

Part 573 Safety Recall Report

23E-026

Manufacturer Name : Carrier Corporation

Submission Date : MAY 23, 2023

NHTSA Recall No. : 23E-026

Manufacturer Recall No. : N/A



Manufacturer Information :

Manufacturer Name : Carrier Corporation

Address : P.O. Box 4805

Carrier Parkway, TR-20 Syracuse NY
13221

Company phone : 315-432-3572

Population :

Number of potentially involved : 15,046

Estimated percentage with defect : 1 %

Equipment Information :

Brand / Trade 1 : Carrier Transicold

Model : Supra 950/950MT/960 Series

Part No. : N/A

Size : N/A

Function : Refrigeration

Descriptive Information : The Supra Series Models 950/950MT/960 single- and multi-temperature units provide refrigeration to the cargo areas of standard tier diesel trucks. Carrier is reporting here the total number of units manufactured since the start of production of these models, which will be higher than the number subject to the remedy campaign.

Production Dates : JAN 01, 2006 - MAR 29, 2023

Description of Defect :

Description of the Defect : The unit's centrifugal clutch transmits mechanical torque from the diesel engine to the drivetrain to allow rotation (through belts) of the compressor, standby motor and alternator. Under certain conditions if the clutch fails to deliver the required torque, it could lead to overheating of the clutch assembly and eventually to severe clutch failure if the system alarm protection (CNF16) that should shut off the unit is disabled. This situation, in certain circumstances, could lead to the clutch breaking apart, and hot pieces falling onto nearby flammable material and/or igniting the clutch belt, which could propagate a flame and result in a fire hazard.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : When the clutch fails, if it has overheated enough and the pieces break apart and fall on nearby flammable material such as leaves or other debris, or any

Description of the Cause : plastic components, it can start a fire hazard.
At this point, Carrier is still investigating the cause of the reported clutch failure that prompted this reporting, although in engines a clutch or a belt may fail for all sorts of reasons not attributable to a defect. The sequence of events that can lead to a thermal event is described above.

Identification of Any Warning that can Occur : First, a proper pre-trip inspection, which is required before every use, would likely lead to the discovery of problems with the powertrain system, clutch, and/or wear of the belts, so that this situation could be avoided. Second, regular and proper maintenance of the unit in accordance with Carrier's prescribed preventive maintenance timeline may also lead to the discovery of conditions that could lead to clutch failure before a failure event occurs. Finally, when the alternator starts to fail to provide a certain level of volts as a consequence of impending clutch failure, and before overheating and total clutch failure, an alarm is triggered both audibly and visually in the cab that should alert the user of a problem and, if configured correctly, the alarm will shut down the unit before the overheating progresses to the point of failure.

Involved Components :

Component Name : Clutch assembly

Component Description : The centrifugal clutch transmits mechanical torque from the diesel engine to the drivetrain to allow rotation (through belts) of the compressor, standby motor and alternator

Component Part Number : 50-01179-02

Supplier Identification :

Component Manufacturer

Name : NR

Address : NR

NR

Country : NR

Chronology :

On January 3, 2023, a thermal incident involving a Supra 950MT unit owned by Sysco was reported to have occurred in New York. As reported, a fire in the unit resulted from clutch overheating and failure, leading to ignition of flammable materials, likely leaves or other debris that had collected in the unit and/or plastic

components in the unit. Carrier immediately began investigating the incident, including sending out an independent investigator and analyzing pieces of the unit in the lab. One crucial piece of information discovered is that a pre-trip inspection was not performed prior to this incident. Also, the system alarm protection (CNF16) that should have shut off the unit before the clutch totally failed was found to be disabled.

Carrier's internal investigation and analysis process involved its safety, engineering, compliance, and legal teams. After internal meetings of its Safety Council and discussing the incident with outside NHTSA counsel, it was determined on March 22, 2023, that the unique set of circumstances investigated could be a safety related defect reportable to NHTSA under Part 573. Carrier files this report on March 29, 2023.

Please note, Carrier does not sell these units to vehicle manufacturers, which is why it does not provide purchaser information in the section above of this report. Rather, Carrier sells to independent dealers, who then sell to owner companies. The owner contact information that Carrier will use for the Owner Notification letters comes from the warranty registration process.

Description of Remedy :

Description of Remedy Program : For units in the field, Carrier will replace the plastic panels at the bottom of each unit with a metal panel, in all units that were manufactured before the production change in 2020. A metal panel will prevent any fire from propagating, even if hot clutch debris falls onto the panel. In addition, Carrier will install a metal bracket/guard around the clutch to prevent hot clutch debris from reaching flammable materials. Carrier estimates that it will need 1-2 months to acquire the panels and brackets for this remedy. Once enough panels and brackets are in supply, Carrier will send out notice letters to owners and dealers instructing owners to bring in their units as soon as possible for these repairs. These repairs will be at no charge to the owner.

In addition to these repairs on all field units with plastic bottom panels and no clutch guard, Carrier will conduct an informational campaign through owner notification letters, dealer letters, service bulletins, and technical instructions, that will cover the following areas: (1) re-emphasizing the importance of the pre-trip inspection, which Carrier urges to be performed before every trip according to Carrier's detailed instructions in the owner's manual and other training materials; (2) re-emphasizing the importance of following the prescribed preventative maintenance schedule; (3) clearing out all leaves and other debris in the bottom panels of the units on a regular basis; and (4) ensuring that the system alarm (CNF16) is fully enabled so that it will shut off the unit when slippage in the powertrain system is detected, which could lead to an overheat situation.

When owners bring in their units to have the metal panel and metal guard installed, Carrier will instruct service dealers to check the clutch and powertrain system, including the belts, alternator, and idler pulleys, clean out any debris, and turn on the slippage detection/alarm/shut off feature CNF16 (if not currently enabled).

How Remedy Component Differs from Recalled Component : As described above, the remedy component will be a new metal panel that replaces the plastic (potentially flammable) panel at the bottom of the unit, and a new metal guard around the clutch that will prevent clutch debris from reaching flammable materials. In addition, Carrier's related informational campaign will highlight for owners and dealers the importance of the pre-trip inspection, the regular maintenance check-ups, regularly cleaning out leaves and debris, and making sure the system alarm shut off feature is properly enabled.

For any owners who have already replaced the bottom plastic panel with a metal panel, and/or already installed the metal guard around the clutch, Carrier will reimburse them according to the Manufacturer Reimbursement Plan to be filed with NHTSA.

Identify How/When Recall Condition was Corrected in Production : For those units produced currently, since 2020 metal panels have been installed below the clutch assembly, replacing the plastic panels used in prior models. Additionally, since 2020, a metal bracket/guard has been installed to further prevent hot clutch debris from reaching flammable materials or debris.

Recall Schedule :

Description of Recall Schedule : Carrier will send out interim owner notification letters, and any applicable dealer notifications, no later than May 26. Once enough metal panels and metal brackets are in supply, which Carrier anticipates will take 1-2 months, Carrier will send out follow up owner notification and dealer letters, with service bulletins and TSBs, advising owners to bring in their units at their earliest convenience for the repairs.

Planned Dealer Notification Date : MAY 24, 2023 - MAY 26, 2023

Planned Owner Notification Date : MAY 26, 2023 - MAY 26, 2023

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 : NR

Address : NR

NR

Country : NR

Company Phone : NR

* NR - Not Reported