

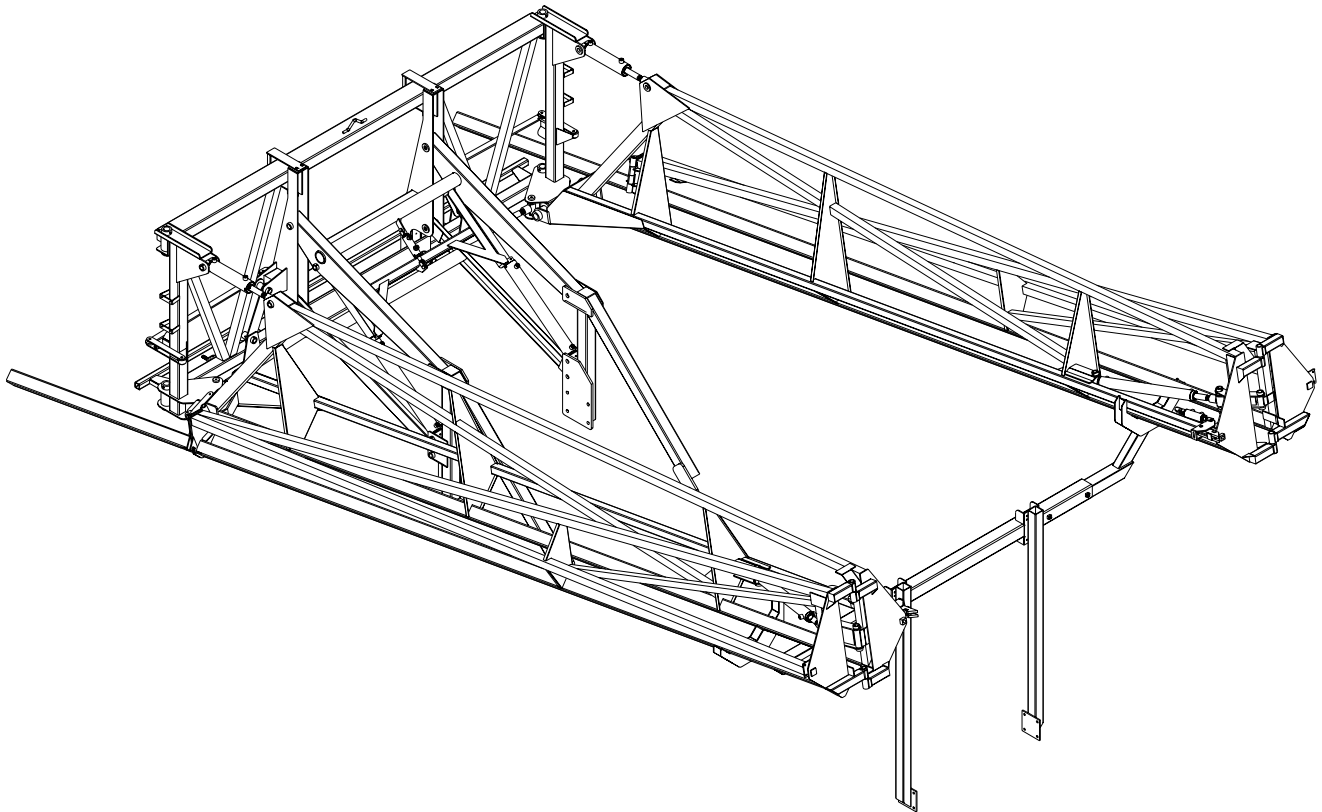
**Demco** manufacturing  
Dethmers Manufacturing Company

DOING OUR BEST TO PROVIDE YOU THE BEST

**FRONT FOLD  
80' AND 90' BOOM  
OPERATORS MANUAL**

ASSEMBLY  
CALIBRATION  
OPERATION  
REPLACEMENT PARTS

READ complete manual CAREFULLY  
BEFORE attempting operation.



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.



**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. Unless otherwise specified, high-strength (grade 5) (3 radial-line head markings) hex head bolts are used throughout assembly of this sprayer.
2. Whenever terms "**LEFT**" and "**RIGHT**" are used in this manual it means from a position behind sprayer and facing forward.
3. When placing a parts order, refer to this manual for proper part numbers and place order by **PART NO., DESCRIPTION, and COLOR.**

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## Warranty Registration

Dethmers Manufacturing Company  
4010 320th Street • Box 189 • Boyden, Iowa 51234  
Toll Free 800-54DEMCO (800-543-3626) • FAX 800-845-6420  
www.demco-products.com

- Ag
- RV
- Rental
- Brakes
- Marine

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
How satisfied are you with our product?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with the dealership/distributor sales staff?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dealer/Distributor Name _____ City _____ State _____				
How satisfied are you with the company sales staff?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with the delivery?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you have any contact with a Demco Representative?	YES	NO		
If <b>YES</b> , how satisfied were you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend this product to my family and friends.	YES	NO		
Would you purchase again from DEMCO?	YES	NO		
Since taking delivery, have you been contacted by the dealer?	YES	NO		
Did you have any problems with this DEMCO product?	YES	NO		
If <b>YES</b> , are you satisfied with the company's resolution of your problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why did you purchase this product? \_\_\_\_\_

Please list the specific source of information prompting this purchase.  
\_\_\_\_\_

After purchasing this product, do you see any needed product improvement? \_\_\_\_\_ If yes, what improvement? \_\_\_\_\_

What other products would you like to see DEMCO offer? \_\_\_\_\_

Comments \_\_\_\_\_

Owner's Name: \_\_\_\_\_ Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Model#: \_\_\_\_\_

Serial #: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Owner's Signature: \_\_\_\_\_

**Please return to DETHMERS MFG. CO. By FAX or tri-folding this form to the backside, it is pre-addressed.**

Postage

*Dethmers Manufacturing Company  
4010 320th Street, Box 189  
Boyden, Iowa 51234*

**NOTES:**

## SAFETY

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE 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**

Note the use of the following signal words **DANGER**, **WARNING**, and **CAUTION** with the safety messages. The appropriate signal word for each 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.

#### **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.

If you have questions not answered in this manual, require additional copies, or if your manual is damaged, please contact your dealer or Dethmers Mfg. Co., P.O. Box 189, 4010 320th Street, Boyden, IA 51234  
ph: (712) 725-2311 Toll Free: 1-800-543-3626 Fax: (712) 725-2380 [www.demco-products.com](http://www.demco-products.com)



# 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 the 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 equipment under the influence of alcohol or drugs.

Review the safety instructions with all users annually.

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

To prevent injury or death, use a tractor equipped with a roll over protective system (ROPS). Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of a piece of machinery. If it's 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 the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.

Lighting kits are available from your dealer or from the manufacturer.



## SAFETY SIGN CARE

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

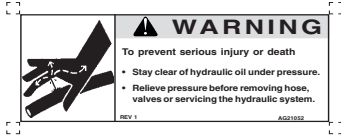
### **How to install safety signs:**

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

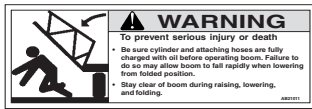


# SAFETY SIGN LOCATIONS

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.



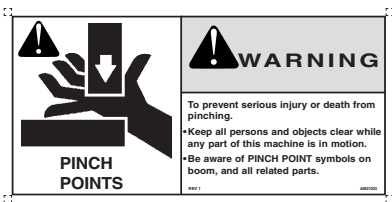
#1 Warning : Stay clear of hydraulic oil under pressure



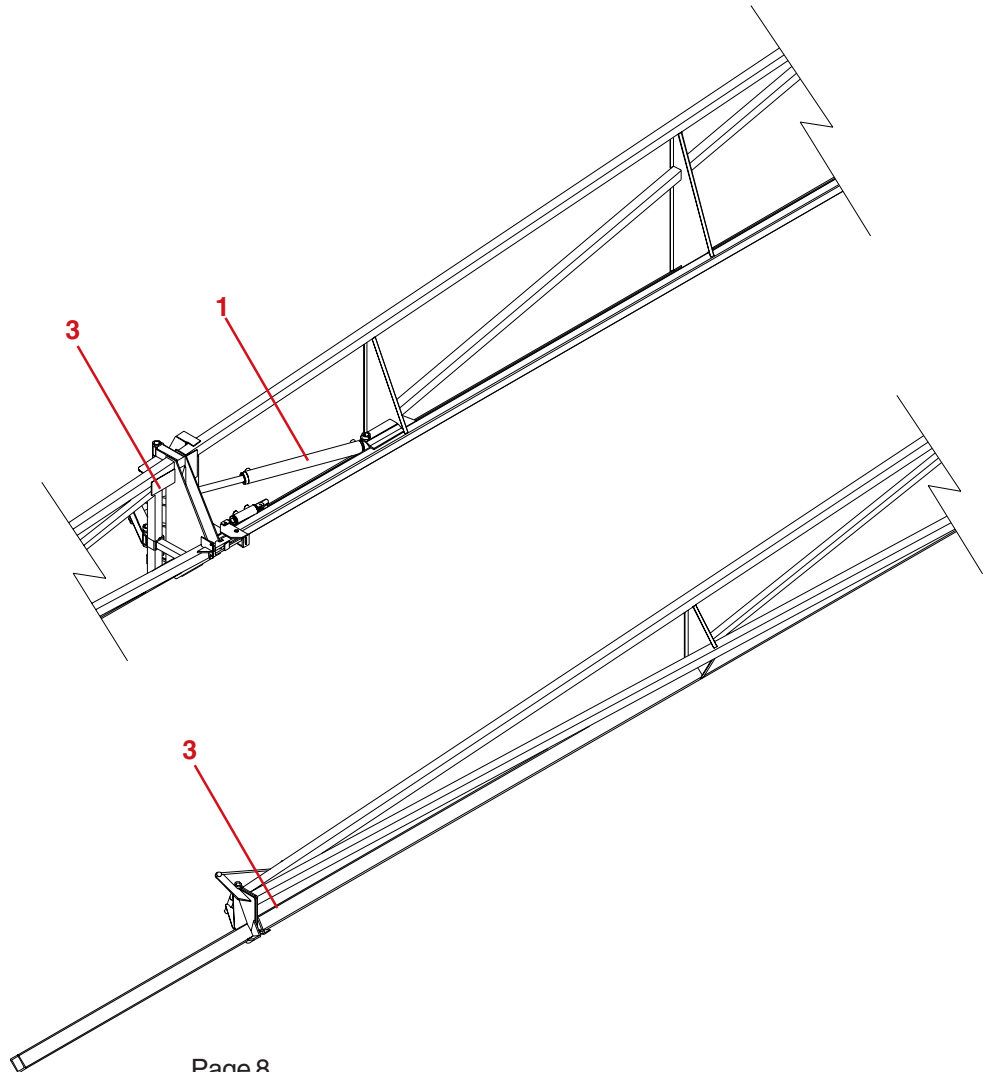
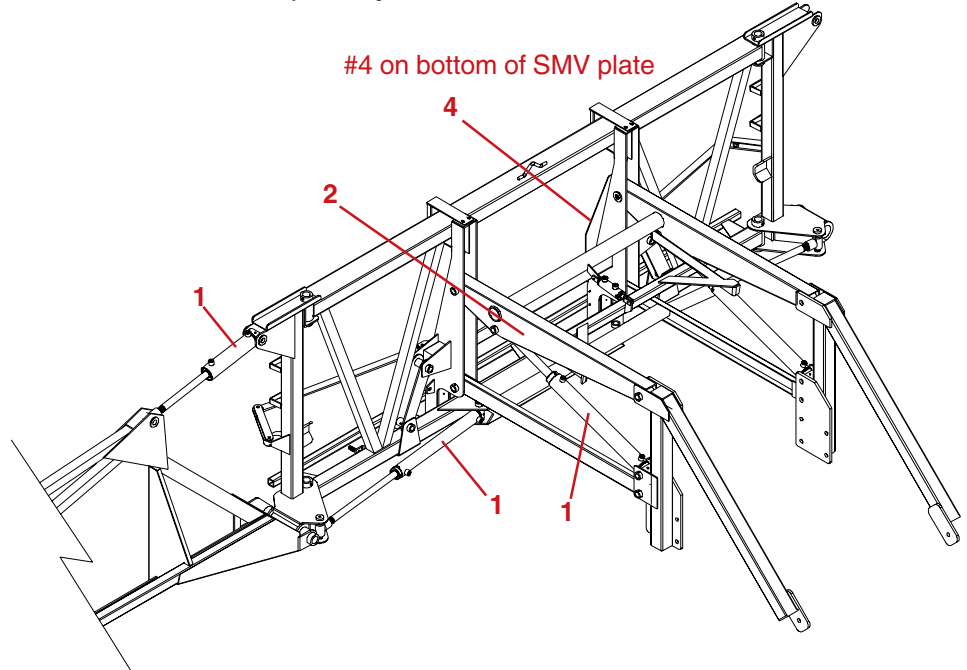
#2 Warning : Stay clear of boom during raising, lowering and folding



#3 Warning : PINCH POINTS



#4 Warning : Be aware of PINCH POINT symbols on boom, and all related parts.



