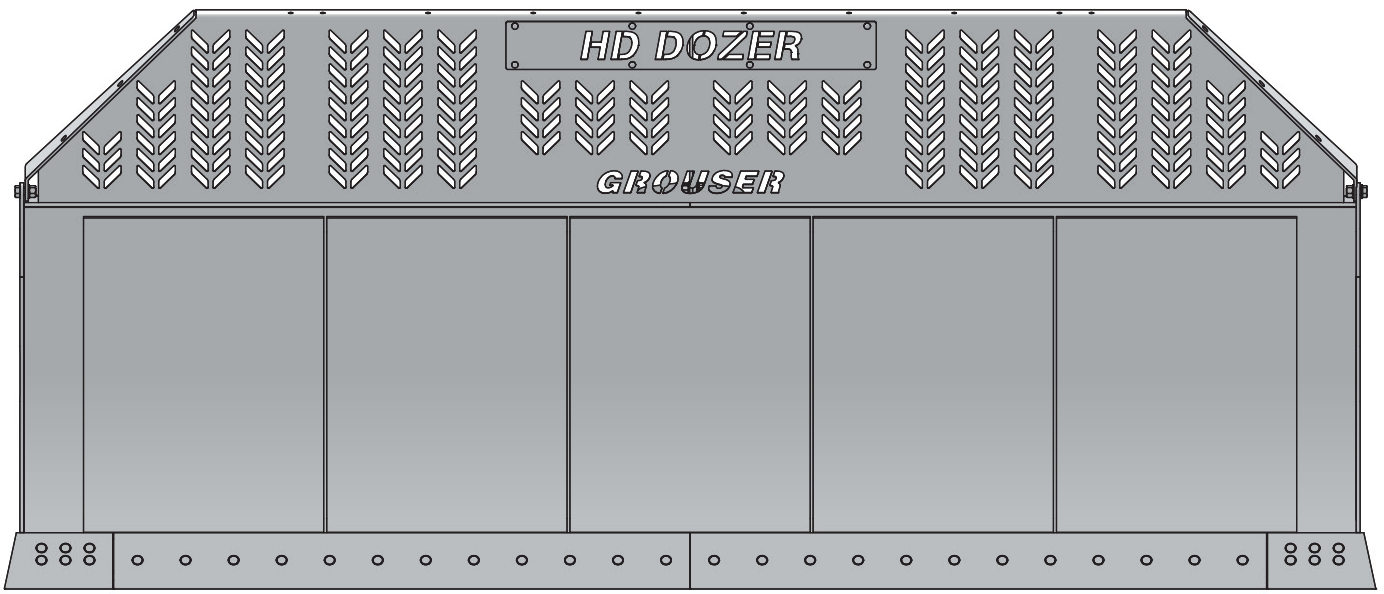
Ag Pro HD

Owner's Manual & Parts Book



Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

Grouser Products
755 2nd Ave NW - West Fargo, ND 58078
Phone: 1-701-282-7710
Fax: 1-701-282-8131
E-mail: grouser@grouser.com
Website: www.grouser.com

PN: 45504 Serial Number: 10210559-Current Date 6-8-2026

Contents

Welcome to the Owner

Thank you for your recent purchase of a Grouser Ag Pro HD 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 HD 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.

Abbreviation Key

HAHT	Hydraulic Angle - Hydraulic 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 HD Dozer:

1. The Ag Pro HD 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 HD 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 HD 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 HD Dozer:

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

	Torque - Dry (ft–lbs)			
	SAE Grade 5		SAE Grade 8	
Size	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

	Torque - Dry (ft-lbs)
Size	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.

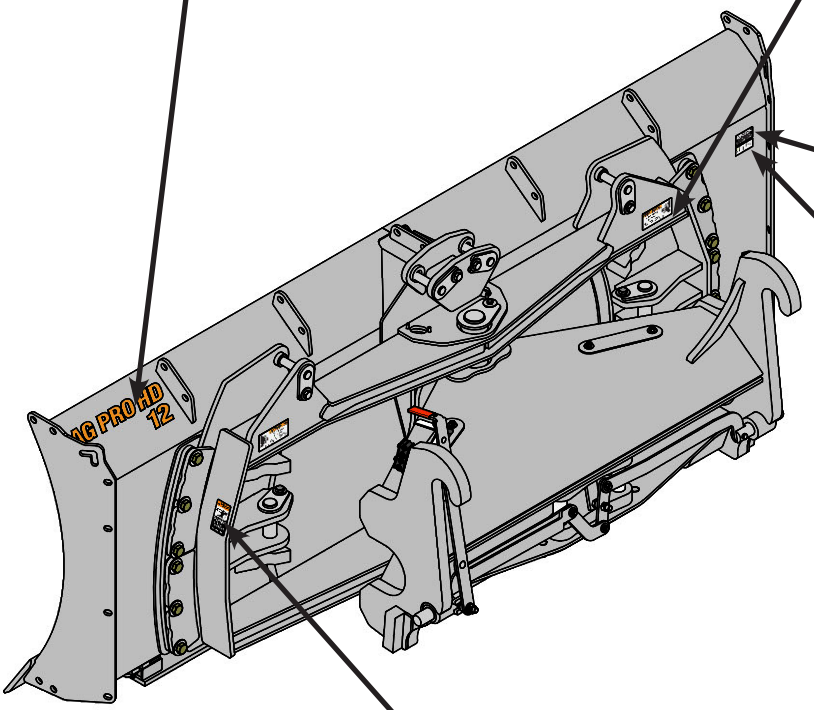
AG PRO HD 12

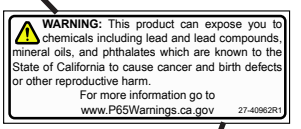
PN: 27-14845

PN: 27-18208

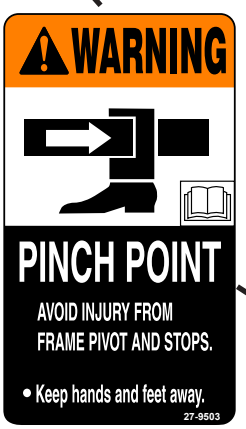
PN: 27-14842-XX
XX = Length of Blade

PN: 27-2409
Left and Right Side

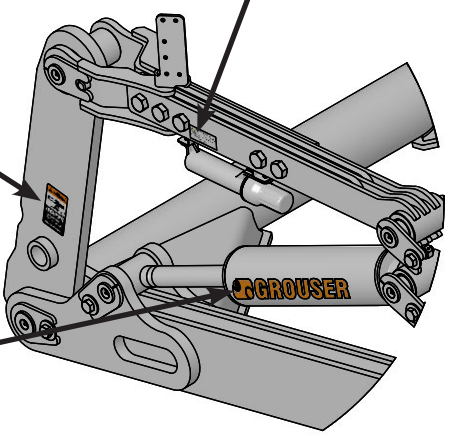




PN: 27-40962



PN: 27-9503
Left and Right Side

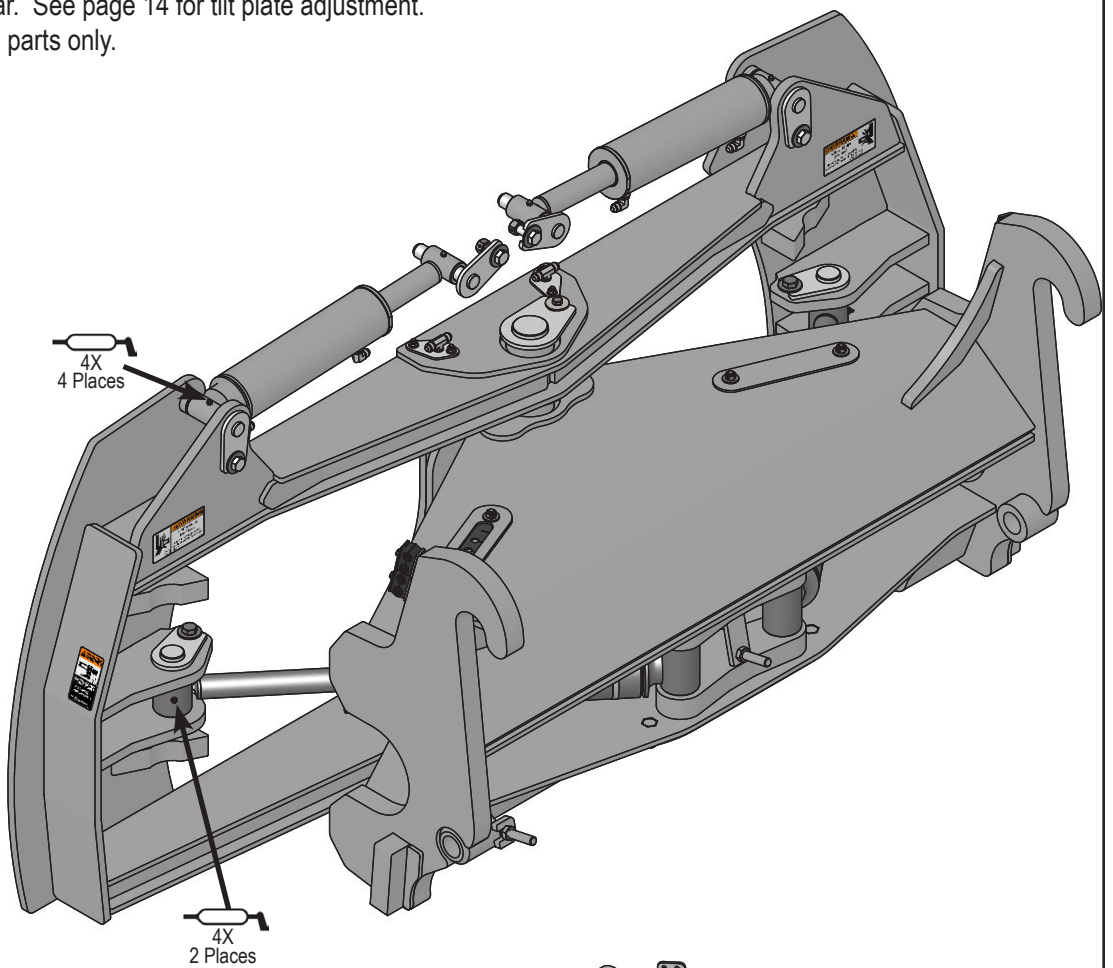


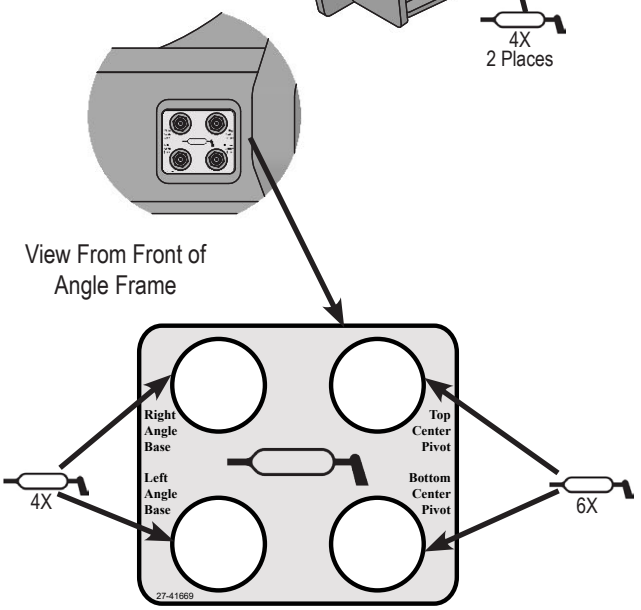
GROUSER

PN: 27-9504

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 HD Dozer. For cutting edge information, see pages 16-17 and 22-23 .
- Check hydraulic cylinders and hoses for damage or leaks. For replacement parts, see hydraulic pages 6, 8-9 and 20-21.
- 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 25-27.
- Inspect all tilt-ways for wear. See page 14 for tilt plate adjustment.
- Replace parts with original parts only.





