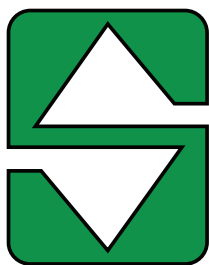


8Z1101D - SW4350 (Superweeder)
8Z1101D - SW4350 (Superweeder)



SUMMERS®

Operator's Manual



SW4350
(Superweeder)

IMPORTANT

THE OPERATOR IS RESPONSIBLE FOR ADJUSTING THE MACHINE SINCE MACHINE DOES NOT COME "FIELD READY" FROM FACTORY.



CAUTION

READ & UNDERSTAND OPERATOR'S MANUAL BEFORE USING MACHINE.

See www.summersmfg.com for latest version of all Summers Operator's Manuals.

SUMMERS MANUFACTURING CO., INC.

WEB SITE: www.summersmfg.com

DEVILS LAKE, NORTH DAKOTA 58301

(701) 662-5391

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TRANSPORT SAFETY

1. Road speed should not exceed 20 mph (32 km/hr).



2. Do not tow if the implement's towing vehicle ratio is greater than 1.5:1. See Specifications Section for implement weights.
3. If more than one implement is to be pulled by a towing vehicle, it is recommended that each implement is to be a maximum of 50% of the weight of the preceding implement. If it is not possible to reach this weight limit, transport the implements separately.
4. When approaching rough roads/ground (such as entering a road), slow down to a safe driving speed.
5. Check all lights and reflectors to ensure ALL regulations are met. Make sure the SMV emblem is attached to the implement and is clearly visible from the rear.



SMV emblems are only attached to vehicles traveling slower than 25 mph (40 km/hr). The most hazardous conditions to drive in are a daybreak and dusk. The use of a pilot car is recommended.

6. Always install ALL safety locks before transporting an implement.
7. Always park implements on a firm, level surface.

Preface

This manual is intended for use with Superweeder for Summers® Manufacturing Company, Inc.

This book is composed of these basic sections: Safety, Operation & Maintenance, Troubleshooting and Parts. The safety section provides complete instructions for the proper safe operation of a Summers Mfg. product. The Operation & Maintenance section provides information for the proper operation and maintenance. A complete parts breakdown is provided in the Parts section.

Parts are referenced in each drawing with the Summers Manufacturing part number. Use this part number when ordering replacement parts from your Summers dealer. See the back section of the manual for description of each part.

Reference to “Right” and “Left” in this book is determined when the machine is viewed from the rear.

Disclaimer

It is the policy of this company to improve its products whenever possible and practical to do so. We reserve the right to make changes or improvements in the design or construction of parts at any time without incurring the obligation to install such changes on products previously delivered.

Summers Manufacturing Company, Inc. strongly recommends that each operator READ and UNDERSTAND the Operator’s Manual before using the machine. In addition, the Operator’s Manual should be REVIEWED at least Annually thereafter.

Contact Information

Summers Manufacturing Company, Inc.

103 Summers St. NW

Devils Lake, ND 58301

Toll Free: 1-800-732-4392

Local: 1-701-662-5391 (Devils Lake, ND)

1-605-226-3644 (Aberdeen, SD)

www.summersmfg.com



Owner Registration Information

Bring this information when ordering parts (Serial Number is located at front of hitch).

Name _____

Size _____

Address _____

Serial Number _____

City _____

(located by the hitch)

State/Prov. _____

Date Purchased _____

Mail Code _____

Dealer _____

WARRANTY

Summers warrants only products of its manufacture against operational failure caused by defective materials or workmanship which occur during normal use within 36 months from the date by the end user from Summers' dealer.

Summers' obligation is to replace, free of charge, any part of the product that Summers inspection shows to be defective excluding transportation charges to Maddock, ND or Devils Lake, ND and return and also excluding all transportation costs from Summers' dealer to the dealer's customer and all other costs, such as removal and installation expense.

Summers shall not be liable for loss of time, manufacturing costs, labor, material, loss of profits, consequential damages, direct or indirect, because of defective products whether due to rights arising under the contract of sale or independently thereof, and whether or not such claim is based on contract, tort or warranty.

Written permission for any warranty claim return must be first obtained from authorized Summers' personnel. All returns must be accompanied with a complete written explanation of claimed defects and the circumstances of operational failure.

Written warranty for all component parts used in the manufacture of Summers products is available upon request. Warranty of such component parts will be determined by said component manufacturer upon their inspection of the claimed defective part.

This express warranty is the sole warranty of Summers. There are no warranties, which extend beyond the warranty therein expressly set forth. The sales for products of Summers under any other warranty or guarantee express or implied is not authorized. This warranty voids all previous issues.

Summers® Manufacturing Co., Inc.
Devils Lake, ND 58301

01/16

Safety Information



This safety alert symbol is used to denote possible danger and care should be taken to prevent bodily injury. When you see this symbol it means ATTENTION, BECOME ALERT! and/or YOUR SAFETY IS INVOLVED!

WARNING: Safe practices must be followed when working on or operating this equipment. All personnel involved must:



- Read and understand the instructions and manuals for this machine.
- Be instructed in the safe use of tools and all lifting devices involved in the assembly of this equipment.
- Clear the area of all personnel not involved in the assembly of this machine.

General Safety Practices

1. READ and UNDERSTAND the Operator's Manual before using any equipment. Review at least annually thereafter.
2. VERIFY all safety devices and shields are in place before using any equipment.
3. KEEP hands, feet, hair and clothing away from moving parts.
4. STOP engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.
5. BE CAREFUL when working around high pressure hydraulic system.
6. DO NOT ALLOW RIDERS.

Safety During Transportation

1. ONLY TOW at a safe speed. Use caution when making corners and meeting traffic.
2. USE safety chain between tractor drawbar and implement hitch when transporting on public roads.
3. ALWAYS use transport locks when transporting on public roads.
4. COMPLY with local lighting, marking and oversize regulations when transporting on highways.
5. FREQUENTLY check for traffic from rear, especially during turns.

Safety Decals



Indicates an immediate hazardous situation that will result in death or serious injury. The color associated with Danger is RED.



Indicates a potentially hazardous situation that could result in death or serious injury. The color associated with Warning is ORANGE.



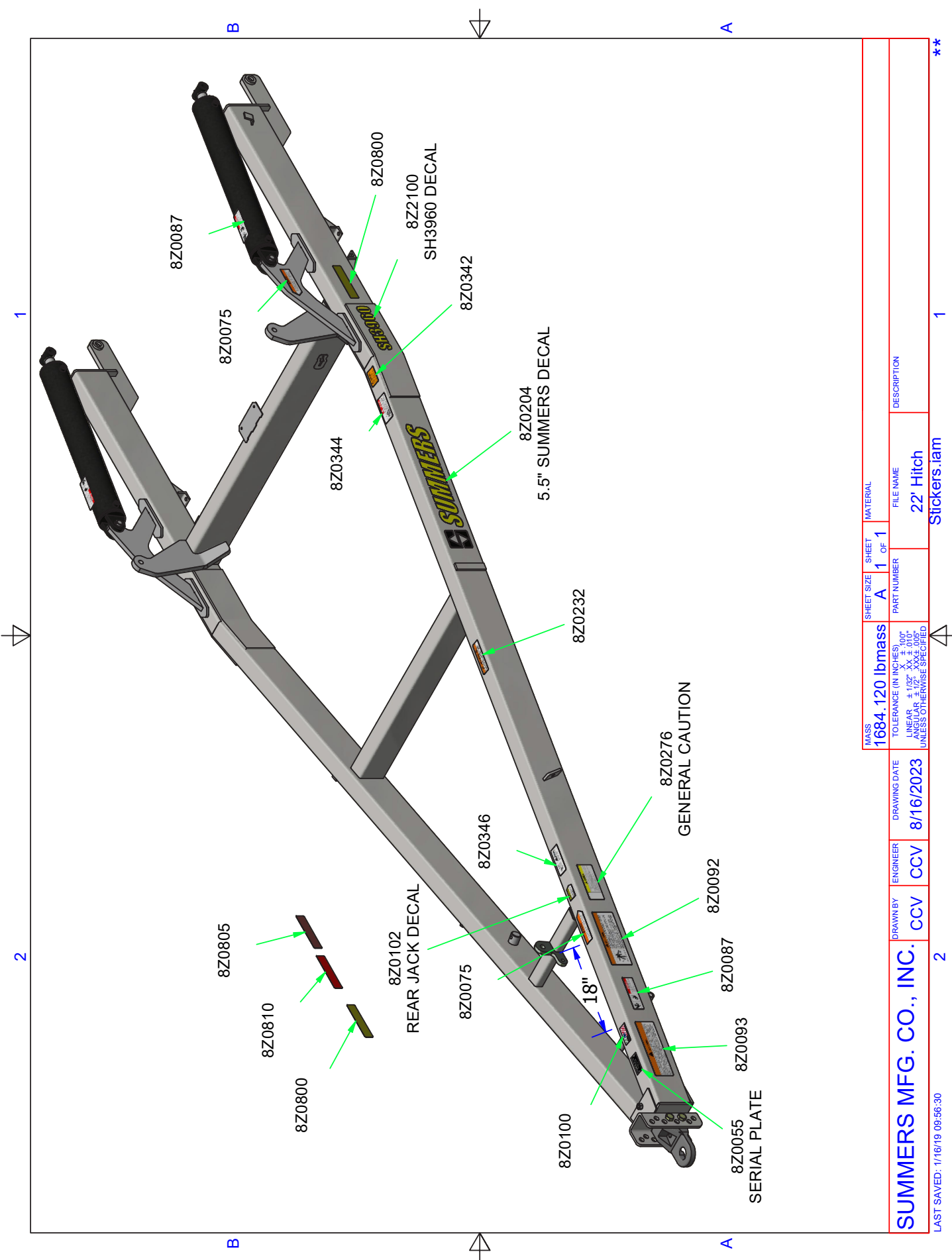
Indicates a potentially hazardous situation that may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

The Notice decals and statements in this manual are to inform the operator of the correct fluids or operational practices for this machine. Failure to follow these notices will result in damage to the machine. The color associated with Notice is GREEN.

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs are available from your dealer's parts department or the factory.

How to install safety signs?

1. Be sure that the installation area is clean and dry.
2. Be sure the temperature is above 50° F (10° C).
3. Decide on the exact position before removing the backing paper.
4. Remove the smallest portion of the split backing paper.
5. Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
6. Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
7. Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.



MASS	1684.120 lbmass	SHEET SIZE	A	SHEET	1	MATERIAL	
TOLERANCE (IN INCHES)	LINEAR $\pm 1/32"$ XX $\pm .005"$ ANGULAR $\pm 1/2^\circ$ XXX $\pm .005^\circ$ UNLESS OTHERWISE SPECIFIED	PART NUMBER		FILE NAME	22' Hitch	DESCRIPTION	
DRAWN BY	CCV	ENGINEER	CCV	DRAWING DATE	8/16/2023		

SUMMERS MFG. CO., INC.

LAST SAVED: 1/16/19 09:56:30

2

Stickers.iam

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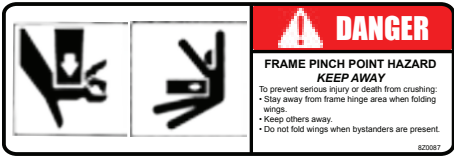
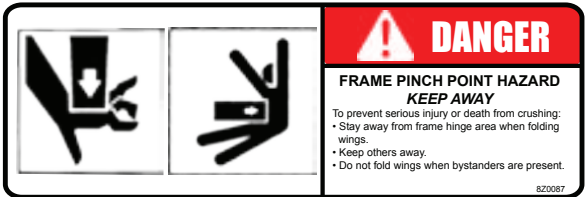
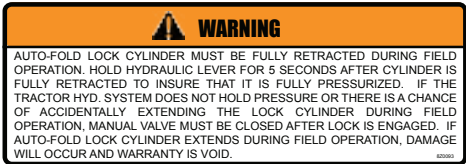
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Safety Decal Locations

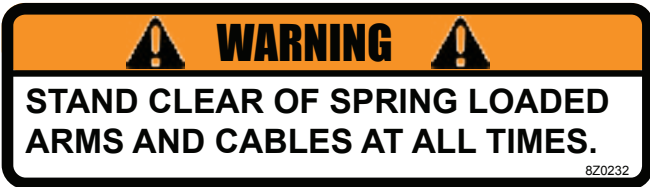
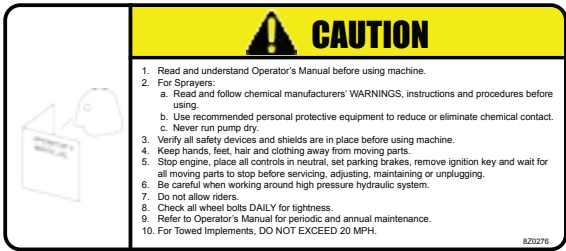
The types of safety signs and locations on the equipment are shown in the illustrations below. Good safety requires that you familiarize yourself with the various safety signs, the type of WARNING and the area or particular function related to that area, that requires your SAFETY AWARENESS.

IMPORTANT: If Safety Signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

Safety Decals

DECALS				
ITEM	PN	QTY	DESCRIPTION	
1	8Z0075	1	TRANSPORT LOCK DECAL	
2	8Z0087	2	"WARNING" PINCH POINT	
3	8Z0092	1	"WARNING" HITCH DECAL	
3	8Z0093	1	"WARNING" AUTO-FOLD DECAL	
4	8Z0100	1	MADE IN THE USA DECAL	

Safety Decal Locations (cont'd)

5	8Z0102	1	"IMPORTANT" REAR JACK(S)	
6	8Z0204	2	5.5" SUMMERS DECAL	
7	8Z0232	1	"WARNING" AUTO-FOLD DECAL	
8	8Z0276	1	GENERAL MACHINE CAUTION DECAL	
9	8Z0342	1	INSTALL CYL LOCKS DECAL	
10	8Z0344	1	WING DANGER DECAL	

Safety Decal Locations (cont'd)

11	8Z0346	1	ELECTROCUTION-TILLAGE EQUIP. DECAL	
12	8Z0800	14	REFLECTOR - YELLOW - ADHESIVE BACKED	
13	8Z0805	4	REFLECTOR - RED-ORANGE ADHESIVE BACKED	
14	8Z0810	6	REFLECTOR - RED - ADHESIVE BACKED	
15	8Z2120	2	SW4350 DECAL	

Safety Light Operation

Figure 1

The Summers Safety Light Kit is equipped with a 7 pin connector which meets SAE J560 specification. To protect 7 pin connector, store in dust cap (8K8067) when not attached to towing vehicle.



General Maintenance Safety Practices

NOTE: Read the entire section before beginning work.

Before You Begin

- **YOU ARE RESPONSIBLE** for the safe maintenance of the superweeder.
- **DO NOT ALLOW CHILDREN** or other unauthorized persons within the superweeder operational area.
- **WEAR PERSONAL PROTECTIVE EQUIPMENT** which includes a hard hat, eye protection, work gloves and steel toed boots with slip resistant soles.
- **DO NOT MODIFY** the equipment or substitute parts in any way. Unauthorized modifications may impair the function and/or safety of the machine.
- **USE SUITABLE LIFTING DEVICE** for components which could cause personal injury.
- **BLOCK UP ANY RAISED PART** of the machine. Be sure machine is stable after blocking.
- **ALWAYS INSPECT LIFTING CHAINS AND SLINGS** for damage or wear.
- **BE SURE LIFTING DEVICE IS RATED TO HANDLE THE WEIGHT.**
- **STOP ENGINE**, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing or adjusting.
- **BE SURE PRESSURE IS RELIEVED** from hydraulic circuits before servicing or disconnecting from tractor.
- **USE EXTREME CARE** when assembling, servicing or adjusting.
- Never Unhitch a 4-Rank Superweeder that has been opened up into field position but has not been completely lowered to the ground.
- Always park machine in a level area, block hitch and transport tires so machine cannot roll.
- Always be sure transport locks are engaged when making adjustments on machine in raised or transport position.
- Never rotate S-tines forward or backward with machine in transport position.

TRANSPORT TO FIELD POSITION

1. Hitch machine to tractor drawbar using a locking hitch pin and safety chain. Connect hydraulic hoses and wiring. Retract jacks and rotate into storage position.
2. Select a level area to lower machine into field position.
3. **IMPORTANT:** Remove transport locks. Store locks in storage guide
4. Back up machine slowly, maneuvering so wings open evenly. If wings do not open evenly, pull ahead and repeat procedure. Cables must not catch on machine while backing up. If cable becomes caught on machine, drive forward until wings are in transport position and carefully unhook cable from obstruction.
5. Open wings until auto-fold arms rest on hitch and cables become slack. Fully retract auto-fold lock cylinder until autofold arms are locked in place and the hinged wing cylinder is fully retracted (if applicable)
6. Extend main lift cylinders to lower machine into field position. If pull cables become tight before transport wheel is off the ground, back up to provide slack in cable.

