



HAMMER KNIFE FLAIL MOWER SHREDDER

**Operation & Service
Manual For Models:
GCF61-3W, GCF69-3W &
GCF79-3W**

May 2007

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Date of Purchase:_____

Model Number:_____

Serial Number:_____

INSTALLATION

BEFORE ATTACHING THE MOWER TO THE TRACTOR

1. Make sure that the mower is suitable for your tractor's horsepower.

<u>MODELS</u>	<u>YOUR TRACTOR'S MAX. H.P.</u>
---------------	-------------------------------------

All

75



CAUTION: Please note that if these limits are exceeded, it will invalidate your warranty.

2. Make sure the lower links and top link on the 3-point hitch arms of your tractor are the correct size (Cat. II), so that they correspond to the size of the hitch on the mower you have purchased.

3. *P.T.O. Installation:*

First, connect the P.T.O. shaft to the tractor. With the shaft in its shortest position, there should be about a 2" clearance between the end of the gearbox shaft and the end of the P.T.O. shaft. Should it be necessary to shorten the P.T.O. shaft, shorten both male and female shafts equally, keeping the protective tube covers 1" shorter than the steel tubes.

Particular attention should be given to carefully removing all burrs and to clean and lubricate the steel tubes and protective covers. There must be sufficient telescopic movement so that the two tubes do not touch the end of the P.T.O. shaft.

It is not important to carefully raise and lower the mower with the tractor hydraulic system, making sure that the P.T.O. shaft does not bottom or disengage the telescopic shaft tubes, otherwise damage may occur.

OPERATION

The *GCF-3W Shredders* can be used in a center, offset or tilt position.

Before starting work, check that the embankment is solid. If the land is unstable, the tractor could roll over, as the weight of the machine is offset to the side.

Having checked the bank for stability, slowly place the head on the ground and set it in the floating position on the tractor distributor. It will then float, following the contour of the land. Then lock off the float position to preserve the machine angle, raise it 4" off the ground, engage the power takeoff and then set the head down on the ground again. At this point re-engage the floating position so that the machine can float while working.

Before starting any work, check the ground for any foreign bodies not involved in the agricultural work; for example, pieces of steel or glass, nylon, steel wires or cables, polluting powders or liquids such as; pesticides or poisons, explosives, flammable substances, etc.

Make certain that no one is loitering within the area and if necessary, send them away before moving the machine.

HYDRAULIC SIDESHIFT

The *GCF-3W Shredder* is fitted with hydraulic side shift therefore, a second double acting external connection is needed on the tractor. With hydraulic side shift fitted, it is possible to side shift the machine to any position within the working range while it is on the move. It is advisable to color code the hoses on the machine and the tractor distributor, so that you can always connect them quickly and correctly. this ensures that the oil will always circulate in the right direction.

ALIGNING SHREDDER

Lower the machine and note if the full width of the roller reaches the ground at the same time. If it does not, adjust the level box on the drop links of the tractor until it does.

Never load the roller with anything but the weight of the machine.

Never turn corners with the roller on the ground. Before turning, lift the unit off the ground slightly.

SAFETY INFORMATION



OPERATIONAL SAFETY:

- ❑ Guards and safety shields are for your protection. **DO NOT** operate equipment unless they are in place.
- ❑ Always operate tractor PTO (power-take-off) at recommended RPM (revolutions per minute).
- ❑ Disengage tractor PTO and shift into neutral before attempting to start engine.
- ❑ Read and observe all safety decals on the tractor and mower.
- ❑ **NEVER** allow anyone within 25' of machine while it is in operation.
- ❑ **DO NOT** stop or start suddenly when going uphill or downhill. Avoid operation on steep slopes.
- ❑ Be alert for holes in terrain and other hidden hazards. Always drive slowly over rough ground.
- ❑ Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Be careful when changing direction on slopes.
- ❑ Stop mower and tractor immediately upon striking an obstruction. Turn off engine, inspect mower and repair any damage before resuming operation.
- ❑ Disengage power to mower and stop engine before dismounting from tractor, before making any repairs or adjustments, transporting or unclogging mower.
- ❑ Take all possible precautions when leaving tractor unattended: Disengage PTO, lower mower, shift into neutral, set parking brake, stop engine and remove key from ignition.
- ❑ Front tractor weights or front tire ballast should be used to enhance front end stability on small tractors.
- ❑ Check to make sur PTO is properly connected and that the driveline is correct to prevent bottoming out or pulling apart during the full lift range of the hitch.
- ❑ This implement is designed for a one-man operation. It is the responsibility of the tractor operator to see that no one is in the proximity of the implement when it is started. **DO NOT** operate the implement with another person within 25' of the implement.
- ❑ **NEVER** operate mower with hatch in the wrong working position.
- ❑ **NEVER** run mower with rotorshaft out of balance.

LUBRICATION

Grease all fittings according to the following schedule:

1. **ROLLER** - Grease at both ends *after 4 hours* of operation, until excess grease is visible (*Ref. 1*).
2. **CUTTING SHAFT** - Grease at both ends lightly *after 8 hours* of operation (*Ref. 2*). **DO NOT** over grease.
3. **P.T.O. SHAFT** - Male and female telescopic tubes and universal joints should be cleaned and greased monthly, or more frequently in extreme operating conditions.

