lb-ft) Bolt (F) : 9.8 - 11.8 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.7 lb-ft) Do not reuse the seal bolts (C, F).

The engine running or pressure test should not be performed within 30 minutes after the timing chain cover was assembled.

- Using a gasket scraper, remove all the old packing material from the gasket surfaces.
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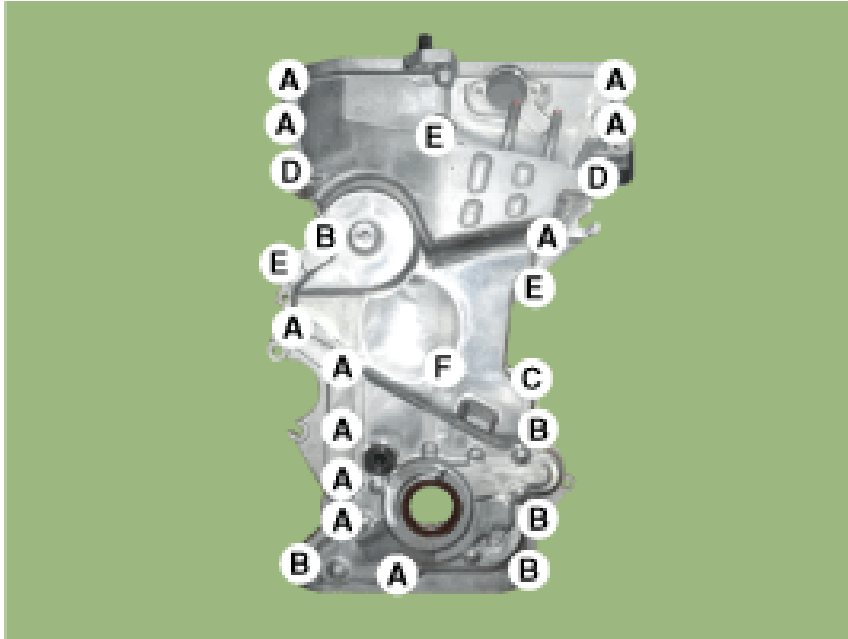


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- Replace the front oil seal if necessary. (Refer to Timing System - "Front Oil Seal")

- Install the intermediate lock CVVT actuator (A). Tightening torque : 8.8 - 9.8 N.m (0.9 - 1.0 kgf.m, 6.5 - 7.2 lb-ft) Always use new actuator bolts. The residue inside of the chain-cover bolt hole should be disposed before locking. The actuator bolts should be locked to the regulated torque.

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- Install the front engine hanger (A). Tightening torque : 34.3 - 39.2 N.m (3.5 - 4.0 kgf.m, 25.3 - 28.9 lb-ft)

- Install the other parts reverse order of removal.

- Add all the necessary fluids and check for leaks. Connect GDS. Check for codes, note, and clear. Recheck. Refill engine with engine oil. Clean battery posts and cable terminals and assemble. Inspect for fuel leakage. After assembling the fuel line, turn on the ignition switch (do not operate the starter) so that the fuel pump runs for approximately two seconds and fuel line pressurizes. Repeat this operation two or three times, then check for fuel leakage at any point in the fuel line.

Refill engine with engine oil. Clean battery posts and cable terminals and assemble. Inspect for fuel leakage. After assembling the fuel line, turn on the ignition switch (do not operate the starter) so that the fuel pump runs for approximately two seconds and fuel line pressurizes. Repeat this operation two or three times, then check for fuel leakage at any point in the fuel line.

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