



During the 1961 model year, Ford Motor Company sold approximately 7000 automobiles equipped with 390-inch high performance V8 engines. These engines were rated at 375 horsepower, or when equipped with optional dealer-installed triple carburetion, 401 horsepower. In the hands of drag enthusiasts throughout the country, they performed quite well in the super stock classes and etched some record speeds and elapsed times on a wide assortment of loving cups.

Another group of speed enthusiasts did quite well with the high performance Fords too, as mechanics and drivers chose them to compete in stock car races on both asphalt and dirt tracks throughout the country. A large amount of publicity resulted from wins at such famous tracks as Darlington and Milwaukee but whether on the 1/4-mile drag strips, Darlington, Milwaukee or at some other racing event, Fords were winning and this the dealers liked.

Before the 1962 model year is over, Ford plans to sell about 10,000 of their new hot cars and it's a cinch that there will be a big collection of trophies won by many of them. The important thing from Ford's standpoint is that the spectators who see these cars perform will quite likely check with their nearest Ford dealer when they are in the market for a new car. Maybe they won't want the high performance model but they will at least be in the showroom looking at all the models under the Ford nameplate. Once they are in the showroom, plenty of them will place an order. That's how cars are sold.

Now, how about this new high performance model which Ford hopes to market so well in '62? It is not really just a single model; the high performance tag comes from the engine but there are actually two engines to choose from and they can be bought in any of the Galaxie body styles except for

FORD'S SUPER SUPER STOCK

by RAY BROCK

405 horses from 406 cubic inches means efficiency.

In the 1962 high performance Ford package, the story doesn't end there; the rest of the car matches

station wagons. Both engines have 406 cubic inches displacement and except for carburetion and horsepower ratings, they are identical. With a single four-barrel carburetor, the rating is 385 hp at 5800 rpm with 444 pounds/feet of torque at 3400 rpm. With triple two-barrel carburetion, the ratings are 405 hp at 5800 rpm and 448 pounds/feet of torque at 3500 rpm. If you check early '62 Ford specification sheets, you

will note that the high performance engine option is 390 cubic inches and carries ratings of 375 and 401 horses. These are the same engines used in 1961 and also for early '62 models before the 406-inch engines were readied for the assembly line. No more of the 390-inch engines will be built; the 406 supersedes them.

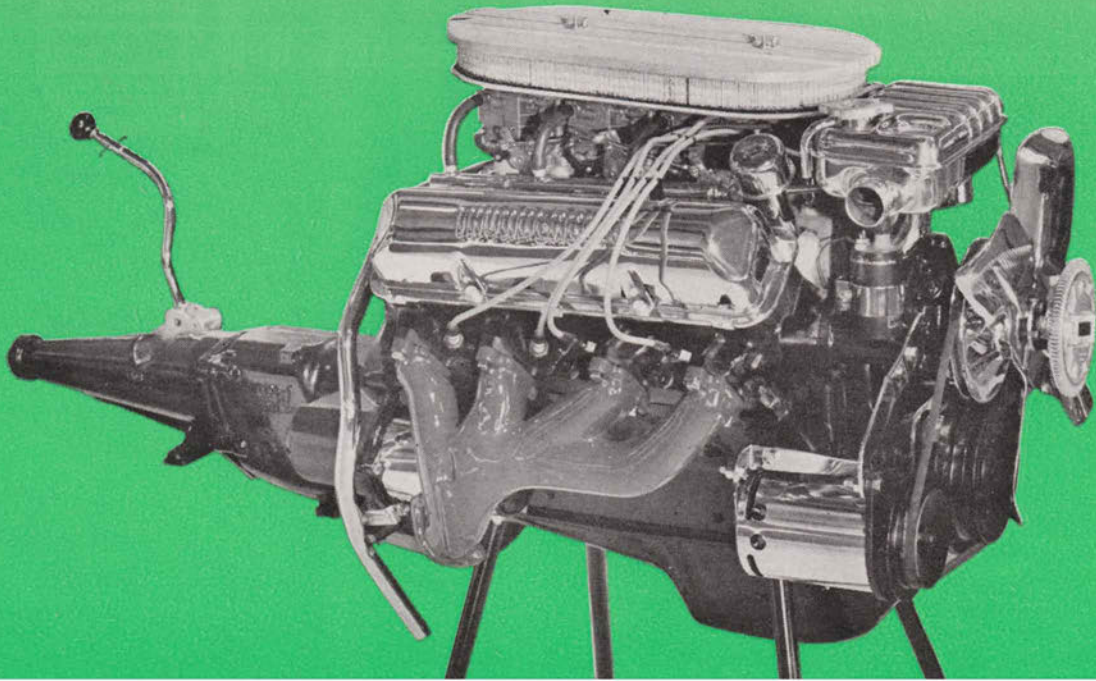
Getting to the 406 engine, it has a bore of 4.13 inches, .080 more than the 390, and the same length stroke as the 390, 3.78 inches. Compression is 10.9:1 as compared to 10.6 for the 390. Although these measurements would indicate that nothing more than an .080-inch overbore was given the 390 to increase displacement and compression, there have been several other important changes made to improve this engine. We will outline them.

ENGINE BLOCK

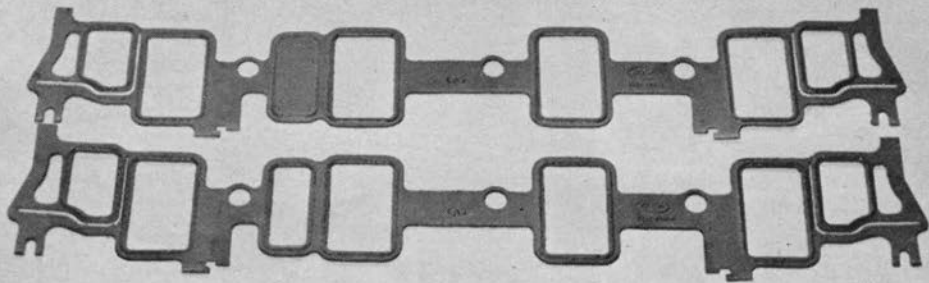
The only change here was to revise the water jacket coring to provide for the larger cylinder bore. Since the bore spacing (center to center distances between cylinders) hasn't changed since this series engine was first introduced in 1958 with 352 cubic inches and a 4-inch bore, the outer diameter of the cylinder walls are getting pretty close to each other. The bore spacing is 4.63 inches and subtracting the bore size, 4.13 inches, we come up with 1/2-inch of room for two cylinder walls, or 1/4-inch per side. To get water between the cylinders for proper cooling, the cylinder walls are actually flattened on the outer diameter where they come closest to the adjacent cylinder. The opening
(Continued on page 29)

When buying a Ford with the high performance 406-inch engine, special suspension components are included in the package. Heavy-duty springs, shocks, brakes and tires make these cars sure-handling over all roads at all speeds.





