

Driver Triggered Snapshot RRMT0044

May 2023



BACKED BY
Roadranger
SUPPORT

RRMT-0044: Driver Triggered Snapshot - Transmission Shift Complaint without Active Transmission Fault Codes Procedure

Date: May 12, 2023

Updated:

Issue Description:

To support diagnosis of transmission performance issues when no Active transmission fault codes are present, a Driver Triggered Snapshot (DTS) may be used to capture vehicle and transmission data when the performance issue occurs. The data can then be saved in the Transmission Control Module (TCM), downloaded with ServiceRanger and sent to Eaton for review.

To ensure a successful DTS, record and understand the customer's performance issue and when it occurs. Drive or operate the vehicle and attempt to duplicate the performance issue under the conditions reported by the customer. A DTS can be performed with key on engine off and key on engine running with vehicle stationary or while driving.

Note: Prior to taking a DTS, ensure to connect ServiceRanger, download a Service Activity Report (SAR) and send to Eaton. This records all the current information stored in the TCM for future reference.

- Snapshots are initiated using the OEM Driver Interface Device:
 - Shift Stalk or Push Button
 - The TCM uses a specific sequence of shift request messages from the device: "Upshift" and "Downshift"
- Snapshots require the following sequence and timeframe:
 - Select Upshift, Downshift, Upshift, Downshift
 - Within 1.5 seconds from the initial Upshift
- "ST" (Snapshot Triggered) is indicated in the Gear Display and a tone may occur when a snapshot has been initiated and recorded.
 - Prior to duplicating the customer's performance issue, confirm a DTS can be initiated by practicing the sequence outlined above.

Note: If the customer's performance issue is duplicated and recorded with a snapshot, do not initiate another snapshot. Previously recorded snapshots may be overwritten.

- Snapshots record 11 seconds of data
 - 9 seconds of data prior to the trigger
 - 2 seconds of data after the trigger

Note: The snapshot is time sensitive and needs to be taken the moment the performance issue is experienced. Timely initiation of the snapshot is required to record the event.

- After the snapshot is recorded, return to the repair facility:
 1. Set vehicle parking brake and chock wheels.
 2. Key off and wait two minutes, allow for a complete power down to write the snapshot to TCM memory.
 3. Key on, connect ServiceRanger and download a Service Activity Report (SAR)
 4. Select "Send to Eaton" - Internet connection required
 5. Contact Eaton Cummins Automated Transmission Technologies at 1-800-826-HELP (4357) for further diagnostic instructions.

Refer to the applicable Transmission Shift Complaint procedure available below:

- Endurant HD Troubleshooting Guide TRTS0950: **Transmission Shift Complaint**.
- Endurant XD Troubleshooting Guide TRTS0960: **Transmission Shift Complaint**.

OEM steering column type Driver Interface Devices have similar functionality:

- Pull towards you to request an Upshift
- Push away from you to request a Downshift

Note: Refer to OEM regarding Driver Interface Device function and operation.

International

- DTS available in Drive (D) and Reverse (R) modes only
 - Not available in Neutral (N) or Low (L) modes



Freightliner

- DTS available in Drive (D), Neutral (N) and Reverse (R) modes



Volvo (Push Button)

- DTS available in Drive (D), Neutral (N) and Reverse (R) modes
- Sequence to initiate a DTS:
 - Up arrow, Down arrow, Up arrow, Down arrow (within 1.5 seconds)
 - or Low, Up arrow, Up arrow



Kenworth and Peterbilt

- DTS available in Drive (D), Neutral (N) and Reverse (R) modes



Note: For Kenworth and Peterbilt vehicles - If “ST” is not indicated in the gear display, refer to OEM for VECU software updates, otherwise perform the following:

1. Request an assistant to monitor ServiceRanger when attempting a DTS.
2. Key on.
3. Connect ServiceRanger.
4. Go To Data Monitor.
5. From the Default Parameter Files tab, select “Transmission Gear Requests”.
6. Monitor “Transmission range attained”
 - a. Drive or operate the vehicle and attempt to duplicate the performance issue under the conditions reported by the customer.
 - b. Select Upshift, Downshift, Upshift, Downshift (within 1.5 seconds)
 - c. “ST” should be indicated when the DTS is initiated.

SR



Data Monitor - Eaton ServiceRanger 4

Go To

Disconnect

List

Components



(Collection)

Eaton

All

Selected

Performance

Temperature

Voltage/Current



Load

Speed

Pressure

Status

Position



View: [Modified]

Link	Source	Parameter	Description	Value
J1939	Transmission	162	Transmission range selected	N
J1939	Transmission	163	Transmission range attained	ST
J1939	Transmission	523	Current gear	N
J1939	Transmission	524	Selected gear	N

Warranty Information:

Information only

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For spec'ing or service assistance, call 1-800-826-HELP (4357) or visit www.eaton.com/roadranger. In Mexico, call 001-800-826-4357.

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