THIS BULLETIN SUPERSEDES SERVICE BULLETIN 08-004-15 REV. A DATED APRIL 04, 2015, WHICH SHOULD BE REMOVED FROM YOUR FILES. ALL REVISIONS ARE HIGHLIGHTED WITH **ASTERISKS** AND INCLUDES, UPDATED PIM SOFTWARE.

THIS SERVICE BULLETIN IS ALSO BEING RELEASED AS RAPID RESPONSE TRANSMITTAL (RRT) 15-001 ALL APPLICABLE SOLD AND UN-SOLD RRT VIN's HAVE BEEN LOADED. TO VERIFY THAT THIS RRT SERVICE ACTION IS APPLICABLE TO THE VEHICLE, USE VIP OR PERFORM A VIN SEARCH IN TECHCONNECT. ALL REPAIRS ARE REIMBURSABLE WITHIN THE PROVISIONS OF WARRANTY.

HELP USING THE wiTECH DIAGNOSTIC APPLICATION FOR FLASHING AN ECU IS AVAILABLE BY SELECTING "HELP" THEN "HELP CONTENTS" AT THE TOP OF THE wiTECH DIAGNOSTIC APPLICATION WINDOW.

THE wiTECH SOFTWARE LEVEL MUST BE AT 15.04 OR HIGHER TO PERFORM THIS PROCEDURE.

SUBJECT:
FLASH: Battery Electric Vehicle, Multiple System Enhancements

OVERVIEW:
This bulletin involves updating the software in multiple modules, Vehicle Tracking Module (VTM), Body Control Module (BCM), On-Board Charging Module (OBCM), Power Inverter Module (PIM) and Battery Pack Control Module (BPCM) if required.

MODELS:

2013 - 2015	(FF)	Fiat 500e

NOTE: **This bulletin applies to vehicles built on or before March 08, 2015 (MDH 0308XX) and equipped with the 83 KW electric motor (sales code E99).**

SYMPTOM/CONDITION:

The customer may experience one or more of the following:

- The vehicle does not start charging when it's plugged into the charging station.
- Intermittently the charge indicator will show it's charging when it's **not** charging.
- Intermittently the vehicle may have reduced performance.

Enhancement:

- Increase of vehicle range in very cold weather.
- Improve Air Conditioning operation.
- Improvements to help reduce 12 volt battery drain when charging the vehicle with incompatible charging station.
- Improvements to DTC diagnostics.
- Enhancements to the central door lock feature.
- Improvements to locate the vehicle, using the smartphone app.
- Increase cabin preconditioning time from 2 to 10 minutes.
- Update information that is displayed by the cluster.
- Enhancements to the high voltage charging system.
- Improves the accuracy of the vehicle estimated range.
- Improve the total Lifetime energy consumed information that is display on a smartphone app.

False Malfunction Indicator Lamp (MIL) illumination:

- **U1014-00-Internal CAN Communication.**
- P1E25-00-Hybrid/Ev Battery Failure Level 2.
- P0AA4-00-Hybrid Battery Negative Contactor Circuit Stuck Closed.
- P0AA6-00-Hybrid Battery Voltage System Isolation Fault.

DIAGNOSIS:

Using a Scan Tool (wiTECH) with the appropriate Diagnostic Procedures available in TechCONNECT, verify if any Diagnostic Trouble Codes (DTCs) are set. If DTCs are present other then the ones listed above, record them on the repair order and repair as necessary before proceeding further with this bulletin.

If a customer's VIN is listed in VIP or your RRT VIN list, perform the repair procedure. For all other customers that describe the symptom/condition or if the technician finds the DTCs, perform the repair procedure.

1. Has RRT 15-001 already been performed?
    a. Yes >>> Proceed to Step #16
    b. No >>> Proceed to Step #2
2. What year vehicle is being updated?
    a. 2015 >>> Proceed to Step #1 of Repair Procedure #1.
    b. 2014 >>> Proceed to Step #1 of Repair Procedure #2.
    c. 2013 >>> Proceed to Step #1 of Repair Procedure #3.

REPAIR PROCEDURE #1 (2015 MY):

1. Every vehicle will not need to update all of the modules. Using the wiTECH tool, only update the modules that show updates are available.

NOTE: Install a 12 volt battery changer to maintain proper battery voltage, when updating the modules.

2. When updating the modules, have the vehicle in "Not Ready" mode.
3. Update the software on the OBCM, BPCM and **PIM** if available.

