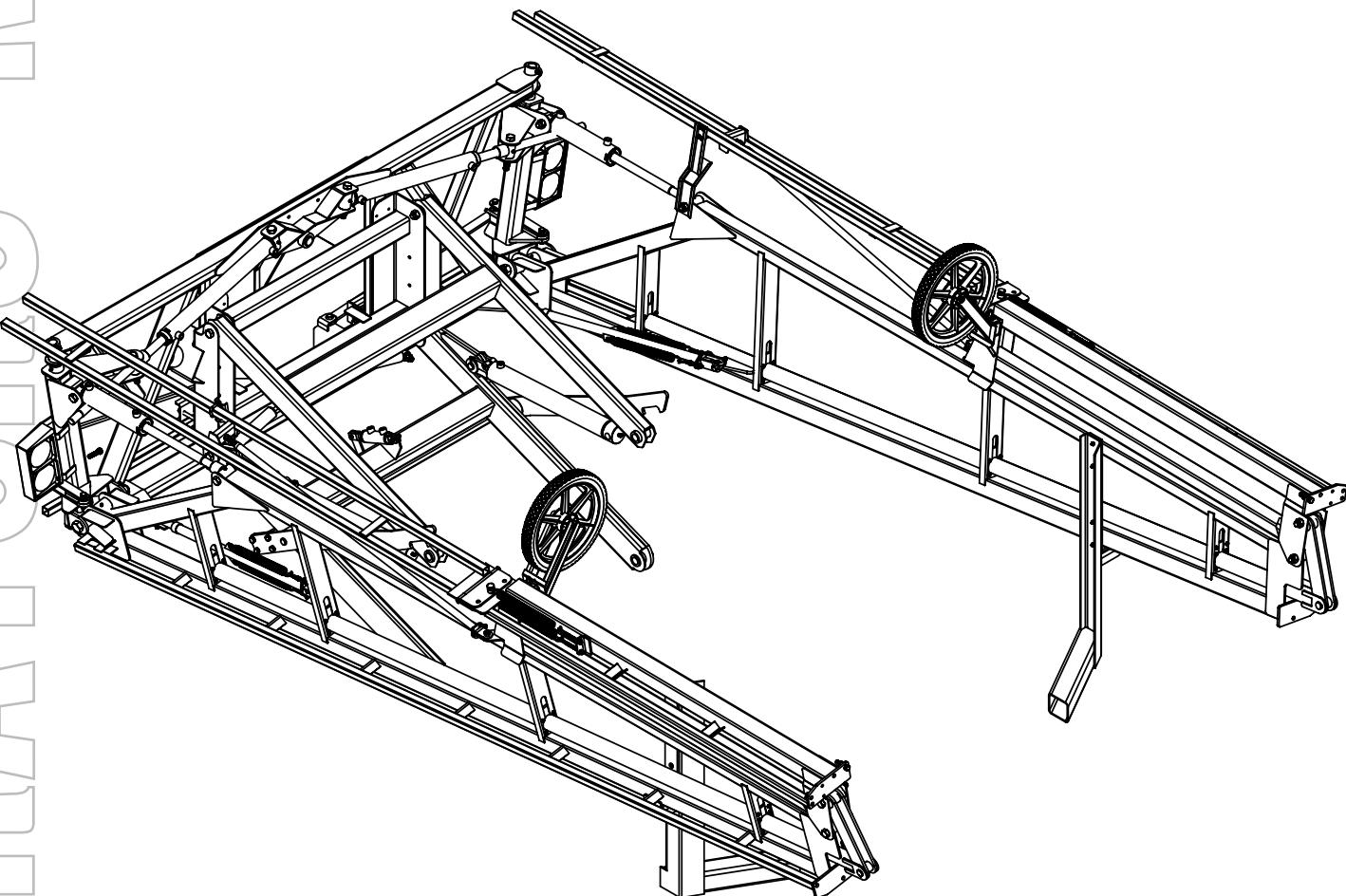




emco

Front Fold Boom

45', 50', 60' & 66'



ASSEMBLY
CALIBRATION
OPERATION
REPLACEMENT PARTS

READ *complete manual CAREFULLY
BEFORE attempting operation.*

Doing Our Best To Provide You The Best

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 (grade5) (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.



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 the manufacturer.

TABLE OF CONTENTS

Introduction	2
General information.....	2
Warranty Registration.....	3-4
Safety Information	5-11
Safety Sign Locations	7
Bolt Torque	12
Height Adjust Parts Breakdown	13
Center Section Parts Breakdown.....	14
Center Section Adjustment Instructions.....	15
Wing Parts Breakdown.....	16-17
Boom Rest Parts Breakdown	18
Boom Operation Instructions.....	18
Hydraulics Schematic.....	19
Nozzle Parts Breakdown.....	20
Optional Wheel Tip Protector	21
Sprayer Checklist	22
Sprayer Calibration Procedures	23



Warranty Registration

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

Ag	<input type="radio"/>
RV	<input type="radio"/>
Rental	<input type="radio"/>
Brakes	<input type="radio"/>
Marine	<input type="radio"/>

	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? Dealer/Distributor Name _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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? If YES, how satisfied were you?	YES <input type="radio"/>	NO <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? If YES, are you satisfied with the company's resolution of your problem?	YES <input type="radio"/>	NO <input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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 DEMCO By FAX or tri-folding this form to the backside, it is pre-addressed.

Postage

*Demco
4010 320th Street, Box 189
Boyden, Iowa 51234*

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 Demco, 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



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 its ability to do a job, or to do so safely is in question-DON'T TRY IT.



LIGHTING AND MARKING

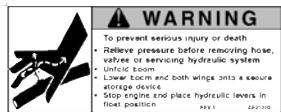
It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.

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

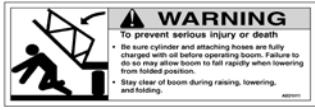
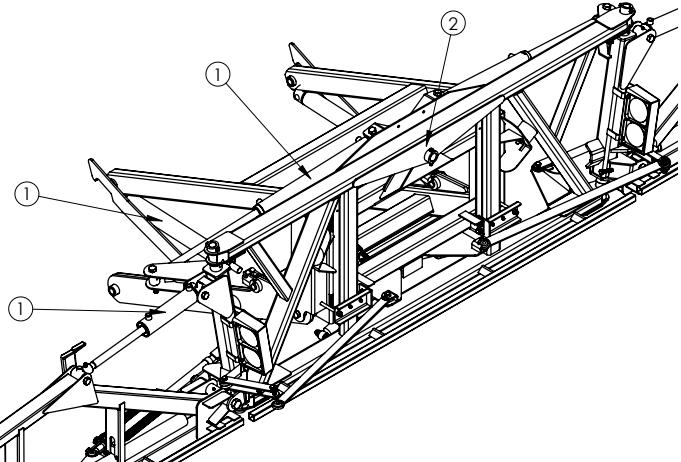


SAFETY SIGN LOCATIONS

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.



