



SUPERCHARGERS GOBBLE GAS AND INSPIRE HARDER DRIVING. BLOWN 'CUDA RECORDED 14.5 MPG, VERSUS 18.8 MPG FOR UNBLOWN VERSION.

# BARRACUDAS CAN BITE!

A road test report of a stock 273 'Cuda, which is sporty motoring. But then, we put on a supercharger . . .

AS LONG as you are not a passenger baking under the big rear glass, the Baccaruda — oops, the power of radio commercials! — Barracuda “S” spells fun motoring. This is particularly so when you order it complete with the optional 4-barrel V-8 and rally suspension.

And rally it does. One of these is the reigning SCCA national rally point champion. Assuming a couple of human computers are in charge, the vehicle, in order to win a rally, must be agile though not necessarily fast, non-tiring, durable down to the most minute detail, immune to weather variables and as happy in traffic as it would be running moonshine.

The Barracuda has proved all of this as a matter of record. So we decided to find what you could do on a budget of \$400 to transform an adequate car into an exceptional one. With connections we might have talked the Plymouth people into

stuffing a hemi under the hood, but that would have voided the warranty as well as our budget. Certainly, any number of speed shops could have monkeyed with its innards, added carburetors and exhausts and probably have achieved the desired results. But would this be at the sacrifice of docility and durability — not to mention tying the car up in one of these leisurely clinics for a couple of weeks?

Before other alternatives occurred, we remembered our text books, which loosely translated say: “The quickest route to more power in a given engine is to force-feed it.” In other words, supercharging offers the most horsepower per buck. And when you’re in the market for a Detroit-type, civilian supercharger, there’s a handy place to go these days. The genial Granatelli brothers, Vince, Joe and Andy, have the market covered under the diversified wing of Studebaker Corp. Sixty minutes and \$365 later, we were supercharged, and in the process, found ourselves with a lot more automobile than we started out with.

In stock form, with racing stripes and cowbell exhaust pipe, the Barracuda looks a lot swifter than it really is. Like any car destined for the common market, its performance parameters are oriented to bolster the low end. For example, our 'Cuda in factory form did 0-60 in a snappy 8.9 seconds. It's not worth \$365 just to lop 1.1 seconds off this, which the supercharger did.

The payoff comes in the rarely used high reaches — a rather unrespectable standing-quarter of 84 mph was raised to 92, with .7 second less elapsed time. If you've ever misjudged a high-speed pass — and who hasn't — you know what these fractions can mean to you and yours. And, too, if you live around mountains, at altitude Paxtonizing is somewhat akin to an overdose of Geritol. With a blower, the engine thinks it's sea level at 7000 feet and performs accordingly.

After some early models ran afoul of the law, the stock Barracuda has been made into a very quiet car. Supercharging does nothing to change this, except that the hiss of the exhaust



PHOTOS BY DARRYL NORENBURG

Goodyear Bluestreak tires served up the usual nylon thump and stuck like glue to the road, even when following surface ridges.

trying to escape through the enforced silencer is noticeable. Although neither they nor we have had a chance to try it, the Granatellis are sure that putting on dual exhausts and a larger carburetor, say from a Chrysler 413, would double the improvement we recorded.

Inside, you can't hear the blower at all, which made us feel a little cheated. The car is exceptionally sound-proof. Another trait the rallyists must like is the driving position. While moving fast on winding roads, you never feel off-balance just strapped there with both hands on the wheel at 10 minutes to 2. Experts criticize drivers who clutch at the vent frame while cornering, but in some cars it's the only way to restore your sense of balance.

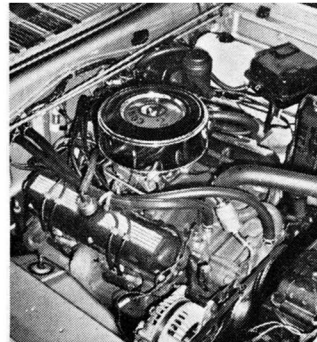
The instrument panel is something else again. For once, we have to reverse ourselves and criticize instruments that are calibrated to the point of confusion. There are as many lines between the 10-mph points on the speedo as there are on a measuring cup, with the result that you can't see the forest for the trees. A tinny console, in which everything you put rattles, also contains an ashtray. This leaves a blank space on the dash which could contain a clock, but none is offered. A rally car ought to have a built-in clock!

