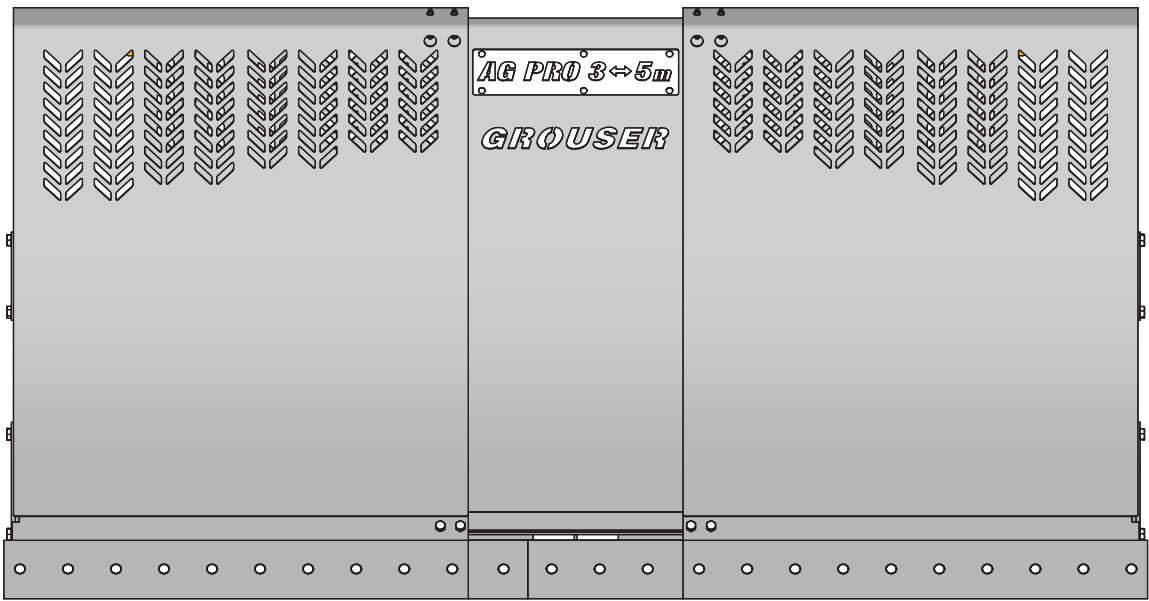




Ag Pro 3-5

Owner's Manual & Parts Book



Grouser Products
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Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

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Safety Precautions, Torque Specifications & Pre-Installation	3
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Thank you for your recent purchase of a Grouser Ag Pro 3-5 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 3-5 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 toll-free 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 3-5 Dozer:

1. The Ag Pro 3-5 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 3-5 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 3-5 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 3-5:

1. Thoroughly clean the Ag Pro 3-5 Dozer before storage. Use paint where necessary to prevent rust.
2. Check the Ag Pro 3-5 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.

1.5

2

2.5 2.5

2

1.5

PN: 27-18937-XX

PN: 27-18937-XX

AG PRO

3-5

PN: 27-18936

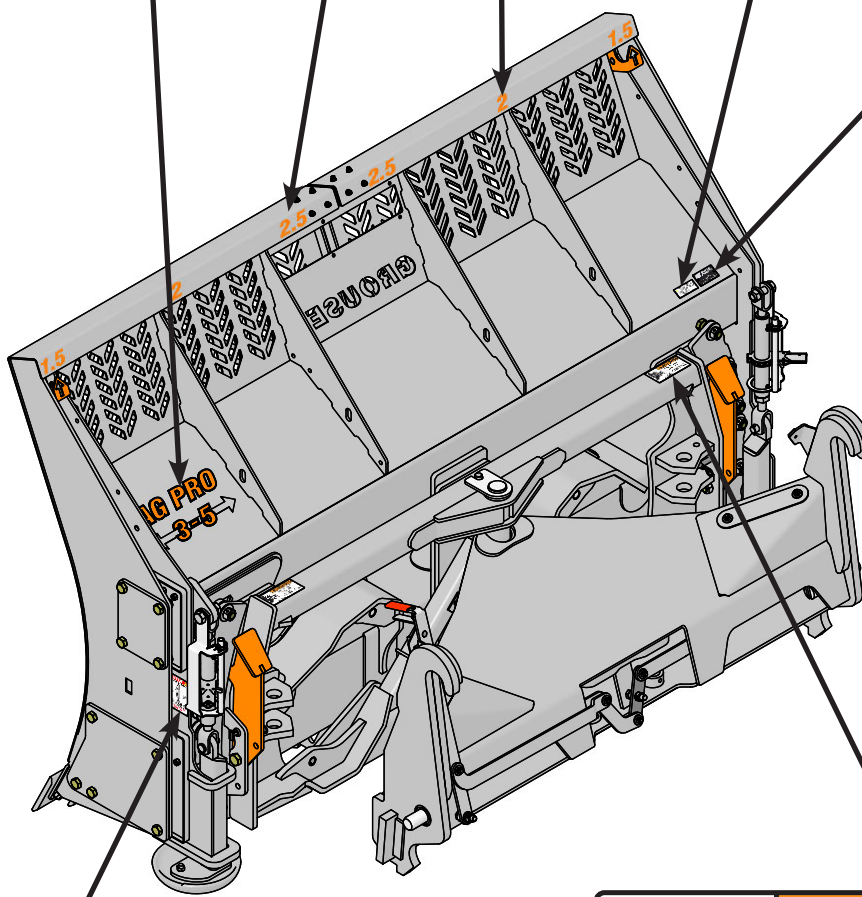
WARNING: This product can expose you to chemicals including lead and lead compounds, mineral oils, and phthalates which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov 27-40962R1

PN: 27-40962



Serial Number Tag



STOP

PROPER RATCHET STORAGE

Handle
 Ratchet Handle
 Ratchet Keeper

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
 27-40917R1

PN: 27-40917

WARNING

PINCH AREA
 Keep away

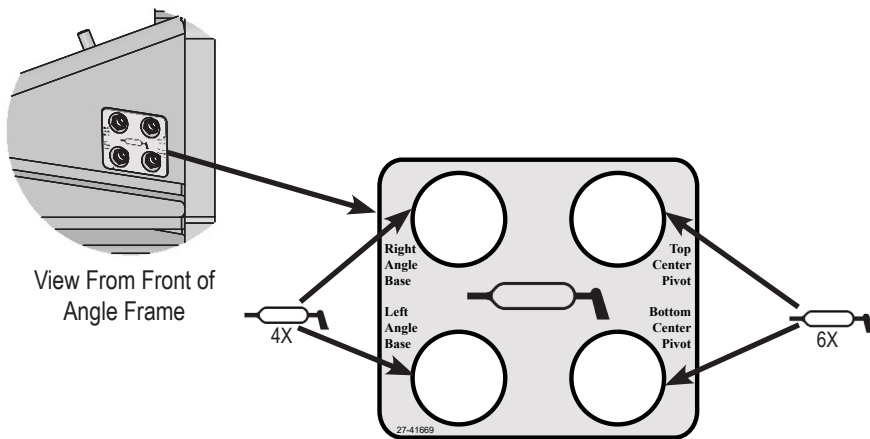
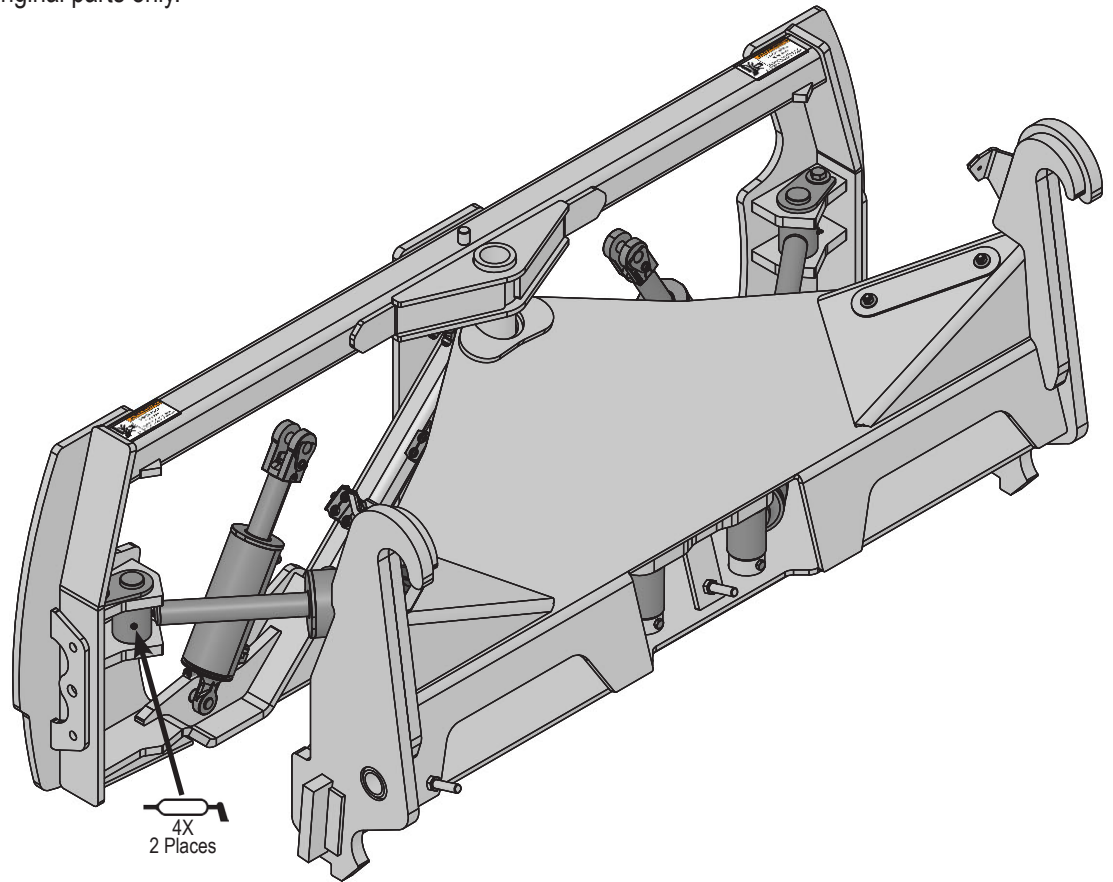
Failure to comply could result in death or serious injury.

27-2409

PN: 27-2409

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 3-5 Dozer. For cutting edge information, see pages 10-11 .
- Check hydraulic cylinders and hoses for damage or leaks. For replacement parts, see hydraulic pages 14-19.
- 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 22-23.
- Inspect all tilt-ways for wear. See page 8 for tilt plate adjustment.
- Replace parts with original parts only.



PN: 27-41669

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 7.

Tilt Function:

Note: Damage will incur if blade stands are down during blade operation.

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.

Blade Width Function:

1. Loosen the fittings on the rod and base end of the right cylinder.
2. Actuate the blade width function to extend the right cylinder and supply oil to the base end of the right 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.
4. Fully extend the right cylinder.
5. Actuate the function in the opposite direction.
6. When oil starts to flow from the rod end fitting, stop oil flow, and tighten the remaining fittings on the cylinders.
7. Continue to actuate the cylinder until cylinder is fully retracted.
8. Cycle the right cylinder in and out 5 more times.
9. Repeat Steps 1-8 for the left cylinder
10. 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.

NOTE: Prior to connecting the blade, clean the fixed and mobile multi-couplers (refer to pages 22-23). Contamination causes leaks and contamination is not warrantable.

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 #12-13 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 22-23 for cleaning and connecting information.
7. Route hoses between hose guide and quick attach (**See Picture Below**).
8. If initial startup, refer to Page 6 before operating any function of the blade.

Note: Damage will incur if blade stands are down during blade operation.

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.



After multi-coupler is connected, verify that hoses are between quick attach and hose guide bar.

