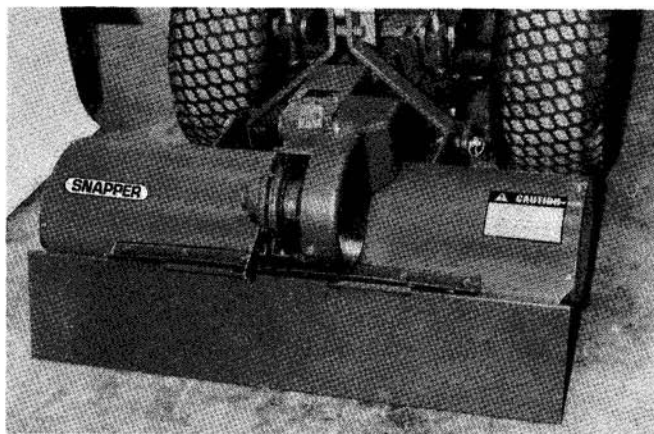


Operator's Manual

for

SNAPPER[®]

TRACTOR KIT #6-0374



**42" REAR P.T.O. DRIVEN
ROTARY TILLER**

**MCDONOUGH POWER EQUIPMENT
MCDONOUGH, GA. 30253**

MANUAL 1-3302



SAFETY PRECAUTIONS



Safety Shields are usually removed for access to assemblies being serviced and sometimes for photographic purposes (clarity of Figure). All safety shields must be replaced after servicing. Also replace any Caution, Warning, or Instruction Decal that is not readable or missing. Refer to "Operator's Manual" for decal locations.

Read this Manual and tractor manual carefully before operating unit. Give special attention to all safety suggestions. They are included for your protection.

- Know tractor controls and how to stop quickly. **READ TILLER AND TRACTOR OPERATOR'S MANUALS.**
- Do not allow children to operate unit. Do not allow adults to operate unit without proper instructions.
- Do not carry passengers. Keep children and pets a safe distance away.
- Clean work area of objects which might be picked up and thrown causing personal injury or equipment damage.
- Disengage power to Tiller, shut off tractor engine before making any repairs or adjustments.
- Keep all safety shields in place.
- Keep hands, feet and clothing away from moving parts.
- Do not operate Tiller on steep hillsides.
- Tiller should be disengaged, tractor engine shut off and inspect for damage after striking foreign object. Damage should be repaired before restarting and operating.
- Disengage power to Tiller, shut off tractor engine before unclogging Tiller tines.
- If Tiller must be in raised position when making adjustments, block it up securely.

**PERSONAL INJURY MAY RESULT IF THESE
PRECAUTIONS ARE NOT FOLLOWED.**

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Look for this symbol to point out important safety precautions. It means — ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

The 42" PTO driven Rotary Tiller is for use with Snapper Garden Tractors equipped with rear PTO and 3-point hitch. It may be used for both primary and secondary tillage, and can replace the plow and disc in normal garden work.

Serial identification plate is located on right side of shroud. Record this number in space provided and refer to it when requesting parts.

NOTE: Reference to left-hand and right-hand used throughout Manual refers to a position behind Tiller facing forward.

TRACTOR AND TILLER PREPARATION

TRACTOR PTO SHIELD INSTALLATION

If not previously installed for some other accessory, the PTO shield kit, Snapper #6-0393, must be installed to the Tractor rear PTO cover.



CAUTION: Make sure tractor engine is shut off.

1. Remove and discard two lower bolts from tractor rear PTO cover as shown in Fig. 1.
2. Install PTO shield as shown in Fig. 2, using two new bolts provided with PTO shield kit.

