



TRIPLE FLAIL ASSEMBLIES

NH T7.210

Current as of 11/30/2012

PARTS LISTING WITH MOUNTING AND OPERATING INSTRUCTIONS

Tiger Corporation
3301 N. Louise Ave.
Sioux Falls, SD 57107
1-800-843-6849
1-605-336-7900
www.tiger-mowers.com

06025000

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 this manual. Observe the rules of safety and use common sense!

READ AND UNDERSTAND THIS MANUAL! Non-English speaking operators will need to GET THE MANUAL TRANSLATED as needed!



DANGER

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



1. Study and understand Operator's Manuals, Safety Decals, and Instructional Decals for tractor and implement to prevent misuse, abuse, and accidents. Practice before operating in a confined area or near passersby.

● Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children

2. Allow no children on or near folding mower or tractor. Allow no riders on tractor or implement. Falling off may cause serious injury or death from being run over by tractor or mower or contact with rotating blades.

3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seat belt securely fastened to prevent injury and possible death from falling off or tractor overturn.

● Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, & Ear Plugs are recommended.

4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain area is clear before lowering or folding

5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding mowers. Put Booms securely in Transport Rest.

● Folding and Boom Mowers have raised center of gravity. Slow down when turning and on hillsides.

6. Make certain that SMV sign, warning lights, and reflectors are clearly visible. Follow local traffic codes.

7. Never operate with Cutting Head or Folding Section raised if passersby, bystanders, or traffic are in the area to reduce possibility of injury or death from objects thrown by Blades under Guards or mower structure.

8. Before dismounting, secure implement in transport position or lower to ground.

● Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent crushing by entanglement in rotating parts which could cause injury or death.

● Never mount or dismount a moving vehicle. Crushing from rollover may cause serious injury or death.



02967827

Warranty Information: Read and understand the complete Warranty Statement found in this manual. Fill out the Warranty Registration form in full and return it within 90 days. Make certain the Serial Number of the machine is recorded on the Warranty Card, and form that you retain.

FORWARD

This manual contains information about many features of the Tiger mowing and roadside maintenance equipment. Some of these include: Safety precautions, Assembly instructions, Operations, Maintenance and Parts. This manual will also assist you in the proper break-in, daily care, and troubleshooting of your new mower.

We recommend that you read carefully the entire manual before operating the unit. Also, time spent in becoming fully acquainted with its performance features, adjustments, and maintenance schedules will be repaid in a long and satisfactory life of the equipment.

Troubleshooting - Please, before you call, help us to help you!

Please look at the equipment to observe what is happening, then:

- Classify the problem
 - Hydraulic, electrical or mechanical - Read the trouble shooting section
 - Tractor or Truck chassis - Contact vehicle dealer

- If unable to correct the problem yourself, contact your local Tiger Dealer after gathering:
 - Machine model _____
 - Serial number _____
 - Dealer name _____
 - Detailed information about the problem including results of troubleshooting

Attention Owner / Operator / Dealer: It is your obligation to read, and understand, the warranty information section located at the back of this manual denoting that the purchaser understands the safety issues relating to this machine and has received and will read a copy of this manual.

If at any time, you have a service problem with your Tiger mower, Contact your local dealer for service and parts needed.

MANUFACTURED BY:

Tiger Corporation

3301 N. Louise Ave.

Sioux Falls, SD 57107

1-800-843-6849

1-605-336-7900

www.tiger-mowers.com

DISTRIBUTED BY:

1- _____ - _____ - _____

1- _____ - _____ - _____

TABLE OF CONTENTS

SAFETY _____	1-1
Safety Information_____	1-2
ASSEMBLY / MOUNTING SECTION _____	2-1
OPERATION SECTION _____	3-1
MAINTENANCE SECTION _____	4-1
PARTS SECTION _____	5-1
Parts Ordering Guide_____	5-2
Parts Table of Contents_____	5-3
WARRANTY INFORMATION _____	6-1



1012

This symbol means:

CAUTION – YOUR SAFETY IS AT RISK!

When you see this symbol, read and follow the associated instructions carefully or personal injury or damage may result.

Tiger is a registered trademark.



SAFETY

SAFETY SECTION

SAFETY

General Safety Instructions and Practices

A safe and careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner / operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this mower. This equipment should only be operated by those persons who have read the Manual, who are responsible and trained, and who know how to do so safely and responsibly.



1000

The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: “**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**” The symbol and signal word are intended to warn the owner / operator of impending hazards and the degree of possible injury when operating this equipment.

Practice all usual and customary safe working precautions and above all -- remember safety is up to YOU! Only YOU can prevent serious injury or death from unsafe practices.

DANGER!



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.

WARNING!



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

CAUTION!



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

IMPORTANT!

Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient or convenient operation or repair.* (SG-1)

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)

SAFETY INSTRUCTIONS



SAFETY

PELIGRO!



Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

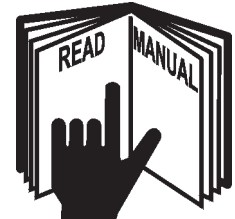


¡ LEA EL INSTRUCTIVO!

DANGER!



Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor and Implement without supervision. Make sure the operator has fully read and understands the manuals prior to operation. (SG-4)



WARNING!



Always maintain the safety decals in good readable condition. If the decals are missing, damaged, or unreadable, obtain and install replacement decals immediately. (SG-5)

WARNING!



Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



WARNING!



Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. 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. (SG-7)



WARNING!

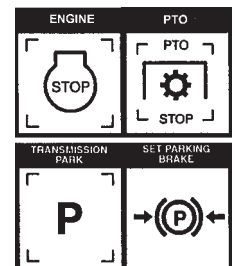


Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)

DANGER!



BEFORE leaving the tractor seat, always engage the brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



SAFETY

DANGER!



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death.

(SG-10)



DANGER!



Never allow children to operate or ride on the Tractor or Implement.

(SG-11)



WARNING!



Do not mount the tractor while the tractor is moving. Mount the tractor only when the tractor and all moving parts are completely stopped.

(SG-12)



DANGER!



Start tractor only when properly seated in the tractor seat. Starting a tractor in gear can result in injury or death. Read the tractor operators manual for proper starting instructions.

(SG-13)



DANGER!



Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death.

(SG-14)



DANGER!



Do not operate this Equipment with hydraulic oil leaking. Oil is expensive and its presence could present a hazard. Do not check for leaks with your hand! Use a piece of heavy paper or cardboard. High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure.

(SG-15)

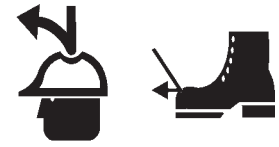


SAFETY

WARNING!



The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items thrown by the equipment. (SG-16)



CAUTION!



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the operator over an extended period of time will cause permanent or 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. (SG-17)



WARNING!



Transport only at safe speeds. Serious accidents and injuries can result from operating this equipment at unsafe speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the safe transport speeds for you and the equipment. Make sure you abide by the following rules:

1. Test the tractor at a slow speed and increase the speed slowly. Apply the brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum safe transport speed for you and this equipment.
2. Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that it is safe to operate at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum safe turning speed for you and this equipment before operating on roads or uneven ground.
3. Only transport the Tractor and Implement at the speeds that you have determined are safe and which allow you to properly control the equipment.



Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)

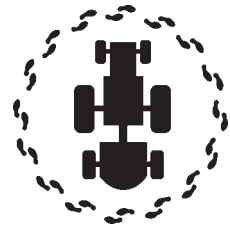
SAFETY

WARNING!



Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. Make sure the tractor engine is **OFF** before working on the Implement.

(SG-20)



WARNING!



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins are properly secured. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



WARNING!



Always read carefully and comply fully with the manufacturers instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)



DANGER!



Never run the tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health.

(SG-23)

DANGER!



KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible serious injury or death.

(SG-24)



DANGER!



Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Children can cause the Implement to shift or fall crushing themselves or others. (SG-25)

WARNING!



Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)

SAFETY

DANGER!



NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. **NEVER** knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



DANGER!



Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)

WARNING!



Mow only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never mow in darkness or foggy conditions where you cannot clearly see at least 100 yards in front and to the sides of the tractor and mower. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see this type of items discontinue mowing. (SGM-1)

DANGER!



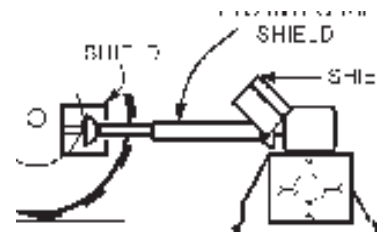
There are obvious and hidden potential hazards in the operation of this Mower. **REMEMBER!** This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care is taken to insure the safety of the operator, bystanders, or passersby in the area. Do not operate this machine with anyone in the immediate area. Stop mowing if anyone is within 100 yards of mower. (SFL-1)



DANGER!



All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Steel Guards, Gearbox Shields, PTO integral shields, and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SFL-5)



SAFETY

DANGER!



The rotating parts of this machine have been designed and tested for rugged use. However, the blades could fail upon impact with heavy, solid objects such as metal guard rails and concrete structures. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the cutting blades to contact such obstacles. (SGM-4)

WARNING!



Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before mowing. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop mowing immediately if blades strike a foreign object. Repair all damage and make certain rotor or blade carrier is balanced before resuming mowing. (SGM-5)



WARNING!



Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items. (SGM-6)

WARNING!



Mow at the speed that you can safely operate and control the tractor and mower. Safe mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 0 to 5 mph. Use slow mowing speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SGM-7)

WARNING!



Avoid mowing in reverse direction when possible. Check to make sure there are no persons behind the mower and use extreme care when mowing in reverse. Mow only at a slow ground speed where you can safely operate and control the tractor and mower. Never mow an area that you have not inspected and removed debris or foreign material. (SGM-8)

DANGER!



Replace bent or broken blade with new blades. NEVER ATTEMPT TO STRAIGHTEN OR WELD ON BLADES SINCE THIS WILL LIKELY CRACK OR OTHERWISE DAMAGE THE BLADE WITH SUBSEQUENT FAILURE AND POSSIBLE SERIOUS INJURY FROM THROWN BLADES. (SGM-10)

WARNING!



Do not mow with two machines in the same area except with Cab tractors with the windows closed. (SGM-11)

SAFETY

DANGER!



Flail Mowers are capable under adverse conditions of throwing objects for great distances (100 yards or more) and causing serious injury or death. Follow safety messages carefully.

STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS UNLESS:

- Front and Rear Deflectors are installed and in good, working condition;
- Mower Head is running close to and parallel to the ground without exposed Blades;
- Passersby are outside the existing thrown-object zone;
- All areas have been thoroughly inspected and all foreign material such as rocks, cans, glass, and general debris has been removed.

NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected closely with any remaining debris being removed, and mowed again at desired final height. (SFL-6)



DANGER!



Do not put hands or feet under mower decks. Blade Contact can result in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SFL-2)



WARNING!



Each Rear Wheel must have a minimum of 1,000 pounds contact with the surface to prevent lateral instability and possible tip-over which could result in serious bodily injury or even death. Widen the wheel tread and add weights if needed. Refer to the mounting instructions or call Customer Service if you need assistance with Counterweight Procedure. (SFL-3)



WARNING!



Do not operate Mower if excessive vibration exists. Shut down PTO and the Tractor engine. Inspect the Mower to determine the source of the vibration. If Mower blades are missing or damaged replace them immediately. Do not operate the mower until the blades have been replaced and the Mower operates smoothly. Operating the Mower with excessive vibration can result in component failure and broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the Mower to be operated with blades missing. (SFL-4)

WARNING!



Be particularly careful when transporting the Implement with the Tractor. Turn curves or go up hills only at a low speed and using a gradual steering angle. Rear mounted implements move the center of gravity to the rear and remove weight from the front wheels. Make certain, by adding front ballast, that at least 20% of the tractor's weight is on the front wheels to prevent rearing up, loss of steering control or Tractor tip-over. Slow down on rough or uneven surfaces to prevent loss of steering control which could result in property damage or possible injury. Do not transport unless 3-Point lift lever is fully raised and in the latched transport position. Dropping implement in transport can cause serious damage to the tractor and/or Implement and possibly cause the operator or others to be injured or killed. (S3PT-2)

SAFETY

DANGER!



Always disconnect the main PTO Driveline from the Tractor before performing service on the Mower. Never work on the Mower with the tractor PTO driveline connected and running. Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death.

(SRM-3)

WARNING!



Do not let the Blades turn when the Mower Deck is raised for any reason, including clearance or for turning. Raising the Mower deck exposes the Cutting Blades which creates a potentially serious hazard and could cause serious injury or even death from objects thrown from the Blades.

(SRM-7)



WARNING!



Never leave Tractor and Implement unattended while the implement is in the lifted position. Accidental operation of lifting lever or a hydraulic failure may cause sudden drop of unit with injury or death by crushing. To properly park the implement when disconnecting it from the tractor, lower the stand and put the retaining pin securely in place, or put a secure support under the A-Frame. Lower the implement carefully to the ground. Do not put hands or feet under lifted components.

(SPT-1)

DANGER!



Make sure the PTO shield, integral driveline shields, and input shields are installed when using PTO-driven equipment. Always replace any shield if it is damaged or missing.

(S3PT-8)



WARNING!



Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Implement on the ground or securely blocked up, disengage the PTO, and turn off the tractor engine. Push and pull the Remote Cylinder lever in and out several times prior to starting any maintenance or repair work.

(S3PT-9)



WARNING!



Use extreme care when lowering or unfolding the implement's wings. Make sure no bystanders are close by or underneath the wings. Allow ample clearance around the implement when folding or unfolding the wings. Use extreme caution around buildings or overhead power lines.

(S3PT-5)

DANGER!



When the Wings are folded for transport, the center of gravity is raised and the possibility of overturn is increased. Drive slowly and use extreme caution when turning on hillsides. Overturning the Implement could cause the Implement to overturn the Tractor and vice versa resulting in serious injury or even death. Never fold wings on a hillside...the Implement may overturn.

(STI-2)

DANGER!



DO NOT allow any person under a folded wing unless wing is securely locked up or supported. **DO NOT** approach the Implement unless the Tractor is turned off and all motion has ceased. Never work under the frame work, or any lifted component unless the implement is securely supported or blocked up. A sudden or inadvertent fall by any of these components could cause serious injury or even death.

(STI-3)



SAFETY

DANGER!



The flail cutter shaft is designed for standard rotation (same rotation as the tractor wheels during forward travel). **Never operate the cutter shaft in the reverse rotation.** Operating this mower in reverse rotation may cause objects to be thrown out the front of the mower head.



WARNING!



The rotating parts of this machine continue to rotate even after the PTO has been turned off. The operator should remain in his seat for 60 seconds after the brake has been set, the PTO disengaged, the tractor turned off, and all evidence of rotation has ceased.

(3PT-10)

“Wait a minute...Save a life!”

WARNING!



Engine Exhaust, some of its constituents, and certain components contain or emit chemicals known to the state of California to cause cancer and birth or other reproductive harm.

WARNING!



Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth or other reproductive harm. **Wash hands after handling!**

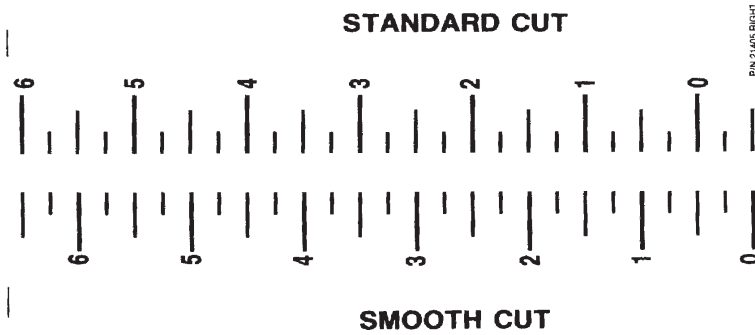
Tiger mowers use balanced and matched system components for blade carriers, blades, cutter-shafts, knives, knife hangers, rollers, drive-train components and bearings. These parts are made and tested to Tiger specifications. Non-genuine “will fit” parts do not consistently meet these specifications. The use of “will fit” parts MAY reduce mower performance, void mower warranties and present a safety hazard. Use genuine Tiger mower parts for economy and safety.

SEE YOUR  DEALER

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 Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

SAFETY

PART NO.
LOCATION



21405
MOWER DECK

**DO NOT LUBRICATE WITH AUTOMATIC
GREASE GUN. GREASE WITH HAND
GREASE GUN ONLY.**

P/N22839

22839
MOWER DECK



22840
INSIDE OF CAB

NO STEP

22865
MOWER DECK

SAFETY



WARNING

INSPECT REAR FLAP FREQUENTLY TO BE SURE IT IS IN SAFE WORKING CONDITION. DO NOT OPERATE MOWER WITH FLAP REMOVED OR WORN.

24028

PART NO.
LOCATION

24028
MOWER DECK



10" x 5.5" 31522
MOWER DECK
18" x 10" 31523
HYDRAULIC TANK

MOWING SAFETY TIPS

- Read & understand the Operators Manual.
- Wear Your Seat Belt.
- Keep all shields and guards in place.
- Make sure equipment is in proper working condition.

- Never attempt to get off or on a moving tractor.

- Never allow riders on tractor or equipment.
- Only start the tractor from the seat with the key.

- Always inspect the area before mowing. Remove all foreign debris.

- Always keep bystanders and coworkers a minimum of 300 feet away.

- Never allow the mower blades to contact solid objects or foreign material.

- Never approach rotating elements.
- Disengage the PTO, place transmission in "Park", set parking brake, shut off engine, and remove key and wait until all rotating motion has stopped before leaving seat.

Tiger

33743

33743
INSIDE OF CAB



DANGER

TO AVERT THROWN OBJECTS,
CUTTER SHAFT MUST TURN IN THIS



DIRECTION

42360

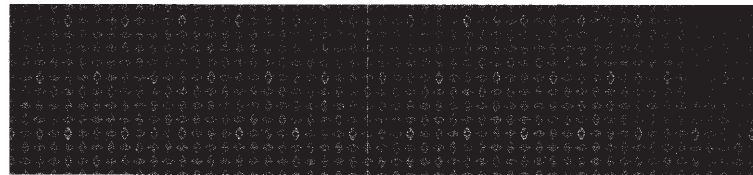
42350
MOWER DECK

SAFETY

PART NO.
LOCATION



42399
MOWER DECK



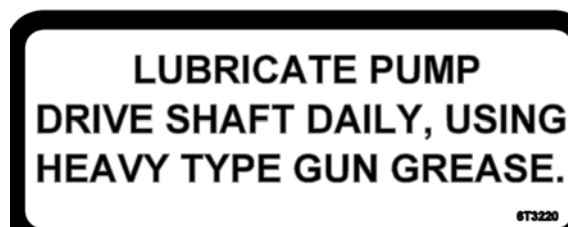
42400
MOWER DECK



6T3217
MOWER DECK



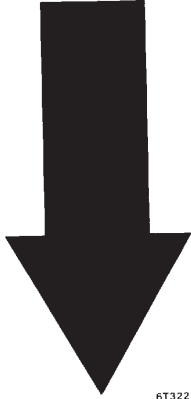
6T3219
INSIDE OF CAB



6T3220
FRONT PUMP MOUNT

SAFETY

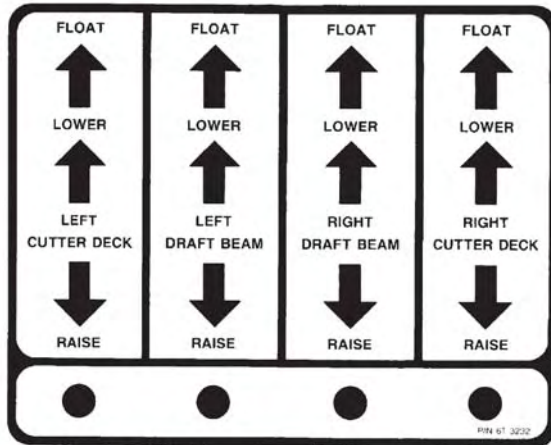
NOTICE:
Engine will not
start when mower
is engaged.



6T3222

PART NO.
LOCATION

6T3222
INSIDE OF CAB

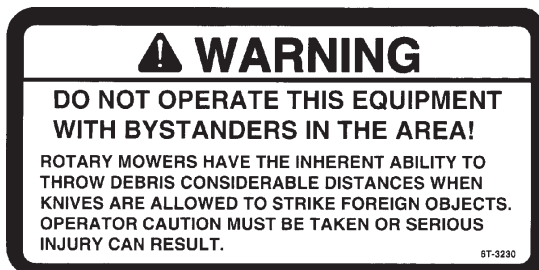


6T3232

6T3232
INSIDE OF CAB



6T3224
MOWER DECK



6T3230
INSIDE OF CAB

SAFETY

PART NO.
LOCATION



6T3233
HYDRAULIC TANK



6T3234
INSIDE OF CAB



6T3236
MOWER DECK
HYDRAULIC TANK



6T3242
INSIDE OF CAB

6T3242

SAFETY



Tiger Corporation

800-843-6849

www.tiger-mowers.com

Description	Application	General Specification	Recommended Lubricant
Tractor Hydraulics	Reservoir	JD-20C	Mobilfluid® 424
Mower Hydraulics Cold Temperatures 0°F Start-up Normal Temperatures 10°F Start-up Normal Temperatures 15°F Start-up High Operating Temperatures Above 90°F Ambient	Reservoir	ISO 46 Anti-Wear/ Low Temp JD-20C ISO 46 Anti-Wear ISO 100 Anti-Wear	Mobil DTE® 15M Mobilfluid® 424 Mobil DTE® 25 Mobil DTE® 18M
Flail Rear Gearbox	Reservoir	PAO Synthetic Extreme Pressure Gear Lube	Mobilube SHC® 75W-90, Mobil 1 Synthetic Gear Lubricant
Cutter Shaft and Ground Roller Shaft (Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease® CM-S
Drive Shaft Coupler (Rotary and Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease® CM-S
Boom Swivel, Boom Cylinder Pivots (Rotary and Flail Boom Type)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease® CM-S
Deck Boom Pivot & Deck Stop Adjustment (Rotary and Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease® CM-S
Deck Spindle (Rotary)	Grease Gun	Tiger Spindle Lubricant	Mobilith SHC 220

For Mobil product information, availability, or technical information, call 1-800-662-4525.

Tiger PN 34852

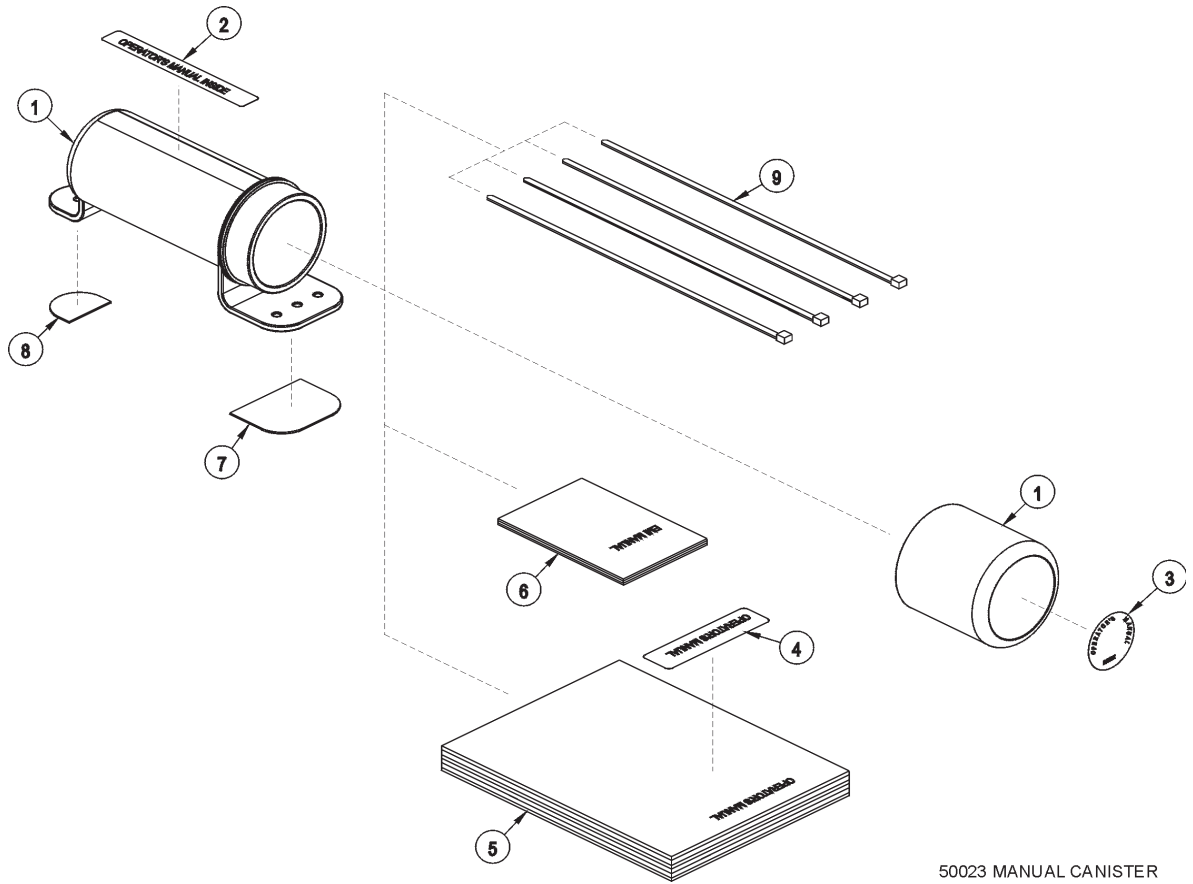
34852

HYDRAULIC TANK

DANGER		PELIGRO
THROWN OBJECT HAZARD		RIESGO DE OBJETO LANZADO
Do not operate mower when cutter shaft is in reverse rotation unless: <ul style="list-style-type: none"> Reverse Rotation Front Guard is in place, and Guard is in good condition 		No funcione el cortacésped cuando el eje de cortador esta en rotación inverso al menos que: <ul style="list-style-type: none"> El Guardia Delantero de Rotación Inversa esta en su lugar y El guardia esta en buenas condiciones
 Reverse Rotation Front Guard	06550054	 Guardia Delantero De Rotación Inverso

D538
ON MOWER HEAD

SAFETY



50023 MANUAL CANISTER

ITEM	PART NO.	QTY.	DESCRIPTION
	50023	AVAIL	MANUAL CANISTER COMPLETE
1	00776031	1	ROUND MANUAL CANISTER
	33997	1	DECAL, SHEET, MANUAL CANISTER
2		*	DECAL
3		*	DECAL
4		*	DECAL
5	*	AVAIL	SPECIFIC PRODUCT MANUAL
6	33753	1	E M I SAFETY MANUAL
7	34296	1	FRONT ADHESIVE PAD
8	34297	1	REAR ADHESIVE PAD
9	6T1823	4	ZIP TIE 14" LONG

NOTE:

The manual canister can be bolted, zip tied or adhered to a variety of surfaces. Locate a protected area within the view of the operator. Then select an installation method and attach the canister. **CAUTION - AVOID DRILLING HOLES INTO UNKNOWN AREAS**, wires and other parts may be located behind these areas. When adhering the canister to a surface, thoroughly clean that surface before installing the canister.

SAFETY

FEDERAL LAWS AND REGULATIONS

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

DUTIES

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Regulations

OSHA regulations state in part: “At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved.”

Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer’s responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator’s manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

SAFETY

ASSEMBLY SECTION

ASSEMBLY

Before attempting to mount your Tiger mower, it is important to read and understand all of the Safety Messages in the Safety section of this manual.

Check complete shipment list against the packing list to make sure there are no shortages. Make certain the tractor model is the appropriate one for the mower received!



Always use a floor jack, hoist or fork lift to lift and raise heavy parts.

Read and understand the entire assembly section instructions before attempting to mount your Tiger mower. Refer to the parts section of this manual for detailed illustrations to locate all parts. (ASM-C-0001)

TRACTOR PREPARATION

- A. Disconnect battery cables.
- B. Check that tractor wheels are adjusted all the way out. Refer to the owners manual for wheel adjustment procedures.

(ASM-NH-0126)

PUMP MOUNTING

Locate the main frame directly behind the PTO shaft. Mount the pump accordingly so that the offset side of the pump is positioned on the top. Connect the PTO drive shaft to the pump and to the tractor.

CAUTION: DO NOT START THE TRACTOR UNTIL ALL HOSES ARE ATTACHED, TANK IS FILLED WITH PROPER OIL AND BALL VALVES ARE OPEN! STARTING AT THIS TIME WILL CAUSE SERIOUS DAMAGE TO THE PUMP. (ASM-NH-0127)

ADJUSTING REAR WHEELS

Raise rear of tractor onto jack-stands. **Follow the instructions in the tractor owners manual for adjusting tires and rims.** The back wheels **MUST** be adjusted to the widest setting. **NOTE:** This may require switching the wheels to opposite sides of tractor. Also take note of any width restrictions when transporting by trailer. (For ease of installation, it is best to leave the rear wheels removed during installation of the mower.) (ASM-B-0001)

MAIN FRAME INSTALLATION

Adjust the jacks on the main frame so that the mounting arms coincide with the three-point hitch of the tractor.

Slowly drive the tractor into the frame until hole alignment is achieved. Mounting and hole alignment can also be aided with the use of a forklift. Secure the frame to the tractor using all of the hardware as shown in the parts section. (ASM-NH-0129)



ASSEMBLY

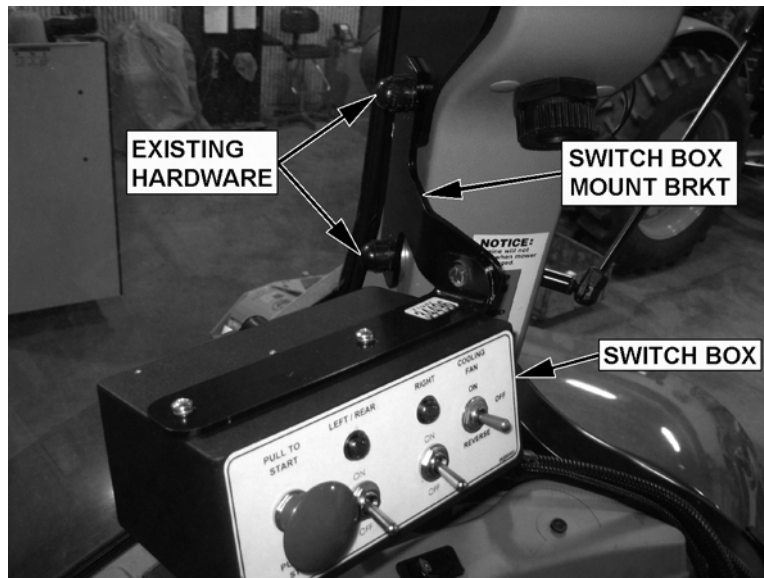
SWITCH BOX MOUNTING

Locate the switch box mounting bracket. Remove the tractor hardware in the right rear cornerpost of the tractor cab. Install switch box mounting bracket into the tractor cab using the hardware that was removed.

Assemble the universal bracket onto the switch box using the hardware shown in the Parts Section. Finally, attach the switch box to the switch box mounting bracket. (ASM-NH-0130)



REMOVE NEGATIVE GROUND FROM THE BATTERY TERMINAL BEFORE WORKING WITH THE WIRING SYSTEM.



ASSEMBLY

SWITCH BOX WIRING

Route the wires from the switchbox through the grommet in the rear right corner of the cab below the window as shown below except for the green and blue wires which connect to the neutral safety. Zip tie the wires together and protect the wires from the cab wall by using split hose. Apply RTV sealer around and between the wires and split hose to create a water-tight seal.

Remove the cover above the steering wheel to access the tractor wiring. Locate the white wire with a yellow stripe, this is the neutral safety. **(NOTE: Power should be “running” through these wires ONLY when the tractor ignition is in the “ON” position, check with a volt meter before splicing.)** Cut the neutral safety wire and connect to the green and blue wires coming from the switch box as shown below and in the wiring diagram. Cover the wires with wire wrap provided and route them under the floor mat and right side of cab to the switch box.

The red wire from the switch box can be connected to the continuous duty solenoid switch.

The red and black wires access power for the switch box through a John Deere auxiliary power plug in the rear of the cab.

NOTE: The ORANGE wire from the JD power plug should not be used because it is ALWAYS “Hot”. +12 VOLTS ELECTRICAL POWER MUST BE TAKEN FROM A SOURCE LOCATION WHERE IT IS LIVE ONLY WHEN THE IGNITION SWITCH IS IN THE “ON” POSITION. THE ORANGE WIRE MUST BE FUSED AT THE SOURCE LOCATION WITH A CLOSED END CONNECTOR (# 34538).

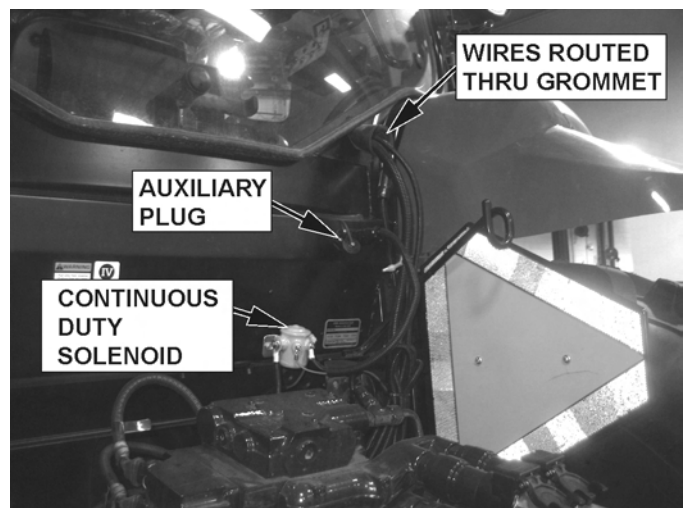
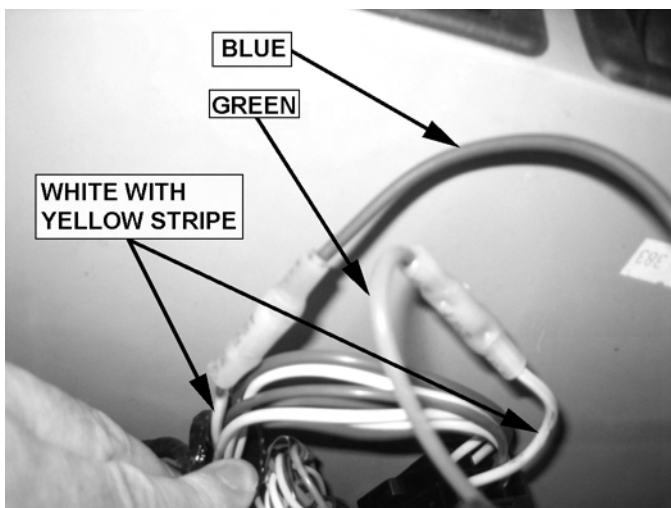
Connect the red wire from the switch box to the red wire from the JD power plug. Connect the black wire from the switch box to the black wire from the JD power plug.

Two sets of wires have Metri-Pak ends on them. The orange and black wires plug into the right side brake valve. The white and black wires plug into the left side brake valve.

One set of wires have a Weather-Pak end on them. The green and red wires will connect to the black and yellow set of wires of the cooler.

Connect a red wire from the battery routed with the battery cable from the positive post through the ‘ring’ under the stairs and under the cab to the continuous duty solenoid switch.

ASM-NH-0131)



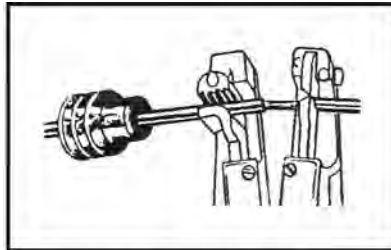
ASSEMBLY

WEATHER-PACK/METRI-PACK ASSEMBLY

These instructions apply to both Weather-Pack and Metri-pack connectors.

NOTE: Use the specific tool for the type of connector you are assembling.

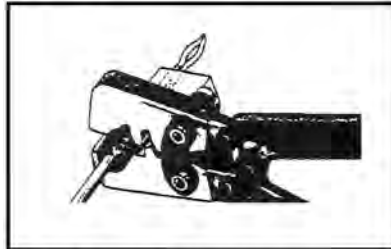
(ASM-C-0009)



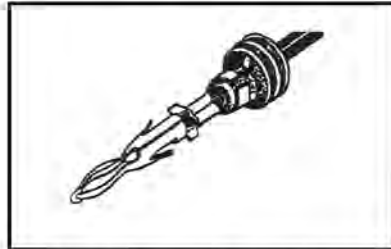
1. Apply seal to cable, before stripping insulation.



2. Align seal with cable insulation.



3. Put terminal in crimping tool, then



4. Crimp and visually inspect for a good

HYDRAULIC TANK INSTALLATION

Install all fittings into the tank and tank filter as shown in Parts Section illustration. Insert tank sight glass into front of the tank. Install the temperature sensor (optional) or pipe plug into side of the tank.

Place the tank in the mounting bracket on the main frame as shown in the Parts Section.

Secure the tank in the mounting bracket with the capscrews and nylock nuts.

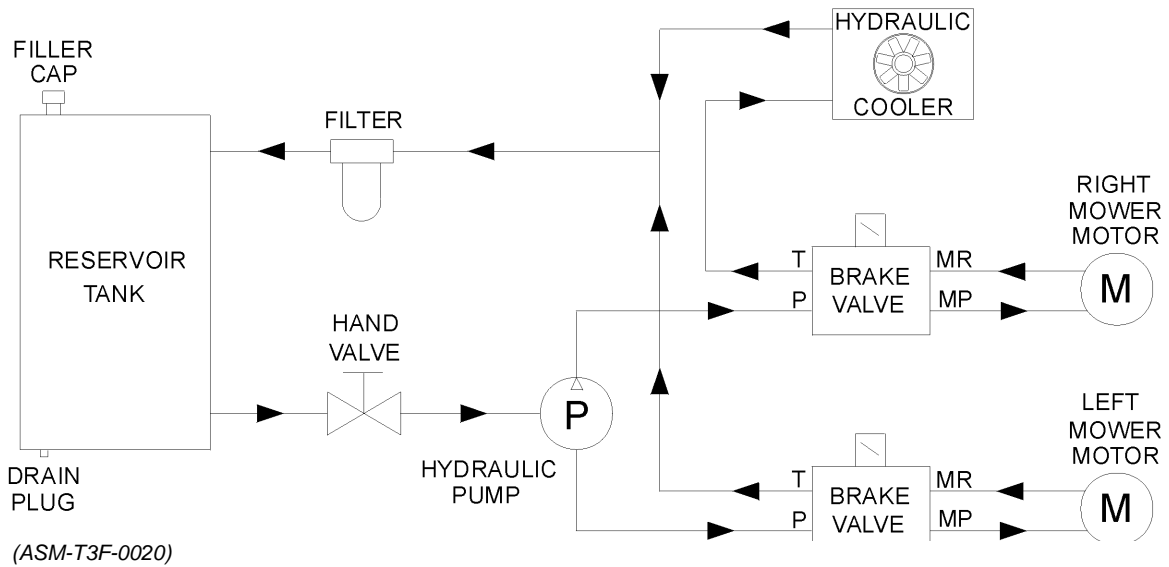
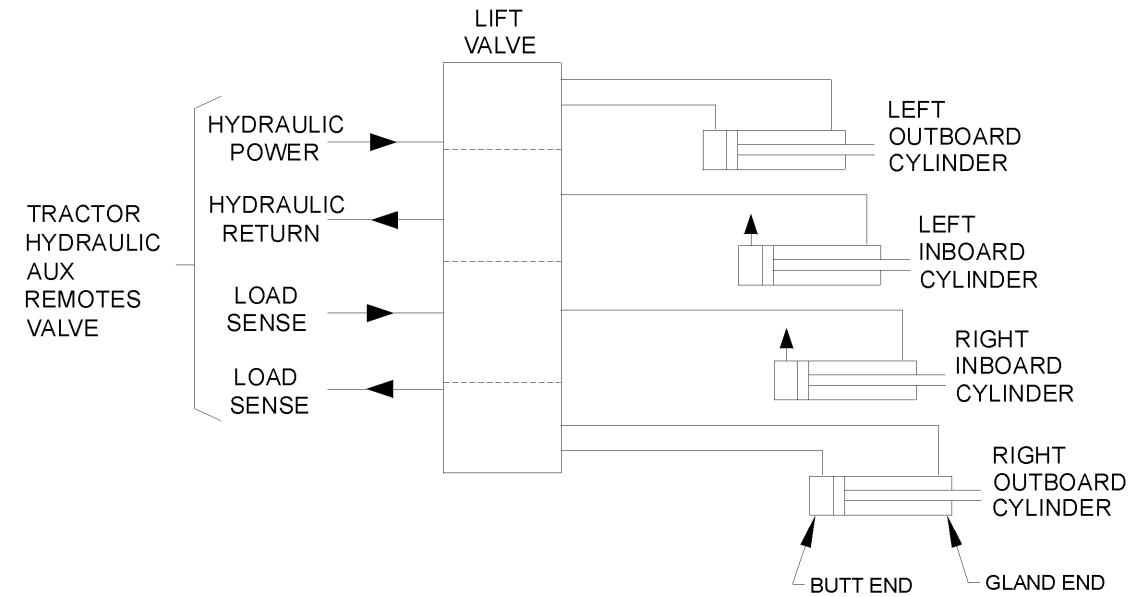
Install the filter gauge into the filter housing so that it points to the rear of the tractor and is clearly visible to the operator.

