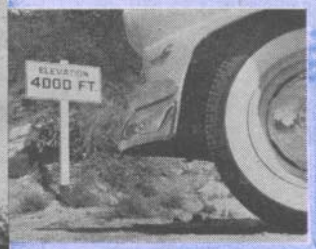



# WRINGING




## *Excellent handling, versatile automatic transmission spark new Ford*

*By Racer Brown*

*Editor's note: This is the first time that HRM has attempted a full-scale invasion of the new car field. We believe that it's high time for more honesty and fewer flowery phrases in new car tests. We also believe that the HRM staff is qualified to bring factual test reports before the public's eyes because our staff are automotive men first and editors and writers second. This places us in a unique position for three reasons: First, we are more critical of a car's behavior, which enables us to accurately diagnose and discuss all phases. Second, and perhaps more important, we will take it upon ourselves to suggest and recommend changes to the basic car that can be made by the purchaser. We feel that criticism by itself is not enough; in order to criticize constructively, sound corrective advice must be offered. Third, with the emphasis currently placed on performance, and this factor being our stock-in-trade, we will discuss modification possibilities and point the way to performance increases with reliability for everyday driving.*

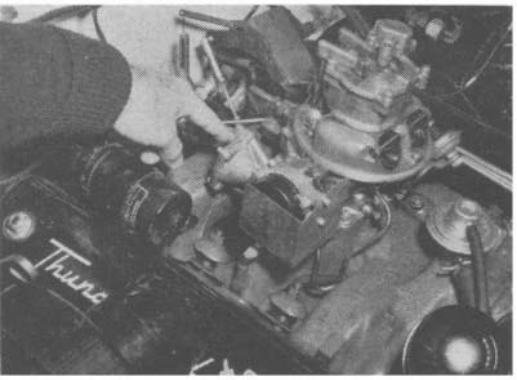
*Several items will be notable by their absence in our reports. First among these will be styling aspects, except where they become a result of mechanical design or improvement. No mention will be made of a car's top speed because we feel that the 100-plus mph that most production cars are capable of is not compatible with safe and intelligent driving practices on the highway and that such speeds are grossly illegal in all but a few states.*

*Our reports will not necessarily be con-*

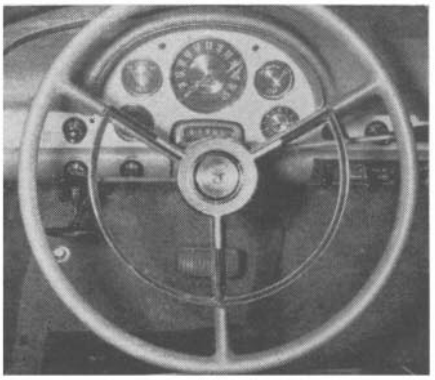
*LEFT. On Paxton Products dyno, Ford produced maximum of 112 road horsepower.*

*RIGHT. Thru roughest going, excellent handling qualities of the Ford persevered.*

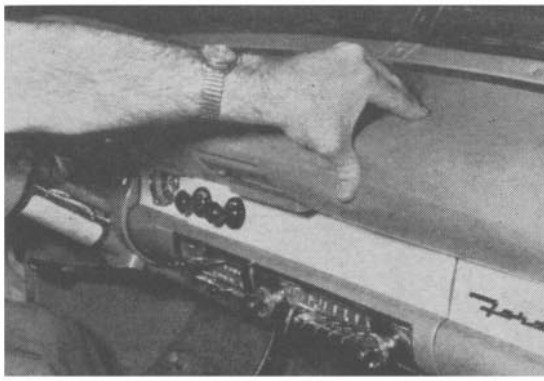
# OUT THE '56 FORD



*Finger points to secondary throttle diaphragm of new Holley. Reducing secondary spring tension increases acceleration.*



*New hooded panel and instrument cluster are simple and legible. All necessary controls are within easy reach of the driver.*



*Well-padded dash provides good passenger protection, but why not a similarly padded steering wheel hub for driver protection?*

*fined to production passenger cars. Whenever possible, we will slip in tests of interesting and salable foreign cars and perhaps some domestic sports types for variety and comparison purposes. Because of the time involved and the great numbers of available models and types, we cannot test all makes and models of any production year. Instead, we will choose cars possessing the best inherent performance factors in combination with those which have proven to be the most popular in price and type. We do not intend to deliberately "tie-in" our reports with the public release of new models because the necessary timing and haste would overshadow the true purpose of these tests, which is, from our standpoint, actual and factual reporting concerning all-important mechanical aspects. A secondary reason for this is that most all early production models are under close factory observation and later units will incorporate the necessary changes to make a better product.*