FIELD TO TRANSPORT POSITION

1. Stop in a level area and back tractor up to provide slack in pull cables.
2. Open manual lock valve on auto-fold lock cylinder. Fully extend auto-fold lock cylinder.
3. Fully retract hydraulic depth adjustment cylinders (if so equipped).
4. Fully retract lift cylinders to raise sections.
5. While machine is resting on its transport wheels, drive tractor forward. Wings should fold to transport position. NOTE: Transport wheels must rotate against “toe-in” adjustment bolts and follow directly behind knuckles. Transport wheel “toe-in” can be adjusted by moving outside 3/4” adjustment set screws (8X0665, page 6-5). “Toe-in” and proper lubrication of pivot will make it easier to unfold machine into field position.
6. **IMPORTANT:** Install transport locks.

Machine must not be adjusted to exceed a maximum S-tine tillage depth of 5” in loose soil conditions. In hard soil conditions, S-tines must not exceed 3” tillage depth.

HYDRAULIC DEPTH ADJUSTMENT (HDA) OPTION

To set depth, install stroke control collars (purchase locally) on 3-1/2” X 8” stroke (HDA) cylinders located on hitch. Collars of identical thickness must be installed on both cylinders. Rephasing cylinders are used for hydraulic depth adjustment. Do not operate HDA cylinders fully extended. Immediately after fully raising hydraulic depth adjustment cylinders, quickly lower 1/2”. If hydraulic depth adjustment cylinders are left in fully raised position, they will settle. If machine has settled unevenly, fully extend hydraulic depth adjustment cylinders and hold hydraulic lever until machine levels. After it levels, quickly lower 1/2”.

OPERATION AND MAINTENANCE

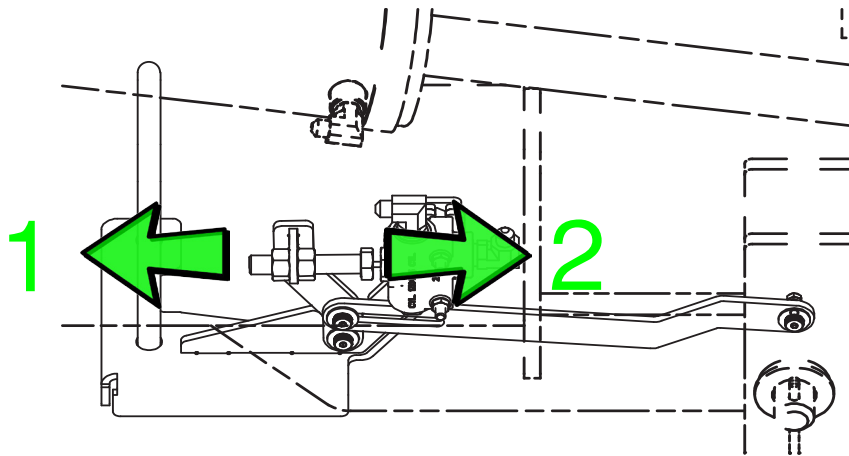
CONNECT TO THE TRACTOR

PREPARING FOR FIELD OPERATION

1. Move bolt in direction of arrow 1 to lower the tillage bar.

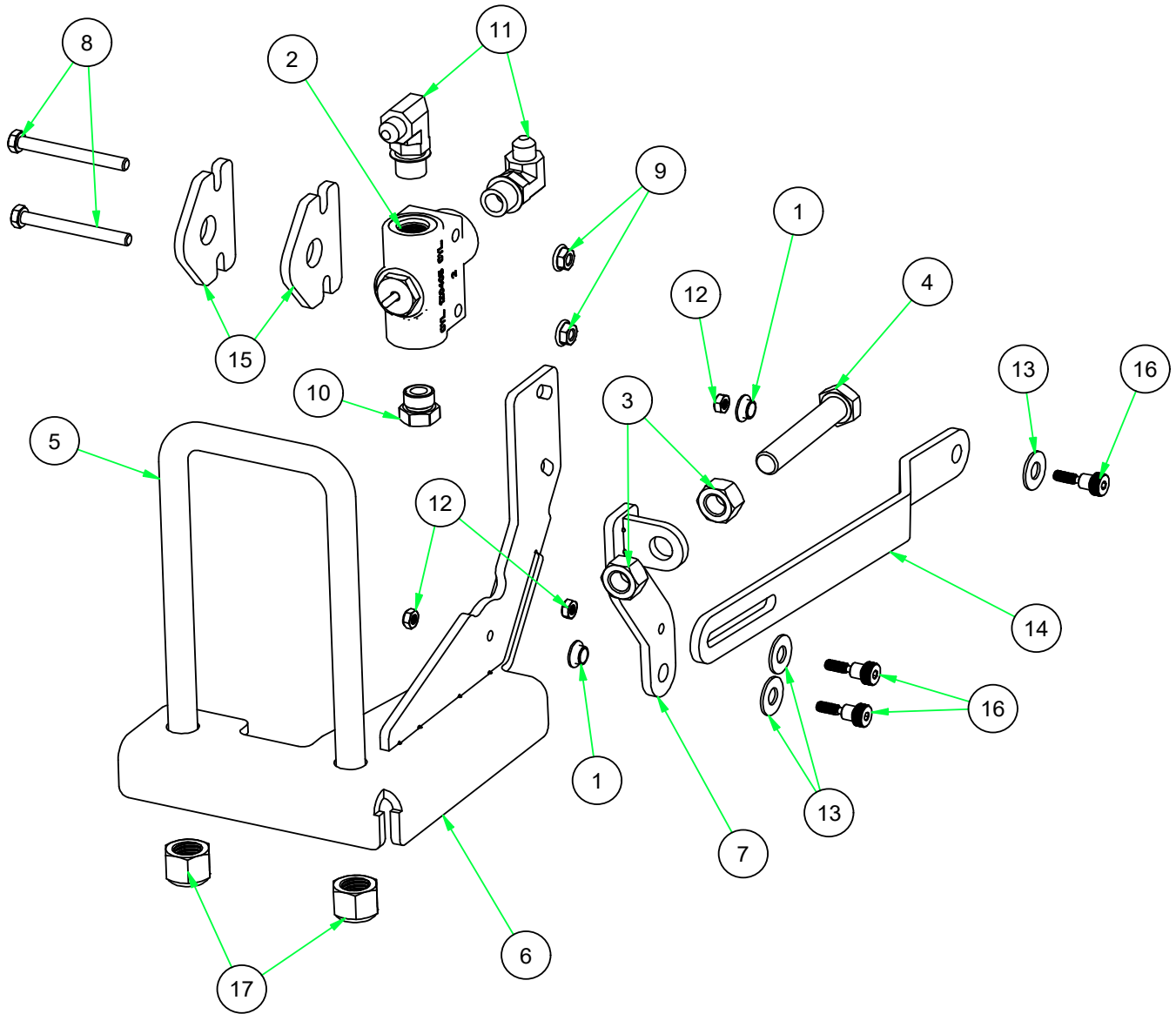
2. Move bolt in direction of arrow 2 to raise the tillage bar.

1/4" adjustment on the bolt will raise or lower the rear S-tine roughly 1-1/4".



PARTS

HYDRAULIC POPPET ASSEMBLY



PARTS

HYDRAULIC POPPET ASSEMBLY

ITEM	PN	DESCRIPTION
1	8X3080	FLANGE BRNG .469X.375"ID- .25"
2	8T1012	DEPTH CNTRL VALVE-CROSS
3	8X0250	NUT 5/8"-11NC HEX GR2 YZ
4	8X0098	BOLT 5/8-11NC X 3.5"FULLTHDGR5 ZDI
5	8D0350	U-BOLT 3/4 X 4-1/16 X 10" SQ
6	8W0270	BRACKET - DRAWBAR POPPET
7	8W0275	STOP ARM - DRAWBAR POPPET
8	8X0024	BOLT 5/16-18NC X 2-1/2" GR5 YZ
9	8X0211	NUT 5/16"-18NC SERFLANG GR2 YZ
10	8J5685	PLUG HEX 3/4"-16ORB
11	8J6010	3/4"-16 ORB X #6 JIC(M)90*ADP
12	8X0222A	NUT 1/4"-20NC NY-LOCK JAM ZN
13	8X0320	WASHER 3/8" (7/16" ID)FLAT ZDI
14	8W0280	SLIDE LINK - DRAWBAR POPPET
15	8W0285	POPPET SPACER
16	8X0174	SHLDR SCREW 3/8 X 3/8 X 1/4-20
17	8X0261	NUT NY-LOCK 3/4"-10NC GR2 ZDI

Maintenance & Specifications



Daily Maintenance:

Check all wheel bolts for tightness.

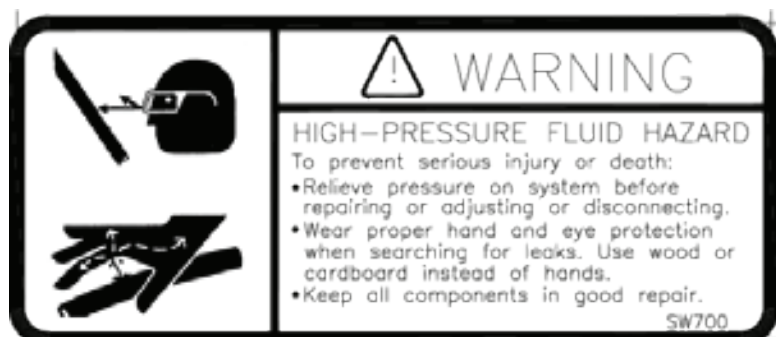
Daily Greasing:

Two zerks on each knuckle.

Two zerks on each cable fold arm.

One zerk on each transport axle pivot.

60 & 70 Ft. machines only: One zerk on each Hinged Wing Pivot.



Weekly Maintenance:

Inspect wheel bearings for tightness.

Seasonal Maintenance:

Disassemble, clean and repack wheel bearings.

Lubricate all zerks with a good grade of general purpose grease.

Inspect entire machine for loose or worn fasteners. Tighten or replace as required.

TIRE INFLATION:

IF 280 70 R15 - 64 PSI

40 MPH maximum. Exceeding this speed voids warranty.

TROUBLESHOOTING

1. Wings trail too far apart in transport.	Insufficient transport wheel toe-in.	Adjust transport wheel toe-in.
2. Wings are not pulling evenly in field position.	Cable pull brackets are improperly located.	Relocate cable pull brackets so wings slightly lead center.
3. Auto-Fold arms do not rotate into transport position.	Improper pivot bracket adjustment.	Adjust pivot bracket with bolts to provide clearance between the cable fold arm bottom guide and hitch tube. (6-4)
4. Wings of machine bounce.	Improper wing support tire inflation.	Inflate tires to proper pressure.
5. Harrow sections not riding level.	Top pull chains are improperly adjusted.	Adjust top pull chain by placing pin in different adjustment hole on lift arm.
6. S-tines tend to rotate out of the ground	Hydraulic cylinder leaking.	Repair or replace hydraulic cylinder.
	Tractor hydraulic circuit not holding pressure.	Repair tractor valve.

SAVED OR PRINTED COPIES ARE UNCONTROLLED

A technical drawing of a mechanical linkage system. It features a long horizontal beam with several joints and a vertical beam connected to it. The drawing is labeled with 'A' and '8Z2606'.



REV	DESIGNER	CHECKED BY	CHECKED DATE
{%03%}	{%05%}	{%08%}	{%09%}

DESIGNER	ENGINEER	DRAWING DATE	MASS	SHEET SIZE	SHEET	MATERIAL
CCV	MLJ	7/1/2019	19456.728	A	1	OF 1

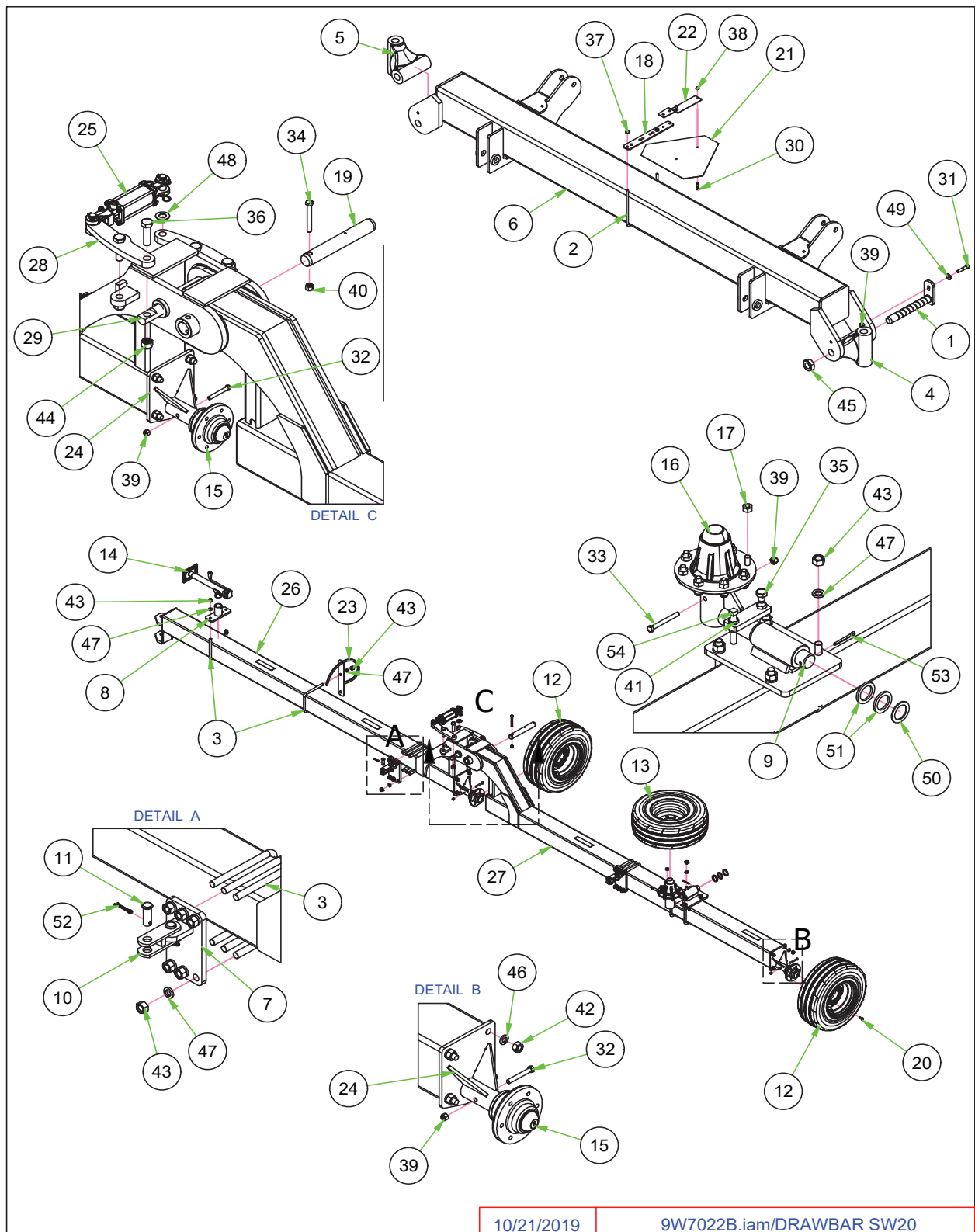
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED	TOUGH TOUGH	DESCRIPTION
FRACTIONAL ±1/32" ANGLES ±1° X ± .030" Y ± .010" Z ± .005" XXX ± .000"	 SUMMERS ®	22" HITCH SMV ASSEMBLY

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SUMMERS MFG. CO. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF SUMMERS MFG. CO. IS PROHIBITED.

