



*Doing Our Best to Provide You the Best*

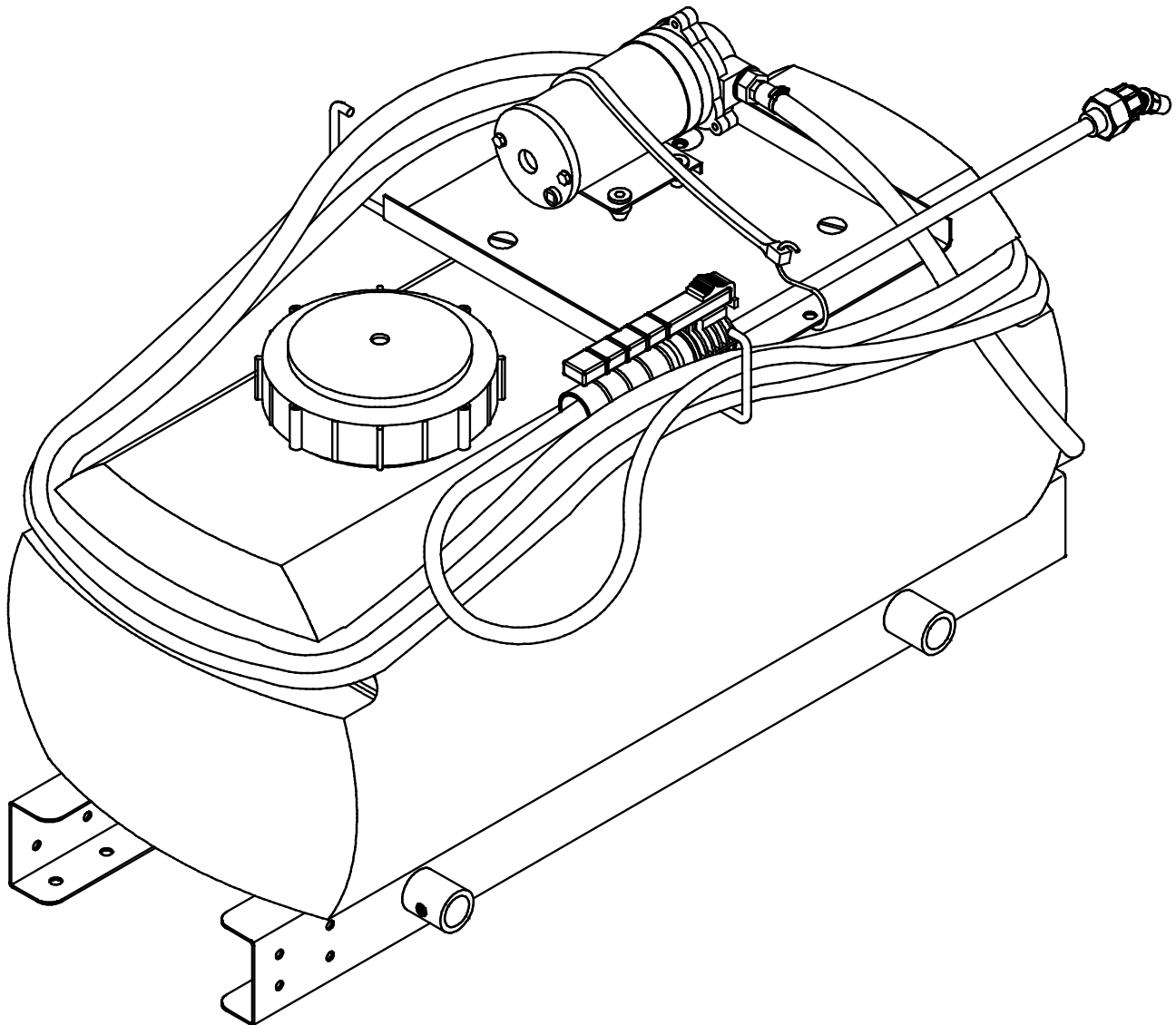
AS20005, Rev 6  
01/19

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## **14 GALLON SPRAYER**

### **SM14 & SM314**

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**OPERATOR MANUAL**

## Introduction

Thank you for purchasing a Demco sprayer. We feel you have made a wise choice and hope you are completely satisfied with your new sprayer. If you have any questions regarding the applications of certain solutions or chemicals, contact your chemical supplier and follow chemical manufacturer recommendations as well as all licensing and use restrictions or regulations.

## WARRANTY POLICY, OPERATOR MANUALS, PARTS MANUALS & REGISTRATION

Go online to [www.demco-products.com](http://www.demco-products.com) to review Demco warranty policies, operator manuals and register your Demco product.



**WARNING: TO AVOID PERSONAL INJURY OR PROPERTY DAMAGE, OBSERVE FOLLOWING INSTRUCTIONS:**

**Chemicals are dangerous. Know exactly what you're going to do and what is going to happen before attempting to work with these products. Improper selection or use can injure people, animals, plants and soil.**

**Always wear protective clothing such as coveralls, goggles and gloves when working with chemicals or sprayer.**

**Be sure to dispose of all unused chemicals or solutions in a proper and ecologically sound manner.**

## GENERAL INFORMATION

1. Whenever terms **"LEFT"** and **"RIGHT"** are used in this manual it means from a position behind sprayer and facing forward.
2. When placing a parts order, refer to this manual for proper part numbers and place order by **PART NO. and DESCRIPTION.**

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**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**



**THIS SYMBOL MEANS**

**ATTENTION**

**BECOME ALERT**

**YOUR SAFETY IS INVOLVED!**

### **SIGNAL WORDS**

This manual uses of the following signal words-- **DANGER**, **WARNING**, and **CAUTION**-- with safety messages. The appropriate signal word has been selected using the following guidelines.

#### **DANGER:**

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

If you have questions not answered in this manual , require additional copies, or if your manual is damaged, please contact your dealer or Demco, 4010 320th Street, Boyden, IA 51234 ph: (712) 725-2311 or Toll Free: 1-800-543-3626 Fax: (712) 725-2380 <http://www.demco-products.com>

#### **WARNING:**

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

#### **CAUTION:**

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



## **SAFETY...YOU CAN LIVE WITH IT**



### **EQUIPMENT SAFETY GUIDELINES**

Every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or you yourself, follow them.

In order to provide a better view, certain illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace shield prior to use.

Replace any caution, warning, danger or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Do not attempt to operate this sprayer under the influence of alcohol or drugs.

Review safety instructions with all users.

Operator should be a responsible adult. **DO NOT ALLOW PERSONS TO OPERATE OR ASSEMBLE THIS UNIT UNTIL THEY HAVE DEVELOPED A THOROUGH UNDERSTANDING OF SAFETY PRECAUTIONS AND HOW IT WORKS.**

Do not paint over, remove, or deface any safety signs or warning decals on your sprayer. Observe all safety signs and practice instructions on them.

Never exceed limits of a piece of machinery. If its ability to do a job, or to do so safely is in question-**DON'T TRY IT.**



### **LIGHTING AND MARKING**

It is the responsibility of customer to know lighting and marking requirements of local highway authorities and to install and maintain sprayer to provide compliance with regulations. Add extra lights when transporting at night or during periods of limited visibility.



### **SAFETY SIGN CARE**

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replacement parts that displayed a safety sign should also display current sign.
- Safety signs are available from your distributor, dealer parts department, or factory.

