

## **GruvenParts.com BRASS RAM 5<sup>th</sup> Gen (2019+) Power Folding Mirror Gear Replacement / Stop Ring Instructions**

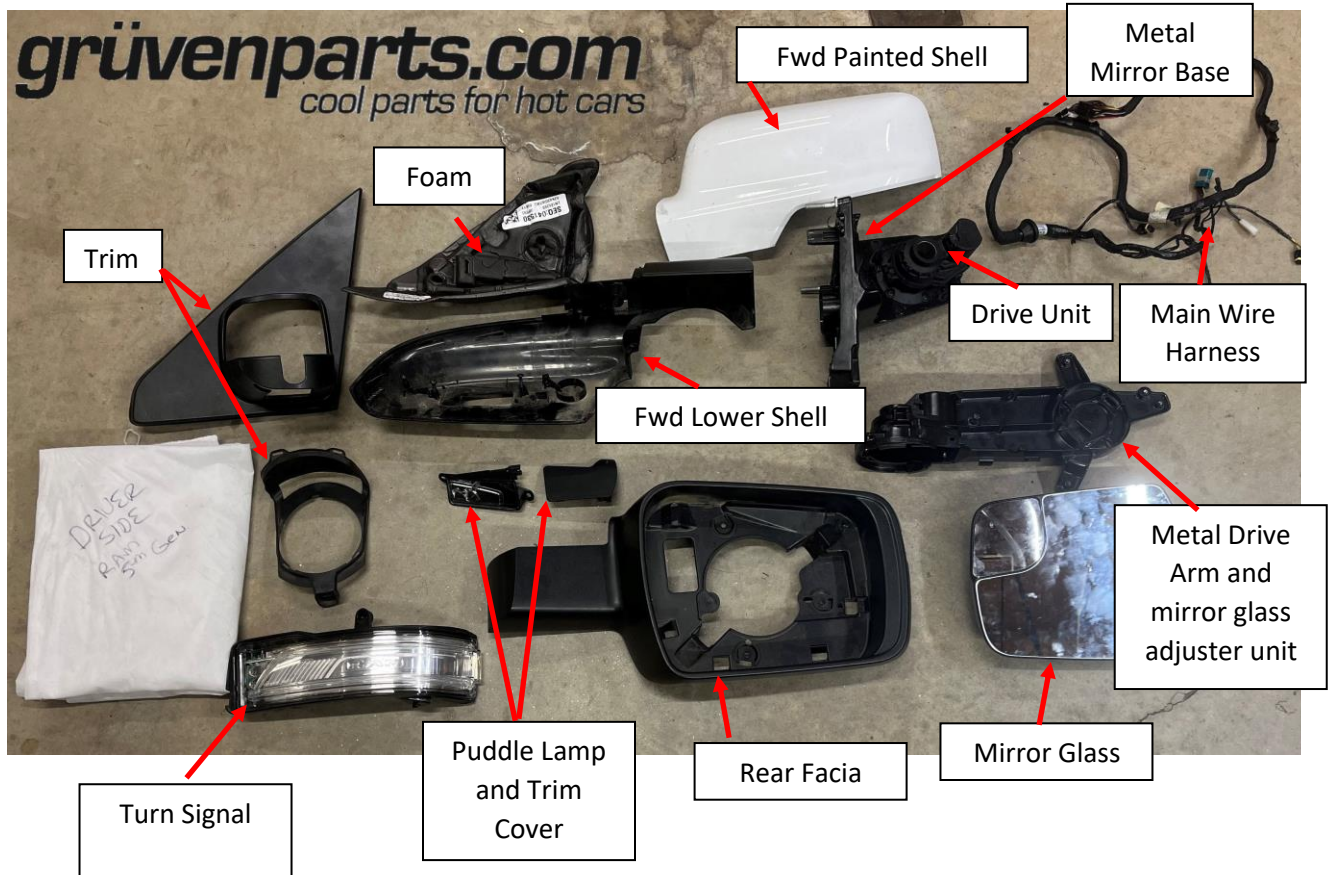
**\*\* Please Note :** [www.GruvenParts.com](http://www.GruvenParts.com) sells the main gear as well as the stop ring. Both are needed to repair the power folding drive unit. The gears and stop rings are specific to each unit. We do not sell replacement high torque motors for these units. We suggest re-using the existing lower torque motors since the case and other internals are entirely plastic on this unit. If you need a replacement used but good condition motor, we can sell those too, please contact us via email – [paul@gruvenparts.com](mailto:paul@gruvenparts.com)

