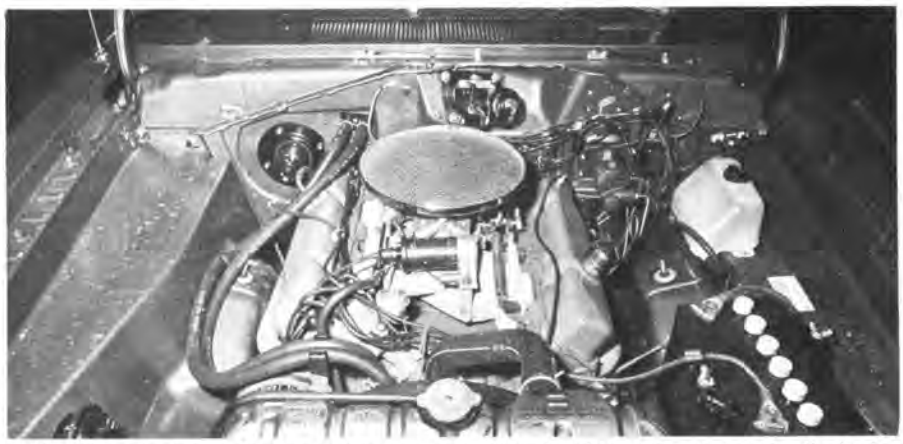
440 DART evolution of a winner

Through one hot rodder's ingenuity, Dodge's docile Dart has grown into a Street/Strip stormer with performance second to none



440 mill rests in the Dart's engine compartment with little room to spare. Big incher with gobs of torque makes machine one of the strongest runners to be found.

Even before Ford Motor Company began using their now famous slogan, Chicago's Mr. Norm Kraus indeed had a better idea, although Norm's notion involved an offspring of the Chrysler Corporation and not a product off the Dearborn assembly line. Specifically, back in 1967, Kraus, already established as the leading high-performance new car Dodge dealer in the country, took a long look at Dodge's compact and the then-docile 1968 Dart "compact," scrutinized the recently introduced Dodge 440 Magnum engine, then decided to see what he could do about getting the two together. A natural? Certainly not at first glance; but, then, the sometimes volatile and always inventive Mr. Kraus has seldom been one to follow the "natural" path of things automotive. Norm has earned his reputation as an innovator through long and discerning use of his unusually astute business-performance mind.

The first thing Norm did was to enlist the aid of a measuring tape, discovering that, even if the Dart and the 440 were not exactly "made for each other," by using a little ol' hot rodding ingenuity the two could at least be made compatible – in much the same way that Alka Seltzer and that sensitive stomach seen so often together on the "boob tube" manage to at least tolerate each other As a matter of fact, after consultations with Norm's contract race car driver, Gary Dyer, and shop employee Rich Mouldry, it began to seem as if the Dart's underhood confines and the big Magnum might even learn to complement each other.

Within a matter of days, Rich and Gary had the 440 shoehorned into a tentative position, new motor mounts were fabricated and a custom exhaust system was laid in alongside the big 440. Next the new pieces were bolted in place, the jack under the engine lowered, a hearty spank applied to the hood as it was closed, and, lo and behold, the first Dart 440 sprang to life!

CAR CRAFT arrived on the scene shortly after that star first rose in the east and reported on the trio's triumph in the January '68 issue of CC. Following that, Mr. Norm built over 50 of these street-strip vehicles, all in his father's Chicago Grand-Spaulding dealership, and sold them faster than Rich and Gary could put them together. At this point, however, Dodge Division, though mildly interested in the project as a "novelty," disdained any desire to mate the 440 and the Dart on one of their production lines.

