



Service Campaign

CC-18-00-02

MODEL: Karma Revero

DATE: April 2018

TITLE: Baseline BL1040 Firmware Release

PRIORITY: All Revero

APPLICABILITY: MY17 and MY18 Revero (See attached VIN list)

MARKET REGION: North America

PURPOSE: This document will be used as a reference guide for technicians to update a vehicle to Baseline 1040 software.

Flash reprogramming allows the control module software to be updated without replacement of the control module hardware. This flash calibration update for the Revero and specific control modules is released as field update procedure as described in the respective service bulletin.

Software and firmware updates will be scheduled as part of Karma Automotive continuous improvement process.

The Karma Sync tool will allow the technician to display the current software identification and cross reference them to any that will be included in the latest updates.

Central Infotainment Unit flashing will occur over the air, TSS is required to be notified prior to this step.

REQUIREMENT: There is a component of this Baseline release which will be performed Over-the-Air. This will require creating a technical services support (TSS) case as soon as the vehicle arrives at the dealer. Please schedule this baseline install and begin the action early in the workday to allow sufficient time to contact and activate this over the air update through the TSS group.

NOTICE!

*The vehicle should have the High Voltage battery charged. If the State of Charge is 15% or less (verified in Karma Sync), when placed in Ready Mode, the vehicle generator may turn on at any time during the flash process. Therefore we recommend the state of charge is **25% or greater before beginning the flash procedure, or five (5) miles of EV range.***

NOTICE!

Have a 12V power supply available to use on every Revero during flashing of modules, there are no exceptions to this. Vehicle 12V battery voltage must be maintained greater than 12.5V while flashing the control modules.

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IF the vehicle is still at BL1021/1022 level you will require two (2) over-the-air updates for Install any required BL1030 hardware prior to scheduling over-the-air updates for BL1030 (bulletin CC-17-00-29) and BL1040. Open a TSS case as normal follow provided instructions.

Screen calibration is required after BL1030 (steps included in this bulletin)

Verify current installed Version of software in the TPI.

Settings >Vehicle > About

If it reads 17.15.42.2 or 17.15.42.3 do not proceed, this vehicle is updated to BL1040.

The chart below should guide you to view the level the vehicle is currently at.

Settings >Vehicle > About	Displayed Version
BL 1021	17.11.16.2
BL 1022	17.12.29.4
BL 1030	17.13.27.3
BL 1035	17.13.27.4
BL 1040	17.15.42.3

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Note: Remove the Karma Sync Equipment. Before the CIU is updated ensure nothing is plugged into the OBD II port. This includes the MDI - remove this, otherwise the TPI will cycle on and off, this is expected behavior. However, this will interrupt the update. The Karma Sync is also not needed for this over the air (OTA) update.

STEP 1

All previous bulletins have been completed, read this BL1040 bulletin



STEP 2

Contact Karma TSS so Over-the-air Update can to be sent to vehicle



STEP 3

Follow Instruction provided to update vehicle with Karma Sync



STEPS MUST BE PERFORMED IN THIS ORDER TO AVOID FIRMWARE INSTALLATION ISSUES

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Overview:

CHECK FOR OPEN BULLETINS:

1. Perform all required action as per bulletins, and verify all available bulletins have been performed: TB-18-12-02 (intake plumbing inspection), CC-18-12-01(oil change), CC-18-30-01 (A/C line inspection), TB-18-44-01(column bolt inspection), TB-18-20-01 (radiator hose clamp inspection) etc.-
Contact TSS when complete

OVER-THE-AIR:

2. Place the vehicle in a safe area with good cell reception, place vehicle in Ready Mode, TSS will contact you within the hour
3. The TSS representative will instruct you to power down the vehicle
4. An update screen will appear
5. Accept the install, follow prompts to install the new BL1040 update 17.15.42.3
6. Contact your TSS representative again this is to confirm step one of the over-the-air firmware update
7. Follow the TSS representative's instructions
8. Verify the firmware in the vehicle TPI again (17.15.42.3 should display)
9. All phones that were previously paired to a vehicle may have to be re-paired after the BL1040 software update. This will require the phone being "forgotten" from the vehicle and the vehicle will need to be "forgotten" from the phone as well. All customer phones will need to be paired to the vehicle again. **SEE PAGE 30 for details on BlueTooth phone pairing**

KARMA SYNC:

10. Proceed to update Karma Sync as per this bulletin (this only need to happen once per service laptop, not for every update)
11. Complete procedure as directed in this bulletin and by your TSS representative

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⚠ WARNING!

DO NOT ALLOW LAPTOP TO GO INTO SLEEP OR SCREEN SAVER MODE DURING THIS PROCESS. TURN OFF SCREEN SAVER IF NECESSARY AND ENSURE THE LAPTOP STAYS AWAKE. THE LAPTOP MUST BE PLUGGED INTO A STABLE POWER SOURCE DURING THE PROCESS. IF THE VEHICLE GOES INTO SLEEP MODE WHILE AN ECU IS BEING PROGRAMMED; THE REPROGRAMMING MAY BE UNSUCCESSFUL AND MAY CAUSE DAMAGE TO THE ECU.

All Vehicles in the field will be brought up to the latest release level of Baseline 1040 or “BL1040.”

BL1040 updates provide the following:

ADAS: Refinements to the system

CIU/ DIS: Refinements introduced, low temperature (possible icy road conditions) will display a blue snowflake icon in the DIS. Energy flow display added as well

BECM (HV Battery): Further enhanced diagnostic logic

ECM: Evaporative emission diagnostics improvements, and other logic enhancements

HCU: Enhanced and refined logic introduced

HVAC: Improved temperature control and diagnostic function

VCM-S: Security and controls logic and functions have been refined

ALERT!

Some user settings will be erased when BL1040 is installed, radio station pre-sets, etc. Please record all radio pre-sets, preconditioning settings, driver preferences and other saved before you begin the install.

All phones that were previously paired to a vehicle will have to be re-paired after the BL1040 software update. This will require the phone being “forgotten” from the vehicle and the vehicle will need to be “forgotten” from the phone as well.

All customer phones will need to be paired to the vehicle again.

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New CIU / DIS Features (fig.1a)



fig. 1a

Shown above we see the newly introduced “Snowflake icon” for possible icy road conditions and the energy flow meter. This is flat when the vehicle is not moving, a wave form will display when the throttle is being applied and released.

Also - in order to enhance Karma Revero features, software BL1040 introduces CIU & DIS 17 Minutes Standby function. After seventeen (17) minutes the vehicle will be asleep and have a much reduced current draw from the awake state.

This stand by function will be terminated if the Key Fob is used to unlock the vehicle, or the 12V battery voltage drops below the 12.2V threshold.

TPI may be ON during vehicle diagnostics and flashing.

During diagnostics & flashing times, Karma Sync generates CAN messages on Chassis CAN while vehicle is asleep. In this case, CIU will start the 17 minutes standby with TPI screen ON. TPI will be turned off either by remote locking vehicle using key fob or after 17 minutes timeout.

Always flash vehicle with an external 12V battery charger active.



