

43-072: DEF Sensor, DEF Tank Coolant Valve Replacement, and DEF Diagnostic Software Re-Enable

6/23/2023

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43-072

DEF Sensor, DEF Tank Coolant Valve Replacement, and DEF Diagnostic Software Re-Enable

Subject

43-072: DEF Sensor, DEF Tank Coolant Valve Replacement, and DEF Diagnostic Software Re-Enable

Whats New Abstract

Certain chassis with Engine Model Year 2016-2021 PACCAR MX-11/MX-13, or EPA13 – EPA21 Cummins ISX12/ISX15/X15 engines that had a previously failed DEF sensor and **with DEF sensor software disabled** due to industry DEF sensor shortages will now be able to receive a replacement DEF sensor, DEF tank heater coolant control valve, and re-enabled DEF diagnostic software.

Please note that chassis equipped with PACCAR PX engines will be eligible for this repair at a future date when software is available.

Condition

Certain chassis previously entered into the DEF Diagnostic Delete Request form and that have had bulletin 43-071 completed. These chassis experienced a DEF sensor failure and had DEF diagnostic system software disabled due to an industry DEF sensor supply shortage. These chassis will now be eligible to receive a

replacement DEF sensor, DEF tank heater coolant control valve and updated software to re-enable DEF diagnostics.

Chassis with PACCAR MX-13/MX-11 or Cummins ISX12/ISX15/ X15 engines are eligible for this repair.

This bulletin will be updated when PACCAR PX7/PX9 Medium Duty engines are available for repair.

Chassis Affected

2,470 (2,354 US and 116 Canada) chassis built from 01/13/2016 through 10/07/2021 with confirmed failed DEF sensor and 43-071 DEF sensor delete software installed. Affected chassis have Engine Model Year 2016-2021 PACCAR MX-11, MX-13, or EPA13 – EPA21 Cummins ISX12/ISX15/ X15 engines.

Action

Emissions Recall

Service all chassis affected that enter your dealership, even if the customer has no issue with the chassis.

1. Review the attached chassis list for your dealer code and schedule your customer(s) for service if their chassis is on the list.
2. In Service Management, select Campaign **43072** to add it to the case. If the unit is released back into service without performing the repair, make sure to also release the Campaign in Service Management.
3. If you are not using Service Management to start repair orders, review SIR for "Complete" or "In Process" next to the **43072** campaign code prior to performing this repair.
4. Follow the procedures below to:
 - Replace DEF sensor assembly.
 - Replace DEF tank heater coolant control valve.
 - Update DEF diagnostic software.

Warranty

There is no time or mileage limit for this emissions recall. Kenworth will pay for parts at dealer net plus applicable mark-up and labor:

- Parts and labor to replace DEF coolant valve & DEF sensor assembly, and update software. See Quick Claim table below for vehicle configurations.
- File an additional claim for extraordinary circumstances. A quick claim for standard labor must be filed

first.

- File the claim within 14 days in accordance with Warranty Policy [CA009](#).

Quick Claim	Time	SRT Code	Description
43072A	1.4 hrs	B23-10A	Bulletin 43-072 - Replace DEF sensor, DEF coolant valve, and update software per bulletin procedure EPA13/EPA17 frame mounted without fairings
43072B	1.7 hrs	B23-10B	Bulletin 43-072 - Replace DEF sensor, DEF coolant valve, and update software per bulletin procedure EPA17 Clear Back of Cab (CBOC) configuration
43072C	1.1 hr	B23-10C	Bulletin 43-072 - Replace DEF sensor, DEF coolant valve, and update software per bulletin procedure EPA21 frame mounted without fairings
43072D	1.6 hrs	B23-10D	Bulletin 43-072 - Replace DEF sensor, DEF coolant valve, and update software per bulletin procedure EPA13/EPA17 frame mounted with fairings
43072E	1.4 hrs	B23-10E	Bulletin 43-072 - Replace DEF sensor, coolant valve and update software per bulletin procedure EPA21 frame mounted with fairings

PRWS CLAIM CODING			
Campaign Code:	43-072	Campaign Type	Field Repair
Claim Category:	Truck	Repair Type	Proactive

Customer Concern Code	288	Causal Code	23
Corrective Action Code	03	Responsibility Code:	Camp
Failure Location	043-007-171	Causal Part	Q21-6170-001
Supplier Code	N/A	SRT Code	See quick claim table above for SRT codes and descriptions

Parts

Parts are available from PACCAR Parts.

