

HIGH-TORQUE engine in '63 Dodge has one 2-barrel carburetor which gives better fuel distribution and economy at normal driving speeds; compression ratio is 10:1.

THE BIG THREE FOR '63			
	Chevrolet	Ford	Dodge
Wheelbase, in.	119	119	119
Track, in.	60.3	61.0	59.4
Overall length, in.	210.4	209.9	208.2
width	79.0	79.9	76.5
height	55.5	55.5	53.9
Box volume, cu. ft.	529	538	496
Curb wt. (approx.) lb.	3600	3800	3700
Engine, cu. in., 6 cyl.	230	223	225
smallest V-8	283	260	318
largest V-8	409	406	426

The 2-barrel carburetor gives much better fuel distribution at low-to-medium speeds and this improves both torque and fuel economy. This, coupled with a mild, high-torque camshaft and a premium fuel compression ratio of 10:1, gives no less than 410 lb.-ft. at only 2400 rpm. Furthermore, the torque curve is very flat and consequently is not too far below the maximum even at 1000 rpm above or below the peaking speed of 2400 rpm. This in turn means that (with 3.23 axle) the speed range between 34 and 82 mph is the range of optimum performance because, as we go back to basic physics, acceleration

CAR LIFE ROAD TEST

1963 DODGE POLARA

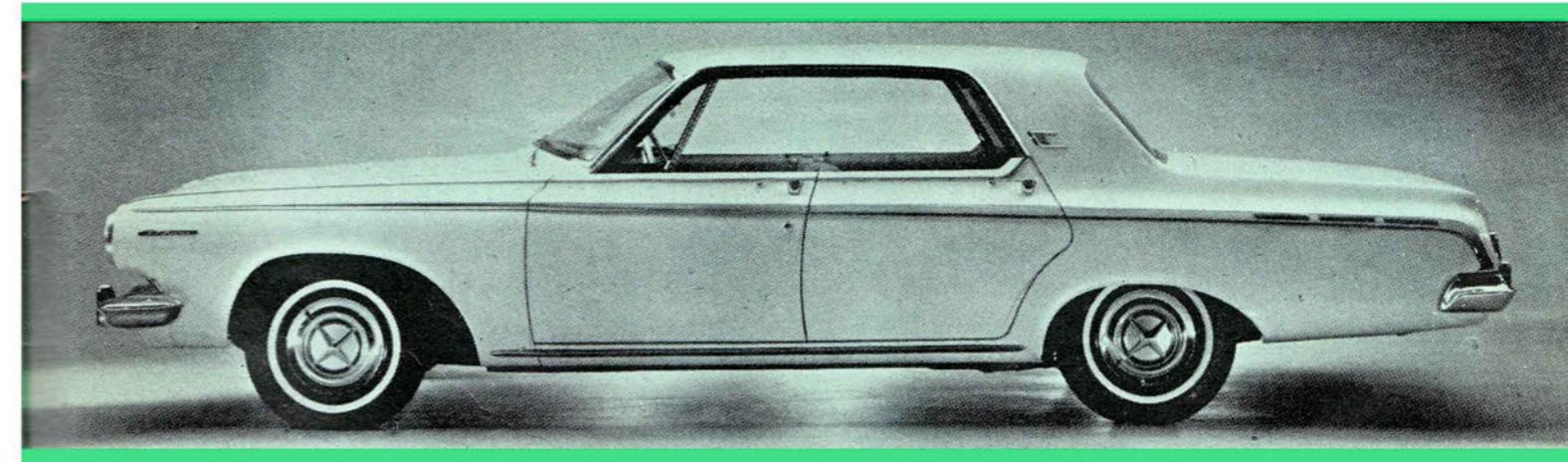
4-DOOR HARDTOP

High-torque 383-cu. in. V-8 provides new approach to old performance problem

DETAILS of the '63 Dodge models were announced last month but did little to describe Dodge Division's most interesting new model, the Polara 500. To explain a bit, the 119-in. wheelbase, full-size Dodge now competes head-on with the Chevrolet Impala and Ford Galaxie models. This Dodge comes in four series—330 (low line), 440 (medium line), Polara (high line) and Polara 500 at the top of the premium model. Standard engines are the 225-cu. in. six and the 318-cu. in. V-8, as before.

