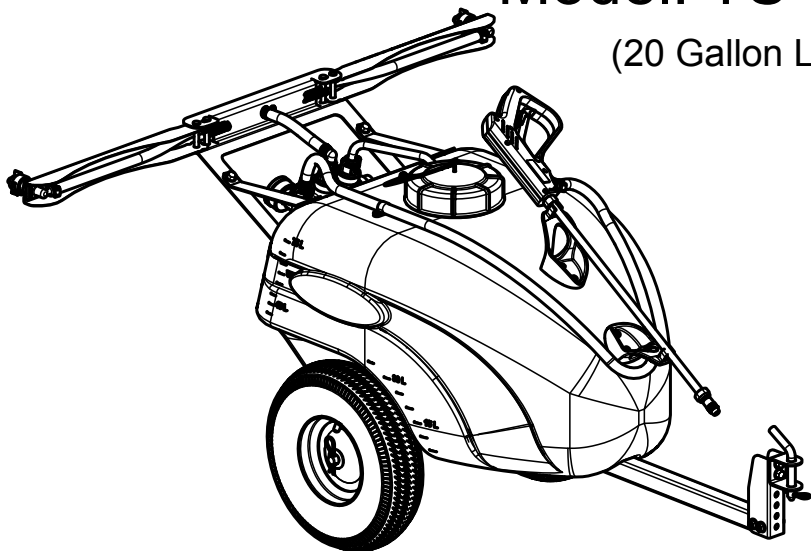


# OWNER'S MANUAL

Model: TS-20-2N-TRL (1231386)

(20 Gallon Lawn & Garden Trailer Sprayer)



BEFORE RETURNING THIS PRODUCT  
FOR ANY REASON, PLEASE CALL

**1-800-831-0027**

IF YOU SHOULD HAVE A QUESTION OR  
EXPERIENCE A PROBLEM WITH YOUR  
FIMCO INDUSTRIES PRODUCT:

**1-800-831-0027**

BEFORE YOU CALL, PLEASE HAVE THE  
FOLLOWING INFORMATION AVAILABLE:  
SALES RECEIPT & MODEL NUMBER. IN MOST  
CASES, A FIMCO INDUSTRIES EMPLOYEE CAN  
RESOLVE THE PROBLEM OVER THE PHONE.

## General Information

Thank you for purchasing this product. The purpose of this manual is to assist you in operating and maintaining your lawn & garden trailer sprayer. Please read it carefully, as it furnishes information which will help you achieve years of trouble-free operation.

## Warranty

Retain a copy of your receipt for your unit,  
as it will be required to validate any warranty service  
Products are warranted against manufacturer or workmanship  
defects for one year from date of purchase for home owner  
usage and 90 days for commercial usage.

For technical assistance, visit our website @ [www.fimcoindustries.com](http://www.fimcoindustries.com)  
or call: **TOLL FREE @ 1-800-831-0027**

Our Technical Support Representatives will be happy to help you.

To obtain prompt, efficient service, always remember to give the following information...

- Correct Part Description and/or part number
- Model #/Serial # of your sprayer

Part descriptions and numbers can be obtained from the illustrated parts list section(s) of this manual.

## Technical Specifications

- 20 Gal. Corrosion-Resistant Polyethylene Tank
- 12 Volt Diaphragm Pump, 2.1 g.p.m.—60 psi
- 15 Ft. Handgun Hose
- 25 Ft. max. vertical throw, 35 Ft. horizontal throw
- Pressure Gauge (0-100 psi)
- 2-Nozzle Break-Away Boom Assembly (80" Spray Coverage)
- Corrosion-Resistant Nylon Nozzles
- Bypass (recirculation) Line w/ON/OFF Control
- Heavy Duty 12" tires
- Easy access drainage port (Complete Drain Out)
- Front forward gun and hose wrap for easier access from transport vehicle

Streamlined tank design for compact storage and shorter turning radius.

**Caution: Always check the vehicle load rating before using the sprayer. The loaded weight of this sprayer and boom assembly is approx.: 225 lbs. when the tank is full.**

## Assembly Instructions

- Make sure the contents of the sprayers carton match the items shown on page 2 of the manual.
- Follow the steps on pages 3 & 4 to properly assemble the sprayer.
- After assembly is complete and before testing your sprayer, connect the wiring harness to the rear of the pump. Clip the alligator clip ends to a fully charged 12 Volt battery. Red wire to the 'Hot' connection and black wire to the 'Ground'.



**[www.fimcoindustries.com](http://www.fimcoindustries.com)**

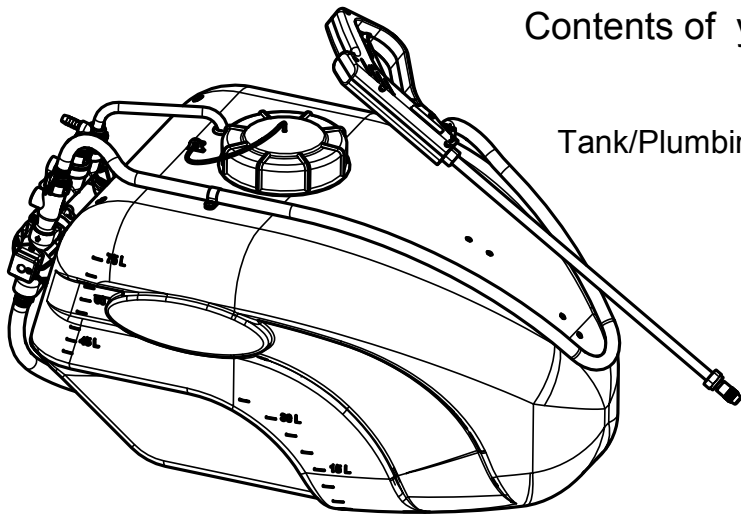
1000 FIMCO Lane, P.O. Box 1700, North Sioux City, SD 57049

Toll Free Phone: 800-831-0027 : Toll Free Fax: 800-494-0440

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## Contents of your sprayer's carton (TS-20-2N-TRL)

