CAR and DRIVER ROAD TEST

Oldsmobile Cutlass S

Here it is . . . W-31 . . . complete soul, all the difference between transportation and a trip

Motorists the world over, here is a collectors' item—an *Oldsmobile!* Improbable as it may seem, incredible as it might sound, the Geritol Brigade from Lansing has managed to build a car America has been waiting for. And this has to be a seven-point-on-the-Richter-Scale shock to every one of you who thinks an Oldsmobile is something you buy if your checking account is too fat for a Pontiac, but not quite up to a Buick. Erase the 4-door Luxury Sedan—whose excitement quotient rivals three uninterrupted hours of Vivaldi chamber music—from your Oldsmobile stereotype. Direct your attention to the Cutlass S and focus your eyes on the W-31 decal on the front fender. W-31 stands for *soul*, a commodity hard enough to find in people let alone cars, and makes all the difference between transportation and a trip.

It also stands for what may very well be this country's best sports sedan. It may even be that the Cutlass is one of the best GT cars ever built this side of the Atlantic River. It is not hard to imagine the Olds equally at home on an Autostrada, I-75 or Route 40 through the Donner Pass, and there's not a treacherous bolt in its body.

In fairness, a minority report filed by the technical editor calls attention to the fact that the Cutlass would put every sports sedan (in the European sense) on the trailer before breakfast, and petitions strongly against a great injustice by limiting its appeal. One thing is for sure. The Cutlass S works. It is fast, not fast enough to be a hairy-chested street racer, but it won't have to hide from touring Ferraris or GTOs either. When it comes to handling, even Tom McCahill would run out of superlatives. Sports cars should be so good.

Best of all, the Cutlass is neither an exotic nor an expensive automobile. The test car is nothing more than Oldsmobile's version of General Motors' intermediate-size A-body, in which all 2-door hardtops are built on a compact 112-inch wheelbase with an overall length just under 202 inches. That is about two feet longer than a Rover 2000, and a foot and a half more than a Mercedes 250, if you want to put it into perspective. As tested, the Cutlass rolls across the scales at 3650 pounds, not bad when you consider the arms-length option list and the full gas tank.

But things really began to happen the moment Olds cranked "W-31" into the package. W-31 is a magic number, a sign of the times in more ways than one. If you have a trick engine you have to say so on the front fender (it will probably be a law by 1971, like the health warning on cigarette packs), and some measure of restraint is essential if your fellow motorist is to digest it all before you disappear over the horizon. That's what it's for, after all. Easily read but not descriptive enough to trigger a fit in your insurance agent. Where do these esoteric letter/number combinations like W-31 and Z/28 come from? From the engineering department, of course. Who but an engineer would refer to the best toy in his box as a W-31?

It is much more than mere nomenclature which is reflective of a change in attitude in Detroit. Not long ago engines with soul weren't permitted outside of the test cells. Uncommercial, unstreetable and unacceptable—the customers would hate them if the idle wasn't dead smooth. But the enthusiast was not to be denied. Hordes of youthful, car-loving buyers were clamoring for 6000-rpm valve trains, deep axle ratios and all manner of lusty-but-frowned-upon-in-the-higher-circles devices. And now Oldsmobile has zeroed in on the enthusiast's pulse with the eager, uninhibited W-31. Olds buyers will never be the same.

According to the technical editor, "it has lots of cam," which no one can dispute. Lots of lift and lots of duration and all of the attendant joys and evils that that kind of excess entails. Three hundred and fifty quivering cubic inches of soul at its normal 700 rpm idle and the shift lever jitters away beside your knee like Hurst had the palsy. Listen to the exhaust. It's music—like Big Brother and The Holding Company were having a session at the far end of those pipes, never hitting the same note twice in an unending series of combinations. Only one tenth the volume, but the same sound you hear from a Group 7 racer warming up in the pits. Irresistible aluminum and forged steel intrigue. All the while, those who appreciate the subtleties

