



ROTARY TILLER "C" SERIES

Operation, Service & Parts Manual



Carefully read this manual
before using the machine

June 2006

No part of this manual shall be reproduced, copied or disseminated by any means, without Gearmore's prior authorization in writing.

Gearmore reserves the right to make any necessary changes without giving prior notice, in order to optimize the quality and safety features and does not commit itself to updating this manual every time a change is made.

This booklet provides a thorough and accurate description of the instruction and maintenance activities to be carried out on the tiller you purchased. We congratulate you on your choice and urge you to thoroughly familiarize yourself with and follow the instructions contained in this manual. This will assure you a long, safe and trouble free working life for your tiller.

Gearmore shall not assume any responsibility should problems arise as a result of lack of compliance with the instructions and/or operator's negligence.

The manual is divided in chapters and paragraphs and the pages are numbered, thus offering accurate and precise information.

The requested information can be easily found by searching the key words or referring to the index.

Date of Purchase: _____

Model Number: _____

Serial Number _____

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GENERAL INFORMATION

GENERAL INFORMATION

APPLICATION

The C Series Rotary Tillers are designed to till soil for seedbed or planting preparation.

The C Series Tillers are adapted for tractors with 540 rpm PTO speed and Category 1 3-point hitch tractors up to 50 HP. These tillers are also Quick Hitch adaptable (by means of Quick Hitch Optional Kit).

SYMBOLS

This booklet contains three "safety pictograms" which highlight the relevant danger levels or important information:



It draws the operator's attention to special situations which may jeopardize people's safety.



It draws the attention to situations which unfavorably affect the machine efficiency, but not people's safety.

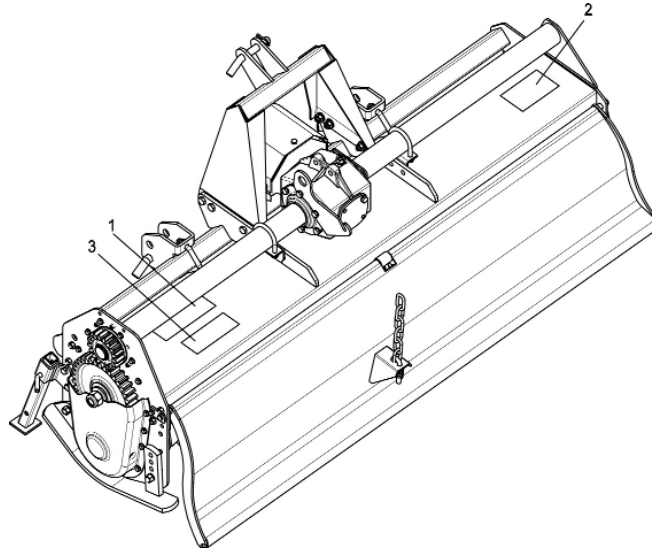


It is used for general information, when people's safety or the efficiency of the parts are not at risk.

SAFETY LABELS

SAFETY LABELS

The safety labels and information on the machine (labels 1, 2 and 3), must be complied with. Failure to comply with these warnings may result in severe injuries or even death. Make sure that the labels are always present and legible; should this not be the case, contact your nearest Gearmore dealer to request replacements



1

DANGER

1. MAKE SURE DRIVELINES ARE OF THE CORRECT LENGTH AND PROPERLY CONNECTED. DRIVELINE SEPARATION AND/OR PTO STUB SHAFT FAILURE CAN CAUSE INJURY OR DEATH. (See Operator's Manual for procedure)

2. MAKE SURE THAT DRIVELINE SHIELDS ARE INSTALLED CORRECTLY AND TURN FREELY TO AVOID INJURY OR DEATH FROM ENTANGLEMENT

3. MAKE SURE THAT DRIVELINE IS INSTALLED CORRECTLY ON TRACTOR PTO SHAFT. MOVE YOKE BACK AND FORTH UNTIL LOCKING COLLAR CLICKS FORWARD AND LOCKS YOKE IN PLACE.

4. 540 PTO RPM UNLESS SPECIFICALLY MARKED OTHERWISE.

3

WARNING

SHIELDS AND DEFLECTORS MAINTAINED IN BAD CONDITION MAY CAUSE INJURY OR DEATH FROM ENTANGLEMENT WITH ROTATING PARTS, BEING HIT BY OBJECTS THROWN WITH GREAT FORCE BY BLADES, OR BY BLADE CONTACT.

- Always replace Guards which have been removed for maintenance. Never operate with guard missing or broken.
- Chain Guards, Gearbox, Drivelines Shields, eventual Rubber-fabric Deflectors, and solid band enclosures are subject to wear and lost or broken parts must be replaced or repaired as soon as damage is found.
- Safety shielding must be installed and in good condition to avoid the possibility of thrown objects when the machine is operated in any area where thrown objects could cause injury.

2

DANGER

FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.

1. READ OPERATOR'S MANUAL CAREFULLY AND PAY ATTENTION TO SAFETY DECALS FOR TRACTOR AND TILLER THOROUGHLY TO AVOID MISUSE, ABUSE, AND ACCIDENTS. PRACTICE BEFORE OPERATING.
2. OPERATE ONLY WITH ROPS AND FASTEN SEAT BELT TO AVOID INJURY AND POSSIBLE CRUSHING DEATH FROM OVERTURN. ALLOW NO RIDERS ON TRACTOR OR TILLER. FALLING OFF CAN CAUSE SERIOUS INJURY OR DEATH BY BEING RUN OVER BY TRACTOR OR TILLER OR BY BEING CUT BY THE ROTATING TILLER BLADES. ALLOW NO CHILDREN ON OR NEAR TILLER OR TRACTOR.
3. TO AVOID INJURY FROM FALLING OBJECTS WEAR HARD HAT, SAFETY GLASSES AND SHOES.
4. BLOK UP OR SUPPORT MACHINE SEVERELY BEFORE PUTTING HANDS OR FEET UNDER, OR WORKING UNDERNEATH LIFTED PARTS TO AVOID CRUSHING INJURY OR EVEN DEATH FROM SUDDEN, INADVERTENT DROPPING. MAKING SURE AREA IS CLEAR BEFORE LOWERING.
5. BEFORE TRANSPORTING, PUT LIFT LEVER IN LIFT (DETENT) POSITION AND FOLLOW TRAFFIC CODES. SLOW DOWN AT NIGHT, IN TURNS, & ON HILLSIDES.
6. MAKE SURE THAT SMV SIGN, WARNING LIGHTS, AND REFLECTORS ARE CLEARLY VISIBLE.
7. NEVER OPERATE WITH TILLER RAISED OF GROUND TO REDUCE POSSIBILITY OF INJURY FROM OBJECTS THROWN UNDER TILLER STRUCTURE.
8. BEFORE DISMOUNTING, SECURE TILLER IN TRANSPORT POSITION OR LOWER TO GROUND. STOP PTO, PUT TRACTOR IN PARK OR SET BRAKE, STOP ENGINE, AND REMOVE KEY. NEVER MOUNT OR DISMOUNT MOVING VEHICLE TO PREVENT POSSIBLE CRUSHING INJURY OR DEATH.

