



Motion. By Plymouth. Volume II

Look what Plymouth's up to now.

A guide to the modern high-performance car.

What's standard? Optional? Which engine? Which gear? Plymouth tells it like it is.

Barracuda

- Basic Equipment (with 'Cuda 340 or 383 package):
- High-performance 340 or 383 cu. in. Wedge V-8, standard. ("Economy" versions not available.)
 - High-performance camshaft, standard.
 - High-flow cylinder heads and intake manifold, standard.
 - High-performance Carter AVS 4-bbl. carburetor, standard.
 - High-flow air cleaner, standard.
 - Dual breaker distributor, standard.
 - Oil pan windage tray, standard.
 - Heavy-duty 4-speed manual transmission, standard.
 - Hurst Competition-Plus floor shift with reverse gear indicator light, standard.
 - Heavy-duty suspension, standard.

- Heavy-duty 0.87" diameter (with 340) and 0.94" diameter (383), front torsion bars, standard.
- Heavy-duty 6-leaf rear springs, standard.
- Heavy-duty shock absorbers, standard.
- Heavy-duty 0.88" diameter front anti-sway bar, standard.
- Heavy-duty ball joints, standard.
- 10-inch drum brakes, standard.
- High-performance dual exhaust system with 2½ in. exhaust pipes (2½ on 383), twin mufflers and 2½ in. tail pipes, standard.
- Heavy-duty driveshaft and U-joints, standard.
- Heavy-duty rear axle, standard.
- Red Streak wide tread E70 x 14" tires, standard.
- Extra-wide 5.5 in. Safety-Rim wheels, standard.
- Dual braking system, standard.
- Full instrumentation, standard.

Road Runner

- Basic Equipment:
- Special high-performance 383 cu. in. 335 hp Wedge V-8, standard. ("Economy" versions not available.)
 - High-performance camshaft, standard.
 - High-performance Carter AVS 4-bbl. carburetor, standard.
 - High-flow cylinder heads and intake manifold, standard.
 - Oil pan windage tray, standard.
 - Heavy-duty 4-speed manual transmission, standard.
 - Hurst Competition-Plus floor shift with reverse gear indicator light, standard.
 - Heavy-duty suspension, standard.
 - Heavy-duty 0.90" diameter front torsion bars, standard.

- Heavy-duty 6-leaf rear springs, standard.
- Heavy-duty shock absorbers, standard.
- Heavy-duty 0.94" diameter front anti-sway bar, standard.
- Heavy-duty ball-joints, standard.
- Heavy-duty driveshaft and U-joints, standard.
- Heavy-duty rear axle, standard.
- High-performance exhaust system with 2½ in. exhaust pipes, twin mufflers, 2½ in. tail pipes, standard.
- Heavy-duty, 59 amp/hr. battery, standard.
- Red Streak wide tread F70 x 14" tires, standard.
- Extra-wide 5.5 in. Safety-Rim wheels, standard.
- Dual braking system, standard.
- Bench seats, standard.
- Beep-Beep horn, standard.

GTX

- Basic Equipment:
- High-performance 440 cu. in. 375 hp Wedge V-8, standard. ("Economy" versions not available.)
 - High-performance camshaft, standard.
 - High-performance Carter AVS 4-bbl. carburetor, standard.
 - High-flow cylinder heads and intake manifold, standard.
 - Oil pan windage tray, standard.
 - Dual breaker distributor and viscous-drive fan, standard with 4-speed.
 - High-upshift, competition-type TorqueFlite automatic or heavy-duty 4-speed (with mandatory extra-cost axle package), standard.
 - Hurst Competition-Plus floor shift with reverse gear indicator light, standard with 4-speed.
 - Extra-heavy-duty "Hemi" suspension, standard.

- Heavy-duty 0.92" dia. torsion bars, standard.
- Heavy-duty shock absorbers, standard.
- Heavy-duty 0.94" dia. anti-sway bar, standard.
- Heavy-duty ball joints, standard.
- Heavy-duty 6-leaf left rear spring, standard.
- Special 6½-leaf right rear spring, standard.
- Heavy-duty 11 in. drum brakes, standard.
- High-performance dual exhaust system with 2½ in. exhaust pipes, twin mufflers, 2½ in. tail pipes, standard.
- Heavy-duty driveshaft and U-joints, standard.
- Heavy-duty rear axle, standard.
- Heavy-duty battery, 70 amp/hr., standard.
- Extra-wide 5.5 in. Safety-Rim wheels, standard.
- Red Streak wide tread F70 x 14" tires, standard.
- Dual braking system, standard.
- Bucket seats, standard.

The Skin.

A high-performance Plymouth looks like no other Plymouth—or any other car. This is why.

GTX

This is GTX's grille—or more appropriately—mouth: two horizontal bars, surrounded by plenty of mean granite-gray. The "GTX" emblem in the center is there for looks; but if ever you see these three letters as "XTD" in your rearview mirror—move over smartly—The Boss wants through.



This is a chromed exhaust tip; one of two found at the rear of every GTX (except California). It's typical of the deluxe touches found everywhere. It also happens to connect with an exhaust system that's just plain super-efficient.

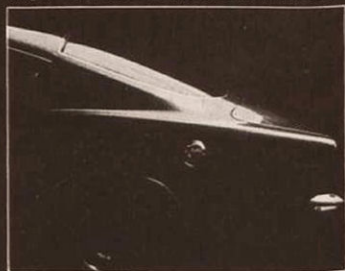


Another distinctive part of every new GTX is the 6" flat-black belt along its lower flanks. A thin red accent stripe sets the whole thing off.



Barracuda

One of the primary points of interest on a 'Cuda is its roofline, because it's available in two configurations. There's a fastback, like this one, or a light-weight "notchback" coupe. Decisions, decisions.



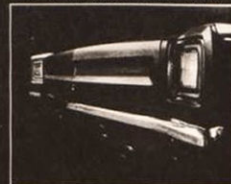
Like GTX, 'Cuda sports a special flat-black paint treatment along its lower extremities. On the 'Cuda, however, it extends all the way around, and it looks like this after you've dirtied your jeans getting down on the ground to look at it.



Like all high-output Plymouths, the 'Cuda carries its own pair of hood scoops, which in this case are combined with a couple of virile-looking racing stripes. The scoops, by the way, can easily be modified to funnel fresh air into the carburetor. All you need is a bit of auntie's vacuum cleaner hose, and you're in business.

