	GROUP <b>TRA</b>	MODEL <b>2011-2015MY Optima Hybrid (TF HEV)</b>
	NUMBER <b>068</b>	DATE <b>October 2017</b>
<b>TECHNICAL SERVICE BULLETIN</b>		
SUBJECT: <b>HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)</b>		

This bulletin provides the procedure to improve the logic of the Hybrid Control Unit (HCU) on some 2011-2012MY Optima Hybrid (TF HEV), produced from February 15, 2011 through December 28, 2012, and both the Hybrid Control Unit (HCU) and the Transmission Control Unit (TCU) on some 2013-2015MY Optima Hybrid (TF HEV) vehicles, produced from January 15, 2013 through March 27, 2015, which may experience a malfunction indicator lamp illumination with DTC P1744. To correct this concern, apply the improved logic to the HCU only (11-12MY) or HCU and TCU (13-15MY) using the KDS ECU Upgrade function as described in this bulletin. For confirmation that the latest reflash has been applied to a vehicle you are working on, verify the ROM ID using the table on page 3 of this bulletin.

**DTC P1744 – Transmission Engine Clutch System Performance**



**★ NOTICE**

This TSB only applies to vehicles equipped with a 400 Mesh solenoid transmission. For additional information about identifying 400 Mesh Transmissions and/or in the case of an automatic transmission having been replaced with a 100 Mesh solenoid valve equipped unit (from 400 Mesh to 100 Mesh), refer to [TSB TRA059](#).

File Under: <Transmission>

- Circulate To:     General Manager     Service Manager     Parts Manager  
 Service Advisors     Technicians     Body Shop Manager     Fleet Repair

SUBJECT:

## HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)

### ECU Upgrade Procedure:


To correct this condition, the ECU(s) should be reprogrammed using the KDS ECU Upgrade function, as described in this bulletin.

Upgrade Event Name
335.TF HEV HCU MIL ON DTC (P1744) LOGIC IMPROVEMENT (FOR 400MESH)
336.TF HEV TCU MIL ON DTC (P1744) LOGIC IMPROVEMENT (FOR 400MESH)

### \* NOTICE

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

### \* NOTICE


Before attempting an ECU 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. 

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## HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)

### ROM ID INFORMATION TABLE:

Upgrade Event 335, 336 (TF HEV)

Model	MY	SYS	IMMO	ECU P/No.	ROM ID			
					Previous	New		
TF HEV	11-12MY	HCU	Yes 	39700-2G100	GYFEANEH HS0-C000 GYFEANEH HS1-C000 GYFEANEH HS4-C000 GYFECNEH HS0-C000 GYFEANEH HS5-C000	GYFECNEH HS3-C000		
				39700-2G101	GYFECNEH HS1-C000 GYFECNEH HS2-C000			
	13MY			39700-2G104	GYFEDNEH HS0-C000 GYFEDNEH HS1-C000 GYFEDNEH HS2-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		
				14-15MY	39700-2G120		GYFEENEH HS0-C000	GYFEENEH HS1-C000
				13MY	39108-2G912 39108-2G915		TTF2H24SA4 TTF2H24SA6	TTF2H24SA9
	14-15MY			TCU	-	39108-2GAN0	TTF2H24SA7	TTF2H24SA9

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

### \* NOTICE

**Prior to performing the ECU upgrade(s), be sure to check that the KDS is fully charged.**

- Prior to performing the ECU upgrade(s), verify that the vehicle is equipped with a 400 Mesh transmission by referring to page 2 of TSB TRA059.
- Connect the VCI-II to the OBD-II connector, located under the driver's side of the instrument panel.

### \* NOTICE

**The ECU upgrade function on KDS is operating wirelessly. It is not necessary to perform the upgrade via USB cable.**



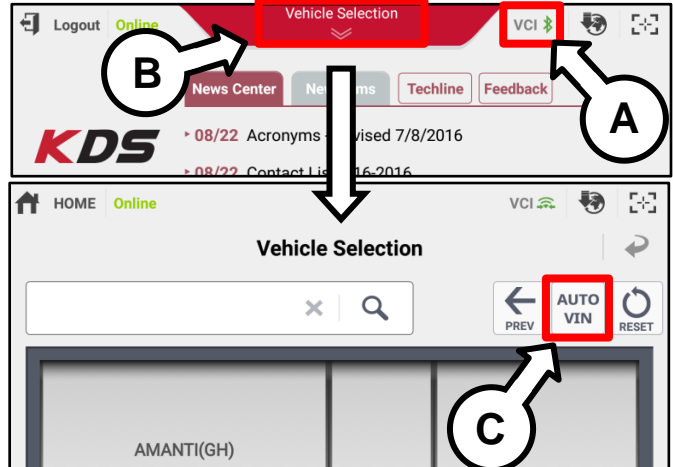
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HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744  
(400 MESH EQUIPPED TRANSMISSIONS ONLY)

