

CAR LIFE ROAD TEST



The Six Built Like an Eight Elevates the Appliance Standard



FORD CUSTOM 500

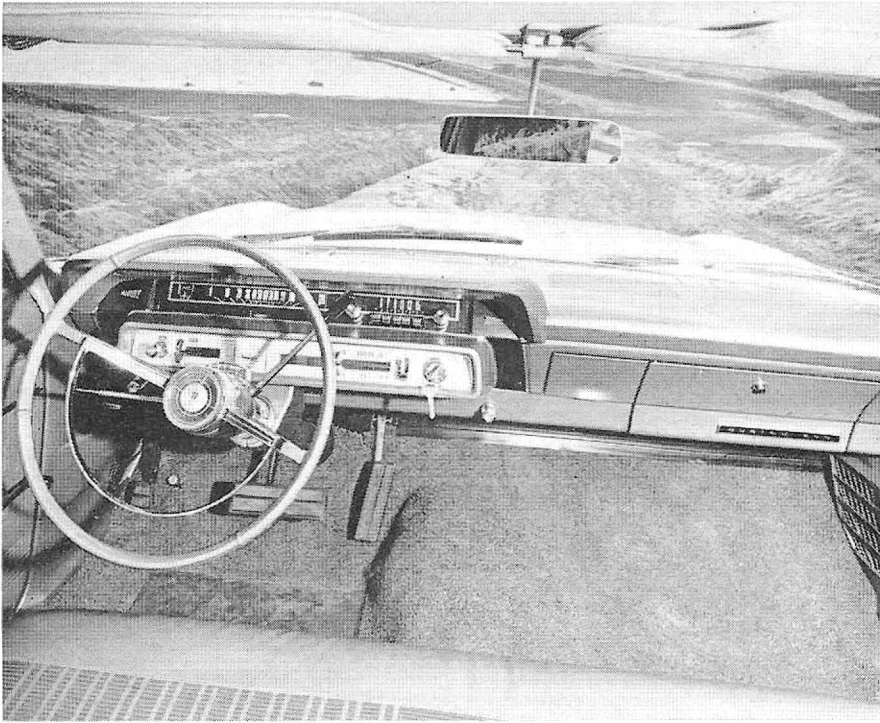
THERE WAS a time, not too many new car introductions ago, when auto manufacturers concentrated on designing, developing, and building their basic cars—6-cyl. models. Once that was accomplished, the engineers could turn their attention to the models which would have higher-powered V-8 engines. The transition invariably called for add-on and/or beef-up modifications to the basic car to maintain

the reliability and durability of the Six. It was the classic method of fleshing out the line, evolved in that manner because V-8 engines were, after all, the same sort of optional equipment as air conditioners and required similar technical modifications to work properly.

But the 1966 Ford Custom 500 testifies to a change in that pattern, a reversal of this traditional method of de-

veloping automobiles. It is *prima facie* evidence that Detroit carmakers must be engineering and developing the V-8s before they remember that, by golly, there's supposed to be a Six in the lineup, too. (Carmakers, in the collective, is probably accurate because if one is doing something, can the others be very far behind?) It's easy to explain such a turnabout: An overwhelming percentage of buyers in to-

FORD SIX



DASH PANEL layout is simple in appearance, but confusing to the driver. Carpeting and upholstery match that found in more expensive V-8 models.



CLEANNESS OF line and that uncluttered look come from total absence of those unnecessary expensive-to-install chromium-plated fripperies.



CHAN BUSH PHOTOS

day's market unhesitatingly order cars with V-8 engines, despite the \$100-200 additional price, and, in fact, would be surprised to find they didn't have to "pay for the engine" if they insisted on a Six.

It goes beyond the mere economics of "how much a month is it going to cost me?" A broader perspective is involved. Although few have the courage to admit it, the American public is preparing itself—however haltingly—for an inevitable and substantial increase in highway and traffic speeds. To retain some semblance of utility and practicality, the automobile must look toward a time when 100 mph throughway speeds are commonplace and urban traffic flow is correspondingly quickened. The prospect of that is a bit beyond the capabilities of 6-cyl. power as it is presently developed for current design passenger sedans.

There will ever be a dedicated (sometimes vociferously so) band of devotees to the Six. *CL* staffers themselves are quick to march alongside that coterie. Many compelling reasons enhance 6-cyl. engines, provided they are installed in suitable vehicles. But there's the rub with the Ford Six: It approaches the point where there is just too much car to be pushed around. Yet, there remains the appeal of basic mechanical simplicity, emphasized by great underhood working space around a rectangular iron box unencumbered with stuffed-in, or tacked-on, gimmicks and doodads. This and the well-known potential for miserly fuel appetite keeps the Sixes' cause alive in the hearts of the countrymen.