These decals are available for replacement as a kit. Order # AB21039



## **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 the handling of such materials. (Examples: extremely dusty, molds, fungus, bulk fertilizers, etc.)
- Keep wheel and lug nuts tightened to specified torque.
- Assure that agricultural implement tires are inflated evenly.
- Give the unit a visual inspection for any loose bolts, worn parts, or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
- Be sure there are no tools lying on or in the equipment
- Do not use the unit until you are sure that the area is clear, especially around children and animals.
- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and it's attachments. Completely familiarize yourself and other operators with it's operation before using.
- Make sure that the brakes are evenly adjusted (if equipped with brakes)
- Use a tractor equipped with Roll Over Protection System (ROPS) and fasten your seat belt prior to starting the engine.
- The manufacturer does not recommend usage of a tractor with the ROPS removed.
- Move the tractor wheels to the widest recommended settings to increase stability.
- Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach a safety chain.
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the equipment.



## **DURING OPERATION**

- **SAFETY CHAIN** -If equipment is going to be transported on a public highway, a safety chain should be obtained and installed. Always follow state and local regulations regarding safety chain and auxiliary lighting when towing farm equipment on a public highway. Be sure to check with local law enforcement agencies for your own particular regulations. Only a safety chain (not an elastic or nylon/plastic tow strap) should be used to retain the connection between the towing and towed machines in the event of separation of the primary attaching system.

- Install the safety chain by crossing the chains under the tongue and secure to the draw bar cage, hitch, or bumper frame.
- Beware of bystanders, **PARTICULARLY CHILDREN!** Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. 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 or in the tractor or equipment.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate, or adjust your equipment while it is moving.
- When halting operation, even periodically, set the tractor or towing vehicle brakes, disengage the PTO, shut off the engine, and **remove the ignition key.**
- Be especially observant of the operating area and terrain- watch for holes, rocks, or other hidden hazards. Always inspect the area prior to operation.
  - DO NOT operate near the 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 levellest possible route when transporting across fields. Avoid the edges of ditches, gullies, and steep hillsides.
- Be extra careful when working on inclines.
- Periodically clear the equipment of brush, twigs, or other materials to prevent buildup of dry combustible materials.
- Maneuver the tractor or towing vehicle at safe speeds.
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
- Avoid loose fill, rocks, and holes; they can be dangerous for equipment operation or movement.
- Allow for unit length when making turns.
- Do not walk or work under raised components or attachments unless securely positioned and blocked.
- Keep all bystanders, pets, and livestock clear of the work area.
- Operate the towing vehicle from the operators seat only.
- 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 the hardware on equipment following every 100 hours of operation. Correct all problems. Follow the maintenance safety procedures.



## **FOLLOWING OPERATION**

- Following operation, or when unhitching, stop the tractor or towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and **remove the ignition keys**.
- Store the 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 the stored unit.
- Make sure all parked machines are on a hard, level surface and engage all safety devices.
- Wheel chocks may be needed to prevent unit from rolling.



## **HIGHWAY AND TRANSPORT OPERATIONS**

- Adopt safe driving practices:
  - Keep the brake pedals latched together at all times. **NEVER USE INDEPENDENT BRAKING WITH MACHINE IN TOW, LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT.**
  - Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.
  - Reduce speed prior to turns to avoid the risk of overturning.
  - Always keep the tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.
  - Do not drink and drive!
- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport. Various safety lights and devices are available from your dealer.
- The 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.
- When driving the tractor and equipment on the road under 20 mph (40 kph) at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.
- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.

- Watch for obstructions overhead and to the side while transporting.
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc.



## **PERFORMING MAINTENANCE**

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
- Before working on this machine, stop the towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and **remove the ignition keys**.
- 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 the machine.
- Always use the proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Follow the torque chart 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 the skin.
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.
- Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. **Without immediate medical treatment, serious infection and reactions can occur.**
- 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.
- Never replace hex bolts with less than grade five bolts unless otherwise specified.
- Refer to bolt torque chart 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. The Manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, the 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 equipment.

## BOLT TORQUE

### 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.

#### 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 \*

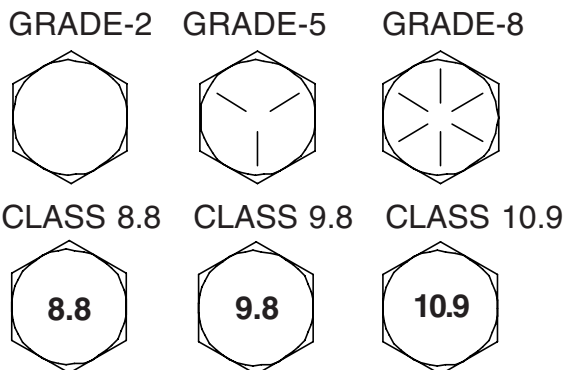
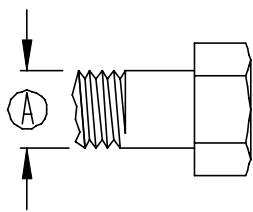
"A"	CLASS 8.8		CLASS 9.8		CLASS 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	(13)	10	(14)	13	(17)
7	15	(21)	18	(24)	21	(29)
8	23	(31)	25	(34)	31	(42)
10	45	(61)	50	(68)	61	(83)
12	78	(106)	88	(118)	106	(144)
14	125	(169)	140	(189)	170	(230)
16	194	(263)	216	(293)	263	(357)
18	268	(363)	--	--	364	(493)
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%.

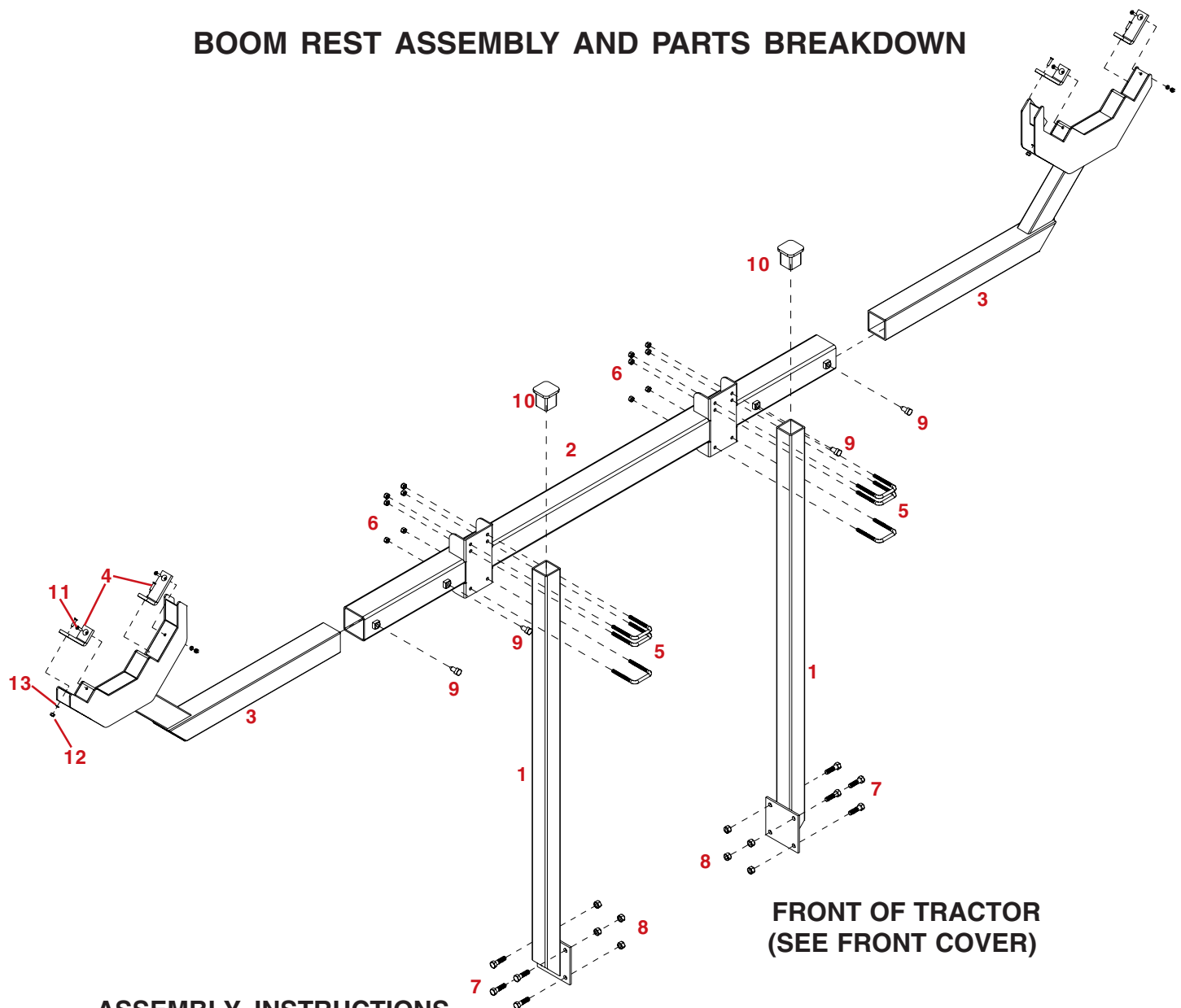
\* GRADE or CLASS value for bolts and capscrews are identified by their head markings.



### Torque Specifications



# BOOM REST ASSEMBLY AND PARTS BREAKDOWN



## ASSEMBLY INSTRUCTIONS

1. Bolt Boom Rest Uprights (#1) to sprayer frame using 1/2" x 1-1/4" bolts (#7) and 1/2" Nylon Insert Locknuts (#8). Do not tighten at this time.
2. Attach Boom Rest Crossbar (#2) to Boom Rest Uprights (#1) using 3/8" U-bolts (#5) and 3/8" Nylon Insert Locknuts (#6) as shown.
3. Tighten bolts and nuts (#7 and #8) left loose in Step 1.
4. Install Tube Caps (#10) into tube ends as shown.
5. Attach boom wear plates (#4) to boom rests (#3), using eight 1/4" x 1" torx screws (#11), 1/4" lock washers (#13), and 1/4"unc hex nuts (#12).
6. Slide boom rests (#3) into crossbar (#2) to desired width lock in place with four 1/2" x 1" set screws (#9)
7. Place Boom into the folded position.
8. Lower Height Adjust onto Height Adjust Lock, then raise 1".
9. Loosen 3/8" U-bolts (#5) and 3/8" Nylon Insert Locknuts (#6).
10. Raise Boom Rest Crossbar (#2) until it touches the boom and tighten the bolts and nuts (#5 and #6) loosened in step 9.