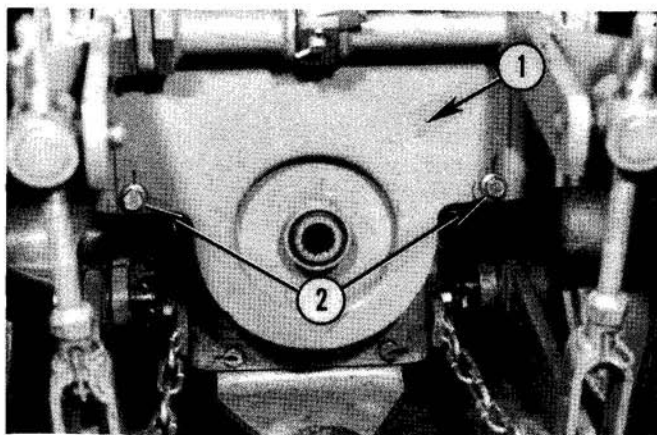


Fig. 1 — Tractor PTO Shield Installation

1. PTO Rear Cover 2. Existing Bolts

ATTACHING TILLER TO TRACTOR



CAUTION: Make sure tractor PTO shield has been installed.

1. Before attaching to tractor, position Tiller on level area so that "A" frame is vertical as viewed from side.

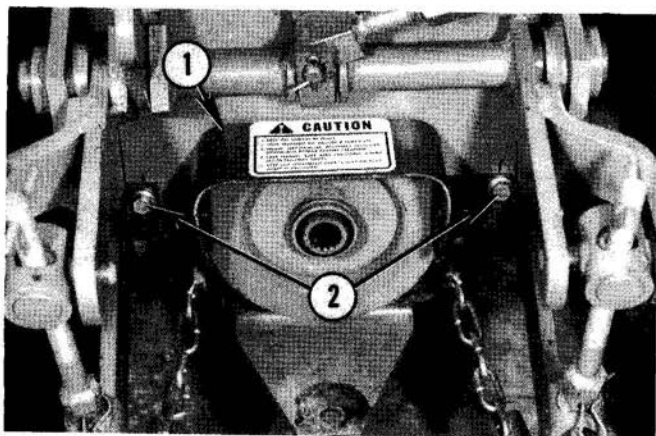


Fig. 2 — Tractor PTO Shield Installation

- 1. PTO Shield
- 2. 3/8" x 7/8" Hex Head Bolts

2. Remove breather fill plug and oil level plug as shown in Fig. 3.

3. Fill gearbox with Specification EP 90 axle oil until oil seeps out of oil level plug hole and then replace both plugs.

4. Position tractor lower link arm check chains in front hole as shown in Fig. 4.

5. Start tractor engine as outlined in Tractor Operator's Manual.

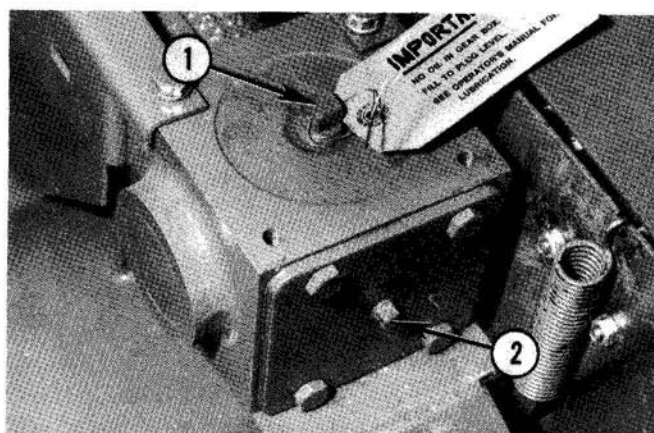


Fig. 3 — Tiller Gearbox

- 1. Breather and Fill Plug
- 2. Level Plug

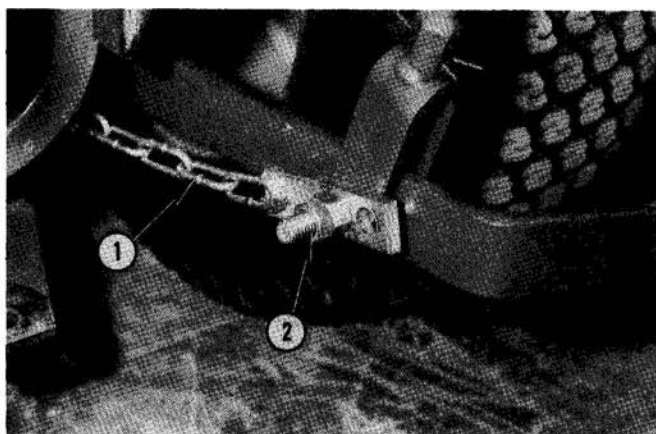


Fig. 4 — Check Chain



CAUTION: Do not move tractor if anyone is between tractor and Tiller or behind Tiller. Do not reach back to align hitch points.

