

Removal

⚠ WARNING

Be sure to read and follow the "General Safety Information and Caution" before doing any work related with the high voltage system. Failure to follow the safety instructions may result in serious electrical injuries.

Be sure to read and follow the "High Voltage Shut-off Procedures" before doing any work related with the high voltage system. Failure to follow the safety instructions may result in serious electrical injuries.

⚠ CAUTION

Use fender covers to avoid damaging painted surfaces.

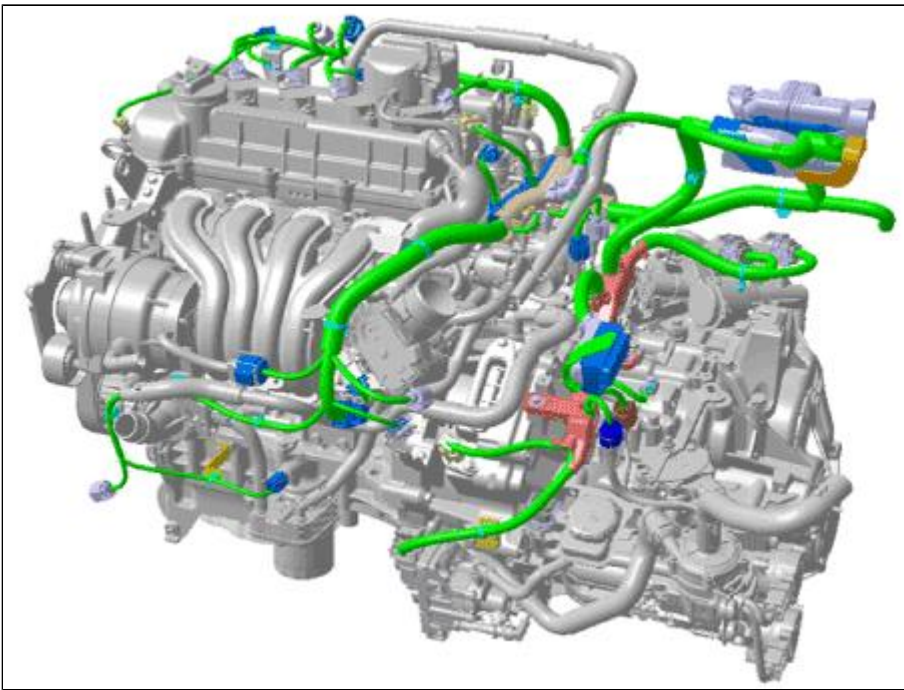
To avoid damage, unplug the wiring connectors carefully while holding the connector portion.

NOTICE

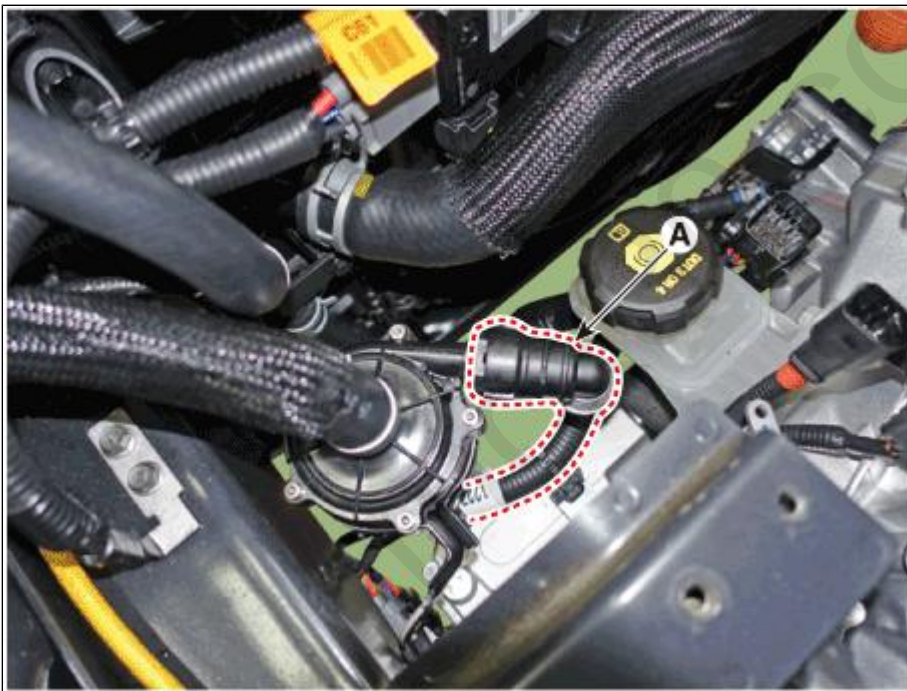
Mark all wiring and hoses to avoid misconnection.

