	GROUP	MODEL
	TRA	**2011~2016MY Optima Hybrid (TF HEV)**
	NUMBER	DATE
	059 (Rev 2 5/11/2017)	**May 2016**

TECHNICAL SERVICE BULLETIN

SUBJECT: HCU/TCU UPGRADE – FOR 100 MESH SOLENOID EQUIPPED HYBRID TRANSMISSIONS

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides information related to a software upgrade of the Hybrid Control Unit (HCU) and the Transmission Control Unit (TCU) of some 2011~2016MY Optima Hybrid (TF HEV) after replacement of the transmission with improved 100 mesh solenoids has taken place. To apply the improved logic, the HCU/TCU should be reprogrammed using the GDS/KDS download, as described in this bulletin.

✶ NOTICE

This update MUST be applied to vehicles receiving replacement transmissions with the following part numbers:
P/N 45000-3D010
P/N 45000-3D340

When installing a transmission with 100 mesh solenoids, follow the repair flow chart shown below:

✶ NOTICE

This update must be performed when a 100 mesh solenoid transmission is installed in a vehicle which previously had a 400 mesh unit, otherwise, the customer may experience drivability issues. Use the identification matrix on Page 2 to correctly identify the replacement transmission. Do NOT apply this update unless a 100 mesh solenoid transmission is installed.

File Under: <Transmission>

Circulate To: ☒ **General Manager** ☒ **Service Manager** ☒ **Parts Manager**

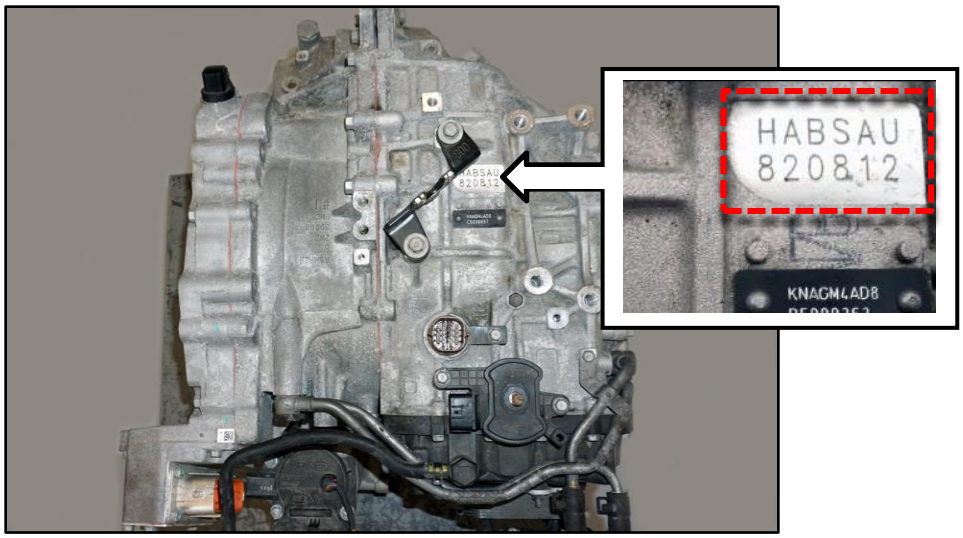
☒ **Service Advisor(s)** ☒ **Technician(s)** ☒ **Body Shop Manager** ☒ **Fleet Repair**

SUBJECT: HCU/TCU UPGRADE – FOR 100 MESH SOLENOID EQUIPPED HYBRID TRANSMISSIONS

Parts Identification Information:

✶ NOTICE

- **The following information applies ONLY to NEW transmissions and NOT remanufactured units.**
- **Remanufactured transmissions will have a warning tag attached to the transmission that indicates 100 mesh solenoids were installed. If so, the TCU and HCU updates must be performed.**



A/T Part #	A/T ID*	Solenoid Mesh #	Update Required
45000 3D000	HA*SAU	400	No
45000 3D300	HA*SBU		
45000 3D320	HB*SAU		
45000 3D010	HA*SCU	100	Yes
45000 3D340	HB*SBU		

SUBJECT: HCU/TCU UPGRADE – FOR 100 MESH SOLENOID EQUIPPED HYBRID TRANSMISSIONS

Upgrade Procedure:

To apply the improved logic, the HCU/TCU should be reprogrammed using the GDS/KDS download, as described in this bulletin.