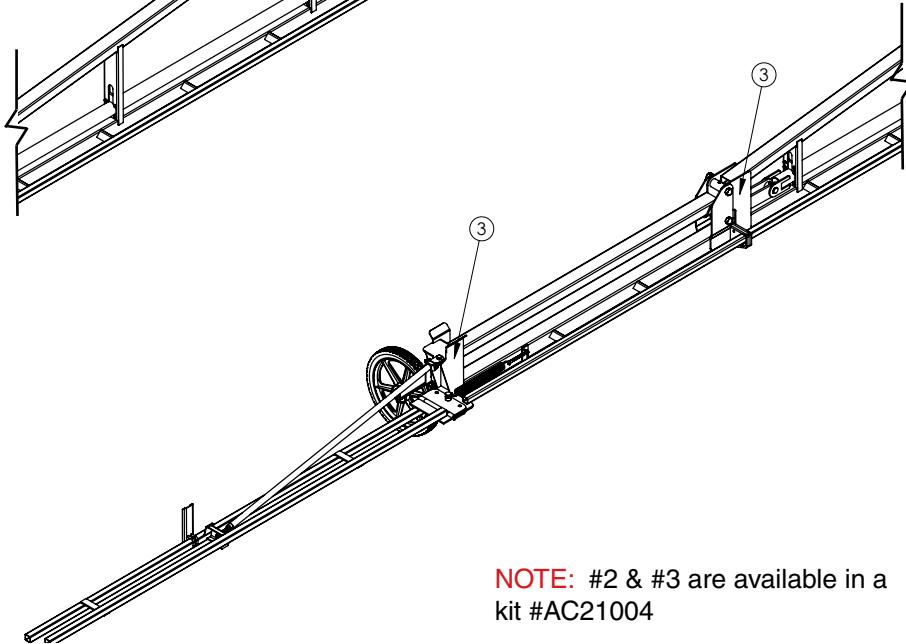
#1 AB21009 Warning : Stay clear of hydraulic oil under pressure



#2 AB21011 Warning : Stay clear of boom during raising, lowering and folding



#3 AB21027 Warning : PINCH POINTS



NOTE: #2 & #3 are available in a kit #AC21004



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.



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 its attachments. Completely familiarize yourself and other operators with its 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 levelest 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 off 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.



Torque Specifications

Bolt Torque for Standard bolts *

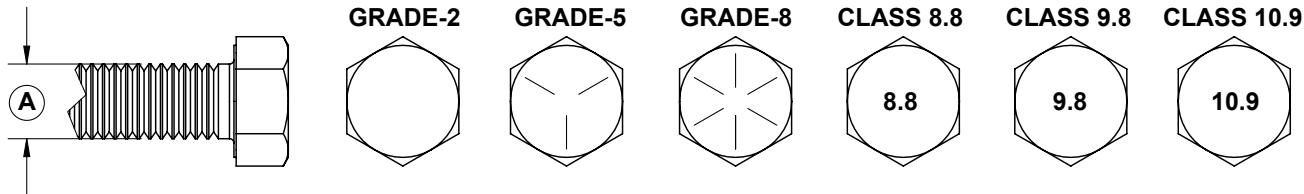
"A"	GRADE 2		GRADE 5		GRADE 8	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	(8)	9	(12)	12	(16)
5/16"	10	(13)	18	(25)	25	(35)
3/8"	20	(27)	30	(40)	45	(60)
7/16"	30	(40)	50	(70)	80	(110)
1/2"	45	(60)	75	(100)	115	(155)
9/16"	70	(95)	115	(155)	165	(220)
5/8"	95	(130)	150	(200)	225	(300)
3/4"	165	(225)	290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

Bolt Torque for Metric bolts *

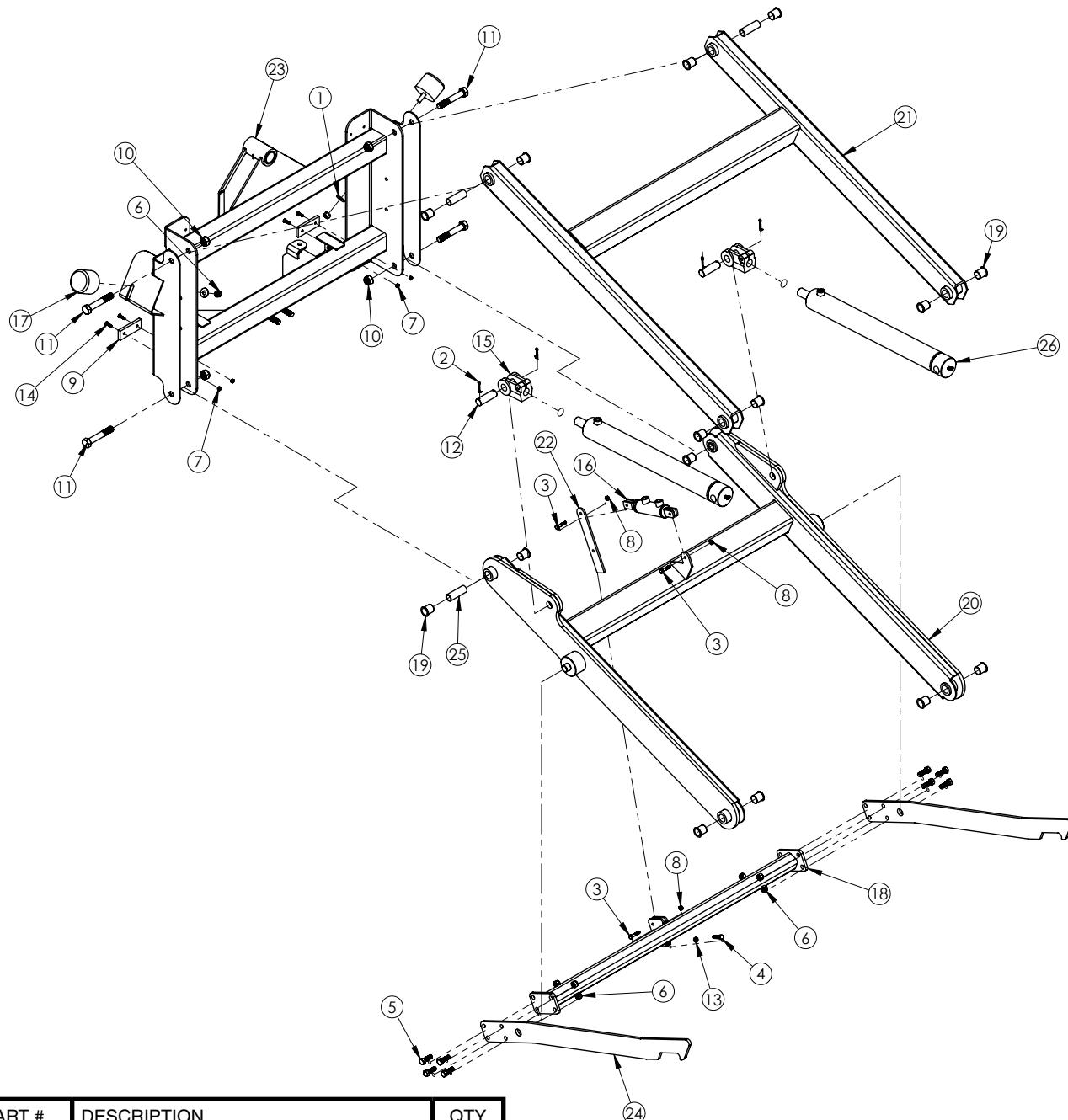
"A"	CLASS 8.8		CLASS 9.8		CLASS 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	(13)	10	(14)	13	(17)
7	15	(21)	18	(24)	21	(29)
8	23	(31)	25	(34)	31	(42)
10	45	(61)	50	(68)	61	(83)
12	78	(106)	88	(118)	106	(144)
14	125	(169)	140	(189)	170	(230)
16	194	(263)	216	(293)	263	(357)
18	268	(363)	--	--	364	(493)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