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Vehicle Identification Number				
50GK41SA1HA000011	50GK41SA7JA000021	50GK41SA8JA000061	50GK41SA0JA000099	50GK41SAXJA000143
50GK41SA3HA000012	50GK41SA0JA000023	50GK41SAXJA000062	50GK41SA3JA000100	50GK41SA1JA000144
50GK41SA5HA000013	50GK41SA4JA000025	50GK41SA1JA000063	50GK41SA5JA000101	50GK41SA3JA000145
50GK41SA7HA000014	50GK41SA6JA000026	50GK41SA3JA000064	50GK41SA9JA000103	50GK41SA5JA000146
50GK41SA9HA000015	50GK41SA8JA000027	50GK41SA5JA000065	50GK41SA0JA000104	50GK41SA7JA000147
50GK41SA0HA000016	50GK41SAXJA000028	50GK41SA7JA000066	50GK41SA6JA000107	50GK41SA9JA000148
50GK41SA2HA000017	50GK41SA1JA000029	50GK41SA9JA000067	50GK41SA8JA000108	50GK41SA0JA000149
50GK41SA6HA000019	50GK41SA8JA000030	50GK41SA0JA000068	50GK41SAXJA000109	50GK41SA7JA000150
50GK41SA2HA000020	50GK41SAXJA000031	50GK41SA2JA000069	50GK41SA6JA000110	50GK41SA9JA000151
50GK41SA4HA000021	50GK41SA1JA000032	50GK41SA9JA000070	50GK41SA8JA000111	50GK41SA0JA000152
50GK41SA6HA000022	50GK41SA3JA000033	50GK41SA0JA000071	50GK41SAXJA000112	50GK41SA4JA000154
50GK41SA8HA000023	50GK41SA5JA000034	50GK41SA2JA000072	50GK41SA1JA000113	50GK41SA8JA000156
50GK41SAXHA000024	50GK41SA7JA000035	50GK41SA6JA000074	50GK41SA3JA000114	50GK41SAXJA000157
50GK41SA1HA000025	50GK41SA9JA000036	50GK41SA8JA000075	50GK41SA5JA000115	50GK41SA1JA000158
50GK41SA5HA000027	50GK41SA0JA000037	50GK41SAXJA000076	50GK41SA7JA000116	50GK41SAXJA000160
50GK41SA7HA000028	50GK41SA2JA000038	50GK41SA1JA000077	50GK41SA0JA000118	50GK41SA1JA000161
50GK41SA9HA000029	50GK41SA4JA000039	50GK41SA3JA000078	50GK41SA2JA000119	50GK41SA5JA000163
50GK41SA5HA000030	50GK41SA0JA000040	50GK41SA5JA000079	50GK41SA9JA000120	50GK41SA0JA000166
50GK41SA1JA000001	50GK41SA2JA000041	50GK41SA1JA000080	50GK41SA0JA000121	50GK41SA4JA000168
50GK41SA3JA000002	50GK41SA4JA000042	50GK41SA3JA000081	50GK41SA2JA000122	50GK41SA6JA000169
50GK41SA5JA000003	50GK41SA6JA000043	50GK41SA5JA000082	50GK41SA4JA000123	50GK41SA4JA000171
50GK41SA7JA000004	50GK41SA8JA000044	50GK41SA7JA000083	50GK41SA6JA000124	50GK41SA7JA000178
50GK41SA0JA000006	50GK41SAXJA000045	50GK41SA9JA000084	50GK41SA8JA000125	50GK41SA4JA000185
50GK41SA2JA000007	50GK41SA1JA000046	50GK41SA0JA000085	50GK41SAXJA000126	50GK41SA8JA000187
50GK41SA4JA000008	50GK41SA3JA000047	50GK41SA2JA000086	50GK41SA1JA000127	50GK41SAXJA000188
50GK41SA6JA000009	50GK41SA7JA000049	50GK41SA4JA000087	50GK41SA5JA000129	
50GK41SA2JA000010	50GK41SA3JA000050	50GK41SA6JA000088	50GK41SA3JA000131	
50GK41SA4JA000011	50GK41SA5JA000051	50GK41SA8JA000089	50GK41SA0JA000135	
50GK41SA6JA000012	50GK41SA7JA000052	50GK41SA4JA000090	50GK41SA2JA000136	
50GK41SA8JA000013	50GK41SA9JA000053	50GK41SA6JA000091	50GK41SA4JA000137	
50GK41SAXJA000014	50GK41SA0JA000054	50GK41SA8JA000092	50GK41SA6JA000138	
50GK41SA1JA000015	50GK41SA2JA000055	50GK41SAXJA000093	50GK41SA8JA000139	
50GK41SA3JA000016	50GK41SA4JA000056	50GK41SA1JA000094	50GK41SA4JA000140	
50GK41SA5JA000017	50GK41SA6JA000057	50GK41SA3JA000095	50GK41SA5JA000132	
50GK41SA7JA000018	50GK41SA8JA000058	50GK41SA5JA000096	50GK41SA7JA000133	
50GK41SA9JA000019	50GK41SAXJA000059	50GK41SA7JA000097	50GK41SA9JA000134	
50GK41SA5JA000020	50GK41SA6JA000060	50GK41SA9JA000098	50GK41SA8JA000142	

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The target software should be as indicated in the table below.

Record the software IDs displayed on the Karma Sync workshop tester. before you begin.

Control Module Name	Software Version ID <u>after</u> BL1040 update	Software ID as received <u>before</u> BL1040 Update (enter ID displayed on scan tool below)
Accessory Power Module	0311-01-02	
Advance Driver Assistance System (ADAS)	0381-00-46	
Battery Energy Control Module (BECM)	0156-04-62	
Engine Control Module (ECM) (Cal ID)	0127-09-07	
Engine Control Module (ECM) (APP ID)	0121-09-04	
Central Infotainment Unit (CIU)	17.15.42.3	
Driver Information System (DIS) "Gauge Panel"	0501-15-42	
Door Module Right	0431-00-22	
Door Module Left	0421-00-22	
Heat/Ventilation Air Conditioning (HVAC)	0162-02-49	
Hybrid Control Unit (HCU)	0111-0C-68	
Memory Seat Module (MSM)	0441-02-08	
Power Inverter Module for Generator	0301-06-30	
Power Inverter Module for Traction (Motor 1)	0281-06-36	
Power Inverter Module for Traction (Motor 2)	0291-06-36	
Tire Pressure Monitor System	0371-00-03	
Vehicle Control Module - Security (VCM-S)	0411-01-21	
Vehicle Control Module - Body (VCM-B)	0401-00-28	

NOTE: The CIU software version ID is found in the TPI, go to; Settings > Vehicle > About

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NOTICE!**ANY DEVICE PLUGGED INTO SHOULD BE
PROMPTLY REMOVED PRIOR TO PROCEEDING**

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1. Central Infotainment Unit flashing will occur over-the-air, **TSS is required to be notified prior** to this step.

TSS will instruct you to place the vehicle in an suitable safe area with good cellular reception, and place Ready Mode: the update packet is downloaded to the vehicle- the download requires no other action on the technician's part, only to leave the vehicle in a secure and safe location in your work area for approximately sixty (60) minutes.

TSS representative will contact you within the hour.

2. Keep the door latched (closed position) the update will not show up on TPI until power button is powered off with door still latched. This is when you can verify the TPI for update available messaging screen. If the download completed, the vehicle will prompt to accept the update (fig. 2) Accept this and allow the vehicle to update. Note that changing the door latch state will interrupt the accessory delay and shut down the TPI. If the TPI shuts down at power off, the update available screen will not display.

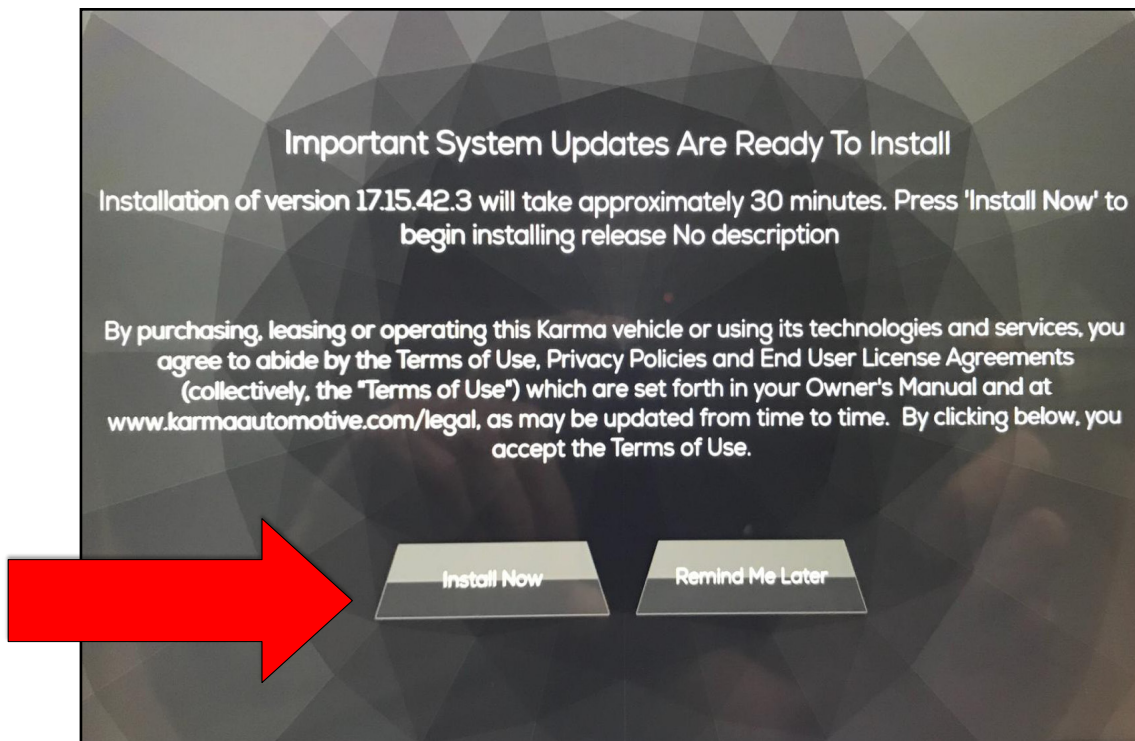


fig. 2

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Below are the screens of the TPI read out as the CIU is updating (fig.3) When this is completed updating, the screen may go blank or black or cycle on and off, normal function will resume upon cycling the mode button.