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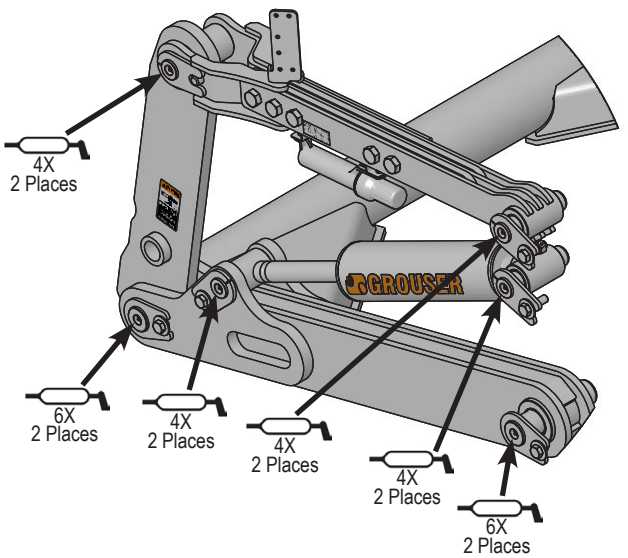
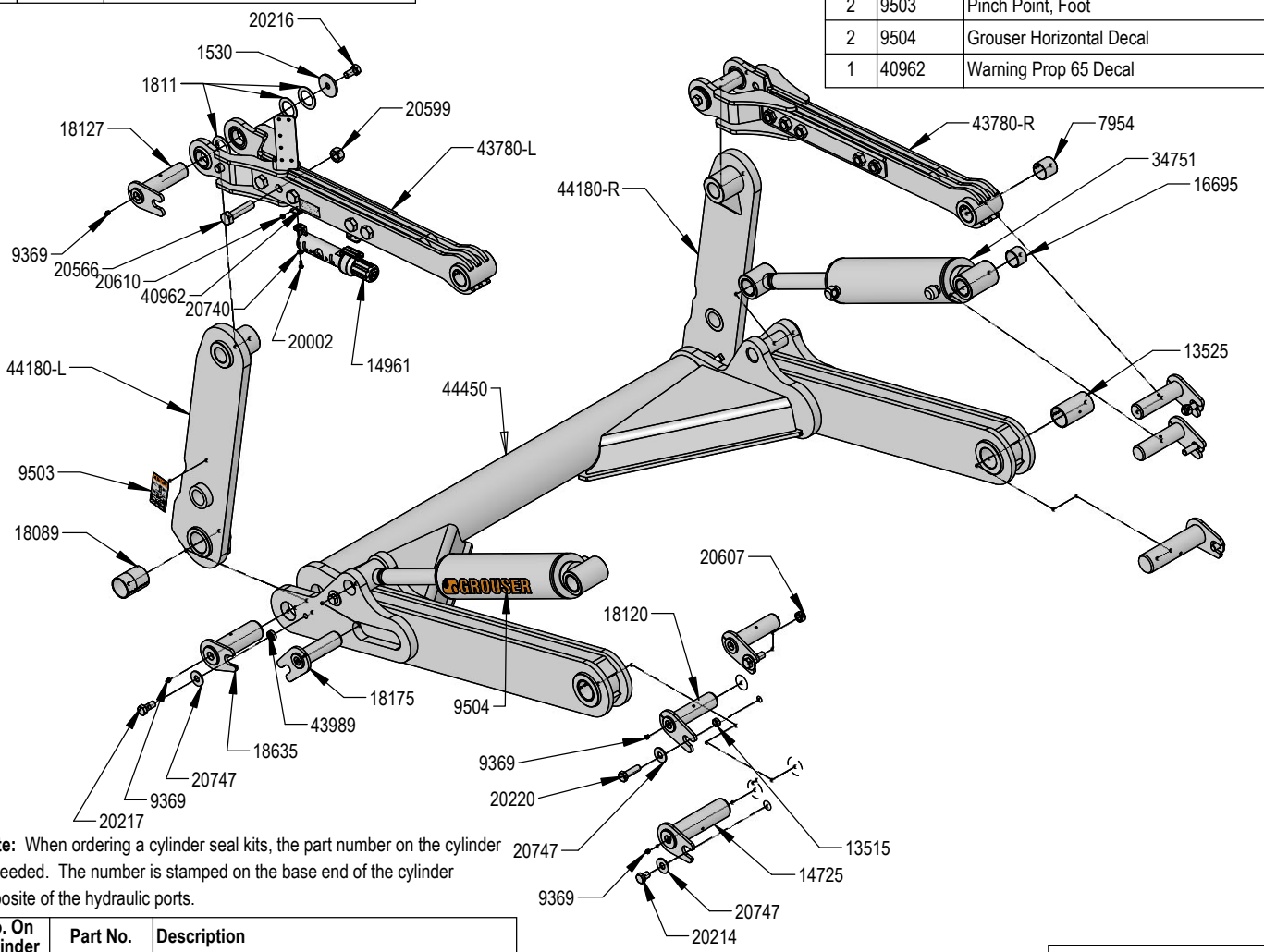


Some assembly of Lift System components is necessary. Follow the steps listed below. See diagram below for the correct hardware and orientation of parts.

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.

QTY.	PART NO.	DESCRIPTION
6	13515	Spacer, NR Pin
2	13525	2.75 x 2.50 x 4.75 Spring Bushing
2	14725	Lift Frame / UC Pin
1	14961	Manual Canister Small
2	1530	3/4" x 3".00 x .25" HD Washer CZ
8	16695	2.25 x 2.00 x 1.50 Spring Bushing
2	18089	2.75 x 2.50 x 3.75 Spring Bushing
6	1811	2" Washer
1	44180-L	HD Male SS QA
1	44180-R	HD Male SS QA
4	18120	Top Pin Weld
2	18127	Top Arm Pin Weld
2	18175	Lift Cyl Pin Weld
2	18635	Ag Pro Plus QA Pin
1	44450	HD Lift Frame
2	20002	1/4" X 3/4" Hex Bolt Gr 5 NC CZ

QTY.	PART NO.	DESCRIPTION
2	20214	3/4" X 1" Hex Bolt Gr 5 NC CZ
2	20216	3/4" X 1-1/2" Hex Bolt Gr 5 NC CZ
4	20217	3/4" X 1 3/4" Hex Bolt Gr 5 NC CZ
4	20220	3/4" X 2-1/2" Hex Bolt Gr 5 NC CZ
10	20566	1" X 4" Hex Bolt Gr 8 NC YZ
10	20599	1" Hex Nut Gr 8 NC CZ
2	20607	3/4" Hex Center Lock Nut Gr 5 NC CZ
2	20610	1/4" Nylock Hex Nut Gr 5 NC CZ
2	20740	1/4" Flat Washer CZ
10	20747	3/4" Flat Washer CZ
2	34751	5 x 18 Cylinder Tube Ends
1	43780-L	Ag Pro Plus Manual Pitch Top Arm Assy
1	43780-R	Ag Pro Plus Manual Pitch Top Arm Assy
2	43989	.75 x 1.25 NR Pin Bushing
4	7954	2.25 x 2.00x 2.00 Spring Bushing
12	9369	Straight 1/8" NPT Grease Zerk
2	9503	Pinch Point, Foot
2	9504	Grouser Horizontal Decal
1	40962	Warning Prop 65 Decal



Note: When ordering a cylinder seal kits, the part number on the cylinder is needed. The number is stamped on the base end of the cylinder opposite of the hydraulic ports.

No. On Cylinder	Part No.	Description
26-34751	49-12275	Monarch Seal Kit 5" (658457) Nitrided Rod

DWG. NO.:43880R1

Note: Refer to Pages 8-9 for the correct hose lengths and hose location.

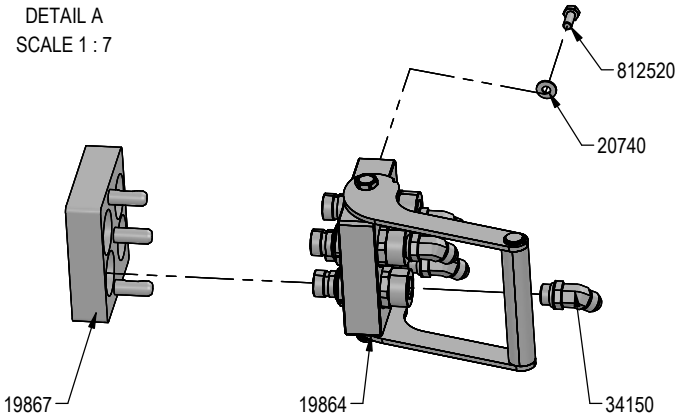
Note: All connections are identified by spiral bands. 2 bands are from the base end of a cylinder and 1 band is from the rod end of a cylinder. Orange = Lift, Green = Tilt and Red = Angle.

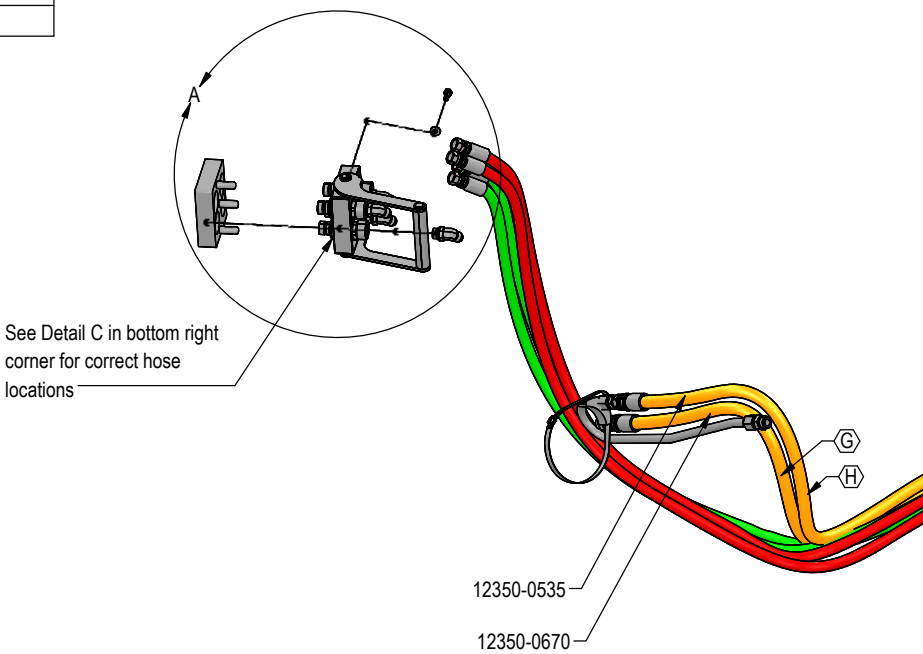
1. Connect the lift hoses to the lift cylinders.
2. Verify that hoses are not twisted and protected from rubbing on any sharp edges. See Pages 8-9 for proper hose routing.
3. Attach the multi-coupler to the top arm mount and install the 45° fittings.
4. Identify each remaining hose at the front of the undercarriage by the colored bands on end of hose and connect hose to corresponding 45° fitting on multi-coupler. Refer to Pages 8-9 for proper hose locations.
5. Hoses were plugged into the rear of the tractor during the undercarriage installation.
6. Continue on Page 10 for initial startup instructions.

