

# OWNER'S MANUAL

## MODEL NO.'s

T25-42

T25-50

T40-50

T40-58

T40-66

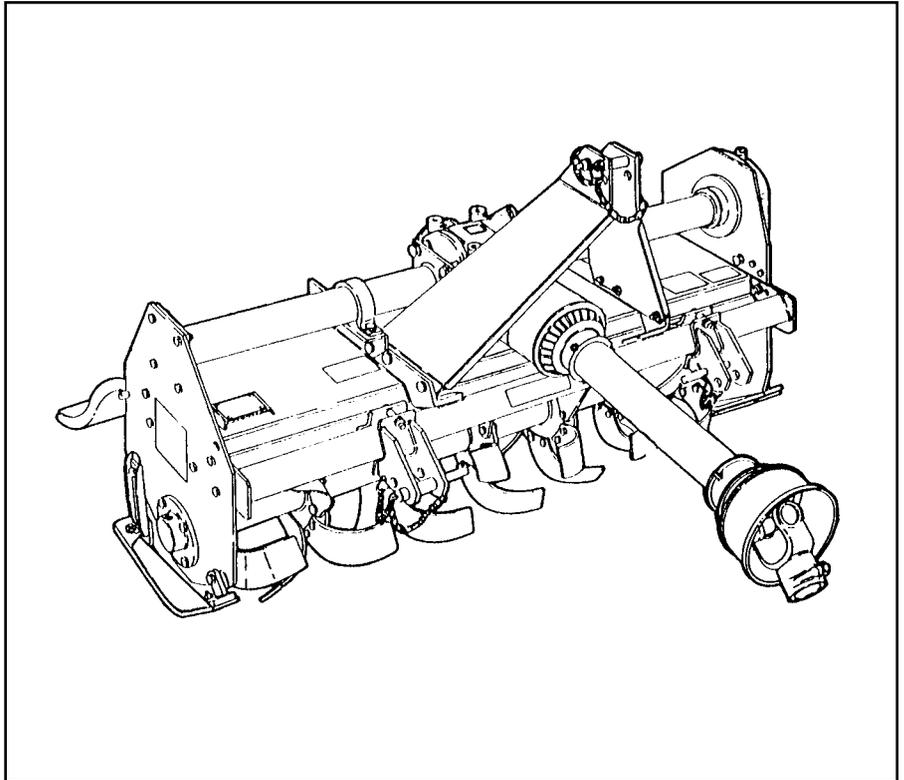
T55-66

T55-74



## CAUTION

For Safe Operation  
Read Rules And  
Instructions Carefully



## 3 PT. ROTARY TILLERS

15 to 55 PTO HP

SINO LEEINGLES, PIDA AYUDA A  
AIGUIEN QUE SI LO LEA PARA QUE  
LE TRADUZCA LAS MEDIDAS DE  
SEGURIDAD.

**Safety Instructions**

**Tractor Preparation**

**Operating Instructions**

**Assembly & Mounting**

**Maintenance**

**Repair Parts**



## CAUTION

**THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE THOROUGHLY UNDERSTOOD  
BEFORE ATTEMPTING TO BEGIN ASSEMBLING THIS MACHINE**

1. Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
2. Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks or other mechanical devices.
3. Preview the assembly instructions in your operator's manual before proceeding further.
4. If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also insure that the blocking material is on a clean, dry surface.
5. Never put hands, or any part of body, under blocked up assemblies if at all possible.
6. After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
7. Before operating the machine, thoroughly read the operation section of your operator's manual.
8. Before operating, read the maintenance section of your operator's manual to be sure that any parts requiring lubrication, such as gearboxes, are full, to avoid any possible damage.
9. **Before operating equipment – If you have any questions regarding the proper assembly or operation, contact your Farm Star dealer or representative.**

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SINO LEEINGLES, PIDA AYUDA A AIGUIEN QUE SI LO LEA PARA QUE LE TRADUZCA LAS MEDIDAS DE SEGURIDAD.

## STATEMENT OF POLICY

It is the policy of **Farm Star** to improve its products where it is possible and practical to do so. **Farm Star** reserves the right to make changes or improvements in design and construction at any time, without incurring the obligation to make these changes on previously manufactured units.

## TO THE OWNER :

Read this manual before using your Rotary Tiller. This manual is provided to give you the necessary operating and maintenance instructions for keeping your rotary tiller in top operating condition. Please read this manual thoroughly. Understand what each control is for and how to use it. Observe all safety signs on the machine and noted throughout the manual for safe operation of implement. Keep this manual handy for ready reference.

Like all mechanical products, it will require cleaning and upkeep. Lubricate the Tiller as specified.

Use only genuine Farm Star service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model and serial number of your Tiller here:

Model: \_\_\_\_\_ Serial Number: \_\_\_\_\_

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## RETAIL CUSTOMER'S RESPONSIBILITY

**It is the Retail Customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain, and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator's Manual is a misuse of this equipment.**

**It is the Retail Customer and/or Operator's responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause a safety hazard.**

**It is the Retail Customer's responsibility to deliver the product to the authorized Farm Star Dealer, from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five (45) days of failure.**

**It is the Retail Customer's responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.**

# SPECIFICATIONS

MODEL	T25 SERIES			T40 SERIES			T55 SERIES		
	T25-42	T25-50	T40-50	T40-58	T40-66	T55-66	T55-74		
HP Rating	25 Max.	25 Max.	40 Max.	40 Max.	40 Max.	55 Max.	55 Max.		
Horse Power Requirement	15 - 18 hp.	18 - 20 hp.	26 - 30 hp.	34 - 38 hp.	35 - 40 hp.	40 - 45 hp.	45 - 55 hp.		
Working Width	42 in.	50 in.	50 in.	58 in.	66 in.	66 in.	74 in.		
Working Depth	5 in. max.	5 in. max.	6 in. max.	6 in. max.	6 in. max.	7 in. max.	7 in. max.		
Total Width	45 in.	53 in.	55 in.	63 in.	71 in.	71 in.	79 in.		
Total Length	19 in.	19 in.	28 in.	28 in.	28 in.	29 in.	29 in.		
Total Height	30 in.	30 in.	36 in.	36 in.	36 in.	40 in.	40 in.		
PTO RPM	540	540	540	540	540	540	540		
Rotor RPM @ 540 PTO	214	214	201	201	201	227	227		
PTO Driveline Metric Size	Series 2	Series 2	Series 4	Series 4	Series 4	Series 5	Series 5		
PTO Driveline	Shear-Bolt	Shear-Bolt	Shear-Bolt	Shear-Bolt	Shear-Bolt	Slip-Clutch	Slip-Clutch		
Driveline Options	-	-	Slip-Clutch	Slip-Clutch	Slip-Clutch	-	-		
Rotor Drive	Oil bath ASA-60 Chain	Oil bath ASA-60 Chain	Oil bath ASA-80 Chain	Oil bath ASA-80 Chain	Oil bath ASA-80 Chain	Oil bath ASA-100 Chain	Oil bath ASA-100 Chain		
Depth Adjust.	Skid Shoes	Skid Shoes	Skid Shoes	Skid Shoes	Skid Shoes	Skid Shoes	Skid Shoes		
Hitch - 3 pt.	Cat. I	Cat. I	Cat. I	Cat. I	Cat. I	Cat. I	Cat. I		
Offset	11 <sup>1</sup> / <sub>2</sub> " Total Gearbox & hitch move as 1 unit	11 <sup>1</sup> / <sub>2</sub> " Total Gearbox & hitch move as 1 unit	7 <sup>1</sup> / <sub>2</sub> " from center left or right	7 <sup>1</sup> / <sub>2</sub> " from center left or right	7 <sup>1</sup> / <sub>2</sub> " from center left or right	7 <sup>1</sup> / <sub>2</sub> " from center left or right	7 <sup>1</sup> / <sub>2</sub> " from center left or right		
No. of Blades Type	20 Curved	24 Curved	24 "L" Shaped	28 "L" Shaped	32 "L" Shaped	32 "L" Shaped	36 "L" Shaped		
Parking Stand (Stock No.)	-	-	Optional (# 320235)						
Shipping Weight	238 lb.	308 lb.	438 lb.	478 lb.	525 lb.	715 lb.	790 lb.		

# CHECKLIST

Inspect the tiller thoroughly after assembly to be certain it is set up properly. The following checklist is a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- h Check operator's manual and familiarize the operator with all sections of it.
- h Check that all safety shielding is in place.
- h Check all bolts to be sure they are tight or adjusted properly at hinged locations.
- h Check that all cotter pins are properly installed.
- h Check PTO driveline. Make sure it is the correct length to operate tiller with intended tractor.
- h Check that all lubrication points with grease fittings have been lubricated.
- h Check that blades have been properly installed. Check all blade bolts.
- h Check that chain drivebox is properly serviced and seals are not leaking.
- h Check shear bolt for proper grade and installation.
- h All safety signs (decals) in place and readable.
- h When the implement is transported on a road or highway at night or during the day, safety devices should be used for adequate warning to operators of other vehicles.

## IMPORTANT!

**Chain drivebox and gearbox was filled at factory. It must be checked before operating. Fill to proper level with SAE 90 oil. Failure to service will result in damage to chain drive, bearings, and gearbox.**

- U Keep children away from danger all day, every day.
- U Equip tractors with roll-over protection (ROPS) and keep all machinery guards in place.
- U Please work, drive, play, and live each day with care and concern for your safety and that of your family and fellow citizens.

# LIMITED WARRANTY



Farm Star warrants to the original purchaser of any new Rotary Tiller (Models T25, T40 and T55), that the equipment be free from defects in material and workmanship for a period of one (1) year for non-commercial, state, and municipalities. Use ninety (90) days for commercial use from date of retail sale.

Replacement or repair parts installed in the equipment covered by this warranty are warranted for ninety (90) days from the date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later.

Such parts shall be provided at no cost to the user during regular working hours. Farm Star reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

## **DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES**

Farm Star's obligation under this warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, including implied warranties of merchantability and fitness for a particular purpose and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Farm Star; duty; taxes; charges for normal service or adjustments; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery of equipment or parts resulting from acts beyond the control of Farm Star.

## **THIS WARRANTY SHALL NOT APPLY:**

1. To vendor items which carry their own warranties, such as hydraulic cylinders, tires, and tubes.
2. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
3. If parts not made or supplied by Farm Star have been used in connection with the unit, if, in sole judgement of Farm Star such use affects its performance, stability, or reliability.
4. If the unit has been altered or repaired outside of an authorized Farm Star dealership in a manner which, in the sole judgement of Farm Star affects its performance, stability or reliability.
5. To normal maintenance service and normal replacement items such as gearbox lubricant, hydraulic fluid, worn blades, or to normal deterioration of such things as belts and exterior finish, due to use or exposure.
6. To expendable or wear items such as teeth, chains, sprockets, belts, springs and other items that in the company's sole judgement is a wear item.

NO EMPLOYEE OR REPRESENTATIVE OF FARM STAR IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY FARM STAR'S SERVICE MANAGER, POST OFFICE BOX 100, LITCHFIELD, ILLINOIS 62056-0100.



# To the Owner/Operator/Dealer

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

## BEFORE YOU START!!

**Read the safety messages on the implement and shown in your manual.  
Observe the rules of safety and common sense!**



### THIS SYMBOL MEANS

- ATTENTION!
- BECOME ALERT!
- YOUR SAFETY IS INVOLVED!

THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY WARNING MESSAGES. CAREFULLY READ EACH WARNING MESSAGE THAT FOLLOWS. FAILURE TO UNDERSTAND AND OBEY A SAFETY WARNING, OR RECOGNIZE A SAFETY HAZARD, COULD RESULT IN AN INJURY OR DEATH TO YOU OR OTHERS AROUND YOU. THE OPERATOR IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF HIMSELF, AS WELL AS OTHERS, IN THE OPERATING AREA OF THE TRACTOR AND ATTACHED EQUIPMENT.

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## UNDERSTAND SIGNAL WORDS

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

**DANGER:** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

**WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

**CAUTION:** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or the manufacturer directly.

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## IMPORTANT SAFETY INFORMATION!

Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembly or operating, to acquaint yourself with the machines. It is the implement owner's responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating:

1. Reads and understands the operator's manuals.
2. Is instructed in safe and proper use.



The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using. If there is something in this manual you do not understand, ask your supervisor, or your dealer, to explain it to you.

## SAFETY INSTRUCTIONS (continued)



### EQUIPMENT SAFETY GUIDELINES

-  Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.
  
-  In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
  
-  Replace any CAUTION, WARNING, DANGER or instruction safety sign that is not readable or is missing. Location of such safety signs is indicated in this booklet.
  
-  Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
  
-  Review the safety instructions with all users annually.
  
-  This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**
  
-  To prevent injury or death, use a tractor equipped with a Roll-Over Protective System (ROPS). Do not paint over, remove or deface any safety signs or warning signs on your equipment. Observe all safety signs and practice the instruction on them.
  
-  Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**
  
-  Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
  
-  In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and Operation instruction in each of the appropriate sections of the Tractor and Implement Manuals. Pay close attention to the Safety Signs affixed to the Tractor and the Implement.

## SAFETY INSTRUCTIONS (continued)



### **SAFETY SIGNS**

-  Keep safety signs clean and legible at all times.
-  Replace safety signs that are missing or have become illegible.
-  Replaced parts that displayed a safety sign should also display the current sign.
-  Safety signs are available from your Distributor or Dealer Parts Department or the factory.

### **How to Install Safety Signs:**

-  Be sure that the installation area is clean and dry.
-  Be sure temperature is above 50°F (10°C).
-  Decide on the exact position before you remove the backing paper.
-  Remove the smallest portion of the split backing paper.
-  Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
-  Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
-  Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.



### **TIRE SAFETY**

-  Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.
-  Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
-  Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires.
-  Always order and install tires and wheels with appropriate capacity to meet or exceed the anticipated weight to be placed on the equipment.

## SAFETY INSTRUCTIONS (continued)



### **SAFETY TRAINING**



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.



In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.



It has been said, "The best safety device is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.



Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembly or operating, to acquaint yourself with the machines. It is the rotary tiller owner's responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating:

1. Reads and understands the operator's manuals.
2. Is instructed in safe and proper use.



Know your controls and how to stop tractor, engine, and tiller quickly in an emergency. Read this manual and the one provided with your tractor.



Train all new personnel and review instructions frequently with existing workers. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.



Do not allow children to operate this machine.

# SAFETY INSTRUCTIONS (continued)



## PREPARATION

-  Never operate the tractor and implement until you have read and completely understand this manual, the Tractor Operator's Manual, and each of the Safety Messages found on the safety signs on the tractor and implement.
  
-  Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the implement. Do not allow long hair, loose fitting clothing or jewelry to be around moving parts.
  
-  **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!**  
Tractors with or without Implement attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss. **NOTE:** Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.
  
-  Operate the implement only with a tractor equipped with an approved Roll-Over Protective System (ROPS). Always wear your seat belt on tractors equipped with a ROPS. Serious injury or even death could result from falling off the tractor ---particularly during a turnover when the operator could be pinned under the ROPS or the tractor.
  
-  Clear area to be tilled of stones, branches or other debris that could become entangled in the tines or be thrown, causing injury or damage.
  
-  Operate only in daylight or good artificial light.
  
-  Ensure implement is properly mounted, adjusted and in good operating condition.
  
-  Make sure driveline spring-activated locking pin or balls operate freely and are seated firmly in tractor PTO stub shaft groove.
  
-  Ensure that all safety shielding and safety signs are properly installed and in good condition.
  
-  Check that the PTO driveline does not contact the swinging drawbar of the tractor. The swinging drawbar may have to be removed on some tractors. Damage to the driveline could make it unsafe to operate.

## SAFETY INSTRUCTIONS (continued)



### **STARTING AND STOPPING SAFETY**



Be certain the tractor is in neutral or park position before starting engine.



Do not leave the tractor or the implement unattended with the engine running.



