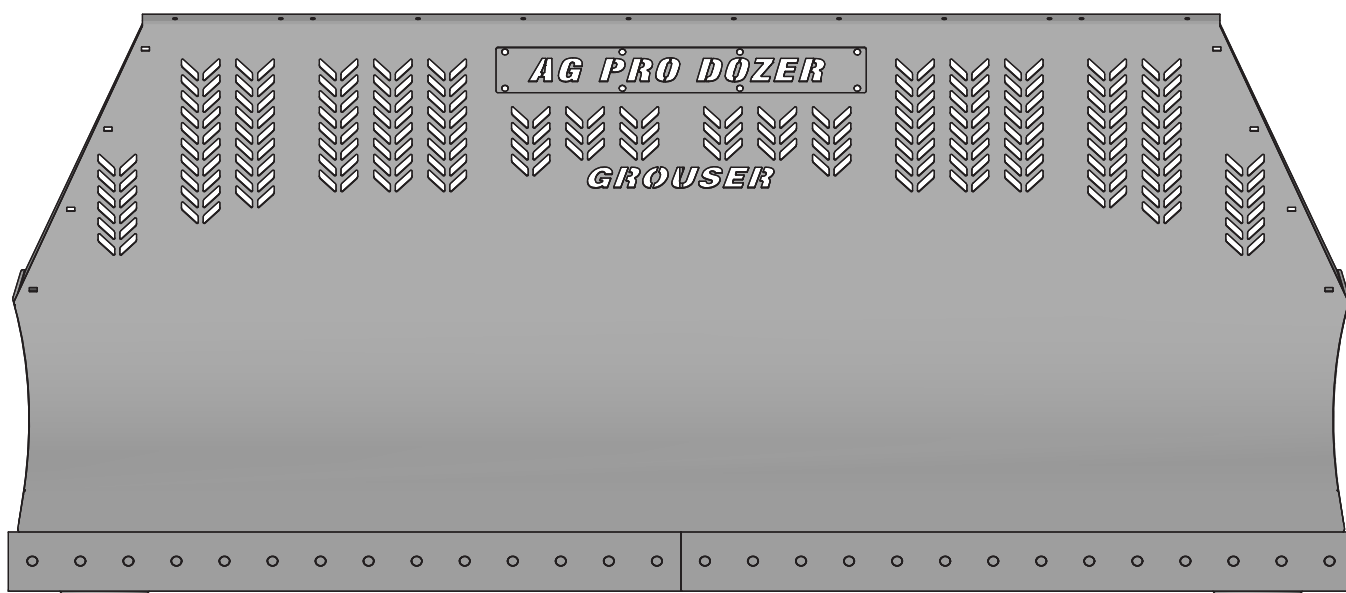




Ag Pro Silage Special Owner's Manual & Parts Book



Grouser Products

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Purchase Date

Serial Number

Model Number

Tractor Model

Dealer

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Thank you for your recent purchase of a Grouser Ag Pro Silage Special Dozer. Welcome to the family of satisfied Grouser blade owners. Grouser Products is committed to offering quality products to help professionals in their daily jobs. We are also committed to providing you the highest level of customer satisfaction possible. Again, thank you for your patronage. We look forward to serving you.

This manual contains information concerning the operation, adjustment, safety and maintenance of the Ag Pro Silage Special Dozer. You have purchased a dependable, long lasting piece of equipment. You can expect to receive long lasting performance and long service built into our products with proper care and operation. Please have all operators read and understand this manual carefully. Keep the manual available for reference. If, for any reason, you have questions or comments, we would be happy to hear from you. Call our number, 701-282-7710, or send us an e-mail at info@grouser.com. You can expect us to respond to your e-mail in a timely manner.

HAHT	Hydraulic Angle - Hydraulic Tilt
HANT	Hydraulic Angle - No Tilt
NAHT	No Angle - Hydraulic Tilt
NANT	No Angle - No Tilt

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read and take the following precautions before operating this equipment. In addition, please follow all safety and operational instructions of your tractor manufacturer.

The Ag Pro Silage Special Dozer:

1. The Ag Pro Silage Special Dozer should be operated only by those who are responsible and instructed to do so.
2. Read the owner’s manual carefully before using this equipment. Lack of operating knowledge can lead to accidents.
3. Keep the Ag Pro Silage Special Dozer maintained in reliable and satisfactory condition to ensure your safety.
4. Make sure the area is clear of people before moving any equipment.
5. Do not modify or permit anyone else to modify or alter the equipment and its components without first consulting Grouser Products.
6. Lower the blade to the ground when not in use.

Servicing the Ag Pro Silage Special Dozer:

1. Read and follow all safety instructions provided by the tractor manufacturer.
2. Always use proper personal safety gear when performing maintenance on equipment.
3. Before servicing, relieve hydraulic pressure, stop engine and fully engage parking brake.
4. Escaping hydraulic fluid under pressure can penetrate skin causing serious injury. If fluid is injected into skin, obtain medical attention immediately.
 - DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.
 - Stop the engine and relieve pressure before connecting or disconnecting lines.
 - Tighten all connections before starting the engine or pressurizing lines.

Storing the Ag Pro Silage Special:

1. Thoroughly clean the Ag Pro Silage Special Dozer before storage. Use paint where necessary to prevent rust.
2. Check the Ag Pro Silage Special Dozer for worn or damaged parts. Install new parts as required.
3. Lubricate all pins and joints.

Tighten all bolts to the values listed below unless otherwise noted. Refer to the parts lists for proper length and grade of the bolts.

Size	Torque - Dry (ft-lbs)			
	SAE Grade 5		SAE Grade 8	
	UNC	UNF	UNC	UNF
5/16	17	19	24	27
3/8	30	35	45	50
7/16	50	55	70	80
1/2	75	85	110	120
9/16	110	120	150	170
5/8	150	170	210	240
3/4	260	300	380	420
7/8	430	470	600	670
1	640	720	910	1020

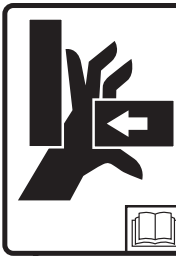
Size	Torque - Dry (ft-lbs)
	Grade 10.9
M18 x 2.50	284
M20 x 2.50	401
M22 x 2.50	547
M24 x 3.00	694

Unstrap and remove the lift frame, hoses, top arms, and any boxes of hardware from the undercarriage. If any components are missing, call Grouser.

Install undercarriage per the tractor specific mounting instructions.

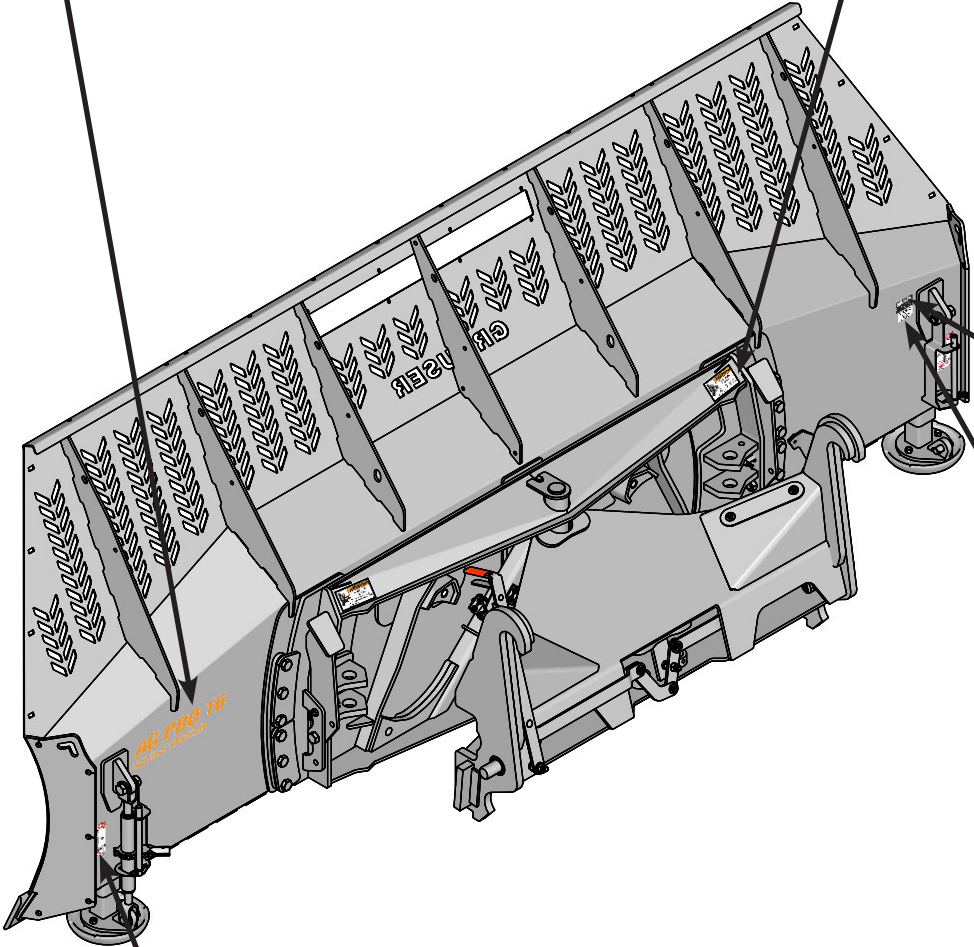
AG PRO 16

SILAGE SPECIAL PN: 27-14845 PN: 27-14842-XX
PN: 27-40956 XX = Length of Blade



WARNING
PINCH AREA
Keep away
Failure to comply could result in death or serious injury.
27-2409

PN: 27-2409
Left and Right Side



WARNING: This product can expose you to chemicals including lead and lead compounds, mineral oils, and phthalates which are known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov 27-40962

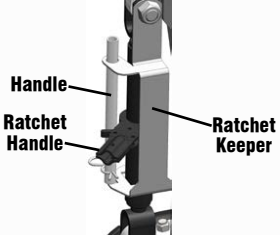
PN: 27-40962

G GROUSER

PN: 27-9504

STOP

PROPER RATCHET STORAGE



Ratchet Handle Must Be Secured Between The Ratchet Keeper And The Handle When Not In Use
FAILURE TO FOLLOW MAY RESULT IN DAMAGE
Parts May Vary Slightly In Appearance From Your Product
27-40917

PN: 27-40917
Left and Right Side

WARNING

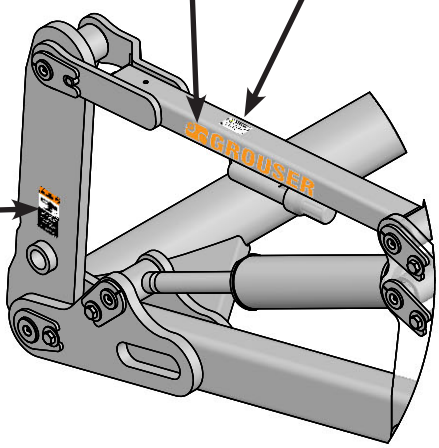


PINCH POINT

AVOID INJURY FROM FRAME PIVOT AND STOPS.

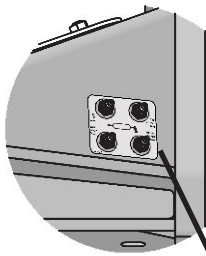
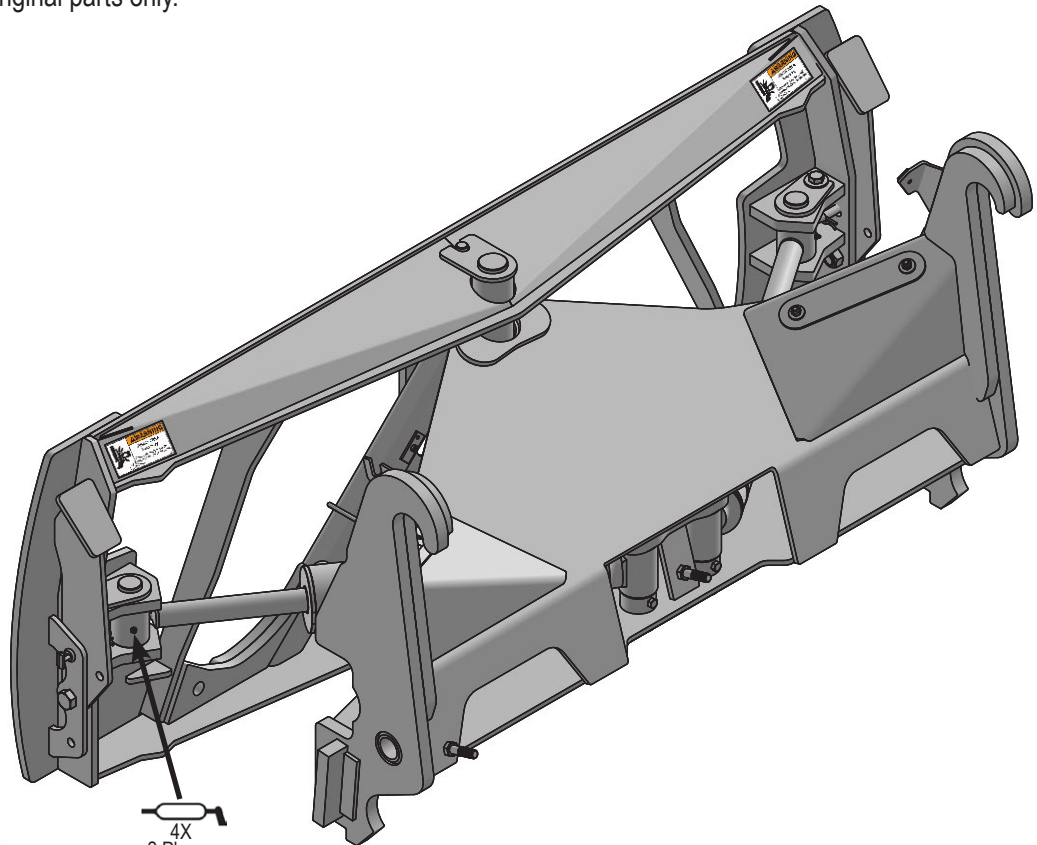
• Keep hands and feet away.
27-9503

PN: 27-9503
Left and Right Side

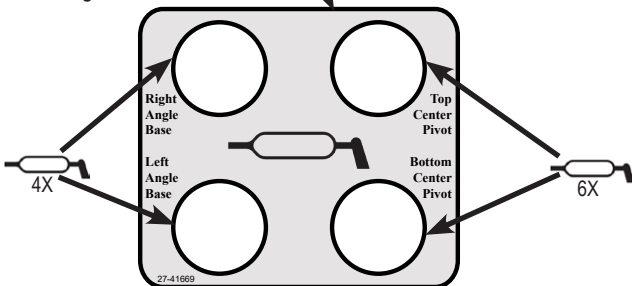


Due to the harsh environment this equipment operates in, the following tasks should be performed every 10 hours or less.

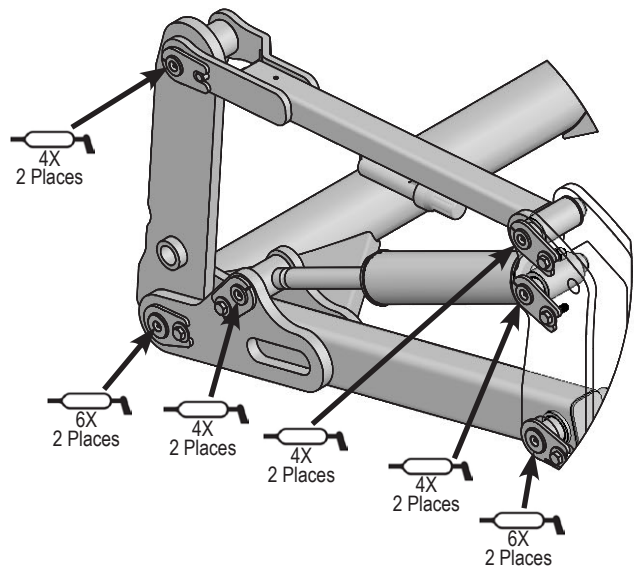
- Inspect all equipment before operation for existing or potential damage.
- Lubricate all joints with high quality grease. See below for grease locations.
- Inspect all bolts, and tighten any loose bolts to torque specifications on page 3.
- Check replaceable cutting edge for wear ensuring there is enough material to prevent permanent damage to the Ag Pro Silage Special Dozer. For cutting edge information, see pages 34 .
- Check hydraulic cylinders and hoses for damage or leaks. For replacement parts, see hydraulic pages 6, 8-9 and 20-29.
- Make sure all non-rotating pins are secured properly.
- Inspect all decals and order replacement decals from your dealer if any are damaged or worn.
- For multi-coupler maintenance, see pages 36-37.
- Inspect all tilt-ways for wear. See page 14 for tilt plate adjustment.
- Replace parts with original parts only.



View From Front of Angle Frame

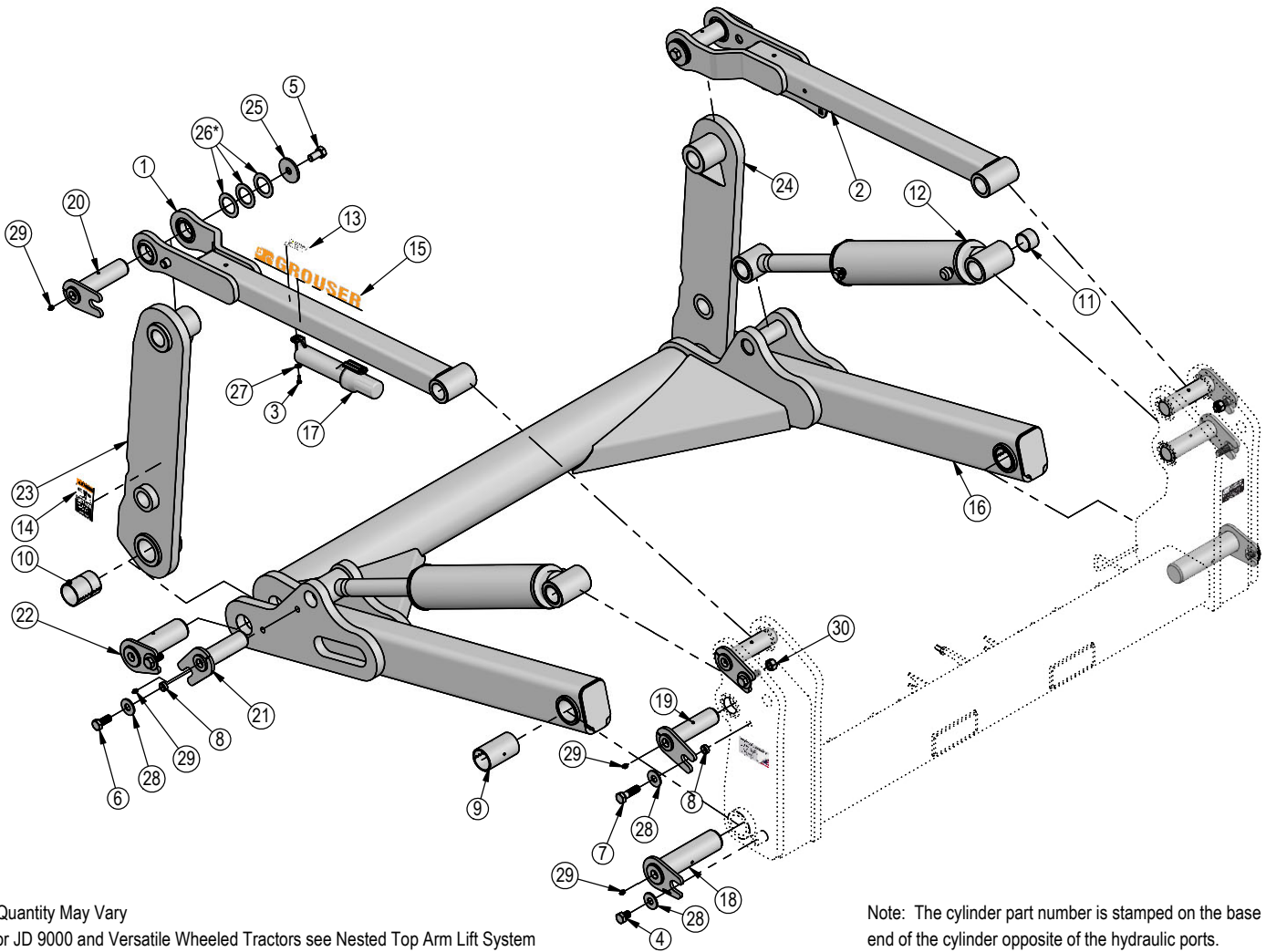


PN: 27-41669



Some assembly of Lift System components is necessary. Follow the steps listed below. See diagram below for the correct hardware and orientation of parts.