To release the fuel system pressure before removing the engine assembly, start the engine with the fuel pump relay removed. and then turn off the ignition switch after engine stops.

1. Shut off the High Voltage circuit.
(Refer to General Information - "High Voltage Shutoff Procedure")
2. Disconnect the battery positive terminal.
3. Remove the air cleaner assembly.
(Refer to Intake and Exhaust System - "Air Cleaner")
4. Remove the engine room under cover.
(Refer to Engine and Transaxle Assembly - "Engine Room Under Cover")
5. Loosen the drain plug, and drain the engine coolant. Remove the reservoir cap to help drain the coolant faster.
(Refer to Cooling System - "Coolant")
6. Loosen the drain plug, and drain the inverter coolant. Remove the reservoir cap to help drain the coolant faster.
(Refer to Hybrid Motor System - "Coolant")
7. Remove the hybrid power control unit (HPCU).
(Refer to Hybrid Control System - "Hybrid Power Control Unit (HPCU)")
8. Remove the engine control module (ECM) and DCT control module (TCM)
(Refer to Engine Control / Fuel System - "Engine Control Module (ECM)")
9. Remove the hybrid power control unit (HPCU) tray.
(Refer to Hybrid Control System - "Hybrid Power Control Unit (HPCU)")
10. Remove the transaxle wire harness connectors and control cable from the transaxle.
(Refer to Double Clutch Transmission (DCT) System - "Double Clutch Transmission (DCT)")
11. Disconnect the wiring harness from the engine room.



12. Recover the refrigerant and then remove the high pressure pipe and low pressure pipe.
(Refer to Heating, Ventilation Air Conditioning - "Compressor")
13. Disconnect the electric water pump (EWP) coolant hose (A).



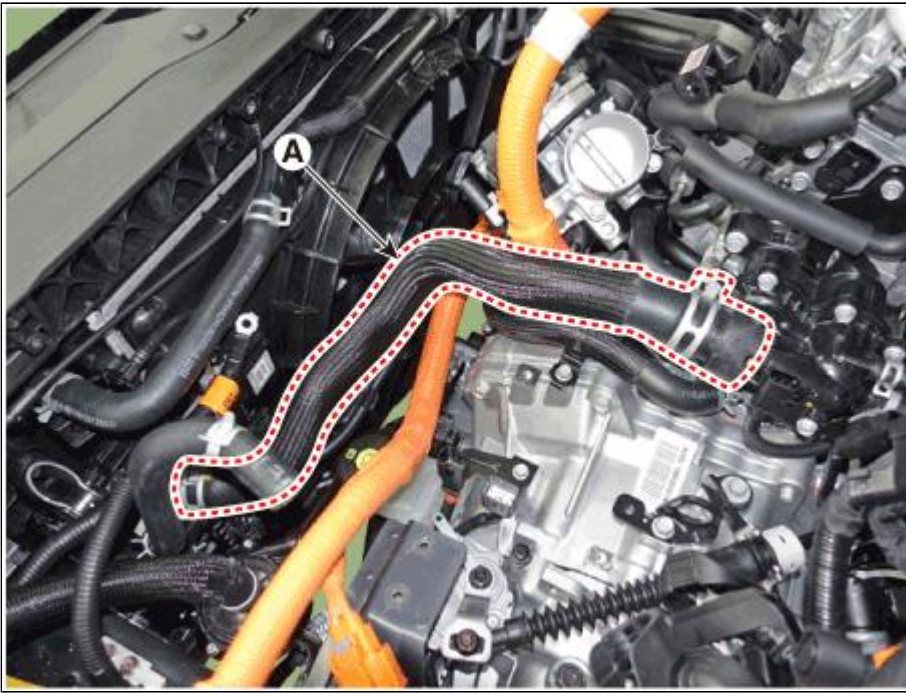
14. Disconnect the fuel hose (A) and the purge control solenoid valve (PCSV) hose (B).