Rotary Tiller operating power is supplied from tractor PTO. Refer to your tractor manual for PTO engagement and disengagement instructions. Always operate the PTO in the 540 rpm range. Know how to stop tractor and tiller quickly in case of an emergency.



Tiller should be lifted off the ground before engaging PTO and be sure that no one is near the machine. When engaging PTO, the RPM should always be low.



Never engage PTO drive with the tiller in the fully raised position. Lower tiller to within 3" to 4" off ground then engage PTO. Failure to do so can cause damage to the tiller pTO driveline. This damage could cause the driveline to come apart causing possible injury or death.



When raising tiller with the 3 point hitch, check that the PTO driveline does not touch the front crossmember of the tiller.



Always stop the tractor, set brake, shut off the tractor engine, remove the ignition key, and lower implement to the ground before dismounting tractor. Never leave equipment unattended with the tractor running.



Check the tractor master shield over the PTO stub shaft. Make sure it is in good condition and fastened securely to the tractor. Purchase a new shield if old shield is damaged or missing. (You may have to use a tractor salvage yard for replacement parts on older tractors.)



Take all possible precautions when leaving unit unattended: Disengage PTO, set parking brake, stop engine and remove key from ignition. Park in level area.



### **OPERATIONAL SAFETY**



The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using. If there is something in this manual you do not understand, ask your supervisor, or your dealer, to explain it to you.



Most accidents occur because of neglect or carelessness. Keep all helpers and bystanders at least one hundred feet from an operating rotary tiller. Only properly trained people should operate this machine.



Never place hands or feet under tiller with tractor engine running or before you are sure all motion has stopped. Stay clear of all moving parts.



Do not reach or place yourself under equipment until it is blocked securely.

## SAFETY INSTRUCTIONS (continued)



### OPERATIONAL SAFETY (continued)

-  Do not allow riders on the rotary tiller or tractor at any time. There is no safe place for any riders.
-  Disengage power takeoff (PTO) and place transmission into neutral before attempting to start engine.
-  Install and secure all guards and shields before starting or operating.
-  Keep hands, feet, hair, and clothing away from moving parts.
-  This rotary tiller is designed for use only on tractors with 540 RPM power takeoff.
-  Pick up all rocks and other debris before tilling. Enter new areas carefully. Never assume an area is clear.  
**Always Check!**
-  Stop tiller and tractor immediately upon striking an obstruction. Turn engine off, remove key, inspect and repair any damage before resuming operation.
-  Use extreme care and maintain minimum ground speed when transporting on hillside, over rough ground and when operating close to ditches or fences. Be careful when turning sharp corners.
-  Avoid sudden starts and stops while traveling up or downhill.
-  Always cut down slopes; never across the face. Avoid operation on steep slopes. Slow down on sharp turns and slopes to prevent tipping and/or loss of control. Avoid slopes when surface is wet, slippery grass or soil.
-  Never attempt to check or adjust chain tension while implement is operating. Always stop it before this operation.
-  Never operate tiller in fully raised transport position. Disengage the PTO when raised for transport or backing up. The tractor's 3 point hitch lift height should be adjusted so that the tiller tines are not more than 14 inches off the ground to prevent damage to the PTO driveline joints. PTO driveline joints cannot operate at sharp angles.
-  If tiller become clogged, shut off engine, disengage PTO, and set brake or place in park before cleaning.
-  Inspect the entire machine periodically as indicated in the Maintenance Section of this manual. Look for loose fasteners, worn or broken parts, and worn PTO driveline joints and/or shields. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order.

## SAFETY INSTRUCTIONS (continued)



### TRANSPORT SAFETY

-  Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
-  The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
-  When driving the tractor and equipment on the road or highway under 20 mph (32 kph) at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.
-  Always be sure the implement is in the proper raised position for transport.
-  Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.
-  Plan your route to avoid heavy traffic.
-  Always install transport locks, pins or brackets before transporting.
-  Do not drink and drive!
-  Watch for traffic when operating near or crossing roadways.
-  Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces, and loose gravel.
-  Use extreme care and maintain minimum ground speed when transporting on hillside, over rough ground and when operating close to ditches or fences. Be careful when turning sharp corners.
-  Never allow riders on either tractor or implement. Falling off can kill.
-  Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
-  Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
-  Always disengage PTO before driving the tractor to transport the implement from one place to another.

## SAFETY INSTRUCTIONS (continued)



### MAINTENANCE SAFETY

-  Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
  
-  Follow good shop practices.
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for the job at hand.
  
-  Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
  
-  Before working on this machine, drive to a level area, disengage the PTO, lower implement (or if working underneath, raise and block securely), shut off the engine, set the brakes, and remove the ignition keys.
  
-  Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
  
-  Never work under equipment unless it is blocked securely. Never depend on hydraulic system to keep implement in raised position.
  
-  Keep all persons away from operator control area while performing adjustments, service, or maintenance.
  
-  Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance.
  
-  Periodically tighten all bolts, nuts and screws and check that all cotter pins are properly installed to ensure unit is in a safe condition.
  
-  When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.
  
-  Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. If injured by escaping hydraulic fluid, see a doctor at once. Gangrene and death can result. Without immediate medical treatment, serious infection and reactions can occur.

## SAFETY INSTRUCTIONS (continued)



### **MAINTENANCE SAFETY (continued)**



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



Check to ensure all safety signs are installed and in good condition. (See safety sign section for location drawing.)



Never replace hex bolts with less than grade five bolts unless otherwise specified, i.e. shear bolts. Refer to bolt torque chart for head identification marking.



Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.



If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.



A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



### **STORAGE SAFETY**



Following operation, or when unhooking, stop the tractor, set the brakes, disengage the PTO, shut off the engine and remove the ignition keys.



Store the unit in an area away from human activity.



Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.



Do not permit children to play on or around the stored unit.



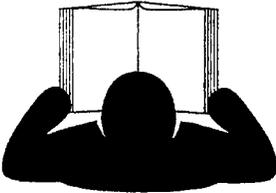
Make sure all parked machines are on a hard, level surface and engage all safety devices.



If blocking is used, make sure it is solid and secure before leaving area.

# SAFETY SIGNS

72.0291.00



**! WARNING**

To prevent Serious Injury or Death

- Avoid unsafe operation or maintenance.
- Do not operate or work on this machine without reading and understanding the operator's manual.
- If manual is lost, contact your nearest dealer for a new manual.

101170 (GB)

**! DANGER**



**ROTATING DRIVELINE CONTACT CAN CAUSE DEATH  
KEEP AWAY!**

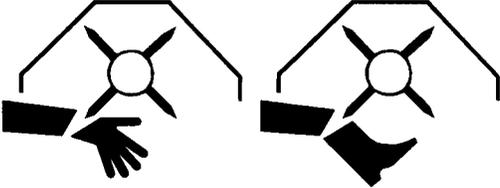
Do not operate without -

- All driveline, tractor and equipment shields in place.
- Drivelines securely attached at both ends.
- Driveline shields that turn freely on driveline.

101103 SW101

72.0288.00

**! DANGER**



**ROTATING BLADE HAZARD  
KEEP AWAY**

101171 (GB)

**! WARNING**

**540 RPM SPEED RANGE ONLY**

**HIGHER PTO SPEEDS CAN CAUSE PERSONAL INJURY AND EQUIPMENT FAILURE**

101101

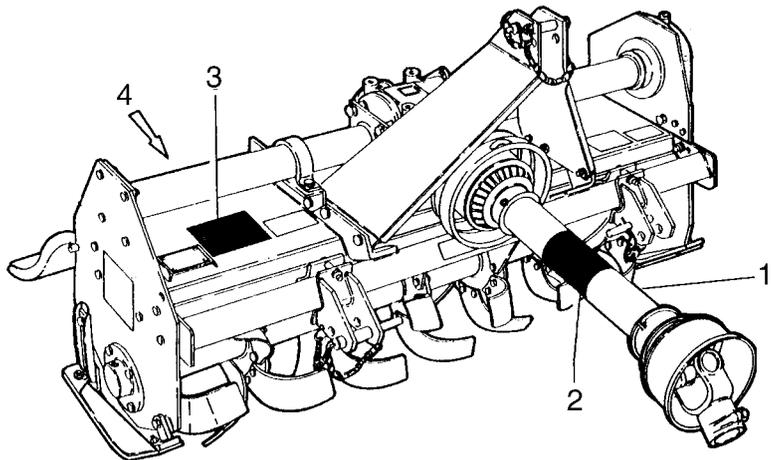


## SAFETY SIGN LOCATIONS

The types of Safety Sign and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various Safety Signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

### SAFETY SIGN LOCATIONS

NO.	PART NO.	DESCRIPTION
1	101101	Warning (540 RPM)
2	101103	Danger (Keep Away)
3	101170	Warning (Prevent Injury)
4	101171	Danger (Rotating Blades)



**REMEMBER:** If Safety Signs have been damaged, removed, become illegible or parts replaced without Signs, new Safety Signs must be applied. New Safety Signs are available from your authorized distributor or factory.

# INSTRUCTIONS

## TRACTOR REQUIREMENTS AND PREPARATION

The Rotary Tillers require a category I 3-pt. hitch tractor from 15 to 55 horsepower depending on the specific tiller model (see chart – page 2). The tractor must be equipped with a 540 rpm PTO (power takeoff) in good working condition.

It is recommended that only tractors with wide front axles be used with the tiller. Tricycle front wheel arrangements are inherently unstable and tractor roll-over accidents are more likely to occur.

The tractor also needs lift arm stabilizer bars or sway blocks to control side movement of the tiller.

Check the tractor's 3-pt. hydraulic lift system. Refer to your tractor operator's manual or dealer for any adjustments necessary to put the hydraulic system in good working order. (I&T shop manuals will list most specifications and adjustment instructions - available from most farm equipment dealers.)

Be sure tires and rims are in good condition. Inflate tires to the proper recommended air pressure.

Check the tractor master shield over the PTO stub shaft. Make sure it is in good condition and fastened securely to the tractor. Purchase a new shield if old shield is damaged or missing. (You may have to use a tractor salvage yard for replacement parts on older tractors.)

It is recommended that a ROPS (Roll-Over Protection Structure) and a seat belt be installed on all tractors. Contact your local dealer for a ROPS for your tractor.

### CAUTION!

**Be sure your tractor is in good condition. Read all the safety precautions and make sure all tractor operators are familiar with the safety rules of operation.**

The operator is responsible for the safe operation of this tiller. The operator must be properly trained. Operators should be familiar with the tiller and tractor and all safety practices before starting operation. Read the safety rules and safety signs on pages 6-15.

### WARNING!

**A heavy load can cause instability in driving a tractor. Make sure the front of the tractor is properly counterbalanced with weights. Always drive slowly - especially around turns. An unstable tractor could steer badly and possibly tip over, causing injury or death.**

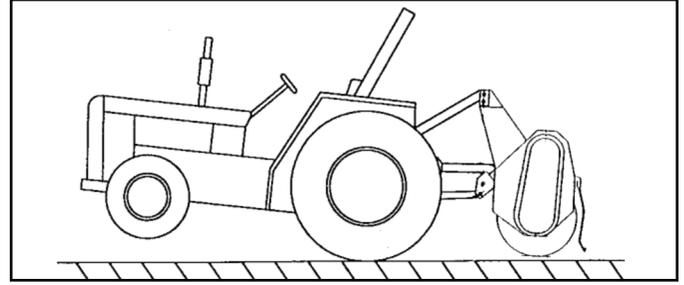


Figure 1. Tractor Stability

### WARNING!

**When using 3 pt. hitch equipment, a minimum 20% of tractor and equipment weight must be on tractor front wheels. Without this weight, tractor could tip up, causing possible loss of control and possible personal injury or death. The weight may be attained with a front end loader, front wheel weights, ballast in tires or front tractor weights. When attaining a minimum 20% of tractor and equipment weight on the front wheels, you must not exceed the ROPS weight certification. Weigh the tractor and equipment. DO NOT GUESS OR ESTIMATE!**

## ASSEMBLY

### CAUTION!

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

This unit is shipped almost completely assembled. Carefully follow instructions for final assembly.

Before attempting assembly check the following items. Having all the needed parts and equipment readily at hand will speed up your assembly task and will make the job as safe as possible.

- Check for fasteners and pins that were shipped with the tiller. All hardware coming from the factory has been installed in the location where it will be used. If a part or fastener is temporarily removed for assembly reasons, remember where it goes. Keep the parts separated.
- Have a fork lift or loader along with chains and safety stands that are sized for the job ready for the assembly task.
- Have a minimum of 2 people at hand during assembly.
- Check to see that all nuts are tightened. Refer to the Torque Values Chart on page 25.

# INSTRUCTIONS (continued)

## ASSEMBLY (continued)

Refer to the Safety Precautions and Warnings on the front cover and in the Safety Section of this manual prior to working on the machine.

Assemble the top hitch "A" frame parts. Refer to the correct "exploded view" drawing in the back section of this manual for proper part position. It is suggested that all the parts be assembled with the bolts loose until all parts are together and then go back and tighten all bolts.

On the T40 and T55 Series Models, assemble the two lower hitch pull brackets. Position these with each bracket 13 inches from the center of the machine to the inside of the pull bracket. (Category I hitch lift arms should be 26 inches apart.)

On the T40 and T55 Series Models, if you have purchased the optional parking stand, it is suggested that you install it at this time to make it easier to work on the machine. Make sure it will not interfere with the pull bracket or with the removal or insertion of the pull pin.

**Do NOT assemble the PTO driveline at this time.**

## TRACTOR HOOK-UP



**Do not stand between the tractor and the implement during hitching.**

1. When using tractors with multi-speed PTO, be certain PTO is set for 540 rpm.
  2. Back tractor up to tiller until lower 3-point links are aligned with hitch clevises on tiller. Always stop the tractor, set the brake, shut off the tractor engine, and remove the tractor key, before dismounting tractor.
  3. Secure the tractor's 3-point lower links to the lower hitch clevises using  $\frac{7}{8}$ " diameter hitch pins.
  4. Secure the tractor's top link to the tiller top hitch using a  $\frac{3}{4}$ " diameter hitch pin (supplied by customer). Adjust tractor top link in order to level the tiller.
  5. Adjust the tractor's 3-point hitch lift height so that the tiller tines are not lifted more than 14 inches off the ground to prevent damage to the driveline u-joints.
- Start the tractor engine and lift the machine from the ground about 12-14 inches. Now switch off the tractor engine.

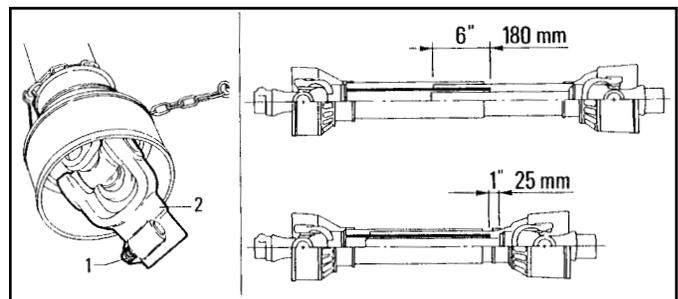
- Install the lift arm stabilizer arms or anti-sway blocks or anti-sway chains (depending on tractor make and model) to limit side sway of hitch. (Note: side to side oscillation of about 2 inches is recommended, but not more.)
- Level the machine at the sides by adjusting the tractor lift links.

The knives must be at the same distance from the ground on both sides of the implement.

- Mount the driveline, checking that it correctly meshes at both ends.
- Check that the driveline is the correct length Figure 2.

The minimum coupling length (overlap) must be no less than 180 mm (6 inches) in each work position.

Driveline travel must still be about 25 mm (1 inch) in the maximum coupling (overlap) position. See Figure 2.



**Figure 2**

Always couple the two end forks of the driveline and check that they are perfectly locked in place.

To achieve this condition, completely insert the latch pins and safety bolts Ref. #1 Figure 2 into the relative grooves in the PTO shafts on both the tractor and machine shafts.