1. Remove all pins and fasteners on each side of the undercarriage and set aside for later installation.
2. Position the lift frame between the two plates on both sides of the undercarriage and align to the bottom holes.
3. Insert pins and hardware to attach the lift frame, the base end of the lift cylinders, and the top arms to the undercarriage.
4. Insert pins and hardware to attach the male quick attaches to the lift frame, and to the top arms. Use 2" washers as shims to keep top arm pins tight and in place. Only use as many as needed until pin is tight while still allowing top arm to rotate.
5. Torque all fasteners according to the specifications on Page 3.



* Quantity May Vary

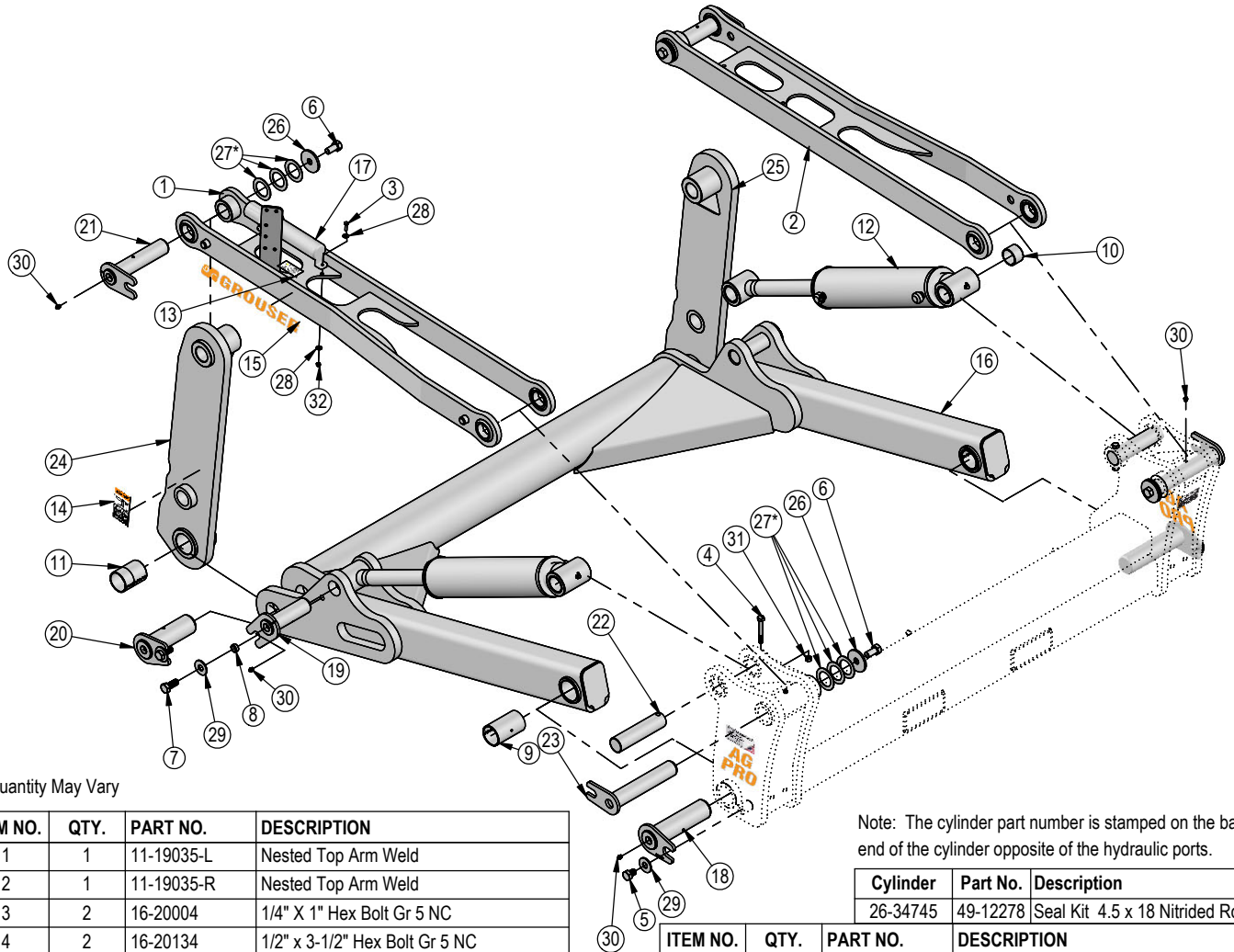
For JD 9000 and Versatile Wheeled Tractors see Nested Top Arm Lift System

Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	11-19975-L	Top Arm Weld
2	1	11-19975-R	Top Arm Weld
3	2	16-20002	1/4" x 3/4" Hex Bolt Gr 5 NC
4	2	16-20214	3/4" x 1" Hex Bolt Gr 5 NC
5	2	16-20216	3/4" x 1-1/2" Hex Bolt Gr 5 NC
6	4	16-20217	3/4" x 1-3/4" Hex Bolt Gr 5 NC
7	4	16-20220	3/4" x 2-1/2" Hex Bolt Gr 5 NC
8	8	19-13515	Spacer, NR Pin
9	2	19-13525	2.75 x 2.50 x 4.75 Spring Bushing
10	2	19-18089	2.75 x 2.50 x 3.75 Spring Bushing
11	8	19-16695	2.25 x 2.00 x 1.50 Spring Bushing
12	2	26-34745	4.5 x 18 Hydraulic Cylinder
13	1	27-40962	Warning Prop 65 Decal
14	2	27-9503	Pinch Decal (Foot)
15	2	27-9504	Grouser Horizontal Decal
16	1	32-42335	Lift Frame

Cylinder	Part No.	Description
26-34745	49-12278	Seal Kit 4.5 x 18 Nitrided Rod

ITEM NO.	QTY.	PART NO.	DESCRIPTION
17	1	34-14961	Manual Canister Small
18	2	43-14725	Lift Frame / UC Pin
19	4	43-18120	Top Pin Weld
20	2	43-18127	Top Arm Pin Weld
21	2	43-18175	Lift Cyl Pin Weld
22	2	43-18635	Ag Pro Plus QA Pin
23	1	45-18110-L	Male Quick Attach, Ag Pro S
24	1	45-18130-R	Male Quick Attach, Ag Pro S
25	2	57-1530	3" OD X .75 ID X .25" HD Flat Washer
26*	6	57-1811	2" Washer
27	2	57-20740	1/4" Flat Washer
28	10	57-20747	3/4" Flat Washer
29	12	58-9369	Straight 1/8" NPT Grease Zerk
30	2	70-20607	3/4" Center Lock Hex Nut Gr 2 NC



* Quantity May Vary

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	11-19035-L	Nested Top Arm Weld
2	1	11-19035-R	Nested Top Arm Weld
3	2	16-20004	1/4" X 1" Hex Bolt Gr 5 NC
4	2	16-20134	1/2" x 3-1/2" Hex Bolt Gr 5 NC
5	2	16-20214	3/4" x 1" Hex Bolt Gr 5 NC
6	4	16-20216	3/4" x 1-1/2" Hex Bolt Gr 5 NC
7	4	16-20217	3/4" x 1-3/4" Hex Bolt Gr 5 NC
8	4	19-13515	Spacer, NR Pin
9	2	19-13525	2.75 x 2.50 x 4.75 Spring Bushing
10	8	19-16695	2.25 x 2.00 x 1.50 Spring Bushing
11	2	19-18089	2.75 x 2.50 x 3.75 Spring Bushing
12	2	26-34753	4.5 x 18 Hydraulic Cylinder With 90° Zerk
13	1	27-40962	Warning Prop 65 Decal
14	2	27-9503	Pinch Decal (Foot)
15	2	27-9504	Grouser Horizontal Decal
16	1	32-42335	Lift Frame
17	1	34-14961	Manual Canister Small
18	2	43-14725	Lift Frame / UC Pin

Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

Cylinder	Part No.	Description
26-34745	49-12278	Seal Kit 4.5 x 18 Nitrided Rod

ITEM NO.	QTY.	PART NO.	DESCRIPTION
19	2	43-18175	Lift Cyl Pin Weld
20	2	43-18635	Ag Pro Plus QA Pin
21	2	43-19040	Top Arm - Quick Attach Pin Weld
22	2	43-19041	Pin, Lift Cylinder
23	2	43-19043	Top Arm - Undercarriage Pin Weld
24	1	45-18110-L	Male Quick Attach, Ag Pro S
25	1	45-18110-R	Male Quick Attach, Ag Pro S
26	4	57-1530	3" OD X .75 ID X .25" HD Flat Washer
27*	12	57-1811	2" Washer
28	4	57-20740	1/4" Flat Washer
29	6	57-20747	3/4" Flat Washer
30	10	58-9369	Straight 1/8" NPT Grease Zerk
31	2	70-20604	1/2" Center Lock Hex Nut
32	2	70-20610	1/4" Nyloc Hex Nut Gr 5 NC

ITEM NO.	PART NO.	HAHT QTY.	HANT QTY.	NAHT QTY.	NANT QTY.	DESCRIPTION
1	16-20124	2	2	2	-	1/2" x 1" Hex Bolt Gr 5 NC
2	16-812525	2	2	2	-	8mm x 1.25mm x 25mm Metric Hex Bolt Gr 10.9
3	18-19995-L	1	1	1	-	Multi-Coupler Mount
4	25-19864	1	-	-	-	Multi-Coupling Plate - 4 Port Fixed
5	25-19867	1	-	-	-	Multi-Coupling Plate - 4 Port - Cap
6*	25-19868	-	1	1	-	Multi-Coupling Plate - 2 Port - Fixed
7*	25-19871	-	1	1	-	Multi-Coupling Plate - 2 Port - Cap
8	25-19870	4	2	2	-	Multi-Coupling Plate - Male Coupler
9	25-40407	4	2	2	-	Multi-Coupling Plate - Snap Ring
10	25-34342	6	4	4	2	Tappet Quick Coupler Male - Poppet Style
11	25-3453	2	-	2	-	Pioneer Dust Cap Tilt (Green)
12	25-3455	2	2	-	-	Pioneer Dust Cap Angle (Red)
13	25-3457	2	2	2	2	Pioneer Dust Cap Lift (Orange)
14	31-11699-10-8	2	2	2	2	JIC Union
15	31-15199-8-8	4	2	2	-	JIC Union Elbow 90°
16	31-34030	2	2	2	2	Bulkhead Run Tee JIC
17	31-34040	2	2	2	2	Straight JIC x O-Ring
18A,B	31-34051	6	4	4	2	Straight Thread Elbow 90° JIC x O-Ring
18C	31-6802-08-10	6	4	4	2	Straight Thread Elbow 45° JIC x O-Ring
19	31-34150	4	2	2	-	Straight Thread Elbow 45° JIC x O-Ring
20	31-6400-10-08	2	2	2	2	Straight JIC x O-Ring

* Part Not Shown

Hoses Not Drawn to Scale

Item A for CNH, JD 9R, JD 9030

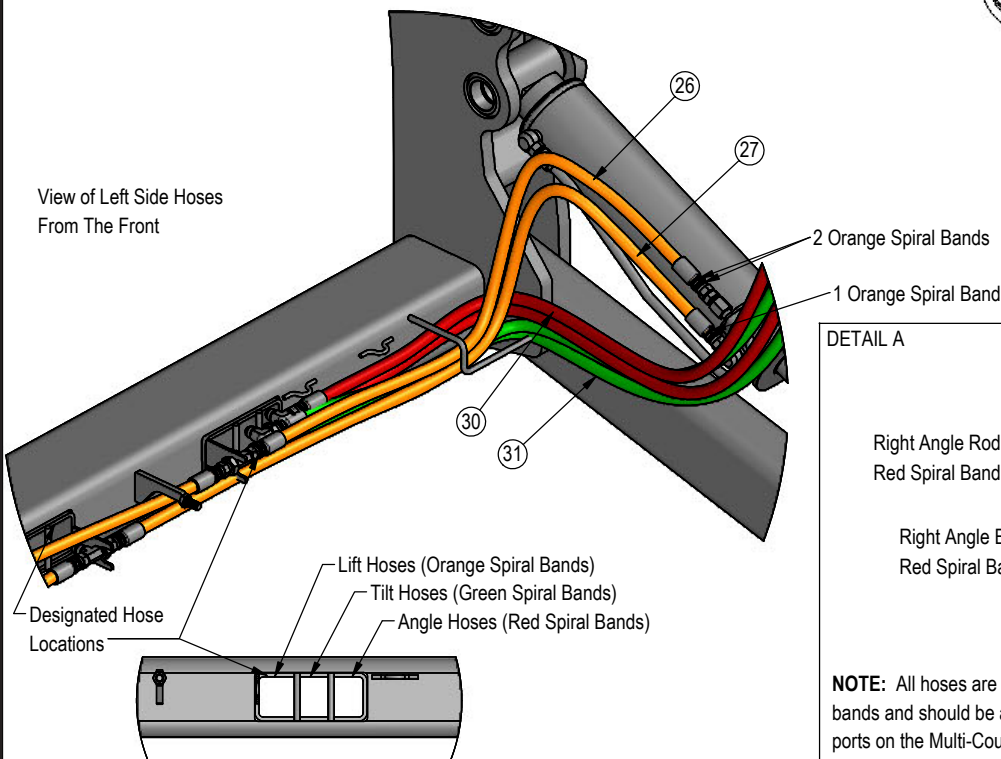
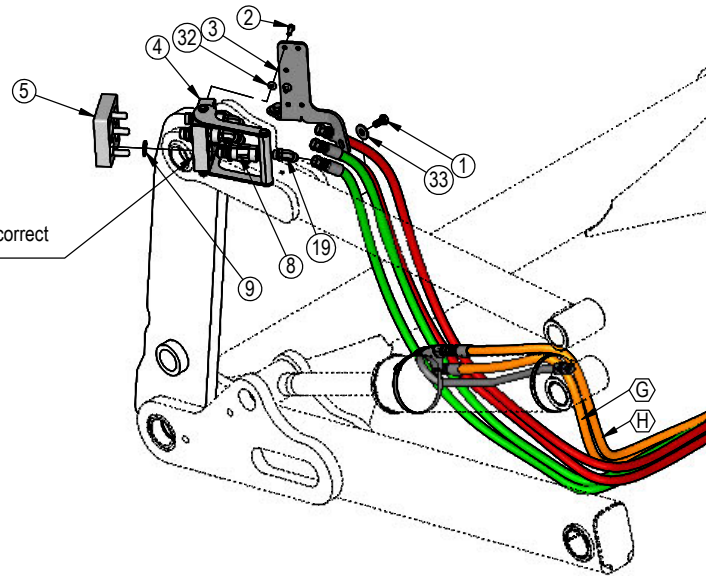
Item B for Versatile, Challenger MT900 and JD 9RX

Item C for Claas Xerion Tractor

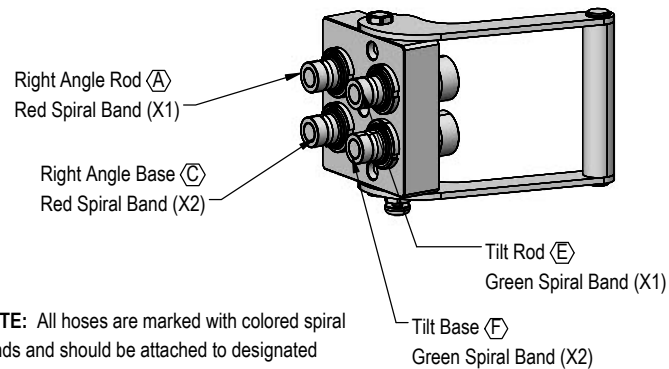
Item #1, 3 and 33 not used with Nested Top Arm Lift Systems

HAHT Shown. See Page 10 for remaining Multi-Coupler Configurations.

Every hydraulic function from the front to the back of the system is designated by a \odot and a letter and can also be referenced on the Hydraulic Schematic on Page 29.

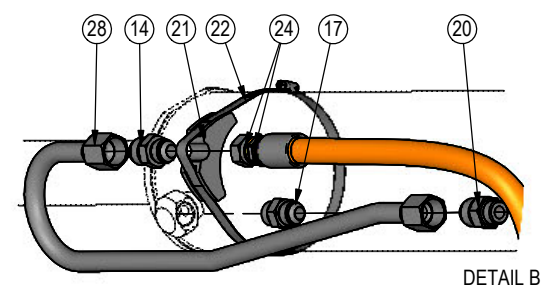
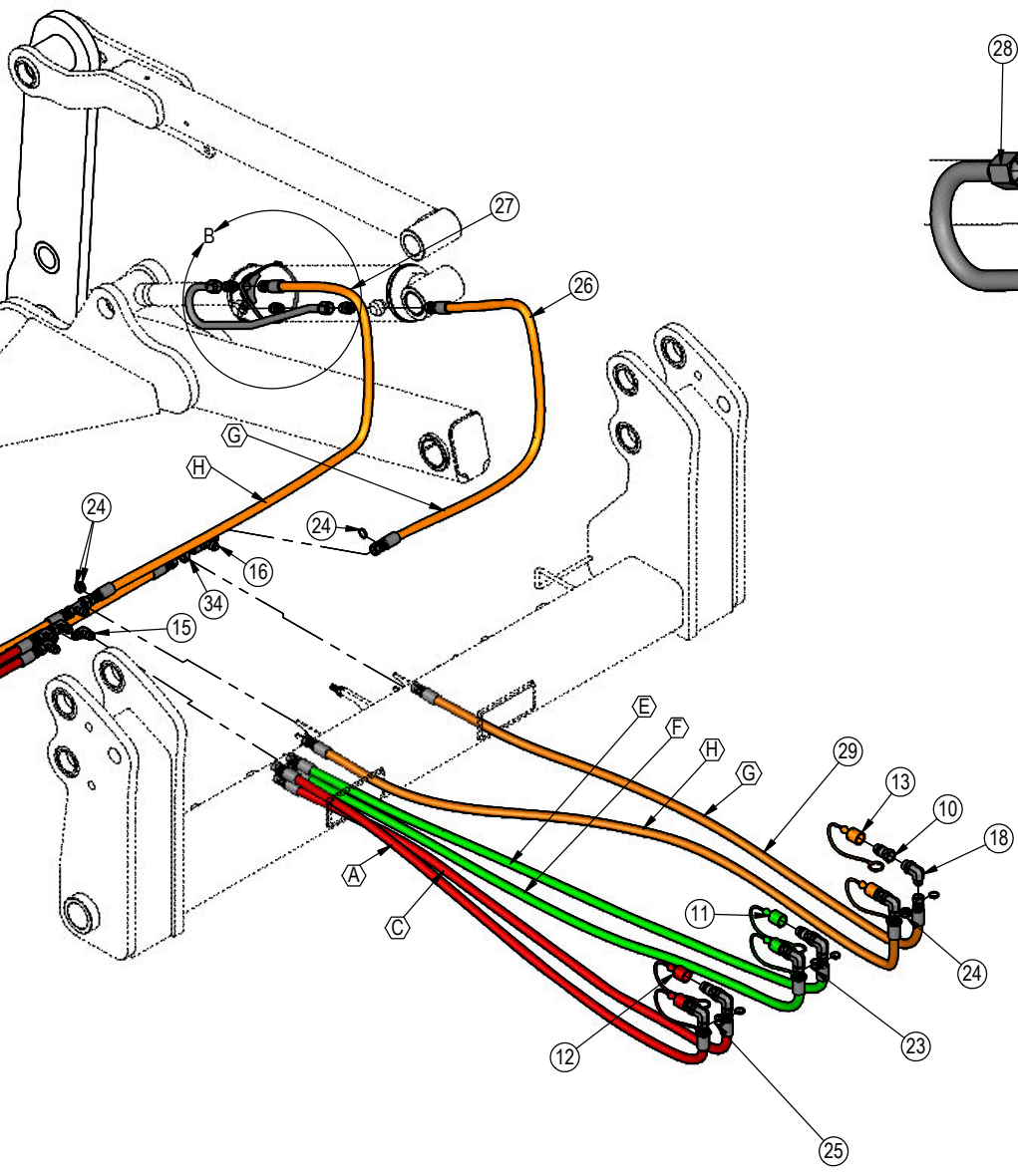