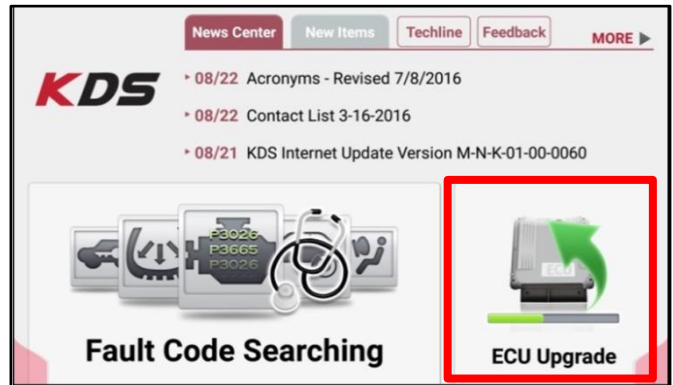
- With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



- Confirm communication with VCI (A) and then configure the vehicle (B) using the **AUTO VIN** (C) feature.



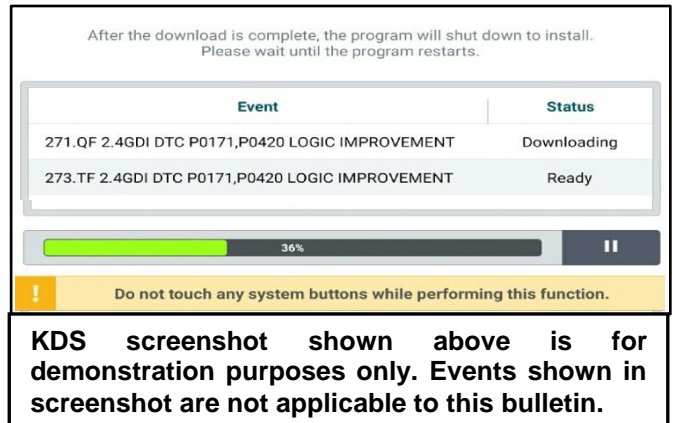
- Select **ECU Upgrade**.



- The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Events #335 for 11-15MY and #336 for 13-15MY**.

**\* NOTICE**

The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.



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## HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)

7. Select **Auto Mode**.



### CAUTION

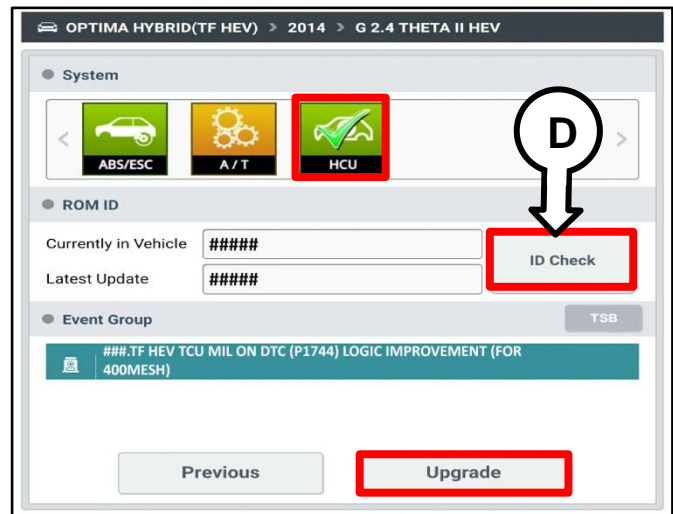
Do **NOT** attempt to perform a **Manual Mode** upgrade **UNLESS** **Auto Mode** fails. Always follow the instructions given on the KDS in either **Auto** or **Manual** mode.



8. Select the **HCU** system under the System selection menu.

Touch **ID Check** (D) and confirm that the latest update is available.

