



LEWIS POULTRY HOUSECLEANER OWNER / OPERATOR MANUAL



MODEL # SP-1 DELUXE HOUSECLEANER

Manufactured by:

**Lewis Brothers Manufacturing, Inc.
Post Office Box 146
Baxley, GA 31515
Telephone: (912) 367-4651
Fax: (912) 367-3958**

1-29-14

INTRODUCTION

All Lewis Brothers equipment is manufactured under stringent production and quality assurance procedures prior to preparation for shipment. A final quality check is performed on all equipment before shipping.

The best equipment is only as good as its operation and management. Sound operation and good preventive maintenance practices are essential to efficient performance of your Lewis Poultry Housecleaner.

Questions on parts and service for the equipment covered in this manual should be referred to the local dealer from whom the equipment was purchased, or the nearest Lewis Brothers Dealer.

We sincerely thank you for purchasing Lewis Brothers equipment.

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SAFETY

OWNER'S AND OPERATOR'S RESPONSIBILITY

This manual is intended for use with your Lewis Poultry Housecleaner. Extra effort has been made to provide for safe operation of this equipment. This manual as well as the safety decals placed on the equipment is part of that effort. Your new Housecleaner should perform the various functions for which it was designed if it is maintained, adjusted to your specific conditions, and operated correctly.

It is the responsibility of the owner and every operator of this equipment to read and understand this manual before initial startup, before each season, before performing service or maintenance tasks and prior to storing the equipment. Each employee who will work on or around this equipment should be instructed in how to do so safely.

It is important to understand the operational methods and safety issues mentioned in this manual. Lewis Brothers cannot anticipate all conceivable ways service and operational functions might be performed and of the possible hazardous consequences of such. Anyone using or servicing this equipment must first satisfy themselves that their chosen methods do not jeopardize the safety of themselves, others, or the equipment.

Read the warranty on page 8. The purchaser is required to fill out and return the registration card supplied with this owner's manual within ten (10) days of purchase to Lewis Brothers Manufacturing to be eligible for warranty coverage.

Genuine Lewis replacement parts will insure the durability and long life of your Housecleaner. Lewis repair parts and optional equipment should be ordered through your Lewis Brothers' Dealer.

Operators should thoroughly inspect the Housecleaner before and after each use. Failure to repair or replace worn parts could result in damage or excess wear to other parts.

GENERAL PRECAUTIONS

- **MAKE SURE** everyone is clear of the equipment before starting the tractor's engine and while equipment is under operation.
- **DO NOT** allow anyone to ride on this equipment.
- **KEEP** hands, feet, hair and clothing away from all moving parts. Do not wear loose clothing while operating equipment, as this may present an entanglement hazard.
- **DRIVE** the pulling tractor at speeds compatible with conditions and good safety practices. This is especially important when operating over rough ground, on slopes, crossing ditches or while turning.
- **MAKE SURE** hitch components are attached securely before operating or transporting.
- **USE** flashing warning lights when on highways, except where prohibited by law.
- **KEEP** all shields in place.
- **MAXIMUM** towing speed is 25 MPH.
- **OBSERVE** all safety decals located on machine. Should any safety decal become damaged, unreadable, or lost, **REPLACE IT IMMEDIATELY**. New decals may be obtained from your Lewis Brothers' dealer.

WARRANTY

LEWIS BROTHERS MANUFACTURING, INC.

LIMITED WARRANTY

Lewis Brothers Manufacturing, Inc. (hereinafter referred to as "LBM") warrants each item of new equipment manufactured by LBM to be free from defects in material and workmanship under normal use and service.

The obligation of LBM under this LIMITED WARRANTY is limited to repair or replacement, as LBM may elect, of any parts that prove, in LBM's judgment, to be defective in material and workmanship within the first twelve (12) months after the date of invoice to the original purchaser. THIS LIMITED WARRANTY DOES NOT APPLY TO BELTS, HYDRAULIC HOSES, TIRES, AND OTHER SERVICE ITEMS, WHICH SHALL HAVE A NINETY (90) DAY WARRANTY.

THIS LIMITED WARRANTY WILL APPLY FOR (3) MONTHS ONLY WHEN THE UNIT IS USED IN A COMMERCIAL APPLICATION.

All warranty part repairs and replacements must be made by a certified LBM dealer. Any outside work or alterations made without written approval of LBM will render this LIMITED WARRANTY void.