DETAIL A



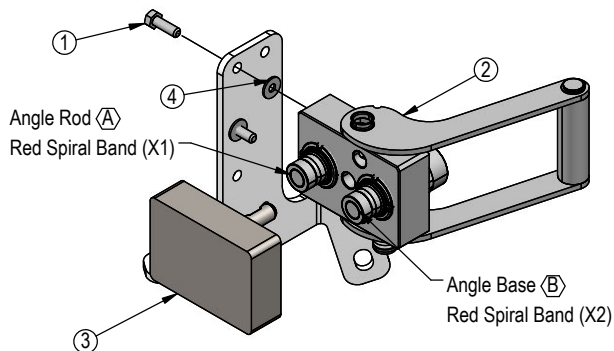
NOTE: All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

ITEM NO.	PART NO.	HAHT QTY.	HANT QTY.	NAHT QTY.	NANT QTY.	DESCRIPTION
21	34-12932	2	2	2	2	Cylinder Saddle
22	34-16578	2	2	2	2	Hose Clamp (worm drive - 4.5)
23	34-18888-GR	9	-	9	-	-12 Green - Spiral Band
24	34-18888-OR	15	15	15	15	-12 Orange - Spiral Band
25	34-18888-RD	9	9	-	-	-12 Red - Spiral Band
26	35-12633-0535	2	2	2	2	53.5" x 1/2" -8JIC/-8JIC Hose w/ Cordura
27	35-12633-0670	2	2	2	2	67" x 1/2" -8JIC/-8JIC Hose w/Cordura
28	35-18240	2	2	2	2	Lift Cylinder Steel Line
29A,C	35-30183	6	4	4	2	293" (24.42") x 1/2" -8JIC/-8JIC Hose w/ Cordura
29B	35-18953-3200	6	4	4	2	320" (26.67") x 1/2" -8JIC/-8JIC Hose w/ Cordura
30	35-31135	2	2	-	-	78" x 1/2" -8JIC/-8JIC Hose w/Cordura
31	35-31136	2	-	2	-	81" x 1/2" -8JIC/-8JIC Hose w/Cordura
32	57-20740	2	2	2	-	1/4" Flat Washer
33	57-20744	2	2	2	-	1/2" Washer
34	70-20807	2	2	2	2	3/4" Hex Jam Nut NF

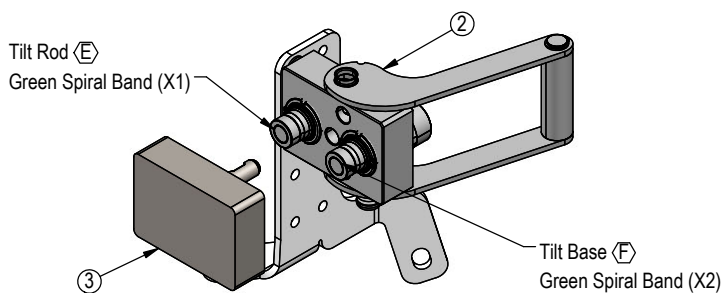


ITEM NO.	PART NO.	HANT QTY.	NAHT QTY.	DESCRIPTION
1	16-812525	2	2	8mm x 1.25mm x 25mm Metric Hex Bolt Gr 10.9
2	25-19868	1	1	Multi-Coupling Plate - 2 Port - Fixed
3	25-19871	1	1	Multi-Coupling Plate - 2 Port - Cap
4	57-20740	2	2	1/4" Flat Washer

HANT



NAHT



Note: Refer to Pages 6-9 for the correct hose lengths and hose location.

Note: All connections are identified by spiral bands. 2 bands are from the base end of a cylinder and 1 band is from the rod end of a cylinder. Orange = Lift, Green = Tilt and Red = Angle.

1. Connect the lift hoses to the lift cylinders.
2. Verify that hoses are not twisted and protected from rubbing on any sharp edges. See Pages 8-10 for proper hose routing.
3. Attach the multi-coupler to the top arm mount and install the 45° fittings.
4. Identify each remaining hose at the front of the undercarriage by the colored bands on end of hose and connect hose to corresponding 45° fitting on multi-coupler. Refer to Pages 8-10 for proper hose locations.
5. Hoses were plugged into the rear of the tractor during the undercarriage installation.
6. Continue on Page 11 for initial startup instructions.

Prior to operating the blade system, all air must be purged from the hydraulic system. Follow the steps below for each function on your blade.

Lift Function:

1. With the lift frame down and blocked, loosen the fittings on both ends of the lift cylinders.
2. Actuate the raise function to supply oil to the rod end of the cylinders.
3. When oil starts to flow from the fittings, stop oil flow, and tighten the fitting on the rod end of the lift cylinders.
4. Continue to flow oil until the system is fully raised and then block the lift frame.
5. Actuate the function in the opposite direction to supply oil to the base end of the lift cylinders.
6. When all air is removed from the lift system, stop oil flow and tighten the fittings on the base end of the lift cylinders.
7. Raise lift system and remove blocks. Cycle up and down 5 more times.
8. Check tractor oil level and fill if necessary.
9. Continue with connecting the blade on Page 10.

Tilt Function:

1. Use a lift or jack to tilt the blade system until the left side is fully up, loosen the fittings on the rod and base end of both tilt cylinders.
2. Actuate the tilt function to extend the right tilt cylinder and supply oil to the base end of the right cylinder and to the rod end of the left cylinder.
3. When oil starts to flow from the fittings, stop oil flow, and tighten the fitting on the base end of the right cylinder and rod end of the left cylinder.
4. Remove the lift or jack.
5. Continue to actuate the tilt function until oil flows out of the remaining open ports.
6. Actuate the tilt function in the opposite direction.
7. When all air is removed from the tilt system, stop oil flow, and tighten the remaining fittings on the cylinders.
8. Cycle both cylinders in and out 5 more times.
9. Check tractor oil level and fill if necessary.

Angle Function:

1. Loosen the fittings on the rod and base end of the left angle cylinder.
2. Actuate the angle function to extend the left angle cylinder and supply oil to the base end of the left cylinder.
3. When oil starts to flow from the fittings, stop oil flow, and tighten the fitting on the base end of the left cylinder.
4. Continue to actuate the left angle function in the same direction until the cylinder is fully extended.
5. Actuate the left angle function in the opposite direction.
6. When oil starts to flow from the rod end fitting, stop oil flow, and tighten the rod end fitting on the left angle cylinder.
7. Continue to actuate the left angle function until cylinder is fully retracted.
8. Loosen the fittings on the rod and base end of the right angle cylinder.
9. Actuate the angle function to extend the right angle cylinder and supply oil to the base end of the right cylinder.
10. When oil starts to flow from the fittings, stop oil flow, and tighten the fitting on the base end of the right cylinder.
11. Continue to actuate the right angle function in the same direction until the cylinder is fully extended.
12. Actuate the right angle function in the opposite direction.
13. When oil starts to flow from the rod end fitting, stop oil flow, and tighten the rod end fitting on the right angle cylinder.
14. Continue to actuate the right angle function until cylinder is fully retracted.
16. Cycle the left cylinder in and out 5 more times and then the right cylinder in and out 5 more times.
16. Check tractor oil level and fill if necessary.

Run the blade through all the functions. If any function does not operate correctly, refer to corresponding section above and re-bleed. If problem still persists, call Grouser Products.

To Connect:

Note: If necessary, use a spotter to help center the blade on the lift system.

1. If necessary, lift the locking latch and push the quick attach lock handle on the left side of the lift system to open the quick attach system. Refer to Page #15 for further clarification on the quick attach system.
2. Drive the tractor forward slowly until the top edge of the male quick attach is under the top hook of the female quick attach on the blade assembly.
3. Raise the lift system until the male quick attach engages the female hook. If both sides don't fully engage, reposition. Continue to raise the lift system until the blade is off the ground and the female quick attaches are against the front of the male quick attaches.
4. Shut off the tractor engine and set the parking brake.
5. Pull the quick attach lock handle to engage the quick attach pins and lift the locking latch to lock the handle in place.
6. Clean and connect hydraulic multi-coupler on the top arm. Refer to Pages 20-21 for cleaning and connecting information.
7. If initial startup, refer to Page 9 before operating any function of the blade.

To Disconnect:

1. Lower the blade until the cutting edge is off the ground a few inches.
2. Shut off the tractor engine and set the parking brake.
3. Unhook the multi-coupler on the top arm.
4. Remove the multi-coupler covers from the parking stations on the blade assembly and install on the multi-couplers on the top arms.
5. Plug the blade side multi-couplers into the parking station.
6. Lift the locking latch and push the quick attach lock handle to disengage the quick attach pins.
7. Start tractor, disengage the parking brake, and lower the blade until cutting edge is on the ground.
8. Continue to slowly lower the lift system to disengage the blade.
9. Slowly back away from the blade. When lift system is clear from the blade, raise the lift system.
10. Shut off the tractor engine and set the parking brake.

Skid Shoe Adjustment:

1. Remove handle from ratchet keeper by pulling hitch clip pin and insert it into handle receiver on ratchet jack.
2. Loosen locking nut on ratchet jack.
3. Hold body of ratchet jack and rotate ratchet jack handle to raise or lower skid shoes.
4. If skid shoe is not moving in the proper direction, flip forward/reverse lever on handle (see Figure 2). Rotate ratchet jack handle again to move skid shoe in desired direction.
5. After skid shoe is adjusted, rotate ratchet jack handle until it rests against the ratchet keeper. Return removable handle to ratchet keeper ensuring that ratchet jack handle is captured by removable handle and ratchet keeper. Secure handle to ratchet keeper with hitch clip pin.
6. Tighten locking nut against ratchet jack body to keep it from moving.
7. When skid shoes are worn up to bolt heads, replace skid shoes.

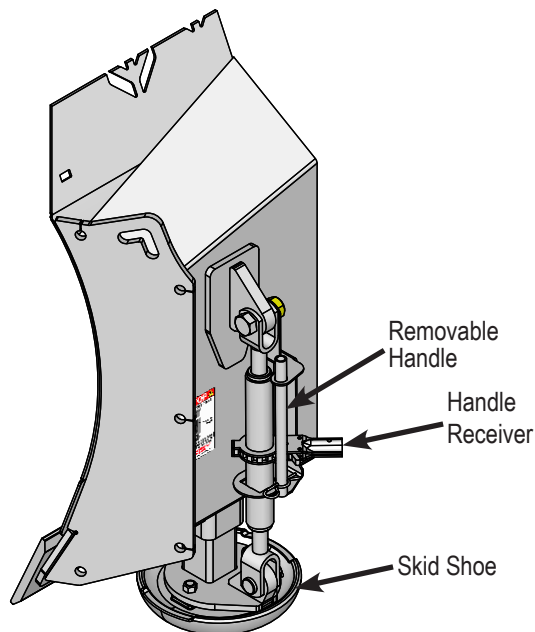


Figure 1

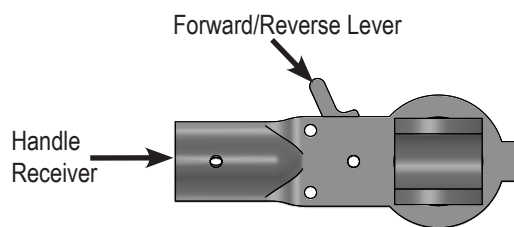


Figure 2

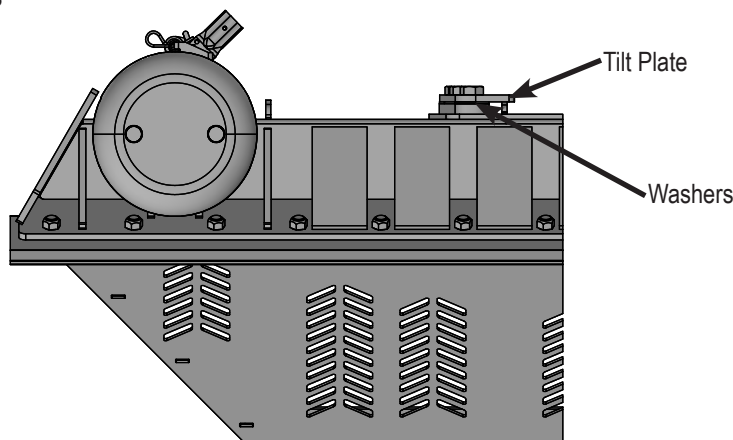
Preferred Method:

1. The preferred blade position for adjusting tilt plates is laying face down on blocks.
2. Remove 6 bolts from right tilt plates.
3. Add or remove washers as needed to adjust tilt-way clearance to 1/16" - 1/8".
4. Reinstall bolts in right tilt plates.
5. Follow Steps #2-4 for left tilt plates.
6. Once tilt-way clearance is set, torque bolts to 640 ft-lbs.

Non-Preferred Method:

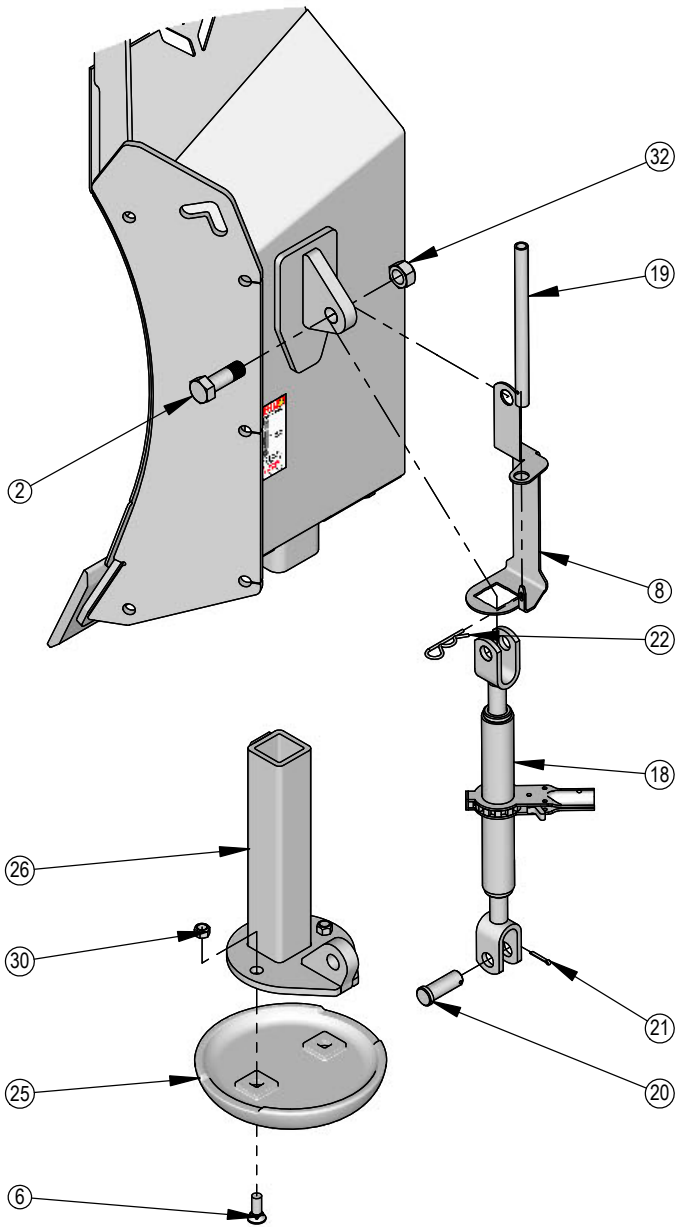
Note: Do not remove all of the bolts at the same time if the blade is not laying face down.

1. The non-preferred blade position for adjusting tilt plates is blade in upright position.
2. Remove the 3 bolts from top right tilt plate and bottom left tilt plate.
3. Add or remove washers as needed to adjust tilt-way clearance to 1/16" - 1/8".
4. Reinstall bolts in top right tilt plate and bottom left tilt plate.
5. Follow Steps #2-4 for bottom right tilt plate and top left tilt plate.
6. Once tilt-way clearance is set, torque bolts to 640 ft-lbs.

