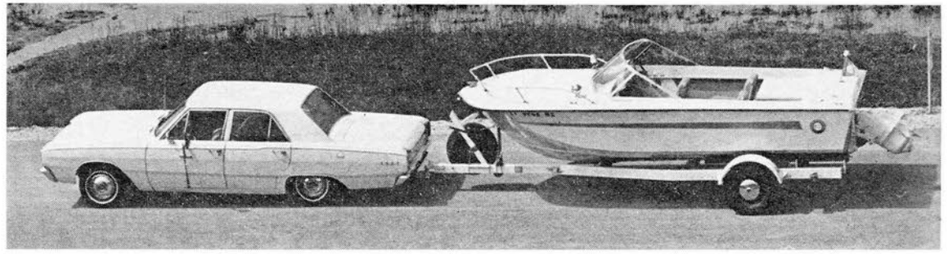
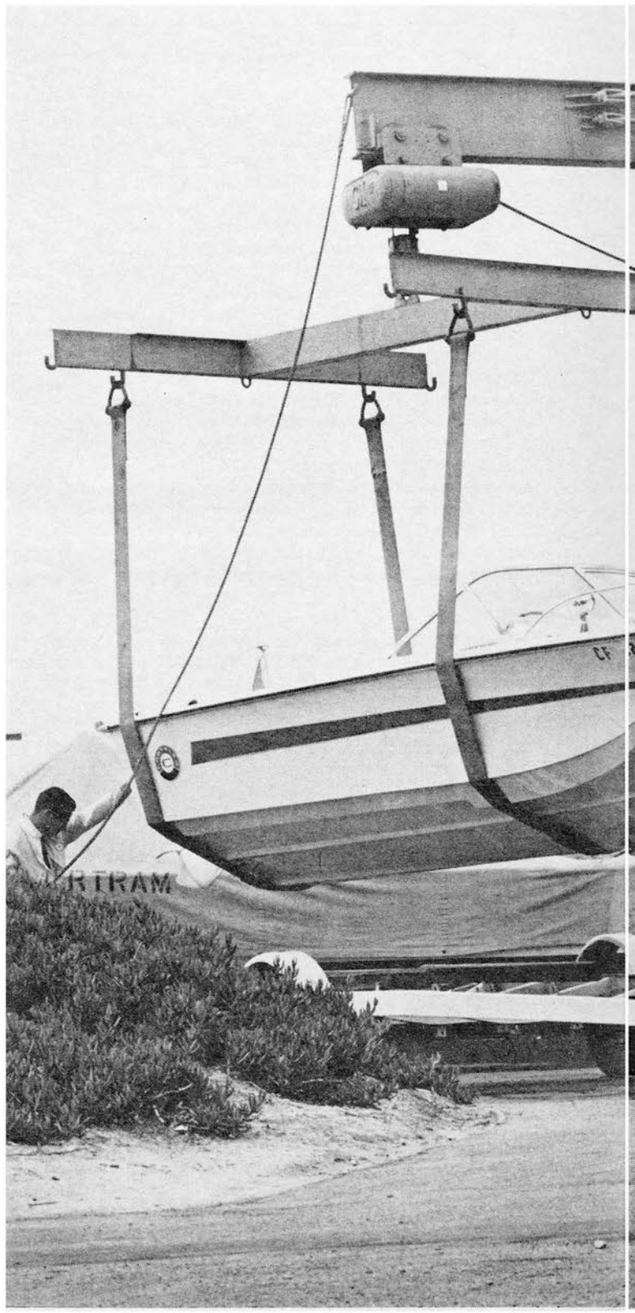
CAR LIFE
ROAD TEST



DART/BOAT

THE CHRYSLER 225 SLANT SIX ON LAND, AT SEA, AND IN A PEA PICKER



CHAN BUSH PHOTOS

MANY'S THE TIME *CAR LIFE* editors have strolled past an unobtrusive Dodge Dart Six with nothing more, perhaps, than a casual glance. Sometimes, however, a casual glance is followed by a monumental second look, the classic double-take. The aforementioned editors bestowed their condescending glances on the small, beige Dart, powered by a Chrysler 225-cu. in. Slant Six, which was towing a large, white Chrysler boat powered by a Chrysler 225-cu. in. Slant Six. Car, Slant Six, boat, Slant Six—and there it was, the double-take. The possibilities of car, boat and engines were sufficient to turn the head of any avowed automotive enthusiast a second time—and rather abruptly.