Locate the tank breather cap and install after tank is filled. (ASM-NH-0132)



ASSEMBLY

TRIPLE FLAIL HYDRAULIC DIAGRAM



FILLING HYDRAULIC RESERVOIR

Refer to the maintenance section for filling specifications and hydraulic oil requirements.

NOTE: Starting or running your Tiger mower before filling reservoir will cause serious damage to hydraulic pump.

(ASM-C-0004hydro resrv)



ASSEMBLY

INSTALLING O-RING FITTINGS

Installing straight, 45° and 90° O-rings requires that the O-ring and washer be up against the swivel body. Insert the swivel and turn in until the swivel is pointed in the desired direction and O-ring contact is made. Hold swivel in set direction with a wrench and turn the O-ring nut away from the swivel body and carefully tighten. (ASM-C-0056)

INSTALLING NATIONAL PIPE FITTINGS

Whenever installing a pipe fitting, wrap the threads clockwise (looking at the end) with teflon tape. In this way, the tape will be tightened when installed. NOTE: It is not necessary to tape O-ring fittings, or those installed in swivels. (ASM-C-0088)

GENERAL HOSE INSTALLATION

Refer to the parts section for detailed information about hoses and fittings for this application. (ASM-C-0011)

HOSE COVERING

Secure hoses together with zip ties wherever loose. Wrap the hoses between the main frame and the swivel as well as between the swivel and main boom with the hose covers provided. Also wrap the hoses between the main boom and secondary boom with the hose cover provided. Where hoses may contact the frame or other edges, wrap with split hose and secure with hose clamps or zip ties. (ASM-NH-0087)

SOLENOID BRAKE VALVE

Install a solenoid valve on the mounting bracket with the supplied hardware as shown in the Parts Section in this manual. While installing the fittings to the brake valve, the electrical coil on the spool may have to be removed to make room. When reinstalling the coil, it is important to use no more than 5 ft. lbs. (or 60in. lbs.) torque. WARNING: OVER TORQUE TO THE COIL WILL RESULT IN HYDRAULIC FAILURE OF SPOOL. (ASM-C-0025)

TEMPERATURE GAUGE MOUNTING (OPTIONAL)

Mount the temperature gauge where it is clearly visible to the operator. Attach the green (-) wire from the negative post on the gauge to a grounded bolt on the tractor frame. Remove paint if needed to make a good ground. Remove the pipe plug from the side of the hydraulic reservoir and install the temperature sensor using thread sealing tape. Run the white wire from the (s) sensor post of the gauge to the temperature sensor on the hydraulic reservoir tank. (ASM-C-0051)

MOWER MOUNTING

Use a forklift or overhead hoist to align mounting ears on bonnets with draft beam arms. Attach bonnet to draft beams with pins from the outside in and secure with hardware as shown in the parts section. Attach the inner cylinder butt end to the main frame mounting ear. Attach inner cylinder rod end into the slotted hole in the dog-leg assembly using the pin, flatwasher and roll pin as shown. Attach the outer cylinder to the dog leg and the cutter head with clevis pins and roll pins as shown.

Connect the hoses from the motors to the solenoid valves as needed for desired rotation per diagrams in parts section. (ASM-NH-0100)



ASSEMBLY

DECK / MOTOR FEEDLINE

Install the 1" hoses from the motor to the solenoid valve. Refer to the parts section for detailed information about hoses and fittings for this application.

Install split hoses around hydraulic hoses where they contact sharp edges, or any other edges that may rub hoses.

Be sure that all grease zerks are installed in the draft beam pin bosses. Grease all areas of the draft beam according to the instructions in the maintenance section. Re-check all fittings for tightness.

Fill hydraulic tank with fluid as recommended in the Maintenance Section. **BE SURE TO OPEN THE BALL VALVES.** Start the tractor and operate the inboard cylinder through the entire stroke and the outboard cylinder through the bottom $\frac{3}{4}$ stroke repeatedly to clear the lines of air. **DO NOT run outboard cylinder out to full stroke until stop bolt has been adjusted!**

Check for oil leaks at all fittings and connections using a piece of paper or cardboard. If a leak is found, you must shut down the tractor and set the cutter head on the ground. Before attempting to fix the leak, you must actuate the lift valve handles several times to relieve any pressure in the lines. **DO NOT USE HANDS TO CHECK FOR FLUID LEAKS!**

Raise the three point hitch and check the tractor internal hydraulics, fill to proper level if needed. (ASM-C-0079)



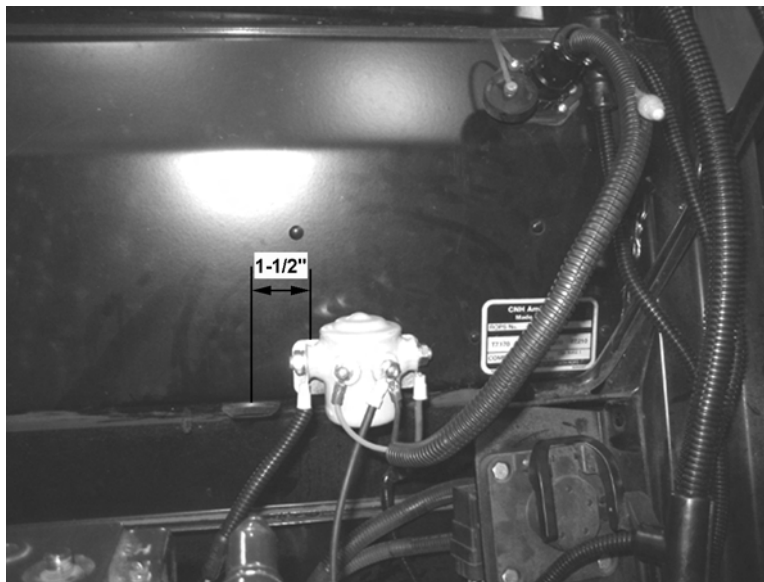
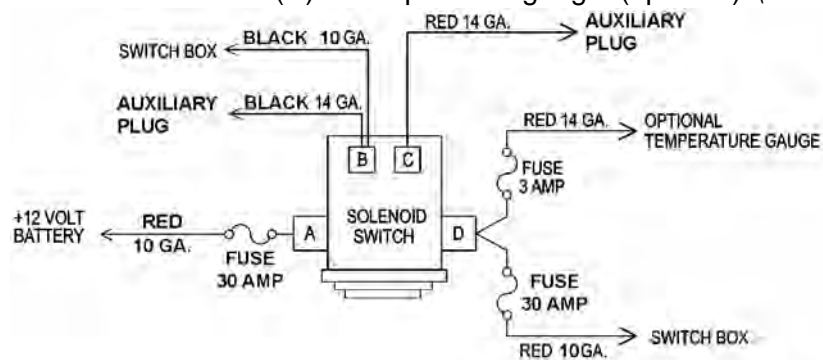
ASSEMBLY

CONTINUOUS DUTY SOLENOID SWITCH

Mount the solenoid switch on the back of the cab in the location shown below. 1-1/2" from the cab center to the inside hole, and the bottom mounting flange edge lined up with the bend in the cab wall. Use the provided self-tapping screws P/N 42335 (1/4" x 3/4").

Route wires to and from the Continuous Duty Solenoid Switch as shown below.

- A.) RED 10 GA. wire from terminal (A) to +12V battery fusible link.
- B.) RED 14 GA. wire from terminal (C) to tractor auxiliary plug.
- C.) BLACK 14 GA. wire from terminal (B) to tractor auxiliary plug.
- D.) BLACK 10GA. wire from terminal (B) to switch box.
- E.) RED 10 GA. wire from terminal (D) to switch box.
- F.) RED 14 GA. wire from terminal (D) to temperature gauge. (optional). (ASM-NH-0133)



ASSEMBLY

FINAL PREPARATION FOR OPERATION

Place operators safety and operation decals on the steering column and side counsel where they are clearly visible to the operator. These decals should be understood by each operator of the machine in conjunction with the safety and operation section of this book. The decals are to be maintained in good condition as a reminder to the operator, and should be replaced if damaged.

Finally, all bosses, pins and pivot points will need to be greased as instructed in the maintenance section of this manual. The hydraulic reservoir can also be filled with the recommended fluid (see maintenance section) and the filter installed in the top of the tank. Double check all fittings and fasteners **BEFORE** starting tractor. Also secure any loose hoses together with zip ties and wrap with split hoses where friction may occur on the hoses.



BEFORE starting or operating the tractor you must read and understand the safety and operation sections of this manual completely.

BE SURE THE BALL VALVES ARE OPEN! Start tractor and allow instruments to stabilize. Using a piece of paper or cardboard as noted in the safety and maintenance sections, check all fittings and connections for hydraulic leaks.

If a leak is found, you must shut down the tractor, set the cutter on the ground. Before attempting to fix the leak, you must actuate the lift valve handles several times to relieve any pressure in the lines.

Before operating the mower, the cutter head and boom should be slowly moved throughout the full range of motion. Watch for any condition that would cause pinching or excess stress on the hoses. The steering and front axle travel should also be carefully moved through their full range of motion. If any condition occurs in which the hoses contact the tires, the steering and / or front axle travel may need to be limited as described in the tractor operators manual. This should also be done if the tires rub, or are extremely close to any other part of the mower such as the hydraulic tank or draft beam. This may include adding shims, or adjusting stop bolts in the tractor front to solve the problem. While checking motion, you should also check that the control circuits are connected according to the operators decal for the valve handles.

MOWER TESTING

Take the tractor to a place free of loose objects on the ground. Operate the cylinders through their full range of motion again, to clear the lines of air. Follow the instructions in the operation section to operate the mower. Vibration of the mower should be minimal at all times. After a 5 minute test run, the knife bolts should be retorqued and once again after the first few hours of operation.

If any parts of this assembly section, or any other section of this manual are not clearly understood you must contact your dealer or the address on the front of this manual for assistance!*(ASM-C-0010)*



OPERATION SECTION

Operation Section 3-1

OPERATION

TIGER TRIPLE FLAIL MOWER OPERATING INSTRUCTIONS

Tiger Triple flail mowers are manufactured with quality material by skilled workers. These mowers are designed for cutting grass and small weeds. The mower is equipped with protective deflectors to prevent objects being thrown from the mower by the blades, however, no shielding is 100% effective. All shields, guards, and deflectors equipped on the mower must be maintained in good operational condition.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the mower, tractor, or a thrown object. Do not operate the mower if passersby, pets, livestock, or property are within 100 yards of the unit.

This section of the Operator's Manual is designed to familiarize, instruct, and educate safe and proper mower use to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a Triple flail mower and are not specific to any model. Some pictures may show shields removed for picture clarity. NEVER operate implement without all shields in place and in good operational condition. The operator must be familiar with the mower and tractor and all associated safety practices before operating the mower and tractor. Proper operation of the mower, as detailed in this manual, will help ensure years of safe and satisfactory use of the mower.

IMPORTANT: To avoid mower damage, retorque all bolts after the first 10 hours of operation. Refer to the Torque Chart at the end of the Maintenance Section to ensure bolts are properly tightened.

READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND IMPLEMENT. If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor. (OPS-U-0001)

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)

**SAFETY
INSTRUCTIONS**



PELIGRO

Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

**¡ LEA EL
INSTRUCTIVO!**



OPERATION

1. OPERATOR REQUIREMENTS

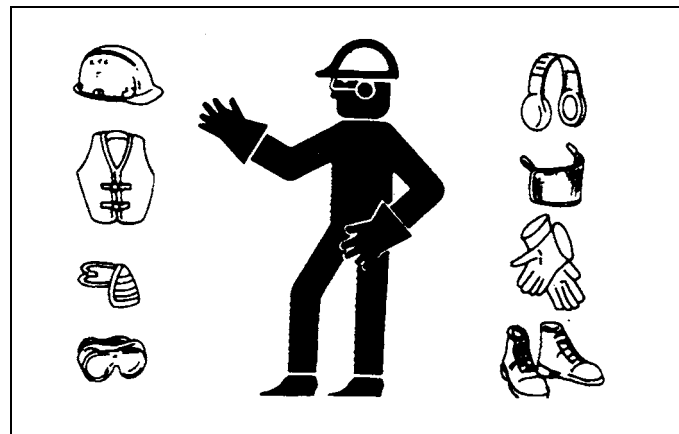
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation.

If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

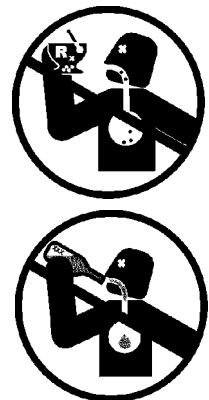
Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Always Wear Safety Glasses
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions) (OPS-U-0002)



NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



OPERATION

2. TRACTOR REQUIREMENTS

In addition to tractor horsepower and size required to operate the unit, the tractor must also be properly equipped to provide operator protection, to alert approaching vehicle drivers of the tractor's presence, and to ensure tractor stability when mowing.

Tractor Requirements and Capabilities

- ASABE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Safety Devices Slow Moving Vehicle (SMV) emblem, lighting, PTO master shield
- Tractor Horsepower..... 65 HP Min Recommended
- Power Take Off..... 540 RPM

2.1 ROPS and Seat Belt

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor models not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer. *OPS-U- 0003*



Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. 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. (SG-7)



2.2 Tractor Safety Devices

If transporting or operating the tractor and implement near a public roadway, the tractor must be equipped with proper warning lighting and a Slow Moving Vehicle (SMV) emblem which are clearly visible from the rear of the unit. Lights and a SMV emblem must be equipped directly on implements if the visibility of the tractor warning signals are obscured.

Maintain all manufacturer equipped safety shields and guards. Always replace shields and guards that were removed for access to connect, service, or repair the tractor or implement. Never operate the tractor PTO with the PTO master shield missing or in the raised position. *OPS-U- 0004*

2.3 Tractor Horsepower

The horsepower required to operate the mower depends on many factors including the vegetation to be cut, terrain condition, operator experience, and condition of the mower and tractor. For most mowing condition, the Triple Flail mowers require a tractor with at least 65HP. Operating the mower with a tractor that does not have adequate power may damage the tractor engine.

OPERATION



DO NOT use a PTO adapter to attach a non-matching Implement driveline to a Tractor PTO. Use of an adapter can double the operating speed of the Implement resulting in excessive vibration, thrown objects, and blade and implement failure. Adapter use will also change the working length of the driveline exposing unshielded driveline areas. Serious bodily injury and/or equipment failure can result from using a PTO adapter. Consult an authorized dealer for assistance if the Implement driveline does not match the Tractor PTO. (S3PT-14)



For non-independent PTO tractors - Never operate the Tractor and Mower if the Implement input driveline is directly connected to the Tractor transmission. Tractor braking distances can be substantially increased by the momentum of the rotating Mower blades driving the Tractor transmission even though the Tractor clutch has been disengaged. Install an over running clutch between the Tractor PTO and the Mower driveline to prevent this potentially dangerous situation. (S3PT-16_A)

3. GETTING ON AND OFF THE TRACTOR

Before getting onto the tractor, the operator must read and completely understand the implement and tractor operator manuals. If any part of either manual is not completely understood, consult an authorized dealer for a complete explanation. OPS-U- 0007



Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)



3.1 Boarding the Tractor

Use both hands and equipped handrails and steps for support when boarding the tractor. Never use control levers for support when mounting the tractor. Seat yourself in the operator's seat and secure the seat belt around you.

Never allow passengers to ride on the tractor or attached equipment. Riders can easily fall off and be seriously injured or killed from falling off and being ran over. It is the operator's responsibility to forbid all extra riders at all times. OPS-U- 0008



Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11)



OPERATION



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)



OPERATION

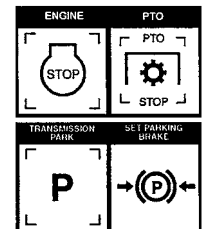
3.2 Dismounting the Tractor

Before dismounting the tractor, idle the tractor engine down, disengage the head and raise the side mower to the transport position. Park the tractor on a level surface, place the transmission in neutral and set the parking brake. Shut down the tractor engine, remove the key, and wait for all motion to come to a complete stop before exiting the operator's seat. NEVER leave the seat until the tractor, its engine, and mower head movement have come to a complete stop.

Use hand rails and extra steps when exiting the tractor. Be careful of your step and use extra caution when mud, ice, snow, and other matter has accumulated on the steps and handrails. Never rush or jump off the tractor. OPS-B- 0002_A



BEFORE leaving the tractor seat, always set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



OPERATION

4. STARTING THE TRACTOR

The operator must have a complete understanding of the placement, function, and operational use of all tractor controls before starting the tractor. Review the tractor operator's manual and consult an authorized dealer for tractor operation instructions if needed.

Essential Tractor Controls:

- Locate the ignition key/switch
- Locate the engine shut off control
- Locate the hydraulic control levers
- Locate the light control lever
- Locate the brake pedals and clutch
- Locate the PTO control
- Locate the 3 point hitch control lever
- Locate the operating controls

Before starting the tractor ensure the following:

- Conduct all pre-start operation inspection and service according to the tractor operator's manual.
- Make sure all guards, shields, and other safety devices are securely in place.
- The parking brake is on.
- The tractor transmission levers are in park or neutral.
- The mower operating controls are in the neutral and off position.
- The PTO control lever is disengaged.
- The hydraulic remote control levers are in the neutral position.

Refer to the tractor owner's manual for tractor starting procedures. Only start the tractor while seated and belted in the tractor operator's seat. Never bypass the ignition switch by short circuiting the starter solenoid. After the tractor engine is running, avoid accidental contact with the tractor transmission to prevent sudden and unexpected tractor movement. *OPS-B-0003_A*



Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)



Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)



5. CONNECTING THE MOWER TO THE TRACTOR

Use extreme caution when connecting the mower to the tractor. The mower should be securely resting at ground level or setting on blocks. Keep hands and feet from under the mower deck and clear of pinch points between the tractor hitch arms and mower pins. *OPS-R-0001*

OPERATION



Always shut the Tractor completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement and Tractor hitches. (S3PT-15)

5.1 Connecting the Rear Flail to the Tractor

1. Make sure the tractor is equipped with the correct PTO shaft. Change shafts if needed.
2. Shorten or remove the tractor drawbar to avoid interference when raising and lowering the mower.
3. Board the tractor and start the engine. Position the tractor to the mower with the 3-point lift arms positioned between the respective set of mower A-frame lift lugs. **Note:** Set the 3-point lift control to "Position Control" so that the lift arms maintain a constant height when attaching the mower. See the tractor Operator's Manual for correct settings when attaching 3-point equipment.
4. Turn off the tractor engine and dismount.
5. One lift arm at a time, align arm end hole between the set of A-frame lift lugs. Insert hitch pin through the lug and arm holes and insert retaining pin into hitch pin.
6. Walk around to opposite side and repeat procedure for remaining lift arm and hitch pin.
7. Extend or retract 3-point top link to align its end hole with the holes of the mower's top link. Insert the top link hitch pin and insert retaining pin into hitch pin.
8. Adjust any lower link check chains, guide blocks, or sway blocks to prevent the mower from swaying side to side and possible contact with tractor rear tires.



OPERATION

5.2 Connecting the Side Flails to the Tractor

1. Install the Draft Beam onto the Main Frame.
2. Raise the Draft Beam to line up with the the 'ears' on the Side Flail and install Pins and hardware.
3. Connect the Linkage and Cylinder to the Side Flail for a Combo Lift set-up or route and connect the cable to the Side Flail if it's a Cable Lift set-up.
4. Route and connect the hydraulic lines to the cylinders and from the Brake Valve to the Side Flail motor.



WARNING

Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)



WARNING

Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)

DANGER

DO NOT allow any person under a side mower unless mower is securely locked up or supported. **DO NOT** approach the Implement unless the Tractor is turned off and all motion has ceased. Never work under the frame work, or any lifted component unless the implement is securely supported or blocked up. A sudden or inadvertent fall by any of these components could cause serious injury or even death. (STI-03_A)



OPERATION

6. SETTING THE MOWER

Properly setting the cutting height is essential for efficient and safe operation. A properly set mower will make a more uniform cut, distribute clippings more evenly, require minimal tractor work, and follow the contour of uneven terrain. **NOTE:** Avoid very low cutting heights, striking the ground with the blades gives the most damaging shock loads and will cause damage to the mower and drive. Blades contacting the ground may cause objects to be thrown out from under the mower deck. Always avoid operating the mower at a height which causes the blades to contact the ground. OPS-U- 0010



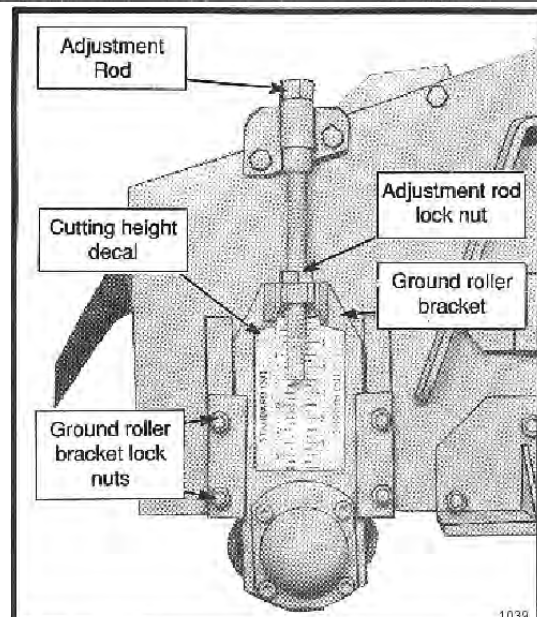
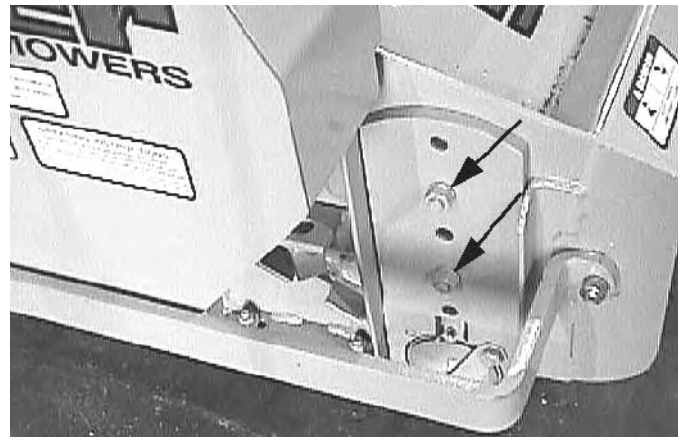
Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



6.1 Roller Height Adjustment

5. The mower's cutting height is set by positioning the roller assembly for each mower section. Each section must be set at the same height to ensure an even cut across the entire width of the mower.
6. Place the tractor and mower on a level surface and completely lower the mower to the ground.
7. Shut down the tractor, place the transmission in park, and set the parking brake before dismounting.
8. One section at a time, place lifting device (scissors jack or hydraulic jack) under center of cutter housing.
9. Remove hex nuts, washers and carriage bolts from brackets at each end of roller. Make certain that roller bracket is free to move once the fasteners are removed. A stuck roller could drop unexpectedly and cause injury.
10. For Standard Duty flails, use lifting device to reposition cutter housing to desired cutting height. Align bracket holes with cutter housing, then reinstall hardware.
11. For Heavy Duty flails, loosen the Adjustment rod lock nut and adjust height by turning the Adjustment Rod. Retighten the Adjustment rod lock nut and then reinstall hardware.
12. Lower cutter housing to the ground and remove lifting device.
13. Set cutting height according to procedures above for remaining two cutter sections. Make sure that all three rollers are set at the same height to ensure a even cut across the entire width of the mower.

Standard Duty



Heavy Duty

TRIPLE FLAIL

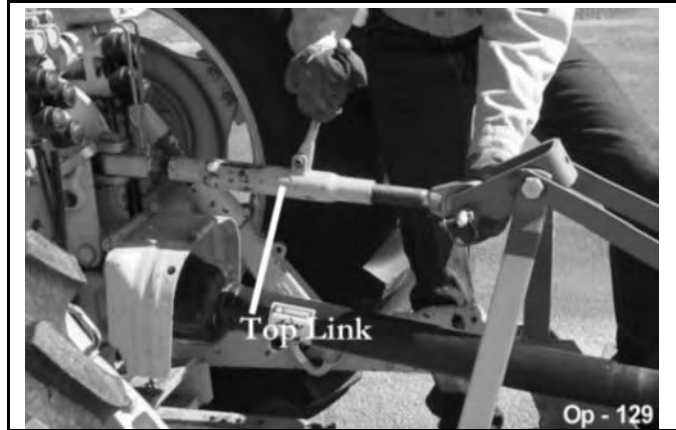
Operation Section 3-10

OPERATION

6.2 Leveling Deck

To facilitate a safe and efficient mowing operation, the mower should be operated parallel to the ground at all times. Never operate if front or rear of mower is tilted upward. Objects may be discharged at high speeds causing possible injury or even death.

Adjust Top Link to level mower roller adjustment. Side Skid Shoes should always be parallel to ground throughout the full adjustment range. Adjust cutting height of machine by raising or lowering rear roller as specified in Operation Section.



WARNING Do not let the Blades turn when the Mower Deck is raised for any reason, including clearance or for turning. Raising the Mower deck exposes the Cutting Blades which creates a potentially serious hazard and could cause serious injury or even death from objects thrown from the Blades. (SRM-07)



7. DRIVELINE ATTACHMENT

The driveline yoke and tractor PTO shaft must be dirt free and greased for attachment.

To connect the mower driveline to the tractor PTO output shaft, pull the driveline yoke collar back and align the grooves and splines of the yoke with those of the PTO shaft. Push the driveline yoke onto the PTO shaft, release the locking collar, and position the yoke until the locking collar balls are seated onto the PTO shaft. Push and pull the driveline back and forth several times to ensure a secure attachment.



After the driveline is securely attached, place the tractor PTO master shield back in the operating position. OPS-R-0003

Driveline Length Check



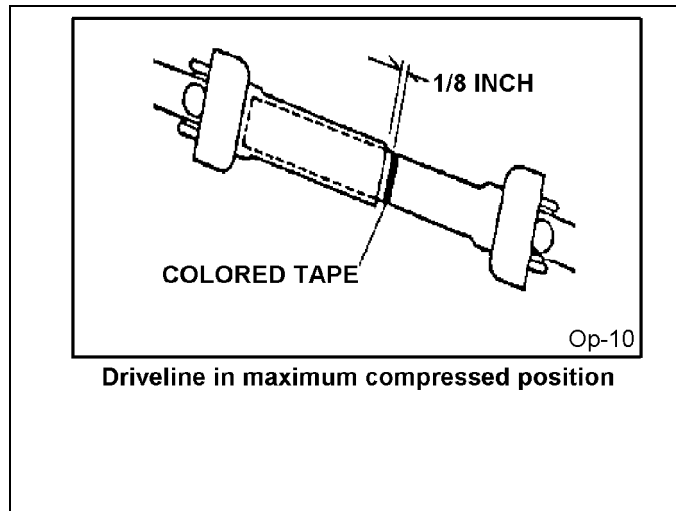
WARNING Before operating the Implement, check to make sure the Implement input driveline will not bottom out or become disengaged. Bottoming out occurs when the inner shaft penetrates the outer housing until the assembly becomes solid-it can shorten no more. Bottoming out can cause serious damage to the Tractor PTO by pushing the PTO into the Tractor and through the support bearings or downward onto the PTO shaft, breaking it off. A broken driveline can cause personal injury. (S3PT-18)

OPERATION

When fitting the mower to the tractor, the telescoping driveline must be inspected to ensure that at its most compressed position, the profiles do not “bottom out”, and when at its farthest extended position, there is sufficient engagement between the profiles to operate safely. At its shortest length, there must be at least a 1” clearance between each profile end and opposite profile universal joint. At its farthest operating extension, a minimum profile engagement of 12” must be maintained.

“Bottoming Out” Check Procedure

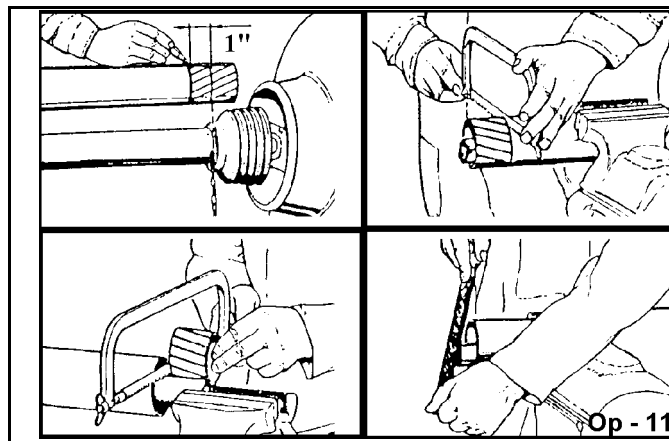
- Disconnect driveline from the tractor and slide the profiles together until fully compressed.
- Place a mark on the inner shield 1/8” from the end of the outer shield and reattach the driveline to the PTO Shaft.
- With the **PTO NOT TURNING**, slowly drive the tractor with mower attached through the sharpest turn possible and watch shaft movement. With the **PTO NOT TURNING**, slowly drive the tractor with the mower attached through the most severe terrain conditions expected and watch shaft movement.
- If the distance between the mark and the outer shield becomes less than 2” at any point there is a potential problem bottoming out the driveline and the driveline should be shortened.
OPS-F-0001



OPERATION

Shorten the driveline profiles as follows:

- Remove the driveline from the tractor.
- Position the mower to the point with the shortest distance between the tractor PTO shaft and cutter gearbox. Shut down the tractor and securely block the mower in this position.
- Pull driveline apart and reattach yoke to PTO shaft.
- Hold driveline sections parallel to one another and measure back 1" from yoke of each shaft and place mark on opposite section. Cut this length off with a saw.
- Round off all sharp edges and debur.
- Thoroughly grease then reinstall the driveline.
- Recheck for proper operation.



Engagement Check Procedure

- With the driveline attached, position the mower to the point where the telescoping driveline is at its maximum extension. Completely shut down the tractor and secure in position.
- Mark the inner driveline shield 1/8" from the end of the outer shield.
- Disconnect the driveline from the tractor and separate the two driveline halves.
- Measure the distance from the mark to the end of the inner profile. This length is the amount the driveline profiles were engaged.
- If the engaged length is less than 12" the shaft is considered too short and should be replaced with a longer shaft. Consult an authorized dealer to purchase the required driveline length.

NOTE: If the driveline cannot be shortened and still maintain the required profile engagement, the operator must be made aware of terrain conditions and avoid situations which pose a potential problem to avoid damaging the driveline. OPS-F-0002

8. PRE-OPERATION INSPECTION AND SERVICE

Before each use, a pre-operation inspection and service of the implement and tractor must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. DO NOT operate the unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair cost can be avoided. OPS-U-0029



Always disconnect the main PTO Driveline from the Tractor before performing service on the Mower. Never work on the Mower with the tractor PTO driveline connected and running. Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death. (SRM-3)

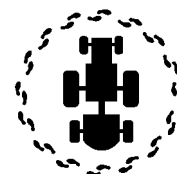
OPERATION



DO NOT allow any person under a side mower unless mower is securely locked up or supported. **DO NOT** approach the Implement unless the Tractor is turned off and all motion has ceased. Never work under the frame work, or any lifted component unless the implement is securely supported or blocked up. A sudden or inadvertent fall by any of these components could cause serious injury or even death. (STI-03_A)



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have attaching hardware. Serious injury may occur from not maintaining this machine in good working order. (SG-21_A)



8.1 Tractor Pre-Operation Inspection/Service

Refer to the tractor operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to the manufacturers recommendations. The following are some of the items that require daily service and inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- PTO shield
- SMV sign is clean and visible
- Tractor's lights are clean and functional
- Tractor Seat belt is in good condition
- Tractor ROPS is in good condition
- ROPS is in the raised position
- No tractor oil leaks
- Radiator free of debris
- Engine oil level and condition
- Engine coolant level and condition
- Power brake fluid level
- Power steering fluid level
- Fuel condition and level
- Sufficient lubrication at all lube points
- Air filter condition *OPS-U-0030*



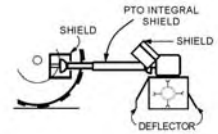
OPERATION

8.2 Mower Pre-Operation Inspection/Service

Before each mower use, a complete inspection and service is required to ensure the mower is in a good and safe working condition. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the mower is ready for operation, conduct the following. OPS-R-0007



All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Steel Guards, Gearbox Shields, PTO integral shields, and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SFL-5)



Replace bent or broken blades with new blades. NEVER ATTEMPT TO STRAIGHTEN, WELD, OR WELD HARDFACING ON BLADES SINCE THIS WILL LIKELY CRACK OR OTHERWISE DAMAGE THE BLADE WITH SUBSEQUENT FAILURE AND POSSIBLY CAUSE SERIOUS INJURY FROM THROWN BLADES. (SGM-10)

The operator's manual and safety signs affixed on the unit contain important instructions on the safe and proper use of the equipment. Maintain these important safety features on the implement in good condition to ensure the information is available to the operator at all times.

- Ensure all safety signs are in place and legible. Replace missing, damaged, and illegible decals. OPS-U- 0011_A



- Check that the main driveline securely attached to the tractor and the locking collar is seated in the groove of the PTO Shaft.
- Ensure side mower hydraulics are secure at both ends. OPS-F- 0003_A



OPERATION

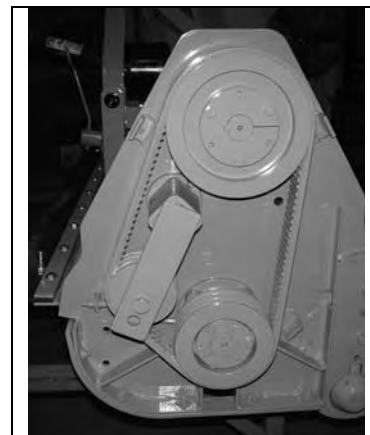
OPERATION

- Ensure rubber deflectors are in position and not damaged. Replace worn, broken, and missing sections immediately.
- Ensure the rollers are in good condition and rotate freely.
- Ensure the driveline integral shield is in good condition and rotate freely.
- Inspect that all bolts and screws are in position and are properly torqued. *OPS-F- 0004*

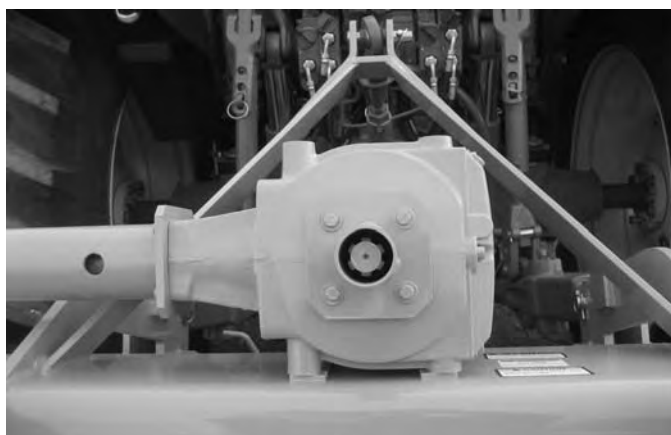


Op-255

- Inspect the condition of the side mowers and rear mower drive belts.
- Ensure the slip clutch (rear mower section only) is properly adjusted and the friction plates are not frozen together. Reference the Maintenance Section for proper slip clutch maintenance.
- Ensure the slip clutch shield and drive belts shields are in place and in good repair.
- Ensure the tractor PTO master shield is in place, lowered and in good condition. *OPS-F- 0005_A*



- Inspect oil level in gearbox and replenish if needed. A low oil level is a warning sign that the gearbox may be cracked or its seal is damaged and needs to be replaced.
- Check the oil level in tank and replenish if need. **NOTE:** Do not fill the tank with oil above the level of the sight gauge. Over filling the tank with oil after initial filling may result in oil being discharged through the breather cap on the top of the hydraulic tank.
- Perform scheduled lubrication as specified in the maintenance section. *OPS-F- 0006_A*



OPERATION

- Inspect cutter knives and knife pins for looseness and excessive wear. Make sure the mower is securely blocked up before crawling beneath. Replace damaged, worn, and missing knives as complete sets to maintain cuttershaft balance.
- Remove any grass or other debris which may be wrapped around the cuttershafts.
- Inspect the condition of deck skid shoes and hardware. *OPS-F- 0007*



OPERATION

OPERATION

Tractor PRE-OPERATION Inspection



Mower ID# _____ Make _____

Date: _____ Shift _____



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

OPERATION

Item	Condition at Start of Shift	Specific Comments if not O.K.
The flashing lights function properly		
The SMV Sign is clean and visible		
The tires are in good condition with proper pressure		
The wheel lug bolts are tight		
The tractor brakes are in good condition		
The steering linkage is in good condition		
There are no visible oil leaks		
The hydraulic controls function properly		
The ROPS or ROBS Cab is in good condition		
The seatbelt is in place and in good condition		
The 3-point hitch is in good condition		
The drawbar pins are securely in place		
The PTO master shield is in place		
The engine oil level is full		
The brake fluid level is full		
The power steering fluid level is full		
The fuel level is adequate		
The engine coolant fluid level is full		
The radiator is free of debris		
The air filter is in good condition		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

This Inspection Form may be freely duplicated for extra copies.

