

TT7399EN
October, 2013
Page 1 of 7

SUBJECT: Transmission Control Module (TCM) Recalibration for Kenworth

MODELS AFFECTED: Kenworth T800, W900, and C500 models built between 1/25/13 - 07/15/13 and equipped Allison 4000 Series Product Family Transmissions and ISX Family 1 engines.



NOTE: Kenworth dealers are asked to coordinate with Allison distributors/dealers for repairs as outlined in Kenworth Technical Information Bulletin (TIB) 27-002. Kenworth has agreed to utilize and pay the Allison service channel for the repairs.

Background:

Kenworth manufacturing specified the incorrect torque converter type used with 5th Generation Controls transmissions and ISX Family 1 engines. Consequently, transmissions and calibrations were installed that contain either a TC541 or TC551 torque converter instead of the required TC561 configuration. Kenworth TIB 27-002 instructs Kenworth dealers to contact Allison Transmission distributors/dealers to replace the currently installed torque converter pump element with P/N 29514713; thereby converting the torque converter to a TC561 configuration.

This Tech Tip supplements Kenworth TIB 27-002 by outlining the procedure for obtaining a replacement TCM calibration that corresponds to a TC561 torque converter after the currently installed pump element has been replaced.

Refer to [Table 1](#) for chassis numbers that are addressed in Kenworth TIB 27-002.

Table 1. Kenworth Chassis Numbers

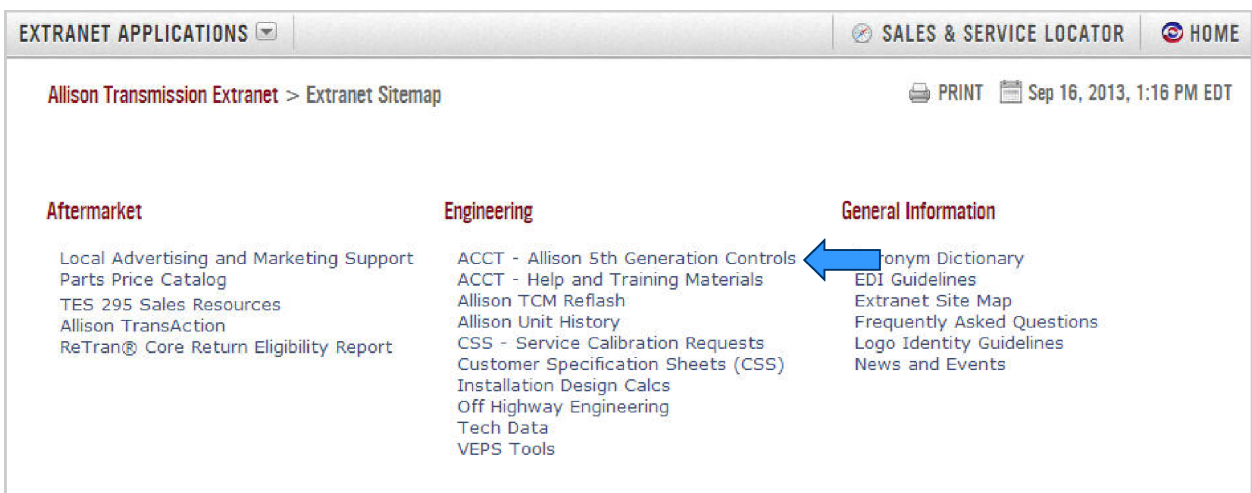
Kenworth Chassis	Model	Transmission Serial Number	Initial Configuration				Final Configuration (after repairs)			
			E Number	G Number	Torque Conv. Group	Torque Conv. Series	E Number	G Number	Torque Conv. Group	Torque Conv. Series
396153	T800	6610367902	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
396794	T800	6610366983	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
396795	T800	6610366865	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
369499	C500	6610370256	E018233	G018826	21-926	TC561	No torque converter parts change necessary. Confirm TC561 in TCM calibration.			
388500	T800	6610363916	E017578	G019084	21-928	TC541	E017544	G020240	21-926	TC561
388665	T800	6610364100	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
390774	T800	6610365897	E017578	G019084	21-928	TC541	E017544	G020240	21-926	TC561
392054	T800	6610365766	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
392551	W900	6610366186	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
392552	W900	6610366185	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
392553	W900	6610366318	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
392554	W900	6610366317	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
392702	T800	6610366320	E017742	G018818	21-927	TC551	E017592	G018817	21-926	TC561
392703	T800	6610366319	E017742	G018818	21-927	TC551	E017592	G018817	21-926	TC561
393097	T800	6610366828	E017742	G018818	21-927	TC551	E017592	G018817	21-926	TC561
393098	T800	6610366827	E017742	G018818	21-927	TC551	E017592	G018817	21-926	TC561
393099	T800	6610366869	E017742	G018818	21-927	TC551	E017592	G018817	21-926	TC561
393100	T800	6610366870	E017742	G018818	21-927	TC551	E017592	G018817	21-926	TC561
393375	T800	6610366863	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
393398	T800	6610366864	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
394083	T800	6610368453	E017578	G019084	21-928	TC541	E017544	G020240	21-926	TC561
394294	T800	6610369821	E018264	G019277	21-927	TC551	E018356	G019789	21-926	TC561
396282	T800	6610368081	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
396443	T800	6610367742	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
397331	T800	6610368857	E017581	G018837	21-927	TC551	E017481	G018816	21-926	TC561
401853	T800	6610375421	E017481	G018816	21-926	TC561	No torque converter parts change necessary. Confirm TC561 in TCM calibration.			

