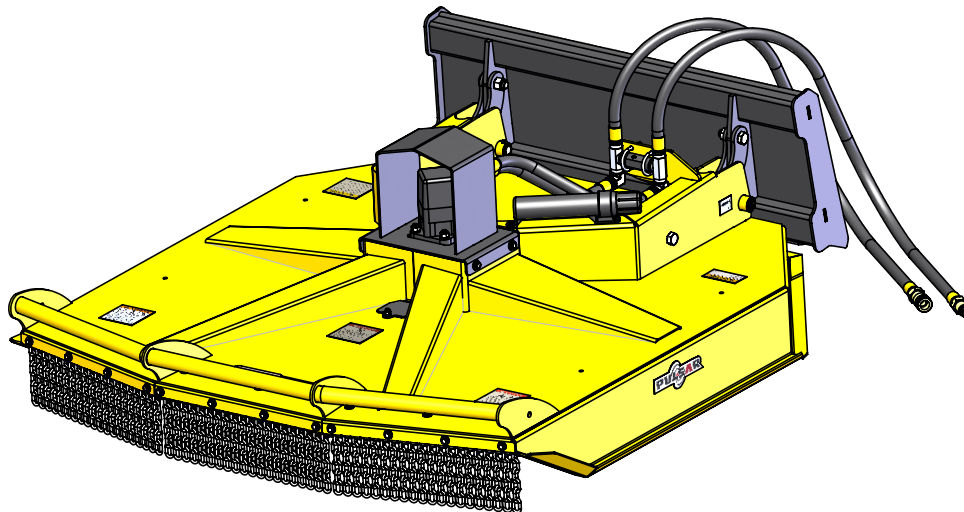


PULSAR

Owner/Operator Manual

Pulsar Skid Steer Cutter 60" - 72"



M K Martin Enterprise Inc
3950 Steffler Rd Elmira On. Ca N3B 2Z3

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Warranty Registration

Please Cut and Return to M K Martin Enterprise Inc

Fold And Tape here *Do not tape all edges or use staples*

Fold Here

**Postage
Stamp**

**M K Martin Enterprise Inc
3950 Steffler Rd
Elmira ON CA N3B 2Z3**

M K Martin Enterprise Inc
3950 Steffler Rd
Elmira ON CA N3B 2Z3

Purchaser's warranty protection is valid only when this completed form or a copy of this form is on file at M K Martin Enterprise Inc. By filling out this form the purchaser has acknowledged delivery of equipment and owner's / operator's manual and has accepted the condition of the equipment.

Date of delivery to purchaser -----

Type of Equipment -----

Model # ----- Serial # -----

Retailer's Signature Indicates

- *Equipment was properly assembled as directed by manufacturer*
- *Equipment was tested for functionality and operates properly*
- *Purchaser was instructed in safe and proper operating procedures*
- *Warranty was explained to purchaser*
- *Purchaser was given the operators manual*

Retailer

Signature -----

Company -----

Address -----

Purchaser's signature indicates

- *Acceptance of equipment fully assembled*
- *Received operator's manual*
- *Clearly understands conditions of warranty*
- *Received instructions of safe and proper operation of equipment*

Purchaser

Signature -----

Company -----

Mailing address -----

City ----- Prov/State ----- Postal Code/Zip -----

Available phone number -----

Warranty is valid only when it has been received by manufacturer at address above

Warranty and Limitations of Liability

All equipment is sold subject to mutual agreement that it is warranted at M K Martin Inc. (Hereafter called the company) to be free of any defects of material and workmanship. The company shall not be liable for special, indirect consequential damage of any kind under this contract or otherwise. The company's liability shall be limited exclusively to replacement or repair without charge at it's factory or elsewhere, at it's discretion, any materials or defects, which become apparent within one year from the date of purchase. In no event shall M K Martin Enterprise Inc. be liable for special, direct, or incidental or consequential damages of any kind. The purchaser by acceptance of the equipment will assume all liability for damage which may result from use or misuse by the employees or others. The purchaser shall maintain and service the equipment as recommended in the Operator's Manual.

This warranty does not cover **Rental/Commercial or Rental** use of the equipment. This equipment is rated as agricultural.

For **Rental/Commercial or Industrial** use, Warranty is for defective material and workmanship for a period of 90 days from the date of purchase.

