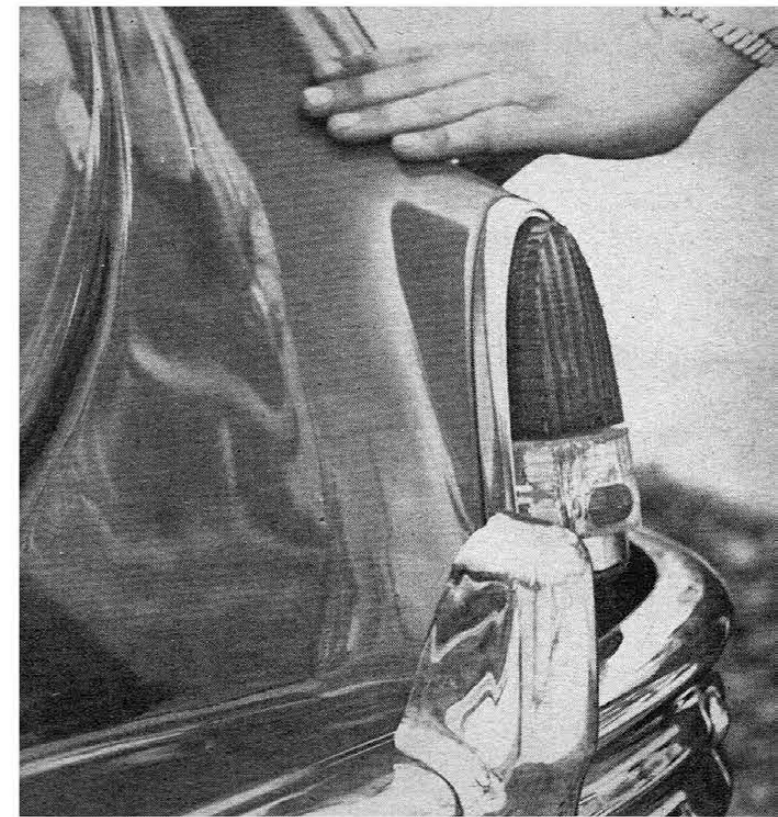


*Car doors open by touching tiny buttons almost hidden in bases of sideview mirrors. A relay and a solenoid do the rest. Dash buttons handle operation from the inside of the car*



*The metalwork is so smooth that it is impossible to tell where it was done. Fenders, lights and '49 Plymouth gravel shields were leaded and contoured in the fine job of reworking*

*Interior is gray and ivory pleated Naugahyde, while Sun tach is only change from stock dash. The car, originally a '40 Ford, is now a sleek combination of Ford, Mercury, Oldsmobile, Lincoln, Plymouth, Buick and Chevrolet components*

*The custom not only looks good but is a top performer—and here's the reason. Under the hood is a 1950 Oldsmobile Rocket 88 engine, with the valves ported and relieved. Other equipment on the engine includes Quadri-Jet carburetor*

# ILLINOIS CUSTOM

PHOTOS AND TEXT BY RICHARD DAY

WHAT happens when a cabinetmaker turns his skill from woodworking to beating on a fender? One might expect him to turn out something resembling a kitchen cabinet or a chest of drawers on wheels.

Not so with Lyle Bertrand of Peotone, Ill., who ordinarily limits his craftsmanship to his basement cabinet shop. But he got to longing for something faster than the schoolbus he pilots each afternoon. He especially wanted something that looked good and yet would show up well in action on the Half Day drag strip near Chicago.

Around Chicago there is friendly rivalry between car enthusiasts on the north and south side. Those in the north have had things sewed up in both speed and appearance departments. Bertrand, being from the deep south side, also wanted to even the balance.

As a matter of fact, this spirit of competition is responsible for the building of many good customs in the entire Chicago area. And as far as Bertrand is concerned, his skill and appreciation of a neat job as a cabinetmaker served him well. Although several friends helped from time to time, he did all the designing and most of the work.

At the beginning, Bertrand had a '50 Oldsmobile engine

mounted in a '39 Ford chassis. He decided, however, to use a '40 coupe instead. This made the installation much easier since he already had fitted many of the underparts on the open '39 chassis from which the body was removed. So he transferred them to the '40.

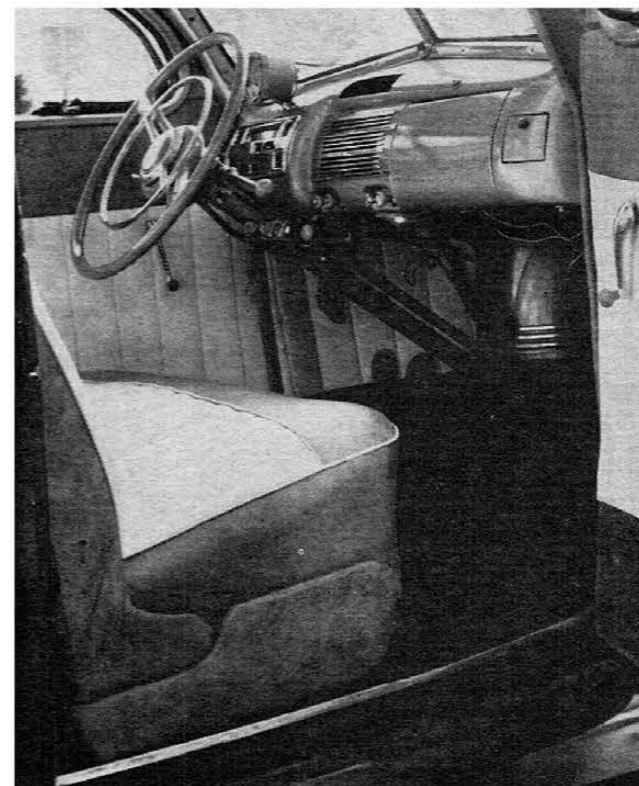
The most difficult problem met by Bertrand was cutting the driveshaft. He had to shorten it 13¾ inches to make room for the Olds engine with McBar adapter and the '48 Lincoln transmission with overdrive.

