

# Care for your Car

Neither rain, snow nor dark of night can hinder you from completing

your appointed rounds this fall and winter if you give

your car the services it requires for safe and pleasant motoring.

# Car care, pollution linked

The condition your car is in the automobile maker, casting owner, no system can function is everybody's business.

Car care is no longer just a on his shoulders. personal whim for your own other person in your community.

With every conscientious person in this country, vitally concerned with the environment, the engine has undergone close scrutiny. It has become fashionable to criticize maintenance on the part of the

complete blame for air pollution

Yet, car makers have already convenience but affects every reduced pollution 65 per cent to 80 per cent since 1960. And in the next few years harmful pollutants will be reduced to nearly zero, according to top automotive officials like General Motors' Ed Cole.

properly. Studies show that an untuned engine, for example, spews as much as four times the rate of harmful emissions as a tuned one.

The motorist's responsibility to his fellow man extends even beyond this vital area.

Keeping safety components in good condition is a sign of But without conscientious responsibility to your fellow motorists as well as yourself and your family. That includes tires, brakes, visibility items and a number of related systems.

> Maintaining your car so that there is a minimum risk of breakdown on a crowded expressway or street is another indication of concern. A sub-par engine that sputters to a stop on a crowded thoroughfare can cause inconvenience to thousands of other drivers.

By keeping all of your car's components in good condition, particularly in the months of foul weather ahead, you make an important contribution to the health and safety of your country.

And you can easily live up to your responsibility to taking your car into your favorite service outlet for its expert assistance.

As the poet John Donne wrote, "No man is an islande unto himself." To make this "islande" more

habitable, care for your car.

# **Dunlop** Tires

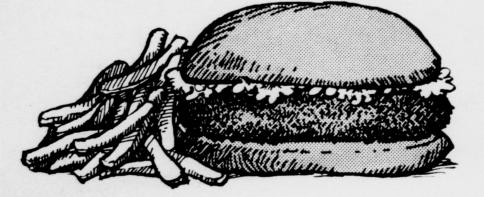
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### 1970 MG

This MGB-GT Special looks as though it is ready to take off for a trip around the world. Its occupants would be comfortable in its wood interior.

State News photo by Don Gerstner

# Daytime use of lights decreases accidents

Fall and winter driving means increased hours of darkness. Obviously, your car's lights will be getting more use.

According to professional drivers, use of headlights has an effect on safety. Checker Cab Company in Chicago conducted a 12-month experiment where drivers put on their headlamps during the day as well as at night.

The result was a 10 per cent decrease in accidents. Bodily injury accidents were reduced 12 per cent.

Why the decrease?

According to Checker, "First, by physically turning on and shutting off the headlights, the driver is reminded he is doing something for safety.

"Second, pedestrians and other drivers are constantly telling our men that their lights are on and this serves as a further reminder of safety to the driver. Also, when Checker drivers see other Checker cabs with their headlights on, they think of safety."

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## CHECK EMISSIONS

# Engineers test exhausts

Laboratories, were in the Kansas more than \$100,000 in testing equipment in an old garage.

are operating in the hands of the to stop - they just keep right on clean exhaust, they said. consumer and how they hold up running after the ignition switch under maintenace programs the is shut off. owners actually maintain," Lorance says.

"This is the first program sponsored by the federal government to see how these car is kept tuned, one of them devices actually perform in the said. The engines are running hands of the public."

engines were tested by the car burning leaner mixtures of makers who follow a strict gasoline and the timing has been maintenance program. The cars retarded to see that more of the meet the requirements, but does gasoline is burned. the public follow the same program?

puts gas in. He usually doesn't the wrong time without the perform preventive maintenance. assistance of the spark plug,

maintenance of the running after the switch is shut manufacturer, he will be in off. It can also cause pinging, range. If he doesn't, he won't be which is damaging to the engine. anywhere close to the In the old days, the richer requirements. The emissions will gasoline mixtures served to cool

tolerances more critical, the two the air. men said. Owners of the Air filters and idle settings on

Other common complaints are loss of power and pinging on regular gas.

This doesn't have to be if the hotter with water thermostats Up to now, they said, the up to 200 degrees. They are

If the timing of the explosion and carburetor settings are not "John Q. Public does not do just so, then glowing hot spots too well most of the time," develop in the combustion Buxton said. "He drives it . . . chamber and fire the gasoline at "If he keeps to the prescribed which accounts for the engine

## Cables provide help for intractable autos

Back in the good old days, whenever they were, the wise motorist always carried a rope in his car - especially if it was subject to fits of stubbornness.