9W7022A.iam/HITCH (NO HDA)

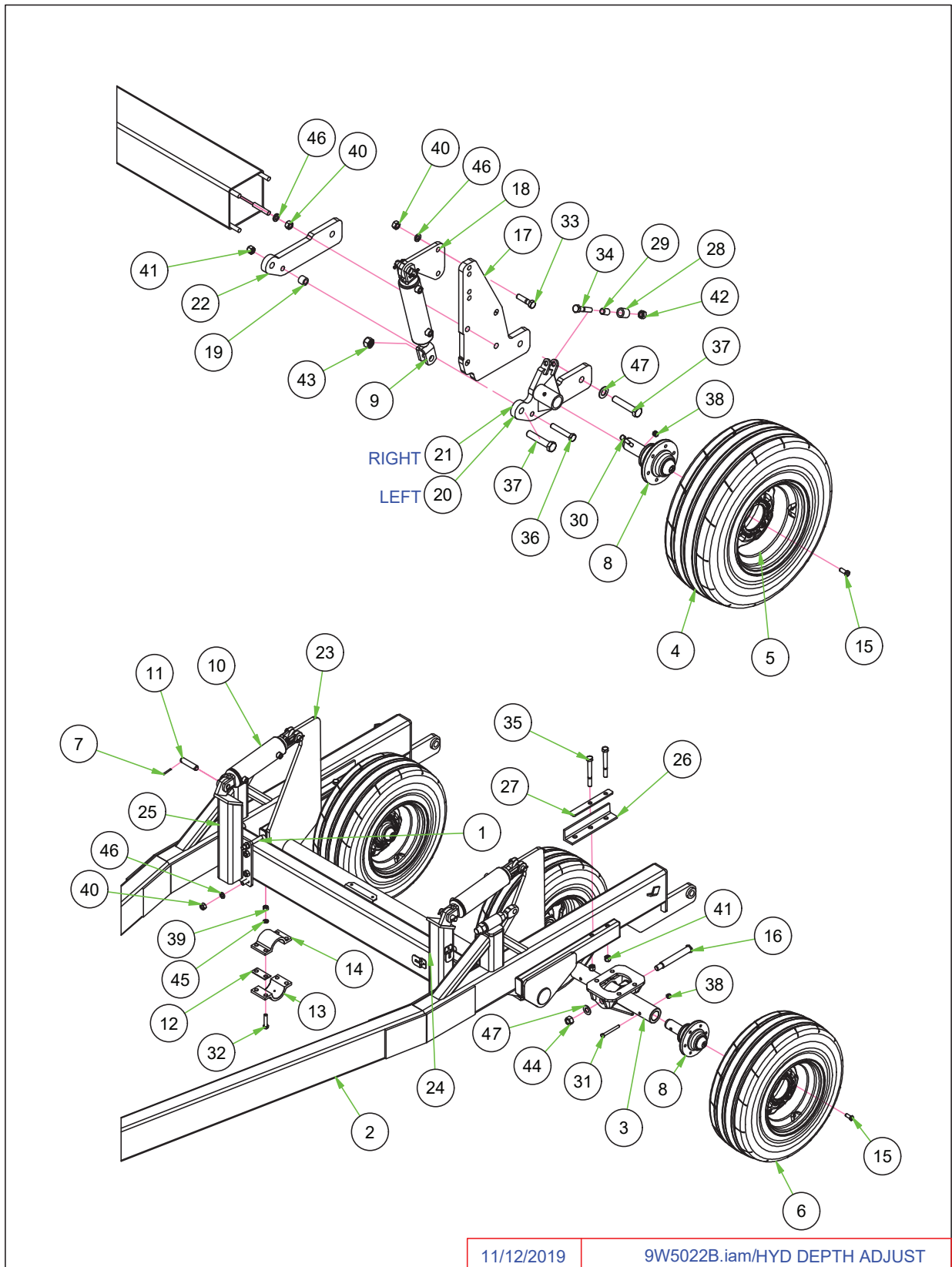
HITCH PARTS LIST

ITEM	PN	DESCRIPTION			
1	8A1004	CLAMP HOSE 5" #72	48	8X0125	BOLT 3/4-10NC X 10" GR5 ZDI
2	8C0532	HYD CYL 5" X 32" 3500PSI	49	8X0140	BOLT 1-8NCX7" W/1.5"THDGR5 YZ
3	8C1420	PIN 1 X 5-7/8" 22'HTCH PLTD	50	8X0150	BOLT 1-8NC X 20" GR5 YZ
4	8C1452	PIN 1 X 6-1/2" CYL DBLWSHR	51	8X0170	SCREW 8 X .75" FLANGE HD
5	8C1470	PIN 1-1/4 X 14" PIVOT	52	8X0202	NUT 3/8"-16NC NY-LOCK GR2 YZ
6	8C1702	U-BOLT 3/8 X 8 X 5" SQ	53	8X0203	NUT 3/8"-16NC SERFLANG GR2 YZ
7	8C1760	U-BOLT 3/4 X 8-1/16 X 6" SQ	54	8X0208	NUT 8-32 HEX YZ SER FLNG
8	8C1900	CLAMP 1/2" WIRE ROPE	55	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ
9	8C1920	SPRING AFLDCABL 1.56"OD GLVNZD	56	8X0246	NUT 1/2"-13NC SERFLANG GR2 YZ
10	8C1940	SPRING AUTOFOLD ARM RAW	57	8X0260	NUT 3/4"-10NC HEX GR2 YZ
11	8C1950	SPRING AFOLD LOCK 3"OD BLACK	58	8X0261	NUT 3/4"-10NC NY-LOCK GR2 YZ
12	8C2200	22' HITCH	59	8X0265	NUT 3/4"-10NC CNTRLOCK GR2 YZ
13	8C2246	TRNSPRT LOCK 1/2X3X32"CYL	60	8X0280	NUT 1"-8NC HEX GR2 YZ
14	8C2314	OSCILLATING AXLE ASSY	61	8X0281	NUT 1"-8NC NY-LOCK GR2 YZ
15	8C2318	SPACR BRCKT HTCH AXL ATTCH	62	8X0282	NUT 1"-14TPI TOPLOCK GR 8 Z
16	8C2620	PIVOT BRCKT A-FLD 22'HTCH	63	8X0284	NUT 1-1/4"-7NC HEX GR2 YZ
17	8C2630	ARM A-FLD LEFT 20&22'HTCH	64	8X0306	LOCKWASHER 3/4" YLW ZNC
18	8C2635	ARM A-FLD RGHT 20&22'HTCH	65	8X0309	LOCKWASHER 1" YLW ZNK
19	8C2650	LOCK ASSY AUTOFLD 22'HTCH 90-	66	8X0311	LOCKWASHER 1-1/4" YLW ZNC
20	8C2660	BUSHING A-FOLD LOCK- 5/16"	67	8X0318	WASHER 3/4"(13/16"ID)FLAT YZ
21	8C2690	FRONT ATTCH DUAL CABLE	68	8X0327	WASHER 1-1/4" SAE FLAT YZ
22	8C2700	A-FLD ARM LIFTER	69	8X0414	COTTER PIN 1/4 X 2" YZ
23	8C2710	A-FLD ARM LFTR BOLT PLATE	70	8X0415	COTTER PIN 3/16 X 1-1/2"
24	8D0312	CLEVIS FOR EYE-EYE CABLE 99-	71	8X0418	COTTER PIN 5/16 X 2-1/2" YZ
25	8D0720	HITCH PIECE CAST CAT.3CTD PNTD	72	8X0803	LIGHT MODULE BRACKET
26	8D2402	CHAIN 3 LINK .625"DIA. ALLOY Z	73	8Z1000	MANUAL-PAK 3DIA X 11.75" 09-
27	8D2460	SAFETY CHAIN 3/8" X 4'			
28	8D2730	PIN 1 X 2-3/4" CABLE PLATED			
29	8D3046	IF280/70R15 134D ON 15X10X6WHL			
30	8D8502	HYD HOSE HOLDER PNTD BLK 91-			
31	8D8537	JACK 7000# SIDE CRANK 15" LIFT			
32	8D9118	HYD CYL 2.5 X8" W/O DPTHCNTRL			
33	8K1100	HUB&AXLE ASSY 614(GBGI-2"RCVR)			
34	8K1620	PIN 1-1/4 X 6-1/8"			
35	8K1720	EYEBOLT 1.25DIAX1"EYE YZ 12-			
36	8K8030A	MODULE AG ENHNCDW/BRAKE6PIN			
37	8R6145	EYEBOLT 3/4"-10NC X 5/8"EYE			
38	8R6914	BOLT WHEEL 9/16"-18 UNF- 1.25"			
39	8S1076	QUICKLINK 1/4" YELLOW ZINC			
40	8T3300	BOLT PIVOT CHSLTRP&WNGFLT YZ			
41	8T4385	HOLDER MANUAL-PAK			
42	8W1204	U-BOLT 1/2 X 3 X 3" SQ			
43	8W1360	MANIFOLD BLOCK ALUMINUM10PORT			
44	8X0008	BOLT 3/8-16NC X 2" GR5 ZDI			
45	8X0063	BOLT 1/2-13NC X 1-1/2" GR5 YZ			
46	8X0074	BOLT 1/2-13NC X 4-1/2" GR5 ZDI			
47	8X0110	BOLT 3/4-10NC X 1-1/4" GR5 YZ			



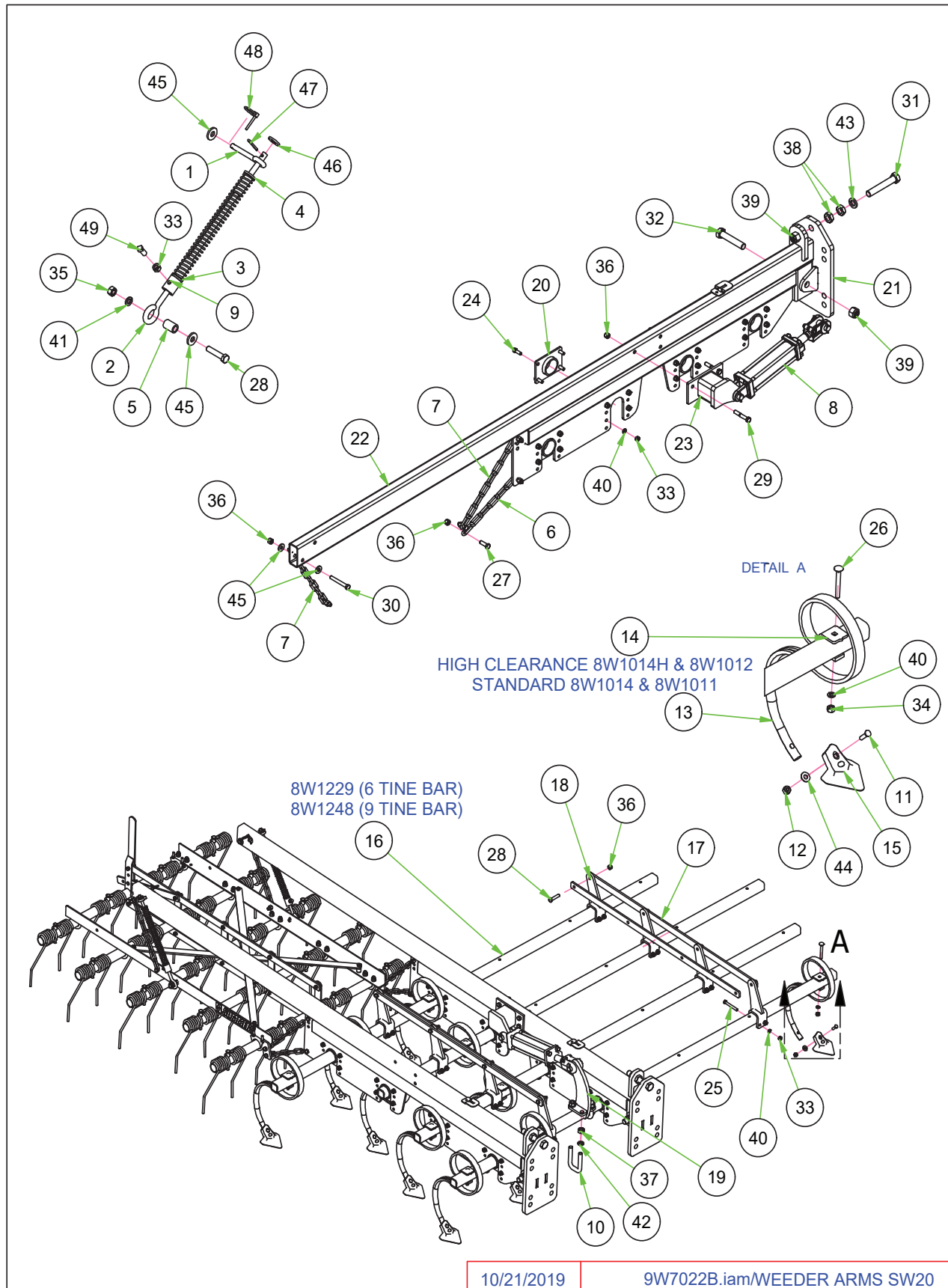
DRAWBAR PARTS LIST

ITEM	PN	DESCRIPTION	48	8X0316	WASHER 1" SAE FLAT YZ
1	8C1480	PIN 1-1/2 X 11-1/2" KNCKL	49	8X0330	WASHER 17/32"ID X 1.25"OD YZ
2	8C1710	U-BOLT 3/8 X 8 X 9" SQ	50	8X0362	WASHER 2.03IDX2-7/8ODX 9GA PLN
3	8C1780	U-BOLT 7/8 X 8-1/16 X 10" SQ	51	8X0366	WASHER 2.03IDX2-7/8ODX 1/4"PLN
4	8C1800	KNUCKLE 88.25° OFFSET LEFT	52	8X0414	COTTER PIN 1/4 X 2" YZ
5	8C1802	KNUCKLE 88.25° OFFSET RIGHT	53	8X0418	COTTER PIN 5/16 X 2-1/2" YZ
6	8C2212	CENTER 22' HTCH 8"SQ-10'	54	8X0665	SET SCRW SQ HD 3/4-10X4.5" YZ
7	8C2260	BRCKT CABLE PULL 8"SQ WNG			
8	8C2280	JACK ATTCH BRCKT- WING			
9	8C2424	TRNSPRT AXLE 2.5" RCVR 90°			
10	8D0312	CLEVIS FOR EYE-EYE CABLE 99-			
11	8D2730	PIN 1 X 2-3/4" CABLE PLATED			
12	8D3046	IF280/70R15 134D ON 15X10X6WHL			
13	8D3060	IF280/70R15 134D ON 15X8X8WHL			
14	8D8537	JACK 7000# SIDE CRANK 15" LIFT			
15	8K1100	HUB&AXLE ASSY 614(GBGI-2"RCVR)			
16	8K1105	HUB&AXLE ASSY HD812(2.5"RCVR)			
17	8K7123	NUT WHEEL BOLT 5/8-18UNF 97-			
18	8K8200	BRCKT SMV ATTCH 4-8"FRAME98-			
19	8P3912	PIN 2 X 13-1/2" HARDENED GREASABLE			
20	8R6914	BOLT WHEEL 9/16"-18 UNF- 1.25"			
21	8S1120	SIGN SLOW MOVING VEHICLE(SMV)			
22	8S1126	MNT SPADE W/HRDWR SMV SIGN			
23	8W1750	CABLE GUIDE BRACKET			
24	8W8004	SPINDLE HOLDER 2"			
25	8W8005	HYD CYL 2.5 X 4"			
26	8W8007	WINGTUBE15' X 8SQ 60'&70'			
27	8W8008	WINGTUBE 15' PRT2 (70')			
28	8W8009	STL 1" 14.5X2.25"			
29	8W8010	HINGED WING PIN			
30	8X0021B	BOLT 5/16-18NC X 1-1/4"GR5 YZ			
31	8X0068	BOLT 1/2-13NC X 2-1/2" GR5 YZ			
32	8X0072	BOLT 1/2-13NC X 3-3/4" GR5 YZ			
33	8X0074	BOLT 1/2-13NC X 4-1/2" GR5 ZDI			
34	8X0095	BOLT 5/8-11NC X 5" GR5 ZDI			
35	8X0114	BOLT 3/4-10NC X 3" GR5 YZ			
36	8X0142	BOLT 1-8NC X 3.5" GR5 YZ			
37	8X0203	NUT 3/8"-16NC SERFLANG GR2 YZ			
38	8X0211	NUT 5/16"-18NC SERFLANG GR2 YZ			
39	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ			
40	8X0253	NUT 5/8"-11NC NY-LOCK GR2 YZ			
41	8X0259	NUT JAM 3/4"-10NC GR2 ZDI			
42	8X0260	NUT 3/4"-10NC HEX GR2 YZ			
43	8X0268	NUT 7/8"-9NC HEX GR2 YZ			
44	8X0281	NUT 1"-8NC NY-LOCK GR2 YZ			
45	8X0286	NUT 1-1/2"-6NC JAM GR2 YZ			
46	8X0306	LOCKWASHER 3/4" YLW ZNC			
47	8X0307	LOCKWASHER 7/8" YLW ZNC			



