

# TRIPLE FLAIL ASSEMBLIES

**JOHN DEERE 5101E, 2011** 

# PARTS LISTING WITH ASSEMBLY INSTRUCTIONS

## **Tiger Corporation**

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

## 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.

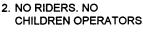
**BEFORE YOU START!!** Read the safety messages on the implement and shown in this manual. Observe the rules of safety and use common sense!

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



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









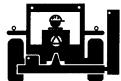
4. BLOCK UP SECURELY **BEFORE WORKING** 



- 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.
- 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.
  Puttractor 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 runover may cause serious injury or death.



6. USE SMV, LIGHTS, & **REFLECTORS** 



7. DO NOT OPERATE WITH CUTTER OR WING RAISED.



8. DO NOT MOUNT OR **DISMOUNT WHILE** MOVING



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

•	<ul> <li>If unable to correct the problem yourself,</li> </ul>	contact your lo	cal Tiger D	ealer at	fter
	gathering:				
	<ul> <li>Machine model</li> </ul>				

• Machine model	
<ul><li>Serial number _</li></ul>	
<ul><li>Dealer name</li></ul>	

• 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.

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## **TABLE OF CONTENTS**

SAFETY SECTION		
ASSEMBLY / MOUNTING SECTION	2	
OPERATION SECTION	3	
MAINTENANCE SECTION	4	
PARTS SECTION	5	
COMMON PARTS SECTION	6	
WARRANTY INFORMATION	7	



## 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
Triple Flail Safety Section 1-1	

## **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.



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 <u>YOU</u>! Only <u>YOU</u> can prevent serious injury or death from unsafe practices.



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



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



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



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 convienient operation or repair. (SG-1)

<u>READ, UNDERSTAND</u>, and <u>FOLLOW</u> 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)



#### PELIGRO!



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



#### i 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.  $_{\rm (SG-4)}$ 



#### WARNING!



Always maintain the safety decals in good readable condition. <u>If the decals are missing, damaged, or unreadable, obtain and install replacement decals immediately.</u> (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.  $_{\rm (SG-6)}$ 



#### 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.

ENGINE PTO

STOP

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.



**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. Highpressure 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)



#### 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-I7)



#### 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)

Triple Flail Safety Section 1-5

#### 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)

#### 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!



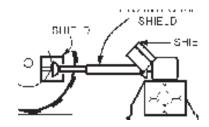
There are obvious and hidden potential hazards in the operation of this Mower. REMEMBER! This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care 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)



#### **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 ATTEMPTTO 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)

#### **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 UN-LESS:

- -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)





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.

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 tipover. 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. (SSPT-2)

Triple Flail Safety Section 1-9

#### 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.

#### **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 is 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 extremecaution 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)



#### 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, cuttershafts, 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.



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)

PART NO. LOCATION

STANDARD CUT

21405

MOWER DECK

SMOOTH CUT

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



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" x10" 31523 HYDRAULIC TANK



33743 INSIDE OF CAB



42350 MOWER DECK



PART NO. LOCATION

42399 MOWER DECK



42400 MOWER DECK



6T3217 MOWER DECK



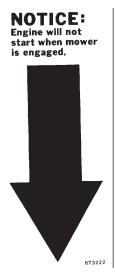
6T3219 INSIDE OF CAB

LUBRICATE PUMP DRIVE SHAFT DAILY, USING HEAVY TYPE GUN GREASE.

FRONT PUMP MOUNT

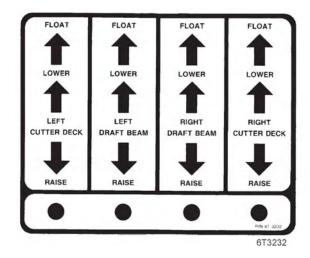
6T3220

Triple Flail Safety Section 1-14



PART NO. LOCATION

6T3222 INSIDE OF CAB



6T3232 INSIDE OF CAB



6T3224 MOWER DECK



DO NOT OPERATE THIS EQUIPMENT WITH BYSTANDERS IN THE AREA!

ROTARY MOWERS HAVE THE INHERENT ABILITY TO THROW DEBRIS CONSIDERABLE DISTANCES WHEN KNIVES ARE ALLOWED TO STRIKE FOREIGN OBJECTS. OPERATOR CAUTION MUST BE TAKEN OR SERIOUS INJURY CAN RESULT.

6T3230 INSIDE OF CAB

PART NO. LOCATION

6T3233 HYDRAULIC TANK

**A** CAUTION

DO NOT START OR RUN WITH VALVES CLOSED. (SERIOUS DAMAGE WILL OCCUR)

6T-323

**A** CAUTION

CHECK CRANKSHAFT ADAPTER DAILY FOR TIGHTNESS AND GROMMET WEAR

AS SERIOUS DAMAGE TO RADIATOR MAY RESULT FROM IMPROPER MAINTENANCE.

6T3234

6T3234 INSIDE OF CAB



6T3236 MOWER DECK HYDRAULIC TANK

REMOVE TRAVEL LOCK PINS
BEFORE LOWERING MOWER

6T3242 INSIDE OF CAB

6T3242

Triple Flail Safety Section 1-16

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## **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 O

0

34852

HYDRAULIC TANK

## DANGER THROWN OBJECT HAZARD Do not operate mower when cutter shaft is in reverse rotation unless: que: Reverse Rotation Front Guard is in place, and

Guard is in good condition

Reverse Rotation Front Guard



06550054

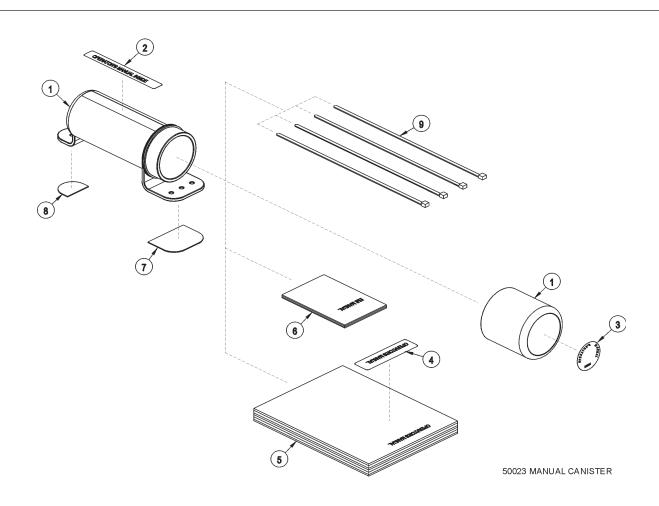
#### RIESGO DE OBJECTO LANZADO

No funcione el cortacésped cuando el eje de cortador esta en rotación inverso al menos

- El Guardia Delantero de Rotación Inversa esta en su lugar y
- El guardia esta en buenas condiciones



D538 ON MOWER HEAD



ITEM	PARTNO.	QTY.	DESCRIPTION
	50023	AVAIL	MANUAL CANISTER COMPLETE
1	00776031	1	ROUNDMANUALCANISTER
	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	ZIPTIE 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.

## 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."

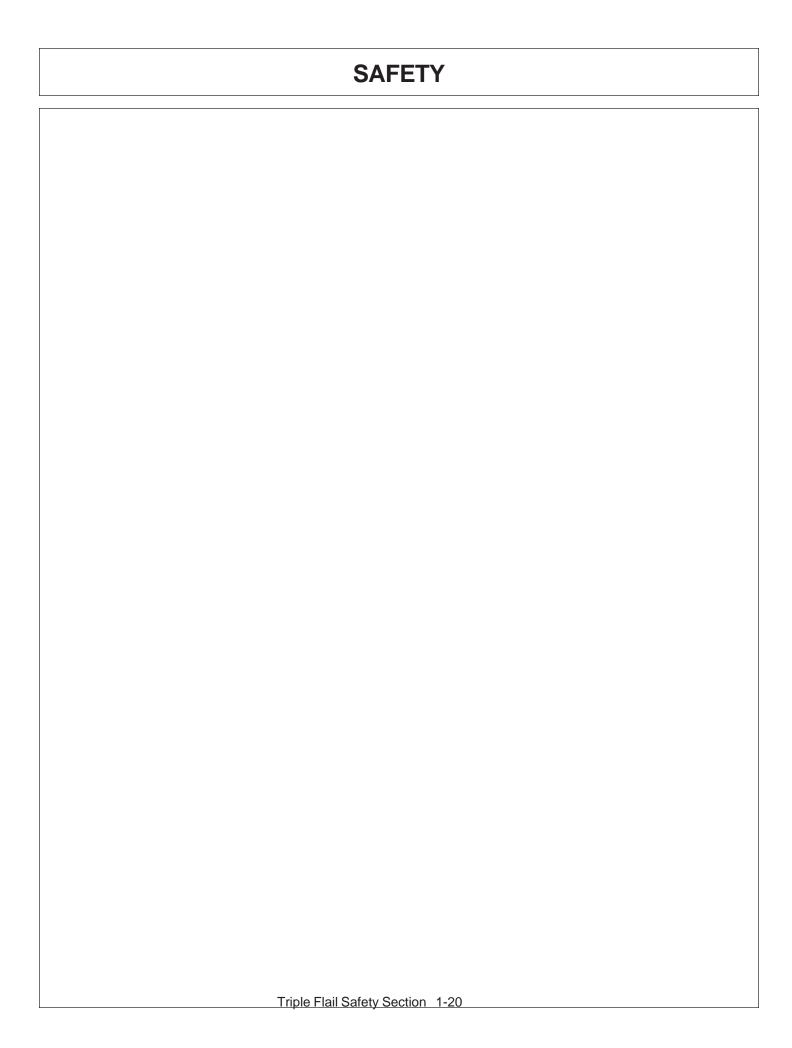
#### **Employer Responsibilities:**

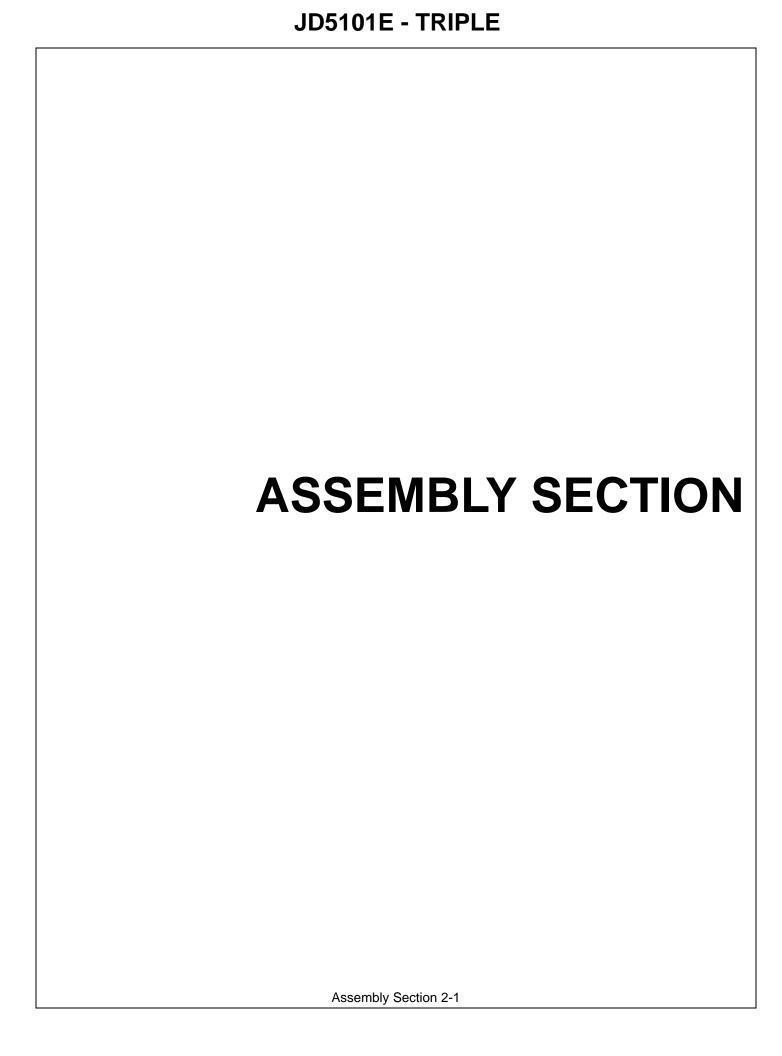
To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

- 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.
- 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.)





Before attempting to mount your Tiger mower, it is important to read an 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!

**AWARNING** 

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. Remove right and left hand steps.
- B. Disconnect battery cables from both batteries.
- C. Remove engine side panels, or raise hood to access front pulley.
- D. Remove plugs from tractor casting where main frame and pump mount will be attached.
- E. Remove any front weights and weight supports.
- F. Raise the tractor onto jack-stands and remove the right and left rear wheels.

(ASM-JD-0001)

## **CRANKSHAFT ADAPTER**

For JD5101E, JD5093E & JD5083E tractors, install the John Deere kit LVB24989 and follow the instructions. You will also need to replace the existing belt with John Deere belt P/N T208891. (ASM-JD-0060)

## **DRIVESHAFT & FRONT PUMP MOUNTING**

Thread the pump drive shaft into the crankshaft adapter.

Slide splined drive shaft coupler onto the pump drive shaft. Install the pump onto the mounting bracket. NOTE: the pump is offset to one direction, the pump should be installed with the offset side on top. Install hardware for securing pump to the pump mount, DO NOT tighten.

Install pump and align so that splined coupling can be moved (FREE PLAY) back and forth by hand. Rotate coupler and check free play every 1/4 turn. Tighten pump mounting bolts in succession rechecking for spline coupling free play. Remove the pump mounting bracket bolts one at a time and apply a thread locking agent. Tighten these bolts in succession, again checking for free play in the drive shaft. After all bolts are torqued, the end play on the drive shaft should be 1/16" to 1/8", and coupler should move freely with hand



pressure. If end play is less than 1/16", grind the end of the shaft to achieve the proper end play. If there is more than 1/4" of end play, return the shaft with specifications for a longer shaft.

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-C-0091)

## MAIN FRAME INSTALLATION

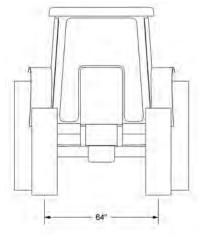
With an overhead hoist and / or jack-stands, raise one side of the frame up to the correctly matching mounting holes. Install capscrews and all other hardware as shown in main frame parts section to secure the sides of the main frame to the tractor casting, DO NOT tighten at this time. Remove the capscrews one at a time and apply a thread locking agent. Reinsert the capscrews and tighten / torque to values noted in the torque chart located in the maintenance section of this manual. (ASM-C-0003)

## 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)

## **4WD FRONT TIRE ADJUSTMENT**

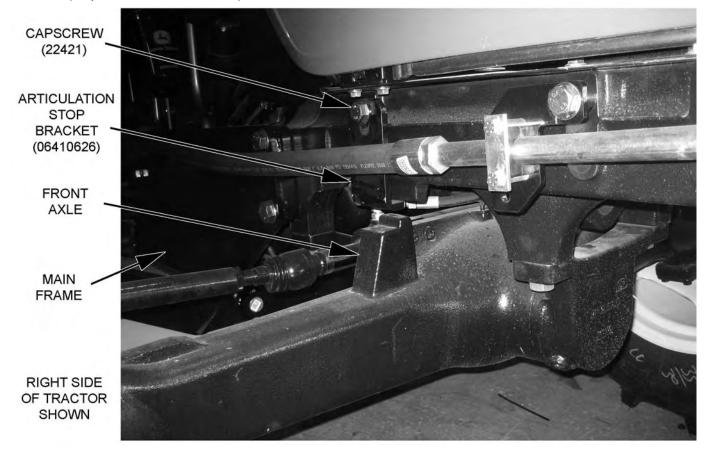
In order to prevent interference with mounted equipment, the front wheels on a 4WD 5101E tractor will have to be adjusted to approximately 64" center to center distance as shown below. Please refer to your John Deere Maintenance Manual to see the correct rim and tire configuration to achieve this. Double check the wheel spacing after adjustment by oscillating and turning the tires fully to check for any interference. (ASM-JD-0069)





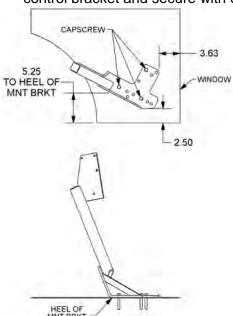
## FRONT AXLE ARTICULATION STOPS

In order to prevent interference with mounted equipment, the front axle articulation must be limited. In order to do this, a stop must be added on both sides of the tractor frame as shown below. Tiger P/N 06410626 (Articulation Stop Bracket) and P/N 22421 (Capscrew 16MM x 40MM) must be mounted as shown. (ASM-JD-0093)



## CABLE CONTROL LEVER STAND (SVC ONLY UNITS)

Place the cable control bracket on the floor so that the bracket is 3-5/8" from the front window. Also the outer rear corner (heel) of the bracket is 5-1/4" from the edge of the door. The middle corner of the bracket should be 2-1/2" from the edge of the door. See image below. Be sure that the location of the stand will allow the operation of all control levers in the tractor and that the door will not strike the stand when shut. Double check under the cab for cables and wires that may be cut when drilling. And before drilling double check location of the stand for proper placement of holes. Drill 3 holes to match control bracket and secure with capscrews and nylock nuts noted in parts section.





The rubber boot under the rear window can be cut in a cross hair pattern and if necessary the bottom cut through to allow it to slip over the cables and back into position. These cables will be routed to the lift valve mounted on the valve mounting plate, and should not have any sharp bends or kinks in them. Secure cables with zip ties and apply RTV sealer in and around individual cables, inside and outside of the cab for a water tight seal. Do not allow excess cable to hang unsecured on the outside of the cab. (ASM-JD-0094).

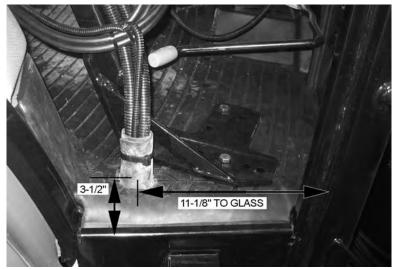


Assembly Section 2-5

## **ELECTRICAL WIRE ROUTING (SVC ONLY UNITS)**

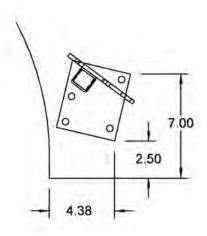
Cut a 1-3/4" hole in the floor to route the wrapped wires through. It needs to have a 1/4" clearance for the trim lock. Before you mark or drill any holes, check for support plates or wires under the cab floor.

**NOTE:** Cutting into plates or wires makes more work for everyone and could be dangerous. Look under the floor for cables and plates that you need to avoid. The hole should be approximately 3-1/2" from the door sill and 11-1/8" from the front window. Install the trim lock around the metal edges of the hole, then route the wires through the hole. Next, wrap the wires with the 6" split hose at the point they pass through the hole, and secure the zip-ties. Apply RTV sealer in and around the wire wrap and split hose, inside and outside of the cab for a water tight seal. Install upper support bracket from cab post to the control lever stand. (ASM-T3F-0021)



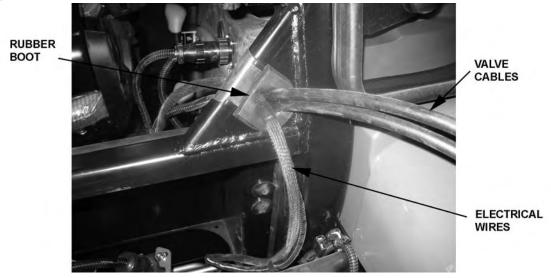
## (MID MOUNT VALVE UNITS)

Place the cable control bracket on the floor so that the bracket is 2-1/2" from the side edge of the door, and 4-3/8" in front of the rear edge of the door. See images below. Be sure that the location of the stand will allow the operation of all control levers in the tractor and that the door will not strike the stand when shut. Before drilling double check location of the stand for proper placement of holes. Make sure that all cables and wires are clear of the area before drilling holes to mount the stand. Drill 3 holes to match control bracket as shown below and secure with capscrews and nylock nuts noted in parts section..





The rubber boot under the rear window can be cut in a cross hair pattern and if necessary the bottom cut through to allow it to slip over the cables and back into position. These cables will be routed to the lift valve mounted on the valve mounting plate, and should not have any sharp bends or kinks in them. Secure cables with zip ties and apply RTV sealer in and around individual cables, inside and outside of the cab for a water tight seal. Do not allow excess cable to hang unsecured on the outside of the cab. (ASM-JD-0063).





## **SWITCH BOX WIRING**

Route the green and blue wires from the switchbox to the front console panel. Refer to the parts section for wiring diagram to hook up the switch box. Cover the wires from the switch box with plastic wire wrap provided. Remove the console panel under the steering wheel to access wires. Locate the neutral safety brown colored wire. Using a test light or meter to verify this wire is the neutral safety wire. Cut the brown neutral safety wire and connect the green wires from the switch box as shown in the wiring diagram.

Route the red wire with the 30amp in-line fuse from the switchbox to the continuous duty solenoid. Run the wire through the rear window and follow the 1/4" hoses from the valve through the wheel well to the front of the tractor.

Run the white and black wire to the solenoid valve. Route the wires through the back window with the cable control wires. Use the rubber grommet in the window to protect the wire, and route the wire out of the cab down to the 1/4" hydraulic hoses. Follow the hydraulic hoses through the wheel well to the front of the tractor.

Route the Red 14ga wire, keyed hot, from the auxillary plug to the signal post of the continuous duty solenoid. **NOTE:** Be certain that the power taken for the switch box is "HOT" only when the tractor ignition is "ON".

The black wire from the switchbox should be routed to the auxiliary plug.

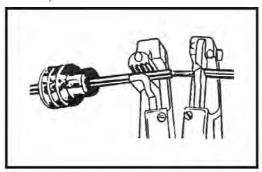
The wires from the switch box are longer than needed and should carefully cut and spliced as required. Zip ties should be used to secure the wires to the tractor framework and boom hoses to eliminate vibation and rubbing. (ASM-JDT3F-0050)



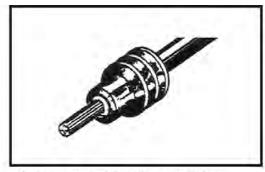
## WEATHER-PACK/METRI-PACK ASSEMBLY

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

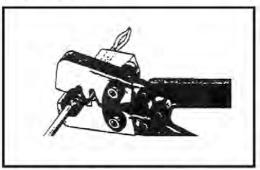
**NOTE:** Use the specific tool for the type of connector you are assembling. (ASM-C-0009)



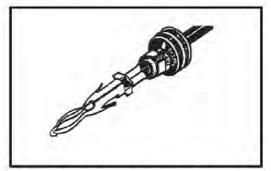
1. Apply seal to cable, before stripping insulation.



2. Align seal with cable insulation.



3. Put terminal in crimping tool, then position wire and seal in place.



 Crimp and visually inspect for a good crimp before installing in connector body.

## **VALVE MOUNTING**

Attach the rear valve mounting bracket to the fender of the tractor by removing the two rear bolts on the left fender and the two rear bolts on the right fender. See illustration below. Drill the square holes in the fenders to accept 3/8" capscrews. Use the hardware noted in the parts section to attach the valve mounting bracket to the tractor.

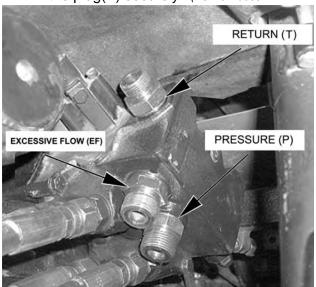
Next, attach the valve mounting plate to the mounting bracket. Align the holes on the plate to the holes on the bracket. Use the hardware shown in the parts section to attach the plate to the valve mounting bracket. Finally, place the valve on the valve mounting plate as shown in the parts section. Align the holes on the valve assembly to the holes on the plate. Use the hardware provided to secure the valve to the plate. Refer to the parts section for the placement of the valve and the hardware used. Please handle the lift valve with care. It is extremely heavy and contains small parts. (ASM-JD-0065)

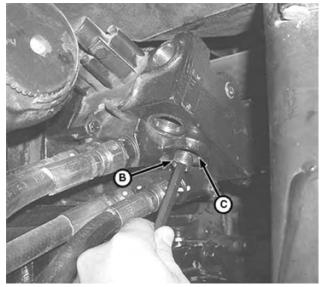


# **VALVE PLUMBING (SVC ONLY UNITS)**

The tractor ports used are on the selective control valve (SCV). The SCV is located between the right arm of the three point hitch and the axle. The pressure port is located the closest to the axle. The excessive flow port is right next to the pressure port. And the return port is located on the adjacent face. Refer to the image below as a guide.

NOTE: To use the pressure port a 3/8 NPT pipe plug(B) must be inserted into the port(C) - (refer to the illustration below and the Parts Section). Remove the plugs covering the ports of the SCV ports. After the plug is removed, use a wrench to tighten the plug(B) securely. (ASM-JD-0066



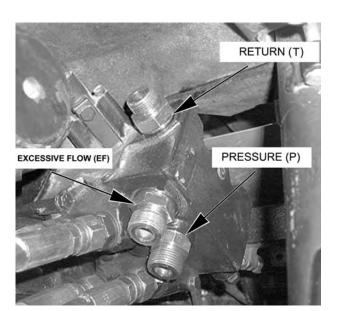


When the pressure port is active, install the adapters in their ports. The hose from the pressure port goes to the "P" port of the husco valve. Next the return hose from the lift valve goes back to the "T" port on the selective control valve. Plumb the power beyond hose from the "PB" port on the husco valve to the "EF" port on the SCV. See the parts pages for placement and the hardware used.

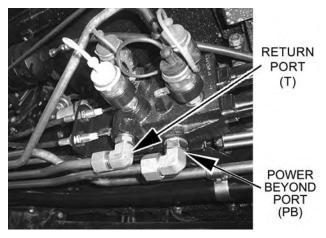
# **VALVE PLUMBING (WITH MID-MOUNT VALVE)**

The tractor ports used are on the selective control valve (SCV) and the Mid-Mount valve. The SCV is located between the right arm of the three point hitch and the axle. The Mid-Mount valve is located under the right front corner of the cab. The power beyond port is located on the bottom of the Mid-Mount valve towards the front. The excessive flow port is located on the underside of the SCV. The return port is accessed through the end of a run tee located on the SCV. See the lift valve page in the parts section for hardware and location of parts.Refer to the image below as a guide. (ASM-JD-0067

### **SVC**

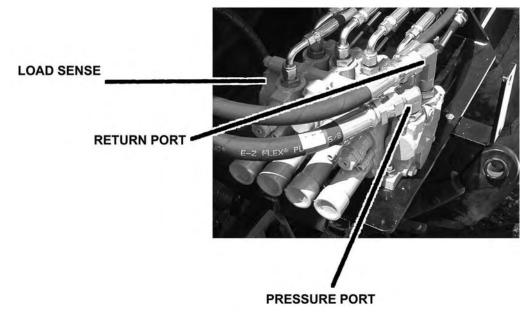


### **MID-MOUNT**



Use the existing adapter in the power beyond port of the mid-mount valve for the pressure hose. That hose is routed to the "P" port of the husco valve. The return hose from the lift valve is connected to the closest end on the run tee of the "T" port on the selective control valve. Plumb the power beyond hose from the "PB" port on the husco valve to the "EF" port on the SCV. Refer to the Parts Section for hardware used. The return line on the mid-mount valve must be replaced with a hose. This hose is routed from the existing adapter in the return port on the mid-mount valve to the run tee in the "T" port on the selective control valve.

### **MANUAL LIFT VALVE PORTS**



(ASM-C-0057)

# **MANUAL SWITCH BOX MOUNTING**

The switch box is to be secured to the operators side of the control handles, or valve stand. Refer to the parts section for assembly and components needed.



(ASM-C-0071)



### 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)

### **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)

### 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 swivel and main boom with the hose cover provided. 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.

On non cab units, the pressure and return hoses from the control valve will also need to be routed inside the protective clear hose wrap. Cover the valve, valve fittings with the yellow hose cover and secure with black string provided.

(ASM-C-0058)

### 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)

### **FUEL TANK REMOVAL**

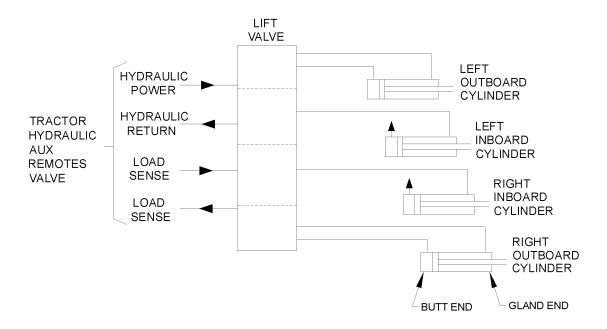
The fuel tank must be replaced with a fuel tank provided by Tiger. This should be done in the following way.

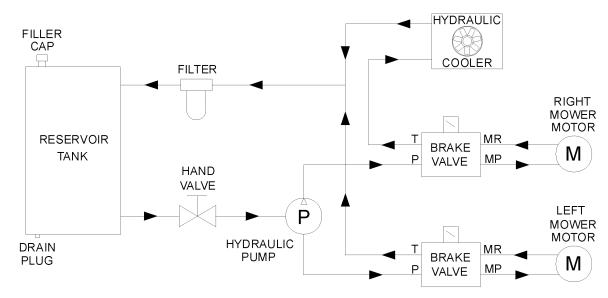
First, drain the fuel tank of all fuel before removing. Remove the brackets that hold the fuel tank to the tractor. Loosen and remove the fuel lines that connect the tank to the tractor. Unplug the electrical cable that is attached to the fuel sensor on top of the tank. You should then be able to manuever the tank off of the tractor. Remove the fuel sensor, screws, and rubber grommet to be reused with the new Tiger fuel tank. (ASM-C-0080)

Assembly Section 2-14



### TRIPLE FLAIL HYDRAULIC DIAGRAM





TRIPLE FLAIL HYD DIAGRAM

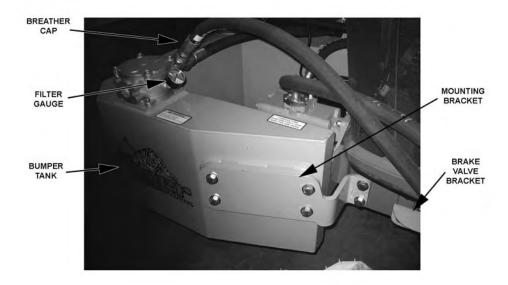
(ASM-T3F-0020)



### HYDRAULIC TANK INSTALLATION

Install the tank mounting brackets with the hardware provided, as shown in the parts section. DO NOT tighten! Using a hoist or lift, raise the tank into position. Line up the holes on the tank with the holes on the mounting brackets and install the hardware. Once all mounting hardware is in place and secured, tighten the capscrews.

