

American Motor's Javelin is graduated from Trans-Am Prep School with top honors including—would you believe—

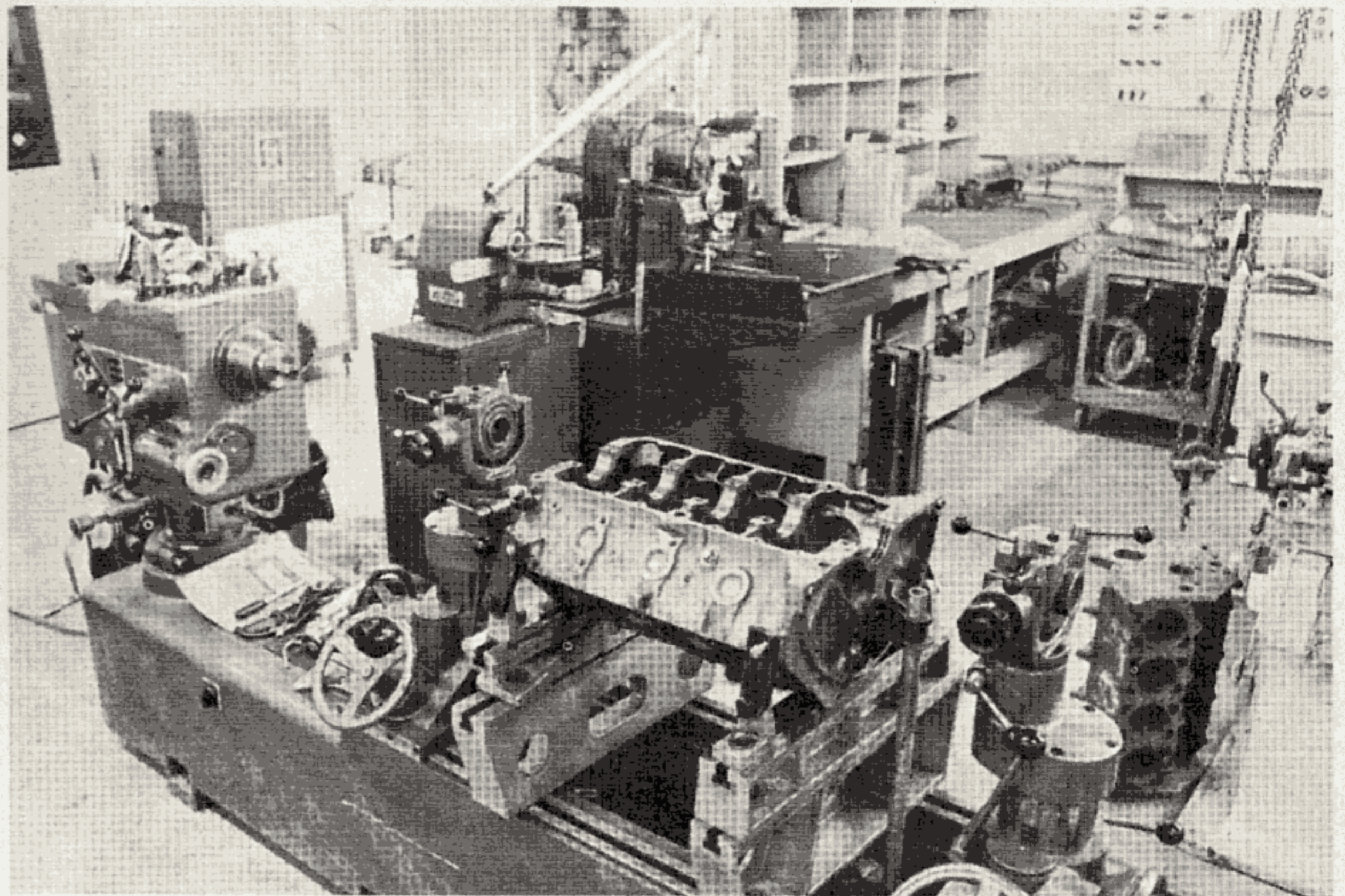
Phi Beta Kaplan!

BY JON ASHER

BACK IN THE '50's (before you and I were around, right?) there used to be a race way down south below the border called the Mexican Road Race. For basically production cars, it really was the forerunner of today's Baja 1000 Off Road Race, and it was a real "killer" on equipment. Most of the entrants never even made the finish line, but in 1952 and again in 1953 Jim Rathman made it to the finish line first, and his co-driver on both occasions was Ronnie Kaplan.

In 1954 there was no Daytona Speedway as we know it today, but there was that beautiful beach, and that's where they raced. A Pontiac won that year, and chief mechanic on the car was Ronnie Kaplan, the first Yankee wrench to ever win the big one.

In '55 and '56 Kaplan worked with the famous Ray Nichols in the preparation of Indy and Grand National cars. In '58 and '59 Ronnie was even busier, working first on the development of the Scarab sports cars with Lance Reventlow, while also racing a B Production Corvette out of Nickey Chevrolet in Sports Car Club of America races. During the two years Ronnie won 27 out of 30 races, and was National Class Champ both years.



Well equipped shop offers almost everything imaginable including a dyno room.

