

SINCE 1839

**BRINLY**

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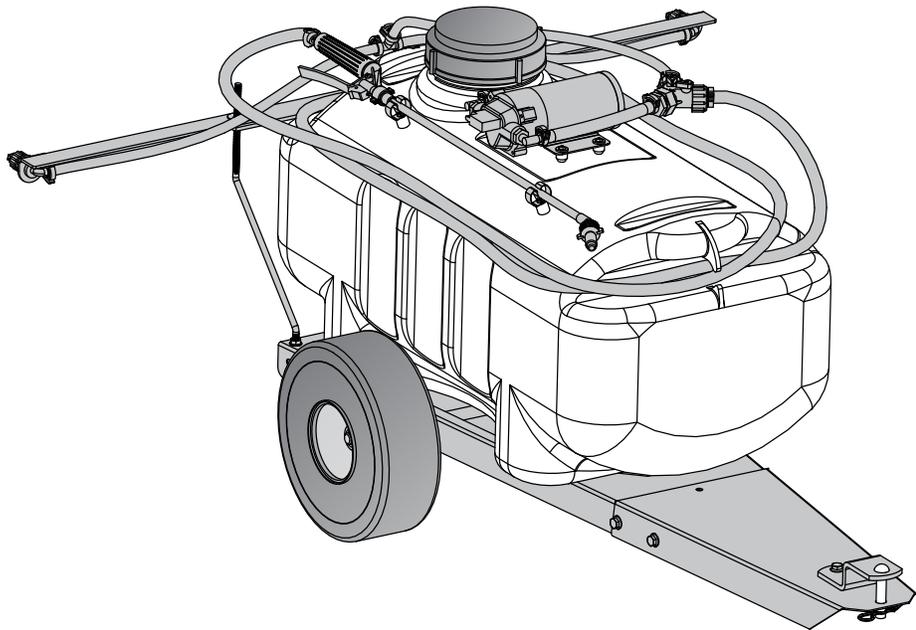
# OWNER'S MANUAL

## 25 GALLON TOW-BEHIND SPRAYER

MODEL:

**ST-251BH**

- Assembly
- Installation
- Operation
- Repair Parts



This sprayer is designed for use with lawn tractors and lawn and garden tractors.

Call Customer Service, Toll-Free: 877-728-8224

Visit us on the web!  
[www.brinly.com](http://www.brinly.com)

Important: This manual contains information for the safety of persons and property. Read it carefully before assembly and operation of the equipment!

# INTRODUCTION AND SAFETY

CONGRATULATIONS on your new Brinly-Hardy Lawn Sprayer! This accessory has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please do not hesitate to contact our knowledgeable customer service department toll-free at 1-877-728-8224. We have competent, well trained technicians to help you with the assembly and use of your sprayer.



## CUSTOMER RESPONSIBILITIES

- Please read & retain this manual. The instructions will enable to assemble and maintain your product properly.
- Please carefully read and observe the SAFETY SECTION of this manual.
- Follow a regular schedule in maintaining and caring for your Brinly-Hardy product.

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## RECORD PURCHASE INFORMATION

Record your purchase information in the spaces provided below:

**Date of Purchase** \_\_\_\_\_

**Company Name** \_\_\_\_\_

**Company Phone** \_\_\_\_\_

**Serial Number** \_\_\_\_\_

## TOOLS REQUIRED FOR ASSEMBLY:



- 1/2" Wrench (2)
- #2 Phillips Screw Driver
- Pliers
- Tape Measure
- Eye Protection
- Gloves

## SAFETY



This symbol will help to point out the important safety precautions throughout this manual. It means - **ATTENTION! BECOME ALERT!** Your safety is involved.

## RULES FOR SAFE OPERATION

- Know controls and how to stop safely, READ THE OWNER'S MANUAL before operating.
- Do not allow children to operate the vehicle, do not allow adults to operate without proper instruction or without having read the owner's manual.
- Do not carry passengers. Keep children and pets a safe distance away.

# SAFETY

<b>⚠ CAUTION</b> RISK OF SEVERE INJURY!	<b>⚠ PRECAUCIÓN</b> ¡RIESGO DE LESIÓN SEVERA!	<b>⚠ ATTENTION</b> RISQUE DE BLESSURE GRAVE !
<b>HELP AVOID CHEMICAL INJURY</b> <ul style="list-style-type: none"><li>• WEAR PROTECTIVE CLOTHES, GLOVES, AND GOGGLES</li><li>• DO NOT USE FLAMMABLE CHEMICALS</li><li>• FOLLOW CHEMICAL MANUFACTURER'S DIRECTIONS</li></ul>	<b>AYUDE A EVITAR UNA LESIÓN QUÍMICA</b> <ul style="list-style-type: none"><li>• VISTA ROPA, GUANTES Y GAFAS PROTECTORAS</li><li>• NO USE QUÍMICOS INFLAMABLES</li><li>• SIGA LAS INDICACIONES DEL FABRICANTE DE QUÍMICOS</li></ul>	<b>POUR ÉVITER TOUT RISQUE DE BLESSURE CHIMIQUE</b> <ul style="list-style-type: none"><li>• PORTER DES VÊTEMENTS, DES GANTS ET DES LUNETTES DE PROTECTION</li><li>• NE PAS UTILISER DE PRODUITS CHIMIQUES INFLAMMABLES</li><li>• SUIVRE LE MODE D'EMPLOI DU FABRICANT DU PRODUIT CHIMIQUE</li></ul>

B-6020

The safety labels shown in this section are placed in important areas on your product to draw attention to potential safety hazards. On your product safety labels, the words DANGER, WARNING and CAUTION are used with the safety-alert symbol. DANGER identifies the most serious hazards. The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol.

## GENERAL NOTES (OPERATION)

Caution should be taken when towing and/or using any attachment. This attachment combined with the weight distribution, turning radius, and speed of towing vehicle can result in severe injury or death to operator, damage to towing vehicle, and/or attachment if not used properly. Follow all towing safety precautions noted in the towing vehicle owner's manual, including the following precautions:

- Ensure the combined weight of the towing vehicle (tow vehicle weight + operator weight) is greater than the maximum towed weight of attachment (empty attachment weight + weight of load).
- Do not exceed maximum towing capacity of towing vehicle.
- Do not exceed the maximum drawbar pull rating of the towing vehicle. Drawbar pull is the horizontal force required to pull the attachment (including weight of load).
- Only tow this product in the vehicle's tow mode/speed setting or less than 5 mph. Do not exceed 5 mph.
- Towing speed should always be slow enough to maintain control. Travel slowly and use caution when traveling over rough terrain. Avoid holes, rocks and roots.
- Slow down before you turn and do not turn sharply.
- Use wide turning angles to ensure the attachment follows the path of the towing vehicle.
- Do not use attachment on steep slopes. A heavy load could cause loss of control or overturn attachment and towing vehicle. Additional weights may need to be added to your vehicle; check with towing vehicle manufacturer for recommendations.
- Reduce towed weight when operating on slopes.
- Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, directions, or turning.
- If you start and stop suddenly on hills, you may lose steering control or the towing vehicle may tip. Do not start or stop suddenly when going uphill or downhill. Avoid uphill starts.
- Slow down and use extra care on hillsides. Turf conditions can affect vehicle stability. Use extreme caution while operating near drop-offs.
- Do not drive close to creeks, ditches and public highways.
- Watch out for traffic when crossing near roadways.
- Use care when loading or unloading the vehicle into a trailer or truck.
- The attachment can obstruct the view to the rear. Use extra care when operating in reverse.
- When reversing, carefully back-up straight to avoid jackknifing. Do not allow towing vehicle wheels to contact attachment draw bar. Damage could result.
- Stop on level ground, disengage drives, set the parking brake, and shut off engine before leaving the operator's position for any reason including emptying the attachment.
- Use this attachment for intended purpose only.
- This attachment is intended for use in lawn care and home applications. Do not tow behind a vehicle on a highway or in any high speed applications. Do not tow at speeds higher than the maximum recommend towing speed.

...continued on page 4

# SAFETY

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## GENERAL NOTES (OPERATION), *continued*

- Do not tow this product behind a motor vehicle such as a car or truck.
- Always wear substantial footwear. Do not wear loose fitting clothing that can get caught in moving parts.
- Keep your eyes and mind on your towing vehicle, attachment and area being covered. Do not let other interests distract you.
- Stay alert for holes and other hidden hazards in the terrain.
- Keep the towing vehicle and attachment in good operating condition and keep safety devices in place.
- The towing vehicle and attachment should be stopped and inspected for damage after striking a foreign object. Any damage should be repaired before restarting and operating the equipment.
- Keep all parts in good condition and properly installed. Fix damaged parts immediately. Replace worn or broken parts. Replace all worn or damaged safety and instruction decals. Keep all nuts, bolts and screws tight.
- Do not modify the attachment or safety devices. Unauthorized modification to the towing vehicle or attachment may impair its function, safety and void the warranty.

## TOWING VEHICLE AND TOWING SAFELY

- Know your towing vehicle controls and how to stop safely. READ YOUR TOWING VEHICLE OWNER'S MANUAL before operating.
- Check the towing vehicle brake action before you operate. Adjust or service brakes as necessary.
- Stopping distance increases with speed and weight of towed load. Travel slowly and allow extra time and distance to stop.
- Use only approved hitches. Tow this attachment only with a towing vehicle that has a hitch designed for towing. Do not connect this attachment except at the approved hitch point.
- Follow the tow vehicle manufacture's recommendations for weight limits for towed equipment and towing on slopes. Use counterweights or wheel weights as described in the towing vehicle operator's manual.
- Do not shift to neutral and coast downhill.
- Do not allow children to operate the towing vehicle. Do not allow adults to operate the towing vehicle without proper instruction or without having read the owner's manual.

## PROTECT THOSE AROUND YOU

- Before you operate any feature of this attachment or towing vehicle, observe your surroundings and look for bystanders.
- Keep children, bystanders and pets at a safe distance away while operating this or any attachment.
- Use care when reversing. Before you back up, look carefully behind for bystanders.

## KEEP RIDERS OFF TOWED ATTACHMENT AND THE TOWING VEHICLE

- Do not carry passengers.
- Do not let anyone, especially children, ride in/on this attachment, the towing vehicle or hitch bracket. Riders are subject to injury such as being struck by foreign object and/or being thrown off during sudden starts, stops and turns. Riders may also obstruct the operator's view resulting in this attachment being operated in an unsafe manner.

## SPRAYER-SPECIFIC SAFETY INFORMATION

- Caution should always be exercised when working on or near batteries.
- Heavy gloves and eye protection should be worn when making connections to the battery.

