



Subject: Mechatronic Transmission Module (MTM) Update – Endurant HD and PACCAR TX-12

Document Number: TAIB-1001

Date: July 1, 2022

Updated: 4/12/2024

Issue Description/Change:

An updated MTM is to be released to production, MTM Type PS-496. Changes include updated solenoids, internal harness, and the addition of an oil temperature sensor. Additionally, remanufactured MTMs were released to be used for all MTM replacements.

Transmission Model	Original MTM Part Number	Original Service Kit Number	New MTM Part Number ^{Production}	New Service Kit Number
Endurant HD	A-10000715	K-4355 (obsolete) K-4355R (obsolete)	A-10004231 ¹	K-4355W ²
	A-10004202	NA	NA	
Endurant HD (PACCAR)	A-10000715	K-4355-PAC (obsolete) K-4355R-PAC (obsolete)	A-10004231 ¹	K-4355W-PAC ² (E74-1119*)
PACCAR TX-12	A-10002594	K-4356-PAC (obsolete) K-4356R-PAC (obsolete)	A-10004383 ¹	K-4356W-PAC ² (E74-1120*)

¹PS-496, MTM Type.

² Kit does not include a Linear Clutch Actuator (LCA), transfer original equipment LCA to replacement MTM – Refer to Endurant HD Parts Book [TRPB0950](#), MTM Kits for additional information.

*PACCAR PN

MTM Part Number	MTM Type
A-10000715	PS-393
A-10002594	
A-10004202	
A-10004231	PS-496
A-10004383	

Affected Models/Population:

- Endurant HD:
 - Navistar, Volvo, DTNA – SOP November 2022
 - Kenworth, Peterbilt – SOP January 2023
- PACCAR TX-12 – SOP January 2023

Field Service Strategy:

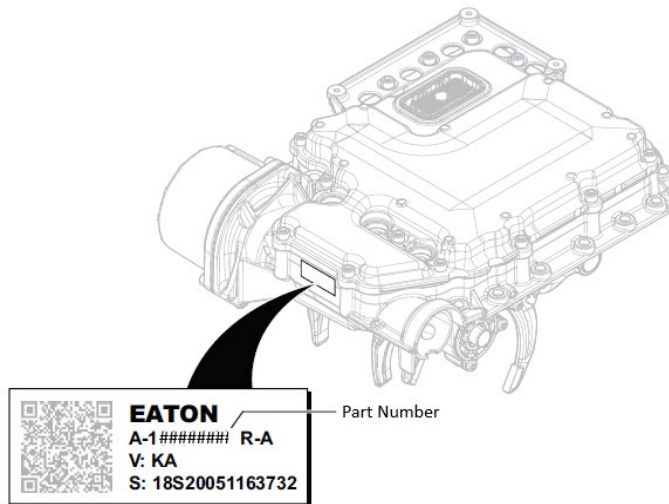
- Transmission Control Module (TCM) Software:
 - Endurant HD
 - TCM software 5516042 or greater is required
 - Navistar, Volvo, DTNA – SOP Q3 2022
 - Kenworth, Peterbilt – SOP Q4 2022
 - PACCAR TX-12
 - TCM software 5516045 (2399316) or greater is required
 - Note:** DAVIE4 Toolset Version – 6.10.81 and Content Version – 23.05 is required to update software and change MTM Type.
 - Configuration parameter added to TCM software – MTM Type with the following settings:
 - PS-393 (Original)
 - PS-496 (New)
 - When TCM software is updated to 5516042 or greater on original equipment units the MTM Type is set to PS-393.
- Service Manual (TRSM0950):
 - If an original equipment MTM (PS-393) is replaced with an updated MTM (PS-496), the MTM Type configuration must be changed in the TCM with ServiceRanger.
 - Updated [MTM Service Procedure](#) (Configure MTM Type) includes recording MTM part number, identifying MTM Type, updating software (if necessary) and configuring MTM Type in TCM.
 - Special Instructions section, at the beginning of the procedure, includes a **NOTICE** for EHD-xxF112C-N transmission models with TCM Software 5516034 to contact Eaton Cummins Automated Transmission Technologies at +1-800-826-4357 for further diagnostic instructions.