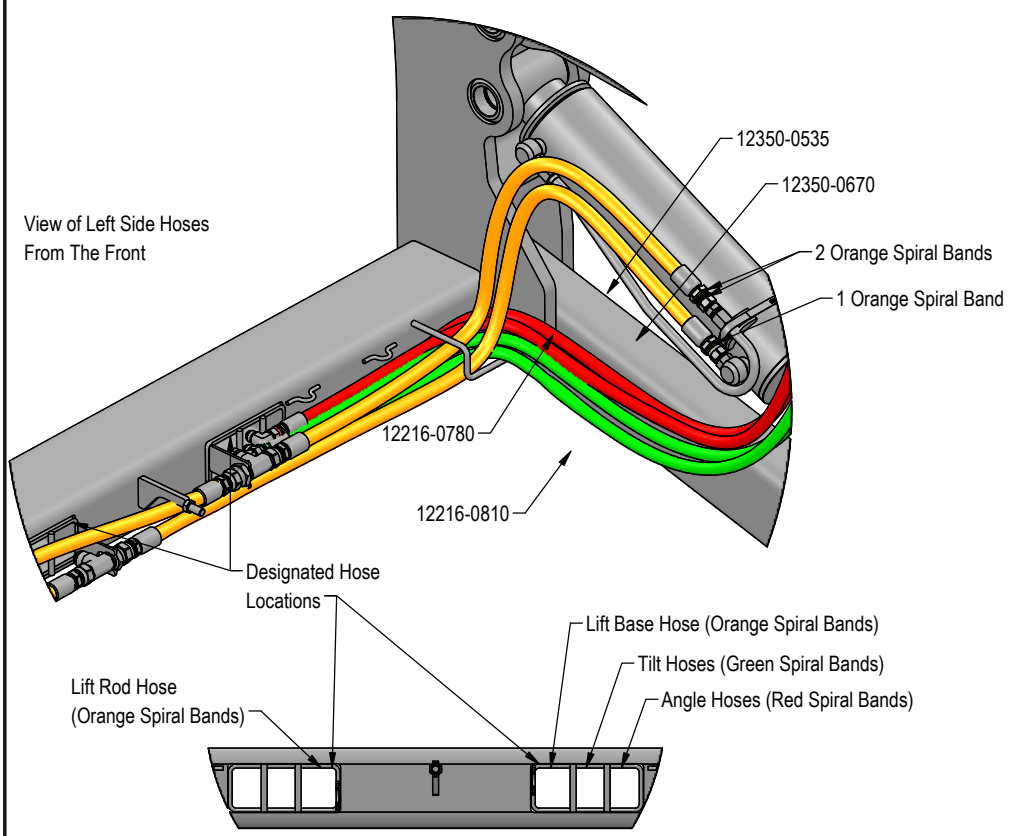
QTY.	PART NO.	DESCRIPTION
2	3453	Pioneer Dust Cap Tilt (Green)
2	3455	Pioneer Dust Cap Angle (Red)
2	3457	Pioneer Dust Cap Lift (Orange)
2	11699-10-10	JIC Union
2	12215-3000	300" (25') x 3/4" -12JIC/-12JIC Cold Temp Hose
2	12216-0780	78" x 1/2" -8JIC/-8JIC Cold Temp Hose
2	12216-0810	81" x 1/2" -8JIC/-8JIC Cold Temp Hose
4	12216-2930	293" (24.4") x 1/2" -8JIC/-8JIC Cold Temp Hose
2	12350-0535	53.5" x 5/8" -10JIC/-12JIC Cold Temp Hose
2	12350-0670	67" x 5/8" -10JIC/-12JIC Cold Temp Hose
2	12932	Cylinder Saddle
2	12933	Hose Clamp (worm drive - 5.0)
4	15199-8-8	JIC Union Elbow 90°
2	18240	Lift Cylinder Steel Line
9	18888-GR	-12 Green - Spiral Band
9	18888-RD	-12 Red - Spiral Band
15	19494-OR	-16 Orange - Spiral Band

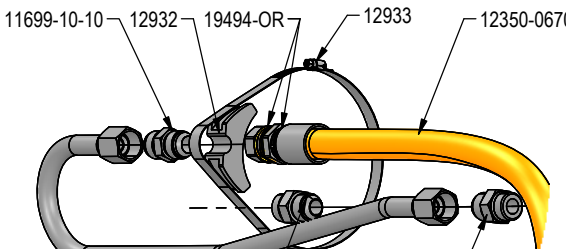
Hoses Not Drawn to Scale

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



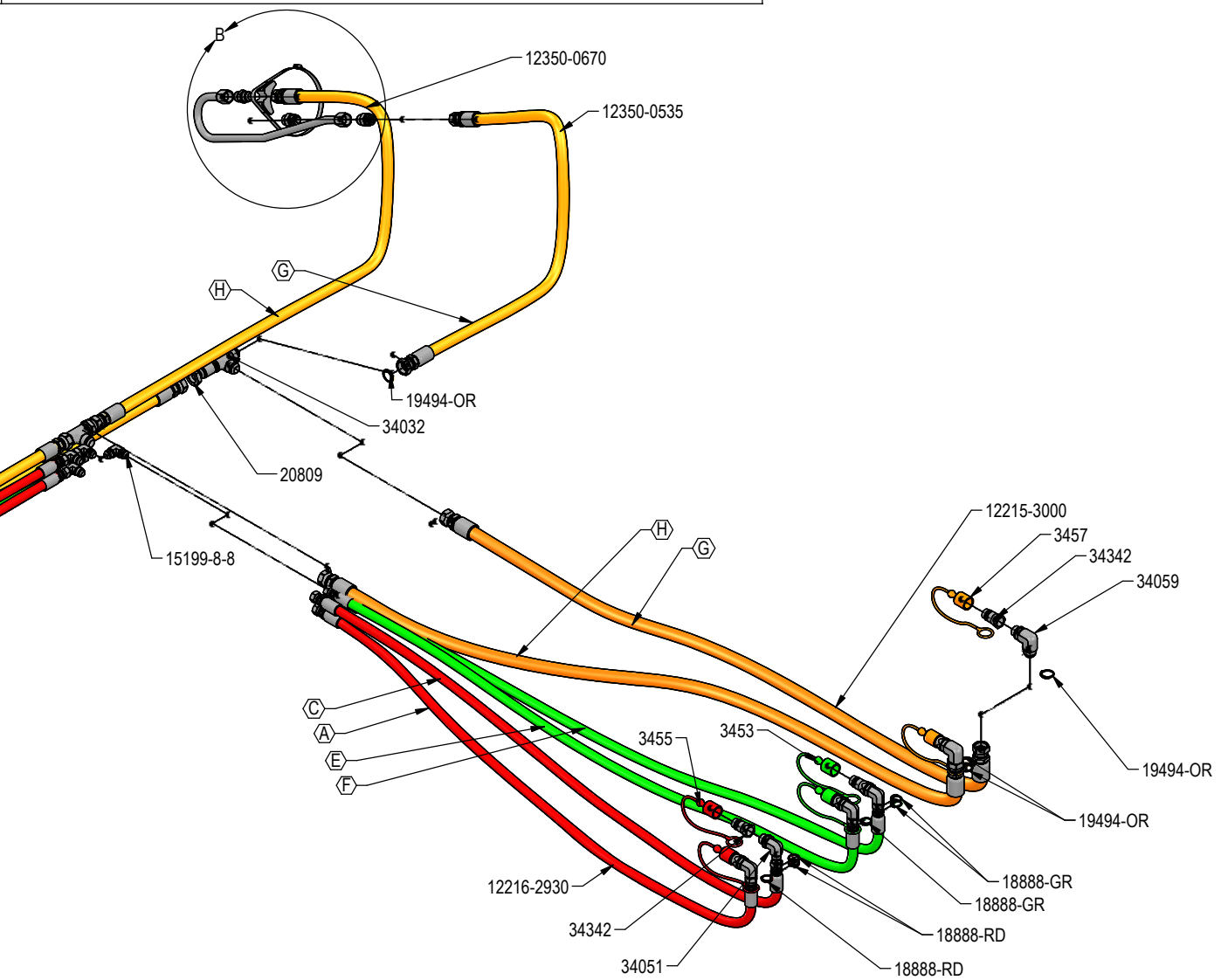




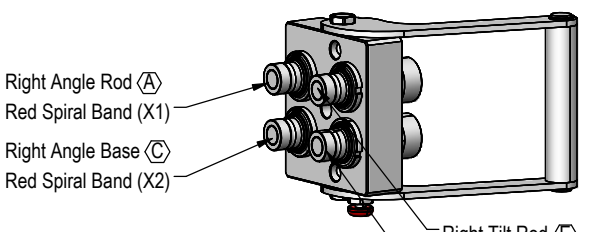


DETAIL B
SCALE 1:6

QTY.	PART NO.	DESCRIPTION
1	19864	Multi-Coupling Plate - 4 Port Fixed
1	19867	Multi-Coupling Plate - 4 Port - Cap
2	20740	1/4" Flat Washer CZ
2	20809	1-1/16" Hex Jam Nut NF CZ
2	34032	Bulkhead Run Tee JIC
4	34042	Straight JIC x O-Ring
4	34051	Straight Thread Elbow 90° JIC x O-Ring
2	34059	Straight Thread Elbow 90° JIC x O-Ring
4	34150	Straight Thread Elbow 45° JIC x O-Ring
6	34342	Tappet Quick Coupler Male - Poppet Style
2	812520	M8-1.25 x 20mm Class 10.9 Hex Bolt CZ



DETAIL C



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

Hydraulic System Bleeding 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.

⚠ Important

- Maintain proper hydraulic oil level in the tractor reservoir throughout all procedures.
- Operate functions at low engine speed and reduce hydraulic flow to **10%** during the bleeding process.
- Always loosen fittings slightly, do not fully remove.
- Always tighten fittings before reversing cylinder direction to prevent air from being drawn back into system.
- Refer to hydraulic schematics on page 22 if needed

Lift Function:

1. Use a lift or jack to manually lift the lift frame all the way up and securely block it in place.
2. At rear of tractor, install a quick coupler onto **Lift Up** hose (one orange spiral band) and connect to appropriate SCV.
3. Slightly loosen the fittings at **rod end** of both lift cylinders.
4. Ensure the flow is reduced to **10%** and actuate the raise function to retract the cylinders (raise the lift frame).
5. When a steady, air-free stream of oil flows from the fittings, stop the function and tighten the fittings.
6. At rear of tractor, install a quick coupler onto **Lift Down** hose (two orange spiral bands) and connect to appropriate SCV.
7. Slightly loosen the fittings at the **base end** of both lift cylinders.
8. Remove blocks and actuate the lower function to extend the cylinders (lower the lift frame).
9. When a steady, air-free stream of oil flows from the fittings, stop the function and tighten the **base end** fittings.
10. Cycle the lift system fully up and down 5–10 times, increase the flow as needed to a safe operating speed

Proceed to Page 12 for Blade Connection Instructions.

Angle Function:

1. Manually angle the blade until **left side** is fully in (**left angle cylinder fully retracted**).
2. At rear of tractor, install a quick coupler onto **right angle retract** hoses (one red spiral band) and connect to appropriate SCV.
3. Slightly loosen the fitting at the **rod end** of the **right angle cylinder**.
4. Ensure the flow is reduced to **10%** and actuate angle function to angle the blade to the right (**left cylinder extending / right cylinder retracting**).
5. When a steady, air-free stream of oil flows from the fittings, stop the function and tighten the fitting. Fully angle the blade all the way to the right.
6. At rear of tractor, install a quick coupler onto **right angle extend** hose (two red spiral bands) and connect to appropriate SCV.
7. Slightly loosen the fitting at the **rod end** of the **left angle cylinder**.
8. Ensure the flow is reduced to **10%** and actuate the angle function to angle the blade to the left (**right cylinder extending / left cylinder retracting**).
9. When a steady stream of oil (free of air bubbles) flows from both fittings, stop the function and tighten both fittings.
10. Cycle the angle function fully in both directions 5–10 times, increase the flow as needed to a safe operating speed.

Tilt Function:

1. Use a lift or jack to tilt the blade system until the **left** side is fully down (left tilt cylinder fully retracted).
2. At rear of tractor, install a quick coupler onto **Tilt Left Side Up** hose (two green spiral bands) and connect to appropriate SCV.
3. Slightly loosen the fitting at the **rod end of the right tilt cylinder** and the **base end of the left tilt cylinder**.
4. Ensure the flow is reduced to **10%** and actuate the tilt function to tilt the blade to the right (**left cylinder extending / right cylinder retracting**).
5. When a steady stream of oil (free of air bubbles) flows from both fittings, stop the function and tighten both fittings. Fully tilt the blade all the way to the right.
6. Remove the lift or jack.
7. At rear of tractor, install a quick coupler onto **Tilt Right Side Up** hose (one green spiral band) and connect to appropriate SCV.
8. Slightly loosen the fitting at the **base end of the right tilt cylinder** and the **rod end of the left tilt cylinder.**
9. Ensure the flow is reduced to **10%** and actuate the tilt function in the opposite direction (**right cylinder extending / left cylinder retracting**).
10. When a steady stream of oil (free of air bubbles) flows from both fittings, stop the function and tighten both fittings.
11. Cycle the tilt function fully in both directions 5–10 times, increase the flow as needed to a safe operating speed.

Final Check:

1. Run the blade through all functions.
2. If any function does not operate correctly, repeat the bleeding procedure for that function.
3. If problem persists, contact Grouser Products.
4. Check and refill the tractor hydraulic oil level as needed.

IMPORTANT

5. Before disconnecting the multi-coupler, put all blade functions into **float** to relieve any additional built-up pressure.

Tilt Frame Installa

NOTE: Some blades are shipped with tilt frame and angle frame disconnected from blade.

1. The preferred blade position is laying face down on blocks
2. Remove center tilt ring, tilt plates and hardware from center of back of blade.

NOTE: Center Ring and Hardware can only be installed with angle frame removed from tilt frame.