NOTE: It is common for these vehicles to have voltage readings at 14.7 when updating modules. A pop-up message may be displayed, indicating that the voltage is to high. Select OK to continue with the flash procedure.

NOTE: Follow on screen pop-up to cycle the key before proceeding to the next step.

4. Reprogram the modules with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the "HELP" tab on the upper portion of the wiTECH window, then "HELP CONTENTS." This will open the Welcome to wiTECH Help screen where help topics can be selected.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

5. Clear all DTCs that were set during the software update. All DTC should be in a stored state, so the fault codes can be properly cleared.
6. After the DTCs were cleared, did any fault codes stay in an active state and would not clear?
   a. Yes >>> Proceed to Step #7.
   b. No >>> Proceed to Step #9.
7. Turn off the vehicle, open the drivers door and disconnect the scan tool. Close the drivers door let the vehicle go to sleep. **Do Not** open the doors for 7 minutes.
8. Reconnect the scan tool and attempt to clear DTCs again.
9. Did all DTCs clear?
   a. Yes >>> This service bulletin has been completed.
   b. No >>> Further diagnostics need to be performed on the active DTCs.

REPAIR PROCEDURE #2 (2014 MY):
1. Every vehicle will not need to update all of the modules. Using the wiTECH tool, only update the modules that show updates are available.
2. When updating the modules, have the vehicle in "Not Ready" mode.

NOTE: Install a 12 volt battery changer to maintain proper battery voltage, when updating the modules.

3. Update the software on the OBCM, and PIM, if available.

NOTE: It is common for these vehicles to have voltage readings at 14.7 when updating modules. A pop-up message may be displayed, indicating that the voltage is to high. Select OK to continue with the flash procedure.

4. Reprogram the modules with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the "HELP" tab on the upper portion of the wiTECH window, then "HELP CONTENTS." This will open the Welcome to wiTECH Help screen where help topics can be selected.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

5. Update the software for the BCM.
6. Update the software for the BPCM.

NOTE: Follow on screen pop-up to cycle the key before proceeding to the next step.

7. Clear all DTCs that were set during the software update. All DTCs should be in a stored state, so the fault codes can be properly cleared.
8. After the DTCs were cleared, did any fault codes stay in an active state and would not clear.
    a. Yes >>> Proceed to Step #9
    b. No >>> Proceed to Step #11.
9. Turn off the vehicle, open the drivers door and disconnect the scan tool. Close the drivers door let the vehicle go to sleep. **Do Not** open the doors for 7 minutes.
10. Connect the scan tool and clear all DTC.
11. Update the software for the VTM module.
12. Use the wiTECH to calibrate the lifetime energy values.

NOTE: NOTE: Normally the lifetime energy routine should NOT be run. This should only be done when instructed by an RRT or TSB.

13. On the topology screen of the scan tool, click on the VTM module.
14. Now go to the Misc Functions and chose the routine labeled, Calibrate Lifetime Energy Value.

NOTE: Sometimes when updating the software on these modules, the CTM may stop communicating and/or U11F6-00 is set as an active fault. Pulling the fuse for the CTM will regain communication with that module and change U11F6-00 to a stored DTC.

15. Is U11F6-00 set as an active fault?
    a. Yes >>> Proceed to Step #16.
    b. No >>> Proceed to Step #18.
16. Turn off the ignition and pull fuse F36 for 10 seconds. It is located in the interior fuse panel, which is part of the BCM, see (Fig. 1).
17. Turn the ignition back on and check if U11F6-00 is now set as a stored fault?
    a. Yes >>> Proceed to Step #17.
    b. No >>> This bulletin has been completed. Perform normal diagnostic, Follow TechConnect > U11F6-00-LOST COMMUNICATION WITH CONVERGENCE TELEMATICS MODULE.
18. Clear any DTCs that may have been set in other modules due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow the tech to clear them.

REPAIR PROCEDURE #3 (2013 MY):
1. Every vehicle will not need to update all of the modules. Using the wiTECH tool, only update the modules that show updates are available.
2. When updating the modules, have the vehicle in "Not Ready" mode.

NOTE: Install a 12 volt battery changer to maintain proper battery voltage, when updating the modules.

3. Update the software on the OBCM, and PIM, if available.

NOTE: It is common for these vehicles to have voltage readings at 14.7 when updating modules. A pop-up message may be displayed, indicating that the voltage is to high. Select OK to continue with the flash procedure.

