

**HYUNDAI**NEW THINKING.
NEW POSSIBILITIES.**Technical Service Bulletin**

GROUP	NUMBER
CAMPAIGN	11-01-022
DATE	MODEL
JUNE, 2011	SONATA HYBRID (YF HEV)

SUBJECT NVLD INSPECTION/REPLACEMENT AND ECM UPDATE
(SERVICE CAMPAIGN TF9)



Global Diagnostic System
ECU Update

Description: For 2011 Sonata Hybrid (YF HEV) vehicles, this bulletin provides a procedure to inspect the NVLD (Natural Vacuum Leakage Detection - Pressure Sensor Assembly) and replace it, if necessary, with a revised part. In addition, it provides a procedure to update the ECM.

★ IMPORTANT***** Dealer Stock and Retail Vehicles *****

Dealers must perform this service campaign on all affected vehicles prior to customer retail delivery and whenever an affected vehicle is in the shop for any maintenance or repair.

When a vehicle arrives at the service department, access Hyundai Motor America's "Warranty Vehicle Information" screen via WEBDCS to identify open campaigns.

Applicable Vehicles: 2011 MY Sonata Hybrid (YF HEV)

- Produced from SOP through 4/28/2011

Parts Information:

NVLD Assembly
(Pressure Sensor Assembly)

31480 – 4R100QQH

**GDS Information:**

EVENT #	DESCRIPTION
Event #235 (or latest Event #)	YF HEV 2.4 P0456 DTC LOGIC IMPROVEMENT

Warranty Information:

Op Code	Operation	Op Time
10C032R1	NVLD REPLACEMENT AND ECM UPGRADE	0.5 M/H
10C032R2	NVLD INSPECTION AND ECM UPGRADE	0.5 M/H

NOTE: Submit claim on Campaign Claim Entry Screen

ROM ID TABLE: Verify the ECM ROM ID before updating vehicle software.

MODEL	ECU P/N	ROM ID	
		Previous	New
YF 2.4 HEV	39105-2G910	YBY4RAAC	YBY4RABA

SERVICE PROCEDURE

NVLD INSPECTION/REPLACEMENT PROCEDURE

1. Turn off the ignition key and lift up the vehicle.
2. Locate the NVLD on the left side of the fuel tank.

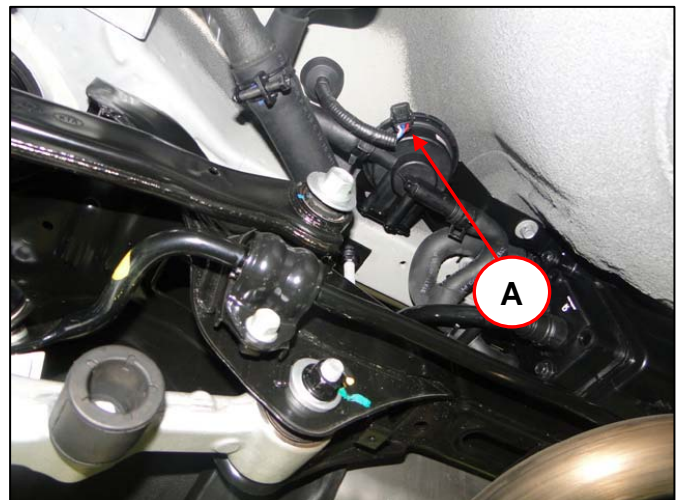


3. Disconnect the NVLD wiring connector (A).



NOTICE

When reconnecting the NVLD wiring connector, be sure to fully reconnect it until a clicking sound is heard.

