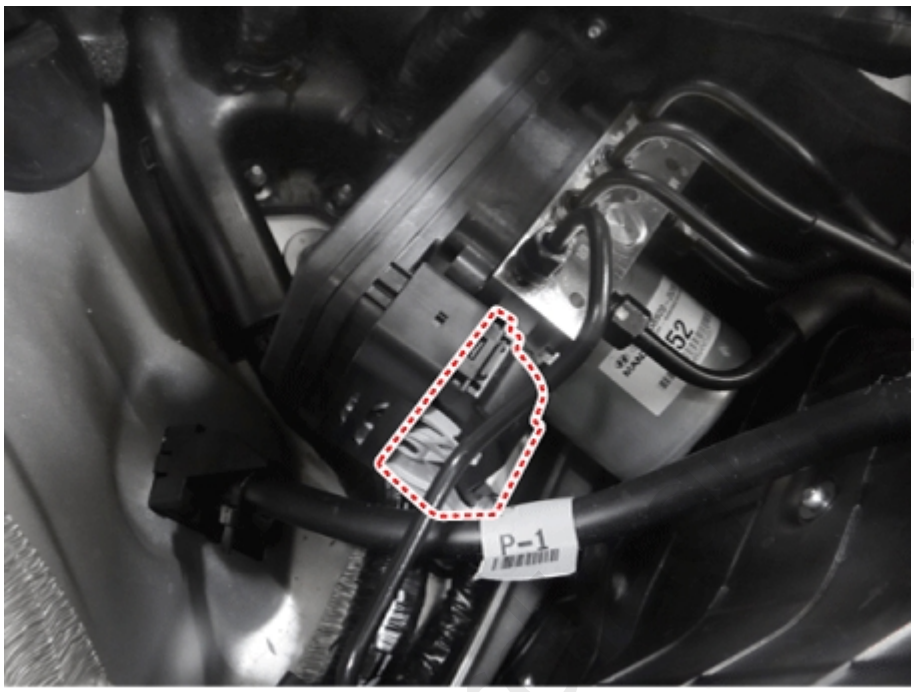
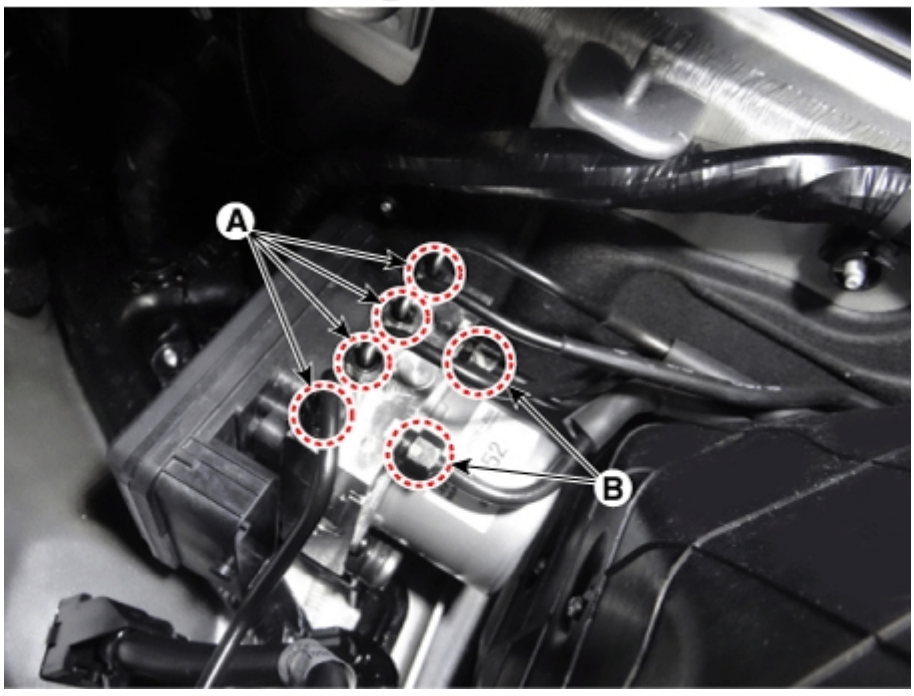
REMOVAL

[LHD]

1. Turn ignition switch OFF and disconnect the negative (-) battery cable.
2. Separate the engine room relay block.
   (Refer to Body Electrical System - "Relay box (Engine compartment)")
3. Disconnect the ESP connector.



4. Loosen the ESP brake tube flare nuts.
   Tightening torque :
   (A) : 16.7 - 20.6 N·m (1.7 - 2.1 kgf·m, 12.3 - 15.2 lb·ft)
   (B) : 20.6 - 24.5 N·m (2.1 - 2.5 kgf·m, 15.2 - 18.1 lb·ft)



