

2021FA06
October 29, 2021
Product Code(s): 65
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SUBJECT: Navistar 3414 RHS TCM Recalibration

MODELS AFFECTED: 3414 RHS™

VOCATIONS AFFECTED: Tractor, Tandem Axle

Introduction:

Allison Transmission has identified a potential concern limited to 3414 RHS™ model transmissions in Navistar RH613 model vehicles operating with A26 engines. The issue may affect the durability of the C1 clutch assembly. This Field Action has been initiated to recalibrate the Transmission Control Module (TCM) in specific vehicles to address this issue.

Refer to the following instructions to identify affected vehicles and transmissions, obtain authorization to perform eligible repairs, and submit proper warranty claims.



NOTE: Because this Field Action is limited to specific transmissions in Navistar RH613 model vehicles, not all serial numbers in range will qualify for this Field Action. Refer to [Table 6](#) for a complete list of all eligible transmission serial numbers.

Table 1. Affected Transmission Product Code, Model, and Vocation

Product Code	Affected Transmission Model	Affected Vocation
65	3414 RHS™	Tractor, Tandem Axle

Field Action Transmission Identification:

Prior to the repair of an eligible transmission, a Field Action Authorization Number must be obtained by logging on to <https://hub.allisontransmission.com/field-actions>. Enter the transmission serial number, VIN, vehicle vocation code, etc. and request an authorization. If you receive an authorization number, this is confirmation that the field action has NOT been performed. If the field action has NOT been performed, proceed with the repair, as defined. Include the authorization number in the **4WARD™ Work Performed Comments** field prior to submitting the warranty claim. If you are unable to obtain an authorization number, and you believe the transmission qualifies for the field action based on the transmission serial number/vehicle model/configuration, contact the Allison Technical Assistance Center (TAC) at 1-800-252-5283 or 317-242-0700 or email: Allison.TAC@allisontransmission.com.

Allison Service Outlets Field Action Responsibility:

1. When contact is made with the customer, determine the number of vehicles within the customer's fleet that are included in the Field Action. If the customer has a significant number of eligible vehicles and agrees to make them available simultaneously, performing the field action efforts at the customer's location may be the best option, logistically.
2. For each vehicle, verify the transmission serial number is included in [Table 6](#).
3. Obtain a 2021FA06 Field Action Authorization Number for the verified transmission serial number.
4. Remove the transmission dipstick and note the fluid condition. Take note of color, contamination, and odor. Inspect for evidence of a potential clutch failure.
5. After making the physical connection from the service tool PC to the diagnostic port in the vehicle, record a **Static Data** file using the **Read Static Data** command from the **Allison DOC® Action Request** drop down menu. Save the Static Data file and include in the 4WARD™ warranty claim submission. Populate the Static Data file fields as shown in [Figure 1](#).
6. Connect to the TCM with **Allison DOC®**. From the **Allison DOC® DTC and General Info** window, check and record the existing software level in the **Cal ID** field (refer to [Figure 2](#)), and include within the **4WARD™ Work Performed Comments** field. Also record the complete TCM serial number to be included in the **4WARD™** warranty claim.
7. Take note of any active or inactive Diagnostic Trouble Codes (DTCs) present. Include any DTCs noted in the **4WARD™ Work Performed Comments** field.

Using Allison TCM Reflash™, reprogram the TCM with road ready calibration **61CR0U7W**. When complete, verify the software level displayed in the **Allison DOC® DTC and General Info** window is **C195** or later (refer to [Figure 2](#)).