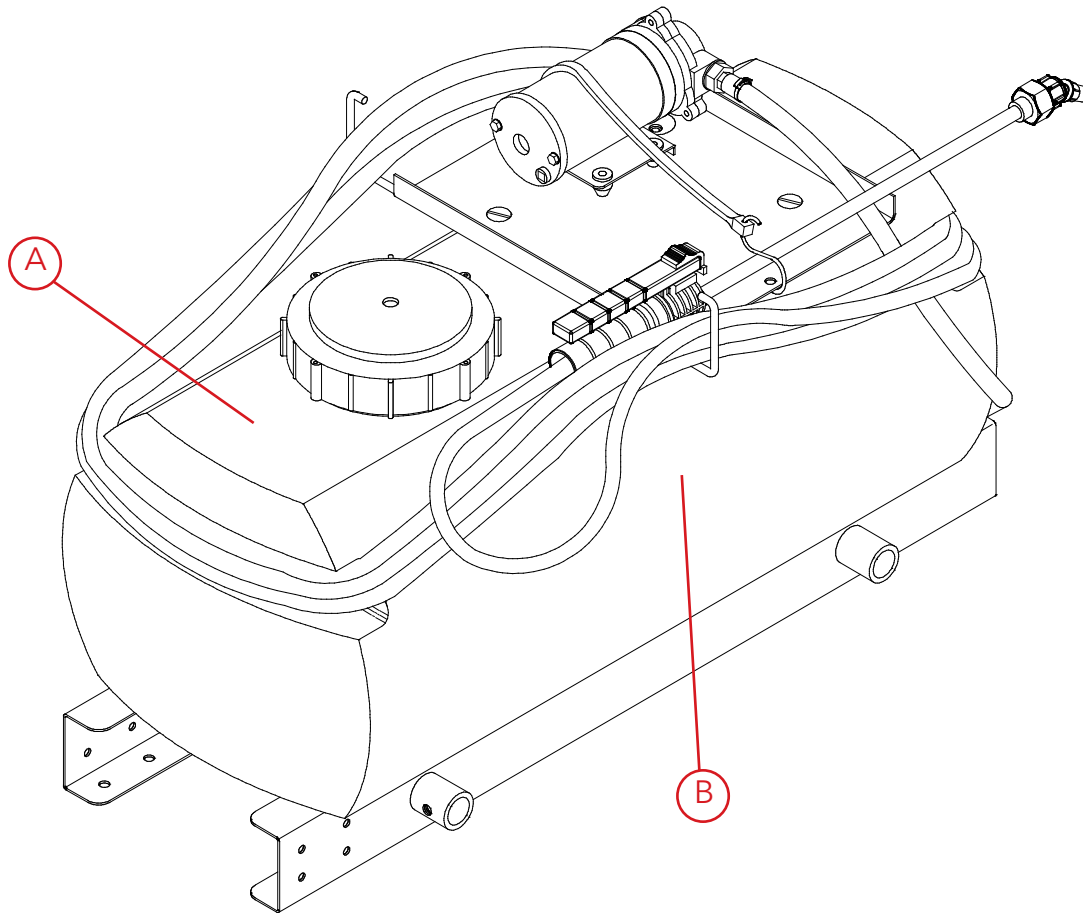
#### **How to install safety signs:**

- Be sure that installation area is clean and dry.
- Decide on exact position before you remove backing paper.
- Remove smallest portion of split backing paper.
- Align decal over specified area and carefully press small portion with exposed sticky backing in place.
- Slowly peel back remaining paper and carefully smooth decal into place.
- Air pockets can be pierced with a pin and smoothed out using piece of backing paper.



## SAFETY SIGN LOCATIONS

Types of safety sign and locations on equipment are shown in illustration below. Good safety requires that you familiarize yourself with various safety signs, type of warning, and area or particular function related to that area, that requires your SAFETY AWARENESS.



**A. AB21014 - Warning: Refer to chemical supplier and manufacturer Qty. 1**



**To prevent serious injury or death**

- Refer to chemical supplier and manufacturer recommendations and all licensing restrictions or regulations.
- Always wear recommended protective clothing when working with chemicals or sprayer.
- Dispose of all unused chemicals or solutions in proper and ecologically sound manner. Improper use can injure people, animals, plants and soil.

**B. AA21012 - Small Demco Qty. 2**





### **TRANSPORT OPERATIONS**

- Adopt safe driving practices:
  - Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop. Keep speed to a minimum.
  - Reduce speed prior to turns to avoid risk of overturning.
  - Always keep ATV in gear to provide engine braking when going downhill. Do not coast.
  - Do not drink and drive!
- Comply with state and local laws governing the use of ATV's. Do not use the ATV on highway and streets if prohibited.
- Use approved accessory lighting and flags and necessary warning devices if using the ATV on streets or highways. Always use flashing amber lights or slow moving vehicle emblem if operating on streets or highways.
- Use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- Be a safe and courteous driver at all times.
- Watch for obstructions overhead and side to side while transporting.
- Always operate your ATV in a position to provide maximum visibility at all times. Make allowances for increased length and weight of sprayer when making turns, stopping, etc.



### **REMEMBER**

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer.



### **BEFORE OPERATION:**

- Carefully study and understand this manual.
- Do not wear loose-fitting clothing which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- It is recommended that suitable protective hearing and eye protection be worn.
- The operator may come in contact with certain materials which may require specific safety equipment relative to handling of such materials. (Examples: extremely dusty, molds, fungus, bulk fertilizers, etc.)
- Give sprayer a visual inspection for any loose bolts, worn parts, or cracked welds, and make necessary repairs. Follow maintenance safety instructions included in this manual.
- Be sure there are no tools lying on or in equipment
- Do not use sprayer until you are sure that area is clear, especially around children and animals.
- Don't hurry learning process or take sprayer for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.



## **DURING OPERATION**

- Beware of bystanders, **PARTICULARLY CHILDREN!** Always look around to make sure that it is safe to start engine of towing vehicle or move sprayer. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED**- Do not carry passengers anywhere on sprayer.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate, or adjust your sprayer while it is moving.
- When halting operation, even periodically, set vehicles brakes, shut off engine, and **remove ignition key**.
- Be especially observant of operating area and terrain- watch for holes, rocks, or other hidden hazards. Always inspect area prior to operation.
  - DO NOT operate near edge of drop-offs or banks.
  - DO NOT operate on steep slopes as overturn may result.
  - Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.
- Pick the most level possible route when transporting across fields. Avoid edges of ditches, gullies, and steep hillsides.
- Be extra careful when working on inclines.
- Periodically clear sprayer of brush, twigs, or other materials to prevent buildup of dry combustible materials.
- Maneuver tractor or towing vehicle at safe speeds.
- Avoid loose gravel, rocks, and holes; they can be dangerous for sprayer operation or movement.
- Do not walk or work under raised components or attachments unless securely supported.
- Keep all bystanders, pets, and livestock clear of work area.
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
- Never leave running equipment attachments unattended.
- As a precaution, always recheck hardware on equipment following every 100 hours of operation. Correct all problems. Follow maintenance safety procedures.



## **FOLLOWING OPERATION**

- Following operation, or when unhitching, stop tractor or towing vehicle, set brakes, shut off engine and **remove ignition key**.
- Store unit in an area away from human activity.
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.
- Do not permit children to play on or around stored unit.
- Make sure all parked machines are on a hard, level surface and engage all safety devices.



### **PERFORMING MAINTENANCE**

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate engine of towing vehicle in a closed building. Exhaust fumes may cause asphyxiation.
- Before working on this machine, stop towing vehicle, set brakes, disengage PTO and all power drives, shut off engine and **remove ignition key**.
- Be certain all moving parts and attachments have come to a complete stop before attempting to perform maintenance.
- Always use a safety support and block wheels. Never use a jack to support machine.
- Always use proper tools or equipment for job at hand.
- Use extreme caution when making adjustments.
- Follow torque chart on page 11 in this manual when tightening bolts and nuts.
- Never use your hands to locate a hydraulic leak on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate skin.
- Openings in skin and minor cuts are susceptible to infection from hydraulic fluid.  
**Without immediate medical treatment, serious infection and reactions can occur.**
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.
- Replace **all shields** and **guards** after servicing and before moving.
- After servicing, be sure all tools, parts and service equipment are removed.
- Do not allow grease or oil to build up on any step or platform.
- When replacing bolts refer to owners manual.
- Refer to bolt torque chart on page 11 for head identification marking.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. Manufacturer will not claim responsibility for use of unapproved parts or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, manufacturer does not accept any liability for injury or warranty.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this sprayer.



## Torque Data for Standard Nuts, Bolts and Capscrews

Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

NOTE: Unless otherwise specified, high-strength Grade 5 hex bolts are used throughout assembly of equipment.