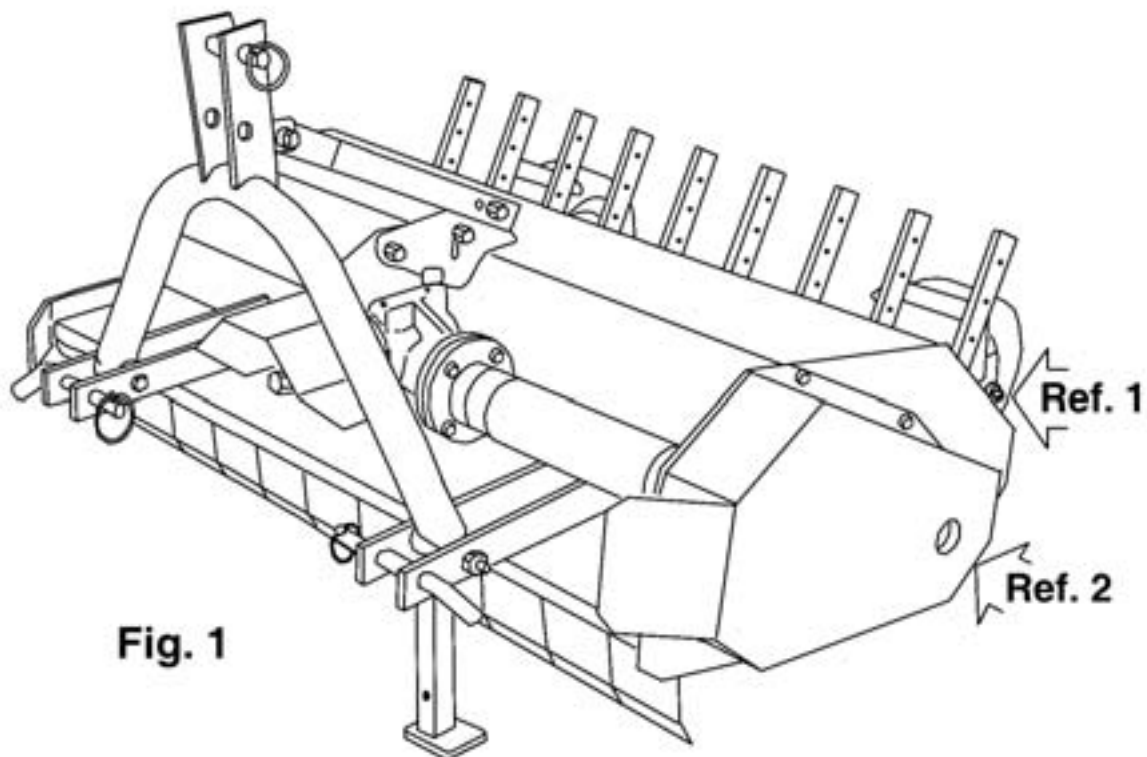


Fig. 1

PRE-OPERATION CHECK

- ✓ Check tightness of all bolts and nuts.
- ✓ Check gearbox oil level (Grade SAE80W-90 gear oil).
- ✓ Grease all points, on all GCF mowers.
- ✓ P.T.O. (power take-off) speed should not exceed 540 RPM (revolutions per minute).
- ✓ Check correct length of P.T.O. shaft. When fitted, there should be 3 3/4" free travel on male and female tubing (check in fully raised and fully lowered positions).
- ✓ The recommended cutting height, with the hammer or blade in its lowest position, is between 2" and 4" (*Ref. 1*). Basically, the fine height adjustment is achieved with the top link of the 3-point hitch. For a greater height adjustment, it is necessary to raise or lower the roller (*Ref. 2*).
- ✓ Drive belt should flex 3/8" (1 cm.) when pushed firmly with the finger.
- ✓ If your tractor does not have a double clutch, or has a hydraulic P.T.O., an overrunning P.T.O. shaft is required.
- ✓ Mower should be completely cleaned after use and before storage.

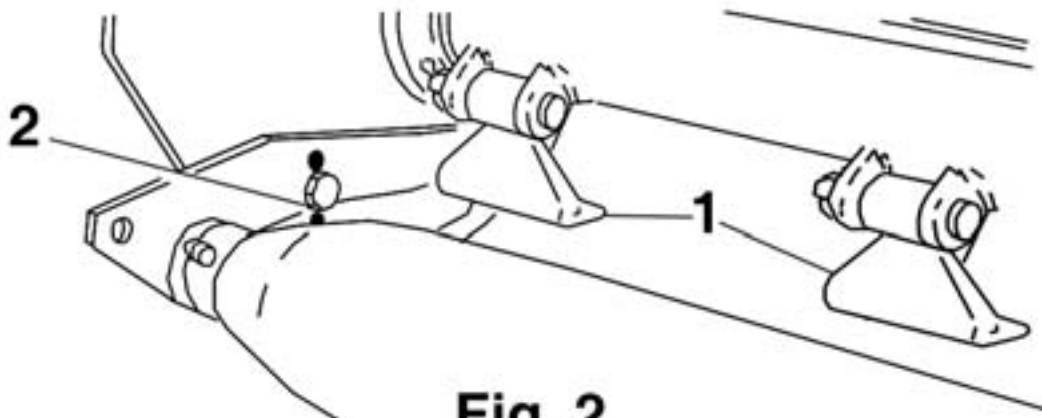


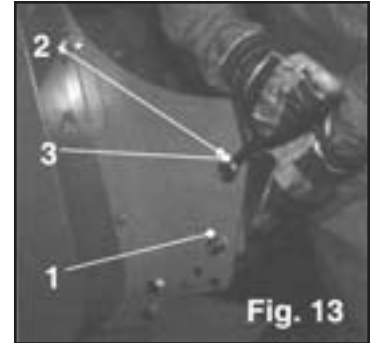
Fig. 2

MOWER ADJUSTMENTS

FOR VARIOUS TYPES OF MOWING

There is an adjustable rear hatch (Fig. 3) that can be set in one of seven positions to control the amount of power needed to do the work.

1. Adjustment of the rear hatch can be made by removing the two bolts at the side (Fig. 13, ref. 1). Loosen the nut (Fig. 13, ref. 2) until the hatch can be pivoted around bolt (Fig. 13, ref. 3). To fix the hatch in the desired position, align the hole in the side of the casing of the machine with the appropriate hole in the hatch. Insert the bolt and tighten the self-locking nut (Fig. 13, ref. 1). Tighten the pivot bolt (Fig. 13, ref. 3) with the self-locking nut (Fig. 13, ref. 2).



2. The rear hatch should be in a completely closed position (Fig. 4) when used for mulching of prunings, or pulverizing debris.
3. The hatch is used in position (Fig. 5) to allow the grass clippings to escape above the roller.
4. The hatch should be in a completely open position when the mower is used for grass, cover crop, weed abatement, vegetables, corn stalk and cotton cutting operations (Fig. 6). An open hatch enables the clippings to be discharged quickly, thus allowing a faster mowing speed and lower H.P. requirements.