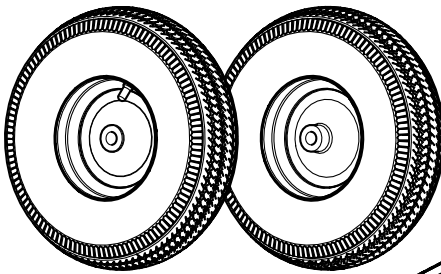


Tank/Plumbing Pre-Assembly

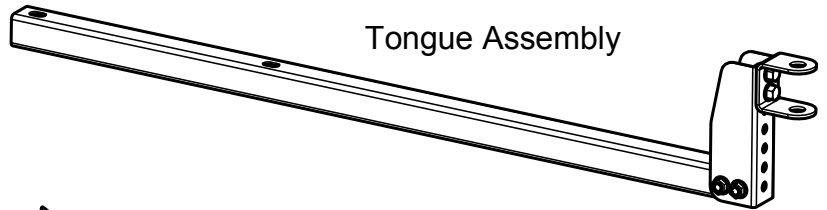
Owner's Manual



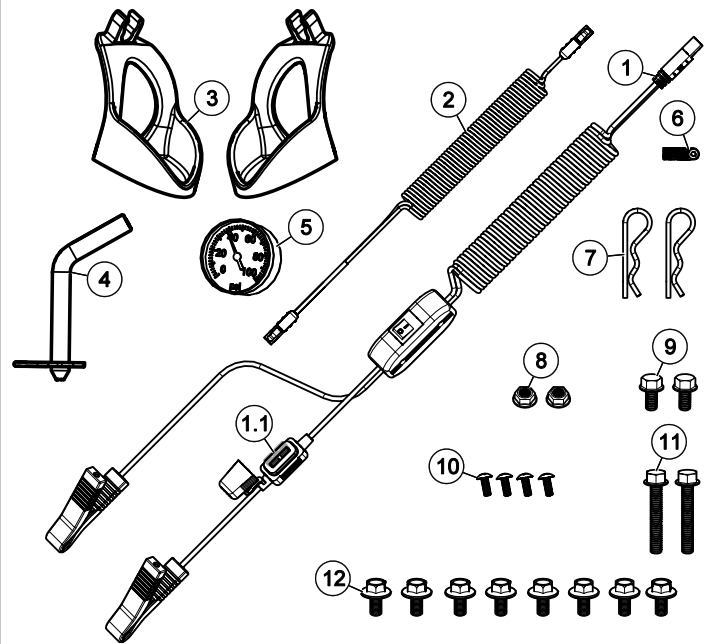
Tires



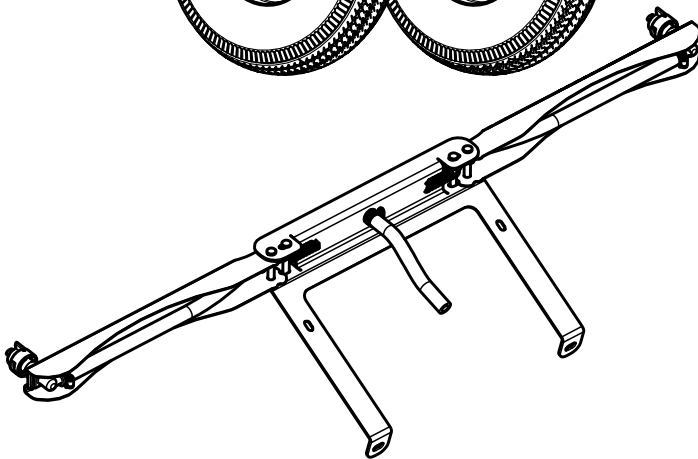
Tongue Assembly



### Contents of Parts Bag (#5278363)

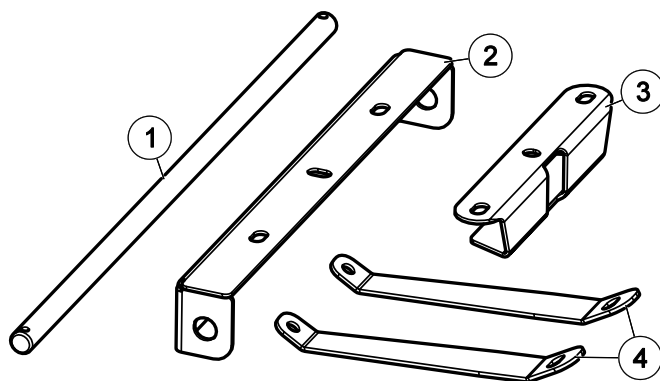


| Ref. # | Part #  | Description                                     | Qty |
|--------|---------|-------------------------------------------------|-----|
| 1      | 5278114 | Lead Wire Assembly w/15A Fuse (96" Long)        | 1   |
| 1.1    | 5157238 | 15 Amp Regular Blade Fuse                       | 1   |
| 2      | 5273212 | 5 Ft. Extension Cable                           | 1   |
| 3      | 5133275 | 20 Gallon Hose Wrap                             | 2   |
| 4      | 5101202 | Bent Clevis Pin (1/2" Dia.) w/Clip              | 1   |
| 5      | 5167097 | 2" Dry 100# Back Mount Gauge                    | 1   |
| 6      | 5051144 | Hose Clamp, 3/8"                                | 1   |
| 7      | 5101065 | #211 Hitch Pin Clip (Zinc Plated)               | 2   |
| 8      | 5006307 | 5/16-18nc Hex Flanged Whiz Nut Gr. 5            | 2   |
| 9      | 5034634 | H.H.C.S. Flanged 5/16"-18nc x 5/8" Long         | 2   |
| 10     | 5117234 | #10-24 x 1/2" Phillips Truss Head Machine Screw | 4   |
| 11     | 5034640 | H.H.C.S. Flanged 5/16"-18nc x 2" Long           | 2   |
| 12     | 5034531 | 5/16"-18 x 5/8" Flange Lock Screw               | 8   |



Breakaway Boom

### Bracket Kit (#5278365)



| Ref. # | Part #  | Description              | Qty |
|--------|---------|--------------------------|-----|
| 1      | 5024132 | 5/8" x 19-7/8" Axle      | 1   |
| 2      | 5095372 | Axle Mount               | 1   |
| 3      | 5095374 | Tank Support (LG-20-TRL) | 1   |
| 4      | 5037868 | Boom Top Strap           | 2   |

Your tank comes pre-assembled with the pump, manifold, bypass, intake assembly, lid w/lanyard, handgun, handgun hose, handgun hose quick connect and loom clamp already attached.

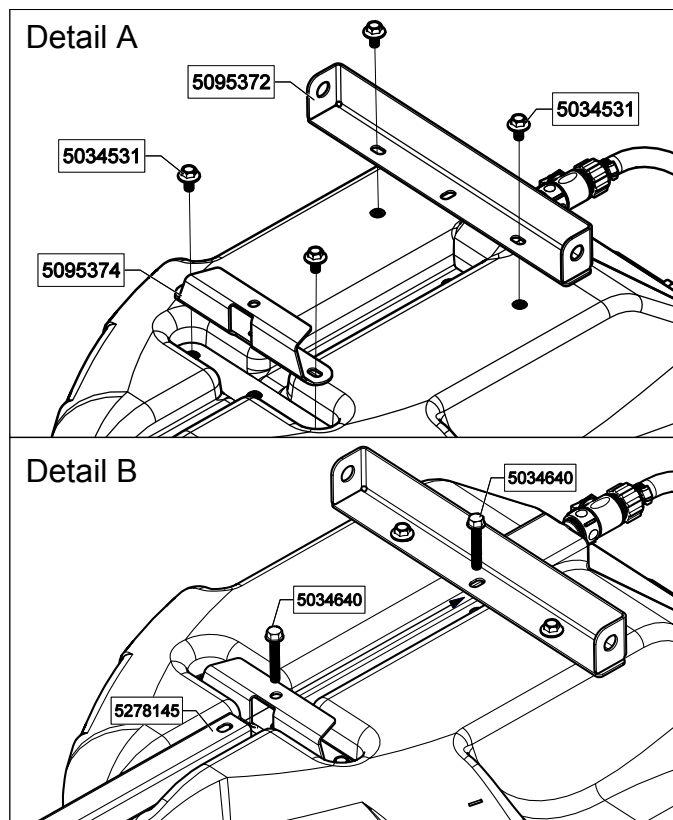
To assemble the tongue and frame to the tank. Locate the (4) 5/16"x5/8" Flange Lock Screws (5034531), (2) 5/16"x1-3/4" Flanged bolts (5034640), tank support (5095374), axle support (5095372) and the preassembled tongue (5278145).