5. Loosen the ESP bracket bolts and then remove the ESP.

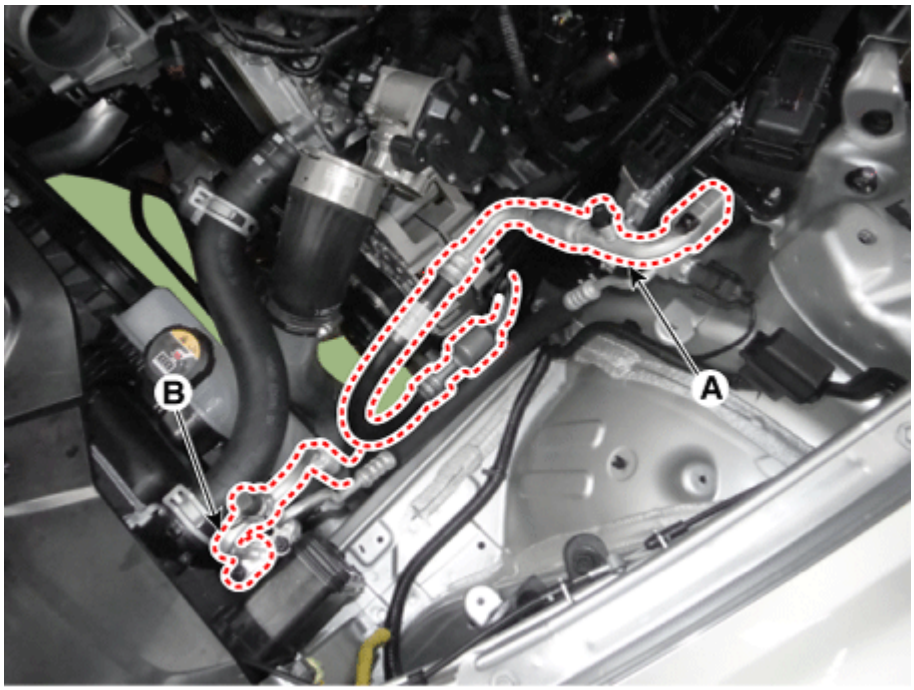
   Tightening torque :
   16.7 - 25.5 N·m (2.0 - 3.0 kgf·m, 12.3 - 18.8 lb·ft)

NOTICE

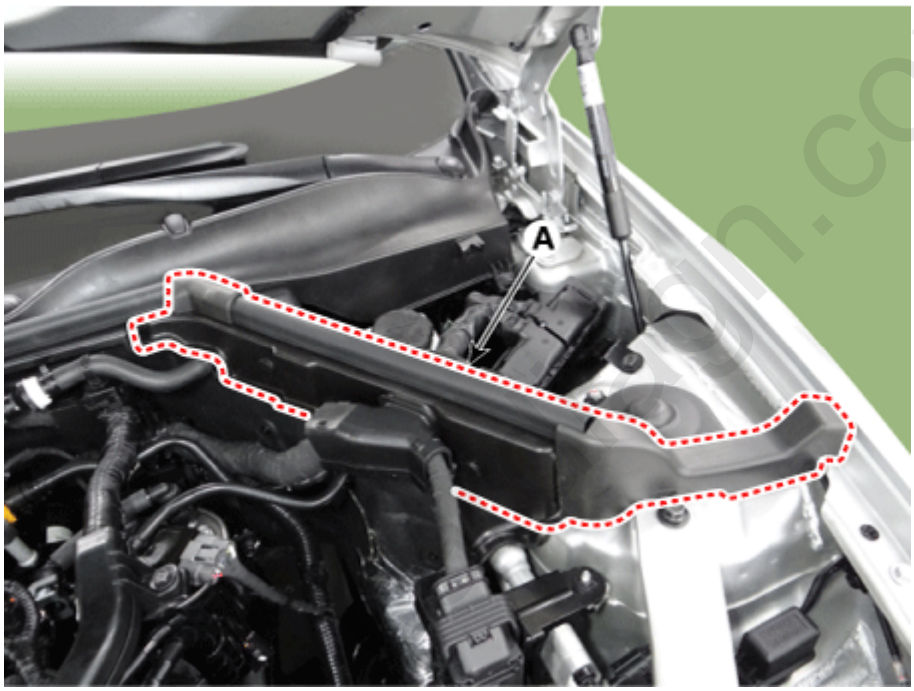
- Never attempt to disassemble the ESP.
- The ESP must be transported and stored in.
- Never shock to the ESP.

[RHD]

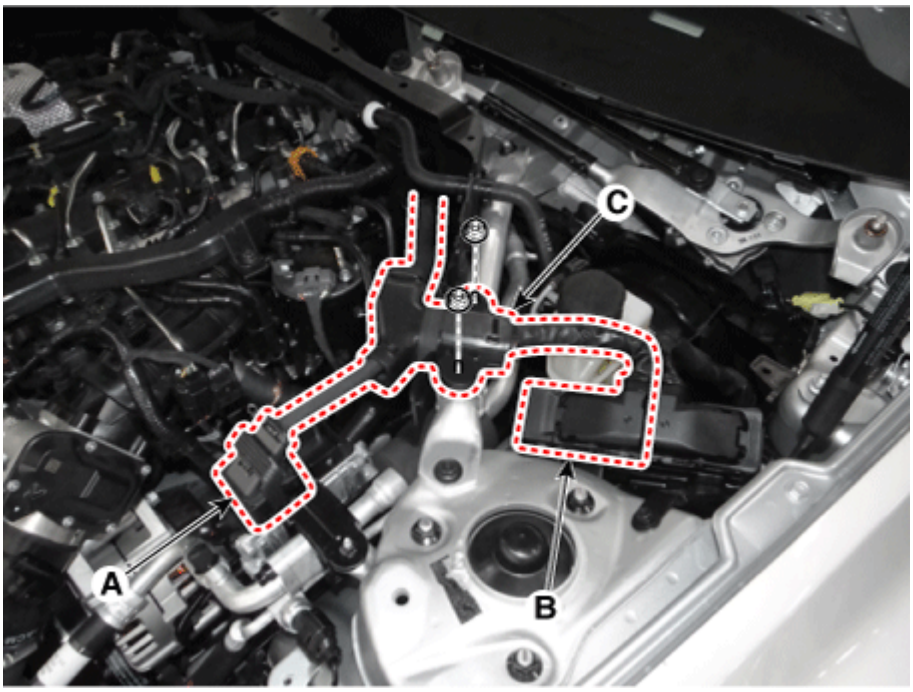
1. Turn ignition switch OFF and disconnect the negative (-) battery cable.
2. Remove the air cleaner.
   D 2.2 R VGT (Refer to Engine Mechanical System - "Air Cleaner")
   D 2.2 R VGT (Enhanced Euro 6) (Refer to Engine Mechanical System - "Air Cleaner")
   G 2.0 T-GDI (Refer to Engine Mechanical System - "Air Cleaner")
   G 3.3 T-GDI (Refer to Engine Mechanical System - "Air Cleaner")
3. Recover the refrigerant.
   (Refer to Heating, Ventilation and Air conditioning - "Repair procedures")
4. Disconnect the discharge line (A) and suction line (B).



