



Multipurpose Grapple

For

Skid Steer Loaders And Category I & II 3-Point Hitches

**Operator's Manual
Maintenance
Parts Information**



Read this Manual Before Use

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REFERENCE INFORMATION

Write the serial number for your attachment in the spaces below. Always refer to this serial number when calling for service or parts.

Serial Number....._____

YOUR ATTACHMENTS DEALER

ADDRESS:

PHONE:

CONTACT:

NOTE: Erskine Attachments LLC reserves the right to make improvements in design or changes in specifications at any time without notice and without incurring any obligations to install them on units previously sold.

SAFETY

DO NOT perform maintenance on this machine until this manual has been read and understood. In addition, read the Operation and Maintenance Manual(s) pertaining to the attachment and the attachment carrier (“Loader”).

The user is responsible for inspecting the machine daily, and for having parts repaired or replaced when continued use of the machine would cause damage, excessive wear to other parts, or make the machine unsafe for continued operation.

If an operating procedure, tool device, maintenance or work method not specifically recommended is used, you must satisfy yourself that it is safe for you and others. You must also ensure that the attachment will not be damaged or made unsafe by the procedures you choose.

Erskine Attachments LLC cannot anticipate every possible circumstance that might involve potential hazard. The safety messages found in this manual and on the machine are therefore not all inclusive.

The signal words **CAUTION**, **WARNING**, or **DANGER** are used to indicate hazards.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ DANGER Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

The word **IMPORTANT** is used in the text when immediate damage will occur due to improper technique or operation.

The word **NOTE** is used to convey information that is out of context with the manual text; special information such as specifications, techniques, reference information, and other information of a supplementary nature.

Improper operation can cause serious injury or death.

Pre-operation

- The multipurpose grapple is designed to grab, sort, and transport materials such as logs, brush, rocks, and demolition debris. **NEVER** use this machine for any other purpose.
- Read the operator's manual for the "Skid Steer Loader." **NEVER** allow untrained people to operate.
- Operating instructions must be given to everyone before operating this attachment and at least once a year thereafter in accordance with OSHA regulations.
- **NEVER** exceed the maximum recommended input power or speed specifications for the attachment. Over-powering or over-speeding the attachment may cause personal injury and/or machine damage.
- Keep all shields, guards, and covers in place.
- Do not modify equipment or add attachments that are not approved by Erskine Attachments LLC.
- Use adequate safety warning lights and devices as required by local regulations. Obey all local laws and regulations regarding machine operation on public property.

Operation

- Hydraulic connections may be hot after use. Use gloves if connecting or disconnecting after use.
- Check and be sure all operating controls are in neutral before starting the engine.
- Depending on how this attachment is used, dust can be created. Prolonged exposure to dust can cause chronic and acute health problems. A NIOSH-approved respirator may be required.
- Keep people away from loader, attachment, and material being handled when in use. This attachment can have a large swing radius, be aware of your surroundings.

Operation (continued)

- **NEVER** operate near embankments or terrain that is so steep that rollover could occur.
- Always stay in the operator position when using the attachment.
- Before leaving the operators position, disengage hydraulic drive, lower the attachment to rest flat on the ground, stop engine, set park brake, and wait for all motion to stop.

Avoid High Pressure Fluids Hazard



- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Avoid the hazard by relieving the pressure before disconnecting hydraulic lines.
- Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks. Wear protective gloves and safety glasses or goggles when servicing or performing maintenance on hydraulic systems.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

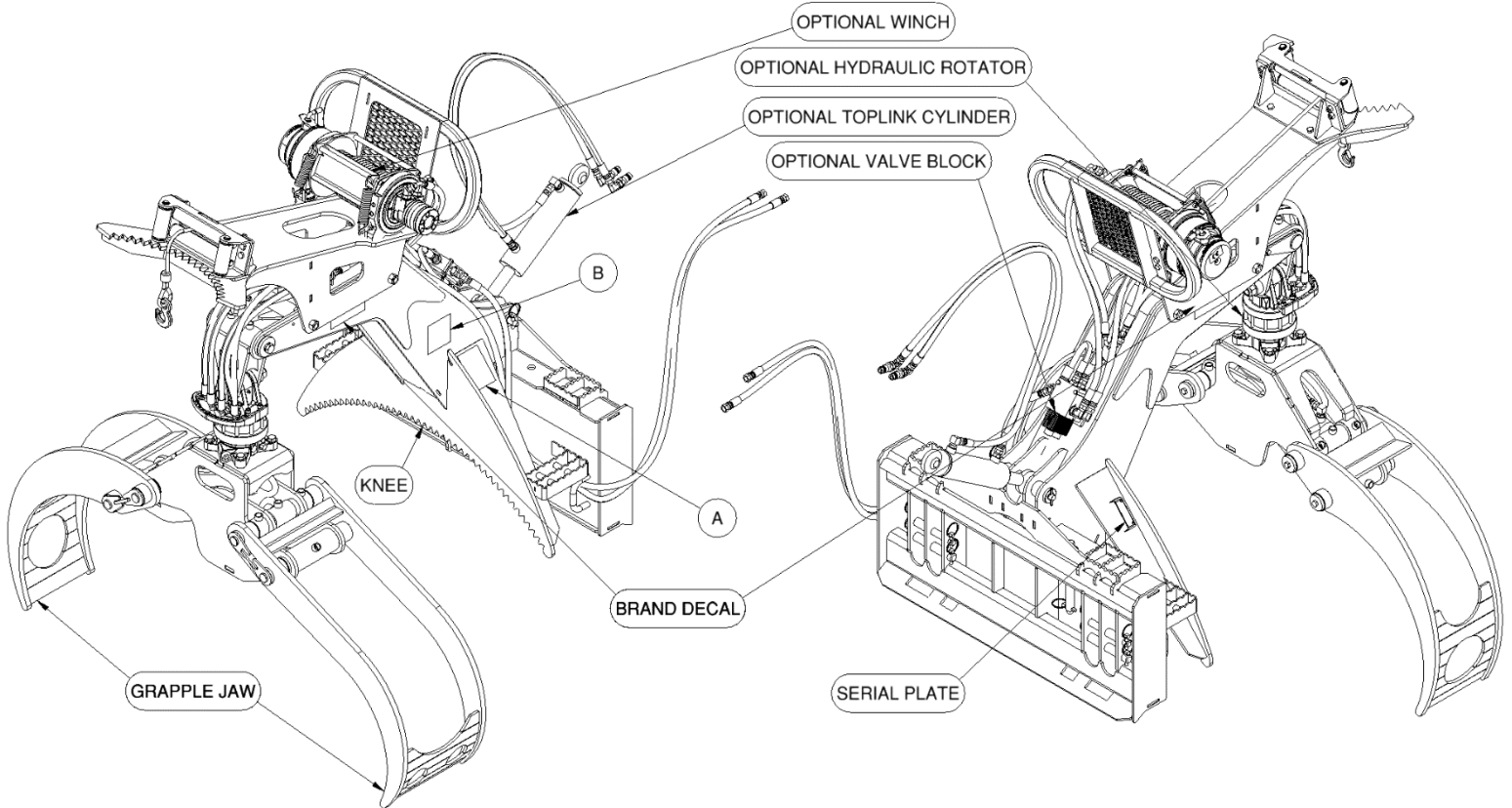
Maintenance

- **NEVER** make adjustments, lubricate, clean, or perform any service on the machine while it is in operation.
- Make sure the attachment is serviced on a daily basis. Improper maintenance can cause serious injury or death in to damage to the attachment and/or your equipment addition.

SERIAL NUMBER AND SAFETY DECAL LOCATIONS

Serial Number Location: On the right knee gusset.

It is important to refer to the serial number of the attachment when making repairs or ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use different procedures in doing a specific operation.

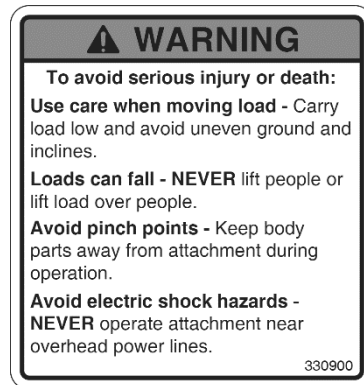


A



Part Number: 200001
Location: On left knee gusset
Quantity: 1

B



Part Number: 330900
Location: On left side of mast
Quantity: 1

Safety Decals Locations:

The locations of the safety decals are shown. If these decals are missing, damaged, or painted over they must be replaced. Call Erskine Attachments LLC (218-435-4045) for replacement decals.

MOUNTING INSTRUCTIONS

After uncrating the attachment, use the following procedure to mount the attachment to the loader.

⚠ WARNING Coupler wedges or pins must extend through the holes in attachment. Levers must be fully down and locked. Failure to secure wedges or pins can allow attachment to come off and cause injury or death.

1. Use the step, safety treads, and grab handles to get on and off the loader and attachment.
2. Sitting in the operator's seat, lower seat bar and fasten the seat belt.
3. Drive the loader to the rear of the attachment. Put the loader quick attach coupler into the attachment mounting bracket.
4. Tilt the loader coupler backward a small amount until it is fully engaged in the multipurpose grapple mounting bracket.
5. If you have manual levers, stop the engine and engage the park brake. If not, proceed to step 6.
6. Secure the coupler locking mechanism that attaches the attachment to the loader.
7. Connect the hydraulic quick couplers from the attachment to the loader.

IMPORTANT: Wipe the ends of the hydraulic quick couplers (both lead and loader) with a rag to remove any possible contamination. Contamination can cause hydraulic components to fail and is not covered under warranty.

IMPORTANT: Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and brand. Do not force the quick couplers together.

NOTE: Attachment is shipped with 8FJX (3/4" Female JIC swivel) fittings on the ends of the lead hoses.

8. Make sure the hoses are properly routed to fit your specific loader. If the hoses are not routed correctly, hoses may get pinched or rub on tires or tracks. Be sure to check the hose routing through the full range of intended motion of the attachment before operating it.

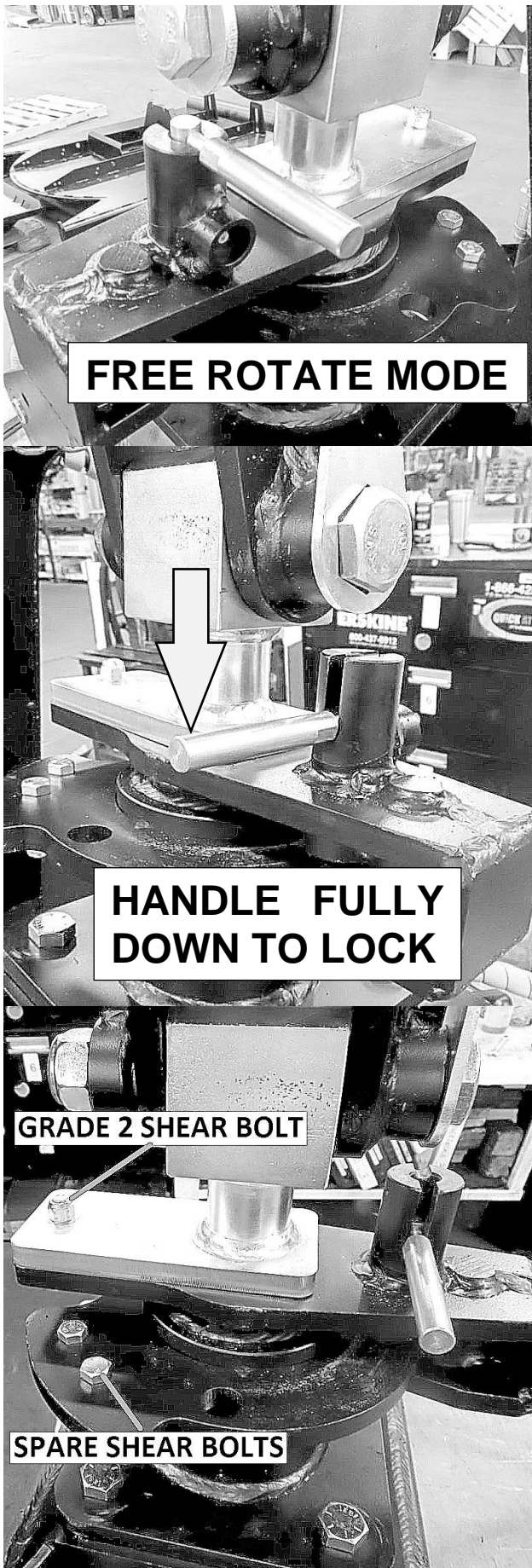
More than one routing may be acceptable depending on the loader. Pick the routing that best suits your loader.

IMPORTANT: Proper hose routing is the responsibility of the owner and/or operator. Pinched or stretched hoses are not covered under warranty.

NOTE: See the loader's operator's manual for further instructions.

Mounting is now complete and you are ready to use the attachment. Use reverse order of above instructions to dismount the attachment from the loader.

OPERATING INSTRUCTIONS



Manual Rotator (IF EQUIPPED)

Free Rotate Function

1. The rotator is in free rotate mode when the lock pin is secured in upright position as shown. This will prevent damage caused by the excessive torque incurred while turning.
2. The grapple should be able to rotate 180 degrees in the free rotate mode. Use logs or the ground to move the grapple to the desired angle.

