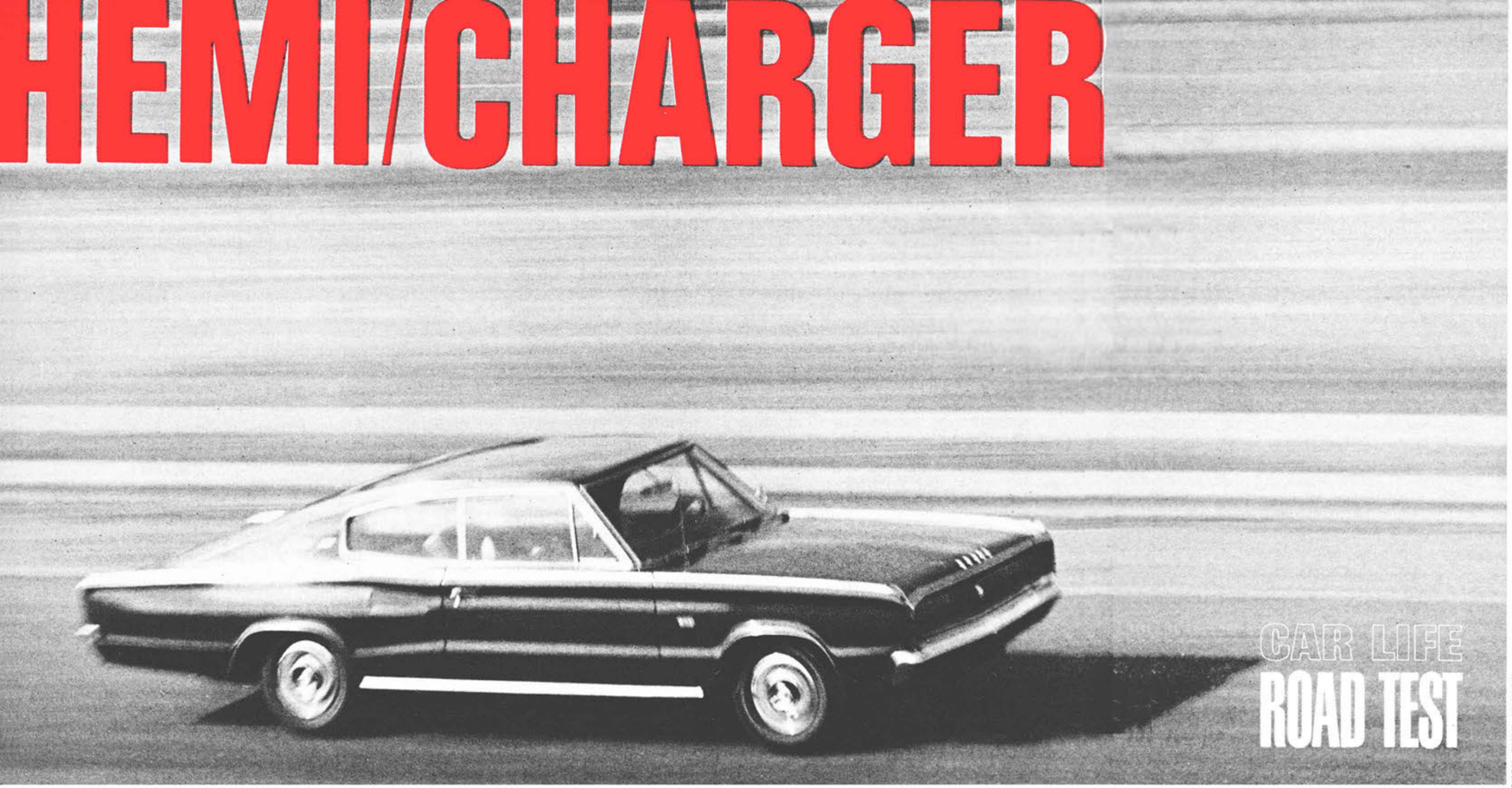
HEMI/CHARGER



CAR LIFE
ROAD TEST

CHAN BUSH PHOTOS

Dodge's Fastback Fullback Plays Offense and Defense

SCOREBOARD LIGHTS read: "Third down, three yards to go." In the huddle, the quarterback earnestly calls the play. Across the stadium that die-hard fan blows his bugle once again. "Ta-da-da-dah-da-daaah!" The partisan crowd responds with one roaring voice, "CHARRRRRGE!"