fig. 3

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3. Verify the CIU software ID in the TPI after the vehicle has been placed in ready mode. go to Settings >Vehicle > About, the version should be displayed above the Terms and Conditions bar (fig. 4)



fig. 4

The CIU Software ID should be as displayed- 17.15.42.3

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For vehicles updating from baseline 1021/1022, these will require TPI calibration on installation of BL1030 before BL1040

4. The Touch Panel Interface **may require** calibration, if prompted follow these steps.
- When loading of the baseline software is complete, the Touch panel will enter a calibration screen. this must be performed. If the vehicle is asleep it will return to the calibration screen as soon as it becomes active again.

Use the supplied stylus from previous updates, which will be used for the screen calibration. Unscrew the cap to expose the tool tip, this flexible end is the contact point for calibration of the touch panel. The touch panel is best calibrated with the stylus tip at or about 90° to the panel surface as shown. Press and hold stylus to the target for calibration (fig 5a,5b,5c)



fig. 5a



fig. 5b



fig. 5c


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- Continue and press the three (3) points on screen using supplied stylus- the screen below shows where all three points will be and the message displayed is enlarged for better reading- this message is present on all screens. Calibration will occur one target at a time (fig 6a).

1 



Screen Calibration

Accurately hold down on the center of the target until the target moves.

As it moves, your touch screen will be calibrated.

2 

3 

fig.6a

- Begin with the upper left shown here in car and graphically as shown (fig.6 and 6c)

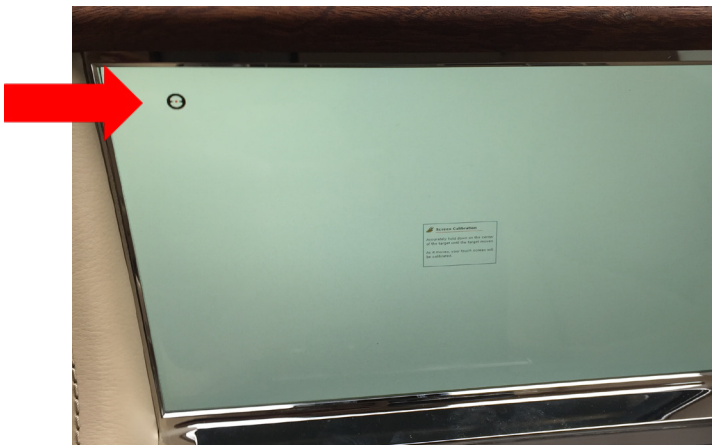


fig.6b



fig.6c

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- Proceed to the right side target shown here (fig 6d).



fig.6d

- the last target is as indicated- central and near the bottom of the TPI screen (fig 6e).

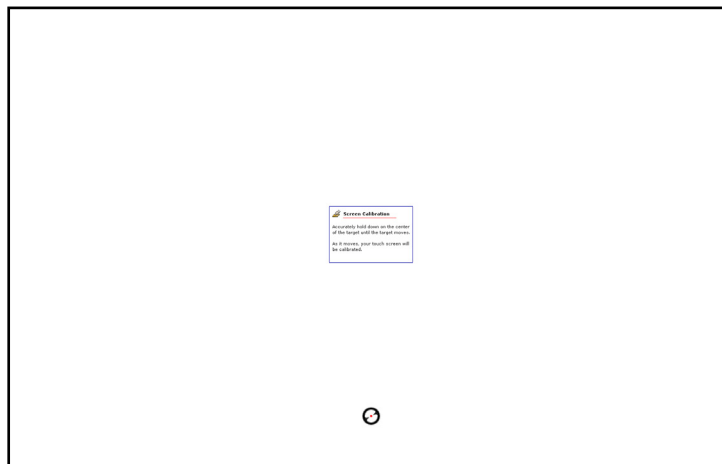


fig.6e

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- Final step, confirm the and accept the calibration.
This is also a target! Maintain accuracy, as shown (fig. 6f).
It will appear smaller on the TPI than on this page.
- Reboot and finish a calibration

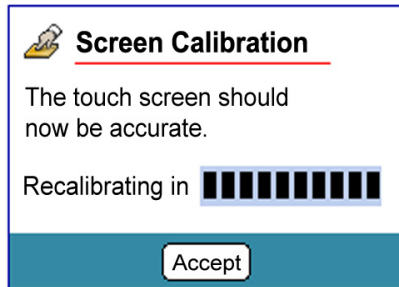


fig.6f

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NOTE: The following KarmaSync update will only occur once per service laptop, in regards to this bulletin.
It will not be repeated after this first instance.

6. Launch the Karma Sync application or close and relaunch if already open
Upon launch of the scan tool you may be prompted to enter user credentials
When a software update is available an update dialog box should appear with the new software package (fig.1). Configuration files version 1040.0.0 will load.

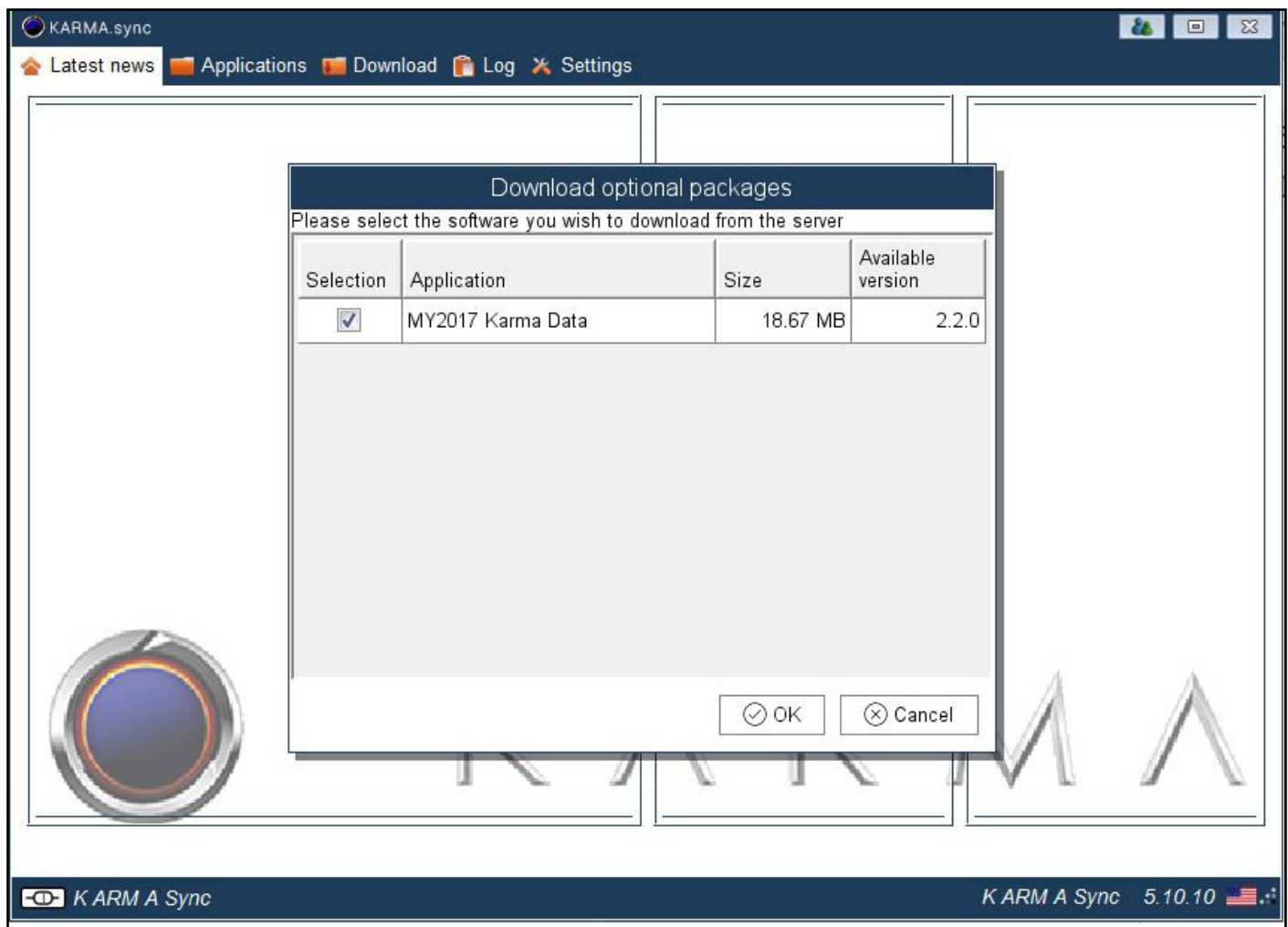


fig.7

7. Click "Ok" to install. (fig. 7)

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The package will then download (fig.7a).