Select **Upgrade Event #335** and select **Upgrade** to continue.

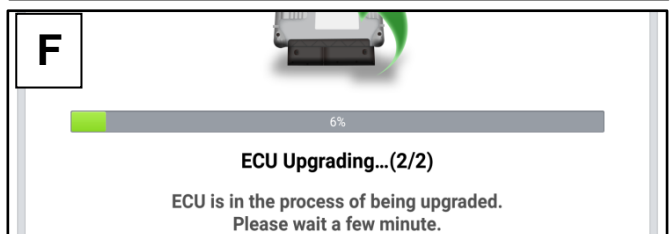
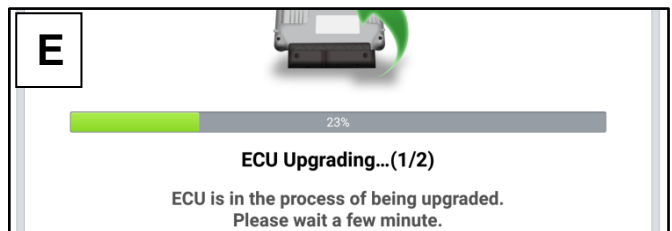


9. The ECU upgrade will begin and the progress of the upgrade will appear on the bar graph. Upgrade part (1/2) (E) will download the upgrade event to the VCI-II. Upgrade part (2/2) (F) will upgrade the ECU.



### CAUTION

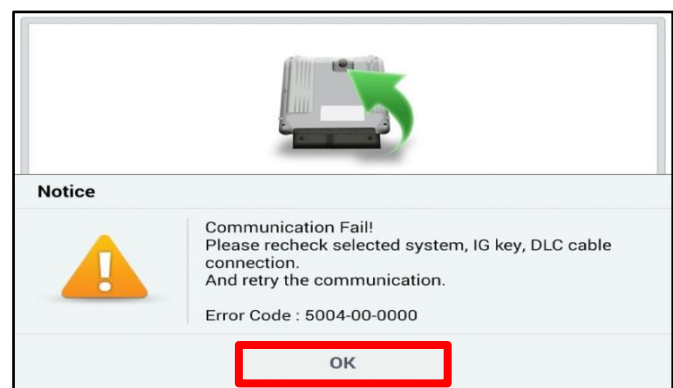
Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.



10. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

### ★ NOTICE

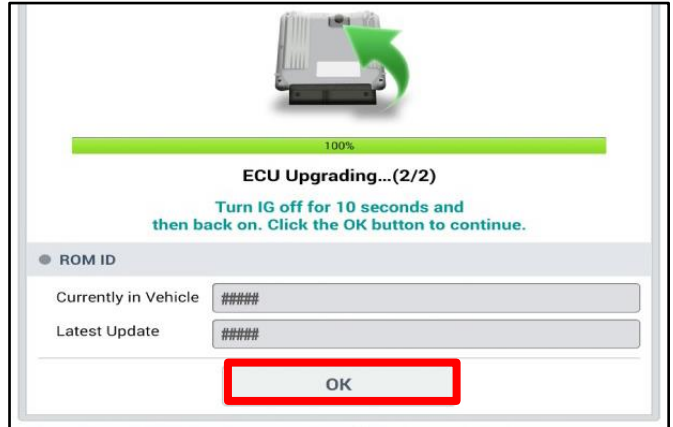
If an error notice continues to appear or if the upgrade cannot be performed, contact Techline or GIT America Help Desk.



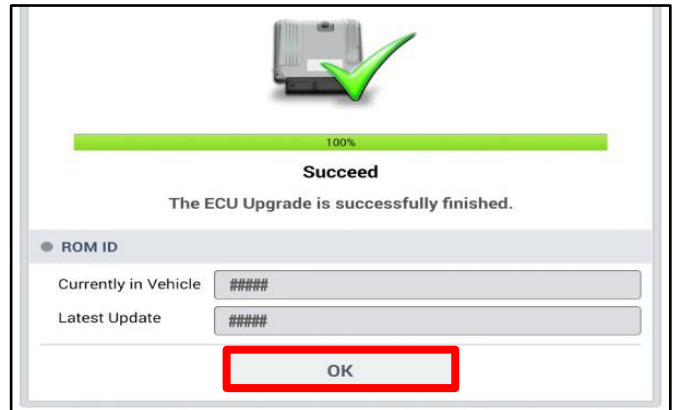
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- When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.

