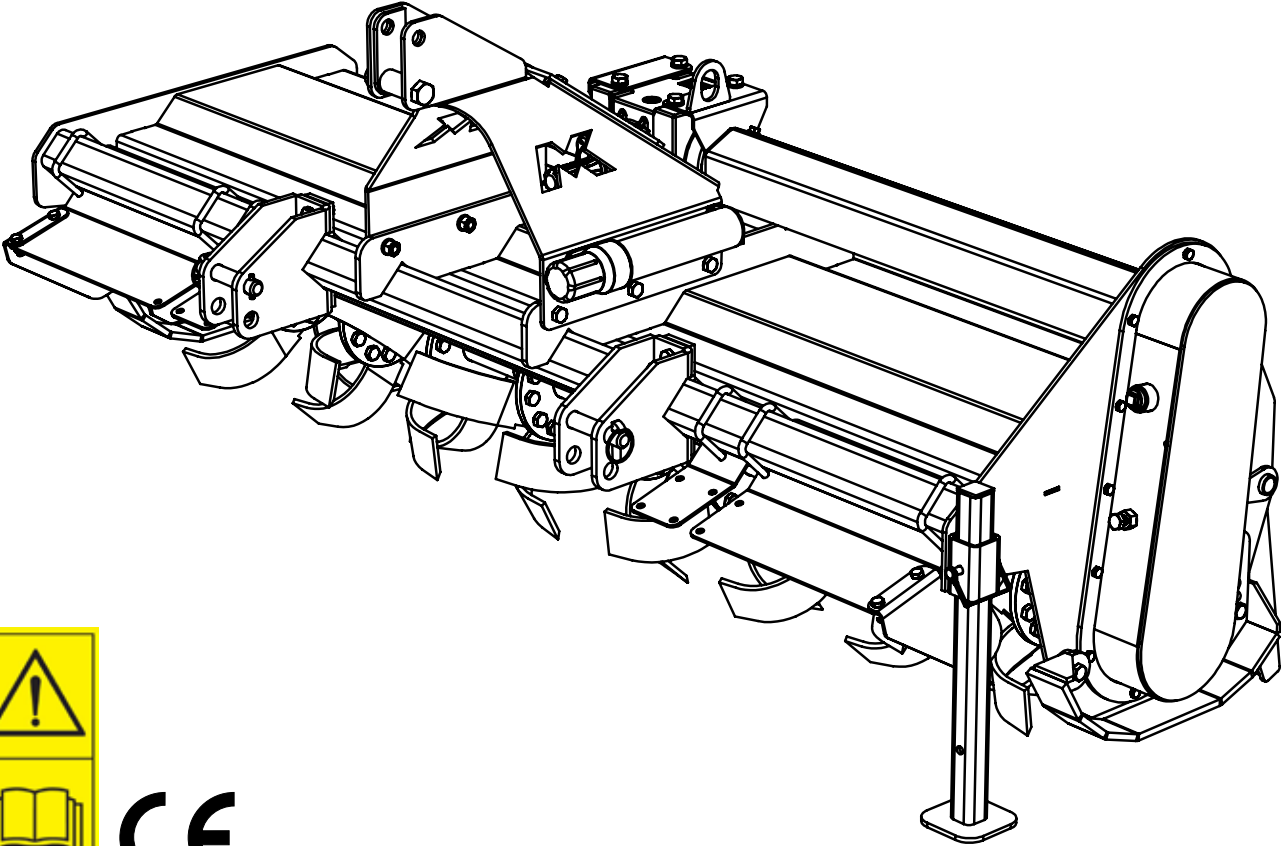


Rotary Tiller Operator's / Parts Manual



MK Martin Enterprise Inc.
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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.

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

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!

Before using this equipment!

Thoroughly read and understand the instructions given in this manual before operation. Refer to the safety decal section read all instructions noted to them.

Do not allow anyone to operate this implement who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the implement.

Be sure that you know the dangers and safety concerns while operating this equipment!

Understand that your safety and the safety of other persons are measured by how you service and operate this machine.

The safety information given in this manual does not replace safety codes, federal, state or local laws. Make certain your machine has the proper equipment as designed by local laws and regulations.



Warning!

Operator should be a responsible adult. Do not allow persons to operate or assemble this unit until they have developed a thorough understanding of safety precautions and how it works.

- Do not use this machine while under the influence of drugs or alcohol.
- The operator should be familiar with all functions of the tractor and attached implement, and be able to handle emergencies quickly.
- Make sure all guards and shields are in place and secured before operating implement.
- **Keep all bystanders away from equipment and work area.**
- **Start tractor and operate controls from the driver's seat only. Never from the ground.**
- **Never dismount from a moving tractor or leave tractor unattended with engine running.**
- Never adjust, service, clean, or lubricate Tiller until all power is shut off.
- Do not allow anyone to stand between tractor and implement while backing up to implement.
- If equipment has been altered in any way from original design, manufacturer does not accept any liability for injury or warranty.
- **Keep hands, feet, and clothing away from power-driven parts.**
- **Do not wear loose-fitting clothing which may catch moving parts.**
- **Always wear protective clothing and substantial shoes.**
- **It is recommended that hearing and eye protection be worn.**
- Watch out for fences, trees, rocks, wires, etc., while operating and transporting implement.
- Detach and store implement in an area where children normally do not play. Secure implement using blocks and supports.



Safety -- It's in your interest!

Lighting and Marking

It is the responsibility of the customer to know lighting and marking requirements of local highway authorities and to install and maintain equipment to provide compliance with regulations. Add extra lights when transporting at night or during periods of limited visibility.

Inspect all the lights to ensure they are all working.

Inspect all the reflectors and SMV emblem to ensure that they are all visible and in the proper place.

Keep safety signs clean and legible at all times.



Transportation and Highway Operation

When traveling on public roads, use accessory lights, SMV sign, clean reflectors, and other adequate devices to warn operators in other vehicles of your presence. Always comply with all federal, state, and local laws.

Reduce ground speed when turning and leave enough clearance to avoid making contact with obstacles such as buildings, trees, fences, etc. Making contact can result in equipment damage and cause serious injury or death.

IMPORTANT: Always disengage PTO before raising tiller to transport position.

When raising tiller to transport position, be sure the drive-line does not contact tractor or tiller. Adjust tractor's 3-point hitch so that the tiller tines are not raised more than 14 inches off the ground to prevent drive-line damage.

Travel Speeds should be such that complete control and machine stability is maintained at all times. Where possible avoid operating near ditches, embankments and holes. Reduce speed when turning, crossing slopes and rough, slick or muddy surfaces.

Be observant of bridge load ratings. Do not cross bridges rated lower than gross weight at which you are operating.

