

D24M2

Creation Date: 06/17/2024

Revision Date: 08/15/2024

**Subject: Field Service Campaign D24M2
DETROIT® ePowertrain™ eCPC Reprogramming**

Models Affected					
Make	Model	Model Yr. Start	Model Yr. End	Prod. Start Date	Prod. End Date
Detroit Diesel Corporation	400.EM2	2023	2024	August 26, 2020	April 26, 2024
	400.EP4				
	410.EM2				
	410.EP4				
Freightliner	eCascadia eM2	2023	2024	August 26, 2020	April 26, 2024
Identifying Feature	Detroit ePowertrain eCPC Software Reprogramming				

General Information

On behalf of the DETROIT™ Diesel Corporation listed below, Daimler Truck North America LLC (DTNA) has decided that motor vehicle improvements exist. There are new features beneficial when allowing 6x4 eP4 and eM2 vehicles to continue moving in a limp home mode during certain hardware failures. Also improves eAxle oil pump speeds in 4x2 and 6x4 vehicles. DTNA is initiating a Field Service Campaign to modify affected vehicles.

- Detroit Diesel Corporation
- Freightliner Trucks Division

PROBLEM: The new eCPC software improvement was developed to allow vehicles to continue moving in a limp home mode during certain hardware failures and to improve the speed of the eAxle oil pump.

SOLUTION: These vehicles will need the eCPC reprogrammed.

There are approximately 457 vehicles involved.

REVISION: General Information and Work Instructions.

Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

Please contact Warranty Campaigns for consideration of additional charges prior to performing the repair.

Work Instructions

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

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Replacement Parts

If our records show your dealership has ordered any vehicle(s) involved in campaign number D24M2, a list of the customers and vehicle identification numbers will be available on DTNA Portal. No parts are required for this repair.

IMPORTANT - After Repair is Complete:

Attach a black completion sticker (WAR261) to the base label (WAR259).

If the vehicle does not have a base label, clean a spot on the appropriate location, and attach a base label, prior to attaching the completion sticker.

If a campaign kit is not required, write the campaign number on a blank sticker, and attach it to the base label.

(Failure to install a completion sticker may result in a chargeback of the campaign claim.)

Claim Reimbursement - Labor Allowance

IMPORTANT: OWL must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

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.

- In OWL, use the 'Retrieve' function and select the appropriate procedure. This will auto-populate the PFP component code, replacement parts, cause, corrective action and SRT code in OWL.

Table 1 - Claim Reimbursement Table

Claim Type	Field Service Campaign
Campaign	D24M2
VMRS Component Code	037-001-006
Cause Code	A1 – Campaign
Primary Failed Part	DDC REPROGRAM4

Procedure	Time Allowed (hours)	SRT Codes	Corrective Action
ECPC, REPROGRAM, D24M2	0.4	996-F219A	12-Repair Recall/Campaign

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Claim type is Field Service Campaign.

- In the Campaign field, enter the campaign number and appropriate condition code D24M2-A.
- In the Primary Failed Part field, enter DDC REPROGRAM4.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically using SRT 939-6010 C, for 0.4 hours (for RVs), A for 0.3 hours (for all other vehicles).
- The VMRS Component Code is 037-001-006 and the Cause Code is A1 - Campaign.
- U.S. and Canada – Reimbursement for Prior Repairs. When a customer asks about reimbursement, please do the following:
 - Accept the documentation of the previous repair.
 - Make a brief check of the customer's paperwork to see if the repair may be eligible for reimbursement. (See the 'Copy of Owner Letter' section of this bulletin for reimbursement guidelines.)
 - Submit an OWL Pre-Approval Request for a decision.
 - Include the approved amount on your OWL claim in the Other Charges section.
 - Attach the documentation to the pre-approval request.
 - If approved, submit a 'based on claim' for the pre-approval.
 - The Dealer is required to reimburse the customer the appropriate amount.

IMPORTANT: OWL must be viewed prior to performing the field service campaign to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNAPortal.com/WSC, if you have any questions or need additional information. Export distributors, submit a Web inquiry or contact your International Service Manager.