DANGER: When the hatch is in the fully open position, objects may be thrown out of the machine. Make sure that **NO ONE** is in the operation area.



Fig. 3

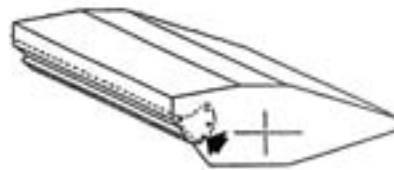


Fig. 4

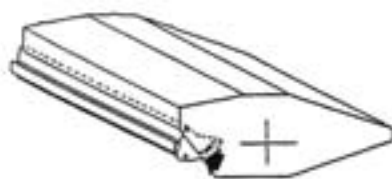


Fig. 5

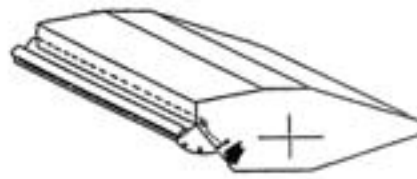
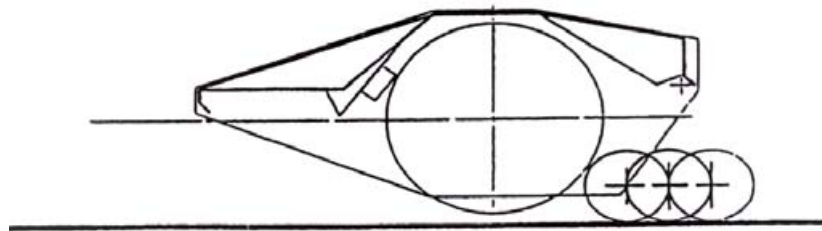


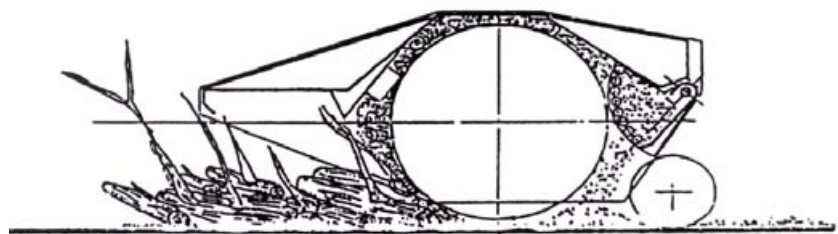
Fig. 6

MOWER ADJUSTMENTS (Continued)

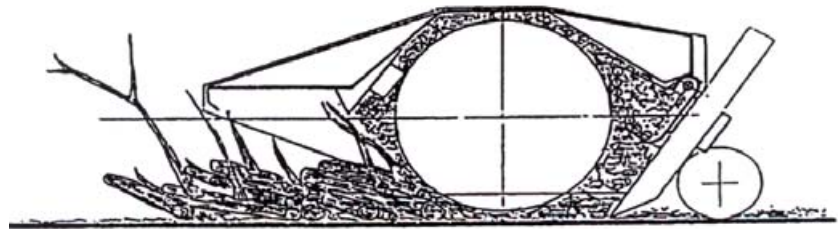
1. Various roller adjustments
3 positions



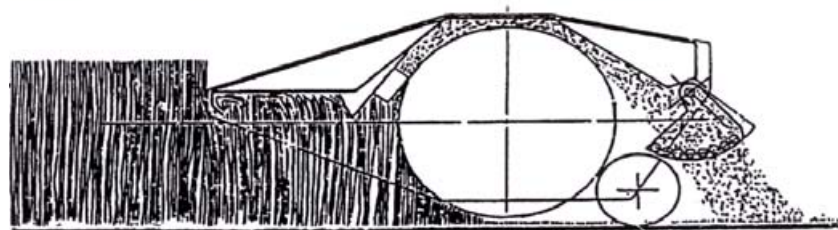
2. Used for mulching
of prunings



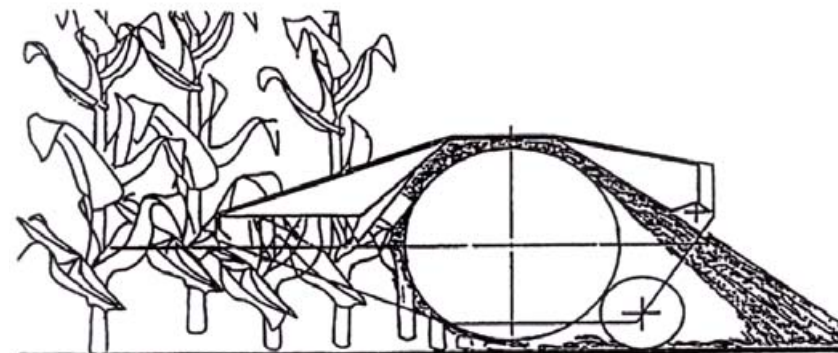
3. Used with rakes to
mulch prunings



4. Used for cutting
grass



5. Used to mulch
cornstalk



ROLLER HEIGHT CONTROL

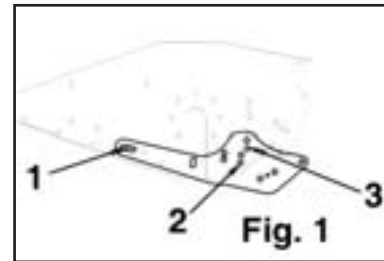
The roller can be adjusted for 2 or 3 cutting heights. By raising the roller, you get a shorter cut, by lowering it, a longer cut is achieved. You can also fine adjust the cutting height with the top link arm. By shortening the link arm, your cut is further from the ground.

A suggested cutting height is having the hammer tips about 2" from the ground.

You can control the power needed and the amount of wear on the hammers by this adjustment.

ADJUSTING REAR ROLLER:

To adjust roller, loosen (*Fig. 1, ref. 1*). Completely remove (*Fig. 1, ref. 2 & 3*). Align the appropriate hole in the support bracket with the hole in the deck to achieve roller position desired.