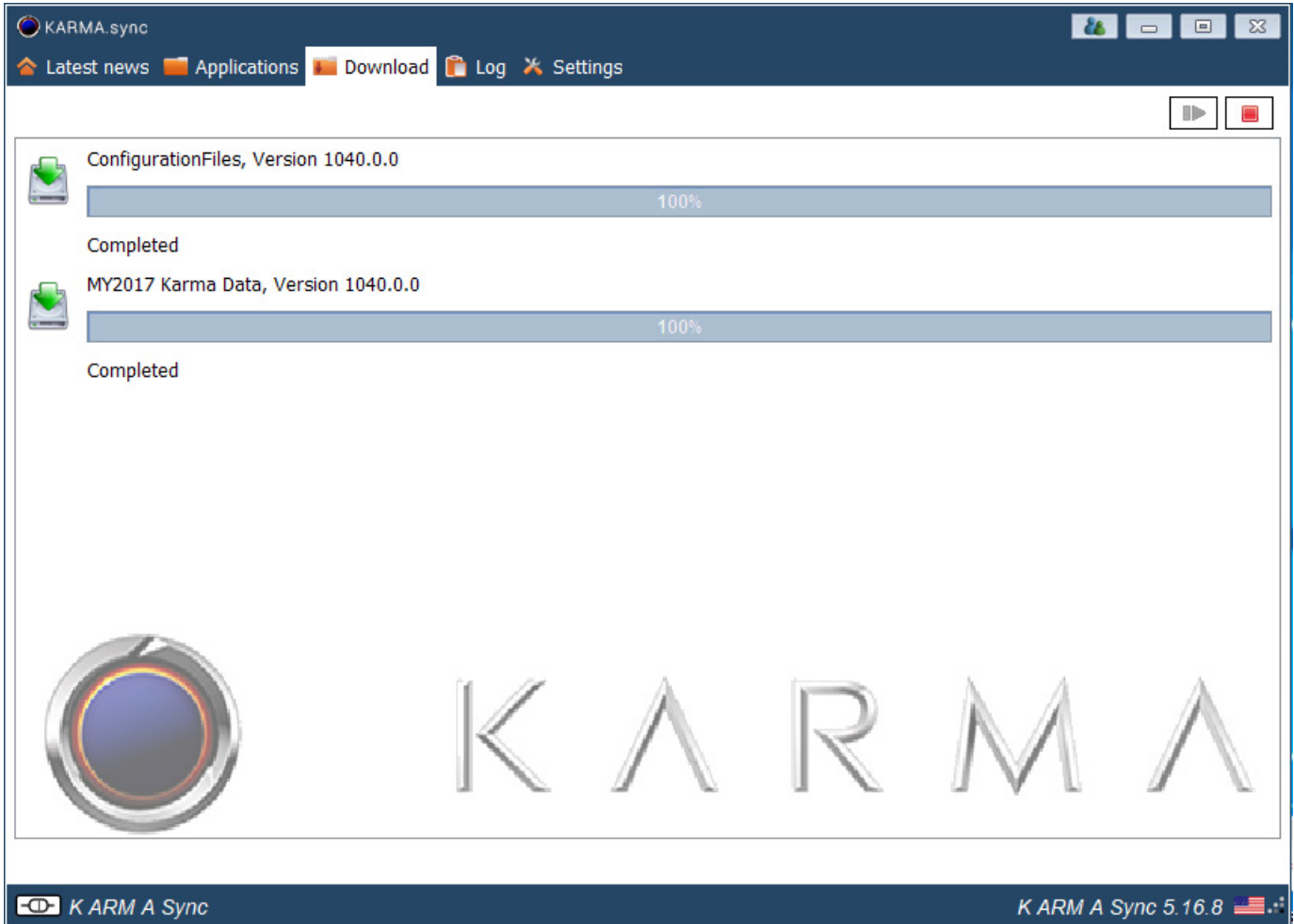


fig.7a

8. When download is complete, follow the on screen prompt to allow the Software to update on the next restart.

Doing this restart is a complete closing of Karma SYNC and relaunching in order to restart the program.

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TITLE: Baseline BL1040 Firmware Release

Restart Scan Tool: The dialog box should open automatically-

If the dialog box does not open automatically to download the new software proceed to add software as shown The tool bar will have a Karma Sync icon, hover over it (fig.8), right-click, proceed to “add software”. Once complete proceed with the remainder of this bulletin.

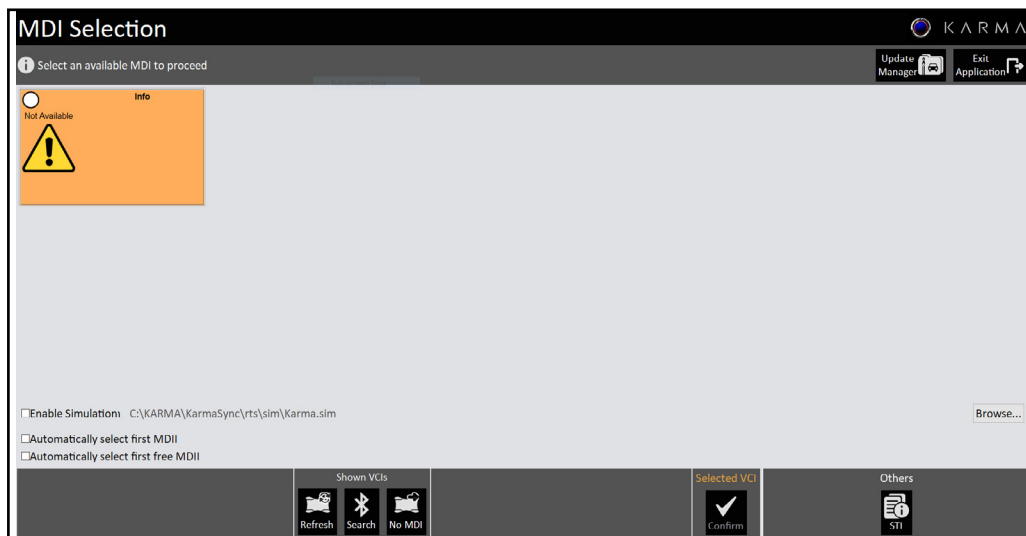


fig.8

If any issue or questions arise contact TSS again in order to resolve these concerns before continuing.

