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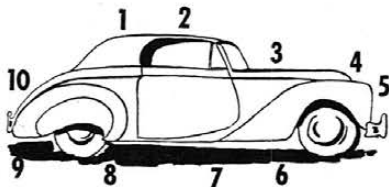
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# TECHNICAL TIPS

BY BARNEY NAVARRO

*(Questions from readers on their problems are welcome and every effort will be made to answer these inquiries in the Technical Tips department. However, the volume of correspondence received makes it impossible to answer such questions directly. Questions which are not brief and specific will be edited.—Ed.)*

### LOWERING '52 WILLYS

One problem has me stumped on my '52 Willys. Due to the unusual front suspension, how can I drop the front end? Robert C. Davidson So. Coventry, Conn.

- Lowering kits are not available for the '52 Willys so any alteration in the front suspension will be a custom job. Probably the easiest way to lower the front end would be to fabricate some angle brackets and weld them to the upper sides of the A arms so that the spindle assemblies can be repositioned an inch to an inch and a half higher. A good blacksmith should be able to do the job, but the expense will be rather high. Torching the springs to make them sag is not recommended because the front end geometry will then be incorrect.

### '50 STUDE HEAD MILLING

I have a '50 Studebaker Champion and am planning a mild souping job. Although I've just begun the work, I already have a thousand questions to ask. The first one is what is the best amount to mill the head for use of dual carburetors?

Billy Jones Americus, Ga.

- Milling the head has no relationship with the carburetion. The only reason that head milling is advised when dual carburetion is installed is because duals reduce low speed torque slightly. Milling the head adds to the torque factor so no reduction in low speed pulling ability is apparent. If .060 is milled from the head, a considerable increase in pulling ability will be noticed.

### CADILLAC CONVERSION

Would installation of a '53 Cadillac engine in my '53 overdrive Ford Victoria, with a Cadillac flywheel, pressure plate and Ford 10-inch diameter clutch disc, place too great a strain on the stock rear end for safety? I intend to use the car for the street only.

Richard B. Blaski Chicago, Ill.

- Whether or not the engine places too much of a strain on the stock rear end will be dependent upon how you drive the car. If you make a practice of engaging the clutch with a jerk at full power, you can expect the rear yoke of your rear universal joint to break occasionally. Smoothly applied power will merely cause the rear wheels to break traction and spin when too much power is applied.

### NEEDS UPDRAFT CARBS

For the sake of body design, the down-draft carburetor on my Chevrolet must go. Can you suggest three sidedraft or up-draft carburetors that will give performance equal to the original equipment? I am trying to keep the hood as close to the valve cover as possible.

Scott Mackintosh Cleveland, Ohio

- A three carburetor manifold adaptable to side draft carburetors can be obtained from Nicson Engineering in Los Angeles.

### PEAK HORSEPOWER

I have a 21-stud '37 Ford block bored out to 3 $\frac{3}{16}$  inches. Stroke is stock and pistons are stock Mercury. Stroke is 3 $\frac{3}{4}$  inches. Block has been ported and relieved, while the heads are milled .060. Valves are stock and the valve springs are Lincoln Zephyr. I have a three-quarter cam, Fenten manifold with dual Stromberg '97s, a '49 Ford oil pump, Mallory coil and condenser and stock distributor with dual spring points. Fuel pump is stock and I'm using Johnson adjustable tappets.

Could you tell me what my approximate horsepower should be and at what rpm the engine will peak? I'd like to put it on a dyno but everyone wants to mess with it and I'd rather do the work myself.

Donald Barton Toledo, Ohio

- Approximately 125 hp at 4,200 rpm.

### FORD SIX IMPROVEMENT

I would like to make a modest improvement in the performance of my '47 Ford six. What would you suggest I do first?

Sam Huyelto Wynnewood, Pa.

- Mill the head or install an aluminum high compression head.

### CIRCUIT BREAKER CONNECTION

In installing a V-8 in an A, I'd like to know where you would connect a circuit breaker in the rewiring of the V-8 to connect the electrical accessories.

A/3c Phillip Scheib Keesler AFB, Mass.

- A circuit breaker should be installed in the "hot" lead between the battery and all of your accessories. This does not mean that it should be in the heavy lead that goes to the starter switch, but immediately after.

### HYDRAULIC BRAKES

Right now I'm looking at my '35 Ford frame. What type of hydraulic brakes could best be adapted to it?

Charles Pettys Newtonville, Mass.

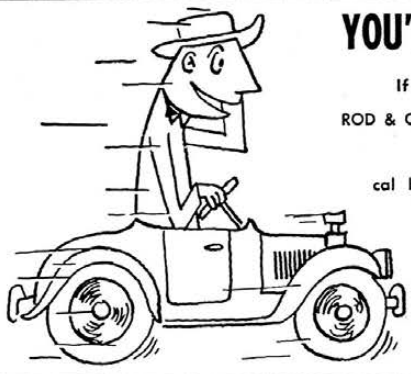
- Use 1939 through 1948 Ford hydraulics.

### DUAL CARBS FOR CHRYSLER

I want to put dual carburetors and 180-degree manifold on my '53 Chrysler New

*(Continued on page 52)*





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speed throttle response will be had with the four-barrel unit. Less idle jet adjustment will be necessary with the four-barrel carburetor because it only has two idle jets instead of four.

**WILLYS JEEP CONVERSION**

I have a '52 Willys Jeep for ranch use and would like to install a '51 Ford Six engine in it. Would it be practical to install the Ford engine and still keep my four-wheel drive transmission?  
Roy Johnson                      Morton, Texas

• The four-wheel drive can be retained but considerable adapter work will be necessary. Construction of adapters would be a custom job. It might be necessary to rework the flywheel housing slightly on the right hand underside to clear the front drive shaft.

**CADILLAC SPEED**

My trouble is with my '49 Cadillac 61 sedan that has 35,000 miles on it. Everything on the car is stock, while plugs, coil and condenser have been replaced. Still the car flattens out at speeds ranging from 35 to 75 mph, usually about 60 mph. Do you have any suggestions?  
Wilburn Lowe                      Westover AFB, Mass.

• It is entirely possible that you are experiencing valve lifter difficulty. They may be pumping up and holding the valves open. Camshaft wear is a definite problem. Even though yours is probably considerably worn, however, it is hardly conceivable that it could be worn enough to cause that much trouble.

**NOISY ACCELERATION**

What causes the roaring sound in the '53 Ford V-8 during acceleration which other V-8s do not have? Further, how can a smooth idle be obtained with this engine? I have had the car tuned, carburetor rebuilt, ignition checked and compression found equal in all cylinders.  
Fred Merritt                      Hartford, Conn.

• You didn't state whether your '53 Ford was equipped with Fordomatic. If it is, the roar is caused by the flex plate that couples the crankshaft to the torque converter. Flywheel-equipped cars do not have the same sound as Fordomatics due to this plate. The variations in torque produced by power impulses cause the flex plate coupling to vibrate like a loudspeaker diaphragm.

**MILEAGE COMPETITION**

I have just purchased a new Ford ohv Six and plan to enter it in a local mileage competition event in the spring. The rules for the event permit any and all modifications to increase economy. The car, of course, already has standard shift and overdrive. What basic changes would you

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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.

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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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