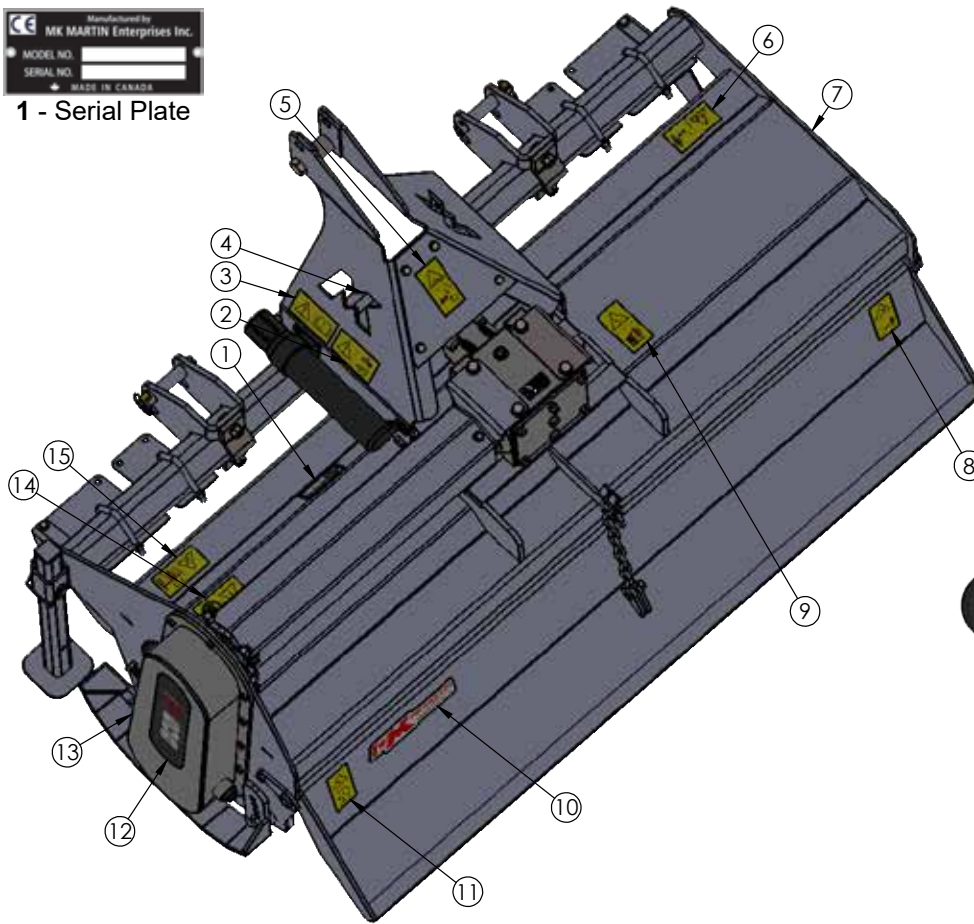
Technical Data

MOD.	Till Width	HP	# tine rows	Till Depth	Weight
RT 486	50"	15-30	6	4"	475
RT 606	58"	20-50	6	4"	500
RT 726	74"	25-60	6	4"	575

Decal Location



1 - Serial Plate



12 - Part # RT486, or RT606, or RT726 Vertical



7 - Part # RT486, or RT606, or RT726 Horizontal



10 - Part # MKlogomadeincanada



2 - Part # 226
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 - Part # F9
Before operating machine, carefully read the instruction manual



4 - Part # 540
Operate with PTO at 540 RPM



5 - Part # 220
DANGER of being caught by the PTO shaft. Do not go near the rotating members of the machine while in operation.



6 - Part # A77
DANGER Risk of injury to the legs. Keep a safe distance from the machine.



8 - Part # 224
DANGER. Sharp objects could be thrown. Keep safe distance from the machine



9 - Part # 227
Danger of dropping. Do not climb on to the machine.



11 - Part # 223
DANGER of injury to the hands. Never remove the guards while the parts are moving wait until all moving components have completely stopped.



13 - Part # 212
Risk of injuries. Do not remove the protective shields unless all moving parts of the machine have reached a complete standstill.



14 - Part # Noise
Loud noise. Wear adequate hearing protection, e.g. headphones.



15 - Part # 207
DANGER of being crushed. Do not get between the tractor and the machine.

