

# New Clinics Trace Air Pollution To Its Sources

**EDITOR'S NOTE** — Internal combustion engines have been the cause for much of the air pollution in the United States.

To combat that pollution, some manufacturers have modified their engines, by reducing compression ratios and retarding ignition timing, to aid in reducing pollutants by better accepting the new low-lead or no-lead gasolines. Other measures have also been introduced to aid more complete burning of the fuel air mixture and to stop evaporation of fuel.

All of these steps, while helping to accomplish the intended purpose, require additional care by the individual

motorist to keep the engines within critical tolerances necessary for clean operation.

A University of Michigan research program has shown one of the best ways to keep an engine clean—as well as the air we must breathe—is to keep it tuned.

That means spark plugs must be replaced at regular intervals, as well as the air cleaner and other replaceable parts. And it's vitally important that the engine be tuned to manufacturers' specifications.

The accompanying report notes some of the problems that can increase pollution and how critical tuning is today.

## Three Adjustments Furnish Keys To Cleaner Operation

By DAVID L. WALKER  
Good things—or bad things—come in "threes." Three is the number of key tune-up adjustments that can convert an average car from a polluter to a relatively pollution-free vehicle.

The basic steps in reducing air pollution involve correcting spark plug misfire, maintaining correct fuel-air mixture and making sure timing is set correctly.

Through a series of Cleaner Air Clinics, Champion Spark Plug Company is instructing auto technicians throughout the nation in how to recognize and correct these laws. The clinics will reach more than 60,000 technicians with the latest information on controlling air pollution from automobiles.

### SPARK PLUG MISFIRE

—A two percent rate of misfire can more than double the amount of unburned hydrocarbons.

The two percent misfire is critical since the average motorist cannot detect that his engine is acting up with that rate of malfunction. So he is not aware there's anything wrong, let alone the fact that his car is polluting excessively. Causes of spark plug misfire include worn out spark plugs, deficiencies in other ignition components, such as points, distributor caps, rotors or cables.

### OVERRICH FUEL SUPPLY

—The function of the carburetor is to mix the gasoline with air and feed the mixture to the combustion chamber. An overrich mixture can result in 200 to 300 percent increased unburned hydrocarbons.

Typical causes of an overrich fuel mixture include clogged air filters restricting the supply of air, improperly adjusted idle mixture and a carburetor in need of servicing.

### TIMING

—With the new anti-pollution devices on cars, some motorists complain about loss of power.

The fact that residents of colder areas are more tune-up conscious than their warmer-climbed counterparts is reflected in regional breakdowns of starting problems.

Motorists in the West North Central U.S. (including Minnesota, the Dakotas, Iowa, Kansas, Missouri and Nebraska) had four percent less starting trouble than motorists in Kentucky, Tennessee, Alabama and Georgia. Car owners in Ontario, Canada, had four percent less difficulties than California, Oregon and Washington State drivers.

The message seems to read, for trouble-free winter driving START with a tune-up.

## 'Certified Car Care' Experts Plan Launched

A private industry program to certify automobile technicians was announced by Henry Sorenson, President of the Independent Garage Owners of America (IGOA).

IGOA, along with the Automotive Service Industry Association and the

Henry Sorenson National Congress of Petroleum Retailers, have formed the National Automotive Technicians Certifications Board (NATCB).

To receive certification, a technician must have at least two years' experience in his specialty. He must also pass an examination in one or more of 15 categories of car components.

Mr. Sorenson believes this system of certifying mechanics preferable to government certification. Said Mr. Sorenson, "This industry knows better than anyone else what the needed requirements for a mechanic are and we alone should establish them. I believe this is our industry's responsibility and I know we accept it."

The NATCB certification plan is based on one begun by the Independent Garage Owners of Arizona.

When your car's PCV valve is clogged, harmful emissions from the engine can increase by 200%, according to Champion Spark Plug Company.

## Pre-Winter Tune-Up Halts Hard Starts

A pre-winter tune-up remains the motorist's best insurance against starting problems.

