



PAUL E. HANSEN PHOTOS

# TRI-POWER 4-4-2

*Oldsmobile's Performer  
Meets the Challenge*

STANDARD-SIZED GM cars have come to be among the best selling models in the current automotive marketplace. These Tempests, Chevelles, Specials and F-85s also have been the objects of much component juggling in order to achieve a broad variety of automotive goals. These (roughly) 3500-lb. 5- to 6-passenger cars have responded well to the installation of various engines, and the public in turn has responded quite well to most all of the resultant variations. And, of course, the ultimate versions are what *CAR LIFE* christened (*CL*, May '65), and the industry subsequently refers to as, Supercars.

Among these, the Oldsmobile F-85 has been represented during the past two seasons by the 4-4-2 model having an exclusive 400-cu. in. engine. There have been fewer 4-4-2s on the road, however, than the other GM Supercars as a result in part of somewhat lower keyed promotion and merchandising. The sad part of this situation is that the car offers everything that its com-

patriots do; the brighter side is that the 4-4-2 owner achieves more "In" status because it is a less commonplace car.

Sales and production figures vividly portray the difference between the 4-4-2 and its leading rival, Pontiac's GTO. Throughout the 1966 model year, F-85s have been somewhat more available than have short-supply Tempests, although this is primarily a reflection of the alternate plant capacities as much as anything else. But among the Tempests, the GTO models have been nudging upward to an annual production total of nearly 100,000 units. That represents almost one-third of the total Tempest production. On the other hand, F-85s are running at about 250,000 annual production with only 10% of the total being the sportiest 4-4-2s. An industry report said that 15,000 4-4-2s had been produced by mid-spring.

Virtually all of the 4-4-2s have been sold with the special engine equipped with the single 4-barrel Quadrajets carburetor and a healthy 278° camshaft.

What most buyers are unaware of, as was *CL*, is that a triple 2-barrel carburetor option also is available for this engine. This higher performance intake system adds \$114 to the regular 4-4-2 package (consisting of the 400-cu. in. engine, dual exhausts, 7.75-14 high-speed tires, heavy-duty suspension and stabilizer bars for \$152 extra) and more brute power. Replacing the Quadrajets and its manifold with the Tri-Power system raises rated bhp to 360 at 5000.

While this may sound like Oldsmobile has been borrowing from Pontiac's parts bins, the opposite would be the more accurate. Almost 10 years ago, Olds introduced the J-2 "power pack" for its then 371-cu. in. Rocket engine. It was during the height of the much-maligned "horsepower race" of the mid-Fifties and Olds 88s were still formidable contenders. Along with an ex-

tensive reworking of the engine in 1957 for greater sturdiness, this triple 2-barrel intake system was released to the public. By the end of the following year, however, it was withdrawn in the wake of the AMA anti-performance agreement. During that original go-around, the option raised the stock engine rating from 277 bhp to 300 at 4600 rpm (312 with a special high-lift camshaft and solid lifter kit sold over the dealer's parts counter).

More recently, Pontiac has reaped the benefit of the Tri-Power arrangement to the point where the more youthful performance enthusiasts tend to regard it as strictly a GTO phenomenon. Older enthusiasts, obviously, recall the actual beginnings of the intake system to be where Oldsmobile engineers had discovered it—the speed shops which catered to early post-

war hot rodding. The reasoning for it all remains as it always has been, to provide the required maximum venturi area for ultimate performance while maintaining a most desirable docility and tractability in the engine for normal traffic and day-to-day driving situations.

The latest version of Olds Tri-Power puts three 2-barrel Carter carburetors atop a special manifold, the sole change for the normal 4-4-2 engine. The trio is linked by throttle rods to provide a progressive operation, utilizing only the central carburetor for normal driving; the outer units are brought into service once the accelerator is mashed past a definite detent point, and produce an almost characteristic moaning sound from the engine. It was interesting to note the efficiency in this arrangement, because fuel mileage figures during the

high performance test period were not drastically reduced from mileage figures for normal operation. Data panel figures, moreover, show that performance increases from this 10 bhp rated addition to the engine made the car fully competitive with the prototype Supercar, the GTO.

Aside from the engine, it was a distinct pleasure to renew acquaintance with the 4-4-2. It is a high performance car that manages to keep some of the civility of the less powerful F-85s. It is, or can be, completely competitive amidst the Supercars and the Tri-Power setup makes that a bit more easy. Yet the car lacks, or perhaps one should say masks, the brutal nature which is apparent in some of the others. As observed in previous road tests (*CL*, Aug. '64), the 4-4-2 is the easiest handling of the GM A-body cars, which





**THE CIVILIZED Supercar** is a sleeper among high-performance vehicles, an ideal car for the practitioner of oneupmanship. Muscular and manageable, the 4-4-2 more or less out-GTOs the Pontiac GTO after which it obviously was patterned.

counts for a great deal in our estimation.

