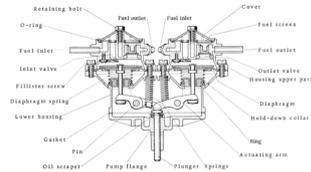


911 Resto Strip™



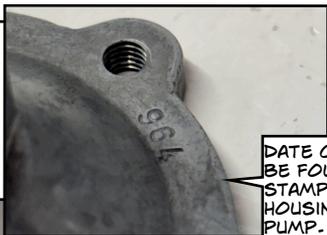
JORIS SCHWEITZER

Pierburg pump overhaul (also worth a read for 912 owners)

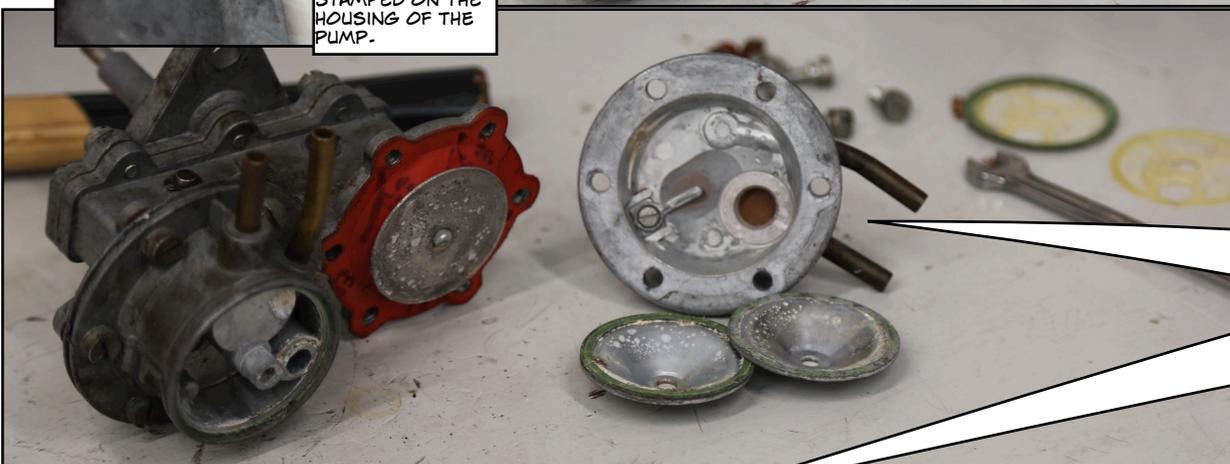
THE EARLY 911 USED A MECHANICAL PIERBURG PUMP TO SUPPLY THE SOLEX 40 PI CARBS WITH FUEL. AN ELECTRICAL BENDIX PUMP TAKES THE FUEL FROM THE TANK TO THE FLOAT BOWLS ON THE INTAKE MANIFOLDS. FROM THAT POINT THE PIERBURG PUMPS THE FUEL FROM THE BOWLS TO THE SIX INDIVIDUAL CARBS. OF COURSE PIERBURG DID NOT EXPECT US TO BE USING THESE PUMPS SIXTY YEARS LATER. SOME WORK WILL BE REQUIRED TO MAKE SURE THAT THE FUEL WILL ACTUALLY GET TO WHERE IT NEEDS TO GO!



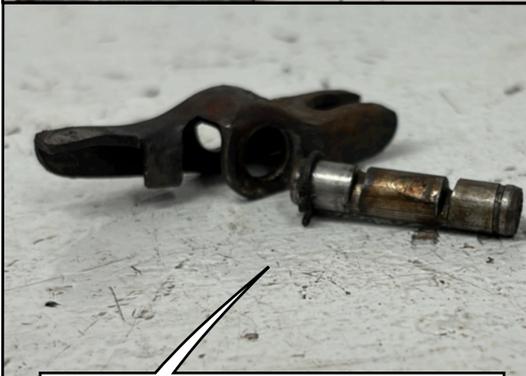
OVERHAULING A FUEL PUMP WHICH HAS BEEN USED ALL OF ITS LIFE IS USUALLY EASIER THAN ONE THAT HAS SAT FOR A LONG TIME. WITH TIME THE ZAMAK WILL START TO CORRODE. A BIT OF CLEANING AND A FEW NEW GASKETS WON'T CUT IT.



