# 

# Series 110 Lawn Tractor



# **OPERATOR'S MANUAL**



IF INCORRECTLY USED THIS MACHINE CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE MACHINE SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ THE ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE MACHINE.

## **CONTENTS**

### **TRACTOR**

|                     |     |    |          |   |    |    |    |    |    |    |   |  |   | Page  |
|---------------------|-----|----|----------|---|----|----|----|----|----|----|---|--|---|-------|
| ADJUSTMENTS         |     |    |          |   |    |    |    |    |    |    |   |  |   | 10-12 |
| GENERAL INFORMATIO  | N   |    |          |   |    |    |    |    |    |    |   |  |   | 6     |
| LUBRICATION         |     |    |          |   |    |    |    |    |    |    |   |  |   | 16-17 |
| MAINTENANCE         |     |    |          |   |    |    |    |    |    |    |   |  |   | 12-14 |
| MAINTENANCE AND LU  | BF  | IJ | CA       | T | 10 | N  | RI | EC | OI | RD | S |  |   | 15    |
| OPERATING CONTROL   | S   |    |          |   |    |    |    |    |    |    |   |  |   | 6-7   |
| OPERATING INSTRUCT  | IOI | NS | <b>.</b> |   |    |    |    |    |    |    |   |  |   | 8-9   |
| SAFE PRACTICES FOR  | RI  | DI | N        | G | VI | CH | IC | L  | ES |    |   |  |   | 20    |
| SET-UP INSTRUCTIONS | ١.  |    |          |   |    |    |    |    |    |    |   |  | • | 4-5   |
| SPECIFICATIONS      |     |    |          |   |    |    |    |    |    |    |   |  |   | 19    |
| STORAGE             |     |    |          |   |    |    |    |    |    |    |   |  | • | 18    |
|                     |     |    |          |   |    |    |    |    |    |    |   |  |   |       |
|                     |     | _  | _        | _ | _  |    |    |    |    |    |   |  |   |       |

# **MOWER**

| MAINTENANCE             |  |  | . , |  | ٠. |   | 23-25 |
|-------------------------|--|--|-----|--|----|---|-------|
| OPERATING INSTRUCTIONS. |  |  |     |  |    | • | 22    |
| SET-UP INSTRUCTIONS     |  |  |     |  |    |   | 22    |
| STORAGE                 |  |  |     |  |    |   | 25    |



#### **WARNING - DANGER**

THIS TRACTOR IS EQUIPPED WITH AN INTERLOCK SYSTEM WHICH IS INTENDED TO PROTECT THE OPERATOR AND OTHERS FROM INJURY BY PREVENTING THE ENGINE FROM STARTING UNLESS THE PTO CLUTCH LEVER IS IN DISENGAGED POSITION AND THE TRANSMISSION GEAR SHIFT LEVER IS IN "NEUTRAL". IN THE INTEREST OF SAFE OPERATING CONDITIONS, THIS TRACTOR MUST NEVER BE OPERATED WITH THE INTERLOCK SYSTEM DISCONNECTED OR MALFUNCTIONING.

# SET-UP INSTRUCTIONS

#### **DEFINITION OF DIRECTIONS**

Reference to "right" and "left" side of tractor is from operator's position when seated in normal operating position. Reference to "forward" and "rearward" is likewise from operator's position.

#### INSTALLING THE STEERING WHEEL (See Fig. 1)

- 1. Straighten the front wheels.
- Remove key, screw, washer, and lockwasher from the bag of parts.
- Position steering wheel mounting key in keyway in the steering wheel shaft.
- 4. Fit hub of steering wheel over steering shaft.
- Place lockwasher and washer on mounting screw and insert screw into threaded hole in steering shaft.
- 6. Tighten screw securely.
- 7. Carefully press cap into place over mounting screw.

#### PUTTING BATTERY IN SERVICE



#### **WARNING - DANGER**

Eye protection must be worn before checking or servicing battery.

With proper care the battery should give the long service life built into it.

A battery which does not function properly is not necessarily worn out or defective. It may only need a good recharge. If battery trouble occurs, a full recharge and test by a competent battery man is recommended.

#### **IMPORTANT**

If you equip your tractor with headlights, do not use them more than one hour for every two hours of tractor operation. For more frequent use provide a supplementary charge to the battery.

