




MODEL NO. 41133-220000101 & UP

OPERATOR'S,
SET-UP & PARTS
MANUAL

HAND SPRAYER KIT for the MULTI-PRO™ 1200 and 1250


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

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

RECOGNIZE SAFETY INFORMATION

 This safety-alert symbol calls 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 attachment only after reading and understanding the contents of this manual. A replacement manual is available by sending complete model and serial number to: Hahn, Inc., 1625 N. Garvin, Evansville, IN. 47711.

2. Learn how to operate the Hand Sprayer Kit and how to use the controls properly. **DO NOT** let anyone operate this equipment without first receiving thorough instructions.

3. Chemicals can injure persons, animals, plants, soils or other property. To eliminate environmental damage and personal injury:

A. Obtain proper training before using or handling chemicals.

B. Select the proper chemical for the job.

C. Follow manufacturer's instructions on chemical container labels. Apply and handle chemicals as recommended.

D. Handle and apply chemicals with care. Wear goggles and other necessary protective equipment. Handle chemicals in well ventilated areas. Never smoke while handling chemicals.

E. Properly dispose of chemical container and unused chemicals.

4. **DO NOT** aim Hand Sprayer at any person or any animal. Fluids under high pressure can penetrate the human skin and can cause severe injury, possibly resulting in amputation or death. Hot liquids and chemicals can also cause burns or injury. If any part of the body comes in contact with the spray stream, immediately consult a physician.

5. **DO NOT** at any time place hand or any other part of the body in front of spray nozzle or tip.

SAFETY INSTRUCTIONS

6. DO NOT leave equipment under pressure unattended at any time. Relieve line pressure by shutting off power to pump, turning off the liquid supply to the pump, and actuating trigger until all fluid ceases to flow; then position trigger lock to the "locked off" position.

7. DO NOT use damaged, perforated, or weakened fluid hose.

8. DO NOT use a Hand Sprayer with a damaged trigger lock.

9. DO NOT operate a Hand Sprayer if there are any leaks from the packings, fitting, hoses, etc. Fluids which are under high pressure can penetrate skin, clothing, etc. and cause serious injury.

10. DO NOT spray near power lines, since contact could result in severe electrical shock.

11. DO NOT handle a Hand Sprayer without a tip or nozzle any differently than one with a tip or nozzle. Even with the tip or nozzle removed,

the Hand Sprayer can discharge a large volume of liquid at a high velocity.

12. 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 the Hand Sprayer in any manner may affect the Hand Sprayer's operation, performance, durability or its use may result in injury or death. Such use could void the product warranty of the Toro Company.

13. This accessory should not be modified without the Toro Company's authorization. Direct any inquiries to:

The Toro Company
Commercial Division
Hahn, Inc.
1625 N. Garvin
Evansville, IN 47711

OPERATION

1. Make sure pump is in the disengaged position and there is no pressure in any part of the system. Examine all connections, making sure they are of the proper type and are secure.



WARNING

Fluids under high pressure can penetrate the human skin and can cause severe injury, possibly resulting in amputation or death.

- **Hot liquids and chemicals can also cause burns or injury.**
- **DO NOT at any time place hand or any other part of the body in front of spray nozzle or tip.**
- **DO NOT aim Hand Sprayer at any person or any animal.**
- **If any part of the body comes in contact with the spray stream, immediately consult a physician.**

2. Before engaging the pump and holding the Hand Sprayer in downward vertical position pointed away from body, familiarize yourself with the operation of the trigger lock.

3. Make sure trigger lock is in "locked off" position. Do not turn on the pump or operate Hand Sprayer if trigger lock is not operating properly.

4. If spraying in cold weather, be sure to protect the Hand Sprayer from freezing.

5. Operation of this Hand Sprayer in windy conditions will cause premature breakup of liquid stream.

6. Flush Hand Sprayer after each spray period, using the same safety precautions as used during spraying operations. Always use the lowest possible pressure for flushing.

7. Wear rubber gloves and a full body protective suit, including safety glasses, when operating the Hand Sprayer.



WARNING

DRIVING WHILE USING THE HAND SPRAYER CAN CAUSE LOSS OF CONTROL OF VEHICLE, RESULTING IN SEVERE INJURY OR DEATH.

DO NOT OPERATE HAND SPRAYER WHILE DRIVING.

SETUP AND OPERATION

SET-UP INSTRUCTIONS:

“Right” and “Left” as used in the following instructions, refer to the operator’s right and left when seated in the normal operating position. Likewise, “Front” and “Rear” as seen from the operator’s position.