4. Reprogram the modules with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the "HELP" tab on the upper portion of the wiTECH window, then "HELP CONTENTS." This will open the Welcome to wiTECH Help screen where help topics can be selected.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

5. Update the software for the BPCM.

**NOTE: Follow on screen pop-up to cycle the key before proceeding to the next step.**

6. Clear all DTCs that were set during the software update. All DTCs should be in a stored state, so the fault codes can be properly cleared.
7. After the DTCs were cleared, did any fault codes stay in an active state and would not clear.
   a. Yes >>> Proceed to Step #8.
   b. No >>> Proceed to Step #9
8. Turn off the vehicle, open the drivers door and disconnect the scan tool. Close the drivers door let the vehicle go to sleep. **Do Not** open the doors for 7 minutes.
9. Update the software for the VTM module.
10. Use the wiTECH to calibrate the lifetime energy values.

NOTE: NOTE: Normally the lifetime energy routine should NOT be run. This should only be done when instructed by an RRT or TSB.

11. On the topology screen of the scan tool, click on the VTM module.
12. Now go to the Misc Functions and chose the routine labeled, Calibrate Lifetime Energy Value.

NOTE: Sometimes when updating the software on these modules, the CTM may stop communicating and/or U11F6-00 is set as an active fault. Pulling the fuse for the CTM will regain communication with that module and change U11F6-00 to a stored DTC.

13. Is U11F6-00 set as an active fault?
    a. Yes >>> Proceed to Step #14.
    b. No >>> Proceed to Step #17.
14. Turn off the ignition and pull fuse F36 for 10 seconds. It is located in the interior fuse panel, which is part of the BCM, see (Fig. 1).
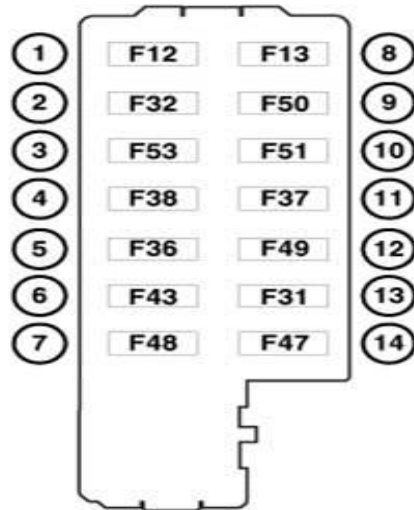
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Fig. 1 Interior Fuse Panel Located By The Left Kick Panel.

Remove fuse F36 .

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15. Turn the ignition back on and check if U11F6-00 is now set as a stored fault?
    a. Yes >>> Proceed to Step #17.
    b. No >>> This bulletin has been completed. Perform normal diagnostic, Follow TechConnect > U11F6-00-LOST COMMUNICATION WITH CONVERGENCE TELEMATICS MODULE.
16. Reprogram the PIM with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the "HELP" tab on the upper portion of the wiTECH window, then "HELP CONTENTS." This will open the Welcome to wiTECH Help screen where help topics can be selected.

NOTE: Make sure that all modules on this vehicle has been updated. Refer to any applicable published service information for repair procedures and labor times regarding updating modules.

17. Clear any DTCs that may have been set in other modules due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow the tech to clear them.

POLICY:
Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
18-19-17-9C	Module, BPCM / OBCM / ** PIM** 2015 - Reprogram (1 - Semi-Skilled)	6 - Electrical and Body Systems	**0.7** Hrs.
18-19-17-9D	Module, BPCM / OBCM / PIM / BCM / VTM 2014 - Reprogram (1 - Semi-Skilled)	6 - Electrical and Body Systems	0.8 Hrs.
18-19-17-9E	Module, OBCM / BPCM / PIM / VTM 2013 - Reprogram (1 - Semi-Skilled)	6 - Electrical and Body Systems	0.8 Hrs.
18-19-86-90	Module, Power Inverter (PIM) Only - Reprogram (1 - Semi-Skilled)	6 - Electrical and Body Systems	**0.2** Hrs.

NOTE: **The expected completion time for the flash download portion of this procedure is approximately 15 minutes on 2015, 24 minutes on 2014 and 22 minutes on 2013. The standalone PIM software download is approximately 4 minutes. Actual flash download times may be affected by vehicle connection and network capabilities.**

**FAILURE CODE:
The dealer must choose which failure code to use. If the customer came in with an issue and the dealer found updated software to correct that issue, use failure code CC, for all other use failure code RF.**

- **If the customer's concern matches the SYMPTOM/CONDITION identified in the Service Bulletin, than failure code CC is to be used.**
- **If an available flash is completed while addressing a different customer concern, failure code RF is to be used.**

CC	Customer Concern
RF	Routine Flash