5. TRANSPORT SAFELY.
6. USE SMV, LIGHTS, & REFLECTORS.
7. DO NOT OPERATE WITH TILLER RAISED.
8. MOUNTING & DISMOUNTING

TECHNICAL DATA

TECHNICAL DATA

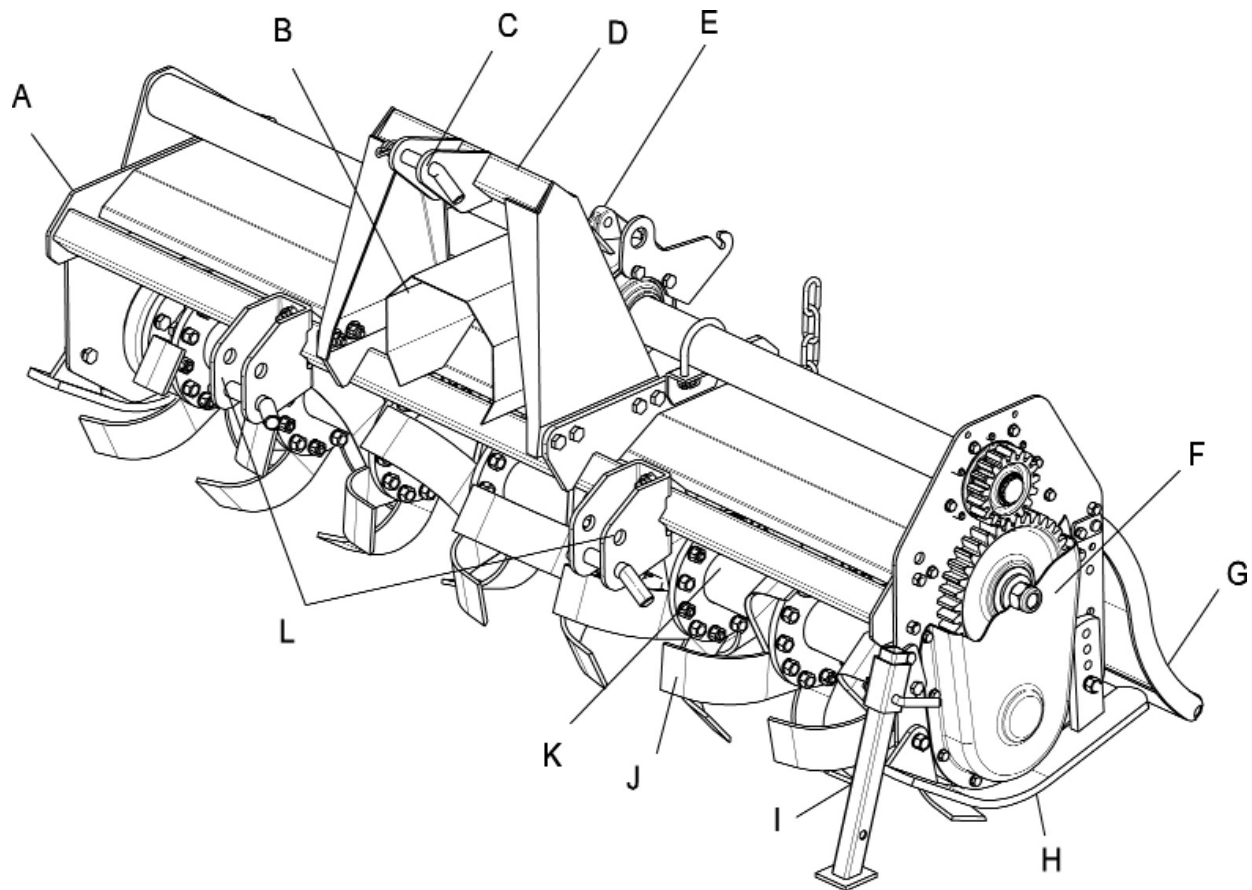
Model	Tilling Width		HP	Weight (Approx.)		Working Depth (Max)		Side Drive		Blades (Qty)	Blades	
	cm	Inches		kg	lbs	cm	Inches	Chain	Gear		Blades/ /flange	Shape
C	105	41	30 - 50	220	485	18	7	*		30	6	Curved
	125	49	30 - 50	230	507	18	7	*		36	6	Curved
	145	57	30 - 50	246	542	18	7	*		42	6	Curved
	165	65	30 - 50	266	586	18	7	*		48	6	Curved
	185	73	30 - 50	290	639	18	7	*		54	6	Curved



When asking for information or technical service, always specify the machine type and width.

MAIN PARTS TERMINOLOGY

MAIN PARTS TERMINOLOGY



- | | | | |
|----|-------------------|----|----------------------|
| A) | Main Frame | G) | Rear Board |
| B) | PTO Guard | H) | Skid |
| C) | Top Link Coupling | I) | Parking Stand |
| D) | Third Point Mast | J) | Tines |
| E) | Gearbox | K) | Rotor |
| F) | Transmission Case | L) | Lower Hitch Brackets |

INFORMATION

IDENTIFICATION PLATE

An identification plate is placed on each tiller and is structured as follows:

Serial number (sample):



RECOMMENDED USE

The tillers described in this instruction and maintenance manual, have been designed explicitly to till the land. Any other use jeopardizes the operator's safety and the machine integrity.

INAPPROPRIATE USE

The tillers shall not be used as follows:

- Connected to vehicles which do not have a suitable power or weight.
- Without being properly installed by securing the hitch brackets to all three points of the tractor lift unit.
- Tilling of extremely stony or unsuitable ground.
- Raising or lifting of the equipment when the power take off is engaged.
- In close proximity to person/s when power is engaged.
- Do not stand or step on the equipment when it is being operated or transported.
- Do not operate the machinery while wearing unsuitable (loose fitting) clothing.

TORQUE SPECIFICATIONS

For correct hardware tightening on the tiller, we suggest the use of suitable torque wrench and the applicable torque as listed in the table below:

M-THREADED SCREW/BOLTS

Bolt grade

Thread	8.8		10.9	
	Nm	Lb-ft	Nm	Lb-ft
M6	11	8.5	17	12
M8	28	20	40	30
M10	55	40	80	60
M12	95	70	140	105
M14	150	110	225	165
M16	240	175	305	225
M18	330	250	475	350

SAFETY

SAFETY IN THE WORKPLACE

Most of the accidents, which occur while the operator is using the machine or the equipment or carrying out maintenance and repair activities, are caused by the non-compliance with the main safety requirements.

Therefore the potential risks must be fully understood and special attention must be paid to the activity which is being executed.

**If potentially dangerous situations are known,
accidents can be prevented!**

USER'S REQUIREMENTS

The equipment user must have the following:

Physical: good sight, co-ordination and capability to execute all instructions in a safe manner.

Mental: the users must understand and follow the prescribed norms, rules and safety measures. They must be careful, pay attention to their own safety and the safety of other people and act properly and in a responsible way.

Training: the users must read and understand this manual, its pictures and charts, and the identification and hazard plates. They must be specialized, trained and qualified on any use and maintenance activities.

WORK CLOTHING

The following clothing and personal protective equipment must be used when working and executing maintenance and repair activities:

- Overalls or any other comfortable outfit; make sure that they are not too loose since they might be caught by moving parts.
- Protective gloves.
- Goggles or mask to protect the eyes and face.
- Safety helmet.
- Safety shoes.



Make sure that the personal protective equipment is properly stored and complies with the laws in force.

GENERAL SAFETY NORMS

The features of the area where work is taking place must always be taken into consideration:

- Do not stand in the working radius of the operating machinery or any other machine accessories when the equipment is running.

PREPARATION

Prepare the work:

- Do not drink alcohol, take drugs, or any other substances which may affect your ability to use the equipment before or when working.
- Make sure that there is sufficient fuel in the tractor to prevent the machine from stopping during work.
- Do not use the equipment under unsafe conditions, e.g. do not make temporary repairs just to start or keep working; do not work at night if the area is not well illuminated.

