

Every week at Pony Carburetors we get questions from clients regarding how to tell which six-cylinder engine is in their vehicle. In the carburetor business, it is important to know exactly what size engine you are dealing with. Over the last 40 years, a lot of engines have been replaced or transplanted. There is the question of whether they have the original 170 cubic-inch engine in their 1964 1/2 Mustang or do they have a 200 cubic-inch engine. In this month's article we will explain how to tell the difference.

EASY WAY TO TELL A 170 VS. 200 OR 250 CUBIC-INCH ENGINES.

If the engine is a 144 or 170 cubic-inch engine, on the passenger's side of the block, there will be THREE freeze plugs. If it a 200 or a 250 cubic inch engine, there will be FIVE freeze plugs.

One sure way of telling what the year and engine size is of your six-cylinder engine is to look at the engineering numbers. All Ford heads and blocks have casting numbers on them. These engineering numbers follow Ford's parts numbering system like many of the other parts. For example, if the block is a 1965, it will have a C5 engineering number. If it a 1966, it will start with C6. The "C" stands for the decade 1960's and the second number indicates the year within that decade. If the head or block is a 1970, it will be marked D0; 1983 will be E3. The location of these numbers on the head will be on the intake runner running front to back (this is the log that runs from the front of the head to the back). Behind the carburetor, toward the firewall is where these engineering numbers will be located. An example would be C5DE-6090-B. The 6090 is the group number meaning "Head," just like 9510 means "Carburetor." Again the C5 means 1965. Then engineering numbers on the block are on the passenger's side near the freeze plugs and starter. The group number for a "Block" is 6010. As a note of interest, we have never seen a C7 casting number on any block or head (on 170 or 200 cubic-inch engines).

Another indication of a 170 or 200 head is the bore size (diameter of the hole). All 170 and 200 cubic inch heads manufactured prior to 1970 have a 1 7/16-inches bore size with one exception (The 1968 170 which had a 1 11/16-inches bore size and used a Carter YF carburetor). Starting in 1970 all of the 200's had a 1 11/16-inch bore and that continued until the end of production in 1983. Starting in 1969 there were 250 cubic inch engines manufactured as well. Some of

these 250s had C8 casting numbers on the heads and blocks. If you have a C8 casting number on the head, it is fairly easy to tell the 250 from the 200. The first way is the bore size; it will be 1 11/16-inches on the 250 and 1 7/16-inches on the 200. Another way to tell the difference is the shape of the intake runner (log). On the 250, it will have a definite OVAL shape vs. a ROUND shape on the 200. Standing at the radiator you will notice this OVAL shape as well as it's larger size. The third way to tell is the diameter of the carburetor studs. They will be 3/8-inch diameter on the 250 and 5/16-inch on the 200. Starting in 1970 all six cylinder heads use 3/8-inch diameter carburetor studs and the distance between the studs is 2 5/8-inches. Every week we get cores from clients that have the base holes drilled out from 5/16-inch to 3/8-inch. This tells us that they have a 1970 or newer head. Starting in 1973 the spacing between the studs went to 2 3/4-inches with 3/8-inch studs. This spacing continued until 1983.

All of the 170 and 200 engines had 1-inch-thick spacer plates. Ninety percent of these spacer plates had the heater hose connected to them circulating hot water underneath the carburetor. This is an excellent performance and drivability device and should always be hooked up. All of the hot water spacers had bore diameters of 1 7/16-inches. In 1967 ONLY, there was a 1/4-inch spacer plate utilized on California emissions vehicles (the carburetor was a Carter YF). The spacer plate used on 1969 250s and 1970-1971 200s was 1/2-inch thick, had a 1 11/16-inches bore and no hot water provision. Starting in 1973 EGR (exhaust gas recirculation) was utilized on all passenger cars and virtually all trucks. The EGR spacer plates had EGR valves (looks like a big diaphragm approximately 3-inches in diameter) with a vacuum hose hooked to it. Again, check the casting number to tell whether the head is a 1973 or newer.

SIX CYLINDER CARBURETORS

Virtually all '64 12 - '69 Mustang's utilized the Autolite 1100 carburetor. In some 1967 California emissions vehicles a Carter YF was used (see reference above). The 1100s vary greatly depending on year, size engine and whether they had California emissions.

All '65-'67 used a 1.2-inch venturi and had a spark control valve. The spark control valve is located on the passenger's side of the carb, is about the size of a quarter and looks like a power valve. California emissions '66-'67s and 1968-1969 carburetors did not have the spark control valve, but had a 1/2-inch diameter hole where the valve would have gone. In 1969 only the 250 cubic-inch engine utilized an Autolite 1101 carburetor. The 1101 looks similar to the 1100 but has a 1 11/16-inch bore and a tiny choke cap (1/2-inch smaller). Starting in 1970 the Carter YF was utilized on all 200's and Carter RBS was used on the 250's. Starting in 1978, Ford used a Holley 6145 on the 200 engines. Interestingly, it will still say "Motorcraft" on the carburetor.

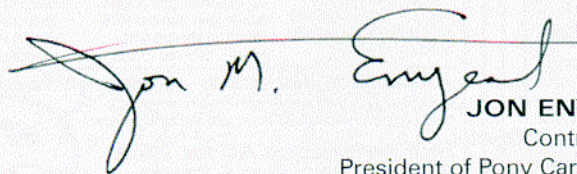
Holley 1940 replacement carburetor
During the 1960s a Holley carburetor could be interchanged with the original Autolite 1100. We do work on this replacement carburetor, but it is an inferior design compared to the 1100. Typically they are 2-3 mpg worse on fuel economy and have hesitations and flat spots (which we are able to remove). We do not recommend them for these reasons as well as the fact that they are not original equipment.

NEW AUTOLITE 1100

It's been about 10 years since ANY new carburetor was made for the 170 and 200 cubic inch engines. Pony Carburetors will have available very soon a brand new version of the Autolite 1100. Assembled and tested in our factory in Las Cruces, NM, it will feature some engineering improvements. Most notably, it will have incorporated in the design, "Annular Fuel Discharge" just like the Autolite 2100 and 4100. This type of fuel discharge atomizes gasoline closer to vapor than any other design ever used. This feature will increase fuel economy 2-3 mpg beyond what the original Autolite 1100 was doing. We are expecting these NEW carburetors to be available this summer.

As always, I invite your comments about any of the Good Carbs columns. You can reach me at Pony Carburetors by phone, fax or email.

Happy Driving,



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