**You can order this part here :**

**[Order the GruvenParts Upgraded 5th Gen Ram Power Folding Mirror Gear and Stop Ring Here](#)**

If you are reading this DIY article, you are like many others who have a Ram 5<sup>th</sup> gen truck with the standard (not towing) power folding mirrors which no longer function due to a broken gear and broken stop ring within the power folding unit. This often occurs during normal operation, and especially with a light impact to the mirror housing. A broken folding mirror gear is evident when the mirror stops power folding. Sometimes you can hear the motor whirring but the mirror refuses to fold in or out. Other times, the broken gear just jams the motor and you hear nothing. Another common symptom is the unit will power fold but refuses to stop on the outswing and folds too far. This is caused by a broken stop ring. The OEM gear and the OEM stop ring are both made from very brittle plastic and break easily. You can now fix your OEM 5<sup>th</sup> gen Ram power folding mirror using the GruvenParts.com solid metal main gear and new high strength Nylon stop ring. This DIY will walk you thru the necessary steps, and is a work in progress so reference the Revision date on each page to be aware if changes are made.

The picture below shows the all the components of a 5<sup>th</sup> Gen Ram power fold mirror assembly – drivers side. The Pass Side is similar.



Please note that the mirror assembly doesn't need to be removed from the vehicle and no interior components need to be taken off. The entire job is handled on the outside of the vehicle. These pictures are taken in a shop with the unit off the vehicle but in the field the mirror will be serviced on the vehicle.

### **Step 1 : Mirror Glass Removal**

The 1<sup>st</sup> step will be to remove the mirror glass from the unit. The glass itself is hiding quite a few attachment screws and must come out before the unit can be service. There is a reference video to show how this done

[Click Here for the Mirror Glass Removal Video](#)