OPERATION

Flail Mower PRE-OPERATION Inspection



Mower ID# _____ Make _____

Date: _____ Shift _____



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

OPERATION

Item	Condition at Start of Shift	Specific Comments if not O.K.
The Operator's Manual is in the canister		
All safety decals are in place and legible		
The Mounting frame bolts are in place and tight		
The connection bolts & pins are tight		
There are no cracks in mower		
The Hydraulic Cylinders pins are tight		
The Hydraulic Pump hose connections are tight		
The Hydraulic Valve hose connections are tight		
The Hydraulic Valve controls function properly		
There are no leaking or damaged hoses		
The Hydraulic Oil level is full		
There is no evidence of Hydraulic leaks		
The Blades are not chipped, cracked or bent		
The Blade bolts are tight		
The Deflectors are in place and in good condition		
The shields are in place and in good condition		
The Skid shoes are in good condition & tight		
The Hyd. motor mounting bolts are tight		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

OPERATION

9. DRIVING THE TRACTOR AND IMPLEMENT

Safe tractor transport requires the operator possess a thorough knowledge of the model being operated and precautions to take while driving with an attached implement. Ensure the tractor has the capacity to handle the weight of the implement and the tractor operating controls are set for safe transport. To ensure safety while driving the tractor with an attached implement, review the following. *OPS-U- 0012*



This Implement may be wider than the Tractor. Be careful when operating or transporting this equipment to prevent the Implement from running into or striking sign posts, guard rails, concrete abutments or other solid objects. Such an impact could cause the Implement and Tractor to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles. (S3PT-12)



Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)



OPERATION

9.1 Starting the Tractor

The procedure to start the tractor is model specific. Refer to the tractor operator's manual for starting procedures for your particular tractor. Consult an authorized dealer if the starting procedure is unclear. Ensure the 3-point control lever is in the lowered position and the PTO is disengaged before starting the tractor. OPS-U-0033



9.2 Brake and Differential Lock Setting

Make sure the tractor brakes are in good operating condition. Tractor brakes can be set to operate independently allowing single rear wheel braking action or locked together to provide simultaneous rear wheel braking. FOR MOST DRIVING AND OPERATING CONDITIONS, THE BRAKE PEDALS SHOULD BE LOCKED TOGETHER TO PROVIDE THE MOST EFFECTIVE BRAKING ACTION.

Always disengage the tractor differential lock when turning. When engaged the differential lock will prevent or limit the tractor from turning. During normal cutting conditions, locking the differential provides no benefit and should not be used.

OPS-U-0013



OPERATING THE SIDE MOWERS

9.3 Transport Position

OPERATION

OPERATION

1. With tractor engine running, place ON/OFF switch(s) in "OFF" position and wait for cuttershaft(s) to stop rotating.
2. Pull LIFT control lever rearward until lift frame is as high as it will go.
3. Pull TILT control lever rearward until bracket on unit is above travel lock bracket on lift cylinder support. It takes some effort to pull TILT lever from "FLOAT" position.
4. Push LIFT control lever forward enough to lower unit slowly. Install the travel lock pin. It must pass through bracket on unit as shown in **Figure Op-258_A**.
5. Make certain that all control levers are in "HOLD" position when transporting unit.



The mower's center of gravity is raised making the mower more prone to tipping when the side mowers are in the raised position. Use extreme caution when in the transport position and avoid uneven terrain which could upset the mower.



⚠ DANGER

When the side mowers are folded for transport, the center of gravity is raised and the possibility of overturn is increased. Drive slowly and use extreme caution when turning on hillsides. Overturning the Implement could cause the Implement to overturn the Tractor and vice versa resulting in serious injury or even death. Never fold side mowers on a hillside...the Implement or unit may overturn. (ST1-02_A)

OPERATION

9.4 Operating Position

Ensure that ON/OFF switch(es) is (are) in "OFF" position. Remove travel lock pin. With tractor engine running, pull LIFT control lever rearward until bracket on cutter unit clears the travel lock bracket on lift cylinder support. Push TILT control lever forward until cutter unit is level with ground. Push LIFT lever forward enough to slowly lower unit until it touches ground, then push both levers forward to "FLOAT" position.

NOTE: For best mowing results and longer roller life, both LIFT and TILT levers should be in "FLOAT" position while mowing.

It takes some effort to pull TILT lever from "FLOAT" position because of detent spring.



The mower must be operated with the cutter sections fully lowered and the hydraulic control lever in the float detent to ensure the mower follows the contour of the ground and to prevent sections from creeping up. NEVER attempt to raise the mower while the mower is operating.

OPERATION

9.5 Driving the Tractor and Implements

Start off driving at a slow speed and gradually increase your speed while maintaining complete control of the tractor and units. Moving slowly at first will also prevent the tractor from rearing up and loss of steering control. The tractor should never be operated at speeds that cannot be safely handled or which will prevent the operator from stopping quickly during an emergency. If the power steering or engine ceases operating, stop the tractor immediately as the tractor will be difficult to control.

Drive the tractor with the 3-Point lift arms in the raised position and lock the control lever in the transport detent position to prevent damage to the mower driveline when turning.

Perform turns with the tractor and units at slow speeds to determine how the tractor with an attached mower handles a turn. Determine the safe speed to maintain proper control of the tractor when making turns.

To avoid overturns, drive the tractor with care and at safe speeds, especially when operating over rough ground, crossing ditches or slopes, and turning corners. Tractor wheel tread spacing should be increased when working on inclines or rough ground to reduce the possibility of tipping.

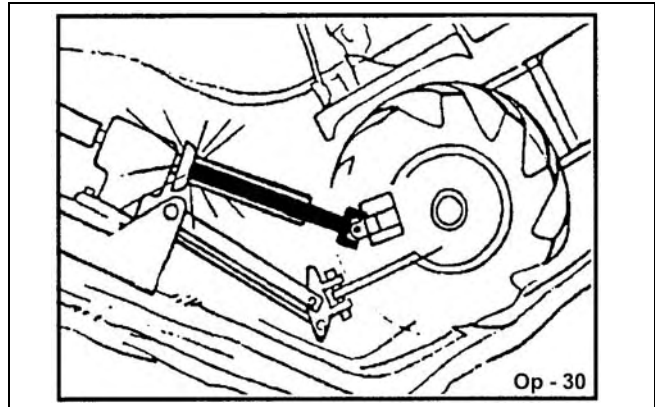
Use extreme caution when operating on steep slopes. Keep the tractor in a low gear when going downhill. DO NOT coast or free-wheel downhill.
OPS-F- 0009_A



9.6 Crossing Ditches and Steep Inclines

OPERATION

When crossing ditches with steep banks or going up sharp inclines, it is possible that the main driveline inner profile will penetrate into the outer housing to its maximum depth until the assembly becomes solid (driveline is at its extreme shortest length). This type of abusive operation can cause serious damage to the tractor and mower drive by pushing the PTO into the tractor and through the support bearings or downward onto the PTO shaft, breaking it off.

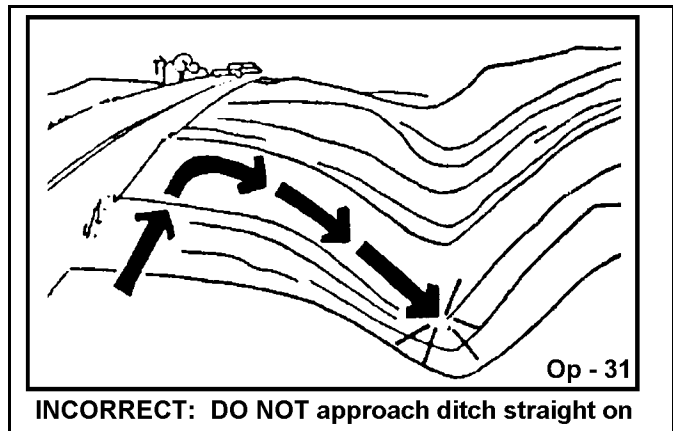


WARNING

Damage resulting from over-collapse of the driveline's inner profile and its outer housing may allow the driveline to come loose from the Tractor which could cause bodily injury to the operator or bystanders and/or extensive damage to the Tractor or Implement. OPS-R-0020

When confronted with an incline or ditch, do not approach from an angle which is perpendicular or straight on as damaged to over collapse of the driveline may occur.

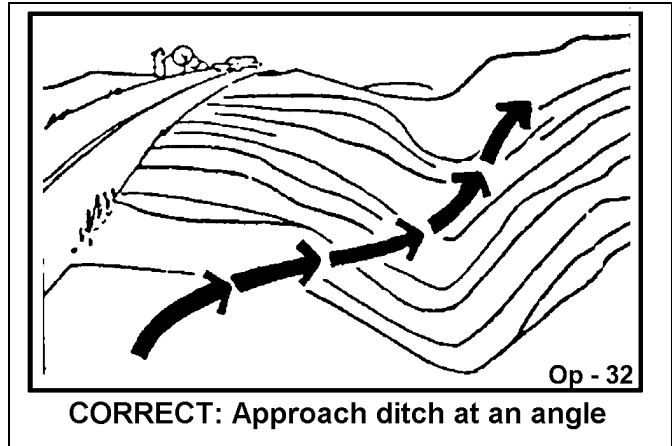
When crossing such terrain, the implement should be fully lowered for a lower center of gravity and added stability. OPS-R-0021



OPERATION

Inclines and ditches should be approached along a line which is at an angle as shown. This type of path will reduce the possibility of over-collapse of the driveline and resulting damage. If the gradient is so steep that such an approach increases the possibility of a tractor roll-over, select an alternate crossing path.

When operating the tractor and mower across slopes and inclines, through ditches, and other uneven terrain conditions, it is important to maintain sufficient deck to ground clearance. Blade contact with the ground may cause soil, rocks and other debris to be thrown out from under the mower resulting in possible injury and/or property damage. Ground contact also produces a severe shock load on the mower drive and to the mower blades resulting in possible damage and premature wear.
OPS-R-0022



10. OPERATING THE TRACTOR AND IMPLEMENT

THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE TRACTOR AND IMPLEMENT AND ALL CONTROLS BEFORE ATTEMPTING TO OPERATE. The operator must read and understand the Safety and Operation Sections of the implement and tractor operator's manuals. These manuals must be read and explained to any operator who cannot read. Never allow someone to operate the implement and tractor without complete operating instructions.

Before starting any operation, the operator must become familiar with the area to be worked in and any obstacles and hazards contained within to ensure safety to the operator, bystanders, and equipment. Special attention should be paid to foreign debris, rough terrain, steep slopes, and passersby and animals in the area.
OPS-U-0015



Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before mowing. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop mowing immediately if blades strike a foreign object. Repair all damage and make certain rotor or blade carrier is balanced before resuming mowing. (SGM-05)



OPERATION

⚠️ WARNING

Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items.

(SGM-06)

10.1 Foreign Debris Hazards

Before mowing, inspect the area to make sure there are no foreign objects that the mower blades could hit or become entangled with. Remove all foreign objects and debris. If objects are too big to remove, mark them clearly and be sure to prevent the mower blades from contacting them.

If you hit a solid object or foreign debris, stop the mower and tractor at once. Immediately idle the engine speed and disengage the PTO. Wait for all mower rotating motion to stop, then raise the mower and move the tractor and implement off the object. Inspect the area and remove, or mark the location of the debris. Inspect the condition of the mower and make any needed repairs immediately. Make sure the blades are not damaged and the carrier is balanced before resuming operation.



Always wear your seat belt securely fastened and only operate the tractor and mower with the ROPS in the raised position. If the tractor or mower hits a tree stump, rock, or bump, a sudden movement could throw you off of the seat and under the tractor and/or mower. The seat belt is your best protection from falling off the tractor and the ROPS provides protection from being crushed during a tractor roll-over. *OPS-F-0010*



10.2 Bystanders/Passersby Precautions

If a bystander comes within 300 feet of the tractor while the mower is being operated, stop the tractor at once, idle the engine and disengage the PTO. Do not engage the PTO again until all bystanders are well past the 300 foot distance. *OPS-R-0024*

OPERATION



Flail Mowers are capable under adverse conditions of throwing objects for great distances (300 feet or more) and causing serious injury or death. Follow safety messages carefully.



STOP MOWING IF PASSERSBY ARE WITHIN 300 FEET UNLESS:

- Front and Rear Deflectors, Chain Guards, or Bands are installed and in good, workable condition;
- Mower sections are running close to and parallel to the ground without exposed Blades;
- All areas have been thoroughly inspected and all foreign material such as rocks, cans, glass, and general debris has been removed.

NOTE: *Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected closely with any remaining debris being removed, and mowed again at desired final height. (This will also reduce power required to mow, reduce wear and tear on the Mower drivetrain, spread cut material better, eliminate streaking, and make the final cut more uniform.)* (SFL-6_A)

10.3 Engaging the Power Take Off (PTO)

Before engaging the PTO, make certain that the area is clear of bystanders and passersby. The implement must be completely lowered and the deck positioned at a safe operating height. NEVER engage the PTO with the implement in the raised position.

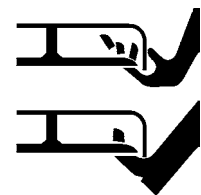
Set the tractor engine speed at approximately 1,000 RPM before engaging the PTO. Shift the PTO control to the on position, and slowly increase the engine speed until the PTO is operating at the rated speed. If you hear unusual noises or see or feel abnormal vibrations, disengage the PTO immediately. Inspect the implement to determine the cause of the noise or vibration and repair the abnormality. OPS-U- 0027



Do not let the Blades turn when the Mower Deck is raised for any reason, including clearance or for turning. Raising the Mower deck exposes the Cutting Blades which creates a potentially serious hazard and could cause serious injury or even death from objects thrown from the Blades. (SRM-07)



Do not put hands or feet under mower decks. Blade Contact can result in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SGM-09)



OPERATION

10.4 PTO RPM and Ground Speed

Ground speed for mowing will depend upon the height, type, and density of vegetation to be cut. Recommended speed for efficient mower performance is between 2 and 5 mph(3-8 kph). Operate the mower at its full rated PTO speed to maintain blade speed for a clean cut. Refer to the tractor operator's manual or the tractor instrument panel for the engine speed and gear to provide the required PTO and desired ground speed. Make sure that the mower is operating at its full rated speed before entering the vegetation to be cut. If it becomes necessary to temporarily regulate engine speed, increase or decrease the throttle gradually.

Ground speed is achieved by transmission gear selection and not by the engine operating speed. The operator may be required to experiment with several gear range combinations to determine the best gear and range which provides the most ideal performance from the mower and most efficient tractor operation. As the severity of cutting conditions increase, the ground speed should be decreased by selecting a lower gear to maintain the proper operating PTO speed. OPS-R-0025



WARNING

Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)



WARNING

Mow at the speed that you can safely operate and control the tractor and mower. The correct mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 2 to 5 mph(3-8 kph). Use slow mowing speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided. (SGM-07)

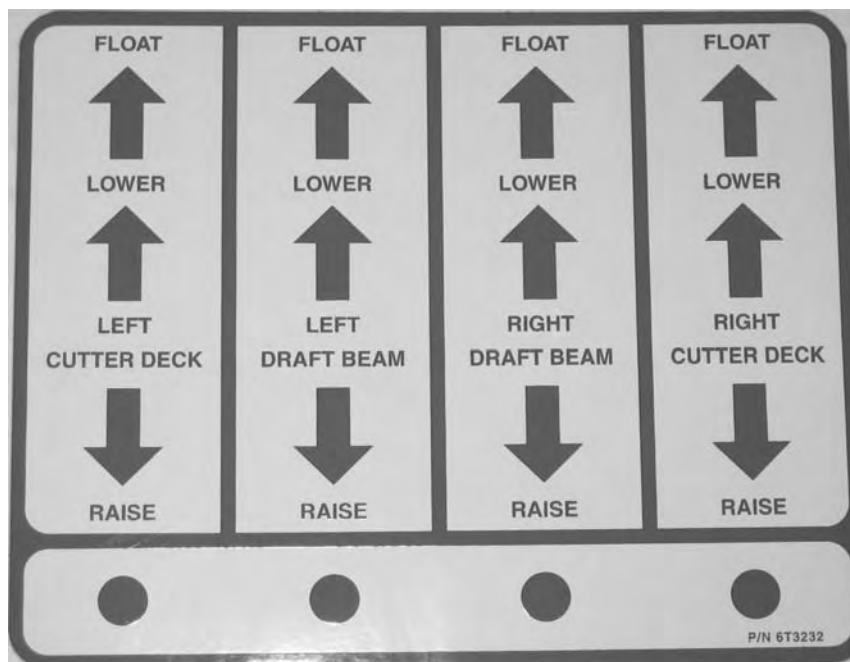
T3F DECAL

OPERATION

OPERATION

11. CONTROL LOCATION AND FUNCTIONS

The left and right mower height is controlled with a four spool valve and is coordinated as shown below. Always mow with the controls in the float position. Be sure to install the travel lock pins whenever the mower is to be transported by truck and trailer.



The rear mower height is controlled with the 3-point hitch control lever. Follow the instructions for this control in the tractor operator's manual. The tilt of the rear mower is controlled with the third spool in the lift valve and is coordinated as shown above.

The left and right mower ON/OFF switches are mounted to the four spool valve or the cable controls for cab and non-cab units respectively. Read and follow the mower operation section closely for instructions on how to operate them.

This machine may be equipped with an auxiliary oil temperature gauge, an amp gauge or oil pressure gauge. If oil temperature reaches 200 degrees Fahrenheit, stop mowers and see **Troubleshooting** in **Maintenance Section** for possible causes. Keep an eye on all gauges for indication of problems.

OPERATION

11.1 Operating the Mower



When rotating parts are in motion, serious injury may occur if caution is not used or danger is not recognized. Never allow bystanders within 300 feet of the machine when in operation. Extreme care should be taken when operating near loose objects – such as gravel, rocks and debris. These conditions should be avoided.

The rotating parts in this machine have been designed and tested for rugged use. However, they could fail upon impact with heavy solid objects – such as steel guard rails, concrete abutments, etc., causing them to be thrown at a very high velocity. Never allow cutter head to contact such objects. Inspecting the cutting area for such objects prior to mowing can help eliminate these potential hazards.

Once on location, lower the mower deck slightly above the material to be cut, so the mower does not have to start under a load. Bring the R.P.M. of the tractor up to 1200 and engage the side mower. If a rear mower is being used, allow the R.P.M. to return to 1200 before engaging the rear mower.

The flail mower deck should be carried so that part of the weight is carried by the ground roller. When the flail is carried this way, the roller also follows the contour of the ground more easily during mowing operations.

When cutting small shrubs or brush, begin each pass at the top of the material and work down with each consecutive pass. Use a low speed to allow the cutting blades time to mulch as well as cut the foliage. When the initial pass has been made, disengage the mower and return the mower to the travel position. Return to the starting point and make next pass, etc. The flail head is not intended for cutting heavy brush, or for continually cutting brush. Wear or damage of the blades will occur rapidly when the flail cutter is used this way.

To ensure a clean cut, engine speed should be maintained at approximately 1800 – 2200 R.P.M. If the tractor slows to less than 1800 R.P.M., shift to the next lower gear. **DO NOT** ride the clutch, this will cause premature clutch failure. **The engine should not be operated at any time at more than 2400 R.P.M. on the tractor tachometer.**

The mower will operate more efficiently in tougher conditions and with less power if the knives are kept sharp. If mower begins to vibrate, stop the tractor, check for wire wrapped around the cuttershaft or damaged knives. When replacing knives, replace all knives with new knives to ensure proper balance so the mower will not vibrate. Severe vibration will result, if knives with unequal wear are used. Follow the instructions in the maintenance section closely when replacing knife blades.



If bystanders approach within 300 feet while mower is in operation turn mower switch “OFF” immediately! After shutdown, never leave the tractor or allow bystanders to approach within **300 feet** of the unit until all motion stops completely.

When encountering a very severe condition which causes the tractor to stall, disengage mower, start tractor, raise the mower from the cut. Shut off tractor and inspect the mower, blades and cuttershaft for damage before engaging mower again.

If the blades jam or stop, disengage the clutch and raise the head slightly or back the tractor up. Normally, this will clear the cutter head. If not, shut off the mower(s), raise the cutter heads, turn off the tractor and set the parking brake. After all motion stops completely, leave the tractor and clear the cutting heads manually.

After the first day of operation, all bolts should be checked and tightened securely. This should be done periodically to ensure the bolts do not become loose and cause damage to the tractor or mower, or injury to the operator. Also, be sure to lubricate the unit as instructed in the **Maintenance Section**.

OPERATION

11.2 Shutting Down the Implement

To shut down the implement, first bring the tractor to a complete stop. Then slow down the implement by reducing the engine speed before disengaging the PTO. Wait for all motion to stop before proceeding to drive or shut down the tractor.



Park the tractor on a level surface, place the transmission in park or neutral and apply the parking brake, lower the attached implement to the ground, shut down the engine, remove the key, and wait for all motion to come to a complete stop before exiting the tractor. OPS-F-0011



12. DISCONNECTING THE MOWER FROM THE TRACTOR

Before disconnecting the mower, the PTO must be disengaged and all motion at a complete stop. Move the mower to a level storage location and lower both side mowers to the ground. If the mower will be stored with the sections in the raised position, be sure that the travel locks are engaged. If the mower is not resting securely on the ground, block the mower up securely before attempting to disconnect it from the tractor. Use extreme care to keep feet and hands from under the mower and clear of any pinch points. OPS-F-0012_A



OPERATION

After disconnecting the 3 lift points, remove the mower driveline from the tractor PTO shaft. Lay the driveline down carefully to avoid damaging the driveline or its shield. Do not let the driveline fall into mud or dirt, which can contaminate the bearing and shorten the life of the driveline.
OPS-F-0013



⚠ DANGER

Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



OPERATION

OPERATION

13. MOWER STORAGE

It is recommended that the mower be stored with the center section and both side mowers fully lowered to ground level. If the mower is stored with the side mowers in the raised position, select a level area and engage travel locks and travel lock pins to prevent the side mowers from falling BEFORE disconnecting the mower rear mower.

Properly preparing and storing the mower at the end of the season is critical to maintaining its appearance and to help ensure years of dependable service. The following are suggested storage procedures:

- Thoroughly clean all debris off the mower to prevent damage from rotting grass and standing water.
- Lubricate all mower grease points and fill gearbox oil levels as detailed in the maintenance section.
- Tighten all bolts and pins to the recommended torque.
- Check the mower for worn and damaged parts. Perform repairs and make replacements immediately so that the mower will be ready for use at the start of the next season.
- Store the mower in a clean, dry place with the mower housing resting securely on blocks or at ground level.
- Keep the driveline yoke from sitting in water, dirt and other contaminants.
- Use spray touch-up enamel where necessary to prevent rust and maintain the appearance of the mower.



It is critical that driveline clutches slip when an obstacle or heavy load is encountered to avoid mower and/or tractor damage. If the mower sits outside for an extended period of time or is exposed to rain and/or humid air, the clutch lining plates must be inspected to ensure they are not frozen together from rust or corrosion. If the mower has been exposed to such conditions, at the start of each mowing season, and any time it is suspected that the slip clutch plates may be frozen together, readjust the slip clutch as detailed in Seasonal Clutch Maintenance of the maintenance section in this manual. OPS-F-0014_A



Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Children can cause the Implement to shift or fall crushing themselves or others. (SG-25)

OPERATION

14. TRANSPORTING THE TRACTOR AND IMPLEMENT

Inherent hazards of operating the tractor and implement and the possibility of accidents are not left behind when you finish working in an area. Therefore, the operator must employ good judgement and safe operation practices when transporting the tractor and implement between locations. By using good judgement and following safe transport procedures, the possibility of accidents while moving between locations can be substantially minimized. *OPS-U- 0017*



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



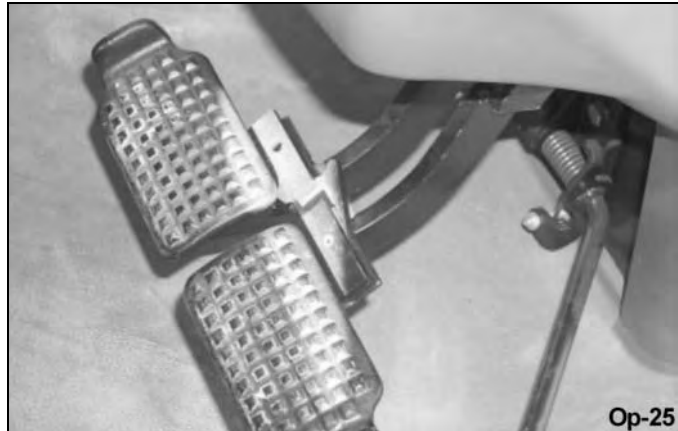
OPERATION

Before transporting the tractor and mower, idle the tractor engine, disengage the PTO and wait for all mower moving parts to come to a complete stop. Raise the mower sections and ensure travel locks engage and install the travel lock pins..



OPERATION

Before transporting the tractor on a public roadway or boarding a trailer for transport, the tractor brake pedals should be locked together. Locking the pedals ensures that both wheels brake simultaneously while stopping, especially when making an emergency stop.



Use extreme caution and avoid hard applications of the tractor brakes when carrying equipment at road speeds. Never haul the implement at speeds greater than 20 MPH (32 kph). OPS-U- 0018_A

If the tractor's hydraulic pump is not independent of the tractor PTO, or if the tractor PTO has to be run to have hydraulic power, disconnect the mower driveline from the tractor PTO output shaft. Secure the driveline to the mower deck to prevent driveline damage or loss during transport.

14.1 Transporting on Public Roadways

Extreme caution should be used when transporting the tractor and implement on public roadways. The tractor must be equipped with all required safety warning features including a SMV emblem and flashing warning lights to alert drivers of the tractor's presence. Remember that roadways are primarily designed for automotive drivers and most drivers will not be looking out for you, therefore, you must look out for them. Check your side view mirrors frequently and remember that vehicles will approach quickly because of the tractor's slower speed. Be extremely cautious when the piece of equipment that you are carrying is wider than the tractor tire width and/or extends beyond your lane of the road. OPS-U- 0019_A

NOTE: Ensure that the mower sections are fully raised and that the travel locks are engaged for each section.

WARNING

Only carry the Implement behind a properly sized and equipped Tractor which exceeds the weight of the Implement by at least 20%. DO NOT carry the Implement behind a truck or other type of vehicle. Never carry the Implement and another Implement connected in tandem. Never carry the Implement at speeds over 20 MPH. (STI-06_A)



DANGER

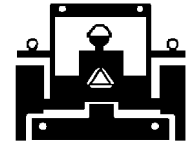
Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



OPERATION

WARNING

Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



The SMV (Slow-Moving Vehicle) emblem is universal symbol used to alert drivers of the presence of equipment traveling on roadways at a slow speed. SMV signs are a triangular bright orange with reflective red trim for both easy day and night visibility. Make sure the SMV sign is clean and visible from the rear of the unit before transporting the tractor and implement on a public roadway. Replace the SMV emblem if faded, damaged, or no longer reflective. OPS-U- 0020



Make sure that all tractor flashing warning lights, headlights, and brake/tail lights are functioning properly before proceeding onto public roads. While newer model tractors have plenty of lighting to provide warning signals and operating lighting, most older models are only equipped with operating lights. Consult an authorized tractor dealer for lighting kits and modifications available to upgrade the lighting on older tractor models. OPS-U- 0021



When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural tractors. Always stay alert when transporting the tractor and implement on public roads. Use caution and reduce speed if other vehicles or pedestrians are in the area. OPS-U- 0022



OPERATION

Reduce speed before turning or applying the brakes. Ensure that both brake pedals are locked together when operating on public roads. *OPS-U- 0023*



14.2 Hauling the Tractor and Implement

Before transporting a loaded tractor and implement, measure the height and width dimensions and gross weight of the complete loaded unit. Ensure that the load will be in compliance with the legal limits set for the areas that will be traveled through. *OPS-U- 0024*



Use adequately sized and rated trailers and equipment to transport the tractor and implement. Consult an authorized dealer to determine the proper equipment required. Using adequately sized chains, heavy duty straps, cables and/or binders, securely tie down both the front and rear of the tractor utilizing the proper tie down locations as specified by the tractor manufacturer. *OPS-U- 0025*



OPERATION

15. TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	REMEDY
Excessive Vibrations	Check gearbox bolts. Check for missing knives on cutter shaft. Check to see if knives are free swinging. Blade broken or bent. Cuttershaft bent. Drivelines not phased correctly. Implements & Tractor yokes must be in line.	Tighten if loose. Replace missing knives. Free knives so they swing. Replace blades. Replace cuttershaft. Replace driveline.
Gearbox Overheating	Low on lubricant. Improper type lubricant. Excessive trash build-up around gearbox. Bearing or gears set up improperly.	Fill to level plug. Replace with proper lubricant. Remove trash. Consult your Dealer.
Gearbox Noisy	Rough Gears. Worn Bearing.	Run-in or change gears. Replace bearing.
Noise	Damaged Belt Shield (Rubbing on pulleys or belt). Worn Bearing or Gear.	Straighten or replace shields.
Gearbox Leaking	Damage oil seal. Bent shaft. Shaft rough in oil seal area. Oil seal installed wrong. Oil seal not sealing in the housing. Oil level too high. Sand hole in casting. Gasket damaged. Bolts loose.	Replace seal. Replace oil seal and shaft. Replace or repair shaft. Replace seal. Replace seal or use a sealant on OD of Seal. Drain oil to proper level. Replace castings or gearbox. Replace gasket. Tighten bolts.

OPERATION

OPERATION

Clutch Slips Excessively	Clutch linings badly worn or plates warped. Too much power for clutch. Oil on facings. Friction facings glazed.	Repair clutch per maintenance section of manuals. Reduce ground speed and material intake. Replace facings. Clean with emery cloth.
Knives Wear Too Fast	Cutting in sandy conditions. Cutting in rocky conditions. Soft "will fit" knives.	Increase cutting height. Increase cutting height. Use genuine Tiger knives.
Hydraulic Cylinder Will Not Operate	Not enough pressure. Valve not connected properly. Quick coupler not completely connected.	Check Pressure. Re-plumb valve. Complete connection.
Oil squirting from Breather Vent Hole	Oil leaking by piston ring. Piston "O" Ring worn. Cylinder wall scored or pitted. Wrong piston ring on piston.	Do not carry cutter on cylinder. Small leakage amount is normal. Replace piston "O" Ring. Replace cylinder. Use correct piston ring.
Discharging Bunches	Belt installed improperly. Blades dull. Grass too wet. Grass too long. Travel speed too fast. PTO RPM too low.	Check belt for correct set up. Check blades for sharpness. Wait for grass to dry. Mow at 3-1/2" and re-cut lower. Use a lower tractor gear. Mow at engine RPM to match 540 PTO RPM.
Blades Scalping High Places	Mowing too low. Rough, uneven ground. Turning Tractor too fast.	Raise height of cut. Use a slower speed. Lower rollers. Slow down when turning.

OPERATION

Uneven Cut

Travel speed too fast.
Mower deck not level.
Blades dull or unbalanced.
Deck underside plugged.
Grass too high.

Use a slower speed.
Level the mowing deck.
Sharpen or balance blades.
Clean underside of deck.
Mow at 3-1/2" and re-cut lower.

Grass Clippings Windrow
or Clump

Grass too wet.
Grass too high.
Housing plugged.

Wait for grass to dry.
Mow at 3-1/2" and re-cut lower.
Clean underside of deck.

Grass Not Being Cut
Evenly

Belt worn or slipping.
Spring broke and belt off idler.
Housing plugged.
Debris around pulleys.

Grass too high.

Replace or adjust belt.
Replace spring or adjust belt.
Clean underside of housing.
Remove deck belt shield and
clean out debris.
Mow at 3-1/2" and re-cut lower.

OPERATION

OPERATION

TRIPLE FLAIL

Operation Section 3-42

MAINTENANCE SECTION

Maintenance Section 4-1

MAINTENANCE

GENERAL INSTRUCTIONS

Tiger Mowers are designed for high performance and rugged durability, yet with simplified maintenance. The purpose of this section of the manual is to help the operator in the regular servicing of the mower. Regular maintenance at the intervals mentioned will result in the maximum efficiency and long life of the Tiger Mower.

When you purchase a Tiger Mower you also acquire another valuable asset, Tiger's parts organization. Our rapid and efficient service has guaranteed the customer satisfaction for many years. Tiger parts keep up with the demands for efficiency, safety and endurance expected of the Tiger Mower.

MAINTENANCE PRECAUTIONS

- Be sure the end of the grease gun and fittings are clean before using. Debris injected into bearings, etc. with grease will cause immediate damage.
- DO NOT use a power grease gun to lubricate bearings. These require very small and exact amounts of lubrication. Refer to the detailed maintenance section for specific lubrication instructions. DO NOT over-grease bearings.
- Lexan windows should be washed with mild soap or detergent and luke warm water, using a soft clean sponge or soft cloth. DO NOT use abrasive or alkaline cleaners or metal scrapers on lexan windows!
- Be alert to maintenance indicators such as the in-tank filter pressure gauge, hydraulic reservoir sight gauge, etc. Take the required action to correct any problems immediately.
- Release of energy from pressurized systems may cause inadvertent actuation of cylinders, or sudden release of compressed springs. Before disconnecting any hoses relieve pressure by shutting tractor off, setting cutter on ground and actuating lift valve handles.

WARNING

DO NOT use hands to check for suspected leaks in hydraulic hoses! Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin and cause serious injury. If fluid is injected into skin, it must be surgically removed within a few hours or gangrene may result. Use a small piece of wood or cardboard, not hands, to search for pin hose leaks. Be sure all connections are tight and hoses and lines are not damaged before applying pressure.

BREAK IN PERIOD

In addition to following the break in instructions for your particular tractor, the in-tank hydraulic fluid filter should be replaced after the first 50 hours of service. Thereafter the filter should be replaced every 500 hours, or yearly, whichever comes first.

Re-torque wheel lugs after first five hours of operation and periodically thereafter. See torque specifications listed in the tractor's service manual for your particular model. **Wheel lugs must always be re-torqued whenever a wheel is removed and reinstalled.**

DANGER

Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



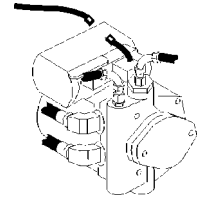
MAINTENANCE



Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)



Always disconnect the wire leads from the mower pump solenoid before performing service on the Tractor or Mower. Use caution when working on the Tractor or Mower. Tractor engine must be stopped before working on Mower or Tractor. The Mower Blades could inadvertently be turned on without warning and cause immediate dismemberment, injury or death. (SBM-12a)



MAINTENANCE

REGULAR MAINTENANCE

The intervals at which regular servicing should be done are based on hours of operation. Use the tractors hour meter to determine when regular servicing is required.

Daily or Every 8 Hours

ITEM	SERVICE	COMMENTS
Drive Shaft Yoke, U-Joint & Stub Shaft	Grease	Grease as instructed in detailed maint. section
Pump Drive Shaft Coupler	Check and Lube	Insure drive shaft end play
Crankshaft Adapter	Check rubber grommets	Replace grommets if damaged or missing
Pivot Points	Lubricate	Inject grease until it appears at ends
Hydraulic Fittings	Check for leaks	Tighten when needed. Do Not use hands to check for leaks, see Maintenance Precautions

MAINTENANCE

MAINTENANCE

ITEM	SERVICE	COMMENTS
Knives	Check	Inspect for missing or damaged knives, change as needed
Spindle mounting bolts (spindle to deck)	Check	3/4" x 2" or 3/4" x 2-1/2" bolts torque to 331 ft. lbs.
Knife mounting bolts (knife to disk)	Check	Pre-lubricate threads, then torque to 800 ft. lbs. Saber - Torque 1-3/4" knife bolts to 2,000 ft. lbs.
Disk mounting bolts (disk to spindle)	Check	5/8" x 1-3/4" or 5/8" x 2" bolts - torque to 204 dry / 184 oiled ft. lbs.
Belts	Check/Adjust	Check if broken, tighten as required.
Main Frame and Deck	Check	Retorque bolts to torque specifications in this section
Hydraulic Fluid Level	Check	Add if required per fluid recommendations
Rear Flail Drive (if applicable) Bearing Flange and Shaft Coupler	Lubricate	Grease as instructed in detailed maintenance section
Cutter Shaft	Lubricate	Grease as instructed in detailed maintenance section
Ground Roller Bearings	Lubricate	Grease as instructed in detailed maintenance section

TRIPLE FLAIL

Maintenance Section 4-4

MAINTENANCE

WEEKLY OR EVERY 50 HOURS

ITEM	SERVICE	COMMENTS
In Tank Hyd. Fluid Filter (10 micron filter)	Change	Change after first 50 hours only, then every 500 hours or yearly
In-Line High Pressure Filter (10 micron filter)	Change	Change after first 50 hours only then every 500 hours or yearly

MONTHLY OR EVERY 150 HOURS

ITEM	SERVICE	COMMENTS
Hydraulic Fluid Level	Check	Add as needed
Hyd. Tank Breather	Clean/Check/Replace	Clean or replace Element as required
Rear Tire Type		Max P.S.I.
480/80R38		29
18.4-34		26
18.4-38		26

YEARLY OR EVERY 500 HOURS

ITEM	SERVICE	COMMENTS
Hydraulic Tank Fluid	Change	
In Tank Hyd. Fluid Filter (10 micron filter)	Change	
In-Line High Pressure Filter (10 micron filter)	Change or	Change when indicated by restriction indicator.
Hyd. Tank Breather	Change	
TRIPLE FLAIL	Maintenance Section 4-5	

MAINTENANCE

MAINTENANCE

MAINTENANCE

TROUBLESHOOTING

SYMPTOMS	CAUSE	REMEDY
Vibration	Loose Bolts	Check all bolts and tighten to recommended torque specs.
	Cutter assembly Unbalanced	Check for damaged blades, disc or cuttershaft. Replace if needed. Check for wire, rope, etc. entangled in the cutter assembly
Mower will not lift	Hydraulic Fluid Low Leaks in line	Check and refill hydraulic fluid Tighten or replace fittings and hoses
	Faulty relief valve	Check pressure in line. Line pressure should be at least 2500 PSI
	Kinked or blocked Faulty cylinder	Clean or replace lines Inspect, repair or replace cylinder
Oil temperature rises above 200°F	Low oil level Kinked/ blocked hoses Worn pump/ motor	Bring oil to proper level Inspect, repair or replace Disable and repair
Mower will not start or run	Blown fuse	Check fuse between mower switch and ignition/replace
	Ball valves closed Low oil level Line leak	Make sure valves are open Check hydraulic tank and fill Check all fittings and lines, re-tighten or replace
	Electronic solenoid faulty	Without the tractor running, turn the mower switch to on. A low audible click should be heard if the solenoid is engaging the solenoid spool. If click is not heard, leave switch in ON position and with a screwdriver or other steel object, touch the small nut on the end of the solenoid. If the metallic object is not attracted to the nut, check the fuse and wiring for an open circuit. If the object is attracted but no "click" is heard, replace the solenoid.

MAINTENANCE

Remove the four bolts holding the small block to the main block. Lift and remove small block being careful not to damage O-rings/ filter. Clean filter and re-install.

Remove large nut on side of large valve block. Remove spring, and use needle nose vise grip to pull spool from block. Check block and spool for contaminants and scratches. Clean parts or replace if scratched.

Motor runs but will not cut.

Belts
Tensioner

Inspect belts and pulleys. Replace belts and repair as needed.
Adjust tensioner nut until flatwasher is flush with top of guide.

Mower turns slowly or not at all.

Contaminants restricting spool movement in valve body

Remove large nut on side of large valve block. Remove spring, and use needle nose vise grip to pull spool from block. Check block and spool for contaminants and scratches. Clean parts or replace if scratched.

Suction lines obstructed

Check for kinks or obstruction in suction hose.

Low oil level

Check Hydraulic tank level and fill.

Pump will not work

Excessive wear on internal parts.

Disassemble and repair.

Motor will not work

Excessive wear on internal parts

Disassemble and repair.





NOTE: *If flow meter is available, check pressure and flow volume for all suspected hydraulic problems.*

If the solution to your problem cannot be found in this section, call the Technical Service representative at the number shown on the front cover of this manual.