Later, man learned about pushing one car with another mainly to get the faulty one started. But car makers recommend against pushing or towing by novices today.

In addition to the distinct danger of damaging your automatic transmission, it is altogether possible that your particular car cannot be started with a push.

So today's emergency measure, other than the nearest telephone, is jumper cables - long cables that permit you to transfer current from the strong battery in one car to the dead one in your own.

Jumper cables cost only a few dollars in your auto store. They are good insurance - if you know how to use them.

First, be sure you have good ones. A heavy current load might melt inferior cables before they can get your car started.

Second, double check with your service dealer to be certain you know how to hook them up correctly.

John Lorance and Jim Buxton, be higher. Performance will the combusion chambers and test engineers for Olson suffer and so will gas mileage." render an easier explosion, even Engine changes to cut airborne if large quantities of unburned City area several weeks installing garbage have made tune-up hydrocarbons were dumped into

"The purpose is to see how the modified cars are more apt to the carburetor also are critical to exhaust emission control devices find them hard to start and hard economy, performance and

A dirty air cleaner element It can cause moisture to gather

Radical weather changes also affect the life and performance Buxton said.

makes it more difficult for the inside the engine while not engine all the time it is running running. The moisture combines rather than only when it is cold. with the oil to form acid and the acid eats at the metal. That's

why it is better to drive a car 10 miles than two miles, Buxton of an engine in other ways, said, because it gives the engine a chance to burn the moisture out.



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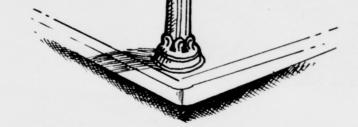
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#### 4 Michigan State News, East Lansing, Michigan

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# Auto parts trade seeks new image

#### By RICK WILBINS **State News Staff Writer**

Wednesday afternoon.

understands this business," said tamper with his car." the former MSU student.

in his Explorer post could tour systems expert and so forth. the automotive shop. Philips "In 1945, when I got into this brake shoes through the line.

"You know," he said, "we combustion system." have groups tour the shop eight or 10 times a year just like these Explorers will do, but we still don't reach enough people."

Philips said that the car owner demands more of a mechanic than he does of a doctor, even though the doctor is far more

7 - 9 P.M.

investment that he will make in his lifetime.

"After all, we're talking about "Our profession is badly \$3,000, or \$4,000 for an maligned by the press and so - automobile that he probably called lawmakers. What we need won't keep longer than three is a good PR man," commented years. Yet, this same individual a leading wholesale automotive gripes when he has to pay \$25 to parts dealer in Lansing get the wheels aligned or \$200 for a complete overhaul."

Leaning back in his desk chair, "If the average do - it -Don Philips, owner of five local yourselfer would realize just auto parts stores, talked of the how much goes into repairing problems the automotive service these new cars with modern air industry has had with its largely conditioning, power windows, ignorant and suspecting public. radio, heaters and the big "The industry has been too engines, he'd be glad to pay the long in hiding its light under a small percentage of his original bushel. Nobody really investment to have someone else

Philips said a mechanic must He was interrupted by a man be an electrician, hydraulics asking if six or seven of the boys expert, modern air conditioning

indicated that the boys might be business, all you needed was a interested in following a set of monkey wrench, screwdriver, a jack and a knowledge of the

> **Black student** quits cheering

MORGANTOWN, W. Va. (AP) - A black student is leaving the West Virginia University cheerleading squad rather than meet a university demand that he stop raising his fist during the National Anthem at athletic

Athletic Director Red Brown said Wednesday the university 'cannot allow any member of any athletic team - and the cheerleaders are a team - to use political views."

"I have to be true to my convictions," said the cheerleader, Phil Mack. "Brown has been after me for weeks irying to get me to act as the other cheerleaders do during the

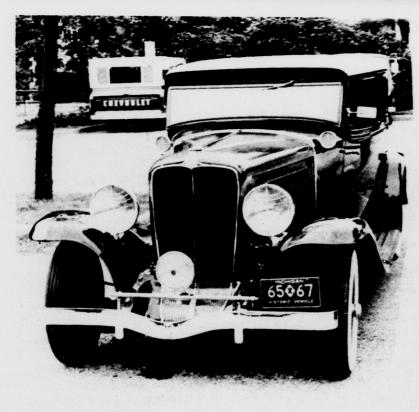
Brown "said I was shaming the

Featuring

Sunday Dining 3:30 P.M. to 8 P.M.



