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## REMOVAL

### NOTICE

Removal of the thermostat may have an adverse effect, causing a reduction in cooling efficiency. Do not remove the thermostat, even if the engine tends to overheat.

1. Remove the engine room front and rear under cover.  
[\(Refer to Engine and Transmission Assembly - "Engine Room Under Cover"\)](#)
2. Drain the coolant.  
[\(Refer to Cooling System - "Coolant"\)](#)
3. Remove the RH air cleaner assembly.  
[\(Refer to Intake and Exhaust System - "Air Cleaner"\)](#)
4. Disconnect the radiator lower hose (A).

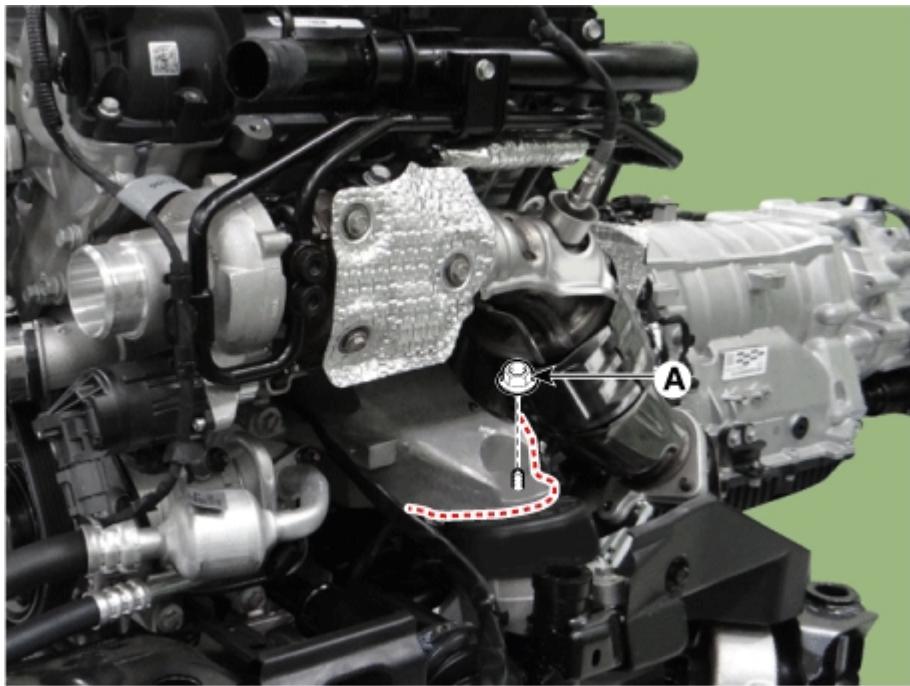


5. Remove the LH/RH engine mounting insulator nut (A).

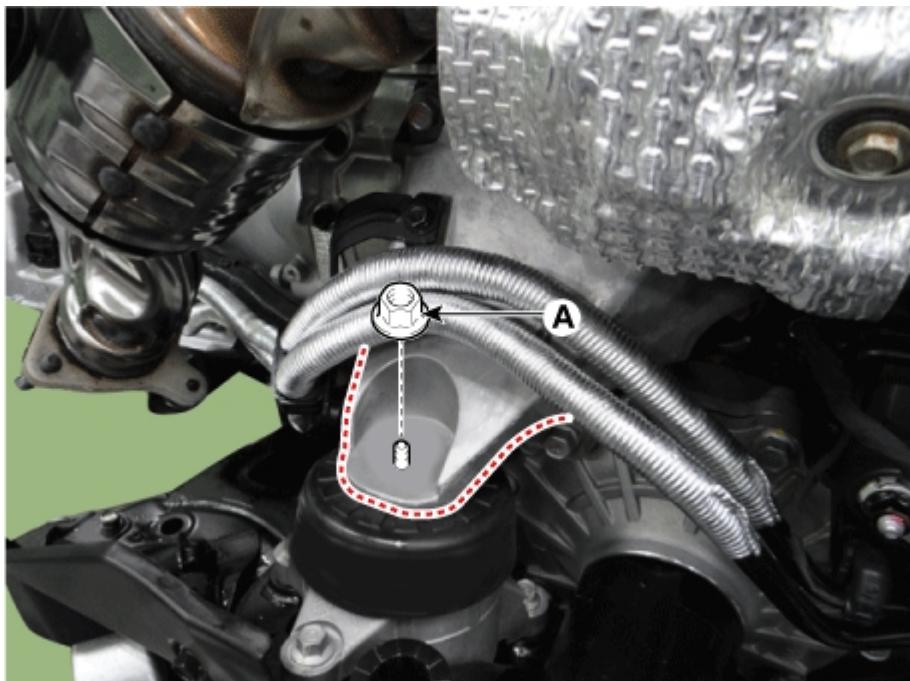
**Tightening torque :**

63.7 - 83.4 N·m (6.5 - 8.5 kgf·m, 47.0 - 61.5 lb·ft)

**[LH]**



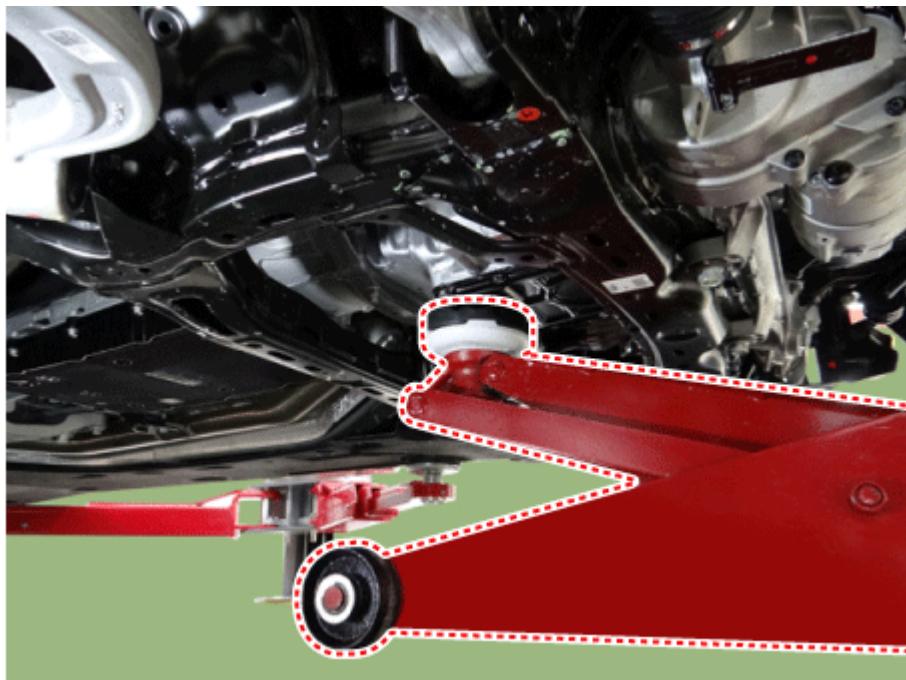
[RH]



6. Disconnect the heater hoses (A).



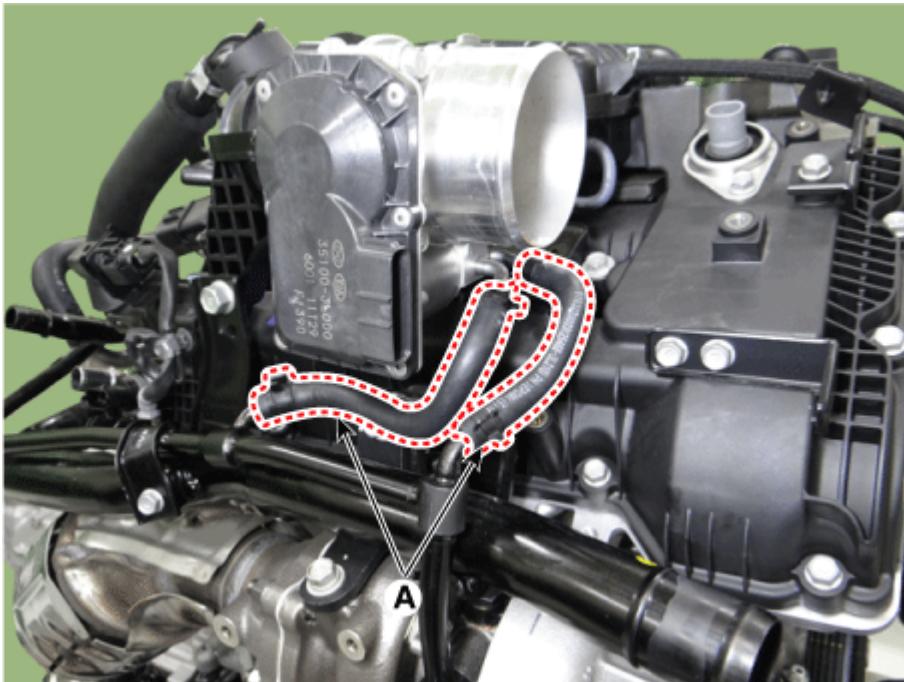
7. Set the jack to the edge of upper oil pan.