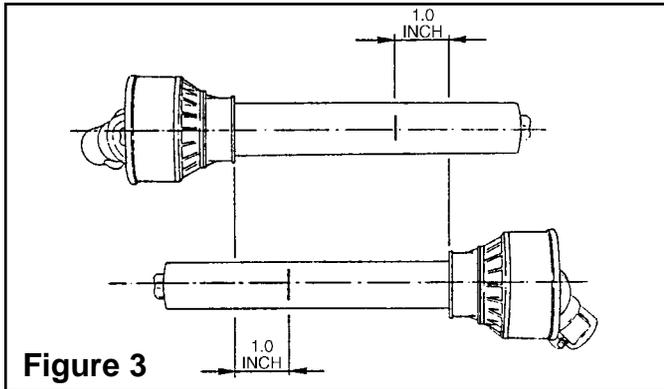
An unlocked shaft would slip out of position, causing notable mechanical damage and serious injury to anyone near.

If the driveline is too long, it should be shortened in the following way:

- Set the machine PTO input gearbox shaft at a minimum distance from the tractor PTO stub shaft; then brake the tractor and switch the engine off.
- Separate the two halves of the driveline. Install the female part into the tractor PTO and the male part on the machine PTO, checking that the position is correct by means of the latch pin or locking bolts (clutch models).

# INSTRUCTIONS (continued)

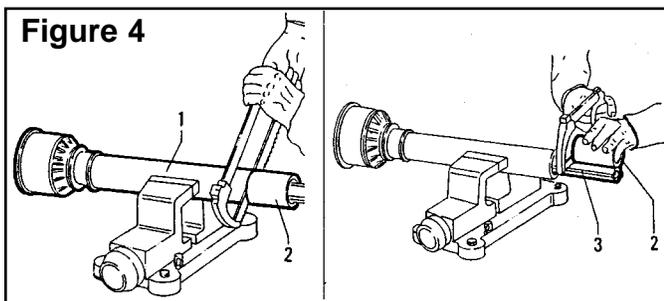
## ASSEMBLY (continued)



1. Place the two halves of the driveline together, keeping them parallel (see Figure 3). Using a felt-tip pen, matchmark the place where the two halves must be shortened, measuring 1.0 inch from the beginning of each half, as shown in Figure 3.

**Double check before making any cuts. Cut PTO drivelines cannot be returned.**

2. Raise and lower the mower to determine position with greatest distance between the PTO shaft and gearbox input shaft. Shut tractor off, leaving tiller in position of greatest distance between shafts. **SECURELY BLOCK TILLER IN POSITION.**
3. Hold driveline sections parallel to each other and check for **minimum 6" (15cm) overlap**. If driveline has been marked for cutting, overlap will be the distance between the two marks. If driveline has less than minimum overlap, **do not use**. Contact authorized Worksaver dealer.



4. If driveline must be cut to a shorter length, clamp driveline in a well padded vise to prevent damage to the shield. Cut off shield where marked. Using cut-off section of shield as a guide, cut shaft the same amount. (Figure 4.)

5. Repeat the procedure to the other driveline half. Remove all burrs and cuttings.

6. Apply multi-purpose grease to inside of outer (female) driveline section. Assemble driveline and install on tractor and tiller. Pull on each driveline section to be sure yokes lock into place. Make certain driveline shielding is in place and in good condition.



**When attaching PTO yoke to tractor PTO shaft, it is important that spring-activated locking pin or balls operate freely and are seated in groove on PTO shaft. A loose shaft could slip off and result in personal injury or damage to equipment.**

7. Carefully raise and lower the tiller and check to be sure the PTO assembly does not jam. If it does, cut equal amounts from each half of the PTO assembly.

Then raise the tractor lift very slowly, making sure that the front drive shaft shield does not hit the front of the tiller. If it does, damage will be done to the drive shaft shield and, if interference is bad enough, it WILL also damage the drive shaft itself.

**NOTE:** This type of damage is **NOT** covered under warranty, as it is totally under the control and the responsibility of the operator.

Use the lift control limiting stop on the tractor control lever to limit the upward travel of the lever so the lift cannot be raised high enough to cause contact between the drive shaft shield and front shielding. It is recommended that the tiller not be raised more than 14 inches off the ground with the PTO engaged.

8. Check the swinging drawbar of the tractor and make sure the PTO driveline assembly will not contact. The swinging drawbar can be moved forward on some tractors or it can be removed.

If the PTO driveline assembly contacts the swinging drawbar, damage will occur to the driveshaft shield and possibly the driveshaft itself. (NOT covered under warranty.)

# OPERATING INSTRUCTIONS

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## PRE-OPERATION CHECKLIST

---

(OWNER/OPERATOR RESPONSIBILITY)

- \_\_\_ Review and follow safety rules and safety signs on pages 5 through 15.
- \_\_\_ Check that tiller is properly and securely attached to tractor.
- \_\_\_ Make sure driveline spring-activated locking pin or locking balls operate freely and are seated firmly in tractor PTO spline groove.
- \_\_\_ Lubricate all grease fitting locations. Make sure PTO shaft slip joint is lubricated.
- \_\_\_ Check to be sure gear lube runs out the small check plug on side of gearbox and chaincase.
- \_\_\_ Check that all hardware is properly installed.
- \_\_\_ Check to ensure blades are sharp and secure and properly positioned.
- \_\_\_ Check that all shields and guards are properly installed and in good condition.
- \_\_\_ Check skid height, front to rear attitude and top link adjustment.
- \_\_\_ Place tractor PTO and transmission in neutral before starting engine.
- \_\_\_ Set tractor PTO gear select lever for 540 rpm operation.
- \_\_\_ Inspect area to be tilled and remove stones, branches or other hard objects that might be wrapped or thrown, causing injury or damage.
- \_\_\_ Check that no one enters the area of machine operation. Always work at a safe distance from roads, built-up areas, or populated places.
- \_\_\_ Know your controls and how to stop tractor, engine and PTO quickly in an emergency. READ THIS MANUAL AND THE ONE PROVIDED WITH YOUR TRACTOR.
- \_\_\_ To avoid accident or injury, do not allow anyone to operate this equipment without proper instructions. Any person who operates this equipment must be instructed in and be capable of the safe operation of the tractor, implement and all controls.

- \_\_\_ Check that PTO driveline shields are securely locked and clears the front of the tiller frame and the swinging drawbar.

**NOTE: This type of damage is not covered under warranty, as it is totally under the control and the responsibility of the operator.**

## OPERATION

---

During operation, the 3 pt. lift must always be fully lowered with the draft control and position devices disengaged so that they are unable to influence the work depth of the tiller.

This should only be regulated by means of the side skids on the machine itself.

Lower the 3 pt. hitch until the tiller tines are near the ground. With the tractor engine at a low speed, engage the PTO. Slowly increase the engine speed until the PTO 540 rpm speed is reached.

Then slowly lower the 3 pt. hitch and tiller into the ground. Shift tractor into forward gear and start tilling.

**NOTE:** Do not allow the tiller to drop violently on to the ground. Lower it slowly to allow the knives to gradually cut into the soil.

Violent impact would strongly stress all machine components and could cause serious damages.

At first, begin tilling at a slow forward speed and then shift up until the desired result and forward speed is achieved.

Optimum working forward speeds will usually be between 1 to 2 mph. The type of soil, soil moisture, amount of crop residue or crop growth and depth of operation are all factors that will determine proper forward speed.

Remember to shift down to a lower forward gear if speed is too fast. Maintain engine speed so PTO is operating at 540 rpm.

## SHEAR BOLT DRIVELINE

---

### T25 MODELS

Tiller drive components are protected from shock loads by a M6 shear bolt.

If the shear bolt fails, replace with a M6 x 40 long hex bolt (Gr. 8.8 part number 320217). Torque nut to 7-9 foot pounds. On a temporary basis, you can use a 1/4" - 20 NC x 1 1/2" long grade 5 bolt. This is softer than the 320217 bolt and will shear easier.

Shear bolt failure can be avoided by engaging the PTO slowly at low engine rpm and rotor above ground.

# OPERATING INSTRUCTIONS (continued)

## SHEAR BOLT DRIVELINE

---

### SOME T40 MODELS

Tiller drive components are protected from shock loads by a M8 shear bolt (part number 320233).

If the shear bolt shears, replace with part number 320233. On a temporary basis, you can use a  $\frac{5}{16}$ " – 18 NC x 2" long grade 5 bolt. Torque nut to 7-9 foot pounds.

Shear bolt failure can be avoided by engaging the PTO slowly at low engine rpm and rotor above ground.

## SLIP CLUTCH DRIVELINE

---

### SOME T40 MODELS – ALL T55 MODELS

Tiller drive components are protected from shock loads by a 2-plate slip clutch.

The clutch should slip during operation to protect the tiller from excessive loads.

Prior to initial operation and after long periods of inactivity, the slip clutch should be serviced.

For instructions on slip clutch adjustment and service, check Owner Service section of this manual (page 22).

## GEARBOX & CHAINCASE GEAR LUBE

---

Before operating this unit check oil level. Add 80-90 EP Gear Lube to the gearbox and chaincase if needed. With the tiller in a level position, fill to the side inspection hole with a good 90 wt. gear lubricant. Check often and add lubricant if necessary.

## GENERAL SAFETY

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Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

It has been said, "The best safety device is an informed, careful operator". We ask you to be that kind of an operator.

Only qualified people familiar with this manual should operate this machine. Operator should wear hard hat, safety glasses, and safety shoes. It is recommended that tractor be equipped with Roll-Over Protective

System (ROPS) and a seat belt be used. Before beginning operation, clear work area of objects that may be picked up and thrown. Check for ditches, stumps, holes, or other obstacles that could upset tractor or damage tiller. Always turn off tractor engine, set parking brake, lower tiller to ground before dismounting tractor.

The designed and tested safety of this machine depends on it being operated within the limitations as explained in this manual. Be familiar with and follow all safety rules in the manual, on the mower and on the tractor.

The safe operation of this machine is the responsibility of the owner/operator. The operator should be familiar with the mower and tractor and all safety practices before starting operation. Read the safety rules on pages 5 thru 14.



**Do not operate the PTO at other than the rated 540 RPM. Excessive speeds can cause breakage, thrown objects, and potential injury.**

## ADJUSTING FOR WORK

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Always be careful to check that the power rating of the tractor used to tow the implement does not exceed the maximum power rating for your model tiller. Using too large a tractor can cause damage to the tiller and voids the warranty.



▲ **Lower tiller to ground or block securely, turn tractor engine off, remove key and disconnect tiller driveline from tractor PTO before performing any service or maintenance.**

▲ **Before working underneath, raise 3-pt. hitch to highest position and block tiller securely. Hydraulic system leakdown and failure of mechanical or hydraulic system can cause equipment to drop.**

▲ **Keep all persons away from operator control area while performing adjustments, service or maintenance.**

The tilling depth is established by the two side skids on the tiller. Lower the skids for a shallower work depth or raise them for a deeper work depth. Tighten all bolts after adjusting the skids. Make sure both sides are the same height.

# OPERATING INSTRUCTIONS (continued)

The slower the machine advances when tilling, the more soil will be crumbled.

Always raise the tiller from the ground when turning and when reversing.



**Do not reverse when tilling. If it is necessary, disengage the PTO drive, lift the implement from the soil and make sure the area to the rear is clear before backing.**

**Never lift the tiller more than 14 inches from the ground with the PTO engaged or the driveline could break and cause injury.**

## GENERAL NOTES FOR FIELD OPERATIONS

Before beginning to till, the following instructions should be noted:

1. Be sure all tiller tines, bolts and nuts are tight.
2. Be certain all guards and shields are in place and secure.
3. Clear the area to be tilled of rocks, branches and other foreign objects.
4. Tall grass and weeds should be mowed before tilling.
5. Operate with 540 rpm PTO tractor.
6. Never engage tiller tines with tiller in full raised position. Lower tiller to within 3" to 4" off ground, then engage PTO. Failure to do so can cause damage to tiller PTO shaft.
7. At first begin tilling at a slow forward speed and shift up until the desired speed is achieved.
8. Tiller should be operated with the tiller deck level to the ground.
9. Tiller tines will cut better at a faster rotor speed than at reduced throttle.
10. Do not engage PTO at full throttle.
11. Tilling should not be done in wet conditions as soil will stick to tines.
12. After tilling the first 50 feet, stop and check to see that the tiller is in the ground.
13. Do not make sharp turns or attempt to back up while tiller is in the ground.
14. Do not engage PTO with machine in the fully raised or lowered position.
15. Periodically check foreign objects wrapped around the rotor shaft and remove them after disengaging PTO, turning off tractor, and removing ignition key.



**Stop tractor and attachment immediately upon striking an obstruction. Turn off engine, remove key, inspect and repair any damage before resuming operation.**

The rotary tiller is not generally suitable for work on stony soil. A few small stones are usually acceptable and will create no difficulties.

Working on excessively stony soils can damage the blades and the machine itself. Such use voids the warranty.

Small stones are from 1.5 inch to 2.2 inch diameter. Larger stones must be removed to prevent the tiller from being damaged.

## TILLER HITCH SIDESHIFT

On the T25 Models, the 3-point hitch and the gearbox can be side shifted to the left of center for various working conditions.

Loosen the bolts holding the hitch/gearbox frame to the main frame of the tiller. Slide to left (up to 11½ inches) until desired side shift is obtained, then tighten all bolts.

On the T40 and T55 Models, only the lower hitch pull brackets may be moved (up to 7½ inches) from center (left or right).

Loosen the bolts clamping each pull bracket and slide to the desired offset position. Remember, Category I lower hitch spacing should be 26 inches inside. Retighten all bolts.

**NOTE:** Make sure the PTO driveline is not angled more than 15° (see Figure 5). PTO driveline operation with more than 15° side angle will cause excessive wear on the driveline.

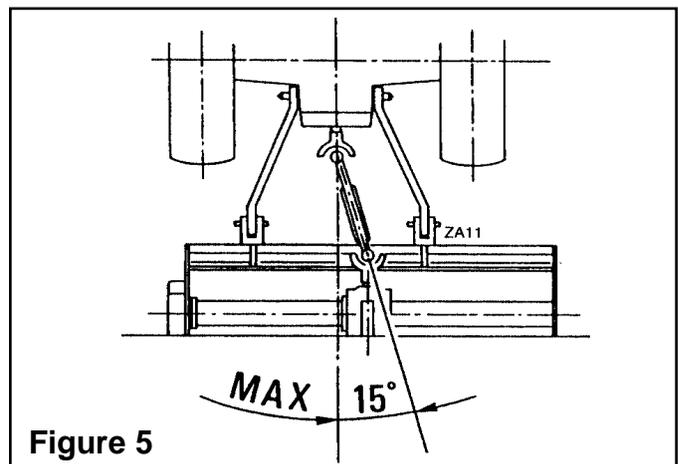


Figure 5

Refer to the Trouble Shooting section of this manual for suggested remedies to operational problems.

# OWNER SERVICE

## MAINTENANCE

### ! WARNING !

Before servicing the machine, disengage the PTO, engage the parking brake or place the transmission in "Park," shut off the tractor and remove the key.

Keep clear of rotating parts; stay on tractor seat until all motion has stopped.

Do not get under machine to make measurements or adjustments without securely blocking implement first.

The tiller should be disconnected from the tractor before maintenance service is performed. If work is required while the tiller is attached to the tractor, the tiller must be blocked securely. NEVER trust the tractors' hydraulic system.

If the machine is used in heavy duty conditions, the maintenance operations must be carried out more frequently.

Thoroughly clean the grease zerks and around oil fill plugs before servicing. Dirt mixed with lubricant will rapidly wear parts and destroy gears and bearings. Keep it clean.