### Torque Specifications

#### Bolt Torque for Standard bolts \*

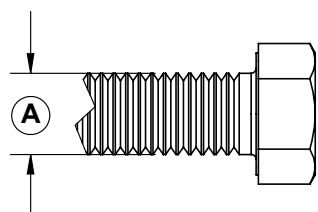
"A"	GRADE 2		GRADE 5		GRADE 8	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	(8)	9	(12)	12	(16)
5/16"	10	(13)	18	(25)	25	(35)
3/8"	20	(27)	30	(40)	45	(60)
7/16"	30	(40)	50	(70)	80	(110)
1/2"	45	(60)	75	(100)	115	(155)
9/16"	70	(95)	115	(155)	165	(220)
5/8"	95	(130)	150	(200)	225	(300)
3/4"	165	(225)	290	(390)	400	(540)
7/8"	170	(230)	420	(570)	650	(880)
1"	225	(300)	630	(850)	970	(1310)

#### Bolt Torque for Metric bolts \*

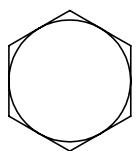
"A"	CLASS 8.8		CLASS 9.8		CLASS 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	(13)	10	(14)	13	(17)
7	15	(21)	18	(24)	21	(29)
8	23	(31)	25	(34)	31	(42)
10	45	(61)	50	(68)	61	(83)
12	78	(106)	88	(118)	106	(144)
14	125	(169)	140	(189)	170	(230)
16	194	(263)	216	(293)	263	(357)
18	268	(363)	--	--	364	(493)
20	378	(513)	--	--	515	(689)
22	516	(699)	--	--	702	(952)
24	654	(886)	--	--	890	(1206)

Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

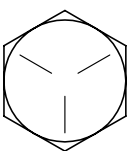
\* GRADE or CLASS value for bolts and capscrews are identified by their head markings.



