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BLASTING WITH BIG BUICKS

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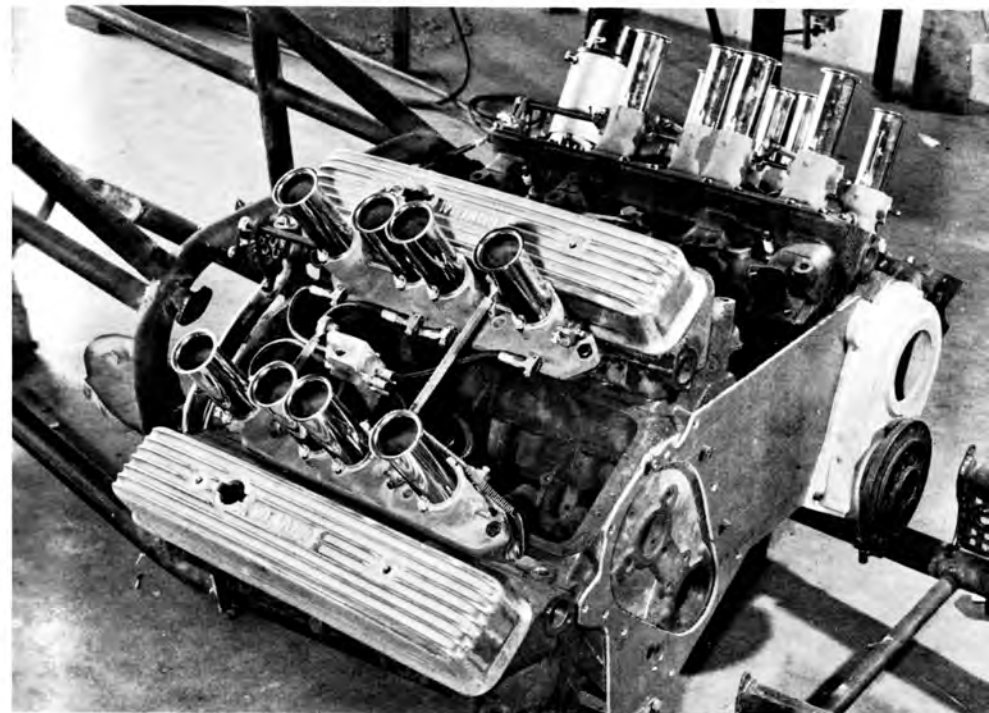
Tommy has had some interesting machinery since he ventured into the drag racing business, but the best conversational piece by far has been his four-engined creation which was built for show and for exhibitions at the strip. It is a sparkling hunk of machinery powered by four 401 Buick mills

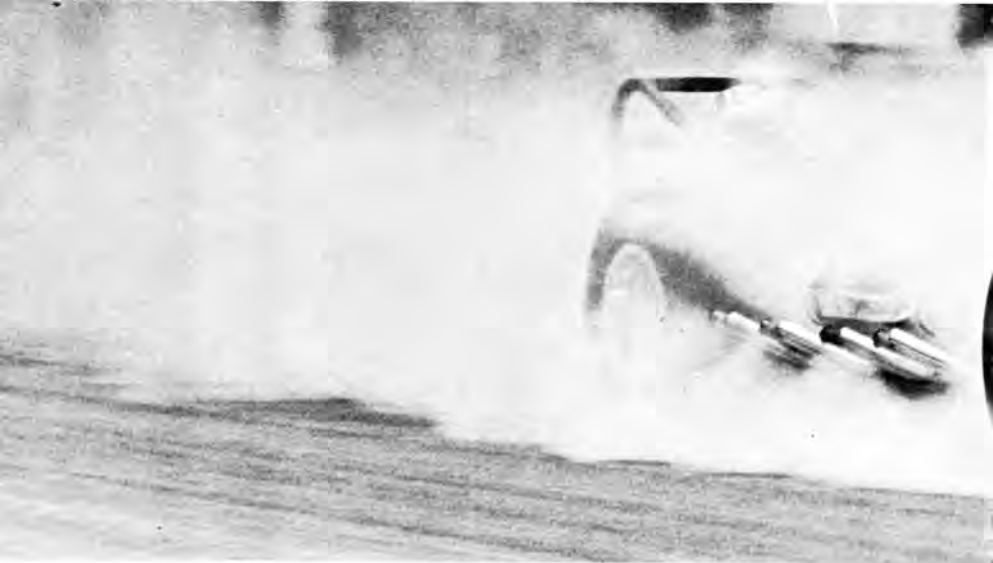
bored and stroked to 454 cubic inches for a total displacement of 1,816 inches!

