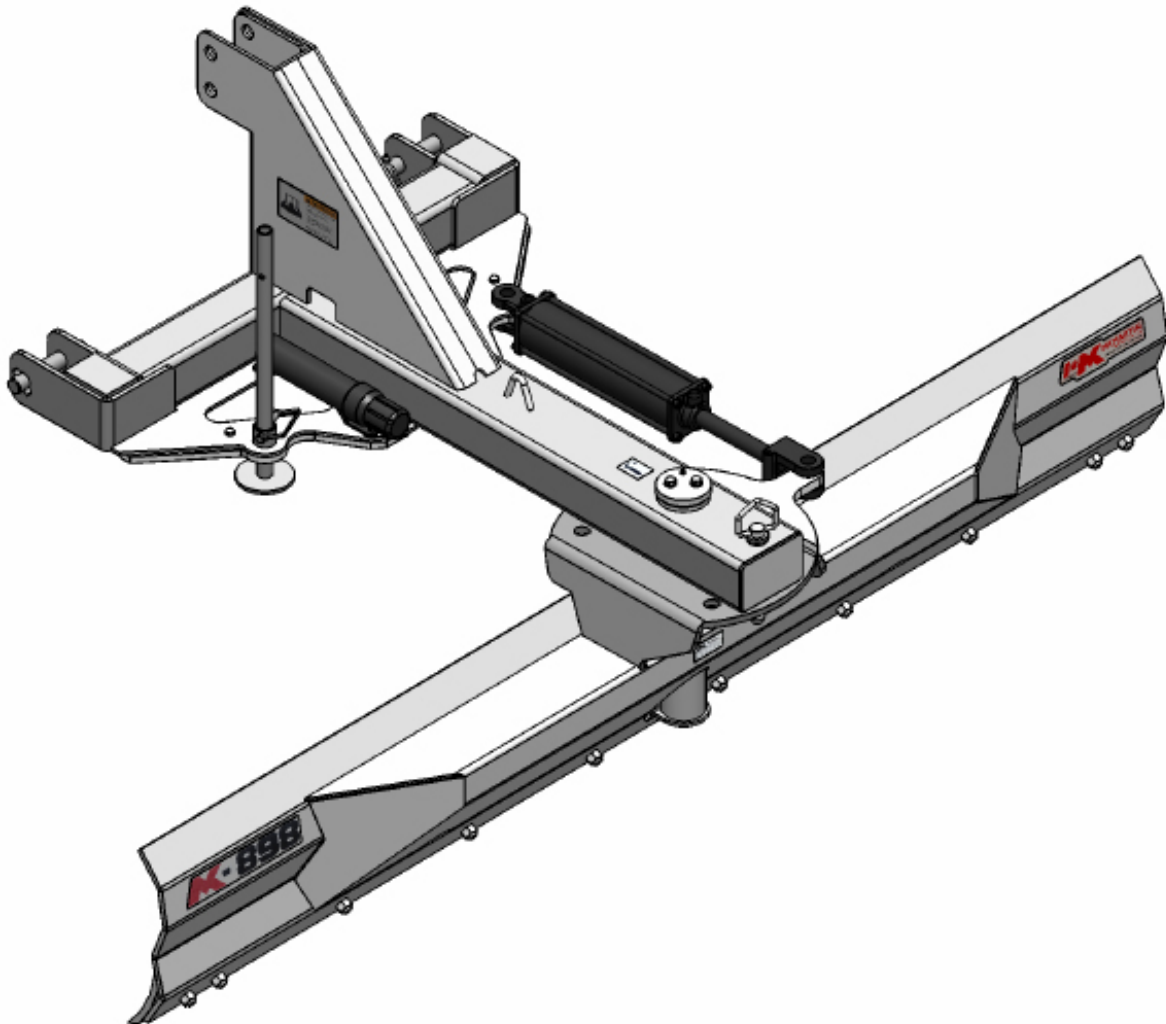




Series Grader Blade

**MK588; MK688; MK788;
MK798; MK898**

Operator's / Parts Manual



MK Martin Enterprise Inc.
3950 Steffler Rd Elmira, ON, Canada N3B 2Z3

Tel: 519-664-2752
Toll Free: 1-855-664-2752
Fax: 519-664-3695
E-mail: sales@mkmartin.ca
www.mkmartin.ca