HYDRALIC DEPTH ADJUST

ITEM	PN	DESCRIPTION
1	8C1760	U-BOLT 3/4 X 8-1/16 X 6" SQ
2	8C2200	22' HITCH
3	8C2314	OSCILLATING AXLE ASSY
4	8D3045	TIRE IF 280/70R15 134D TUBELESS
5	8D3046	IF 280/70R15 134D ON 15X10X6WHL
6	8D3046	IF280/70R15 134D ON 15X10X6WHL
7	8D9108	ROLL PIN 1/4 X 2" ZINC
8	8K1100	HUB&AXLE ASSY 614(GBGI-2"RCVR)
9	8K8430	HYD CYL 3" X 8" RPHS 1.5" ROD
10	8K8435	HYD CYL 3.5" X 8" RPHS 1.75" ROD
11	8K9102	PIN 1 X 4" CYL-FOR1/4"ROLL PIN
12	8R6060	STL 12GA X 1.75- 4" W/HLS 08-
13	8R6065	PILLOWBLOCK CAP W/ZERK CAST
14	8R6067	PILLOWBLOCK CAP CAST PNTD
15	8R6914	BOLT WHEEL 9/16"-18 UNF- 1.25"
16	8T3300	BOLT PIVOT CHSLTRP&WNG LFT YZ
17	8W1660	STL 1" - 24.25 X 15.5"
18	8W1802	STL 3/4" - 10 X 7.25"
19	8W1806	SPACER TUBE 1.25X.76- 1-1/16"
20	8W1840	PIVOT W/SPNDL HLDR WNG LFT SW
21	8W1842	PIVOT W/SPNDL HLDR WNG RGHT SW
22	8W1845	STL 1" - 17.75 X 4.75"
23	8W1850	HITCH PIVOT ASSY 22' HDA
24	8W1860	CYL ATTCH HTCH UBLT LEFT
25	8W1862	CYL ATTCH HTCH UBLT RGHT
26	8W1884	L UHMW 2.5X2.5X3/8- 13" W/HLS
27	8W1886	FLAT 5/16X 1.5 - 11-3/8"
28	8W1890	ROLLERTUBE 1.5 X 1"ID- 1.5" 94-
29	8W1895	NYLATRON 1"ODX .76"ID- 1-1/2"
30	8X0070	BOLT 1/2-13NC X 3-1/4" GR5 YZ
31	8X0074	BOLT 1/2-13NC X 4-1/2" GR5 ZDI
32	8X0092	BOLT 5/8-11NC X 2-3/4" GR5 YZ
33	8X0114	BOLT 3/4-10NC X 3" GR5 YZ
34	8X0115	BOLT 3/4-10NC X 3-1/2" GR5 YZ
35	8X0121	BOLT 3/4-10NC X 6-1/2" GR5 YZ
36	8X0122	BOLT 3/4-10NC X 4-1/2" GR5 YZ
37	8X0143	BOLT 1-8NC X 5" GR5 YZ
38	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ
39	8X0250	NUT 5/8"-11NC HEX GR2 YZ
40	8X0260	NUT 3/4"-10NC HEX GR2 YZ
41	8X0261	NUT 3/4"-10NC NY-LOCK GR2 YZ
42	8X0265	NUT 3/4"-10NC CNTRLOCK GR2 YZ
43	8X0281	NUT 1"-8NC NY-LOCK GR2 YZ
44	8X0282	NUT 1"-14TPI TOPLOCK GR 8 Z
45	8X0304	LOCKWASHER 5/8" YLW ZNC
46	8X0306	LOCKWASHER 3/4" YLW ZNC
47	8X0316	WASHER 1" SAE FLAT YZ



10/21/2019

9W7022B.iam/WEEDER ARMS SW20

WEEDER ARMS PARTS LIST

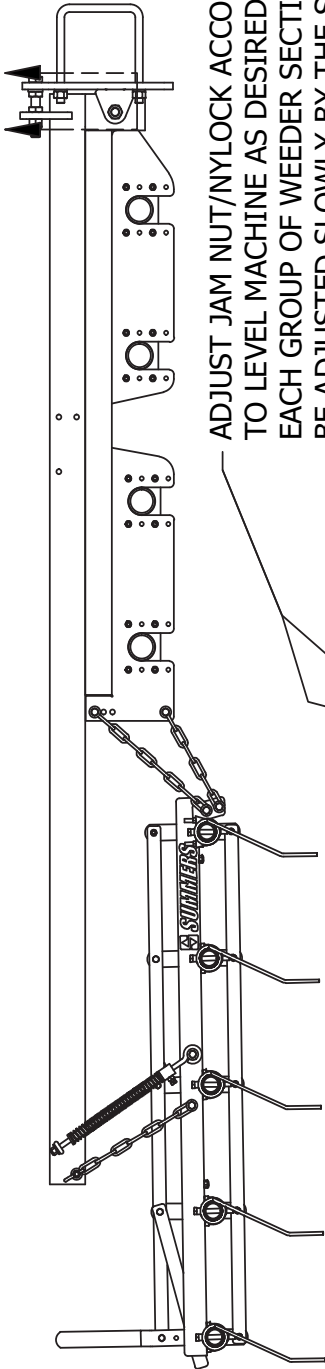
ITEM	PN	DESCRIPTION			
1	8D1710	EYE BOLT SHORT 7/16" DIA	47	8X0415	COTTER PIN 3/16 X 1-1/2"
2	8D1720	EYE BOLT LONG 1/2" DIA	48	8X0492	LYNCH PIN 3/16 X 1-1/4" YZ
3	8D1730	SPRING PRESS 3/8" C-HRRW OPT	49	8X0605	SET SCRW SQ HD 7/16-14X 1" ZDI
4	8D1740	PIPE 1/2" SCH80- 2-1/8" W/WSHR			
5	8D1750	PIPE 1/2" SCH80- 1-1/4" -07			
6	8D2100	CHAIN 6 LINK CASE HARDEND-12.5"			
7	8D2210	CHAIN 8 LINK CASE HARDEND-17"			
8	8D9116	HYD CYL 2.5 X 8" SP W/ DEPTH CNTRL			
9	8H1320	TUBE			
10	8K5505	U-BOLT 3/4 X 2-1/8 X 4-1/4" SQ			
11	8W1006	PLOWBOLT 3/8"X1.5"			
12	8W1007	3/8" HVY NUT			
13	8W1012	S-TINE HIGH			
14	8W1014H	CLAMP HI CLEARANCE S-TINE			
15	8W1021	SHOVEL 1/4 X 4" STINE			
16	8W1229	TUBE SQ 2 X 4T - P 18-			
17	8W1264	FLAT 3/8X1.5- 50" 4RNK SW 91-			
18	8W1271P	LEVER 2"SQ TUBE SW-P 18-			
19	8W1281P	CYL ATTCH LVR ROD SW -P 18-			
20	8W1300	BUSHING 2" SQ TUBE/S-TINE			
21	8W8001	WEEDER ARM BOLT PLATE			
22	8W8002	WEEDER ARM			
23	8W8003	TINE ADJUST CYL ATTACH			
24	8X0033	BOLT 7/16X1.25 5/8"THD GR5 ZDI			
25	8X0044	BOLT 7/16-14NC X 3-1/2"GR5 ZDI			
26	8X0070A	BOLT 1/2-13NC X 3-1/2" GR 5 YZ			
27	8X0063	BOLT 1/2-13NC X 1-1/2" GR5 YZ			
28	8X0067	BOLT 1/2-13NC X 2-1/4" GR5 ZDI			
29	8X0069	BOLT 1/2-13NC X 3" GR5 ZDI			
30	8X0072	BOLT 1/2-13NC X 3-3/4" GR5 YZ			
31	8X0138A	BOLT 1-8NC X 6" FULL THRD			
32	8X0143	BOLT 1-8NC X 5" GR5 YZ			
33	8X0232	NUT 7/16"-14NC HEX GR2 ZDI			
34	8X0233	NUT 7/16"-14NC CNTRLOCK			
35	8X0240	NUT 1/2"-13NC HEX GR2 YZ			
36	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ			
37	8X0260	NUT 3/4"-10NC HEX GR2 YZ			
38	8X0277	NUT JAM 1"-8NC GR2 ZDI			
39	8X0281	NUT 1"-8NC NY-LOCK GR2 YZ			
40	8X0302	LOCKWASHER 7/16" YLW ZNC			
41	8X0303	LOCKWASHER 1/2" YLW ZNC			
42	8X0306	LOCKWASHER 3/4" YLW ZNC			
43	8X0309	LOCKWASHER 1" YLW ZNC			
44	8X0320	WASHER 3/8" (7/16" ID)FLAT ZDI			
45	8X0330	WASHER 17/32"ID X 1.25"OD YZ			
46	8X0330B	WASHER 17/32"ID X 1.25"OD BLACK			

LEVELING WEEDER ARM FOR PROPER TILLAGE.

- RETRACT S-TINE
- FOLD MACHINE TO FIELD POSITION
- EXTEND LIFT CYLINDER ALL THE WAY
- START LEVELING PROCESS



A



ADJUST JAM NUT/NYLOCK ACCORDINGLY TO LEVEL MACHINE AS DESIRED. EACH GROUP OF WEEDER SECTIONS MUST BE ADJUSTED SLOWLY BY THE SAME AMOUNT. **MACHINE DOES NOT COME FIELD READY FROM FACTORY.**

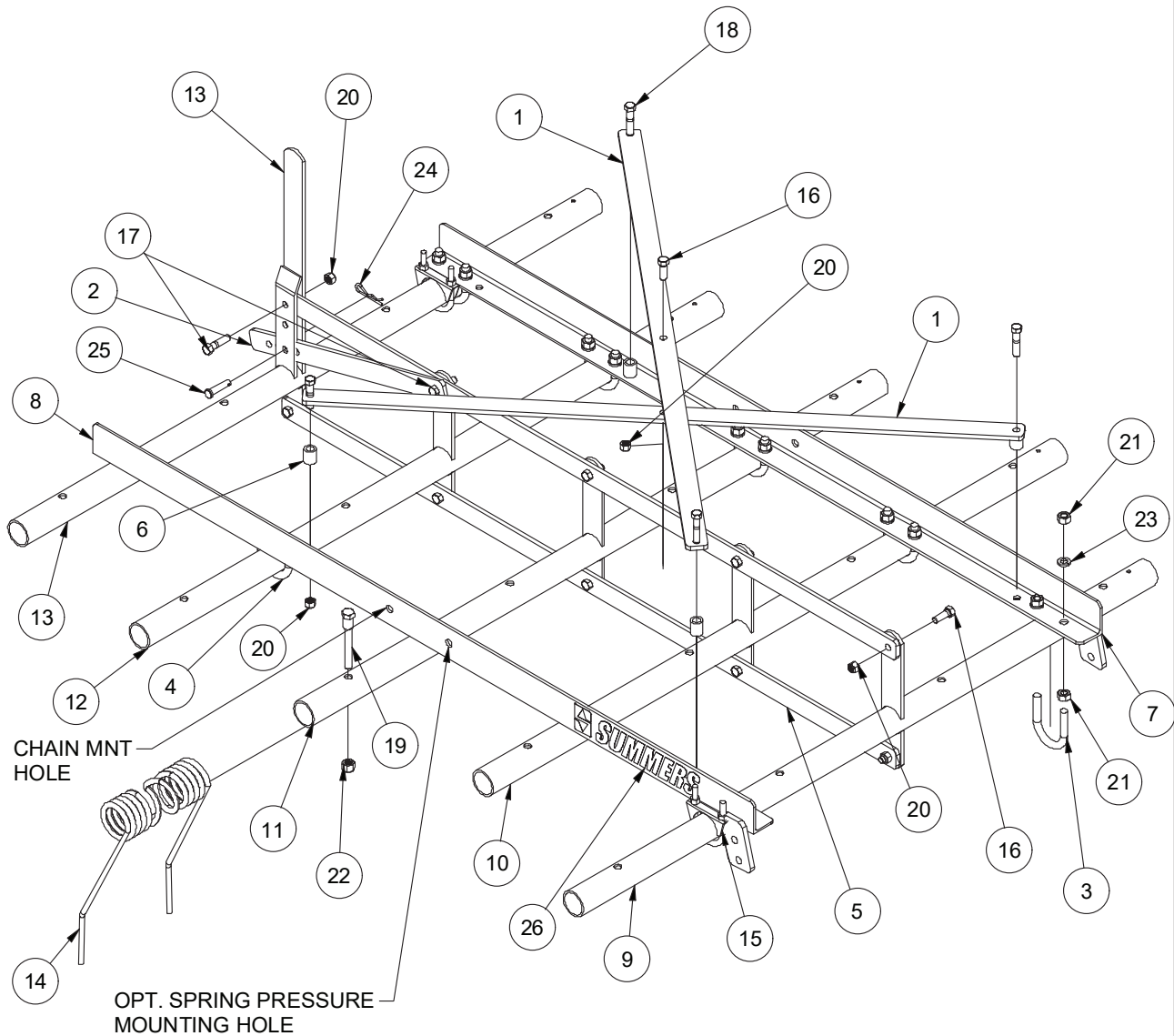
MAY NEED TO LOOSEN TO ALLOW ARM TO MOVE DURING ADJUSTMENT. SNUG NYLOCK AFTER ADJUSTMENT IS COMPLETED.

DETAIL A
SCALE 1 / 10

MAY NEED TO MOVE HITCH PIECE TO ADJUST MACHINE FURTHER.

DESIGNER		ENGINEER	DRAWING DATE	MASS	SHEET SIZE		MATERIAL
CCV		MLJ	8/8/2019	609.869 lbmass	A	1 OF 1	
REV		DESIGNER	CHECKED BY	CHECKED DATE	PART NUMBER		DESCRIPTION
{%03%}	{%06%}			{%09%}	WEEDER		WEEDER ARM

