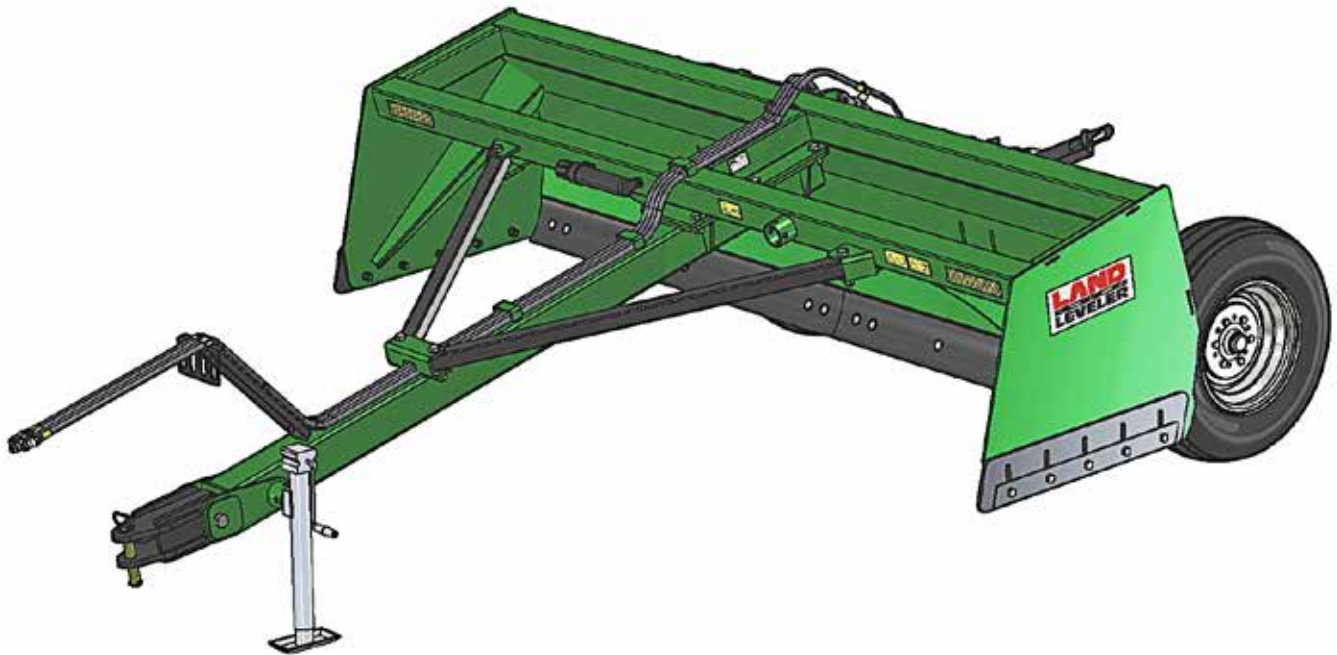


# LAND LEVELER

## Land Leveler 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](mailto:sales@mkmartin.ca)  
[www.mkmartin.ca](http://www.mkmartin.ca)



REV: 18-1



## Table of Contents

• Warranty	-----	2
• Registration	-----	3
• Safety	-----	5-7
• Decal Location	-----	8
• Assembly Instruction	-----	9
• Operation	-----	10
• Sign Off	-----	11
• Parts	-----	12-15
• Maintenance	-----	16
• Bolt Torque	-----	17



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

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

Tel: 519-664-2752  
1-855-664-2752  
Fax: 519-664-3695  
e-mail [sales@mkmartin.ca](mailto:sales@mkmartin.ca)

[www.mkmartin.ca](http://www.mkmartin.ca)



## **Be Safe! Stay Safe!**



Remember you the operator are responsible for the safe operation of this equipment. Before operating this equipment take lessons from an experienced operator, read through this manual and understand each step of operation prior to doing any work with the equipment.