The total car weighs 3555 pounds in full racing trim and the engines offer a combined rating of 1720 horsepower. That figures out to an amazing 430 hp per engine!

Getting down to specifics, the engines are connected in tandem by specially designed sprockets and double roller chain, with the right bank driving the rear wheels and the left engines providing power to the front wheels.

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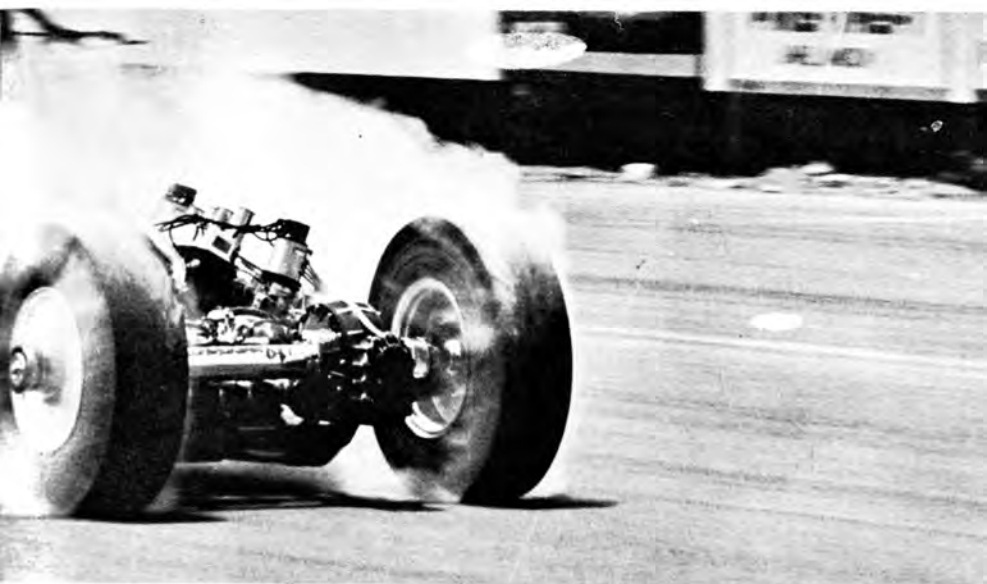
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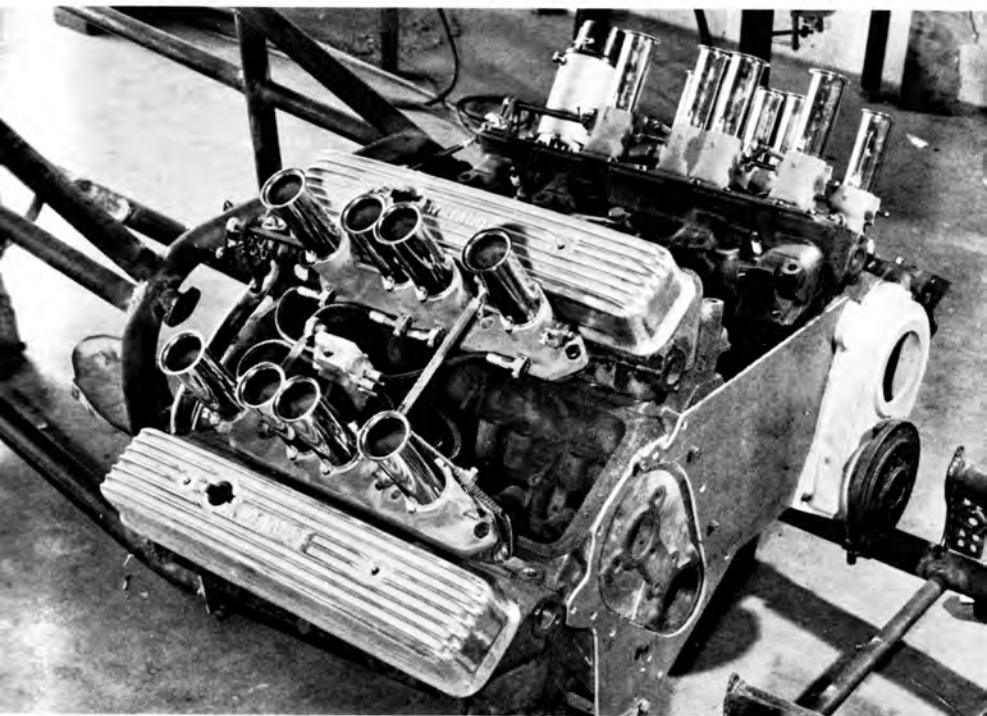
