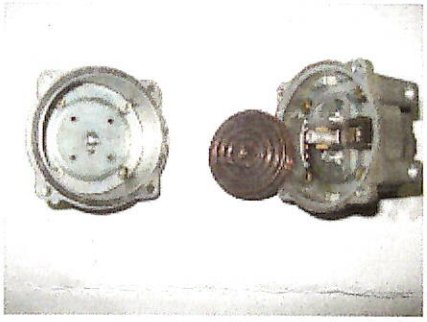
MPS Diaphragm Replacement

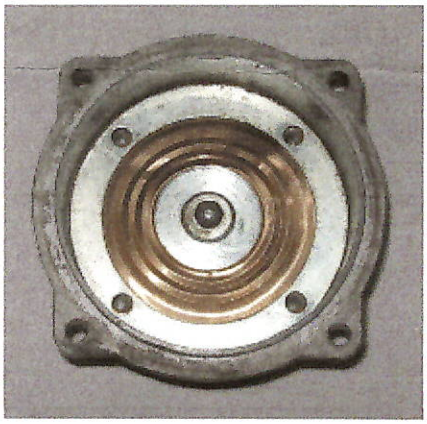
Read through these instructions before beginning

1) If your MPS housing is held together with screws remove them and procede to step #3. If your housing has rivets use a 3/16 drill bit to drill the rivets deep enough until the head comes off.

2) Using a small punch tap the rivets from the housing.

3) With the housing apart set the aneroid cell and housing half with the electrical connector aside.





4) Remove the four screws and remove the part load stop plate, retaining ring, diaphragm and gasket.

5) If you are replacing the full load stop to make your MPS tunable measure the stop screw's protrusion into the housing so that the adjustment will be close upon reassembly. If you are only replacing the diaphragm go to step #10

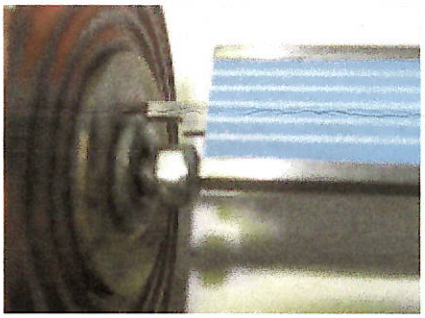
1.97mm

6) Removal of the full load stop screw can be difficlult. Begin with a heat gun to soften the epoxy. Using a small screwdriver or dental pick remove all traces of epoxy. The screw is soft and can be stripped easily. Using a screwdriver that fits snugly in the slot carefully turn the screw in.

7)Remove all epoxy from newly exposed threads. To prevent galling lubricate the threads and work the screw slowly until it can be removed from the housing. Take your time. If you ruin the housing your MPS is junk. You might find that the threads cannot be sufficiently cleaned to let the full load stop screw be backed out of the housing but can be removed by screwing it in.

8) After stop screw removal, finish cleaning the threads until the screw can be installed from the outside. Use a M12x1.0 or M14 x 1.0 tap to scrape the internal threads clean. New Adjustable Stop Screws may fit more tightly than the old screw. Do not force it - use lubricant, and continue cleaning until the screw threads in fully, without resistance!

9) Be sure the 8mm hex is facing out and adjust the new full load stop screw to the depth measured previously.



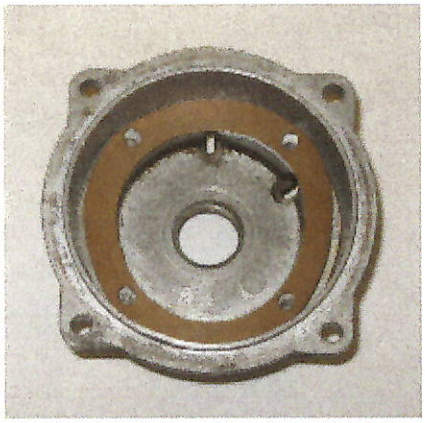
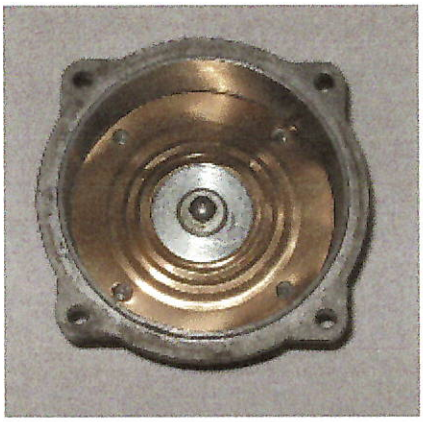
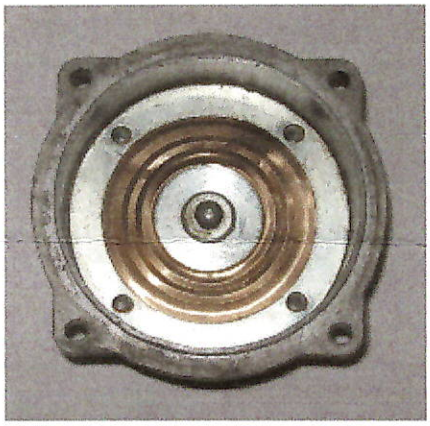
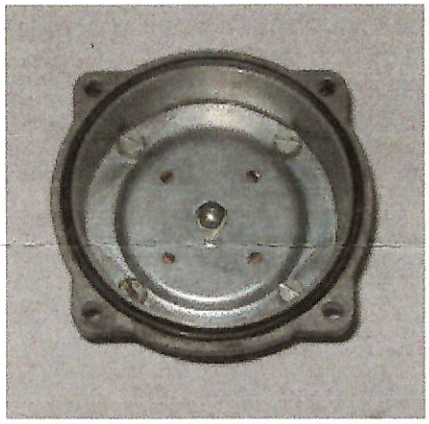
10) The inner/outer screw assembly needs to be transfered to the new diaphragm. Measure the assembly's depth in the old diaphragm.

6.51mm

11) Remove the screw assembly using the hex tool. Do not turn or remove the inner screw.

12)Replace the small O ring and install in the new diaphragm to the correct depth.

13) Apply a thin film of wheel bearing grease or non-hardening gasket compound (such as Hylomar) to both sides of the gasket. Reassemble the diaphragm into the housing with the new paper gasket. Be sure the diaphragm is installed correctly with the adjusting hex and screw slot facing the full load stop screw. Spacer ring for 2 liter MPS goes directly under the part load stop plate (inner diaphragm cover).

14) Using the new O ring reassemble the housings being careful to position the aneroid cell on the adjustment screw and armature shaft. The vent holes in the housing should face down so water can't collect in the housing. You will need to source new hardware (6-32 or 8-32 x 3/4 with nuts and washers) if your housing was held together by rivets.