But enough of these minor quibbles. After a couple of years, the 'Cuda still attracts its share of admiring attention, especially when you lift the hood (or turn this page) and see the blower.

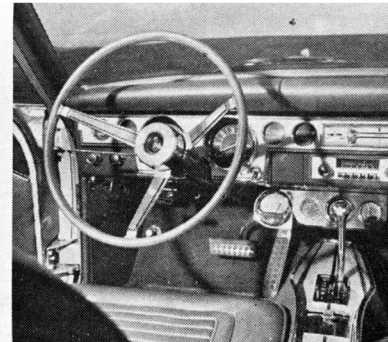
— D. M.



Cornering is the 'Cuda's forte, whether stock or blown. Stiffer rally-pack suspension offers nearly ideal bump absorption.



Engine compartment is less crowded than most, facilitating do-it-yourself modification.



Deep-dish wheel has unhandy horn button. It should be hooked to ridges on the spokes.

## PLYMOUTH BARRACUDA FORMULA "S"

2-door, 5-passenger coupe

### ACCESSORY PRICE LIST

*Engine option: 235 hp .....	\$ 97.30
*Automatic transmission .....	177.20
4-speed transmission .....	175.45
Overdrive .....	—
Limited-slip differential .....	37.60
*Heavy-duty suspension .....	13.60
Whitewall tires .....	78.05
*Disc brakes .....	81.95
*Power brakes .....	41.75
*Power steering .....	80.35
Power windows .....	—
Power seat .....	—
*Radio AM .....	57.35
Radio AM/FM .....	—
Air conditioning .....	318.50
*Tinted glass .....	27.90
*Bucket seats .....	std
Adjustable steering wheel .....	—
Clock .....	—
*Tachometer .....	48.70
Automatic headlight dimmer .....	—
Automatic speed regulator .....	—
Vinyl roof cover .....	62.60
Head rests .....	—
*On test car .....	—
Dash (—) — Not offered	—

**MANUFACTURER'S SUGGESTED LIST PRICE:** \$2556 (incl. taxes, safety equip't & PCV device)

**PRICE OF CAR TESTED:** \$3616.50 (incl. excise tax, delivery & get-ready charges, but not local tax & license)

**MANUFACTURER'S WARRANTY:** 50,000 miles and/or 5 years

### SPECIFICATIONS FROM MANUFACTURER

#### ENGINE IN TEST CAR: Ohv V-8

Bore and stroke: 3.63 x 3.31 ins.  
 Displacement: 273 cu. ins.  
 Advertised horsepower: 235 @ 5200 rpm  
 Max. torque: 280 lbs.-ft. @ 4000 rpm  
 Compression ratio: 10.5:1  
 Carburetion: 1 4-bbl.

**TRANSMISSION TYPE & FINAL DRIVE RATIO:** TorqueFlite, torque converter automatic. 2.93:1.

**SUSPENSION:** Torsion bars at front, 6-leaf springs at rear; direct-acting shocks at each wheel

**STEERING:** Rack and sector; integral power assist  
 Turning diameter: 37.1 ft., curb to curb  
 Turns lock to lock: 3.5

**WHEELS:** Steel disc; 5-lug

**TIRES:** 7.00 x 13 tubeless, rayon

**BRAKES:** Hydraulic: disc-front, duo-servo rear  
 Diameter of drum: Rear, 10 ins.

#### SERVICE:

Type of fuel recommended: Premium  
 Fuel capacity: 18 gals.  
 Oil capacity: 4 qts.; with filter, 5 qts.  
 Shortest lubrication interval: 3000 mi.  
 Oil- and filter-change interval: 4000 mi. or 3 mos.

#### BODY & FRAME:

Unitized construction  
 Wheelbase: 106.0 ins.  
 Track: front, 55.9 ins.; rear, 55.6 ins.  
 Overall: length, 188.3 ins.; width, 70.2 ins.; height, 52.9 ins.  
 Min. ground clearance: NA  
 Usable trunk capacity: 5.7 cu. ft.  
 Curb weight: 3290 lbs.



Vast glass area will make red-necks of your passengers, even if they aren't from Mississippi. False mags come with "S" pack.

### PERFORMANCE (Supercharged)

#### ACCELERATION (2 aboard)

0-30 mph .....	3.2 secs.
0-45 mph .....	5.4 secs.
0-60 mph .....	7.8 secs.

