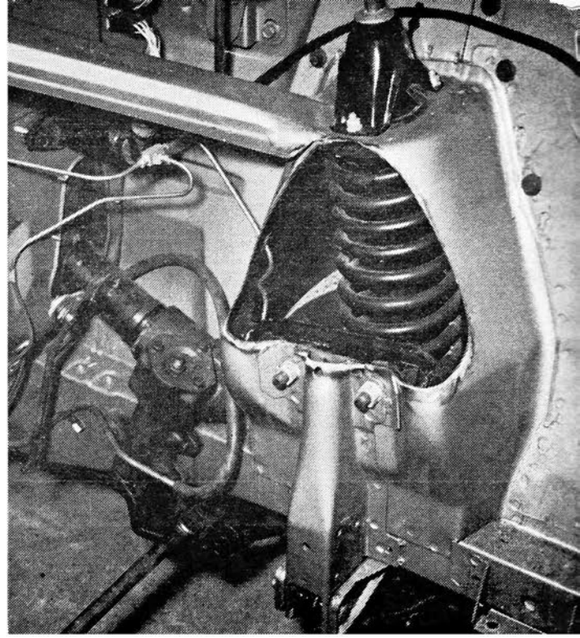
THE FALCON GETS A V8

By RAY BROCK

320 inches of Mercury and an automatic transmission turn Ford's compact Falcon into a hot rodder's dream

Bill Stroppe makes the final inspection of the Falcon before turning over the keys to William Ford, Vice President of the Ford Motor Company. The Merc engine occupies the same relative position in the chassis as the Falcon six. No modifications were required for hood to clear V8, accessories.



Front spring pocket in the unit construction Falcon body had to be cut away to gain extra width in the engine compartment for the V8. The front lip of the firewall brace was also rolled under for extra room.

When the new compact Ford Falcon entered the American automotive scene last fall, one of the first things every good hot rodder did when he saw the car was to raise the hood and eye the engine compartment. What he saw was a six-cylindered, overhead-valve engine designed for economy and not particularly endowed with horsepower. For those interested strictly in economy, this was fine. Others were happy with the size of the car but not the size of the engine so the next thing that came to mind was just how hard would it be to replace the little six with a big V8. It wasn't long before the idea was tried and in at least one case we can report that the results were tremendous.

Bill Stroppe and Associates, a Long Beach, California, concern that conducts special events and tests for the Ford Motor Company, decided that they would like to find out how practical a V8 Falcon would be, so they made the swap. The idea was to build a smooth, dependable car that would be ideal for all types of driving. The car used was a deluxe 1960 Falcon four-door sedan. The engine was a 1960 Mercury 312-inch V8 and the transmission was a 1960 Ford Cruise-O-Matic.

After removing the Falcon engine and transmission, Stroppe's mechanics measured a 312 V8 assembly and the underhood cavity to see what problems would arise. The engine with exhaust manifolds was wider than the cavity so the first step was to enlarge the hole. The front coil springs and shock absorbers mount between each upper A-arm and a reinforced "well" in the inner fender panel. This well in the panel had to be relieved to gain width. A large wedge was cut away and the opening then fitted with a piece of 12-gauge metal shaped to fit.