The battery needs to be charged before it can be placed in service. You can do this yourself or have it done either by an automotive service station or your Authorized Dealer. Two quarts of electrolyte are required for proper battery fill and can be purchased from your local auto supply store. Proceed as follows:

- 1. Make sure all switches are in "off" position.
- 2. Pull back plastic battery cover off battery.
- Remove hood from tractor, See General Information "REMOVING THE HOOD".
- Remove the battery from the tractor (See Fig. 2) and place it on a wooden bench or a piece of wood or plastic. DO NOT SET THE BATTERY ON A CONCRETE FLOOR.

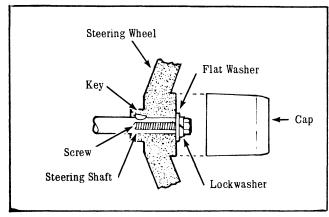


Figure 1

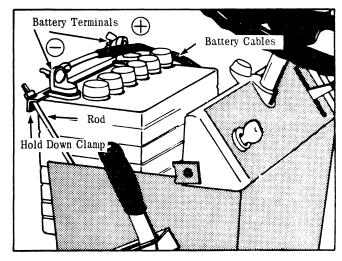


Figure 2



#### WARNING - DANGER

Take care to avoid contact with the acid of the battery electrolyte. It will cause painful and dangerous injury to eyes or skin in case of external contact. It will damage clothing and other articles if spilled or spattered. Before opening the electrolyte container or handling the electrolyte, study the antidote label on the container for instructions and procedure in case of accidental contact.

- Before installing the electrolyte, study the instructions on the carton.
- Remove filler caps and fill battery with electrolyte to proper level (See Fig. 15). ALLOW BATTERY TO SIT FOR 20 MIN-UTES BEFORE PROCEEDING WITH STEP NO. 6.



#### WARNING

Under no conditions should battery be over-filled. We cannot be responsible for damages if this warning is not observed.

# SET-UP INSTRUCTIONS

- 7. With the filler caps still removed, place battery on charge at 3 amperes until gravity reading is 1.265-1.275. This should take approximately four hours. If room, battery and electrolyte temperatures are below normal, a longer charging period may be necessary to bring the specific gravity up to 1.265-1.275.
- 8. Insert filler caps into filler holes and place battery on shelf in front of the instrument panel. BATTERY TERMINALS MUST BE AS SHOWN IN FIGURE 2.
- 9. Locate battery hold-down clamp and rods. Insert curved ends of rods into holes in tractor frame below battery holder. Place straight ends of rods through holes in battery clamp as shown.

Install lockwashers and nuts on the rods and tighten snugly in place. DO NOT OVER-TIGHTEN.

If all clamping and connections have been made properly, the battery should be in a stable position and not able to "wobble".

- 10. Next, connect the two battery cables to the battery terminals (See Figure 2). The cable leading to the ignition components of the engine is the "hot" cable (red in color) and should be attached to the positive (+) battery terminal in the following manner: Remove the wing nut from the large carriage bolt provided and place cable eye onto threads of the bolt. Secure cable eye in place with the large wing nut.
- 11. The cable that is attached to the tractor chassis is the ground cable (black in color) and is connected to the negative (-) battery terminal in the following manner; Remove the wing nut from the small carriage bolt and place cable eye on threads of the bolt. Secure cable eye in place with the small wing nut just removed.

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#### WARNING - DANGER

Always connect the "ground" (black) cable last and remove it first whenever performing any battery maintenance. When the battery is being removed or reinstalled, make sure the positive and negative terminals do not contact metal tractor parts at the same time or arcing will result. Battery connections must be kept tight at all times. Loose cables will cause arcing and pitting of the connections and cause eventual failure.

12. Apply a light coat of petroleum jelly or chassis lubricant to both terminals and cable ends to prevent corrosion.

13. Put battery cover back over battery,

#### **IMPORTANT**

As a safety precaution it is not recommended that the tractor be stood on end. However, if the operator should at some time consider it necessary to do so, he should first REMOVE THE BATTERY AND DRAIN THE GAS TANK.