### **Understand you are the primary safety device.**

When operating this equipment keep spectators at a distance to allow you to concentrate on the job at hand.

Anybody who has not read and understood these operating and safety instructions is not qualified to operate this equipment.

Do not modify or alter this equipment in any way.

Any unauthorized modifications may impair the safety and function of this equipment.

- Read and understand the Operator's Manual
- Wear appropriate protective gear, This list may include but is not limited to: a hard hat, safety shoes, safety glasses or goggles, wet weather gear, hearing protection, respirator or filter mask.
- Do not allow riders
- Lower blade to the ground, place all controls in neutral, set parking brake, stop the engine and remove the key before servicing, adjusting or repairing this equipment.
- Review safety related items with all operators annually.
- Before transporting on a highway clean reflectors and SMV signs
- Obey all local highway laws when transporting this equipment on roads.
- Always travel at safe speeds
- Maintain and keep tires in good condition. Have a qualified serviceman perform the required maintenance.
- Ensure that all decals are legible. See your dealer parts department for replacements.



## **WARNING !**

**Always block Land Leveler securely before working on  
or under Land Leveler.**



## 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.

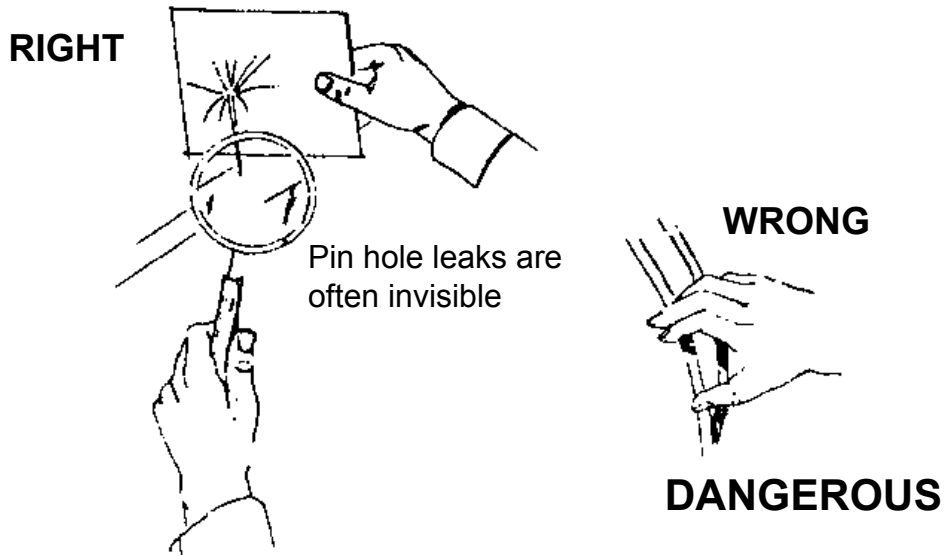


Figure 1. Detecting pinhole leaks in a hydraulic system.