Now it's 1969 and you can again purchase a drag strip Dart from Kraus, but things have changed a bit. And how! Seems that the "brass" at MoPar, satisfied that the "backyard"-built bomb was not a quick-fused dud, suddenly decided to get in on the act. They contacted Norm just as the '69 Darts were released, arranged for Norm and Gary to again engineer the big torquer into the baby bruiser, lined up Hurst Performance of Detroit to do the actual engine installations (demand for the traffic stoppers at this point had risen to a volume that not even the entrepreneuring Mr. Kraus could handle)

CAR CRAFT MAGAZINE DRAG TEST

Hooker Headers exit through the fender wells into 3" collector, 18" long. H.P. increase is high, as 440 mill needs to breathe at the top end. "Western" style snubber has ¾" clearance from floor pan, controls wind-up.

ABOVE—Standard Dart interior is enhanced by floor shifter and console. Gauges are needed.

RIGHT—"Mr. Norm" (left) discusses modified snubber with G-S performance parts manager, Dennis Hirschboeck, and friend, Steve Modeno.

BELOW—15" wheels require adapter for Dart's bolt pattern. Fender wells had to be trimmed.

Photos by Don Green and A. B. Shuman

and announced the 440 Dart as a performance option, eventually to be handled by all Dodge dealers who care to trifle in that field.

So far, however, the Kraus' G-S dealership remains the lone outlet in the midwest; but somebody out west smelled the good deal, resulting in the availability of "Norm's Follie" at the Los Angeles area's newest and most performance conscious dealership, Gene O'Hara's Saddleback Dodge in Santa Ana, California. There, as at Grand-Spaulding, all you have to do is mention the 440 and any number of sales people will be ready and able to help you. You can buy the 440 Dart "as is," or order it with any number of "goodies" to enhance its already great street/strip performance. The added "goodies" were another innovation of Norm's, growing out of his dealership stock of almost any conceivable high performance option. And Saddleback is now in the process of setting up a similar "hot parts" department under the guidance of Gene and Bob Moore, Saddleback's Hi-Per service manager. At last check, Saddleback, which originally ordered 20 of the cars, was moving them at a pace that surprised even those salesmen who thought they had "seen every sales gimmick in the book." Gentlemen, the answer is, "this ain't no gimmick; it's a goer!"

My first look at the '69 440 Darts came when the transport truck carrying the cars drove through the gates of Saddleback. Bob Moore called me over to look at them. At first glance they appeared to be standard Dodge Darts, with the exception of the GT Sports stripe on the rear deck. A second look, however, showed that maybe this "book" was more interesting than what its "cover" revealed. The first clues were the large twin exhausts exiting from underneath the rear bumper, but the "440" emblems on the sides of the simulated air scoops told the story.

With the hood open, all you can see is cubic engine, as this "baby" occupies all the space from firewall to radiator, and shock tower to shock tower. The fit really isn't that bad, though, as the stock engine compartment sheet metal retains its standard form. The only visible modification is a new set of front motor mounts, engineered by Mr. Norm and fabricated by Hurst Performance Research when they installed the engine. Coupled to the engine is a stand-