5 FT. HARROW SECTION - 5 BAR (3/8" Dia. Tooth - 8H0795)



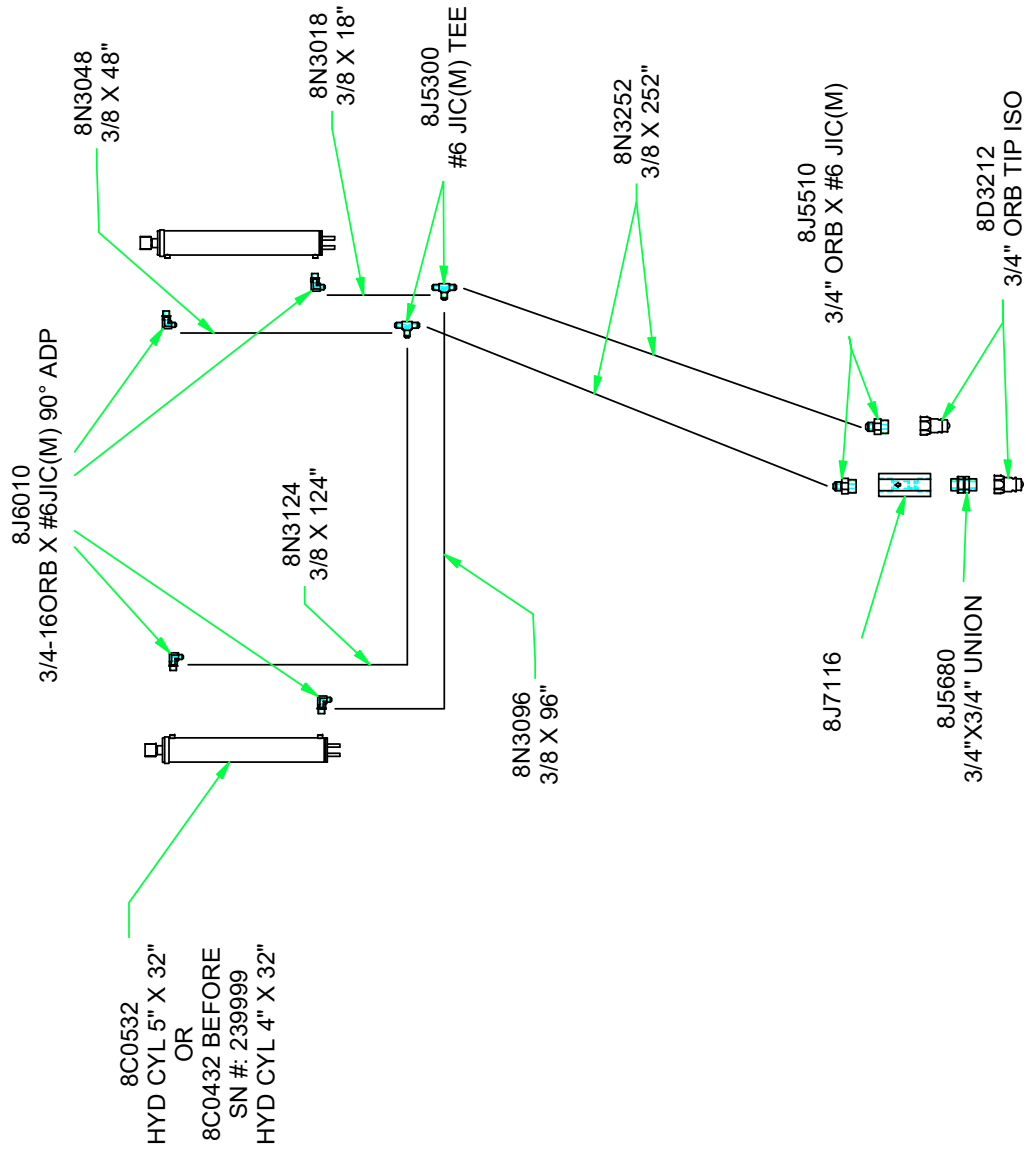
8/7/2018

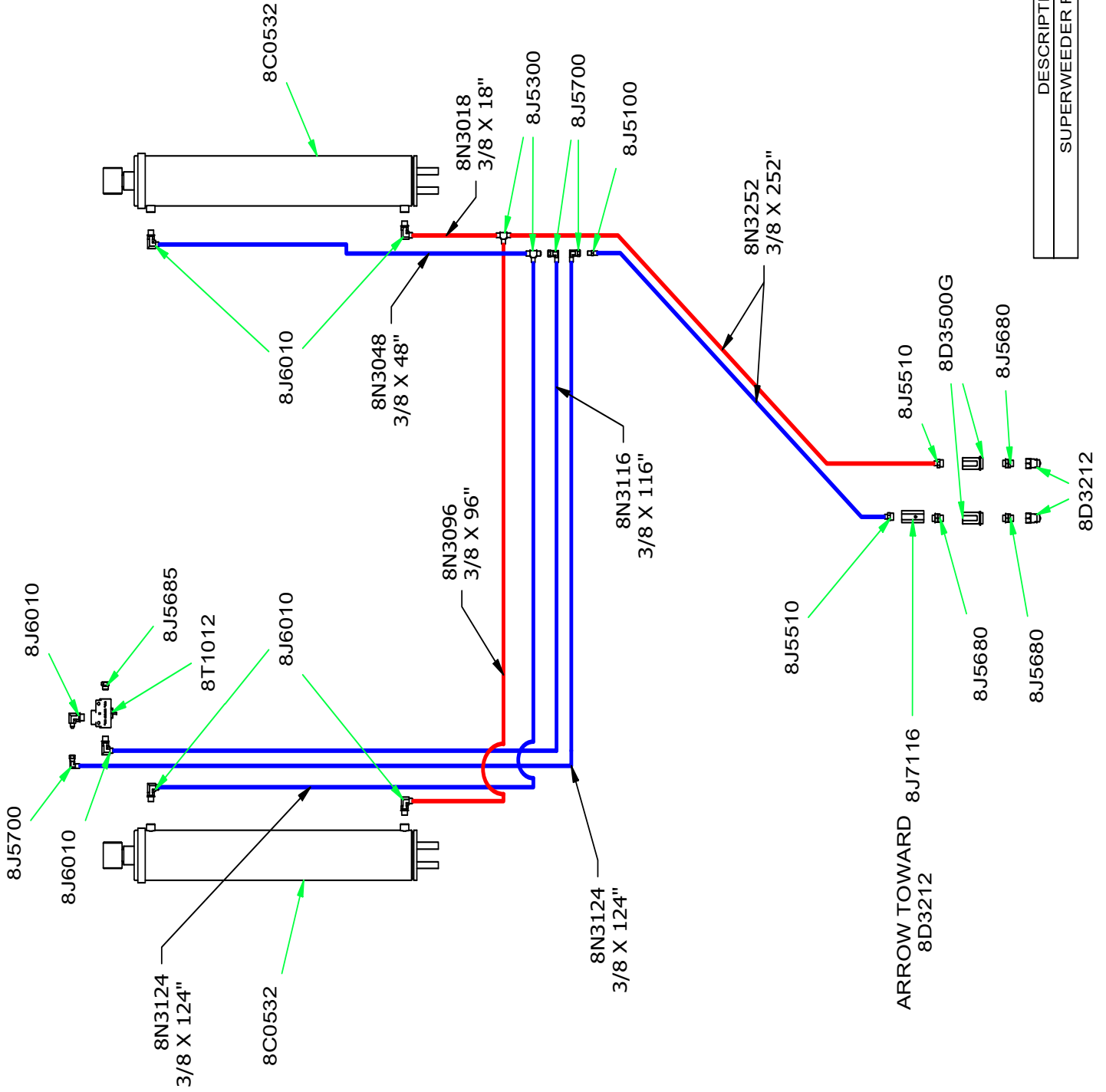
8H0795.iam/5 BAR 5' HRRW SECTION

5 FT. HARROW SECTION PARTS LIST

ITEM	PN	DESCRIPTION
1	8H0232	FLAT 5/16 X 1.5 - 47.5" (5')
2	8H0260	FLAT 5/16 X 1.5 -18.5"CULTI
3	8H0350	U-BOLT 1/2 X 2 X 3" RND
4	8H0352	U-BOLT 1/2 X 2 X 3" RND W/NUTS
5	8H0370	FLAT 5/16X1.5- 57" (5 BR)
6	8H0390	PIPE 1/2" SCH 80- 1" (5 BR)
7	8H0410	SIDE ANGLE LEFT 5 BAR
8	8H0411	SIDE ANGLE RGHT 5 BAR
9	8H0641	1ST PIPE W/LEVER 5' 5 BAR
10	8H0642	2ND PIPE W/LEVER 5' 5 BAR
11	8H0643	3RD PIPE W/LEVER 5' 5 BAR
12	8H0644	4TH PIPE W/LEVER 5' 5 BAR
13	8H0645	REAR PIPE W/LEVER 5' 5 BAR
14	8H1110	HARROW TOOTH 3/8X 14"CULTIHRRW
15	8S0080	PIPE CLAMP, 1.90" ID PLATED
16	8X0033	BOLT 7/16X1.25 5/8"THD GR5 ZDI
17	8X0034	BOLT 7/16X1.75 W/1"THD GR5 ZDI
18	8X0036	BOLT 7/16-14NC X 2" GR5 ZDI
19	8X0079	BOLT 1/2-13X4-1/8"SHOULDR GR2ZDI
20	8X0234	NUT 7/16"-14NC NY-LOCK GR2 ZDI
21	8X0240	NUT 1/2"-13NC HEX GR2 YZ
22	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ
23	8X0303	LOCKWASHER 1/2" YLW ZNC
24	8X0400	HAIR PIN CLIP 1/8 X 1-15/16"
25	8X0420	CLEVIS PIN 7/16 X 1-3/4" ZDI
26	8Z0101	2" SUMMERS DECAL

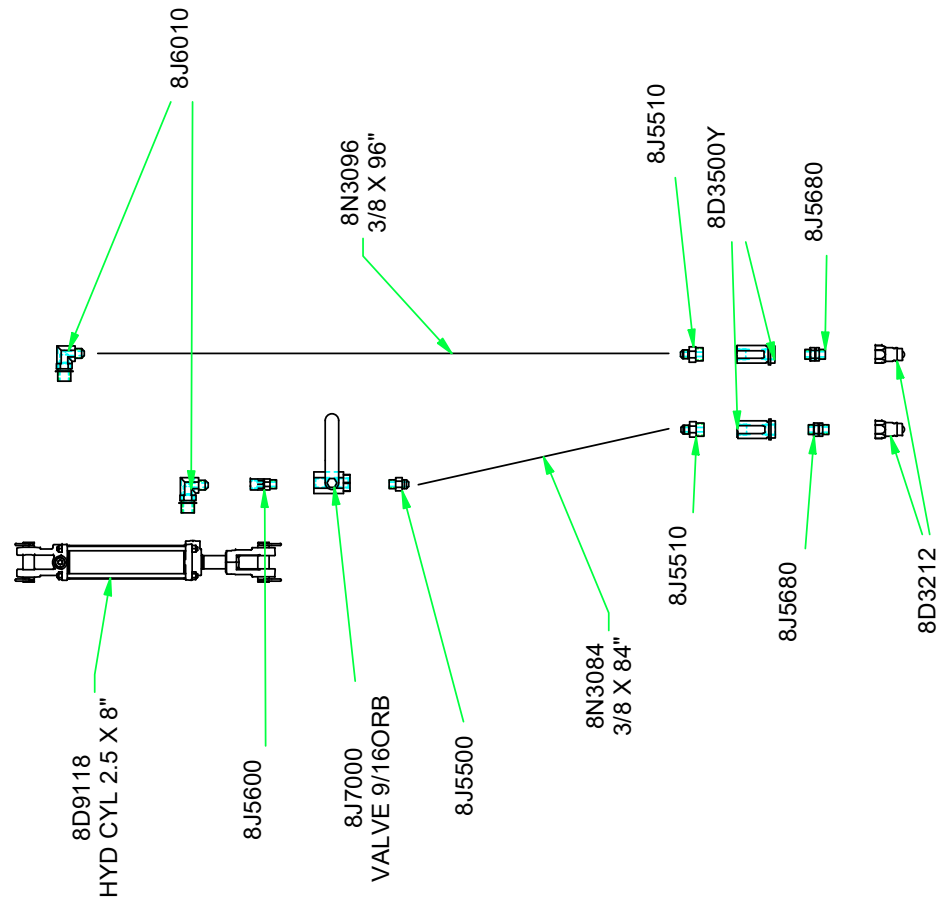
MAIN LIFT HYD



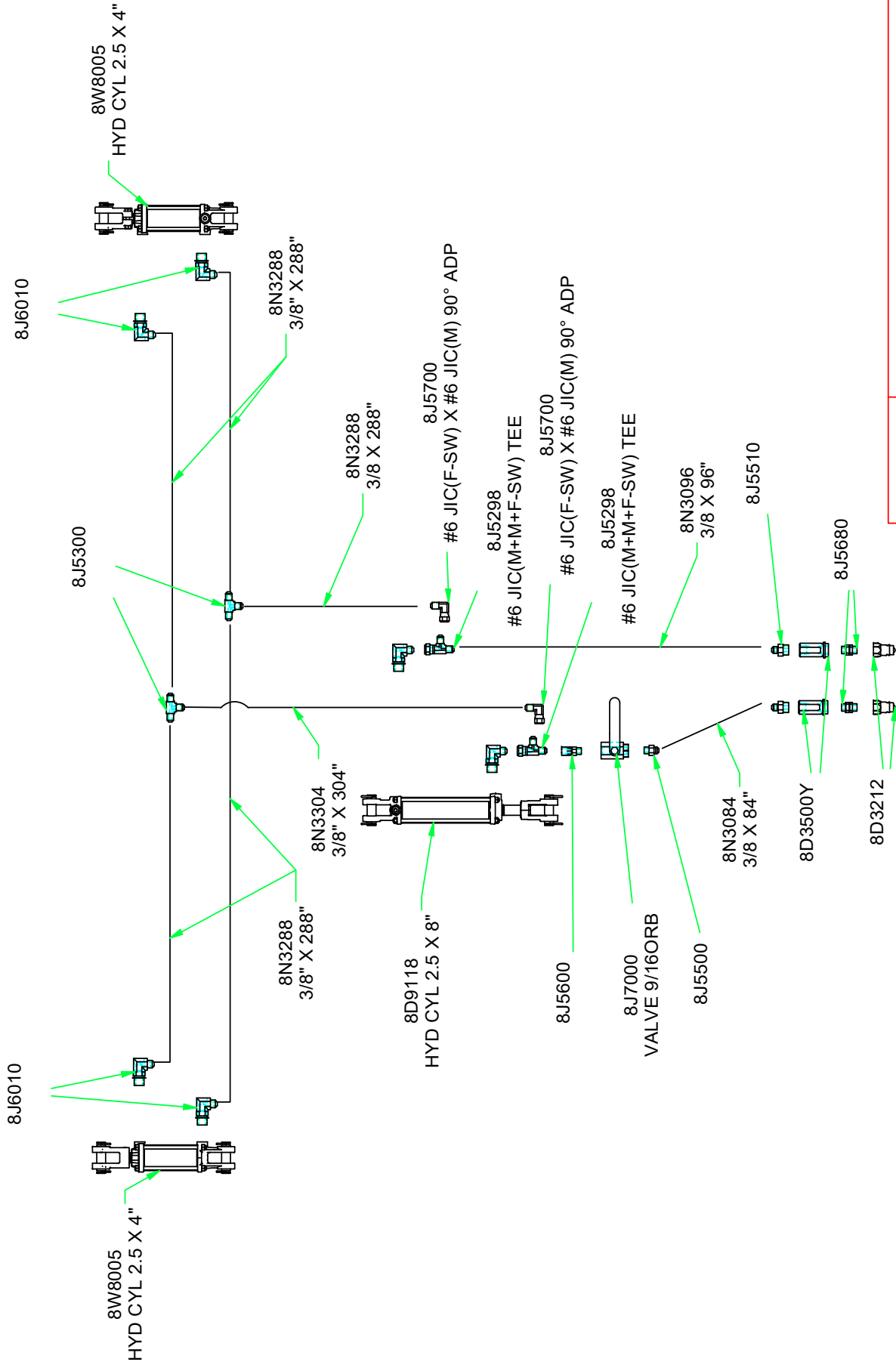


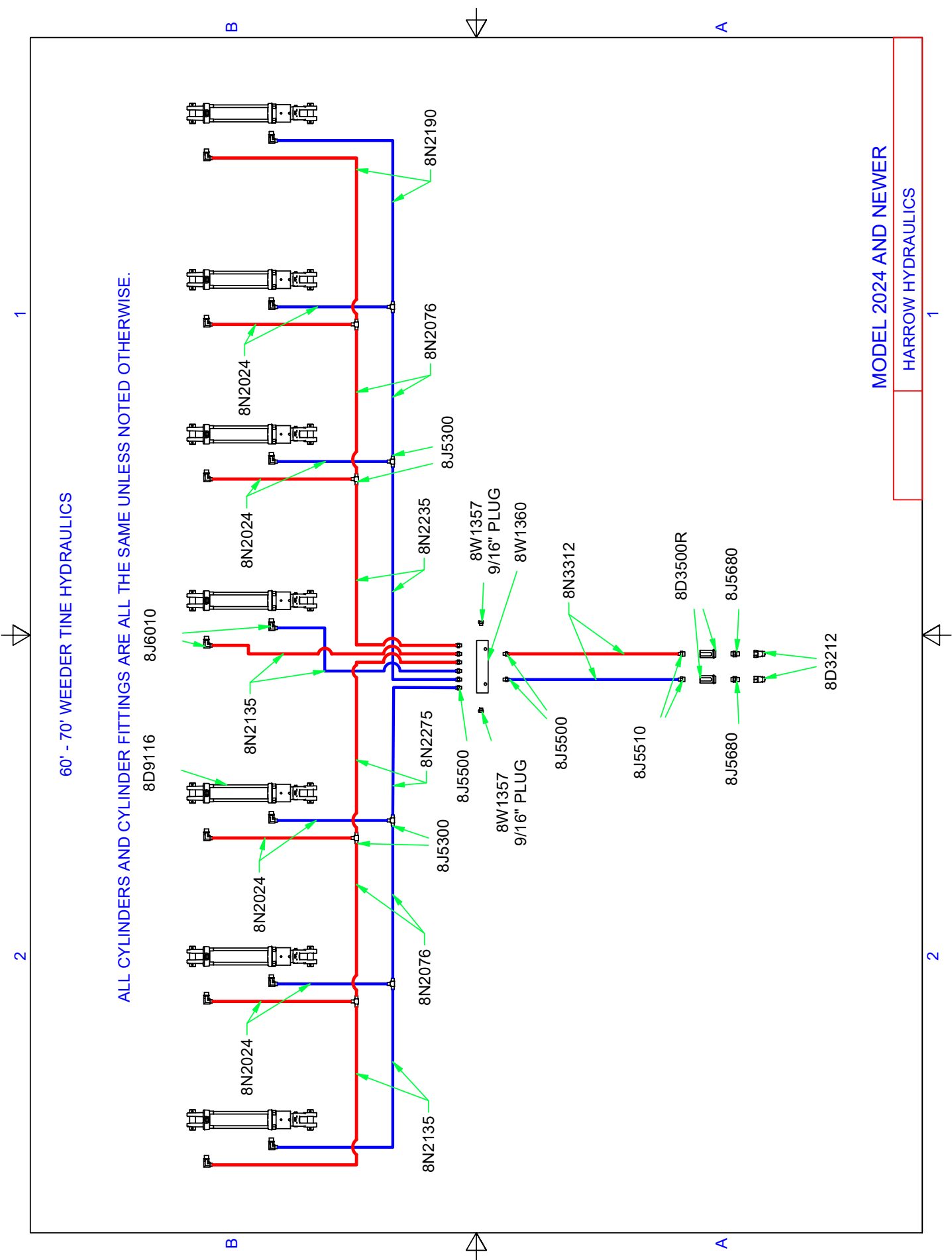
SUPERWEEDER FOLD HYD.idw	
DESCRIPTION	DATE
SUPERWEEDER FOLD HYD	12/11/2024

AUTOFOLD LOCK 30'-50'