IMPORTANT: When skidding (pulling longer trees or limbs where one end will be dragging on the ground), it is necessary to have the rotator in the free rotate mode. Machine damage can occur if skidding in lock mode.

Lock Function

1. To lock the rotator, rotate grapple to one of three lock position.
2. Lift up on the handle until it clears the detent slot, then rotate the handle 180 degrees to the deeper locking slot.
3. The spring loaded pin must be fully engaged with the handle all the way to the bottom of the slot. The grapple may need to be rotated a few degrees to the right or left to align the pin and allow full engagement.
4. The shear bolt helps prevent excessive torque loads on the machine. If the shear bolt breaks you are operating beyond the designed limits, replace bolt and change operation of the machine. Use care to not over torque againsts stops or while in lock position.

Hydraulic Rotator Option (IF EQUIPPED)

1. A hydraulic rotator on your Multipurpose Grapple is an option that can greatly improve ease of use and operator efficiency.
2. The primary function on your hydraulic system should be activating the jaws on the grapple, with the secondary function being rotation. If this is not the case, the plumbing in the hydraulic circuit may be incorrect.
3. The electric solenoid valve that diverts oil to the rotor needs to be activated, the activation button will need to be held while running the auxiliary hydraulics. Depending on the brand of loader and functions available you may need a pistol grip wire harness installed on your machine for this secondary operation.

OPERATING INSTRUCTIONS

Winch Option (IF EQUIPPED)

Read and understand the manual supplied with the winch before operating.

1. When handling the winch cable the skid steer or tractor should be shut off with the keys pulled and in your pocket.
2. Put the winch in free spool and pull the line out to the desired tree you wish to pull. Always keep at least 5 wraps around the winch drum or the cable could slip off and cause damage to the cable, winch, and surrounding property or persons. Never operate the winch with other people nearby.
3. Secure the cable to the tree and put the winch back into pull mode with the lever. Make sure it is fully engaged and locked into position.
4. You can now turn your skid steer or tractor back on and hold the third auxiliary function while operating the hydraulics. This should activate your winch.
5. Make sure that you have a straight line path for pulling so that the tree does not hit any obstacles while being spooled in.

3-Point Mount

1. The Multipurpose Grapple is compatible with category I and II 3-point hitches.
2. Connect the hydraulics on the Multipurpose Grapple through the lead hoses. Control of the different functions is done by activating the electric over hydraulic valve blocks using a pistol grip harness. If it is possible, mount the pistol grip control on the hydraulic lever you plan on using. This makes using the different functions much easier.
3. If you have the optional top link hydraulic cylinder, simply replace the top link with the hydraulic cylinder and connect the hoses to the tractor's hydraulics. Check clearance between the Multipurpose Grapple and your tractor in the full range of motion.

Using the Multipurpose Grapple

Brush

1. Brush can be transported and stacked or loaded into a chipper. Use extra caution when working around a chipper.
2. Drive up to desired branches, open grapple and lower over larger portion of branch.
3. It may be desirable to group a few branches together either by hand or with the grapple before transporting them. This can reduce the number of trips taken and improve efficiency.
4. Be aware of your surroundings when transporting any materials.

Logs

1. Logs can be sorted, stacked, and transported with the Multipurpose Grapple.
2. The knee on the main frame is designed to help support the rear end of the log to keep it more stable during handling.
3. Be aware of swing radius when turning.
4. Stay at least 50 feet away from power lines.

Rocks

1. The multipurpose grapple can be used for moving rocks for landscaping purposes.
2. Drive up to desired rock, open grapple and lower onto the rock so that it is centered and slowly close the jaws around the rock. Lift the grapple a few inches off the ground and carefully transport to desired position.
3. Rocks that are too small will slip between the plates of the jaws. Rocks that are too large will either slip out of the grapple or overload your machine. Never exceed the rated operating capacity for your loader.

ROUTINE MAINTENANCE



WARNING! Lower the attachment to rest on the ground, shut down the engine, relieve the hydraulic pressure to the attachment, wait for all motion to stop, and set parking brake before leaving the operator's seat to perform service of any kind.

It is the operator's responsibility to make daily inspections of the attachment and loader for damage, loose bolts, fluid leaks, or anything else that could cause a potential service or safety problem. Preventive maintenance is the easiest and least expensive type of maintenance.

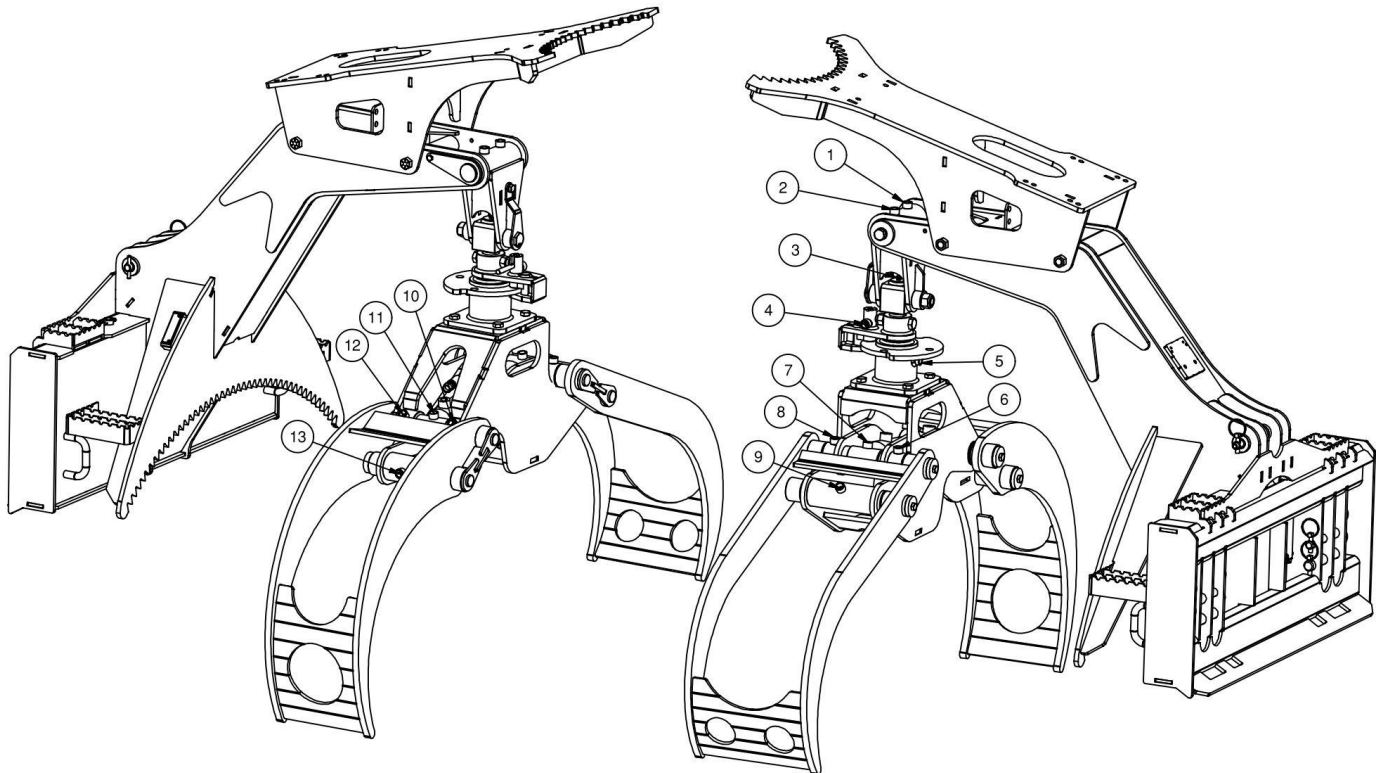
IMPORTANT: Bolts and set screws can loosen after initial usage. After first hour of operation check all bolts and set screws. This must also be done daily before operation. If nuts or bolts are missing or damaged, replace immediately.

DAILY INSPECTION



Follow the multipurpose grapple service schedule for routine maintenance. Check the following items every **10 hours** of operation:

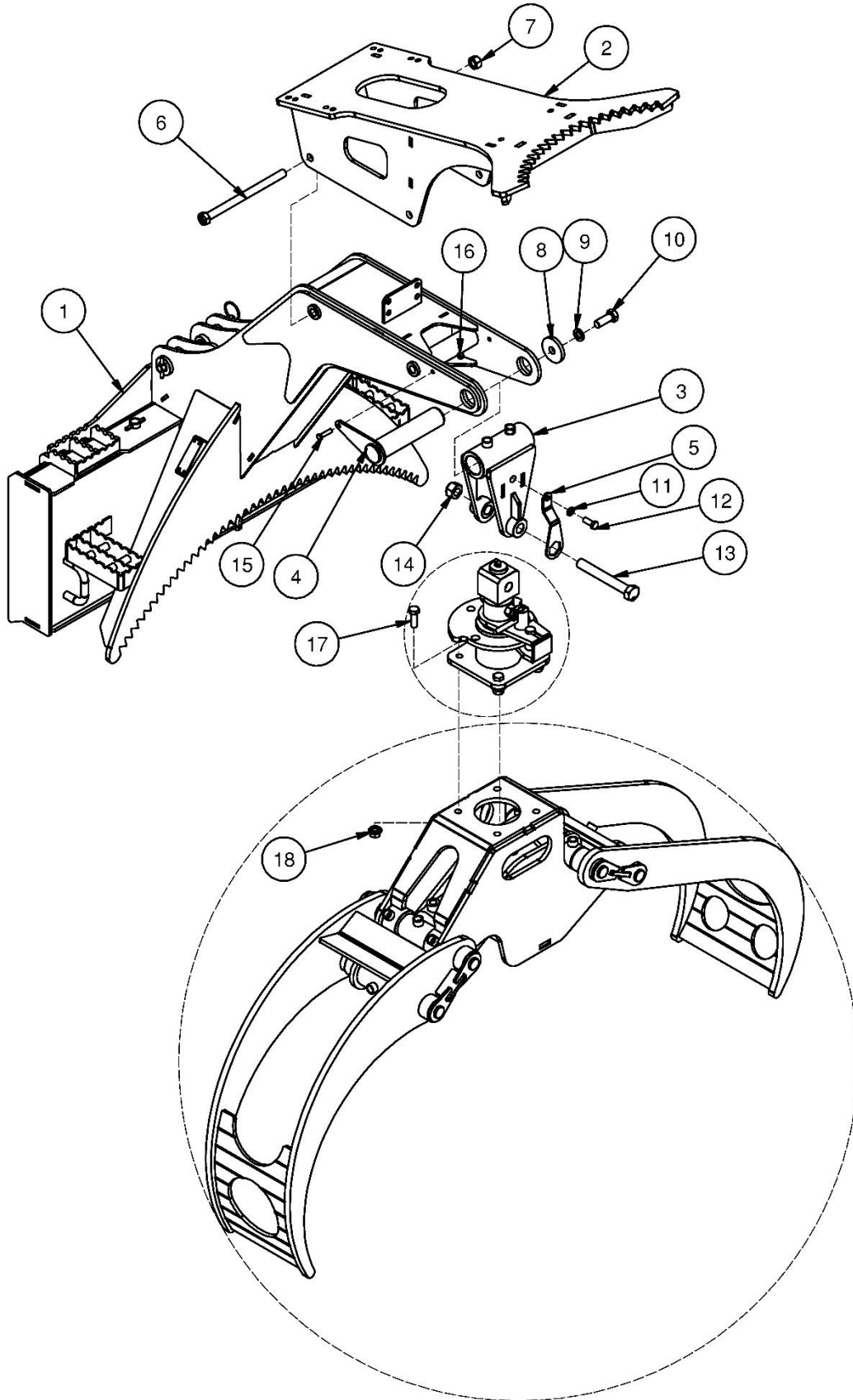
1. Check entire attachment for weld cracks or excessive damage. Replace if necessary.
2. Check all hardware. Retighten if necessary.
3. Check for damaged or missing decals. Replace if damaged or missing.
4. Check for damaged or leaking hydraulic hoses or fittings. Replace or tighten.
5. Grease machine every day of use.
 - a. See diagram below for grease zerk location.
 - b. If a grease fitting does not take grease replace or clean it.
 - c. Hydraulic rotate option does not have zerks at location 4 and 5.