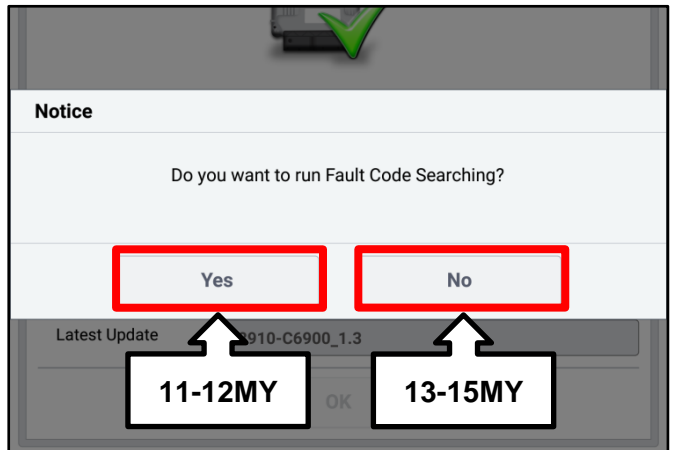


- Once the upgrade is complete, touch **OK** to finalize the procedure.



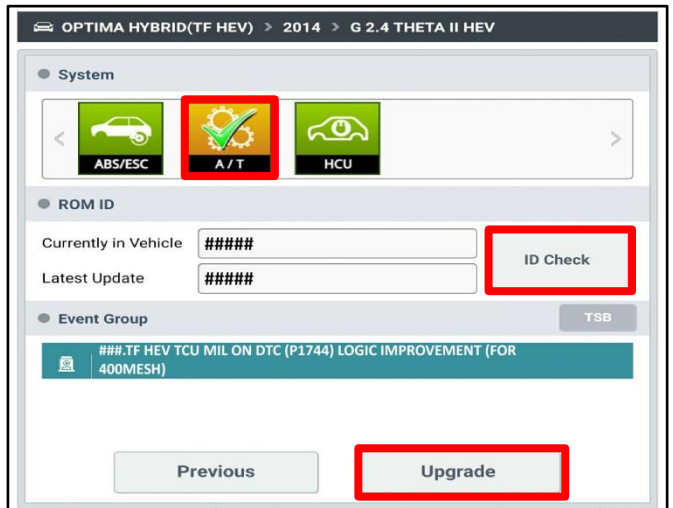
- For 11-12MY vehicles, when prompted, select **Yes** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade. Proceed to step 15.

For 13-15MY vehicles, when prompted, select **No** for the Diagnostic Trouble Codes (DTC) check, then return to the KDS Home Page and proceed to the next step.



- For 13-15MY vehicles, repeat steps 4-12 and perform **Upgrade Event #336** with the **A/T** system selected under the System selection menu.

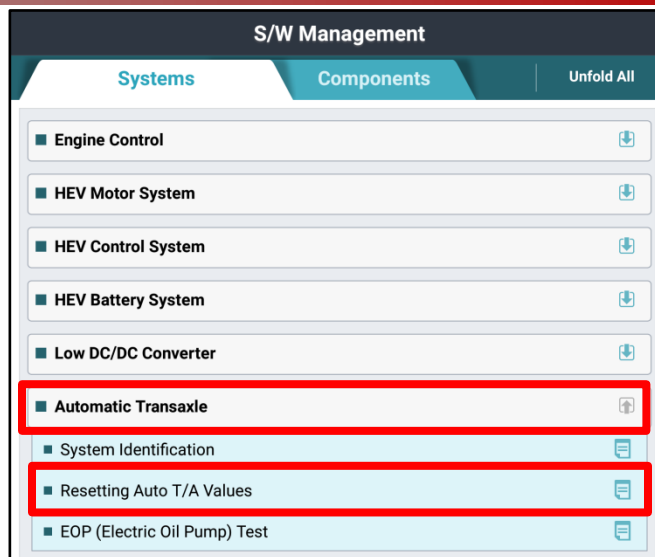
When prompted, select **YES** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.