Road Runner

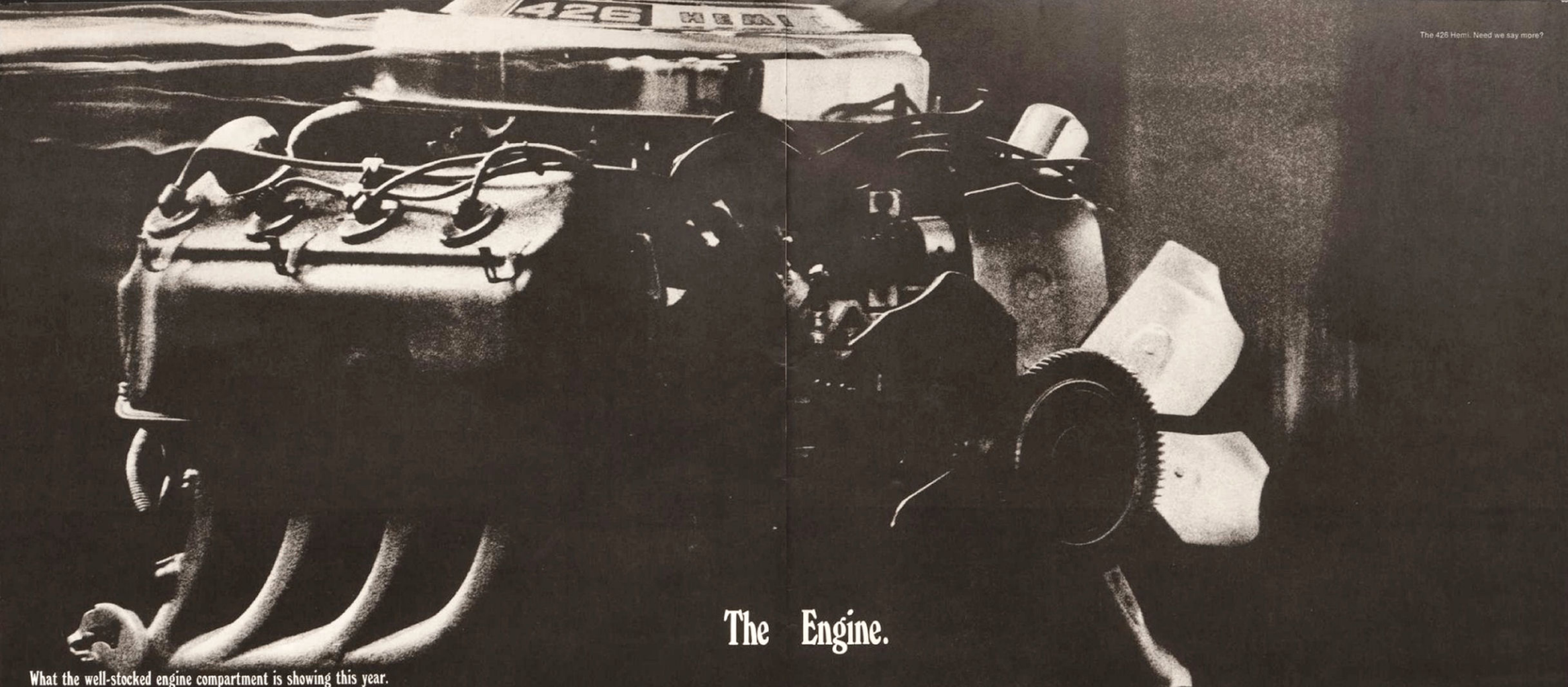
This is the back end—a view which has become fairly familiar to all sorts of would-be predators in recent months. Note how clean and uncluttered the 1969 version is—just like the whole car.



On your immediate left is our new Bird, which is now bigger, and pictured in glorious living color on the doors, dash and backside of every Road Runner we build.

This is the business end: simple, unadorned, functional—wicked. And behind it, the greatest Road Runner characteristic of them all—that inimitable Voice of Road Runner horn. This year, appropriately enough, it's purple in color. Beep-Beep!





The Engine.

What the well-stocked engine compartment is showing this year.

The 340:

(As found in the 'Cuda 340)

Bhp @ rpm	275 @ 5000
Torque @ rpm	340 @ 3200
Bore	4.04 in.
Stroke	3.31 in.
Displacement	340 cu. in.
Compression Ratio	
Nominal	10.5 to 1
Maximum	11.79 to 1
Minimum Combustion Chamber Volume	63.3 cc.
Minimum Deck Clearance	.045 in.
Carburetion	Single AVS
Throttle	
Primary	1-7/16 in.
Secondary	1-11/16 in.
Cam Duration	
Intake	276°
Exhaust	284°
Overlap	52°
Lift at Zero Lash	
Intake	.430 in.
Exhaust	.445 in.
Valve Diameter	
Intake	2.02 in.
Exhaust	1.60 in.
Tappet Type	Hydraulic
Tappet Clearance	
Intake	Zero
Exhaust	Zero

Max. Valve Spring Pressure	
Closed	110.2 lb. @ 1.62 in.
Open	240 lb. @ 1.24 in.
Crankshaft Journal Diameter	
Mains	2.50 in.
Rods	2.13 in.
Rod Bearing Material	Tri-Metal
Ignition Type	
TorqueFlite	Single Breaker
4-Speed	Dual Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	30°-35°
Dual Breaker	27°-32° each
	37°-42° total
Timing	
TorqueFlite	Single Breaker: 5° BTC
4-Speed	Dual Breaker: TDC
Plug Type	Champion
Range	N-9Y
Gap	.035 in.

The 383:

(As found in the 'Cuda 383)

Bhp @ rpm	330 @ 5200 rpm
Torque @ rpm	410 @ 3600 rpm
Bore	4.25 in.
Stroke	3.38 in.
Displacement	383 cu. in.
Compression Ratio	
Nominal	10.1 to 1

Maximum	10.8 to 1
Minimum Combustion Chamber Volume	79.5 cc.
Minimum Deck Clearance	.0205 in.
Carburetion	Single AVS
Throttle	
Primary	1-7/16 in.
Secondary	1-11/16 in.
Cam Duration	
Intake	276°
Exhaust	292°
Overlap	54°
Lift at Zero Lash	
Intake	.450 in.
Exhaust	.465 in.
Valve Diameter	
Intake	2.08 in.
Exhaust	1.74 in.
Tappet Type	Hydraulic
Tappet Clearance	
Intake	Zero
Exhaust	Zero
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	248 lb. @ 1.41 in.
Crankshaft Journal Diameter	
Mains	2.63 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal
Ignition Type	Dual Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	27°-32° each
	37°-42° total

Timing	
TorqueFlite	5° BTC
4-Speed	TDC
Plug Type	Champion
Range	J-11Y
Gap	.035 in.
Stroke	
Intake	Zero
Exhaust	Zero
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	248 lb. @ 1.41 in.
Crankshaft Journal Diameter	
Mains	2.63 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal
Ignition Type	Single Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	30°-35°

The 383:

(As found in Road Runner)

Bhp @ rpm	335 @ 5200
Torque @ rpm	425 @ 3400
Bore	4.25 in.
Stroke	3.38 in.
Displacement	383 cu. in.
Compression Ratio	
Nominal	10.0 to 1
Maximum	10.8 to 1
Minimum Combustion Chamber Volume	79.5 cc.
Minimum Deck Clearance	.0205 in.
Carburetion	Single AVS
Throttle	
Primary	1-7/16 in.
Secondary	1-11/16 in.
Cam Duration	
Intake	276°
Exhaust	292°
Overlap	54°
Lift at Zero Lash	
Intake	.450 in.

Exhaust	.465 in.
Valve Diameter	
Intake	2.08 in.
Exhaust	1.74 in.
Tappet Type	Hydraulic
Tappet Clearance	
Intake	Zero
Exhaust	Zero
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	248 lb. @ 1.41 in.
Crankshaft Journal Diameter	
Mains	2.63 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal
Ignition Type	Single Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	30°-35°
Timing	
TorqueFlite	5° BTC
4-Speed	TDC
Plug Type	Champion
Range	J-11Y
Gap	.035 in.
Stroke	
Intake	Zero
Exhaust	Zero
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	248 lb. @ 1.41 in.
Crankshaft Journal Diameter	
Mains	2.63 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal

The 440:

(As found in GTX)

Bhp @ rpm	375 @ 4600
Torque @ rpm	480 @ 3200
Bore	4.32 in.