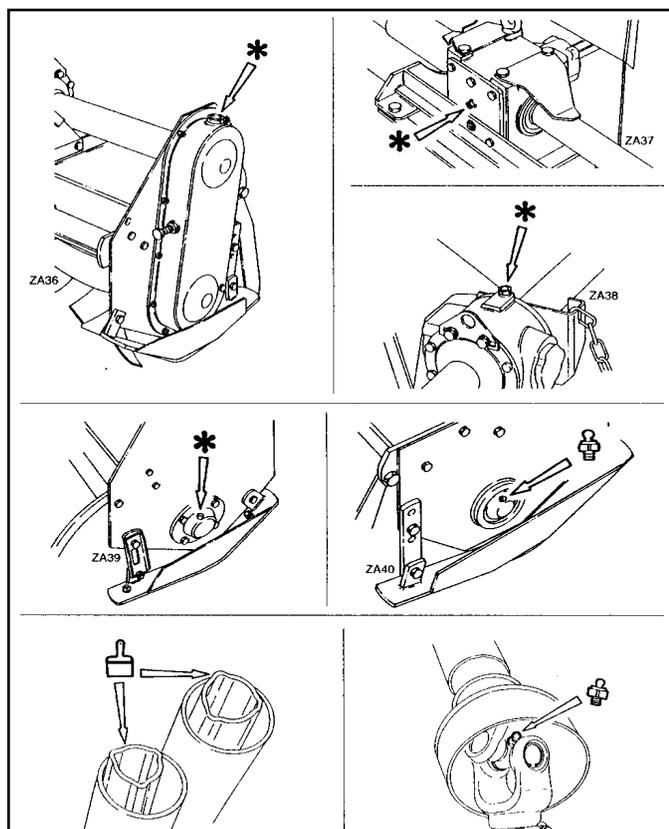


Figure 6 Lubricating and grease points

### ! ATTENTION !

Store the lubricant in a sheltered place, well away from children's reach.

Always read the recommendations given on the lubricant containers.

Prevent the lubricants from being splashed on the skin. Wash the effected part with water if this occurs.

Old lubricants must be handed over to authorized disposal companies in compliance with the anti-pollution provisions locally in force.

### EVERY 8 HOURS SERVICE

- Grease the right hand support of the rotor.
- Grease the "U" joints of the PTO driveline.
- Check the bolts that connect the blades to the rotor.

### EVERY 50 HOURS SERVICE

- Change the first oil fill in the gearbox and chaincase after the first 50 hours service. Following this, the oil should be changed after every 250 hours service.
- Check blades for wear. Replace if necessary.
- Disconnect, disassemble, and clean the PTO driveline. Cover the sliding parts with grease before re-assembly.
- Check that all bolts and nuts are tight.
- Check level of lubricant in gearbox and chaincase. Add proper lubricant if required.

**NOTE:** Oil level must be checked with tiller on flat surface. Check tension of transmission chain.

### EVERY 250 HOURS SERVICE

- Change oil in the gearbox and chaincase.

**NOTE:** Spilled oil should not be allowed to pollute the environment. Place a suitable receptacle under the machine in order to collect the oil and then consign this to a company authorized to dispose of such products.

### TIGHTENING TRANSMISSION CHAIN

The tension of the side transmission chain will need to be periodically checked. Proceed as follows:

- Remove the PTO driveline from the tractor and the input shaft of the tiller gearbox. The rotor assembly must turn free.
- Slacken off lock nut of chain tension idler bolt a few turns.
- Tighten idler bolt by hand as far as possible, meanwhile using the other hand or a foot to turn tiller rotor.

## OWNER SERVICE (continued)

### TIGHTENING TRANSMISSION CHAIN (CONTINUED)

- Having obtained the maximum possible tension with the hands alone, unscrew idler bolt one turn, then keep it in this position by tightening lock nut.
- Turn the rotor several times by hand to check that it rotates without encountering excessive resistance.

If the rotor jams in a certain point, repeat the chain tensioning procedure from the beginning.

### SLIP CLUTCH ADJUSTMENT

The slip clutch is designed to slip, protecting the gearbox and driveline, should the cutter strike an obstruction. The slip clutch is factory preset to the correct torque for protecting implement and tractor.

A new slip clutch, or one that has been in storage over the winter, may seize. Before operating, make sure it will slip by performing this operation:

- Make sure tractor engine is turned off and key is removed.
- Remove driveline from tractor PTO.
- Loosen the eight bolts to remove all tension from springs. (Until spring can be turned with fingers.)
- Hold clutch hub solid and turn shaft to make sure clutch slips.
- If clutch does not slip freely, disassemble and clean the faces of clutch plate, yoke and plate, and clutch hub.
- Reassemble clutch.

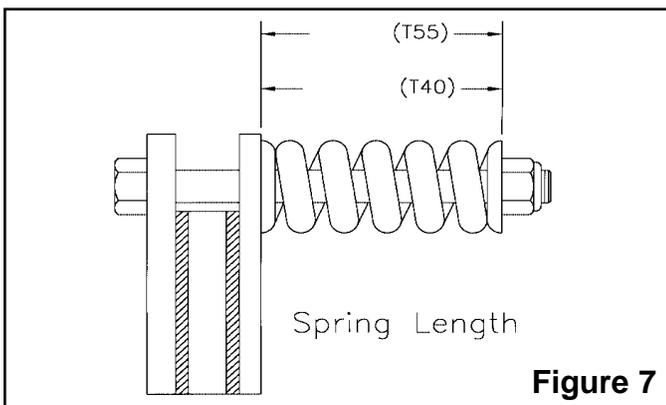


Figure 7

- Tighten each of the eight bolts evenly until the springs are compressed to the proper dimension for your tiller model as shown in Figure 7. T40 Model length is  $1\frac{3}{16}$ " (1.187) and T55 Model length is  $1\frac{5}{32}$ " (1.156).

If a clutch continues to slip when the springs are compressed to the proper length as shown in Figure 7, check friction disc for excessive wear. Discs are  $\frac{1}{8}$ " when new. Replace discs after  $\frac{1}{16}$ " wear. Minimum disc thickness is  $\frac{1}{16}$ ".

### FIELD ADJUSTMENT

If necessary, adjust nut on any spring that is unequal. Adjust all eight spring retaining nuts  $\frac{1}{3}$  of a turn (2 flats on a nut) and check clutch slippage. If further adjustment is necessary, do so in  $\frac{1}{3}$  turn increments. Adjust only to provide sufficient torque to prevent slippage under normal conditions. Occasional slippage is normal for drive-train protection. If satisfactory results cannot be obtained, clutch discs and springs may have to be replaced.

**NOTE:** Constant clutch slipping could be due to field conditions – check Troubleshooting section in manual.

### TINE REPLACEMENT

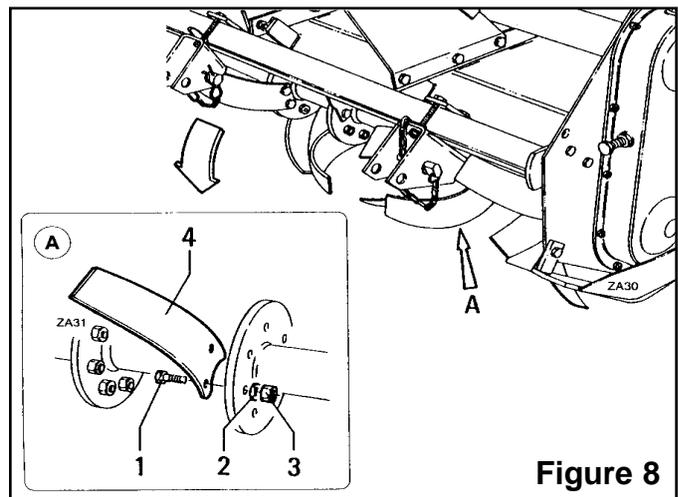


Figure 8

The hoe blades Ref. 4 Fig. 8 must be replaced if they are damaged, bent, worn, blunt or liable to break during work.

Remove the damaged hoe blades by unscrewing bolts (Ref. 1) and fitting new blades in their place.

Take great care to ensure that the new blades are mounted in the same position as the old ones.

If more than one hoe blade must be replaced, change one blade at a time to prevent possible positioning error.

**NOTE:** The sharp side of the blades must point in the same direction as that in which the rotor turns.

The bolts that fix the blades to the rotor flange must be mounted with the head of bolt (Ref. 1) on the blade side and with washer (Ref. 2) and nut (Ref. 3) on the flange side.



**Worn tines may be very sharp! Leather work gloves are recommended.**

**NOTE:** Replace tines with Worksaver replacement tines. The use of other tines could affect tiller operation.

## OWNER SERVICE (continued)

### TRANSPORTING

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**When traveling on public roads, whether at night or during the day, use accessory light and devices for adequate warnings to operators of other vehicles. Comply with all federal, state and local laws.**

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

1. When raising the tiller to the transport position, be sure that powershaft does not contact tractor or tiller. Adjust the tractor's 3-point hitch lift height so that the tiller Tines are not lifted more than 14 inches off the ground to prevent damage to the powershaft.  
If it is necessary to lift the unit higher to navigate rough terrain, always disconnect the PTO driveline from the tractor first.
2. Be sure to reduce tractor ground speed when turning; and, leave enough clearance so the tiller does not contact obstacles such as buildings, trees or fences.
3. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
4. When traveling over rough or hilly terrain, slow down and use extra care.
5. Read all the safety warnings in the front of the manual.

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**Equip tractors with roll-over protection (ROPS) and keep all machinery guards in place.**

**Keep children away from danger all day, every day . . .**

**Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.**

### TRANSPORTING

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- Never store equipment with fuel in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in an enclosure.
- Do not run engine indoors – exhaust gasses contain carbon monoxide, an odorless and deadly poison.
- At the end of the working season or when the tiller will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated on any of the moving parts.
- Check the tines for wear and replace if necessary. See Tine Replacement in this manual.
- Inspect the tiller for loose, damaged or worn parts and adjust or replace if needed.
- Lubricate as noted.
- Disconnect tiller driveshaft from tractor PTO.
- Collapse driveshaft as far as possible and store it to prevent ground contact. Place blocks under tiller side skids. Lower onto blocks, disconnect mower from tractor 3-point hitch, and carefully drive tractor away from tiller.
- Sand areas where paint is chipped or worn and repaint to prevent rust. Lubricate all pivot locations on tiller to prevent moisture damage during storage.
- Always store in a safe place away from children or livestock.

### DISMANTLING

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When the machine is no longer usable and must be dismantled, remember that it is almost completely made of ferrous material.

The only potentially polluting components on the machine are the lubricants. To prevent them from polluting the environment, spread a waterproof tarpaulin on the ground, position the machine on this and then drain out the lubricants which must be collected in suitable containers.

Now dismantle the machine, separating the components in the following way:

- Painted Parts
- Ferrous Parts
- Plastic Parts

Contact those companies that are legally authorized to dispose of such materials.

# PROPER TORQUE FOR FASTENERS

The charts below list the correct tightening torque for fasteners. When bolts are to be tightened or replaced, refer to the charts to determine the grade of bolt and the proper torque.

## BOLT CLASSIFICATION AND IDENTIFICATION CHART

INCH		METRIC	
SAE GRADE	BOLT HEAD MARKINGS	CLASS	BOLT HEAD MARKINGS
2		5.8	
5		8.8	
8		10.9	

Recommended torque for all Standard Unplated Nuts and Bolts, provided:

- A. Surface finish is oxide coated, oil quenched or bright.
- B. All thread surfaces are clean and lubricated with SAE-30 engine oil or equivalent.
- C. Joints are rigid. That is, no gaskets or compressible materials are used.
- D. When re-using nuts or bolts, use minimum torque values.

**NOTE:** Multiply the standard torque by:

- .65 when finished jam nuts are used.
- .70 when Molykote, white lead or similar mixtures are used as lubricants.
- .75 when phosphate coated and oiled bolts or nuts are used.
- .85 when cadmium or zinc dichromate bolts or nuts are used.
- .90 when hardened surfaces are used under the nut or bolt head (this applies to standard unplated hardware only).

## STANDARD TORQUE DATA FOR INCH NUTS AND BOLTS (Foot Pounds)

RECOMMENDED TORQUE IN FOOT POUNDS

Bolt Diameter	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4"	6	11	14
5/16"	13	21	25
3/8"	23	38	55
7/16"	37	55	80
1/2"	57	85	120
9/16"	82	125	180
5/8"	111	175	230
3/4"	200	300	440

## STANDARD TORQUE DATA FOR METRIC NUTS AND BOLTS (Foot Pounds)

RECOMMENDED TORQUE IN FOOT POUNDS

Bolt Diameter	 Class 5.8		 Class 8.8		 Class 10.9	
	Min.	Max.	Min.	Max.	Min.	Max.
6	5	6	8	9	11	13
7	9	10	14	15	19	21
8	13	14	20	23	28	31
10	25	28	40	45	54	61
12	43	49	70	78	95	106
14	70	78	111	125	151	170
16	108	121	172	194	233	263
18	149	168	238	268	324	364
20	210	237	336	378	458	515
22	287	323	458	616	624	702
24	363	409	581	654	791	890

# TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
<b>Gearbox overheating.</b>	1. Low on lubricant.	Fill to proper level.
	2. Improper type lubricant.	Replace with proper lubricant.
	3. Excessive trash build-up around gearbox.	Remove trash.
<b>Soil texture too coarse.</b>	1. Ground speed too fast.	Decrease ground speed.
	2. Leveling door too high.	Lower leveling door.
	3. PTO speed too slow.	Increase PTO speed.
	4. Soil too wet.	Wait until soil dries.
<b>Soil texture too fine.</b>	1. Ground speed too low.	Increase ground speed.
	2. Leveling door too low.	Raise leveling door.
	3. Shallow working depth.	Increase the depth by means of the skids.
<b>Work depth differs on the two side of the tiller.</b>	1. Side skids set at different height.	Adjust skids to same height.
<b>Tiller skips or leaves crop residue.</b>	1. Badly worn or bent tines.	Replace worn/bent tines.
	2. Ground speed too fast for conditions.	Reduce ground speed.
	3. Slip clutch slipping (if unit so equipped).	Reduce load.
<b>Tines balling up with soil.</b>	1. Worn or bent tines.	Replace tines.
	2. Tines incorrectly installed.	Install correctly.
	3. Rear leveling door too low.	Raise door.
	4. Tractor speed too fast.	Reduce ground speed.
	5. Soil too wet.	Wait until soil dries.
<b>Overheated side supports.</b>	1. Grass/soil build-up on ends of rotor.	Clean rotor.
	2. No lubrication on side support or side transmission.	Check oil in chaindrive box and lubricate outer side bearing.
<b>Tines clog frequently.</b>	1. Soil too wet.	Wait until soil dries.
	2. Excessive forward speed.	Reduce ground speed.
	3. Grass/weeds too tall to be worked.	Cut grass/weeds beforehand.

