



MODEL NO. 41036 - 30101 & Up

OPERATOR'S
MANUAL**SONIC BOOM**

for the WORKMAN® and MULTI PRO SPRAY SYSTEMS

To assure maximum safety, optimum performance, and to gain knowledge of the product, it is essential that you or any other operator of this equipment read and understand the contents of this manual before the vehicle engine is ever started. Pay particular attention to the **SAFETY INSTRUCTIONS** highlighted by this symbol—



The safety alert symbol means **CAUTION, WARNING, or DANGER**—personal safety instruction. Failure to comply with the instruction may result in personal injury.

**SAFETY INSTRUCTIONS**

Keep this Operator's Manual in the plastic tube behind the operator seat.

It is very important that all persons operating this equipment have easy access to these instructions at all times.

Carefully read and follow the Installation Instructions that are provided with this equipment and the Safety Instructions in the Workman Operator's Manual.



This safety-alert symbol is used to call attention to a **dangerous** situation, which could result in serious injury or death to the operator or a bystander.

Safety, mechanical and some general information in this manual are emphasized. **DANGER, WARNING** and **CAUTION** identify safety messages. Whenever the triangular safety symbol appears, it is followed by a safety message that must be read and understood. For more details concerning safety, read the Safety Instructions that follow. **IMPORTANT** identifies special mechanical information and **NOTE** identifies general information worthy of special attention.

These instructions are provided as a guide for the safe operation and maintenance of this equipment. However, the operator's personal safety, as well as those persons in the work area, will depend on the careful actions and good judgement of the operator.

To reduce the potential for injury or death, comply with the following safety instructions.

BEFORE OPERATING:

1. Operate this equipment only after reading and understanding the contents of this manual. A replacement manual is available by sending complete model and serial number to: The Toro Company, 8111 Lyndale Avenue South, Minneapolis, Minnesota 55420.
2. Learn how to operate the Sonic Boom and how to use the controls properly. Do NOT let anyone operate this equipment without first receiving thorough instructions.
3. Keep all shields, safety devices and decals in place. If a shield, safety device or decal is malfunctioning, illegible or damaged, repair or replace it before operating the machine.
4. Chemicals can injure persons, animals, plants, soils or other property. To eliminate environmental damage and personal injury:
 - A. Follow manufacturer's instructions on chemical container labels. Apply and handle chemicals as recommended.
 - B. Handle and apply chemicals with care. Wear goggles and other necessary protective equipment. Handle chemicals in well ventilated areas. Never smoke while handling chemicals.
 - C. Properly dispose of chemical container and unused chemicals.

SAFETY INSTRUCTIONS

5. Make certain everyone is clear of the machine and work site before starting the engine and beginning to spray.

WHILE OPERATING:

6. This attachment adds extra height to the vehicle when the booms are in a raised position. Drive the vehicle safely.

A. In order to avoid electric shock, inspect the area overhead for wires before raising booms.

B. Always use caution while operating the booms near low clearance areas.

6. To avoid personal injury, keep bystanders away while raising and lowering booms.

7. Do **not** direct spray at any persons or pets; even low pressure is very dangerous and can cause serious injury.

8. If equipment begins to operate abnormally, stop **immediately**. Shut off the vehicle engine and disengage all power. Repair all damage before commencing operation.

MAINTENANCE:

12. **Before** servicing or making any adjustments to the Sonic Boom:

A. Stop the vehicle and set the parking brake.

B. Shut off the vehicle's engine and remove key from ignition.

C. Disengage all power and wait until all moving parts have stopped.

13. Keep all nuts, bolts and other fasteners tightened securely. Replace any shields removed during servicing or adjustments.

14. To be sure of optimum performance and safety, always purchase genuine TORO replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous. Altering this equipment in any manner may affect the machine's operation, performance, durability or its use may result in injury or death. Such use could void the product warranty of the TORO Company.

