1956 to 1962 Corvette Windshield Wiper Rebuild - Disassembly

Rich's Restoration Site

http://home.comcast.net/~richmz/site/?/page/1956_to_1962_Corvette_Windshield_Wiper_Rebuild_-_Disassembly/

This is the procedure I use to disassemble the wiper motor for repair and rebuild. This example is an extensive restoration including refinishing/replating of the external metal parts. However it can simply be used as a guide to perform repairs of defective units as all areas are shown in detail.

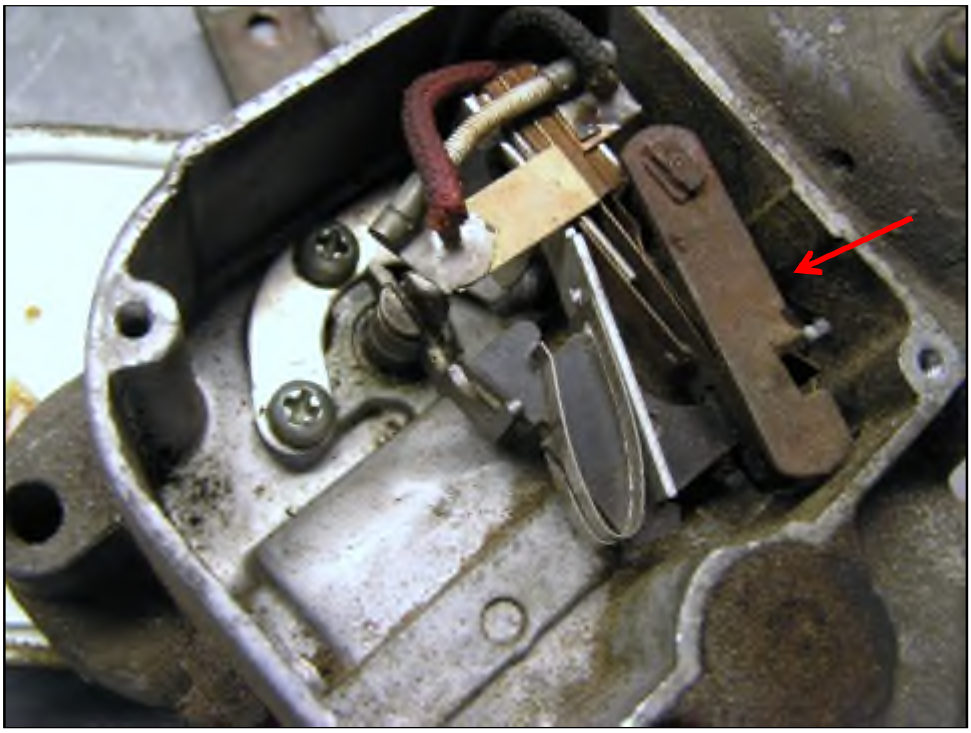
In addition to this document, additional information including diagnosis, troubleshooting and repair can be seen in the Corvette ST-12 Service Manual, Section 12-4. This is available online at this location:

http://chevy.oldcarmanualproject.com/shop/5362csg/5362csg1204.html

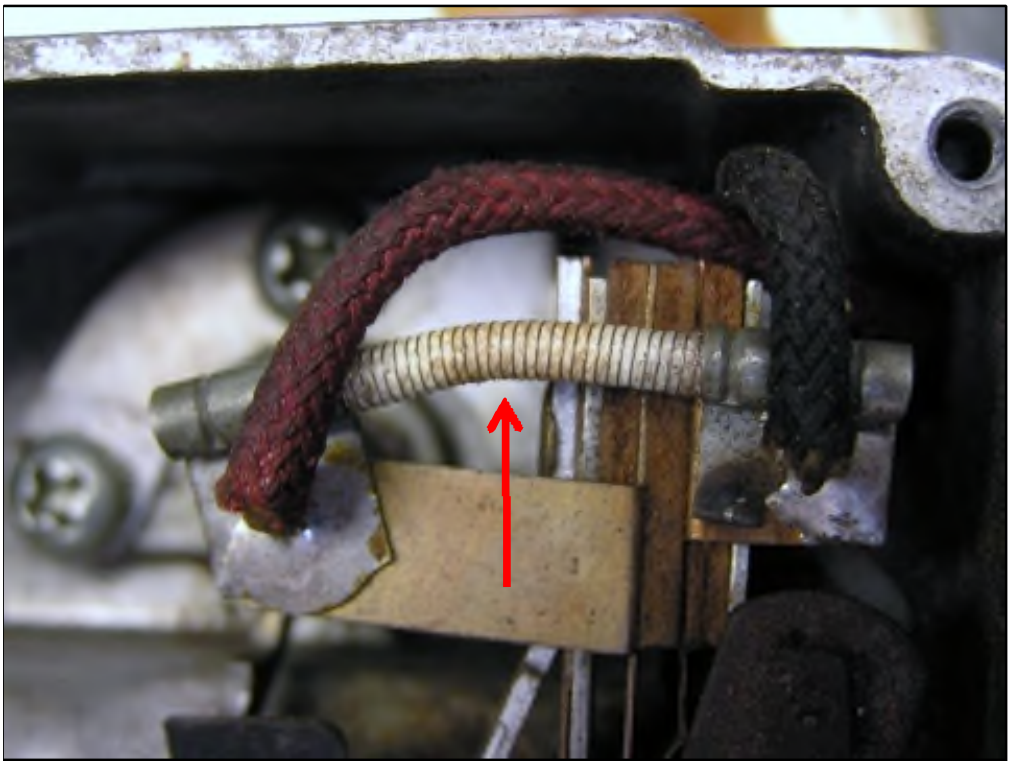
Disassembly:
This is an original wiper motor removed from a 1961 Corvette. It is similar in design to wiper motors used on 1956 to 1962 Corvettes and similar to many Passenger car motors of the era. Some of the external features are different but much of the internals are the same.