The quarterback takes the snap and hands off to the fullback who bulls his way through the crush of straining bodies, straight up the middle for that three yards and inches to spare. The crowd bellows approval.

As professional football fullbacks provide excitement, so do the automotive fastback fullbacks from Dodge. The enthusiast who desires to play the game can huddle with his Dodge dealer and call on the player of the year, that big, strong, tough fullback, the Hemi/Charger. Ever afterward as he tramps down on the Hemi/Charger's accelerator pedal, the owner will hear that bugled "Ta-da-da-dah-da-daaah!" and his lips will automatically, silently form that word, "CHARRRRRGE!"

Driving the Dodge Hemi/Charger is like quarterbacking the Green Bay Packers. Call the play, and the job gets done with great speed, strength and agility. The power and speed of the Hemi/Charger stem directly from what is underhood—simply the current NASCAR champion engine in its twin 4-barrel-carburetored, 10.25:1 compression street form. In this tune, the 426-cu. in. engine is rated at 425 bhp at 5000 rpm (110 mph), with torque delivery maximum of 490 lb.-ft. at 4000 rpm (89 mph), but proves eminently tractable for the street and singularly tenacious for the strip.

In addition to the Hemi/Charger, Dodge Division makes available engine options to create the Demi/Charger and the Magna/Charger. The Demi category includes Chargers powered by the 2-barrel carburetored, 318-cu. in./230-bhp engine, or 383-cu. in. V-8s rated at 270 bhp in single 2-barrel trim or 325-bhp with a single 4-barrel carburetor. The Magna/Charger is distinguished by installation of the largest of all Chrysler Corp. engines, the 440-cu. in. V-8, rated at 375 bhp with one 4-barrel carburetor.

But for brute strength for a Charger, the 426-cu. in. hemispherical combustion chamber engine is the choice. Its cylinder block, for example, carries special reinforcement at the main bearing webs, and main bearings No. 2, 3 and 4 are secured with horizontal tiebolts through the sides of the block to the bearing caps. Heads have additional tie-downs by special studs and nuts that are tightened from inside the tappet chamber. Domed pistons are of extruded aluminum.

The Hemi's crankshaft is forged from carbon steel. Added strength comes in the form of shot-peened fillets and a special nitriding dip to harden the entire surface of the crank to aid in resistance to fatigue. Extra-wide oil grooves in main bearings help protect this strength in high speed operation.

The high lift camshaft, driven off the forward end of the crank by a double roller chain, is made of hardened cast iron and is specially coated for protection from scuffing. Valve duration and timing aim not only at smooth operation at low engine speeds for normal street and highway operation, but also at efficient high speed breathing and top power output.

The valve train itself is made up of mechanical tappets, tubular pushrods and forged steel rocker arms, all designed for light weight with maximum strength for sustained high speed operation. Heavy-duty concentric outer and inner valve springs, and valve spring dampers, also are engineered to allow maximum performance.

NESTLED IN THE vee is the aluminum tandem intake manifold. Branches of the manifold are shaped to provide free flow of the fuel/air charge to all cylinders over a wide range of engine speeds for street and strip flexibility. (The NASCAR version of the Hemi employs a ram manifold, tuned for peak performance in a much less broad engine speed range.) Atop the manifold are two Carter carburetors, an AFB-4324S forward, an AFB-4325S at the rear. Staged throttle linkage permits the primary throttle blades of the forward carburetor to remain closed until the rear carburetor's primary blades are 40% open. After this point is reached, both sets of primary blades travel in unison, reaching full open position simultaneously. The secondary barrels of both carburetors are velocity actuated by the flow of incoming air. Weights hold the valves closed until the air velocity pressure drop overcomes the counterweights and the secondaries swing open.