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3950 Steffler Rd. • Elmira • Ontario, Canada • N3B 2Z3 • Email : sales@mkmartin.ca • Fax : (519)-664-3695 • Tel : (519)-664-2752

Warranty

Effective on products retailed on or after November 1, 2017

Two Year Limited Consumer Warranty

Five Year Limited Consumer Warranty on Gearboxes

90 Day Limited Commercial Warranty including Gearboxes

Commercial includes rental and industrial applications.

Warranty begins at the time of customer delivery and is activated upon warranty registration receipt at MK Martin Enterprise Inc.

Warranty coverage is null and void unless the Warranty Registration form has been completed in full and is on file at MK Martin Enterprise Inc.

Keep your registration copy in a safe place, it is required as proof of warranty activation.

This new and unused product is warranted by MK Martin Enterprise Inc. to be free from defects in material and workmanship under normal use and regular service as described in the owner's manual, for a consumer period of 2 years and 5 years for gearboxes, from the date of delivery, and commercial period of 90 days, including gearboxes, from the date of delivery. Warranty is limited to the replacement of parts and / or repair of the product.

If issues develop within the warranty period with the product, contact the local dealer from which you purchased the unit. Only MK Martin authorized dealers may make repairs to the product or affect the replacement of defective parts, unless otherwise approved by MK Martin. Repairs / replacement will be done at no charge within a reasonable time after the receipt of the product.

This warranty does not cover the following items:

1. Normal replacement of service items.
2. Normal maintenance or adjustments.
3. Machines or parts lost or damaged during shipment,
4. Accessory items / parts not supplied by MK Martin
5. Damages resulting from:
 - misuse, negligence, accident, theft or fire
 - use of improper or insufficient fuel, fluids or lubricants
 - use of after market parts or accessories, unless approved by MK Martin
 - modifications, alteration, tampering or improper repair
 - any device or accessories installed by other than an authorized dealer.
6. Tires are covered by the manufacturer of the tire and the warranty period specified by that manufacturer. **Please contact the tire manufacturer for warranty on these items.**

MK Martin Enterprise Inc. shall not, in any event, be liable for any losses, damages or costs; to include profits, travel, transportation, pick up, delivery, towing cost, tow vehicle, loss of use, whether special, incidental, consequential or otherwise, in any way. Unit or parts are returned at the customer's expense.

Include a copy of your completed Warranty Registration form with any claim as proof of warranty activation.

There are no warranties, expressed or implied, other than those specified herein. No agent, employee or other person has any authority to vary any of the foregoing provisions.

Warranty coverage is null and void unless the Warranty Registration form has been completed in full and is on file at MK Martin Enterprise Inc. Warranty begins at the time of customer delivery and is activated upon Warranty Registration receipt at MK Martin Enterprise Inc.

**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 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**

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: Indicates a potentially 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 your 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 you, the operator to practice caution and safety!

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

The M K Grader Blade is a very basic piece of equipment. Clear the area of people and especially children, as your attention will be concentrated on what the blade is doing, rather than the surrounding space. Try to stay aware of your surroundings at all times!

When adjusting or replacing parts, do not place yourself or other persons or any part of your body under a raised blade!

Replace any missing or illegible decals. Location of the decals are indicated elsewhere in this manual.

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

Review the safety instructions annually.

This equipment should not be operated by children, or those unfamiliar with the operation of the M K Martin Grader Blade.