This is what it looked like after I began to take it apart for rebuild.

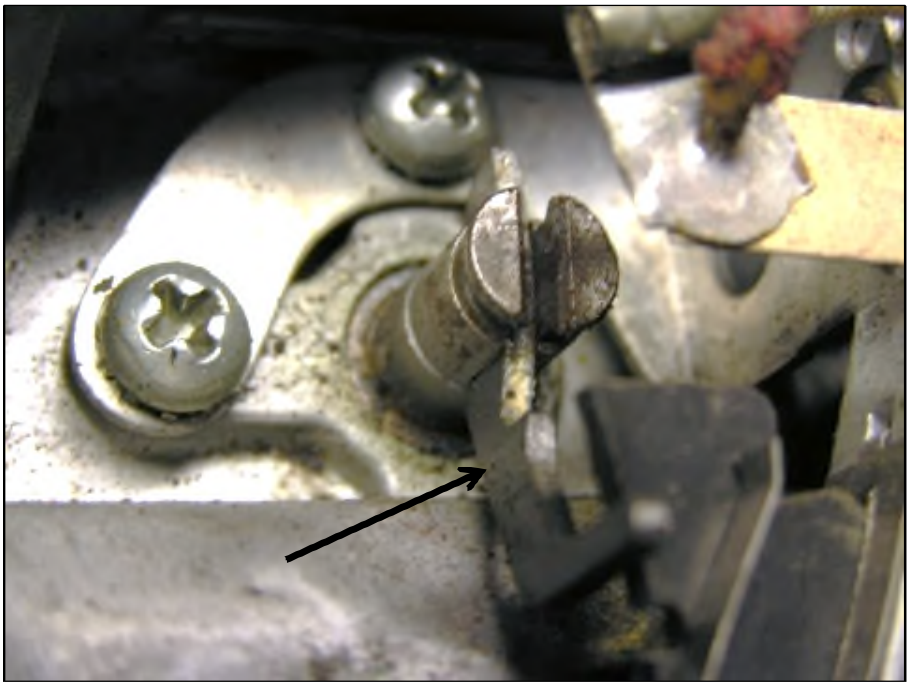
Remove the top cover from the housing by removing the 4 screws and the cable actuator attaching hardware. There will be different actuators if the car is equipped with windshield washers or not. Inside you will see the main switch and the park trip lever. The lever to the right is the cable actuator lever which is controlled by the dash knob/cable.



Desolder the red and black wires from the switch. Pay careful attention to protect the wirewound resistor from heat and physical damage.



Remove the 2 screws securing the switch. Carefully slide the switch out of the housing, around the park trip lever (arrow) and out towards the left.