Manifold and carburetors are isolated from the top of the cylinder block by a heat shield that minimizes transfer of heat from engine oil to the incoming fuel/air charge. Heat riser tubes, when the engine is cold, carry hot exhaust gasses through heat passages in the intake manifold. As engine heat increases, a thermostatically controlled valve reduces gas flow through the riser tubes, thus regulating mixture temperature for smoother warmup operation.

Gasses from the engine's internal activity are dumped through cast iron exhaust headers and thence into dual 2.5-in. exhaust pipes. A 4-speed manual gearbox is available with the Hemi engine, but a TorqueFlite 3-speed automatic was fitted to *CAR LIFE*'s test Charger.

If the engine can be likened to a fullback, then this transmission must be compared to the fleet halfback who can run the sweeps and the tricky veers on quick-openers, who can catch flare passes and the bomb, who can run the pass option and who comes in to kick the extra points as well. The TorqueFlite transmission, if allowed to remain in "Drive" position, shifts for itself, plays the field, chooses the right gear for trickling through traffic, passing on a short stretch of straight, or snarling up the dragstrip for automatic gear change quarter-mile times of under 15 sec. But, when called upon by the driver to do so, the transmission can be held in first and second gears for so long as is desired. *CL*, with some prudence, chose 6000 rpm as the manual shift point for the automatic and therewith recorded top time in acceleration runs conducted at Carlsbad (Calif.) Raceway.

WHEN A PLYMOUTH Satellite with a similar Street Hemi engine underhood was tested (*CL*, July '66) the transmission's torque converter maximum ratio at stall was 2.2:1. Automatics being installed with the Hemi engines in Chrysler Corp. cars now have torque converter maximum ratio at stall of 2.0:1. This means the 1967 TorqueFlite unit is a little tighter and is inclined toward creep at engine idle—but to some enthusiasts, converter creep means a more responsive, ▶

CHARGER

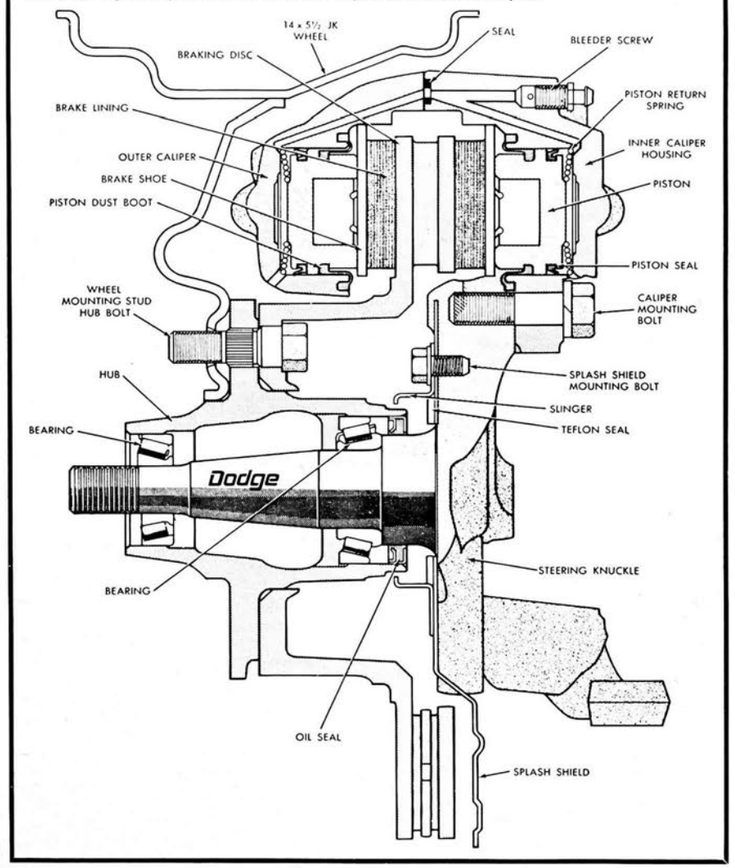
much more competitive transmission.