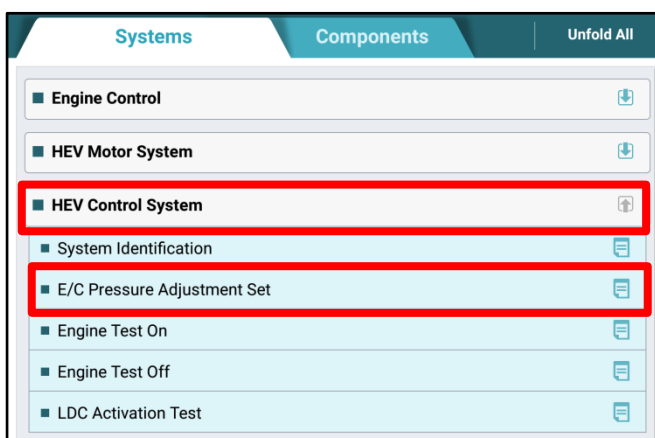
SUBJECT:

## HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)

15. After completion of the upgrade(s), reset the TCU adaptive values in S/W Management → Automatic Transaxle → Resetting Auto T/A Values.



16. Perform an Electronic Clutch Fluid Pressure Calibration by returning to the KDS home screen then selecting S/W Management → HEV Control System → E/C Pressure Adjustment.



17. Start the engine to confirm proper operation of the vehicle.

### ★ NOTICE

The TCM adaptive learning drive procedure is not needed for this update.

### Manual Upgrade Procedure:

### ★ NOTICE

The manual upgrade should **ONLY** be performed if the automatic upgrade fails.




If the automatic upgrade fails, turn the ignition **OFF** for about 10 seconds then place it back in the **ON** position to reset the control unit **BEFORE** performing manual upgrade.

See table below for Manual Mode passwords.

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## HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)

### Manual Mode ECU Upgrade Passwords

Menu	Password
TF HEV 11~12MY HCU +IMMO/SMK : 39700-2G100/101 	<b>2101</b>
TF HEV 13MY HCU +IMMO/SMK : 39700-2G104 	<b>2104</b>
TF HEV 14~15MY HCU +IMMO/SMK : 39700-2G120 	<b>2120</b>
TF HEV TCU : 39108-2G912/915/AN0	<b>2915</b>

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **HCU** system under the System selection menu. Select **Upgrade Event #335** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 3, and select **OK**.
4. Enter the appropriate password from the Manual Mode password table above and select **OK**.
5. The upgrade will begin and the progress of the upgrade will appear on the bar graph.
6. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.
7. Once the upgrade is complete, touch **OK** to finalize the procedure.
8. For 11-12MY vehicles, when prompted, select **Yes** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade. Proceed to the step 9.  
For 13-15MY vehicles, when prompted, select **No** for the Diagnostic Trouble Codes (DTC) check, then return to the KDS Home Page and proceed to the next step.
9. For 13-15MY vehicles, repeat steps 1-6 and perform **Upgrade Event #336** with the **A/T** system selected under the System selection menu.  
When prompted, select **YES** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.
10. After completion of the upgrade(s), reset the TCU adaptive values in S/W Management → Automatic Transaxle → Resetting Auto T/A Values.
11. Perform an Electronic Clutch Fluid Pressure Calibration by returning to the KDS home screen then selecting S/W Management → HEV Control System → E/C Pressure Adjustment.
12. Start the engine to confirm proper operation of the vehicle.

### \* NOTICE

The TCM adaptive learning drive procedure is not needed for this update.



SUBJECT:

## HCU/TCU LOGIC IMPROVEMENT FOR DTC P1744 (400 MESH EQUIPPED TRANSMISSIONS ONLY)

## AFFECTED VEHICLE RANGE:

Model	Production Date Range
11-12MY Optima Hybrid (TF HEV)	February 15, 2011 through December 28, 2012
13-15MY Optima Hybrid (TF HEV)	January 15, 2013 through March 27, 2015

## WARRANTY INFORMATION:

**N Code: I14 C Code: ZZ3**

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	Refer to ROM ID Information Table	0	<b>11-12MY</b> 400 Mesh Solenoid Valve Logic Improvement HCU Only Upgrade	39110FD2	0.3 M/H	N/A	0
	Refer to ROM ID Information Table		<b>13-15MY</b> 400 Mesh Solenoid Valve Logic Improvement HCU & TCU Upgrade	39110FD3	0.4 M/H		