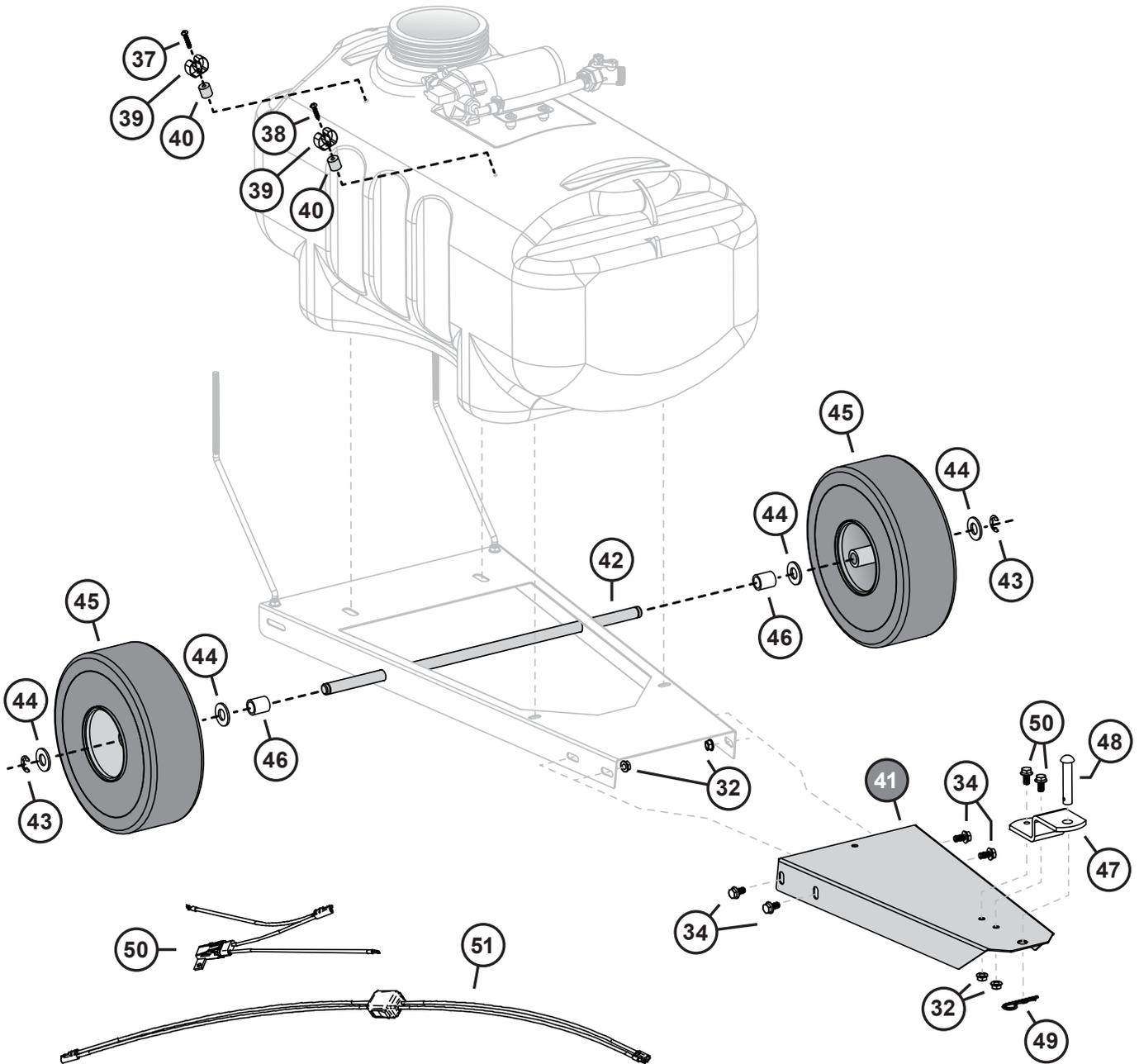
Installation Questions?  
Missing Parts? Replacement Parts?

**DON'T GO BACK TO  
THE STORE!**

Please call our Customer Service  
Department, Toll Free: 877-728-8224  
or [customerservice@brinly.com](mailto:customerservice@brinly.com)



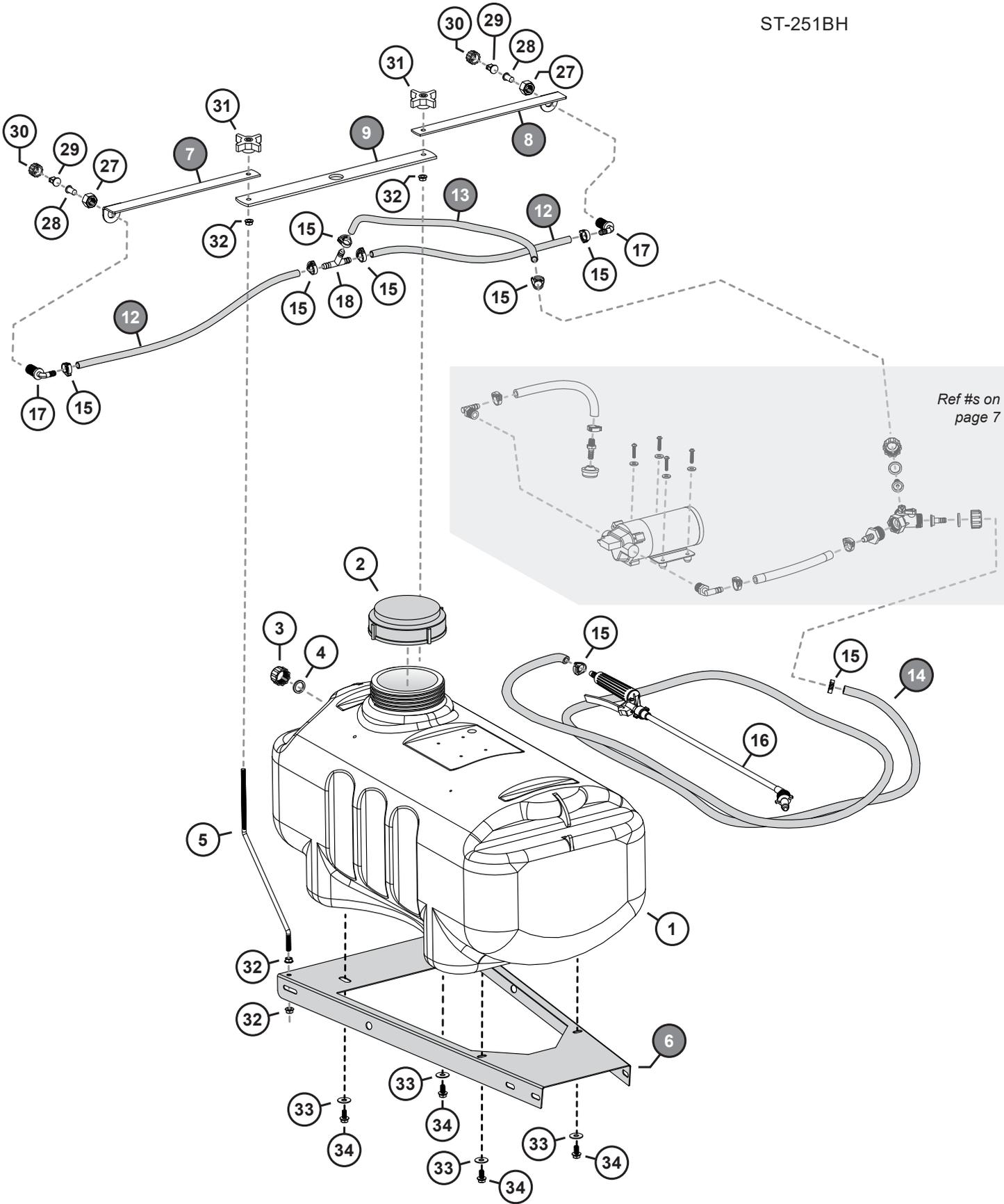
# PARTS



Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
41	B-6322F-10	Towbar; Front, Painted	1	52	1008563	Decal, BH Logo	1
42	B-5684-01	Axle; Plated	1	53	B-6020	Decal, Caution	1
45	B-5692	Wheel Asm; Pneu	2	54	L-1744	Label, Serial No	1
47	B-3034-10	Clevis, Blk.	1	55	L-1823-1	Label, Inspected by	2
50	1018962	Wire Harness Batt Conn	1	56	R-1946	Decal, Instruction w/ CE	1
51	1018961	Wiring Harness w switch	1				