HOSE HOOK ASSEMBLY:

1. Assemble Hose Hooks to front Tank Band as shown in Illustration on page 8 of this manual, and by using the following instructions.
2. Remove right bolt securing Tank Band to Tank Saddle to allow installation of (3) three 5/16-18 x 3/4" carriage bolts into the (3) three embossed holes in the Tank Band. Hold bolts into place by placing the (2) two 5/16-18 hex nuts onto carriage bolts, hand tighten. See FIG. 1, page 4.
3. Reassemble Tank Band to Tank Saddle. Make sure Strap Insulator is aligned with Strap when reassembling Tank Band to Tank Saddle.
4. Remove 5/16-18 x 3/4" Carriage bolt nuts to allow assembly of the Hose Hooks onto Tank Band as shown in FIG. 2. Secure Hooks onto Tank Band with (2) two 5/16 flat washers and 5/16-18 hex nuts.
5. Attach Hand Spray Mount to the second Carriage bolt from the bottom on the Tank Band. Secure with washer and nuts. See FIG. 2.
6. Store Hand Sprayer as shown in FIG. 3.

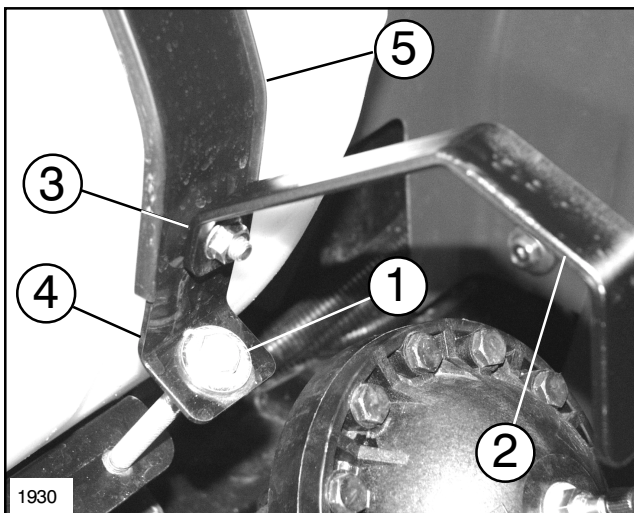


FIG. 1

- | | |
|--------------------|--------------|
| 1. Bolt | 2. Hose Hook |
| 3. Emboss | 4. Tank Band |
| 5. Strap Insulator | |

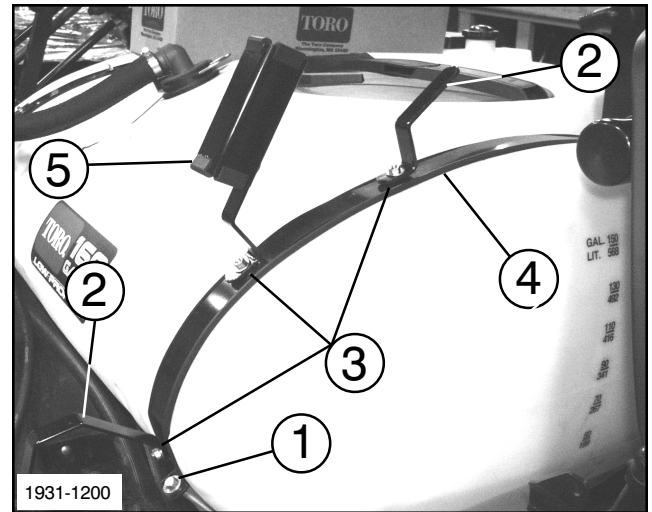


FIG. 2

- | | |
|---------------------|---------------|
| 1. Bolt | 2. Hose Hooks |
| 3. Emboss | 4. Tank Band |
| 5. Hand Spray Mount | |

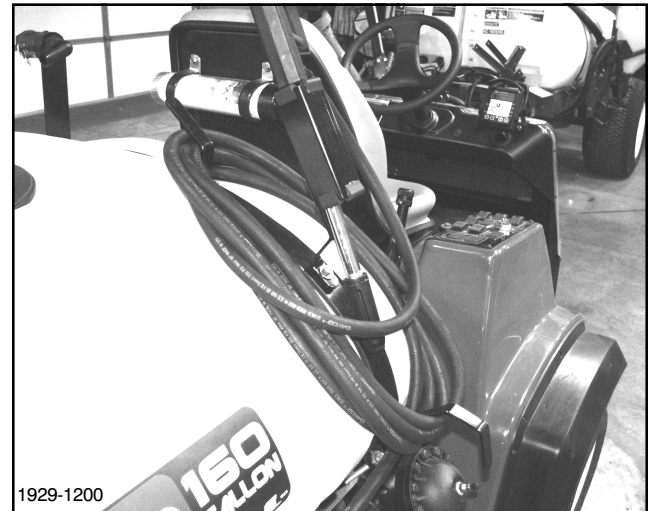


FIG. 3

HAND SPRAYER ASSEMBLY:

