

## !! CHEVROLET OWNERS !!

9.3% Gain in Low, 18.6% Gain in 2nd  
The Greatest News Since Hop-Up Began. For the first time you can take advantage of your engine's power with our trans. gear train, approx. same as "Zephyrs" in Fords. Full line of Chevy equipmt.

Call or write to:  
TURNER'S GARAGE, 12002 E. Centralia Rd. Artesia, Calif. Torrey 5-3720

## Fibreglass Dechrome Kits

**\$1.00**

and up. (Add 25c for postage. No C.O.D.) Also \$4.95 kits. Contains METALFAST which adheres to metal.

Everything from Dechroming (Metal-Bonding) to complete car bodies. Ideal for rusted spots; eliminates leading. Write for details.

FIBREGLASS-EVERCOAT CO.

7608 Reading Rd., Cincinnati 37, Ohio

PEP UP with a  
PEP-MASTER

EXCLUSIVE FOR CHEVROLET  
CARBURETORS, GEAR SHIFT  
MODELS 1934-1952

Perfected by  
LOUIS CHEVROLET

UNBELIEVABLE PEP FOR  
CHEVROLETS, EQUAL TO  
LATE MODELS

5 MINUTES INSTALLATION TIME, ANYONE  
CAN INSTALL PEP-MASTER AT LESS THAN 1/2 COST  
OF OTHER PEP DEVICES.

★ POWER ★ PEP ★ ACCELERATION  
ORDER YOURS TO-DAY Only \$2.00, MONEY  
REFUNDED IN TEN DAYS IF NOT SATISFIED  
PEP-MASTER Co. PO. BOX 9057  
FT. WORTH, TEXAS

WHOLESALE SPEED  
PARTS FOR ALL CARS

Send 25¢ for new retail and  
wholesale CATALOG and  
how-to-do-it hints.

HONEST CHARLEY SPEED SHOP

Box MU3086, Chattanooga, Tenn.

## WHO USES MAGNETOS!!!!!!!

ENGINES OF ALL TYPES, Automobiles, Boats, Motorcycles, and Airplanes, where the utmost in efficiency, dependability and economy is the goal. Magnetos cost less to operate than the battery ignition on your car. The types we sell can be used year after year, even if you change cars. Conversions by us are very inexpensive. The balanced electric circuit and fine quality of the magneto eliminates costly battery ignition tune-up.

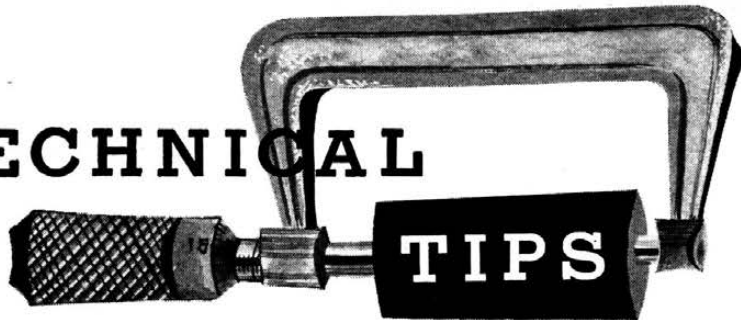
Our prices compare favorably with the cost of a dual coil battery ignition.

You also are dealing with the finest magneto shop in the world. Our products have been on the winning car at Indianapolis the last three years, also winning AAA national championships and setting world boat records.

Want to cut costs and get increased efficiency? Write us for details.

JOE HUNT | 2600 W. Vernon Ave.  
Los Angeles 8, Calif.

## TECHNICAL



BY BARNEY NAVARRO

### SUPERCHARGING PROBLEM

I have a Judson supercharger on my 1953 Ford and find that the engine is hard to start after it sets overnight. The engine also dies when the throttle is opened fast from a standing start and misses at high speeds. The accelerator pump is putting out a good stream and I have it on the longest stroke.

T/Sgt. T. R. Tybie Cleveland, O.

• The difficulty you are experiencing is one that is seldom understood and, although we can explain what is occurring, we cannot offer a solution.

At the bottom of the problem lies a principle that is overlooked to such a degree that a very small number of enthusiasts ever give it any consideration. Actually, it involves the reason for the existence of acceleration pumps.

When the throttle is first opened, manifold air velocities are very low and are incapable of keeping all of the gasoline in suspension. Some of the gas falls out of suspension and adheres to the walls of the manifold passages and ports, thereby causing the fuel mixture that reaches the cylinders to become lean. The purpose of an acceleration pump is to supply enough extra fuel to make up for the momentary loss caused by the wetting of the passages.

Use of a positive displacement supercharger between the carburetor and manifold increases the area of wetting when the throttle is first opened. Such a requirement poses quite a problem, since an increase in acceleration pump discharge at low speeds will have a detrimental effect at higher speeds when the "fall out" doesn't occur which will result in richness.

The heat riser or hot spot in intake manifolds is located in the area where the greatest fall out is apt to occur. This is in the region directly under the carburetor where the fuel mixture must make 90-degree changes in direction. Placing the carburetor in the stock position and blowing through the air horn, as is done with the McCulloch supercharger, would improve matters but would create another insurmountable problem. Unless a variable speed drive, similar to the McCulloch, is designed for the application, considerable power will be wasted by the blower at partial throttle.

Coincident with your carburetion problems is one of ignition. Although you do not state what has been done about spark timing, we can be reasonably sure that the distributor has been retarded sufficiently to prevent detonation (ping) when maximum blower pressure is being fed into the engine. Such a procedure will allow close to correct spark advance while high blower pressure is being employed, but will cause you to operate with insufficient spark advance when blower pressure isn't used.

The miss at high speeds can be caused by two factors: insufficient spark or fouled plugs. The spark intensity produced by stock ignition systems varies considerably. Some will fire satisfactorily under your conditions, others will not. A higher voltage spark is always required to fire a blown than an unblown engine, so if your ignition is one of the weaker ones, the added compression pressure may prevent the spark from jumping the plug gaps.

Plug fouling is often caused by insufficient spark advance at low speeds. Unless you have a means of making a special ignition system that will conform to the spark advance requirements of your engine, we have no recommendations. There are no ignition systems mass produced for supercharged engines with correct advance curves. An article on performance timing will appear in the next issue of MOTOR Life.

### FIRE SIREN ON SIX VOLTS

I am a city fireman and drive a '55 Chevrolet with a 12-volt electrical system. My siren, however, is a six-volt unit. Could you tell me what would be the cheapest and best way to take six volts off the 12-volt system to run the siren?  
Richard B. Berges Winona, Minn.

• The simplest way of obtaining six volts from a 12-volt battery is to install a center tap. Drill and tap the heavy portion of the lead terminal at either end of the connecting strap in the center of the battery. A stud can then be installed to serve as a connecting point for the hot wire to any six-volt accessory. Please note, however, that, although the foregoing method is simple and effective, it is not recommended for continuous heavy current drain.