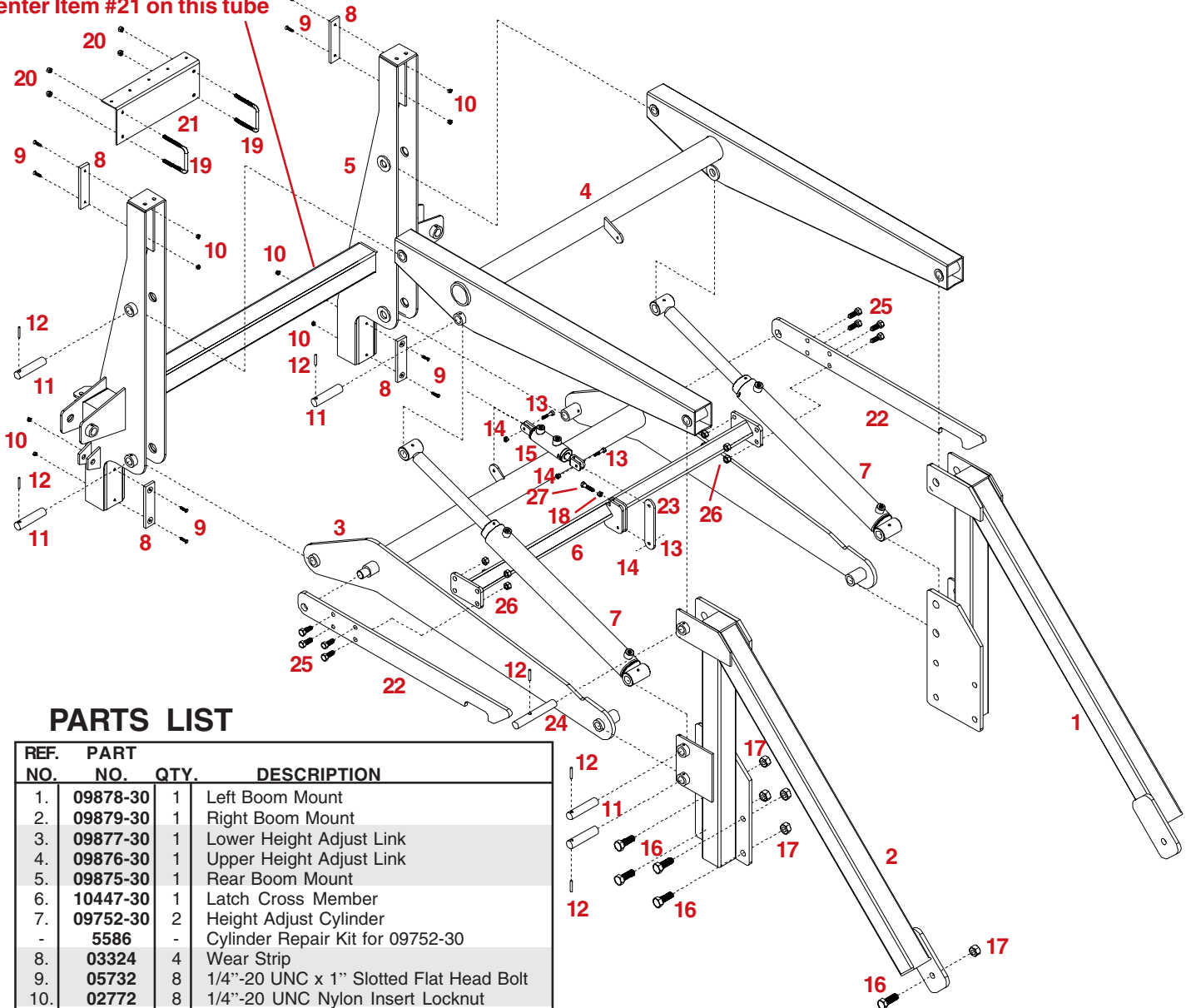
## PARTS LIST

REF. PART NO.	PART NO.	QTY.	DESCRIPTION
1.	09896-30	2	Boom Rest Boom Upright
2.	11919-30	1	Boom Rest Crossbar
3.	11856-30	2	Boom Rest
4.	11857	4	Boom Rest Wear Plates
5.	01887	6	3/8"-16 UNC U-Bolt
6.	02592	12	3/8"-16 Nylon Insert Locknut
7.	00967	8	1/2"-13 UNC x 1-1/4" Hex Head Bolt (Gr.5)
8.	02178	8	1/2"-13 UNC Nylon Insert Locknut
9.	02561	4	1/2"UNC x 1" Square Head Set Screw
10.	10020	2	2-1/2" Tube End Cap
11.	07082	8	1/4"UNC x 1" Torx Screws
12.	00062	8	1/4"UNC Nuts
13.	00057	8	1/4" Lock Washer

Please order replacement parts by PART NO., DESCRIPTION, and COLOR.

# HEIGHT ADJUST ASSEMBLY AND PARTS BREAKDOWN

Center Item #21 on this tube



## PARTS LIST

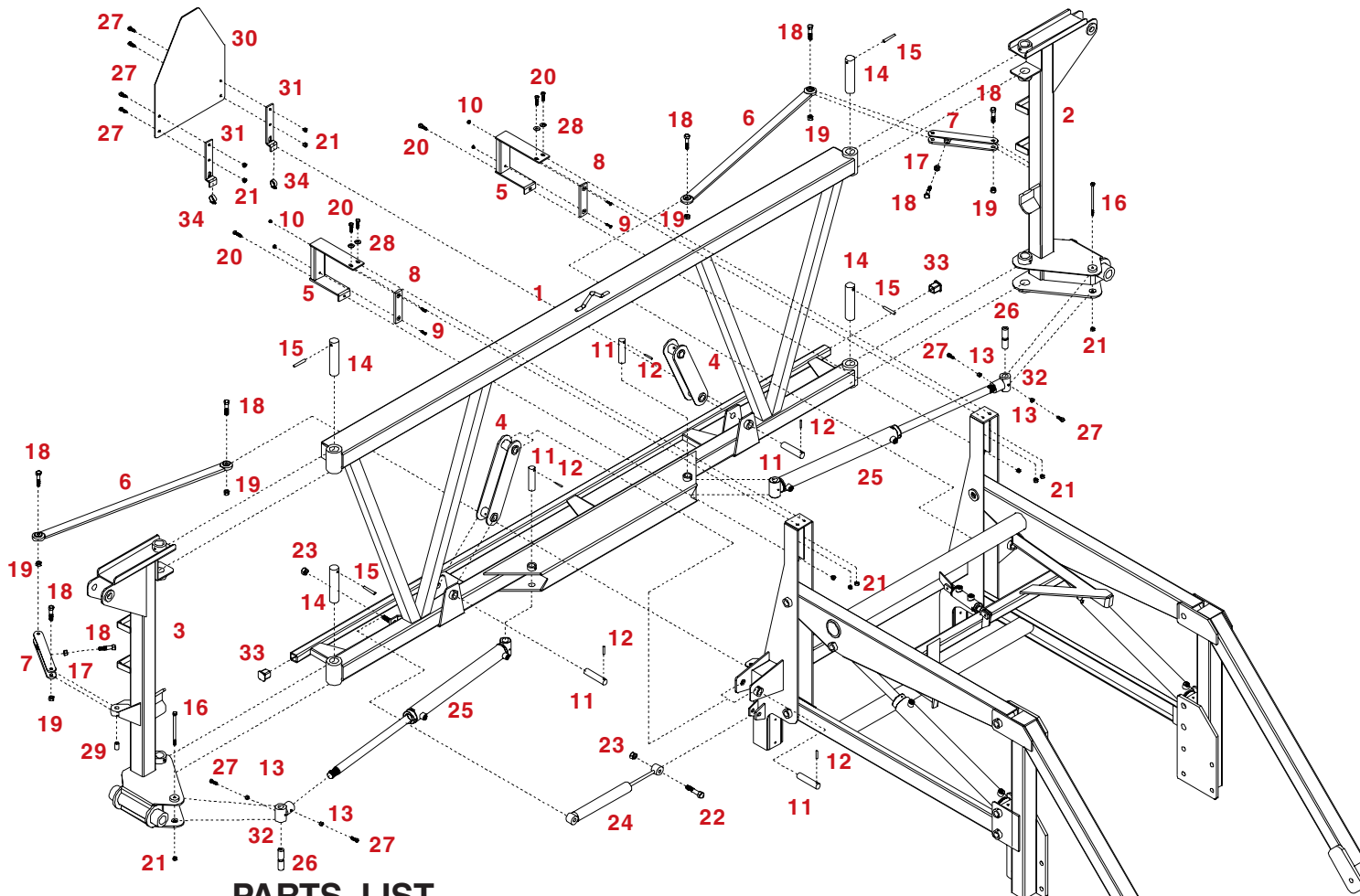
REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	09878-30	1	Left Boom Mount
2.	09879-30	1	Right Boom Mount
3.	09877-30	1	Lower Height Adjust Link
4.	09876-30	1	Upper Height Adjust Link
5.	09875-30	1	Rear Boom Mount
6.	10447-30	1	Latch Cross Member
7.	09752-30	2	Height Adjust Cylinder
-	5586	-	Cylinder Repair Kit for 09752-30
8.	03324	4	Wear Strip
9.	05732	8	1/4"-20 UNC x 1" Slotted Flat Head Bolt
10.	02772	8	1/4"-20 UNC Nylon Insert Locknut
11.	09914-95	10	1" x 4-3/8" Pin (Plated)
12.	09954	12	7/32" x 1-1/2" Roll Pin
13.	00372	3	5/16"-18 UNC x 1-1/2" Hex Head Bolt (Gr.5)
14.	02802	3	5/16"-18 UNC Nylon Insert Locknut
15.	09985-30	1	Lock Cylinder
-	5222	-	Cylinder Repair Kit for 09985-30
16.	01235	10	3/4"-10 UNC x 2" Hex Head Bolt (Gr.5)
17.	02961	10	3/4"-10 UNC Nylon Insert Locknut
18.	04886	1	3/8" Jam Nut
19.	02759	2	3/8"-16 UNC U-Bolt
20.	02592	4	3/4"-16 UNC Nylon Insert Locknut
21.	09835-30	1	Valve Control Bracket (Black)
22.	10444-30	2	Latch Arm (Black)
23.	10446-30	1	Linkage Arm (Black)
24.	10445-95	2	1" x 6-1/2" Latch Pin (Plated)
25.	01254	8	1/2"-13 UNC x 1-1/2" Hex Head Bolt, (Gr.5)
26.	02178	8	1/2" Nylon Insert Locknut
27.	00914	1	3/8" 16 UNC x 1-1/2" Hex Head Bolt, (Gr.5)

Please order replacement parts by PART NO. , DESCRIPTION, and Color.

## ASSEMBLY INSTRUCTIONS

- Bolt Left and Right Boom Mounts (#1 & #2) to sprayer frame using 3/4" X 2" bolts (#16) and 3/4" Nylon Insert Locknuts (#17)
- Attach Lower Height Adjust Link (#3) to lower holes in Left and Right Boom Mounts (#1 & #2) and secure with 1" x 4-3/8" Pins (#11) and Roll Pins (#12) as shown.
- Attach body end of Height Adjust Cylinders (#7) to holes directly above lower holes in step 2, using 1" x 4-3/8" Pins (#11) and Roll Pins (#12) as shown (cylinder fittings must be up).
- Attach Upper Height Adjust Link (#4) to upper holes in Left and Right Boom Mounts (#1 & #2) using 1" x 6-1/2" Pins (#24) and Roll Pins (#12) as shown.
- Attach ram end of Cylinders (#7) to Upper Height Adjust Link (#4). Insert 1" x 4-3/8" Pin. Secure with Roll Pins (#12).
- Slide a Latch Arm (#22) on each side of the Lower Height Adjust Link (#3) as shown. Bolt Latch Cross Member (#6) to the Latch Arms using 1/2" x 1-1/2" Bolts (#25) and 1/2" Nylon Insert Locknuts (#26).
- Mount body end of Locking Cylinder (#15) to Lower Height Adjust Link (#3) (cylinder fittings must be up) using a 5/16" x 1-1/2" Bolt (#13) and a 5/16" Nylon Insert Locknut (#14). Attach Linkage Arm (#23) to Locking Cylinder and to Latch Cross Member (#6) using 5/16" x 1-1/2" Bolts (#13) and 5/16" Nylon Insert Locknuts (#14). Run in 3/8" x 1-1/2" Bolt (#27) and 3/8" Jam Nut (#28) into Latch Cross Member (#6).
- Attach Wear Strips (#8) with 1/4" x 1" Flat Head Slotted Bolts (#9) and 1/4" Nylon Insert Locknuts (#10). Ensure screw head is in countersunk hole, tighten with a screwdriver only. Do not overtighten.
- Attach Rear Boom Mount (#5) to Lower Height Adjust Link (#3) and Upper Height Adjust Link (#4) using 1" x 4-3/8" Pins (#11) and Roll Pins (#12) as shown.
- Raise Rear Boom Mount (#5) and then raise Locking Cylinder (#15) so that Latch Arm (#22) comes up off of Latch Pin (#24). Slowly raise and lower Rear Boom Mount and adjust 3/8" Bolt (#27) and 3/8" Jam Nut (#28) to ensure that Latch Arm will not hit Latch Pin when raising and lowering the boom. Center Valve Control Bracket (#21) using 3/8" U-bolts (#19) and 3/8" Lock Nuts where shown.