The letter notifying U.S. and Canadian vehicle owners is included for your reference.

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Copy of Notice to Owners

**Subject: Field Service Campaign D24M2
DETROIT® ePowertrain™ eCPC Reprogramming**

Daimler Truck North America LLC (DTNA), on behalf of its Detroit Diesel Powertrain Division, has decided that motor vehicle improvements exist. There are new features beneficial when allowing 6x4 eP4 and eM2 vehicles to continue moving in a limp home mode during certain hardware failures. Also improves eAxle oil pump speeds in 4x2 and 6x4 vehicles.

Models Affected					
Make	Model	Model Yr. Start	Model Yr. End	Prod. Start Date	Prod. End Date
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Freightliner	eCascadia eM2	2023	2024	August 26, 2020	April 26, 2024
Identifying Feature	Detroit ePowertrain eCPC Software Reprogramming				

A Daimler Truck North America authorized service facility will perform software updates to eCPC. The Field Service Campaign will take approximately 0.7 hours and will be **performed free of charge**, prior to **June 17, 2025**, under the provisions of this notice.

Please contact an authorized Daimler Truck North America dealer to arrange to have the field service campaign performed. To locate an authorized dealer, search online at <https://northamerica.daimlertruck.com/contact-us>. Scroll down to "Locate a Dealer" and select the appropriate brand.

You may also confirm your vehicle's involvement in this recall at the following URL:
<https://dtna-dlrinfo.prd.freightliner.com:48518/VinLookup/vin-module/getVinLookupPage>.

To reduce downtime and ensure the repair facility is prepared to complete the repair upon your arrival, please make an appointment in advance. Having an appointment enables the repair facility to order and receive the parts required for the field service campaign.

Progressive damage could result from delayed completion of this campaign. To ensure vehicle functionality, and optimal performance are not compromised, DTNA highly recommends having the campaign completed as soon as possible. To avoid incurring additional downtime and expenses from progressive damage please complete the campaign in a timely manner.

We have taken this action in the interest of your continued satisfaction with our products.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Work Instructions

Vehicle Model	eCascadia / eM2 Class 7	eM2 Class 6
ECPC Software Version	R23.32.10.00A w/ shift map A0294488802 ZGS 001	R23.31.10.00A w/ shift map A0294488802 ZGS 001
ETCM Software Version	NAMT231400	

Minimum Software Versions for Compatibility

1. Check the base label (Form WAR259) for a completion sticker for D24M2 (Form WAR261), indicating this work has been done. The base label is usually located on the passenger-side door, about 12 inches (30 cm) below the door latch. If a completion sticker is present, no work is needed. If a completion sticker is not present, proceed to the next step.
2. Park the vehicle on a level surface, place the vehicle in neutral, turn the keyswitch OFF, and set the parking brake. Chock the tires.

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CAUTION:

ELECTRICAL SHOCK

To avoid injury from electrical shock, use care when connecting low voltage battery cables. The magnetic switch studs are at battery voltage.



DANGER:

To avoid serious personal injury or death, regard the following requirements before beginning repairs:

Service and repair of the electric vehicle should only be performed by technicians that have completed HV2 or HV3 Daimler Safety Training.

Decommissioning and commissioning of the High-voltage (HV) system should only be performed by technicians that have completed HV3 Daimler Safety training. To prevent personal injury, death, or damage to the electric system, do not attempt repairs if untrained.

Note: Decommissioning and commissioning of the HV system need only be performed when instructed by the procedure. Service repair time is not reimbursed if the HV system is decommissioned or commissioned without direction by the procedure.

3. Connect a 12-volt battery charger to the jump studs in the frontbox.
4. Turn the keyswitch to the ON position.
5. Connect an RP1210B-compliant vehicle diagnostic adaptor to the diagnostic connector on the vehicle. Connect the other end of the adaptor to the laptop.
6. Open DiagnosticLink®
IMPORTANT: Make sure that DiagnosticLink is updated to the latest version (8.20 at the time of publication or newer), before programming the vehicle.
7. Go to the 'Program Device' tab, and make sure the vehicle identification number (VIN) that appears is correct. Select 'Download data from server. See figure 'Downloading Data from Server'.

