CAR LIFE

ROAD TEST

PLYMOUTH VALIANT

BARRACUDA

FEW CARS WE have driven for our continuing series of *Car Life* road tests have stirred up so much immediate interest among the motorists encountered during the period of the test. To say that the Plymouth Valiant Barracuda is an attention-getter is an understatement—a more accurate commentary is that it is a traffic-stopping, people-grabbing, where-do-I-sign-the-order-blank? sort of attention.

The simple addition of a sweeping fastback roofline (from windshield header to a point just over the rear bumper) seems to transform the mundane Valiant into a thing of purpose and poise. Or, perhaps we should say, porpoise, since the result more resembles that playful mammal than it does its whip-thin, rapacious namesake.

Owners of earlier-model Valiants assailed us with questions and enthusiasm. Owners of '63-64 Corvettes looked affronted. Service station attendants were full of compliments for the styling and seating design, but were apprehensive over cleaning 14.4 sq. ft. of back window in addition to the windshield. Everywhere, the youthful and the style-conscious heaped praise on the Barracuda's curvaceous exterior.

It's not very secret that the Barracuda is the Chrysler Corporation's immediate answer to the sales threat posed by the Ford Mustang. And it's pretty safe to assume that these are two of what must develop as a whole separate breed of automobile—the sports/luxury runabout. Other manufacturers are sure to follow suit with similar types in similar shapes. In fact, the trend to the fastback styling for U.S. cars should really gain momentum with the introduction of the '65s: CL understands that there are several fastbacks scheduled for production. Meantime, the Barracuda is the third domestic production-series true fastback (the Avanti was the first and the Corvette Sting Ray the second), although there are numerous variations of this theme being imported from Europe (notably the Jaguar XK-E coupe and the Volkswagen!).

Along with catchy styling and sporting intent, the Barracuda also falls directly into the Mustang's price range (a fact that Chrysler-Plymouth Division made positive by waiting until after the Mustang prices were announced before putting the stickers on the Barracuda). On an FOB Detroit basis, a Mustang costs $2368, the Barracuda $2365, for the cheapest 6-cyl. model. Both have lengthy option lists, although Mustang has by far the more complete one. Note that the test car, with the "usual" accessories plus V-8 engine and air conditioning tots up to more than $1000 over the "list" price.

From the beltline down, the Barracuda is mechanically and physically just the same as any other model in the Valiant line, except for a slightly different grille which has big round parking lights placed near its body-colored center section. But, from the windshield back to the rear deck lid sill, new sheet metal and bracing are needed for the top. Inside, the designers have done their best piece of work in creating a station wagon-type of fold-down seat that creates a flat, carpeted, 7-ft. trunk.

Because the usual diagonal braces and rear shelf structure were eliminated by this compartment, a network of new supports surrounds the rear window to give the body torsional rigidity. A reinforced box section arch extends across from wheelhouse to wheelhouse, forming the front support for the rear window. A similar but

shorter box-section arch forms the rear support and new longitudinal reinforcement sections extend between these trusses. A Chrysler Engineering report says "tests have shown no appreciable difference in twist stiffness between the rear structure of the Barracuda and that of the Valiant Signet hardtop with conventional rear structure."

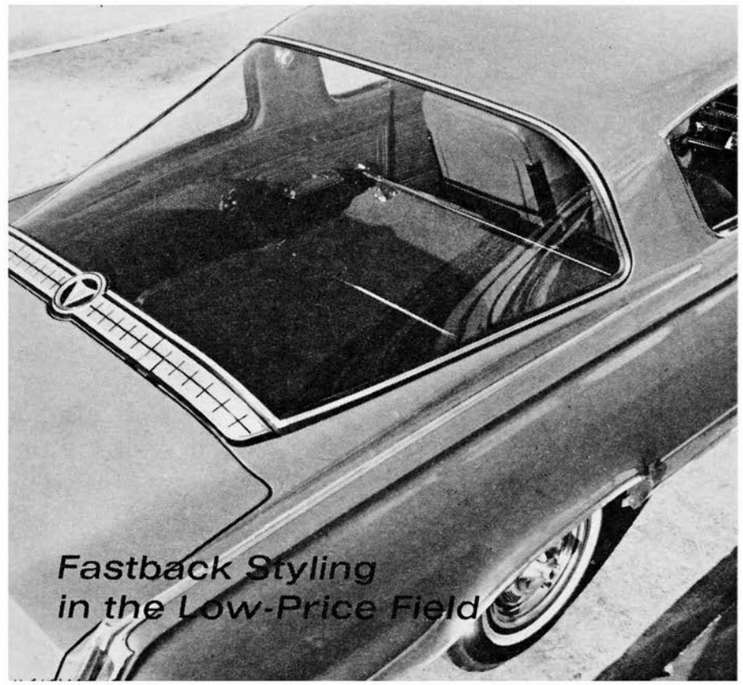
Now any aerodynamicist will tell us that with such a sleek form, a strong low pressure area should form over the rear half of the roof, increasing as the speed of the vehicle increases. Should the windows be rolled down at high speed, thereby creating a high air pressure inside the car, the chances are that the combination of forces could pop out such a large back window. The Chrysler body engineers have foreseen the situation, however, and provided, in effect, a pressure relief valve for the interior air. This consists of a row of four rectangular air slots at the base of the rear window, which bleed the air pressure into the aft window support, which in turn funnels it out the rear through rubber flaps to the lid slot. This ingenious system also has another good use: When side windows are rolled up tight, air taken in by the front cowl vent is circulated through the car and exhausted out the rear—simply, efficiently and noiselessly. This system also would tend to keep the back window from fogging up on the colder days by promoting a flow of warm air across it from the front.