6. Back tractor slowly until tractor lower lift arms are aligned with lower hitch points on Tiller "A" frame.

7. Make sure all tractor controls are in "Neutral" or in "Off". set parking brake and shut off engine.

8. Attach tractor left and right lift arms to Tiller and secure with linch pins as shown in Fig. 5.

9. With Tiller "A" frame vertical, adjust length of tractor top link and attach to top high point on Tiller "A" frame, Fig. 5.

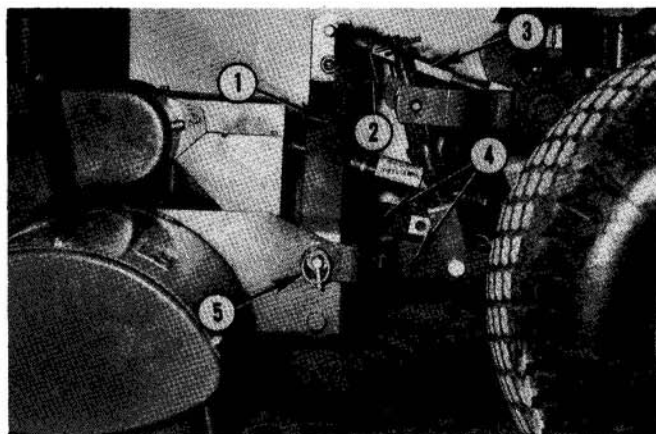


Fig. 5 — Attaching Tiller

1. "A" Frame

2. Jam Nut

3. Top Link

4. Lower Lift Arms

5. Linch Pins

10. Slide front portion of PTO drive line onto rear portion and then slide PTO drive line splined end into tractor making sure PTO lock ring snaps into place.

LEVELLING TILLER

IMPORTANT: A transport height above 16" (measured from lower lift arm hitch pin hole to ground) will cause an undesirable PTO angle resulting in excessive noise due to vibration of sliding PTO shield. Remove hairpins and adjust lift links until this measurement is achieved, Fig. 6. Replace locking hairpins.

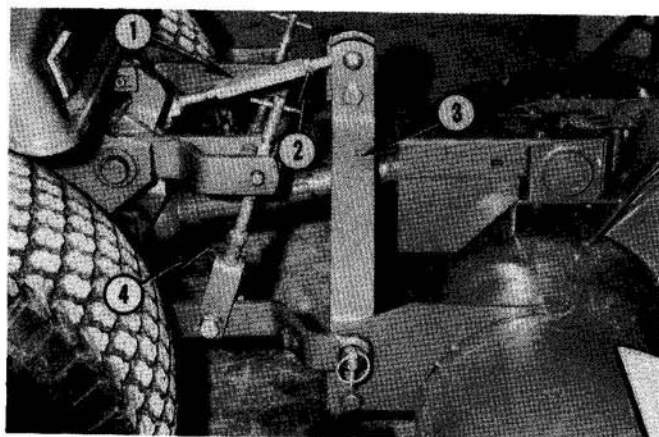


Fig. 6 — Levelling Tiller

- | | | |
|---------------|-------------|--------------|
| 1. Turnbuckle | 2. Jam Nuts | 3. "A" Frame |
| 4. Hairpin | | |

With tractor and Tiller attached at all three lift points and standing on a level surface, Tiller is longitudinally level when Tiller "A" frame is vertical as viewed from side. If "A" frame is not vertical, loosen jam nut on top link and lengthen or shorten as necessary to achieve vertical "A" frame position, Fig. 6.