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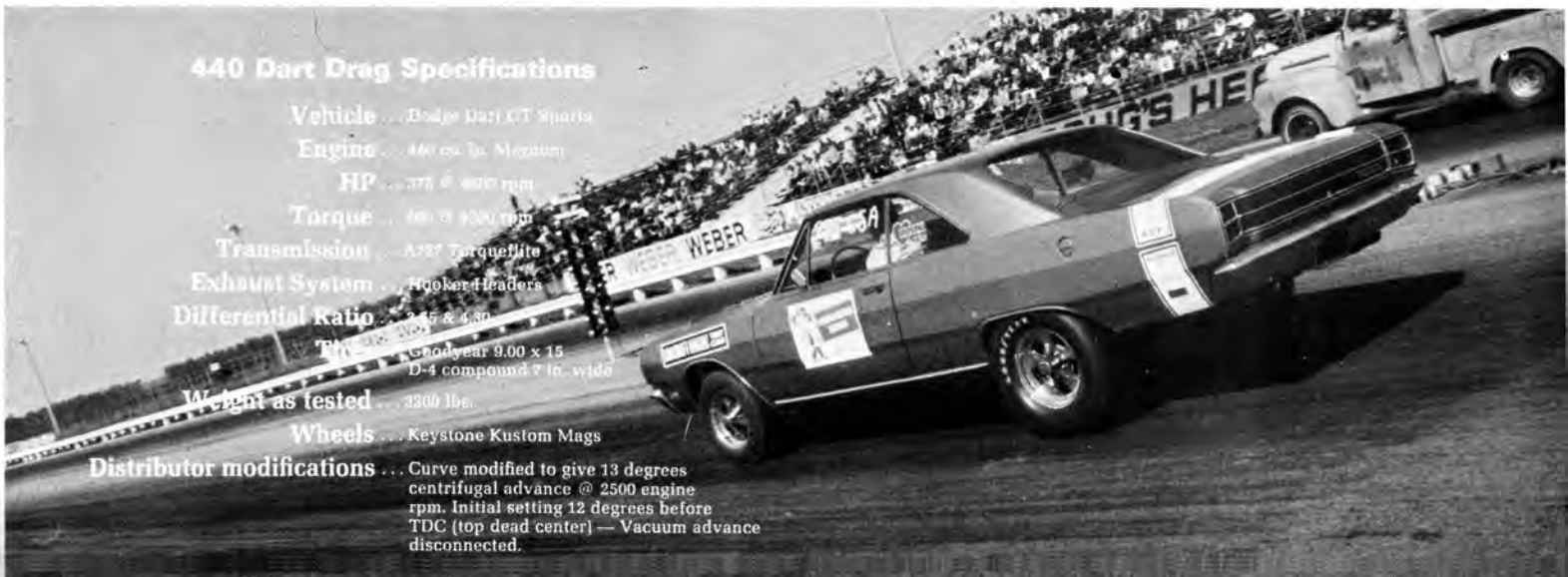

DRAG TEST

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ard 440 A727 TorqueFlite transmission and torque converter, with the driveshaft spinning a set of 3.55:1 gears mounted in a Sure-Grip carrier assembly. (A 3.91 ratio is optional for this car from the factory.)

The 440 cubic inch engine is a standard Dodge mill. No special tricks in the camshaft or carburetion department, which makes the combination relatively easy to tune. Of course, with 375 horsepower and 480 ft./lbs. of torque no tricks are needed, as the factory has been able to achieve these ratings with a single four-barrel carb and hydraulic lifters.

Inside, the car sports a lot of class with its contoured bucket seats and center console. The shift lever for the TorqueFlite is within easy reach, although the detents could be a little more positive to prevent skipping a gear on the upshift pattern. Generally speaking, the quality control throughout was above average for a car of this type, but on the other hand there are areas in which the factory could have improved on, especially in the basic equipment offered.

When you think of a "pony" car the image that presents itself is a big engined, high performance street screamer. This is what the youth market is looking for, and this is what they're going to buy. Good gas mileage and a smooth idle aren't on the program. However, when the factory produces these cars there is a certain responsibility on their part to make sure that the package is relatively safe – when it comes to handling and braking for instance.

The suspension on the 440 is the same as that offered on a 340 Dart Swinger. It's listed as a heavy-duty package, but with the extra 200 pounds of engine hanging over the front wheels, it has a hard time matching the heavy-duty name. The steering on our particular model had the quick ratio, and without power assist is a real bear to handle in tight spaces. The brakes are heavy-duty drum types, ten inches in diameter with wide linings. I for one would like to see discs on the front; but these are not available without power, and there's no room under the hood for the booster unit.

The lack of proper instrumentation was somewhat a disappointment, too. Idiot lights have no place in a high performance automobile. I'm sure I'm not the only one who wants to know what the oil pressure, etc., is at all times. It's not too comforting to see a red light come on after the damage has been done.