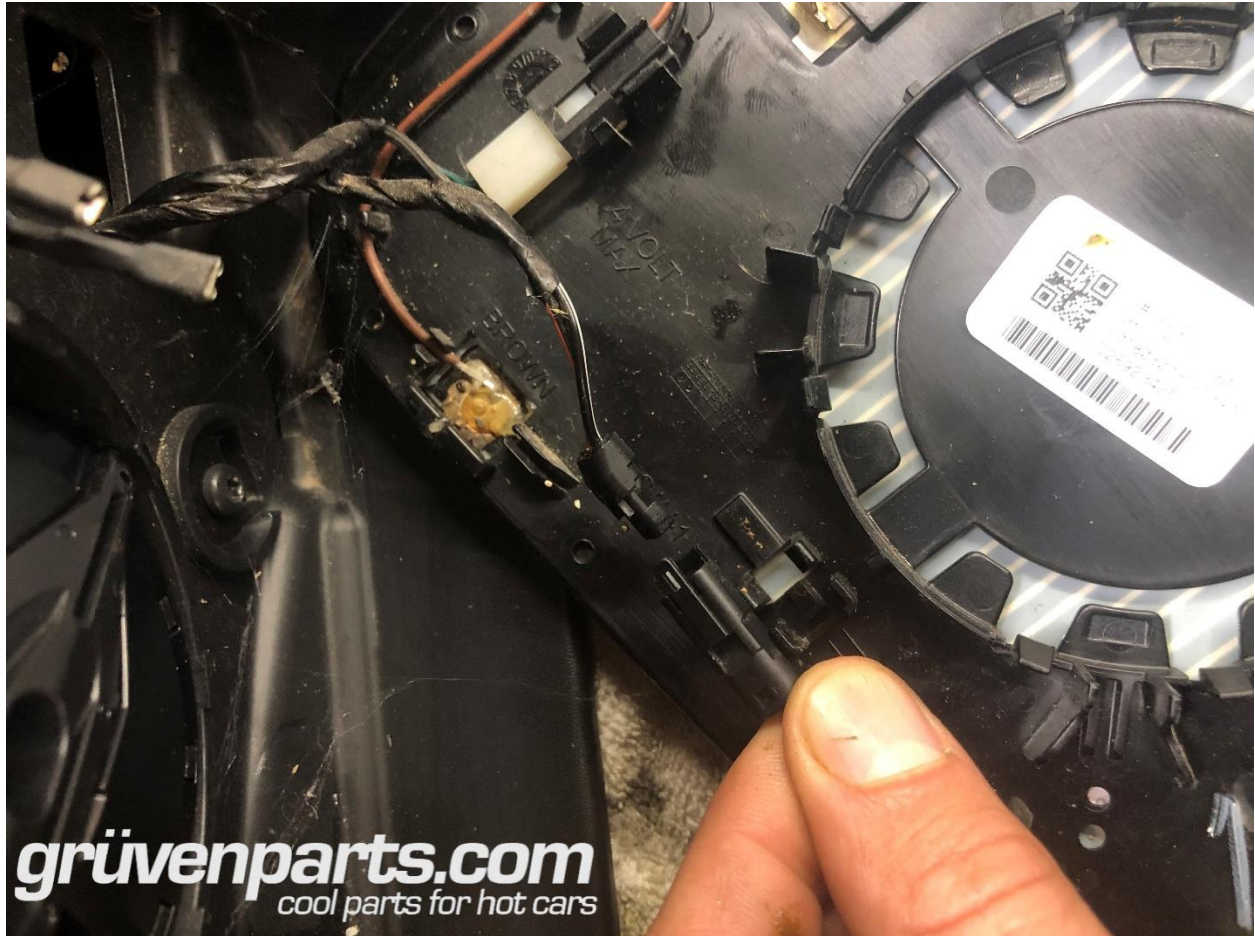
You will need to tilt the mirror glass down (as if you were backing up) so you can access the small area between the top edge of the mirror glass and the Rear Facia. You can gently pry this open more by using a soft, padded tool like the padded handle of a pair of channel lock pliers. DO NOT PRY OPEN TOO HARD OR YOU COULD BREAK THE GLASS OR REAR FACIA. Once the opening is wide enough, reach in with a small flat head screwdriver and release the top inner and top outer clips holding the mirror glass to the mirror adjuster unit mounted to the metal drive arm. The video shows this process. Note there are a total of 4 clips that hold the mirror glass to the mirror glass adjuster unit – you only need to disengage the top 2 clips and then gently pull the mirror glass free of the mirror glass adjuster unit. Note there will be wiring still attached to the back side of the mirror glass so don't move the glass too far yet.



Mirror Glass removed from the mirror adjuster. Picture is Driver side looking forward. See the video link for details on how this was done. Note the wiring still attached to the mirror glass.



Now gently unclip the wiring associated with the mirror glass. There are usually 2 small black heater wires, then a wire plug. Unclip all and store the mirror glass in some bubble wrap.



## Step 2 : Remove the Front Upper Painted Shell

Remove the visible torx screws and gently pry on the tabs that lock the front painted shell to the Rear Facia. The Front Painted Shell will pop off.









**Step 3 : Remove Turn Signal and Puddle lamp**



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**Step 4 : Remove forward lower trim to expose the power fold drive unit. You can just unclip the tabs holding this in place carefully.**





**Step 5 : Remove the metal drive arm by removing the 2 long torx screws that go thru the power fold drive unit. Wiggle the metal arm up and off of the power fold drive unit.**





**Step 6 : Unbolt the drive unit from the vehicle and bring it onto a work surface.**



**Step 7 :** Cut the plastic case just below the witness line where the upper and lower case halves were originally fused together. See Red Line in the picture below. You can use a small cutter such as a Dremel tool to do this. **DO NOT** Cut too deep. Work slow and cut just enough to separate the case halves. **IF** you cut too deep you will damage in the internal components. You can use a thin feel gauge to see if your cut has gone thru the case wall.

