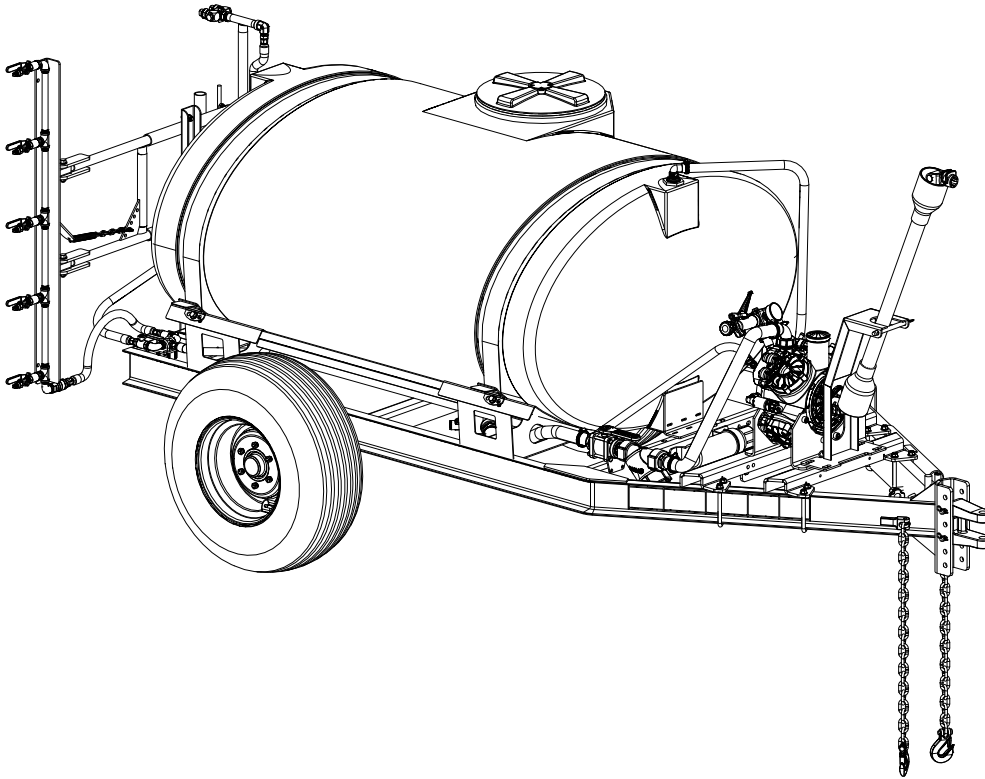


OWNER'S MANUAL

500 Gallon Poultry House Trailer Sprayer

**Standard
TR500PHS-S**
(5281784)

**Deluxe
TR500PHS-D**
(5281785)



General Information

Thank You and Congratulations on purchasing your new trailer sprayer. The purpose of this manual is to assist you in operating and maintaining your poultry house sprayer.

Please read it carefully, as it furnishes information which will help you achieve years of trouble-free operation. All units can be custom equipped to meet all your spraying needs.



WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.



WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Any Questions, Comments or Problems: Call your nearest AG SPRAY Location and speak with one of our Friendly Technical Support Staff.



[5195585 (11/20)]

| | | | | | |
|--|-------------------------------------|-----------------------------------|----------------------------------|---|---|
| BAKERSFIELD, CA 877-724-2236 | COLUMBUS, NE 800-274-1025 | DOTHAN, AL 800-227-4098 | FARGO, ND 701-280-2862 | HOPKINSVILLE, KY 800-637-7172 | VISIT US ONLINE @ WWW.AGSPRAY.COM |
| MANKATO, MN 507-388-6295 | NEWTON, KS 800-394-7662 | PASCO, WA 800-634-2026 | TEMPE, AZ 877-974-7166 | | |

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AG SPRAY EQUIPMENT - Owner's Manual

Welcome to Ag Spray's line of sprayers and a special thanks for buying the TR500PHS. The TR500 PHS stands for Poultry House Sprayer with a 500-gallon tank. The sprayer is built with quality, dependability and service after the sale.

This sprayer is designed to clean and disinfect even the dirtiest of poultry houses. The TR500PHS is built with a boom in a vertical position on the right hand side, direction of travel, so that it will spray the walls from the floor to the ceiling. Also, the TR500PHS is built with a boom jet nozzle that will clean the ceiling and is located on the very back and in the center of the sprayer, so that it is easy to change the direction of the spray. Another great feature of the TR500PHS is the OPTIONAL 800 psi handgun kit to clean and disinfect those hard to reach places where the booms may not be able to reach very well. Further more, this sprayer is designed to do all this and maneuver in the poultry house with the greatest of ease.

This booklet is made to inform you of the maintenance and operation needed to use this sprayer. This booklet's intention is to familiarize the owner with the machine before operation. So, please, take time to read over this booklet and take the proper precautions before using the TR500PHS. Ag Spray Equipment would like to thank you again for choosing this product and if you have any questions, feel free to contact one of the customer service centers.

Make your poultry house a clean one.

Important Operation & Safety Information

Before Operation



- Carefully study and understand the owner's manual
- Read and follow chemical manufacturer's labels, warnings and instructions! A material safety data sheet (MSDS) should be provided by the chemical manufacturer
- To avoid injury from chemical hazards, wear the proper protective clothing. Each chemical manufacturer's clothing requirements are listed under the "Personal Protective Equipment (PPE)" section in the chemical instructions
- Never exceed your tractor's load rating
- Do not wear loose-fitting clothing which may catch in moving parts
- Give the sprayer a visual inspection for any worn parts, loose bolts or other visible problems and make any needed repairs
- Make sure the area is clear of any people or obstructions before using the sprayer
- Before adding chemicals, have all operators practice operating the sprayer (clean water only) and it's attachments until all operators are completely capable of safe operation

BEFORE SEASONAL USE



- **CHECK and TEST sprayer with water before adding chemical.** Temperature change can cause material fitting expansion/contraction. Serious injury could result from chemical leaks
- **REPLACE** any worn or frayed hoses. Hose failure can result in serious damage
- **INSPECT** pressure gauge. Insure the needle rests at zero when all pressure is relieved in the spray system. Failure to have a properly functioning pressure gauge can result in miss applications of chemical

DURING OPERATION



- Always be aware of bystanders, particularly children! Always look before moving the sprayer or engaging the PTO
- Never leave running equipment unattended!
- Keep hands and body parts clear of all moving parts, especially the tractor PTO
- Be aware of dangerous terrain such as holes, slopes, drop-offs, banks, rocks and hidden hazards. Operate the tractor and sprayer up and down slopes, not across
- When operating on inclines, it is especially important that your tractor is equipped with Roll Over Protection System (ROPS)
- No passengers are allowed on or in the tractor or sprayer at anytime
- Allow for sprayer boom length when making turns
- Remember that accidents can even happen to seasoned operators. Always take your time and follow all safety instructions

Important Operation & Safety Information

General Chemical Safety



- **READ and FOLLOW** all chemical label's instructions and warnings
- **AVOID** inhaling, ingesting or coming into contact with any chemicals
- **KNOW** applicable licensing and regulatory requirements for the chemical you plan to use
- **KNOW** emergency procedures before handling chemicals
- **WEAR** protective clothing, eye protection and chemical resistant gloves when filling, using and cleaning the sprayer. Wear additional protective gear, such as facemask or apron, as recommended on the chemical label
- **EXERCISE EXTRA CAUTION** around children or pets. Pesticides are especially toxic to them. Keep sprayer and spray materials away from them at all times
- **DO NOT MIX OR POUR** chemicals in an enclosed, unvented area
- **DO NOT USE** flammable or corrosive chemicals in the sprayer
- **FLUSH** the sprayer with clean water after every use **AND** before switching chemicals
- **STORE** pesticides in a correctly labeled container and in a secure location
- **MONITOR** the health of operators frequently exposed to pesticides, as recommended by the chemical label or local/federal regulations

Chemical Application Safety



- **INSPECT** and **PREPARE** sprayer before each use as directed
- **DO NOT TURN ON POWER** to sprayer until ready to spray in order to avoid unintended spray release
- **MAKE SURE NOZZLES ARE ORIENTED IN THE PROPER DIRECTION** before starting the sprayer. As incorrectly positioned nozzle may spray chemicals on you or others
- **KEEP** sprayer and spray materials away from children and pets. Pesticides can be especially toxic to children and animals

Pump Safety Precautions



- Never pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.
- Never pump acids (i.e. acid fertilizer) with super rollers. For acid fertilizer, Hypro recommends the Silver Series castings with Teflon rollers
- Never run the pump dry! Never pump faster than, or above, the maximum recommended speed and pressure
- Never pump liquids at temperatures higher than the recommended maximum temperature (140° F/60° C). Do not exceed this temperature
- Before servicing your pump, disconnect the power, release all pressure and drain all liquids

Important Operation & Safety Information

WARNING

Read and understand **this owner's manual** completely before using the sprayer.
Read each **chemical label's instructions** before handling the chemical.

Improper use of the sprayer or handling of chemicals could result in serious injury or illness for the operator or nearby persons/animals, or cause damage to the environment.

LISTED BELOW is a summary of safety information of particular importance. See individual sections of this owner's manual for more details.

----- **BEFORE YOU BEGIN** -----



Please read and understand this manual and its instructions and warnings completely before operating the sprayer.

- **Be aware of all safety guidelines, warnings and cautions including those of the tractor manufacturer**
- **Read and understand the chemical manufacturer's labels, warnings and instructions**
- **Know and fulfill all state pesticide applicator license requirements**
- **Familiarize yourself and other operators with the sprayer's components and how all parts are operated**

----- **General Safety Guidelines** -----



Every year many unnecessary accidents occur do to improper equipment handling and a disregard for safety precautions. You, the operator, can avoid accidents by observing the precautions in this section.

- The operator should be a responsible adult. Do not allow persons to operate this sprayer until they have displayed a thorough understanding of sprayer safety precautions and operational use!
- All operators must also fulfill state pesticide applicator license requirements
- Never attempt to operate this sprayer when under the influence of alcohol or drugs.
- The best defense against accidents is a careful and responsible operator. If your sprayer is equipped with a PTO drive shaft, it is very important to take the proper safety precautions
- Failure to keep body parts or clothing clear of the sprayer's PTO drive shaft could result in serious injury or death. Ag Spray assumes no liability for any possible injury
- Never step over or work near the PTO drive shaft during operation
- When transporting the sprayer on public roads, always follow state and local regulations regarding safety and transportation requirements

Important Operation & Safety Information

-----Following Operation-----



- Following operation, it is very important that you completely rinse the entire sprayer and all of its components of all chemical residue
- Following operation, stop the tractor unit, set the brakes, disengage PTO shaft, shut off the engine and remove the ignition key
- Park the sprayer on a hard level surface
- Store the sprayer away from human and livestock activity
- Do not permit children to play on or around sprayer

Operation Instructions

Check for OVERHEAD clearance - pay special attention if the center boom is up.

Before starting work, analyze the area to determine the best - and safest - operating procedure. Plan your travel straight forward, whenever possible. Avoid sharp turns at high speeds.

WARNING! Never stand or allow anyone else to stand between the tractor and the sprayer, unless the engine is turned off and parking brake is engaged and the transmission is in park (or neutral). For stationary PTO operation, such as setting the pressure regulator, always place transmission in park (neutral), engage parking brake and block both tractor and the sprayer tires.

Hooking & Unhooking

All towed loads, including the TR500PHS must be hooked to the drawbar.

WARNING! Never allow anyone to stand between the tractor and the TR500PHS, while the tractor is backing up.

To unhook, move to level ground, block the tires and set the jack before unhitching. Be sure to unlatch and disengage PTO to complete unhitching. Make sure you use a proper safety hitch pin with safety clip retainer.

Chemical Operations

Always wear the proper clothing and equipment when handling chemicals. Follow chemical guidelines and instructions for proper PPE.

When dry chemicals are to be used, they should be added when the tank is partially filled and the bypass agitation valve is open. By the time the tank is filled, the chemicals should be thoroughly mixed.

It is important to keep dry chemicals mixed. Chemicals will settle out, forming a hard, crusty sediment in:

- **The diaphragm pump** - if this happens, the pump may lock up, causing pump damage, PTO shaft damage and grave personal injury.
- **The tank** - Always thoroughly flush the system after chemical operations.

Operating Procedures

Tractor Selection

Power

The Diaphragm Pump requires a 20 HP minimum. Your tractor should have 25-30 horsepower available on the PTO shaft. It also needs to have the ability to stop the TR500PHS, when full of water. A small tractor is more maneuverable in a poultry house. We recommend using a tractor with a 45-60 HP available on the PTO.

PTO

The diaphragm pump is designed to **operate at a 540 RPM speed**. Tractors come standard with a maximum PTO speed of either 540 or 1000 RPM.

The shape of the PTO shaft usually indicates the PTO speed.

Small tractors (80 HP or less) generally come standard with 540 RPM PTO (1-3/8" shaft with six splines).

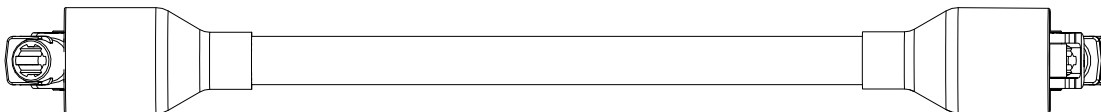
Large tractors (80 HP or more) generally come stock with 1000 RPM PTO (1-3/8" 21 splines or 1-3/4" 20 splines).

WARNING! Do not try to operate your TR500PHS with a 1000 RPM PTO!