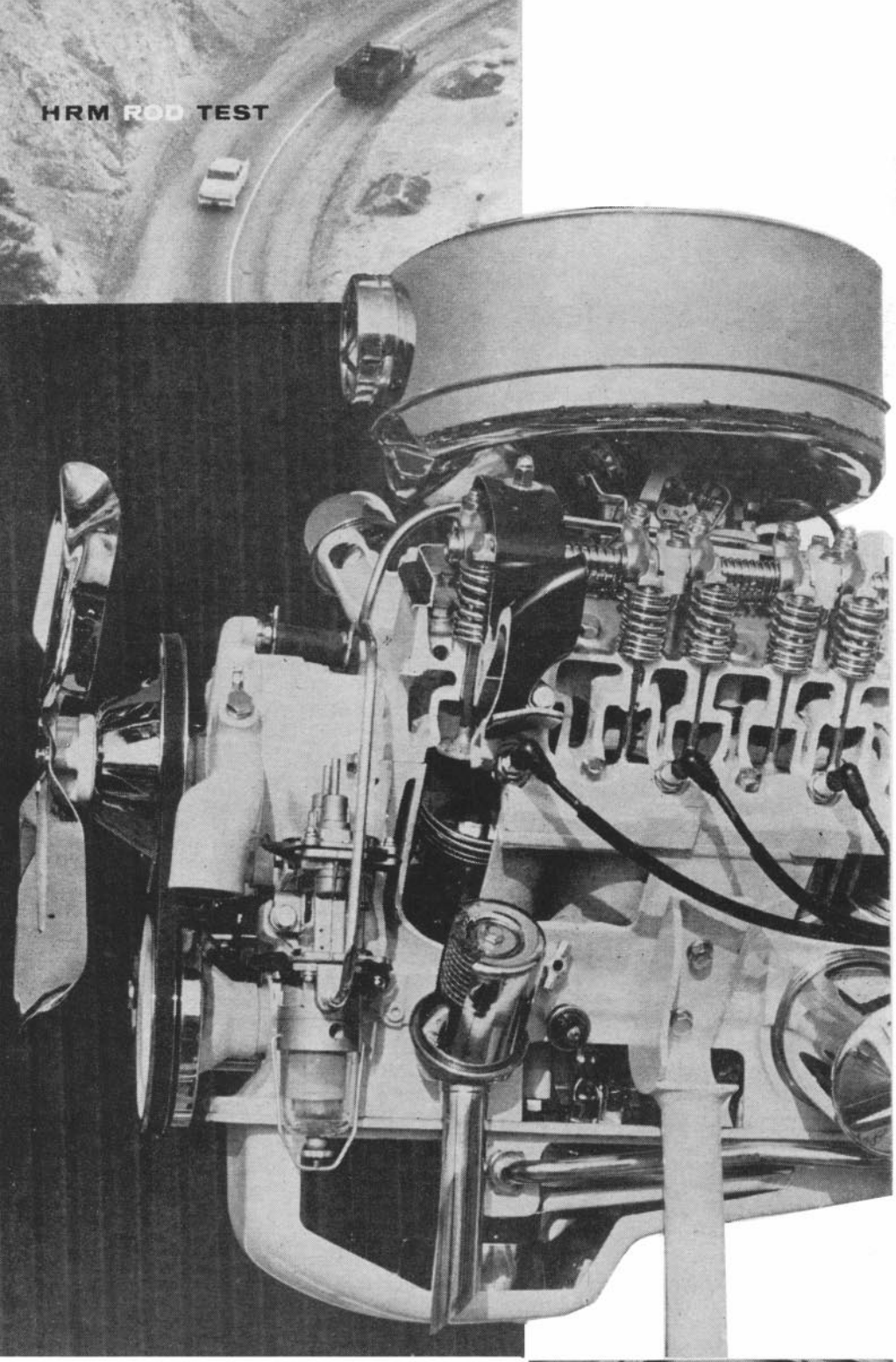
*Allow me to point out that we, by choice, refrain from using the term "road test." Ours are not "road tests" in the strictest and most mechanized sense of the words. We have chosen to ignore the sometimes meaningless and misleading instrumentation that, unfortunately, has become the trademark of some of the more literate testers. Instead, we place a premium upon our crews' mechanical and driving experiences, knowhow and common sense. In this way, we feel that our impressions may be conveyed without hiding behind theoretical circumstances. In doing this, we are certain that we are performing a most useful and interesting service for our readers, who form a large percentage of intelligent buyers and users of new and late model automobiles. We may not be the first in the reporting of new models but we will make every effort to be the best and the most practical. We solicit the opinions and criticisms of our readers in relation to this new program.*

When one mentions the name "Ford," he breathes a word that is the mechanical heart and soul of hot rodding. Thus, it seems quite appropriate to bring news of the 1956 Ford into our first complete new car test.