**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.

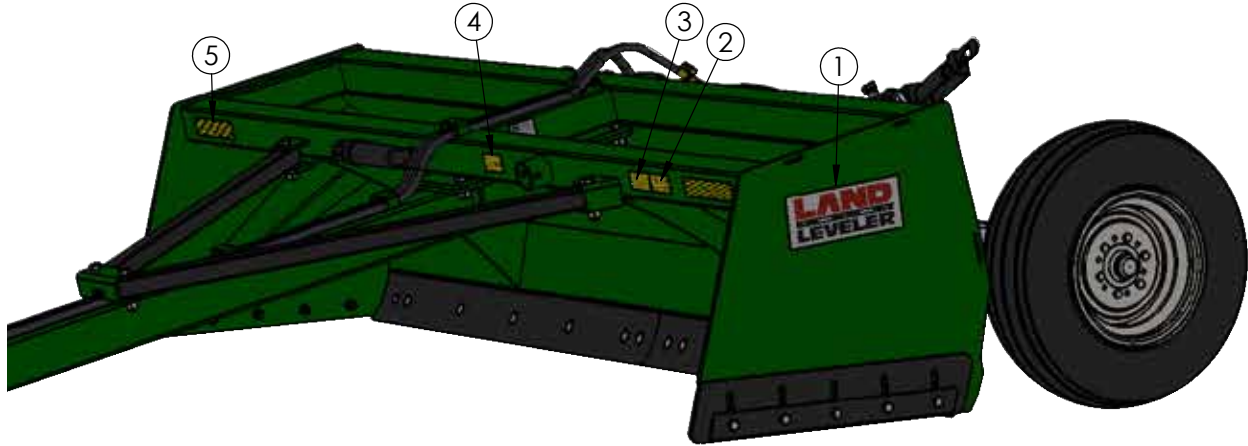


Use a piece of wood or cardboard as a backstop when searching for leaks, **NEVER** your hand or fingers.



Always relieve pressure before disconnecting or working on hydraulic system.

## Decal Location



# 1 - Land Leveler Decal - x2



# 2 - Before any operation of maintenance a/o adjustment, stop, brake the tractor on level ground, lower the machine to the ground and read the instruction manual.

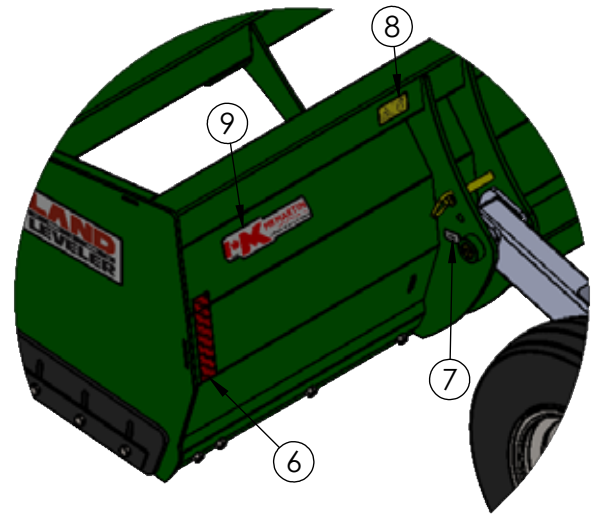


# 3 - Before operating machine, carefully read the instruction manual.



# 4 - Before any operation of maintenance, carefully read the instruction manual. Avoid fluid escaping under pressure. Consult technical manual for service procedures.

# 5- Amber Decal - x2



# 6 - Red Decal - x2



# 7- Grease Decal - x2



#8 - DANGER of being crushed. Insert safety lock pins before getting in hazardous area.

# 9 - MK Martin Made in Canada



## **Assembly Information**

- The Land Leveler is shipped as a package that includes;
- Main Mouldboard Assembly
- Rear Axle Beam with Tilt.
- Tongue with Hitch
- Tongue Braces ( for 10 and 12 foot )
- Wheels
- Jack
- Lift Cylinder c/w Hydraulic lines Tilt Cylinder c/w Hydraulic hose.