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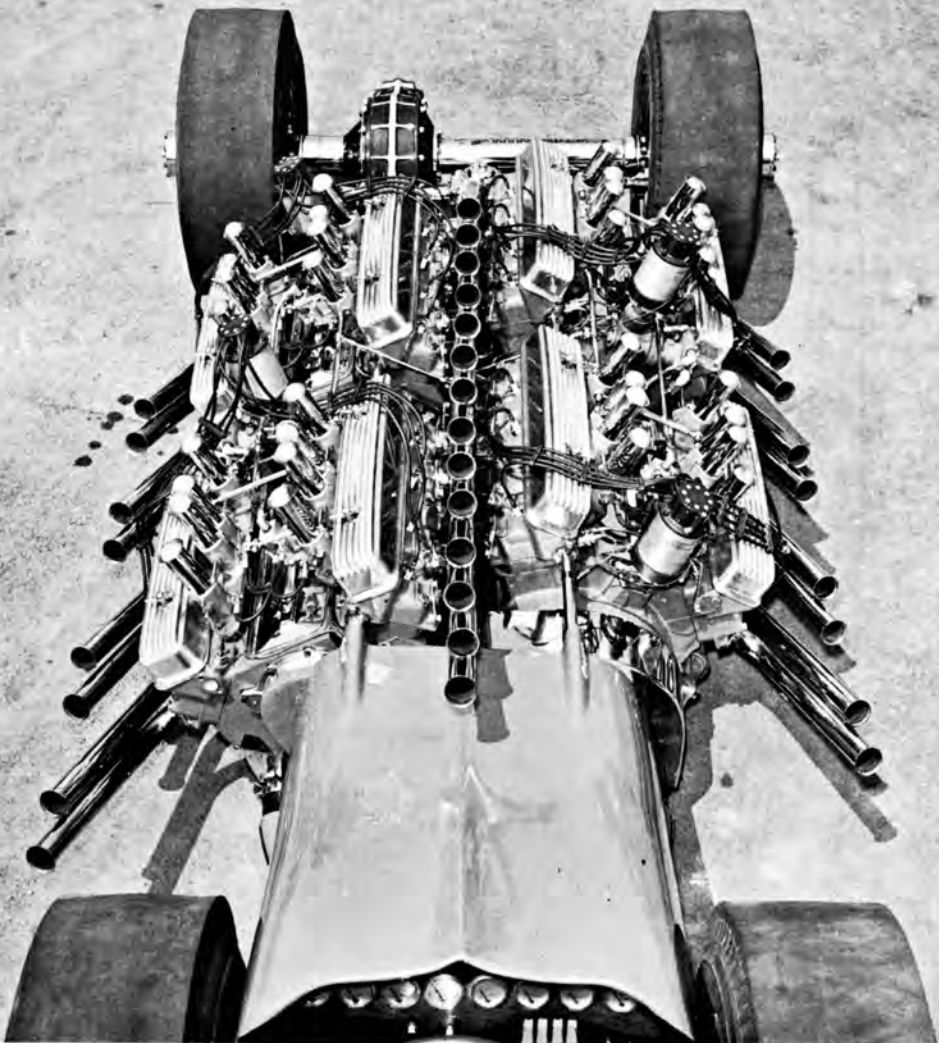
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Two engines are bored and stroked to 454 cu. in. each for huge total of 1,816 cu. in.

Iskenderian cams with kits, Jahns pistons and Grant piston rings. Stock '56 rods were used but the engines are fed by Hilborn injectors and are fired by modified Vertex magnetos by Joe Hunt. Weiland front engine covers also are used as were Gotha rocker arms and

adjustable pushrods.

