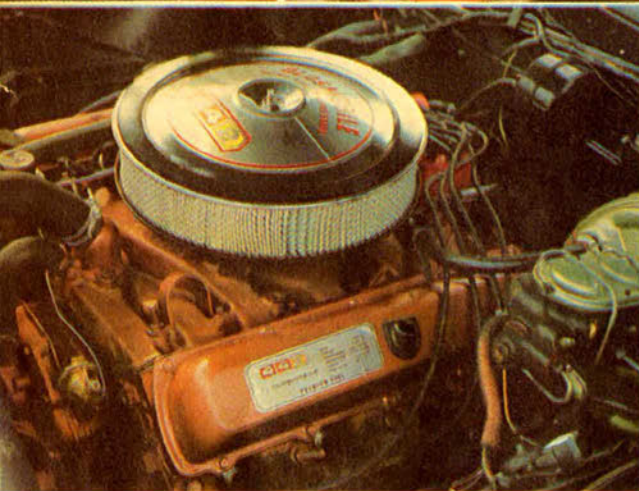
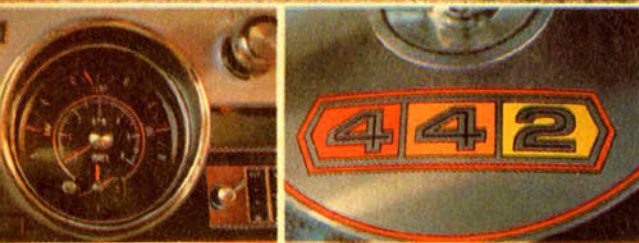




**CARS ROAD TEST**  
**1,000 MILES IN**  
**A 4-4-2 OLDS**

Lansing's sophisticated supercar for the youth-plus market boasts precise road manners, instant stopability, max muscle dig plus super-status. Who says you can't have your cake and eat it?



BY MARTYN L. SCHORR





## "A Cutlass with Starfire power, LS trim, Police Cruiser durability"

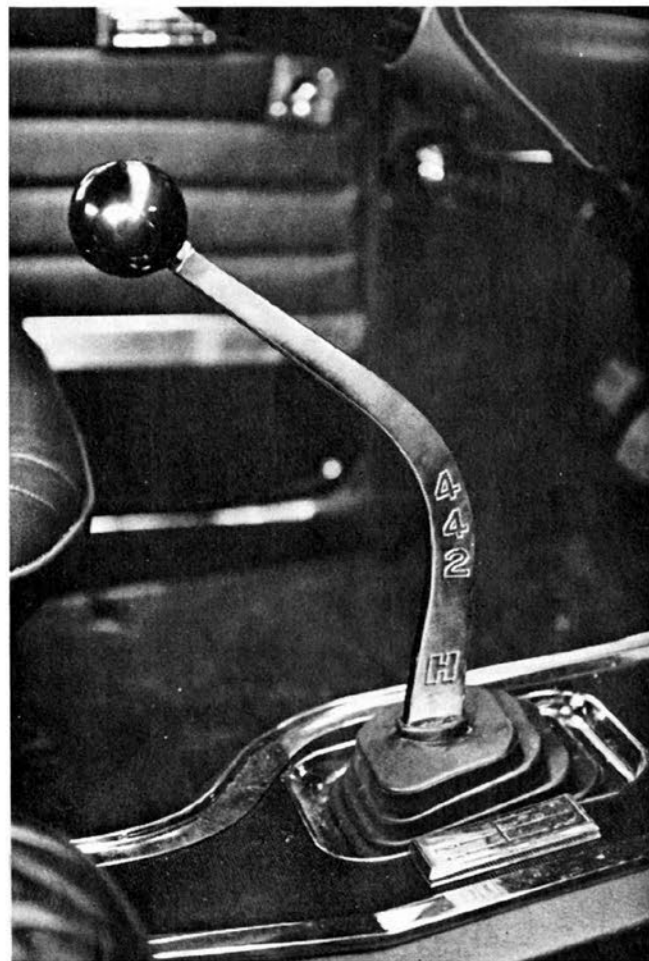
ORIGINALLY 4-4-2 meant an F-85 Olds equipped with four-speed transmission, four-barrel carburetor and dual exhausts. That was in 1965. It's two years later and the same numbers mean a heck of a lot more. They stand for supercar status, superior performance, unreal handling characteristics and a certain degree of luxurious appointments. The '67 4-4-2 is a far cry from the original, and far superior to the model everyone thought it was built to duplicate. The '67 is a gutsy, glitzy goer with drag potential, GT handling and stopping and just enough image trim to make it stand head and shoulders above its consumer brothers. It's sort of a Cutlass with Starfire power, Luxury Sedan appointments and Police Cruiser durability!