Friday, November 13, 1970 5



#### 1932 Auburn

This 1932 Auburn belongs to Richard B. Hoskins, instrument maker in physics, Hoskins said the auto has a top speed of 100 m.p.h. Hoskins lives in Haslett.

State News photo by Milton Horst

# Vehicle tune ups reduce pollution

as 55 per cent on the average may be achieved if only car low emissions.

findings reported by a group of unburned hydrocarbon University of Michigan concentrations of 3,000 parts engineering students who per million which reduced to conducted an emission tune-up several hundred parts," the clinic during the Environmental students said. Teach-In here last spring.

More than 85 per cent of the pre-1968 cars have much higher cars, the students said, showed a average hydrocarbon emissions decrease in hydrocarbon than post-1968 cars showing the emissions following a tune-up same mileage." (spark plugs, points, ignition One thing is certain, the

A drastic reduction in motor reported. A car, at idle, released vehicle emissions - by as much the greatest concentration of emissions.

"Some cars came in with seven owners tune up their vehicles for to 10 per cent carbon monoxide in the exhaust and left with a This is one of the major fraction of a per cent. Some had

"The data indicate that

timing and carburetor students said: "It should be adjustments). The carbon emphasized that it is the owner's monoxide and unburned responsibility to maintain an hydrocardon emissions were automobile, not only for his reduced by an average of 55 own interests, but also for the percent at idle, the U-M students well - being of the community."



### YS CAR REPAIRS

Uses for credit cards up

company credit cards to charge card because "the station has for car maintenance is increasing good mechanics and facilities for according to the Car Care repair." Subcommittee of the American Petroleum Institute.

Many factors indicate that today's motorist is aware of automotive safety, and is concerned about the safety and performance of his own car. More than ever before he's purchasing tires, batteries, and maintenance services when needed, using his credit card instead of cash.

Paul Nadler of New York University has estimated that there are today over 100 million oil company credit cards in use compared with 70 million outstanding just four years ago. Over 213,000 stations now honor credit cards.

in the same study, 20 per cent of the credit card holders - one

out of five - said that they The popularity of using oil valued their particular credit

Nearly all oil companies now allow dealers to charge for installation of products carried in their stations.





## WITH SEASON CHANGE

# Check tires, drivers told

and icy conditions.

With winter approaching Snow tires on the rear wheels the country. For motorists in manual remains vitally

THE 1971'S ARE HERE!

THE NEW '71

motorists should check their with plenty of tread or added warmer climates, new tires with important everywhere. Also, it is tires and make sure their cars are studs give the best assurance of good tread should be sufficient. important to remember that prepared for the season's snow safety and improved car Maintaining air pressure as balding tires of any type increase performance in cold regions of recommended in the owner's the chances of skidding and cause a lack of steering and braking effectiveness.

Ross R. Ormsby, Chairman of the Tire Industry Safety Council, advises that a 2/32 inch or less tread depth in a tire is a sound guideline - in the interest of safety - for removing the tire from use.

New tires will aid motorists in winter weather because of their sufficient tread depth. However, for best results motorists should consider getting snow or "studded" tires. Tires equipped with studs give the best assurance of traction on ice and hard - packed snow.

results indicate that when glare ice conditions are present at 25 degrees F snow tires provide 28 per cent better starting traction than regular tires. Studded tires that have had 2,500 miles of bare pavement use demonstrated a 183 per cent improvement in starting traction while new studded tires showed 218 per cent improvement.

Tire industry testing also indicated that cars equipped with studded tires on all four wheels show braking distance more.

The Council warns that studs should only be installed in tires whose tread surface is "pinned" for studding. The studs should be installed only by a qualified tire dealer or at a service station.

The U.S. Department of Transportation recommends a tire have no more than 150 studs. Many foreign tires have up to 200 stud holes, but over studding a tire can adversely influence its potential purpose for normal highway use.

Studs should be installed only when the tires are new. Older tires acquire dirt and foreign matter in the tread.



Rolls

The hood ornament for the Rolls Royce is one that is easily recognized by most people as a sign of distinction in automobiles.

## Fast action National Safety Council test IMPROVES car safety

Keeping all of your car's components in good working order is your best insurance against emergencies caused by equipment failure. But should critical equipment fail, due to neglect or unforeseen circumstances, it's vital to know how to react, says the National Safety Council.

Four situations that could improvements by 50 per cent or confront a driver and prove disastrous are:

- Stuck gas pedal
- Brake failure
- Blowout

• Fire in engine compartment If your gas pedal becomes stuck to the floor board, simply turn off the ignition, put the car in neutral and stop. If your car has power steering and brakes, these components will work harder so be prepared for the occurrence.