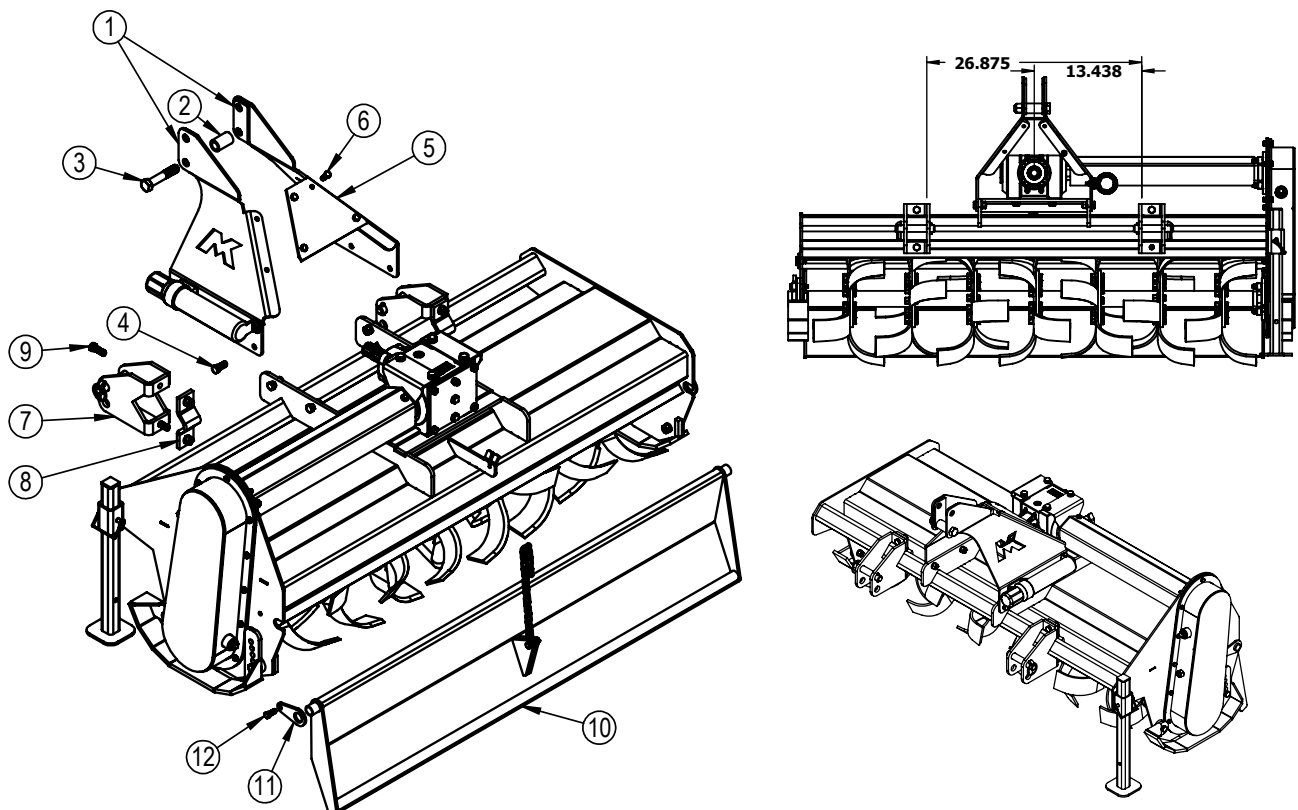
Assembly

CAUTION To avoid bodily injury caused by accidental falling of tiller, securely support tiller on safe supporting stands or blocks.

This unit is shipped with detached parts. Carefully follow instructions for final assembly. Having all the needed parts and equipment readily at hand will speed up your assembly task.

Rotary Tiller Assembly

- Attach upper left-hand hitch plate (#1) to gearbox mounting frame with 1/2 x 1 1/4" bolts (#4), lock washers, and nuts. Do not tighten hardware at this time.
- Repeat step above to attach upper right-hand hitch plate (#1) to gearbox mounting frame.
- Attach 1 1/4" OD spacer (#2) between upper 3-point hitch plates (#1) with 3/4" x 4" bolt (#3), and locknut. Attach plate (#5) with 3/8 x 1 bolts (#6) With lock washers and nuts.
- Tighten all hex nuts (#3, #4 & #6) to the correct torque.
- Attach manual storage tube to hitch plate (#1) with 1/4"-20 x 1" bolts and flange hex nuts. Tighten to the correct torque.
- Attach clevis (#7) to the front square tube on the tiller with bracket (#8) with 1/2" x 1 1/2" bolts (#9) and lockwasher and nuts.
- Draw bolts (#9) up snug. Do Not Tighten lock nuts at this time.
- Repeat steps Above for other side.
- Position clevises (#7) 26 7/8" apart from inside of clevis plate to inside of clevis plate and centered off the gearbox input shaft 13 7/16" as shown.
- Tighten bolts, lock washers and nuts (#9) to the correct torque.
- Attach leveling door (#10) with keeper plates (#11) and secure 3/8 x 1 bolts (#12) lock washers and nuts.



Attaching / Unhooking the Tiller



Danger: A Crushing Hazard exists while hooking and unhooking implement. Do not allow anyone to stand between tractor and implement while backing-up to implement or pulling away from implement. Do not operate hydraulic 3-point lift controls while someone is directly behind tractor or near implement.

Warning: Always disengage PTO, put tractor in park or set park brake, shut tractor engine off, remove ignition key, and wait for all moving parts to stop before dismounting tractor.

Caution: to avoid bodily injury caused by accidental falling of tiller, stabilize unit with park stand and support blocks.



1. Clear the area of bystanders, especially small children.
2. The Tiller is equipped with a Cat. 1 hitch. Make sure your tractor's hitch is compatible with the tiller's hitch.

Important: The tractor's lower 3-point arms must be stabilized to prevent side-to-side movement. Most tractors have sway blocks or adjustable chains for this purpose.

3. Remove lower linchpins and hitch pins.
4. Customer to supply upper hitch pin and pin keeper. If present remove hitch pin and keeper.
5. Slowly back tractor to tiller while using tractor 3-point control lever to align holes in lower 3-point lift arms with holes in tiller clevises.
6. Attach lower 3-point lift arms to clevises with hitch pin. Secure hitch pins with linchpins.
7. Attach tractor's top center 3-point link to tiller hitch plates with upper hitch pin and pin keeper.
8. Raise tiller off the ground several inches, and remove the park stand.

Important: To keep park stand from becoming damaged, always store stand in transport position before moving tractor with tiller attached.

9. Adjust tractor's top link to level tiller from front to back.
10. Adjust one of the two tractor's lower 3-point lift arms up or down to level tiller from left to right.
11. **Attach PTO if this is the first time this unit is hitched together make sure PTO is the correct length** (see drive line set up pg. 17).

Important: Be sure that the drive line does not bottom out when going through its working angles.

12. Raise tiller with the 3-point lift arms. Measure distance the tines are off the ground. If distance exceeds 14 inches, adjust tractor's 3-point lift limiter so that it will not lift higher.
13. Reverse the above procedures when unhooking from the tractor.

Warning: Place support blocks under tiller as needed to prevent unit from tipping over onto a child and/or an adult. A tiller that tips over can result in injury or death.



Before Operation

Efficient and safe operation of the Rotary Tiller requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this manual. A pre-operation checklist is provided for the operator. It is important for both personal safety and maintaining the good mechanical condition of the Tiller that this checklist is followed.

Give unit a visual inspection for any loose bolts, worn parts, or cracked welds, and make necessary repairs.

Be sure there are no tools lying on or in equipment.



Pre-operation Checklist

- Lubricate the machine per the schedule outlined in the Service and Maintenance Section.
- Check that the machine is properly attached to the tractor. Be sure retainers are used on the mounting pins.
- Check the oil level in the gearbox. Add as required.
- Check that the PTO drive-line shield turns freely and that the drive-line can telescope easily. Clean and lubricate if required.
- Check the blades. Be sure they are not damaged or broken and are bolted securely to the rotor. Repair or replace as required.
- Remove any entangled material on rotating parts.
- Install and secure all guards, shields and covers before starting.
- **Danger:** Make certain you are not working over electrical power lines, gas lines, phone lines, or other utilities, that can cause serious injury or death from electrocution, explosion, or fire. **If in doubt**, call your local utilities providers before digging so that utilities can mark the location of any underground utilities in the area.
- **Danger:** Clear area of debris before tilling. Mark any potential hazards that cannot be removed such as tree stumps, posts, rocks, holes, and drop-offs with a visible flag.



Operating

Warning: Before using your Rotary Tiller, you should have completely read the Operator's Manual, properly attached the tiller to the tractor, cut the drive-line to proper length, and gone through the Operating Checklist. If you have missed any of these steps, please complete them before proceeding.

Comply with state and local laws governing highway safety and movement of farm machinery on public roads.

Warning; Be sure all lights are working properly before highway travel.

Make sure that everyone is clear of equipment before applying power or moving the machine.

Now that you have properly prepared yourself and your tiller, it's time to do some tilling. Carefully drive the tractor to the site where you intend to till. You should have already cleaned this site of any large limbs, rocks, trash, metal or other debris.