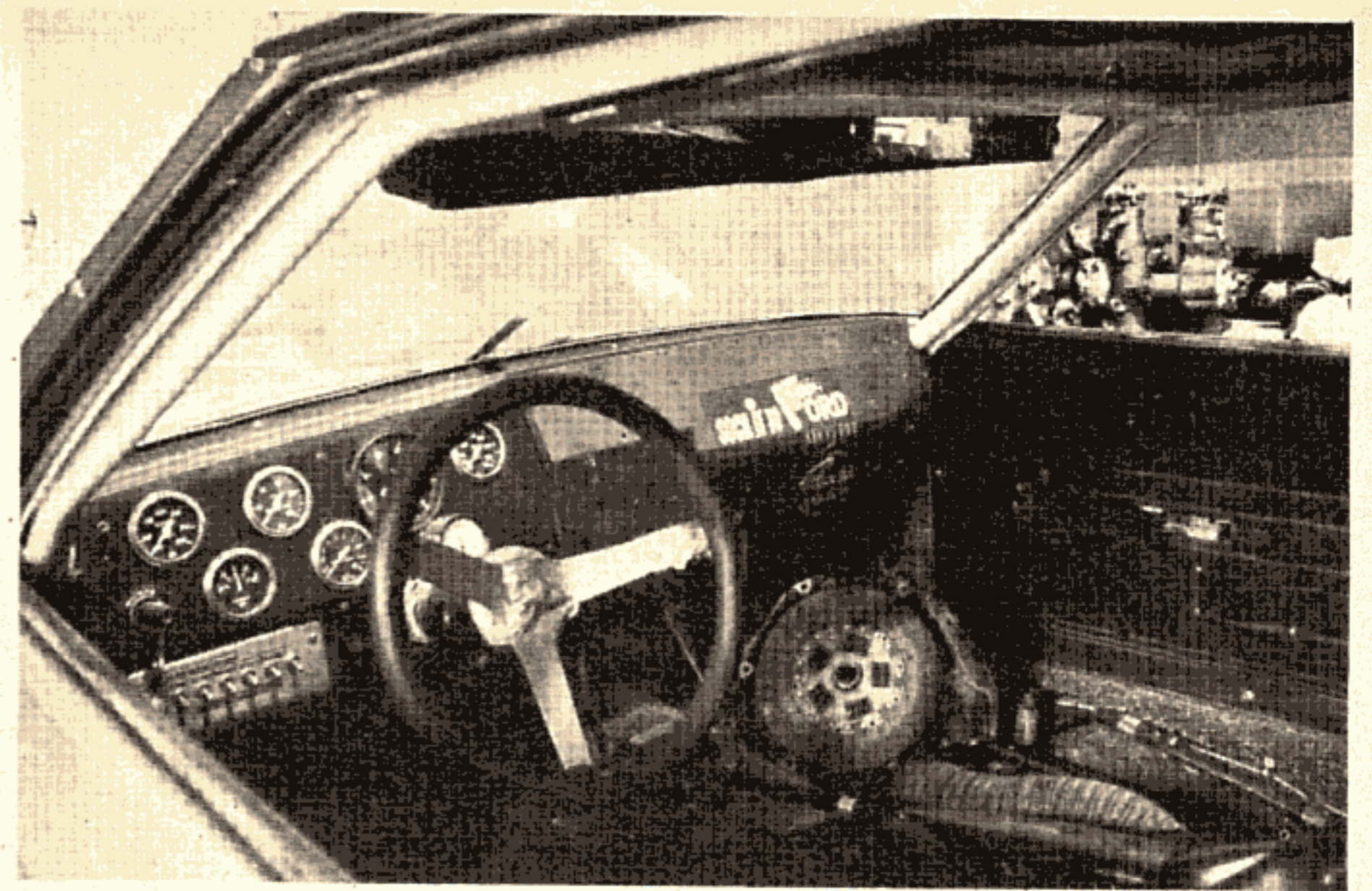
Want more? From 1961 through 1963 Kaplan again teamed up with Jim Rathman, and also Smokey Yunick, on the development of Chevrolets for racing, mainly Corvettes for races like the Sebring 12 Hour Endurance Race. In '61 and '63 Ronnie was chief mechanic on the winning class Corvette.

So, from what I've said so far it's

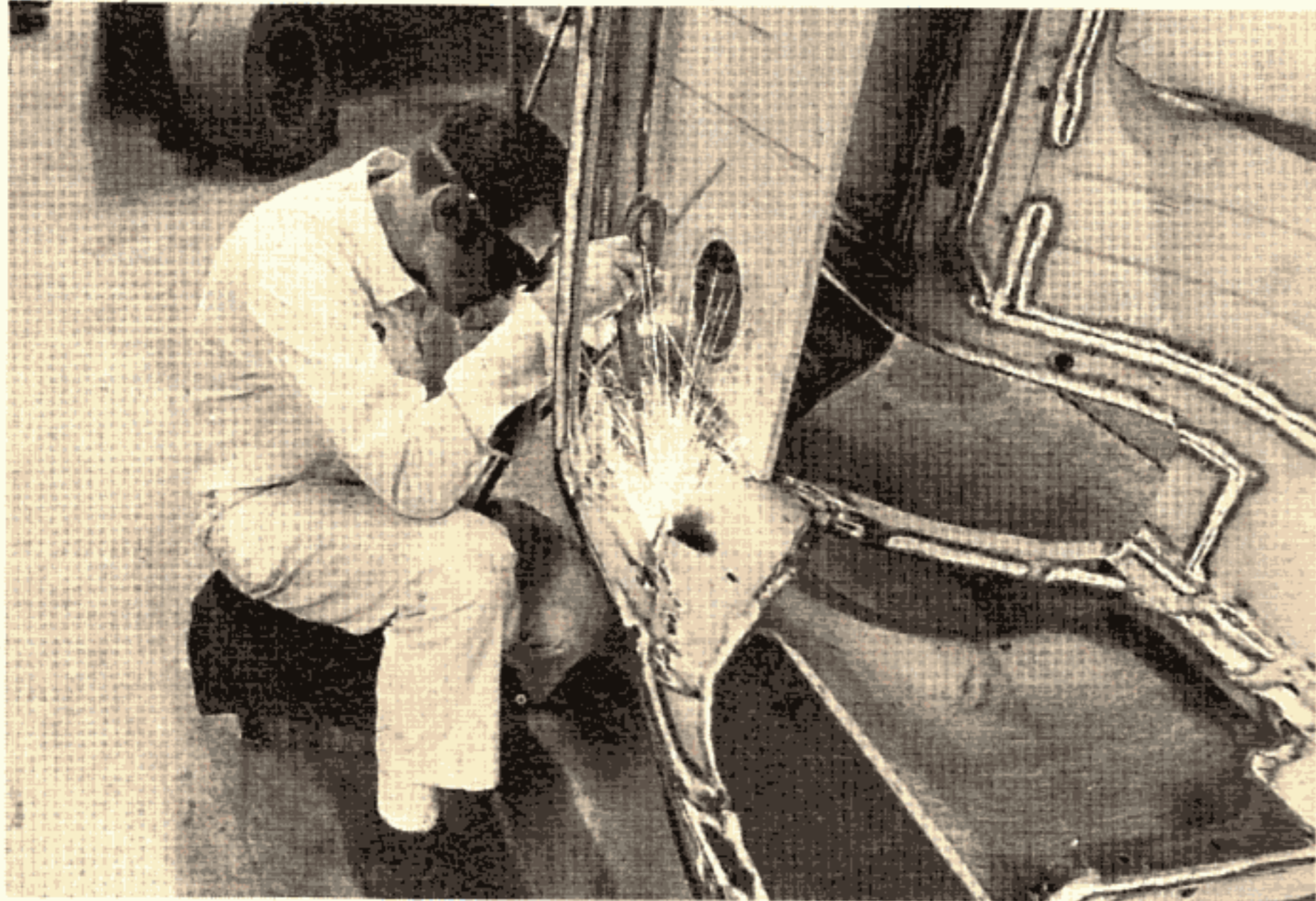
pretty plain that Chicago's Ronnie Kaplan has had a rather extensive racing background, and has piled up an envious record of wins. In September of 1967 Kaplan was contacted by Carl Chakmakian of American Motors on the recommendation of ex-racer Jim Jeffries, a man who participated in a number of events in Kaplan prepared cars. Chakmakian wondered if



Preparation work in full swing, things are crowded in Kaplan's shop.



Note full field of vision rear view mirror on John Martin's car.



All body seams are re-welded for additional strength.

