



| | |
|------------------------|---|
| GROUP | MODEL |
| Safety Recall Campaign | Multiple Models (Refer to chart below) |
| NUMBER | DATE |
| SC226 | March 2022 |

SAFETY RECALL CAMPAIGN

SUBJECT: **AIRBAG CONTROL UNIT (ACU) REPLACEMENT FOR
DTC B1620 OR ACU SOFTWARE UPDATE (SC226)**

This bulletin provides information to replace the Airbag Control Unit (ACU) or to update the ACU software logic on certain Kia vehicles listed below.

| Model | Production Date Range |
|-----------------------------|------------------------------------|
| 2017-2019 MY Soul (PS EV) | May 18, 2017 to September 28, 2018 |
| 2017-2019 MY Soul (PS) | July 25, 2016 to December 24, 2018 |
| 2017-2019 MY Sedona (YP) | July 12, 2016 to January 10, 2019 |
| 2017-2018 MY Forte (YD/YDm) | March 2, 2017 to July 27, 2018 |
| 2017 MY Forte Koup (YD) | October 4, 2016 to October 4, 2016 |

Due to variances in the manufacturing of the Airbag Control Unit (ACU), contact between the ACU cover and the Electrically Erasable Programmable Read-Only Memory (EEPROM) chip on the ACU's Printed Circuit Board (PCB) may occur and cause damage to the EEPROM's soldering joints resulting in an open circuit. If this condition occurs, the Airbag Warning Light (ABWL) will illuminate with diagnostic trouble code B1620 and the vehicle's airbags will not deploy in crashes where deployment is necessary, thereby increasing the risk of injury.

- **If the ABWL is illuminated and the ABWL is due to the existence of diagnostic trouble code B1620,** dealers are to replace the ACU with a new improved one.
- **If the ABWL is not illuminated,** dealers are to update the ACU software logic to ensure deployment of the airbag(s) in the event of a crash that warrants such protection even if the recall condition related to DTC B1620 occurs in the future.

Follow the procedure outlined in this publication to replace the ACU or to update the ACU software logic. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

NOTICE

There is no charge to the vehicle owner for this repair. Under applicable law, you may not sell or otherwise deliver any affected vehicle until it has been repaired pursuant to the procedures set forth in this bulletin.

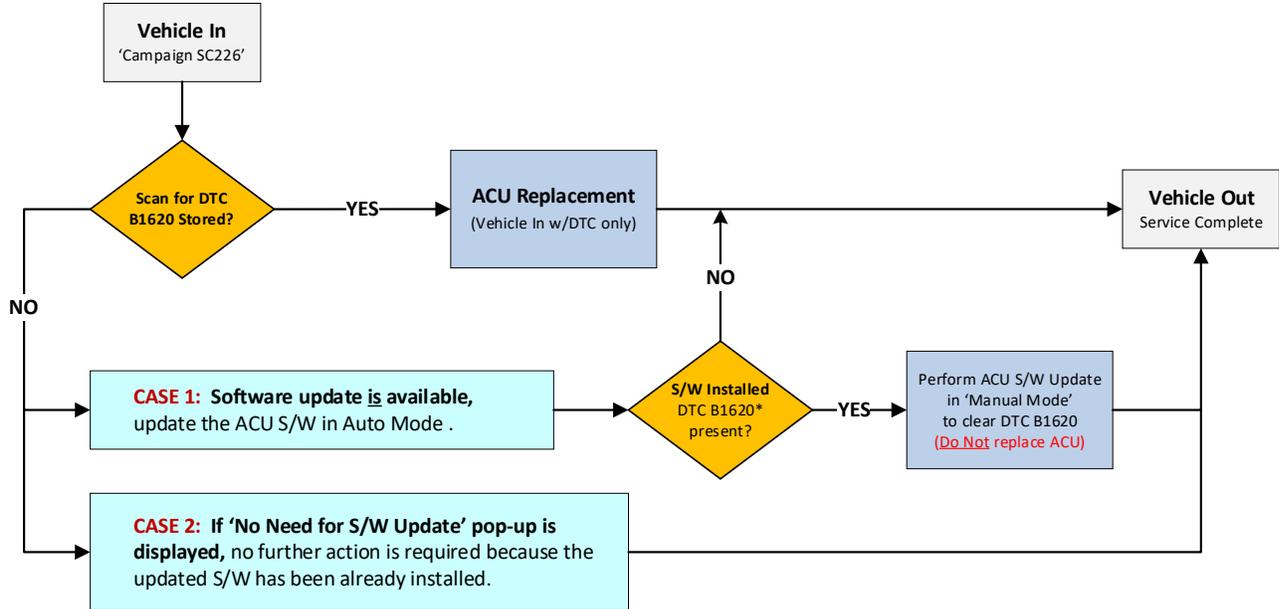
SUBJECT:

