

Technical Service Bulletin (TSB)

Harsh Transition From Electric to Hybrid Mode

REFERENCE:	TSB: 21-003-23 REV. A GROUP 21 - Transmission and Transfer Case	Date:	May 18, 2023	REVISION:	21-003-23
VEHICLES AFFECTED:	2022 - 2023 (WL) Jeep Grand Cherokee This bulletin applies to vehicles equipped with the 2.0L I4 DOHC DI Turbo PHEV Engine (Sales Code ECX) and 8-Speed Auto 8P75PH PHEV Transmission (Sales Code DFY).			MARKET AF	PPLICABILITY: ⊠MEA ⊠IAP □CH
CUSTOMER SYMPTOM:	 Customers may experience one or more of the following: Harsh Shift Abrupt or harsh transition from Electric Vehicle to Hybrid Engine mode. 				
CAUSE:	Transmission adaptive relearn				

This bulletin supersedes Technical Service Bulletin (TSB) 21-003-23, date of issue January 20, 2023, which should be removed from your files. All revisions are highlighted with **asterisks** and include updated LOP.

This Technical Service Bulletin (TSB) has also been released as a Rapid Service Update (RSU) 22-209, date of issue November 02, 2022. All applicable RSU VINs have been loaded. To verify this RSU service action is applicable to the Un-Sold vehicle, use VIP or perform a VIN search in DealerCONNECT/Service Library. This RSU will expire 18 months after the date of issue.

REPAIR SUMMARY:

This bulletin involves performing a transmission quick learn with wiTECH.

CLAIMS DATA:

Labor Operation No:	Labor Description	Skill Category	Labor Time
21-58-01-90	Module, Transmission Control (TCM) - Inspect	2 - Automatic Transmis- sion	0.2 Hrs.
21-58-01-91	Module, Transmission Control (TCM) - Inspect and Perform Quicklearn (0 - Introduction)	2 - Automatic Transmis- sion	0.9 Hrs.
Failure code	ZZ	Service Action	

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 Diagnostic Trouble Codes (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 RSU VIN list, perform the repair. If any vehicle not on the VIN list exhibits any of the symptoms listed above in the customer symptom section, perform the Repair Procedure.

SPECIAL TOOLS/EQUIPMENT:

Description	Ref. No.	Notes
wiTECH or Equivalent	_	_

REPAIR PROCEDURE:

- NOTE: The transmission oil temperature must be above 60° C (140° F) and transmission oil level must be full before performing the adaptation procedure.
- NOTE: The High Voltage (HV) battery State Of Charge (SOC) must be always above 20% and below 80% while performing this procedure. If the HV battery is below 20%, charge the battery before continuing.
- 1. Does the vehicle have more than 500 miles on the odometer?
 - YES>>> This bulletin is complete. Use (**21-58-01-90**) to close this RSU. Perform normal diagnostics.
 - NO>>> Proceed to Step 2.
- 2. Using wiTECH ensure the transmission temp is above 60° C (140° F)
- NOTE: If the HV battery voltage is over 80% drive the vehicle in "ELECTRIC" mode until the voltage drops under 80%. This will also aid in warming up the transmission to proper operating temp.
- 3. Check the HV battery State of Charge (SOC) is above 20% and below 80%. This can be found in the Instrument Panel Cluster (IPC).
- 4. Using wiTECH create a vehicle scan report.
- 5. Ensure the vehicle is in HYBRID mode on the left side switch bank.
- 6. Using wiTECH, record the K0 Filling Counter and K0 Fast filling Counter. This can be found in Transmission Control Module (TCM) Misc Functions in PHEV Quicklearn, Read Adaptives (Fig. 1).

PHEV Quicklearn	
From this screen, you will be able to choose to run the K0 Clutch learn or to read Adaptive	values.
By choosing K0, you will be able to run only the K0 to completion=	d VA al-stabase sumilable for our to view as maken afterwards. Ver will also be directed basis
By choosing Read Adaptives, you will have a table with all the Adaptive values for A-E, ILE ar here after you choose to exit.	d Ku clutches available for you to view or review afterwards. You will also be directed back
Selected: Learn K0 Clutch -	
Learn K0 Clutch	Cancel
Read Adaptives OPT out of routine	

Fig. 1 PHEV Quicklearn

- 7. Now select "Learn K0 Clutch". Follow prompts in wiTECH to complete the Learn K0 Clutch procedure.
- Upon successful completion of the Learn K0 Clutch procedure, verify the new K0 Filling Counter and K0 Fast filling Counter are both 1. Record all four K0 values found in TCM Misc Functions > PHEV Quicklearn > Read Adaptives.
- 9. Clear all DTCs that may have been set.

NOTE: Before the test drive go into the radio E-Hybrid pages, go to the e-Save page and verify "Battery Save" is selected.

- 10. Test drive the vehicle to ensure the customer concerns have been corrected. Put the vehicle into "e-Save" mode, engine should not be running when starting the test drive. Drive until the engine begins to run.
- 11. Have the customer concerns be corrected?
 - YES>>> This bulletin has been completed return the vehicle to the customer.
 - NO>>> Further Diagnostic will be needed.

POLICY:

Reimbursable within the provisions of the warranty.

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