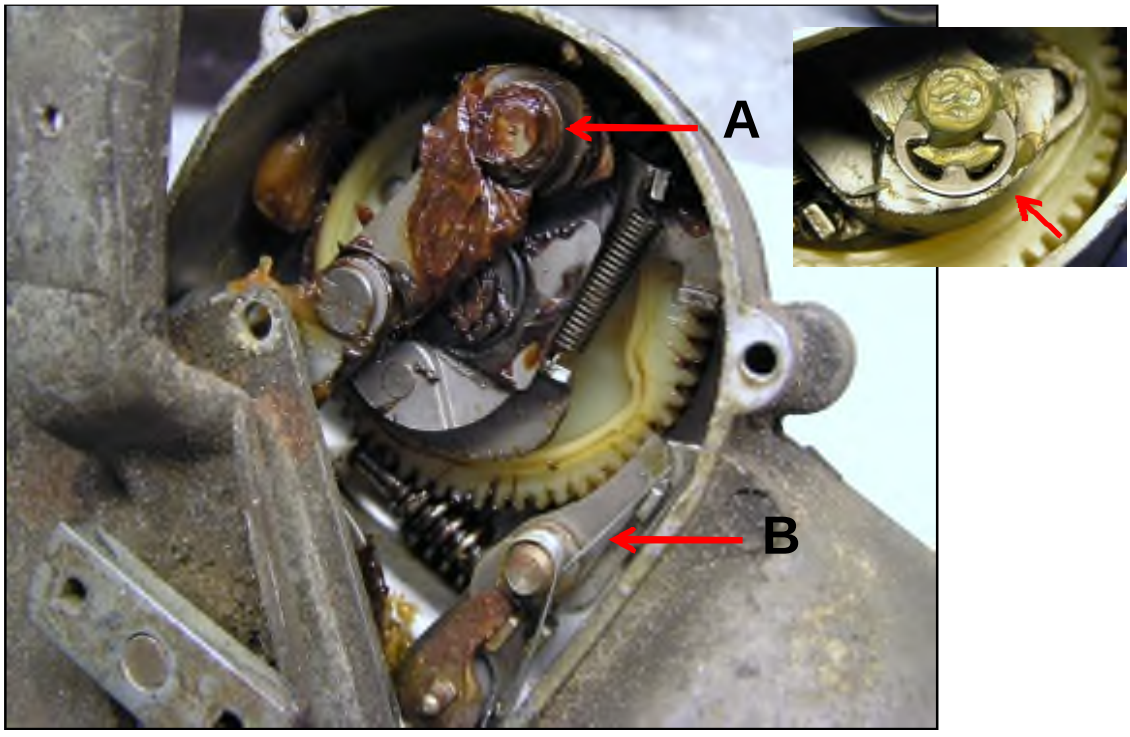


Remove the clip and washer from the park trip lever (oscillating arm), then using a pry tool, carefully lift the lever from the slotted shaft. This is what the parts look like after removal.

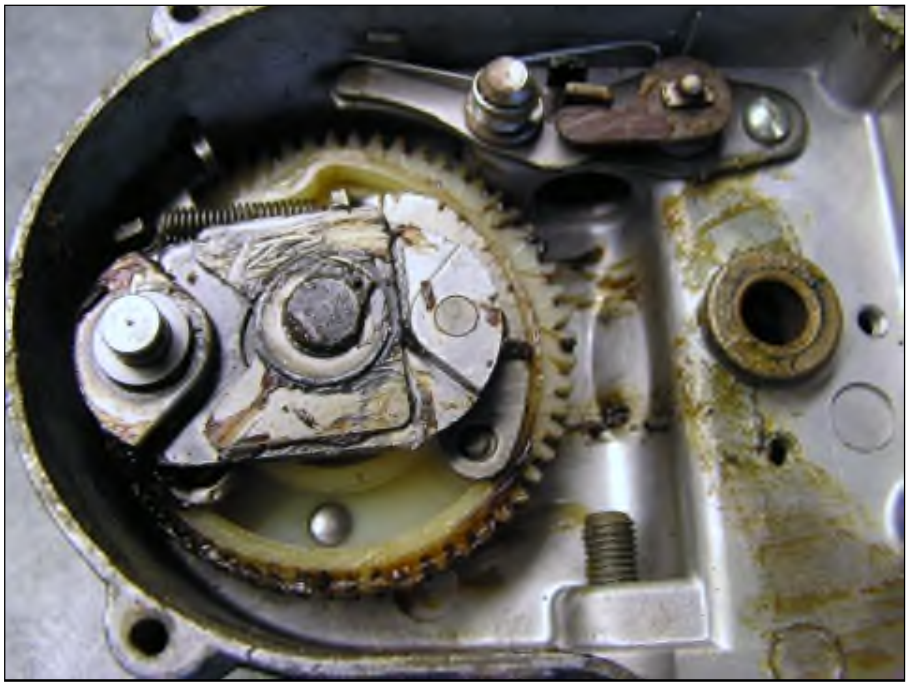
Remove the two long hex-head machine bolts holding the motor case to the housing. There may be a small bracket attached to the lower screw. Carefully twist and pull the cover from the housing. The armature will remain in the housing because the gear mechanism is still installed. **Pay attention to the field wires and the switch wires as they come out from the housing**.

Remove the 4 Phillips screws attaching the rear cover. Rotate the cover up and away from the housing.

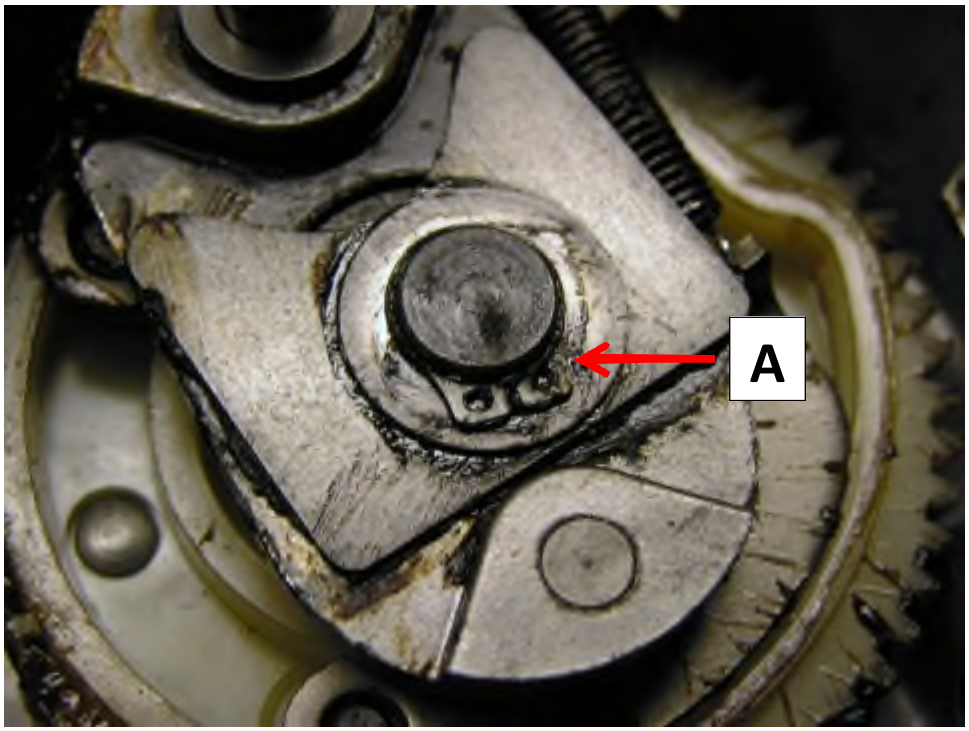
There will be an E-clip (**A**) holding the link lever to the gear mechanism. Remove the E-clip, and lift the link from the shaft. You can barely see it under the old red grease. Note there is a small spacer washer below the link lever. Also remove the spring (**B**) attached to the lever shaft, shown in the lower right of the photo below.