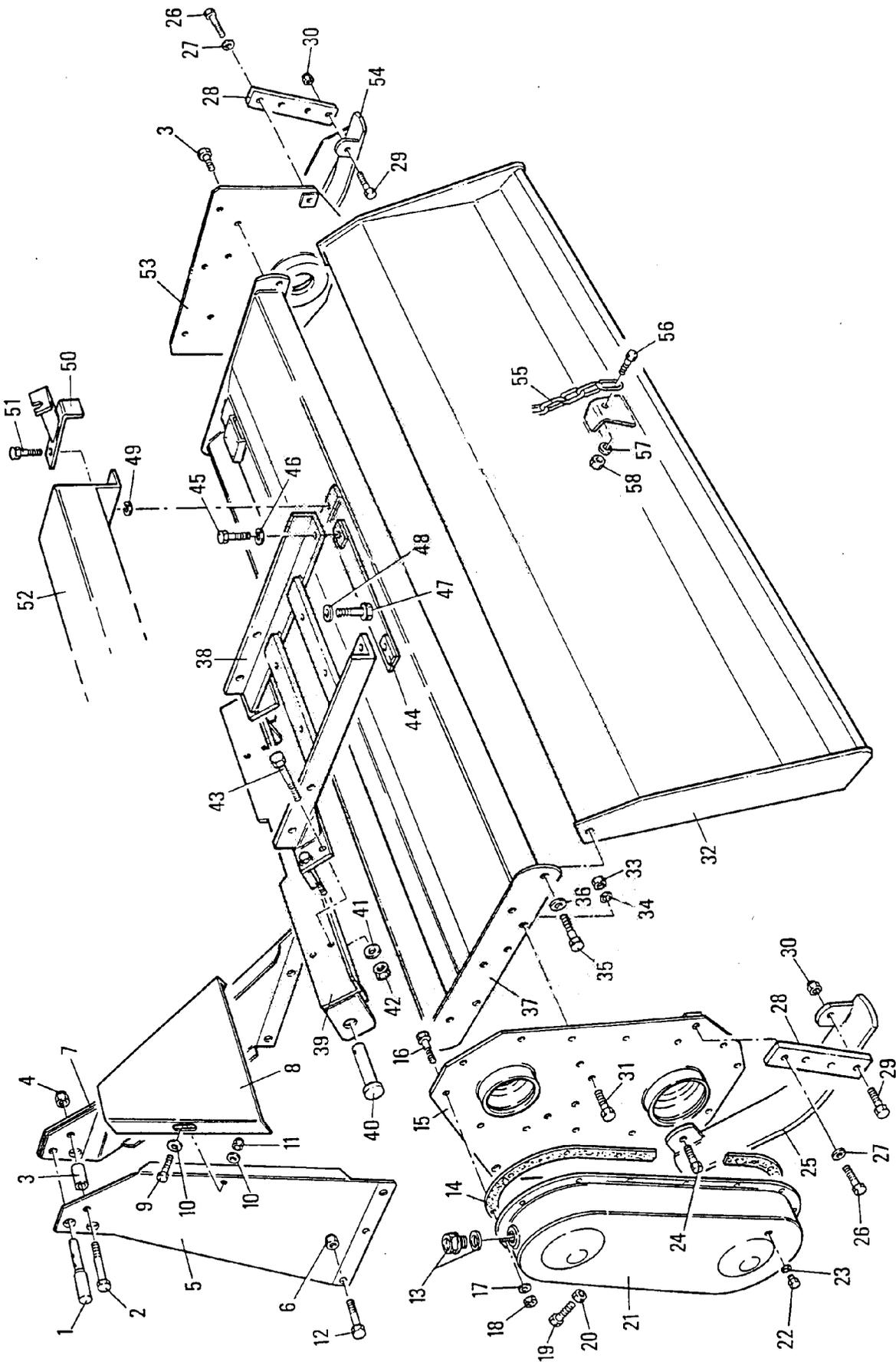
# TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
<b>Gearbox noisy.</b>	1. Rough gears.	Run in or change gears.
	2. Worn bearings.	Replace bearing.
	3. Low oil in gearbox.	Check level and add oil.
	4. May be normal on new machine.	Allow time for break-in.
<b>Gearbox leaking.</b>	1. Damaged oil seal.	Replace seal.
	2. Bent shaft.	Replace oil seal and shaft.
	3. Shaft rough in oil seal area.	Replace or repair shaft.
	4. Oil seal installed wrong.	Replace seal.
	5. Oil seal not sealing in the housing.	Replace seal or use a sealant on outside diameter of seal.
	6. Oil level too high.	Drain oil to proper level.
	7. Hole in gearbox.	Replace gearbox.
	8. Gasket damaged.	Replace gasket.
	9. Bolts loose.	Tighten bolts.
<b>Tillage depth insufficient or tiller will not penetrate ground.</b>	1. Skid shoes need adjusting.	Adjust skid shoes.
	2. Tines installed backwards.	Correctly re-mount tines with cutting edge toward direction of rotation.
	3. Tiller carried by tractor.	Lower tractor 3 point arms.
	4. Insufficient power.	Increase tractor engine RPM.
	5. Tall grass/weeds wrapped on rotor.	Clear rotor and tines. Cut, burn, or defoliate long material prior to tilling.
	6. Worn or bent tines.	Replace tines
	7. Ground too hard.	Set tiller for shallow penetration, then deepen progressively (make several trips). Wait for rain. Slow forward tractor speed.
	8. Tiller climbs out of ground and propels tractor forward.	Till at shallower depth and then deepen progressively. Tractor too small – use larger tractor or add weights.

# TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
<b>Tillage depth insufficient or tiller will not penetrate ground.</b> (CONTINUED)	9. Tiller at wrong attitude.	Adjust toplink of 3 point hitch to correct tiller attitude.
	10. Excessive forward speed.	Reduce ground speed.
<b>Machine makes intermittent clicking noise.</b>	1. Loose parts.	Check that all nuts and bolts are properly tightened.
	2. Chain damaged.	Replace damaged chain link.
	3. Gearbox gear tooth damaged.	Replace damaged gear.
<b>Excessive vibration and/or machine jumps over ground.</b>	1. Wrong PTO RPM.	Place PTO lever in 540 RPM position.
	2. Excessive trash wrapped on rotor.	Remove trash.
	3. Broken or worn blades.	Replace blades.
	4. Incorrectly mounted blade/blades with dull side cutting first (blades on backwards).	Correctly remount the blades.
	5. Damaged or bent main rotor.	Replace rotor shaft.
<b>PTO vibrates.</b>	1. Worn universal joint.	Replace universal joint.
	2. Machine lifted too high.	Lower machine and readjust tractor 3 point lift stop.
	3. Excessive trash wrapped on rotor.	Remove trash.
	4. PTO driveline bent.	Replace PTO driveline.
	5. PTO driveline hitting front of tiller or swinging drawbar.	Adjust machine lift height and/or remove drawbar.
<b>Rotor will not turn.</b>	1. PTO not engaged.	Engage PTO.
	2. Broken drive chain.	Repair drive chain.
	3. Driveline shearbolt sheared.	Replace shearbolt.
	4. Clutch slipping.	Reduce load (slow forward speed). Adjust clutch.
	5. Rock or stump wedged between tine and housing.	Remove material wrapped or wedged.

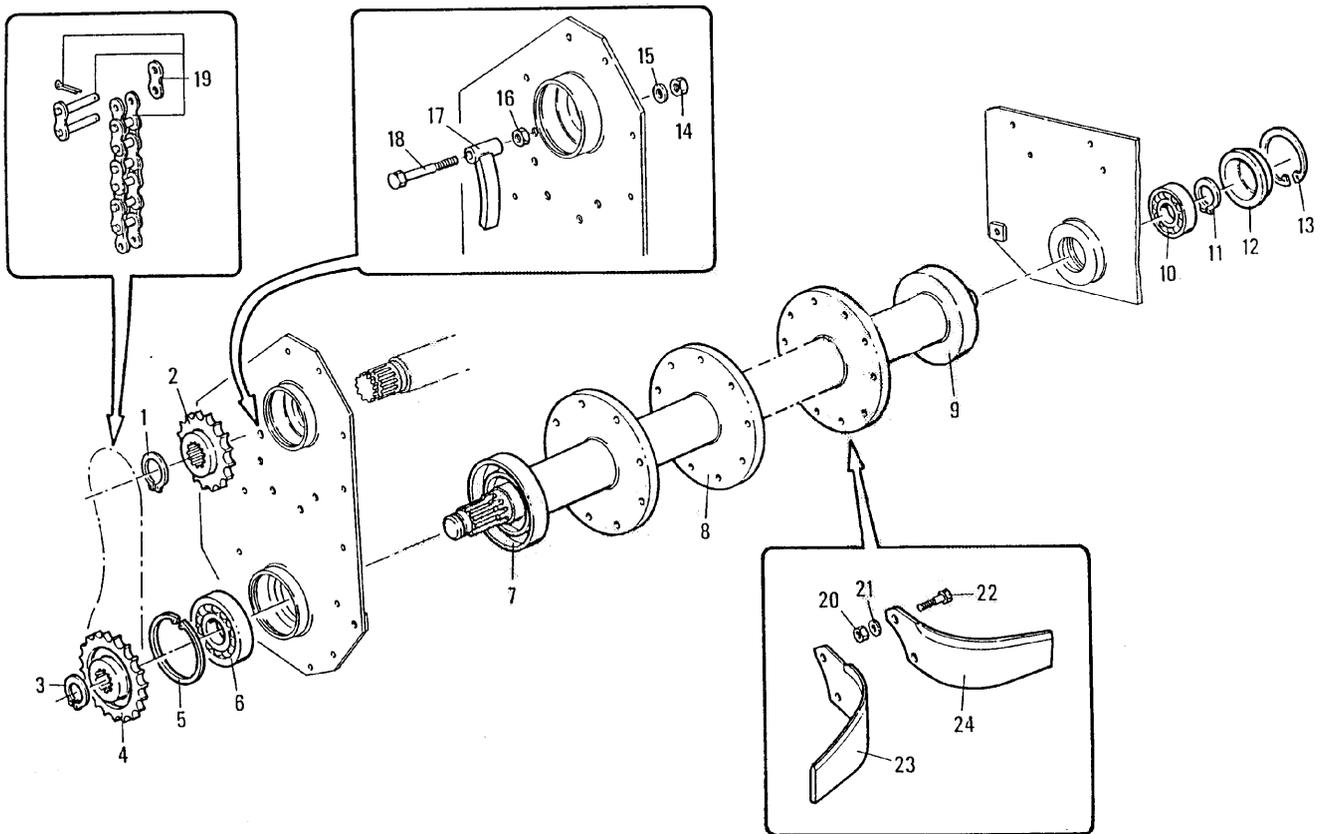
MODEL T25 MAIN FRAME  
PARTS VIEW



# MODEL T25 MAIN FRAME PARTS LIST

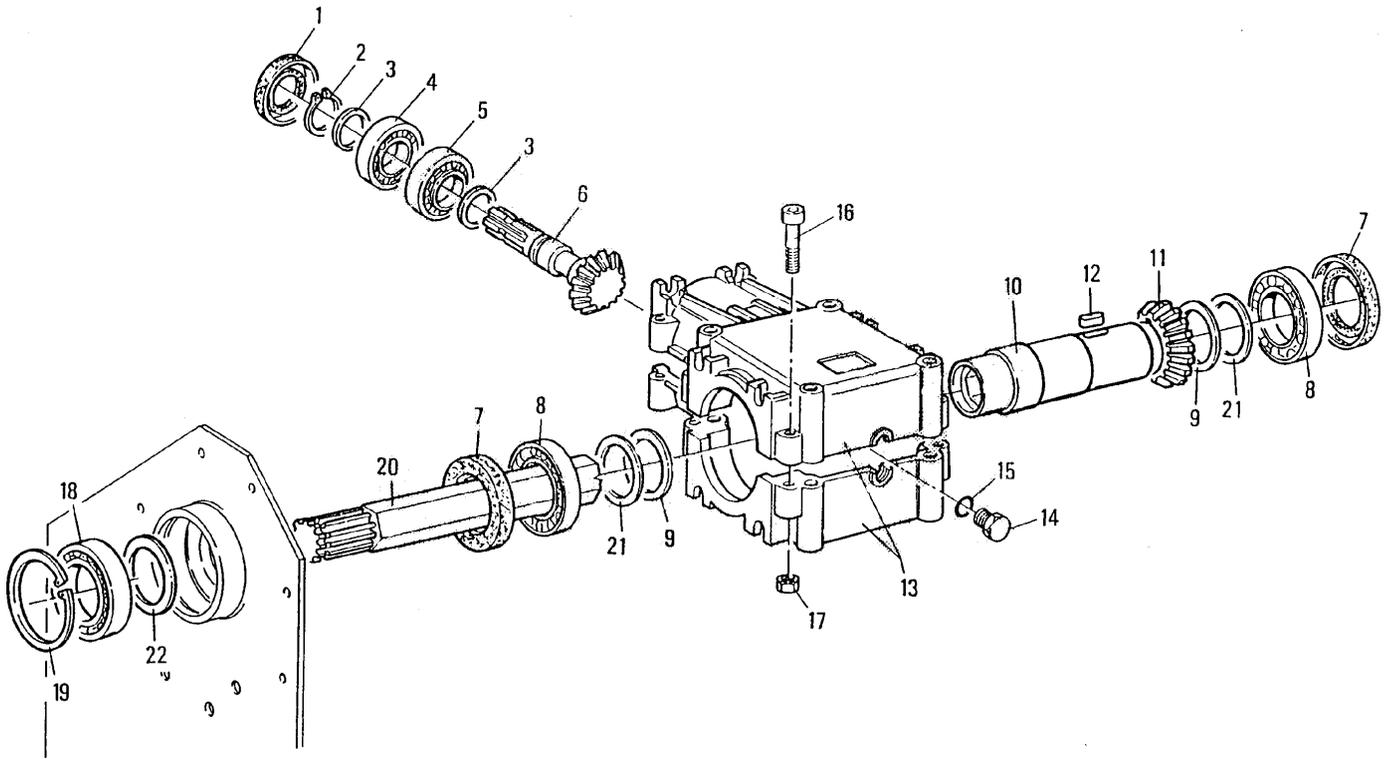
Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320306	Pin, Toplink	68062000	1
2	320307	Bolt, Hex M10 x 70	60023100	1
3	320308	Spacer	32004600	1
4	320309	Nut, M10 x 1.5 Lock	62010400	1
5	320310	Sideplate, L.H. "A" Frame	40091900	1
6	320309	Nut, M10 x 1.5 Lock	62010400	4
7	320311	Sideplate, R.H. "A" Frame	40092000	1
8	320312	Backplate, "A" Frame	39098000	1
9	320313	Bolt, M8 x 16	60015100	2
10	320314	Washer 8mm	61004700	4
11	320315	Nut, M8 x 1.25	62007200	2
12	320316	Bolt, M10 x 25	60017900	4
13	320317	Plug Oil Fill	68000500	1
14	320291	Gasket, Chaincase cover	80006600	1
15	320318	Endplate, Chain drive	40034601	1
16	320319	Bolt, M8 x 20	60000900	10
17	320320	Washer 8mm	61000600	10
18	320321	Nut, M8 x 1.25	62000700	10
19	320322	Bolt, M10 x 80	60030200	1
20	320323	Nut, M10 x 1.25	62000500	1
21	320290	Cover, Chaincase T25	40033000	1
22	320324	Bolt, Oilcheck M10 x 10	60001100	1
23	320325	Washer 10mm Aluminum	61000800	1
24	320303	Bolt, M10 x 25	60002300	2
25	320288	Skid, LH	40138602	1
26	320326	Bolt, M10 x 20	60004000	2
27	320305	Washer 10 mm	61000400	2
28	320327	Link, Depth Control	30030800	2
29	320303	Bolt, M10 x 25	60002300	2
30	320304	Nut, M10 x 1.5	62000500	2
31	320303	Bolt, M10 x 25	60002300	12
32	320328	Door, Rear Leveling T25-42	41061100	1
32	320329	Door, Rear Leveling T25-50	41061300	1
33	320304	Nut, M10 x 1.5	62000500	12
34	320305	Washer 10 mm	61000400	12
35	320330	Bolt, M10 x 45	60010700	2
36	320331	Washer 10 mm	61001500	2
37	320332	Frame, Main - T-25-42	41083200	1
37	320333	Frame, Main - T-25-50	41083400	1
38	320334	Bracket, Gearbox slide	40110200	1
39	320335	Bracket, Lower Hitch-Cat I	40138800	1
40	320336	Pin, Lower Hitch-Cat I	68062300	2
41	320305	Washer 10 mm	61000400	4
42	320304	Nut, M10 x 1.5	62000500	4
43	320337	Bolt, M10 x 70	60006800	2
44	320338	Bar, slide clamp	40069600	1
45	320303	Bolt, M10 x 25	60002300	2
46	320305	Washer 10mm	61000400	2
47	320339	Bolt, M10 x 120	60020700	4
48	320340	Washer 10mm	61004900	4
49	320305	Washer 10mm	61000400	2
50	320341	Hook, Chain adjust	40069300	1
51	320326	Bolt, M10 x 20	60004000	2
52	320342	Guard - T25-42	40107800	1
52	320343	Guard - T25-50	40107900	1
53	320344	Endplate, RH	40034501	1
54	320289	Skid, RH	40138701	1
55	320345	Chain, Door adjustment	68022800	1
56	320346	Bolt, M12 x 25	60020400	1
57	320347	Washer 12mm	61005000	1
58	320348	Nut, M12 x 1.75	62000600	1
NS	101101	Decal - Warning (540rpm)		1
NS	101103	Decal - Danger (Keep Away)		1
NS	101170	Decal - Warning (Prevent Injury)	72029100	1
NS	101171	Decal - Danger ( Rotating Blades)	72028800	1