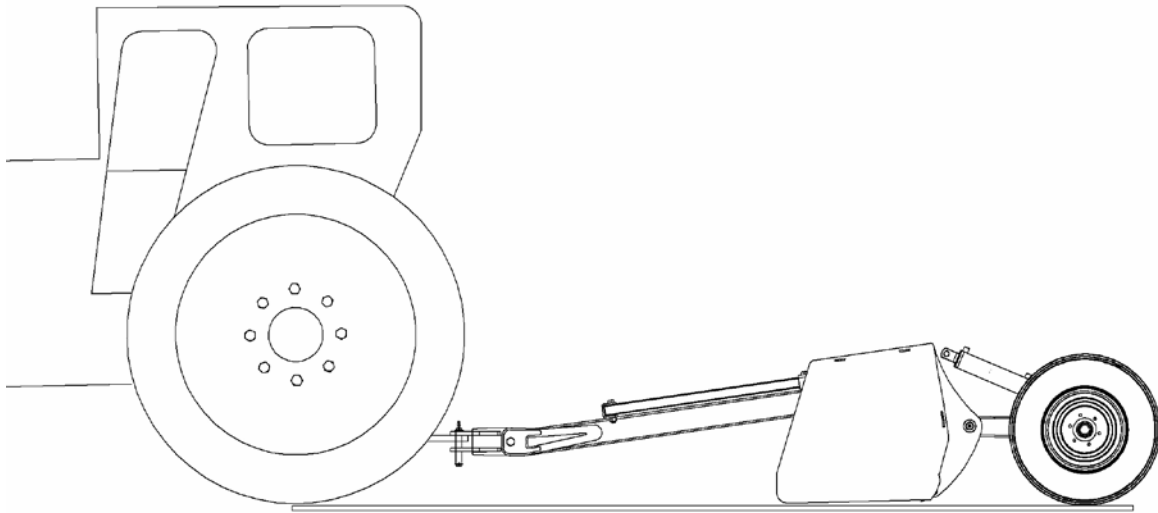
### **To assemble**

Please see preceding page (decal location) for component placement.

1. Remove all components from skid.
2. Attach Tongue to Mouldboard
3. Fasten the Tongue Braces ( if required )
4. Remove two pivot pins on the Mouldboard and attach axle beam with the gusset braces on top.
5. Fasten the Wheels
6. Install Hydraulic Cylinder and route Hydraulic Lines along the clamps to the hitch

## Operating

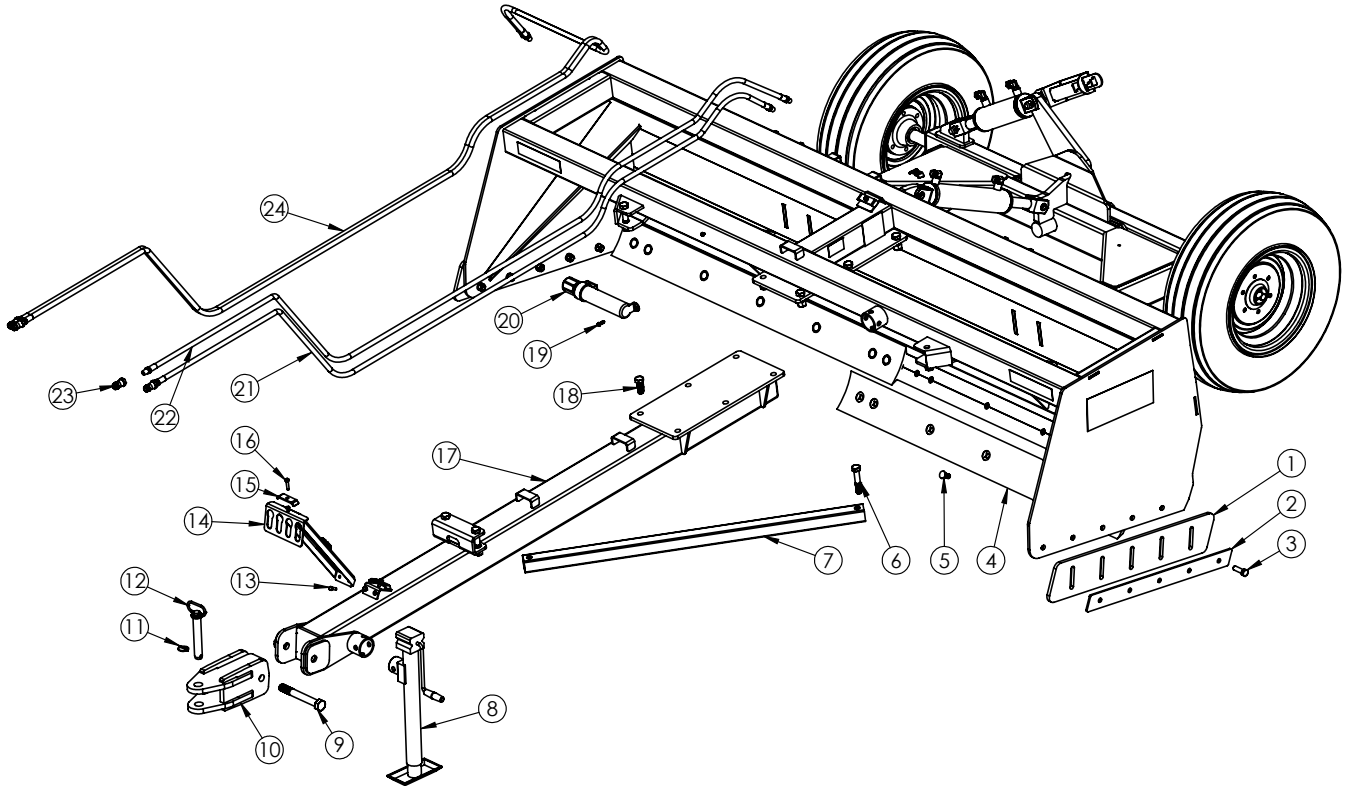
The leveler will work better and easier if the soil is plowed and disked before leveling. The Land Leveler blade is situated between the tractor wheels and the leveler wheels and will shave or plane off the high areas and fill in low areas. For leveling purposes' adjust the rear wheels with the hydraulic cylinder so that the rear tractor wheels, the cutting edge and the rear leveler wheels form a straight line as shown. If the rear wheels are lower the leveler will progressively add soil and if the wheels are higher the leveler will progressively cut deeper.