MODEL: Karma Revero**DATE: April 2018****TITLE: Baseline BL1040 Firmware Release**

6. Open the Karma Sync application again.
The “Confirm Deliverable Update - K1-18-1040.0.0” box should appear, click “Yes” (fig.9a)

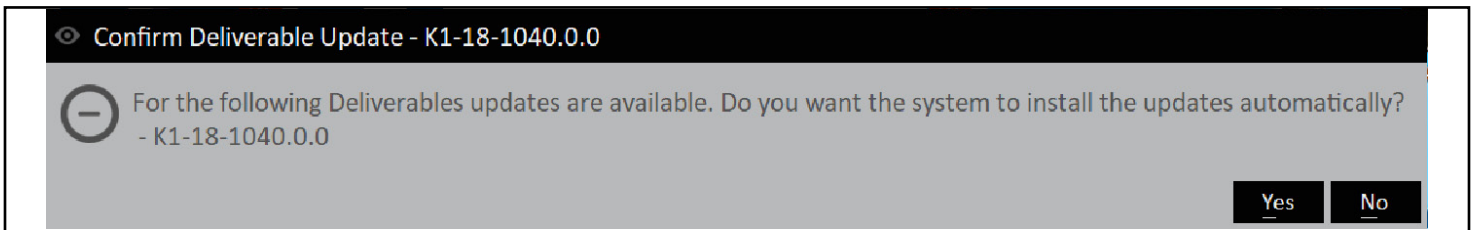


fig.9a

A progress screen will pop up after (fig.9b)

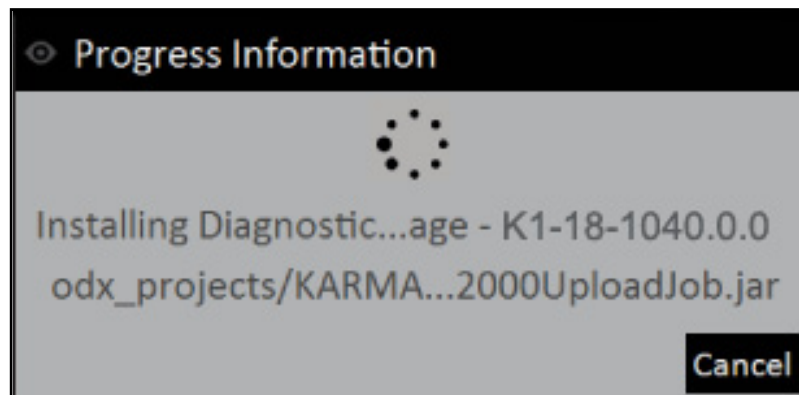


fig.9b

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9. Verify the package installed by clicking on update manager (fig.10)

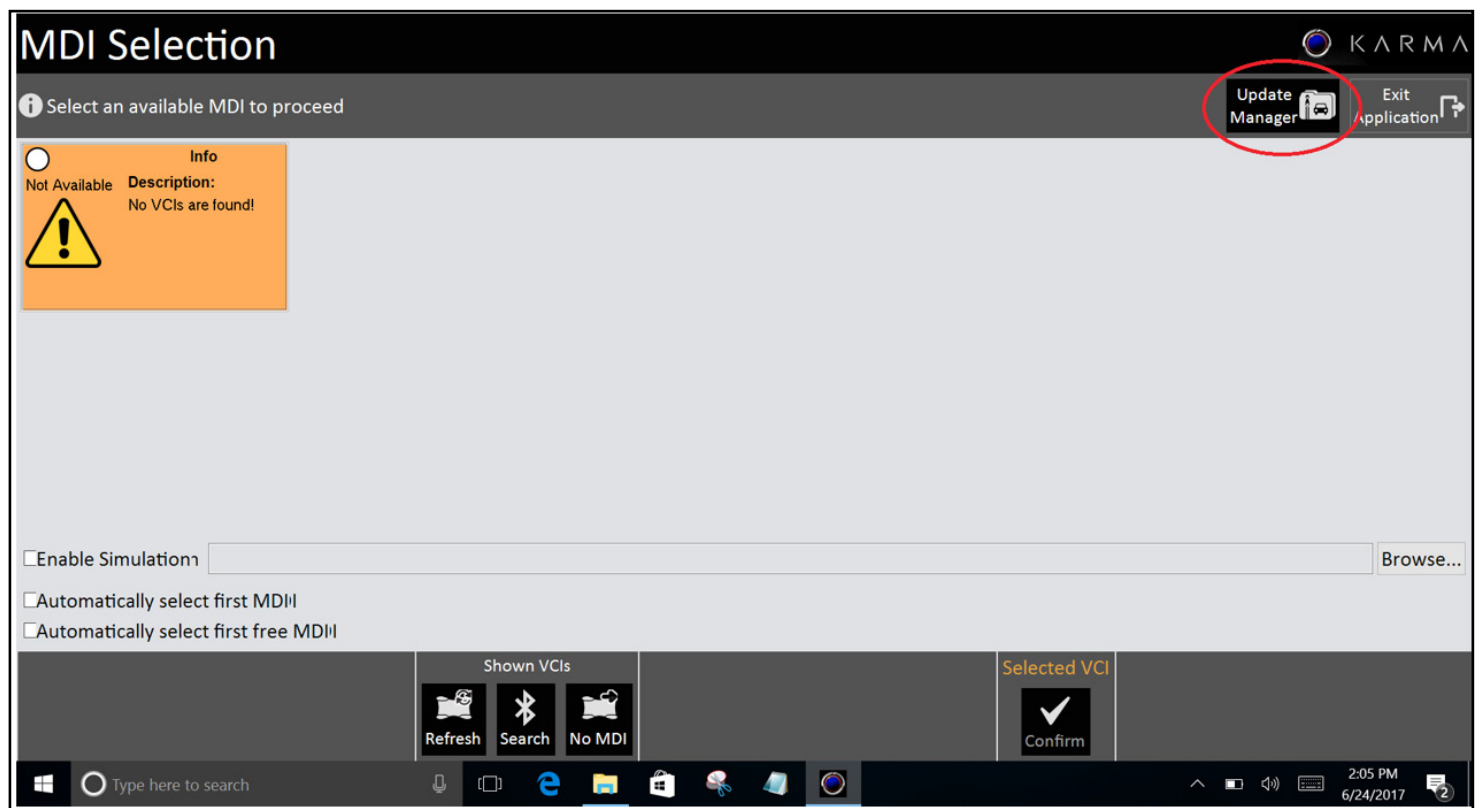


fig.10

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10. Verify the package is installed successfully by verifying that “K1-18-1030” is displayed in the Update Manager (fig.11)

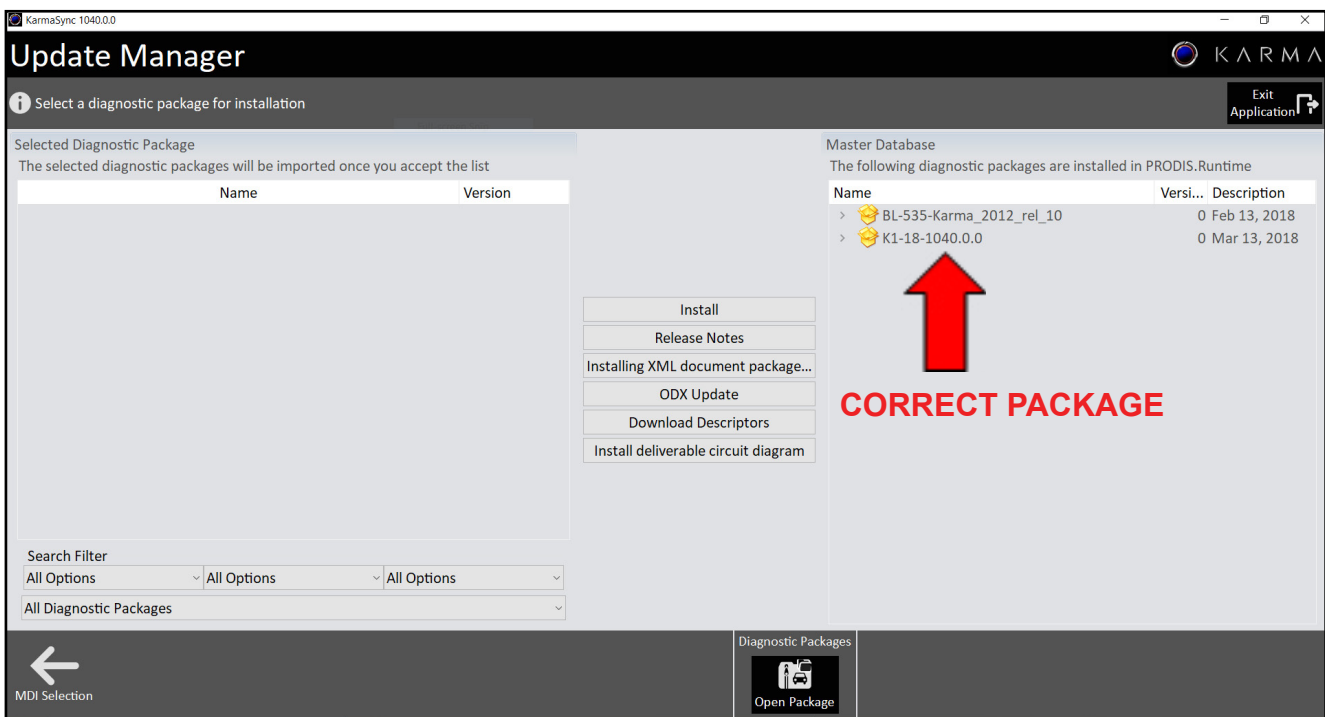


fig.11

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14. Again follow the prompts and ensure that a suitable 12V power supply is connected to the vehicle. and click continue as per (fig. 12a).