Stroke	3.75 in.
Displacement	.440 cu. in.
Compression Ratio	
Nominal	10.1 to 1
Maximum	10.87 to 1
Minimum Combustion Chamber Volume	79.5 cc.
Minimum Deck Clearance	.027 in.
Carburetion	Single AVS
Throttle	
Primary	1-11/16 in.
Secondary	1-11/16 in.
Cam Duration	
Intake	276°
Exhaust	292°
Overlap	54°
Lift at Zero Lash	
Intake	.450 in.
Exhaust	.465 in.
Valve Diameter	
Intake	2.08 in.
Exhaust	1.74 in.
Tappet Type	Hydraulic
Tappet Clearance	
Intake	Zero
Exhaust	Zero
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	248 lb. @ 1.41 in.
Crankshaft Journal Diameter	
Mains	2.63 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal

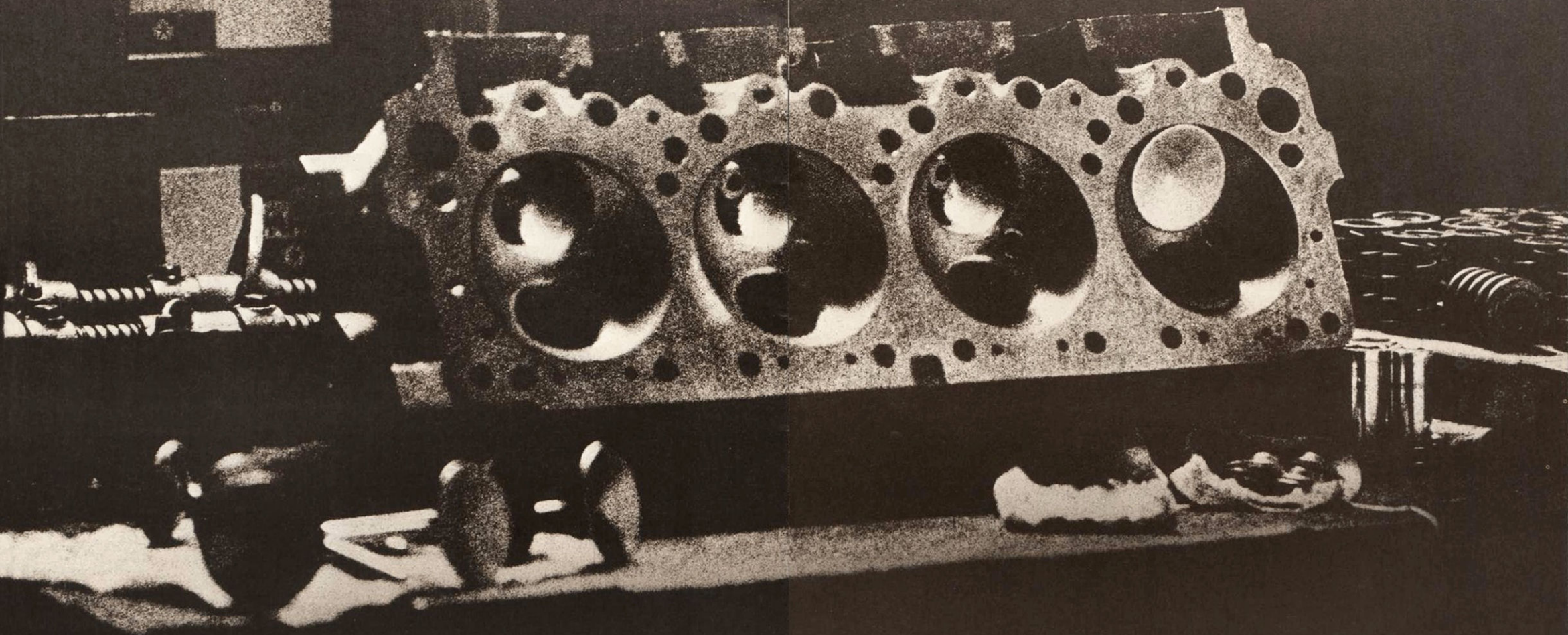
Ignition Type	
TorqueFlite	Single Breaker
4-Speed	Dual Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	30°-35°
Dual Breaker	27°-32° each
	37°-42° total
Timing	
TorqueFlite	Single Breaker: 5° BTC
4-Speed	Dual Breaker: TDC
Plug Type	Champion
Range	J-11Y
Gap	.035 in.
Stroke	
Intake	Zero
Exhaust	Zero
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	248 lb. @ 1.41 in.
Crankshaft Journal Diameter	
Mains	2.63 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal
Ignition Type	Dual Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	27°-32° each
	37°-42° total

The 426 Hemi:

(As found in Road Runner and GTX)

Bhp @ rpm	425 @ 5000
Torque @ rpm	490 @ 4000
Bore	4.25 in.
Stroke	3.75 in.
Displacement	426 cu. in.
Compression Ratio	
Nominal	10.25 to 1
Maximum	11.1 to 1
Minimum Combustion Chamber Volume	167.7 cc.
Minimum Deck Clearance	.536 in.
Carburetion	Dual AFB
Throttle	
Primary	1-7/16 in.

Secondary	1-11/16 in.
Cam Duration	
Intake	292°
Exhaust	292°
Overlap	68°
Lift at Zero Lash	
Intake	.490 in.
Exhaust	.480 in.
Valve Diameter	
Intake	2.25 in.
Exhaust	1.94 in.
Tappet Type	Mechanical
Tappet Clearance	
Intake	.028 cold
Exhaust	.032 cold
Max. Valve Spring Pressure	
Closed	131 lb. @ 1.83 in.
Open	279.5 lb. @ 1.37 in.
Crankshaft Journal Diameter	
Mains	2.75 in.
Rods	2.37 in.
Rod Bearing Material	Tri-Metal
Ignition Type	Dual Breaker
Point Gap	.014-.019 in.
Dwell	
Single Breaker	27°-32° each
	37°-42° total
Timing	
TorqueFlite	TDC
4-Speed	TDC
Plug Type	Champion
Range	N-10Y
Gap	.035 in.



The Internals.

Where the "rumpety-rumpety" comes from—and why.

Just what makes a high-performance engine? Breathing ability, primarily. That's why all our Supercar engines—from the 340 to the 426 Hemi—use great big intake and exhaust valves. Take this Hemi valve, for example. Like all our intake valves, it has a head diameter of more than 2 inches. Which is darned big, by anybody's standards.



No sense having big valves without a nice hot cam to open 'em good and wide. That's why a high-lift, long-duration camshaft is standard in every high-performance Plymouth. Ah, and the idle it makes: rumpety-rumpety-rump-rumpety...

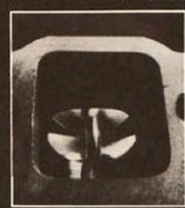


This is a dual-point distributor, and you'll find it on a lot of our high-performance mills. It's there to provide a more positive spark at high rpm's.