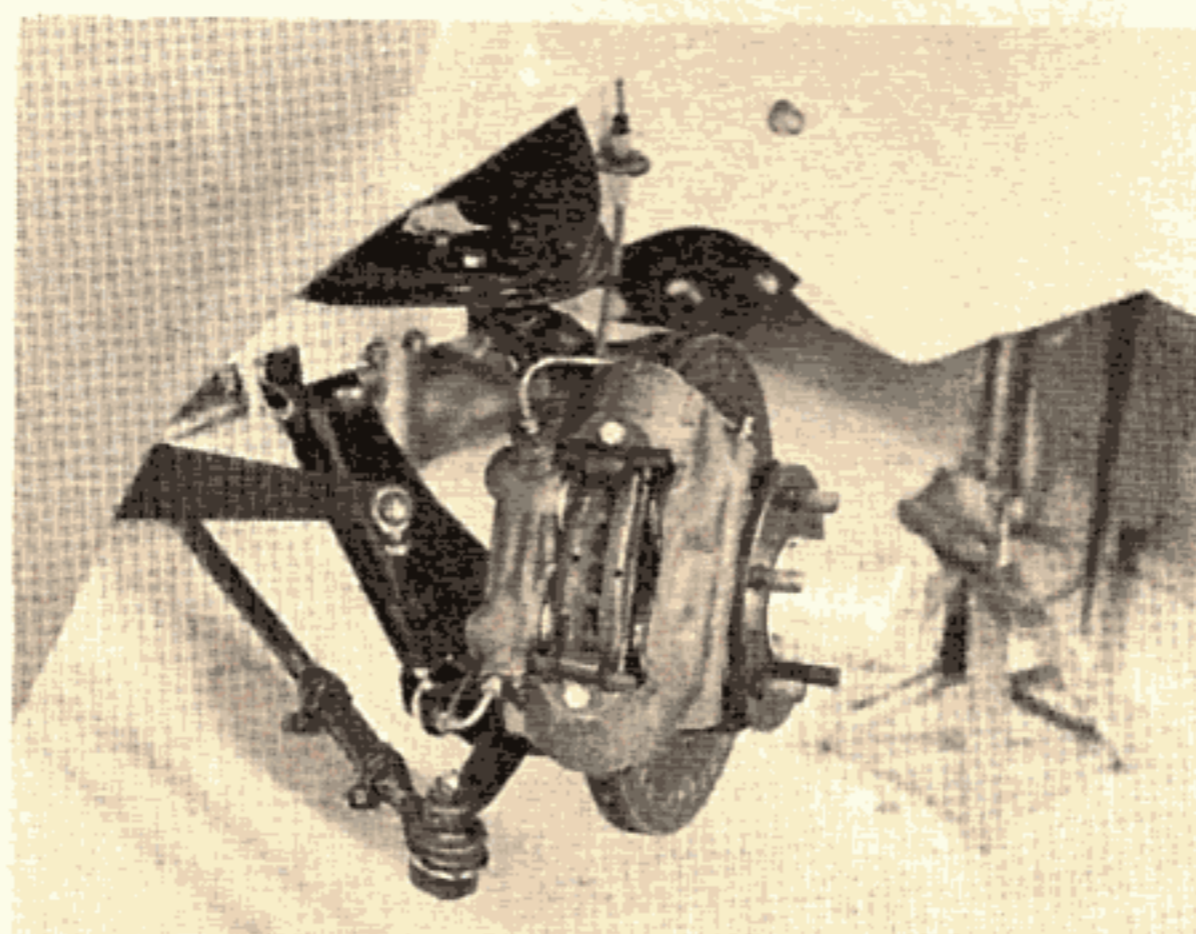


Fully adjustable spoilers have been added to increase top end stability.

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Heavily baffled oil pan makes the use of a trick oil pickup mandatory.



The front disc brakes were beefed up considerably for a mucho longer life.

Ronnie would be interested in setting up and maintaining a two car team of Javelins for the Trans-American Sedan Series of road races. With Kaplan just having moved into a brand new facility in the Chicago suburb of Elk Grove Village he was ready, willing and able to take on the project.

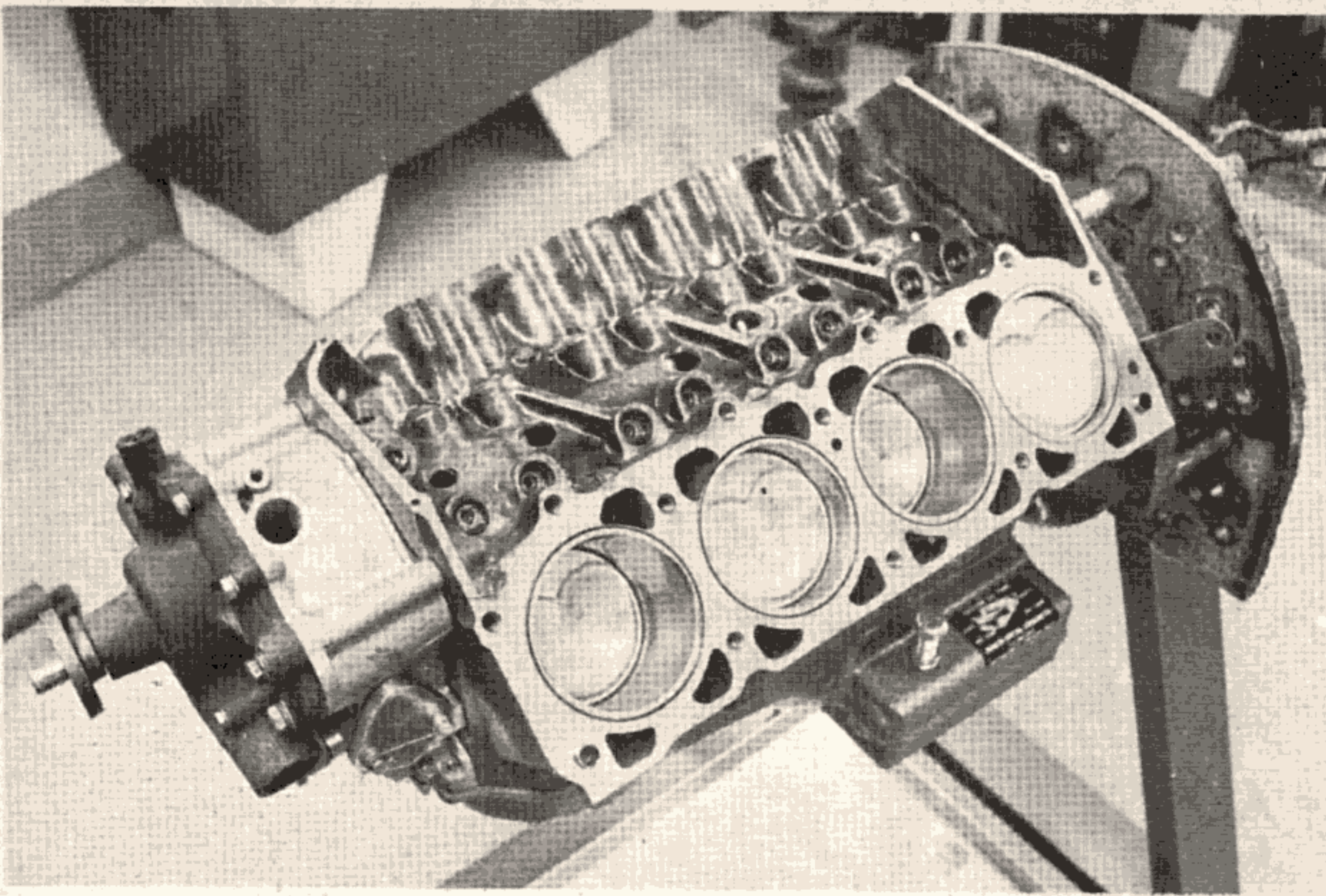
With Trans-Am cars restricted to 305-cubic-inch engines, and the general classification rules the stiffest in organized racing, the program was a real challenge for Kaplan, but his first year's effort paid off handsomely for AM. With totally untried cars, Ronnie hit the Trans-Am trail after extensive