AIRBAG CONTROL UNIT (ACU) REPLACEMENT FOR DTC B1620 OR ACU SOFTWARE UPDATE (SC226)

NOTICE

To assure complete customer satisfaction, always remember to refer to WebDCS Warranty Coverage (validation) Inquiry Screen (Service → Warranty Coverage → Warranty Coverage Inquiry) for a list of any additional campaigns that may need to be performed on the vehicle before returning it to the customer.

Flowchart:



***NOTE:** In very rare cases, DTC B1620 may be present due to a software installation error/glitch after 'Auto Mode' software installation is completed even though there was no Airbag Warning Light (ABWL) w/DTC B1620 prior to upgrade. If this occurs, perform the 'Manual Mode' upgrade in order to clear DTC B1620.

IMPORTANT

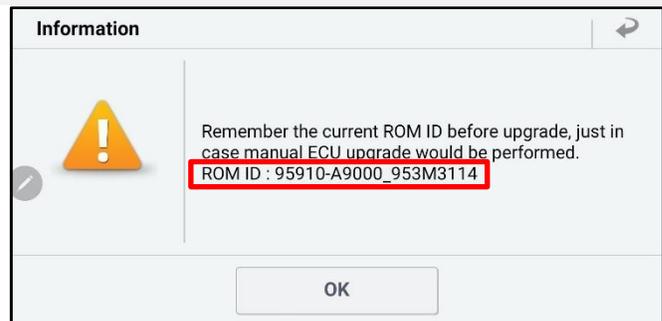
A Vehicle Diagnosis Number (VDN) must be created prior to ACU replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur.

Software Check:

Confirm and note the existing ROM ID of the Airbag Control Unit (ACU).

Perform the 'Manual Upgrade Procedure' only if one of the following conditions occur:

- 1) Auto Mode S/W update fails
- 2) DTC B1620 present after S/W update



Continued on Page 3.



SUBJECT:

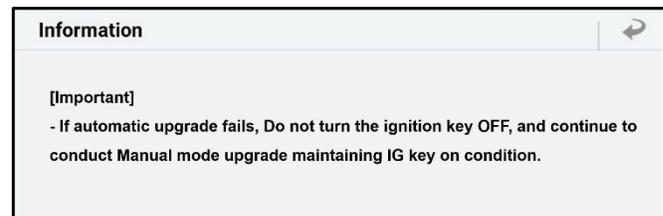
AIRBAG CONTROL UNIT (ACU) REPLACEMENT FOR DTC B1620 OR ACU SOFTWARE UPDATE (SC226)

If a "No need for S/W update" pop-up is displayed on KDS in 'Auto Mode', then the software upgrade is not required because the updated S/W has been already installed.. (The ACU part does not need this upgrade event)



Note: This pop-up notice may display if the ACU does not need or match the selected update. Please, check the ACU parts number and select correct match by referring the Manual upgrade list. If the pop-up notice continues to display, even though ACU part is correctly matched to the Manual upgrade list in this bulletin, then the ACU part will not require the upgrade event.

If automatic upgrade fails, **Do Not** turn the ignition key OFF, and continue to conduct Manual mode upgrade maintaining IG key on condition.



