



## PREPARING FOR THE WINTER

### JOBS YOU SHOULD LOOK AFTER ON YOUR CAR YOURSELF



THE time has now arrived when we must take stock of our car and consider what it has done in the summer and what it will be called upon to do through the winter. The abnormal summer weather may lull us with a false sense of security.

The first item that should be tackled is the brakes. Badly adjusted brakes do not show up on dry roads, but with the advent of probably wet and even frozen roads it is absolutely essential that the brakes be balanced. First remove the brake drums and clean out the powder and dirt and it will be found that much better braking will ensue. The shoes should be examined for thickness of liner and equality as well. It takes two to overhaul the brakes, one to apply the lever and pedal and the other to do the actual work. If the cams are unduly open it shows that either the shoes or the drums are worn. Drums that show scoring should be cleaned up in a lathe, or replaced.

Presuming that the shoes and drums are in order, replace the drums and jack up all four wheels and apply the hand brake hard enough to be able just to pull the road wheels over. Go round each in turn and see the effort required to rotate the wheel is equal. If not, refer to the instruction book and study the illustration of the independent brake adjustment for each wheel. It is quite simple. It is sometimes necessary to slip back the rubber covering to reach the locking nut. The ordinary service adjustments for the brakes should be oiled with a thin machine oil to facilitate their use from time to time.

How many people know that in addition to it being an offence to have a car on the road with inefficient brakes—quite apart from it being suicidal—they run a serious risk of the insurance

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policy being invalidated in the event of an accident. A case came to the writer's notice recently when through abject neglect of the brake a crowd of people were run down and the driver was charged and committed to prison for a long term. There is no excuse for bad brakes to-day.

Now that the daylight saving is past and the lamps have to be lit at an early hour, let us look to the battery. Headlights take their toll and so does the starter. It is not always sufficient to replenish the battery with distilled water. If this is done every week the battery should be in good condition, but how many people take the trouble—out of sight out of mind. In the next few days remove the terminals and clean them and replace after coating the parts with vaseline. If time permits, send the battery to a competent charging station to be emptied and refilled with correct electrolyte and slowly recharged. The dynamo can never bring a battery to that condition which a slow continuous charge will.

The old headlamp bulbs may be dull and the reflectors in need of a clean up. Night driving will be made safer by a little attention. See that the dynamo charges at the proper rate so as to maintain the batteries charged when using the headlamps. If, for example, with the headlamps alight the ammeter shows more than 3 amps. charge, or only shows a charge in the daytime of 6 amperes with no lamps alight, the third brush regulator requires adjustment. A low rate of charge may also indicate that the commutator requires cleaning. Unless you know how, go to a service station

and see how it is done; you can then do it on a subsequent occasion yourself.

The final suggestion this month is very important.

Drain the sump—flush it out and refill. A little explanation is necessary if these operations are to be executed correctly.

Draining is easy. You just remove the plug on the offside of the sump and let out the oil. Now comes the principal point. Remove the pipe leading from the sump to the oil pump—wash the unions and place on one side, noting which end goes to the pump. A large hexagon nut will be noticed which is part of the oil strainer—remove this by unscrewing the nut, but be careful to preserve the fibre washer between the nut and the sump. Withdraw the filter and wash it in paraffin or petrol and replace it.

First of all, obtain say  $\frac{1}{2}$ -gallon of flushing oil, or very thin engine oil will do; pour this into the engine and start up and run the engine for 2 or 3 minutes, at say 1,200 r.p.m. and then drain off the flushing oil. It went in crystal clear, it will come out like mud. And that is exactly what you want to get rid of—mud. All the oil ways will have been flushed out—impurities removed. And the system will be ready for the new winter's oil. Valve guides will be freed, piston rings become elastic, timing gears cleaned and the oilways in the crankshaft flushed out.

Be sure to drain out as much as possible before pouring in fresh oil.

Do not run the engine, however, too fast or too long. On the other hand, it is no use letting it idle round. Watch the oil gauge after, to see that the joints have been properly made between the filter and the sump and the pipe from the latter to the pump.