Hence the subjects of this road (and water) test are that Dart, that boat and the powerplant for both, that Slant Six.

And, that 225-cu. in. Six has been around for quite a while, since 1959 (1960 models) to be exact. Until Chrysler engineers deemed a 30° tilt to the right advantageous for reasons of space conservation and body design, all U.S. 6-cyl. engines had sat bolt upright within their respective chambers. The original Slant Sixes were, as they are today, offered in 170- and 225-cu. in. piston displacements. These Sixes have, over the years, powered a goodly number of Lancers, Valiants, Darts, Barracudas, Belvederes and Coronets. Once met, soon familiar, the Slant Six faded into the automotive background, faintly remembered, snobbishly, as an adequate engine, lacking the fame and glamor of greater numbers of cubic inches.

WHILE V-TYPE engines were going on to greater, nobler things on dragstrips, oval tracks and road courses, the Slant Six became, in its own way, a titan of industry. The 225-cu. in. engine's power is available, still, in a wide range of Dodge and Plymouth cars and Chrysler boats, and it also is the power source for irrigation pumps, portable generators and welders, concrete breakers, standby fire pumps, street sweepers, crane winches, cotton strippers, grain harvesters and, in truth, pea pickers. These applications say something for the strength, durability and reliability of this Chrysler engine. ▶

The 225-cu. in. Slant Six, with bore and stroke of 3.400 x 4.125 in., respectively, has an 8.4:1 compression ratio in automotive and marine form, and an 8.2:1 ratio in industrial trim. The powerplant is rated at 145 bhp at 4000 rpm, with torque of 215 lb.-ft. at 2400 rpm, for automobiles and 119 bhp at 4000 rpm, with 204 lb.-ft. of torque at 1200 rpm, for industrial uses. Marine literature claims 150 bhp at 4000 rpm, with torque delivery calculated at 218 lb.-ft. at 2800 rpm.

The marine and automotive engines employ identical camshafts; the industrial engines are given milder camshaft timing.

The Dart tested by *CL* was not fitted with Dodge trailer towing package components in braking, suspension or electrical systems. These would be a wise choice for boat trailering.

Dodge people say the standard, as-is, off-the-assembly-line 225-cu. in. Six-powered Dart is capable of towing trailer loads which gross up to 1500 lb. For large boats, house trailers and the like, Dodge recommends installation of the trailer towing package, priced at $55.70. A true bargain, this packet includes a 20-qt. radiator with special air seals, 17-in. diameter 6-bladed fan with shroud, 3.23:1 rear axle, heavy-duty turn signal flasher, 10-in. drums with 2.25-in. wide shoes at the front and 1.75-in. wide shoes at the rear, wider 4.5 J wheel rims, and heavy-duty suspension components. The latter are front torsion bars, rear semi-elliptic leaf springs, and shock absorbers, and a front antiroll bar. The HD torsion bars raise front ride rate at the wheel from 85 to 103 lb./in. Six leaves, rather than the standard five in the rear springs, increase ride rate at the wheel from 110 to 130 lb./in. The antiroll bar is 0.88 in. in diameter.

Purchasers who specify installation of the trailer towing package on a Dart, however, are required to purchase some extra-cost items, including the TorqueFlite automatic transmission at $171.65 and 8-ply-rated tires at $59.05. Dodge also recommends installation of power steering at $80.35, limited-slip differential at $37.60, 46-amp. high-output alternator at $14.05, and 70-amp./hr. battery at $7.70.