The pressure gauge is installed in the filter assembly with a street elbow. The breather cap is screwed into the bung hole on the top of the bumper tank as shown in the parts section.. (ASM-C-0072)



### **INSTALLING TRAVEL LOCKS & PINS**

Install lock pin with cable onto back side of travel lock brackets using the hardware provided. Install the left travel lock and bracket on the mast frame as shown. Install the right travel lock and bracket on the mast frame as shown.

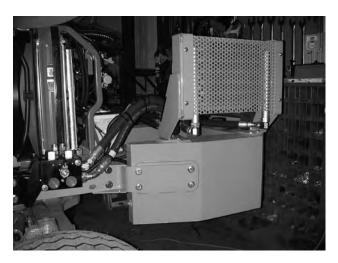
(ASM-C-0075)



### **COOLER MOUNTING**

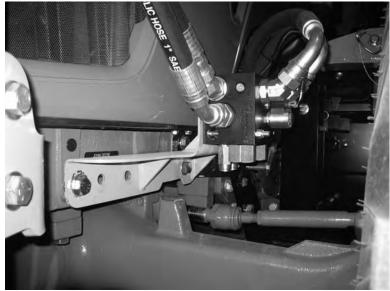
Mount the cooler mounting brackets on the top right side of the bumper hydraulic tank. Locate bolt plates on the top of the tank and secure the appropriate cooler bracket to the tank with the hardware provided. Attach the screen and cooler to the brackets. Refer to the parts section to connect the hoses to the cooler. (ASM-C-0073)





### **SOLENOID BRAKE VALVE**

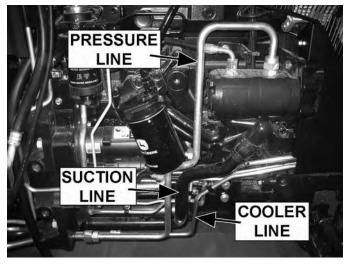
Install a solenoid valve to each brake valve bracket with the spacers (if necessary) and supplied hardware as shown in the parts section. If there is need to install the coil, it is important to use no more than 5 ft. lbs. (or 60 in. lbs.) torque. Over torque of coil will result in hydraulic failure of spool. (ASM-C-0074)

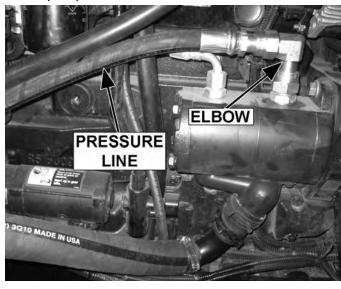




### HIGH MOUNT PRESSURE LINE REPLACEMENT

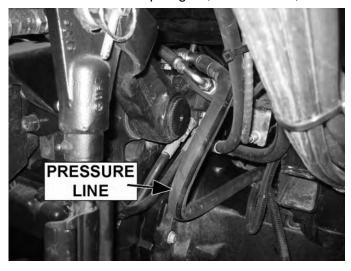
Remove the JD Pump Pressure Line located on the right side of the tractor motor. You may have to cut the line in the middle to help with the removal. This Pressure Line will be discarded and replaced by hose (P/N 06500000). An Elbow (P/N 06500000) will be used to connect the hose to the pump.

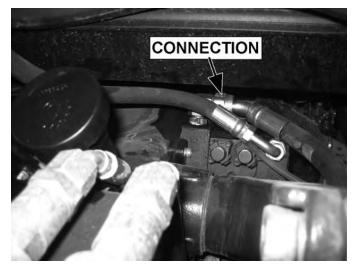




BEFORE REPLACEMENT

Connect the other end of the hose to the rear port which the preformed tube was removed. Route the hose under the belly of the tractor and through the wheel well above the axle. Use zip-ties where necessary to hold the hose. Wrap the hose with a piece of split hose and secure with zip-ties anywhere the hose may come in contact with a sharp edge. (ASM-JDT3F-0051)

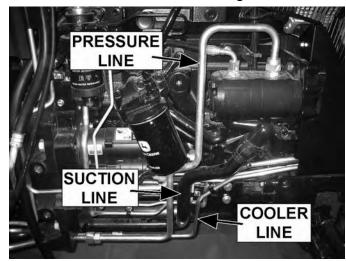


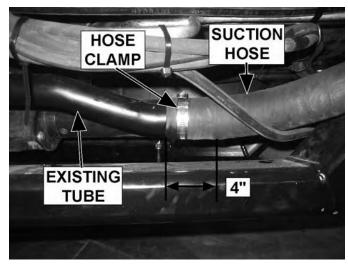




### HIGH MOUNT SUCTION LINE REPLACEMENT

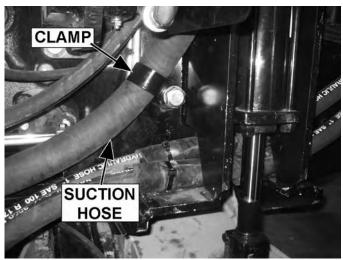
Remove the JD Pump Suction Line located on the right side of the tractor motor from the pump. You will have to cut the line approximatly 4" from the bend on the rear side of the Tiger mast. Part of this cut Suction Line will be used to create an elbow. This cut Suction Line will be replaced by 57" of Ø1-1/2" bulk hose (P/N 22897). You will need to create a bead around the cut end of the existing tube for clamping on the hose. Hose Clamp (P/N 6T4236) will be used to connect the hose to the existing tube.

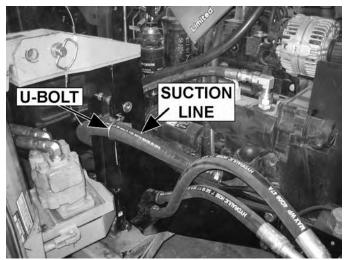




BEFORE REPLACEMENT

Route the hose as shown below using Clamp (P/N 06500000), Capscrew (P/N 25341) and Spacer (P/N 06500000) to hold the hose on the rear side of the mast and U-Bolt (P/N 27602) with Nylock Nuts (P/N 21627) on the front side of the mast. (ASM-JDT3F-0052)



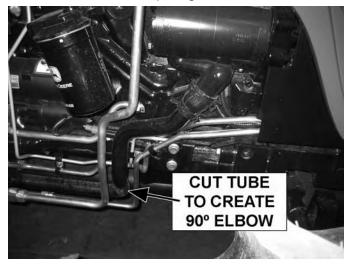


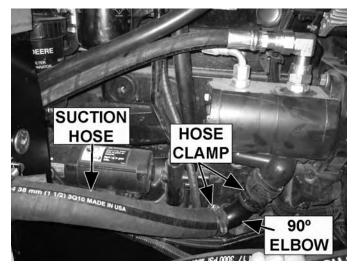


### HIGH MOUNT SUCTION LINE REPLACEMENT

(CONTINUED)

To create the 90° Elbow from the existing tube that was removed, you will need to cut the tube approximately 4" on the long side and approximately 2" (as much straight as you can before running into another bend) for the other leg. You will need to create a bead around both ends of the 90° tube for clamping on the hose. Connect the short leg of the 90° tube to the Pump and secure it with Hose Clamp (P/N 6T4236). Connect the long leg to the new Suction hose and secure it with another Hose Clamp. Wrap the Suction Hose with a piece of split hose and secure with zip-ties anywhere the hose may come into contact with a sharp edge.



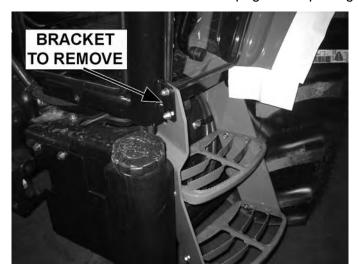


BEFORE REPLACEMENT

(ASM-JDT3F-0053)

# STEP BRACKET REMOVAL

The bracket on the corner of the tractor cab which holds the steps must be removed (cut off) for both sets of steps. This bracket will possibly interfere and damage the mower hoses when the mowers are raised to the upright transporting position . (ASM-



JDT3F-0054)



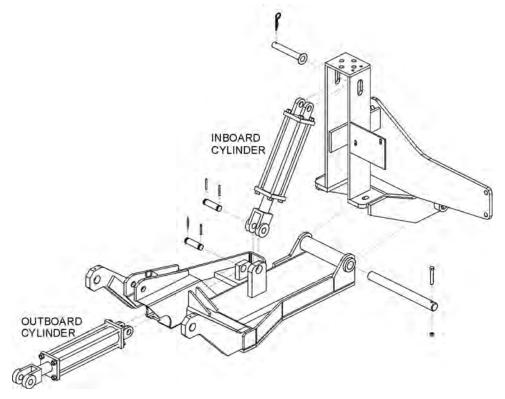
### DRAFT BEAM INSTALLATION

Install ½" O-ring breather into butt port of inboard cylinder. Install fittings in the rod end of the cylinder according to the diagram in the Common Parts section. These fittings should be positioned to face the butt end of the cylinder.

Next turn the clevis onto the rod of the cylinder until it is tight against the shoulder and lock into place with locking bolt on clevis.

The inboard cylinder can now be installed into the main frame mast with the pin, flat-washer and R-clip as shown below.

Install all fittings in the outboard cylinder and adjust to point towards the butt end of the cylinder. Attach the hoses as specified in the parts book. Slide the cylinder into the draft beam from the outside of the draft beam and attach cylinder to the draft beam with clevis pin and rollpins. (ASM-C-0076)



### DRAFT BEAM MOUNTING

Pull the inboard cylinder poston rod down to the extreme extended position. Slide the draft beam under the cylinder

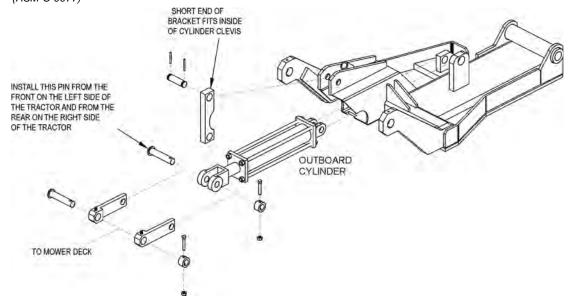
Using inboard cylinder as a pivot point, slide draft beam under tractor and install draft beam pin. Align hole in draft beam pin with holes in main frame boss and install capscrew and nylock nut. (ASM-C-0078)



### **MOWER MOUNTING**

Check that all grease zerks have been installed in the draft beams pivot arm, left linkage arm, right linkage arm, and cylinder mounting ears.

Using a clevis pin and roll pins, connect the pivot arm to clevis on draft beam. NOTE: Make sure the longer distance between the cutout and the end of the pivot arm is closest to the draft beam pivot ears on the center tube as shown in the diagram below. Also make sure the cutout on the pivot arm faces into tube of draft beam. (ASM-C-0077)



Slide other end of pivot arm with short distance between the cut-out and the end of the pivot arm, into the cylinder clevis. Next, line up the holes of the left and right lift linkage arms outside of the cylinder clevis holes. Connect with linkage pin, shims (as required), boss, cap-screw, lock-washer and hex nut as shown.

To connect the bonnet to the draft beam, slide the extension arms of the draft beam between the mounting ears on the inner end of the bonnet. Line up the holes and secure with swivel pin, cap-screw, lock-washer, and hex nut (both sides). See parts book illustration.

Next, slide the left and right linkage arms up to the slotted ear on the side of the deck. Secure with linkage pin, shims, boss, cap-screw, lock-washer and hex nut. See illustration in Parts Section.

### **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 ¾ stroke repeatedly to clear the lines of air. **DO NOT** run outboard cylinder out to full stroke until stop bolt has been adjusted!

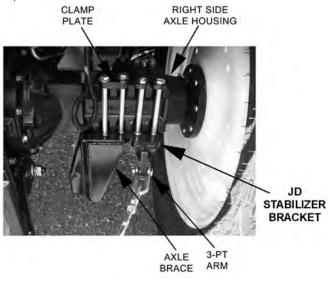
Check for oil leaks at all fittings and connections using a piece of paper or cardboard. If a leak is found, you must shut down the tractor and set the cutter head on the ground. Before attempting to fix the leak, you must actuate the lift valve handles several times to relieve any pressure in the lines. **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)

### **AXLE BRACE MOUNTING**

Position the right axle brace under the tractor right hand side. Raise the brace up to the matching mounting holes in the main frame and rear axle housing. The picture below shows the right side axle brace. Install the clamp plate with capscrews, washers and nuts as shown in the main frame parts section. Install the hardware to attach the axle brace up to the main frame. Apply Loc-tite to the threads and torque to the values noted on the torque chart located in the maintenance section of this manual. Next, re-install the JD stabilizer bracket and clamp to the right hand axle housing. Torque as noted in the maintenance section.

Repeat installation steps for the left axle brace but do not tighten until the fuel tank is mounted. (ASM-C-0073)

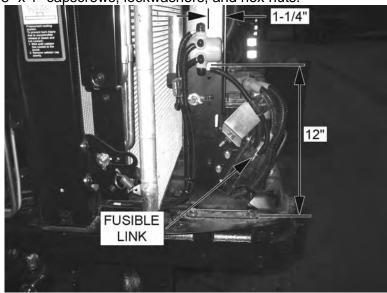




### CONTINUOUS DUTY SOLENOID SWITCH

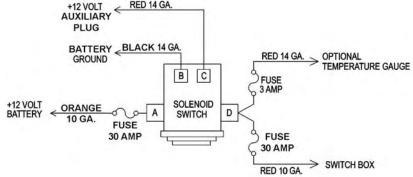
To mount the solenoid switch, drill 1/4" holes to match as necessary in location shown below.

Secure with provided 3/8" x 1" capscrews, lockwashers, and hex nuts.



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

- A.) ORANGE 10 GA. wire from terminal (A) to +12V battery fusible link.
- B.) RED 14 GA. wire from terminal (B) to tractor plug in cab.
- C.) BLACK 14 GA. wire from terminal (C) to -12V battery post.
- D.) RED 10 GA. wire from terminal (D) to switch box.
- E.) RED 14 GA. wire from terminal (D) to temperature gauge. (optional). (ASM-T3F-0023)





### 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 maintaned 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.

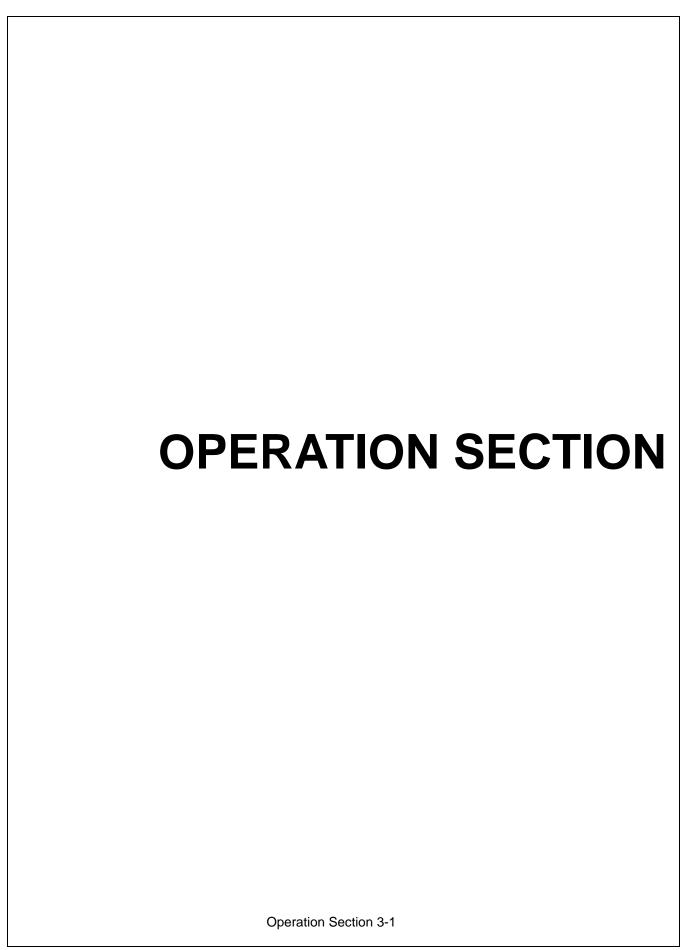
Before operating the mower, the cutter head and boom should be slowly moved throughout the full range of motion. Watch for any condition that would cause pinching or excess stress on the hoses. The steering and front axle travel should also be carefully moved through their full range of motion. If any 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)





# 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* 

<u>READ, UNDERSTAND, and FOLLOW</u> 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)





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



TRIPLE FLAIL

#### 1. OPERATOR REQUIREMENTS

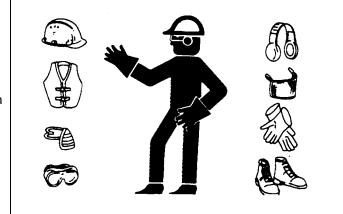
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained 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



A 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)



TRIPLE FLAIL

#### 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.

TRIPLE FLAIL



**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)

### **AWARNING**

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)



TRIPLE FLAIL



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)



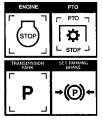
#### 3.2 Dismounting the Tractor

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)



TRIPLE FLAIL

#### 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* 

TRIPLE FLAIL



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.
- 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.





TRIPLE FLAIL

#### 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.



#### **AWARNING**

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)



### **AWARNING**

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)



**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)



TRIPLE FLAIL

#### 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

### A DANGER

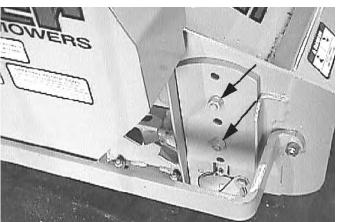
Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)

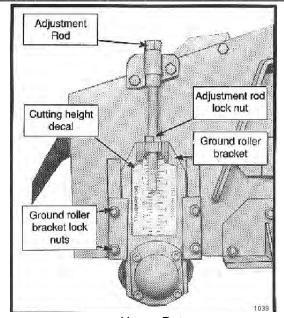


#### 6.1 Roller Height Adjustment

- 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.
- 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.
- 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





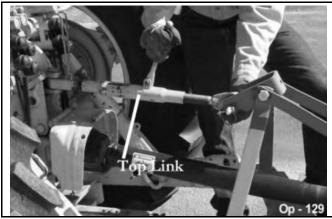
Heavy Duty

TRIPLE FLAIL

#### 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.





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



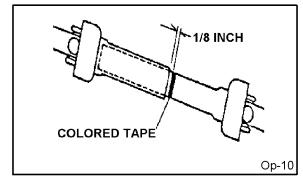
Before operating the Implement, check to make sure the Implement input driveline will not bottom out or become disengaged. Bottoming out occurs when the inner shaft penetrates the outer housing until the assembly becomes solid-it can shorten no more. Bottoming out can cause serious damage to the Tractor 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)

TRIPLE FLAIL

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

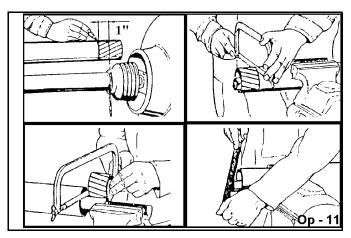
- Disconnect driveline from the tractor and slide the profiles together until fully compressed.
- Place a mark on the inner shield 1/8" from the end of the outer shield and reattach the driveline to the PTO Shaft.
- With the PTO NOT TURNING, slowly drive the tractor with mower attached through the sharpest 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



Driveline in maximum compressed position

#### 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)

TRIPLE FLAIL



**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)



#### **AWARNING**

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



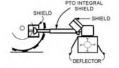
TRIPLE FLAIL

#### **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* 

A 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)



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



TRIPLE FLAIL

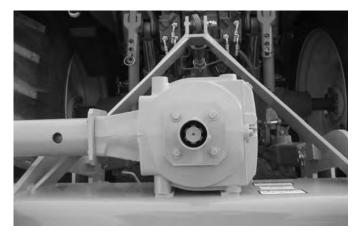
- Ensure rubber deflectors are in position and not damaged. Replace worn, broken, and missing sections immediately.
- Ensure the rollers are in good condition and rotate freely.
- Ensure the driveline integral shield is in good condition and rotate freely.
- Inspect that all bolts and screws are in position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



- 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



TRIPLE FLAIL

- 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



TRIPLE FLAIL

### **Tractor PRE-OPERATION Inspection**

	_
Mower ID#	Make
Date:	Shift
AWARNING has stopped and t	the inspection, make sure the tractor engine is off, all rotation be tractor is in park with the parking brake engaged. Make sure ng on the ground or securely blocked up and all hydraulic relieved.
Item	Condition at Start Specific Comments of Shift if not O.K.
The flashing lights function prope	ly
The SMV Sign is clean and visible	
The tires are in good condition wi	n proper pressure
The wheel lug bolts are tight	
The tractor brakes are in good con	lition
The steering linkage is in good co	dition
There are no visible oil leaks	
The hydraulic controls function pr	pperly
The ROPS or ROBS Cab is in goo	d condition
The seatbelt is in place and in goo	condition
The 3-point hitch is in good condi	ion
The drawbar pins are securely in p	ace
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 f	11
The fuel level is adequate	
The engine coolant fluid level is f	11
The radiator is free of debris	
The air filter is in good condition	

# DO NOT OPERATE an UNSAFE TRACTOR or MOWER

This Inspection Form may be freely duplicated for extra copies.

TRIPLE FLAIL

	Flail Mower PRE-OP	PERATION Inspection	
	Mower ID#	Make	
	Date:	Shift	
AWARNING	has stopped and the tractor is in	on, make sure the tractor engine is off, all rota in park with the parking brake engaged. Make ground or securely blocked up and all hydr	sure

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		

# DO NOT OPERATE an UNSAFE TRACTOR or MOWER

TRIPLE FLAIL

Operation Section 3-19

Operator's Signature:

#### 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* 

A DANGER

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)

**AWARNING** 

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



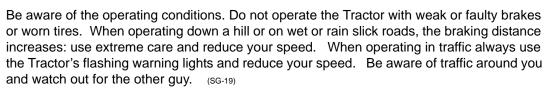
how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.

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.





TRIPLE FLAIL

### 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

TRIPLE FLAIL

- 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.
- 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.
- 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.



A DANGER

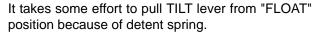
When the side mowers are folded for transport, the center of gravity is raised and the possibility of overturn is increased. Drive slowly and use extreme caution when turning on hillsides. Overturning the Implement could cause the Implement to overturn the Tractor and vice versa resulting in serious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

TRIPLE FLAIL

### 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.





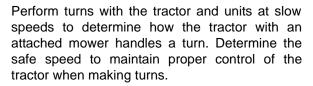
The mower must be operated with the cutter sections fully lowered and the hydraulic control lever in the float detent to ensure the mower follows the contour of the ground and to prevent sections from creeping up. NEVER attempt to raise the mower while the mower is operating.

TRIPLE FLAIL

### 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.



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* 

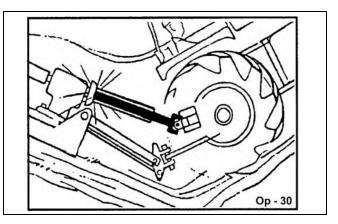




#### 9.6 Crossing Ditches and Steep Inclines

TRIPLE FLAIL

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.

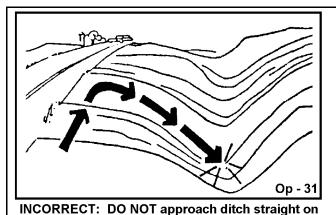


**AWARNING** 

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.

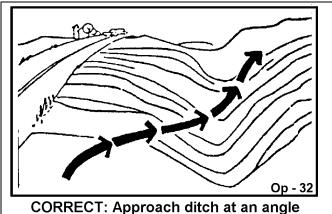
When crossing such terrain, the implement should be fully lowered for a lower center of gravity and added stability. *OPS-R-0021* 



TRIPLE FLAIL

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

**A**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 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)



TRIPLE FLAIL

### **AWARNING**

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* 

TRIPLE FLAIL



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)



TRIPLE FLAIL

### 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)



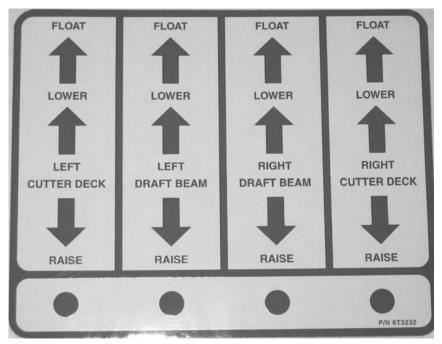
Mow at the speed that you can safely operate and control the tractor and mower. The correct mowing speed depends on terrain condition and grass type, density, and height of cut. Normal ground speed range is from 2 to 5 mph(3-8 kph). Use slow mowing speeds when operating on or near steep slopes, ditches,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

T3F DECAL

TRIPLE FLAIL

### 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.

TRIPLE FLAIL

### 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.** 

TRIPLE FLAIL

### 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* 



TRIPLE FLAIL

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* 





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)



### **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)

TRIPLE FLAIL

### 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* 

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)



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..





TRIPLE FLAIL

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.



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)





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



TRIPLE FLAIL

### **AWARNING**

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* 

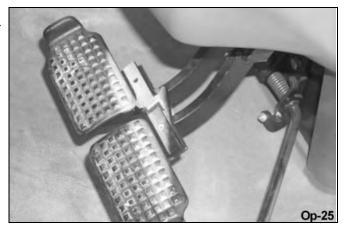


When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural tractors. Always stay alert when transporting the tractor and implement on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



TRIPLE FLAIL

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* 



TRIPLE FLAIL

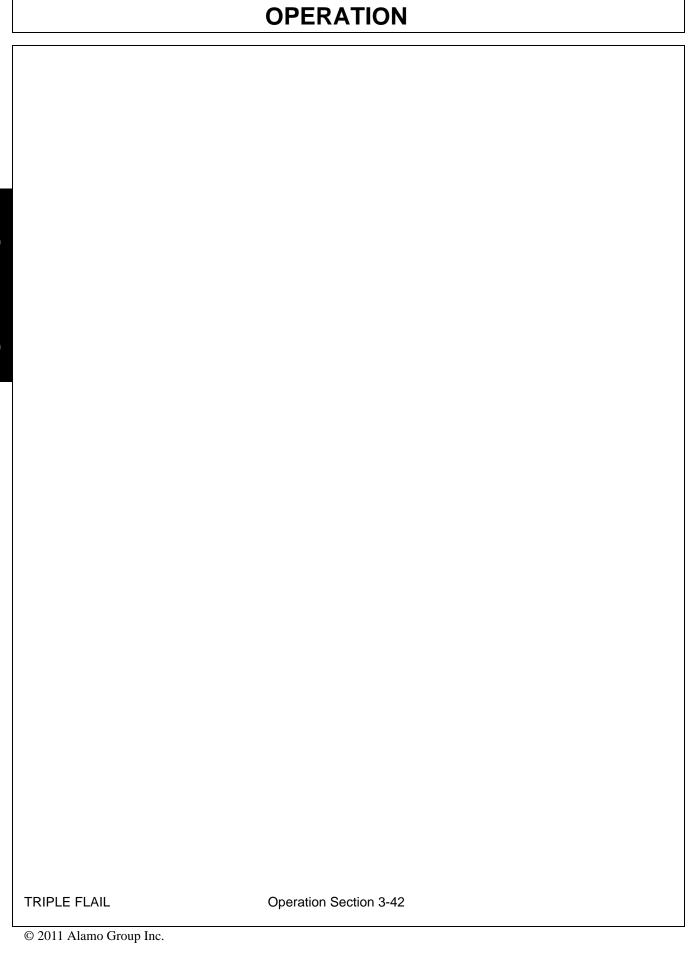
# 15. TROUBLESHOOTING GUIDE

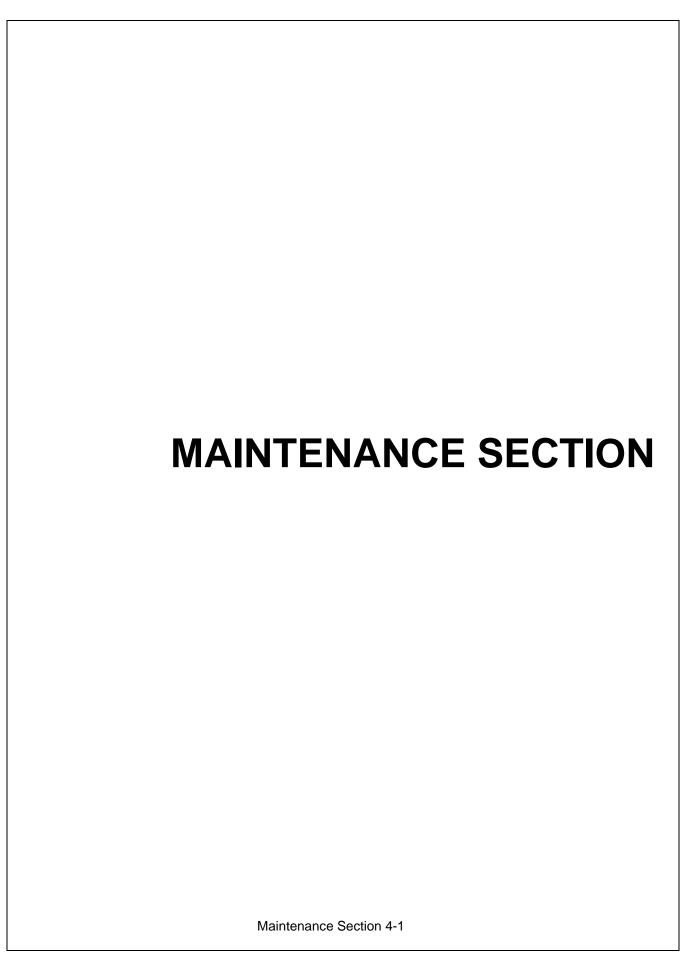
PROBLEM	POSSIBLE CAUSE	REMEDY
Excessive Vibrations	Check gearbox bolts. Check for missing knives on cutter shaft. Check to see if knives are free swinging.	Tighten if loose. Replace missing knives. Free knives so they swing.
	Blade broken or bent. Cuttershaft bent. Drivelines not phased correctly. Implements & Tractor yokes must be in line.	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 is 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.
TRIPLE FLAIL	Operation Section 3-39	

Clutch Slips Excessively	Clutch linings badly worn or	Repair clutch per maintenance				
	plates warped.	section of manuals.				
	Too much power for clutch.	Reduce ground speed and material intake.				
	Oil on facings.	Replace facings.				
	Friction facings glazed.	Clean with emery cloth.				
		,				
Knives Wear Too Fast	Cutting in sandy conditions.	Increase cutting height.				
	Cutting in rocky conditions.	Increase cutting height.				
	Soft "will fit" knives.	Use genuine Tiger knives.				
Lludroulia Culindar Mill	Net an augh procesure	Charle Dragging				
Hydraulic Cylinder Will	Not enough pressure.	Check Pressure.				
Not Operate	Valve not connected properly.	Re-plumb valve.				
	Quick coupler not completely connected.	Complete connection.				
Oil squirting from Breather	Oil leaking by piston ring.	Do not carry cutter on cylinder.				
Vent Hole	Distance "O" Discourse	Small leakage amount is normal.				
	Piston "O" Ring worn.	Replace piston "O" Ring.				
	Cylinder wall scored or pitted.	Replace cylinder.				
	Wrong piston ring on piston.	Use correct piston ring.				
Discharging Bunches	Belt installed improperly.	Check belt for correct set up.				
Districting Duriones	Blades dull.	Check blades for sharpness.				
	Grass too wet.	Wait for grass to dry.				
	Grass too long.	Mow at 3-1/2" and re-cut lower.				
	Travel speed too fast.	Use a lower tractor gear.				
	PTO RPM too low.	Mow at engine RPM to match 540 PT0				
	1 10 11 11 100 10 11.	RPM.				
Blades Scalping High	Mowing too low.	Raise height of cut.				
Places	Rough, uneven ground.	Use a slower speed.				
		Lower rollers.				
	Turning Tractor too fast.	Slow down when turning.				
TRIPLE FLAIL	Operation Section 3-40					

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.		