1. Assemble Hand Sprayer to hose and secure with a hose clamp. See Hand Sprayer ASM on page 8.
2. Connect the other end of the Supply Hose as shown in the Hose Plumbing Illustration on page 7, and by using the following instructions.
3. Disconnect Pressure Gauge, Pressure Hose, Boom Supply Hose, and Relief Valve Hose from Tee to allow installation of Hose Plumbing.
4. Remove Tee and Tee Bracket ASM.

SETUP AND OPERATION

5. Verify that the arrow on the Three-Way Valve handle is in line with the large hole in the ball inside the Valve. If not, remove the screw from the center of the handle and reorientate the handle. Replace screw. See FIG.4.

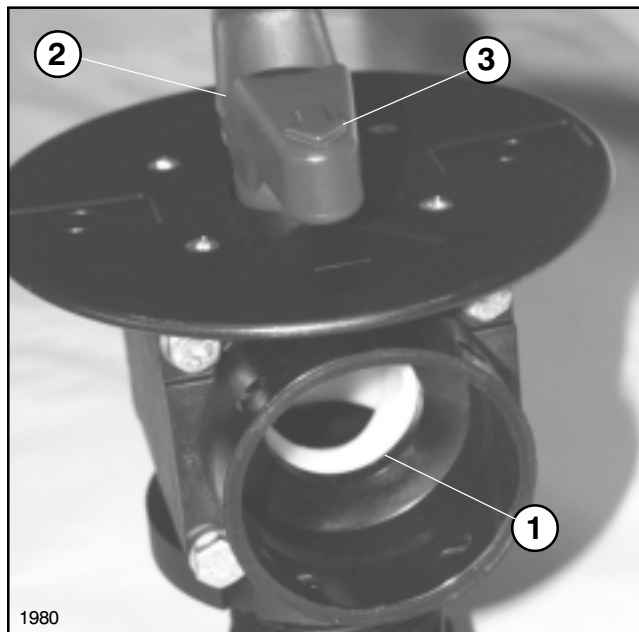


FIG. 4

1. Hole in Ball
3. Arrow

2. Handle

6. The Three-Way Valve handle should have the arrow pointing toward the rear of Vehicle and the male threaded portion of the Valve housing toward the front. Tighten Adapter and Nut securely.

7. Attach the Three-Way Valve ASM to the Tee ASM and secure with fork.

8. Attach Valve ASM to the Valve Bracket using the two (2) #10-16 x 5/8 long screws provided.

9. Attach Support Bracket to Valve Bracket using two (2) 1/4-20 x 3/4 cap screws and two (2) flange nuts.

10. Attach Valve Bracket and Support Bracket to the tank valve Tee Bracket Assembly, using two (2) existing 1/4-20 x 3/4 cap screws and two (2) 1/4-20 x 3/4 cap screws and two (2) flange nuts from Parts Bag.

11. Place spray decal on Valve Bracket.

12. Reattach the Pressure Gauge, Pressure Hose and Relief Valve Hose removed in Step 3 on page 4.

13. Attach Boom Supply Hose to Three-Way Valve and secure with fork. See Hose Plumbing illustration on page 7.

14. Assemble large O-Ring and Nut to Valve Adapter. Insert Seal into Valve Adapter and secure Tee. Insert Tee ASM into Valve and secure with large Nut.

15. Assemble Nut and threaded Reducer to other end of Tee with Seal. Use small O-Ring and attach Hand Sprayer Hose to threaded Reducer.

16. Use Teflon thread tape on pressure Gauge threads to install in Gauge Adapter and Nut. Insert Gauge Adapter into branch portion of Tee and secure with Nut. Gauge will be able to be rotated for convenient viewing.

OPERATION:

1. For Boom Spray Three-Way Valve handle should be turned with arrow pointing toward the rear of vehicle. For Hand Spray, arrow on the Three-Way Valve handle should be pointing toward the front of the vehicle. See FIG. 1

2. Turn arrow on the Three-Way Valve handle toward the front of vehicle.

3. Start the vehicle with the Range selector in the Neutral position.

4. Shut off all boom section with Master ON/OFF foot switch or individual boom ON/OFF switches. Application Rate Button should be adjusted to full increase (INCR +) (1250 only).