PTO Components

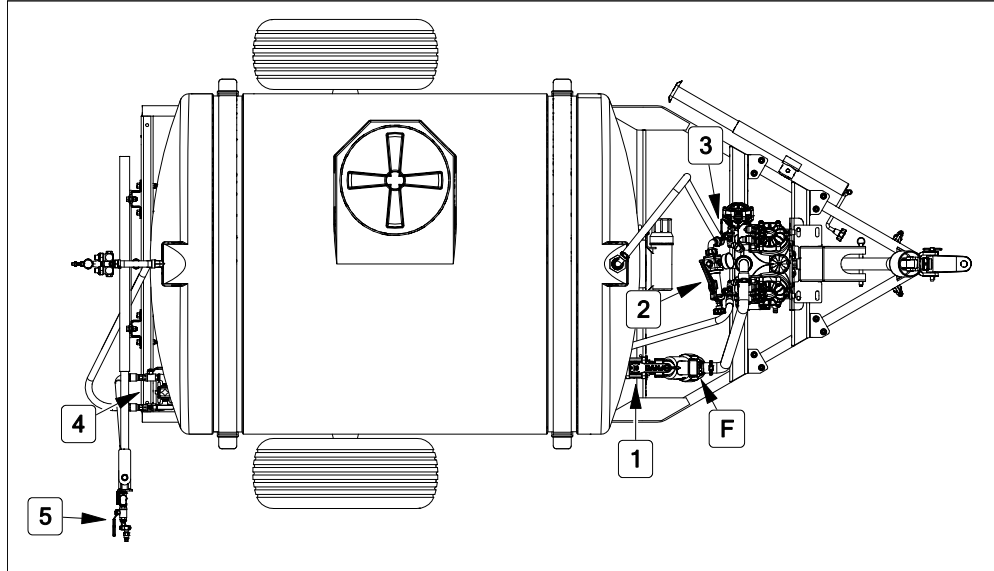
Complete PTO Shaft Assembly

Part #68379



Pre-Start Instructions

- A. Fill the tank full if using water only, half full, if you are to add chemicals.
- B. Check that the PTO shaft and attached pump shaft turns freely by hand (DO NOT attach PTO shaft or operate the pump, if the pump does not turn freely by hand, because it may be locked up and may cause serious injury).
- C. Attach PTO shaft, making sure the lock pin is locked on the PTO shaft.
- D. Check that all shields are in place.
- E. Check that there is oil showing in the sight glass of the pump. Add oil, if needed.
- F. Clean and inspect strainer screen.
- G. Check all hoses and fittings for tightness, wear and leakage.
- H. Set the following valve lineup:
 - 1) Pump suction valve OPEN.
 - 2) Pressure control valve - pressure adjusting handle in the UP position.
 - 3) Hose reel ball valve CLOSED.
 - 4) Rear boom ball valve OPEN.
 - 5) All individual nozzle isolation valves set to achieve desired pattern.
- I. Check the oil, water and fuel on the tractor.
- J. Check lug nuts and check tire pressure (40 PSI cold inflation).



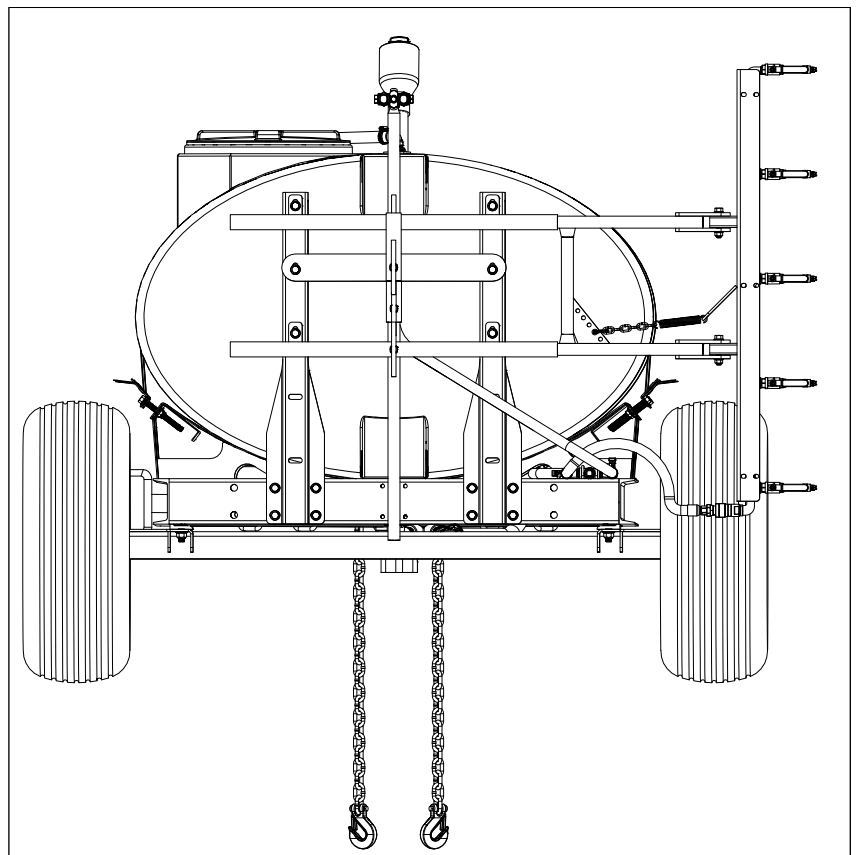
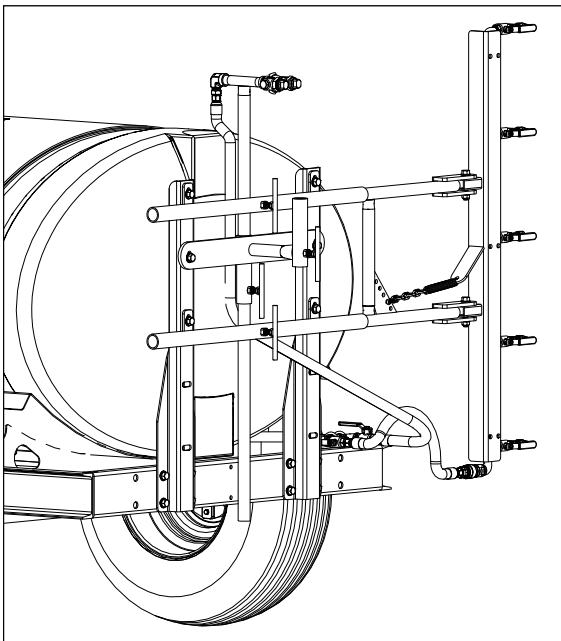
Boom Operation Instructions

All nozzles have individual shutoff valves for controlling spray patterns.

Center vertical boom - cluster nozzle (20 GPM with a 20' radius range) creates a fan spray pattern generally used to clean the rafters, but in the inverted position and at reduced pressure (100 PSI) can be used to disinfect the floor.

Lateral spray boom - has spring loaded and self-centering breakaway feature. Five individual 50-20 spray nozzles (50 degree spray angle and a 2 GPM spray rate each) for a possible 10 GPM. All side boom nozzles can be adjusted vertically and the valve bodies can rotate 270° for varied spray patterns.

Shutoff ball valves, handle position indicates whether the valve is open or closed (handle parallel with valve body, valve is open - handle across valve body, valve is closed).



Operation Instructions

1. Check the diaphragm pump oil level. The oil should be half way up the clear oil sight tube.
2. Make sure the suction hose is properly secured to the pump.
3. Check the charge pressure on the diaphragm pump pulsation damper before starting the pump. The pressure is checked with a standard automotive air gauge. The pressure should be approximately 20% of the maximum operating pressure, with a minimum charge of 10 PSI.
4. The relief valve bypass port should be connected back to the liquid tank unrestricted. Do not hook the bypass line back to the inlet port or suction hose.
5. Always allow pump to start under low pressure by putting the pressure release lever in the up position (bypass).
6. Start the pump and let it run for approximately one minute at low pressure. Stop and check the oil level in the sight gauge. Oil should be halfway up the sight gauge. Add 30W non-detergent oil if necessary. Oil should be clear, if milky, do not run the pump. See pump instructions for replacing pump diaphragms.
7. Return the pressure release lever to the pressure position and adjust the pump to the desired pressure by changing the relief valve setting on the control unit, relief valve or unloader.
8. **All operating instructions are recommendations only! The frequency, density of material and cleanliness level of the poultry house will dictate how fast to travel and how many passes are required to reach the desired cleanliness level.**

I. Spraying Side Walls

1. Set the sprayer nozzle to clean the desired side wall area. Adjust nozzles 2-3 feet from sidewall.
2. Adjust operating pressure with the hand screw, located on the pressure relief valve between 500-700 PSI.
3. The first trip along the house wall is the “wet-down” pass. Travel approximately 3-4 MPH spraying the wall, this will shake the loose material from the wall and allow time for the water to soak in.
4. Once you have went around the building, the second pass is the “cleaning” pass. On the cleaning pass, travel approximately 2-3 MPH while spraying. **Adjust your speed according to the material density and cleaning level needed.**
5. Spray nozzles may be pivoted forward or backward to obtain the best results.

Optional: Turn nozzles rearward 10-15 degrees on the first (wet-down) pass and forward 10-15 degrees on the second (cleaning) pass. This will help in being able to clean on both the front and back sides of truss legs, frame beams, etc.

Operation Instructions

II. Washing the Ceiling

1. Turn the cluster nozzle up toward the ceiling. Adjust the nozzle to spray about 10-15 feet on the ceiling per pass.
2. Set the pressure to about 500-700 PSI. Travel at a speed that will suit your situation. More than one pass may be required under extreme conditions.

III. Disinfecting Floor

1. Adjust the cluster nozzle to spray the entire width of your house. The nozzle should be set 36" from the floor.
2. Set pressure at about 60-80 PSI. At this pressure setting, you will be spraying approximately 10 gallons per minute.

IV. Handgun Operation (optional)

1. Your sprayer may be equipped with a handgun kit. The handgun can be used in areas where the sprayer may not easily maneuver, like house corners, trusses, bins, fans and brooders.
2. The wand is equipped with an adjustable handle that can change the spray pattern from a direct stream to a cone pattern. Simply by pushing or pulling on the handgun extension handle, you can change the spray pattern.



**CAUTION: Never Operate Handgun above 400 PSI.
Damage to pump Diaphragm can occur!**



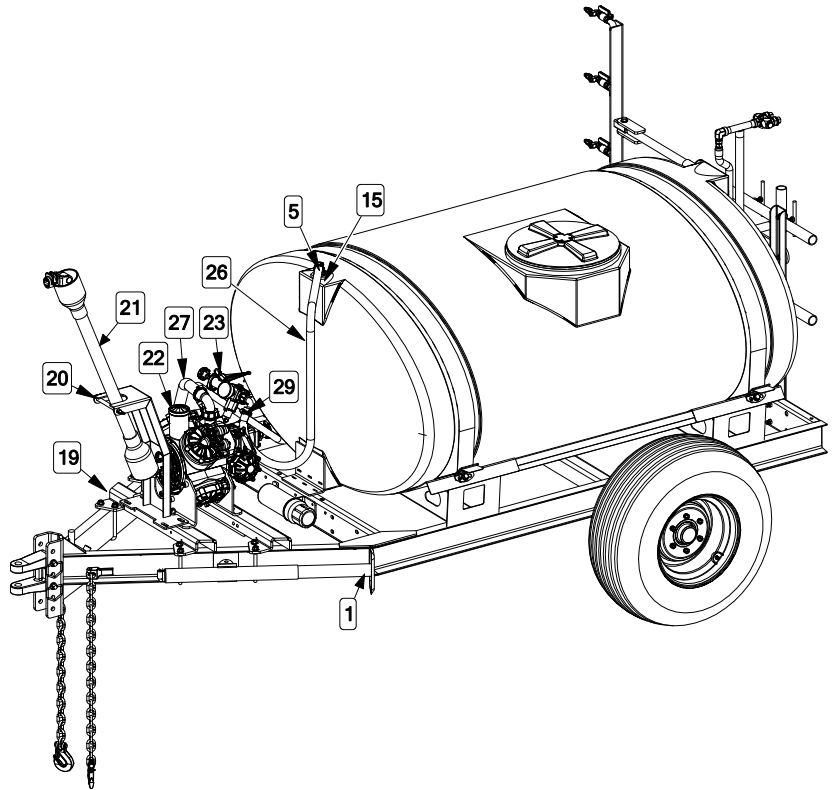
**Warning: After Each Use, thoroughly flush pump and control valve,
with water or proper solvent. Failure to do so could cause the control
valve or relief valve to malfunction and result in possible injury to the
user and/or void the warranty.**



**Warning: Never make turns while PTO is engaged.
Doing so will damage pump, bearings and will void all warranty.**

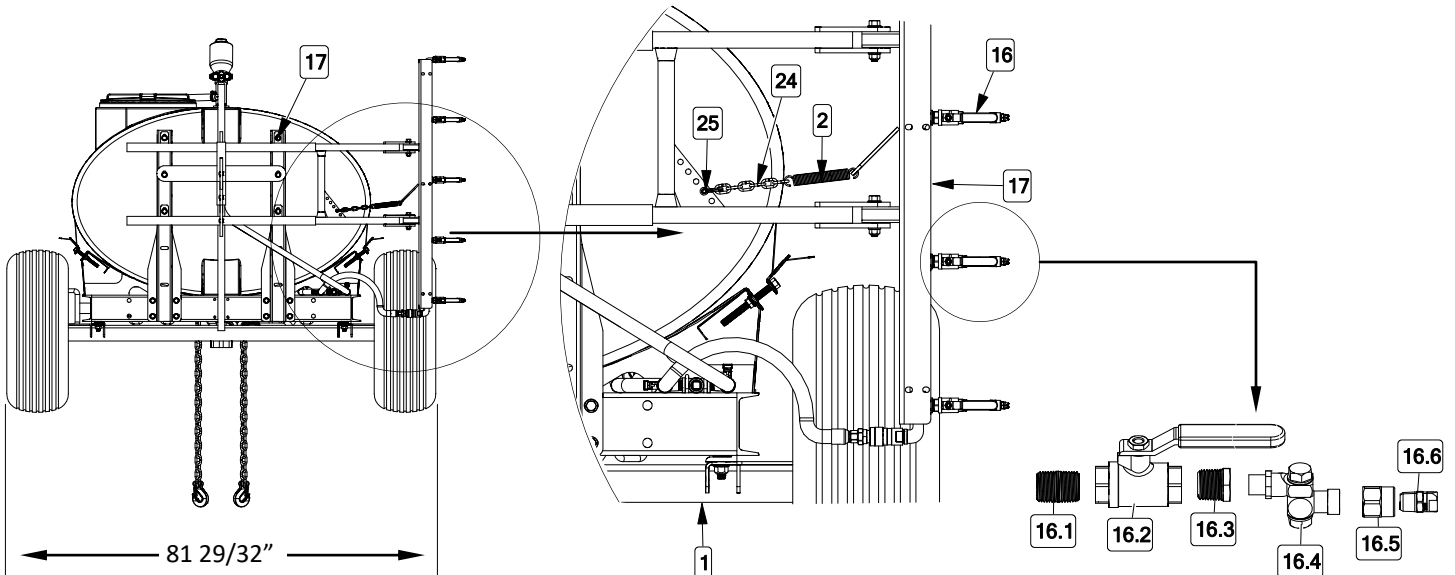
Poultry House Sprayer - Standard Breakdown & Parts List

TR500PHS-S (5281784)