MAINTENANCE

MAINTENANCE

TORQUE SPECIFICATIONS

Torque for Standard Fasteners													
Nominal Dia. (in.)	threads per inch	 Grade 2			 Grade 5			 Grade 8			 Grade 9		
		Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque		
		Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain
		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20
Unified Coarse Thread Series													
1/4	20	49 in-lbs	59 in-lbs	66 in-lbs	76 in-lbs	86 in-lbs	101 in-lbs	107 in-lbs	122 in-lbs	143 in-lbs	126 in-lbs	143 in-lbs	168 in-lbs
5/16	18	101	122	135	157	178	209	221	251	295	259	294	346
3/8	16	15 ft-lbs	18 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	31 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-lbs
7/16	14	24	29	32	37	42	49	52	59	70	61	70	82
1/2	13	37	44	49	57	64	75	80	90	106	94	106	125
9/16	12	53	63	70	82	92	109	115	130	154	135	153	180
5/8	11	73	87	97	113	128	150	159	180	212	186	211	248
3/4	10	129	155	172	200	227	267	282	320	376	331	375	441
7/8	9	125	150	167	322	365	429	455	515	606	533	604	710
1	8	187	225	250	483	547	644	681	772	909	799	905	1065
1 1/8	7	266	319	354	596	675	794	966	1095	1288	1132	1283	1510
1 1/4	7	375	450	500	840	952	1121	1363	1545	1817	1597	1810	2130
1 1/2	6	652	783	869	1462	1657	1950	2371	2688	3162	2779	3150	3706
Fine Thread Series													
1/4	28	56 in-lbs	68 in-lbs	75 in-lbs	87 in-lbs	99 in-lbs	116 in-lbs	123 in-lbs	139 in-lbs	164 in-lbs	144 in-lbs	163 in-lbs	192 in-lbs
5/16	24	112	135	150	174	197	231	245	278	327	287	325	383
3/8	24	17 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	30 ft-lbs	35 ft-lbs	37 ft-lbs	42 ft-lbs	49 ft-lbs	43 ft-lbs	49 ft-lbs	58 ft-lbs
7/16	20	27	32	36	41	47	55	58	66	78	68	78	91
1/2	20	41	49	55	64	72	85	90	102	120	105	120	141
9/16	18	59	71	78	91	103	121	128	146	171	151	171	201
5/8	18	82	99	110	127	144	170	180	204	240	211	239	281
3/4	16	144	173	192	223	253	297	315	357	420	369	418	492
7/8	14	138	165	184	355	403	474	502	568	669	588	666	784
1	14	210	252	280	542	614	722	765	867	1020	896	1016	1195
1 1/8	12	298	357	397	668	757	890	1083	1227	1444	1269	1439	1693
1 1/4	12	415	498	553	930	1055	1241	1509	1710	2012	1768	2004	2358
1 1/2	12	734	880	978	1645	1865	2194	2668	3024	3557	3127	3544	4169

Torque values for 1/4 and 5/16-in series are in inch-pounds. All other torque values are in foot-pounds. K = 0.15 for "lubricated" conditions
 Torque values calculated from formula T=KDF, where K = 0.17 for zinc plated and dry conditions F = Clamp Load
 K = 0.20 for plain and dry conditions

Torque-Tension Relationship for Metric Fasteners													
Nominal Dia. (mm)	Pitch	 Class 4.6			 Class 8.8			 Class 10.9			 Class 12.9		
		Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque		
		Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry plain	
		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.20	
3	0.5	0.28	0.32	0.38	0.73	0.82	0.97	1.0	1.2	1.4	1.2	1.6	
3.5	0.6	0.44	0.50	0.59	1.1	1.3	1.5	1.6	1.9	2.2	1.9	2.5	
4	0.7	0.66	0.74	0.87	1.7	1.9	2.3	2.4	2.7	3.2	2.8	3.8	
5	0.8	1.3	1.5	1.8	3.4	3.9	4.5	4.9	5.5	6.5	5.7	7.6	
6	1	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11	9.7	13	
6	1.25	2.1	2.3	2.7	5.3	6.0	7.0	7.6	8.6	10	8.8	12	
7	1	3.8	4.3	5.0	9.7	11	13	14	16	19	16	22	
8	1	5.9	6.6	7.8	15	17	20	22	24	29	25	34	
8	1.25	5.5	6.2	7.3	14	16	19	20	23	27	24	31	
10	1.25	11	13	15	29	33	39	42	48	56	49	66	
10	1.5	11	12	14	28	32	37	40	45	53	47	62	
12	1.25	21	23	28	53	60	71	76	86	101	89	119	
12	1.5	20	22	26	51	58	68	73	82	97	85	113	
12	1.75	19	21	25	49	55	65	70	79	93	81	108	
14	1.25	26	29	34	66	75	89	95	108	127	111	148	
14	1.5	28	32	37	72	82	96	103	117	138	121	161	
14	2	30	34	40	78	88	104	111	126	148	130	173	
16	1.5	50	57	67	129	146	171	184	208	245	215	287	
16	2	47	53	62	121	137	161	173	196	230	202	269	
18	1.5	73	82	97	187	212	249	268	303	357	313	417	
18	2.5	65	73	86	167	189	222	239	270	318	279	372	
20	2.5	91	104	122	236	267	314	337	382	449	394	525	

Clamp load calculated as 75% of the proof load for specified bolts. K = 0.15 for "lubricated" conditions D = Nominal Diameter
 All torque values are listed in foot-pounds K = 0.17 for zinc plated, dry conditions F = Clamp Load
 Torque values calculated from formula T=KDF, where K = 0.20 for plain and dry conditions

MAINTENANCE

MAINTENANCE

LUBRICATION RECOMMENDATIONS

Description	Application	General Specification	Recommended Mobil Lubricant
Tractor Hydraulics	Reservoir	JD-20C MF M1135, M1141 FNHM2C134D	Mobilfluid 424
Mower Hydraulics	Reservoir		
	Cold Temperatures 0°F Start-Up	ISO 46 Anti-Wear-Low Temp	Mobil DTE 15M
	Normal Temperatures 10°F Start-Up	JD20C MF M1135, M1141 FNH M2C134D (FNH201)	Mobilfluid 424
	Normal Temperatures 15°F Start-Up	ISO 46 Anti-Wear	Mobil DTE 25
	High Operating Temp. Above 90°F	ISO 100 Anti-Wear	Mobil DTE 18M
Flail Rear Gearbox	Reservoir	PAO Synthetic Extreme Pressure Gear Lube	Mobil SHC 75W-90 Mobil 1 Synthetic Gear
Cutter Shaft & Ground Roller Shaft (Flail)	Grease Gun	Lithium-Complex Extreme Pressure NLGI-2 - ISO 320	Mobilgrease CM-S
Drive Shaft Coupler (Flail and Rotary)	Grease Gun	Lithium-Complex Extreme Pressure NLGI2 - ISO 320	Mobilgrease CM-S

MAINTENANCE

POLYCARBONATE CARE & MAINTENANCE

The propriety UV and Abrasion Resistant surface coating on SHIELDS® SUPERCOATED™ polycarbonate significantly improves performance. Periodic cleaning using proper procedures and compatible cleaners are recommended to prolong service life. Tiger Corp. polycarbonate is SUPERCOATED™ on both sides.

CLEANING THE SUPERCOAT™ HARD-COAT

1. Wash with a mild solution of soap or detergent and lukewarm water.
2. Using a soft cloth or sponge, gently wash the sheet to loosen dirt and grime and rinse well with clean water.
3. To prevent water spotting, thoroughly dry with chamois or cellulose sponge.
4. Avoid the use of abrasive cleaners, squeegees and/or other cleaning implements that may mar or gouge the coating.

CLEANING AGENTS WHICH HAVE BEEN FOUND TO BE COMPATIBLE UNDER LABORATORY CONDITIONS:

- Aqueous Solutions of Soaps and Detergents

Windex	Top Job	Joy	Mr. Clean
Fantastik	Formula 409	Sumalight D12	Brucodecid

- Organic Solvents

Butyl Cellosolve	Kerosene	Hexel, F.O. 554	Naphtha (VM&P grade)
Neleco-Placer	Turco 5042		

- Alcohols

Methanol	Isopropyl
----------	-----------

All residual organic solvents should be removed with a secondary rinse.

GRAFFITI REMOVAL

Butyl cellosolve (for removal of paints, marking pen inks, lipstick, etc.). The use of masking tape, adhesive tape or link removal tools works well for lifting off old weathered paints.

To remove labels, stickers, etc., the use of kerosene or VM&P naphtha are generally effective. When the solvent will not penetrate sticker material, apply heat (hair dryer) to soften the adhesive and promote removal.

If a material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide-only, and it is recommended that the user test the products under actual end-use conditions.

MAINTENANCE

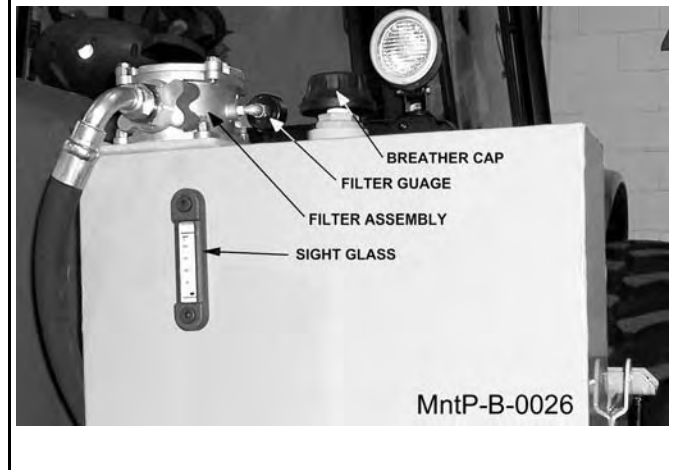
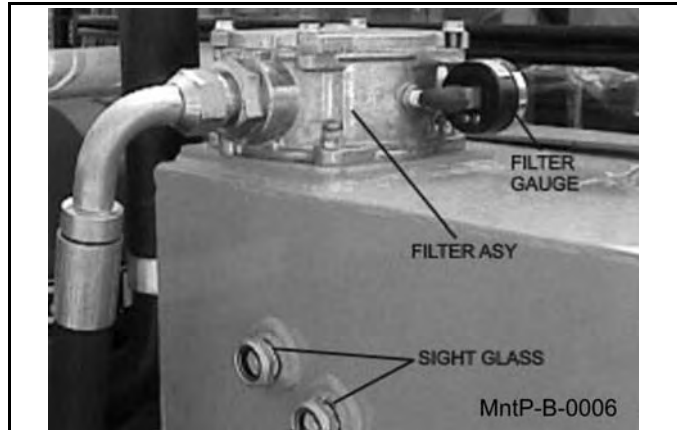
MAINTENANCE

RECOMMENDED FILLING INSTRUCTIONS FOR HYDRAULIC RESERVOIRS

When filling or checking the oil level, the unit should be parked on a level surface., shut "OFF", and allow sufficient time to cool to ambient temperature. Use caution when removing the pressurized breather. Do not place face over opening when removing breather.

If your reservoir has two sight glasses: The reservoir should be filled to the top of the lower sight glass on the side of the tank. Do not over-fill. The reservoir has been over-filled when oil is visible in the upper sight glass. If tank has too much oil, the excess may be expelled through the pressurized breather.

If your reservoir has one sight glass/temperature gage: The reservoir should be filled to the center of the sight glass on the side of the tank. Do not over-fill. If the tank has too much oil, the excess may be expelled through the pressurized breather.



REPLACING IN-TANK HYDRAULIC FILTER

Loosen the four bolts on the top cover of the filter housing. Turn cover counter-clockwise until cover is free. Remove and replace filter. Replace top cover and cover bolts in opposite order as removed.

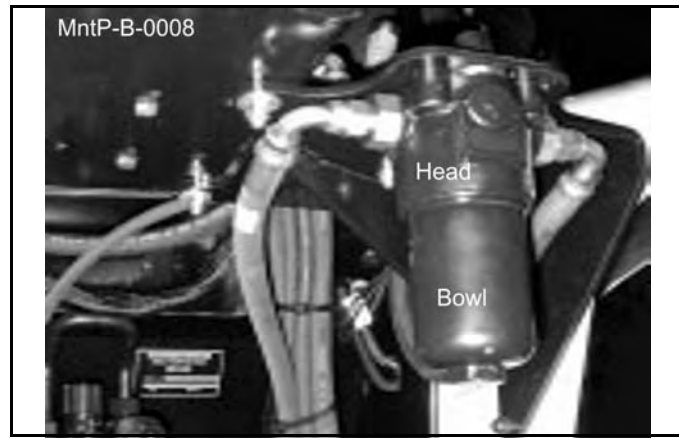


MAINTENANCE

MAINTENANCE

REPLACING HIGH PRESSURE HYDRAULIC FILTER ELEMENT

Assure system has been shut down and depressurized. Locate High Pressure Filter housing. Confirm that the element that is about to be installed matches the element p/n on the filter model tag. Example: V3.0510-06 (world line 100, HD049 model) Locate the bottom of the High Pressure Bowl, and use the appropriate spanner wrench-or-ratchet and turning in a counterclockwise rotation, (looking at the bottom of the bowl) remove the bowl from the head, The first couple rotations will seem tight as the o-ring passes the sealing flats, once the o-ring has cleared the sealing flats the bowl should spin freely. Taking care not to drop the bowl, finish removing the bowl from the head.



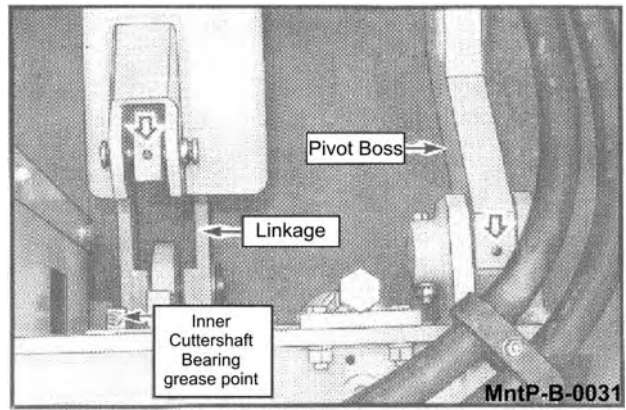
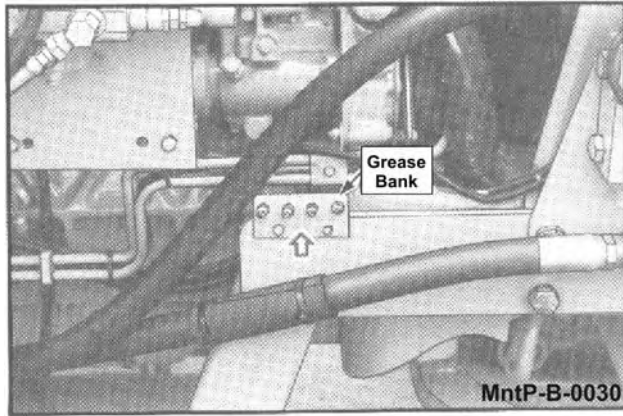
WARNING: *Bowl will be full of oil!* Pour the oil from the bowl into a container, this oil should be considered contaminated due to the flow direction through the element is outside-in. Clean the inside of the bowl if “dirt” is present. Remove the old element from the filter head by pulling with a rotation motion. Dispose of the used element properly. Remove the new element from the packaging. Using your finger, dab and lubricate the o-ring in the top of the new element. Install the new element into and on the mounting boss within the head; assure that the element is fully seated on the boss. Clean and inspect the o-ring that is affixed in the bowl, lubricate with oil. Using a clockwise rotation, screw the bowl back into the head, assuring that the bowl has not been cross threaded into the head. Continue to “tighten” the bowl into the head, using the spanner wrench-or-ratchet, the rotation of the bowl will become tighter once the o-ring engages the sealing flats. Once the bowl has bottomed out, “back-off” the bowl by 1/6 turn, this assures that the o-ring is seated properly with in the sealing flats. Element change out and re-assembly is now complete. Start the machine and inspect the filter area checking that there is no oil leaking from the filter assembly. This is first to be done at 50 hours of operation, then yearly (500 hours) or when indicated by restriction indicator.

MAINTENANCE

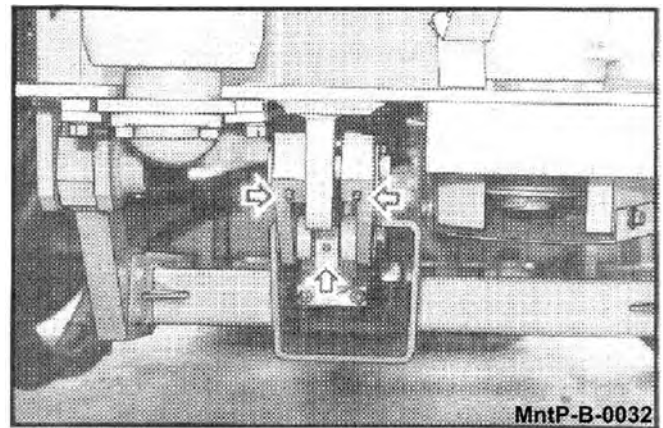
MAINTENANCE

GREASING INNER AND OUTER DRAFT BEAM PIVOT POINTS

Locate the grease zerks on the inner and outer draft beam pivot bosses. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications into each zerk until grease protrudes from joints. Grease all pivot points daily or every 8 hours of service.



With the cutter head lowered, locate the grease zerks on the linkage and pivot bosses. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications until it protrudes from the ends. With the cutter head in this position, it is also possible to grease the draft beam cylinder anchors and pins. Now, raise the cutter head to expose the remaining zerks on the deck tilt linkages and on the other end of the cylinder.

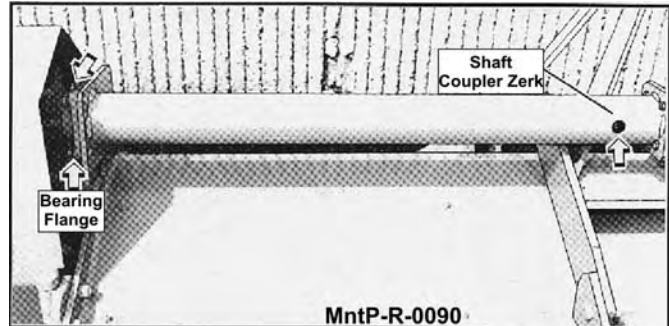


MAINTENANCE

MAINTENANCE

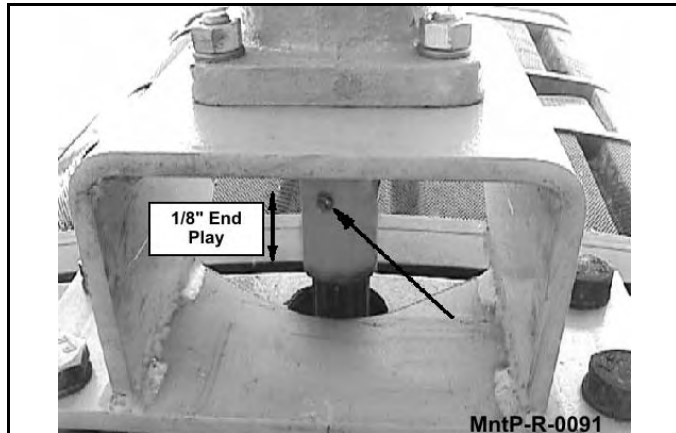
GREASING THE REAR DRIVE BEARING AND EXTENSION COUPLER SHAFT

Locate the grease zerks for the rear flail drive extension shaft. Make sure the zerks are clean before injecting grease. One pump of grease into flange zerk and shaft coupler once every day or for every 8 hours of service.



GREASING PUMP DRIVE SHAFT COUPLER

With engine stopped, ensure drive shaft alignment by grasping coupler and sliding back and forth. Coupler should slide freely with approximately 1/8" of end play. If coupler does not slide freely, inspect for loose pump mount bolts, or damaged or loose crank shaft adapter. Inject-Lithium Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications into coupler until grease begins to protrude from ends. Grease daily or every 8 hours. Do not over grease.

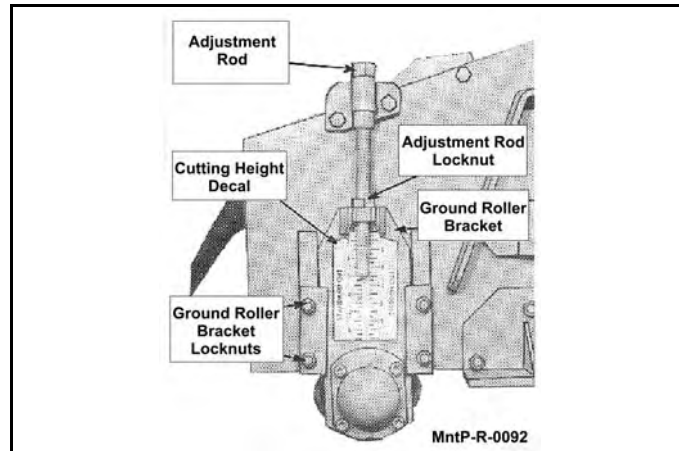


MAINTENANCE

MAINTENANCE

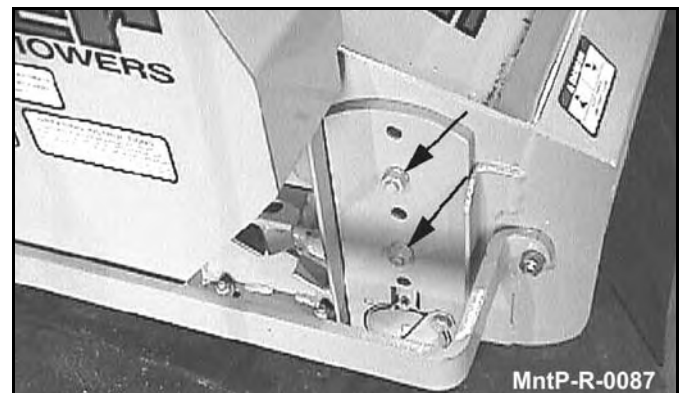
ADJUSTING THE CUTTING HEIGHT

Loosen the four ground roller bracket locknuts. Loosen the adjustment rod locknut and turn the adjustment rod to adjust the cutting height. The cutting height is indicated by the end of the adjustment rod on the cutting height decal. When cutting height has been achieved, tighten the ground roller bracket locknuts and the adjustment rod locknut securely. Be sure both sides of the flail are adjusted the same.



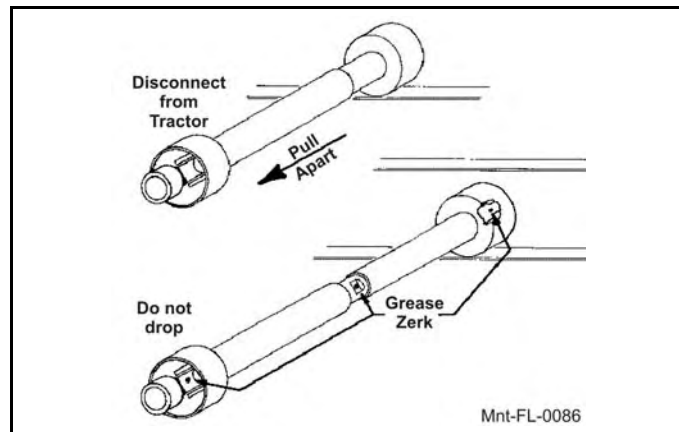
ADJUSTING STANDARD DUTY CUT HEIGHT

To adjust the cutting height of the standard duty flail head the two nuts on the roller shaft brackets must be taken off and moved to the desired location/height. Be sure that both sides of the shaft are adjusted to corresponding holes so the shaft remains level.



GREASING P.T.O. SHAFTS

After bringing the tractor to a complete stop, shut off the engine and remove the PTO shaft from the tractor. Slide the shaft apart to expose the grease zerk. Grease the shaft with 5 pumps of grease and the U-joints until grease protrudes from caps per the scheduled interval in the maintenance section.



MAINTENANCE

MAINTENANCE

BALL VALVES

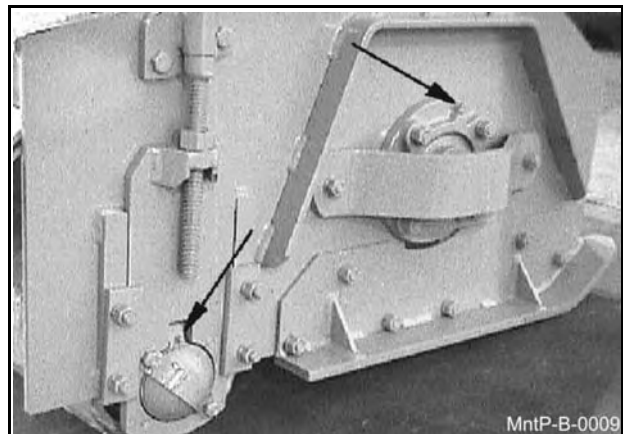
The ball valve at the hydraulic reservoir may need to be closed during certain maintenance or repair procedures. **THE BALL VALVE MUST BE OPEN (handle parallel with valve) WHEN TRACTOR IS RE-STARTED OR PUMP IS COUPLED TO MOTOR OR P.T.O.!** Failure to do so will result in component failure!

BALL VALVE



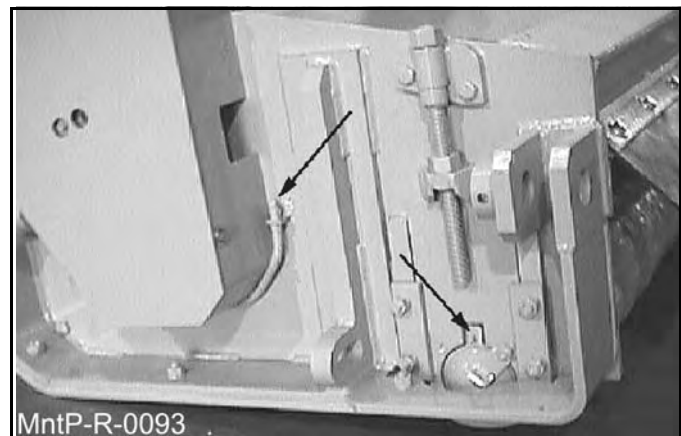
GREASING CUTTER SHAFT-FLAIL MOWERS

Locate grease zerks on each end of cutter shaft(s). These are located on the bearing cover. Normal conditions require one or two pumps in each bearing, using Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications. This is to be done with a standard grease gun daily or at **8 hour intervals**. **CAUTION: Over greasing may cause premature seal failure.**



GREASING GROUND ROLLER SHAFT-FLAIL

Locate grease zerks on each end of roller tube at lower rear of head. Normal conditions require one or two pumps in each bearing, using Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications. This is to be done with a standard grease gun daily or at **8 hours intervals**. **CAUTION: Over greasing may cause premature seal failure.**



MAINTENANCE

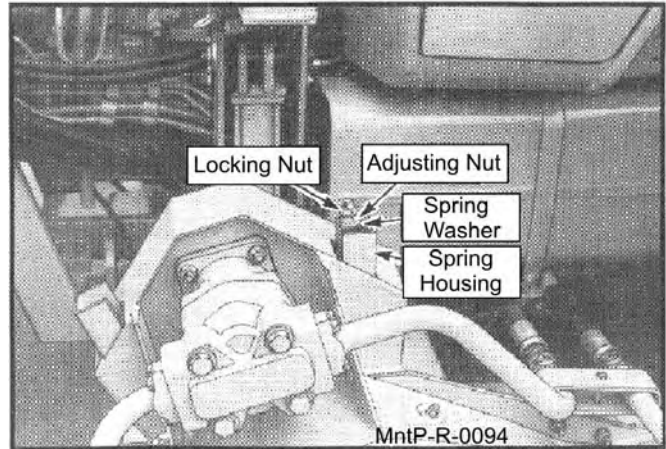
MAINTENANCE

GREASING THE IDLER TENSION ARMS

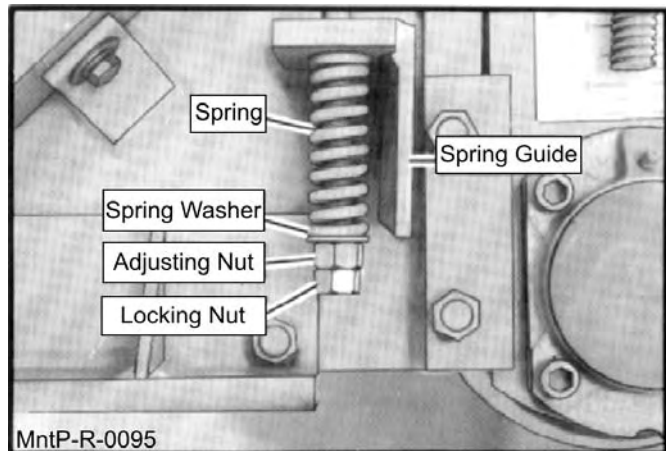
Locate the access holes and grease zerks in the belt shields of the side and rear flails. Normal conditions require one pump daily or every 8 hours of service with multi purpose grease.

IDLER TENSION

Locate the idler tensioning rod for each flail. Loosen the locking nut. Turn the adjusting nut until the washer between the spring and nuts are flush with the spring housing or guide. Tighten locking nut securely. For standard cut on side flail adjust until the spring washer is flush with the top of the spring housing. Use the same method to adjust hydraulically driven rear flails. **MntP-R-0094**



For standard cut on the mechanically driven rear flail mower, adjust so that the spring washer is flush with the spring guide. **MntP-R-0095**



MAINTENANCE

MAINTENANCE

ROSTA TENSIONER

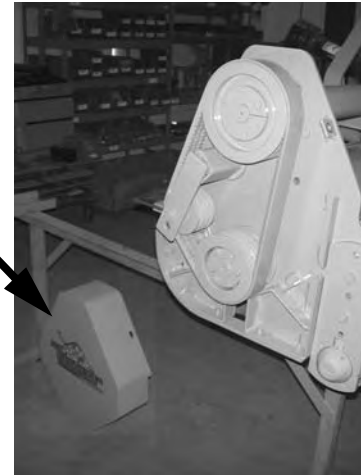
STANDARD DUTY REAR FLAILS

Remove the shield guard over the belt shield. Next, remove the belt shield that covers the tensioner, belt and sheaves.

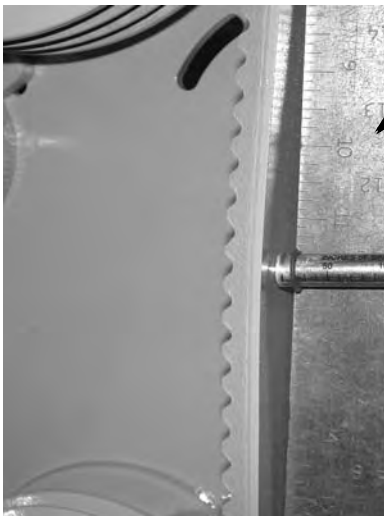


BELT SHIELD

SHIELD
GUARD



Place a straight edge over both sheaves and measure the belt tension (See TENSIONER MEASUREMENT PROCEDURE). To adjust the Rosta Tensioner, first, loosen the Rosta Stop and Rosta Bolt that secures the Rosta to the flail. Next use the Wrench (P/N 06401023 available) to adjust the tension of the belt. After the tension has been set, secure the Rosta Stop and re-torque the Rosta Bolt to specs.

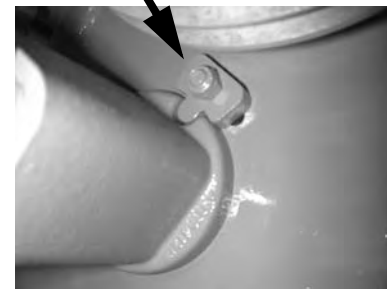


STRAIGHT EDGE

ROSTA WRENCH



ROSTA STOP



ROSTA
TENSIONER

TRIPLE FLAIL

Maintenance Section 4-18

MAINTENANCE

TENSIONER MEASUREMENT PROCEDURE

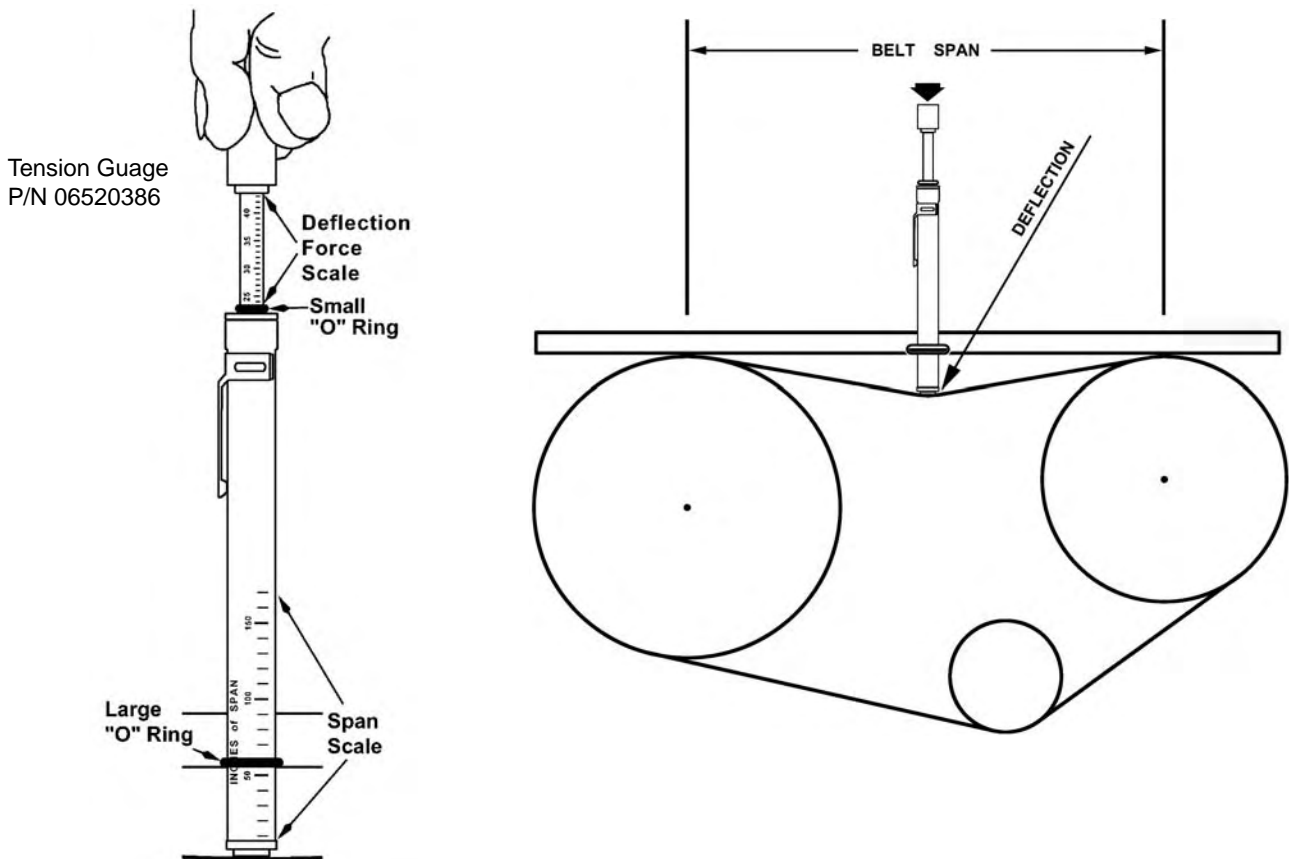
1. Measure the Belt Span (SEE SKETCH).
2. Position the bottom of the Large "O" Ring on the Span Scale at the measured Belt Span.
3. Set the Small "O" Ring on the Deflection Force Scale to Zero.
4. Place the tension gauge squarely on the belt at the center of the belt span. Apply a force on the plunger perpendicular to the belt span until the bottom of the Large "O" Ring is even with the bottom of a straight edge laid across the sheaves.
5. Remove the tension gauge and read the force applied from the bottom of the Small "O" Ring on the Deflection Force Scale.
6. Compare the force denoted by the Small "O" Ring with the values shown. The force should be between the values given for either a New Belt or Used Belt.
7. Make sure to use the force values in pounds if the span is measured in inches. Use kilograms of force if the span is measured in centimeters.

NOTE: The ratio of the deflection to belt span is 1/64 in either units of measurements.

Deflection Force Values - Standard Duty

New Belt: 20 to 25 pounds

Used Belt: 12 to 20 pounds

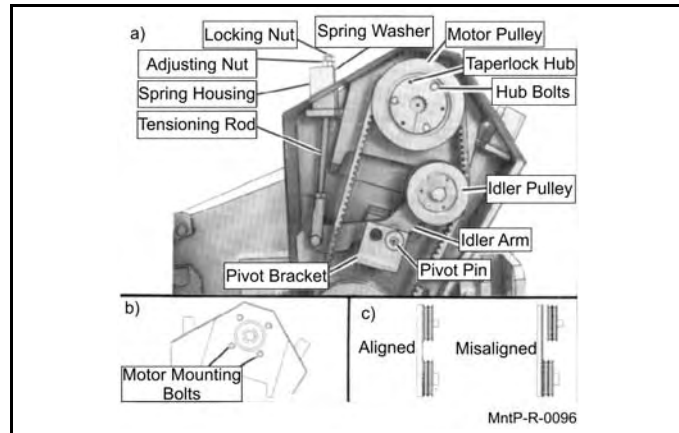


MAINTENANCE

REVERSING MOWER ROTATION OF SIDE AND REAR FLAIL MOWERS

To reverse the rotation of the side and hydraulically driven rear flail, a different idler arm is needed only for side flail. Part No. TF4346 is used in standard rotation. Part No. TF4345 is used in reverse rotation.

Before attempting this procedure, be sure all dirt is cleaned away from the motor and around all hose connections. This will prevent the oil from becoming contaminated.



1. Start by removing the belt shield from the flail mower.
2. Remove the locking and adjusting nut, spring washer and spring from the idler tensioning rod.
3. Disconnect the tensioning rod from the idler arm.
4. Remove the idler arm with the pulley attached.
5. Remove the idler pulley from the idler arm and reinstall in the short end of the new idler arm.

Reinstall the idler arm and pivot pin. The pivot pin is installed into the hole in the pivot bracket closest to the idler pulley. When assembling for **standard** cut rotation, the idler arm is installed with the idler pulley toward the front of the mower with the pivot pin in the front hole. When assembling for **reverse** rotation, with smooth cut knives, the idler arm is installed with the pulley toward the rear of the mower with the pivot pin in the rear hole.

Now disconnect the hoses and fittings from the motor and remove the taper-lock hub and pulley from the motor by removing the three hub bolts from the existing positions and inserting simultaneously into the threaded holes. Remove the four bolts holding the motor. Rotate the motor 180° so the hump is opposite the prior position. Reinstall the motor bolts and torque to 75 ft. lbs. Reconnect the hoses and fittings to the motor in the same configuration as before, i.e. the hose that was connected to the front port on the motor should now be connected to the port that is now facing the front.

Reinstall the taper-lock hub and pulley on the motor by installing the hub bolts in the original holes and tightening until the hub just contacts the pulley. Then, position the pulley on the motor shaft approximately 3/16" beyond the idler pulley and tighten and torque the hub bolts to 18 ft./lbs. Be sure the pulleys are vertically aligned when tight (see **Figure MntP-R-0096**), loosen and readjust if needed.