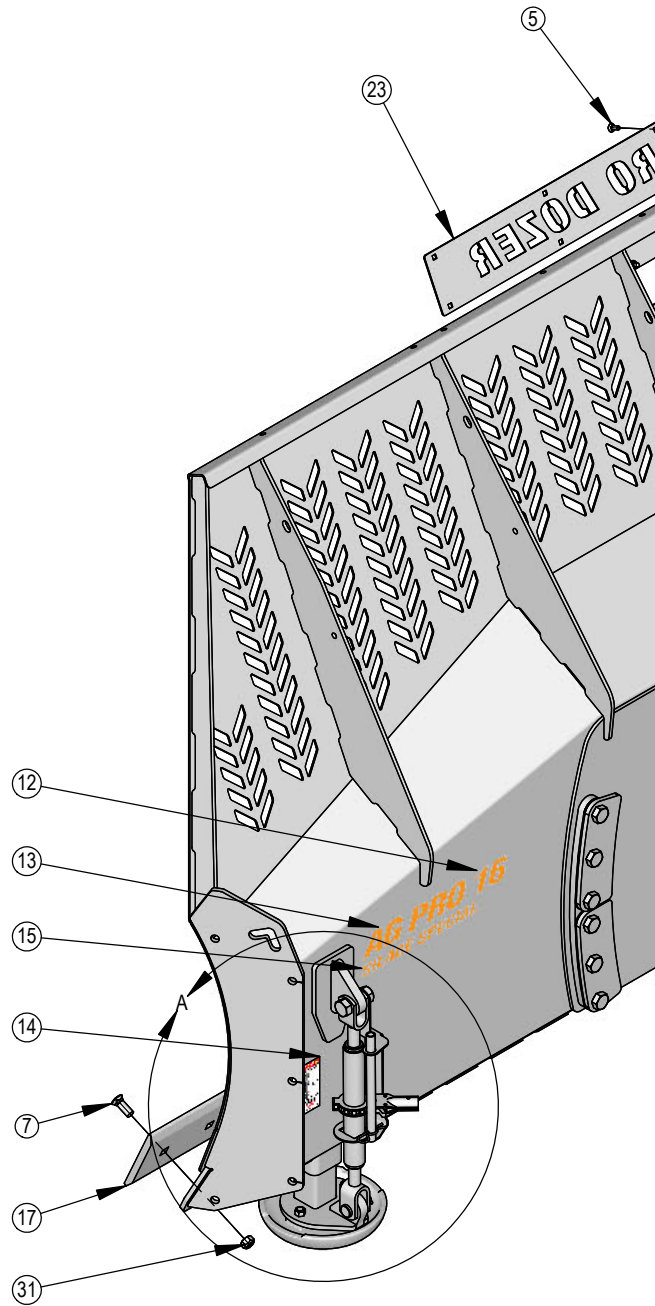


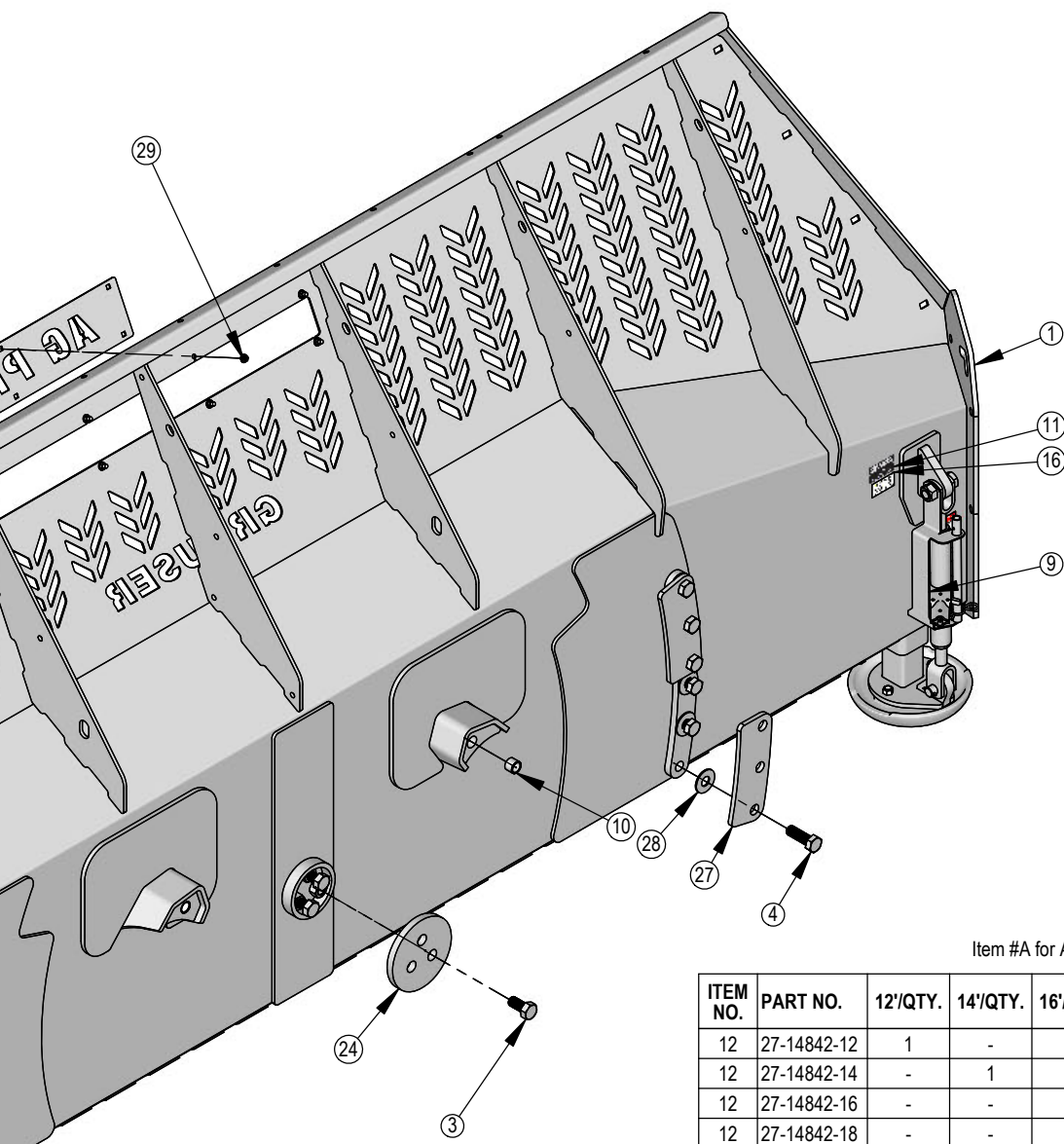
Ag Pro Silage Special Blade

ITEM NO.	PART NO.	12'/QTY.	14'/QTY.	16'/QTY.	18'/QTY.	DESCRIPTION
1	15-19250-12	1	-	-	-	Ag Pro SS Blade - 12'
1	15-19250-14	-	1	-	-	Ag Pro SS Blade - 14'
1	15-19250-16	-	-	1	-	Ag Pro SS Blade - 16'
1	15-19250-18	-	-	-	1	Ag Pro SS Blade - 18'
2	16-18945	2	2	2	2	1" x 3" Hex Bolt Gr 5 NC - Short Thread
3	16-20558	3	3	3	3	1" x 2" Hex Bolt Gr 8 NC
4	16-20562	12	12	12	12	1" x 3" Hex Bolt Gr 8 NC
5	16-21064	8	8	8	8	3/8" x 1" Carriage Bolt Gr 5 NC
6	16-21666	4	4	4	4	5/8" x 1-3/4" Plow Bolt Gr 5 NC
7	16-21748	24	28	32	36	3/4" x 2" Plow Bolt Gr 8 NC
8	18-18498-L	1	1	1	1	Ratchet Keeper - Left
9	18-18498-R	1	1	1	1	Ratchet Keeper - Right
10	19-7774	2	2	2	2	1" x 1" Spring Bushing
11	NA	1	1	1	1	Grouser Dozer Metal Serial Tag



DETAIL A





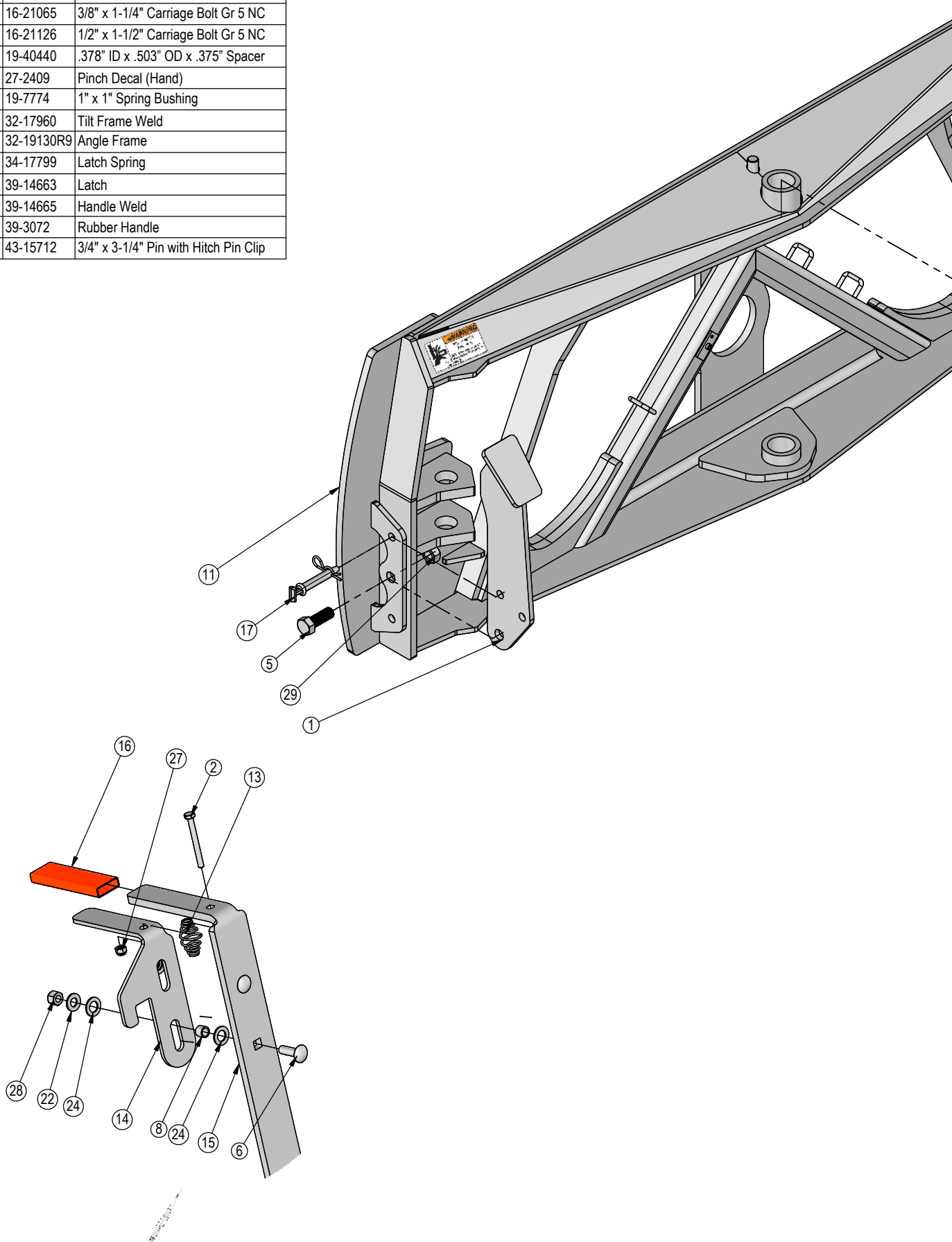
Item #A for Ag Pro Dozer Name Plate and #B for Custom Name Plate

ITEM NO.	PART NO.	12'/QTY.	14'/QTY.	16'/QTY.	18'/QTY.	DESCRIPTION
12	27-14842-12	1	-	-	-	12' Decal
12	27-14842-14	-	1	-	-	14' Decal
12	27-14842-16	-	-	1	-	16' Decal
12	27-14842-18	-	-	-	1	18' Decal
13	27-14845	1	1	1	1	Ag Pro Blade Decal
14	27-40917	2	2	2	2	Ratchet Holder Storage Decal
15	27-40956	1	1	1	1	Silage Special Decal
16	27-40962	1	1	1	1	Warning Prop 65 Decal
17	29-11118-6	2	-	-	3	6' - 3/4"x 8" Cutting Edge
17	29-11118-7	-	2	-	-	7' - 3/4"x 8" Cutting Edge
17	29-11118-8	-	-	2	-	8' - 3/4"x 8" Cutting Edge
18	34-17565	2	2	2	2	Ratchet Jack
19	34-17567	2	2	2	2	Handle, Ratchet Jack
20	43-18463	2	2	2	2	1" x 2.75" Pin
21	43-18943	2	2	2	2	3/16" x 1-1/2" Cotter Pin
22	43-7767	2	2	2	2	Cylinder Pin Clip
23A	44-15150	1	1	1	1	Ag Pro Dozer Name Plate
23B	44-14830	1	1	1	1	Custom Name Plate
24	44-3749	1	1	1	1	Backdrag Brace Plate
25	50-15458	2	2	2	2	12" Round Mushroom Skid Shoe
26	50-17545	2	2	2	2	Mushroom Skid Shoe Mount
27	52-8204	4	4	4	4	Tilt Plate
28	57-20749	12	12	12	12	1" Flat Washer
29	70-20622	8	8	8	8	3/8" Flange Hex Nut Gr 5 NC
30	70-20646	4	4	4	4	5/8" Hex Top Lock Nut Gr 5 NC
31	70-20647	24	28	32	36	3/4" Hex Top Lock Nut Gr 5 NC
32	70-20999	2	2	2	2	1" Hex Top Lock Nut Gr 8 NC

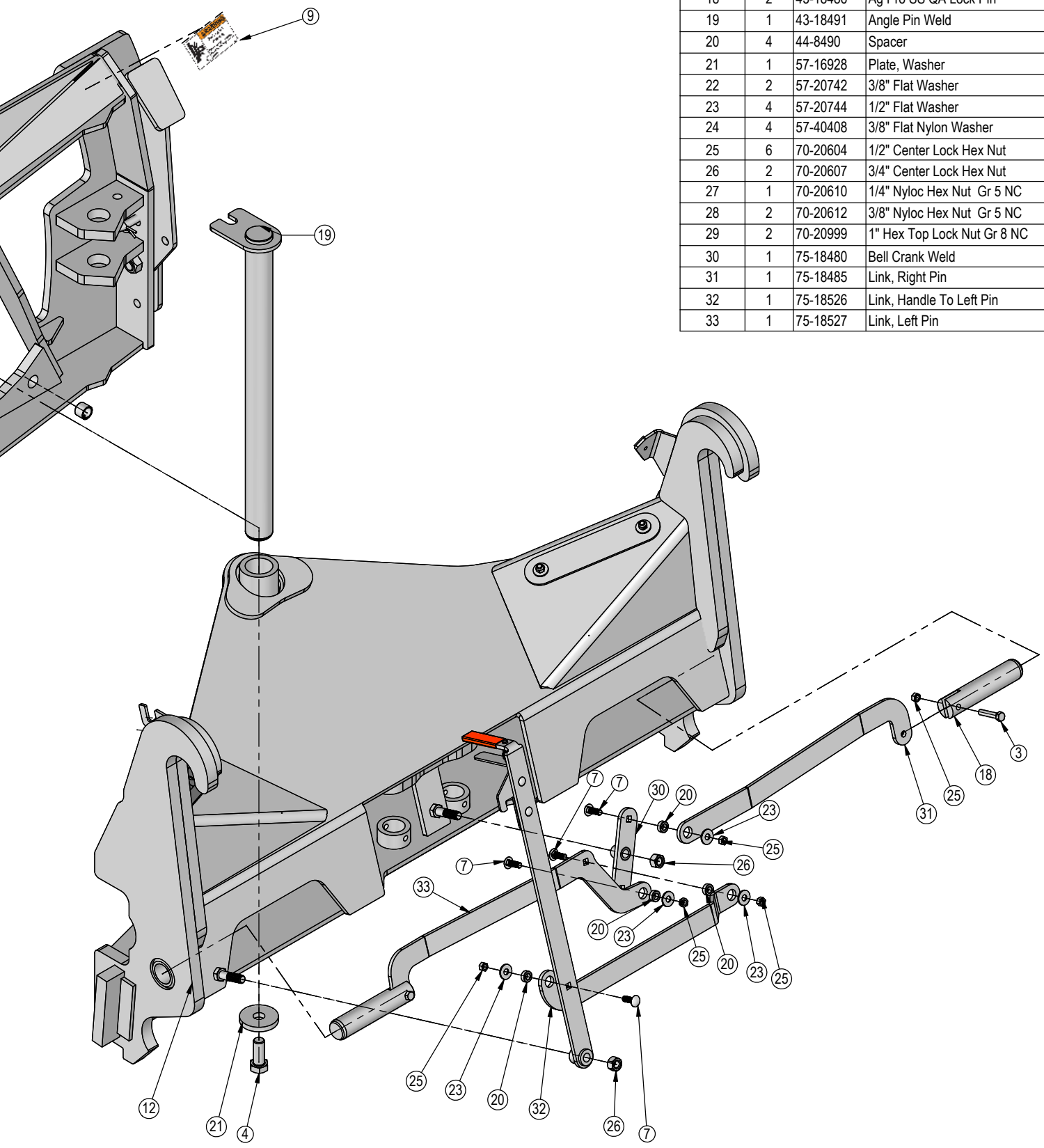
DWG. NO.: 40910-XX-A

Hydraulic Angle-Hydraulic Tilt and Hydraulic Angle-No Tilt System

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	11-18495	Blade Stand
2	1	16-20011	1/4" x 2-3/4" Hex Bolt Gr 5 NC
3	2	16-20130	1/2" x 2-1/2" Hex Bolt Gr 5 NC
4	1	16-20560	1" x 2-1/2" Hex Bolt Gr 8 NC
5	2	16-20561	1" x 2-3/4" Hex Bolt Gr 8 NC
6	2	16-21065	3/8" x 1-1/4" Carriage Bolt Gr 5 NC
7	4	16-21126	1/2" x 1-1/2" Carriage Bolt Gr 5 NC
8	2	19-40440	.378" ID x .503" OD x .375" Spacer
9	2	27-2409	Pinch Decal (Hand)
10	2	19-7774	1" x 1" Spring Bushing
11	1	32-17960	Tilt Frame Weld
12	1	32-19130R9	Angle Frame
13	1	34-17799	Latch Spring
14	1	39-14663	Latch
15	1	39-14665	Handle Weld
16	1	39-3072	Rubber Handle
17	2	43-15712	3/4" x 3-1/4" Pin with Hitch Pin Clip



ITEM NO.	QTY.	PART NO.	DESCRIPTION
18	2	43-18486	Ag Pro SS QA Lock Pin
19	1	43-18491	Angle Pin Weld
20	4	44-8490	Spacer
21	1	57-16928	Plate, Washer
22	2	57-20742	3/8" Flat Washer
23	4	57-20744	1/2" Flat Washer
24	4	57-40408	3/8" Flat Nylon Washer
25	6	70-20604	1/2" Center Lock Hex Nut
26	2	70-20607	3/4" Center Lock Hex Nut
27	1	70-20610	1/4" Nyloc Hex Nut Gr 5 NC
28	2	70-20612	3/8" Nyloc Hex Nut Gr 5 NC
29	2	70-20999	1" Hex Top Lock Nut Gr 8 NC
30	1	75-18480	Bell Crank Weld
31	1	75-18485	Link, Right Pin
32	1	75-18526	Link, Handle To Left Pin
33	1	75-18527	Link, Left Pin

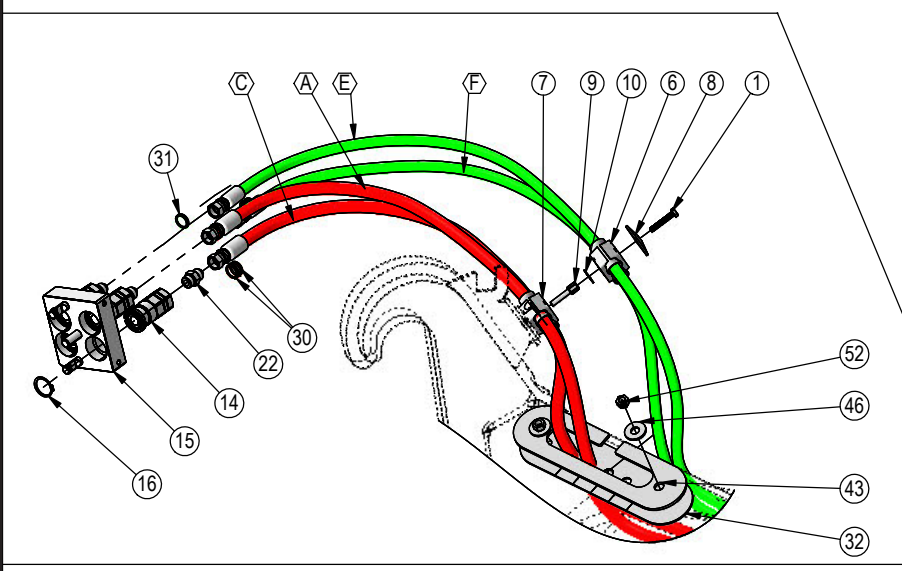
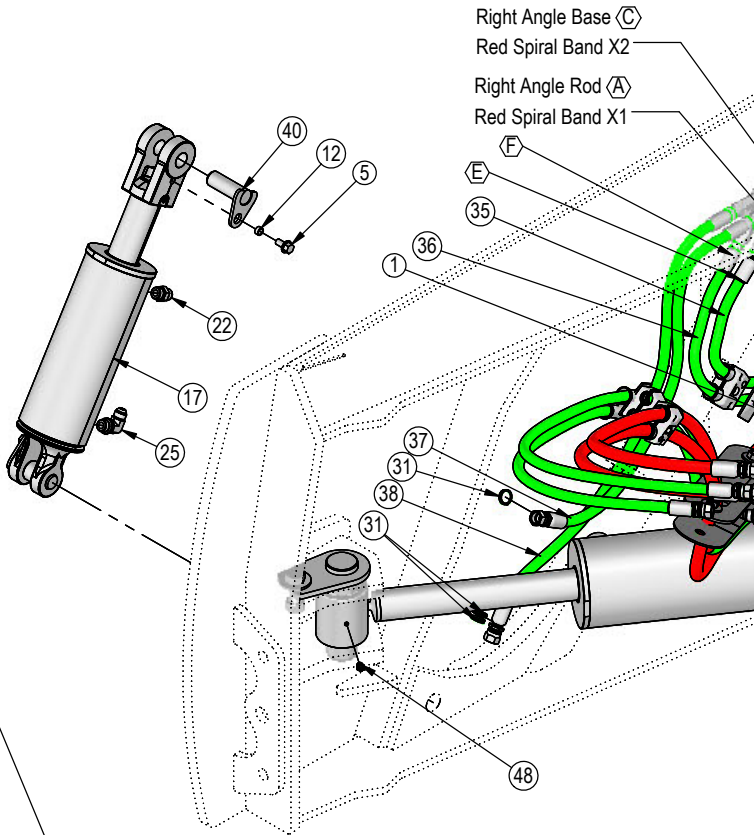
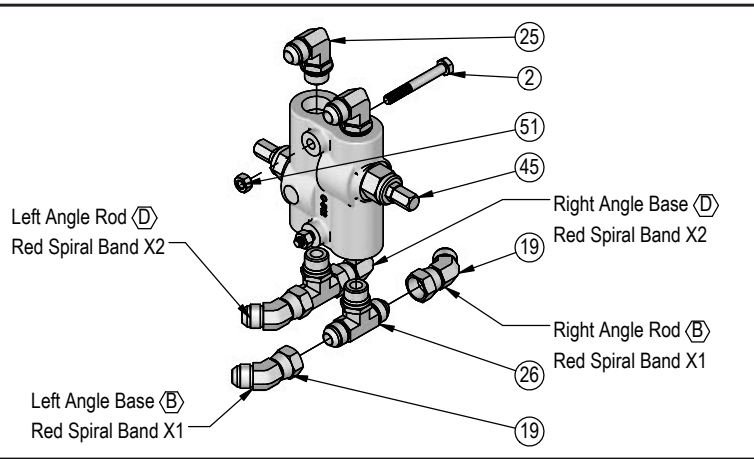