❗ IMPORTANT

If automatic upgrade fails, **DO NOT** turn the ignition key OFF, and continue to conduct Manual mode upgrade maintaining IG key on condition.

📄 NOTICE

If after 'Auto Mode' software installation is completed, DTC B1620 has occurred after upgrade event has done, even though there was no such a DTC B1620 before upgrade, please, reconduct Manual mode upgrade in order to remove DTC B1620.

AIRBAG CONTROL UNIT (ACU) REPLACEMENT FOR DTC B1620 OR ACU SOFTWARE UPDATE (SC226)

ECU Upgrade Procedure:

To correct this condition, the ECU should be reprogrammed using the KDS download, as described in this bulletin.

| Upgrade Event Name |
|--|
| 586. PS EV ACU OPERATION LOGIC IMPROVEMENT |
| 587. PS PE ACU OPERATION LOGIC IMPROVEMENT |
| 588. YP PE ACU OPERATION LOGIC IMPROVEMENT |
| 589. YDm ACU OPERATION LOGIC IMPROVEMENT |
| 597. YD PE ACU OPERATION LOGIC IMPROVEMENT |

NOTICE

- Confirm a fully charged battery (12.3 volts or higher is necessary) is used or utilize a fully charged jump starter box connected to the battery.
- **Ensure the KDS GDS is sufficiently charged at 60% or higher prior to reflash.**
- All ECU upgrades must be performed with the ignition set to the 'ON' position unless otherwise stated.
- **Damaged VCI II units should not be used and promptly replaced.**
- 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 application.

IMPORTANT

It is recommended to ALWAYS check the Electronic Parts Catalog (EPC) to locate the ECU Part Number respective to Auto/Manual Mode ROM IDs. DO NOT reference the parts label affixed to the ECU.

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AIRBAG CONTROL UNIT (ACU) REPLACEMENT FOR DTC B1620 OR ACU SOFTWARE UPDATE (SC226)

NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable 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.

ROM ID INFORMATION TABLE:

Upgrade Event #586 (PS EV), #587 (PS), #588 (YP), #589 (YDm) and #597 (YD)

| Model | Controller | ECU P/No. | ROM ID | |
|-------|------------|----------------------------|----------------------|----------|
| | | | Previous | New |
| PS EV | ACU | 95910 E4000 | 481H6D9D 492H6D9D | 4D0H6D9D |
| | | 95910 E4050 | | 4D1H6D9D |
| | | 95910 E4100 | | 4D2H6D9D |
| | | 95910 E4200 | | |
| PS | ACU | 95910 B2150 | 490H6D9D 492H6D9D | 4D3H6D9D |
| | | 95910 B2250 | | 4D4H6D9D |
| | | 95910 B2350 | | 4D5H6D9D |
| | | 95910 B2450 | | 4D6H6D9D |
| | | 95910 B2550 | | 4D7H6D9D |
| | | 95910 B2050 | | 4D8H6D9D |
| | | 95910 B2600 | | |
| YP | ACU | 95910 A9000 | 132M3114 133M3114 | 150M3114 |
| | | 95910 A9050 | | 151M3114 |
| | | 95910 A9100 | | 152M3114 |
| | | 95910 A9200 | | 153M3114 |
| | | 95910 A9300 | | 154M3114 |
| | | 95910 A9400 | | 155M3114 |
| | | 95910 A9500 | | 156M3114 |
| | | 95910 A9600 | | 157M3114 |
| | | 95910 A9700 95910 A9750 | | |

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.



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| Model | Controller | ECU P/No. | ROM ID | |
|-------|------------|-------------|----------------------|----------|
| | | | Previous | New |
| YD | ACU | 95910 A7650 | 931M3114 932M3114 | 951M3114 |
| | | 95910 A7700 | | 952M3114 |
| | | 95910 A7750 | | 953M3114 |
| | | 95910 A7850 | | 955M3114 |
| | | 95910 A7920 | | 956M3114 |
| | | 95910 A7950 | | |
| | | 95910 B0000 | | 957M3114 |
| | | 95910 B0100 | | |
| YDm | ACU | 95910 B0000 | 957M3114 | |
| | | 95910 B0100 | | |

NOTICE

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

1. 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 operates wirelessly. It is not necessary to perform the upgrade via USB cable.