PARTS INFORMATION

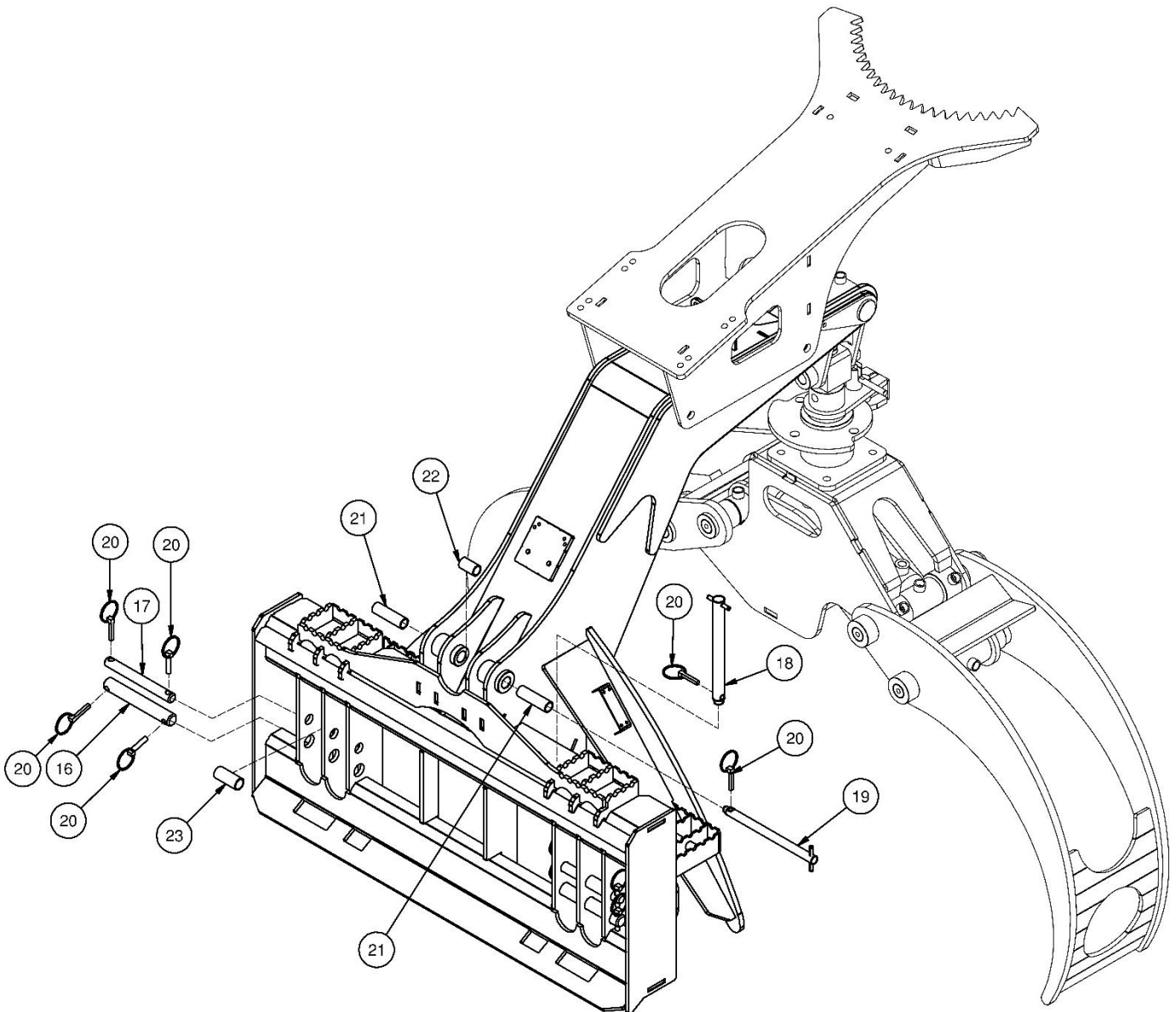
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	319900	FRAME MULTIPURPOSE GRAPPLE W/A	
2	1	319907	PUSH BAR W/A	
3	1	319906	LINK TWO AXIS PIVOT 1 X 2 X 7.1 W/A	
4	1	319963	PIN 2 X 8.75 W/A Z	
5	1	319944	BRKT HEX BOLT RETAINER Z	
6	2	15385	BOLT HEX	3/4 X 11 NC GR 8
7	2	38067	NUT TOP LOCK	3/4 NC GR 9
8	1	319966	WASHER PLATE .76 X 2.75 X .375 Z	
9	1	33632	WASHER LOCK	3/4"
10	1	13361	BOLT HEX	3/4 X 2 NC GR 5
11	1	33626	WASHER LOCK	1/2"
12	1	13207	BOLT HEX	1/2 X 1-1/4 NC GR 5
13	1	11114508	BOLT METRIC	M24-3MM X 180 CLASS 10.9 YZ
14	1	40193	NUT LOCK NYLON	M24-3MM CLASS 8 Z
15	1	103879	BOLT HEX	BOLT 3/8 X 1-1/2 NC GR 5
16	1	37212	NUT REV LOCK	3/8 NC
17	4	15310	BOLT HEX	5/8 X 1-3/4 NC GR 8 YZ
18	4	0167012	NUT TOP LOCK FLNG	5/8 NC GR G (GR8)

PARTS INFORMATION



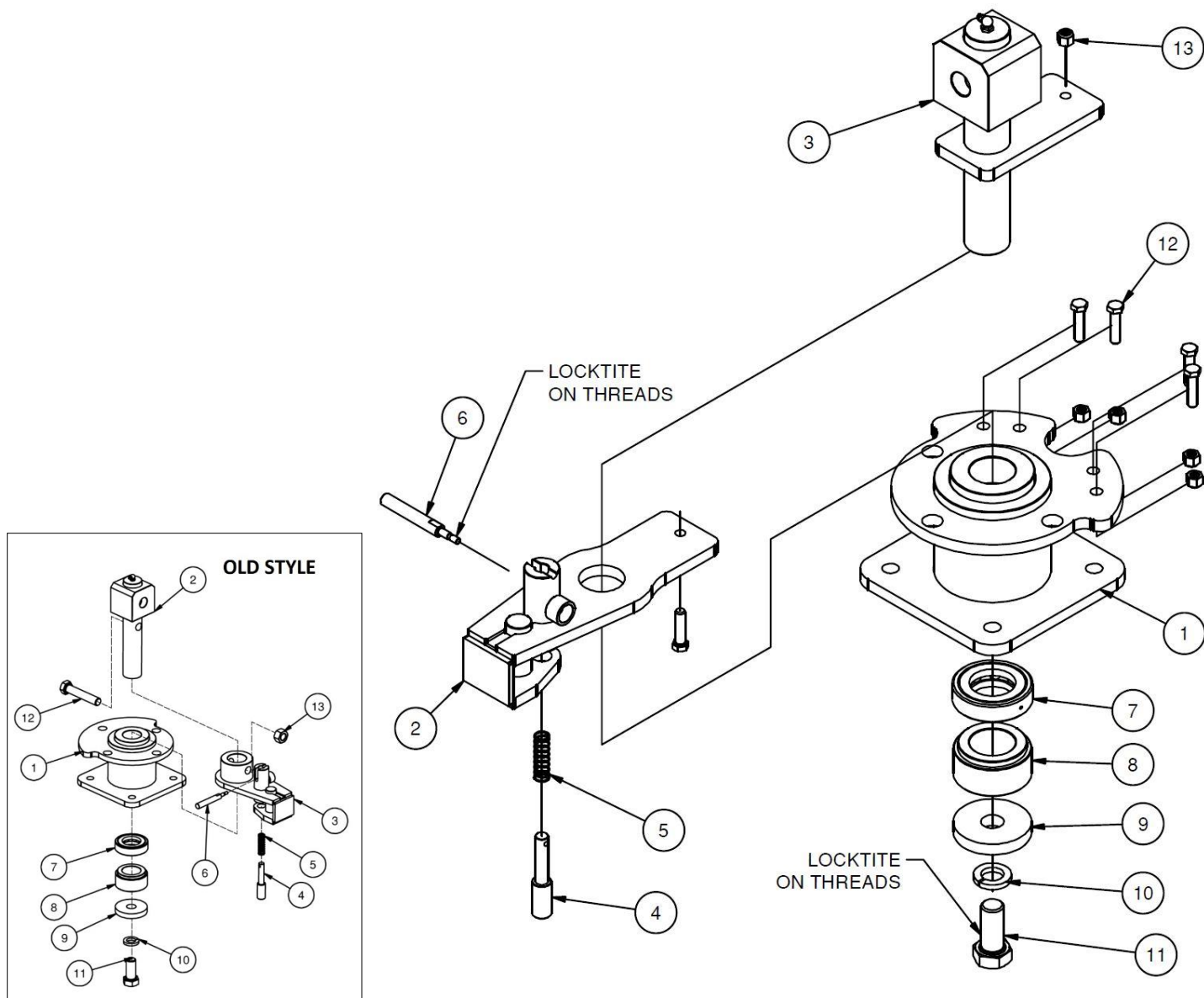
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
16	2	340952	PIN 1.13 X 7.88 W/H Z	
17	2	317979	PIN .88 X 7.88 W/H Z	
18	1	340951	PIN CAT 2 1 X 10.38 ASSM	
19	1	319984	PIN .75 X 10.38 Z ASSM	
20	10	104432	PIN LYNCH 7/16 X 1-3/4	
21	2	340953	BUSH 1 X .78 X 1.69 Z	
22	1	420070	BUSH 1 X .78 X 1.69 Z	
23	2	420069	BUSH 1.10 X .91 X 2.5 Z	



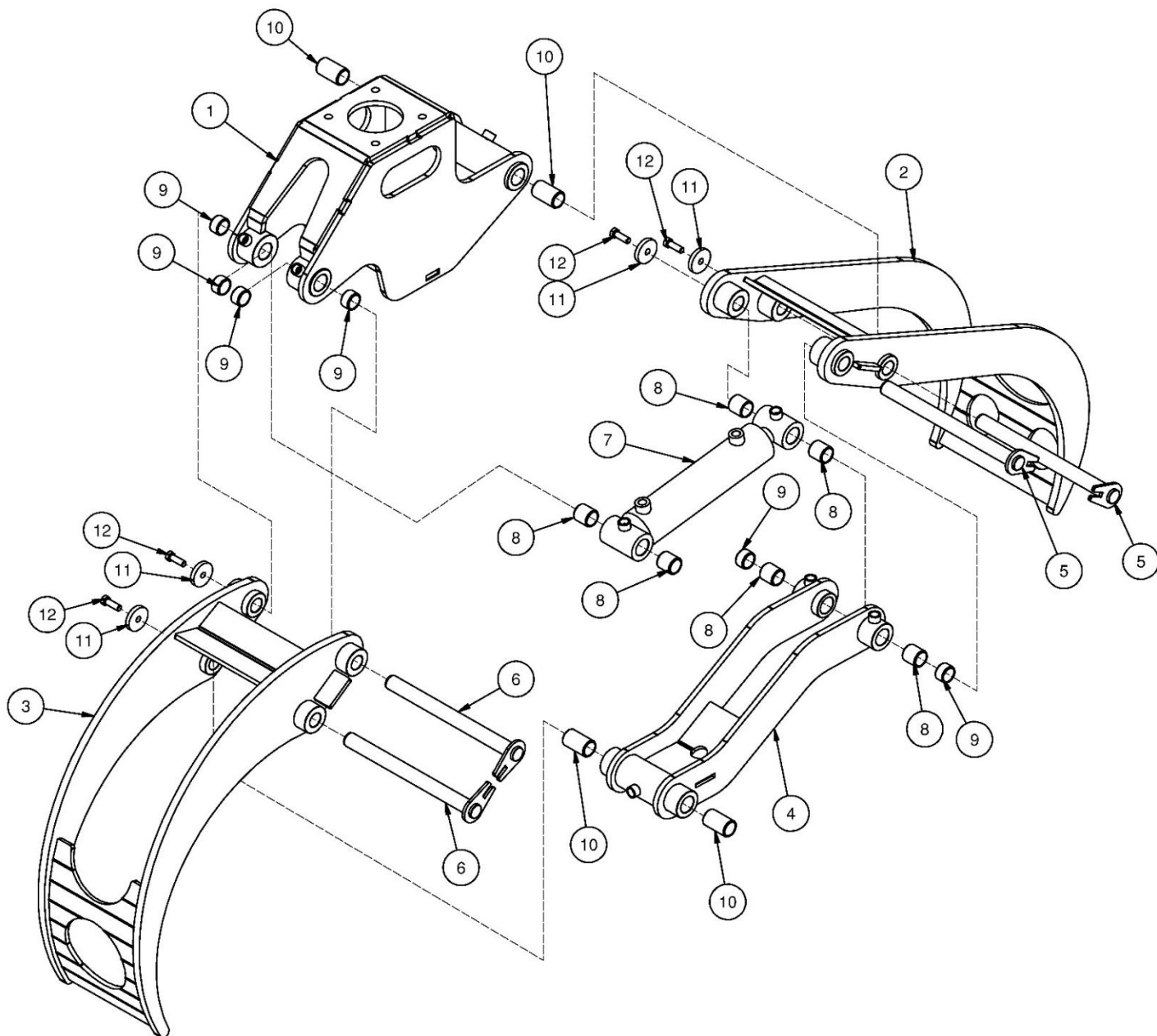
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	400907	ROTATOR MANUAL BODY W/A	
2	1	400908	ROTATOR MANUAL LOCK W/A	
3	1	400909	ROTATOR MANUAL HANGER GRS W/A Z	
4	1	340955	PIN SHAFT .75 X 3.68 W/H Z	
5	1	340907	SPRING COMPRESSION .6 X 2	
6	1	340956	HANDLE SHAFT .5 X 3.98 Z	
7	1	400911	BRG THRUST 3 X 1.75 X .81	
8	1	400977	BUSH 3 X 1.77 X 1.5 Z	
9	1	400979	WASHER .885 X 3 X .5 Z	
10	1	33899	WASHER LOCK	7/8" GR 8
11	1	15411	BOLT HEX	7/8 X 2 NC GR 8
12	5	11109	BOLT HEX	3/8 X 1-1/2 NC GR 2
13	5	37024	NUT NYLON LOCK	3/8 NC GR2