# PARTS

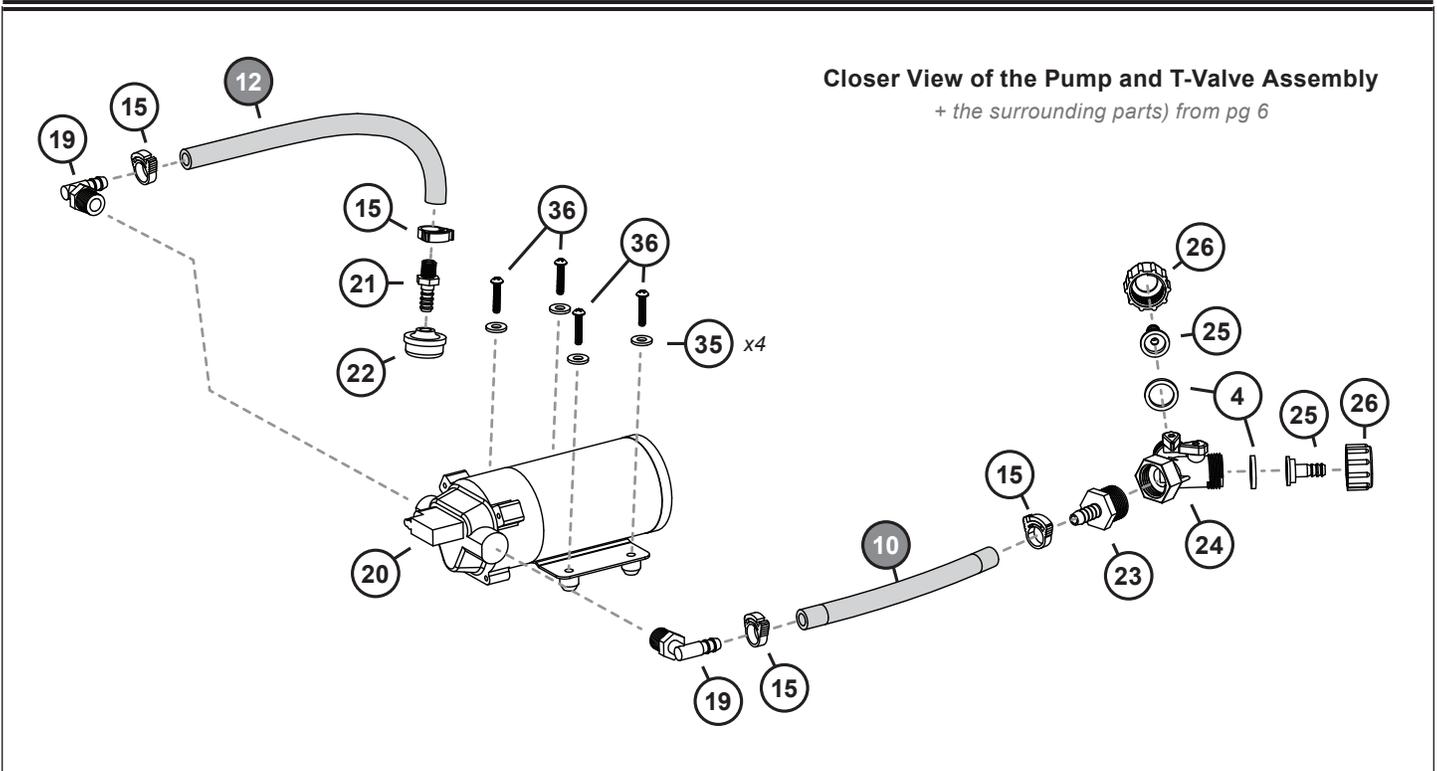
ST-251BH



# PARTS

## Closer View of the Pump and T-Valve Assembly

+ the surrounding parts) from pg 6



### ST-251BH

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
1	B-6025	Tank; Sprayer, 25Gal	1	21	B-6598	Adaptor, 1/8 MPT x 3/8" H.B.	1
2	B-6028	Cap; Tank	1	23	1016549	Male Fitting	1
3	B-6578	Cap; Drain, 3/4"	1	24	B-6512	Tee, Dual Valve	1
4	B-6054	Washer; Black Vinyl 1" OD x 3/4" ID	3	33	R-618	Washer, Special	4
5	S-1142	Boom, support	2	34	B-5695	Bolt, Hex Fl.Hd, 5/16	4
6	B-6322R-10	Base; Rear, Painted	1	35	45M0909P	Washer; SAE Flat, 1/4"	4
7	B-7761L-10	Bar; Boom, Painted	1	36	22M0616P	Screw; Round Head, #10	4
8	B-7761R-10	Bar; Boom, Painted	1				
9	S-1141-10	Boom Center, Painted	1				
10	1016888	Hose, 3/8" x 8"	1				
12	B-6035	Hose, 3/8" x 22"	3				
13	B-6034	Hose, 3/8" x 38"	1				
14	B-6033	Hose, 3/8" x 12'	1				
15	B-6047	Clamp, Hose	4				
16	B-6400	Hand Wand	1				
19	B-6046	Elbow	1				
20	B-6027	Pump; 2.0 GPM, CE Rated	1				

Continue to page 8 for contents of the hardware bags.

Installation Questions? Missing Parts?  
Replacement Parts? **DON'T GO BACK TO THE STORE!**

Please call our Customer Service Department, Toll Free: 877-728-8224 or email: customerservice@brinly.com



# PARTS

ST-251BH

<b>Z-1705 Hardware Bag "A"</b>			
31	F-782	Knob, 4 Prong, Black	2
32	B-4355	Nut, Whiz Lock, 5/16" -18	12
34	B-5695	Bolt, Hex Fl. Hd, 5/16	6
37	22M0616P	Screw, Round Head, #10	1
38	1019182	Screw #10 x 1 Self Tap	1
39	B-6511	Clip, wand holder	2
40	1019177	Nylon spacer, #10 x 5/8 lg	2
43	F-577	E Ring, 5/8"	2
44	45M2121P	Washer, Flat 5/8	4
46	B-5691	Spacer, Axle	2
48	B-3861	Pin, Hitch 1/2" x 2-1/2"	1
49	D-146P	Cotter, Hairpin 1/8",#211	1

<b>Z-1987 Hardware Bag "B"</b>			
3	B-6054	Washer, Vinyl, 3/4"	2
15	B-6047	Clamp, Hose	8
17	B-6043	Nozzle Body, 90 Deg	2
18	B-6045	Hose Barb; Tee, 3/8" x 3/8"	1
22	B-6597	Strainer; 1/4" NPT	1
25	B-6055	Hose Barb	2
26	B-6056	Nut, Hose Swivel	2

<b>Z-1704-CC2 Tip Bag; (2) 90 Deg.</b>			
27	B-6041	Nut; Jam, Plastic	2
28	B-6040	Strainer; Nozzle	2
29	S-1148	Tip; 90 deg	2
30	B-6042	Nut; TipFitting	2

## NOTES

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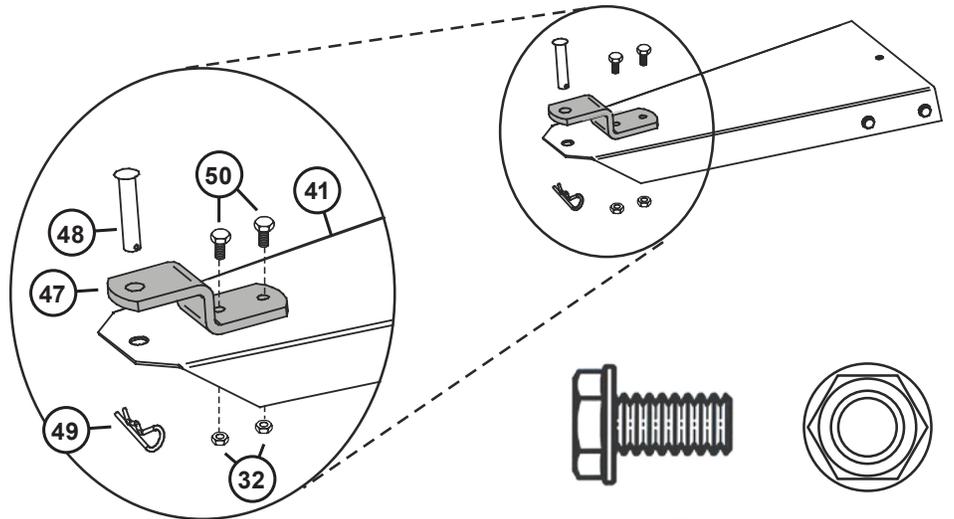
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# ASSEMBLY

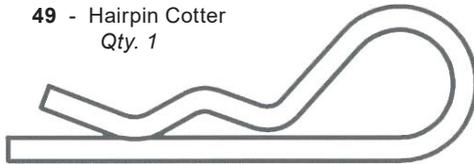
## Step 1

### INSTALL CLEVIS

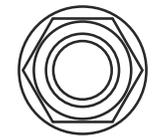
- A. Install Clevis (47) to the Tow-bar (41).
- B. Install Hitch Pin (48) and secure with Hairpin Cotter (49).



49 - Hairpin Cotter  
Qty. 1

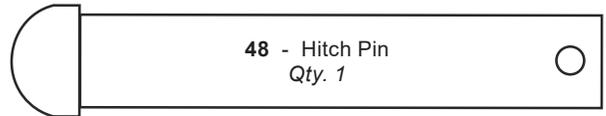


50 - Hex Flange Bolt, 5/16" x 5/8"  
Qty. 2



32 - Whiz Lock Nut, 5/16"  
Qty. 2

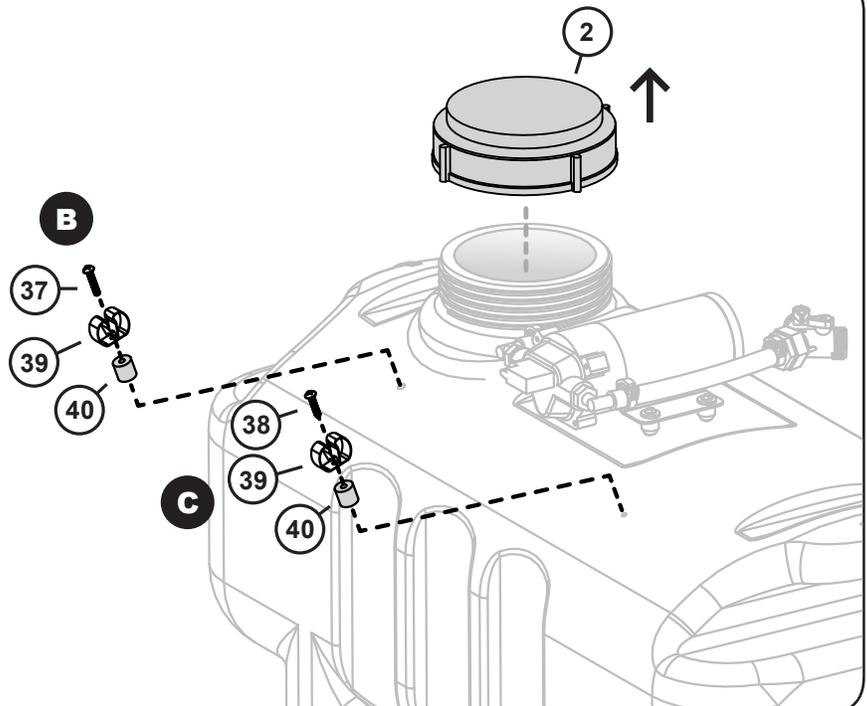
48 - Hitch Pin  
Qty. 1



## Step 2-1

### ATTACH THE WAND HOLDER CLIPS

- A. Retirez le bouchon du réservoir (2).
- B. Add the first wand clip using:
  - (40) Nylon Spacer (x1)
  - (39) Wand Clip (x1)
  - (37) Screw, Round Head (x1)
- C. Add the second wand clip using:
  - (40) Nylon Spacer (x1)
  - (39) Wand Clip (x1)
  - (38) Screw, #10 Tapping (x1)



# ASSEMBLY

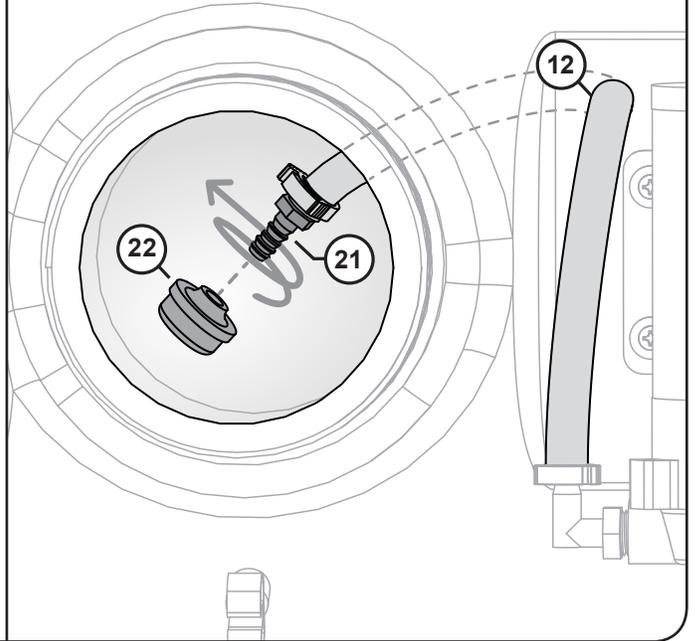
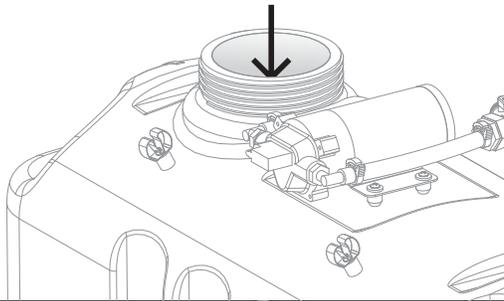
## Step 2-2

- D. **Inside the tank (1)**, on the end of the suction hose (12):

Attach the mesh strainer (22) by screwing it to the 1/4 inch adapter (21).