With a 3.23:1 ratio in a limited slip rear axle, the 426/TorqueFlite combination could produce great amounts of smoking, useless wheelspin when the car was called upon to perform for show, not for go. However, judicious application of the foot throttle to maintain a rate of power application just short of wheelspin, and the 6000 rpm manual gear changes, snapped off the 14.16-sec. quarter-mile time for the Charger, though it carried two test crewmen, a crate of test equipment and a full tank of fuel. What would have been Charger's e.t. had there been but one man aboard, had there been little fuel in the tank, and had test equipment remained at the editorial office? Conjecture is that the car would have performed well down in the 13s—and that a set of drag slicks at the rear could have made great additional improvement.

The hefty Hemi engine, the TorqueFlite transmission, the taut Charger unitized body and all else that added up to test weight of 4560 lb. required some husky suspension components—not only to cope with the massive weight of the so-called intermediate sized fastback, but to give it a measure of handling facility.

Forward, in the Hemi/Charger combination, are torsion bars of 0.92-in. diameter, the largest offered in Dodge's Charger/Coronet catalog. These longitudinal torsion bars and associated telescopic shock absorbers offer a ride rate of 118 lb./in. at the wheel, also stiffest in the Charger/Coronet specification book. An anti-roll bar of 0.94-in. diameter is standard on the Hemi-equipped Charger, but is optional on Chargers supplied with engines of lesser piston displacement. At the rear, the Hemi/Charger's longitudinal semi-elliptic leaf springs, measuring 58 x 2.5 in., carry two more leaves than, for example, the rear springs on a 383-cu. in. engine-equipped Charger. These rear springs of the Hemi/Charger give the stiffest-of-all Dodge ride rates, 159 lb./in. at the wheel.

CHARGER DISC brake systems employ 11.04-in. ventilated cast iron rotors, four pistons per caliper. With rear drums, swept area totals 387.8 sq. in.



One Dodge Division representative described this stiffest-of-all suspension system: "The handling package, the police package, the trailer towing package, the rally package, it's the same thing, whatever you want to call it, but it's a darn good system."

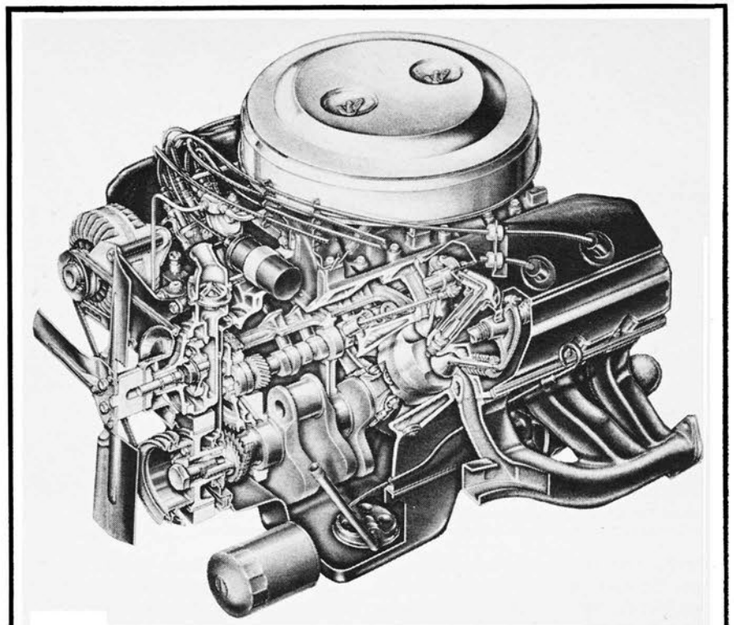
He proved correct in his statement. The suspension system, though immensely firm, was not harsh and allowed sufficient cushioning to smooth out minor roadway irregularities. The system also provided enough bite for some measure of cornering capability and thoroughly eliminated the tractive instability which plagues some of the more softly sprung Chrysler Corp. cars.