- Calibration **61CR0U7W** incorporates the following changes:
 - Software level change to C195
 - Parameter 16020 set to one (1) = Dynamic Shift Sensing: Economy Shift Schedule Designation
 - Parameter 22020 set to five (5) = 5th Range Engine Brake Preselect
- 8. Start the vehicle. Operate the vehicle until a transmission fluid temperature of 80°C (176°F) or greater is attained. In the **Allison DOC® Data Monitor** window, note idle input speed and corresponding transmission turbine speed in neutral. Subtract turbine speed from input speed to determine neutral turbine slip speed. If neutral turbine slip speed is 75 rpm or greater, proceed to step [10](#). If neutral turbine slip speed is less than 75 rpm and there is no physical evidence of clutch failure from step [4](#), proceed to step [15](#).
- 9. Contact Allison TAC and initiate a TAC case for the associated transmission serial number.
- 10. Remove the transmission and disassemble the rotating clutch assembly (limited to authorized service outlets). Contact Allison TAC and report any findings within the corresponding TAC case.
- 11. If a primary failure is related to the C1 clutch, repair as-needed under Field Action 2021FA06. Tag all components with the transmission serial number. Allison Transmission may issue a Return Material Authorization (RMA) for specific components. Retain all components until the 4WARD™ warranty claim is approved. After the 4WARD™ warranty claim is approved, components that do not have RMAs issued may be disposed of.
- 12. If a primary failure is identified, but unrelated to the C1 clutch assembly, file two 4WARD™ warranty claims. One is for the 2021FA06 Field Action effort related to recalibration of the TCM and a second warranty claim is for the unrelated primary failure.

13. Reinstall the transmission into the vehicle. Fill the transmission with approved transmission fluid and verify the appropriate fluid level.
14. Test drive the vehicle to verify all forward and reverse ranges are operational and no Diagnostic Trouble Codes (DTCs) become active. Verify the minimum preselect range with the engine brake commanded on is **5** (Fifth Range).
15. Return the vehicle to the customer.

The 'Enter Comments' dialog box contains the following fields and values:

- Vehicle Identification Number: Enter Vehicle ID
- TCM Serial Number: BK0691A35077015
- CIN: C19500106G15N
- Program level: W19BC_PC868812
- Miles: Enter Mileage
- Transmission Model: 3414RHS
- Engine type:
- Rear tire size:
- Distributor / Dealer: Enter Distr. or Dealer
- Location: Enter Distr./Dealer City
- Name: Enter Distr./Dealer Name
- Date: 29-Sep-2021
- Medium/Heavy Duty Only Vehicle manufacturer: Navistar
- Vehicle model: RH613
- Engine horsepower:
- Axle Ratio:
- Shift Selector:
- Customer complaint: Only complete if applicable - otherwise state "None".
- Corrective action taken: Recalibrate TCM to C195 Software Level.
- Comments: Identify if done at customer location or at dealer/distr. location.

Buttons: OK, Cancel, Print

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Figure 1. Populated Static Data File Fields

TCM Information	Value
Cal ID	C19500267G15W
TCM Assembly Number	
Software Level	W19BC_PC86881263
Serial Number	BK0691A350770151
Part Number	29550691
TCM Date	03-18-2015
HCN / CCN	49 / W19BC_PC86881263

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Figure 2. Cal ID, Software Level (C195 Software Level Shown)

Claim Submittal Information:

Approved authorized Allison service outlets must submit work performed per this Field Action as outlined in [Table 2](#), [Table 3](#), [Table 4](#), and [Table 5](#).

Include the Field Action Authorization Number in the **4WARD Work Performed Comments** field.

When filing each claim, enter the recalibrated TCM serial number from step 7 into the Failed Component Serial Number field of the **4WARD™** claim.

Table 2. Claim Information

CLAIM TYPE	Automatically Applied by 4WARD™ system
PRIMARY FAILED PART	Automatically Applied by 4WARD™ system
SPECIAL ACTIVITY INDICATOR	Not required by 4WARD™ system
COMPLAINT CODE	Automatically Applied by 4WARD™ system
FAILURE CODE	Automatically Applied by 4WARD™ system
FIELD ACTION AUTHORIZATION NUMBER	*
*Provided from Allison HUB™. Must be included in 4WARD Work Performed Comments field.	

