

 HYUNDAI Technical Service Bulletin	GROUP HYBRID CONTROL	NUMBER 18-HC-004
	DATE DECEMBER, 2018	MODEL IONIC HYBRID/ PLUG-IN HYBRID (AE HEV/PHEV)
HEV/PHEV CALIBRATION USING GDS		

DESCRIPTION:

This bulletin provides the procedures for calibrating Ionic Hybrid sensors using GDS whenever the components listed below are replaced or the DTC listed are stored:

Applicable Vehicles: 2017~ Ionic Hybrid/Plug-in Hybrid (AE HEV/PHEV)

#	Procedure	After replacing the following:
1.	Motor/HSG (Hybrid Starter Generator) Resolver Calibration	<ul style="list-style-type: none"> • HSG replaced • If DTC P0C1700 or P1C76 is stored
2.	EWP (Electronic Water Pump) Actuation	<ul style="list-style-type: none"> • HSG, HPCU, EWP, OBC, inverter radiator or coolant hoses replaced
3.	Brake Pedal Travel Sensor Calibration & AHB (Active Hydraulic Booster) Pressure	<ul style="list-style-type: none"> • HPCU, ECU, brake pedal or brake pressure sensor replaced • If DTC C137801, C137902, C138004 or C138404 stored
4.	1. Initialization of the engine clutch inspection line learning and diagnostic information 2. Removal of air from engine clutch hydraulic pressure line 3. Engine Clutch/Motor Resolver Adaptation 4. Stabilization of engine clutch hardware transfer torque	<ul style="list-style-type: none"> • DCT replaced • Hybrid motor replaced • Engine clutch, Engine clutch actuator • HPCU, HSG replaced • If DTC P17EB, P17C000 or P1744 are stored
	DCT Manual Input Function (DCT exchange) DCT Leaning Function	<ul style="list-style-type: none"> • DCT (Additional steps)

NOTICE

Follow the prompts on the GDS to determine if the vehicle should be in **HEV Ready** or **HEV Not Ready** mode.

NOTICE

If any test shows “Failed”:

- **Check for DTC in all modules and erase any DTC.**
- **Turn off the ignition and GDS. Turn on the ignition and GDS and perform the test.**

Warranty Information: Normal Warranty applies

SERVICE PROCEDURE

1. MOTOR/HSG RESOLVER CALIBRATION:

Conditions where calibration is required:

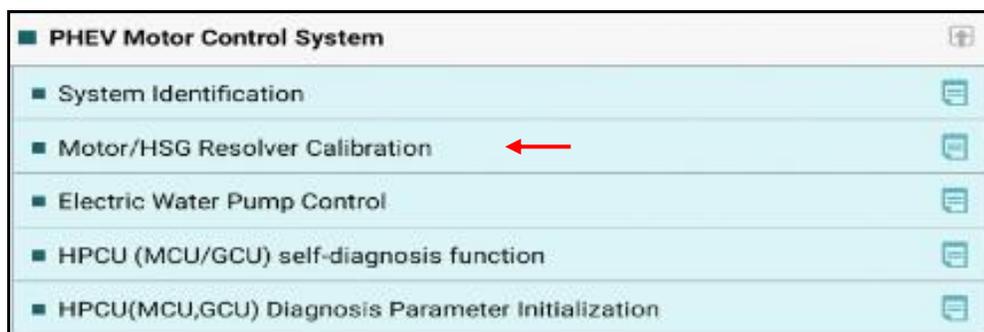
- After reinstalling or replacing the HSG.
- When DTC P0C17 or P1C76 is stored and the service indicator in the cluster is illuminated.

GDS procedure to perform Motor/HSG Resolver Calibration:

CONDITION: HEV Ready: (Press the Start-Stop Button (**SSB**) one time with brake pedal depressed)

Select **S/W Management, PHEV/HEV Motor Control System** and **Motor/HSG Resolver Calibration**. Select **OK** and follow the prompts on the GDS.

The GDS will automatically go back to the home screen. Go to Step 4 and select **S/W Management, HCU/Low DC-DC Converter**. Select **OK** and follow the prompts on the GDS.