LBM's obligation specifically excludes any liability for consequential damages, such as loss of profit, delays, expenses, damage to goods or property used in connection with or processed in or by the product sold, or damage to the product sold from whatever cause, whether or not such loss is due to negligence by LBM.

This LIMITED WARRANTY shall not apply to any item that has been operated in a manner not recommended by LBM.

No person is authorized to give any other warranties or to assume any other liability on behalf of LBM unless made in writing by Lewis Brothers Manufacturing, Inc.

THIS LIMITED WARRANTY IS IN LIEU OF AND REPLACES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED, AS ARE ALL OTHER REPRESENTATIONS TO THE USER-PURCHASER AND ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, ON THE PART OF LBM.

LEWIS BROTHERS MANUFACTURING, INC.
P.O. BOX 146 - BAXLEY, GA. 31513
FEBRUARY 1, 2007

SPECIFICATIONS

SPECIFICATIONS

HOUSE CLEANER MODEL SP-1

Pump Max PSI @ 540 R.P.M.	700 psi
Pump Max Flow @ 540 R.P.M.	42 gpm
Tank Volume	500 Gallons
Height	60"
Width	74"
Length	13'
Weight (empty)	1500 lbs
Tire Pressure	50 PSI
Tire Size	9.5L X 15SL
PTO Horsepower (Minimum)	20HP

SETUP AND OPERATION

MACHINE SETUP

In familiarizing oneself with the poultry housecleaner, you need to identify some specific parts. (Figure 1 through Figure 4)

The housecleaner has an effective range of operation between 50 and 700 PSI with sprayer tip output between 10 and 40 gallons per minute.

Some of the basic rules that must be followed if you are to receive good service from your sprayer are as follows:

1. Never allow your pump to exceed 700 PSI. Pressure over 700 PSI will eventually rupture the diaphragms in your pump.
2. The diaphragm pump cannot be drained to avoid freezing. A 50/50 solution of antifreeze and water must be poured into the pump inlet while slowly turning the pump shaft. Continue filling pump until antifreeze solution flows from the hand gun nozzle. Drain the tank and remove the filter cup to avoid cracking. System pressure will be reduced when the tank agitator is in use. In order to maintain maximum available pressure; use the agitator only when needed.
3. Keep agitator turned off unless you are using a material that is difficult to keep in solution. When you use very much agitation, you will notice a drop in system pressure.

OPERATING INSTRUCTIONS

1. Be sure oil is half way up the clear oil sight tube. If necessary, fill to correct level with 30W non-detergent motor oil.
2. Make sure the suction hose barb is properly secured to the section union.
3. Check the charge pressure on the 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 inlet hose.
5. Always allow pump to start under low pressure by putting the pressure release lever in pump position.
6. Start pump and let it run for approximately one minute at low pressure. Stop pump and check the oil level in sight glass. Oil should be halfway up the sight glass. Add 30W non-detergent oil if necessary.
7. Return pressure release lever to pressure position and adjust pump to desired pressure by changing the relief valve setting on the control unit, relief valve or unloader.

I. SPRAYING SIDE WALLS

1. Set the sprayer nozzles 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 600 – 700 PSI.
3. When making the first pass along the house wall, the operator will want to maintain a quicker pace. This will shake the loose material from the wall and allow time for the water to soak in.
4. Repeat this procedure for the other wall before returning to the first wall for the cleaning pass. This second pass should be at a slower pace and do more cleaning than the “wet-down” pass did before.
5. Spray nozzles may be pivoted forward or backward to obtain the best results. Try nozzles turned rearward 10 – 15 degrees on the first pass and forward 10 – 15 degrees on the next pass in order to be able to clean on both the front and back sides of truss legs, etc.
6. The relief valve bypass line must remain unrestricted at all times.

II. WASHING THE CEILING

Two sets of spray tips are included with the sprayer. The wide-angle tips (these have a wide split across the tip) Part No. OC40, are used to spray drop ceiling houses. The narrow nozzles, Part Number TP8050, are used for rafters, trusses, etc.

1. Turn cluster nozzle up toward the ceiling. Adjust this nozzle to spray about 10 – 15 feet of the ceiling area.
2. Set pressure to about 600 – 700 PSI, and use a ground 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 inches from the floor using the wide-angle spray tips.
2. Set pressure at about 60 – 80 PSI. At this pressure, you are spraying about 10 gallons per minute.