Skid Shoe Adjustment:

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

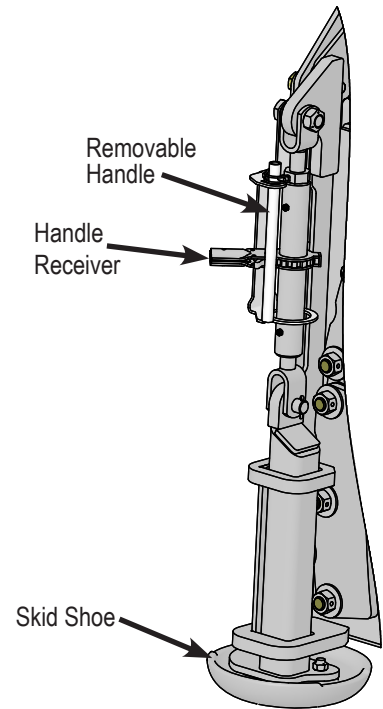


Figure 1

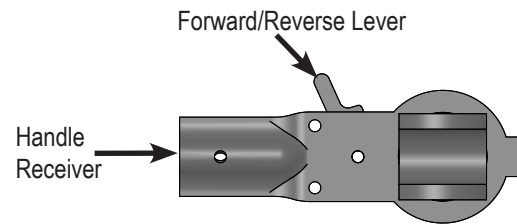


Figure 2

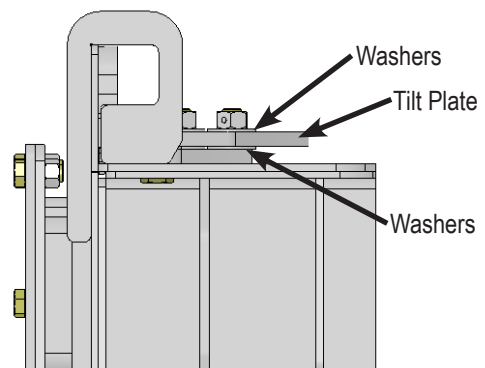
Preferred Method:

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

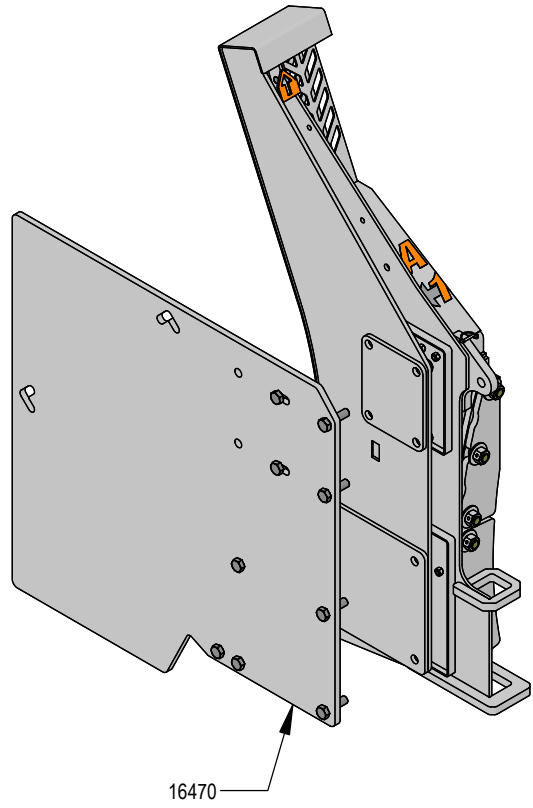
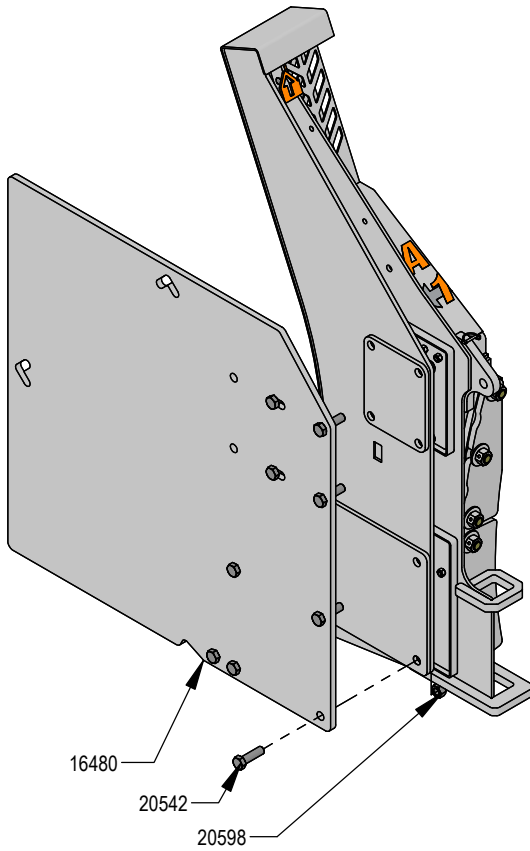
Non-Preferred Method:

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

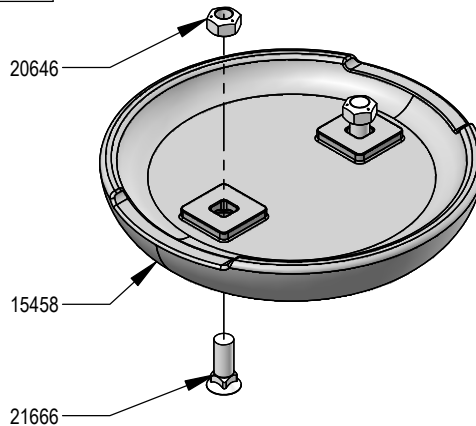
1. The non-preferred blade position for adjusting the tilt plates is the blade in the upright position.
2. Remove the skid shoe mounts to obtain better access to bottom tilt plate nuts.
3. Remove the 3 nuts from the top right tilt plate and the bottom left tilt plate.
4. Add or remove washers as needed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



PART NO.	16480-K QTY.	16470-K/QTY.	DESCRIPTION
16480	2	-	Silage Box End Plate
16470	-	2	Box End Plate
20598	18	18	7/8" Hex Nut Gr 8 NC CZ
20542	13	13	7/8" X 3" Hex Bolt Gr 8 NC YZ



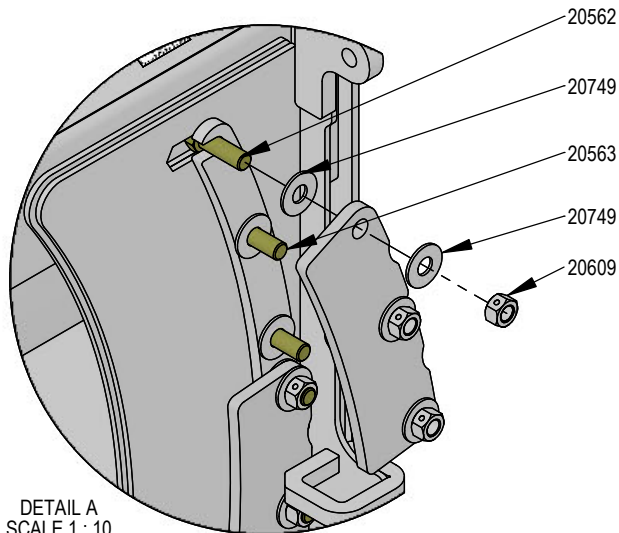
PART NO.	15458-1K QTY.	15458-K QTY.	DESCRIPTION
21666	2	4	5/8" X 1-3/4" Plow Bolt Gr 5 NC (#3 Flat Head)
15458	1	2	12" Round Mushroom Skid Shoe
20646	2	4	5/8" Hex Top Lock Nut Gr 5 NC CZ