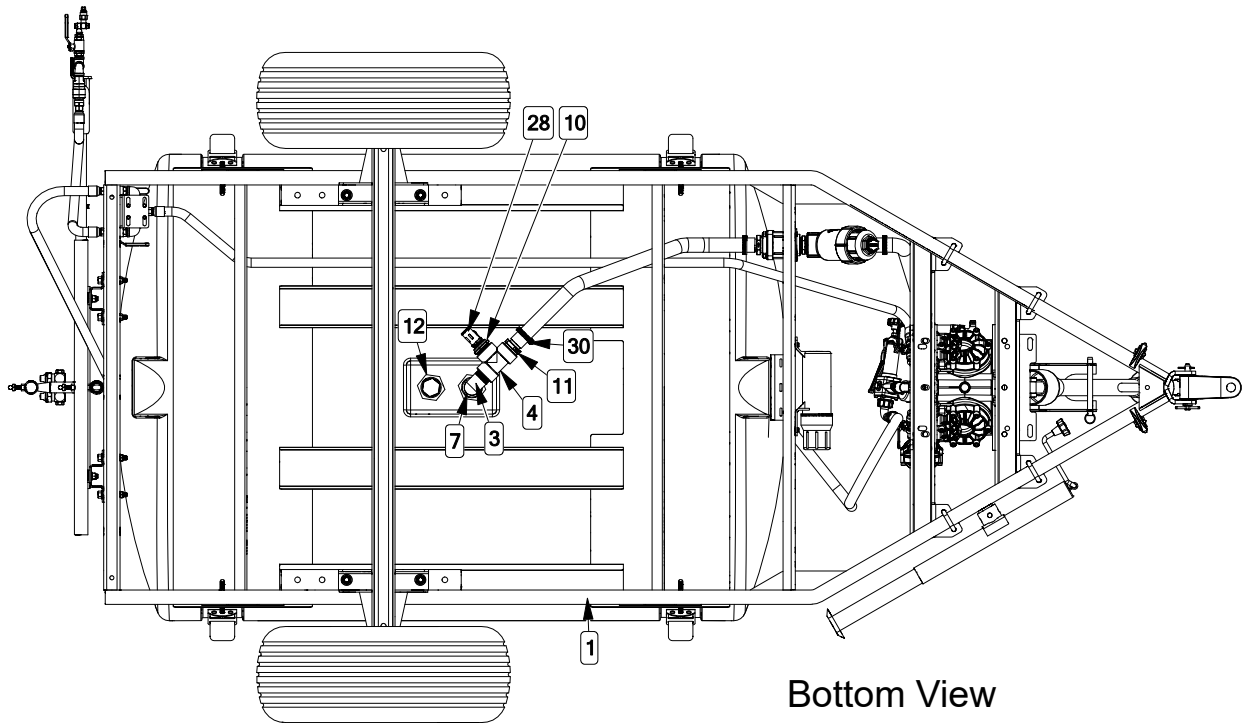
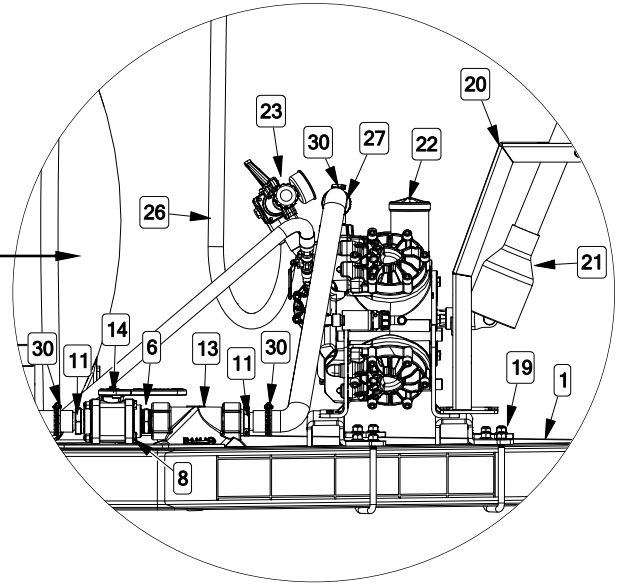
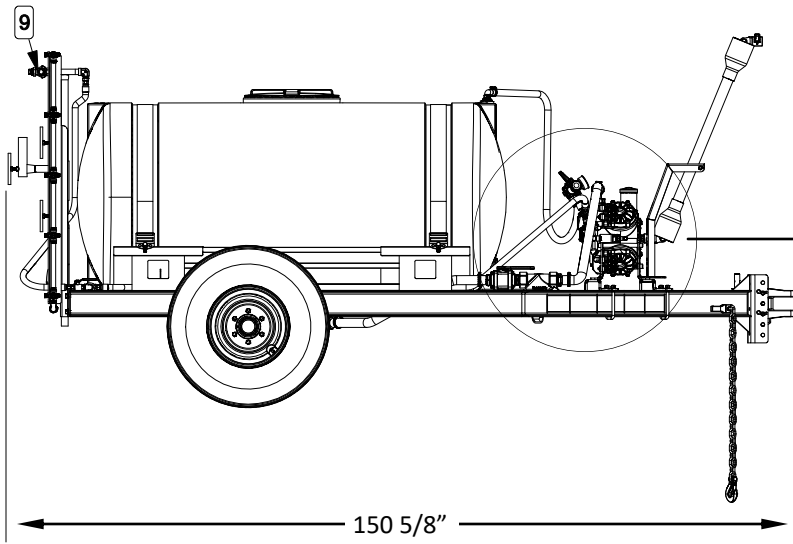


| Ref. # | Part # | Description | Qty |
|--------|----------|--|-----|
| 1 | 5303200 | 500E-M Low Profile 500 Gallon Trailer Kit | 1 |
| 2 | 1-5.560C | ATV Spring | 1 |
| 3 | 5010299 | Banjo 1 1/2" MPT x 1 1/2" FPT Poly Street Elbow 90° | 1 |
| 4 | 5010312 | Banjo 1 1/2" FPT Poly Pipe Tee | 1 |
| 5 | 5010334 | 3/4" MNPT x 1" Hosebarb 90° | 1 |
| 6 | 5011203 | Banjo 1 1/2" MPT x 1 1/2" MPT Short Poly Pipe Nipple | 1 |
| 7 | 5011214 | Banjo 1 1/2" MPT x 1 1/4" MPT Reducing Nipple | 1 |
| 8 | 5017777 | Valve Mounting Plate | 1 |
| 9 | 5018350 | TeeJet 4418-3/4 -2T OC20 Double Swivel Assembly | 1 |
| 10 | 5041097 | Banjo 1 1/2" MPT x 1" FPT Reducer Bushing | 1 |
| 11 | 5067195 | Banjo 1 1/2" MPT x 1 1/2" Hose Barb | 3 |
| 12 | 5102100 | Banjo 1 1/4" MPT Poly Pipe Plug | 1 |
| 13 | 5116469 | 1 1/2" Y Line Strainer w/50 Mesh Screen | 1 |
| 14 | 5143142 | Banjo 1 1/2" Full Port Bolted Valve | 1 |
| 15 | 5273736 | 3/4" Double-Threaded Poly Tank Bulkhead Fitting | 1 |
| 16 | 5276961 | 5-Nozzle Boom & Feed Tube | 1 |
| 16.1 | GALM12 | Galvanized Nipple 1/2" | 1 |
| 16.2 | V50B | 1/2" Brass Valve | 1 |
| 16.3 | RB1214G | Bushing 1/2" x 1/4" Plated | 1 |

| Ref. # | Part # | Description | Qty |
|--------|--------------|---|-----|
| 16.4 | 5002383 | TeeJet Single Swivel Body 1/4" FPT | 1 |
| 16.5 | 5005074 | 1/4" FPT Brass x 11/16" Nozzle Thread Adapter | 1 |
| 16.6 | H1/4U-SS5020 | StreamJet Stainless Steel Spray Nozzle | 1 |
| 17 | 5277314 | Poultry House Boom Assembly | 1 |
| 18 | 5281583 | TR500PHS Plumbing Manifold Assembly | 1 |
| 19 | 5281689 | PHS 500E Pump Mount Assembly | 1 |
| 20 | 5281695 | PTO Travel Bracket | 1 |
| 21 | 68379 | GR4 810 1-3/8 6SPL x 1-3/8 6-SP Drive Shaft | 1 |
| 22 | 9910-DBA160 | Hypro DBA160 Diaphragm High Pressure Spray Pump | 1 |
| 23 | 9910-GH50 | Control Unit | 1 |
| 24 | CH316 | Chain 3/16", Use with EK516 SHO | 1 |
| 25 | CL14 | Shackle Clevis 1/4" w/Screw Pin | 1 |
| 26 | EPDM100 | 1" - 200 PSI Spray Hose | 4 |
| 27 | KF1123900 | 1 1/2" Kanaflex Black Ribbed EPDM Helix Hose | 7 |
| 28 | LV050100MTV | Banjo Micro Valve, 1/2 FNPT x 1" NPT | 1 |
| 29 | M16 | SS Hose Clamp 11/16" - 1 1/2" | 2 |
| 30 | M28 | SS Hose Clamp 1 1/4" - 2 1/4" | 4 |



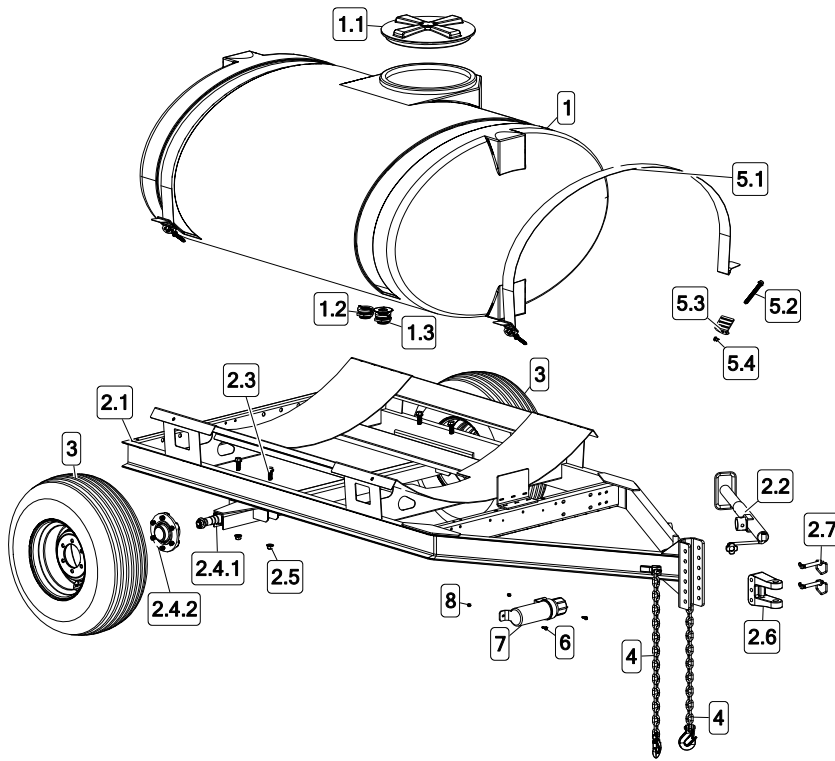
Poultry House Sprayer - Standard Breakdown & Parts List



Bottom View

Poultry House Sprayer - Standard Breakdown & Parts List

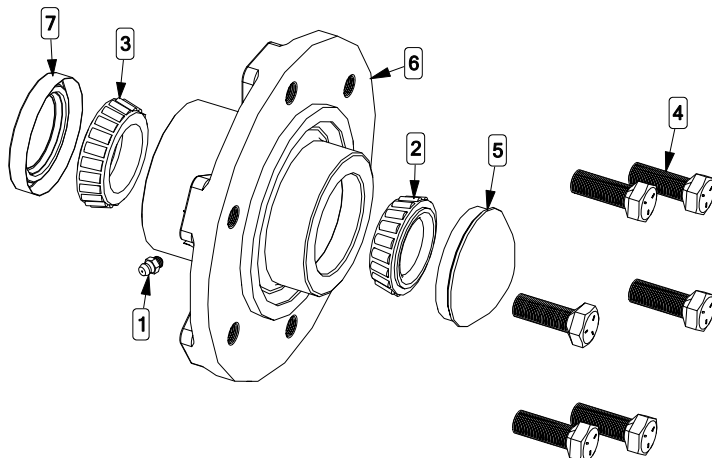
500E-M Low Profile 500 Gallon Trailer Kit (5303200)



| Ref. # | Part # | Description | Qty |
|--------|-------------|---|-----|
| 1 | 500ELY-OSHX | 500 Gallon Elliptical Tank (Yellow) | 1 |
| 1.1 | 63485 | 16" Lid & Ring w/Blue Snap-In Vent | 1 |
| 1.2 | 5274362 | 1-1/4" Double-Threaded Bulkhead Fitting | 1 |
| 1.3 | TF125AVN | 1-1/4" Anti-Vortex Double Threaded Bulkhead Fitting | 1 |
| 2 | 5281699 | 500E-M Frame w/Straight Axle | 1 |
| 2.1 | 5281685 | 500 E Trailer Frame | 1 |
| 2.2 | 5273859 | Jack, 2000# - 15" Pipe Mount - Topwind | 1 |
| 2.3 | 5034840 | 5/8-11 x 1.75 Flanged Hex Bolt | 4 |
| 2.4 | 5281687 | Bolt On Straight Axle 72.75 HF - 660 | 1 |
| 2.4.1 | 5281686 | Bolt-On Axle Bracket Weldment - 72.75 HF | 1 |
| 2.4.2 | 5271840 | 6-Bolt Hub Assembly | 2 |
| 2.5 | 5006364 | 5/8-11 Flanged Top-Lock Hex Nut | 4 |
| 2.6 | 5080030 | Cast Hitch Clevis | 1 |

| Ref. # | Part # | Description | Qty |
|--------|---------|---|-----|
| 2.7 | 5101226 | Hitch Pin, 5/8" Dia., 4 1/4" Useable w/Hairpin Cotter | 2 |
| 3 | 5274950 | 11L-15 Tire (8 PLY), 6 on 6.00 BC, 4.5625 PH | 2 |
| 4 | 5049041 | Safety Chain w/Hook | 2 |
| 5 | 5278118 | Strap Kit, 500 Low Profile | 1 |
| 5.1 | 5133231 | Poly Tank Strap, 3" x 132" | 2 |
| 5.2 | 5034706 | 1/2-13 x 5 Flanged Hex Bolt | 4 |
| 5.3 | 5108112 | Tank Strap Buckle (Bent, for 3" Strap) | 4 |
| 5.4 | 5006337 | 1/2-13 Serrated Flanged Hex Nut | 4 |
| 6 | 5117301 | 1/4-20 x 1.00 Flanged Hex Bolt | 2 |
| 7 | 67670 | Owner's Manual Canister (Large) | 1 |
| 8 | 5006344 | 1/4-20 Flanged Top-Lock Hex Nut | 2 |

6-Bolt Hub Assembly (5271840)