3. Position tilt frame on back of blade.
4. Reinstall center tilt ring, tilt plates and hardware to attach tilt frame onto back of blade.
5. Add or remove washers as needed to adjust tilt-way clearance to 1/16" - 1/8".
6. Once the tilt-way clearance is set, torque bolts to 640 ft-lbs.
7. Torque center tilt ring bolts to 640 ft-lbs.
8. Install angle frame on tilt frame. Harware shown on pages 18-19.
9. Attach all hydraulics.

NOTE: If tilt frame needs to be removed from back of blade, tilt the frame to gain access to center pivot pin and remove pin and angle frame from tilt frame to gain access to center ring hardware.

Blade Connection and Disconnection

NOTE: Prior to connecting the blade, clean the fixed and mobile multi-couplers (refer to pages 25-27). 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 locking latch and push quick attach lock handle on left side of lift system to open the quick attach system. Refer to Page #18-19 for further clarification on the quick attach system.

Note: Place blocks under angle frame to have ample room for male quick attach to fit under hook in next step.

2. Drive tractor forward slowly until top edge of male quick attach is under top hook of female quick attach on the blade assembly.
3. Raise lift system until male quick attach engages female hook. If both sides don't fully engage, reposition. Continue to raise lift system until blade is off ground and female quick attaches are against front of male quick attaches.
4. Shut off tractor engine and set parking brake.
5. Pull quick attach lock handle to engage quick attach pins and lift locking latch to lock handle in place.
6. Clean and connect hydraulic multi-coupler on top arm. Refer to Pages 25-26 for cleaning and connecting information.
7. If initial startup, refer to Page 10 before operating any function of blade.

To Disconnect:

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

Skid Shoe Adjustment:

1. Raise and secure blade to access skid shoe bolts and nuts.
2. Loosen nuts and set skid shoe depth by sliding the shoe back and forth in direction 'A' shown in Figure 1.
3. Once depth is set, tighten bolts to 150 ft-lbs.
4. When skid shoes are worn down, replace with new skid shoes.

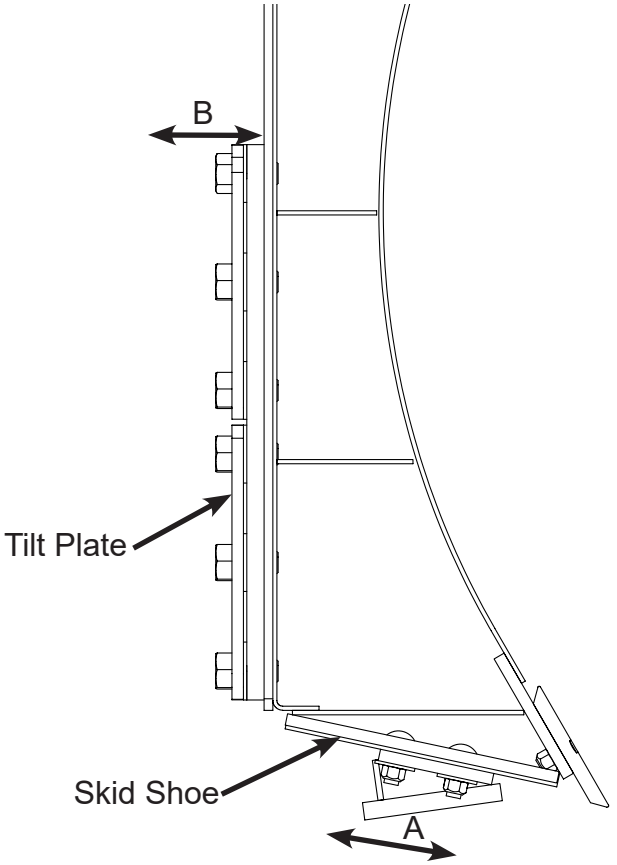


Figure 1

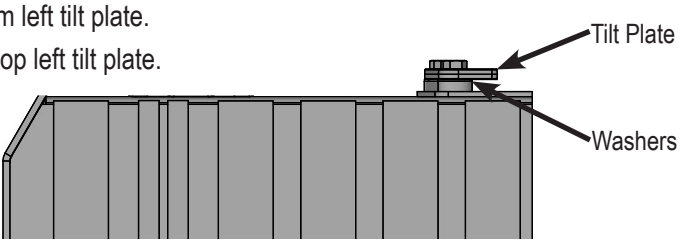
Preferred Method:

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

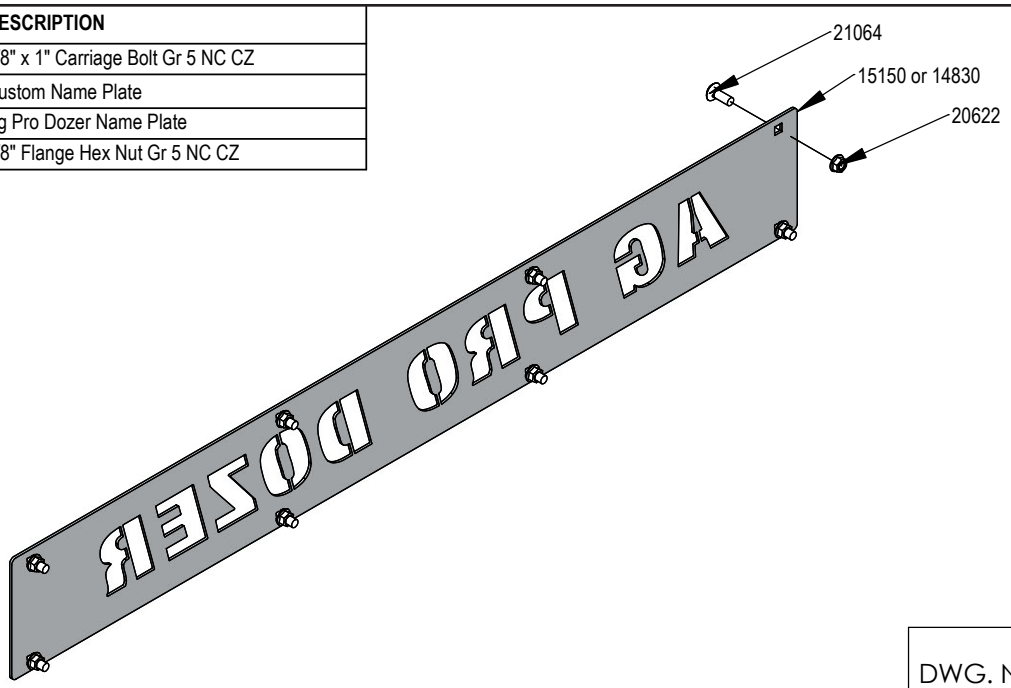
1. The non-preferred blade position for adjusting the tilt plates is the blade in the upright position.
2. Remove the 3 bolts from the top right tilt plate and the bottom left tilt plate..
3. Add or remove washers as needed to adjust tilt-way clearance to 1/16” - 1/8”.
4. Reinstall the bolts in the top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



Name Plate

PART NO.	Qty.	DESCRIPTION
21064	8	3/8" x 1" Carriage Bolt Gr 5 NC CZ
14830*	1	Custom Name Plate
15150	1	Ag Pro Dozer Name Plate
20622	8	3/8" Flange Hex Nut Gr 5 NC CZ