Warranty is null and void unless the Warranty Registration form has been completed and on file at

M K Martin Enterprise Inc
3950 Steffler Rd
Elmira On Ca N3B 2Z3

For your Record

Purchase Date _____

Model # _____

Serial # _____

Please contact your retailer

Manufactured by
M K Martin Enterprise Inc
3950 Steffler Rd
Elmira On Ca N3B 2Z3
Tel: (519)-664-2752
(855)-664-2752
Fax: (519)-664-3695
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Safety

Take Note! This safety symbol is found throughout this manual to call your attention to instructions involving yourself and others working around the machine.

- **Failure to follow these instructions can result in injury or death!**



This symbol means

- **Attention!**
- **Become Alert!**
- **Your Safety is involved!**

Signal words are used in this manual.

Caution: Indicate a potential hazardous situation that may result in injury.

Warning: Indicates a hazardous situation that could result in serious injury or death.

Danger: Indicates a hazardous situation that needs to be avoided. It is you the operator that needs to be aware of these dangers.

If you have any questions not answered in this manual please contact you dealer or

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Safety -- It's in your interest!



Safety Guidelines.

Safety of the operator is one of our main concerns, however it is up to the operator to practice caution.

To avoid personal injury, study the following precautions and insist that those that are working with you follow them.

The Skid Steer Pulsar Cutter has a chain guard at the front of the machine, to lower the possibility of debris being ejected out of the machine.

The cutter has a cover plate in the deck to gain access to one side of the blade bolts, do not operate the cutter with this removed or missing.



This cutter has High Pressure hydraulic lines and a leak can be extremely hazardous!

Replace any decals that may be missing or not readable. Location of the decals are indicated elsewhere in this manual.

Do not use this machine while under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment should not be operated by children: or those unfamiliar with the operation of the Skid Steer Pulsar Cutter. Do not allow persons to operate this machine until they have read this manual and/or were instructed by a qualified person.

Do not paint over, remove or deface any safety signs or warning decals on the Pulsar Cutter. Observe all safety signs and practice the instructions on them.

Do not use this machine to push or carry objects or people.



Please be careful with the extra length on the front of the loader, you need a larger space to turn.



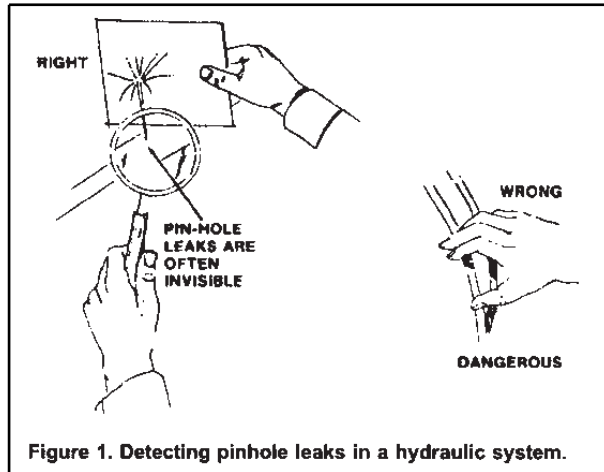
Please stop the engine on the loader and set the cutter on a solid support! When servicing the blades do not work or walk under an unsupported cutter!

Hydraulic Leak Test



Warning! Do not check for high pressure leaks with your hands or fingers. Use a piece of cardboard or a thin piece of wood to detect the leak.

A high pressure stream of fluid from a pin hole can penetrate the skin and inject hydraulic fluid into your blood veins.



If the skin has been penetrated get medical attention immediately!



Hydraulic lines may have high pressure fluid in the lines, even when the lines are disconnected.

Remember a small leak at high pressure may be invisible yet can penetrate the skin. If this happens get medical attention immediately, serious infection or toxic reaction can develop when hydraulic fluid pierces the skin.

Use caution when working with hydraulic components. Ensure there are no leaks, all fittings are tight and all components are in good repair.