**NOTE:**

The suction hose (12) is already attached to the pump.



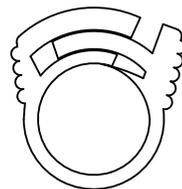
## Step 3

With pliers, clamp one end of the 3/8" x 12' hose (14) to the Hand Wand (16) using one Hose Clamp (15), as shown.

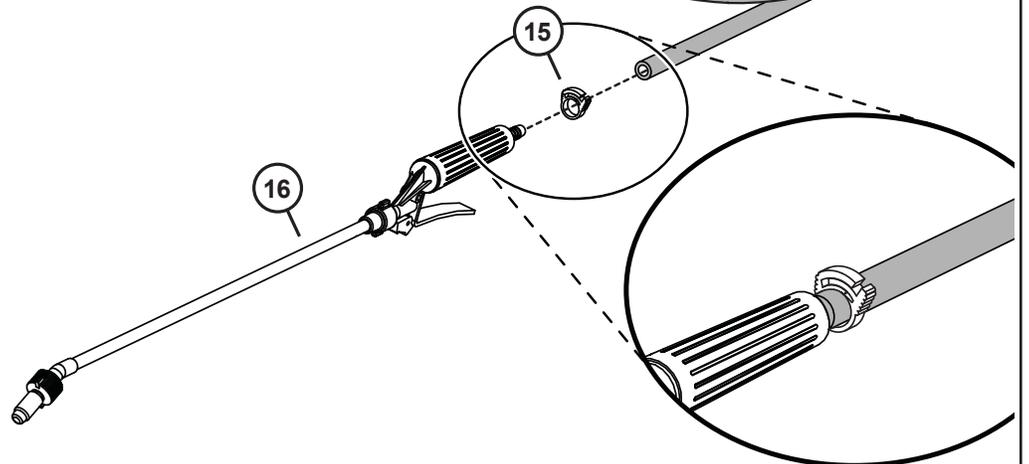
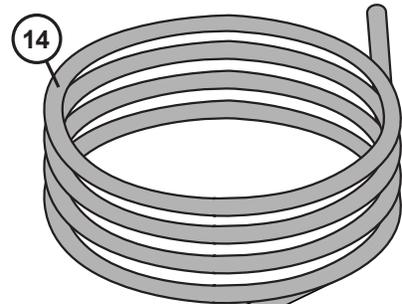
**NOTE:**

**IT CAN BE TRICKY TO INSERT THE HOSE BARBS**

- Try dipping the ends of your hoses in soapy water.



15 - Hose Clamp  
Qty. 1

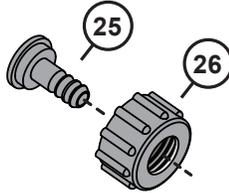


# ASSEMBLY

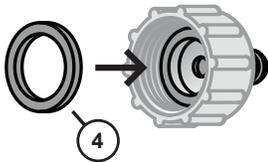
## Step 4

### HOSE SWIVEL NUTS

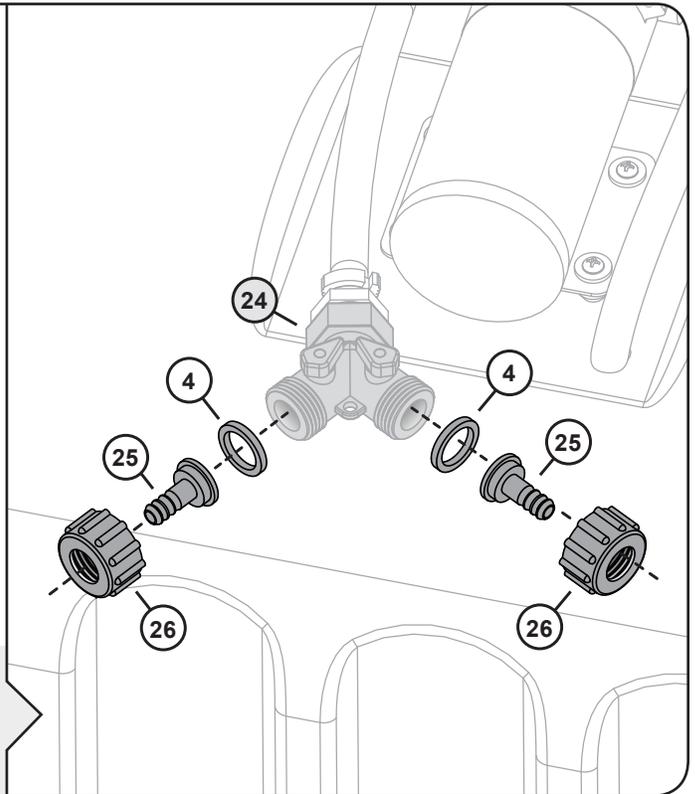
A. Insert a Hose Barb (25) through the threaded side of each Hose Swivel Nut (26), as shown.



B. Insert one Vinyl Washer (4) against the back side of the Hose Barb (26) to insure that the fittings do not leak.



C. Screw the assembled Swivel Nuts (26) to both Dual Tee Valve fittings (24), as illustrated here.



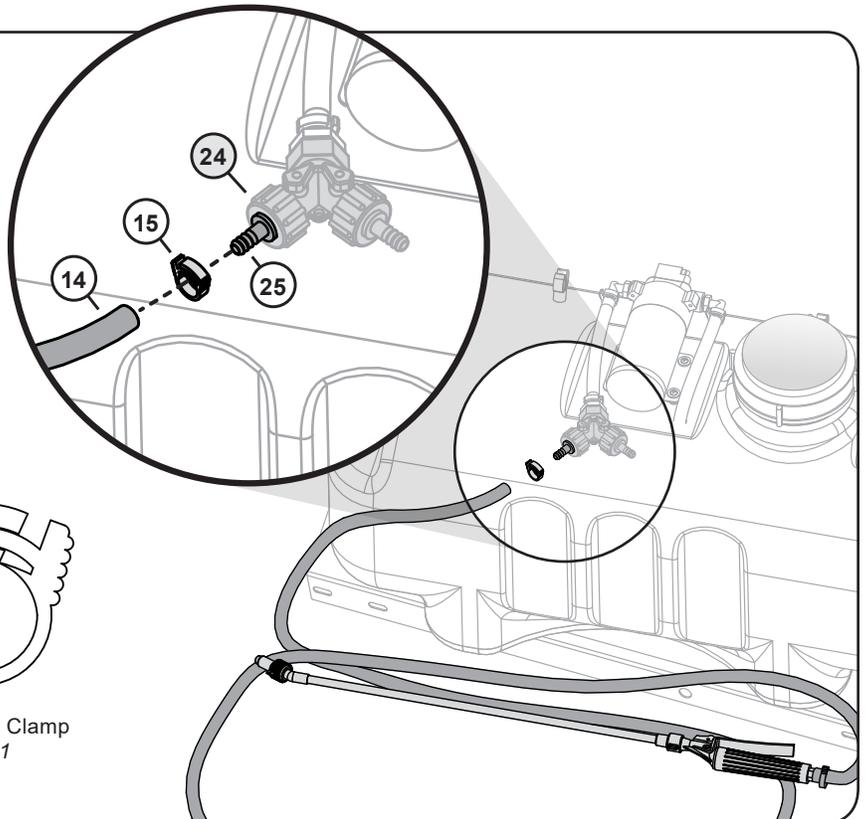
## Step 5-1

A. Attach the Wand Hose (14) to the Hose Barb (25) previously installed to the Dual Tee Valve (24) as shown.

B. Clamp the hose in place using pliers to secure the Hose Clamp (15) over the Hose barb.



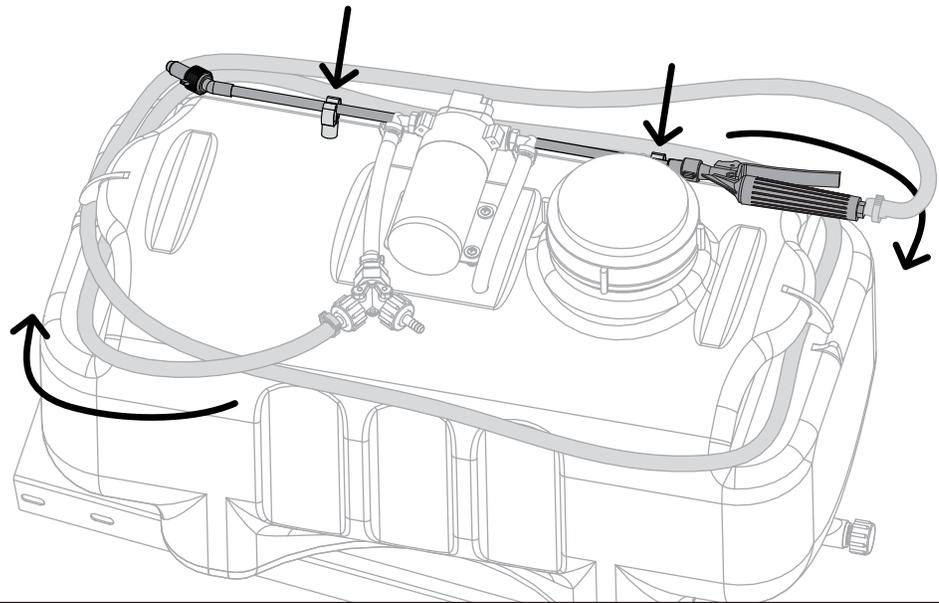
15 - Hose Clamp  
Qty. 1



# ASSEMBLY

## Step 5-2

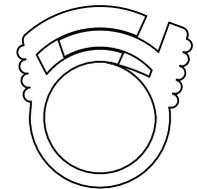
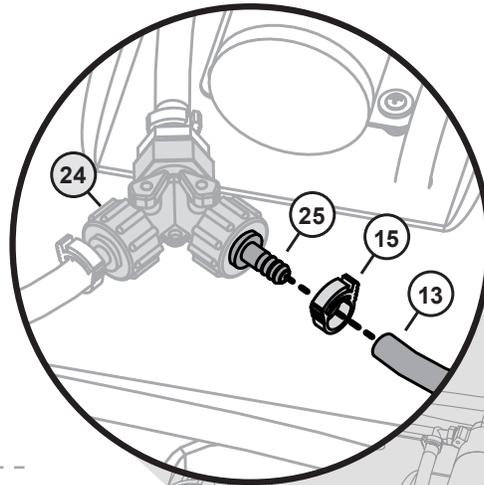
- C. Stow the wand and hose by wrapping it around the top of the sprayer tank, then secure the wand to the wand holder clips.