5. Remove the LH hood sealing cover (A).

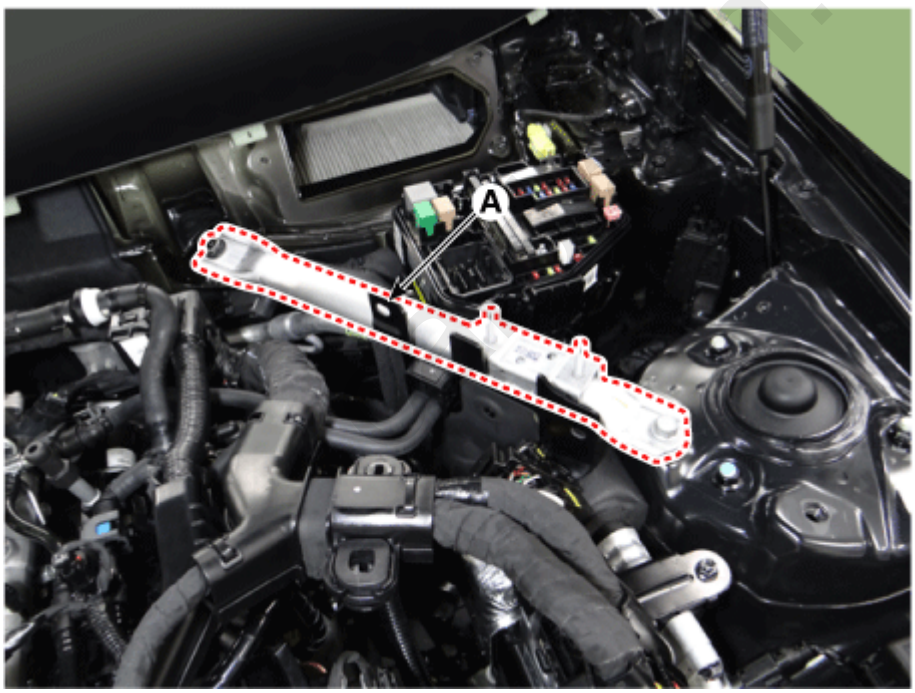


6. Disconnect the wiring connector and harness from the engine room.
   (1) Disconnect the ECM connector (A) and TCM connector (B).
   (2) Remove the wiring protector (C).
   Tightening torque :
   5.9 - 8.8 N·m (0.6 - 0.9 kgf·m, 4.3 - 6.5 lb·ft, 52.1 - 78.1 lb·in)



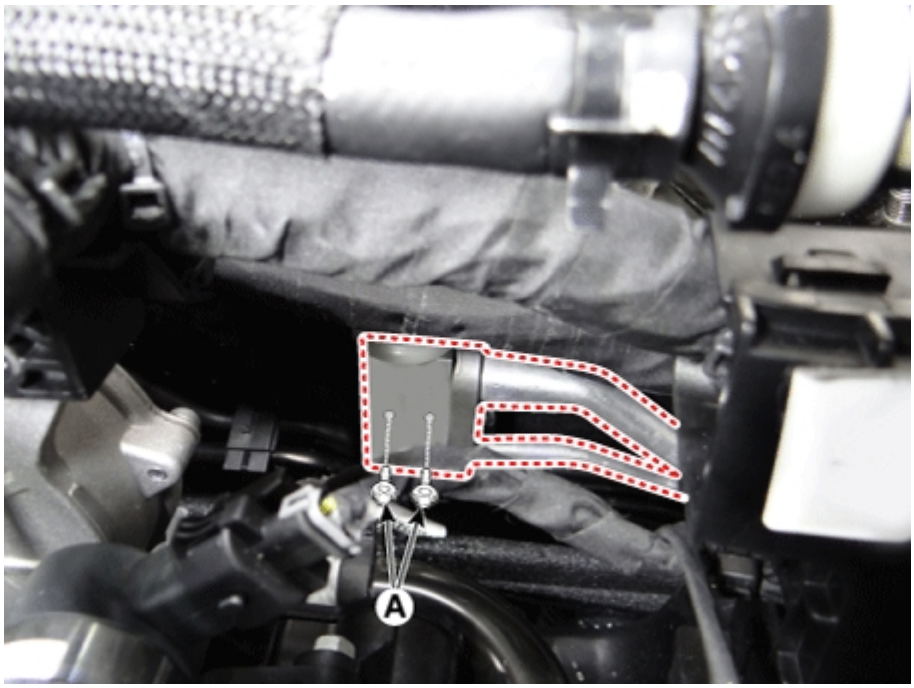
7. Remove the engine control module (ECM).
   D 2.2 R VGT (Refer to Engine Control /Fuel System - "Engine Control Module (ECM)")
   D 2.2 R VGT (Enhanced Euro 6) (Refer to Engine Control /Fuel System - "Engine Control Module (ECM)")
   G 2.0 T-GDI (Refer to Engine Control /Fuel System - "Engine Control Module (ECM)")
   G 3.3 T-GDI (Refer to Engine Control /Fuel System - "Engine Control Module (ECM)")

