



ROTARY TILLER

**Operation, Service
& Parts Manual For
"G" Series**

October 1995 (rev. 3-05)

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Date of Purchase: _____

Model Number: _____

Serial Number _____

PREPARATION

WARNING

To prevent possible personal injury or death during assembly, installation, operation, adjustment, or removal of implement, **DO NOT** wear loose clothing, always wear gloves and safety glasses or face shield. **Keep other persons a minimum of twenty-five (25) feet away from any unit under power.**



READ THIS BEFORE OPERATING TILLER

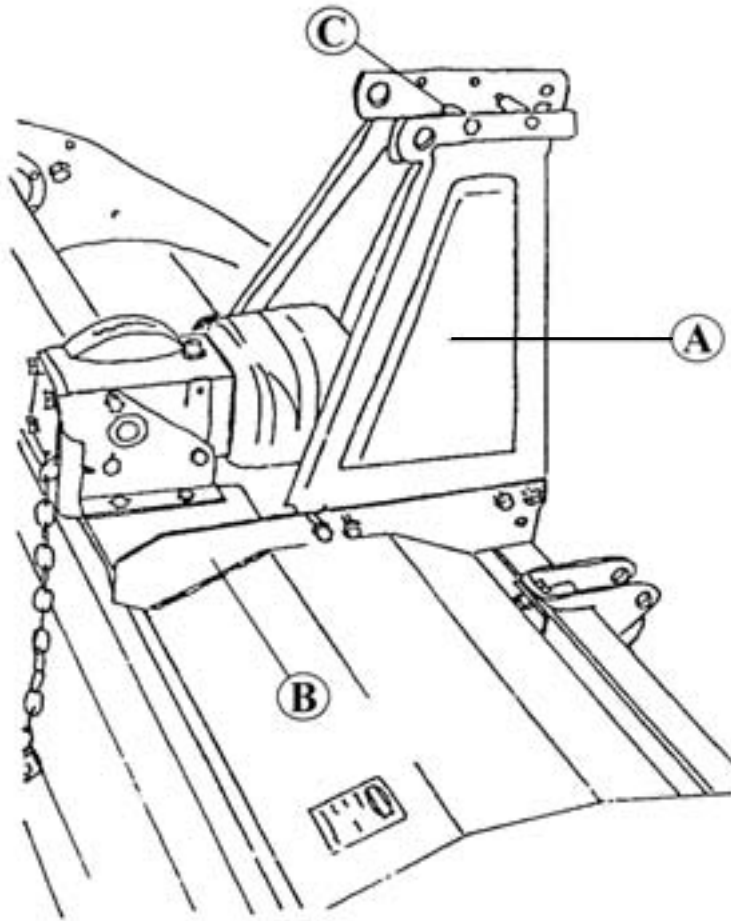
TRAINING

Know your controls. Read this operator's manual and the manual provided with your tractor. Learn how to stop the tractor engine and tiller quickly, in case of an emergency. **DO NOT** allow children to operate machine, or adults to operate it without proper instructions.

PREPARATION

- Clear area of debris.
- Never permit any person other than the operator to ride on board the tractor at any time.
- **DO NOT** allow riders on tiller at any time.
- Operate only in daylight or good artificial light.
- Ensure all safety shielding is properly installed.
- **Always** wear relatively tight and belted clothing when operating tiller. Loose clothing should not be worn, as it could get caught in the moving parts or controls.

ASSEMBLY INSTRUCTIONS



1. With tiller on bottom pallet, install a-frame mast (Ref. A).
Note: The mast mounts on the outside of the rails (Ref. B).
2. Install spacer (Ref. C) between the two a-frame masts using supplied bolt and nut.
3. Tighten all bolts and nuts.
4. Install PTO driveline to tiller gearbox. **Note:** The clutch half of the driveline assembly goes to the tiller gearbox.
5. Check oil in gearbox (140 SAE Lube).
6. Check oil in chain case (140 SAE Lube).