preparation work on the cars, and racing in all twelve events on the schedule he managed to gain second place no less than six times, and third place on two other occasions. No wins were chalked up by the Kaplan Javelins, but at least one of the cars managed to finish all twelve of the races. When the season ended American Motors held down third place in the manufacturer's points standings, a record that is truly remarkable considering that it was AM's first real attempt at racing of any kind. Of course, the six second-place finishes by the team cars were pleasing to the factory, but

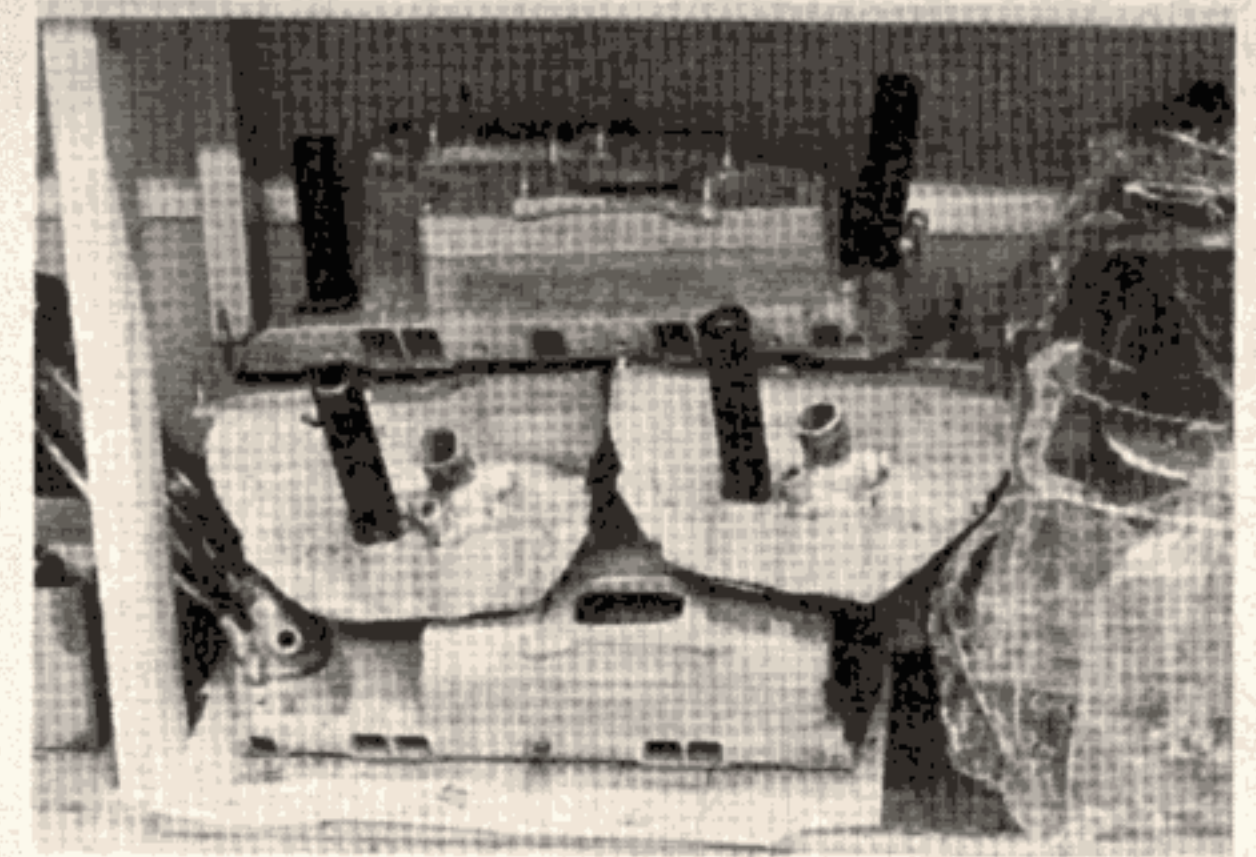
almost the highlight of the entire year took place on June 8, 1968 when a Javelin took the pole position at Mid-Ohio Raceway for the first time in automotive history that an AM car held that coveted spot.

For 1969, the American Motors effort is headed up by Dick Williford, and he was naturally enthusiastic about having Kaplan continue with the Trans Am program, so Ronnie got the title of Competition Director of the Javelin Racing Team, and work began on three new cars. Choosing his "shoes" carefully, Ronnie retained the services of John Martin again, and added Don White and Ron Grable to his stable. Both of the '68 cars were sold to private parties, but are still maintained by Ronnie Kaplan Engineering, and are more than competitive with the new cars.

John Martin works full time at Kaplan's engine emporium, and his help is invaluable. Two other "heavy hitters" at the Kaplan shop are Fred Duray and Tom Tolentino, both expert engine builders, and more than capable of building winning motors on their own. The combination of talents of the three men makes for



Assembled short blocks are flawlessly accurate in clearances.



An Edelbrock intake? Factory money at work.

an almost insurmountable edge over competitive brands of cars.