HITCH EQUIPMENT is not a Dodge factory-installed item. The Dart buyer must obtain a hitch suitable for the towing tasks he contemplates. A hefty hitch, installed, is priced in the $100 range.

Thus, to fully prepare a Dart Slant Six 4-door sedan for towing more than 1500 lb. gross, the purchaser must be willing to spend an amount well in excess of $400.

Whether equipped for under- or over-1500-lb. duty, Dodge's 1967 Dart 270 4-door by itself, away from nautical influence, proved a very delightful little car. "This is all the car anyone with good sense would ever need," was one comment. The Dart's unit body was tight and squeak free. Panel fit was excellent. Light tan paint showed no flaws. Interior and exterior trim, including nylon carpeting, a cigarette lighter, moldings and medallions, separated the mid-range 270 from the plain-Jane Dart and the more plush, bucket seated Dart GT.

Soloing the Dart was a pleasant experience. Ride quality was firm, with pitch tendencies well damped. Handling was more than testers have come to anticipate from low-line automobiles. The Dart 270's minimal body lean in cornering was such that one driver was forced to stop the car, get out and get under to determine if, really, an antiroll bar had been fitted by mistake. The Dart 270, with six passengers, was equally at home on urban streets, rural secondary roadways or cruising the freeways at legal speed limits. Relatively light, with

1967 DODGE
DART 270 4-DOOR SEDAN

DIMENSIONS

Wheelbase, in.	111.0
Track, f/r, in.	57.4/55.6
Overall length, in.	195.4
width	69.7
height	53.6
Front seat hip room, in.	52.7
shoulder room	55.7
head room	38.3
pedal-seatback, max.	39.4
Rear seat hip room, in.	56.6
shoulder room	55.7
leg room	36.5
head room	37.3
Door opening width, in.	30.0/29.3
Ground clearance, in.	7.1
Trunk liftover height, in.	21.9

PRICES

List, FOB factory	$2362
Equipped as tested	3118

Options included: Automatic transmission, air cond., power steering, Cleaner Air Package, wsw tires, wheel covers, radio, remote adjustable mirror.

CAPACITIES

No. of passengers	6
Luggage space, cu. ft.	n.a.
Fuel tank, gal.	18.0
Crankcase, qt.	4.0
Transmission/dif., pt.	16/2
Radiator coolant, qt.	14.0

CHASSIS/SUSPENSION

Frame type: Unitized.
Front suspension type: Independent, non-parallel control arms, torsion bars, telescopic shock absorbers.

ride rate at wheel, lb./in.	85
antiroll bar dia., in.	none

Rear suspension type: Live axle with longitudinal asymmetrical, semi-elliptic leaf springs, telescopic shock absorbers.

ride rate at wheel, lb./in.	110

Steering system: Integral, power assisted recirculating ball, parallelogram, trailing, parallel Pitman and idler arms, equal length tie rods.

overall ratio	28.7:1
turns, lock to lock	5.3
turning circle, ft. curb-curb	38.7
Curb weight, lb.	3330
Test weight	3730
distribution, (driver), % f/r.	55.2/44.8

BRAKES

Type: Two-circuit hydraulic, duo-servo shoes in cast iron drums, front and rear.

Front drum dia. x width, in.	9.0 x 2.25
Rear drum, dia. x width	9.0 x 2.00
total swept area, sq. in.	254.5
Power assist.	none
line psi at 100 lb. pedal	800

WHEELS/TIRES

Wheel rim size	13 x 4.5J
optional size	14 x 5.5J
bolt no./circle dia. in.	5/4.0

Tires: Goodyear Power Cushion.

size	7.00-13
normal inflation, psi f/r.	24/24
Capacity @ psi	4330 @ 24

ENGINE

Type, no. of cyl.	ohv, IL-6
Bore x stroke, in.	3.400 x 4.125
Displacement, cu. in.	224.596
Compression ratio	8.4:1
Fuel required	regular
Rated bhp @ rpm	145 @ 4000
equivalent mph	92
Rated torque @ rpm	214 @ 2400
equivalent mph	55
Carburetion: Holley, 1x1	
throttle dia., pri./sec.	1.69