Power-assisted steering, optional on all Chargers, was welcome on this front-heavy Hemi/Charger as it took the effort out of changing the car's direction, yet was quick enough for smart maneuvering.

In some ways, suspension and steering of the Hemi/Charger could be likened to the professional football linebacker. There's not much glory in the job, but the job must be done, surely and well.

OBVIOUSLY, WHERE there's an offense, there must be a defense to make up a balanced team. Where the Hemi/Charger is concerned, 387.8 sq. in. of braking swept area seems a fairly adequate defense. When *CAR LIFE* testers twice applied the defensive mechanism in all-on stops from 80 mph, the result was smooth deceleration at the rate of 27 ft./sec./sec.—both times. Then the Hemi/Charger did what other, lighter cars haven't been able to do. Test drivers added repeated stops at 27 ft./sec./sec., all accomplished without untoward directional changes, though there was a slight grab here and there, but no extreme rear wheel lockup and only minor vacuum runout on the third and fourth stops.

Generating this outstanding stopping power was a disc-front/drum-rear, 2-circuit, vacuum assisted braking system of the type now universally available as optional, or in some cases standard, equipment on all U.S.-made passenger cars. This sort of brake efficiency was a long time in coming, but is heartily welcomed by car enthusiasts and safety-conscious family men, along with those who would enter automotive competitions. The regrettable part of the entire matter of brakes is that some manufacturers persist in retention of small diameter drum brakes as standard equipment. This pusillanimous braking equipment has time and again proven less effective, less capable of stopping cars than all disc or even disc/drum systems such as that of the Hemi/Charger. Until the latter is made standard equipment, the defensively oriented purchaser must continue to shell out additional cash for the best available defensive team. Those small diameter drums should go the way of the flying wedge.



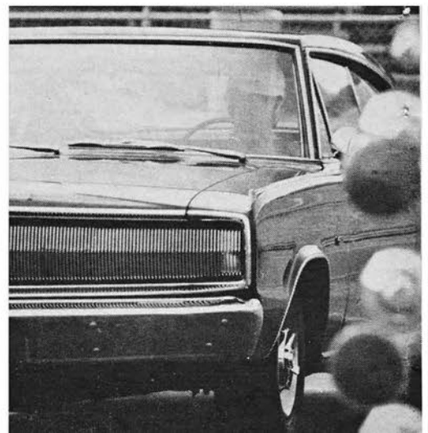
RATED AT 425 bhp, with torque delivery at 490 lb.-ft., the 426-cu. in. hemispherical combustion chamber engine from Chrysler is capable of very strong acceleration, yet is gentle enough for town and freeway.

THE 1967 HEMI/Charger supplied to *CAR LIFE* showed only minor trim changes from 1966, the Charger's introduction year. Perhaps because 1967 is the second year of production for the Charger, the test car displayed a more finished exterior—more smoothly applied paint and less wide gaps between panels, for examples. Full-width taillights, and the roll-up headlamp eyelids remain as Charger hallmarks. Rear fender panels, smooth in 1966, for 1967 carry notched indentations just rearward of the door pillar. These faintly recall Buck Rogers comic strip rocket ships of the 1930s. The incongruity approaches that of a Green Bay Packer turning up for a ballgame in ballet slippers.

The interior of the Charger also is little changed from 1966. Instruments, including speedometer/odometer, tachometer and gauges are located in four circular pods arrayed across the dash in front of the driver. Numerals and letters, i.e., E-F for fuel, are backlighted cutouts in the circumferences of the pods. These do not lend themselves well to daylight visibility, but when they are illuminated a fluorescent green for nighttime operation, they prove quite satisfactory. On the console of the test Hemi/Charger, where other manufacturers often locate tachometers, was a clock, its face angled toward the driver. The clock was useful—once the driver became accustomed to its odd location.

Two perennial complaints were noticed within the Hemi/Charger. Carpeting seemed more hacked to size than cut to fit, giving the floor of the car a rag-tag appareance. And, a header molding along the curve of the pillarless expanse of side glass was loose, and hummed and fluttered in the wind when windows were open. The same condition was noted in the Charger tested earlier (*CL*, June '66).