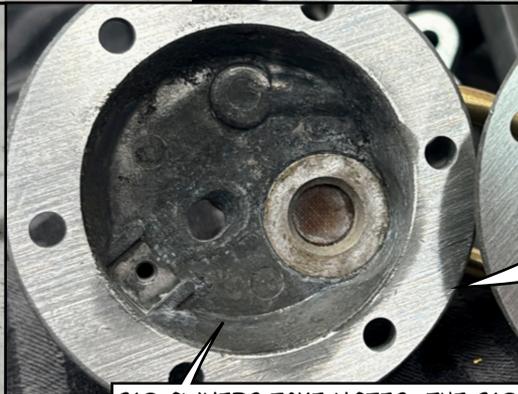
DATE CODES CAN BE FOUND STAMPED ON THE HOUSING OF THE PUMP.



THE PUSH ROD IN THE MOUNTING FLANGE MOVES UP AND DOWN WHICH PUSHES TWO LEVERS THAT ACTUATE THE PUMP DIAPHRAGMS. THE TWO VALVES IN THE TOP HALF OF THE PUMP HOUSING MAKE SURE THAT FUEL IS SUCKED IN WHEN THE DIAPHRAGM MOVES DOWN AND PUMPED OUT WHEN THE DIAPHRAGM COMES UP.



THE LEVERS THAT MOVE THE DIAPHRAGM UP AND DOWN RUN ON HARDENED STEEL SHAFTS. EITHER THIS PUMP HAS SEEN MANY MILES OR SOME SERIOUS RESISTANCE :-).



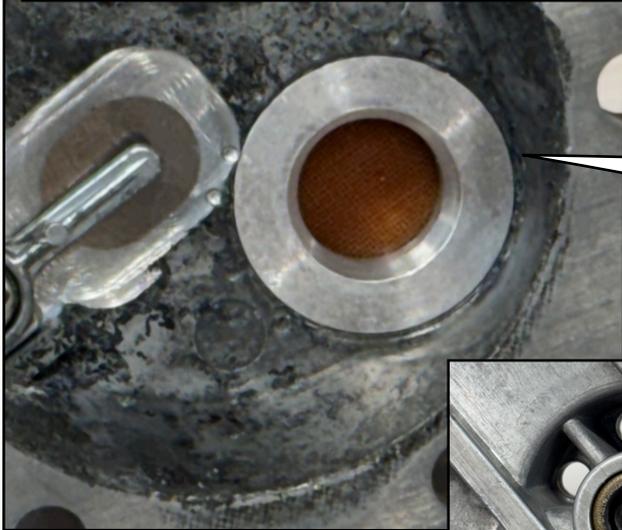
THE PUMP HOUSING ABOVE IS IN VERY GOOD CONDITION. THE INLET VALVE SEATS AND SHUTS NICELY ON THE PUMP HOUSING. THE OTHER PUMP HAS NOT BEEN SO LUCKY. CORROSION HAS EATEN AWAY THE SEALING SURFACE. LET'S SEE IF WE CAN FIX IT!

912 OWNERS TAKE NOTES. THE 912 USED A PIERBURG PUMP WITH LARGELY THE SAME PRINCIPLE. A SINGLE PUMP IS USED INSTEAD OF THIS DOUBLE PUMP. THE PUSH ROD FOR THE 912 PUMP IS DIRECTLY CONNECTED TO THE DIAPHRAGM.