## Step 6

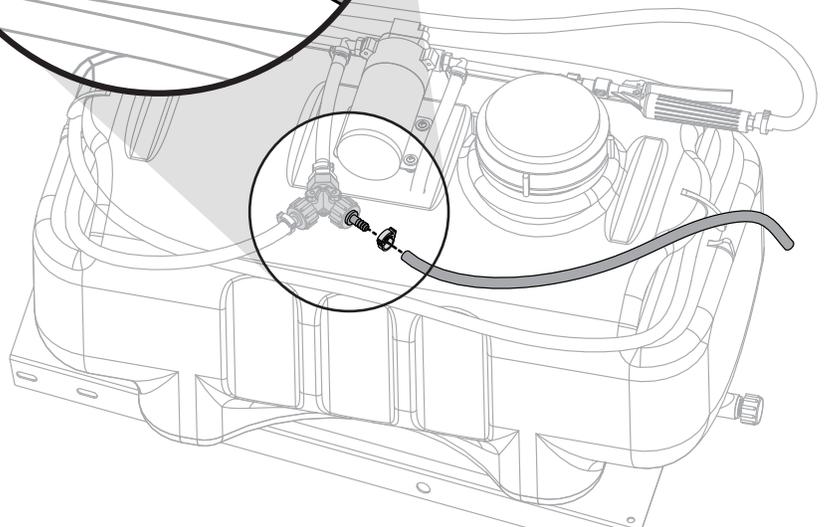
### ATTACH BOOM HOSE TO THE PUMP

- A. Attach the 38 inch Hose (13) to the remaining Hose Barb (25) installed to the Dual Tee Valve (24) as shown.



15 - Hose Clamp  
Qty. 1

- B. Clamp the hose in place using pliers to secure the Hose Clamp (15) over the Hose barb (25).



# ASSEMBLY

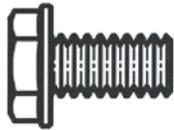
## Step 7

### INSTALL THE TOWBAR

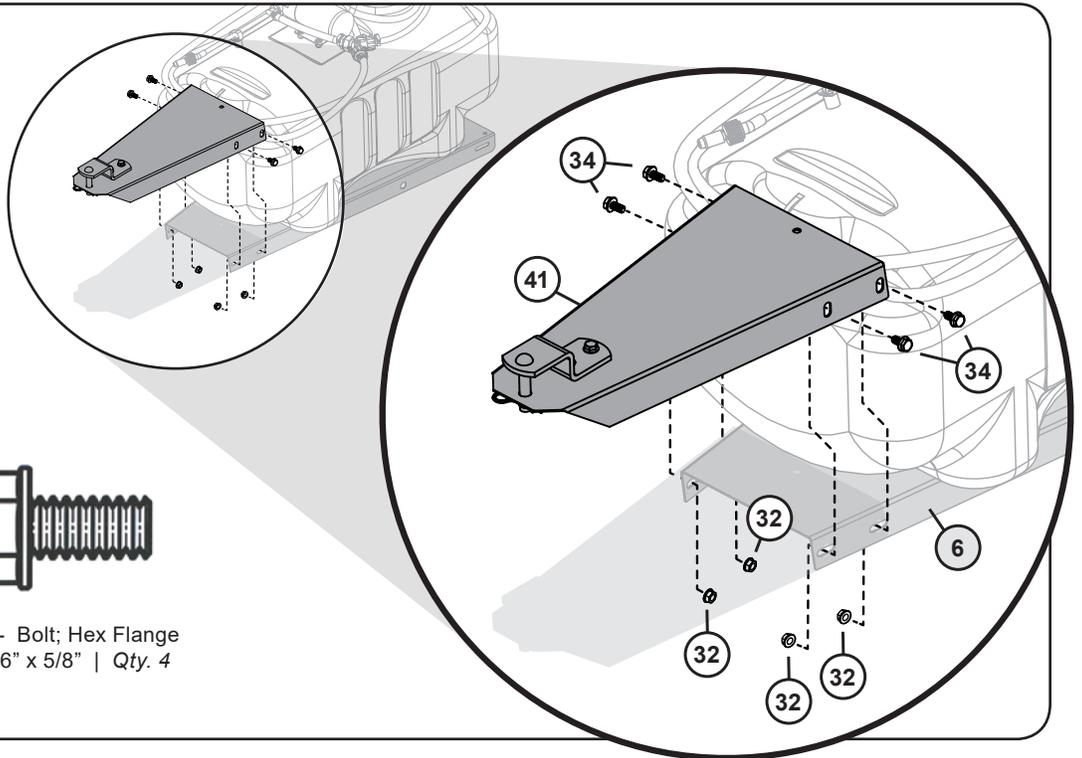
Install the Towbar (41) to the Rear Base (6) as shown.



32 - Nut; Whiz Lock  
5/16" | Qty. 4



34 - Bolt; Hex Flange  
5/16" x 5/8" | Qty. 4

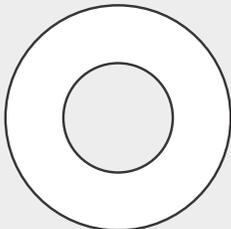


## Step 8

46  
Axle  
Spacer  
Qty. 2



44  
Washer,  
Flat 5/8"  
Qty. 4



43  
E-Ring  
5/8"  
Qty. 2

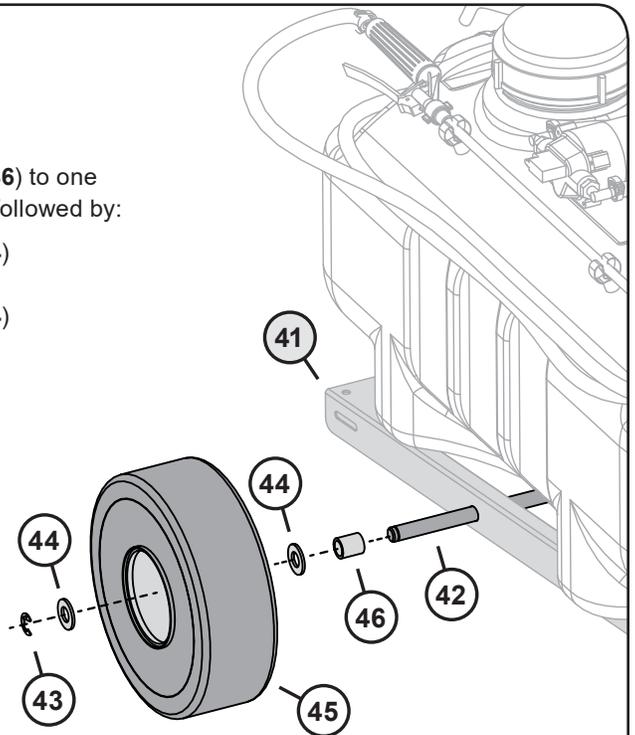


- A. Install Axle (42) in to Rear Base (41).
- B. Install Axle Spacer (46) to one side of the Axle (42) followed by:
  - x1 Flat Washer (44)
  - x1 Wheel (45)
  - x1 Flat Washer (44)

*Note: Make sure valve stem is outboard to maintain proper tire inflation.*

- C. Attach E-Ring (43) to secure wheel to the axle.

- D. Repeat steps for other wheel.



# ASSEMBLY

## Step 9

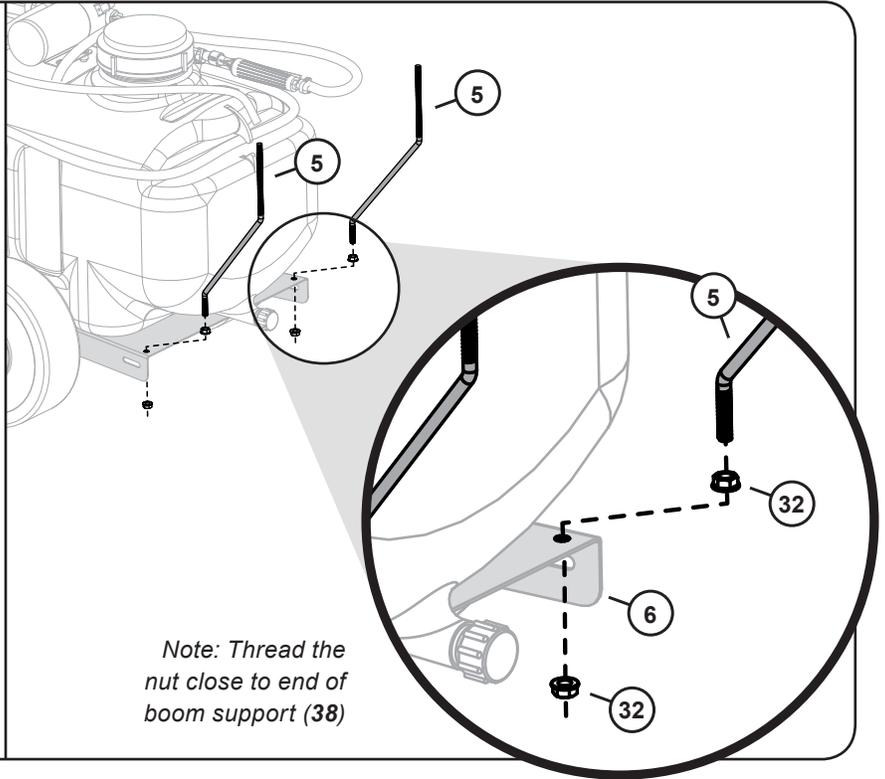
### INSTALL BOOM SUPPORTS

Install the Boom Supports (5) to the left and right side of the Rear Base Assembly (6) using 2 Lock Nuts (32), as shown.