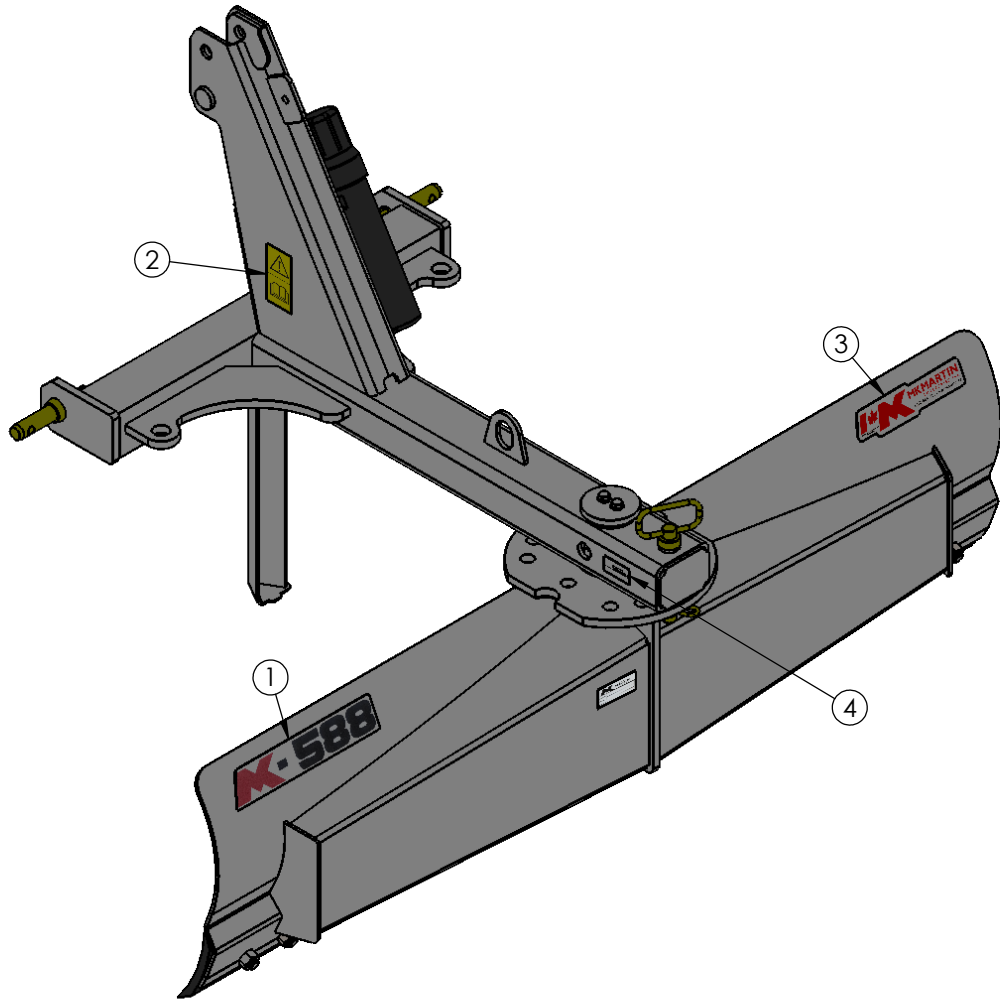
Do not allow persons to operate this equipment until they have read this manual and/or were instructed by a qualified Person.

Do not paint over or deface any safety signs or warning decals on this equipment.



Please be careful with the extra weight on the back of the tractor. It may be necessary to add extra weight to the front of the tractor to keep it balanced properly.

Decal Location



Part #1 Series decal x2

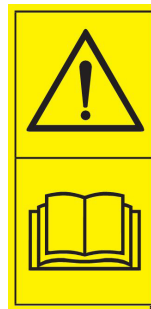
MK-588

MK-688

MK-788

MK-798

MK-898



Part #2

Before operating machine, carefully read the instruction manual



Part #3

MK logo made in canada



#4 - Grease

Operating

The 88 series blade is designed for Cat#1 3ph and is adaptable for "Quick Hitch"

The 98 series blade is designed for Cat#2 3ph and is adaptable for "Quick Hitch"

The M K Grader Blade has 5 manual pinned stops as standard angle adjustment, the blade can be rotated 180° with 5 more stops available.