The most common DEF sensors (dash variations 001KIT, 002K1T, and 003K1T) are now required stock parts at

all dealer locations and managed by MDI. Order other variations following instructions noted on Parts Online.

Quantity	Part Number	Description
1	Q21-6170-001K1T	Sensor-DEF Concentration
1	Q21-6170-002K1T	Sensor-DEF Concentration
1	Q21-6170-003K1T	Sensor-DEF Concentration
1	Q21-6170-004K1T	Sensor-DEF Concentration
1	Q21-6173-001K1T	Sensor-DEF Concentration
1	Q21-6171-001K1T	Sensor-DEF Concentration
1	Q21-6170-006K1T	Sensor-DEF Concentration
1	Q21-6170-005K1T	Sensor-DEF Concentration
1	Q21-6172-K1T	Sensor-DEF Concentration
1	356500WMA	Sensor-DEF Concentration
1	356600WMA	Sensor-DEF Concentration
1	F90-6013	DEF Coolant Valve
1	F50-6603	Adapter Hose
1	F50-6605	Adapter Hose
1	F90-6016	DEF Coolant Valve
1	F90-6017	DEF Coolant Valve
1	F90-6014	DEF Coolant Valve
1	M31-6026	DEF Coolant Valve
1	Y53-6109	Kit – Label Repair (Kit contains part numbers Y53-6107 and Y53-6108)

Background

Certain chassis with a PACCAR MX-11/MX-13 or Cummins EPA13 – EPA21 ISX12/ISX15/X15 engines that had a previously failed DEF sensor or with software disabled due to DEF sensor shortage, will now be able to receive a replacement DEF sensor, DEF tank heater coolant control valve and re-enable the DEF diagnostic software.

Please note that chassis equipped with PACCAR PX engines will be eligible for this repair at a future date when

software is available.



Procedure

Please follow your dealership's safety procedures and precautions to ensure the vehicle can be safely repaired and maintained. Read all steps before beginning.

Read all steps before beginning.

[EPA13/EPA17 Procedures](#) with frame-mounted DEF tank.

[EPA21 Procedures](#) with frame-mounted DEF tank.

 NOTE
Removal of DEF sensors from EPA21 Frame-mounted DEF tanks requires an adjustable spanner wrench, available from Amazon .


[EPA21 Procedures with Clear Back-of-Cab \(CBOC\) DEF tank](#).

Attachments

[Chassis List](#)

[EPA13/EPA17 Procedures](#)

[EPA21 Procedures](#)

[EPA21 CBOC Procedures](#)

[US Customer Letter](#)

[Canada Customer Letter](#)



A PACCAR COMPANY

Kenworth Truck Company
Customer Service Department
PO Box 1000
Kirkland, Washington 98083-1000
(425) 828-5888

Date of Letter

Subject: TIB 43-072: DEF Sensor, DEF Tank Coolant Valve Replacement, and DEF Diagnostic Software Re-Enable
EXPIRATION DATE: NONE
(The VINs are listed on the back of this page)

Customer name
Customer address
City, State ZIP



Dear Kenworth Customer,

Kenworth Truck Company has determined that certain models built from 2016 through 2021 equipped with a PACCAR MX-13, MX-11, PX-9, PX-7, or Cummins X12 / X15 EPA2017 / EPA2021 engine with certain portions of emissions software disabled due to a Diesel Exhaust Fluid (DEF) sensor shortage fails to conform to emissions control requirements. Due to a global parts shortage, government agencies allowed temporary operation of these vehicles until DEF sensors became available.

Repairs are now available for PACCAR MX series and Cummins X12/X15 engines in vehicles identified by VIN on this letter. If this repair is not completed, it may cause the vehicle to fail a vehicle inspection or Smog Check test when such tests are required under state law.

Vehicles equipped with EPA21 compliant engines may require extra lead time for parts and tools to complete repairs. Contact your dealer to determine lead time requirements.

Vehicles equipped with PACCAR PX engines will not be eligible for this repair until software becomes available. Once software becomes available, customers will receive a letter notifying them that their PX equipped vehicles are eligible for repairs.