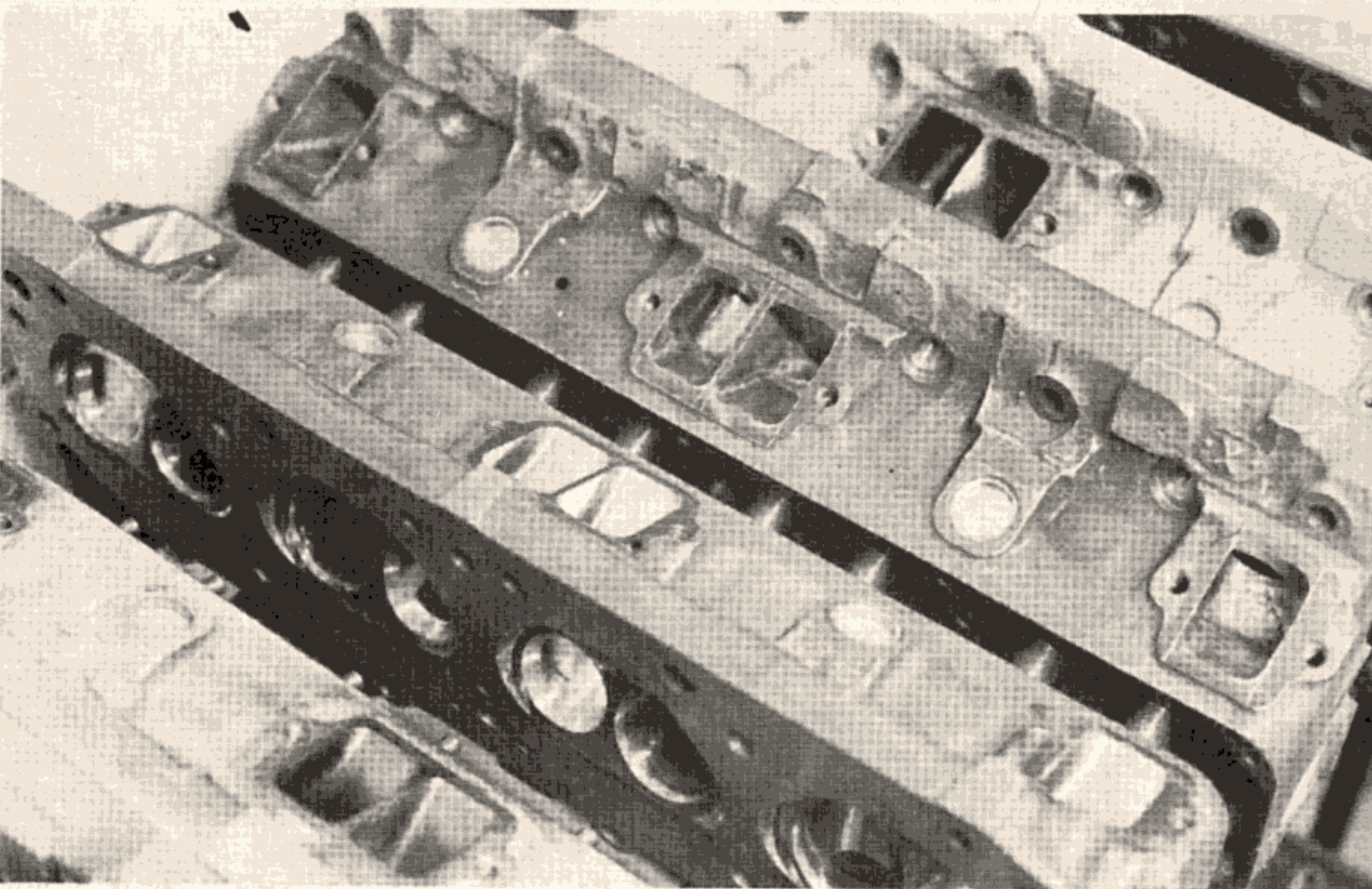
Beginning with a 290-cubic-inch motor, the short block assembly is first disassembled completely, and thoroughly cleaned in a hot tank. The block is then carefully checked for cracks or other flaws before any further work is done. After the inspection a block is either accepted or rejected at the word of any of the Kaplan men. If something doesn't look quite *kosher*, the block will be x-rayed to make sure everything is A-OK. After the final bare block check, the block is align bored and the cylinders receive an overbore of .090 thousandths, which brings the finished cubic inches to 304, one under the legal limit.

The crankshaft is next carefully gone over in the same manner in which the block is checked. If it's okay to start with it's balanced and polished. Since the stock high performance American Motors rods and pistons have some weight added for extra strength, the crankshaft must also receive some additional weight so that the entire assembly will balance out. Perfect Circle Rings are used in all of the engines, and the compression ratio is determined by whichever race track the cars are going to next. It's usually between 10 1/2-and 11 1/2-to-1. To get the different ratios, anywhere from .007-inch to .015-inch will be machined off the block or a set of trick pistons will be used.

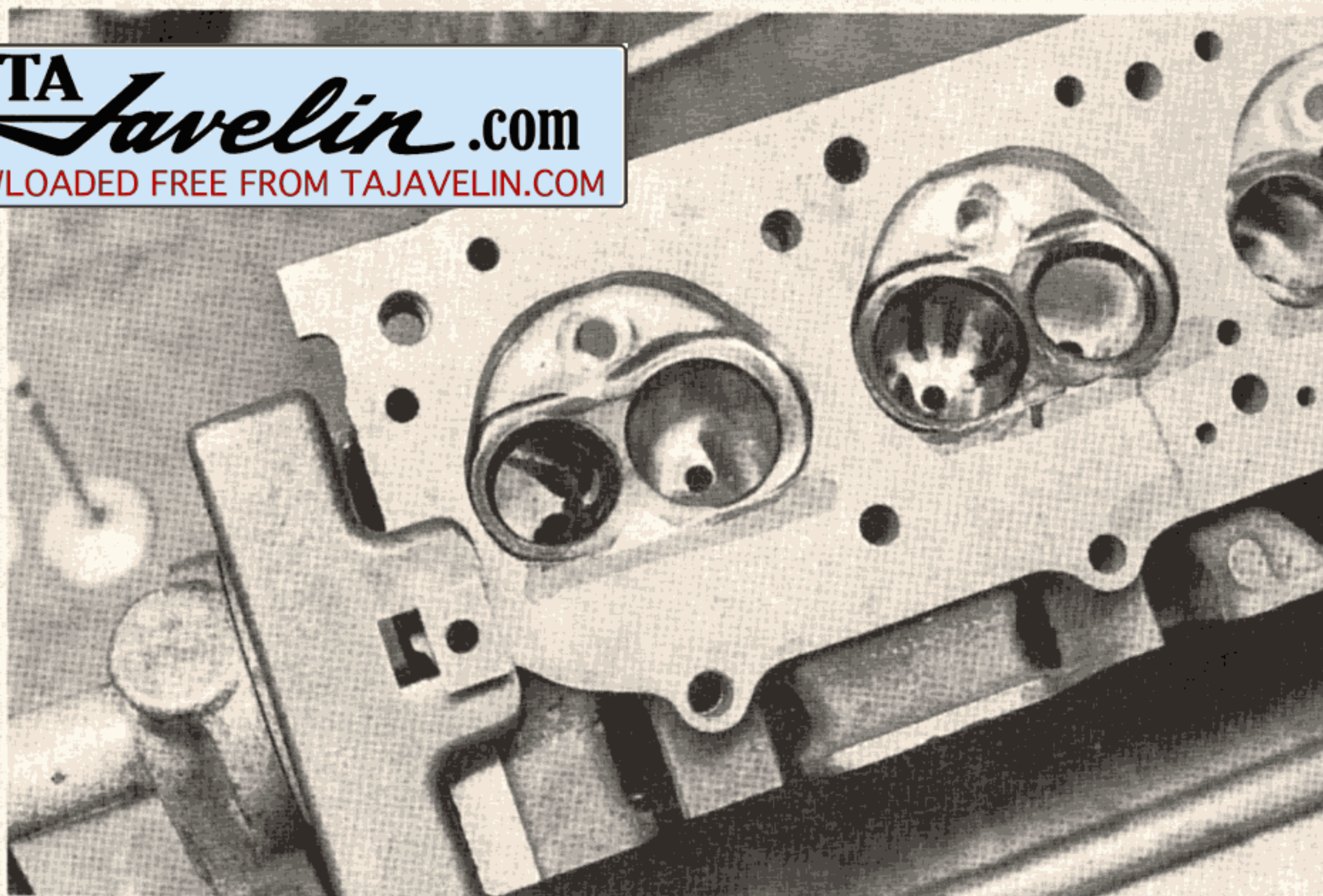
The head passages are ported out and polished extensively, and the valves are basically stock in size. The seat angles on both intakes and exhausts are 45 degrees, with the intakes measuring 2 inches across the top, and the exhausts measuring 1 5/8th inches.