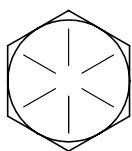
GRADE-2



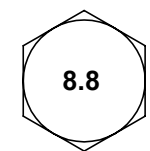
GRADE-5



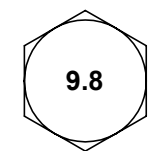
GRADE-8



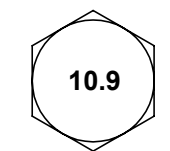
CLASS 8.8



CLASS 9.8

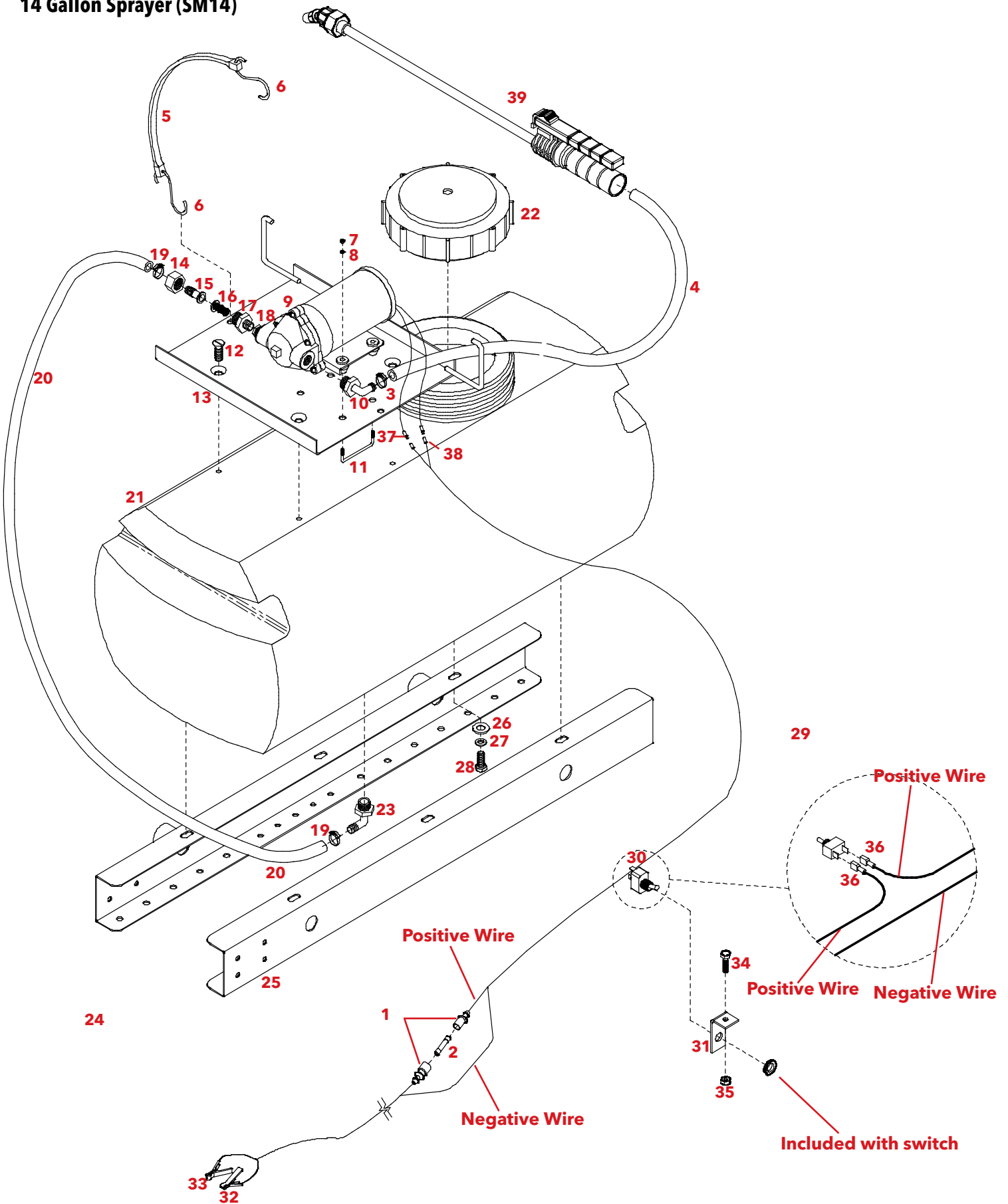


CLASS 10.9



# Parts Breakdown

## 14 Gallon Sprayer (SM14)



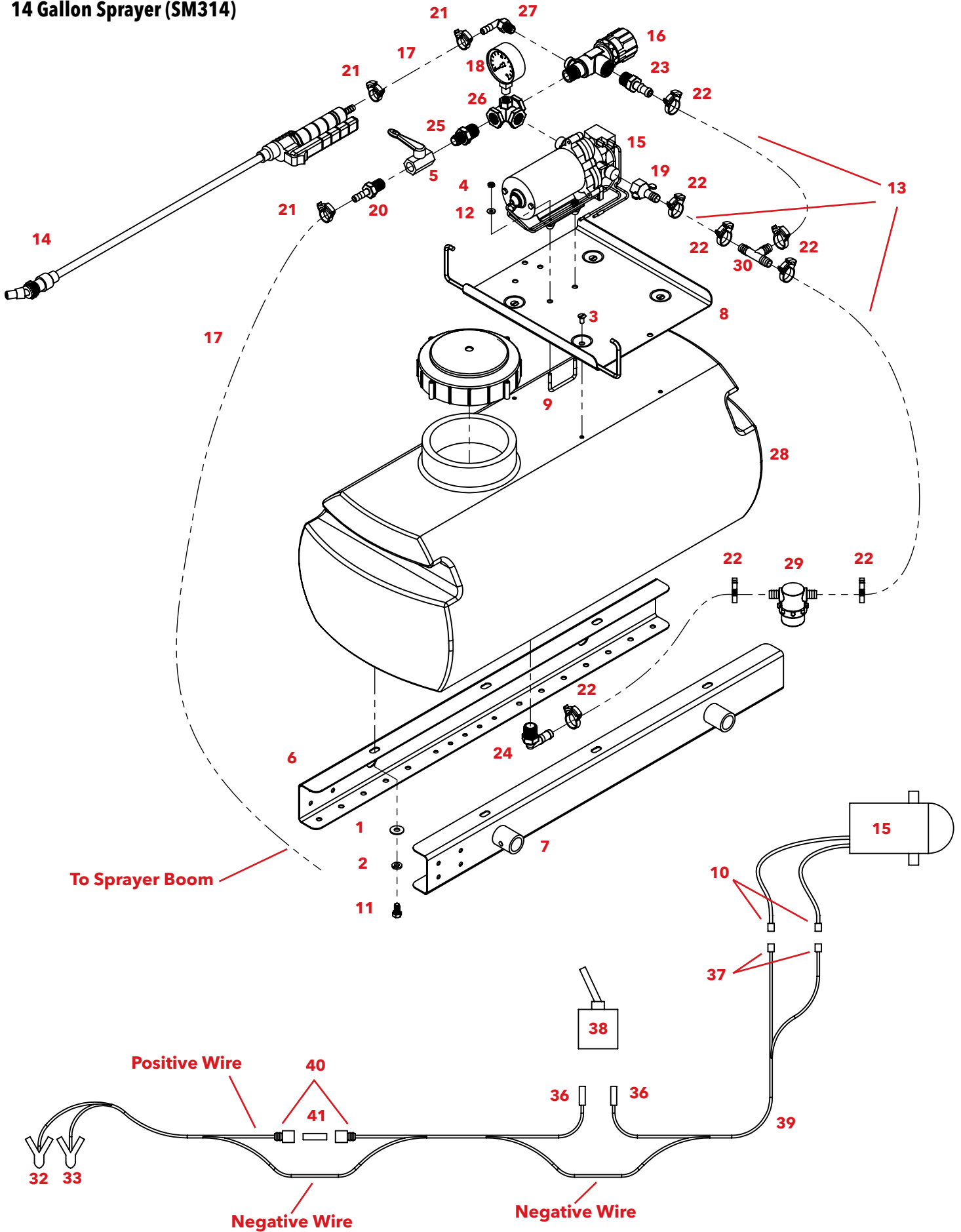
## 14 Gallon Sprayer (SM14) Parts List

ITEM	PART #	DESCRIPTION	QTY
1	<b>09244</b>	REPLACEMENT FUSE HOLDER	1
2	<b>09272</b>	REPLACEMENT 20 AMP FUSE	1
3	<b>B6PH</b>	HOSE CLAMP .375 NYLON	2
4	<b>380RB</b>	.375 I.D. RUBBERS HOSE (15')	-
5	<b>04742</b>	SHORT RUBBER TARP STRAP	1
6	<b>04658</b>	S-HOOK FOR TARP STRAP	2
7	<b>02205</b>	#10-24 UNC NYLON INSERT LOCKNUT	4
8	<b>07490</b>	.50 OD X .19" ID FLATWASHER	4
9	<b>8000 543 150</b>	12 VOLT ELECTRIC PUMP	1
10	<b>EL3838</b>	.375 MPT X .375 HOSE BARB ELBOW	1
11	<b>04824</b>	#10-24 UNC SPECIAL U-BOLT (2.0625 WIDE)	2
12	<b>00622</b>	.25-10 UNC X .50 LG FLAT HEAD SLOTTED CAP SCREW	4
13	<b>04747-80</b>	PUMP AND BATTERY MOUNT	1
14	<b>8027</b>	SWIVEL NUT	1
15	<b>K8400 1/2</b>	.50 HOSE BARB	1
16	<b>8079NY</b>	50 MESH POLYPROPYLENE STRAINER	1
17	<b>NB1614</b>	.375 MPT X .25 MPT STRAINER FITTING	1
18	<b>RB3814</b>	.375 MPT X .25 FPT REDUCER FITTING	1
19	<b>B8PH</b>	.50 HOSE CLAMP NYLON	2
20	<b>120RB</b>	.50 I.D. RUBBER HOSE (36")	-
21	<b>P14 14</b>	14 GALLON TANK (LID INCLUDED)	1
22	<b>PL5A</b>	TANK LID ONLY	-
23	<b>BEL1212</b>	.50 MPT X .50 HOSE BARB ELBOW (GFP)	1
24	<b>04746-80</b>	MAIN FRAME WITH BUSHINGS	1
25	<b>04745-80</b>	MAIN FRAME	1
26	<b>00004</b>	.3125 FLAT WASHER	6
27	<b>00036</b>	.3125 LOCKWASHER	6
28	<b>05961</b>	.3125-18 UNC X .625 HEX HEAD BOLT GR.5	6
29	<b>04764</b>	14-2 STAND X 8' WIRE HARNESS w/BATTERY CLAMPS (10')	1
30	<b>01013</b>	SWTICH	1
31	<b>04755-95</b>	SWITCH MOUNT	1
32	<b>02447</b>	RED BATTERY CLMAP	1
33	<b>02448</b>	BLACK BATTERY CLAMP	1
34	<b>04055</b>	BOLT, .25 NC HEX HEAD (NOT SHOWN)	1
35	<b>02772</b>	LOCKNUT .25 NC NYLON (NOT SHOWN)	1
36	<b>05004</b>	CONNECTOR, SPADE	2
37	<b>05020</b>	SPADE ENDS - PUMP	2
38	<b>05021</b>	SPADE ENDS - WIRE HARNESS	2
39	<b>12217</b>	15" POLY HAND GUN w/TIP	1
-	<b>5500 18PP</b>	REPLACEMENT TIP STRAIGHT (NOT SHOWN)	-

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

# Parts Breakdown

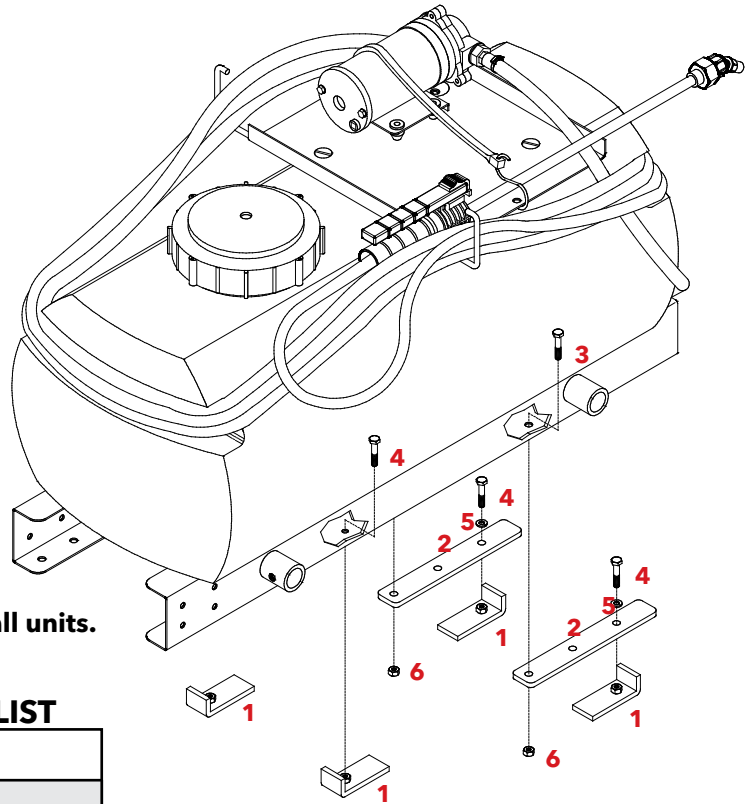
## 14 Gallon Sprayer (SM314)