Table 3. Labor Codes/Hours – Recalibration Only

LABOR OPERATION CODE	LABOR HOURS	LABOR OPERATIONS
00096501	1.0	RECALIBRATE TCM
00096400	0.5	TEST DRIVE

Table 4. Labor Codes/Hours – Recalibration and C1 Clutch Repair

LABOR OPERATION CODE	LABOR HOURS	LABOR OPERATIONS
00094000	6	Transmission Remove & Replace
00094006	0.5	Steam Clean Transmission
00094010	0.5	Back Flush Cooler
00095211	3	Partial Transmission Overhaul
00095205	1.5	Trans Dyno Test After Rebuild
00096100	2	Control Valve Body/Module Overhaul
00096501	1	RECALIBRATE TCM
00096400	0.5	TEST DRIVE

Table 5. Parts List – Recalibration and C1 Clutch Repair

PART NUMBER	QUANTITY	PART NAME
23047185	1	O-ring, 4.4 inch ID
29538448	1	Sealring Kit
29503288	1	Gasket, Converter Housing
23042434	1	Sealring Kit, External
23045588	6	Plate, C1 Clutch Friction
23045613	1	Sealring, External
23046274	1	O-ring, 25.1 mm ID
29536334	6	Plate, C1 Clutch Friction
29546153	1	Sealring, C2 Piston, 116.3 mm ID
29546154	1	Sealring, C1 Piston, 101.1 mm ID
29546155	1	Sealring, C1 Piston, 178.8 mm ID
29546156	1	Sealring, Piston, 202.1 mm ID
23046376	3	Seal, Face
29512863	1	Sealring
29535518	6	O-ring, Solenoid, 13.0 mm ID
29537066	1	Gasket, Suction Filter
29542084	1	Seal
29542976	6	O-ring, 10.65 mm ID
29542991	1	Seal, Face
29552364	1	Switch Assembly, Pressure
23019664	1	O-ring, 16.4 mm ID
29503382	1	O-ring, 14.0 mm ID
29503384	1	O-ring, 18.8 mm ID
29507437	2	O-ring, 75.9 mm ID
29524449	2	Gasket, Filter Cover
29548953	2	O-ring, 85.3 mm ID
29549658	1	Switch Assembly, Pressure

Any additional parts, labor, or travel costs deemed necessary to complete this Field Action must be described in detail in the claim narrative; if not, they will be deducted from the warranty claim. Authorized Allison service outlets must follow the published Allison Transmission current labor time guide for work performed when adding any additional charges.

Contact Information:

If there are questions concerning this Proactive Field Action please contact:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206 0894
TOLL FREE: 1-800-252-5283
Allison.TAC@allisontransmission.com

Table 6. Eligible Transmission S/Ns

Transmission Serial Number	
6511719159	6511765021
6511728153	6511765022
6511728154	6511764985
6511728284	6511759854
6511728285	6511759855
6511728286	6511764892
6511728287	6511764893
6511728288	6511764894
6511728289	6511764895
6511728293	6511764902
6511738672	6511764903
6511738673	6511764904
6511743967	6511764905
6511743968	6511764987
6511743969	6511764991
6511743970	6511764992
6511743971	6511764993
6511743972	6511764994
6511743973	6511764995
6511745233	6511764996
6511745234	6511765015
6511745235	6511765016
6511745236	6511765018
6511745237	6511765023
6511745238	6511765024
6511745239	6511765025
6511745240	6511765026
6511745880	6511765027

Table 6. Eligible Transmission S/Ns (cont'd)