Service Procedure:

Engine torque management features require that the torque converter type is properly set in the TCM calibration; therefore, a calibration update is required. A new calibration must be reflashed into the TCM with the torque converter type set to TC561.

Kenworth orders base model calibrations from Allison Transmission and customizes calibration settings using a Vehicle Electronic Programming Station (VEPS) in their manufacturing operations. Therefore, no fully calibrated Allison TCM part number is available. Refer to the following procedure to obtain a replacement TCM calibration part number to enter into Allison TCM Reflash™ and load into the TCM.

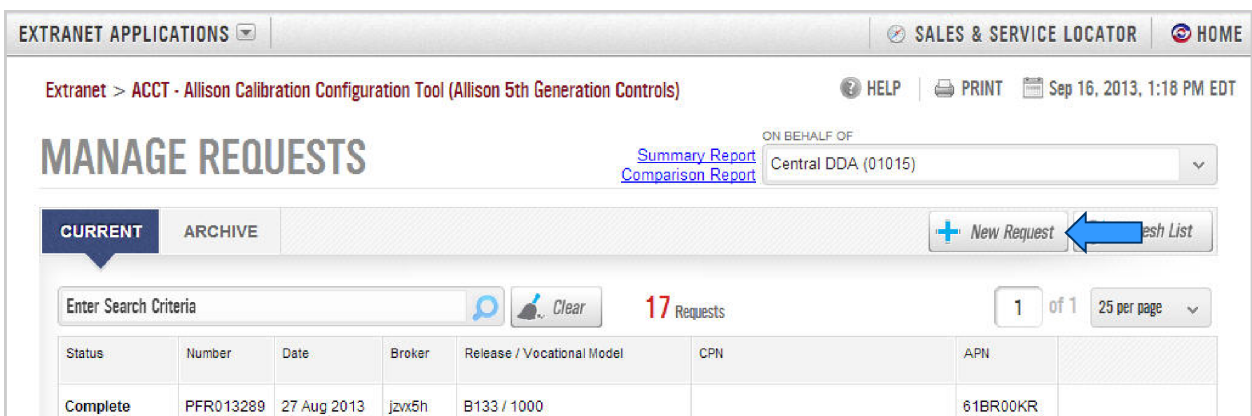
1. Log onto the Allison Extranet.
2. Launch the Allison Calibration Configuration Tool (ACCT) for Allison 5th Generation Controls. Refer to [Figure 1](#).



