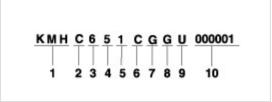


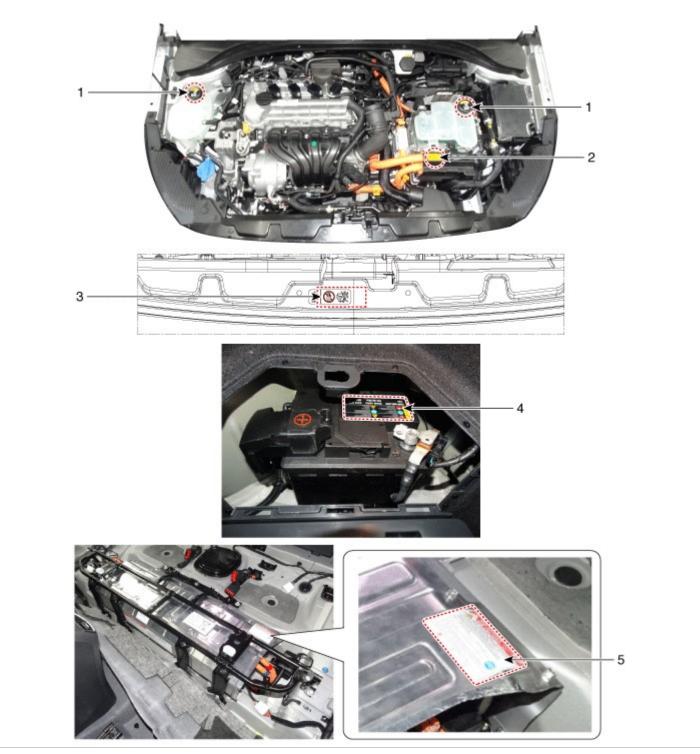
Identification Number Description

Vehicle Identification Number



- 1. World Manufacturer Identifier (WMI)
 - KMH : Passenger vehicle, MPV(Multipurpose Passenger Vehicle)/SUV(Sports Utility Vehicle)/RV(Recreational Vehicle)
 - KMF : Commercial vehicle (Van)
 - KM8 : MPV/SUV/RV (For U.S.A, Canada, Mexico)
 - KMJ : Van
- 2. Vehicle line
 - C : IONIQ
- 3. Model & Series
 - 6 : Low grade (L)
 - 7 : Middle-Low grade (GL)
 - 8 : Middle grade (GLS, JLS, TAX)

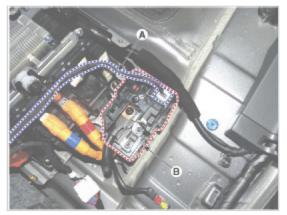
Warning and Caution Labels



- 1. Coolant caution
- 2. High voltage caution
- 3. Fan caution

- 4. Auxiliary 12V battery caution
- 5. High voltage battery caution

Auxiliary 12V battery Caution Label Description



- Remove the power relay assembly (PRA).
 (Refer to Hybrid Control System "Power Relay Assembly (PRA)")
- 12. Remove the battery mounting bolts (A-2ea).



13. Remove the auxiliary 12V battery (A) after disconnect the connector (B).





Engine Electrical System





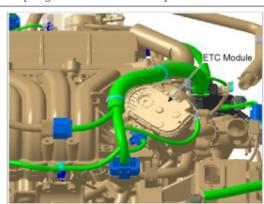
6. Engine Coolant Temperature Sensor (ECTS) [EGR Cooler Tube]



7. Throttle Position Sensor (TPS) [integrated into ETC Module]
19. ETC Motor [integrated into ETC Module]



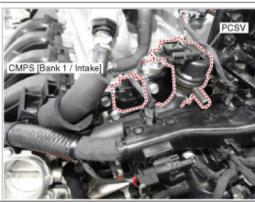
8. Crankshaft Position Sensor (CKPS)



Camshaft Position Sensor (CMPS) [Bank 1 / Intake]
 Camshaft Position Sensor (CMPS) [Bank 1 / Intake]
 Camshaft Position Sensor (CMPS) [Bank 1 / Intake]