8. Remove the cowl shock absorber housing bar (A).



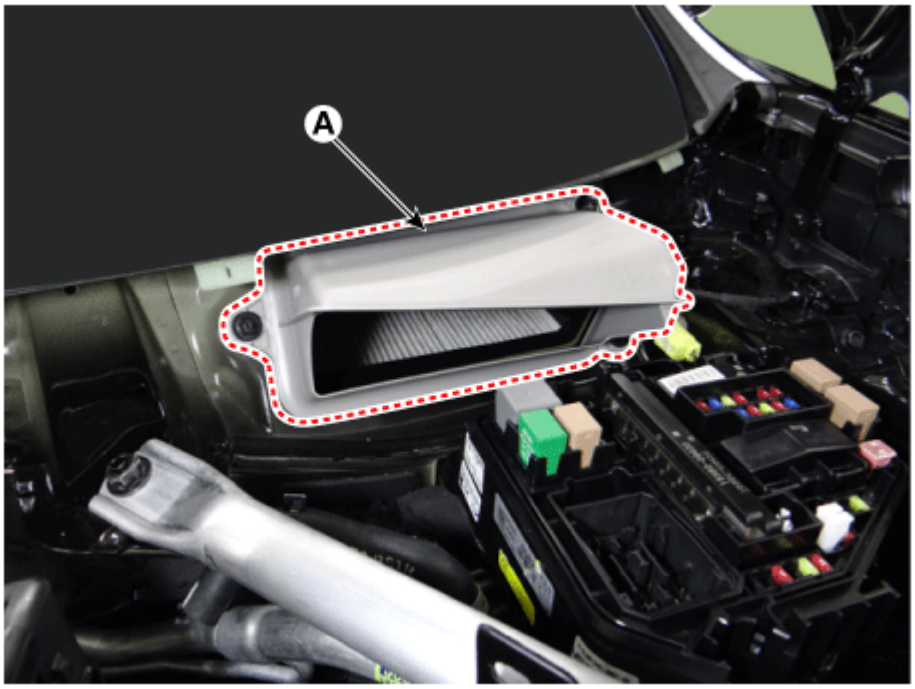
9. Remove the transmission control unit (TCM).
   D 2.2 R VGT (Refer to Automatic Transmission System - "Transmission Control Module (TCM)")
   D 2.2 R VGT (Enhanced Euro 6) (Refer to Automatic Transmission System - "Transmission Control Module (TCM)")
   G 2.0 T-GDI (Refer to Automatic Transmission System - "Transmission Control Module (TCM)")
   G 3.3 T-GDI (Refer to Automatic Transmission System - "Transmission Control Module (TCM)")

10. Loosen the suction & liquid tube mounting bolts (A).
    Tightening torque :
    8.8 - 13.7 N·m (0.9 - 1.4 kgf·m, 6.5 - 10.1 lb·ft)

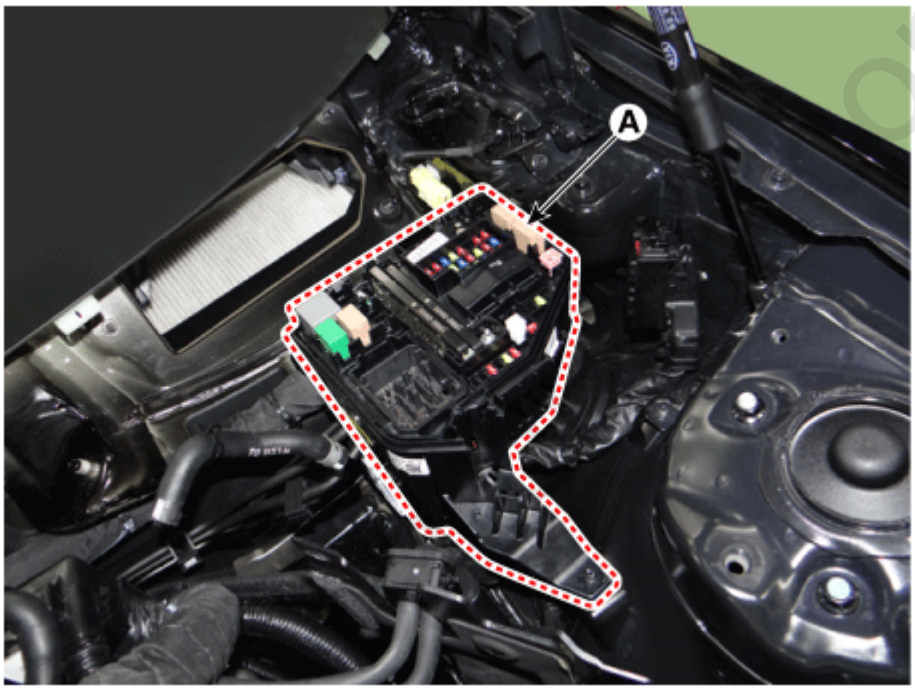


11. Remove the suction & liquid tube assembly (A).

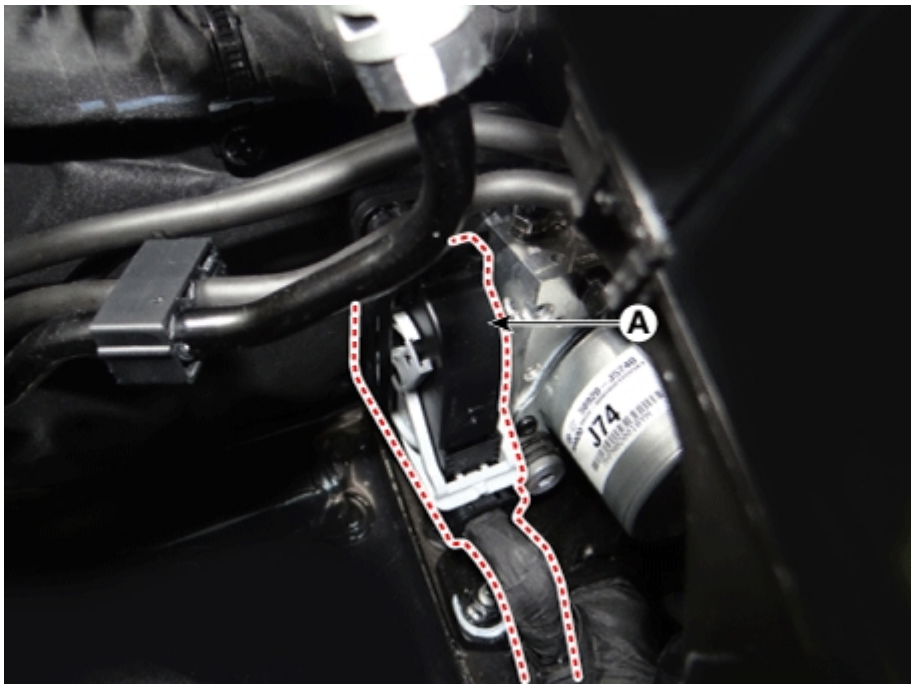
12. Remove the air blower duct (A).