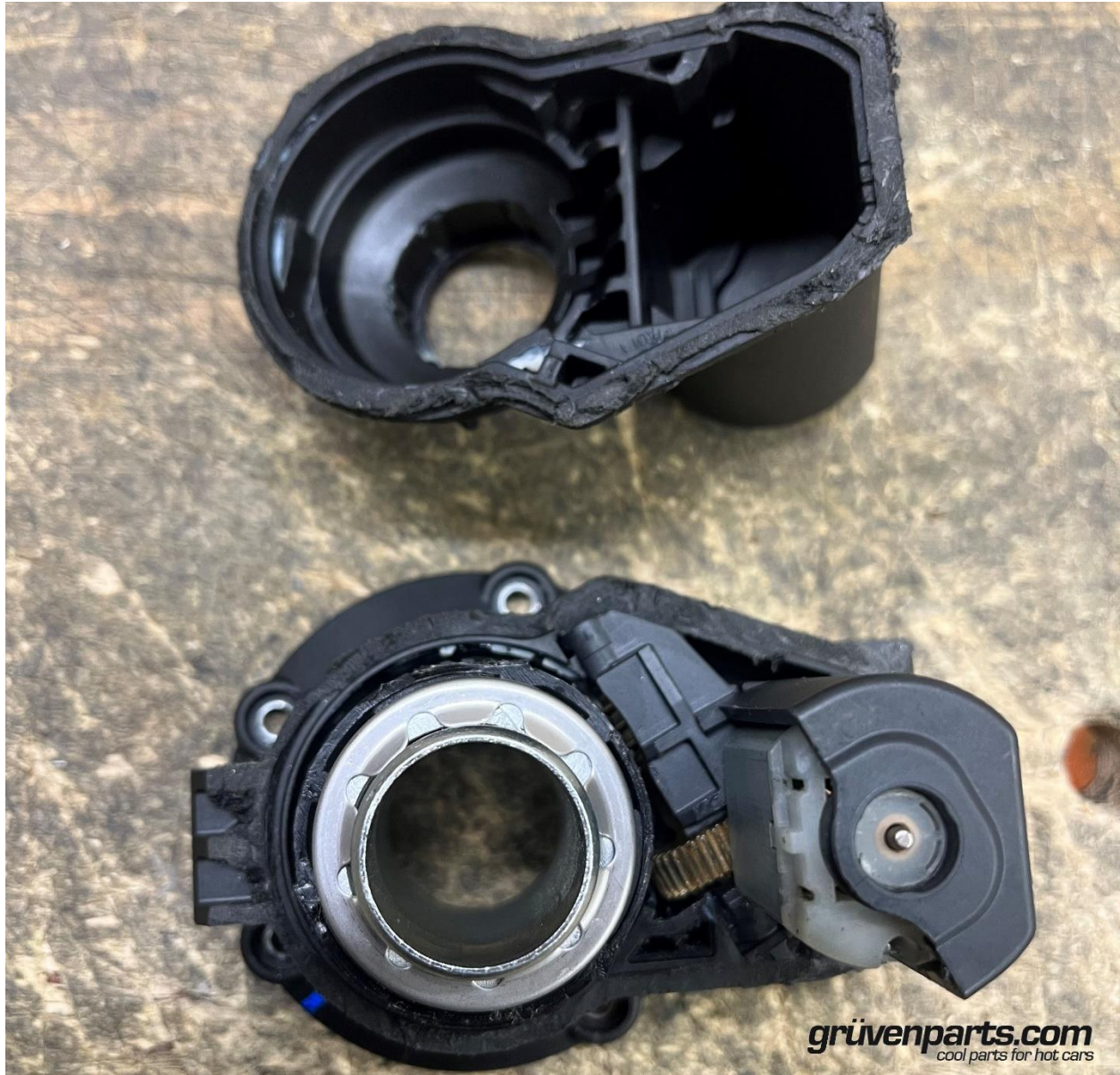


**Step 8 –** Remove the upper case half and clean up the cut surfaces – deburr and remove any debris. Remove the plastic OEM spiral drive gear and replace with GruvenParts all brass gear. Reinstall the C shaped metal bracket under the drive gear. Note in the pics below, the gruveparts brass main gear has already been installed into the unit. Note the new brass gear and the Nylon stop ring are both side specific as shown below – do not install a passenger gear into a driver unit or it will sweep the wrong way ! Note the direction of the worm portion on the shaft and how it leans differently for driver side versus pass side.