When working or executing maintenance activities, remember:

- The labels and stickers providing instructions on the use of the equipment or information on dangers must not be removed or hidden, and must be legible.
- Do not remove the safety devices, covers and safety guards, unless maintenance activities are being carried out. If the safety devices must be removed, turn the engine off, remove them correctly and re-install them before turning the tractor on.
- Do not lubricate, clean or adjust moving parts.
- Use the appropriate tools to execute maintenance or adjustment activities on the equipment.
- Do not use damaged or unsuitable tools, e.g. pliers rather than wrenches etc.
- Prior to carrying out activities on hydraulic lines under pressure, or disconnecting their components, make sure that the line is no longer under pressure and that it does not contain any hot fluids.
- Check all the fittings and make sure that they are well connected before supplying pressure to the hydraulic lines.
- Make sure that no tools, clothes or any other materials are left in areas where moving parts are present when the maintenance and repair activities are completed.
- Do not give directions and make signals at the same time during a maneuver. Maneuver directions and signals must be given from one person only.
- Do not unexpectedly call an operator, if not necessary. Do not startle the operator, e.g. by throwing objects.
- Pay attention to people in the vicinity of the work area, especially children!
- Make sure that nobody is standing in the working range of the equipment.
- Do not use the equipment to lift people.
- When the equipment is not needed, turn the engine off, leave the vehicle on a flat surface, with the first gear and the parking brake engaged. Disengage the power take off.
- Do not execute any cleaning, lubrication, repair or adjustments when the engine is running and the equipment is in the raised position.
- Do not work on steep slopes, if the stability of the vehicle can be jeopardized.

Manufacturer shall not assume any responsibilities if these instructions are not strictly followed.

SET-UP

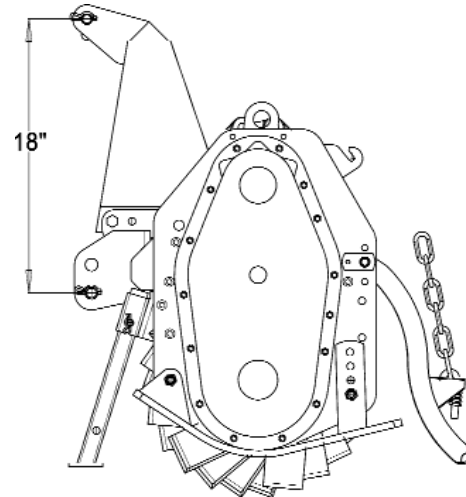
ATTACHMENT TO THE TRACTOR

This tiller may be attached to any tractor equipped with a Cat. 1, 3-point hitch with suitable ball ends; it can also be attached by means of a Cat. 1 Quick Hitch.

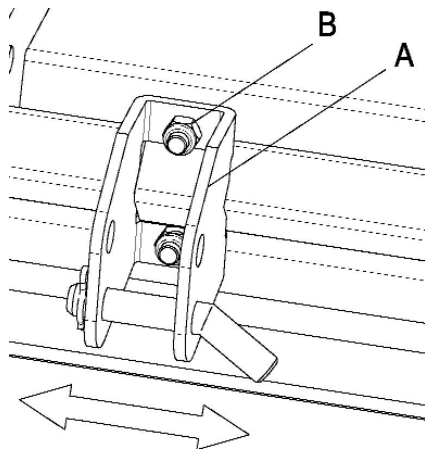
3-POINT CATEGORY 1 HITCH

To connect the tiller to the tractor's 3-point hitch, do the following operations:

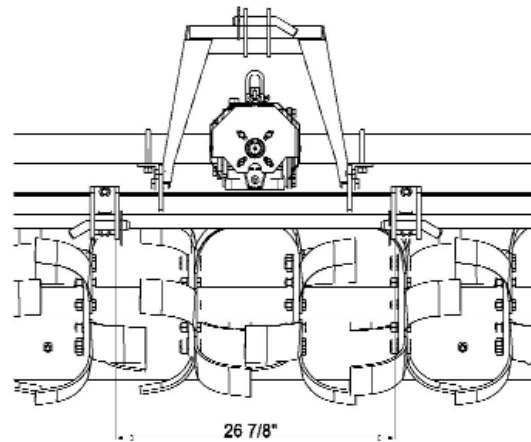
- 1) Install the lower link brackets with the holes facing down as shown in picture 1; this gives you the standard A.S.A.E. vertical dimension of 18" (**picture 1**).
- 2) Release the bolts **B** and adjust the position of the brackets **A** to obtain standard A.S.A.E. horizontal dimension of 26 7/8" (**picture 2**).



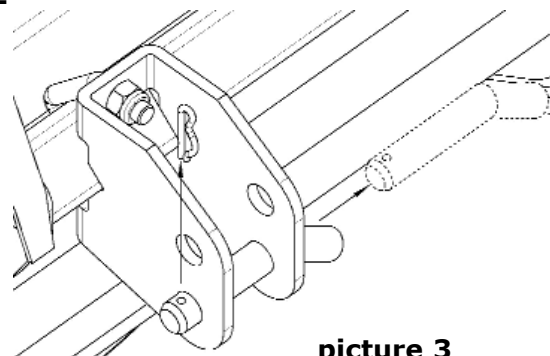
picture 1



picture 2



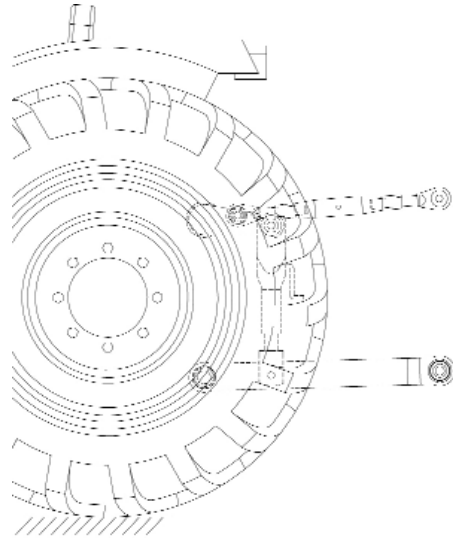
- 3) Remove the hair pins from the hitch pins (**picture 3**).
- 4) Remove the lower hitch pins from the lower hitch brackets (**picture 3**).



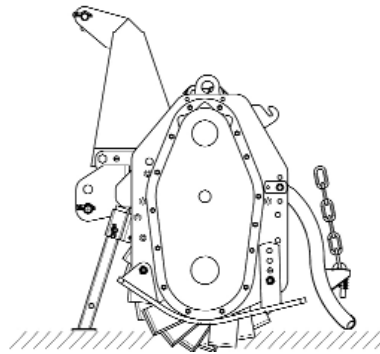
picture 3

SET-UP

- 5) Before attaching the equipment to the tractor, make sure that the ground is smooth and flat and that nobody is standing between the tractor and the tiller; slowly move the tractor towards the tiller by aligning the tractor lifter arms with the lift bracket holes (**picture 4**); turn the engine off and pull the brake.