Because they were under test at the same time, the Ford Six and the Opel Kadett (Page 74) make an interesting contrast. Whereas the Ford had a considerably better power/weight ratio, the Opel could actually sprint right along with it. Quarter-mile times were identical, although the Ford reached progressively quicker speed increments. To be sure, the frisky Four matched the sluggish Six only because its tiny pistons were stitching away at near supersonic speed, but it illustrates a point: Sheer bulk requires more than mere inches to prod it from its lethargy.

FORD'S BIG SIX is now in its second year of production after replacing a slightly dated 223-cu. in. engine with one of more modern 7-main bearing, hydraulic lifter design. The welcome increase in torque (from 203 lb.-ft.) still occurs at a 2200 rpm peak, although the horsepower curve is lower



WHAT HAPPENS when a body designed to accommodate a V-8 is fitted with a 6-cyl. engine and a 3-speed automatic transmission? The result is minimal transportation—adequate, but unexciting as a dishwasher in the kitchen.

at a 4000 rpm peak. The present engine, then, is a relatively fair torquer rather than a quick runner. Top end performance is choked off by relatively small valve sizes, mild timing and minimal carburetion. In normal circumstance, such specifications aid in achieving an opposite goal, maximum fuel economy. They probably still do for buyers fortunate enough to be spared the dreaded Thermactor exhaust emissions control system. The test car fell victim to the system's whims, all of which have been thoroughly deplored before (*CL*, Feb. '66).

The Ford spotted Brand C 10 cu. in. and the sporting gesture shows in data panel figures and performance curves. Yet, on the basis of seat of the pants comparisons, the Ford seemed the better performer. This impression was undoubtedly attributable to the 3-speed automatic with which the Ford was supplied; it would be less than accurate to say the Ford lived up to expectations for its gearbox, however. There was a looseness of operation, presumably engineered into the mechanism to achieve shift smoothness, which defeated quick gear changing

and still left some roughness. In theory, and borne out in past experiences, the 3-speed automatic allows a car to perform better than a 2-speed automatic—simply because there is less compromise involved when there can be an intermediate gear.

Ride, handling and roadability are the areas in which the apparent switchabout in engineering practice was most noticeable, however. The Six is expected to be better balanced in weight distribution; the test car wasn't notably improved. As the basic design, a Six chassis is more likely to have op-

FORD SIX

imum harshness control engineered into it; Ford's V-8s are better in this respect. Even allowing for the soft standard springs, the Six should handle as well as the V-8; it didn't. The same suspension softness ought to give a smooth pillowy ride; there's a toss-up between Six and V-8 here.

None of this is to say the Six is "bad" and the V-8 is "good." The comparison has to be relative, and relative to non-Ford products as well. In *CL's* estimation, the Ford V-8s have proved to be superior in areas of roadability and handling to better selling competitors, though less so than products from the third-ranked corporation. However, the fact is that the Ford Custom Six didn't display handling qualities on a par with those of the V-8s. And it is this as much as anything which provides the most significant clue to the reversal in basic engineering. It was almost as if Ford engineers cheapened various drive and suspension parts in a V-8 in order to substitute the 6-cyl. engine, making the basic Six an afterthought.

The Six does its work with a certain, if minimal, handiness and dispatch. Provided one views his transportation as the mere trucking around of human cargo, he need look no farther than a Ford Six—or any other basic Six in the industry, for that matter. The Ford will do the job, with reliability, with a certain style, and with no need for the driver to become involved with or attached in any way to the chore at hand. He can punch the button for his destination and the automatic Otis takes him effortlessly to that stop. There is little of even remote interest to the enthusiastic or serious driver.

Where this Ford begins to exhibit some individualistic luster is in finish and appointments in the passenger compartment. Quality of upholstery and its execution have not been particular strong points with Ford in years past, but 1965 models displayed a reversal of that trend and 1966 confirms a giant step in the opposite direction. Though one of Ford Division's cheaper cars, the Custom 500 had floor carpets that were rich, durable and fully fitted. Door panels, dash padding and seat coverings all displayed the proper fitting of tasteful materials. The styling dictum is that the lower-priced models should have hose-down

interiors (for livestock to ride therein?) and this meant a 2-fold benefit in the Ford: Extremely durable vinyl and nylon materials were used but, by the very simplicity of styling, it was all used most tastefully. Only a few years ago interiors of such quality were found only on the luxury cars.

FORD STILL overlooks the design of a really comfortable bench seat, preferring to continue the past construction methods underneath the upholstery. The front seat still feels as if it had a convex transverse cross-section, causing the passengers to slide toward the lower edges at the doors. Relationship between steering wheel height and seat cushion remains in the typical unsettling fashion of past Fords, making one wish to meet the obviously misshapen engineer who signs off that particular item as satisfactory. Moreover, the obvious fix for this—a tilting steering wheel—is not listed among Ford options.

