

## Operation and Service Guide

Dear Customer:

Thank you for your recent purchase of a Roadside Mower. As with any piece of machinery, certain care is required in its operation and maintenance to ensure continuous, reliable and safe service. Attention should be given to a thorough understanding of the operation of the mower and its maintenance requirements. By following a regimen of daily and periodic lubrication and inspection, you will reap the benefit of your investment. The following information is provided as a guideline for the operation and service of your mower.

### SAFETY PRECAUTIONS

THE FOLLOWING SAFEGUARDS SHOULD BE FOLLOWED:

1. Rotary cutters are capable of throwing objects for great distances and inflicting serious injury. No one should be allowed within an unsafe radius of the machine when in operation.
2. Use extreme care when operating near loose objects, such as gravel, rocks and debris. You should avoid the objects.
3. Never allow the cutter head to contact solid objects, such as steel guardrails, concrete abutments, etc. Although the rotating parts of the machine have been designed for rugged use, these objects should be avoided.
4. The rotating parts of this machine may continue to rotate for a period of time after the control valve is turned off. Therefore, the operator should remain in his seat after turning the control valve off to allow sufficient time for the rotating members to come to a complete stop.
5. This machine is **NOT** grounded. Serious injury or death could result from allowing any part of the machine to contact any electrical device, such as power lines, transformers or streetlights. First identify and locate all such items before cutting in any area. You should use extreme care and maintain a safe working distance from any electrical power or telephone lines.
6. The boom is designed only to position the cutter head attached to it. Never attempt to lift, pull or push other objects with the boom. Serious injury could result from a structural failure if the boom is used for purposes other than those intended and designed for.

7. Avoid objects such as wire, cable, rope, chains, etc. Which could become entangled in the rotating parts of the cutter head.

8. Prior to doing any maintenance, unload all hydraulic cylinders. To do this, set the cutter head on the ground and stop the tractor engine. Then operate all the valves in both directions to dissipate all the oil pressure in the cylinders.

9. After, the first day of operation, and periodically thereafter, all bolts should be checked and tightened securely. This should be done to ensure the bolts from becoming loose and causing damage to the tractor and mower.

10. You should inspect the machine each and every time before use to determine that all of the hydraulic fluid connections are tight and that all hydraulic hoses and lines are in good condition before applying pressure to the hydraulic system.

11. Never operate the machine until the operator has walked completely around the unit to check for broken blades, hoses, link pins, etc. and has inspected the cutting blades, blade mounting dish, bolts and nuts of the blade mounting system for completeness of assembly and for broken or damaged items. Replace all broken or damaged items prior to operation.

12. You should inspect the machine daily prior to operation for missing or damaged guards. Replace all missing or damaged guards prior to operation.

## **DAILY LUBRICATION**

**SPINDLE.** You must lubricate the spindle daily. Use a standard grease gun with semi-fluid. (GREASE MUST BE FLOWABLE). You should grease the spindle while the mower deck is in a down position, with the mower operating at a slow speed. Pump grease into the spindle zerk fitting until it shows at the top seal.

**MISCELLANEOUS.** Lubricate the pump drive shaft and all grease points with a good grade of lithium-based grease.



## OPERATION

**THINK SAFETY.** Before operating the mower, the operator should thoroughly familiarize himself with the location and function of all the operator's controls.

At fast idle, engage mower, open throttle to full speed and allow mower to get up to full speed before starting to cut. Upon making your initial cut, it should be noted that you should always carry the Roadside Mower Deck rather than drag it. Dragging the deck causes an extreme side draft, premature tire wear, excessive horsepower consumption and drastically decreases blade life. Once you have attained the skill of carrying the mower deck, it will become very easy to control both your inner and outer ends, thus doing a proficient job of cutting.

The operator should work slowly and carefully until he has become accustomed to the machine. Speed and skill will be attained much easier if the necessary time is spent to familiarize him with the machine and its operation.

When encountering a very severe condition which causes the tractor to stall, disengage mower, start tractor and raise mower from the cut before engaging mower again.

The operator should be familiar with the area to be mowed in order to avoid contact with any large immovable objects, which may be hidden. If the operator is mowing heavy brush he should inspect the area on foot to determine this. Any contact with rocks, stumps or curbs can damage the knife mounting disk or knives and endanger the operator's safety.

To insure a clean-cut, minimum engine speed of 1800 RPM should be maintained. If the tractor slows to below 1800 RPM, shift to the next lower gear. The engine would not be operated at any time at more than 2400 RPM on the tractor tachometer.

When cutting small trees it is our recommendation that their diameter never exceed six (6) inches. When mowing, the material to be cut should always be cut with a forward motion of the cutting head. **Do not cut any material while backing up. Do not lower the cutting head onto the material to be cut or allow the knives to contact the ground. This causes extreme flexing of the cutting disk, which will damage the knife mounting disk.**

The mower will operate more satisfactorily in tougher conditions and with less power if the knives are kept sharp. If the mower begins to vibrate, stop the tractor, check for broken knives or wire wrapped in the spindle or knives. When replacing knives, replace new knives or ones with an equal amount of wear to insure proper balance so the mower will not vibrate.