15. Disconnect the heater hoses (A).



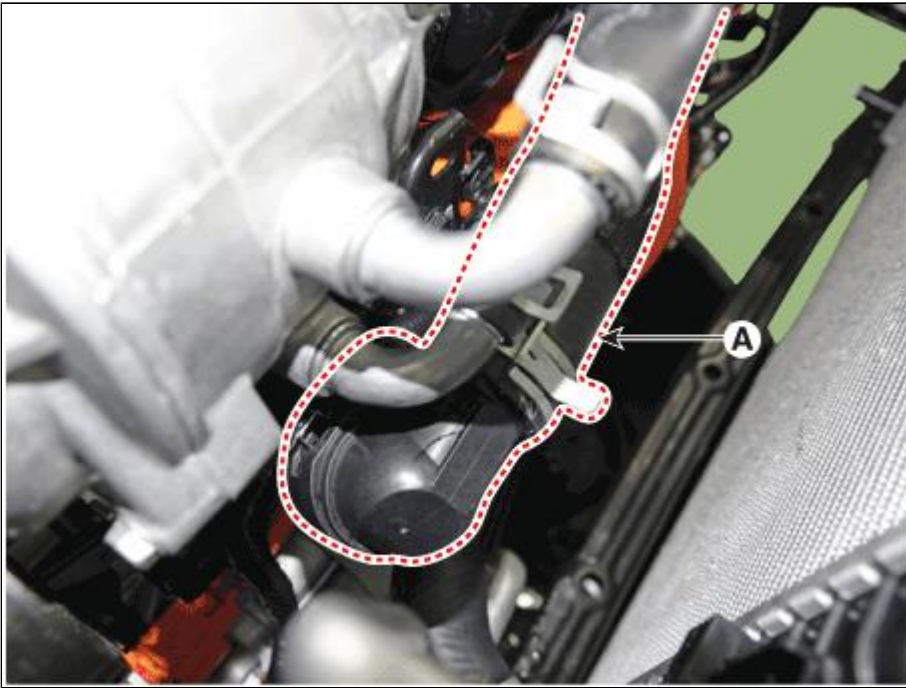
16. Disconnect the radiator upper hose (A).



17. Disconnect the hybrid starter generator (HSG) coolant hose (A).



18. Disconnect the radiator lower hose (A).



19. Disconnect the reservoir tank coolant hose (A).



20. Disconnect the reservoir tank coolant hose (A).



21. Remove the front muffler.
(Refer to Intake and Exhaust System - "Muffler")
22. Remove the steering U-joint mounting bolts.
(Refer to Steering System - "Steering Gear Box")
23. Remove the roll rod bracket (A).