1. There is also an adjustment that can be made on the roller to control mulch size and power needed. By moving the roller toward the cutting shaft (*Fig. 7*), a finer mulch is produced, requiring less H.P. In this case, we suggest opening the hatch to cut grass, vegetables, cornstalk, cotton, etc.
2. By moving the roller away from the cutting shaft (*Fig. 7*), a coarser mulch is produced, requiring more H.P. In this case, we suggest closing the hatch to mulch prunings.
3. The third position, or furthest from the cutting shaft, is used only to allow room for rakes on the mower, if needed. Rakes are used when the prunings are laying close to the ground and have to be drawn out.
4. For more precise work and performance, we recommend spending 5 minutes adjusting your mower for the job, this can be done according to the previous recommendations.
5. The roller scraper can be removed when cutting grass, because close positioning of the roller to the cutting shaft permits the hammers to act as a roller cleaning device.

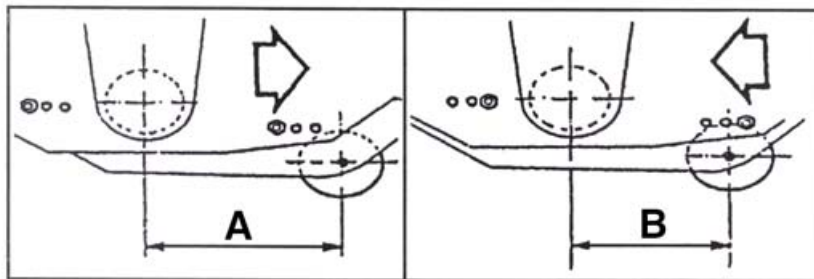


Fig. 7

DRIVE BELT TENSION ADJUSTMENT

1. Check belt tension before each use (*Fig. 8*). The tension is correct when you can depress one belt 1 cm ($3/8$ ") between the two pulleys. It is possible for you to insert a tool through the belt cover (*Fig. 9*), with mower stopped, to check the tension.
2. To adjust the belt tension, loosen bolts 1, 2, 3 & 4 and locknut 6 (*Fig. 9*). To adjust tension, move bolt 5. Do not forget to tighten all bolts after correct belt tension is achieved. If a belt requires replacement, replace all other belts as well.

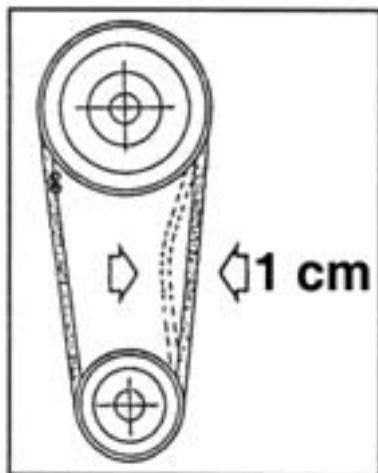


Fig. 8

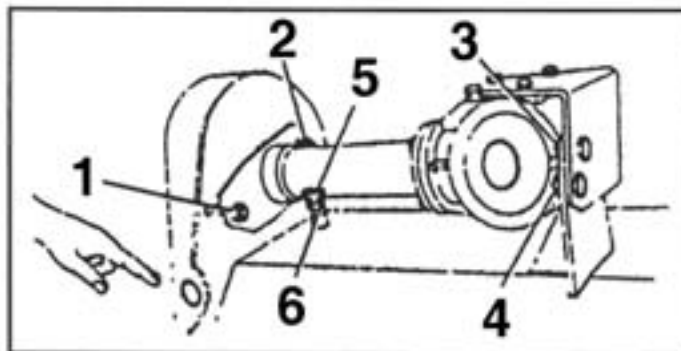


Fig. 9

TROUBLESHOOTING

1. Cutting shaft does not rotate properly:
 - a. Tighten drive belts to correct tension (*see page 9*).
 - b. Replace belts if they no longer can be adjusted properly.

2. Mower vibrates:
 - a. Check for loose or missing hammers or bolts.
 - b. Check for hammers that are unevenly worn. If one or more hammers is badly worn, replace all the hammers the first time. Keep the hammers that are in good shape for future replacement in worn series of hammers. For example: when replacing a worn hammer, replace it with a hammer of similar shape and weight. This will insure a balanced and vibration free cutting.

3. If the cutting shaft becomes jammed, reverse the rotation of the shaft to loosen and release the obstruction.

4. If the hammer mounting ears break off, they must be welded back in their exact position, otherwise the cutting shaft will be unbalanced.

