

October 2020
D20M2

Subject: DETROIT™ TM2020 Transmission Replacement

**Models Affected: 27 NAFTA and Australian Pre Series Trucks equipped with the
TM2020 C and D models**

General Information

Daimler Trucks North America LLC, on behalf of its DETROIT™ Powertrain Division, is initiating Field Service Campaign D20M2 to replace the complete transmissions in selected chassis.

It has been discovered that certain TM2020 units have porosity issues in and around the oil cooler line fittings on the center housing.

There are approximately 21 units affected by this Field Service Campaign. These units are separated into 8 groups that differ only by the transmission part number that is installed. All units require the transmission to be replaced.

Work Instructions

Please refer to the attached work instructions. **Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR261).**

Replacement Parts

A new DT12 transmission will be required for this Field Service Campaign. Replacement parts are now available and can be obtained by ordering the new part number(s) listed below from your facing Parts Distribution Center. Please order a replacement transmission per the Vehicle Identification Number using the PartsPro system and the table below. Each campaign group will require a different transmission part number.

| Campaign Group | Part Number | Part Description | Quantity |
|----------------|---------------|-------------------------------|----------|
| A | C07-00052-125 | DDE DT-O2400-BASE TRANS MODEL | 1 |
| B | C07-00052-158 | DDE DT-O3050-BASE TRANS MODEL | 1 |
| C | C07-00052-127 | DDE DT-O3400-BASE TRANS MODEL | 1 |
| D | C07-00052-142 | DDE DT-O3050-BASE TRANS MODEL | 1 |
| E | C07-00052-156 | DDE DT-O3400-BASE TRANS MODEL | 1 |
| F | C07-00052-123 | DDE DT-O3050-BASE TRANS MODEL | 1 |
| G | C07-00052-128 | DDE DT-O3050-BASE TRANS MODEL | 1 |
| H | C07-00052-138 | DDE DT-O3050-BASE TRANS MODEL | 1 |

Removed Parts

For Vehicles in the USA and Canada, please package and ship transmission cores directly back to Detroit Diesel Corporation using the attached Rapid Parts Return Form. **Please do not drain the transmission fluid from the core as it will be used for analysis.** Please also cap the oil cooler ports on the transmission if they are not already capped. Any additional parts can be placed in crate with transmission.

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Labor Allowance

| Procedure | Time Allowed (hours) | SRT Number | Corrective Action |
|------------------|----------------------|------------|---------------------------|
| D20M2 | | | |
| Transmission R/R | 6.6 - 7.6 | 996-F086A | 12-Repair Recall/Campaign |

Claim Reimbursement

You will be reimbursed for your parts, labor, and handling (landed cost for Export Distributors) by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

| | |
|---|---|
| Claim Type | Field Service Campaign |
| Campaign (number with appropriate condition code) | D20M2 |
| Component Code | 026-015-002 |
| Cause Code | A1 - Campaign |
| Primary Failed Part | C07-00052-125 |
| Procedure A¹ | |
| Labor time associated with 996-R109A will automatically adjust based on vehicle model. | |
| Labor Number | 996-F086A TRANS, DT12, AUTOMATED, R/R (D20M2) |
| Labor Hours | 6.6 – 7.6 Hours |
| Part Number | Refer to Replacement Parts Table on page 1 |
| Parts Return | RETURN |
| ¹ Administrative time (SRT 939-6010A) for 0.3 hours is automatically added to the claim. | |

This Field Service Campaign will terminate on October 29, 2021. Dealers will be notified of any changes

IMPORTANT: OWL must be viewed prior to beginning work to ensure the vehicle is involved and the campaign has not previously been completed.

All claims must be submitted within 30 days of the repair and within 30 days of the termination date of the campaign. U.S. and Canadian Dealers: All excess inventory to be returned to the PDC following the conclusion of the campaign must be returned in resalable condition to the Memphis PDC within 90 days from the termination date. Please submit a PAR to request return to the Memphis PDC. (Canadian dealers should return the kits to their facing PDC.) Export Distributors: Excess inventory may be returned as noted for U.S. and Canadian dealers. Export locations will pay freight to return kits. Export Distributors: Excess inventory is not returnable.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNAConnect.com / WSC, or the Customer Assistance Center at (800) 385-4357. Export distributors submit a Web inquiry or contact your International Service Manager.

****Copy of Notice to Owner****

Subject: Field Service Campaign D20M2

DETROIT™ TM2020 DT12 Transmissions have porosity

Daimler Trucks North America LLC, on behalf of its DETROIT™ Powertrain Division, is initiating Field Service Campaign D20M2 to modify certain DETROIT™ TM2020 transmissions in Pre Series Trucks.

