SERVICE BULLETIN

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GROUP: Electrical

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THIS BULLETIN SUPERSEDES SERVICE BULLETIN 08-010-16 REV. C, DATED AUGUST 06, 2016, WHICH SHOULD BE REMOVED FROM YOUR FILES. ALL REVISIONS ARE HIGHLIGHTED WITH **ASTERISKS AND INCLUDE ADDITIONAL DIAGNOSTIC TROUBLE CODES (DTCs) FOR PCM WITH BUILD DATES AND LOPS.**

THIS SERVICE BULLETIN IS ALSO BEING RELEASED AS RAPID RESPONSE TRANSMITTAL (RRT) 16-012. 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.

FOR HELP WITH USING wiTECH FOR ECU FLASH REPROGRAMMING, CLICK ON THE APPLICATION'S "HELP" TAB.

THE wiTECH SOFTWARE IS REQUIRED TO BE AT THE LATEST RELEASE BEFORE PERFORMING THIS PROCEDURE.

SUBJECT:
Flash: Diagnostic And System Improvements

OVERVIEW:
This bulletin involves updating the Body Control Module (BCM), Powertrain Control Module (PCM) and Transmission Control Module (TCM) with the latest available software. All three modules must be up to date when finished with this service action.

MODELS:

2016	(FB)	Fiat 500X

RRT Portion Info:

NOTE: This bulletin applies to vehicles within the following markets/countries: NAFTA.

NOTE: The RRT portion of this bulletin applies to vehicles built on or before October 16, 2015 (MDH 1016XX) equipped with a 2.4L I4 Multiair Engine (Sales Code ED6) and a 9-SPD 948TE Auto Trans (Sales Code DFH).

BCM Info:

NOTE: This bulletin applies to vehicles within the following markets/countries: NAFTA.

NOTE: The BCM portion of this bulletin applies to vehicles built on or before October 16, 2015 (MDH 1016XX) equipped with a 2.4L I4 Multiair Engine (Sales Code ED6) and a 9-SPD 948TE Auto Trans (Sales Code DFH).

PCM Info:

NOTE: This bulletin applies to vehicles within the following markets/countries: NAFTA, LATAM, APAC and EMEA.

NOTE: The PCM portion of this bulletin applies to vehicles built on or before **August 05, 2016 (MDH 0805XX) equipped with a 2.4L I4 Multiair Engine (Sales Code ED6).**

TCM Info:

NOTE: This bulletin applies to vehicles within the following markets/countries: NAFTA, EMEA, and APAC.

NOTE: The TCM portion of this bulletin applies to vehicles built on or after February 11, 2016 (MDH 0211XX) and on or before July 19, 2016 (MDH 0719XX) equipped with a 2.4L I4 Multiair Engine (Sales Code ED6) and a 9-SPD 948TE Auto Trans (Sales Code DFH).

SYMPTOM/CONDITION:

Powertrain Control Module (PCM)

Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find one or more of the following Diagnostic Trouble Codes (DTCs):

- **P1066 - Cylinder 1 oil supply solenoid valve switch off time out of range.
- P1068 - Cylinder 2 oil supply solenoid valve switch off time out of range.
- P106A - Cylinder 3 oil supply solenoid valve switch off time out of range.
- U1424-00 - Implausible Engine Torque Signal Received.**
- P0335 - Crankshaft Position Sensor Circuit.
- P1185 - General Pressure Sensor Correlation.
- P050D - Cold Start Rough Idle.
- P1CEC - Variable Valve Solenoid Valve Cold Start Closing Position 1 Timing Over-Retard.
- P1CED - VAriable Valve Timing Solenoid Valve Cold Start Closing Position Timing Over-Advance.
- P1607 - PCM Internal Shutdown Timer Rationality.
- P2610 - PCM Internal Engine Off Timer Performance.
- P0440 - General EVAP System Failure.

- P0441 - EVAP Purge System Performance.
- P0456 - EVAP System Small Leak.
- P0455 - EVAP System Large Leak.
- P0452 - EVAP Pressure Switch Stuck Closed.
- P0133 - O2 Sensor 1/1 Slow Response.
- C0501 - Wheel Speed Signal Left Front Rationality.
- C0507 - Wheel Speed Signal Right Front Rationality.
- C050D - Wheel Speed Signal Left Rear Rationality.
- C0513 - Wheel Speed Signal Right Rear Rationality.
- U0428-00 - Implausible Data Received From Steering Angle Sensor Module.
- P1185 - General Pressure Sensor Correlation.
- C0061 - Lateral Acceleration Sensor.
- P0128 - Thermostat Rationality.
- C0501 - Wheel Speed Signal Left Front Rationality.
- C0507 - Wheel Speed Signal Right Front Rationality.
- C050D - Wheel Speed Signal Left Rear Rationality.
- C0513 - Wheel Speed Signal Right Rear Rationality.
- C0062 - Longitudinal Acceleration Sensor In Airbag System - Signal Invalid.
- U0402 - Implausible Data Received From TCM - (Transmission Control Module).
- P0133 - O2 Sensor 1/1 Slow Response.
- P0171 - Fuel System 1/1 Lean.