4a. Adjust Master Boom lever to "OFF" position (1200 only).

5. Engage Pump; increase engine speed until pressure gauge reads approximately 150 psi. Push the accelerator Lock Rocker Switch forward to "SET" position to engage the Throttle Lock.

6. If hand spraying at less than 150 psi is desired, rotate Three-Way Valve handle counterclockwise until desired pressure is obtained.

NOTE: Additional pressure will not increase spray distance. It will only atomize the spray mixture which will actually decrease spray distance.

OPERATION

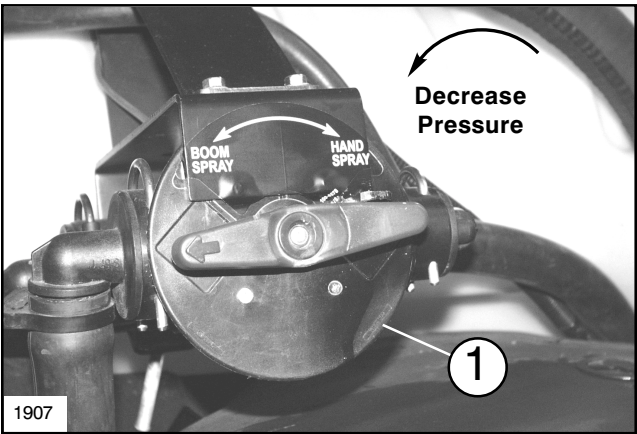




FIG. 1

1. Three-Way Valve

NOTE: For high volume Walking Boom applicatons it may be necessary to increase engine speed until pressure gauge reads approximately 200 psi. Push the Accelerator Lock Rocker Switch forward to "SET" position to engage the Throttle Lock.

NOZZLE FLOW

NOZZLE CAPACITIES (GPM)

PRESSURE IN PSI	99-0889 NOZZLE	
DIRECTION OF FLOW		
15	0.588	0.464
20	0.678	0.538
30	0.829	0.661
35	0.895	0.715
40	0.956	0.766
50	1.068	0.857
60	1.169	0.940
70	1.261	1.018
100	1.504	1.222
150	1.840	1.500

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NOTES:

MAINTENANCE

With proper care your Hand Sprayer will give you reliable service. To maintain this performance, parts should be regularly replaced when necessary.

DISASSEMBLY PROCEDURE:

1. Before servicing or making any adjustments to the Sprayer:

- 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.

If it becomes necessary to disassemble this unit, flush Hand Sprayer, detach from supply hose. Use Hand Sprayer ASM Illustration on page 6, FIG.1, this page and the following instructions for disassembling and assembling the Hand Sprayer.

HAND SPRAYER DISASSEMBLY:

- 1.** Unscrew Nozzle Housing, this exposes a Nozzle and O-Ring. The Nozzle has a Flat and a tapered side. The flow volume through the Nozzle is greater with the flat side facing out towards the spray pattern. See the chart on page 3 for flow rated at various pressures.
- 2.** Removing the large O-Ring at the base of the Housing for Swirl exposes two Pins. Removing these two Pins allows the Housing for Swirl to be unscrewed and removed, this exposes an O-Ring and the Swirl. Unscrewing the Swirl exposes an O-Ring and ON-OFF Valve Seal.
- 3.** Remove the seven Screws in the handle, once the Screws are removed the handle can be separated and the Tee Housing, Valve ASM, Trigger, Safety, and Trigger Stop are exposed.
- 4.** Remove the Nut above the Hose Clamp on the Spray Hose, when disassembled this will expose two O-Ring's and a Hosebarb.
- 5.** Clean and inspect all parts. Replace worn or damaged parts.

HAND SPRAYER ASSEMBLY:

- 1.** The Tee Housing, Valve ASM (with Sleeve Rubber and ON-OFF Cone), Trigger, Trigger Stop and the O-Ring must be placed in one side of the handle and the other side of the handle can be assembled using the seven screws.
- 2.** Assemble the Hosebarb, and O-Ring's, secure to bottom of the Tee Housing with Nut.
- 3.** Assemble the ON-OFF Seal, and O-Ring to the Swirl and then screw the Swirl to the Front of the Tee Housing.
- 4.** Assemble the O-Ring and Swirl Housing to the Swirl.
- 5.** Secure the Swirl Housing with the two Pins and slide large O-Ring onto the Swirl Housing covering the two Pins.
- 6.** Place the Nozzle and O-Ring into the Housing for the Nozzle and attach to the Swirl Housing.