# MODEL T25 ROTOR SHAFT & DRIVE PARTS VIEW & PARTS LIST



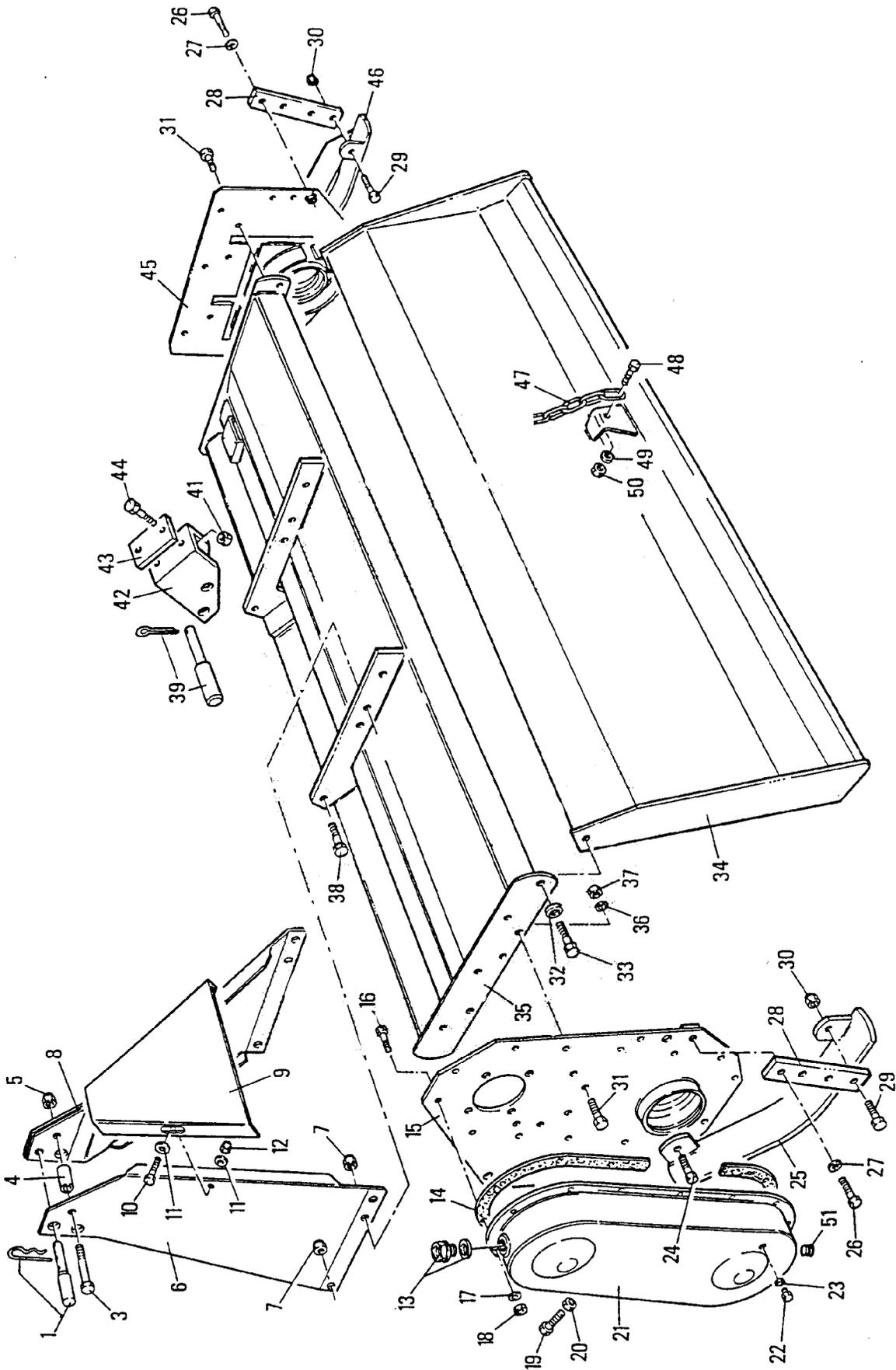
Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320369	Snap Ring 29mm E	63003000	1
2	320292	Sprocket, Top 11T - 3/4"	10014900	1
3	320370	Snap Ring 34mm E	63002400	1
4	320293	Sprocket, Lower 19T - 3/4"	10014801	1
5	320371	Snap Ring 72mm I	63000300	1
6	320295	Bearing Ball 6207 2RS	67006700	1
7	320372	Cap, LH Rotor Shaft	39083600	1
8	320373	Rotor Shaft - T-25-42	42009702	1
8	320374	Rotor Shaft - T-25-50	42009902	1
9	320375	Cap, RH Rotor Shaft	39083500	1
10	320296	Bearing Ball 6206 2RS	67006400	1
11	320376	Snap Ring 30mm E	63000400	1
12	320297	Cover, Rotor Shaft RH	39036500	1
13	320364	Snap Ring 62mm I	63005200	1
14	320377	Nut, M12 x 1.75	62001100	1
15	320275	Washer 12mm	61000500	1
16	320377	Nut, M12 x 1.75	62001100	1
17	320378	Chain Tightener	40033102	1
18	320379	Bolt, M12 x 50	60011600	1
19	320294	Chain ASA 60 3/4" 44MG	68018100	1
20	320304	Nut, M10 x 1.5	62000500	Var.
21	320305	Washer 10mm	61000400	Var.
22	320303	Bolt, M10 x 25	60002300	Var.
23	320302	Blade, Curved, LH T25	12014200	Var.
24	320300	Blade, Curved, RH T25	12014300	Var.

# MODEL T25 GEARBOX PARTS VIEW & PARTS LIST



Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320349	Seal Ring 35 x 62 x 7	66011600	1
2	320350	Snap Ring 35mm E	63000600	1
3	320351	Shim 45 x 35 x 06	68052300	2
4	320352	Bearing, Ball 6207	67003700	1
5	320353	Bearing, Ball 6307	67002100	1
6	320354	Shaft, Input	10012700	1
7	320355	Seal Ring 40 x 62 x 7	66008400	2
8	320267	Bearing, Ball 6208	67004400	2
9	320356	Spacer	32123000	2
10	320357	Tube	32065100	1
11	320358	Gear, Z19 M5	10022400	1
12	320359	Key 8 x 7 x 25	65001200	1
13	320360	Gearbox Case Half	03001400	2
14	320361	Plug	68051300	1
15	320362	Seal Ring OR 3062	66011100	1
16	320363	Bolt, TCEI 8 x 55 8.8	60020500	8
17	320321	Nut, M8 x 1.25	62000700	8
18	320296	Bearing, Ball 6206 2RS	67006400	1
19	320364	Snap Ring 62mm I	63005200	1
20	320365	Axle - Shaft T25-42	38011000	1
20	320366	Axle - Shaft T25-50	38011200	1
21	320367	Shim 70 x 50 x 0.5	68052200	2
22	320368	Shim	68011200	1

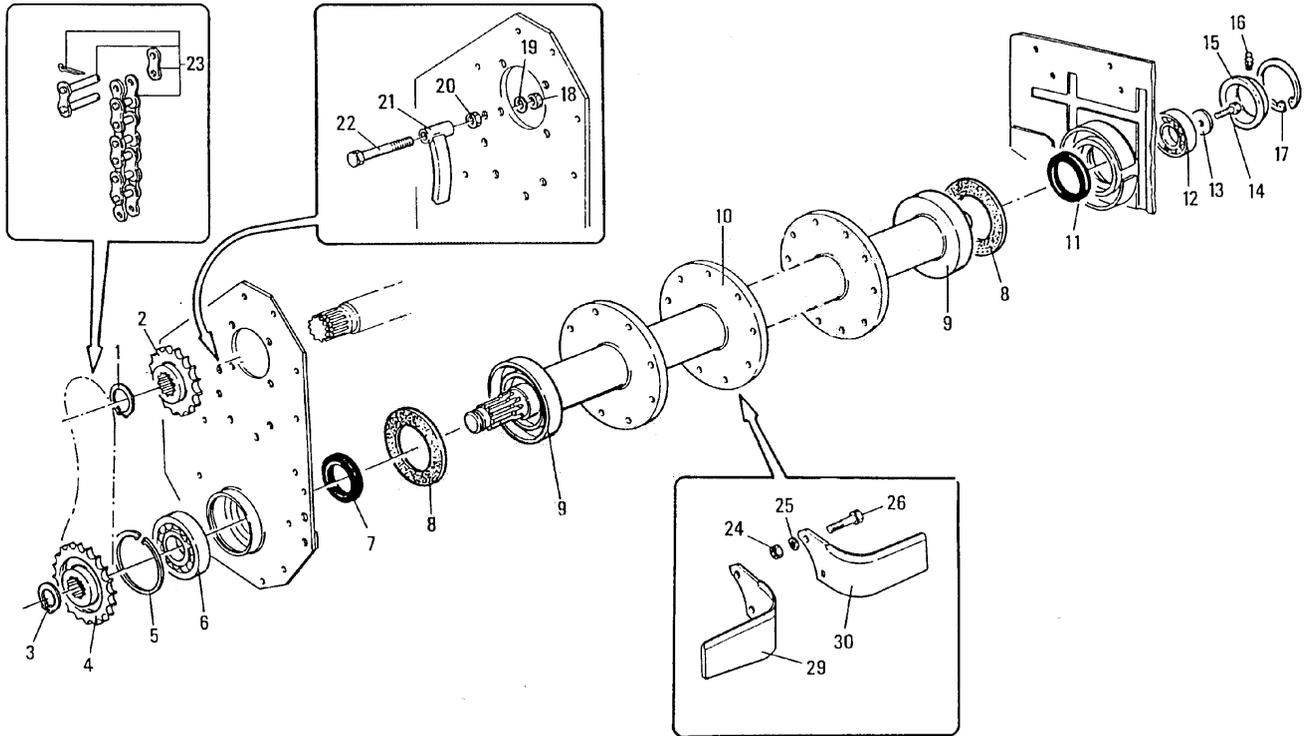
MODEL T40 MAIN FRAME  
PARTS VIEW



# MODEL T40 MAIN FRAME PARTS LIST

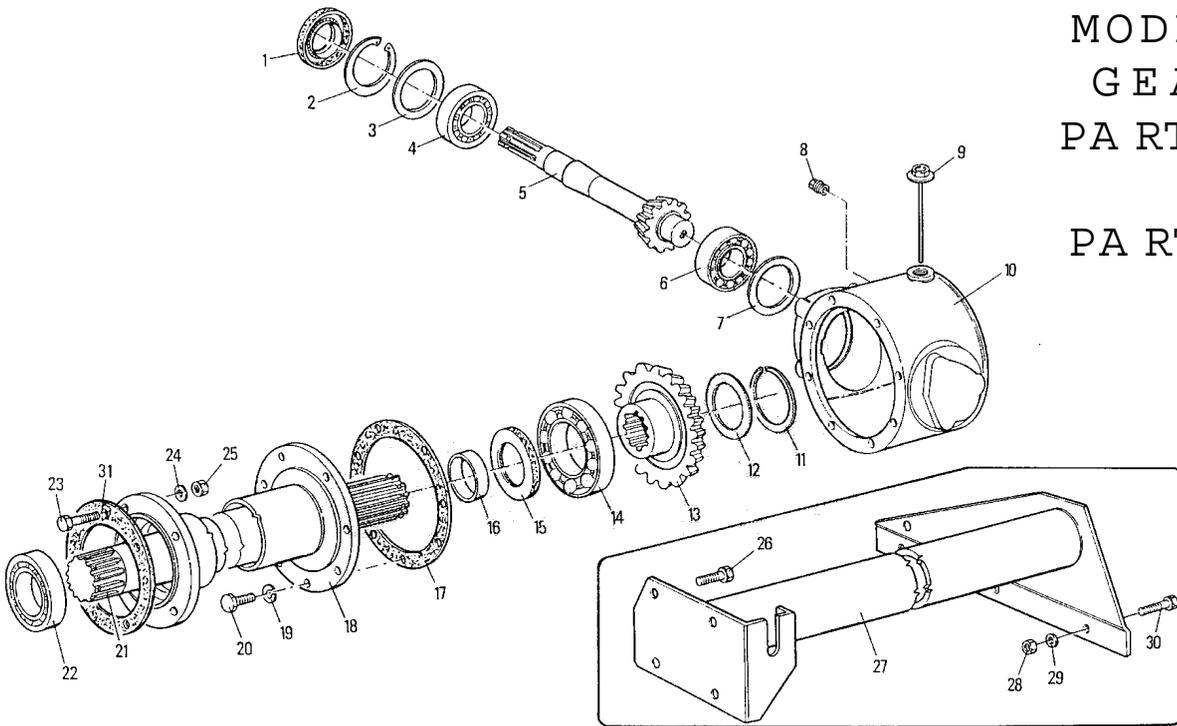
Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320306	Pin, Toplink	68062000	1
3	320380	Bolt, M12 x 80	60021500	1
4	320381	Spacer	32069101	1
5	320382	Nut, M12 x 1.75 Lock	62010600	1
6	320383	Sideplate, LH "A" Frame	40089400	1
7	380382	Nut, M12 x 1.75 Lock	62010600	6
8	320384	Sideplate RH "A" Frame	40089300	1
9	320385	Backplate, "A" Frame	39097900	1
10	320386	Bolt, M8 x 20	60022800	2
11	320314	Washer 8mm	61004700	4
12	320315	Nut, M8 x 1.25	62007200	2
13	320317	Plug, Oil Fill	68000500	1
14	320263	Gasket, Chaincase T40	80005601	1
15	320387	Endplate, Chaindrive T40-50	40086001	1
15	320387	Endplate, Chaindrive T40-58	40086001	1
15	320387	Endplate, Chaindrive T40-66	40086001	1
16	320319	Bolt, M8 x 20	60000900	10
17	320320	Washer 8mm	61000600	10
18	320321	Nut, M8 x 1.25	62000700	10
19	320388	Bolt, M14 x 70	60027400	1
20	320389	Nut, M14 x 2	62000100	1
21	320262	Cover, Chaincase T40	40010700	1
22	320324	Bolt, M10 x 10	60001100	1
23	320325	Washer 10mm Aluminum	61000800	1
24	320390	Bolt, M12 x 20 8.8	60002200	2
25	320260	Skid, LH T40	40002502	1
26	320391	Bolt, M12 x 25 8.8	60001400	2
27	320275	Washer 12mm	61000500	2
28	320392	Link, Depth Control	30001300	2
29	320391	Bolt, M12 x 25 8.8	60001400	2
30	320377	Nut, M12 x 1.75	62001100	2
31	320303	Bolt, M10 x 25 8.8	60002300	9
32	320393	Bolt, M14 x 50	60019300	2
33	320394	Washer 14mm	61004500	2
34	320395	Door, Rear Leveling T40-50	41052101	1
34	320396	Door, Rear Leveling T40-58	41052301	1
34	320397	Door, Rear Leveling T40-66	41056701	1
35	320398	Frame, Main T40-50	41060000	1
35	320399	Frame, Main T40-58	41060200	1
35	320401	Frame, Main T40-66	41060300	1
36	320305	Washer 10mm	61000400	12
37	320304	Nut, M10 x 1.5	62000500	12
38	320402	Bolt, M12 x 30	60023000	6
39	320336	Pin, Hitch pull	68062300	2
41	320382	Nut, M12 x 1.75 Lock	62010600	4
42	320403	Bracket, Lower Hitch Pull	30002401	2
43	320404	Plate, Lower Hitch Lock	30002500	2
44	320380	Bolt, M12 x 80	60021500	4
45	320405	Endplate, RH	40042402	1
46	320261	Skid, RH T40	40002602	1
47	320406	Chain, Rear door adjust	68041700	1
48	320346	Bolt, M12 x 25	60020400	1
49	320347	Washer 12mm	61005000	1
50	320407	Nut, M12 x 1.75	62007100	1
51	320408	Plug, Chaincase drain	68008700	1
NS	101101	Decal - Warning (540rpm)		1
NS	101103	Decal - Danger (Keep Away)		1
NS	101170	Decal - Warning (Prevent Injury)	72029100	1
NS	101171	Decal - Danger (Rotating Blades)	72028800	1