With this modification the block assembly could then be

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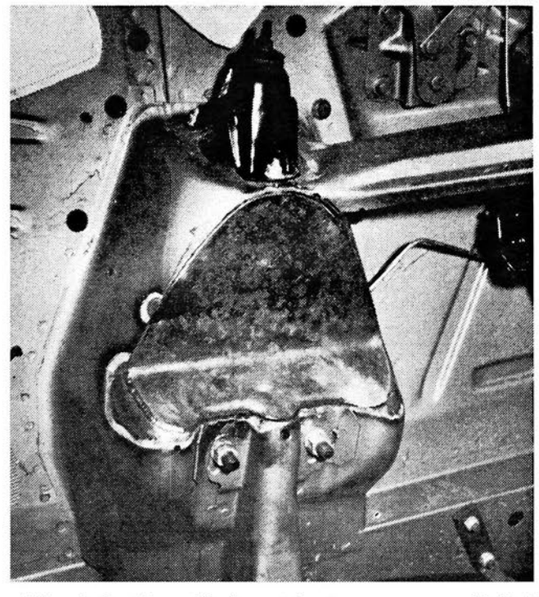
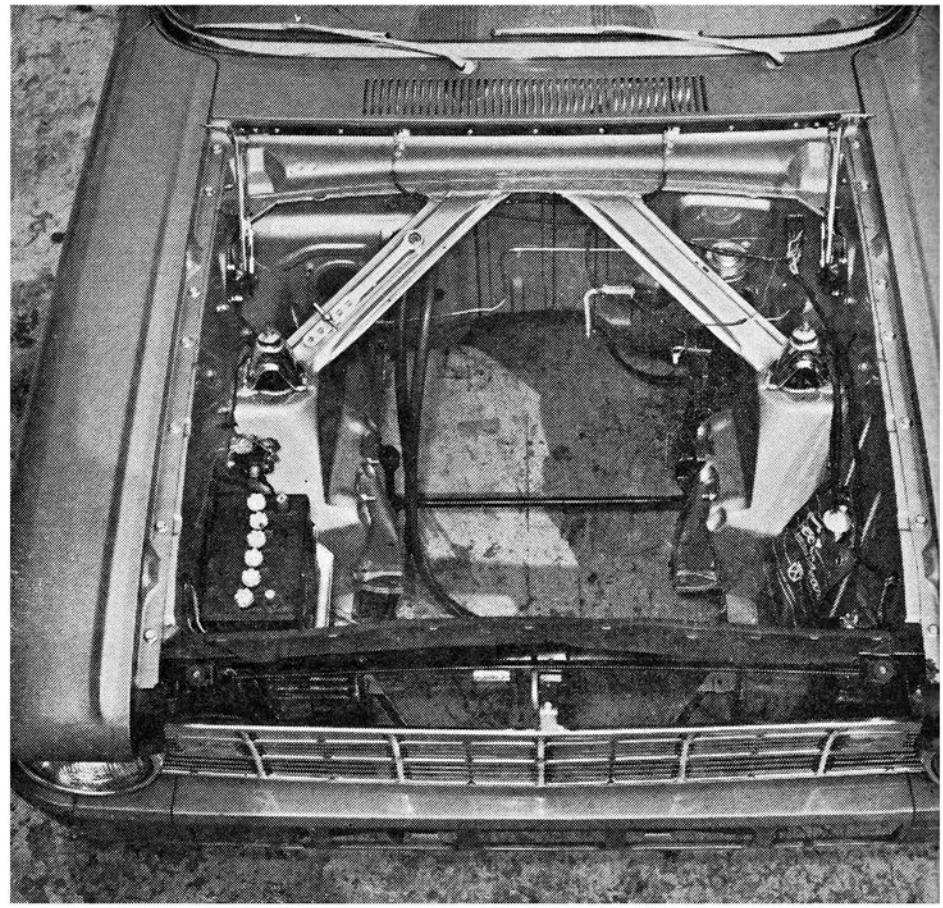
LEFT—A limited-slip differential gives the V8 Falcon excellent rear wheel "bite" but full throttle starts will break both rear wheels loose. Wheels and tires are 6.50 x 13 Comet size.