Valve train: Mechanical lifters, push-rods, overhead rocker arms.

cam timing, deg., int./exh.	10-50/50-6
duration, int./exh.	240/236

Exhaust system: Single, reverse flow muffler.

pipe dia., exh./tail	1.88/1.75
Normal oil press. @ rpm.	65 @ 2000
Electrical supply, V./amp.	12/30
Battery, plates/amp. hr.	42/38

DRIVE TRAIN

Clutch type:	
dia., in.	

Transmission type: Automatic with torque converter and planetary gearbox.

Gear ratio 4th ( ) overall	
3rd (1.00:1)	2.93:1
2nd (1.45:1)	4.25:1
1st (2.45:1)	7.17:1
1st x t.c. stall (2.20:1)	15.81:1

Shift lever location: Column.
Differential type: Hypoid.

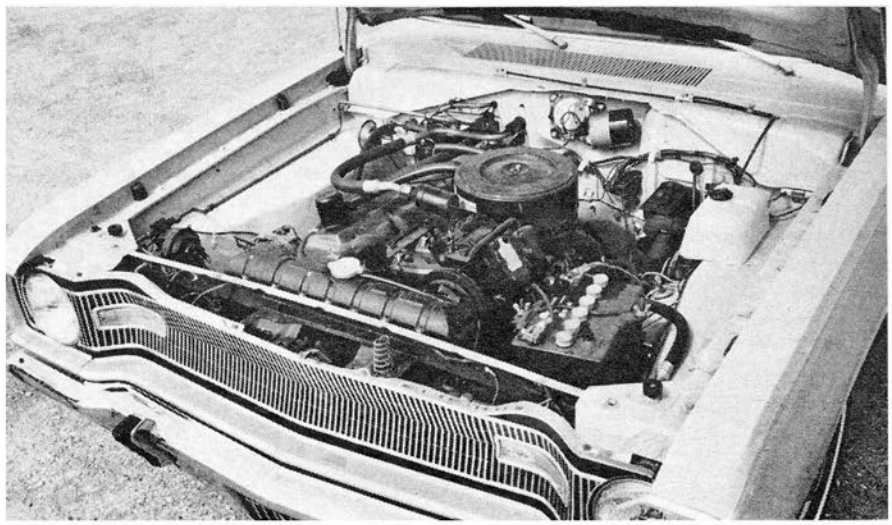
axle ratio	2.93:1

weight very well distrbuted on the short wheelbase, the Dart, if not truly exciting, was brisk enough to delight test drivers.

Without the boat behind, the Dart 4-door sedan was capable of quarter-mile e.t.s of 19.3 sec., with terminal speed of 68.2 mph—no Sunday afternoon top eliminator, surely, but nonetheless outstanding for a boat tractor.

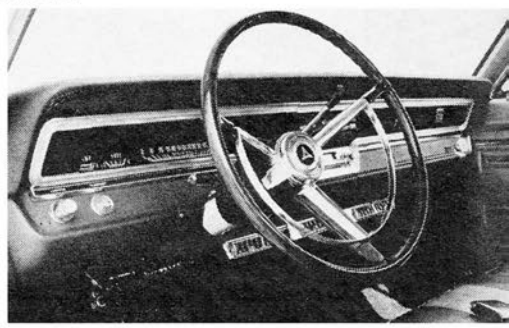
NINE-INCH drum brakes appeared inadequate for long downhill operations with a boat on a trailer behind; again, the 10-in. drums of the trailer towing package seem the wise selection for Dart/boating. in sans-trailer performance, however, the smaller drums were capable of 24 ft./sec./sec. maximum deceleration. On the fourth panic stop from 80 mph, the system was still delivering 20 ft./sec./sec. stopping power with only slight control loss and moderate fade. Only once in four panic stops did one rear wheel lock. No doubt the broad contact patch of the 7.00-13 Goodyear Power Cushions on the Dart contributed to the dry-pavement stopping capability of the car's braking system.