However, the Polara 500 comes equipped with a new variant of the Chrysler Corporation's 383-cu. in. V-8 and this engine is optional on all of the 119-in. wheelbase Dodge cars. This 383 engine will be called (by us) an h.t. engine—for high-torque. It represents an important and significant new approach toward the goal of very high performance with economy. It is an honest attempt to achieve these objectives without forcing the owner-driver to accept those certain undesirable and annoying features which al-

most inevitably accompany "high-performance" engines. In short, the basic idea is to give high performance via ample cubic inches and high torque—and to eliminate the erratic idle, the poor low speed torque, the necessity for high rpm rates—as found in virtually all high output engines. The Dodge 383 h.t. V-8 uses only one 2-barrel carburetor. This restricts the peak power, definitely, but how often (or where) does the owner need (or use) that extra horsepower that only begins to develop at over 90 mph?



DODGE POLARA

at any given instant is directly related to the available torque—and not to the horsepower.

So much for the engine; all of the foregoing merely explains why we selected this particular engine option for our first road test of a 1963 Dodge—and consider this Dodge's "most interesting" new model. Those who insist on even more performance can order it in the form of a 383 police engine or the still more brutal 426-cu. in. Ram-Charger.

Our test car was a Polara 4-door hardtop sedan with automatic transmission. The actual test work was done by our crew at the Chrysler Corporation's giant proving grounds in Chelsea, Mich., about 50 miles west of Detroit. We used our own test equipment, calibrated the speedometer (the error was considerable) and did a great deal of work with the Tapley meter in order to prove to ourselves whether or not the high-torque was real torque. Because the above "work" was done on the proving grounds before announcement date the total mileage involved was not enough to give an accurate assessment of fuel consumption. Therefore the fig-

ures given in the data panel (14-17 mpg) are labeled "est." for estimated and must be regarded as tentative. We think that, if anything, our estimate may be low.

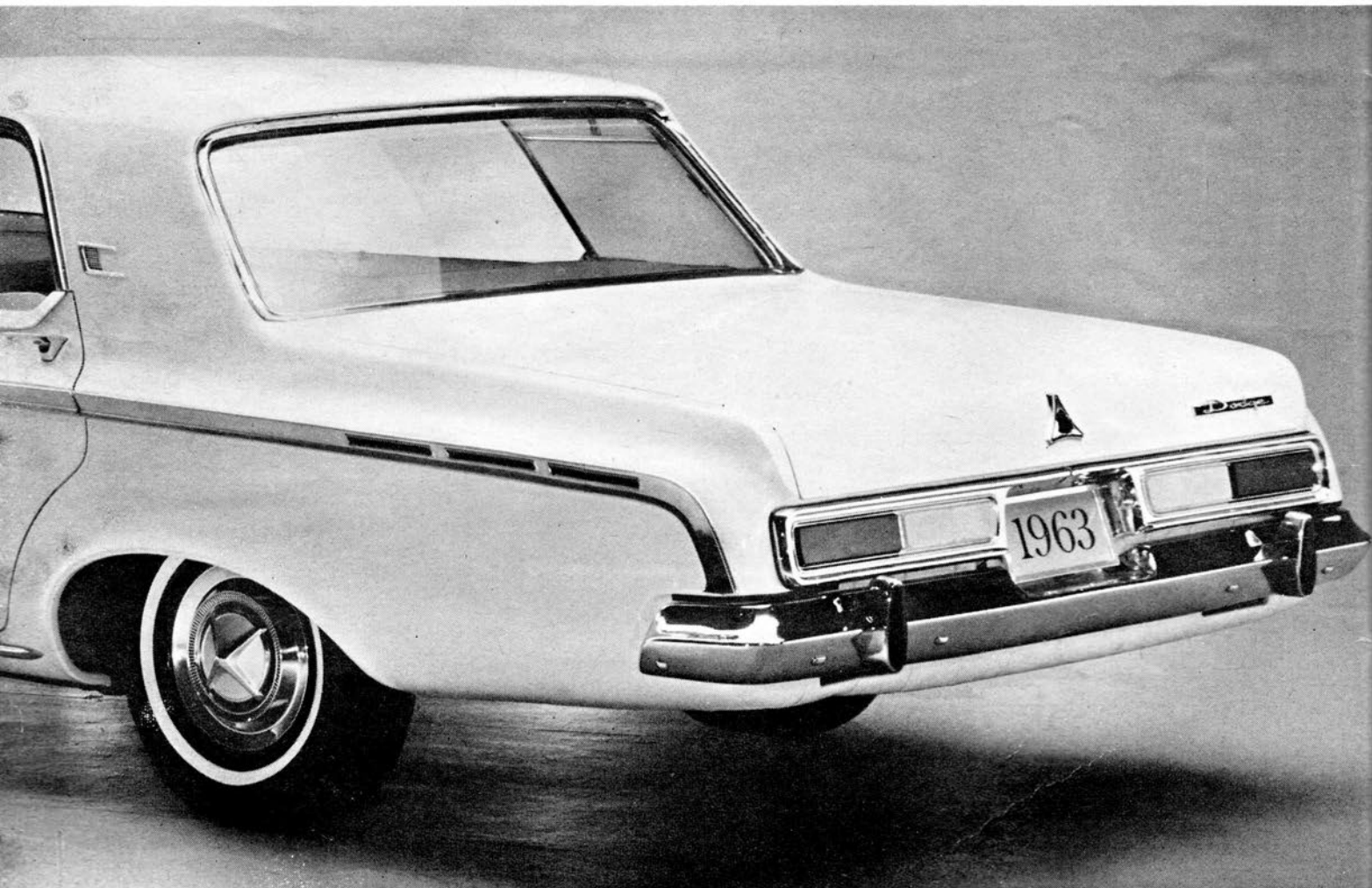
This car certainly proved the need for accurate speedometer calibration for its error was substantial. If, for example, one took the average 0 to 100 mph time by the speedometer the figure would be 23.5 sec. However, 100 mph, indicated, proved to be an actual 91.0 mph. Zero to 110 mph, indicated, took 32.5 sec., quite a different story since 110 was an actual 100 mph. However, this car was a prototype and Dodge engineers assured us that production cars positively will not have speedometers that are 10% optimistic.