This was one of the findings of the most recent study of hard starting problems conducted by Champion Spark Plug Company. Motorists in the United States and Canada were surveyed on their winter-time starting, experience and on maintenance performed on their cars during the winter.

Results of the survey indicated: Motorists who corrected hard starting by charging their batteries had up to three times the incidence of repeated failures than those who had tune-ups performed. Motorists who replaced batteries to correct starting problems still had from 28 percent more repeated trouble (in the U.S.) to 90 percent more (in Canada) than tune-up purchasers.

The effect of pre-winter maintenance was also demonstrated in the survey. In the United States, 23 percent of all motorists had starting problems at least once during the winter. Canadian car owners, living in a considerably colder climate, had a 27 percent rate of "won't starts."

Key factor in these statistics, according to Champion, is the comparative rate of tune-up purchases. In the U.S., less than one out of every three motorists (33.1 percent) purchased a pre-winter tune-up. In Canada, 41.6 percent bought tune-ups.

## Says Tune-Up Is Cure For Air Pollution

They came to get a free tune-up. They left with the realization that a neglected engine is a major contributor to the air pollution problem.

When engineering students at the University of Detroit decided to help observe Engineering Week by offering free tune-ups to the public, the students did not anticipate the response.

Seeking to dramatize the effects of undermaintenance on harmful emissions, the students found 150 cars waiting in line at a campus facility. It was more than they could handle so they invited excess numbers of car owners back for a tune-up the following week.

Additional openings for the second week's clinics were exhausted in 15 minutes as the public phoned in for appointments.

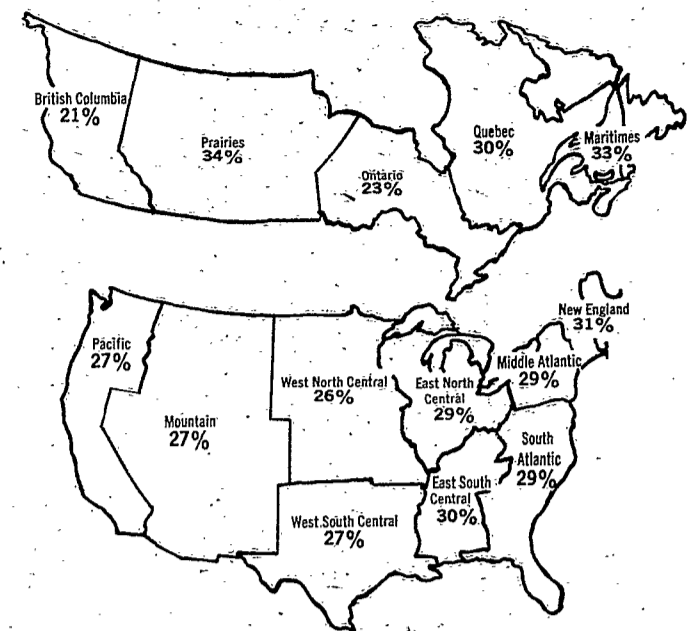
What was the result of the Clinic's study?

After tune-up the average hydrocarbon emissions were reduced 52 percent.

According to clinic organizers Bob Kaczorowski and John Smreker, "The goals that were set for the tune-up were 400 parts per million of hydrocarbons and 2.0 percent carbon monoxide. The average HC reading coming in was 644 PPM. The average CO count was 3.06 percent."

"After tune-up the average HC count was 312 and the average CO count was 1.3 percent."