ITEM	PART #	DESCRIPTION	QTY
1	<b>00004</b>	WASHER, FLAT, .313	6
2	<b>00036</b>	WASHER LOCK 0.313	6
3	<b>00622</b>	SCREW, .25NC X .50 FLAT HEAD SLOT	4
4	<b>02205</b>	NUT, #10NC NYLON INSERT	4
5	<b>03900</b>	VALVE, BRASS, .375" FPT (2X), 2 WAY	1
6	<b>04745</b>	14 GALLON TANK BOTTOM CHANNEL	1
7	<b>04746</b>	MAIN FRAME HALF-SM14	1
8	<b>04747</b>	PUMP AND BATTERY MOUNT	1
9	<b>04824</b>	#10-24 U-BOLT, 2" SPECIAL	2
10	<b>05020</b>	BULLET CONNECTOR F/16-14GA	2
11	<b>05961</b>	BOLT, .313 NC X .625 HEX HEAD GR5	6
12	<b>07490</b>	WASHER, .190-.200 I.D. X.50 O.D.	4
13	<b>120RB</b>	1/2" RUBBER HOSE	4FT
14	<b>12217</b>	15" SPRAY WAND POLY W/ TIP	1
-	<b>5500 18PP</b>	REPLACEMENT TIP STRAIGHT (NOT SHOWN)	
15	<b>2088 343 135</b>	12VDC 3.6GPM PUMP	1
16	<b>23120PP</b>	VALVE, PRESSURE RELIEF, 1/2"	1
17	<b>380RB</b>	3/8" RUBBER HOSE	20FT
18	<b>60GB</b>	GAUGE BRASS 60#	1
19	<b>A1212SF</b>	FTG STR .50 FPT X .50 HB SWIVEL	1
20	<b>A3838</b>	FTG, .375 MPT X .375 HB	1
21	<b>B6PH</b>	CLAMP, NYLON FOR .375 HOSE	3
22	<b>B8PH</b>	CLAMP, NYLON FOR .5 HOSE	8
23	<b>BA1212</b>	FTG, STR, .50" MPT X .50" HB. GFP	1
24	<b>BEL1212</b>	FTG, ELB, .5"MPT X .5" HB, GFP	1
25	<b>BM1238</b>	FTG, STR, .50" MPT X .375"HB	1
26	<b>BTT12G</b>	FTG, TEE, .50" FPT W/ .25 FPT	1
27	<b>EL1438</b>	FTG, ELB, .25" MPT X .375"HB	1
28	<b>P14 14</b>	TANK 14 GALLON POLY (LID INCLUDED)	1
-	<b>PL5A</b>	REPLACEMENT LID	-
29	<b>RVB12 80</b>	STRAINER, .50" X 80 MESH	1
30	<b>T12</b>	FTG TEE .50 HB POLY	1
31	<b>04755-95</b>	SWITCH MOUNT (NOT SHOWN, SEE PAGE 10)	1
32	<b>02447</b>	RED BATTERY CLMAP	1
33	<b>02448</b>	BLACK BATTERY CLAMP	1
34	<b>04055</b>	BOLT, .25 NC HEX HEAD (NOT SHOWN)	1
35	<b>02772</b>	LOCKNUT .25 NC NYLON (NOT SHOWN)	1
36	<b>05004</b>	CONNECTOR, SPADE	2
37	<b>05021</b>	CONNECTOR, SPADE	2
38	<b>01013</b>	SWITCH	1
39	<b>04764</b>	10' WIRE HARNESS W/ CLAMPS	1
40	<b>09244</b>	FUSE HOLDER	1
41	<b>09272</b>	FUSE 20 AMP	1
<b>Please order replacement parts by PART NO. and DESCRIPTION.</b>			

# HYMB Mounting Brackets

Honda, Kawasaki, Ploaris & Yamaha with Luggage Rack



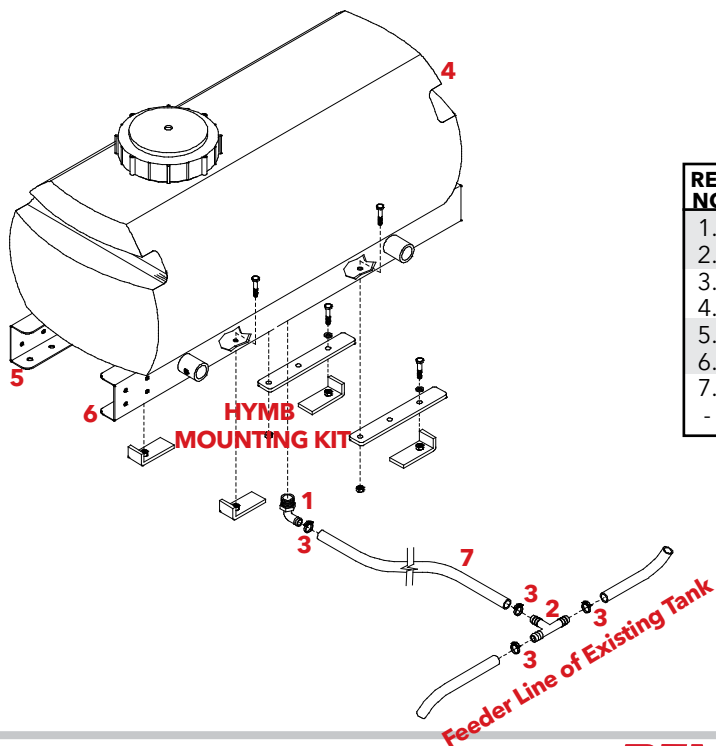
NOTE: Item No.2 may not be required on all units.

## HYMB MOUNTING BRACKETS PARTS LIST

REF. NO.	PART NO.	REQ'D QTY.	DESCRIPTION
1.	<b>02441-95</b>	4	Mounting Clamp
2.	<b>02440-95</b>	2	Mounting Bar
3.	<b>02990</b>	4	5/16"-18 UNC x 1" Hex Hd. Bolt
4.	<b>00372</b>	4	5/16"-18 UNC x 1-1/2" Hex Hd. Bolt
5.	<b>00036</b>	4	5/16" Lockwasher
6.	<b>02802</b>	4	5/16"-18 UNC Nylon Insert Locknut

Please order replacement parts by PART NO. and DESCRIPTION.

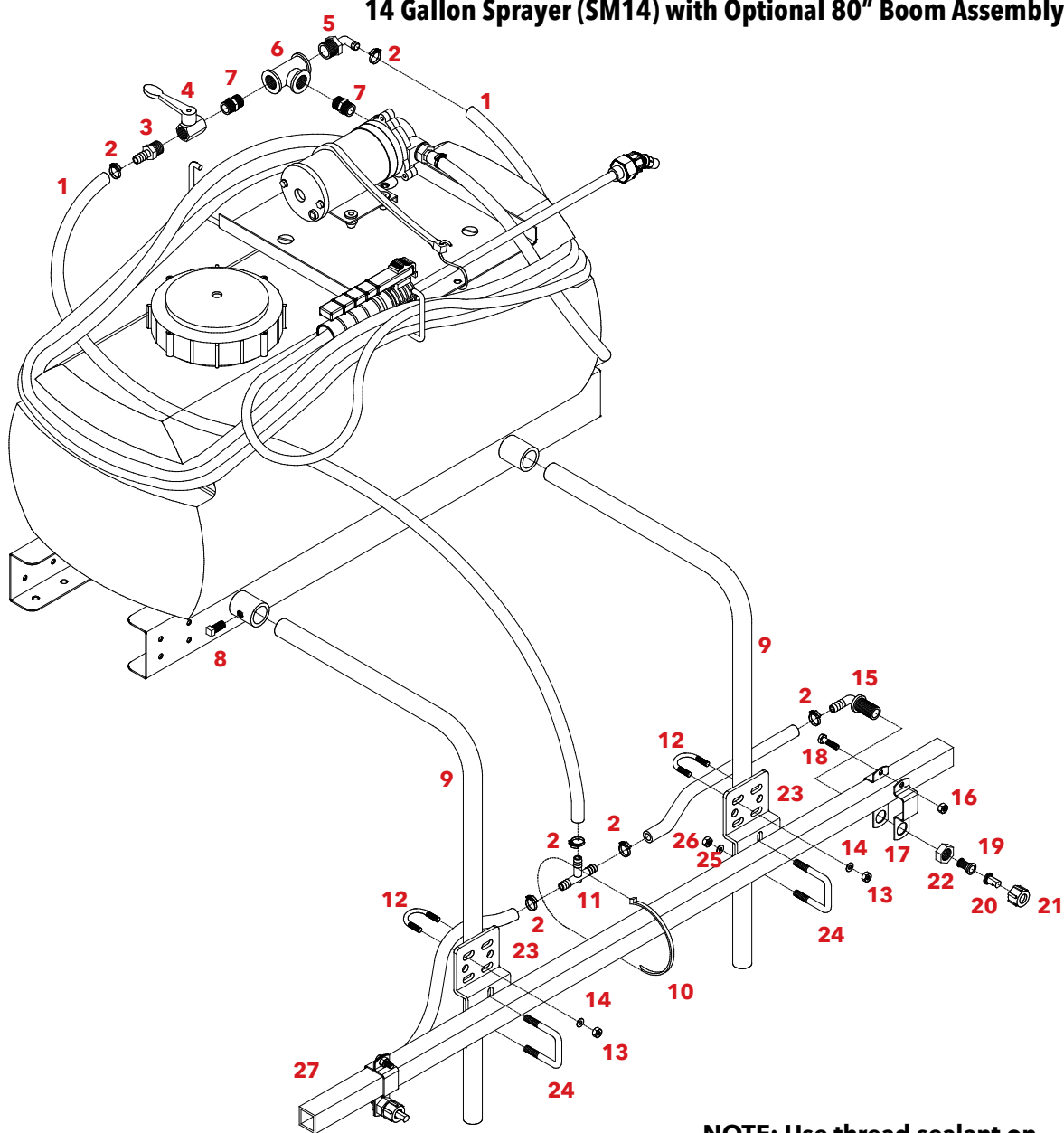
## SECONDARY TANK OPTION PARTS BREAKDOWN



