

# Part 573 Safety Recall Report

# 17V-704

**Manufacturer Name :** Crestline Coach Ltd.**Submission Date :** NOV 30, 2017**NHTSA Recall No. :** 17V-704**Manufacturer Recall No. :** 17A-01**Manufacturer Information :**

Manufacturer Name : Crestline Coach Ltd.

Address : 126 Wheeler St.

Saskatoon SK 00 S7P 0A9

Company phone : (306) 934-8844

**Population :**

Number of potentially involved : 17

Estimated percentage with defect : 100 %

**Vehicle Information :**

Vehicle 1 : 2016-2017 Crestline Coach ICON 2.0 Ambulance

Vehicle Type : LOW VOLUME VEHICLES

Body Style : OTHER

Power Train : NR

Descriptive Information : Any US vehicle that contained the Magnum 1000W Model MMS 1012 inverter was included.

Production Dates : AUG 09, 2016 - OCT 20, 2017

VIN Range 1 : Begin : WDPPF3CC0G9680596	End : WDPPF3CC0G9681053	<input checked="" type="checkbox"/> Not sequential
VIN Range 2 : Begin : WDPPF3CC2G9680860	End : WDPPF3CC3G9681905	<input checked="" type="checkbox"/> Not sequential
VIN Range 3 : Begin : WDPPF3CC3H9731056	End : WDPPF3CC4G9679208	<input checked="" type="checkbox"/> Not sequential
VIN Range 4 : Begin : WDPPF3CC4G9689799	End : WDPPF3CC4H9715710	<input checked="" type="checkbox"/> Not sequential
VIN Range 5 : Begin : WDPPF3CC5G9678598	End : WDPPF3CC5G9679735	<input checked="" type="checkbox"/> Not sequential
VIN Range 6 : Begin : WDPPF3CC5G9681226	End : WDPPF3CC6G9680022	<input checked="" type="checkbox"/> Not sequential
VIN Range 7 : Begin : WDPPF3CC6G9680859	End : WDPPF3CC7G9681910	<input checked="" type="checkbox"/> Not sequential
VIN Range 8 : Begin : WDPPF3CC9G9679382	End : WDPPF3CCXG9681044	<input checked="" type="checkbox"/> Not sequential

**Description of Defect :**

Description of the Defect : On three vehicles sold and operated in Canada, the Magnum 1000W Model MMS 1012 inverter experienced thermal events. In the first two events, the thermal event resulted in overheating damage to the inverter and minor damage to items in close proximity to the inverters. In the third, and most recent event, the thermal event resulted in overheating that caused a fire that damaged the vehicle. Note that the inverters are installed in a separate electrical compartment accessible only from the exterior of the vehicle.

FMVSS 1 : NR

FMVSS 2 : NR

**Description of the Safety Risk :** The thermal events have the potential of causing smoke and/or a fire in the electrical compartment.

**Description of the Cause :** Crestline Coach Ltd. has worked closely with the manufacturer of the inverter, Magnum Energy Inc., and has determined that the Magnum 1000W Model MMS 1012 inverter is sensitive to AC ripple voltage which is present in various chassis electrical systems and customer electrical equipment loads. We have determined that the users of the vehicle can place the vehicle into an operational mode that disconnects the inverter from the conversion batteries while the inverter is functioning, exposing the inverter to excess AC ripple current. This exposure could result in an internal failure of the inverter that could lead to an overheating condition and, if undetected, possible fire.

**Identification of Any Warning that can Occur :** The following are possible early indicators of a possible thermal event:

- Repeated shutdown of the inverter due to over temperature conditions
- Repeated shutdown of the inverter due to overload conditions
- An acrid, burning odor
- Presence of smoke
- visible damage and/or discoloration of inverter case
- evidence of discoloration or heat damage on internal components of the inverter

## Supplier Identification :

### Component Manufacturer

Name : Magnum Energy

Address : 2211 West Casino Road  
Everett WASHINGTON 98204

Country : United States

## Chronology :

Oct 11, 2016: A Canadian customer reported a thermal event related failure in its electrical system on one of its vehicles. Inspection determined that the Magnum MMS 1012 inverter had experienced a thermal event and was damaged beyond repair. The inverter was returned to the OEM (Magnum Energy) for failure analysis. Their report indicated that they were unable to determine the root cause of the failure. A new inverter was installed, related electrical compartment damage was repaired and the vehicle returned to service.

July 18, 2017: A different customer in Canada reported a thermal event in its electrical system on one of its vehicles. Inspection determined that the Magnum MMS 1012 inverter had experienced a thermal event and was damaged beyond repair. The inverter was sent to an independent 3rd party laboratory (IAL Labs) hired by Crestline for failure analysis. A new inverter was installed and the vehicle has been in operation since.

Oct 23, 2017: The same Canadian based customer as in the first event reported a fire in the electrical compartment on one of its vehicles (not the same vehicle as Event 1). This vehicle had a Magnum MMS 1012 inverter installed. An initial Fire Inspection was conducted on Nov 6, 2017. The inverter was removed from

the vehicle and will undergo further inspection and analysis in a laboratory (date and location TBD)  
Oct 30, 2017: Crestline received a prelim report from IAL Labs on the inverter from Event 2 and a new inverter. The prelim report overserved temperatures exceeding expected design limits at or below rated load. The final report is scheduled to be delivered on 11/14/17. No injuries or deaths occurred in any of these events.

Nov 1, 2017: After reviewing the information received from IAL Labs, the details of the three (3) thermal events, and having consulted with the manufacturer of the inverter, Crestline determined that a defect exists and that regulatory reporting was required.

## Description of Remedy :

Description of Remedy Program : Crestline will issue a service bulletin to advise maintenance personnel on how to prevent creating this condition during maintenance. In addition, Crestline has identified a minor wiring change to the vehicle's DC electrical system that would prevent the users from inadvertently placing the vehicle in the operational mode that creates this condition. This is accomplished by ensuring that the inverter's DC output remains connected to the conversion batteries during all modes of operation. Crestline will also perform an inspection of all installed inverters and will repair or replace any inverter that shows indications of damage due to the presence of ripple current. Crestline will ensure these remedies will be implemented at no cost to the owners.

How Remedy Component Differs from Recalled Component : No components are changed in this remedy. This is simply a wiring change that ensures the inverter remains connected to the conversion batteries during all modes of operation.

Identify How/When Recall Condition was Corrected in Production : This same wiring change will be made in production of new vehicles prior to delivery to customers.

## Recall Schedule :

Description of Recall Schedule : As soon as Crestline receives approval from NHTSA on the customer communication letter, Crestline will send this communication to all affected customers and then begin the process of scheduling the implementation of the remedy. It is Crestline's intention to implement this remedy as quickly as our customers allow us access to the affected vehicles.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : NR - NR

\* NR - Not Reported