



Come Back Little Ethyl

Mini-tests of seven
'71 regular fuel Super Cars

By A.B. Shuman

Despite the almost total demise of the high compression/premium fuel engine, the '71 Super Cars have managed to retain their essential vitality. Some, like the Z/28 Camaro, appear to have suffered more than others, but most have come through the metamorphosis remarkably well. The cars we tested were pilot line and prototype models — the best that was available in mid-July — but we have a hunch that the production run machines will be a bit better: they usually are. At any rate, we'll be subjecting these cars and their variants to much closer scrutiny and complete road tests during the coming months. — Editor

OLDS 4-4-2 STICK

Both of the Oldsmobiles tested were prototypes: '70 cars with '71 engines and running gear. The 350-cubic-inch W-31 package has become a casualty in the emissions war and no longer exists, but the 455 W-30 is still extant, and this is what we were interested in. Along with dropping compression ratios to 8.5:1, Oldsmobile has adopted a new method of rating their engines, resulting in figures considerably lower than what we're used to. The new rating system gives the SAE installed, or net, horsepower and torque, rather than the gross output without accessories. The standard 442 engine is rated at 260 horsepower under this system, but figures for the W-30 have not yet been released.

The first 442 we tried was equipped with a wide ratio four-speed, 3.42:1 axle ratio, and W-30 engine. It featured the new double disc clutch (standard on stick W-30s, optional on regular 442s) and had very low pedal effort. The engine showed a good power range, allowing starts at 2,500 rpm and shifts at 5,800. Indeed, the Olds seemed to be the least effected of the cars we tested following the switch to regular fuel. In comparison with the other vehicles, the big difference is noticed at 60 mph and above, as reflected in the performance charts. Maybe Olds is ready to take back that title of "King of the Road" again.

/MT

442 W-30 (Stick)

Engine	455 W-30
Power	N.A.
Transmission	Wide ratio 4-spd
Rear Axle	3.42:1
Tires	G70-14

Performance (2 aboard)

0-30 mph	3.1 seconds
0-45 mph	4.5 seconds
0-60 mph	6.6 seconds
0-75 mph	9.4 seconds
1/4-mile	14.7 seconds/97 mph
40-60 mph	2.9 seconds (second gear)
50-70 mph	3.3 seconds (third gear)



OLDS 4-4-2 AUTOMATIC

Having tried the four-speed W-30 and several competitive cars, we decided to return to Oldsmobile to check out the automatic version, believing that the combination of torque converter and different valve timing made the performance potential (on street tires) better than anything we had tested up until then. This turned out to be true, as the car made top marks in standing start acceleration, though it couldn't match the four-speeds in the passing range. Several different driving techniques were tried, with best results obtained by starting from idle and smoothly "walking" into the throttle to keep the tires just on the verge of spinning, manually shifting the automatic at 5,200-5,400 rpm. Though undoubtedly quicker than the stick cars, the automatic was considerably less consistent, because of the importance of the start. As an example, with the automatic, 0-30 times ranged from 2.46 seconds to 2.88, a span of .4-second, compared to 3.08 to 3.11 for the four-speed. Speeds attained in the quarter-mile were identical, but the elapsed times could vary by a half-second, depending on driving technique.

We personally checked the fueling of these test cars, so can attest to the fact that they were running on regular gas, though it was of the leaded type, rated at 94 octane, as 91 octane low-lead gasoline wasn't available. /MT

442 W-30 (Automatic)

Engine	455 W-30
Power	N.A.
Transmission	Turbo-Hydramatic
Rear Axle	3.42:1
Tires	G70-14

Performance (2 aboard)

0-30 mph	2.5 seconds
0-45 mph	4.1 seconds
0-60 mph	6.1 seconds
0-75 mph	9.0 seconds
1/4-mile	14.4 seconds/97 mph
40-60 mph	3.1 seconds
50-70 mph	3.4 seconds



CHEVELLE SS 454

Despite the pressures of insurance company rate setters, there is still a SS 454 Chevelle in '71. The compression ratio has been cut to 9:1 in the big 454-cubic-inch LS-6 engine, but it still carries a healthy 425 hp rating, well above that 301 hp boundary that puts a car in Surcharge City. The standard SS 396 has a big-block 402 engine, now rated just at 300 hp, for comparison, and there is a new SS 350, with choice of 240 or 270-hp small block offered. These come equipped with all the SS equipment (which becomes mandatory with certain engine options), including the good F41 suspension pieces, now complimented with Camaro "Trans-Am" 15 x 7-inch wheels and F60-15 tires.