## No Area is Immune



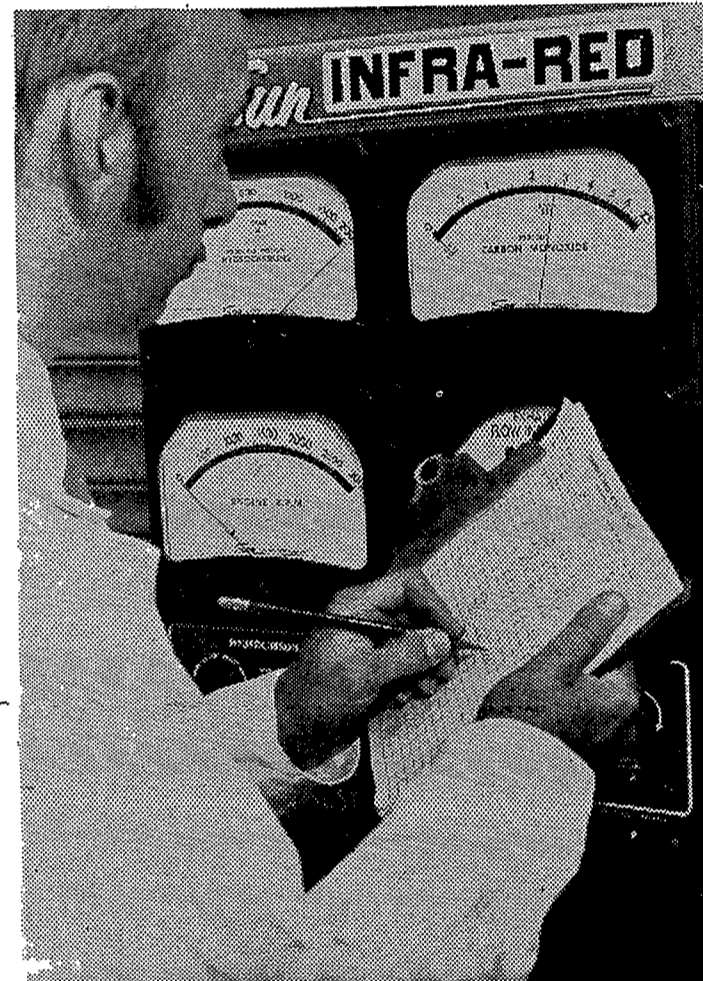
No region of the United States or Canada is immune from starting trouble. Motorists in warm California or Florida are as likely to have difficulty as car owners in Montana and Michigan. In fact, motorists in cold Ontario have only slightly more starting trouble than their British Columbia counterparts who enjoy a mild winter climate. When comparing the two provinces in terms of tune-up purchases, the reason is apparent. Ontario has a high incidence of tune-ups while British Columbia has a low one. Compared to the U.S. average, Ontario has about five percent less starting trouble.

## GHIZE'S GARAGE

FOREIGN CAR REPAIRS  
ALL GENERAL REPAIRS

- ENGINE TUNE UP
- CARBURETOR REPAIRS
- ELECTRICAL REPAIRS

RIVERSIDE DRIVE 393-3243 OGDENSBURG, N.Y.



A key ingredient of Champion Spark Plug Company's Cleaner Air Clinics is an exhaust analyzer which measures hydrocarbon and carbon monoxide emissions produced by car engines. Various ignition system malfunctions can increase these undesirable emissions dramatically, showing the maintenance is a vital contribution to cleaner air.

## NATE'S AUTO PARTS

— DISTRIBUTORS —  
YOUR ONE STOP PARTS HEADQUARTERS

- Auto - Tractor & Truck Parts & Repair
- Small Engine - Lawnmower & Outboard
- Radiator Repair • Motor Parts
- Machine Shop • Auto Electric Service



210 Isabella St. — Ogd., N.Y.  
393-0820



fast service!