Actuating the valves are either Racer Brown or Engle Cams, again depending upon the racetrack. Both the Racer and Engle grinds are prominently listed in the American Motors parts book, and might be the hot lash for you junior stock racers.

Intake manifolds are Edelbrock items, again listed on the parts sheet.

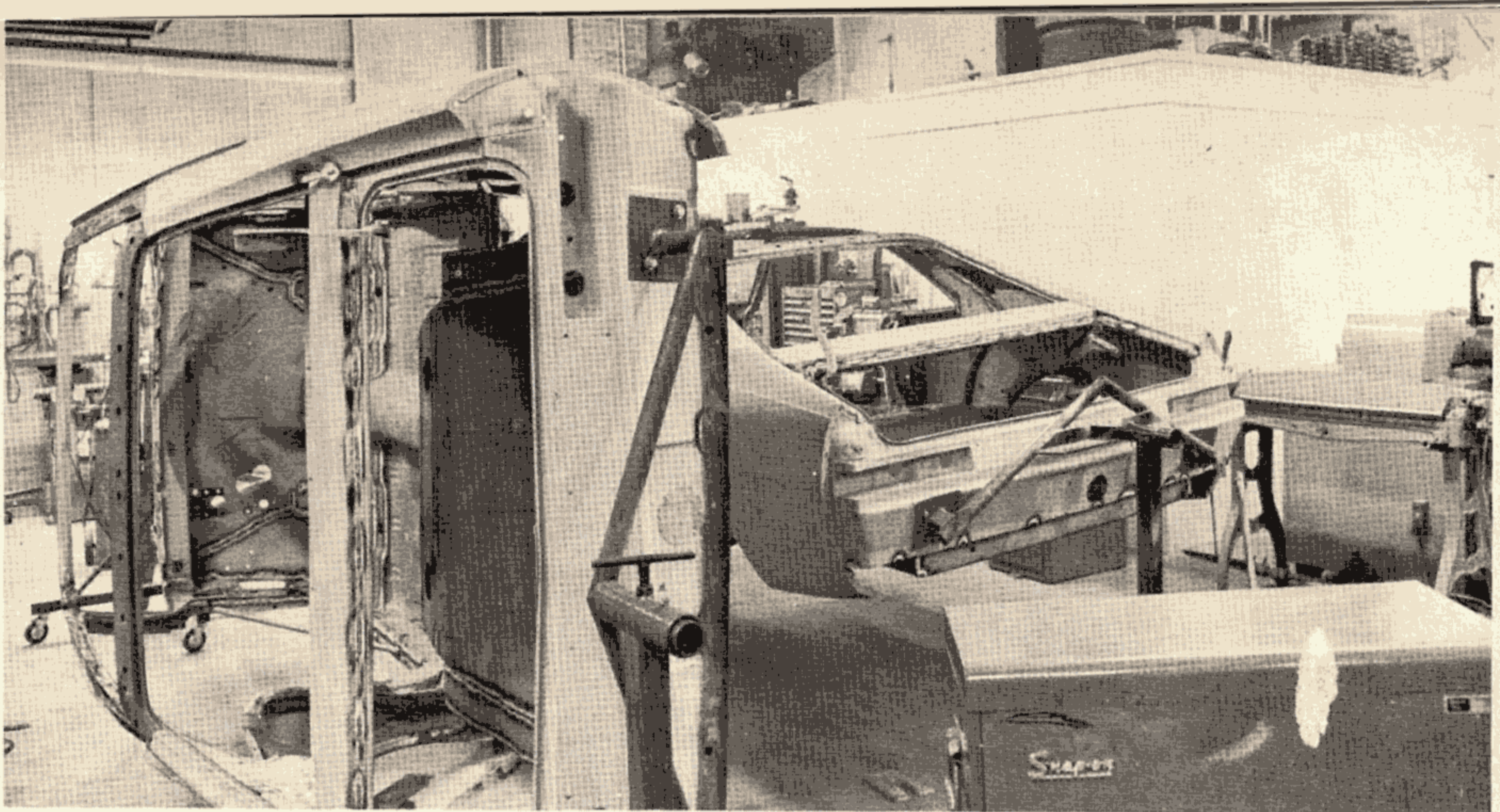


Size of finished head passages have been extensively hogged out and polished.



Heads are first marked with purple dye and then cut accordingly.