Towing the Chrysler boat was a convincing demonstration of the 225-cu. in. Slant Six's torque, the small car's strength. The test Dart's engine was coupled to the Chrysler 3-speed



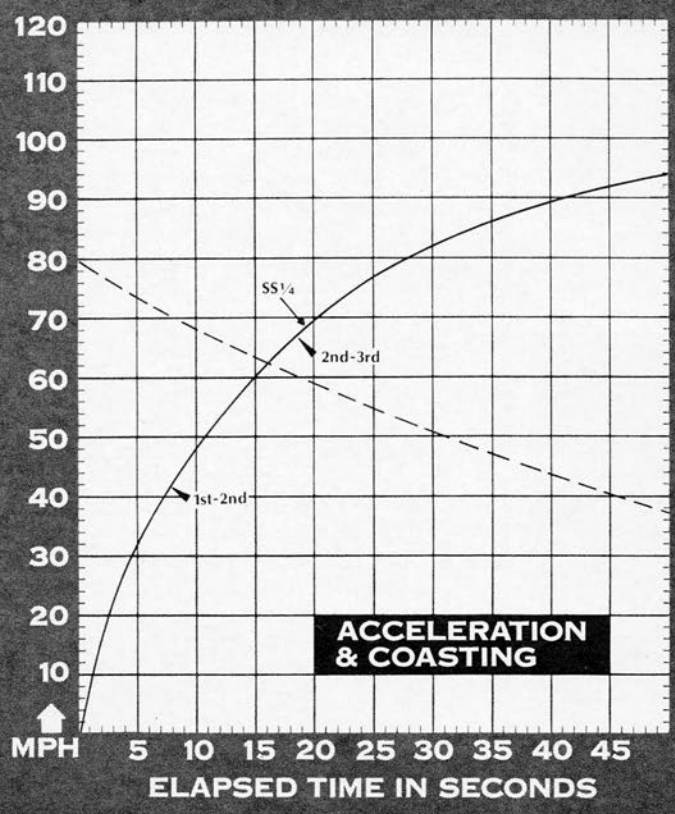
THE SLANT Six for automobiles is rated at 145 bhp, 119 bhp for industrial equipment and 150 bhp for use in Chrysler boats.

DART 270 means mid-line trim has been applied to the car.



INSTRUMENTS proved complete, neat and quite readable.

CAR LIFE ROAD TEST



CALCULATED DATA

Lb/bhp (test weight)	25.7
Cu. ft./ton mile	91
Mph/1000 rpm (high gear)	23.1
Engine revs/mile (60 mph)	2600
Piston travel, ft./mile	1790
CAR LIFE wear index	46.5
Frontal area, sq. ft.	20.8
NHRA-AHRA Class	K/S-M/SA

SPEEDOMETER ERROR

30 mph, actual	28.8
40 mph	39.1
50 mph	48.4
60 mph	58.3
70 mph	67.9
80 mph	76.8
90 mph	87.3

MAINTENANCE

Engine oil, miles/days	4000/90
oil filter, miles/days	8000/180
Chassis lubrication, miles	36,000
Anti-smog servicing, type/miles: Clean crankcase vent. system/6000, replace PCV valve annually.	
Air cleaner, mo.	clean at 6
Spark plugs: MoPar P-6-6P	
gap, (in.)	0.035
Basic timing, deg./rpm	0/650
max. cent. adv., deg./rpm.	25/4800
max. vac. adv., deg./in. Hg.	17/10
Ignition point gap, in.	0.017-0.023
cam dwell angle, deg.	40-45
arm tension, oz.	17-20
Tappetclearance,int./exh.	0.010/0.020
Fuel pressure at idle, psi	3.5-5.0
Radiator cap relief press., psi	16