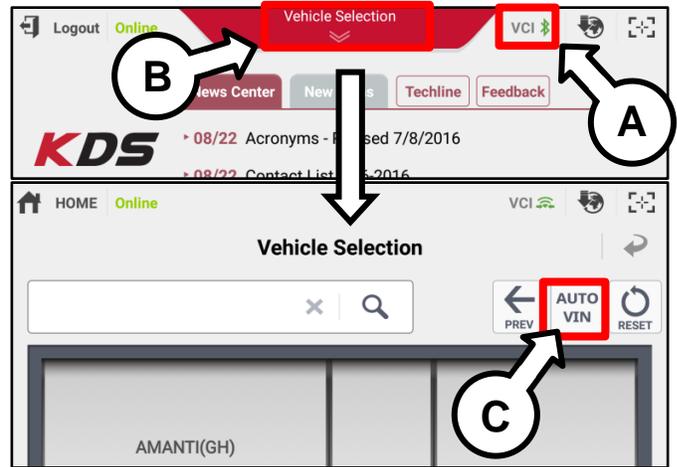
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



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



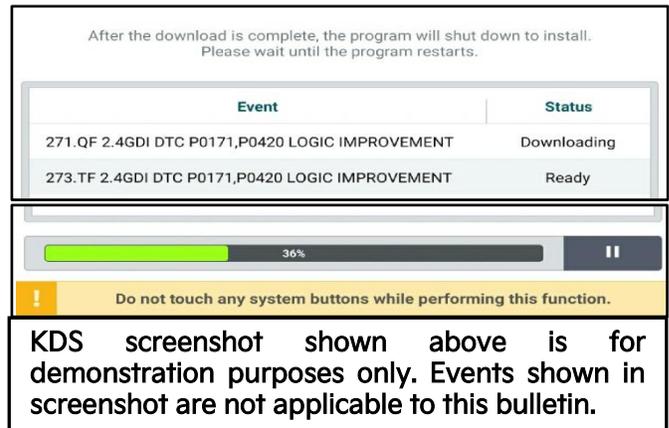
4. Select 'ECU Upgrade'.



5. The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event(s) #586-589, 597 (as applicable).

NOTICE

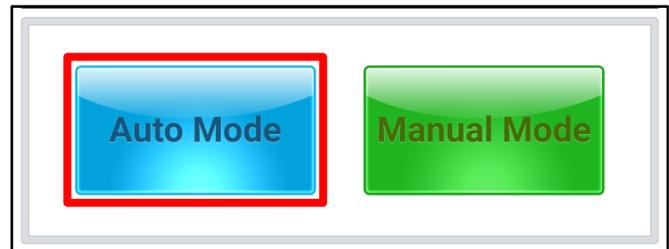
The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.



6. 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.



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7. Select **AIRBAG** system and the corresponding software event for the vehicle.

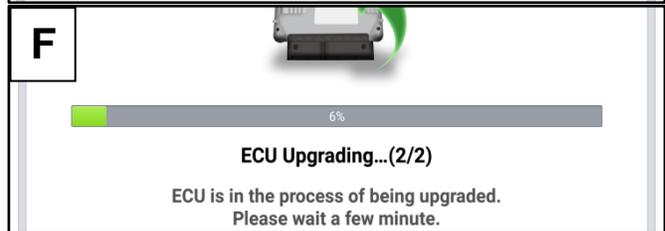
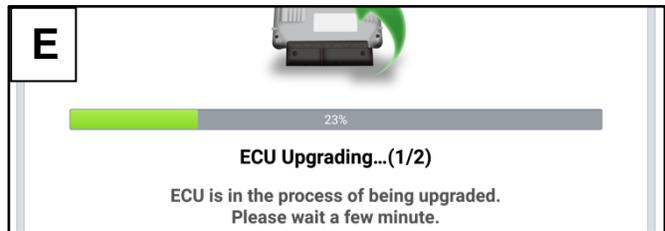
- 586. PS EV ACU OPERATION LOGIC IMPROVEMENT
- 587. PS PE ACU OPERATION LOGIC IMPROVEMENT
- 588. YP PE ACU OPERATION LOGIC IMPROVEMENT
- 589. YDm ACU OPERATION LOGIC IMPROVEMENT
- 597. YD PE ACU OPERATION LOGIC IMPROVEMENT



