



HOT ROD CARBURETION • CLOTHING & COLLECTIBLES • SERVICE PARTS • LINKAGE & FUEL DELIVERY

## Will the new 97 fit my car?

### Stock, hot rod and alternative applications

The new Genuine Stromberg 97 is built to original blueprint specification (which some improvements), so it fits wherever an old Stromberg 97 does. Let's take a look at the stock Ford and hot rod applications, then examine everything else you might need to know for alternative uses. This includes manifold stud pattern and spacing/air cleaners/hood clearance, throttle and choke linkage, fuel lines, distributor vacuum and flow in cfm.

The Genuine Stromberg 97 has been around a long time, so let's cover the traditional applications first. The 97 was standard on Ford V8 from around 1935 to 1938. They were also offered as an aftermarket replacement for Ford V8 from 1932 right up to 1953, though the '49-53 applications used a slightly different model (for distributor vacuum, which we'll come to later). The 97 can also be used as a replacement for the smaller Stromberg 81, which was standard on the small Ford V8-60 engine from 1937-40. No, they're not too big! They work great – maybe we'll explain that later too. There's a whole bunch of new 97s running around on Harley Davidson V-Twins. Go figure.

Then there's the hot rod applications. As the 97 became the hot rod carburetor of choice, so all the early multi-carb intakes were set up for 97s right through until the muscle car era. Hot rod multi-carb intakes for 97s are still available new for Ford flathead V8s, early Ford 4-cyl engines (Model A,B,C), early Chevy straight 6, Chevy small block V8 and early Cadillac V8. And intakes for other vintage overhead valve engines can still be found at swap meets.

#### Alternative applications

We are often asked about conversions – making new intake manifolds or adapter plates to fit 97s on for new engine applications. The 97 is a very simple carburetor which makes it ideal for adapting, so let's look at what you need to bear in mind: Manifold stud pattern and spacing, carb height/hood clearance, throttle and choke linkage, distributor vacuum and carb flow in cfm. Most of these are covered in more details elsewhere, right now we'll just cover the main points.

#### Manifold stud pattern and spacing, air cleaners and hood clearance

Our 97 carburetor has a three bolt intake mount – the same on Ford V8 from 1933 right up to 1953. If you're making an adapter plate, the key dimensions are:

Bore centers are 1.34 inches apart. The two bores are 1 3/16 inches diameter. The two front fixing bolts are 3.12 inches apart and 0.88 inches from the carb centre (throttle) line. And the third rear bolt is centered on the front two, but 1.88 inches back. Aftermarket intakes tend to vary but if you are making an adapter plate and you set the carbs 4.75 inches apart you'll match the Offenhauser standard and you'll get a Stromberg TwoStep linkage to fit too.

The OD of the casting at the top where the air cleaner fits is 2-5/8th inch and the overall height of the 97 is 5-5/8 inch plus the intake gasket, though the air cleaners/scoops sit 5/8 inch down over the top of the carb mouth.

#### Throttle and choke linkage

The 97 throttle and choke levers were designed to work with solid rods to the pedal/choke and have a 0.275 inch OD ball end fitting. Aftermarket 97 models designed originally to fit the 49-53 Fords had a different choke lever for a cable choke (with a bracket to hold the cable outer) and we offer this conversion both as a kit (9552K-C) or a complete carburetor with the cable choke parts installed (9510A-C).

Something else. The standard 97 throttle lever is designed to be pulled from the firewall end. If your throttle pedal pushes (like the 1949-51 Mercury for example) you need our 9581K-LZ kit or 9510A-LZ carb with it installed.

#### Fuel lines

The fuel inlet is usually the easiest part of any conversion. We offer brass hose end fittings (9080K) and stainless steel banjo fittings with one of two outlets (9082K and 9083k). If you want to build hard lines, we offer 'Ford Nut' compression fittings (9081K) to install 1/4inch hard lines into the S-jet inlet fitting. The thread into the 97 inlet is half inch by 20 teeth per inch.

#### Distributor vacuum

There is no ported vacuum take-off on the regular Genuine Stromberg 97 carb, so if your distributor can use ported vacuum (and please check the spec) you will need to specify your new 97 with the -VP (vacuum port) option. All Stromberg BIG97 Primary carbs have this port as standard. There's a separate Tech article, "Stromberg 97 and Vacuum Advance. Your Questions Answered" on this Tech Center.

What we don't recommend is drilling the base casting to install a vacuum take-off. A few rare Stromberg 97 models (called the '1-1') did have a vacuum port built in to the base, but this was specifically for the 49-53 distributor which had no base-level mechanical advance built in. So the carb provides vacuum from at least two different points through special base and bowl castings.

In case you're wondering, the early Ford 32-48 crab-type distributors use a vacuum brake, not advance, which takes vacuum off the intake manifold. Completely different deal.

#### Flow in cfm

Whatever conversion you are planning, you need to ensure you have enough flow through the carburetor to feed the engine underneath. There are plenty of places on the internet that will help you work out your requirements based on cubic capacity, maximum RPM and volumetric efficiency, so let's just say that the Genuine Stromberg 97 has been independently measured at 162cfm per carburetor measured at the 1.5inch Hg pressure drop measure that is usually quoted for 4bbl carbs. Traditionally, 2bbl carbs were measured at 3inch Hg pressure drop, but in reality carbs never see that much vacuum at full throttle. The 3inch measure comes out higher so sounds good, but we believe it's misleading.

Just remember, as a rule you can run a big carb on a little engine, but a small carb on a big engine will run out of cfm and literally choke off the revs.