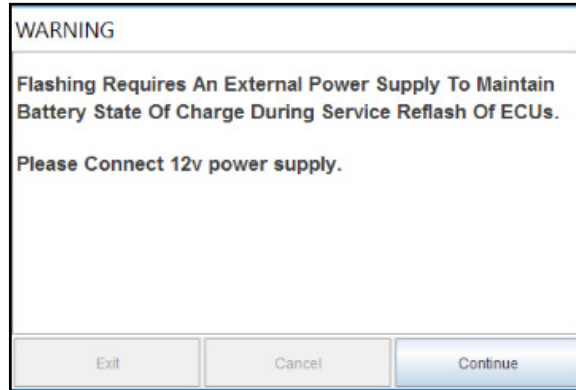


fig.12a

Below is an example of a suitable and recommended power supply (fig.12b)



fig.12b

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19. Return to the vehicle diagnosis menu and select full vehicle update as in (fig.13a) and select K1-18-1040.0.0 as shown below (fig.13b).

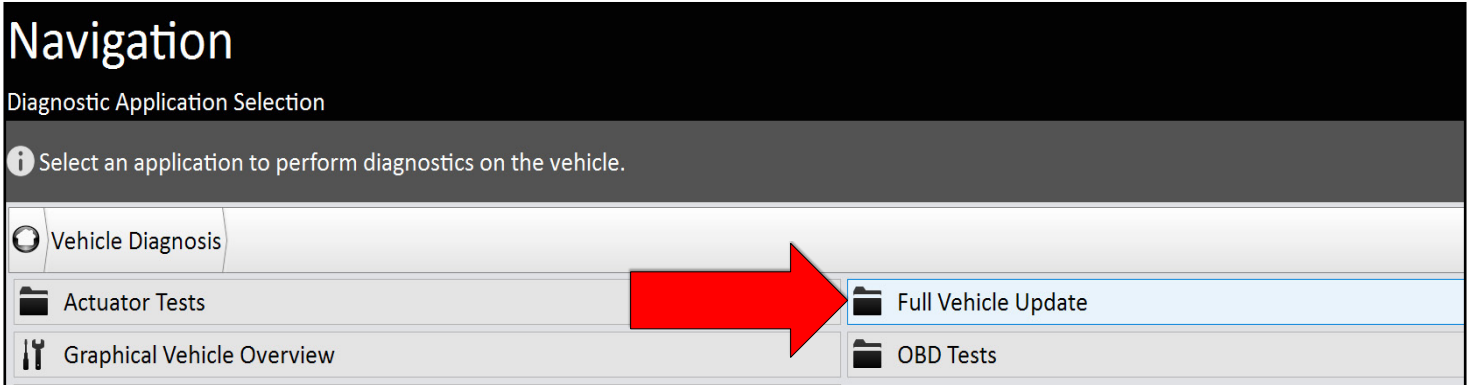


fig.13a

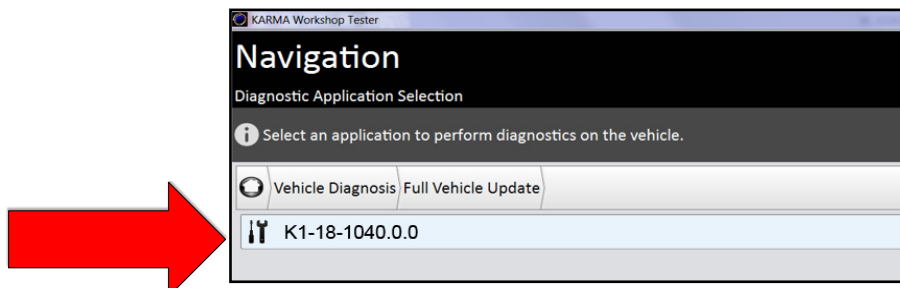


fig.13b

20. Follow the prompts and make sure that a suitable 12V power supply is connected to the vehicle. Click continue (fig.14)

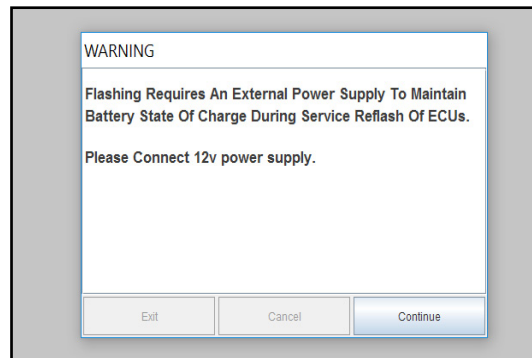


fig.14

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21. The flash information will be populated, as before (fig.15a)
 - If a pop up opens stating the "OBCM failed to communicate;" disregard this message
 Proceed to click "next" and follow the prompts.

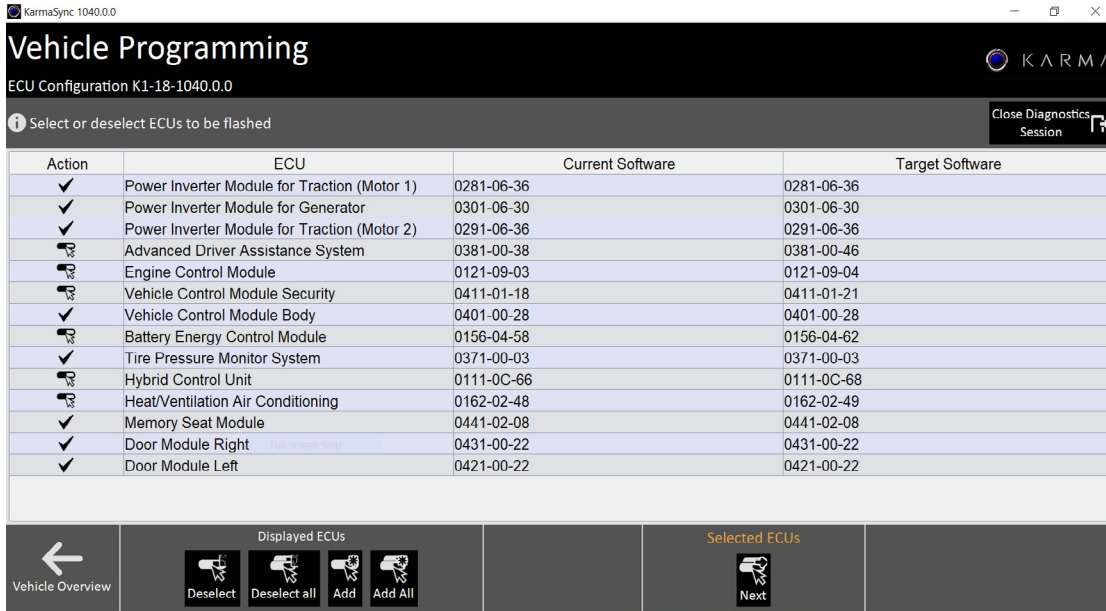


fig.15a

22. Click **START UPDATE**. The modules which will update are displayed, (fig.15b).

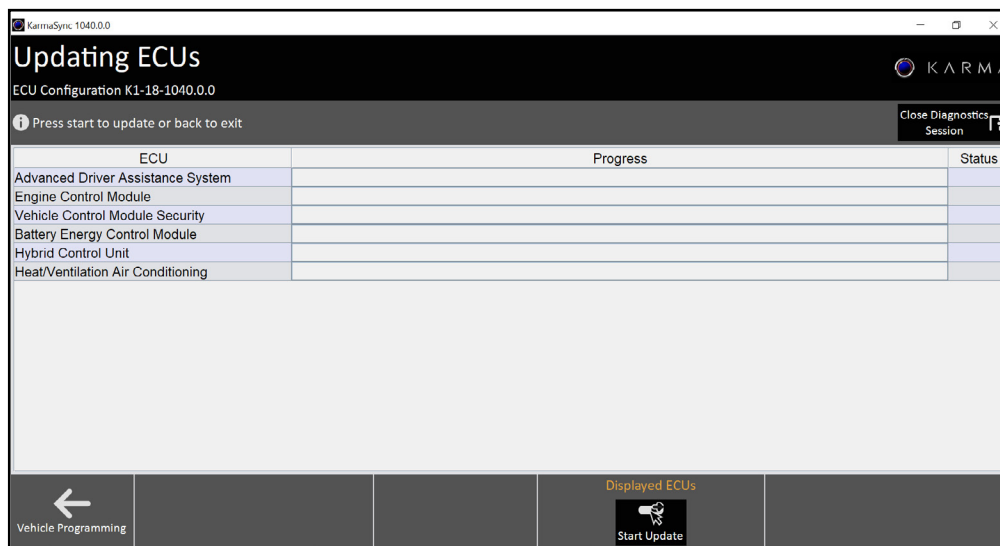


fig.15b

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As instructed place vehicle in the requested mode (fig.16a). Do not walk away from the vehicle, as you will be prompted to switch modes.