8. 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

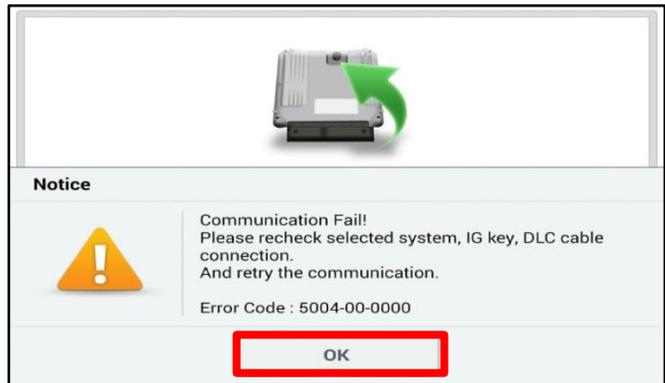
Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.



9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the from step 4.

NOTICE

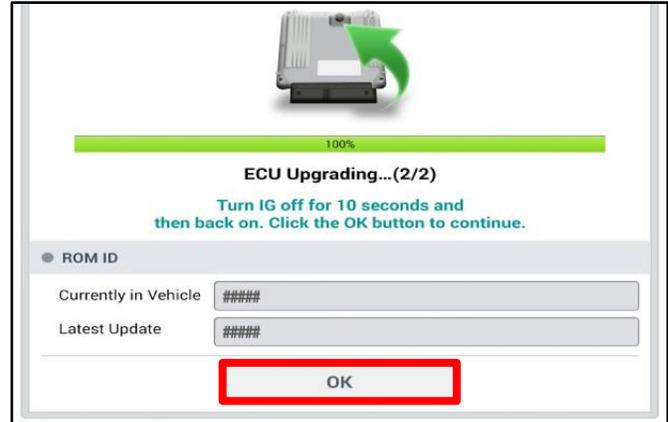
If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.



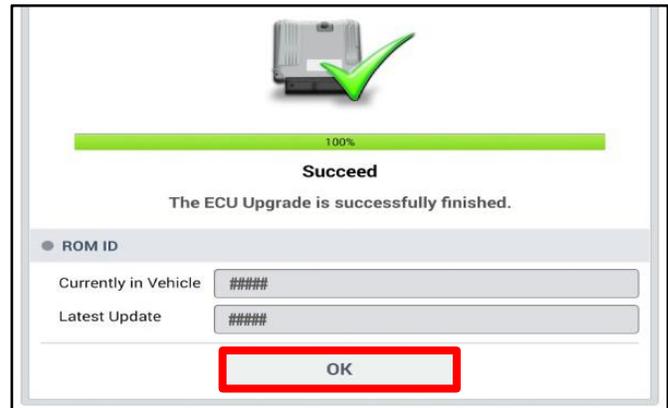
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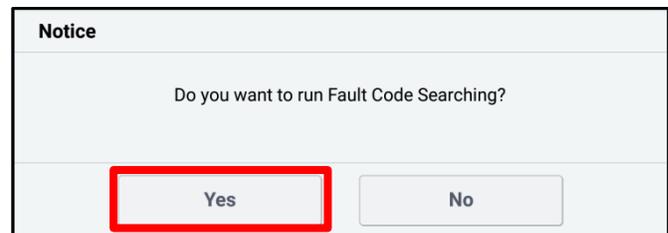
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Select **'OK'** to continue.



