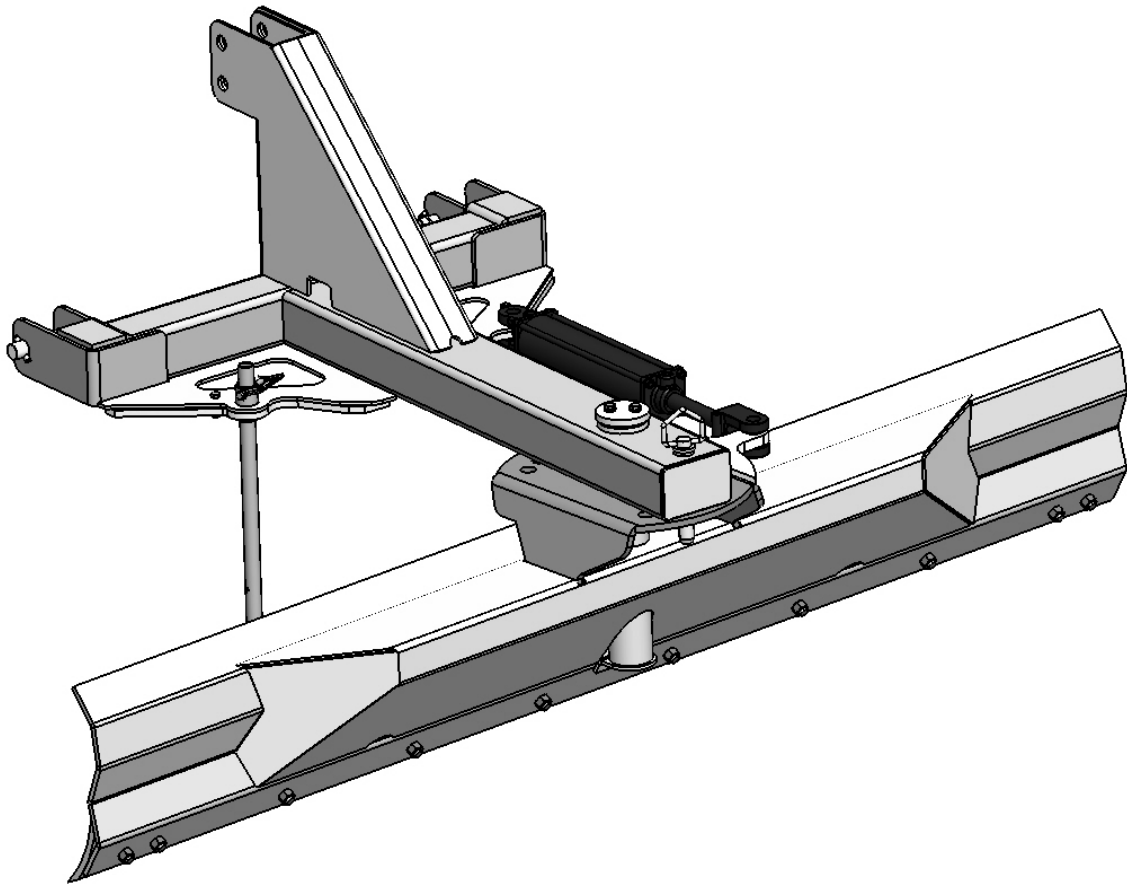




M K Martin 3PH Scraper Blade
88 Series - 98 Series
Operator, Parts and Service Manual



Manufactured By



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



Tel: 519-664-2752

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M Grader Blade

M Grader blade is ruggedly built with a reversible cutting edge to give you years of dependable service. This blade is designed for maintaining the grade of your graveled yards and driveways.

Warranty and Limitation of Liability

All equipment is sold subject to mutual agreement that is warranted by M K Martin enterprise Inc (hereafter called the company) of any defects of material and workmanship. The company shall not be liable for special, indirect or consequential damage of any kind under this contract or otherwise. The company's liability shall be limited exclusively to replacing or repairing without charge at its factory or elsewhere, at its discretion, any material or workmanship defects which become apparent within one year from date of purchase. *This will allow you one complete year of use in all conditions.* The company will have no liability for damages of any kind. The buyer, by the acceptance of the equipment will assume all liability for any damages which may be the result from the use or misuse by by the employees or others.

Warranty coverage is null and void if any unauthorized repairs or alterations are performed to this equipment.

Warranty is also null and void unless this warranty Registration is completely filled out and is on file at M K Martin Enterprise Inc.

This information is exclusively for registration and warranty purposes only. It shall not be shared sold or otherwise divulged to 3rd parties.

To register please cut and mail the bottom or fax the whole page.

We will also accept electronic registration by e-mail or through the website. We need name, address, purchase date, model and serial number.