NOTICE

After selecting this test, the GDS will return to the home page. Go to Step 4 and perform all 4 procedures in the listed order.

2. ELECTRIC WATER PUMP (EWP) ACTUATION:

Conditions where calibration is required:

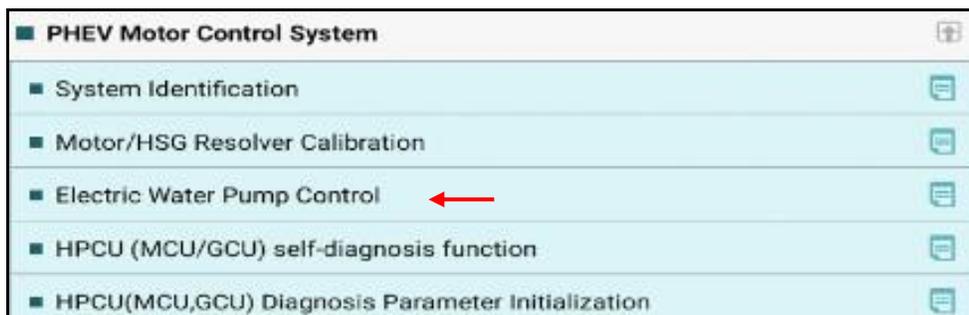
- After changing or adding coolant.
- After reinstalling or replacing the HPCU, HSG, EWP, OBC, inverter radiator or coolant hoses.

GDS procedure to perform Electric Water Pump Actuation:

CONDITION: HEV not Ready: (Press the **SSB** two times without depressing brake pedal)

Select **S/W Management, PHEV/HEV Motor Control System** and **Electric Water Pump Control**. Select **OK** and follow the prompts on the GDS.

The GDS will display “Test Completed”. Press **OK**.



3. BRAKE PEDAL TRAVEL SENSOR & AHB PRESSURE SENSOR CALIBRATION

Conditions where calibration is required:

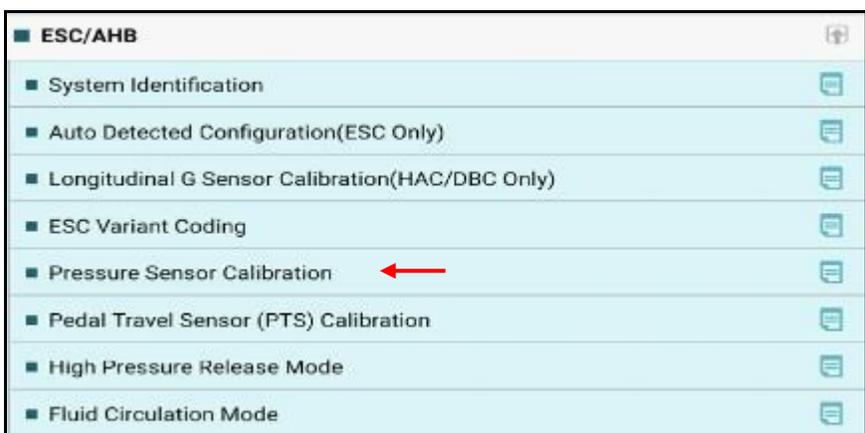
- After reinstalling or replacing the HPCU, ECU, brake pedal or brake pressure sensor.
- If C137801, C137902, C137902, C138004 or C138404 are stored.

GDS procedure for Brake Pedal Travel Sensor & AHB Pressure Sensor Calibration:

CONDITION: HEV not Ready: (Press the **SSB** two times without depressing brake pedal).

Select **S/W Management**, **ESC/AHB** and **Pressure Sensor Calibration**. Select **OK** and follow the prompts on the GDS.