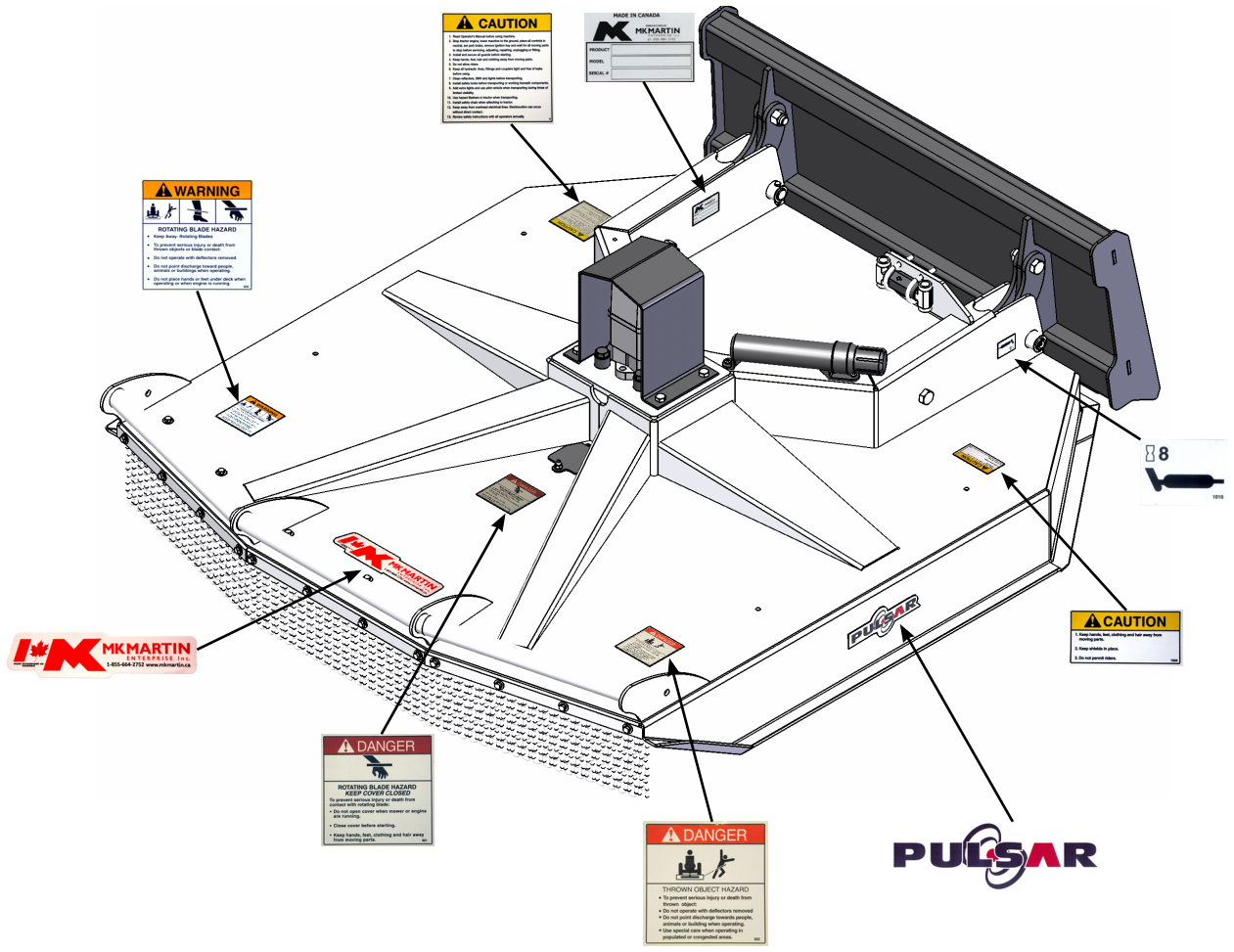


Use a piece of wood or cardboard as a backstop when searching for leaks, **NEVER** your hand or fingers.



Always relieve pressure before disconnecting or working on hydraulic system.