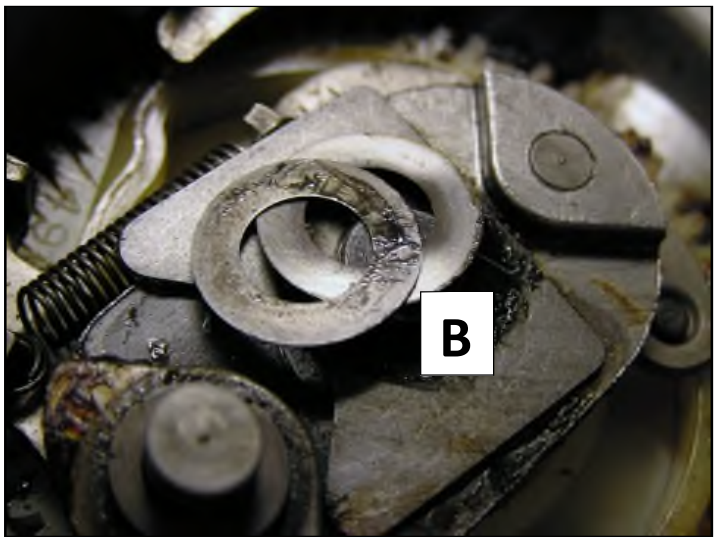
Now remove the cover and linkage assembly/shaft from the motor housing. Inside you will get a better view of the gear mechanism and the various links and levers to control the run and park functions. Clean excess grease from the area.

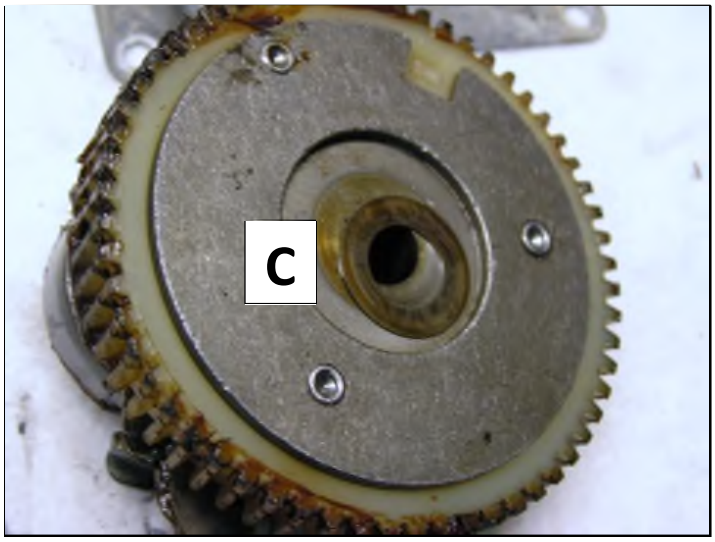


Remove the C-clip (**A**) and shim washers (**B**) from the shaft, and lift the gear out of the housing. Note there will also be a shim washer (**C**) below the gear.