CONNECTION TO TRACTOR

Your Gearmore Rotary Tiller can be attached to tractors having a 3-point hitch with category "0" or category "I" length arms and category "I" hitch balls.

1. Attach the lower link arms of the tractor to the lower attaching brackets of the tiller by inserting pins.

NOTE: Hitch brackets can be adjusted for offset. Loosen hitch brackets and rear strap and slide gearbox assembly left or right for offset. Check PTO length and clearance, then re-tighten bolts.

2. Attach the top link of the 3-point hitch to the tiller. Next, tighten the lower link arm check chains to prevent any horizontal movement of the tiller, which could cause damage during operation. Adjust the unit so the drive shaft is parallel to the ground in the working position. Adjust the tractor lift linkage or the hydraulic lever lifting stops to prevent the tiller being lifted more than 6" from the ground. This will avoid any damage to the universal joints.
3. Attach the drive shaft, first to the tiller input shaft and then to the PTO of the tractor. Make sure the yokes are locked on to the tractor and tiller shaft.

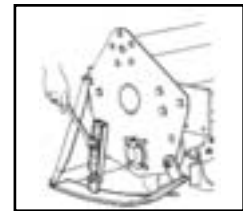
SHEAR PIN DRIVESHAFT:

If your tiller has a driveshaft with a shear bolt, it has been calibrated for a certain overload. Should the bolt shear, due to meeting resistance, replace it with a new one of the same specification.

NOTE: For bolt size, refer to page 11-12.

SET SIDE SKIDS FOR WORKING DEPTH:

To regulate working depth, loosen the nuts of the skids and adjust them to the desired position. Set skids equally on both sides. (See Picture)



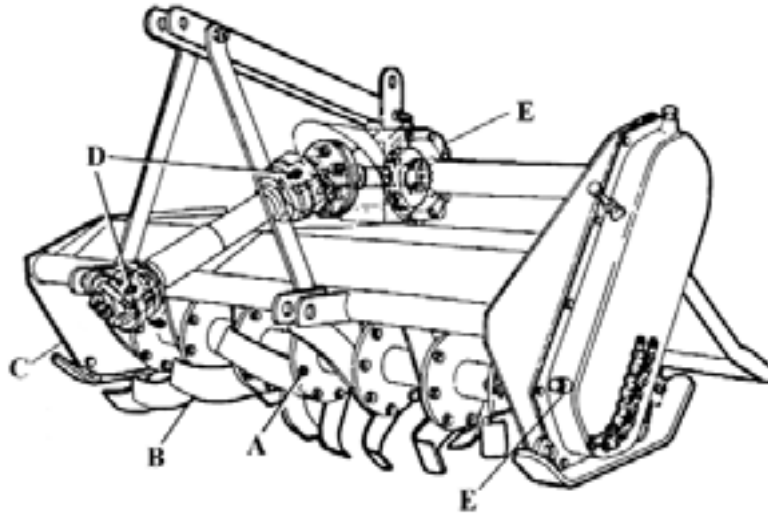
TRANSMISSION CHAIN TENSION:

Your Gearmore Rotary Tiller has an automatic chain tensioner, so no adjustment is necessary.

TINES:

When the complete set of tines has to be replaced, it is advisable to replace one at a time to insure that the new tines are mounted in the same position as the old ones. It is important to fit the bolts with the heads to the side of the tine and the nuts and washers to the side of the flange. It is also recommended to replace all washers with new ones at the time of tine replacement.

GENERAL MAINTENANCE



Carefully follow all instructions as stated in this operator's manual, this includes safety, assembly, operation, lubrication and maintenance of the tiller.

1. Check bolts and nuts for tightness (Ref. A).
2. Check tiller daily for loose, worn or broken tines (Ref. B).
3. Replace, **immediately**, any damaged or worn parts.
4. Check lubrication - *See Lubrication Section.*

LUBRICATION

GEARBOX & CHAIN CASE:

Fill gearbox to level plug (Ref. E) with gear oil. Use SAE#140 multi-gear lubricant or equivalent. Gear oil should be checked weekly and changed *every 400 hours* of use.

