

2X4 MANIFOLDS

By Ron Dill

Seeing the picture of Don Whitehead's restored engine compartment stirred up some old memories. I remember back in the early 60s that one of my friends had a '59 or '60 with 2 fours, 4-speed and positraction. With a good set of "cheater slicks" (remember those?) and if the conditions were right – he could get the front tires off the ground going into second gear. Ahhhh, those were the days!

Those old manifolds and carbs are still available at various swap meets or on e-bay and even if you don't put them on a car, they look neat on a shelf in the garage. I thought you might want to keep an eye out for these things as you are wandering around garage sales, and the like. So, it would probably help a little if you knew what to look for.

Essentially, Corvette 2X4 setups used two different aluminum manifolds. They were part numbered as 3731394 for '56 model cars and 3739653 for the '57 through '61 cars – 2X4s were not used in 1962. Also, I've never seen one but you may find a GM manifold part number 3728725 which was a first design for 225 horse '56 engines. And, you will, occasionally, find old Offenhauser and Eldebrock 2X4 small block manifolds but they were not original.



Aside from the part numbers, there was one major difference between the two most common manifolds. The '56 manifold (3731394) had four distinct holes for each carb.



The '57 – '61 manifold (3739653) was changed at the factory to give better efficiency. You can see that the aluminum has been removed between the holes. And, as you can see in this picture, the part number and GM, as well as the snowflake mark are between the two carb bases. This and the firing order found near the oil filler tube are the only obvious markings on the top of the manifolds.



The manifolds are date marked on the bottom side. The marking is under the oil shield which is pinned to the bottom of the manifold. The shield has been removed from this manifold so that you can see the date mark of 2-25-59.



Normally, this code won't be so visible with the shield in place. For example:

It is rather unlikely that you will find any manifolds in perfect condition. People modified '56 manifolds by grinding out the aluminum between the holes and a great many had the front "ears" broken off and welded back on – depending upon the skill of the welder, the repair may not be terribly obvious. The following pictures show a couple of effective but half **&&%% repair jobs.



While the broken ears tend to be pretty significant flaws in the manifold, there are less obvious problems. Many of the old manifolds were used on "decked" engines and the manifolds were not matched to the decked engine – as a result, many of the bolt holes where the manifold bolts to the heads were elongated so that the bolts could be inserted. Also, heavy fisted mechanics would often over tighten the manifold and would crack the aluminum around the bolt holes. There are two cracks in this picture.



The cracks are hard to see here but, trust me, they are at 4 and 8 o'clock when viewed from the top.

Properly done, these manifolds can be repaired and they would certainly be good enough for a daily driver and – maybe, depending on the repair – good enough for an NCRS judged car.

A note of caution, these manifolds should not be sandblasted! Typically, that is the first thing that a seller or a new buyer does to restore the appearance of the manifold to “like new.” The problem is that some of the sand will get stuck behind the oil shield and eventually wash down into the engine. Generally, when this occurs those engines seldom last over 3,000 miles and while we don't drive our machines that much – I doubt that any of you would want to rebuild the engine after just 3,000 miles.