Optional hydraulic angle adjustment is available to allow the operator to control the angle from the tractor seat.

88 Series: To reverse the direction of the blade, unpin the cylinder at the front of the A frame and turn the blade 180°, then pin the cylinder back on the other side of the A frame.

98 series: To reverse the blade, remove the hydraulic cylinder, rotate the blade 180°. Switch the stand and cylinder bracket and install the cylinder in the new position.

Please note:

M K 88 series blade uses an 8" stroke agricultural cylinder (20 1/4" - 28 1/4" closed to open)

M K 98 series blade uses an 12" stroke cylinder (22 1/4" - 34 1/4" closed to open)

To operate the M K Grader Blade

1. Attach to tractor as any 3ph equipment.
2. Ensure all pins are secure
3. Raise the blade slightly.
4. Undo stand pin and pull the stand up to the top position and lock with pin.
5. At this time you can use the leveling adjustment and level the blade by adjusting the top link. The blade should also be adjusted with the lower hitch adjuster until the blade is level with the ground.
6. The blade can be made more or less aggressive by adjusting the top link. This changes the cutting angle.
7. The blade can be rotated left or right depending on the direction that you prefer the material to move.
8. For finishing the grade, allow the material to slip under the edge before it moves off the end of the blade.

This Grader Blade is not designed for excavating! Be careful when backing up as you can now push the blade into the load causing some of the tractor weight to transfer to the blade beam and may buckle it.

Note:

OL = Obtain Locally

c/w = complete with

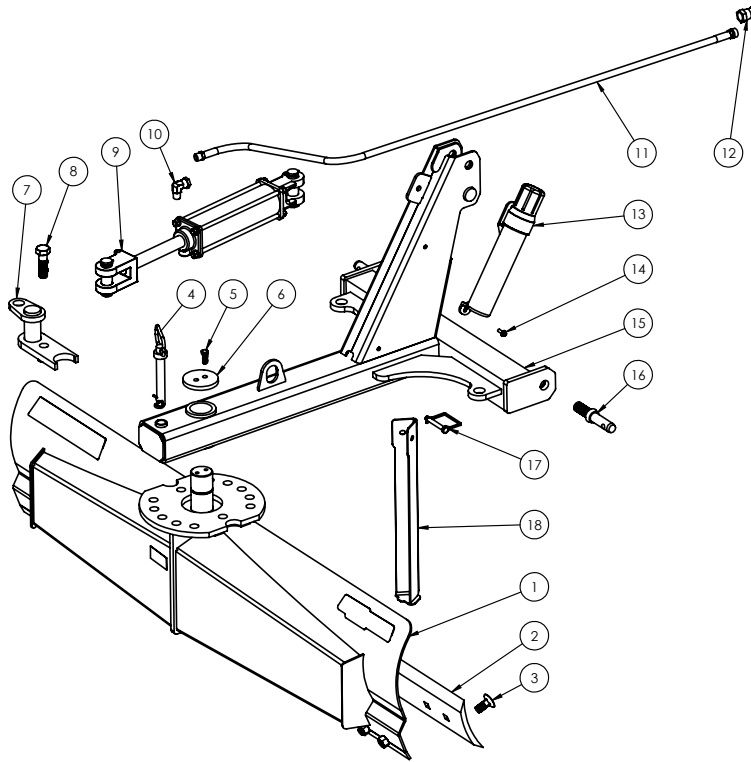
fw = Flatwasher

lw = Lockwasher

ln = Locknut

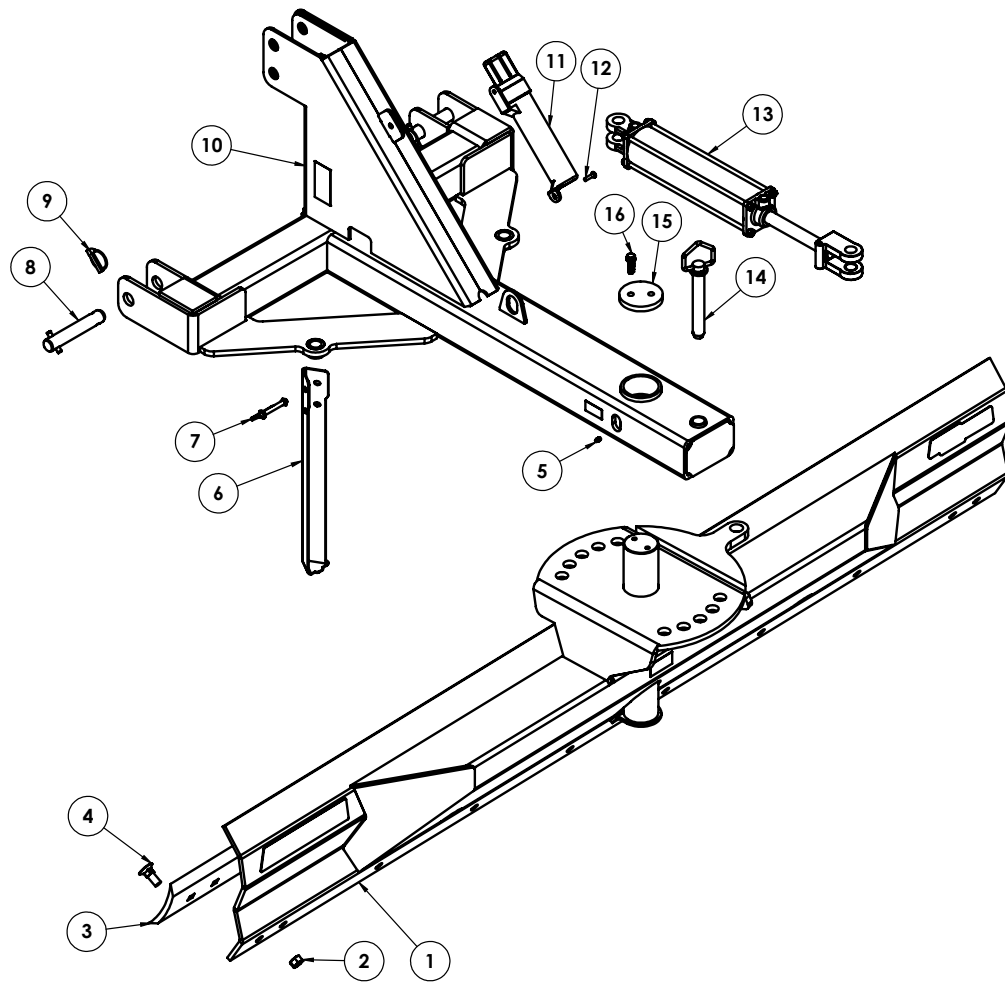
n = Nut

M K Grader Blade 88 Series



Item #	Part #	Description	588 Qty	688 Qty	788 Qty
1	52825	5' Moldboard	1		
	52836	6' Moldboard		1	
	52837	7' Moldboard			1
2	52787	5' Cutting Edge	1		
	53089	6' Cutting Edge		1	
	53090	7' Cutting Edge			1
3	OL	Plowbolt 5/8x1 1/2 c/w n	7	8	9
4	OL	Index Pin (3/4 Drawbar Pin)	1	1	1
5	OL	Bolt 3/8x1 c/w lw	2	2	2
6	52838	Swivel Cap	1	1	1
7	52834	Cylinder Bracket	1	1	1
8	OL	Bolt 3/4 x 2 1/2 c/w ln	1	1	1
9	OL	2 1/2x8 Ag Cylinder (20 1/4 - 28 1/4)	1	1	1
10	1501-0606	3/8 NPT - 3/8 NPT Swivel Elbow 90°	2	2	2
11	23895	1/4 x 80 Hyd Hose	2	2	2
12	S71-4	agri-ball nipple 1/2	2	2	2
13	52649	Manual Tube	1	1	1
14	OL	Flange Bolt 1/4 x 1	2	2	2
15	52810	Main Frame	1	1	1
16	53061	Cat #1 Lower Hitch Pin c/w lw, n	2	2	2
17	OL	3/8 PTO Pin	1	1	1
18	52840	Stand	1	1	1