Turn the tank upside down.

Detail A: Loosely attach the tank support and axle support with (4) lock screws. Just start the bolts, do not tighten on either support.

Detail B: Slide the tongue assembly into place and using the (2) flanged bolts, attach to the tank and tighten. Do Not Overtighten.

Then tighten the (4) lock screws. Do Not Overtighten.



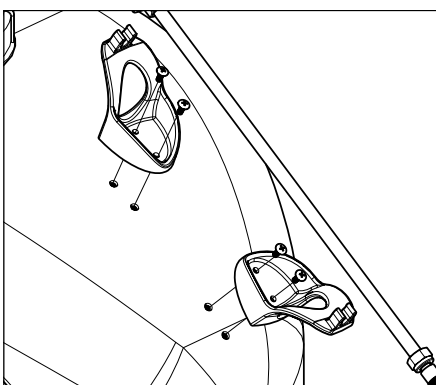
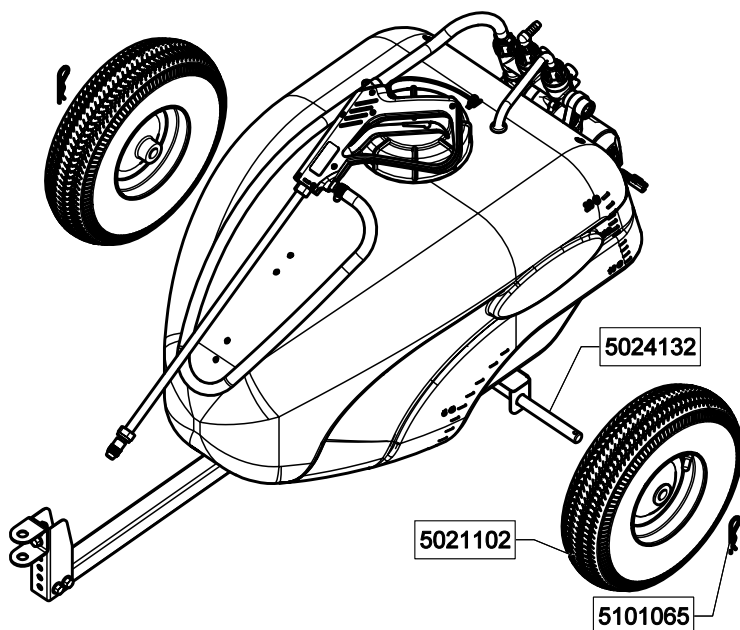
Locate the axle (5024132) and (2) wheels (5021102) from the carton.

Remove the (2) Hitch Pin Clips (5101065) from the parts bag.

Slide the axle through the hole in one side of the axle mount and through the corresponding hole on the other side.

Slide the wheels over the axle, making sure the valve stems are facing outward.

Retain the wheels on the axle with the hitch pins. Place the pins through the holes at the end of the axle.



• A phillips head screwdriver is required for this step

Turn the trailer right side up.

Locate the (4) #10x1/2" Screws (5117234) and the (2) Hose Wraps (5133275) from the parts bag.

Place a screw through the holes in the hose wrap and bring it up to the tank. Use the phillips head screwdriver to secure the holders in place. Tighten so the holders are secure. **\*\*Do Not Over-Tighten\*\***

Wrap the hose and clip in the handgun. Do not use excessive force when placing the handgun into the clips, as this could cause breakage.

Break-Away Boom Assembly is preassembled. Follow the directions below to mount to your tank.

**Detail A:**

Locate the (2) Boom Top Straps (5037868) and then in the parts bag, locate (2) 5/16-18x5/8" Flanged Lock Screws (5034531)

Attach the Boom Top Straps to the tank, using the two screws.  
**DO NOT TIGHTEN**

**Detail B:**

Locate the Boom Assembly (5281003) and then in the parts bag, locate (2) 5/16-18x5/8" Flanged Lock Screws (5034531)

Attach the Boom Assembly to the tank, using the two screws.  
**DO NOT TIGHTEN**

**Detail C:**

Locate in the parts bag (2) 5/16-18x5/8" Flanged Bolts (5034634) and (2) Whiz Nuts (5006307)

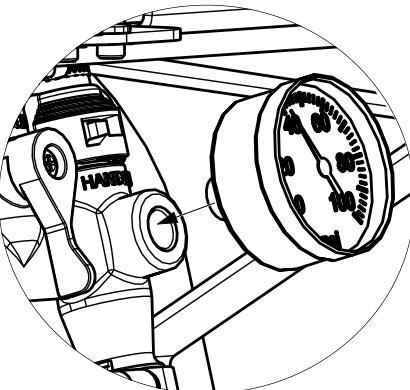
Attach the Boom Top Straps to the Boom Assembly using the two bolts and whiz nuts.

\*\*\*\* Tighten all Bolts from Details A, B & C \*\*\*\*  
\*\*\*\* DO NOT OVERTIGHTEN \*\*\*\*

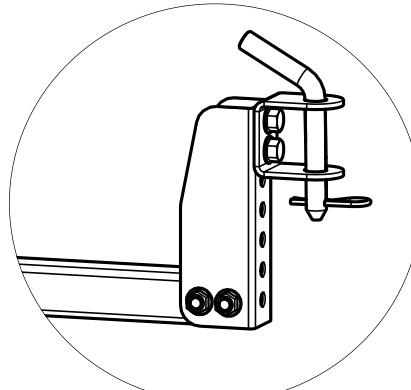
After the boom is installed, attach the 8" Feeder Hose to the 90° HB Elbow on the manifold.

The boom is now installed.

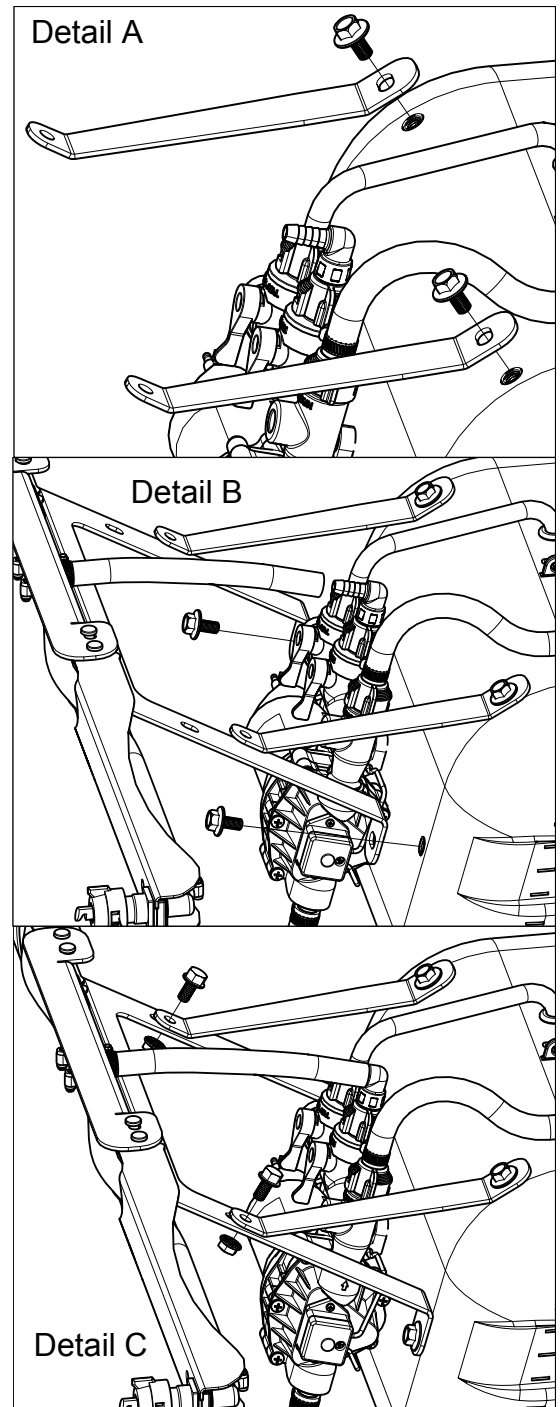
**Final Steps:**



Locate the Pressure Gauge (5167097) in the parts bag and thread into the open port on the manifold.