HEIGHT ADJUST ASSEMBLY AND PARTS BREAKDOWN

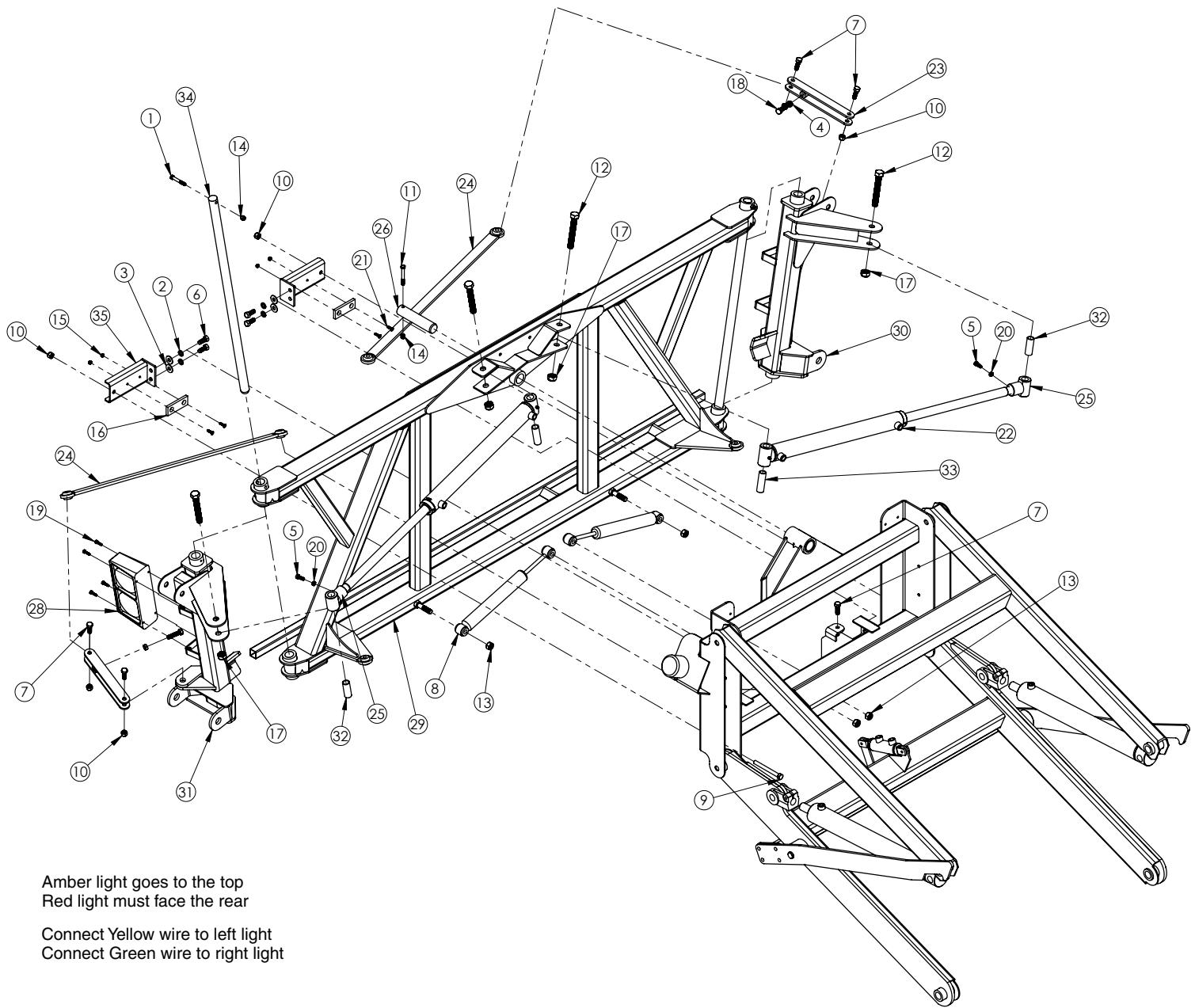


ITEM	PART #	DESCRIPTION	QTY
1	00085	.50 FLAT WASHER	2
2	00116	COTTER PIN, .156 X 1.50	4
3	00372	BOLT, .31 X 1.50 HEX GR 5	3
4	00914	BOLT, .375 NC X 1.50 HEX HEAD GR.5	1
5	01254	BOLT, .50 NC X 1.50 GR.5 HEX	8
6	02178	NUT, .50NC LOCK, NY. INSERT	10
7	02772	NUT, .25NC LOCK NYLON INSERT	4
8	02802	NUT, .313 NC NYLON LOCK	3
9	02946	PLATE, WEAR	2
10	02961	.75NC NYLON INSERT LOCK NUT	4
11	03700	BOLT, .75-10 UNC X 4.50	4
12	03738-95	CYLINDER PIN	2
13	04886	NUT, .375 JAM	1
14	07082	.25NC X 1.00 FLAT HD TORX	4
15	09741-30	CYLINDER CLEVIS	2

16	09985-30	HYD. CYL 1.50" X .63" STR W/O SPRING	1
17	10443	RUBBER BUMPER	2
18	10447	LATCH CONNECTOR	1
19	12291	1.00 ID 1.25 PLASTIC BUSHING	16
20	12612-30	LOWER HEIGHT ADJUST	1
21	12613-30	TOP HEIGHT ADJUST FRAME	1
22	12635-95	LATCH LINK	1
23	12804	CENTER PIVOT ASSEMBLY	1
24	12810-30	LATCH FOR 60 BOOM	2
25	12602-95	1.00 OD BUSHING X 2.96"	
26	13448-30	CYLINDER, 2.50 X 20.00 X 1.25" ROD	2

Please order replacement parts by PART NO. and DESCRIPTION.

CENTER SECTION PARTS BREAKDOWN



Amber light goes to the top
Red light must face the rear

Connect Yellow wire to left light
Connect Green wire to right light

ITEM	PART #	DESCRIPTION	QTY
1	00082	BOLT, .375NC X 2.50 GR.5 HEX	2
2	00084	.50 LOCKWASHER	4
3	00085	.50 FLAT WASHER	4
4	00640	JAM NUT .50	2
5	00907	BOLT, .375NC X 1.00 GR.5 HEX	2
6	00967	BOLT, .50NC X 1.25	4
7	01254	BOLT, .50 NC X 1.50 GR.5 HEX	6
8	01729-30	SHOCK STABILIZER	2
9	01975	BOLT .50NC X 5.00 GR5 HEX	2
10	02178	NUT, .50NC LOCK, NY. INSERT	8
11	02207	BOLT, .375 NC X 3.00 GR.5	1
12	02389	.75NC X 5.00 GR5 HEX BOLT	4
13	02587	NUT, .625 NC NYLON LOCK	4
14	02592	NUT, .375NC NYLON LOCK	3
15	02772	NUT, .25NC LOCK NYLON INSERT	16
16	02946	PLATE, WEAR	4
17	02961	.75NC NYLON INSERT LOCK NUT	4
18	02995	BOLT .50NC X 2.00 GR5	2
19	04055	.25-20NC X 1 GD5 HEX	8
20	04886	JAM NUT .375	2
21	07082	.25NC X 1.00 FLAT HD TORX	8
22	09771	CYLINDER, 2.00" WING FOLD	2
23	09888	AUTO LEVEL LOCK ARM	2
24	09889	AUTO LEVEL LOCK LINK	2
25	09902	WIDE CYLINDER END	2
26	09911-95	PIN, MAIN FOLDING	1
27	10032	LEFT LIGHT (NOT SHOWN)	1
28	10033	RIGHT LIGHT	1
29	11317	CENTER SECTION 45' - 60' FF BOOM	1
30	11318	LEFT HINGE FRONT FOLD BOOM	1
31	11319	RIGHT HINGE FRONT FOLD BOOM	1
32	11337	HINGE BUSHING	2
33	11338-95	BUSHING	2
34	11379	WING HINGE PIN FOR 60'	2
35	12802	PIVOT CLAMP	2

Please order replacement parts by PART NO. and DESCRIPTION.