of engine design savor thoughts of long-duration cam lobes opening the exhaust valves early in the exhaust stroke, while the pressure is still high so the hot gasses can explode into the pipes in great cascading waves. Since both valves are held open simultaneously for an abnormally long time during the overlap period, it is an indecision on the part of the burned charge as to which valve to use for exit that causes the random idle. We could love the whole car for its camshaft alone. Not that the W-31 has nothing else to appreciate. The 350's big bore, short stroke layout is a vivid contrast to the other V-8s in the Oldsmobile lineup, which are just the opposite. Its lofty 10.5-to-one compression ratio gives rise to a haughty distaste for anything less than the finest premium fuel, all of which passes through a Rochester Quadrajet of generous proportions. Not to be forgotten is the Force-Air system (that Oldsmobile pioneered on the 4-4-2) which gobbles up cold air just below the front bumper and ducts it back to the air cleaner to be ingested on demand. On a good day the W-31 makes 325 hp at 5400 rpm if you are to believe Oldsmobile, and we will testify that each horse is happy in its work. Don't expect the W-31 to have the docile temperament of a work horse. It is always civil but not without character as you would expect of a medium displacement engine in this state of tune. Since it doesn't produce much energy at low speeds the wide-ratio transmission is the best solution for stop and start driving. Depending upon how fast you like to start there is a good choice of axle ratios too. The test car had the standard 3.42, but since the engine revs so freely and quietly you shouldn't be afraid of a 3.91 if brisk acceleration is your idea of sport.

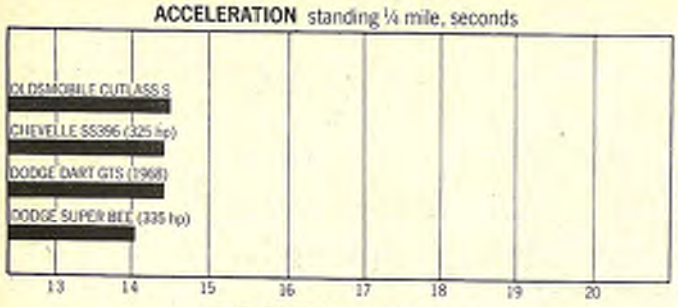
Although the W-31 is great fun to drive, everyday Oldsmobile drivers may find it is a bit too nervous at low speeds. You have to feather the clutch to get launched, and once under way it chugs and bucks when you try to idle along in gear. This is one of the evils of that camshaft, but then there are the good times, too. Once the tach needle reaches the four digit numbers the problems are over. Everything goes quiet—the calm before the storm. The storm arrives at 3600 rpm, leaving no doubt that all of the off-idle weakness is a small price to pay. You know it is a new generation Oldsmobile when the tach will buzz right up to its 6000 rpm redline with such willingness. Even so, we found that shifting at about 5500 rpm produced the best acceleration. So doing shoots you through the quarter mile in 14.5 seconds at 97.2 mph which is probably a conservative example of the car's true potential. With only 500 miles on the odometer, the Oldsmobile was a bit young to give its best performance, and the carburetor was so lean that the engine would misfire at constant cruising speeds in the 60-70 mph range.