DWG. NO.: 19893

Hydraulic Angle-Hydraulic Tilt Hydraulics

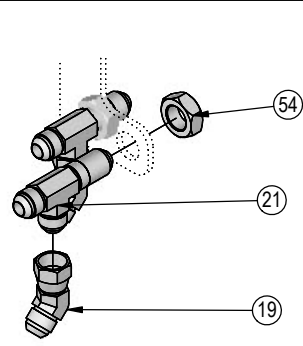
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	3	16-20037	5/16" x 1-3/4" Hex Bolt Gr 5 NC
2	2	16-20040	5/16" x 2-1/2" Hex Bolt Gr 5 NC
3	2	16-20134	1/2" x 3-1/2" Hex Bolt Gr 5 NC
4	2	16-20219	3/4" x 2-1/4" Hex Bolt Gr 5 NC
5	4	16-35C612	3/8" x 3/4" Flange Bolt
6	3	18-19311-03-P-087	Hose Clamp
7	1	18-19311-03-P-100	Hose Clamp
8	3	18-19312-03	Twin Cover Plate
9	1	18-19313-04	Twin Stacking Bolt
10	1	18-19314-02	Twin Safety Plate
11	2	19-13515	Spacer, NR Pin
12	4	19-13577	NR Pin Spacer Clevis End
13	8	19-16695	2.25" x 2.00" x 1.50" Spring Bushing
14	4	25-19865	Multi-Coupling - Female Coupler
15	1	25-19866	Multi-Coupling Plate - 4 Port Mobile
16	4	25-40407	Multi-Coupling - Snap Ring
17	2	26-34747	4 x 8 Cylinder w/ Clevis Ends
18	2	26-34750	5 x 20 Cylinder Bushed Tube Ends
19	6	31-11492-8-8	Male JIC x Female JIC Swivel Nut Elbow 45°
20	2	31-11699-10-8	JIC Union
21	2	31-34030	Bulkhead Run Tee JIC
22	6	31-34040	Straight JIC x O-Ring
23	2	31-34041	Straight JIC x O-Ring
24	2	31-34042	Straight JIC x O-Ring
25	4	31-34050	Straight Thread Elbow 90° JIC x O-Ring
26	2	31-34060	Branch Tee JIC x O-Ring

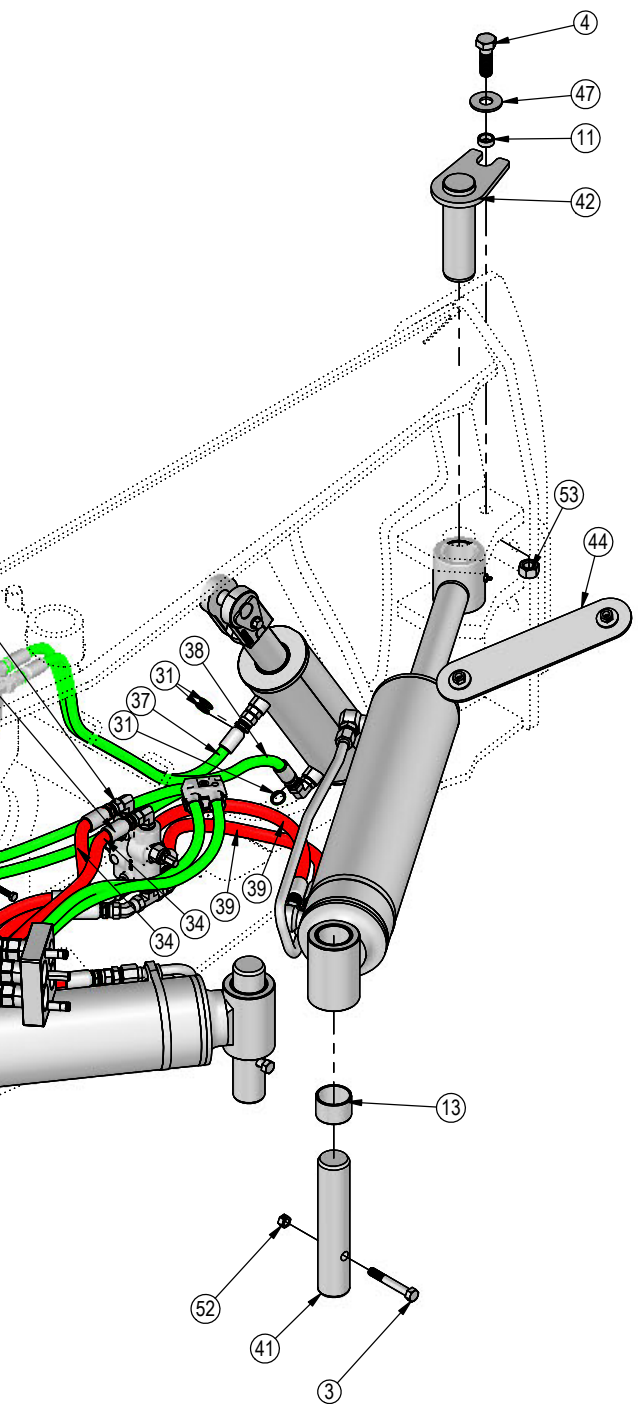
Note: Every hydraulic function from the front to the back of the system is designated by a letter and can also be referenced on the Hydraulic Schematic.



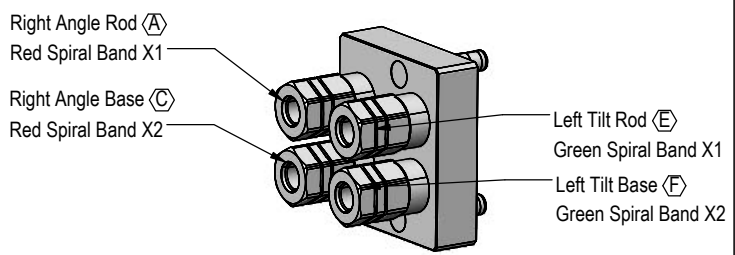
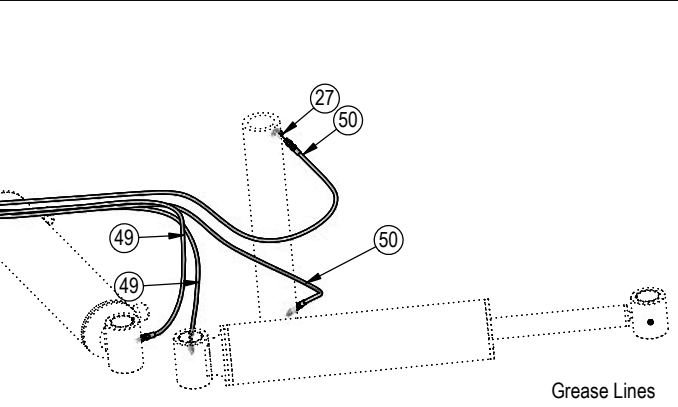
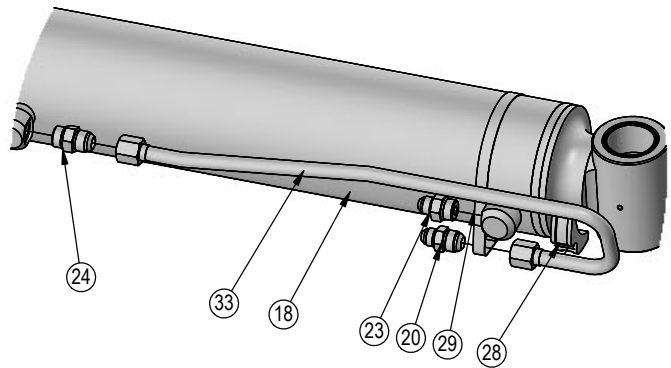
Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

Cylinder	Part No.	Description
26-34747	49-12271	Seal Kit 4x8 Nitrided Rod, Clevis Ends
26-34750	49-12275	Seal Kit 5 x 20 Nitrided Rod





ITEM NO.	QTY.	PART NO.	DESCRIPTION
27	2	31-13933-2-2	1/8" NPT Street Elbow
28	2	34-12932	Cylinder Saddle
29	2	34-12933	Hose Clamp (worm drive - 5.0)
30	18	34-18888-RD	-12 Red - Spiral Band
31	18	34-18888-GR	-12 Green - Spiral Band
32	1	34-19217	Rubber Seal
33	2	35-12931	Formed Steel Line
34	2	35-19355	75.5" x 1/2" -8JIC/-8JIC Hose (w/ 1 Collar & Cordura)
35	1	35-19356	122" x 3/8" -8JIC/-8JIC Hose (w/ 3 Collar & Cordura)
36	1	35-19359	128.5" x 3/8" -8JIC/-8JIC Hose (w/3 Collar & Cordura)
37	2	35-30018	33" x 3/8" -8JIC/-8JIC Hose
38	2	35-30081	37" x 3/8" -8JIC/-8JIC Hose
39	4	35-31113	28" x 1/2" -8 JIC/-8 JIC Hose w/ Cordura
40	4	43-13580	Pin Weld
41	2	43-18487	Angle Cylinder Base Pin
42	2	43-18490	Angle Cylinder Rod Pin Weld
43	1	44-19218	Seal Clamp Plate
44	1	44-19219	Cover Plate
45	1	56-7772	Valve
46	4	57-20744	1/2" Flat Washer
47	2	57-20747	3/4" Flat Washer
48	2	58-9369	Straight 1/8" NPT Grease Zerk
49	2	58-18994-0440	44" Grease Hose (w/lock nut and grease zerk)
50	2	58-18994-0570	57" Grease Hose (w/lock nut and grease zerk)
51	2	70-20581	5/16" Hex Nut Gr 5 NC
52	6	70-20604	1/2" Center Lock Hex Nut
53	2	70-20607	3/4" Center Lock Hex Nut
54	2	70-20807	3/4" Hex Jam Nut NF



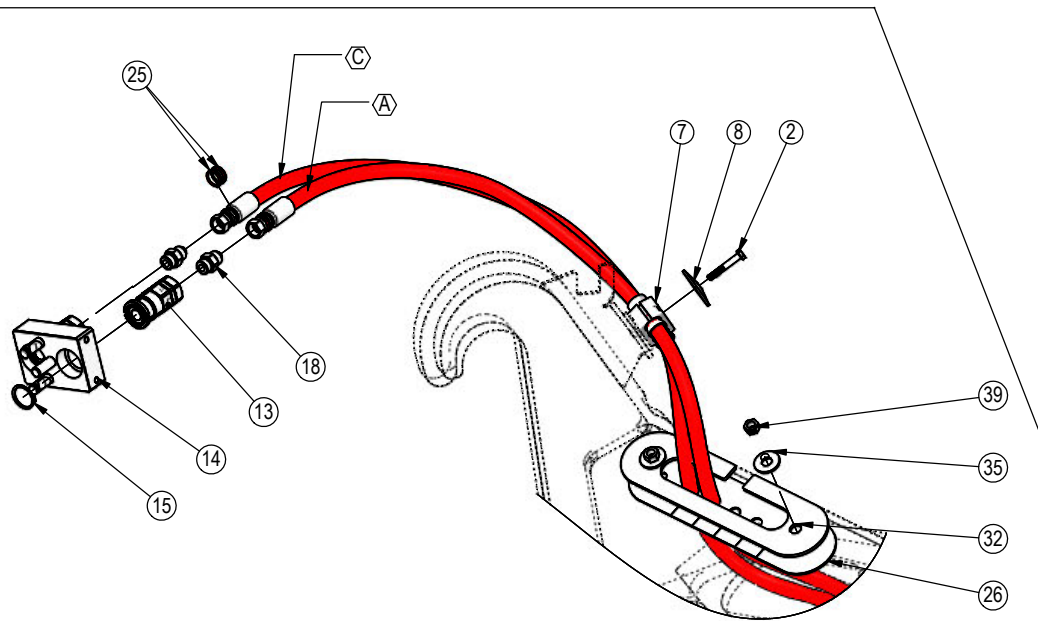
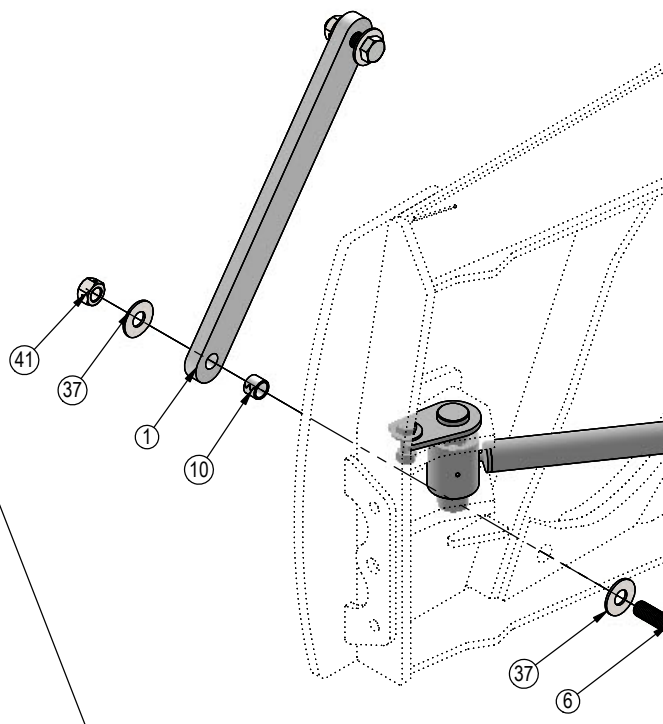
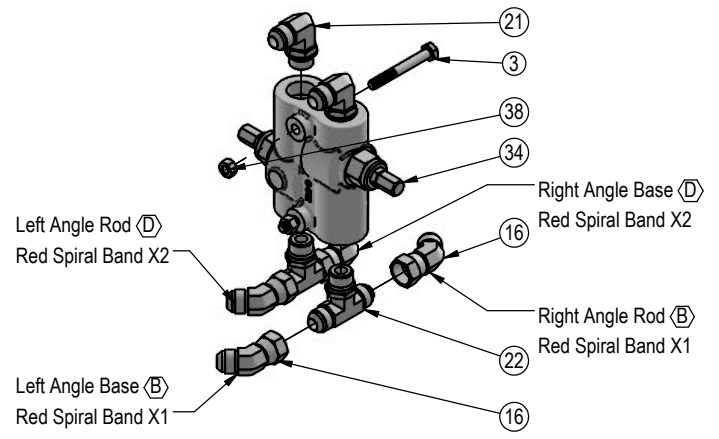
Note: View is from Multi-Coupler Installed on Top Arm.
 All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

DWG. NO.: 19893

Hydraulic Angle-No Tilt Hydraulics

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	14-9366	Ag Pro Non Tilt Bar
2	1	16-20038	5/16" x 2" Hex Bolt Gr 5 NC
3	2	16-20040	5/16" x 2-1/2" Hex Bolt Gr 5 NC
4	2	16-20134	1/2" x 3-1/2" Hex Bolt Gr 5 NC
5	2	16-20219	3/4" x 2-1/4" Hex Bolt Gr 5 NC
6	2	16-20564	1" x 3-1/2" Hex Bolt Gr.8 NC
7	1	18-19311-03-P-100	Hose Clamp
8	1	18-19312-03	Twin Cover Plate
9	2	19-13515	Spacer, NR Pin
10	1	19-7774	1" x 1" Spring Bushing
11	8	19-16695	2.25" x 2.00" x 1.50" Spring Bushing
12	2	26-34750	5 x 20 Cylinder Bushed Tube Ends
13	4	25-19865	Multi-Coupling - Female Coupler
14	1	25-19869	Multi-Coupling Plate - 2 Port - Mobile
15	4	25-40407	Multi-Coupling - Snap Ring
16	4	31-11492-8-8	Male JIC x Female JIC Swivel Nut Elbow 45°
17	2	31-11699-10-8	JIC Union
18	2	31-34040	Straight JIC x O-Ring
19	2	31-34041	Straight JIC x O-Ring
20	2	31-34042	Straight JIC x O-Ring
21	2	31-34050	Straight Thread Elbow 90° JIC x O-Ring
22	2	31-34060	Branch Tee JIC x O-Ring
23	2	34-12932	Cylinder Saddle
24	2	34-12933	Hose Clamp (worm drive - 5.0)
25	18	34-18888-RD	-12 Red - Spiral Band
26	1	34-19217	Rubber Seal
27	2	35-12931	Formed Steel Line
28	2	35-19355	75.5" x 1/2" -8JIC/-8JIC Hose (w/ 1 Collar & Cordura)
29	4	35-31113	28" x 1/2" -8 JIC/-8 JIC Hose w/ Cordura

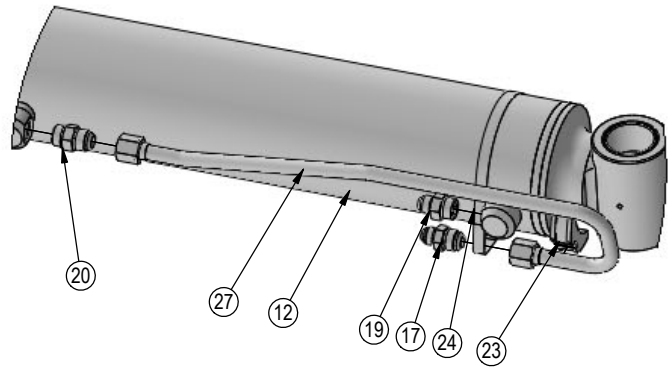
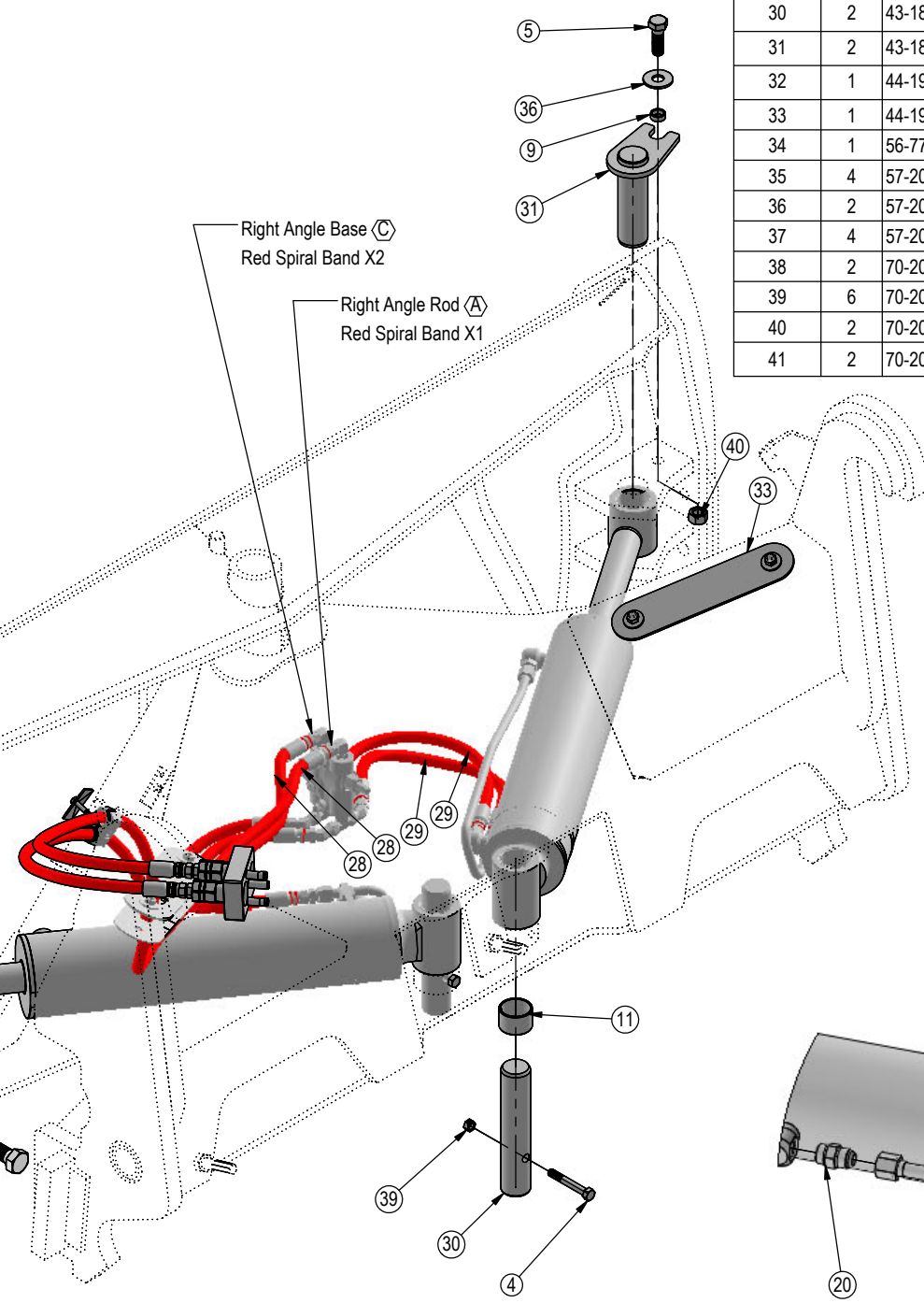
Note: Every hydraulic function from the front to the back of the system is designated by a letter and can also be referenced on the Hydraulic Schematic.



Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

Cylinder	Part No.	Description
26-34750	49-12275	Seal Kit 5 x 20 Nitrided Rod

ITEM NO.	QTY.	PART NO.	DESCRIPTION
30	2	43-18487	Angle Cylinder Base Pin
31	2	43-18490	Angle Cylinder Rod Pin Weld
32	1	44-19218	Seal Clamp Plate
33	1	44-19219	Cover Plate
34	1	56-7772	Valve
35	4	57-20744	1/2" Flat Washer
36	2	57-20747	3/4" Flat Washer
37	4	57-20749	1" Flat Washer
38	2	70-20581	5/16" Hex Nut Gr 5 NC
39	6	70-20604	1/2" Center Lock Hex Nut
40	2	70-20607	3/4" Center Lock Hex Nut
41	2	70-20609	1" Hex Center Lock Nut Gr.2 NC



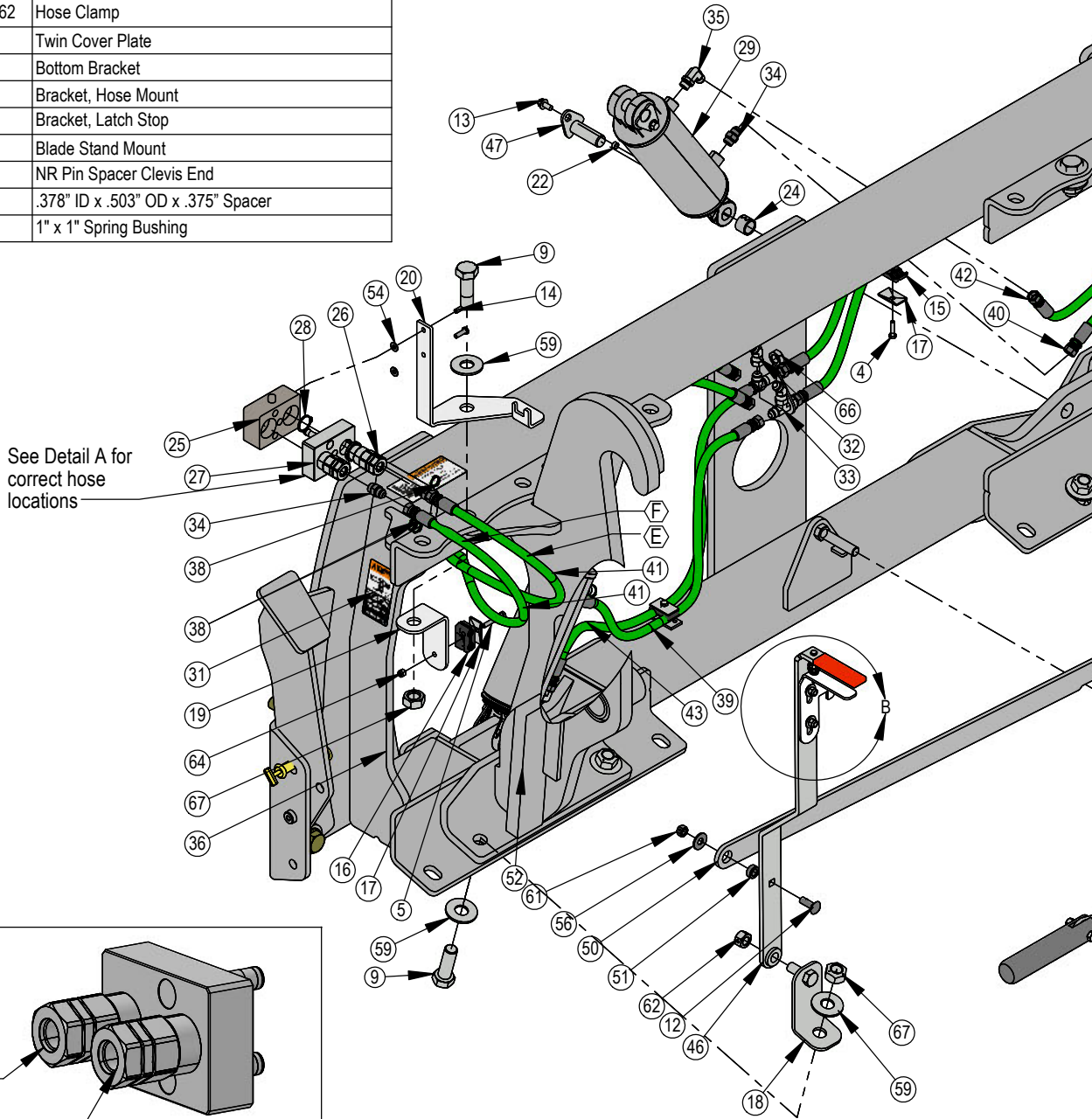
Right Angle Rod (A)
Red Spiral Band X1

Right Angle Base (C)
Red Spiral Band X2

Note: View is from Multi-Coupler Installed on Top Arm.
All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

DWG. NO.: 19892

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	11-18495	Blade Stand
2	1	11-40866	Bell Crank
3	1	16-20011	1/4" X 2-3/4" Hex Bolt Gr 5 NC CZ
4	5	16-20035	5/16" X 1-1/4" Hex Bolt Gr 5 NC CZ
5	1	16-20038	5/16" X 2" Hex Bolt Gr 5 NC CZ
6	2	16-20126	1/2" X 1-1/2" Hex Bolt Gr 5 NC CZ
7	2	16-20130	1/2" X 2-1/2" Hex Bolt Gr 5 NC CZ
8	6	16-20560	1" X 2-1/2" Hex Bolt Gr 8 NC YZ
9	2	16-20562	1" X 3" Hex Bolt Gr 8 NC YZ
10	4	16-20563	1" X 3-1/4" Hex Bolt Gr 8 NC YZ
11	2	16-21065	3/8" x 1-1/4" Carriage Bolt Gr 5 NC CZ
12	4	16-21126	1/2" x 1-1/2" Carriage Bolt Gr 5 NC CZ
13	4	16-35C612	3/8" x 3/4" Flange Bolt
14	2	16-812525	M8-1.25 x 25mm Class 10.9 Hex Bolt CZ
15	5	18-19311-02-P-062	Half Hose Clamp
16	1	18-19311-02-P-062	Hose Clamp
17	6	18-19312-02	Twin Cover Plate
18	1	18-42046	Bottom Bracket
19	1	18-43719	Bracket, Hose Mount
20	1	18-43729R1	Bracket, Latch Stop
21	2	18-43730	Blade Stand Mount
22	4	19-13577	NR Pin Spacer Clevis End
23	2	19-40440	.378" ID x .503" OD x .375" Spacer
24	2	19-7774	1" x 1" Spring Bushing



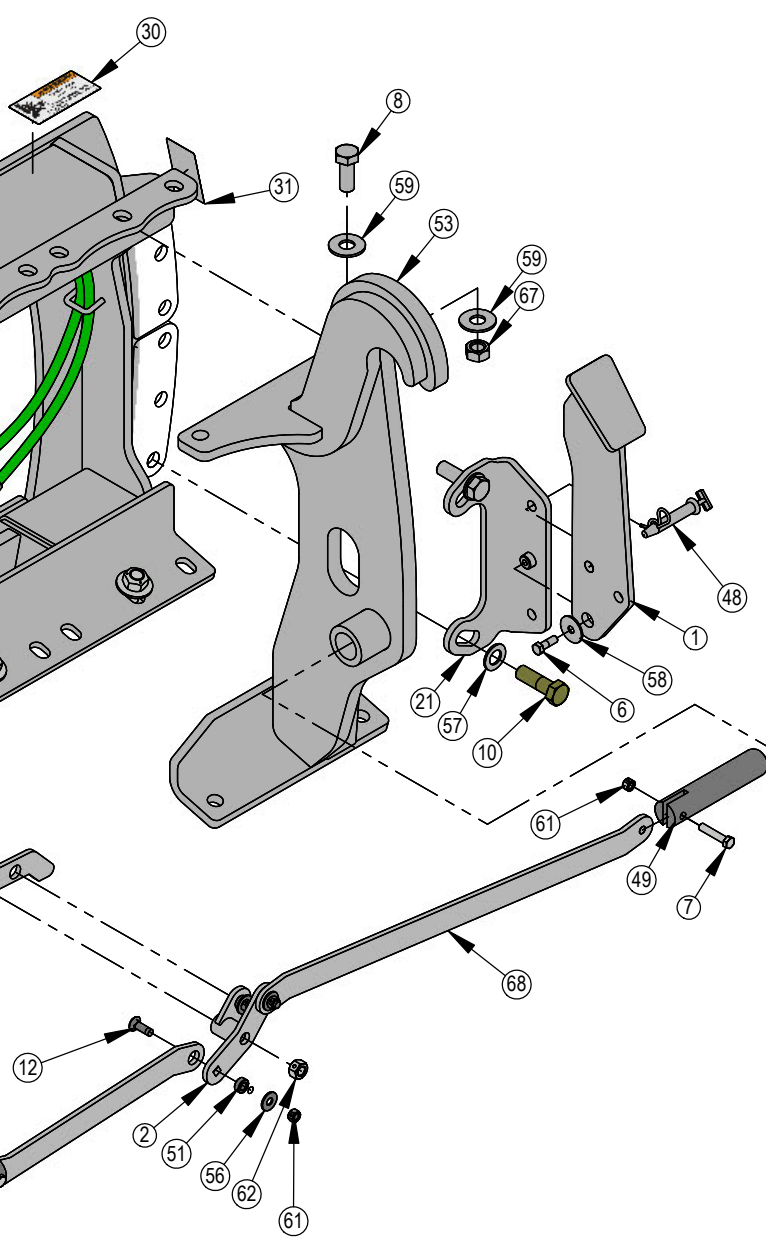
Detail A

Tilt Rod (E)
Green Spiral Band (X1)
Tilt Base (F)
Green Spiral Band (X2)

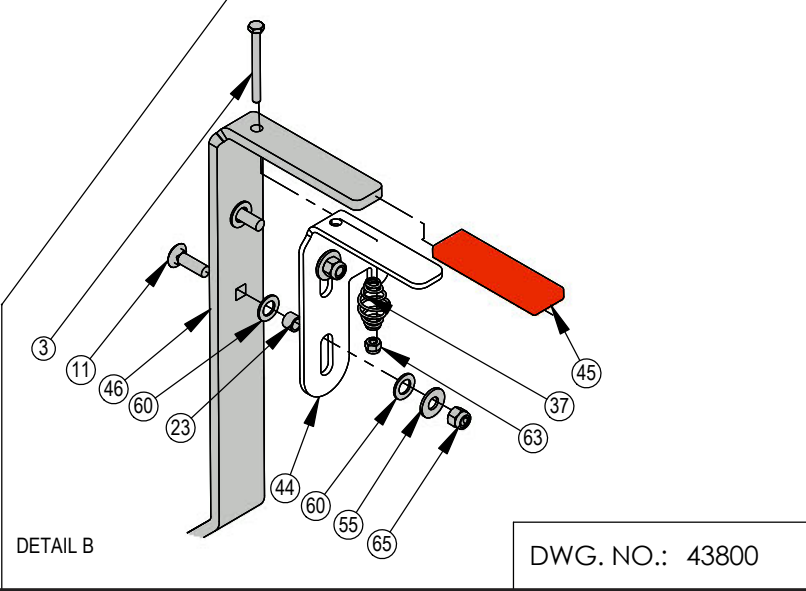
Note: View is from Multi-Coupler Installed on Top Arm. All hoses are marked with spiral bands and should be attached to designated ports on the Multi-Coupler.

Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

Cylinder	Part No.	Description
26-34747	49-12271	Seal Kit 4 x 8 Nitrided Rod, Clevis Ends



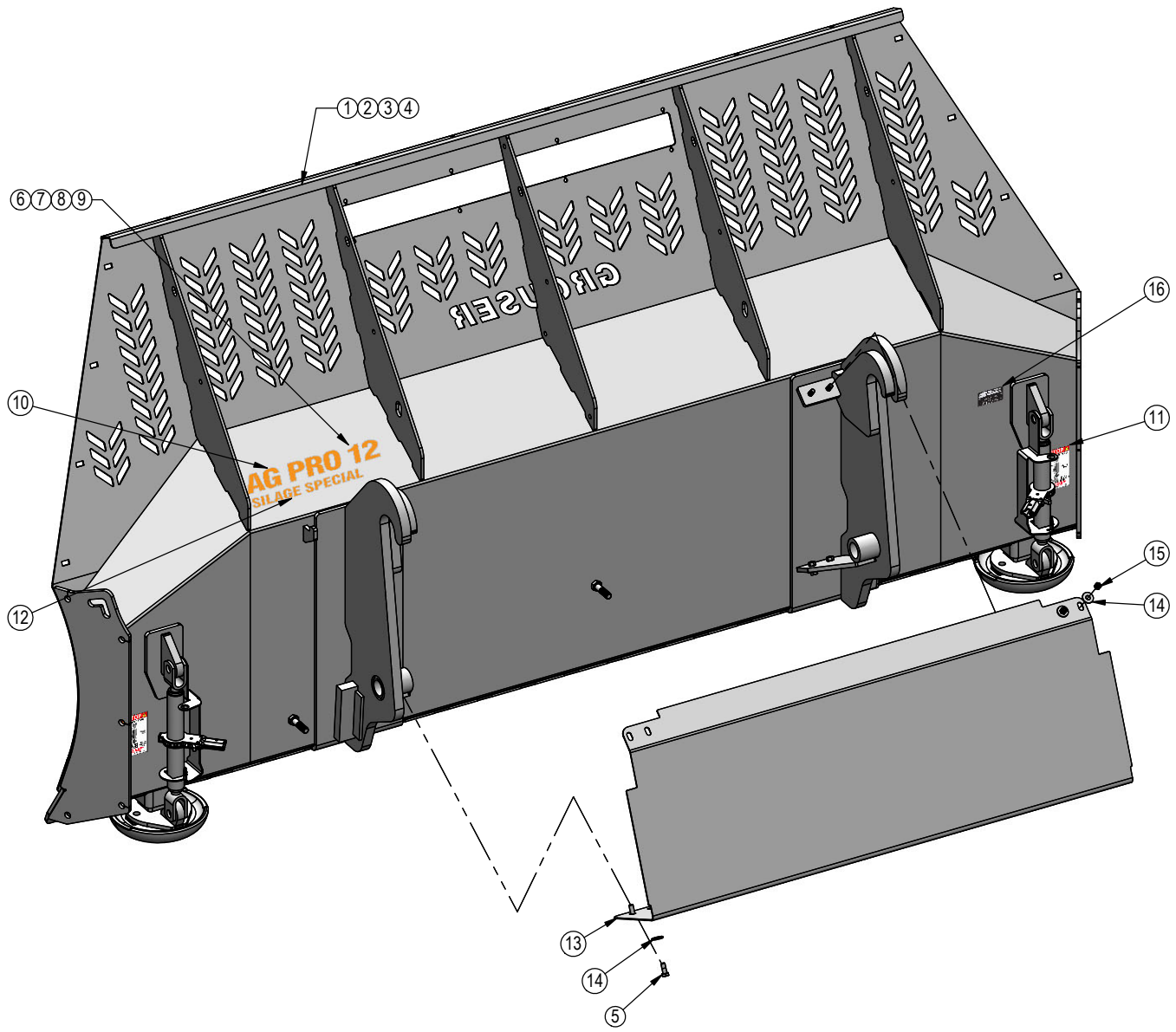
ITEM NO.	QTY.	PART NO.	DESCRIPTION
25	1	25-19657	Multi-Coupling Plate - 2 Port Parking Station
26	2	25-19865	Multi-Coupling Plate - Female Coupler
27	1	25-19869	Multi-Coupling Plate - 2 Port - Mobile
28	2	25-40407	Multi-Coupling Plate - Snap Ring
29	2	26-34747	4 x 8 Cylinder w/ Clevis Ends
30	2	27-2409	Pinch Area, Hand
31	2	27-9503	Pinch Point, Foot
32	2	31-11492-8-8	Male JIC x Female JIC Swivel Nut Elbow 45°
33	2	31-34030	Bulkhead Run Tee JIC
34	4	31-34040	Straight JIC x O-Ring
35	2	31-34050	Straight Thread Elbow 90° JIC x O-Ring
36	1	32-43725	Tilt Frame Weld
37	1	34-17799	Latch Spring
38	12	34-18888-GR	-12 Green - Spiral Band
39	1	35-30021	36" x 3/8" -8JIC/-8JIC Hose
40	1	35-30033	72" x 3/8" -8JIC/-8JIC Hose
41	2	35-30035	78" x 3/8" -8JIC/-8JIC Hose
42	1	35-30036	80" x 3/8" -8JIC/-8JIC Hose
43	1	35-30079	40" x 3/8" -8JIC/-8JIC Hose
44	1	39-14663	Latch
45	1	39-3072	Rubber Handle
46	1	39-42050	Handle Weld
47	4	43-13580	Pin Weld
48	2	43-15712	3/4" x 3-1/4" Pin with Hitch Pin Clip
49	2	43-18486	Ag Pro SS QA Lock Pin
50	1	44-42049	Link, Handle to Bell Crank
51	4	44-8490	Spacer
52	1	45-40870-L	SS Bolt in Quick Attach - Left
53	1	45-40870-R	SS Bolt in Quick Attach - Right
54	2	57-20740	1/4" Flat Washer CZ
55	2	57-20742	3/8" Flat Washer CZ
56	4	57-20744	1/2" Flat Washer CZ
57	4	57-20759	1" SAE Hardened Flat Washer - 2" OD
58	2	57-20794	1/2" Fender Washer (2.00" OD x .500" ID x .125")
59	16	57-20819	1" Flat Washer Heavy Duty Gr 8 (USS) YZ
60	4	57-40408	3/8" Flat Nylon Washer
61	6	70-20604	1/2" Hex Center Lock Nut Gr 5 NC CZ
62	2	70-20607	3/4" Hex Center Lock Nut Gr 5 NC CZ
63	1	70-20610	1/4" Nylock Hex Nut Gr 5 NC CZ
64	1	70-20611	5/16" Nyloc Hex Nut Gr 5 NC CZ
65	2	70-20612	3/8" Nyloc Hex Nut Gr 5 NC CZ
66	2	70-20807	3/4" Hex Jam Nut NF CZ
67	8	70-20999	1" Hex Top Lock Nut Gr 8 NC YZ
68	2	75-40869	Link, Bell Crank To Pin