Outwardly, the most noticeable difference in the new Chevelle is the front end styling. Inwardly, it's the difference in performance. The new, low compression LS-6 lacks the punch of the original SS 454 we tested last fall, running .9-second and 9 mph slower in the quarter. The engine still has plenty of low end, though, necessitating gentle, idle rpm starts when driving an automatic. It winds steadily, if slowly, through the range, seeming to like the shift to second at 5,700 rpm, and to third at 5,500 rpm. Our car had a domed hood, but this did not include the Cowl Induction feature introduced last year, which has apparently been dropped. /MT

SS 454 CHEVELLE

Engine	454 LS-6
Power	425 hp
Transmission	Turbo-Hydramatic
Rear Axle	3.31:1
Tires	F60-15

Performance (2 aboard)

0-30 mph	3.0 seconds
0-45 mph	4.7 seconds
0-60 mph	7.0 seconds
0-75 mph	10.5 seconds
1/4-mile	14.7 seconds/89.5 mph
40-60 mph	3.7 seconds
50-70 mph	4.2 seconds



BUICK GS STAGE 1

After our experience with '70 GS Stage 1 we were quite interested in what the '71 engineering changes had done to its performance. The '70 car was the quickest American production vehicle we had ever tested, running quarter-mile times of 13.38 seconds and 105.50 mph. According to Buick engineers, the only real change was the drop in compression ratio (to 8.5:1), accomplished by lowering piston dome height. In addition, valve seat inserts are being used to improve exhaust valve life with the new low-lead fuels which it has been modified to use. The standard rear axle ratio for the Stage 1, whether stick or automatic, is now 3.42:1 (compared to 3.64:1 last year) and shift points in the automatic have been dropped several hundred rpm to 5,000, to keep the engine operating in its best range. At the time of our test, final jetting had not been established and our Stage 1 showed a slight lean condition at high rpm, noticeably effecting our 0-75 mph and quarter-mile runs. There was also a slight stumble right off idle, a sharp contrast to the '70, requiring a starting rpm of 1,000-1,200 with the automatic. If left in "Drive," the transmission shifts itself right at 5,000 rpm, but slightly better results were derived from doing the shifting manually at about 5,200. The performance is more than adequate, but it's a long way from what it was last year. /MT

BUICK GS STAGE 1

Engine	455 Stage 1
Power	N.A.
Transmission	Turbo-Hydramatic
Rear axle	3.42:1
Tires	G60-15

Performance (2 aboard)

0-30 mph	2.9 seconds
0-45 mph	4.9 seconds
0-60 mph	6.5 seconds
0-75 mph	9.7 seconds
1/4-mile	14.7 seconds/92.5 mph
40-60 mph	3.3 seconds
50-70 mph	3.5 seconds



PLYMOUTH ROAD RUNNER

The car tested had been converted to a Satellite Sebring Plus for some advance photography, so it was a bit heavier than a standard Road Runner. Additionally, it was equipped with air conditioning, adding still more weight. The engine was the standard 383 four-barrel (300 horsepower), coupled with a Torqueflite and 3.23:1 rear axle. In normal driving, the combination was responsive and flexible, though the performance figures pale in comparison to those of the 455-cubic-inch-engined GM intermediates. A '71 'Runner with a (premium fuel) 440-6 bbl. was scheduled for testing, but was spirited away at the last minute for some ad filming. That car had turned in quarter-mile performances of 14.3 seconds at 100 mph in earlier running at the Chrysler Proving Grounds. The 383-powered machine was quite a way behind those bench marks, with a best of 15.9 seconds and 84 mph. Left to itself, the Torqueflite shifted at 4,300-4,400 rpm, but raising the shift points to 4,800-5,000 gave better results. Best times were achieved by starting from an idle and putting the accelerator right to the firewall. There was no problem with traction, even with the relatively skinny F78-14 tires. Especially nice features were the big, centrally located tachometer and the "slap shifter," a ratchetting device that prevents overshifting the automatic. /MT