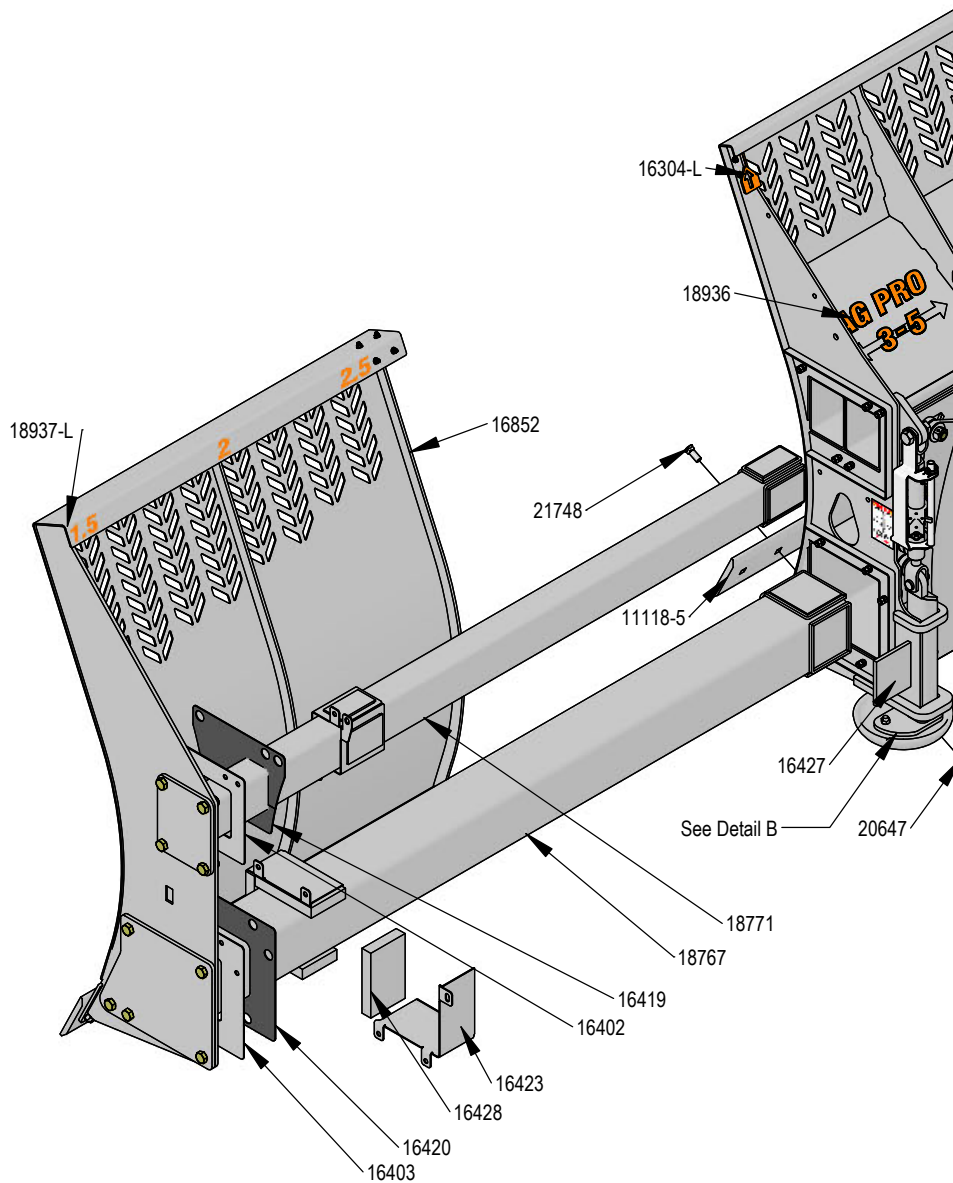
Ag Pro 3-5 Blade

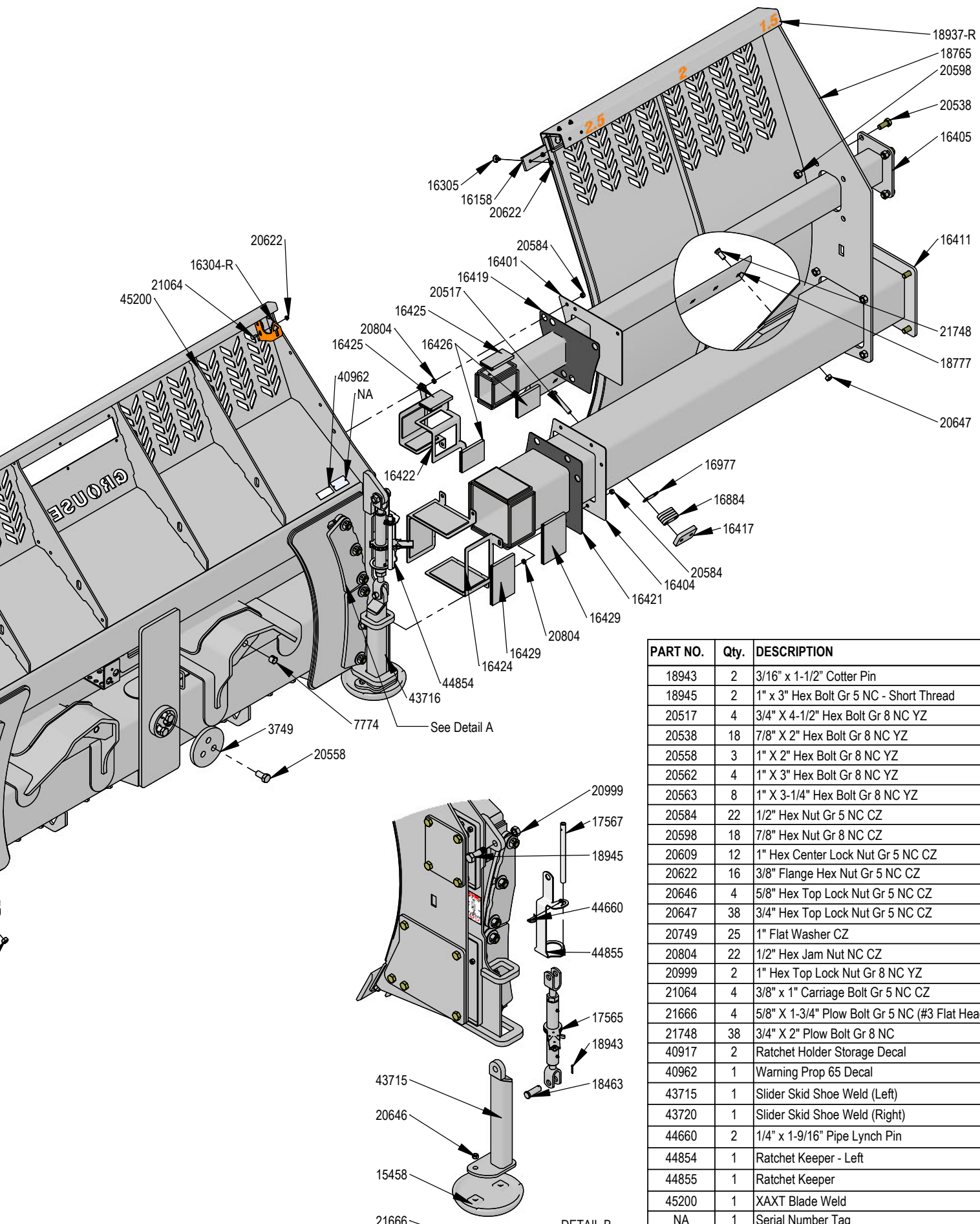
PART NO.	Qty.	DESCRIPTION
3749	1	Backdrag Brace Plate
7774	2	1" x 1" Spring Bushing
11118-4	1	4' - 3/4"x 8" Cutting Edge
11118-5	1	5' - 3/4"x 8" Cutting Edge
15458	2	12" Round Mushroom Skid Shoe
16158	6	Bearing, 2.625 x 6.00 W/Holes
16304-L	1	Bracket, Left Location
16304-R	1	Bracket, Right Location
16305	12	3/8" x 1.25" Flanged Elevator Bolt
16401	1	Plate, Top Cover Right
16402	1	Plate, Top Cover Left
16403	1	Plate, 8" Cover
16404	1	Plate, 10" Cover
16417	2	Plate, Slider
16419	2	Top Seal
16420	1	8" Tube Seal
16421	1	10" Tube Seal
16422	4	Top Outer Retainer
16423	2	8" Outer Retainer
16424	2	10" Outer Retainer
16425	8	Top Narrow UHMW
16426	8	Top Wide UHMW
16427	4	8" Inner UHMW
16428	4	8" Outer UHMW
16429	8	10" UHMW
16525	2	Standoff
16977	6	Plate, Slider Standoff Shim
17565	2	Ratchet Jack
17567	2	Handle, Ratchet Jack
18299	4	Tilt Plate
18463	2	1" x 2.75" Pin
18760-L	1	3-5 Slider End Weld - Left
18760-R	1	3-5 Slider End Weld - Right
18768	1	8 x 8 Tube Weld, 3-5 Slider
18770	1	10 x 10 Tube Weld, 3-5 Slider
18772	2	4 x 6 Tube Weld, 3-5 Slider
18777	2	58" - 3/4 x 8 Cutting Edge
18936	1	Ag Pro 3-5 Decal
18937-L	1	Ag Pro 3-5 Width Decal - 1.5-2.5 (Left Side)
18937-R	1	Ag Pro 3-5 Width Decal - 2.5-1.5 (Right Side)

* Part Not Shown



DETAIL A
SCALE 1 : 10
PARTS HIDDEN
FOR CLARITY





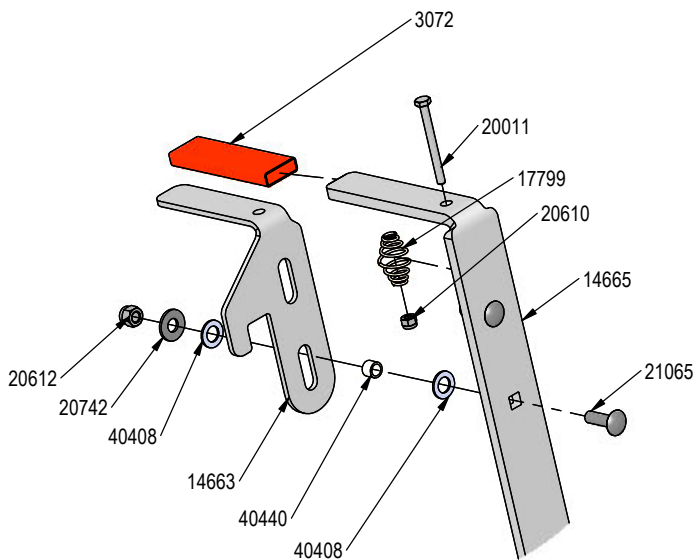
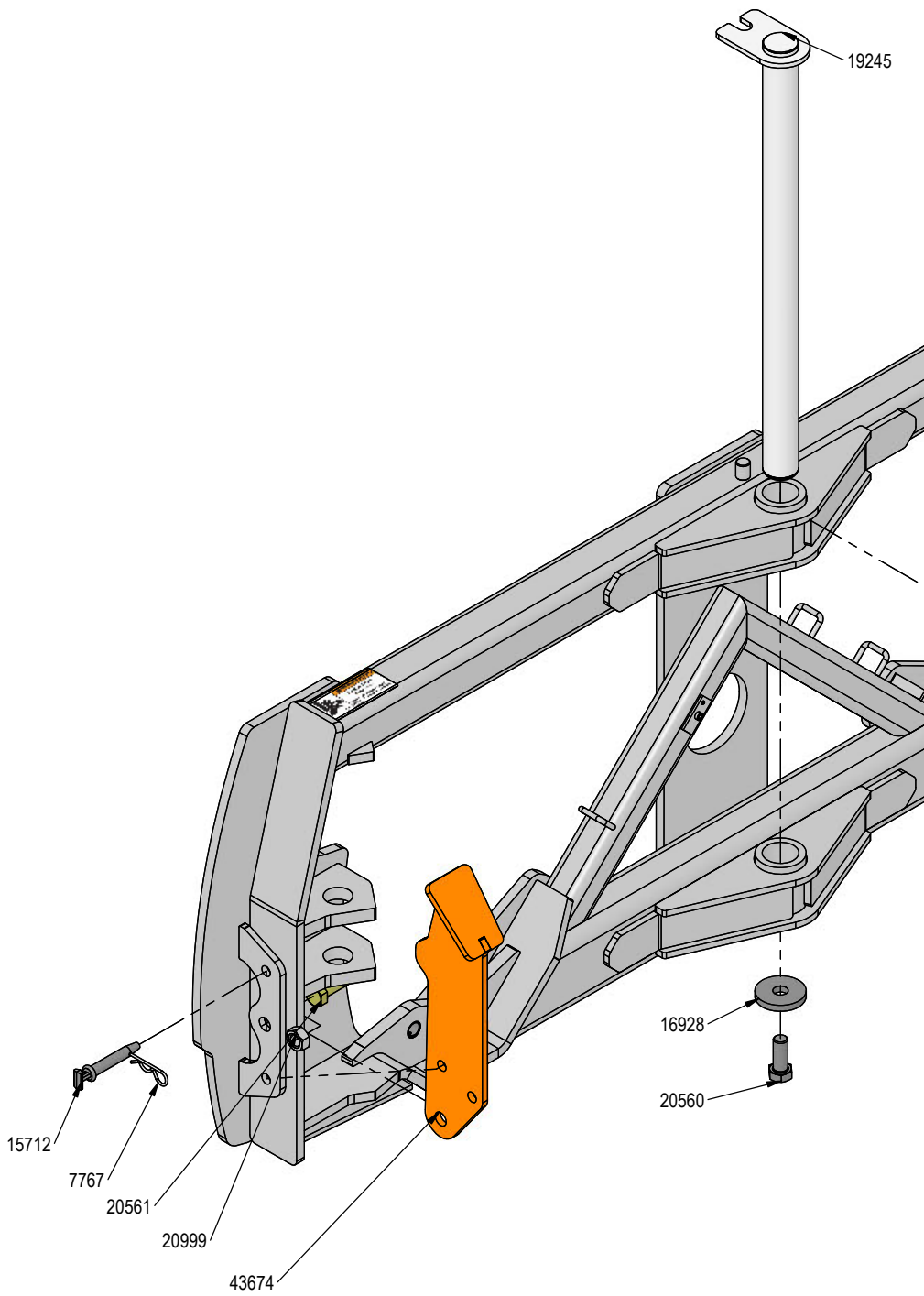
PART NO.	Qty.	DESCRIPTION
18943	2	3/16" x 1-1/2" Cotter Pin
18945	2	1" x 3" Hex Bolt Gr 5 NC - Short Thread
20517	4	3/4" X 4-1/2" Hex Bolt Gr 8 NC YZ
20538	18	7/8" X 2" Hex Bolt Gr 8 NC YZ
20558	3	1" X 2" Hex Bolt Gr 8 NC YZ
20562	4	1" X 3" Hex Bolt Gr 8 NC YZ
20563	8	1" X 3-1/4" Hex Bolt Gr 8 NC YZ
20584	22	1/2" Hex Nut Gr 5 NC CZ
20598	18	7/8" Hex Nut Gr 8 NC CZ
20609	12	1" Hex Center Lock Nut Gr 5 NC CZ
20622	16	3/8" Flange Hex Nut Gr 5 NC CZ
20646	4	5/8" Hex Top Lock Nut Gr 5 NC CZ
20647	38	3/4" Hex Top Lock Nut Gr 5 NC CZ
20749	25	1" Flat Washer CZ
20804	22	1/2" Hex Jam Nut NC CZ
20999	2	1" Hex Top Lock Nut Gr 8 NC YZ
21064	4	3/8" x 1" Carriage Bolt Gr 5 NC CZ
21666	4	5/8" X 1-3/4" Plow Bolt Gr 5 NC (#3 Flat Head)
21748	38	3/4" X 2" Plow Bolt Gr 8 NC
40917	2	Ratchet Holder Storage Decal
40962	1	Warning Prop 65 Decal
43715	1	Slider Skid Shoe Weld (Left)
43720	1	Slider Skid Shoe Weld (Right)
44660	2	1/4" x 1-9/16" Pipe Lynch Pin
44854	1	Ratchet Keeper - Left
44855	1	Ratchet Keeper
45200	1	XAXT Blade Weld
NA	1	Serial Number Tag