As we said, the luggage compartment encompassed by this new fastback is nothing short of amazing. Although the "mail-slot" trunk lid, made necessarily short by the huge back window, and the pint-sized trunk compartment may at first seem disappointing, when the snap-catch "security" panel that blocks off the trunk is dropped, the amount of space available trebles. Then, when the rear seat is folded forward (and fastened down by two safety straps), the luggage or storage area is truly monstrous.

In front, there are two vinyl-covered bucket seats as standard equipment. A simulated wood steering wheel, as on the test car, is $17.30 extra; the padded dash $16.35 and the power steering $82.05. And those simulated chrome-wheel hubcaps are another $34.15. A buyer can either specify the push-button automatic ($171.55 with 6 cyl.) or the 4-speed manual ($179.20 with V-8) instead of the standard 3-speed (shift lever on the steering column). And the V-8 engined Barracuda costs $131 more than the Six.

The powerplant choice, as for other Valiants, consists of three units: the basic 170-cu. in./101 bhp Slant Six, the longer-stroked 225/145 Six, and the 273/180 V-8. The two Sixes have been in the Valiant since its inception back in 1959 (1960 models) while the V-8 was new last spring. The bigger Six has a 1-in. longer stroke, 3.125 vs. 4.125 in., (and more deck height—i.e., is taller from crankshaft center line to top of block) otherwise is identical to the smaller engine. Of ohv, wedge combustion chamber design, they are noted for their excellent performance in the lighter Chrysler Corporation products.

The V-8 is very similar to the corporation's 318-cu. in./230 bhp engine which is the standard V-8 power for Plymouth and Dodge (April CL), although about 55 lb. lighter in overall weight. This means the Barracuda's V-8 option adds some 50 lb. additional weight over the 225-6, and 85 lb. over the 170-6, onto the front wheels—which are already carrying a large share of the avoirdupois. This engine, too, is a strictly conventional design, although its heads are much more compact than those for the 318, a bit of compromise necessary to squeeze this wider engine into the narrow 6-



BARRACUDA

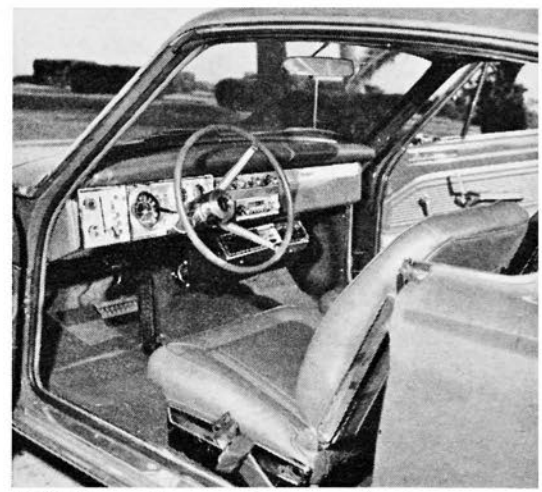
cyl. compartment. Valves are in-line, rather than staggered, allowing all rockers and pushrods to be identical. Tappets are mechanically actuated, rather than hydraulically as on the 318. Both block and heads make use of the latest hot-core-box-curing foundry techniques allowing "thinwall" castings for the weight savings.

Performance in the mid-range is reasonably good with this engine, but leaves something to be desired at both the low and high ends of the operating scale. It seems to lack in torque at the bottom, and at the top it just pants for air. It is smooth, quiet, and not overly lively. The automatic transmission, with its 2.2:1 torque multiplication at starting speeds, improves the getaway, and holding each gear until 4200 rpm was reached seemed to extract every bit of power available. Of course, the test car was equipped with the 2.93:1 axle ratio which usually goes with the V-8s. Optional 3.23 and 3.55:1 ratios would further improve the accelerative performance, but at the cost of top speed since this engine, in this tune, just has nothing more to give.