To give credit where it is due, the brakes performed quite satisfactorily for an all-drum system. Maximum deceleration rates were consistent and remarkable, but the most notable factor was the excellent control. On the first stop, the right rear locked up from

1966 FORD CUSTOM 500 SEDAN



DIMENSIONS

Wheelbase, in.	119.0
Track, f/r, in.	62/62
Overall length, in.	210.0
width	79.0
height	55.6
Front seat hip room, in.	62.6
shoulder room	60.0
head room	38.9
pedal-seatback, max.	42.0
Rear seat hip room, in.	62.7
shoulder room	59.9
leg room	37.7
head room	37.7
Door opening width, in.	32.3/30.9
Floor to ground height, in.	12.5
Ground clearance, in.	6.0

PRICES

List, fob factory	\$2533
Equipped as tested	2911
Options included: Auto. trans., exhaust control device, smog valve, power steering, am radio.	

CAPACITIES

No. of passengers	6
Luggage space, cu. ft.	19.1
Fuel tank, gal.	25.0
Crankcase, qt.	5.0
Transmission/diff., pt.	20/5
Radiator coolant, qt.	13.0

CHASSIS/SUSPENSION

Frame type	perimeter
Front suspension type: Independent by s.l.a. upper/lower arms, axial strut; coil springs and tubular shock absorbers.	
ride rate at wheel, lb./in.	82
anti-roll bar dia., in.	0.69
Rear suspension type: Live axle with 3 control arms and lateral track bar.	
ride rate at wheel, lb./in.	107
Steering system: Integrally power-assisted recirculating ball nut with parallelogram linkage, cross-link and idler; ball-joint steering knuckles.	
gear ratio	17.1
overall ratio	21.9
turns, lock to lock	4.0
turning circle, ft. curb-curb	41.0
Curb weight, lb.	3640
Test weight	3980
Weight distribution, % f/r	55/45

BRAKES

Type: Single-line hydraulic; self-adjusting duo-servo shoes in composite drums.	
Front drum, dia. x width, in.	11.03 x 2.5
Rear drum, dia. x width	11.03 x 2.25
total swept area, sq. in.	330.2
Power assist	none
line psi @ 100 lb. pedal	750

WHEELS/TIRES

Wheel size	15 x 5JK
optional size available	15 x 6JK
bolt no./circle dia., in.	5/4.5
Tire make, brand: Firestone Deluxe Champions	
size	7.35-15
recommended inflation, psi	24
capacity rating, total lb.	4140

ENGINE

Type, no. cyl.	IL-6, ohv
Bore x stroke, in.	4.00 x 3.18
Displacement, cu. in.	240
Compression ratio	9.2
Rated bhp @ rpm	150 @ 4000
equivalent mph	102
Rated torque @ rpm	234 @ 2200
equivalent mph	56
Carburetion	1 x 1 barrel dia., pri./sec.
Valve operation: Hydraulic lifters, pushrods and rocker arms.	
valve dia., int./exh.	1.78/1.56
lift, int./exh.	0.37/0.40
timing, deg.	12-62, 60-28
duration, int./exh.	254/268
opening overlap	40
Exhaust system: Single, reverse-flow muffler.	
pipe dia. exh./tail	2.0/2.0
Lubrication pump type	rotor
normal press. @ rpm	50 @ 2000
Electrical supply	alternator
ampere rating	42
Battery, plates/amp. rating	54/45

DRIVE-TRAIN

Clutch type	
dia., in.	
Transmission type: Automatic; torque converter with 3-speed gearbox.	
Gear ratio 4th () overall	
3rd (1.00)	3.00
2nd (1.46)	4.38
1st (2.46)	7.38
1st x t.c. stall (2.10)	15.5
synchronous meshing	planetary
Shift lever location	column
Differential type: Hypoid; straddle-mounted pinion.	
axle ratio	3.00

overexuberance on the driver's part, but this was easily avoided on subsequent stops. Without vacuum-powered assistance, the pedal had a somewhat spongy feel and required greater effort, although that didn't detract from the driver's ability to accurately feed in the necessary pressure to achieve maximum deceleration. Two thoughts suggest themselves under these circumstances: A large share of villainy attributable to current drum brake systems perhaps belongs instead to power assist devices, and brake capabilities in 6-cyl. cars are probably more in line with their needs and requirements. *CL* drivers, while mulling these possibilities, were unable to come to definite conclusions about either. Suffice it to say that the Ford Six has adequate, i.e., better than ordinary, brakes as normal production equipment.