The only other trouble in mounting the engine in the chassis was moving the steering gear three-quarters of an inch to the right to make room for the Olds exhausts, plus altering the wishbone to clear the Olds oilpan.

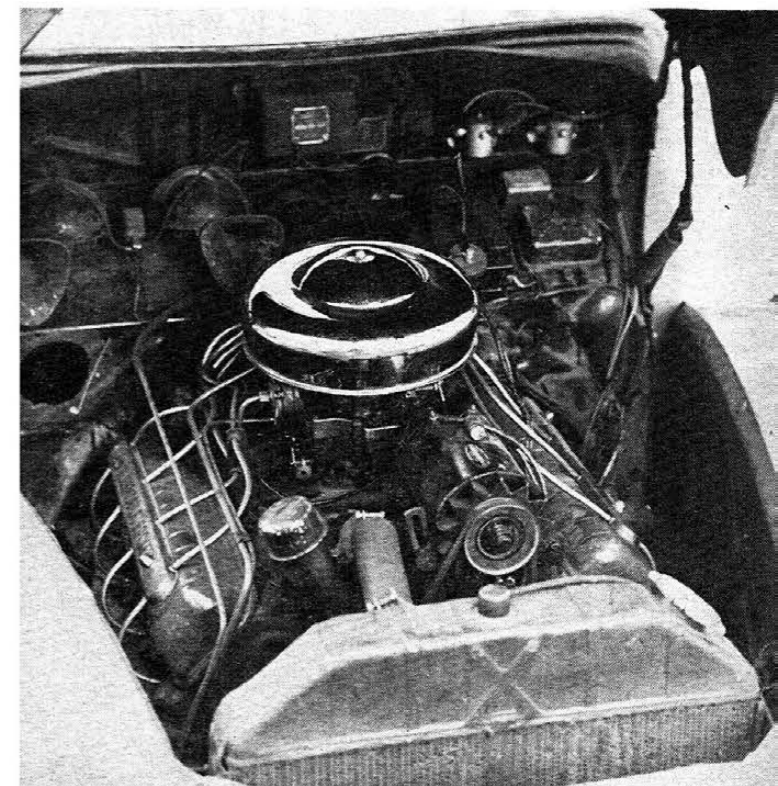
Bertrand chopped the top three inches, installed a 2¾ inch dropped axle in front and six-inch shackles in the rear. Columbus shocks provided spring damping on both front and rear. The dual exhaust works through Chevrolet truck mufflers.

The most difficult body problem was deciding how to make the rocker panels. Bertrand finally hit upon the idea of using cut-down '51 Mercury rocker panels, inverting them and putting the right one on the left side and the left one on the right. The rear window is a section from a '48 Mercury welded into the '40

(Continued on page 55)



MOTOR LIFE, March, 1954



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suggest to improve the economy of this engine?

Ralph Dailey

Trenton, N. J.

• An all-out mileage competition event can be quite rough, so if you are really interested, be prepared to spend a lot of time, effort and money. The engine should have its compression ratio increased. Valves should have their clearances increased to .030 to reduce valve timing. Carburetor size should be reduced and the smallest practical jets employed. Ignition timing will have to be advanced to a point where maximum power will be obtained with small throttle openings and a lean mixture. The fan, generator and water pump should be rendered inoperative by removing the belts. Crankcase oil should be changed to SAE 10. Light oil should be placed in the transmission and rear end. Wherever possible remove grease seals to reduce drag. Loosen brake adjustments so that no drag exists between the shoes and drums. Wheel bearing grease should be replaced with very light grease or heavy oil. Tires must have all of their tread removed except for a ribbon one inch wide in the center of the tire. Tire pressure will have to be increased to 100 pounds to reduce rolling friction. Wheels must be as perfectly aligned as is humanly possible.

#### QUICKER ACCELERATION

A group of us have repeatedly discussed this question: supposing the same modifications (8-to-1 compression, dual carburetion and three-quarter cam) were made to '53 Ford Fordomatic V-8 and Chevrolet Powerglide engines. What horsepower would each develop and which would accelerate faster in the quarter mile?

Alfred O'Connor South Bend, Ind.

• The Chevrolet would out-accelerate the Ford because of the better low speed torque characteristics. They would both develop approximately 135 hp.

#### ILLINOIS CUSTOM

(Continued from page 44)

top after chopping operation.

Mallory Magspark gives the engine added zip which is transmitted by an 11-inch Ford truck clutch to 3.78-to-1 rear end gears. The car runs on '48 Lincoln 15-inch wheels, with 6.70x15 tires on both front and rear. Total weight is 3,280 lbs. and the car has clocked 81 mph on the Half Day quarter-mile before modifications were made on the engine. Bertrand estimates the top speed of his car is about 118 mph, based on his Sun tach readings.

Now that the job is finished, Bertrand would like to try his skill at a Fiberglass-bodied sports car. As a woodworker turned to metal, he did exceptionally well; his touch with plastics should produce interesting results.

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