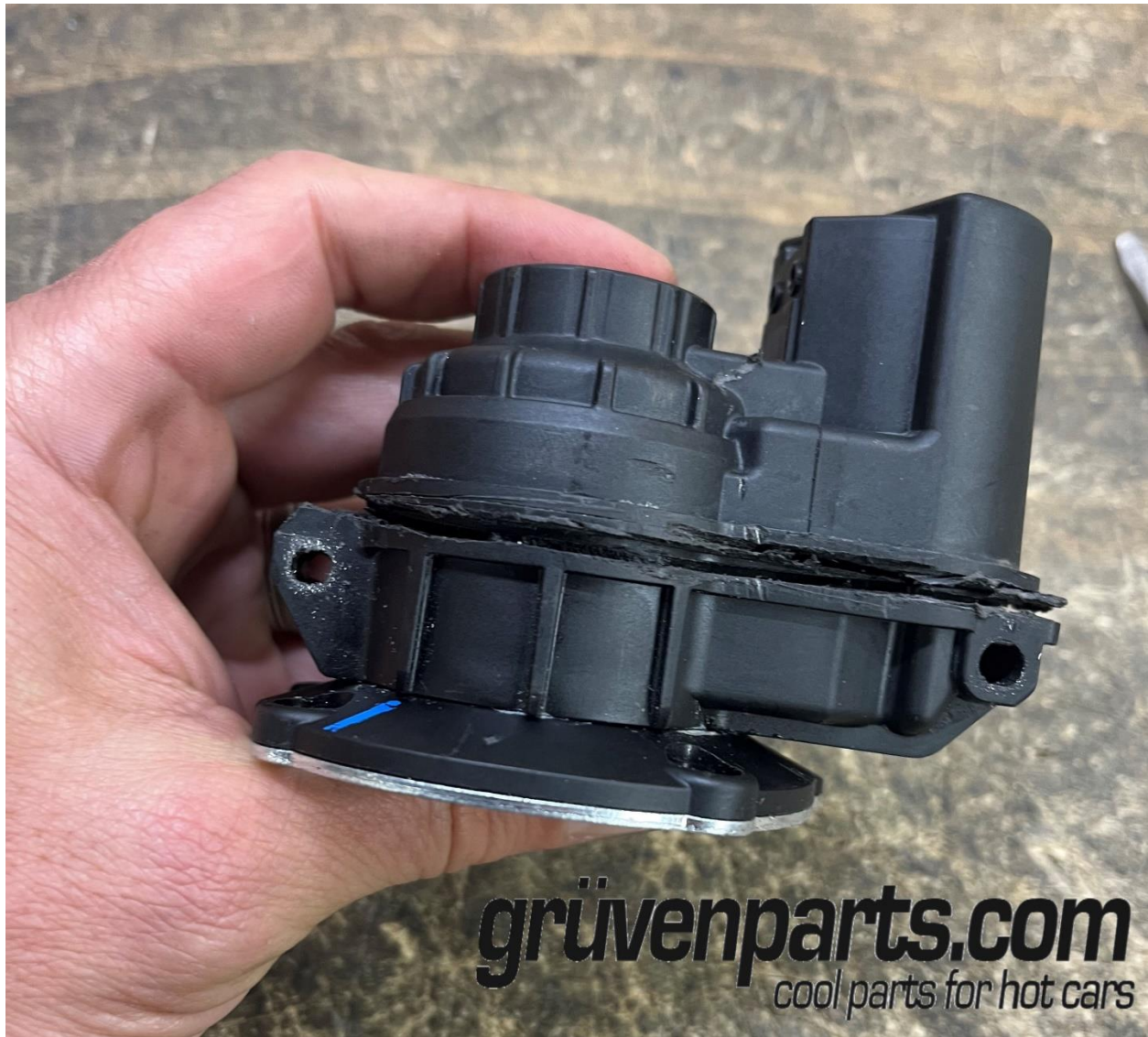




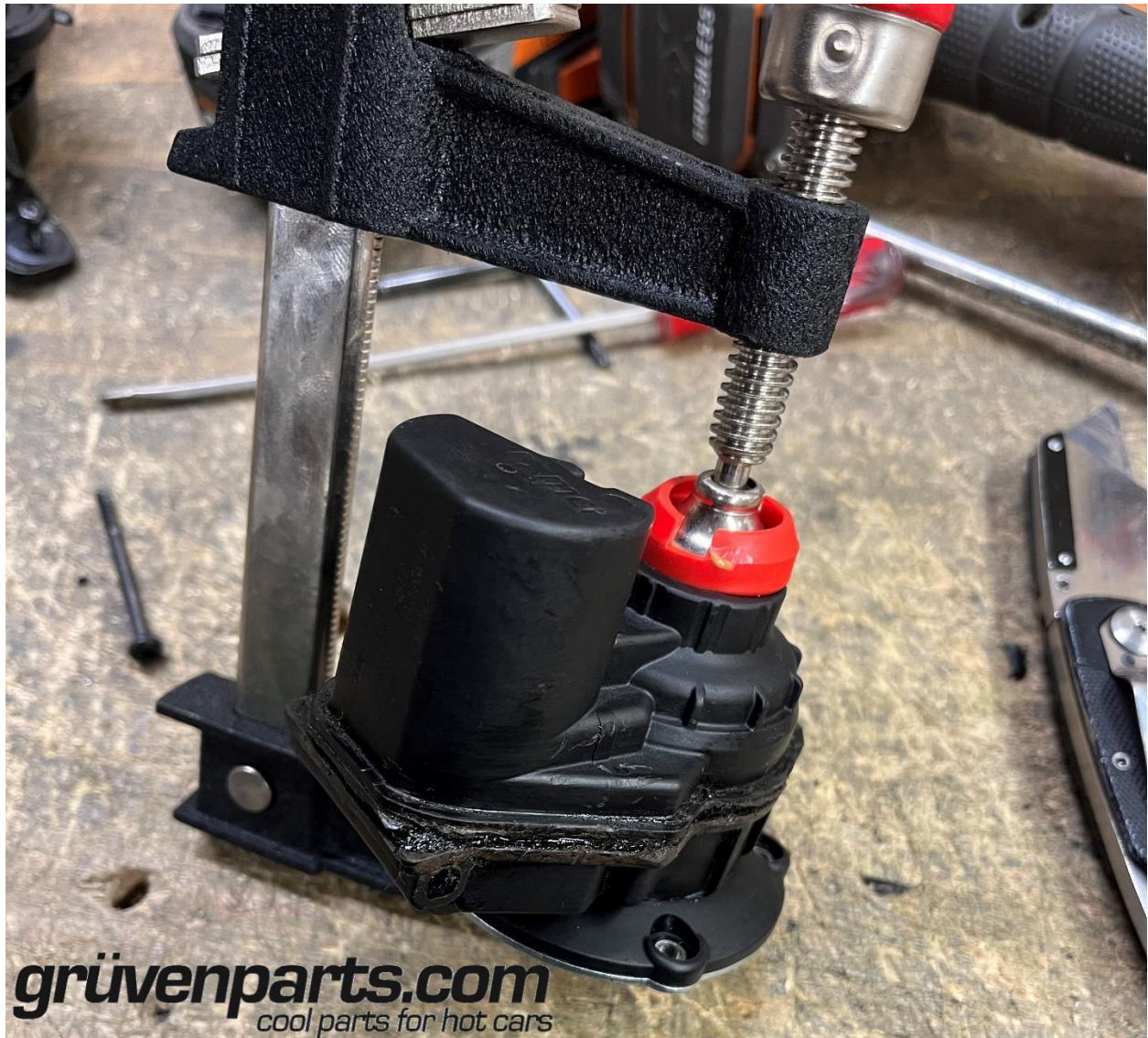
**Step 10 – Remove remnants of OEM stop ring from the center gear under the main spring. Install the GruvenParts replacement stop ring with the 3 protrusions facing down. Then carefully test fit the upper case to lower case to ensure it sits flush such that the motor plug will fit in the motor. Note the stop rings are specific to each side. They prevent the arm from over rotating in the outward direction but do not limit rotation folding inwards. The metal frame has a built in stop to prevent over rotating inward.**







**Step 10 – Plastic weld the case halves back together using a strong plastic epoxy. Clamp case and allow epoxy to fully cure.**



**Step 11 – Reinstall drive unit into mirror assembly using the reverse procedure as disassembly**