The car chosen for the kick-off is bound to be one of the favorites of the current model year: It was a "Fairlane" 4-door sedan equipped with heater, signal-seeking radio, whitewall tubeless 7.60 x 15 tires, and what is known as "safety package B," back-up lights, tinted glass, two-tone paint and Ford-O-Matic. Power steering and the 4-way power seat adjustment were also included in the test car. "Safety package B" is a $26.90 option that consists of seat belts and a vinyl-covered foam rubber padding on the dash panel and sun visors.

The engine is the same basic 292 cubic inch (3¾ inch bore, 3.30 inch stroke) "Y8" that was used in last year's Thunderbirds and Mercurys with a few improvements. In eight cylinder Fairlane models, this engine is standard, as it is in all eight cylinder station wagons. The rated brake horsepower power output is 202 at 4600 rpm. Rated torque is 289 pounds-feet at 2600 rpm. These figures are for Ford-O-Matic equipped Fairlane and wagon engines with an 8.4 to 1 compression ratio. A pair of optional 9 to 1 heads raises the rated power to 208 at 4600 rpm and rated torque to 299 pounds-feet at 2600 rpm. An identical engine, except for a compression ratio of 8 to 1, is used in all synchromesh and overdrive equipped Fairlanes and wagons. This one is rated at 200 brake horsepower at 4600 rpm and 285 pounds-feet of torque at 2600 rpm. Other engines in the Ford line will be discussed later. The engine in our test car was equipped with the 9 to 1 heads, a Holley four-throat carburetor and standard Ford dual exhausts.

In this and subsequent tests automatic transmissions will be used whenever possible for three significant reasons: First, because the Ford-O-Matic, in the case of Ford, makes up about 80 per cent of the total cars sold in the last two years. In other makes, where there is an option of synchromesh or overdrive, the total number of automatics sold varies between 70 and 90 per cent, which shows that the automatic transmission, be it of torque converter type or otherwise, is the "people's choice." Another group is represented by those cars that use automatics as standard equipment. Second, the largest (in piston displacement) and most powerful engines are usually hooked up to an automatic of one form or another, so



this group is capable of potentially higher performance than those with smaller and less powerful engines and synchromesh or overdrive gearboxes. Third, it would be definitely unfair to compare the performance of one car with an automatic against a car in a similar size and price class with a synchromesh box. So to be consistent, we'll stick to the automatics and let you draw your own conclusions as to performance with other types.

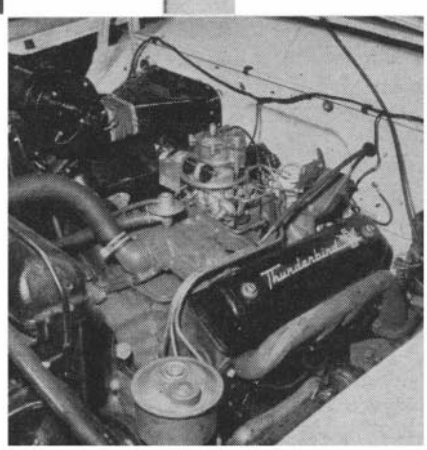
The car loaned to us had 7523 miles registered on the odometer when we got it, which assured us that it was properly "loosened up" and would not be hampered by "new" fits of components in the engine and running gear departments. We had the car for two weeks and drove it over 1000 miles under all kinds of conditions, so our acquaintance with the car was no casual affair; it was an intimate relationship between car and driver. First, the car was tuned to factory specifications and was checked over from stem to stern to make sure nothing was amiss. Then the speedometer and odometer were checked for accuracy and correction factors were obtained to be used in timed acceleration and fuel mileage runs.