Certain DETROIT™ DT12 transmissions in Pre Series labeled units vehicles will require replacing.

Records available to us indicate that your vehicle has one of the eligible transmissions. Instructions for this Field Service Campaign have been sent to your local Detroit Diesel Authorized Repair Facility and the labor time required to perform this replacement is **7.6** hours.

Please contact a Detroit Diesel Authorized Repair Facility to arrange to have the Field Service Campaign performed. To locate an authorized facility, search online at <https://demanddetroit.com/find-a-dealer/>

You must make an appointment with the repair facility at least two weeks in advance of the actual repair in order for the repair facility to stock the replacement transmission to complete this Field Service Campaign. Failure to provide advance notification to the repair facility may result in a delayed repair.

This service will be completed for you at no charge, prior to **October 29, 2021**, under the provisions of this notice.

We are sorry to cause you this inconvenience; however, we have taken this action in the interest of your continued satisfaction with our products.

DETROIT WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Work Instructions

Subject: DETROIT™ DT12 Transmission Replacement

Models Affected: 27 NAFTA and Australian Pre Series Trucks equipped with the TM2020 C and D models

IMPORTANT: Owners of vehicles have been instructed to contact the dealership in advance to have the transmission replaced.

Corrective Procedure

1. Order a new DT12 transmission per the Vehicle Identification Number using the Parts Pro system
2. Please **DO NOT DRAIN THE TRANSMISSION OIL** from the core transmission as it will be used for analysis.
3. Please follow the [New Cascadia Workshop Manual](#) section 26.01 Detroit™ Automated Transmissions for procedures. Details are also shown below on pages 4 – 10.

Detroit™ Automated Transmissions

26.01.060 Safety Precautions

Safety Precautions

When working with a Detroit Transmission, observe the following:

WARNING

To avoid injury, do not install a PTO that is not Detroit Diesel approved onto a Detroit Transmission. Use of a non-Detroit Diesel approved PTO with a Detroit Transmission could result in unintended operation which could lead to severe personal injury.

26.01.100 Transmission Removal and Installation

Special Tools

A special tool is required for this procedure. See [Table 1](#) .


| Special Tool for Transmission Installation | | | |
|---|--------------------|--------------|-----------------------|
| Tool | Description | Manufacturer | Part Number |
|  | Input Shaft Pliers | Daimler | DDE W715 589 01 37 00 |

Table 1, Special Tool for Transmission Installation

Removal

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Disconnect the batteries at the negative post, including the batteries for the auxiliary HVAC, if equipped.
3. Remove the right-hand forward side-fairing panel. See [Section 31.03, Subject 100](#) .
4. Remove the left- and right-hand cab-mounted splash shields.
5. To improve access, raise the front of the vehicle and support it with safety stands.
6. Remove the ATD outlet/tail pipe, if it is routed inboard of the frame rail.
7. Remove the ATD inlet pipe and bellows in one piece.
8. Drop the front of the driveline. See [Section 41.00](#) .

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9. Remove any fuel and coolant line brackets and fasteners attached to the top of the transmission.
10. On the bottom of the transmission, remove the battery cable and the oil cooler line fasteners (if applicable).
11. Disconnect the oil cooler lines, if so equipped.
12. Disconnect the chassis harness connector from the transmission control module (TCM), and the transmission harness from the clutch position sensor pass-through. See [Fig. 1](#) .