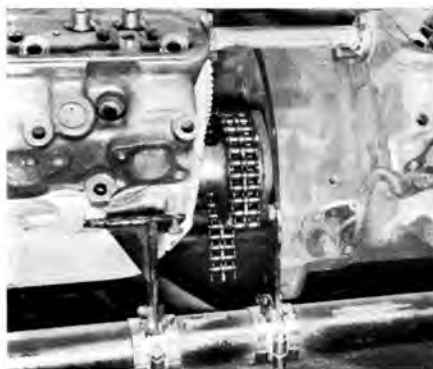
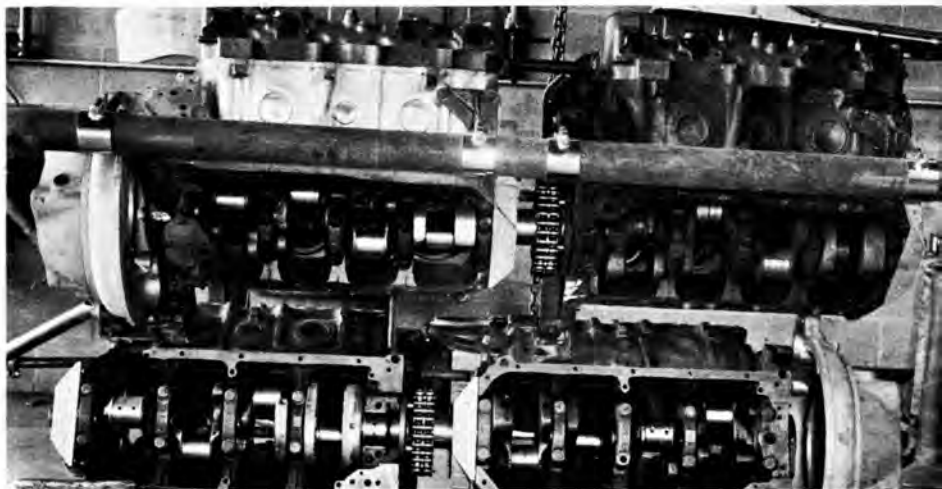
The front drive works through a Halibrand Championship-type rear end which is connected to a double disc Schiefer flywheel/pressure plate assembly. Front wheels were fabricated from Buick rims and sheet metal discs,



In twin-engined dragster, flywheels were geared together. Single clutch, in back of one engine, transmitted power to rear.

Four-engined car (below) has each pair of engines chained in tandem. Left-hand set drives front, right-hand pair drives rear.

Close-up (bottom) shows details of double roller chain and how it fits big sprocket on each engine to keep them both in sync.



and steering is from a '53 Mercury.

Rear drive works through a Ford truck rear end which is connected to the right bank of engines by a Cragar adaptor. Rear wheels are magnesium by Halibrand Engineering.

The frame was built by Kent Fuller of Los Angeles and consists of three-inch chrome moly tubing with a .156 wall. Bob Sorrell fashioned the body work and upholstery was completed by Tony Nancy. It is all fully stitched Scotch grain leather. The overall car is valued at \$13,000.



Chassis for Ivo's "Showboat" was work of Kent Fuller. "Rear" end from Halibrand's catalog is used to gear front wheels. Car, seen on opposite page, has aluminum body by Bob Sorrell, upholstery by Tony Nancy. And, lest we forget, four Buick engines supplying total of 1720 hp.

In its many appearances at various strips throughout the nation, the big Showboat has hit speeds in excess of 170 mph with ET's in the low nine second bracket, not as good as the average AA/Dragster running the strips these days but exceptionally good considering the massive 3555 pounds being hauled down the quarter-mile. Turned loose on a long straightaway course with the proper gearing and there's no telling what the top speed would be.

Another confirmed Buick enthusiast, mentioned earlier, is Max Balchowsky whose Buick-powered "Old Yaller" sports cars have hung up a fantastic string of victories in sports car competition throughout California and other parts of the nation. Max's cars have been taken on and beaten some of the best big bore sports cars from Europe.

Max is quite a perfectionist at his work, and probably is one of the leading authorities on the Buick engine outside the factory. As a matter of fact, he probably could teach factory engineers some interesting secrets.

Most of his engines are built up from stock components, given the Balchowsky treatment that seems to work like a magic wand. He attributes his partiality to Buicks to a long and successful experience with these engines, starting with the straight eights of years gone by.

"Buick engineers have been working with eight-cylinder engines for a long time," he told us. "And they were responsible for perfecting the overhead

Dual four-barrel manifolds for Buick 401 are available from Edelbrock (above) for \$92.50; Offenhauser (below) for \$89.50.