For you record

Purchase Date Y20---- M ----

Model # -----

Serial # -----

Please cut at dotted line and return this registration form to the company via, Mail

✂-----

Grader Blade

M K Martin Enterprise Inc
3950 Steffler Rd Elmira On Ca N3B 2Z3
sales@mkmartin.ca

Name or Purchaser

Name -----

Address -----

Postal Code/Zip Code

Purchase Date Y 20--- M ----

Model # -----

Serial # -----

Safety

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

- **Failure to follow these instructions can result in Injury or Death!**



This symbol means

--- Attention!

--- Become Alert!

--- You are involved in your Safety!

Signal words used in this booklet

Caution: indicates a potentially hazardous situation that may result in injury!

Warning: Indicates a potentially 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 has to be aware of these dangers!

If you have any questions not answered in this booklet 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.

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

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

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

Replace any decals that may be missing or illegible. 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 annually.

This equipment should not be operated by children: or those unfamiliar with the operation of the MK Grader Blade.

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 deface any safety signs or warning decals on the machine.

Observe all safety signs and practice the instructions on them.



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

Grader Blade Operating Instructions

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 MK Grader blade has 5 manual pinned stops as standard angle adjustment, blade can also be rotated 180° and use 5 more stops in the other direction.

Optional hydraulic angle adjuster is available to give you angle control from your tractor seat.

The direction can be changed by unbolting the cylinder mount bracket and change to the other side.

Please note

MK88 series uses an 8" stroke agricultural cylinder (20 1/4" - 28 1/4" closed to open)

MK 98 series uses a 12" stroke cylinder (22 1/4" - 34 1/4" closed to open)

To change direction on the MK88 series blade the rear cylinder mount is removed and the blade rotated 180° and then bolted into the new position .

To change the MK98 series direction,

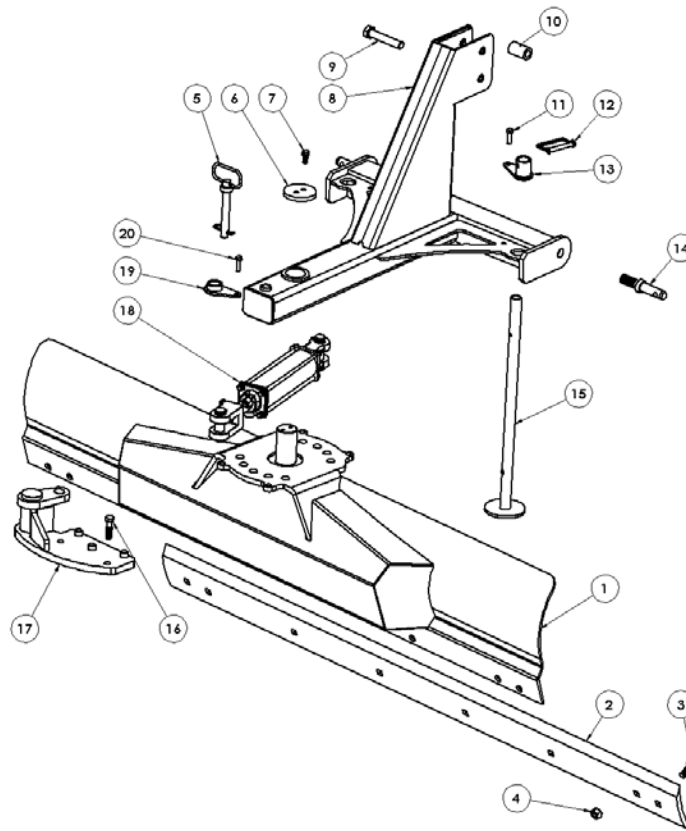
- 1 remove cylinder pin to allow the cylinder to be used on the other side
- 2 unbolt the cylinder pin bushing and the stand bushing and switch them to the other side
- 3 rotate blade 180° and install cylinder

To operate the MK Grader Blade

- 1 Attach to tractor as a 3ph mounted piece of equipment.
- 2 Ensure all pins are secured
- 3 Raise the blade slightly with the hydraulics
- 4 Undo stand pin and pull stand up to the top position and lock with pin
- 5 At this time you can use the leveling adjustment and level the blade with the ground.
- 6 The blade can be made more or less aggressive by lengthening or shortening the top 3ph link. This changes the cutting angle.
- 7 The blade can be rotated left or right depending on the direction that you want the material to go.
- 8 For finishing the grade, allow the material to slip under the cutting edge before it moves off the end of the blade.