SAFETY AND INSTRUCTION DECALS

The following safety and instruction decals are installed on this equipment. If any become damaged or illegible, replace them. Decal part numbers are listed below and in the parts catalog. Order replacements from your Authorized Toro Distributor.

CLEANING INSTRUCTIONS: This sensor uses an acoustically transparent foam to protect the ultrasonic transducer. To clean, remove the foam and wash with a weak soap and water solution. Rinse with water and allow to air dry before reinstalling.

CAUTION: Never use high pressure spray or garden hose to clean.

(Part No. 042817) On Sonic Sensor Covers on each boom



(Part No. 87-0570) On both corners of Rear Tank Band

CONTROLS and OPERATION

Power Switch (FIG. 1): Switches the power to the control box On or Off.

Right Boom Up/Down Switch (FIG. 1): Controls the up and down motion of the right boom.

Left Boom Up/Down Switch (FIG. 1): Controls the up and down motion of the left boom.

Sonar Switch (FIG. 1): Toggles the boom lift control between sonar operation and manual operation.

Height Adjustment Knob (FIG. 1): Adjust the height at which the sonar control will maintain the left and right booms.

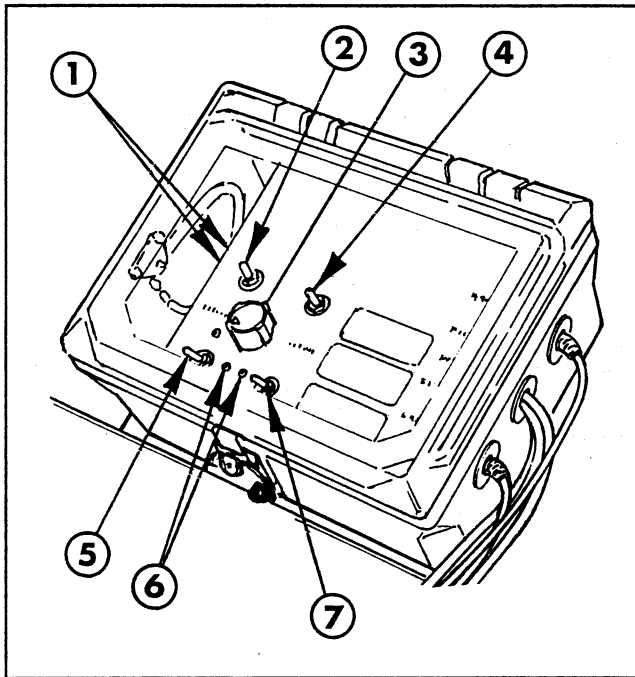


FIG. 1

- | | |
|---------------------------|-----------------------|
| 1. Reset Buttons | 5. Power Switch |
| 2. Left Up/Down Switch | 6. Overload Indicator |
| 3. Height Adjustment Knob | 7. Sonar Switch |
| 4. Right Up/Down Switch | |

OPERATION:

MANUAL OPERATION:



CAUTION

When activating the booms, always be aware of your surroundings. Do NOT operate near bystanders or other equipment. Be aware of overhead power lines which could cause electrical shock.

1. Turn the Power switch "On". The indicator light will come on.

2. Use the Up/Down switches to raise or lower the right or left booms.

SONAR OPERATION:

1. Turn the Power switch to "On". The indicator light will come on.

2. Rotate the Height Adjust Knob to position the arrow at a point midway between the "2" and "3" as a trial setting.

3. With booms in spraying position, turn the Sonar switch "On".

4. Rotate the Height Adjust Knob until the right and left booms are level with the center boom. This boom height will be automatically maintained until the height adjust knob is moved to another setting.

NOTE: If the booms are not level with one another, adjust the boom height at the adjustable clevis on the center boom frame (Refer to the Sonic Boom Set-Up Instructions).

5. To manually override the automatic boom height setting, use the Up/Down switches to raise or lower the left or right boom. When the switch is released, the boom automatically returns to the preset boom height.

