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**FIELD SERVICE CAMPAIGN – 19114**

18 December 2019

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**SUBJECT:**

Allision Transmission Control Module (TCM) Calibration Update

**MODELS INVOLVED:**

International® HV™ (Heavy Duty) and HX® Series.

**DEFECT DESCRIPTION:**

Torque Converter parameter setting may have been programmed incorrectly at time of manufacture.

**ELIGIBILITY:**

This procedure applies ONLY to vehicles marked in the International® Service Portal<sup>SM</sup> with FSC 19114. Also complete any other open campaigns listed on the Service Portal at this time.

**TOOLS REQUIRED:**

| Part Number | Description  | Tool Number |
|-------------|--|-------------|
| N/A         | EZ-Tech®   | NA          |
| N/A         | Approved Health Report Tool (HeRo™ or Accelerator® Write-Up) | 1           |
| N/A         | NavKal™  | 1           |
| N/A         | Approved USB Communication Interface                         | 1           |
| PSC550CC    | Battery Charger 55 Amp                                       | 1           |

**Table 1** Tools Information

**PARTS REQUIRED:**

There are no parts for this campaign.

**WORK INSTRUCTIONS**

**GOVERNMENT REGULATION:** Engine fluid (oil, fuel, and coolant) may be a hazard to human health and the environment. Handle all fluid and other contaminated materials (such as filters and rags) in accordance with applicable regulations. Recycle or dispose of engine fluids, filters, and other contaminated materials according to applicable State and Federal regulations.

**WARNING!** To prevent personal injury and / or death, or damage to property, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in both directions.

**WARNING!** To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

**WARNING!** To prevent personal injury and / or death, or damage to property, keep flames, sparks, or other heat sources away from the vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel gases which may cause an explosion resulting in personal injury and / or death, or damage to property. Avoid contact with any heat sources.

**NOTE:** For International® dealers who POSSESS Allison certification and TCM programming capability, perform Steps 1 – 16.

**NOTE:** For International® dealers who DO NOT POSSESS Allison certification and TCM programming capability, perform Step 17 only.

1. Park vehicle on a flat surface.
2. Shift transmission into Park or Neutral and set parking brake.
3. Turn ignition to Key OFF position.
4. Install wheel chocks.
5. Turn ignition to Key ON, Engine OFF position.

**CAUTION:** DO NOT use Allison DOC® to upload calibration file from TCM prior to reflashing TCM. Uploading file with Allison DOC® overrides corrected parameters in Allison database.

6. Using USB Communication interface, connect EZ-Tech® to vehicle.
7. Obtain health report from vehicle if not created at time of write-up.
8. Open Allison TCM Reflash™ software.

**NOTE:** System will correct calibration setting for TCM when calibration is downloaded.

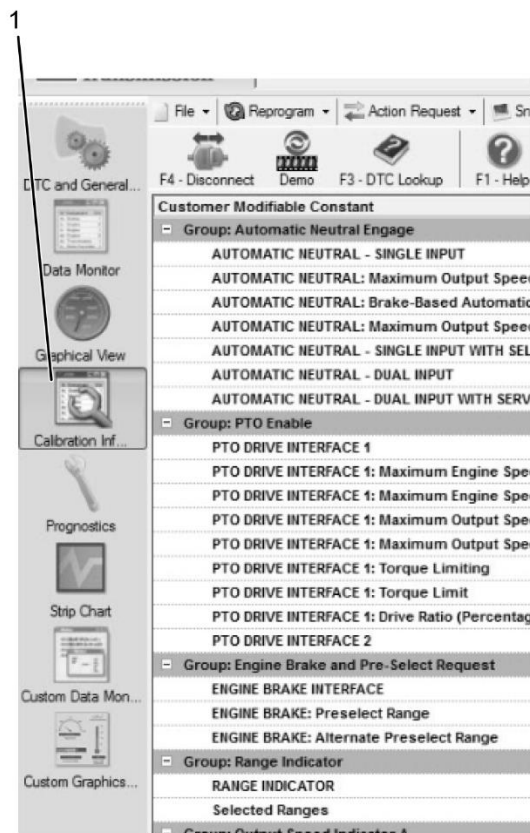
9. Enter TCM serial number or VIN into 5th Generation Controls database.