PERFORMANCE

Top speed (4100), mph	96
Test shift points (rpm) @ mph	
3rd to 4th ( )	
2nd to 3rd (4150)	66
1st to 2nd (4480)	42

ACCELERATION

0-30 mph, sec.	4.7
0-40 mph	7.5
0-50 mph	11.0
0-60 mph	15.1
0-70 mph	20.5
0-80 mph	28.3
0-90 mph	41.0
0-100 mph	
Standing ¼-mile, sec.	19.3
speed at end, mph	68.2
Passing, 30-70 mph, sec.	15.8

BRAKING

Max. deceleration rate from 80 mph ft./sec./sec.	24
No. of stops from 80 mph (60-sec. intervals) before 20% loss in deceleration rate	2
Control loss?	slight
Overall brake performance	fair

FUEL CONSUMPTION

Test conditions, mpg	15.7
Normal cond., mpg	15-19
Cruising range, miles	270-340

GRADABILITY

4th % grade @ mph	
3rd	12 @ 48
2nd	18 @ 33
1st	30 @ 17

DRAG FACTOR

Total drag @ 60 mph, lb.	140

TorqueFlite automatic and fairly tall-for-towing 2.93:1 rear axle. Transmission gearing and 2.20:1 torque converter stall ratio provided completely adequate power to tow more than 2000 lb. of trailered boat. The automatic's second ratio was used in towing through town; top gear was employed for the 55-mph towing speed limit operations on the open highway; and downhill management of the brakeless trailer was accomplished to some degree by flipping the automatic into low range. Test drivers, however, expressed a desire for trailer brakes should any great downhill distance be traversed.

Once, towing the boat up a rather steep hill, the driver was forced by traffic conditions to bring the tandem outfit to a complete halt. The succeeding start would have been fatal to a manually operated clutch. However, that automatic transmission absorbed the tremendous load without complaint. One reason that Dodge requires the trailer package purchaser to buy the automatic transmission was clear.

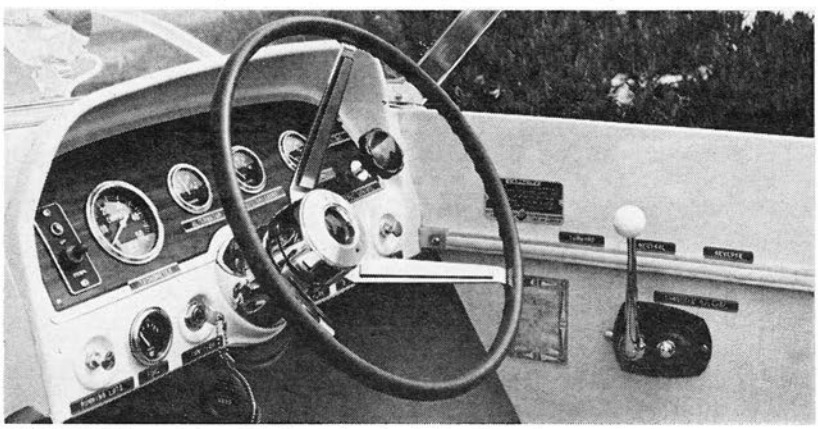
The consensus was, however, that the 3.23:1 axle ratio would have aided both ups and downs in no small way with the trailered boat. A 3.55:1 ratio also is available for the Dart 270; this, perhaps, would be the better choice for the Dart owner/trailer puller who intends to take his boat or house trailer to high mountain areas.

By itself, the Dart 270 appeared a neat, trim little car; as a boat tractor it was uncomplaining; the towing package, mandatory components and recommended options, then, can only improve an already more than satisfactory performance.

The trailer actually towed in *CL*'s Dart/boat double-take experiment was a Chrysler C 200 model, priced at $449. Rolling on 7.75-14 tires of 4-ply rating, the C 200 was fitted with launching winch, rollers angled to aid in centering the load and padded bolsters to support the boat.

