| | Regulatory Recall Method-Sheet | | RRM0008 |
|---------------|---|----------------|------------------|
| | 19V830 Display Short Defect Remedy Instructions | | Rev: 0 |
| Author: PeteZ | PO: Dir Q&RA | Appr: Dir Q&RA | Date: 01/29/2020 |

1 PURPOSE

Safety Recall Remedy Instructions: Display Short Defect

2 AFFECTED VEHICLES

| Model Year | Model | VIN Range (last 8 digits) |
|------------|---------------|---------------------------|
| 2019 | FUV Evergreen | KER00000 - KER00024 |

3 BACKGROUND

Due to unnecessarily long pins (a design oversight calling for longer pins than necessary and without checking for any mechanical interferences within the display assembly during the manufacturing process) of a 5V regulator on the display backer board, the pins are able to make contact with the display's RGB ribbon-cable. Over time, the pins can scrape against the display's RGB ribbon-cable, which can eventually lead to a short-circuit between the 12V bus and a ground wire on the display's RGB ribbon-cable. A short-circuit between the 12V bus and ground wire on the display's RGB ribbon-cable may cause the communication board and the display board to shut down. If the communication board goes through a full power cycle (power is removed, then power is reapplied), it would result in battery shutdown and loss of traction-power. Separately, if the short-circuit persists, a fuse will blow causing the display and communication boards to be permanently disabled, leading to unexpected 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. A service technician will rework the display backer board by trimming the pins of the 5V regulator, and applying a layer of VHB (Very High Bond) tape to provide conductive insulation. 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

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No new parts are required to complete the remedy action.

7 RELATED DOCUMENTS AND RESOURCES

- <u>four separate pin groups</u>
- four (trimmed w/ VHB tape) pin-groups
- 003221E
- 003299
- 003536

8 SERVICE PROCEDURE

- 8.1 Remove the Display Assembly (<u>003221E</u>) from the Dash, and place it face down on a soft clean cloth, to protect the glass surface.
- 8.2 Disassemble the Display Assembly (<u>003221E</u>) to access the Display Backer Board (<u>003536</u>).
- 8.3 Remove the Display Backer Board (003536) and place it face down on a soft clean cloth, to protect the components on the face of the board.
- 8.4 Use a side-cutter to trim all pins of the following <u>four separate pin groups</u> located on the PCB (Printed Circuit Board), directly above the solder joint from 4mm down to 1.5 mm.
- 8.5 After trimming, verify that all pin lengths are 1 mm or less (as measured from the surface of the PCB).
- 8.6 Cut four pieces of VHB (Very High Bond) tape long enough to completely cover all pins on each of the four pin-groups. Do not remove the red backing material from the VHB tape.
- 8.7 Apply one layer of VHB tape (with backing material intact) to the board directly over each of the <u>four (trimmed) pin-groups</u>.
- 8.8 Reassemble the Display Assembly (003221E)
- 8.9 Replace the Display Assembly (003221E) in the Dash.
- 8.10 END.

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9 REVISION HISTORY

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

| Revision | | Reason for change; | |
|----------|--------------------|--|--|
| # | Date Issued | Summary of change from prior Revision | |
| 0 | 0 01/29/2020 | Initial Issue | |
| 0 | | Initial Issue Safety Recall Remedy Instructions: Display Short Defect | |