Holley Carburetor Rebuild

There are a few things that you should check when rebuilding a Holley 4-barrel. Our example here is a 1967 300HP Corvette, List#3810 off our member's car, Jeff Lauch. We are not going through each detailed step as there are many resources already available. We used an original Holley rebuild kit, but their kit is for several different models and has many parts not relevant to our carburetor; don't worry about many left over parts. But be very careful to match all the gaskets and parts to the ones being taken off. One small hole can make a difference.

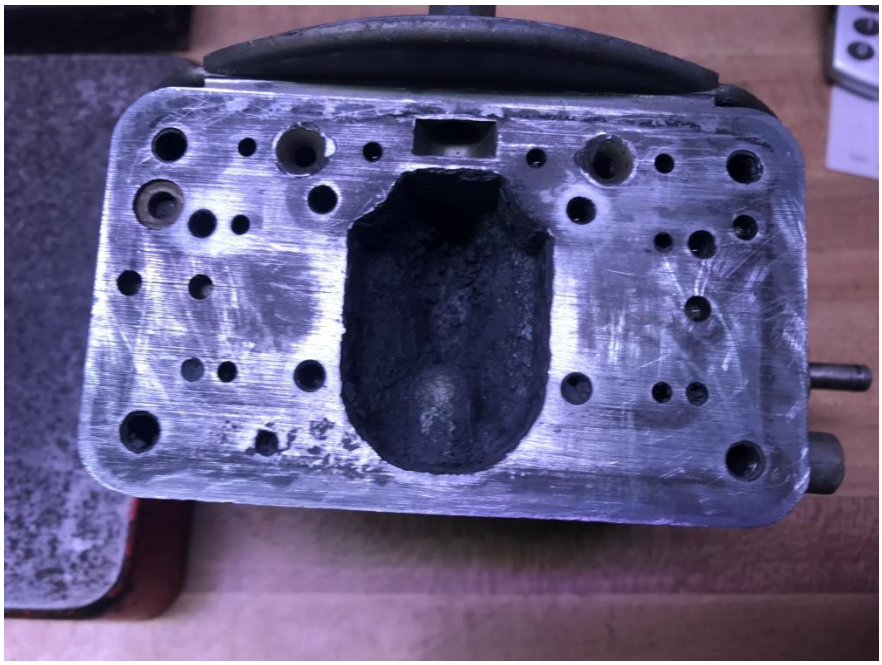
We divided our carburetor in to sections and carefully layout out the parts to help remember where they go when reassembling. We had the: 1. Primary Float Bowl, 2. The Secondary Bowl, 3. The Base unit and 4. The Main Body.

Please note that we have the gaskets matched up to the old gaskets and there were many different version of the same gasket.

We also took some pictures before disassembling some of the parts to ensure we remembered how they went back, easy today with your phone or digital camera.

With the carburetors and their age, many times you will find some warpage with the main unit and where the bowls meet. We also noted that the main unit and the base did not match up very well as well. So to address these issues we ground off these surfaces to ensure that the gaskets will seal when we reassemble the carburetor. Since we did not have a surface grinder, we used a honing block.

Using the “manual” method to ensure the surfaces are flat takes some care that the honing block is consistently flat with the surface.



After some grinding of the service, you can really see just how un-level this service was. We ground it further until we had a smooth surface to ensured it will seal. We did the same procedures on the other two surfaces.

Inspecting this carburetor, it seemed to us that this had not been serviced in many years. It look like fine sand particles in the float bowls and it came apart very hard. It needed some really good cleaning.

We cleaned the Carburetor using a cleaning vat and soak the components to clean out all passages and surfaces. We then scrapped the gasket surfaces to remove any left on gasket material and to ensure a good seal when reassembled. We reassembled the unit getting the floats set to the specification in the directions. We did have some questions and this carburetor, List #3810, was not specified in our directions. Talking to Holley, because of the age of this unit, it only falls into a general range.

In fact when we ran it on Jeff 's car, we had a fuel leak where the tube feeds gas to the rear fuel bowl. Again, talking to Holley Technical staff, it seems like there are three versions of these seals. Our O-rings seem to be too small and did not make a good seal. Holley is supplying with the other versions at no cost. After sine cranking to get gas to the carburetor, it started and seems to run OK. After fixing the gas leak, we will do set the idle mixtures and his car should be ready to drive again.