IV. HANDGUN

The handgun is equipped with a retractable reel and can be used in areas where the sprayer may not be easily maneuvered. House corners and small areas around trusses along with equipment such as bins, fans, and brooders can be cleaned using the handgun. The wand is equipped with an adjustable handle that can change the spray pattern from a direct stream to a fan pattern by rotating the nozzle and thereby eliminating the need to change tips. Excessive use of the hand gun trigger may damage the pump.



Never operate handgun above 400 PSI. Damage to the pump diaphragm will occur.



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.

RELIEF VALVE BYPASS LINE MUST BE FULL SIZE AND UNRESTRICTED AT ALL TIMES. DO NOT CONNECT THIS LINE TO ANY RESTRICTION, SUCH AS AGITATION DEVICES IN THE SPRAY TANK.



HYPRO CORPORATION RECOMMENDS THAT YOU DO NOT PUMP ASPHALT, ASPHALT SEALER, ROOFING COMPOUNDS, CONCRETE SEALERS, OR TWO STEP CURING PRODUCT, OR FLAMMABLE LIQUID WITH THIS PUMP. PERSONAL INJURY MAY RESULT AND ALL WARRANTY WILL BE VOID.

**HYPRO APPLICATIONS TOLL FREE NUMBER
1-800-445-8360**



NEVER MAKE TURNS WHILE PTO IS ENGAGED. DOING SO WILL DAMAGE PUMP, BEARINGS & WILL VOID ALL WARRANTY.

SAFETY

GENERAL SAFETY INFORMATION

Use of a pressure relief device on the discharge side of the pump is required to prevent damage from pressure build up if the discharge is closed or blocked while the power source is still running.



Do not pump flammable or explosive fluids such as gasoline, fuel, oil, kerosene, etc. Do not use in explosive atmospheres. The pump should be used only with liquids compatible with the pump component materials. Do not pump asphalt, asphalt sealer, roofing compounds or concrete sealers or any two step curing products. Personal injury may result and the warranty will be void. If there are any questions, call HYPRO APPLICATIONS toll free number (1-800-445-8360.)



- Do not operate pump above recommended RPM. (540 RPM)
- Do not pump at pressures higher than the maximum recommended pressures. (See Applications)
- Operate pump between temperature range of 45°F to 140°F.
- Make certain that the power source conforms to the requirements of your equipment.
- Provide adequate protection in guarding around the moving parts such as the shaft and pulleys.
- Disconnect power before servicing.
- Release all pressure within the system before servicing any component.
- Drain all liquids from the system before servicing.
- Secure the discharge lines 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 Section)
- Replacement parts should be properly rated for system pressure and all should exceed relief valve settings. Never install used pipe or hoses.
- Do not use these pumps for pumping water or other liquids for human or animal consumption.

MAINTENANCE

MAINTENANCE INSTRUCTIONS

1. After use, flush pump with clean water.
2. Change oil and diaphragms after 500 hours of use. To drain oil from the pump, remove drain plug located at bottom of pump housing. Be careful not to over tighten when replacing drain plug. To fill pump with oil, slowly pour oil into sight tube while turning the pump shaft. Turning the pump shaft purges all of the air out of the diaphragms.
3. For winter storage, or if freezing conditions will be encountered, flush pump with 50 / 50 mixture water and antifreeze.

DIAPHRAGM AND VALVE REPLACEMENT FOR MODELS DBA160.

I. VALVE AND O-RING REPLACEMENT

Occasionally debris can cause the valve 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 readily be removed and checked for debris or wear. Check o-rings as well. See parts list for appropriate valve and O-ring kits.
2. Replace the necessary parts and reassemble.

II. DIAPHRAGM REPLACEMENT

1. Drain the oil from the pump by removing cap from oil sight tube and removing oil drain plug. Rotate the shaft to remove excess oil.
2. For DBA160 Pumps remove head bolts and heads. For the D1900 pump, remove manifolds and valves before removing heads.
3. Turn the crankshaft to bring the retaining bolt as far out as possible.
4. Use a 13MM box wrench to remove the diaphragm retaining washer and diaphragm.
5. When reinstalling, turn the crankshaft to bring the piston to its down stroke and seat the new diaphragm into the sleeve groove. Install new port o-rings and install heads and tighten bolts. (35 FT lbs.)
6. Replace the pulsation damper diaphragm by first bleeding the air from the damper. Remove the cover holding the damper assembly together, then replace diaphragm.
7. Refill crank case with 30W non-detergent oil. Rotate the shaft to distribute oil and fill to the proper level.