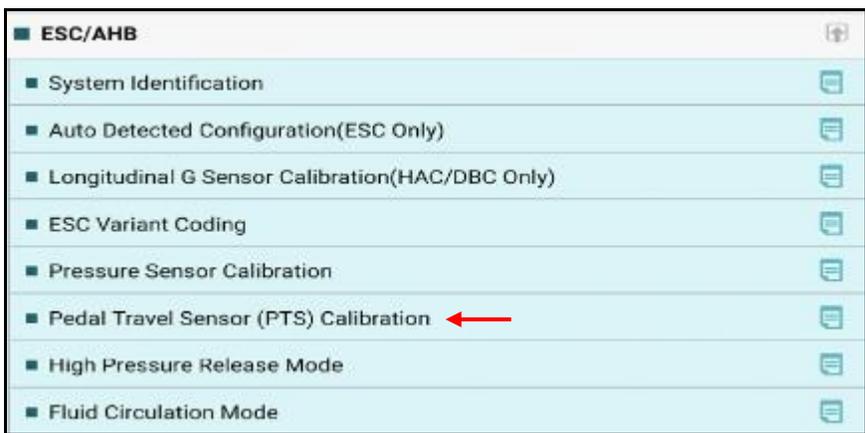
The GDS will display “Calibration Completed”. Press **OK**.



Select **S/W Management**, **ESC/AHB** and **Pedal Travel Sensor (PTS) Calibration**. Select **OK** and follow the prompts on the GDS.

CONDITION: HEV not Ready: (Press the **SSB** two times without depressing brake pedal).

The GDS will display “Calibration Completed”. Press **OK**.



4. DUAL CLUTCH TRANSMISSION, HYBRID MOTOR, ENGINE CLUTCH, ENGINE CLUTCH ACTUATOR, HPCU or HSG are replaced.

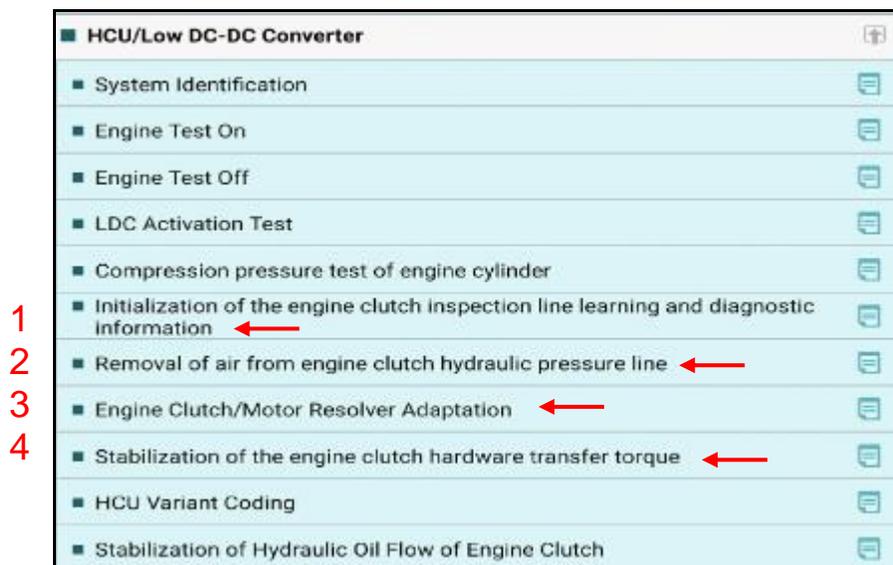
If DTC P17EB or P17C000 or ENGINE CLUTCH DTC P1744 are stored.

Select **S/W Management, HCU/Low DC-DC Converter**. Select **OK** and follow the prompts on the GDS.

CONDITION: HEV Ready: (Press the **SSB** one time with brake pedal depressed).

NOTE: Perform the procedure in the order listed below.

The GDS will display “Calibration Completed”. Press **OK**.



DCT REPLACEMENT (ADDITIONAL), HPCU, TCM or GEAR ACTUATOR ASSY:

Select **S/W Management, Transmission/dual Clutch Transmission**. Select **OK** and follow the prompts on the GDS.

CONDITION: HEV Not Ready: (Press the **SSB** two times without depressing brake pedal).

Perform the DCT Learning Function. Next, the GDS will prompt you to select **HEV Ready** to continue. The GDS will display “Calibration Completed”. Press **OK**.



CONDITION: HEV Not Ready: (Press the **SSB** two times without depressing brake pedal).