Locate the Bent Clevis Pin (5101202) in the parts bag and place in the hole on the hitch.



\*\*\* The Sprayer should now be ready for use \*\*\*

**IMPORTANT: Remove tank lid and be sure the tank is clean and free of any foreign material. Rinse tank out of any tank residue before filling with water to test.**

### Testing the Sprayer

**NOTE:**

It is **VERY** important for you to test your sprayer with plain water before actual spraying is attempted. This will enable you to check the sprayer for leaks without the possibility of losing any expensive chemicals.

Fill the tank about 1/2 full with plain water and drive to the starting place for spraying.

When you are ready to spray, turn the boom valve to the “on” position (Detail A). This will start solution spraying from the tips of the boom. The pressure will decrease slightly when the boom is spraying.

Adjust the pressure by turning the “ON/OFF” valve lever on the bypass line valve (Detail B). Make sure your pattern is sufficient. You may down-pressure the system by ‘bypassing’ solution back into the tank. This is achieved by opening the bypass valve. Regulating pressure is done in this manner.

Read the operating instructions and initially begin spraying by closing the ‘Pressure Adjust’ valve and opening the boom line valve (Detail A). This will enable the air in the line to be eliminated (purged) through all the tips, while building pressure. When everything tests all right (no leaks and good pressure), add the desired chemicals to the mixture and water combination and start your spraying operation. Adjust the pressure and spray as you did in the testing procedure.

Conditions of weather and terrain must be considered when setting the sprayer. Do not spray on windy days. Protective clothing must be worn in some cases.

**Be sure to read the chemical label(s) before application!**

### Operation

The pumping system draws solution from the tank, through the strainer and to the pump. The pump forces the solution under pressure to the handgun or boom nozzles.

Connect the lead wire to a fully charged 12 volt battery. You may use either a stand-alone battery or the battery on your towing vehicle. Connect to the positive (red) terminal first, then connect to the negative (black) terminal. Then connect the end of the lead wire to the end of the pump. When disconnecting, disconnect the end of the pump wire from the lead wire, then disconnect the negative (black) connection and finally the positive (red) connection. The lead wire has an On/Off switch to activate the pump. “-” is on and “O” is off.

Fill the tank part way with water and then add the desired amount of chemical to be sprayed. Finish filling tank to proper level. Turn the pump on and by depressing the “-” side of the rocker switch. The pump is equipped with a pressure switch that is pre-set at the factory to shut the pump off when all discharges are closed.

The pump will turn back on when one of the following actions occurs:

- ◆ Handgun lever is squeezed to spray the handgun.
- ◆ Boom valve is opened to broadcast spray with the boom.
- ◆ Bypass valve is opened to re-circulate solution back into the tank.

When spraying with either the boom or the handgun, pressure may be reduced by slowly opening the bypass valve until desired pressure is achieved. Opening the valve decreases pressure, closing the valve increases pressure. When spraying with the boom, the proper method to set the pressure is to open the boom valve completely and if a lower pressure is desired, then slowly open the bypass valve until that pressure is obtained.

For the safest and most efficient chemical application, you will need to calibrate your sprayer using the tip and speed charts. Once you have determined the proper speed and pressure settings, you will need to consult your chemical label for the amount of chemical to be added to the tank. Read the entire label. Use only according to label directions.

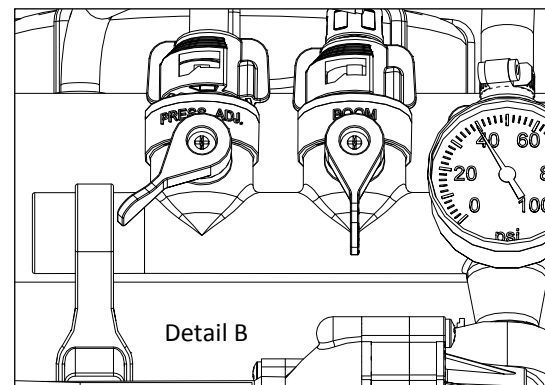
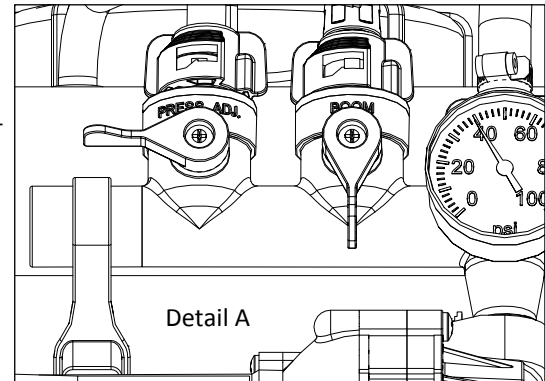
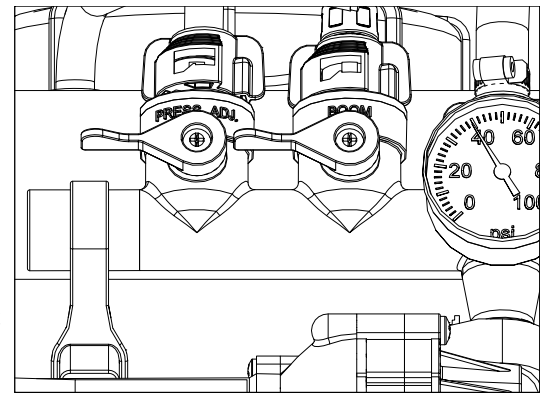
### Calibration

Chemical labels may show application rates in gallons per acre, gallons per 1000 square feet or gallons per 100 square feet. You will note that the tip chart shows 3 of these rating systems. Once you know how much you are going to spray, then determine (from the tip chart) the spraying pressure (PSI), and the spraying speed (MPH).

Determining the proper speed of the pulling vehicle can be done by marking off 100, 200 & 300 feet. The speed chart indicates the number of seconds it takes to travel the distances. Set the throttle and with a running start, travel the distances. Adjust the throttle until you travel the distances in the number of seconds indicated by the speed chart. Once you have reached the throttle setting needed, mark the throttle location so you can stop and go again, returning to the same speed.

Add water and proper amount of chemical to the tank and drive to the starting place for spraying.