10. Camshaft Position Sensor (CMPS) [Bank 1 / Exhaust]



11. Knock Sensor (KS)



12. Heated Oxygen Sensor (HO2S) [Bank 1 / Sensor 1]



13. Heated Oxygen Sensor (HO2S) [Bank 1 / Sensor 2]



14. Rail Pressure Sensor (RPS)

20. Injector



15. Accelerator Position Sensor (APS)



16. Fuel Tank Pressure Sensor (FTPS)

17. Fuel Pressure Sensor (FPS)



18. A/C Pressure Transducer (APT)



22. CVVT Oil Control Solenoid (OCS) [Bank 1 / Intake]



23. CVVT Oil Control Valve (OCV) [Bank 1 / Exhaust]

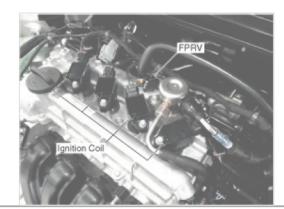


24. Fuel Pressure Control Valve (FPCV)

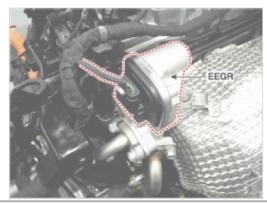
27. Ignition Coil



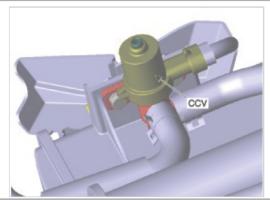
25. Electric EGR Control Valve



26. Canister Close Valve (CCV)



28. Main Relay 29. Fuel Pump Relay



30. Data Link Connector (DLC) [16-Pin]



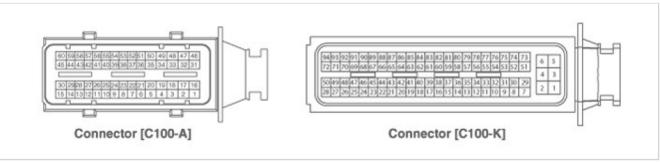
31. Multi-Purpose Check Connector [20-Pin]



Multi-Purpose Check Connector [20-Pin]

Engine Control/Fuel System

ECM Terminal And Input/Output signal

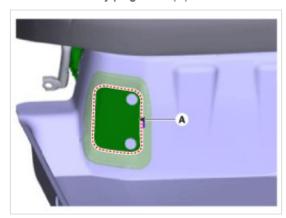


ECM Terminal Function

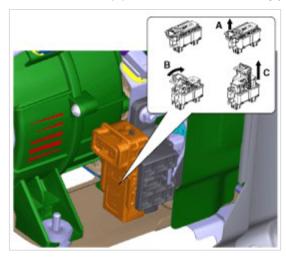
Connector [C100-A]

Pin No.	Description	Connected to
1	Injector (Cylinder #3) [Low] control output	Injector (Cylinder #3)
2	Injector (Cylinder #4) [High] control output	Injector (Cylinder #4)
3	Injector (Cylinder #3) [Low] control output	Injector (Cylinder #3)
4	Vehicle speed signal output	Cluster
5	EGR valve (motor -)	EGR valve
6	Sensor power (+5V)	Throttle Position Sensor (TPS) 1,2
7	Sensor power (+5V)	EGR valve
8	Knock Sensor (KS) signal input	Knock Sensor (KS)
	i	

2. Remove the safety plug cover (A).



3. Unfasten the hook (A) and then remove the safety plug (C) by pulling the lever (B) to the direction of arrow.

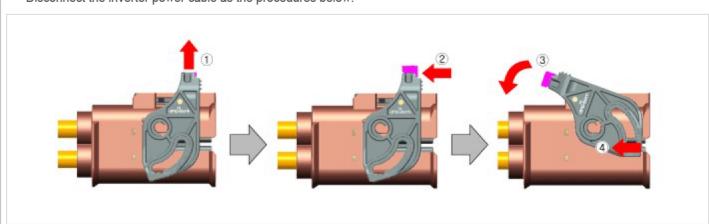


- 4. Wait for more than 5 minutes so that the capacitor in the high voltage system can be fully discharged.
- 5. Measure the voltage between the inverter terminals to check that the capacitor in the inverter is discharged completely.
 - (1) Remove air cleaner assembly and air duct.
 (Refer to Engine Mechanical System "Air Cleaner")
 - (2) Disconnect the inverter power cable (A).





· Disconnect the inverter power cable as the procedures below.

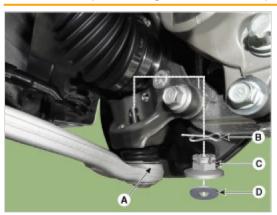




- 5. Loosen the lower arm nut and then remove the lower arm ball joint by using SST(09568-1S100).
 - (1) Rmove the split pin (B).
 - (2) Loosen the nut (C) and washer (D).
 - (3) Using SST(09568-1S100), separate the ball joint (A) from the knuckle.

Tightening torque:

78.5 - 98.1 N.m (8.0 - 10.0 kgf.m, 57.9 - 72.3 lb-ft)





NOTICE

- Do not reuse the lower arm lock nut (C).
- 6. Disconnect the stabilizer link with the front strut assembly after loosening the nut (A).