Troubleshooting Chart

SYMPTOM	PROBABLE CAUSES	CORRECTIVE ACTION
The pump does not draw water	One or more valves are seating improperly. Suction line is plugged or collapsed. Clogged strainer.	Remove valve & check for debris. Examine line. & Clean strainer.
The liquid flow is irregular.	The charge in the pulsation damper is incorrect. One or more valves are seating improperly.	Check pressure in pulsation damper (10% working pressure) Remove valve and check for debris. Examine the valve seating and clean them.
Output drops & 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 & heads. Drain oil & clean crankcase of water. Replace diaphragms, heads & manifold. Refill with 30W non-detergent motor oil.



Hazardous Substance Alert

- Always drain and flush pump before servicing or disassembling for any reason
- Always drain and flush pump prior to returning unit for repair.
- Never store pumps containing hazardous chemicals.

TECHNICAL INFORMATION

Hypro Corporation

July 12, 1993

Dear Hypro Customer:

It is important that Hypro pumps be used in appropriate applications. Safety for our customers must be our number one concern. Unfortunately, sometimes end users try to use our products in applications for which they were not intended which can result in a catastrophic failure.

We have been informed that Hypro diaphragm pumps have malfunctioned and caused personal injury to operators when that pump is used for pumping asphalt, asphalt sealer, roofing compounds, concrete sealers, two-step curing compounds and flammable liquids. You are being notified that Hypro diaphragm pumps must be used for those applications. In instances where Hypro diaphragm pumps are being used for those applications, that use should be terminated immediately. Hypro will provide no warranty or insurance coverage for any injuries that occur for subsequent use of the pump for the above mentioned applications.

Please notify your customers of this restriction. We have special warning tags for the pumps to advise the end user of the danger of pumping asphalt, asphalt sealers, roofing compounds, concrete sealers, two-step curing compounds, and flammable liquids. This special warning will appear on all diaphragm pumps. If you need an additional supply of these warning tags, please let us know and we will send them to you at no charge.

Sincerely,

Donald L. Jorgensen
Vice President and Chief Operating Officer
Agricultural Products Division

IMPORTANT

FAILURE TO FOLLOW INSTRUCTIONS WILL VOID WARRANTY

SPRING REWIND REELS

NEVER WIND MORE THAN 17 USABLE TURNS AND NEVER WIND SPRING IN REVERSE OR FREE WHEEL PAST START OF SPRING LOAD.

1. RELEASE SPRING

To release the spring, disengage the pawl from the ratchet wheel and allow the spring to unwind completely and slowly.

2. SET SPRING TENSION

To set spring tension, turn the disc by hand, carefully, in the direction the outlet is facing, the number of turns listed above for your particular spring. Lock the reel by engaging the pawl in the ratchet wheel.

CAUTION:

Do not wind more than the number of turns required rewinding the hose. Tension can be reduced after hose has been installed on the reel.

3. ATTACH HOSE OR CABLE

Hose: After setting spring tension, insert hose between rollers and attach hose fitting to reel outlet.

NOTE: On series 900 reels, outlet riser may be removed to attach hose.

Cable: After setting spring tension, feed cable through drum and hub, then connect to collector ring terminals, (remove cover to expose collector ring.)

IMPORTANT: Always use a cable clamp connected to drum to keep pressure off the wire.

4. WIND HOSE OR CABLE ON REEL

Pull gently on hose until pawl drops into one of the cutout positions on the ratchet wheel. (Figure A) Release hose slowly and allow retracting until it is completely on the reel. Then, pull hose out until the pawl drops into one of the locking notches on the ratchet wheel (figure B) to lock the reel.

5. REDUCE SPRING TENSION

If spring tension is greater than needed to properly retract the amount of the hose attached, tension can be decreased by winding hose completely on reel, allowing end of the hose to pass through the roller assembly, and allowing spring to carefully unwind until the proper tension is reached. Relock the reel, as above, and pass hose back through rollers.

6. ATTACHING HOSE OR CABLE STOP

Draw hose through rollers to point where hose stop should be attached according to your individual requirements. At this point, put the two halves of hose stop over hose and fasten with bolts provided.

IMPORTANT

A flexible connector must be used between the inlet pipe and the swivel joint on the reel or our guarantee will be void.