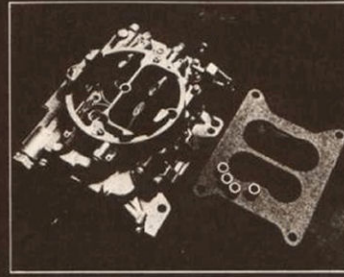


This is a windage tray, and it mounts between the oil pan and the block. The purpose of the thing is to keep the engine oil

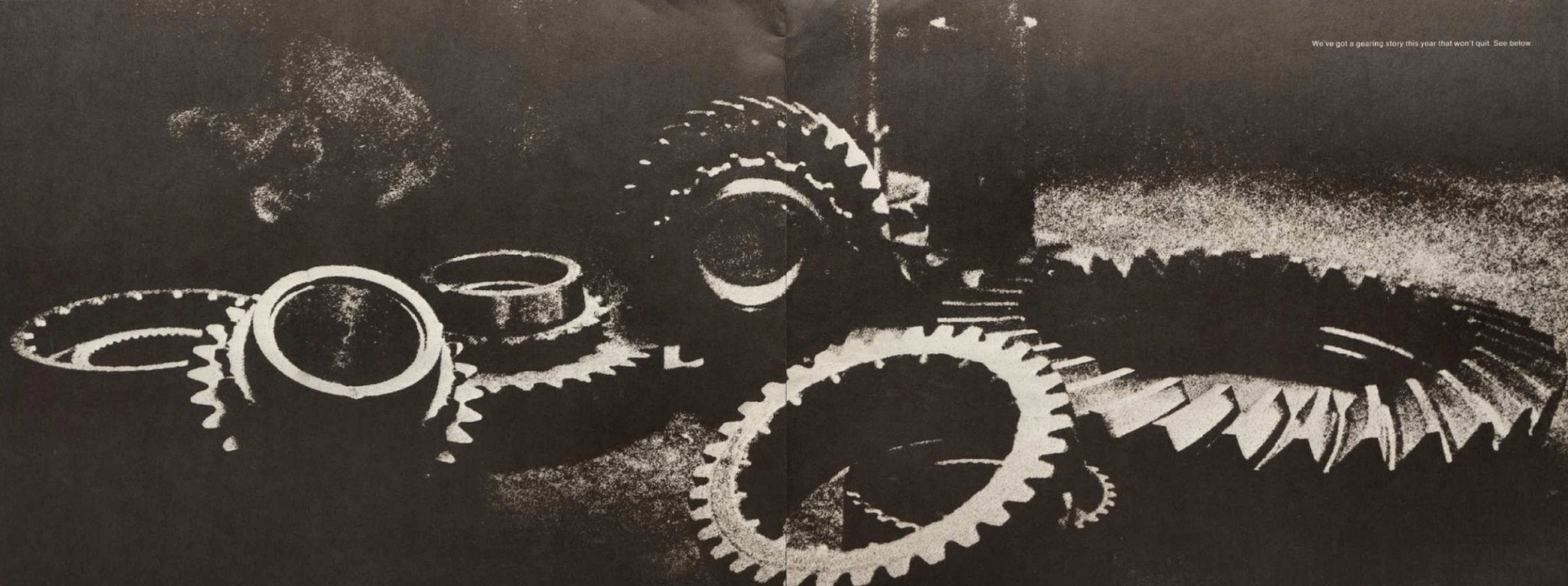
from surging up and causing friction "drag" on the crankshaft. We've found that it's good for an extra 15 horsepower at 6,000 rpm. Naturally, we install it on every high-performance engine.



This is a port. Big, isn't it? Well, it's typical of the porting in all our engines. You'll also note that we run a separate, individual port to each big valve—no "Siamese" arrangements for us. Our way makes for better flow characteristics, more horsepower.



Ah, the carburetor. How many times have you seen some manufacturer offer a so-called "performance" motor with a puny 2-barrel carb on it! Don't let anybody put the shuck on you. All our performance engines use single or dual 4-barrel carburetors—big Carter AVS models, mostly—because without 'em, you're nowhere. That's an AVS over there on your left.



The Gears.

How to set up a driveline—right in your living room.

Next to the engine, the driveline is the most important element in a car's acceleration.

It is also the least understood element.

Consequently, we'll try to break our driveline down to individual components, describe them car by car, and show what's available. Here goes.

Transmissions

Basically, we offer five different high-performance transmissions: two 4-speeds and three automatics. The particular 4-speed or Automatic you get depends on the engine you specify.

340 AND 383 4-SPEED: Fully-synchronized, competition-type; uses fine-pitch gears with ratios of 2.65, 1.91, 1.39 and 1.00:1.

440 AND 426 HEMI 4-SPEED: Fully-synchronized, competition-type; uses coarse-pitch gears with ratios of 2.65, 1.93, 1.39 and 1.00:1.

340 AND 383 TORQUEFLITE AUTOMATIC: High-upshift, competition-type; uses a 10 1/4-in. diameter, 2100-rpm, high stall-speed torque converter. The unit is manually-shiftable, it has a stall ratio of 2.1:1 and a set of planetary gears with ratios of 2.45, 1.45 and 1.00:1. It uses four front clutch discs and a 2-in.-wide "kickdown" band.

426 HEMI TORQUEFLITE: Same as the above, except this unit uses five front clutch discs, plus an extra-wide 2 1/2 in. kickdown band.

440 TORQUEFLITE: Because of the tremendous bottom-end torque (480 lbs.-ft. @ 3200-rpm) of the "440" engine, this unit is special. It's a high-upshift, competition-type; but it uses an 11 1/4 in., 1650-rpm stall-speed torque converter with a stall ratio of 2.00:1. Like the other "auto's," it's manually shiftable, and uses planetary gears with ratios of 2.45, 1.45 and 1.00:1.

Clutches
Like our transmissions, our clutches are matched to the engine; which means that as horsepower and torque go up, the bigger the clutch gets. All clutches, however, are Burst-tested to 11,000 rpm. Individually, though, the story looks like this:

Engine	340	383 (Cuda)	383 (R.R.)	440 & 426 Hemi
Pressure Plate Diameter	10 1/2"	10 1/2"	10 1/2"	11"
Pressure, (sq. in.)	2345 lbs.	2345 lbs.	2345 lbs.	2713 lbs.
No. of centrifugal rollers	6	6	6	6
Driven disc Diameter	10 1/2"	10 1/2"	10 1/2"	11"
Material	Woven asbestos	Woven asbestos	Woven asbestos	Woven asbestos

SHIFT LINKAGE: All our 4-speeds carry a Hurst Competition-Plus floor shifter, with a reverse-gear warning light. The shift knob is simulated wood-grain, in order to foil unsuspecting woodpeckers and termites.

Rear Axles

Or, facts everyone should know about rear ends.

First, we offer two different sizes of differential on our high-performance cars. The first is built by us and uses a 8 3/4 in. diameter ring gear; it is available as a standard or Sure-Grip (limited-slip) unit. The second is built by Dana Corp. and uses an enormous 9 1/2 in. diameter ring gear; it is available as a Sure-Grip unit *only*. Once, again, the size you get depends on the engine/transmission combination you select: the bigger the engine, the stronger the axle.

Second, between our Chrysler- and Dana-built axles, we now offer enough factory-installed rear-end ratios to cover more than 95% of all high-performance car applications. And for the remaining few, we offer a number of special purpose ratios (for everything from the Salt Flats to Bristol) on a dealer-installed, or do-it-yourself basis. (See pp. 19 and 20.)

Third, in selecting the right ratio for your car, always consider the *primary* use of the vehicle. Remember, too, that the higher the numerical ratio, the greater the acceleration and the lower the top speed. Thus, on Street/Strip cars, a numerical ratio of 3.91:1 or higher tends to be infinitely superior to a relatively low numerical ratio of, say 3.23:1. On the other hand, the 3.23 is an ideal long-legged Turnpike gear, whereas the 3.91 is not. In many cases, therefore, a ratio of 3.55:1 can prove to be an effective compromise.

Fourth, we strongly recommend our optional Sure-Grip rear axle on virtually every high-performance car. For that reason, we include a package of special "goodies" with every unit to sort of sweeten the deal. The following list shows what you get in each package—presupposing, of course, that you have already decided on your car, engine, transmission and final-drive ratio. Use this list when you see your dealer.