Manifold Valves CLOSED



| Speed Chart                         |                                                     |          |          |
|-------------------------------------|-----------------------------------------------------|----------|----------|
| Speed in M.P.H.<br>(Miles Per Hour) | Time Required in seconds<br>to travel a distance of |          |          |
|                                     | 100 Ft.                                             | 200 Ft.  | 300 Ft.  |
| 1.0                                 | 68 sec.                                             | 136 sec. | 205 sec. |
| 2.0                                 | 34                                                  | 68       | 102      |
| 3.0                                 | 23                                                  | 45       | 68       |
| 4.0                                 | 17                                                  | 34       | 51       |
| 5.0                                 | 14                                                  | 27       | 41       |
| 6.0                                 | 11                                                  | 23       | 34       |
| 7.0                                 | 9.7                                                 | 19       | 29       |
| 8.0                                 | 8.5                                                 | 17       | 26       |
| 9.0                                 | 7.6                                                 | 15       | 23       |
| 10.0                                | 6.8                                                 | 14       | 20       |

| Tip Chart for TKT-VP3, TF-VP3 & 30DT3.0 Tips |                   |                   |                                           |       |       |       |       |         |        |
|----------------------------------------------|-------------------|-------------------|-------------------------------------------|-------|-------|-------|-------|---------|--------|
| Tip No.<br>(Color)                           | Pressure<br>(psi) | Capacity<br>(GPM) | Gallons Per Acre - Based on Water         |       |       |       |       |         |        |
|                                              |                   |                   | 1 MPH                                     | 2 MPH | 3 MPH | 4 MPH | 5 MPH | 7.5 MPH | 10 MPH |
| 3<br>(Gray)                                  | 10                | .30               | 44                                        | 22    | 14.9  | 11.1  | 8.9   | 5.9     | 4.5    |
|                                              | 20                | .42               | 63                                        | 31.5  | 20.9  | 15.7  | 12.6  | 8.4     | 6.3    |
|                                              | 30                | .52               | 76                                        | 38    | 26    | 19.3  | 15.4  | 10.3    | 7.7    |
|                                              | 40                | .60               | 90                                        | 45    | 30    | 22    | 17.8  | 11.8    | 8.9    |
| Tip No.<br>(Color)                           | Pressure<br>(psi) | Capacity<br>(GPM) | Gallons Per 1000 Sq. Ft. - Based on Water |       |       |       |       |         |        |
|                                              |                   |                   | 1 MPH                                     | 2 MPH | 3 MPH | 4 MPH | 5 MPH | 7.5 MPH | 10 MPH |
| 3<br>(Gray)                                  | 10                | .30               | 1.01                                      | .5    | .34   | .254  | .204  | .135    | .103   |
|                                              | 20                | .42               | 1.4                                       | .72   | .48   | .36   | .29   | .19     | .14    |
|                                              | 30                | .52               | 1.74                                      | .87   | .596  | .44   | .35   | .236    | .176   |
|                                              | 40                | .60               | 2.06                                      | 1.00  | .688  | .50   | .408  | .27     | .20    |
| Tip No.<br>(Color)                           | Pressure<br>(psi) | Capacity<br>(GPM) | Gallons Per 100 Sq. Ft. - Based on Water  |       |       |       |       |         |        |
|                                              |                   |                   | 1 MPH                                     | 2 MPH | 3 MPH | 4 MPH | 5 MPH | 7.5 MPH | 10 MPH |
| 3<br>(Gray)                                  | 10                | .30               | .10                                       | .05   | .034  | .025  | .02   | .013    | .01    |
|                                              | 20                | .42               | .14                                       | .072  | .048  | .036  | .029  | .019    | .014   |
|                                              | 30                | .52               | .174                                      | .087  | .059  | .044  | .035  | .023    | .017   |
|                                              | 40                | .60               | .206                                      | .10   | .068  | .05   | .04   | .027    | .02    |

### Using the Boom Nozzles

Four things must be considered before spraying with the boom.

1. How much chemical must be mixed in the tank.
  2. Rate of spray (gallons per acre to be sprayed).
  3. What pressure (p.s.i.) will be used.
  4. Speed traveled (mph) while spraying.
- \* Refer to the chemical label to determine your chemical mixture
  - \* See the tip chart to determine the pressure to be used. The chart will also show the speed used when spraying.
  - \* Start the pump and open the valve to the boom nozzles.
  - \* Check the spray pattern. Usually you can see the coverage better on a solid concrete surface, such as a driveway.

### Maintenance During/After Spraying

Periodically check the strainer and clean the screen on your intake line.

Proper care and maintenance will prolong the life of your sprayer.

After use, drain the tank and store or dispose of chemical properly. Fill the sprayer half way with clean water. Start the pump and allow the water to pump through the entire plumbing system and nozzles. Drain and then refill half full, add the recommended amount of a good quality tank cleaner, such as FIMCO Tank Neutralizer and Cleaner. (If no tank cleaner is available, you may substitute dish soap for this step, about 1-2 oz. per gallon). Turn pump on and circulate through system for 15 minutes and then spray out through boom and handgun nozzles. Refill sprayer half way with clean water and repeat. Follow the chemical manufacturer's disposal instructions of all wash or rinsing water. If boom or handgun nozzles need cleaning, remove them from the sprayer and soak in warm soapy water. Clean with a soft bristled brush or toothpick if necessary. Never use a metal object. Even the slightest damage can change the flow rate and spray distribution. Water rinse and dry the tips before storing.

**WARNING: Some chemicals will damage the pump valves if allowed to soak untreated for a length of time! ALWAYS flush the pump as instructed after each use. DO NOT allow chemicals to sit in the pump for extended times of idleness. Follow the chemical manufacturer's instructions on disposal of all waste water from the sprayer.**

### Winter Storage

Prepare the sprayer for end-of-season storage by running RV antifreeze through the system. This will keep internal parts lubricated, protect against corrosion and keep the unit from freezing. *Note: RV antifreeze is non-toxic and biodegradable and generally safer for the environment than automotive antifreeze.*

Before storing your sprayer for winter or long term storage, thoroughly clean and drain it as much as possible. Then pour enough pink RV antifreeze into the tank so that when the pump is turned on you can pump the antifreeze throughout the entire plumbing system, including the bypass. Make sure to operate the boom and handgun until you see pink fluid spraying from the nozzles. Leave any remaining antifreeze in the tank. Before your next usage, rinse the antifreeze from the sprayer with clean water.

It is nearly impossible to drain all of the water from the sprayer and any trapped water can freeze in cold weather and damage parts of the sprayer. Pumping the antifreeze through the system will displace the water and help prevent this damage.

Removing from storage: drain the antifreeze. Fill the tank with fresh water and run through the system. Dispose of antifreeze and flush water properly.

| Troubleshooting        |                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------|
| Pump will not run:     | Check for loose wiring                                                                                     |
|                        | Make sure the ON/OFF switch is on                                                                          |
|                        | Check the fuse                                                                                             |
|                        | Check for defective pressure switch                                                                        |
| Low Pressure/Low Flow: | Check for a clogged strainer                                                                               |
|                        | Check for proper voltage<br>Try another 12-Volt battery                                                    |
|                        | Check for worn or dirty check valve                                                                        |
| Pump surges:           | Low flow may cause pump to surge                                                                           |
|                        | Spray wand is adjusted for a small or fine spray pattern                                                   |
|                        | Slightly open bypass (if applicable) to overcome                                                           |
|                        | If needed, pressure switch may need to be adjusted<br>Quarter turn at a time clockwise until surging stops |
| Pump continues to run: | Bypass is not completely closed                                                                            |
|                        | System has leaks                                                                                           |
|                        | Check for worn or dirty check valve                                                                        |
| Fuse blows:            | Excessive voltage                                                                                          |
|                        | Improper adjustment of pressure switch                                                                     |
|                        | Damaged or defective wiring harness                                                                        |
|                        | Defective pressure switch                                                                                  |

### Checking the Pressure Switch:

If your motor is not running and you've checked the following: for loose wiring connections, fuse, the switch on the lead wire was "ON" and made sure you were connected to a fully charged battery and everything is fine, but the motor won't run, then it's time to check to see if the pressure switch is bad.

