FIAT CHRYSLER AUTOMOBILES

Revised April 2015

Dealer Service Instructions for:

Customer Satisfaction Notification R01 Reprogram Transmission and Powertrain Control Modules

NOTE: Revised Related Operation 18-R0-11-51 time allowance to allow the transmission to reach the proper temperature.

Effective immediately all repairs on involved vehicles are to be performed according to this notification. Service Bulletin 21-001-15 is no longer applicable to the involved vehicles.

Models

2014 - 2015 (KL) Jeep® Cherokee

*NOTE: This notification applies only to the above vehicles equipped with a 2.4L Multi Air engine (**sales code ED6, ED8, EDD or EDE**), or 3.2L V6 engine (**sales code EHB**) and an automatic transaxle (**sales code DFH or DFJ**) built June 17, 2013 through December 1, 2014 **(MDH 061709 through 120106)**.*

2015 (UF) Chrysler 200

*NOTE: This notification applies only to the above vehicles equipped with a 2.4L Multi Air engine (**sales code ED6, ED8, EDD or EDE**) and an automatic transaxle (**sales code DFH**) built May 7, 2014 through October 22, 2014 **(MDH 050721 through 102209)**.*

IMPORTANT: Some of the involved vehicles may be in dealer vehicle inventory. Dealers should complete this repair on these vehicles before retail delivery. Dealers should also perform this repair on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The Powertrain Control Module (PCM) and the Transmission Control Module (TCM) software on about 152,000 of the above vehicles requires an update that will help prevent potential durability issues with the transmission.

Repair

The PCM and TCM must be reprogrammed with new software.

Parts Information

No parts are required to perform this service procedure.

Parts Return

No parts return required for this campaign.

Special Tools

The following special tools are required to perform this repair:

- NPN wiTECH VCI Pod Kit
- NPN Laptop Computer
- NPN wiTECH Software

Service Procedure

A. Reprogram the Powertrain and Transmission Control Modules

NOTE: wiTECH must be used to perform this recall. This procedure must be performed with software release level 15.02 or higher. If the reprogramming flash for the Transmission or Powertrain Control Modules is aborted or interrupted, repeat the procedure.

CAUTION: Both the PCM and TCM software must be updated during this procedure. Failure to do so may result in undesirable transmission shift quality.

CAUTION: First the PCM must be reprogrammed; second the TCM must be programmed, third the VIN verification program must be performed, and last the Proxi Configuration Alignment program must be performed. <u>The reprogramming process must be done in this order or the transaxle will not operate.</u>

1. Open the hood. Install a battery charger and verify that the charging rate provides 13.0 to 13.5 volts. Do not allow the charger to time out during the flash process. Set the battery charger timer (if so equipped) to continuous charge.

   NOTE: Use an accurate stand-alone voltmeter. The battery charger volt meter may not be sufficiently accurate. Voltages outside of the specified range will cause an unsuccessful flash. If voltage reading is too high, apply an electrical load to the vehicle by activating the park or headlamps and/or HVAC blower motor to lower the voltage.

2. Connect the wiTECH micro POD to the vehicle data link connector.

3. Place the ignition in the "**RUN**" position.

4. Open the wiTECH Diagnostic application.

5. Starting at the **"**Select Tool**"** screen, highlight the row/tool for the wiPOD device you are using. Then select "**Next**" at bottom right side of the screen.

6. Enter your "**User id**" and "**Password**", then select "**Finish**" at the bottom of the screen.

Service Procedure (Continued)

7. From the "**Vehicle View**" screen, click on the "**PCM**" icon.

8. From the "**PCM View**" screen, compare the "**Current ECU Flash Number**" with the "**New Part Number**" listed on the "**sort table**". If the "**Current ECU Flash Number**" is the same as the "**New Part Number**" continue to Step 13. If the part numbers are not the same, continue to Step 9.

9. With the cursor over the desired flash file, click the green arrow button on the right side of the screen to start the process.

10. From the "**ECU Flash**" screen follow the wiTECH screen instructions to complete the reprogramming.

11. Once the flash is complete click the "**OK**" button on the "**ECU Flash**" screen.

12. From the "**PCM View**" screen, compare the "**Current ECU Flash Number**" with the "**New Part Number**" listed on the "**sort table**". If the "**Current ECU Flash Number**" is the same as the "**New Part Number**" the flash is complete. If the part numbers are not the same, repeat Steps 7 through 11. If the part numbers match, continue with Step 13.