ADJUSTMENT INSTRUCTIONS

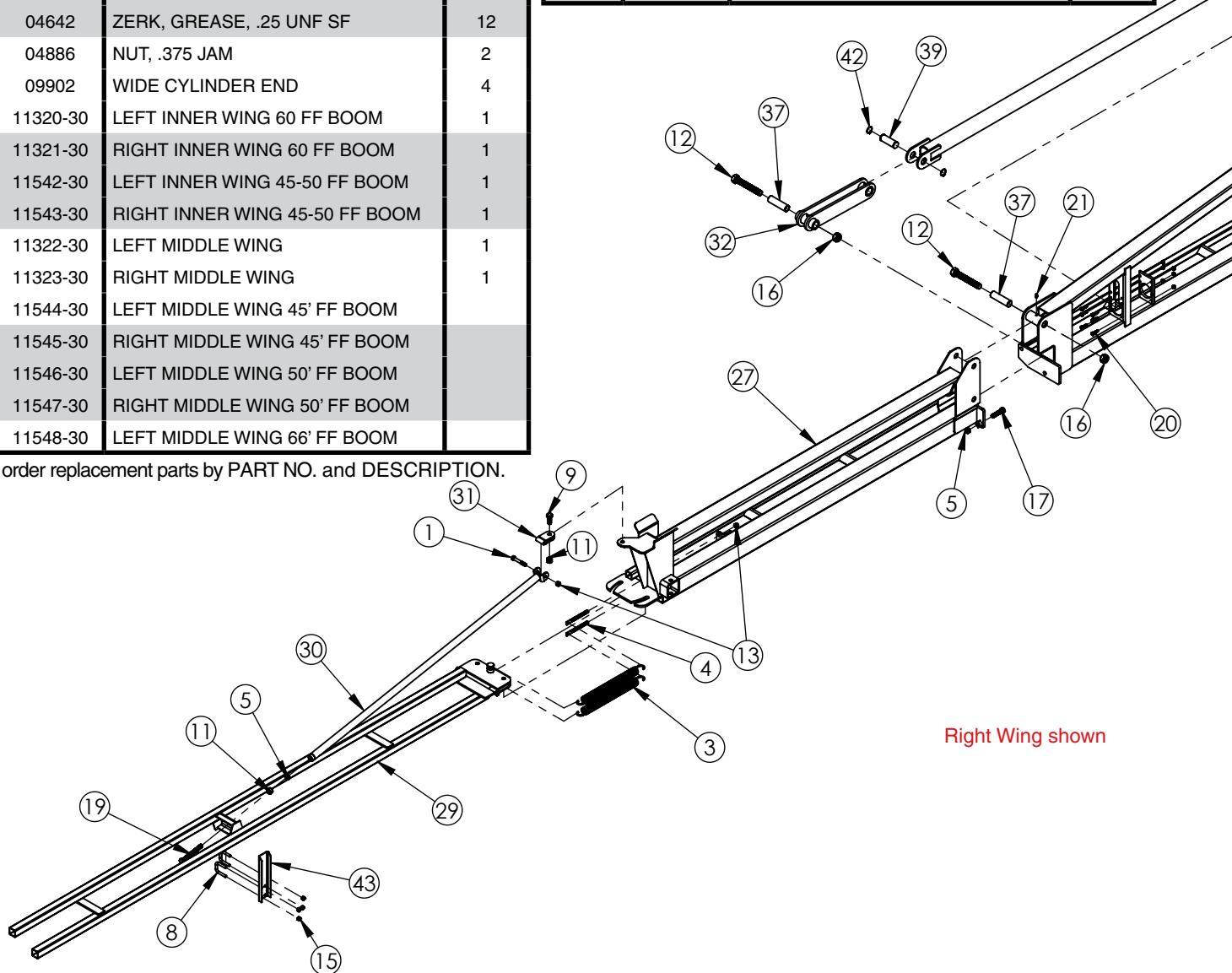
These adjustments should be done with the inner wings attached. (see page 10-11)

1. Unfold the wings fully.
2. Adjust wing straightness front to back using the Adjustable Cylinder End of the Folding Cylinders(#22). This is best done by turning the cylinder shaft. Once the wing is straight, lock the Adjustable Cylinder End (#25) in place using a 3/8"-16 UNC x 1" Bolt (#5) and 3/8"-16 UNC Jam Nut (#20) as shown.
3. Thread a 1/2"-13 UNC Jam Nut (#4) onto a 1/2"-13 UNC x 2-1/4" Bolt (#18) and insert the bolt into the Auto-level Lock Link (#23) 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. Lock Stop Bolt in place with the Jam Nut.