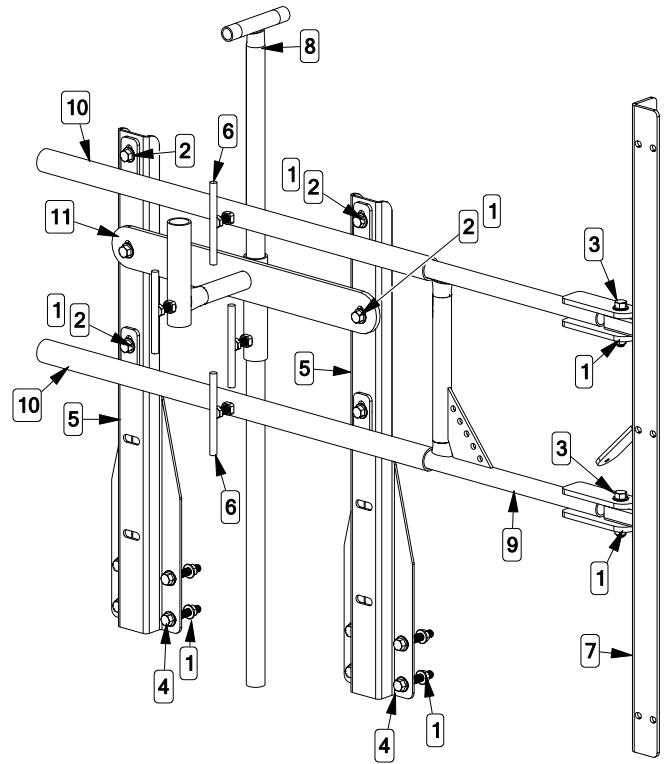


| Ref. # | Part # | Description | Qty |
|--------|---------|-----------------------------------|-----|
| 1 | 5012015 | Grease Zerk, 1/4"-28 Thread | 1 |
| 2 | 5031067 | Cone Bearing | 1 |
| 3 | 5031081 | Cone Bearing | 1 |
| 4 | 5034166 | Wheel Bolt, 1/2"-20 N.F. x 1 1/4" | 6 |
| 5 | 5046094 | Hub Cap | 1 |
| 6 | ** | Hub (Only), 6-Bolt | 1 |
| 7 | 5110120 | Grease Seal | 1 |

** Available ONLY in Complete Assembly

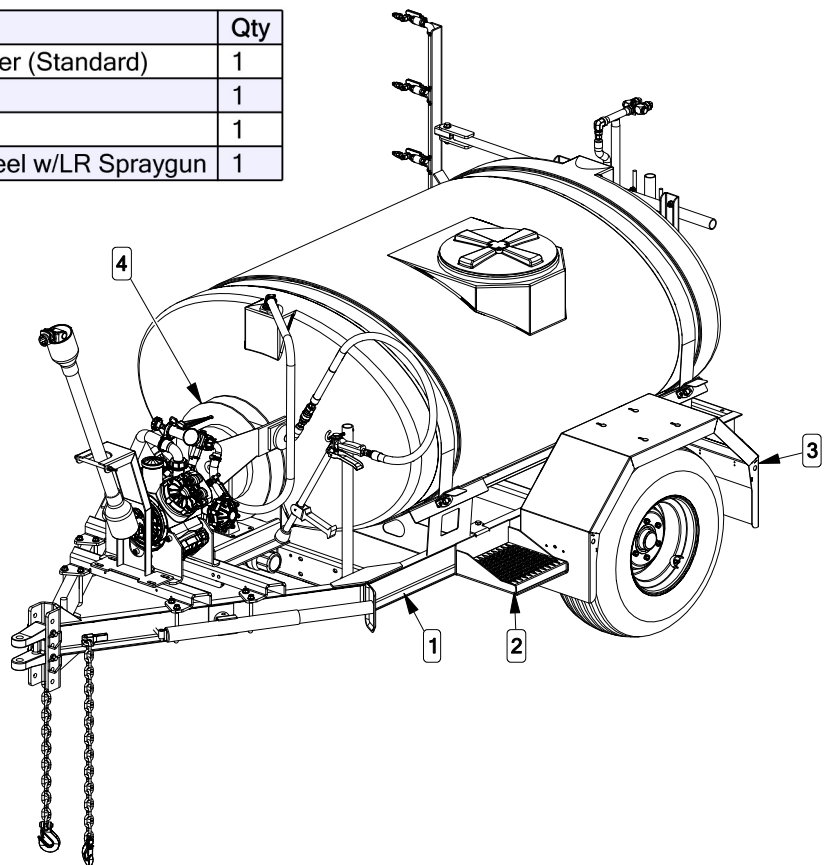
Poultry House Sprayer Boom (5277314)

| Ref. # | Part # | Description | Qty |
|--------|---------|--------------------------------------|-----|
| 1 | 5006365 | 1/2"-13 Flanged Top-Lock Hex Nut | 16 |
| 2 | 5034691 | 1/2"-13 x 1 1/4" Flanged Hex Bolt | 6 |
| 3 | 5034697 | 1/2"-13 x 2 3/4" Flanged Hex Bolt | 2 |
| 4 | 5034698 | 1/2"-13 x 3" Flanged Hex Bolt | 8 |
| 5 | 5144058 | Boom Rack Upright | 2 |
| 6 | 5277067 | Threaded T-Handle | 4 |
| 7 | 5277135 | Nozzle Bracket | 1 |
| 8 | 5277136 | Extension Pipe | 1 |
| 9 | 5277137 | Nozzle Extension | 1 |
| 10 | 5277139 | Extension Adjustment | 2 |
| 11 | 5281451 | Vertical Support w/Floor Spray Mount | 1 |



Poultry House Sprayer - Deluxe Breakdown (5281785)

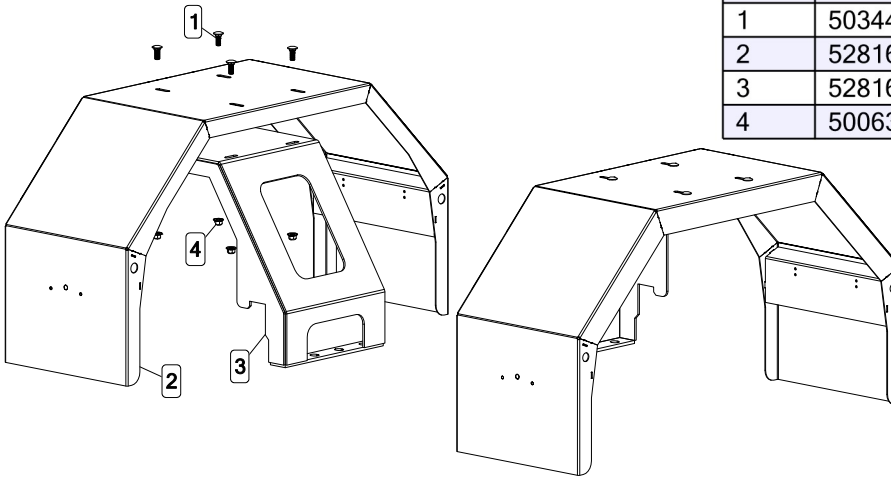
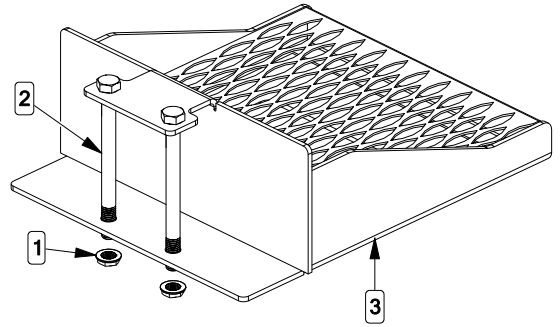
| Ref. # | Part # | Description | Qty |
|--------|---------|---|-----|
| 1 | 5281784 | 500 Gallon Poultry House Sprayer (Standard) | 1 |
| 2 | 5281692 | Bolt On Step | 1 |
| 3 | 5281693 | 500E Fender Package Kit | 1 |
| 4 | 5281783 | PHS 50' Self Retracting Hose Reel w/LR Spraygun | 1 |



Trailer Options

Bolt on Step for 5" Frame (5281692-BLK)

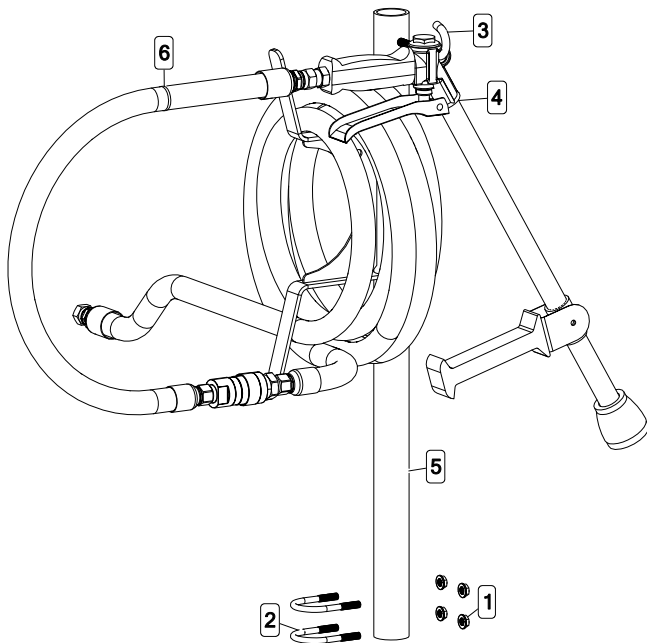
| Ref. # | Part # | Description | Qty |
|--------|---------|---------------------------------|-----|
| 1 | 5006337 | 1/2-13 Serrated Flanged Hex Nut | 2 |
| 2 | 5034323 | 1/2-13 x 6.00 Hex Bolt | 2 |
| 3 | 5281691 | 500E Step Weldment | 1 |



| Ref. # | Part # | Description | Qty |
|--------|---------|---------------------------------|-----|
| 1 | 5034482 | 3/8-16 x 1.00 Carriage Bolt | 8 |
| 2 | 5281670 | Single Axle DOT Fender Weldment | 2 |
| 3 | 5281694 | Fender Mount | 2 |
| 4 | 5006366 | 3/8-16 Flanged Top-Lock Nut | 8 |

Bolt on Fender Kit For 11L Tires (5281693-BLK)

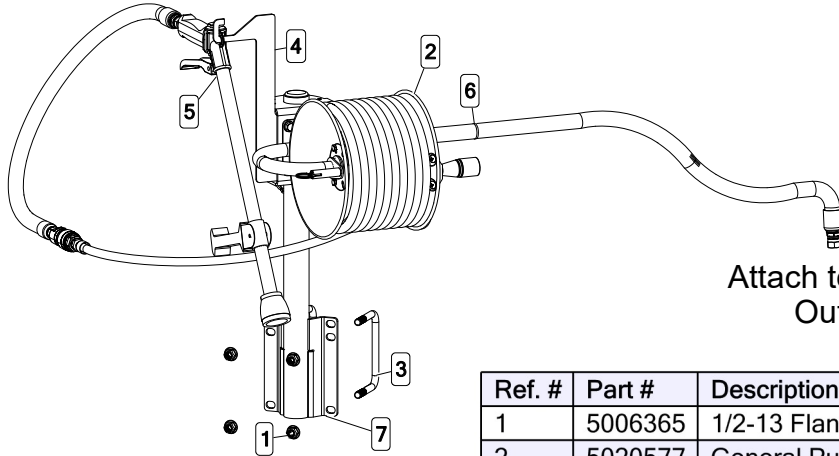
Hose Reel Kits



PHS 25' Manual Hose Wrap Kit (5281781)

| Ref. # | Part # | Description | Qty |
|--------|---------|---|-----|
| 1 | 5006307 | 5/16-18 Serrated Flanged Hex Nut | 4 |
| 2 | 5034123 | 5/16-18 x 1.75 x 2.125 Round U-Bolt | 2 |
| 3 | 5034173 | 3/8-16 x 5.50 Hook Bolt | 1 |
| 4 | 5163089 | Hypro Adjustable Spray Gun w/17" Barrel | 1 |
| 5 | 5277118 | Hose Wrap & Gun Holder Stand | 1 |
| 6 | 5281766 | PHS 25' Manual Hose Wrap Plumbing Kit | 1 |

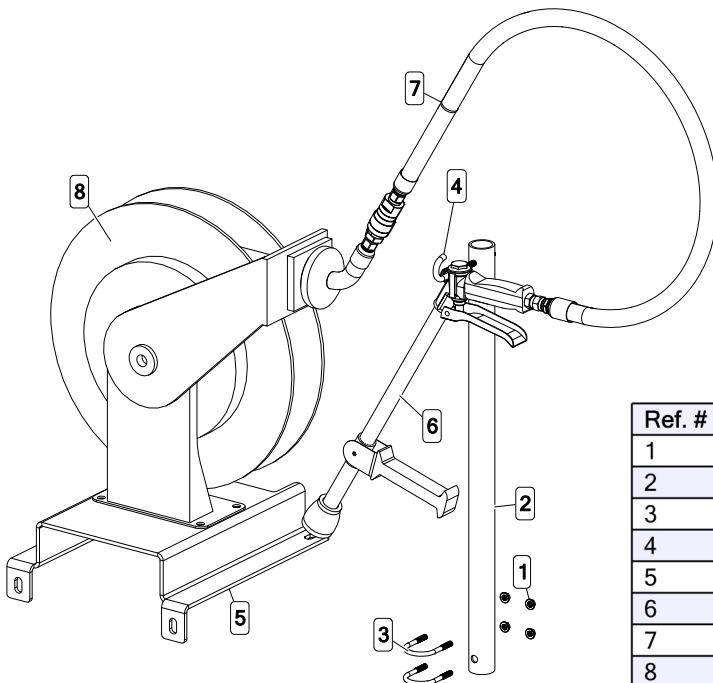
Hose Reel Kits



**PHS 25'
Manual Hose Reel Kit
(5281782)**

Attach to Pump
Outlet

| Ref. # | Part # | Description | Qty |
|--------|---------|---|-----|
| 1 | 5006365 | 1/2-13 Flanged Top-Lock Hex Nut | 4 |
| 2 | 5020577 | General Pump D30001 | 1 |
| 3 | 5034789 | 1/2-13x 5.0625 x 3.50 Square U-Bolt | 2 |
| 4 | 5078830 | Spray Gun Holder | 1 |
| 5 | 5163089 | Hypro Adjustable Spray Gun w/17" Barrel | 1 |
| 6 | 5281767 | PHS 25' Hose Reel Plumbing Kit | 1 |
| 7 | 5303204 | 500E-M Hose Reel Assembly | 1 |