5. If you have any questions or problems, it is always best to contact your dealer immediately.

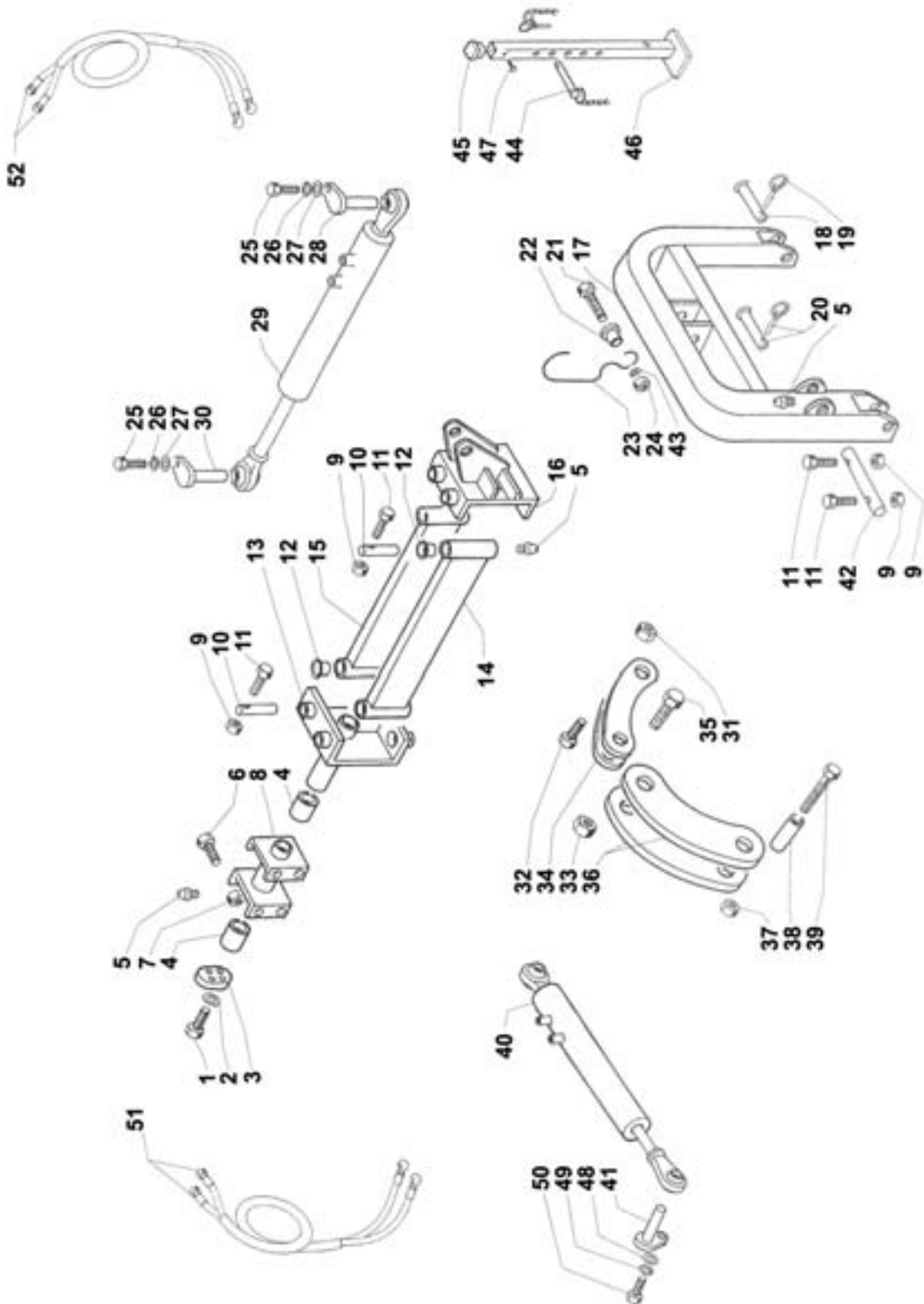
6. When ordering spare parts, you must contact your authorized Gearmore dealer for original replacement parts. When doing so, please include the following information:
 - a. Model Number
 - b. Serial Number

SAFETY PRECAUTIONS

1. All adjustments, inspections and repairs must be made with tractor and mower completely stopped.
 - a. When the mower is in operation, make sure that there is no one near the flying debris from the mower, to prevent the possibility of serious injuries.
 - b. **ALWAYS** keep hands and feet away from a mower that is in operation.
 - c. Check that all guards and safety features are in place and in good operating condition.
2. While mowing, take the necessary precautions to insure operator's and others safety.
3. **DO NOT** make height adjustment using only the top link. This will cause flying debris to come out the front of the mower and toward the operator. Use the roller adjustment.

We thank you again for your choice of mowers and we remind you that the safety points outlined in this manual will help you do your work in a safe and efficient manner.