In addition, customers may experience one or more of the following:

- Vehicle performance enhancements.
- Clatter or ticking noise from the engine at idle.
- RPM flare at cold start.
- Less than desired idle performance.
- Cold engine RPM surge with gear engagement.

Transmission Control Module (TCM)

Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find one or more of the following Diagnostic Trouble Codes (DTCs):

- **Reduced shuttle shifting/gear hunting.**
- P0711 - Transmission Fluid Temperature Sensor A Circuit Range-Performance.
- P1CC9 - Unable To Engage Gear.
- P1D98 - Incorrect Gear Ratio Clutch B or D Defective.
- P1DAD - Input Shaft-Output Shaft Direction Correlation.
- U1424 - Implausible Engine Torque Signal Received.

In addition, the customer may also experience one or more of the following transmission related conditions:

- Garage shifts (Shifting from Park or Neutral into Drive or Reverse).
- Harsh 1-2 upshifts.
- Less than desired accelerator pedal response in Sport and Traction Plus modes.
- RPM flare at engine start.
- Less than desired idle performance when shifting into Drive or Reverse following a cold start.

The following enhancements are included in the software update:

- Improved or enabled paddle shifter operation.
- Vehicle performance enhancements.
- Improve transmission shift enhancements for Sand and Snow mode.

Body Control Module (BCM)

A customer may describe that the remote key is not recognized and doesn't open/close the door locks.

In some cases the engine may not start due to the fact that a valid key is not recognized.

Upon further investigation the technician may find the Diagnostic Trouble Codes (DTCs):

- B105A-64 - Doors Lock All-Signal Plausibility Failure.
- B105D-64 - Doors Deadlock Or Unlock Driver-Signal Plausibility Failure.

DIAGNOSIS:

Using a Scan Tool (wiTECH) with the appropriate Diagnostic Procedures available in TechCONNECT, verify all related systems are functioning as designed. If DTCs or symptom conditions, other than the ones listed above are present, record the issues 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. For all other customers that describe the symptom/condition listed above or if the technician finds the DTC, perform the Repair Procedure.

REPAIR PROCEDURE:

NOTE: The Transmission Control Module (TCM), Powertrain Control Module (PCM) and the Body Control Module (BCM) must all be updated to the latest available software at the conclusion of this repair procedure.

NOTE: Install a battery charger to ensure battery voltage does not drop below 13.2 volts. Do not allow the charging voltage to climb above 13.5 volts during the flash process.

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

1. Is the RRT being performed on this vehicle?
   a. YES>>> Proceed to Step #2.
   b. NO>>> Proceed to the specified modules as needed.
2. Inspect all modules for latest available software. Are all the modules up to date?
   a. YES >>> This bulletin has been completed, use LOP (18-19-17-9H) to close the active RRT.
   b. NO >>> Proceed to Step #3.
3. Reprogram the PCM with the latest available software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the application's "HELP" tab.
4. Reprogram the TCM with the latest available software.
5. Reprogram the BCM with the latest available software.
6. Using wiTECH, restore configuration and align proxi. This routine is available under the "Diagnostic Procedures" tab found on the home, "Vehicle View", page of wiTECH.
7. Clear all DTCs that may have been set in any module due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow them to be cleared.
8. Verify all three modules are programmed with the latest available software (RRT only)

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
18-19-17-9H	Module, Powertrain Control, Transmission Control, Body Control - Inspect (RRT) (0 - Introduction)	6 - Electrical and Body Systems	0.2 Hrs.
18-19-17-9N	Module, Powertrain Control, Transmission Control, Body Control - Reprogram (RRT) (0 - Introduction)	6 - Electrical and Body Systems	0.5 Hrs.
**18-19-06-MW	Module, Powertrain Control - Reprogram (0 - Introduction)	6 - Electrical and Body Systems	0.2 Hrs.**
18-19-05-DS	Module, Transmission Control - Reprogram (0 - Introduction)	6 - Electrical and Body Systems	0.2 Hrs.
18-19-02-BS	Module, Body Control - Reprogram (0 - Introduction)	6 - Electrical and Body Systems	0.3 Hrs.

NOTE: The expected completion time for the flash download portion of this procedure is approximately 6 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, 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