420935

Figure 1. Launching ACCT

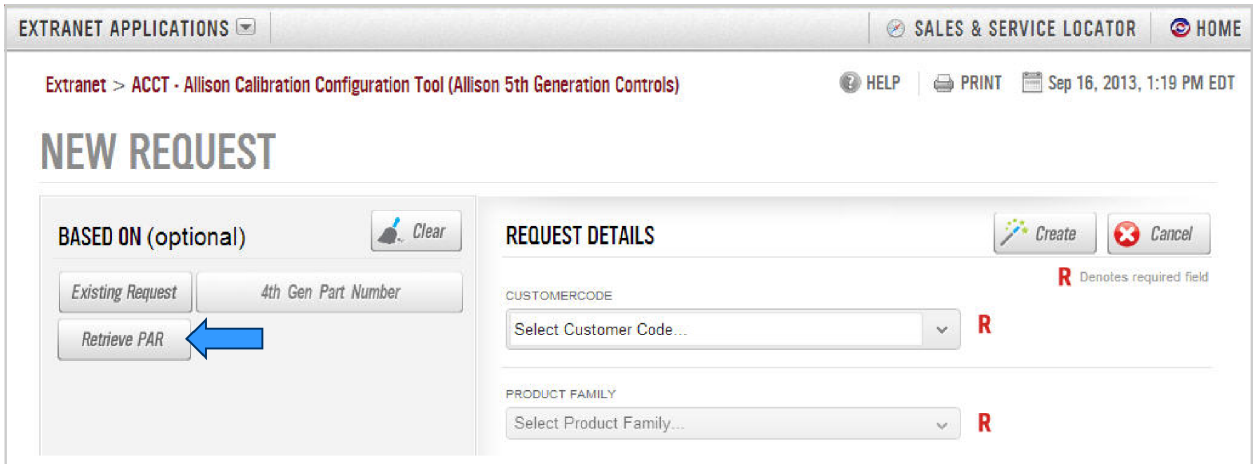
3. From the MANAGE REQUESTS screen, click on the “New Request” button.



420950

Figure 2. New Request

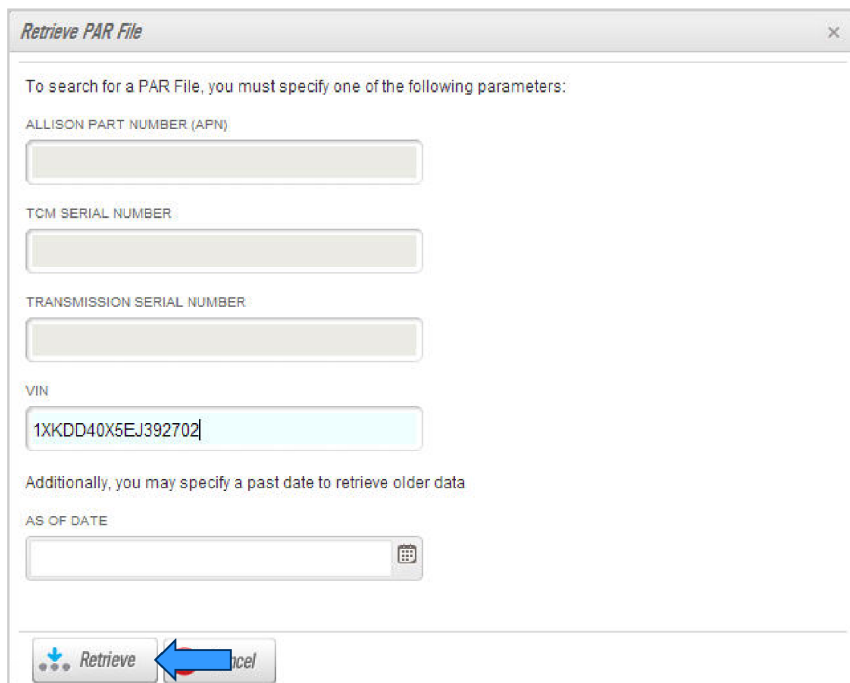
4. In the NEW REQUEST screen, click on the “Retrieve PAR” button. Refer to [Figure 3](#).



420961

Figure 3. Retrieve PAR

5. Enter either the Vehicle Identification Number (VIN) or TCM serial number into the appropriate parameter search field and the click “Retrieve” button.



420971

Figure 4. Retrieving PAR File

- a. If the following message is displayed (refer to [Figure 5](#)), perform the actions in step 5b; otherwise, proceed to Step 6.