13. Using wiTECH, reprogram the TCM with the latest available software.

    - If both the PCM and TCM **were not** reprogrammed and are up to date, the repair is complete. Remove the wiTECH micro POD and return the vehicle to the customer.

    - If the PCM **was** reprogrammed and the TCM **was up to date**, continue with step 42, **Transmission Drive Verification Test**.

    - If the TCM **was** reprogrammed and the PCM **was up to date**, continue with step 14.

    - If both the TCM and PCM **were** reprogrammed, continue with step 14.

Service Procedure (Continued)

14. Select "**Misc. Functions**" tab.

15. Highlight "**TCM VIN Verification**" and click on the green arrow to start the process.

16. Follow screen prompts to complete VIN verification process.

17. Page back to "Vehicle View" screen.

18. Select "**Vehicle Preparations**" tab.

19. Highlight "**Proxi Configuration Alignment**" and click on the green arrow to start the process.

20. Follow screen prompts to complete proxi configuration alignment process.

21. Turn the ignition to the "**OFF**" position.

22. Unplug the wiTECH micro POD from the vehicle, close the doors and wait two minutes.

23. Connect the wiTECH micro POD to the vehicle.

24. Turn the ignition to the "**RUN**" position.

25. Start a wiTECH session.

26. Select the "**Vehicle Preparations**" tab.

27. Highlight "**Proxi Configuration Alignment**" and click on the green arrow to start the process.

28. Follow the screen prompts to verify the proxi configuration alignment:

    - If the TCM module is not aligned, repeat Steps 18 through Step 27.
    - If the TCM module is aligned, continue with Step 29.

Service Procedure (Continued)

29. Cycle the ignition to the "**OFF**" position and wait one minute.

30. Place ignition in the "**RUN**" position.

31. Clear all Diagnostic Trouble Codes **(DTC's)**.

32. Remove the battery charger from the vehicle.

    - If the vehicle is a 2014 KL, continue with **Step 33**.

    - If the vehicle is a 2015 KL or UF, continue with the **Quick Learn** and **Transmission Drive Verification Test** procedures **Steps 34 through 43**.

33. Using wiTECH, navigate to the TCM data and locate the transmission fill and fast fill counters.

    - **<u>If all counters have a value greater than zero</u>**, continue with **Step 42 Transmission Drive Verification Test**.

    - **<u>If all counters have a value equal to zero</u>**, continue with **Section B. Transaxle Relearn Procedure and Transmission Drive Verification Test.**

34. Start the engine and monitor the transmission temperature on the Electronic Vehicle Information Center (EVIC).

35. With the vehicle located in a suitable area and emissions being addressed, allow the transmission to warm up to minimum of 60°C (140°F) by performing the following steps:
    a. Apply the service brake.

    b. Shift the transmission from Park to Reverse.

    c. Shift the transmission from Reverse to Drive.

    d. Accelerate the vehicle to minimum of 45 mph to allow the transmission to cycle through each gear.

Service Procedure (Continued)

e. Continue to drive the vehicle until the transmission temperature reaches 60°C (140°F).

NOTE: If the vehicle is equipped with the start/stop feature (sales code XBU) it must be disabled prior to performing the quick learn procedure, steps 36 through 40. To disable, press the on/off switch located on the center switch bank near the HVAC controls.

36. Connect the wiTECH diagnostic scan tool to the vehicle.

37. Check for active TCM DTCs (Diagnostic Trouble Codes). Do not perform the Quick Learn procedure if TCM DTCs are present. If DTCs are present, repair the transmission as required then continue with Step 38.

38. Select the TCM module in wiTECH.

39. Select the "Misc Functions" tab.

NOTE: If the "Quick Learn" option does not appear on wiTECH and both the TCM and PCM were just updated, restart the wiTECH application which should now be populated with the "Quick Learn" option.

40. Select the **"Quick Learn"** procedure, and follow the on-screen instructions to reset and learn the clutch adaptive values.

41. Shift the transmission into Park and shut off the engine.

42. Perform a **Transmission Drive Verification Test** by performing the following steps.

a. With the vehicle located in a suitable area and emissions being addressed, start the vehicle and allow the coolant temperature to reach between 35°C and 105°C (95°F and 221°F).

b. Allow the transmission temperature to reach between 50°C and 115°C (122°F and 239°F).

c. Ensure the vehicle is below an altitude of 8000 ft.

Service Procedure (Continued)

d. With the vehicle in a suitable area and traveling in a straight line, bring the vehicle to a minimum of 30 mph (5th gear) and perform a 0 throttle coasting deceleration until the transmission downshifts from 5th gear to 4th gear.

e. Repeat this coasting downshift 10 times.