TRIPLE FLAIL





### **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 overgrease 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.



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, which ever 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.



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)



TRIPLE FLAIL



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)

A DANGER

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)



#### **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

TRIPLE FLAIL

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

	IVIAIIVILIVA	NCL
	WEEKLY OR EVER	Y 50 HOURS
ITEM	SERVICE	COMMENTS
In Tank Hyd. Fluid Filter <b>(10 micron filter)</b>	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 EVER	Y 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 480/80R38		Max P.S.I. 29
18.4-34 18.4-38		26 26
	YEARLY OR EVERY	7 500 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	

Maintenance Section 4-5

TRIPLE FLAIL

# **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  Ball valves closed  Low oil level  Line leak	Check fuse between mower switch and ignition/replace 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.
TRIPLE FLAIL	Maintenance Section	on 4-6

		Remove the four bolts holding the small block to the main block. Lift and remove small block being careful not to damage Orings/ 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	Inspect belts and pulleys. Replace belts and repair as needed.		
	Tensioner	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.

TRIPLE FLAIL

## **TORQUE SPECIFICATIONS**

				Т	orque	for St	andard	Faste	ners				
Nominal threads			$\rangle$	Grade 2	0	>	Grade 5	(I)		Grade 8			Grade
Dia.	per	Tig	htening Tor	que	Tig	htening To	rque	Tig	htening Tor	que	Tig	htening Ton	que
	inch	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plair
(in.)		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
					Uni	fied Coa	rse Threa	ad 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-lb
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-lb
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
							nread Se						l
1/4	28	56 in-lbs							139 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-lb
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

D = Nominal Diameter F = Clamp Load

K = 0.17 for zinc plated and dry conditions K = 0.20 for plain and dry conditions

			Class 4.6			Class 8.8			Class 10.9			Class 12.9	
		4.6				8.8			10.9	>	12.9		
Nominal	Pitch	Tigh	ntening To	rque	Tig	htening Tor	que	Tig	htening To	rque	Tightening Torque Lubed Dry plain		
	-	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain			
Dia.		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	
(mm)		(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	
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 lo	ad calc	culated as	75% of th	ne proof lo	ad for spe	cified bolts.	K = 0.15 f	or "lubrica	ated" cond	itions	D = Nomin	nal Diamete	
All torqu	e value	es are list	ed in foot-	pounds			K = 0.17 f	or zinc pl	ated, dry o	onditions	F = Clamp	Load	

TRIPLE FLAIL

# **LUBRICATION RECOMMENDATIONS**

Description	Application	General Specification	Recommended Mobil Lubricant
Tractor Hydraulics	Reservoir	JD-20C MF M1135, M1141 FNHM2C134D	Mobilfluid 424
Mower Hydraulics Cold Temperatures 0 <sup>o</sup> Normal Temperatures	•	ISO 46 Anti-Wear-Low Temp JD20C MF M1135, M1141 FNH M2C134D (FNH201)	Mobil DTE 15M Mobilfluid 424
Normal Temperatures High Operating Temp	•	ISO 46 Anti-Wear ISO 100 Anti-Wear	Mobil DTE 25 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

TRIPLE FLAIL

### 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.

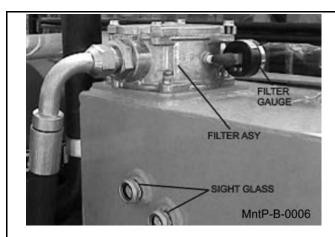
If a material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a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

TRIPLE FLAIL

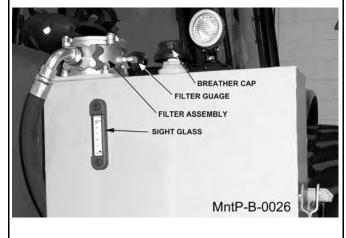
# RECOMMENDED FILLING INSTRUCTIONS FOR HYDRAULIC RESERVOIRS

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 overfill. If the tank has too much oil, the excess may be expelled through the pressurized breather.



#### REPLACING IN-TANK HYDRAULIC FILTER

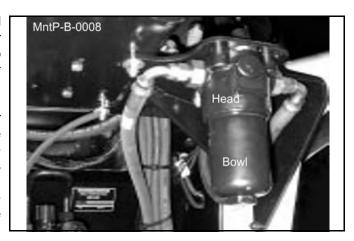
Loosen the four bolts on the top cover of the filter housing. Turn cover counter-clockwise until cover is free. Remove and replace filter. Replace top cover and cover bolts in opposite order as removed.



TRIPLE FLAIL

### 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.

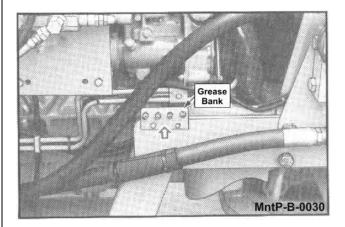


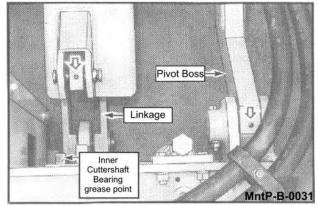
WARNING: Bowl will be full of oil! Pour the oil from the bowl into a container, this oil should be considered contaminated due to the flow direction through the element is outside-in. Clean the inside of the bowl if "dirt" is present. Remove the old element from the filter head by pulling with a rotation 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.

TRIPLE FLAIL

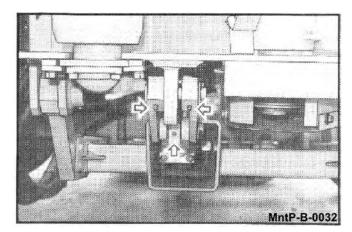
### **GREASING INNER AND OUTER DRAFT BEAM PIVOT POINTS**

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.





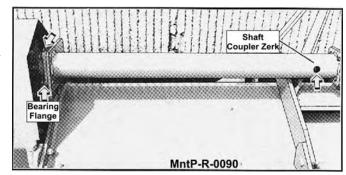
With the cutter head lowered, locate the grease zerks on the linkage and pivot bosses. Inject Lithium-Complex Extreme Pressure grease conforming to NLG12-ISO 320 specifications until it protrudes from the ends. With the cutter head in this position, it is also possible to grease the draft beam cylinder 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.



TRIPLE FLAIL

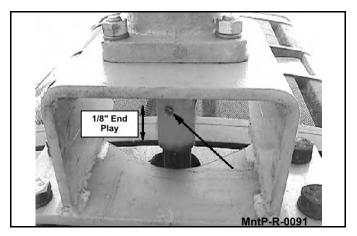
# GREASING THE REAR DRIVE BEARING AND EXTENSION COUPLER SHAFT

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**

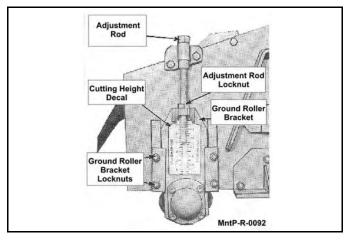
With engine stopped, ensure drive shaft alignment by grasping coupler and sliding back and forth. Coupler should slice freely with approximately 1/8" of end play. If coupler does not slide freely, inspect for loose pump mount bolts, or damaged or loose crank shaft adapter. Inject-Lithium Complex Extreme 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.



TRIPLE FLAIL

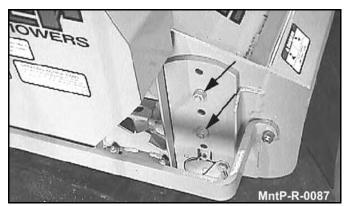
## ADJUSTING THE CUTTING HEIGHT

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.



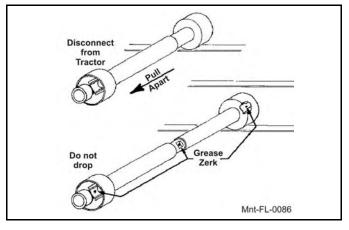
## ADJUSTING STANDARD DUTY CUT HEIGHT

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 he 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.



TRIPLE FLAIL

## **BALL VALVES**

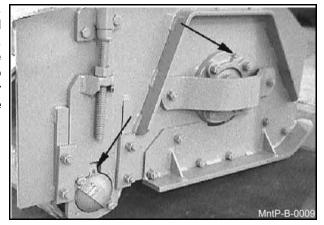
The ball valve at the hydraulic reservoir may need to be closed during certain maintenance or repair procedures. THE BALL VALVE MUST BE OPEN (handle parallel with valve) WHEN TRACTOR IS RE-STARTED OR PUMP IS COUPLED TO MOTOR OR P.T.O.! Failure to do so will result in component failure!

BALL VALVE



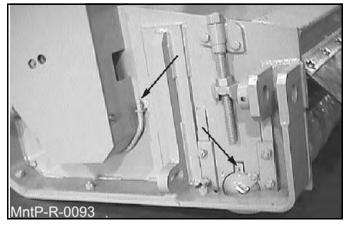
## **GREASING CUTTER SHAFT-FLAIL MOWERS**

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.



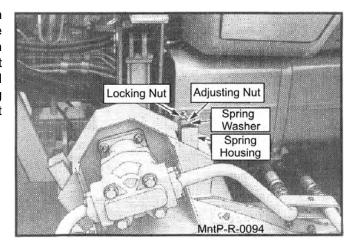
TRIPLE FLAIL

## **GREASING THE IDLER TENSION ARMS**

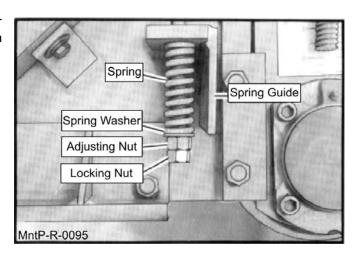
Locate the access holes and grease zerks in the belt shields of the side and rear flails. Normal conditions require one pump daily or every 8 hours of service with multi purpose grease.

## **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** 

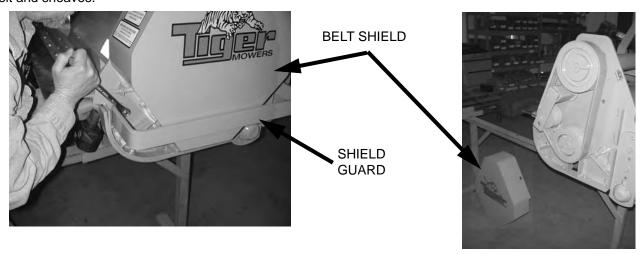


TRIPLE FLAIL

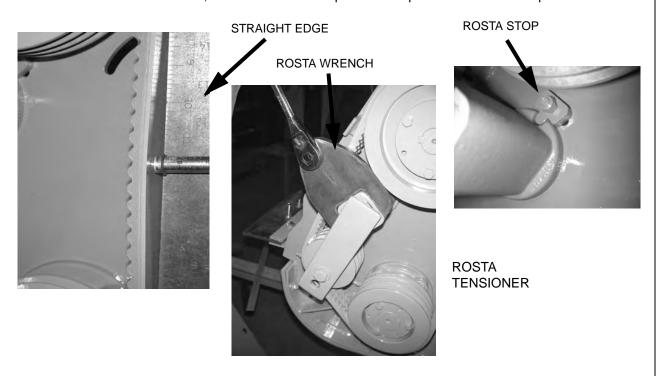
## **ROSTA TENSIONER**

### STANDARD DUTY REAR FLAILS

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



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.



TRIPLE FLAIL

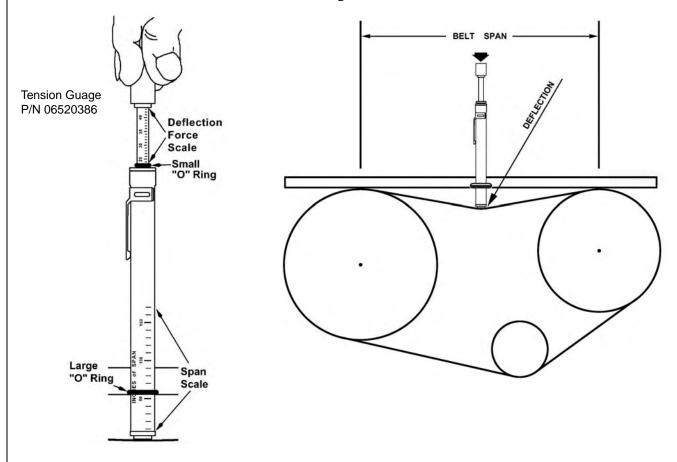
## TENSIONER MEASUREMENT PROCEDURE

- 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

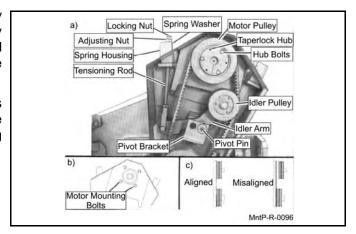


TRIPLE FLAIL

## 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.



- Start by removing the belt shield from the flail mower.
- Remove the locking and adjusting nut, spring washer and spring from the idler tensioning rod.
- 3. Disconnect the tensioning rod from the idler arm.
- 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.

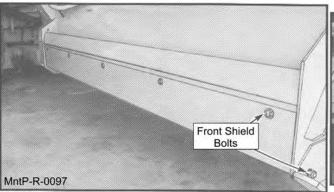
Reinstall the taper-lock hub and pulley on the motor by installing the hub bolts in the original holes and tightening until the hub just contacts the pulley. Then, position the pulley on the motor shaft approximately 3/16" beyond the idler pulley and tighten and torque the hub bolts to 18 ft./lbs. Be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

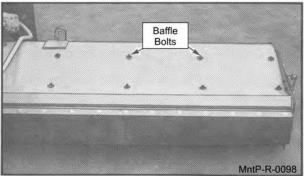
Reinstall the belts and idler tensioning rod. Tighten and lock the tensioning rod as shown previously in the maintenance section. Reinstall the belt shield.

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.

TRIPLE FLAIL

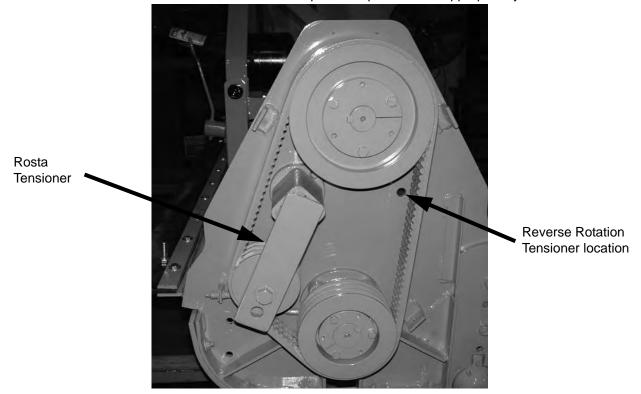
When operating in standard rotation, the front shield must be removed and the baffle installed. When operating in reverse rotation, remove the baffle and install the front shield. Finally, reposition the wear pads on the hoses and replace the zip ties as needed to prevent the hydraulic hoses from rubbing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

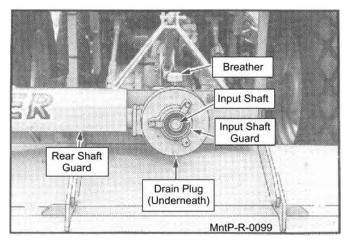


TRIPLE FLAIL

# 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 not.

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 be side and the breather vent plug is on the top of the case.



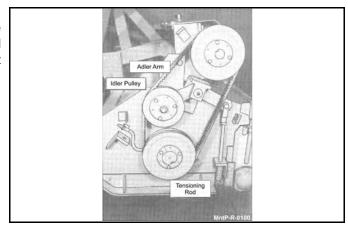
The sprocket must be aligned and spaced approximately 3/8" apart. When changing from standard cut to smooth cut rotation, a spacer plate may have to be installed between the gear box and the frame. When changing from smooth cut to standard cut rotation the spacer plate is to be omitted. Install the chain 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.



TRIPLE FLAIL

## Flail Blades Inspection

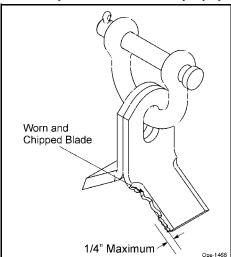
A DANGER

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* 

TRIPLE FLAIL

## **Blade Pins and D-Ring Inspection**

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

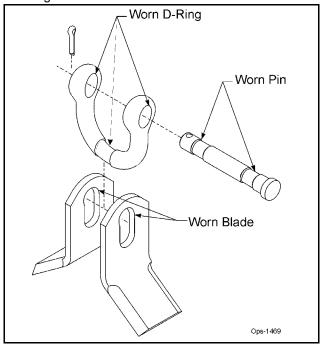


Inspect the Blade pins and D-Rings daily for abnormal wear. Make sure the cotter pins are in place and properly spread. REPLACE BLADE Pins and D-Rings IMMEDIATELY if they have:

- 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* 

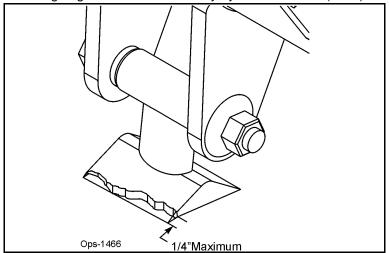
TRIPLE FLAIL

## Flail Axe Blades Inspection

A DANGER

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.

**Important** 

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* 

TRIPLE FLAIL

## Flail Axe Blade Bolt Inspection

Inspect Blade Bolts daily for wear or damage as follows:

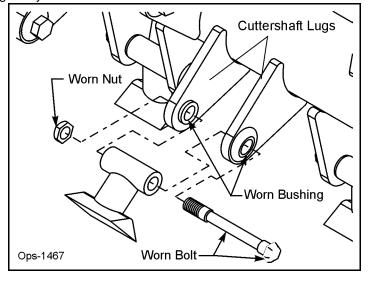
A DANGER

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* 



TRIPLE FLAIL

# 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.

**AWARNING** 

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.



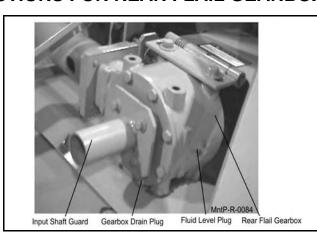
Knives should not be welded on for any reason.

## 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.



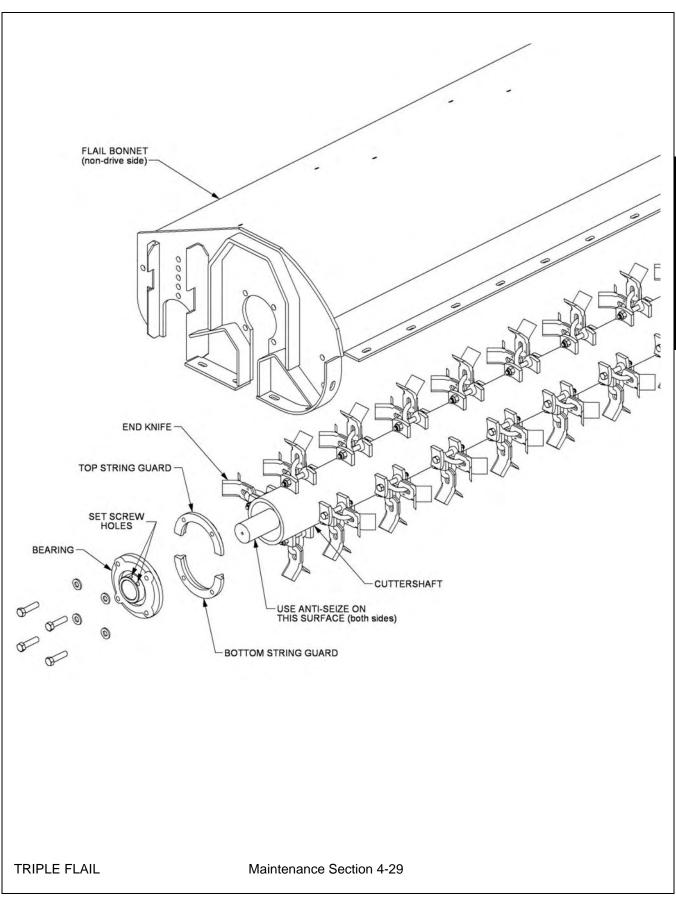
TRIPLE FLAIL

## **CUTTERSHAFT BEARING REPLACEMENT**

- Remove existing cuttershaft, bearings and string guards.
- 2. Make sure that the end knives on each end of the cuttershaft are orientated as shown.
- Apply anti-seize on cuttershaft as shown on next page.
- 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.
- Grease both bearings properly.

# See illustration on next page

TRIPLE FLAIL



DAILY	Y MAINTENANCE SCHEDULE	
	llowing services should be performed <b>daily</b> or every <b>8 hours</b> nance instructions in the operators manual.	of service, following the detailed
	_ Pump Drive Shaft: Check for end play in driveshaft / coupler and	lubricate at zerks.
	<ul> <li>Crankshaft adapter: If equipped with rubber grommets check con damaged.</li> </ul>	dition, replace if missing or
	_ Pivot points: Inject grease until it appears at ends.	
	_ Hydraulic fittings: Check for leaks with paper or cardboard. immediately.	Tighten fittings or replace hoses
	_ Knives: Inspect for missing or damaged knives, change (only con	nplete sets) as needed.
	_ Belts: Check/Tighten/Replace belts as needed.	
	Main Frame/Deck: Unless otherwise specified retorque bolts ac this section.	cording to torque specifications in
	_ Hydraulic Fluid Level: Add, if required, per fluid recommendations	3.
	Rear Flail Drive, Bearing Flange and Shaft Couplers (if application detailed maintenance section.	able): Grease as instructed in the
	_ Cutter Shaft and Ground Roller: Grease as instructed in the detai	led maintenance section.
Service p	performed by: Date	:/ Hour
Meter:		
Maintena	nance Section	
**This pag	page may be copied and used as part of the daily maintenance routing	ne.
TRIPLE F	FLAIL Maintenance Section 4-30	

# **JD5101E TRIPLE FLAIL PARTS SECTION**

# PART NAME INDEX

TRACTOR MOUNT KIT - MAIN FRAME       4         TRACTOR MOUNT KIT - BUMPER TANK       6         TRACTOR MOUNT KIT - HYDRAULICS       8         AXLE BRACES       10         FUEL TANK ASSEMBLY       12         4 SPOOL CABLE CONTROL MOUNT       14         CABLE (MANUAL) LIFT VALVE - 4 SPOOL       16         CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411       18         POLYCARBONITE SAFETY WINDOW       26         FLAP DEFLECTOR       22         EGRESS       22         EGRESS MOUNTING       22         EGRESS MOUNTING - CONTINUED       22         EGRESS PUMP MOUNTING       22         EGRESS PUMP MOUNTING       22         EGRESS PUMP BREAKDOWN       36         EGRESS SWITCH BOX       35         EGRESS SCHEMATIC       35         NOTES 1       34	PARTS ORDERING GUIDE	3
TRACTOR MOUNT KIT - HYDRAULICS.       8         AXLE BRACES.       16         FUEL TANK ASSEMBLY.       17         4 SPOOL CABLE CONTROL MOUNT.       14         CABLE (MANUAL) LIFT VALVE - 4 SPOOL.       16         CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411.       15         POLYCARBONITE SAFETY WINDOW.       26         FLAP DEFLECTOR.       22         EGRESS.       22         EGRESS MOUNTING.       22         EGRESS MOUNTING - CONTINUED.       22         EGRESS OPERATION.       26         EGRESS PUMP MOUNTING.       27         EGRESS PUMP MOUNTING.       28         EGRESS PUMP BREAKDOWN.       30         EGRESS SWITCH BOX.       33         EGRESS SCHEMATIC.       33	TRACTOR MOUNT KIT - MAIN FRAME	4
AXLE BRACES. 10 FUEL TANK ASSEMBLY. 12 4 SPOOL CABLE CONTROL MOUNT. 14 CABLE (MANUAL) LIFT VALVE - 4 SPOOL 16 CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411 18 POLYCARBONITE SAFETY WINDOW. 20 FLAP DEFLECTOR. 22 EGRESS. 22 EGRESS MOUNTING. 22 EGRESS MOUNTING. 22 EGRESS MOUNTING - CONTINUED. 22 EGRESS OPERATION. 22 EGRESS TROUBLESHOOTING. 22 EGRESS PUMP MOUNTING. 22 EGRESS PUMP BREAKDOWN. 33 EGRESS SWITCH BOX. 33 EGRESS SCHEMATIC. 33	TRACTOR MOUNT KIT - BUMPER TANK	6
FUEL TANK ASSEMBLY	TRACTOR MOUNT KIT - HYDRAULICS	8
FUEL TANK ASSEMBLY	AXLE BRACES	10
CABLE (MANUAL) LIFT VALVE - 4 SPOOL       16         CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411       18         POLYCARBONITE SAFETY WINDOW       20         FLAP DEFLECTOR       22         EGRESS       22         EGRESS MOUNTING       22         EGRESS OPERATION       26         EGRESS TROUBLESHOOTING       27         EGRESS PUMP MOUNTING       22         EGRESS PUMP BREAKDOWN       30         EGRESS SWITCH BOX       32         EGRESS SCHEMATIC       33	FUEL TANK ASSEMBLY	12
CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411       18         POLYCARBONITE SAFETY WINDOW.       20         FLAP DEFLECTOR.       22         EGRESS.       23         EGRESS MOUNTING.       24         EGRESS MOUNTING - CONTINUED.       25         EGRESS OPERATION.       26         EGRESS TROUBLESHOOTING.       27         EGRESS PUMP MOUNTING.       28         EGRESS PUMP BREAKDOWN.       30         EGRESS SWITCH BOX.       32         EGRESS SCHEMATIC.       33	4 SPOOL CABLE CONTROL MOUNT	14
POLYCARBONITE SAFETY WINDOW.       20         FLAP DEFLECTOR.       22         EGRESS.       22         EGRESS MOUNTING.       24         EGRESS MOUNTING - CONTINUED.       25         EGRESS OPERATION.       26         EGRESS TROUBLESHOOTING.       27         EGRESS PUMP MOUNTING.       28         EGRESS PUMP BREAKDOWN.       30         EGRESS SWITCH BOX.       32         EGRESS SCHEMATIC.       33	CABLE (MANUAL) LIFT VALVE - 4 SPOOL	16
FLAP DEFLECTOR	CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411	18
EGRESS       22         EGRESS MOUNTING       22         EGRESS MOUNTING - CONTINUED       22         EGRESS OPERATION       26         EGRESS TROUBLESHOOTING       27         EGRESS PUMP MOUNTING       28         EGRESS PUMP BREAKDOWN       30         EGRESS SWITCH BOX       32         EGRESS SCHEMATIC       33	POLYCARBONITE SAFETY WINDOW	20
EGRESS MOUNTING	FLAP DEFLECTOR	22
EGRESS MOUNTING - CONTINUED	EGRESS	23
EGRESS OPERATION		
EGRESS TROUBLESHOOTING	EGRESS MOUNTING - CONTINUED	25
EGRESS PUMP MOUNTING	EGRESS OPERATION	26
EGRESS PUMP BREAKDOWN	EGRESS TROUBLESHOOTING.	27
EGRESS SWITCH BOX	EGRESS PUMP MOUNTING	28
EGRESS SCHEMATIC	EGRESS PUMP BREAKDOWN	30
NOTES 1	EGRESS SCHEMATIC	33
	NOTES 1	34

#### 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.

- 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.