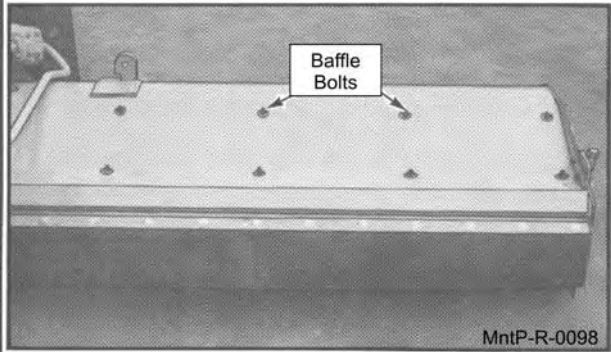
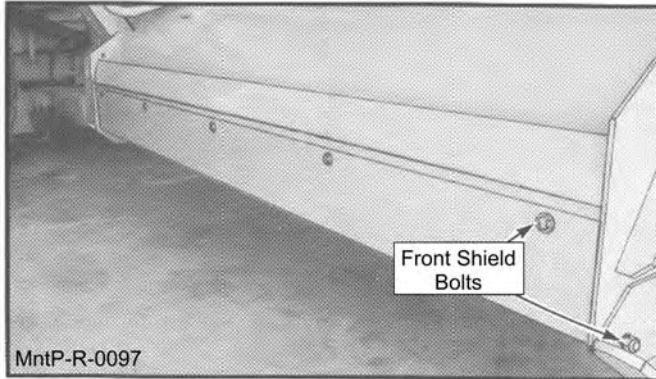
Reinstall the belts and idler tensioning rod. Tighten and lock the tensioning rod as shown previously in the maintenance section. Reinstall the belt shield.

With the motor rotation changed, now all of the knives on the cutter shaft must be changed as required. The cutter shaft rotates in the same direction as the tractor tires when going forward for standard cut knives. The shaft rotates opposite to standard rotation for smooth cut knives. Smooth cut knives should be installed so the cutting edge is forward.

MAINTENANCE

MAINTENANCE

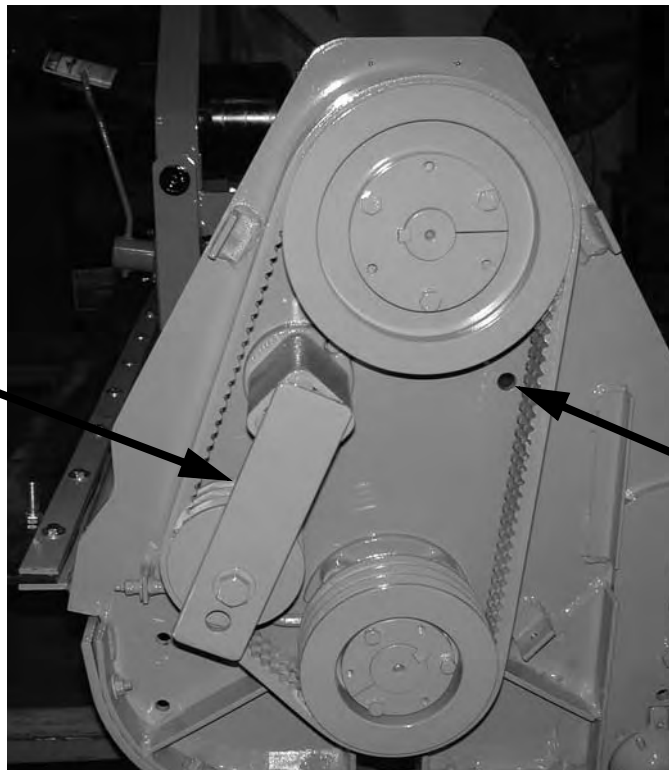
When operating in standard rotation, the front shield must be removed and the baffle installed. When operating in reverse rotation, remove the baffle and install the front shield. Finally, reposition the wear pads on the hoses and replace the zip ties as needed to prevent the hydraulic hoses from rubbing or chafing.



REVERSING MOWER ROTATION OF SD REAR FLAIL MOWERS

Remove the shield guard and belt shield. Next, remove the Rosta stop and loosen the Rosta Tensioner (**CAUTION:** the Rosta Tensioner is under belt pressure. Sudden release of this pressure may cause serious injury). Remove the Rosta Tensioner and relocate to the Reverse Rotation Tensioner location. Using the Rosta wrench, tension the belt, then tighten the Rosta bolt. Check the tension and adjust as needed. When the correct tension is achieved install the Rosta stop and torque the bolts appropriately

Rosta Tensioner



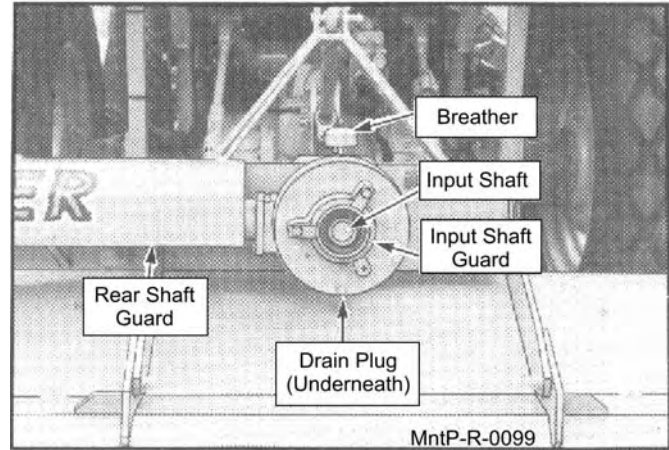
MAINTENANCE

MAINTENANCE

REVERSING MOWER ROTATION REAR MECHANICAL DRIVEN FLAIL MOWERS

Remove the rear shaft guard and disconnect the chain coupling to the shaft. Disconnect the P.T.O. drive shaft from the right angle gear box. Remove the gear box from the flail frame and lay down flat so that gear oil does not leak out.

Switch the top breather vent plug with the drain plug on the bottom. Remove the input shaft guard. The input shaft must be pressed through or turned around so the rear extension is equal to what the original front dimension was. Turn the gear box 180° and install on the flail frame so the frame so the chain coupling sprockets are side by side and the breather vent plug is on the top of the case.



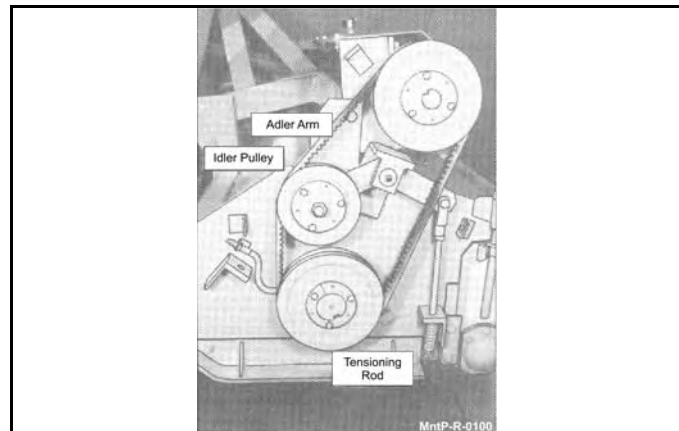
The sprocket must be aligned and spaced approximately 3/8" apart. When changing from standard cut to smooth cut rotation, a spacer plate may have to be installed between the gear box and the frame. When changing from smooth cut to standard cut rotation the spacer plate is to be omitted. Install the chain for the chain coupling. If there is any binding, or not free movement in the chain, the bearing next to the coupler may be shimmed as required to eliminate the chain binding.

Change all the knives on the cutter shaft as required. The cutter shaft rotates in the same direction as the tractor tires when going forward for standard knives. The cutter shaft rotates opposite the tractor tires for smooth cut knives.

Remove the belt shield. Then remove the adjusting nuts, washer and spring from the idler tensioning rod. Remove the clevis rod and small bushing from the idler arm. Remove the idler arm with the pulley attached. Remove the idler pulley from the idler arm and install the pulley on the other end of the idler arm. Reinstall the idler arm in the pivot bracket. For standard cut rotation the pulley is toward the front, for reverse rotation with smooth knives, the idler pulley is toward the rear. Install the small bushing in the idler arm and connect the idler tensioning rod.

Tightening the adjusting nuts for the idler arm tensioner as shown previously in the maintenance section. Install the belt shield, the shaft guard and P.T.O. shaft guards.

When operating the mower in reverse rotation with smooth cut knives, remove the baffle and install the front shield. When operating the mower in standard rotation with standard cut knives, remove the front shield and install the baffle.



MAINTENANCE

Flail Blades Inspection

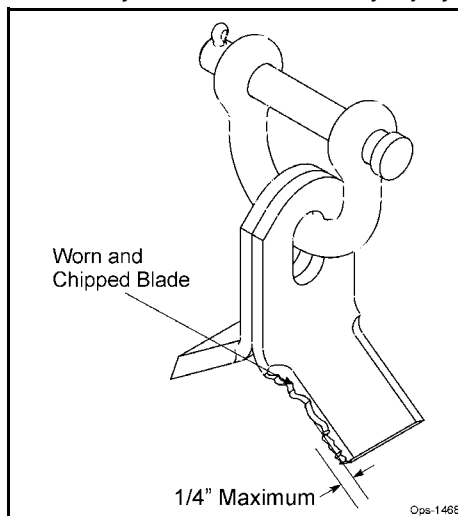


Inspect the Blades daily for abnormal wear. REPLACE ALL BLADES on the carrier IMMEDIATELY if any blades have:

- Become bent or deformed from its original shape, or
- Wear inside the blade bolt hole, or
- Any cracks are visible, or
- Deep gouges in the blade's surface are present, or
- Gouges or chipped areas in the cutting edge are larger than 1/4"(8mm), or
- The material on the leading edge has been worn away by more than 1/4"(8mm)

DO NOT straighten, sharpen, weld or hard-face blades

Failure to replace worn or damaged blades may lead to catastrophic failure of the blades and ejection of the broken part with tremendous force which may cause serious bodily injury or death.



Always replace blades in sets

- Blades that are damaged may indicate severe service or abuse. If one blade is worn or damaged other blades on the same shaft will have been subjected to the same severe service or abuse.
- The Flail rotor turns at speeds exceeding 2000 RPM and is dynamically balanced at the factory. Differences in blade weight between used blades with loss of material from gouges or wear as compared to new blades can cause severe vibration and damage to the Flail rotor. Always replace blades as complete sets.

Important

Use only genuine Alamo Industrial replacement blades and fasteners. Other blades and fasteners may not meet the Alamo Industrial requirements and could fail during operation resulting in part being thrown out from under the mower.



Never attempt to sharpen blades. OPS-U-0044

MAINTENANCE

MAINTENANCE

Blade Pins and D-Ring Inspection

Blade Pins and D-Rings daily for wear or damage as follows:

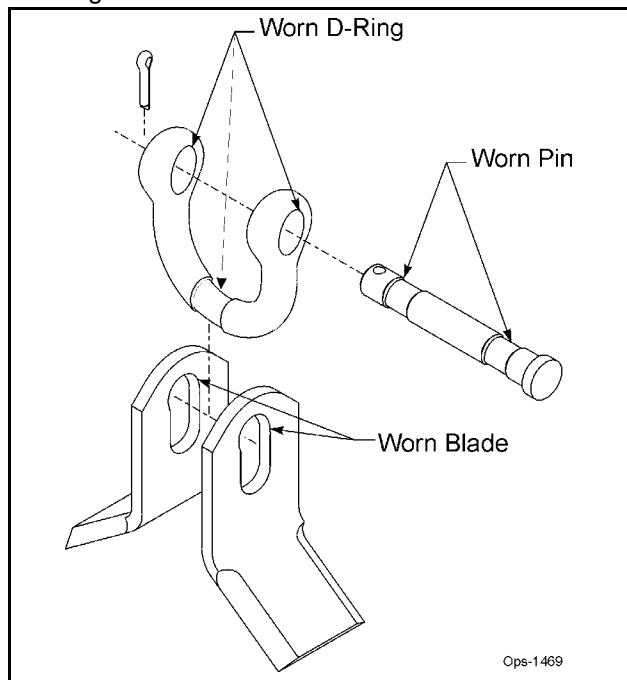


Inspect the Blade pins and D-Rings daily for abnormal wear. Make sure the cotter pins are in place and properly spread. REPLACE BLADE Pins and D-Rings IMMEDIATELY if they have:

- Visible cracks or
- If a Pin or D-Ring has visible worn areas, or
- If a Pin or D-Ring has gouges or chipped areas

Failure to replace abnormally worn pins or D-Rings may lead to catastrophic failure and ejection of the broken part which may cause serious bodily injury or death.

Always replace the pins and D-Rings whenever excessive wear is noticed.



Important

If the cotter pins are broken by contact with other flail blades, remove the pin and reverse the direction the pin is inserted through the D-Ring so that the cotter pin is on the opposite side of the D-Ring. This will prevent the next set of blades from swinging back and hitting the cotter pin. *OPS-U-0045*

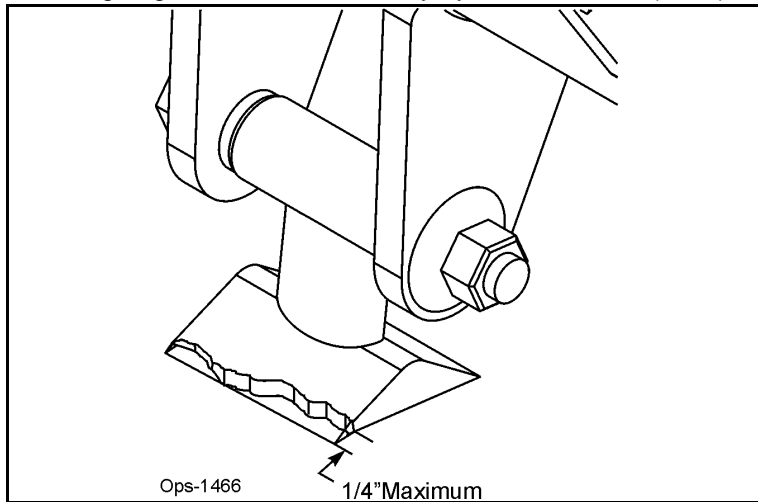
MAINTENANCE

Flail Axe Blades Inspection



Inspect the Blades daily for abnormal wear. REPLACE ALL BLADES on the carrier IMMEDIATELY if any blades have:

- Become bent or deformed from its original shape, or
- Oval shape wear inside the blade bolt hole, or
- Any cracks are visible, or
- Deep gouges in the blade's surface are present, or
- Gouges or chipped areas in the cutting edge are larger than 1/4"(8mm), or
- The material on the leading edge has been worn away by more than 1/4"(8mm)



Failure to replace worn or damaged blades may lead to catastrophic failure of the blades and ejection of the broken part with tremendous force which may cause serious bodily injury or death.

Always replace blades in sets

- Blades that are damaged may indicate severe service or abuse. If one blade is worn or damaged other blades on the same shaft will have been subjected to the same severe service or abuse.
- The Flail Axe rotor turns at speeds exceeding 2000 RPM and is dynamically balanced at the factory. Differences in blade weight between used blades with loss of material from gouges or wear as compared to new blades can cause severe vibration and damage to the Flail Axe rotor. Always replace blades as complete sets.



Use only genuine Alamo Industrial replacement blades, blade bolts and fasteners. Other blades and bolts may not meet the requirements of Alamo Industrial and fail during operation resulting in part failing and being thrown out from under the mower.



Never attempt to sharpen blades. **OPS-U-0042**

MAINTENANCE

Flail Axe Blade Bolt Inspection

Inspect Blade Bolts daily for wear or damage as follows:

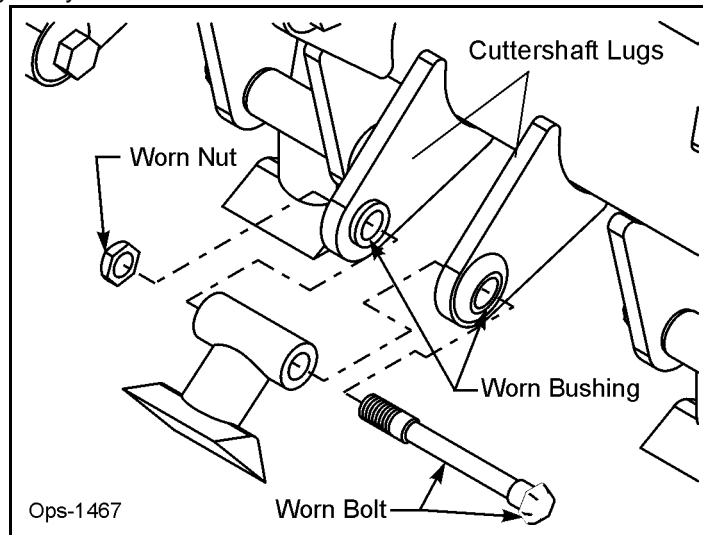


Inspect the Blade Bolt daily for abnormal wear. REPLACE ALL BLADE BOLTS on the carrier IMMEDIATELY if any bolts have:

- Visible cracks or
- If the blade bolt is worn or any recessed area is visible on the bolt, or
- If Blade Bolt has gouges or chipped areas. or
- If Bushing fits loose in the Rotor Shaft.

Failure to replace abnormally worn bolts or bushings may lead to catastrophic failure of the blades and ejection of the broken part which may cause serious bodily injury or death.

Always replace Blade Bolts with new bolts and new bushings whenever replacing the Blades. To tighten bolts and nuts, first apply thread lock to nut. Make sure to tighten bolts and nuts just enough to allow the blades to swing freely, and not bend the cuttershaft lugs. If cuttershaft lugs are bent together because of over tightening the blades will not swing freely. OPS-U-0043



MAINTENANCE

MAINTENANCE

STANDARD OR HEAVY DUTY SIDE OR REAR FLAIL KNIFE REPLACEMENT

1. If knives are damaged or badly worn, they will need to be replaced as a set. Replacing a single knife can cause severe vibration and possible damage to the mower.
2. Assemble knives, clevis, bolts and nuts as shown in parts manual.
3. Install locking hex nut so that the flat face of nut is towards the knife.
4. Apply loctite "271" or equivalent to threads.
5. Torque nut to 52 FT. LBS. Knife must swing freely.



DO NOT re-use the locking hex nuts for mounting the knives. If hex nut become loose, or require removal for knife replacement or any other reason, they must be discarded and replaced with new nuts.



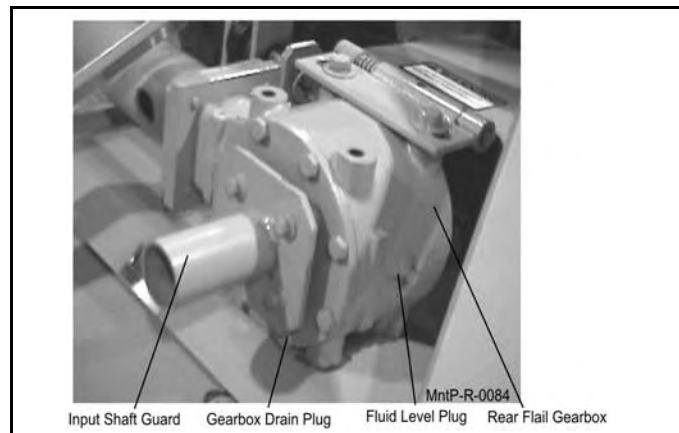
Knives should not be welded on for any reason.

RECOMMENDED FILLING INSTRUCTIONS FOR REAR FLAIL GEARBOX

When filling or checking the fluid level, the unit should be parked on a level surface with rear flail down on surface, shut "OFF", and cold, (at ambient temperature).

Remove the fluid level plug located on the side of the gear box. The gear box should be filled to the bottom of the fluid level hole. If necessary, use 75-90 wt. PAO Synthetic Extreme Pressure Gear Lube to raise level to bottom of the hole.

Do not over-fill. Excessive gear oil will run back out of the hole. Reinstall fluid level plug into gearbox. If gearbox has been over-filled, the excess may be expelled through the pressurized breather.



MAINTENANCE

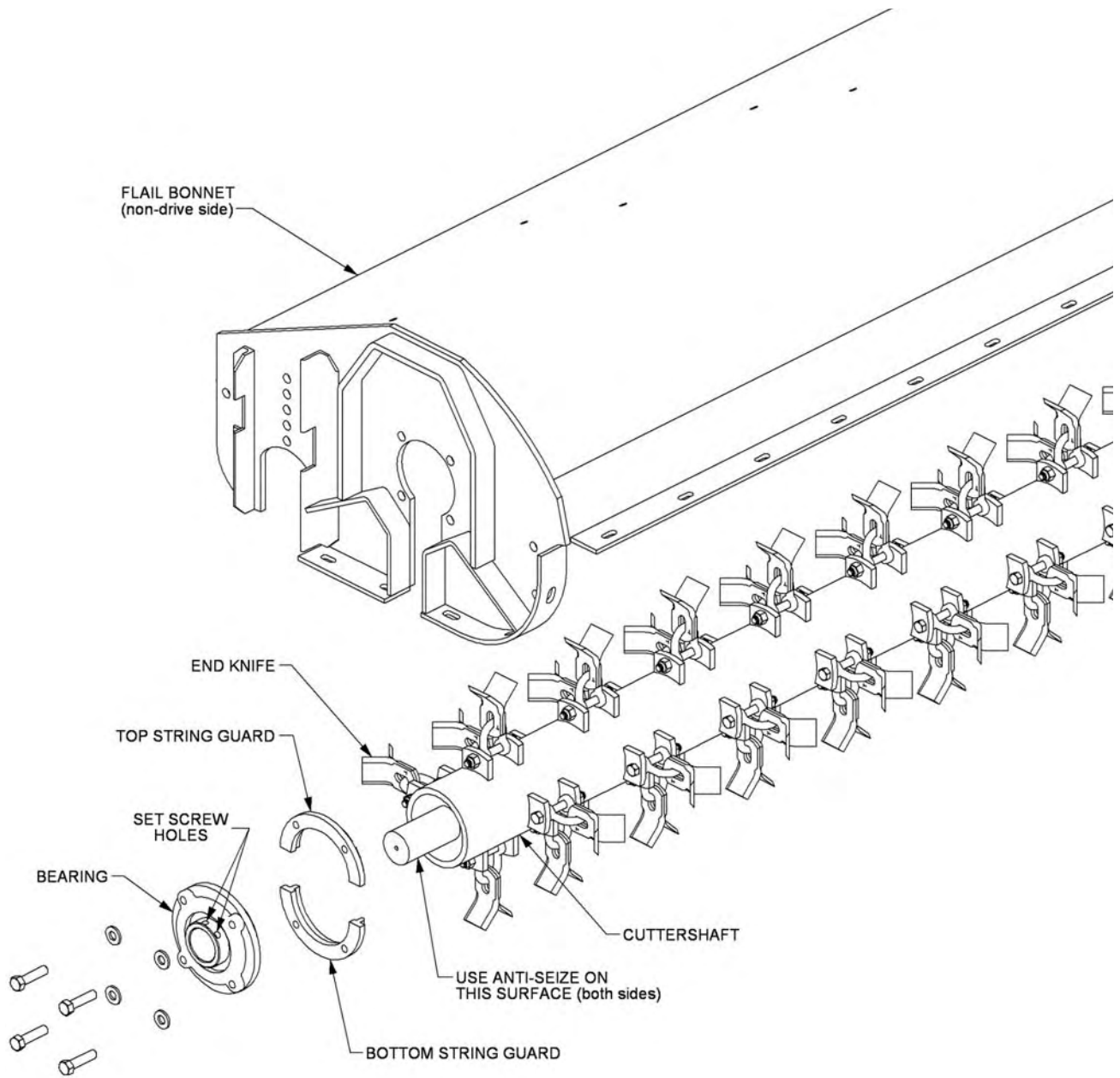
CUTTERSHAFT BEARING REPLACEMENT

1. Remove existing cuttershaft, bearings and string guards.
2. Make sure that the end knives on each end of the cuttershaft are orientated as shown.
3. Apply anti-seize on cuttershaft as shown on next page.
4. Install non-drive side bearing first.
5. Install the top of the string guard on the non-drive side first. Use loctite-271 or equivalent and torque (95 ft-lb or 104ft-lb if you use an extension).
6. Install the bearing and top string guard on the drive side.
7. Center the cuttershaft between the string guards. Use loctite-271 or equivalent and torque (95ft-lb or 104ft-lb if you use an extension) the top string guard on the drive side.
8. Install, use loctite-271 or equivalent, and torque (95ft-lb or 104ft-lb if you use an extension) the bottom string guard on both sides.
9. Make sure the cuttershaft is centered. On the non-drive side, tighten one set-screw in the bearing onto the cuttershaft.
10. Remove the other set-screw and drill a 5/16" hole into the cuttershaft 3/16" deep through the hole in the bearing. **BE CAREFULL NOT TO DAMAGE THE THREADS IN THE BEARING HOLE.**
11. Replace the set-screw in the bearing, use loctite-271 or equivalent, and tighten onto the cuttershaft through the new hole.
12. Remove the other set-screw and repeat the drilling procedure (Step 10). Replace the set screw as stated in Step 11.
13. Repeat steps 9 through 12 on the drive side.
14. Grease both bearings properly.

See illustration on next page

MAINTENANCE

MAINTENANCE



TRIPLE FLAIL

Maintenance Section 4-29

MAINTENANCE

MAINTENANCE

DAILY MAINTENANCE SCHEDULE

The following services should be performed **daily** or every **8 hours** of service, following the detailed maintenance instructions in the operators manual.

- _____ Pump Drive Shaft: Check for end play in driveshaft / coupler and lubricate at zerks.
- _____ Crankshaft adapter: If equipped with rubber grommets check condition, replace if missing or damaged.
- _____ Pivot points: Inject grease until it appears at ends.
- _____ Hydraulic fittings: Check for leaks with paper or cardboard. Tighten fittings or replace hoses immediately.
- _____ Knives: Inspect for missing or damaged knives, change (only complete sets) as needed.
- _____ Belts: Check/Tighten/Replace belts as needed.
- _____ Main Frame/Deck: Unless otherwise specified retorque bolts according to torque specifications in this section.
- _____ Hydraulic Fluid Level: Add, if required, per fluid recommendations.
- _____ Rear Flail Drive, Bearing Flange and Shaft Couplers (if applicable): Grease as instructed in the detailed maintenance section.
- _____ Cutter Shaft and Ground Roller: Grease as instructed in the detailed maintenance section.

Service performed by: _____ Date: ____/____/____ Hour

Meter: _____

Maintenance Section

**This page may be copied and used as part of the daily maintenance routine.

PARTS SECTION

PART NAME INDEX

PARTS ORDERING GUIDE.....	4
TRACTOR MOUNT KIT - DRAFT BEAMS.....	5
TRACTOR MOUNT KIT - MAIN FRAME.....	7
TRACTOR MOUNT KIT - HYDRAULICS.....	9
TRACTOR MOUNT KIT - LIFT HYDRAULICS.....	11
EXTREME DUTY 90IN SIDE FLAIL - STD ROT.....	13
EXTREME DUTY 90IN SIDE FLAIL - REV ROT.....	15
EXTREME DUTY SIDE FLAIL DRIVE ASSEMBLY.....	17
EXTREME DUTY SIDE FLAIL MOTOR BREAKDOWN.....	19
EXTREME DUTY FRONT FLAIL - STD ROT.....	21
EXTREME DUTY FRONT FLAIL - REV ROT.....	23
EXTREME DUTY FRONT FLAIL DRIVE ASSEMBLY.....	25
FRONT 3-POINT ASSEMBLY.....	27
PTO DRIVESHAFT STAND.....	29
PTO DRIVESHAFT - 06520490.....	30
GEAR BOX BREAKDOWN.....	31
RESERVOIR TANK FILTER ASSEMBLY.....	33
HYDRAULIC PUMP BREAKDOWN.....	35
3IN X 8IN TIE-ROD CYLINDER BREAKDOWN - 30481.....	37
3IN X 10IN TIE-ROD CYLINDER BREAKDOWN - 6T0151R.....	39
3IN X 18IN TIE-ROD CYLINDER BREAKDOWN - 6T0150.....	41
BRAKE VALVE ASSEMBLY.....	43
BRAKE VALVE HYDRAULIC SCHEMATIC.....	44
COOLER ASSEMBLY.....	45
SWITCH BOX MOUNT.....	47
SWITCH BOX SERVICE PARTS.....	48
SWITCH BOX SCHEMATIC.....	49

PARTS ORDERING GUIDE

The following instructions are offered to help eliminate needless delay and error in processing purchase orders for the equipment in this manual.

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.
2. The Purchase Order must indicate the **Name and Address** of the person or organization ordering the parts, **who should be charged**, and if possible, the **serial number of the machine** for which the parts are being ordered.
3. The purchase order must clearly list the **quantity of each part**, the complete and correct **part number**, and the basic **name of the part**.
4. The manufacturer reserves the right to substitute parts where applicable.
5. Some parts may be unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a purchase order.
6. The manufacturer reserves the right to change prices without prior notice.

NOTE: When ordering replacement decals, refer to the part numbers and descriptions listed in the safety section in the front of this manual.

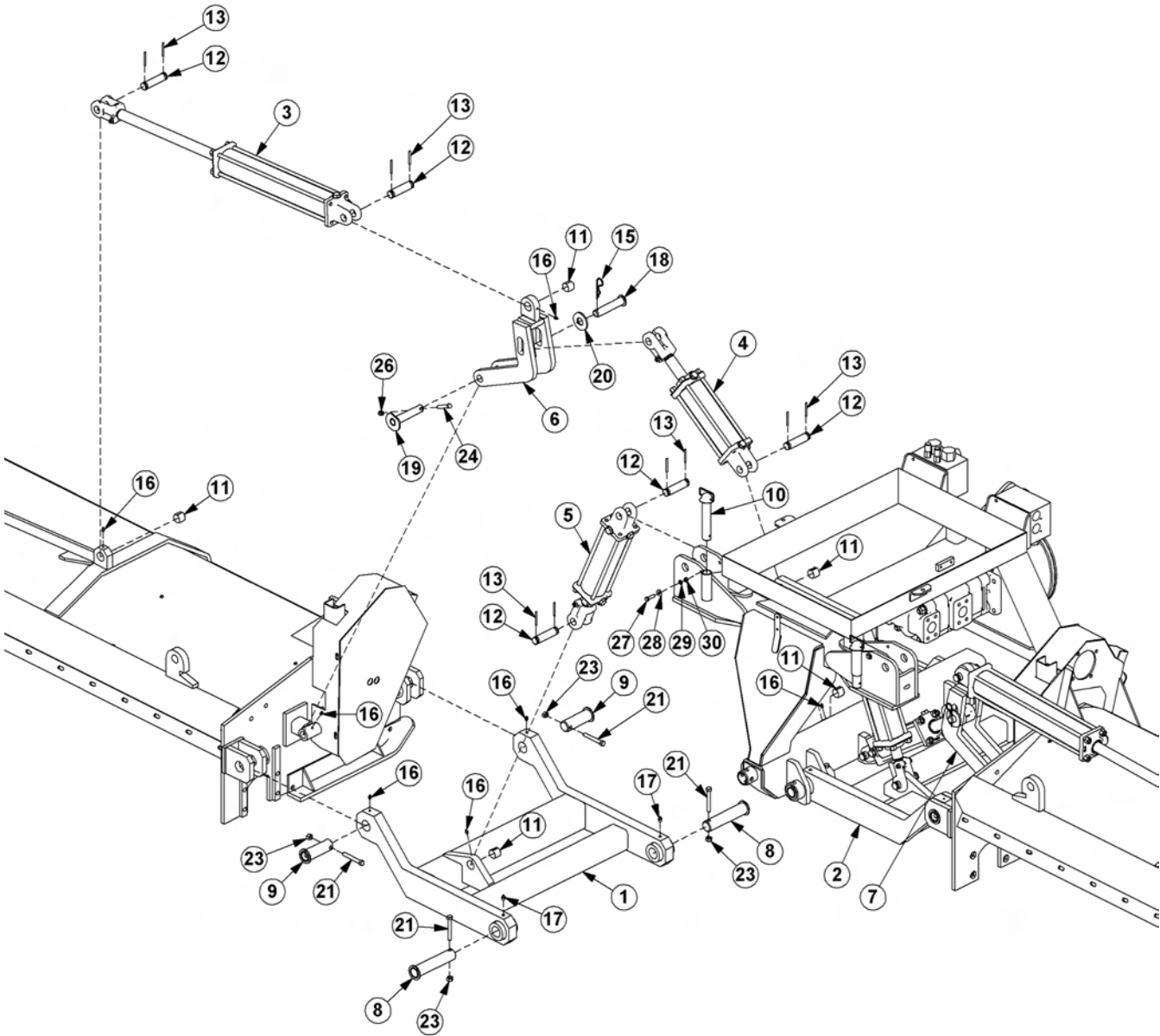


For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

Tiger Corporation
3301 N. Louise Ave.
Sioux Falls, SD 57107
1-800-843-6849
1-605-336-7900

TRACTOR MOUNT KIT - DRAFT BEAMS

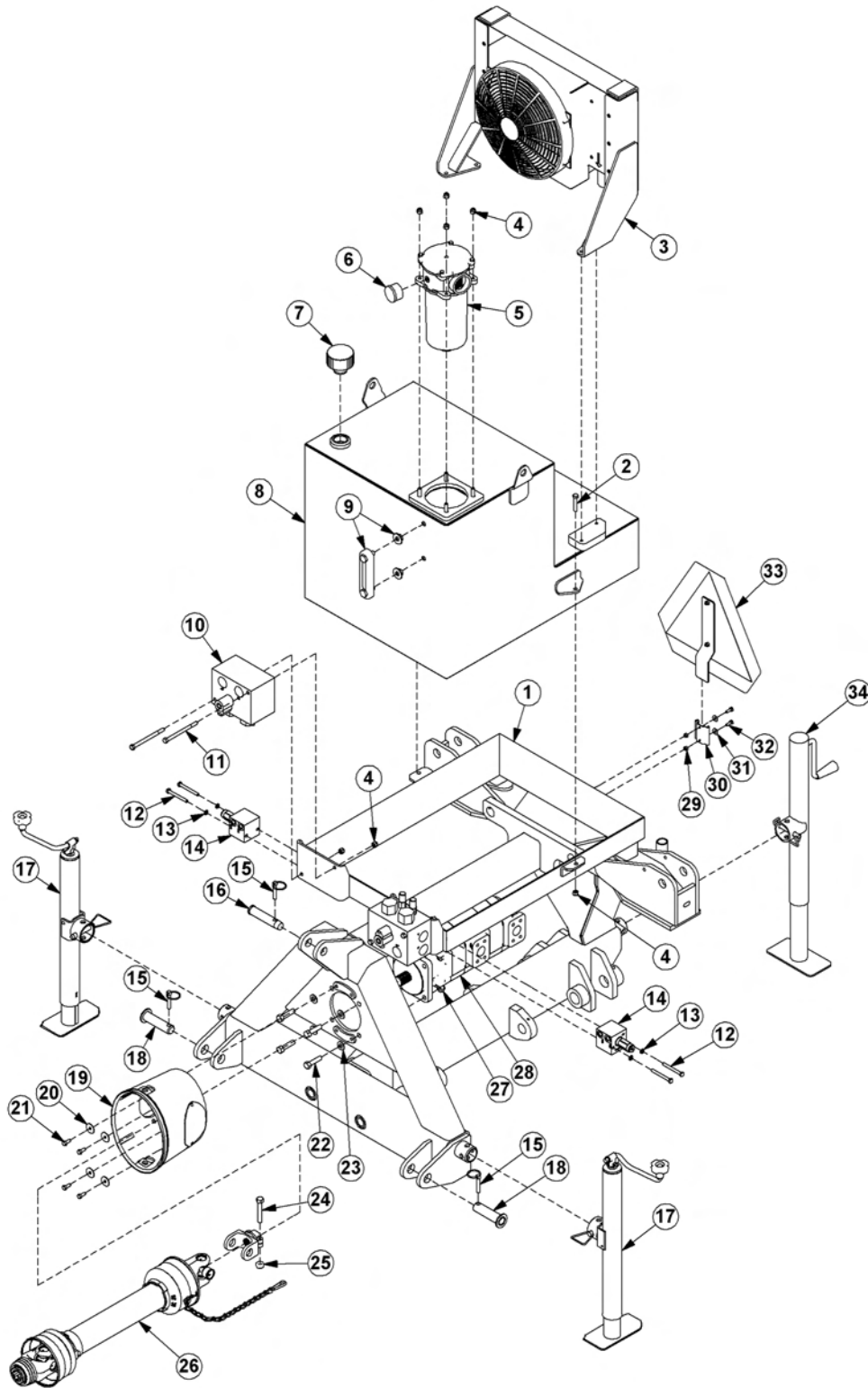


TRACTOR MOUNT KIT - DRAFT BEAMS

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	23700B	1	DRAFT BEAM,RIGHT
2	32706B	1	DRAFT BEAM,LEFT
3	6T0150	2	CYLINDER,DECK LIFT OUTER
4	30481	2	CYLINDER,DECK LIFT INNER
5	6T0151R	2	CYLINDER,DRAFT BEAM LIFT
6	23833A	1	TILT LINK,RIGHT
7	23834A	1	TILT LINK,LEFT
8	TF4515	4	PIN,DRAFT BEAM TO MAIN FRAME
9	TF4514A	4	PIN,DRAFT BEAM TO HEAD
10	TF4250	2	PIN,TRAVEL LOCK W/ CHAIN
11	TB3010	10	BUSHING
12	TB1033	10	CLEVIS PIN
13	06537021	18	ROLL PIN
15	6T3004	2	R-CLIP
16	6T3207	14	GREASE ZERK,1/4"
17	6T3211	4	GREASE ZERK,1/8"
18	23827C	2	PIN
19	23829	2	PIN
20	22023	2	FLATWASHER,1"
21	21688	8	CAPSCREW,7/16" X 3-1/4",NC
22	21989	8	LOCKWASHER,7/16"
23	21675	8	HEX NUT,7/16",NC
24	21635	2	CAPSCREW,3/8" X 2-1/4",NC
25	21988	2	LOCKWASHER,3/8"
26	21625	2	HEX NUT,3/8",NC
27	21581	2	CAPSCREW,5/16" X 1-1/4",NC
28	22015	2	FLATWASHER,5/16"
29	21987	2	LOCKWASHER,5/16"
30	21575	2	HEX NUT,5/16",NC