- Remove the cover off the 1" square box (pressure switch) on the head of the pump, the cover is held on by one phillips-head screw. This will expose the two red wires.
- With the pump connected to a good 12 volt power source and everything on.
- Slip the two red wires off the terminals and touch them together.

If the motor runs, it means the pressure switch is bad and needs to be replaced. If it still doesn't run, you'll need something like a voltmeter or electrical tester to make sure you are indeed getting power to the head of the pump, as it could possibly be something in one of the wires or even the lead wire assembly may need to be replaced.

**Warning:** It is NOT recommended to run the pump this way, as the pump will continue to run and not shut off. This could result in blown hoses when all discharges are closed. Also, this could result in premature failure of the pump completely.

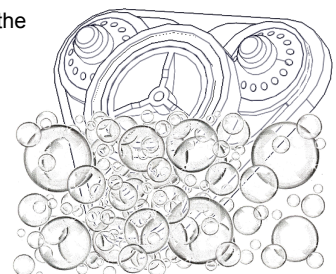
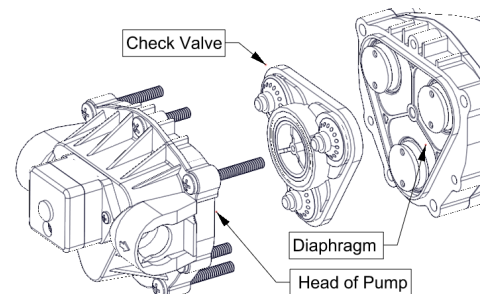
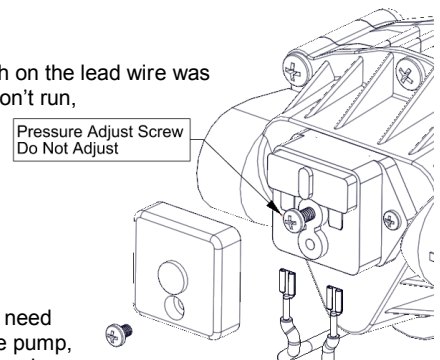
### Cleaning the Check Valve:

If you're experiencing little to no pressure or the pump is not priming and you've checked your filter screen and it's clean, you may need to clean the check valve.

- Remove the head of the pump, which is held on by about 6-7 screws.
- The first piece inside the head of the pump is called a check valve, it's the part responsible for building up pressure and pumping water/solution through the lines.
- Clean the check valve under hot, soapy water (such as a good grade dish soap).
- Give it a very light scrubbing with something like an old toothbrush, something with soft bristles.
- Then let it soak for about an hour or so in the hot soapy solution and replace in the pump and reassemble the pump.

Most times this will restore most, if not all of the prime of a pump.

If you're still having issues with pressure after this step, this is the part Fimco would recommend replacing.



STOP

WARNING

STOP

DO NOT USE PUMP IN AN EXPLOSIVE ENVIRONMENT. DO NOT USE TO PUMP FLAMMABLE/COMBUSTIBLE FLUIDS, GASOLINE, KEROSENE, FUEL, OIL, ETC.

Availa-

| Ref. # | Part #    | Description                      | Qty |
|--------|-----------|----------------------------------|-----|
| 1      | 5168837   | Upper Housing Assembly           | 1   |
| 1.1    | 5157202   | Pressure Switch Assembly         | 1   |
| 1.2    | 5168839   | Plunger Kit                      | 1   |
| 1.3    | 20408-000 | Pkg. (2) Clips (Port Fitting)    | 1   |
| 1.4    | 5168820   | Check Valve Kit (w/O-Ring)       | 1   |
| 1.5    | 5168838   | Diaphragm/Piston/Cam/Bearing Kit | 1   |
| 2      | 5095202   | Mounting Feet (Pkg of 4)         | 1   |
| 3      | 5157205   | 7.5 Amp 'Mini Blade' Fuse        | 1   |

Pump Model: 5277981



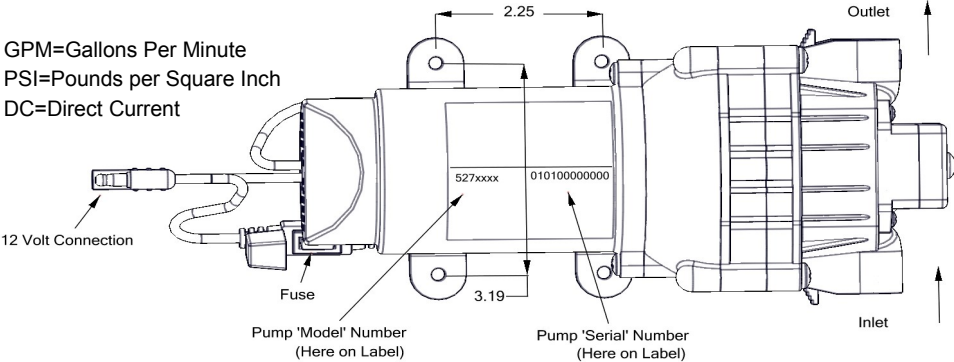
- Clean and rinse your pump after each use with Fimco Tank Neutralizer
- Winterize your pump or sprayer by rinsing, draining and running RV Antifreeze through it before storing for the winter.
- Use clean water for your spray mixture
- Store inside a building when not in use.



- Use to pump bleach.
- Use to pump petroleum products such as diesel fuel, gasoline or kerosene
- Leave your pump sit with spray mixture in it for extended periods
- Use dirty or unfiltered water for spraying

| Pump Specifications   |                   |
|-----------------------|-------------------|
| Current:              | 4.5 Amps @ 30 PSI |
| Check Valve:          | Viton             |
| Wetted Parts Housing: | Polypropylene     |
| Diaphragm:            | Santoprene        |
| Liquid Temperature:   | 130° F max.       |

GPM=Gallons Per Minute  
PSI=Pounds per Square Inch  
DC=Direct Current



CAUTION

PRESSURE SWITCH OPERATION

Pressure switch is pre-set at the factory. Improper adjustment of the pressure switch, may cause severe overload or premature failure. If the pump is subjected to rapid cycling during normal operation, or infrequent periods, damage may occur.