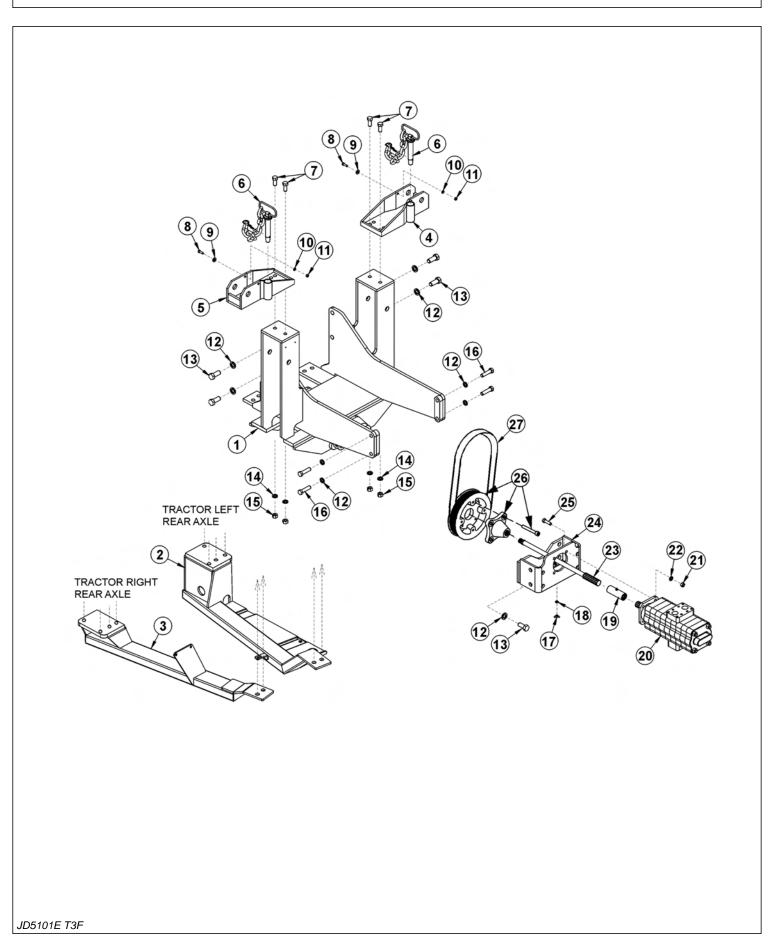


For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

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 - MAIN FRAME**



# TRACTOR MOUNT KIT - MAIN FRAME

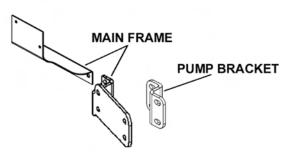
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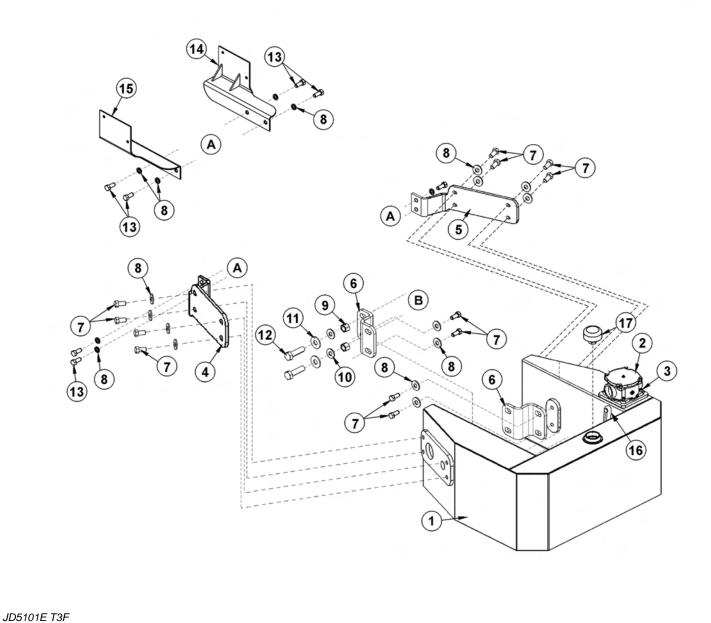
ITEM	PART NO.	QTY.	DESCRIPTION
1	06300146	1	MAIN FRAME,T3F,JD5101E,2011
	06300143	1	MAIN FRAME,T3F,JD5101E,2011 (HIGH MOUNT)
2		1	AXLE BRACE,LEFT HAND *REFER TO AXLE BRACE PAGE
3		1	AXLE BRACE, RIGHT HAND *REFER TO AXLE BRACE PAGE
4	TF4253LA	1	TRAVEL LOCK BRACKET,LH
5	TF4253RA	1	TRAVEL LOCK BRACKET,RH
6	TF4250	2	TRAVEL LOCK PIN W/ CHAIN
7	21783	4	CAPSCREW,5/8" X 2",NC
8	21580	2	CAPSCREW,5/16" X 1",NC
9	22015	2	FLATWASHER,5/16"
10	21987	2	LOCKWASHER,5/16"
11	21575	2	HEX NUT,5/16"
12	33880	12	FLATWASHER,3/4",GR8,SAE
13	24860	8	CAPSCREW,20MM X 40MM,2.5P
14	21992	4	LOCKWASHER,5/8"
15	21775	4	HEX NUT,5/8"
16	25341	4	CAPSCREW,20MM X 70MM,2.5P
17	32519	1	WING NUT,1/4"
18	22014	1	FLATWASHER,1/4"
19	6T0375B	1	DRIVE SHAFT COUPLER
20	TF4450	1	HYDRAULIC PUMP
21	21725	4	HEX NUT,1/2",NC
22	21990	4	LOCKWASHER,1/2"
23	06520135	1	PUMP DRIVE SHAFT
24	32642	1	PUMP MOUNTING BRACKET
25	21732	4	CAPSCREW,1/2" X 1-3/4",NC
26		1	JD PULLEY KIT LVB24989
27		1	JD BELT T208891

## TRACTOR MOUNT KIT - BUMPER TANK

## HARDWARE PLACEMENT

A - CONNECTS TO MAIN FRAME B - PLACED THROUGH COOLER BRACKET TO PUMP BRACKET



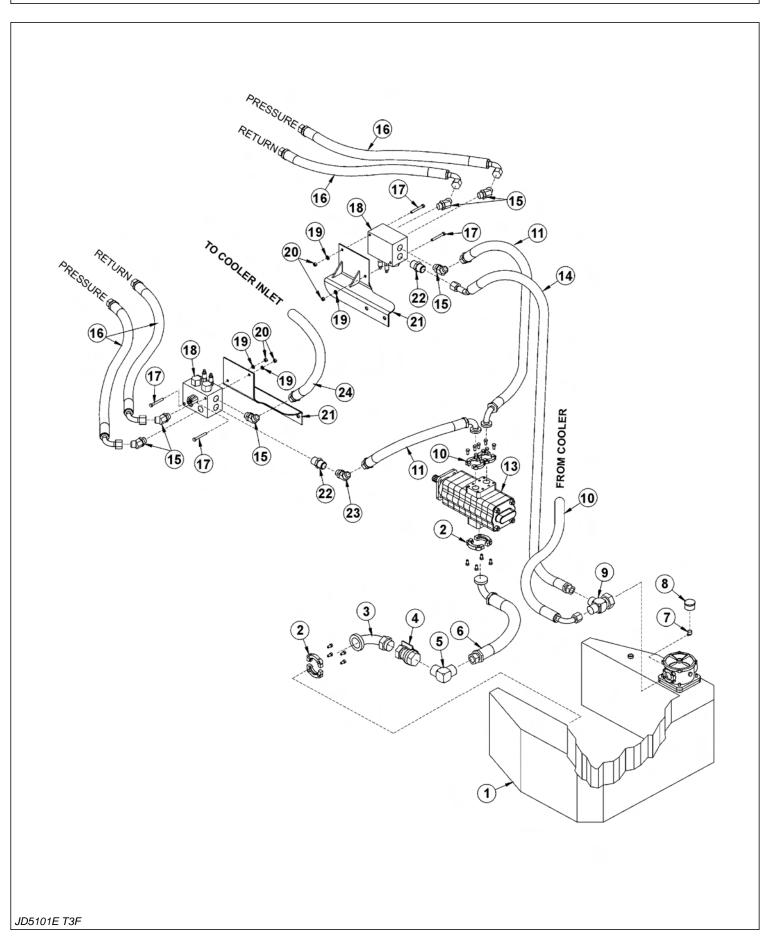


# TRACTOR MOUNT KIT - BUMPER TANK

## Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	34666	1	RESERVOIR TANK
2	35269	1	IN-TANK FILTER ASSY
3	21627	4	NYLOCK NUT,3/8",NC
4	06410259	1	RIGHT HAND TANK BRACKET
5	06410258	1	LEFT HAND TANK BRACKET
6	06410150	2	SMALL MOUNT PLATE
7	21780	12	CAPSCREW,5/8" X 1-1/4",NC
8	22020	20	FLATWASHER,5/8"
9	21825	4	HEX NUT,3/4",NC
10	22021	4	FLATWASHER,3/4"
11	21993	4	LOCKWASHER,3/4"
12	21835	4	CAPSCREW,3/4" X 2-3/4",NC
13	22421	4	CAPSCREW,16MM X 40MM,2.0P
14	32324	1	SOLENOID BRACKET - LH
15	32323	1	SOLENOID BRACKET - RH
16	06505067	1	SIGHT GAGE
17	06505077	1	PRESSURE CAP
	6T0649	1	FILTER GAUGE (NOT SHOWN)

## **TRACTOR MOUNT KIT - HYDRAULICS**

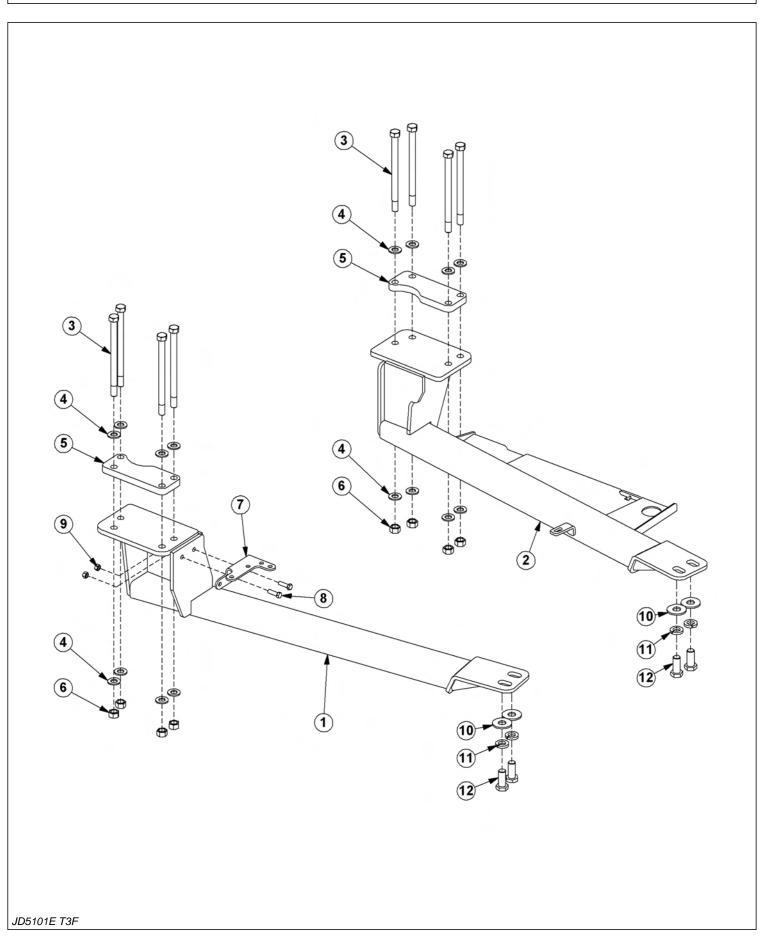


# TRACTOR MOUNT KIT - HYDRAULICS

## Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1		-	HYDRAULIC RESERVOIR *REFER TO MAIN FRAME PARTS
2	TF4431	2	FLANGE KIT #32
3	34389	1	ELBOW,1-1/2ORB X 32FLG90
4	34309	1	BALL VALVE
5	34655	1	ELBOW,1-1/2"ORB X 1-1/2MJ
6	06500119	1	HOSE,1-1/2" X 28"
7	TF4887	1	STREET ELBOW
8	6T0649	1	FILTER GAUGE
9	34656	1	TEE,RUN,1-1/4ORB X 1-1/4MJ X 1-1/4MJ
10	06500260	1	HOSE,1" X 31" (COOLER RETURN)
11	06500177	2	HOSE,1" X 40"
12	TF4852	2	FLANGE KIT,#20
13		-	PUMP *REFER TO MAIN FRAME PARTS
14	06500178	1	HOSE,1" X 43"
15	33554	6	ELBOW,1MORB X 1MJIC45
16	34384	4	HOSE,1" X 106"
17	21644	4	CAPSCREW,3/8" X 5",NC
18	34115	2	BRAKE VALVE
19	21988	4	LOCKWASHER,3/8"
20	21625	4	HEX NUT,3/8"
21		-	SOLENOID BRACKET *REFER TO MAIN FRAME PARTS
22	33555	2	ADAPTER,1MORB X 1MJIC
23	24724	1	SWIVEL,1MJ X 1FJX45
24	33413	1	HOSE,1" X 47" (COOLER PRESSURE)
25	6T3200	8	SPLIT HOSE (NOT PICTURED)
26	6T1823	12	ZIP TIES 14" (NOT PICTURED)

# **AXLE BRACES**

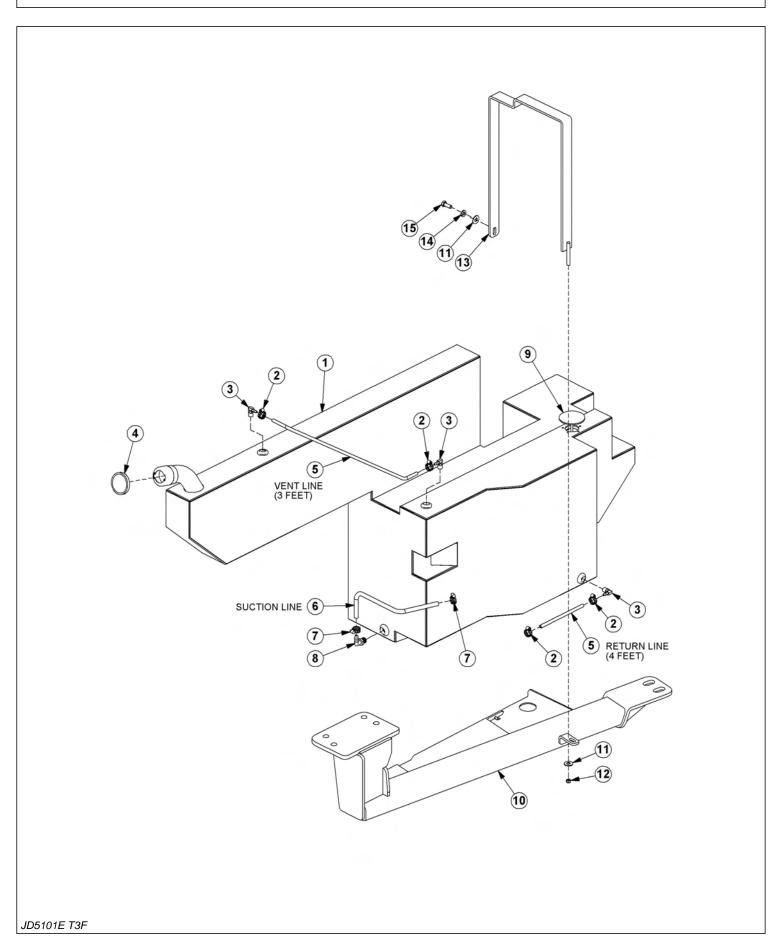


## **AXLE BRACES**

## Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300147	1	AXLE BRACE, RIGHT HAND
	06300144	1	AXLE BRACE, RIGHT HAND (HIGH MOUNT)
2	06300148	1	AXLE BRACE,LEFT HAND
	06300145	1	AXLE BRACE,LEFTT HAND (HIGH MOUNT)
3	21797	8	CAPSCREW,5/8" X 9",NC
4	33764	16	FLATWASHER,5/8",GR8
5	06401246	2	CLAMP PLATE
6	21775	8	HEX NUT,5/8",NC
7	06410857	1	BRACKET
8	21631	2	CAPSCREW,3/8" X 1-1/4",NC
9	21625	2	NYLOCK NUT,3/8",NC
10	22021	4	FLATWASHER,3/4"
11	21993	4	LOCKWASHER,3/4"
12	21831	4	CAPSCREW,3/4" X 1-3/4",NC

## **FUEL TANK ASSEMBLY**

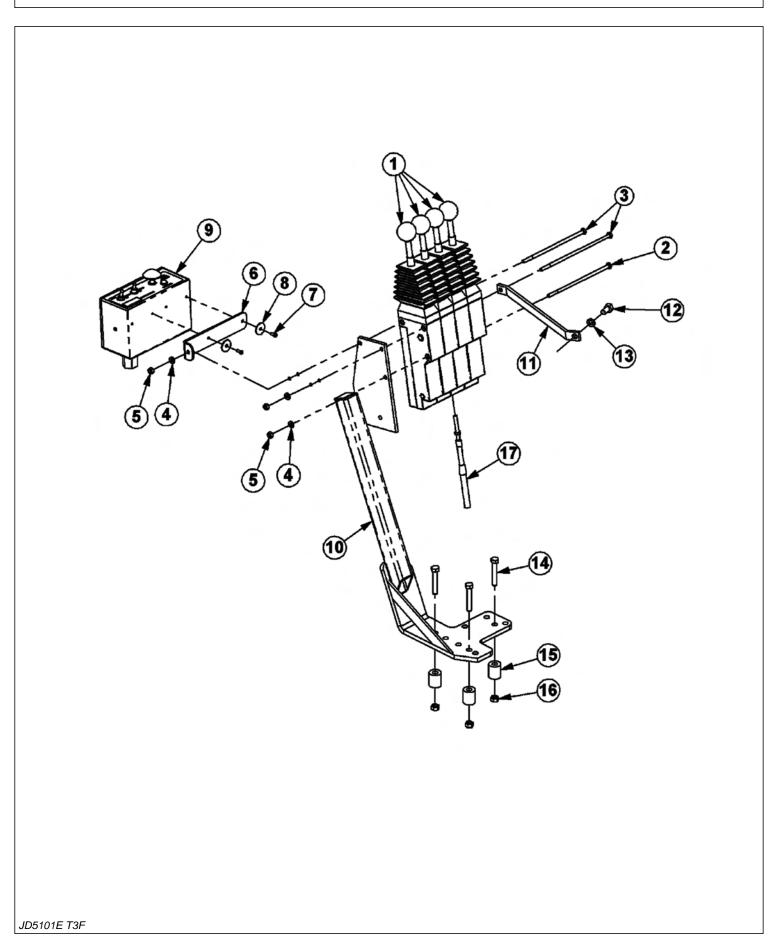


## **FUEL TANK ASSEMBLY**

## Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06370162	1	TANK,FUEL,JD5101E,T3F
2	35086	4	CLAMP,HOSE,#4
3	06503092	3	ELBOW,1/4,BRASS
4	25391	1	CAP,FUEL TANK
5	34602	7	HOSE,1/4",FUEL LINE (IN FEET)
6	34380	4	HOSE,3/8",FUEL LINE (IN FEET)
7	35091	2	CLAMP,HOSE,#6
8	06503063	1	ELBOW,3/8,BRASS
9		1	FUEL SENDING UNIT (TRACTOR PART)
10		1	AXLE BRACE *REFER TO TRACTOR MOUNT KIT
11	22016	2	FLATWASHER,3/8"
12	21527	1	NYLOCK NUT,3/8",NC
13	06370034	1	TANK STRAP
14	21988	1	LOCKWASHER,3/8"
15	21630	1	CAPSCREW,3/8" X 1",NC

## **4 SPOOL CABLE CONTROL MOUNT**

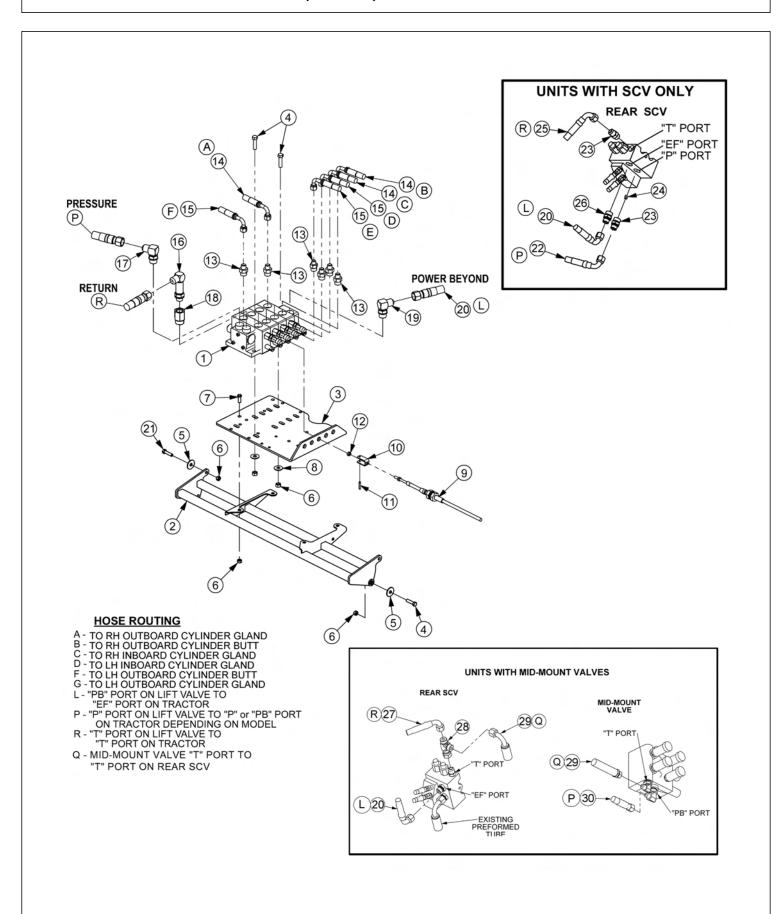


## **4 SPOOL CABLE CONTROL MOUNT**

## Continued...

ľ	TEM	PART NO.	QTY.	DESCRIPTION
1		6T1251	4	CBL CTRL BOX,180 DEG
2		21546	1	CAPSCREW, 1/4" X 7",NC
3		21547	2	CAPSCREW, 1/4" X 8",NC
4		21986	3	LOCKWASHER,1/4"
5		21525	3	HEX NUT,1/4",NC
6		34496	1	BRKT,SWITCHBOX,UNI
7		6T3951	2	SCREW,MACHINE 8/32" X 1/2",NC
8		32360	2	LOCKWASHER,#8
9		06510097	1	SWITCHBOX,T3F,GND
1	0	23865B	1	CBL CTRL MT BRKT
1	1	06410230	1	BRKT,CBL,CTRL
1	2	33534	1	CAPSCREW,10MM X 20MM,1.5P
1	3	32691	1	LOCKWASHER,10MM
1	4	21636	3	CAPSCREW,3/8" X 2-1/2",NC
1	5	27082B	3	SPACER
1	6	21627	3	NYLOCK NUT,3/8",NC
1	7	06505100	4	CBL,CNTRL,108

## **CABLE (MANUAL) LIFT VALVE - 4 SPOOL**

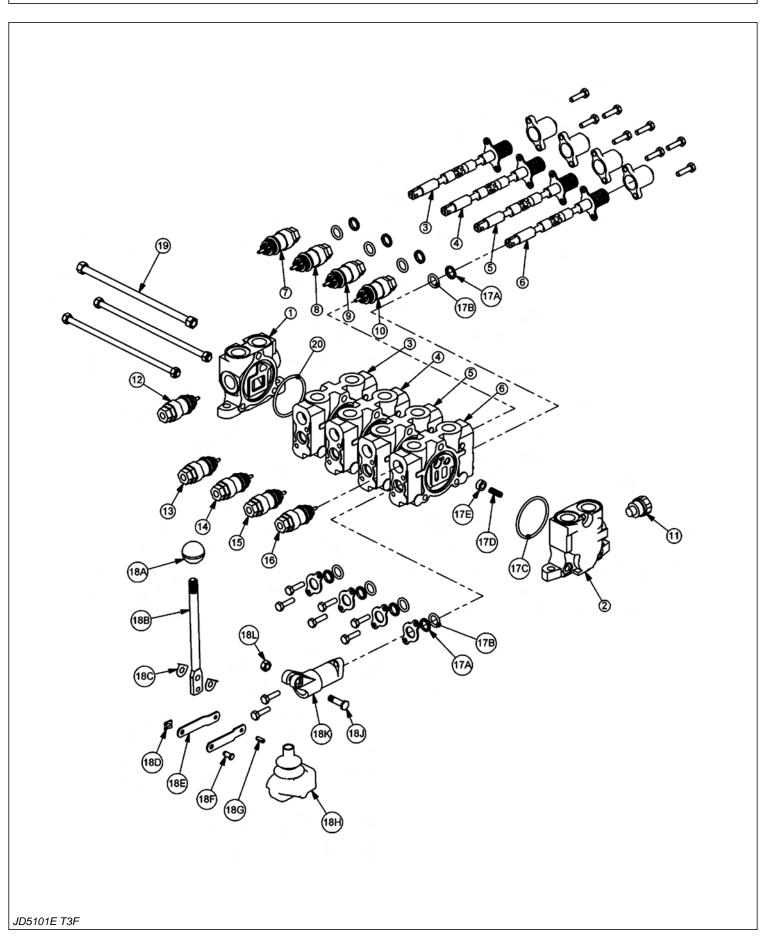


# **CABLE (MANUAL) LIFT VALVE - 4 SPOOL**

## Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	27411	1	VALVE
2	06340033	1	VALVE MOUNTING BRACKET
3	34622	1	VALVE MOUNTING PLATE
4	21632	6	CAPSCREW,3/8" X 1-1/2",NC
5	6T2615	4	FENDER WASHER
6	21625	12	HEX NUT,3/8"
7	21630	4	CAPSCREW,3/8" X 1",NC
8	21988	12	LOCKWASHER,3/8"
9	06505100	4	CONTROL CABLE
10	6T4411	4	CABLE CONTROL CLEVIS
11	6T3017	4	ROLL PIN
12	21500	8	HEX NUT,1/4",NF
13	33271	6	ADAPTER,1/2MOR X 3/8MJ
14	33364	3	HOSE,1/4" X 120"
15	06500136	3	HOSE,1/4" X 140
16	33293	1	ELBOW,LONG
17	33383	1	ELBOW
18	32678	1	ADAPTER
19	06503033	1	ELBOW
20	06500399	1	HOSE,1/2" X 41"
21	21631	2	CAPSCREW,3/8" X 1-1/4",NC
22	33595	1	HOSE,1/2" X 65"
23	33463	2	ADAPTER,22MM
24	31171	1	PLUG,PIPE
25	33649	1	HOSE,1/2" X 50"
26	34424	1	FITTING,ADAPTER,22MM
27	06500392	1	HOSE,1/2" X 62"
28	32872	1	TEE,RUN,SWIVEL NUT
29	06500492	1	HOSE,1/2" X 52"
30	06500391	1	HOSE,1/2" X 97"

# CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411

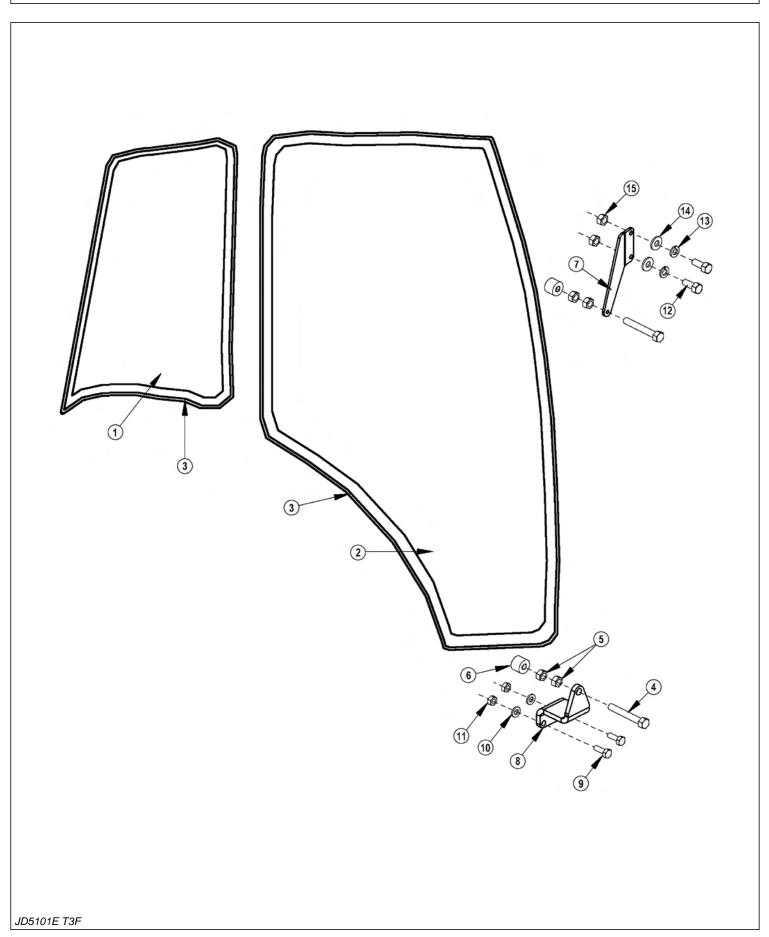


# CABLE (MANUAL) LIFT VALVE BREAKDOWN - 27411

## Continued...

,				
	ITEM	PART NO.	QTY.	DESCRIPTION
	1	TB1017S	1	INLET END COVER
	2	TB1702	1	END COVER,POWER BEYOND
	3	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
	4	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
	5	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
	6	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
	7	31861	1	RELIEF VALVE,360 PSI
	8	06503067	1	#10 O-RING PLUG
	9	06503067	1	#10 O-RING PLUG
	10	31861	1	RELIEF VALVE,360 PSI
	11	TB1017M	1	SHUT-OFF PLUG
	12	06502037	1	RELIEF VALVE,2600 PSI
	13	31862	1	RELIEF VALVE,2175 PSI
	14	31862	1	RELIEF VALVE,2175 PSI
	15	31862	1	RELIEF VALVE,2175 PSI
	16	31862	1	RELIEF VALVE,2175 PSI
	17	TB1017A	4	VALVE SEAL KIT (FOR ONE SECTION)
	17A		2	WIPER
	17B		2	O-RING SMALL
	17C		1	O-RING LARGE
	17D		1	SPRING
	17E		1	PUCKET
	18	TB1017L	4	LEVER KIT (FOR ONE SECTION)
	18A		1	LEVER KNOB
	18B		1	LEVER
	18C		2	LEVER WASHER
	18D		1	LEVER CLIP
	18E		2	LINKAGE
	18F		1	LEVER PIN
	18G		1	ROLL PIN
	18H		1	LEVER BOOT
	18J		1	LEVER BOLT
	18K		1	LEVER DUST COVER
	18L		1	LEVER NUT
	19	TB1017U	1	TIE ROD KIT
	20	24214	1	O-RING,LARGE
١				

# **POLYCARBONITE SAFETY WINDOW**

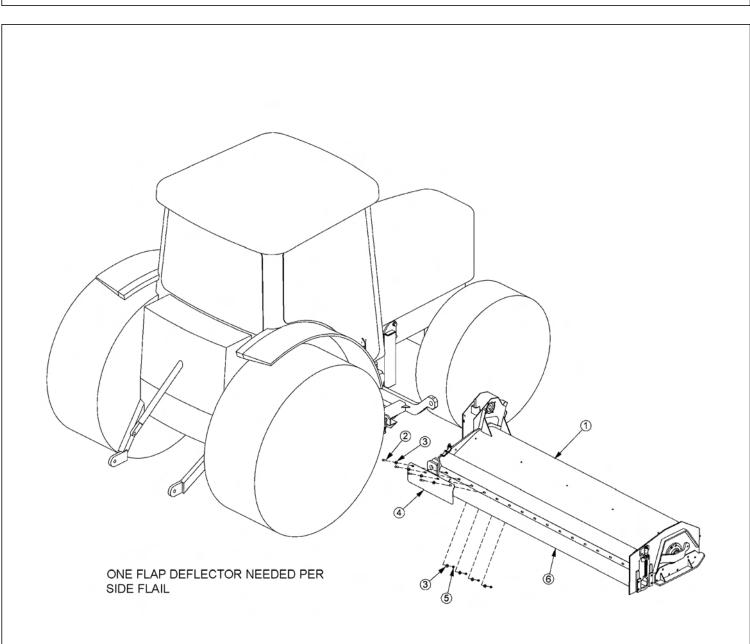


# **POLYCARBONITE SAFETY WINDOW**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06490014	1	POLYCARB,FRMD,REAR
2	06490013	1	POLYCARB,FRMD,DOOR
3	31965	25	TRIM SEAL (IN FEET)
4	21584	2	CAPSCEW,5/16" X 2",NC
5	21575	6	HEX NUT,5/16",NC
6	33477	2	VIBRATION ISOLATOR
7	06410268	1	TOP BRACKET
8	06410269	1	BOTTOM BRACKET
9	21529	2	CAPSCREW,1/4" X 3/4",NC
10	21986	2	LOCKWASHER,1/4"
11	21525	2	HEX NUT,1/4",NC
12	27508	2	CAPSCREW,8MM X 20MM,1.25P
13	6T2619	2	LOCKWASHER,8MM
14	34948	2	WASHER,8MM
15		2	HEX NUT *EXISTING HARDWARE
	06537005	1	3M ADHESIVE

# **FLAP DEFLECTOR**



ITEM	PART NO.	QTY.	DESCRIPTION
1		-	FLAIL *REFER TO COMMON PARTS SECTION
2	21632	4	CAPSCREW,3/8" X 1-1/2",NC
3	22016	8	FLATWASHER,3/8"
4	06410877	1	DEFLECTOR,FLAP
5	21625	4	HEX NUT,3/8",NC
6		-	FLAP *REFER TO COMMON PARTS SECTION

EGRESS	
	<b>EGRESS</b>
	SECTION
JD5101E T3F	

#### EGRESS MOUNTING

# TRIPLE EGRESS MOUNTING

Park the tractor on a flat, hard, level surface. Lower both side decks down onto the hard surface. Make sure the engine is off and the park brake has been set. Operate the lift controls several times to release any pressure contained in the hydraulic lift system. Disconnect the positive battery cable from the battery. Then remove the right rear wheel from the tractor. Next remove the left side deck lift hoses from the lift valve and both lift cylinders, mark or label valve ports and cylinders as hoses are removed.