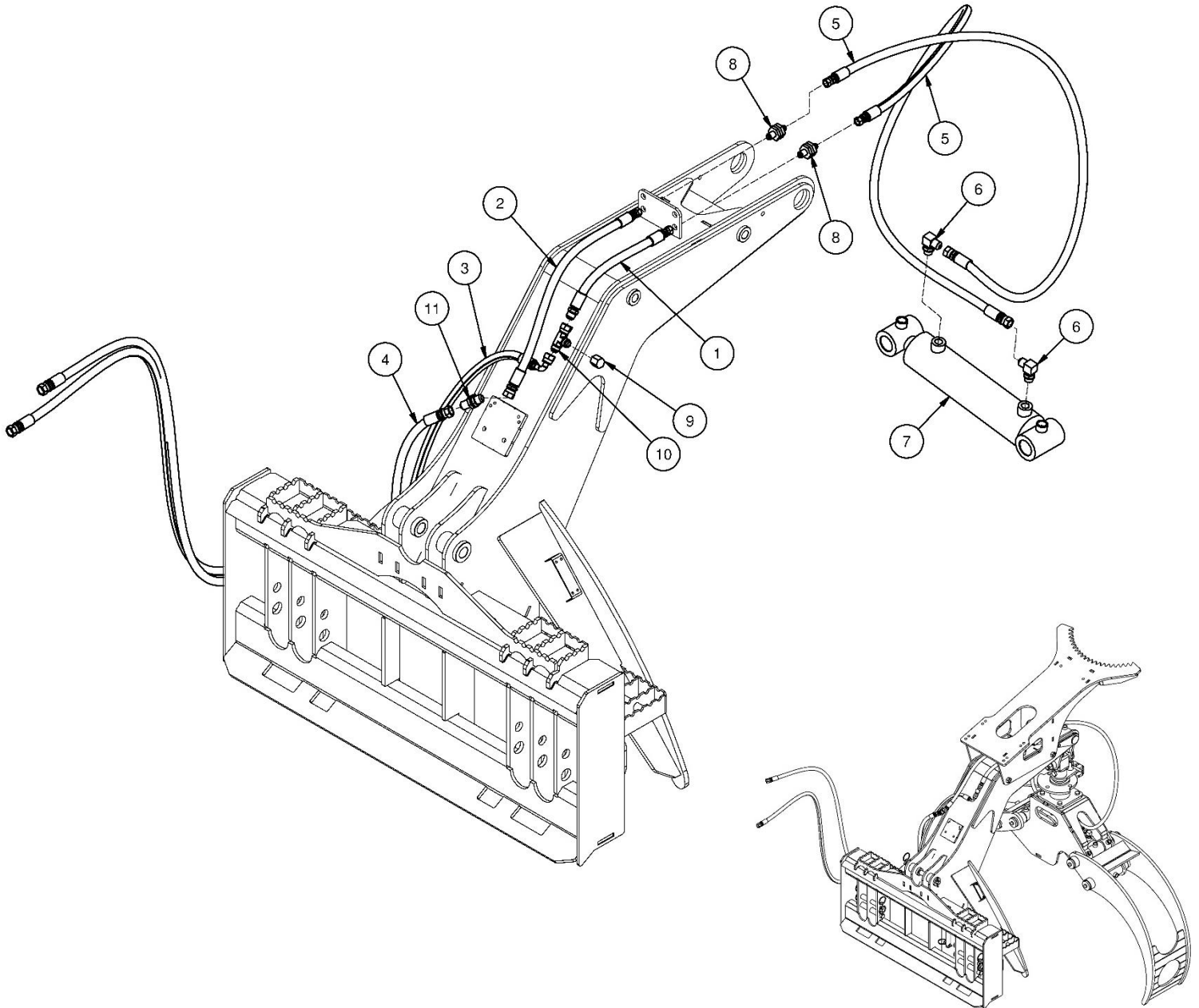
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	319903	BODY GRAPPLE W/A	
2	1	319915	JAW OUTSIDE 48 W/A (YELLOW)	48 MODEL ONLY
	1	340902	JAW OUTSIDE 60 W/A (YELLOW)	60 MODEL ONLY
3	1	319914	JAW INSIDE 48 W/A (YELLOW)	48 MODEL ONLY
	1	340901	JAW INSIDE 60 W/A (YELLOW)	60 MODEL ONLY
4	1	319916	LINK JAW W/A	
5	2	319969	PIN 1.25 X 15.25 W/A Z	
6	2	319974	PIN 1.25 X 14.5 W/A Z	
7	1	319967	CYLINDER 3 X 10 B-B	
8	6	317895	BUSH SPRING 1.5 X 1.25 X 1.5	
9	6	319977	BUSH SPRING 1.5 X 1.25 X .875	
10	4	317896	BUSH SPRING 1.5 X 1.25 X 2.5	
11	4	319975	WASHER PLATE .53 X 2.22 X .375 Z	
12	4	15209	BOLT HEX	1/2 X 1-1/2 NC GR 8 YZ



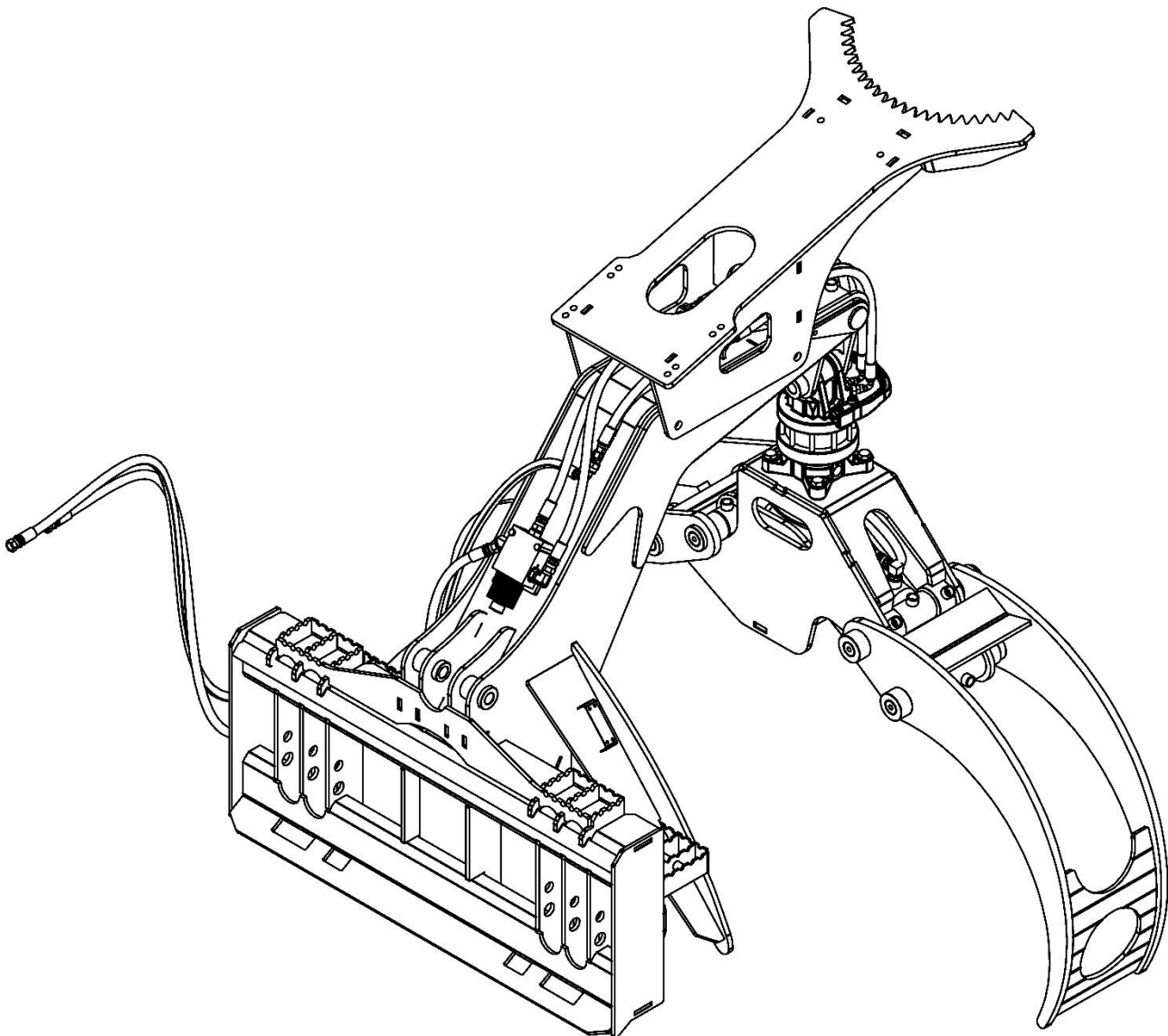
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	340962	HOSE 3/8 X 14.5 6FJX-8MJ	TEE TO BULKHEAD
2	1	340963	HOSE 3/8 X 23.25 6FJX-8FJX	LEAD HOSE UNION TO BULKHEAD
3	1	340961	HOSE 3/8 X 96 8FJX-8FJX-90	LEAD HOSE TO TEE
4	1	340960	HOSE 3/8 X 84 8FJX-8FJX	LEAD HOSE TO UNION
5	2	340964	HOSE 3/8 X 63 6FJX-8FJX	BULKHEAD TO CYLINDER
6	2	202037	ADPT ELB 8MB-8MJ-90	CYLINDER
7	1	319967	CYLINDER 3 X 10 B-B	
8	2	317934	ADPT STR 6MJ-6MJ-BULKHEAD	
9	1	340984	ADPT CAP 8FJX	TEE FITTING
10	1	340983	ADPT TEE 8FJX-8MJ-8MJ	
11	1	300524	ADPT STR 8MJ-8MJ BULKHEAD	LEAD TO UNION
12	1	340985	WRAP SPIRAL 1.25 X 64 (YEL)	LEAD HOSES NOT SHOWN
13	2	340986	WRAP SPIRAL .6 X 60 (YEL)	CYLINDER HOSES NOT SHOWN
14	1	340987	WRAP SPIRAL 1.54 X 16 (YEL)	CYLINDER HOSES NOT SHOWN