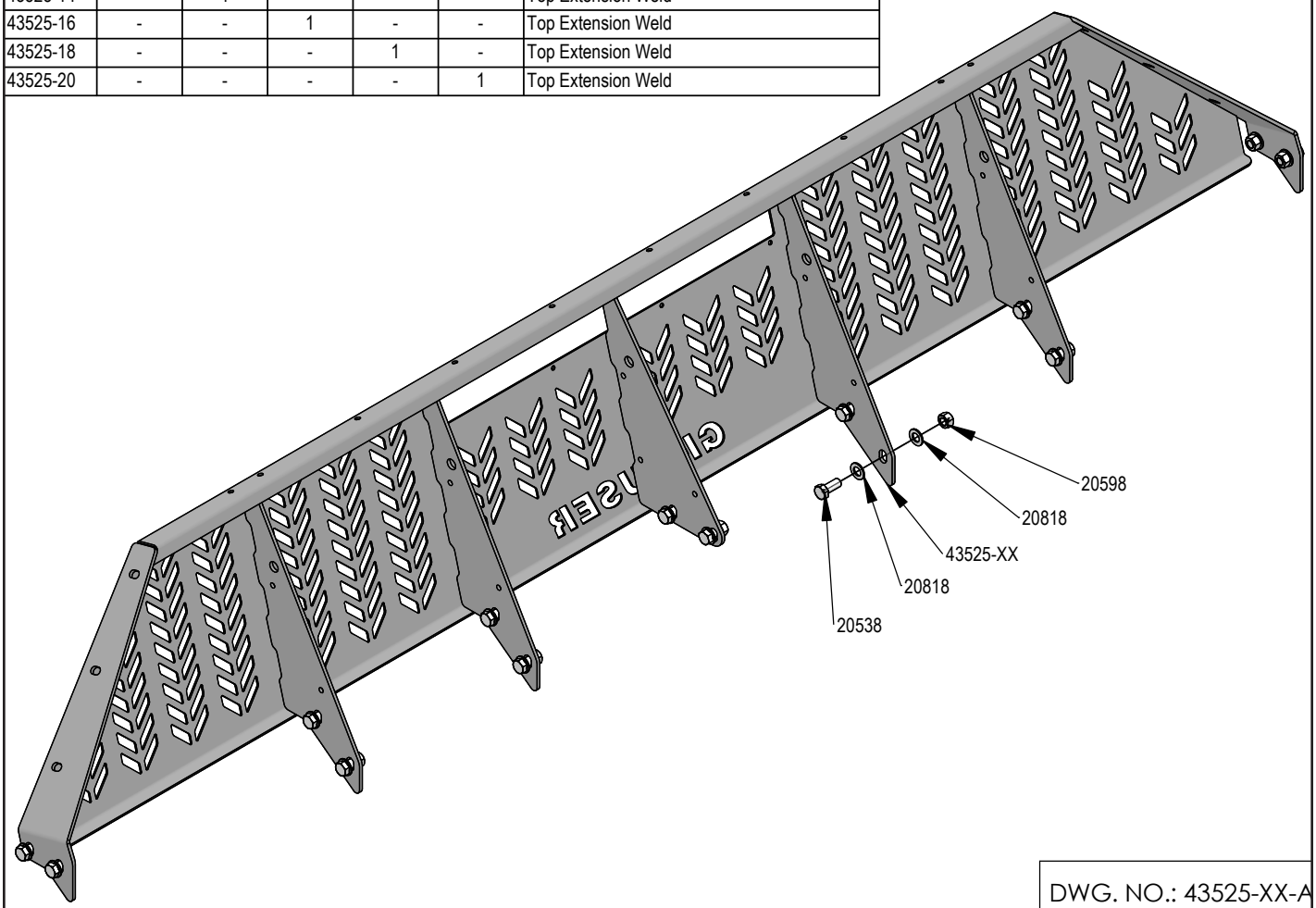
* Part Not Shown



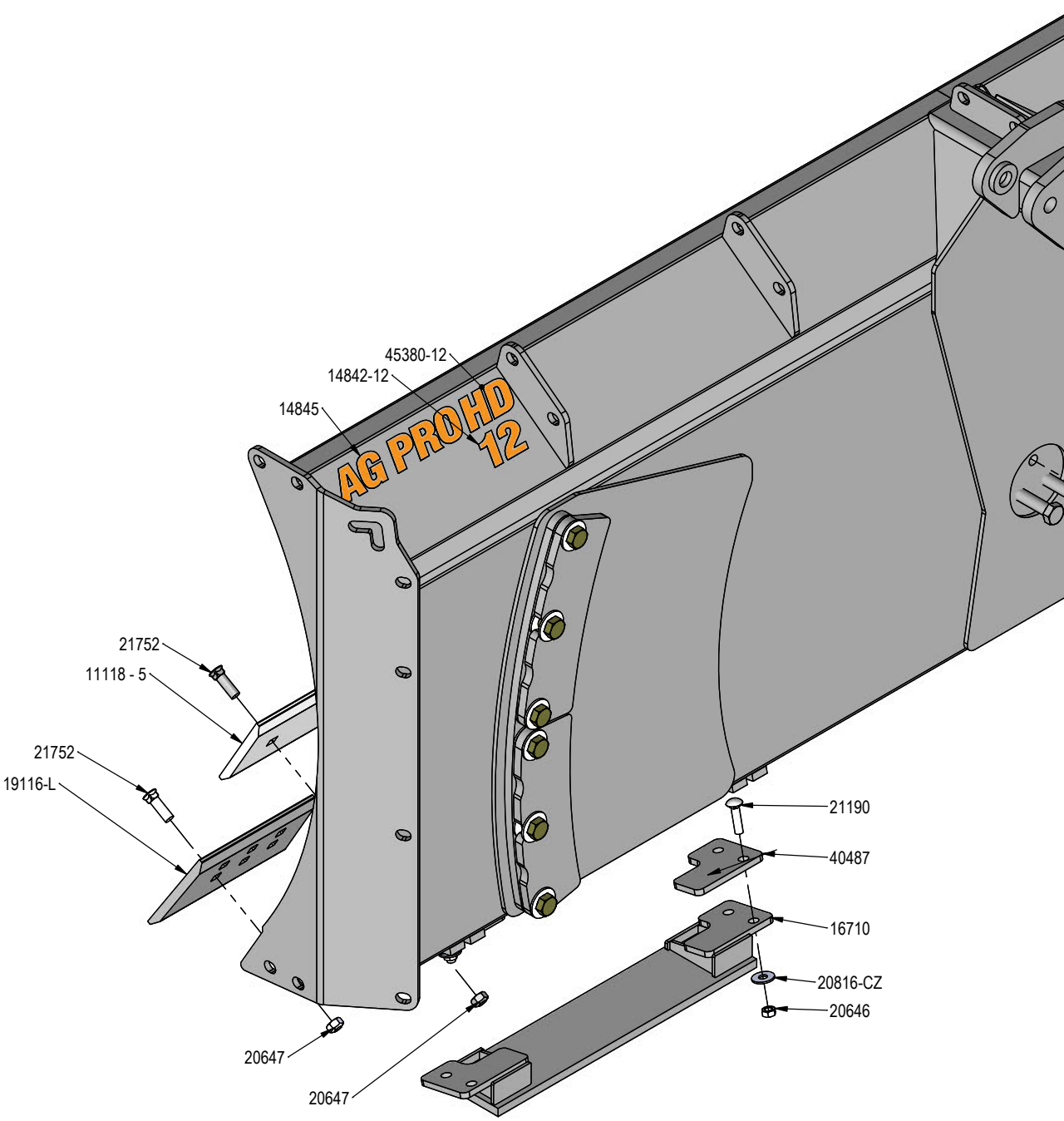
DWG. NO.: 15150-A or 14830-A

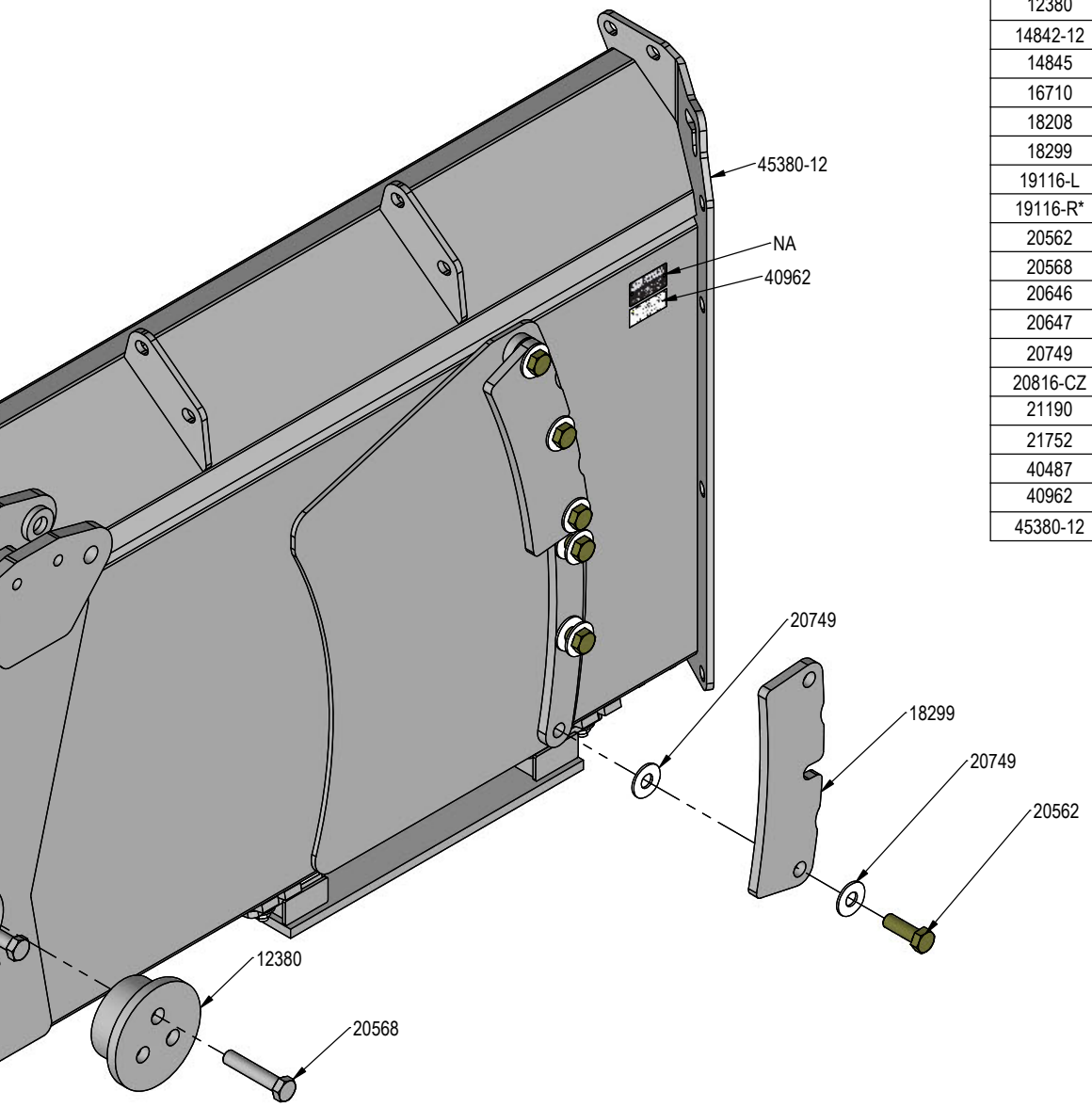
Top Extension

PART NO.	12'/Qty.	14'/QTY.	16'/QTY.	18'/QTY.	20'/QTY.	DESCRIPTION
20538	14	14	18	18	22	7/8" X 2" Hex Bolt Gr 8 NC YZ
20598	14	14	18	18	22	7/8" Hex Nut Gr 8 NC CZ
20818	28	28	36	36	44	7/8" Flat Washer Heavy Duty Gr 8 (USS) YZ
43525-12	1	-	-	-	-	Top Extension Weld
43525-14	-	1	-	-	-	Top Extension Weld
43525-16	-	-	1	-	-	Top Extension Weld
43525-18	-	-	-	1	-	Top Extension Weld
43525-20	-	-	-	-	1	Top Extension Weld



DWG. NO.: 43525-XX-A


45380-12
14842-12
14845
AG PRO HD 12
21752
11118 - 5
21752
19116-L
21190
40487
16710
20816-CZ
20646
20647
20647



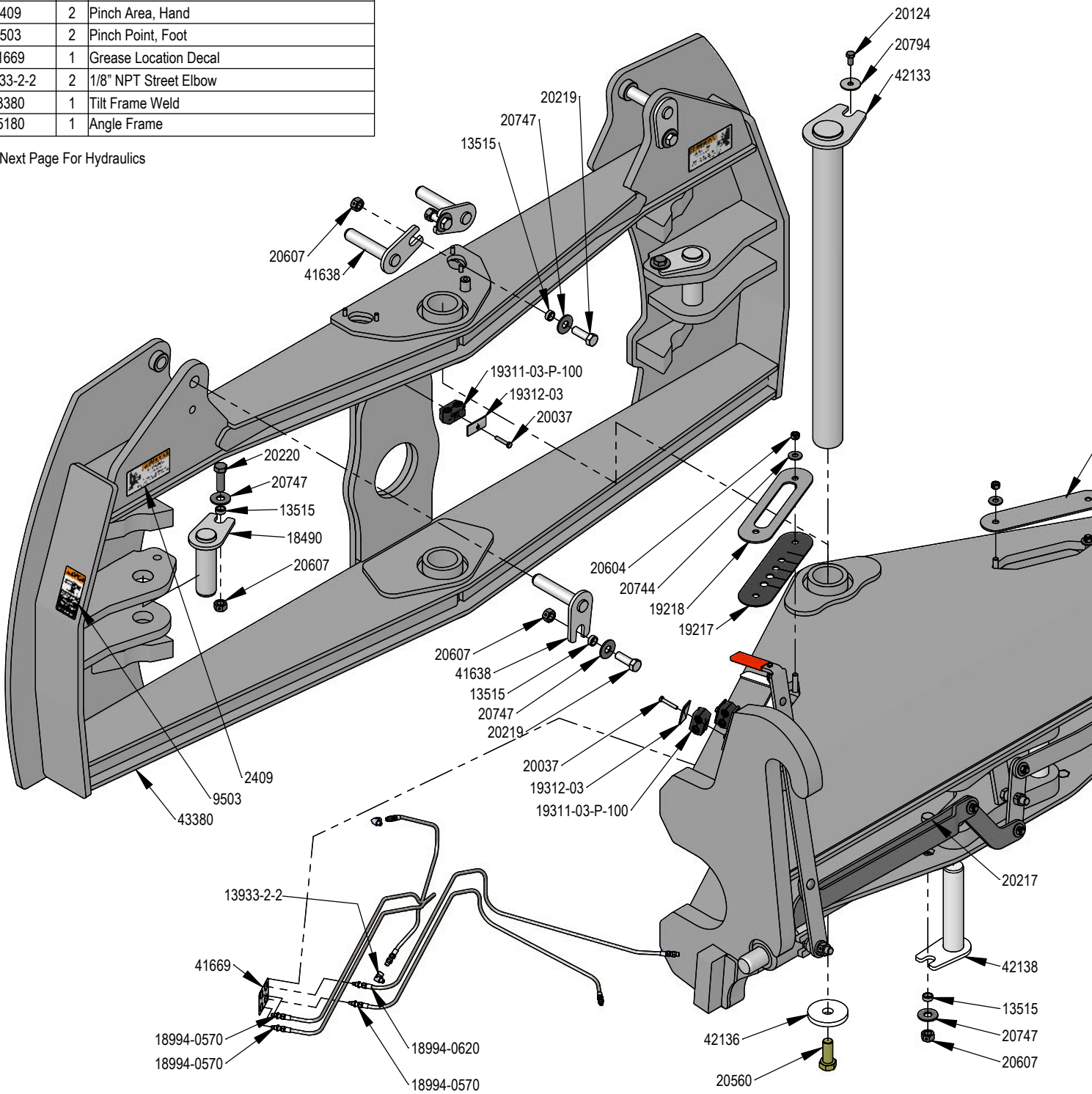
PART NO.	Qty.	DESCRIPTION
NA	1	Serial Number Tag
11118 - 5	2	5' - 3/4"x 8" Cutting Edge
12380	1	Center Tilt Way Cover
14842-12	1	12' Decal
14845	1	Ag Pro Blade Decal
16710	2	HD Skid Shoe
18208	1	HD Decal
18299	4	Tilt Plate
19116-L	1	8" End Bit
19116-R*	1	8" End Bit
20562	12	1" X 3" Hex Bolt Gr 8 NC YZ
20568	3	1" X 5" Hex Bolt Gr 8 NC YZ
20646	8	5/8" Hex Top Lock Nut Gr 5 NC CZ
20647	32	3/4" Hex Top Lock Nut Gr 5 NC CZ
20749	24	1" Flat Washer CZ
20816-CZ	8	5/8" Flat Washer Grade 8 (USS) CZ
21190	8	5/8" x 2-1/2" Carriage Bolt Gr 5 NC CZ
21752	32	3/4" X 2-1/2" Plow Bolt Gr 8 NC
40487	4	HD Skid Shoe Plate
40962	1	Warning Prop 65 Decal
45380-12	1	HD Blade Weld