Troubleshooting the Pump:

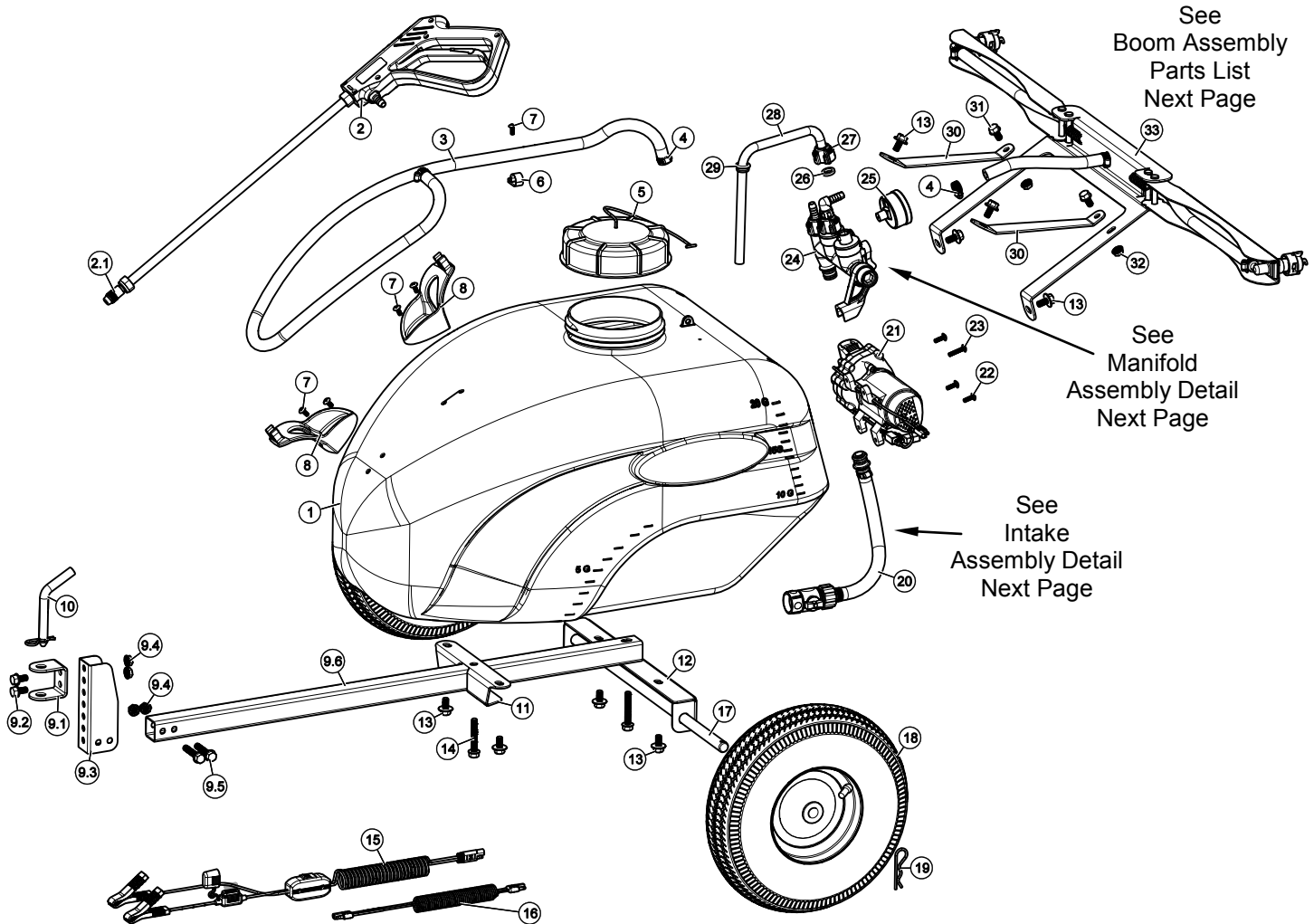
- Motor does not run:
- Check for loose wiring connection(s).
  - Make sure the 'ON/OFF' switch in the lead wire assembly is in the 'ON' position. "I" is the 'ON' position and 'O' is the 'OFF' position.
  - Check for defective pressure switch. Make sure you are connected to a good 12 volt power source. Make sure any on/off switches are in the 'on' position.
  - Remove the cap to the pressure switch. Pull both red wires off of their terminals, and touch the two ends together. If your pump runs when you do this, your pressure switch will need to be replaced.
  - Check the fuse.
  - Check for low voltage at the power supply.

- Pump does not prime:
- Check for air leaks in supply line.
  - Check for debris in the check valve assembly.
  - Check for defective check valve.
  - Check for clogged strainer/filter.
  - Check for cracks in the pump housing.
  - Check for empty product supply.

- Pulsating flow (surging):
- Check for defective pressure switch.
  - Check for leaks in the discharge line.
  - Check for restriction in the discharge line.
  - Check for debris in nozzle orifice.
  - Discharge hose may be too long.
  - Check for clogged strainer.

- Motor continues to run after discharge is shut off:
- Check for empty product supply.
  - Check for open bypass valve. (if equipped)
  - Check for low voltage.
  - Check for leak in discharge line.
  - Check for defective or dirty check valve.
  - Check for defective pressure switch.

## Exploded View/Parts List: TS-20-2N-TRL (1231386)



| Ref. # | Part #  | Description                                     | Qty |
|--------|---------|-------------------------------------------------|-----|
| 1      | 5169320 | 20 Gallon Trailer Tank                          | 1   |
| 2      | 5273959 | Deluxe Pistol-Grip Handgun w/X-26 Tip           | 1   |
| 2.1    | 5018331 | Brass Handgun Tip (X-26)                        | 1   |
| 3      | 5020524 | Hose, 3/8"-1 Brd. x 15 Ft.                      | 1   |
| 4      | 5051144 | Hose Clamp, 3/8"                                | 3   |
| 5      | 5058188 | Tank Lid w/Lanyard                              | 1   |
| 6      | 5051122 | 5/8" Black Nylon Loom Cable Clamp               | 1   |
| 7      | 5117234 | #10-24 x 1/2" Phillips Truss Head Machine Screw | 5   |
| 8      | 5133275 | 20 Gallon Hose Wrap                             | 2   |
| 9      | 5278145 | Tongue Assembly (LG-20-TRL)                     | 1   |
| 9.1    | 5038854 | Hitch                                           | 1   |
| 9.2    | 5034634 | H.H.C.S. Flanged 5/16"-18nc x 5/8" Long         | 2   |
| 9.3    | 5038853 | Hitch Bracket                                   | 1   |
| 9.4    | 5006307 | 5/16-18nc Hex Flanged Whiz Nut Gr. 5            | 4   |
| 9.5    | 5034639 | H.H.C.S. Flanged 5/16"-18nc x 1 3/4" Long       | 2   |
| 9.6    | 5096113 | Trailer Tongue (LG-20-TRL)                      | 1   |
| 10     | 5101202 | Bent Clevis Pin (1/2" Dia.) w/Clip              | 1   |
| 11     | 5095374 | 20 Gallon Tank Support                          | 1   |
| 12     | 5095372 | Axle Mount                                      | 1   |
| 13     | 5034531 | 5/16"-18 x 5/8" Flange Lock Screw               | 8   |
| 14     | 5034640 | H.H.C.S. Flanged 5/16"-18nc x 2" Long           | 2   |
| 15     | 5278114 | Lead Wire Assembly w/15A Fuse (96" Long)        | 1   |
| 15.1   | 5157238 | 15 Amp Regular Blade Fuse                       | 1   |
| 16     | 5273212 | 5 Ft. Extension Cable                           | 1   |
| 17     | 5024132 | 5/8" x 19-7/8" Axle                             | 1   |
| 18     | 5021102 | 4.10/3.50-6 Wheel w/2 1/4" Offset & 5/8" BB     | 2   |
| 18.1   | 5031175 | 5/8" Wheel Ball Bearing                         | 2   |
| 19     | 5101065 | #211 Hitch Pin Clip (Zinc Plated)               | 2   |