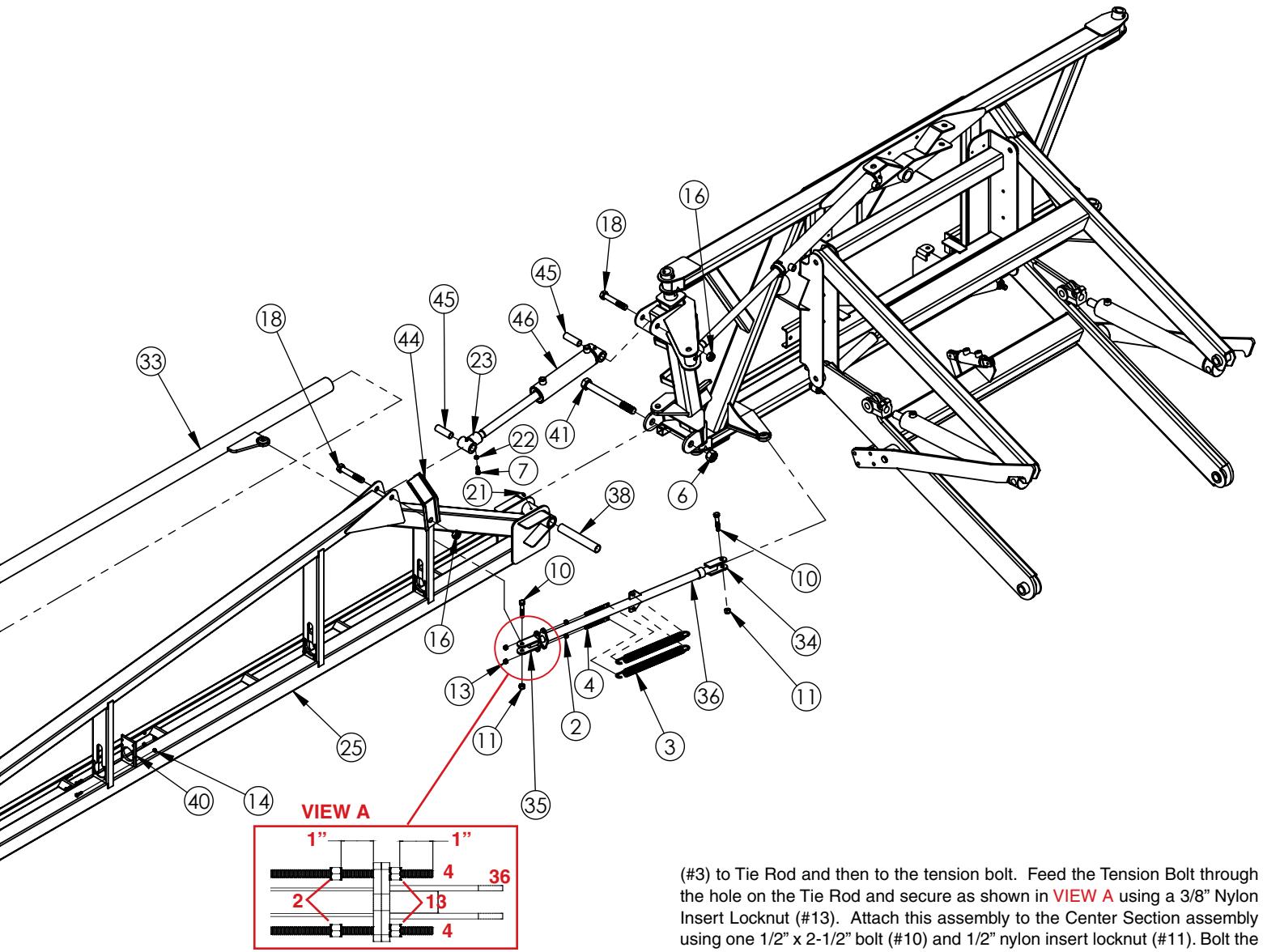
ITEM	PART #	DESCRIPTION	QTY
1	00082	BOLT, .375NC X 2.50 GR.5 HEX	2
2	00179	NUT .375NC LOCK CENTER PUNCH	4
3	00180	EXTENSION SPRING	6
4	00357	BOLT, TENSION, .375NC X 4.50	8
5	00640	JAM NUT 0.50	4
6	00884	NUT, 1.00NC HEX	2
7	00907	BOLT, .375NC X 1.00 GR.5 HEX	2
8	00909	U-BOLT, SQ, .313NC X 1.00	4
9	00967	BOLT, .50NC X 1.25	2
10	01264	BOLT, .50 NC X 2.50 HEX GR.5	4
11	02178	LOCK NUT, .50NC NYLON INSERT	8
12	02389	BOLT, .75NC X 5.00 GR5 HEX	6
13	02592	NUT, .375NC NYLON LOCK	11
14	02772	NUT, .25NC LOCK NYLON INSERT	44
15	02802	NUT, .313 NC NYLON LOCK	8
16	02961	LOCK NUT, .75NC NYLON INSERT	10
17	02995	BOLT, .50NC X 2.00 HEX GR.5	2
18	03700	BOLT, .75-10 UNC X 4.50 HEX	4
19	03714	BOLT, .50NC X 4.00 HEX	2
20	04055	BOLT, .25-20NC X 1.00 HEX GD.5	44
21	04642	ZERK, GREASE, .25 UNF SF	12
22	04886	NUT, .375 JAM	2
23	09902	WIDE CYLINDER END	4
24	11320-30	LEFT INNER WING 60 FF BOOM	1
25	11321-30	RIGHT INNER WING 60 FF BOOM	1
-	11542-30	LEFT INNER WING 45-50 FF BOOM	1
-	11543-30	RIGHT INNER WING 45-50 FF BOOM	1
26	11322-30	LEFT MIDDLE WING	1
27	11323-30	RIGHT MIDDLE WING	1
-	11544-30	LEFT MIDDLE WING 45' FF BOOM	
-	11545-30	RIGHT MIDDLE WING 45' FF BOOM	
-	11546-30	LEFT MIDDLE WING 50' FF BOOM	
-	11547-30	RIGHT MIDDLE WING 50' FF BOOM	
-	11548-30	LEFT MIDDLE WING 66' FF BOOM	

Please order replacement parts by PART NO. and DESCRIPTION.

-	11549-30	RIGHT MIDDLE WING 66' FF NOOM	
28	11324-30	LEFT OUTER WING	1
29	11325-30	RIGHT OUTER WING	1
30	11326-30	OUTER WING TOP LINK	2
31	11327-30	TOPLINK HINGE	2
32	11328-30	FOLD LINKAGE	2
33	11329-30	SLIDE ROD 60 FF BOOM	2
-	11541-30	SLIDE ROD 45'-50' FF BOOM	
34	11330-30	TIE ROD THREADED END	2
35	11331-30	TIE ROD SLIDE END	2
36	11332-30	TIE ROD MAIN BODY	2
37	11339-95	1" X 3-9/16" HINGE BUSHING	4
38	11340-95	8" HINGE BUSHING	2
39	11341-95	1" X 2-7/8" SLIDE ROD PIN	2
40	11344	PLASTIC GUIDE BLOCK	8
41	11359	HEX BOLT 1.00-8UNC X 10.00	2
42	11360	EXTERNAL SNAP RING	4
43	13489-30	OUTER WING REST GUIDE	2
44	11757-30	OUTER WING REST CRADLE	2
45	12602-95	1.00 OD BUSHING X 2.96"	4
46	13447-30	CYLINDER, HD 2.50" X 8" STROKE	2