and that it deserved a long duration test instead of the usual two week trek. Oldsmobile was quite responsive to the idea of a long term 1000-mile 4-4-2 test and gave us the "green light" on ordering a particular model to our specifications. Approximately two months after filling out a dealer's wholesale order form we took delivery of our test car.

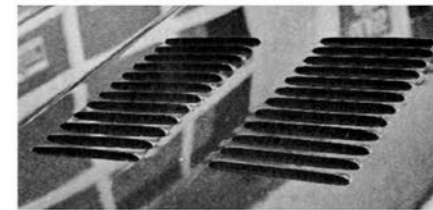
Finished off in Burgundy Mist with a Cameo Ivory roof and an all-red vinyl interior, our test car featured, in our opinion, the best of two worlds. Since the 4-4-2 appeals to the *youth-plus* market (70-percent of all '66's were delivered to buyers over age 30) we had it equipped with luxury and performance options. Offsetting the quick manual steering, close-ratio four-speed, UHV ignition, 3.90 gears and disc brakes were power windows, AM-FM radio, power aerial, four-way power reclining buckets and tinted glass. Because of the power and luxury



Test car was set up on a Clayton dyno using the latest Sun 1020 scope.



Above, Hurst stick is standard, offers precise shift control, no neutral hangup. Right, anti-squat rear suspension and Wide Ovals aid drag performance.



Above, non-functional hood louvers set 4-4-2 off from consumer F-85. Left, anti-dive front suspension, sway bar and discs account for car's superior cornering and stopping characteristics.



## OLDSMOBILE 4-4-2 SPECIFICATIONS

### ENGINE

Type.....	OHV V-8
Displacement.....	400 cubic inches
Compression Ratio.....	10.50-to-1
Carburetion.....	Single Quadrajet
Camshaft.....	Hydraulic, .474-inch lift
Horsepower.....	350 @ 5000 rpm
Torque.....	440 foot/pounds @ 3600 rpm
Exhaust.....	Dual headers, dual pipes
Ignition.....	UHV Pointless

### TRANSMISSION

Make.....	Close-ratio Four-speed
Control.....	Hurst Competition-plus

### REAR END

Type.....	Limited slip
Ratio.....	3.91-to-1

### BRAKES

Front.....	11-inch power-assisted discs
Rear.....	9.50-inch power-assisted drums

### SUSPENSION

Front.....	Independent, HD coil springs, HD shocks, sway bar
Rear.....	HD coils, sway bar, shocks
Steering.....	Quick ratio, manual
Overall Ratio.....	N/A

### GENERAL

List Price.....	\$2902
Price As Tested.....	\$4299
Weight.....	3700 pounds
Wheelbase.....	115 inches
Overall Length.....	204.2 inches
Tire Size.....	7.75 x 14 Firestone

### PERFORMANCE

0 to 30 mph.....	3.8 seconds
0 to 60 mph.....	6.8 seconds
Standing ¼ mile.....	100 mph
Elapsed Time.....	14.20 seconds
Top Speed.....	115 mph (EST)
Fuel Consumption.....	8-12 mpg



# "It's truly unreal in the 4000-5800 rpm range"

options, the base list price of our Cutlass Supreme Holiday Coupe (\$2902) jumped to a whopping \$4299.93. Now you can see why it appeals to the youth-plus crowd!

Unlike most of the so-called supercars in its class, the 4-4-2 isn't merely an image car that looks and sounds like a hot-rodded stocker. It's a genuine



Front disc binders are a must option on the super-hot 4-4-2.



New UHV capacitive discharge ignition works with a pointless distributor.