# MODEL T40 ROTOR SHAFT & DRIVE PARTS VIEW & PARTS LIST



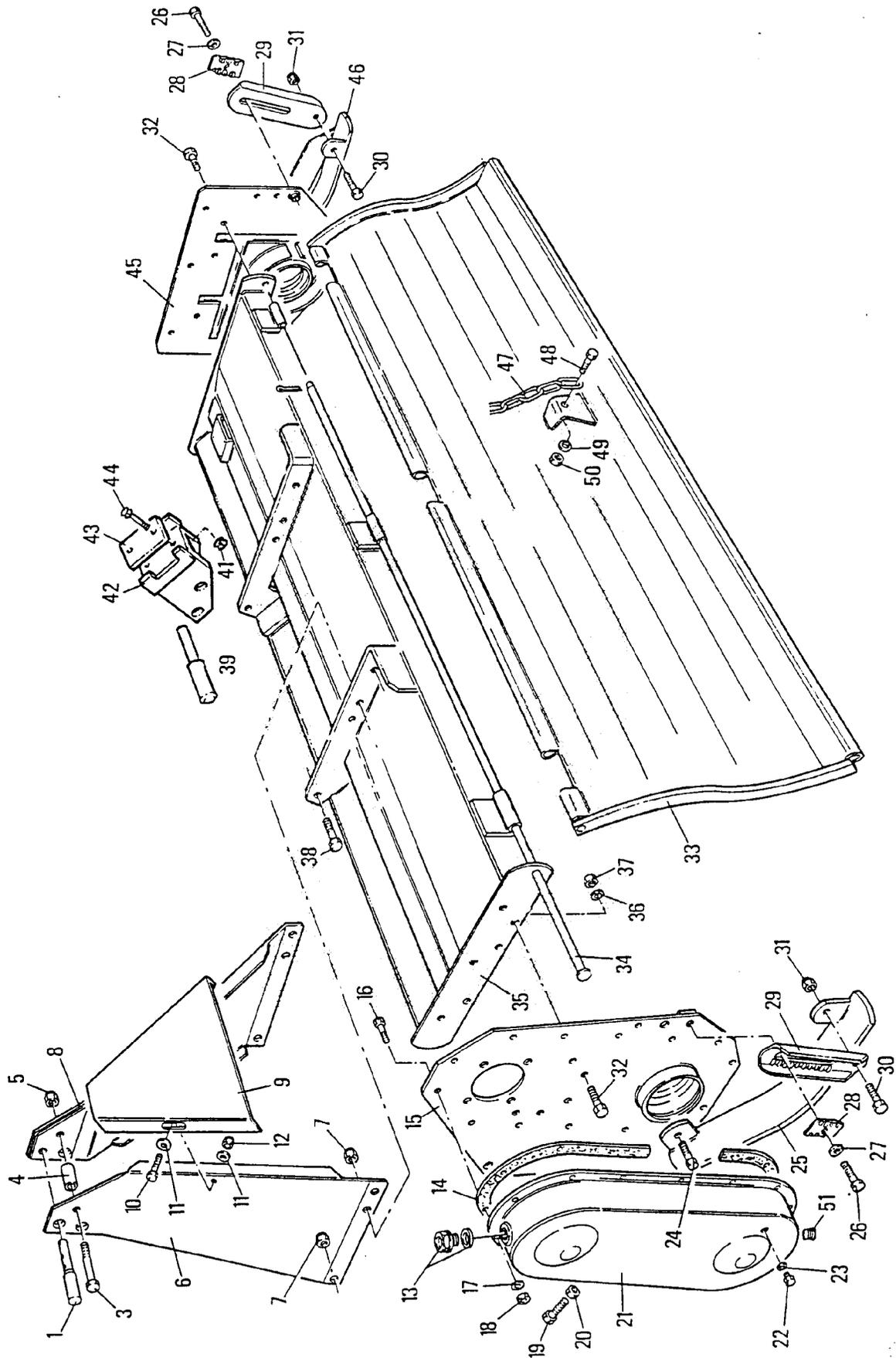
Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320416	Snap Ring 40mm E	63000700	1
2	320264	Sprocket, Top 10T-1"	10006501	1
3	320416	Snap Ring 40mm E	63000700	1
4	320265	Sprocket, Lower 17T-1"	10006600	1
5	320410	Snap Ring 80 mm I	63000200	1
6	320267	Bearing, Ball 6208	67004400	1
7	320437	Seal Ring 45 x 72 x 10	66002100	1
8	320438	Seal 100	68000600	2
9	320439	Cap, LH Rotor Shaft	39049200	2
10	320440	Rotor Shaft Assem. T40-50	42014203	1
10	320441	Rotor Shaft Assem. T40-58	42014403	1
10	320442	Rotor Shaft Assem. T40-66	42026903	1
11	320443	Seal Ring 45 x 65 x 10	66000100	1
12	320268	Bearing, Ball 6306	67009700	1
13	320444	Washer 13 x 40 x 4	61002300	1
14	320391	Bolt, M12 x 25 8.8	60001400	1
15	320269	Cover, Rotor Shaft	39014000	1
16	320431	Zerk, Grease M6 x 1	64000200	1
17	320371	Snap Ring 72mm I	63000300	1
18	320348	Nut, M12 x 1.75	62000600	1
19	320275	Washer 12mm	61000500	1
20	320377	Nut, M12 x 1.75	62001100	1
21	320445	Chain Tightener	40010300	1
22	320446	Bolt, M12 x 60 8.8	60007600	1
23	320266	Chain ASA 80 -1" 40MG	68001000	1
24	320274	Nut, M12 x 1.5	62001000	Var.
25	320275	Washer 12mm	61000500	Var.
26	320273	Bolt M12 x 1.5 x 30 8.8	60001500	Var.
29	320270	Blade, "L" LH	12000401	Var.
30	320272	Blade, "L" RH	12000301	Var.

MODEL T40  
GEARBOX  
PARTS VIEW  
&  
PARTS LIST



Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320409	Seal Ring 35 x 80 x 10	66001400	1
2	320410	Snap Ring 80mm I	63000200	1
3	320411	Shim 63 x 80 x 1	68013000	1
4	320353	Bearing, Ball 6307	67002100	1
5	320412	Shaft, input Z12T	10000400	1
6	320413	Bearing, Ball 30208	67005200	1
7	320411	Shim 63 x 80 x 1	68013000	1
8	320408	Plug - Oil Check 3/8	68008700	1
9	320414	Plug - Oil Fill/Dipstick	68007600	1
10	320415	Housing, gearbox	01009100	1
11	320416	Snap Ring 40mm E	63000700	1
12	320417	Shim 40 x 50 x 1	68008200	1
13	320418	Gear, Bevel Z19	10016700	1
14	320419	Bearing, Ball 6212	67000200	1
15	320420	Seal Ring 50 x 65 x 8	66003900	1
16	320421	Bushing	32045400	1
17	320422	Gasket, Gearbox	80000100	1
18	320423	Flange w/ tube T40-50	40051900	1
18	320424	Flange w/ tube T40-58	40052000	1
18	320425	Flange w/ tube T40-66	40052100	1
19	320305	Washer 10mm	61000400	8
20	320303	Bolt, M10 x 25	60002300	8
21	320426	Axle Shaft T40-50	31024100	1
21	320427	Axle Shaft T40-58	31024200	1
21	320428	Axle Shaft T40-66	31024300	1
22	320429	Bearing, Ball 6308	67001900	1
23	320430	Bolt, M12 x 30 8.8	60000500	4
24	320275	Washer 12mm	61000500	4
25	320348	Nut M12 x 1.75	62000600	4
26	320391	Bolt, M12 x 25 8.8	60001400	4
27	320432	Tube Assem. RH T40-50	40080300	1
27	320433	Tube Assem. RH T40-58	40080400	1
27	320434	Tube Assem. RH T40-66	40085900	1
28	320304	Nut M10 x 1.5	62000500	3
29	320305	Washer 10mm	61000400	3
30	320435	Bolt M10 x 30 8.8	60000400	3
31	320436	Gasket, Endplate/Tube	80009000	1

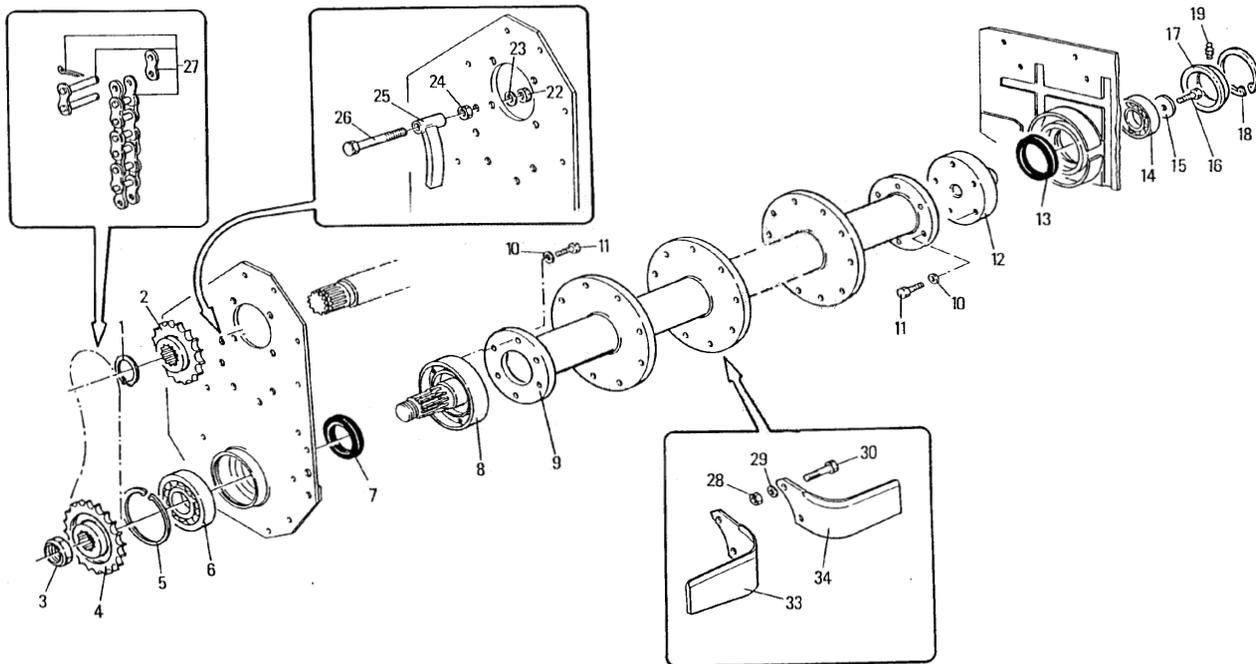
MODEL T55 MAIN FRAME  
PARTS VIEW



# MODEL T55 MAIN FRAME PARTS LIST

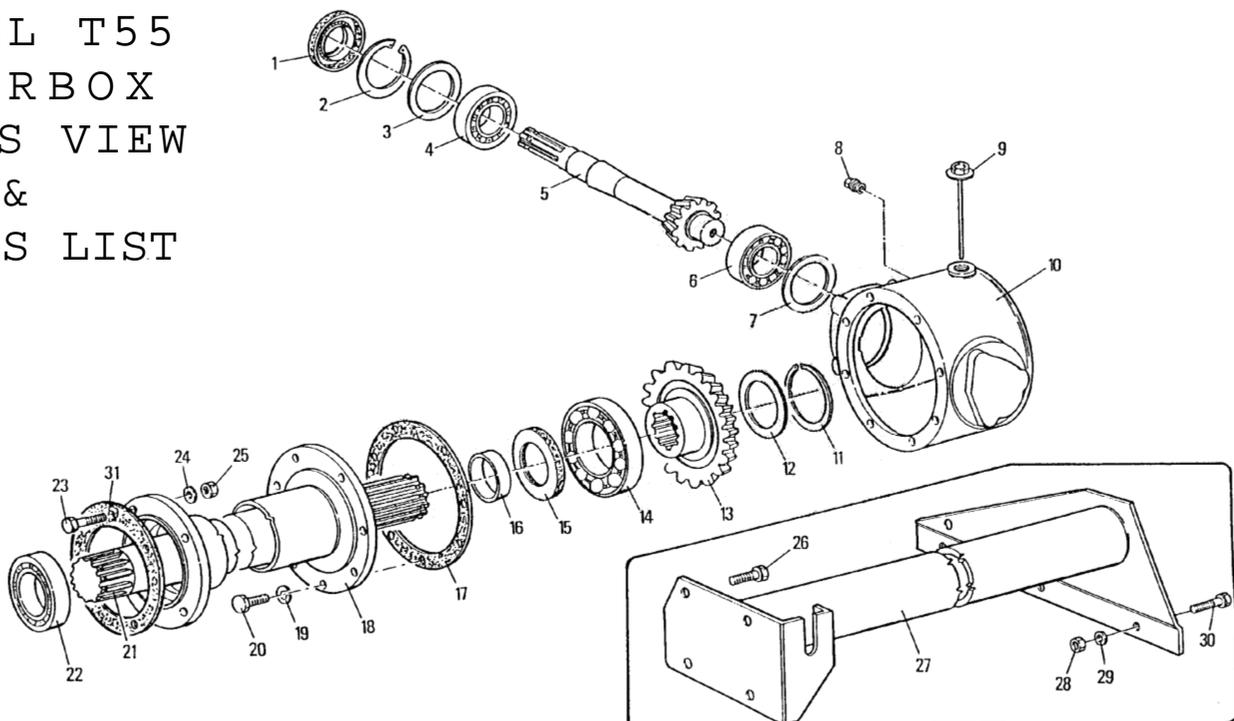
Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320306	Pin, Toplink	68062000	1
3	320447	Bolt, M14 x 90 8.8	60023400	1
4	320381	Spacer	32069101	1
5	320448	Nut, M14 x 2.	62010800	1
6	320449	Sideplate, LH "A" Frame	40090900	1
7	320448	Nut M14 x 2.	62010800	6
8	320450	Sideplate, RH "A" Frame	40090800	1
9	320451	Backplate "A" Frame	39099400	1
10	320386	Bolt M8 x 20 8.8	60022800	2
11	320314	Washer 8mm	61004700	4
12	320315	Nut M8 x 1.25	62007200	2
13	320317	Plug - Oil Fill Chaincase	68000500	1
14	320279	Gasket, Chaincase T-55	80005700	1
15	320452	Endplate, LH Chaindrive T-55	40112000	1
16	320319	Bolt M8 x 20 8.8	60000900	14
17	320320	Washer 8mm	61000600	14
18	320321	Nut, M8 x 1.25	62000700	14
19	320453	Bolt M16 x 80 8.8	60020000	1
20	320454	Nut M16 x 2	62000900	1
21	320278	Cover, Chaincase T-55	40016901	1
22	320324	Bolt, M10 x 10	60001100	1
23	320325	Washer 10mm Aluminum	61000800	1
24	320455	Bolt M14 x 30 8.8	60003100	2
25	320276	Skid, LH	40001101	1
26	320456	Bolt, M14 x 35 8.8	60001900	2
27	320457	Washer 14mm	61000100	2
28	320458	Plate, Depth Control Serrated	39143100	2
29	320459	Link, Depth Control Serrated	39143000	2
30	320460	Bolt, M14 x 35 8.8	60017500	2
31	320461	Nut, M14 x 1.5 Lock	62010700	2
32	320430	Bolt, M12 x 30 8.8	60000500	9
33	320462	Door, Rear Leveling T55-66	41028701	1
33	320463	Door, Rear Leveling T55-74	41028801	1
34	320464	Rod, Rear Door T55-66	31055200	1
34	320465	Rod, Rear Door T55-74	31055300	1
35	320466	Main Frame T55-66	41057900	1
35	320467	Main Frame T55-74	41058000	1
36	320275	Washer 12mm	61000500	9
37	320348	Nut M12 x 1.75	62000600	7
38	320468	Bolt M14 x 35 8.8	60023200	4
39	320336	Pin, Lower Hitch-Pull	68062300	2
41	320469	Nut M12 x 1.75	62004000	4
42	320470	Bracket, Lower Hitch-Pull	40092800	2
43	320471	Clamp, Lower Hitch	30016500	2
44	320472	Bolt, M12 x 90	60024500	4
45	320473	Endplate, RH T-55	40112100	1
46	320277	Skid, RH	40001200	1
47	320474	Chain, Rear Door adjust	68022900	1
48	320346	Bolt, M12 x 25 8.8	60020400	1
49	320275	Washer 12mm	61005000	1
50	320407	Nut, M12 x 1.75	62007100	1
51	320408	Plug, Oil Drain- Chaincase	68008700	1
NS	101101	Decal - Warning (540rpm)		1
NS	101103	Decal - Danger (Keep Away)		1
NS	101170	Decal - Warning (Prevent Injury)	72029100	1
NS	101171	Decal - Danger (Rotating Blades)	72028800	1