Hot Rodding Buick

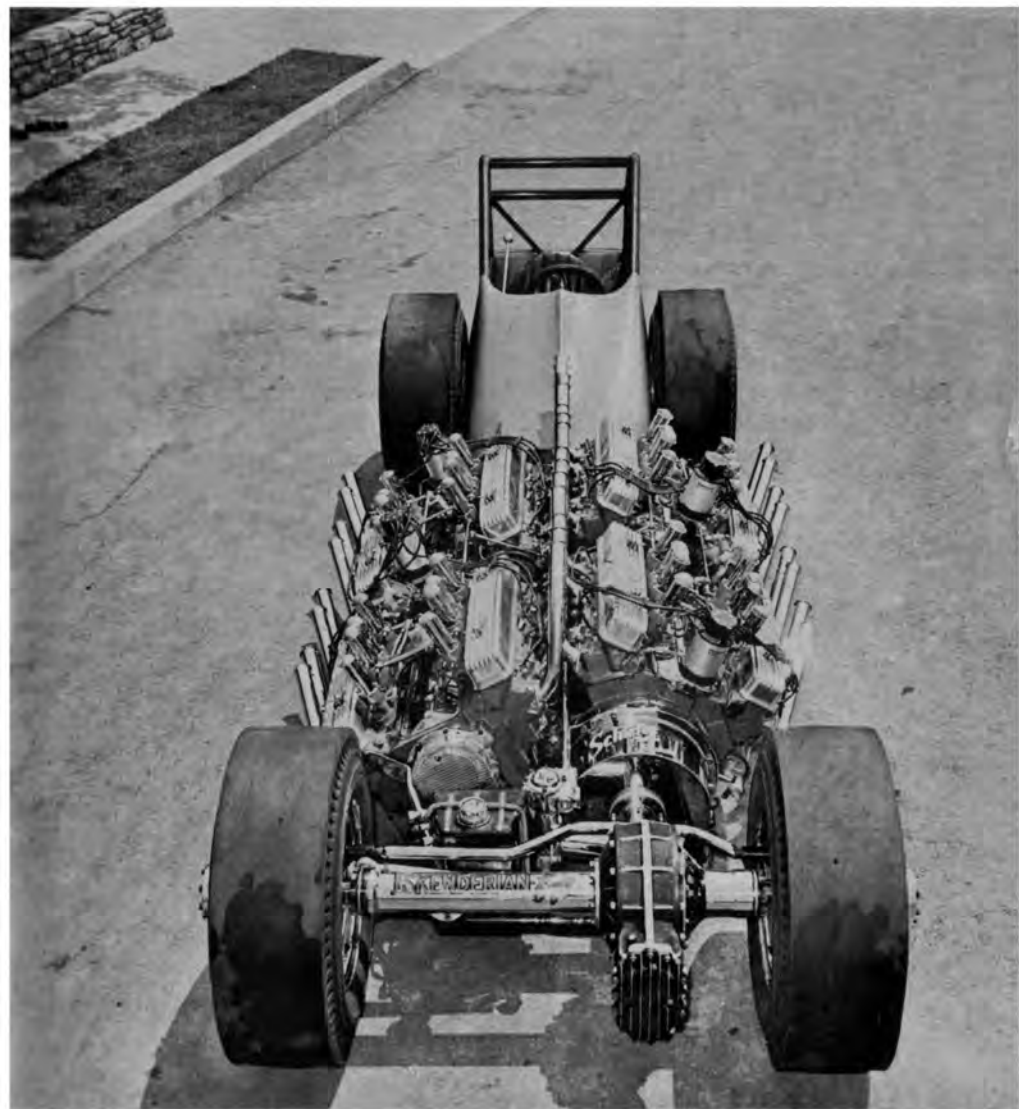


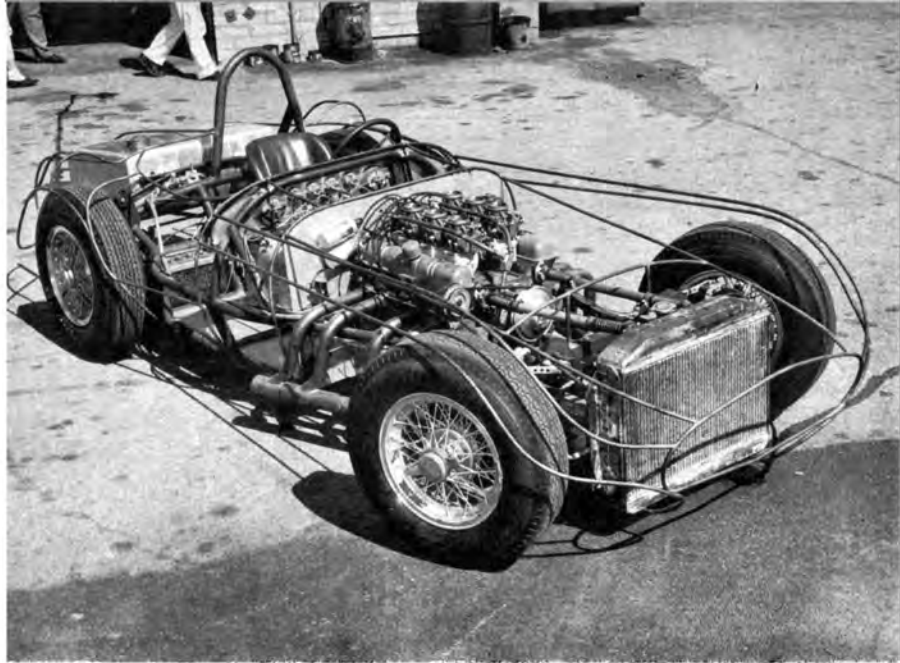
valve engine as we know it today. It stands to reason, then, that Buick engineering is among the best.”

Actually, many of the tuning modification procedures described in the preceding chapter go into Balchowsky's engines along with some of his own refinements. The crankshafts, for example, are grooved back about 20 degrees for more efficient lubrication and main bearings from '56 or earlier are used

since they, too, are grooved.