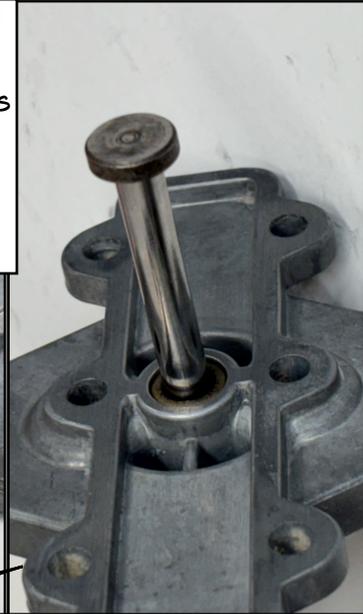
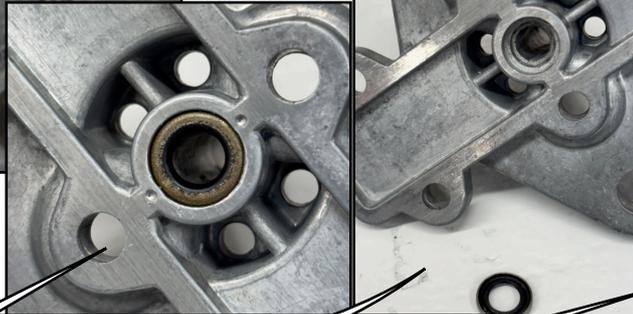


CORRODED PUMP HOUSINGS CAN BE SAVED IF THE PITTING IS NOT TOO DEEP. A VERY SMALL END MILL CAN BE USED TO REWORK THE SEALING SURFACE.

IF THE OUTLET VALVE DOES NOT SEAL ANYMORE IT CAN BE REPLACED. A COUPLE OF SMALL HOLES CAN BE DRILLED IN THE ALUMINUM RING. AFTER THREADING THE HOLES IT CAN BE PULLED OUT SLOWLY AND EVENLY. TAKE CARE WITH THIS OPERATION OTHERWISE THE NEW ALUMINUM RING WON'T SEAL PROPERLY AROUND ITS CIRCUMFERENCE.

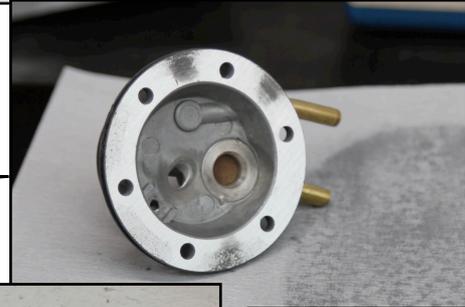


THE NEW OUTLET VALVE IS PLACED IN THE HOUSING. TO ASSURE THE ALUMINUM RING DOES NOT LEAK AROUND ITS CIRCUMFERENCE CILINDRICAL LOCTITE CAN BE USED. AS A FINAL MEASURE I HAVE PEENED THE HOUSING AROUND THE RING LIGHTLY WITH A SMALL CENTER PUNCH. AS A FINAL CHECK YOU CAN PUT SOME PRESSURE (YOUR MOUTH) ON THE BRASS OUTLET PIPE TO SEE IF THE VALVE IS LEAK FREE.



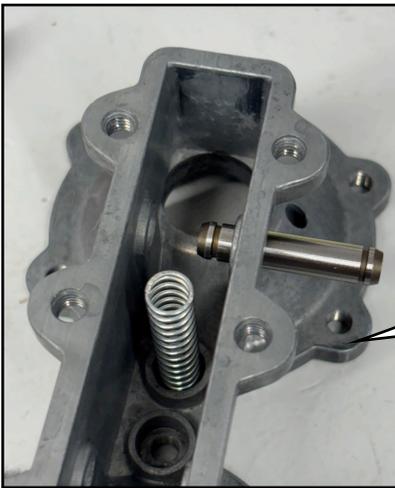
THE PUSH ROD THAT ACTUATES THE PUMPS IS LUBRICATED BY THE OIL IN THE CHAINHOUSING OF THE ENGINE. TO MAKE SURE THAT THE OIL ONLY REACHES THE PUSH ROD AND DOESN'T FILL UP THE REST OF THE PUMP HOUSING A SEAL IS PLACED IN THE FLANGE. A NEW ONE CAN SIMPLY BE PRESSED IN. TWO PUNCH MARKS MAKE SURE IT WILL STAY PUT FOR THE NEXT SIXTY YEARS :-).