DETAIL B
SCALE 1:21

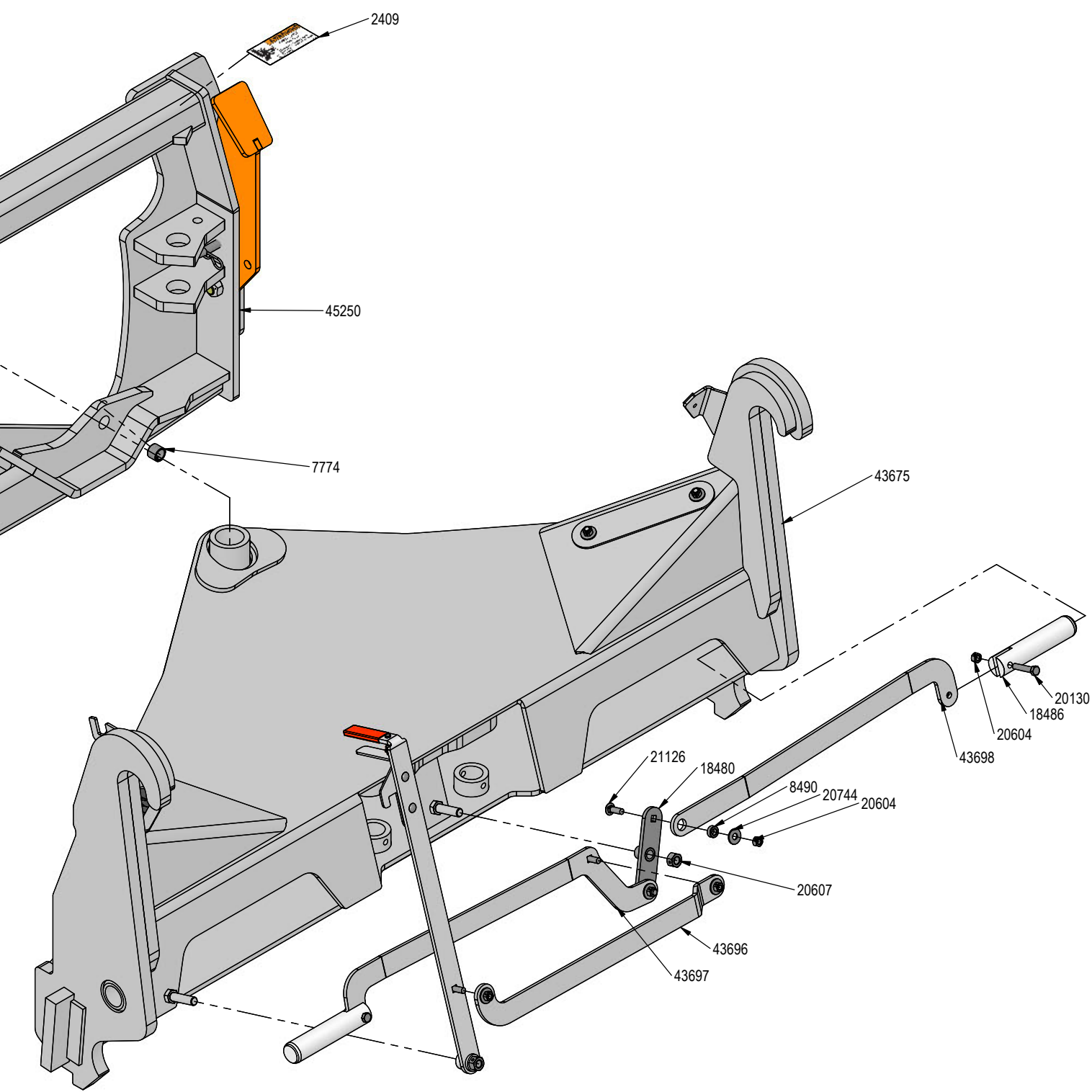
DWG. NO.: 45200-A

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

PART NO.	QTY.	DESCRIPTION
2409	2	Pinch Area, Hand
3072	1	Rubber Handle
7767	2	Cylinder Pin Clip
7774	2	1" x 1" Spring Bushing
8490	4	Spacer
14663	1	Latch
14665	1	Handle Weld
15712	2	3/4" x 3-1/4" Pin
16928	1	Plate, Washer
17799	1	Latch Spring
18480	1	Bell Crank Weld
18486	2	Ag Pro SS QA Lock Pin
19245	1	Angle Pin Weld
20011	1	1/4" X 2-3/4" Hex Bolt Gr 5 NC CZ
20130	2	1/2" X 2-1/2" Hex Bolt Gr 5 NC CZ
20560	1	1" X 2-1/2" Hex Bolt Gr 8 NC YZ
20561	2	1" X 2-3/4" Hex Bolt Gr 8 NC YZ
20604	6	1/2" Hex Center Lock Nut Gr 5 NC CZ
20607	2	3/4" Hex Center Lock Nut Gr 5 NC CZ
20610	1	1/4" Nylock Hex Nut Gr 5 NC CZ
20612	2	3/8" Nyloc Hex Nut Gr 5 NC CZ
20742	2	3/8" Flat Washer CZ
20744	4	1/2" Flat Washer CZ
20999	2	1" Hex Top Lock Nut Gr 8 NC YZ
21065	2	3/8" x 1-1/4" Carriage Bolt Gr 5 NC CZ
21126	4	1/2" x 1-1/2" Carriage Bolt Gr 5 NC CZ
40408	4	3/8" Flat Nylon Washer
40440	2	.378" ID x .503" OD x .375" Spacer
43674	2	Blade Stand
43675	1	Angle Frame
43696	1	Link, Handle To Left Pin
43697	1	Link, Left Pin
43698	1	Link, Right Pin
45250	1	3-5 XAXT Tilt Frame



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

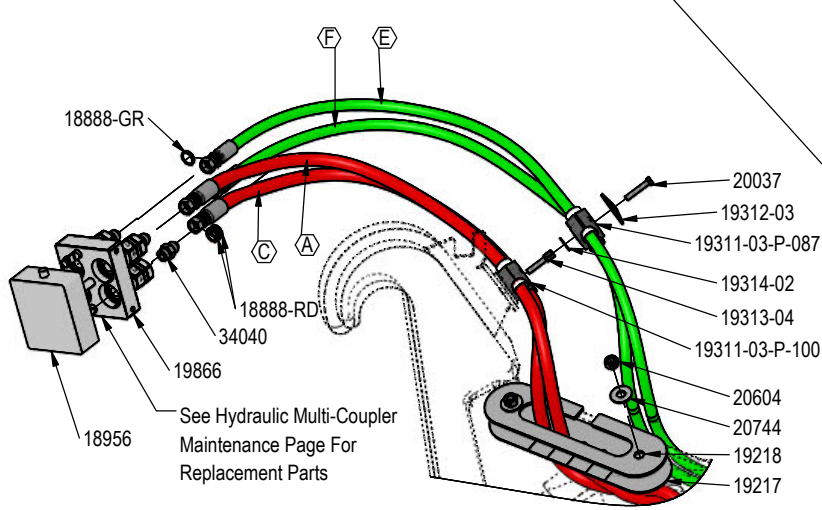
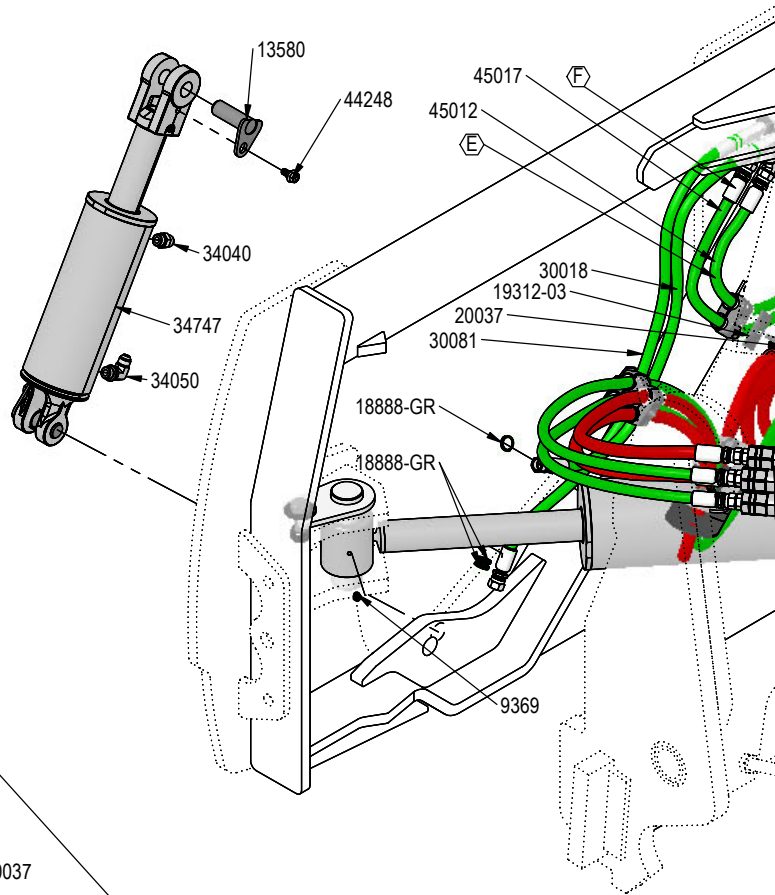
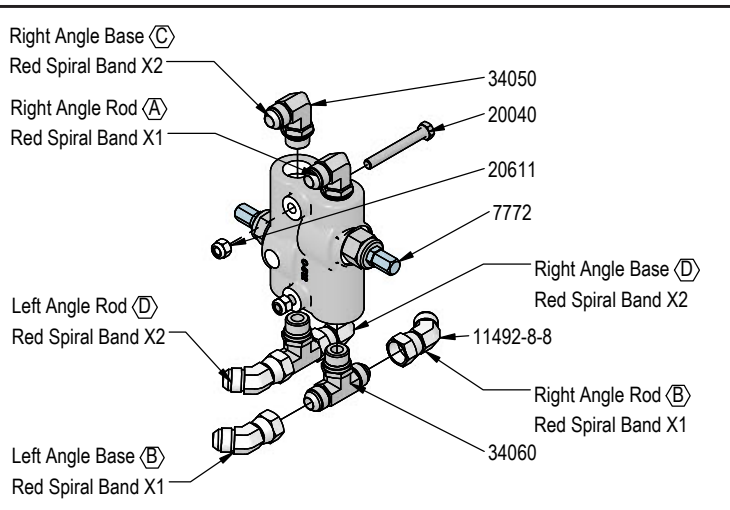


DWG. NO.: 44993

Hydraulic Angle-Hydraulic Tilt Hydraulics

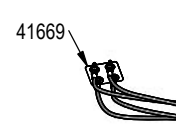
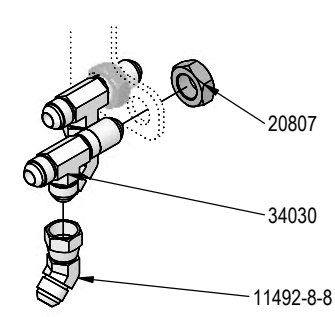
PART NO.	QTY.	DESCRIPTION
7772	1	Valve
9369	2	Straight 1/8" NPT Grease Zerk
11492-8-8	6	Male JIC x Female JIC Swivel Nut Elbow 45°
11699-10-8	2	JIC Union
12931	2	Formed Steel Line
12932	2	Cylinder Saddle
12933	2	Hose Clamp (worm drive - 5.0)
13515	2	Spacer, NR Pin
13580	4	Pin Weld
13933-2-2	2	1/8" NPT Street Elbow
16695	8	2.25" x 2.00" x 1.50" Spring Bushing
18487	2	Angle Cylinder Base Pin
18490	2	Angle Cylinder Rod Pin Weld
18888-GR	18	-12 Green - Spiral Band
18888-RD	18	-12 Red - Spiral Band
18956	1	Multi-Coupling Plate - 4 Port Parking Station
18994-0490	1	49" Grease Hose (w/lock nut and grease zerk)
18994-0570	1	57" Grease Hose (w/lock nut and grease zerk)
18994-0620	2	62" Grease Hose (w/lock nut and grease zerk)
19217	1	Rubber Seal
19218	1	Seal Clamp Plate
19219	1	Cover Plate
19311-03-P-087	3	Hose Clamp
19311-03-P-100	1	Hose Clamp
19312-03	3	Twin Cover Plate
19313-04	1	Twin Stacking Bolt
19314-02	1	Twin Safety Plate
19866	1	Multi-Coupling Plate - 4 Port Mobile (Includes Couplers)
20037	3	5/16" X 1-3/4" Hex Bolt Gr 5 NC CZ
20040	2	5/16" X 2-1/2" Hex Bolt Gr 5 NC CZ