*Note: Thread lock nut close to the end of the boom support.*



32 - Nut; Whiz Lock  
5/16" | Qty. 4

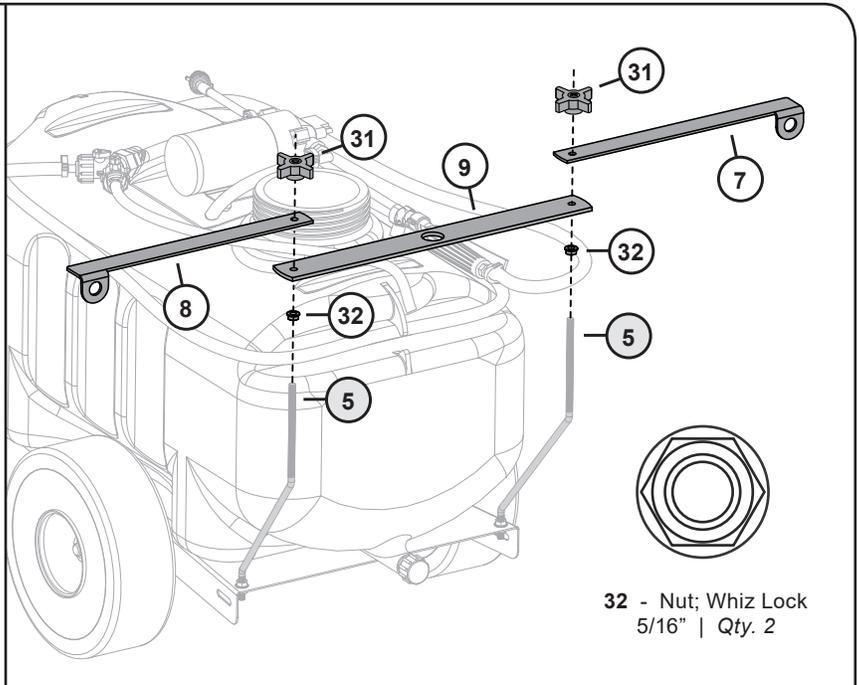


*Note: Thread the nut close to end of boom support (38)*

## Step 10

### INSTALL BOOM CENTER BAR AND BOOM EXTENSIONS

- Install a Lock Nut (32) on both Boom Supports (5) with the flange facing upward as shown.
- Position Boom Center Bar (39) over both Boom Supports (5).
- Mount RH and LH Boom Extensions (7 & 8) to Boom Supports and tighten snugly using Knob (31).



32 - Nut; Whiz Lock  
5/16" | Qty. 2

*Note: Once assembled completely and hooked to towing machine, measure from each Boom Extension to the ground and adjust threaded nut until you get a distance of approximately 16.5 inches before spraying.*

# ASSEMBLY

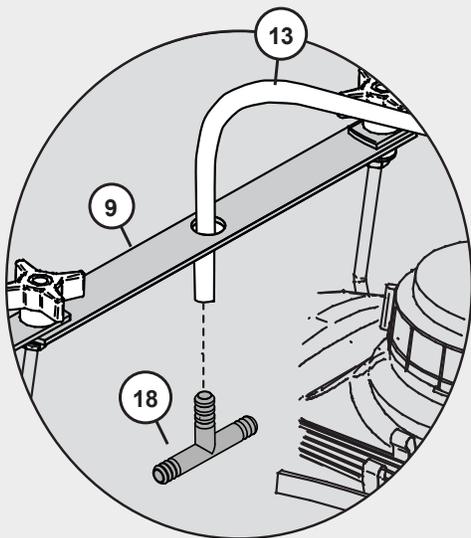
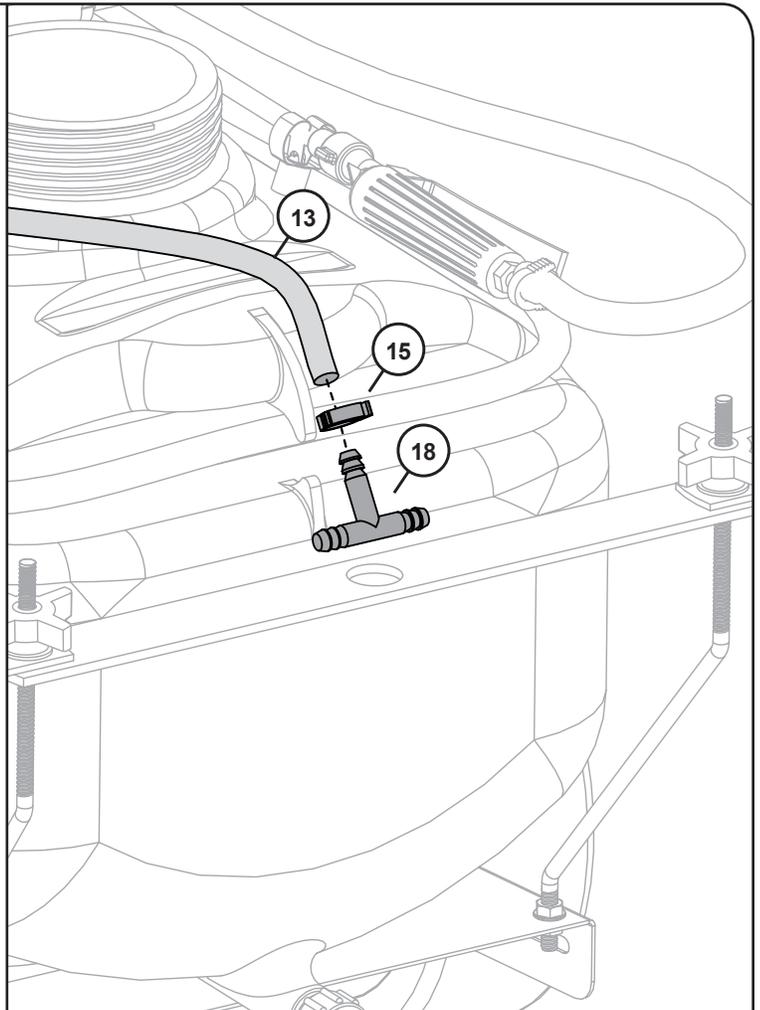
## Step 11

### CONNECT PUMP SUPPLY HOSE TO BOOM

- A. Place a Hose Clamp (15) on the end of the 38 inch hose (13) and fit the center orifice of the Hose Barb (18) into the end of the hose as shown.
- B. Tighten the hose clamp (15) with a pair of pliers.



15 - Hose Clamp  
Qty. 1



#### OPTIONAL / ALTERNATE ASSEMBLY:

#### PUMP SUPPLY HOSE - *through the center boom...*

- A. Route the free end of the pump supply hose (13) through the hole in the Boom Center Bar (9), as shown.
- B. Place the Hose Clamp (15) on the end of the 38 inch hose (13) and fit the center orifice of the Hose Barb (18) into the end of the hose as shown.
- C. Tighten the hose clamp (15) with a pair of pliers.

# ASSEMBLY

**NOTE:** The Sprayer Tip (25) and Nozzle Strainer (26) are easily lost when the Nut Tip Fitting is removed. Use caution.

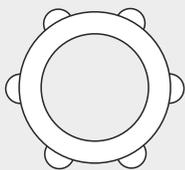
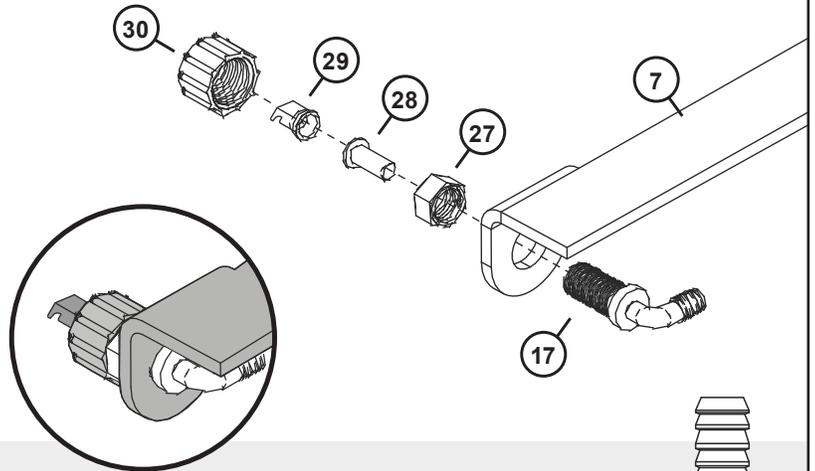
## Step 12

- A. Assemble the sprayer tips / nozzles with hardware found in the tip bag to the right Boom Extension (7), as shown.

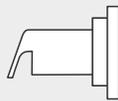
Hold the tip of the nozzles (29) pointing down to the ground while securing the nut (30).

Note: DO NOT over tighten plastic fittings.

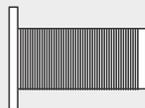
- B. Repeat for left Boom Extension (8).



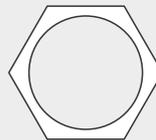
**30** - Nut; Tip Fitting | Qty. 2



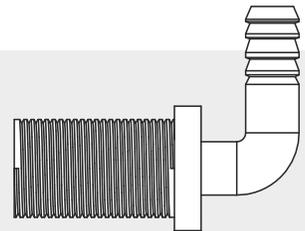
**29**  
Tip; 90 Deg.  
Qty. 2



**28**  
Nozzle Strainer  
Qty. 2



**27** - Nut; Jam Plastic | Qty. 2



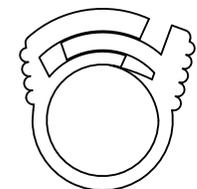
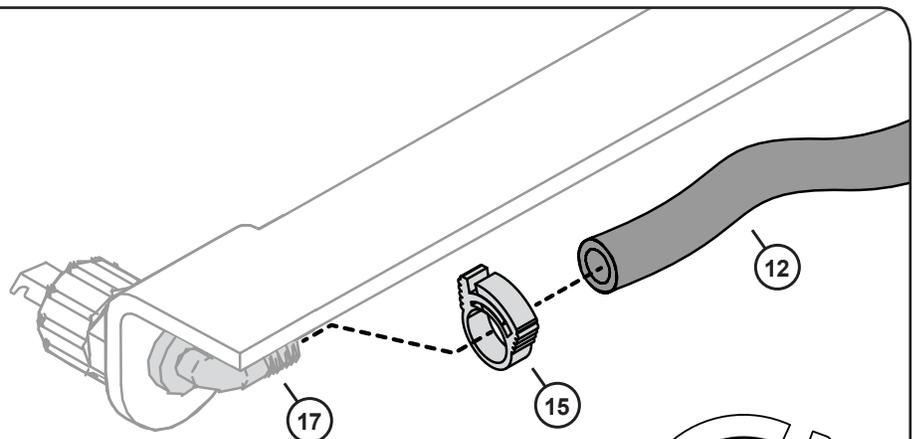
**17** - Nozzle Body, 90 Deg. | Qty. 2

## Step 13-1

### CONNECT SPRAYER HOSES

- A. Place a Hose Clamp (15) on the end of a 22 inch hose (12). Slide the end of the hose over the nozzle body (17) as shown.

- B. Tighten the hose clamp (15) with a pair of pliers.



**15** - Hose Clamp  
Qty. 1

- C. Repeat this step, attaching the second 22 inch hose (12) to the second nozzle body (17).