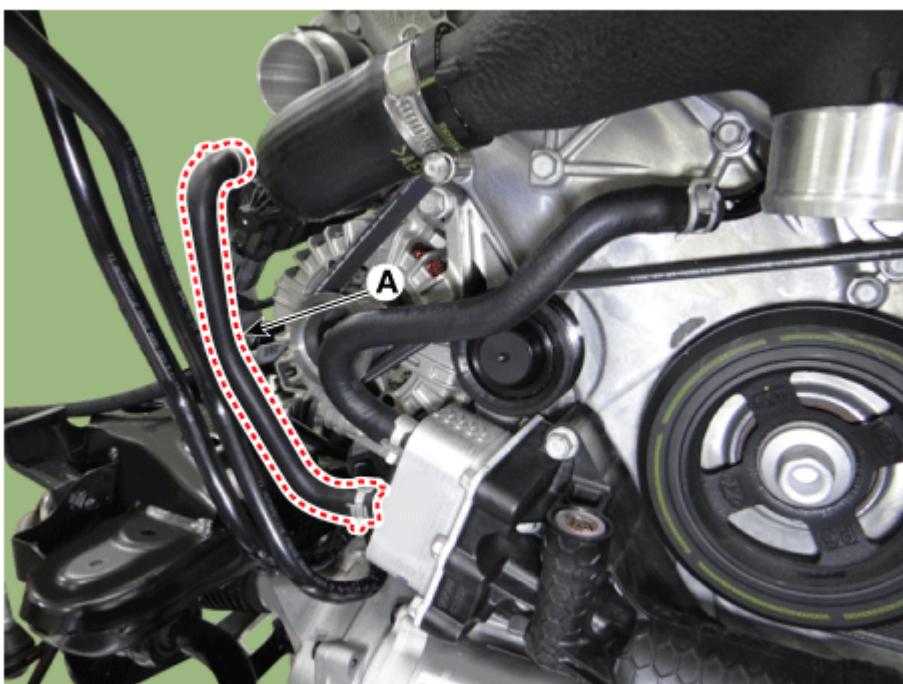
**NOTICE**

Place a wooden block between the jack and the oil pan to prevent damage to the upper oil pan.

8. Lift the engine slightly using the jack to obtain space for loosen the RH turbocharger water pipe eye bolt.
9. Disconnect the electronic throttle body control (ETC) module coolant hose (A).