ZAMAK IS A PRETTY SOFT MATERIAL. THE SEALING SURFACES WARP OVER TIME DUE TO HEAT CYCLES AND REPAIRS. TO MAKE SURE THESE SURFACES SEAL AGAIN THEY ARE MADE TRUE. ALL ZAMAK PARTS ARE FIRST CLEANED BY TUMBLING THEM IN CERAMIC MEDIA. AFTER TUMBLING THEY ARE ULTRASONICALLY CLEANED.

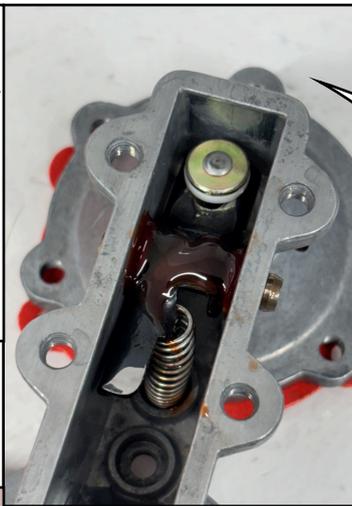


ALL HARDWARE IS ZINC PLATED. YOU CAN BUY NEW SCREWS BUT THE SCREW HEADS WON'T BE THE CORRECT SHAPE. DETAILS, DETAILS, DETAILS!

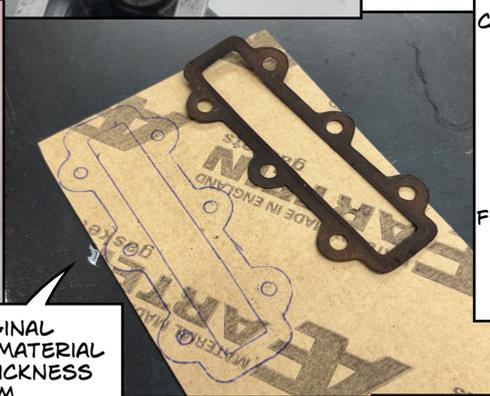




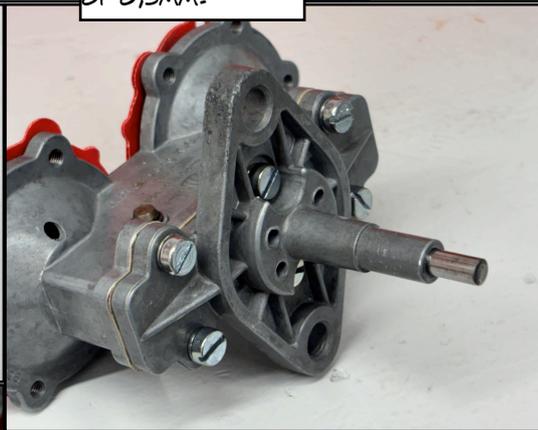
NO COMPLETE REPAIR KITS ARE AVAILABLE IN ORDER TO REPAIR THESE PUMPS. LUCKILY THE DIAPHRAGMS ARE STILL AVAILABLE TOGETHER WITH THE STEEL SHAFTS FOR THE LEVERS. STUFF LIKE SPRINGS, OIL SEALS AND GASKETS WILL HAVE TO BE SOUGHT ELSEWHERE OR MADE IN HOUSE.