* Not Shown

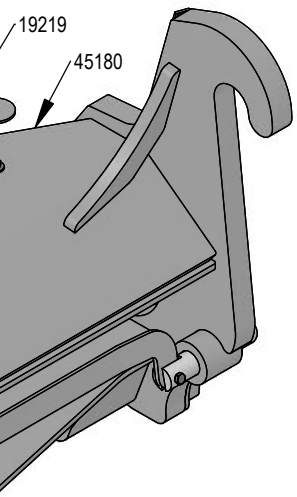
DWG. NO.:45380-XX-A

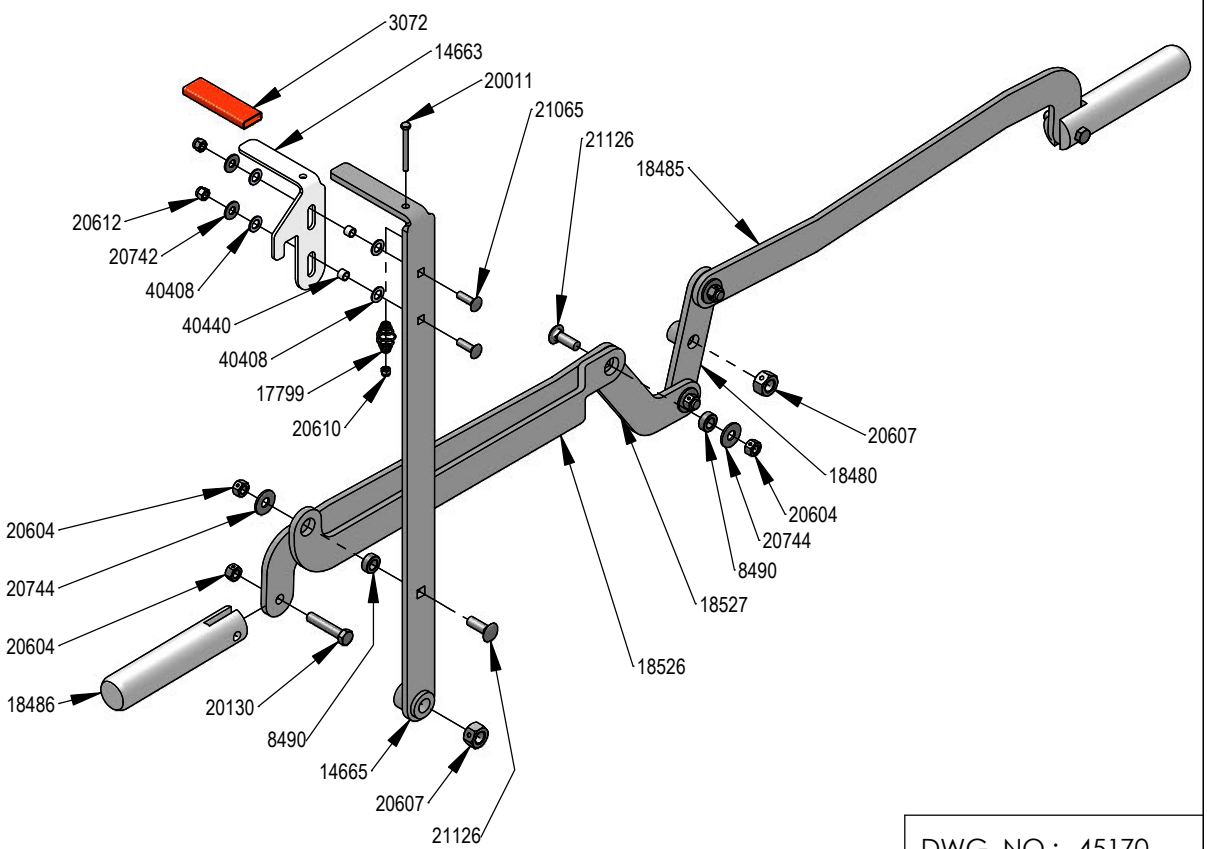
PART NO.	QTY.	DESCRIPTION
20011	1	1/4" X 2-3/4" Hex Bolt Gr 5 NC CZ
20037	4	5/16" X 1-3/4" Hex Bolt Gr 5 NC CZ
20124	1	1/2" X 1" Hex Bolt Gr 5 NC CZ
20130	2	1/2" X 2-1/2" Hex Bolt Gr 5 NC CZ
20217	2	3/4" X 1 3/4" Hex Bolt Gr 5 NC CZ
20219	4	3/4" X 2-1/4" Hex Bolt Gr 5 NC CZ
20220	2	3/4" X 2-1/2" Hex Bolt Gr 5 NC CZ
20560	1	1" X 2-1/2" Hex Bolt 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
19311-03-P-100	4	Hose Clamp
19312-03	4	Twin Cover Plate
13515	8	Spacer, NR Pin
40440	2	.378" ID x .503" OD x .375" Spacer
2409	2	Pinch Area, Hand
9503	2	Pinch Point, Foot
41669	1	Grease Location Decal
13933-2-2	2	1/8" NPT Street Elbow
43380	1	Tilt Frame Weld
45180	1	Angle Frame

See Next Page For Hydraulics



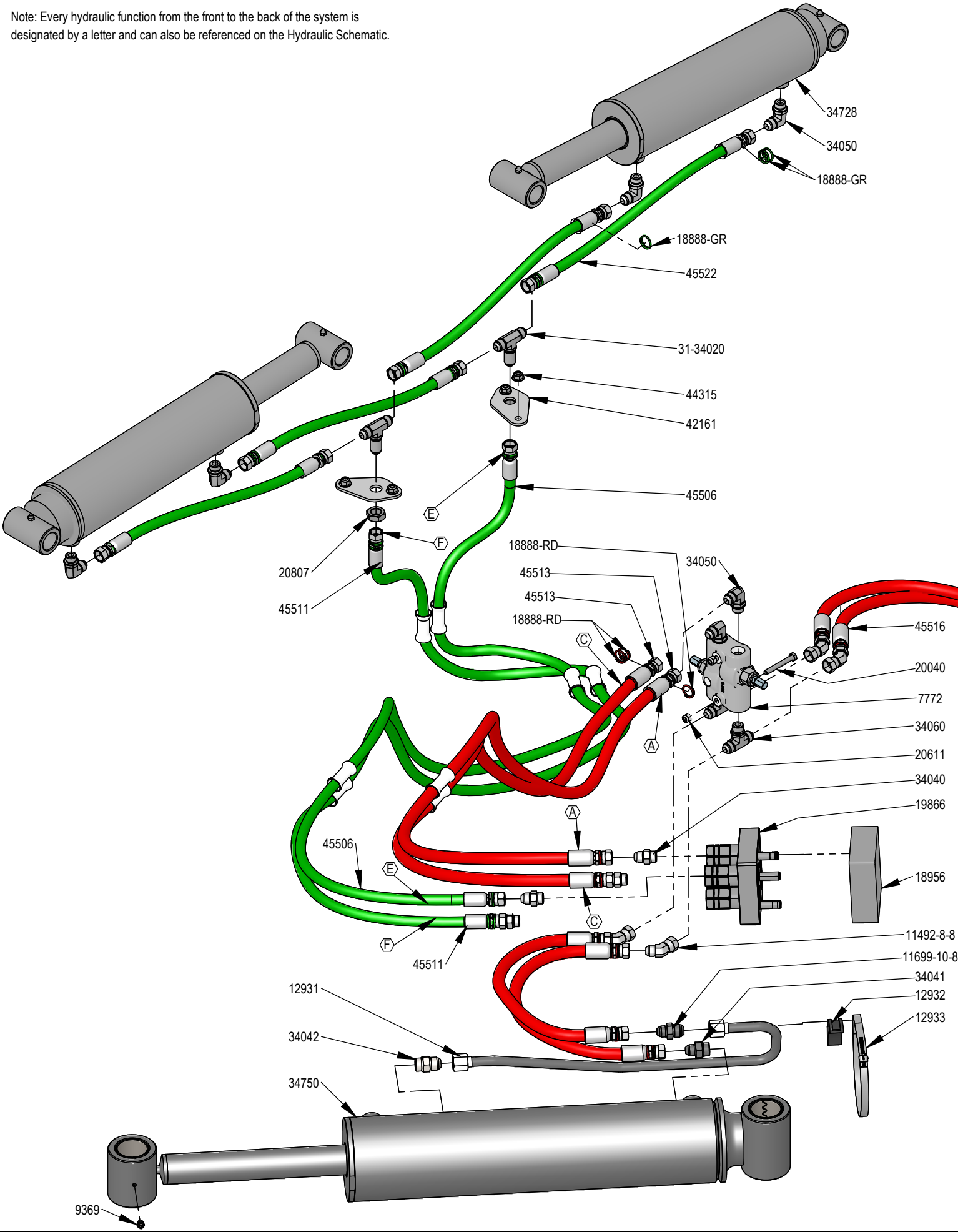
PART NO.	QTY.	DESCRIPTION
17799	1	Latch Spring
19217	1	Rubber Seal
3072	1	Rubber Handle
14663	1	Latch
14665	1	Handle Weld
18486	2	Ag Pro SS QA Lock Pin
18490	2	Angle Cylinder Rod Pin Weld
41638	4	Pin Weld
42133	1	Angle Pin Weld
42138	2	Pin Weld
8490	4	Spacer
19218	1	Seal Clamp Plate
19219	1	Cover Plate
20742	2	3/8" Flat Washer CZ
20744	8	1/2" Flat Washer CZ
20747	8	3/4" Flat Washer CZ
20794	1	1/2" Fender Washer (2.00" OD x .500" ID x .125")
40408	4	3/8" Flat Nylon Washer
42136	1	Plate, Washer
18994-0620	1	62" Grease Hose w/ Long Bulkhead
18994-0570	3	57" Grease Hose w/ Long Bulkhead
20604	10	1/2" Hex Center Lock Nut Gr 5 NC CZ
20607	10	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
18480	1	Bell Crank Weld
18485	1	Link, Right Pin
18526	1	Link, Handle To Left Pin
18527	1	Link, Left Pin



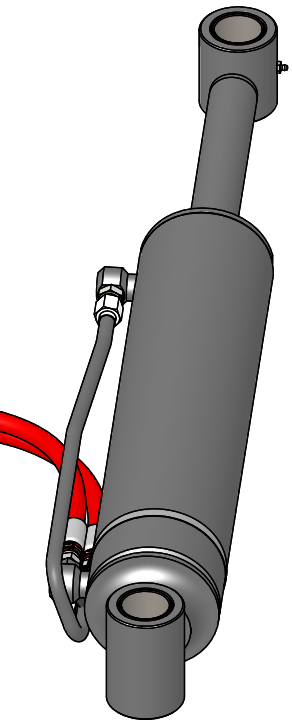


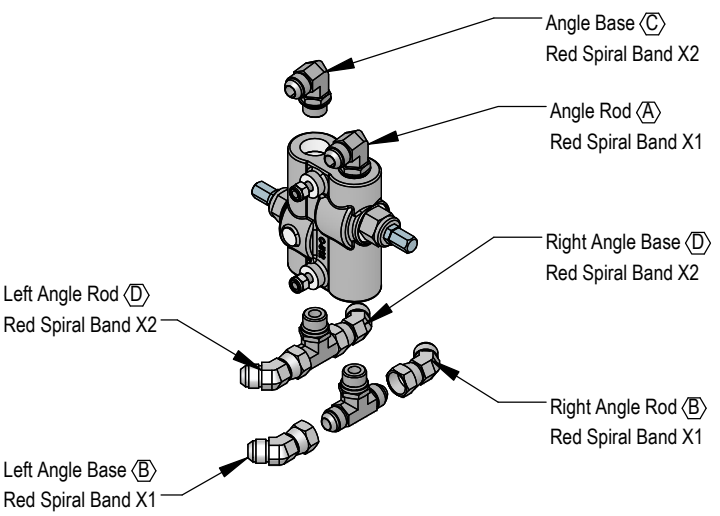
DWG. NO.: 45170

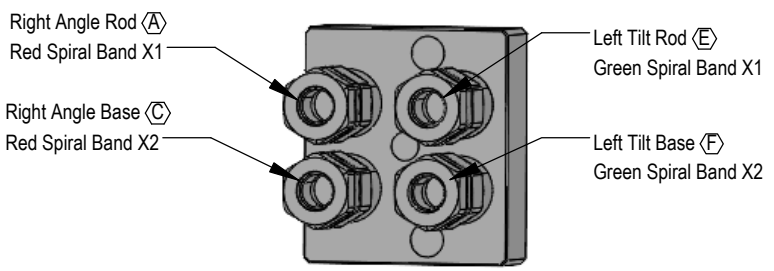
Note: Every hydraulic function from the front to the back of the system is designated by a letter and can also be referenced on the Hydraulic Schematic.