Transmission Serial Number	
6511745881	6511765028
6511745882	6511766450
6511745883	6511766451
6511745884	6511766452
6511745885	6511766453
6511745886	6511766454
6511745887	6511766455
6511745888	6511766456
6511745889	6511766457
6511745890	6511766674
6511745891	6511766675
6511745892	6511766676
6511746119	6511766677
6511746120	6511766678
6511746121	6511766679
6511746122	6511766680
6511746123	6511766681
6511746124	6511766682
6511746125	6511766683
6511746126	6511766937
6511746127	6511766938
6511746128	6511766939
6511746129	6511766940
6511746130	6511766941
6511746131	6511766942
6511746132	6511766943
6511746776	6511766944
6511746777	6511766945
6511746778	6511766946
6511746779	6511766947
6511746780	6511766948
6511746781	6511766949
6511746782	6511771969
6511746783	6511772535
6511746784	6511772536

Table 6. Eligible Transmission S/Ns (cont'd)

Transmission Serial Number	
6511746785	6511772537
6511746786	6511772538
6511746787	6511772539
6511746991	6511772540
6511746992	6511772541
6511746993	6511774765
6511746994	6511774766
6511746995	6511774767
6511746997	6511774768
6511746998	6511774769
6511746999	6511774770
6511747000	6511774771
6511747001	6511774772
6511747002	6511774773
6511747003	6511774774
6511747004	6511774775
6511747005	6511774776
6511747006	6511774777
6511747007	6511774778
6511747556	6511774779
6511747557	6511774826
6511747559	6511774827
6511747560	6511774828
6511747862	6511774829
6511747863	6511775237
6511746996	6511775238
6511747558	6511775239
6511747633	6511775240
6511747860	6511775241
6511747861	6511775242
6511747864	6511775243
6511747865	6511775244
6511747866	6511775249
6511747867	6511775250
6511748177	6511775251

Table 6. Eligible Transmission S/Ns (cont'd)

Transmission Serial Number	
6511748178	6511775252
6511748179	6511775253
6511748180	6511775254
6511748181	6511775255
6511748472	6511775256
6511748473	6511775261
6511748474	6511775262
6511749624	6511775507
6511749625	6511775508
6511751951	6511775509
6511751952	6511775510
6511751953	6511775511
6511751954	6511775512
6511751955	6511775513
6511751956	6511779061
6511751957	6511779062
6511751958	6511779063
6511751959	6511779064
6511751960	6511779065
6511751961	6511779066
6511751962	6511779067
6511752499	6511779068
6511752500	6511779069
6511752501	6511779070
6511752502	6511779071
6511752503	6511779072
6511752504	6511779073
6511752505	6511779074
6511752506	6511779075
6511752507	6511779076
6511752508	6511779077
6511752509	6511779078
6511752510	6511779079
6511752511	6511779080
6511752720	6511779081

Table 6. Eligible Transmission S/Ns (cont'd)

Transmission Serial Number	
6511752721	6511780022
6511752722	6511780023
6511752723	6511780024
6511752724	6511780025
6511752725	6511780026
6511752726	6511780027
6511752727	6511780028
6511752728	6511780029
6511752729	6511780030
6511752730	6511780031
6511752731	6511780032
6511752732	6511780033
6511752733	6511780034
6511752734	6511780035
6511752735	6511780036
6511752736	6511780345
6511752737	6511780346
6511752738	6511780347
6511752739	6511780348
6511752740	6511780349
6511752741	6511780350
6511752742	6511780351
6511750932	6511780352
6511750933	6511780353
6511753581	6511780354
6511753582	6511780355
6511754861	6511780356
6511757983	6511780357
6511757984	6511780358
6511757985	6511780359
6511758187	6511780372
6511758188	6511780373
6511758189	6511780374
6511759852	6511785939
6511759853	6511791264

Table 6. Eligible Transmission S/Ns (cont'd)

Transmission Serial Number	
6511762794	6511789129
6511763232	6511790476
6511764986	6511791260
6511764988	6511791261
6511764989	6511791262
6511764990	6511791263
6511765012	6511791265
6511765013	6511791266
6511765014	6511792841
6511765017	6511803180
6511765019	6511803181
6511765020	