## EX14KT PARTS LIST

REF. NO.	PART NO.	REQ'D QTY.	DESCRIPTION
1.	<b>BEL1212</b>	1	1/2"MPT x 1/2" Hose Barb Elbow (GFP)
2.	<b>T12</b>	1	1/2" Hose Barb Tee
3.	<b>B8PH</b>	4	1/2" Plastic Hose Clamp
4.	<b>P14 14</b>	1	14 Gal. Poly. Tank w/Lid
5.	<b>04745-70</b>	1	Frame Rail
6.	<b>04746-70</b>	1	Frame Rail w/Bushing
7.	<b>120RB</b>	-	1/2" ID Rubber Hose (5' Req'd)
-	<b>HYMB</b>	1	Mounting Kit (parts listed above)

14 Gallon Sprayer (SM14) with Optional 80" Boom Assembly (80B10)



**NOTE: Use thread sealant on all threaded fittings.**

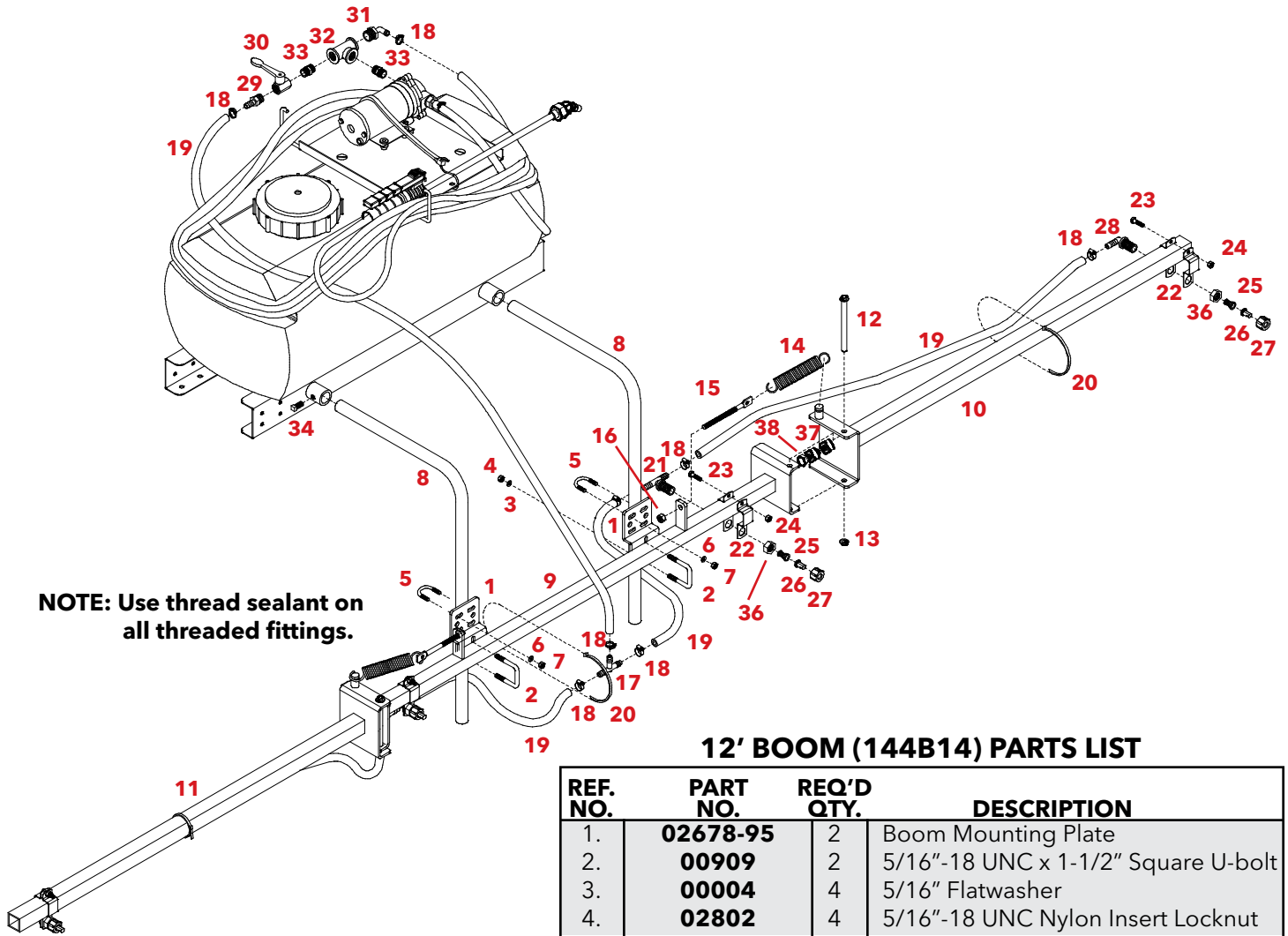
**OPTIONAL 80" BOOM ASSEMBLY (80B10) PARTS LIST**

REF. NO.	PART NO.	REQ'D QTY.	DESCRIPTION
1.	<b>380RB</b>	-	3/8" I.D. Rubber Hose (5')
2.	<b>B6PH</b>	7	3/8" Hose Clamp
3.	<b>A3838</b>	1	3/8" MPT x 3/8" Hose Barb
4.	<b>03900</b>	1	3/8" FPT x 3/8" FPT Valve
5.	<b>EL1238</b>	1	1/2" MPT x 3/8" Hose Barb Elbow
6.	<b>BTT12</b>	1	1/2" FPT Tee
7.	<b>BM1238</b>	2	1/2" MPT x 3/8" MPT Nipple Fitting
8.	<b>00095</b>	2	3/8"-16 UNC x 3/4" Sq. Hd. Set Screw
9.	<b>02274-70</b>	2	Mounting Pipe
10.	<b>NHT11</b>	1	Hose Tie
11.	<b>T38</b>	1	3/8" Hose Barb Insert Tee
12.	<b>00955</b>	2	1/4"-20 UNC Round U-bolt
13.	<b>02772</b>	4	1/4"-20 UNC Nylon Insert Locknut
14.	<b>00214</b>	4	1/4" Flatwasher
15.	<b>NTL38</b>	2	3/8" Elbow Spray Nozzle Ftg. (w/nut)

REF. NO.	PART NO.	REQ'D QTY.	DESCRIPTION
-	<b>B11 114</b>	2	1-1/4" Boom Clamp Assembly
16.	<b>00062</b>	1	1/4"-20 UNC Hex Nut
17.	<b>00337-95</b>	2	1-1/4" Boom Clamp
18.	<b>00068</b>	1	1/4"-20 UNC x 3/4" Hex Bolt
19.	<b>4193 A PP50</b>	2	5 PSI Ball Check Strainer
20.	<b>AN1.5</b>	2	Flood Jet Spray Tip (Blue)
21.	<b>8027</b>	2	11/16" FPS Swivel Nut
22.	<b>B12</b>	2	Nozzle Nut
23.	<b>02678-95</b>	2	Boom Mounting Plate
24.	<b>00909</b>	2	5/16"-18 UNC x 1-1/4" Sq. U-bolt
25.	<b>00004</b>	4	5/16" Flatwasher
26.	<b>02802</b>	4	5/16"-18 UNC Nylon Insert Locknut
27.	<b>02253-10</b>	1	Boom Tube