It goes like this:

IF YOU WANT A 3.55:1 REAR AXLE IN A:
"383" Road Runner, 4-speed or Automatic
"Hemi" Road Runner, Automatic
"440" GTX, Automatic

ORDER PERFORMANCE AXLE, CODE #A36. YOU GET:

8 3/4" Sure-Grip differential
7-blade Torque-Drive fan and shroud
"Hemi" suspension
26" high-performance radiator

IF YOU WANT A 3.91:1 REAR AXLE IN A:

"383" Road Runner, 4-speed or Automatic
ORDER HIGH-PERFORMANCE AXLE PACKAGE, CODE #A31. YOU GET:

All items in "A36," plus 3.91 Sure-Grip axle.
IF YOU WANT A 4.10:1 REAR AXLE IN A:
"440" or "Hemi" GTX Automatic
"Hemi" Road Runner Automatic

ORDER SUPER PERFORMANCE AXLE PACKAGE, CODE #A32. YOU GET:

9 1/2" Dana Sure-Grip differential
7-blade Torque-Drive fan and shroud
26" high-performance radiator
Power disc brakes

IF YOU WANT A 3.54:1 REAR AXLE IN A:

"Hemi" Road Runner 4-speed
"440" or "Hemi" GTX 4-speed

ORDER TRACK PAK, CODE #A33. YOU GET:
9 1/2" Dana Sure-Grip differential
7-blade Torque-Drive fan and shroud

26" high-performance radiator
Dual-breaker Distributor

IF YOU WANT A 4.10:1 REAR AXLE IN A:

"Hemi" Road Runner 4-speed
"440" or "Hemi" GTX 4-speed

ORDER SUPER TRACK PAK, CODE #A34. YOU GET:

All the items in "A33," plus power disc brakes.
IF YOU WANT A 3.55 OR 3.91 REAR AXLE IN A:
"Cuda 340, 4-speed or Automatic
"Cuda 383, 4-speed or Automatic
ORDER SURE-GRIP, CODE #D91. YOU GET:
8 3/4" Sure-Grip differential

This is the way the axle story looks in total:

	Axle Ratio	MPH per 1000 RPM (high gear)				
		3.23	3.54*	3.55*	3.91*	4.10*
Cuda	340 Manual	22.96	N.A.	20.89	18.97	N.A.
	383 Manual	22.96	N.A.	20.89	18.97	N.A.
Road Runner	383 Manual	23.69	N.A.	21.56	19.57	N.A.
	426 Manual	N.A.	21.62	N.A.	N.A.	18.67
GTX	440 Manual	N.A.	21.62	N.A.	N.A.	18.67
	426 Manual	23.69	N.A.	21.56	N.A.	18.67

*Available with Sure-Grip only.



The Brakes.

Or, a Supercar without Superbinders—isn't.

Sir Isaac Newton tells us that a body in motion tends to remain in motion, until it is acted upon by an opposing force. He also tells us that the greater the speed and the weight of the body in motion, the more it tends to resist the action of the opposing force.

This being the case, Sir Isaac might very well have applauded the brakes on our Supercars. (If we'd built them in those days, that is.)

You see, we figure like Mr. Newton: We figure the bigger the car and the greater its propellant force, the bigger its brakes (Sir Isaac's "opposing force") have to be. Simple, isn't it? Almost.

Actually, there are all kinds of factors that influence a car's stopping ability—things like fade

resistance, heat dissipation, line pressure, unsprung weight, lining composition, et al. Nevertheless, when all these factors have been taken into account, it's still the size of the opposing force—the amount of lining and the size of the disc or drum it scrapes against—that stops the motion. We call this measurement *swept area*; and, like engine displacement, it can tell you a lot about a car's performance capabilities.

As you'll note on the chart at right, we're big on swept area. Not just on our optional brakes, mind you—but on our *standard equipment* brakes as well. Which is more than you can say for some of our competitors.

Our cars get all the good brakes.

'Cuda 340 and 383

Standard front brakes:	
Type	Drum; self-adjusting
Diameter	10 in.
Width	2.25 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	43.93 sq. in.
Swept area per wheel	70.69 sq. in.

Standard rear brakes:

Type	Drum; self-adjusting
Diameter	10 in.
Width	1.75 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	34.16 sq. in.
Swept area per wheel	54.98 sq. in.
Total lining area	156.2 sq. in.
Total swept area	251.3 sq. in.

'Cuda 340 and 383

Optional front brakes:	
Type	Disc; self-adjusting
Diameter	10.79 in.
Width	3 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	63.84 sq. in.
Swept area per wheel	103.67 sq. in.

Standard rear brakes:

Type	Drum; self-adjusting
Diameter	10 in.
Width	1.75 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	34.16 sq. in.
Swept area per wheel	54.98 sq. in.
Total lining area	102.3 sq. in.
Total swept area	314.7 sq. in.

GTX and Road Runner

Standard front brakes:	
Type	Drum; manually adjustable
Diameter	11 in.
Width	3 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	63.84 sq. in.
Swept area per wheel	103.67 sq. in.

Standard rear brakes:

Type	Drum; manually adjustable
Diameter	11 in.
Width	2.5 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	53.36 sq. in.
Swept area per wheel	86.39 sq. in.
Total lining area	234.4 sq. in.
Total swept area	380.1 sq. in.

GTX and Road Runner

Optional front brakes:	
Type	Disc; self-adjusting
Diameter	11.04 in.
Width	3 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	18.0 sq. in.
Swept area per wheel	115.36 sq. in.

Rear brakes:

Type	Drum; self-adjusting
Diameter	10 in.
Width	2.5 in.
Lining material, High-temperature, fade-resistant	
Lining area per wheel	48.81 sq. in.
Swept area per wheel	78.54 sq. in.
Total lining area	131.62 sq. in.
Total swept area	387.8 sq. in.



The Suspension.

We figure a car ought to be able to go sideways as well as forward.

It's pretty much an accepted fact in automotive circles that Chrysler products—particularly our high-performance cars—handle better than other American cars. And invariably, the reason cited takes the form of two words: *torsion bars*. We have them; most other people don't.

The belief has merit, but our superior handling ability is really the result of more than torsion bars. True, torsion bars allow the engine to sit nice and low in the chassis for a better center of gravity; true, torsion bars are adjustable, which means the front end can be raised or lowered at will; and true, we make our torsion bars good and stiff, so the whole car doesn't wallow about. But, again, torsion bars aren't everything.

Actually, it all has to do with a philosophy. And it's similar in content to our braking philosophy.

Like our brakes, we match our suspensions to the *specific* load they have to carry. The heavier the load, the beefier the suspension gets.

As engine displacement goes up, so goes the stiffness of the torsion bars, the size of the rear springs, and in some cases, the diameter of the anti-sway bar. A 440 GTX, for example, generates more "load"—in terms of horsepower, torque and weight—than, say, a 383 Road Runner. Consequently, the GTX carries front torsion bars that are .02" thicker in diameter, plus an extra half-leaf in the right rear spring. (The half-leaf, by the way, is there to cancel torque steer from the big 440 engine, and it's one of the reasons why our Super-cars don't need traction bars or other costly assists to get off the line correctly at the strip.)

The effect of all this is a firm ride—but never a downright harsh one. It means that when the road turns crooked, our cars go exactly where they're pointed. The stiff spring rates control understeer; the anti-sway bar keeps body lean to a minimum; the shocks keep the wheels planted, and the geometry we use keeps them at right angles to the road.

In short, everything works together to generate maximum cornering power.

Which, in turn, keeps you out of the tulips. Suspension Data.

