

Wilson Rebuilds Engine

Aside from the Ford and Offy powerplants, there probably are more different types of engines entered in this year's 500-Mile Race than at any time in recent years.

Predominantly, the Ford and Offy powerplants constitute the largest number entered. But there are some stock blocks which give evidence of coming on strong, especially a couple using turbochargers.

One of these is a turbocharged Chevrolet machine which put in its first appearance with Dempsey Wilson at the wheel. There was a bit of trouble with an oil line connection, so the car still is in the shake down process.

Dempsey, however, the head of a manufacturing company on the West Coast called Dempsey Wilson Cams, spent last winner running not only the engine but the entire drive train hooked up to a special dynamometer set up, and he feels he knows just what the equipment will do.

Dempsey built up the engine using his own parts. Since the rules governing the 500 permit 203-cubic inches for stock block turbocharged engines, he obtained a 1956 Chevy block which was the smallest V-8 Chevrolet Motor Division produced, and changed the bore and stroke to come down to the 203 inches.

A quarter-inch sleeve which is a pretty thick one as sleeves go, was put into the cylinders to drop them more to 3½ inches. Dempsey re-ground the crankshaft to shorten the stroke to 2 5/8 inches.

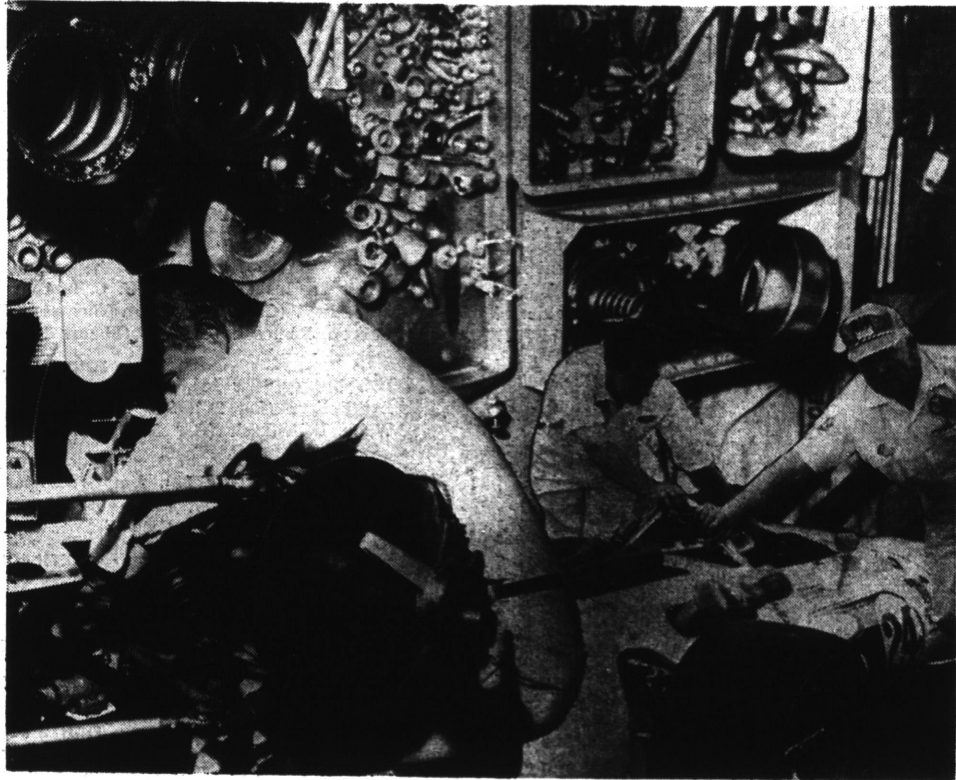
Most of the internal reciprocating parts are manufactured by him. So the connecting rods, pistons and bearing all are special components.

A good solid 575-horsepower was pulled on the dyno, and this pleased Wilson very much because he is using stock sized Chevrolet valves which in '56 were rather on the small side.

The valve train naturally is running a Wilson cam, plus special pushrods and forged aluminum rocker arms. With such a short stroke and a relatively mild cam which can be used with turbocharging, Dempsey said yesterday the V-8 has almost an unlimited rpm range.

The turbocharger is the AiResearch unit being used by the Offy. However, the conventional fuel injection system has been supplanted by a triple Riley carburetor set up which has sidedraft carburetors fanned out in a cloverleaf fashion.

The engine still has to be proven on the race track, al-



YEAR AROUND PROPOSITION . . . The mechanics' garage is where car designers and mechan-

ics are constantly at work engineering an engine and chassis to create faster speed records.

though Dempsey said it was to his advantage to work with a Chevy inasmuch as he is in the business of making speed parts for it.

He said he will learn more by actually running it at the Speedway than ever would be possible by just doing dyno work.

The carburetor mountings and intake manifold that deliver the fuel and air to the two banks of the V-8 all are of Wilson's fabrication. He said that a fuel injection system of Chevy engines was developed by fuel injection manufacturer Stu Hilborn, and it should be good for about another 50-horsepower.

The carburetors work good in the low and middle engine speed ranges, but they choke of the V-8 at the top end.

What seems to make Dempsey feel so confident that there is excellent potential in the Chevy is he is running a rather moderate amount of stress on the engine and still is getting some pretty good power readings.

By using a turbocharger, he said the small valves and a moderate cam didn't seem to have an adverse effect on the power as it would with a normally aspirated engine. In addition, by reducing the displacement it provided a greater strength ratio to other component parts.

'Cam Kit' Announced By Crower

Crower Cams & Equipment Company has announced the development of a cam installation kit.

The unit consists of (1) valve spring depressor (2) hub puller, and (3) air fitting.

The air fitting is used in the spark plug hole to keep valves in place by air pressure when changing valve springs.

When the kit is used in conjunction with the recently announced conical valve springs for the small block Chevrolet, the installation of a cam and kit can be accomplished within three hours or less.

All components in the cam installation kit are precision manufactured of 4130 Chrome Moly Steel for long, trouble free life.

List price of the Cam Installation Kit complete is \$24.95. When purchased with a Crower Cam and Kit, the Installation Kit lists for \$14.95.

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