10. Disconnect the oil cooler hose B (A).



11. Loosen the RH turbocharger water pipe eye bolts (A) and mounting bolt (B).

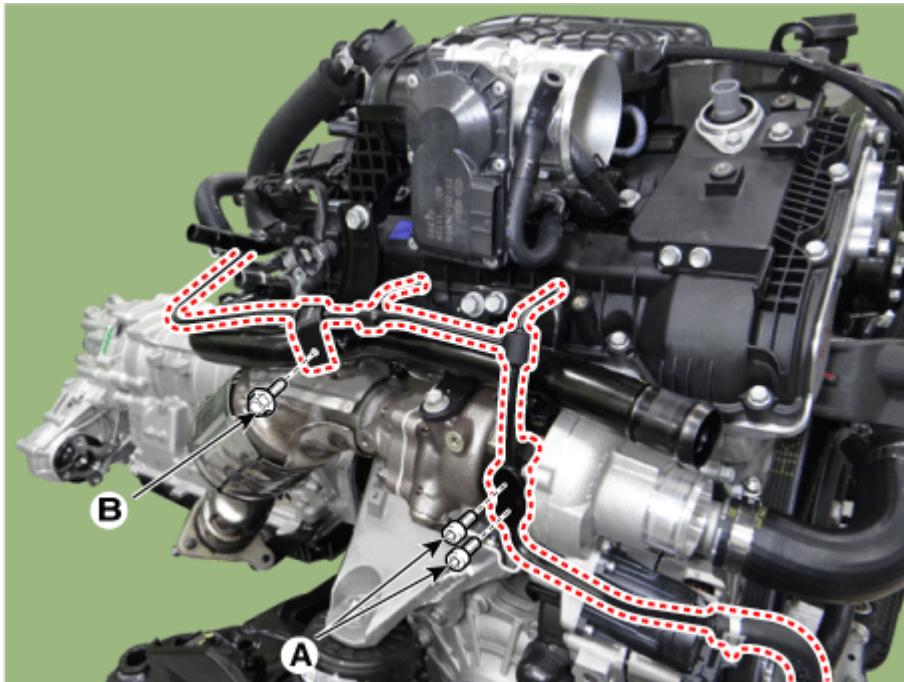
**Tightening torque**

Eye bolts :

33.3 - 39.2 N·m (3.4 - 4.0 kgf·m, 24.6 - 28.9 lb·ft)

Bolt :

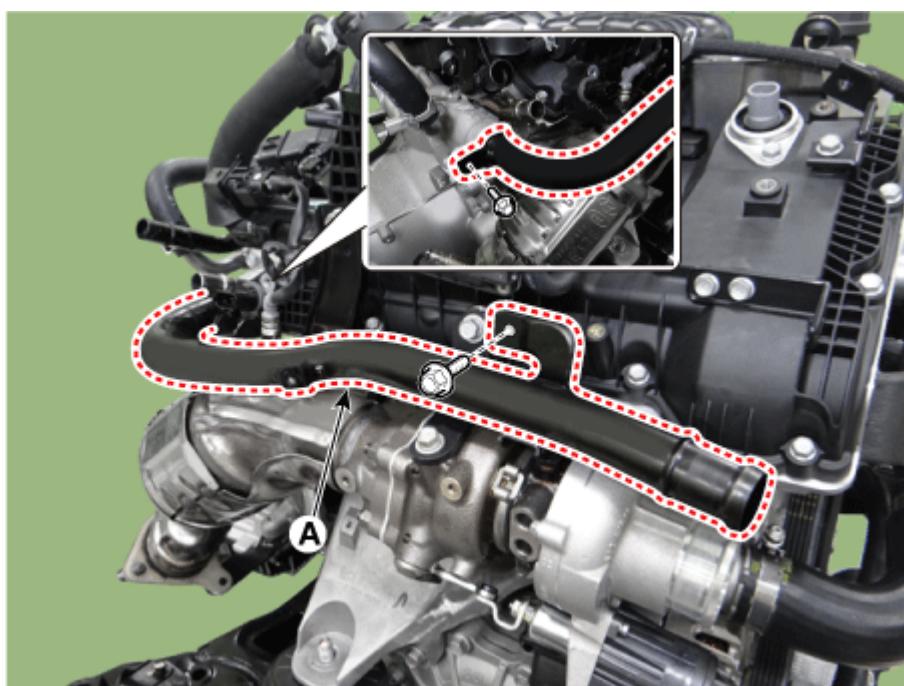
9.8 - 11.8 N·m (1.0 - 1.2 kgf·m, 7.2 - 8.7 lb·ft)