Install the egress switch box brackets on the left side of the mower pump mounting bracket, using hardware supplied. See pictures on next page. After the bracket is secured, then remove the front cover from the switch box, and install the switch box back half to the switch box bracket with (4)  $8/32 \times 1/2$ " machine screws. Reinstall the front cover onto the switch box.

Install the egress pump mounting bracket onto the right side of the tractor located under the cab in front of the right rear axle using hardware provided. Next preassemble the rear half of the pump cover onto the egress pump with the hardware provided, do not tighten bolt at this time. Connect the hoses for the C1 port to the egress pump port only. Do not tighten hoses at this time. The pump is now ready to be mounted to the pump mounting bracket. Secure egress pump to the bracket with the hardware provided.

Locate the ports on the egress pump labeled "A1", "A2", "B1", "B2", "C1" and "C2", these ports will be the connection points for the hydraulic lift lines.

A1 port - to lift valve -- left hand outboard cylinder butt

A2 port - to cylinder -- left hand outboard cylinder butt

B1 port - to lift valve -- left hand outboard cylinder gland

B2 port - to cylinder -- left hand outboard cylinder gland

C1 port - to lift valve -- left hand inboard cylinder gland

C2 port - to cylinder -- left hand inboard cylinder gland

Route the hoses to the lift valve and or cylinder as specified above, tighten all hose fittings. Refer to the Parts section for the location of hose connections on the lift valve.

Now that the hydraulic lines are installed, connect the power cable from the positive post of the egress pump solenoid to the tractor starter solenoid positive post. Also connect the ground cable from the negative post on the egress pump electric motor to a bracket mounting bolt on the frame. Then route the cable from the switch box along the tractor to the egress pump and connect the male to the female plug. Secure cable with cable tie.

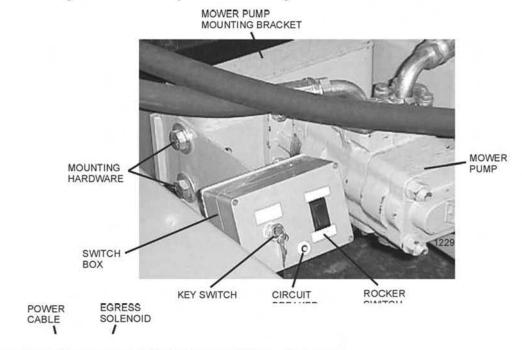
Next remove the drain plug on the bottom of the tractors transmission, <u>CAUTION</u> hydraulic oil will come out and maybe hot. Oil loss can be reduced by attaching a shop vacuum to the tractor transmission fill neck. Install fittings into the transmission drain hole, refer to part section for parts and illustrations. Connect the suction hose from the filter to the fittings on the tractor transmission, cut the hose to the required length. Install a hose clamp both end of the hose.

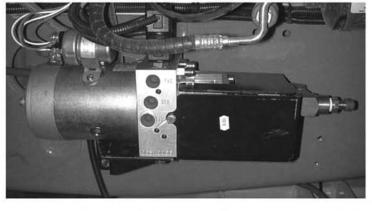
Install the front half of the cover onto the egress pump with provided hardware. Make sure all mounting hardware and hose connections are tight. Check hydraulic oil level and add if required. Reinstall the right rear wheel and reconnect the positive battery cable to the battery.

#### **EGRESS MOUNTING - CONTINUED**

# TRIPLE EGRESS MOUNTING CONTINUED

NOTE: Use the egress pump ONLY to lifting or lowering the head for storage, or transportation by trailer. When the egress pump is not in use make sure the switch box key is in the "off" position and key has been removed.





TRACTOR FRAME

GROUND CABLE

EGRESS MOUNTING BRACKET EGRESS PUMP

FILTER



JD5101E T3F

EGRESS / ELECTRIC MOTOR

#### **EGRESS OPERATION**

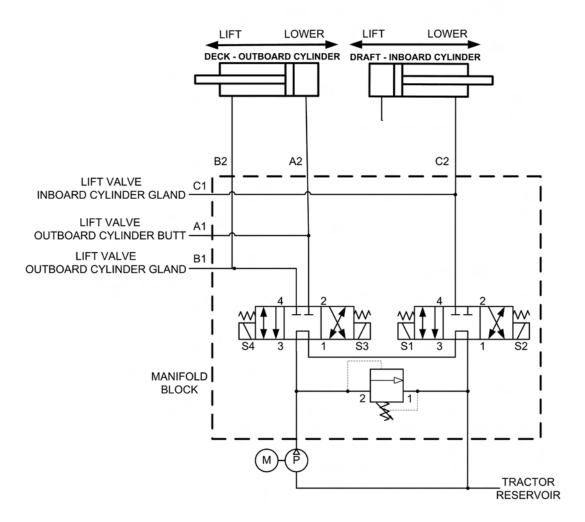
### **EGRESS OPERATION**

When operating the egress system to lift the deck, turn the key to the "DRAFT" position and push the rocker switch to the "LIFT" position and it will lift the draft beam. Once the draft beam is lifted to the highest position, then turn the key to the "DECK" position and push the rocker switch to the "LIFT" position, and that will raise the deck up to the travel lock. To seat the deck into the travel lock turn the key back to the "DRAFT" position and push the rocker switch to the "LOWER" position, until the deck is fully seated into the travel lock. Turn the key to the "OFF" position and remove the key. To lower the deck in sert key and reverse the steps that were done to raise the deck.



CAUTION: Never leave the key in the egress switch box. Field conditions can shake the key out of the switch box and become lost. Also personal injury or death can occur from sudden dropping or inadvertent operation of the controls. Make certain the area is clear before lowering or raising the deck.

#### TRIPLE EGRESS HYDRAULIC DIAGRAM



#### **EGRESS TROUBLESHOOTING**

FAILURE MODE:	CHECK STEPS
- DECK OR DRAFT CYLINDER ONLY GOES ONE WAY.	1 and 2
- DECK OR DRAFT CYLINDER WILL NOT STAY IN POSITION.	1 and 2
-WILL OPERATE WITH LIFT VALVE, BUT NOT WITH EGRESS.	3 and 5
- EGRESS DOES NOT OPERATE AS FAST AS IT USED TO.	3 and 4

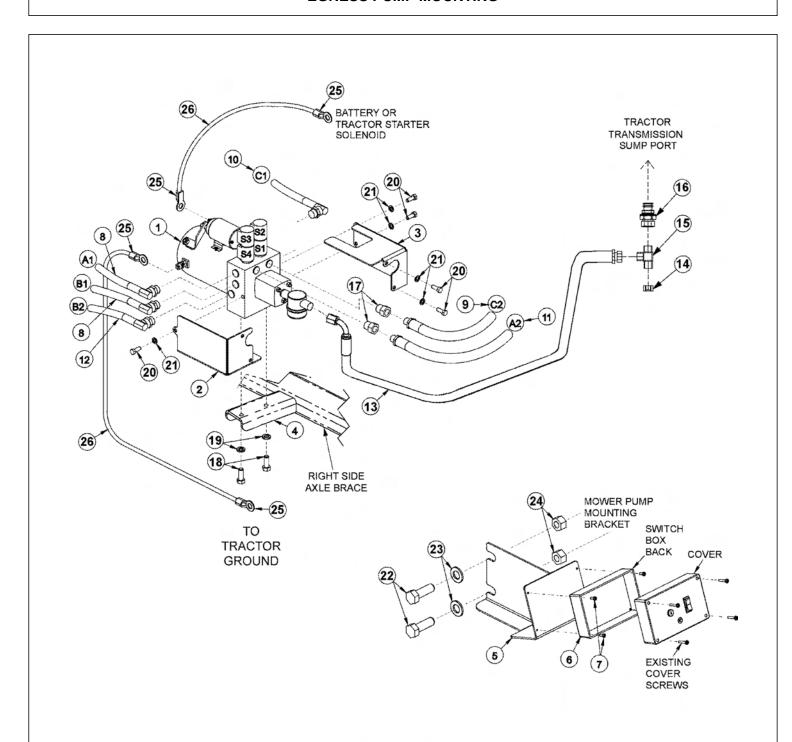
#### **CORRECTIVE STEPS:**

- 1. Remove relief valve installed on tractor lift valve. Visually inspect for contamination.
- 2. Remove solenoid valve (S1, S2, S3, S4) from egress unit and verify spool shift.
- 3. Remove relief valve from egress unit and visually inpect for contamination.
- 4. Inspect suction strainer for contamination.
- 5a. Verify supply voltage at pump motor posts on egress.
- 5b. Verify voltage at pump motor relay while switches are activated.
- 5c. Verify voltage at solenoid valve (S1, S2, S3, S4) on egress unit.
- 5d. Check or reset curcuit breaker.

#### NOTE:

1. All voltage readings must be between 10.2 volts and 13.8 volts.

#### **EGRESS PUMP MOUNTING**



#### HOSE ROUTING

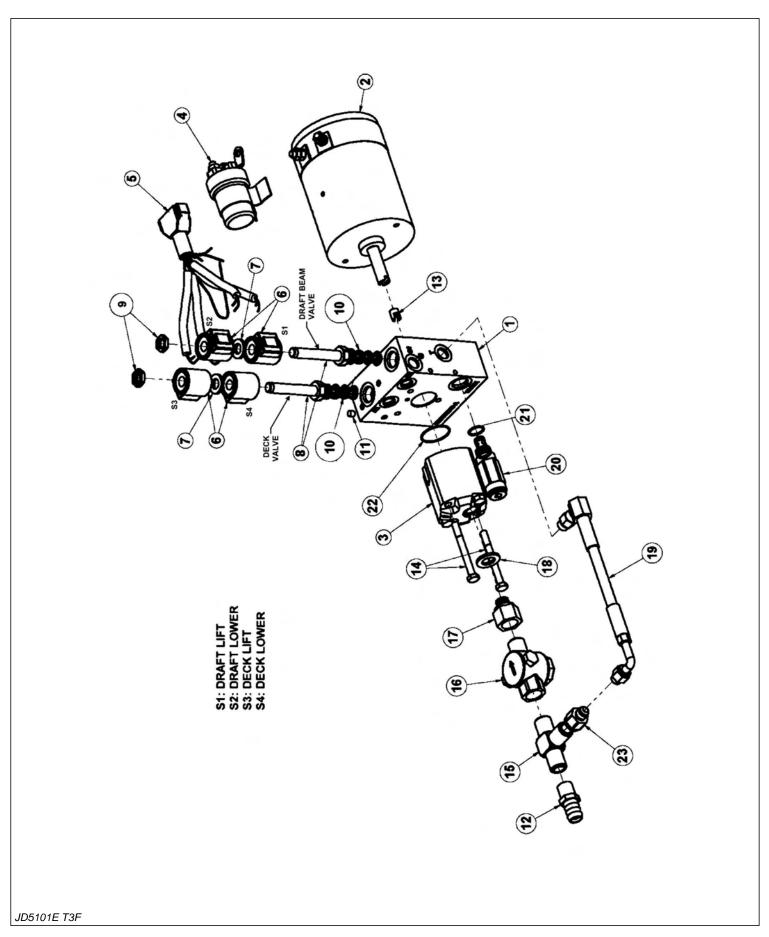
A1 PORT - TO LIFT VALVE -- LEFT HAND OUTBOARD CYLINDER BUTT
A2 PORT - TO CYLINDER -- LEFT HAND OUTBOARD CYLINDER BUTT
B1 PORT - TO LIFT VALVE -- LEFT HAND OUTBOARD CYLINDER GLAND
B2 PORT - TO CYLINDER -- LEFT HAND OUTBOARD CYLINDER GLAND
C1 PORT - TO LIFT VALVE -- LEFT HAND INBOARD CYLINDER GLAND
C2 PORT - TO CYLINDER -- LEFT HAND INBOARD CYLINDER GLAND

# **EGRESS PUMP MOUNTING**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06510066	1	EGRESS PUMP
2	34306	1	COVER,FRONT HALF
3	34307	1	COVER,REAR HALF
4		1	AXLE BRACE,RH *REFER TO AXLE BRACES PAGE
5	34124	1	MOUNTING BRACKET,SWITCH BOX
6	34123	1	SWITCHBOX
7	6T3951	4	SCREW,MACHINE,8-32UNC X 1/2"
8	06500567	2	HOSE,1/4" X 70"
9	06500565	1	HOSE,1/4" X 81"
10	06500566	1	HOSE,1/4" X 67"
11	34493	1	HOSE,1/4" X 63"
12	34439	1	HOSE,1/4" X 64"
13	06500564	1	HOSE,1/2" X 42
14	06503097	1	CAP,1/2"
15	6T3992	1	TEE,RUN
16	06503154	1	ADAPTER
17	32901	2	ADAPTER
18	21629	2	CAPSCREW,3/8" X 3/4",NC
19	21988	2	LOCKWASHER,3/8"
20	21529	5	CAPSCREW,1/4" X 3/4",NC
21	21986	5	LOCKWASHER,1/4"
22	21833	2	CAPSCREW,3/4" X 2-3/4",NC
23	22021	2	FLATWASHER,3/4"
24	21825	2	HEX NUT,3/4",NC
25	23572	4	RING CONNECTOR,3/8",STUD
26	24201	12	WIRE,RED,6GA (IN FEET)

# **EGRESS PUMP BREAKDOWN**

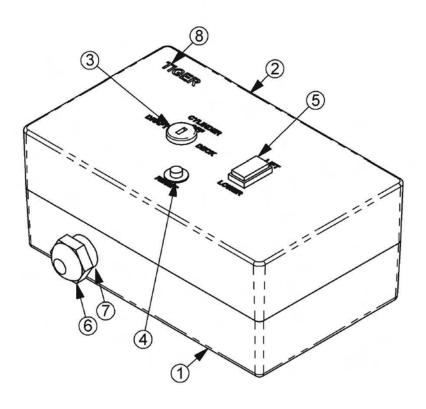


# **EGRESS PUMP BREAKDOWN**

#### Continued...

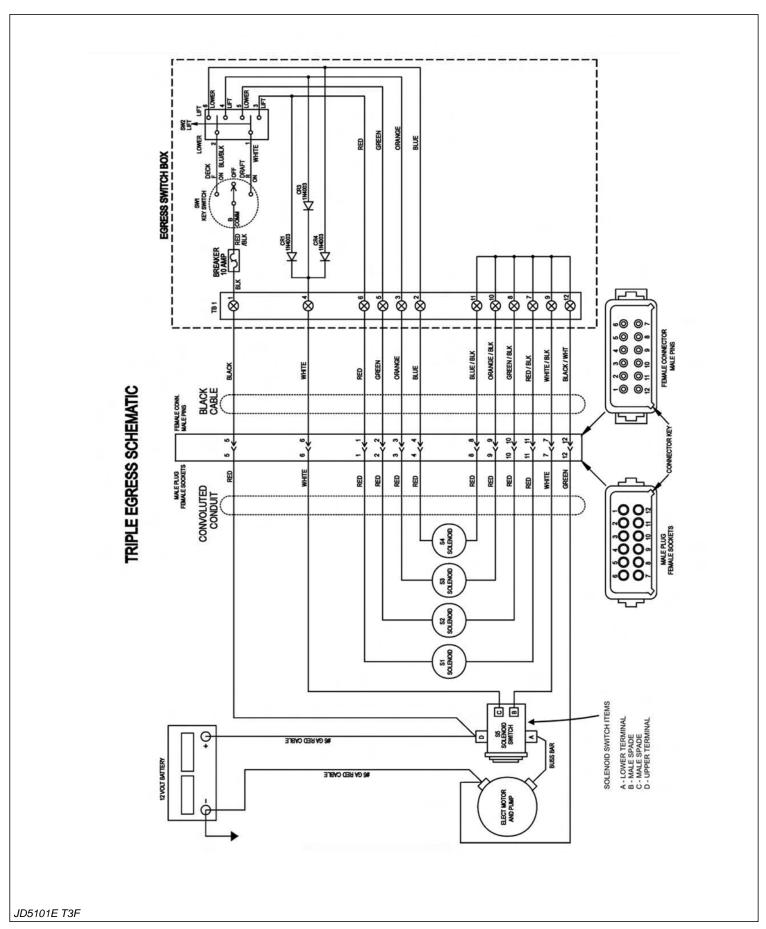
ITEM	PART NO.	QTY.	DESCRIPTION
	06510066	1	PUMP,ASSY,EGRESS
1	06510067	1	MANIFOLD
2	06510068	1	MOTOR
3	06510070	1	PUMP
4	06510170	1	RELAY
5	06510171	1	HARNESS
6	06510172	4	COIL
7	06510173	2	SPACER
8	06510174	2	SPOOL
9	06510175	2	NUT
10	06510176	6	SEAL KIT,06510174
11	06510177	1	PLUG
12	06510179	1	ADAPTER,BARB
13	06510180	1	COUPLING
14	06510181	2	BOLT
15	06510182	1	TEE
16	06510183	1	FILTER
17	06510184	1	ADAPTER,BARB
18	06510185	1	WASHER
19	06510186	1	HOSE
20	06510187	1	RELIEF
21	06510188	1	SEAL
22	06510189	1	SEAL KIT,06510066
	06510178	1	O-RING
23	33380	1	ADAPTER,3/8"MOR X 1/2"FOR

# **EGRESS SWITCH BOX**



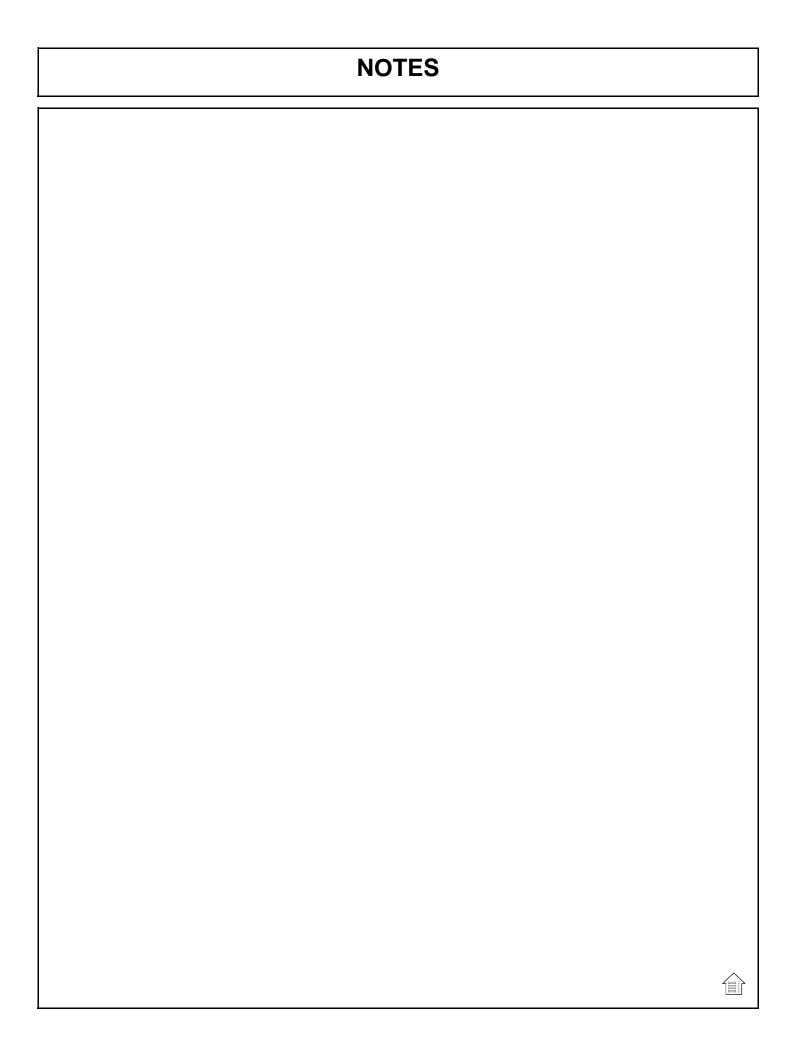
ITEM	PART NO.	QTY.	DESCRIPTION
1	34934	1	BOTTOM,EGRESS SWITCH BOX
2	34933	1	TOP,EGRESS SWITCH BOX
3	34937	1	KEY,SWITCH
4	34936	1	CIRCUIT BREAKER,10AMP
5	34935	1	ROCKER SWITCH
6	34938	1	STRAIN RELIEF
7	34939	1	LOCK NUT,3/4"
8	34940	1	DECAL,TIGER

#### **EGRESS SCHEMATIC**



NOTES 1
NOTES
JD5101E T3F

# **COMMON TRIPLE PARTS SECTION**



# PART NAME INDEX

PARTS ORDERING GUIDE	. 5
DRAFT BEAM - RIGHT HAND	. 6
DRAFT BEAM - LEFT HAND	. 8
SUPER DUTY 63IN SIDE FLAIL - STD ROT	10
SUPER DUTY 63IN SIDE FLAIL - REV ROT	12
SUPER DUTY 75IN SIDE FLAIL - STD ROT	14
SUPER DUTY 75IN SIDE FLAIL - REV ROT	16
SUPER DUTY SIDE FLAIL DRIVE ASSY	18
SUPER DUTY SIDE FLAIL MOTOR BREAKDOWN	20
EXTREME DUTY 60IN SIDE FLAIL - STD ROT	22
EXTREME DUTY 60IN SIDE FLAIL - REV ROT	24
EXTREME DUTY 75IN SIDE FLAIL - STD ROT	26
EXTREME DUTY 75IN SIDE FLAIL - REV ROT	28
EXTREME DUTY 90IN SIDE FLAIL - STD ROT	30
EXTREME DUTY 90IN SIDE FLAIL - REV ROT	32
FRONT FLAPS, XD FLAIL - STANDARD ROTATION	34
EXTREME DUTY SIDE FLAIL DRIVE ASSY	36
EXTREME DUTY SIDE FLAIL MOTOR BREAKDOWN	38
SUPER DUTY 75IN REAR FLAIL - STD ROT	40
SUPER DUTY 75IN REAR FLAIL - REV ROT	42
SUPER DUTY 90IN REAR FLAIL - STD ROT	44
SUPER DUTY 90IN REAR FLAIL - REV ROT	46
SUPER DUTY REAR FLAIL DRIVE ASSY	48
SUPER DUTY PTO DRIVE ASSY	50
SUPER DUTY REAR GEAR BOX ASSY	52
EXTREME DUTY 75IN REAR FLAIL - STD ROT	54
EXTREME DUTY 75IN REAR FLAIL - REV ROT	56
EXTREME DUTY 75IN REAR FLAIL DRIVE ASSY	58
EXTREME DUTY 90IN REAR FLAIL - STD ROT	60
EXTREME DUTY 90IN REAR FLAIL - REV ROT	62
EXTREME DUTY 90IN REAR FLAIL DRIVE ASSY	64
EXTREME DUTY 96IN REAR FLAIL - STD ROT	66
EXTREME DUTY 96IN REAR FLAIL - REV ROT	68
EXTREME DUTY 96IN REAR FLAIL DRIVE ASSY	70
EXTREME DUTY 102IN REAR FLAIL - STD ROT	72
EXTREME DUTY 102IN REAR FLAIL - REV ROT	74
EXTREME DUTY 102IN REAR FLAIL DRIVE ASSY	76
EXTREME DUTY REAR GEAR BOX ASSY	78
PTO SHAFT ASSEMBLY	80
PTO SHAFT ASSEMBLY WITH CLUTCH	81

# PART NAME INDEX

CLUTCH ASSEMBLY	
NOTES 1	83
RESERVOIR TANK FILTER ASSEMBLY	84
FRONT HYDRAULIC PUMP BREAKDOWN	86
3IN X 8IN TIE-ROD CYLINDER - 31211	88
3IN X 12IN TIE-ROD CYLINDER - 25343	90
3IN X 12IN TIE-ROD CYLINDER - 32215	92
4 SPOOL CABLE (MANUAL) LIFT VALVE - 31190	94
4 SPOOL CABLE (MANUAL) LIFT VALVE - 06502046	96
COOLER ASSEMBLY	98
CASTER WHEEL ASSEMBLY	100
SIDE FLAIL TRAVEL LOCK	102
BRAKE VALVE ASSEMBLY	103
BRAKE VALVE HYDRAULIC SCHEMATIC	104
SWITCHBOX SERVICE PARTS	105
SWITCHBOX SCHEMATIC	106
PTO STAND	107
NOTES 2	108

#### 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.

- 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 pur chase 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.