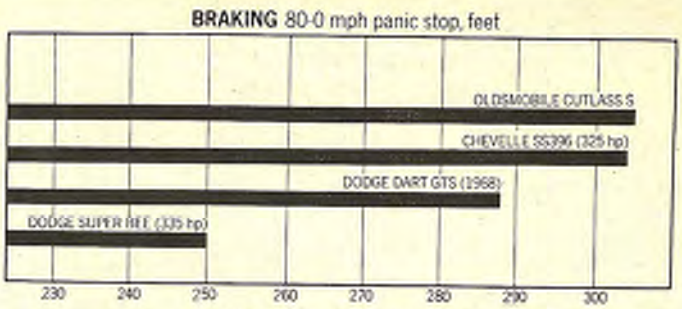
If we are enthusiastic about the powertrain in the Cutlass, then we are completely smitten with its handling. It is superb—easily the best compromise between ride and handling we've ever found in a sedan. No bouncing, floating or pitching and no cringing in your seat when a chuck hole looms. Most people don't realize that shock absorbers can be too hard as well as too soft, but Oldsmobile does and they've picked that exact area in the middle which makes everything right. But this is only part of the car's handling virtue. Even with 56.5 percent of its weight on the front wheels, the Cutlass has a fine balance that is almost never found outside of 2-passenger sports cars—neither understeering nor oversteering, but responding instantly to the driver's minutest correction. The Cutlass will drive around pebbles in a corner at speeds that would confront some of its competitors with a lie-down posture and would have them grinding off the letters on their front tire sidewalls. All of this is no coincidence because the W-31 now shares the 4-4-2's suspension components. You can recognize the handling Oldsmobiles instantly from the rear. If the one you are following down the road has a rear anti-sway bar sweeping across the car just below the rear axle don't even bother to try to keep up if you're not driving expensive Italian or expensive German. The only improvement we would suggest would be variable ratio power steering which is not available in the Cutlass. The standard power steering (called Roto-Matic, which shows that all the old style product describers haven't been turned out to pasture) requires 4.25 turns lock-to-lock which is too slow for our tastes.

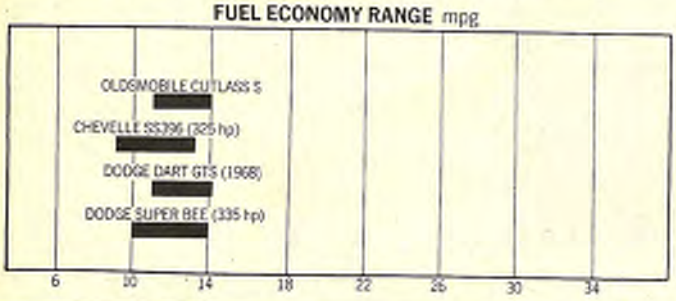
In spite of the Oldsmobile's praiseworthy handling, there is one thing that makes the rear suspension lose its poise and that is a panic stop. Rear axle hop, an affliction all too common with manual transmission cars, is standard equipment. In every other area of performance the Cutlass sparkles, but in braking it's fairly grim. The test car was equipped with drum brakes as will be most W-31s. Even though disc brakes are optional, power assist is not, because one of the evils of that lovely camshaft is that it reduces manifold vacuum at idle below the minimum required for power assist. Since non-power disc brakes demand incredible pedal effort, self-energizing drums are the only other alternative. On the test car, not a pleasant alternative either. The very best stop we could manage from 80 mph required 305 feet (0.70G) and most stops were far longer. Almost every braking problem was represented; premature rear wheel lock-up, rapid fade and a kind of non-uniformity of performance which caused certain wheels, particularly the right rear, to lock up well in advance of the rest of the team. The braking of this test car was not acceptable and yet there is some doubt in our minds that this car's braking performance is typical of all drum brake Cutlasses. As we said earlier, the Cutlass had barely 500 miles showing at the track testing portion of the test and it is quite possible that the brake linings were not properly worn in. This is most important on duo-servo drum brakes because their self-energizing feature greatly magnifies any weakness in the linings. Our attempts to speed up the break-in period by making sequences of medium speed, high effort stops interspersed with recovery periods of gentle stops did improve the car's stopping ability to the eventual 0.70G. Even though further improvement may be possible, don't expect miracles.

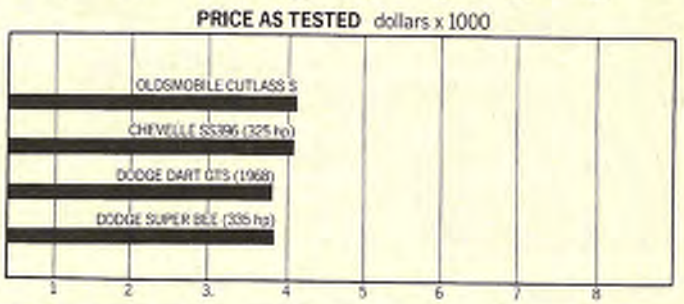
Like all really good sporting automobiles in the world, the Cutlass responds to a light touch. Clutch effort, which frequently is unmercifully high in muscle cars, is no problem in the W-31. Same for the non-power assisted brakes. All of these details add up to a car in which a driver instantly feels at home. The bucket seat holds you