DETAIL B

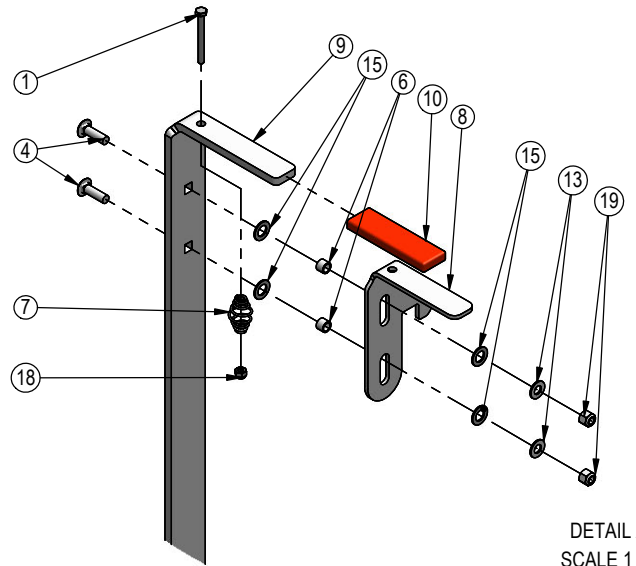
DWG. NO.: 43800

ITEM NO.	PART NO.	12' QTY.	14' QTY.	16' QTY.	18' QTY.	DESCRIPTION
1	15-19560-12	1	-	-	-	Ag Pro SS Blade - 12'
2	15-19560-14	-	1	-	-	Ag Pro SS Blade - 14'
3	15-19560-16	-	-	1	-	Ag Pro SS Blade - 16'
4	15-19560-18	-	-	-	1	Ag Pro SS Blade - 18'
5	16-20125	4	4	4	4	1/2" x 1-1/4" Hex Bolt Gr 5 NC
6	27-14842-12	1	-	-	-	12' Decal
7	27-14842-14	-	1	-	-	14' Decal
8	27-14842-16	-	-	1	-	16' Decal
9	27-14842-18	-	-	-	1	18' Decal
10	27-14845	1	1	1	1	Ag Pro Blade Decal
11	27-40917	2	2	2	2	Ratchet Holder Storage Decal
12	27-40956	1	1	1	1	Silage Special Decal
13	44-19580	1	1	1	1	Cover Plate
14	57-20744	8	8	8	8	1/2" Washer
15	70-20604	4	4	4	4	1/2" Center Lock Hex Nut
16	NA	1	1	1	1	Grouser Dozer Metal Serial Tag

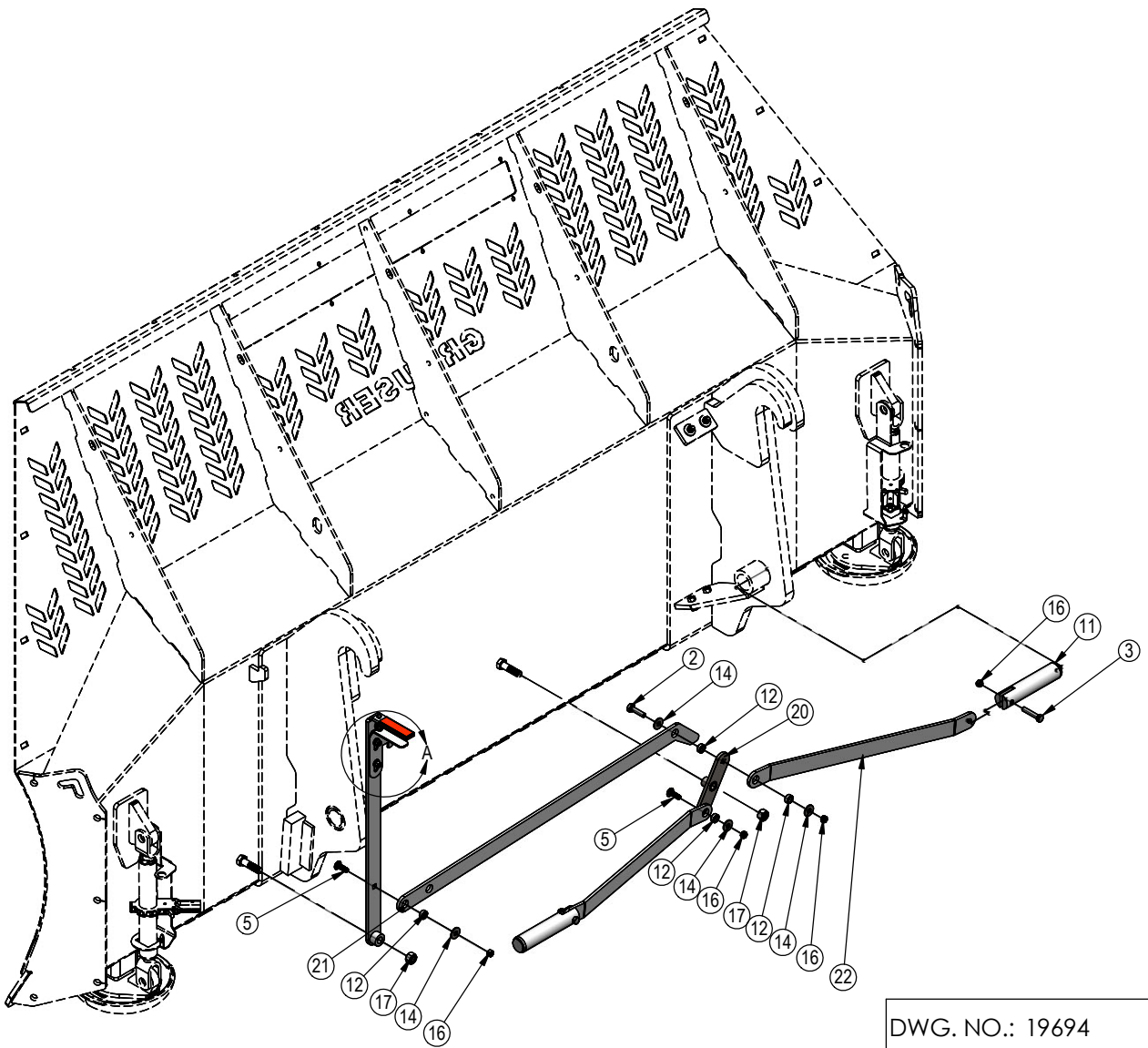


DWG. NO.: 40915-XX-A

ITEM NO.	Qty.	PART NO.	DESCRIPTION
1	1	16-20011	1/4" x 2-3/4" Hex Bolt Gr 5 NC
2	1	16-20128	1/2" x 2" NC Hex Bolt Gr. 5"
3	2	16-20130	1/2" x 2-1/2" Hex Bolt Gr 5 NC
4	2	16-21065	3/8" x 1-1/4" Carriage Bolt Gr 5 NC
5	2	16-21126	1/2" x 1-1/2" Carriage Bolt Gr 5 NC
6	2	19-40440	.378" ID x .503" OD x .375" Spacer
7	1	34-17799	Latch Spring
8	1	39-14663	Latch
9	1	39-14665	Handle Weld
10	1	39-3072	Rubber Handle
11	2	43-18486	AG Pro SS QA Lock Pin
12	4	44-8490	Spacer
13	2	57-20742	3/8" Flat Washer
14	4	57-20744	1/2" Washer
15	4	57-40408	3/8" Flat Nylon Washer
16	5	70-20604	1/2" Center Lock Hex Nut
17	2	70-20607	3/4" Center Lock Hex Nut Gr 2 NC
18	1	70-20610	1/4" Nyloc Hex Nut Gr 5 NC
19	2	70-20612	3/8" Nyloc Hex Nut Gr 5 NC
20	1	75-18480	Bell Crank Weld
21	1	75-19575	Plate, Link
22	2	75-19576	Link, Bell Crank To Pin

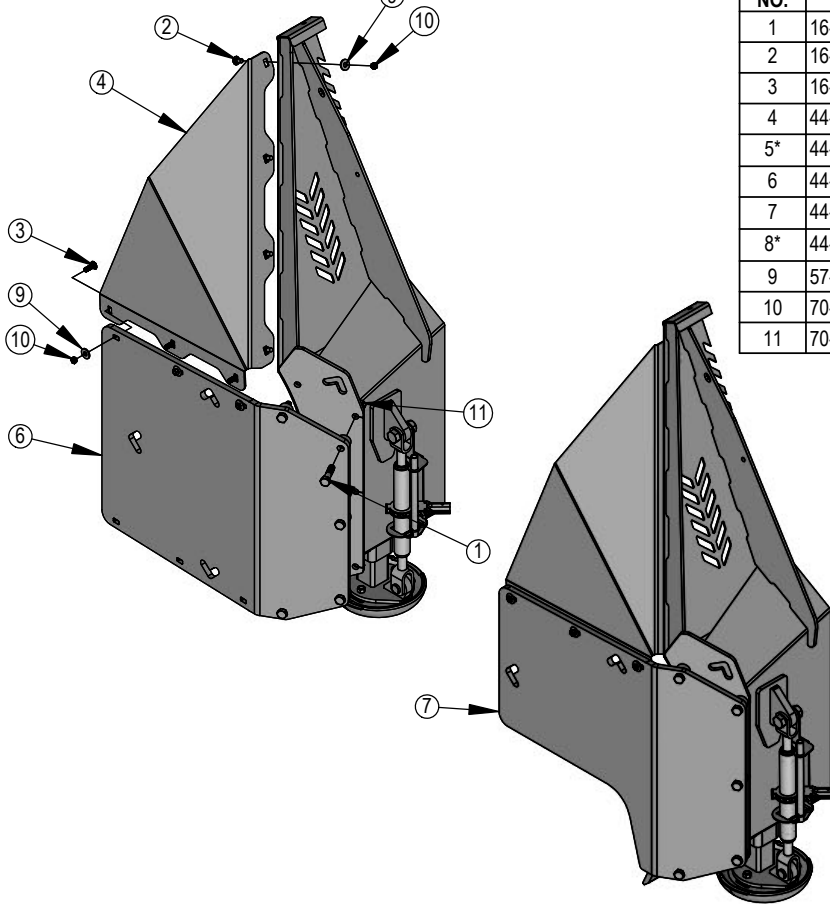


DETAIL A
SCALE 1 : 8



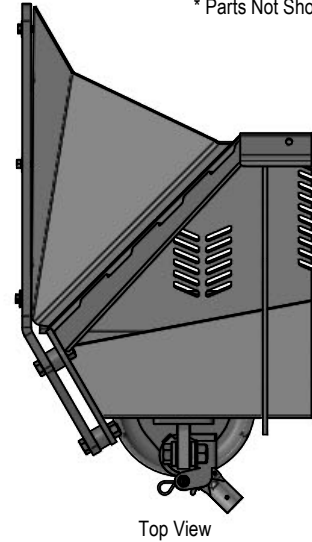
DWG. NO.: 19694

End Plates



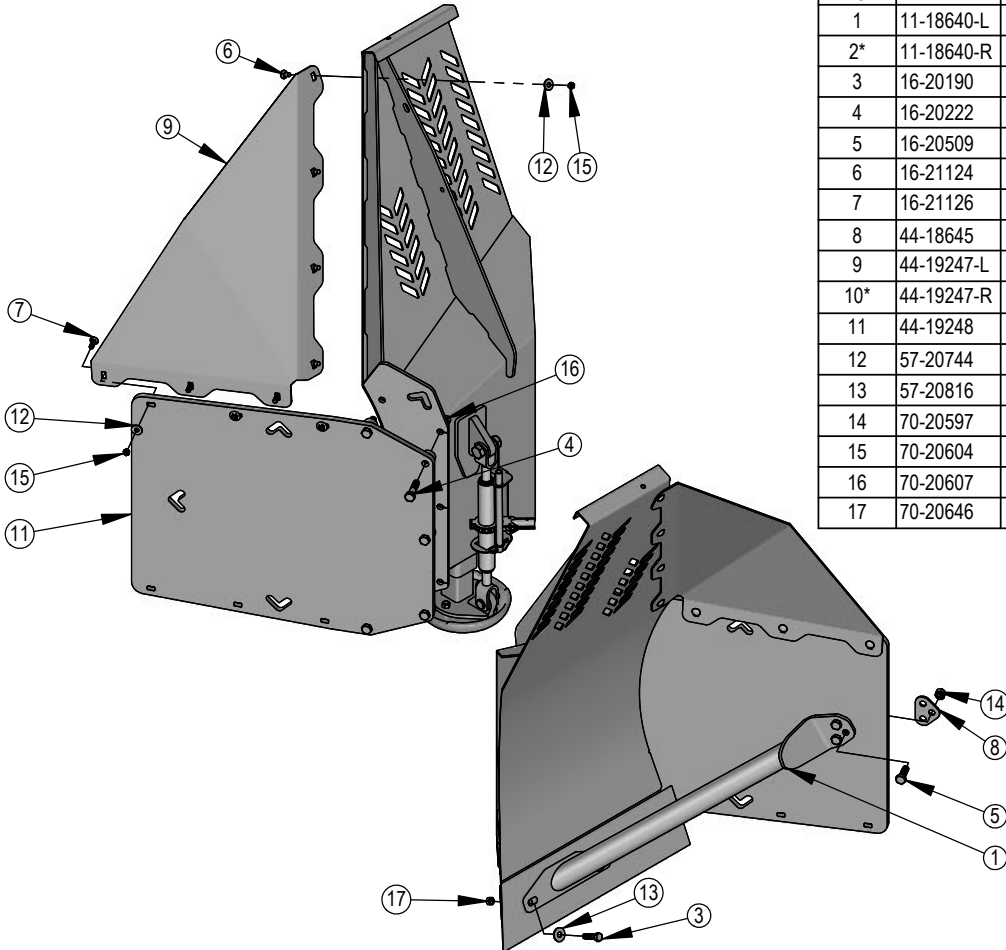
ITEM NO.	PART NO.	19265-K Qty.	41710-K Qty.	DESCRIPTION
1	16-20222	10	10	3/4" x 3" Hex Bolt Gr.5 NC
2	16-21124	8	8	1/2" x 1" Carriage Bolt Gr 5 NC
3	16-21126	6	6	1/2" x 1-1/2" Carriage Bolt Gr 5 NC
4	44-19262-L	1	1	Box End Plate, Top
5*	44-19262-R	1	1	Box End Plate, Top
6	44-19265	2	-	Ag Pro SS Box End Plates
7	44-41710-L	-	1	Ag Pro SS Silage End Plates, Left
8*	44-41710-R	-	1	Ag Pro SS Silage End Plates, Right
9	57-20744	14	14	1/2" Washer
10	70-20604	14	14	1/2" Center Lock Hex Nut
11	70-20607	10	10	3/4" Center Lock Hex Nut Gr 2 NC

* Parts Not Shown



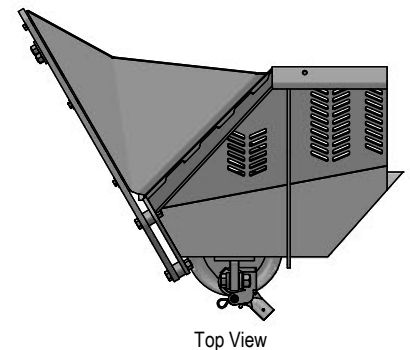
Top View

U'd End Plates



ITEM NO.	PART NO.	19248-K Qty.	DESCRIPTION
1	11-18640-L	1	End Plate Brace
2*	11-18640-R	1	End Plate Brace
3	16-20190	4	5/8" X 2-1/2" Gr.5 Hex Bolt
4	16-20222	10	3/4" x 3" Hex Bolt Gr.5 NC
5	16-20509	6	3/4" x 2-1/4" Hex Bolt Gr 8 NC
6	16-21124	8	1/2" x 1" Carriage Bolt Gr 5 NC
7	16-21126	6	1/2" x 1-1/2" Carriage Bolt Gr 5 NC
8	44-18645	2	Lift Hook Washer
9	44-19247-L	1	U'd End Plate, Top
10*	44-19247-R	1	U'd End Plate, Top
11	44-19248	2	Ag Pro SS U'd End Plates
12	57-20744	14	1/2" Washer
13	57-20816	4	5/8" Flat Washer Grade 8 (USS) Plated
14	70-20597	6	3/4" Hex Nut Gr 8 NC
15	70-20604	14	1/2" Center Lock Hex Nut
16	70-20607	10	3/4" Center Lock Hex Nut Gr 2 NC
17	70-20646	4	5/8" Hex Top Lock Nut Gr 5 NC

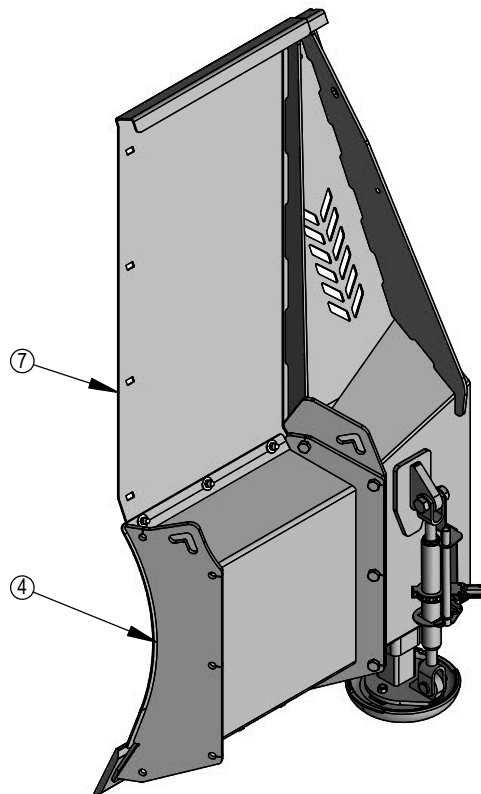
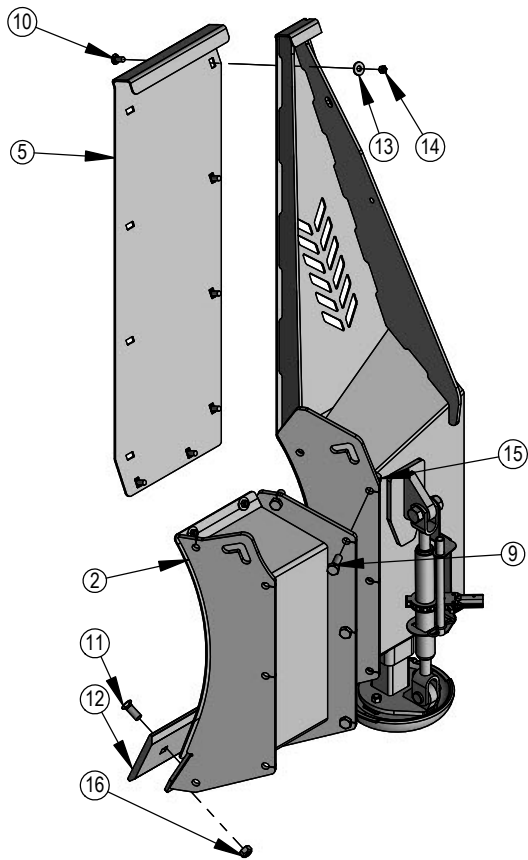
* Parts Not Shown