#### TIME & DISTANCE TO ATTAIN PASSING SPEEDS

40-60 mph .....	4.4 secs., 322 ft.
50-70 mph .....	4.5 secs., 396 ft.

STANDING-START QUARTER-MILE: 15.8 secs. and 92 mph

#### BEST SPEEDS IN GEARS @ SHIFT POINTS

1st .....	36 mph @ 4500 rpm	3rd .....	125 mph @ 5300 rpm
2nd .....	64 mph @ 4500 rpm		

MPH PER 1000 RPM: 23 mph

SPEEDOMETER ERROR AT 60 MPH: 3%

STOPPING DISTANCES: from 30 mph, 28.9 ft.; from 60 mph, 149 ft.

### PERFORMANCE (Stock)

#### ACCELERATION (2 aboard)

0-30 mph .....	3.4 secs.
0-45 mph .....	6.3 secs.
0-60 mph .....	8.9 secs.

#### TIME & DISTANCE TO ATTAIN PASSING SPEEDS

40-60 mph .....	4.7 secs., 343 ft.
50-70 mph .....	5.8 secs., 501 ft.

STANDING-START QUARTER-MILE: 16.5 secs. and 84 mph

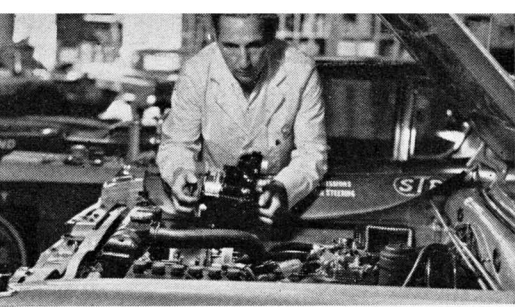
#### BEST SPEEDS IN GEARS @ SHIFT POINTS

1st .....	42 mph @ 5500 rpm	3rd .....	106 mph @ 5000 rpm
2nd .....	76 mph @ 4700 rpm		

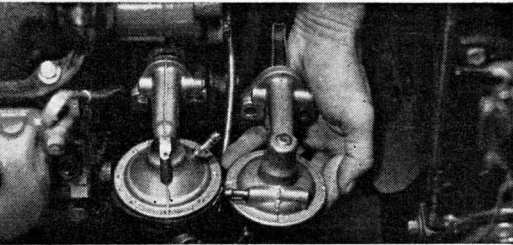
MPH PER 1000 RPM: 20 mph

SPEEDOMETER ERROR AT 60 MPH: 3%

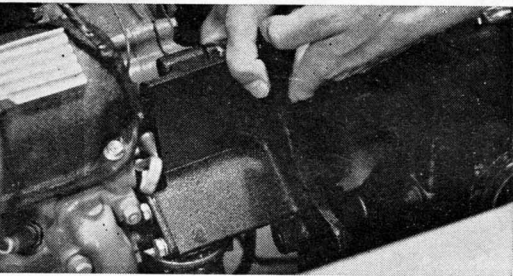
STOPPING DISTANCES: from 30 mph, 28.9 ft.; from 60 mph, 149 ft.



Vince Granatelli begins installation of Paxton supercharger on Barracuda 273-cubic-inch engine. There's plenty of room for unit. First operation includes removal of alternator, belt(s), air cleaner, fuel pump, and crank pulley. Dipstick tube must be bent against cylinder block, valve cover.



The blower kit includes a modified fuel pump with extra pressure outlet for supercharger. After new pump is in place, new crank pulley from kit is bolted in. This is hardest part of job, requires sockets.



Idler pulley/alternator bracket is held to engine block by three bolts, is notched to clear reshaped dipstick tube. After it is in position, alternator is bolted on. Alternator support bracket is reshaped to fit.



Drill two 3/8-inch holes in fender well, just above shock absorber upper mount, and install special supercharger air cleaner. Switch smog-device caps and hose from left cover to right one; hose to cleaner.

# Barracuda Bolt-on...

No fish story this. Using ordinary hand tools and a spare hour, you can turn your finned friend into a bargain bomb!

**40 per cent more horsepower in 60 minutes. For \$365, how can you miss?**

**Text and Photos by LeRoi Smith**

THE SINGLE most effective method of increasing horsepower is through supercharging. By compressing a fuel/air mixture and forcing it into a given space, the resultant energy of the mixture will be correspondingly greater than normal. Until recent years, however, the complexity of good supercharger design kept this direct principle of increased power limited to expensive race cars.