Lower the tiller half way to the ground and reduce your tractor engine speed to about one quarter throttle. Engage the PTO and gradually increase the engine speed until you reach full PTO speed of 540 rpm.

Lower the tiller to the ground and simultaneously commence forward travel of approximately 2 mph. Do not make turns or attempt to back up while tiller is in the ground.

Important: Turning or backing up with rotary tines in the ground will damage the tiller.

Caution: In order to prevent breakages or damage, the speed of tractor must never exceed 5 mph when implement is working.

Travel about 50 ft. and then stop to check your results. When stopping, remember to lift the tiller out of the ground, stop the tractor, reduce engine speed, disengage the PTO, set the park brake, shut off the tractor, and remove the key.

If you are tilling too shallow or too deep, adjust the skid shoes accordingly.

If the soil texture is too coarse, reduce your ground speed.

If the soil texture is too fine, you will need to increase your ground speed.

For any other problem conditions that may arise, you will want to refer to the "Troubleshooting Chart"

Comply with all safety warnings and cautions in this manual and in combined operators manuals.

Troubleshooting Chart

The rotary tiller moves curved tines on a turning rotor through the ground to break it up and prepare a seed bed. It is a simple and reliable system that requires minimal maintenance.

In the following section, we have listed many of the problems, causes and solutions to the problems you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this manual, please call your local MK Martin distributor or dealer.

Problem	Cause	Solution
Tillage depth insufficient	<ul style="list-style-type: none"> •Tiller is carried by tractor •Skid shoes need adjusting •Tines are worn or bent •Soil too hard •Obstacles are entangled in tines or rotor. 	<ul style="list-style-type: none"> •Lower tractor 3-point arms •Adjust skid shoes •Replace tines •Repeat the run several times •Clean rotor or tines of obstacles
Soil texture too coarse	<ul style="list-style-type: none"> •Leveling door is too high •PTO speed too slow •Ground speed too fast 	<ul style="list-style-type: none"> •Lower leveling door •Increase PTO speed to 540 rpm •Decrease ground speed
Soil texture too fine	<ul style="list-style-type: none"> •Leveling door too low •Ground speed is too slow 	<ul style="list-style-type: none"> •Raise leveling door •Increase ground speed
Uneven seed bed	<ul style="list-style-type: none"> •Machine not level •Leveling door too high 	<ul style="list-style-type: none"> •Level machine •Adjust leveling door
Tines balling up with soil	<ul style="list-style-type: none"> •Soil is too wet •Tines are worn or bent •Tines are incorrectly installed 	<ul style="list-style-type: none"> •Wait until soil dries •Replace tines •Install tines correctly
Tiller jolts over the ground or vibrates	<ul style="list-style-type: none"> •Obstacles are entangled in tines or rotor. •Tines are incorrectly installed •Rotor warped due to blows received from hidden obstacles 	<ul style="list-style-type: none"> •Clean rotor or tines of obstacles •Install tines correctly •Replace rotor
Drive line vibrates	<ul style="list-style-type: none"> •Machine lifted too high •Tiller tilts too far forward or backwards as it works 	<ul style="list-style-type: none"> •Limit the lifting travel (If the fault persists, disengage the PTO as the machine starts to lift) •Lengthen or shorten top link so that the upper surface of the tiller is parallel to ground worked

Maintenance

Good maintenance is your responsibility. Poor maintenance is an invitation for trouble.

Check for missing paint and scratches, prime and paint to keep the metal from rusting.

Replace any caution, warning, danger or instruction safety decal that is not readable or is missing.

FIRST 8 HOURS SERVICE

- Carefully check the general condition of the machine after the first 8 hours service.
- In particular, you are advised to fully tighten all the screws and bolts on the machine after having checked the hoe blades for wear.

EVERY 8 WORK HOURS

- Grease the PTO shaft U-joints.
- Check that the bolts fixing the hoe blades are well tightened.
- Grease the rotor spindles

EVERY 50 WORK HOURS

- Change the oil in the gearbox housing after the first 50 hours. (Replace with 80W-90)
- Check the level of the oil in the gearbox or in the reduction unit and top up to the oil level plug on side of box as necessary
- Check the level of the grease in the side casing of the transmission unit, unscrewing the level/drain plug and checking that grease is there. Add (.00 grease) if necessary It should come to the level plug.

EVERY 400 WORK HOURS

- Change the oil in the gearbox or in the reduction unit and transmission casing by completely draining off the old oil through the drain plug under the reduction unit and through the transmission drain plug. When this operation is carried out, it is also advisable to demount and clean the clutch disks (if the PTO shaft has a clutch).
- Check the tightening of the clutch springs.

Always use safety support and block implement. Never use a jack to support machine.

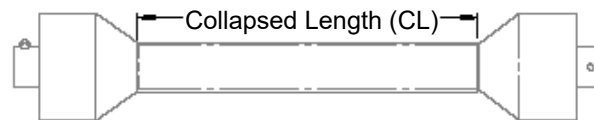
After servicing, be sure all tools, parts and service equipment are removed.

PTO Drive-line Dimension

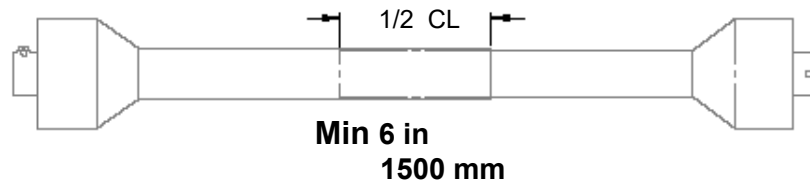
The PTO Drive-line as supplied with the machine will need to be checked for the proper length before being put into service.

To accommodate the various hitch and tractor configurations the supplied shaft may be too long, or in some cases too short. To determine shaft length, find the collapsed length, raise or lower the equipment until the PTO out of the tractor is horizontal with the input shaft on the machine. Measure lock-pin groove to lock-pin groove or bolt hole on the equipment. If this is on trailed equipment then turn tractor as sharp as possible.

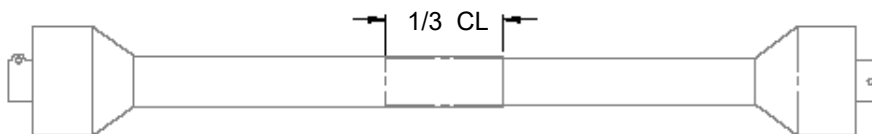
Measure collapsed PTO shaft from lock-pin to lock-pin or bolt hole and compare it with the measurement on the tractor. The difference of these measurements needs to be cut from Both Halves of the PTO shaft plus 1/2".