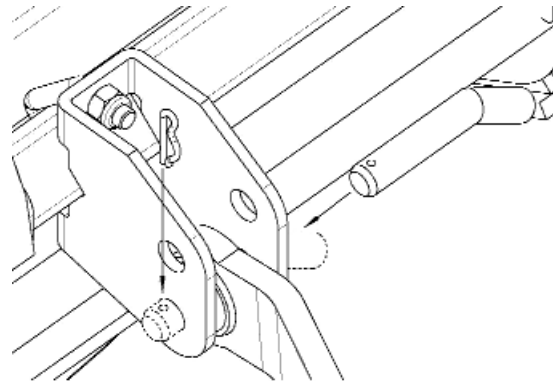


picture 4



- 6) Insert the lower hitch pins through the lower hole of the hitch brackets and ball ends (**picture 5**).

- 7) Secure them by means of the hair pins which were previously removed (**picture 5**).



picture 5

- 8) Connect the tractor top link to the third upper point by removing the pin located between the two plates, inserting the top link and securing it by means of the hair pin. Shift the parking stand in the upper position.
- 9) Adjust the top link so that the upper part of the frame is parallel to the ground. Block all the linking parts by means of the sway chains or arms.
- 10) Make sure that the central unit axis (gearbox assembly) is parallel to the ground, thus minimizing the stresses on the power take off and increasing the working life of the equipment.

Caution

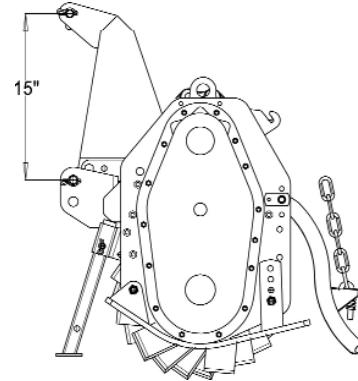
After executing all the above mentioned activities, make sure that all the nuts and bolts are tightened.

SET-UP

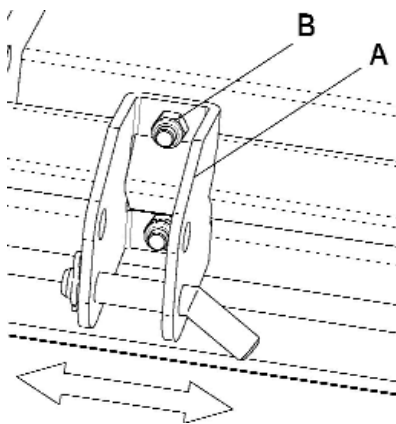
3-POINT CATEGORY 1 QUICK HITCH

The C Series Tillers are Cat. 1 Quick Hitch adaptable. To attach the implement to the tractor it is necessary to order the Quick Hitch Kit composed of 3 bushings. The following operations are needed:

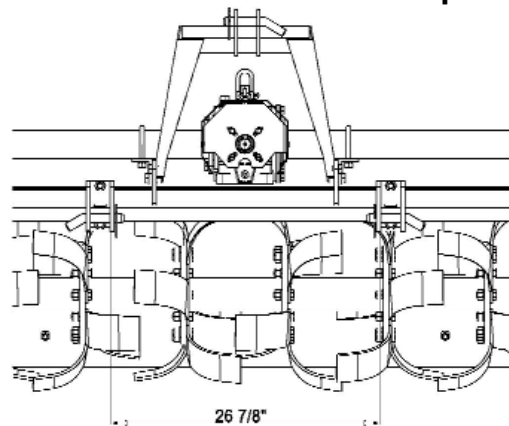
- 1) Place the bottom brackets with holes facing up as shown in **picture 5**. This gives you the standard A.S.A.E. dimension of 15" for Quick Hitch (**picture 6**).
- 2) Release the bolts **B** and adjust the position of the brackets **A** to obtain horizontal displacement of 26 7/8" (**picture 2**).



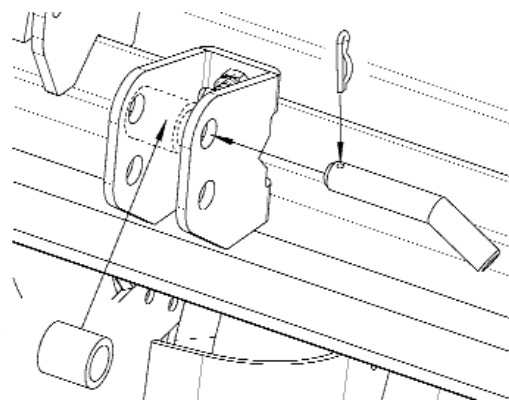
picture 6



picture 2

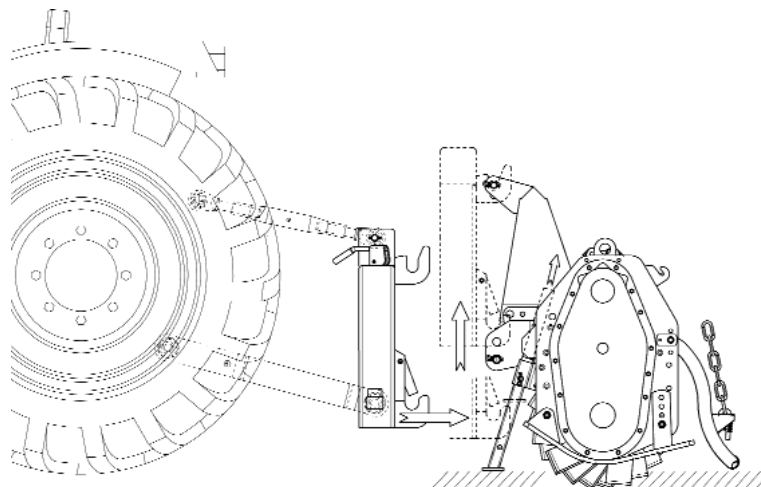


- 3) Insert the lower bushing of the kit in the upper hole of the lower hitches (**picture 7**).
- 4) Insert the lower hitch pins through the hitch bracket and bushing (**picture 7**).
- 5) Secure them by means of the hair pins which were previously removed (**picture 7**).
- 6) Repeat the same operations from 3 to 5 for the upper bracket with the upper bushing.
- 7) Before attaching the equipment to the tractor, make sure that the ground is smooth and flat and that nobody is standing between the tractor and the tiller; slowly move the tractor towards the tiller by aligning the tractor lifter arms with the bracket holes; turn the engine off and pull the brake.



picture 7

SET-UP



- 8) Lift the Quick Hitch until its hooks engage the hitches of the implement.
- 9) Raise the parking stand to the upper position.

PTO SHAFT CONNECTION

Before installing the PTO shaft make sure that the RPM rating and the direction of rotation match those of the tractor. Carefully read the PTO shaft and tractor instructions. Furthermore, accurately read the instructions of the manufacturer of the PTO shaft and of the tractor.

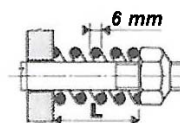
Before starting any activity, make sure that the guards are installed on the power take off of the tractor and PTO shaft. Make sure that they cover the PTO shaft throughout its length.



When fully extended, the plastic pipes must overlap by at least 1/3 of the length of the pipes (LT). When retracted, the minimum acceptable clearance is 2".

SLIP CLUTCH DRIVE SHAFT

This tiller has a drive shaft with a slip clutch, which has been calibrated for a certain overload. To adjust the clutch, tighten or loosen bolts equally. Don't over-tighten or clutch will lock and not slip under stress, which could cause damage during operation. The clutch assembly should get warm (normal temp. 104-122°F) under normal operation. If the clutch gets extremely hot, this is a sign of slippage. If the machine sits for an extended period of time with no usage, the bolts should be loosened and the PTO engaged. This will allow the clutch discs to become free again. After a few seconds, shut-off the tractor and retighten bolts equally. Recheck clutch assembly for temperature after using in tilling application. If it is too hot, the bolts need tightening. If it is too cool, loosen bolts.