TRACTOR MOUNT KIT - MAIN FRAME



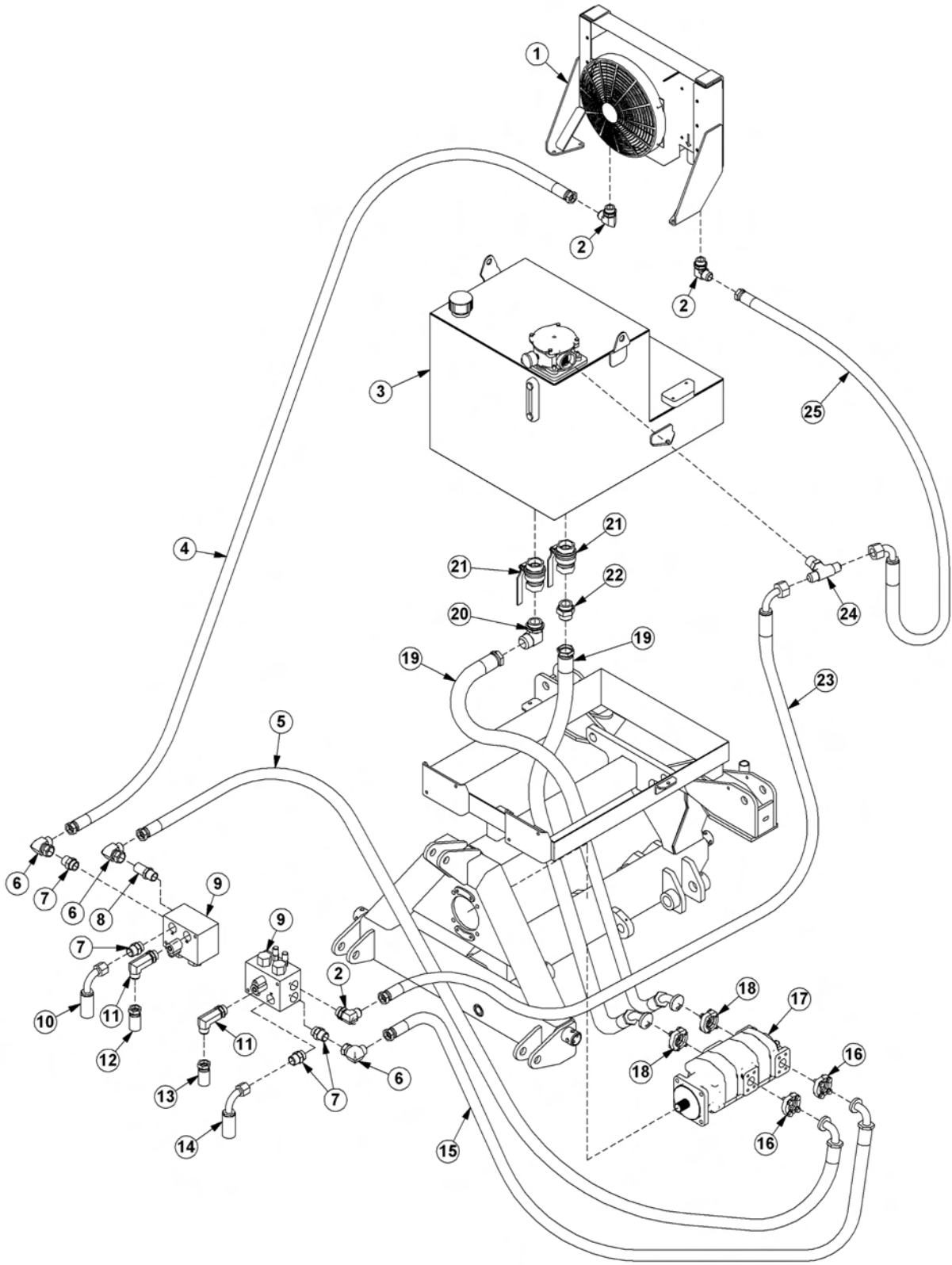
TRACTOR MOUNT KIT - MAIN FRAME

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300204	1	MAINFRAME,T3F
2	21634	2	CAPSCREW,3/8" X 2",NC
3	-----	-	COOLER *REFER TO COOLER BREAKDOWN
4	21627	10	NYLOCK NUT,3/8",NC
5	06505044	1	FILTER,IN-TANK,10MIC
6	6T0649	1	FILTER GAUGE
7	06505077	1	CAP,BREATHER,O-RING
8	06700180	1	HYDRAULIC TANK,ASSEMBLY
---	06380055	1	HYDRAULIC TANK,WELDMENT
9	06505067	1	SIGHT GAUGE
---	06503175	1	SEAL KIT,SIGHT GAUGE
10	06510083	2	BRAKE VALVE
11	21644	4	CAPSCREW,3/8" X 5",NC
12	21588	4	CAPSCREW,5/16" X 3",NC
13	21987	4	LOCKWASHER,5/16"
14	32875	2	VALVE,RELIEF
15	TF1143	3	PIN,LYNCH
16	TB1036	1	PIN,3-PNT,UPPER
17	RD1035	2	JACK,TOP CRANK
18	TF1120	2	PIN,3-PNT,LOWER
19	06770054	1	GUARD,PTO
20	06533009	4	WASHER,FENDER,5/16"
21	21579	4	CAPSCREW,5/16" X 3/4",NC
22	21733	4	CAPSCREW,1/2" X 2",NC
23	06533004	4	FLATWASHER,1/2",SAE
24	27589	1	CAPSCREW,1/2" X 3",NF
25	27915	1	HEX NUT,1/2",NF,STOVER
26	32832	1	PTO,DRV SHFT,T3F
27	21727	4	NYLOCK NUT,1/2",NC
28	23644	1	PUMP,TANDEM
29	21527	2	NYLOCK NUT,1/4",NC
30	F847590	1	SOCKET,SMV
31	22014	2	FLATWASHER,1/4"
32	21529	2	CAPSCREW,1/4" X 3/4",NC
33	23472	1	SMV SIGN
34	23964	1	JACK,REAR

NH T7.210 T3F

TRACTOR MOUNT KIT - HYDRAULICS



TRACTOR MOUNT KIT - HYDRAULICS

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	COOLER *REFER TO COOLER BREAKDOWN
2	34117	3	ELBOW,1"MOR X 1"MJ,FORGED
3	-----	-	HYDRAULIC TANK *REFER TO MAIN FRAME PAGE
4	06500653	1	HOSE,1" X 35"
5	06500650	1	HOSE,1" X 43"
6	33259	3	ELBOW,1"MJ X 1"FJX
7	33555	4	ADAPTER,1"MOR X 1"MJ
8	32869	1	NIPPLE,MALE,LONG,1"MOR X 1"MJ
9	-----	-	BRAKE VALVE *REFER TO MAIN FRAME PAGE
10	34421	1	HOSE,1" X 77" (PRESSURE) (RIGHT FLAIL)
11	06503149	2	ELBOW,1"MJ X 1"MOR,LONG
12	06500655	1	HOSE,1" X 68" (RETURN) (RIGHT FLAIL)
13	06500660	1	HOSE,1" X 64" (RETURN) (LEFT FLAIL)
14	06500647	1	HOSE,1" X 74" (PRESSURE) (LEFT FLAIL)
15	06500651	1	HOSE,1" X 30"
16	TF4852	2	FLANGE KIT,#20
17	-----	-	PUMP *REFER TO MAIN FRAME PAGE
18	TF4854	2	FLANGE KIT,#24
19	06500051	2	HOSE,1-1/2" X 27" (SUCTION)
20	34655	1	ELBOW,1-1/2"MOR X 1-1/2"MJ
21	34309	2	BALL VALVE,1-1/2"FOR
22	34710	1	ADAPTER,1-1/2"MOR X 1-1/2"MJ
23	06500652	1	HOSE,1" X 21"
24	34391	1	TEE,BRANCH,1-1/4"MOR X 1-1/4"MJ
25	06500654	1	HOSE,1" X 35"

TRACTOR MOUNT KIT - LIFT HYDRAULICS

TRACTOR REMOTES

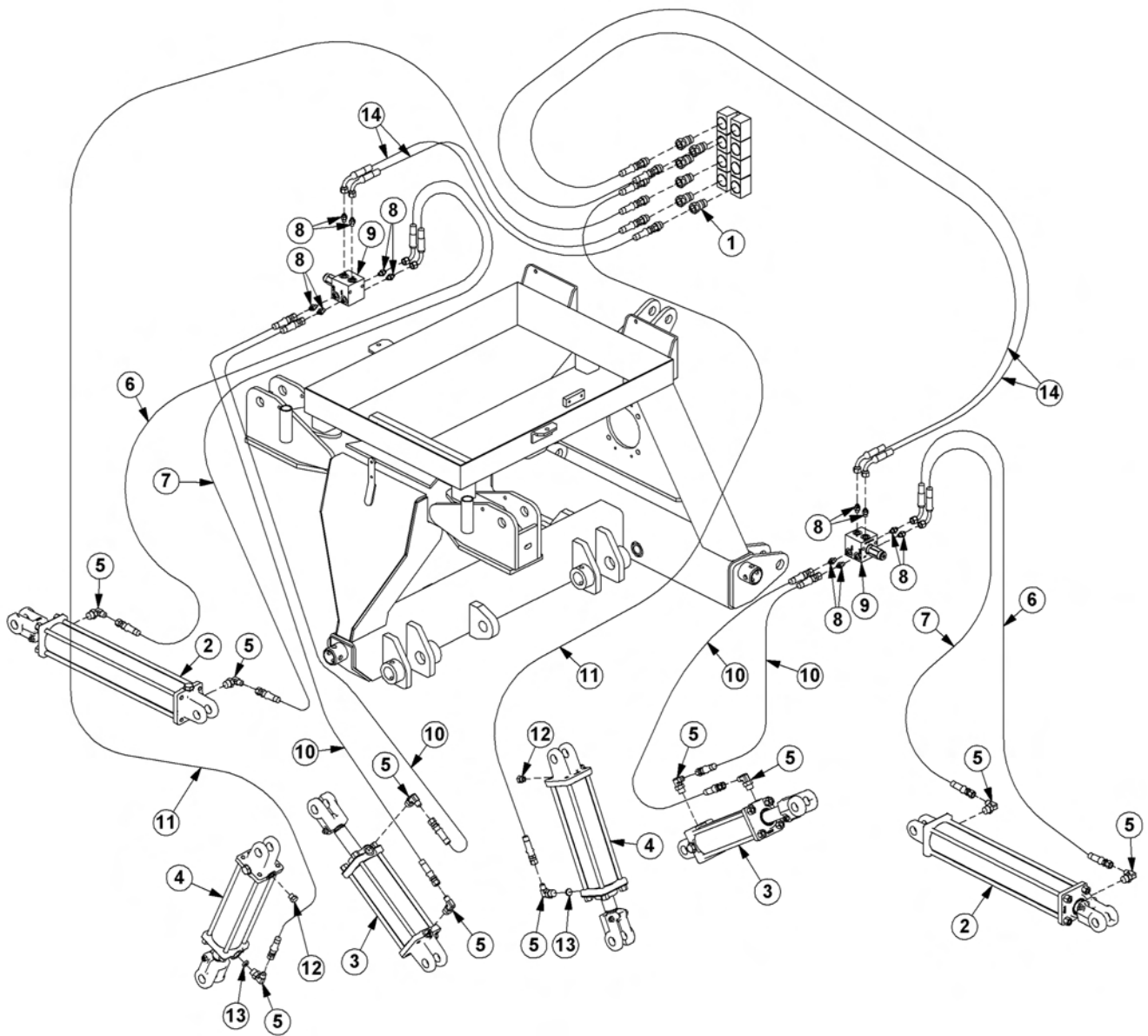
BLACK	A	B
BROWN	C	
BLUE	D	
GREEN	E	F

HOSE ROUTING

- A - RH HEAD LIFT (PORT "A" ON RH RELIEF VALVE)
- B - RH HEAD LIFT (PORT "B" ON RH RELIEF VALVE)
- C - RH DRAFT BEAM CYLINDER GLAND END
- D - LH DRAFT BEAM CYLINDER GLAND END
- E - LH HEAD LIFT (PORT "A" ON LH RELIEF VALVE)
- F - LH HEAD LIFT (PORT "B" ON LH RELIEF VALVE)

DUST CAPS

- 15 BLACK
- 16 RED
- 17 BLUE
- 18 GREEN

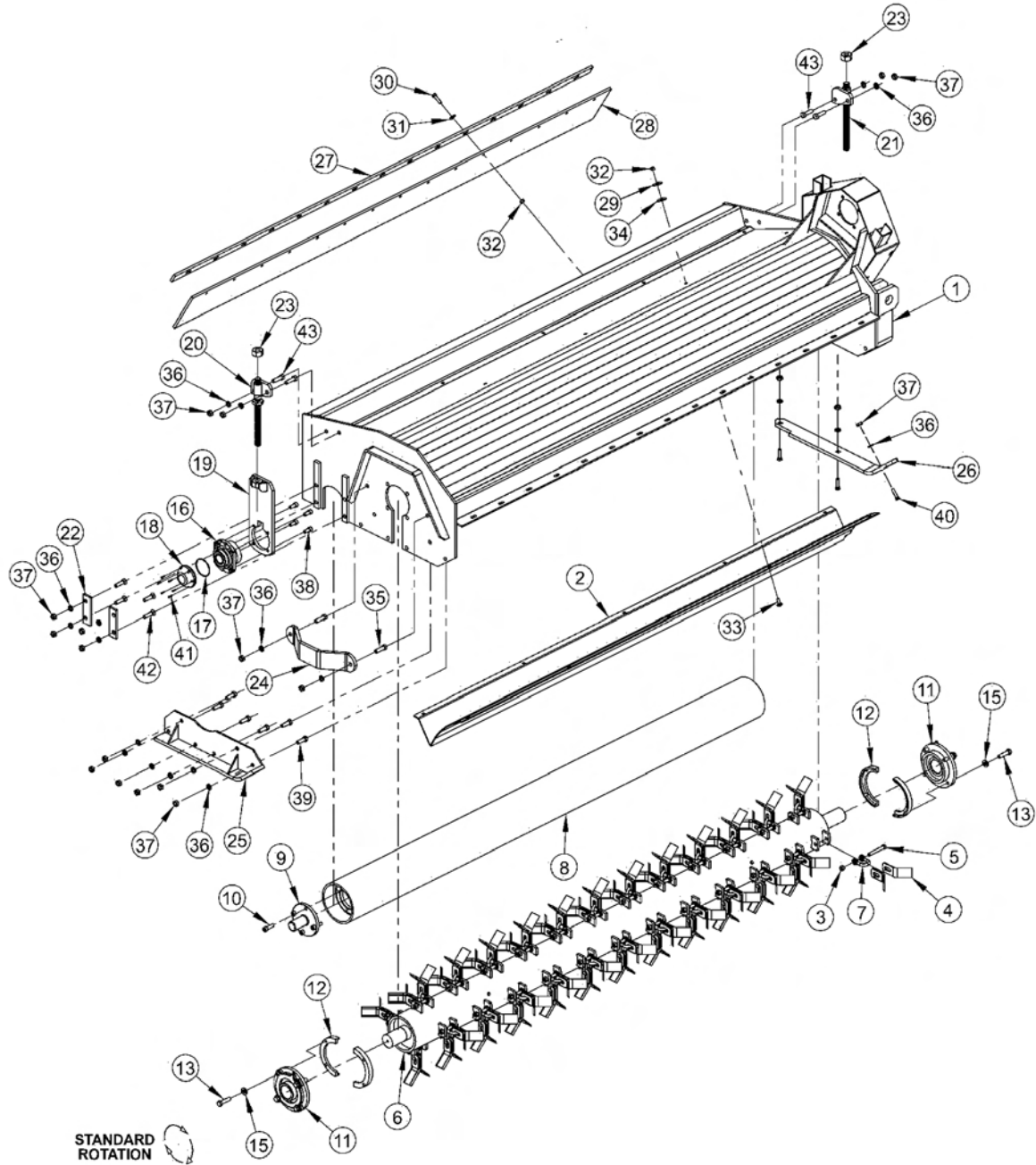


TRACTOR MOUNT KIT - LIFT HYDRAULICS

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	32900	6	QUICK COUPLER,MALE
2	6T0150	2	CYLINDER,3" X 18"
3	30481	2	CYLINDER,3" X 8"
4	6T0151R	2	CYLINDER,3" X 10"
5	32810	10	ELBOW,1/2"MOR X 3/8"MJ,ADJ
6	06500658	2	HOSE,1/4" X 90"
7	06500657	2	HOSE,1/4" X 67"
8	32901	12	ADAPTER,3/8"MOR X 3/8"MJ
9	32875	2	VALVE,RELIEF
10	34462	4	HOSE,1/4" X 40"
11	06500659	2	HOSE,1/4" X 88"
12	6T4258	2	BREATHER,1/2"MOR
13	32930	2	ORIFICE,1/16"DIA
14	06500656	2	HOSE,1/4" X 51"
15	06505179	2	DUST CAP,BLACK,1/2"
16	06505181	1	DUST CAP,RED,1/2"
17	06505182	1	DUST CAP,BLUE,1/2"
18	06505180	2	DUST CAP,GREEN,1/2"

EXTREME DUTY 90IN SIDE FLAIL - STD ROT



ITEM	PART NO.	QTY.	DESCRIPTION
1	23785	1	BONNET,90,HD,T3F (RIGHT FLAIL)
---	23786	1	BONNET,90,HD,T3F (LEFT FLAIL)
2	TF1502A	1	BAFFLE,FLAIL,90HD,STD ROT
---	TF1102A	1	CUTSHFT ASSY,90HD,STD KNIVES
3	21677	48	NYLOCK NUT,7/16 NC
4	33714	96	KNIFE,FLAIL,STANDARD

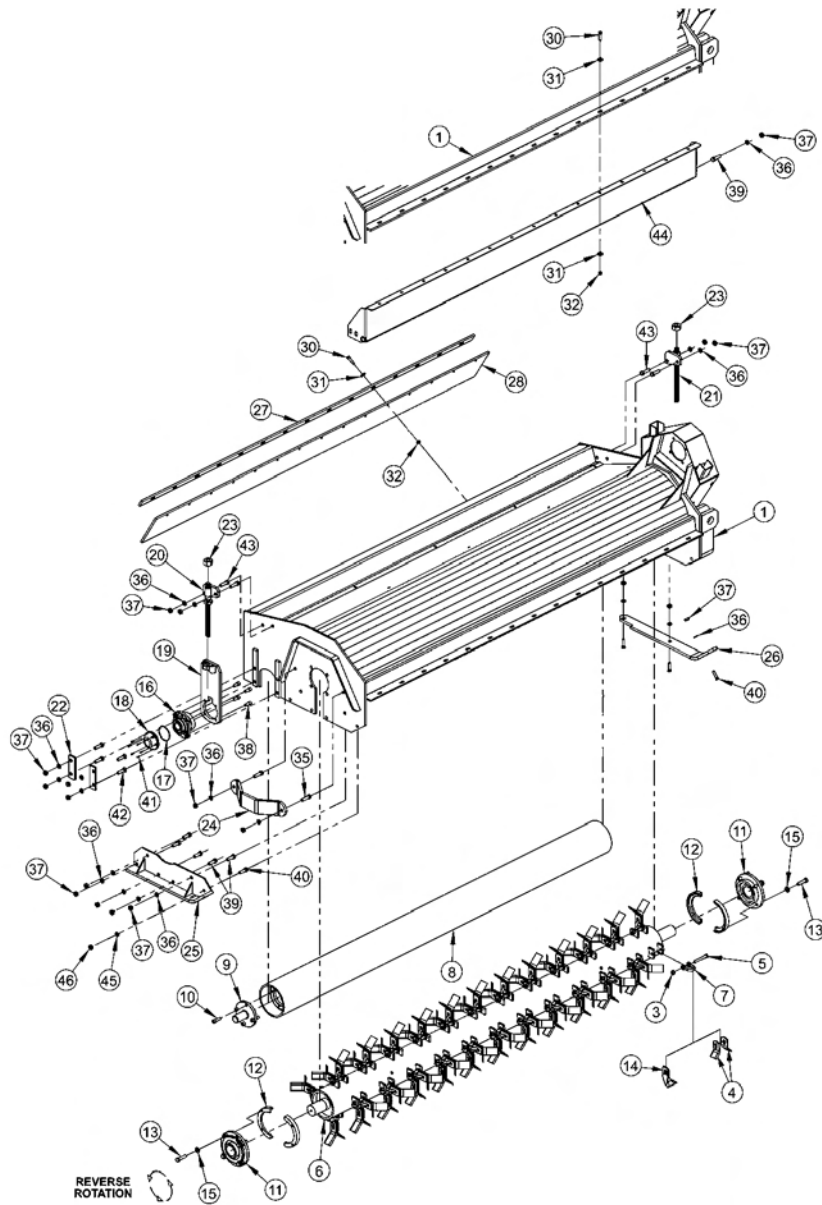
EXTREME DUTY 90IN SIDE FLAIL - STD ROT

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
5	34011	48	CAPSCREW,7/16X3 7/16,NC GR8
6	TF1102	1	CUTTERSHAFT,90,HD
7	TF1020	48	KNIFE MTG CLEVIS,FLAIL
8	27972A	1	GROUND ROLLER,90
9	TF1045B	2	STUB SHAFT,GROUND ROLLER
10	6T2330	8	CAPSCREW,SKT HD,7/16X1-1/2NC
11	TF1018	2	BEARING,FLANGE,2-3/16
---	06200347	1	STRING GUARD,KIT,HD(ITEMS 12,13,15)
12	31204	2	STRING GUARD, HD
13	06530217	8	CAPSCREW,1/2 X 2,NC,L9
15	06533006	12	FLATWASHER,1/2,SAE,L9
16	06520028	2	BEARING,FLANGE,1 3/8,GRNDRLR
17	06520029	2	O-RING,2 3/4X3/32,AS568A-148
18	06520027	2	CAP,BEARING,GRNDRLR
19	TF4333A	2	GROUND ROLLER ADJ,BRKT
20	TF4334	1	ROD,GROUND ROLLER ADJ,RT
21	TF4335	1	ROD,GROUND ROLLER ADJ,LF
22	TF4336	4	PLATE,GROUND ROLLER LOCK
23	21399	2	HEX NUT,3/4 (ACME) BULK
24	TF1040	1	GUARD,CUTTER SHAFT
25	TF4371	1	SKID SHOE, OUTER (RIGHT FLAIL)
---	TF4370	1	SKID SHOE, OUTER (LEFT FLAIL)
26	TF4365	1	SKID SHOE, INNER (RIGHT FLAIL)
---	TF4366	1	SKID SHOE, INNER (LEFT FLAIL)
27	TF1135	2	BAR,FLAP,TSF/TRF 90
28	TF1116	1	FLAP,DEFLECTOR,TSF/TRF 90
29	06520243	1	FLAP,90",FRONT
30	21632	30	CAPSCREW,3/8 X 1-1/2 NC
31	22016	60	FLATWASHER,3/8
32	21625	40	HEX NUT,3/8 NC
33	6T2283	10	CARRIAGE BOLT,3/8 X 1 NC
34	6T2615	10	WASHER,FENDER 3/8
35	21732	2	CAPSCREW,1/2 X 1-3/4 NC
36	21990	23	LOCKWASHER,1/2
37	21725	23	HEX NUT,1/2 NC
38	6T2331	8	CAPSCREW,SKT HD,7/16 X 1 NC
39	21730	6	CAPSCREW,1/2 X 1-1/4 NC
40	23293	3	PLOW,BOLT,1/2 X 1-3/4 NC
41	06530001	12	CAPSCREW,SKT HD,8-32X1/2,SS
42	6T2291	8	PLOW BOLT,1/2 X 2 NC GR5
43	21731	4	CAPSCREW,1/2 X 1-1/2 NC

NH T7.210 T3F

EXTREME DUTY 90IN SIDE FLAIL - REV ROT



ITEM	PART NO.	QTY.	DESCRIPTION
1	23785	1	BONNET,90,HD,ASSY (RIGHT FLAIL)
---	23786	1	BONNET,90,HD,ASSY (LEFT FLAIL)
2	TF1102A	1	CUTSHFT ASSY,90HD (STANDARD CUT)
---	TF1102B	1	CUTSHFT ASSY,90HD (SMOOTH CUT)
3	21677	48	NYLOCK NUT,7/16 NC
4	33714	96	KNIFE,FLAIL (STANDARD CUT)
5	34011	48	CAPSCREW,7/16X3 7/16,NC GR8
6	TF1102	1	CUTTERSHAFT,90,HD
7	TF1020	48	KNIFE MTG CLEVIS,FLAIL
8	27972A	1	GROUND ROLLER,90

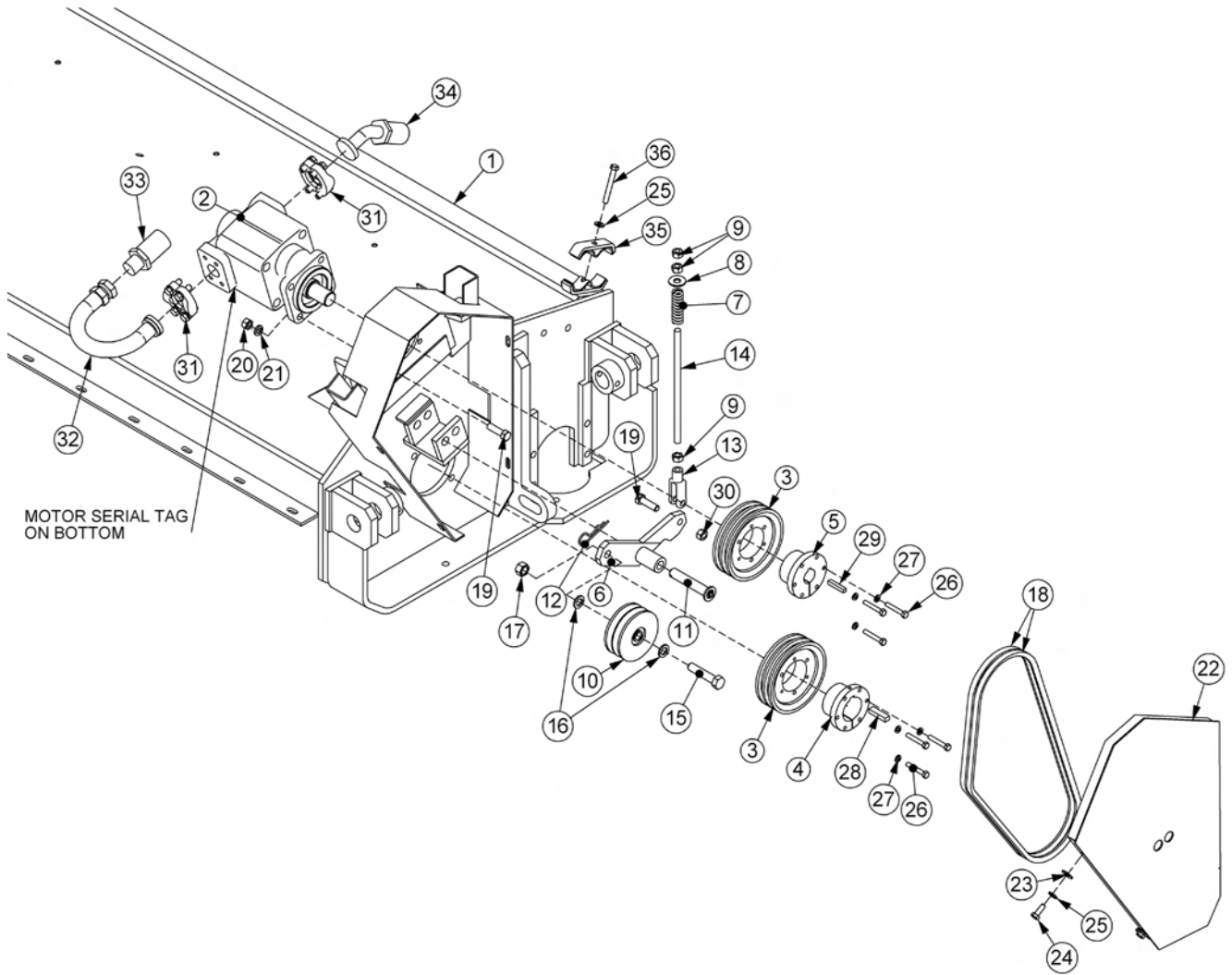
EXTREME DUTY 90IN SIDE FLAIL - REV ROT

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
9	TF1045B	2	STUB SHAFT,GROUND ROLLER
10	6T2330	8	CAPSCREW,SKT HD,7/16X1-1/2NC
11	TF1018	2	BEARING,FLANGE,2-3/16
---	06200347	1	STRING GUARD,KIT,HD(ITEMS 12,13,15)
12	31204	2	STRING GUARD, HD
13	06530217	8	CAPSCREW,1/2 X 2,NC,L9
14	TF1019F	48	KNIFE,FLAIL (SMOOTH CUT)
15	06533006	12	FLATWASHER,1/2,SAE,L9
16	06520028	2	BEARING,FLANGE,1 3/8,GRNDRLR
17	06520029	2	O-RING,2 3/4X3/32,AS568A-148
18	06520027	2	CAP,BEARING,GRNDRLR
19	TF4333A	2	GROUND ROLLER ADJ,BRKT
20	TF4334	1	ROD,GROUND ROLLER ADJ,RT
21	TF4335	1	ROD,GROUND ROLLER ADJ,LF
22	TF4336	4	PLATE,GROUND ROLLER LOCK
23	21399	2	HEX NUT,3/4 (ACME) BULK
24	TF1040	1	GUARD,CUTTER SHAFT
25	TF4371	1	SKID SHOE, OUTER (RIGHT FLAIL)
---	TF4370	1	SKID SHOE, OUTER (LEFT FLAIL)
26	TF4365	1	SKID SHOE, INNER (RIGHT FLAIL)
---	TF4366	1	SKID SHOE, INNER (LEFT FLAIL)
27	TF1135	1	BAR,FLAP,TSF/TRF 90
28	TF1116	1	FLAP,DEFLECTOR,TSF/TRF 90
29	06520243	1	FLAP,90",FRONT
30	21632	30	CAPSCREW,3/8 X 1-1/2 NC
31	22016	60	FLATWASHER,3/8
32	21625	40	HEX NUT,3/8 NC
33	6T2283	10	CARRIAGE BOLT,3/8 X 1 NC
34	6T2615	10	WASHER,FENDER 3/8
35	21732	2	CAPSCREW,1/2 X 1-3/4 NC
36	21990	23	LOCKWASHER,1/2
37	21725	23	HEX NUT,1/2 NC
38	6T2331	8	CAPSCREW,SKT HD,7/16 X 1 NC
39	21730	6	CAPSCREW,1/2 X 1-1/4 NC
40	23293	3	PLOW,BOLT,1/2 X 1-3/4 NC
41	06530001	12	CAPSCREW,SKT HD,8-32X1/2,SS
42	6T2291	8	PLOW BOLT,1/2 X 2 NC GR5
43	21731	4	CAPSCREW,1/2 X 1-1/2 NC
44	TF1503	1	TRASH GUARD,90REV ROT-HD
45	22018	1	FLATWASHER,1/2,WIDE
46	21727	1	NYLOCK NUT,1/2 NC

NH T7.210 T3F

EXTREME DUTY SIDE FLAIL DRIVE ASSEMBLY



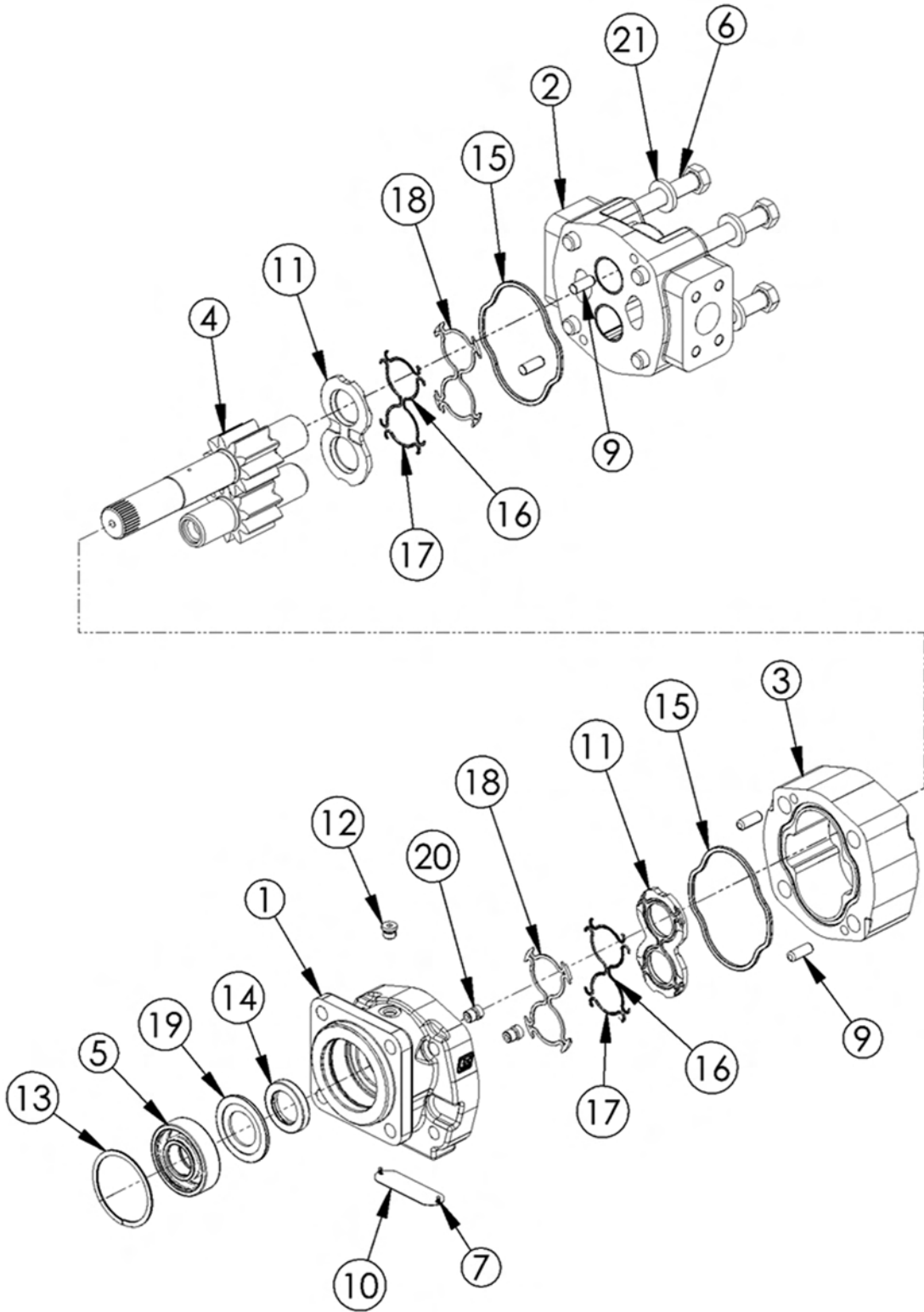
EXTREME DUTY SIDE FLAIL DRIVE ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	BONNET *REFER TO FLAIL PARTS
2	06504066	1	MOTOR,T3F
3	TF3040	2	SHEAVE,6.3"
4	TF3011	1	BUSHING,QD,SK,2-3/16"
5	TF3013	1	BUSHING,QD,SK,1-1/4"
6	TF4346	1	IDLER ARM (RIGHT FLAIL - STD ROT / LEFT FLAIL - REV ROT)
---	TF4345	1	IDLER ARM (RIGHT FLAIL - REV ROT / LEFT FLAIL - STD ROT)
7	TF3620A	1	SPRING,TENSIONER
8	22018	1	FLATWASHER,1/2",WIDE
9	21700	3	HEX NUT,1/2",NF
10	31293	1	SHEAVE,IDLER ASSY,4.4" O.D.
11	TF3605	1	PIN,IDLER ARM 3/4" X 4-1/4"
12	6T3004	1	R-CLIP (HAIRPIN COTTER, 3/16")
13	PT3611A	1	CLEVIS,6"
14	32494	1	ROD,THREADED,1/2-20NF
15	21787	1	CAPSCREW,5/8" X 3",NC
16	21992	2	LOCKWASHER,5/8"
17	21775	1	HEX NUT,5/8",NC
18	TF3020	2	V-BELT,(530)
19	21732	5	CAPSCREW,1/2" X 1-3/4",NC
20	21725	4	HEX NUT,1/2",NC
21	21990	4	LOCKWASHER,1/2"
22	TF4564	1	BELT SHEILD (RIGHT)
---	TF4565	1	BELT SHEILD (LEFT)
23	22016	4	FLATWASHER,3/8"
24	21630	4	CAPSCREW,3/8" X 1",NC
25	21988	5	LOCKWASHER,3/8"
26	21584	6	CAPSCREW,5/16" X 2",NC
27	21987	6	LOCKWASHER,5/16"
28	TF1025	1	KEY,1/4" X 1/2" X 1-7/8" SQ
29	TF1125	1	KEY,3/8" X 1/2" X 1-7/8" SQ
30	21727	1	NYLOCK NUT,1/2",NC
31	TF4853	2	KIT,FLANGE,#16
32	32920	1	PREFORMED TUBE
33	-----	-	HOSE (RETURN FOR STANDARD ROTATION)
34	-----	-	HOSE (PRESSURE FOR STANDARD ROTATION)
35	TB3031	1	CLAMP,HOSE
36	21638	1	CAPSCREW,3/8" X 3",NC

NH T7.210 T3F

EXTREME DUTY SIDE FLAIL MOTOR BREAKDOWN

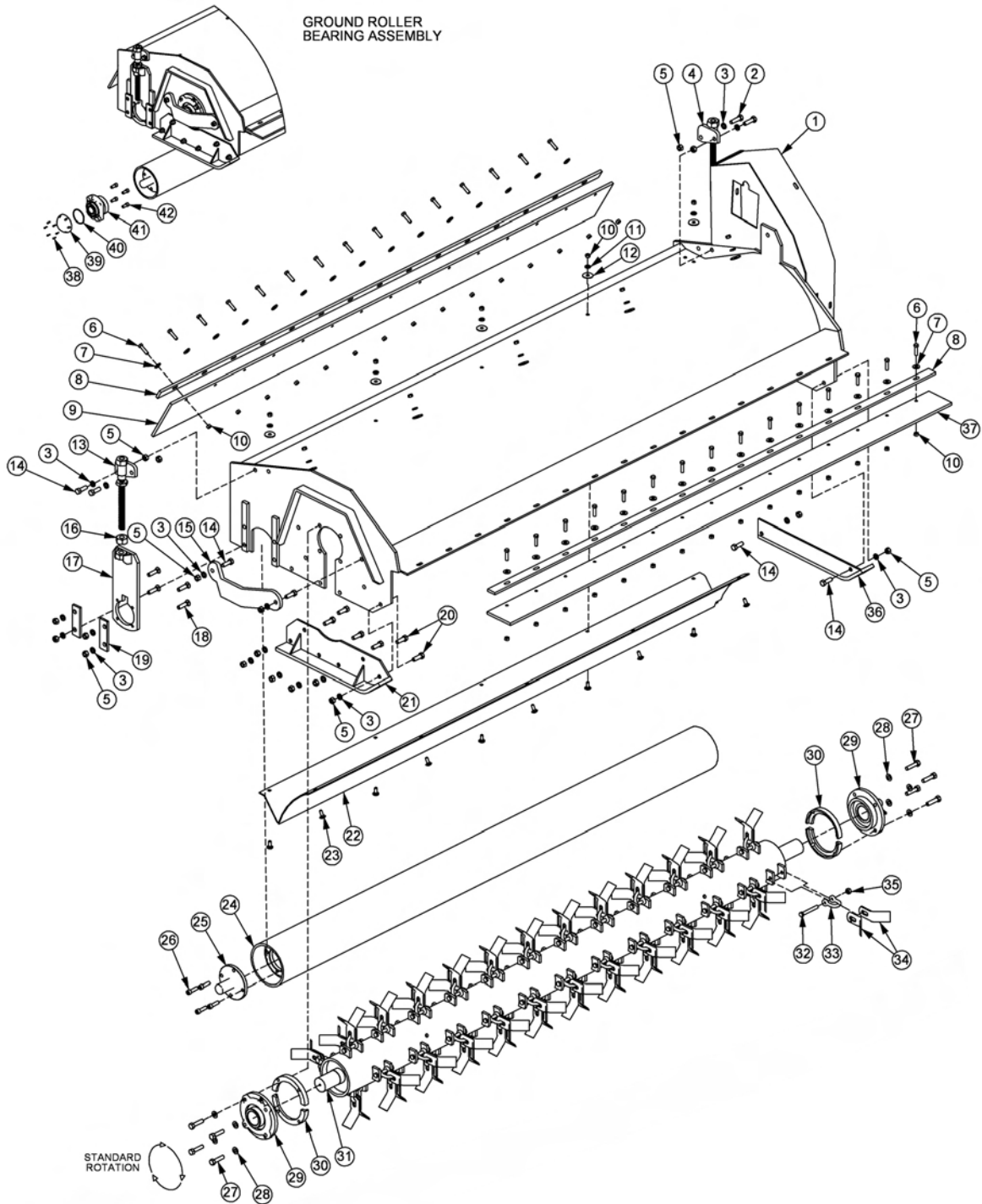


EXTREME DUTY SIDE FLAIL MOTOR BREAKDOWN

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	06504066	1	MOTOR ASSEMBLY 350 - TSF
1	06504039	1	SHAFT END COVER
2	06504054	1	PORT END COVER
3	06504055	1	GEAR HOUSING
4	06504056	1	MATCHED GEAR SET
5	TF4402	1	BALL BEARING
6	06504057	4	CAP SCREW
7	06504044	2	SET SCREW
9	06504045	4	DOWEL PIN
10	-----	1	NAMEPLATE
11	763759	2	THRUSTPLATE
12	02961940	1	HEX PLUG
13	TF4401	1	SNAP RING
14	06504049	1	LIP SEAL (INCLUDED IN SEAL KIT)
15	TF4410	2	GASKET SEAL (INCLUDED IN SEAL KIT)
16	06504046	4	SIDE SEAL (INCLUDED IN SEAL KIT)
17	06504047	4	END SEAL (INCLUDED IN SEAL KIT)
18	TF4407	2	BACK-UP SEAL (INCLUDED IN SEAL KIT)
19	02961932	1	SEAL RETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
---	06504023	1	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)

