



## STAR ONLINE PUBLICATION



**Case Number: S2021000006**

**Release Date: 11/24/2020**

**Symptom/Vehicle Issue:** Transmission Slip/Flare During Shifts With No Diagnostic Trouble Codes (DTCs) Set. Manual Drive Learn Procedure.

**NOTE: If the customer's concern is a transmission slip/flare during shifts, AND there are associated transmission DTCs setting, this SOL Publication does not apply. Please perform normal published diagnostics for the DTCs present.**

**Diagnosis:** A small number of customers may experience a concern of a transmission slip/flare during shifts. Upon further investigation, a technician may not find any transmission related DTCs setting.

The 68RFE Transmission, is a fully adaptable transmission that will adapt to the driving style of the customer. In some instances, it can take up 2500 miles for the transmission to fully adapt to the customer's driving style. Performing a Transmission Quick Learn clears out all previously learned adaptives, and forces the transmission to start to relearn from the beginning.

If a customer is complaining of general shift performance concerns, and there are no associated DTCs setting, do not perform the Transmission Quick Learn as a first step. Instead, please perform the following Repair Procedure: 68RFE Drive Learn that is specific to the customer's shift complaint. This will allow the transmission to further adapt/learn the clutch fill volumes, and improve shift performance.

### **Repair Procedure: 68RFE Drive Learn**

For customer concern of transmission slip/flare during 1-2, 2-3, 3-4, 4-5, and 5-6 upshifts. Please perform the following drive cycles to learn the OD, 4C, Alternate 4C, 2C, and Alternate 2C Clutch Fill Volumes.

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

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1. For OD, 4C, Alternate 4C, Alternate 2C Clutch Fill Volumes:
  - a. From a complete stop, accelerate using an approx. 25-35% steady throttle to 60mph (96 kph), or until 6th gear is achieved.
  - b. Come to a complete stop
  - c. Repeat 10 times.

**NOTE: Current gear can be monitored by engaging ERS set to 6<sup>th</sup> gear.**

2. For 2C Clutch Fill Volume:
  - a. Drive vehicle at a steady 30 mph (48 kph).
  - b. Perform a deceleration under light braking, down to 12-13 mph (19-20 kph).
  - c. Accelerate using a gradual moderate application of the accelerator, to get the transmission to achieve a 4-2, or 3-2 downshift. Do NOT go to Wide Open Throttle (WOT).
  - d. Repeat steps **a-c**, one more time.
  - e. Drive the vehicle at a steady speed for 2-4 minutes.
  - f. Repeat the entire 2C Clutch Fill Volume Drive Cycle, a total of 5 times.

For customer concern of transmission slip/flare during 6-4, 5-4, and 5-3 downshifts. Please perform the following drive cycle to learn the UD Clutch Fill Volume.

**NOTE: Current gear can be monitored by engaging ERS set to 6<sup>th</sup> gear.**

1. For vehicles with a 3.73 gear ratio:
  - a. Drive the vehicle until 6<sup>th</sup> gear is achieved.
  - b. Decelerate to speeds of 36-38 mph (58-61 kph).
  - c. Accelerate using a gradual moderate application of the accelerator, to get the transmission to achieve a 4-3 downshift. Do NOT go to Wide Open Throttle (WOT).
  - d. Repeat steps **a-c**, 10 times.
2. For vehicles with a 4.10 gear ratio:
  - a. Drive the vehicle until 6<sup>th</sup> gear is achieved.

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- b. Decelerate to speeds of 34-36 mph (54-57 kph).
- c. Accelerate using a gradual moderate application of the accelerator, to get the transmission to achieve a 4-3 downshift. Do NOT go to Wide Open Throttle (WOT).
- d. Repeat steps **a-c**, 10 times.

For customer concern of transmission slip/flare during the first 3-4 upshift after being in Park or Reverse. Please perform the following drive cycle to learn the First OD Clutch Fill Volume.

**NOTE: The OD Clutch volume will not start to learn until the 3<sup>rd</sup>, 3-4 upshift after the FOD Fill Volume learn**

1. Start the vehicle.
2. Shift the vehicle into reverse for a minimum of 1 second.
3. Shift the vehicle into drive, and accelerate through 4<sup>th</sup> gear, using approx. 25-35% throttle.
4. Come to a complete stop.
5. Repeat steps 1-4, a total of 10 times.

For customer concern of transmission slip/flare during a 2-1 downshift while in ERS or during Garage Shifts (i.e. shifting from park to reverse). Please perform the following drive cycle to learn the LR Clutch Fill Volume.

1. Ensure that ERS is currently disabled at the beginning of the drive cycle.
2. Drive the vehicle, on level ground, at a steady 35 mph (56 kph).
3. Using light to no braking input, decelerate the vehicle while using the ERS controls to downshift down to 1<sup>st</sup> gear.
4. Disable ERS.
5. Repeat steps 1-4, a total of 10 times.

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