STORAGE:

Flush and drain all liquid from the Hand Sprayer, and store in a safe, dry place.

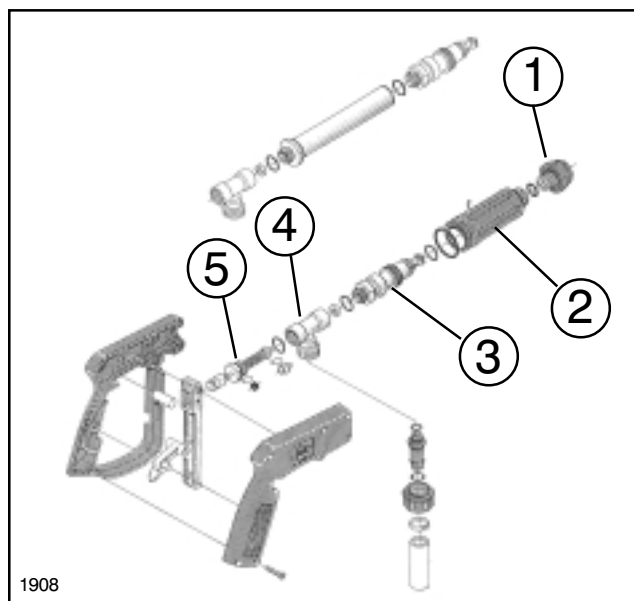
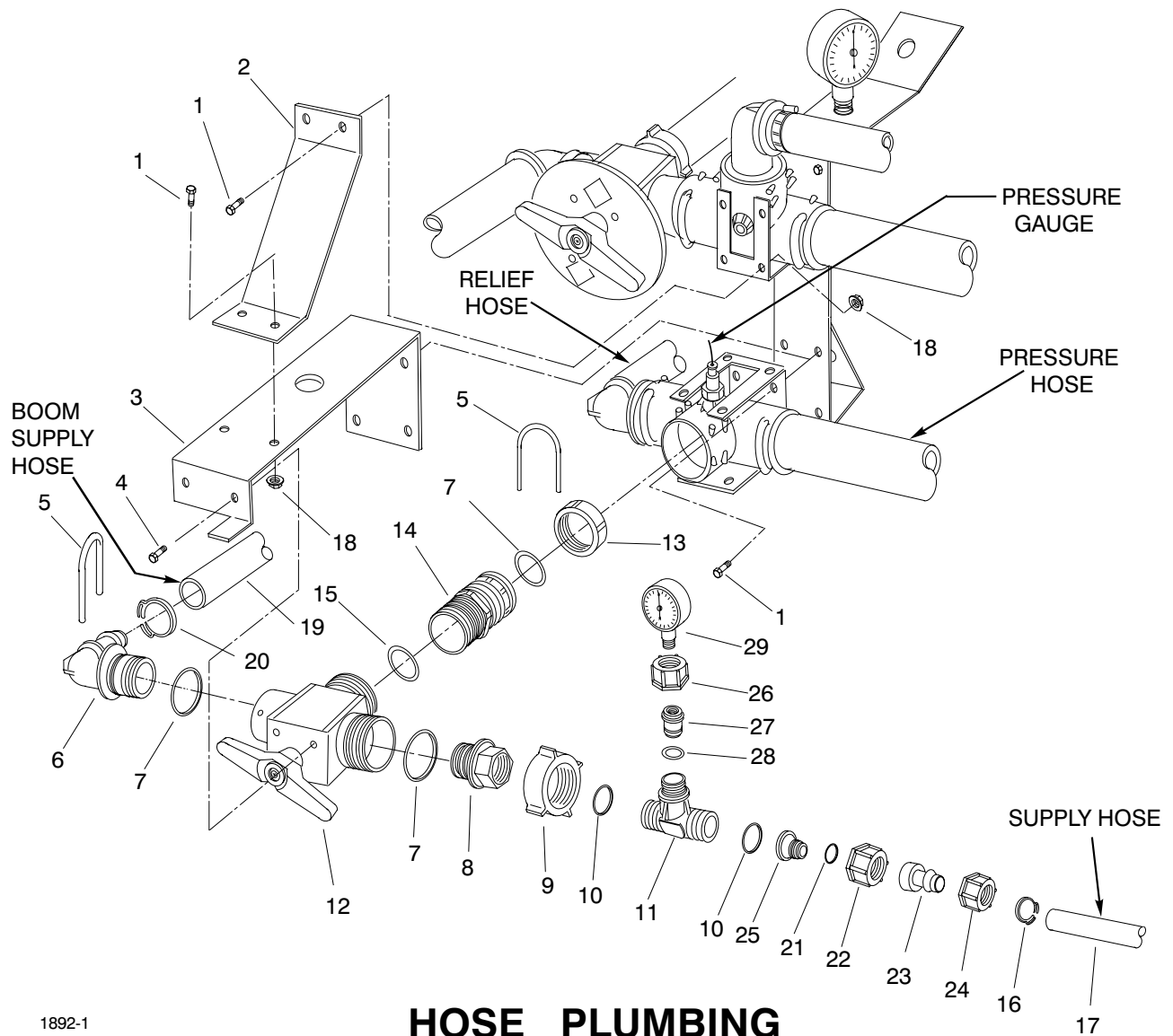