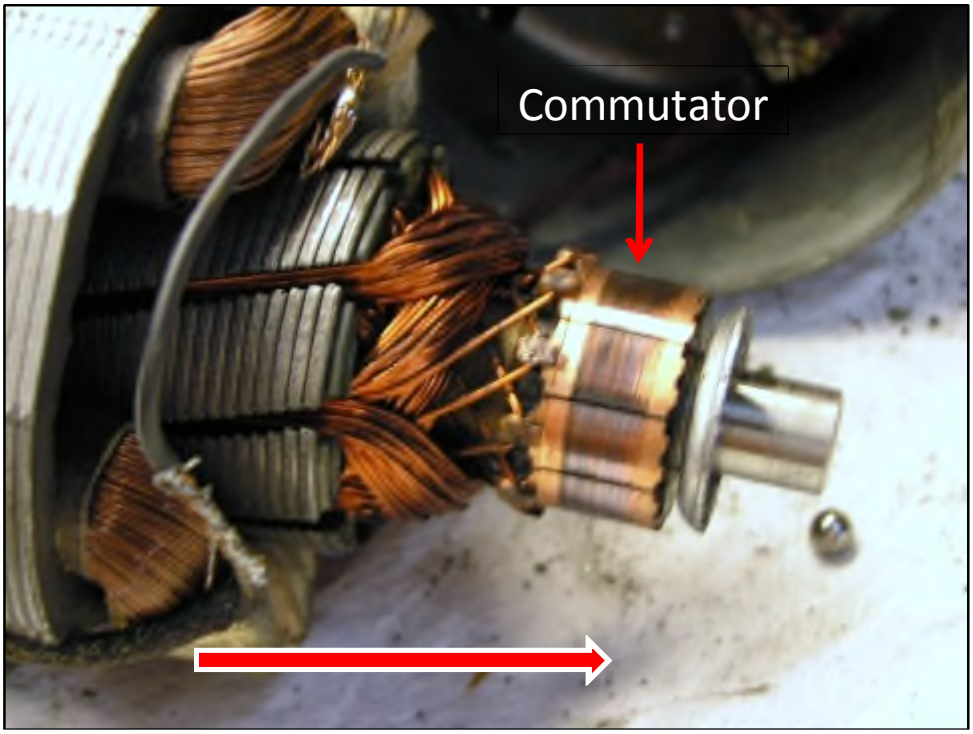



K-D TOOLS
5191

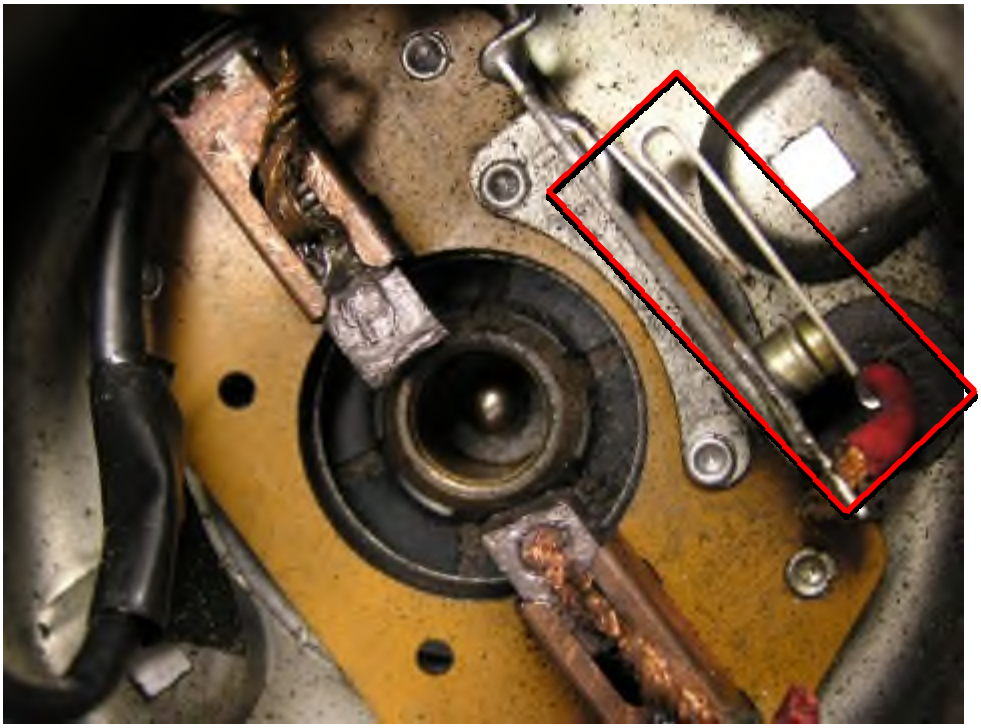

B

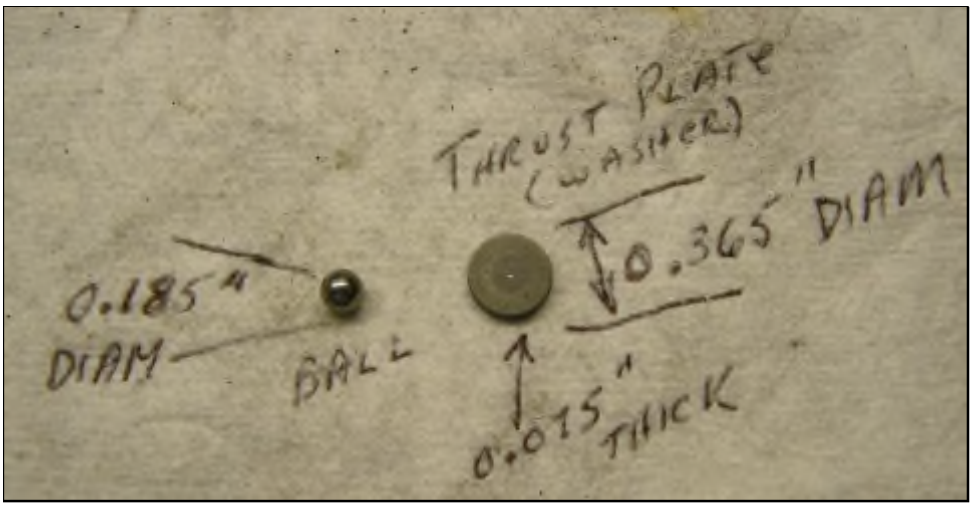

C

Now you can remove the armature from the housing from the commutator end (where the brushes make contact).There will be a bearing ball, felt donut, and spacer/disc located in the motor case bearing. Sometimes the ball will be stuck to the end of the armature.



