

## GOOD ROADS LESSEN COST OF OPERATING MOTOR VEHICLE

The good roads movement is now spreading all over the nation in a remarkable manner and hundreds of million of dollars are being expended for good roads of all kinds everywhere. This includes money appropriated by Congress, by the various states, counties and municipalities, and much of it is being spent this year.

Good roads are more of a benefit to truck users than to passenger car users; if such a thing is possible. Good roads make hauling by truck easier, faster and less expensive. In a test made recently by the Portland cement association, accurate data showed that it took 204 per cent. more gasoline to haul a load over a dirt road than over a smooth concrete, and the saving recorded between the two types of roads would pay toward the construction of a paved highway at the rate of \$3,000 per mile per year, on a road carrying 500 motor vehicles per day.

The purpose of this test was to show the comparative cost of operation on rough roads and on smooth concrete roads.

These experiments were made over typical roads of every type, and the engineer spent several days determining the routes to be followed. The tests were fairly made and the results showed conclusively that the smooth surfaced roads pay.

Oregon is contemplating building one of the finest highway systems in the country. The growth of the truck industry gradually shows the way the wind is blowing. Machines are rapidly replacing animals for hauling purposes. Trucks now haul

big loads long distances at low cost and their value is judged by the money they earn for their owners. In the early days of the truck industry many trucks were sold to merchants because they looked good and because expert salesmen handled them. Now these merchants have had experience with motor equipment to a great extent and are buying the machines on performance alone. They are paying more for the equipment and getting machines to last and earn dividends, instead of securing hauling machinery that is constantly on the wrong side of the ledger.

Good roads and the growth of the truck and car industry go hand in hand. The more good roads are built the more trucks will be used to haul material and freight longer distances over them.

This is the era of good roads and good trucks.

### CLUTCH DRIVING HELD DANGEROUS

Don't drive with the foot resting on the clutch pedal as it will soon wear out the clutch collars or rollers, as the case may be. The first warning will be a rattle or a squeak under the floor boards.

When you hear a noise like that investigate immediately. If the bearing is not too far gone put some grease on it and save yourself a repair bill.

If it is of the self oiling type it is possible that the oil feed line is clogged. In either case put some oil on it and remember to keep the

foot off the pedal when not actually using it to shift gears. It is a mistake to hold out the clutch while coasting down hills.

Either put your shifting lever in a neutral position or coast down using your engine as a brake by retarding the gas. Don't turn the switch off for any length of time while using your engine as a brake.

More or less gasoline enters into the motor, and not being ignited, it drops down onto the piston and washes the oil from the cylinder walls, causing a leakage of compression and wearing of the pistons against the cylinder walls.

### CENT-ORE. MOTOR CO. PUTS IN NEW MACHINE

New Device Insures Accurate Motor And Bearing Testing—Machine Installed at Big Expense.

In order to give its patrons better repair service and to insure expert workmanship, the Cent. Ore. Motor Co., this week installed a modern new American Junior Combination bearing and burning-in and motor test and run-in stand. This machine has for its particular work the proper adjustment of the bearings, especially for Ford motors and the accurate testing of the motors before they are placed in the body. According to J. A. Van Huffel who is in charge of the shop of the company, this apparatus is identical to the machines used in the main plants of the Ford Motor company. By using it for the adjustment of bearings and testing the motors, better service can be given now to Ford patrons. The machine installed cost approximately \$1,000.

Put it in "THE BULLETIN." Try a Bulletin Want Ad for quick results.

## FIRE PRINCIPAL DANGER TO AUTO

Owner Should Have Extinguisher Handy and Keep Close Watch on Electrical System.

### SWEEP GARAGE FLOOR OFTEN

Gasoline Tank Should Never Be Filled If There Is Open Flame Near—Go Over Connections to Discover Any Leak.

Fire is really the greatest danger with which the motorist has to cope. Not that automobiles are in the habit of catching fire regularly, but the fire, when it does come, is sudden and unheralded. Furthermore the everyday handling of gasoline makes one careless, a warning in itself that is seldom heeded. There are so many ways in which a car can catch fire that it is the duty of every motorist to see that all possible steps are taken to prevent such accidents. A few suggestions follow that may assist in warding off the danger.

**Keep Fire Extinguisher Ready.** First of all have a fire extinguisher and keep it ready at all times for use. Many motorists carry them on their cars and thus reduce their insurance rates. This is the best practice, but an extra extinguisher in the garage is never out of place. The small, compact pump type is advised, as it is the best for fighting gasoline or oil fires and can be used safely around electrical apparatus. Some owners have an idea that the solution used in these extinguishers can be used for cleaning purposes, but its use for this purpose, even if practicable, is hardly wise. The extra few drops may mean a lot should the car catch fire on the road.