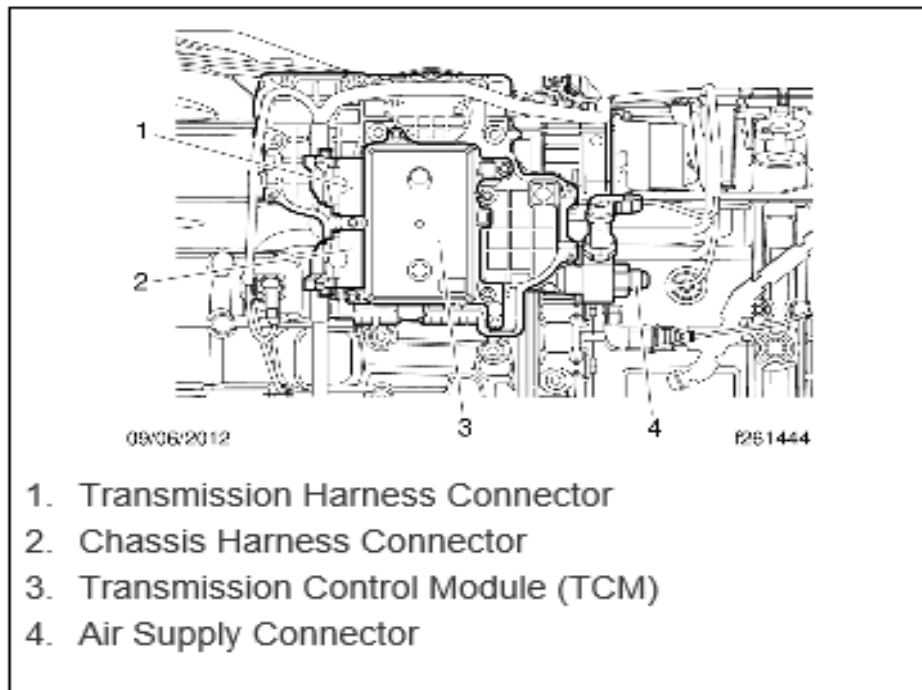


Fig. 1, TCM and Shift Controller Connectors

13. Drain the main air system and the isolated transmission reserve air tank. See [Fig. 2](#) .

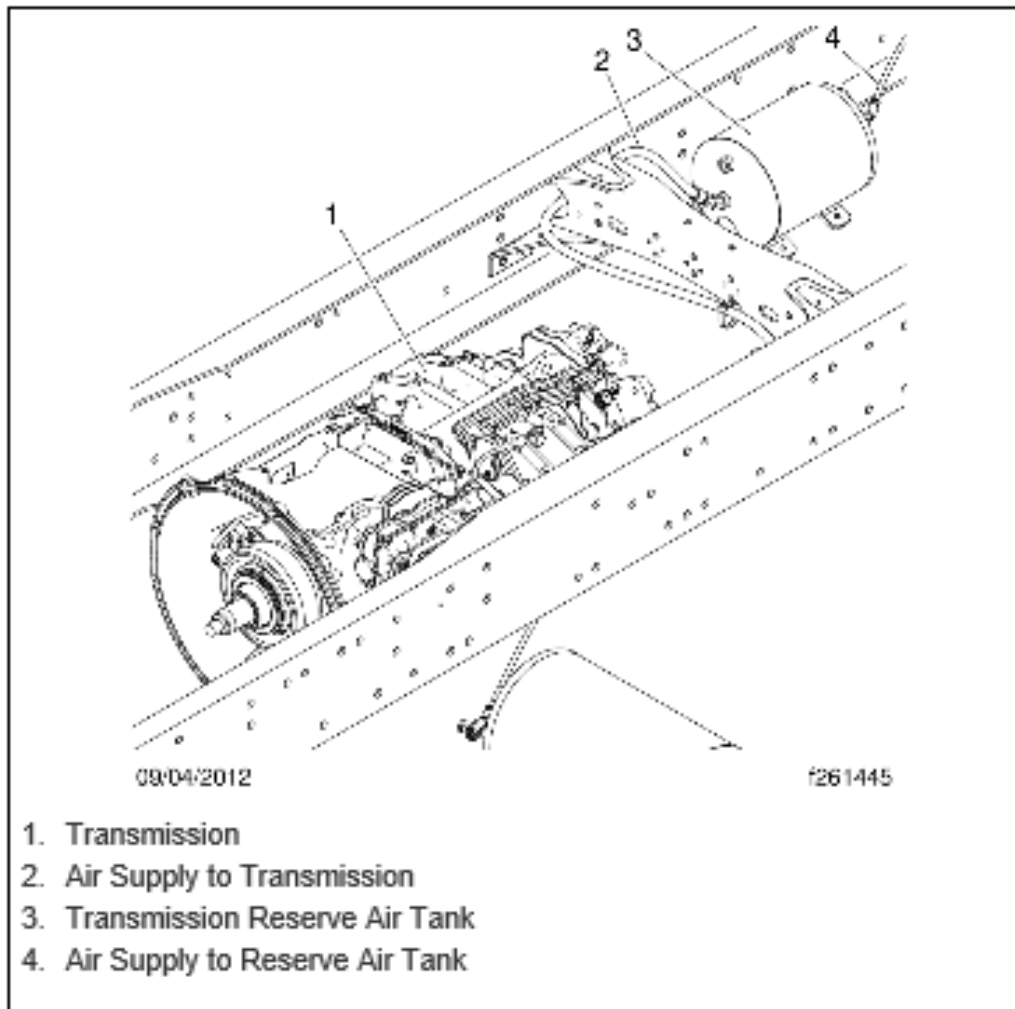


Fig. 2, Isolated Transmission Reserve Air Tank (typical installation)

14. While using a backup wrench to hold the air pressure adapter fitting, disconnect the air supply line from the shift controller.
15. Raise a transmission jack against the bottom of the transmission, then secure the transmission to the jack.
16. Remove the flywheel-housing-to-clutch-housing fasteners. Keep the flange of the clutch housing parallel (all the way around) to the flange of the flywheel housing, until the input shaft is clear of the clutch.
17. Install caps on the oil cooler ports on the core transmission if they are not already capped.