CAUTION: Be sure to lock jam nuts on top link to prevent unintentional rotation of turnbuckle barrel.

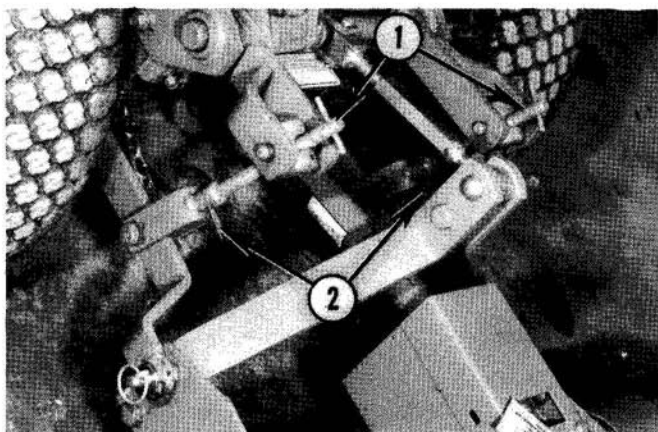


Fig. 7 — Levelling Tiller

1. Adjustable Lift Link 2. Hairpins

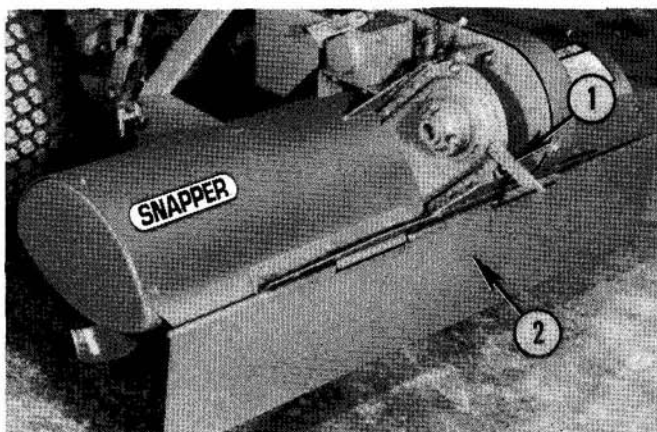
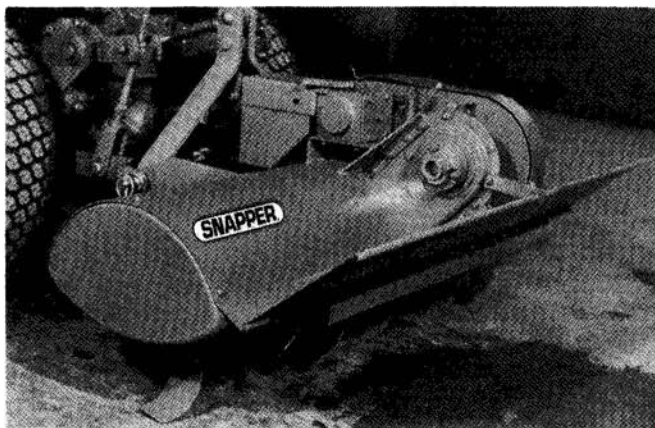


Fig. 8 — Level Blade — Lowered

1. Level Blade Lock Arm 2. Lever Blade



**Fig. 9 — Level Blade Locked in
Raised Position**

OPERATION

Before operating Tiller, always check area to be worked. Do not run over large stones, pipes or other heavy obstructions which could damage Tiller.



CAUTION: Never adjust or work on Tiller with tractor engine running. Although Tiller will not normally throw heavy objects, keep persons and pets from directly behind when it is in operation. Always make certain rear shield is lowered when Tiller is being operated in rocky conditions.

OPERATING TILLER

NOTE: Do not try to operate Tiller in long grass or high weeds. Cut and remove this material before tilling.