Its better balanced handling characteristics are the result of quite refined suspension engineering—specifically, the drawn-out and painstaking drudgery of thoroughly determining the best compromise in shock absorber calibrations and ride rates for this particular suspension geometry. A significant part of that determination was the decision to install an anti-roll bar linking the

two rear axle support arms. Every 4-4-2 built has had this addition and *CL* has recommended it for all the A-body cars; it was picked up last year by the Chevelle SS, although Pontiac has steadfastly rejected it because it does what it does.

What it does, in conjunction with a stiffer front anti-roll bar, is to reduce excessive body roll and outside wheel loading in cornering—particularly in the A-body chassis with its steeply in-

clined front-to-rear roll axis. The effect of this is quicker steering response and a more balanced traction at both ends of the car. It tries to—but in actual fact doesn't—reduce the degree of the dreaded understeer which is so inherent in the A-body design. The driver is more completely in control of his car simply because it provides him with a better feel of what is happening, or about to happen.

Riding qualities are hardly impaired

## 1966 OLDSMOBILE CUTLASS 4-4-2 COUPE



### DIMENSIONS

Wheelbase, in.....	115.0
Track, f/r, in.....	58/58
Overall length, in.....	204.2
width.....	75.4
height.....	53.6
Front seat hip room, in.....	2 x 23
shoulder room.....	58.8
head room.....	38.1
pedal-seatback, max.....	50.5
Rear seat hip room, in.....	52.4
shoulder room.....	58.8
leg room.....	35.9
head room.....	37.2
Door opening width, in.....	42.0
Floor to ground height, in.....	10.8
Ground clearance, in.....	7.2

### PRICES

List, fob factory.....	\$2750
Equipped as tested.....	3949
Options Included: Tri-power engine, 4-speed manual transmission, power steering with tilt wheel, power brakes, am radio with power antenna and rear speakers, limited slip differential, console, deluxe seats with headrests, vinyl roof covering.	

### CAPACITIES

No. of passengers.....	5
Luggage space, cu. ft.....	20.1
Fuel tank, gal.....	20.0
Crankcase, qt.....	4.0
Transmission/diff., pt.....	2.25/2.75
Radiator coolant, qt.....	17.0

### CHASSIS/SUSPENSION

Frame type.....	perimeter
Front suspension type: Independent by s.l.a., ball-joint steering knuckles, coil springs, telescopic shock absorbers, link-type stabilizer.	
ride rate at wheel, lb./in.....	.124
anti-roll bar dia., in.....	0.937
Rear suspension type: Live axle, 2 upper, 2 lower control arms; coil springs, telescopic shock absorbers, anti-roll bar.	
ride rate at wheel, lb./in.....	.130
Steering system: Coaxial power-assisted, recirculating ball; parallelogram linkage, 2 tie rods.	
gear ratio.....	17.5
overall ratio.....	20.7
turns, lock to lock.....	4.3
turning circle, ft. curb-curb.....	41.0
Curb weight, lb.....	3620
Test weight.....	3960
Weight distribution, % f/r.....	57.9/42.1

### BRAKES

Type: Single-line hydraulic; self-adjusting duo-servo shoes in cast-iron drums.	
Front drum, dia. x width, in.....	9.5 x 2.5
Rear drum, dia. x width.....	9.5 x 2.0
total swept area, sq. in.....	267.8
Power assist.....	integral, vacuum
line psi @ 100 lb. pedal.....	(725 @ 40)

### WHEELS/TIRES

Wheel size.....	14 x 6K
optional size available.....	none
bolt no./circle dia., in.....	5/4.75
Tires.....	Goodyear Power Cushion
size.....	7.75-14
recommended inflation, psi.....	.24
capacity rating, total lb.....	4480