Rear sway bar is 4-4-2 exclusive, key to car's precise handling qualities.

supercar, even though it does have hood louvers that do little more than vent the area between the layers of hood stock and multi-colored "status stickers." What is not visible from the outside is the superbly engineered chassis and suspension, which was originally designed for highway patrol pursuit work, and the torque-laden 400 cubic-inch engine which thrives on high rpm operation. Our test car was fitted with an additional goodie which was also not visible from the outside, a #397329 "cold air" cam which is used in conjunction with stiffer springs and a fresh air intake system for the Quadrajets. Since production of the '67 "cold air" packages had not begun at the time our car was being built, we settled for the camshaft and valvetrain *only* which was in stock in Lansing.

When we picked up our test car it had 209 miles on the clock and was in typically-dealer-prepared shape. In all honesty it was quite sluggish for a 4-4-2 and just about hit 5000 rpm before valve float set in. The car itself felt tight as a drum, but the engine obviously wasn't "right there." As planned, the car was turned over to Joel Rosen,

played with the Quadrajets, installed colder Champion J-10Y plugs and set the total advance curve at 35 degrees. In the future we plan to publish a complete report on super-tuning the 4-4-2.

During the course of the 1000-mile evaluation period we realized that even though the car is little changed from its predecessors it's an animal of another breed. Now the car stops as well as it handles. Last year the 4-4-2 relied on the GM 9.65-inch intermediate drum brakes which were barely adequate for the six-cylinder F-85 models. This year there are optional power discs listed for the front (Delco-Morraine 11-inchers with vented discs) which offer fantastic resistance to fade and require a minimum of pedal pressure. The only minus feature is that the styled steel Super/Stock wheels can't be ordered on a disc-braked machine because of caliper clearance. We found the discs invaluable as they gave us piece of mind when we occasionally let it out throwing power shifts at 5800 rpm!

Olds has had the handling edge on its intermediate competition since all this supercar jazz started in 1965. Since

## WHAT THE HOT SETUP COSTS

L-78 4-4-2 PACKAGE.....	\$184.31
W-30 COLD AIR PACKAGE.....	N/A
M-21 CLOSE RATIO FOUR-SPEED.....	\$184.31
K-66 UHV IGNITION.....	\$100.05
U-21 ROCKET RALLY PAC.....	\$ 84.26
J-52 POWER DISC BRAKES.....	\$104.79
G-80 ANTI-SPIN REAR.....	\$ 42.13
V-01 HD RADIATOR.....	\$ 21.06

who runs Motion Performance, Inc. in Baldwin, New York, after we put an additional 200 miles on the clock. Joel's specialty is super-tuning, both for street and strip, high-performance factory stockers. He was instructed to test drive the car, dyno tune it to street specifications, test drive and report to us. The culprits turned out to be a full tank of less-than-desirable octane fuel, a 7-degree-off advance curve, too lean a mixture, too hot a heat range plug for the capacitive discharge ignition and an extremely tight engine. Olds advised us that maximum performance can't be expected from a 4-4-2 with less than 1000 miles on the engine. This proved to be true as the car got progressively stronger without any additional modifications as we put on the miles. Joel

the 4-4-2 chassis was originally designed for police pursuit work, it required almost no changes when the high-performance "super-package" was developed. Under the roughest of conditions we found our test car to be a fairly neutral steerer, which is saying a lot for a car of this type. Its cornering characteristics are completely predictable, and with the close-ratio four-speed, 3.90 gears and Firestone Wide Ovals, minor oversteer can be induced when you want to "let it all hang out." The quick-ratio manual steering (ratio not as quick as the power-assisted setup) affords a full feeling of the road and precise control of the car. The front/rear tuned sway bar package (only production car in its class to have such a setup) consists of a .937-inch (Continued on page 80)

have discs on your car, check this carefully before investing in a set of custom wheels.

IT LOOKS like NASCAR officials are going to clamp down on illegal body modifications on '67 cars on the Grand National circuit. The boys were getting away with murder toward the end of last season, with body sectioning, wheelbase alterations, bobbed fenders, windshield re-slanting, and even rear decks altered to function as "spoilers." The race cars didn't look anything like their production-line cousins. The whole deal kind of got out of hand before the officials knew what was happening. Pretty soon *everybody* was illegal, and they couldn't have run any races if the rules were enforced.