WEEDER AUTOFOLD LOCK

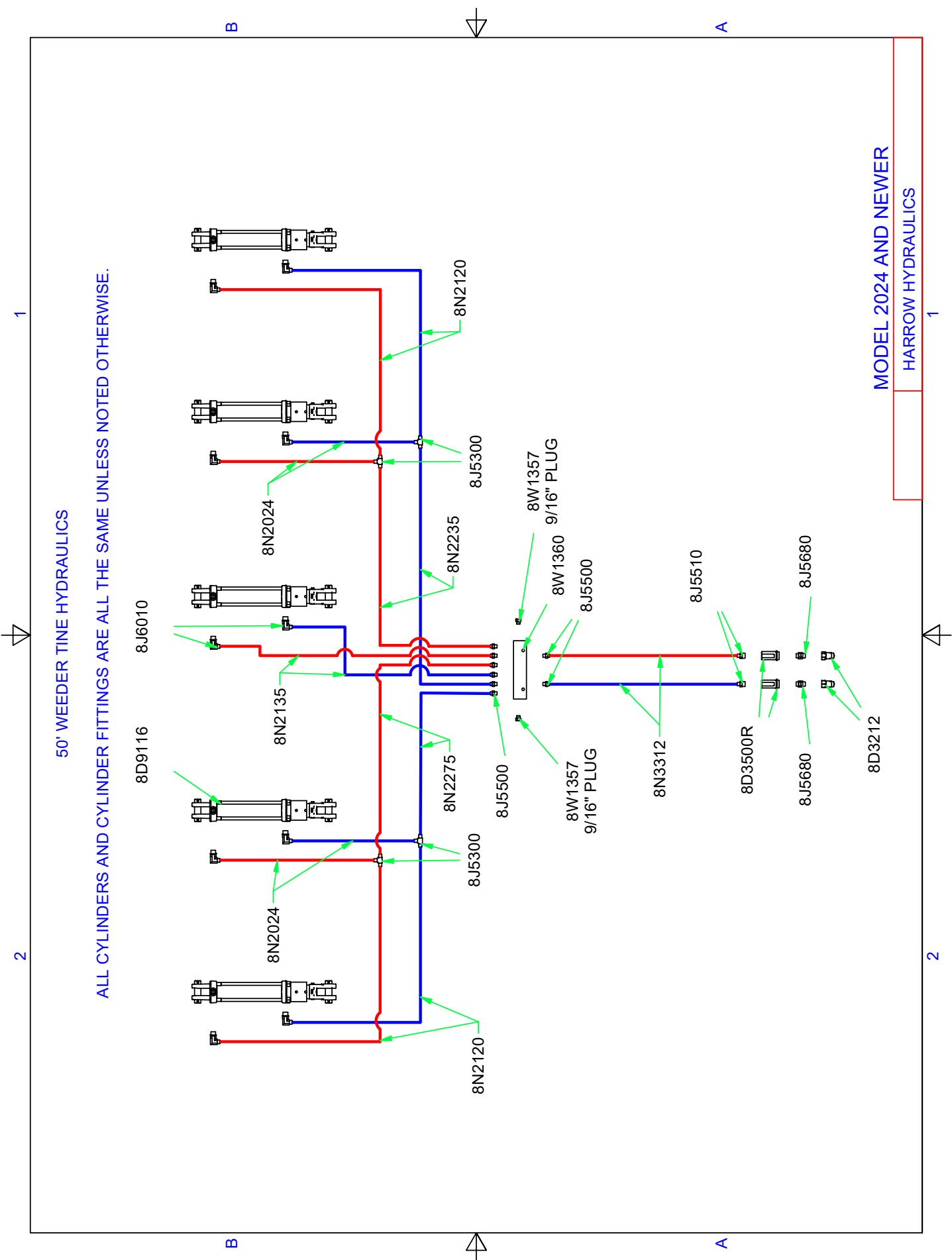


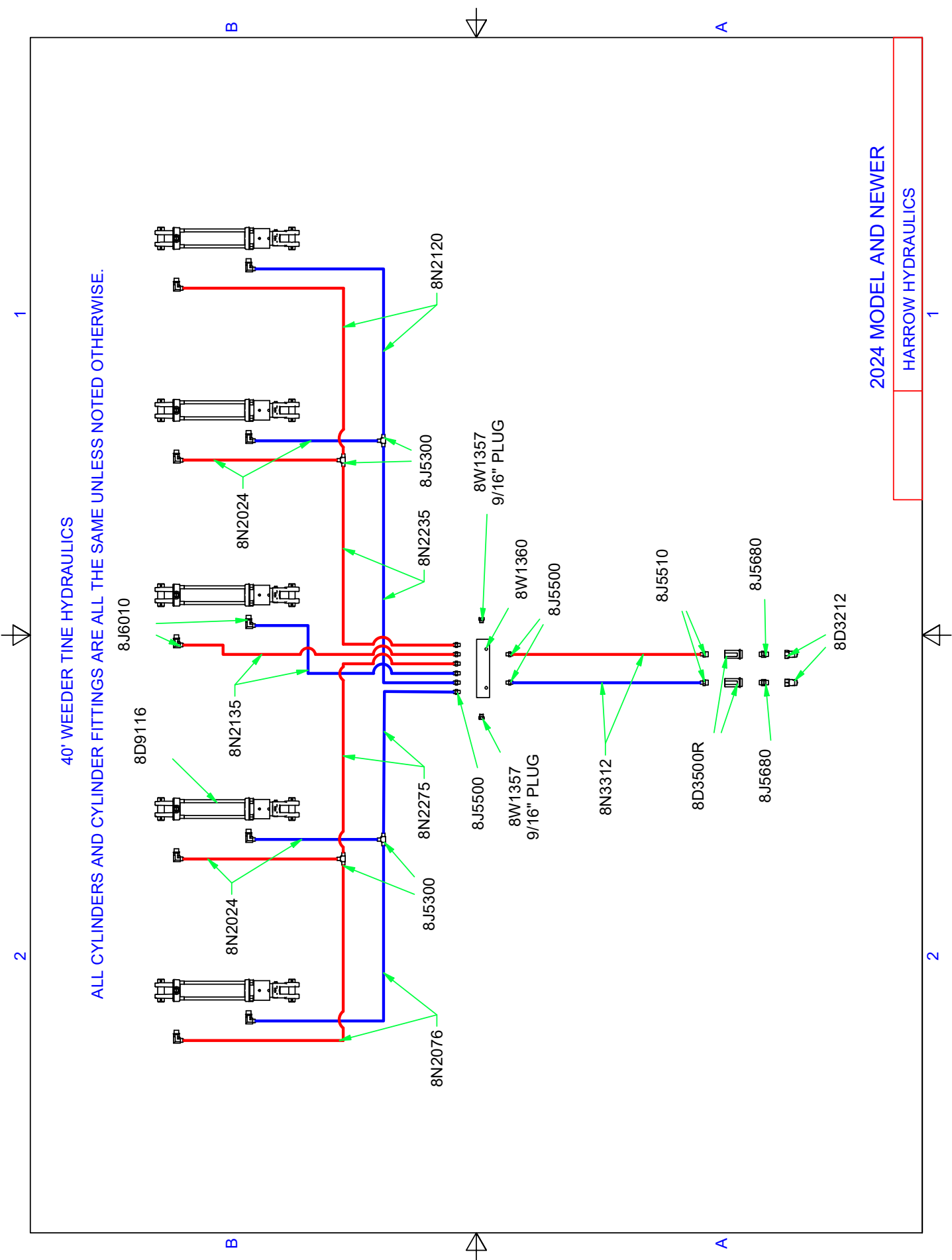


60' - 70' WEEDEER TINE HYDRAULICS

ALL CYLINDERS AND CYLINDER FITTINGS ARE ALL THE SAME UNLESS NOTED OTHERWISE.

MODEL 2024 AND NEWER
HARROW HYDRAULICS



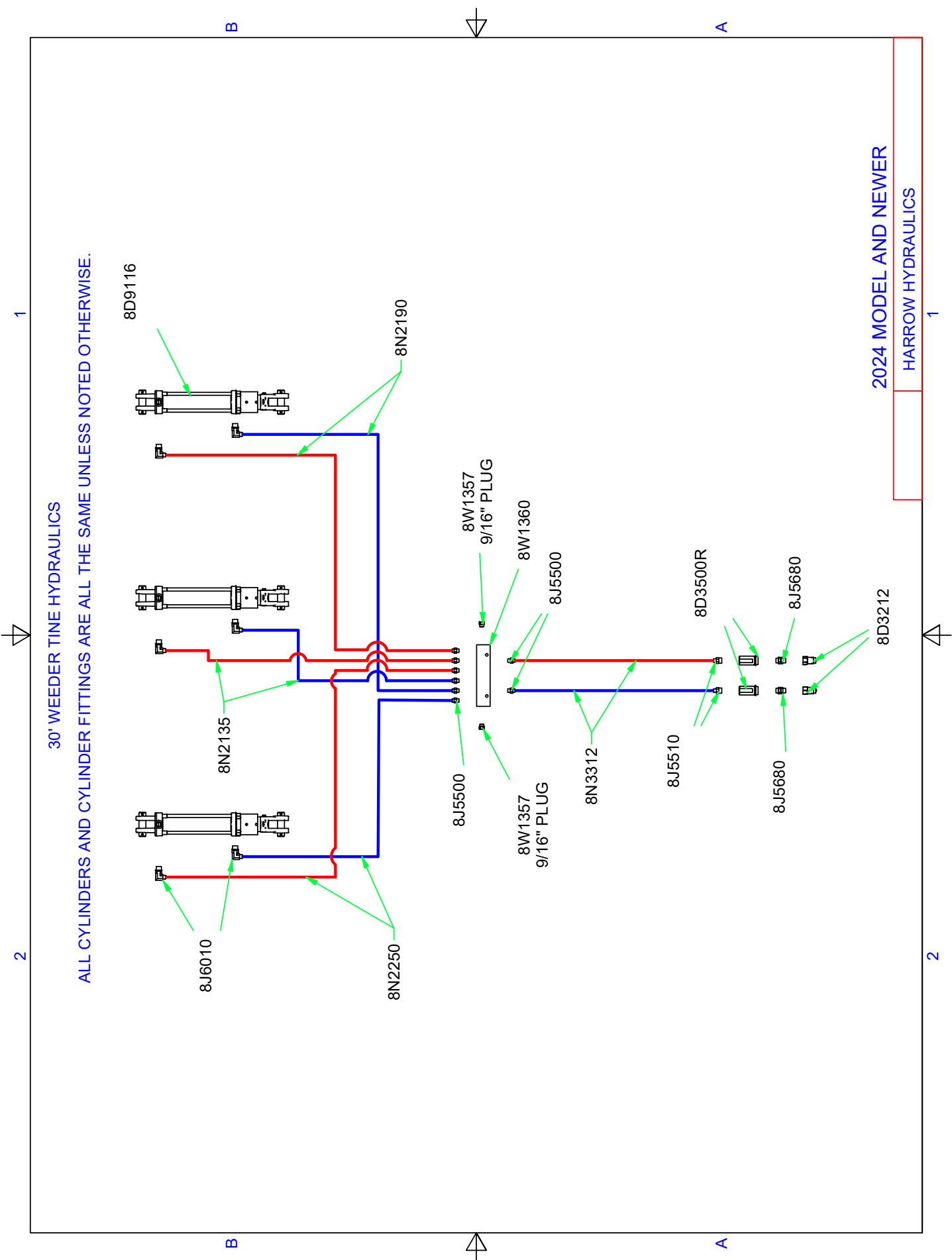


40' WEEDEER TINE HYDRAULICS

ALL CYLINDERS AND CYLINDER FITTINGS ARE ALL THE SAME UNLESS NOTED OTHERWISE.

2024 MODEL AND NEWER

HARROW HYDRAULICS



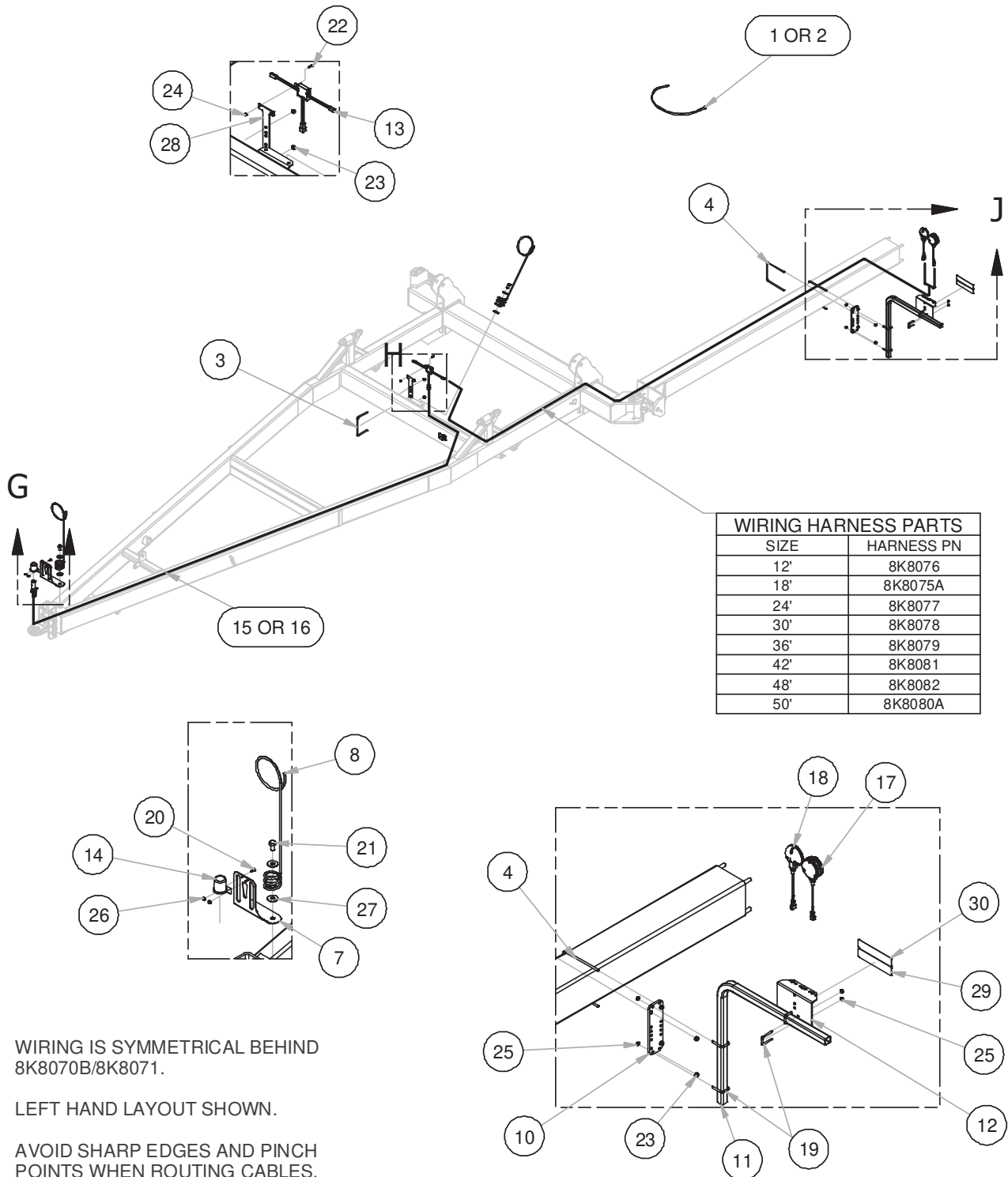
30' WEEDE TINE HYDRAULICS

ALL CYLINDERS AND CYLINDER FITTINGS ARE ALL THE SAME UNLESS NOTED OTHERWISE.

2024 MODEL AND NEWER

HARROW HYDRAULICS

LIGHT KIT, 8"SQ DRAWBAR



WIRING IS SYMMETRICAL BEHIND
8K8070B/8K8071.

LEFT HAND LAYOUT SHOWN.

AVOID SHARP EDGES AND PINCH
POINTS WHEN ROUTING CABLES.

LEAVE SLACK AT HINGES AND
KNUCKLES. SECURE WITH NYLON TIES.