12. Remove the water inlet pipe (A).

**Tightening torque :**

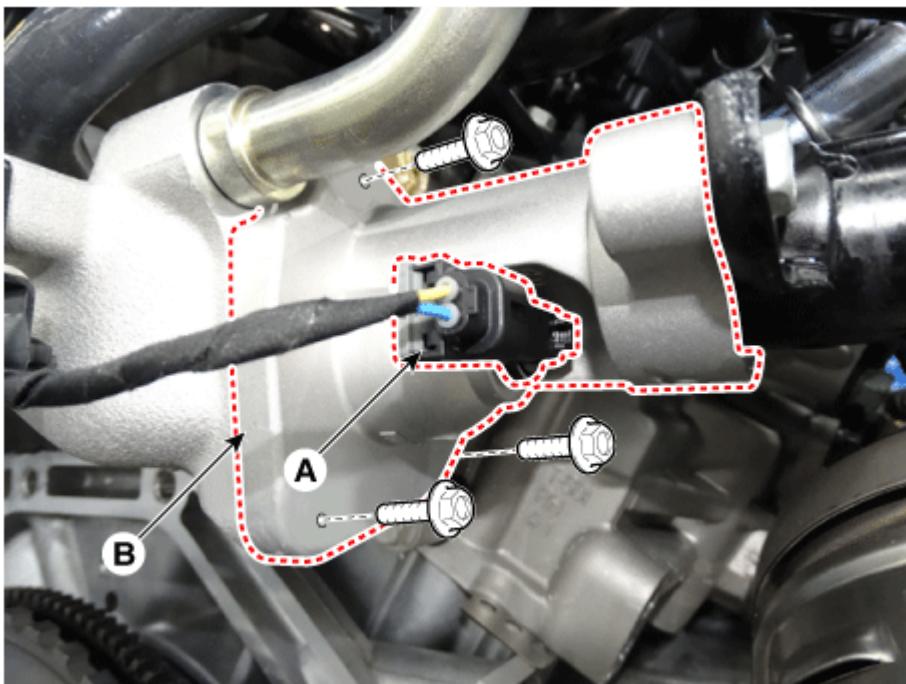
24.5 - 28.4 N·m (2.5 - 2.9 kgf·m, 18.1 - 21.0 lb·ft)



13. Disconnect the electric thermostat (ECT) connector (A), and then remove the electric thermostat (ECT) (B).

**Tightening torque :**

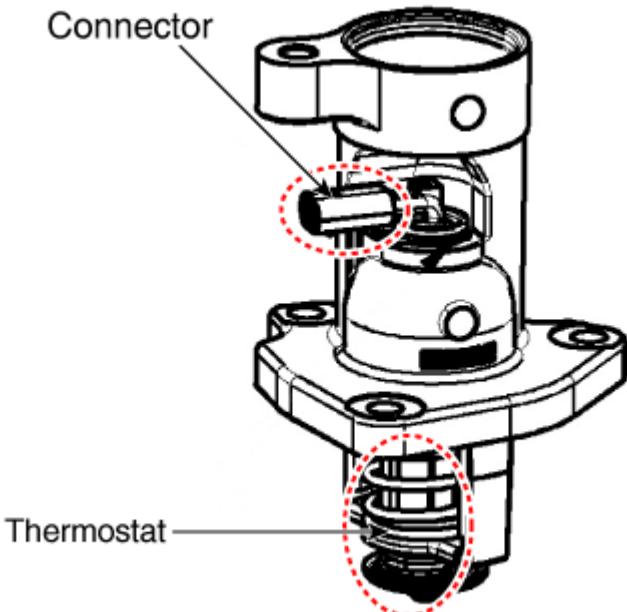
16.7 - 19.6 N·m (1.7 - 2.0 kgf·m, 12.3 - 14.5 lb·ft)



14. Install in the reverse order of removal.

## INSPECTION

1. Immerse thermostat in coolant heated to over 95°C (203°F), then heat for at least 3 minutes to check valve lift.



### NOTICE

Do not immerse connector part.

2. Check the valve opening temperature.

**Valve opening temperature:**

$100 \pm 2^\circ\text{C}$  ( $212 \pm 3.6^\circ\text{F}$ )

**Full opening temperature:**  $113^\circ\text{C}$  ( $235^\circ\text{F}$ )

If the valve opening temperature is not as specified, replace the thermostat.

3. Check the valve lift.

**Valve lift :** 8 mm (0.3150 in.) or more at  $113^\circ\text{C}$  ( $235^\circ\text{F}$ )

If the valve lift is not as specified, replace the thermostat.

English

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