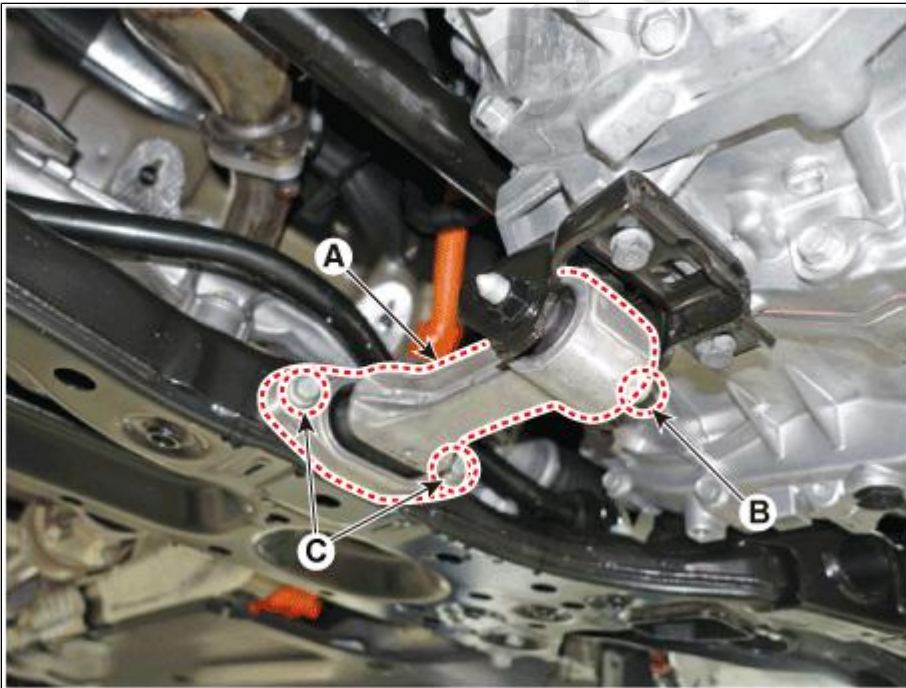
Tightening torque

Bolt (B) :

107.9 - 127.5 N.m (11.0 - 13.0 kgf.m, 79.6 - 94.0 lb-ft)

Bolts (C) :

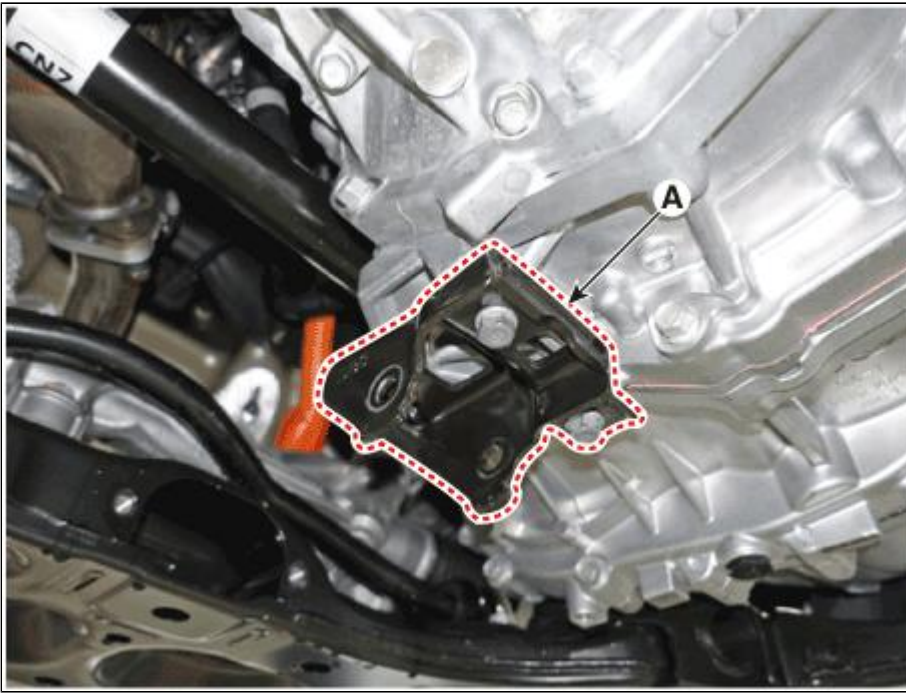
49.0 - 63.7 N.m (5.0 - 6.5 kgf.m, 36.2 - 47.0 lb-ft)



24. Remove the roll rod mounting support bracket (A).

Tightening torque :

49.0 - 68.6 N.m (5.0 - 7.0 kgf.m, 36.2 - 50.6 lb-ft)



25. Support the sub frame with a floor jack, and then remove the sub frame assembly.
(Refer to Suspension System - "Sub Frame")
26. Support the engine and transaxle assembly safely with a floor jack.
27. Remove the engine mounting support bracket (A).