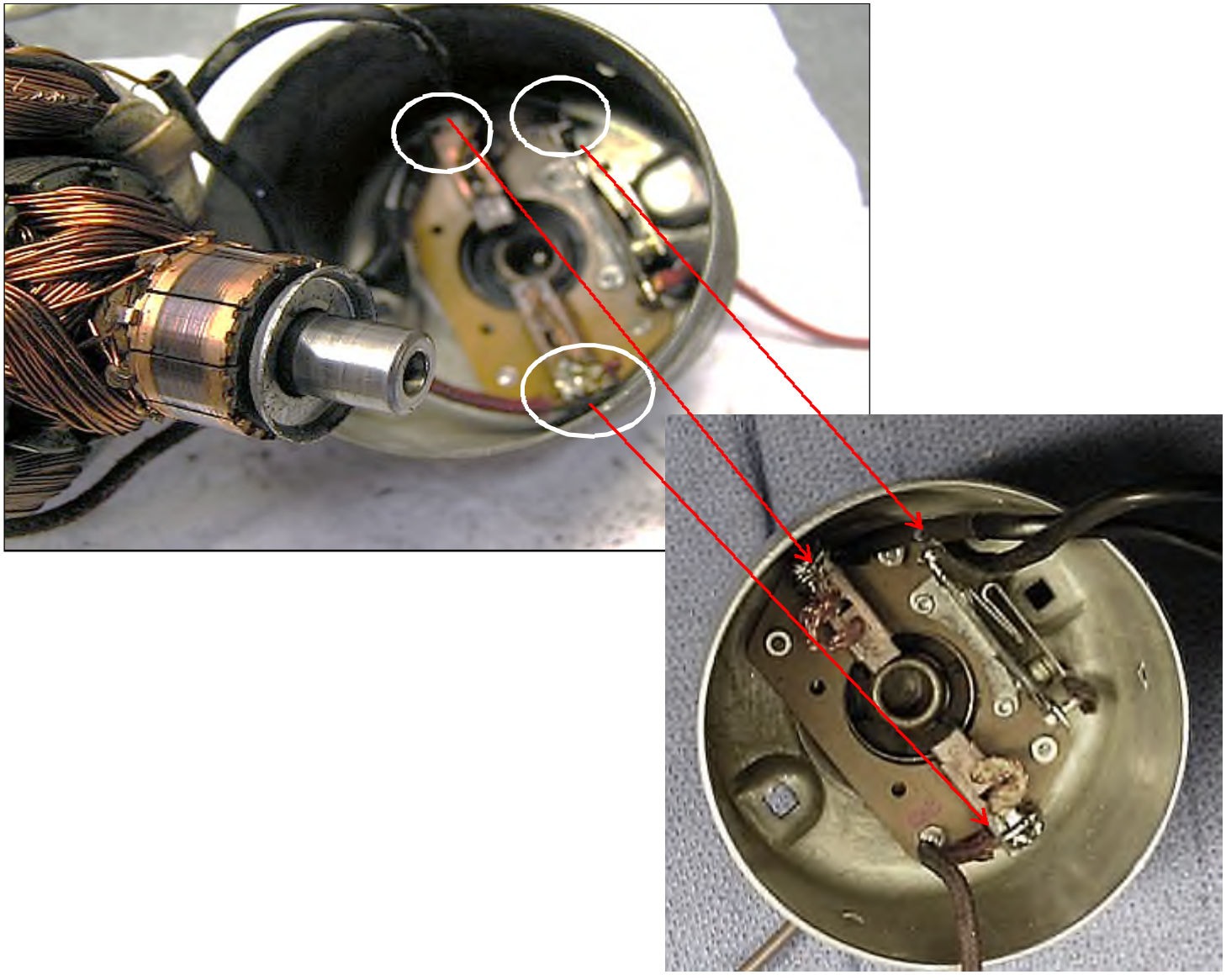
This one needs new brushes and a new brown lead wire. Note one brush was installed backwards previously. This unit was worked on in the past. The thermal breaker (box) can also be seen below.