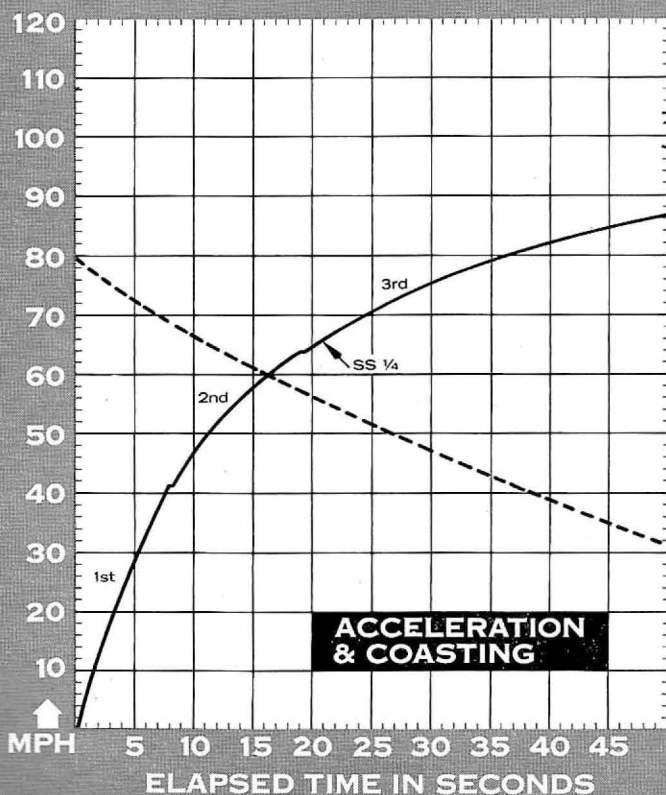
An automobile such as the Ford Custom 500 Six is hardly of the nature to lend itself to test and evaluation, though there is a publication or two which dotes on its type. Potential buyers would learn as much by taking a dealer's demonstrator for a test ride as by searching through enthusiast magazines for performance data. Considering the overwhelming number of V-8s, performance of the 6-cyl.-powered



full-size cars isn't even average. Among 6-cyl. cars, the Ford Six still suffers indignities at the hands of smaller, lighter cars with better power to weight ratios. As automobiles go, the Ford Six makes a relatively good taxicab; as taxis go, it is finished and appointed with such quality that it

seems to take on a limousine image. Those who can't stand excitement, whose doctors advise against surprises, would be well satisfied with the Ford Six. It will do a completely adequate job, just like a Philco appliance in a kitchen, and with about as much attention. Or reason to brag. ■

CAR LIFE ROAD TEST



CALCULATED DATA

Lb./bhp (test weight)	26.5
Cu. ft./ton mile	82.0
Mph/1000 rpm (high gear)	25.4
Engine revs/mile (60 mph)	2360
Piston travel, ft./mile	1250
Car Life wear Index	29.5
Frontal area, sq. ft.	24.4
Box volume, cu. ft.	534

SPEEDOMETER ERROR

30 mph, actual	26.7
40 mph	37.1
50 mph	46.7
60 mph	56.2
70 mph	66.6
80 mph	78.3
90 mph	90.0

MAINTENANCE INTERVALS

Oil change, engine, miles	6000
trans./differential	as req.
Oil filter change	6000
Air cleaner service, mo.	6
Chassis lubrication	36,000
Wheelbearing re-packing	30,000
Universal joint service	n.a.
Coolant change, mo.	24

TUNE-UP DATA

Spark plugs	Autolite BTF-6
gap, in.	0.032-0.036
Spark setting, deg./idle rpm	4/450-650
cent. max. advance, deg./rpm	22/4000
vac. max. adv., deg./in. Hg.	24/16
Breaker gap, in.	0.024-0.026
cam dwell angle	35-38
arm tension, oz.	17-20
Tappet clearance, int./exh.	0
Fuel pump pressure, psi	4.5-5.5
Radiator cap relief press., psi	12-15

PERFORMANCE

Top speed (3700), mph	95
Shifts (rpm) @ mph	
3rd to 4th ()	
2nd to 3rd (3700)	64
1st to 2nd (4000)	41

ACCELERATION

0-30 mph, sec.	5.2
0-40 mph	7.7
0-50 mph	11.2
0-60 mph	16.3
0-70 mph	24.2
0-80 mph	36.0
0-90 mph	
0-100 mph	
Standing 1/4-mile, sec.	20.7
speed at end, mph	66
Passing, 30-70 mph, sec.	19.0

BRAKING

(Maximum deceleration rate achieved from 80 mph)	
1st stop, ft./sec./sec.	26
fade evident?	slight
2nd stop, ft./sec./sec.	26
fade evident?	slight

FUEL CONSUMPTION

Test conditions, mpg	14.7
Est. normal range, mpg	13-16
Cruising range, miles	325-400

GRADABILITY

4th, % grade @ mph	
3rd	9 @ 59
2nd	14 @ 49
1st	22 @ 29

DRAG FACTOR

Total drag @ 60 mph, lb.	120
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