But now the change from '66 to '67 bodies gives NASCAR a chance to get the boys back in line. Also, former NASCAR chief tech inspector, Norris Friel, passed away unexpectedly last fall. Bill Taylor is taking over the job, and he's using an entirely different approach for checking the cars. He's making up a set of aluminum frame-type "gauges" that will fit right over the car body and tell at a glance whether it's the right size and contour. There will be similar gauges to check wheelbase length and the location of wheels in relation to the body contour. The racers won't be able to get away with anything, and yet the inspection will only take a few seconds. There will be no laborious, time-consuming measurements with a tape.

I've always thought that the life of a race car tech inspector is not an easy one. But this new inspection method sounds very good. And it will be good to see the NASCAR machines looking something like American passenger cars again!

## 442 OLDS continued

bar up front and a .875-incher at the rear and does a first class job of offsetting excessive lean and loss of the footprint on tight corners.

On city streets the engineered *safe* suspension took away very little from the car's excellent ride qualities. The ride was obviously stiffer and there was some transmission of road noise. The steering was not objectionable, except when negotiating typical tight city parking spaces. However, the plus-features of the suspension outweigh the minus ones. Anyone that wouldn't sacrifice a little comfort for a whole lot of safety and high-speed handling control shouldn't buy a supercar in the first place!

The one place the car really surprised

us was on the strip. We had already driven a similarly-equipped 4-4-2 at the General Motors Proving Grounds, so we turned our test car over to Frank Musico, a friend who owns a '66 4-4-2 equipped with 4.33-to-1 gears, Crane cam, Hooker headers, tri-power, mag wheels and all that jazz. At first he wasn't that impressed, but after making five or six passes he gave in. "It's much stronger than mine was when it was new, and truly unreal in the 4000-to-5800 rpm range," said our track tester. "Besides, the suspension seems a lot sturdier, the disc brakes are fade-free and the clutch never sticks to floor, power-shift after power-shift. Let me tell you like it is, I can come off at 4500 rpm with the Wide Ovals, power-shift at 5800 and go through the traps flat out without a trace of lifter pump up. This car's bear!"

The best time recorded through the traps was 100 mph in 14.20 seconds, which we consider quite respectable for a 3700-pound stock car equipped with closed exhausts and Wide Ovals. We also made a few 0-to-60 mph passes, as this is what most of the supercars are bought for, and managed to stop the clock between 6.8 and 7.2 seconds. This we also consider good as the Cold-Air-cammed 400-cubic-incher is *not* a low-end engine. Where this engine excels is in the mid and top range of the scale. Over 4000 rpm the engine feels like it just received a shot of adrenalin and it climbs strong as a bear to 5800 rpm. Because of the torque curve of the engine when fitted with the Cold Air cam it can really use "big numbers" in the rear, such as the popular 4.33 (dealer installed) drag setup. The Cold Air cam checks out at .474-inches lift and 308 degrees duration and can be identified by four orange stripes.

Even when fitted with the optional Cold Air cam and valve train the 400-cubic-inch engine is still docile enough for everyday transportation. Throughout the 1000-mile test the engine never failed to start immediately without fuss or muss. We were able to idle the engine down to 800-900 rpm for a noise and vibration-free performance. The 10.5-to-1 compression ratio and 35-degree ignition setup worked well with 260 Sunoco, but would not get along on lesser-rated octane fuel. Even with the Sunoco there were some traces of ping or detonation during max muscle runoffs, but it wasn't serious enough to cut back on the timing. The stock Quadra-jet engine is rated at 350 hp to 5000 rpm, 440 foot pounds of torque at 3600 rpm, and carries a 5200 redline. There are no published figures on the W-30

Cold Air engine, but according to our track and dyno tests the engine pulls at least another 10-15 hp when equipped with the cam and kit alone and is good for a 6200 rpm redline when super-tuned. Joel Rosen actually pulled 170 real wheel hp at 4000 rpm on the dyno after standard tuning and a shade over 180 hp after super-tuning (new jetting, spacer plates under carb, blocked PCV and vacuum advance). According to Joel these figures are extremely impressive for a car factory-rated at 350 hp.

Another one of the impressive features of our car was the powertrain, which consisted of the GM 2.20 First gear four-speed with Hurst Competition-Plus linkage and an all-new, Olds-manufactured rear end. With the Hurst stick no problems arose knocking off power-shift after power-shift without even giving a thought to "neutral hangup." At the receiving end of the "torque transmission" is a new super-beefy rear which is just the ticket for track or traffic. The rear also boasts a larger ring and pinion assembly, one case that will handle ratios to 3.91-to-1, big car 31-spline axles, higher capacity differential side bearings, new high friction limited-slip discs and a super-duty-constructed housing. Rear end failure has always been a sore point when setting up a stock GM intermediate for the drags, but Olds has solved the problem. The new rear is a "house" item and is used only on the Olds line.