# ASSEMBLY

## Step 13-2

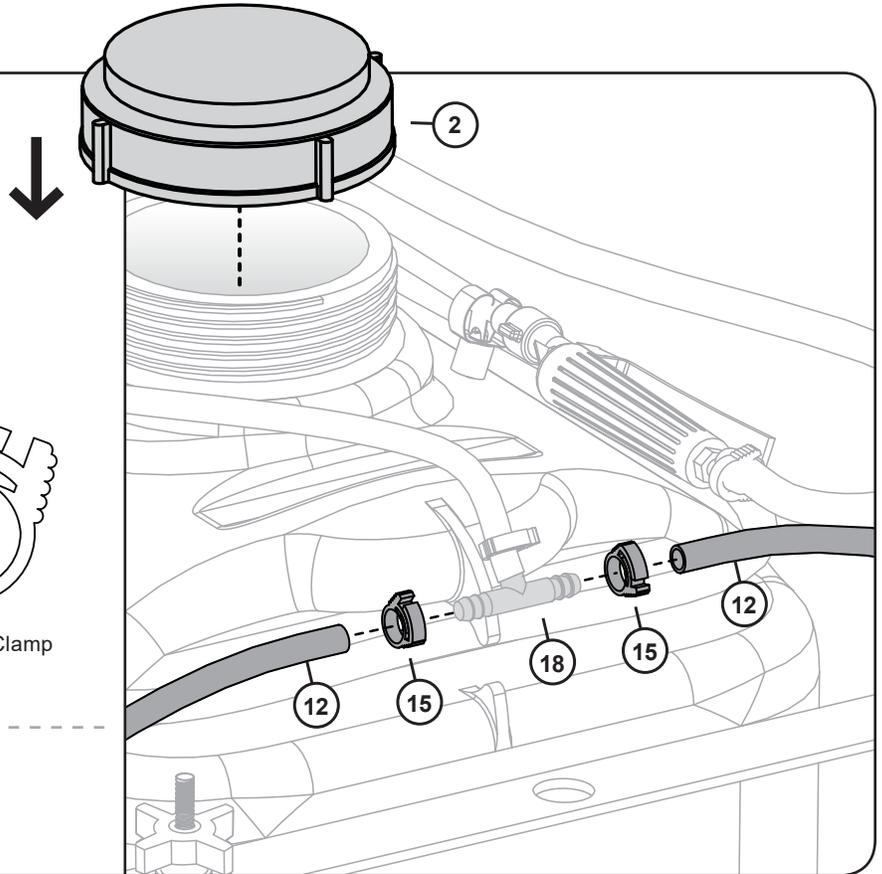
### CONNECT SPRAYER HOSES

- A. Connect the Sprayer Hose (12) for both left and right sprayer nozzles to the Hose Barb (18), as shown.
- B. Tighten the hose clamp (15) with a pair of pliers.



15 - Hose Clamp  
Qty. 2

- C. Place the sprayer cap (2) back on the tank.

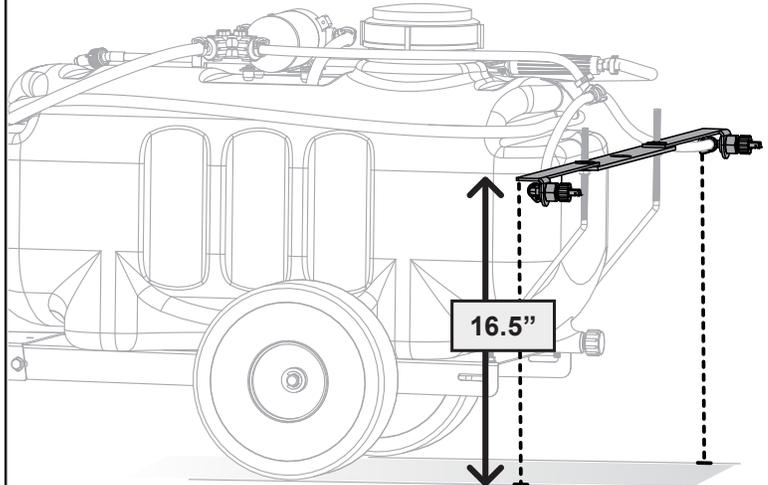


## Step 14

### SETTING BOOM HEIGHT

Once hooked to the towing machine, measure the distance between the boom extensions and the ground. Adjust threaded nut until you get the a distance of approximately 16.5 inches.

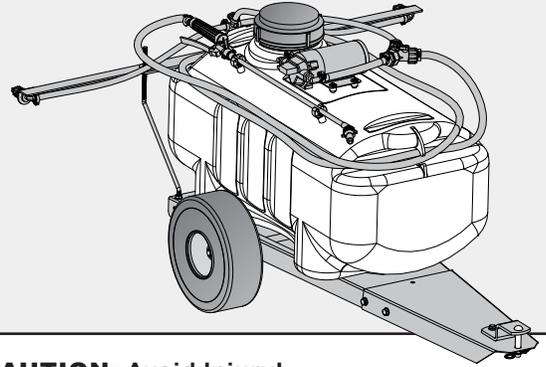
See Step 10.



Assembly is complete.

# USE AND CARE

## 25 GALLON TOW-BEHIND SPRAYER ST-251BH USE AND CARE SECTION



### CAUTION: Avoid Injury!

Before installing or removing the sprayer, make sure the towing vehicle is parked safely.

## SPECIFICATIONS

Maximum  
Towing Speed . . . . . 5 mph

Tank Capacity . . . . . 25 gal

Maximum  
Pump Pressure . . . . . 75 psi

Fuse (*Blade Type*) . . . . . 15 amp.

Empty Weight . . . . . 53 lbs.

Maximum  
Towed Weight . . . . . 260 lbs.

### TIRES

Size . . . . . 10.5 x 3.5 in

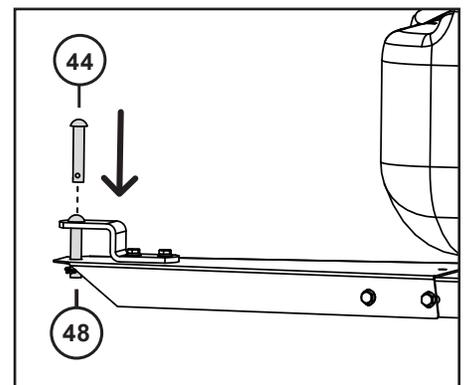
### MAXIMUM

Tire Inflation Pressure . . . 30 PSI

*Tire pressure may be reduced to increase wheel traction or to reduce shock, although it should not be reduced to below 70% of the maximum rated pressure.*

## INSTALLING SPRAYER

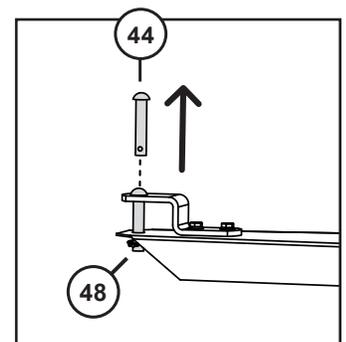
1. Park machine safely.  
(See *Towing Machine manual*.)
2. Align sprayer drawbar with towing machine drawbar.
3. Install Hitch Pin (44) through sprayer drawbar and machine drawbar.  
Secure Hitch Pin with Hairpin Cotter (48).



## REMOVING SPRAYER

*NOTE: Refer to illustrations in the Installing Section, earlier in this manual.*

1. Park machine safely.  
(See *Towing Machine manual*.)
2. Unload sprayer tank before disconnecting hitch towing vehicle.
3. Remove hairpin cotter (48) & hitch pin (44).
4. Push sprayer away from machine.  
Block sprayer wheels.
5. Install hitch pin (44) and hairpin cotter (48) in sprayer drawbar for storage.



# USE AND CARE

## INSTALLING ELECTRICAL CONNECTIONS



**CAUTION: Avoid injury!**

Care should be used when working around batteries. Use insulated tools when making battery connections. Heavy gloves and eye protection should be worn when making battery connections.

1. Select the proper tools to remove the leads to the battery terminals. *Note: If you do not have insulated tools, use electrical tape to wrap all exposed non-working surfaces of the tools. It is important to take steps to reduce the risk of causing an electrical spark.*
2. Put on gloves and eye protection.
3. Verify that the red lead is attached to the positive (+) battery terminal and the black lead is attached to the negative (-) battery terminal.
4. Remove the battery leads.
5. Attach the red lead (with the fuse) of the Battery Connecting Wiring Harness and the red lead from your engine to the positive (+) battery terminal.
6. Using the Battery Connection Wiring Harness (6) attach the black lead and the black lead from your engine to the negative (-) battery terminal.

*NOTE: The Battery Connection Wiring Harness contains a 15 amp blade type fuse.*

*NOTE: If the battery is underneath the seat, ensure that both battery terminals and battery leads do not make contact with seat.*

7. Attach the Wiring Harness with Switch (5) to the connector terminal end of the Battery Connection Wiring Harness (6).

*NOTE: In most instances the terminal connector with the shorter leads from the Wiring Harness with Switch (5) are connected to the terminal connector on the Battery Connection Wiring Harness (6). Most users like the switch to lie in their laps or be convenient to the towing vehicle operator. The Wiring Harness with Switch (5) terminal connectors can be reversed to suit the need of the user.*

*NOTE: Switch wire harness colors do not need to match mating connector wire colors for the pump to function.*



**CAUTION: Avoid Injury!** Care should be used when routing the wiring harness to the sprayer.

*Do not place the wiring harness in areas that the wires can be pinched or damaged.*

*Place the wires to minimize a tripping hazard when getting on or off the towing vehicle.*

8. Attach the other end of remaining terminal lead connector from the Wiring Harness with Switch (5) to the terminal lead connector coming from the Pump (4). If the pump begins to run, use the switch to turn the pump off

*NOTE: The Battery Connection Wiring Harness (6) can remain connected to the battery of the towing vehicle when spraying operations are complete. Simply detach the Wiring Harness with Switch (5) terminal connector from the Battery Connection Wiring Harness (6) terminal connector.*

## PUMP OPERATIONS

The pump motor supplied with your sprayer is a “demand flow” type pump. An internal pressure switch in the pump turns the pump off when the pressure reaches approximately 75psi. When the pump senses that pressure has dropped (by triggering the wand) the pump will again start and continue to run until 75psi is reached.

*NOTE: Pump surge should be avoided. It can cause the pump motor to overheat resulting in damage to the pump. Refer to the Wand Operations Section for tips on how to avoid pump surge.*

# USE AND CARE

## DETERMINING WEIGHT FOR SPRAYER



**CAUTION: Avoid injury!** Excessive towed load can cause loss of traction and loss of control on slopes. Stopping distance increases with speed and weight of towed load. Total towed weight must not exceed combined weight of pulling machine, ballast and operator.

The following maximum loaded weight capacity is the average weight loaded with water to the 25 gallon mark on the sprayer tank.

Model Sprayer	Weight Capacity
ST-251BH	207 lbs. Maximum load
(25 Gal. Tank)	260 lbs. Combined Towed Weight (Attachment + Load)



**CAUTION: Avoid injury!** If additional weight is required when towing, add weight at or forward of the rear wheels. Adding weight behind the rear wheels can affect machine steering. Refer to your towing machine manual.