PART NO.	QTY.	DESCRIPTION
20040	2	5/16" X 2-1/2" Hex Bolt Gr 5 NC CZ
18956	1	Multi-Coupling Plate - 4 Port Parking Station
19866	1	Multi-Coupling Plate - 4 Port Mobile
34728	2	4 x 12 Cylinder Tube Ends
34750	2	5 x 20 Cylinder Bushed Tube Ends
11492-8-8	4	Male JIC x Female JIC Swivel Nut Elbow 45°
11699-10-8	2	JIC Union
31-34020	2	Bulkhead Branch Tee JIC
34040	4	Straight JIC x O-Ring
34041	2	Straight JIC x O-Ring
34042	2	Straight JIC x O-Ring
34050	6	Straight Thread Elbow 90° JIC x O-Ring
34060	2	Branch Tee JIC x O-Ring
12932	2	Cylinder Saddle
12933	2	Hose Clamp (worm drive - 5.0)
18888-GR	18	-12 Green - Spiral Band
18888-RD	18	-12 Red - Spiral Band
12931	2	Formed Steel Line
45511	1	128.50" x 3/8" -8JIC/-8JIC Cold Temp Hose (w/ 3 Collars)
45506	1	122" x 3/8" -8JIC/-8JIC Cold Temp Hose (w/ 3 Collars)
45513	2	75.50" x 1/2" -8JIC/-8JIC Cold Temp Hose (w/1 Collar)
45516	4	30 x 1/2" -8JIC/-8JIC Cold Temp Hose W/Cordura
42161	2	Plate, BH Mount
7772	1	Valve
9369	2	Straight 1/8" NPT Grease Zerk
20611	2	5/16" Nyloc Hex Nut Gr 5 NC CZ
20807	2	3/4" Hex Jam Nut NF CZ
44315	4	3/8" Nyloc Flange Nut Gr N5 NC
45522	4	22" x 1/2" -8JIC/-8JIC Abrasion Resistant Hose







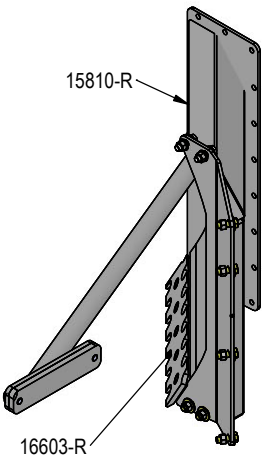
Note: View is from Multi-Coupler Installed on Top Arm. All hoses are marked with colored spiral bands and should be attached to designated ports on the Multi-Coupler.

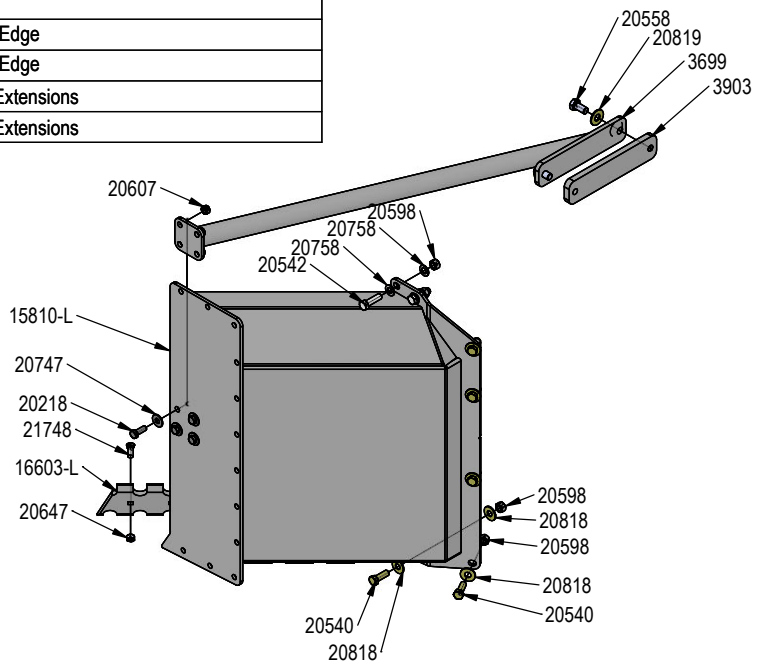
Note: The cylinder part number is stamped on the base end of the cylinder opposite of the hydraulic ports.

Cylinder	Part No.	Description
26-34728	49-12272	Seal Kit 4 x 12 Nitrided Rod
26-34750	49-12275	Seal Kit 5 x 20 Nitrided Rod

U-End End Extension w/ Serrated Cutting Edge

PART NO.	QTY.	DESCRIPTION
20218	8	3/4" X 2" Hex Bolt Gr 5 NC CZ
20540	12	7/8" X 2-1/2" Hex Bolt Gr 8 NC YZ
20542	4	7/8" X 3" Hex Bolt Gr 8 NC YZ
20558	4	1" X 2" Hex Bolt Gr 8 NC YZ
21748	10	3/4" X 2" Plow Bolt Gr 8 NC
20747	8	3/4" Flat Washer CZ
20758	8	7/8" SAE Hardened Flat Washer - 1-3/4" OD
20818	16	7/8" Flat Washer Heavy Duty Gr 8 (USS) YZ
20819	4	1" Flat Washer Heavy Duty Gr 8 (USS) YZ
20598	16	7/8" Hex Nut Gr 8 NC CZ
20607	8	3/4" Hex Center Lock Nut Gr 5 NC CZ
20647	10	3/4" Hex Top Lock Nut Gr 5 NC CZ
3699	2	Reinforcement Arm
3903	2	Bar
16603-L	1	Cutting Edge
16603-R	1	Cutting Edge
15810-L	1	U-End Extensions
15810-R	1	U-End Extensions

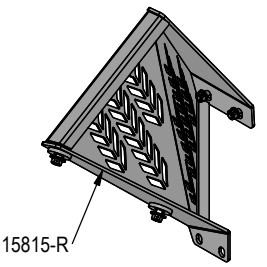


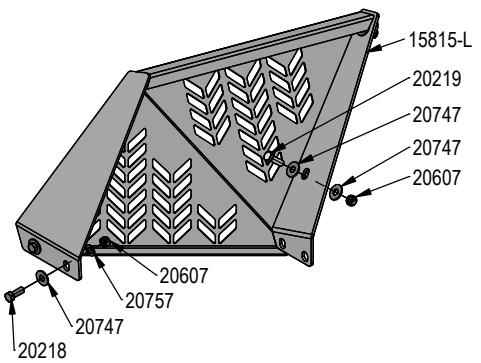


DWG. NO.: 16605-A

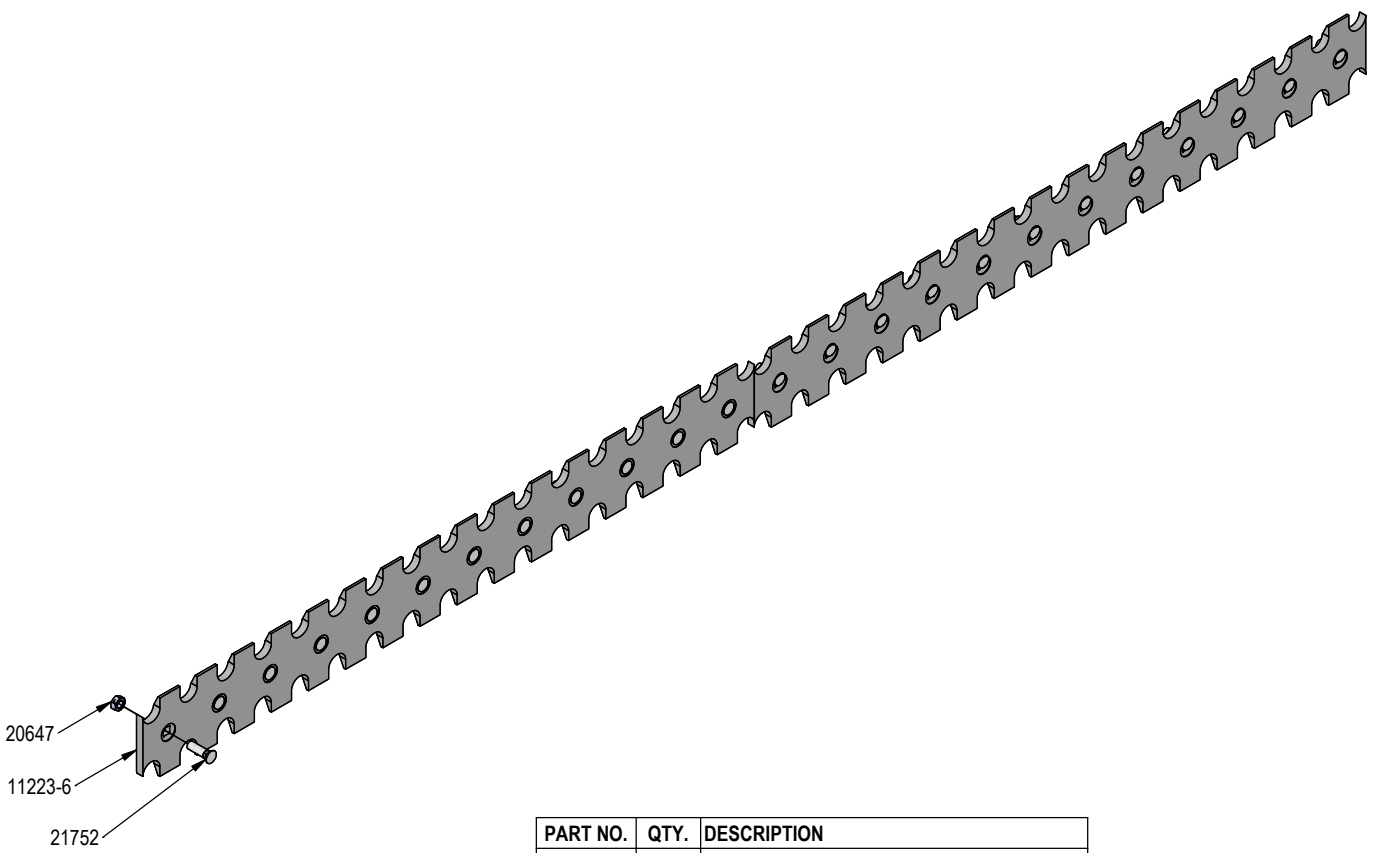
Top Extension for U-End Extension

PART NO.	QTY.	DESCRIPTION
20218	4	3/4" X 2" Hex Bolt Gr 5 NC CZ
20219	4	3/4" X 2-1/4" Hex Bolt Gr 5 NC CZ
20747	12	3/4" Flat Washer CZ
20757	4	3/4" SAE Hardened Flat Washer - 1-1/2" OD
20607	8	3/4" Hex Center Lock Nut Gr 5 NC CZ
15815-L	1	U-End Top Extension
15815-R	1	U-End Top Extension



