

REMOTE DIAGNOSTICS REPAIR INSTRUCTIONS



DTC: See fault(s) below

Bulletin: RD24-034 Date: December 17, 2024

Description: Exhaust Gas Temperature Sensor Circuit Short to Battery or Open

Applies to: US24 Emissions VN (4) B1

For Spanish click here: [ESPAÑOL](#) For French click here: [FRANÇAIS](#).

General Information

These repair instructions are intended to address the following fault(s):

DTC	Description	Possible Cause	Possible (Observable) Symptoms
P0544-15	Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 1	• Connector • Open circuit, Signal wire • Open circuit, Ground wire • Short circuit to voltage supply, signal wire • Wiring harness between component connector and electronic control unit (ECU) connector • Exhaust Gas Temperature (EGT) Sensor • Aftertreatment Control Module (ACM)	Regeneration not possible
P2031-15	Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 2		
P242A-15	Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 3		
P246E-15	Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 4		

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Required Parts

Part Number	Description	Quantity
21542714	Exhaust Gas Temperature (EGT) Sensor (T1 & T4)	1
22035664	Exhaust Gas Temperature (EGT) Sensor (T2)	1
21164790	Exhaust Gas Temperature (EGT) Sensor (T3)	1

Additional Resources

These repairs are the most likely fix for the identified fault, if this does not fix the issue, Tech Tool will need to be used for more detailed diagnostics. If filing a warranty claim, please include the ASIST case number.

Labor Code	
3100-09-01-06 Low Voltage System, Decommissioning	0.2
3100-09-01-05 Low Voltage System, Commissioning	0.2
2581-03-02-05 (T1)	0.6
2581-03-02-06 (T2)	0.6
2581-03-02-07 (T3)	0.6
Causal Part	Part Number of Sensor Replaced

NOTE: Before proceeding, please make sure that ALL electronic control modules are up to date and there are no pending updates available.

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2581-03-02-05 Exhaust Temperature Sensor, Replacement T1
2581-03-02-06 Exhaust Temperature Sensor, Replacement T2
2581-03-02-07 Exhaust Temperature Sensor, Replacement T3



Illustrations may differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.



Colors used in illustrations are for highlighting purposes only and do not correspond to the actual colors of the vehicle.



All threaded fasteners that do not have a tightening torque specification in the information are tightened to a standard torque. Standard torques are available in the

following specification. ➡ Standard Tightening Torques



WARNING

Risk of severe burns.

Exhaust gases and component surfaces are hot. Avoid exposure and contact.

► Wait for the engine to cool before working with exhaust-related components.



WARNING

Risk of burn injuries.

Heated components and mechanical parts can cause burns.

► Exercise caution when working with heated components. Always use the appropriate protective equipment.



CAUTION

Service Information Advisory.