GTX and Hemi Road Runner

Front suspension:

Type	Torsion bar; extra-heavy-duty
Diameter	.092 in.
Rate at wheel	130 lbs. per in.
Stabilizer bar	Heavy-duty
Diameter	.094 in.
Ball joints	Heavy-duty
Shock absorbers	Heavy-duty
Caster	—1/2° ± 9/16" (Manual), +3/4° ± 9/16" (Power)

Camber	+1/2° ± 1/4" (Left), +1/4° ± 1/4" (Right)
Toe-in	1/8" ± 1/32"

Rear suspension:

Type	Asymmetrical; extra-heavy-duty; multiple-leaf
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No. of leaves on left	6
No. of leaves on right	6 1/2
Rate at wheel, both sides	150 lbs. per in.
Shock absorbers	Heavy-duty

383 Road Runner

Front suspension:

Type	Torsion bar; heavy-duty
Diameter	.090 in.
Rate at wheel	118 lbs. per in.
Stabilizer bar	Heavy-duty
Diameter	.094 in.
Ball joints	Heavy-duty
Shock absorbers	Heavy-duty
Caster	—1/2° ± 9/16" (Manual), +3/4° ± 9/16" (Power)

Camber	+1/2° ± 1/4" (Left), +1/4° ± 1/4" (Right)
Toe-in	1/8" ± 1/32"

Rear suspension:

Type	Asymmetrical; heavy-duty; multiple-leaf
No. of leaves on left	4 1/2

No. of leaves on right	4 1/2
Rate at wheel, both sides	140 lbs. per in.
Shock absorbers	Heavy-duty

Cuda 340

Front suspension:

Type	Torsion bar; heavy-duty
Diameter	.087 in.
Rate at wheel	100 lbs. per in.
Stabilizer bar	Heavy-duty
Diameter	.088 in.
Shock absorbers	Heavy-duty
Caster	—1/2° ± 9/16" (Manual), +3/4° ± 9/16" (Power)

Camber	+1/2° ± 1/4" (Left), +1/4° ± 1/4" (Right)
Toe-in	1/8" ± 1/32"

Rear suspension:

Type	Asymmetrical; heavy-duty; multiple-leaf
No. of leaves on left	6
No. of leaves on right	6
Rate at wheel, both sides	130 lbs. per in.

Shock absorbers	Heavy-duty
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Cuda 383

Front suspension:

Type	Torsion bar; heavy-duty
Diameter	.089 in.
Rate at wheel	110 lbs. per in.
Stabilizer bar	Extra-heavy-duty
Diameter	.094 in.
Shock absorbers	Heavy-duty
Caster	—1/2° ± 9/16" (Manual), +3/4° ± 9/16" (Power)

Camber	+1/2° ± 1/4" (Left), +1/4° ± 1/4" (Right)
Toe-in	1/8" ± 1/32"

Rear suspension:

Type	Asymmetrical; heavy-duty; multiple-leaf
No. of leaves on left	6
No. of leaves on right	6
Rate at wheel, both sides	150 lbs. per in.
Shock absorbers	Heavy-duty

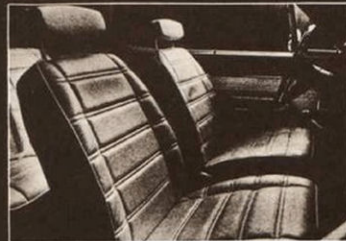
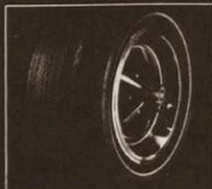
AIR GRABBER

Beware of cars with orange hood scoops—"Air Grabber" lurks beneath!

In support of the theory that no two Supercars should be exactly alike.

Looming above, and looking about as innocent as a well-oiled bear trap, is our new "Air Grabber" cold-air induction system. The purpose of the system is simple. It makes our hood scoops functional, thus allowing the engine to breathe cool air from the slipstream, instead of warm, underhood air. The cooler the air is, of course, the denser it is. And the denser it is, the bigger the BANG it makes in the combustion chambers. A lever on the dash allows the system to be closed off during inclement weather. It also prevents low-flying aircraft from getting sucked into the carburetor. "Air Grabber" is available on all GTXs and Road Runners.

Here's our trusty chrome-plated steel road wheel. Note the star-shaped webbing, which makes the wheel extremely strong. The plating itself is extra thick, for added corrosion resistance. Dimensions are 14" by 5.5". Available on GTX and Road Runner.



The Options.

This being a performance catalog and all, we normally wouldn't show you anything as trite as bucket seats—except for one fact: buckets are now available for the first time in all Road Runners. And if you so specify, we'll install a wood-grain console between them.



For some reason, Road Runner buffs fall into one of two categories: (1) those who like its Spartan, race-car-like interior as is, and (2) those who like it fancied-up a bit. Take heart, category #2: there's a new decor package. Standard on the hardtop and convertible, optional on the coupe. Included are deluxe door panels (With armrests, yet!), deluxe steering wheel with a funny picture of our lovable bird perched smack dab in the middle of the horn ring, chromed exhaust tips (n.a. California), a variety of interior color combinations, and a spizzier-looking bench seat.



More Options.

Further support of the theory.

Look-up in the picture—it's Supertire! Actually, it's one of the new fiberglass-belted Wide Tread tires you can order on our Supercars. The fiberglass belt reinforces the tire carcass, prevents it from flexing and thereby increases tread life. In turn, this allows a softer or "stickier" tread compound, which makes for better traction, wet or dry. It comes in F70 sizes on GTX and Road Runner. E70 on 'Cuda.

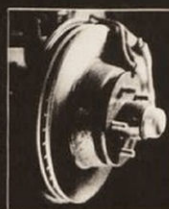
Son of a gun, flat black makes a car look sinister! In this case, it becomes two bold hood stripes, yours for the ordering, on GTX and "Beep-Beep."



particular tach goes in the 'Cuda. Notice how we've put the "5,000" mark in the 12 o'clock position? That makes it easier for you to read.