ABOVE — Display 406 engine fitted with four-speed transmission attracts plenty of attention at public showings.

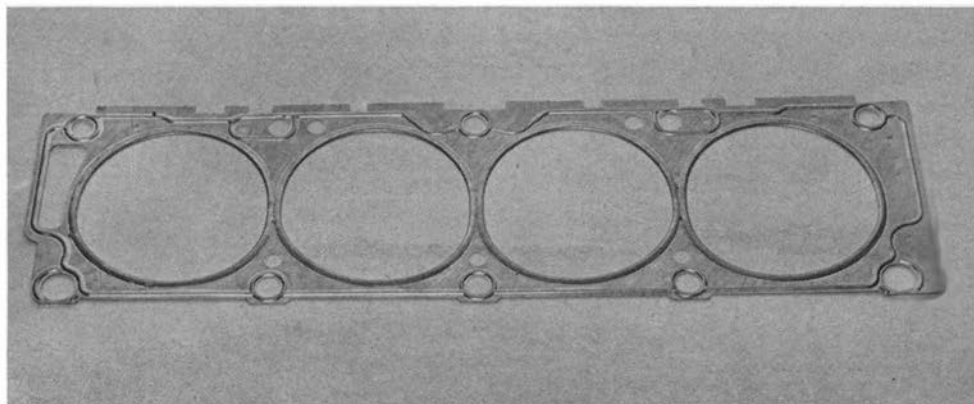
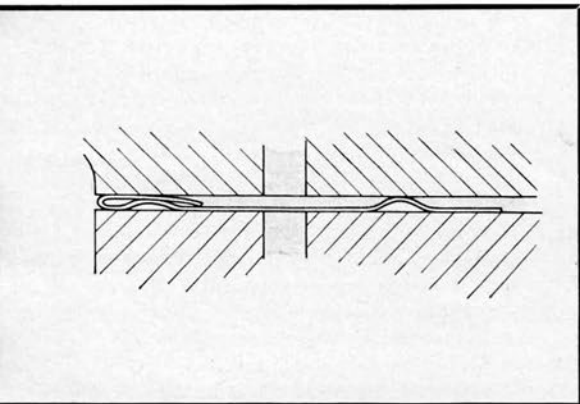
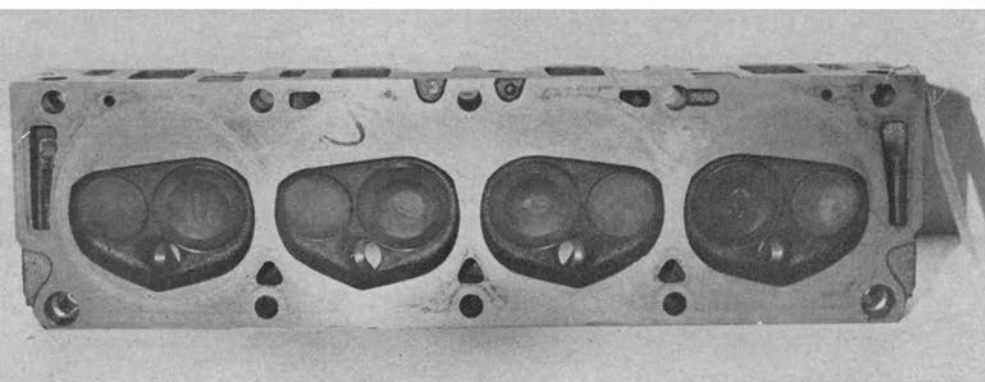


LEFT — As sold by the dealer, 406 engines use intake gaskets with openings for exhaust heat to the intake charge, bottom. The top gasket is available through dealers and has exhaust heat passage blocked for heavier air charge.

LEFT — Cylinder heads for 406 use a new chamber shape which permits better breathing. Exhaust valve is larger.

LOWER LEFT — Drawing shows how head gaskets use embossed dam, right, around edge of head and head bolts, a dam with steel gasket folded back over for double seal around cylinder, left.

BELOW — New gasket design permits a thin sheet of water to circulate freely between block and head to cool any possible hot spots occurring around cylinder.



FORD'S SUPER SUPER STOCK continued

for water between cylinders is about $\frac{1}{8}$ -inch so that means that each wall thickness is cut down an extra $\frac{1}{16}$ -inch at this point. Total it up and you have a maximum of $\frac{3}{16}$ -inch material at the thinnest part of the cylinder.

That $\frac{3}{16}$ -inch wall thickness represents a perfect block with no sand holes and perfectly centered bores. Try to bore this block too much and you just might have problems. A .030-inch bore (.015 per side) should never get you in trouble and a .060 overbore (.030 per side) will probably be safe most of the time but Ford engineers would prefer that those owners trying to get the very most from their engines stay away from the .060-inch overbore. The pres-

The relief spring in the pump will bypass at 105 psi for filter protection.