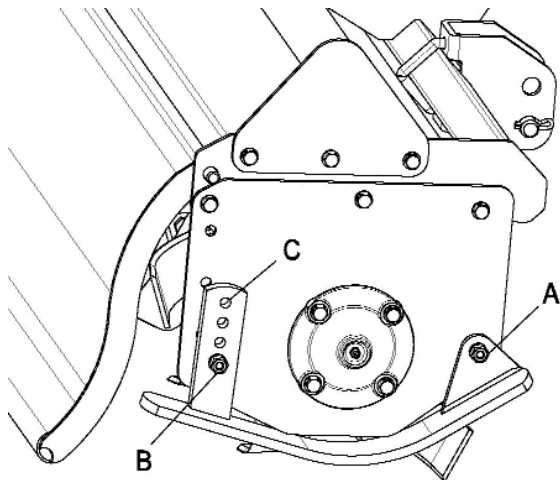
WORKING LENGTH mm (in.)

SPRING HEIGHT	
FF-2	
	Nm
L=29.5 (1.161")	---
L=29.0 (1.142")	610
L=28.5 (1.122")	750
L=28.0 (1.102")	900
L=27.5 (1.083")	1050
L=27.0 (1.063")	---
L=26.5 (1.043")	---

SET-UP

WORKING DEPTH ADJUSTMENT

The working depth of the equipment depends on the position of the lateral skids. If the skids are raised, the working depth increases; if the skids are lowered, the working depth decreases.



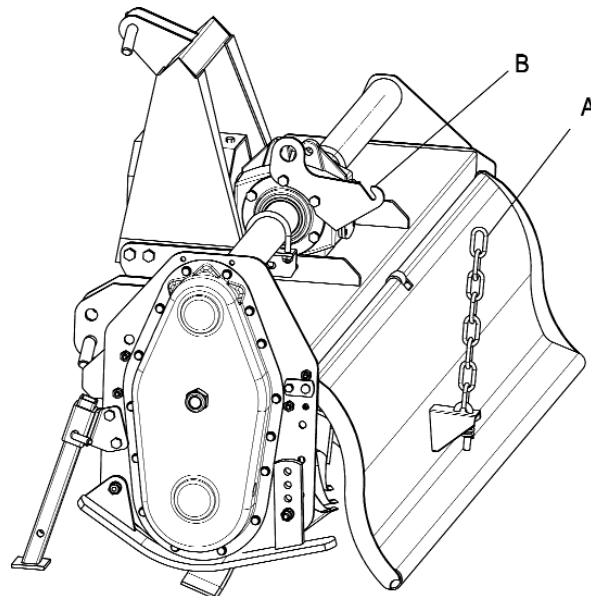
picture 8

To adjust the working depth, loosen nut **A** (**picture 8**), remove nut **B** and adjust the skid height according to the holes **C**. When the adjustment is completed, tighten both the screws to the correct torque, according to the values suggested in **Torque Specifications, page 5**.

IMPORTANT: Make sure that the skids are set at the same height on both sides.

LEVELING BOARD ADJUSTMENT

The rear leveling board can be adjusted in height to better compact the ground and make it flat. The adjustment can be made by releasing chains **A** (**picture 9**) from upper hooks **B** and inserting it back to the desired height.



picture 9

MAINTENANCE



These activities must be carried out with the engine off, the power take off disengaged and the hand brake applied. If needed, lift the equipment and place it on supports, thus preventing any injuries that might be caused by a sudden fall of the equipment.

START UP

After carrying out these adjustments, the equipment is ready for use. When at the working area, do not start the power take off with the tiller in working position in the ground. Be sure to lift it by a few centimeters using the tractor lift. Start the engine, engage the power take off, lower the equipment to its working position and start.

ROAD TRANSPORT

With reference to road transport, follow local traffic regulations.

SHUT DOWN

The following activities are recommended if the tiller will not be used for a long period of time:

- 1 Clean and dry the equipment.
- 2 Inspect the equipment and replace the damaged or worn parts if necessary.
- 3 Tighten all the screws and nuts.

Lubricate and cover the machine with a tarpaulin and store it in a dry place.

MAINTENANCE

Maintenance is crucial for the working life and efficiency of any agricultural equipment. If the equipment is properly maintained and operated, a long working life and operator safety are assured.

The maintenance intervals indicated in this booklet are provided as a mere reference and are related to normal working conditions; changes may occur depending on the type of activities, environmental dust, seasonal factors, etc.



- Before injecting lubricating grease into the grease fittings, clean the fittings to prevent mud, dust, or any other foreign matter from contaminating the grease and reducing the lubrication effect.
- When adding or changing the oil, use the same type of oil to prevent mixing oils with different features.
- All maintenance activities must be carried out with the tiller resting horizontally on the ground.
- After using the equipment for a few hours, make sure that all the bolts (especially tine bolts) are tightened; regularly check all the machine guards.

FIRST CHECK

- After 50 working hours, change the oil in the gearbox and make sure that all the screws and bolts are tightened.

MAINTENANCE

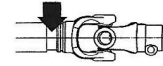
EVERY 8 WORKING HOURS

- Grease the PTO shaft crosses.

20h

EVERY 20 WORKING HOURS

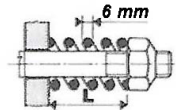
- Grease the PTO shaft inner drive tube.



Inner tube
Tube intérieure

EVERY 50 WORKING HOURS

- Grease the external rotor bearing through the grease zerk **A** (**picture 10**).
- Check the oil level in the case/bevel gear pair by removing gearbox's upper oil plug (**A - picture 11**); oil level should be contained between the 2 nicks of MIN & MAX of the dip stick oil plug (**B - picture 11**). If needed add SAE EP 80W90 oil.
- Check the oil level in the side transmission (**A - picture 12**). If needed add SAE EP 80W90 oil.
- Make sure that all the screws and bolts, especially on the blades, are tightened.
- Check slip-clutch spring tension (1050 Nm).

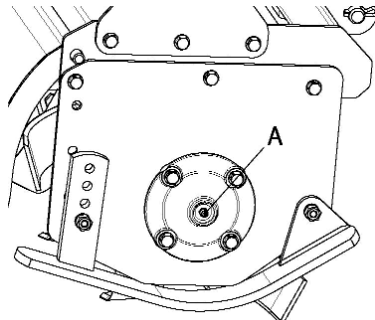


WORKING LENGTH mm (in.)