Should you step on the brake and the pedal sinks to the floor, try pumping to build up pressure. If there is no pressure, coast in gear and use the hand brake. For quicker stops, shift into a lower forward gear.

If all of these precautions fail, look for something to sideswipe such as a guard rail, snow bank or parked car. Use your horn and light to warn other motorists or pedestrians that you are out of control.

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If you experience a blowout, keep a firm grip on the steering wheel and avoid slamming on the brakes or you risk losing control of the car. A smooth pumping of the brakes is recommended. Then pull off the road at the nearest safe spot.

Most engine compartment fires are caused by short circuits in the electrical system. Should you experience such a fire, immediately pull the jack handle out of the trunk, wrap protective cloth around it and rip loose any burning wires. Then if you have a fire extinguisher, douse the burning area.

If you don't have a fire extinguisher, smother the burning wires with a coat or similar heavy article of clothing. Never use water or attempt to grab the wires with your hands. If the fire is beyond control, hurry as far away from the car as you can in case the gas tank explodes.

6 Michigan State News, East Lansing, Michigan

# Rust linked with accidents

of highway accidents . . . and rust is often the chief villain.

rust can be detected and corrected ahead of time. Know how? Experts at Ziebart Process Corporation have answered this car owners:

· I keep my car in a heated garage in winter, yet I have more trouble with rust than ever. Why result of environmental is this? A heated garage can conditions such as salt and actually increase rusting by as much as 300 per cent. According fleet operators say that 40 per to a University of Manitoba survey, ice on the car melts and damaged after two years of becomes water, and electrolyte service. The LTI people further that completes the electro . recommend that car owners chemical circuit necessary for protect their car and their life rusting.

• Are there any areas in the U.S. or Canada where because of there really enough climate there is no rust problem? contamination in our air to There is no area where rust is cause vehicle rusting? This is the not a problem. It is less in arid finding of extensive investigation areas because moisture must be of rusting just undertaken by the present for rusting to take place. Canadian Province of Ontario. In

waxing prevent rust? Car care sulfur dioxide gas are put into

The National Safety Council helps, but unless the interior points out that faulty vehicles boxed - in areas of the car. contribute to at least 10 per cent where 88 per cent of all rusting starts, are protected, rust can still eat holes in your car and But many problems caused by your pocketbook. The rustproofing sealant must be sprayed at high pressure through strategically located holes.

· What is the major safety list of common questions from problem caused by auto rust? Brake failure. According to the Lincoln Technical Institute of Detroit, this condition is a direct moisture on our streets. Major cent of their brake lines are rust with a rust preventive process.

• What about air pollution? Is · Does frequent washing and ome industrial areas tons of

## Thermostat troubles lead to engine wear

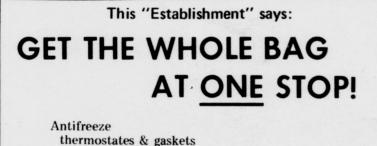
If your car's engine is running hot, or if your automatic transmission seems to be sluggish - have your thermostat checked.

Thermostats open and close to regulate coolant flowing through the cooling system to maintain proper engine temperatures. Functioning correctly, thermostats should open to allow coolant to pass through the system when the coolant reaches the exact temperature level for which its engine was designed.

If the thermostat opens before the coolant reaches this desirable temperature, the engine will run too cool. This will result in excess wear on moving parts, accumulations of sludge in the crank case and decreased fuel economy, among other things.

However, should the thermostat fail to open when the proper temperature is reached, the engine is subjected to overheating. With the thermostat closed, coolant flow is blocked off from the radiator. Until the stat opens, the coolant becomes hotter and hotter. When this occurs, the engine will deteriorate rapidly as metal parts are tortured by extreme temperatures.

In addition to costly damage done to metal parts, overheating also results in loss of engine power, increased oil consumption, abnormal combustion and preignition.



of residential and commercial

areas, too. Since sulfur dioxide plus rain water results in sulfurous and sulfuric acid which certain cities are adding to salt? effectively accelerate rusting, Do they retard rust? Corrosion and Canada a few years ago and

the air every minute. This is true sulfuric acid every time it rains! salt. Comprehensive testing of

your car has a bath of dilute inhibitors have been tried with

such corrosion inhibitors was • What about the chemicals undertaken by municipal governments both in the U.S. ineffective.

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You can help.

A recent tune-up clinic conducted by engineering students at the University of Michigan found that on average, a tune-up will reduce a car's exhaust pollution by 55%. So please. Take your car in for a tune-up. You'll have a better, smoother running, more economical car.