#### SAFETY GUIDELINES FOR BATTERIES

- 1. Under certain conditions, AABM (Association of American Battery Manufacturers) says, the hydrogen gas given off by all electric storage batteries can cause an explosion and result in personal injury or damage to the tractor. There are precautions that can be taken to avoid accidental explosions. The problem of hydrogen gas is often overlooked when it comes to provisions for ventilating closed spaces in machines and equipment. Most existing vent systems deal with gasoline fumes, which are heavier than air and travel downward. Hydrogen gas is lighter than air and seeks upper spaces, such as those under a cowling or enclosure.
- 2. If vehicles are not equipped with ventilation for the upper spaces, especially in areas surrounding the battery box, make some provisions for letting out any hydrogen gas that may accumulate.
- 3. Make sure the engine air intake does not draw air from around the battery. If hydrogen gas is drawn in with the fuel mixture, it possibly will explode other gas in the engine area.
- 4. Use extra caution with an external battery charger. If overcharging occurs the battery will release excessive hydrogen gas. Avoid charging next to an open flame or devices that may cause sparks.
- 5. Check the battery's liquid level regularly hydrogen gas can build up in the void space.
- 6. Be sure there is nothing in your engine installation that will cause a spark to jump. Plug wires that are dirty or wet or covered with oil will cause a spark, as will poor connections and corroded terminals.
- 7. Accidents can also happen while inspecting or installing the battery. While installing, be sure all switches for ignition, lights, and accessories are in the off position. Always attach the ground cable last to further prevent spark with the installation tools. Do not use a match or a lighter to inspect the installation or water level.

### GENERAL INFORMATION

#### POWER PLANT

Your tractor is powered by a single cylinder, 4-cycle engine that uses "regular" gasoline. DO NOT MIX OIL WITH GASOLINE FOR THIS ENGINE! Engine speed is controlled by means of a throttle lever conveniently mounted on the dash.

#### GASOLINE

The engine manufacturer recommends use of non-leaded gasoline of 90 octane rating of higher.

#### DRIVE TRAIN

Engine power is transmitted to the rear wheels through a drive belt and "TRANSAXLE" located on the rear axle. This is a single, oil-tight assembly which combines the functions of an automotivetype transmission and differential. It provides three speeds forward and one speed in reverse.

The transmission is coupled to an automotive-type differential (within the transaxle) that allows the tractor to be maneuvered without unnecessary wear to the rear tires.

#### REMOVING THE HOOD

To move the hood, turn the four hood fastening screws counterclockwise, and pull out of hook fastening nuts. Grasp and spread hood at screw mounting areas (front section first and then rear) and remove from tractor (See Fig. 5).

#### **SEAT SAFETY SWITCHES**

These safety switches will stop the engine if the operator leaves the seat while the P.T.O. clutch lever is engaged.

#### **TIRES**

Your tractor is shipped from the factory with all tires mounted.

#### **IMPORTANT**

Front and rear tires are over-inflated at the factory for shipping purposes. Before operation, check all tires for proper air pressure. See "Tire Maintenance" for tire pressures.

Tires mounted on your tractor are as follows:

Front Tires

Wide Base ( set of two )

Size 13 x 5.00-6 Pneumatic

Rear Tires

Wide Base ( set of two )

Size 18 x 9.50 - 8 Pneumatic

Wide base tires have a larger area of the tread in effective contact with the ground at all times, thus providing added traction, and have considerably less tendency to mark turf or sink into such surfaces as loose soil, soft sand, etc. They also provide a soft and smooth ride on rough terrain.



#### **WARNING - DANGER**

To avoid possible serious bodily injury and unnecessary wear on parts, before operating an accessory be sure to read and follow the instructions contained in the accessory's Operator's Manual.

## **OPERATING CONTROLS**

#### SINGLE POINT IMPLEMENT HITCH (See Fig. 3)

A fixed hitch is supplied as standard equipment for the towing of implements.

#### CLUTCH - BRAKE PEDAL (See Fig. 4)

When the clutch-brake pedal is pushed down firmly, the clutch is disengaged and the brake is applied to stop tractor motion.

#### PARKING BRAKE (See Fig. 4)

A latch is provided to retain the clutch brake pedal in the disengaged position. To engage the latch, push down firmly on the clutch brake pedal with ball of foot while using heel to rotate latch against saw teeth in pedal arm. To disengage latch depress pedal fully and latch will automatically return to its original position.

#### GEAR SHIFT LEVER

The gear shift lever is used to shift the transaxle from one gear to another. Instructions and a complete diagram of gear shift positions have been installed on your tractor (See Fig. 6). Detailed instructions of gear selection and method of shifting is given under "Operating Instructions". The gear shift lever must be in "Neutral" to start the engine.

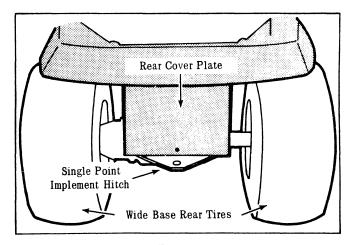


Figure 3

#### CHOKE AND THROTTLE LEVER (See Fig. 5)

One convenient lever controls both the choke and throttle.

When starting a cold engine, push the lever forward to close the choke. After the engine starts, move lever to Medium position as Thank you so much for reading. Please click the "Buy Now!" button below to download the complete manual.



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