The above discussion explains one of the reasons we like to use the standing start ¼-mile in all our road tests—speedometer error is not a factor. The average of 3 trials was 17.19 sec. and further trials showed that forced shifts via the "1" and "2" pushbuttons didn't knock more than 0.2 sec. off the e.t. Speed at the end of the ¼ was clocked by Dodge engineers as follows: 79.86, 79.86 and 80.65 mph. Incidentally, their times were recorded as 17.202, 17.319 and 17.050. Our watches (from inside the car) read 17.20, 17.32 and

17.05 sec.; close enough.

By using the pushbuttons it is possible to run to maximum speeds, in 1st and 2nd, of nearly 59 and 90 mph. However, the true speeds (corrected) at 5000 rpm are 49 and 82 mph. This big-bore, short-stroke engine goes to 5000 rpm readily enough but obviously a high-torque unit that develops its peak horsepower at only 4600 rpm isn't efficient at an overspeed of 13.6%. Therefore the automatic shift points are set at the optimum points which are 40 mph (4100 rpm) and 72 mph (4350 rpm), as shown in the acceleration graph.

All this tends to show rather conclusively that the Dodge with 383 h.t. engine really performs. What it doesn't show is the uncanny ease, the smoothness, with which it is done. By careful manipulation of the accelerator pedal it is possible to really feel the "power" (which is actually the torque we've been talking about) merely by avoiding pushing down so hard that the transmission downshifts. Of course a downshift gives an extra punch for passing ability (below 65 mph) but only high gear gives one a chance to really appreciate what's under the hood. In fact, if we were a dealer demonstrating this engine option, we would be tempted to



use a manual-shift transmission. Only direct drive, and from 10 mph up, would show the true value of a high-torque engine, and this is not to belittle the TorqueFlite—it's the best 3-speed automatic we know of—and we've tried them all.

A useful way of evaluating the overall performance of this Dodge is to compare it with last year's Custom 880 model (*Car Life*, July) even though the two cars are not strictly comparable in terms of size and weight.