13. Separate the engine room relay box (A).

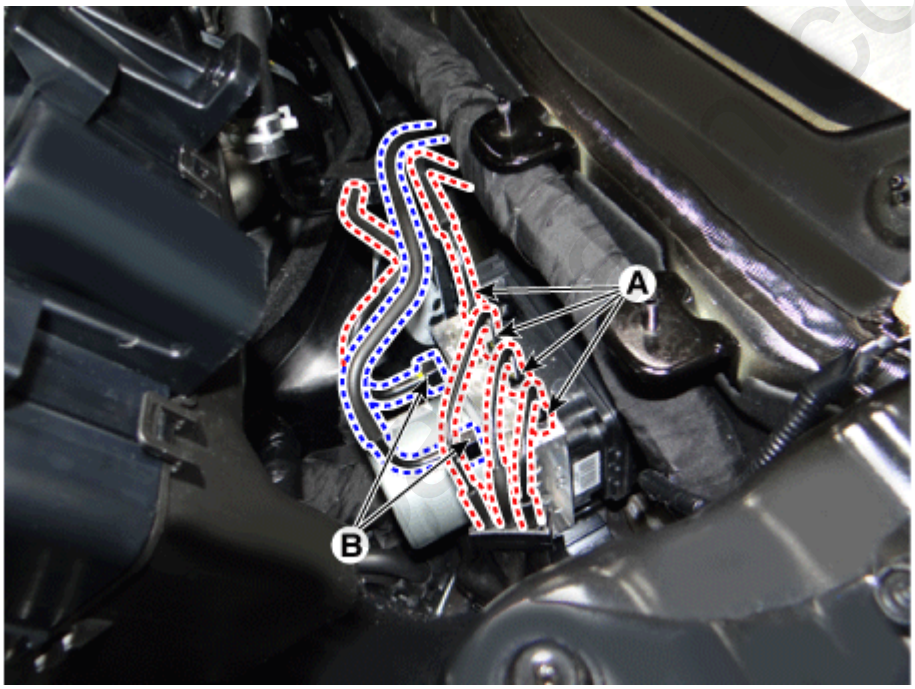


14. Disconnect the ESP connector (A).



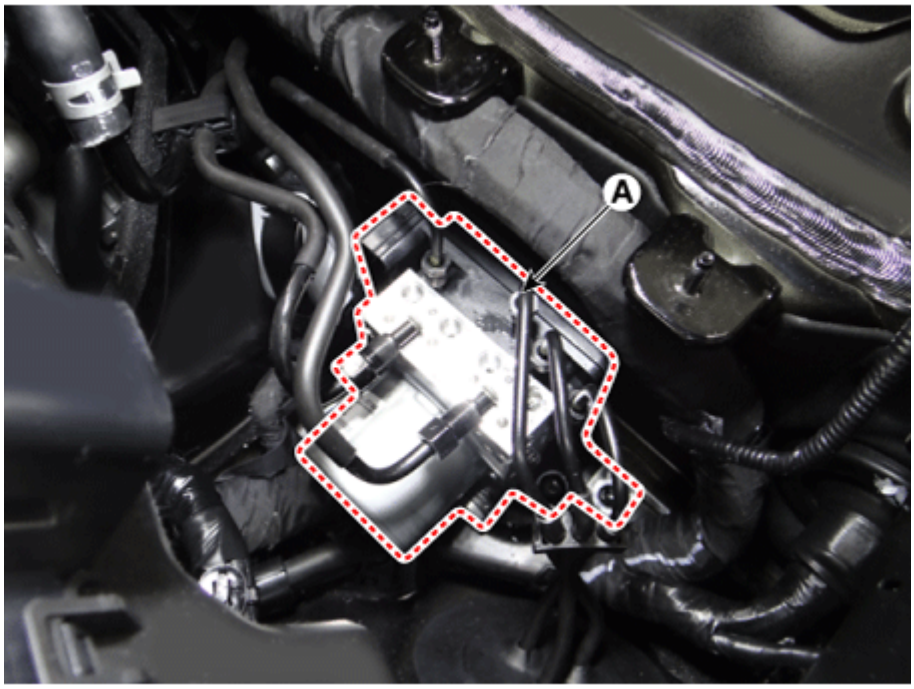
15. Loosen the ESP brake tube flare nuts.

Tightening torque :
(A) : 16.7 - 20.6 N·m (1.7 - 2.1 kgf·m, 12.3 - 15.2 lb·ft)
(B) : 20.6 - 24.5 N·m (2.1 - 2.5 kgf·m, 15.2 - 18.1 lb·ft)



16. Remove the ESP control module (A).

Tightening torque :
16.7 - 25.5 N·m (2.0 - 3.0 kgf·m, 12.3 - 18.8 lb·ft)



NOTICE

- Never attempt to disassemble the ESP.
- The ESP must be transported and stored in.
- Never shock to the ESP.