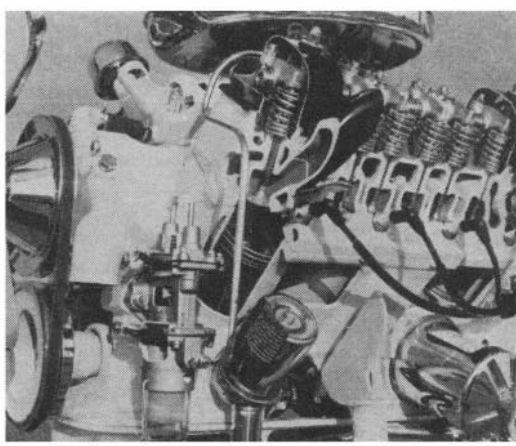
After these preliminaries, we drove to the Paxton Products Division of McCulloch Motors Corporation in Inglewood, California, for a run on their chassis dynamometer. As the accompanying chart shows, maximum road horsepower was 112 at 3500 rpm, equivalent to 86 mph in third speed. The dyno runs were made without touching the engine and all accessories (fan, air cleaner, fuel pump, power steering pump, water pump, etc.) were connected and operative. The fuel-air mixture ratio was checked with an exhaust gas analyzer and found to be slightly rich—about right for maximum power. No audible detonation was encountered at any engine speed under full load with the stock ignition setting. Incidentally, the fuel used during our test was premium pump gasoline of a brand and grade that is readily available in all parts of the country.

*TOP. Cutaway display of Ford "Y8" reveals all the innermost working details of modern and ruggedly designed ohv engine.*

*Spacious engine compartment provides a relatively good degree of accessibility for future repairs, adjustments and servicing.*

*Close study of cutaway provides good education in engine design. Note valve gear, ports and full length water jackets, etc.*



Following the dyno runs, we drove the car on our pre-determined route from Hollywood, over the Angeles Crest highway to Lancaster and back to Los Angeles by Mint Canyon. This enabled all of us (Man. Ed. Bob Greene, Bob D'Olivo, our lead-footed photographer and me) to drive the car under wide and fairly representative conditions. The Angeles Crest road contains nothing but twists and turns and the altitude varies from about 1000 feet to 4500 feet above sea level. The Mint Canyon stretch is mostly open highway with a couple of good grades and some turns. And by now, everyone should be acquainted with the miseries of Los Angeles city driving. This phase of the test covered 200 miles.

For the second phase, the car was driven up the coast to Ventura and back, a stretch that is almost at sea level and consisting largely of restricted speed zone highway driving and a few small towns. This run put another 150 miles on the odometer and, incidentally, was made at night in the rain. These routes will be used for all subsequent tests.

After everyone had several turns at the wheel under various conditions, the unanimous and enthusiastic opinion was that the '56 Ford possesses really excellent handling qualities. The term "handling qualities" refers to inherent factors of an automobile chassis and include directional and lateral stability, bounce and dip control, tire adhesion, weight distribution, ease and responsiveness in making steering corrections and the manner in which the car behaves as a unit. These factors are the result of good (or bad) design of tangible and important mechanical items such as springs, shock absorbers, steering gear, steering linkage, suspension linkage, stabilizer bars, ratio of sprung to unsprung weight, etc. Also, there is the very important psychological factor of car "feel." In all of these, the Ford scored outstandingly high.

Our test car was equipped with the optional Bendix "linkage booster" type power steering, which accounted for the ease of steering. Nevertheless, a very definite "feel-of-the-road" is maintained by the method of valving the booster unit. The steering gear ratio is 20.1 to 1 with an over-all ratio of 25.3 to 1 for both power and manual steering, and it takes 4¾ turns of the steering wheel for full lock-to-lock travel of the front wheels. This is definitely on the "slow" side and could be effectively reduced by about 26 per cent (to 3¾ turns lock-to-lock) by the installation of Ford Thunderbird steering arms (Ford part numbers B5S-3130 and B5S-3131, price $12.90 per pair). The added steering effort resulting from this change would be negligible with power steering but it would be a bit stiffer with manual steering. Yet, it would enable faster corrections to be made when necessary. Changing to the 'Bird steering arms requires re-alignment of the front end.