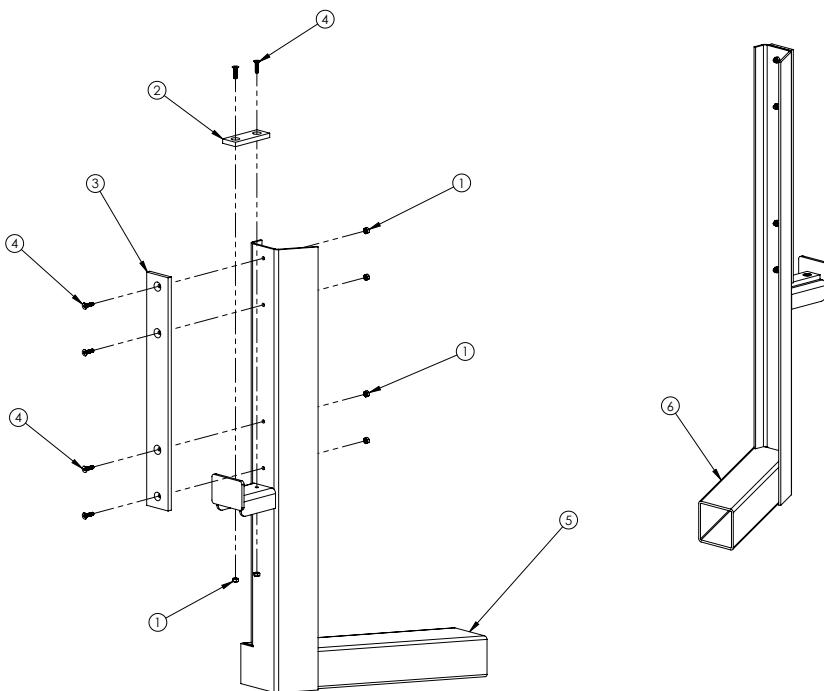
WING ASSEMBLY AND PARTS BREAKDOWN



ASSEMBLY & ADJUSTMENT

1. Attach the Inner Wings (#25 & 26) to the Center Section Assembly using two 1" x 10" Bolt (#43) and 1" Hex Nut (#6) as shown. Do both left and right Inner Wing at this time to balance the weight load.
2. For the Optional Wing Lift, thread the Wide Cylinder Ends (#24) onto Wing Lift Cylinders (#23). Attach the body end of Wing Lift Cylinders (#23) to the Center Section Assembly using one 3/4" x 4-1/2" Bolt (#18) and 3/4" Nylon Insert Locknut (#16). Attach the ram end of Wing Lift Cylinder (#23) and boom rest cradle (#46) to Inner Wing (#25 & 26) using one 3/4" x 4-1/2" Bolt (#18) and 3/4" Nylon Insert Locknut (#16). Do both left and right side to balance the weight load. Adjust Inner Wings so that they are level horizontally. This is best done by turning the shaft of the cylinders. Lock the adjustment using 3/8"-16 UNC x 1" Bolts (#7) and 3/8"-16UNC Jam Nuts (#22) on the wing lift cylinders.
3. Split all of the Plastic Guide Blocks (#42) into two pieces. Attach the bottom part of the Plastic Guide Blocks (#42), so the bevel is towards the bend, to the boom using eight 1/4" x 1" Bolts (#20) and 1/4" Nylon Insert Locknuts (#14). Slide the Slide Rod (#34) into the inner section of the boom. Attach the top part of the Plastic Guide Blocks (#42) using ten 1/4" x 1" Bolts (#20) and 1/4" Nylon Insert Locknuts (#14).
4. Assemble the Fold Linkage (#33) and the Tie Rod (#35, 36, & 37) as shown. Attach the Fold Linkage (#33) to the Slide Rod (#34) using the 1" x 2-7/8" Pin (#41) and two External Snap Rings (#44). Slide this assembly as far as possible into the inner wing to make room to mount the middle wing. After the Tie Rod is assembled, thread one 3/8" Center Punched Locknut (#2) onto the 3/8" tension bolt (#4). Do this to two bolts. Attach the Spring (#3) to Tie Rod and then to the tension bolt. Feed the Tension Bolt through the hole on the Tie Rod and secure as shown in **VIEW A** using a 3/8" Nylon Insert Locknut (#13). Attach this assembly to the Center Section assembly using one 1/2" x 2-1/2" bolt (#10) and 1/2" nylon insert locknut (#11). Bolt the other end to the Slide Rod (#34) the same way.
5. Insert a 1" x 3-9/16" Bushing (#39) into the top hole of the inner wing as shown. Attach the Middle Wing (#27 & 28) as shown using a 3/4" x 5" Bolt (#12) and 3/4" Nylon Insert Locknut (#16). Fold the Middle Wing (#27 & 28) over the Inner Wing (#25 & 26) to make some space to attach the slide rod/fold linkage to the middle wing. Insert a 1" x 3-9/16" Bushing (#39) into the fold linkage (#33). Attach the fold linkage/slide rod to the middle wing using a 3/4" x 5" Bolt (#12) and 3/4" Nylon Insert Locknut (#16).
6. Attach the Outer Wing (#29 & 30) to the Middle Wing (#27 & 28). Bolt the Outer Wing Top Link (#31) and the Top Link Hinge (#32) together using a 3/8" x 2-1/2" Bolt (#1) and 3/8" Nylon Insert Locknut (#13). Do Tighten this bolt completely. The hinge needs to have free movement. Attach the hinge end of the Top Link to the Outer Wing using a 1/2" x 1-1/4" Bolt (#9) and 1/2" Nylon Insert Locknut (#11). For the other end of the Top Link, take a 1/2" x 4" Full Thread Bolt (#19) and insert it into the hole as shown. Fasten a 1/2" Nylon Insert Locknut and tighten until there is approx. 1/8" of clearance between the nut and the plate. Now thread a 1/2" Jam Nut (#5) onto the bolt and then thread the entire assembly into the Top Link. Tighten the bolt until the outer boom section is level and then tighten the jam nut.
7. Attach two 3/8" Tension Bolts (#4) to two springs (#3). Attach this assembly to the pegs on the top and bottom of the hinge of the Outer Wing (#29 & 30). Insert the Tension Bolts in the bracket on the Middle Wing and thread two 3/8" Nylon Insert Locknuts (#13) on them. Tighten to the desired tension of the spring.
8. Attach the boom rest guide (#45) to outer wing using two 5/16" x 1-3/8" x 1-7/8" u-bolts (#8) and four 5/16" nylon insert locknuts (#15). Adjust this bracket so that it lines up with the cradle (#46) when the wing is folded.

BOOM REST ASSEMBLY AND PARTS BREAKDOWN



ITEM	PART #	DESCRIPTION	QTY
1	02772	NUT, .25NC LOCK NYLON INSERT	12
2	02946	PLATE, WEAR	2
3	03377	WEAR PAD	2
4	07082	.25NC X 1.00 FLAT HD TORX	12
5	12828	BOOM HOLDER, RT	1
6	12829	BOOM HOLDER, LT	1

Please order replacement parts by PART NO. and DESCRIPTION.

BOOM OPERATING INSTRUCTIONS

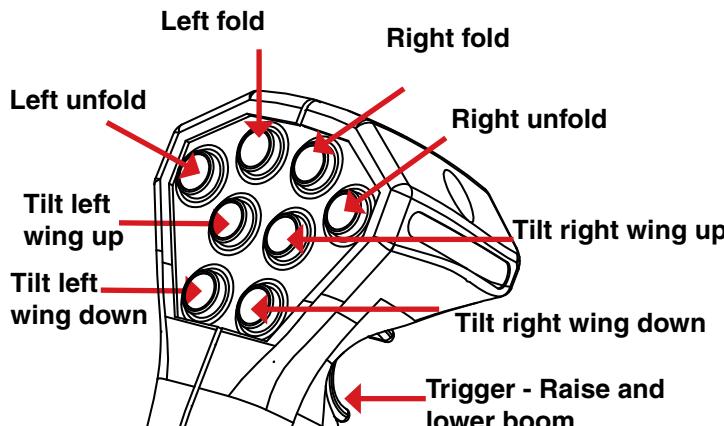
Initial Operation:

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.



Note: Do not select more than one switch at a time.
Note: Tractor hydraulic flow control lever should be reduced to 25% for initial start up. Increased oil flow may be required on certain model tractors.

(See tractor manual for location and procedure)

1. Lock hydraulic lever in tractor to the ON position.
2. Raise boom off Wing Rest using **Height Adjust** switch.
3. Unfold boom completely using **L fold** then **R fold** switches.
4. Lower boom using **Height Adjust** switch.
5. **L lift / R lift** switches are for infield use.

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.