CRANKSHAFT

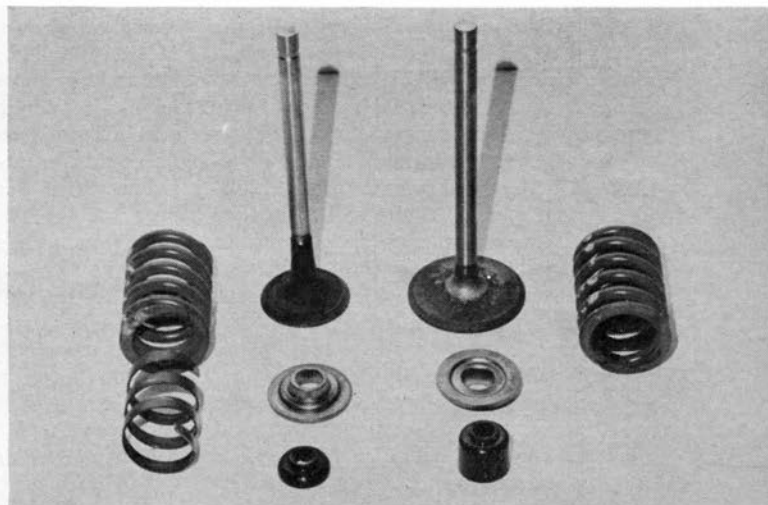
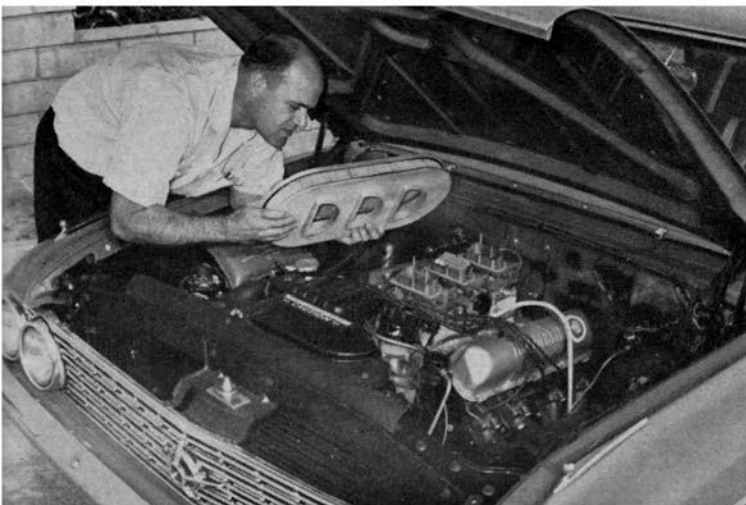
Although the 406 stroke is the same as the 390, a new crankshaft is used for the larger engine. Journal sizes are the same; 2.750-inch mains and 2.440-inch for rods, less clearances. It is still a cast nodular iron crankshaft and the bearing inserts are the same as before, heavy-duty steel-backed with a copper-lead overlay. The one difference is in the counterweight department. The 406 has more mass in the counterweights to compensate for heavier connecting rods.

CONNECTING RODS AND PISTONS

There were two weak points in the 1961 high performance Ford engine and one of them was the connecting rod. Calling the 390 connecting rod weak is actually a little ridiculous because out of those 7000 cars sold, the only ones to ever have rod problems were a hand-

page 31; the extra material added is easily seen. The 406 rods average 26.92 ounces in weight, the 390 rods were 25.46 ounces. Ford engineers are confident that they will hear of no more broken rods even in the long distance NASCAR events.

Pistons for the 406 engine weigh exactly the same as the 390 pistons but they are different in design. Last year, the 390 pistons had a dished top and .010-.030-inch clearance limits between the top of the piston and top of the block. For the 406 engine, the pistons are flat topped with no dish but they do not come up as far in the cylinder. Clearance limits for the 406 pistons are .045-.065 inches. With the minimum .045 deck clearance, the volume between the piston and top of the block is 11.7 cubic centimeters. With .050 clearance, the volume is 12.9 cc; .055, 14.0 cc; .060, 15.1 cc; and at the low limit of



RIGHT — Valves for the 406 engine are 2.030 inches for intakes, 1.560 inches for exhausts. Single springs with dampers are used with stamped retainer washer, neoprene seals. The exhaust valve has chromed stem and a hardened button on tip. LEFT — HRM's Ray Brock inspects the triple Holley carburetion on the 405 hp test car. These carburetors are mounted with float bowls to the rear and if not properly adjusted, cause engine stall on fast stops. Air cleaner is cast aluminum.

ent 406 bore of 4.13 inches is definitely the limit for Ford Engine and Foundry Division. Any future extra inches will have to come from more stroke or a new engine.

The 406 engine retains the oil pressure relief valve at the extreme end of the oil system to insure ample pressure to the whole engine. This pressure relief is located at the rear of the block, just below the main oil gallery. It has a spring set to bypass pressure in excess of 75 pounds. The oil pump at the front of the engine also has a relief valve but it is strictly to prevent popping oil filter gaskets during cold weather starting. When the oil is very cold and heavy, pressures often rise quite high when the engine is first started.

ful that ran on the high speed banked tracks in the NASCAR circuit. For races of 250 miles or so in length, everything was usually fine but in those 500- and 600 mile events, some of the Fords would retire with broken rods before the race was over. Many times the Ford forced out of the race would be leading at the time. Nobody had trouble on the street or on the drag strip but after a few hours at 6000 rpm on the high banks, the rods often fatigued. Ford engineers set out to solve this problem so that spectators wouldn't get the wrong idea about Ford reliability.