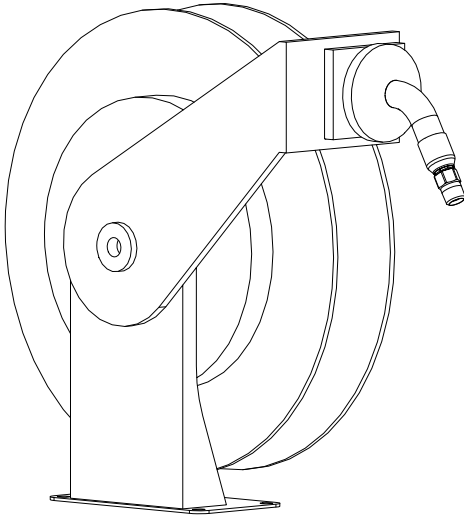


**PHS 50'
Self Retracting
Hose Reel Kit
(5281783)**

| Ref. # | Part # | Description | Qty |
|--------|----------|---|-----|
| 1 | 5006307 | 5/16-18 Serrated Flanged Hex Nut | 4 |
| 2 | 5011249 | Pipe | 1 |
| 3 | 5034123 | 5/16-18 x 1.75 x 2.125 Round U-Bolt | 2 |
| 4 | 5034173 | 3/8-16 x 5.50 Hook Bolt | 1 |
| 5 | 5037988 | Hose Reel Support | 1 |
| 6 | 5163089 | Hypro Adjustable Spray Gun w/17" Barrel | 1 |
| 7 | 5281768 | PHS 50' Hose Reel Plumbing Kit | 1 |
| 8 | HRSR1250 | Hose Reel, 50', 1/2", 2000 PSI Open SPR | 1 |

Series 7000 Spring Driven Hose Reel

Part Number: HRSPR1250
MFG. #: 7850 OMP

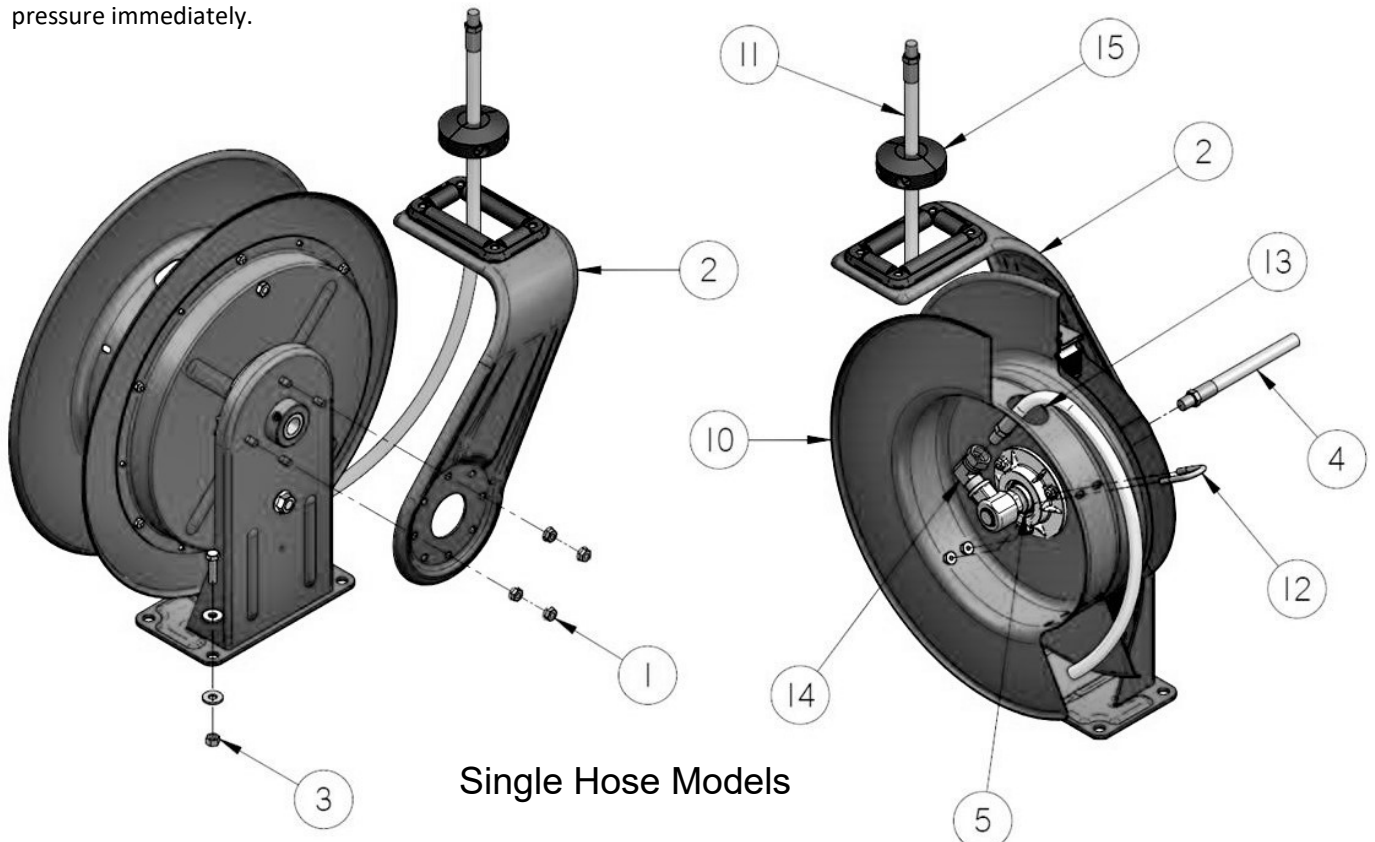


Important
Read this manual carefully before installing, operating or servicing this equipment.

SAFETY

Personal injury and/or equipment damage may result if proper safety precautions are not observed.

- Ensure that reel is properly installed before connecting input and output hoses.
- Bleed fluid/gas pressure from system before servicing reel.
- Before connecting reel to supply line, ensure that pressure does not exceed maximum working pressure rating of reel.
- Remember, even low pressure is very dangerous and can cause personal injury or death.
- Be aware of machinery and personnel in work area.
- If a leak occurs in the hose or reel, remove system pressure immediately.
- A high tension spring assembly is contained within the reel. Exercise extreme caution.
- Pull hose from reel by grasping the hose itself, not the control valve.
- Ensure that reel, hose and equipment being serviced are properly grounded. Use an ohmmeter to check ground continuity.
- If reel ceases to unwind or rewind, remove system pressure immediately. Do not pull or jerk on hose!
- Treat and respect the hose reel as any other piece of machinery, observing all common safety practices.



Single Hose Models

MOUNTING

1. Unpack and inspect reel for damage. Turn by hand to check for smooth operation. Check for completeness.
2. Configure reel for top, side or bottom-wind hose dispensing, by removing nuts (1) securing guide arm bracket (2). Position guide arm bracket to desired location and replace nuts.

Caution: When changing guide arm positions, the U-bolt must be placed in the proper location as instructed in Figure A below. The reel can “latch out” during use if this instruction is not adhered to.

3. Position reel on floor, wall or ceiling. Secure into place using four (customer supplied) bolts (3).

INSTALLING THE INPUT HOSE(S)

Warning: Ensure that supply line pressure does not exceed maximum working pressure rating of reel. Apply pipe thread sealant to all threads.

Caution: Use flexible hose connection at input. Do not use rigid plumbing.

- 1) Connect supply line hose (4) to main shaft input (5) as indicated in illustration.

INSTALLING THE OUTPUT HOSE(S)

Warning: Use extreme caution; reel under tension. Avoid releasing latch mechanism. Apply pipe thread sealant to all threads.

- 1) Manually turn sheave (10) until spring is tight, back off 3 turns, then latch.
- 2) Route output hose(s) (11) through guide arm bracket (2), U-bolts (12), then through cutout (13) in spool as indicated in illustration.
- 3) Connect output hose(s) (11) to swivel (14) as indicated in illustration.
- 4) Tighten U-bolts (12).

Dimensions

| | | |
|--|---|----------|
| | A | 20 1/4" |
| | B | 19 3/4" |
| | C | 7 13/16" |
| | D | 3 7/8" |
| | E | 7" |

- 5) Charge hose(s). Momentarily open control valve to purge hose(s) of gases. When fluid appears at control valve, close valve. With hose(s) fully charged, release latch and wind output hose(s) onto reel.

ADJUSTMENTS

Warning: Use extreme caution; reel under tension. Avoid releasing latch mechanism. If necessary, adjust spring tension on reel by adding or removing wraps of hose from spool, one wrap at a time, until desired tension is obtained. Add wraps to increase tension. Remove wraps to decrease tension.

SERVICE INSTRUCTIONS

User servicing of the reel is limited to replacing input/output hoses only. Refer all other repairs to an authorized service person or directly to Reelcraft. Failure to do so can result in personal injury and/or equipment damage and may void the warranty.

Warning: Rewind hose on reel, then bleed pressure from system before performing the following procedures.

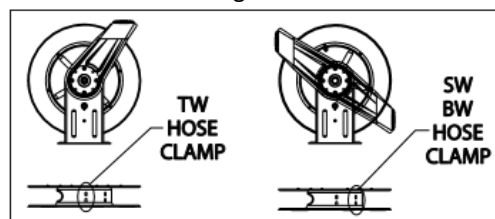
- 1) Replace hoses in accordance with procedures given in “Installation instructions” section of manual.

Caution: When replacing drive spring, hold the center of the spring down as the hub is pulled out. If the center is allowed to raise up, the spring may escape from its container with enough force to cause injuries.

When disposing of old or broken spring assemblies, the coils should be welded or wired together to prevent possible injury to scrap handling personnel.

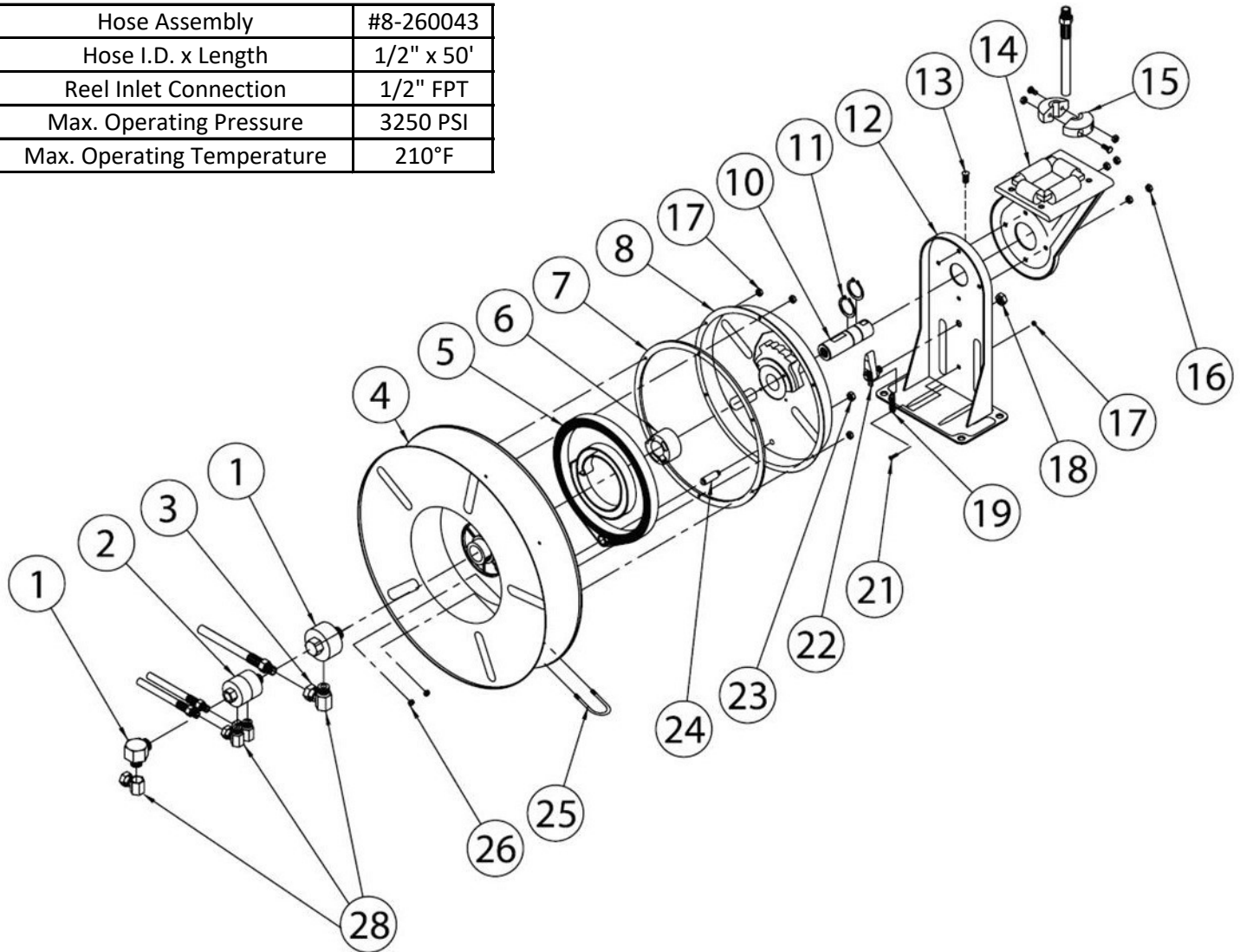
2. All mating moving parts are to be lubricated with Perma Bond or Loctite anti-seize compound.

