



NUMBER: 21-010-20

GROUP: 21 - Transmission and Transfer Case

DATE: February 15, 2020

This bulletin is supplied as technical information only and is not an authorization for repair. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without written permission of FCA US LLC.

This bulletin supersedes service bulletin 21-017-16 REV. A, dated July 30, 2016, which should be removed from your files. All revisions are highlighted with **asterisks**** and include removal of build dates, additional symptom/condition, repair procedure step and LOP.**

SUBJECT:

Flash: Transmission Control Module (TCM) Updates

OVERVIEW:

This bulletin involves reprogramming the TCM with the latest available software.

MODELS:

2016	(DS)	RAM 1500 Pickup
2016	(DX)	RAM 1500 Pickup (Mexico)

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

NOTE: This bulletin applies to vehicles:

- Equipped with a 3.0L V6 Turbo Diesel Engine (Sales Code EXF) and a 8-Speed Automatic 8HP70 Transmission (Sales Codes DFD or DFK).
- Equipped with a 3.6L V6 24V VVT Engine (Sales Codes ERB or ERT) and a 8-Speed Automatic 845RE Transmission (Sales Codes DFL or DFK).
- Equipped with a 5.7L V8 Hemi MDS VVT Engine (Sales Code EZH) and a 8-Speed Automatic 8HP70 Transmission (Sales Codes DFD or DFK).

SYMPTOM/CONDITION:

Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find the following Diagnostic Trouble Code (DTC) has been set:

- P0731 - Gear Ratio Error In 1st.

****The customer may describe the following condition:**

- Rough or harsh shifting during coastdown to a stop (might also be described as a 2-1 bump) **(Sales Code EZH).********

In addition, the following software enhancements are also available:

- 2-1 coast down improvement **(Sales Code EXF).**
- 3-2 coast down improvement **(Sales Code EXF).**
- Improvements to 5-3 downshift with pedal to improve 5-3-2 shifts **(Sales Code EXF).**
- 6-5 coast down improvement **(Sales Code EXF).**
- 2-3 upshift with less than 30% pedal **(Sales Code EXF).**
- Clutch C adaption stability (improves shift quality for new transmissions on gear shifts that use Clutch C) **(Sales Code EXF).**

- Garage shift to D improvements (**Sales Code EXF**).
- Rolling garage shift (**Sales Code EXF**).
- Implementation of End Of Line (EOL) adaption to improve shift quality on brand new transmissions.
- Diagnostics improvements (**Sales Codes ERB, ERT and EZH**).
- Improve shift quality on brand new transmission (**Sales Code EZH**).
- Improvement to first 1-2 shift after start (**Sales Code EZH**).
- Improvement to 1-2 shift, especially for colder operating temperatures (**Sales Code EZH**).
- 2-3 shift feel improvement especially for colder operating temperatures (**Sales Code EZH**).
- Coastdown shift improvements (6-5, 5-4, 4-3, 3-2 and 2-1) (**Sales Code EZH**).
- Coastdown shift feel refinement for double downshifts (**Sales Code EZH**).
- Kickdown improvements for the following shifts (7-6-5-4-3, 8-6-5-4, 6-3-2, 5-3-2 and 4-2) (**Sales Code EZH**).
- Improvement to 4-2-1 (**Sales Code EZH**).
- Improved 7th gear upshift timing.
- Downhill engine braking improvements.

DIAGNOSIS:

Using a Scan Tool (wiTECH) with the appropriate Diagnostic Procedures available in DealerConnect/Service Library, verify all related systems are functioning as designed. If DTCs or symptom conditions, other than the ones listed are present, record the issues on the repair order and repair as necessary before proceeding further with this bulletin.

If the customer describes a symptom/condition or if the technician finds a DTC listed above, perform the repair procedure.

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. Reprogram the TCM 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.
2. Clear any DTCs that may have been set in any modules due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow them to be cleared.
3. ****Is the vehicle equipped with Sales Code EZH and has a rough or harsh shifting during coastdown to a stop (also described as a 2-1 bump)?**
 - YES>>> Perform process to relearn the Adaptive Values. Refer to all applicable published service bulletins for detailed repair procedures and labor times regarding a Quick Learn or Static Adaptation (STADA) routine.
 - NO>>> This bulletin has been completed. Do **NOT** clear the adaptation memory cells in the TCM's memory. Clearing the memory cells may cause the transmission to not shift smoothly until they can be fully relearned.**

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
18-19-05-NL	Module, Transmission Control (TCM) - Reprogram (0 - Introduction)	2 - Automatic Transmission	0.2 Hrs.

NOTE: The expected completion time for the flash download portion of this procedure is approximately 2 minutes. Actual flash download times may be affected by vehicle connection and network capabilities.

FAILURE CODE:

The dealer must use failure code CC with this Service Bulletin.

- If the customer's concern matches the SYMPTOM/CONDITION identified in the Service Bulletin, failure code CC is to be used.
- When utilizing this failure code the 3C's (customer's concern, cause and correction) must be provided for processing Service Bulletin flash/reprogramming conditions.

CC	Customer Concern
----	------------------