The modern automobile lends itself readily to supercharging, especially the smaller ones with mid-size engines. The Barracuda, weighing in at 3290 pounds and equipped with a 273-cubic-inch, 235-hp ohv V-8, is an excellent example of such a car.

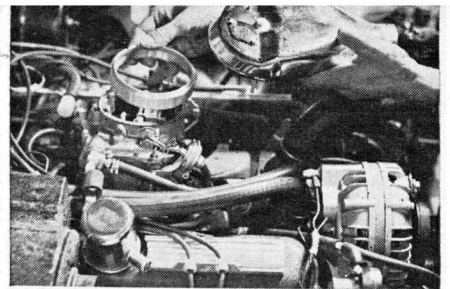
The subject of an extensive road and research report for this issue of MT, the Barracuda is, in stock form, reasonably exciting. Equipped with a Paxton centrifugal supercharger (nothing else added to the engine), the car becomes a regular sensation.

The Paxton blower, produced by the Granatelli Brothers of Novi race-car fame, has been around for several years, being designed and refined expressly for passenger-car street use. Capable of developing from 5 to 6 pounds' pressure in normal use (it has been upped to 10 pounds for specific competition), the unit has proven a dependable immediate power boost.

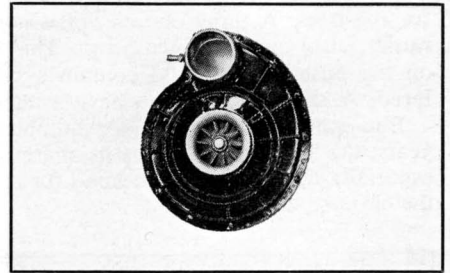
The Barracuda engine compartment is ideally suited to this particular supercharger. With all components in place, there is a minimum of 1/2-inch clearance in all vital areas, and the finished installation does not hamper normal maintenance procedures. The real beauty of the whole affair is, however, the very short time necessary to bolt the blower in. The average person, even the mechanical "clod," can install the package in less than one hour, using only basic hand tools.

Tests with the Paxton in place indicate a horsepower increase of approximately 40%, with the increased power especially useful in passing and acceleration situations. Cost of such an installation (about \$365) is remarkably low, a fact made crystal clear when you consider the cost of a special camshaft, carburetion, head work, etc., necessary to achieve the same percentage of horsepower increase by conventional methods.

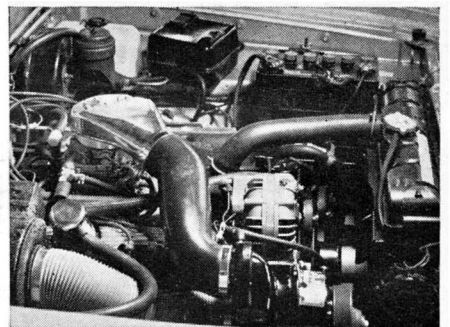
If you want to give your Barracuda a bigger bite, consider supercharging. /MT



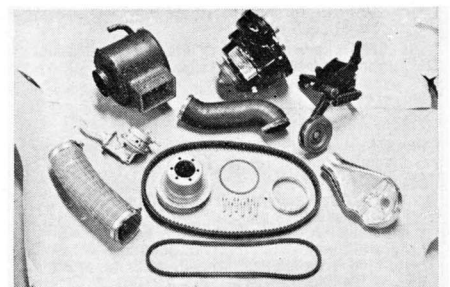
Supercharger is bolted to idler pulley bracket with nameplate at top dead center. Alternator and blower belts are then installed. Secondary jets in carburetor are drilled out to .073 (they're .070 stock), then install adapter ring and air cleaner.



The Paxton centrifugal supercharger takes air in at the center opening, vanes direct air through scroll and out at other opening. Under normal conditions, the blower puts out from 5 to 6 pounds' pressure, gives an average of 40% horsepower boost.



The supercharger is filled with 10 ounces of automatic transmission fluid, then hoses to air cleaner and carburetor are installed. Make sure all connections are tight, then turn engine over with ignition off to check for moving parts clearance. The engine is tuned to the manufacturer's specifications.



The Paxton supercharger kit is engineered for each individual type of automobile, and each part is designed for maximum durability. Basically the same for each kind of car, the kit sells for approximately \$365.