



America's Most Popular Oval Track Racing Magazine

FEATURES

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SHOEBOX SPEEDSTERS

In the 1930s, miniature race cars were in their glory.

HOLLYWOOD HOWLERS

Through the years, Tinseltown has produced many great films, but racing movies have never been amongst them.

CIRCLE TRACK CLASSIC

This Studebaker Special was a 1933 Indy 500 top-10 finisher and was 85% stock!

LITTLE JOE B

There was never a dull moment on the NASCAR circuit when Joe Weatherly was around.

SPECIAL ENGINE TECH SECTION

GRAND NATIONAL CHEVY V6

Bill Jenkins and Dennis Fischer take different approaches when building this high-tech powerplant.

CHEAP POWER

Whether you're a NASCAR Street Stock, Sportsman, or Modified competitor, here are the best ways to spend your money.

COMBUSTION TIMING I

A simple explanation of a complex process.

Jerry McGarrity shares his knowledge on moving engine components to improve performance.

RACER'S WORKSHOP

Fel-Pro Incorporated's Jerry Rosenquist discusses performance gaskets.

A RUN-IN WITH SUCCESS I

How to build an engine run-in stand for a more professionally prepared engine.

Having the appropriate pit equipment is a necessity for any team.

Don't throw your warped Holley away. Repair it with a new tool from the Carburetor Shop.

Included are low-buck ideas on how to protect tire pressure

gauges and remove dents from molded plastic noses.

CORNER SCIENCE

A look at the design factors in the geometry of an independent suspension.

Smokey Yunick answers your questions on plug indexing, setting deck height, carburetor placement, and much more.

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COVER PHOTOGRAPHY: Special thanks to Larry Ofria of Valley Head Service and Dennis Fischer of Fischer Engineering for providing the engines for our cover photo, captured so beautifully by PPC Photographic's Lynne McCready. Inset photo: Bob Tronolone.

CIRCLE TRACK (ISSN 0734-5437) Copyright® 1988 by Petersen Publishing Co. All Rights Reserved. Published monthly by Petersen Publishing Co., 8490 Sunset Blvd., Los Angeles, CA 90069. Second-class postage paid at Los Angeles, CA 90052 and at additional mailing offices. Single copy: \$2.95. Subscription rates: U.S., military, and possessions, one year \$21.95. Canada and other countries, one year \$31.95. Subscription inquiries: (213) 854-2470.

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HE GREATEST FACTORY-BACKED assault at Indianapolis Motor Speedway was about to take place. Built by one of the best fabricators in the business, five cars, their bodies shaped in a wind tunnel, had easily qualified. The engines powering these machines were tuned to a razor's edge on a company dyno by factory technicians. And five of the top drivers in the sport were selected to pilot these machines. This was quite an impressive display, despite the fact that this was Depression-torn 1933.

Had Hollywood scriptwriters and pulp novelists created the story, they would have had the Studebaker Specials come home first through fifth. The fact is, a Studebaker Special never won the 500. Nevertheless, the story of these cars is one of the most incredible sagas seen in the 78-year history of the Indianapolis 500. The story is all the more incredible when you consider that these highly successful machines were 85% stock. You read that right-85% stock!

The saga of the Studebaker Specials really began in October of 1929. With the crash of the stock market and the onslaught of the Great Depression, the way of life Americans had taken for granted suddenly came to an end. American auto racing, too, would never be the same. With the crash came increased concern over whether there would be an Indianapolis 500 race in 1930. Captain Eddie Rickenbacker, president of Indianapolis Motor Speedway, instituted a new set of rules in the hope that a full field of cars would make the 1930 500. Gone were

By THOMAS GLATCH

the ultra-sophisticated, ultra-exotic 91cubic-inch supercharged jewels of what Griffith Borgeson, the dean of automotive writers, called "the golden age of the American racing car." Engines with four valves per cylinder were outlawed, as were superchargers, and riding mechanics were brought back for the first time since 1922. But engines were allowed as much as 366 cubic inches, and the time was right for inexpensive productionbased race cars.

Rickenbacker's new rules have been unkindly termed the "Junk Formula." Call it what you want, but 38 cars started in the 1930 event, and the new rules may well have saved the 500 from extinction. True, some of the machines were nothing more than thinly disguised production cars, but the race went on.

One of the highest-placed stock-based racers that year was a creation called the "Russell '8'," built and driven by Russell Snowberger. His tan #22 started on the outside of the third row with a qualifying speed of 104.577 MPH (compared with Billy Arnold's pole speed of 113.263 MPH). Billy Arnold became the third man to win the 500 Mile Sweepstakes from the pole position, and Russ Snowberger came home right where he started, in ninth, finishing on the lead lap. Snowberger, a Detroit machinist, built the Russell '8' almost entirely from a 1930 Studebaker President passenger car at a cost of perhaps \$2000 to \$3000 (a front-drive Miller 91 cost \$15,000 in

1929). Following this fine performance at the Speedway, Snowberger competed in most of the races on the Champ car trail, finishing a remarkable fourth in the points chase.

When Barney Oldfield dropped the green flag for the start of the 1931 500, the pole position was held by none other than Russell Snowberger and the Russell '8'. Louie Schneider won the accidentfilled race in a Miller-powered machine, but Snowberger was the top stock-block finisher-this time in fifth. He again finished fourth in AAA Championship points, the season shortened to five races by the Depression.