43. Using the wiTECH check for active DTC's.

- If U0402 code is present, refer to all current, normal diagnostics published in DealerCONNECT/TechCONNECT regarding the U0402 code and repair as necessary following normal warranty repair guidelines.

- If U0402 code is not present continue with Step 44.

44. Disconnect the wiTECH and return the vehicle to the customer.

Service Procedure (Continued)

B. Transaxle Relearn Procedure

NOTE: The Transaxle Relearn Procedure must be performed on vehicles that have 50 miles or more. Vehicles with less than 50 miles do not require the Transaxle Relearn procedure.

The following 948TE Clutch Application Chart has been provided for your reference only. This chart will help in identifying what clutches are applied in specific gears. Keep in mind that shift quality is greatly affected by the timing of disengaging one clutch and applying another smoothly. If a clutch remains on too long, then harsh shifts can occur or if the clutch disengages too quickly, then poor shift quality can be observed.

948TE Clutch Application Chart							
Gear	**Clutch-A (Dog Clutch)**	**Clutch-B**	**Clutch-C**	**Clutch-D**	**Clutch-E**	**Clutch-F (Dog Clutch)**	**Ratio**
First	X			X		X	4.700
Second	X		X			X	2.842
Third	X	X				X	1.909
Fourth	X				X	X	1.382
Fifth	X	X			X		1.000
Sixth	X		X		X		0.808
Seventh	X			X	X		0.699
Eight			X	X	X		0.580
Ninth		X		X	X		0.479
N/P				X		X	
Reverse		X		X		X	3.805
Default Fourth Gear					X	X	

Service Procedure (Continued)

The adaptation memory cells appear on the wiTECH for every clutch except the dog clutches. Each clutch will include:

- Fast Filling Counter = the number of filling time events that has taken place.
- Filling Time = +/- number of ms (milli seconds) from zero (standard set value).
- Filling Counter = the number of filling pressure events that has taken place 21-032-14 -2-
- Filling Pressure = +/- mb (millibar)/PSI (Pounds per Square Inch) from zero (standard set value)

If the adaptation memory cell "counter" is zero (0), than the adaptation memory cell has not been updated. It will take a minimum of two counts to improve shift quality and with each subsequent count, shift quality will improve even more.

CAUTION: The Transaxle Relearn Procedure must be performed with an assistant driving the vehicle. This will allow the wiTECH scan tool to be properly monitored while maintaining safe driving practices. DO NOT attempt to drive the vehicle and monitor the wiTECH at the same time.

Continue with **"B" and "C" Clutches Adaptation Learn Procedure.**

Service Procedure (Continued)

"B" and "C" Clutches Adaptation Learn Procedure

1. With the wiTECH scan tool, erase DTC's.

2. Setup the scan tool to display the Transmission Oil Temperature, Engine Crankshaft Torque, Turbine (Input) Speed Sensor rpm, and Clutch 'X' - Filling Counter for each clutch.

3. Drive the vehicle until the Transmission Oil Temperature is above 50° C (122° F).

4. Accelerate the vehicle moderately to seventh (7th) gear. It will be necessary to maintain seventh gear during this process by utilizing the Electronic Range Selector (ERS).

5. Drive vehicle at constant vehicle speed between 50 and 60 mph (80 and 96 kph).

6. Maintain seventh gear, steady pedal, and constant speed continuously for approximately 10 minutes while staying within the following conditions:

   - Transmission input Shaft Torque should be between 18 ft. lbs. (24 N·m) and 110 ft. lbs. (150 N·m). It will be monitored on the scan tool as Engine Crankshaft Torque.

   - Transmission input shaft RPM should be between 1100 and 2500 RPM (can be monitored by monitoring Engine RPM using the tachometer on the cluster)

7. Using the wiTECH scan tool, inspect the Clutch "B" and Clutch "C" Filling Counter/Fast Filling Counter status.

8. Continue the drive adaptation procedure until Clutch "B" and Clutch "C" Filling and Fast Filling Counters are at least 2 or greater.

9. Continue with **"D" Clutch Adaptation Learn Procedure**.

Service Procedure (Continued)

"**D**" **Clutch Adaptation Learn Procedure**

1. With the wiTECH scan tool, erase all DTC's.

2. Setup the scan tool to display the Transmission Oil Temperature, Engine Crankshaft Torque, Turbine (Input) Speed Sensor rpm, and Clutch "D" Filling Counter.

3. Drive the vehicle until the Transmission Oil Temperature is above 50° C (122° F).

4. Accelerate the vehicle moderately to sixth (6th) gear. It will be necessary to maintain sixth gear during this process by utilizing Electronic Range Shifter (ERS).

