

# Part 573 Safety Recall Report

# 19V-833

**Manufacturer Name :** Arcimoto Inc**Submission Date :** JAN 28, 2020**NHTSA Recall No. :** 19V-833**Manufacturer Recall No. :** NR**Manufacturer Information :**

Manufacturer Name : Arcimoto Inc

Address : 2034 W. 2nd Ave  
Eugene OR 97402

Company phone : 5416836293

**Population :**

Number of potentially involved : 22

Estimated percentage with defect : 100 %

**Vehicle Information :**

Vehicle 1 : 2019-2019 Arcimoto FUV

Vehicle Type : MOTORCYCLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : Affects first twenty-two MY2019 vehicles produced through to 11/04/2019.

Production Dates : SEP 19, 2019 - NOV 04, 2019

VIN Range 1 : Begin : 7F7ATR312KER00000 End : 7F7ATR31XKER00021  Not sequential**Description of Defect :**

Description of the Defect : Due to an unintended software behavior, the inverter broadcast current limit may not be obeyed.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If the broadcast current limit is exceeded, this will result in opening isolation contactor cascades, leading to unexpected battery shutdown and immediate loss of traction-power, which would make the vehicle more difficult to control and increase the likelihood of a crash.

Description of the Cause : NR

Identification of Any Warning that can Occur : None.

**Involved Components :**

Component Name 1 : NR

Component Description : NR

Component Part Number : NR

## Supplier Identification :

### Component Manufacturer

Name : Dana Inc. (formerly SME Group)

Address : Via della Tecnica, Z.I. 40  
Arzignano (VI) Foreign States 36071

Country : Italy

## Chronology :

The first documented instance of this issue in current production vehicles occurred in late September 2019. This issue had previously been evidenced in prior model generations but was believed to be fixed due to software/ firmware updates that prevented battery regeneration at high state-of-charge. After the issue resurfaced in production vehicles, Arcimoto immediately continued investigating the failure mode and considering factors that could have caused the fault. It was determined motor inverters and software/ firmware were the sources of the failure mode, and the Root Cause was identified as inverters exceeding broadcast current limits. In mid October, Arcimoto's inverter supplier updated the inverter software/ firmware to better approximate the broadcast current and consequently better implement the programmed current limits. On November 12, 2019, Engineering and Q&RA Departments presented research and analysis findings to Arcimoto executives, who subsequently decided on the next day to validate findings of Safety issue from Engineering and Q&RA Departments, and notify NHTSA of a Safety Recall.

## Description of Remedy :

Description of Remedy Program : Owners will be notified by mail and instructed to contact Arcimoto to schedule a service appointment to have their inverter software reprogrammed. There will be no charge to vehicle owners for this service. To the best of our knowledge, no owners have incurred any costs resulting from this defect.

How Remedy Component Differs from Recalled Component : The previous software version did not accurately approximate the broadcast current, therefore allowed significant overshoot of the current limits, leading to the failure mode. Arcimoto's supplier Dana (SME) has updated the inverter firmware to better approximate the broadcast current and consequently better implement the programmed current limits, which should prevent the system opening the isolation contactor

Identify How/When Recall Condition was Corrected in Production : during typical operating circumstances.  
Inverter programming on vehicles in production was updated with the new software profile starting November 5, 2019.

**Recall Schedule :**

Description of Recall Schedule : Manufacturer does not have Dealers.  
Planned Dealer Notification Date : NR - NR  
Planned Owner Notification Date : JAN 20, 2020 - JAN 31, 2020

\* NR - Not Reported