On the plus side of the scale, the Dart has a lot going for it, especially in

straight line acceleration. The stock E-70x14 tires are worthless on this car, as there's no way they can handle the torque this engine puts out. Even so, the initial times through the quarter mile were quite impressive. How does a 13.71 with a top speed of 105-plus sound? Not too bad! Driving the car does take a little practice. Too much throttle coming off the line, and the e.t. goes up in smoke. The best procedure I found was to come off the line at a dead idle, using the primaries only for the first 50 feet or so, and then plant my foot in the secondaries. Even so, the tires still protested loudly, regardless of the air pressure used. With an engine that develops this much torque, winding it to high rpm's through the gears is a waste of time. Shifting the TorqueFlite at 5200-5500 seemed to work best. In fact, leaving the selector in Drive and letting the trans shift automatically produced almost identical marks. With the initial tests completed, it was time to make a few modifications to the engine and chassis. We were interested in what it would take to get some of this power to the ground.

Our first stop was at Hooker Headers in Ontario, California, where Jim Dale gave us the lowdown on what was available for the 440. Hooker and Chrysler Corporation work in conjunction on the design of headers for all the MoPar cars. The Hooker #5206 model is the one that fits this particular application. This is a through-the-fender-well model, as there isn't enough room to put a set between the frame and the engine. Using 1⅞" diameter pipes 42" long, the basic header is formed. The collector was changed from the standard 3½"x10" to a 3"x18" length to take advantage of the engine's torque curve. Even corked up these headers make a big difference, as the car felt much stronger in the mid-range.

The car was taken back to Saddleback Dodge for the remainder of the modifications. Dave Danials modified the distributor curve to give 13 degrees centrifugal advance at 2500 engine rpm (26 degrees at the crankshaft). Using an initial setting of 12 degrees gave us a total advance of 38 degrees, which seems to work best with these engines. The vacuum advance mechanism was disconnected, as we weren't interested in mileage. The only modification to the chassis was the installation of a pinion snubber, to control rear axle wind up, and a set of 4:30 gears. The snubber should have ¾" clearance between it and the floor plan when the chassis is loaded.

To dress up the appearance of our Dart, a set of Keystone Kustom Mags were installed. A slight problem arose with the rear wheels, as we wanted to run 9:00 x15 Goodyear slicks. It seems that the Dart has a four-inch diameter

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DOUG HEADERS

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bolt circle, and no one makes a 15-inch wheel in this pattern. Our only recourse was to use a set of adapters on the rear, which Keystone furnished. Unfortunately, our problems had just begun, as now the tires interfered with the edge of the fenderwells. A little cutting and trimming soon fixed this, but if any of the factory brass are listening, I hope they take heed and correct this situation in future model cars.

It was track time again, so we headed for Orange County International Raceway to "let it all hang out." Arriving at the track we headed for the tech lines, and after inspection were classified in C/SA. On the first pass I tried the same driving technique as before. Now the Goodyears bit so hard that the car bogged momentarily coming off the line. Going through the traps the stench of burning rubber filled the car, with clouds of white smoke visible in the rear view mirror. A quick inspection showed that the tires were growing almost an inch at speed, interfering with the wheel wells again. Even so, the car registered a strong 13.22 e.t. with a top end of 107.56.

Back in the pits we tried reworking the wheel openings for more clearance. The snubber was also spaced up to keep the car from settling as far when shutting off after a run.

Driving technique was changed for the second run, as I stalled the converter on the line as the Christmas Tree blinked down. The car moved hard on the first ten feet or so, and then the tires came loose. Short shifting to second and winding the engine slightly past the power peak before going into third gave results of 13.14, with a top end of 108.86. Needless to say, the tires were still hitting, but not as badly as before. During the course of the day several other runs were attempted, varying the start procedure for the maximum in traction. With the snubber spaced up the car would hop if there was too much bite, or smoke the tires if I came out too hard. Try as we did, the car would not dip into the twelve second bracket, although it came close on several occasions. Unfortunately, we ran out of time, so it will have to be another day before we reach our goal, but that day should come soon, as the 440 Dart has the potential of being one of the strongest pony cars on the market. After all, Mr. Norm claims consistent 12.90's in some of his "super equipped" versions, with e.t. occasionally dipping into the 12.70's, and knowing how performance minded Saddleback's people are... well, how about a good ole fashioned "grudge run"? Shades of yesteryear, hey Norm?!