

ONE OF THE first things most performance enthusiasts do to improve the breathing of an engine is to install two, three or four carburetors. But when they come to a supercharged engine they seem to forget breathing restriction on the inlet side of the blower. Apparently it's a common belief that a high-pressure supercharger literally overpowers this routine flow restriction.

Nothing could be further from the truth, as Lansing, Mich., Corvair modification expert, Dick Griffin, has proved. Two years ago Griffin built up a Paxton-blown '61 Corvair that could turn consistent drag strip e.t.s in the low 13s at 104-106 mph. Just last fall he won the G/Stock class at the NHRA Nationals with his new Corvair Spyder turbo, hitting 15.31 and 89 mph on his trophy run.

In the course of developing the '62 Spyder for the Nationals, Griffin decided to check carburetor flow restriction by tapping a pressure gauge between the carburetor and blower inlet. He found a vacuum of 7 in. Hg (of mercury) under full throttle at 4000 rpm, which is easy enough to believe. The basic Carter YH sidedraft carburetor used on the Spyder has only a single venturi, with a diameter of 1 5/16 in. This is a breathing area of only 1.35 sq. in. With the large volume of air pumped by the turbo this tiny orifice is bound to set up a considerable restriction. This shows up as a pressure drop across the venturi.

In effect, the blower impeller is drawing its mixture from a vacuum. Since this type of supercharger com-

presses at a ratio of roughly 2:1, this means that every inch of vacuum at the impeller inlet costs 2 in. of supercharge pressure in the engine manifold. In other words, in the case above, with 7 in. of restriction, getting rid of all that loss raises manifold pressure by about 14 in.—or some 7 lb./sq.in.

Of course removal of all venturi losses is unlikely. But Griffin certainly improved the situation on his Spyder. His formula was very simple: adapt a larger 2-throat carburetor to the blower inlet, with much more total venturi area, then suitably modify the stock throttle linkage to operate it. It isn't a legal modification for the stock classes at the drag strip, but it makes a brand new animal out of the Spyder for everyday driving on the street and highway. The results were such that Griffin decided to market simple bolt-on kits for any '62-63 Corvair Spyder.

Griffin tried both sidedraft and downdraft carbs in his tests. He feels the 2-throat downdraft is best because it not only gives the needed venturi area, but the gravity-helped fuel feed gives improved cold starting and general throttle response on the road. A Stromberg WW carb is mounted on a neat cast aluminum adapter manifold on the blower housing. This has 1 3/16 in. venturis for a total of 2.22 sq. in. breathing area. This is an increase of 64% over stock. Pressure drop across the venturis is reduced to 2-3 in. Hg at 4000 rpm, which would be equivalent to roughly 4 or 5 lb. more manifold boost pressure. Cold-starting is almost instant, even without a choke. A couple of pumps on the accelerator

pedal will do the job on a frosty morn.

The improvement in throttle response on the road is readily evident. With the stock Spyder, an appreciable lag in acceleration exists between the turbo and car. There is very little boost in low and 2nd gears, about half in 3rd, and full benefit isn't realized until the shift into high. With Griffin's new carburetion system the pressure needle on the instrument panel will come up to the center in 2nd gear, and go right off the end of the dial in 3rd. (The last mark on the dial is equivalent to 20 in. Hg, or about 10 lb. boost.) It is estimated that the Corvair turbo would put out between 14 and 16 lb. boost with this free-flow carburetion system under ideal conditions.

Here's what Griffin's setup did for the performance of one test car:

	Stock	Modified	CL Spyder
0-30 mph, sec.	4.1	3.5	4.1
0-60 mph	12.5	10.0	10.8
Standing 1/4 e.t.	18.8	17.5	18.5
Terminal speed at 1/4, mph	77	84	80
Boost in 3rd gear, psi	6	11	6
Mpg on turnpike	19.8	19.2	20/23

The kit consists of a new Stromberg WW carb, aluminum adapter manifold, necessary throttle linkage, 20 in. of new copper fuel line and fittings, and instructions, all priced at \$79.95 with the carburetor, or \$54.95 without. Kits may be ordered direct from Demmer Tool & Die Co., P.O. Box 478, Lansing, Mich.

Griffin estimates the modification adds 34 bhp at the clutch on the Spyder, plus easier starting and quicker response. —Roger Huntington

OWNERS OF Monza Spydery, given as they are to driving with a bit more than usual enthusiasm, have occasionally been plagued with momentary fuel starvation during brisk cornering. This is caused when centrifugal force sloshes the float bowl fuel into the air vent, upsetting the pressure balance inside the bowl.

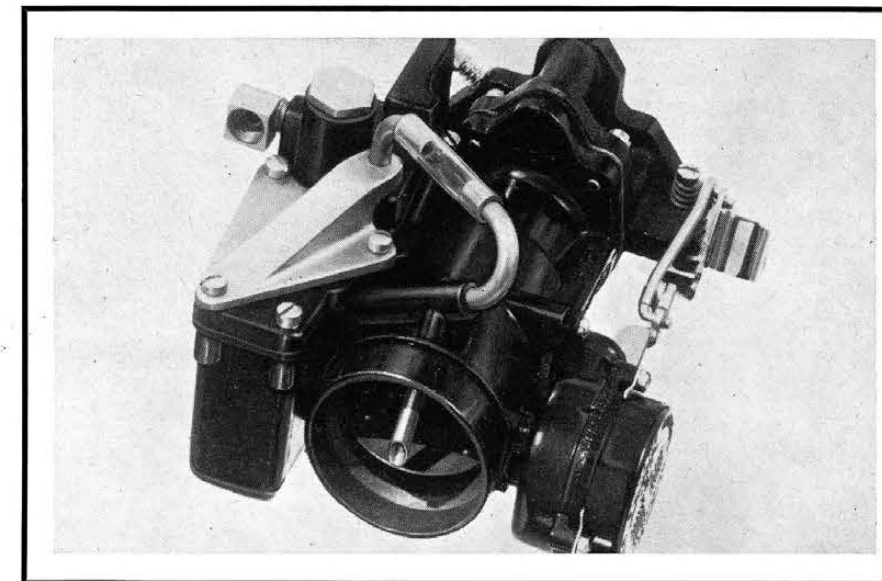
This problem has been tackled by Bill Thomas, West Coast Corvair specialist, who has designed an anti-spill modification for the Carter YH carburetor fitted to the Spydery. The device, easily installed by anyone able to drill a 1/4-in. hole, sells for \$11.75 and effectively eliminates sloshing fuel through the normal air vent.