Decal Location



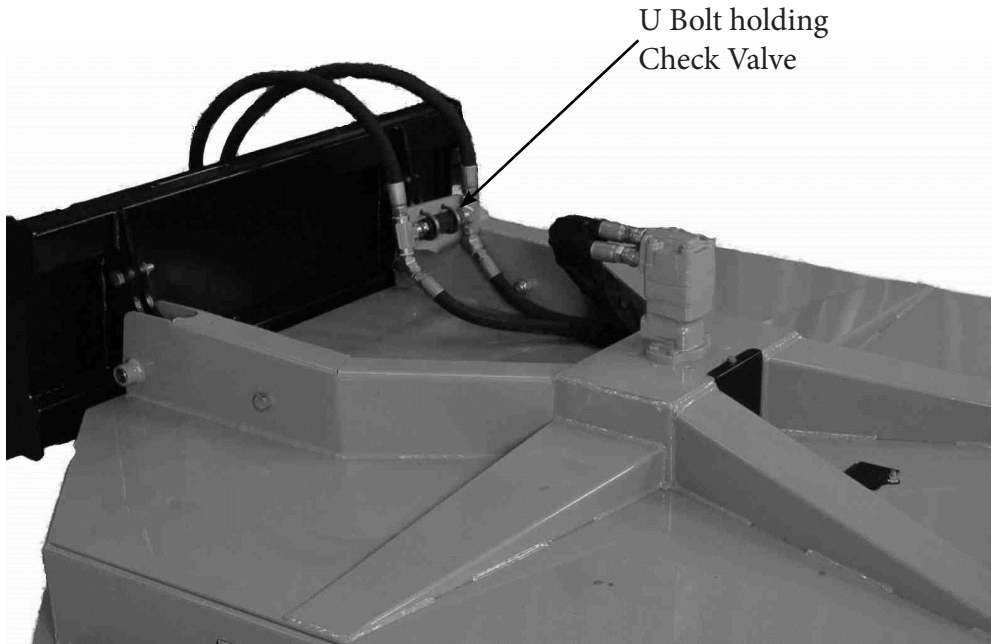
Operating

Upon receiving the product please take a few moments and check for broken or damaged or missing parts that happened during shipping.

The Skid Steer Pulsar® Cutter is shipped with most or all the components in place. The exception may be the hydraulic lines.

Unpack the lines and route them as shown below. Clamp the check valve part to the frame to secure the lines.

U Bolts holding Check Valve



Attaching the Pulsar® Cutter to your loader

1. Ensure that the hydraulic lines are not hanging in front of the loader plate
2. Hook loader adaptor into the top of the loader plate and tilt up until the front of the cutter is lifted.
3. Lock the attachment to the loader.
4. Attach the hydraulic lines to the loader.

You are now ready to do some cutting.

Operating

This cutter was designed for a skid steer loader. The loader plate has a floating link to allow the cutter to float freely up and down at the front while in use. The hydraulics has a check-valve in the line that will act like an overrunning clutch when the cutter is stopped. This avoids the tremendous pressure surge when the valve is closed, allows the blade to be turned by hand during servicing and will not run the cutter in reverse rotation.

Operating *continued*

Operating the Pulsar Cutter

With the cutter secured to the loader and you are at the site you want to cut.

Ensure that NO bystanders or workers are in the vicinity that you want to cut. Do not run cutter in any other position then flat on the ground!



Be sure to stop the cutter whenever you raise it off the ground!



This cutter is mounted in front of the loader and is pushed rather than dragged. The loader is also capable to put down pressure on the cutter, (this is not desirable).

With the cutter tilted up slightly at the front, lower the cutter until the sides almost touch the ground.

1. Tilt the cutter down until the front comes in contact with the ground.
2. Tilt it a little further to allow the cutter to float over uneven terrain.
3. Slowly start the cutter and bring it up to Full speed. (It is the speed of the blades
4. that do the cutting).
5. Lift the cutter up before turning
6. Stop the cutter any time it is not in contact with the ground.
7. Slow down if the cutter speed decreases.
8. After the job is completed Stop the cutter blade.

When driving with the cutter attached to the loader. Lift the cutter up for ground clearance only.

The cutter extends out the front and will tend to swing in a larger arc when turning and may cause the loader to be unstable.