ROTOR SHAFT:

Lubricate rotor spindle (Ref. C) **daily**. NOTE: Grease zerk located on the side of the tiller.

DRIVESHAFT:

Grease both cross and bearing and shear bolt yoke (Ref. D). After that grease *every 8 hours* of use. It is also necessary, from time to time, to untelescope the driveshaft to clean and re-grease tubing.



WARNING: DO NOT OPERATE TILLER UNLESS ALL SHIELDS ARE IN PLACE

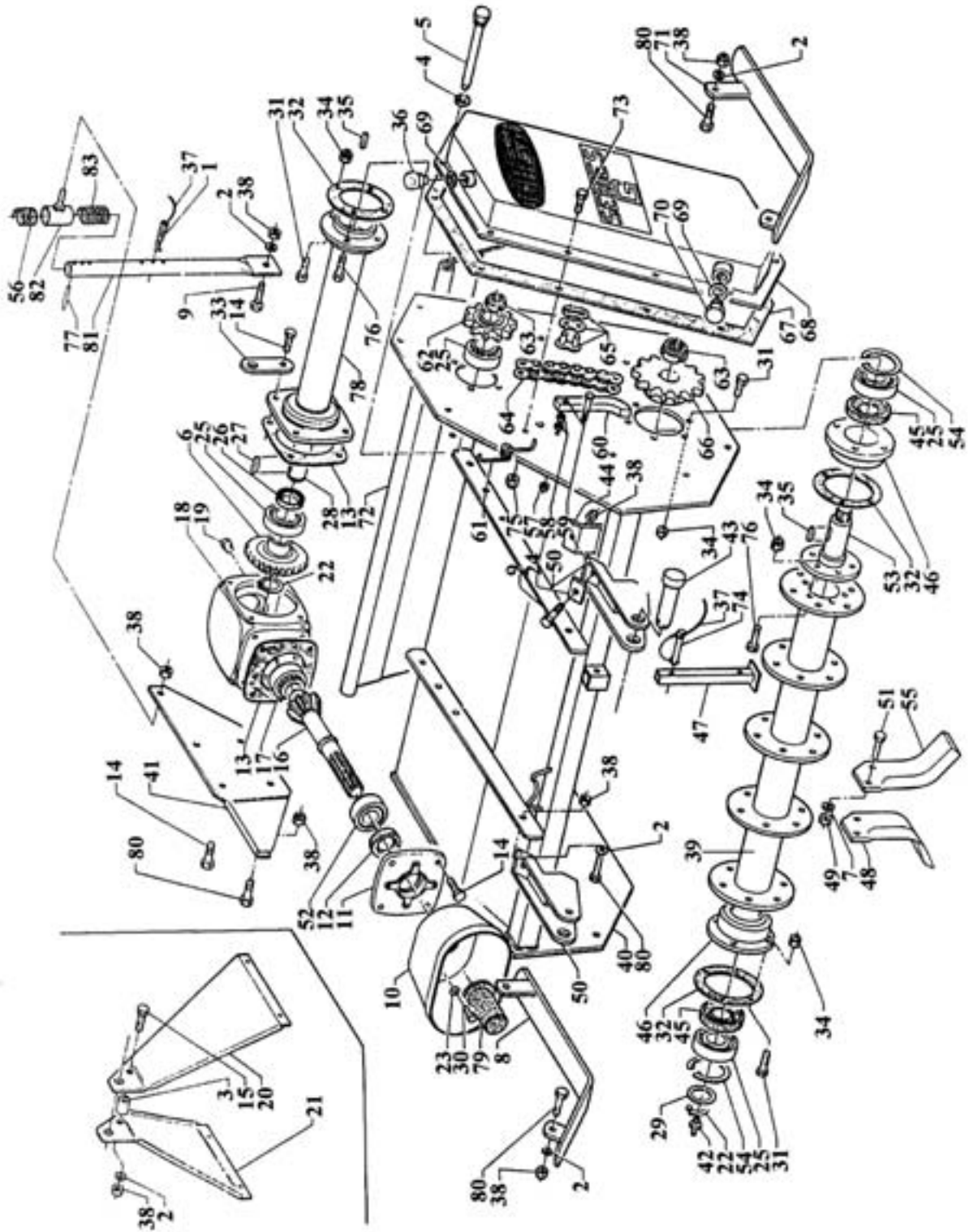
SAFETY INFORMATION

- Guards and safety shields are for your protection. **DO NOT** operate equipment unless they are in place.
- Always** engage the tractor's PTO with the tiller off the ground and at a low engine speed. Bring the engine speed up and lower the tiller onto the ground. The tiller operates more efficiently at the 540 RPM PTO speed. **Always** operate tractor PTO (power take-off) at recommended RPM (revolutions per minute), or 540 RPM.
- Disengage tractor PTO and shift into neutral before attempting to start engine.
- Read and observe all safety decals on the tractor and tiller.
- 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. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Be careful when changing direction on slopes. Always raise tiller when backing up.
- Be alert for holes in terrain and other hidden hazards. Always drive slowly over rough ground.
- STOP** tiller and tractor **immediately** upon striking an obstruction. Turn off engine, inspect tiller, and repair any damage before resuming operation.
- Disengage power to tiller and stop engine before dismounting from tractor, before making any repairs or adjustments, transporting, or unclogging tiller.
- Take all possible precautions when leaving tractor unattended: Disengage PTO, lower tiller, 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 sure 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.
- Never** work under tiller without safety blocks.