Installation

1. Ensure that the clutch actuator (CPCA) is fully collapsed before mating the transmission to the engine. If not, collapse the CPCA by hand, or loosen the attachment bolts enough to break the O-ring seal, hold the actuator collapsed, and tighten the fasteners 40 lbf·ft (55 N·m). See [Fig. 3](#).



For a video showing how to collapse the CPCA by hand, see DTNA.info/CPCACompressLR in DTNA Connect

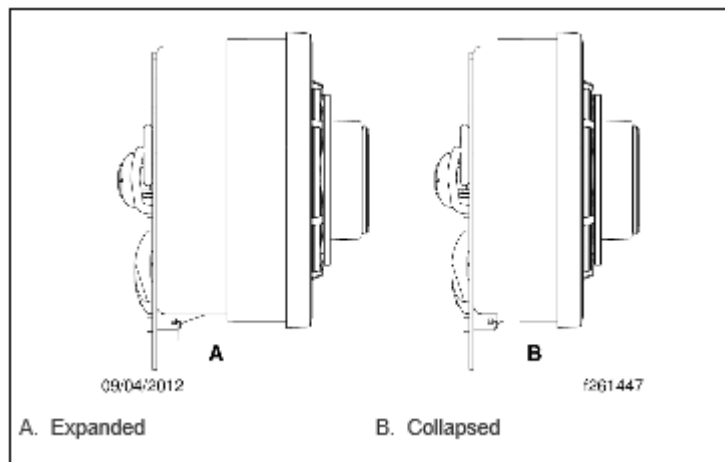


Fig. 3, CPCA Expanded and Collapsed Positions

NOTE: Do not apply lubricant to the input shaft splines. Dust will contaminate the lubricant and cause slow clutch response time.

2. Raise the transmission up. Using input shaft pliers ([Table 1](#)), align the splines with the clutch, then fit the transmission to the flywheel housing. See [Fig. 4](#).

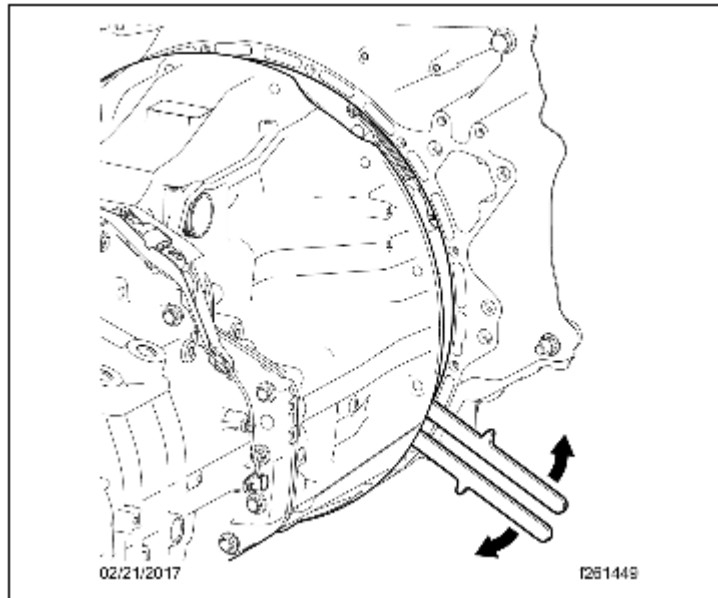


Fig. 4, Aligning the Input Shaft Splines with the Clutch

3. Apply medium-strength thread locker to the fasteners that attach the flywheel housing to the clutch housing, or use new fasteners with pre-applied locking compound. Install the fasteners, and using a star pattern, tighten them finger-tight. Then, using the same star pattern, tighten the capscrews 45 to 53 lbf·ft (61 to 72 N·m), and the threaded stud 35 to 45 lbf·ft (47 to 61 N·m). See [Fig. 5](#) .

