1   PURPOSE

Safety Recall Remedy Instructions: Battery Shutdown May Occur Unexpectedly

2   AFFECTED VEHICLES

Model Year	Model	VIN Range (last 8 digits)
2019	FUV Evergreen	KER00000 - KER00017

3   BACKGROUND

Due to an unintended software behavior, communication between inverters may time out. If a specific inverter message times out, this will lead to the traction contactor opening, which will lead 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.

4   OWNER NOTIFICATION

Owners of affected vehicles will be sent a notification of this campaign.

5   CORRECTIVE ACTION

Owners will be notified by mail and instructed to contact Arcimoto to schedule a service appointment to have their inverter software/ firmware 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.

6   PARTS INFORMATION

No new parts are required to complete the remedy action.

Updated firmware files

7   RELATED DOCUMENTS AND RESOURCES

- 002983B1
- 001950

8 SERVICE PROCEDURE

8.1 Safely elevate the front of the FUV.

8.2 Remove the Lower Right Dash Panel (002983) to access the Inverter Programming Cables.

8.3 Insert the key and turn the FUV ON.

8.4 Locate the Master and Slave Inverter programming cables, and gently pull them out far enough to access both connectors.

8.5 Connect the right-side Inverter to the USB port on the programming laptop via the Serial Null Modem Cable Service Programming Harness (001950).

8.6 Use the Smart View software application on the programming laptop (*Firmware Update* tab) to update the firmware on the right-side Inverter with the most recent version of released Inverter firmware file (available to Arcimoto technicians via the online Arcimoto Service Portal). The Laptop will recognize which inverter it is plugged into.

8.7 Disconnect the Serial Null Modem Cable Service Programming Harness (001950) from the right-side Inverter.

8.8 Connect the left-side Inverter to the USB port on the programming laptop via the Serial Null Modem Cable Service Programming Harness (001950).

8.9 Use the Smart View software application to update the firmware on the left-side Inverter with the most recent version of released Inverter firmware file (available to Arcimoto technicians via the online Arcimoto Service Portal).

8.10 Disconnect the Serial Null Modem Cable Service Programming Harness (001950) from the left-side Inverter.

8.11 Use the Smart View software application on the programming laptop (*Clone* tab) to set the profile on the right-side Inverter ("Right Wheel") with the most recent version of the right-side Inverter clone file "Inverter Profile Right.clon" (available to Arcimoto technicians via the online Arcimoto Service Portal).

8.12 Disconnect the Serial Null Modem Cable Service Programming Harness (001950) from the right-side Inverter.

8.13 Use the Smart View software application on the programming laptop (*Clone* tab) to set the profile on the left-side Inverter ("Left Wheel") with the most recent version of the left-side Inverter clone file "Inverter Profile Left.clon" (available to Arcimoto technicians via the online Arcimoto Service Portal).

8.14 Disconnect the Serial Null Modem Cable Service Programming Harness (001950) from the left-side Inverter.

8.15 Power cycle the FUV: Key OFF, then Key ON.

8.16 Connect the right-side Inverter to the USB port on the programming laptop via the Serial Null Modem Cable Service Programming Harness (001950).

8.17 Use the Smart View software application (*Configure: Motor & Control page*) to commission and set the Offset value for the right wheel. The "Offset" value in the *Motor &*

Control page - Spin Sensor tab should match the "OFFSET CW" value indicated on the right-side inverter (on a printed decal affixed to the right-side inverter).

8.18   Connect the left-side Inverter to the USB port on the programming laptop via the Serial Null Modem Cable Service Programming Harness (001950).

8.19   Use the Smart View software application (Configure: Motor & Control page) to commission and set the CW Offset value for the left wheel. The "Offset" value in the *Motor & Control page - Spin Sensor* tab should match the "OFFSET CW" value indicated on the left-side inverter (on a printed decal affixed to the left-side inverter).

8.20   Power cycle the FUV: Key OFF, then Key ON.

8.21   Test the updated inverters: First, set the Direction Switch to Forward, and gently twist the throttle - the wheels should spin in the forward direction accordingly. Then, set the Direction Switch to Reverse, and gently twist the throttle - the wheels should spin in the reverse direction accordingly.

8.22   Replace the Lower Right Dash Panel (002983).

8.23   Lower the FUV.

8.24   END.

9   REVISION HISTORY

Function	Role	Name	Signature	Date
Author	Dir Q&RA	Pete Z	<insert name>	01/29/2020
PO	Dir Q&RA	Pete Z	<insert name>	01/29/2020
Approver	Dir Q&RA	Pete Z	<insert name>	01/29/2020
Checker	RA RCE		<insert name>	01/29/2020

Revision		Reason for change;
#	**Date Issued**	**Summary of change from prior Revision**
0	01/29/2020	Initial Issue Safety Recall Remedy Instructions: High-Voltage Cable Short May Cause Battery Shutdown