- 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 or PTO drive.

TROUBLESHOOTING CHART

PROBLEM:	CAUSE:	SOLUTION:
Excessive vibration:	Driveshaft damaged	Replace worn driveshaft
	Tines broken off	Replace damaged tines
	Bent rotor shaft	Replace rotor shaft
Rotor shaft does not turn:	Shear bolt broken	Replace shear bolt
	Clutch linings slipping	Replace clutch linings
	Transmission chain broken	Replace transmission chain
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 the 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 telescope:	Improper lubrication	Separate and grease both halves
	PTO twisted	Replace twisted parts
	Shields damaged	Replace shields

"G" TILLER ASSEMBLY



TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	108403005	Pin
2	6	108203022	Washer
3	1	112801014	Bushing
4	1	108203011	Washer M18
5	1	116001016	Pin, Tailboard
6	1	116501006	Bevel Gear Z24
7	See Pg. 11	108203005	Lock Washer M12
8	1	132201001	Skid, R.H.
9	3	108201019	Bolt M12 x 35
10	1	115201053	Shield
11	1	113001001	Cover, Front Gearbox
12	1	35x52x7	Oil Seal
13	1	114401008	Gasket
14	6	108201014	Bolt M12 x 25
15	1	108201063	Bolt M12 x 70
16	1	116201014	Input Shaft & Pinion
17	1	30207	Bearing
18	1	118701001	Housing
19	1	101401003	Plug
20	1	132602011	A-frame Mast L.H.
21	1	132602010	A-frame Mast R.H.
22	1	108301002	Circlip E35
23	4	108203031	Washer D.8 x 30
24	2	114701005	Plate
25	4	6307	Bearing
26	1	35x72x10	Oil Seal
27	1	108404002	Key 8 x 10 x 30
28	1	115901001	Transmission Shaft G90
28	1	115901002	Transmission Shaft G100
28	1	115901003	Transmission Shaft G120
28	1	115901004	Transmission Shaft G135
29	1	112802009	Spacer
30	2	108201002	Bolt M8 x 16
31	10	108201008	Bolt M10 x 25
32	3	114401011	Gasket
33	1	114802004	Bracket
34	18	108202007	Nut, Nyloc M10
35	2	108404003	Key 8 x 10 x 35
36	1	101401001	Plug, Fill
37	2	100601001	Wire, Lynch Pin Retainer

TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
38	6	108202010	Nut, Nyloc M12
39	1	130801001	Rotor Shaft G90
39	1	130801002	Rotor Shaft G100
39	1	130801003	Rotor Shaft G120
39	1	10801004	Rotor Shaft G135
40	1	131901001	Frame G90
40	1	131901002	Frame G100
40	1	131901003	Frame G120
40	1	131901004	Frame G135
41	1	135501007	Plate, Support
42	1	108501001	Grease Zerk M8
43	2	116001007	Pin, Lift
44	2	114601002	Clamp
45	2	40x60x10	Oil Seal
46	2	115501011	Support, Rotor
47	1	134801001	Jackstand (Optional)
48	See Pg. 11	112002001	Tine R.H.
49	See Pg. 11	108202009	Nut M12 x 1.25
50	2	114503012	Bracket, Lift
51	See Pg. 11	108201017	Bolt M12 x 30 x 1.25
52	1	6207	Bearing
53	1	116101007	Hub
54	2	108301004	Circlip I80
55	See Pg. 11	112002002	Tine L.H.
56	1	117701015	Spring
57	1	108202013	Nut M14
58	2	108202034	Nut M14
59	1	108201026	Bolt M14 x 60
60	1	114703001	Stretchers, Chain
61	1	117701001	Spring
62	1	116201012	Gear Z17
63	2	108601001	Nut, Nyloc M35 x 1.5
64	1	106701004	Chain ASA60
65	1	106702001	Master Link
66	1	116201013	Gear Z20
67	1	114401001	Gasket
68	1	131301002	Cover, Chain Case
69	2	114401015	Gasket
70	1	101401004	Plug

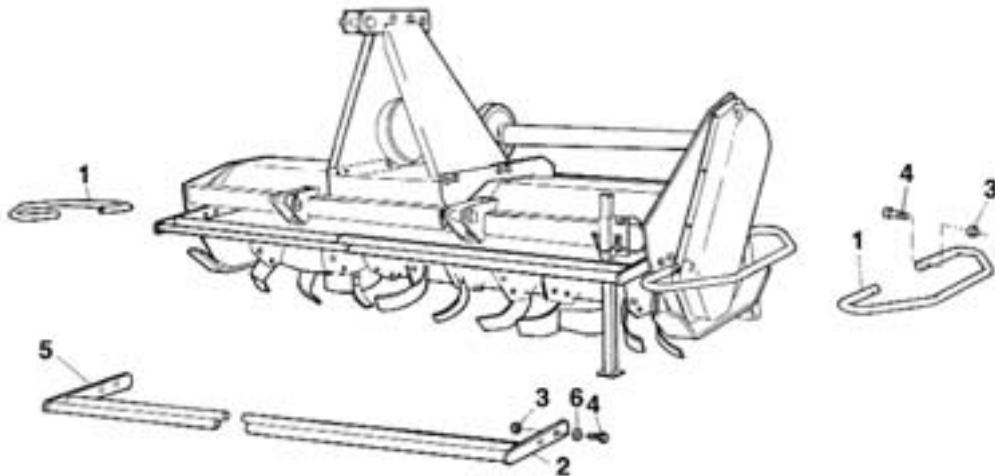
TILLER ASSEMBLY

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
71	1	133201002	Skid, L.H.
72	1	132001001	Tailboard G90
72	1	132001002	Tailboard G100
72	1	132001003	Tailboard G120
72	1	132001004	Tailboard G135
73	10	108201003	Bolt M8 x 20
74	1	108403003	Pin, Jackstand (Optional)
75	10	108202004	Nut, Nyloc M8
76	7	108201010	Bolt M10 x3 0
77	1	108402004	Roll Pin M6 x 35
78	1	131201001	Extension Tube G90
78	1	131201002	Extension Tube G100
78	1	131201003	Extension Tube G120
78	1	131201004	Extension Tube G135
79	1	102701001	Cover
80	4	108201015	Bolt M12 x3 0
81	1	115701014	Rod, Support
82	1	135501006	Bracket, Support Tube
83	1	117701014	Spring