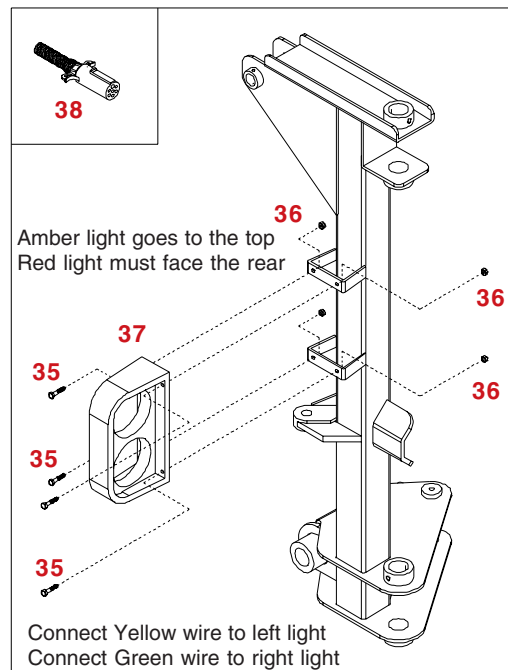
# BOOM CARRIER PARTS BREAKDOWN



## PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	09871-10	1	Center Section (Red)
-	09871-20	1	Center Section (Green)
2.	09872-30	1	Left Hinge
3.	09873-30	1	Right Hinge
4.	09874-30	2	Auto-Level Arm
5.	09887-30	2	Auto-Level Slide Bracket
6.	09889-30	2	Auto-Level Lock Link
7.	09888-95	2	Auto-Level Lock Arm
8.	03324	2	Wear Strip
9.	05732	4	1/4"-20 UNC x 1" Slotted Flat Head Bolt
10.	02772	4	1/4"-20 UNC Nylon Insert Locknut
11.	09914-95	6	1" x 4-3/8" Pin (Plated)
12.	09954	6	7/32" x 1-1/2" Roll Pin
13.	04886	4	3/8"-16 UNC Jam Nut
14.	09911-95	4	1-1/2" x 6-1/2" Pin (Plated)
15.	09955	4	3/8" x 2-1/2" Roll Pin
16.	12002	2	7/16"-16 UNC x 6" Hex Head Bolt (Gr.5)
17.	00640	2	1/2"-13 UNC Jam Nut
18.	00348	8	1/2"-13 UNC x 2-1/4" Hex Head Bolt (Gr.5)
19.	02178	6	1/2"-13 UNC Nylon Insert Locknut
20.	00523	6	3/8"-16 UNC x 1-1/4" Hex Head Bolt (Gr.5)
21.	02592	12	3/8"-16 UNC Nylon Insert Locknut
22.	04215	2	5/8"-11 UNC x 3" Hex Head Bolt (Gr.5)
23.	02587	4	5/8"-11 UNC Nylon Insert Locknut
24.	01729-30	2	Stabilizer Shock
25.	09771-30	2	Folding Cylinder
-	5585	-	Cylinder Repair Kit for 09771-30
26.	09913-95	2	1" X 3-3/4" Step Pin (Plated)
27.	00907	8	3/8"-16 UNC x 1" Hex Head Bolt (Gr.5)
28.	00059	4	3/8" Flat Washer
29.	09904-95	2	Bushing (Plated)
30.	09899-30	1	SMV Plate
31.	09900-30	2	SMV Brackets
32.	09902-30	2	Wide Cylinder End
33.	10021	2	1-1/2" Tube Cap
34.	B24H	2	1-1/4" Hose Clamp (Stainless Steel)

Please order replacement parts by PART NO., DESCRIPTION, and COLOR



## LIGHTING PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
35.	00336	8	1/4"-20 UNC X 1-1/4" Hex Head Bolt
36.	02772	8	1/4"-20 UNC Nylon Insert Locknut
37.	10032	1	Left Light Assembly (shown)
38.	07416	1	7 Way Connector Plug (Male)
-	10033	1	Right Light Assembly
-	09058	1	Wiring Harness (not shown)

Please order replacement parts by PART NO. and DESCRIPTION.

# BOOM CARRIER ASSEMBLY AND ADJUSTMENT

## ASSEMBLY INSTRUCTIONS

1. Hang Center Section (#1) from Height Adjust Assembly with two Auto-level Arms (#4) using four 1" x 4-3/8" Pins (#11) and four Roll pins (#12) as shown.
2. Attach Wear Strips (#8) to the Auto-level Slide Brackets (#5) using two 1/4"-20 UNC x 1" Slotted Flat Head Bolts (#9) and two 1/4"-20 UNC Nylon Insert Locknuts (#10) as shown. Ensure screw head is in countersunk hole and tighten with a screwdriver only. Do not overtighten.
3. Attach the two Auto-level Slide Brackets (#5) to the Height Adjust Assembly using three 3/8"-16 UNC x 1-1/4" Bolts (#20), three 3/8" washers (#28), and three 3/8"-16 UNC Nylon Insert Locknuts (#21). Use more 3/8" washers if needed to get 1/16" clearance between Wear Strip (#8) and Center Section (#1).
4. Install Stabilizer Shocks (#24) using two 5/8"-11 UNC x 3" Bolts (#22) and four 5/8"-11 UNC Nylon Insert Locknuts (#23).
5. Attach Left and Right Hinges (#2 and #3) using four 1-1/2" x 6-1/2" Pins (#14) and four Roll Pins (#15)
6. Insert the Step Pin (#26) into Wide Cylinder End (#32). Keep it centered using a 3/8"-16 UNC x 1" Bolts (#27) and 3/8"-16 UNC Jam Nut (#13) as shown. Tighten the bolt until it makes contact, then back it off 1/8 turn. This bolt holds the Step Pin from falling out. The pin must still be able to turn.
7. Thread Wide Cylinder Ends (#32) onto Folding Cylinders (#25). Attach body end of cylinders to Center Section (#1) using 1" x 4-3/8" Pins (#11) and Roll Pins (#12). Attach Ram Ends of Folding Cylinders to Hinges (#2 and #3) using 3/8"-16 UNC x 6" Bolts (#16) and 3/8"-16 Nylon Insert Locknuts (#21).
8. Attach Auto-level Lock Link (#6) and Auto-level Lock Arm (#7) to Center Section (#1) and Hinges (#2 and #3) using 1/2"-13 UNC x 2-1/4" Bolts (#18) and 1/2"-13 Nylon Insert Locknuts (#19) as shown.
9. Attach SMV Brackets (#31) to SMV Plate (#30) using 3/8"-16 UNC x 1" Bolts (#27) and 3/8"-16 UNC Nylon Insert Nuts (#21). Install SMV Assembly to Center Section (#1) as shown keeping the SMV Assembly as far to the left as possible.
10. Install Tube End Caps (#33) into sprayer nozzle tube of Center Section (#1) as shown.

## ADJUSTMENT INSTRUCTIONS

These adjustments should be done with the inner wings attached. (see page 10-11)

1. Unfold the wings fully.
2. Adjust wing straightness using Adjustable cylinder end of Folding Cylinders (#25). This is best done by turning the cylinder shaft. Once the wing is straight, lock Adjustable Cylinder end (#32) in place using a 3/8"-16 UNC x 1" Bolt (#27) and 3/8"-16 UNC Jam Nut (#13) as shown.
3. Thread a 1/2"-13 UNC Jam Nut (#17) onto a 1/2"-13 UNC x 2-1/4" Bolt (#18) and insert the bolt into the Auto-level Lock Link (#6) as shown. Leave Loose at this time.
4. Bring wings to the folded position.
5. Adjust the stop bolt left loose in step 3 to center the wings on the Boom Rest Assembly Rubbers (see page 6). Lock Stop Bolt in place with the Jam nut.