PHOTOS BY ERIC RICKMAN

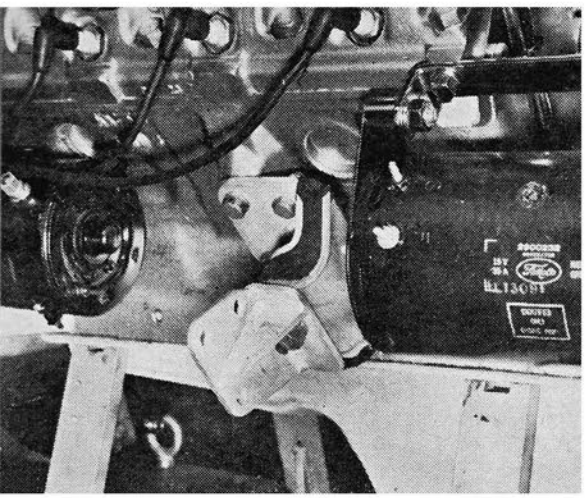


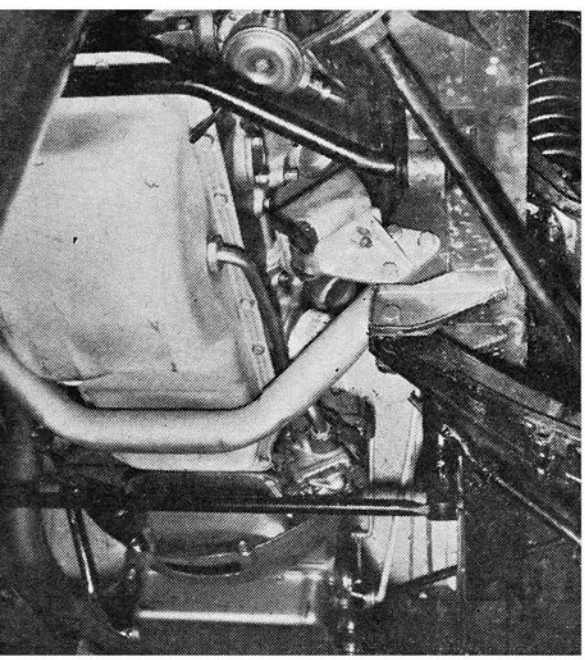
Although the piece of body metal cut away was very light, it is responsible for carrying part of the front wheel load so the new piece formed to fit the hole is of much heavier gauge than the original metal. All edges were securely gas welded.

RIGHT—Reworked engine compartment ready for the V8 was painted and appears factory fresh to the untrained eye. Battery box was moved outboard a couple of inches, floorpan also reshaped slightly.



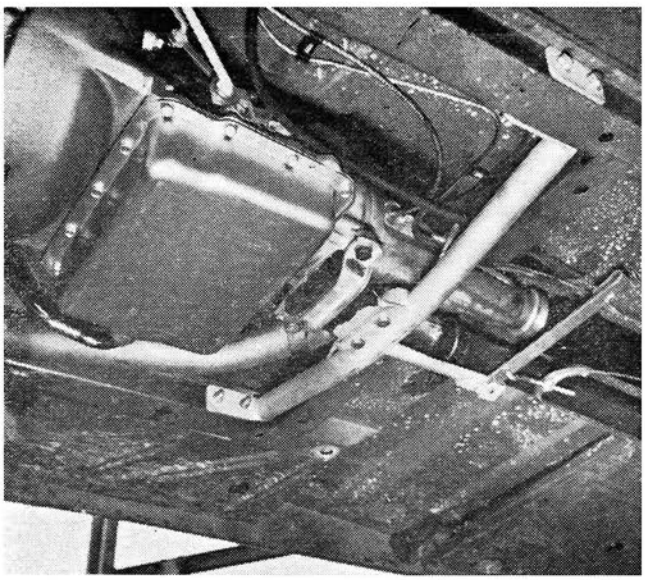
BELOW—Front engine mount insulator is stock V8 but has a piece of plate added to extend it forward two inches. The bottom bracket was fabricated from steel plate to match the Falcon frame brackets.



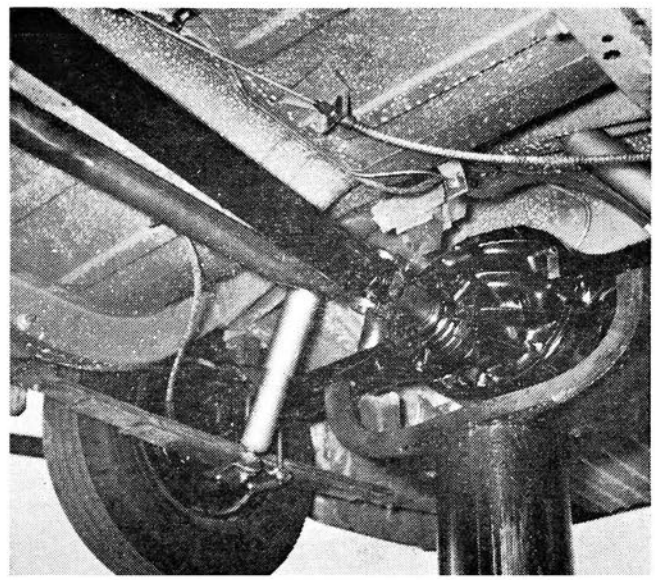


ABOVE—V8 engine bolts to the stock Falcon location in chassis, uses the stock Falcon tube crossmember. The oil pickup tube was reshaped to clear crossmember, steering link moved to bottom of pitman.

RIGHT—After several trial fits, the engine is lowered in for the final time by Don Edmunds and Bob Strohlman. Engine-trans was installed as a unit with only crank pulley and generator removed.