23. Follow the prompts and place the vehicle into Accessory or Ready mode (fig.16). It is normal for the vehicle to appear to be 'stuck on' during this step of the programming. Follow the prompts and do as directed (fig 16a,16b,16c,16d).

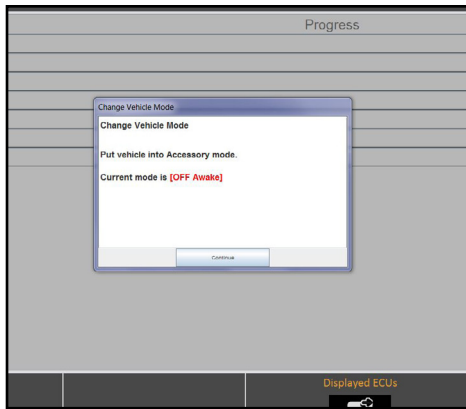


fig.16a

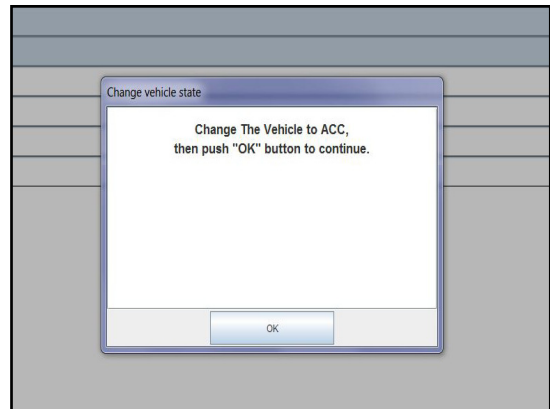


fig.16b



fig.16c

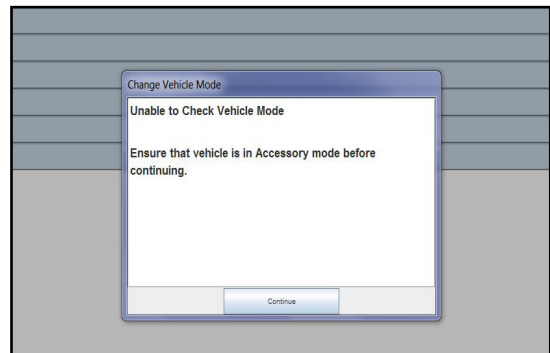


fig.16d

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When complete the green checks should appear.(fig 17)

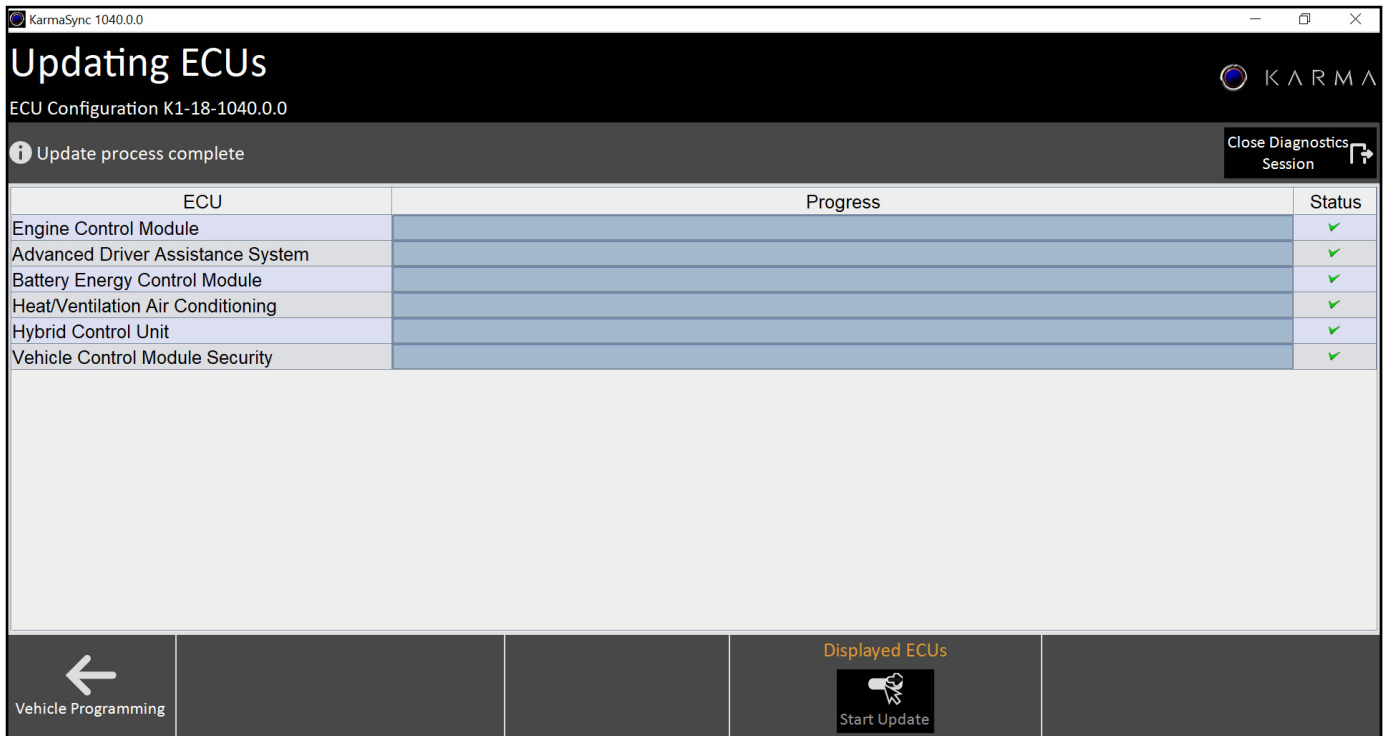


fig.17

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DATE: April 2018

TITLE: Baseline BL1040 Firmware Release

REMINDER: the OBCM will not update.

⚠ NOTICE! ⚠

If any other modules fail to update during this procedure, select that module again and update.

If any module continues to fail to accept the update, please contact TSS for further instruction on how to proceed.

The flash information will be populated, as before (fig.18) - If a pop up opens stating the “OBCM failed to communicate;” disregard this message. Select the modules requiring the update and proceed to click “next” and follow the prompts again if needed.

Action	ECU	Current Software	Target Software
✓	Power Inverter Module for Traction (Motor 1)	0281-06-36	0281-06-36
✓	Power Inverter Module for Generator	0301-06-30	0301-06-30
✓	Power Inverter Module for Traction (Motor 2)	0291-06-36	0291-06-36
✓	Advanced Driver Assistance System	0381-00-46	0381-00-46
✓	Engine Control Module	0121-09-04	0121-09-04
✓	Vehicle Control Module Security	0411-01-21	0411-01-21
✓	Vehicle Control Module Body	0401-00-28	0401-00-28
✓	Battery Energy Control Module	0156-04-62	0156-04-62
✓	Tire Pressure Monitor System	0371-00-03	0371-00-03
✓	Hybrid Control Unit	0111-0C-68	0111-0C-68
✓	Heat/Ventilation Air Conditioning	0162-02-49	0162-02-49
✓	Memory Seat Module	0441-02-08	0441-02-08
✓	Door Module Right	0431-00-22	0431-00-22
✓	Door Module Left	0421-00-22	0421-00-22

fig.18

If the displayed “Current Software” is marked as complete with check mark, and the software ID does not match the “Target Software”, return to “Vehicle Overview” and “Vehicle Diagnosis” to reload the list. If the list does not match after a reload, contact TSS.

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24. The update is complete with Karma Sync. Any codes need to be cleared in READY state. Ignore the pop-up of cycling state to ACCESSORY in Karma SYNC. Proceed to clear any DTC's present in the system. (fig.19a, 19b, 19c)

-If nothing is able to clear allow the vehicle to sleep for 10 minutes and make another attempt.