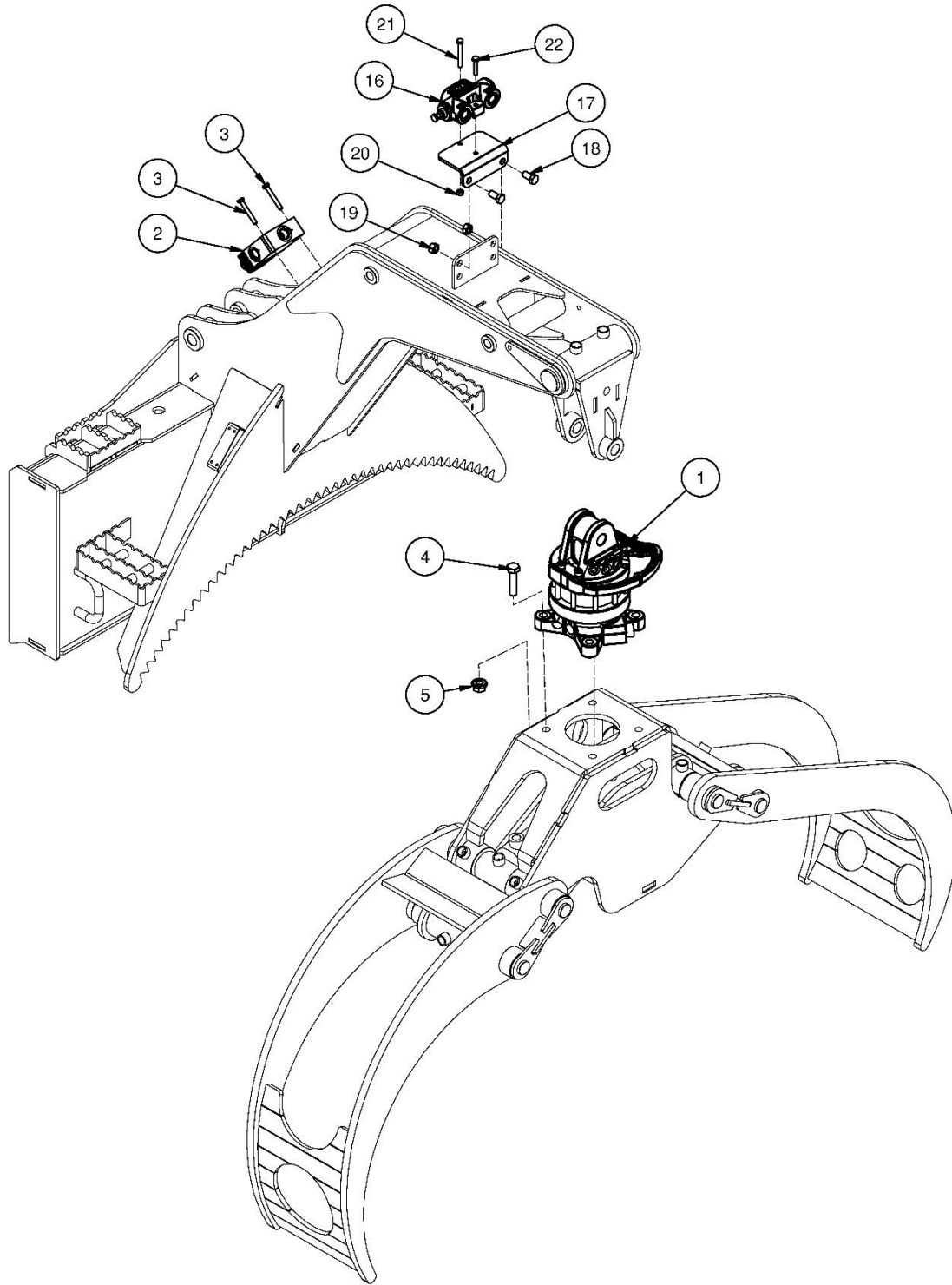


PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340941	PKG OPT HYD ROTATOR	
1	1	319905	ROTATOR FIN CR400	
2	1	400923	VALVE ASSM MP GRAPPLE	
3	2	13062	BOLT HEX	5/16 X 2-1/4 NC GR 5
4	4	15313	BOLT HEX	5/8 X 2-1/2 NC GR 8 YZ
5	4	0167012	NUT TOP LOCK FLNG	5/8 NC GR G (GR8)
16	1	340910	VALVE LOCK MP GRAPPLE	
17	1	340927	BRKT LOCK VALVE MNT PNT	
18	2	13205	BOLT HEX	1/2 X 1 NC GR 5
19	2	37214	NUT REV LOCK	1/2 NC GR 5
20	2	37211	NUT REV LOCK	5/16 NC GR 5
21	1	13063	BOLT HEX	5/16 X 2-1/2 NC GR 5
22	1	202031	BOLT HEX	5/16 X 1-1/2 NC GR 5

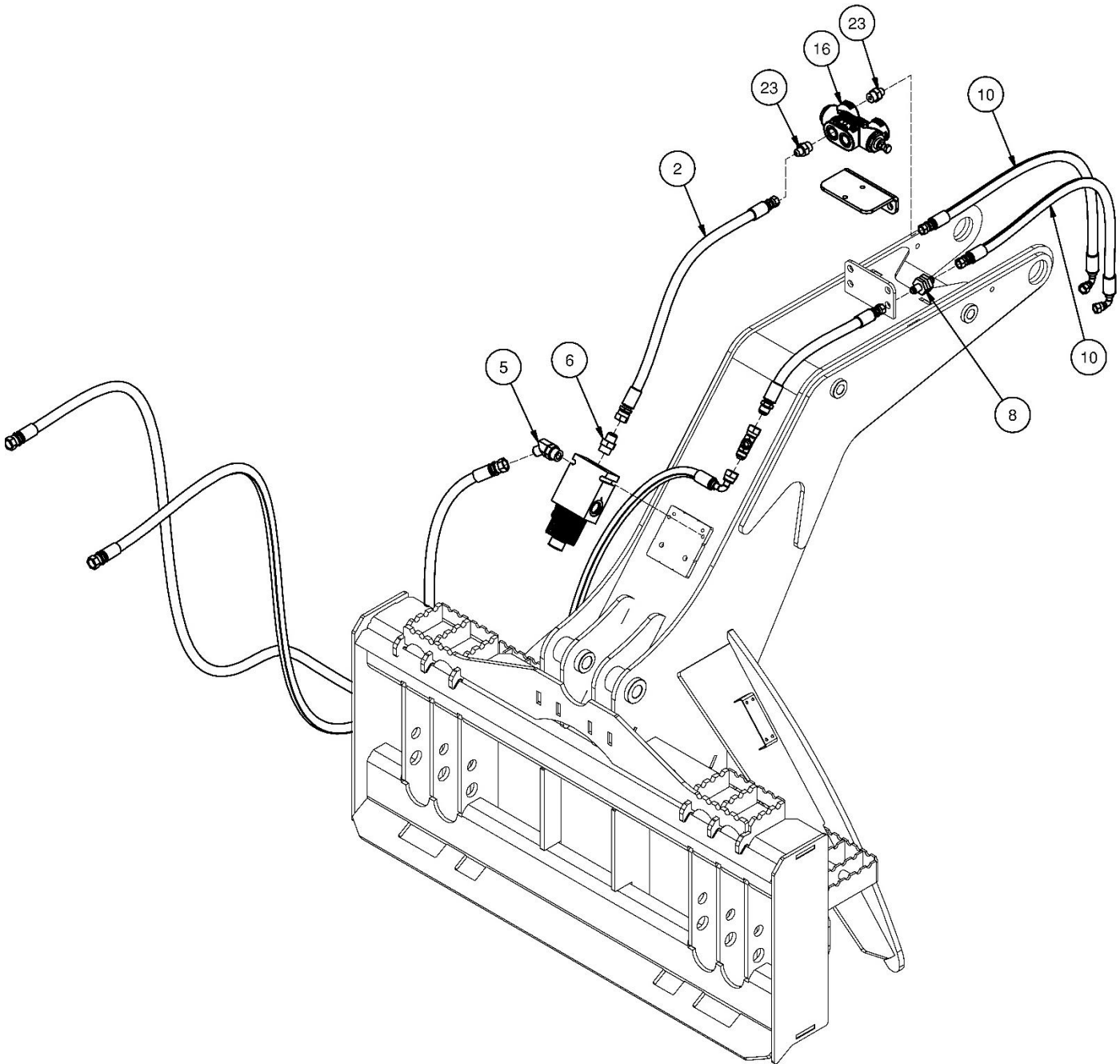


PARTS INFORMATION



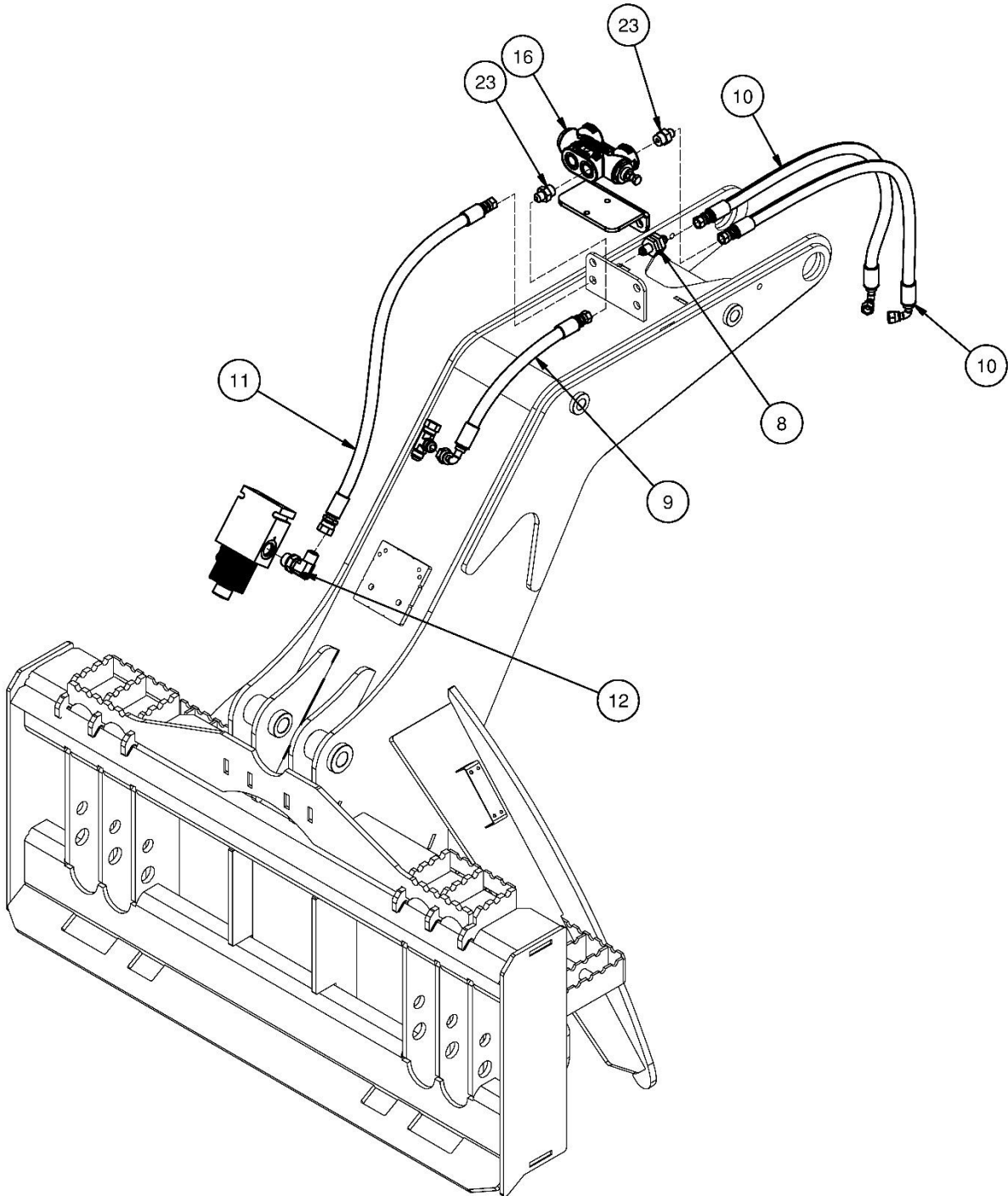
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340941	PKG OPT HYD ROTATOR	
2	1	340963	HOSE 3/8 X 23.25 6FJX-8FJX	MAN (STD) HOSE TO 340910
5	1	201532	ADPT ELB 10MB-8MJ-45	VB1-2 TO LEAD HOSE
6	1	201523	ADPT STR 10MB-8MJ	VB1-1 TO BULKHEAD
8	1	317934	ADPT STR 6MJ-6MJ-BULKHEAD	
10	2	340965	HOSE 3/8 X 36 6FJX-6FJX-90	BULKHEAD/VALVE TO ROTATOR
11	2	340988	WRAP SPIRAL 1.25 X 33 (YEL)	BH TO ROTATOR HOSES NOT SHOWN
12	2	340989	WRAP SPIRAL .6 X 19 (YEL)	CYLINDER HOSES NOT SHOWN
16	1	340910	VALVE LOCK MP GRAPPLE	
23	2	201925	ADPT STR 8MB-6MJ	VALVE BLOCK 340910



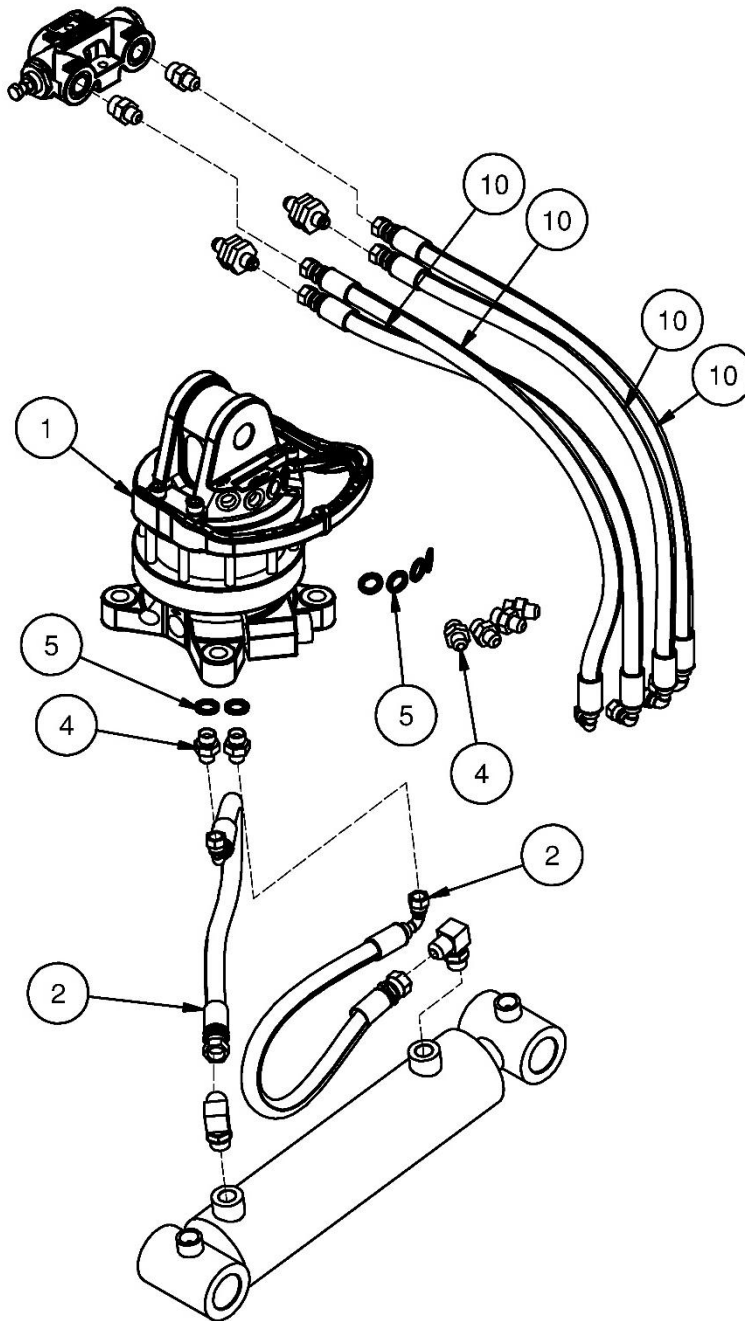
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340941	PKG OPT HYD ROTATOR	
8	2	317934	ADPT STR 6MJ-6MJ-BULKHEAD	
9	2	340968	HOSE 3/8 X 15.5 6FJX-8FJX-90	TEE DROP TO VALVE 340910
10	2	340965	HOSE 3/8 X 36 6FJX-6FJX-90	BULKHEAD/VALVE TO ROTATOR
11	1	340967	HOSE 3/8 X 27.75 6FJX-8FJX	VB1-3 TO BOTTOM BULKHEAD
12	1	313148	ADPT ELB 10MB-8MJ-90	VB1-3
16	1	340910	VALVE LOCK MP GRAPPLE	
23	2	201925	ADPT STR 8MB-6MJ	VALVE BLOCK 340910