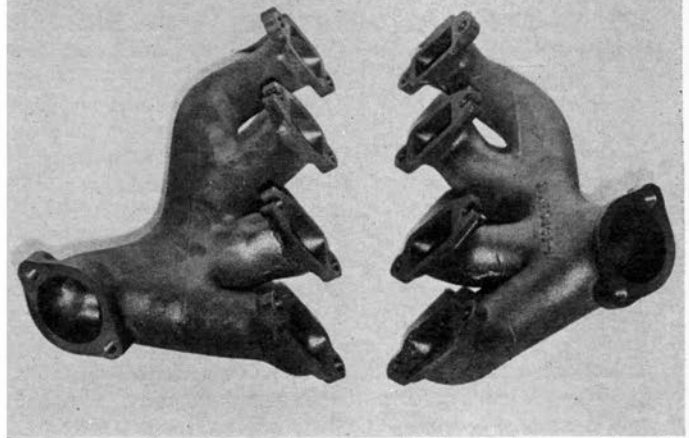
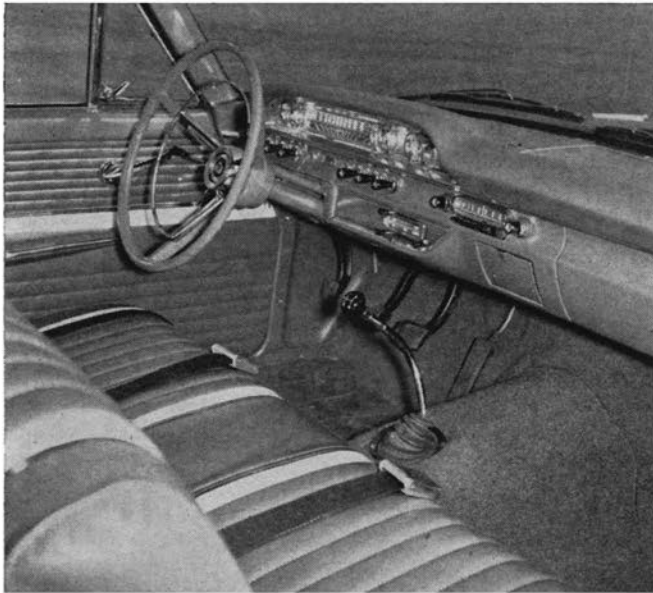
The rods for the 406 engine are forged of a high grade steel alloy and weigh $1\frac{1}{2}$ ounces more than the 390 rods. Note the comparative pictures on

.065 clearance, the volume is 16.2 cc. These volumes will come up later when computing compression ratios.

CYLINDER HEADS

The shape of the combustion chamber in cylinder heads for the 406 engine is quite different from that of the 390 engine. For the 406 heads, the chamber has been trimmed on a line tangent with the valves on the shallow side of the chamber and the pocket around the spark plug has been eliminated on the deep side. Chamber volumes for the 406 heads are about 6 cc larger than last year with the minimum volume 62.1 cc and the maximum 67.5 cc. These volumes are with valves and spark plug in place.

(Continued on following page)



ABOVE — Cast iron exhaust manifolds are designed to give minimum restriction to exhaust gases. Ford also has another set near production which will increase the 406 engine's power.

LEFT — Ford interior is well designed and comfortable. The four-speed shift lever is convenient to manipulate through all gears and a lockout handle on the lever prevents accidental engagement of reverse. Clutch action is very smooth and light.

FORD'S SUPER SUPER STOCK continued

Advertised compression ratio for the 406 is 10.9:1 but this is the nominal compression arrived at by figuring all manufacturing tolerances at their mean. Maximum compression can be as high as 11.4:1 if minimum chamber volume of 62.1 cc and minimum piston-to-deck clearance of .045 for 11.7 cc are used. These volumes plus the 6.5 cc contained in the gasket total 80.3 cubic centimeters and that's 4.9 cubic inches total chamber volume which gives the 11.4:1 ratio. At the other end of the limits, 67.5 cc volume in the heads plus 16.2 in the bore (piston .065 from top of block) and the 6.5 cc for gasket total 90.2 cc, or 5.5 cubic inches and a minimum compression ratio of 10.2:1.

A little ways back, we mentioned that Ford had two weak points in their 390 engine and then proceeded to tell you about one, the rods, which never bothered any one running on the street or at the drags. The second problem may have bothered this group however. It was a problem of leaky head gaskets. For the 406 engine, though, Ford worked out a whole new idea in gaskets which promises to solve leaky head gaskets for once and for all.

This new gasket is quite similar in appearance to a conventional steel shim gasket but has a new double seal around the cylinders and no seals around the water passages between head and block. That's right, except for embossed sealing dams around each head bolt hole, oil passages, the edge of the head and the cylinders themselves, the water is free to wander around as it pleases between head and gasket, gasket and block. Of course the area in question is only about .020 deep so most of the water flows through matching holes in block and head but that thin

sheet can circulate right up to the edge of the cylinder seal and cool any possible hot spots where the gasket might have a tendency to fail. The improved seal around each cylinder is made by first embossing a dam around the cylinder, then folding the gasket back over the top of this dam as shown in the drawing on page 28. Ingenious and it works like a charm. In case you have a 390 engine with gasket problems, this 406 gasket will work on the earlier engine too although since designed for a 4.130 bore, the opening around the cylinders will be a little larger than necessary.

CAMSHAFT AND VALVE TRAIN

A glance at the AMA specifications on the 406 reveals that the same camshaft and intake valves are held over from last year's 390 engine but a larger exhaust valve is now being used. The intake valve remains the same at 2.030 inches while the exhaust has been enlarged from 1.560 to 1.625 inches. Not only is the exhaust valve larger, it has also been modified in the stem to improve durability. The changes cannot be readily noted with the naked eye but they include a special chrome plated stem to cut down on stem and guide wear and a hardened button welded to the tip for less wear where contacted by the rocker arm.

New valve springs are fitted to the 406 engine although they still have the same tension requirements as the 390 springs. The difference is that each of the springs is subjected to a synthetic break-in by compression to coil-bind for a certain length of time and at a specified temperature. This break-in prevents tension loss after installation in the engine. The springs should have 80-90 pounds pressure at 1.82 inches

height and 255-280 pounds compressed to valve open height of 1.32 inches.

Camshaft timing is unchanged for the 406 but a new process is being used for the first time by Ford to prevent cam lobe wear. Each of the cams is induction hardened and hardenable iron one-piece lifters are used.

INTAKE SYSTEM

There are two intake systems for the 406; single four-barrel Holley and triple two-barrel Holleys. The four-barrel has a capacity of 600 cubic feet of air per minute, the triples 840 cfm. Both use aluminum intake manifolds. The four-barrel has an automatic choke and is topped by a paper-pack filter cartridge with a stamped steel cover. The triple intake air cleaner has a more exotic looking cast aluminum top and bottom plate, also a paper-pack filter.