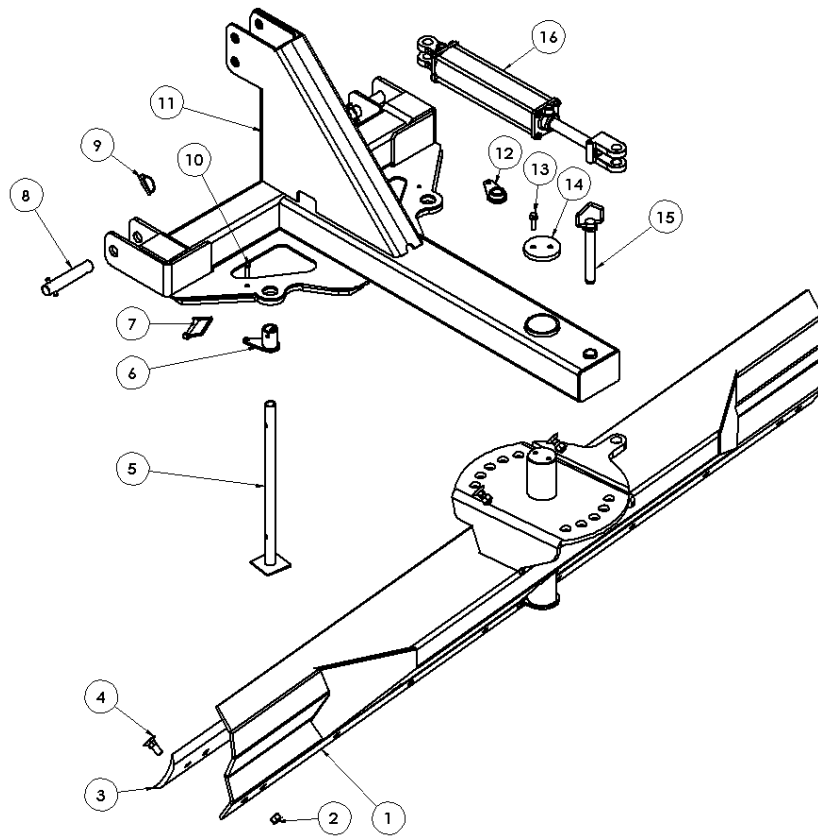
This grader blade is not designed for excavating . Be careful when backing up as you can now push the blade into the load causing some of the tractor weight to transfer to the blade beam and possibility buckling it.

MK Grader Blade 88 Series



Item #	Description	Part #	Qty
1	5ft Mouldboard	770-22326	1
	6ft Mouldboard	770-32777	1
	7ft Mouldboard	770-22323	1
2	5ft Cutting Edge	783-100-504	1
	6ft Cutting Edge	783-100-604	1
	7ft Cutting Edge	783-100-704	1
3	Plowbolt 5/8x1 1/2 (5ft)	OL	7pc (5ft) 8pc (6ft) 9pc (7ft)
4	5/8 Nut	OL	7pc (5ft) 8pc (6ft) 9pc (7ft)
5	Index Pin (3/4 Drawbar Pin)	OL	1
6	Swivel Cap	770-23778	1
7	Bolt 3/8x1 c/w lw	OL	2
8	Main Frame	770-32772	1
9	Bolt 3/4x4 c/w ln	OL	1
10	Bushing	770-32779	1
11	Bolt 3/8x1 1/4 c/w lw, n	OL	1
12	3/8 PTO Pin	OL	1
13	Stand Bracket	770-22333	1
14	Hitch Pin Cat#3 Lower Pin	783-100-110	2
15	Stand	770-22336	1
	Optional Hydraulic Angle		
16	Bolt 1/2x2 c/w lw, n	OL	2
17	Cylinder Bracket Rear	770-32778	1
18	8" stroke Ag Cyl 20 1/4-28 1/4	OL	1
19	Cylinder Bracket Front	770-32761	1
20	Bolt 3/8x1 1/4 c/w n,lw	OL	1

MK Grader Blade 98 Series



Item #	Description	Part #	Qty
1	7 ft Mouldboard	770-22339	1
	8 ft Mouldboard	770-22059	1
2	5/8 nut (7ft)	OL	9
	5/8 nut (8ft)	OL	10
3	7 ft Cutting Edge	783-100-704	1
	8ft Cutting Edge	783-100-804	1
4	Plow Bolts 5/8x 1 3/4 (7ft)	OL	9
	Plow Bolts 5/8 x 1 3/4 (8ft)	OL	10
5	Stand	770-22262	1
6	Stand Bracket	770-22259	1
7	3/8 PTO Pin	OL	1
8	Hitch Pin	519-8720965	2
9	Lynch Pin	OL	2
10	Bolt 3/8x 1 1/2 c/w n, lw	OL	2
11	Main Frame	770-222053	1
12	Cylinder Bracket	770-32761	1
13	Bolt 7/16x1 1/2 c/w lw	OL	2
14	Swivel Pin Cap	770-22060	1
15	Index Pin (1" Drawbar Pin)	OL	1

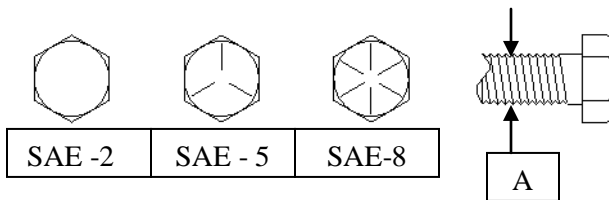
Bolt Torque
As used on this equipment

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.

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 retighten 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, the 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!