M K Grader Blade 98 Series



Item #	Part #	Description	798 Qty	898 Qty
1	22339	7' Mold board	1	
	22059	8' Mold board		1
2	OL	5/8 Nut	9	10
3	53090	7' Cutting Edge	1	
	53918	8' Cutting Edge		1
4	OL	Plow Bolt 5/8x1 3/4	9	10
5	OL	Grease Fitting 1/4-28	1	1
6	53180	Stand	1	1
7	OL	3/8 PTO Pin	1	1
8	53896	Cat#2 Hitch Pin	2	2
9	OL	Lynch Pin	2	2
10	22053	Main Frame	1	1
11	52649	Manual Tube	1	1
12	OL	1/4 x 1 Pan Machine screw c/w fn	2	2
13	OL	3x12 Ag Cylinder	1	1
14	53914	Index Pin (1" Draw bar Pin)	1	1
15	22060	Swivel Pin Cap	1	1
16	OL	Bolt 7/16x1 1/2 c/w lw	2	2

MK Grader Blade

Care and Maintenance

After 1st 5 hours check all nuts and bolts and retighten if required. At 10 hours check all nuts and bolts and re-tighten if required. Repeat at 5 hour intervals until all bolts have seated and stay tight.

Storage of MK Grader Blade

Store MK Grader Blade in a firm, dry area, and set on blocks if the area is not firm enough to support the equipment without sinking in. Clean off all caked dirt and mud.

When storing for a long period and rusting may be a problem, unbolt swivel cap and apply oil between the swivel shaft and swivel bushing, then replace the cap. This will prevent the movable part from seizing up. Wipe all excess oil off with a dry rag.

The Cutting Edge is reversible and after it shows considerable wear it can be reversed.

- 1 Loosen all the Plowbolts
- 2 Remove all bolts except the bolts at each end
- 3 Tilt the Grader Blade on its back and remove the remaining bolts.

Note! Cutting Edge is heavy! Handle with care and use heavy gloves!

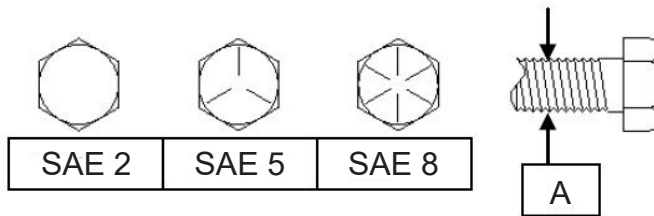
Bolt Torque

As used on this machine

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

Torque Specifications. Torque values are identified by their head markings.

Diameter	SAE 2		SAE 5		SAE 8	
	<i>ft-lb</i>	<i>N.m</i>	<i>ft-lb</i>	<i>N.m</i>	<i>ft-lb</i>	<i>N.m</i>
"A"						
1/4	6	(8)	8	(11)	12	(16)
5/16	11	(15)	17	(24)	25	(33)
3/8	20	(27)	31	(42)	44	(59)
7/16	32	(43)	49	(67)	70	(95)
1/2	49	(66)	76	(105)	105	(145)
5/8	97	(130)	150	(205)	210	(285)
3/4	144	(195)	265	(360)	375	(510)
7/8	165	(225)	430	(585)	605	(820)
1	250	(340)	645	(875)	910	(1230)
1 1/8	355	(480)	795	(1080)	1290	(1750)
1 1/4	500	(680)	1120	(1520)	1820	(2460)
1 1/2	870	(1180)	1950	(2640)	3160	(4290)



Allen head cap screw are similar to SAE 8 quality

These torques are for 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.



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