The 406 test car we had at our disposal was equipped with the 405 horsepower engine and triple carburetion. We noted that on fast stops, the engine stalled and was sometimes difficult to restart. The reason for this is the three Holley two-barrel carburetors are mounted backwards on the manifold so that the float bowls slosh fuel into the manifold on sudden stops. The reason they're mounted backwards is that Ford used existing two-barrel carburetor designs when building their triple manifold and if mounted with the float bowls to the front, the carburetors had to be moved back so far to clear the distributor that the throttle bores were not evenly spaced in relation to the intake ports. By reversing the carburetors, the throttle bores could be spaced properly.

Another problem we noticed with the triple intake system was a stumble as the secondary carburetors started to

open. In normal operation, the center carburetor does most of the fuel metering. It is also the only one equipped with an automatic choke and fast idle linkage. At about half throttle, mechanical progressive throttle linkage starts to open the two end carburetors and all three carburetors reach wide open at the same time. On our test car, the transition from one to three carburetors was not smooth.

We checked with Les Ritchey of Performance Associates in West Covina, California, to see what they did about these two problems and they had solutions. On the problem of flooding on fast stops, Les said that the first step was to make sure float levels on the end carburetors were correct and then drop the center float level 1/16-inch. At the same time, Les reworks the end carburetors to correct the stumble and the changes here also help prevent flooding. The throttle bodies are disassembled on the secondary carburetors, the bores polished with crocus cloth to make sure they are smooth, the shafts checked to make sure they are free and then the throttle butterflies reassembled. Before completely tightening the screws in the butterflies, they are tapped and aligned until they seal the bores completely and the screws tightened. Then the idle screw is screwed in just enough to keep the butterflies from sticking in the bores. Next, the idle mixture control screws on both end carburetors are screwed in so that they seat fully and shut off all idle mixture to the end carburetors. All idle mixture and speed settings are then made on the center carburetor. These are the changes Les makes and he claims they give smooth acceleration and prevent engine stalling on all but full panic stops. Jetting for the high performance Ford engines is set to racing conditions and usually needs no changing.

IGNITION

The same distributor is used for the 406 as for the 390 engine with centrifugal mechanism only giving a total advance of about 26° at 4400 engine rpm. Initial timing for the 406 is recommended at 8° BTC for a total of 34° at maximum rpms. This is 6° less than the 390 used but Ford engineers warn against too much timing. For short bursts at the drag strip, more timing can be tried. On the subject of timing, Les Ritchey states that he gets his best results from reworking the distributor so that he gets full centrifugal advance by at least 3000 rpm instead of 4400.

CLUTCH AND TRANSMISSIONS

An 11-inch clutch connects the engine to one of three transmissions and it is a real smooth item. It has 1710 pounds initial pressure and more is added centrifugally as the engine speed increases.

Pedal pressure is quite light considering the heavy-duty nature of the clutch.

The standard transmission is a three-speed heavy-duty unit with 2.37 low, 1.51 second, direct in third and a 2.81 reverse. An optional overdrive three-speed has ratios of 2.49 in first, 1.59 in second, direct in third, .72 in overdrive and 3.15 in reverse. A second option is the Borg-Warner four-speed with ratios of 2.36 in first, 1.78 in second, 1.41 in third, direct in fourth and 2.42 in reverse. The four-speed uses a floor shift lever with reverse lockout while the three-speed and overdrive transmissions use a column shift. An optional floor shift for the three-speed is also listed.

You cannot buy the 406 engine with an automatic transmission for the simple reason that the engine is too strong for the design limits of Ford's Cruise-O-Matic. A Cruiso behind one of these engines would undoubtedly be a real stromer in the ¼-mile but probably wouldn't stand full-time hard duty.

REAR AXLE RATIOS

The standard rear axle ratios installed in a car with the 406 engine will either be a 3.56 or 4.11. The 3.56 ratio is for three-speed and four-speed transmissions while the 4.11 is for the three-speed with overdrive. Our test car had the 3.56 ratio and it was a good all-around ratio for both city and highway. For the drag strip though, this ratio would not get the job done. Optional ratios listed by Ford range all the way from 3.00:1 to 5.83:1 so if you are ordering one of these cars, you can name your choice.

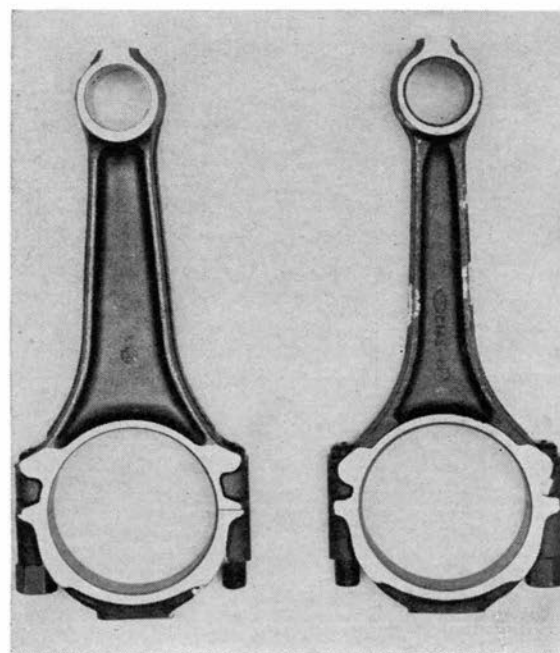
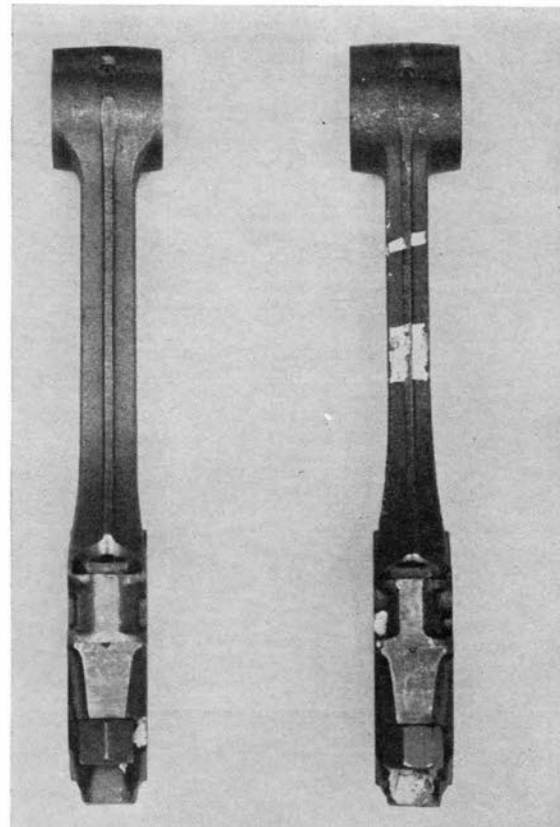
If the car is to be used consistently at the drags, the 4.57 ratio will probably give best speeds and elapsed times. Of course this doesn't give ideal highway cruising conditions except with the overdrive transmission which comes up with a final ratio of 3.28 in O.D. If you can get the ¼-mile performance you need from a three speed transmission