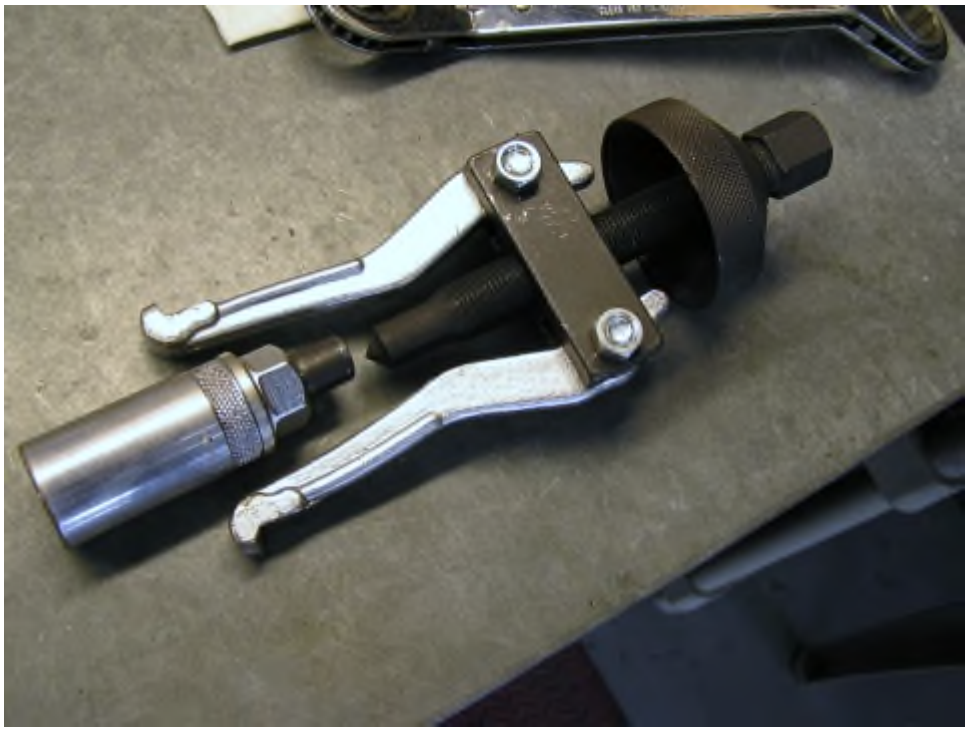


Bearing ball, felt donut, and spacer/disc

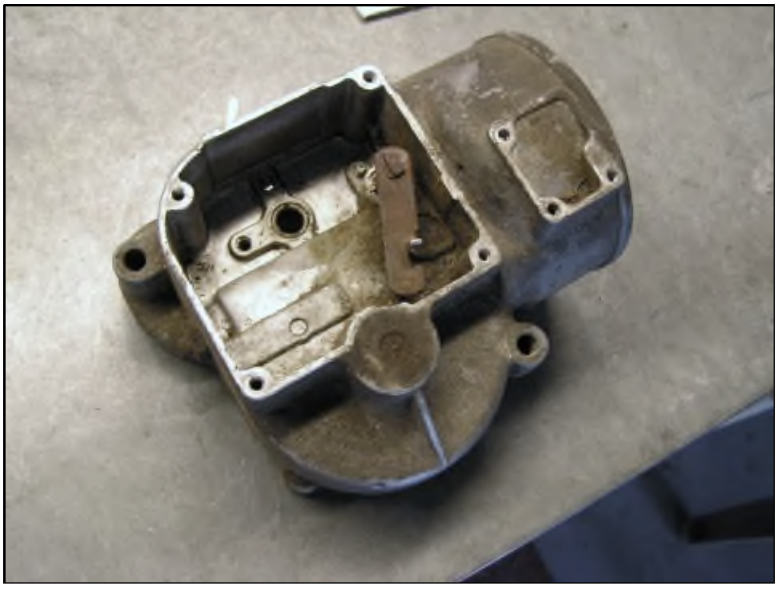
Mark each wire position and desolder the wires and brushes from the brush holder board.



I decided to remove the field windings from the unit to get the case housing refinished. This is the puller I used to remove the field windings. It's a combination of a slide hammer jaw set and the threaded bolt from a ball-joint puller. It worked perfectly. Now the housing can be sent out for refinishing. The switch levers cannot be removed unless you "un-stake" their attachments. This is not necessary.

