

# In the Auto World

## PLAIN MECHANICAL SUGGESTIONS FOR OWNERS WHO CARE FOR CARS

### Do You Know Your Auto Has a Universal Joint? Hint is Given For Testing of Distributor and Coil.

You will avoid much trouble if you look over the following details before taking out a car: gasoline, water, oil, and air in the tires. Then try out your brakes as soon as you get outside. Most troubles lie among these and beginners are especially apt to overlook them.

Do not neglect the universal joint. "Out of sight, out of mind" is the usual motto, but the result is to let this part run dry, which means loss of power, wear, and sometimes a broken joint. If you have a fabric joint this advice does not apply, but it is extremely important with all other kinds.

If your engine has overhead valves do not neglect the rocker arms. If these are not oiled every day they will run dry and wear. This makes them noisy, besides cutting down the efficiency of the engine.

If your engine refuses to run and you suspect the ignition system, a good test is to remove the wire from the coil to the distributor, loosening the still attached to the coil. Set the free end near the cylinder, so that a spark can jump, and crank the engine by hand or self-starter. If a good spark jumps the trouble may be in the distributor. If no spark jumps the trouble is in the battery circuit, which takes in the switch, coil, resistance unit, and interrupter. The trouble is usually a loose connection or dirty interrupter points.

Are you sure you have located all the grease cups and oil holes under the car? There are several on the break levers and other connections at the rear which may be suffering from neglect. Your oiling chart is a good guide, but the best way to find them is to go under the car with an extension lamp or a flashlight and locate them. If any of these bearings run dry and seize serious results may follow.

When the cooling system begins to overheat it gives sufficient warning by steam coming out of the top of the radiator or at the overflow pipe. This should not be disregarded, as the engine will soon begin to knock, burn up the lubricating oil, lose power and may end by stopping with a seized piston. If luck is with you no further harm may follow, but such things as bent connecting rods and crankshafts and broken pistons and cylinders are not unknown. The driver who watches for the first symptoms of overheating and governs himself accordingly is the one who gets most out of his engine in the end.

Popping back in the carburetor is a serious trouble as it may set fire to the car, but it also means a loss of power in the engine. Look for the cause among the following: Lean mixture (carburetor out of adjustment or a leaky inlet manifold), leaky inlet valve, valve tappet adjustment set too close, short-circuit in the distributor or on the ignition wires.

Draw off a few drops of oil occasionally from the oil base and catch it on the palm. If it is thinner than usual it means that gasoline is condensing in the crank case, damaging the oil and consequently the bearings. This increases the friction and reduces the power of the engine. If the oil is thin, change it immediately. If it is simply black it does not matter so much, but it should always be changed every 1,000 miles.

If a joint in the gasoline line persists in leaking, rub a little soap in the threads. This is not soluble in gasoline and so makes a tight joint. Red or white lead could be used, but they make a permanent cement which would damage the joint when removing. Soap it better, as it does not prevent the joint from being taken apart.

### Mechanical Hints

#### For Wise Autoists

A relief cock with a handle that is vertical when the valve is closed is apt to work open if the plug loosens through wear. The best way is to throw out the offending cock and buy a new one with the hole set properly, especially one with a spring to hold the plug tight in spite of wear. Another method is to drill a hole in the plug with a piece of brass wire carefully fitted and to drill a new hole in such a position that the valve is closed when the handle is down.

A simple but effective way to take off or put on piston rings is to use broken hack-saw blades a little longer than the piston. They work best with the teeth ground off. Use three, setting one under each end of the ring and one at the middle. The rings can be slid off or on without distortion or breakage. It is best to carry a set of four, so that if one is broken there will still be enough to work with.

Do not under-inflate and do not over-inflate your tires. If too soft they will heat up too much and wear out all the sooner. If they are too hard they make harder riding and require more gasoline consumption, as the soft tire wraps itself around an obstacle, whereas a hard tire does not yield but must be pushed over the obstruction.

