Dear User:

We want to help you save an unnecessary repair bill.

A service call for fixing a sticking valve, or repairing a tractor after a stuck valve has caused you to break the crankcase is expensive. Also, completely unnecessary.

First you should know that exhaust valve sticking is common to any small air cooled engine, unless the proper lubrication of the cylinder head is carried out. The easiest and most satisfactory way to prevent a sticking valve is to use Mobil Upperlube valve top oil in your gasoline according to the directions on the container. This lubricates the head, helps to prevent the exhaust valve from sticking.

SYMPTOMS: Suddenly, usually overnight, you have no compression. That means you spin the motor over by hand easily, but it will not start. When this is the case you have an exhaust valve stuck in the open position.

CURE: Remove the spark plug and head. Use a light penetrating oil. (We recommend Mobiloil Artic Special, SAE 10, mixed half and half with kerosene.) Put the penetrating oil liberally around the valve stem. Then take a screwdriver and insert it in the slot in the top of the valve, and keep trying to turn the valve as the oil works down. The valve will usually free itself in a few minutes and turn easily. Remove the screwdriver and turn the engine over gently with the strap, pulling slowly and evenly. If the valve works up and down as the engine turns over, you have the trouble fixed. Now replace the head and the spark plug.

You may have to pull the strap several times until the oil and kerosene burn out, but your tractor will start after a few tries and you have saved yourself an unnecessary repair bill.
CAUTION: It is always a good idea, after the tractor has been idle a day or more, to try to turn the motor over GENTLY with the strap. If you meet with more than normal resistance, DO NOT TRY TO FORCE THE ENGINE TO TURN OVER! You probably have a valve stuck in the down position. If you try to start the motor by force with the valve stuck down you will tear off the Valve Cam, and usually knock a hole in the crankcase.

If you meet resistance while turning the motor over gently, to make sure it is a valve stuck and not something else wrong, turn the engine over backwards. If the exhaust valve is stuck, you will meet the same resistance after the strokes have allowed the intake valve to open and close.

If this test proves that the exhaust valve is stuck in the down position, follow the same steps we told you about in the first of this letter. If the resistance is met only in the forward turn, call us.

We sincerely hope this letter will save you some inconvenience as well as money. As always, we try to help our users get the greatest possible satisfaction from their Gravely Equipment.

We are always at your service—just give us a call. You can be assured of reasonable rates and factory methods for your complete satisfaction.

Yours sincerely,

GRAVELY NEW YORK, INC.

E. C. Harvey, Mgr.