UPGRADE EVENT NAME
262.TF HEV HCU/TCU SOL [FOR 100MESH]

✶ NOTICE

- **A fully charged battery is necessary before ECM upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECM mode during charging. DO NOT connect any other battery charger to the vehicle during ECM upgrade.**
- **All ECM upgrades must be done with the ignition key in the 'ON' position.**
- **Be careful not to disconnect any cables connected to the vehicle or GDS during the ECM upgrade procedure.**
- **DO NOT start the engine during ECM upgrade.**
- **DO NOT turn the ignition key 'OFF' or interrupt the power supply during ECM upgrade.**
- **When the ECM upgrade is completed, turn the ignition 'OFF' and wait 10 seconds before starting the engine.**
- **ONLY use approved ECM upgrade software designated for the correct model, year.**

✶ NOTICE

After performing the software upgrade, make sure to reset the TCM Adaptive Learning Values by referring to TSB TRA 049.

⚠ CAUTION

Before attempting an ECM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

SUBJECT: HCU/TCU UPGRADE – FOR 100 MESH SOLENOID EQUIPPED HYBRID TRANSMISSIONS

ROM ID INFORMATION TABLES:

Upgrade event #262 Optima (TF HEV)

Model	SYS	ECM P/N	ROM ID	
			Previous	New
TF HEV	TCU	39108-2G910 39108-2G911	TTF2H24SA1 TTF2H24SA3 TTF2H24SA5	**TTF2H24SAA**
	HCU	39700-2G100 39700-2G101	GYFEANEH HS0-C000 GYFEANEH HS1-C000 GYFEANEH HS4-C000 GYFEANEH HS5-C000 GYFECNEH HS0-C000 GYFECNEH HS1-C000 GYFECNEH HS2-C000 GYFECNEH HS3-C000	**GYFECNEH HS4-C000**
	TCU	39108-2G912 39108-2G915	TTF2H24SA4 TTF2H24SA6	**TTF2H24SAB**
		39108-2GAN0 39108-2GAN1	TTF2H24SA7 TTF2H24SA9	**TTF2H24SA8**
	HCU	39700-2G102 39700-2G104	GYFEDNEH HS0-C000 GYFEDNEH HS1-C000 GYFEDNEH HS3-C000 GYFEDNEH HS4-C000 GYFEDNEH HS5-C000 GYFEDNEH HS6-C000 GYFEDNEH HS7-C000 GYFEDNEH HS8-C000 GYFEDNEH HS9-C000 GYFEDNEH HSA-C000	**GYFEFNEH HS0-C000**
		39700-2G103 39700-2G120	GYFEENEH HS0-C000 GYFEENEH HS1-C000	**GTFEFNEH HS1-C000**

To verify the vehicle is affected, be sure to check the Calibration Identification of the vehicle's ECM ROM ID and reference the Information Table, as necessary.

★ NOTICE

If performing this TSB using KDS, refer to TSB SST 037 for detailed information.

1. Connect the power supply cable to the GDS.

★ NOTICE

If attempting to perform the ECM upgrade with the power supply cable disconnected from the GDS, be sure to check that the GDS is fully charged before ECM upgrade. If the GDS is not fully charged, failure to perform the ECM upgrade may occur. Therefore, it is strongly recommended that the power supply connector be connected to the GDS.

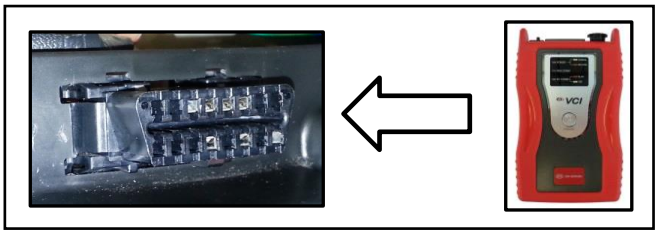
2. Connect the USB cable between the VCI and the GDS.

★ NOTICE

When performing the ECM upgrade using the GDS, wireless communication between the VCI and GDS is not available. Therefore, be sure to connect the USB cable between the VCI and the GDS.

