

ELECTRIC HYDRAULIC UNIT USEFUL ON TREE PLANTER

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Mounting an electrically powered hydraulic unit on a Lowther Crank-axle tree planter eliminates the need to install special hydraulic hookups on privately owned crawler tractors, and speeds the lifting of the planter plow from the ground at turning points.

Very few tractors have dual hydraulic systems for

operating the planter and the V-blade.¹ Tractor owners do not want to make the necessary alterations because the dual system is not needed for other jobs. Also, the hydraulic systems of some tractors are not

¹ **A V-blade is mounted on the tractor in place of the dozer blade to clear debris from the planter's path.**

always adequate to operate both the V-blade and the equipment on the tree planter.

Procedure

An electrically powered hydraulic unit was mounted inside the protective cage of the tree planter (fig. 1). This 12-volt unit is used to operate single-blade snowplows on light trucks. An insulated transmission cable with a 6-volt capacity (approximately $\frac{1}{2}$ inch in diameter) was used to connect the tractor battery to the motor on the tree planter. (The battery cable can be used for the transmission line, but secondhand welding cable costs less and is much more flexible.) The transmission cable was placed in plastic pipes to prevent abrasion and short circuits. A ground wire

should be connected from the tree planter tongue to the drawbar of the tractor. A heavy-duty floor starter switch was

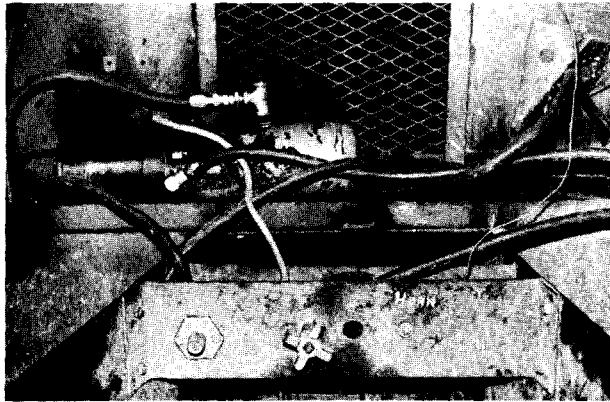


Figure 1.—This electric hydraulic unit is mounted on a tree planter.

used to operate the electric motor because a common dashboard switch burns out in a short time. (This also eliminates the need for a solenoid switch.) A high-pressure valve had to be installed in the cage where it could be controlled by the planter operator. The valve was placed in the pressure line between the hydraulic pump and cylinder that raises the planter from the ground.

Advantages

This installation has several assets:

1. Any crawler tractor (TD-9 or equivalent) on which the V-blade can be mounted can be used to haul the planter.
2. The planter's hydraulic system is controlled by the planter operator. When the tractor driver handled the controls, he was not always able to stop and raise the planter from the ground quickly enough.
3. When the planter plugs up with debris, the operator can raise it free of the ground and clear it while in motion.
4. Because an electrical unit was installed on the planter, a truck horn could be mounted in the cage. This enabled the planter operator to signal the tractor driver to stop immediately when there was danger of debris injuring him, or to stop and clear the planter before a long lapse in planting occurred.