Towing capacity will vary with weight of towing machine and operator.

### EXAMPLE:

If Towing Machine Weighs: 400 lbs.  
Add Your Weight: 200 lbs.  
Combined Weight Equals: 600 lbs.

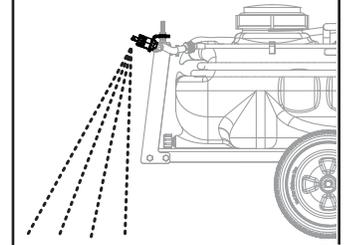
To maintain stability using the machine in this example, you cannot safely tow more than 600 lbs. without first adding additional ballast to the towing machine.

## BOOM OPERATIONS

Boom spraying is the normal spraying configuration and is controlled by the operator in the seated position.

For spraying in a vertical orientation such as along fences or hedges, use the wand operation.

Normal downward spraying configuration and is controlled by the operator in the seated position.

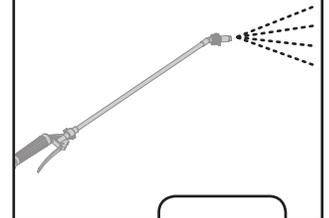


## WAND OPERATIONS

The wand can be used for spraying in various applications from a steady stream to a fine mist.

Adjust the spray pattern by turning the Wand Tip (31) clockwise for a fine mist or counterclockwise for a course spray.

For spraying in a vertical orientation such as along fences or hedges, use the wand operation.



**CAUTION: Avoid Injury!** Always turn the pump off when making adjustments to the Wand Tip. Wear eye protection.

# USE AND CARE

## PUMP SURGE

Pump surge may occur when using the wand for fine mist applications. Do not allow this to occur. The pump is designed for continuous duty. Intermittent starting and stopping will cause the pump motor to overheat. To eliminate pump surge:

- a) Open the wand tip to a higher flow rate
- b) Create a bypass that allows the pump to run continuous by removing one of the boom hoses near the tip (See Step 11). Remove the tank fill cap and place the hose in the tank. Open the valve for the boom slowly until the pump runs continuously. Adjust the wand tip to the desired mist.

## APPLICATION RATE

### WAND

Understanding the following information about your sprayer will help to calibrate the application rate. The sprayer operates at a fixed pressure of 75 psi. This results in actual spraying time of 30 minutes using the handgun.

### BOOM

Product	Gallons Per Acre			
	<i>2 mph</i>	<i>3 mph</i>	<i>4 mph</i>	<i>5 mph</i>
	56.5	37.5	28.0	22.5
ST-251BH	Gallons Per 1,000 SQ FT			
	<i>2 mph</i>	<i>3 mph</i>	<i>4 mph</i>	<i>5 mph</i>
	1.3	0.9	0.6	0.5

## TOWING VEHICLE REQUIREMENTS

The lawn sprayer requires towing equipment with a 12-volt battery and charging system, and a towbar hitch in order to operate properly.

The towing equipment should have operable brakes capable of controlling the loaded sprayer and towing vehicle.

## CALIBRATION OF SPEED

By measuring off a distance of 50 or 100 feet, the speed of the towing vehicle can be calibrated by selecting a gear and throttle position to cover the prescribed distance in the specified time as shown:

Speed	Seconds Required to Travel	
	<i>50 feet</i>	<i>100 feet</i>
2 mph	17	34
3 mph	11	22
4 mph	9	17
5 mph	7	14

# USE AND CARE

## CALCULATION PROCEDURE FOR SPRAYER APPLICATION

Chemical labels normally show application rates in gallons per acre or gallons per square feet. Using the following method, one can determine the appropriate amount of water to use and speed to travel to adequately follow the manufacturers recommended instructions:

1. Based on the size of your yard, **select the amount of water to be used.** Use the formula:

_____	Application Rate	→	<i>(from the table on pg 21)</i>
_____	x Area to be Sprayed		
<b>= Amount of Water</b>			

2. **Choose the speed / amount of water you want to use.** A comfortable speed for a lawn tractor is 3 mph.

3. Determine how many tanks are required to complete the total job.

_____	Amount of Water		
_____	÷ Tank Capacity		
<b>= Number of Tanks</b> (from Step 1)			
<i>If the number of tanks = less than 1.0, use 1.0.</i>			

4. Determine how much chemical is to be used:

_____	Rate from Manufacturer's Label		
_____	x Area to be Sprayed		
<b>= Amount of Chemical Required</b>			

5. Determine how much chemical per tank:

_____	Amount of Chemical (from Step 4)		
_____	÷ Number of Tanks (from Step 3)		
<b>= Amount of Chemical / Tank</b>			

### EXAMPLES

#### Example 1

Using Table 1 and formula from Step 1:

**Yard Size = 4 Acres**

$$56.5 \text{ gal / acre} \times 4 \text{ acres} = 225.6 \text{ gal @ 2mph}$$

$$37.5 \text{ gal / acre} \times 4 \text{ acres} = 149.6 \text{ gal @ 3mph}$$

$$28.0 \text{ gal / acre} \times 4 \text{ acres} = 112.0 \text{ gal @ 4mph}$$

$$22.5 \text{ gal / acre} \times 4 \text{ acres} = 90.00 \text{ gal @ 5mph}$$

#### Example 2

Using Table 1 and formula from Step 1:

**Yard Size = 20,000 sf**

$$1.3 \text{ gal / 1000} \times 20,000 \text{ sf} = 26 \text{ gal @ 2mph}$$

$$0.9 \text{ gal / 1000} \times 20,000 \text{ sf} = 18 \text{ gal @ 3mph}$$

$$0.6 \text{ gal / 1000} \times 20,000 \text{ sf} = 12 \text{ gal @ 4mph}$$

$$0.5 \text{ gal / 1000} \times 20,000 \text{ sf} = 10 \text{ gal @ 5mph}$$

Choice =  
149.6 ~ 150 gal  
@ 3mph

Choice =  
18 gal @ 3mph  
*\*Since 18 gallons can be done with only one filling.*

$$150 \text{ gal} / 25 = 6.0 \text{ tanks}$$

$$18 \text{ gal} / 25 = 0.7 \text{ tanks}$$

*(use 1.0 tank)*

Label =  
20 ounces / acre

$$20 \text{ oz.} \times 4 \text{ acres} = 80 \text{ oz.}$$

Label = 1/2 pint  
÷ 1000 sq. ft.

$$1/2 \text{ pt.} \div 1000 \times 20,000 \text{ sf} = 10 \text{ pints}$$

$$80 \text{ oz.} \div 6.0 \text{ tanks} = 13.3 \text{ oz. / tank}$$

$$10 \text{ pints} \div 1 \text{ tank} = 10 \text{ pints}$$

# USE AND CARE

## LUBRICATING WHEEL BEARINGS

Lubricate each wheel bearing with multipurpose grease or an equivalent.

## CHEMICAL DISPOSAL

*IMPROPER CHEMICAL WASTE DISPOSAL CAN POLLUTE THE ENVIRONMENT AND CAUSE HEALTH ISSUES.*

Follow the disposal directions on the chemical manufacturer's label. Dispose of chemicals and containers in accordance to local / state / federal laws.



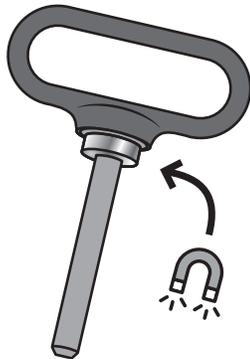
## OPTIONAL ACCESSORIES

### MAGNETIC HITCH PIN MHPK-12BH

This quick-connect magnetic hitch pin can replace a regular cotter pin for an extra-strong, convenient upgrade.



- Diameter: 1/2"
- Pin Length: 3"



*NOTE: Additional accessories are also available in our Parts Store online: [shop.brinly.com](http://shop.brinly.com)*

## SERVICE



### QUALITY CONTINUES WITH QUALITY SERVICE

If you have installation questions, are missing parts or need replacement parts, don't go back to the store!

Please find your product serial number and model number, then contact our Customer Service department:



In North America and Canada call  
Toll-Free: **877-728-8224**



Chat online: **[www.brinly.com](http://www.brinly.com)**



Email: **[customerservice@brinly.com](mailto:customerservice@brinly.com)**

## ONLINE

### BRINLY.COM

Additional info and videos are available on our website. Please visit the URL above OR scan this QR code.

ST-251BH





MANUFACTURER'S LIMITED WARRANTY  
**SPRAYERS**

*The limited warranty set forth below is given by Brinly-Hardy Company with respect to new merchandise purchased and used in the United States (its possessions and territories) and Canada.*

Brinly-Hardy Company warrants the products listed below against defects in material and workmanship, and will at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been assembled, operated, and maintained in accordance with the Operator's manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster.

Parts found to be defective within the warranty period will be replaced at our expense. Our obligation under this warranty is expressly limited to the replacement or repair, at our option, of parts found to be defective in material and workmanship.

**HOW TO OBTAIN SERVICE:** Warranty parts replacements are available, only with proof of purchase, through our Customer Service Department. Call 877-728-8224.

**This limited warranty does not provide coverage in the following cases:**

- a. Routine maintenance items such as lubricants & filters.
- b. Normal deterioration of exterior finish due to use or exposure.
- c. Transportation and/or labor charges.
- d. The warranty does not include commercial and/or rental use.

**No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the part as identified below. No other express warranty whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind Brinly-Hardy Co. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.**

**The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. Brinly-Hardy Co. shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

During the warranty period, the exclusive remedy is replacement of the part. In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. Alteration of safety features of the product shall void this warranty. You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability

to use this product. **NOTE:** *This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.*

This limited warranty lasts as long you own your product purchased from an authorized seller. **Coverage terminates once you sell or otherwise transfer the product.**

This limited warranty does not cover any purchaser other than the original purchaser of the product, nor does it cover any product purchased from an unauthorized third-party. If you are not the original purchaser of this product, your product is not covered by our limited warranty and you take the product "AS IS" and "with all faults."

We may require proof of purchase from you demonstrating that you are the original purchaser of the product, purchased the product from an authorized dealer, and are eligible to make a valid claim under this limited warranty.

**How state law relates to this warranty:** This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**IMPORTANT:**

The Warranty period stated below begins with the proof of purchase. Without the proof of purchase, the Warranty period begins from the date of manufacture determined by the serial number manufacturing date. All parts replaced under warranty will be considered as part of the original product, and any warranty on the replaced parts will expire coincident with the original product warranty.

**WARRANTY PERIOD:**

*See applicable parts listed below.*

**Standard / Residential Use:**

- Steel Frame & Steel Parts . . . . . 2 years
- Tank . . . . . 2 years
- Tires / Wheels . . . . . 90 days

*All other normal wear parts or component failures will be covered on this product for a period of 90 days.*

*If this equipment is being used in a commercial application and / or for multiple properties, the warranty is 90 days after purchase for all parts.*