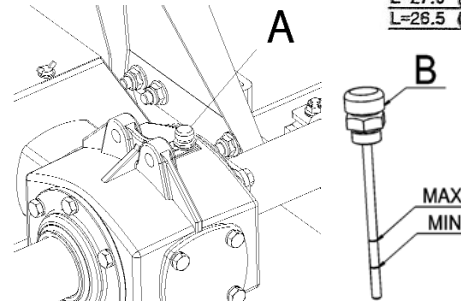
WORKING LENGTH mm (in.)	SPRING HEIGHT FF-2	Nm
L=29.5 (1.161")	---	---
L=29.0 (1.142")	610	---
L=28.5 (1.122")	750	---
L=28.0 (1.102")	900	---
L=27.5 (1.083")	1050	---
L=27.0 (1.063")	---	---
L=26.5 (1.043")	---	---

EVERY 500 WORKING HOURS

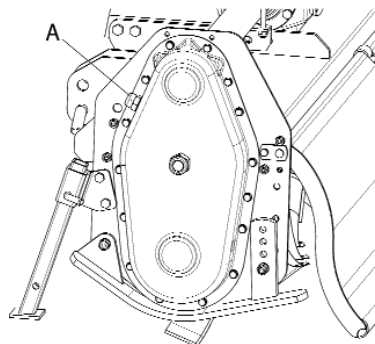
- Change the oil of the case/bevel gear pair, side transmission and rotor support; use SAE EP 80W90 oil. Contact the closest dealer for this maintenance activity.



picture 10



picture 11



picture 12

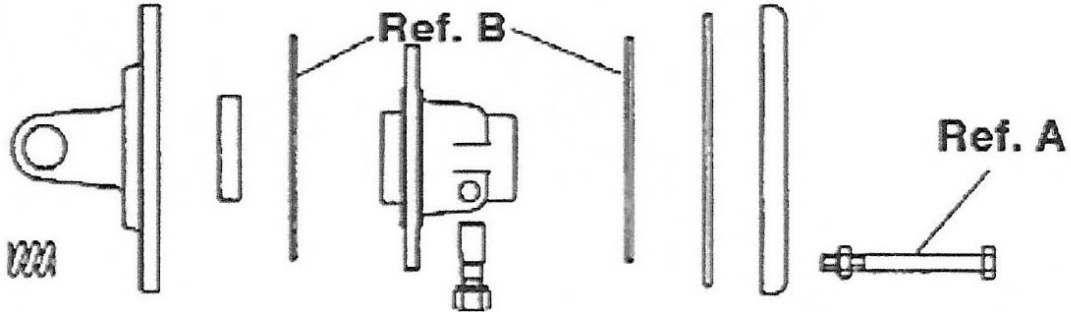
Caution

The old oil must be disposed of in compliance with the local laws where these activities are carried out; do not spill or dispose of waste oil on the ground.

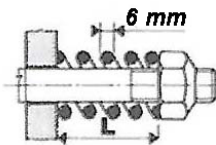
Danger

The maintenance activities must be carried out with the engine off, the power take off disengaged, the parking brake engaged, and the equipment placed on the ground.

REPLACING CLUTCH LININGS



1. Mount clutch assembly in vise.
2. Remove all bolts and nuts (**Ref. A**).
3. Disassemble all components.
4. Check the condition of all parts, friction plates especially.
5. Replace clutch linings (**Ref. B**).
6. Reassemble the components, install spring with their corresponding bolts and nuts.
7. Tighten nuts following an alternating cross pattern until reaching a height of 27.6 mm (1.083").
8. Check that the height is the same for all springs.
9. Reinstall driveline, making sure all shields are in place.



WORKING LENGTH mm (in.)

SPRING HEIGHT FF-2	Nm
L=29.5 (1.161")	---
L=29.0 (1.142")	610
L=28.5 (1.122")	750
L=28.0 (1.102")	900
L=27.5 (1.083")	1050
L=27.0 (1.063")	---
L=26.5 (1.043")	---

SPARE PARTS

BLADES REPLACEMENT

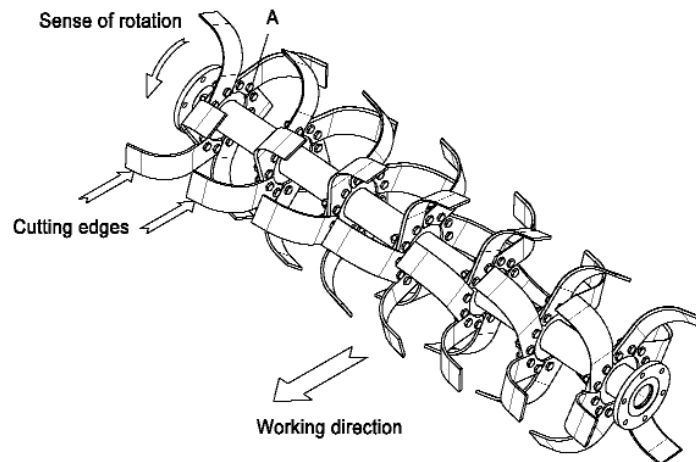
To assure the optimum efficiency of the machine, make sure that the tiller blades are in a good working condition and that their bolts are tightened; replace them if they are broken or bent. The new parts must be installed in the original position.



Before replacing the blades, turn the tractor engine off, pull the parking brake, disengage the power take off, raise the tiller using the tractor lift, and install supports to prevent accidental dropping of the machine.

Pay special attention to the bolts **A** on the blades (**picture 13**): the screw head must be placed on the blade side, with the washer and the nut on the flange side, so that the bolts cannot loosen while the equipment is being used.

When several blades must be replaced, replace one blade at a time, so that the initial helical layout is maintained (**picture 13**).



picture 13

HOW TO ORDER SPARE PARTS

For spare parts requests please refer to our spare parts catalogue.

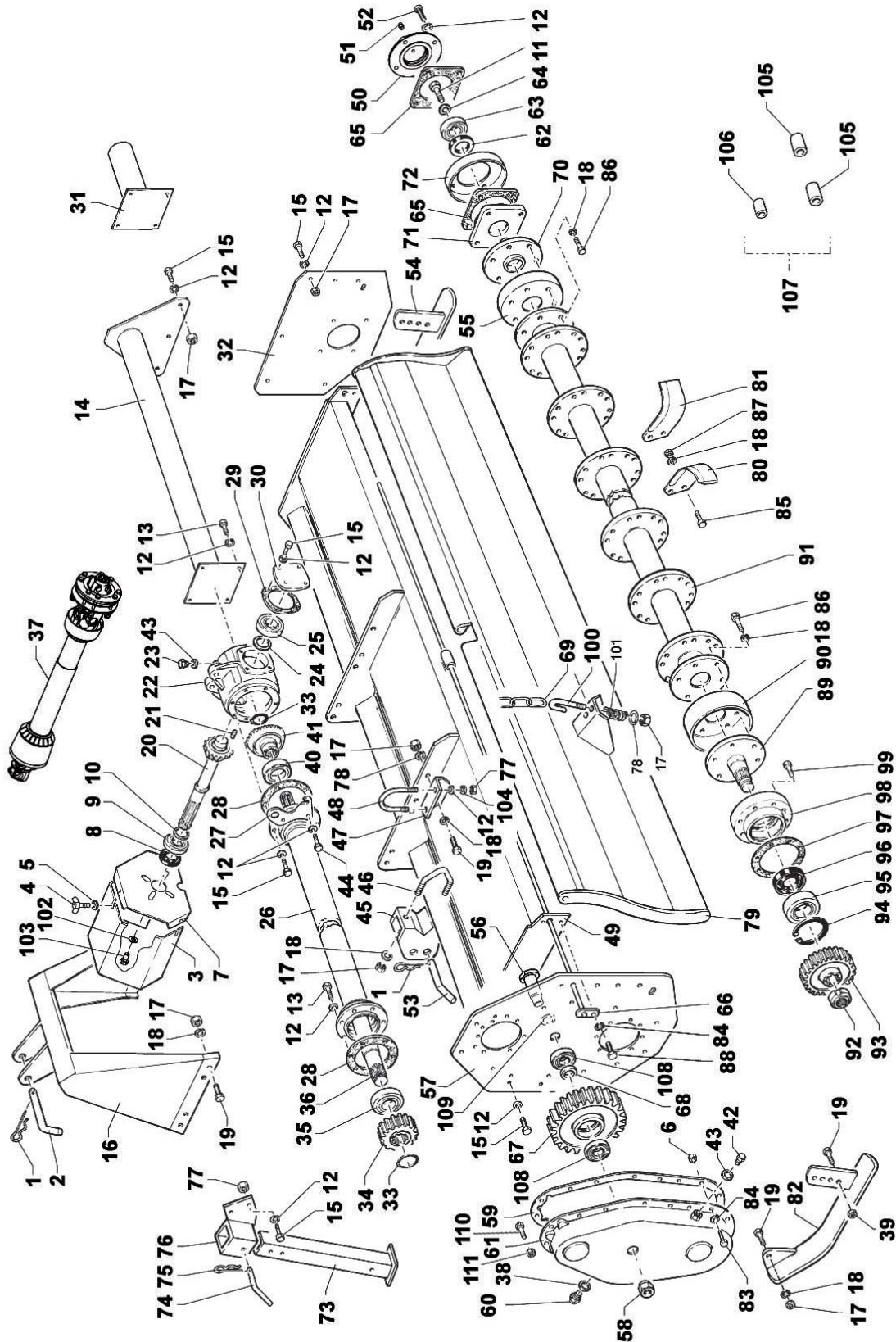
The spare parts can be ordered from the dealer or service center. The following data must always be specified:

- Equipment model and width.
- Part number of the requested component. If the code number is missing, indicate the reference number in which it is shown and the relevant reference.
- Description of the part and requested quantity.
- Requested type of transport. Should this information not be provided, the dealer or service center shall not be responsible for delays caused by circumstances beyond their control. The addressee shall be responsible for any transport charges.

TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
Excessive vibration	Drive shaft damaged	Replace worn drive shaft
	Tines broken off	Replace damaged tines
	Bent rotor shaft	Replace rotor shaft
Rotor shaft does not turn	PTO Clutch slipping	Check slip clutch adjustment
		Replace clutch discs
Tilling deeper on one side	Tractor lower lift arm out of adjustment	Adjust lift arm
	Tiller depth skid not properly adjusted	Adjust skids to level depth
Tiller bouncing	Trying to go too deep on first pass	Raise tiller so tilling 3" deep
	Tractor in too high a gear	Tiller runs smoother in first or second gear
Leaving tire tracks	Tires set out too wide	Set in tractor tires
	Tractor too large	Offset tiller to cover right tire tracks
PTO will not untelescope	Improper lubrication	Separate and grease both halves
	PTO twisted	Replace twisted parts
	Shields damaged	Replace shields

"C" TILLER ASSEMBLY



TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	3	6351004	Split Pin 4 x 80
2	1	4301589	Pin
3	1	4138034	Protection
4	3	33108020	Bolt M8 x 1.25 x 20 UNI 5449
5	3	34118008	Washer
6	15	34100008	Nut M8 UNI 5587
7	1	4138035	Protection Support
8	1	35X72X12	Oil Seal 35 x 72 x 12 PP
9	1	6207	Bearing
10	1	47172	Circlip I72
11	1	30212025	Bolt M12 x 1.75 x 25 UNI 5739
12	41	34121010	Washer
13	10	31510020	Bolt M10 x 1.5 x 20 UNI 5739
14	1	4001590	External Support C125
14	1	4001592	External Support C145
14	1	4001593	External Support C165
14	1	4001594	External Support C185
15	21	31510025	Bolt M10 x 1.5 x 25 UNI 5739
16	1	4001514	Upper 3rd Point
17	23	34100012	Nut M12 UNI 5587
18	As Req'd*	34121012	Washer UNI 1751
19	14	31512035	Bolt M12 x 1.75 x 35 UNI 5739
20	1	4728795	Bevel Pinion Z=13
21	1	3441014	Oil Plug M14 x 1.5
22	1	4658818	Gearbox
23	1	3442014	Plug M14 x 1.5
24	1	4598808	Spacer
25	1	6307	Bearing
26	1	4008788	Shaft Support C105
26	1	4008789	Shaft Support C125
26	1	4008790	Shaft Support C145
26	1	4008791	Shaft Support C165
26	1	4008792	Shaft Support C185
27	1	4148775	Chain Plate
28	2	4788744	Gasket
29	1	4788793	Gasket
30	1	4938843	Cover
31	1	4001577	External Support C105
32	1	4131503	External Side Plate
33	2	6320040	Circlip E40
34	1	4228706	Gear Z=17

TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
35	1	6308	Bearing
36	1	4218939	Shaft C85
36	1	4218835	Shaft C105
36	1	4218837	Shaft C125
36	1	4218839	Shaft C145
36	1	4218840	Shaft C165
36	1	4218841	Shaft C185
37	1	E8201507	AX5 590/847 1025010-1345018 CP SC
38	1	6470118	Washer
39	2	34106012	Stop Nut M12
40	1	6308-2RS	Bearing
41	1	4728794	Ring Bevel Gear Z=19
42	1	3444014	Plug M14 x 1.5
43	2	6420114	Washer
44	2	31510030	Bolt M10 x 1.5 x 30
45	2	4001506	Lower Junction for 3rd Point
46	2	4201513	U Bolt
47	2	4131519	Bracket
48	2	4301520	U Bolt
49	1	4001468	Frame C105
49	1	4001470	Frame C125
49	1	4001472	Frame C145
49	1	4001473	Frame C165
49	1	4001474	Frame C185
50	1	4648026	Cover
51	1	6560010	Grease Nipple M10 x 1.5
52	4	31510035	Bolt M10 x 1.5 x 35
53	2	4301590	Pin
54	1	4001456	Right Skid
55	1	4148030	Cover
56	1	4208774	Idler Gear Pin
57	1	4001448	Gearing Side Plate
58	1	34107024	Nut M24 UNI 7473
59	1	4788745	Gasket
60	1	3442022	Plug M22 x 1.5
61	1	4018702	Cover
62	1	45X62X10	Oil Seal 45 x 62 x 10 PP
63	1	6207	Bearing
64	1	34018012	Washer
65	2	4788219	Gasket
66	1	4001568	Pin C105
66	1	4001570	Pin C125

TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
66	1	4001572	Pin C145
66	1	4001573	Pin C165
66	1	4001574	Pin C185
67	1	4728707	Idler Gear Z=36
68	1	4598935	Idler Gear Spacer
69	1	4674003	Chain MG 13
70	1	4708028	Hub
71	1	4648025	Support
72	1	4148029	Cover
73	1	4001234	Stand Leg
74	1	4236115	Pin
75	1	6351003	Split Pin
76	1	4001682	Support
77	6	34100010	Nut M10 UNI 5587
78	3	34120012	Washer 12 UNI 6592
79	1	4001526	Rear Board C105
79	1	4001528	Rear Board C125
79	1	4001530	Rear Board C145
79	1	4001531	Rear Board C165
79	1	4001532	Rear Board C185
80	As Req'd*	4811401	Left Blade
81	As Req'd*	4811400	Right Blade
82	1	4001457	Left Skid
83	15	31508025	Bolt M8 x 1.25 x25 UNI 5739
84	16	34121008	Washer UNI 1751
85	As Req'd*	31412035	Bolt M12 x 1.25 x 35
86	12	31512030	Bolt M12 x 1.75 x 30 UNI 5739
87	As Req'd*	34101012	Nut M12 UNI 5587
88	1	31508020	Bolt M8 x 1.25 x 20 UNI 5739
89	1	4728922	Hub
90	1	4148040	Cover
91	1	4001493	Rotor C105
91	1	4001495	Rotor C125
91	1	4001497	Rotor C145
91	1	4001498	Rotor C165
91	1	4001499	Rotor C185
92	1	3840035	Self Locking Metal Ring
93	1	4728708	Gear Z=26
94	1	6310100	Circlip
95	1	6309	Bearing
96	1	50X90X10	Oil Seal 50 x 90 x 10