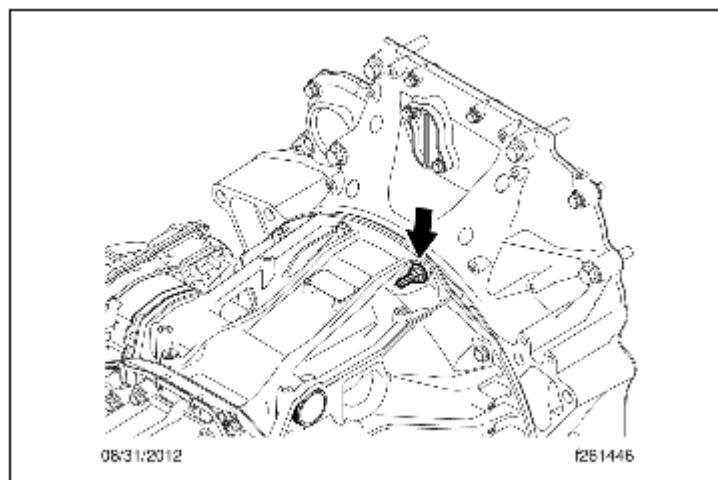


Fig. 5, Threaded Stud Location

4. Remove the transmission jack from under the vehicle.
5. Connect the chassis wire harness to the TCM, and the transmission harness to the clutch position sensor pass-through. See [Fig. 1](#) .

NOTICE:

To prevent damage to the shift controller, use a back-up wrench to support the air pressure adapter fitting.

6. Attach the air supply connection to the shift controller. Tighten the connection 43 to 47 lbf·ft (58 to 64 N·m).
7. If applicable, attach the battery cable and the oil cooler line fasteners to the bottom of the transmission.
8. Attach any brackets to the top of the transmission.
9. Connect the driveline to the transmission output yoke. See [Section 41.00](#) .
10. Clean the gasket material from all the exhaust connection surfaces, being sure not to drop any material in the ATD or piping.
11. Using new gaskets, install the ATD inlet pipe and bellows, then tighten the clamps 14.5 to 15.5 lbf·ft (19.5 to 21 N·m) and the ATD inlet pipe U-clamp fasteners 20 to 26 lbf·ft (27 to 35 N·m).
12. Remove the safety stands and lower the vehicle.
13. Install the left- and right-hand cab-mounted splash shields.
14. Install the right-hand forward side-fairing panel. See [Section 31.03, Subject 100](#) .
15. If applicable, install the ATD outlet piping.

NOTICE:

Detroit transmissions use synthetic lubricant that meets the requirements of the MB 235.11 specification, such as Detroit Synth 75W-90. Using lubricant that does not comply with this specification will result in damage to the transmission. The oil part number can be found in module 348 in PartsPro.

16. Add transmission fluid; for instructions, see the *New Cascadia Maintenance Manual*.
17. Connect all the batteries.
18. Charge the air system.
19. Using the DDDL software interface, perform the "transmission learn" steps.

26.01.400 Specifications

Unless listed in [Table 1](#) , tighten all fasteners using the torque specifications found in [Section 00.01](#) .

| Torque Specifications | | |
|--|-----------|---------|
| Fastener Description | lbf-ft | N-m |
| Flywheel-Housing-to-Clutch-Housing Capscrews | 45-53 | 61-72 |
| Flywheel-Housing Threaded-Stud Nut | 35-45 | 47-61 |
| Air Supply Connection | 43-47 | 58-64 |
| ATD Inlet Pipe and Bellows Clamps | 14.5-15.5 | 19.5-21 |
| ATD Inlet Pipe U-Clamp Fasteners | 20-26 | 27-35 |

Table 1, Torque Specifications

Completion Stickers

- Upon completion of Field Service Campaign D20M2, clean a spot on the base label (Form WAR259), write the Field Service Campaign Number (D20M2) on a blank, black completion sticker (Form WAR261), and attach it to the base label.
- Label ordering info: [DTNACconnect](#) > Services and Reference > Publications & Warranty Supplies > Warranty

Rapid Parts Return Form

Please use this form for returning the DT12 DETROIT™ transmission back to Detroit for this Field Service Campaign. **Warranty claim and Paragon Core Return form (if applicable) must be completed before shipping.**

Warranty Claim Number: _____

Paragon Number: _____

Vehicle Identification Number (VIN): _____

Transmission Serial No: _____

Expedite your warranty claim and Paragon Core Return Packing slip, then ship with the parts directly to:

Detroit Diesel Corporation
12200 Telegraph Road
Redford, Michigan 48239
Attn: Warranty Return Material Center

Small packages should use the DDC UPS Account No. E49591.

Large packages should use the normal LTL carrier Prepay freight and add costs to AFA as a net item – “F”.

----- Fold and display the tag below on the outside of the package -----

Detroit Diesel Corporation
12200 Telegraph Road
Redford, Michigan 48239
Attn: Warranty Return Material Center

**Detroit DT12
TM2020 FSC**