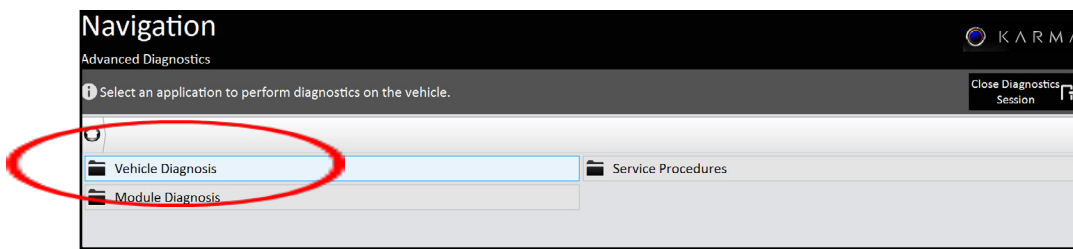


fig.19a

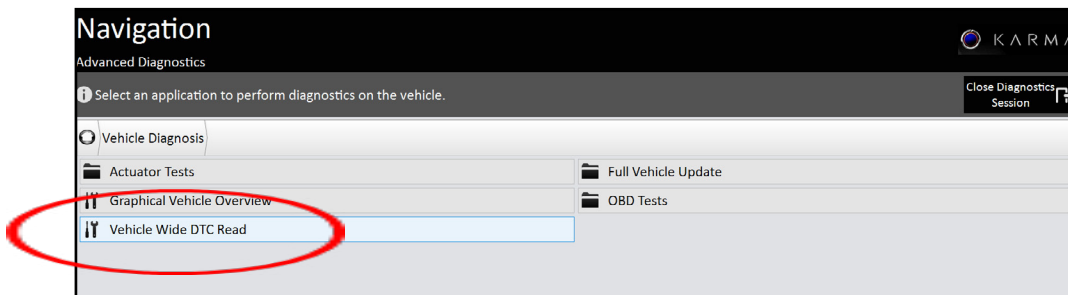


fig.19b

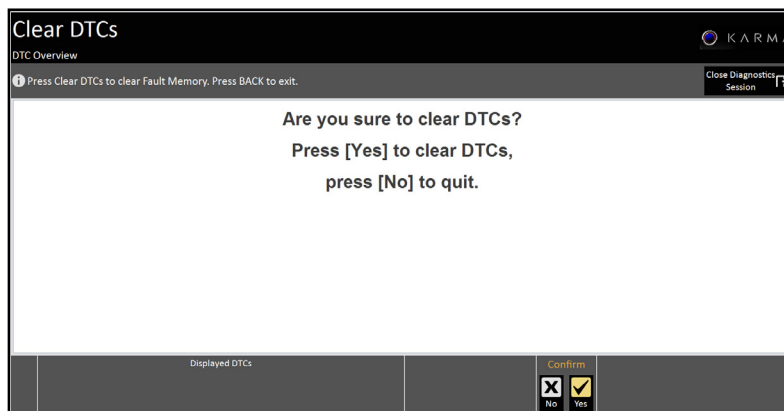


fig.19c

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DATE: April 2018

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Bluetooth phone pairing:

1. Leave the owners phone paired
2. If it is not paired, pair it and then turn off the Bluetooth so it's not active
3. Pair a new phone to the car
4. Power off car, after it goes to sleep, power on, ensuring the second phone is saved
5. Verify that new device connects after power cycle
6. Once confirmed turn off the Bluetooth on the second phone
7. Check to see if the owners Bluetooth device is still on the list after the sleep cycle. If it is, Un-pair and re-pair the owners Bluetooth device. It should now be the second one on the list
8. If the owners phone is not on the list, pair it
9. Lock the doors with the **keyfob** and let the vehicle go to sleep
10. Turn the car back on and check to be sure the owners phone is on the Bluetooth device list and works over Bluetooth

If this does not work:

11. With the vehicle in ready mode Pull fuse 40 (CIU) and reset the CIU. Reinsert the fuse and watch the TPI reboot and wait for the minibar (climate control icons) to appear.
12. Pair the owners phone if it is not on the Bluetooth list
13. Lock the doors with the **keyfob** and let the car go to sleep
14. Power the car on, verify the owners phone is on the Bluetooth device list, and works over Bluetooth

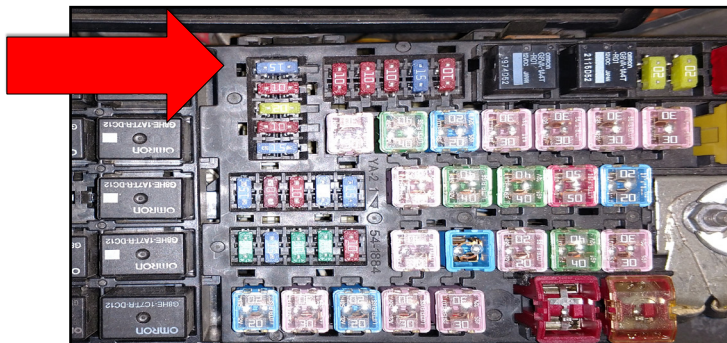


fig.20

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DATE: April 2018

TITLE: Baseline BL1040 Firmware Release

Perform 12V reset

Allow the vehicle to fully go to sleep:

1. Open the fuse box under the hood (PDC) and remove fuse 10 (fig.21a, SPBC - solar panel boost controller)
2. Disconnect the main 12V ground disconnect (fig.21b)
3. Reconnect in reverse
4. Reconnect 12 volt main connector
5. Reinstall Fuse #10 for solar roof (SPBC)
6. Calibrate all windows
7. Calibrate the Parking Brake
8. Clear all DTC's
9. Verify all settings are correct: (Clock Time, Dimming and Light Levels, Seat Position, etc.)

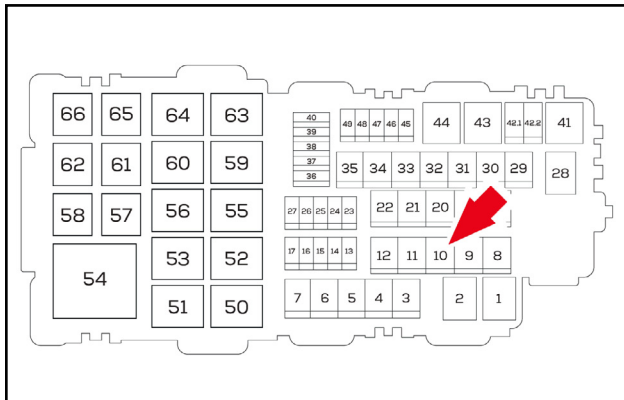


fig.21a

NOTE: Do not install the solar fuse before connecting the main 12V ground as this will cause under voltage to the control units and may cause new concerns.

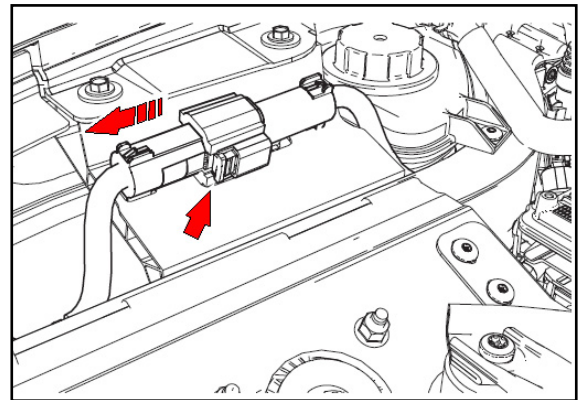


fig.21b

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Service Campaign

CC-18-00-02

MODEL: Karma Revero

DATE: April 2018

TITLE: Baseline BL1040 Firmware Release

PARTS REQUIRED:

PART NUMBER	DESCRIPTION
N/A	N/A

SHOP SUPPLIES:

DESCRIPTION
N/A

SPECIAL TOOLS:

PART NUMBER	DESCRIPTION
N/A	

CAUSAL PART:

PART NUMBER	DESCRIPTION
C161113201001	Engine Control Module

LABOR CODES

CODE	DESCRIPTION	TIME	DEFECT CODE
00-99-24-40	BL1040 Firmware Update	1.5	00-99-20-98

SUBLET:

CODE	DESCRIPTION	AMOUNT
N/A		

WARRANTY DISPOSITION: This repair is covered under the New Vehicle Limited Warranty, in effect for five (5) years from the in-service date with no mileage limitation.

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