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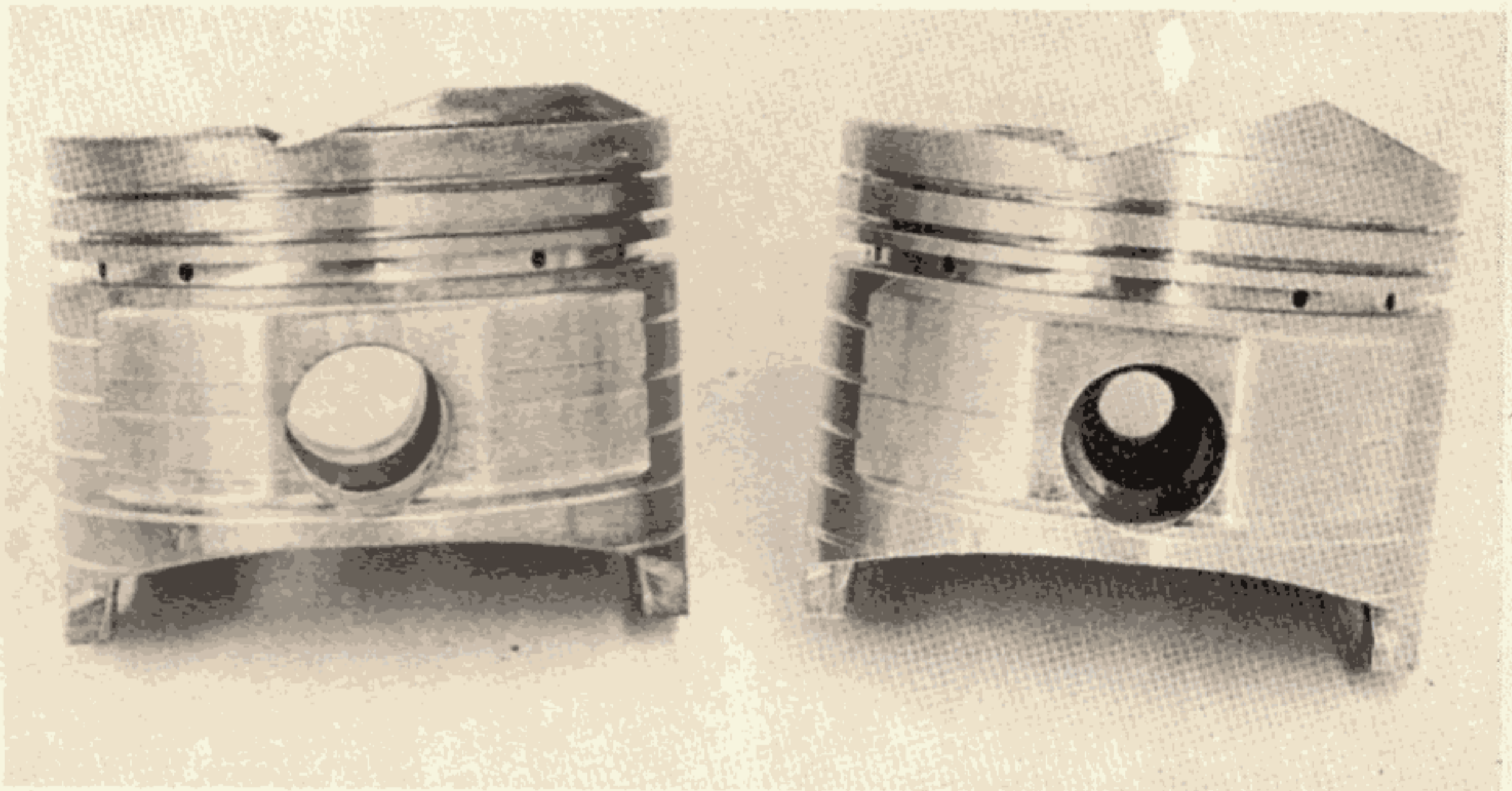
Chassis and body modifications begin on yet another Javelin for a private owner. Everyone's jumping on the bandwagon now.

Twin Holley 710 CFM carburetors are used exclusively, and the jetting, like almost everything else, depends upon the track. Providing fire are stock American Motors distributors, but they've been modified considerably, with the vacuum advance having been removed completely so that there's no lag before they move to full advance, which is usually between 36 and 40 degrees.

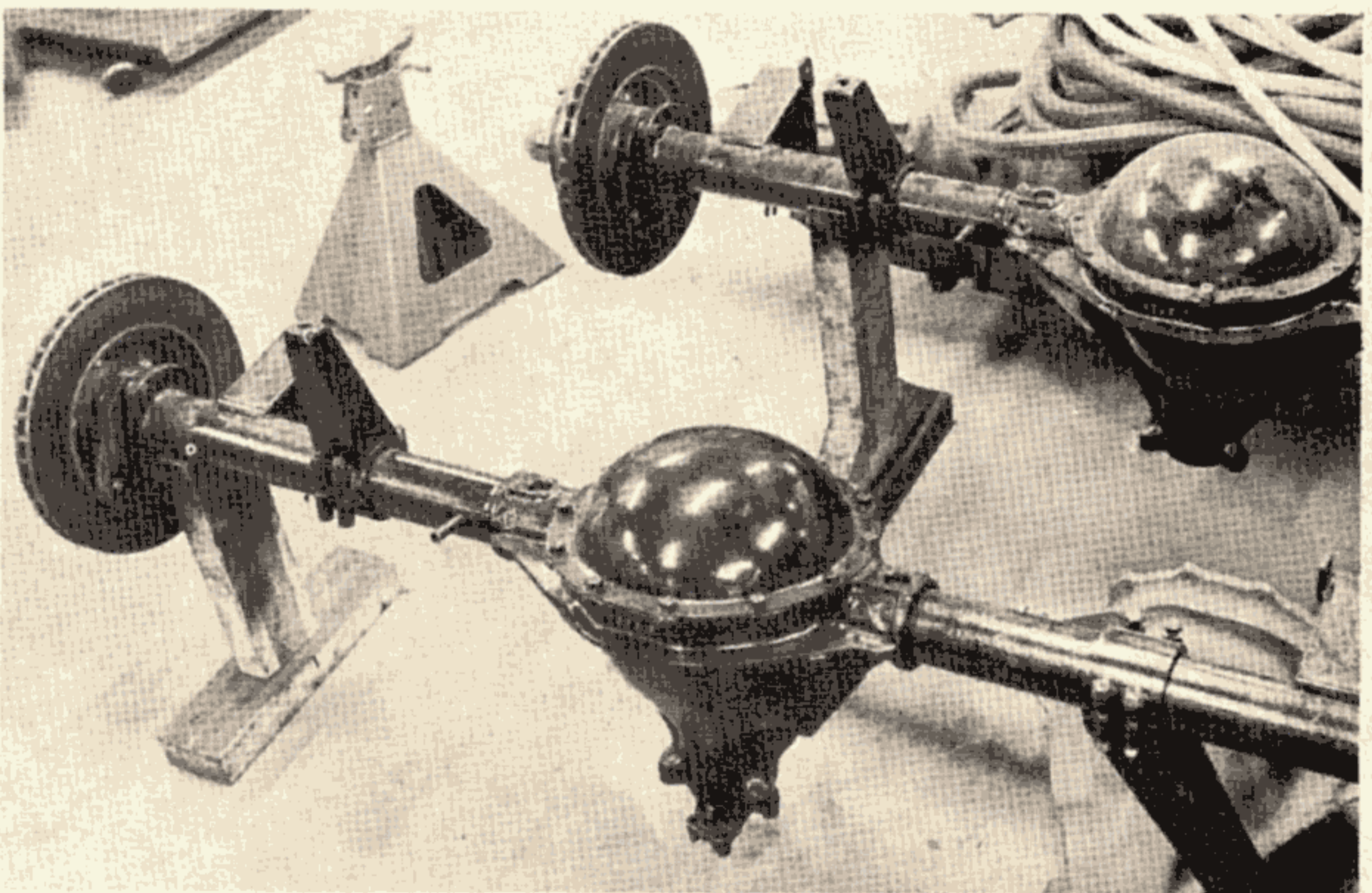
Transmissions used are stock AM items, with the addition of heavy duty Hurst shifters. Tires up to this point have been Goodyears, but that could change if Firestone comes up with a good combination.