Spring motors are matched to a specific length and diameter of hose or cable. The reel may not function properly if the length or diameter of hose varies from that for which the reel is designed. When ordering parts, always give model number and serial number of reel and describe part as fully as possible.

Guarantee: Equipment manufactured by Clifford B. Hannay & Sons, Inc. is guaranteed for one year from date of shipment when installed according to our instructions, given proper care, and used for the purpose for which it is designed. Equipment which proves to be defective upon our inspection will be replaced free of charges, F.O.B., Western, New York. No allowance will be made for labor charges incurred in making exchanges, replacements or repairs.

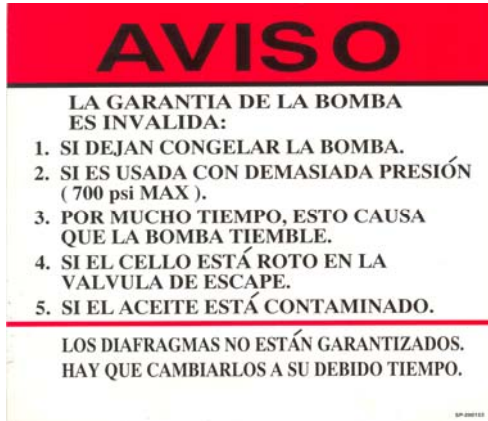
We expressly disclaim any liability for damage or injuries resulting from the use, operation, installation, service, maintenance or failure of equipment.

Before returning any material to us for our inspection, contact our factory for proper authorization, or material will not be accepted.

HANNAY REELS
THE REEL LEADER

Clifford B. Hannay & Sons, Inc.
600 East Main Street
Westerio, New York, USA 12193-0159
Telephone 518-797-3791
Fax 1-800-REELING (733-5464)