5. Drive vehicle at constant vehicle speed between 40 and 50 mph (64 and 80 kph).

6. Maintain sixth gear, steady pedal, and constant speed continuously for approximately 10 minutes while staying within the following conditions:

   - Transmission input Shaft Torque should be between 18 ft. lbs. (24 N·m) and 110 ft. lbs. (150 N·m). It will be monitored on the wiTECH scan tool as Engine Crankshaft Torque.

   - Transmission input shaft RPM should be between 1100 and 2500 RPM (can be monitored by monitoring Engine RPM using the tachometer on the cluster).

7. Using the wiTECH scan tool, inspect the Clutch "D" Filling Counter/Fast Filling Counter status.

8. Continue the drive adaptation procedure until Clutch "D" Filling and Fast Filling Counter is at least 2 or greater.

9. Continue with "**E**" **Clutch Adaptation Learn Procedure**.

Service Procedure (Continued)

"E" Clutch Adaptation Learn Procedure

NOTE: This procedure will require the vehicle to be driven on a smooth road that is mostly flat that can be driven safely while maintaining a constant speed of 15 mph (24 kph) for approximately 10 miles (16 kph).

NOTE: During the "E" clutch adaptation learn procedure, the vehicle must come to a complete stop in between each adaptation in order to learn the next adaptation. In some cases, it may be necessary to shift the transmission into Park, then into Reverse, then back to Park before proceeding to the next adaptation learn cycle.

1. With the wiTECH scan tool, erase DTC's.

2. Drive the vehicle until the Transmission Oil Temperature is above 50° C (122° F).

3. Accelerate the vehicle moderately to third (3rd) gear. It will be necessary to maintain 3rd gear during this process by utilizing Electronic Range Shifter (ERS).

4. Drive vehicle at constant vehicle speed at 15 mph (24 kph).

5. Maintain 3rd gear, steady pedal, and constant vehicle speed continuously for a minimum of 1 minute, making sure engine speed is less than 2,000 rpm while driving 15 mph (24 kph). This will require adjusting the gas pedal position to keep the engine speed below 2,000 rpm.

6. After 1 minute of driving at 15mph, bring vehicle to a stop, then proceed to 15 mph (24 kph) as described above and repeat 5 times.

7. Stop the vehicle and shift to PARK. Using the scan tool, inspect Clutch "E" Filling Counter/Fast Filling Counter status.

8. Continue this procedure until Clutch "E" Filling and Fast Filling Counters are at least 2 or greater.

9. Continue with **Transmission Drive Verification Test.**

Service Procedure (Continued)

Transmission Drive Verification Test

1. Perform a Transmission Drive Verification Test by performing the following steps.

   a. With the vehicle located in a suitable area and emissions being addressed, start the vehicle and allow the coolant temperature to reach between 35°C and 105°C (95°F and 221°F).

   b. Allow the transmission temperature to reach between 50°C and 115°C (122°F and 239°F).

   c. Ensure the vehicle is below an altitude of 8000 ft.

   d. With the vehicle in a suitable area and traveling in a straight line, bring the vehicle to a minimum of 30 mph (5th gear) and perform a 0 throttle coasting deceleration until the transmission downshifts from 5th gear to 4th gear.

   e. Repeat this coasting downshift 10 times.

2. Using wiTECH check for active DTC's.

   - If U0402 code is present, refer to all current, normal diagnostics published in DealerCONNECT/TechCONNECT regarding the U0402 code and repair as necessary following normal warranty repair guidelines.

   - If U0402 code is not present continue with Step 3.

3. Disconnect the wiTECH and return the vehicle to the customer.

Complete Proof of Correction Form for California Residents

This recall is subject to the **State of California Registration Renewal/Emissions Recall Enforcement Program**. Complete a Vehicle Emission Recall Proof of Correction Form **(Form No. 81-016-1053)** and **supply it to vehicle owners residing in the state of California** for proof that this recall has been performed when they renew the vehicle registration.

Completion Reporting and Reimbursement

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims submitted will be used by FCA US to record Customer Satisfaction Notification service completions and provide dealer payments.