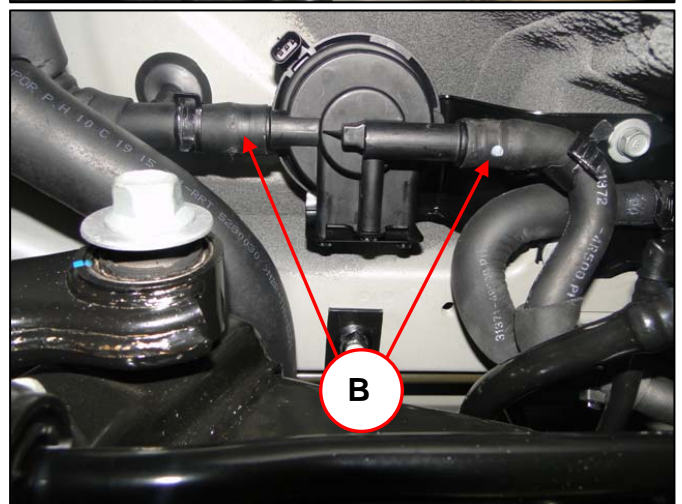


4. Disconnect the ventilation hoses (B).

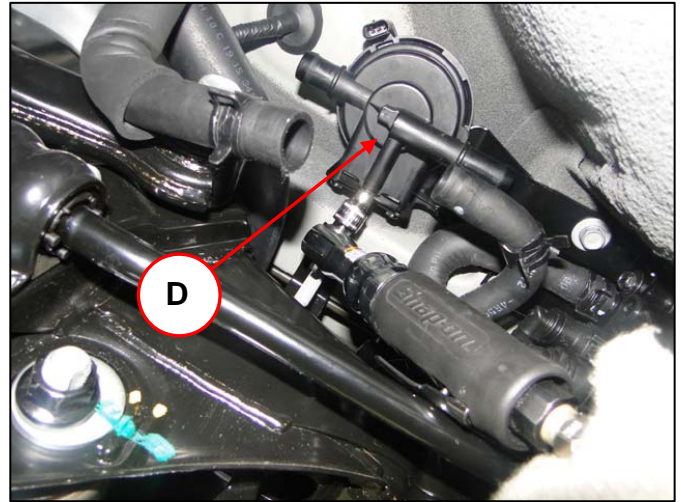
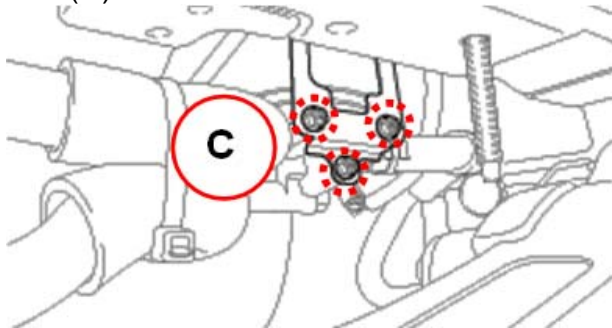


NOTICE

When reinstalling the ventilation hoses, be careful not to twist them or airflow restriction may result.



5. Remove the NVLD (D) by unfastening 3 bolts (C).



- Follow the inspection information below to determine if the NVLD assembly needs to be reinstalled or replaced.

6. Visually inspect the top cover of the NVLD assembly to read the “SW” version.

- NVLD assemblies with “**SW 102**” are revised parts. **DO NOT REPLACE.**
Possible Part Numbers:
 - **31480-4R000**
 - **31480-4R100**
- NVLD assemblies with “**SW 103**” are old version parts and **must be replaced.**
Possible Part Numbers:
 - **31480-4R000**



**Example of a revised NVLD assembly:
P/N 31480-4R100 with “SW 102”**



**Example of a revised NVLD assembly:
P/N 31480-4R000 with “SW 102”**

**SW 102 = REVISED
SW 103 = REPLACE**

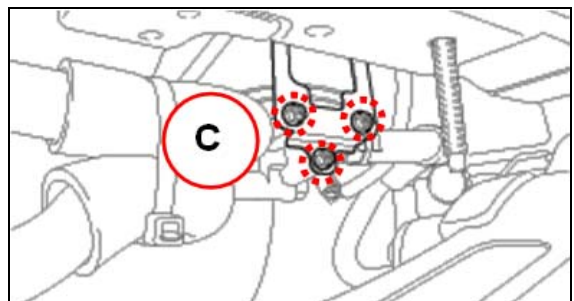
NOTICE

Regardless of the part number, NVLD assemblies with “SW 102” stampings are revised parts that should be reinstalled. **DO NOT REPLACE.**

7. Install the new or existing NVLD assembly as appropriate (determined from step 6 above), and reinstall all the removed parts in reverse order of removal.