The unit consists of an aluminum casting which fits atop the float bowl cover, holding in place a new vent tube to equalize pressure within the chamber. The hole for this tube is drilled by using the plate as a template.

Another tube is inserted in the vent outlet that normally is blocked off with a chromed cap (on the aft side of the carburetor). This passage is a branch of the normal air vent, running from just inside the air cleaner to inside the float bowl. A kit-supplied plug seals the latter outlet and reroutes the vent through the new tube, which is connected to the bowl-top tube by a short length of clear plastic hose.

The device is available from Bill Thomas Race Cars, 510 E. Julianna St., Anaheim, Calif.

Drivers of unblown Corvairs who want a shorter fuse and less fuss also can get help from Thomas in the form of a 2-barrel carburetor kit to replace



ANTI-SPILL device prevents flooding in tight turns.

the pair of stock carburetors fitted. This modification takes the Rochester 2-barrel unit that was used on 1955-58 Chevrolets. The larger barrels (1.65 in. diameter each) provide a better high speed mixture than the stock 1.25-in. units mounted on each cylinder head.

The package, available for \$49.95 less carburetor and air cleaner, includes plated intake tubes which locate the carburetor low at the forward side of the engine, eliminating the need for alterations to the deck lid for clearance. Spacers are supplied so the intakes can be bolted to the standard manifold studs and a new throttle link-

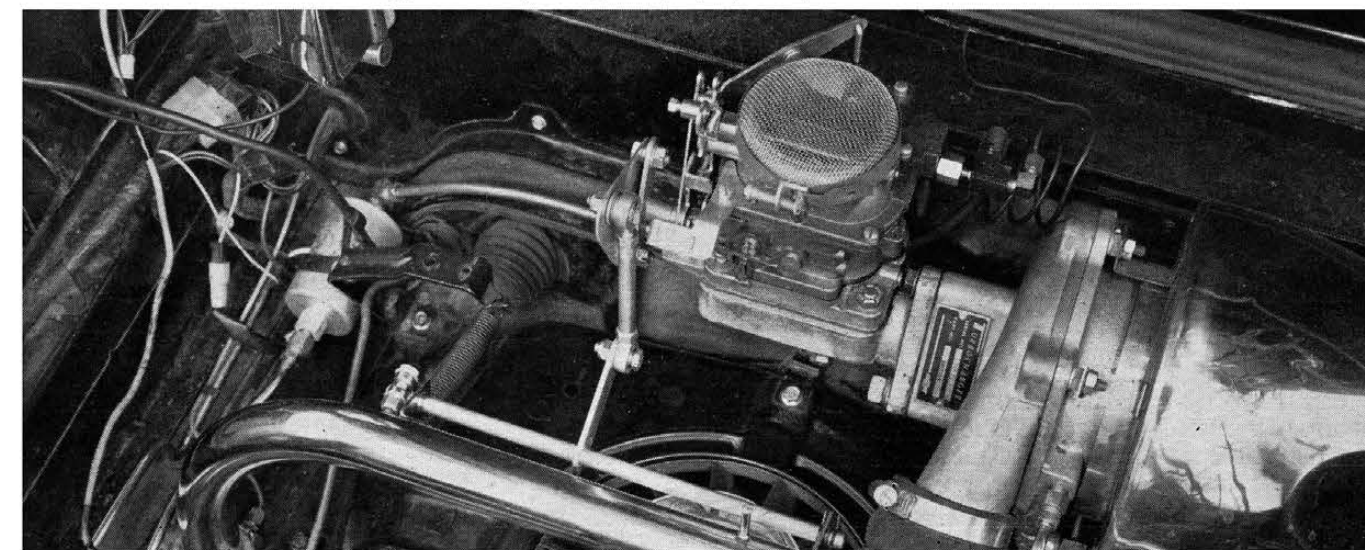
age replaces the stock engine-spanning hook-up. An exhaust-heated carburetor mount is a feature of the kit.

While comparison figures are not yet available, Thomas claims the kit-equipped car "wiped out" a Corvair with similar 4-barrel carburetion in an acceleration test. Thomas feels the 2-barrel unit is better suited to engine capacity (and more economical) than such 4-barrel modifications.

The proper carburetor for the kit can be supplied by Thomas for an additional \$28, and the air cleaner adds another \$9.95. His firm also makes modified heads and exhaust headers for the Corvair. —Gene Booth

## MORE SPUNK FOR THE SPYDER . . .

DOWNDRAFT CARBURETOR bolts on to Spyder turbo-supercharger adapter, improves performance.



## AND SMOOTHING OUT THE MONZA

TWO-THROAT carburetor for Corvair Monza requires little modification for attachment, is heated.