(Continued on page 104)

TOP—The rod on the right is the one used in last year's 390-inch high performance engine and that on the left is from the 406. Note the extra material.

CENTER—406 piston, right, uses a flat top and lower position in the cylinder than the 390 piston with dished top used in '61. 406 compression ratio: 10.9.


BOTTOM—The stronger 406 rod, left, has much more material and strength in the beam section between crank and pin. Rod caps are unchanged, plenty adequate.



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FORD'S SUPER SUPER STOCK

continued from page 31

sion instead of a four, and many drivers do, then the overdrive transmission is the best bet. Ford is the only company out of the manufacturers presently building high performance engines to offer an overdrive and we think they have a darned good selling point.

The complete list of axle ratios offered by Ford are as follows: 3.00, 3.10, 3.22, 3.40, 3.56 3.89, 4.11, 4.29, 4.57, 4.71, 4.86, 5.14, 5.43, 5.67 and 5.83. Out of that selection, you should be able to get what you want.

CHASSIS

One of the best things about buying a high performance Ford is the very reasonable price you pay for this extra plus the fact that they "force" you to take a heavy-duty chassis option as part of the package. This package includes heavier springs, shock absorbers, stabilizer bar, bigger brakes with fade-resistant linings, 15-inch wheels and nylon tires.

With all of these heavy-duty suspension components, you might get the idea that this is a rough riding bronco style of car but it is not so. This car is a dream to drive with, in our opinion, a perfect combination of springs and shocks. The car doesn't bottom on dips that make you flinch in most cars and recovery after leaving a bad dip is immediate and sure. Cornering is flat and positive with very good balance between front and rear. With the four-speed transmission and the abundance of power, this Ford will breeze through a tight road course in excellent fashion.

To match all of that go, Ford fits a superb set of brakes to cars ordered with the 406 engine. 3-inch wide drums are used up front, 2½-inchers at the rear and the total lining area is 234 square inches. The lining used is the same used for police interceptors and taxi cabs. Even though power brakes are not available with the 406 package and the lining is the fade-resistant type, brake pedal effort is not excessive. Stops are straight-line and even on our acceleration tests where we make repeated starts and fast stops, we noted no fade whatsoever.

Partially responsible for lack of brake fade are of course the 15-inch wheels and tires which permit more air flow around the 11-inch brake drums than with a 14-inch wheel. The nylon tubeless tires have a recommended inflation pressure of 30 psi and with this pressure give safe operating conditions above 100 mph. Self-adjusters keep a high pedal by taking up excessive clearance between lining and drum. This adjusting operation takes place if needed when the brakes are applied as the car is traveling in reverse.

(Continued on page 106)



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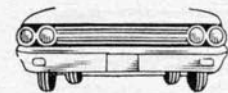
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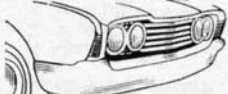
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61-62 FORD



1960 FORD



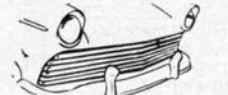
1959 FORD



1958 FORD & Thunderbird



1957 FORD



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Give the front end of your car an entirely new, more beautiful look. Add sparkling, streamlined beauty. Grilles are custom tailored and contoured to harmonize with chrome trim, blend in perfectly with body lines. Tubes curve sharply back at each end to blend into grill opening. Grilles are complete with necessary mounting brackets, bolts and are already assembled. Easy to install — no alterations, cutting or welding necessary. Perfect fit guaranteed. GUARANTEED RUSTPROOF. Deluxe quality — heavier 3/4" diameter, 18 gauge heavy stainless steel tubing. Tubes used in these grilles are not solid but 2 1/2" of a full tube, open in back. Brackets have welded studs that match original grill mounting holes. No alterations required.

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I enclose check or money order for \$16.95 to cover payment in full (or 25% if C.O.D.). Please do not send currency or stamps. If C.O.D. order, enclose 25% deposit, pay balance upon delivery.

Name _____

Address _____

City _____ Zone _____ State _____

My car is a _____ Year _____

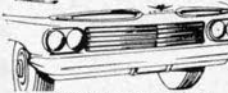
NOTE: Be sure to give Make and Model of car when ordering.



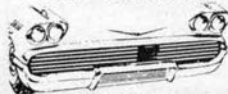
61-62 CHEVROLET



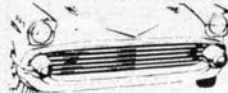
1960 CHEVROLET



1959 CHEVROLET



1958 CHEVROLET



55-57 CHEVROLET



60-61 CORVAIR



ALL FLEXIBLE ROCKER ARM SHAFTS... WHICH LITERALLY MURDER VALVE TIMING AT HIGH R.P.M.

NOW AVAILABLE FOR ALL O.H.V. ENGINES
except Chrysler hemisphere (pre '58) & Buick V8

SEE YOUR NEAREST DEALER, OR WRITE
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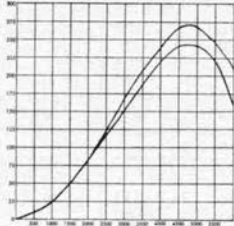
Dealer inquiries invited.