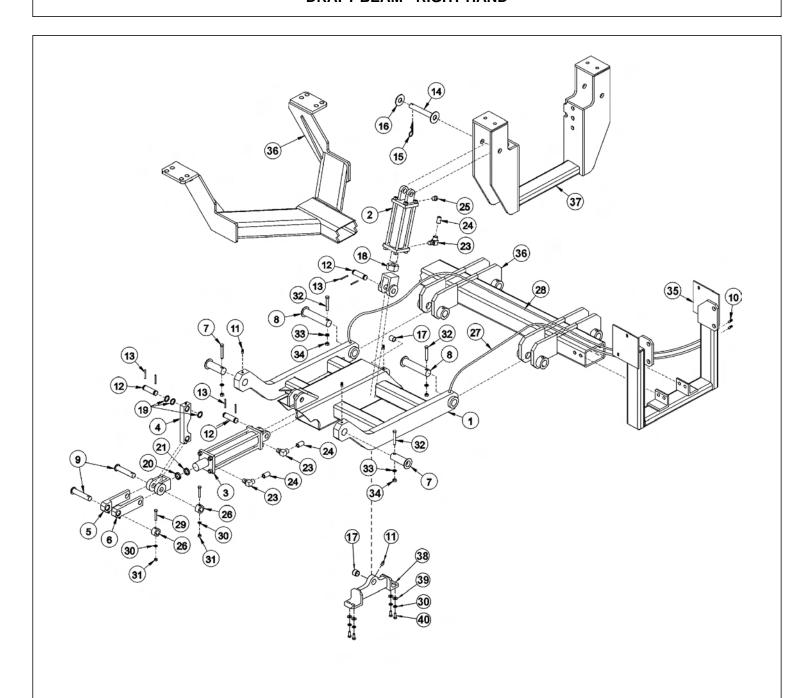
For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

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

COMMON TRIPLE

# **DRAFT BEAM - RIGHT HAND**



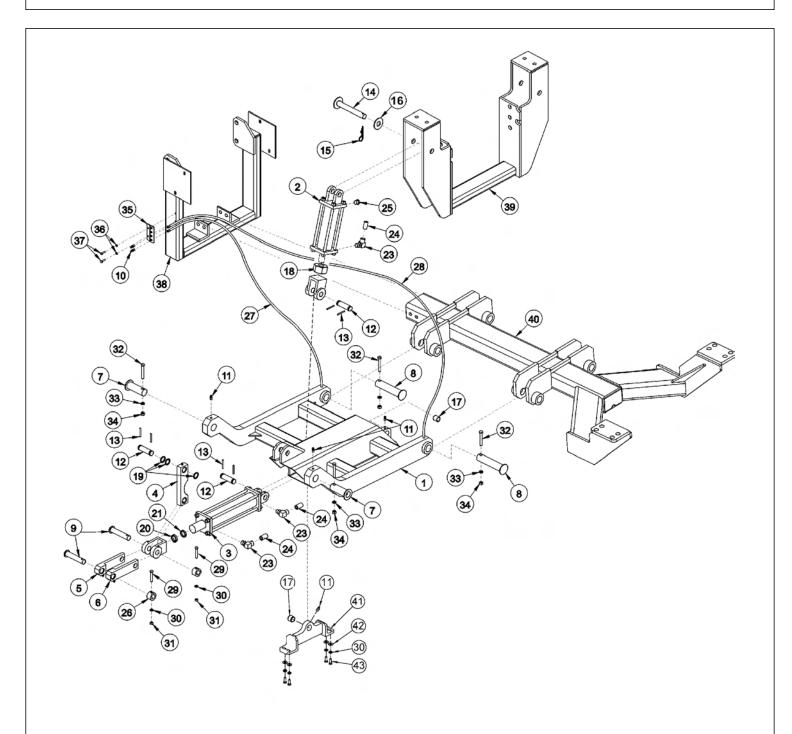
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	DRAFT BEAM - REFER TO TRACTOR PARTS SECTION
2	31211	1	INBOARD CYLINDER
3	25343	1	OUTBOARD CYLINDER - XD
	32215	1	OUTBOARD CYLINDER - SD
4	TF4500A	1	PIVOT ARM
5	TF4506B	1	LIFT ARM - LH

#### **DRAFT BEAM - RIGHT HAND**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
6	TF4507B	1	LIFT ARM - RH
7	TF4514A	2	PIN
8	TF4515	2	PIN,1-1/2" X 6-3/4"
9	TF4519	2	PIN
10	TF1033	2	GREASE ZERK,1/8"
11	6T3207	4	GREASE ZERK,1/4"
12	TB1033	3	CLEVIS PIN
13	06537021	6	ROLL PIN
14	6T3005	1	CYLINDER PIN
15	6T3004	1	R-CLIP
16	22023	1	FLATWASHER
17	TB3010	2	BUSHING
18	31208	1	SPACER
19	23724	3	SHIM
20	22076	1	SPACER (AS REQUIRED)
21	22077	1	SPACER (AS REQUIRED)
23	34244	3	FITTING
24	34396	3	RESTRICTOR
25	6T4258	1	BREATHER
26	22847A	2	BOSS
27	22851	1	HOSE,3/16" X 37"
28	22860	1	HOSE,3/16" X 70"
29	21635	2	CAPSCREW,3/8" X 2-1/4",NC
30	21988	6	LOCKWASHER,3/8"
31	21625	2	HEX NUT,3/8",NC
32	21688	4	CAPSCREW,7/16" X 3-1/4",NC
33	21989	4	LOCKWASHER,7/16"
34	21675	4	HEX NUT,7/16",NC
35		-	HANGER - REFER TO TRACTOR PARTS SECTION
36		-	FRAME - REFER TO TRACTOR PARTS SECTION
37		-	MAST - REFER TO TRACTOR PARTS SECTION
38	06350000	1	CYLINDER ANCHOR
39	22016	4	FLATWASHER,3/8"
40	21630	4	CAPSCREW,3/8" X 1",NC

# **DRAFT BEAM - LEFT HAND**



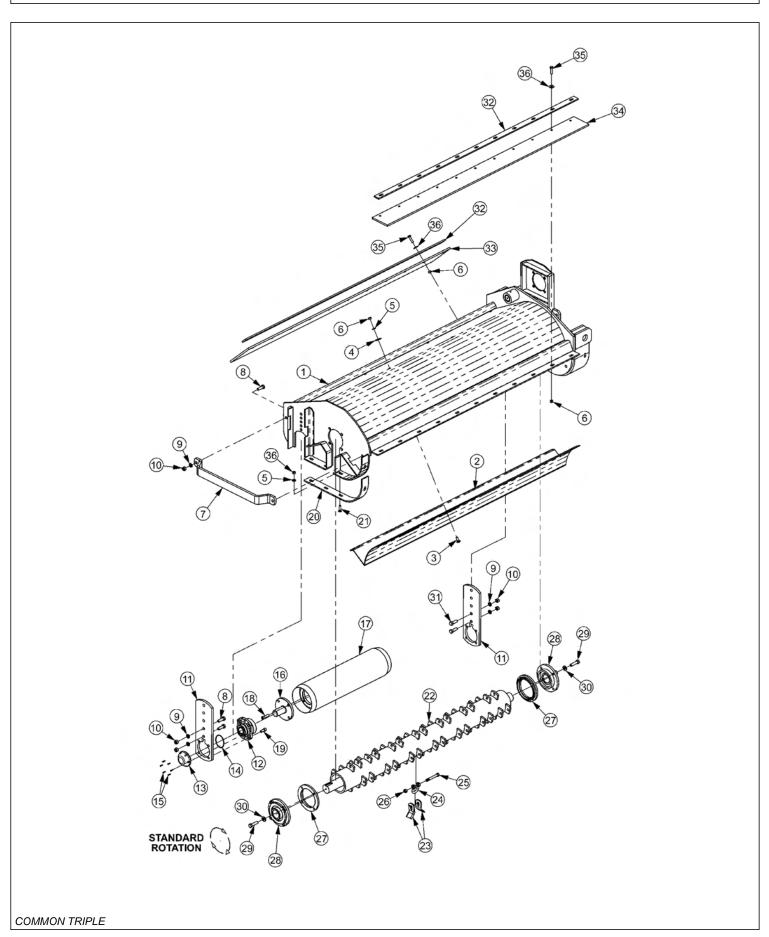
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	DRAFT BEAM - REFER TO TRACTOR PARTS SECTION
2	31211	1	INBOARD CYLINDER
3	25343	1	OUTBOARD CYLINDER - XD
	32215	1	OUTBOARD CYLINDER - SD
4	TF4500A	1	PIVOT ARM
5	TF4506B	1	LIFT ARM - LH
COMMON	I TRIPLE		

# **DRAFT BEAM - LEFT HAND**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
6	TF4507B	1	LIFT ARM - RH
7	TF4514A	2	PIN
8	TF4515	2	PIN,1-1/2" X 6-3/4"
9	TF4519	2	PIN
10	TF1033	2	GREASE ZERK,1/8"
11	6T3207	4	GREASE ZERK,1/4"
12	TB1033	3	CLEVIS PIN
13	06537021	6	ROLL PIN
14	6T3005	1	CYLINDER PIN
15	6T3004	1	R-CLIP
16	22023	1	FLATWASHER
17	TB3010	2	BUSHING
18	31208	1	SPACER
19	23724	3	SHIM
20	22076	1	SPACER (AS REQUIRED)
21	22077	1	SPACER (AS REQUIRED)
23	34244	3	FITTING
24	34396	3	RESTRICTOR
25	6T4258	1	BREATHER
26	22847A	2	BOSS
27	22851	1	HOSE,3/16" X 37"
28	22660	1	HOSE,3/16" X 70"
29	21635	2	CAPSCREW,3/8" X 2-1/4",NC
30	21988	6	LOCKWASHER,3/8"
31	21625	2	HEX NUT,3/8",NC
32	21688	4	CAPSCREW,7/16" X 3-3/4",NC
33	21989	4	LOCKWASHER,7/16"
34	21675	4	HEX NUT,7/16",NC
35	22625	1	GREASE HOSE BRACKET
36	21986	2	LOCKWASHER,1/4"
37	21529	2	CAPSCREW,1/4" X 3/4",NC
38		-	HANGER - REFER TO TRACTOR PARTS SECTION
39		-	MAST - REFER TO TRACTOR PARTS SECTION
40		-	FRAME - REFER TO TRACTOR PARTS SECTION
41	06350000	1	CYLINDER ANCHOR
42	22016	4	FLATWASHER,3/8"
43	21630	4	CAPSCREW,3/8" X 1",NC

# **SUPER DUTY 63IN SIDE FLAIL - STD ROT**



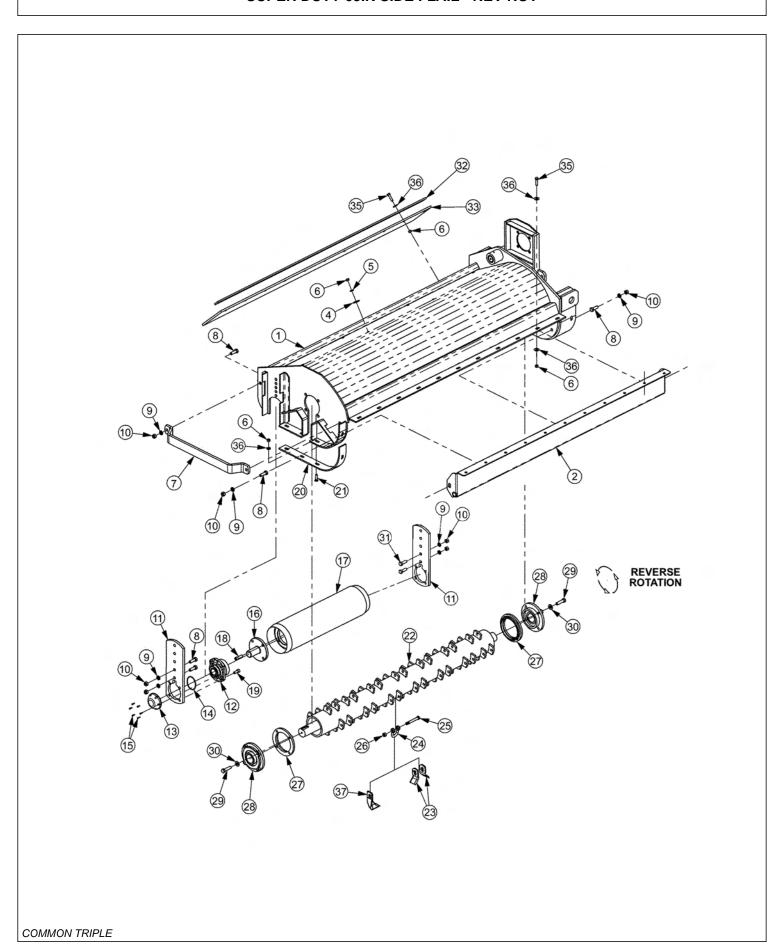
# **SUPER DUTY 63IN SIDE FLAIL - STD ROT**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	32433	1	BONNET,63",STD,T3F (RIGHT FLAIL)
	32224	1	BONNET,63",STD,T3F (LEFT FLAIL)
2	28665A	1	BAFFLE,63",STD ROT
3	6T2283	8	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	8	WASHER,FENDER 3/8"
5	21988	8	LOCKWASHER,3/8"
6	21625	40	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	4	CAPSCREW,1/2" X 1-1/2",NC
9	21990	6	LOCKWASHER,1/2"
10	21725	6	HEX NUT,1/2",NC
11	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
12	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLR
13	06520027	2	CAP,BEARING,GRNDRLR
14	06520029	2	O-RING,2-3/4" X 3/32",AS568A-148
15	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
16	TF1045B	2	STUB SHAFT, GROUND ROLLER
17	28650A	1	GROUND ROLLER,63"
18	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
19	6T2331	8	CAPSCREW,SKT HD,7/16" X 1",NC
20	28086A	2	SKID SHOE,STD DUTY REAR FLAIL
21	30013	10	PLOW BOLT,3/8" X 1-1/4",NC,GR5
	28743	-	CUTTERSHAFT ASSY,STANDARD
22	28642C	1	CUTTERSHAFT,63"
23	33713	64	KNIFE,FLAIL,SHORT,FORGES GORCE
24	TF1020	32	KNIFE MTG CLEVIS,FLAIL
25	34011	32	CAPSCREW,7/16" X 3-7/16",NC,GR8
26	21677	32	NYLOCK NUT,7/16",NC
27	33863	2	STRING GUARD,STD
28	28683	2	BEARING,FLANGE,1-15/16",STD,TSF
29	06530217	8	CAPSCREW,1/2" X 2",NC,L9
30	06533006	8	FLATWASHER,1/2",SAE,L9
31	21732	2	CAPSCREW,1/2" X 1-3/4",NC
32	28700	2	BAR,FLAP,TSF/TBF,63"
33	28701	1	FLAP,DEFLECTOR,TSF,63"
34	06520241	1	FLAP,63",FRONT
35	21632	22	CAPSCREW,3/8" X 1-1/2",NC
36	22016	32	FLATWASHER,3/8"

COMMON TRIPLE

# **SUPER DUTY 63IN SIDE FLAIL - REV ROT**



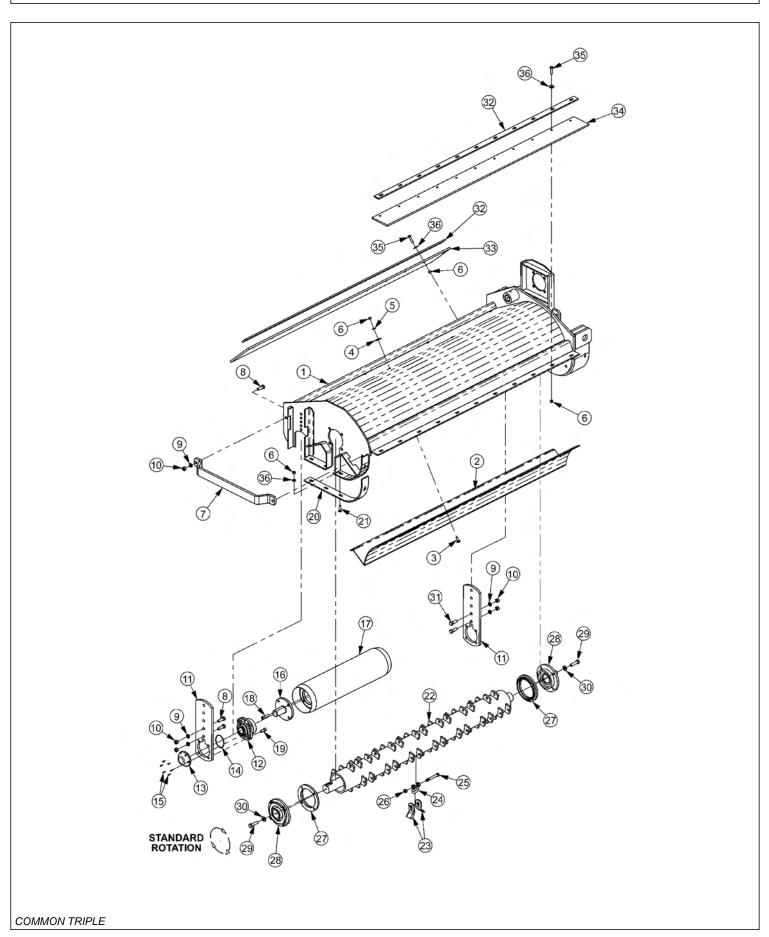
# **SUPER DUTY 63IN SIDE FLAIL - REV ROT**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	32433	1	BONNET,63",STD,T3F (RIGHT FLAIL)
	32224	1	BONNET,63",STD,T3F (LEFT FLAIL)
2	28969A	1	TRASH GUARD,63",REV ROT
3	6T2283	8	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	8	WASHER,FENDER,3/8"
5	21988	8	LOCKWASHER,3/8"
6	21625	40	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	6	CAPSCREW,1/2" X 1-1/2",NC
9	21990	8	LOCKWASHER,1/2"
10	21725	8	HEX NUT,1/2",NC
11	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
12	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLR
13	06520027	2	CAP,BEARING,GRNDRLR
14	06520029	2	O-RING,2-3/4" X 3/32",AS568A-148
15	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
16	TF1045B	2	STUB SHAFT, GROUND ROLLER
17	28650A	1	GROUND ROLLER,63"
18	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
19	6T2331	8	CAPSCREW,SKT HD,7/16" X 1",NC
20	28086A	2	SKID SHOE,STD DUTY REAR FLAIL
21	30013	10	PLOW BOLT,3/8" X 1-1/4",NC,GR5
	28743	-	CUTTERSHAFT ASSY,STANDARD CUT
	28744	-	CUTTERSHAFT ASSY,SMOOTH CUT
22	28642C	1	CUTTERSHAFT,63"
23	33713	64	FLAIL KNIVES (STANDARD CUT)
24	TF1020	32	KNIFE MTG CLEVIS,FLAIL
25	34011	32	CAPSCREW,7/16" X 3-7/16",NC,GR8
26	21677	32	NYLOCK NUT,7/16",NC
27	33863	2	STRING GUARD,STD
28	28683	2	BEARING,FLANGE,1-15/16",STD,TSF
29	06530217	8	CAPSCREW,1/2" X 2",NC,L9
30	06533006	8	FLATWASHER,1/2",SAE,L9
31	21732	2	CAPSCREW,1/2" X 1-3/4",NC
32	28700	1	BAR,FLAP,TSF/TBF,63"
33	28701	1	FLAP,DEFLECTOR,TSF,63"
35	21632	22	CAPSCREW,3/8" X 1-1/2",NC
36	22016	43	FLATWASHER,3/8"
37	28184A	32	FLAIL KNIVES (SMOOTH CUT)

COMMON TRIPLE

# **SUPER DUTY 75IN SIDE FLAIL - STD ROT**

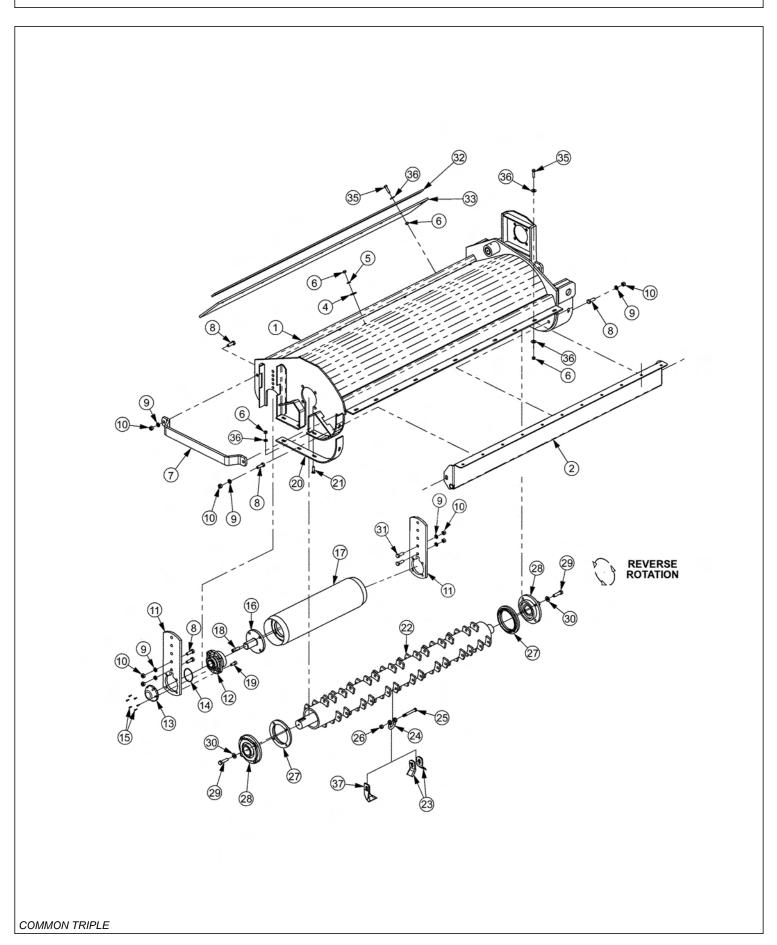


# **SUPER DUTY 75IN SIDE FLAIL - STD ROT**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06320109	1	BONNET,75",STD,T3F (RIGHT FLAIL)
	06320108	1	BONNET,75",STD,T3F (LEFT FLAIL)
2	28737	1	BAFFLE,75",STD ROT-STD
3	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	10	WASHER,FENDER,3/8"
5	21988	10	LOCKWASHER,3/8"
6	21625	46	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	4	CAPSCREW,1/2" X 1-1/2",NC
9	21990	6	LOCKWASHER,1/2"
10	21725	6	HEX NUT,1/2",NC
11	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
12	06520028	2	BEARING,FLANGE,1-3/8,GRNDRLR
13	06520027	2	CAP,BEARING,GRNDRLR
14	06520029	2	O-RING,2-3/4 X 3/32",AS568A-148
15	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
16	TF1045B	2	STUB SHAFT,GROUND ROLLER
17	28738	1	GROUND ROLLER,75"
18	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
19	6T2331	8	CAPSCREW,SKT HD,7/16" X 1",NC
20	28086A	2	SKID SHOE,STD DUTY REAR FLAIL
21	30013	10	PLOW BOLT,3/8" X 1-1/4",NC,GR5
	28747	-	CUTTERSHAFT ASSY,STANDARD
22	28643B	1	CUTTERSHAFT,75"
23	33713	80	KNIFE,FLAIL,SHORT,FORGES GORCE
24	TF1020	40	KNIFE MTG CLEVIS,FLAIL
25	34011	40	CAPSCREW,7/16" X 3-7/16",NC,GR8
26	21677	40	NYLOCK NUT,7/16",NC
	06200639	-	STRING GUARD KIT,SD (ITEMS 27,29,30)
27	33863	2	STRING GUARD,STD
28	28683	2	BEARING,FLANGE,1-15/16",STD,TSF
29	06530217	8	CAPSCREW,1/2" X 2",NC,L9
30	06533006	8	FLATWASHER,1/2",SAE,L9
31	21732	2	CAPSCREW,1/2" X 1-3/4",NC
32	TF1029	2	BAR,FLAP,TSF/TBF,75"
33	TF1016	1	FLAP,DEFLECTOR,TSF,75"
34	06520242	1	FLAP,75",FRONT
35	21632	26	CAPSCREW,3/8" X 1-1/2",NC
36	22016	36	FLATWASHER,3/8"

# **SUPER DUTY 75IN SIDE FLAIL - REV ROT**

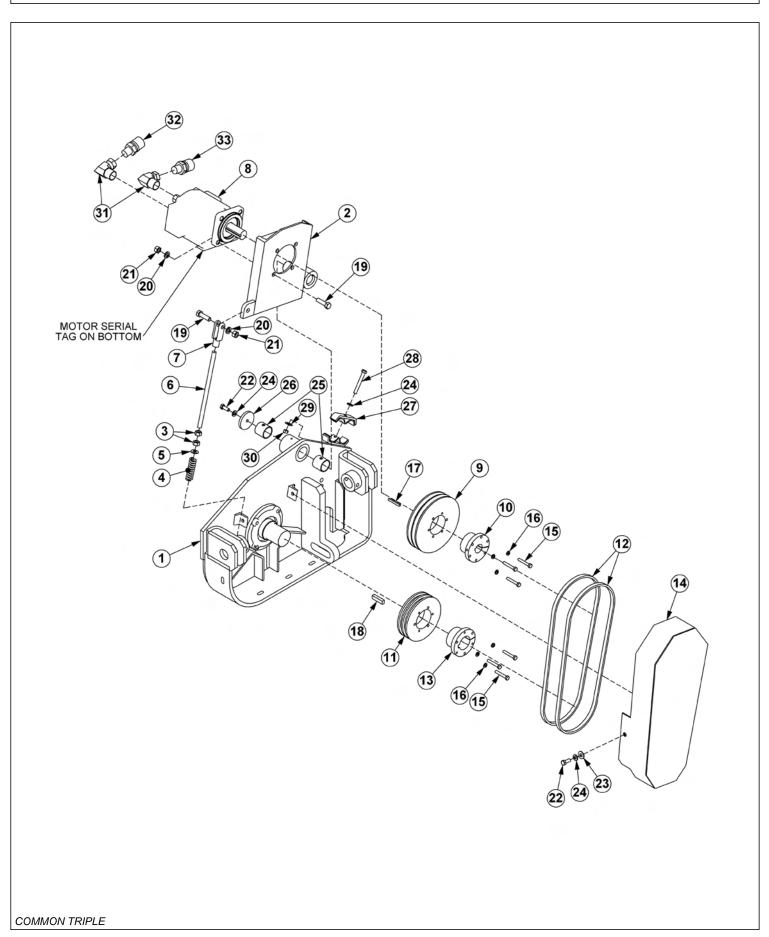


# **SUPER DUTY 75IN SIDE FLAIL - REV ROT**

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06320109	1	BONNET,75,STD,T3F (RIGHT FLAIL)
	06320108	1	BONNET,75,STD,T3F (LEFT FLAIL)
2	28968A	1	TRASH GUARD,75"
3	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	10	WASHER,FENDER,3/8"
5	21988	10	LOCKWASHER,3/8"
6	21625	36	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	6	CAPSCREW,1/2" X 1-1/2",NC
9	21990	8	LOCKWASHER,1/2"
10	21725	8	HEX NUT,1/2",NC
11	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
12	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLR
13	06520027	2	CAP,BEARING,GRNDRLR
14	06520029	2	O-RING,2-3/4" X 3/32",AS568A-148
15	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
16	TF1045B	2	STUB SHAFT, GROUND ROLLER
17	28738	1	GROUND ROLLER,75"
18	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
19	6T2331	8	CAPSCREW,SKT HD,7/16" X 1",NC
20	28086A	2	SKID SHOE,STD DUTY REAR FLAIL
21	30013	10	PLOW BOLT,3/8" X 1-1/4",NC,GR5
	28747	-	CUTTERSHAFT ASSY,STANDARD (22, 23, 24, 25 & 26)
	28748	-	CUTTERSHAFT ASSY,SMOOTH (22, 23, 24, 25 & 37)
22	28643B	1	CUTTERSHAFT,75"
23	33713	80	FLAIL KNIVES (STANDARD CUT)
24	TF1020	40	KNIFE MTG CLEVIS,FLAIL
25	34011	40	CAPSCREW,7/16" X 3-7/16",NC,GR8
26	21677	40	NYLOCK NUT,7/16",NC
	06200639	-	STRING GUARD KIT, SD (ITEMS 27,29,30)
27	33863	2	STRING GUARD,STD
28	28683	2	BEARING,FLANGE,1-15/16",STD,TSF
29	06530217	8	CAPSCREW,1/2" X 2",NC,L9
30	06533006	8	FLATWASHER,1/2",SAE,L9
31	21732	2	CAPSCREW,1/2" X 1-3/4",NC
32	TF1029	1	BAR,FLAP,TSF/TBF,75"
33	TF1016	1	FLAP,DEFLECTOR,TSF,75"
35	21632	22	CAPSCREW,3/8" X 1-1/2",NC
36	22016	46	FLATWASHER,3/8"
37	28184A	40	FLAIL KNIVES (SMOOTH CUT)

# SUPER DUTY SIDE FLAIL DRIVE ASSY



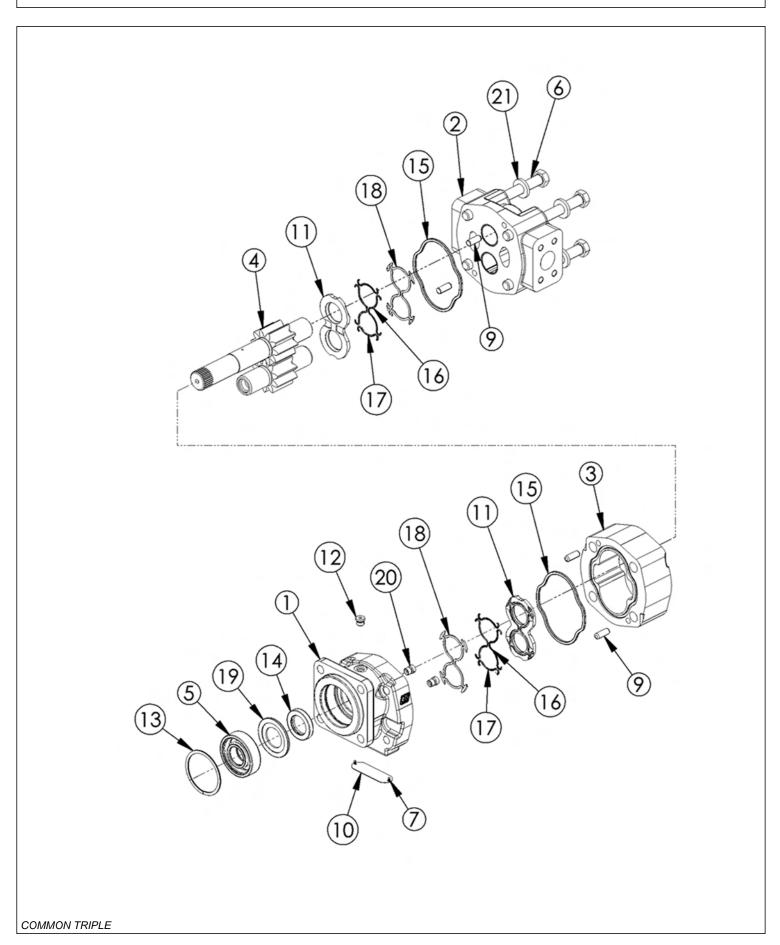
# SUPER DUTY SIDE FLAIL DRIVE ASSY

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1		-	BONNET *REFER TO HEAD PARTS
2	32287	1	MOTOR CHANNEL (RIGHT FLAIL)
	32286	1	MOTOR CHANNEL (LEFT FLAIL)
3	21700	2	HEX NUT, 1/2", NF
4	TF3620A	1	SPRING, TENSIONER
5	27938	1	BUSHING,MACH,1ODX1/2IDX14GA.
6	40496	1	ROD,THREADED,1/2NFX8
7	PT3611A	1	CLEVIS,6"
8	06504065	1	MOTOR, M350-1 GEAR
9	TF3041	1	SHEAVE,6.7
10	TF3013	1	BUSHING,QD,SK 1-1/4,1/4 KEY
11	TF3040	1	SHEAVE,6.3
12	32252	2	V-BELT,(470)
13	28723	1	BUSHING,QD,SK 1-15/16
14	32569	1	GUARD,BELT
15	21584	6	CAPSCREW, 5/16 X 2,NC
16	21987	6	LOCKWASHER, 5/16"
17	06504028	1	KEY (KEY FROM MOTOR)
18	26142A	1	KEY,1/2 X 1/2 X 2
19	21732	5	CAPSCREW, 1/2 X 1 3/4,NC
20	21990	5	LOCKWASHER, 1/2"
21	21725	5	HEX NUT,1/2 NC
22	21630	3	CAPSCREW, 3/8 X 1,NC
23	22016	2	FLATWASHER,3/8"
24	21988	4	LOCKWASHER, 3/8"
25	27580	2	BEARING,DX,1-1/2",GRM
26	28682	1	RETAINING,WASHER 2-1/2 X 5/16
27	TB3031	1	CLAMP,TUBE
28	21638	1	CAPSCREW,3/8" X 3",NC
29	22016	1	FLATWASHER,3/8",GR8
30	21625	1	HEX NUT,3/8",NC
31	34117	2	ELBOW,1MOR X 1MJIC
32		-	HOSE (RETURN FOR STANDARD ROTATION)
33		-	HOSE (PRESSURE OF STANDARD ROTATION)