FIG. 1

- | | |
|------------------------------|-------------------------|
| 1. Housing for Nozzle | 2. Swirl Housing |
| 3. Swirl | 4. Tee Housing |
| 5. Valve ASM | |

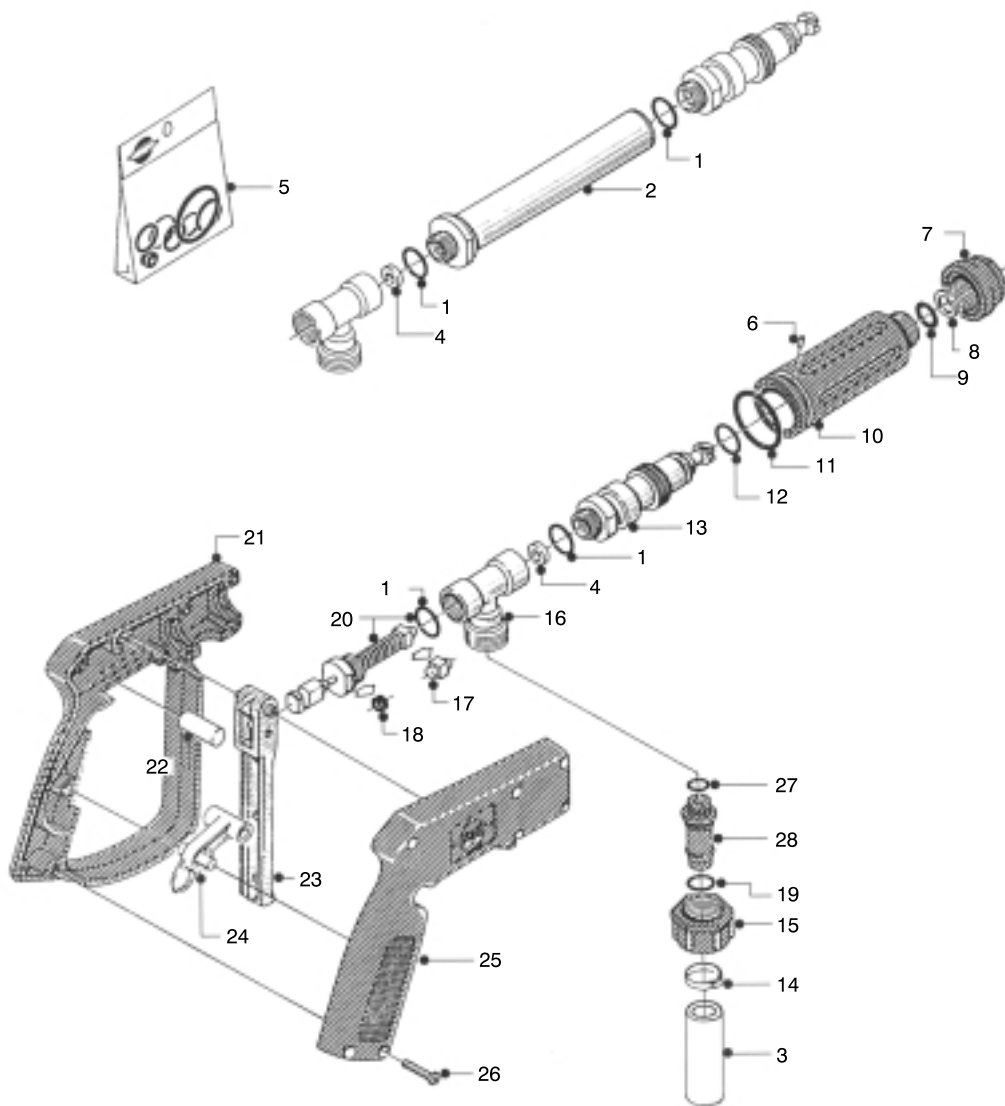


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HOSE PLUMBING

Ref.	Part No.	Description	Qty
1	3234-4	Cap Screw	4
2	104-8728	Support Bracket	1
3	104-8727	Valve Bracket	1
4	32144-32	Screw	2
5	100-8635	Fork	2
6	100-8672	90° Hosebarb	1
7	100-8671	O-Ring	3
8	104-9067	Valve Adapter	1
9	100-8669	Nut	1
10	100-6655	Seal	2
11	100-8699	Tee	1
12	104-9069	Valve	1
13	104-8857	Nut	1
14	104-8858	Adapter	1