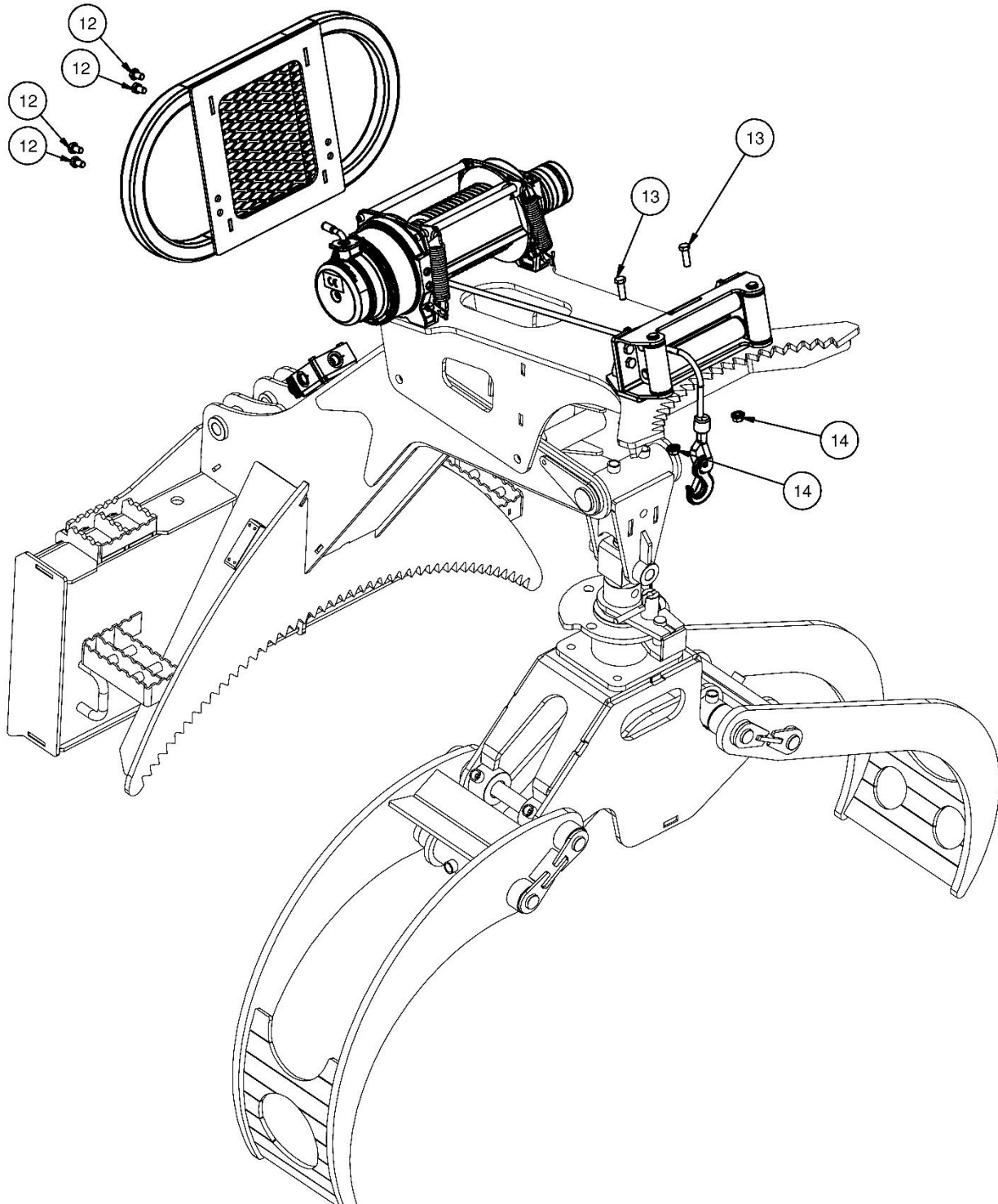
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340941	PKG OPT HYD ROTATOR	
1	1	319905	ROTATOR FIN CR400	
2	2	340966	HOSE 3/8 X 21.5 8FJX-6FJX-90	ROTATOR TO CYLINDER
4	6	319990	ADPT STR 6BSPP-6MJ	
5	1	319991	ADPT SEAL 6BSPP (COMES WITH 319990)	
10	4	340965	HOSE 3/8 X 36 6FJX-6FJX-90	BULKHEAD/VALVE TO ROTATOR



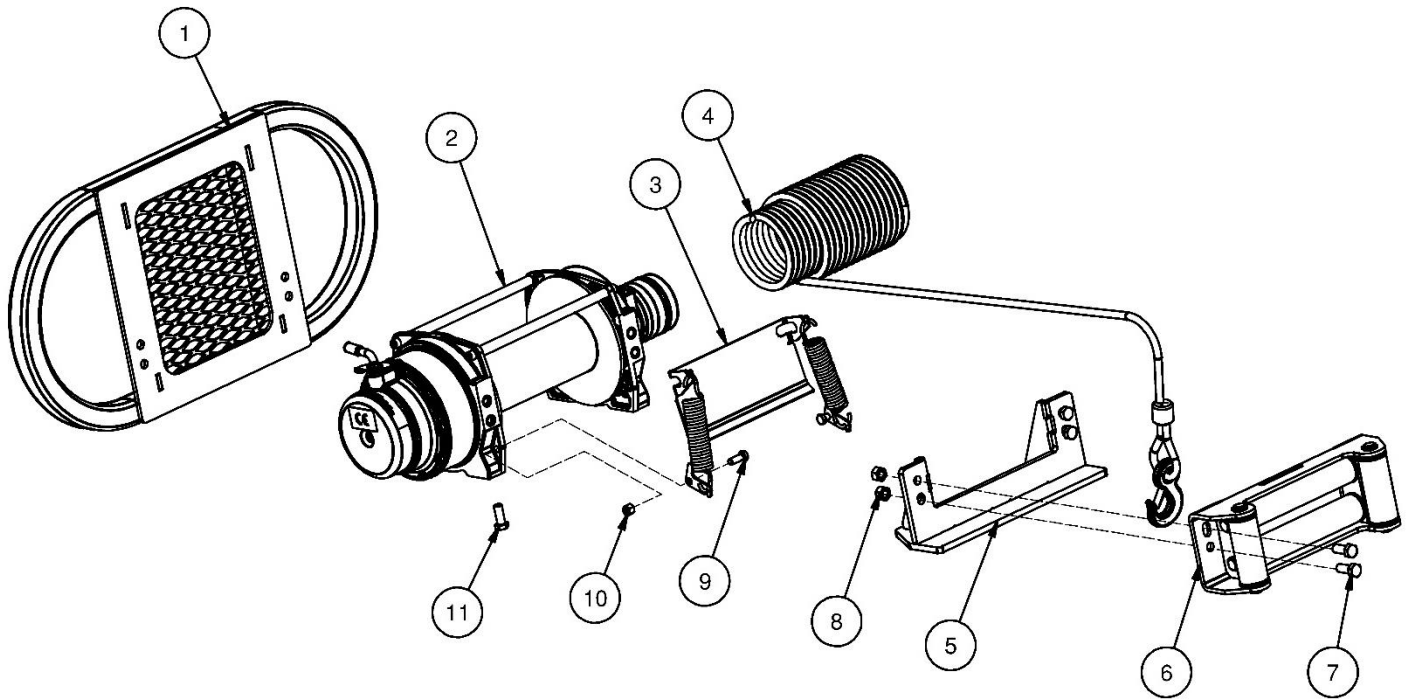
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340944	PKG OPT WINCH	
12	4	38704	BOLT METRIC	M12-1.75 X 20 GR 8.8 Z
13	2	15209	BOLT HEX	1/2 X 1-1/2 NC GR 8 YZ
14	2	0167011	NUT TOP LOCK FLNG	1/2 NC GR G (GR8)



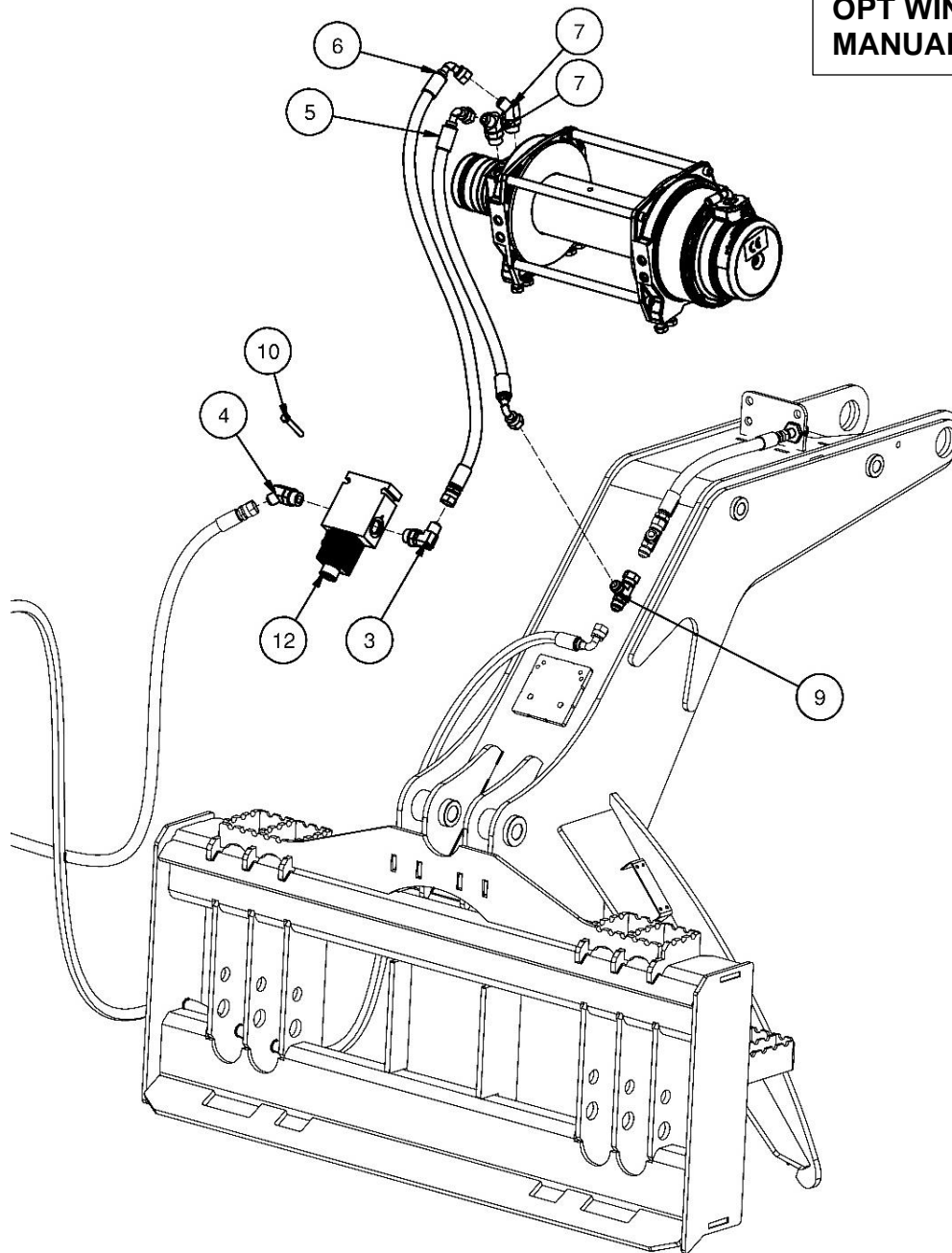
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340944	PKG OPT WINCH	
1	1	400976	SHIELD WINCH W/A	
2	1	319908	WINCH WARN SERIES 12	
3	1	340904	TENSIONER WIRE ROPE ASSM	
4	1	340905	WIRE ROPE AND HOOK ASSM	
5	1	319998	MOUNT WINCH W/A	
6	1	340903	FAIRLEAD ROLLER ASSM	
7	4	13207	BOLT HEX	1/2 X 1-1/4 NC GR 5
8	4	37214	NUT REV LOCK	1/2 NC
9	2	13105	BOLT HEX	3/8 X 1 NC GR 5
10	2	37212	NUT REV LOCK	3/8 NC
11	8	38706	BOLT METRIC	M12-1.75 X 30 GR 8.8 Z