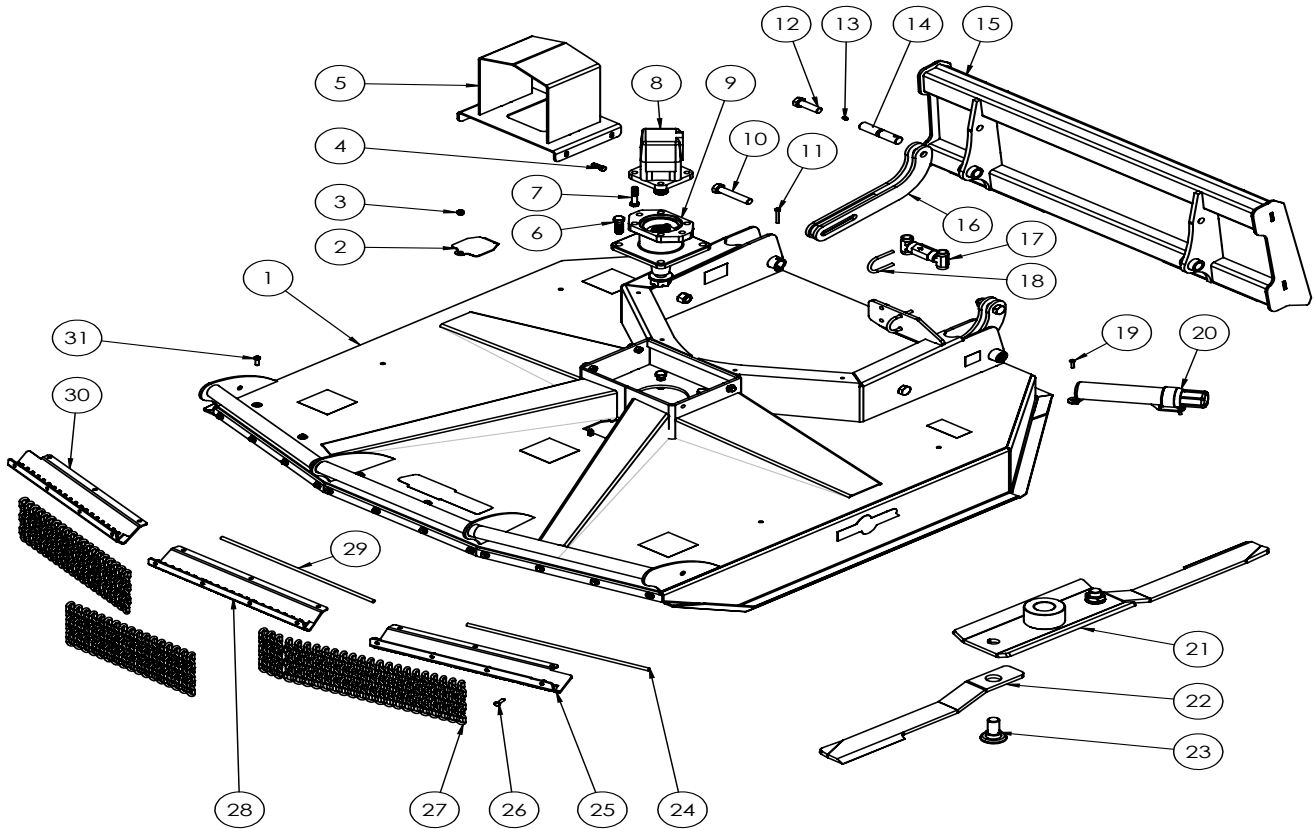
Maintenance



- Check all nuts and bolts after the first hour of use.
- Grease pivot pin on loader adapter plate every few days of use.
- When hooking up hydraulic lines check for wear marks and abraded spots. Replace if lines are worn and/or cracked.

Inspect blades for wear every 25 hrs of use. Replace both blades and bolts if excessive wear is noticed.

Pulsar Skid Steer Cutter Parts



Item #	Part #	Description	60 Qty	72 Qty
1	21664	PRCH60 Main Deck	1	
	21669	PRCH72 Main Deck		1
2	21660	Deck Cover Plate 60	1	
	31419	Deck Cover Plate 72		1
3	OL	Nut 3/8 c/w lw	1	1
4	OL	Bolt 3/8 x 1 1/4 c/w fw,lw	4	4
5	34880	Motor Guard	1	1
6	OL	Bolt 5/8 x 2 c/w lw,n	4	4
7	OL	Bolt 1/2 x 2 1/2 c/w lw,n	4	4
8	See page 14	Motor	1	1
9	See page 15	Drive Spindle	1	1
10	OL	Bolt 3/4 x 4 c/w ln	2	2
11	OL	Bolt 1/4 x 2 c/w ln	2	2
12	OL	Bolt 3/4 x 2 1/2 c/w ln	2	2
13	OL	Grease Fitting 1/4-28	2	2
14	72M104	Pivot Pin	2	2