Directional control of the car was simple to maintain at all times, in spite of the "slow" steering ratio. This is due to fewer parts and the excellent geometry of the Ford ball-joint front end and steering layout. However, we found that at first, it was an easy matter to oversteer the car, but this tendency disappeared as we got used to the power steering. Also, we found that it required a conscious effort to return the wheel to a neutral position when coming out of a tight turn. About the only cure for this would be to prescribe an additional one to 1½ degrees more positive caster in the front end but, in all probability, this trait would not show up in a car with manual steering. We felt that power steering was not entirely necessary during normal driving. However, if a large percentage of driving is done in the city or if womenfolk occupy the driver's seat, power steering would be a definite asset. The Ford-Bendix unit is a good one and has a further advantage in that it can be installed at any time by disturbing a minimum of existing parts.

The ride of the Ford is a bit more firm than in comparable makes but this is justified by the car's roadability. Primarily, riding qualities are a function of weight on the wheels, spring rate (360 pounds per inch front, 110 pounds per inch rear) and shock absorber valving. At first, the spring rates may appear to be a bit soft, but the car wasn't excessively heavy (3630 pounds without passengers) and weight distribution was 58½ per cent, or 2130 pounds on the front wheels and 41½ per cent, or 1500 pounds on the rear wheels. The shocks do a good job of controlling the bounce and rebound actions of the springs, although stiffer ones at the front (like Gabriel "Silver E's") would not ruin the ride and would give even better control. For the road race minded, the "Silver E's" at the front, Gabriel "Adjust-O-Matics" at the back and a '55 Ford station wagon front stabilizer bar (Ford part number B5A-5482-A, price $5.50) would be an investment for pool table-like cornering qualities. The '56 front stabilizer is the same for passenger cars and wagons, while the '55 wagon stabilizer has a higher rate. In this respect, the lateral stability of the new Ford is aided by relatively wide treads (58 inches front, 56 inches rear) and the fact that the rear semi-elliptic springs are mounted outside the frame instead of directly beneath.

Driving the car was a breeze. It could be "drifted" through turns with ease and finesse and the rear end would start to break loose, giving ample warning that the car was approaching its limit. This could be easily corrected by a nudge of the steering wheel and changing the throttle setting to conform to conditions. While this road race treatment is not recommended for everyday driving, it did allow us to explore the car's potential. Tire squeal was at a minimum, due in part to Firestone's effective tread pattern, plus the fact that we had the tires inflated to 36 psi instead of the Ford-recommended 26 psi front and 23 psi rear. The car showed no signs of "sashaying" at the tail end, either in turns or on

(*Continued on page 52*)

**PERFORMANCE CHART—'56 FORD**

| Engine RPM | MPH | Road Horsepower |
|---|---|---|
| *2000 | 30 | 83 |
| *2500 | 41 | 91 |
| 3000 | 51 | 104 |
| 3500 | 86 | 112 |
| 4000 | 97 | 108 |

*In intermediate (2nd speed).
All others in 3rd speed.

**Acceleration**

| | |
|---|---|
| Average 0 to 60 MPH | 10.8 secs. |
| Average 0 to 80 MPH | 19.4 secs. |
| Standing quarter-mile | 17.8 secs. |

**Fuel and Oil Consumption**

| | |
|---|---|
| City driving | 12.6 MPG |
| Highway driving | 16.7 MPG |
| Mountain driving | 13.0 MPG |
| Average | 14.1 MPG |

Oil consumption—less than ½ pint in 1000 mile test.

**Statistics**

| | |
|---|---|
| Weight | 3630 lbs. |
| Weight distribution: | 58½% (2130 lbs.) front, 41½% (1500 lbs.) rear. |
| Braking area | 180 square inches |
| Braking effectiveness | 62% front |
| Transmission type | Ford-O-Matic |
| Rear axle gear ratio | 3.22 |

# THE '56 FORD

(*Continued from page 17*)

the straights, nor was there any "wallowing" in the front end.

In the cockpit, all controls and accessories can be easily reached by the driver, except for the glove box. The foam rubber padded seats were firm but comfortable and the seating position was such that it did not tire one while driving for long distances. Instrument layout is simple, sensible and legible during day or night operation. Glare and reflections are notable by their absence. Steering wheel position is comfortable. The wheel itself shows considerable thought, what with its recessed hub, the positioning of the horn ring, which prevents accidental tweaking, yet it does not obstruct a clear view of the instruments, and the finger grips on the reverse side of the rim encourage correct hand positions. The seat belts, padded dash and visors give real as well as psychological protection, although the seat belt buckles are somewhat awkward to fasten. With all this, plus impact-tested and proven door latches, one feels quite secure behind the wheel. However, it's my opinion that a well-padded steering wheel hub would give further protection to the face and head of a driver in the event of a crash. The wrap-around windshield and large rear window provided very good visibility in all directions. There was a minimum of distortion at the corners of the windshield. The only disconcerting note was that the left hand vertical windshield post was frequently in the line of vision during sharp left turns.