It may be necessary to repeat the operation in cases of severe irregularity. After your field is leveled you may find that the filled in areas have settled and need more leveling the following year, this is normal.



## Land Leveler Parts



Item #	Part #	Description	8 ft Qty	10 ft Qty	12 ft Qty
1	10917	Wear Bar	2	2	2
2	10916	Wear Bar Clamp	2	2	2
3	xzhcs6220nc	Bolt 5/8 x 2 c/w In	10	10	10
4	53918	8ft Cutting Edge	1		
	52787	10ft Cutting Edge		2	
		12ft Cutting Edge			2
5	xbbp6215nc	Plowbolts 5/8x1 1/2 c/w n	10	14	16
6	xzhcs7540nc	Bolt 3/4x4 c/w In		4	4
7	30979	Brace		2	2
8	53642	Jack	1	1	1
9	xzhcs10080nc	Bolt 1x8 c/w In	1	1	1
10	30982	Hitch	1	1	1
11	53913	3/16" Lynch Pin	1	1	1
12	53914	Hitch Pin 1"	1	1	1
13	xzhcs3115nc	Bolt 5/16 x 1 1/2 c/w lw	2	2	2
14	10932	Hose Stand	1	1	1
15	10211	Hose clamp	3	3	3
16	xzhcs3115nc	Bolt 5/16 x 1 1/2 c/w In	3	3	3