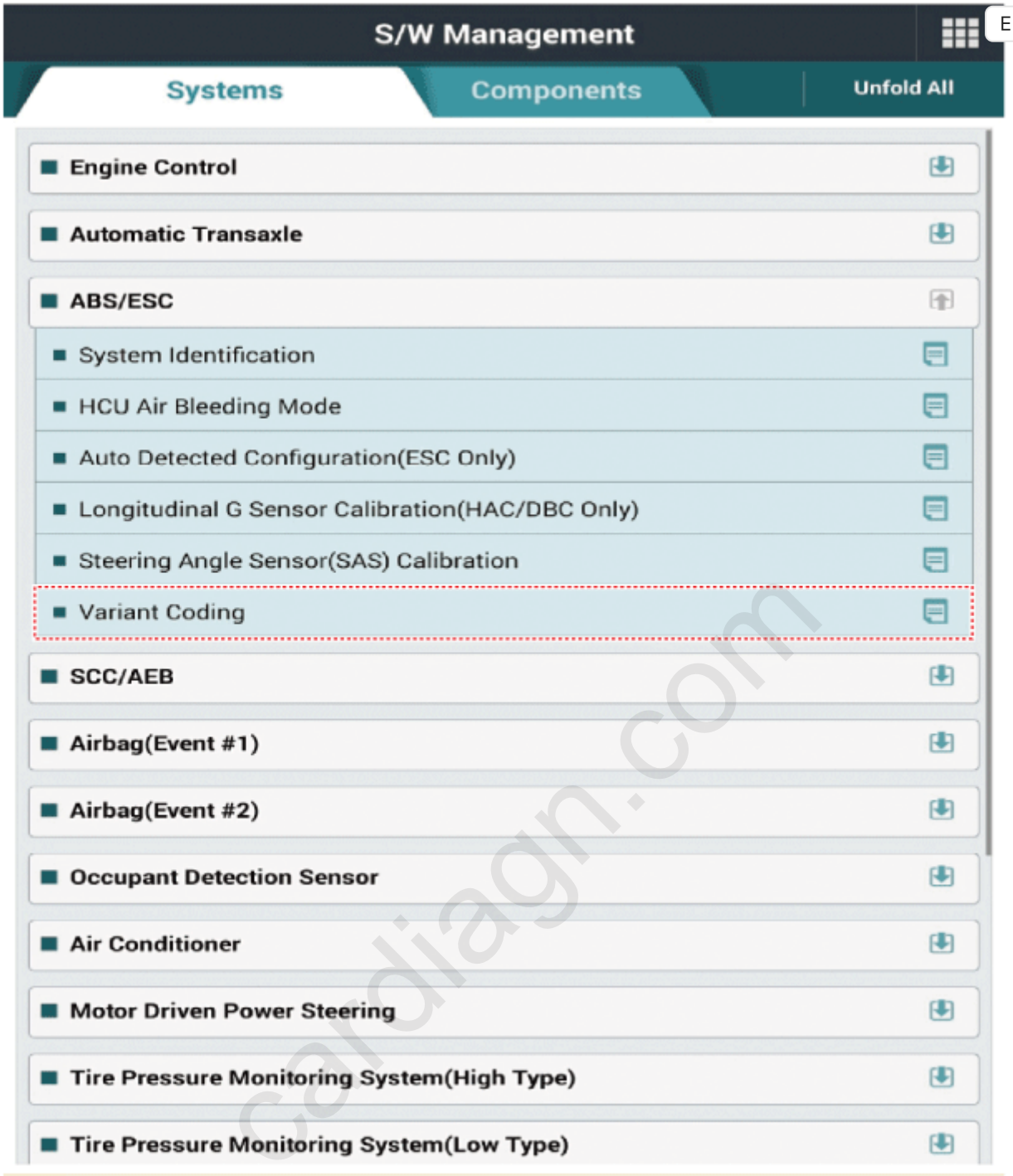
INSTALLATION

1. Install in the reverse order of removal.
2. After installation, bleed the brake system.
   (Refer to Brake system - "Brake Bleeding Procedures")

DIAGNOSTIC PROCEDURE BY USING DIAGNOSTIC DEVICE

Perform diagnostic procedure by using diagnostic device as shown below:
Connect self-diagnosis connector (16pins) located under the driver side crash pad to self-diagnosis device, and then turn the self-diagnosis device after key is ON.
Select the "vehicle model" and "ESP/ESC" on KDS vehicle selection screen, then select OK.

[Variant Code Reset]



English

• Variant Coding

Purpose	This function resets variant code and input the new one in ESP. Perform this function when you replace ESP occur C1702 with MIL On.(ESP/EBD/ABS)
Enable Condition	1. Engine Off 2. Ignition Switch On
Concerned Component	Hydraulic Electric Control Unit(HECU)
Concerned DTC	C170204
Fail Safe	Warning Lamp On
Etc	-

OK

English

S/W Management

Variant Coding

[Variant Coding]

This function resets variant code and input the new

one in ESP. Perform this function when you replace ESP or

occur C1702 with MIL On.(ESP/EBD/ABS)

[Condition]

1. Ignition key on
2. Engine Stop

Press **[OK]** button, if you are ready
Press **[CANCEL]** button to exit.

OK Cancel

English

S/W Management

Variant Coding

[Variant Coding]