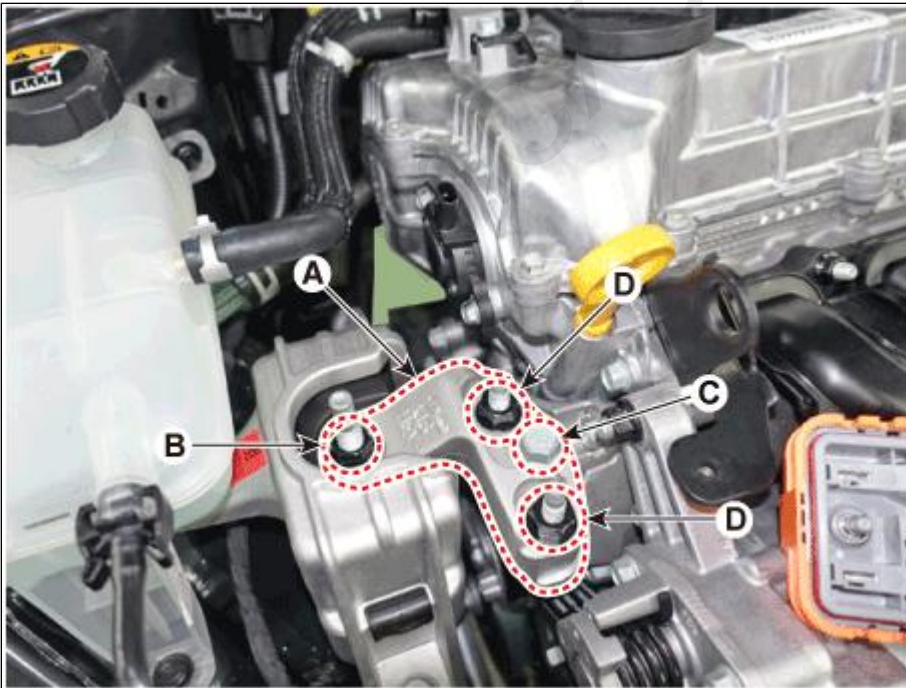
Tightening torque :

Nut (B) :

88.3 - 107.9 N.m (9.0 - 11.0 kgf.m, 65.1 - 79.6 lb-ft)

Bolt (C), Nuts (D) :

58.8 - 73.5 N.m (6.0 - 7.5 kgf.m, 43.4 - 54.2 lb-ft)



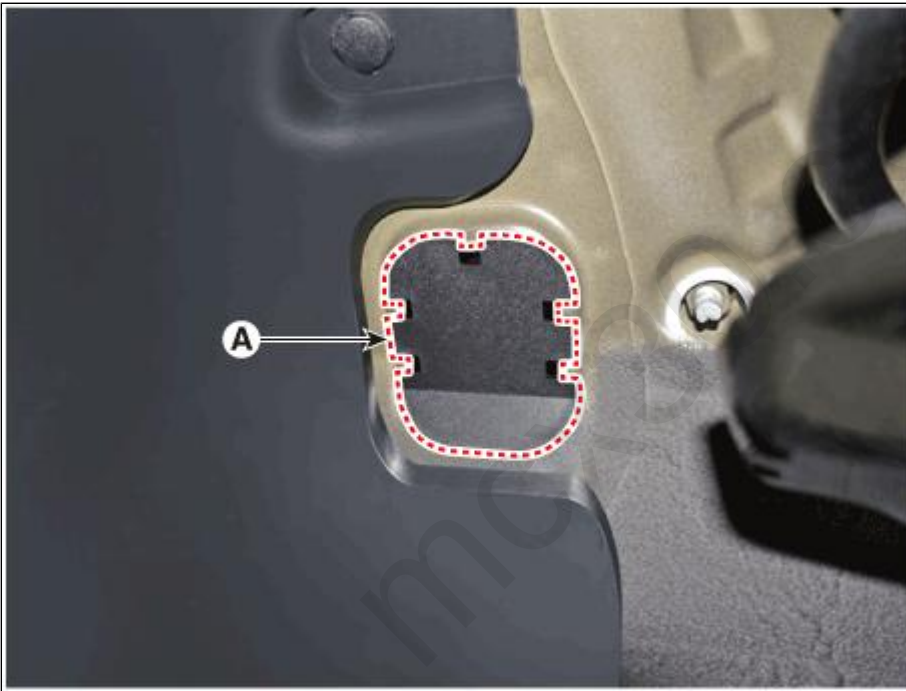
28. Disconnect the transaxle ground cable (A).