10/3/2016

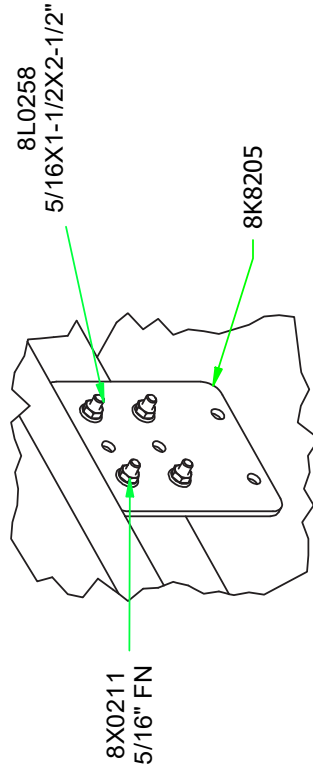
LIGHT KITS, 8"SQ DRWBR

LIGHT KIT PARTS LIST

ITEM	PN	DESCRIPTION
1	8A4048	11" NYLON TIE
2	8A4052	15-1/4" NYLON TIE
3	8C1702	U-BOLT 3/8 X 8 X 5" SQ
4	8C1710	U-BOLT 3/8 X 8 X 9" SQ
5	8C2200	22' HITCH
6	8C2210	CENTER 22' HTCH 8"SQ-10'
7	8D8490	PIONEER/ISO TIP HLDR BNT
8	8D8500	HYD HOSE HOLDER PNTD BLK 91-
9	8HD6620	WINGTUBE 11'0" (36'SH+) 8"SQ
10	8K8000	STL 7K2045 3/8X3.5 PNTDLGHT
11	8K8010	TUBE LGHT BRCKT1.5SQ55.5"00-
12	8K8020	MOUNTNG BRCKT LIGHT 00-
13	8K8030A	MODULE AG ENHNCDW/BRAKE6PIN08-
14	8K8067	DUST CAP FOR 7PIN CONNECT00-
15	8K8070B	7 PIN MAIN HARNESS - 32'
16	8K8071	7 PIN MAIN HARNESS - 26'
17	8K8090B	LIGHT LED AMBER 2WR DTSCH 12-
18	8K8095B	LIGHT LED RED 3WIRE DTSCH 12-
19	8L0258	U-BOLT 5/16 X 1-1/2 X 2-1/2"SQ
20	8X0000	BOLT 1/4-20X3/4" FLLTHD GR5 YZ
21	8X0110	BOLT 3/4-10NC X 1-1/4" GR5 YZ
22	8X0170	SCREW 8 X .75" FLANGE HD
23	8X0203	NUT 3/8"-16NC SERFLANG GR2 YZ
24	8X0208	NUT 8-32 HEX YZ SER FLNG
25	8X0211	NUT 5/16"-18NC SERFLANG GR2 YZ
26	8X0223	NUT 1/4"-20NC SERFLANG GR2 YZ
27	8X0318	WASHER 3/4"(13/16"ID)FLAT YZ
28	8X0803	LIGHT MODULE BRACKET
29	8Z0805	REFLCTR REDORANGE ADHSVBK99-
30	8Z0810	REFLECTOR RED ADHSV-BACK 98-

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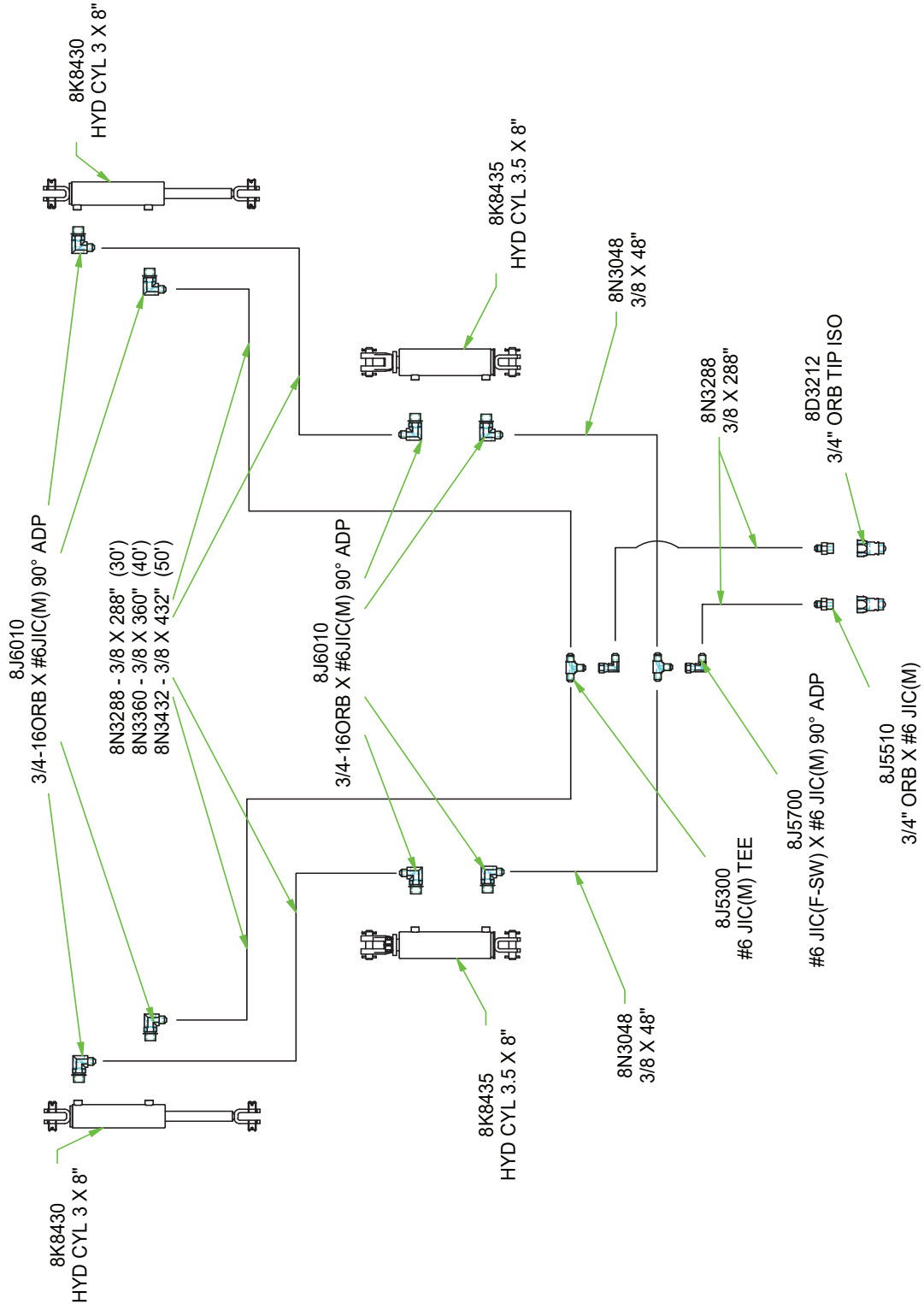
8Z2606



DETAIL A
SCALE .04/1

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DEPTH CONTROL HYD



11/12/2019 9W5022B / DEPTH CONTROL HYD

PN	DESCRIPTION	8D0720	HITCH PIECE CAST CAT.3CTD PNTD
8A1004	CLAMP HOSE 5" #72	8D1242	PIN
8A4048	NYLON TIE .18 X 11"	8D1660	PIN 1-3/4 X 12-1/4" HARDND
8A4052	NYLON TIE .30 X 15.25"	8D1702	SPRING PRESSURE ASSY-ADJUSTABL
8A4054	NYLON TIE .30 X 24" BLK	8D1703	SPRING PRSSR ASSY-CULTHRRW 18-
8C0432	HYD CYL 4 X 32" 3000PSI	8D1710	EYE BOLT SHORT 7/16" DIA
8C0532	HYD CYL 5 X 32" 3500PSI	8D1720	EYE BOLT LONG 1/2" DIA
8C1420	PIN 1 X 5-7/8" 22'HTCH PLTD	8D1730	SPRING PRESS 3/8" C-HRRW OPT
8C1452	PIN 1 X 6-1/2" CYL DBLWSHR 90-	8D1740	PIPE 1/2" SCH80- 2-1/8" W/WSHR
8C1470	PIN 1-1/4 X 14" PIVOT 90-	8D1750	PIPE 1/2" SCH80- 1-1/4" -07
8C1480	PIN 1-1/2 X 11-1/2" KNCKL 90-	8D1850	CABLE 1/2 X 227"E-E PLUS CHAIN
8C1702	U-BOLT 3/8 X 8 X 5" SQ	8D1860	CABLE 1/2 X 246"E-E PLUS CHAIN
8C1710	U-BOLT 3/8 X 8 X 9" SQ	8D1870	CABLE 1/2 X 262"E-E PLUS CHAIN
8C1760	U-BOLT 3/4 X 8-1/16 X 6" SQ	8D1880	CABLE 1/2 X 281"E-E PLUS CHAIN
8C1780	U-BOLT 7/8 X 8-1/16 X 10" SQ	8D1900	CABLE 1/2 X 324"E-E PLUS CHAIN
8C1800	KNUCKLE 88.25° OFFSET LEFT	8D1910	CABLE 1/2 X 341"E-E PLUS CHAIN
8C1800P	KNUCKLE 88.25° OFFST LFT BLK	8D2100	CHAIN 6 LINK CASE HARDND-12.5"
8C1802	KNUCKLE 88.25° OFFSET RIGHT	8D2210	CHAIN 8 LINK CASE HARDEND-17"
8C1802P	KNUCKLE 88.25° OFFST RGT BLK	8D2402	CHAIN 3 LINK .75"DIA. PLATED
8C1805P	KNUCKLE 90° OFFSET PAINTED	8D2460	SAFETY CHAIN 3/8" X 4'
8C1900	CLAMP 1/2" WIRE ROPE	8D2730	PIN 1 X 2-3/4" CABLE PLATED
8C1920	SPRING AFLDCABL 1.56"OD GLVNZD	8D3045	TIRE IF 280/70R15 134D TUBELESS
8C1940	SPRING AUTOFOLD ARM RAW	8D3046	IF280/70R15 134D ON 15X10X6WHL
8C1950	SPRING AFOLD LOCK 3"OD BLACK	8D3060	IF280/70R15 134D ON 15X8X8WHL
8C2200	22' HITCH	8D3212	MALE TIP 3/4"-16 ORB ISO
8C2212	CENTER 22' HTCH 8"SQ-10'	8D8490	PIONEER/ISO TIP HLDR BNT 97-
8C2246	TRNSPRT LOCK 1/2X3X32"CYL 90-	8D8502	HYD HOSE HOLDER H-DUTY BLK 14-
8C2260	BRCKT CABLE PULL 8"SQ WNG 90-	8D8537	JACK 7000# SIDE CRANK 15" LIFT
8C2261	BRCKT FRICTION 8"SQ WNG 18-	8D9102	PIN 1 X 4"
8C2280	JACK ATTCH BRCKT- WING 97-	8D9108	ROLL PIN 1/4 X 2" YLW ZNC
8C2314	OSCILLATING AXLE ASSY 2"RCVR18-	8D9110	HAIR PIN CLIP LARGE
8C2318	SPACR BRCKT HTCH AXL ATTCH 01-	8D9116	HYD CYL 2.5 X8"SP W/DPTH CNTRL
8C2424	TRNSPRT AXLE 2.5" RCVR 90°	8D9118	HYD CYL 2.5 X8" W/O DPTH CNTRL
8C2450	PIVOT W/PLATE 812TRNSPRT 90-	8H0232	FLAT 5/16 X 1.5 - 47.5" (5')
8C2620	PIVOT BRCKT A-FLD 22'HTCH	8H0260	FLAT 5/16 X 1.5 -18.5"CULTI
8C2630	ARM A-FLD LEFT 20&22'HTCH	8H0350	U-BOLT 1/2 X 2 X 3" RND
8C2635	ARM A-FLD RGHT 20&22'HTCH	8H0352	U-BOLT 1/2 X 2 X 3" RND W/NUTS
8C2650	LOCK ASSY AUTOFLD 22'HTCH 90-	8H0370	FLAT 5/16X1.5- 57" (5 BR)
8C2660	BUSHING A-FOLD LOCK- 5/16"	8H0390	PIPE 1/2" SCH 80- 1" (5 BR)
8C2690	FRONT ATTCH DUAL CABLE	8H0410	SIDE ANGLE LEFT 5 BAR
8C2700	A-FLD ARM LIFTER	8H0411	SIDE ANGLE RGHT 5 BAR
8C2710	A-FLD ARM LFTER BOLT PLATE	8H0641	1ST PIPE W/LEVER 5' 5 BAR
8C3100	WINGTUBE 10' X 8SQ 30'HP+4RNKSW	8H0642	2ND PIPE W/LEVER 5' 5 BAR
8C3150	WINGTUBE 15' X 8SQ 40'HP+4RNKSW	8H0643	3RD PIPE W/LEVER 5' 5 BAR
8C3200	WINGTUBE 20' X 8SQ 50'HP+4RNKSW	8H0644	4TH PIPE W/LEVER 5' 5 BAR
8D0312	CLEVIS FOR EYE-EYE CABLE 99-	8H0645	REAR PIPE W/LEVER 5' 5 BAR

8H0795	5 BAR 5' CULTI-HRRW SECTION	8N2135	1/4X 135"HYD HOSE #6FJX3000PSI
8H1110	HARROW TOOTH 3/8X 14"CULTIHRRW	8N2190	1/4X 190"HYD HOSE #6FJX3000PSI
8H1320	COLLAR ADJSTMNT DOWN PRES	8N2210	1/4X 210"HYD HOSE #6FJX3000PSI
8HD6620	WINGTUBE 11'0" (36'SH+) 8"SQ	8N2250	1/4X 250"HYD HOSE #6FJX3000PSI
8J5298	TEE #6 SWIVELNUTRUN(M+M+F-SW)	8N3018	3/8X 18"HYD HOSE #6FJX3000PSI
8J5300	TEE #6 JIC (MALE) 3X	8N3048	3/8X 48"HYD HOSE #6FJX3000PSI
8J5500	9/16"-18 ORB X #6 JIC(M) STR	8N3084	3/8X 84"HYD HOSE #6FJX3000PSI
8J5510	3/4"-16 ORB X #6 JIC(M) STR	8N3096	3/8X 96"HYD HOSE #6FJX3000PSI
8J5600	9/16"-18 ORB X #6 JIC(F-SW)STR	8N3124	3/8X 124"HYD HOSE #6FJX3000PSI
8J5680	3/4"-16 ORB X 3/4"-16ORB UNION	8N3252	3/8X 252"HYD HOSE #6FJX3000PSI
8J5700	#6 JIC(F-SW) X #6 JIC(M)90*ADP	8N3276	3/8X 276"HYD HOSE #6FJX3000PSI
8J6010	3/4"-16 ORB X #6 JIC(M)90*ADP	8N3288	3/8X 288" HYD HOSE #6FJX3000PSI
8J7000	BALL VALVE HYD 9/16"-18ORB(2X)	8N3312	3/8X 312"HYD HOSE #6FJX3000PSI
8J7116	3/4"-16 ORB(2X)1WAY 1/16"RESTR	8N3360	3/8X 360"HYD HOSE #6FJX3000PSI
8K1100	HUB&AXLE ASSY 614(GBGI-2"RCVR)	8N3432	3/8X 432"HYD HOSE #6FJX3000PSI
8K1105	HUB&AXLE ASSY HD812(2.5"RCVR)	8P3912	PIN 2 X 13.5" HARDEND GREASABL
8K1620	PIN 1-1/4 X 6-1/8" 84-	8R6060	STL 12GA X 1.75- 4" W/HLS 08-
8K1720	EYEBOLT 1.25DIAX1"EYE YZ 12-	8R6065	PILLOWBLOCK CAP W/ZERK CAST
8K5505	U-BOLT 3/4 X 2-1/8 X 4-1/4" SQ	8R6067	PILLOWBLOCK CAP CAST PNTD
8K7123	NUT WHEEL BOLT 5/8-18UNF 97-	8R6145	EYEBOLT 3/4"-10NC X 5/8"EYE
8K8000	STL 7K2045 3/8X3.5 PNTDLGHT09-	8R6808	SPLITSTEELBUSH 1.25X 1"ID-.75"
8K8010	TUBE LGHT BRCKT 1.5SQ PNTD 00-	8R6914	BOLT WHEEL 9/16"-18 UNF- 1.25"
8K8020	STL 12GA MNTNG BRCKT LIGHT 00-	8S0080	PIPE CLAMP, 1.90" ID PLATED
8K8030A	MODULE AG ENHNCDW/BRAKE6PIN08-	8S1076	QUICKLINK 1/4" YELLOW ZINC
8K8067	DUST CAP FOR 7PIN CONNECT00-	8S1120	SIGN SLOW MOVING VEHICLE(SMV)
8K8070B	7 PIN MAIN HARNESS - 32'	8S1126	MNT SPADE W/HRDWR SMV SIGN
8K8071	MAIN HRNSS 7PN 26' W/BRAKE 09-	8S2990	HYD HOSE CLAMP-LARGE-NYLON
8K8081	EXT HARNESS 42' DEUTSCH 16-	8S3095	CAPLUG FITS ISO HYD COUPLR 08-
8K8090B	LIGHT LED AMBER 2WR DTSCH 12-	8T3300	BOLT PIVOT CHSLTRP&WNGLFT YZ
8K8095B	LIGHT LED RED 3WIRE DTSCH 12-	8T4385	HOLDER MANUAL-PAK
8K8200	BRCKT SMV ATTCH 4-8"FRAME98-	8W1006	PLOWBOLT 3/8-16 X 1.5" GR5 PLN
8K8430	HYD CYL 3" X 8" RPHS 1.5" ROD	8W1007	NUT 3/8"-16NC HVY HEX GR2 PLN
8K8435	HYD CYL 3.5" X 8" RPHS 1.75" ROD	8W1011	S-TINE STANDARD
8K9102	PIN 1 X 4" CYL-FOR1/4"ROLL PIN	8W1012	S-TINE HI-CLEARANCE HU7088B
8L0258	U-BOLT 5/16 X 1-1/2 X 2-1/2"SQ	8W1014	CLAMP STANDARD S-TINE 18 -
8N0320	HOSE WRAP SM GRN A	8W1014H	CLAMP HI CLEARANCE S-TINE 18 -
8N0321	HOSE WRAP SM GRN B	8W1017	ROD END BEARING-F 3/4" F_THRD
8N0322	HOSE WRAP SM BLU A	8W1018	PIVOT PIN 1.5" W_3/4"HL YZ 18-
8N0323	HOSE WRAP SM BLU B	8W1019	RND 3/4 X 16 UNF - 6.75" YZ
8N0324	HOSE WRAP SM BRN A	8W1021	SHOVEL 1/4 X 4" STINE V-STYLE
8N0325	HOSE WRAP SM BRN B	8W1204	U-BOLT 1/2 X 3 X 3" SQ
8N2024	1/4X 24"HYD HOSE #6FJX3000PSI	8W1227	TUBE SQ 2 X 4T -98" -P 18-
8N2050	1/4X 50"HYD HOSE #6FJX3000PSI	8W1229	TUBE SQ 2 X 4T -108"-P 18-
8N2076	1/4 X 76" HYD HOSE #6FJX3000PSI	8W1233	TUBE SQ 2 X 4T -118" -P 18-
8N2110	1/4X 110"HYD HOSE #6FJX3000PSI	8W1243	TUBE SQ 2 X 4T -158" -P 18-
8N2120	1/4 X 120" HYD HOSE #6FJX3000PSI	8W1248	TUBE SQ 2 X 4T -168"-P 18-

