Machining Process

First pull the snout off.
Then pull the rotors and gear case out of the housing.
I usually just put some good packing tape over the bearings at the back of the housing. Make sure the surface is clean a there will be oil on all surfaces. This is a easy way to keep chips and dirt out of the bearings and you should not have to repack them.
It is a good idea to remove the bypass actuator. It is held on by 2 10mm bolts. Then turn the linkage till it comes out of the arm that turns the butterfly valve. Tape the arm all the way back and out of the way.

Now the feet need to be machined down .250". But not all of them.
It is not necessary to be perfect, but the more parallel the better it will be held by the bolts.

On the elbow side all 4 feet need to be machined.

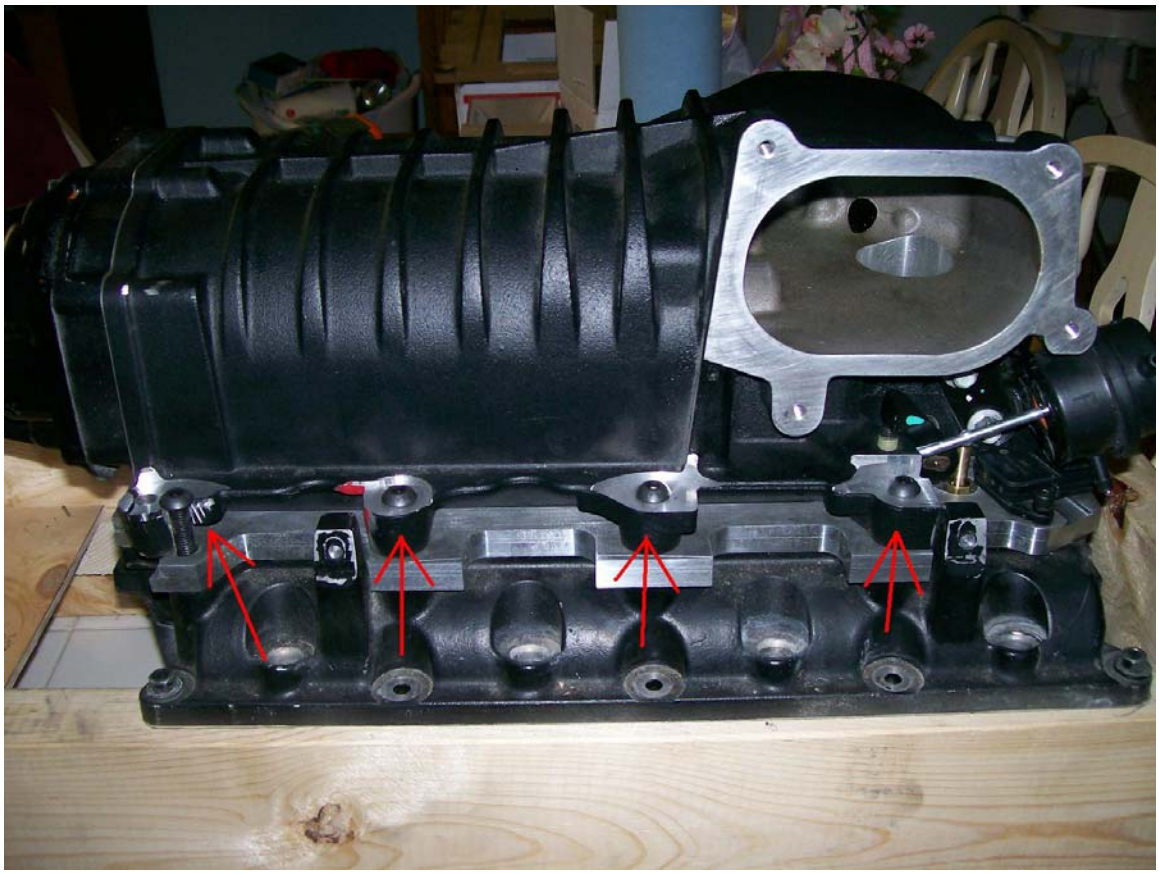


Figure 1

On the other side only the 3 middle feet need to be machined the same .250".

Figure 2

You can go straight across the webbing. There should be plenty of strength left.

I just knocked out the big tube as I don't have a PCV system. You can use a ½ NPT tap to thread it for a plug. If you need this pipe for your PCV system you could use a socket on a extension from the inside and knock it out. Then after machining the feet use Loctite on the pipe and knock it back in.
The top smaller pipe you need for the EVAP carbon hose that used to go on the M112 elbow.

Next (you can do this first if you want) the remaining 3 feet need to have the top side of the holes chamfered. The counter sink bolts labeled "Blower to Manifold" need to go in these holes. The angle is not critical so just use the bolt head as a guideline.