Kenworth has initiated this notice to remedy the defect. Please contact your Kenworth dealer. To find your Kenworth dealer, please visit Dealer Locator at www.Kenworth.com or scan the QR code at the top of this letter. This repair may take up to 2.0 hours of labor depending on vehicle configuration and dealer scheduling. This repair will be performed at no charge to you.

Table with 2 columns: Action/Problem and Description. Rows include: The problem is... (Vehicles that had DEF software temporarily disabled now require replacement of failed DEF Sensor, DEF tank coolant valve, and update to software to re-enable DEF diagnostics); What your dealer will do... (Enable chassis to operate within normal emissions guidelines and compliance); What you must do ... (Contact your Kenworth Dealer to schedule an appointment for repair)

If you had this repair performed before you received this letter, you may be eligible to receive reimbursement for the cost of obtaining a pre-notification remedy of the problem associated with this recall.

For vehicles registered in California; you will be provided with a Proof of Correction certificate by the service facility. If the driver is not the registered owner of the vehicle, please provide a mailing address for the certificate.

Please note that, vehicle registration renewal cannot be completed and the engine cannot be legally operated in the state of California if the owner fails to bring the vehicle to an authorized dealer to complete the recall once it is available.

In order to ensure your full protection under the emission warranty provisions, it is recommended that you have your vehicle serviced as soon as possible. Failure to do so could be determined as lack of proper maintenance of your vehicle.

If you require further information about this recall, reimbursement of a pre-notification remedy associated with this recall or experience any difficulty in making arrangements for this repair, please contact Kenworth Customer Service using one of the following:

Email: Kenworth.Campaigns@paccar.com with the bulletin number in the subject line

or

Mail: Kenworth Truck Company, P.O. Box 1000, Kirkland, WA 98083-1000, Attn: Customer Service Department

or

Phone: 425-828-5888. In your message, provide a call back number, the last 8 digits of the VIN, and the bulletin number.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days. If you no longer own this vehicle, we would appreciate your advising us of the new owner if you know their name.

We regret any inconvenience that this work may cause you and appreciate your cooperation in this matter.

Thank you,

Annick Hollingsworth (handwritten signature)

Annick Hollingsworth
Director of Service Platforms
Kenworth Truck Company



A **PACCAR** COMPANY

Kenworth Truck Company
Customer Service Department
PO Box 1000
Kirkland, Washington 98083-1000
(425) 828-5888

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EXPIRATION DATE: NONE
{The VINs are listed on the back of this page}

Customer name
Customer address
City, State ZIP



Dear Kenworth Customer,

You are receiving this notice in accordance with the requirements of the Canadian Environmental Protection Act of 1999.

Kenworth Truck Company has determined that certain models built from 2016 through 2021 equipped with a PACCAR MX-13, MX-11, PX-9, PX-7, or Cummins X12 / X15 EPA2017 / EPA2021 engine with certain portions of emissions software disabled due to a Diesel Exhaust Fluid (DEF) sensor shortage fails to conform to emissions control requirements. Due to a global parts shortage, government agencies allowed temporary operation of these vehicles until DEF sensors became available.

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Vehicles equipped with EPA21 compliant engines may require extra lead time for parts and tools to complete repairs. Contact your dealer to determine lead time requirements.

Vehicles equipped with PACCAR PX engines will not be eligible for this repair until software becomes available. Once software becomes available, customers will receive a letter notifying them that their PX equipped vehicles are eligible for repairs.

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The problem is...	Vehicles that had DEF software temporarily disabled now require replacement of failed DEF Sensor, DEF tank coolant valve, and update to software to re-enable DEF diagnostics.
What your dealer will do...	Enable chassis to operate within normal emissions guidelines and compliance.
What you must do ...	Contact your Kenworth Dealer to schedule an appointment for repair

If you had this repair performed before you received this letter, you may be eligible to receive reimbursement for the cost of obtaining a pre-notification remedy of the problem associated with this recall.

In order to ensure your full protection under the emission warranty provisions, it is recommended that you have your vehicle serviced as soon as possible. Failure to do so could be determined as lack of proper maintenance of your vehicle.

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Annick Hollingsworth
Director of Service Platforms
Kenworth Truck Company