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A. Verify VIN is correct. B. Select 'Download data from server.'

Fig. Downloading Data from Server

- 8. Once the data download is complete, select 'Next.' See Figure 'Download Data for Connected Unit'. Devices with available software are listed.

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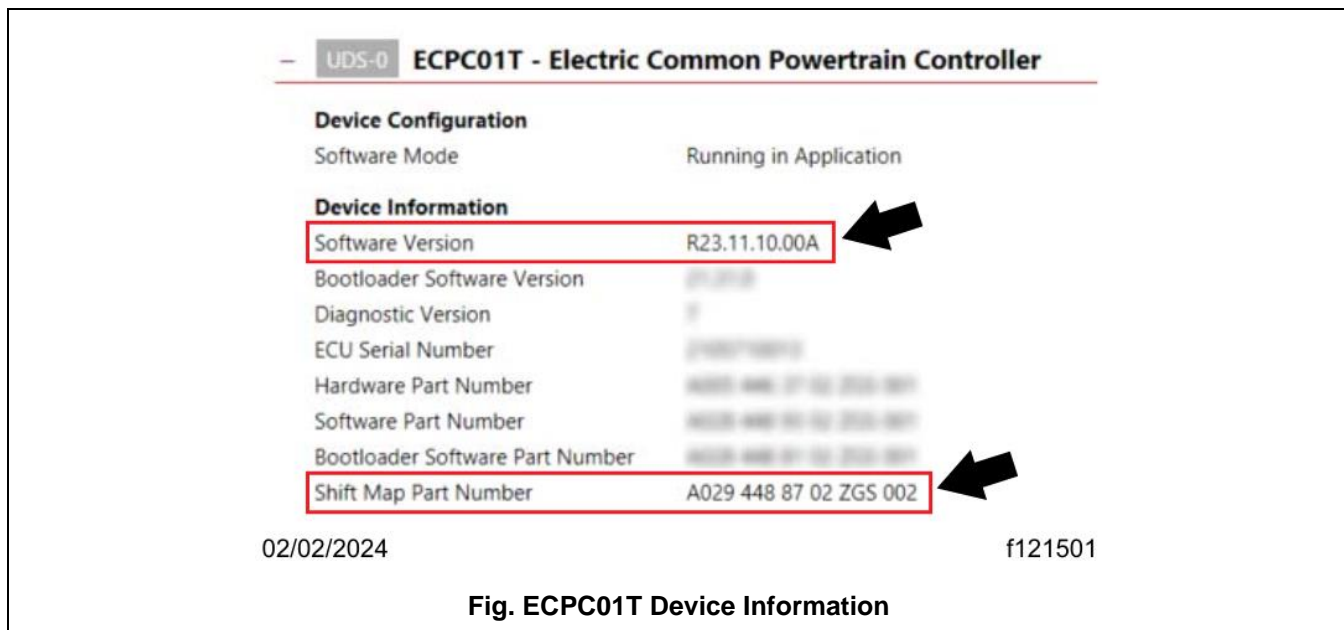
Fig. Download Data for Connected Unit

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- Before proceeding to program the electric common powertrain controller (ECPC) and electronic control unit (ECU), check the software version and the shift map part number. Go to the 'Identification' tab, then select and expand the 'ECPC01T - Electric Common Powertrain Controller' panel.
- Verify the ECPC01T software version and the shift map part number. See Figure 'ECPC01T Device Information'.



- If this is an eCascadia or eM2 Class 7, ensure that the software version is updated to 'R23.32.10.00A', and the shift map part number is 'A029 448 88 02 ZGS 001' or greater. Example: Software R23.11.10.00A in Fig. 3 is less than R23.32.10.00A and requires updating.
- If this is an eM2 Class 6, ensure the software version is updated to 'R23.31.10.00A', and the shift map part number is 'A029 448 88 02 ZGS 001' or greater. Example: Software R23.11.10.00A in Fig. 3 is less than R23.31.10.00A and requires updating. See Figure 'Identifying eM2 GVWR Class 6 or Class 7'.
- Is programming required?
YES → Continue with step 14.
NO → Go to step 19.