11. Once the upgrade is complete, select **'OK'** to finalize the procedure.



12. 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.



13. Start the engine to confirm normal operation of the vehicle.

Manual Upgrade Procedure:
NOTICE

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

If the automatic upgrade fails, DO NOT turn the ignition 'OFF'. Proceed to the 'Manual Mode' upgrade with the ignition 'ON'.

See table below for 'Manual Mode' passwords.

Manual Mode ECU Upgrade Passwords

| Menu | Password |
|----------------------------|----------|
| PSEV ACU: 95910-E4000/050 | 4000 |
| PSEV ACU: 95910-E4100 | 4100 |
| PSEV ACU: 95910-E4200 | 4200 |
| PS PE ACU: 95910-B2150 | 2100 |
| PS PE ACU: 95910-B2250 | 2200 |
| PS PE ACU: 95910-B2350 | 2300 |
| PS PE ACU: 95910-B2450 | 2400 |
| PS PE ACU: 95910-B2550 | 2500 |
| PS PE ACU: 95910-B2050/600 | 2600 |
| YP PE ACU: 95910-A9000/050 | 9000 |
| YP PE ACU: 95910-A9100 | 9100 |
| YP PE ACU: 95910-A9200 | 9200 |
| YP PE ACU: 95910-A9300 | 9300 |
| YP PE ACU: 95910-A9400 | 9400 |
| YP PE ACU: 95910-A9500 | 9500 |
| YP PE ACU: 95910-A9600 | 9600 |
| YP PE ACU: 95910-A970/750 | 9700 |
| YDm ACU: 95910-B0000/100 | 0100 |
| YD PE ACU: 95910-A7650 | 7650 |
| YD PE ACU: 95910-A7700 | 7700 |
| YD PE ACU: 95910-A7750 | 7750 |
| YD PE ACU: 95910-A7850 | 7850 |
| YD PE ACU: 95910-A7920/950 | 7920 |
| YD PE ACU: 95910-B0000/100 | 0100 |

Continued on page 9.

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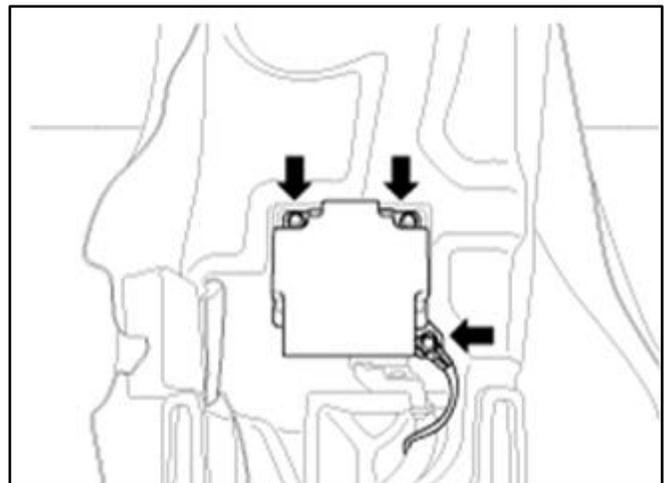
1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **AIRBAG** system under the System selection menu. Select **Upgrade Event #586-589, 597** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table 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. Select **OK**.
7. Once the upgrade is complete, select **OK** to finalize the procedure.
8. 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.
9. Start the engine to confirm proper operation of the vehicle.

Replacement Procedure:

1. Replace the Airbag Control Unit (ACU) by referring to the Restraint → SRSCM → SRS Control Module (SRSCM) → Repair Procedures” chapter in the applicable Shop Manual on KGIS.

NOTICE

Use a non-marring trim removal tool (such as Snap-on® Part Number PBN5 or equivalent) to avoid damaging trim pieces.



IMPORTANT

A Vehicle Diagnosis Number (VDN) must be created prior to ACU replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur.