Working Length overlap is 1/2 of above collapsed length



Minimum Overlap in Transport Position 1/3 of collapsed length

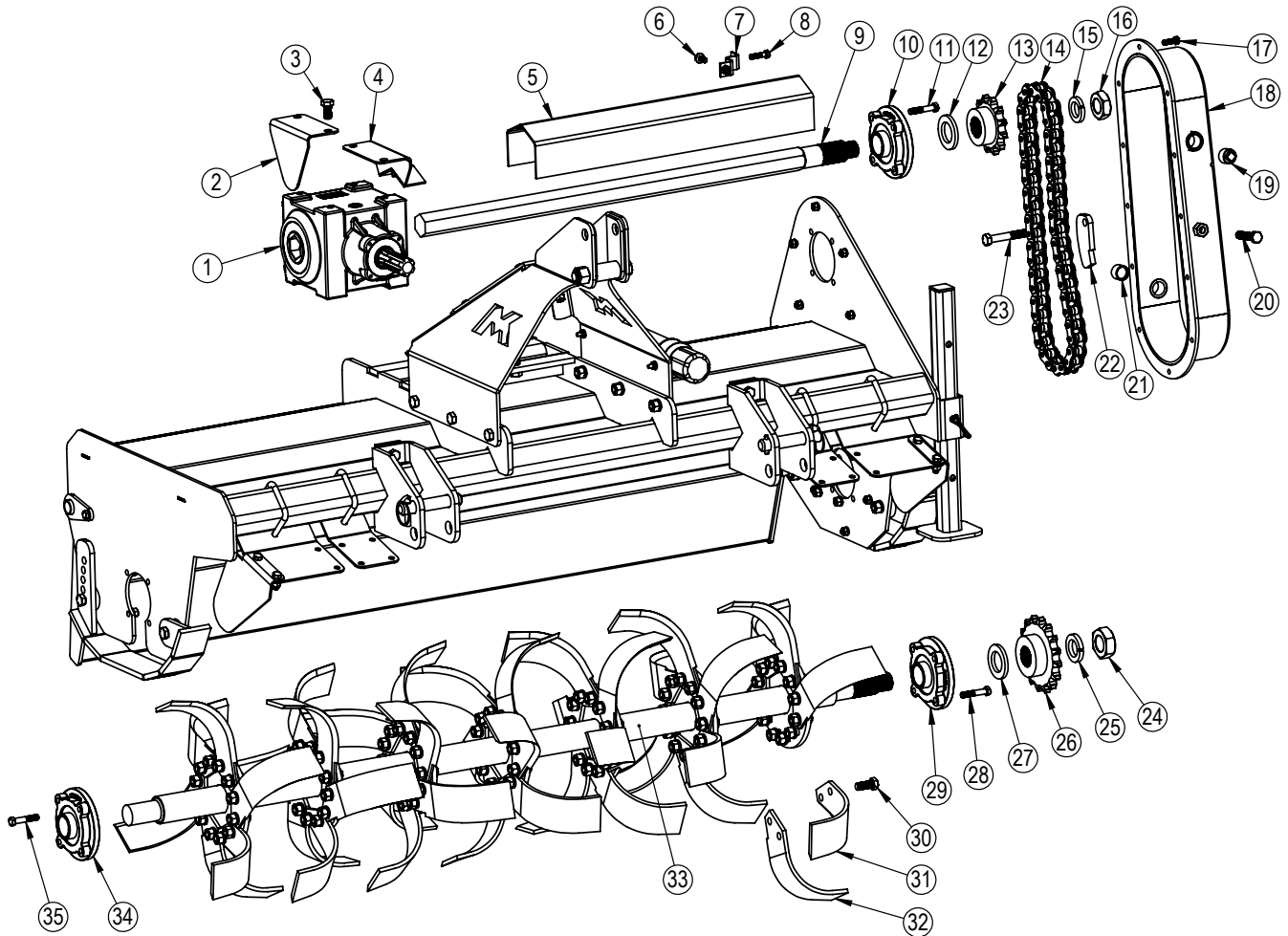


Following these guidelines will reduce the chances of damage to the equipment.

- Use a sharp hacksaw to cut the PTO tube
- Use a fine file to remove any sharp edges and burrs from sawing
- Clean off all dirt and filings from tube , carefully test for smooth fit.
- Apply a light coat of grease to the outside of the small tube
- Reinstall the shields
- Install on equipment and recheck

These procedures need to be done before first putting into operation and when attaching to a different tractor

48-60-72 Tiller Parts

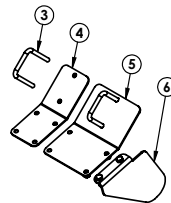
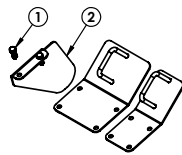


Item #	Part #	Description	48 Qty	60 Qty	72 Qty
1	53789	Gear Box	1	1	1
2	35422	Drive Shaft End Cover	1	1	1
3	xzhcs5010nc	Bolt 1/2 x 1 c/w lw	8	8	8
4	35376	Shield Mount	1	1	1
5	35629	48" Drive Shield	1		
	35666	60" Drive Shield		1	
	35421	72" Drive Shield			1
6	xzhfss3107nc5	Hex serrated flange screw 5/16 x 3/4	2	2	2
7	35377	Shield Clip	1	1	1
8	xzhcs3112nc5	Bolt 5/16 x 1 1/4 c/w lw,n	1	1	1
9	35628	48" Drive Shaft	1		
	35665	60" Drive Shaft		1	
	35425	72" Drive Shaft			1
10	53792	Bearing	1	1	1
11	xzhcs3720nc	Bolt 3/8 x 2 c/w lw,n	4	4	4
12	35655	Washer	1	1	1
13	35477	Drive Sprocket	1	1	1