Item #	Part #	Description	60 Qty	72 Qty
15	21620	Loader Adapter	1	1
16	31410	Float Link	2	2
17	See page 14	Check Valve Assy	1	1
18	OL	5/16 U Bolt	2	2
19	OL	RH Bolt 1/4x1 c/w Flange Nut	2	2
20	DJA7011	OP Manual Tube	1	1
21	34946	PRCH60 Cutter Bar	1	
	34947	PRCH72 Cutter Bar		1
22	h214	Cutter Blade	2	2
23	bb55	Blade Bolt c/w lw, n	2	2
24	21652	PRCH60 Side Chain Retainer Rod	2	
	21623	PRCH72 Side Chain Retainer Rod		2
25	21647	PRCH60 RH Chain Retainer Bracket	1	
	21633	PRCH72 RH Chain Retainer Bracket		1
26	OL	Bolt 5/16x1 c/w fw, lw	12	12
27	31gr30zx6	PRCH60 Chain Guard	60	
	31gr30zx6	PRCH72 Chain Guard		72
28	21650	PRCH60 Center Chain Retainer	1	
	21632	PRCH72 Center Chain Retainer		1
29	21653	PRCH60 Center Chain Retainer Rod	1	
	21624	PRCH72 Center Chain Retainer Rod		1
30	21651	PRCH60 LH Side Chain Retainer Bracket	1	
	21634	PRCH72 LH Side Chain Retainer Bracket		1
31	OL	Bolt 5/16x1 c/w fw, lw, n	9	

Note:

OL = Obtain Locally

c/w = complete with

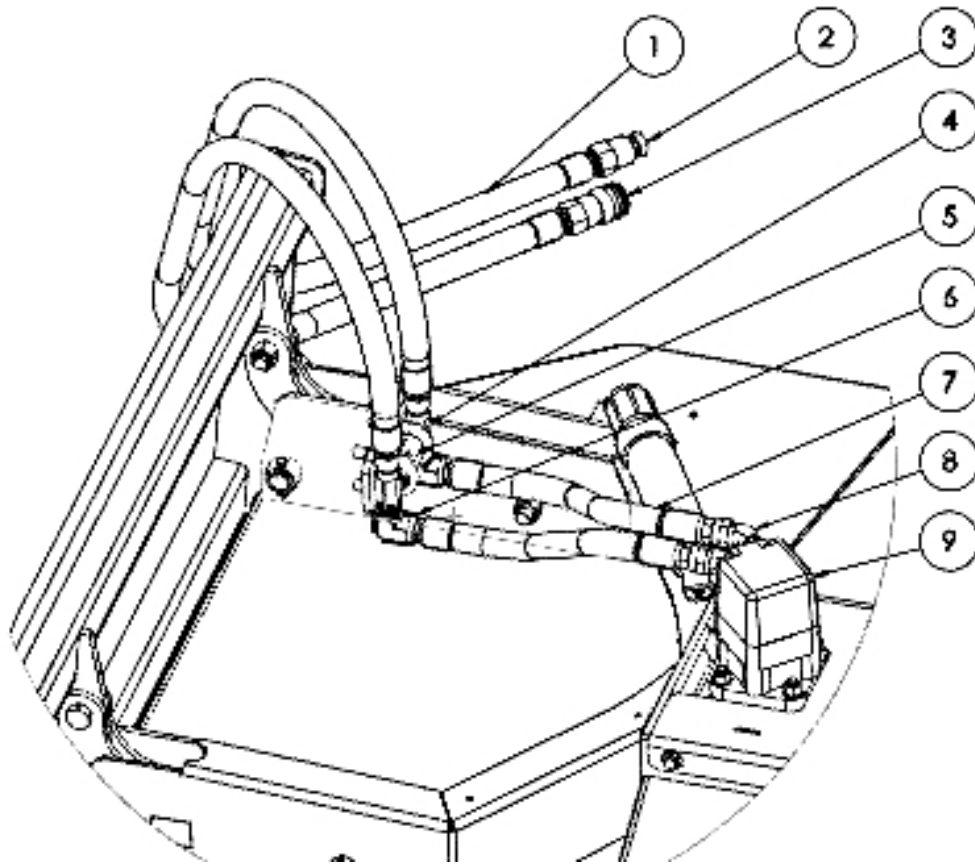
fw = Flatwasher

lw = Lockwasher

ln = Locknut

n = Nut

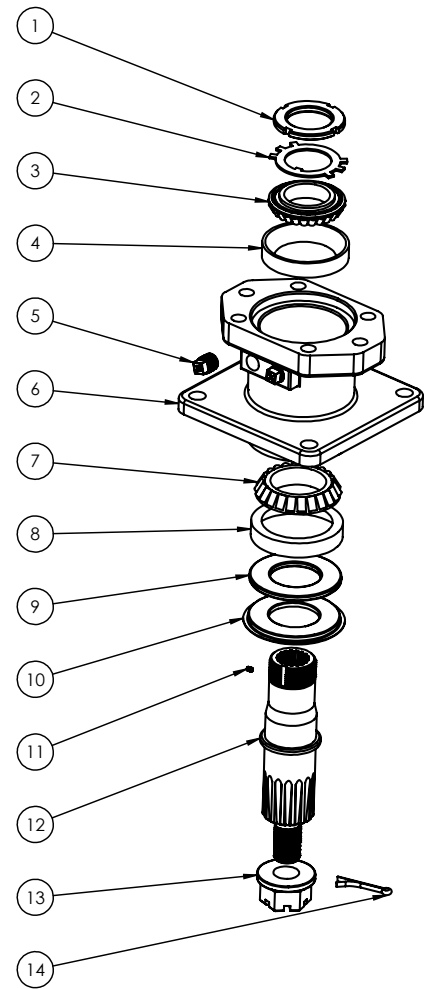
Skid Steer Pulsar Cutter Hydraulics



Item #	Part #	Description	Qty
1	24427	3/4 M NPT x 60" - 3/4 M NPT Loader Hose	2
2	801301001	Flat Face male	1
3	801301000	Flat Face female	1
4	5604-1212	3/4 Tee	2
5	512-SSC116	3/4 NPT Check Valve	1
6	5502-1212	3/4 NPT 90° St Elbow	2
7	24426	3/4 M NPT x 30" - 3/4 F JIC Motor Hose	2
8	6400-1214	3/4 JIC - SAE10	2
9	52672	Fan Motor A	1
	52673	Fan Motor B	1
	52674	Fan Motor B +	1
	52675	Fan Motor C	1
	52676	Fan Motor C +	1
	52677	Fan Motor D	1

Skid Steer Pulsar Cutter Spindle

Item #	Part #	Description	Qty
1	52654	Bearing Nut	1
2	52653	Lock Washer	1
3	52650	Top Cone	1
4	52649	Top Cup	1
5	52666	Plug	2
6	52647	Housing	1
7	52652	Bottom Cup	1
8	52651	Bottom Cone	1
9	52656	Seal	1
10	52655	Poterctor	1
11	52665	Set Screw	2
12	52648	Shaft	1
13	52664	Nut	1
14	OL	3/16 x 2 Cotter Pin	1



Bolt Torque

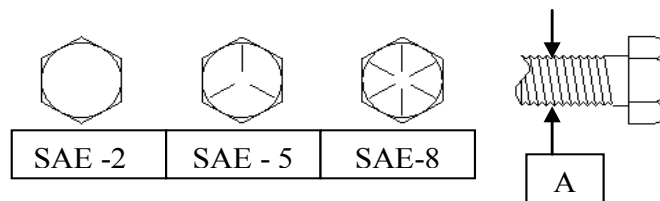
As used on this equipment

Bolt torque table shown below gives torque values for the various bolts used. This chart is for non-lubricated threads. Replace with the same strength bolt.

Torque Specifications. Torque values are identified by their head markings

Diameter	SAE 2		SAE 5		SAE 8	
	Lb-ft	N.m	Lb-ft	N.m	Lb-ft	N.m
1/4	6	(8)	9	(12)	12	(17)
5/16	10	(13)	19	(25)	27	(36)
3/8	20	(27)	33	(45)	45	(63)
7/16	30	(41)	53	(72)	75	(100)
1/2	45	(61)	80	(110)	115	(155)
5/8	95	(128)	160	(215)	220	(305)
3/4	165	(225)	290	(390)	400	(540)
1	225	(345)	630	(850)	970	(1320)

Allen head cap screws are similar to SAE 8 quality.



These torques are for a reference only. Not all these sizes and grades are necessarily used in this machine. Bolts that are used as a pivot or hinge have to be used with a locknut, therefore only tighten enough to secure the bolt and still allowing the part to rotate freely.

Notes:



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