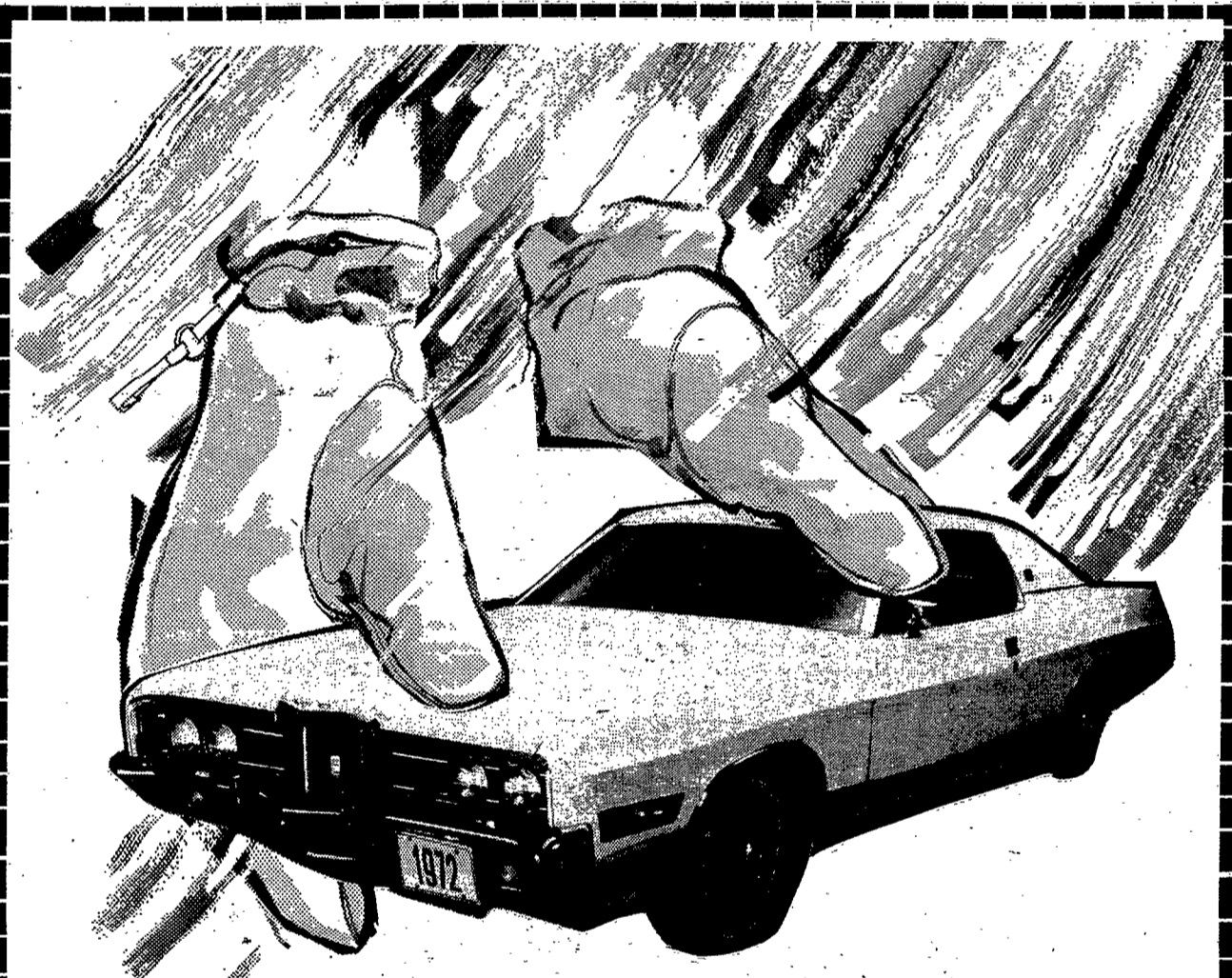
Stop here for prompt, expert attention to your car needs

Honest, Efficient Business Which Is Appreciated — You Can Trust Us.

FRANCHISED DEALER FOR FIRESTONE TIRES



Tom and Don's SHELL Station  
ACROSS FROM SHOPPING CENTER ENTRANCE  
PHONE 393-3075



## Keep Your Car On the Road With Our WINTER PROTECTION-

### CHECK OUT RADIATOR

Flush radiator, check for rust, leaks, signs of wear. Check hose clamps.

### IGNITION SYSTEM

Check for proper wiring, coil spark, distributor output and gap points.

### SPARK PLUG INSPECTION

Remove, clean, regap spark plugs. Check wires and proper current flow.

### BATTERY

Check voltage level, terminals. Clean clamps, cables. Add fluid, if necessary.

### MOUNT SNOW TIRES

Remove rear tires, balance and mount snow tires. Rotate front wheels.

### ANTIFREEZE

\* Check permanent-type antifreeze to insure proper engine block protection.

All for Only  
**\$14.95**

\* Parts Extra

# COLLIN'S FORD



CORNER ARTERIAL AND CANTON ST.

PH. 393-2520