48-60-72 Tiller Parts

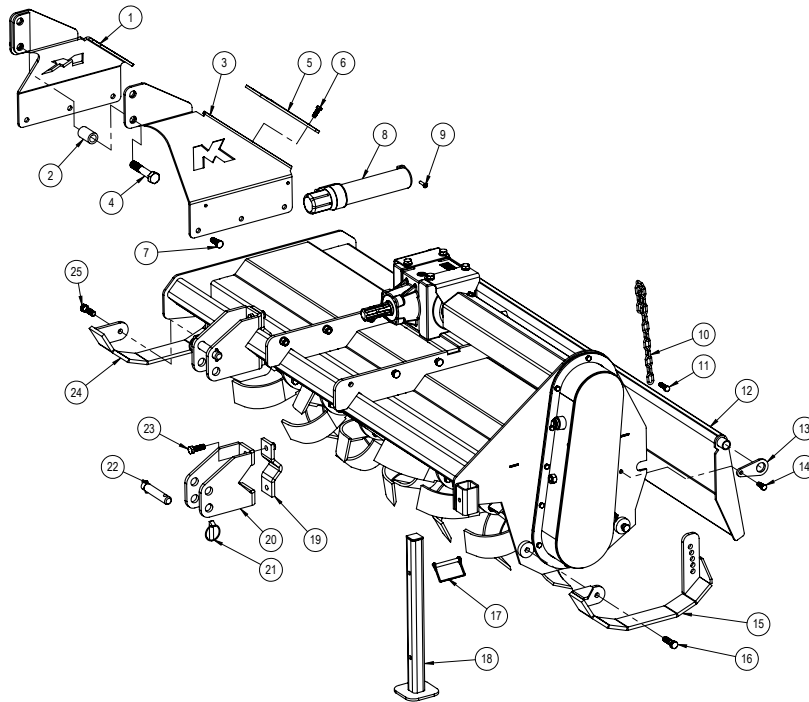
Item #	Part #	Description	48 Qty	60 Qty	72 Qty
14	35426	Chain	1	1	1
15	xzlw125	1"1/4 Lockwasher	1	1	1
16	xz125jmnf	1/4 -12 Fine thread jam nut	1	1	1
17	xzhcs3110nc5	Bolt 5/16 x 1 c/w lw,n	11	11	11
18	35373	Chain Guard	1	1	1
19	246-102	3/4 Magnetic Pipe Plug	1	1	1
20	xzhcs5025ncft	Bolt 1/2 x 2 1/2 full thread c/w n	1	1	1
21	246-102	3/4 Magnetic Pipe Plug	1	1	1
22	35420	Chain Tightener Arm	1	1	1
23	xzhcs5030nc	Bolt 1/2 x 3 c/w ln	1	1	1
24	xz125jmnf	1/4 -12 Fine thread jam nut	1	1	1
25	xzlw125	1"1/4 Lockwasher	1	1	1
26	35478	Rotor sprocket	1	1	1
27	35655	Washer	1	1	1
28	xzhcs3720nc	Bolt 3/8 x 2 c/w Bass washer lw,n	4	4	4
29	53792	Bearing	1	1	1
30	xzhcs5012nc	Bolt 1/2 x 1 1/4 c/w lw,n	72	84	108
31	53790	Tiller tine RH	18	21	27
32	53791	Tiller tine LH	18	21	27
33	35634	48" Rotor Shaft	1		
	35668	60" Rotor Shaft		1	
	35461	72" Rotor Shaft			1
34	53792	Bearing	1	1	1
35	xzhcs3720nc	Bolt 3/8 x 2 c/w lw,n	4	4	4

48-60-72 Tiller Front Guard Parts



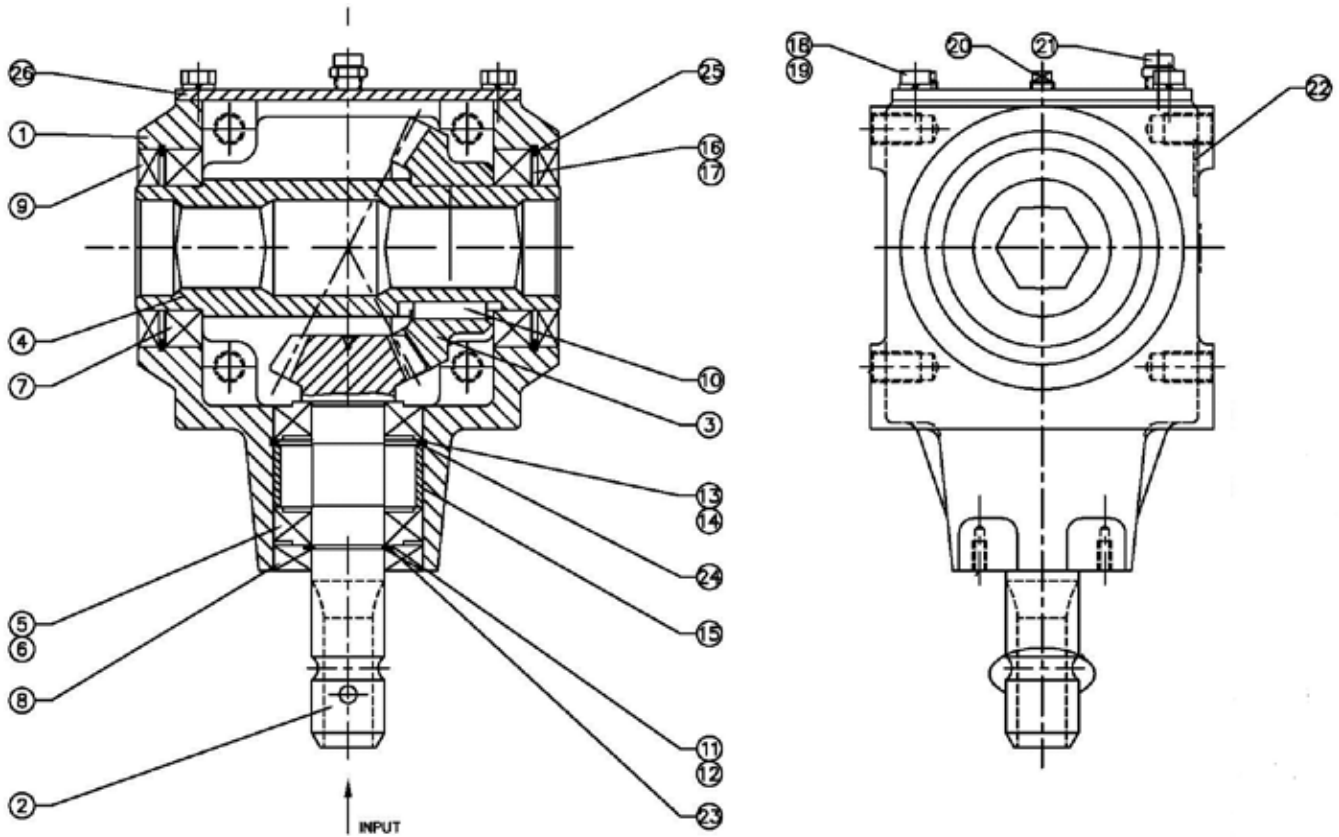
Item #	Part #	Description	48 Qty	60 Qty	72 Qty
1	xzhcs3710nc5	Bolt 3/8 x 1 c/w lw, n	4	4	4
2	36057	Guard Right	1	1	1
3	xzub372535	3/8 x 2 1/2 x 3 1/2 U Bolt	4	4	6
4	36054	Guard	4	2	2
5	36055	60" Guard		2	
	36056	72" Guard			2
6	36058	Guard Left	1	1	1