3-POINT HITCH FRAME



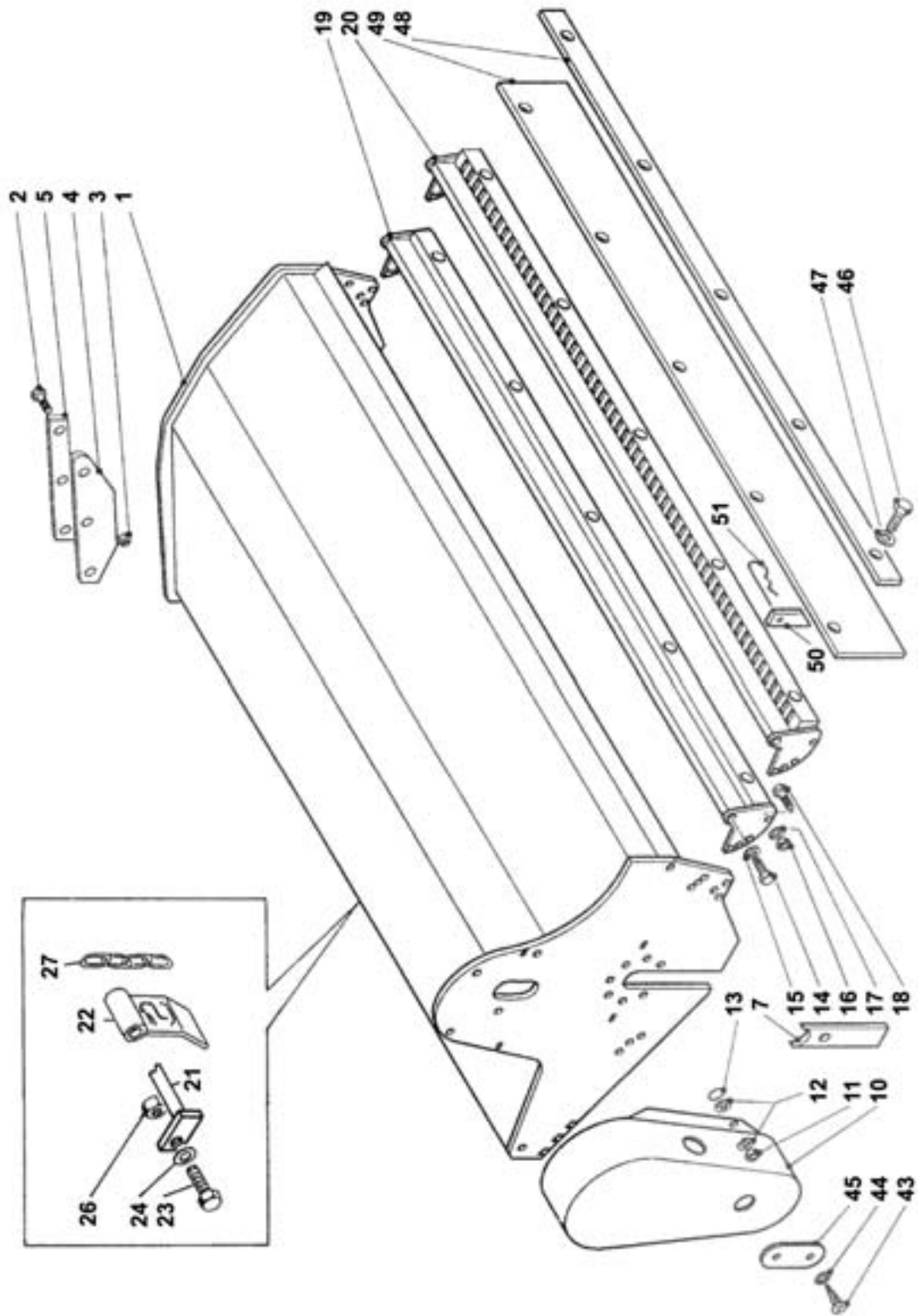
3-POINT HITCH FRAME

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	96607921	Bolt M10 x 40 UNI 5739 8.8 ZN
2	2	97494931	Washer 10.2 x 18.1 x 2.2 ZN
3	2	11404031	Fix. Plate Pin
4	2	11404039	Bronze Bushing 60 x 70 x 50
5	2	97036611	Grease Nipple UNI 7663
6	2	96614721	Bolt M16 x 45 UNI 5739 8.8 ZN
7	2	97972521	Lock Nut M16-6S UNI 7474
8	2	11404024	Revolving Support
9	2	97971821	Lock Nut M10-6S UNI 7474
10	2	13004035	Pin, Short Frame Side
11	2	96608321	Bolt M10 x 60 UNI 5737 8.8 ZN
12	2	13004037	Nylon Splined Bushing 30 x 38 x 50
13	2	11404017	Fix Support f/Variable Displac.
14	2	11404004	Joint Arm DX L=900
14	2	11404006	Joint Arm DX L=675
14	2	11404060	Joint Arm DX L=1000
15	2	11404003	Joint Arm SX L=900
15	2	11404005	Joint Arm SX L=675
15	2	11404059	Joint Arm SX L=1000
16	2	11404013	Support f/Variable Displacement
17	2	11404022	3-Point Linkage Cat. 2
17	1	11404033	3-Point Linkage Cat.1
17	1	11404086	Attacco A Tre Punti Cat. 1
17	1	32104044	Linkage 3 for Apple 2002
18	2	19704013	Cat. 2 Pin 1 & 2 Point Long
19	2	16004014	Pin D.10
20	2	19704005	Cat. 1 Pin 3 Point + Chain + Pin 19
21	2	96610221	Bolt M12 x 45 UNI 5739 8.8 ZN
22	2	13004139	Boccola Per P.T.O. Shaft Support
23	2	14404021	P.T.O. Shaft Support
24	2	97972021	Lock Nut M12-6S UNI 7474
25	2	96605521	Bolt M8 x 20 UNI 5739 8.8 ZN
26	2	97494831	Washer ASA B 27 - 8.2 x 14.8 x 2 ZN
27	2	97094911	Smooth Washer UNI 6592 8.4 x 16 x 1.6 ZN
28	2	11404043	Pin with Plate D22 x 72 INT=28
29	2	11412005	Hyd. Cylinder 60 x 30 x 200
29	2	42012047	Hyd. Cylinder 40 x 20 x 160 3/8"
30	2	11404041	Pin with Plate D19 x 72 INT=28
31	2	97972721	Lock Nut M24-6S UNI 7474
32	2	96620721	Bolt M24 x 80 UNI 5737 8.8 ZN

3-POINT HITCH FRAME

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
33	2	97973021	Lock Nut M22-6S UNI 7474
34	2	11404054	CPL Arm DA 250
35	2	96629221	Bolt M22 x 150 UNI 5737 8.8 ZN
36	2	11404027	Arm 335 x 15 For SMO-AVS
37	2	97972821	Lock Nut M20-6S UNI 7474
38	2	11404065	Spacer 38 x 22 x 80
39	2	96618521	Bolt M20 x 160 UNI 5737 8.8 ZN
40	2	11412007	Hyd. Cylinder 60 x 30 x 200
40	1	42012047	Hyd. Cylinder 40 x 20 x 160 3/8"
41	2	17908009	Pin with Plate D19 x 80 INT=45
42	2	11404040	Pin F/Joint Support SMWAV-SMLAV
43	2	97495034	Washer B-27-12 - 12.2 x 21.2 x 2.5 N
44	2	14311010	Pin for Support
45	2	13011019	Cap f/Small Support
46	2	13011009	Support Foot SMO, SMW/OA, SML
47	2	97486611	Bolt 6.3 x 19 UNI 8117
48	2	97095111	Smooth Washer UNI 6592 10.2 x 21 x 2.0 ZN
49	2	97494931	Washer B-27 - 10.2 x 18.1 x 2.2 ZN
50	2	96607621	Bolt M10 x 25 UNI 5739 8.8 ZN
51	2	48120193	Hose SAE 100R2AT 1/4" x 3000 O-FD
52	2	19412002	Hose SAE 100R2ATDN 1/4" x 2200 O/FD