# MODEL T55 ROTOR SHAFT & DRIVE PARTS VIEW & PARTS LIST



Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320416	Snap Ring 40mm E	63000700	1
2	320280	Sprocket, Top 10T -1 1/4"	10009900	1
3	320481	Nut, Ring M40 x 1.5 Lock	62004700	1
4	320281	Sprocket, Lower 15T -1 1/4"	10010000	1
5	320482	Snap Ring 90mm I	63000100	1
6	320283	Bearing, Ball 6210	67000500	1
7	320483	Seal Ring 55 x 72 x 10	66011400	1
8	320484	Hub - LH Rotor T55	40111800	1
9	320485	Rotor Assem. T55-66	42042600	1
9	320486	Rotor Assem. T55-74	42042700	1
10	320275	Washer 12mm	61000500	10
11	320487	Bolt M12 x 25 10.9	60013600	10
12	320488	Hub, RH Rotor T55	40111900	1
13	320489	Seal Ring 55 x 72 x 10	66002400	1
14	320267	Bearing, Ball 6208	67004400	1
15	320490	Washer 14mm	61004600	1
16	320491	Bolt, M14 x 25 8.8	60000800	1
17	320284	Cover, Rotor Shaft RH T55	39049001	1
18	320410	Snap Ring 80mm I	63000200	1
19	320431	Zerk, Grease M6 x 1	64000200	1
22	320348	Nut M12 x 1.75	62000600	1
23	320275	Washer 12mm	61000500	1
24	320348	Nut, M12 x 1.75	62000600	1
25	320494	Chain Tightener T55	40016401	1
26	320495	Bolt, M12 x 70 8.8	60019400	1
27	320282	Chain, Drive ASA 100 - 1 1/4" 36MG	68074500	1
28	320274	Nut, M12 x 1.5	62001000	Var.
29	320275	Washer 12mm	61000500	Var.
30	320273	Bolt, M12 x 1.5 x 35 8.8	60021700	Var.
33	320285	Blade, "L" LH T55-66 & 74	12000800	Var.
34	320286	Blade, "L" RH T55-66 & 74	12000700	Var.

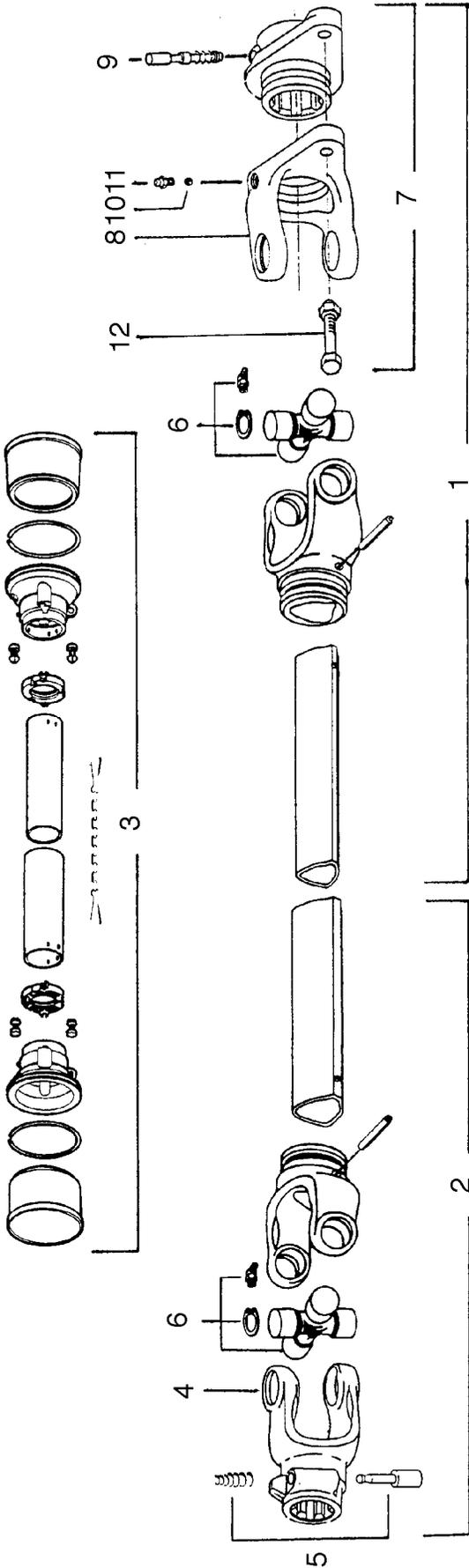
MODEL T55  
 GEARBOX  
 PARTS VIEW  
 &  
 PARTS LIST



Ref. #	Worksaver #	Description	MUR Code	Quantity
1	320409	Seal Ring 35 x 80 x 10	66001400	1
2	320410	Snap Ring 80mm I	63000200	1
3	320411	Shim 63 x 80 x 1	68013000	1
4	320353	Bearing, Ball 6307	67002100	1
5	320412	Shaft, Input Pinion 12T	10000400	1
6	320413	Bearing, Ball 30208	67005200	1
7	320411	Shim 63 x 80 x 1	68013000	1
8	320408	Plug, Oil check 3/8	68008700	1
9	320475	Plug, Oil fill/dipstick	68007600	1
10	320415	Housing, Gearbox T55	01009100	1
11	320416	Snap Ring 40mm E	63000700	1
12	320417	Shim 40 x 50 x 1	68008200	1
13	320418	Gear, Bevel ring 19T	10016700	1
14	320419	Bearing, Ball 6212	67000200	1
15	320420	Seal Ring 50 x 65 x 8	66003900	1
16	320421	Bushing	32045400	1
17	320422	Gasket, Gearbox T-55	80000100	1
18	320425	Flange w/tube (gearbox) T55-66	40052100	1
18	320476	Flange w/tube (gearbox) T55-74	40052200	1
19	320305	Washer 10mm	61000400	8
20	320303	Bolt, M10 x 25 8.8	60002300	8
21	320428	Axle Shaft T55-66	31024300	1
21	320477	Axle Shaft T55-74	31024400	1
22	320429	Bearing, Ball 6308	67001900	1
23	320430	Bolt, M12 x 30 8.8	60000500	4
24	320275	Washer 12mm	61000500	4
25	320348	Nut, M12 x 1.75	62000600	4
26	320391	Bolt, M12 x 25 8.8	60001400	4
27	320478	Tube Assem. RH T55-66	40052700	1
27	320479	Tube Assem. RH T55-74	40052800	1
28	320348	Nut, M12 x 1.75	62000600	3
29	320275	Washer, 12mm	61000500	3
30	320480	Bolt M12 x 25 8.8	60001200	3
31	320436	Gasket, Tube/Chaincase T55	80009000	1

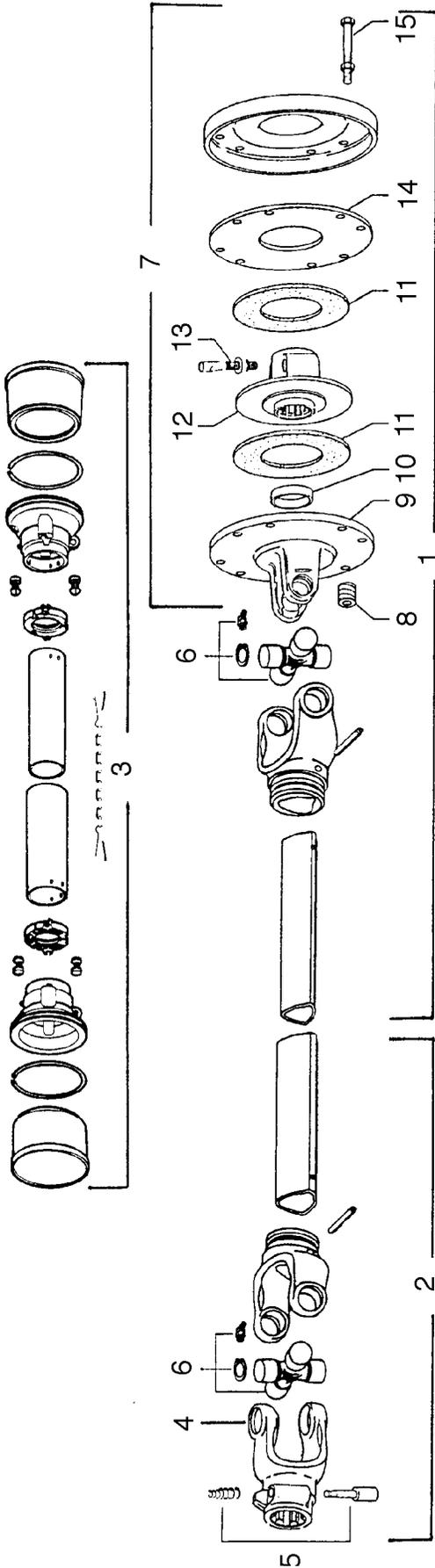
# SHEAR BOLT PTO (T25 & T40 SERIES)

## PARTS VIEW & PARTS LIST



REF. NO.	WORKSAVER PART NO.		DESCRIPTION	B & P REF. NO.		QTY.
	T25 SERIES	T40 SERIES		T25 SERIES	T40 SERIES	
1	320240	320245	Complete Driveline Assembly			1
2	320201	320222	1/2 PTO with Shielding (Implement End)			1
3	320202	320223	1/2 PTO with Shielding (Tractor End)			1
4	320203	320224	Complete Shield Kit			1
5	320204	320226	Tractor End Yoke with Push Pin	507020351	507040351	1
6	320206	320206	Push Pin Set	403000001	403000001	1
7	320207	320227	Cross Journal Set	41202	41204	2
8	320208	320228	Complete Shear Bolt Torque Limiter	606202001	606404001	1
9	320209	320229	Hub	213020020	213040020	1
10	320212	320212	Push Pin Set	401000001	401000001	1
11	320213	320231	Ball Bearing	362004000	362002000	Var.
12	320214	320232	Grease Fitting	348006000	348012000	1
12	320217		Shear Bolt M6 x 40 with Nut	432000002		1
12	320233		Shear Bolt M8 x 45 with Nut		432000047	1
320218	320218		Safety Sign - Danger (Rotating Driveline)			1
320219	320219		Safety Sign - Danger (Shield Missing)			1

# SLIP CLUTCH PTO (T40 & T-55 SERIES) PARTS VIEW & PARTS LIST



REF. NO.	WORKSAVER PART NO.		DESCRIPTION	B & P REF. NO.		QTY.
	T40 SERIES	T55 SERIES		T40 SERIES	T55 SERIES	
1	320255	320250	Complete Driveline Assembly			1
2	320234	320249	1/2 PTO with Shielding (Implement End)			1
3	320236	320251	1/2 PTO with Shielding (Tractor End)			1
4	320237	320252	Complete Shield Kit			1
5	320226	320253	Tractor End Yoke with Push Pin	507040351	507050351	1
6	320206	320206	Push Pin Set	403000001	403000001	1
7	320227	320254	Cross Journal Set	41204	41205	2
8	320238	320256	Complete Disc Clutch	637141001	638141001	1
9	320239	320239	Spring	351022370	351022370	8
10	320247	320257	Flanged Yoke	253042001	253052001	1
11	320248	320248	Bushing	258005320	258005320	1
12	320241	320241	Lining Ring (Friction Disc)	247000054	247000054	2
13	320242	320242	Hub, Splined	515200311	515200311	1
14	320243	320243	Push Pin Set			1
15	320244	320244	Pressure Plate	248220008	248220008	1
	320246	320246	Bolt with Nut	432000006	432000006	8
	320218	320218	Safety Sign - Danger (Rotating Driveline)			1
	320219	320219	Safety Sign - Danger (Shield Missing)			1



## SAFETY PRECAUTIONS

**MOST ACCIDENTS OCCUR BECAUSE OF NEGLIGENCE OR CARELESSNESS.**

**AVOID NEEDLESS ACCIDENTS BY FOLLOWING ALL OF THE SAFETY PRECAUTIONS LISTED BELOW.**

- Machinery should be operated only by those who are responsible and are authorized to do so.
- Stop the engine, lower all equipment, lock the brakes, and remove the ignition key before dismounting from the tractor.
- Never stand between tractor and implement while tractor is being backed to hitch.
- Loose fitting clothing should not be worn, to avoid catching on various parts.
- Detach implement in area where children normally do not play.
- When performing adjustments or maintenance on an implement, first lower it to the ground or block it securely at a workable height.
- Only a qualified operator should be permitted on tractor when in operation; no riders allowed.
- Make certain everyone is in the clear before starting tractor or raising or lowering equipment.
- Operate the tractor and implement only while seated in the driver's seat.
- Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.
- A heavy load can cause instability of the tractor. Use extreme care during road travel. Slow down on turns and watch out for bumps. Tractor may need front counter-weights to counter-balance the weight of the implement.
- Reduce speed on hillsides or curves so there is no danger of tipping.
- Avoid driving too close to the edge of ditches or creeks.
- Do not transport implement on public roads without reflectors and slow moving vehicle emblem in daylight and with approved warning lights at night and other periods of poor visibility.
- Due to the width of some implements, use extra caution on highways, farm roads, and when approaching gates.
- Always be sure the implement is in the proper position for transport.
- Keep alert and watch the front as well as the rear when working with the implement.

## OWNER'S MANUAL

### MODEL NO.'s

**T25-42**

**T25-50**

**T40-50**

**T40-58**

**T40-66**

**T55-66**

**T55-74**

APRIL 1998

## 3 PT. ROTARY TILLERS

15 to 55 PTO HP

**WHEN ORDERING REPAIR PARTS,  
ALWAYS GIVE THE  
FOLLOWING INFORMATION:**

1. PART NUMBER
2. PART DESCRIPTION
3. MODEL NUMBER
4. NAME OF ITEM

**MAKE EVERY DAY  
A HOLIDAY  
FROM ACCIDENTS!**

F A R M S T A R

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