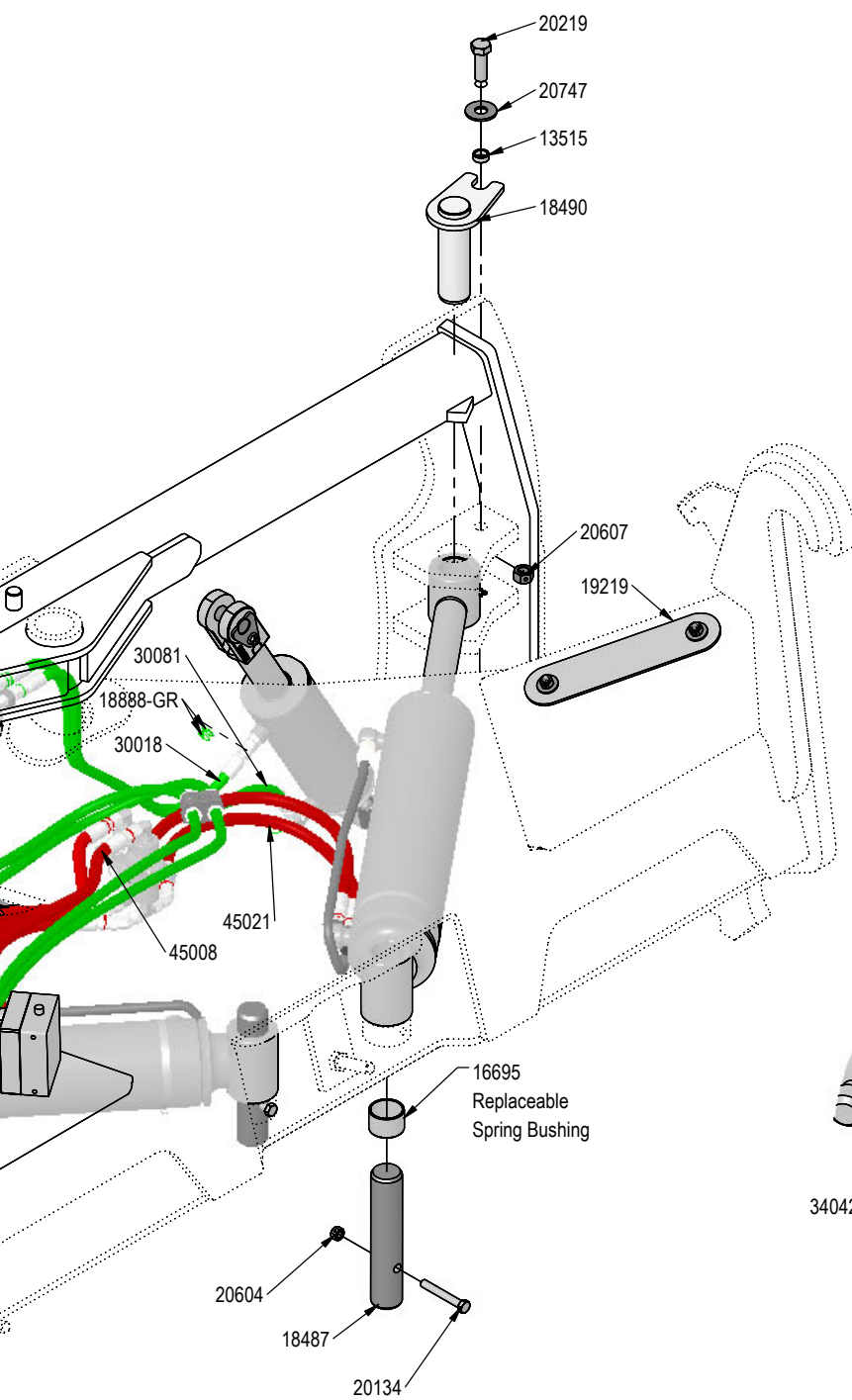
Note: Every hydraulic function from the front to the back of the system is designated by a letter and can also be referenced on the Hydraulic Schematic.



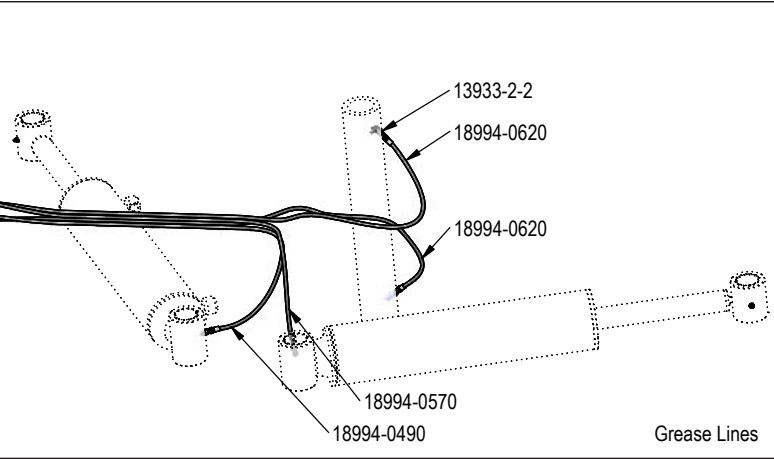
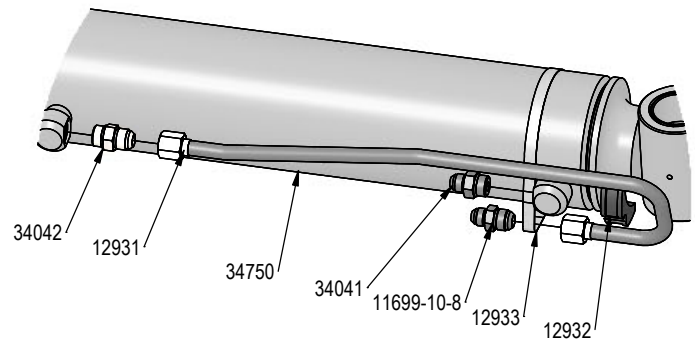
Note: The cylinder part number is stamped on the base end of cylinder opposite of hydraulic ports.

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

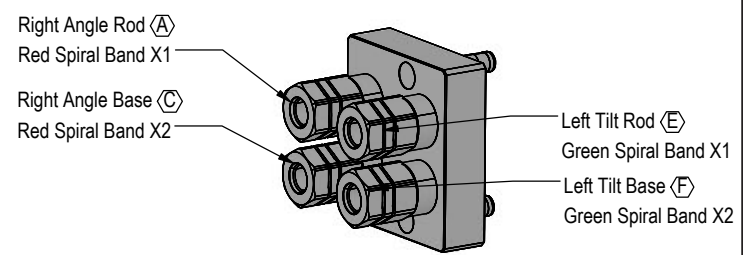




PART NO.	QTY.	DESCRIPTION
20134	2	1/2" X 3-1/2" Hex Bolt Gr 5 NC CZ
20219	2	3/4" X 2-1/4" Hex Bolt Gr 5 NC CZ
20604	6	1/2" Hex Center Lock Nut Gr 5 NC CZ
20607	2	3/4" Hex Center Lock Nut Gr 5 NC CZ
20611	2	5/16" Nyloc Hex Nut Gr 5 NC CZ
20744	4	1/2" Flat Washer CZ
20747	2	3/4" Flat Washer CZ
20807	2	3/4" Hex Jam Nut NF CZ
30018	2	33" x 3/8" -8JIC/-8JIC Hose
30081	2	37" x 3/8" -8JIC/-8JIC Hose
34030	2	Bulkhead Run Tee JIC
34040	6	Straight JIC x O-Ring
34041	2	Straight JIC x O-Ring
34042	2	Straight JIC x O-Ring
34050	4	Straight Thread Elbow 90° JIC x O-Ring
34060	2	Branch Tee JIC x O-Ring
34747	2	4 x 8 Cylinder w/ Clevis Ends
34750	2	5 x 20 Cylinder Bushed Tube Ends
44248	4	3/8 Flanged Hex Head Shoulder Bolt
45008	2	80.5" x 1/2" -8JIC/-8JIC Hose (w/1 Collar & Cordura)
45012	1	127" x 3/8" -8JIC/-8JIC Hose (w/ 3 Collar & Cordura)
45017	1	133.5" x 3/8" -8JIC/-8JIC Hose (w/ 3 Collar & Cordura)
45021	4	32" x 1/2" -8 JIC/-8 JIC Hose w/ Cordura



Grease Lines

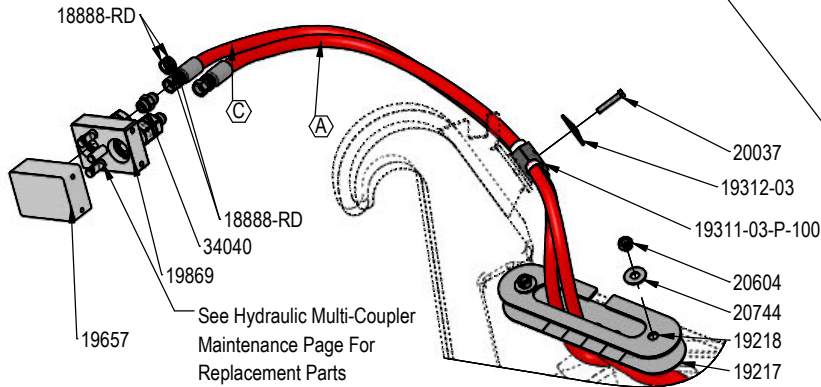
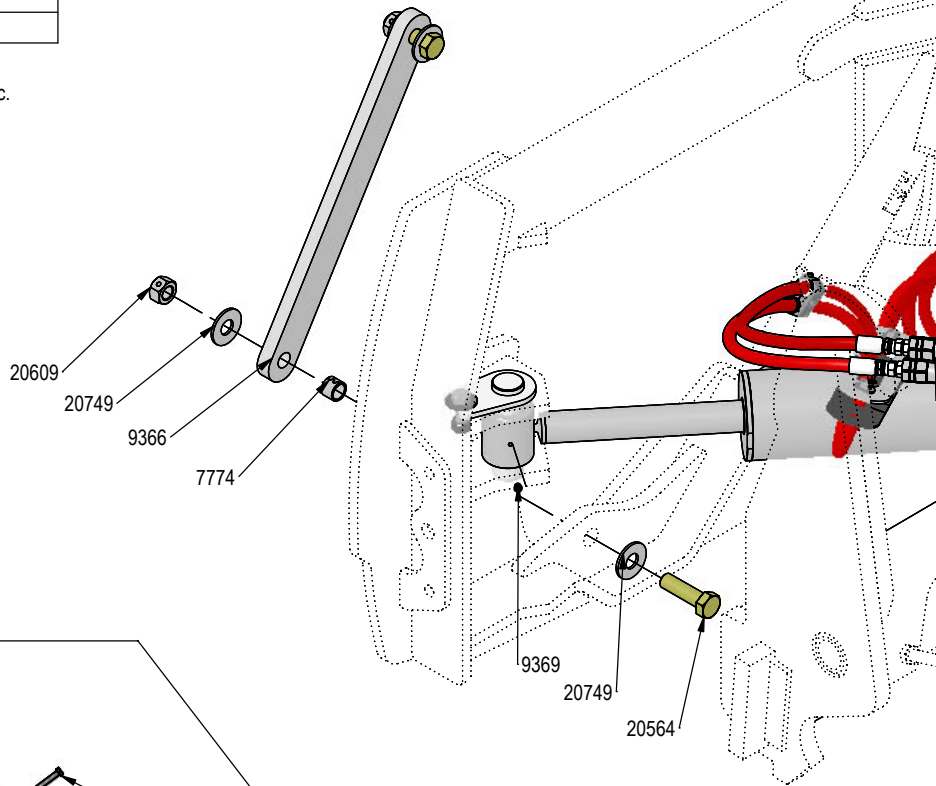
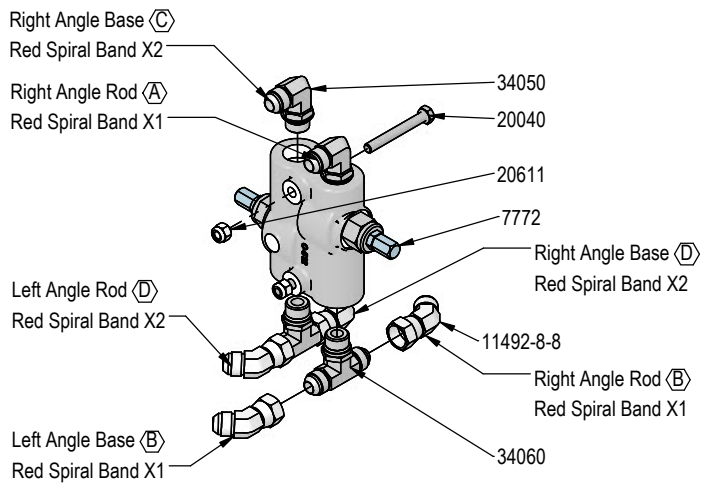