FRAME



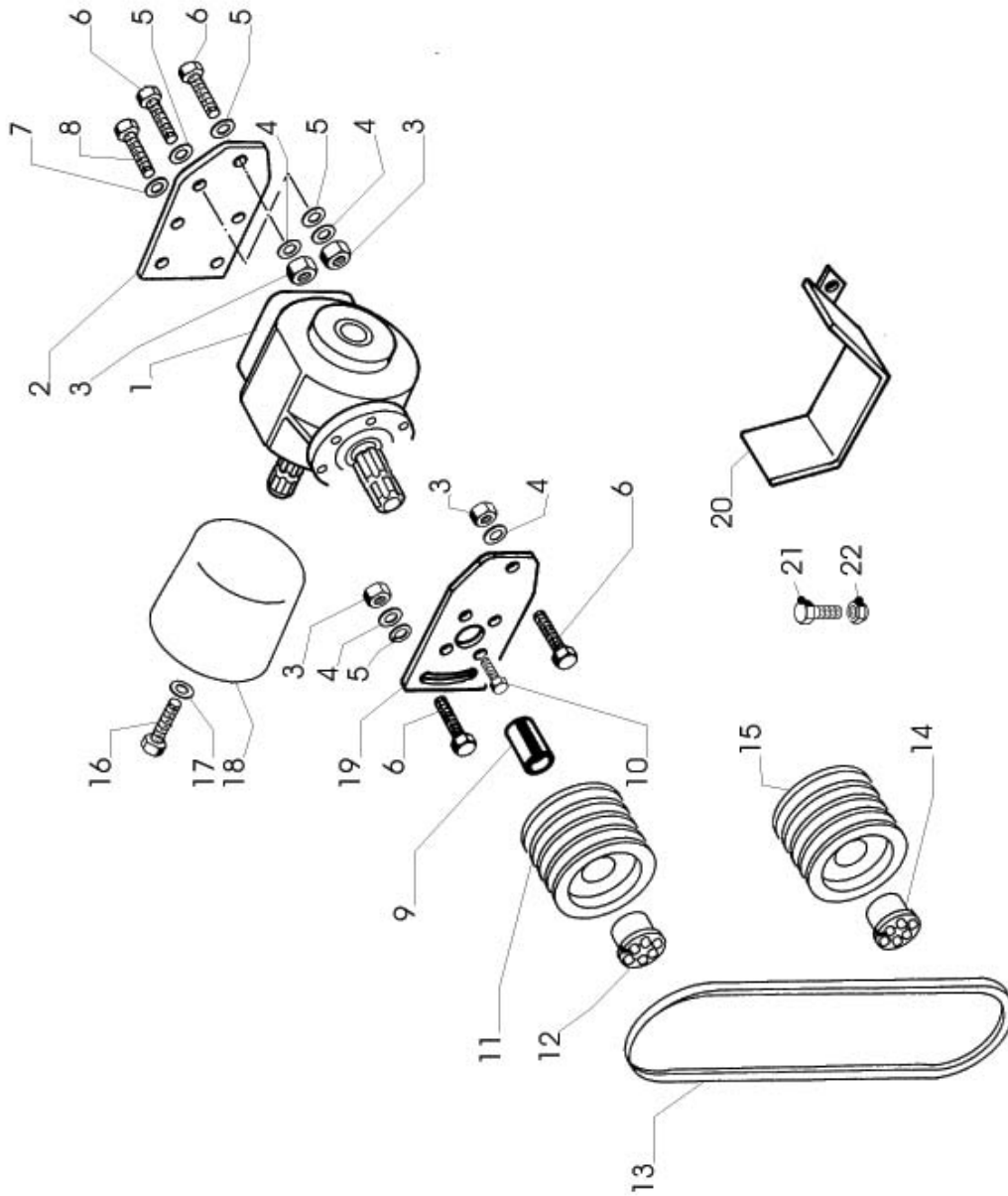
FRAME

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	11401006	Cpl Frame SMWAV 95
1	1	11401007	Cpl Frame SMWAV 105
1	1	11401008	Cpl Frame SMWAV 125
1	1	11401009	Cpl Frame SMWAV 155
1	1	11401010	Cpl Frame SMWAV 175
1	1	11401011	Cpl Frame SMWAV 200
1	1	11401020	Cpl Frame SMWAV 135
2	1	96605721	Bolt M8 x 30 UNI 5739 8.8 ZN
3	1	97971721	Lock Nut M8-6S UNI 7474
4	1	13010033	Side Rubber Protection F.Side
5	1	13010034	Blocking Plate Protect Side
6	2	96605721	Bolt M8 x 30 UNI 5739 8.8 ZN
7	2	11301028	Feather for Upper Side SML
8	2	97494834	Washer ASA B - 27 - 8.2 x 14.8 x 2 N
10	1	12010002	Belt Protection (H=90_
10	1	12010003	Belt Protection SMWA, SML (H 110)
11	1	97971721	Lock Nut M8-6S UNI 7474
12	1	97094921	Smooth Washer M8 9x24x2 ZN
13	1	97277980	Oil Seal 9.25x 1.78
14	1	96612421	Bolt M14 x 40 UNI 5739 8.8 ZN
15	1	97495134	Washer ASA B-27 14.2 x 24.1 x 3 N
16	1	97972321	Lock Nut M14-6S UNI 7474
17	1	97495134	Washer ASA B-27 14.2 x 24.1 x 3N
18	1	96612321	Bolt M14 x 35 UNI 5739 8.8 ZN
19	1	13008019	Cpl Hatch 175
19	1	13008020	Cpl Hatch 200
19	1	15008021	Cpl Hatch 095
19	1	15008022	Cpl Hatch 105
19	1	15008024	Cpl Hatch 125
19	1	15008026	Cpl Hatch 155
21	1	11010002	Cpl Chain Holder Bar L=95
21	1	11010003	Cpl Chain Holder Bar L=105
21	1	11010006	Cpl Chain Holder Bar L=155
21	1	13010006	Cpl Sh. Stone Guard (L=125)
21	1	13010008	Cpl Sh. Stone Guard (L=175)
21	1	13010009	Cpl Sh. Stone Guard (L=200)
21	1	13010041	Cpl Chain Holder Bar L=125
21	1	13010043	Cpl Chain Holder Bar L=175
21	1	13010044	Cpl Chain Holder Bar L=200
21	1	15010004	Cpl Sh. Stone Guard (L=95)

FRAME

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
21	1	15010005	Cpl Sh. Stone Guard (L=105)
21	1	15010008	Cpl Sh. Stone Guard (L=155)
22	1	13010038	Stone Guard Model October '98
23	1	96610021	Bolt M12 x 35 UNI 5739 8.8 ZN
23	1	96612221	Bolt M14 x 30 UNI 5739 8.8 ZN
23	1	96612321	Bolt M14 x 35 UNI 5739 8.8 ZN
24	1	97495034	Washer ASA B-27 - 12.2 x 21.2 x 2.5 N
24	1	97495134	Washer ASA B-27 - 14.2 x 24.1 x 3 N
26	1	97972021	Lock Nut M12-6S UNI 7474
26	1	97972321	Lock Nut M14-6S UNI 7474
27	1	13010037	Chain Prot. 13 Chains Link 7
27	1	21010035	Chain Prot. 11 Chains Link 7
43	1	96964401	Bolt 4.8 x 9.5 UNI 6954
44	1	97708871	Ext. Galvanized Toothed Washer 5.3 x 10
45	1	13010039	Prot. Cover For Greasing Hole
46	1	96605621	Bolt M8 x 25 UNI 5739 8.8 ZN
47	1	97494831	Washer ASA B-27 - 8.2 x 14.8 x 2 ZN
48	1	14008021	Counter Plate F.Rubber (L=125)
48	1	14008023	Counter Plate F.Rubber (L=175)
48	1	14008024	Counter Plate F.Rubber (L=200)
48	1	15008052	Counter Plate F.Rubber (L=95)
48	1	15008053	Counter Plate F.Rubber (L=105)
48	1	15008053	Counter Plate F.Rubber (L=155)
48	1	96605621	Bolt M8 x 25 UNI 5739 8.8 ZN
49	1	13008077	Rubber Protection F/Hatch (L=125)
49	1	13008079	Rubber Protection F/Hatch (L=175)
49	1	13008080	Rubber Protection F/Hatch (L=200)
49	1	15008058	Rubber Protection F/Hatch (L=95)
49	1	15008059	Rubber Protection F/Hatch (L=105)
49	1	15008062	Rubber Protection F/Hatch (L=155)