COMMON TRIPLE

# SUPER DUTY SIDE FLAIL MOTOR BREAKDOWN

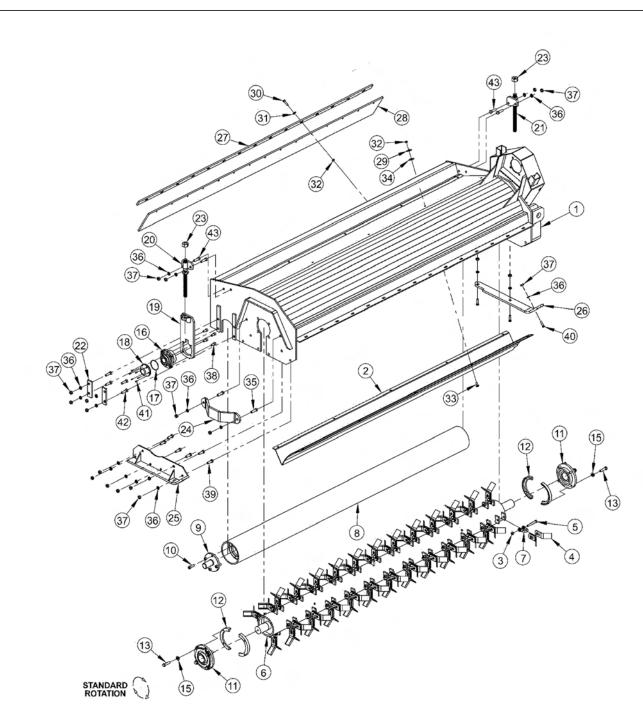


# SUPER DUTY SIDE FLAIL MOTOR BREAKDOWN

#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	06504065	-	MOTOR ASSEMBLY 350 - TSF
1	06504039	1	SHAFT END COVER
2	06504060	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	029661932	1	SEAL RETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
	06504023	-	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)

# **EXTREME DUTY 60IN SIDE FLAIL - STD ROT**

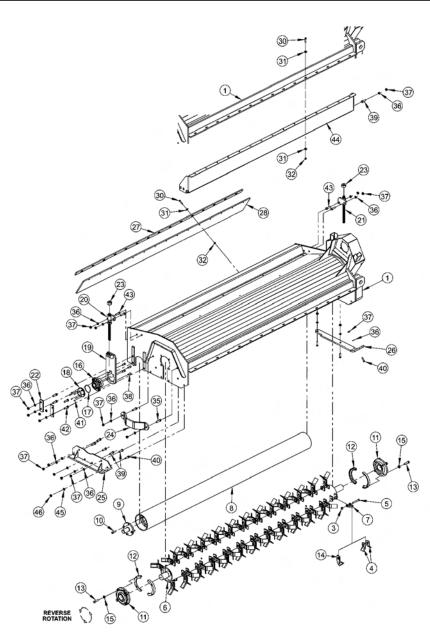


ITEM	PART NO.	QTY.	DESCRIPTION
1	33913	1	BONNET,60,HD,T3F (RIGHT FLAIL)
	06320015	1	BONNET,60,HD,T3F (LEFT FLAIL)
2	TF1802A	1	BAFFLE,FLAIL,60HD,STD ROT
	TF1807A	-	CUTSHFT ASSY,60HD,STD KNIVES (ITEMS 3, 4, 5, 6 & 7)
3	21677	32	NYLOCK NUT,7/16 NC
4	33714	64	KNIFE,FLAIL,STANDARD
COMMON	N TRIPI F		

## **EXTREME DUTY 60IN SIDE FLAIL - STD ROT**

ITEM	PART NO.	QTY.	DESCRIPTION
5	34011	32	CAPSCREW,7/16X3 7/16,NC GR8
6	TF1807	1	CUTTERSHAFT,60,HD
7	TF1020	32	KNIFE MTG CLEVIS,FLAIL
8	30277	1	GROUND ROLLER,60
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	-	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	8	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	23272A	1	SKID SHOE,INNER (RIGHT FLAIL)
	27526	1	SKID SHOE,INNER (LEFT FLAIL)
27	TF1803	1	BAR,FLAP,TSF/TRF 60
28	TF1804	1	FLAP,DEFLECTOR,TSF/TRF 60
29	21988	10	LOCKWASHER,3/8
30	21632	10	CAPSCREW,3/8 X 1-1/2 NC
31	22016	10	FLATWASHER,3/8
32	21625	18	HEX NUT,3/8 NC
33	6T2283	8	CARRIAGE BOLT,3/8 X 1 NC
34	6T2615	8	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

### **EXTREME DUTY 60IN SIDE FLAIL - REV ROT**

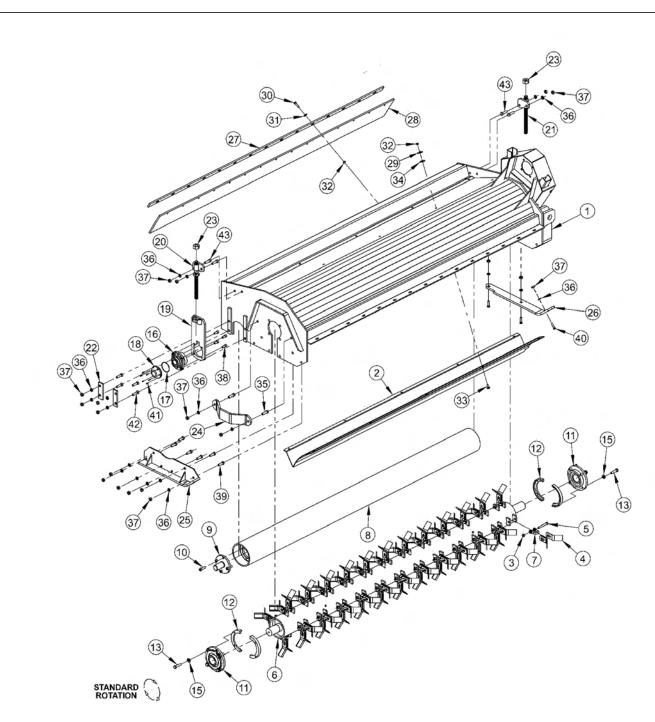


ITEM	PART NO.	QTY.	DESCRIPTION
1	33913	1	BONNET,60,HD,T3F (RIGHT FLAIL)
	06320015	1	BONNET,60,HD,T3F (LEFT FLAIL)
2	TF1807A	-	CUTSHFT ASSY,60HD (STANDARD CUT) (ITEMS 3, 4, 5, 6 & 7)
	TF1807B	-	CUTSHFT ASSY,60HD (SMOOTH CUT) (ITEMS 3, 5, 6, 7 & 14)
3	21677	32	NYLOCK NUT,7/16 NC
4	33714	64	KNIFE,FLAIL (STANDARD CUT)
5	34011	32	CAPSCREW,7/16X3 7/16,NC GR8
6	TF1807	1	CUTTERSHAFT,60,HD
7	TF1020	32	KNIFE MTG CLEVIS,FLAIL
8	30277	1	GROUND ROLLER,60

## **EXTREME DUTY 60IN SIDE FLAIL - REV ROT**

	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	-	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	32	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	23272A	1	SKID SHOE, INNER (RIGHT FLAIL)
		27526	1	SKID SHOE, INNER (LEFT FLAIL)
	27	TF1803	1	BAR,FLAP,TSF/TRF 60
	28	TF1804	1	FLAP,DEFLECTOR,TSF/TRF 60
	30	21632	20	CAPSCREW,3/8 X 1-1/2 NC
	31	22016	30	FLATWASHER,3/8
	32	21625	20	HEX NUT,3/8 NC
	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	TF1801	1	TRASH GUARD,60REV ROT-HD
	45	22018	1	FLATWASHER,1/2,WIDE
	46	21727	1	NYLOCK NUT,1/2 NC
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### **EXTREME DUTY 75IN SIDE FLAIL - STD ROT**

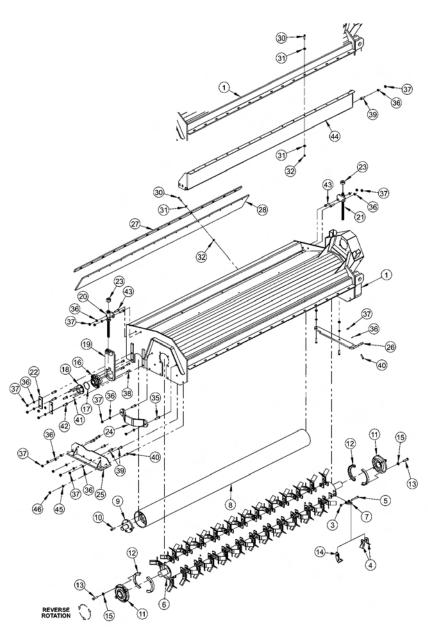


ITEM	PART NO.	QTY.	DESCRIPTION
1	21499A	1	BONNET,75,HD,T3F (RIGHT FLAIL)
	21478A	1	BONNET,75,HD,T3F (LEFT FLAIL)
2	TF1402A	1	BAFFLE,FLAIL,75HD,STD ROT
	TF1002A	-	CUTSHFT ASSY,75HD,STD KNIVES (ITEMS 3, 4, 5, 6 & 7)
3	21677	40	NYLOCK NUT,7/16 NC
4	33714	80	KNIFE,FLAIL,STANDARD
COMMON	N TRIPI F		

## **EXTREME DUTY 75IN SIDE FLAIL - STD ROT**

ITEM	PART NO.	QTY.	DESCRIPTION
5	34011	40	CAPSCREW,7/16X3 7/16,NC GR8
6	TF1002	1	CUTTERSHAFT,75,HD
7	TF1020	40	KNIFE MTG CLEVIS,FLAIL
8	28738	1	GROUND ROLLER,75
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	-	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	8	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	23272A	1	SKID SHOE,INNER (RIGHT FLAIL)
	27526	1	SKID SHOE,INNER (LEFT FLAIL)
27	TF1029	1	BAR,FLAP,TSF/TRF 75
28	TF1016	1	FLAP, DEFLECTOR, TSF/TRF 75
29	21988	10	LOCKWASHER,3/8
30	21632	13	CAPSCREW,3/8 X 1-1/2 NC
31	22016	13	FLATWASHER,3/8
32	21625	23	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

## **EXTREME DUTY 75IN SIDE FLAIL - REV ROT**



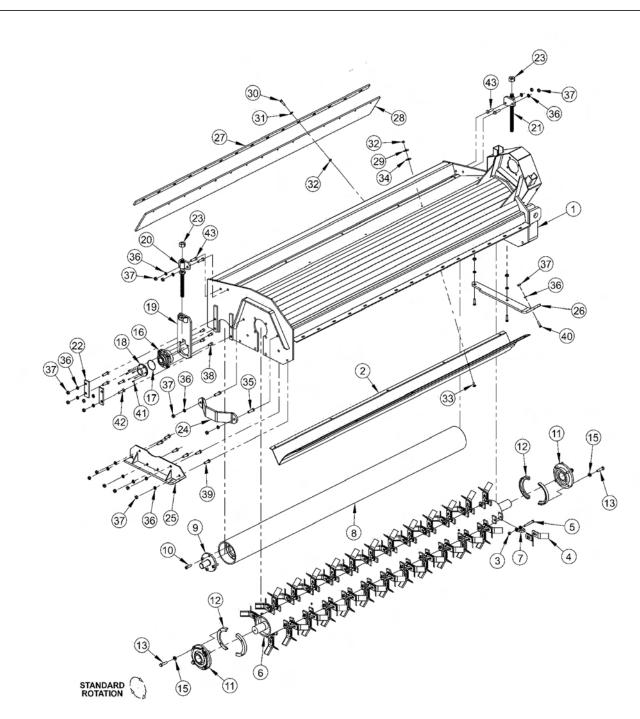
ITEM	PART NO.	QTY.	DESCRIPTION
1	21499A	1	BONNET,75,HD,T3F (RIGHT FLAIL)
	21478A	1	BONNET,75,HD,T3F (LEFT FLAIL)
2	TF1002A	-	CUTSHFT ASSY,75HD (STANDARD CUT) (ITEMS 3, 4, 5, 6 & 7)
	TF1002B	-	CUTSHFT ASSY,75HD (SMOOTH CUT) (ITEMS 3, 5, 6, 7 & 14)
3	21677	40	NYLOCK NUT,7/16 NC
4	33714	80	KNIFE,FLAIL (STANDARD CUT)
5	34011	40	CAPSCREW,7/16X3 7/16,NC GR8
6	TF1002	1	CUTTERSHAFT,75,HD
7	TF1020	40	KNIFE MTG CLEVIS,FLAIL
8	28738	1	GROUND ROLLER,75

COMMON TRIPLE

## **EXTREME DUTY 75IN SIDE FLAIL - REV ROT**

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	-	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	40	KNIFE,FLAIL (SMOOTH CUT)
15	06533006	8	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	23272A	1	SKID SHOE, INNER (RIGHT FLAIL)
	27526	1	SKID SHOE, INNER (LEFT FLAIL)
27	TF1029	1	BAR,FLAP,TSF/TRF 75
28	TF1016	1	FLAP, DEFLECTOR, TSF/TRF 75
30	21632	26	CAPSCREW,3/8 X 1-1/2 NC
31	22016	39	FLATWASHER,3/8
32	21625	26	HEX NUT,3/8 NC
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
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	TF1403	1	TRASH GUARD,75REV ROT-HD
45	22018	1	FLATWASHER,1/2,WIDE
46	21727	1	NYLOCK NUT,1/2 NC

### **EXTREME DUTY 90IN SIDE FLAIL - STD ROT**

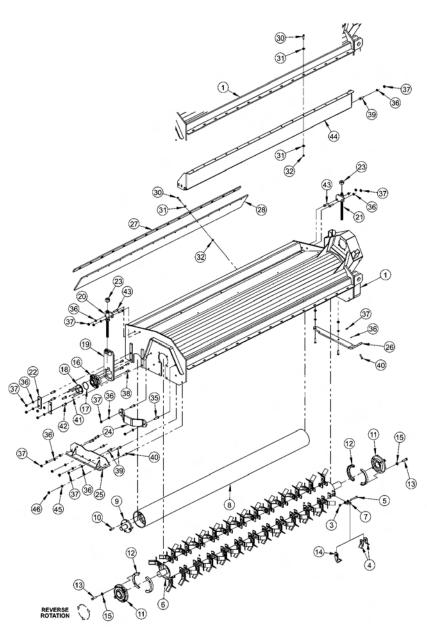


ITEM	PART NO.	QTY.	DESCRIPTION
1	22083A	1	BONNET,90,HD,T3F (RIGHT FLAIL)
	22084A	1	BONNET,90,HD,T3F (LEFT FLAIL)
2	TF1502A	1	BAFFLE,FLAIL,90HD,STD ROT
	TF1102A	-	CUTSHFT ASSY,90HD,STD KNIVES (ITEMS 3, 4, 5, 6 & 7)
3	21677	48	NYLOCK NUT,7/16 NC
4	33714	96	KNIFE,FLAIL,STANDARD
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## **EXTREME DUTY 90IN SIDE FLAIL - STD ROT**

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	-	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	8	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	23272A	1	SKID SHOE, INNER (RIGHT FLAIL)
	27526	1	SKID SHOE, INNER (LEFT FLAIL)
27	TF1135	1	BAR,FLAP,TSF/TRF 90
28	TF1116	1	FLAP,DEFLECTOR,TSF/TRF 90
29	21988	10	LOCKWASHER,3/8
30	21632	15	CAPSCREW,3/8 X 1-1/2 NC
31	22016	15	FLATWASHER,3/8
32	21625	25	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

## **EXTREME DUTY 90IN SIDE FLAIL - REV ROT**



ITEM	PART NO.	QTY.	DESCRIPTION
1	22083A	1	BONNET,90,HD,ASSY (RIGHT FLAIL)
	22084A	1	BONNET,90,HD,ASSY (LEFT FLAIL)
2	TF1102A	-	CUTSHFT ASSY,90HD (STANDARD CUT) (ITEMS 3, 4, 5, 6 & 7)
	TF1102B	-	CUTSHFT ASSY,90HD (SMOOTH CUT) (ITEMS 3, 5, 6, 7 & 14)
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

COMMON TRIPLE

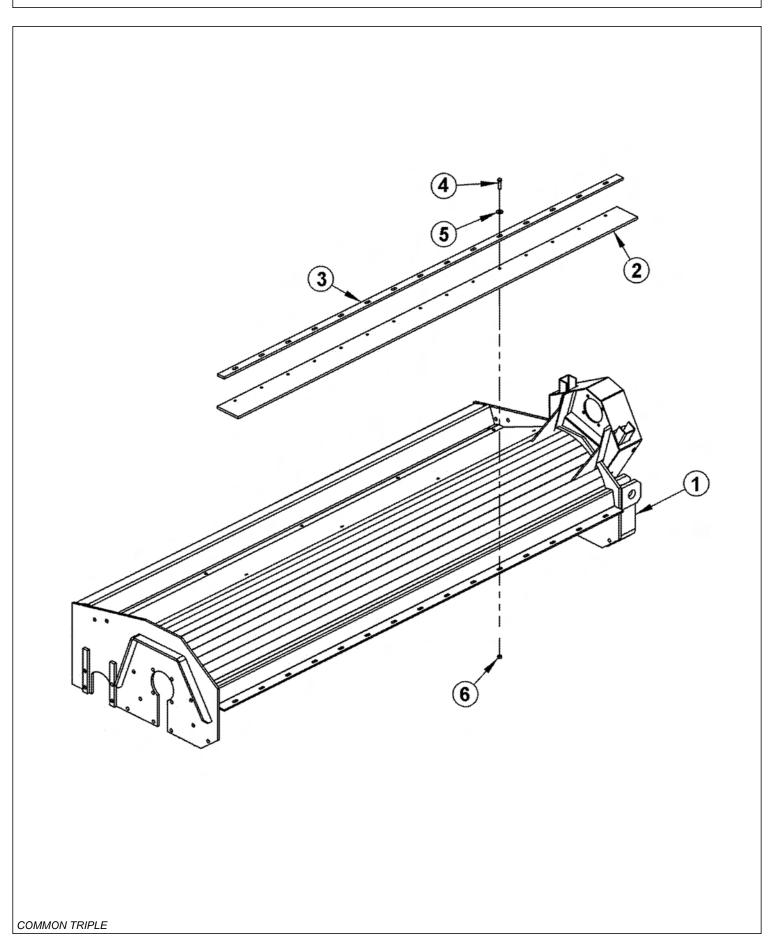
## **EXTREME DUTY 90IN SIDE FLAIL - REV ROT**

### 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	-	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	8	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	23272A	1	SKID SHOE, INNER (RIGHT FLAIL)
	27526	1	SKID SHOE, INNER (LEFT FLAIL)
27	TF1135	1	BAR,FLAP,TSF/TRF 90
28	TF1116	1	FLAP,DEFLECTOR,TSF/TRF 90
30	21632	30	CAPSCREW,3/8 X 1-1/2 NC
31	22016	45	FLATWASHER,3/8
32	21625	30	HEX NUT,3/8 NC
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

COMMON TRIPLE

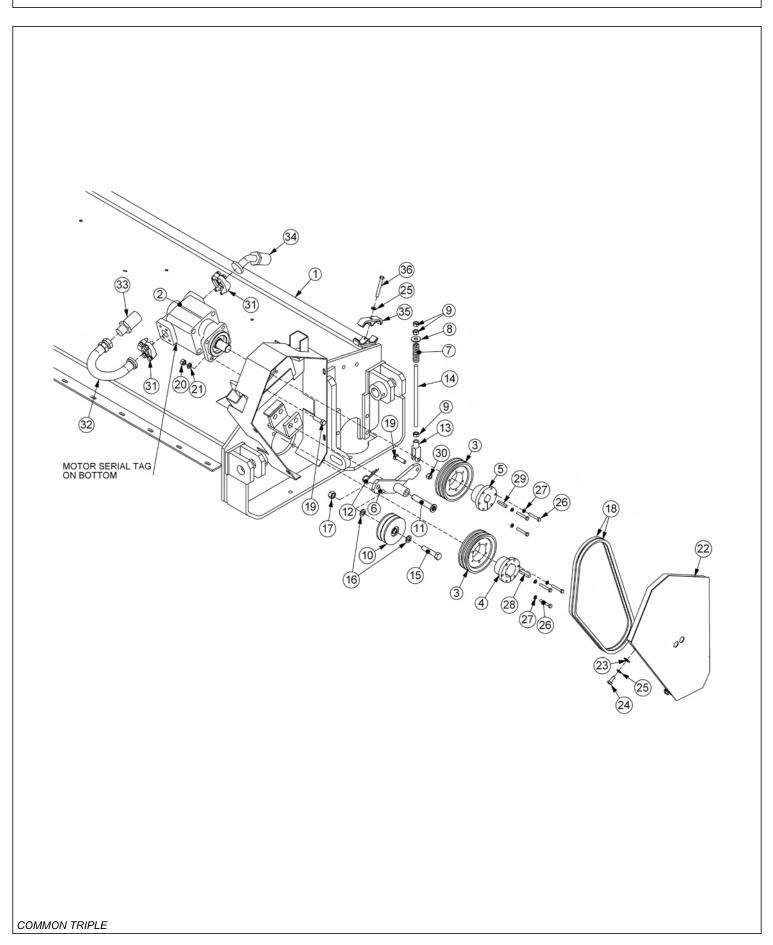
# FRONT FLAPS, XD FLAIL - STANDARD ROTATION



# FRONT FLAPS, XD FLAIL - STANDARD ROTATION

ITEM	PART NO.	QTY.	DESCRIPTION
1		-	BONNET *REFER TO HEAD ASSEMBLY
2	06520240	1	FLAP,FRONT,60IN
	06520242	1	FLAP,FRONT,75IN
	06520243	1	FLAP,FRONT,90IN
3	TF1803	1	BAR,FLAP,60IN
	TF1029	1	BAR,FLAP,75IN
	TF1135	1	BAR,FLAP,90IN
4	21632	10	CAPSCREW,3/8" X 1-1/2",NC (60IN FLAIL)
		13	CAPSCREW,3/8" X 1-1/2",NC (75IN FLAIL)
		15	CAPSCREW,3/8" X 1-1/2",NC (90IN FAIL)
5	22016	20	FLATWASHER,3/8" (60IN FLAIL)
		26	FLATWASHER,3/8" (75IN FLAIL)
		30	FLATWASHER,3/8" (90IN FLAIL)
6	21625	10	HEX NUT,3/8",NC (60IN FLAIL)
		13	HEX NUT,3/8",NC (75IN FLAIL)
		15	HEX NUT,3/8",NC (90IN FLAIL)

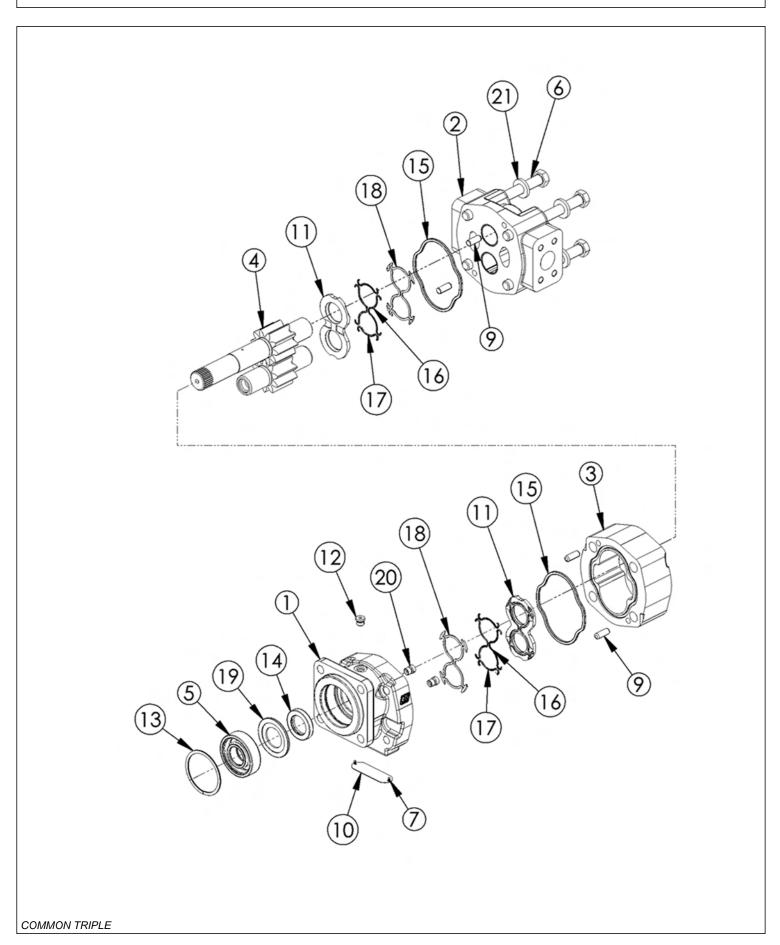
### **EXTREME DUTY SIDE FLAIL DRIVE ASSY**



## EXTREME DUTY SIDE FLAIL DRIVE ASSY

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	-	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"X4-1/4"
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
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
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

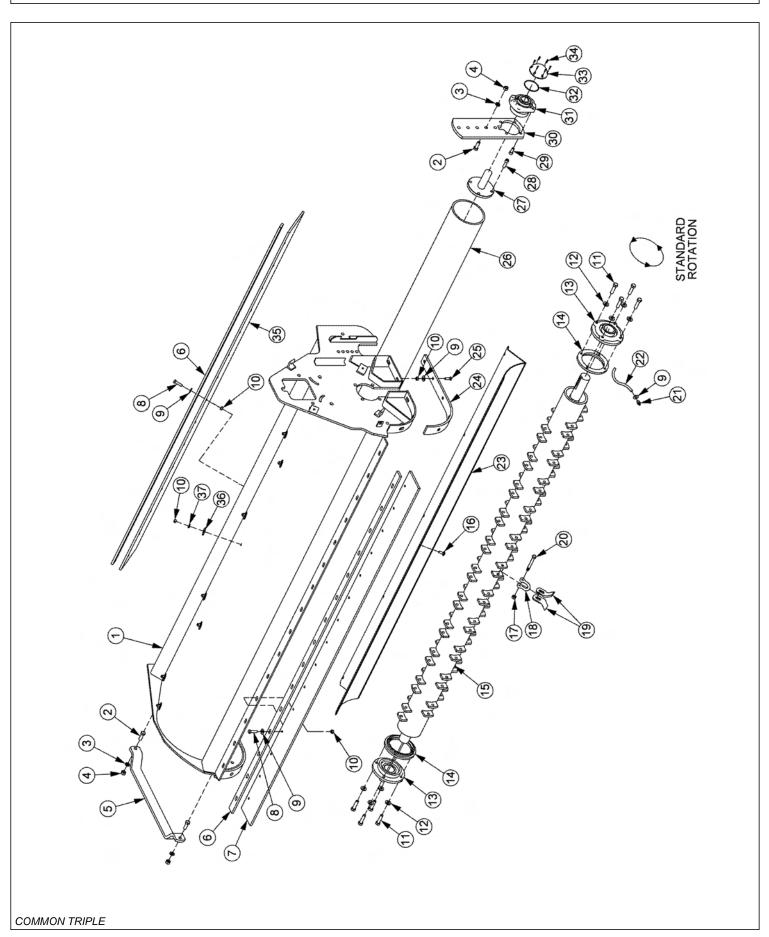
### **EXTREME DUTY SIDE FLAIL MOTOR BREAKDOWN**



## EXTREME DUTY SIDE FLAIL MOTOR BREAKDOWN

ITEM	PART NO.	QTY.	DESCRIPTION
	06504066	-	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	-	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)