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2024 Freightliner Electric M2 106 4 x 2 Truck

VIN: [REDACTED]

Manufacturer: Freightliner, U.S.A.
Make: Freightliner
Vehicle Type: Incomplete Vehicle
Chassis: 4 x 2 Truck
Model: Electric M2 106
Cab: Conventional
GVWR: Class 6
Engine: Detroit Electric
Fuel Type: Electric
Brake Type: Air
Model Year: 2024
Build Location: Portland, Oregon

Identification

The connected vehicle contains powertrain and chassis devices

Common Standard Central Gateway Monitoring NOx Binning J1939

UDS-0 **ECPC01T - Electric Common Powertrain**

Device Configuration

Software Mode	Running in Application
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Device Information

Software Version	R23.31.10.00A
Bootloader Software Version	21.31.0
Diagnostic Version	8
ECU Serial Number	2306000283
Hardware Part Number	A005 446 36 02 ZGS 001
Software Part Number	A028 448 95 02 ZGS 001
Bootloader Software Part Number	A028 448 81 02 ZGS 001
Shift Map Part Number	A029 448 88 02 ZGS 001

A. Hover pointer over Vehicle description B. Visually Identify GVWR Class

Fig. Identifying eM2 GVWR Class 6 or Class 7

14. Turn the keyswitch to the OFF position. Press the ESTOP button on the dash panel, then turn the keyswitch to the ON position.
15. Update the ECPC01T device software by selecting 'ECPC01T' as the device to program. See Figure 'Updating ECPC01T Device Software'.

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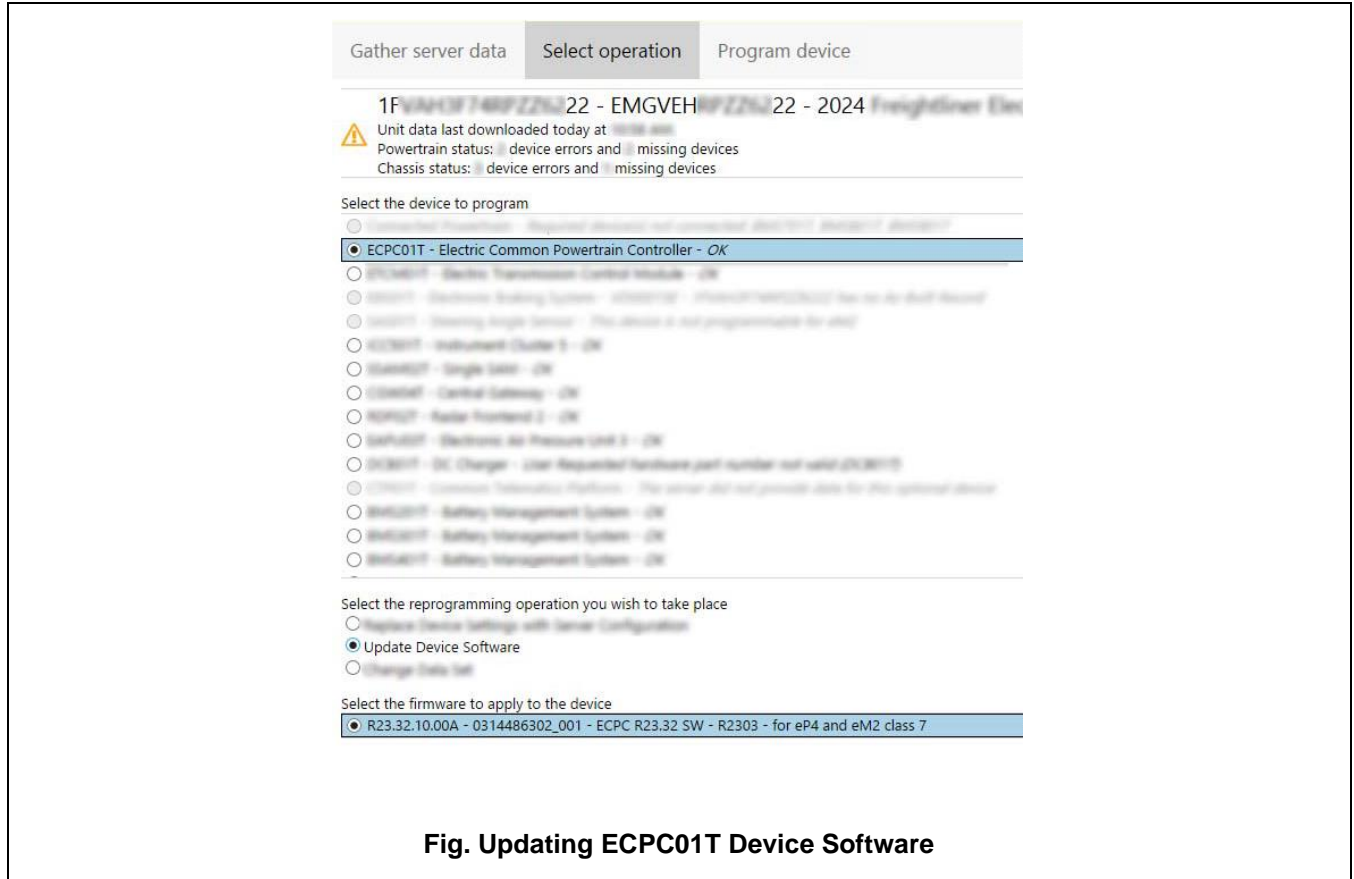