Remove the rubber seal from the plate.
After doing this you can use those same bolts to bolt the plate to the blower to determine where the holes need to be moved or oblonged so the they line up with the intake manifold. Notice all the holes on the plate are drilled to 11mm (except the one by the tapped hole). The bolts are only 8mm so you do not need to make them that size but make sure they are at least 9mm (a little smaller than 3/8").
The 2 shorter bolts go in the back 2 holes and the long one goes in the front. Notice the 2 back holes are shallow and can be striped so do not over tighten these at any time during install. These 3 holes are more for locating the blower than holding it down.
Now you can mark where the holes go. I used a 3/8" end mill to "drill" them out.

Notice in Figure 1 the red paint on the front of the second foot back. You have to grind/cut here to clear the fuel rail mount. Just use the plate as a guidline. And do both sides.

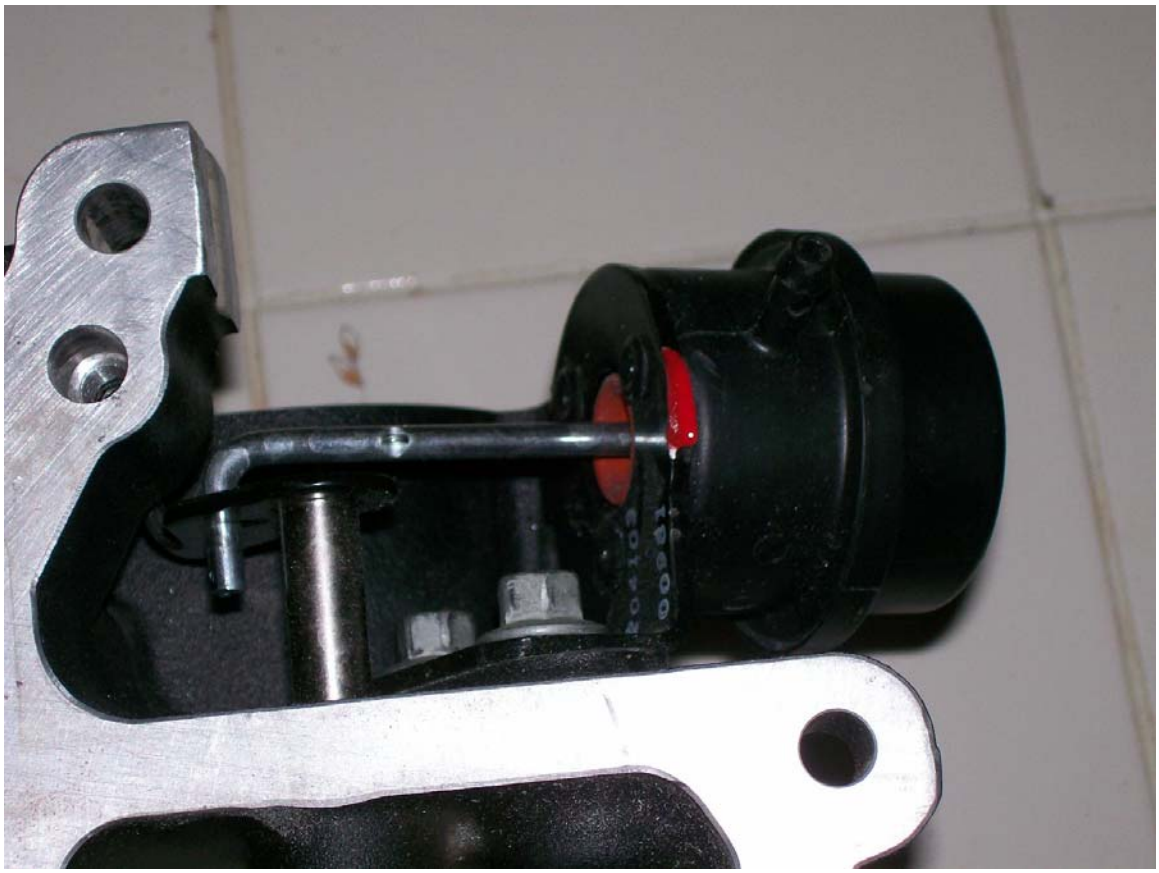
The front elbow side foot is in the way of the coolant crossover tube when installed on the engine.
Notice on the plate that there is a circular section cut out at the front. This is cut to clear the same tube.
Make a mark where this is on that front foot so you know how much of the foot needs to be cut. I used a

grinder but a hack saw and file could do it. Or just have it machined at the same time.

Figure 3

Here and in Figure 1 you can see how I did not have to grind all the way to the top but you could and it would make no difference. Also you can see where I ground for the fuel rail supports. I took more than necessary so use the plate for reference.

While you have the bypass actuator off you have to grind the tab off of the bottom to give clearance for the IAT2 sensor when installed.



The only thing left to do is making the elbow work.
First on the throttle body side you have to drill the 4 holes that are tapped.
Drill them out to at least 7mm you can use a 9/32" or even a 5/16".
Now in order to get the bolts in you will have to grind/file away some of the "bumps" that are directly behind the holes. Just grab one of the bolts and work it until you can get the bolt in the hole you just drilled. This is where a little bigger hole comes in handy.

Notice how I knocked out the 2 tubes in the elbow. I just plugged them as I did not need them.


Figure 5

This should take care of machining necessary for install.