

## RECALL CAMPAIGN 20E040

### CHRONOLOGY OF EVENTS LEADING TO DEFECT DETERMINATION

Dometic Corporation has built and sold a series of portable chest-type refrigerator/freezers or “powered coolers” for several years identified as “CFXW Series” coolers. This product has become a favorite of RV owners, campers, picnickers, beachgoers, commercial truckers, boaters, and even car owners. In 2019, it became clear that our customers wanted a powered cooler with a more modern look and enhanced features.

Dometic initiated an engineering project to re-design the electronics, add smarter features, new handles, and an improved external structure. The electronics had a new multi-color display, Bluetooth wireless control, and an integrated USB charge port. The new line of product that would replace the “CFXW” Series product would be called the “CFX3” Series Powered Cooler.

Dometic began manufacturing the “CFX3” in Zhuhai China, November 2019, with a sales launch target date in January 2020. The first sale of the “CFX3” product in the U.S. occurred on January 20th, 2020. Dometic continued to sell these without interruption and with increasing sales through the first quarter and well into the second quarter of 2020 without complaint or any field incidents.

On May 19, Dometic received the first notification of an issue from a dealer that had installed a model CFX375DZ into an RV and who reported experiencing a feedback of 26V through the DC plug back into the RV. It appeared to cause electrical damage to the separate multiplex controller. Dometic began communicating with the dealer to investigate the field problem on 5-20-2020 and continued that communication through 6-9-2020.

On May 29<sup>th</sup>, one of Dometic’s RV OEM customers contacted Dometic and stated they were experiencing feedback of 27.5V to the DC plug when the “CFX3” unit was plugged into both 120VAC and 12VDC, at the same time. The OEM also identified that if a momentary short were to occur on the DC side, this would result in a fault condition on the DC appliances and cause electrical damage.

Dometic Engineering conducted preliminary testing to investigate these fault conditions from the two field reports on 6/10 and 6/11 after discussions with both dealer and OEM that had experienced the fault occurrences. At that time, it was demonstrated that the fault could be replicated.

Dometic formed a potential defect investigation group which included Sales, Engineering, Operations, Product Management, and Product Safety and met on June 11, to discuss the field occurrences, and the preliminary tests and results. The decision was made to conduct further investigative testing to determine if the fault condition was external and what conditions caused the fault to occur.

On June 15, 2020 a second potential defect investigation meeting was held to review the additional testing results. During this meeting Dometic identified that the new control on the “CFX3” Series product could feedback 27.5V through the “CFX3” **if and only if** the “CFX3” was located in a vehicle that had both 120VAC and 12VDC sources and was plugged into both 120VAC and 12VDC at the same time. However, it was also identified that the malfunction of this feedback would not occur unless one of three potential use cases was realized. Those, potential use cases, although rare, which can lead to this failure can happen when the “CFX3” powered cooler is in a vehicle, and is connected to **BOTH 120VAC AND 12VDC** power at the same time and:

1. While connected to AC power, something causes the master fuse on the DC circuit to trip, removing DC power from the DC circuit;
2. While connected to AC power, user chooses to turn off the vehicle’s 12VDC power system; or
3. While the vehicle’s 12VDC power system is turned off, user turns on the vehicle’s generator or Inverter.

The testing between June 12 and June 15 also established that the preceding “CFXW” series coolers did NOT experience this feedback when tested in an identical manner as the “CFX3” powered cooler.

On June 18, 2020 Dometic Corporation filed the Defect Notification with NHTSA in accordance with 49CFR 573, within 5 days after it was determined that the “CFX3” powered coolers could potentially have a defect related to motor vehicle safety.