(Text continued on page 86; Specification overleaf)









OLDSMOBILE CUTLASS S

Manufacturer: Oldsmobile Division
General Motors Corporation
Lansing, Michigan

Vehicle type: front engine, rear-wheel-drive, 5-passenger hardtop coupe

Price as tested: $4102.23
(Manufacturer's suggested retail price, including all options listed below, Federal excise tax, dealer preparation and delivery charges, does not include state and local taxes, license or freight charges)

Options on test car: 325-hp engine with force-air induction, $310.69; 4-speed manual transmission, $184.80; power steering, $100.05; F70-14 tires, $89.52; styled wheels, $73.72; tilt steering column, $45.29; wood interior trim, $10.53; convenience group, $16.43; courtesy group, $6.32; chrome door edge mouldings, $5.27; radio, $69.51; power antenna, $31.60; tinted glass, $26.33; H.D. radiator, $15.80; floor mats, $7.37; instrument package, $84.26; bucket seats, $68.46; dual exhaust, $30.23; limited-slip differential, $42.13; chrome wheel openings, $15.80; head restraints, $16.85; sport suspension, $13.27.

ENGINE

Type: V-8 water-cooled, cast iron block and heads, 5 main bearings
Bore x stroke, 4.06 x 3.39 in, 103.0 x 86.0 mm
Displacement, 350 cu in, 5740 cc
Compression ratio, 10.5 to one
Carburetion, 1 x 4-bbl, Rochester Quadrajet
Valve gear, Pushrod operated overhead valves
Power (SAE), 325 bhp @ 5400 rpm
Torque (SAE), 360 lbs/ft @ 3600 rpm
Specific power output, 0.93 bhp/cu in, 56.7 bhp/liter
Max recommended engine speed, 6000 rpm

DRIVE TRAIN

Transmission, 4-speed, all-synchro
Final drive ratio, 3.42 to one

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	2.52	8.7	48 mph (5500 rpm)
II	1.88	11.7	64 mph (5500 rpm)
III	1.46	15.0	82 mph (5500 rpm)
IV	1.00	22.0	115 mph (5230 rpm)

DIMENSIONS AND CAPACITIES

Wheelbase, 112.0 in
Track, F/R, 59.0/59.0 in
Length, 201.9 in
Width, 76.2 in
Height, 52.8 in
Ground clearance, 5.5 in
Curb weight, 3650 lbs
Weight distribution, F/R, 56.5/43.5%
Battery capacity, 12 volts, 61 amp/hr
Alternator capacity, 444 watts
Fuel capacity, 20.0 gal
Oil capacity, 4.0 qts
Water capacity, 15.7 qts

SUSPENSION

F: Ind., unequal length wishbones, coil springs, anti-sway bar
R: Rigid axle, trailing arms, coil springs, anti-sway bar.

STEERING

Type, Recirculating ball, power assist
Turns lock-to-lock, 4.2
Turning circle curb-to-curb, 38.5 ft

BRAKES

F:, 9.5 x 2.5 in cast iron drum
R:, 9.5 x 2.0 in cast iron drum

WHEELS AND TIRES

Wheel size, 14 x 6.0-in
Wheel type, styled, stamped steel
Tire make and size, Goodyear F70-14
Tire type, Polyester cord, tubeless
Test inflation pressures, F/R, 26/26 psi
Tire load rating, 1500 lbs per tire @ 32 psi

PERFORMANCE

Zero to	Seconds
30 mph	2.2
40 mph	3.2
50 mph	4.5
60 mph	6.0
70 mph	8.0
80 mph	10.0
90 mph	12.5
100 mph	15.2

Standing ¼-mile, 14.5 sec @ 97.2 mph
Top speed (estimated), 132 mph
80-0 mph, 305 ft (0.70 G)
Fuel mileage, 11-14 mpg on premium fuel
Cruising range, 220-280 mi