48-60-72 Tiller Parts



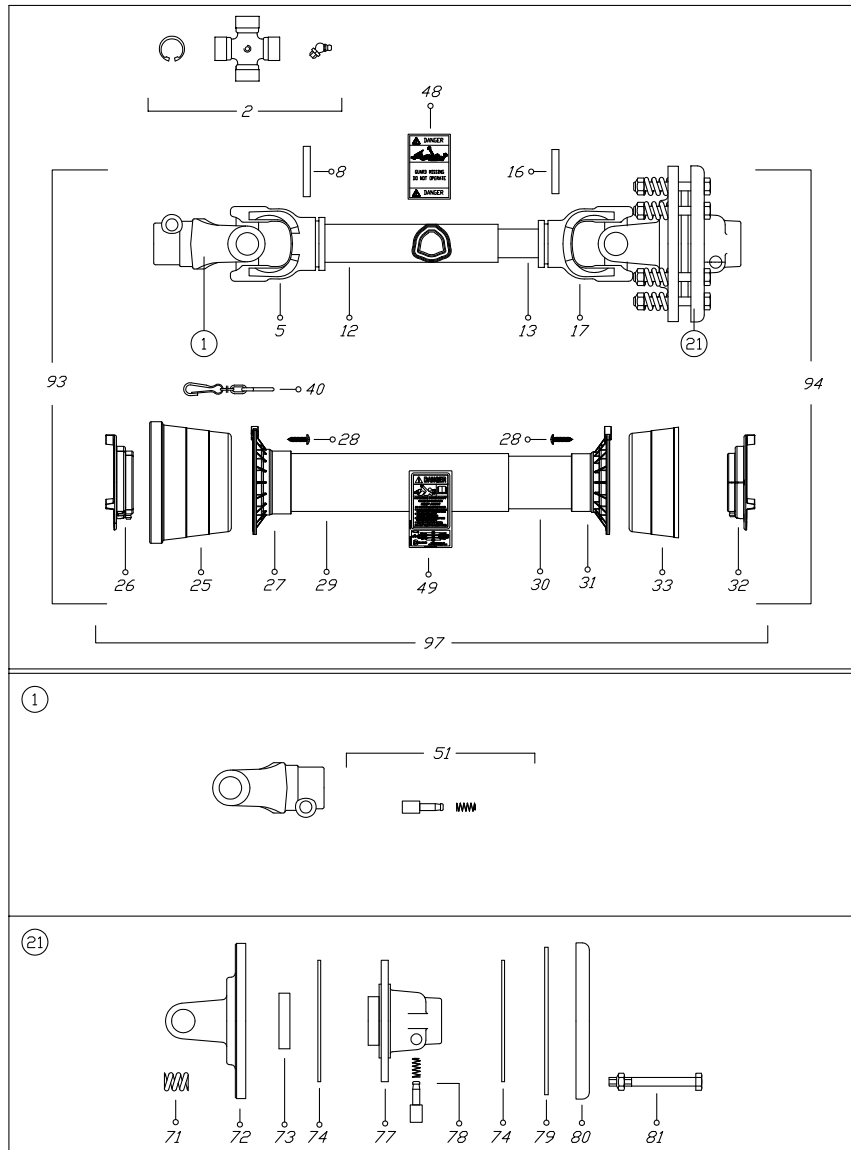
Item #	Part #	Description	48 Qty	60 Qty	72 Qty
1	53786	Right a frame	1	1	1
2	30162	Top link bushing	1	1	1
3	53787	Left a frame	1	1	1
4	xzhcs7540nc	Bolt 3/4 x 4 c/w ln	1	1	1
5	35393	A frame tie	1	1	1
6	xzhcs3710nc5	Bolt 3/8 x 1 c/w lw, n	4	4	4
7	xzhcs5012nc	Bolt 1/2 x 1 1/4 c/w lw, n	6	6	6
8	52649	Manual tube	1	1	1
9	knp385-209	Pan head screw 1/4 x 1 c/w fn	2	2	2
10	35430	Leveling door chain	1	1	1
11	xzhcs3712nc5	Bolt 3/8 x 1 1/4 c/w lw, n	1	1	1
12	35654	48" Leveling door	1		
	35664	60" Leveling door		1	
	35372	72" Leveling door			1
13	35418	Leveling door retainer	2	2	2
14	xzhcs3710nc5	Bolt 3/8 x 1 c/w lw, n	2	2	2
15	35644	Left skid shoe	1	1	1
16	xzhcs5017nc5	Bolt 1/2 x 1 3/4 c/w lw, n	2	2	2
17	52705	3/8 x 2 1/2 pto pin	1	1	1
18	35378	Tiller stand	1	1	1
19	35652	Hitch clamp	2	2	2
20	35638	Lower hitch	2	2	2
21	52656	7/16 Lynch Pins	2	2	2
22	52658	Hitch Pin Cat 1	2	2	2
23	xzhcs5015nc5	Bolt 1/2 x 1 1/2 c/w lw, n	4	4	4
24	35645	Right skid shoe	1	1	1
25	xzhcs5017nc5	Bolt 1/2 x 1 3/4 c/w lw, n	2	2	2

Gear Box Parts



Item #	Part #	Description	Qty.	Item #	Part #	Description	Qty.
1	010228	Housing, RTD - 15	1	14	090227	Shim, input 0.15mm	1-A/R
2	030473	Pinion shaft, 12T	1	15	090228	Spacer	1
3	030474	Gear, 23T	1	16	090229	Shim, output 0.1mm	2-A/R
4	040352	Shaft, 1.52" Hex bore	1	17	090230	Shim, output 0.15mm	2-A/R
5	050170	Bearing, cup	2	18	110000	Screw, 3/8- 16	4
6	050172	Bearing, cone	2	19	130002	Lockwasher, 3/8"	4
7	050224	Bearing, ball	2	20	140010	Plug, pipe square head	2
8	060146	Seal, input	1	21	140039	Plug, press relief	1
9	060197	Seal, output	2	22	190156	I.D. tag	1
10	080053	Key	1	23	200142	Retaining ring, 35mm	1
11	090224	Shim, input 0.1mm	1-A/R	24	200146	Retaining ring, 72mm	1
12	090225	Shim, input 0.15mm	1-A/R	25	200147	Retaining ring, 95mm	2
13	090226	Shim, input 0.1mm	1-A/R	26	240287	Inspection cover	1