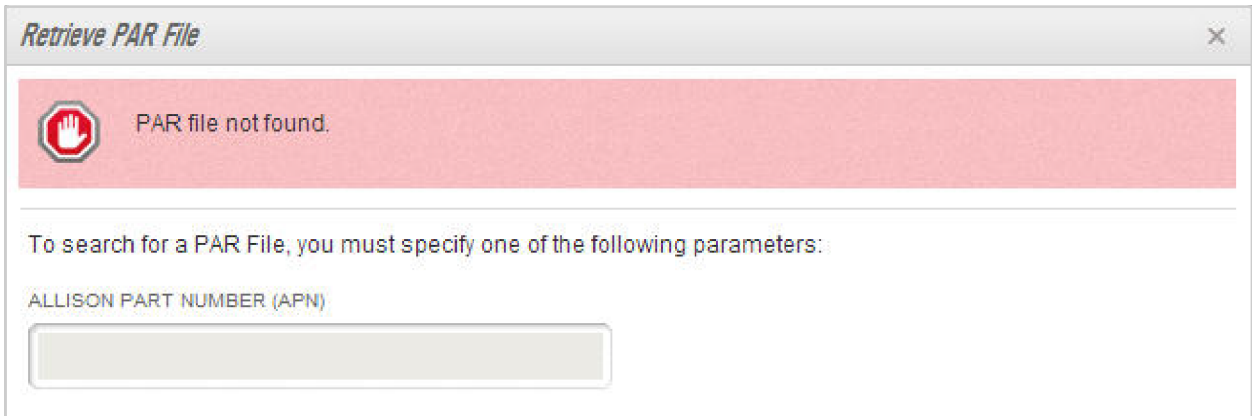


Figure 5. PAR File Not Found

- b. Connect Universal Allison DOC[®] to the vehicle and make a Customer Modifiable Constant (CMC) change using the DOC reprogramming menu. Then, reconnect the laptop to the Internet and launch Allison DOC[®] to return the TCM calibration settings to the Allison server. Allow approximately 15 minutes then repeat steps 1 through 5. If this continues to be unsuccessful, contact the Allison Technical Assistance Center (TAC) at (800) 252-5283. Provide the Vehicle Identification Number (VIN) and TCM serial number.
6. Enter distributor code, product family, release, vocational model, TCM type, and Service for PAR file type in the REQUEST DETAILS screen. Click on the Create button.