The nautical part of the double-take, the Slant Six-powered craft, was a Chrysler Courier 229 model, a 17-ft. inboard/outdrive foam-filled fiberglass triple-vee hulled boat suitable for lake, stream and in-shore ocean work, for fishing, waterskiing or simply cruising.

CHRYSLER COURIER 229



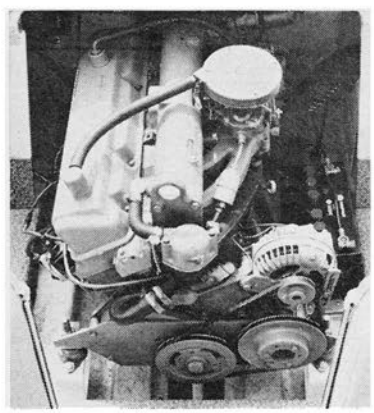
SWITCH, LEFT, controls raising/lowering of outdrive. Gear change and throttle control systems are integrated for single lever operation.

SPECIFICATIONS

Length, centerline, ft. 17
Width, beam, in. 86.5
Depth, max., in. 45
Weight, less engine, lb. 1000
Load capacity, lb. 1727
Fuel capacity, gal. 12
Price, with 150-bhp engine $4095
Price, as equipped for test $4780

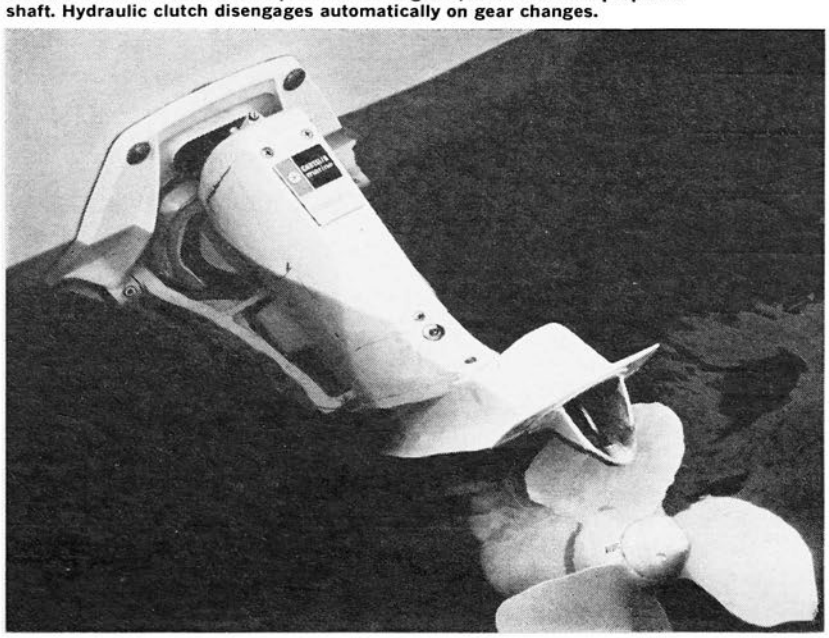
Optional equipment included: Fire extinguisher, horn, spotlight, bilge pump, fuel gauge, C 200 trailer, jack stand, spare wheel and tire.

Other equipment available: Vinyl camper cabin, windshield wipers, stern rail, cigarette lighter.



WATER-cooled exhaust manifold is part of marine-use tuning.

COMMANDO OUTDRIVE uses spiral-cut bevel gears, stainless steel propeller shaft. Hydraulic clutch disengages automatically on gear changes.



DESIGNED TO accommodate six-passengers, the 229 (for cu. ft. total) was a "bow rider" model. That is, removal of a canvas cover revealed a pair of seats ahead of the main bulkhead and driver/forward passenger seating. The four passenger seats in the main compartment of the 229 were pedestal-swivel buckets, capable of 360° rotation, with positive locks in eight positions, and reclining backrests.

The hull design was Chrysler's new for 1967 "Hydro-Vee." The smaller outboard step sponsons were designed to provide stability when the boat is at rest, or moving slowly through the water, to lift clear of the water at speeds over 20 mph in order for the boat to plane on a very small area of the center vee, and to contact the water during high-speed turns.