SUBJECT:

AIRBAG CONTROL UNIT (ACU) REPLACEMENT FOR DTC B1620 OR ACU SOFTWARE UPDATE (SC226)

AFFECTED VEHICLE RANGE:

| Model | Production Date Range |
|-----------------------------|------------------------------------|
| 2017-2019 MY Soul (PS EV) | May 18, 2017 to September 28, 2018 |
| 2017-2019 MY Soul (PS) | July 25, 2016 to December 24, 2018 |
| 2017-2019 MY Sedona (YP) | July 12, 2016 to January 10, 2019 |
| 2017-2018 MY Forte (YD/YDm) | March 2, 2017 to July 27, 2018 |
| 2017 MY Forte Koup (YD) | October 4, 2016 to October 4, 2016 |

REQUIRED PART:

| Part Name | Model | Old P/N | New P/N | Qty. |
|------------------------------|--------------------------|----------------------------|----------------|------|
| Airbag Control Unit (ACU) | Soul (PS EV) | 95910 E4000 95910 E4050 | 95910 E4050QQK | 1 |
| | Soul (PS) | 95910 B2050 95910 B2600 | 95910 B2600QQK | 1 |
| | Sedona (YP) | 95910 A9000 95910 A9050 | 95910 A9050QQK | 1 |
| | Forte/Forte Koup (YD) | 95910 A7920 95910 A7950 | 95910 A7950QQK | 1 |
| | Forte (YDm) | 95910 B0000 95910 B0100 | 95910 B0100QQK | 1 |

Note: Replacement of ACU part is only allowed for 'Vehicle In' with DTC B1620.

❗ IMPORTANT

A Vehicle Diagnosis Number (VDN) must be created prior to ACU replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur.

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WARRANTY INFORMATION:

N Code: N99 C Code: C99

| Model | Claim Type | Causal P/N | Qty. | Repair Description | Labor Op Code | Op Time | Replacement P/N | Qty. |
|-------------------------|-------------|-------------|------|--|---------------|------------|-----------------|------|
| PS EV | R | 95910 E4000 | 0 | (SC226) ACU S/W Update <u>or</u> S/W Check <i>(No ABWL, confirm if S/W upgrade is required)</i> | 221004R0 | 0.3 M/H | N/A | 0 |
| PS | | 95910 B2050 | | | | | | |
| YP | | 95910 A9000 | | | | | | |
| YD | | 95910 A7920 | | | | | | |
| YDm | | 95910 B0000 | | | 221M03R0 | | | |
| PS EV, PS, YP, YD | R | 95910 E4000 | 0 | (SC226) ACU S/W Update + Manual Mode S/W <i>(Update to remove ABWL w/B1620)</i> | 221004R3** | 0.4 M/H | N/A | 0 |
| YDm | | 95910 B2050 | | | | | | |
| | | 95910 A9000 | | | | | | |
| | | 95910 A7920 | | | | | | |
| YDm | 95910 B0000 | 221M03R2** | | | | | | |
| PS EV | R | 95910 E4000 | 0 | (SC226) ACU Replacement (w/ABWL B1620) | 221004R1 | 0.5 M/H | 95910 E4050QQK* | 1 |
| PS | | 95910 B2050 | | | 221004R4 | | 95910 B2600QQK* | 1 |
| YP | | 95910 A9000 | | | 221004R2 | 0.6 M/H | 95910 A9050QQK* | 1 |
| YD | | 95910 A7920 | | | 221004R5 | | 95910 A7950QQK* | 1 |
| YDm | | 95910 B0000 | | | 221M03R1 | | 95910 B0100QQK* | 1 |

***Note:** A Vehicle Diagnosis Number (VDN) must be created prior to ACU replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. Refer to Warranty Bulletin 2022-08 for claim submission procedures.

****Note:** In very rare cases, DTC B1620 may be present due to a software installation error/glitch after 'Auto Mode' software installation is completed even though there was no Airbag Warning Light (ABWL) w/DTC B1620 prior to upgrade. If this occurs, perform the 'Manual Mode' upgrade in order to clear DTC B1620. Use the applicable Op Code (221004R3 or 221M03R2) as shown above.

NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SC226 when accessing the WebDCS system.



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