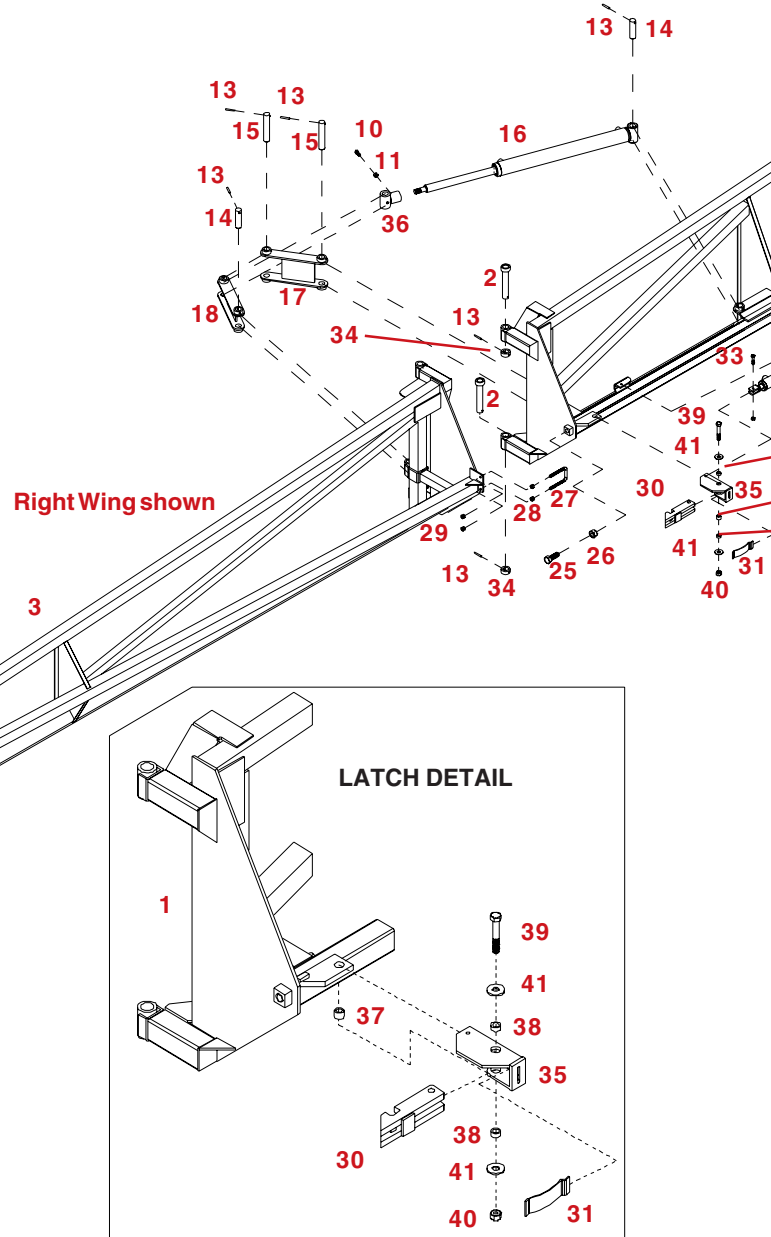
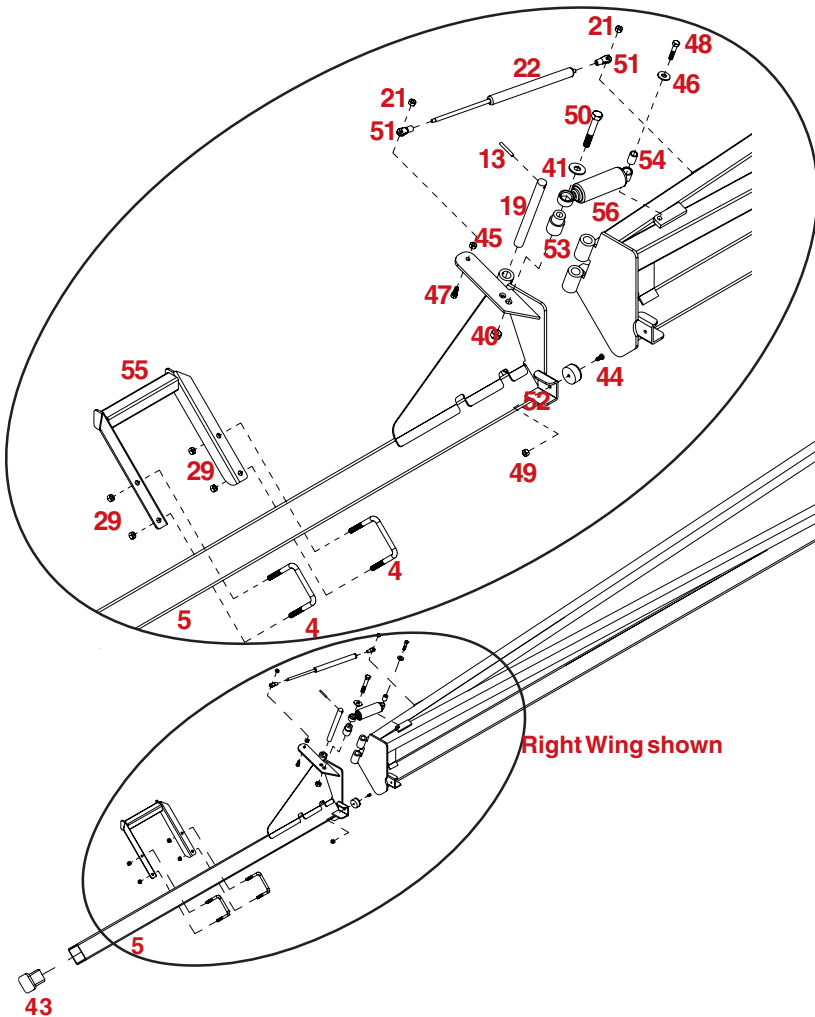
# PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	09880-30	1	Left Inner Wing (Black)
-	09881-30	1	Right Inner Wing (Black)
2.	09909-95	4	Headed Boom Rest
3.	09882-30	1	Left Middle Wing for 90' only(Black)
-	09963-30	1	Left Middle Wing for 80' only(Black)
-	09883-30	1	Right Middle Wing for 90' only(Black)
-	09964-30	1	Right Middle Wing for 80' only(Black)
4.	02759	4	U-Bolt
5.	09884-30	1	Left Outer Wing (Black)
-	09885-30	1	Right Outer Wing (Black)
6.	09926-30	2	Outer Boom Rest
7.	09910-95	2	1-1/2" x 13-3/4" Pin (Plated)
8.	09955	2	3/8" x 2-1/2" Roll Pin
9.	09770-30	2	Wing Lift Cylinder
-	5587	-	Cylinder Repair Kit for 09770-30
10.	00907	4	3/8"-16 UNC x 1" Hex Head Bolt
11.	04886	4	3/8"-16 UNC Jam Nut
12.	09915-95	2	1" x 3-1/2" Pin (Plated)
13.	09954	18	7/32" x 1-1/2" Roll Pin
14.	09914-95	6	1" x 4-3/8" Pin (Plated)
15.	09912-95	4	1" x 6-1/4" Pin (Plated)
16.	09771-30	2	Folding Cylinder
-	5585	-	Cylinder Repair Kit for 09771-30
17.	09890-30	2	Inner Folding Link
18.	09891-30	2	Outer Folding Link
19.	09916-95	2	Breakaway Pin (Plated)
21.	02802	12	5/16"-18 UNC Nylon Insert Locknut
22.	11928	2	Gas Spring
25.	01235	2	3/4"-10 UNC x 2" Hex Head Bolt
26.	03701	2	3/4"-10 UNC Jam Nut
27.	02128	2	U-Bolt
28.	00061	4	3/8"-16 UNC Hex Nut
29.	02592	16	3/8"-16 UNC Nylon Insert Locknut
30.	09892-30	2	Wing Latch
31.	01158-95	2	Spring (Plated)
32.	09985-30	2	Latch Cylinder

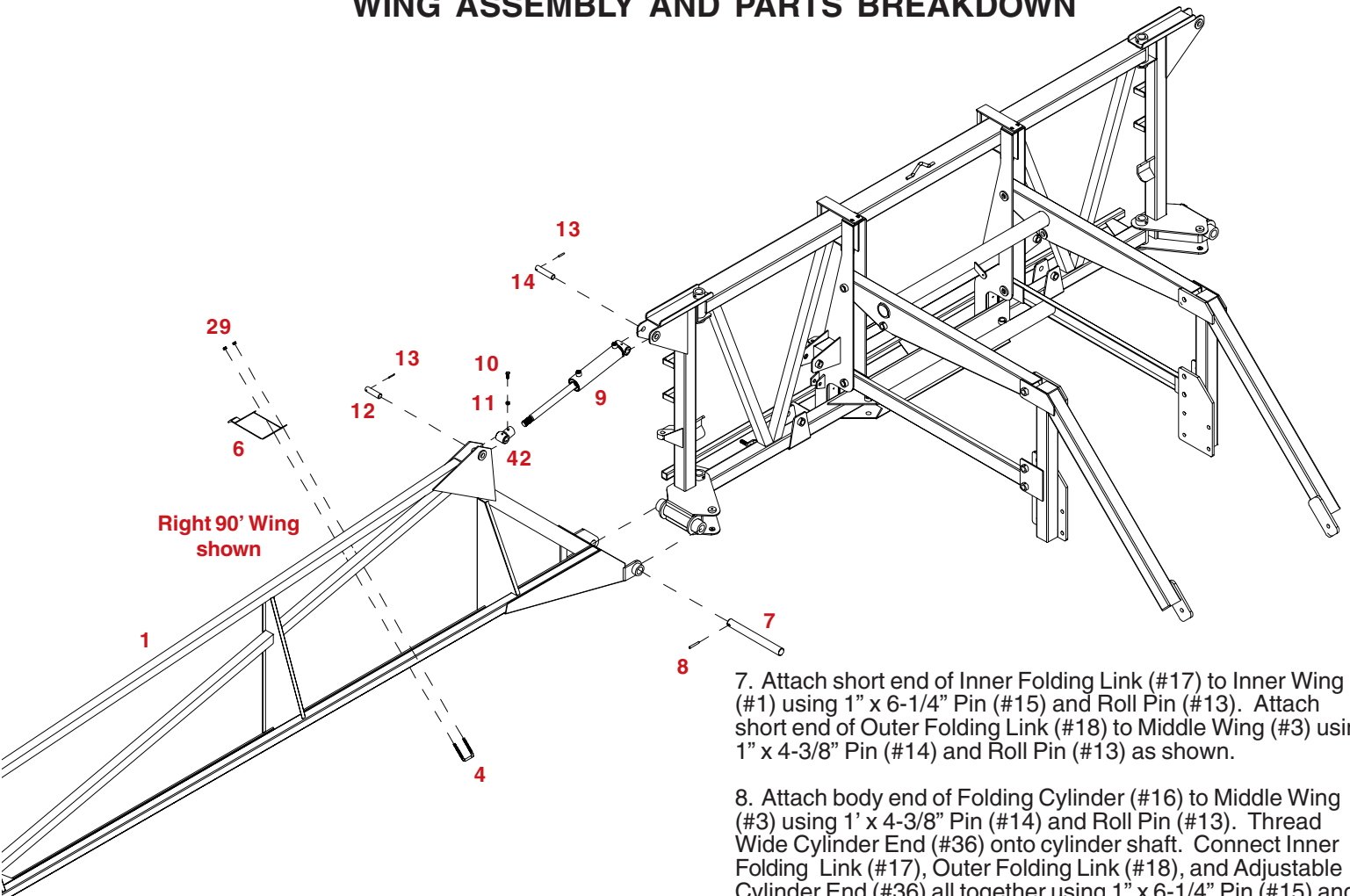
# PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
33.	00372	4	5/16"-18 UNC x 1-1/2" Hex Head Bolt
34.	09907-95	4	Collar (Plated)
35.	09893-95	1	Left Latch Actuator
-	09894-95	1	Right Latch Actuator
36.	09902-95	2	Wide Cylinder End (Plated)
37.	09905-95	2	3/4" x 9/16" Wide Bushing (Plated)
38.	02579-95	4	3/4" x 11/32" Wide Bushing (Plated)
39.	04073	2	1/2"-13 UNC x 3" Hex Head Bolt
40.	02178	4	1/2"-13 UNC Nylon Insert Locknut
41.	00085	6	1/2" Flat Washer
42.	09903-95	2	Narrow Cylinder End (Plated)
43.	10019	2	3" Tube End Cap
44.	07082	2	1/4" x 1" Flat Head Torx Bolt
45.	00007	4	5/16" Hex Nut
46.	00059	2	3/8" Flat Washer
47.	00685	4	5/16" x 1-1/4" Gr. 5 Hex Bolt
48.	02377	2	7/16" x 1-1/2" Gr. 8 Epoxy Hex Bolt
49.	02772	2	1/4" Nylon Insert Lock Nut
50.	04073	2	1/2"-13 UNC x 3" Hex Head Bolt
51.	11032	4	Gas Spring Ends
52.	11867	2	Rubber Bumper
53.	11908-95	2	Step Bushing
54.	11909-95	2	Bushing
55.	11910-30	2	Front Fold Wing Stop
56.	SB12426	2	Damper Cylinder

Please order replacement parts by PART NO., DESCRIPTION, and COLOR.



# WING ASSEMBLY AND PARTS BREAKDOWN



## ASSEMBLY & ADJUSTMENT

1. Attach Inner Wing (#1) to Carrier Assembly using 1-1/2" x 13-3/4" Pin (#7) and Roll Pin (#8) as shown. Do both left and right Inner Wing at this time to balance the weight load.

2. Thread Narrow Cylinder Ends (#42) onto Wing Lift Cylinders (#9). Attach body end of Wing Lift Cylinder (#9) to Carrier Assembly using 1" x 4-3/8" Pin (#14) and Roll Pin (#13). Attach ram end of Wing Lift Cylinder to Inner Wing (#1) using 1" x 3-1/2" Pin (#12) and Roll Pin (#13) Do both left and right side to balance the weight load. Adjust Inner Wings to level using the Adjustable Cylinder Ends. This is best done by turning the shaft of the cylinders. Lock the adjustment using 3/8"-16 UNC x 1" Bolts (#10) and 3/8"-16 UNC Jam Nuts (#11).

3. Attach Outer Boom Rests (#6) using 3/8"-16 UNC U-Bolts (#4) and 3/8"-16 UNC Nylon Insert Locknuts as shown.

4. Assemble and attach Wing Latch (#30), Latch Spring (#31), and Latch Actuator (#35) to Inner Wing (#1) using 1/2"-13 UNC x 3" Bolts (#39), 1/2"-13 UNC Nylon Insert Locknuts (#40), 1/2" Flat Washers (#41), 3/4"x 9/16" Bushings (#37), and 3/4"x 11/32" Bushings (#38) as shown.

5. Attach body end of Latch Cylinder (#32) to Inner Wing (#1) and ram end of Latch Cylinder (#32) to Latch Actuator (#35) using 5/16"-18 UNC x 1-1/2" Bolts (#33) and 5/16"-18 UNC Nylon Insert Locknuts (#21).

6. Attach Middle Wing (#3) to Inner Wing (#1) using Headed Pins (#2), Collars (#34), and Roll Pins (#13).

7. Attach short end of Inner Folding Link (#17) to Inner Wing (#1) using 1" x 6-1/4" Pin (#15) and Roll Pin (#13). Attach short end of Outer Folding Link (#18) to Middle Wing (#3) using 1" x 4-3/8" Pin (#14) and Roll Pin (#13) as shown.