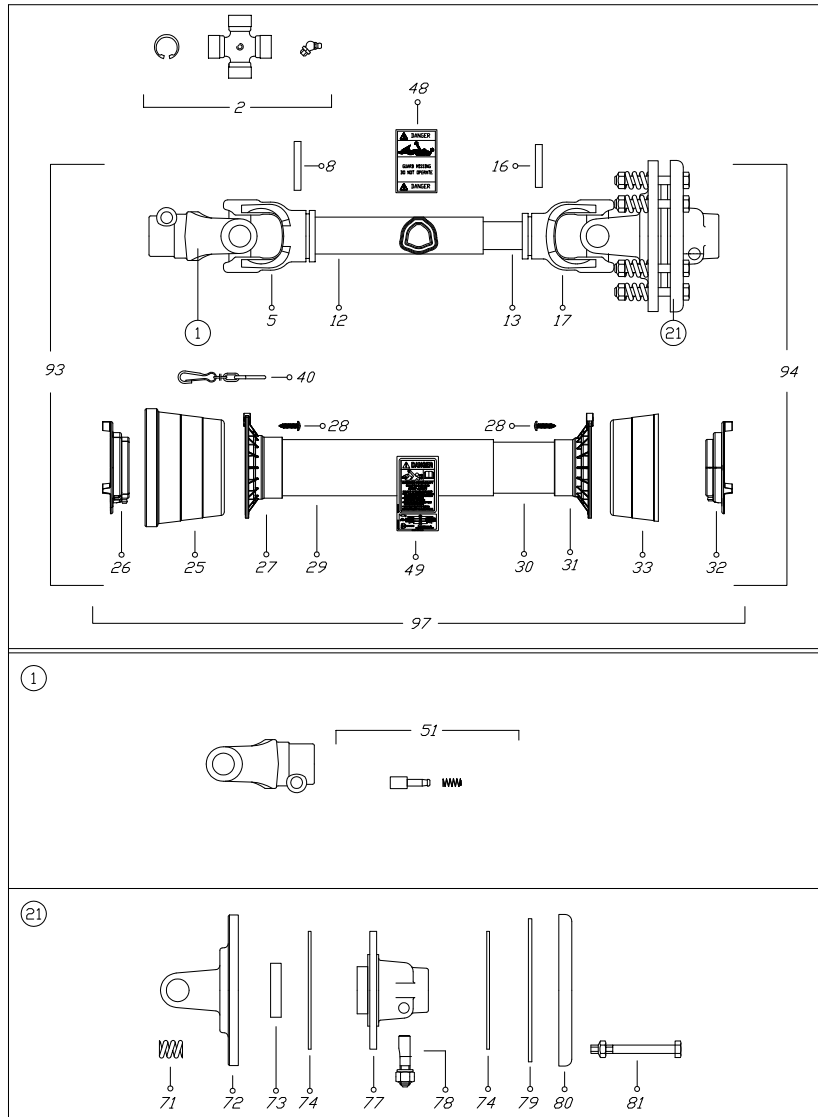
48" PTO Parts



Item #	Part #	Description	Qty.
1	0800403C	YOKE	1
2	08204	CROSS JOURNAL ASS.	2
5	08004021	OUTER TUBE YOKE	1
8	098700860	FLEXIBLE PIN	1
12	09881433100	CM. 100 CARDAN TUBE(*)	1
13	09881364100	CM. 100 CARDAN TUBE(*)	1
16	098700855	FLEXIBLE PIN	1
17	08004011	INNER TUBE YOKE	1
21	086104	TORQUE LIMT. LF1/4	1
25	021904C001	CONE SHIELD BELL 03-04	1
26	025504C001	OUTER BEARING 03-04	1
27	025404C001	OUTER BASE CONE 03-04	1
28	0998052242	SCREW	6
29	0988966B4066	OUTER SAFETY TUBE	1
30	0988961B4066	INNER SAFETY TUBE	1
31	025404C002	INNER BASE CONE 03-04	1
32	025504C002	INNER BEARING 03-04	1

Item #	Part #	Description	Qty.
40	0252000001	CHAIN	2
48	09872006	LABEL DANGER OUTER TUBE	1
49	09872010	EXTERNAL SHIELD LABEL	1
51	0986014047	COMPLTE PUSH BUTTON	1
71	09845236035	SPRING (D.6)	8
72	086910104	FLANGE YOKE 04	1
73	0981554125	BUSH	1
74	09833140	LINING	2
77	0869107A60	HUB	1
78	0986014075	COMPLTE PUSH BUTTON	1
79	0869119	INNER PLATE	1
80	0869112	PRESSURE PLATE	1
81	099510085B	SCREW AND NUT	8
93	B4066US2	OUTER HALF SHAFT	1
94	B4066US1243	INNER HALF SHAFT	1
97	083US04066	SAFETY GUARD	1

60"- 72" PTO Parts



Item #	Part #	Description	Qty.
1	0800403C	YOKE	1
2	08205	CROSS JOURNAL ASS.	2
5	08005021	OUTER TUBE YOKE	1
8	098701075	FLEXIBLE PIN	1
12	09881523100	CM. 100 CARDAN TUBE(*)	1
13	09881454100	CM. 100 CARDAN TUBE(*)	1
16	0987001065	FLEXIBLE PIN	1
17	08005011	INNER TUBE YOKE	1
21	086205	TORQUE LIMT. LF2/5	1
25	021906C001	CONE SHIELD BELL 05-06	1
26	025505C001	OUTER BEARING 05	1
27	025406C001	OUTER BASE CONE 05-06	1
28	0998052242	SCREW	6
29	0988981NB5066	OUTER SAFETY TUBE	1
30	0988975NB5066	INNER SAFETY TUBE	1
31	025406C002	INNER BASE CONE 05-06	1
32	025505C002	INNER BEARING 05	1
33	021905C001C	CONE SHIELD BELL 05-06	

Item #	Part #	Description	Qty.
40	0252000001	CHAIN	2
48	09872006	LABEL DANGER OUTER TUBE	1
49	09872003	EXTERNAL SHIELD LABEL	1
51	0986014047	COMPLTE PUSH BUTTON	1
71	09845236035	SPRING	8
72	086920105	FLANGE YOKE	1
73	0981554125	BUSH	1
74	09833160	LINING	2
77	0869207P60	HUB	1
78	0408000029	TAPER PIN	1
79	0869219	INNER PLATE	1
80	0869212	PRESSURE PLATE	1
81	099510085B	SCREW AND NUT	8
93	B5N066US2	OUTER HALF SHAFT	1
94	B5N066US1255	INNER HALF SHAFT	1
97	083US05066	SAFETY GUARD	1

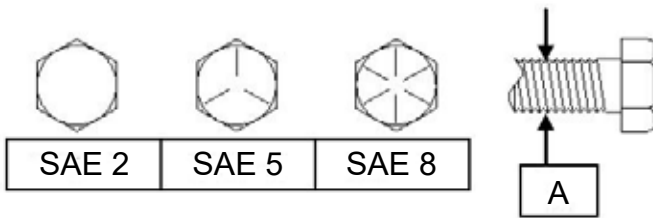
Bolt Torque

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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