New rear crossmember bolts between box sections in the Falcon underbody with matching plates on the outside of the boxes to spread the load. Bracket in center supports V8 rear insulator. Another bracket supports Falcon parking brake mechanism.



A complete '59 Ford rear axle assembly bolts directly to the Falcon rear springs with only a one-inch increase to rear wheel tread. Shock absorbers are Monroe. Ford axles and brake drums were modified (below) to match Falcon 4-bolt pattern.

lowered in for a test fit. The steering link between pitman arm and idler arm interferred with the V8 oil pan but this problem was easily solved by removing the link from the stock position on top of the arms, re-reaming the tapered hole from the bottom side and then reinstalling the link. This lowered the link by almost three inches and gave plenty of pan clearance as well as ample road clearance.

The V8 engine was positioned in the same relative position to the chassis that the six occupied. Crankshaft height for the V8 was made the same as it had been for the six and the engine was centered equally between the fenders. The Cruise-O-Matic transmission bell housing presented the next problem as it was larger than the Falcon's floor tunnel. This obstacle was hurdled by cutting away a portion of the floorpan at the base of the firewall and

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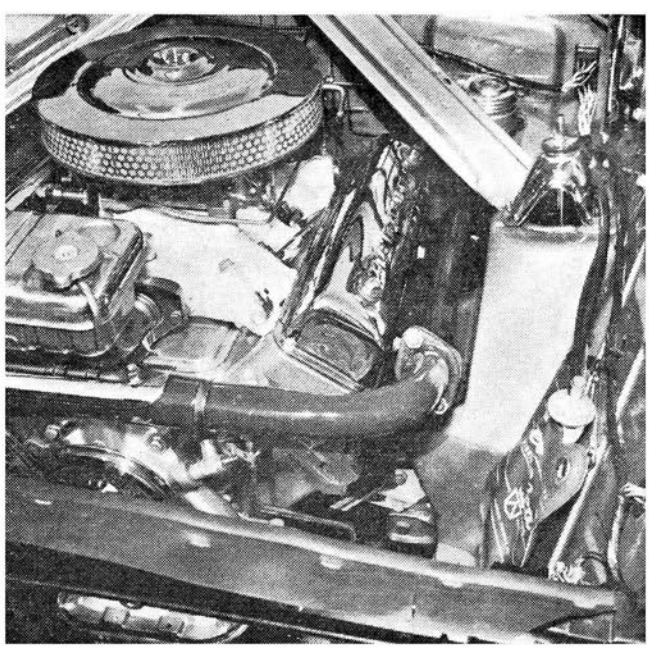
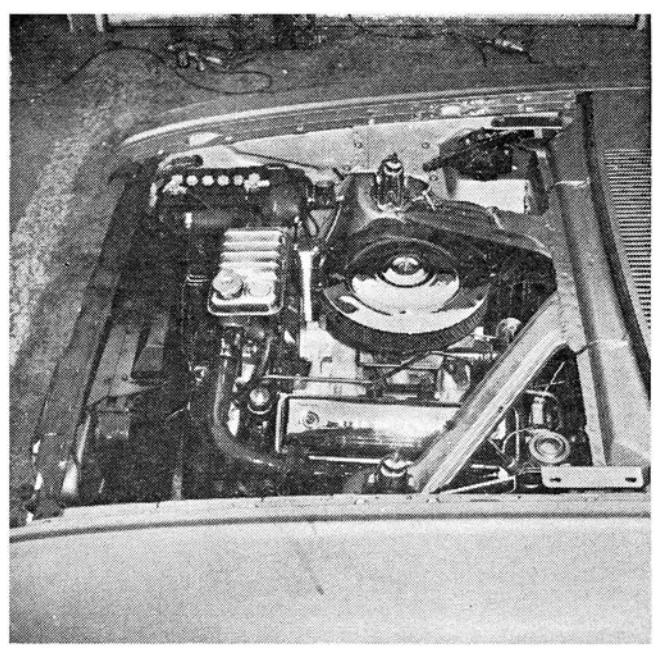


Stock exhaust manifolds and crossover pipe between the manifolds were porcelainized to help muffle noise, a single exhaust pipe used. Reworked fender wells have ample clearance around manifolds but special wrench is needed for some spark plugs.