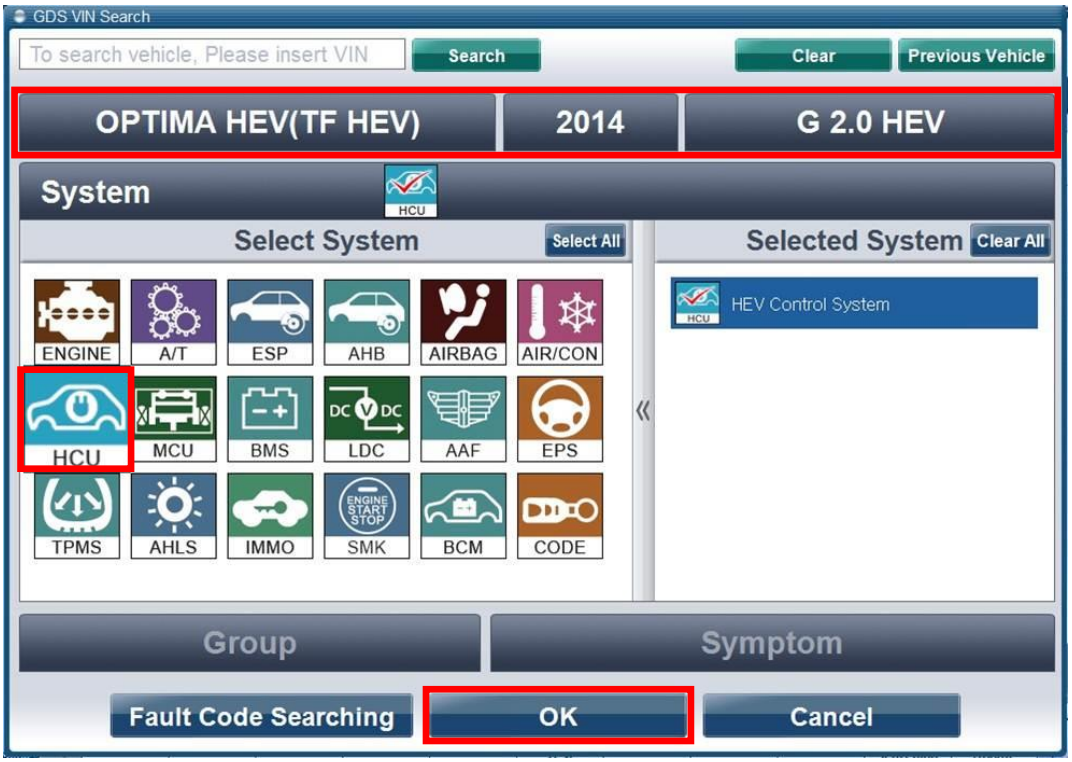
3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

4. Connect the Main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.



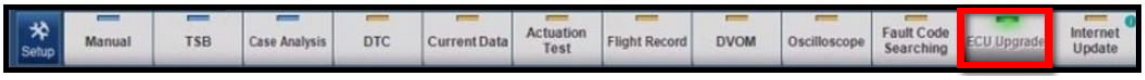
5. With the ignition key ON, turn ON the VCI and GDS. Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the **VIN AUTO DETECT** Function.

6. Select **HCU** system and click **OK**.



SUBJECT: HCU/TCU UPGRADE – FOR 100 MESH SOLENOID EQUIPPED HYBRID TRANSMISSIONS

7. Select **ECU Upgrade** from the bottom right-hand corner. Next select **Auto Mode**, and then **A/T**. Perform the upgrade in accordance with normal GDS ECM upgrade procedures.



8. After the upgrade is complete, reset the TCM Adaptive Learning Values per TSB TRA 049.

9. Confirm proper operation of the vehicle.

⚠ CAUTION

Before attempting an ECM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

✶ NOTICE

Do NOT attempt to perform a Manual Mode upgrade unless Auto Mode fails. Always follow the instructions given on the GDS in either Auto or Manual mode. See table for Manual Mode passwords.

*** <u>Do NOT perform Manual Mode ECM upgrade unless Auto Mode fails</u>.**

*** MANUAL MODE ECM UPGRADE PASSWORDS:**

Upgrade event #262 Optima Hybrid (TF HEV)

Menu	Password
TF HEV HCU : 39700-2G100/1 TCU : 39108-2G910/1	**2911**
TF HEV HCU : 39700-2G102/4 TCU : 39108-2G912/5['13.1/24~'13.12/8]	**2915**
TF HEV HCU : 39700-2G103/20 TCU : 39108-2GAN0/1['13.12/9~] 820	**820**

SUBJECT: HCU/TCU UPGRADE – FOR 100 MESH SOLENOID EQUIPPED HYBRID TRANSMISSIONS

1. Within the ECM Upgrade screen, select **Manual Mode** in the left column, select **HCU** and then select **Upgrade Event #262**. Select the appropriate control unit part number by referring to the ROM ID Information Table on Page 3, and click **OK**.

2. Enter the password from the table above and click **OK**.

3. Upgrade will begin and the progress of the upgrade will appear on the bar graph.

4. When the GDS reports that the TCM upgrade has been successfully completed, click **OK**, turn OFF the ignition key, and wait at least 10 seconds before attempting to start the engine.

5. Check for Diagnostic Trouble Codes (DTCs) using the GDS and erase any DTCs stored that may have been set during reprogramming.

6. After the upgrade is complete, reset the TCM Adaptive Learning Values per TSB TRA 049.

7. Confirm proper operation of the vehicle.

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Optima Hybrid (TF HEV)	2011~2016MY

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Time	Related Parts	Qty.
W	39108-2GAN1	0	I14	ZZ3	(TRA 059) TCM Upgrade	39700F05	0.4 M/H	N/A	0