

Part 573 Safety Recall Report

24E-012

Manufacturer Name : Carrier Corporation**Submission Date :** FEB 26, 2024**NHTSA Recall No. :** 24E-012**Manufacturer Recall No. :** P1074**Manufacturer Information :****Population :****Manufacturer Name :** Carrier Corporation**Number of potentially involved :** 1,945**Address :** P.O. Box 4805**Estimated percentage with defect :** 1 %Carrier Parkway, TR-20 Syracuse NY
13221**Company phone :** 315-432-3572**Equipment Information :****Brand / Trade 1 :** Carrier Transicold**Model :** Carrier's PowerLINE® series 24 CARB-compliant RG genset and UG genset models**Part No. :** 69RG15-120W-24 etc.**Size :** N/A**Function :** Refrigeration

Descriptive Information : Carrier's PowerLINE® series 24 CARB-compliant RG and UG genset units provide power for refrigerated intermodal container units. RG Units are face mounted to the container units. The UG units are mounted to the I beam of the chassis on which the container unit is mounted. The model numbers at issue are: 69RG15-120W-24 (RG genset units); 69UG15-068S-24, 69UG15-050S-24, and 69UG15-080S-24 (UG genset units). The models included in the recall all share the same component part engine, in which the reported issue is believed to exist. The number of units in the population with the issue is unknown, but is believed to be less than 1%.

Production Dates : DEC 17, 2021 - FEB 07, 2024**Description of Defect :**

Description of the Defect : The failure mode appears to occur in the Diesel Oxidation Catalyst (DOC) of the Kubota engine that powers the genset, and is believed to cause a thermal event in the DOC that may result in the inside of the DOC becoming hot enough to melt and cause damage to the DOC shell, the genset cover and potentially nearby components (e.g. frame, battery charger and wire harnesses).

FMVSS 1 : NR**FMVSS 2 :** NR**Description of the Safety Risk :** It is believed that the reported issue causes a thermal event in the DOC that

Description of the Safety Risk : may become hot enough to melt the steel shell of the DOC, and/or melt a hole through the aluminum genset cover, and potentially damage surrounding parts.

Description of the Cause : Carrier is still investigating the root cause of this issue.

Identification of Any Warning that can Occur : Based on Carrier’s investigation and analysis to date, it is believed that warning signs could include abnormal sounds from the engine, and/or redness or other signs of overheating from the DOC.

Involved Components :

Component Name : V2403-CR-E4B-CTD-3 (RG); V2403-CR-E4B-CTD-6 (UG)

Component Description : Kubota 2.4L Compression Ignition Engine

Component Part Number : 1J294-30000 (RG); 1J294-60000 (UG)

Supplier Identification :

Component Manufacturer

Name : Kubota Corporation

Address : Rinkai Plant 3-8
Chikko-shinmachi Nishi-ku Sakai-City, Osaka Foreign States 592-8331

Country : Japan

Chronology :

In mid-January 2024, Carrier was made aware of two reports of RG genset units, belonging to the same customer, that had failed from thermal events believed to originate in the Diesel Oxidation Catalyst (DOC) located in the Kubota engine for each unit. In the first report the thermal event led to melting of the DOC’s shell, and damage to the surrounding genset frame/cover, battery charger and wire harnesses resulting in the shutdown of the genset. In the second report, where the damage was less severe, the genset unit continued to operate until it was manually turned off on arrival.

In both cases, there was no fire that spread beyond this immediate area, nor were flames ever observed. No damage was reported to any other parts of the container or vehicle, and no personal injuries were reported for either event.

Carrier quickly commenced an internal investigation, and began working with Kubota, to determine the cause of the thermal events through field and lab testing. On February 4, 2024, Carrier was advised of a third report involving a UG genset unit that belonged to a different customer. In this event, the DOC in the Kubota engine

was reported to be glowing red at the mounting straps of the DOC, but did not melt through the DOC shell or cause other damage.

Following this third event, Carrier moved quickly to suggest to its customers with these models to ground all units in their possession as soon as possible. Meanwhile, Carrier continues to work with Kubota to test the three subject engines to determine both root cause and potential remedies.

After internal meetings of all safety stakeholders following the third event, Carrier determined that a reportable issue existed in the subject genset units on February 6. Carrier now files this 573 report on February 9.

Description of Remedy :

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| <p>Description of Remedy Program :</p> | <p>As an immediate containment action Carrier will install a safety circuit that shuts down the genset when the DOC reaches an overheat condition. The safety circuit includes redundant thermal switches wired to the engine ENCUC (engine controller). In the event of a DOC overheat situation, the safety switches would trip open, causing the engine to shut down. This safety circuit can be installed at service centers or in the factory. Carrier or its supplier may replace the thermal switch with a temperature sensor embedded in the DOC.</p> <p>Carrier has completed design and safety FMEA reviews to validate the design robustness and has conducted testing to verify that this concept is effective and operates as intended. Carrier has also conducted service reviews to validate the installation processes.</p> <p>Once the remedy is approved by NHTSA, Carrier will send out owner notification letters advising owners that a Regional Carrier Transcold Field Service Engineer will contact them within 30 days of receipt of the letter to arrange to have all affected gensets known to be owned by them inspected and repaired as soon as possible. The remedy will be provided at no charge to the owner. Owners will also be instructed to keep the unit free of debris, particularly at the intake air cleaner.</p> |
| <p>How Remedy Component Differs from Recalled Component :</p> | <p>As described above, the remedy component includes a newly added safety circuit that will shut down the unit when it reaches an overheat condition.</p> |
| <p>Identify How/When Recall Condition was Corrected in Production :</p> | <p>The described safety circuit with thermal switch and/or temperature sensor will be installed on new production units, as with field units.</p> |

Recall Schedule :

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| <p>Description of Recall Schedule :</p> | <p>Carrier is proposing the remedy described above to NHTSA on February 26, 2024. Carrier will start sending out owner notification letters as early</p> |
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as March 4, 2024, depending on the timing of NHTSA approvals for the remedy and the owner notification letter.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : MAR 04, 2024 - MAR 08, 2024

Purchaser Information :

The following manufacturers purchased this defective/noncompliant equipment for possible use or installation in new motor vehicles or new items of motor vehicle equipment:

Name : Maersk

Address : 9300 Arrowpoint Blvd
Charlotte NC 28273

Country : US

Company Phone : 7045715031

Name : Ocean Network Express

Address : 377 E. Butterfield Rd
Suite 500 Lombard IL 60148

Country : US

Company Phone : 7738316609

Name : Matson Navigation Company

Address : 555 12th Street
Oakland CA 94607

Country : US

Company Phone : 5106284375

Name : Seacube Container Leasing

Address : 123 Tice Blvd.
2nd Floor Woodcliff Lake NJ 07677

Country : US

Company Phone : 2019492007

Name : Tote Maritime Alaska

Address : 500 Alexander Ave.
Tacoma WA 98421

Country : US

Company Phone : 2633808529

Name : SM Lines
Address : 700 Pier A Plaza
Long Beach CA 90813
Country : US
Company Phone : 6025278401

Name : Pasha Hawaii
Address : 222 Las Colinas Blvd.
Suite 300 Irving TX 75039
Country : US
Company Phone : 4695651708

Name : Hapag Lloyd Americas
Address : 3 Ravinia Drive
Suite 1600 Dunwoody GA 30346
Country : US
Company Phone : 7328856125

Name : Dole Fresh Fruit
Address : PO Box 725
New Castle DE 19720
Country : US
Company Phone : 3026526414

* NR - Not Reported