The 225-cu. in. Slant Six engine that powered the 229 differed from the Dart's engine in a few minor respects. The boat powerplant carried a water-cooled exhaust manifold, flame arrestor atop the 2-barrel carburetor, separate belt-driven water pump and marine oil pan.

Chrysler's inboard/outdrive units, marketed under the trade name "Commando," feature a hydraulic clutch

HYDRO-VEE design aims to provide stability when the boat is at rest, when moving slowly and at brisk speeds through turns. The Courier 229 Model, above, is capable of an estimated 30 mph at 3000 rpm from the 225-cu. in./150-bhp Slant Six.

that disengages automatically in changes from forward to reverse gear. Gear change and throttle control systems are integrated for single lever operation. The Commando's drive train is comprised of spiral-cut bevel gears of forged steel and a stainless steel propeller shaft. The drive unit on the 229 was raised and lowered electrically. The Commando drive is designed to kick up if its skeg should strike an underwater object. The unit permits steering of 30° right and 30° left of center through a gear and cable system connected to the outdrive.

After a technical briefing by Hal Koch, Chrysler Marine's Western Public Relations manager, the boat was launched at the wharf of the friendly local builder of ocean racing engines (where *CL* editors paused to marvel at a pair of 427-cu. in. turbocharged Ford engines destined to run flat out from Miami, Fla., to Nassau, the Bahamas). *CL* test crewmen were then checked out in operation of the Courier 229 by Jack Oxley, Chrysler Marine field representative—winner and record setter in such events as the Colorado River Marathon, Canyon Country River Marathon and the Stockton-Colusa Marathon.

The outdrive was lowered into the water with a slight whine from the electirc motor. A turn of the ignition key bubbled the Slant Six to life. The 229 eased away from the dock quietly, leaving a barely perceptible wake. The easy trolling speed satisfied the fishermen in the crowd. Then the craft was taken out into the channel and into the water ski area for some speed runs. The test driver slowly applied revolutions from the Slant Six—1500, 2000, 2500, then 3000. The latter figure produced an estimated 30 mph, and some breathless excitement as the hull pounded through the wakes of other boats. Maintaining that speed, the tester bent the craft in ever-decreasing circles, but the 229 showed no tendency to skid or creep off line. The boat simply demonstrated the stability of the design discussed earlier.

IF THE THROTTLE advancement was brisk, testers discovered, the Slant Six and propeller bite combined in a torque reaction that slewed the boat heavily to the left. Sharp corrective steering to the right, with high driver effort, was required. Once the craft was planing on its center vee, however, steering again became neutral.

The Slant Six/Commando outdrive combination, with 12-gal. fuel tank filled and two occupants aboard, displaces well over 3000 lb. However, the 150 bhp from the Six appeared sufficient to tow up to four skiers at over 20 mph. In short, the engine that is a small Six in a car becomes a big Six when installed in a boat.

For those who desire less or more power, Chrysler Marine offers a very broad range of inboard/outdrive combinations, from a Simca-engined 80-bhp model, through Volvo 4-cyl. engines and Chrysler 273-, 318-, 383- and 426-cu. in. V-8s, in 110-, 120-, 175-, 210-, 235-, 260- and 290-bhp ratings. These engines are sold with Hydro-Vee hulls from 15 to 24 ft. in length.

The fact that most of these Chrysler boats all can be powered by automobile engines stimulates the imagination. One can envision a carefree, laughing, red-blooded American family at the end of a happy day of boating. They bring their Chrysler Courier 229 alongside the dock and, speeded along with wing nuts on the engine mounts, quick disconnects for cooling and electrical lines, and a small portable crane, swing the 225-cu. in. Slant Six from the boat into their Dart 270 parked nearby. The Slant Six Dart tows the C 200 trailered boat to the family's ranch some miles away. In the morning the Slant Six is quickly transferred from Dart to farm equipment, just in time for another day of pea-picking. ■