## **BEFORE STARTING**

Make a visual inspection of the tractor and mower components before attempting to start the unit.

- ◆ Be sure all bystanders are at a safe distance at all times.
- ◆ Do not start or operate any controls while standing alongside the tractor. Be in the tractor seat.
- ◆ Use parking brake whenever dismounting the tractor.
- ◆ PTO lever should be disengaged before dismounting and when PTO is not being utilized.
- ◆ The mower switch should be in the -off - position when not in actual mowing capacity.

## **DURING OPERATION**

- ◆ Do not operate tractor in a closed building.
- ◆ Do not get off the tractor while still in motion.
- ◆ Use your seatbelt.
- ◆ Reduce speed when turning, taking curves, rough ground or hillsides to reduce the chance of a rollover.
- ◆ Sudden uphill turns on steep inclines should be avoided.
- ◆ Always keep tractor in gear when traveling downhill to prevent runaway.
- ◆ When driving on a road, day or night, use lighting and marking required by local laws.
- ◆ Lower equipment when not in use.
- ◆ Do not use a hydraulic system for a jack. Use jack stands or their equivalent.
- ◆ Whenever stopping or leaving the unit you should: stop tractor and equipment, lower equipment, be sure all motion stops and remove key.
- ◆ Whenever refueling tractor, shut off the engine and do not smoke.

## PRECAUTIONS FOR SAFETY

This symbol means: **CAUTION**. We are interested in your safety.

### General Rules

- ◆ Do not allow any persons on the equipment except the operator.
- ◆ Loose clothing that can catch in moving parts should be avoided.
- ◆ Keep safety decals clean and replace illegible and damaged decals.
- ◆ Do not bypass the tractor neutral safety switch. Jumping or bypassing can cause tractor runaway.
- ◆ Use the handhold and step plates provided when mounting and dismounting to prevent injury.





## **MOWER OPERATION**

Before any operation of tractor or mower, find the location and learn the functions of the units instruments and controls. The instrument panel and controls of the tractor can be found in your operators manual provided by the tractor manufacturer.

Make sure the gate valves, located on each hydraulic line coming from the hydraulic tank, are in the open position. Do this before starting the tractor. Failure to do so will cause damage to the hydraulic components of the mower.

Locate the mower on-off switch. The switch must be in the off position in order to start the tractor.

Locate the mower control valve at the right on its own stand. The left control lever is for moving the inboard cylinder. This cylinder raises and lowers the draft beam. The draft beam controls the mower on a horizontal plane. The right control lever moves the outboard cylinder. This cylinder controls the vertical position of the deck.

## **STARTING TRACTOR AND MOWER**

Check the operator's manual received from the tractor manufacturer for their recommendations and procedures pertaining to your make and model.

Be sure the gate valves on the mower hydraulic tank are open before starting tractor and the PTO is disengaged. Start the tractor and allow the instruments to stabilize. Without starting the mower, practice raising and lowering the deck and draft beam. The operator should work slowly and carefully until he has become accustomed to the machine. Speed and skill will be attained much easier if you spend the necessary time to develop and familiarize yourself with the machine and its operations.

When familiar with the draft beam and deck controls, raise draft beam and deck into travel position. (Draft beam horizontal and mower deck vertical in the up position).

To ensure a clean cut, engine speed should be maintained at approximately 1800 to 2200 RPM. If the tractor slows to below 1800 RPM, shift to the next lower gear. Do not "ride" the clutch, this can cause premature clutch failure. The engine should not be operated at any time at more than 2400 RPM on the tractor tachometer.

The mower will operate more efficiently in tougher conditions and with less power if the knives are kept sharp. If the mower begins to vibrate, stop tractor, check for foreign objects on the rotor. When replacing knives, replace worn knives with new knives or used knives with an equal amount of wear to ensure proper balance so the mower will not vibrate.

After the first day of operation, all bolts should be checked and tightened securely. This should be done periodically to ensure the bolts from becoming loose and causing damage to the tractor and mower.

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1. Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin and cause serious injury. If fluid is injected into the skin it must be surgically removed within a few hours by a doctor familiar with form of injury or gangrene may result.
2. Caution to the operator,-make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
3. Caution! Keep body and hands away from pinholes or nozzles which eject fluid under pressure. Use paper or cardboard to search for leaks and NOT HANDS.
4. Minimize the hazard of pressurized oil releasing on the operator by shutting off the engine, lower machine to the ground and work the control levers in both directions to relieve pressure in lines before approaching any area where there is a leak, to prevent injury from pressurized oil!