1. Raise or lower Tiller with tractor auxiliary hydraulic control lever.
2. To engage Tiller move tractor PTO control to "On" position.
3. Depress tractor neutral return brake pedal, place rear axle shift lever in "Low" range and speed control lever in desired speed range.
4. Advance throttle to "Fast" position and lower Tiller slowly with auxiliary hydraulic control lever to engage soil.
5. Release neutral return brake pedal and slowly push down with toe on forward/reverse pedal.
6. **Always raise the Tiller when turning or when backing tractor.**
7. Lower level blade when tilling to produce a finer and smoother seed bed, Fig. 8. For coarse bed or when cultivating, move level blade all the way up, Fig. 9.
8. Recommended forward speed for tilling is 0.5 mph.
9. If Tiller should encounter a heavy obstruction, stop tractor immediately and disengage Tiller drive. Should a large accumulation of heavy vines or weeds wrap around tines or shaft, turn off tractor engine and remove this material before proceeding.
10. If tractor is to be stopped for any length of time, with Tiller in working position, quickly disengage drive or raise machine out of ground or its working motion will create a hole after only a few seconds of stationary operation.

DETACHING TILLER — FIG. 5



CAUTION: Before detaching Tiller, it is recommended support blocks be placed under front and rear of Tiller to prevent Tiller from tipping over. Also, disconnect PTO at Tractor.

1. Lower Tiller onto blocks.
2. Disconnect Tiller PTO drive line from tractor.
3. Detach tractor top link from Tiller.
4. Detach tractor right lift arm, then left lift arm from Tiller
5. Drive tractor slowly away.

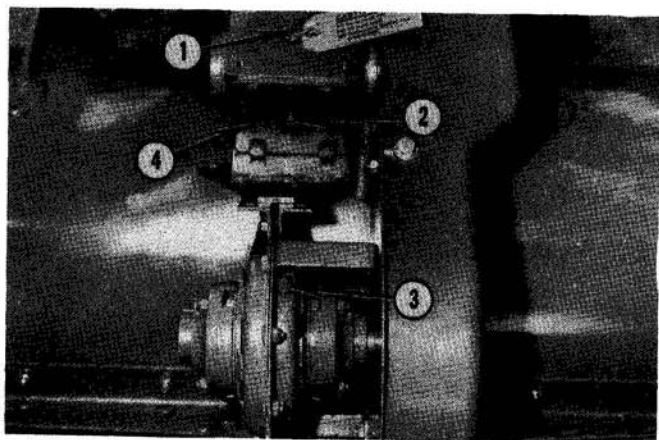


Fig. 10 — Tiller Lubrication

- | | |
|-----------------------|------------|
| 1. Breather Fill Plug | 3. Oil Cup |
| 2. Level Plug | 4. Gearbox |

LUBRICATION

Oil leveller blade hinges and springs daily with engine oil.

Periodically remove oil level plug at rear of gearbox to check oil level. If filling is necessary, remove breather plug and fill with Specification EP 90 gear and axle oil until it seeps out level hole. Reinstall plugs, Fig. 10.

Apply daily a few drops of engine oil through oil cup on top of enclosed drive chain, Fig. 10.

Annually, or at end of each working season, remove external drive chain and clean thoroughly with cleaning solvent or diesel fuel. Submerge chain in clean engine oil. Remove excessive oil before reinstalling on Tiller.

IMPORTANT: Excessive oil on chain will seep into torque limiter and clutch plates causing excessive slipping.

