## PUT A STOP TO

## **Bypass Starting**

here are a lot of tricks of the trade in farming, clever shortcuts to save time and effort. But one trick—bypass starting—is a potentially deadly practice.

Bypass starting involves touching a wrench or screwdriver to the terminals of the starter motor or to the solenoid of a tractor or self-propelled vehicle engine, which bypasses all tractor-neutral start switches. Accompanied by a few bright sparks and electrical snaps, the circuit is completed, the starter engages and the engine starts.

As is the case with some of these shortcuts, that is not where the story ends.

Unfortunately, every year a few farmers or mechanics touch their tools across the terminals of a tractor or vehicle that is in gear, and it immediately lurches forward or backward. Too startled to jump away, they are pulled down by the drive wheel, crushed,

and seriously injured or killed. And it takes less time than it took you to read this paragraph.

Tractors with wet clutches pose the added danger of letting the engine start before the tractor begins to move, providing a false sense of security.

Although bypass starting is practiced on a variety of powered vehicles, including trucks, self-propelled windrowers and combines, statistics show that it's most often attempted on tractors. The threat of foul weather just adds to the temptation of trying to save time by bypass starting a machine.

Fortunately, very few of these types of accidents occur. And compared to the number of tractors in service, the instance of injury and death caused by bypass starting is infinitely small. Still, every accident is a tragedy that could have been avoided.

The danger of bypass starting is implied in the name. It bypasses all the safety-start and neutral-start switches that may be included in the tractor's or the engine's elecis potentially trical and hydraulic systems.

There have even been incidents where people bypass-started tractors because of a maintenance problem with the tractor's neutral-start switch. Me-

chanical problems that might cause a person to bypass start an engine should be repaired immediately.



## **Safety Start Switch Check**

You can help avoid the temptation of trying to bypass start an engine by checking to make sure switches remain in working condition. Do this by periodically checking that the safety start switches function correctly. The procedure for this check, which takes only a few seconds, is as follows:

Ensure that no bystanders or obstructions are around the tractor, should it inadvertently start.

This

time-saver

a costly,

or deadly,

mistake.

- Depress the clutch and brake pedal. Attempt to start the engine with the gears disengaged and the PTO in neutral. The starter should engage.
- Depress the clutch and brake pedal. Attempt to start the tractor with the gears engaged and the PTO in neutral. The starter should NOT engage.
- Depress the clutch and brake pedal. Attempt to start the tractor with the gears in neutral and the PTO engaged. Again, the starter should NOT engage.
- For tractors equipped with clutch-mounted start switch, depress the brake pedal, but do not depress the clutch pedal. Place the transmission and PTO in neutral. The starter should NOT engage.
- Fig. 15 If either switch is not working correctly, it should be replaced immediately. See your AGCO dealer for parts and/or repairs at once.
- Also, if your tractor does not have the decal shown on this page, you may obtain one from your AGCO dealer. It is part number 3605 284 M2 (as shown), or part number 72200600 (not shown). This decal reminds operators to avoid the practice of bypass starting.

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