It is a good plan to start the engine when filling the radiator of a car using a pump system. In some cases there are places which fill with air which only can be dislodged by running the engine. The system may seem full, but after the engine has started the level will be found too low. Running the engine while filling will do away with this.

If a motor is subject to considerable vibration there is danger of the bolts coming loose at the base. A wrench should be applied occasionally to make sure that everything is right. If this is not attended to almost anything may happen, from oil leakage to a wrecked engine.

A frequent and unsuspected loss of power is due to spark plug leakage. Most plugs leak when run very hot, and for this reason it will prove an advantage to make an occasional test at the end of a trip by dropping a little oil around the packing joints and watching for bubbles. The leakage can usually be stopped by taking up on the packing glands of the plug. When struggling with a balky engine do not overprime. The usual tendency is to pull out the dash adjustment and to put gasoline in the priming cups. Many times the mixture is too rich to fire. Leave the compression cocks open and spin the engine with the starter. This will thin down the mixture and will probably start the engine.

#### Rubber Cement

When rubber cement has stood exposed to the air, even for a short time, it becomes so thick that it does not give good results in application. Many motorists thin cement with gasoline, but the ordinary grades of gasoline contain considerable oil, which has a decidedly adverse action on the cement. High test gasoline or bisulphite of carbon is best to use for thinning.

Keep the springs tight at the axles. That is where the most spring breaks occur.

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 NOISY RIMS DUE TO DRY WEATHER  
 Many motorists have been bothered more by squeaking rims and noisy wheels this summer than ever before. On this account, local garages have sold a considerable quantity of devices which are designed to overcome the noise of rim squeaks. The reason given for the excessive noise is the dry weather. For several weeks there was no evidence of moisture with the result that wooden wheels had an opportunity to become thoroughly dried.  
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### ALCOHOL TO OUST GASOLINE SHORTLY?

#### Its Practicability as Motor Fuel Demonstrated—Cheaper Methods.

Alcohol, banned from booze, may play a big part in future in commerce. To put it more plainly, there seems to be a distinct tendency among automotive engineers to believe that alcohol is destined to become an important source of motor fuel supply. There is no fundamental reason why alcohol shall not be used as motor fuel. Even with our present cars comparatively slight adjustments make it possible. Unimportant changes in design would make the conventional gasoline engine an alcohol burner. One company, a large producer of alcohol, has already placed on the market a fuel embodying alcohol as a base, in conjunction with petroleum products. This fuel is being enthusiastically used in communities where it is readily obtainable and the sales consume all that can be produced. Quantity production seems to be the only drawback to general use of this combination fuel.

There is not much doubt that the eighteenth amendment of the United States constitutes, nominally ending the use of alcohol as a beverage, has been the means of bringing prominently to the fore the possibilities of utilizing alcohol as a motor fuel. When alcohol could be sold at anywhere from a dollar up per quart as a beverage there was not great inducement to cheapen the processes of production to produce a motor fuel. Now the case is different. A large production of alcohol finds its principal mission gone. The manufacturers must find other fields to consume their product. Naturally they turn to automotive vehicles. There is no reason why they should not find as remunerative an outlet as the one they have lost. Once assured of this they can go on to cheapen the methods and increase the output of alcohol until the supply is sufficient to drive every motor vehicle in the country. Almost everything that grows can be made to produce alcohol, and the output need be limited only by the demand.—Motor.

A woman's idea of "scare headlines" are those that begin to show on her face after she passes thirty. Some girls' idea of being poverty poor is not to be able to wear silk stockings to the factory every day.



# Look for the Trade-Mark

Most batteries are very much alike as to plates, case, battery solution, and many other features. The important—and the most important—point of difference is insulation. In ordinary batteries the plates are merely separated by thin pieces of wood. The wood softens with age, and it may crack, warp or carbonize, making re-insulation necessary, and frequently seriously damaging the battery.

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