It should come as no surprise that the Studebaker Corporation management was impressed by Snowberger's performance, so impressed, in fact, that a second Studebaker-powered machine was entered in the 1931 500. Called the Hunt Special, it was built by George Hunt, supervisor of test facilities for Studebaker, and Ab Jenkins, the famed tester and speed record holder of Studebaker passenger cars. While not an official factory entry, Hunt and Jenkins were allowed to "borrow" parts, factory engineers, and equipment. The chassis and body were built by master craftsman Herman Ringling of Indianapolis and were fitted with near-stock Studebaker President components. With 40 laps remaining in the 1931 race, Kansas City's Tony Gulotta had the Hunt Special in second place behind leader Billy Arnold. Ironically, Arnold's Miller-Hartz Special snapped an axle and crashed; Gulotta hit



Arnold's oil and also crashed.

Studebaker management decided to make an all-out effort for the 1932 500. Studebaker was in a unique position to accomplish an attack on Indy. While other manufacturers were struggling to survive the Depression, Studebaker was flying high in sales and profits. The Studebaker President, too, was a proven performer, both at the Speedway and in stock speed trials. Four new cars patterned after the Hunt Special were built by Herman Ringling. Each was assembled at the Studebaker plant in South Bend, Indiana, and track-tested to be as fast as the Hunt Special prototype. Each car was painted a different color, an experimental pearlescent finish, to allow quick identification from the pits. The four new cars and the Hunt machine were entered for Peter Kreis (dark blue, #18); Cliff Bergere (maroon and white, #22); Tony Gulotta (gray and blue, #25); Zeke Meyer (green and white, #37-the Hunt Special); and Luther Johnson (gun metal and silver, #46).

The cars qualified 10th, 11th, 17th, 20th, and 38th out of 40 starters. For the third straight year Billy Arnold ran away with the race but crashed again, allowing Fred Frame to win. Of the Studebaker cars, Cliff Bergere finished a remarkable third, with Meyer in at sixth (both on the lead lap), Gulotta 13th, Kreis 15th, and Johnson 16th. Tire wear was greater than planned, and wheels and tires had to be borrowed to finish the race. Johnson lost a wheel, and a set of ill-fitting wheels caused the early demise of Kreis, who crashed.

Encouraged by another fine year at the Speedway, Studebaker set its sights on the 1933 race. Four new cars were built by Ringling. The 103-inch wheelbase chassis was similar to the 1932 cars except that the engine was positioned 5 inches behind the front axle, compared with the 13-inch set-back of the older cars (possibly for aerodynamic reasons). The same 336-cubic-inch Studebaker President engine was used again, an Lhead straight-8 that produced 132 horsepower in stock trim. Studebaker engineers planed the head to give a 7.5:1 compression ratio, reground the cam, installed a Scintilla VAG3-D3 magneto, and added four Stromberg single-throat carburetors from Studebaker truck stock. That's all it took to build a superreliable 196-horsepower engine. The three-speed transmission, starter, front axle, 3.07:1 rear axle, mechanical brakes, Houdaille shock absorbers, and steering gear were also stock. A Ford Model-AA truck radiator provided the cooling. The entire package was wrapped in a Ringling-built body designed and tested in the University of Michigan wind tunnel, and as much as 3½ MPH may have been gained over the older models by improved aerodynamics alone. Studebaker was indeed serious.

These cars, along with the Hunt Special, were entered in the 1933 500 for Cliff Bergere (maroon and silver, #6); Zeke Meyer (blue and silver, #9); Tony Gulotta (white and blue, #34); Luther Johnson (black and silver, #46); and L.L. Corum (green and silver, #47—the Hunt Special).

Behind Byron Foy's Chrysler pace car the Studebaker Specials started ninth, 12th, 16th, 18th, and 20th in the 42-car field. The slippery aerodynamics proved to be a problem early in the race. The cars were actually too sleek, and time was wasted in the pits to cut holes for increased cockpit ventilation. Nevertheless, all of the Studebakers finished the five-hour grind, all on the lead lap. Tony Gulotta, with riding mechanic Carl Riscigno, finished seventh, the highestplaced "Stude" in 1933. Meyer, Johnson, Bergere, and Corum came in ninth through 12th respectively, with Dave Evans finishing sixth and Russ Snowberger finishing eighth in privately entered Studebaker-powered cars. Understandably, this feat was proudly proclaimed in Studebaker advertising.

This month's CIRCLE TRACK Classic is Tony Gulotta's seventh-place-finishing Studebaker Special. It is owned by famed automotive and industrial designer Brooks Stevens and is on display in his automotive museum in Mequon, Wisconsin, north of Milwaukee. The car was acquired by Stevens in the mid-Fifties and remains in authentic condition. Stevens styled many of the passenger automobiles built by Studebaker in the final years of the firm's existence before production was halted in 1966.

The Studebaker Corp. went into receivership shortly before the 1933 race. The Depression had finally caught up with Studebaker. The Studebaker Specials never raced again.

The last production-based winner of the Indianapolis 500 was Joe Dawson's National in 1912, in only the second 500 ever run. In more modern times, others would try to win the 500 with stockblock machinery. Ford's ambitious effort in 1935 was an embarrassing failure. Chrysler made an attempt in the mid-Fifties but never got beyond the testing stage. It wasn't until 1963 that Jim Clark in a stock-block-powered Lotus-Ford beat Cliff Bergere's third place of 1932. Dan Gurney also finished second in the 500 in 1969 and 1970 driving his own stock-block Ford-powered Eagle. Another Gurney-built Eagle, this time Chevy-powered, put Mike Mosley in the middle of the front row for the 1981 race. Yet only Studebaker can claim their cars were truly stock-85% stock!



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