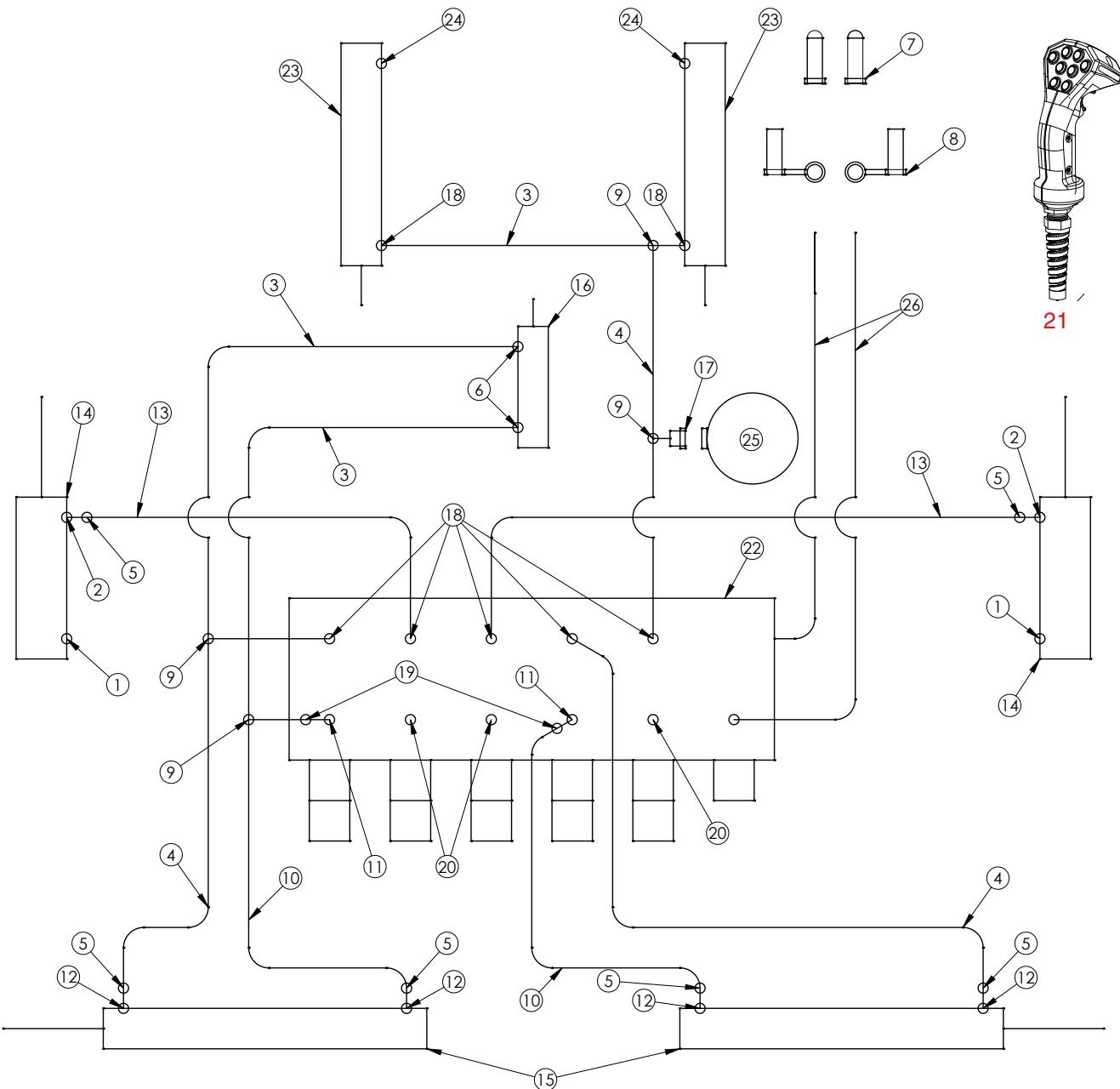
Folding the boom:

1. Lock hydraulic lever in tractor to the on position.
2. Raise boom to full height using **Height Adjust** switch.
3. Fold boom completely using **L fold** and **R fold** switches.
4. Lower boom onto Wing Rest using **Height Adjust** switch.

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.

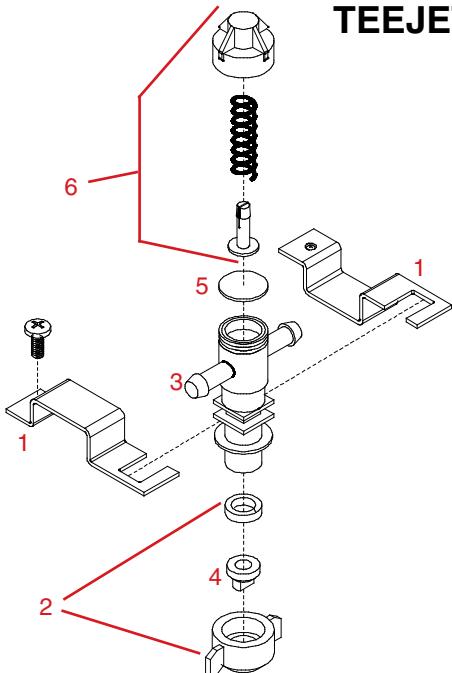
60' FRONT FOLD BOOM HYDRAULIC SCHEMATIC



ITEM	PART #	DESCRIPTION	QTY
1	00288	.38" MPT Breather	2
2	03743	.041" Orifice	2
3	05190	48" HYD Hose	3
4	05191	36" HYD Hose	4
5	05194	.38" MPT to #6 JIC Elbow	8
7	05197	Quick Coupler With Male Tip	2
8	05198	Rubber Caps	2
9	05203	#6 Female Swivel JIC To #6 Male JIC (2x) Tee	4
10	05212	18" HYD Hose	2
11	05243	#6 Male O-Ring to #6 Male JIC Straight	2
12	05661	.031" Orifice	4
13	07071	72" HYD Hose	2
14	13447-30	Cylinder, HYD 2.50" x 8.00" Stroke	2
15	09771-30	Cylinder, HYD 2.00" x 16.00" Stroke	2
16	09985-30	Cylinder, HYD 1.50" x 0.625" Stroke	1
17	10029	Metric to #6 JIC Fitting	1
18	11143	#6 Male O-Ring x #6 Male JIC 90°	7
19	11434	#6 Female Swivel JIC to #6 Male 90° Elbow	2
20	11763	O-Ring Plug #6	3
21	11868	Pendent Control	1
22	11869	HYD Block	1
23	12587-30	Cylinder, HYD 2.50" x 20.00" Stroke	2
24	12711	Air Vent SAE-6 Brass Breather	2
25	12826	Accumulator 350PSI, Nitrogen Charged	1
26	12849	.50 x 28' HYD Hose	2

Please order replacement parts by PART NO. and DESCRIPTION.