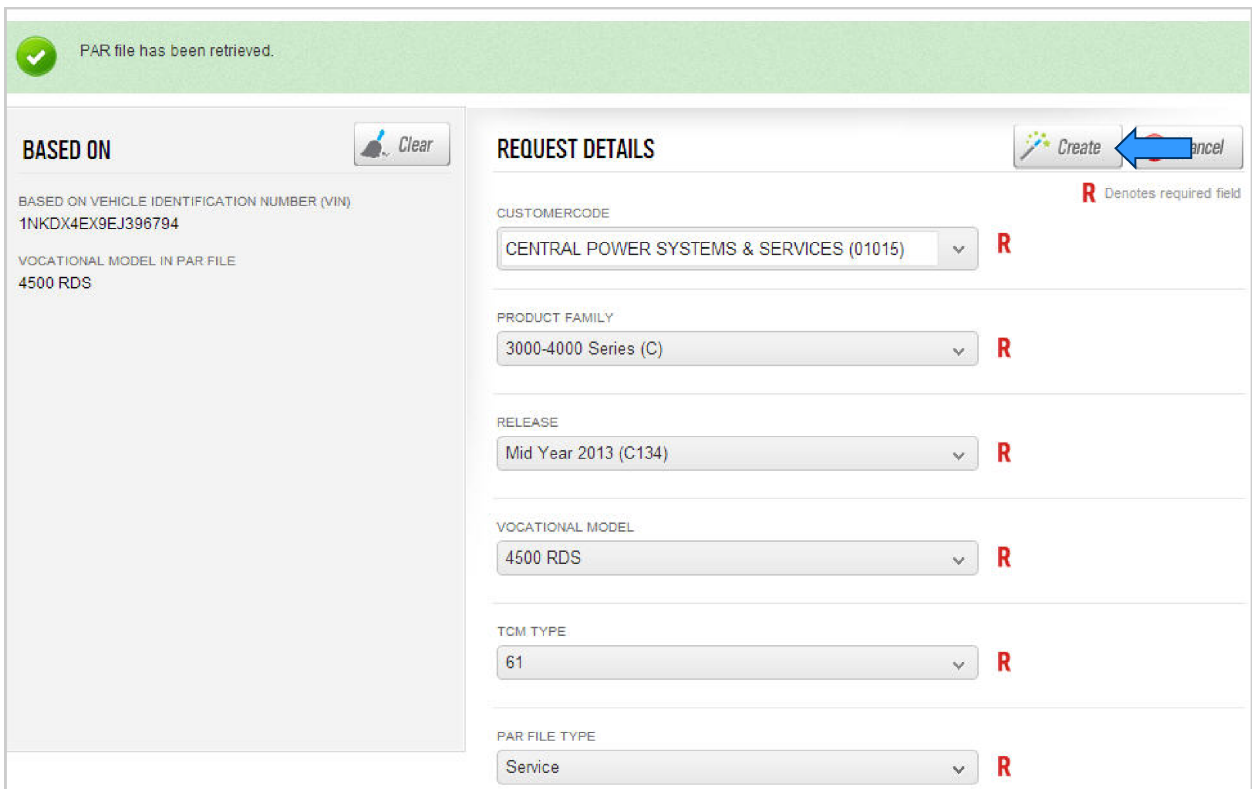


Figure 6. Request Details – Create

7. Select Marketing Region in the drop down list. Click “Basic” tab on left side of page.

The screenshot shows a software interface with a top navigation bar containing 'Status Draft', 'Based on Request Retrieved PAR File', and buttons for '< > Submit Save Save & Exit Cancel'. Below this is a 'Base Information' section with 'CUSTOMER CENTRAL POWER SYSTEMS & SERVICES (01015)' and 'VOC. MODEL CALIBRATION 3000-4000 Series / Mid Year 2013 / 4500 RDS / 61'. A left sidebar lists tabs: 'Customer Info', 'Reference', 'Basic', 'General', 'Inputs', 'Interfaces', 'Indicators', and 'Debug'. A blue arrow points to the 'Basic' tab. The main area is titled 'CUSTOMER INFO' and contains several input fields: 'Description (Max Length 200)', 'Customer Part Number (CPN) (Max Length 18)', 'ISCAAN NUMBER (Max Length 10)', and 'AFR NUMBER (Max Length 10)'. At the bottom, there is a dropdown menu for 'Marketing Region' with 'North America' selected. A status bar at the bottom right shows '421013'.

Figure 7. Select Marketing Region – Basic Tab

8. Change Torque Converter selection to TC561 in drop down list. Click “Submit” button at the top of the page. Refer to Figure 8.

Status: Draft
Based on Request: Retrieved PAR File

Submit Save Save & Exit Cancel

Base Information

CUSTOMER: CENTRAL POWER SYSTEMS & SERVICES (01015)
VOC. MODEL CALIBRATION: 3000-4000 Series / Mid Year 2013 / 4500 RDS / 61

Customer Info >
Reference >
Basic >
General >
Inputs >
Interfaces >
Indicators >
Debug >

BASIC issues exist review required R required info A addendum options

R VOCATIONAL USAGE [10010] BASED ON [22]
540000 GENERIC [22]

R VOCATIONAL RATING [10020] BASED ON [12]
ON/OFF HIGHWAY (OH) [12]

R ENGINE MAKE AND MODEL [11020] BASED ON [25]
CUMMINS ISX 15 2013 [25]

NUMBER OF ENGINE CYLINDERS [11000] BASED ON [1]
OTHER [1] (D)

R TORQUE CONVERTER [14000] BASED ON [381]
561 [39]

R ENGINE GOVERNED SPEED [11030] BASED ON [9]
1800 [9]

421532

Figure 8. Torque Converter Selection

- a. Verify Engine Governed Speed is set to 1800 RPM. If Engine Governed Speed is not set to 1800 RPM, save the request. Contact Allison TAC at (800) 252-5283 before submitting the service calibration request in ACCT.
9. Monitor your email for the approved Allison calibration part number.
10. Use Allison TCM Reflash™ to load calibration part number provided in step 9.
11. Notify Allison TAC at (800) 252-5283 of the transmission serial number, VIN, and TCM serial number associated with this repair.
12. The Allison warranty department will update Unit History to reflect the transmission's new torque converter type, TC561.



NOTE: The issue outlined in this document is not an Allison Transmission defect in material or workmanship. Invoice for repairs are to be presented to the Kenworth dealer, not to the customer/driver.

For further information regarding this issue, please reference Kenworth TIB 27-002: Allison Transmission Has Incorrect Torque Converter for the Application.