He also copper plates the main caps and bolts with a $\frac{3}{40}$ -inch coating and gives them more clearance. The copper plating is especially helpful in road racing competition where the mains and oil temperatures are subjected to more heat. Rather than disassembling the entire lower end to check for bearing wear and overheating, it is necessary only to drop the pan and look at

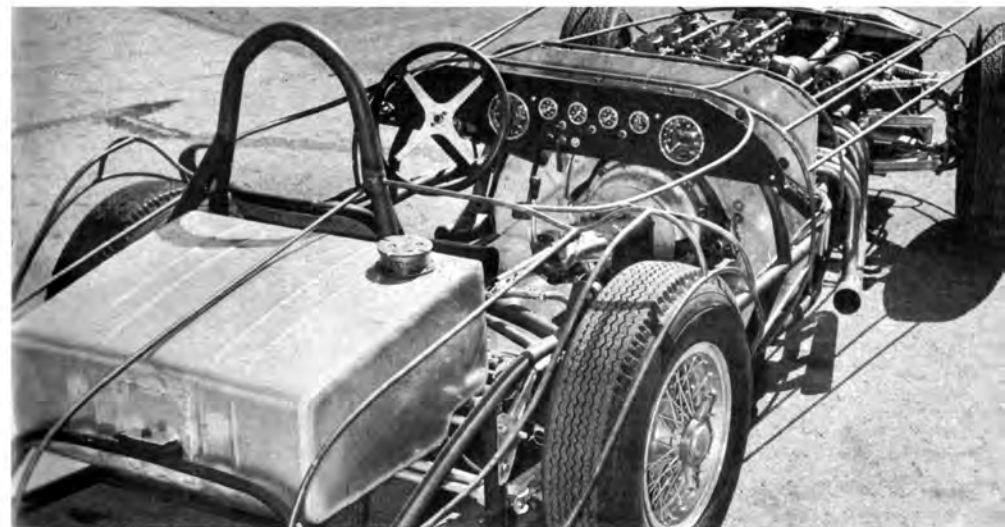




Max Balchowsky has used Buick V8's since '53. Shown is structure of his latest car.



"Old Yaller" Mark II was driven by such top aces as Dan Gurney, Carroll Shelby, Bob Drake. Below is chassis of Mark IV.