### ENGINE

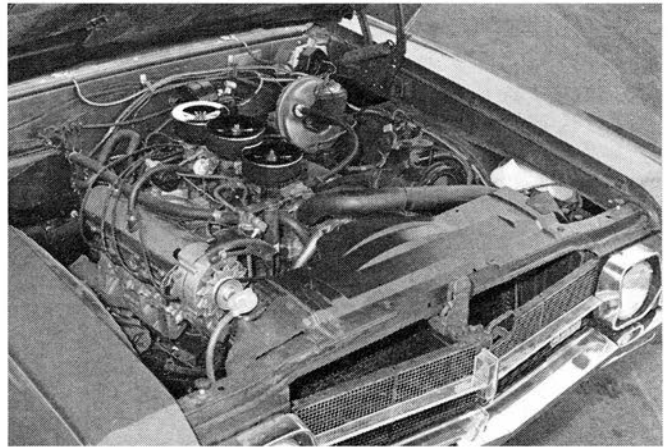
Type, no. cyl.....	V-8, ohv
Bore x stroke, in.....	4.00 x 3.975
Displacement, cu. in.....	400
Compression ratio.....	10.25
Rated bhp @ rpm.....	360 @ 5000
equivalent mph.....	108
Rated torque @ rpm.....	440 @ 3600
equivalent mph.....	78
Carburetion.....	3x2
barrel dia., pri./sec.....	1.687
Valve operation: Hydraulic lifters, pushrods, overhead rocker arms.	
valve dia., int./exh.....	1.995/1.62
lift, int./exh.....	0.431/0.433
timing, deg.....	30-76, 78-28
duration, int./exh.....	286/286
opening overlap.....	.58
Exhaust system: Dual reverse flow mufflers & pipes.	
pipe dia., exh./tail.....	2.25/2.0
Lubrication pump type.....	n.a.
normal press. @ rpm.....	n.a.
Electrical supply.....	alternator
ampere rating.....	37
Battery, plates/amp. rating.....	66/61

### DRIVE-TRAIN

Clutch type: Borg & Beck single plate.	
dia., in.....	11.0
Transmission type: Manual 4-speed.	
Gear ratio 4th (1.00) overall.....	3.55
3rd (1.46).....	5.18
2nd (1.88).....	6.67
1st (2.52).....	8.94
synchronous meshing?.....	all four
Shift lever location.....	console
Differential type: Hypoid, semi-floating axles.	
axle ratio.....	3.55



**BUCKET SEAT** with headrest tilts back for comfort and well-padded glove box lid looks protective.



**TRIO OF SMALL** air cleaners perches atop three 2-barrel carburetors having progressive linkage.

at all from those of a less sporting F-85. While stiffer springs and shock absorbers are fitted, they are not all that much stiffer than stock; the softness was a bit more than *CL* drivers like for hard driving although it didn't actually detract from handling qualities. It was, as mentioned, an acceptable compromise which suited the Oldsmobile scheme of passenger comfort.

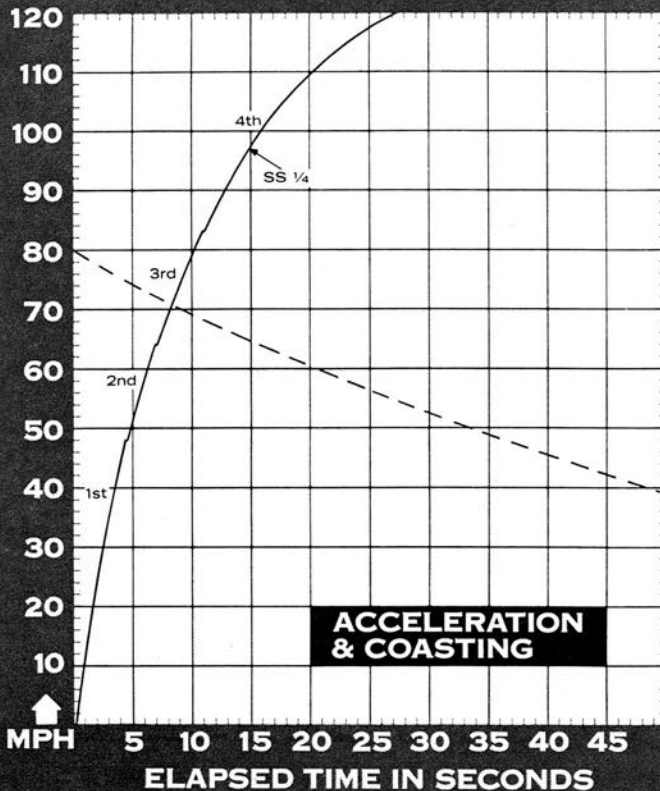
Brakes on the test car cannot be

called exceptional even with the heavy-duty organic linings supplied with the 4-4-2 package. As is so often the case, much of the problem can be laid to an overly sensitive vacuum power booster which doesn't permit much modulation in pedal pressures. A panic stop meant virtual automatic wheel lock-up and brake fade was quickly apparent during the normal stopping test. Metallic linings have been available for some of the A-body cars and would

help the 4-4-2. It would seem, too, that some serious development of a front-to-rear proportioning arrangement is necessary.