Do not let oily rags or waste lie around the garage. Keep them in a metal container and sweep the floor often. It prevents the spread of fire. Keep the engine clean, especially the oil pan. See that there is a small hole in it under the carburetor drip. If there is none by all means make one.

**Keep Flame From Tank.** Never fill the gasoline tank with an open flame near. Likewise see that the funnel used makes metallic contact with the tank. It has happened that static electricity generated by the gasoline flowing through the funnel has sparked the tank and caused a serious explosion. Make sure that the tank does not leak, particularly when the tank is located under the cowl. It is well to go over all gasoline connections occasionally to detect any leaks.

Install a gasoline shut-off where it can be readily reached. Some cars have them in an out-of-the-way place that is difficult to reach in an emergency. Always shut off the gasoline when leaving the car in the garage. This is even more important when an open-type coal stove is used for heating the building. A strainer should also be installed in the feed pipe if there is none on the car, and sediment should be removed once a month.

The electrical system should also be watched and the connections kept tight, for a loose or grounded wire may start a fire. When cleaning the engine with a brush use one with no metal parts; a short circuit caused by the metal on the brush may ignite the gasoline used in cleaning.

Should a fire start in the carburetor shut off the gasoline and start the engine, as racing it will soon draw all the gasoline from the carburetor. Sand can be thrown at the base of the flame, and when using the extinguisher squirt it through the radiator without raising the hood.

The last suggestion is not the least important—read this again.

**Walking.** Walking! Walking! What pleasure there is in the mere act of walking upon some pleasant level! If relieved by alternating hill and dale, so much the better.—Edward P. Hood.

### With the Spark Plugs

The Cent-Ore. Motor company expects the arrival this week of a carload of Ford cars, including one coupe, one sedan, two trucks, five touring cars and one roadster. The cars will be ready for delivery to a long waiting list.

Gunder Anderson this week purchased through the Bend garage a new model "Four-Ninety" Chevrolet.

The Bend garage expects delivery this week of a carload of Chevrolet autos, including one roadster and three touring cars. Practically all of these cars received in a recent carload received by Walter Coombs, have been delivered to Central Oregon purchasers.

E. G. Rourke, postmaster and merchant of Crescent was in town Thursday and Friday. He reports the roads this side of La Pine are getting in bad condition, but that the roads south of La Pine, via Crescent are still in good shape for motor travel.

H. F. Shoemaker, of M. P. Cashman's, this week purchased a "four

WILLARD STORAGE BATTERY

## One Thing More!

Most car owners know that this is the place to have their batteries tested with a hydrometer.

—That it is the place to buy a Bone Dry Battery with Willard Threaded Rubber Insulation—which carries with it the evidence of battery newness.

—That it is the place to come for battery charging, repair and a rental battery.

But, one thing more—it is the place to come, just as soon as you buy your new car, to have your battery registered and get the benefit of Willard 90-day battery insurance.

Drive in, whether you have bought a new car or not. Perhaps we can give you some battery information that will mean longer life to your battery and fuller use of your car.

We test, repair and recharge storage batteries, and always carry a full supply of battery parts, new batteries and rental batteries.

### BEST & HARRIS

Greenwood Avenue

Bend, Oregon

ninety" Chevrolet from the Bend garage.

"To assure better operation," says Walter Coombs, of the Bend garage, "change your oil in the crank case at least once every 1500 miles. Wash the motor with kerosene, turning the motor by hand.

This cranking flushes out the dirty parts. Then put in new oil. You will be surprised how much cooler your engine will run and with much less carbon."

Tim Wilson, of the Pioneer garage has returned to his work after a three weeks vacation in Tacoma.

## Something of Special Interest to All Ford Owners in Central Oregon---

You may be assured that before any Ford Motor Car is delivered to you it has been thoroughly tested in our shop.

### We have just installed a New AMERICAN JUNIOR COMBINATION BEARING BURNING-IN AND MOTOR TESTING MACHINE.

This machine burns in bearings with absolute accuracy—tests the motor for any defects perfectly.

This machine is identical to the one used in the main shops of the Ford Motor Company.

We can give you even better service than before on your repair work.

## Cent-Ore Motor Co.

Sole Local Agents for Firestone Tires  
The Ford Service Station of Central Oregon  
BEND, OREGON

# GENERAL TIRES

## Extra Heavy

That's what makes General Tires

so good. Built extra strength. Best possible materials from the Sea Island Cotton.

10,000 mile guarantee for General Cord Tires.

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7,500 mile guarantee for General "Jumbo" Oversize Tires 30x3½

GENERALS CUT ANNUAL TIRE COSTS

## Pioneer Garage

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Free Air - Batteries Tested Free - Gasoline Storage - Open Evenings

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