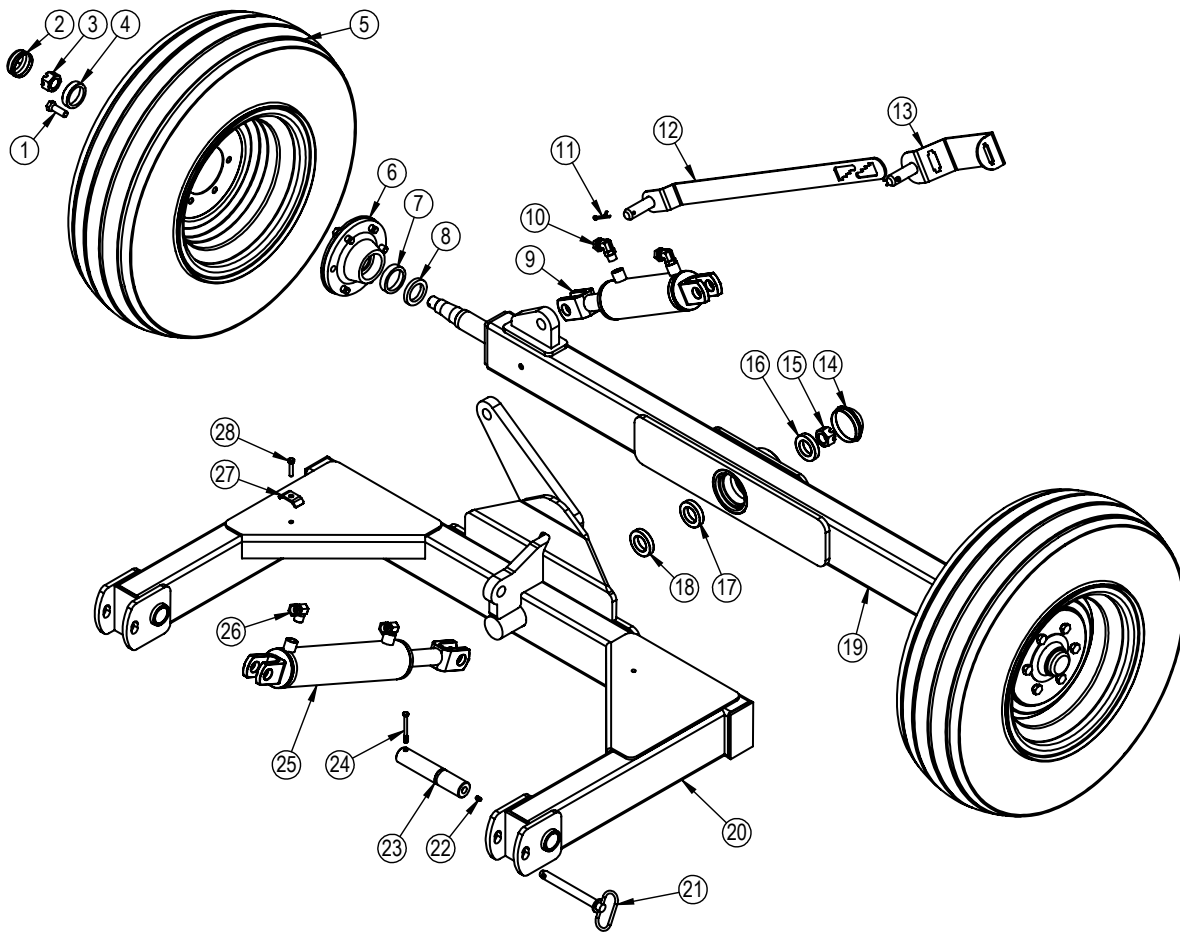
## Land Leveler Parts

Item #	Part #	Description	8 ft Qty	10 ft Qty	12 ft Qty
17	10191	8 Ft Tongue	1		
	30981	10 & 12 Ft Tongue		1	1
18	xzhcs7520nc	Bolt 3/4x2 c/w In	6	6	6
19	508-021	Self Drilling Screw 1/4 x 1	2	2	2
20	52649	Manual Tube	1	1	1
21	32502	Short Hydraulic Hose	1	1	1
22	32503	Long Hydraulic Hose	1	1	1
23	S71-4	Agri-ball nipple	4	4	4
24	32504	Hydraulic Tilt Hose	2	2	2

**Note:**

**OL = Obtain Locally**  
**c/w = complete with**  
**fw = Flat Washer**  
**lw = Lock Washer**  
**In = Locknut**  
**n = Nut**