Top View

End Extensions

ITEM NO.	PART NO.	40925-1-A Qty.	40925-2-A Qty.	DESCRIPTION
1*	15-17525-R-1	1	-	1' End Extensions - Right
2	15-17525-L-1	1	-	1' End Extensions - Left
3*	15-17525-R-2	-	1	2' End Extensions - Right
4	15-17525-L-2	-	1	2' End Extensions - Right
5	15-19305-L	1	-	1' End Ext. Top Extensions - Left
6*	15-19305-R	1	-	1' End Ext. Top Extensions - Right
7	15-19306-L	-	1	2' End Ext. Top Extensions - Left
8*	15-19306-R	-	1	2' End Ext. Top Extensions - Right
9	16-20218	10	10	3/4" x 2" Hex Bolt Gr.5 NC
10	16-21125	12	14	1/2" x 1-1/4" Carriage Bolt Gr 5 NC
11	16-21748	4	8	3/4" x 2" Plow Bolt Gr 8 NC
12	29-11118-1	2	-	1' - 3/4" x 8" Cutting Edge
12	29-11118-2	-	2	2' - 3/4" x 8" Cutting Edge
13	57-20744	12	14	1/2" Washer
14	70-20604	12	14	1/2" Center Lock Hex Nut
15	70-20607	10	10	3/4" Center Lock Hex Nut Gr 2 NC
16	70-20647	4	8	3/4" Hex Top Lock Nut Gr 5 NC

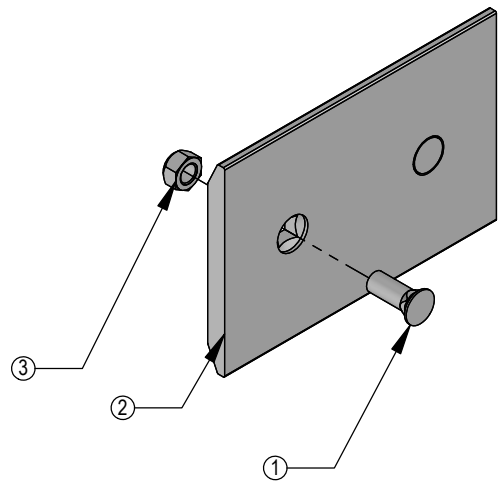


* Parts Not Shown

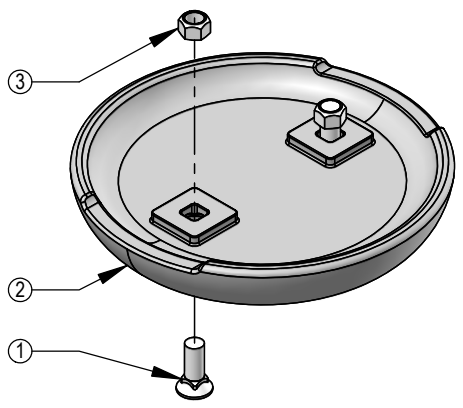
Replacement Wear Parts

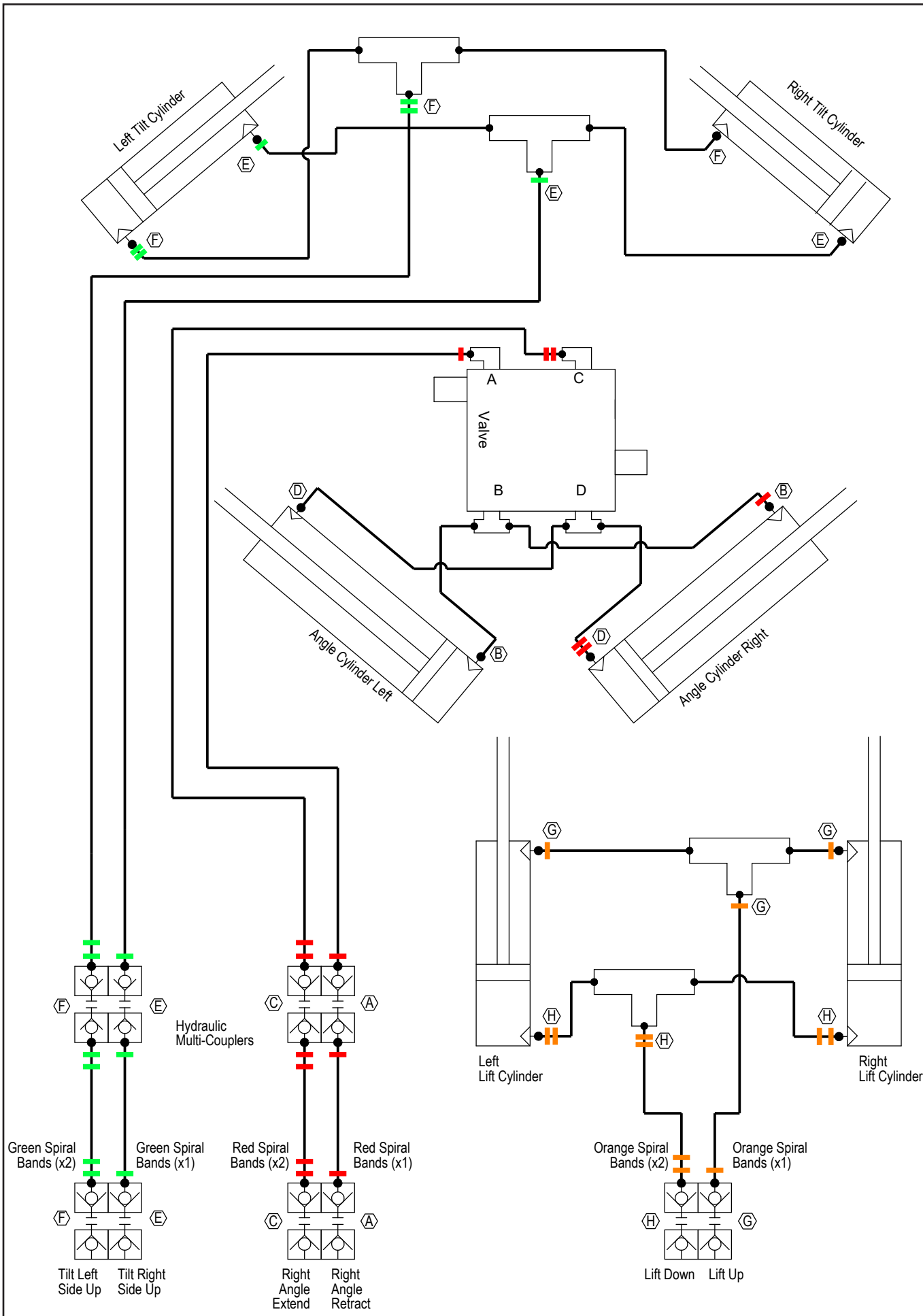
ITEM NO.	PART NO.	DESCRIPTION	11118-1K QTY.	11118-2K QTY.	11118-3K QTY.	11118-4K QTY.	11118-5K QTY.	11118-6K QTY.	11118-7K QTY.	11118-8K QTY.
1	16-21748	3/4" x 2" Plow Bolt Gr 8 NC	2	4	6	8	10	12	14	16
2	29-11118-1	1' - 3/4" x 8" Cutting Edge	1	-	-	-	-	-	-	-
2	29-11118-2	2' - 3/4" x 8" Cutting Edge	-	1	-	-	-	-	-	-
2	29-11118-3	3' - 3/4" x 8" Cutting Edge	-	-	1	-	-	-	-	-
2	29-11118-4	4' - 3/4" x 8" Cutting Edge	-	-	-	1	-	-	-	-
2	29-11118-5	5' - 3/4" x 8" Cutting Edge	-	-	-	-	1	-	-	-
2	29-11118-6	6' - 3/4" x 8" Cutting Edge	-	-	-	-	-	1	-	-
2	29-11118-7	7' - 3/4" x 8" Cutting Edge	-	-	-	-	-	-	1	-
2	29-11118-8	8' - 3/4" x 8" Cutting Edge	-	-	-	-	-	-	-	1
3	70-20647	3/4" Hex Top Lock Nut Gr 5 NC	2	4	6	8	10	12	14	16

ITEM NO.	PART NO.	DESCRIPTION	11118-12K QTY.	11118-14K QTY.	11118-16K QTY.	11118-18K QTY.	11118-20K QTY.
1	16-21748	3/4" x 2" Plow Bolt Gr 8 NC	24	28	32	36	40
2	29-11118-4	4' - 3/4" x 8" Cutting Edge	3	2	4	3	5
2	29-11118-3	3' - 3/4" x 8" Cutting Edge	-	2	-	2	-
3	70-20647	3/4" Hex Top Lock Nut Gr 5 NC	24	28	32	36	40



ITEM NO.	PART NO.	DESCRIPTION	15458-1K QTY.	15458-K QTY.
1	16-21666	5/8" x 1-3/4" Plow Bolt Gr 5 NC	2	4
2	50-15458	12" Round Mushroom Skid Shoe	1	2
3	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	2	4





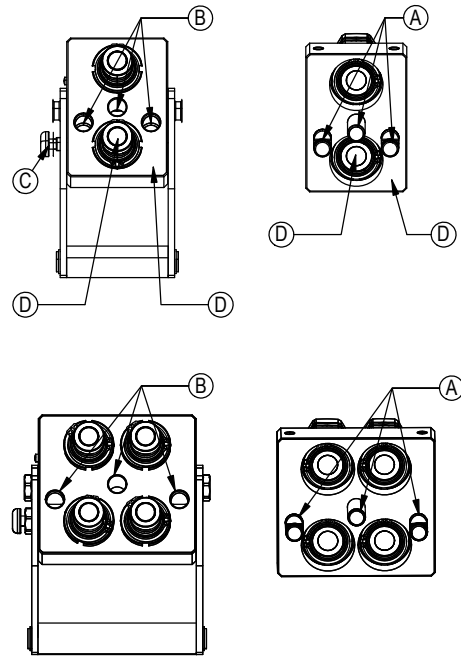
Tractor Service Valve

Before Each Use:

1. Disconnect the mobile half from the parking station and the cap from the fixed half.
2. Check that there is no contamination (salt, sand, dirt, etc.):
 - A. On the pins.
 - B. Inside the cam.
 - C. In the locking mechanism area.
 - D. On the face of the plates and couplings.
3. In case of contamination, remove it with a cloth and/or compressed air.
4. Check that there is still a lubricant/anti-corrosion (grease or silicone - see Note 1):
 - A. On the pins.
 - B. Inside the cam.
 - C. In the locking mechanism area.
5. Connect the mobile and fixed halves together.

Fixed Half

Mobile Half



After Each Use:

1. Disconnect the mobile half from the fixed half.
2. Clean all contamination (salt, sand, dirt, etc.) from the following areas:
 - A. On the pins.
 - B. Inside the cam.
 - C. In the locking mechanism area.
 - D. On the face of the plates and couplings.

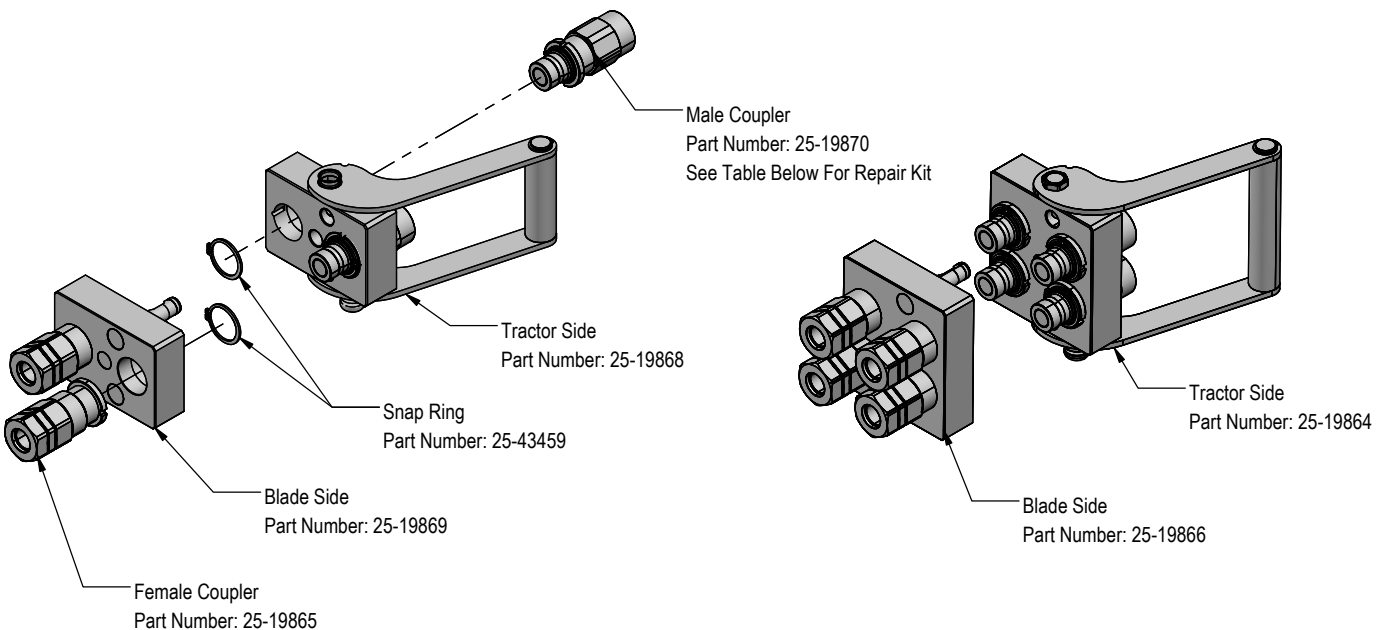
*Use a cloth or compressed air. It is advised to not use water to clean these surfaces
3. Apply a lubricant/anti-corrosion (grease or silicone - see Note 1):
 - A. On the pins.
 - B. Inside the cam.
 - C. In the locking mechanism area.
4. Connect the cap to the fixed half and the mobile half to the parking station.

Note 1:

When sand and salt are present, or the plates under go a washdown, a heavy duty silicone spray lubricant should be used to replace grease from the factory. The lubricant should help protect from corrosion without collecting dust and contaminants, and will resist washing off when exposed to water.

Recommended Lubricant Brands:

Fluid Film (Aerosol or Non-Aerosol), LPS-2 Heavy Duty Lubricant, or CRC 3-36.



PN	Description
25-43425	Male Coupler O-Ring Repair Kit

Cleaning The Male Interface Seal:



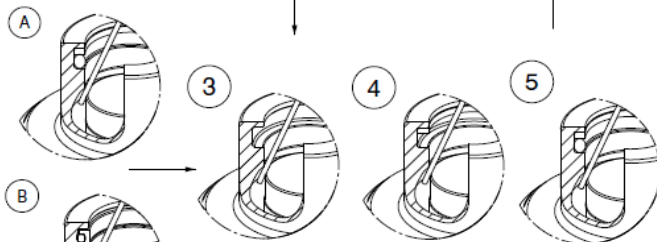
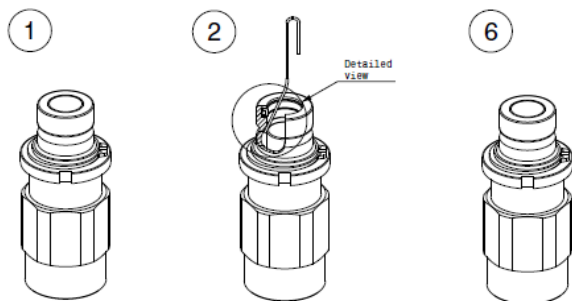
1. Make sure the coupling is securely fastened into the plate or place in a vice.
2. Using a blunt, non-marring tool, depress the valve face until the seal is exposed. Insert a bent metal wire between the valve face and the body of the coupling. Use caution not to damage or scratch the seal when inserting the wire.
3. Inspect the seal and interior surfaces for contamination.
4. In case of contamination, carefully wipe surfaces with a soft cloth, or use compressed air to blow the contamination out. Do Not press hard on the seal as contamination can scratch the seal surface.
5. Using a non-marring tool, depress the valve face and remove the metal wire. Release the valve to the flush position.

Cleaning The Female Bushing:

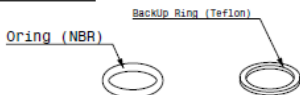


1. Make sure the coupling is securely fastened into the plate or place in a vice.
2. Using a non-marring tool, depress the outer ring to expose the bushing. There is no need to expose the valve seal, so stop pressing before the valve is opened.
3. Inspect the interior body and bushing surfaces for contamination.
4. In case of contamination, carefully wipe surfaces with a soft cloth, or use compressed air to blow the contamination out.
5. Release the outer ring so that it returns to the flush position.

MALE FAP - REPAIR KIT INSTRUCTIONS



PN SEAL KIT:



DISASSEMBLING STEPS (see figures)

1. Place the coupling in a vice.
2. Bend positioning clip as shown. Using a blunt, non marring object, depress valve face until seals are exposed. Insert the positioning clip between valve face and body, captivating the valve face.
3. Using an O-ring pick or similar device, remove the seal from retaining groove. Clean properly the retaining groove with a clean cloth.

Note: Some M FAP are originally assembled with different seal technologies (see figures A and B) but both used O-ring and backUp ring as replacement kit.

ASSEMBLING STEPS (see figures)

4. Insert the backup ring (4) in the seat and even with the use of a non sharpen tool. Place the BackUp ring on the superior shoulder of the seat in order to leave space for the O-ring (see figure 4).
5. Lubricate the O-ring with a fluid compatible with the seals compound. **Warning: using non compatible fluid would compromise the efficiency of the coupling.**
6. Push the piston with a blunt, non marring tool and take the metal clip out. Release the piston.

FUNCTIONING CHECK

Assemble the male coupling with the female in order to check the functioning and check for leaks.

BY REPLACING THE SEALS, YOU REMOVE THE WARRANTY AND BECOME RESPONSIBLE FOR THE SAFETY AND THE EFFICIENCY OF THE COUPLING!

Improvements

Grouser Products Inc. is continually striving to improve its products. We reserve the right to change prices, specification, or equipment at any time without notice. We also reserve the right to make improvements or changes when it becomes practical and possible to do so without incurring any obligation to make changes or additions to the equipment sold previously.

Warranty

Grouser Products warrants to the original purchaser of each item that the product be free from defects in material and workmanship under normal use and service for a period of **two (2) years for Agriculture Series Blades and one (1) year for Heavy Duty Series from date of original retail delivery.**

The obligation of the consumer under this warranty:

1. To read the operators manual and to operate, lubricate, maintain and store equipment in accordance with the instructions listed in the operators manual.
2. To inspect equipment and if any part needs repair or replacement when continued use would cause damage or wear to other parts or safety.
3. All equipment or parts claimed to be defective in material or workmanship must be made available for inspection at the place of business of a dealer authorized to handle the equipment covered by this warranty, or, upon request by Grouser Products, shipped to the Grouser Products factory in West Fargo, North Dakota.

The obligation of the dealer under this warranty:

1. Complete warranty registration form and submit within 30 days of sale.
2. Contact Grouser Products for authorization prior to performing any warranty repairs or part replacement.
3. Complete warranty request form and submit with photos and supporting documentation.

The obligation of Grouser Products under this warranty:

1. Repair or replace, any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.
2. Grouser Products will cover the cost of parts and ground shipping at dealer invoice only.
3. Grouser Products shall have no obligation to bear the cost of labor or transportation in connection with replacement or repair of any such defective parts.

This warranty does not cover:

1. Depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments.
2. Improper maintenance including lack of proper lubrication, or improper use. Including loose bolts, nuts, or fitting due to over tightening or vibration after 20 hours of operation.
3. Repairs or alterations without authorization from a Grouser Products representative.
4. Grouser Products shall have no liability if the equipment has been altered or reworked without the written authorization of Grouser Products.

Grouser Products' parts, which are furnished under this warranty and properly installed, shall be warranted to the same extent as the original parts under this warranty if, and only if, such parts are found to be defective within the original warranty period covering the original equipment.

NO EMPLOYEE OR REPRESENTATIVE OF GROUSER PRODUCTS IS AUTHORIZED TO CHANGE THE WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY.

Contact Us

As always, if you have any questions about your system or other products made by Grouser, feel free to contact us.



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