Tightening torque:

98.1 - 117.7 N.m (10.0 - 12.0 kgf.m, 72.3 - 86.8 lb-ft)



- When loosening the nut (A), fix the outer hexagon of stabilizer bar link.
- Be careful not to damage the stabilizer link boots.
- 7. Remove the heat protector (A).

Tightening torque :

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



8. Loosen the mounting bolt (A)&(B) then remove the pipe from the sub frame.





9. Remove the muffler rubber hanger (A).



10. Remove the roll rod stopper (A) by loosening the bolt and nut.

Tightening torque:

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



· Set up a transmission jack for safety.



11. Loosen the mounting bolts and then remove the stabilizer bar.

Tightening torque:

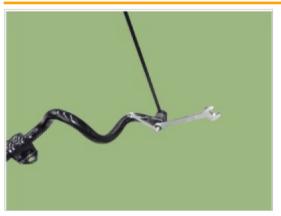
44.1 - 53.9 N.m (4.5 - 5.5 kgf.m, 32.5 - 39.8 lb-ft)



12. Remove the stabilizer link.

Tightening torque:

98.1 - 117.7 N.m (10.0 - 12.0 kgf.m, 72.3 - 86.8 lb-ft)



NOTICE

• When loosening the nut, fix the outer hexagon of stabilizer bar link.

2. Loosen the wheel nuts slightly.

Raise the vehicle, and make sure it is securely supported.

3. Remove the front wheel and tire (A) from the front hub.

Tightening torque:

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

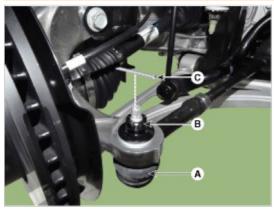


NOTICE

- Be careful not to damage the hub bolts when removing the front wheel and tire.
- 4. Remove the tie rod end ball joint.
 - (1) Rmove the split pin (C).
 - (2) Loosen the nut (B).
 - (3) Using SST(09568-1S100), separate the ball joint (A) from the knuckle.

Tightening torque:

78.5 - 98.1 N.m (8.0 - 10.0 kgf.m, 57.9 - 72.3 lb-ft)





- 5. Loosen the lower arm nut and then remove the lower arm ball joint by using SST(09568-1S100).
 - (1) Rmove the split pin (B).
 - (2) Loosen the nut (C) and washer (D).
 - (3) Using SST(09568-1S100), separate the ball joint (A) from the knuckle.

Tightening torque :

78.5 - 98.1 N.m (8.0 - 10.0 kgf.m, 57.9 - 72.3 lb-ft)





- Do not reuse the lower arm lock nut (C).
- 6. Disconnect the stabilizer link with the front strut assembly after loosening the nut (A).

Tightening torque:

98.1 - 117.7 N.m (10.0 - 12.0 kgf.m, 72.3 - 86.8 lb-ft)



NOTICE

- \bullet When loosening the nut (A), fix the outer hexagon of stabilizer bar link.
- Be careful not to damage the stabilizer link boots.
- 7. Remove the heat protector (A).

Tightening torque :

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



8. Loosen the mounting bolt (A)&(B) then remove the pipe from the sub frame.





9. Remove the muffler rubber hanger (A).



10. Remove the roll rod stopper (A) by loosening the bolt and nut.

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



· Set up a transmission jack for safety.



11. Loosen the mounting bolts and then remove the stabilizer bar.

Tightening torque:

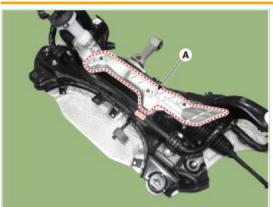
44.1 - 53.9 N.m (4.5 - 5.5 kgf.m, 32.5 - 39.8 lb-ft)



12. Remove the protector (A).

Tightening torque:

6.9 - 10.8 N.m (0.7 - 1.1 kgf.m, 5.1 - 8.0 lb-ft)

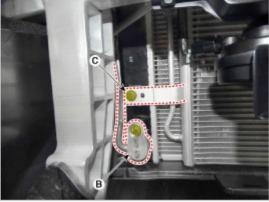


13. Remove the steering gearbox from the front sub frame by loosening the mounting bolts.

Tightening torque:

88.2 - 107.8 N.m (9.0 - 11.0 kgf.m, 65.0 - 79.5 lb-ft)







- While removing the line, mount the plug or cap to protect the system from humidity and dust.
- Replace the O-ring (A) with a new one when mounting the coolant line.



10. Remove the electric radiator (A).