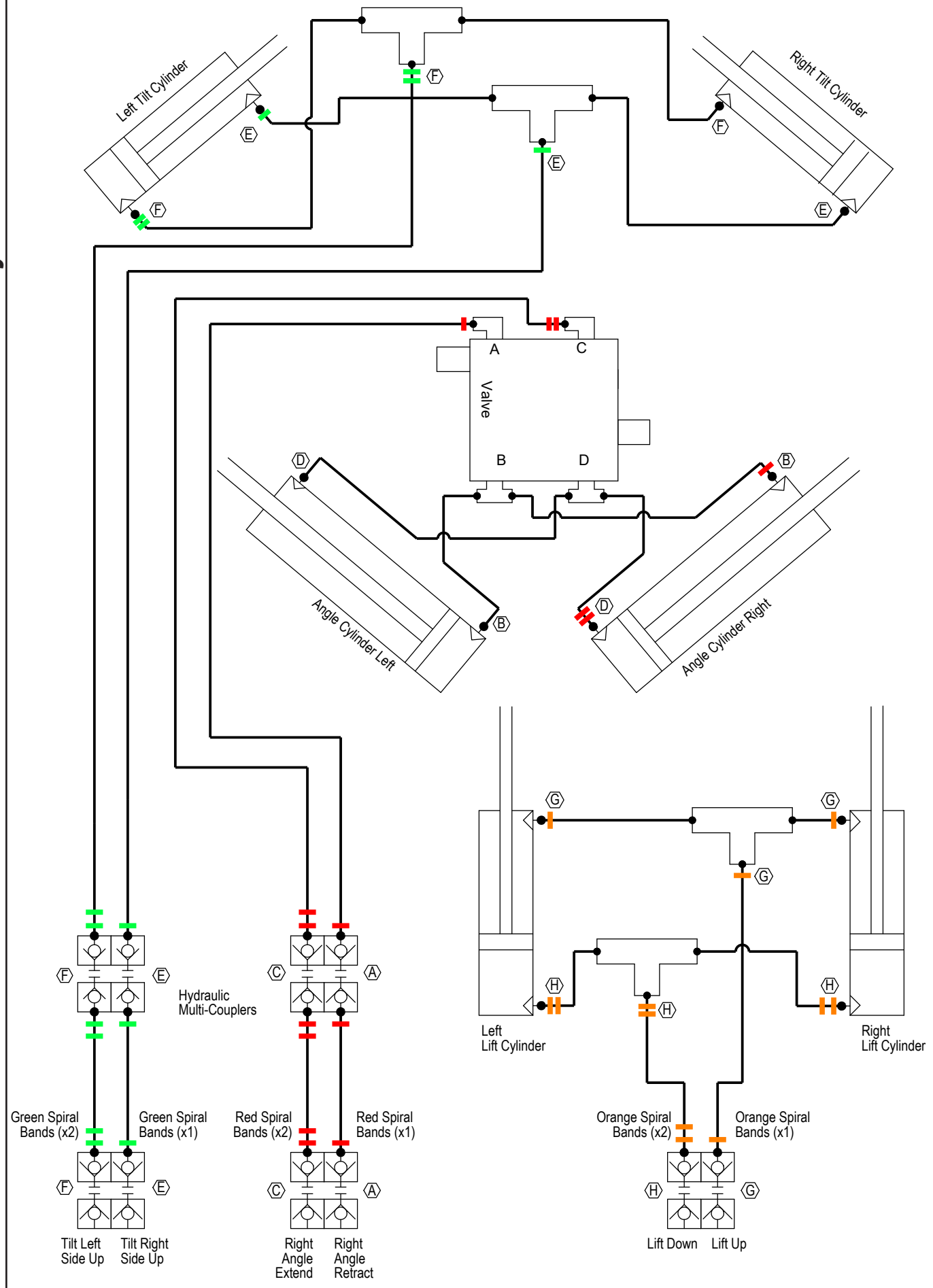


DWG. NO.: 15815-A



PART NO.	QTY.	DESCRIPTION
20647	1	3/4" Hex Top Lock Nut Gr 5 NC CZ
11223-6	2	Cutting Edge
21752	1	3/4" X 2-1/2" Plow Bolt Gr 8 NC

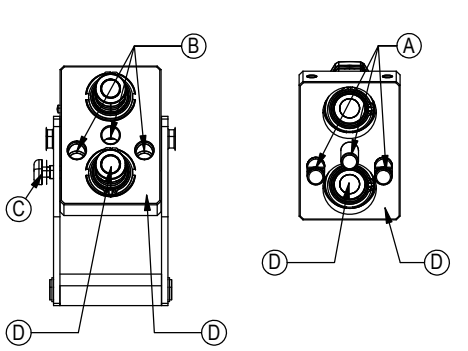
DWG. NO.: 45487

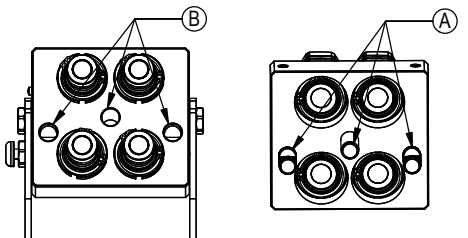


Tractor Service Valve

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.





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.

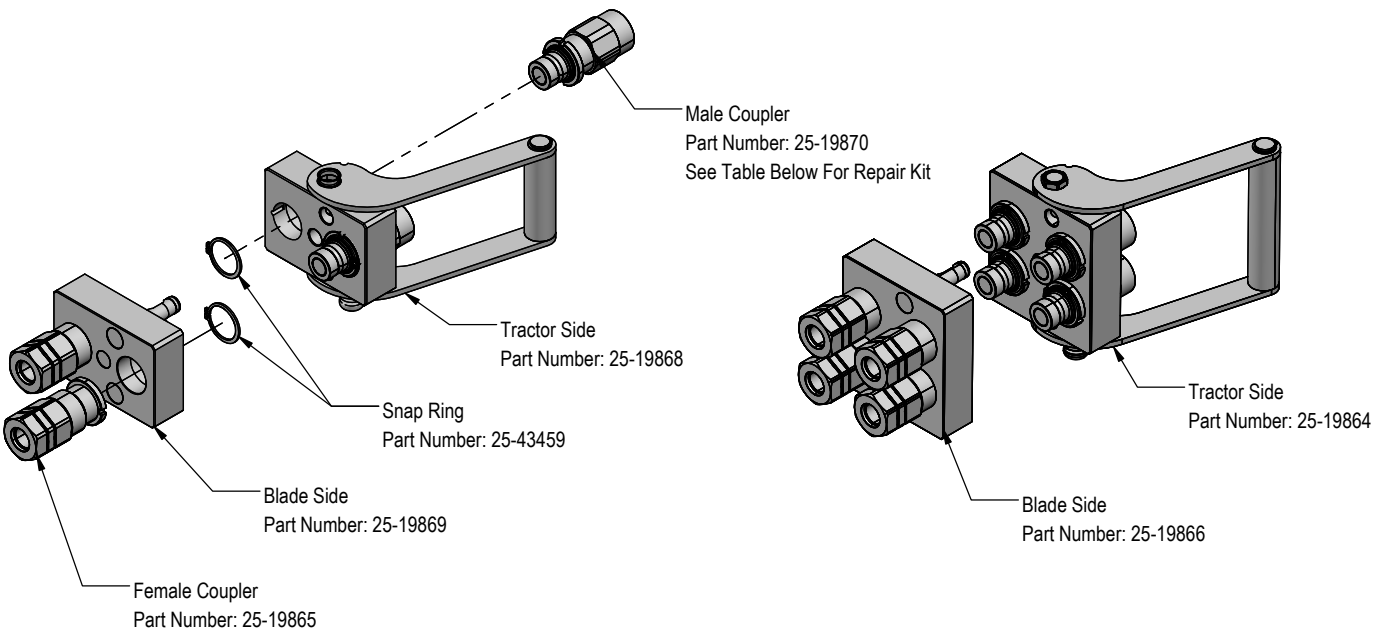
   *Use a cloth or compressed air. It is advised to not use water to clean these surfaces
3. Apply a lubricant/anti-corrosion (grease or silicone - see Note 1):
   - A. On the pins.
   - B. Inside the cam.
   - C. In the locking mechanism area.
4. Connect the cap to the fixed half and the mobile half to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

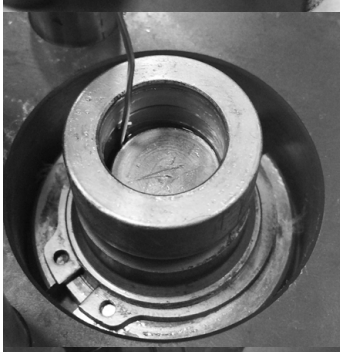


PN	Description
25-43425	Male Coupler O-Ring Repair Kit

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.

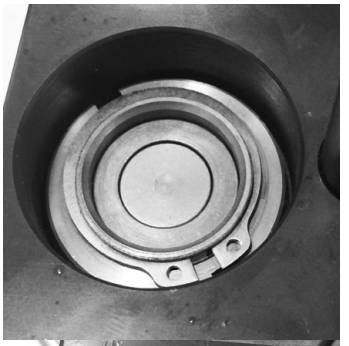


3. Inspect the seal and interior surfaces for contamination.

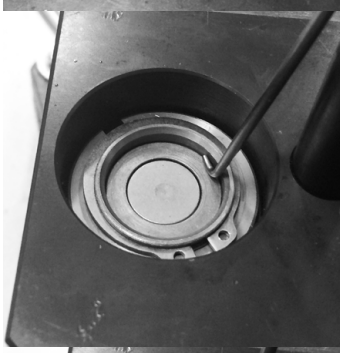
4. In case of contamination, carefully wipe surfaces with a soft cloth, or use compressed air to blow the contamination out. Do Not press hard on the seal as contamination can scratch the seal surface.

5. Using a non-marring tool, depress the valve face and remove the metal wire. Release the valve to the flush position.

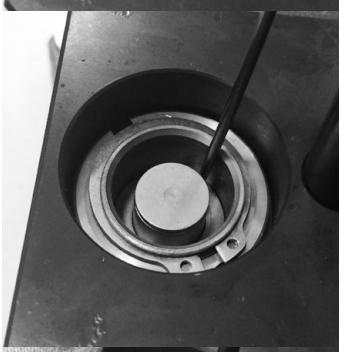
Cleaning The Female Bushing:



1. Make sure the coupling is securely fastened into the plate or place in a vice.

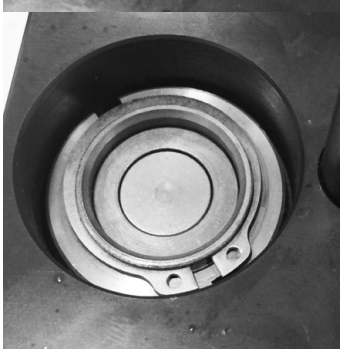


2. Using a non-marring tool, depress the outer ring to expose the bushing. There is no need to expose the valve seal, so stop pressing before the valve is opened.



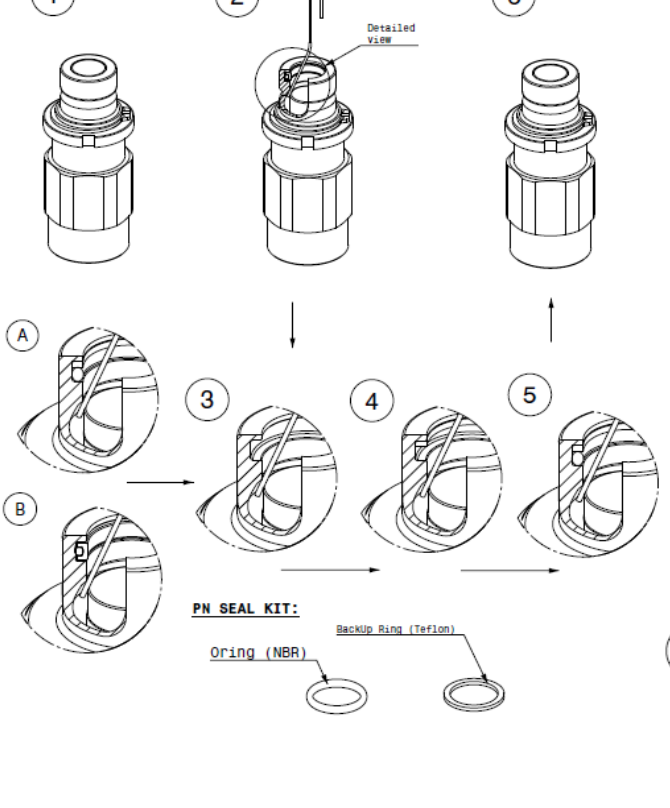
3. Inspect the interior body and bushing surfaces for contamination.

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



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 originaly assembled with different seal technologies (see figures A and B) but both used O-ring and backUp ring as repalcement 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 efficency 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!

Leaking When Connected:

1. Male Coupler is the issue despite leakage visually appearing from either top or bottom of female coupler sleeve, the seal between the two halves is made from the male interface seal.

2. Root cause typically is contamination. Can be identified by pushing in piston on male and exposing male seal. If dirty, can be wiped clean and reconnected to test seal. Can also be cut or extruded either from contamination or dynamic pressure in circuit while connection/disconnection.

3. The male coupler can be completely replaced, or a cost-effective approach would be replacing with available O-Ring seal kits (See Above for O-ring Repair Instructions).

Leaking When Disconnected:

1. Leaking/weeping at face of male coupler - See Above.

2. Leaking/weeping at face of female coupler - Root cause is contamination creating a leak path on the valve stem seal. This may be viewed/cleaned/cleared by exposing the seal. This is done by pushing in the inner ring bushing with a flat head screwdriver or similar tool. Once pressed in, it will stop at the next spring point that opens the valve. Pressing with additional force on the tool will open the valve and expose the sealing area which is underneath the valve. If the seal is damaged or extruded and cleaning does not fix the leakage, a new female coupler is best option. Seal kits are not available.

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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