PATENT APPLIED FOR COMPLETE KIT \$245.00 - \$275.00

THE MOST ADVANCED VALVE TERRAIN ON THE MARKET
KAECKER ROCKER ARM
CONVERSION KITS / **DAVE'S SPEED SHOP**
(to install Chevy rocker arms on other engines)

117 W. OREGON AVE.
PHOENIX 13, ARIZ.
AM 5-8700

30 MORE H.P. AT REAR WHEELS



Dynamometer tests on a 401 H.P. '61 Ford, owned by Smiley-Berge Motors, Mesa, Ariz., show an increase of 7 H.P. at 2500 R.P.M., increasing to a 30 HP. increase, (from 240 to 270 H.P.), at 4800 R.P.M., at the rear wheels, by bolting on a KAECKER rocker arm conversion kit as the ONLY change.

FORD'S SUPER SUPER STOCK continued

Only standard steering is available with the 406 package; no power is offered. Standard steering is not too hard to handle for the average person although it can be a handful in a tight parking place. The ratio is 30:1 overall and optional linkage can be purchased from parts departments to drop this ratio to 22:1. After driving the regular ratio for a couple of weeks, we would venture to guess that only a professional wrestler would be able to handle the optional "quick" ratio without straining something. Obviously, this ratio is strictly a track option.

PERFORMANCE

We got our hot hands on the first 406 to be built in the Los Angeles assembly plant and there were only 25 miles on the odometer when we took possession. Although this means we did not have a thoroughly loosened car at our disposal, we often like to be the first person to try out a new car because it really gives us a chance to see how well the car is put together. This Galaxie was one of the best we've gotten hold of. During the period of two weeks we had the car, we ran up several hundred miles on the odometer and found only two things wrong. One was a too tight adjustment of the deck lid making it a real bear to slam closed and the other was a too tight fit between the oil filler cap and the breather tube when we tried to add a quart of oil after several hundred break-in miles. The first problem we solved with our trusty 7/16-inch end wrench in a few seconds but that filler cap was a dandy. After much struggling and a few magic words (dirty), we finally got it off too. Usually we find cars put together in ragged fashion; first time we had one built too good.

We got a letter from a reader while we were testing the 406 Ford and he wanted to know why we didn't take a high performance Ford, install header cutouts to run open exhausts, use a low axle ratio, pull the air cleaner, play with the timing, use cheater slicks or Butyl tires, raise the front of the car, lower the rear and then see what kind of times we could turn at the drags. He thought this was the way for us to test a high performance machine. Well, we've considered this to a degree from time to time but then why should we go to all this trouble when all we have to do is pick up the latest issue of NHRA's National Dragster and see what Fords prepared in this fashion are turning at drag strips throughout the country? We know from past experience that you don't get a car ready to perform its best at the drags in a couple of days.

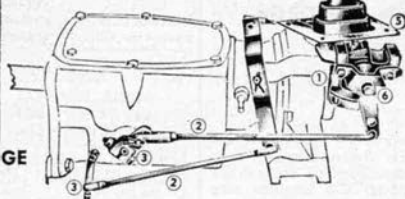
(Continued on page 108)

Convert Your Selector-Type Column-Shift Transmission to FAST Straight-Line Floor Shift

Flip Gears TWICE AS FAST
with **NEW TOUCH'n'GO**
KAR-LIFE Selector-Type
TRANSMISSION
CONVERSION KIT

FOR 39-60 BUICK, 39-56 CHRYSLER, DE SOTO, DODGE & PLYMOUTH, 51-62 OLDS., AND 39-57 PONTIAC

\$34.95 Complete
NOTHING ELSE TO BUY



Here's straight-line floor board shifting at its fastest for all column shift selector type transmissions. This easy-to-install TOUCH'n'GO kit is the fastest, shortest-stroke shift-stick kit on the market. Heavy dual-H pattern springs assure you a lightning-fast smooth shift from 1st to 2nd without a pause, from 2nd to 3rd with a flick of the wrist. . . AND YOU FLICK THE BALL ONLY 4" BETWEEN POSITIONS, where other kits have 6 1/2" to 7" strokes. This TOUCH'n'GO Kar-Life Straight-Line Floor Shift Selector-Type Transmission Conversion Kit has no equal in performance, appearance or durability—regardless of price! This complete kit includes all the outstanding features of kits selling for much, much more . . . in addition to exclusive features not found on any other kit. And the low price includes even the ball, shaft, boot, and dressy-looking chrome plated floor plate. What's more, the durable built-in quality in this kit enables us to guarantee the entire kit for the life of your car, as long as you own it!

Designed exclusively for Selector-Type Transmissions, this TOUCH'n'GO kit converts your column shift to floor shift effectively and efficiently. It doubles the life of the transmission by eliminating column shift linkage that tends to wear and cause sloppy, lost motion and possible damage to the transmission. The TOUCH'n'GO Floor Shift Conversion Kit has less parts to go wrong, thereby lengthening the life of your transmission.

Shift Twice as Fast as Original Column Shift—after installation of this floor shift conversion kit, you should be able to knock seconds off elapsed time, increase speed from 5 to 10 miles on the drag strip.

Straight-Line H-Pattern—assures you faster, smoother shifting through all the gears. Shift from 1st to 2nd without a pause, from 2nd to 3rd with a flick of the wrist.

Short Stick Shift Travel—flick the ball only 4" to shift from 1st to 2nd, 2nd to 3rd. There's no faster shift in the U.S.A. today, at any price.

Cadmium Plated Hardened Steel—all moving parts are made of rugged hardened steel to insure greater durability. All parts are cadmium plated to resist rust.

Shift Lever Position Adjustment—Simple adjustment permits moving shift lever farther forward or backward as preferred, for the most comfortable "reach". Can be easily adjusted at any time.

Easiest Selector-Type Transmission Floor Shift Kit to Install—with complete illustrated, step-by-step instructions to eliminate possibility of error in installation. Complete job can be made in 1 hour with ordinary tools.