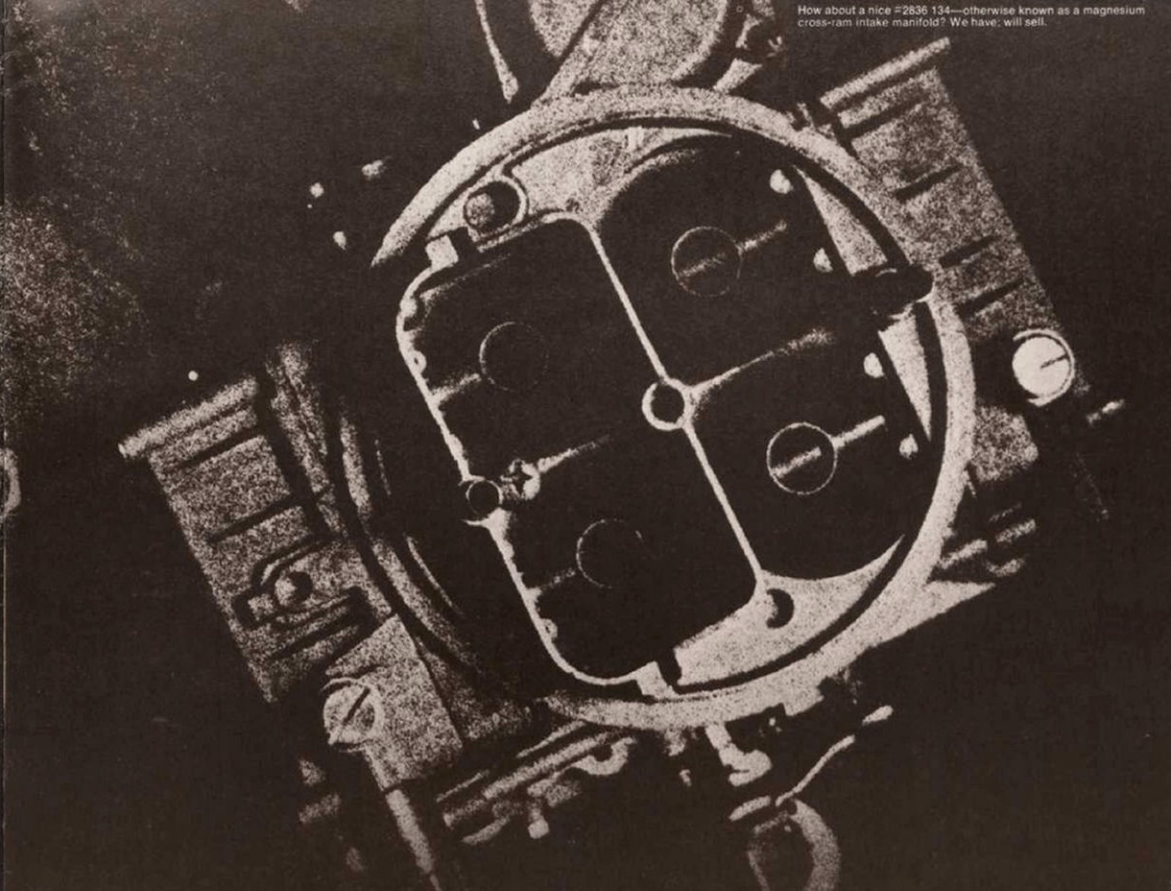
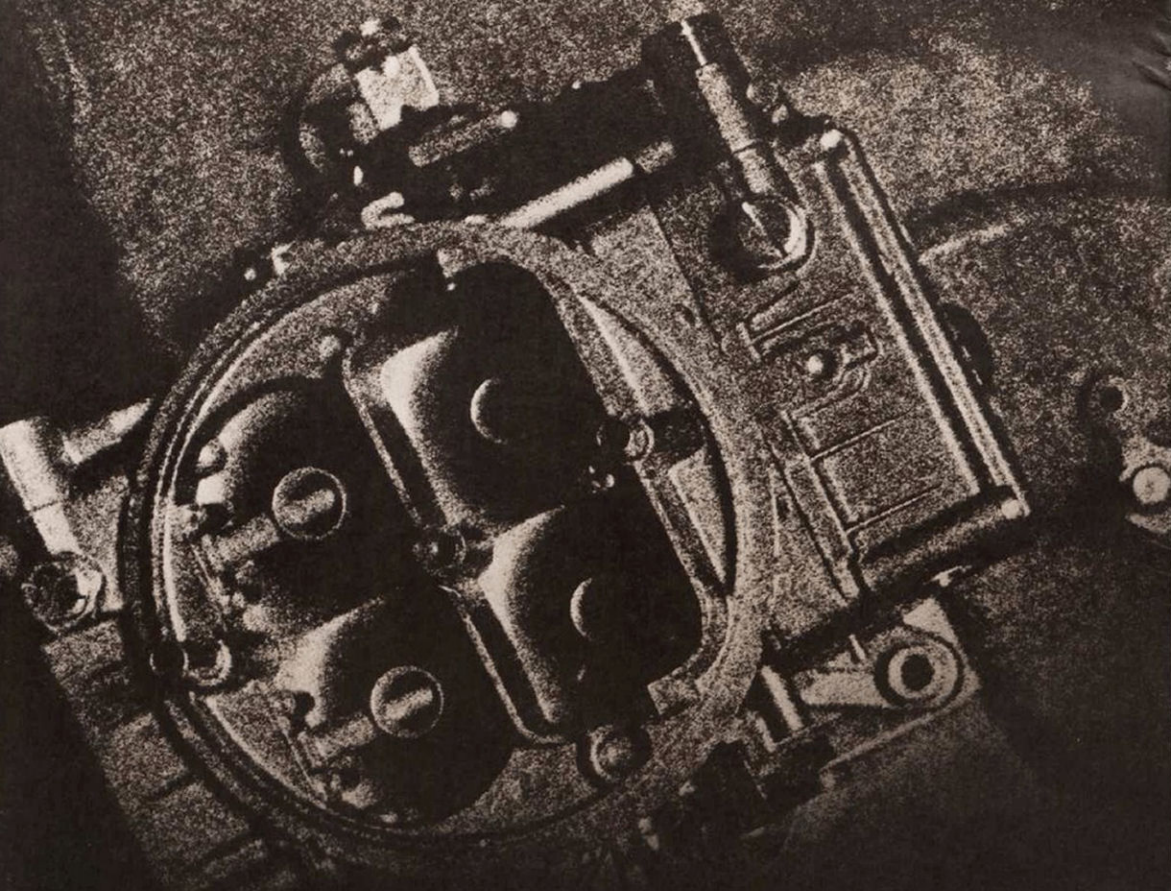
Three guesses on this one—and the first two don't count. Yep, it's a tachometer, and it's offered in various configurations on all our machinery. This

Disc brakes deserve the attention of every high-performance car lover. But before you make up your mind, be sure to give equal time to our drum-type units. Specifications for both are listed in detail under "The Brakes" on pages 12 and 13. They're "must" reading.



Finally, no Options page would be complete without a Hurst Shifter as a reminder of the many transmission/rear axle selections we offer. For the complete story, see "The Gears," pages 10 and 11.

(And for complete details on all other options and accessories, including fast manual steering, accent striping, wood-grain steering wheels, vinyl tops, deluxe wheel covers, AM/FM radios, stereo tape systems, consoles, tinted glass and all the things Plymouth is up to now, pick up a copy of the 1968 Barracuda or Belvedere catalog at your Plymouth dealer.)



How about a nice #2836 134—otherwise known as a magnesium cross-ram intake manifold? We have; will sell.

The Bolt-ons.

What's good for Sox & Martin is good—period.

Okay, let's say you've gone and plunked your hard-earned bread for that Streamline Baby. Your next thought—after you've washed it 20 or 30 times the first week—may be *how to get even more out of it.*

In that case, you'll be happy to know about the wide range of high-performance parts that have been developed and tested by us personally, or in cooperation with various equipment manufacturers.

The selection covers every conceivable kind of Plymouth, and it includes just about every hop-up part imaginable.

You want dual quads? We've got the quads, the manifold and all the bits and pieces to hook 'em up. Cams? You name it—lsky, Racer Brown—we've got it.

Ignition parts? Check.

Transmission goodies? Special gears? Scatterproof bellhousings? Gaskets?

Pistons? Bearings? Gotcha covered.

The list is too long to even begin to cover here. Consequently, we'd recommend you write for a free copy of our new "Hi-Performance Parts" catalog. Just send a postcard with your name and address to:

Performance Parts Service
Chrysler Corporation
P.O. Box 1919
Detroit, Michigan 48231

But we do more than just make parts available. We tell you which ones are best for your application, how to install them, and how to tune the whole setup so it really runs. In fact, literature on all the following subjects can be obtained by writing to the address above.

High-Performance Parts Catalog

383 Tune-Up Tips

Double Pick-Up Oil Pumps

SCCA Sedan Preparation Notes

4-Speed Transmission "Slick Shift" Conversion

273/318/340 Tune-Up Tips

Street Hemi Manual-Shift TorqueFlite

Conversion

Hemi Tune-Up Tips

Barracuda Club Application Form

Fuel Injection Bulletin

440 Tune-Up Tips

Slant-Six Tune-Up Tips

Supercharged Hemi Tips

Camshaft Installation Tips

TorqueFlite Transmission Modifications

Special Parts Bulletin
Warranty Policy Letter
Plymouth Supercar Clinic Booklet
Parts for sale from Domestic Product Planning

While you're in a writing mood, perhaps you'll want to drop a line to some of the firms that manufacture additional high-performance goodies for Plymouths. Their names and addresses are listed below. Democratic of us, huh?