During our test, the 11-inch diameter Bendix duo-servo brakes performed very well, and positive straight-line stops were never a problem. Only during deliberately severe and prolonged use was any degree of "fade" noticeable. Front end "dive" during braking was at a minimum, no doubt due to the inclined front coil spring arrangement adopted in 1955. The new fixed-anchor brake design reduces the number of adjustments to a single expanding strut arrangement at the bottom of each assembly. About the only inconvenience was the relatively high position of the brake pedal, which was necessitated by a maximum pedal travel of six inches for both power and manual braking systems. (Our Ford did not have power brakes.) Ford continues near the head of the parade with 180.16 square inches of effective brake lining area, which corresponds to a ratio of 20 pounds of car weight per square inch of lining area for our test car.

The new model (in '55) Ford-O-Matic is perhaps the most versatile torque converter type of automatic transmission available today. In "drive range" it is either a two or three-speed unit, depending upon road speed and throttle position. For instance, during normal operation in "drive," the car will start from a standstill in intermediate or second speed, later shifting to third or direct drive. Or, if the throttle is squashed to the floor, a detent will shift the transmission to low and hold it there until about 35 mph is reached or the throttle is released, at which time a shift into intermediate will take place followed by another shift into third. A downshift from third to intermediate may be effected in "drive" by flooring the throttle anywhere between about 20 and 65 mph and, if the throttle remains on the floor, an upshift into third will occur at about 70 mph. If the car is started in "lo" range, the transmission will remain in low or first speed until the selector is manually shifted to another position.

Now, if a lower gear seems desirable for mountain driving or "compression braking," the selector is simply moved from "drive" to "lo" and, at any speed above 15 mph, the transmission will downshift into intermediate and stay there until the selector is moved. If the speed falls below 15 mph in this position the transmission will shift into low and the selector must be moved from "lo to "drive" and back to "lo" again, after the shift from low to intermediate or third has taken place in order to lock it in intermediate. Intelligent use of the Ford-O in this manner will not inflict any undue hardships upon it but I strongly doubt that FoMoCo will ever recommend this practice. In any event, it isn't advisable to hold the transmission in intermediate beyond 75 mph.

This feature also aided the acceleration times considerably by using the Ford-O in the following manner: First, for the zero to 60 mph runs, the selector was moved to "lo" with the brakes applied, then simultaneously, the throttle was floored and the brakes released. The Ford-O remained in low until 45 mph was reached, then the selector was moved to "drive," which was accompanied by a shift into intermediate. For the zero to 80 mph and standing quarter-mile runs, the procedure was the same, except that after the low to intermediate shift had taken place, the selector was moved to "lo," thus locking the Ford-O in intermediate until 75 mph was reached, at which time the selector was moved to "drive" to permit a shift into third. This practice isn't recommended by FoMoCo either but it helped to post the following averages: Zero to 60 mph, 10.8 seconds; zero to 80 mph, 19.4 seconds; standing quarter-mile, 17.2 seconds. By using "drive" only, the average zero to 60 mph time was 11.2 seconds, the zero to 80 mph, 20.1 seconds and the standing quarter-mile, 17.8 seconds. These times are pretty good for a stock automobile, particularly in view of the high (low numerical) rear end ring and pinion gear ratio and accounted for very good "top end" performance.

The reduction ratios of the Ford-O are 2.40 to 1 in low, 1.47 to 1 in intermediate, 1 to 1 in third and 2.00 to 1 in reverse. The maximum torque converter ratio at stall speed is 2.1 to 1 between 1540 and 1740 rpm. After 24 acceleration runs made in quick succession, the Ford-O was none the worse for the abusive treatment and continued to deliver very smooth shifts at the correct engine speed-road speed points. It should be pointed out that the Ford-O performs at its best when the transmission and oil have been thoroughly warmed up.

The rear axle gear ratio of our test car was the standard Ford-O ratio of 3.22. For the purpose of good performance at low and mid-range speeds, this ratio is in the clouds and represents a concession made in the interests of fuel economy. A switch to the listed optional Ford-O ratio of 3.56 would definitely improve performance with very little, if any, increase in fuel consumption. But I'll bet that obtaining the 3.56's in anything but a wagon will be a problem. Of course, this ratio as well as 3.31's, 3.78's, 3.89's and 4.11's are available from Ford parts dealers and are interchangeable with existing gears. In Ford-O equipped cars, modifications for improved performance begin not with the engine, but in the rear axle assembly.