EXTREME DUTY FRONT FLAIL - STD ROT



ITEM	PART NO.	QTY.	DESCRIPTION
1	22046J	1	BONNET,102",HD
2	21732	2	CAPSCREW,1/2" X 1-3/4",NC
3	21990	22	LOCKWASHER,1/2"
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF

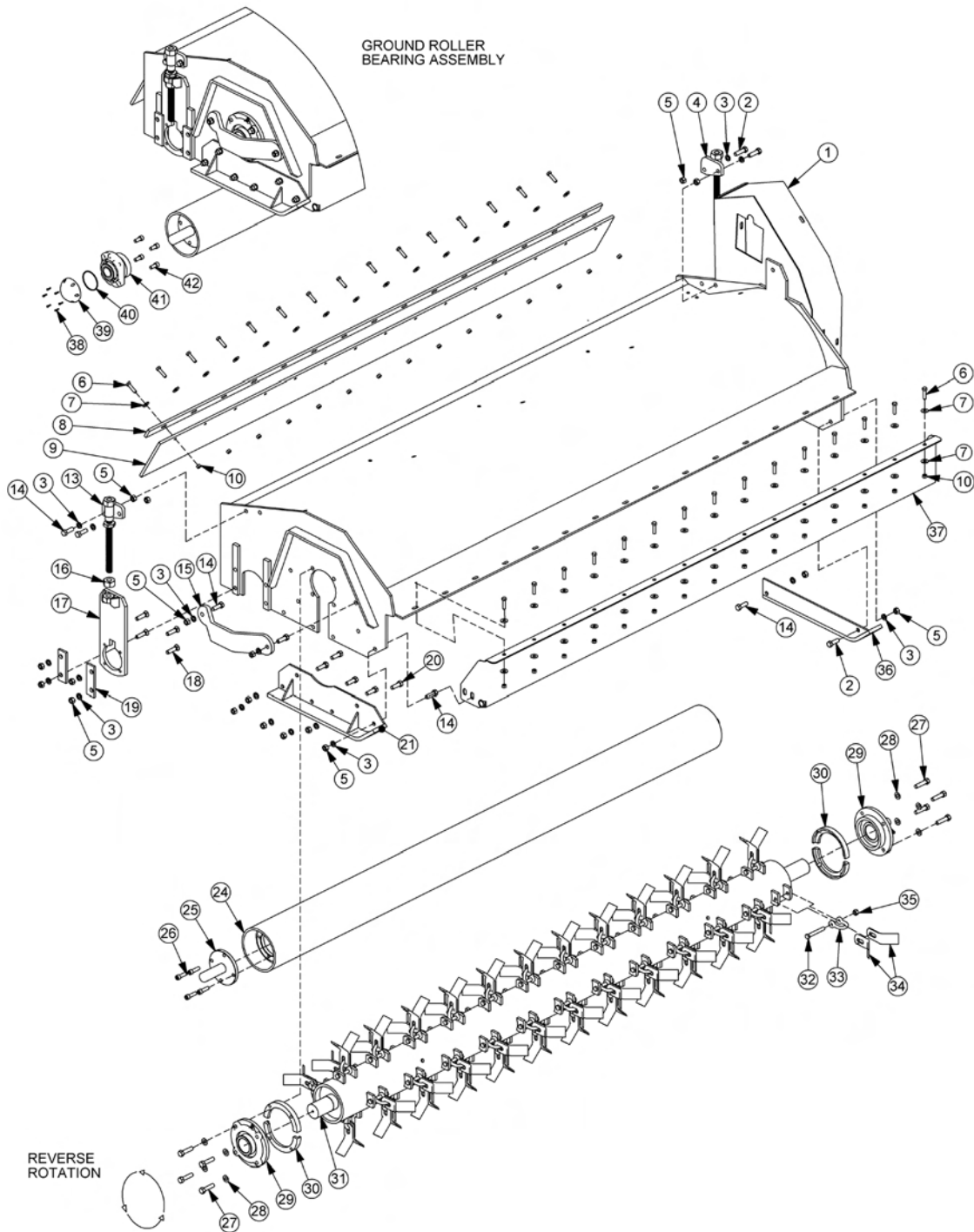
EXTREME DUTY FRONT FLAIL - STD ROT

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
5	21725	22	HEX NUT,1/2",NC
6	21632	36	CAPSCREW,3/8" X 1-1/2",NC
7	22016	36	FLATWASHER,3/8"
8	TF1703	2	BAR,FLAP,TSF/TRF,102"
9	TF1704A	1	FLAP,DEFLECTOR,TSF/TRF,102"
10	21625	46	HEX NUT,3/8",NC
11	21988	10	LOCKWASHER,3/8"
12	6T2615	10	WASHER,FENDER,3/8"
13	TF4334	1	ROD,GROUND ROLLER ADJ,RT
14	21731	6	CAPSCREW,1/2" X 1-1/2",NC
15	TF1040	1	GUARD,CUTTERSHAFT
16	21399	2	HEX NUT,3/4",ACME THRD
17	TF4333A	2	GROUND ROLLER ADJ BRKT
18	6T2294	8	PLOW BOLT,1/2" X 2",NC
19	TF4336	4	PLATE,GROUND ROLLER LOCK
20	21730	6	CAPSCREW,1/2" X 1-1/4",NC
21	TF4371	1	SKID SHOE,L/PROFILE-OUTER
22	TF1702	1	BAFFLE,FLAIL,102",HD
23	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
24	28999	1	GROUND ROLLER,102"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW,7/16" X 1-1/2", SKT HD
27	06530217	8	CAPSCREW,1/2" X 2",NC,L9
28	06533006	8	FLATWASHER,1/2",SAE,L9
29	TF1018	2	BEARING,FLANGE,2-3/16"
30	31204	2	STRING GUARD,HD
31	TF1707	1	CUTTERSHAFT,102",HD
32	30411	56	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	56	KNIFE MTG CLEVIS,FLAIL
34	33714	112	KNIFE,FLAIL,STANDARD CUT
35	21677	56	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	06520245	1	FLAP,FRONT,102"
38	06530001	12	CAPSCREW,SKT HD
39	06520027	2	CAP,BEARING
40	06520029	2	O-RING,2-3/4" X 3/32"
41	06520028	2	BEARING,FLANGE,1-3/8"
42	6T2331	8	CAPSCREW,7/16" X 1",SKT HD

NH T7.210 T3F

EXTREME DUTY FRONT FLAIL - REV ROT



ITEM	PART NO.	QTY.	DESCRIPTION
1	22046J	1	BONNET,102",HD
2	21732	3	CAPSCREW,1/2" X 1-3/4",NC
3	21990	22	LOCKWASHER,1/2"
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF

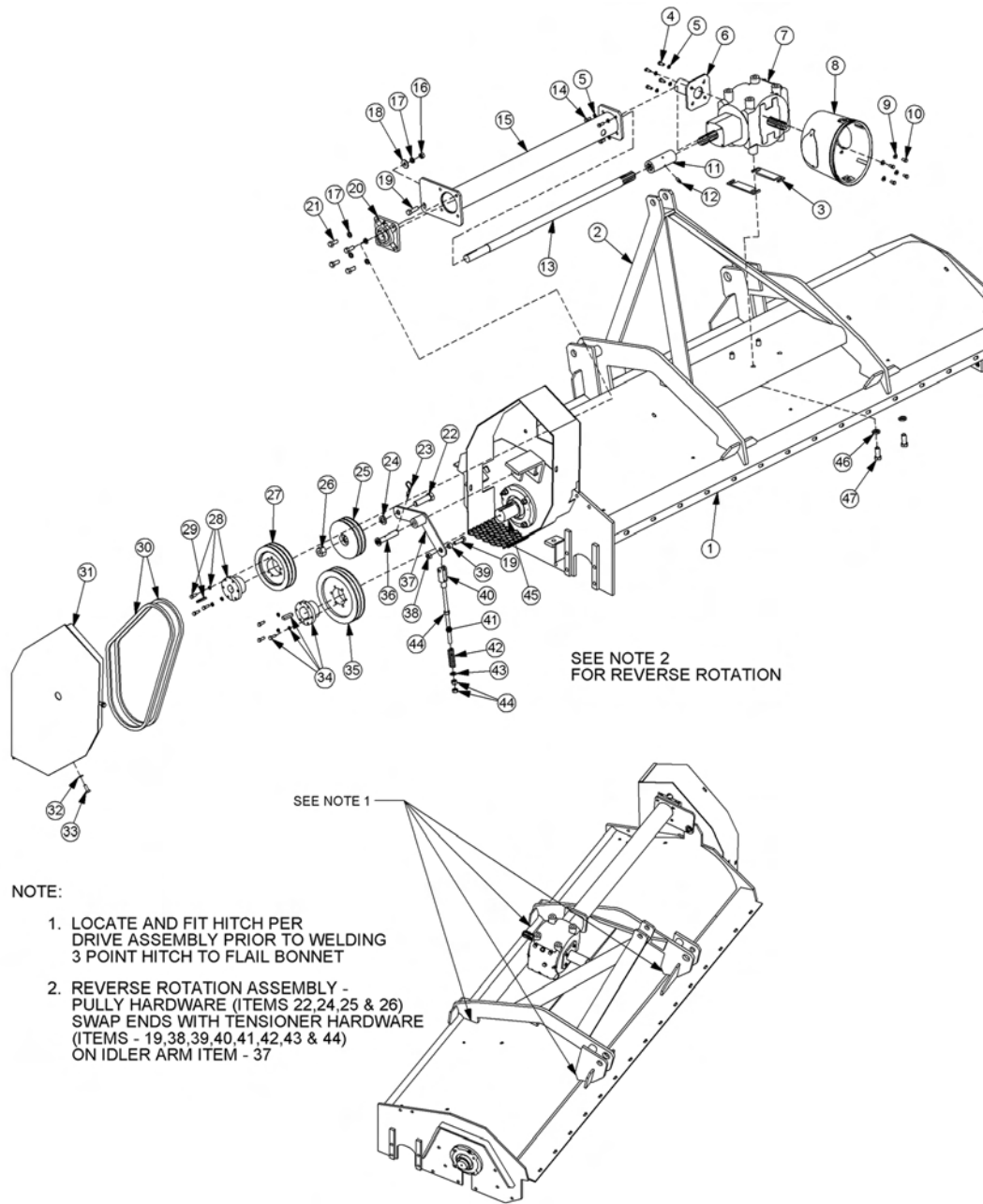
EXTREME DUTY FRONT FLAIL - REV ROT

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
5	21725	22	HEX NUT,1/2",NC
6	21632	36	CAPSCREW,3/8" X 1-1/2",NC
7	22016	36	FLATWASHER,3/8"
8	TF1703	1	BAR,FLAP,TSF/TRF,102"
9	TF1704A	1	FLAP,DEFLECTOR,TSF/TRF,102"
10	21625	46	HEX NUT,3/8",NC
11	21988	10	LOCKWASHER,3/8"
12	6T2615	10	WASHER,FENDER,3/8"
13	TF4334	1	ROD,GROUND ROLLER ADJ,RT
14	21731	6	CAPSCREW,1/2" X 1-1/2",NC
15	TF1040	1	GUARD,CUTTERSHAFT
16	21399	2	HEX NUT,3/4",ACME THRD
17	TF4333A	2	GROUND ROLLER ADJ BRKT
18	6T2294	8	PLOW BOLT,1/2" X 2",NC
19	TF4336	4	PLATE,GROUND ROLLER LOCK
20	21730	5	CAPSCREW,1/2" X 1-1/4",NC
21	TF4371	1	SKID SHOE,L/PROFILE-OUTER
22	TF1702	1	BAFFLE,FLAIL,102",HD
23	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
24	28999	1	GROUND ROLLER,102"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW,7/16" X 1-1/2", SKT HD
27	06530217	8	CAPSCREW,1/2" X 2",NC,L9
28	06533006	8	FLATWASHER,1/2",SAE,L9
29	TF1018	2	BEARING,FLANGE,2-3/16"
30	31204	2	STRING GUARD,HD
31	TF1707	1	CUTTERSHAFT,102",HD
32	30411	56	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	56	KNIFE MTG CLEVIS,FLAIL
34	33714	112	KNIFE,FLAIL,STANDARD CUT
---	TF1019F	56	KNIFE,FLAIL,SMOOTH CUT (NOT SHOWN)
35	21677	56	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	TF1701	1	FRONT TRASH GUARD
38	06530001	12	CAPSCREW,SKT HD
39	06520027	2	CAP,BEARING
40	06520029	2	O-RING,2-3/4" X 3/32"
41	06520028	2	BEARING,FLANGE,1-3/8"
42	6T2331	8	CAPSCREW,7/16" X 1",SKT HD

NH T7.210 T3F

EXTREME DUTY FRONT FLAIL DRIVE ASSEMBLY



NOTE:

1. LOCATE AND FIT HITCH PER DRIVE ASSEMBLY PRIOR TO WELDING 3 POINT HITCH TO FLAIL BONNET
2. REVERSE ROTATION ASSEMBLY - PULLY HARDWARE (ITEMS 22,24,25 & 26) SWAP ENDS WITH TENSIONER HARDWARE (ITEMS - 19,38,39,40,41,42,43 & 44) ON IDLER ARM ITEM - 37

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	FRONT FLAIL *REFER TO MOWER ASSEMBLY
2	31279A	1	HITCH,3-POINT
3	40454	2	SPACER
4	27508	4	CAPSCREW,8MM X 20MM,1.25P
5	6T2619	8	LOCKWASHER,8MM
6	28447E	1	GUARD,OUTPUT SHAFT
7	28505	1	GEARBOX
8	06520181	1	GUARD,PTO,GRBX

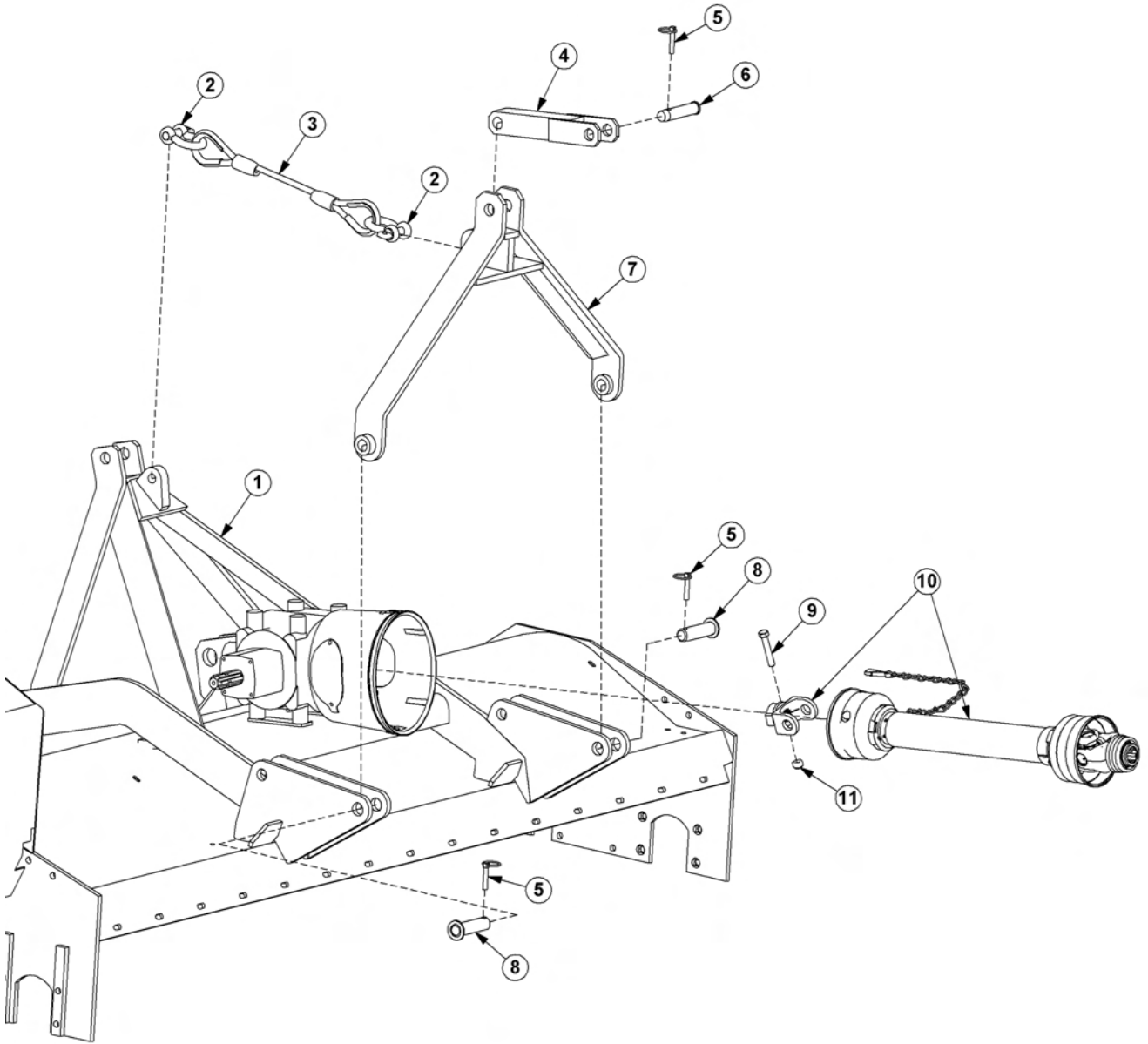
EXTREME DUTY FRONT FLAIL DRIVE ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
9	34948	4	FLATWASHER,8MM
10	27507	4	CAPSCREW,8MM X 15MM,1.25P
11	28914	1	COUPLING,6 SPLINE
12	6T3209	1	GREASE ZERK,1/4"
13	28421A	1	OUTPUT EXTENSION SHAFT
14	30162	4	CAPSCREW,SKT HD,8MM X 20MM,1.25P
15	28429A	1	SHAFT GRD,HD,102"
16	21725	1	HEX NUT,1/2",NC
17	21990	5	LOCKWASHER,1/2"
18	22018	1	FLATWASHER,1/2",WIDE
19	21732	2	CAPSCREW,1/2" X 1-3/4",NC
20	28571	1	BEARING,FLANGE,1-1/4"
21	21730	4	CAPSCREW,1/2" X 1-1/4",NC
22	28399	1	CAPSCREW,20MM X 80MM,2.5P,GR10.9
23	6T3004	1	R-CLIP,HAIRPIN COTTER,3/16"
24	24881	1	LOCKWASHER,20MM
25	31295	1	SHEAVE,IDLER ASSY,6.3"
26	31740	1	NYLOCK NUT,20MM,2.5P
27	TF3040	1	SHEAVE,6.3"
28	30049	2	BUSHING,QD,SK 1-1/4",1/4" KEY
29	28572	1	KEY,1/4"SQ X 2"
30	06520491	2	V-BELT(610)
31	31286A	1	SHIELD,BELT
32	21988	4	LOCKWASHER,3/8"
33	21630	4	CAPSCREW,3/8" X 1",NC
34	TF3011	1	BUSHING,QD,SK 2-3/16"
35	28570	1	SHEAVE,9.0"
36	TF3605	1	PIN,IDLER ARM
37	TF1180	1	IDLER ARM
38	6T2418	1	HEX NUT,1/2",NC,GR8,STOVER
39	TF3610	1	BUSHING,IDLER
40	PT3611A	1	CLEVIS
41	32482	1	ROD,THREADED,1/2-20,NF,12-1/2"
42	TF3620A	1	SPRING,TENSIONER
43	27938	1	BUSHING,MACH,14GA
44	21700	3	HEX NUT,1/2",NF
45	-----	-	CUTTERSHAFT *REFER TO MOWER ASSEMBLY
46	6T2625	4	LOCKWASHER,16MM
47	22421	4	CAPSCREW,16MM X 40MM,2.0P,GR10.9

NH T7.210 T3F

FRONT 3-POINT ASSEMBLY

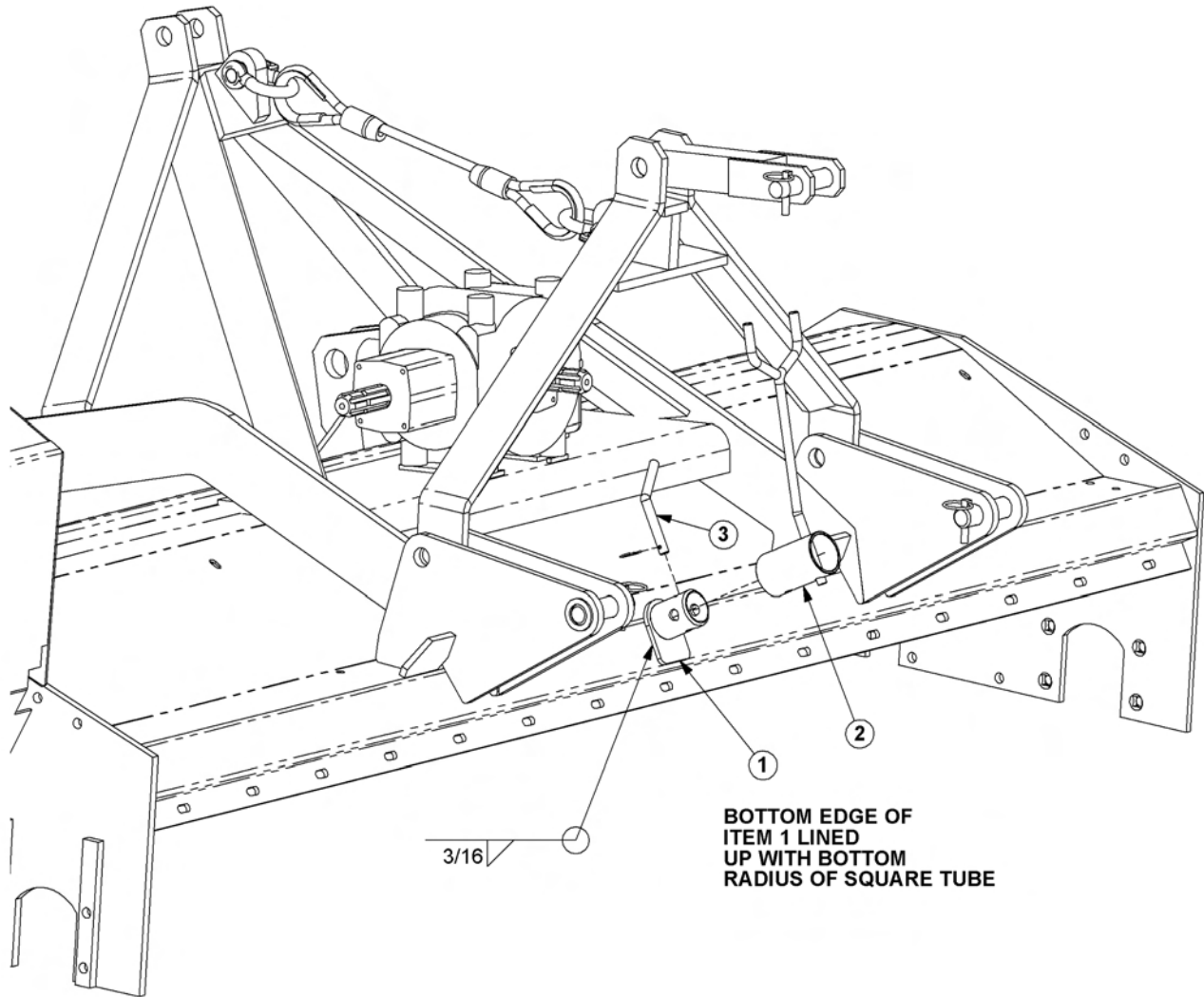


FRONT 3-POINT ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	31279A	1	HITCH,3-POINT
2	6T0112	2	SHACKLE
3	06520384	1	CABLE,LIFT
4	06370125	1	CLEVIS
5	TF1143	3	LYNCH PIN
6	TB1036	1	PIN,3-PNT,UPPER
7	21474A	1	HITCH,3-POINT,TFF
8	TF1120	2	PIN,3-PNT,LOWER
9	27589	1	CAPSCREW,1/2" X 3",NF
10	06520490	1	DRIVE SHAFT,PTO,FRONT
11	27915	1	NYLOCK NUT,1/2",NF

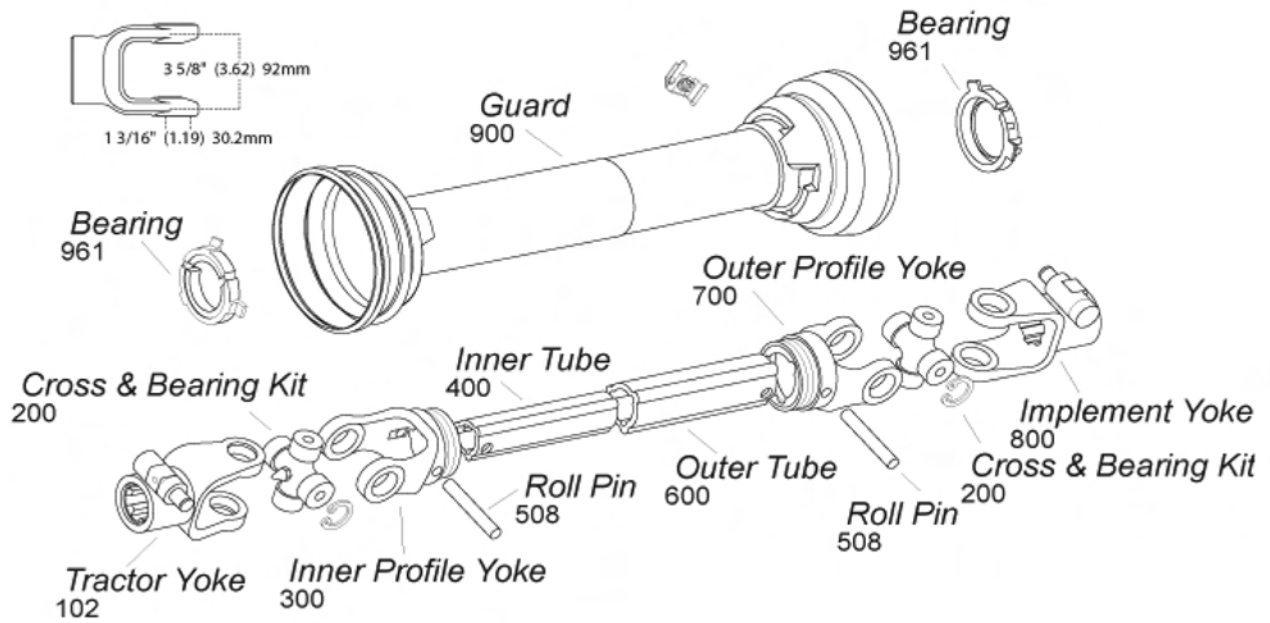
PTO DRIVESHAFT STAND



**BOTTOM EDGE OF
ITEM 1 LINED
UP WITH BOTTOM
RADIUS OF SQUARE TUBE**

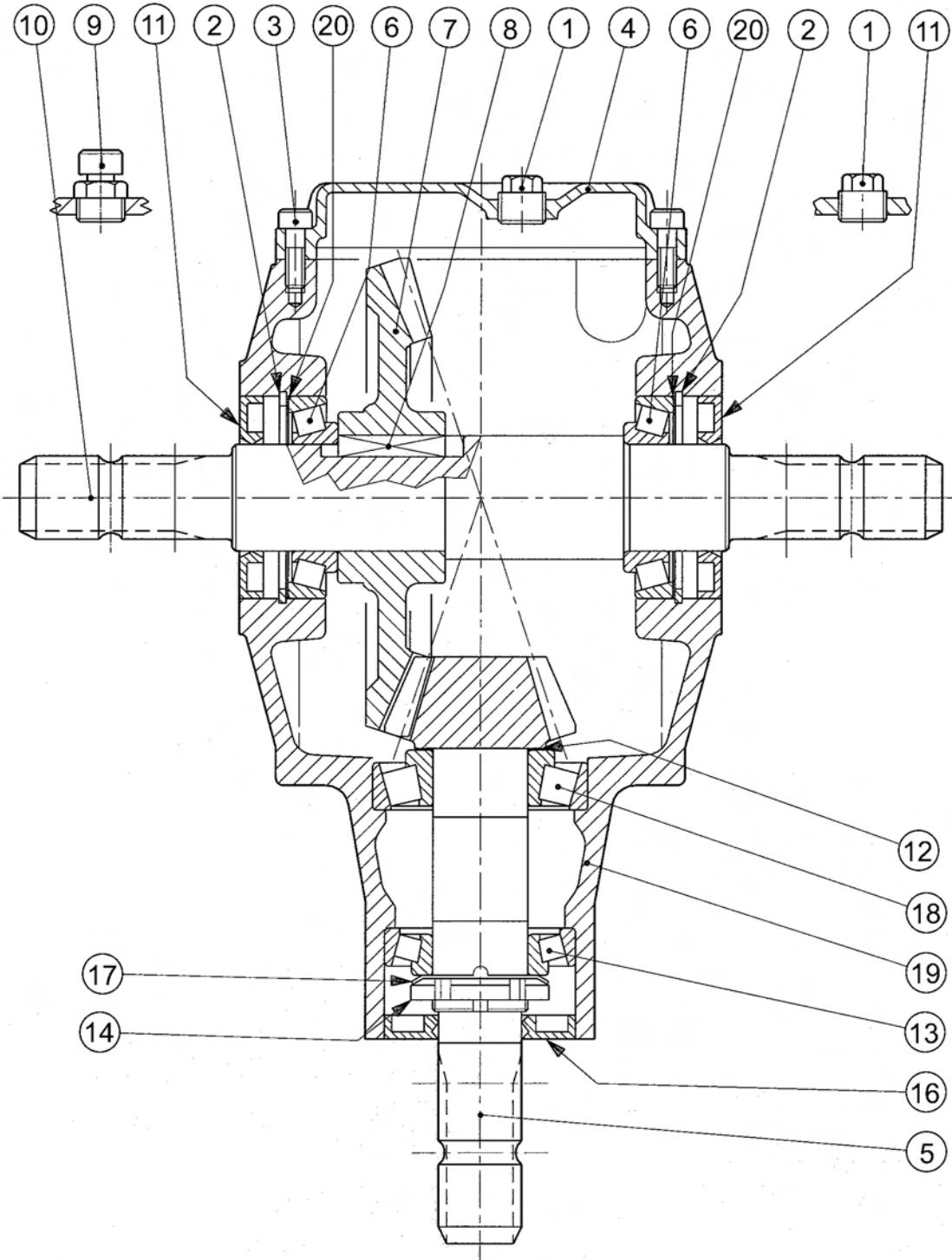
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370080	1	BRACKET,SUPPORT
2	06370022	1	SUPPORT,PTO
3	06520048	1	PIN,BENT,W/ R-CLIP

PTO DRIVESHAFT - 06520490



Tractor Yoke:	102-8606
Cross & Bearing Kit:	200-8692
Inner Profile Yoke:	300-6645
Roll Pin:	508-1080
Inner Tube:	400-6545
Outer Tube:	600-6654
Outer Profile Yoke:	700-6654
Implement Yoke:	102-8606
Guard:	902-3548
Guard Bearing:	961-3567

GEAR BOX BREAKDOWN

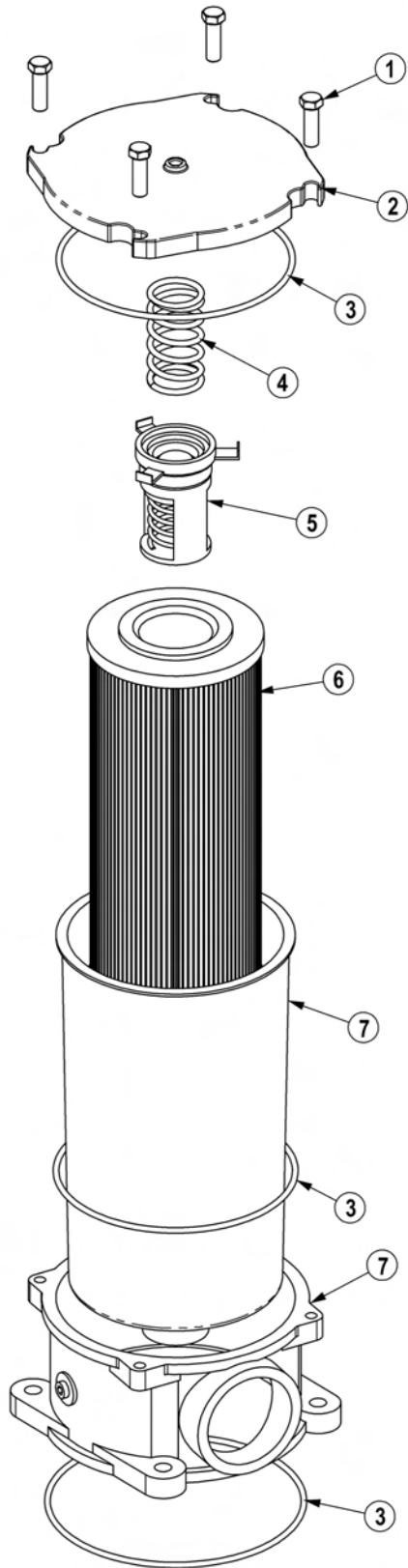


GEAR BOX BREAKDOWN

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	28505	1	GEAR BOX,FRONT FLAIL
1	28592	2	PLUG,1/2",GAS
2	28593	2	SNAP RING
3	28594	6	CAPSCREW,8MM X 25MM
4	28595	1	SHIM
6	28597	2	BEARING
7	28598	1	GEAR
8	28599	1	PARALLEL KEY
9	28600	1	OIL FILLER PLUG
10	28601	1	SHAFT
11	28602	2	OIL SEAL
12	28603	1	SHIM
13	28604	1	BEARING
14	28605	1	LOCK NUT
15	28606	1	PINION
16	28607	1	DOUBLE LIP SEAL
17	28608	1	SPRING WASHER
18	28609	1	BEARING
19	28591	1	CASTING
20	28596	2	SHIM

RESERVOIR TANK FILTER ASSEMBLY

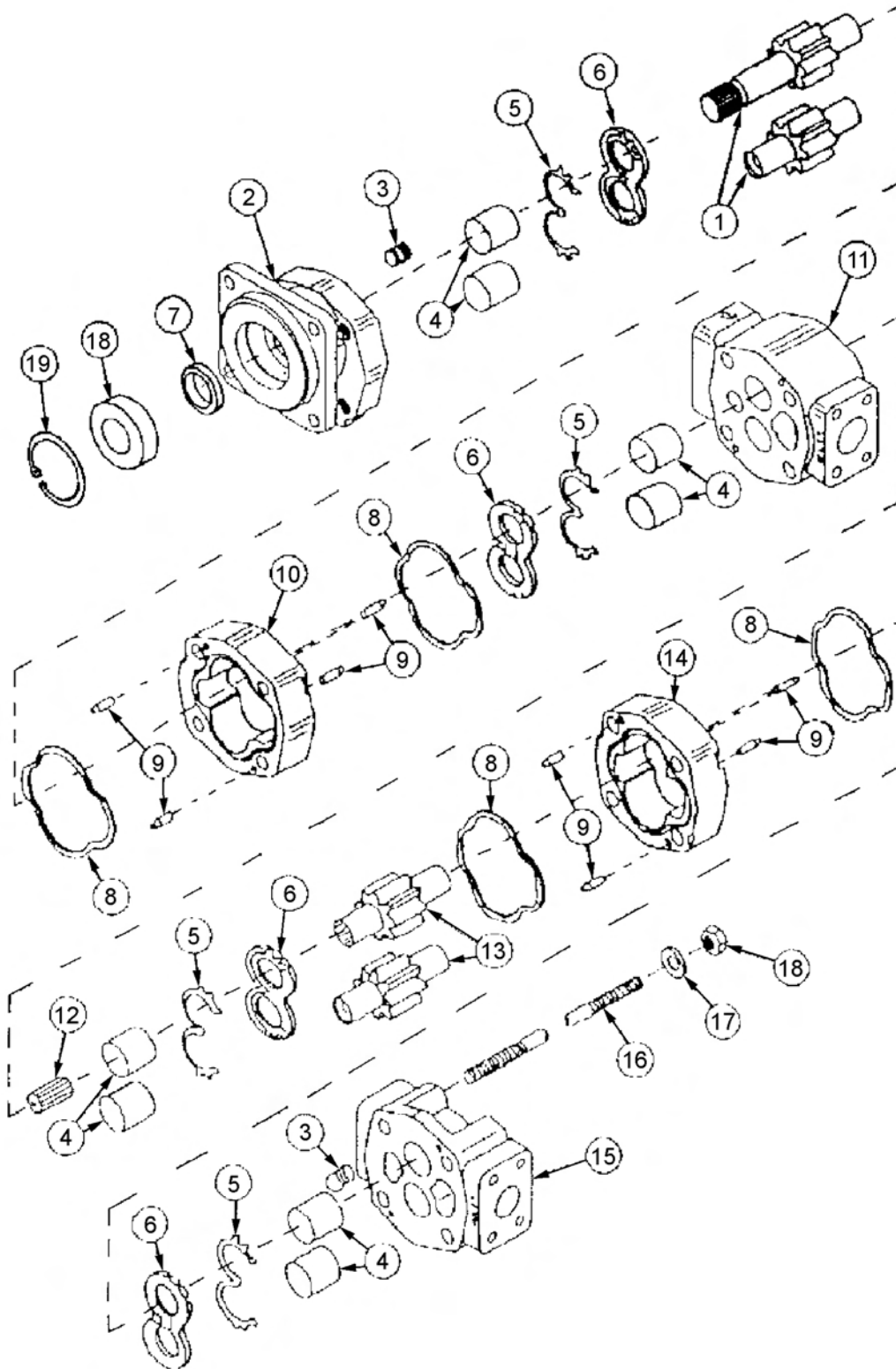


RESERVOIR TANK FILTER ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
-----	06505044	1	FILTER ASSY SAE 10 MICRON
1	28583	4	CAPSCREW,8MM X 25MM(1.25 PITCH)
2	06505045	1	COVER
3	06505046	1	SEAL KIT
4	06505047	1	SPRING
5	06505048	1	BYPASS
6	35259	1	FILTER,10 MIC,RETURN LINE
7	06505049	1	CAN/BODY