ROAD RUNNER

Engine	383 4-bbl
Power	300 hp @ 4,800 rpm
Transmission	Torqueflite
Rear Axle	3.23:1
Tires	F78-14

Performance (2 aboard)

0-30 mph	3.5 seconds
0-45 mph	5.6 seconds
0-60 mph	8.9 seconds
0-75 mph	12.7 seconds
1/4-mile	15.9 seconds/84 mph
40-60 mph	4.6 seconds
50-70 mph	4.9 seconds



CAMARO Z/28

The 350-cubic-inch LT-1 engine in the Z/28 came through its transformation to regular fuel pretty much intact, with the critical difference a drop in compression from 11:1 to 9:1 (accomplished through the use of a new piston, with lower dome height). This may not seem like much, but it certainly made itself felt in the Turbo-Hydro-equipped car we tested. It would appear that a four-speed is required to make full use of the engine as it now stands. The power seems to be concentrated in a band between 3,000 and 5,500 rpm, making it difficult to "launch" the car properly with the automatic. Holding the brakes and building up the rpm to stall speed isn't the answer; what did work, however, was starting in low, holding the engine at a fast idle—about 1,000 rpm,—and then smartly swatting the accelerator all the way to the floor, thereafter moving the shifter in time to change ratios at 5,900 rpm. The results weren't spectacular, partly due to the rough handling this particular car had gotten at the long-lead press preview a few days earlier; production cars should run about a half-second quicker in the quarter-mile, putting their drag strip performance at about the 14.9-second level. This is substantially slower than what current automatic Z/28s are doing, but should be quite close to the Boss 351 Mustang. /MT

Z/28 (Automatic)

Engine	350 LT-1
Power	330 hp
Transmission	Turbo-Hydramatic
Rear Axle	3.73:1
Tires	F60-15

Performance (2 aboard)

0-30 mph	3.4 seconds
0-45 mph	5.2 seconds
0-60 mph	7.6 seconds
0-75 mph	10.9 seconds
1/4-mile	15.4 seconds/90 mph
40-60 mph	4.0 seconds
50-70 mph	4.1 seconds



PONTIAC GTO JUDGE

Along with Pontiac's top-of-the-line 455 HO, our test Judge was also equipped with the new optional Road Package suspension. This includes the big fat, 1.25-inch diameter Trans Am type front and rear stabilizer bars, the Trans Am steering ratio, 15 x 7-inch wheels, 60 series tires, and front disc brakes. The result, when coupled with the coarse pitch M-22 close ratio four-speed, is a very well-behaved package that comes within a whisker of the Trans Am's lateral G capability in cornering. In terms of straight line performance, the addition of 55 cubic inches, use of Ram Air IV heads and manifolds, and a higher capacity carburetor have helped keep things in the same realm as last year's premium fuel 400s. The effect of the drop to 8.4:1 compression is felt most in the upper speed ranges, with low end performance only mildly effected. Our Judge showed a tendency toward bogging under full throttle starts below 3,000 rpm, perhaps attributable to the greatly reduced carburetor secondary air valve opening time (from 2½ seconds to one). As a result, we were forced to use a starting rpm of 3,400-3,600 to obtain best results, though this resulted in excessive wheelspin. Shifts were made at 5,000-5,300 rpm; pushing the engine above that speed produced poorer times. The shift linkage, in Pontiac tradition, felt very good. /MT

GTO JUDGE

Engine	455 HO
Power	335 hp @ 4,800 rpm
Transmission	Close ratio 4-spd
Rear axle	3.55:1
Tires	G60-15

Performance (2 aboard)

0-30 mph	3.0 seconds
0-45 mph	4.5 seconds
0-60 mph	7.0 seconds
0-75 mph	9.6 seconds
1/4-mile	14.9 seconds/95 mph
40-60 mph	2.8 seconds (second gear)
50-70 mph	3.0 seconds (third gear)