In checking the car's fuel mileage, we didn't resort to rather inconclusive test-tube methods: We simply drove the car as if it were our own. We must collectively confess to a degree of "lead-footedness" not found in the average driver and if the throttle were treated with its due share of respect, the miles-per-gallon figures would have been increased by at least 12 to 15 per cent. In city driving, which incidentally included all of the full-bore acceleration runs, the average miles-per-gallon was 12.6. In the mountains, we averaged 13.0 mpg and on the highway at relatively steady speeds between 45 and 65 mph, we averaged 16.7 mpg for an overall average of 14.1 mpg. Oil consumption for our 1000 mile test was less than ½ pint.

There are a total of six variations from three basic engines available in the '56 Fords. These have been reported in HRM from time to time, so we won't go into great detail here. The first of these engines is a 223 cubic inch six (3⅝ inch bore, 3.6 inch stroke). This one is rated at 137 brake horsepower at 4200 rpm and 202 pounds-feet of torque at 2200 rpm and is available in all three Ford lines with either synchromesh, overdrive or Ford-O. A 272 cubic inch (3⅝ inch bore, 3.3 inch stroke) V8 is available only in "Mainline" and "Customline" models. In synchromesh or overdrive forms with a compression ratio of 8 to 1, the rated output is 173 brake horsepower at 4400 rpm and 260 pounds-feet of torque at 2400 rpm. With Ford-O and an 8.4 to 1 compression ratio the output is 176 brake horsepower at 4400 rpm and 264 pounds-feet of torque at 2400 rpm. Both of these V8 engines use a single two-throat Holley carburetor with 1 11/16 inch diameter venturii and a new integral automatic choke.

Because of an exceptional degree of interchangeability of stock parts, the engine modification prospects for the V8 engines are bright indeed. For example, a 272 engine can be made into a 292 by boring the cylinders ⅛ of an inch to 3¾ inches and using stock 292 pistons. Or, the displacement can be stretched to 304 cubic inches by using a '56 Mercury crankshaft (3.440 inch stroke), grinding the main bearing journals to 2.498 inches in diameter and using special pistons. In the case of a 292 engine, it's entirely feasible to bore the cylinders .050 of an inch to 3.8 inches and use stock '56 Mercury pistons, which will raise the displacement to 296 cubic inches. The '56 Mercury crankshaft can also be used in this engine to raise the displacement to 312 cubic inches by grinding the main bearing journals to 2.498 inches in diameter. However, if the '56 Mercury crank is used with '56 Mercury pistons, it is absolutely essential that '56 Mercury connecting rods be used. These rods are .070 of an inch shorter than the Ford rods. If Ford rods are used, the pistons will strike the heads with force sufficient to break up the entire engine. Before you break out the boring bar, it's wise to remember that it isn't advisable to rebore the cylinders of post '54 Ford blocks any larger than ⅛ of an inch from their original size. This will leave enough "meat" for a good margin of structural safety plus enough for a couple of light "clean-up" bores. Also, when new pistons, cranks or rods are used, it's strongly advisable to rebalance the entire rotating and reciprocating assemblies.

For those desiring additional performance without digging into the engine, the heads can be milled .060 of an inch. On a 272 engine, this will raise the compression ratio to 8.8 to 1 on the synchromesh and overdrive cars and 9.2 to 1 on Ford-O cars. On 292 engines, the compression ratio will be 9 to 1 and 9.4 to 1 on synchromesh-overdrive cars and Ford-O cars, respectively. With the optional 9 to 1 heads on 292 engines, a cut of .030 of an inch will raise the compression ratio to 9½ to 1, which should be considered maximum for use with a stock cam and the best pump grade gasolines. If a good reground cam is used, which is, incidentally, a very sound investment in performance for the late Fords, a .060 of an inch cut from these heads will boost the compression ratio to an even 10 to 1. In any event, milling the heads beyond .060 of an inch is to be avoided because the "top deck" of the heads is rather thin and will not stand excessive milling without structural failure, but .060 of an inch is OK.