The interior of the 4-4-2 is plush, comfortable and easy on the eyes. The buckets put the driver and front passenger in complete control of the scene, and if you want to go for the Rocket Rally Pac you can reap the benefits of complete instrumentation. Our car was fitted with this option which enabled us to keep an eye on what was happening under those louvers. The tach, which assumes the front center mounting position, is good for the street, but leaves a lot to be desired for dragging. A good, large-faced tach, which mounts in the driver's line of sight, is recommended for serious running. Since our car was also fitted with the adjustable steering wheel, we were able to tailor the wheel's position to our exacting specifications.

Impressed with the engineering and quality control of our test car, we actually hated to turn it back to Olds. The stiffer ride, the "strong arm" steering and the *compressed* instrumentation were overshadowed by the car's precise handling characteristics, flawless brake power, and engine performance throughout a wide torque range. Another plus-feature we must mention is the heavy duty radiator. With this



radiator installed in our test car, we were able to run the car under full load on the dyno, make eight passes through the traps and then go out in bumper-to-bumper traffic without ever seeing the needle reach the normal marker on the temp gauge. It's a must for the performance buff, or the executive who runs back and forth to work in his air-conditioned 4-4-2!

But the one *really* plus-feature of this "anti-boredom bundle," is that when you come up to a light in it there's a heck of a good chance that you won't run up against a carbon copy. GTO owners can't make that statement!

## STREAMLINING continued

a kind of closed scoop to build up a literal wall of air in front of the car—which had the effect of breaking up the air flowing over the top of the hood and under the bottom of the car. They also pitched the front of the body down slightly. The overall effect was to greatly reduce the lift and stabilize the car very nicely at speeds over 150 mph. Of course the big concave section in front also increased the *drag* some. They could probably have achieved the same thing with very little increase in drag by more radical changes in body shape around the nose, or possibly even with a small spoiler on top of the hood. But they had to keep the thing looking at least something like a '66 Comet. The weird bumper was a choice of evils that worked.

And the price couldn't have been too high—as Chrisman eventually turned elapsed times in the mid 8's at over 180 mph before the car was destroyed. And we can look for more sophisticated aerodynamic development on Mercury's 1967 funny cars, now that their engineers know a little of what they're up against. In fact Ford and Chrysler have said they would not build factory funny cars next season, partly because of these aerodynamic dangers. But Mercury is apparently going ahead, with the help of the wind tunnel.

Up to now we've been talking strictly about racetracks and competition cars. How about future aerodynamic developments on high-performance road cars? Can any of the aerodynamic lessons being learned on racetracks today be applied to road cars tomorrow?

All this Dodge-spoiler business has not gone unnoticed throughout the industry. Notice that the new '67 Shelby Mustang GT-350 has a well-shaped spoiler at the back tip of the rear deck. Ford has not said that the effect of this spoiler has been established by wind tunnel tests; but it *looks* good. And I note that some accessory companies have bolt-on fiberglass spoilers

for popular sports-type bodies like the Mustang, Corvair, Barracuda, and soon the Camaro. American car fans are fast becoming aware of aerodynamic problems. And it is becoming known that the fastback-type body is a special problem in the area of rear end lift. Rear end spoilers seem to be effectively solving the problem. If the factories don't supply them the hot rod industry will!

But one wonders how much farther this business of bolt-on fiberglass body panels might go. Why wouldn't it be possible to completely transform the aerodynamic characteristics of a given passenger car body with \$500 worth of special lightweight body panels? I'm thinking that these special panels might be necessary to make NASCAR racers safe and stable when track speeds get up around 200 mph in a year or two. Such special panels are not legal under current rules; but NASCAR officials might be forced to go along for the sake of safety. Then, if these special panels were produced in limited numbers for the racing cars, wouldn't there soon be a demand from the young guys for their wild street machines? It's not so crazy.

Believe me, we're just on the threshold of a great revolution in aerodynamic refinement of American passenger cars. Wait and see!

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