Note: View is from Multi-Coupler Installed on Top Arm.
All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

DWG. NO.: 44993

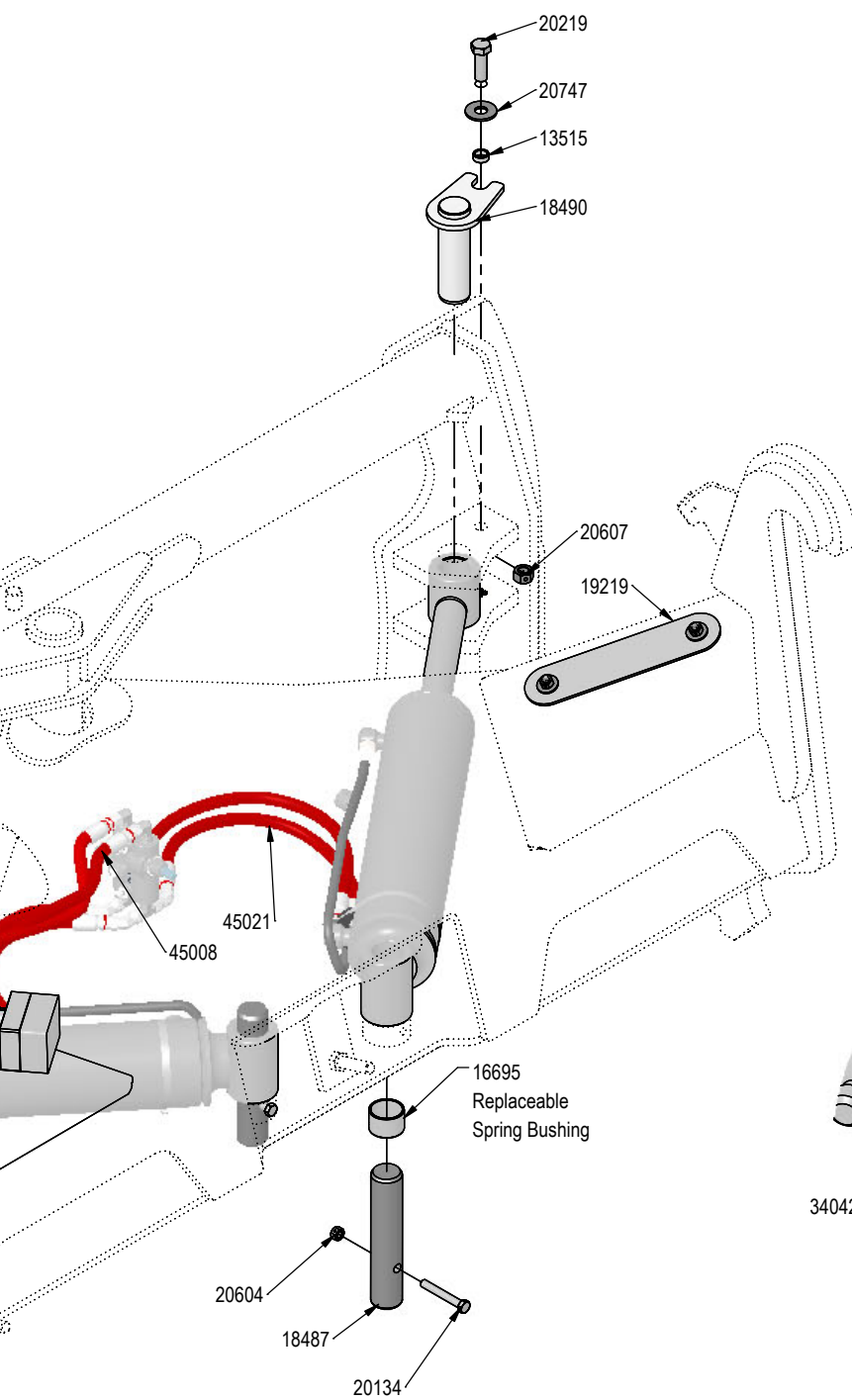
PART NO.	QTY.	DESCRIPTION
7772	1	Valve
7774	2	1" x 1" Spring Bushing
9366	1	Ag Pro Non Tilt Bar
9369	2	Straight 1/8" NPT Grease Zerk
11492-8-8	4	Male JIC x Female JIC Swivel Nut Elbow 45°
11699-10-8	2	JIC Union
12931	2	Formed Steel Line
12932	2	Cylinder Saddle
12933	2	Hose Clamp (worm drive - 5.0)
13515	2	Spacer, NR Pin
13933-2-2	2	1/8" NPT Street Elbow
16695	8	2.25" x 2.00" x 1.50" Spring Bushing
18487	2	Angle Cylinder Base Pin
18490	2	Angle Cylinder Rod Pin Weld
18888-RD	18	-12 Red - Spiral Band
18994-0490	1	49" Grease Hose (w/lock nut and grease zerk)
18994-0570	1	57" Grease Hose (w/lock nut and grease zerk)
18994-0620	2	62" Grease Hose (w/lock nut and grease zerk)
19217	1	Rubber Seal
19218	1	Seal Clamp Plate
19219	1	Cover Plate
19311-03-P-100	1	Hose Clamp
19312-03	1	Twin Cover Plate

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.

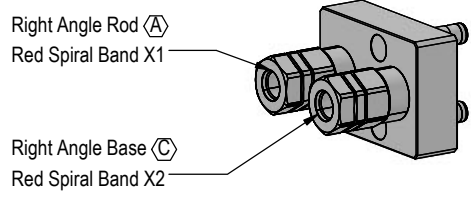
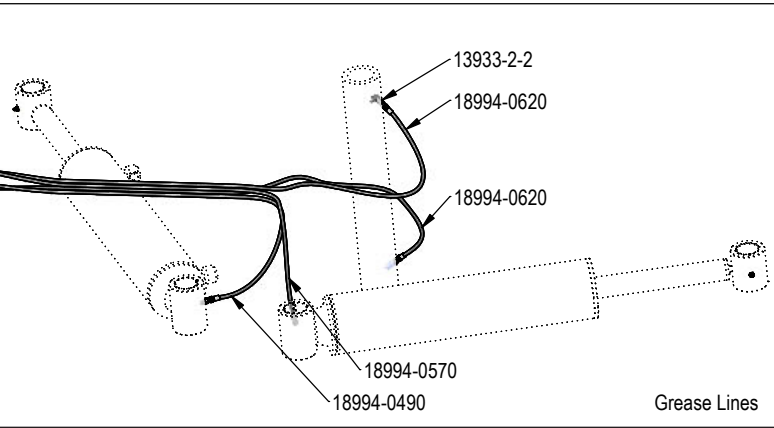
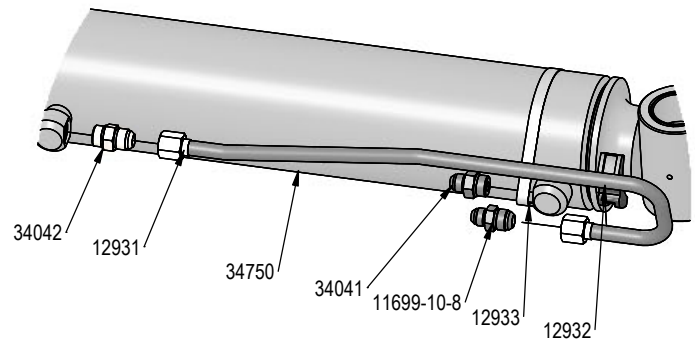


Note: The cylinder part number is stamped on the base end of cylinder opposite of hydraulic ports.

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



PART NO.	QTY.	DESCRIPTION
19657	1	Multi-Coupling Plate - 2 Port Parking Station
19869	1	Multi-Coupling Plate - 2 Port - Mobile
20037	1	5/16" X 1-3/4" Hex Bolt Gr 5 NC CZ
20040	2	5/16" X 2-1/2" Hex Bolt Gr 5 NC CZ
20134	2	1/2" X 3-1/2" Hex Bolt Gr 5 NC CZ
20219	2	3/4" X 2-1/4" Hex Bolt Gr 5 NC CZ
20564	2	1" X 3-1/2" Hex Bolt Gr 8 NC YZ
20604	6	1/2" Hex Center Lock Nut Gr 5 NC CZ
20607	2	3/4" Hex Center Lock Nut Gr 5 NC CZ
20609	2	1" Hex Center Lock Nut Gr 5 NC CZ
20611	2	5/16" Nyloc Hex Nut Gr 5 NC CZ
20744	4	1/2" Flat Washer CZ
20747	2	3/4" Flat Washer CZ
20749	4	1" Flat Washer CZ
34040	2	Straight JIC x O-Ring
34041	2	Straight JIC x O-Ring
34042	2	Straight JIC x O-Ring
34050	2	Straight Thread Elbow 90° JIC x O-Ring
34060	2	Branch Tee JIC x O-Ring
34750	2	5 x 20 Cylinder Bushed Tube Ends
45008	2	80.5" x 1/2" -8JIC/-8JIC Hose (w/1 Collar & Cordura)
45021	4	32" x 1/2" -8 JIC/-8 JIC Hose w/ Cordura

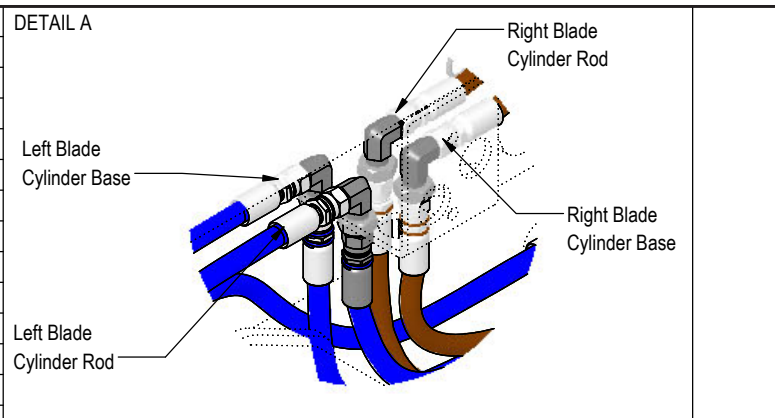


Note: View is from Multi-Coupler Installed on Top Arm.
All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