**NOTE: If internet access is not available when reflashing TCM, log on to Allison TCM Reflash™ as soon as internet access becomes available. Go to File menu and select “Upload Logs” to return verification (VER) files(s) to Allison database. This allows confirmation of new settings and ensures that future service events use correct settings.**

**NOTE: If TCM is transferred from one vehicle to another, new VIN information must be programmed into TCM via Allison DOC® before returning vehicle to service.**

10. Reprogram TCM with updated calibration.

11. Open Allison DOC Premium and connect to TCM.



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**Figure 1. Allison DOC® Navigation – Calibration Information**

1. Calibration Information

12. Select CALIBRATION INFORMATION (Figure 1, Item 1).

| SUMP/RETARDER TEMPERATURE INDICATOR         |              | GPIO B A S DEFINED IN SELECTED GPIO PACKAGE        |                |
|---|--------------|--|----------------|
| AUTOMATIC NEUTRAL - IDLE START / STOP INPUT |              | GPIO C F A S DEFINED IN SELECTED GPIO PACKAGE      |                |
| Signal Source                               | Signal State | Function Name                                      | Function State |
| 121, Databus                                | OFF          | Input - Anti-Lock Brake System (ABS)               | OFF            |
| 142   | OFF          | Input - Auto Neutral Dual Input                    | OFF            |
| Databus                                     |              | Input - Diesel Particulate Filter                  | OFF            |
| Databus                                     |              | Input - High N/V Ratio Input 1                     | OFF            |
| Databus                                     |              | Input - Alternate Gear Start                       | OFF            |
| 143   | OFF          | Input - PTO Drive Interface 1                      | OFF            |
|   |              |  |                |
| Signal Source                               | Signal State | Function Name                                      | Function State |
| Databus                                     |              | Output - Lockup Indicator                          | OFF            |
| 145   | ON           | Output - Neutral Indicator for PTO and PTO Request | ON             |
| 105   | OFF          | Output - Output Speed Indicator A                  | OFF            |
| 130   | OFF          | Output - PTO Drive Interface 1                     | OFF            |
| Databus                                     |              | Output - Range Inhibit Indicator - RII             | OFF            |
| 124   | ON           | Output - Retarder Active Indicator                 | OFF            |

**Additional Calibration Information**

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**Figure 2. Allison DOC® Navigation – Additional Calibration Information**

1. Additional Calibration Information button

13. Select ADDITIONAL CALIBRATION INFORMATION (Figure 2, Item 1).

| Additional Calibration Information                               |                        |  |     |
|--|------------------------|--|-----|
| Read-Only Calibration Information/Constants                      | Value                  |  | SE  |
| ENGINE MAKE AND MODEL  | NAVISTAR N13 20...     |  | SEI |
| NUMBER OF ENGINE CYLINDERS                                       | Other                  |  | SEI |
| NEUTRAL-TO-RANGE ASSIST (NRA)                                    | Disabled               |  | LR  |
| LOW SPEED GRADE ASSIST (LSGA)                                    | Disabled               |  | SEI |
| PRIMARY MODE: Shift Schedule                                     | SA 3000/4000 AN...     |  | LR  |
| PRIMARY MODE: Shift Speed  | 1900                   |  | SEI |
| SECONDARY MODE: Shift Schedule                                   | S3 Economy             |  | LR  |
| SECONDARY MODE: Shift Speed                                      | 1900                   |  | Un  |
| SECONDARY MODE: Starting Range Override                          | NA                     |  | Un  |
| THROTTLE AND LOAD SOURCE   | Primary On-Vehi...     |  | Ma  |
| ENGINE COOLANT TEMPERATURE (ECT) SOURCE                          | Primary On-Vehi...     |  | Pe  |
| ENGINE GOVERNED SPEED  | 2000                   |  |     |
| OUTPUT TORQUE LIMITING: Default Turbine Torque with Loss of Comm | 4425.37 ft-lb / 600... |  |     |
| OUTPUT TORQUE LIMITING: T-Case Low Output Torque Limit           | 24167.7 ft-lb / 327... |  |     |
| OUTPUT TORQUE LIMITING: Reverse Output Torque Limit              | 24167.7 ft-lb / 327... |  |     |
| OUTPUT TORQUE LIMITING: General Output Torque Limit              | 24167.7 ft-lb / 327... |  |     |
| <b>TORQUE CONVERTER</b>  | <b>541</b>             |  |     |
| RANGE INHIBIT INDICATOR: Enable Bulb Check on GPO AD             | Yes                    |  |     |
| J1939 SA: AETC   | 00                     |  |     |
| J1939 SA: CCVS1 Brake Switch                                     | 254                    |  |     |