8. Attach body end of Folding Cylinder (#16) to Middle Wing (#3) using 1" x 4-3/8" Pin (#14) and Roll Pin (#13). Thread Wide Cylinder End (#36) onto cylinder shaft. Connect Inner Folding Link (#17), Outer Folding Link (#18), and Adjustable Cylinder End (#36) all together using 1" x 6-1/4" Pin (#15) and Roll Pin (#13) as shown. Adjust straightness between Inner and Middle Wings by fully extending the Folding Cylinder and turning the cylinder shaft. Thread a 3/8"-16 UNC Jam Nut (#11) onto a 3/8"-16 UNC x 1" Bolt (#10) and insert the bolt into the Adjustable Cylinder End (#36). Use this bolt and jam nut to lock the adjustment.

9. Thread a 3/4"-10 UNC Jam Nut (#26) onto a 3/4"-10 UNC x 2" Bolt (#25). Thread the bolt into Inner Wing (#1) as shown until the head of the bolt just contacts Middle Wing (#3) when wings are fully unfolded. Lock the bolt in place with the jam nut.

10. Thread two 3/8"-16 UNC Jam Nuts (#26) onto a 3/8"-16 UNC U-Bolt (#27). Attach the U-Bolt to the Middle Wing (#3) using 3/8"-16 UNC Nylon Insert Locknuts (#29) as shown. Adjust U-bolt out until latch operates freely without excessive play.

11. Attach Outer Wing (#5) to Middle Wing (#3) using Breakaway Pin (#19) and Roll Pin (#13). Attach Gas Spring (#22) to Middle Wing (#3) using 5/16" bolts (#47), 5/16"-18 UNC Hex nuts (#45) & (#21)

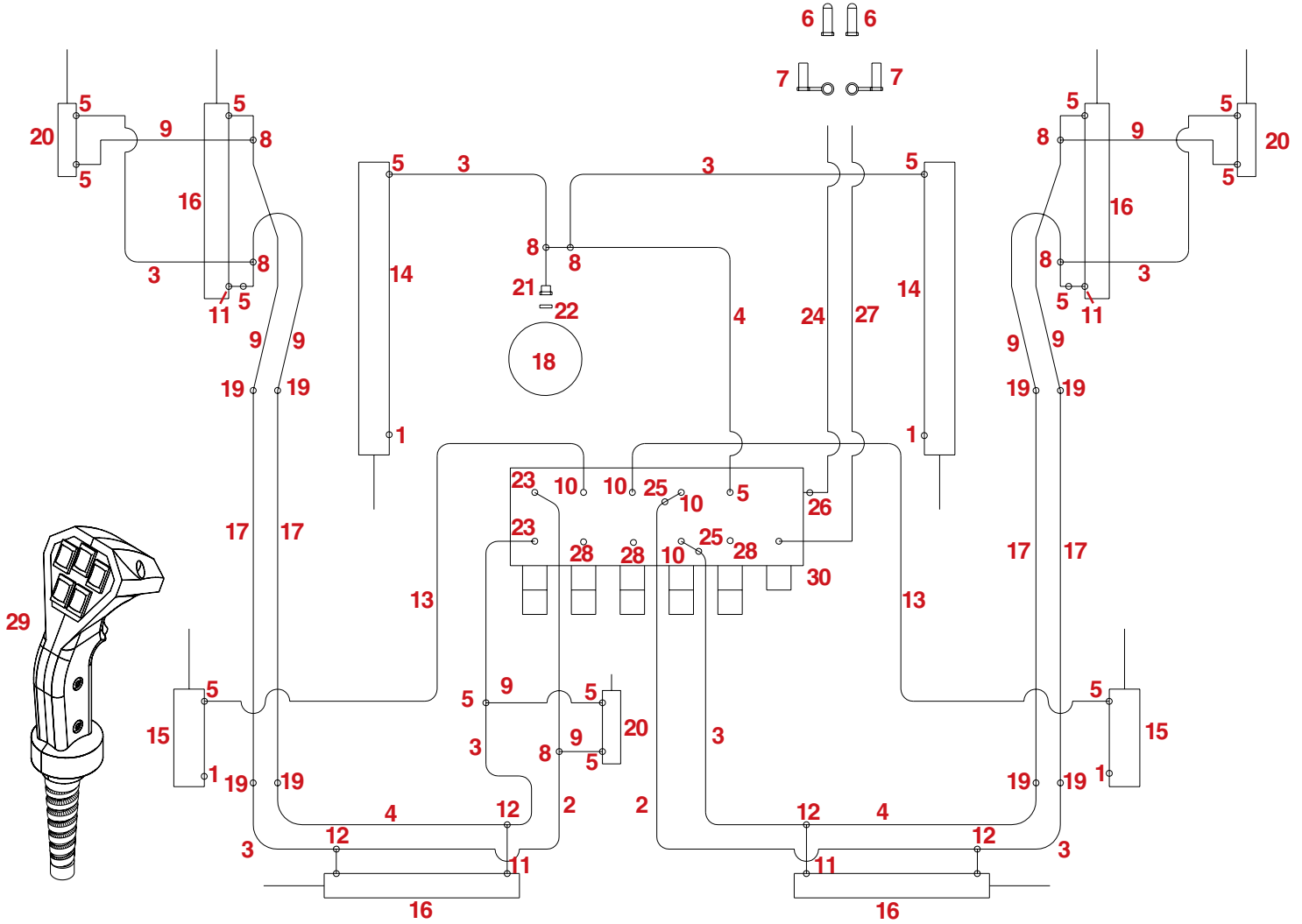
12. Attach Shocks using bushings (#53 & #54) and bolts (#48 & #50) and Nuts (#40) and washers (#41 & #46).

13. Attach bracket (#55) to outer wing (#5) using u-bolts (#4) and hex nuts (#29)

14. Bolt on rubber cushion (#52) with 1/4" bolt (#44) and nut (#49) adjust straightness of boom by putting washers behind rubber bumper.

15. Install End Caps (#43) into ends of Outer Wings (#5).

# 80 & 90 FRONT FOLD HYDRAULIC SCHEMATIC



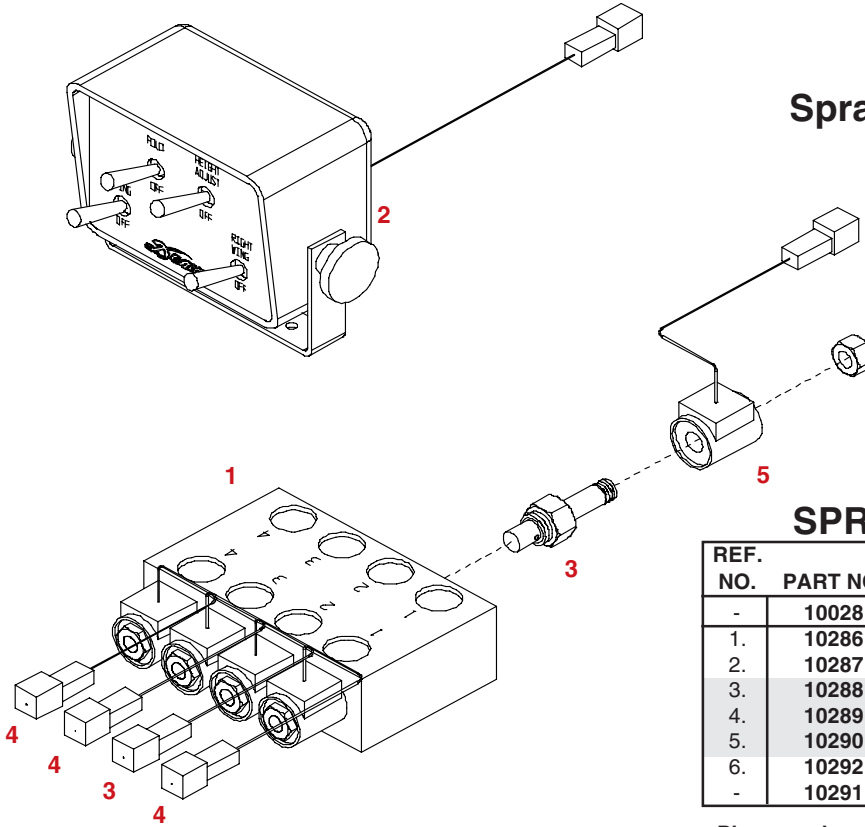
## HYDRAULICS PARTS LIST

REF NO.	PART NO.	QTY.	DESCRIPTION
1.	00288	4	.38 Breather
2.	05190	2	48" .25" HYD Hose
3.	05191	8	36" .25" HYD Hose
4.	05192	3	60" .25" HYD Hose
5.	05194	14	.38" MPT to #6 JIC Male 90°
6.	05197	2	Pioneer Coupler
7.	05198	2	Coupler Rubber Cap
8.	05203	8	#6 Female JIC to #6 Male JIC (2x) Tee
9.	05212	8	18" .25" HYD Hose
10.	05243	4	#6 Male O-Ring to #6 JIC Male STR
11.	05661	4	.031 Orifice
12.	05827	4	.38" MPT to #6 JIC Male (2x) Tee
13.	05839	2	142" .25" HYD Hose
14.	09752-30	2	Cylinder 2.5" x 20"
15.	09770-30	2	Cylinder 2.5" x 8"

REF NO.	PART NO.	QTY.	DESCRIPTION
16.	09771-30	4	Cylinder 2" x 16"
17.	09908-30	4	.38 HYD Tube 168"
18.	09918	1	Accumulator
19.	09950	8	#6 Male JIC Union
20.	09985-30	3	Cylinder 1.5" x 5"
21.	10029	1	Metric to #6 JIC Male
22.	10030	1	Seal For 10029
23.	11143	3	#6 O-Ring to #6 Male JIC 90°
24.	11398	1	36" .38" HYD Hose
25.	11434	2	#6 Male JIC to #6 Female JIC 90°
26.	11628	1	#10 Male O-Ring to #6 Female O-Ring
27.	11629	1	36" .38" HYD Hose w/ 90° Swivel End
28.	11763	3	#6 O-Ring Plug
29.	11868	1	Pendant Control
30.	11869	1	HYD Control Block

# CONTROL BOX PARTS BREAKDOWN

## SprayMaster Control System



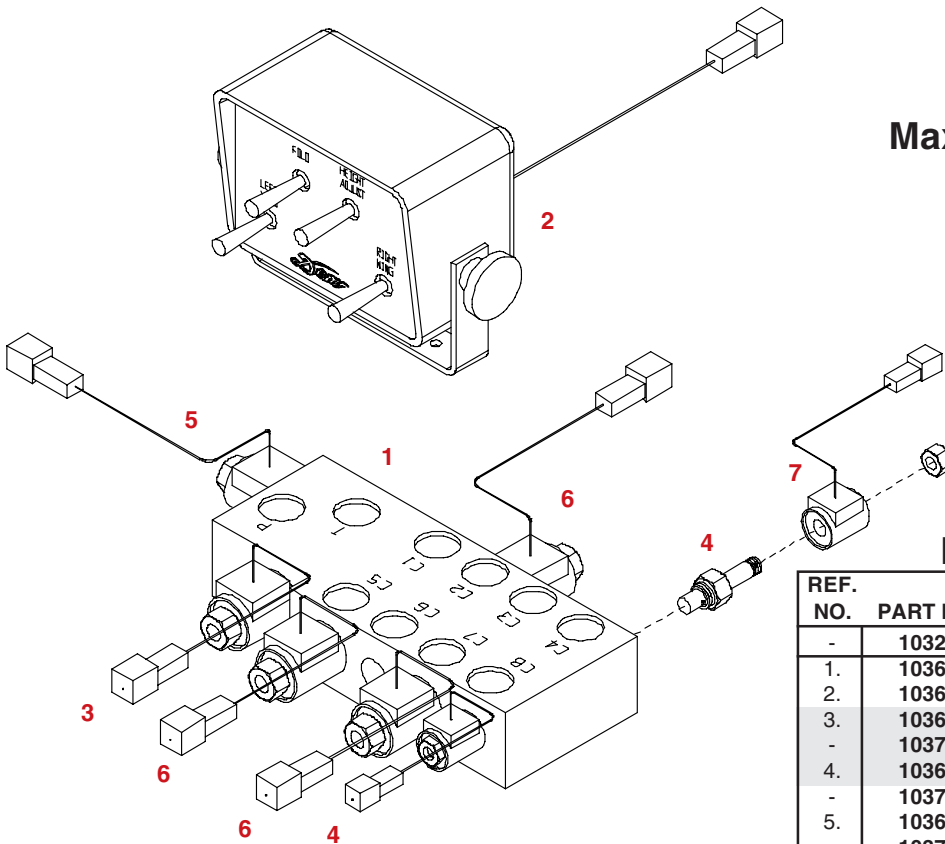
### SPRAYMASTER PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	10028	-	FasseControl System (includes item 1-6)
1.	10286	1	Valve Block Assembly
2.	10287	1	Control Console Assembly
3.	10288	2	8 Gallon/Minute Valve Cartridge
4.	10289	3	1/2 Gallon/Minute Valve Cartridge
5.	10290	5	Solenoid Coil Assembly
6.	10292	1	Wiring Harness (not shown)
-	10291	-	Seal Kit (1 kit required per cartridge)

NOTE: 8 GALLON/MINUTE CARTRIDGES (#3) MUST BE OPPOSITE EACHOTHER AS SHOWN ABOVE

Please order replacement parts by PART NO. and DESCRIPTION.