Inside the car, every provision for passenger comfort has been made. Particularly noteworthy are the high-backed front bucket seats, equipped with integral slide-up headrests and a tilting back for the passenger. In view of the safe car crusade, Oldsmobile's two-year-old dashboard layout becomes

## CAR LIFE ROAD TEST



### CALCULATED DATA

Lb./bhp (test weight)	11.0
Cu. ft./ton mile	162
Mph/1000 rpm (high gear)	21.6
Engine revs./mile (60 mph)	2770
Piston travel, ft./mile	1840
Car Life wear index	50.9
Frontal area, sq. ft.	22.4
Box volume, cu. ft.	467.5

### SPEEDOMETER ERROR

30 mph, actual	29.7
40 mph	38.2
50 mph	47.9
60 mph	57.8
70 mph	68.7
80 mph	78.3
90 mph	88.3

### MAINTENANCE INTERVALS

Oil change, engine, miles	2000
transmission/differential	12,000
Oil filter change	6000
Air cleaner service, mo.	12
Chassis lubrication	36,000
Wheelbearing re-packing	as req.
Universal joint service	as req.
Coolant change, mo.	24

### TUNE-UP DATA

Spark plugs	AC
gap, in.	0.030
Spark setting, deg./idle rpm	7.5
cent. max. adv., deg./rpm	24/4250
vac. max. adv., deg./in. Hg.	22/25
Breaker gap, in.	0.016
cam dwell angle	28
arm tension, oz.	19
Tappet clearance, int./exh.	0/0
Fuel pump pressure, psi	8-9
Radiator cap relief press., psi	15

### PERFORMANCE

Top speed (5600), mph	121
Shifts (rpm) @ mph	
3rd to 4th (5600)	83
2nd to 3rd (5600)	64
1st to 2nd (5600)	48

### ACCELERATION

0-30 mph, sec.	2.5
0-40 mph	3.4
0-50 mph	4.7
0-60 mph	6.3
0-70 mph	8.2
0-80 mph	10.3
0-90 mph	12.8
0-100 mph	15.8
Standing 1/4-mile, sec.	14.8
speed at end, mph	97
Passing, 30-70 mph, sec.	4.7

### BRAKING

(Maximum deceleration rate achieved from 80 mph)	
1st stop, ft./sec./sec.	23
fade evident?	definite
2nd stop, ft./sec./sec.	23
fade evident?	increasing

### FUEL CONSUMPTION

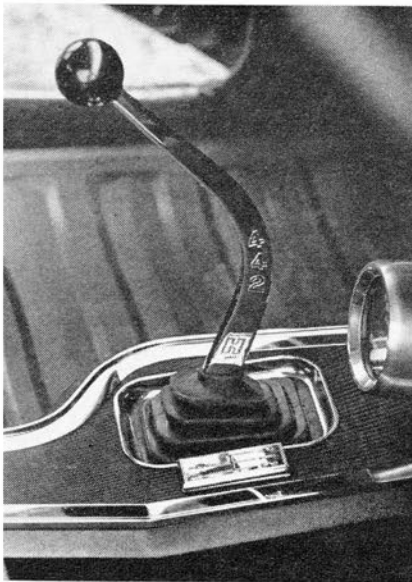
Test conditions, mpg	11.6
Est. normal range, mpg	10-13
Cruising range, miles	200-260

### GRADABILITY

4th, % grade @ mph	21 @ 84
3rd	28 @ 70
2nd	35 @ 60
1st	off scale at 45

### DRAG FACTOR

Total drag @ 60 mph, lb.	120
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**HURST SHIFTER** has fine precision, good heft for flawless changes.



# 4-4-2

quite notable. The heavy rectangular hood surrounding the wide instrument panel is heavily padded, tilting upward from the windshield so as to block the windshield wipers' glare from view, and largely free (except for radio) of protruding knobs. The glove box has a heavily padded lid that cannot drop a

sharp edge in front of the passenger because it lifts upward. The vacuum gauge mounted atop the console was a welcome instrument, but the tachometer—a wrist-watch sized pod attached to the far left corner of the instrument panel hood—was too small, too unexpectedly placed, and too poorly calibrated to be of much value. The heavy, chromed steel Hurst shifter and linkage supplied with the transmission made gear changing faultless and pure joy.

If there is one phrase to sum up the

4-4-2, it would have to be: Civilized Supercar. It boasts a high order of handling to complement its overly generous engine power. It reflects Oldsmobile passion for providing creature comforts even in a car for rough-and-ready tiger hunters. It is a most handsome vehicle in overall line though it bears the occasional scar of stylistic encounter. Together with the relative scarcity of the Oldsmobile 4-4-2, the purchaser is assured of a highly individualistic and truly personalized specialty car. ■