Use one of the following labor operation numbers and time allowances:

	Labor Operation Number	Time Allowance
Transmission and Powertrain Control Module updates previously performed	18-R0-11-81	0.2 hours
Reprogram Transmission Control Module only	18-R0-11-82	0.3 hours
Reprogram Powertrain Control Module only	18-R0-11-83	0.2 hours
Reprogram Transmission and Powertrain Control Modules	18-R0-11-84	0.5 hours
Related Operations		
Perform Transaxle Relearn and Drive Verification Procedure (2014MY)	18-R0-11-50	1.3 hour
Perform Transaxle Quick Learn and Drive Verification Procedure (2015MY)	18-R0-11-51	0.9 hour
Perform Drive Verification Only	18-R0-11-52	0.8 hour

Related Operations Continued

Porter's time Flat Fee Allowance	95-21-44-52	$20.00
Fuel Allowance	95-14-01-53	$8.00

Add the cost of the parts package plus applicable dealer allowance to your claim.

Dealer Notification

NOTE**:** See the Warranty Administration Manual, Recall Claim Processing Section, for complete claim processing instructions.

To view this notification on DealerCONNECT, select "Global Recall System" on the Service tab, then click on the description of this notification.

Owner Notification and Service Scheduling

All involved vehicle owners known to FCA US are being notified of the service requirement by mail. They are requested to schedule appointments for this service with their dealers. A generic copy of the owner letter is attached.

Enclosed with each owner letter is an Owner Notification postcard to allow owners to update our records if applicable.

Vehicle Lists, Global Recall System, VIP and Dealer Follow Up

All involved vehicles have been entered into the DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP) for dealer inquiry as needed.

GRS provides involved dealers with an updated VIN list of their incomplete vehicles. The owner's name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the **"Service"** tab and then click on **"Global Recall System."** Your dealer's VIN list for each recall displayed can be sorted by: those vehicles that were unsold at recall launch, those with a phone number, city, zip code, or VIN sequence.

Dealers should perform this repair on all unsold vehicles *before* retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this notification only and is strictly prohibited from all other use.

Additional Information

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

Customer Service / Field Operations
FCA US LLC

FIAT CHRYSLER AUTOMOBILES

REPROGRAM TRANSMISSION AND POWERTRAIN CONTROL MODULES

CUSTOMER SATISFACTION NOTIFICATION

R01

Dear: (Name)

At FCA US LLC, we recognize that the success of our business depends on the satisfaction of our customers. We are constantly monitoring the quality of our products and looking for opportunities to improve our vehicles even after they are sold. Because your long-term satisfaction is important to us, we are contacting you on important improvements we would like to make to your vehicle. This will be done at no charge to you.

We are recommending the following improvements be performed on certain **2014 through 2015 model year Jeep® Cherokee and 2015 model year Chrysler 200 vehicles equipped with a 9 speed automatic transaxle**.

Recommended Service:	**The Transmission Control Module (TCM) and Powertrain Control Module (PCM) software in your vehicle (VIN: xxxxxxxxxxxxxxxx) requires an update that will help prevent potential durability issues with the transmission.**
What your dealer will do:	**FCA will service your vehicle free of charge (parts and labor).** To do this, your dealer will reprogram the TCM and PCM with new software. The work will take about 1 ½ hours to complete. We recommend that you make an appointment with your dealer to minimize your inconvenience.
What you should do:	Simply **contact your Chrysler, Jeep, Dodge or RAM dealer,** at your convenience, to schedule a service appointment. Your dealer will collect the necessary information to ensure that the appropriate parts are available so your service can be completed in a timely manner. Although not required, we recommend bringing this letter with you to your dealer, when you bring your vehicle in for this service.
If you need help:	Please contact the FCA US Customer Assistance Center at 1-800-853-1403.
California residents…	The State of California requires the completion of emission recall repairs prior to vehicle registration renewal. Your dealer will provide you with a Vehicle Emission Recall Proof of Correction Form after the recall service is performed. Be sure to save this form since the California Department of Motor Vehicles may require that you supply it as proof that the recall has been performed.

If you have already experienced this condition and have paid to have it repaired, please send your original receipts and/or other adequate proof of payment to the following address for reimbursement: FCA US Customer Assistance, P.O. Box 21-8007, Auburn Hills, MI 48321-8007, Attention: Reimbursement. Once we receive and verify the required documents, reimbursement will be sent to you within 60 days.

Please help us update our records by filling out the attached prepaid postcard, if any of the conditions listed on the card apply to your vehicle. If you have further questions go to **recalls.mopar.com**.

We apologize for any inconvenience this service may cause to your schedule. FCA US is committed to providing our customers with world class quality products, ensuring that you have a positive dealership experience and following up on any issues and concerns that you may have in a timely manner through our Customer Assistance Center. Thank you for being our customer.

Sincerely,
Customer Service / Field Operations
FCA US LLC