DECALS



SP-200153



HK-100919



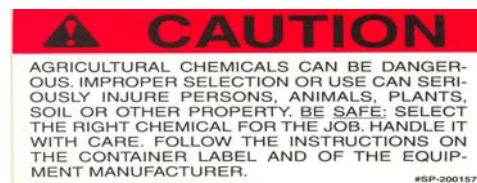
SP-200151



SP-200154



SP-200152



SP-200157



HK-101669



HK-100899

PARTS

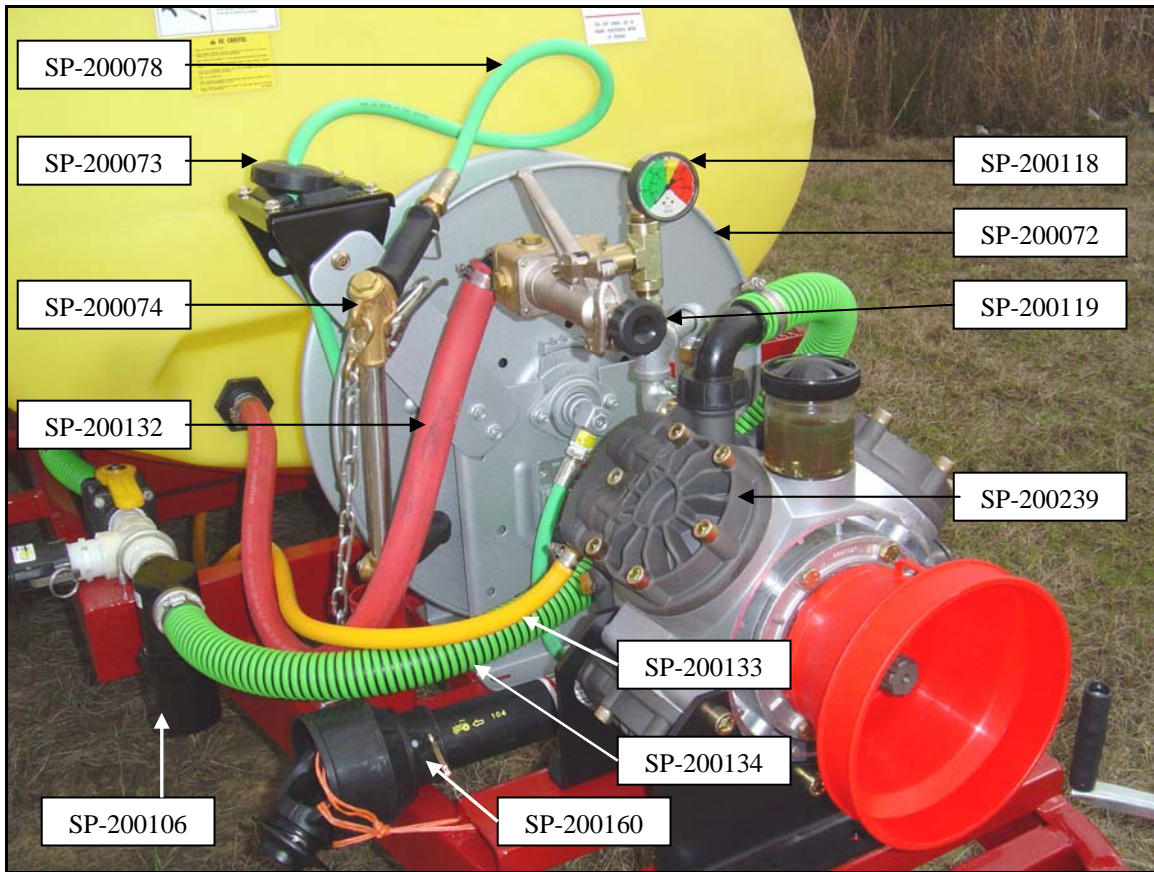


Figure 1

SP-200078	Hose Assembly
SP-200073	Hose Ballstop For Reel
SP-200074	Spray Gun
SP-200132	Hose, Relief Valve To Tank
SP-200106	Strainer
SP-200160	Drive Shaft Assembly
SP-200134	Hose, Line Strainer To Pump
SP-200133	Hose, Pump To Agitator
SP-200239	Pump
SP-200119	Main Relief Valve
SP-200072	Hose Reel Less Hose
SP-200118	Pressure Gauge