Ref.	Part No.	Description	Qty
15	100-8671	O-Ring	1
16	99-0772	Clamp	1
17	104-8718	Hose	1
18	32128-33	Flange Nut	2
19	104-8713	Hose, 1" Length = 48"	1
20	99-0782	Hose Clamp	1
21	100-6653	O-Ring	1
22	99-0769	Nut	1
23	104-8797	Hosebarb	1
24	99-0766	Nut	1
25	99-0770	Threaded Reducer	1
26	99-0850	Nut	1
27	104-9068	Gauge Adapter	1
28	100-6645	O-Ring	1
29	100-8576	Gauge	1

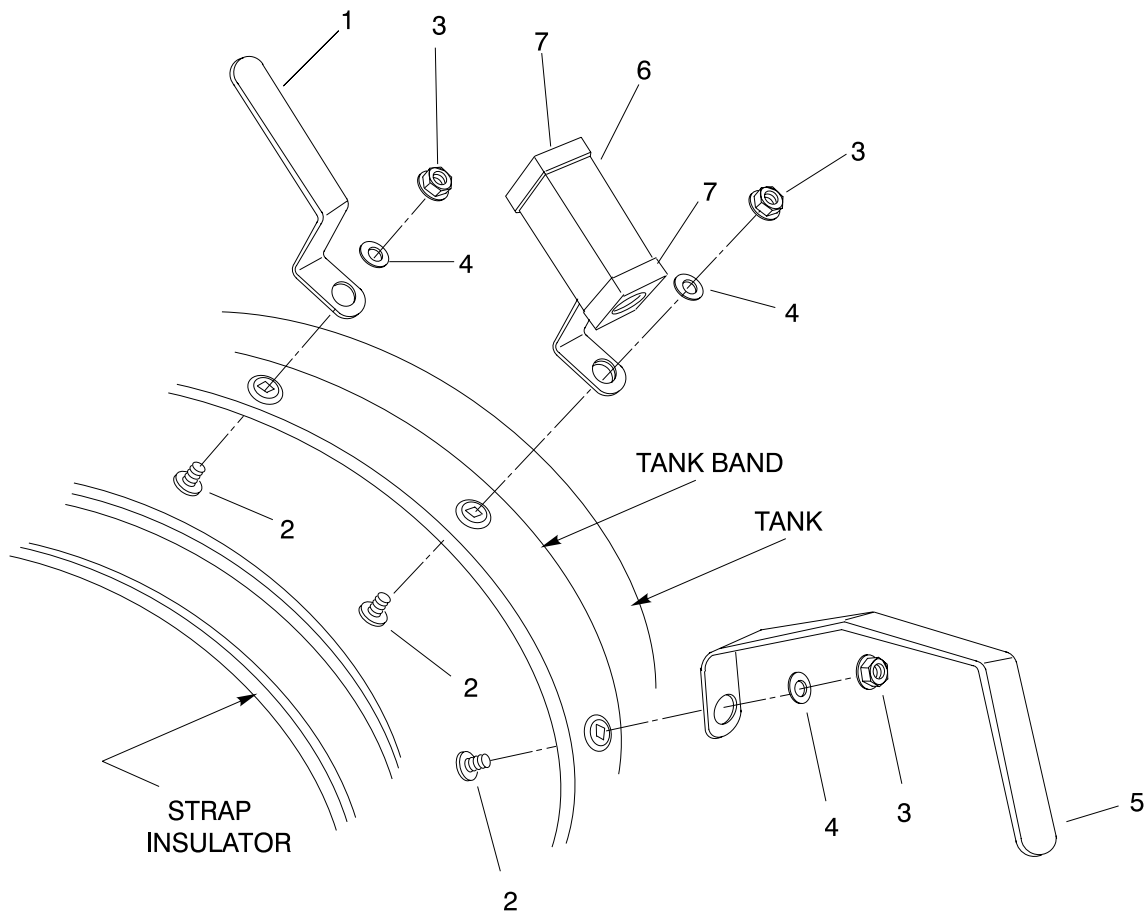


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HAND SPRAYER ASM

Ref.	Part No.	Description	Qty
1	100-6649	O-Ring	3
2	99-0885	Lance Ext. For 60L Hand Sprayer	1
3	104-8718	Hose	1
4	99-0884	Seal for On/Off Valve	1
5	99-0779	Repair Kit For Hand Sprayer	1
6	99-0887	Pin	1
7	99-0890	Housing For Nozzle	1
8	99-0889	Nozzle Ceramic	1
9	100-6650	O-Ring	1
10	99-0886	Housing For Swirl	1
11	100-6646	O-Ring	1
12	100-6644	O-Ring	1
13	99-0780	Swirl For Hand Sprayer	1
14	99-0772	Hose Clamp	1

Ref.	Part No.	Description	Qty
15	99-0766	Nut	1
16	99-0883	Tee Housing	1
17	104-8860	Cone For On/Off	1
18	104-8861	Sleeve Rubber	1
19	100-6647	O-Ring	1
20	99-0882	Valve ASM	1
21	99-0877	Handle L.H.	1
22	99-0878	Stop Rubber For Trigger	1
23	99-0880	Trigger Arm	1
24	99-0879	Trigger Safety Arm	1
25	99-0881	Handle R.H.	1
26	100-6666	Screw	1
27	100-6648	O-Ring	1
28	99-0849	Hosebarb	1



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HOSE HOOK ASM

Ref.	Part No.	Description	Qty
1	040153	Hose Hook	1
2	3230-1	Carrage Bolt	3
3	3217-6	Nut	3
4	3256-3	Washer	3

Ref.	Part No.	Description	Qty
5	104-8883	Hose Hook	1
6	104-8892	Hand Spray Mount	1
7	104-8893	Cap	2

NOTES:

NOTES:

The Toro General Commercial Products Warranty

A Two-Year Limited Warranty

Conditions and Products Covered

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrant your 1996 or newer Toro Commercial Product ("Product") purchased after January 1, 1997, to be free from defects in materials or workmanship for two years or 1500 operational hours*, whichever occurs first. Where a warrantable condition exists, we will repair the Product at no cost to you including diagnosis, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser.

* Product equipped with hour meter

Instructions for Obtaining Warranty Service

You are responsible for notifying the Commercial Products Distributor or Authorized Commercial Products Dealer from whom you purchased the Product as soon as you believe a warrantable condition exists.

Toro Commercial Products Service Department
Toro Warranty Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196
612-888-8801
800-982-2740
E-mail: commercial.service@toro.com

Owner Responsibilities

As the Product owner, you are responsible for required maintenance and adjustments stated in your operator's manual. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim

Items and Conditions Not Covered

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. This express warranty does not cover:

- Product failures which result from the use of non-Toro replacement parts, or from installation and use of add-on, modified, or unapproved accessories.
- Product failures which result from failure to perform required maintenance and/or adjustments.
- Product failures which result from operating the Product in an abusive, negligent or reckless manner.
- Parts subject to consumption through use unless found to be defective. Examples of parts which are consumer, or used up, during normal Product operation include, but are not limited to, blades, reels, bedknives, tines, spark plugs, castor wheels, tires, filters, belts, etc.

- Failures caused by outside influence, items considered to be outside influence include, but are not limited to, weather storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.

- Normal "wear and tear" items. Normal "wear and tear" includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.

Parts

Parts scheduled for replacement as required maintenance are warranted for the period of time up to the scheduled replacement time for that part.

Parts replaced under this warranty become the property of Toro. Toro will make the final decision whether to repair any existing part or assembly or replace it. Toro may use factory remanufactured parts rather than new parts for some warranty repairs.

General Conditions

Repair by an Authorized Toro Distributor or Dealer is your sole remedy under this warranty.

Neither The Toro Company nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of the Toro Products covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty. Except for the Emissions warranty referenced below, if applicable, there is no other express warranty. All implied warranties of merchantability and fitness for use are limited to the duration of this express warranty.

Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above, exclusions and limitations 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.

Note regarding engine warranty: The Emissions Control System on your Product may be covered by a separate warranty meeting requirements established by the U. S. Environmental Protection Agency (EPA) and/or the California Air Resources Board (CARB). The hour limitations set forth above do not apply to the Emissions Control System Warranty. Refer to the Engine Emission Control Warranty Statement printed in your operator's manual or contained in the engine manufacturer's documentation for details.

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 Toro Warranty Company.