THE DIFFERENCE BETWEEN THE BLOWN AND UNBOWN AUBURN ENGINES CF 1935-36

By Bob Graham

First, there is the prefix to the motor number that is stamped on the front upper left small extruded section of the block. On the blown engine, it is GH. On the unblown, it is GG. The motor number is usually only four digits long.

The blown engines have an extra large timing chain housing made of cast iron, to hold the extra chains required for driving the blower. The unblown engine has a small stamped steel chain cover and a wider camshaft and crankshaft timing gear. The timing chain is wider on the unblown engine. The blown engine has a narrow timing chain so that there will be room for two on the same camshaft gear. The camshaft gear on the blown engine has two separate driving areas; one for the blower drive shaft. The front flywheel pulley that drives the fan belts has only one belt drive area, on the blown models. This one belt drives the generator, which in turn has an extra driving belt to drive the water pump. On the unblown engines, the front pulley has two belt drives and one goes to the generator and the other goes to the water pump.

The camshafts of the two engines have a slightly different grind and the camshaft on the blown model looks a little more finished, when compared with the one from an unblown model. There are four babbit lined bearings in the blown engine and on the unblown engine, the only babbit lined bearing is the one in front; the other are not babbitted.

The crankshaft on the blown engine is fully counterbalanced and counterweighted. On the unblown engine it is only balanced and has no counterweight. So the shaft on the blown engine will weight more than the unblown.

The oil pan on the blown engine will have a slight extruded area for the number two counterweight to run through. The oil pan on the unblown does not have this extruded area.

You can interchange the crankshafts from blown to unblown, but will have to hand file a small portion from the webbing of the inside of the block to allow passage of the number four counterweight. (Then you would have to use the blown type oil pan, too.)

The blown blocks have an oil drain plug, for the blower, tapped into the lower left hand side of the block. This is dead center. The unblown have none.

The connecting rods of the blown engine are different than the unblown. The blown ones are heavier and have a different serial number. G-180 DA for the blown and G-180 for the unblown. The con-rods usually have the motor number stamped on them. The blown

engine has the oil holes in the rods facing a different direction than those of the unblown engine.

The intake ports on the blown engine have an area bored out about a half inch into the block, larger than the port by about $1/16^{th}$ inch to allow for the insert ring of iron, that fits into the intake manifold to keep it in alignment with the block. There are two separate intake manifolds, on the blown engine and it has four intake ports. There is one large exhaust manifold that has four outlets for the four outside headers to bolt on to.

The water pump on the blown engine is different than that of the unblown in that it has a water outlet plug on the left side to run hot water through the intake manifolds.

The fuel pump is different on each in that the blown model has one that is set at a different angle to allow the blower drive shaft to pass by it. They will interchange.

There is a larger gasoline supply line on the blown model. The carburetors are different. The blown one has a single throat and the unblown is a dual throat. The throttle levers are different, from the firewall to the carburetor.

There is one large motor mounting bolt on the left front side of the engine that screws into the cast iron housing, on the blown models. The unblown has the smaller bolts, like on the right side of each.