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

# 12' Boom Assembly (144B14) Parts Breakdown



**NOTE: Use thread sealant on all threaded fittings.**

## 12' BOOM (144B14) PARTS LIST

REF. NO.	PART NO.	REQ'D QTY.	DESCRIPTION
29.	<b>A3838</b>	1	3/8" MPT x 3/8" Hose Barb
30.	<b>03900</b>	1	3/8" FPT x 3/8" FPT Valve
31.	<b>EL1238</b>	1	1/2" MPT x 3/8" Hose Barb Elbow
32.	<b>BTT12</b>	1	1/2" FPT Tee (GFP)
33.	<b>BM1238</b>	2	1/2" MPT Nipple Fitting
34.	<b>00095</b>	2	3/8"-16 UNC Sq. Hd. Set Screw
35.	<b>B6PH</b>	2	3/8" Gear Clamp
36.	<b>B12</b>	4	Nozzle Nut
37.	<b>00640</b>	2	1/2"-13 UNC Jam Nut
38.	<b>00967</b>	2	1/2"-13 UNC x 1-1/4" Hex Head Bolt

REF. NO.	PART NO.	REQ'D QTY.	DESCRIPTION
1.	<b>02678-95</b>	2	Boom Mounting Plate
2.	<b>00909</b>	2	5/16"-18 UNC x 1-1/2" Square U-bolt
3.	<b>00004</b>	4	5/16" Flatwasher
4.	<b>02802</b>	4	5/16"-18 UNC Nylon Insert Locknut
5.	<b>04822</b>	2	1/4"-20 UNC x 1-1/2" Round U-bolt
6.	<b>00214</b>	4	1/4" Flatwasher
7.	<b>02772</b>	4	1/4"-20 UNC Nylon Insert Locknut
8.	<b>02274-70</b>	2	Mounting Pipe
9.	<b>02636-10</b>	1	Center Boom Section
10.	<b>02637-10</b>	1	Right Boom Section
11.	<b>02638-10</b>	1	Left Boom Section
12.	<b>00340-95</b>	2	Wing Hinge Pin (includes two 11137)
13.	<b>11137</b>	2	3/8" Clinch Nut (incl'd with 00340-95)
14.	<b>01564</b>	2	Spring
15.	<b>00357</b>	2	3/8"-16 UNC x 4-1/2" Tension Bolt
16.	<b>02592</b>	2	3/8"-16 UNC Nylon Insert Locknut
17.	<b>T38</b>	1	3/8" Insert Tee
18.	<b>B6H</b>	8	3/8" Gear Clamp
19.	<b>380RB</b>	-	3/8" I.D. Rubber Hose
20.	<b>NHT11</b>	5	Hose Tie
21.	<b>NTT38</b>	2	3/8" Tee Nozzle Fitting w/nut
	<b>B11 114</b>	4	<b>1-1/4" Boom Clamp Assembly</b>
22.	<b>00337-95</b>	2	1-1/4" Boom Clamp
23.	<b>00068</b>	1	1/4"-20 UNC x 3/4" Hex Hd. Bolt
24.	<b>02772</b>	1	1/4"-20 UNC Nylon Insert Locknut
25.	<b>4193APP50</b>	4	5 PSI Ball Check Valve
26.	<b>AN1.5</b>	4	Flood Jet Spray Tip
27.	<b>8027</b>	4	11/16" FPS Swivel Nut
28.	<b>NTL38</b>	2	3/8" Elbow Spray Nozzle Fitting w/nut

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

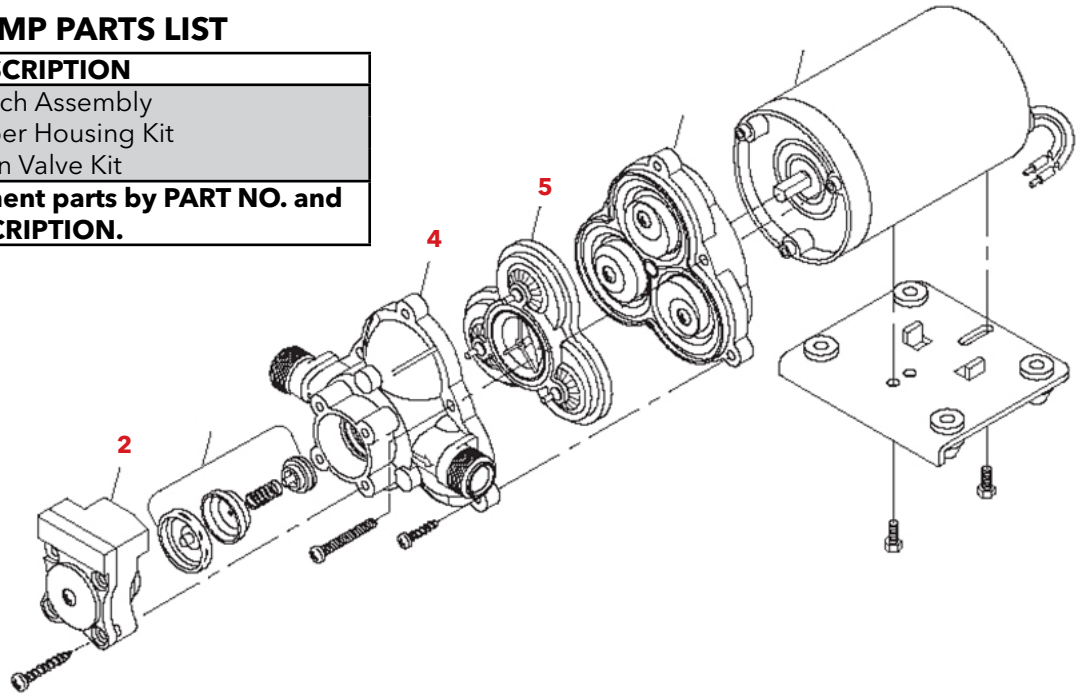


Electric Pump

**2088 343 135 -  
3GPM ELECTRIC PUMP PARTS LIST**

ITEM	PART #	DESCRIPTION
2.	<b>94 230 36</b>	Switch Assembly
4.	<b>94 231 30</b>	Upper Housing Kit
5.	<b>94 232 05</b>	Viton Valve Kit

**Please order replacement parts by PART NO. and DESCRIPTION.**



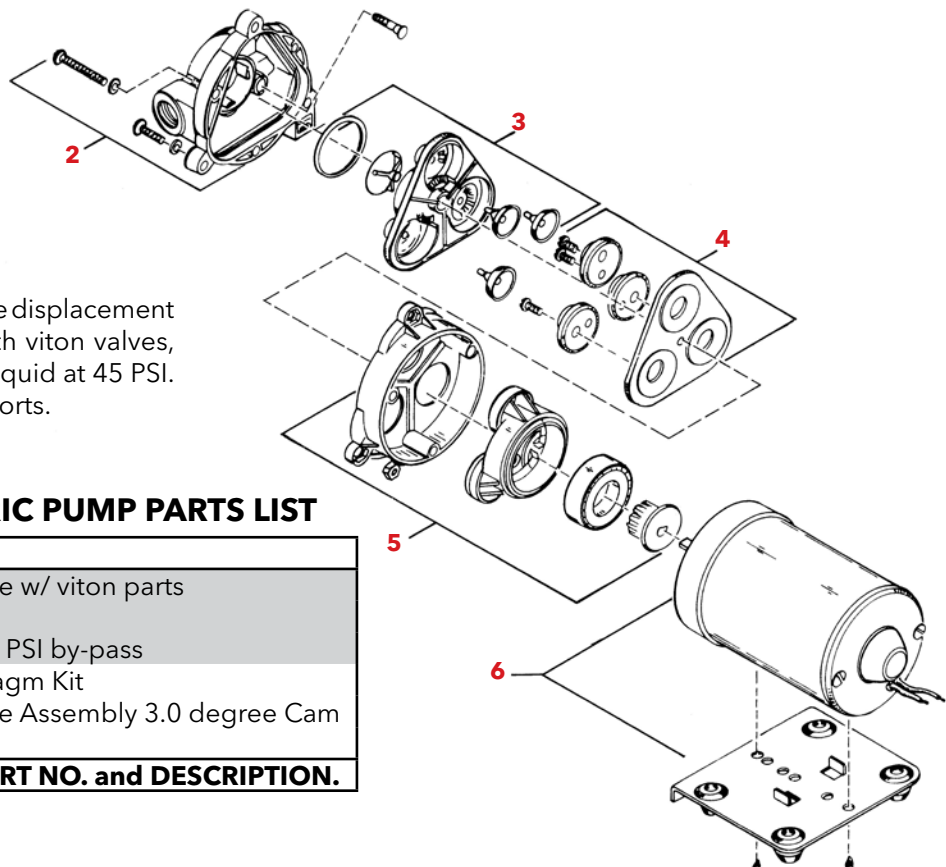
**PART NO. 8000 543 150**

12VDC continuous duty motor and positive displacement diaphragm pump. Pump is equipped with viton valves, santoprene diaphragm, and will bypass liquid at 45 PSI. 1.5 GPM maximum discharge. 3/8" FPT ports.