	1962-880	1963 Polara
Test weight	4345	4120
Box volume, cu. ft.	536	496
Engine size, cu. in.	361	383
Max. torque, lb.-ft.	380	420
Acceleration, sec.		
0-60	10.8	9.6
0-100	41.0	32.5
¼-mph	74.0	80.0
Tapley pull (3rd)	325	390

The wheelbase being longer, there is a theoretical advantage in riding quali-

ties and in directional stability. However, the increase is only 2.54% and we can't say that we definitely noted any improvement. On the other hand Dodge has made slight changes in ride rates and shock absorber calibration. All this, plus the important change to 2-ply tires, tends to improve the ride and reduce harshness. We'll take Dodge's word for it that there is an improvement.

The interior trim of all Dodge models, from the 330 to the Polara 500, has been upgraded. Here you make your choice according to taste and pocket-book. One of the first interior changes one notices is the entirely new instrument panel layout. With real, honest, round gauges, the layout is very sensible and functional—the only idiot light left is for low oil pressure.

The front seat and steering wheel have been moved up, fractionally, and under the seat we found a very useful new feature: special mounting pads which allow the dealer to relocate the

seat exactly where the owner wants it. This feature should particularly help the owner who is well above or below the norm in body dimensions. The usual seat adjustment is retained, of course.

The most important change in seating dimensions comes at the rear where there is now 4.4 in. more knee room and 1.5 in. more hip room. Behind the rear seats, most of the 6.2-in. increase in overall length has been utilized for additional trunk space; Dodge claims an increase of 10%.

External changes can only be described as 100% new from bumper to bumper; a complete list of all the changes made in the 1963 Dodge would take several pages. We were most impressed. In fact, we have often been somewhat critical of the fact that thousands of designers and engineers seem necessary but, too often, produce so little. This cannot be said of the 1963 Dodge. Dodge engineers have spent a busy and fruitful year. ■

CAR LIFE ROAD TEST



1963 DODGE Polara 4-door Hardtop

SPECIFICATIONS

List price	n.a.
Price, as tested	n.a.
Curb weight, lb.	3770
Test weight	4120
distribution, %	55/45
Tire size	7.00-14
Tire capacity, lb @ 24 psi	3900
Brake swept area	314
Engine type	V-8, ohv
Bore & stroke	4.25 x 3.38
Displacement, cu in.	383
Compression ratio	10.0
Carburetion	1 x 2
Bhp @ rpm	305 @ 4600
equivalent mph	106
Torque, lb.-ft.	410 @ 2400
equivalent mph	57.6

EXTRA-COST OPTIONS

TorqueFlite, power steering, power brakes, safety belts, positive crank-case ventilation, radio.

DIMENSIONS

Wheelbase, in.	119.0
Tread, f and r	59.4/57.5
Over-all length, in.	208.2
width	76.5
height	53.9
equivalent vol, cu ft.	496
Frontal area, sq ft.	22.9
Ground clearance, in.	
Steering ratio, o/a	15.7
turns, lock to lock	3.5
turning circle, ft.	41.7
Hip room, front	60.8
Hip room, rear	61.0
Pedal to seat back	41.0
Floor to ground	n.a.
Luggage vol, cu. ft.	n.a.
Fuel tank capacity, gal.	20.0

GEAR RATIOS

3rd (1.00), overall	3.23
2nd (1.45)	4.69
1st (2.45)	7.91
1st (2.45 x 2.2)	17.4

PERFORMANCE

Top speed (4800), mph	115
Shift points, rpm-mph (auto.)	
3rd ()	
2nd (4950)	82
1st (5000)	49

ACCELERATION

0-30 mph, sec.	3.8
0-40	4.9
0-50	7.2
0-60	9.6
0-70	13.0
0-80	17.2
0-100	32.5
Standing ¼ mile	17.2
speed at end	80

FUEL CONSUMPTION

Normal range, mpg (est)	14-17
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SPEEDOMETER ERROR

30 mph, actual	30.0
60 mph	56.1
90 mph	82.5

CALCULATED DATA

Lb/hp (test wt)	13.5
Cu ft/ton mile	134
Mph/1000 rpm	24.0
Engine revs/mile	2500
Piston travel, ft/mile	1410
Car Life wear index	35.2

PULLING POWER

3rd, lb/ton @ mph	390 @ 50
2nd	500 @ 33
1st	off scale
Total drag at 60 mph, lb	170