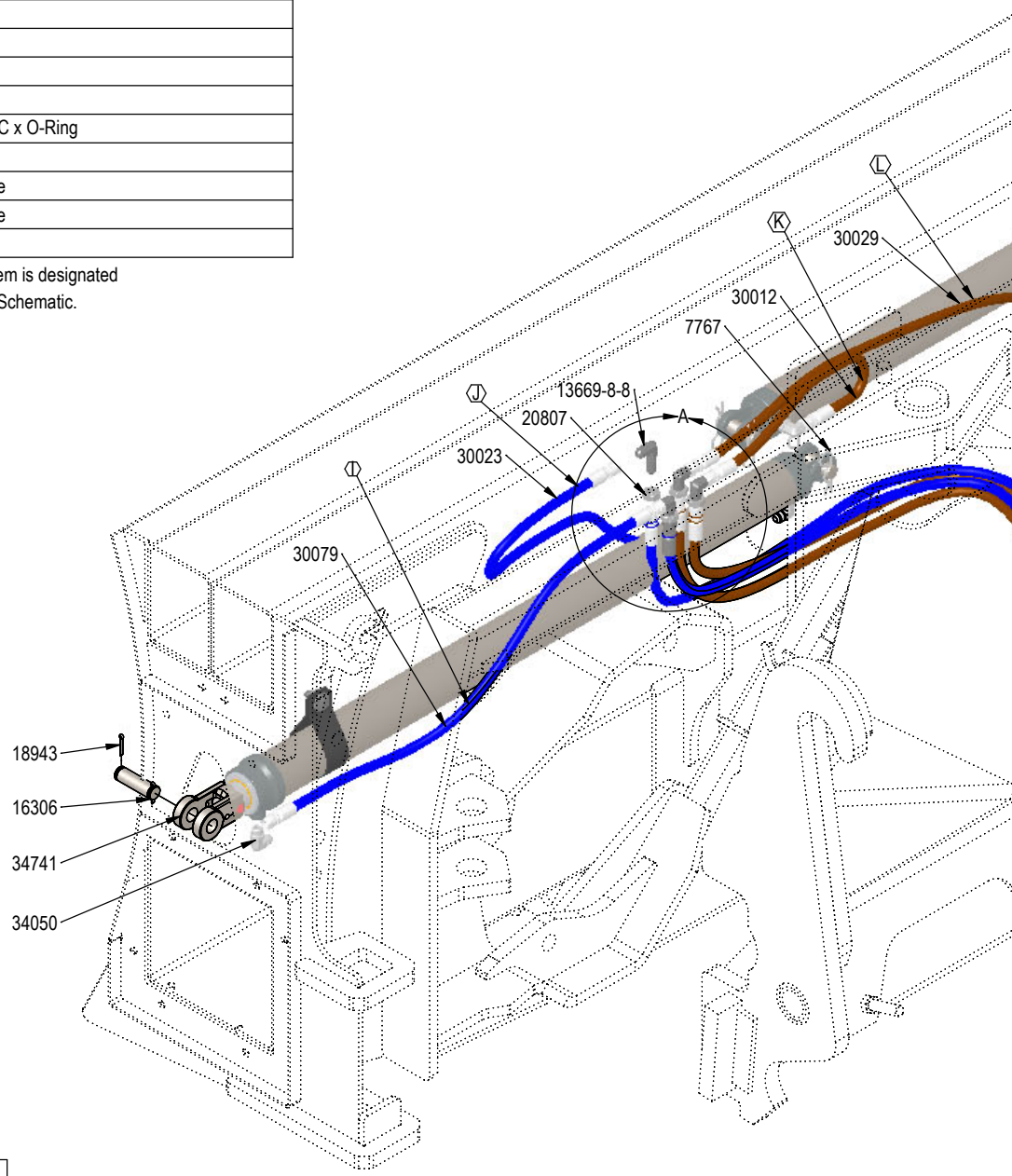
DWG. NO.: 44991

Hydraulic Angle Blade Hydraulics

PART NO.	QTY.	DESCRIPTION
13669-8-8	4	Male JIC 90° Elbow Bulkhead Fitting
15676-LL-8-8	2	Straight Thread Extra Long Elbow 90° JIC x O-Ring (6801-LL-08-08)
7767	4	Cylinder Pin Clip
16306	4	Cylinder Pin w/ Cotter Pins
17585	2	Cylinder Strap
18888-BL	6	-12 Blue - Spiral Band
18888-BR	6	-12 Brown - Spiral Band
18943	4	3/16" x 1-1/2" Cotter Pin
18956	1	Multi-Coupling Plate - 4 Port Parking Station
19217	1	Rubber Seal
19218	1	Seal Clamp Plate
19311-03-P-087	4	Hose Clamp
19312-03	2	Twin Cover Plate
19313-03	2	Twin Stacking Bolt
19314-02	2	Twin Safety Plate
19866	1	Multi-Coupling Plate - 4 Port Mobile (Includes Couplers)
20037	2	5/16" X 1-3/4" Hex Bolt Gr 5 NC CZ
20126	2	1/2" X 1-1/2" Hex Bolt Gr 5 NC CZ
20604	4	1/2" Hex Center Lock Nut Gr 5 NC CZ
20744	6	1/2" Flat Washer CZ
20807	4	3/4" Hex Jam Nut NF CZ
30012	1	27" x 3/8" -8JIC - 8JIC Hose
30023	1	42" x 3/8" -8JIC/-8JIC Hose
30029	1	60" x 3/8" -8 JIC/-8 JIC Hose
30079	1	40" x 3/8" -8JIC/-8JIC Hose
34050	6	Straight Thread Elbow 90° JIC x O-Ring
34741	2	3 x 48 Hydraulic Cylinder
45061	2	130.5" x 3/8" -8JIC/-8JIC Hose
45064	2	122.5" x 3/8" -8JIC/-8JIC Hose
45198	1	Hose Guide Weld



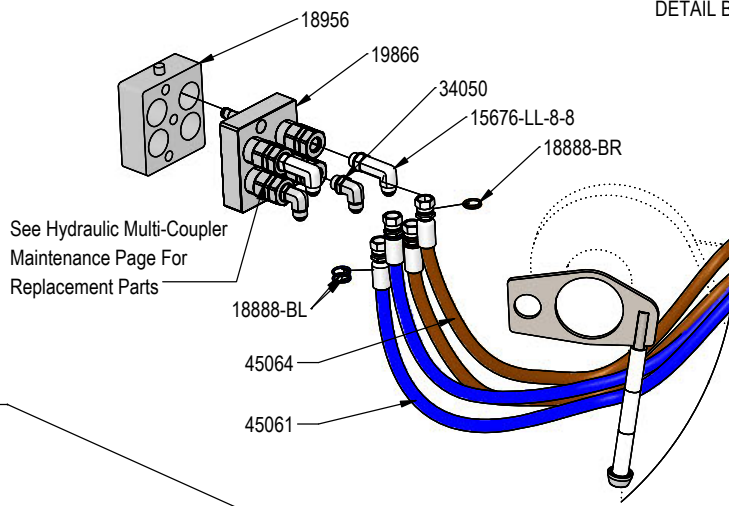
Note: Every hydraulic function from front to back of system is designated by a letter and can also be referenced on the Hydraulic Schematic.



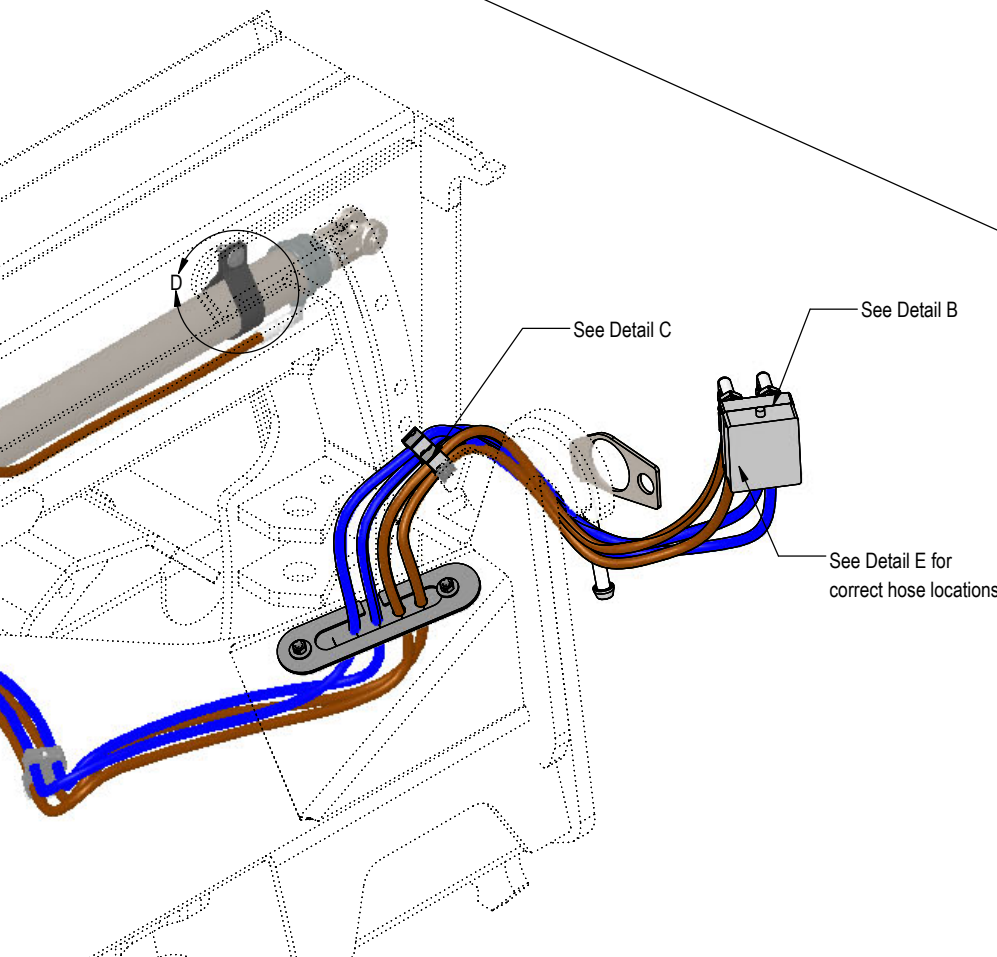
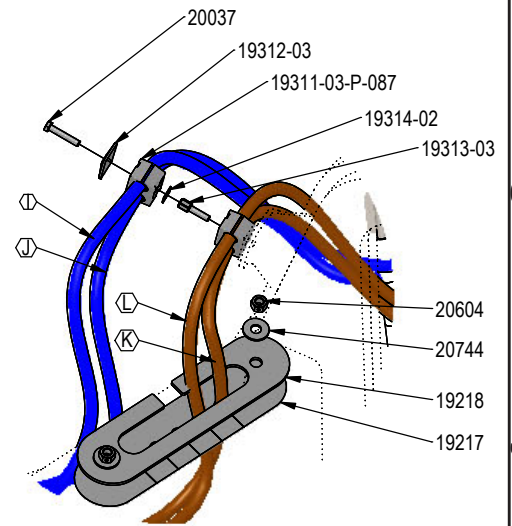
Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

Cylinder	Part No.	Description
26-34741	49-19997	Seal Kit 3"