NOTE: When the booms are in the full upright position, it is necessary to push the Up/Down switches "Down" before the booms will receive a signal and return to their preset height.

OVERLOAD RESET (ACTUATORS):

1. Should either of the actuators draw a heavy load current momentarily, the left or right Overload Indicator light will come on to indicate the boom effected (FIG. 1).

2. To reset, turn the Power switch "Off" for five seconds and then turn back to "On". If the light does not come on again, the boom is operable. Normally, the only cause for an overload is when the actuator on the effected side reaches its load capacity.

OVERLOAD RESET (SONAR SYSTEM):

1. Should power to the sonar system fail, push the manual reset buttons (FIG. 1) on the left hand side of the sonar controller head, to restore power.

OPERATION

AFTER OPERATING:

IMPORTANT: The control box is **NOT** absolutely waterproof and must be protected to prevent moisture from damaging the sonar control. The sonar heads mounted on the booms can also be seriously damaged by water. Be especially careful when using high pressure washing equipment near the sonic boom components.

Before leaving the sprayer, make sure the power switch is "Off" and the sonar control box lid is closed. The closing latch on the control box will accept a small padlock which is recommended to help prevent the unauthorized operation of the sonic boom.

Be sure the Sonar Switch is "Off" when the booms are folded forward for transport.

TROUBLESHOOTING:

The following steps are to be followed if one or both booms should stop working automatically, but are still capable of being lowered and raised manually by using the right and left boom switches on the console head.

1. Check that the boom hoses are not interfering or blocking the path of travel of the sonar beam being emitted from the sensors located at the ends of the booms.

2. Check all wires and cables for loose connections, cable breaks, cable cuts, or crimped cables.

3. If problem still persists, move the right sensor to the left wing, and the left sensor to the right wing, and determine if the problem follows the sensor.

4. If a new sensor is available, switch the new sensor into the system and see if the problem is cured.

5. This same procedure can be done with the sensor cables, and with the console head.

6. The sensor normally emits a "crackling" sound when power from the console box is "ON", however, the "crackling" indicates the sensor is transmitting okay, but it does not mean it is receiving.

NOTES

NOTES

MAINTENANCE RECORD

[illegible]



The Toro Promise

A One Year Limited Warranty

The Toro Company promises to repair your model 41036 Sonic Boom for the Workman vehicle if defective in materials or workmanship. The following time periods from the date of purchase apply (special warranty terms, on certain components, may be offered through The Toro Company by the component manufacturers):

Commercial Products 1 Year

The cost of parts, labor and transportation are included.

If you feel your TORO Product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact your Authorized TORO Distributor or Commercial Dealer (the Yellow Pages of your telephone directory is a good reference source).
2. The TORO Distributor or Commercial Dealer will advise you on the arrangements that can be made to inspect and repair your product.
3. The TORO Distributor or Commercial Dealer will inspect the product and advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without an extra charge to you.

If for any reason you are dissatisfied with the distributor's analysis of the defect or the service performed, you may contact us.

Write:

TORO Commercial Products Service Department
8111 Lyndale Avenue South
Bloomington, MN 55420-1196

The above remedy of product defects through repair by an Authorized TORO Distributor or Commercial Dealer is the purchaser's sole remedy for any defect.

THERE IS NO OTHER EXPRESS WARRANTY. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE EXPRESS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

All warranty repairs reimbursable under The Toro Promise must be performed by an Authorized Toro Commercial Dealer or Distributor using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Distributor or Commercial Dealer are not reimbursable under the TORO Promise. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

THE TORO COMPANY IS NOT LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OR EXPENSE OF PROVIDING SUBSTITUTE EQUIPMENT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

COUNTRIES OTHER THAN THE UNITED STATES OR CANADA

Customers who have purchased TORO products exported from the United States or Canada should contact their TORO Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the TORO importer. If all other remedies fail, you may contact us at The Toro Company.