The 292 intake manifold and four-throat Holley carburetor will bolt right

## THE '56 FORD continued

to a 272 engine. If this is done, the vacuum advance in the ignition *must* be recalibrated to 292 specifications. Or, if the expense is justified, a "Bird" ignition may be installed that contains an integral tachometer drive, although for the same money, I would prefer to invest in a centrifugally advanced ignition. Also the 292 dual exhaust system will fit the 272 with the optional tailpipes or the 292 tailpipe-rear bumper combination.

While we're close to the subject of carburetors, all the derogatory remarks I've made about previous Holley four-throats certainly do not apply to the '56 carburetor. This one is a dandy and approaches the operating excellence of the Holley two-throats. Never once did it miss a lick during hot or cold starts, nor did it flood, "drop dead" on turns or fill the car with gasoline fumes. The customary "flutter," felt when the secondary throttles started to open in earlier models, was not present. The idle mixture screws could be adjusted to a gnat's eyebrow and there were no "flat spots" or "hesitations" or "stumbles" caused by either lean or rich mixture conditions in any speed range. Although it wasn't tried on this car, experience has shown that by reducing the secondary throttle diaphragm spring pressure by about 25 per cent will definitely improve mid-range performance.

The ignition system used with four-throat carburetors is a step forward from previous Ford-Holley units. These improvements arise primarily from the use of a second spring-load vacuum diaphragm "can" attached to the ignition case and connected to the intake manifold. Its purpose is to momentarily retard the spark by utilizing the drop in intake manifold vacuum that occurs when the throttle is opened. In doing so, the total spark advance is kept below the point at which detonation and rough engine operation occur due to excessive advance. By advancing the ignition, the engine of our test car became considerably more responsive, however, the engine was quite rough between idle speed and about 1500 rpm. This suggests that any changes to the spark advance curve occur after an engine speed of 1500 rpm is reached, and accordingly, the following advance curve is entirely satisfactory with 292 engines and compression ratios up to 9½ to 1.

| Distributor RPM | Distributor Degrees Advance | Vacuum (inches of mercury |
|---|---|---|
| 200 | 0 | 0 |
| 300 | 1½ | 0.16 |
| 400 | 2½ | 0.29 |
| 800 | 8½ | 0.88 |
| 1200 | 12 | 1.27 |
| 1600 | 15 | 1.73 |
| 2000 | 15 | 2.19 |

This curve can be duplicated by adjusting the primary and secondary breaker point return springs while the ignition is mounted on an ignition testing machine. After reinstalling the ignition on the engine, the initial advance should be set with a timing light to fire at a maximum of 11 crankshaft degrees before top center. This will give a total maximum advance of 41 crankshaft degrees. If the heads have been milled, the initial advance may have to be dropped back to around eight crankshaft degrees. While a 12 volt electrical system has been adopted by Ford (with negative ground, incidentally), it's interesting to note that full line voltage reaches the ignition coil only during starting; at all other times, the voltage is reduced to about six by the use of an external resistor.

The length of a list of special equipment available for the rocker arm Fords is exceeded only by their flat-headed forebears. There are special pistons (up to 3⅞ inches), special stroker cranks (with stroke lengths up to 3⅜ inches), camshafts, valve lifters and springs, push-rods and rocker arms. There are a few excellent single and dual coil ignitions, exhaust headers, dual and triple two-throat intake manifolds and dual four-throat manifolds. Discretion and moderation in the selection and use of any of these performance-increasing items will result in a very high level of performance with no serious reductions in longevity or reliability, for the Ford engines are "receptive" to treatment and have been designed to withstand far greater outputs than are possible with stock engines. We have in the works a series of tests involving one of the new FoMoCo engines and there is no reason to doubt that an honest and reliable 300 brake horsepower under sustained full load is not only attainable on gasoline, but is completely suitable for use on the street. But more of that at a later date.

The new Ford is no longer a target of derision as in the "Tin Lizzie" days. It's all automobile—and a good one, too. What it lacks in blinding performance, in stock form, it makes up for by inherently excellent roadability. Let's face it; the Fords have *got* to be good in order to sell in excess of one and a half million passenger cars a year. In 1956, this figure will no doubt drop by the wayside because of two very significant factors. First, the car itself is definitely better than any of its predecessors. Second, more people than ever before will have a personal interest in Ford products because of the proposed sale of Ford stock to the public, which has already proved to be a good sales promotion plan, although this was not the primary reason for the stock sale.

Any owner who shouts "It's a F-o-o-o-r-d!" can be justifiably proud that it is, indeed, a Ford. If, for the money involved, you can find a better domestic automobile to suit your requirements whatever they might be, my advice is to buy it.