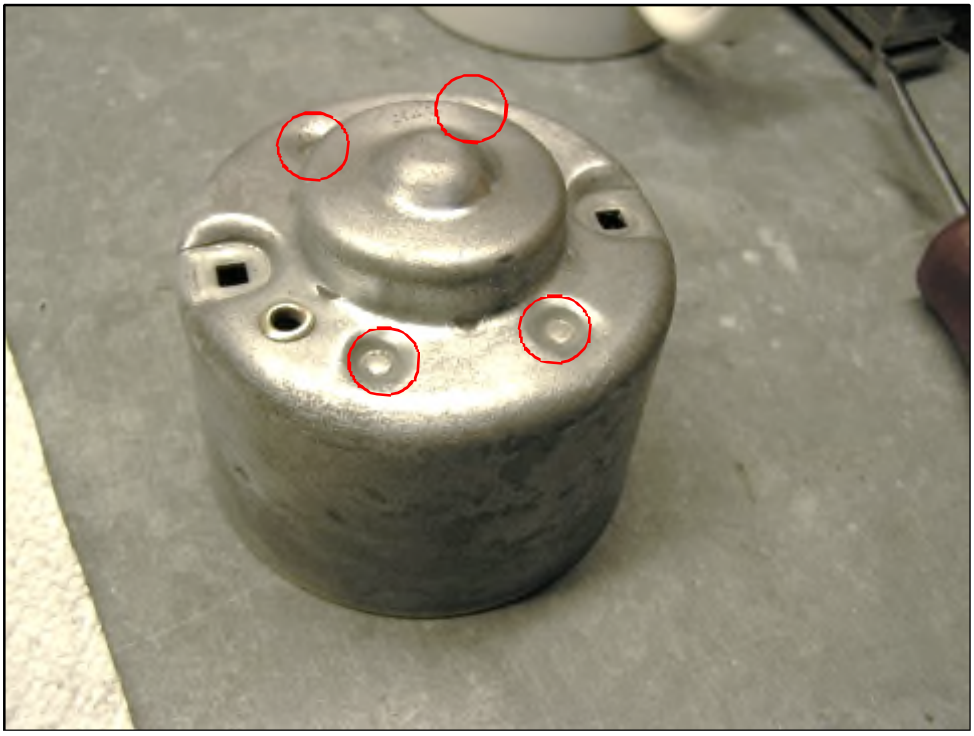


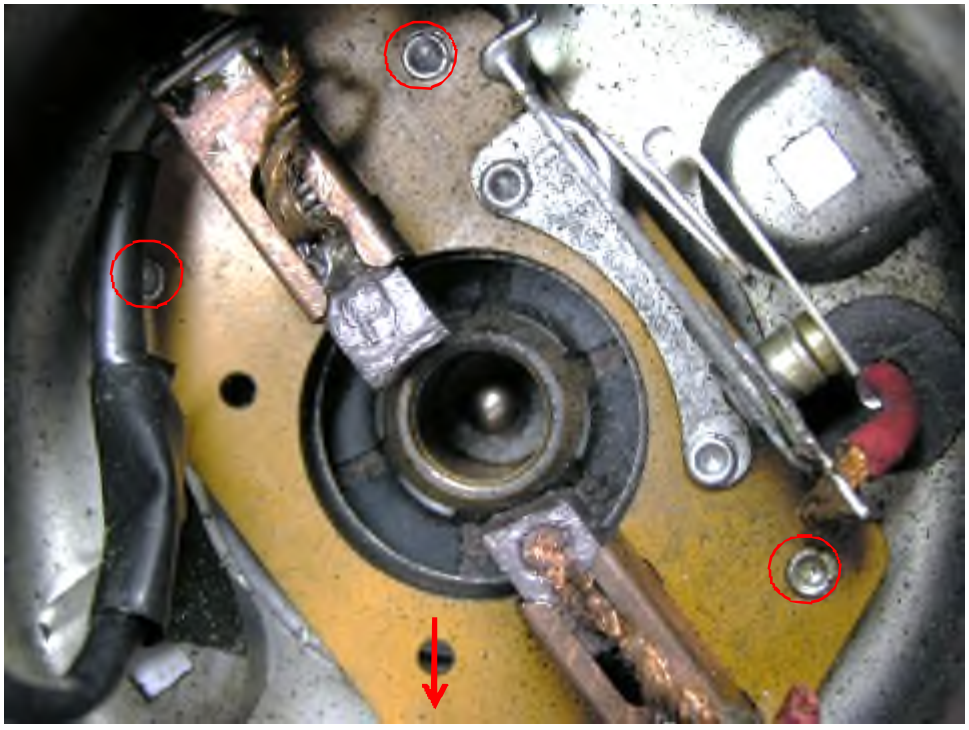

BRUSH
(NEG)
M-55



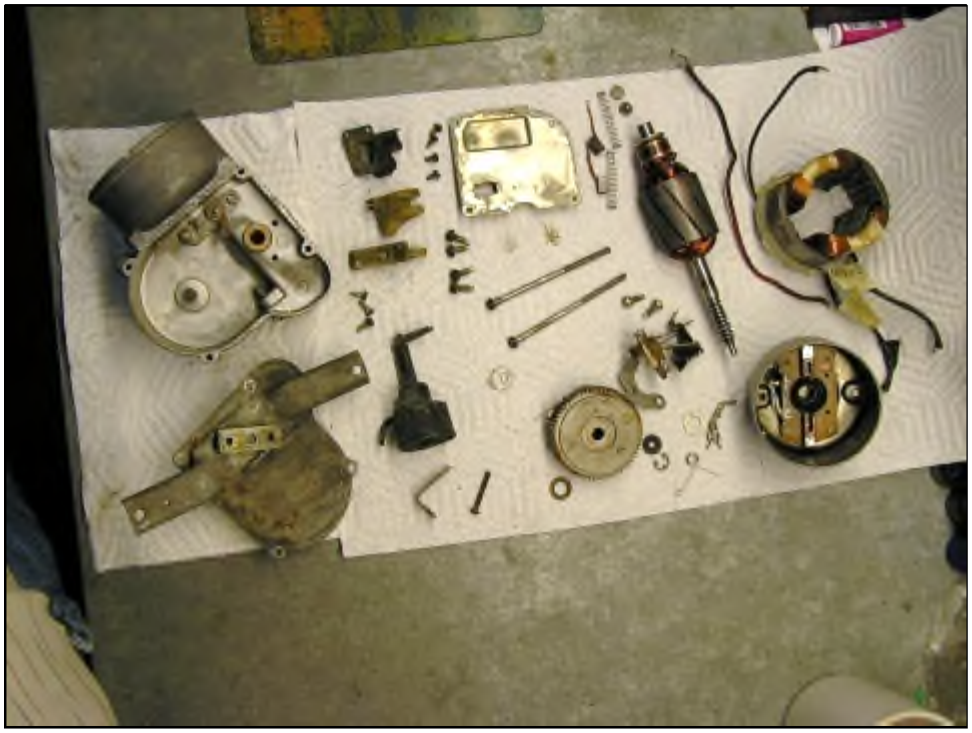
Now for removal of the drive cog from the rear case. Stake both the shaft and the cog (i.e., lightly punch or scratch the cog and shaft to make alignment reference points) to maintain proper alignment on reassembly (A). Drive the shaft from the cog using a drift. Remove the shaft and link assembly (B). The rear cover (C) can now be cleaned and prepared for plating along with the front cover.

The end case cannot be plated unless the brush board is removed. If desired, simply drill out the 4 small rivets from the inside and lift the board out.





After disassembly, organize and clean the parts for a thorough restoration. The 3 main parts for plating are the motor case, front cover, and rear cover. The main housing can also be cleaned. All other small parts may require light cleaning and detailing.



See the link below for the Assembly process after all parts are restored or refinished.

http://home.comcast.net/~richmz/site/?/page/1956_to_1962_Corvette_Windshield_Wiper_Rebuild_-_Assembly/