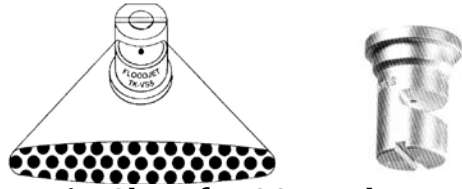
**8000 543 150 - 1.5GPM ELECTRIC PUMP PARTS LIST**

ITEM	PART #	DESCRIPTION
1.	<b>94 382 09</b>	Pumhead complete w/ viton parts
2.	<b>94 378 00</b>	Upper Housing Kit
3.	<b>94 391 09</b>	Viton Valve Kit w/45 PSI by-pass
4.	<b>94 395 06</b>	Santoprene Diaphragm Kit
5.	<b>94 385 03</b>	Lower Housing Drive Assembly 3.0 degree Cam
6.	<b>94 370 03</b>	Motor Assembly

**Please order replacement parts by PART NO. and DESCRIPTION.**

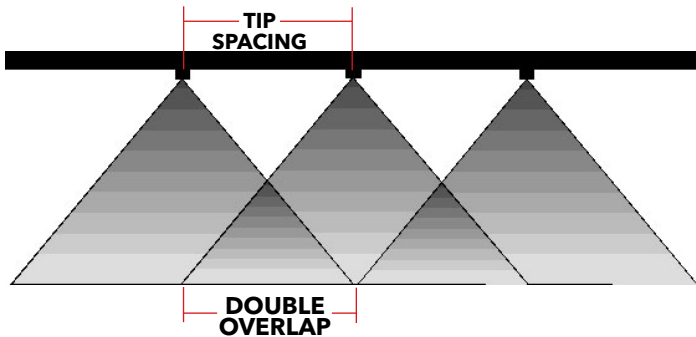


# Calibration Instructions



## Spray Tip Chart for 80" and 144" Booms

Tip No.	Liquid Pressure in PSI	Capacity 1 Nozzle in GPM	GALLONS PER ACRE 40" TIP SPACING							
			2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	7 MPH	8 MPH	
AN1.5	10	.15	11.2	7.5	5.6	4.5	3.7	3.2	2.8	
	20	.21	15.8	10.5	7.9	6.3	5.3	4.6	3.9	
	30	.26	19.4	12.9	9.7	7.7	6.4	5.6	4.8	
	40	.30	22.2	14.8	11.1	8.9	7.4	6.5	5.6	



There is not a standard spray height for FloodJet tips. Raise or lower the spray boom. . . or rotate nozzle tips to double overlap spray patterns and provide optimum coverage along spray boom.

When switching from one chemical to another chemical in the sprayer where contamination must be prevented, wash out with ammonia and water through the tank, pump and all hose. Then flush with water two or three times. Herbicides such as 2-4-D are hard to remove. After using them, follow the special cleaning procedures noted on the pesticide label.

Use the following formula to determine your ratio per acre.

- GPA - Gallons Per Acre
- GPM - Gallons Per Minute
- MPH - Miles Per Hour

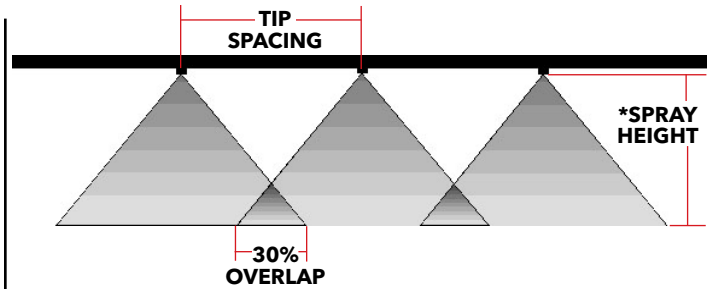
$$GPA = \frac{5940 \times GPM \text{ (Per Nozzle)}}{MPH \times W^*}$$

\* W - Nozzle spacing in inches.

## RATES OF FLOW...for calibrating spray tips.

GPM	seconds to collect 1 qt.	GPM	seconds to collect 1 qt.
.05	300	.20	75
.06	250	.225	67
.07	214	.25	60
.08	188	.30	50
.09	167	.35	43
.10	150	.40	38
.11	136	.50	30
.12	125	.60	25
.13	115	.70	21
.14	107	.80	19
.15	100	.90	17
.17	88	1.0	15

**Important:** Replace all worn tips and those with streaky or uneven patterns.



\*approximately 13-1/2" for 30" coverage.

\*approximately 15" for 40" coverage.

This tip (LP015 110) is specially designed to operate at low pressure, and wide angle allowing the boom to be run close to the ground for less spray drift.

## VEHICLE SPEEDS

Mark off a distance of 100, 200 or 300 feet. Run the lawn mower or all terrain vehicle over this distance, carefully marking the throttle setting or speedometer reading. To make measurement of test run, begin from a standing start far enough ahead of the first marker so that your rig is at full speed before traveling the 100, 200 or 300 foot distances.

speed in MPH (miles per hr.)	time required in SECONDS to travel:		
	100 feet	200 feet	300 feet
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
10	6.8	14	20



**WARNING: To Prevent Serious Injury Or Death**

- **Keep hands, feet, and loose clothing away from rotating parts.**
- **Wear protective clothing recommended by your chemical and fertilizer manufacturer when working with chemicals.**

**Downtime in fields caused by field breakdowns is costly and time consuming. Many breakdowns can be eliminated by periodic equipment maintenance. By spending a little time running over this checklist before seasonal spraying application time and following proper after-season care, you can save time and money later on.**

**Check Before Going To The Field :**

**1. NOZZLES**

Check tip for excessive wear by checking for grooves in or near tip opening. Check nozzle spacing by starting at center and working outwards. Check boom for proper height.

**2. HOSES**

Check all hoses for worn or soft spots. Be sure all hose clamps are tightened and hoses are not kinked or pinched. Check for leakage in any lines.

**3. TANK**

Remove and clean agitator orifices. Check orifices for excessive wear by checking for grooves in or near orifice opening. Inspect fitting and grommets to insure they are in good condition.

**4. CONTROLS**

Check for leakage, plugging, or wear on all valves, fittings, etc. Clean off any build up of foreign material.

**5. PUMP**

Check to be sure pump turns freely.

**6. FRAME**

Be sure all bolts are tightened.

**7. REPLACEMENT PARTS**

Replace all worn or damaged parts.

**After Season Care:**

**NOTE: It is important that when cleaning sprayer you wear proper safety equipment. See your chemical or fertilizer package for this information.**

1. After spraying chemicals, run water mixed with cleaners through tank, pump and all hose hookups. If wettable powder dries out in system, it is very difficult to put back into suspension and can cause malfunction, damage or injury.
2. When cleaned, tank should have all openings closed or covered to keep dirt from blowing in.
3. Pump should be flushed with soluble oil and pump ports plugged to keep out moisture and air.
4. Disassemble tips and rinse with water or cleaning solution. (Appropriate for chemical sprayed).
5. Clean tip opening with a wooden toothpick. Never use wire or a hard object that could distort opening.
6. Be sure to dispose of all unused chemicals or solutions in a proper and ecologically sound manner.
7. Water rinse and dry tips before storing.

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**NOTE: Demco does not and will not make any recommendations concerning the application of various chemicals or solutions. These recommendations relate to either amount or procedure of materials applied. If you have any questions regarding application of certain chemicals or solutions, contact your chemical supplier and follow chemical manufacturer recommendations.**

# **DEMCO**

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**Demco warranty policies, operator manuals, and product registration  
can be found online:**

**[www.demco-products.com](http://www.demco-products.com)**