Figure A



Hose Reel Breakdown

| | |
|----------------------------|------------|
| Hose Assembly | #8-260043 |
| Hose I.D. x Length | 1/2" x 50' |
| Reel Inlet Connection | 1/2" FPT |
| Max. Operating Pressure | 3250 PSI |
| Max. Operating Temperature | 210°F |



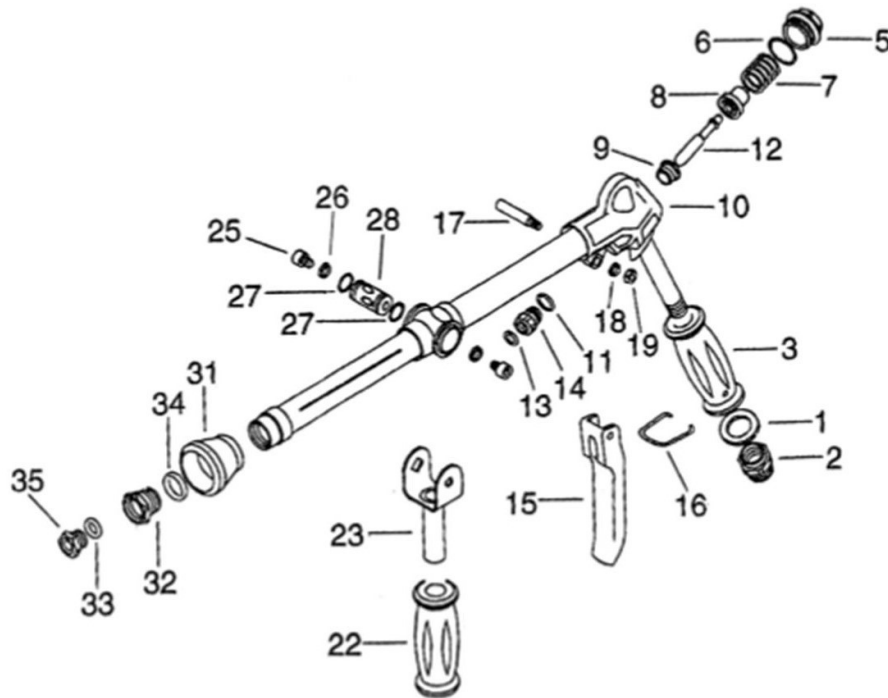
| Item # | Description | # Req. | Part # | Item # | Description | # Req. | Part # |
|--------|-----------------------|--------|---------|--------|------------------------|--------|------------|
| 1 | Swivel Assembly | 1 | S602033 | 15 | Bumper Stop Assembly | 1 | 2-HR1004-3 |
| 3 | 90° Ell | 1 | None | 16 | 5/16-18 Locknut | 4 | 300107 |
| 4 | Sheave Assembly | 1 | S260011 | 17 | 10-32 x 3/8" Nyloc Nut | 7 | S82-15 |
| 5 | Drive Spring Assembly | 1 | S260053 | 18 | 1/2-20 x 5/8" Hex Nut | 1 | S280-8 |
| 6 | Spring Arbor Assembly | 1 | S600621 | 19 | Latch Spring | 1 | S260067 |
| 7 | Gasket | 1 | S260069 | 21 | 10-32 Shoulder Screw | 1 | S393-2 |
| 8 | Spring Case Assembly | 1 | S260074 | 22 | Latch Pawl Assembly | 1 | S600018 |
| 10 | Main Shaft | 1 | 602231 | 23 | 3/8"-24 Jam Nut | 1 | S76-106 |
| 11 | 1 1/4" Snap Ring | 2 | 300007 | 24 | Spring Case Stud | 1 | S260031 |
| 12 | Base Assembly | 1 | S600016 | 25 | U-Bolt | 1 | 3-117440 |
| 13 | 1/2-13 Set Screw | 1 | S35-84 | 26 | 1/4"-20 x 3/8" Locknut | 2 | 261650-1 |
| 14 | Guide Arm w/Rollers | 1 | S600017 | 28 | Swivel Union | 1 | S257-26 |

Hypro Spray Gun Model 3381-0010 (Ag Spray Part #: 5163089)



| SPECIFICATIONS: | |
|------------------|----------------|
| Maximum Pressure | 1200 PSI |
| Maximum Capacity | 25 GPM |
| Barrel Length | 17" |
| Port-NPT | 1/2" Inlet (M) |

(Note: Gun comes equipped with a 1/2" hose barb inlet. Simply remove hose barb for 1/2" male inlet).



| Item # | Description | # Req. | Part # | Item # | Description | # Req. | Part # |
|--------|-------------------|--------|---------------|--------|--|--------|--------------|
| 1 | Washer | 1 | 9920-232 | 17 | Pin | 1 | 9920-194 |
| 2 | Inlet Port | 1 | 9920-230B | 18 | Washer | 1 | 9920-1751 |
| 3 | Hand Grip | 1 | 9920-193 | 19 | Nut | 1 | 9920-5587-68 |
| 5 | Plug | 1 | 9920-231 | 22 | Front Grip | 1 | 9920-192 |
| 6 | O-Ring | 1 | * | 23 | Bracket | 1 | 9920-247 |
| 7 | Spring | 1 | 9920-233 | 25 | Bolt | 2 | 9920-5931 |
| 8 | Poppet | 1 | * | 26 | Washer | 2 | 9920-1751 |
| 9 | Seat | 1 | * | 27 | O-Ring | 2 | * |
| 10 | Body, Welded Assy | 1 | 9920-7.1615.3 | 28 | Regulator | 1 | 9920-237 |
| 11 | O-Ring | 1 | * | 31 | Shroud | 1 | 9920-183 |
| 12 | Plunger | 1 | 9920-239 | 32 | Nozzle Retainer | 1 | 9920-158 |
| 13 | O-Ring | 1 | * | 33 | O-Ring | 1 | * |
| 14 | Guide | 1 | 9920-241 | 34 | O-Ring | 1 | * |
| 15 | Trigger | 1 | 9920-246 | 35 | Nozzles: 3385-2300,-3000,-3500, -4000,-4500,-5000,-5500,-6000,-7000 | 1 | 3385- |
| 16 | Locking Clip | 1 | 9920-245C | 36 | Hose Barb, Wing Nut, Gasket | 1 | 9910-110130 |

Note: When ordering parts, give QUANTITY, PART NUMBER, DESCRIPTION and COMPLETE ACCESSORY NUMBER. Reference numbers are used ONLY to identify parts in the drawing and are NOT to be used as order numbers.

* Repair Kit No. 9920-KIT10/11 consists of the following:
 (1) Ref. 6 O-ring 9920-3100, (1) Ref. 8 Poppet 9920-71903.1,
 (1) Ref. 9 Seat 9920-129, (1) Ref. 11 O-ring 9920-2050,
 (1) Ref. 13 O-ring 9920-109, (2) Ref. 27 O-rings 9920-119,
 (1) Ref. 33 O-ring 9920-115 & (1) Ref. 34 O-ring 9920-124



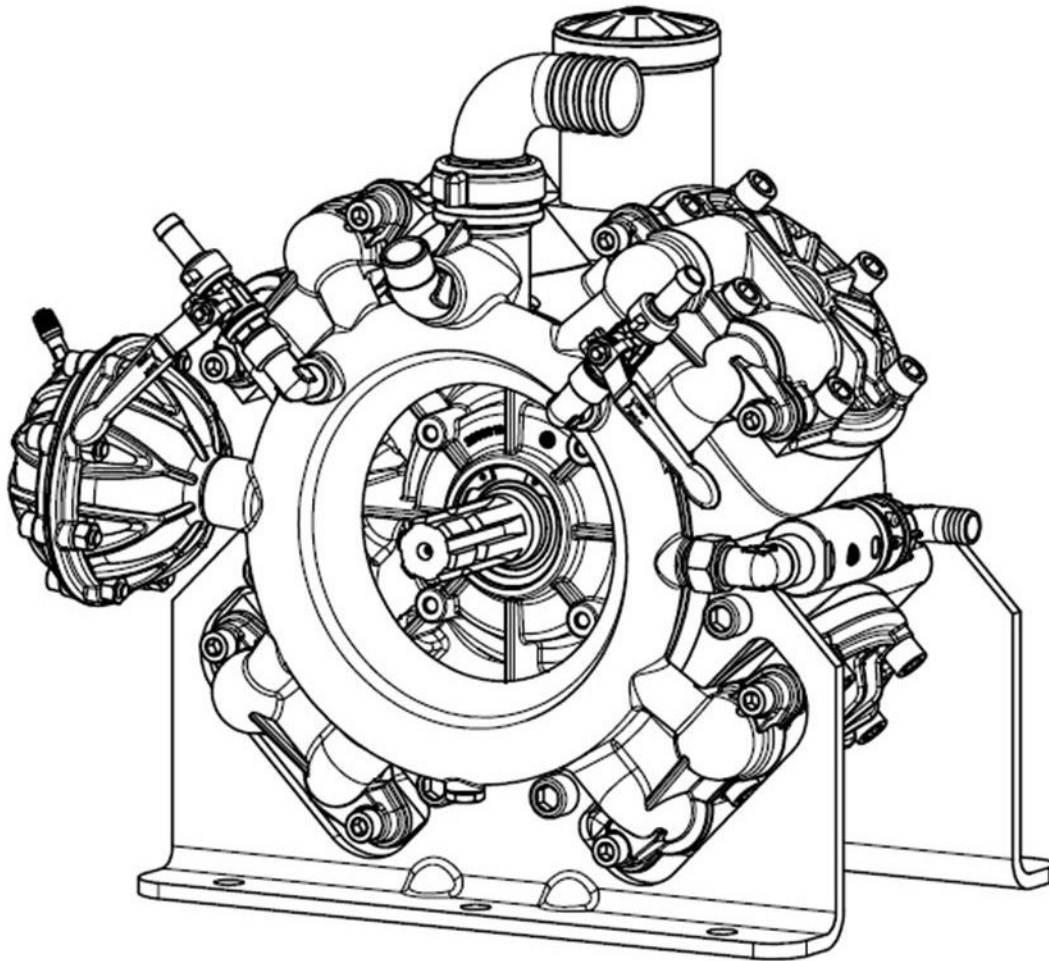
High Pressure Diaphragm Pumps

Installation, Operation, Repair & Parts Manual

Description

Heavy-duty, high pressure diaphragm pumps. These industrial-built pumps are designed to handle all of your high pressure and volume diaphragm pump needs with minimal maintenance required. Their innovative, external manifold design allows for normal servicing to be done from one side of the pump, thereby eliminating the need for dismounting. These pumps are excellent for chemical spraying where high-

er pressures are desired, such as insecticide spraying, air blast and tall tree sprayers. They also work great for high pressure cleaning and disinfecting applications, such as poultry house cleaners.



Model 9910-DBS160
Model 9910-DBA160
Max. Flow: 39.7 GPM
Max. Pressure: 725 PSI
Max. Speed: 550 RPM
4 Diaphragms

General Safety Information

NOTE

Notes are used to notify of installation, operation, or maintenance information that is important but not safety related.

CAUTION

Caution is used to indicate the presence of a hazard, which will or can cause minor injury or property damage if the notice is ignored.

WARNING

Warning denotes that a potential hazard exists and indicates procedures that must be followed exactly to either eliminate or reduce the hazard, and to avoid serious personal injury, or prevent future safety problems with the product.

DANGER

Danger is used to indicate the presence of a hazard that will result in severe personal injury, death, or property damage if the notice is ignored.

DANGER

- Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres. Do not pump asphalt sealer, roofing compounds, concrete sealers, or any two-step curing products. The pump should only be used with liquids compatible with the pump materials. Failure to follow this notice can result in severe personal injury and/or property damage and will void the product warranty.
- Never use your hand to check the condition of hydraulic lines or hoses. If hydraulic fluid penetrates the skin, get medical attention immediately. Failure to get proper medical attention may result in loss of limb or life. The safest way to check hydraulic lines is by holding a piece of cardboard next to the hydraulic line or hose.

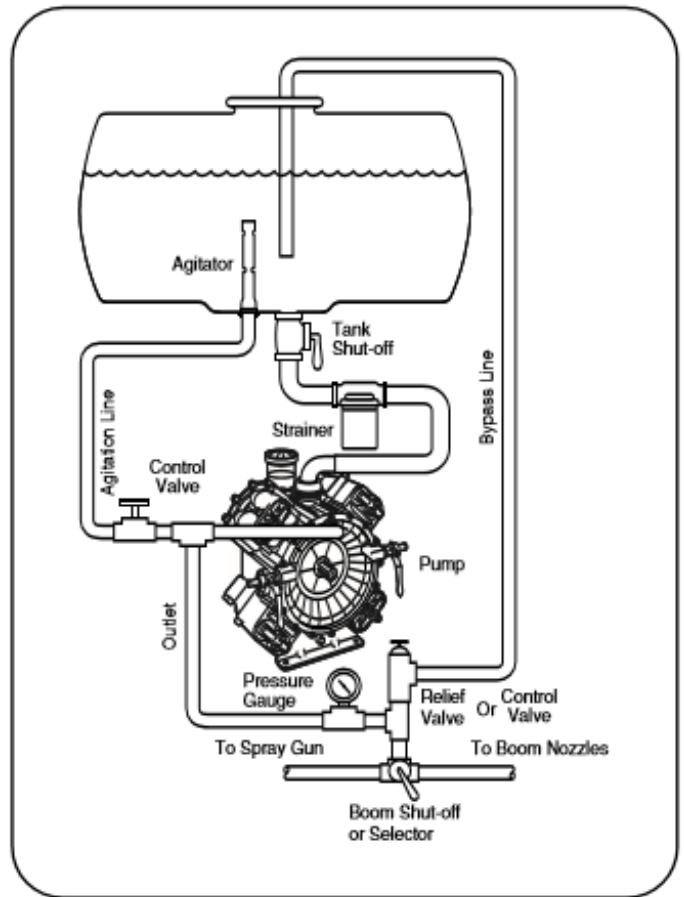
CAUTION

- Do not pump at pressures higher than the maximum recommended pressure.
- Operate the pump between a temperature range of 45° to 140° F [7° to 60° C].
- Make certain that the power source conforms to the requirements of your equipment.
- Provide adequate protection in guarding around the moving parts such as shafts and pulleys.
- Disconnect the power before servicing.
- Release all pressure within the system before servicing any component.
- Drain all liquids from the system before servicing.
- Secure the discharge line before starting the pump. An unsecured discharge line may whip, resulting in personal injury and/or property damage.
- Check all hoses for weak or worn condition before each use. Make certain that all connections are tight and secure.
- Periodically inspect the pump and the system components. Perform routine maintenance as required (See Maintenance).
- When wiring an electrically-driven pump, follow all electrical and safety codes, as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA) requirements.
- Use only pipe, hose, and hose fittings rated for maximum rated pressure of the pump or the pressure at which the pressure relief valve is set at. Do not use used pipe.
- Do not use these pumps for pumping water or other liquids for human or animal consumption.
- Do not pressure feed pump inlet.

Installation

NOTE: Use only pipe, fittings, accessories, hose, etc. rated for the maximum pressure rating of the pump.

1. Always mount the pump with oil sight tube in the upright position.
2. The correct type and size of hose is vital to good performance:
 - a. Use good quality inlet hose, compatible with fluids being pumped and with good elasticity to reduce inlet water hammer or pulsation. Be sure that the hose is not too rigid but capable of operating at low vacuums without collapsing. The diameter of the inlet hose should be at least that of the pump inlet port size and preferably one size larger if the inlet line is longer than approximately 6 feet.
 - b. Use only approved high pressure hose on the discharge side of the pump.
3. Most ports are provided with hose barb connections. Use good quality hose clamps and tighten securely.
4. See the figure for typical system hook-up. The diagram shows necessary components and accessories and their connections within the complete system.



Pump Operation Instructions

1. Be sure the oil is halfway up the clear oil sight tube. If necessary, fill to the correct level with Hypro Oil (Part Number 2160-0038). Hypro Oil is a specially formulated, high-grade, nondetergent, SAE 30 weight oil designed to prolong pump life.
2. Make sure the suction hose barb is tightly screwed onto the suction union, and that there are no air leaks on the inlet side of the pump.
3. Check the charge pressure on the pulsation dampener before starting the pump. The pressure is checked with a standard automotive air gauge. The pressure should be at approximately 20% of your operating spray pressure.
4. The relief valve bypass port should be connected back to the liquid tank unrestricted. Do not hook the bypass line back to the inlet port or inlet hose.
5. Always allow the pump to start under low pressure by putting the pressure release lever in the up position.
6. Start the pump and run for approximately one minute at low pressure. Stop the pump and check the oil level in sight glass. Oil should be halfway up the sight glass. Add Hypro Oil (Part Number 2160-0038) if necessary. See chart below for approximate oil capacities.
7. Return the pressure release lever to the pressure position and adjust the pump to the desired pressure by changing the relief valve setting on the control unit, relief valve, or unloader.