SERVICING

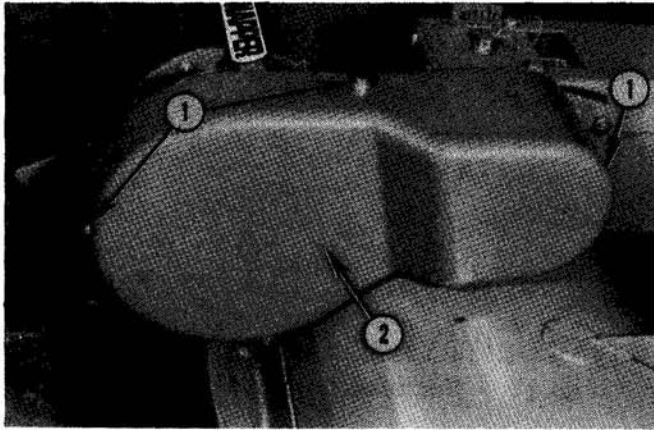


Fig. 11 — Replacing External Chain

1. 5/16" x 1/2" Hex Head Bolts, Flatwashers and Lockwashers
2. Chain Guard

REPLACING EXTERNAL DRIVE CHAIN

1. Remove chain guard by removing three bolts, Fig. 11.
2. Relieve chain tension by unhooking spring, Fig. 12.
3. Remove chain dampener by removing two bolts, Fig. 12.
4. Separate chain by removing cotter pin and chain master link pin, Fig. 12.

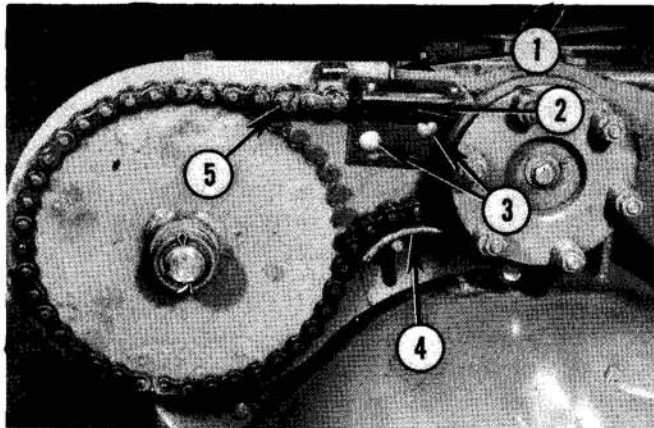


Fig. 12 — Replacing External Chain

- | | |
|-------------------------------|----------|
| 1. Tension Spring | 3. Bolts |
| 2. Chain Dampener | 4. Pad |
| 5. Cotter Pin and Master Link | |

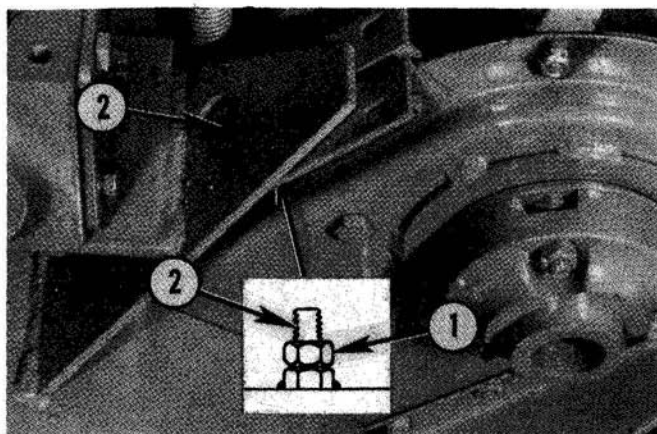


Fig. 13 — Enclosed Drive Chain Adjustment

1. Jam Nut 2. Allen Head Screw

5. Install new or repaired chain and rehook chain tension spring.

6. Replace chain dampener and adjust so that it just touches chain.

7. Replace chain guard.

ENCLOSED DRIVE CHAIN ADJUSTMENT.— FIG. 13

To check for proper chain tension on the enclosed drive chain, raise Tiller tines completely off ground, disengage the PTO and shut off engine. Move tines back and forth. If chain slack or backlash is detected, readjust tension as follows:

1. Loosen the jam nut shown in Figure 13 and turn the adjusting screw in clockwise direction while rotating the tines. Turn in until all backlash is removed and a slight drag on chain is felt.

2. Turn the adjusting screw back out (counter-clockwise) about 1/2 turn or until tines turn freely again without drag. Hold the setscrew in this position and tighten the jam nut to lock setscrew.