TINE CHART / SAFETY SHIELDS

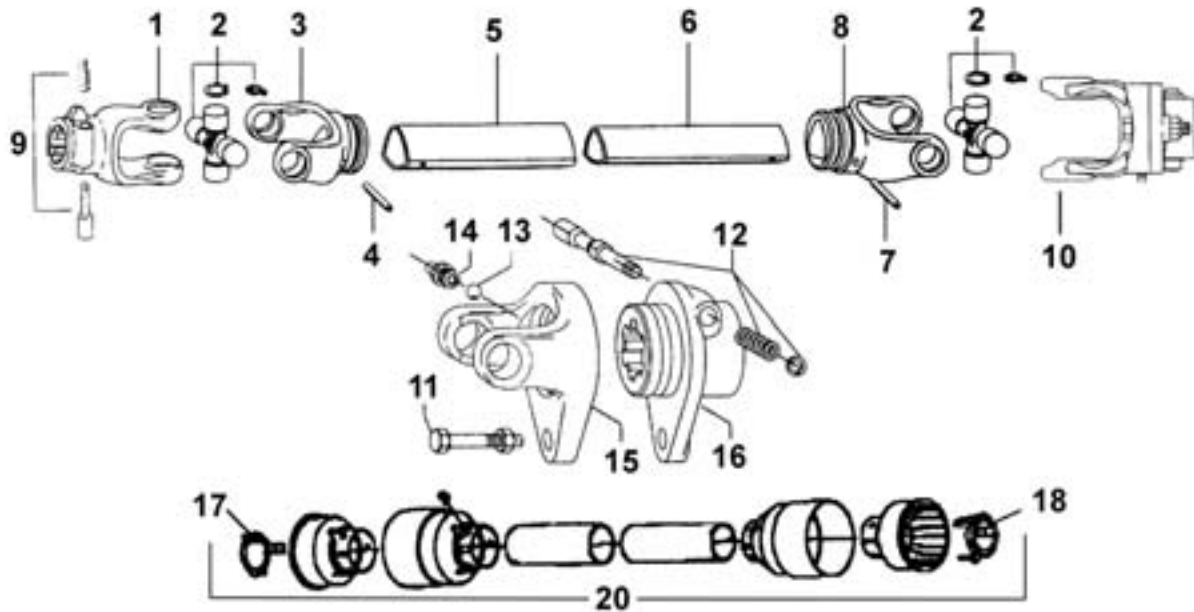
MODEL NO.	NUMBER OF TINES		NUMBER OF BOLTS & NUTS
	R.H.	L.H.	
G90	10	10	40
G100P	12	12	48
G120P	14	14	56
G135P	16	16	64

<u>PART NO.</u>	<u>DESCRIPTION</u>
112002001	Tine R.H.
112002002	Tine L.H.
108201017	Bolt M12 x 30 - 1.25
108202009	Nut M12 x 1.25
108203005	Lockwasher



<u>REF. #</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	76.90.0001	Side Protection Bar
2	1	76.90.0012	L.H. Front Guard Bar
3	8	80.Z.11.012	Locknut M10
4	8	80.Z.03.137	Bolt M10 x 30
5	1	76.90.0011	R.H. Front Guard Bar
6	8	80.Z.30.010	Flat Washer M10
	1	65.15.0011	Complete Guard