- Troubleshooting Guide (TRTS0950):
 - Updated solenoid and position sensor fault isolation procedures with the following information:
 - Updated 74-Way connector pin locations
 - Updated solenoid resistance values
 - Added Fault Code 212 SPN 177 Transmission Oil Temperature.
 - Electrical FMIs only
 - DM53 (Service tool only)
 - No degraded mode
 - Updated the following fault codes to support troubleshooting of a mis-configured MTM Type in the TCM:

Fault Code	SPN	FMI	Fault Code Description
200	629	14	TCM Operation 1
275	4219	5	Rail B Position
295	4220	8	Rail C Position
315	5941	8	Rail D Position
320	5942	8	Rail E Position
596	5901	5	Rail B Fore Solenoid (A5)

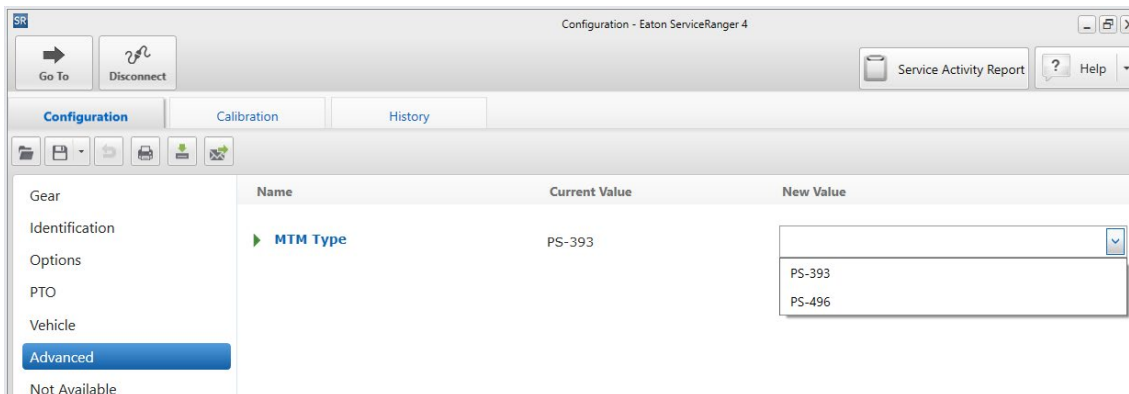
- Procedures include instructions on how to identify MTM Type using MTM part number installed on transmission:

MTM Part Number	MTM Type
A-10000715	PS-393
A-10002594	
A-10004202	
A-10004231	PS-496
A-10004383	



MTM Type Configuration in ServiceRanger:

1. Key on
2. Connect ServiceRanger
3. Go To “Configuration”
4. Select “Advanced”
5. From the New Value dropdown, select MTM Type based on MTM part number.
6. Select “Apply” (lower right) and follow on-screen prompts.



Warranty Information:

- Warranty will cover repairs as part of warrantable repair
- Claim is submitted through normal Warranty channels
- Repairing customer/dealer to provide SAR verifying transmission serial number affected

Warranty Parts:

- MTM and claim associated parts are to be returned per TMIB0129
 - If transmission model EHD-xxF112C-N and TCM Software 5516034, replace TCM*

Warranty Labor:

- Diagnostics (OEM SRT up to 1.0 hour)
- Transmission R&R (OEM SRT)
- MTM R&R (bench time up to 1.2 hours)
 - *TCM R&R included in MTM R&R
- Software Update and calibration/configuration change (OEM SRT up to 0.5 hour) (If required by the software level indicated in the Service Manual)
- Clutch and Rail Calibration after Repair (OEM SRT up to 0.5 hours)
- Test Drive (up to 0.5 hour)

General Claim Coding

- Line Item tab – Repair Line List
 - Primary Causal Part #: Code to the failed MTM part number
 - Complaint Code: Varies
 - Failure Mode Description: Varies per failure
 - Responsibility Code:
 - RTW COMMITMENT (601) for RTW claims
 - Varies per failure mode
 - Part Return Instructions: Return

RMA Claim Coding

- RMA PCP#: Code to the returned MTM part number
- PCP Failure Mode: Varies
- RMA SCP#: N/A
- SCP Failure Mode: N/A

Warranty Coverage:

Standard warranty per Model and Vocation as published in the Eaton Cummins Automated Transmission Technologies Warranty Manual [ECWY3000 EN-US](#)

Change Log

Date:	Description
4/12/2024	Removed PS-496 MTM Type service kits.
2/19/2024	Added K-4355W, K-4355W-PAC, K-4356W-PAC
02/14/2024	Obsolete original service kit PNs: K-4355R, K-4355R-PAC, K-4356R-PAC