If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

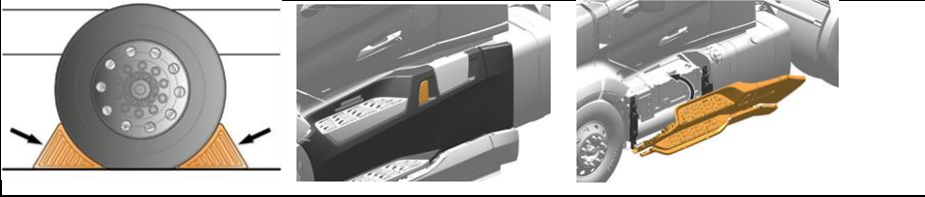
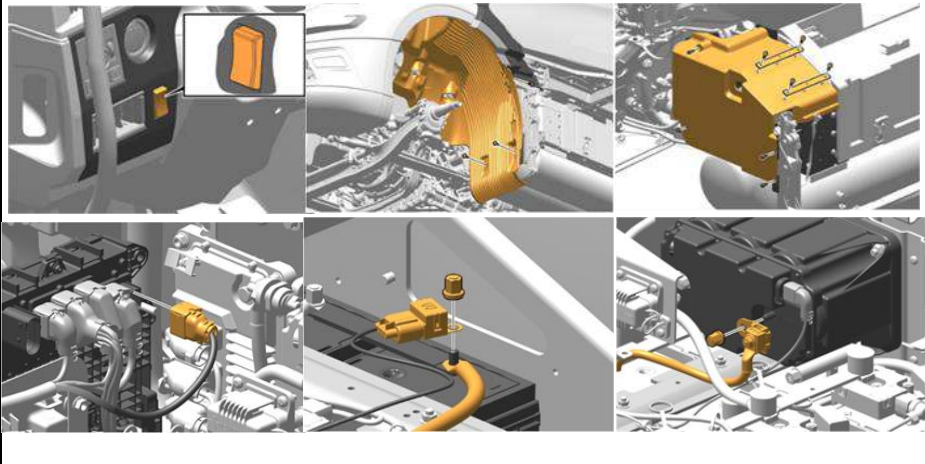
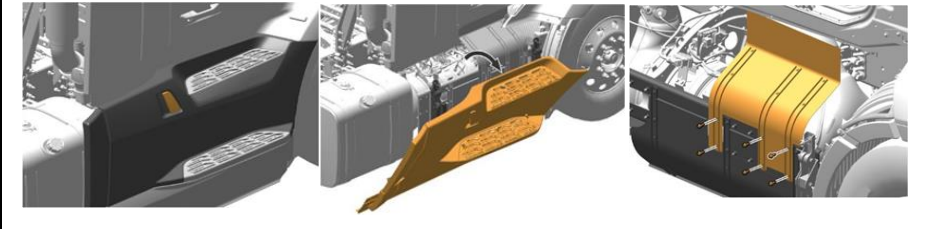
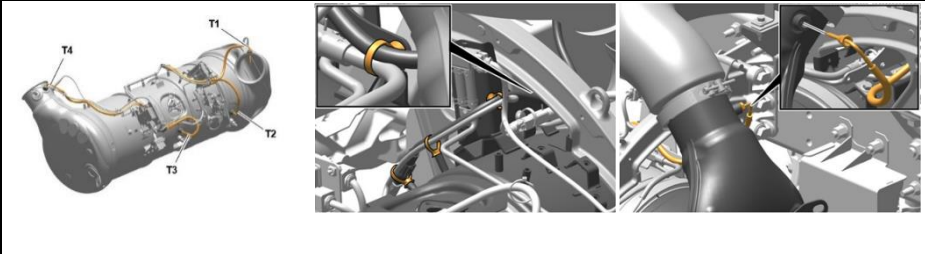
► You must read and understand the precautions and guidelines in Service Information, Function Group 2, "General Safety Practices, Engine" before performing this procedure.

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Park the vehicle on a level surface. Apply the parking brake. Place the gear lever in neutral. Install the wheel chocks. Unlatch the LH fairing. Remove the tether. Remove the fairing.	
Decommission the low voltage system. 1 Turn the dash mounted battery switch to the (OFF) position or (if equipped) press the LOCK button twice. 2 Remove the screws and move the splash shield out of the way. 3 Remove the nut, screws, and brackets. Remove the battery switch cover. 4 Turn the battery disconnect switch to the (OFF) position. 5 Disconnect the connector. 6 Unlatch the battery cover and remove. 7 Remove the nut, fuse, and the battery negative cable. 8 If equipped with Ultra Capacitor. Remove the nut and battery negative cable from ultra capacitor.	
Unlatch the RH fairing, remove the tether, remove the fairing. Remove the screws, remove the heat shield.	
Remove the faulty sensor cable ties. Disconnect the faulty sensor connector. Remove the faulty sensor. Install the new sensor. Torque tighten the new sensor. Torque Sensor, screw 45 ± 5 Nm (33 ± 4 lbf-ft) Note: Use the torque wrench that suits your application. Connect the new sensor connector. Install new cable ties.	

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Install the heat shield. Install the screws. Install the RH fairing. Install the tether. Close and latch the fairing.	
Commission the low voltage system. 1 Install the battery negative cable from ultra capacitor if equipped. Install the nut. 2 Tighten the nut to torque. Tightening torque cable terminal, nut 20 ± 2 Nm (15 ± 1 lbf·ft) 3 Install the battery negative cable. Install the fuse. Install the nut. 4 Tighten the nut to torque. Tightening torque battery, terminal, nut 20 ± 2 Nm (15 ± 1 lbf·ft) 5 Install the battery cover. Latch the battery cover. Connect the connector. Turn the switch to the (ON) position. 6 Install the battery switch cover. Install the brackets. Install the screws. Install the nut. 7 Position the splash shield. Install the screws. 8 Turn the dash mounted battery switch to (ON) position or (if equipped) push the Unlock button twice.	
Install the LH fairing. Install the tether. Latch the fairing. Connect the diagnostic tool (Premium Tech Tool). Delete the diagnostic trouble codes according to the diagnostic tool (Premium Tech Tool) instructions. Disconnect the diagnostic tool (Premium Tech Tool). Start the engine. Check for leakage. Stop the engine. Remove the wheel chocks.	