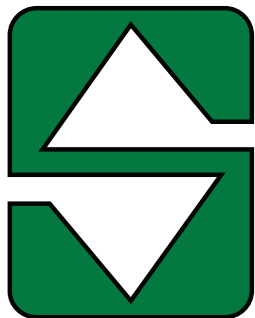
8W1251	TUBE SQ 2 X 4T -178" -P 18-	8X0034	BOLT 7/16X1.75 W/1"THD GR5 ZDI
8W1264	FLAT 3/8X1.5- 50" 4RNK SW 91-	8X0036	BOLT 7/16-14NC X 2" GR5 ZDI
8W1271P	LEVER 2"SQ TUBE SW-P 18-	8X0044	BOLT 7/16-14NC X 3-1/2"GR5 YZ
8W1279	STL 1/2X54.5" WDR EXT ARM-R 18-	8X0048	CRG 7/16-14NC X 3-1/2" GR5 YZ
8W1281P	CYL ATTCH LVR ROD SW -P 18-	8X0063	BOLT 1/2-13NC X 1-1/2" GR5 YZ
8W1282P	CYL ATTCH BOLT PLATE PAINTED	8X0066	BOLT 1/2-13NC X 1-3/4" GR5 ZDI
8W1300	BUSHING 2" SQ TUBE/S-TINE	8X0067	BOLT 1/2-13NC X 2-1/4" GR5 YZ
8W1357	HEX HEAD PLUG 9/16"-18 ORB	8X0068	BOLT 1/2-13NC X 2-1/2" GR5 YZ
8W1360	MANIFOLD BLOCK ALUMINUM 10PORT	8X0069	BOLT 1/2-13NC X 3" GR5 YZ
8W1660	STL 1" - 24.25 X 15.5"	8X0070	BOLT 1/2-13NC X 3-1/4" GR5 YZ
8W1750	CABLE GUIDE BRACKET	8X0072	BOLT 1/2-13NC X 3-3/4" GR5 YZ
8W1800	CYL ATTCH WNG 7W1610 W/HLS	8X0074	BOLT 1/2-13NC X 4-1/2" GR5 YZ
8W1802	STL 3/4" - 10 X 7.25"	8X0079	BOLT 1/2-13X4-1/8"SHOULDR GR2ZDI
8W1806	SPACER TUBE 1.25X.76- 1-1/16"	8X0092	BOLT 5/8-11NC X 2-3/4" GR5 YZ
8W1807	TUBE 1.25ODX3/4"ID 7/8"SPCR-P	8X0095	BOLT 5/8-11NC X 5" GR5 ZDI
8W1817H	PIVOT W/SPNDL HLDR WNG HD LFT	8X0110	BOLT 3/4-10NC X 1-1/4" GR5 YZ
8W1818H	PIVOT W/SPNDL HLDR WNG HD RGT	8X0112	BOLT 3/4-10NC X 2-1/4" GR5 YZ
8W1820	PVT INNER WING W/ROLLRS LEFT	8X0114	BOLT 3/4-10NC X 3" GR5 YZ
8W1822	PVT INNER WING W/ROLLRS RGHT	8X0115	BOLT 3/4-10NC X 3-1/2" GR5 YZ
8W1826	PVT INNER WING W/ROLLRS LEFT	8X0118	BOLT 3/4-10NC X 4" GR5 ZDI
8W1830H	PVT PLATE WNG-1" 7W1650H PNTD	8X0121	BOLT 3/4-10NC X 6-1/2" GR5 YZ
8W1840	PIVOT W/SPNDL HLDR WNG LFT SW	8X0122	BOLT 3/4-10NC X 4-1/2" GR5 YZ
8W1842	PIVOT W/SPNDL HLDR WNG RGHT SW	8X0122	BOLT 3/4-10NC X 4-1/2" GR5 YZ
8W1845	STL 1" - 17.75 X 4.75"	8X0125	BOLT 3/4-10NC X 10" GR5 YZ
8W1850	HITCH PIVOT ASSY 22' HDA	8X0138A	BOLT 1-8NC X 6" FULL THRD
8W1859P	CROSS TUBE BLT ON P 18-	8X0140	BOLT 1-8NCX7" W/1.5"THDGR5 YZ
8W1860	CYL ATTCH HTCH UBLT LEFT	8X0142	BOLT 1-8NC X 3.5" GR5 YZ
8W1862	CYL ATTCH HTCH UBLT RGHT	8X0143	BOLT 1-8NC X 5" GR5 YZ
8W1884	L UHMW 2.5X2.5X3/8- 13" W/HLS	8X0150	BOLT 1-8NC X 20" GR5 YZ
8W1886	FLAT 5/16X 1.5 - 11-3/8"	8X0170	SCREW 8 X .75" FLANGE HD
8W1890	ROLLERTUBE 1.5 X 1"ID- 1.5" 94-	8X0202	NUT 3/8"-16NC NY-LOCK GR2 YZ
8W1895	NYLATRON 1"ODX .76"ID- 1-1/2"	8X0203	NUT 3/8"-16NC SERFLANG GR2 YZ
8W8001	WEEDER ARM BOLT PLATE	8X0208	NUT 8-32 HEX YZ SER FLNG
8W8002	WEEDER ARM	8X0211	NUT 5/16"-18NC SERFLANG GR2 YZ
8W8003	TINE ADJUST CYL ATTACH	8X0223	NUT 1/4"-20NC SERFLANG GR2 YZ
8W8004	SPINDLE HOLDER 2"	8X0232	NUT 7/16"-14NC HEX GR2 ZDI
8W8005	HYD CYL 2.5 X 4"	8X0233	NUT 7/16"-14NC CNTRLOCK
8W8007	WINGTUBE15' X 8SQ 60'&70'	8X0234	NUT 7/16"-14NC NY-LOCK GR2 ZDI
8W8008	WINGTUBE 15' PRT2 (70')	8X0240	NUT 1/2"-13NC HEX GR2 YZ
8W8009	STL 1" 14.5X2.25"	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ
8W8010	HINGED WING PIN	8X0246	NUT 1/2"-13NC SERFLANG GR2 YZ
8W8015	WINGTUBE 10' PRT2 (60')	8X0250	NUT 5/8"-11NC HEX GR2 YZ
8X0000	BOLT 1/4-20X3/4" FLLTHD GR5 YZ	8X0253	NUT 5/8"-11NC NY-LOCK GR2 YZ
8X0008	BOLT 3/8-16NC X 2" GR5 YZ	8X0259	NUT JAM 3/4"-10NC GR2 ZDI
8X0021B	BOLT 5/16-18NC X 1-1/4"GR5 YZ	8X0260	NUT 3/4"-10NC HEX GR2 YZ
8X0033	BOLT 7/16X1.25 5/8"THD GR5 YZ	8X0261	NUT 3/4"-10NC NY-LOCK GR2 YZ

8X0265	NUT 3/4"-10NC CNTRLOCK GR2 YZ	8Z0092	"WARNING" HITCH DECAL
8X0268	NUT 7/8"-9NC HEX GR2 YZ	8Z0093	"WARNING" AUTO-FOLD DECAL
8X0277	NUT 1"-8NC JAM GR2 YZ	8Z0100	MADE IN THE USA DECAL
8X0280	NUT 1"-8NC HEX GR2 YZ	8Z0101	2" SUMMERS DECAL
8X0281	NUT 1"-8NC NY-LOCK GR2 YZ	8Z0102	DECAL "IMPORTANT" REAR JACK(S)
8X0282	NUT 1"-14TPI TOPLOCK GR 8 Z	8Z0204	5.5" SUMMERS DECAL
8X0284	NUT 1-1/4"-7NC HEX GR2 YZ	8Z0232	"WARNING" AUTO-FOLD DECAL
8X0286	NUT 1-1/2"-6NC JAM GR2 YZ	8Z0276	GENERAL MACHINE CAUTION DECAL
8X0302	LOCKWASHER 7/16" YLW ZNC	8Z0342	INSTALL CYL LOCKS DECAL
8X0303	LOCKWASHER 1/2" YLW ZNC	8Z0344	DECAL WING DANGER
8X0304	LOCKWASHER 5/8" YLW ZNC	8Z0346	ELECTROCUTION-TILLAGE EQUIP. DECAL
8X0306	LOCKWASHER 3/4" YLW ZNC	8Z0800	REFLECTOR AMBER ADHSVBCK98-
8X0307	LOCKWASHER 7/8" YLW ZNC	8Z0805	REFLCTR REDORANGE ADHSVBK99-
8X0309	LOCKWASHER 1" YLW ZNK	8Z0810	REFLECTOR RED ADHSV-BACK 98-
8X0311	LOCKWASHER 1-1/4" YLW ZNC	8Z1000	MANUAL-PAK 3DIA X 11.75" 09-
8X0316	WASHER 1" SAE FLAT YZ	8Z1101	OPER/SETUP MAN22'HTCH SH+HP SW
8X0318	WASHER 3/4"(13/16"ID)FLAT YZ		
8X0320	WASHER 3/8" (7/16" ID)FLAT ZDI		
8X0327	WASHER 1-1/4" SAE FLAT YZ		
8X0330	WASHER 17/32"ID X 1.25"OD YZ		
8X0330B	WASHER 17/32"ID X 1.25"OD BLACK		
8X0362	WASHER 2.03IDX2-7/8ODX 9GA PLN		
8X0366	WASHER 2.03IDX2-7/8ODX 1/4"PLN		
8X0400	HAIR PIN CLIP 1/8 X 1-15/16"		
8X0414	COTTER PIN 1/4 X 2" YZ		
8X0415	COTTER PIN 3/16 X 1-1/2"		
8X0418	COTTER PIN 5/16 X 2-1/2" YZ		
8X0420	CLEVIS PIN 7/16 X 1-3/4" ZDI		
8X0492	LYNCH PIN 3/16 X 1-1/4" YZ		
8X0605	SET SCRW SQ HD 7/16-14X 1" ZDI		
8X0665	SET SCRW SQ HD 3/4-10X4.5" YZ		
8X0721	ZERK 5/16"-24 NF STR YZ		
8X0750	PIN XEDNI16P8 BOSTR3/220MA RED		
8X0803	STL .25 MODULE BRACKET 16-		
8X0960	CAN SPRAY PAINT SUMMERS GREEN		
8X0962	CAN SPRAY PAINT SUMMERS BLACK		
8X1120	CRG 3/8-16NC X 2" GR2 ZN		
8X1130	CRG 3/8-16NC X 3" GR2 ZN		
8X1135	CRG 3/8-16NC X 3-1/2" GR2 ZN		
8Y1400	KIT DCL 30-70' SW4350		
8Z0018	BAG ZIP LOCK 10 X 12" 4MIL		
8Z0055	PLATE SERIAL NUMBER UNIVRSL		
8Z0075	TRANSPORT LOCK DECAL		

History of Summers Manufacturing Co., Inc.

- 1965 – Summers Manufacturing is founded by Harley Summers, who purchases patent rights for Goebel truck and pickup hoists from the Goebel Brothers of Lehr, ND. These hoists, produced in Harley Summers' blacksmith shop the first year, were distributed nationwide by a Cincinnati, Ohio, dealer. With increasing sales, the company soon outgrows the small shop. Summers wins the Herman harrow contract, beginning the company's Herman culti-harrow line. Summers builds a 7,200 square-foot factory in Maddock to meet the demand for truck and pickup hoists, as well as Herman harrows.
- 1969 – Firm incorporates and becomes officially known as Summers Manufacturing Company, Inc.
- 1970 – Summers purchases rights to manufacture/market the Herman Harrow.
- 1973 – Company builds new 20,000 square-foot plant and offices in Maddock, adding a 20,000 square-foot assembly plant in the fall of 1975 (completed in January 1976), bringing total square footage of Maddock factories to 47,000.
- 1977 – Summers introduces the Agri-sprayer, used in conjunction with the Herman culti-harrow to incorporate herbicides and liquid fertilizer.
- 1980 – Company purchases manufacturing and distributing rights to Crown rockpickers from Crown Manufacturers of Regina, Saskatchewan. This forces another expansion project – a 26,000 square foot factory on a 24 acre site in Devils Lake, ND Industrial Park.
- 1981 – Company establishes a branch facility in Regina, Saskatchewan.
- 1982 – Devils Lake plant begins operations in January, manufacturing supersprayers and rockpickers. The Maddock factory begins producing the Superweeder, a combination cultivator and harrow.
- 1983 – Summers buys manufacturing and distributing rights to the Fargo Field Sprayer line from Mid America Steel (formerly Fargo Foundry), Fargo. This field sprayer line is manufactured at the Devils Lake plant. Harley Summers is selected North Dakota's small-businessman of the year by the Small Business Administration.
- 1984 – Herman Diamond Disk, a disk harrow made in a diamond shape to reduce blade breakage from rocks, comes off the assembly line.
- 1985 – Summers signs a contract with Melroe Company of Bismarck to obtain exclusive manufacturing rights to the Melroe harrow line.
- 1989 – Summers purchases TorMaster Company of Hordean, Manitoba, giving the company a line of rolling packer equipment, comprised of harrow packers and hydraulic fold coil packers.
- 1992 – A new engineering office/parts department is added to the Devils Lake factory.
- 1993 – Company adds two new products: a pickup-mounted sprayer with booms of 80 and 90 feet, and the Summers Superharrow, an extra-heavy-duty residue-management tool designed for the minimum and no-till farmer.
- 1994 – a 50 by 125 foot addition to the Maddock factory is completed. Construction begins on a 24,576 square-foot addition to the Devils Lake factory, which enables the company to increase production of truck-mounted and pull-type supersprayers and rockpickers.
- 1996 – 1500 square foot office area added to the Maddock plant. Company introduces Chisel Plow with floating hitch and 700# trip assembly. Introduced 2-point sprayer.
- 1997 – 16,800 square foot warehouse in Maddock purchased from local business.
- 1999 – Company introduces the Ultimate suspended boom trailer sprayer with hydraulic folding booms. Additional sizes added to the Chisel Plow line, now ranging from 28' to 54'.
- 2000 – Company introduces the Supercoulter, the innovative solution for excessive field residue management on no-till, minimum-till, and conventional-till farming operations.
- 2001 – Cold storage building completed at Devils Lake. Company extends boom lengths up to 110 feet on the Ultimate Supersprayer.
- 2002 – Company adds a warehouse and service man in Aberdeen, SD.
- 2003 – Company introduces the Ultimate NT Supersprayer featuring a bolt on axle for easier adjustment, and a new family of tanks that feature a drainable sump and a common width dimension.
- 2004 – A 124 ft. x 310 ft. addition is added onto the current Devils Lake plant.
- 2005 – The Summers Superroller is added to the "Field Tested Tough" product line. Additional sizes of 56', 58' and 60' are added to the Superchisel line. Ultimate-Ultra NT Supersprayer introduced featuring 120' & 133' booms.
- 2006 – The Summers Coulter-Chisel, Rolling Choppers and 30' Superroller were included in product line.
- 2007 – 62' & 84' 5 Section Landrollers and a 20' Coulter-Chisel were introduced.
- 2008 – Disk-Chisels, ranging from 16' to 40' widths, are added to product line.
- 2009 – M105 and M108 Mounted Harrows added to selection of Mounted Attachments. SuperHarrow 2650, 50' SuperCoulter, Hydraulic Fold Rolling Chopper and 36" diameter Landrollers introduced.
- 2010 – Rolling Basket and 47' Diamond Disk added to product line. A 124 ft. x 310 ft. addition to Devils Lake factory built for a state of the art paint system.
- 2011 – Additional Supercoulter sizes were added along with larger tires for tillage implements. Ultimate and Ultra Supersprayers received an additional tank size of 1650 gallons. Front Caster Wheel option was made available for chisel implements.
- 2012 – 41', 46' & 53' Trail Type Landroller added to product line. Additional Superchisel sizes of 16' & 20' were added.
- 2013 – DT9530 added to product line. Internal Scraper in Rolling Baskets introduced. Finishing Coulter Gang becomes standard on the Diamond Disk and 2510 DT. Corporate offices opened at Devils Lake plant. New building and location for the Aberdeen warehouse.
- 2014 – Introduced the VRT2530 (Variable Rate Tillage).
- 2015 – Introduced the VT Flex Applicator and Spray Fill Xpress.
- 2016 – Introduced the 8-Bar Superharrow.
- 2018 – Introduced the VRT Renegade.

Summers distributes on a wholesale level to dealers and distributors throughout markets in North Dakota, South Dakota, Minnesota, Montana, Iowa, Washington, Idaho, Oregon, Utah, Colorado, Kansas, Nebraska, Oklahoma, Texas, Manitoba, Saskatchewan, Alberta, British Columbia, Kazakhstan, Russia and Australia, making it an international company.



SUMMERS[®]

... Field Tested TOUGH!



Tillage



Rock Picker



Land Rollers/Packers



Cultivators/Harrows



Mounted Attachments



Sprayers