TEEJET NOZZLES AND BOOM CLAMPS



3/4" NOZZLE PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1.	10903	1-1/4" Sq. Boom Clamp SS (includes bolt)
2.	07787	Flat Fan Cap (includes EPDM Gasket)
3.	09147	3/4" TeeJet Nozzle Elbow
-	09148	3/4" TeeJet Nozzle Tee
4.	-----	Tip (specify tip size) (not included)
5.	21953VI	Diaphragm (viton)
6.	21950 10PP	End Cap Assembly

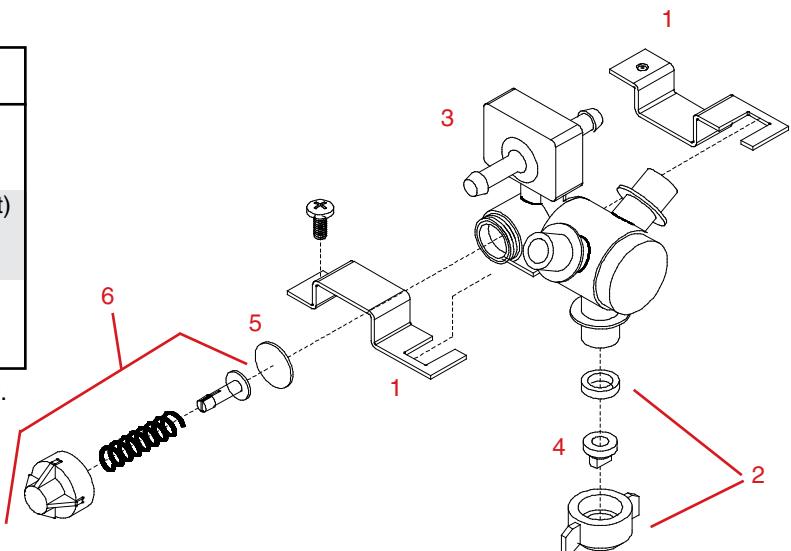
Please order replacement parts by PART NO. and DESCRIPTION.

TEEJET 3-WAY NOZZLES AND BOOM CLAMPS

3/4" NOZZLE PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1.	10903	1-1/4" Sq. Boom Clamp SS (includes bolt)
2.	07787	Flat Fan Cap Red (includes EPDM Gasket)
-	07788	Flat Fan Cap Blue (includes EPDM Gasket)
-	07789	Flat Fan Cap Brown (includes EPDM Gasket)
3.	07782	3/4" TeeJet Nozzle Elbow
-	07783	3/4" TeeJet Nozzle Tee
4.	-----	Tip (specify tip size) (not included)
5.	21953VI	Diaphragm (viton)
6.	21950 10PP	End Cap Assembly

Please order replacement parts by PART NO. and DESCRIPTION.



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 nozzle clamp so the sprayer tip will be on the back side of the boom.

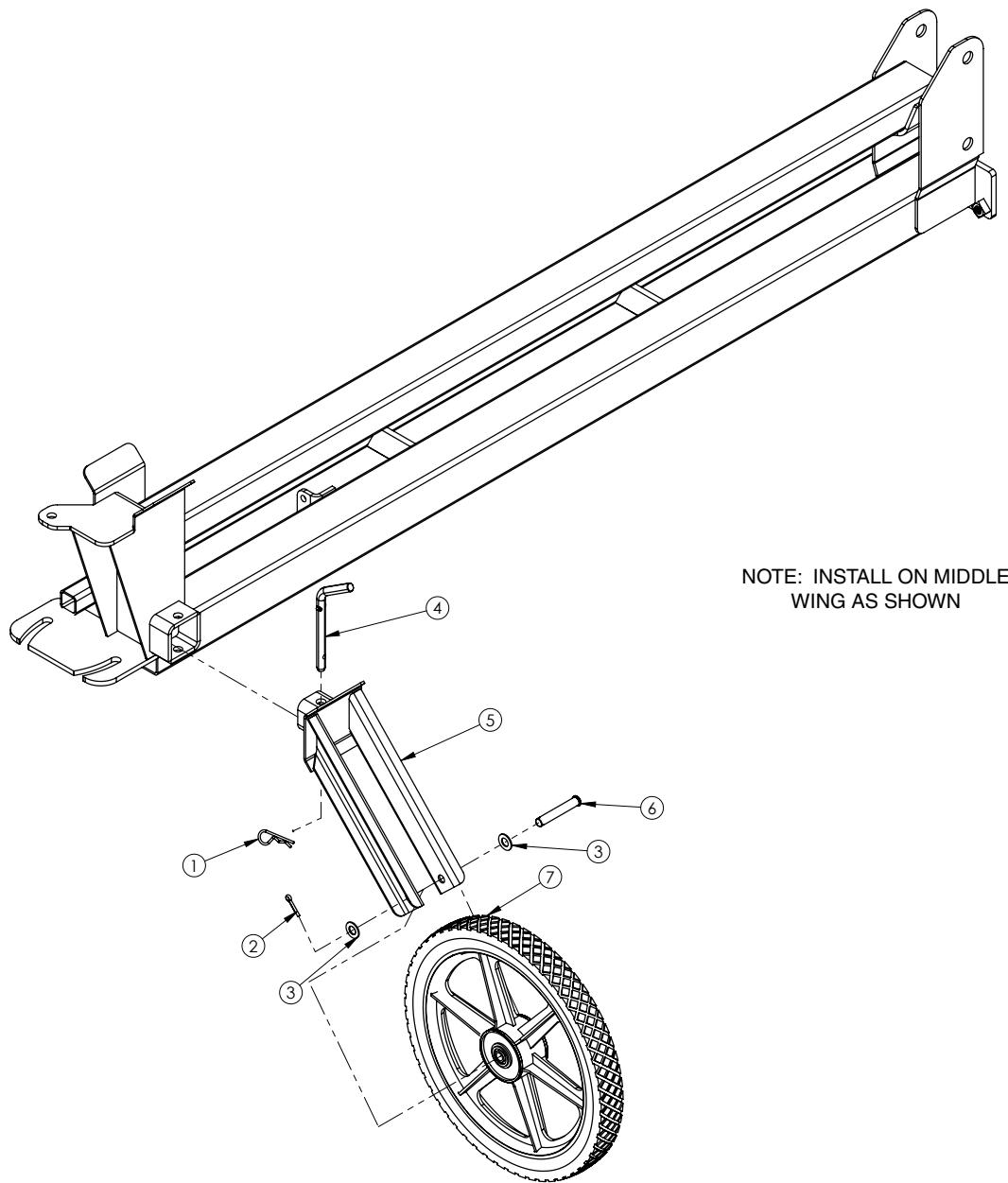
NOTE: The 60 foot takes 37 spraying tips.

BASIC PLUMBING PARTS LIST

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

Please order replacement parts by PART NO. and DESCRIPTION.

OPTIONAL WHEEL TIP PROTECTOR



9488055 PARTS LIST

REF. PART NO.	PART NO.	QTY.	DESCRIPTION
1.	00182	2	Hair Pin
2.	00185	2	5/32" x 1" Cotter Pin
3.	02384	4	1/2" x 14 Ga. Machine Washer
4.	03878-95	2	Pin
5.	05564-30	4	Wheel Fork (Black)
6.	05619	2	1/2" x 3" Clevis Pin
7.	09801	2	Wheel

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

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.

Check Before Going To The Field :



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.

After Season Care:

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.

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.

NOTE: DEMCO

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.

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

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

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

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

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.

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

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

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

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



P.O. BOX 189
4010 320th St., BOYDEN, IA. 51234
PH: (712) 725-2311 or (712) 725-2302
FAX: (712) 725-2380
TOLL FREE: 1-800-54DEMCO (1-800-543-3626)
www.demco-products.com