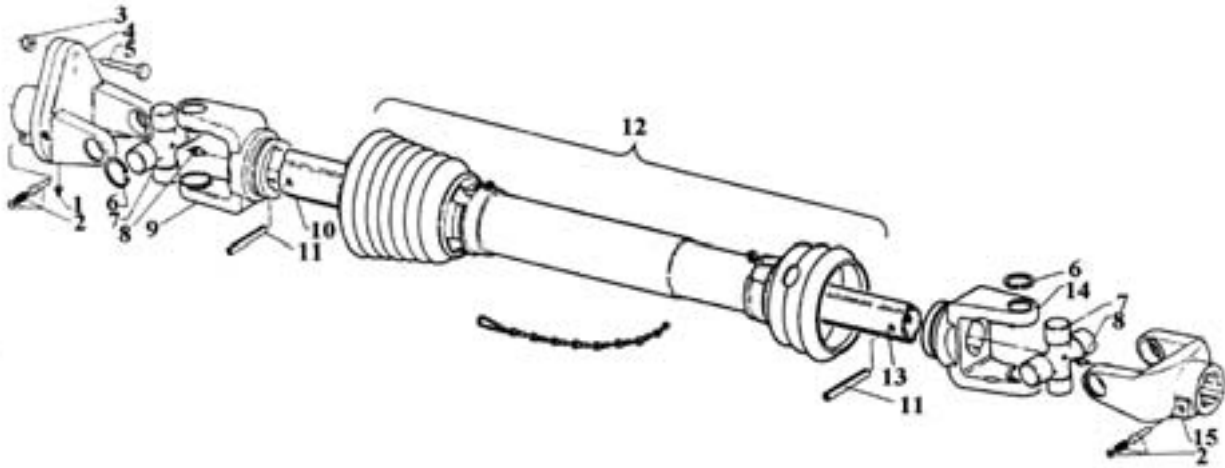
SHEAR BOLT DRIVELINE ASSY 146702002



NOTE: Triangular Drive Tubing

REF#	QTY.	PART NO.	DESCRIPTION
1	1	507040351	Yoke, 1-3/8" 6-Spline
2	2	41204	Cross Journal Kit #4
3	1	204046851	Yoke, Outer Drive Tube
4	1	341038000	Roll Pin O.T. 8 x 60
5	1	125080950	Outer Drive Tube
6	1	125070950	Inner Drive Tube
7	1	341048000	Roll Pin I.T. 8 x 55
8	1	204046852	Yoke, Inner Drive Tube
9	1	403000001	Push Pin Kit
10	1	606404001	Clutch Assembly SB4
11	1	432000047	Bolt M8 x 45
12	1	401000001	Push Pin Kit
13	1	362002000	Steel Ball
14	1	348012000	Grease Zerk M10 x 1 Straight
15	1	213040020	Flange, Yoke
16	1	513070324	Hub 1-3/8" 6- Spline
17	1	255040005	Bearing, Outer Shield
18	1	255040006	Bearing, Inner Shield
19	2	252000001	Safety Chain (not shown)
20	1	5N04095N6	Complete Shield
21	1	146702002	Complete Driveline

PTO DRIVELINE ASSY 470479



NOTE: Lemon Shaped Drive Tubing

<u>REF#</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	304123	Grease Zerk M10
2	1	339107	Push Pin Kit
3	1	453119	Locknut M6
4	1	470480	Shear Bolt Assembly
5	1	451184	Shear Bolt M6 x 45
6	8	020712	Circlip 27 x 1.5
7	2	044444	Cross Journal Assy (includes #6 & 8)
8	2	084099	Grease Zerk M8 x 1
9	1	041318	Yoke, Outer Drive Tube
10	1	054078	Outer Drive Tube
11	2	020614	Roll Pin M10 x 65
12	1	339230	Complete Shield
13	1	016621	Inner Drive Tube
14	1	041315	Yoke, Inner Drive Tube
15	1	041378	Yoke, 1 3/8 6-Spline (includes #2)
16	1	470479	Complete Driveline

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.