Several tricks are in store for the future from American Motors, the most promising being a change in pushrod and valve angles of operation. In the past the small AM mill has suffered from valve train failures on several occasions, and Kaplan and Company are working on some new wrinkles that may end that problem forever. It's something about re-tooling the heads completely, but for the real word on that one we'll have to wait for a later date.

Since Kaplan's first effort in behalf of American Motors began slightly over a year ago he's put them literally on the racing map, and has done much to help change American's image from one of the old ladies go-to-market put-put to one of a rip-snortin', actual racing-type car, and that's some accomplishment. While Kaplan has done much to help American Motors, the



Latest piston trick includes the cutting out of the dome as seen at left.



Discs are also added to rear end assemblies. Gear ratios depend entirely upon the track.

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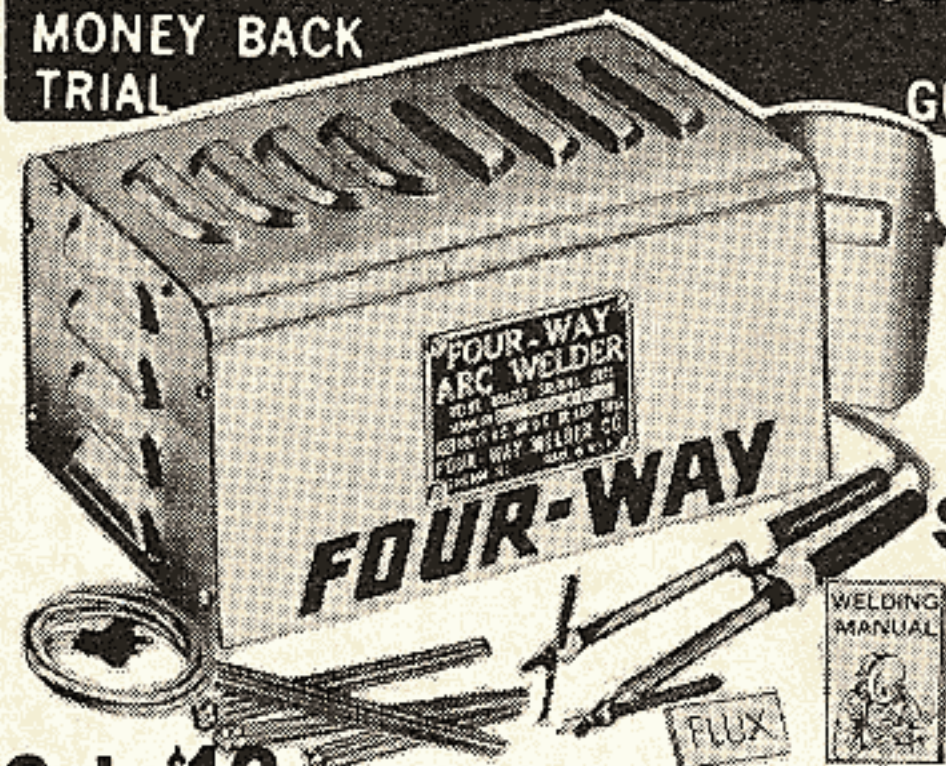
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CHEVY TUNNEL RAM continued

sponse the plate can be installed (for improved port charge velocity at this engine speed). For pure-race applications with all-out machines, the plate can be left out and the power range elevated to 6500-8000 rpm. The plate itself is inexpensive (standard on new manifolds) and comes with all bolts and gaskets for a simple bolt-on installation. It really does wonders for mid-range performance on all-out race machines that do make horsepower up around the 8000-rpm range, but lack some in the mid-range. It's the way to go.

PHI-BETA KAPLAN continued

job isn't done yet, not by a long shot. To really cement the name Javelin and American Motors into the minds of the buying public American Motors must have a winning season. This one might just be it.

1970 SCENE continued

inches of water pressure at 100 mph. There is also a neat set of lock-down knobs that supplement the normal hood latch and provide a racier look. Besides, the fiberglass top of the 442 saves an extra 22 pounds. Another 30 pounds are cut by switching to an aluminum manifold of the same general configuration as its cast-iron counterpart of last year. You could move the battery to the rear, and OLDSMOBILE has done it in the past, but that is something of a nuisance. Next, we move back and find an aluminum pig at the rear axle and that saves another 25 pounds. Now you see how the Oldsmobile boys have gone to work with cubic inches and drastic weight saving in an effort to fight off some of the extra non-performance weight. That aluminum rear axle, incidentally, happens to have a neat cast aluminum cover that looks for all the money in the world like a quick change. With most guys adding lift kits to their muscle cars, this should be one of the most popular items around. Going to an aluminum differential housing may seem like an expensive option to save 25 pounds but, who knows, it may serve as a test bed for a permanent switch from cast iron to aluminum. The range of gear ratios, incidentally, includes a 3.9 and a 4.11 plus a dealer installed 5.00.

Oldsmobile's list of options begins with a neat W25 package, including

the hood locks, glass top and a dual cold air induction. This is available on any Cutlass. Next comes a W30 which includes all of the W25 goodies plus special cylinder heads, a hotter cam, different distributor, etc. In the lower displacement engine, the Ram Air 350, you can get the same W25 hood plus a W31 power package.

The Olds engine engineer has a theory, not at all unrealistic, that a fellow who buys a regular 442 with an automatic will probably order air conditioning, power brakes and will require a respectable idle, so he cams the engine accordingly. On the other hand, the fellow who orders a 442 stick shift is a driver, not a little old lady, and he gets a driver's cam. This little bit of insight into management feelings may help you order accordingly. That stick shift cam, incidentally, is definitely designed for performance, and since idle vacuum is not that great, your stick shift 442 will have some manual disc brakes with semi metallic linings, just like the police package. Push with a manly step and they stop in fade-free fashion.

Several interesting engine developments have taken place, such as an intriguing new valve rotator, which prolongs valve life no end, prevents them from picking up one-sided deposit build-ups, improves the stem oiling and evens out the valve cooling. Valve rotators as such are not new by any means, but this one is simple, light, inexpensive and it works. It's great for a street 442 or even one used for mixed street and drag applications, but for the drag strip, you'll be able to buy a service package that is somewhat lighter.

Another improvement concerns a new style of bearing design called Con-Ecc—an abbreviation for concentric, eccentric. It's a compromise between a wildly eccentric racing bearing with enough side clearance built in to take care of any changes in rod shape and the requirements

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