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**Figure 3. Allison DOC® Navigation – Torque Converter Parameter**

1. Torque Converter 541

14. Confirm TORQUE CONVERTER parameter is set to 541 after TCM reflash (Figure 3, Item 1). If parameter is not set to 541, contact Allison Service Calibration Support Desk: [calibration\\_support@allisontransmission.com](mailto:calibration_support@allisontransmission.com)
15. Turn ignition to Key OFF position and disconnect USB Communication interface from vehicle.
16. Remove wheel chocks.

**NOTE: Step 17 is to be performed only by International® dealers who DO NOT POSSESS Allison certification and TCM programming capability.**

**NOTE: If customer has multiple vehicles and / or Allison dealer not in local area, arrange for Allison representative to perform on-site TCM reflash.**

17. Allison dealer performs TCM reflash.

## LABOR INFORMATION

Operation number must appear on all claims.

| Operation Number | Description  | Time   |
|------------------|--|--------|
| A40-19114-1      | Program Transmission ECU (Navistar Dealer Performed) | 0.4 hr |
| A40-19114-2      | Process Allison Outside Charges                      | 0.2 hr |

**Table 1** Labor Information

**NOTE: Selected Allison location that performs TCM reflash must work with its local International® dealer for reimbursement. Charges must be filed under “Other Charges” category.**

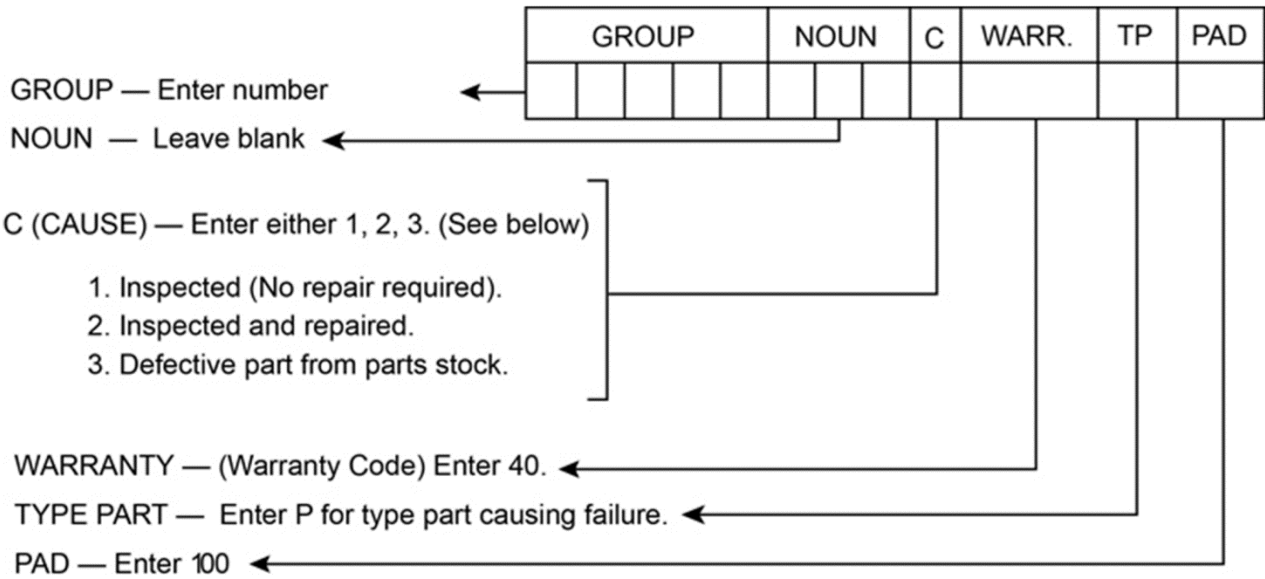
## WARRANTY CLAIMS

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Field Service Campaign 19114.

Section 7 of the Warranty Policy and Procedures Manual contains further information related to the submission and processing of AFC / Recall claims.

As with all claim submissions, items acquired locally must be submitted in the “Other Charges” tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To make sure this important improvement is made in a timely manner, all claims for 19114 activity must be submitted by 18 December 2020 or within the normal warranty period for the component, if after 18 December 2020.



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