The cooling system is 1960 Ford V8 with a crossflow radiator fitting behind the Falcon grille with minor modifications. The high point filler tank bolts directly to the 312 engine. Engine modifications include cam, overbore and ported heads.

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then shaping a new piece for increased clearance. This was welded in and other close spots carefully "bumped" with a hammer to give approximately ¾-inch minimum clearance all around the top of the housing.

Next, new front engine mounts were made. This, too, proved easy with 312 engine insulators modified by extending the flange that bolts to the block about 2 inches to move them forward to match the Falcon unit frame brackets. Adaptor brackets were made from ¼-inch steel plate to bolt between the modified 312 insulators and the Falcon chassis. With the front of the engine mounted in this manner, the stock Falcon crossmember could then be bolted back in its normal location.

A piece of 1¾-inch chrome moly tubing with ⅛-inch wall was formed to bolt between the box-shaped members in the Falcon underbody and support the rear of the engine-transmission unit. A plate on either end of the tube fits against the inside of each underbody box member and matching plates on the outside of the box give firm purchase on the box section. A stock late Ford rear insulator fastens between the transmission and a bracket on the middle of the tube. With the engine compartment and new mounts thus prepared, the chassis was ready for the special V8 carefully assembled by Stroppe's engine specialist, Vern Houle.

The 312 Merc engine was altered only slightly with a set of .060-inch overbore pistons, ported and polished heads and a Racer Brown street grind camshaft. The extra bore raised the displacement to 320 cubic inches and combined with a slight milling of the heads, the compression ratio was raised from 9 to 10:1. Stock exhaust manifolds were used with a connecting pipe across the front of the engine from left to right side. The choice of stock exhaust system instead of racing type headers was to ensure quiet engine operation. A single Holley four-barrel carburetor from a 332-inch Ford engine was used for carburetion.

A '59 Ford rear axle assembly with 3.10:1 ratio was installed in place of the lighter Falcon axle unit but the stock Falcon springs were retained. This change required nothing more than removing the Falcon axle and bolting the Ford axle in its place since the spring pads on the two housings are the same distance apart and no modifications are needed. The Ford axle increases tread just one inch. Monroe adjustable tube shock absorbers were used in place of the stock Falcon shocks. Ford ten-inch brakes were used on the rear so that the drum diameter would be small enough to fit inside the 13-inch wheels. Comet wheels were used to get wider rims and 6.50 x 13 tires used on all four wheels. The Ford rear axle shafts flanges were reworked for a four-bolt pattern to match the stock Falcon pattern so that wheels are interchangeable front and rear. The only modification to the front suspension was to install stronger coil springs, Monroe shock absorbers and a special made ⅞-inch front stabilizer bar. Front brakes are stock Falcon.

To provide ample cooling for the larger V8 engine, a 1960 Ford cross-flow radiator was installed. This required enlarging the sheet metal opening behind the grille and repositioning the mounting brackets. The engine-mounted filler tank is from a 292-inch '60 Ford V8. The battery position was also changed slightly, both for increased engine room and also to give more room for the cross-flow radiator. The platform for the battery was merely moved a couple of inches farther into the right front fender well.

As with any engine swap, there were a number of other minor modifications: The front edges of the braces between the firewall and spring wells were rolled under to provide enough clearance for the rocker covers to be removed; the sides of the spring wells were "dimpled" for better spark plug clearance; and a special box-end wrench was designed to change the hard-to-reach plugs. This wrench fastens to one of the body braces with a wing nut so that it is always with the car.

As you might expect, the completed car does not sound, ride or perform like a compact car. It rides much better, thanks to the extra sprung weight; it is very quiet and accelerates with great haste. Stroppe was so pleased with the results when completed that he took the car to nearby Palm Springs, where William Clay Ford, Vice President in charge of styling for Ford Motor Company, was spending a winter vacation. Stroppe presented the Falcon to Mr. Ford, who liked it so well that he drove it almost exclusively during his stay at the desert resort although he had several higher-priced Ford products at his disposal.

The Falcon V8 is now based at Mr. Ford's Detroit home and at last report is still his favorite town car, at least when he can get the keys away from Mrs. Ford. Having ridden in the car, we might just warn executives from other automobile companies in the area to be careful about challenging blue four-door Falcons; if you pick the wrong one, you'll get the surprise of your life.

". . . and then I added a pinch of Nitro for good luck!"