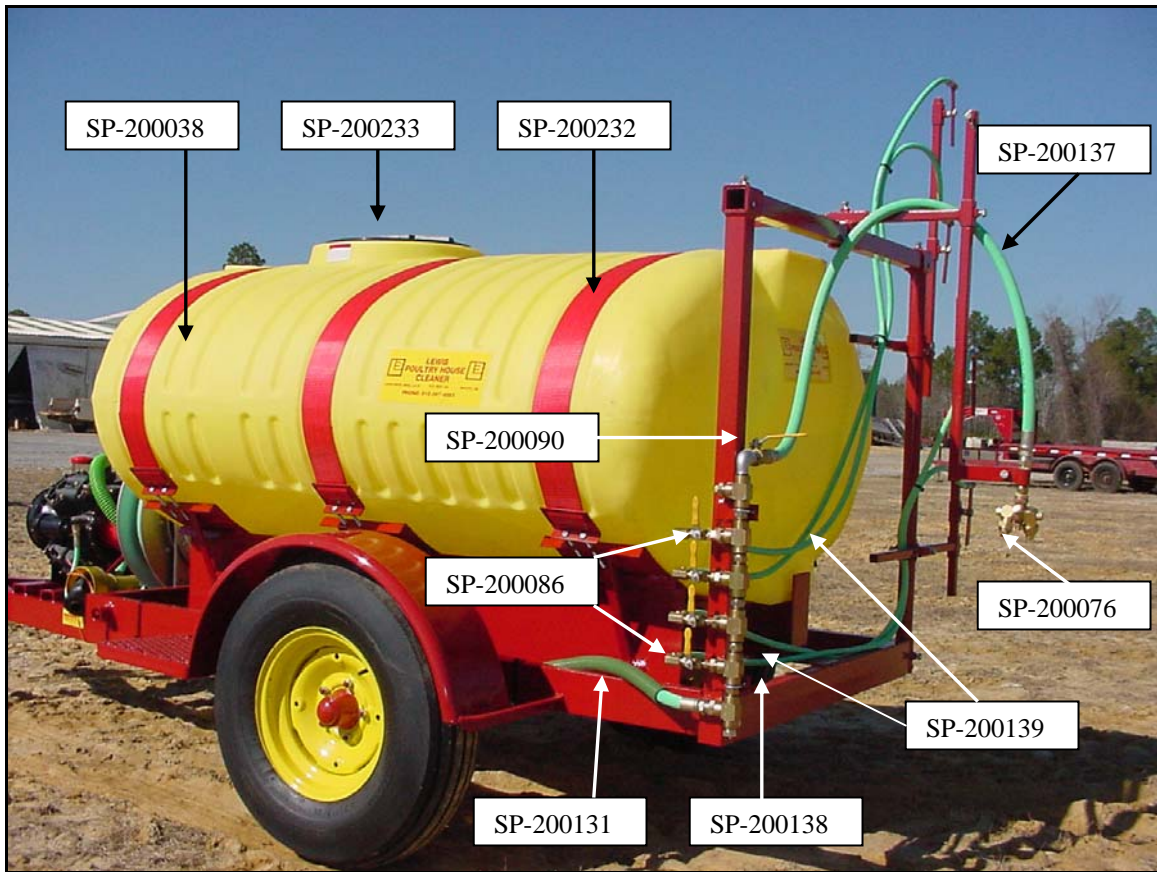


Figure 2

SP-200038	Tank, Elliptical 500 Gallon
SP-200233	16" Fillwell Cover
SP-200232	Sprayer Tank Strap
SP-200090	Ball Valve ¾"
SP-200086	Ball Valve 3/8" (Quantity 4)
SP-200131	Pump To Manifold Sleeve Assembly
SP-200138	Bottom Side Nozzle Hose
SP-200139	Top Side Nozzle Hose
SP-200076	Nozzle
SP-200137	Manifold To Cluster Nozzle



Figure 3

SP-200044	Top Spray Bar
SP-200040	Sprayer Bar Weldment (Left Hand)
SP-200065	Mount Weldment, $\frac{3}{4}$ Spray Nozzle
SP-200060	Sprayer Bar Weldment (Right Hand)
SP-200075	Spray Nozzle, ss H1/4u-Ss5020 Teejet

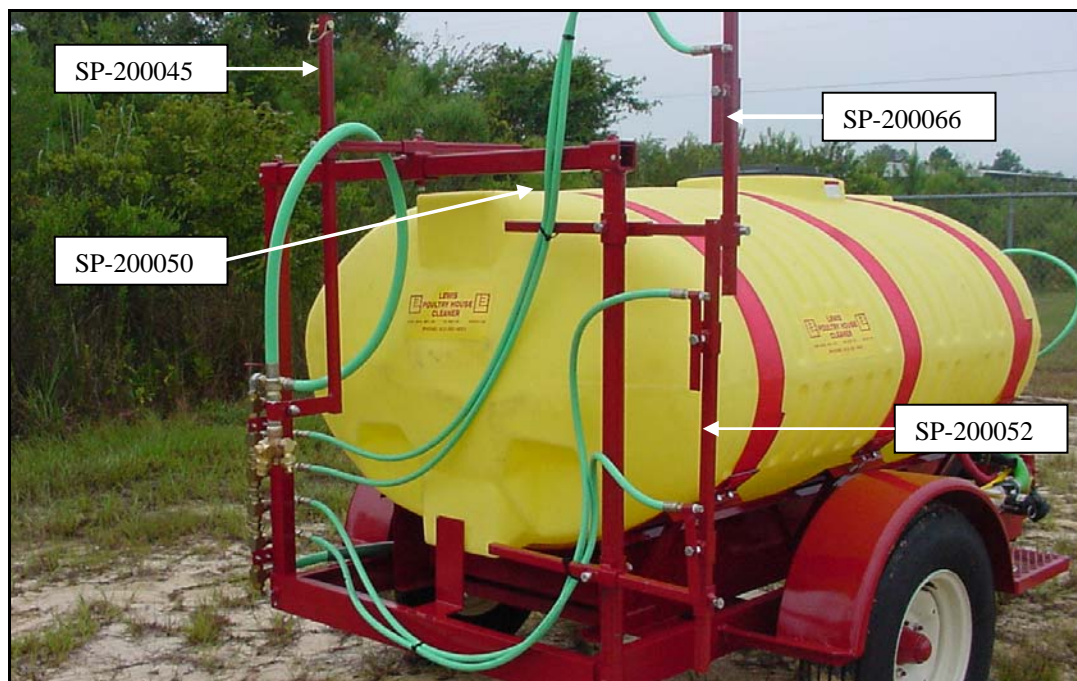


Figure 4

SP-200045	Sprayer Boom Weldment
SP-200050	Sprayer Arm Weldment
SP-200052	Sprayer Boom Extension
SP-200066	Mount Weldment, $\frac{1}{4}$ Spray Nozzle