

MOTORS AND MOTORING:

A Page Full of Interest to the Owner or Prospective Owner of an Automobile.

A PILGRIMAGE TO YPRES



Members of the Ypres League, led by Field Marshall, the Earl of Ypres, made a pilgrimage to the town recently to commemorate the fifth anniversary of the Third Battle. The photograph shows the procession passing the ruins of the famous Cloth Hall.

CLEAN MUFFLER A STEP TOWARDS MORE EFFICIENCY

One of the parts of an automobile most neglected by many owners and drivers is the muffler. As a boy with a dirty face puts off the cleaning process just as long as possible, so the motorist with a muffler that needs attention procrastinates and thinks perhaps he will fix it up tomorrow. And tomorrow never comes, but today is always here with its greater use of gasoline and various other complications that a dirty muffler causes.

Let us consider the use of the muffler. The exhaust valve opens while the burned gas is still under a pressure of from twenty-five to thirty pounds per square inch. If this were exhausted directly into the air the resulting noise would stifle conversation in the car, annoy everybody along the street and quickly get the driver into trouble with the police. The muffler prevents all this. It provides a chamber in which these exhaust gases may expand and cool somewhat and at the same time break up the pressure by allowing it to leak out slowly through a number of very small holes, instead of letting it loose in one "big noise".

In the early history of the automobile mufflers were not used and everybody for blocks around knew when an auto was coming. As the automobiles increased in number this became a nuisance and was stopped by law. Then they sought, indeed had been seeking, a means of stifling the sound. In the early muffler there was trouble because the gas would back up in the cylinder and decrease the power of the motor. It was thought there was no way to decrease the sound without decreasing the power; therefore the manufacturers devised a valve to "cut out" the muffler on the

car whenever extra power was desired. Sometimes the back pressure was so great as to interfere when driving through heavy roads or up hills. The "cut out" let the gas exhaust directly into the air instead of going through the muffler. At the present time nearly every city has a law prohibiting the use of "cut outs".

As a matter of fact, those well posted on automobile engines understand today that the "cut out" is absolutely unnecessary on a modern car if the muffler is kept in proper condition. Muffler manufacturers have been able to produce a design in which there is no back pressure at all. For this reason manufacturers discourage the use of the "cut out" on their cars, and some of them will no longer install one except as an "extra".

The average driver, however, does not know that his muffler needs as careful attention as any other part of the mechanism, and so he neglects it. In these days of noiseless cars it requires a great number of very small holes inside the muffler. These become clogged with soot or carbon from the exhaust. The deposit collects very rapidly, especially when the grade of oil used is poor or too much oil is used. It also results when the carburetor is adjusted to give too rich a mixture.

When these small openings become clogged the exhaust gases cannot escape rapidly, naturally the cylinder of the engine is not cleaned at the exhaust stroke. Result: It is impossible to bring in a full cylinder of new gas on the next intake stroke. There is not a full charge to explode, and this means a loss of power to the engine.

Cases are known where the throttle was opened wide without any increase in power. Trying to find out what the matter was, the driver opened the "cut

out" and this caused the machine to accelerate very rapidly.

In other cases when the engine was cranked there would be a few explosions, a splutter and a stop, and the reason was that the muffler was so clogged that it was impossible to exhaust the gas from these few explosions; the cylinder remained full of burned gas, and, of course, could not take in a further supply. These, of course, are extreme cases.

But even in these less serious cases it will often be found that the power of the motor may be materially increased by having the muffler cleaned yet it is seldom done, even when the car is supposed to be overhauled completely.

PICKED UP IN THE ROAD

If you use kerosene for cleaning an engine that is oiled under pressure, do not run the engine, even with the starter. This pumps kerosene into the oil tubes, from which it cannot easily be removed.

One of the elements of complication about bolts and nuts is the ubiquitous cotter pin. How is the best way to remove it?—Use a long stout button hook for that purpose. Be sure you note the position of the hole in the bolt before covering it with the castellated nut. While the nut is removed it often happens that an adjustment of one sort or another will prevent the nut being threaded far enough to bring the castellated portion in line with the hole for the cotter pin. In that case, put the nut on with the castellated portion first.

THE SULPHATED BATTERY

When a battery becomes sulphated because of neglect to charge it properly or because of low water in the cells it should be charged at a slow rate and discharged, the cycle being repeated until the battery is in good condition. Slow charging can be effected by operating the car with the sidelights or the headlights, during the day as well as at night. The set to use should be determined by the ammeter reading. When the ammeter hand begins to swing considerably past zero, the headlights should turn out. This will bring down the charging rate. If the machine is operated at a very high speed, it may be necessary to turn on the headlights to reduce the charging.

FOR A QUICK STOP

When making an emergency stop, leave the clutch engaged, apply the foot brake and pull the hand brake; but do not "lock the wheels". Keep the wheels rolling; otherwise there is danger that the car might slide or skid.

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REVERSING BOLTS

In some instances a nut is so placed that it is extremely difficult to reach it with a wrench. Often this may be obviated by reversing the thread end of the bolt, whereby the nut is brought within easy reach.

USING A JACK ON SOFT GROUND

When it becomes necessary to jack up a car on soft ground, where there is no support for the tool, take out the floorboard or toe-board and use it for the jack to rest upon.

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(Signed) FRANK E. JOHNS, Montreal.

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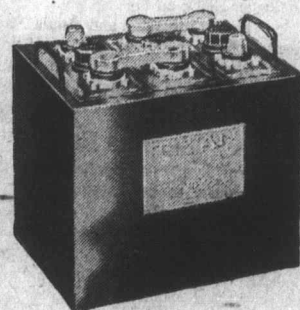
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