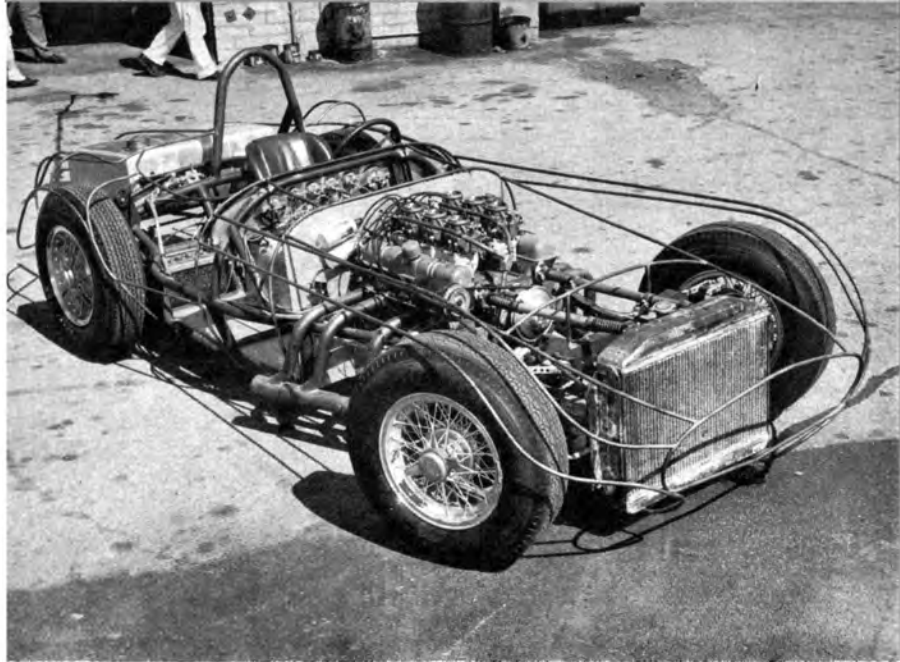
Third car in Balchowsky's "Old Yaller" series is seen here in action at Pomona, Calif.



the copper color coating. A deep purple color indicates too much heat and usually calls for a more thorough examination. This way you save time and the trouble of stretching the cap bolts since it isn't necessary to take them apart as often.

Oil pressure usually is kept at 40 pounds which is normal even for a completely stock engine. The oil pick-up in the pan is changed, however, so that it reaches lower, and because of sloshing which results from taking left and right-hand turns at high speed during a road race, the pan itself is baffled.

Most of Balchowsky's modification work is done in the cylinder heads and combustion chamber and with carburetion. Heads usually are milled .040 and excess material is removed from around the intake valves. Stock valves are retained but are lightened considerably and are run with 185 pounds of spring



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First "Old Yaller" proved worth of Buick power by winning more trophies than any other one car ever entered in road races.



Buick engine in Balchowsky's Mark IV has 430 cu. in., develops 350 hp at 5800 rpm.



Consistent success has marked careers of all of Balchowsky's "Old Yaller" cars.

pressure.

Valve stems are chrome plated which improves lubrication and helps eliminate valve float at high rpm. Friction between the stems and valve guides is greatly reduced, and wear becomes practically non-existent. This is a fairly inexpensive operation, too, and one well worth considering by the owner who is going after all-out performance. The .0002 inch or so of hard chrome applied to the stems does not impair stem to guide clearance.

Valve lifters are solid, from the 1957 export kit, or from Iskenderian who also produces a very efficient hydraulic lifter. Rocker arms also are stock although the pushrods are specially made chrome moly manufactured by the Smith Brothers of Covina, Calif.

Surprisingly, Max does not run a great deal of compression on his engines, usually 11-to-1. He does, however, believe in a fairly radical camshaft, and turns his engines as high as 7200 rpm.

Until recently, his engines were usually equipped with a six carburetor manifold employing Stromberg 97 carbs rejetted for road racing purposes. As this is being written, however, Max is experimenting with a three two-barrel manifold which he plans to market. Made of aluminum, it weighs only ten pounds and has large passages that produce a ram effect and really improve performance. The manifold has been set up to accommodate three two-barrel Rochesters, making a fairly economical package for the amount of added horsepower it gives.

Designed with or without heat, the new manifold probably will sell for \$90, which is about par for some of the dual four-barrel setups that are available. Considerable savings can be made in the carburetor, however, since the two-barrel Rochesters list for about \$29 apiece while Stromberg 97's, which also will fit, go for about \$32.50. The four-barrel AFB sells for around \$80. ■