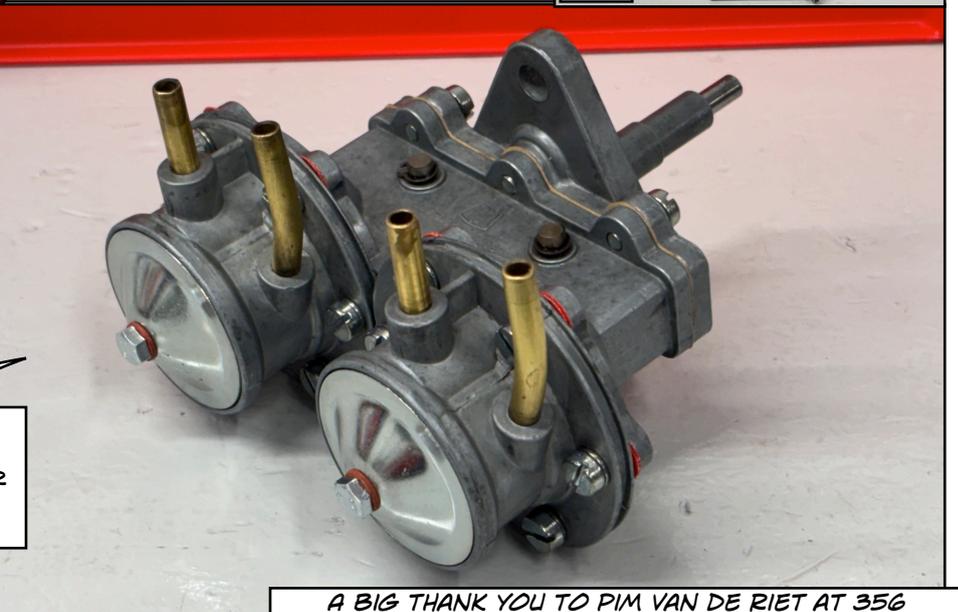
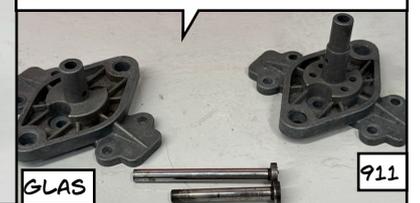
ASSEMBLY STARTS WITH PLACING THE DIAPHRAGMS IN THE HOUSING. NEXT THE LEVERS, SHAFTS AND SPRINGS CAN BE PLACED. THE MOUNTING FLANGE WITH THE PUSH ROD CAN THEN BE SCREWED ON THE HOUSING. USE THE PUSH ROD TO PULL THE DIAPHRAGMS DOWN TO A POINT WHERE THE PUMP HOUSINGS CAN BE INSTALLED WITHOUT STRESSING THE DIAPHRAGMS. FINALLY THE MESH FUEL FILTERS CAN BE PLACED ON THE PUMP HOUSINGS TOGETHER WITH THE GASKET FOR THE COVER. DON'T SCREW THE COVERS ON TOO TIGHT OR YOU MIGHT STRIP THE THREADS. ONCE EVERYTHING HAS BEEN ASSEMBLED YOU CAN TEST THE PUMPS BY ATTACHING SOME FUEL HOSES AND LETTING THEM PUMP UP SOME FUEL INTO TWO SEPERATE MEASURING CUPS. THIS WAY YOU CAN CHECK IF THE VOLUME OF FUEL PUMPED IS EQUAL.



THE ORIGINAL GASKET MATERIAL HAS A THICKNESS OF 0,5MM.



IF YOU ARE IN THE MARKET FOR ONE OF THESE PUMPS KEEP IN MIND THAT THEY WERE ALSO USED FOR THE 'GLAS TS AND GT'. THE DIFFERENCE IS THE LENGTH OF THE MOUNTING FLANGE AND PUSH ROD. THE 911 FLANGE AND ROD IS LONGER. FOR THE 911 THE ROD MEASURES 67MM VS GLAS AT 50MM.



BY TUMBLING ZAMAK IN CERAMIC MEDIA YOU GET THE ORIGINAL LOOK. IF YOU WOULD LIKE IT TO BE SHINIER YOU COULD TRY FOLLOWING UP WITH WALNUT AS THE TUMBLING MEDIA.

A BIG THANK YOU TO PIM VAN DE RIET AT 356 CLASSICS B.V. FOR LETTING ME DO THE RESTORATION WORK ON THESE PIERBURG PUMPS.
 JORIS SCHWEITZER ©
 RESTO STRIPS™ IS A PART OF RESTO LAB™
 FOR MORE RESTORATION CONTENT PLEASE VISIT
 WWW.RESTOLAB.NL