## MaxStak Control System



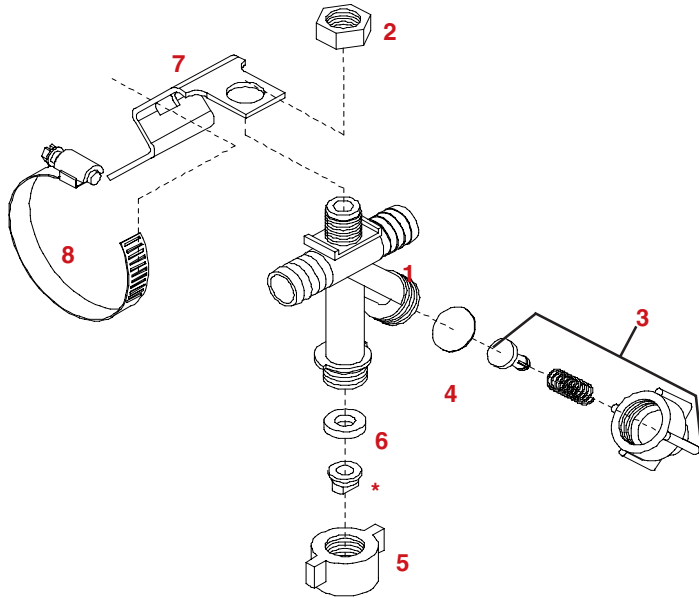
### MAXSTAK PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	10321	-	Fasse Control System (includes item 1-6)
1.	10362	1	Valve Block Assembly
2.	10363	1	Control Console Assembly
3.	10364	1	Reversing Valve Cartridge
-	10370	-	Seal Kit for 10364 (1 kit reqd. per cartridge)
4.	10365	2	Single Poppet Valve Cartridge
-	10371	-	Seal Kit for 10365 (1 kit reqd. per cartridge)
5.	10366	1	Dump Valve Cartridge
-	10372	-	Seal Kit for 10366(1 kit reqd. per cartridge)
6.	10367	3	Dual Poppet Valve Cartridge
-	10291	-	Seal Kit for 10367(1 kit reqd. per cartridge)
7.	10290	2	Small Solenoid Coil Assembly (Shown)
-	10368	5	Large Solenoid Coil Assembly
8.	10369	1	Wiring Harness (not shown)

NOTE: SMALL SOLENOID COILS ARE USED WITH 10365 (#4)  
LARGE SOLENOID COILS ARE USED WITH #3, #5, AND #6 AS SHOWN

Please order replacement parts by PART NO. and DESCRIPTION.

## DRIP FREE NOZZLES AND BOOM CLAMPS

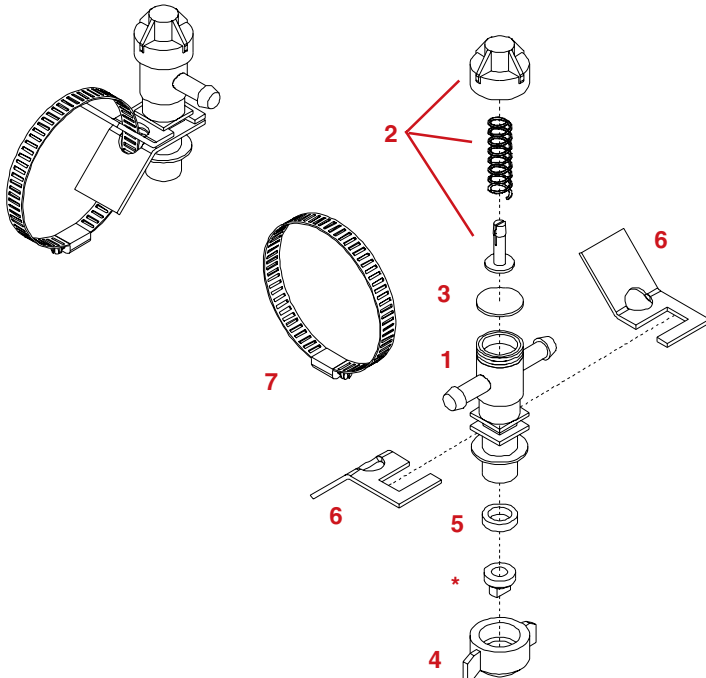


### 3/4" NOZZLE PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
-	<b>DF34NTL</b>	3/4" Nozzle Elbow Assy. w/ Red & Yellow Cap
-	<b>DF34NTT</b>	3/4" Nozzle Tee Assy. w/ Red & Yellow Cap
1.	<b>DF34T</b>	3/4" Nozzle Tee
-	<b>DF34E</b>	3/4" Nozzle Elbow
2.	<b>DFB12</b>	Nut
3.	<b>DFCP</b>	Spring Retainer Cap Assembly
4.	<b>DFDV</b>	Diaphragm (viton)
5.	<b>DFFD</b>	Floodjet Cap (red)
-	<b>DFFT</b>	Flat Cap (yellow)
6.	<b>DFGE</b>	Gasket (EPDM)
*	-----	Tip (specify tip size) (not included)
7.	<b>09931</b>	Nozzle Mounting Bracket
8.	<b>B64H</b>	Stainless Steel Gear Clamp

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

## TEEJET NOZZLES AND BOOM CLAMPS

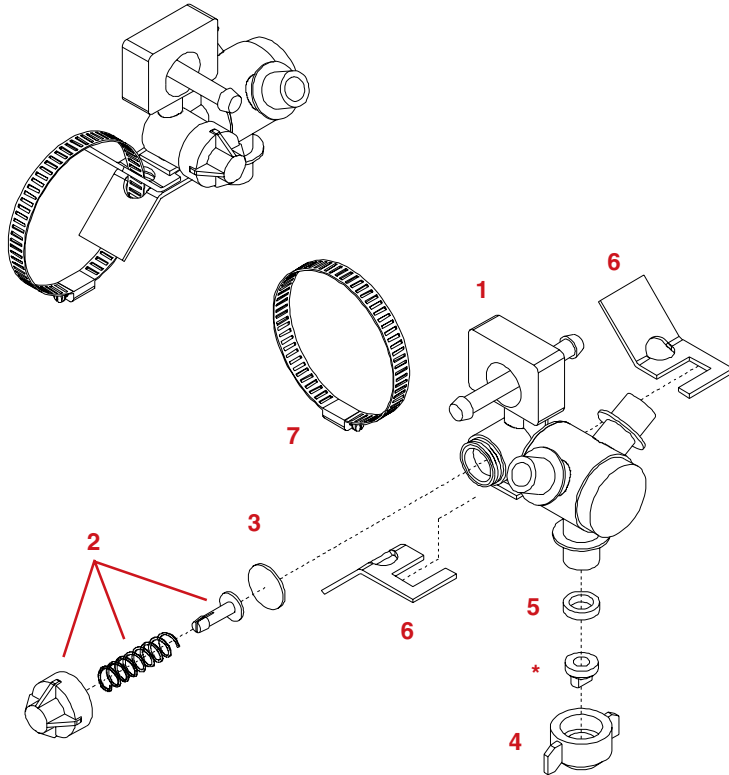


### NOZZLE PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1.	<b>09147</b>	3/4" Nozzle Tee Assembly (Items 1-3)
-	<b>09148</b>	3/4" Nozzle Elbow Assembly (Items 1-3)
2.	<b>21950 10PP</b>	Spring Retainer Cap Assembly
3.	<b>21953VI</b>	Diaphragm (viton)
4.	<b>07787</b>	Red Flat Fan Cap (w/gasket)
-	<b>07788</b>	Blue Flat Fan Cap (w/gasket)
-	<b>07789</b>	Brown Flat Fan Cap (w/gasket)
-	<b>07790</b>	Green Flood Jet Cap (w/gasket)
5.	<b>19438EPR</b>	Gasket (EPDM)
*	-----	Tip (specify tip size) (not included)
6.	<b>09792</b>	Nozzle Mounting Bracket
7.	<b>B64H</b>	Stainless Steel Gear Clamp
-	<b>07786</b>	1-1/2" Square Clamp Assy. (7 center nozzles)

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

## 360° TEEJET NOZZLES AND BOOM CLAMPS



### NOZZLE PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1.	<b>07783</b>	3/4" Triple Tee Assembly (Items 1-3)
-	<b>07782</b>	3/4" Triple End Assembly (Items 1-3)
2.	<b>21950 10PP</b>	Spring Retainer Cap Assembly
3.	<b>21953VI</b>	Diaphragm (viton)
4.	<b>07787</b>	Red Flat Fan Cap (w/gasket)
-	<b>07788</b>	Blue Flat Fan Cap (w/gasket)
-	<b>07789</b>	Brown Flat Fan Cap (w/gasket)
-	<b>07790</b>	Green Flood Jet Cap (w/gasket)
5.	<b>19438EPR</b>	Gasket (EPDM)
*	-----	Tip (specify tip size) (not included)
6.	<b>09792</b>	Nozzle Mounting Bracket
7.	<b>B64H</b>	Stainless Steel Gear Clamp

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

## TIP PLACEMENT

1. **Marking location of boom clamps:** Mark the clamp locations by starting at the center of the center boom section. From this mark, locate 20 inch spaces to both ends of the boom.