One of the advertised selling points of the Charger fastback is the fold-down seating and the flip-down luggage compartment transverse bulkhead which create a seemingly vast expanse of straight-through cargo area behind the driver/passenger compartment. Usefulness of this cargo space, however, is debatable. If an item of cargo—a cooler chest containing 25 lb. of ice, three cartons of soft drinks and lunch, for example—will not fit into the narrow, shallow luggage compartment, it must be placed inside the car, on the folded-down cargo deck. If one isn't a defensive tackle who has ▶



ORNAMENTAL BARS across the Charger's seatbacks were a source of passenger irritation and complaint.

LEG room in abundance is provided for driver and passengers.

MINIMUM TRUNK space and maximum liftover height both are attributable to the Charger's roomy forward, cramped rearward fastback configuration.

paid great attention to his isometric exercises, the loading task proves all but impossible. A larger cargo hatch at the rear, perhaps with some of that expanse of glass hinged in some manner, would be welcome to weekend picnickers, campers, fishermen and other haulers of the big and bulky. Perhaps installation of a trailer hitch would solve the cargo problem.

With the rear seats locked in position, cargo space becomes minimal, and rear passenger space absolutely is for no more than two persons—adults or children. The Charger truly is a 2 plus 2 car.

Space for heads, legs, knees, hips and shoulders is more than adequate for four persons within the Charger fastback body. *CL*'s tall tester, the chronic complainer about lack of leg room, was satisfied with the Charger accommodations for his frame after a long, looping Sunday circuit.

One gripe stated vehemently by several test crew personnel, their friends, families and other occasional passengers, was with a very hard ornamental bar across all four seat backs. This useless styling fillip was thoughtlessly placed exactly where spines curve and where shoulder blades rest. Fitting purgatory for the stylist who sketched in that little bar would be for him to sit, just sit, in that seat for 1000 miles.

A BIT OF HUMAN engineering also could well have been expended on placement of restraint belts. The manner in which shoulder belts for front seat passengers were installed would be termed, in the vernacular of football, "a busted play." While lap belts were anchored in the conventional fashion, the shoulder belts, some 6 ft. in length, were secured to the body behind the rear seats. This meant that each time cross-chest belts were removed, they were placed on the floor to be kicked and tangled on exit and entry by driver and passengers. The drill was to gather up all the belts, match buckles and tangs, hitch the lap belt, unkink and fasten the shoulder strap, in a state of maximum grope, then discover that the driver thus trussed could not release the parking brake, tune a bit of music on the radio or set the clock.

Upholstery was in an ocher shade of vinyl, contrasted with the deep green of the exterior paint, and the black of the nylon carpeting, chromium accented dashboard and vinyl covered dashboard padding. The scheme was sporting, rather than sedate, as is fitting for a car with the ability to "CHARRRRRGE!"

AND, CHARGING is where the Hemi/-Charger seems most at home. The simple chore of matching freeway speeds from inclined on-ramps allows short unleashings of the 426-cu. in. engine that are purely delightful. Passing slower vehicles on steep, straight upgrades involves the driver in the pleasures of 8-barrel carburetion. The knowledge that the car is king at the stoplight, but making no arrogant display of this monarchy is the oneupsmanship of Hemi/Chargering.

Only once in a great while does the opportunity present itself to *CAR LIFE* test crewmen to do a little belly-to-the-ground automobile racing. The day *CL*'s test team took the Hemi/-Charger to Carlsbad Raceway, who should appear but the lads from next door, the *Road & Track* magazine test crew with a 440-cu. in. Magnum-engined Dodge R/T in hand. Solo runs against the electronic timers were the order of the day until, as if by mere chance, the Hemi/Charger and the R/T somehow appeared simultaneously at the staging lights. *CL* in Hemi/Charger eyed *R&T* in R/T. The nods signified mutual agreement. A hand was raised, then dropped.