| Ref. # | Part #  | Description                                     | Qty |
|--------|---------|-------------------------------------------------|-----|
| 20     | 5278280 | Intake Assembly (LG-20-TRL)                     | 1   |
| 20.1   | 5143419 | Swivel Shut-Off                                 | 1   |
| 20.2   | 5116242 | Strainer, 1" Filter Washer                      | 1   |
| 20.3   | 5149035 | Poly Swivel, 1/2" Hose Barb                     | 1   |
| 20.4   | 5006209 | Poly Knurled Swivel Nut, 3/4" FGHT              | 1   |
| 20.5   | 5051114 | Hose Clamp (3/8"-1/2")                          | 2   |
| 20.6   | 5020567 | Hose 1/2" Polyspring X 9.75"                    | 1   |
| 20.7   | 5168833 | Port Kit Fitting, 1/2" Hose Barb                | 1   |
| 21     | 5277981 | High Flo Gold Series 2.1 GPM Pump               | 1   |
| 22     | 5117167 | #10-24 x 5/8" Phillips Truss Head Machine Screw | 3   |
| 23     | 5117168 | #10-24 x 1" Phillips Truss Head Machine Screw   | 1   |
| 24     | 5302352 | Quick Connect Manifold Assembly                 | 1   |
| 24.1   | 5302347 | Quick Connect Manifold                          | 1   |
| 24.2   | 5143422 | QC Manifold - Support Bracket                   | 1   |
| 24.3   | 5302802 | QC Manifold 3/8 Swivel 90° Elbow Assembly       | 1   |
| 24.4   | 5143430 | Flat Washer - Hose Barb Seal                    | 1   |
| 24.5   | 5143431 | QC Manifold - 3/8" Hose Barb - Straight         | 1   |
| 24.6   | 5143429 | QC Manifold - QC Quarter Turn Cap               | 1   |
| 25     | 5167097 | 2" Dry 100# Back Mount Gauge                    | 1   |
| 26     | 5143430 | Flat Washer - Hose Barb Seal                    | 1   |
| 27     | 5143429 | QC Manifold - QC Quarter Turn Cap               | 1   |
| 28     | 5149152 | Rigid By-Pass Tube                              | 1   |
| 29     | 5075018 | Grommet, 1/2" I.D.                              | 1   |
| 30     | 5037868 | Boom Top Strap                                  | 2   |
| 31     | 5034634 | H.H.C.S. Flanged 5/16"-18nc x 5/8" Long         | 2   |
| 32     | 5006307 | 5/16-18nc Hex Flanged Whiz Nut Gr. 5            | 2   |
| 33     | 5281003 | 2-Nozzle Boom (LG-TRL)                          | 1   |

**Exploded View Parts List: Boom Assembly (5281003)**

Opposite side has typical setup

Diagram illustrating the exploded view of the Boom Assembly (5281003) components, showing the assembly sequence from the base to the boom arm.

Key components and their assembly order (indicated by numbers in circles):

- 33.3.1.1: Base component (bottom left)
- 33.3.1.2: Intermediate component (bottom left)
- 33.3.1.3: Intermediate component (bottom left)
- 33.3.1.4: Intermediate component (bottom left)
- 33.3.1.5: Top component (bottom left)
- 33.3.1: Main boom arm component (center)
- 33.3.2: End component (right)
- 33.3.3: Intermediate component (right)
- 33.3.4: Intermediate component (right)
- 33.3.5: Intermediate component (right)
- 33.4: Intermediate component (right)
- 33.1.1: Base component (bottom center)
- 33.1.2: Intermediate component (bottom center)
- 33.2: End component (bottom right)

Hinge Detail

33.1.1

33.1.2

33.1.3

33.1.4

33.1.5

1.1 1.2 1.3 1.4 1.5 1.6

Pressure Gauge Port

| Ref. # | Part #  | Description                        | Qty |
|--------|---------|------------------------------------|-----|
| 1      | 5278280 | Intake Assembly (LG-20-TRL)        | 1   |
| 1.1    | 5143419 | Swivel Shut-Off                    | 1   |
| 1.2    | 5116242 | Strainer, 1" Filter Washer         | 1   |
| 1.3    | 5149035 | Poly Swivel, 1/2" Hose Barb        | 1   |
| 1.4    | 5006209 | Poly Knurled Swivel Nut, 3/4" FGHT | 1   |
| 1.5    | 5051114 | Hose Clamp (3/8"-1/2")             | 2   |
| 1.6    | 5020567 | Hose 1/2" Polyspring x 9.75"       | 1   |
| 1.7    | 5168833 | Port Kit Fitting, 1/2" Hose Barb   | 1   |

Page 10

NOTES:

# Warranty

## LIMITED WARRANTY FOR NEW FIMCO, IND. EQUIPMENT

**WHO MAY USE THIS LIMITED WARRANTY.** This limited warranty (the "Limited Warranty") is provided by Fimco, Ind. to the original purchaser ("you") of the Equipment (as defined below) from Fimco, Ind. or one of Fimco, Ind.'s authorized dealers. This Limited Warranty does not apply to any subsequent owner or other transferee of the Equipment. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

**WHAT THIS LIMITED WARRANTY COVERS AND FOR HOW LONG.** Fimco, Ind. warrants that any new Equipment will be free from defects in material and workmanship for a period of **one (1) year** after delivery of the Equipment to you (the "Warranty Period"). The Warranty Period is not extended if Fimco, Ind. repairs or replaces the Equipment.

**WHAT IS NOT COVERED BY THIS LIMITED WARRANTY.** This Limited Warranty does not apply to: (1) used Equipment; (2) any Equipment that has been altered, changed, repaired or treated since its delivery to you, other than by Fimco, Ind. or its authorized dealers; (3) damage or depreciation due to normal wear and tear; (4) defects or damage due to failure to follow Fimco, Ind.'s operator's manual, specifications or other written instructions, or improper storage, operation, maintenance, application or installation of parts; (5) defects or damage due to misuse, accident or neglect, "acts of God" or other events beyond Fimco, Ind.'s reasonable control; (6) accessories, attachments, tools or parts that were not manufactured by Fimco, Ind., whether or not sold or operated with the Equipment; or (7) rubber parts, such as tires, hoses and grommets.

**HOW TO OBTAIN WARRANTY SERVICE.** To obtain warranty service under this Limited Warranty, you must (1) provide written notice to Fimco, Ind. of the defect during the Warranty Period and within **thirty (30)** days after the defect becomes apparent or the repair becomes necessary, at the following address: Fimco, Ind., 800 Stevens Port Drive, Suite DD836, Dakota Dunes, SD 57049; and (2) make the Equipment available to Fimco, Ind. or an authorized dealer within a reasonable period of time. For more information about this Limited Warranty, please call: **800-831-0027**.

**WHAT REMEDIES ARE AVAILABLE UNDER THIS LIMITED WARRANTY.** If the conditions set forth above are fulfilled and the Equipment or any part thereof is found to be defective, Fimco, Ind. shall, at its own cost, and at its option, either repair or replace the defective Equipment or part. Fimco, Ind. will pay for shipping and handling fees to return the repaired or replacement Equipment or part to you.

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