1. Select the item to modify.

2. Select the value in combo box

[OK] button: Codes settings

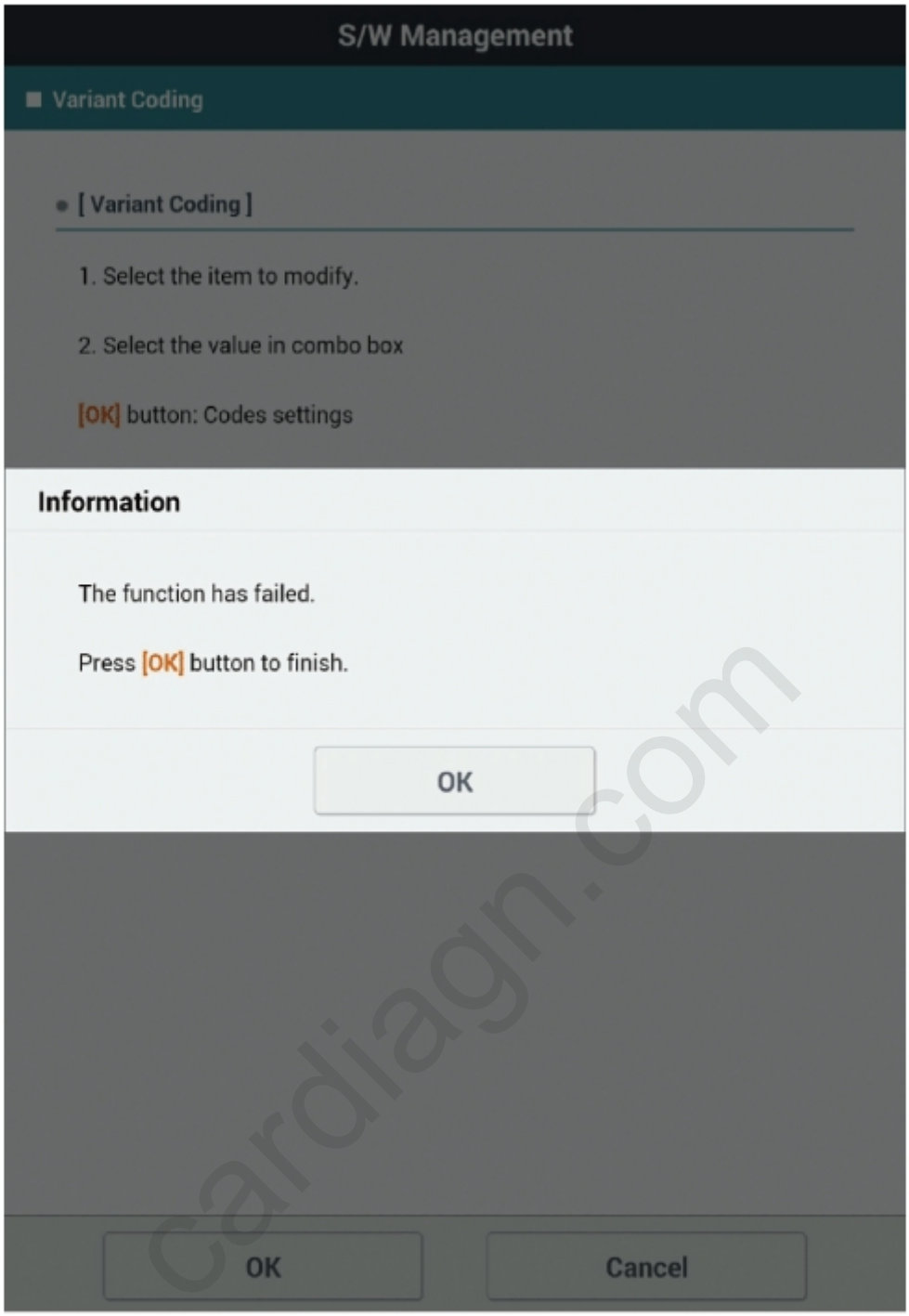
[Cancel] button: Main Menu

Item	Setting Value
ESS status :	DISABLE

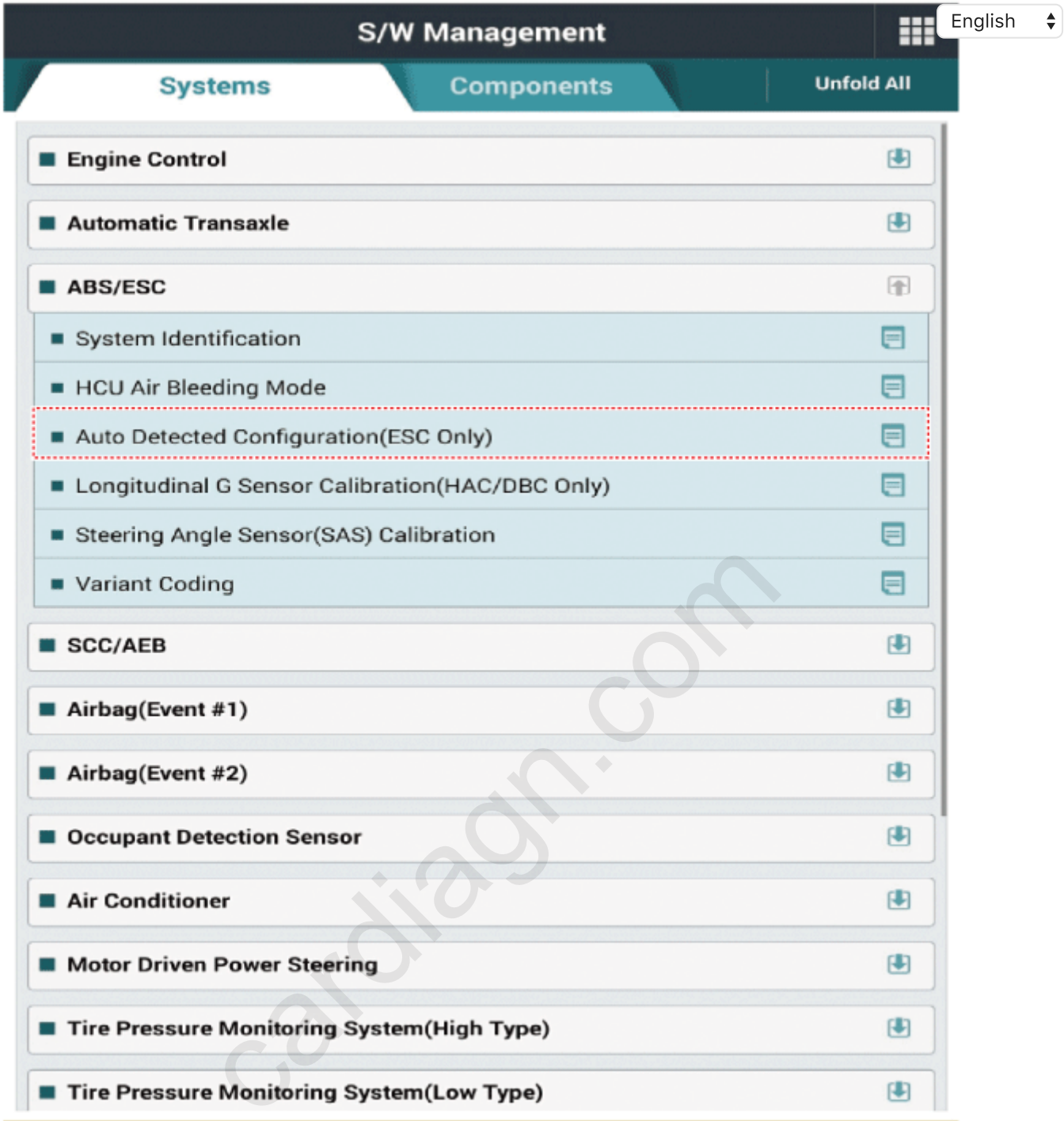
DISABLE

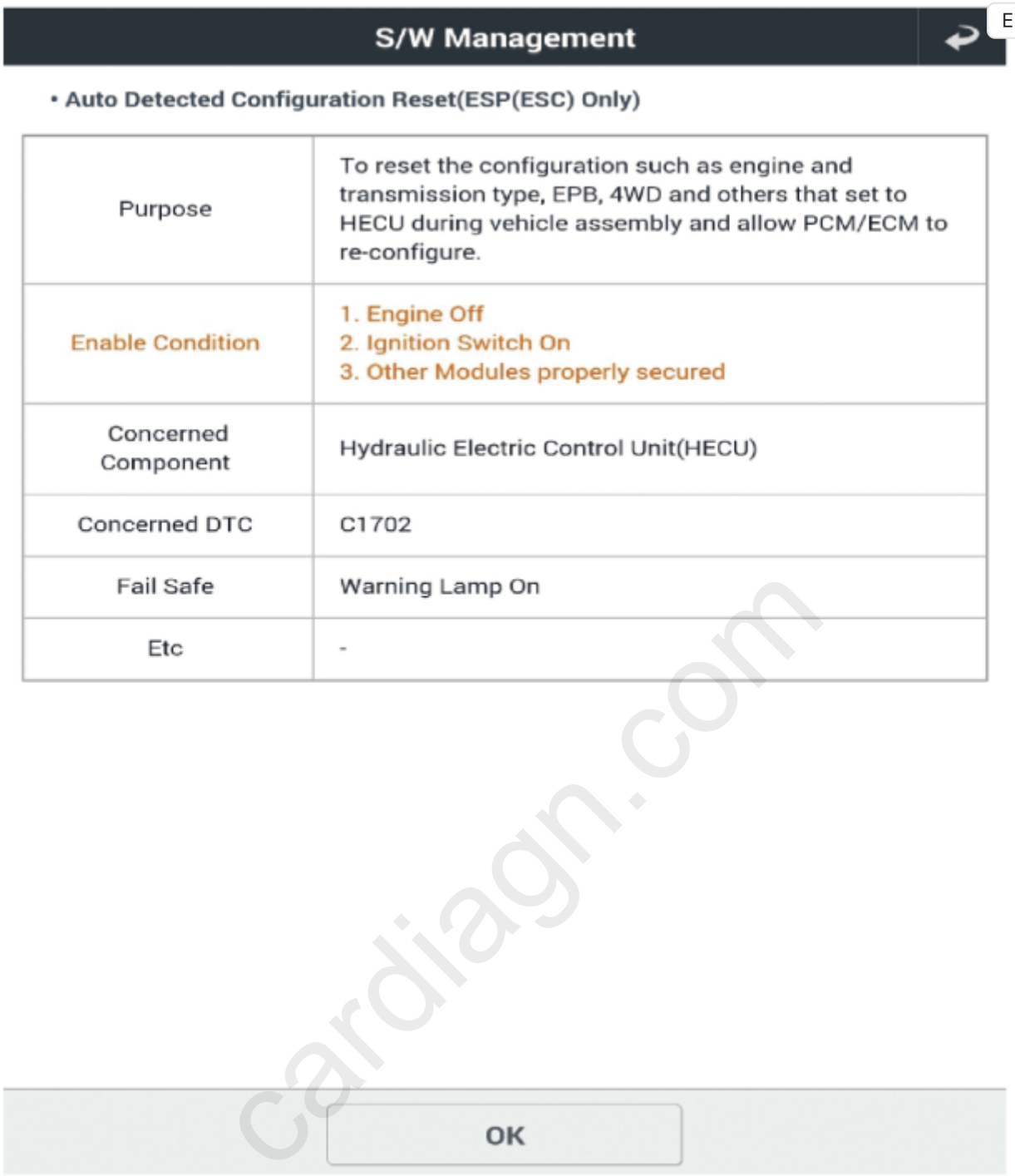
OK Cancel

English



[Auto Detected Sensor Calibration]





[Longitudinal G Sensor Calibration]

English

• Longitudinal G Sensor Calibration(HAC/DBC Only)

Purpose	To reset sensor value of longitudinal G sensor.
Enable Condition	1. Engine Off 2. Ignition Switch On 3. HAC Condition : Enabled 4. Max. Incline Angle : within ±0.57 deg 5. Straighten Steering Wheel position 6. Normal Tire Pressure 7. No excessive load on vehicle
Concerned Component	Hydraulic Electric Control Unit(HECU), Longitudinal G Sensor
Concerned DTC	C1285
Fail Safe	Warning Lamp On
Etc	Must be performed after sensor or ECU is replaced.

OK