The R/T holeshot the Hemi/-Charger—but the advantage was short-lived. Beyond 70 mph, the Hemi began to unwind itself and the R/T faded to the rear. Over the rush of wind and roar of induction and exhaust was heard a faint bugle call, "Ta-da-da-dah-da-daaaah!" ■

BODY LINES of the fastback Charger are little changed for 1967, but panel fit, application of paint and interior finish seem improved.

1967 DODGE CHARGER

2-DOOR HARDTOP

DIMENSIONS

Wheelbase, in. 117.0
Track, f/r, in. 59.5/58.5
Overall length, in. 203.6
width 75.3
height 53.8
Front seat hip room, in. ..... 2 x 22.4
shoulder room 58.0
head room 37.7
pedal-seatback, max. 44.9
Rear seat hip room, in. ..... 2 x 19.9
shoulder room 53.4
leg room 34.0
head room 36.5
Door opening width, in. 42.0
Floor to ground height, in. 11.4
Ground clearance, in. 6.1

PRICES

List, fob factory $3263
Equipped as tested 5289
Options included: Hemi engine; auto. trans.; 3.23 limited slip; radio and heater, power steering, windows and disc brakes; headrests and exterior trim; wheel covers; special handling package; Goodyear HP Power Cushions.

CAPACITIES

No. of passengers 4
Luggage space, cu. ft. ..... n.a.
Fuel tank, gal. 19.0
Crankcase, qt. 4.0
Transmission/diff., pt. 8.5
Radiator coolant, qt. 18.0

CHASSIS/SUSPENSION

Frame type ..... unitized
Front suspension type: Independent by s.l.a., ball joints, torsion bars, telescopic shock absorbers.
ride rate at wheel, lb./in. 118
anti-roll bar dia., in. 0.94
Rear suspension type: Live axle, Hotchkiss drive, multi-leaf longitudinal semi-elliptic springs, telescopic shock absorbers.
ride rate at wheel, lb./in. 159
Steering system: Integral power assisted recirculating ball, parallelogram linkage with trailing, parallel Pitman and idler arms.
gear ratio 15.7
overall ratio 19.12
turns, lock to lock 3.5
turning circle, ft. curb-curb 40.9
Curb weight, lb. 4160
Test weight 4560
Weight distribution, % f/r 53.9/46.1

BRAKES

Type: Two-circuit hydraulic, with 4-piston caliper, vented cast iron rotors, front; duo-servo shoes in composite drums, rear.
Front rotor, dia., in. 11.04
Rear drum, dia. x width ..... 10 x 2.5
total swept area, sq. in. 387.8
Power assist: integral vacuum
line psi @ 100 lb. pedal 1510

WHEELS/TIRES

Wheel size 5.5K
optional size available 5.5JK
bolt no./circle dia., in. 5/4.5
Tires: Goodyear HP Power Cushion
size 7.75-14
recommended inflation, psi 24
capacity rating, total lb. 5080