Carefully tighten the fastener (C) through the bracket into the NVLD assembly mount.

- Tightening torque: 17~26 lb-in (2.3~3.3 N.m)



GENERAL PRECAUTIONS

GDS ECM UPDATE PROCEDURE

- Connect the USB cable between the GDS and the VCI.
- Connect the 16-pin DLC connector from the VCI into the DLC located under the driver's side dash.



NOTICE

Make sure the battery icon at the bottom right of the GDS laptop shows at least 50%; if not, charge the GDS or attach a battery charger.

- Turn off all lights (Do not leave the headlight switch in auto mode) and all accessories (including heater/air conditioner/fan, audio, heated seats, rear defroster, etc) to ensure the battery will not be discharged during the update.
- Perform the update with the ignition key in the ON position.
- Do not disconnect any cables connected to the vehicle or the GDS during the update.
- Do not start the engine or turn the ignition switch OFF during the update.



NOTICE

Confirm your GDS has the most recent version. If not, connect the GDS to an Internet port, open the GDS home page and select "Update". Refer to instructions on hmaservice.com if necessary.



NOTICE

If you encounter GDS related problems, call the GIT Helpline at 888-437-0308.

SERVICE PROCEDURE**GDS AUTO MODE ECM UPDATE PROCEDURE**

1. From the GDS home page, select **ECU Upgrade**. If necessary, select the VIN.
2. Select **ENGINE** as the system and then select **OK**.



3. Select **Auto Mode** and then select Next.
4. From the **System** tab, select **ENGINE** and then select **OK**. The GDS will read the ROM ID. Confirm the ROM is applicable as shown on Page 1, "ROM ID Information".
5. Select update event **#235 YF HEV 2.4 P0456 DTC LOGIC IMPROVEMENT** or any later (higher) event number that shows in the GDS list. Select **Upgrade**.
6. If the screen indicates "**Voltage is OK**", select **OK**. If not, select **CANCEL** and charge the vehicle battery by running the engine (from READY mode, press the accelerator in PARK) for 10 minutes and then retry from previous steps.

**NOTICE**

A chime will be heard twice from the cluster during ECU update procedure.

7. Updating will occur until 100% is reached on the bar graph. At the prompt, turn the ignition key OFF for 40 seconds, then turn it ON and select **OK**.
8. The GDS will confirm that ECM reprogramming is successfully finished. Select **OK**.
9. If the ECM update was not successful, go to **GDS MANUAL MODE ECM UPDATE PROCEDURE**.
10. Check for any incidental Diagnostic Trouble Codes that may have been created by the ECM update process. Check all systems and clear any DTC(s) present.

GDS MANUAL MODE ECM UPDATE PROCEDURE

The manual update should be performed only if the automatic update fails. If the automatic update fails, then cycle the ignition to the OFF position for about 10 seconds before performing the manual update.

1. From the GDS home page, select **ECU Upgrade**. If necessary, select the VIN.
2. Select **ENGINE** as the system and then select **OK**.
3. Select **Manual Mode** and then select **Next**.
4. From the **System** tab, select **ENGINE** and then select **OK**.
5. Select update event **#235 YF HEV 2.4 P0456 DTC LOGIC IMPROVEMENT** or any later (higher) event number that shows in the GDS list. Select **Upgrade**.



6. Enter the password from the table below.

MENU	PASSWORD
YF HEV 2.4 : 39105-2G910	2910

7. If the screen indicates “**Voltage is OK**”, select **OK**. If not, select **CANCEL** and charge the vehicle battery by running the engine (from READY mode, press the accelerator in PARK) for 10 minutes and then retry from previous steps.



NOTICE

A chime will be heard twice from the cluster during ECU update procedure.

8. Updating will occur until 100% is reached on the bar graph. At the prompt, turn the ignition key OFF for 40 seconds, then turn it ON and select **OK**.
9. The GDS will confirm that ECM reprogramming is successfully finished. Select **OK**.
10. Check for any incidental Diagnostic Trouble Codes that may have been created by the ECM update process. Check all systems and clear any DTC(s) present.