Tightening torque :

10.8 - 13.7 N.m (1.1 - 1.4 kgf.m, 8.0 - 10.1 lb-ft)



29. Remove the service cover (A).



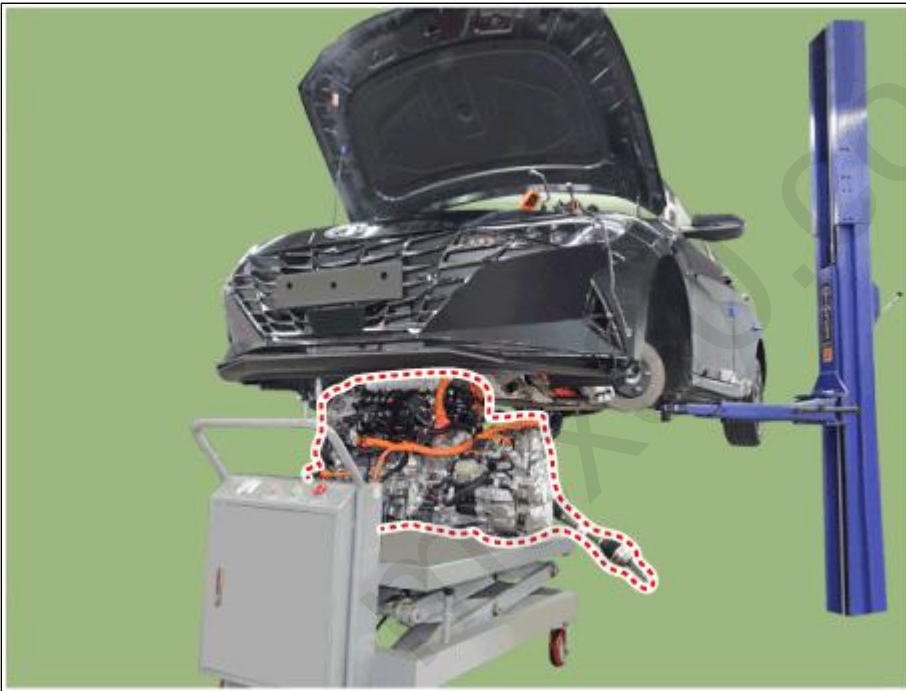
30. Remove the transaxle support bracket mounting bolts (A).

Tightening torque :

88.3 - 107.9 N.m (9.0 - 11.0 kgf.m, 65.1 - 79.6 lb-ft)



31. Remove the engine and transaxle assembly by lifting vehicle.



NOTICE

When remove the engine and transaxle assembly, be careful not to damage any surrounding parts or body components.

Installation

Installation is in the reverse order of removal.

Add all the necessary fluids and check for leaks. Connect diagnostic tool. Check for codes, note, and clear. Recheck.

NOTICE

- Adjust a shift cable.
- Refill engine with engine oil.
- Refill a transaxle with fluid.
- Refill an engine radiator and a reservoir tank with coolant.
- Refill an inverter radiator and a reservoir tank with coolant.
- Clean battery posts and cable terminals and assemble.

Inspect for fuel leakage.

After assemble 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.

Bleed air from the hybrid motor cooling system.

(Refer to Hybrid Motor System - "Coolant")

Bleed air from the engine cooling system.

Start engine and let it run until it warms up. (until the radiator fan operates 3 or 4 times.)

Turn Off the engine. Check the level in the radiator, add coolant if needed. This will allow trapped air to be removed from the cooling system.

Put radiator cap on tightly, then run the engine again and check for leaks.

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