Crankcase Oil Capacities

| | |
|----------------|----------------------------|
| 110/140 Series | 2 qts. 19.7 oz. (83.7 oz.) |
| 160/200 Series | 2 qts. 30 oz. (94 oz.) |

Troubleshooting

| Symptom | Probable Cause(s) | Corrective Action |
|--|---|--|
| The pump does not draw water. | One or more valves are seating improperly. | Remove valve and check for debris. |
| | Suction line is plugged or collapsed. Clogged strainer. | Examine suction line. Clean strainer. |
| The liquid flow is irregular. | The charge in the pulsation damper is incorrect. | Check pressure in pulsation damper (approximately 20% of your operating spray pressure). |
| | One or more valves are seating improperly. | Remove valve and check for debris. Examine the valve seatings and clean them. |
| Output drops and the pump is noisy. | Oil level is too low. | Add oil to correct level (halfway up the sight tube). |
| Oil comes out of the discharge port or oil is a milky color. | One or more diaphragms split. | Remove manifold and heads. Drain oil and clean crankcase of water. Replace diaphragms, heads and manifold. Refill with Hypro Oil (Part No. 2160-0038). |

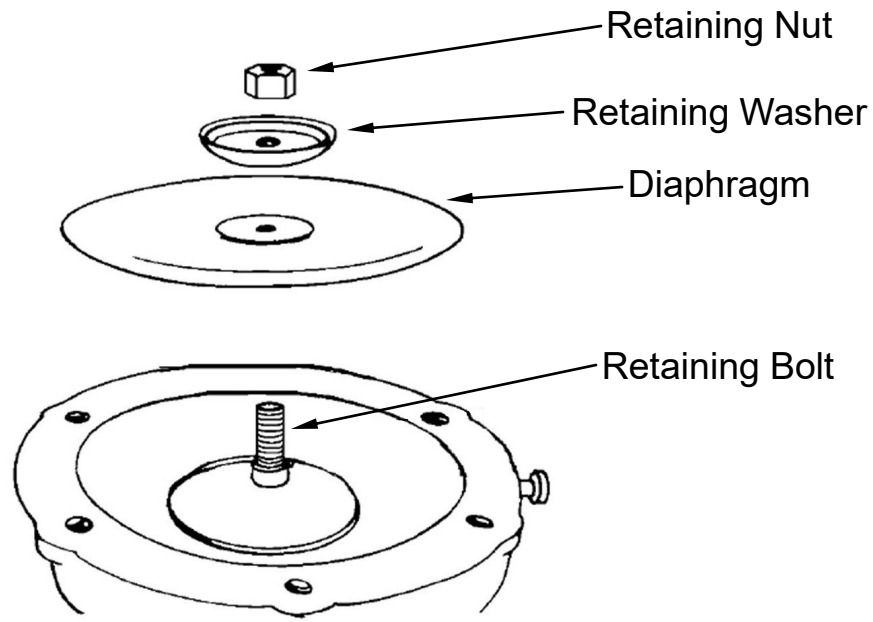
Hazardous Substance Alert

- Always drain and flush pump before servicing or disassembling for any reason (see instructions).
- Always drain and flush pump prior to returning unit for repair.
- Never store pumps containing hazardous chemicals.
- Before returning pump for service/repair, drain out all liquids and flush unit with neutralizing liquid. Then, drain the pump. Attach tag or include written notice certifying that this has been done. Please note that it is illegal to ship or transport any hazardous chemicals without United States Environmental Protection Agency Licensing.

Maintenance Schedule

| REGULAR SERVICE PERIOD | | First Use | Each Use | First month or 40 hours | Every 3 months or 500 hours | Every 6 months or 1000 hours |
|---|---------------------------|-----------|----------|-------------------------|-----------------------------|------------------------------|
| Performed at every indicated month or operating hour interval, whichever comes first. | | | | | | |
| Item | | | | | | |
| Crankcase Oil | Check Level | X | X | | | |
| | Replace | | | X | X | |
| Gearbox Oil | Check Level | X | X | | | |
| | Replace | | | X | X | |
| Pulsation Dampener Pressure (in models with dampeners) | Set to 20% of working PSI | X | | | | |
| | Check | | | X | X | |
| Diaphragms | Replace | | | | X | |
| Valves | Check | | | | X | |
| | Replace | | | | | X |
| O-rings | Check | | | | X | |
| | Replace | | | | | X |

Maintenance Instructions for All Models



1. After usage, flush the pump with clean water.

2. Hypro diaphragm pumps come with oil in the crankcase. **Hypro recommends changing oil after 40 hours of break-in operation and every three months or 500 hours, whichever comes first. Use Hypro Oil (Part Number 2160-0038).** Hypro Oil is a specially formulated, high-grade, nondetergent, SAE 30 weight oil designed to prolong pump life. To drain oil from the pump, remove the oil drain plug, located on the side of the pump body for series 110 and 140 and underneath the pump body for series 160 and 200. To fill the pump with oil, slowly pour oil into sight tube while turning the pump shaft. Turning the pump shaft purges all the air out of the crankcase. Always change oil when replacing diaphragms.

3. For winter storage or if a freezing condition will be encountered, flush pump with a 50/50 mixture of water and antifreeze.

Diaphragm and Valve Replacement for All Models

I. Valve and O-Ring Replacement

Occasionally debris can cause the valves to not seat properly or damage the o-rings. To check for this problem, follow these steps.

1. Remove valve retainers and valve holders. With holders removed, the valves can be readily removed and checked for debris or wear. Check o-rings as well. See the parts list for appropriate valve and o-ring kits.

2. Replace the necessary parts and reassemble.

II. Diaphragm Replacement

Change diaphragms every 500 hours or three months, whichever comes first.

1. Drain the oil from the pump by removing the cap from oil sight tube and removing the oil drain plug. Rotate the shaft to remove excess oil.

2. Remove the head bolts and heads.

3. Turn the crankshaft to bring the retaining bolt as far out as possible.

4. Use a 13 mm box wrench to remove the diaphragm retaining nut. Remove the nut, retaining washer and diaphragm.

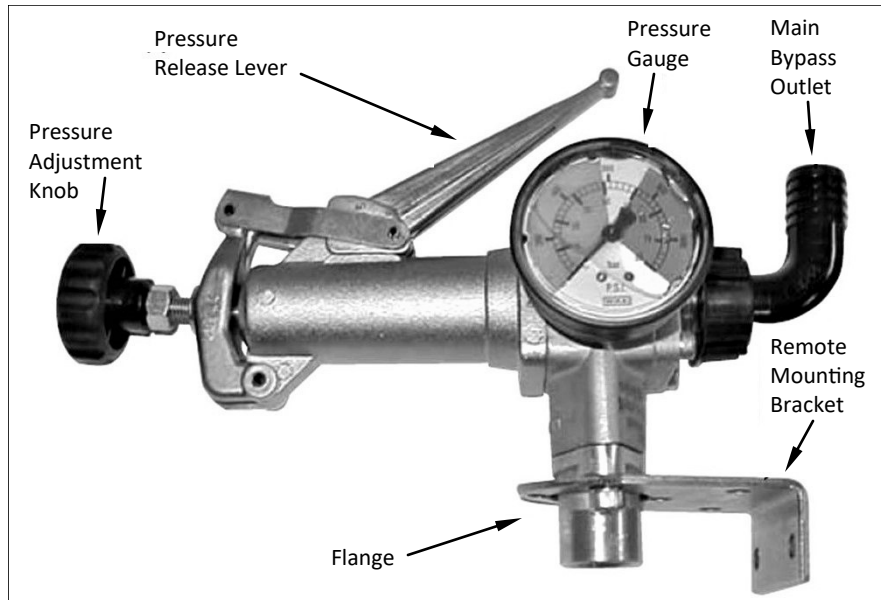
5. When reinstalling, turn the crankshaft to bring the piston to its downstroke and seat the new diaphragm into the sleeve groove. Install the retaining washer and tighten the nut. Clean any excess oil from the area. Install the new port o-rings. Install the heads and tighten the bolts.

6. Replace the pulsation dampener diaphragm by first bleeding the air from the dampener. Remove the cover holding the dampener assembly together, then replace the diaphragm. See Pump Operation Instructions on page 3, Ref. Number 3.

7. Refill the crankcase with Hypro Oil (Part Number 2160-0038). Rotate the shaft to distribute the oil and fill to the proper level.

Control Unit 9910-GH50

The Model 9910-GH50 Control Unit is designed for the control of pressure up to 725 PSI and flows up to 51 GPM. It consists of an adjustable pressure relief valve, pressure gauge and a manual pressure release lever.



Installation

Direct Mounting:

1. Remove the two Allen bolts (Ref. 23)* from the flange (Ref. 24)* on the control unit. Retain the bolts for later. Do not misplace the o-ring.
2. Locate the outlet elbow (Ref. 52)** on the top of the discharge manifold of the pump.
3. Using thread sealant, attach the flange onto the outlet elbow. Tighten the flange to the desired orientation.
4. Verify o-ring is in place on the flange. Place the control unit onto the flange in the desired orientation, and replace and tighten the bolts previously removed in step 1.
5. Connect the bypass hose to the bypass port hose barb (Ref. 38)* and run it unrestricted back to the tank.
6. Connect the desired amount of lines to the outlet port hose barbs (Ref. 42)**. Unused ports can be shut off with the ball valve, or they can be plugged.

* Refer to diagram on page 7.

** Refer to diagram on page 10 or 12.

Remote Mounting:

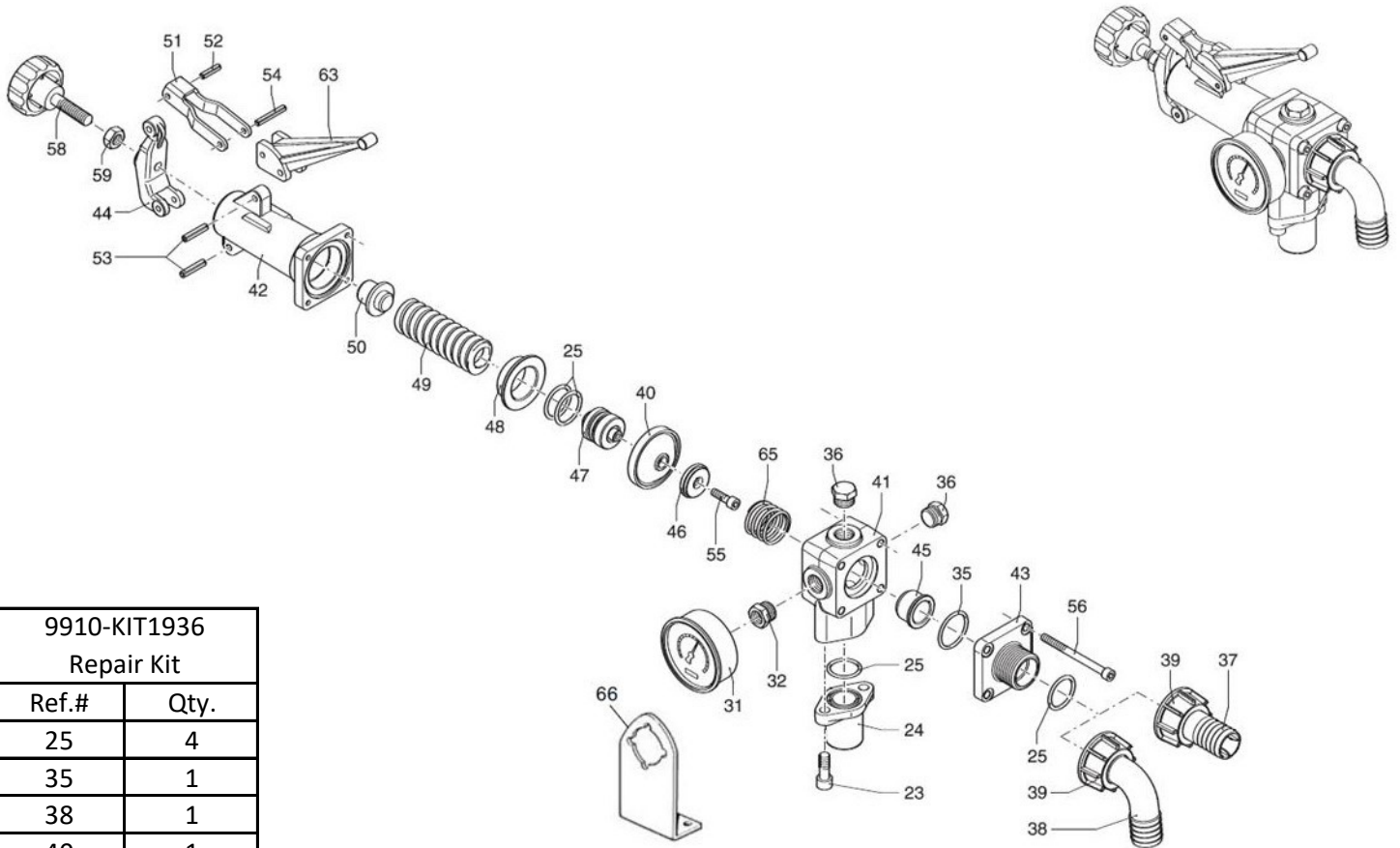
1. Remove the two Allen bolts (Ref. 23)* from the flange on the control unit.
2. Position the mounting bracket (Ref. 66)* over the flange in the desired position. Replace and secure bolts.
3. With high pressure hose, connect the NPT flange on the control unit to the NPT elbow at the top of the discharge manifold of the pump.
4. Connect the bypass hose to the bypass port hose barb (Ref. 38)* and run it unrestricted back to the tank.
5. Connect the desired amount of lines to the outlet port hose barbs (Ref. 42)**. Unused ports can be shut off with the ball valve, or they can be plugged.

NOTE: For all discharge connections, use hose rated equal to or greater than the maximum pressure rating of the pump.

Operation

1. Refer to the pump operation instructions for proper operation of the pump.
2. The control unit can be put into full bypass mode by lifting the pressure release lever into the up position.
3. With the pressure release lever in the down (pressure) position, pressure can be controlled with the adjustment knob at the end of the relief valve. Turning it clockwise will increase the operating pressure and turning it counterclockwise will decrease the pressure.
4. Flow can be controlled with the ball valves on each of the outlet ports.