HYDRAULIC PUMP BREAKDOWN

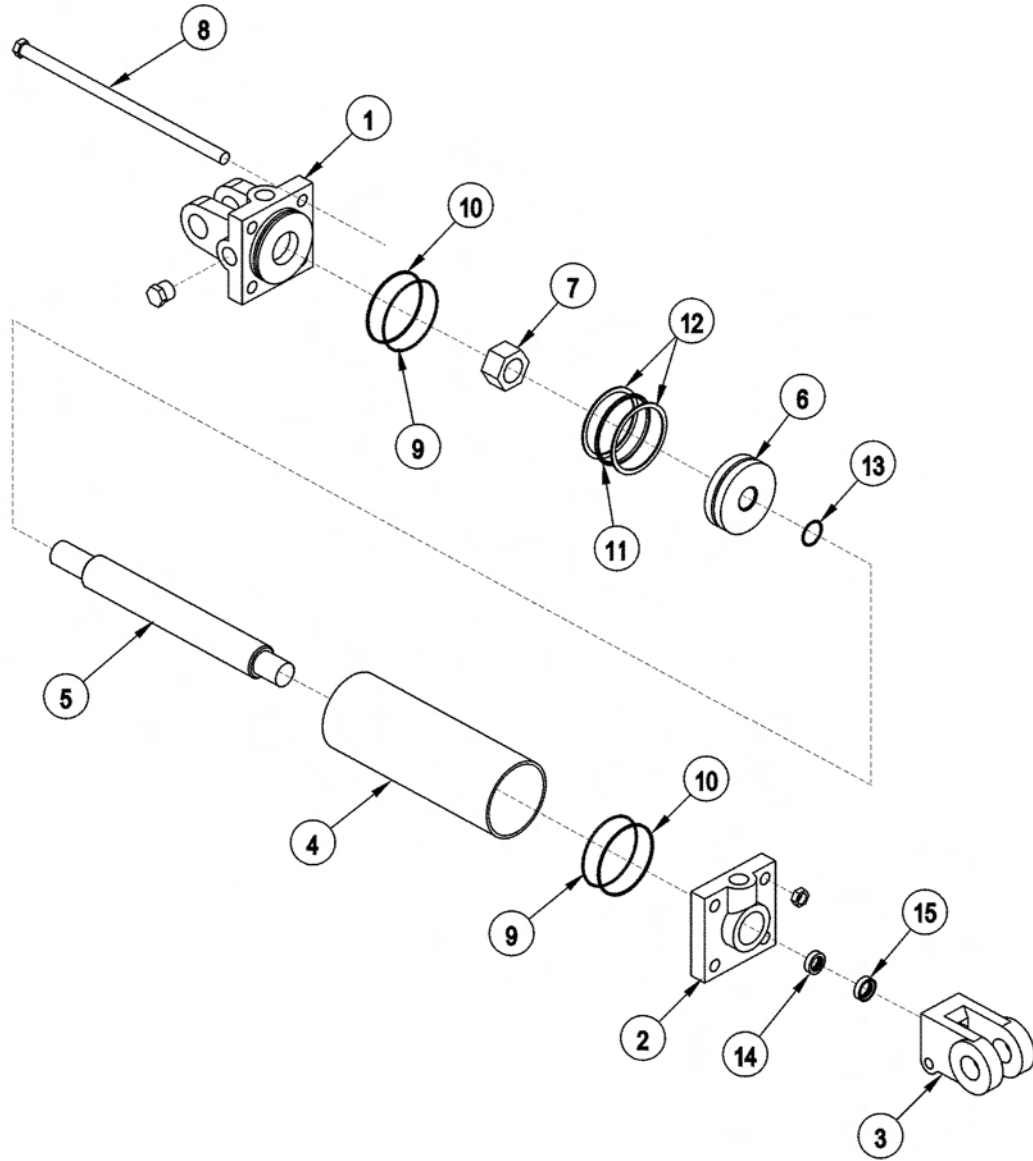


HYDRAULIC PUMP BREAKDOWN

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	23644	1	TANDUM PUMP
1	22771	1	INTEGRAL DRIVE SHAFT AND GEAR SET
2	23967	1	SHAFT END COVER
3	22767	2	PLUG
4	23969	8	BUSHING
5	23970	4	CHANNEL SEAL
6	23971	4	THRUST PLATE
7	23978	1	SEAL
8	23973	4	GASKET SEAL
9	23974	8	DOWEL PINS
10	23975	1	GEAR HOUSING
11	23976	1	BEARING CARRIER
12	23977	1	CONNECTING SHAFT
13	23972	1	MATCHED GEAR SET
14	23975	1	GEAR HOUSING
15	23980	1	PORT END COVER
16	23981	4	STUDS
17	23982	4	WASHER
18	6T5201	1	BALL BEARING
19	6T5200	1	SNAP RING
---	23979	1	SEAL KIT

3IN X 8IN TIE-ROD CYLINDER BREAKDOWN - 30481

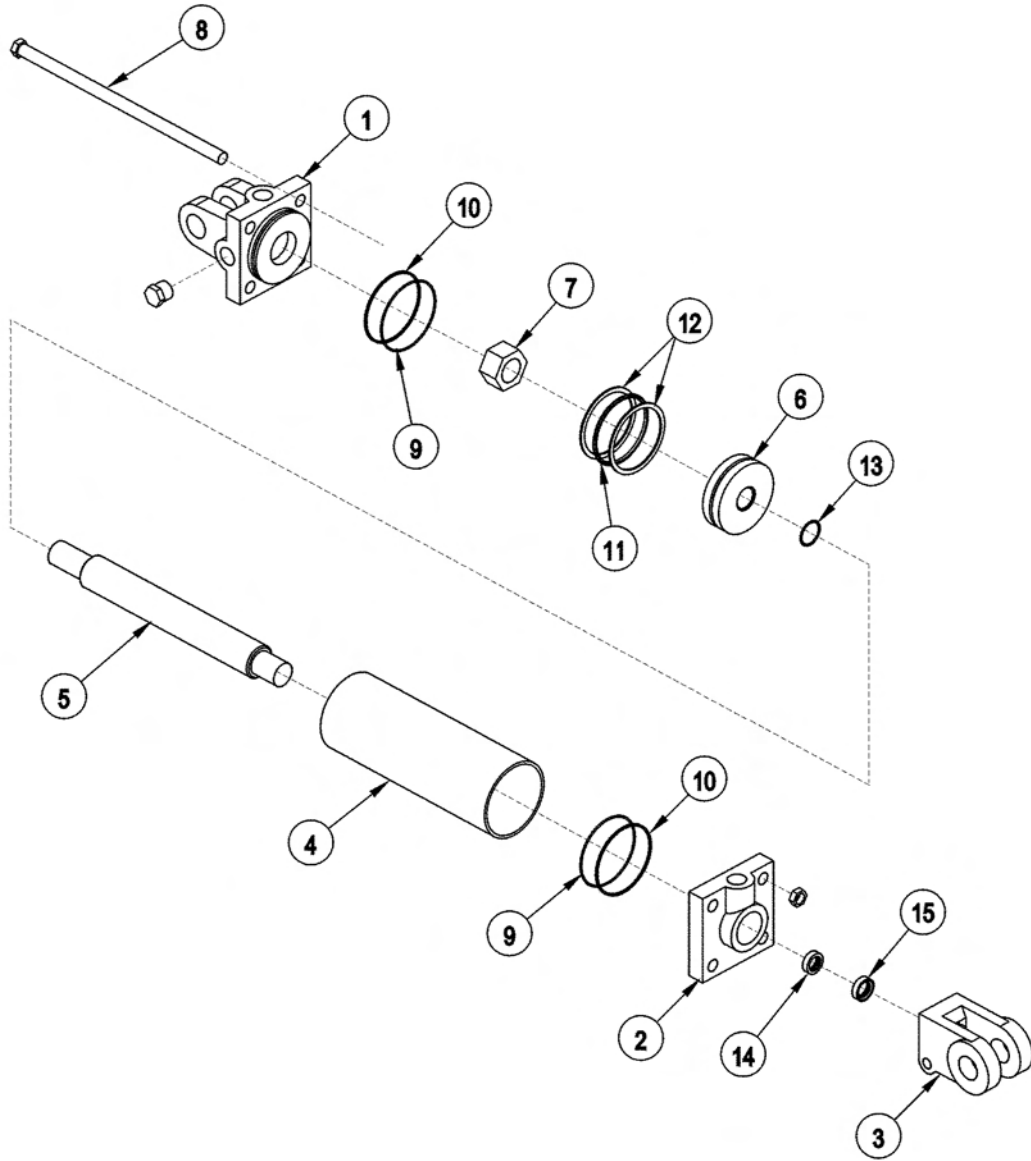


3IN X 8IN TIE-ROD CYLINDER BREAKDOWN - 30481

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	30481	1	CYLINDER 3" X 8"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	23870	1	CYLINDER TUBE
5	23869	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	23871	4	TIE ROD ASY
---	6T0187	1	SEAL KIT
9	-----	2	O - RING
10	-----	2	BACK - UP WASHER
11	-----	1	O - RING
12	-----	2	BACK - UP WASHER
13	-----	1	O - RING
14	-----	1	U - CUP
15	-----	1	WIPER

3IN X 10IN TIE-ROD CYLINDER BREAKDOWN - 6T0151R

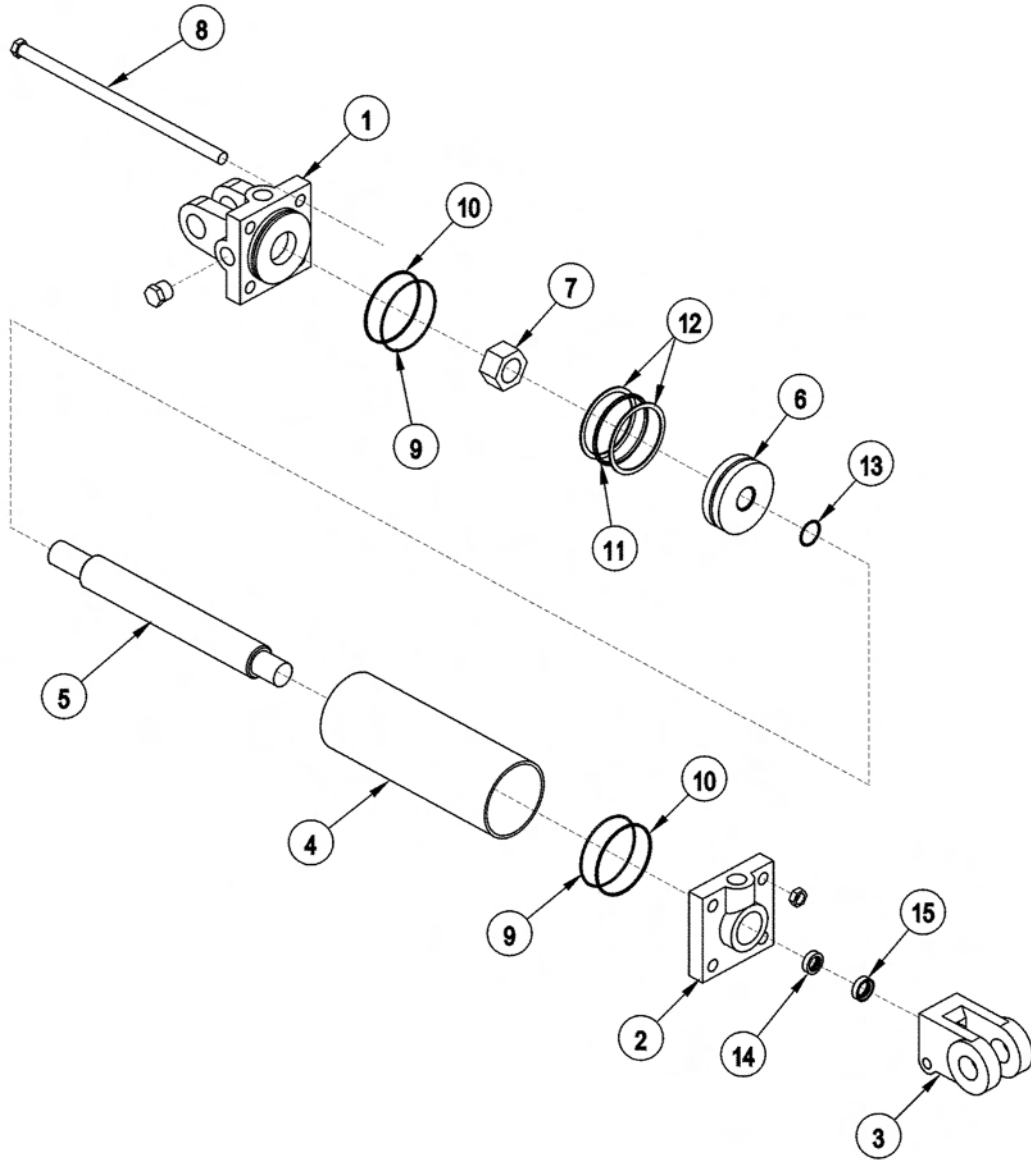


3IN X 10IN TIE-ROD CYLINDER BREAKDOWN - 6T0151R

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	6T0151R	1	CYLINDER 3" X 10"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	6T0164	1	CYLINDER TUBE
5	6T0161	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	6T0176	4	TIE ROD ASY
---	6T0187	1	SEAL KIT
9	-----	2	O - RING
10	-----	2	BACK - UP WASHER
11	-----	1	O - RING
12	-----	2	BACK - UP WASHER
13	-----	1	O - RING
14	-----	1	U - CUP
15	-----	1	WIPER

3IN X 18IN TIE-ROD CYLINDER BREAKDOWN - 6T0150

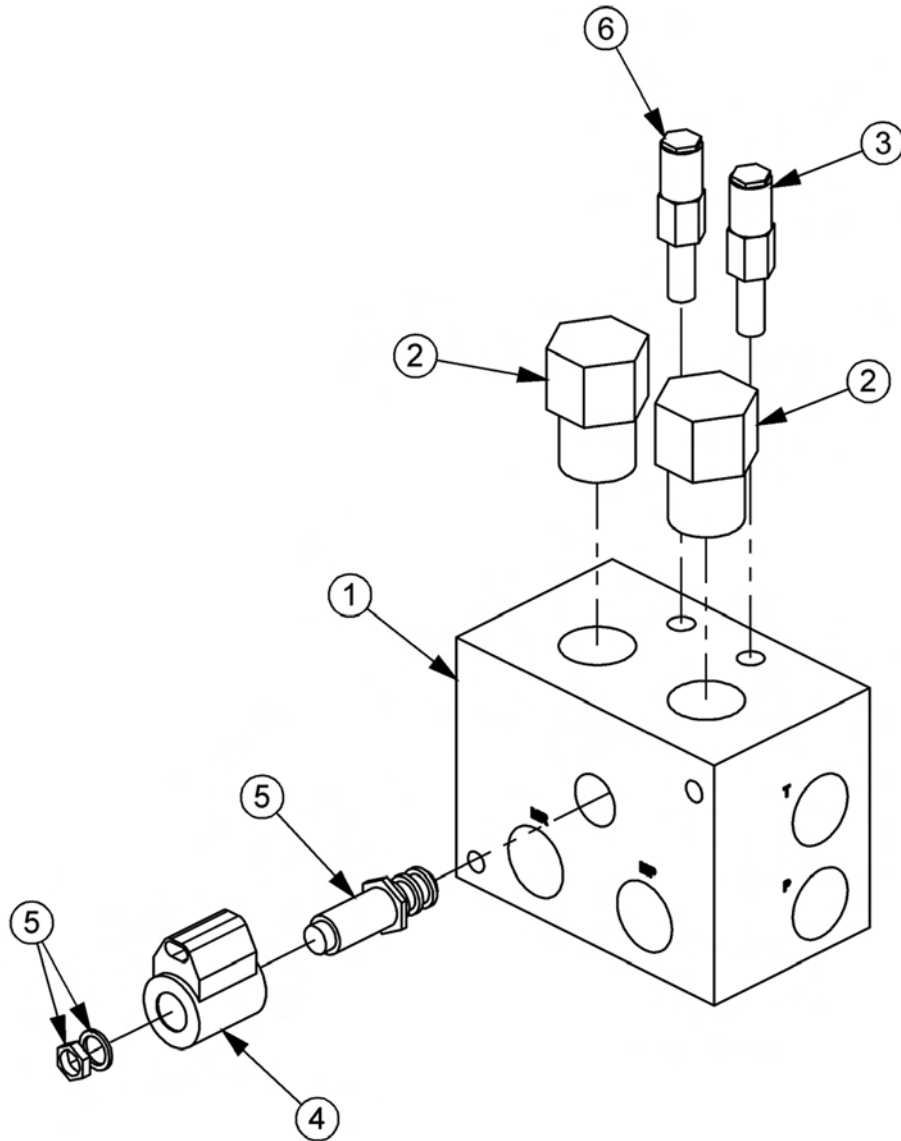


3IN X 18IN TIE-ROD CYLINDER BREAKDOWN - 6T0150

Continued...

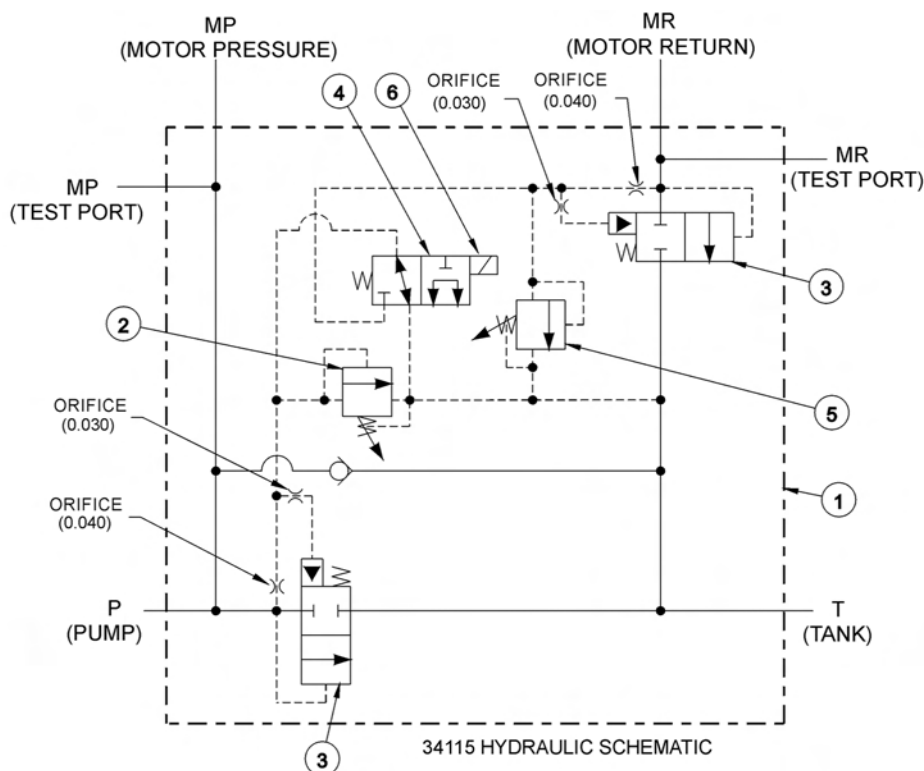
ITEM	PART NO.	QTY.	DESCRIPTION
---	6T0150	1	CYLINDER 3" X 18"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	6T0165	1	CYLINDER TUBE
5	6T0162	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	6T0177	4	TIE ROD ASY
---	6T0187	1	SEAL KIT
9	-----	2	O - RING
10	-----	2	BACK - UP WASHER
11	-----	1	O - RING
12	-----	2	BACK - UP WASHER
13	-----	1	O - RING
14	-----	1	U - CUP
15	-----	1	WIPER

BRAKE VALVE ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
---	06510083	1	BRAKE VALVE, ASSY
1	34092	1	BRAKE VALVE, BLANK
2	34094	2	LOGIC ELEMENT
3	34095	1	RELIEF VALVE, 3000 PSI
4	06510095	1	METRI PAK COIL
5	34093	1	CARTRIDGE, 2 POSITION, 3 WAY (WITH NUT & WASHER)
6	34091	1	RELIEF VALVE, 2600 PSI
---	34096	2	RELIEF SEAL KIT
----	34097	1	SOLENOID SEAL KIT
---	34098	2	ELEMENT SEAL KIT

BRAKE VALVE HYDRAULIC SCHEMATIC



BRAKE VALVE TROUBLESHOOTING

FAILURE MODE:

- MOWER WILL NOT START - system pressure is low (engine not lugging).
- MOWER WILL NOT START - system pressure is high (engine lugging). "MR" port will be high pressure.
- MOWER WILL NOT ROTATE AT FULL SPEED - limited power.
- MOWER BLADE WILL NOT STOP - blade will not stop in proper time.

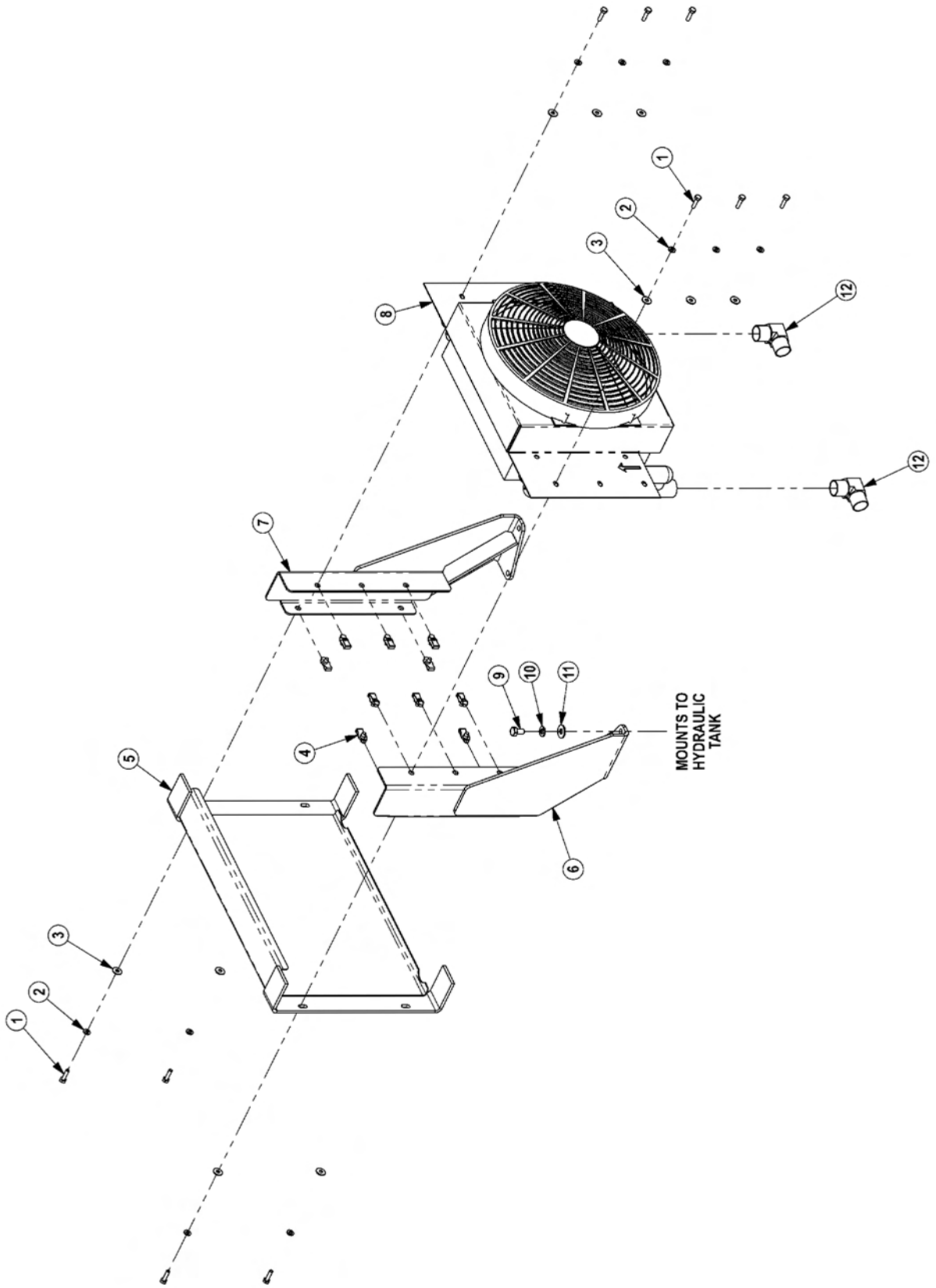
CHECK STEPS

- 1 thru 6
- 7
- 3 thru 5
- 7 thru 9

CORRECTIVE STEPS:

1. Check for voltage at solenoid (item 6), voltage must be between 10.2 volts and 13.8 volts.
2. Remove, inspect solenoid and cartridge (items 4, 6) for wear or contamination.
3. Remove, inspect logic elements near "P" port (item 3) for wear or contamination.
4. Remove, inspect 3000 psi relief valve (item 2) for wear or contamination.
5. Remove and inspect orifices near "P" port for contamination.
6. Remove "P" port hose and fitting, visually inspect for contamination, check ball for movement.
7. Remove and inspect orifices near "MR" port for contamination.
8. Remove, inspect 2600 psi relief valve (item 5) for wear of contamination.
9. Remove, inspect logic element near "MR" port (item 3) for wear or contamination.

COOLER ASSEMBLY

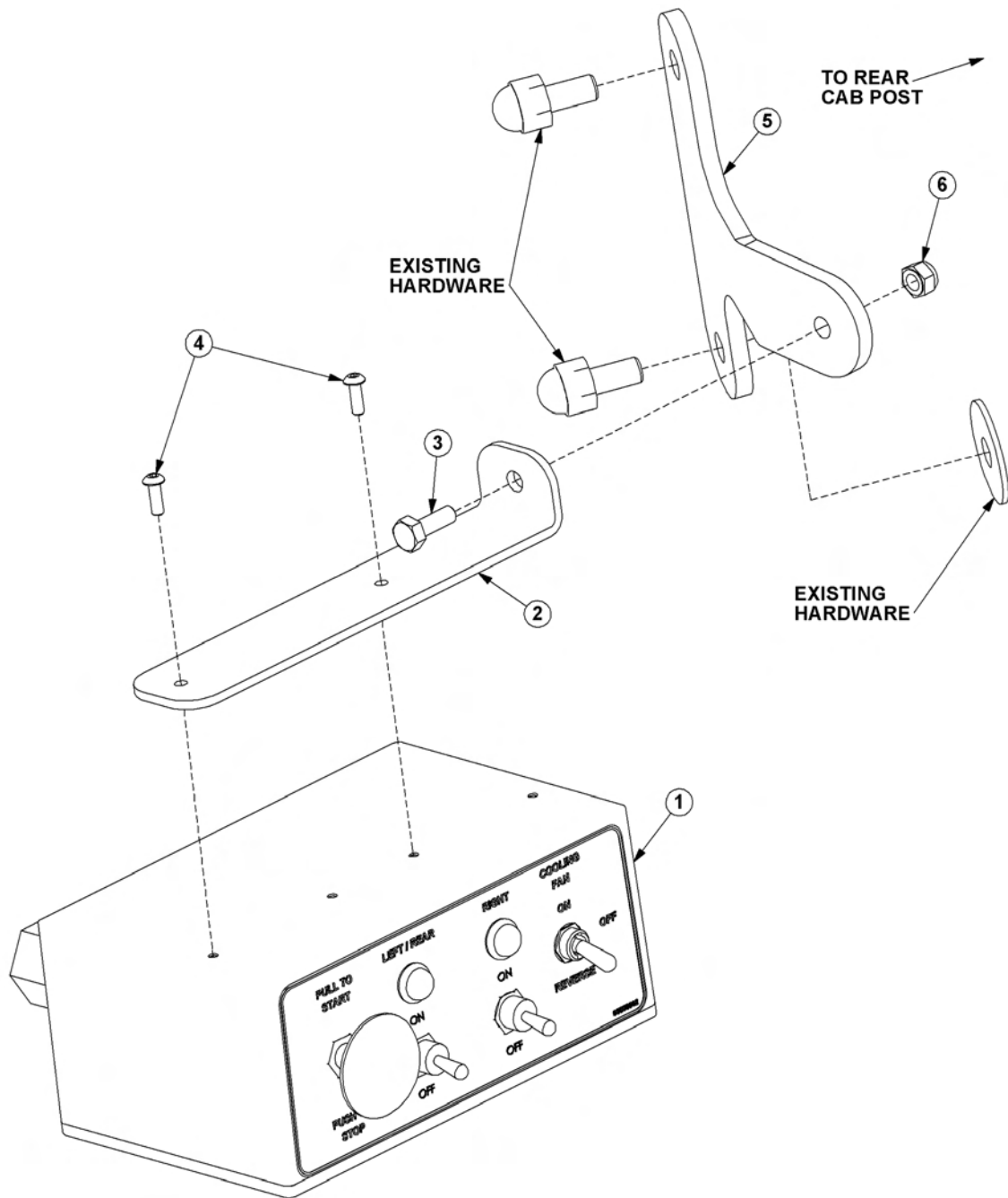


COOLER ASSEMBLY

Continued...

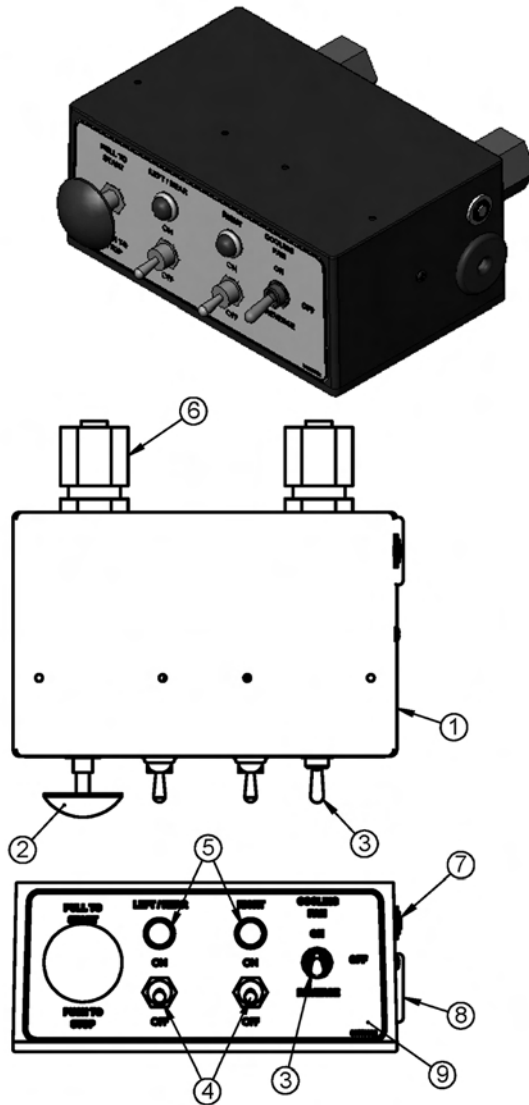
ITEM	PART NO.	QTY.	DESCRIPTION
1	21530	10	CAPSCREW,1/4" X 1",NC
2	21986	10	LOCKWASHER,1/4"
3	22014	10	FLATWASHER,1/4"
4	35176	10	1/4",U-NUT
5	06370015	1	SCREEN,COOLER,FRNT
6	06380006	1	MNT,COOLER,BUMPER TANK,RH
7	06380007	1	MNT,COOLER,BUMPER TANK,LH
8	06510026	1	COOLER,FRONT MNT
9	21629	4	CAPSCREW,3/8" X 3/4",NC
10	21988	4	LOCKWASHER,3/8"
11	22016	4	FLATWASHER,3/8"
12	34117	2	ELBOW,1"MOR X 1"MJ90,FORGED

SWITCH BOX MOUNT



ITEM	PART NO.	QTY.	DESCRIPTION
1	06510097	1	SWITCH BOX,T3F
2	34496	1	BRKT,UNIVERSAL
3	21529	1	CAPSCREW,1/4" X 3/4",NC
4	6T3951	2	SCREW,MCHN,8-32X1/2
5	06411650	1	MOUNT,SWITCH BOX
6	21527	1	NYLOCK NUT,1/4",NC

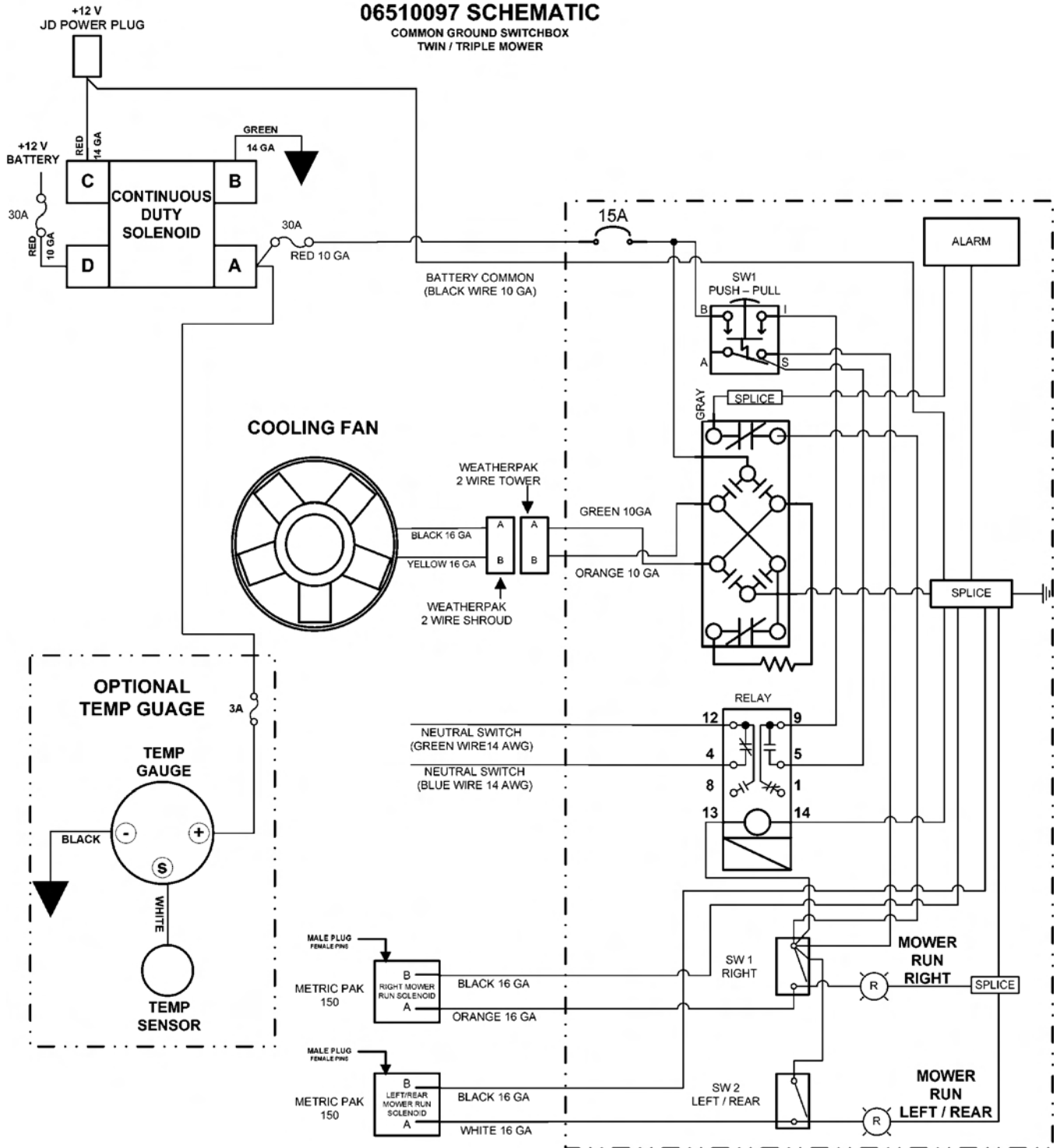
SWITCH BOX SERVICE PARTS



ITEM	PART NO.	QTY.	DESCRIPTION
---	06510097	1	SWITCHBOX ASSEMBLY
1	06514011	1	SWBX,ALUM,BLK
2	35226	1	SWITCH,MOWER,COLEHERSEE
3	06510028	1	SWITCH,FORWARD/BRAKE/REV
4	33811	2	SWITCH,MASTER/DECK FLOAT
5	6T3923	2	INDICTATOR LIGHT,ON,RED
6	34540	2	STRAIN RELIEF,3/4,BLACK,NYLON
7	06514006	1	BREAKER,15A,SWBX
8	06514015	1	ALARM,SWBX,REVERSER
9	06550002	1	DECAL,SWTCHBX,TWIN/T3F,REV FAN
10	35227	1	RELAY,DP,DT,12V,LY2F,35226

SWITCH BOX SCHEMATIC

06510097 SCHEMATIC COMMON GROUND SWITCHBOX TWIN / TRIPLE MOWER



**WARRANTY
SECTION**

WARRANTY INFORMATION

Tiger Corporation, 3301 N. Louise, Sioux Falls, South Dakota, warrants to the original Retail Customer, the new Tiger equipment is free of defects in material and workmanship. Any part of equipment that in Tiger's judgement, show evidence of such defects will be repaired or replaced without charge, provided that the failure of part(s) shall have occurred within twelve (12) months from the date of delivery of said equipment to the Retail Customer. Expendable components such as knives, oil, chain sprockets, skid shoes, knife mounting disks and the like are excluded but not limited to this warranty.

The Retail Customer must pay the transportation cost to and from the Tiger Dealer's service shop for warranty service. Warranty service will be performed by the Tiger Dealer from whom the equipment was purchased, during service shop regularly scheduled days and hours of operation.

All Tiger obligation under this warranty shall be terminated if the equipment is modified or altered in ways not approved in writing by Tiger, if repair parts other than genuine Tiger repair parts have been used, or if the equipment has been subject to misuse, neglect, accident, improper maintenance or improper operation.

Tiger Corporation reserves the right to make improvements in design or changes in specification at any time without incurring any obligation to owners of equipment previously sold.

No agent or person has authority to alter, add to or waive the above warranties which are agreed to be in the only warranties, representations or promises, expressed or implied, as to the quality or performance of the products covered and which do not include any implied warranty of merchantability or fitness. In no event will Tiger be liable for incidental or consequential damages or injuries, including, but not limited to, loss of profits, rental or substitute equipment or other commercial loss.

**THERE ARE NO WARRANTIES WHICH EXTEND
BEYOND THOSE EXPRESSED HEREIN.**

It is the Purchasers obligation to sign the warranty registration form **AFTER** he / she has Read and Understands the Operation and Safety Instructions stated within this manual.

ONE LAST WORD

This manual cannot possibly cover all of the potentially hazardous situations you will encounter. By being familiar with the safety rules, operating and maintenance instructions in this manual you can help prevent accidents. The objective of this manual is to help make you a better operator. Remember, **SAFETY IS YOU!**



1012

Your safety and the safety of those around you depends on **YOU**. Common sense should play a large role in the operation of this machine.

Since we at Tiger Corporation are constantly striving to improve our products, we reserve the right to change specifications or design at any time.

TO THE OWNER / OPERATOR / DEALER



To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this manual and on the machine. The table of contents clearly identifies each section where you can easily find the information you need.

The Occupational Safety and Health Act (OSHA 1928.51 subpart C) makes the following minimum requirements for tractor operators.

OWNER REQUIREMENTS:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seatbelts that meet the requirements of this Standard and SAE J3C; and
3. Ensure that each employee uses such Seatbelt while the tractor is moving; and
4. Ensure that each employee tightens the Seatbelt sufficiently to confine the employee to the protected area provided by the ROPS.

OPERATOR REQUIREMENTS:

1. Securely fasten seatbelt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near steep ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going – especially at row ends, on roads, and around trees.
6. Do Not permit others to ride.
7. Operate the tractor smoothly – no jerky turns, starts, or stops.
8. Hitch only to the draw-bar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available



Printed in USA
© Tiger Corporation