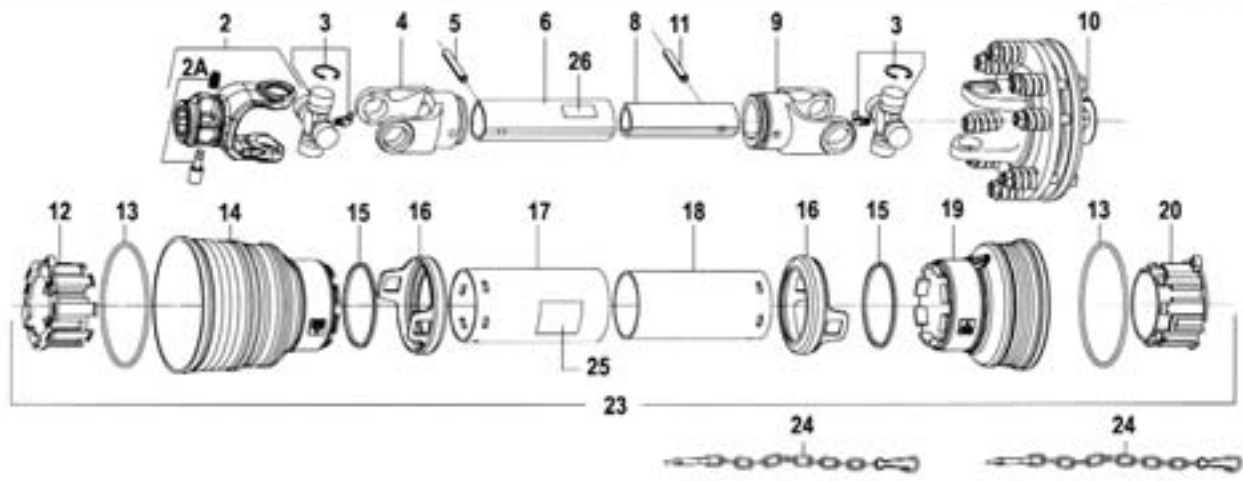
TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
97	1	4788217	Gasket
98	1	4708071	Support
99	6	31712020	Bolt M12 x 1.75 x20 UNI 5931
100	1	4302183	Chain Plate
101	1	4212214	Spring
102	2	34120008	Washer
103	2	31508016	Bolt M8 x 1.25 x 16 UNI 5739
104	4	34120010	Washer UNI 6592
105	2	4531713	Quick Hitch Lower Bushing
106	1	4531714	Quick Hitch Upper Bushing
107	1	8833003	Quick Hitch Kit
108	2	30306	Bearing
109	1	6800030	Seal
110	3	3062208020	Allen Bolt Countersunk M8 x 20 Brg. Cover
111	3	34100008	Nut M8

*TINE CHART

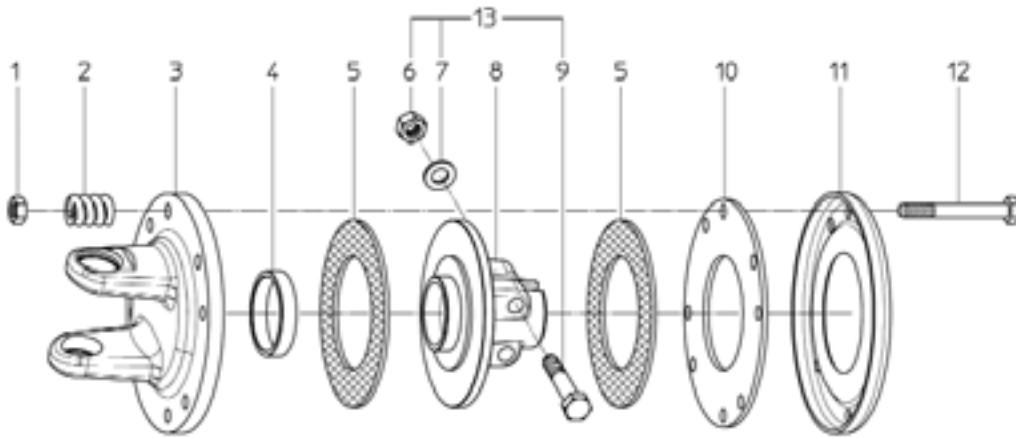
MODEL NO.	NUMBER OF TINES		NUMBER OF BOLTS & NUTS	NUMBER OF WASHERS
	R.H.	L.H.		
C105	15	15	60	60
C125	18	18	72	72
C145	21	21	84	84
C165	24	24	96	96
C185	27	27	108	108

DRIVESHAFT ASSEMBLY



<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
2	1	1025010	Yoke Assembly, Tractor End
2A	1	1581038	Push Pin Kit
3	2	1005020	Cross Assembly
4	1	1705027	Outer Tube Yoke
5	1	6331075	Roll Pin 8 x 75 Outer Tube
6	1	1527044	Outer Tube
8	1	1526044	Inner Tube
9	1	1705029	Inner Tube Yoke
10	1	1345018	Torque Limiter, 2 Friction Discs
11	1	6331065	Roll Pin 8 x 65 Inner Tube
12	1	1785710	Tube Bearing
13	2	1215733	Stiffening Ring
14	1	1785703	Standard Cone
15	2	1215735	Stop Ring
16	2	1885709	Safety Sleeve
17	1	1776034	Outer Tube Shield
18	1	1877034	Inner Tube Shield
19	1	1785702	Short Cone
20	1	1785711	Tube Bearing, Inner Tube
23	1	90SC5034	Complete Protection
24	2	1006065	Anti-rotation Chain
25	1	1140001	Outer Decal
26	1	1140003	Inner Decal

SLIP CLUTCH ASSEMBLY



SLIPPING TORQUE TABLE	
SPRING COMPRESSION HEIGHT SETTING (mm)	SLIPPING TORQUE (N/CM)
29	300
28	450
27	750

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	8	6411010	Screw Nut (For Spring)
2	8	1215012	Spring
3	1	1705006	Flange With Yoke
4	1	1705009	Bushing
5	2	1805010	Friction Disc
6	2	6410112	Screw Nut
7	2	6412112	Spring Washer
8	1	1705005	Hub With Flange
9	2	6141270	Bolt
10	1	1135008	Inner Disc
11	1	1135007	Pressure Disc
12	8	6001085	Bolt (For Spring)
13	1	6761270	Locking Bolt Kit Replacement

LIMITED WARRANTY



GEARMORE, INC., warrants each new Gearmore product to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase to the original purchaser. This warranty shall not apply to implements or parts that have been subject to misuse, negligence, accident, or that have been altered in any way.

Our obligation shall be limited to repairing or replacement of any part, provided that such part is returned within thirty (30) days from date of failure to Gearmore through the dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting or any other expenses, for any other reasons.

Gearmore in no way warrants engines, tires, or other trade accessories, since these items are warranted separately by these respective manufacturers.

Gearmore reserves the right to make improvements in design or changes in specification at any time, without incurring any obligations to owners or units previously sold.

GEARMORE, INC.
13477 Benson Ave.
Chino, CA 91710

Always refer to and heed machine operating warning decals on machine.

The serial number of this product is stored in our computer database, thus submitting a warranty registration card is not required.