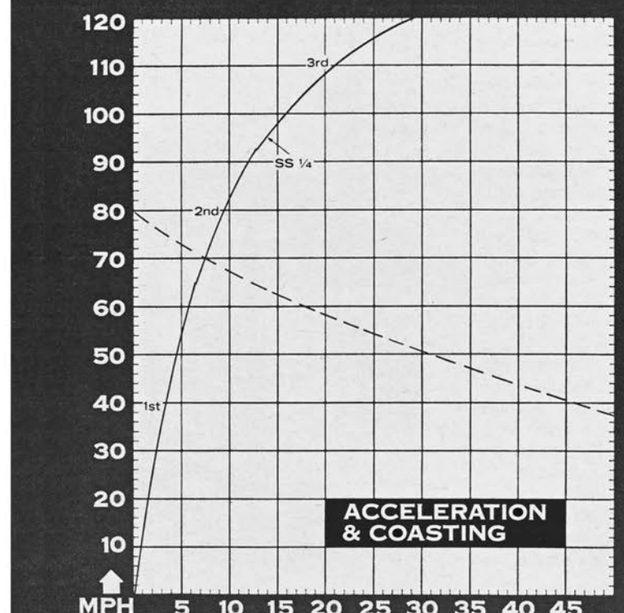
ENGINE

Type, no. cyl. ..... ohv, 90° V-8
Bore x stroke, in. ..... 4.25 x 3.75
Displacement, cu. in. 425.3696
Compression ratio 10.25
Rated bhp @ rpm ..... 425 @ 5000
equivalent mph 112
Rated torque @ rpm ... 490 @ 4000
equivalent mph 90
Carburetion ..... Carter, 2x4
barrel dia., pri./sec. 1.44/1.69
Valve operation: Mechanical lifters, pushrods, overhead rocker arms.
valve dia., int./exh. 2.25/1.94
lift, int./exh. 0.480/0.460
timing, deg. 30-66, 74-22
duration, int./exh. 276/276
opening overlap 52
Exhaust system: Dual reverse-flow mufflers.
pipe dia., exh./tail 2.50/2.25
Lubrication pump type ..... rotary
normal press. @ rpm. 45-65 @ 2000
Electrical supply ..... alternator
ampere rating ..... 37 @ 12 V.
Battery, plates/amp. rating 78/70

DRIVE-TRAIN

Clutch type ..... dia., in. .....
Transmission type: Automatic with torque converter and planetary gearbox.
Gear ratio 3rd (1.00) overall 3.23
2nd (1.45) 4.68
1st (2.45) 7.92
1st x t. c. stall (2.00) 15.83
Shift lever location ..... console
Differential type: Hypoid with torque bias limited-slip.
axle ratio 3.23

CAR LIFE ROAD TEST



CALCULATED DATA

Lb./bhp (test weight) 10.7
Cu. ft./ton mile 14.5
Mph/1000 rpm (high gear) 22.4
Engine revs/mile (60 mph) 2680
Piston travel, ft./mile 1675
Car Life wear index 43.5
Frontal area, sq. ft. 22.5
Box volume, cu. ft. 475.5

SPEEDOMETER ERROR

30 mph, actual 28.1
40 mph 36.1
50 mph 45.9
60 mph 55.3
70 mph 64.7
80 mph 73.4
90 mph 81.8

MAINTENANCE INTERVALS

Oil change, engine, miles 4000
trans. & differential 24,000
Oil filter change 8000
Air cleaner service, mo. 6
Chassis lubrication 32,000
Wheelbearing re-packing ..... as req.
Universal joint service ..... not req.
Coolant change, mo. 12

TUNE-UP DATA

Spark plugs ..... Champion N-10Y
gap, in. 0.035
Spark setting, deg./idle rpm 0/900
cent. max. adv., deg./rpm. 17/2800
vac. max. adv., deg./in. Hg. 19/15
Breaker gap, in. 0.014-0.019
cam dwell angle 27-32/37-42
arm tension, oz. 17-21.5
Tappet clearance,
int./exh. 0.028/0.032
Fuel pump pressure, psi 7-8.5
Radiator cap relief press., psi 16

PERFORMANCE

Top speed (6000), mph 134
Shifts (rpm) @ mph—manual
3rd to 4th ( ) .....
2nd to 3rd (6000) 93
1st to 2nd (6000) 65

ACCELERATION

0-30 mph, sec. 2.7
0-40 mph 3.8
0-50 mph 5.1
0-60 mph 6.4
0-70 mph 8.0
0-80 mph 10.1
0-90 mph 12.2
0-100 mph 16.4
Standing ¼-mile, sec. 14.16
speed at end, mph 96.15
Passing, 30-70 mph, sec. 5.3

BRAKING

(Maximum deceleration rate achieved from 80 mph)
1st stop, ft./sec./sec. 27
fade evident? ..... no
2nd stop, ft./sec./sec. 27
fade evident? ..... no

FUEL CONSUMPTION

Test conditions, mpg 10.1
Est. normal range, mpg 10-13
Cruising range, miles 190-247

GRADABILITY

3rd, % grade @ mph ..... 21 @ 90
2nd ..... 30 @ 75
1st ..... 40 @ 59

DRAG FACTOR

Total drag @ 60 mph, lb. 125