## Land Leveler Tilt Axle



Item #	Part #	Description	8 ft Qty	10 ft Qty	12 ft Qty
1	53919	9/16 Wheel Stud	12	12	12
2	53920	Dust Cap	2	2	2
3	53921	Castle Nut	2	2	2
4	53922	Outer Bearing	2	2	2
5	53930	8 ply tire	2	2	2
6	53925	Hub 4000	2	2	2
7	53923	Inner Bearing	2	2	2
8	53924	Seal	2	2	2
9	53144	Cylinder	1	1	1
10	53926	Hyd. Fitting	2	2	2
11	pinco1820	3/16 x 2 Cotter Pin	2	2	2
12	10923	Bottom Tilt Indicator	1	1	1
13	10921	Upper Tilt indicator	1	1	1
14	53927	Dust Cap	1	1	1
15	53928	Castle Nut	1	1	1
16	53929	Outer Bearing	1	1	1
17	53931	Inner Bearing	1	1	1
18	53932	Seal	1	1	1



## Land Leveler Tilt Axle

Item #	Part #	Description	8 ft Qty	10 ft Qty	12 ft Qty
<b>19</b>	31790	Tilt Axle 8ft - 10ft	1	1	
	31792	Tilt Axle 12ft			1
<b>20</b>	31789	Tilt Frame 8ft - 10ft	1	1	
	31791	Tilt Frame 12ft			1
<b>21</b>	52657	3/4 x 6 1/4 Hitch pin	2	2	2
<b>22</b>	53933	Grease Nipple	2	2	2
<b>23</b>	30971	Pivot Pin	2	2	2
<b>24</b>	xzhcs2530nc	Bolt 1/4 x 3 c/w ln	2	2	2
<b>25</b>	21914	Cylinder	1	1	1
<b>26</b>	53934	Hyd. Fitting	2	2	2
<b>27</b>	10179	Hose Clamp	1	1	1
<b>28</b>	xzhcs3115nc	Bolt 5/16 x 1 1/2 c/w lw	1	1	1

**Note:**

**OL = Obtain Locally**  
**c/w = complete with**  
**fw = Flat Washer**  
**lw = Lock Washer**  
**ln = Locknut**  
**n = Nut**

## Maintenance

### Before using for the first time

- Read Operator's Manual
- Check all bolts for proper torque
- Grease Pivot Pins



## WARNING !

**Always block Land Leveler securely before working on or under Land Leveler.**

### After first 2 hours

1. Re-torque all bolts including wheel bolts
2. Check for hydraulic leaks

### After 10 hours

Repeat 2 hour step

### Using after break-in period

1. Lubricate pivot pins
2. Use a tractor with enough power and weight to handle the Leveler.
3. Ensure the drawbar hitch pin has a mechanical retainer.
4. Ensure the safety chain is installed.
5. Check condition of Cutting Edge
6. Check Hydraulic Oil level in the tractor. Add if required.
7. Use a clean cloth to clean couplers before attaching to the tractor
8. Check tire pressure. 32 psi, (220 kPa)

### Tractor

Fix drawbar in the center position to prevent it from swinging.

After the implement is attached, raise the jack and rotate it 90° to its stowed position.

### Storage

1. After the seasons use, inspect the machine for wear and damage. This is a good time to repair or replace worn and damaged parts. It is then ready at the beginning of the next season.
2. Wash the machine to remove all dirt and residue.
3. This is also a good time to inspect the hydraulic hoses for cuts and abrasions.
4. Touch-up all paint nicks and scratches to prevent rusting
5. Oil exposed hydraulic cylinder shafts to prevent rusting.
6. Repack wheel bearings
7. Store in an area that is dry, level and safe from activity, including children.

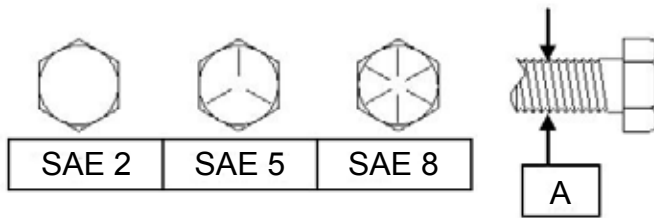
## Bolt Torque

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



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](mailto:sales@mkmartin.ca)  
[www.mkmartin.ca](http://www.mkmartin.ca)