1. Custom Tailored Brackets—Specifically engineered for each model of selector-type transmission. Not a universal bracket, but a bracket shaped and drilled to fit your transmission. No cutting, bending or welding necessary.

2. Heavy Steel Shift Rods—Precision formed of heavy 3/8" solid steel, machine-bent where necessary for non-flex non-twist positive action. Rods are precision made for perfect, non-binding fit into gearshift arm and lever.

3. Precision-Fit Shift Arms & Swivels—Perfect-fitting arms eliminate sloppiness, lost motion. Custom designed to fit your selector-type transmission perfectly. Formed and threaded ball-and-joint swivels eliminate binding.

4. Bakelite Gear Shift Ball & Chromed Steel Gear Shift Lever—Large 1 7/8" black bakelite gearshift ball plus 1 5/8" long gleaming-bright chrome plated steel gearshift lever that can be easily bent to any desired position or angle.

5. Oval Black Rubber Boot & Chrome Plated Floor Plate—Boot conceals hole in floor, dresses up base and adds to good looks of installed unit. Custom-like chrome plated floor plate has shift pattern embossed on it—adds a "sporty" look.

6. Heavy Duty, Spring Loaded Shift Pin—Larger and stronger than those used on other kits for maximum wear-resistance. Snaps into selector slot every time in a split second—you can't miss a gear no matter how fast you shift.

CUSTOM ENGINEERED FOR THE FOLLOWING CARS:

NEW ADVANCED STRAIGHT-LINE PATTERN:

LOW: Pull back as regular shift.
2ND: Straight forward.
HIGH: Straight back.



| Make Year Model | Stk. No. |
|--|----------------|
| BUICK | |
| 39-60 All Sm. Tr. w/5-hole top cover | 505 |
| 39-60 All Lge. Tr. w/6-hole top cover and tailshaft 3 1/2" to 6" | 506 |
| 39-60 All Lge. Tr. w/6-hole top cover tailshaft 6" to 10 1/2" | 507 |
| CHRYSLER | |
| 39-56 Selector-type Trans. w/O.D. | 508 |
| Selector-type Trans. w/O.D. | 509 |
| DE SOTO | |
| 39-56 Selector-type Trans. w/O.D. | 510 |
| Selector-type Trans. w/O.D. | 511 |
| DODGE | |
| 39-56 Selector-type Trans. w/O.D. | 512 |
| Selector-type Trans. w/O.D. | 513 |
| OLDSMOBILE | |
| 51-62 All Selector-type Trans. | 507 |
| PLYMOUTH | |
| 39-56 Selector-type Trans. w/O.D. | 514 |
| Selector-type Trans. w/O.D. | 515 |
| PONTIAC | |
| 39-55 All Selector-type Trans. | 516 |
| 56-57 All Selector-type Trans. | 517 |
| All numbers, per kit | \$34.95 |

J. C. WHITNEY & CO., 1917 H-24E Archer Av., Chicago 16, Ill.

I enclose check or money order for \$34.95 (or \$9.00 if C.O.D.) plus \$1.00 postage, for complete Kar-Life Touch'n'Go Selector-Type Transmission Floor Shift Conversion Kit. My car is a:

| | | |
|-----------------|------|-----------|
| MAKE | YEAR | MODEL |
| TYPE OF TRANS.: | | STOCK NO. |

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Please do not send currency or stamps. If C.O.D. order, enclose 25% deposit, pay balance upon delivery.

FORD'S SUPER SUPER STOCK

continued

So, the performance figures we get are just as the car is built and delivered off the assembly line in most cases. Air cleaners, stock tires with stock tire pressures, full exhaust system, no tachometer and no wild power shifts. On our secluded back country test strip, we calculate speedometer error with a stop watch over a measured quarter-mile, then run our tests with stopwatch and speedometer. Maybe not perfect but we've double-checked past test cars at the drag strip and found that we are within a few tenths and a couple of miles per hour on our private strip.

We made several runs for each of the acceleration ranges we checked then picked the lowest three in each range for an average. From 0 to 30 mph, we had several runs of 2.8 seconds. This was accomplished by easing the car from a standstill by slipping the clutch to avoid initial wheelspin and then "standing on it" as soon as the car was rolling. With wheel-spin, times jumped over 3 seconds. From 0 to 45 mph, using the same starting technique and first gear only, our average was 4.3 seconds. Zero to 60 mph with a shift to second gear just over 50 mph, 6.5 seconds. First, second and a shift into third at about 70 mph gave a 0-80 mph time of 11.4 seconds. Simulated passing from 30 to 60 mph in second gear only required 3.9 seconds and 50 to 80 mph in third gear only took 5.8 seconds.

For the quarter mile, we made several runs in both directions to cancel wind, came up an average of 15 seconds flat and a speed of approximately 95 miles per hour. Now if you are interested in what this same car would turn after thorough preparation for dragging, check next month's issue of HRM, because there will be quite a few of these cars in competition at the NHRA Winternationals. We estimate they'll run 110 mph plus and break the 13 second mark in competition.

There's one more thing that should be mentioned and that's the all-important subject of price. Here is where Ford really has the edge on their competitors. The suggested list price for the 406 with triple carburetion is \$379.70 over the base 292-inch V8 engine. This price includes the heavy-duty suspension, brakes, tires, etc. For the four-barrel carbureted 385 horsepower 406 package, the price is about \$65 less. If you want a four-speed transmission, add about \$200. Any way you look at it, this is a bargain price for a high performance automobile. With everything they have to offer, Ford should have no trouble at all selling 10,000 of these items.

CHECK YOUR SPEED

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are the choice of top drivers everywhere. They know only CARTACH is unconditionally guaranteed 2% accurate at any reading from 0 to 15000 RPM—complete temperature compensation stops false RPM Readings when its hot or cold—one piece molded construction ends shock and vibration damage. The one piece Cartach installs easily by connecting 2 wires to the coil posts. Ruggedness and long life guaranteed by eliminating transistors, zener diodes, batteries and relays. EASY TO READ DIAL, NO NEEDLE QUIVER OR JITTER.

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