

movement in it; but if by depressing the pedal too far you tie the clutch cone with the clutch brake, you may be sure of a recurrence of the difficulty if the clutch stops are too positive.

Another method in coming to neutral from first gear is sharply to re-engage and depress the clutch pedal, simultaneously withdrawing the gear lever to neutral, but if on a hill one must be very quick so as not to let the vehicle run backwards.—A.B.

CLEAN AIR FOR THE CARBURETOR

THE need for some means of cleaning the air supply to the engines on motor vehicles of all kinds is rapidly being recognized. When you look under the hood of a passenger car or truck after a long trip on a dusty road and see the engine covered with dust you realize how much dust is going inside the engine through the carburetor. And on a tractor the conditions are very much worse, especially in sandy soils. On days when there is no wind, or very little, there is such a cloud of dust round a tractor that a

SHEET METAL PIPE ANY SIZE DESIRED



few yards away it is impossible to see the tractor or the disks or the driver.

In all published illustrations of the U. S. Army tractors showing the engines the air cleaner can be plainly seen.

The fine dust being sucked into the cylinders causes very rapid wear of the cylinders, pistons and rings and as it works down into the crank case it circulates with the oil and wears every moving part. Fully to cover this subject would fill a book. The writer has seen a piston ring which was used in a tractor motor in very sandy soil. In less than 100 hours of operation the ring was worn "paper thin" and one third of the circumference had disappeared. This shows that an air cleaner is a necessity.

But the dust entering the cylinders affects the operation of the engine in another way, which is to add to the carbon deposit on the cylinder heads and pistons. One manufacturer of tractors had analyses made of carbon taken from tractor engines working under widely different conditions.

All Farmers Agree

Imperial Royalite Coal Oil and Imperial Premier Gasoline are used and recommended by thousands of Canadian farmers.

IMPERIAL PREMIER GASOLINE

A straight-distilled all-power "gas"—not a mixture. Burns clean and vaporizes readily at all temperatures. The best fuel it is possible to obtain for your gasoline tractor, your farm "gas" engine and your automobile. Imperial Premier Gasoline settles the question of economy and efficiency.

IMPERIAL ROYALITE COAL OIL

A clean, clean-burning fuel oil, just as powerful as it is uniform. Recommended by many of the leading manufacturers of kerosene tractors. Extra refined. Canadian-made for Canadian use. A superior fuel for the oil heater and the oil cook-stove as well as for other household purposes.

Promptly supplied anywhere in Canada in any quantities desired.



IMPERIAL OIL LIMITED

Power · Heat · Light · Lubrication
Branches in all Cities

Every Ford Car is Champion Equipped

The best possible reason why every plug replaced in your Ford should be a Champion "X" is contained in the Ford instruction book which says—"The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our motor."

Champion
Dependable Spark Plugs

are exclusive factory equipment in Fords, Overlands, Maxwells, Studebakers, and over two hundred other makes of gasoline motors and engines, because Champions have justified every claim and every confidence by an unbroken record for dependability under every possible test in actual service.

There is a Champion that will maintain the efficiency of your Motor Car, Truck, Tractor, Farm Engine, Motor Cycle or Motor Boat.

Sold where Motor Supplies are sold.

**Champion Spark Plug Co.
of Canada Limited
Windsor, Ontario.**



Champion "X"
for Ford Cars
A-15. 1/2 inch.
Price 90c.