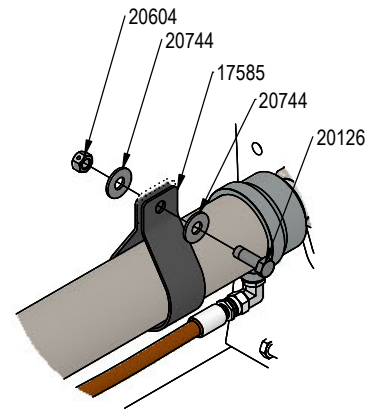
DETAIL B



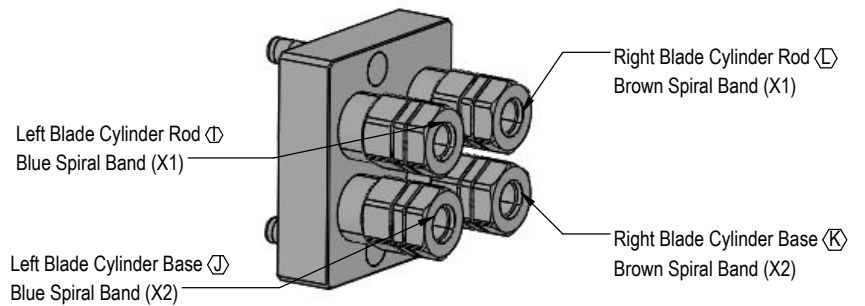
DETAIL C



DETAIL D



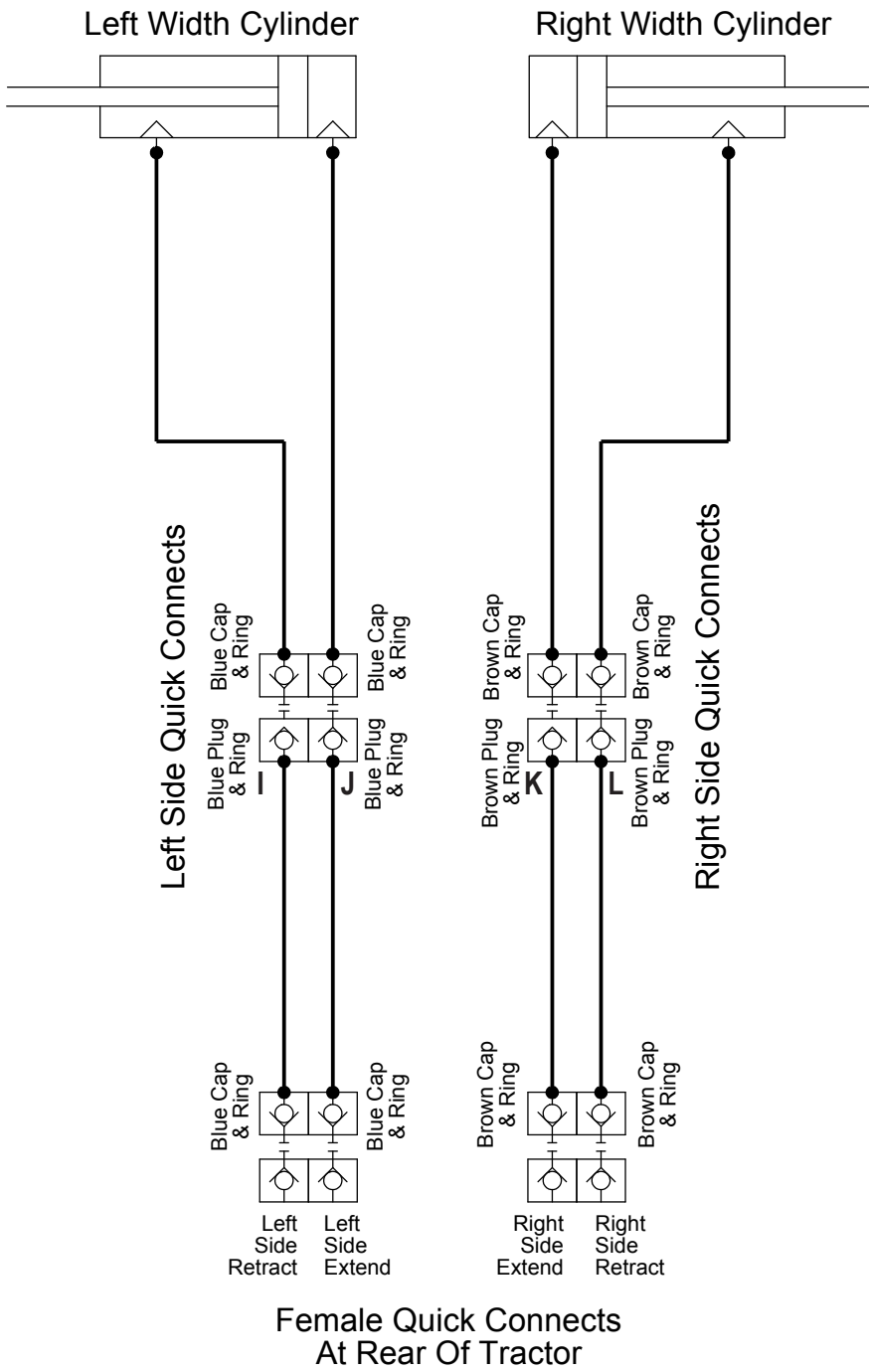
DETAIL E

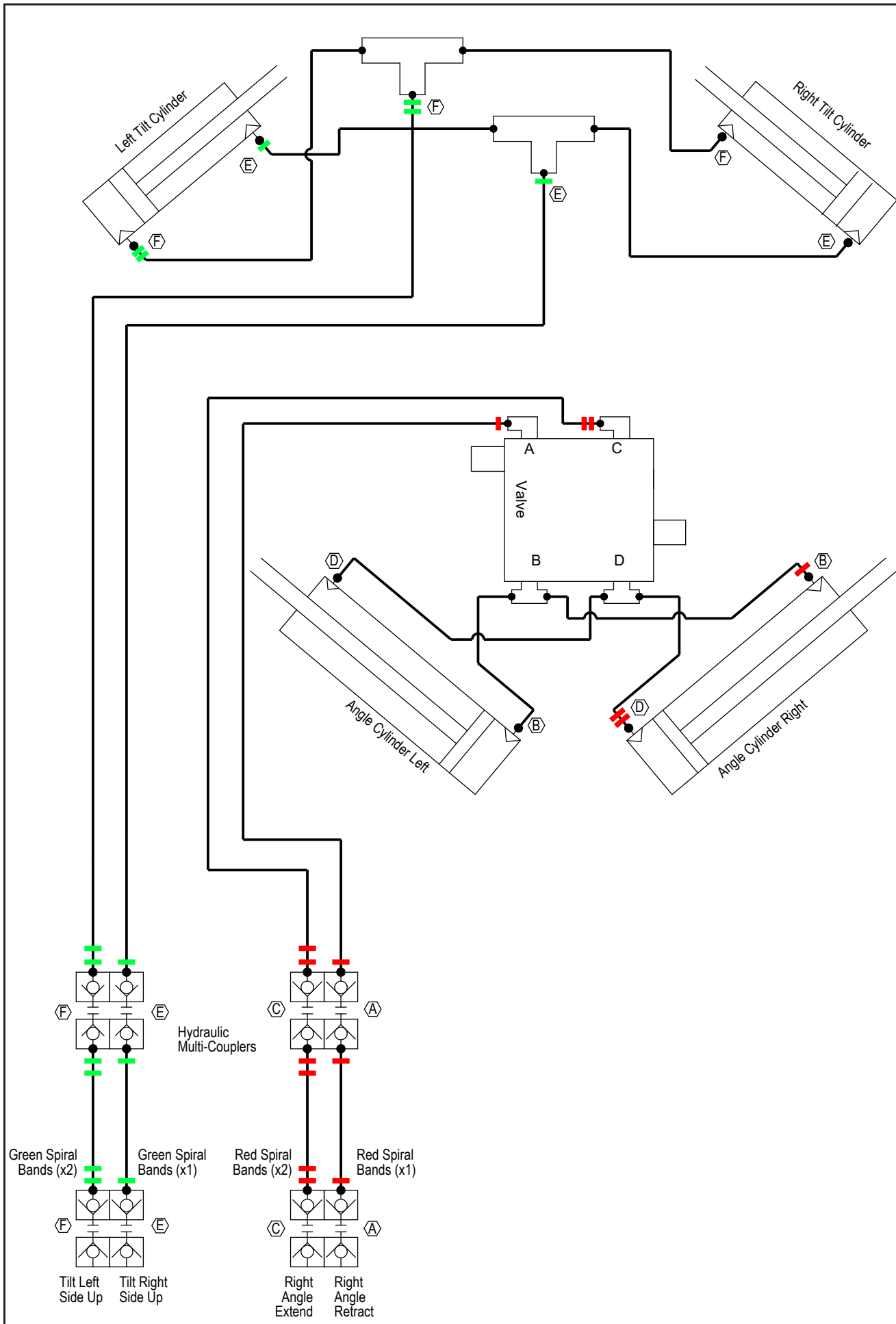


Note: View is from Multi-Coupler installed on Top Arm. All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

DWG. NO.: 45007

3-5 Blade Cylinders





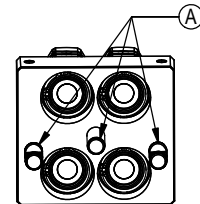
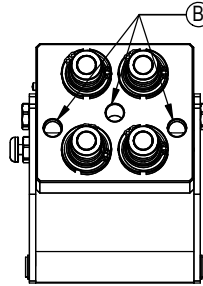
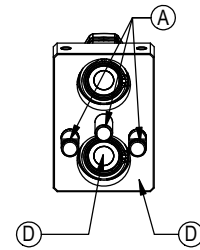
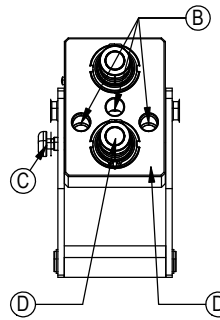
Tractor Service Valve

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.

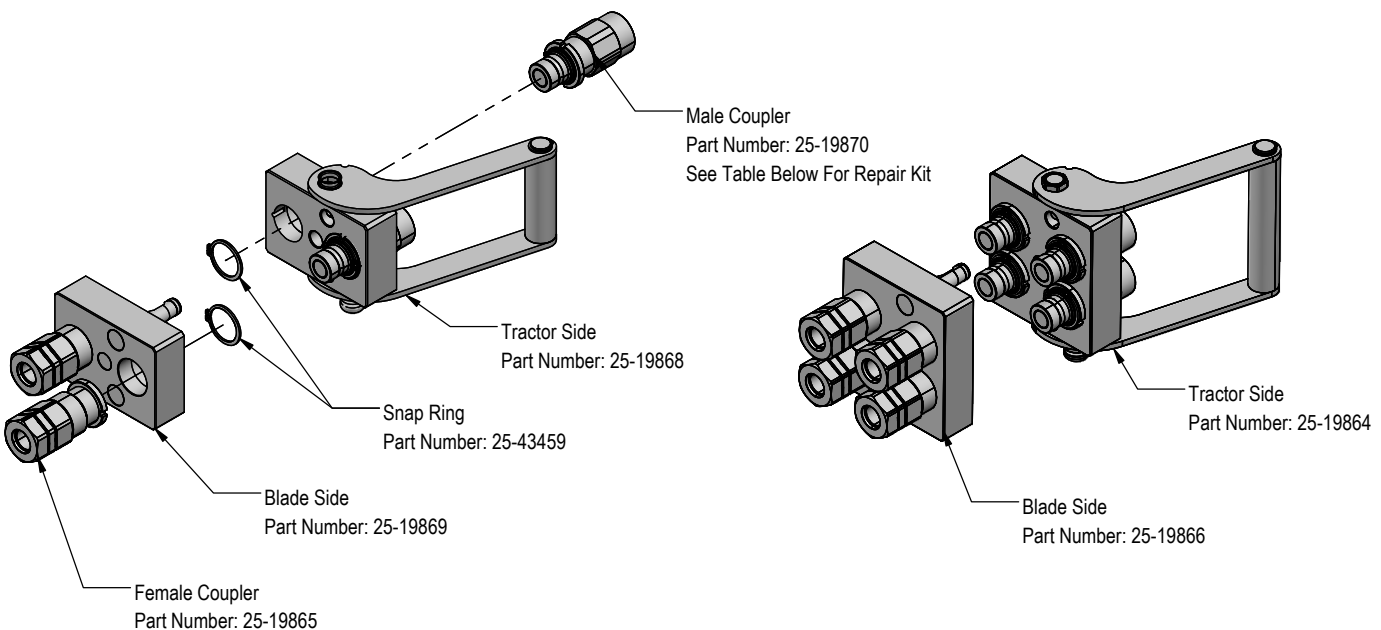
*Use a cloth or compressed air. It is advised to not use water to clean these surfaces
3. Apply a lubricant/anti-corrosion (grease or silicone - see Note 1):
 - A. On the pins.
 - B. Inside the cam.
 - C. In the locking mechanism area.
4. Connect the cap to the fixed half and the mobile half to the parking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

Hydraulic Multi-Coupler Maintenance

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.

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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