PARTS INFORMATION

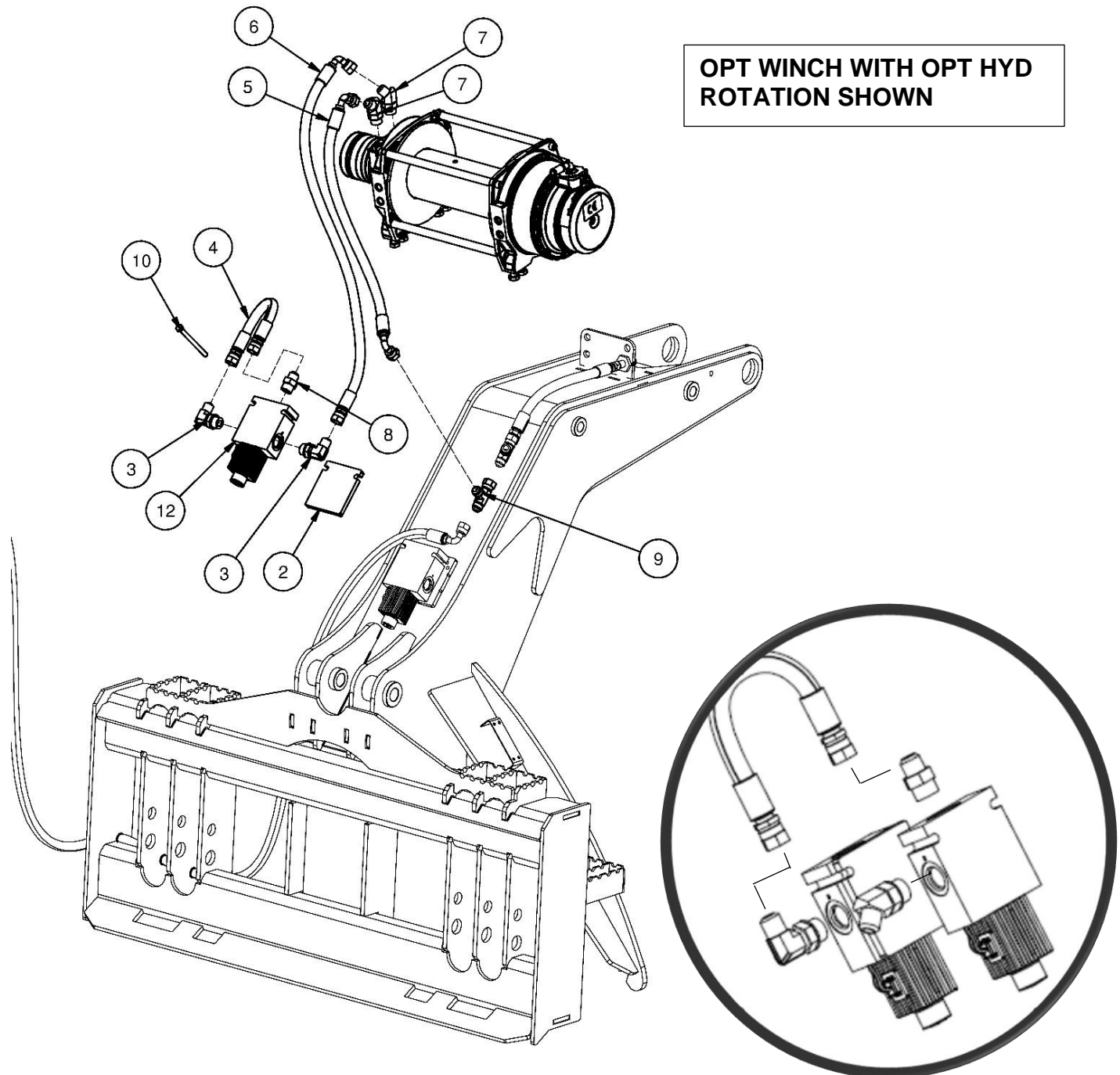
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340944	PKG OPT WINCH	
3	1	313148	ADPT ELB 10MB-8MJ-90	VB2-2 & VB2-3
4	1	201532	ADPT ELB 10MB-8MJ-45	FOR WINCH WITH MAN ROT
5	1	340970	HOSE 3/8 X 21.5 8FJX-90 - 8FJX-90 (0°)	TEE TO WINCH
6	1	340969	HOSE 3/8 X 32 8FJX-8FJX-90	VALVE BLOCK TO WINCH
7	2	201532	ADPT ELB 10MB-8MJ-45	WINCH
9	1	340983	ADPT TEE 8FJX-8MJ-8MJ	
10	2	13062	BOLT HEX 5/16 X 2-1/4 NC GR 5	FOR WINCH WITH MAN ROT
11	1	340990	WRAP SPIRAL 1.25 X 20 (YEL)	WINCH HOSES NOT SHOWN
12	1	400923	VALVE ASSM MP GRAPPLE	



**OPT WINCH WITH STANDARD
MANUAL ROTATION SHOWN**

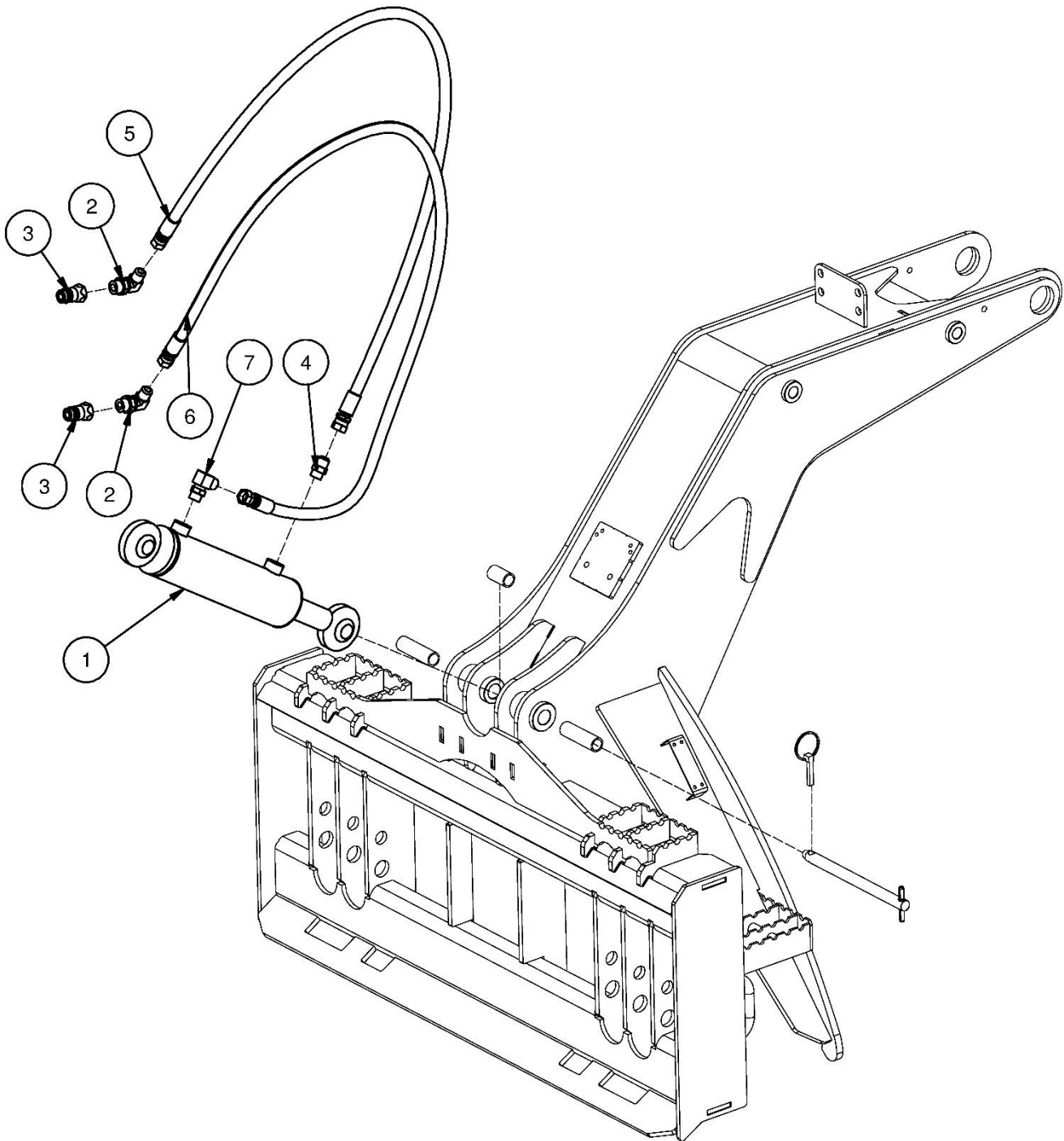
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340944	PKG OPT WINCH	
2	1	340922	PLATE VALVE SPACER BUCHER Z	FOR WINCH WITH HYD ROT
3	2	313148	ADPT ELB 10MB-8MJ-90	VB2-2 & VB2-3
4	1	340971	HOSE 3/8 X 13.5 8FJX-8FJX	VB1-2 TO VB2-1
5	1	340970	HOSE 3/8 X 21.5 8FJX-90 - 8FJX-90 (0°)	TEE TO WINCH
6	1	340969	HOSE 3/8 X 32 8FJX-8FJX-90	VALVE BLOCK TO WINCH
7	2	201532	ADPT ELB 10MB-8MJ-45	WINCH
8	1	201523	ADPT STR 10MB-8MJ	VB2-1
9	1	340983	ADPT TEE 8FJX-8MJ-8MJ	
10	2	13071	BOLT HEX 5/16 X 4-1/2 NC GR 5	FOR WINCH WITH HYD ROT
11	1	340990	WRAP SPIRAL 1.25 X 20 (YEL)	WINCH HOSES NOT SHOWN
12	1	400923	VALVE ASSM MP GRAPPLE	