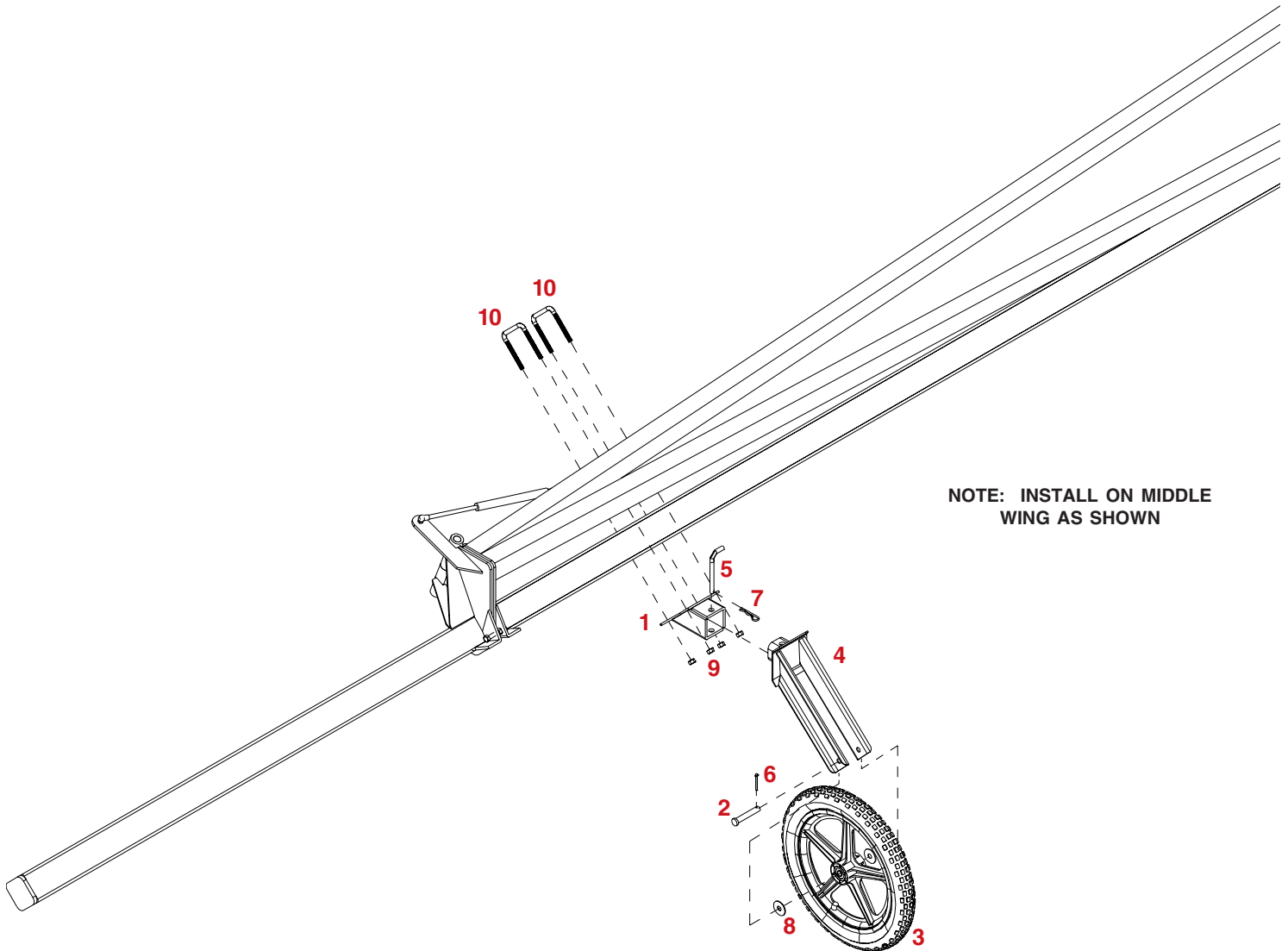
2. **Fasten preassembled boom lines:** Fasten the boom clamps on the boom using a stainless steel gear clamp, so the sprayer tip will be on the back side of the boom.

**NOTE:** The 80 foot takes 49 spraying tips.  
The 90 foot takes 55 spraying tips.

### BASIC PLUMBING PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
-	<b>340RB</b>	3/4" Rubber Hose
-	<b>B12H</b>	3/4" Gear Clamp
-	<b>NHT11</b>	Nylon Hose Ties

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



NOTE: INSTALL ON MIDDLE WING AS SHOWN

### 9488055 PARTS LIST

REF. PART NO.	PART NO.	QTY.	DESCRIPTION
1.	<b>11911-30</b>	2	Front Fold Tip Protector
2.	<b>09041-95</b>	2	Pin
3.	<b>09801</b>	2	Wheel
4.	<b>05564-30</b>	2	Wheel Fork (Black)
5.	<b>05619</b>	2	1/2" x 3" Clevis Pin
6.	<b>00185</b>	2	5/32" x 1" Cotter Pin
7.	<b>00182</b>	2	Hair Pin
8.	<b>02384</b>	4	1/2" x 14 Ga. Machine Washer
9.	<b>02592</b>	8	3/8"-16 UNC Nylon Insert Locknut
10.	<b>02759</b>	2	U-Bolt

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

# BOOM OPERATING INSTRUCTIONS.

Initial Operation:

**! WARNING: To avoid personal injury or property damage, observe the following instructions.** Do not attempt to operate the boom until the hydraulic lines and cylinders are completely charged with hydraulic fluid. Failure to do so may cause erratic and unpredictable boom operation that may cause personal injury and physical damage to the boom.

**! WARNING: To avoid personal injury or property damage, observe the following instructions.** Make sure whenever operating the boom that there is no one in the line of unfolding and that there are no electric lines or tree branches that will come in contact with the boom during folding or unfolding.

Unfolding the boom :

When doing this the first time it would be advisable to have another person standing safely behind the sprayer to ensure that none of the hoses or cables are interfering with the boom operation and that the boom is correctly unfolding.

SprayMaster Controls:

1. Select height adjust switch. Raise boom to full height using hydraulic lever in tractor.
2. Select fold switch. Unfold boom completely using hydraulic lever in tractor.
3. Select left or right wing switch. Lower wing using hydraulic lever in tractor.
4. Select height adjust switch. Set desired height using hydraulic lever in tractor.

**Note: Do not select more than one switch at a time.**

MaxStak Controls:

1. Lock hydraulic lever in tractor to the on position.
2. Raise boom to full height using Height Adjust switch. (Green Switch)
3. Unfold boom completely using Fold switch. (Blue switch)
4. Lower wings using Wing switches. (Red and White Switches)
5. Set desired height using Height Adjust switch. (Green switch)

**Note: Do not move one switch up and one switch down at the same time. You can move more than one switch in the same direction at the same time.**

After the boom has been unfolded, the first time, stop and take a moment to make sure all hose are routed correctly and that there are no interference problems.

Folding the boom:

SprayMaster Controls:

1. Select height adjust switch. Raise boom to full height using hydraulic lever in tractor.
2. Select left or right wing switch. Fully raise wing using hydraulic lever in tractor.
3. Select fold switch. Completely fold boom using hydraulic lever in tractor.
4. Select height adjust switch. Allow boom to settle down using float position of hydraulic lever in tractor.

**Note: Do not select more than one switch at a time.**

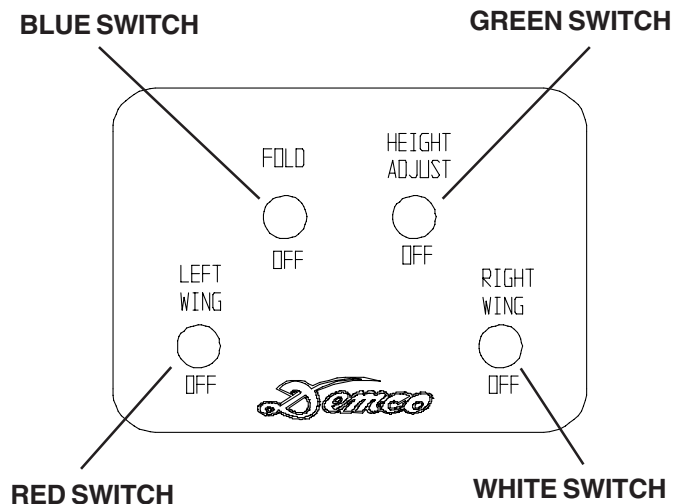
MaxStak Controls:

1. Lock hydraulic lever in tractor to the on position.
2. Raise boom to full height using Height Adjust switch. (Green Switch)
3. Fully raise wings using Wing switches. (Red and White Switches)
4. Fold boom completely using Fold switch. (Blue switch)
5. Lower boom onto Boom Rest using Height Adjust switch. (Green switch)

**Note: Do not move one switch up and one switch down at the same time. You can move more than one switch in the same direction at the same time.**

**Do not operate boom from the folded position:**

The boom is designed to be used with both wings unfolded to the spraying position. Spraying with only one wing extended, could excessively twist the ride mechanism, causing damage to boom.



# SPRAYER CHECKLIST:

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



## **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.

### 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 to wear proper safety equipment when cleaning the sprayer. 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 the 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 entering.
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 hard object that could distort opening.
6. Dispose of all unused chemicals or solutions in a proper and ecologically sound manner.
6. Water rinse and dry tips before storing.

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**NOTE:** DETHMERS MANUFACTURING COMPANY does not and will not make any recommendations concerning 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.

# SPRAYER CALIBRATION PROCEDURES

**NOTE:** To avoid wind drift, use lower pressure and higher spray volume.

## Guidelines For Sprayer Calibration

### Calibrating the Sprayer

1. Mark off 660 feet (1/8 mile).
2. Fill the tank with water.
3. Set the sprayer to your desired operating pressure.
4. Turn the sprayer on and drive at the constant speed you will be spraying. Calibration on a road or unplowed field will give different results than on soft cultivated ground. Note tachometer reading so same speed can be maintained later.
5. Measure the amount of water it takes to refill the tank completely.
6. Calculate the amount applied:

$$\frac{\text{Number of gallons used} \times 66 \text{ (factor)}}{\text{Spray Swath in Feet}} = \text{Gallons applied per acre}$$

Example: If 10 gallons are used in 660 feet and the spray swath is 40 feet, spraying rate is 16.5 gallons per acre.

$$\frac{10 \times 66}{40} = \frac{660}{40} \text{ or } 16.5 \text{ gallons per acre}$$

7. To calculate the amount of chemical to put in the tank:

$$\frac{\text{Sprayer Tank Size}}{\text{Desired GPA}} = \frac{\text{Acres Covered}}{\text{then;}}$$

$$\text{Recommended amount of chemical per acre} \times \frac{\text{Acres Covered}}{\text{Amount of chemical per tankful}} = \text{Amount of chemical per tankful}$$

Example: If a 500 gallon tank is used and 16.5 gallons per acre are applied, one tank will cover 30.3 acres. If three pounds of chemical are required per acre, then 90 pounds of chemical are required per tankful.

$$\frac{500}{16.5} = 30.3 \text{ acres covered then;}$$

$$3 \text{ lbs. (gal.)} \times 30.3 = 90 \text{ lbs. (gal.) per tankful}$$

$$10 \text{ mph} \quad .50$$

### Sprayer Tips

FLAT SPRAY NOZZLE for Broadcast Spraying

Nozzle No.	Liquid Pressure in PSI	Nozzle Capacity in GPM	Gallons Per Acre Based on 20" Nozzle Spacing			
			4 MPH	5 MPH	7.5 MPH	10 MPH
XR8001VS	20	.07	5.3	4.3	2.8	2.2
	25	.08	5.9	4.7	3.1	2.4
	30	.09	6.4	5.1	3.4	2.6
	40	.10	7.4	6.0	4.0	3.0
XR80015VS	20	.11	7.8	6.3	4.3	3.2
	25	.12	8.8	7.1	4.7	3.6
	30	.13	9.7	7.7	5.2	3.9
	40	.15	11.1	8.9	6.0	4.5
XR8002VS	20	.14	10.5	8.4	5.6	4.2
	25	.16	11.8	9.4	6.3	4.7
	30	.17	12.9	10.3	6.9	5.2
	40	.20	14.8	11.8	7.9	5.9
XR8003VS	20	.21	15.7	12.6	8.4	6.3
	25	.24	17.6	14.1	9.4	7.1
	30	.26	19.0	15.4	10.3	7.7
	40	.30	22.0	17.8	11.8	8.9
XR8004VS	20	.28	21.0	16.8	11.2	8.4
	25	.32	24.0	18.7	12.5	9.4
	30	.35	26.0	21.0	13.7	10.3
	40	.40	30.0	24.0	15.8	11.9
XR8005VS	20	.35	26.0	21.0	14.0	10.5
	25	.40	29.0	23.0	15.7	11.7
	30	.43	32.0	26.0	17.2	12.9
	40	.50	37.0	30.0	19.8	14.9
XR8006VS	20	.42	31.0	25.0	16.9	12.6
	25	.47	35.0	28.0	18.7	14.1
	30	.52	39.0	31.0	21.0	15.5
	40	.60	45.0	36.0	24.0	17.8
XR8008VS	20	.56	42.0	34.0	22.0	17.0
	25	.63	47.0	37.0	25.0	19.0
	30	.69	52.0	41.0	27.0	21.0
	40	.80	59.0	48.0	32.0	24.0
8010SS	20	.70	53.0	42.0	28.0	21.0
	25	.78	59.0	47.0	31.0	24.0
	30	.86	64.0	51.0	34.0	26.0
	40	1.00	74.0	59.0	40.0	30.0

To determine GPA for solutions other than water, determine the weight per gallon or specific gravity and use the following conversion table.

Weight per Gallon	Specific Gravity	Multiply By
7.0 lbs.	.84	1.09
8.0 lbs.	.96	1.02
8.34 lbs. (water)	1.00	1.00
9.0 lbs.	1.08	.96
10.0 lbs.	1.20	.91
11.0 lbs.	1.32	.87
12.0 lbs.	1.44	.83



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