Parts List for Control Unit 9910-GH50

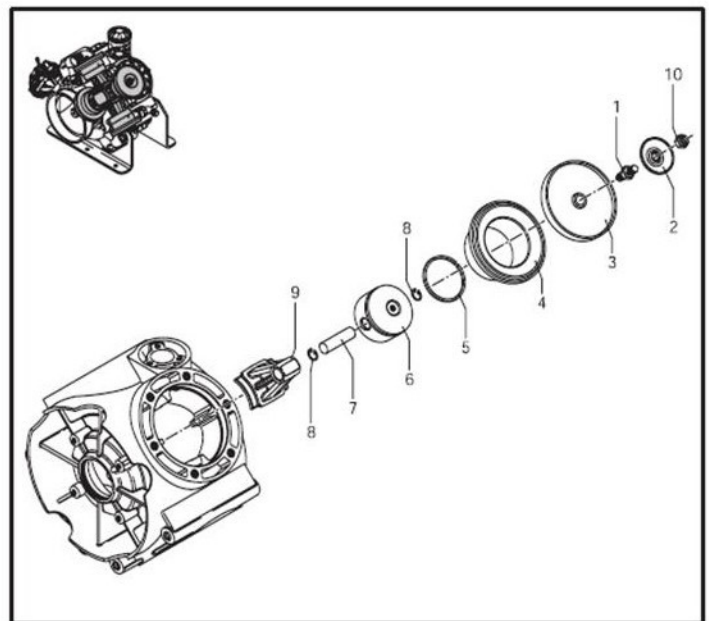
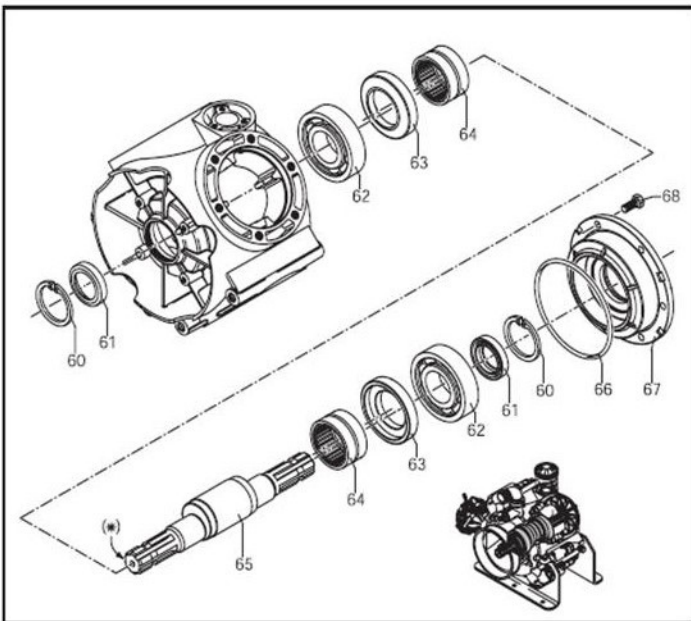
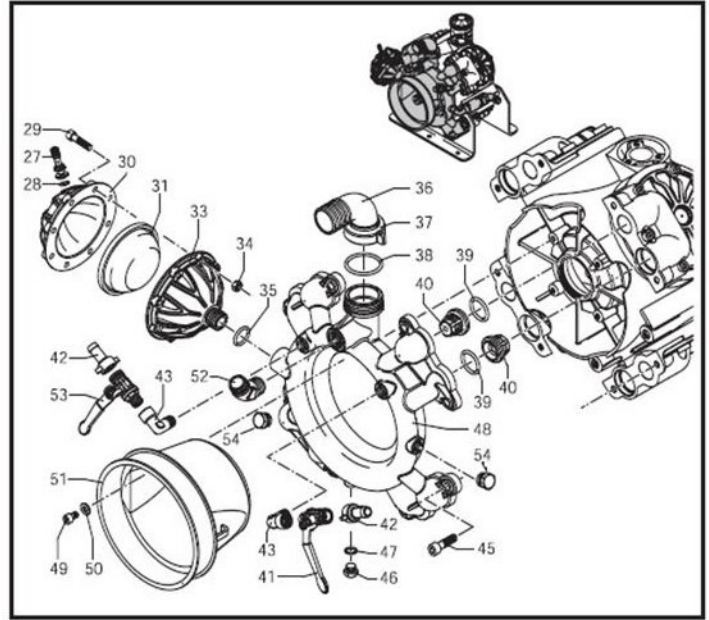
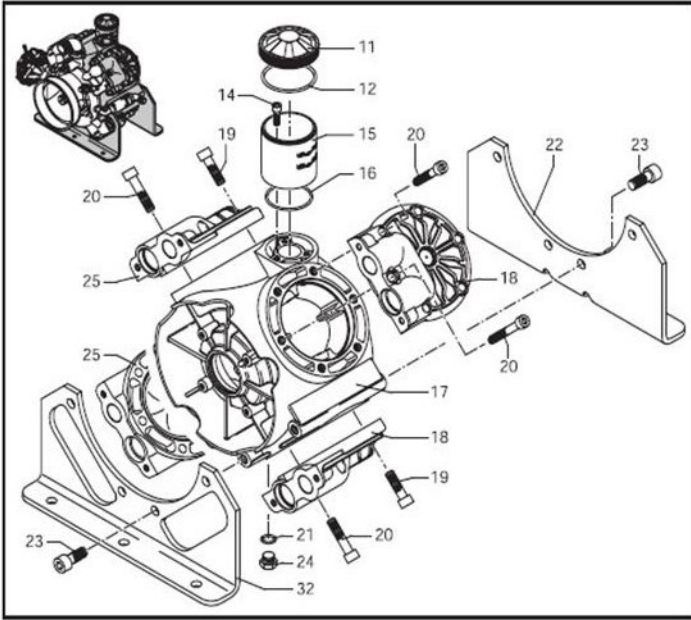


| 9910-KIT1936 Repair Kit | |
|----------------------------|------|
| Ref.# | Qty. |
| 25 | 4 |
| 35 | 1 |
| 38 | 1 |
| 40 | 1 |
| 45 | 1 |
| 46 | 1 |
| 65 | 1 |

| Item # | Part # | Description | # Req. | Item # | Part # | Description | # Req. |
|--------|--------------|----------------------|--------|--------|--------------|--------------------------|--------|
| 23 | 9910-620610 | M8x30 Bolt | 2 | 46 | 9910-680470 | Valve | 1 |
| 24 | 9910-550394 | Flange 3/4" G(F) | 1 | 47 | 9910-680480 | Valve Piston | 1 |
| 25 | 9910-550350 | O-Ring | 4 | 48 | 9910-680490 | Piston Valve | 1 |
| 31 | 9910-1880290 | Pressure Gauge | 1 | 49 | 9910-680500 | Regulating Spring | 1 |
| 32 | 9910-130170 | Pipe Reducer | 1 | 50 | 9910-680510 | Spring Guide | 1 |
| 35 | 9910-280220 | O-Ring | 1 | 51 | 9910-680520 | Lever Guide | 1 |
| 36 | 9910-130171 | Plug | 2 | 52 | 9910-680530 | Pin | 1 |
| 37 | 9910-550210 | Hose Barb (Optional) | 1 | 53 | 9910-680540 | Pin | 2 |
| 38 | 9910-550370 | Elbow (Standard) | 1 | 54 | 9910-680550 | Pin | 1 |
| 39 | 9910-550242 | Ring Nut | 1 | 55 | 9910-680700 | M6x20 Bolt | 1 |
| 40 | 9910-390740 | Diaphragm (Buna) | 1 | 56 | 9910-680570 | M6x60 Bolt | 4 |
| 41 | 9910-680412 | Valve Body | 1 | 58 | 9910-660130 | Control Knob | 1 |
| 42 | 9910-680423 | Upper Valve Side | 1 | 59 | 9910-180150 | Nut | 1 |
| 43 | 9910-680432 | Discharge Flange | 1 | 63 | 9910-680452 | Control Lever | 1 |
| 44 | 9910-680442 | Tension Adj. Support | 1 | 65 | 9910-320420 | Spring | 1 |
| 45 | 9910-680460 | Valve Seat | 1 | 66 | 9910-1150590 | Remote Mounting Bracket* | 1 |

* Order Separately

Parts Illustrations for Model 9910-DBA160



NOTE: From manifold side, heads on right side are marked with a "D" (#18)
 And heads on the left side are marked with an "S" (#25).

Parts List for Model 9910-DBA160

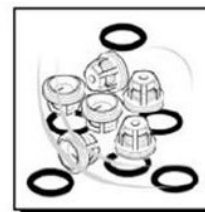
| Ref. # | Part # | Description | # Req. |
|--------|--------------|----------------------------|--------|
| 1 | 9910-2240100 | Diaphragm Pin | 4 |
| 2 | 9910-580090 | Retaining Washer | 4 |
| 3 | 9910-2240080 | Diaphragm, Buna | 4 |
| 4 | 9910-2240510 | Sleeve DBA160 | 4 |
| 5 | 9910-260230 | Piston Ring DBA160 | 4 |
| 6 | 9910-2240060 | Piston DBA160 | 4 |
| 7 | 9910-260700 | Piston Pin DBA160 | 4 |
| 8 | 9910-160-691 | Pin Ring | 8 |
| 9 | 9910-2380050 | Connecting Rod | 4 |
| 10 | 9910-2240110 | Nut | 4 |
| 11 | 9910-1800060 | Black Cap DBA160 | 1 |
| 12 | 9910-1040060 | O-Ring | 1 |
| 14 | 9910-540290 | M8x25 Bolt | 3 |
| 15 | 9910-2240070 | Oil Sight Glass | 1 |
| 16 | 9910-2240270 | O-Ring | 1 |
| 17 | 9910-2380010 | Pump Body DBA160 | 1 |
| 18 | 9910-2240450 | Right Head (D) | 2 |
| 20 | 9910-2240470 | M12x70 Bolt | 24 |
| 21 | 9910-180101 | O-Ring | 1 |
| 22 | 9910-2380040 | Base | 1 |
| 23 | 9910-2380060 | M14x35 Bolt | 8 |
| 24 | 9910-820361 | Plug | 1 |
| 25 | 9910-2240451 | Left Head (S) | 2 |
| 27 | 9910-180020 | Air Valve | 1 |
| 28 | 9910-650542 | Gasket | 1 |
| 29 | 9910-621781 | M8x40 Bolt | 8 |
| 30 | 9910-629211 | Upper Air Chamber | 1 |
| 31 | 9910-550190 | Air Chamber Diaphragm-Buna | 1 |
| 32 | 9910-2380030 | Base | 1 |
| 33 | 9910-1520770 | Lower Air Chamber | 1 |
| 34 | 9910-1520740 | Threaded Adapter | 8 |
| 35 | 9910-720030 | O-Ring | 1 |
| 36 | 9910-540550 | Elbow, 1-1/2" | 1 |
| 37 | 9910-540540 | Ring Nut | 1 |
| 38 | 9910-250310 | O-Ring | 8 |
| 39 | 9910-680070 | O-Ring | 8 |
| 40 | 9910-759051 | Complete Valve | 8 |
| 41 | 9910-130491 | Right Valve | 1 |

| Ref. # | Part # | Description | # Req. |
|--------|--------------|-----------------|--------|
| 42 | 9910-110130 | Hose Barb, 1/2" | 2 |
| 43 | 9910-2240260 | Valve Elbow | 2 |
| 45 | 9910-650330 | M10x35 Bolt | 8 |
| 46 | 9910-880581 | Cap, Brass | 1 |
| 47 | 9910-820510 | O-Ring | 1 |
| 48 | 9910-2380071 | Manifold | 1 |
| 49 | 9910-850250 | M8x12 Bolt | 4 |
| 50 | 9910-390311 | Washer | 4 |
| 51 | 9910-1500470 | Shield | 1 |
| 52 | 9910-851650 | Outlet Elbow | 1 |
| 53 | 9910-KIT3497 | Left Valve | 1 |
| 54 | 2406-0023 | Plug | 2 |
| 60 | 9910-2240160 | Snap Ring | 2 |
| 61 | 9910-2240150 | Seal Ring | 2 |
| 62 | 9910-2240430 | Bearing | 2 |
| 63 | 9910-2240121 | Con Rod Ring | 2 |
| 64 | 9910-850320 | Roller Bearing | 2 |
| 65 | 9910-2240173 | Crankshaft | 1 |
| 66 | 9910-2240290 | O-Ring | 1 |
| 67 | 9910-2240020 | Flange | 1 |
| 68 | 9910-160670 | M10x25 Bolt | 6 |



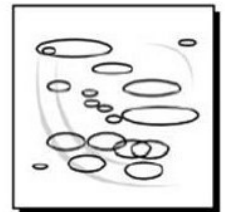
9910-KIT2456
Diaphragm Kit

| Ref.# | Qty. |
|-------|------|
| 3 | 4 |



9910-KIT2374
Valve Kit

| Ref.# | Qty. |
|-------|------|
| 39 | 8 |
| 40 | 8 |



9910-KIT1936
Repair Kit

| Ref.# | Qty. |
|-------|------|
| 12 | 1 |
| 16 | 1 |
| 21 | 1 |
| 35 | 1 |
| 38 | 1 |
| 39 | 8 |
| 47 | 1 |
| 66 | 1 |

| Ref. # | Description | Tightening Torque | |
|--------|-------------|-------------------|------|
| | | In Lbs. | Nm |
| 1 | Dia. Pin | 262.5 | 29.4 |
| 10 | Nut | 262.5 | 29.4 |
| 14 | Bolt | 87.5 | 9.8 |
| 19 | Bolt | 435.5 | 49.0 |
| 20 | Bolt | 435.5 | 49.0 |
| 23 | Bolt | 435.5 | 49.0 |
| 24 | Plug | 171.4 | 19.6 |
| 27 | Air Valve | 34.5 | 3.9 |
| 29 | Bolt | 171.4 | 19.6 |
| 45 | Bolt | 350.0 | 39.2 |
| 46 | Brass Cap | 171.4 | 19.6 |
| 49 | Bolt | 87.5 | 9.8 |
| 54 | Plug | 171.4 | 19.6 |
| 68 | Bolt | 350.0 | 39.2 |

Warranty

LIMITED WARRANTY FOR NEW AG SPRAY EQUIPMENT

WHO MAY USE THIS LIMITED WARRANTY. This limited warranty (the "Limited Warranty") is provided by Fimco, Inc. ("Ag Spray Equipment") to the original purchaser ("you") of the Equipment (as defined below) from Ag Spray Equipment or one of Ag Spray Equipment'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. Ag Spray Equipment warrants that any new Equipment will be free from defects in material and workmanship for a period of **one (1) year** (homeowner), **90 days** (commercial user), after delivery of the Equipment to you (the "Warranty Period"). The Warranty Period is not extended if Ag Spray Equipment 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 Ag Spray Equipment or its authorized dealers; (3) damage or depreciation due to normal wear and tear; (4) defects or damage due to failure to follow Ag Spray Equipment'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 Ag Spray Equipment's reasonable control; (6) accessories, attachments, tools or parts that were not manufactured by Ag Spray Equipment, 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 Ag Spray Equipment 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: Ag Spray Equipment, 1000 Fimco Lane, North Sioux City, SD 57049; and (2) make the Equipment available to Ag Spray Equipment or an authorized dealer within a reasonable period of time. For more information about this Limited Warranty, please call: **800-274-1025**

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