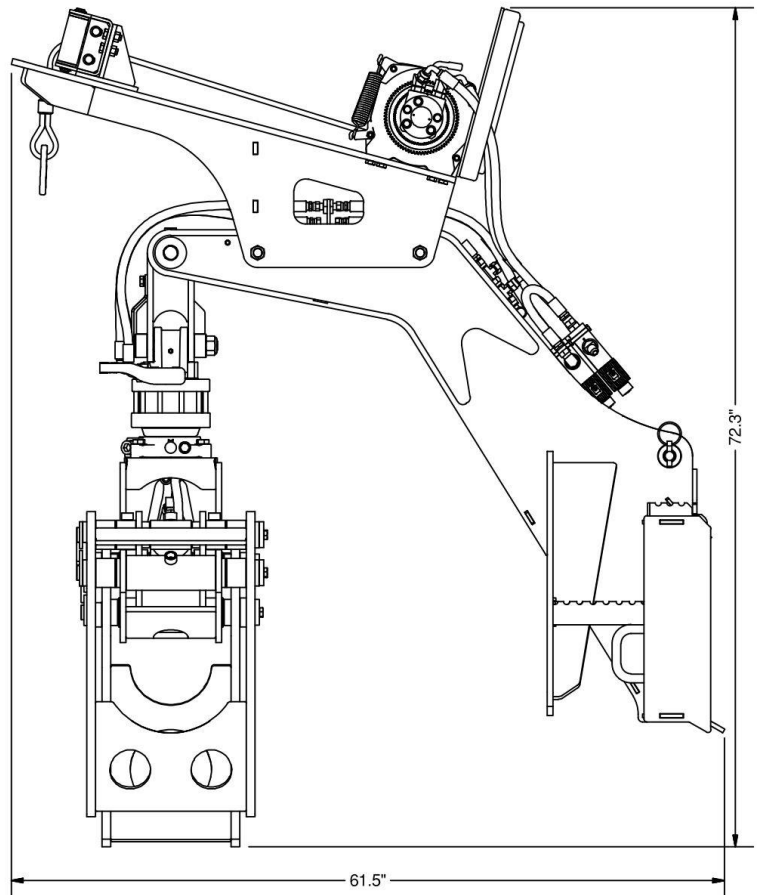
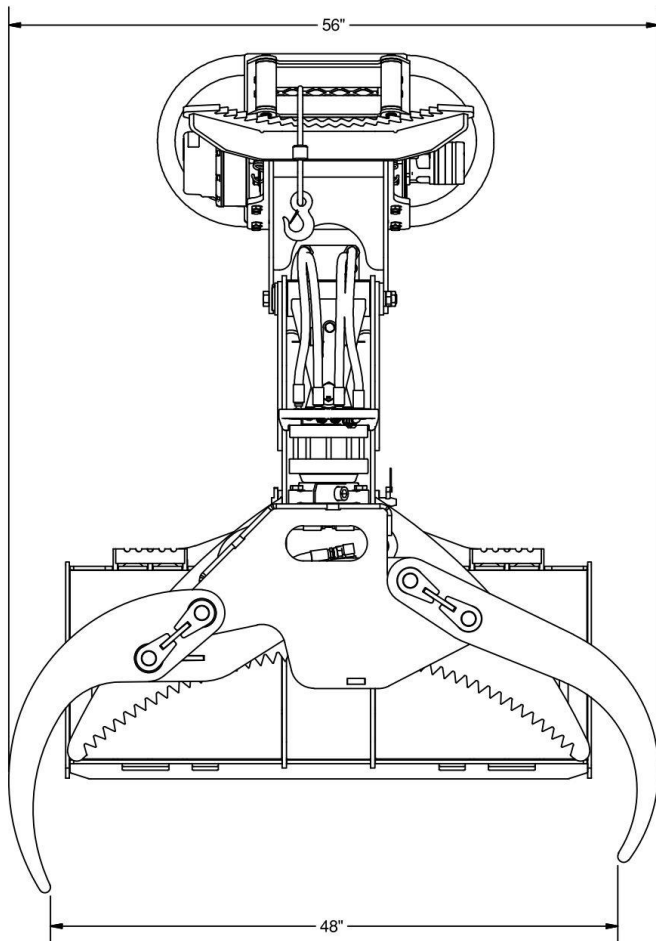
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		340945	PKG OPT TOP LINK CYLINDER	
1	1	317081	CYLINDER 3 X 8 SPEEBALLS	
2	2	313148	ADPT ELB 10MB-8MJ-90	END OF COUPLERS
3	2	200248	COUPLER HYD PPT 1/2-100R M	END OF LEAD HOSES
4	1	300273	ADPT STR 8MB-8MJ	CYLINDER ROD END
5	1	340973	HOSE 3/8 X 63 8FJX-8FJX	LEAD HOSES TO CYL ROD END
6	1	340972	HOSE 3/8 X 75 8FJX-8FJX	LEAD HOSES TO CYL BASE END
7	1	202037	ADPT ELB 8MB-8MJ-90	CYLINDER BASE
8	1	340997	WRAP SPIRAL 1.25 X 63 (YEL)	TOPLINK LEAD HOSES NOT SHOWN



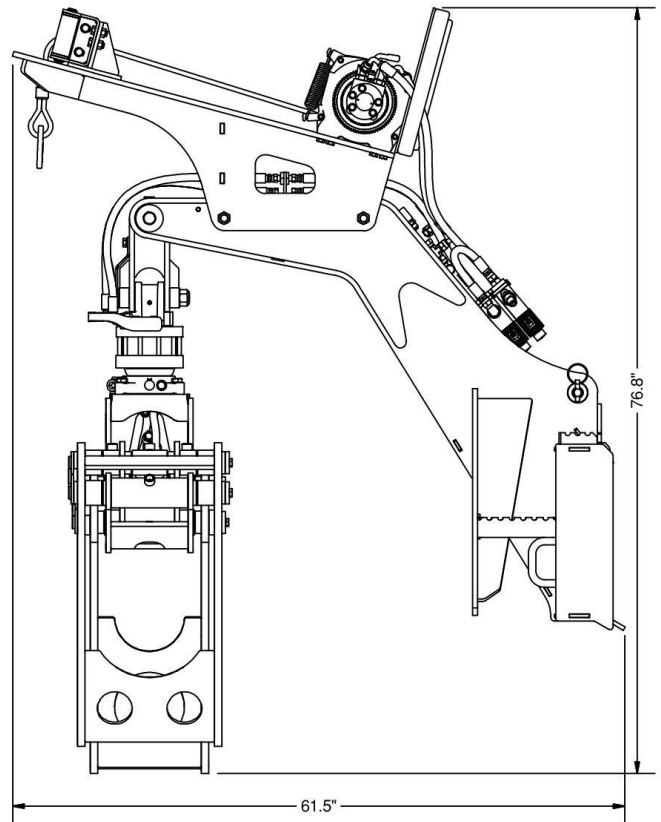
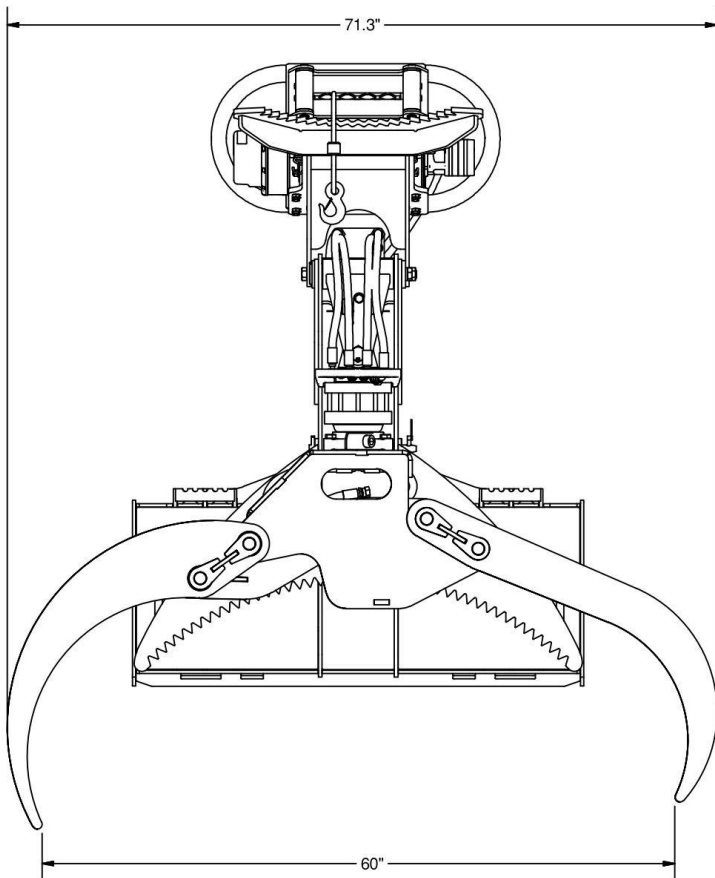
GENERAL SPECIFICATIONS

Model	Multipurpose Grapple 48
Mounting Plate	Universal Cat I 3-Point Cat II 3-Point
Hydraulic Pump Capacity Requirements	10 to 25 GPM
System Pressure	2,000 – 3,000 psi
Maximum Jaw Opening Width	48"
Minumum Jaw Closing Diameter	3"
Boom and Rotator Capacity	9,000 lbs
Grapple Cylinder Bore	3"
Winch Capacity	12,000 lbs
Operating Weight	Manual Rotation.....1,129 lbs Hydraulic Rotation.....add 22 lbs Toplink Cylinder Option.....add 31 lbs Winch Option.....add 200 lbs



GENERAL SPECIFICATIONS

Model	Multipurpose Grapple 60
Mounting Plate	Universal Cat I 3-Point Cat II 3-Point
Hydraulic Pump Capacity Requirements	10 to 25 GPM
System Pressure	2,000 – 3,000 psi
Maximum Jaw Opening Width	60"
Minumum Jaw Closing Diameter	3"
Boom and Rotator Capacity	9,000 lbs
Grapple Cylinder Bore	3"
Winch Capacity (optional)	12,000 lbs
Operating Weight	Manual Rotation.....1,183 lbs Hydraulic Rotation.....add 22 lbs Toplink Cylinder Option.....add 31 lbs Winch Option.....add 200 lbs



BOLT TORQUE INFORMATION

Torque-Tension Relationships for SAE J429 Grade Bolts

Nominal Thread Size	SAE J429 Grade 2			SAE J429 Grade 5			SAE J429 Grade 8		
	Clamp Load (lbs)	Tightening Torque		Clamp Load (lbs)	Tightening Torque		Clamp Load (lbs)	Tightening Torque	
		K = .15	K = .20		K = .15	K = .20		K = .15	K = .20
Unified Coarse Thread Series									
1/4-20	1,300	49 in-lbs	65 in-lbs	2,000	75 in-lbs	100 in-lbs	2,850	107 in-lbs	143 in-lbs
5/16-18	2,150	101	134	3,350	157	210	4,700	220	305
3/8-16	3,200	15 ft-lbs	20 ft-lbs	4,950	23 ft-lbs	31 ft-lbs	6,950	32.5 ft-lbs	44 ft-lbs
7/16-14	4,400	24	30	6,800	37	50	9,600	53	70
1/2-13	5,850	36.5	49	9,050	57	75	12,800	80	107
9/16-12	7,500	53	70	11,600	82	109	16,400	115	154
5/8-11	9,300	73	97	14,500	113	151	20,300	159	211
3/4-10	13,800	129	173	21,300	200	266	30,100	282	376
7/8-9	11,425	125	166	29,435	321	430	41,550	454	606
1-8	15,000	187.5	250	38,600	482.5	640	54,540	680	900
Unified Fine Thread Series									
1/4-28	1,500	55 in-lbs	75 in-lbs	2,300	85 in-lbs	115 in-lbs	3,250	120 in-lbs	163 in-lbs
5/16-24	2,400	112	150	3,700	173	230	5,200	245	325
3/8-24	3,600	17 ft-lbs	22.5 ft-lbs	5,600	26 ft-lbs	35 ft-lbs	7,900	37 ft-lbs	50 ft-lbs
7/16-20	4,900	27	36	7,550	42	55	10,700	59	78
1/2-20	6,600	41	55	10,200	64	85	14,400	90	120
9/16-18	8,400	59	79	13,000	92	122	18,300	129	172
5/8-18	10,600	83	110	16,300	128	170	23,000	180	240
3/4-16	15,400	144	193	23,800	223	298	33,600	315	420
7/8-14	12,610	138	184	32,480	355	473	45,855	500	668
1-12	16,410	205	273	42,270	528	704	59,670	745	995

Clamp load estimated as 75% of proof load for specified bolts.

Torque values for 1/4 and 5/16 inch series are in inch-pounds. All other torque values are in foot-pounds.

Torque values calculated from formula $T = KDF$

where: $K=0.15$ for "lubricated" conditions

$K=0.20$ for "dry" conditions

TROUBLESHOOTING

Problem	Possible Solution
Manual rotator does not rotate smoothly	<ul style="list-style-type: none">• Check for interference• Check if thrust bearing is properly greased• Contact your dealer
Hydraulic rotator option not turning	<ul style="list-style-type: none">• Check wiring, button needs to be held while operating auxillary hydraulic controls.• Hydraulic hoses not routed correctly• Contact Erskine Attachments LLC
Winch option not turning	<ul style="list-style-type: none">• Check wiring, button needs to be held while operating auxillary hydraulic controls.• Freespool/engagement lever not in proper position• Hydraulic hoses not routed correctly• Contact Erskine Attachments LLC
Excessive play in grapple components	<ul style="list-style-type: none">• Replace pins and/or replace insert bushings• Contact your dealer



LIMITED WARRANTY

Erskine Attachments LLC warrants each new machine manufactured by us to be free from defects in material and workmanship for a period of twenty-four (24) months from date of delivery to the original purchaser.

Our obligation under this warranty is to replace free of charge, at our factory or authorized dealership, any part proven defective within the stated warranty time limit.

All parts must be returned freight prepaid and adequately packaged to prevent damage in transit.

This warranty does not cover:

1. New products which have been operated in excess of rated capacities or negligence
2. Misuse, abuse, accidents or damage due to improperly routed hoses
3. Machines which have been altered, modified or repaired in any manner not authorized by our company
4. Previously owned equipment
5. Any ground engaging tools in which natural wear is involved, i.e. tooth tips, cutting teeth, etc.
6. Normal maintenance
7. Fork tines
8. Hydraulic motors that have been disassembled in any manner

In no event will the Sales Representative, Dealership, Erskine Attachments LLC, or any other company affiliated with it or them be liable for incidental or consequential damages or injuries, including but not limited to the loss of profit, rental or substitute equipment or other commercial loss. Purchaser's sole and exclusive remedy being as provided here in above.

Erskine Attachments LLC must receive immediate notification of defect and no allowance will be made for repairs without our consent or approval.

This warranty is in lieu of all other warranties, express or implied by law or otherwise, and there is no warranty of merchantability or fitness purpose.

No agent, employee, or representative of Erskine Attachments LLC has any authority to bind Erskine Attachments LLC to any warranty except as specifically set forth herein. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms apply.

This warranty may not be enlarged or modified in any manner except in writing signed by an executive officer of Erskine Attachments LLC to improve its products whenever it is possible and practical to do so. Erskine Attachments LLC reserves the right to make changes and or add improvements at any time without incurring any obligation to make such changes or add such improvements to products previously sold.

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P/N 340999
Erskine Attachments LLC

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