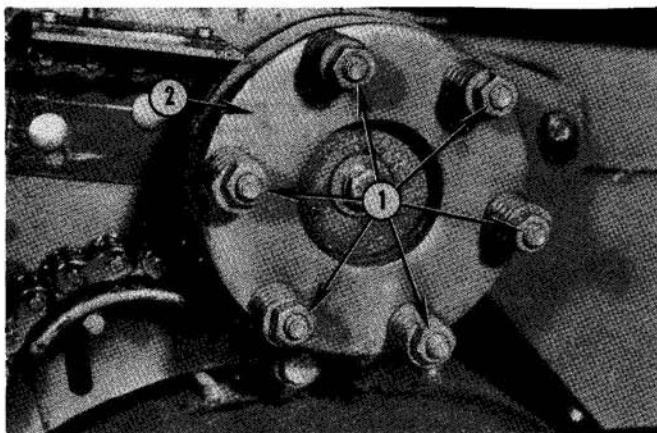


Fig. 14 — Torque Limiter Adjustment

1. Adjusting Nuts and Springs

2. Pressure Plate

TORQUE LIMITER ADJUSTMENT — FIG. 14



CAUTION: Do not overtighten nuts as torque limiter cannot function if not properly adjusted.

If torque limiter slips excessively check and adjust spring tension.

1. Remove chain guard, Fig. 11.
2. Tighten nuts until spring is tight against pressure plate then back off 1/2 turn.
3. Replace guard and test adjustment by placing Tiller under normal load.
4. If torque limiter continues to slip excessively have Dealer check and replace clutch disc if worn.

TROUBLE-SHOOTING

TINES DO NOT ROTATE

Probable Cause	Remedy
External drive chain slipping	Check and replace tension spring
Torque limiter slipping	Adjust
Drive chain jumping on sprockets	Check chain tension adjustment
Material wrapped around tine shaft	Clean and free up tine shaft

TINES DO NOT DIG

Probable Cause	Remedy
One or more tines are reversed	Check tine installation, cutting edges must be toward direction of rotation
Tractor hitch linkage improperly adjusted	Check and adjust linkage

TILLER CLIMBS OUT OF GROUND

Probable Cause	Remedy
Attempting to cut too deep for ground conditions on first pass	Make shallow cut on first pass — make successive passes
Too high a forward speed	Reduce forward speed
Ground conditions severe	Adjust cutting depth with tractor control lever

TINES WILL NOT CLEAR GROUND IN RAISED POSITION

Probable Cause	Remedy
Tractor hitch not adjusted	Adjust hitch

MANUFACTURER'S 90 DAY LIMITED WARRANTY

For Ninety (90) days from purchase date for a non-commercial user, or for Thirty (30) days from purchase date for a commercial user, McDONOUGH POWER EQUIPMENT, through any factory authorized service dealer, will replace for the original purchaser, free of charge, any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship, or both.

All transportation cost incurred by the purchaser in submitting material to an authorized service dealer for replacement under this warranty must be borne by the purchaser.

This warranty does not apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond our control.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to Ninety (90) days from purchase for non-commercial users, and for thirty (30) days from purchase for commercial users and to the extent permitted by law any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

McDONOUGH POWER EQUIPMENT
McDONOUGH, GEORGIA 30253

IT IS THE POLICY OF McDONOUGH POWER EQUIPMENT TO IMPROVE ITS PRODUCTS WHENEVER IT IS POSSIBLE AND PRACTICAL TO DO SO. WE RESERVE THE RIGHT TO MAKE CHANGES OR ADD IMPROVEMENTS AT ANY TIME WITHOUT INCURRING ANY OBLIGATION TO MAKE SUCH CHANGES ON PRODUCTS MANUFACTURED PREVIOUSLY.

TILLER SPECIFICATIONS

Tilling Width	42"
Overall Width	44"
Number of Tine Cutting Tips	24
Tilling Depth	Up to 8"
Drive	Tractor rear PTO
Tine Material	High carbon, heat treated steel
Tine Speed	190 rpm at 2000 PTO speed
Weight	200 lbs.
Shipping Weight	230 lbs.
Tine Retaining Bolt Torque	55 ft.-lbs.

McDONOUGH POWER EQUIPMENT

McDONOUGH, GA., U. S. A., 30253