Fig. Updating ECPC01T Device Software

16. Select 'Update Device Software' as the reprogramming operation. See Figure 'Updating ECPC01T Device Software'.

'R23.32.10.00A' (if you are connected to an eCascadia or eM2 Class 7), or 'R23.31.10.00A' (if you are connected to an eM2 Class 6) should be selected as the firmware to apply to the device. Select 'Next'. See Figure 'Updating ECPC01T Device Software'.

17. Review the programming information, then select 'Start'.

18. Once programming is complete, the message; 'Programming was successfully completed.'; should display. Select 'Finish'.

19. Verify the ETCM is at the minimum software level as shown in the table labeled '**Minimum Software Versions for Compatibility**'.

20. Has the ECPC software been updated to 'R23.32.10.00A' or 'R23.31.10.00A' and ETCM been updated to NAMT231400 in step 19?

YES → Continue with step 21.

NO → ECPC and ETCM are already up to date. No programming was necessary. Go to step 27.

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21. To enable the high voltage system, turn the keyswitch key to OFF position, release the ESTOP button on the dash panel, then turn the keyswitch to the ON position.
22. Perform the ERC run-in procedure by opening the 'Refrigerant System Management' panel. This panel is located on the 'Service Routines' tab in DL version 8.19 SP1 and later. In DL versions 8.19 and earlier, it is under the 'I/O Controls' tab.
23. Set the blower fan speed to a minimum of level 8.
24. Select 'Start' to re-learn the ERC run-in. See Figure 'ERC Run-In Panel'.



26. Once programming is complete, click the 'Finish' button and perform the following to allow the modules to synchronize with each other:
 - Disconnect the USB Link at 9-pin vehicle diagnostic port.
 - Turn the vehicle keyswitch OFF and wait one minute.
 - Turn the vehicle keyswitch ON and wait one minute.
 - Turn the vehicle keyswitch OFF and wait one minute.
 - Turn the vehicle keyswitch ON and wait one minute.
 - Reconnect the USB Link, reconnect DiagnosticLink® to the ECPC and the ETCM, and confirm the proper software.
27. Update the server by clicking the 'Connect to Server' button in the bottom left corner of the DiagnosticLink screen.
28. Clean a spot on the base label (Form WAR259) and attach a campaign completion sticker for D24M2 (Form WAR261), indicating this work has been completed.