Handling qualities of the Valiant, which heretofore have been judged quite excellent by the CL staff, are

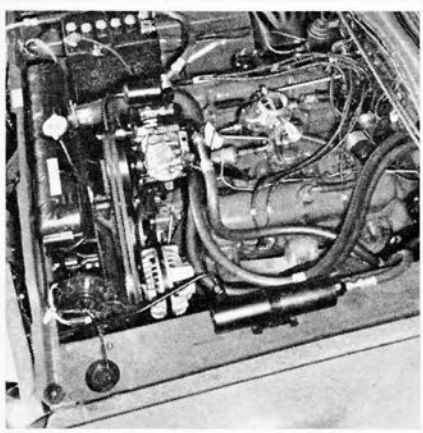
GENE BOOTH, RALPH POOLE

FASTBACK ROOF sweeps from taillights to windshield header in classic style.



VALIANT panel has good instrument layout.

273 CU. IN. V-8 is a tight squeeze into Valiant engine compartment.



FOLD-DOWN seat back is shaped and molded to imitate front bucket seats.

VIEW from rear shows 7-ft. expanse of deck area created by folding seat down.

SECURITY panel closes normal trunk area off from deck behind the rear seat.

SPARE TIRE fits in well under luggage compartment floor.

LOCKING BAR also serves as a luggage stopper under hard decelerations.

somewhat lessened by the V-8 installation and its attendant increase in frontward weight bias. The rear wheels have become too lightly loaded (in proportion to the front) and the car lacks that geared-to-the-road feeling of the 6-cyl. models. The V-8 option calls for stiffer front springs and recalibrated shock absorbers, but these may not be quite enough; certainly a front anti-roll bar, if such were available, would help the cornering, and bigger tires (only 7.00-13) the traction. We'd also like to see some bigger, or better, brakes since these registered a maximum deceleration rate of only 20 ft./sec./sec. on the first stop from 80 mph and 18 on the second. With just 254 sq. in. of swept area, the Valiant's brakes can only be rated as barely adequate.

The fit and finish of the Barracuda was also disappointing. Not only was low-quality material used throughout the interior, it was poorly put there. One such annoying example was the insulating strip between the front and rear side windows, which retracts into the door with the front window, pulled off the second time the window was rolled up.

The Barracuda, then, needs some development if it is to match with performance the promise of its racy good looks. In fact, we'd like to see Plymouth offer horsepower, handling and brake packages for it, as Ford is doing with the Mustang. This would allow the Barracuda to develop a character all its own, perhaps even enough to put it on the best-seller list. As it is now, it's just a novel little hardtop that won't swim away from anything. ■

CAR LIFE ROAD TEST

1964 PLYMOUTH Valiant Barracuda V-8

SPECIFICATIONS

List price	$2496
Price, as tested	3324
Curb weight, lb	3150
Test weight	3450
distribution, %	57.5/42.5
Tire size	7.00-13
Tire capacity, lb	3680
Brake swept area	254
Engine type	V-8, ohv
Bore & stroke	3.63 x 3.31
Displacement, cu. in	273.0
Compression ratio	8.80
Carburetion	1 x 2
Bhp @ rpm	180 @ 4200
equivalent mph	103
Torque, lb-ft	260 @ 1600
equivalent mph	39.2

DIMENSIONS

Wheelbase, in.	106.0
Tread, f & r	55.9/55.6
Overall length, in	188.2
width	70.1
height	53.8
equivalent vol, cu. ft.	410
Frontal area, sq. ft	20.9
Ground clearance, in.	5.3
Steering ratio, o/a	18.8
turns, lock to lock	3.5
turning circle, ft.	40.8
Hip room, front	2 x 20.5
Hip room, rear	55.0
Pedal to seat back, max.	41.5
Floor to ground	11.0
Luggage vol, cu. ft.	n.a.
Fuel tank capacity, gal	18.0

EXTRA-COST OPTIONS

Auto. trans., air cond., outside mirror, radio, tinted windshield, w.s.w. tires, power steering, wheel covers, steering wheel, padded dash.

GEAR RATIOS

3rd (1.00) overall	2.93
2nd (1.45)	4.25
1st (2.45)	7.18
1st (2.45 x 2.20)	15.8

CALCULATED DATA

Lb/bhp (test wt)	19.2
Cu. ft/ton mile	112
Mph/1000 rpm	24.5
Engine revs/mile	2450
Piston travel, ft/mile	1355
Car Life wear index	33.2

SPEEDOMETER ERROR

30 mph, actual	30.2
60 mph	60.0
90 mph	89.4

FUEL CONSUMPTION

Normal range, mpg	16-19

PERFORMANCE

Top speed (4300), mph	105
Shifts, @ mph (auto., forced)	
3rd ( )	
2nd (4200)	71
1st (4200)	42
Total drag at 60 mph, lb	130

ACCELERATION

0-30 mph, sec.	4.5
0-40	6.7
0-50	9.5
0-60	12.9
0-70	17.0
0-80	22.1
0-100	38.0
Standing ¼ mile, sec	17.8
speed at end, mph	72