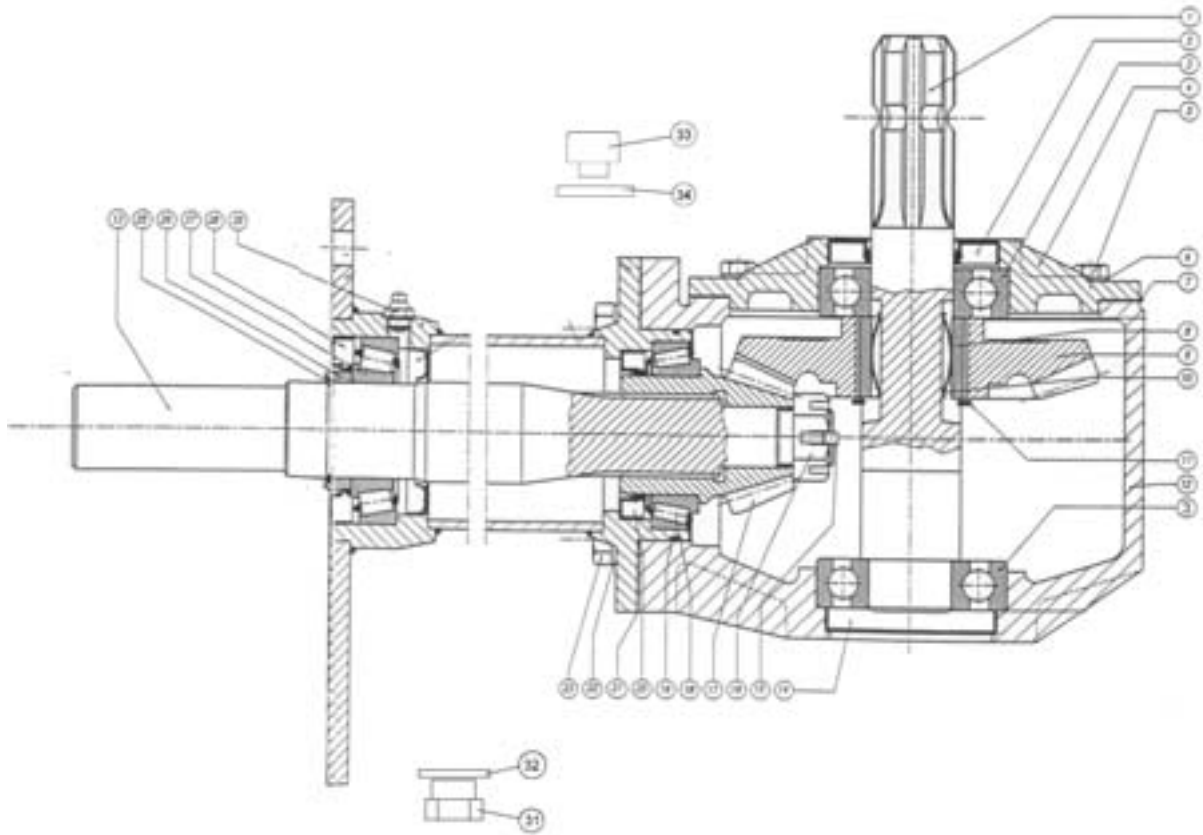
TRANSMISSION



TRANSMISSION

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	11403006	Gearbox TL311 (9.311.620.00) R=1:3
1	1	11403007	GEarbox TL311 R=1:1.6
2	1	11003014	Plate f/Gearbox 6 mm
3	1	97972321	Lock Nut -MS UNI 7474
4	1	97495134	Washer ASA B-27 - 14.2 x 24.1 x 3 N
5	1	97093311	Smooth Washer M14 UNI 5714 ZN
6	1	96612421	Bolt M14 x 40 UNI 5739 8.8 ZN
7	1	97495034	Washer ASA B-27 - 12.2 x 21.2 x 2.5 N
8	1	96609821	Bolt M12 x 25 UNI 5739 8.8 ZN
9	1	22003062	Splined Bushing f/Taper Lock Seat
10	1	97345827	Bolt M12 x 25 UNI 5933 8.8 Black
11	1	13003081	Pulley 4 SPB 180
11	1	15003055	Pulley 3 SPB 180
12	1	13003006	Taper Lock Viblock VK 156 45 x 80
12	1	15003054	Taper Lock Viblock VK 156 45 x 80 Std
13	1	12003001	Belt BX 43
14	1	13003006	Taper Lock Viblock VK 156 45 x 80
15	1	15003056	Pulley 3 SPB 140
15	1	22003020	Pulley 4 SPB 140
16	1	96605321	Bolt M8 x 12 UNI 5739 8.8 ZN
17	1	97094921	Smooth Washer M8 9 x 24 x 2 ZN
18	1	13010081	Oval Protection 275 x 210 L=210
19	1	11403011	Flangia Cpl Attaco Molt.
20	1	11410010	Cpl Reinforc.F/Belt Protect.
21	1	96610021	Bolt M12 x 35 UNI 5739 8.8 ZN
22	1	97038421	Nut M12-6S NI 5588

GEARBOX



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.