Cams & Valve Gear:
Iskenderian Racing Cams
16020 South Broadway
Gardena, California 90247

Racer Brown Cams
108 West Florence Avenue
Inglewood, California 90301

Shifters:
Hurst Performance Products
50 West Street Road
Warminster, Pa. 18974

B&M Automotive, Inc.
7700 Woodman Avenue
Van Nuys, California 91402

Transmissions:
B&M Automotive
7700 Woodman Avenue
Van Nuys, California 91402

Electrical:

Mallory Electric Corporation
12416 Cloverdale Avenue
Detroit, Michigan 48204

Prestolite Company
15075 Meyers
Detroit, Michigan 48227

Champion Spark Plug Company
Toledo, Ohio 43601

Stewart-Warner Corporation
1826 Diversey Parkway
Chicago, Illinois 60614

Wheels:

Keystone Rims, Inc.
700 East Bonita Avenue
Pomona, California 91767

Cragar Industries
5829 East Firestone Boulevard
South Gate, California 90280

Carburetion:

Holley Carburetor Company
11955 East Nine Mile Road
Warren, Michigan 48090

Carter Carburetor Corporation
2840 North Spring Avenue
St. Louis, Missouri 63107

Shielding:

R. C. Industries
880 West Lafayette Road, P.O. Box 356
Medina, Ohio 44256

Manifolding:

Edelbrock Equipment Company
4921 West Jefferson Boulevard
Los Angeles, California 90016

Doug's Headers
5533 Whittier Boulevard
Los Angeles, California 90022

Stahl Engineering
2005 West Market Street
York, Pennsylvania 17404

Hooker Headers
1004 West Brooks
Ontario, California 91761

Filters:

Fram Corporation
Providence, R.I. 02916

Tires:

Firestone Tire & Rubber Company
Akron, Ohio 44317

Goodyear Tire & Rubber Company
Akron, Ohio 44316

M&H Tire Co.
309 Main Street
Watertown, Mass. 02172

Pistons:

Forge True Piston Company
1979 East Colorado Boulevard
Pasadena, California 91107

Bearings:

Clevite Corporation
17000 St. Clair
Cleveland, Ohio 44110

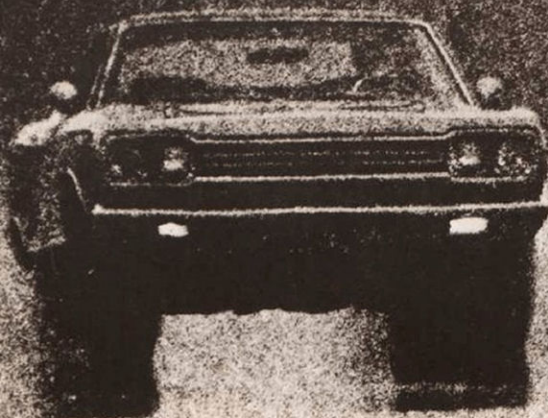
Oils:

Valvoline Oil Company
Ashland, Kentucky 41101

On top of that, there's a catalog of related items like racing jackets, cartoon posters, Road Runner T-shirts, decals, stickers, etc. It's yours free for a postcard to:

Supercars
P.O. Box 916
Detroit, Michigan 48231

Oh yes—be sure to watch for the Plymouth "Supercar Clinic," featuring Ronnie Sox and Buddy Martin, or another famous Plymouth Super Stocker, coming to your area soon. You'll get first-hand answers to your questions from the Super Stock champs themselves—not to mention movies, prizes and the latest factory information.



The Performance

Look what Plymouth's up to now: your choice of 13-second Pure-Stockers.

Car tested: 1969 GTX Hardtop

Equipment on test car:

"440" engine; 4-speed transmission; 4.10:1 Sure-Grip rear axle with Super Track Pak; F70 x 14" "Polyglas" tires; road wheels; AM/FM; "Air Grabber"; power steering; heater/defroster.

Test results:

Run #	Elapsed time/secs.	Trap speed/mph
1.	14.04	102.04
2.	13.87	102.27
3.	14.02	102.04
4.	13.92	102.38
5.	13.82	102.62
6.	13.77	102.50
7.	13.80	102.38
Average:	13.89	102.32

Car tested: 1969 'Cuda 340 Fastback

Equipment on test car:

"340" engine; 4-speed transmission; 3.91:1 Sure-Grip rear axle; E70 x 14" "Polyglas" tires; power disc brakes; power steering; AM/FM; folding rear seat; heater/defroster.

Test results:

Run #	Elapsed time/secs.	Trap speed/mph
1.	13.88	102.50
2.	13.94	101.46
3.	13.95	101.01
4.	14.01	100.44
5.	13.86	102.50
6.	13.98	101.35
7.	14.04	100.89
Average:	13.95	101.45

Car tested: 1969 Road Runner Coupe

Equipment on test car #1:

"383" engine; 4-speed transmission; 3.91:1 Sure-Grip rear axle with Track Pak; "Air Grabber"; decor package; radio; road wheels; F70 x 14" "Polyglas" tires; power steering; heater/defroster.

Test results:

Run #	Elapsed time/secs.	Trap speed/mph
1.	14.01	101.23
2.	14.06	101.01
3.	14.06	100.55
4.	13.98	101.80
5.	13.95	101.69
6.	14.00	101.46
7.	14.03	101.12
Average:	14.01	101.26

Two Versions

Equipment on test car #2:

426 Hemi engine; TorqueFlite transmission; 4.10:1 rear axle Super Track Pak; "Air Grabber"; decor package; F70 x 14" "Polyglas" tires; radio; heater/defroster.

Test results:

Run #	Elapsed time/secs.	Trap speed/mph
1.	13.44	106.25
2.	13.53	105.38
3.	13.69	104.28
4.	13.43	105.88
5.	13.50	105.50
6.	13.56	105.14
7.	13.35	107.39
Average:	13.50	105.68

These runs were conducted in private at a sanctioned dragstrip by Chrysler Engineering, as a part of a constant program of test and evaluation—both in the lab and on the track. The four cars tested were in pure-stock condition, using street tires, stock exhaust systems and clean-air packages. The times and speeds given are in no way meant to be a guarantee or measure of every such vehicle's performance, but rather an indication of what similarly-equipped cars might do under similar circumstances.

Nevertheless, the results are impressive—particularly as an indication of potential. Indeed, if all four cars tested will turn the quarter in the 13-14-second bracket, with speeds in the 100-105 mph range, just imagine what they'll do with slicks, headers and blueprinting!

Motion by Plymouth.

By now, you're beginning to get a pretty good idea of what Plymouth Motion is all about.

For many, it's a dragstrip, the right gear and a well-tuned "Elephant Motor."

For others, it's an oval—maybe even a Super

speedway—and a suspension that's right on the money.

For still others, it's a closed section on a rally like the Shell 4000 and a set of brakes that just won't quit.

Motion by Plymouth is everything that sanctioned racing is: speed, color, sound, excitement, competition.

It's also common sense. And safety. It means there's a time and place for everything, and it means that time and place for speed is at a strip, or a track, or a road course, or a special stage.

Organized racing is where Plymouth's Motion was born; and that is where it will always live. Where helmets and belts are the accepted form of dress. And where electronic timing equipment decides the better man and the better car.

Anything less is for frustrated Kamikaze pilots.

All product illustrations and specifications are based on authorized information. Although descriptions are believed correct at publication approval, accuracy cannot be guaranteed. Some of the equipment shown on product illustrations is optional, at extra cost. Chrysler Motors Corporation reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors and materials, and to change or discontinue models.



Plymouth





Plymouth



Motion. By Plymouth. Volume II

Look what Plymouth's up to now.