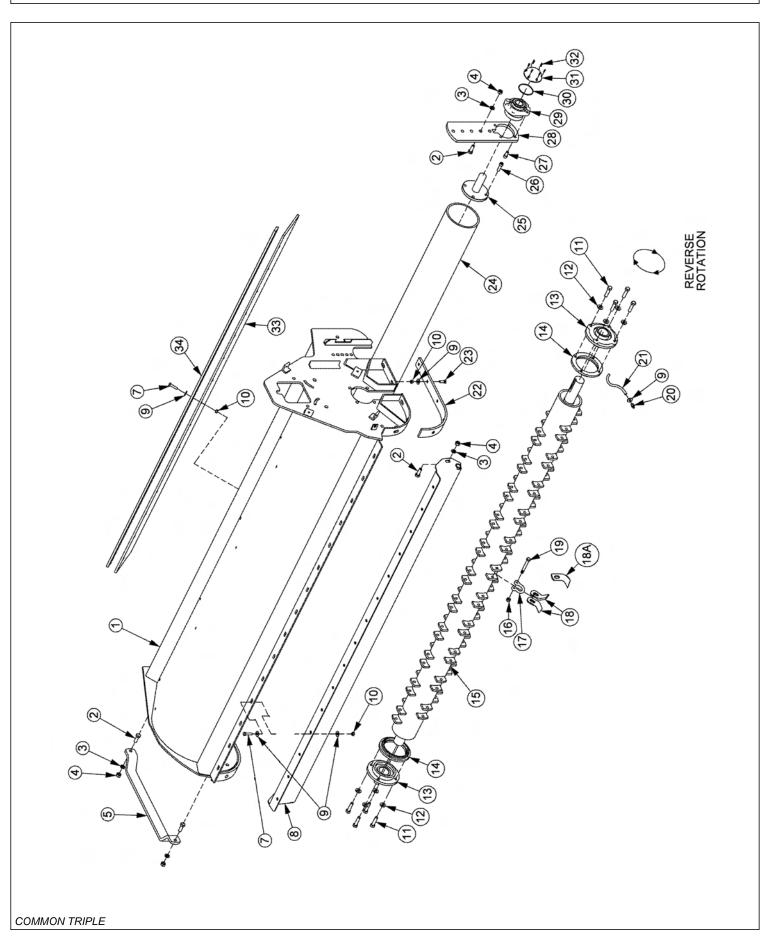
### **SUPER DUTY 75IN REAR FLAIL - STD ROT**



## **SUPER DUTY 75IN REAR FLAIL - STD ROT**

ITEM	PART NO.	QTY.	DESCRIPTION	
	06742090	-	75" REAR FLAIL,SD,STD ROT	
1	06320134	1	BONNET,75",STD,ROSTA	
2	21731	6	CAPSCREW,1/2" X 1-1/2",NC	
3	21990	6	LOCKWASHER,1/2"	
4	21725	6	HEX NUT,1/2",NC	
5	27975A	1	GUARD,CUTTERSHAFT	
6	TF1029	2	BAR,FLAP,TSF/TRF 75"	
7	06520242	1	FLAP,75",FRONT	
8	21632	20	CAPSCREW,3/8" X 1-1/2",NC	
9	22016	37	FLATWASHER,3/8",GR8	
10	21625	46	HEX NUT,3/8",NC	
	06200639	-	KIT,STRING GUARD (ITEMS 11, 12 & 14)	
11	06530217	8	CAPSCREW,3/4" X 2-1/2",GR8,NC	
12	06533006	8	FLATWASHER,1/2",SAE,L9	
13	28683	2	BEARING,FLANGE,1-15/16",STD	
14	33863	2	STRING GUARD,STD	
	28747	-	CUTTERSHAFT ASSY (STANDARD CUT) (ITEMS 15, 17, 18, 19 & 20)	
15	28643B	1	CUTTERSHAFT,75"STD,W/EARS	
16	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC	
17	21677	40	NYLOCK NUT,7/16",NC	
18	TF1020	40	KNIFE MTG CLEVIS,FLAIL	
19	33713	80	KNIFE,FLAIL (STANDARD CUT)	
20	34011	40	CAPSCREW,7/16" X 3-7/16",GR8,NC	
21	TF1033	1	GREASE ZERK,1/8" FPT	
22	TF1032	1	GRS HOSE,3/16" X 8"	
23	28737	1	BAFFLE,75",STD ROT-STD	
24	28086A	2	SKID SHOE,STD DUTY,REAR FLAIL	
25	30013	10	PLOW BOLT,3/8" X 1-1/4",GR5,NC	
26	28738	1	GROUND ROLLER,75"	
27	TF1045B	2	STUB SHAFT,GROUND ROLLER	
28	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC	
29	6T2331	4	CAPSCREW,SKT HD,7/16" X 1",NC	
30	28735	2	GROUND ROLLER ADJ BRKT,STD DTY	
31	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLLR	
32	06520029	2	O-RING,2-3/4" X 3/32"	
33	06520027	2	CAP,BEARING,GRNDRLLR	
34	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS	
35	TF1016	1	FLAP,DEFLECTOR,75"	
36	6T2615	10	WASHER,FENDER,3/8"	
37	21988	10	LOCKWASHER,3/8"	

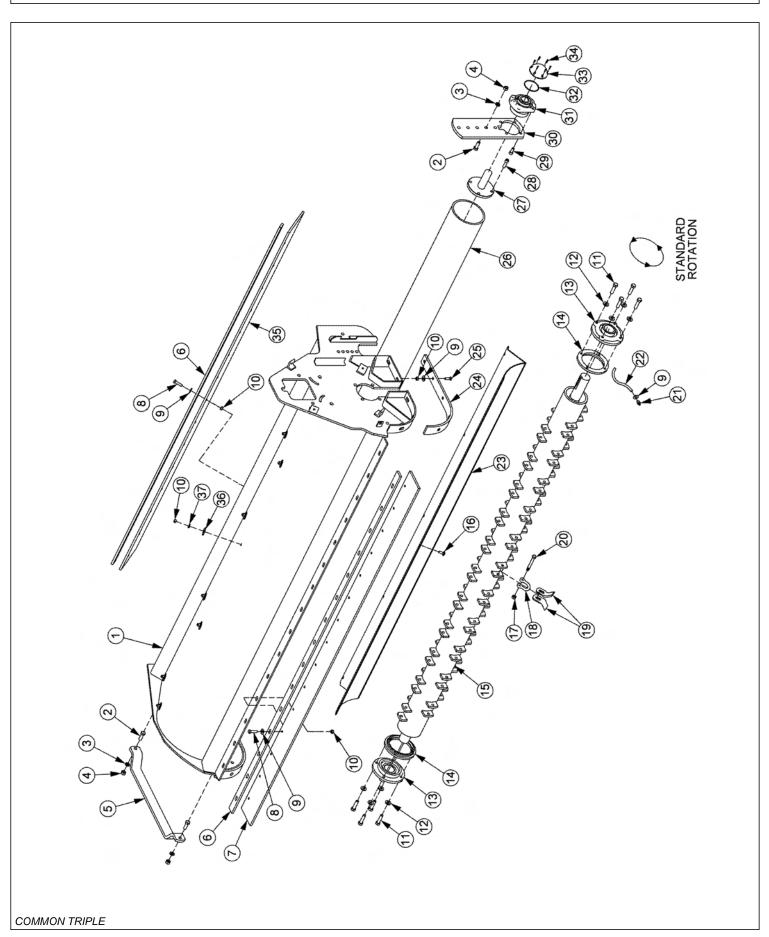
## **SUPER DUTY 75IN REAR FLAIL - REV ROT**



## **SUPER DUTY 75IN REAR FLAIL - REV ROT**

ITEM	PART NO.	QTY.	DESCRIPTION
	06742091	-	75IN REAR FLAIL,SD,RR (STANDARD CUT)
	06742092	-	75IN REAR FLAIL,SD,RR (SMOOTH CUT)
1	06320134	1	BONNET,75",STD,ROSTA
2	21731	8	CAPSCREW,1/2" X 1-1/2",NC
3	21990	8	LOCKWASHER,1/2"
4	21725	8	HEX NUT,1/2",NC
5	27975A	1	GUARD,CUTTERSHAFT
7	21632	20	CAPSCREW,3/8" X 1-1/2",NC
8	28968A	1	TRASH GUARD,75"
9	22016	50	FLATWASHER,3/8",GR8
10	21625	40	HEX NUT,3/8",NC
	06200639	-	KIT,STRING GUARD (ITEMS 11, 12 & 14)
11	06530217	8	CAPSCREW,3/4" X 2-1/2",GR8,NC
12	06533006	8	FLATWASHER,1/2",SAE,L9
13	28683	2	BEARING,FLANGE,1-15/16",STD
14	33863	2	STRING GUARD,STD
	28747	-	CUTTERSHAFT, ASSY (STANDARD CUT) (ITEMS 15, 16, 17, 18 & 19)
	28748	-	CUTTERSHAFT, ASSY (SMOOTH CUT) (ITEMS 15, 16, 17, 18A & 19)
15	28643B	1	CUTTERSHAFT,75"STD,W/EARS
16	21677	40	NYLOCK NUT,7/16",NC
17	TF1020	40	KNIFE MTG CLEVIS,FLAIL
18	33713	80	KNIFE,FLAIL (STANDARD CUT)
18A	28184A	40	KNIFE,FLAIL (SMOOTH CUT)
19	34011	40	CAPSCREW,7/16" X 3-7/16",GR8,NC
20	TF1033	1	GREASE ZERK,1/8" FPT
21	TF1032	1	GRS HOSE,3/16" X 8"
22	28086A	2	SKID SHOE,STD DUTY,REAR FLAIL
23	30013	10	PLOW BOLT,3/8" X 1-1/4",GR5,NC
24	28738	1	GROUND ROLLER,75"
25	TF1045B	2	STUB SHAFT,GROUND ROLLER
26	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
27	6T2331	4	CAPSCREW,SKT HD,7/16" X 1",NC
28	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
29	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLLR
30	06520029	2	O-RING,2-3/4" X 3/32"
31	06520027	2	CAP,BEARING,GRNDRLLR
32	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
33	TF1016	1	FLAP,DEFLECTOR,75"
34	TF1029	1	BAR,FLAP,TSF/TRF,75"

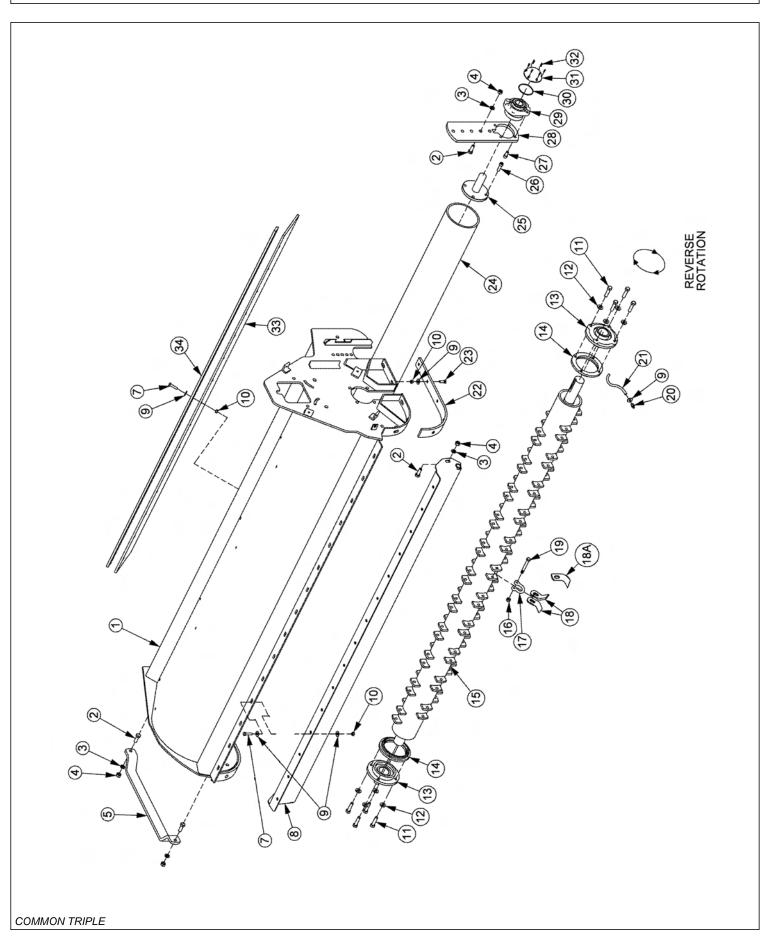
### **SUPER DUTY 90IN REAR FLAIL - STD ROT**



## **SUPER DUTY 90IN REAR FLAIL - STD ROT**

ITEM	PART NO.	QTY.	DESCRIPTION
	06742080	-	90" REAR FLAIL,SD,STD ROT
1	06320115	1	BONNET,90",STD,ROSTA
2	21731	6	CAPSCREW,1/2" X 1-1/2",NC
3	21990	6	LOCKWASHER,1/2"
4	21725	6	HEX NUT,1/2",NC
5	27975A	1	GUARD,CUTTERSHAFT
6	TF1135	2	BAR,FLAP,TSF/TRF 90"
7	06520243	1	FLAP,90",FRONT
8	21632	20	CAPSCREW,3/8" X 1-1/2",NC
9	22016	41	FLATWASHER,3/8",GR8
10	21625	50	HEX NUT,3/8",NC
	06200639	-	KIT,STRING GUARD (ITEMS 11, 12 & 14)
11	06530217	8	CAPSCREW,3/4" X 2-1/2",GR8,NC
12	06533006	8	FLATWASHER,1/2",SAE,L9
13	28683	2	BEARING,FLANGE,1-15/16",STD
14	33863	2	STRING GUARD,STD
	28745	-	CUTTERSHAFT ASSY (ITEMS 15, 17, 18, 19 & 20)
15	27964C	1	CUTTERSHAFT,90"STD,W/EARS
16	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
17	21677	48	NYLOCK NUT,7/16",NC
18	TF1020	48	KNIFE MTG CLEVIS,FLAIL
19	33713	96	KNIFE,FLAIL,SHORT
20	34011	48	CAPSCREW,7/16" X 3-7/16",GR8,NC
21	TF1033	1	GREASE ZERK,1/8" FPT
22	TF1032	1	GRS HOSE,3/16" X 8"
23	27971	1	BAFFLE,90",STD ROT-STD
24	28086A	2	SKID SHOE,STD DUTY,REAR FLAIL
25	30013	10	PLOW BOLT,3/8" X 1-1/4",GR5,NC
26	27972A	1	GROUND ROLLER,90"
27	TF1045B	2	STUB SHAFT, GROUND ROLLER
28	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
29	6T2331	4	CAPSCREW,SKT HD,7/16" X 1",NC
30	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
31	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLLR
32	06520029	2	O-RING,2-3/4" X 3/32"
33	06520027	2	CAP,BEARING,GRNDRLLR
34	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
35	TF1116	1	FLAP,DEFLECTOR,90"
36	6T2615	10	WASHER,FENDER,3/8"
37	21988	10	LOCKWASHER,3/8"

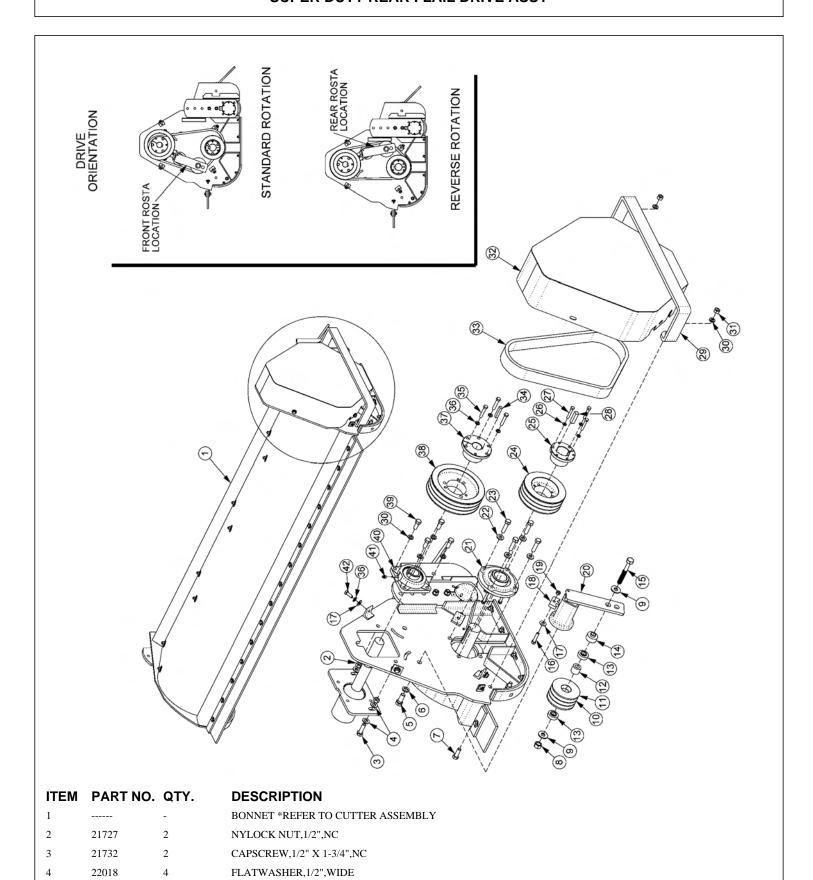
## **SUPER DUTY 90IN REAR FLAIL - REV ROT**



## **SUPER DUTY 90IN REAR FLAIL - REV ROT**

ITEM	PART NO.	QTY.	DESCRIPTION
	06742083	-	90" REAR FLAIL,SD (STANDARD CUT)
	06742084	-	90" REAR FLAIL,SD (SMOOTH CUT)
1	06320115	1	BONNET,90",STD,ROSTA
2	21731	8	CAPSCREW,1/2" X 1-1/2",NC
3	21990	8	LOCKWASHER,1/2"
4	21725	8	HEX NUT,1/2",NC
5	27975A	1	GUARD,CUTTERSHAFT
7	21632	20	CAPSCREW,3/8" X 1-1/2",NC
8	28967A	1	TRASH GUARD,90"
9	22016	56	FLATWASHER,3/8",GR8
10	21625	40	HEX NUT,3/8",NC
	06200639	-	KIT,STRING GUARD (ITEMS 11, 12 & 14)
11	06530217	8	CAPSCREW,3/4" X 2-1/2",GR8,NC
12	06533006	8	FLATWASHER,1/2",SAE,L9
13	28683	2	BEARING,FLANGE,1-15/16",STD
14	33863	2	STRING GUARD,STD
	28745	-	CUTTERSHAFT ASSY (STANDARD CUT) (ITEMS 15, 16, 17, 18 & 19)
	28746	-	CUTTERSHAFT ASSY (SMOOTH CUT) (ITEMS 15, 16, 17, 18A & 19)
15	27964C	1	CUTTERSHAFT,90"STD,W/EARS
16	21677	48	NYLOCK NUT,7/16",NC
17	TF1020	48	KNIFE MTG CLEVIS,FLAIL
18	33713	96	KNIFE,FLAIL (STANDARD CUT)
18A	28184A	48	KNIFE,FLAIL (SMOOTH CUT)
19	34011	48	CAPSCREW,7/16" X 3-7/16",GR8,NC
20	TF1033	1	GREASE ZERK,1/8" FPT
21	TF1032	1	GRS HOSE,3/16" X 8"
22	28086A	2	SKID SHOE,STD DUTY,REAR FLAIL
23	30013	10	PLOW BOLT,3/8" X 1-1/4",GR5,NC
24	27972A	1	GROUND ROLLER,90"
25	TF1045B	2	STUB SHAFT,GROUND ROLLER
26	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
27	6T2331	4	CAPSCREW,SKT HD,7/16" X 1",NC
28	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
29	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLLR
30	06520029	2	O-RING,2-3/4" X 3/32"
31	06520027	2	CAP,BEARING,GRNDRLLR
32	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
33	TF1116	1	FLAP,DEFLECTOR,90"
34	TF1035	1	BAR,FLAP,TSF/TRF,90"

#### SUPER DUTY REAR FLAIL DRIVE ASSY

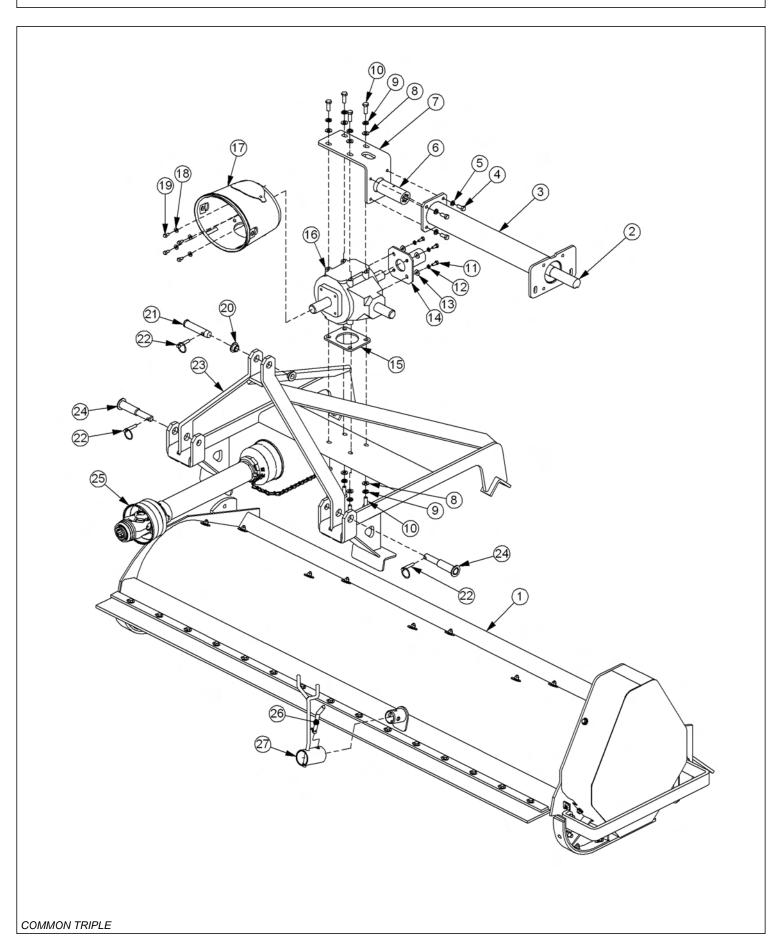


**COMMON TRIPLE** 

## SUPER DUTY REAR FLAIL DRIVE ASSY

ITEM	PART NO.	QTY.	DESCRIPTION
5	22421	-	CAPSCREW,16MM X 40MM(2.0P)
6	31956	-	FLATWASHER,16MM,HARDENED
7	21731	2	CAPSCREW,1/2" X 1-1/2",NC
8	32838	1	HEX NUT,5/8-11 UNC,GR8
9	25270	2	FLATWASHER,5/8",GR8,USS
10	06700092	-	ASSY,SHEAVE,IDLER,3 GRV
11	06420072	1	SHEAVE,IDLER,3 GRV
12	31298	2	BRG,FAFNIR,203KRR2
13	06430072	1	SPACER,1.25" X .69" X 1.03"
14	06420094	1	SPACER,1.00" X 1.63" X .64"
15	33854	1	CAPSCREW,5/8" X 4-1/2",GR8,NC
16	21632	1	CAPSCREW,3/8" X 1-1/2",NC
17	22016	5	FLATWASHER,3/8",GR8
18	06400717	1	STOP,ROSTA
19	21627	1	NYLOCK NUT,3/8",NC
20	06520306	1	TNSNR,ROSTA,SE38,W/MTG BOLT
21	28683	2	BEARING,FLANGE,1-15/16",STD
22	06533006	8	FLATWASHER,1/2",L9,SAE
23	06530217	8	CAPSCREW,1/2" X 2",L9,NC
24	06520218	1	SHEAVE,6.7",3G5V,QD,SK
25	28723	1	BUSHING,QD,SK 1-15/16"
26	21987	3	LOCKWASHER,5/16"
27	21584	3	CAPSCREW,5/16" X 2",NC
28	26142A	1	KEY,1/2"SQ X 2"
29	06410723	1	BAR,RUB
30	21990	6	LOCKWASHER,1/2"
31	21725	2	HEX NUT,1/2",NC
32	06320114	1	SHIELD,BELT,WLDMNT,STD
33	06520312	1	BELT,BANDED,3/5VX560
34	28224	1	KEY,3/8"SQ X 2"
35	21634	3	CAPSCREW,3/8" X 2",NC
36	21988	3	LOCKWASHER,3/8"
37	06520304	1	BUSHING,QD,SF 1-1/2",3/8" KEY
38	02967325	1	SHEAVE,8.5",3G5V
39	21730	4	CAPSCREW,1/2" X 1-1/4",NC
40	06520308	1	BRNG,FLNG,1-1/2",GRIP-TIGHT
41	6T3208	1	ZERK,1/8" X 45°
42	21630	4	CAPSCREW,3/8" X 1",NC
43	06520386	-	GAGE, TENSION, PLUNGER (NOT SHOWN)
44	06401023	-	WRENCH,ROSTA

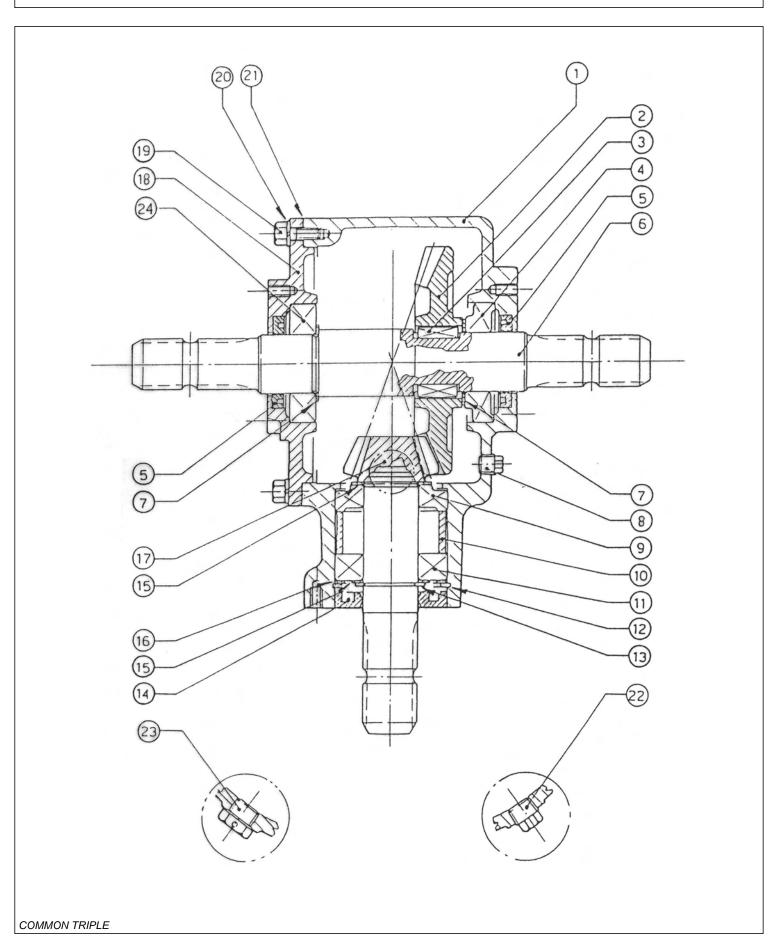
### **SUPER DUTY PTO DRIVE ASSY**



### **SUPER DUTY PTO DRIVE ASSY**

ITEM	PART NO.	QTY.	DESCRIPTION
1	06320134	1	BONNET,75,STD,ROSTA
	06320115	-	BONNET,90,STD,ROSTA
2	06420110	1	SHAFT,OUTPUT,TRF75
	06420109	-	SHAFT,OUTPUT,TRF75 (OFFSET)
	06420092	-	SHAFT,OUTPUT,TRF90
	06420109	-	SHAFT,OUTPUT,TRF90 (OFFSET)
3	06320133	1	TUBE,SAFETY,75,SD
	06320119	1	TUBE,SAFETY,75 (OFFSET)
	06320117	-	TUBE,SAFETY,90,SD
	06320119	-	TUBE,SAFETY,90 (OFFSET)
4	21679	4	CAPSCREW,7/16 X 1,NC
5	21989	4	LOCKWASHER,7/16
6	28914	1	COUPLING,6 SPLINE W/ZERK
7	33204	1	PLATE,MNT,GUARD
8	27724	8	LOCKWASHER,12MM
9	22017	4	FLATWASHER,7/16
10	34890	8	CAPSCREW,12MM X 35MM(1.75P)
11	27508	4	CAPSCREW,8MM X 20MM(1.25P)
12	6T2619	4	LOCKWASHER,8MM
13	22015	4	FLATWASHER,5/16
14	28447E	1	GUARD,TRF,OUTPUT SHAFT
15	06400018	1	SPACER,REAR FLAIL (IF NECESSARY)
16	28950	1	GEAR BOX,540 RPM
17	06520181	1	SHIELD,PTO
18	34948	4	FLATWASHER,3/8
19	27507	4	CAPSCREW,8MM X 15MM(1.25P)
20	28235A	2	BUSHING,3PT,CAT II TO CAT I
21	TB1036	1	PIN,SEC BOOM SWIV 1 X 4-11/16
22	TF1143	3	PIN,LYNCH,7/16 X 2
23	06370154	1	FRM,3PT,STD
24	28234B	2	PIN,3PT,TRF,STD
25	06520414	1	PTO,DRV SHFT,TRF
	06520415	-	PTO,DRV SHFT,TRF,W/ CLUTCH
26	06520048	1	PIN,.5 X 2.5,BENT,W/R-CLIP
27	06370022	1	SUPPORT,PTO
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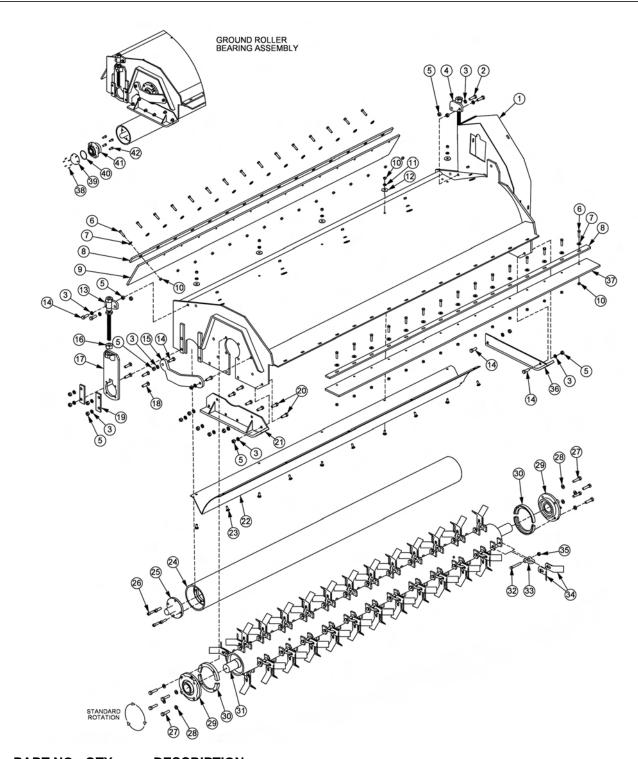
### **SUPER DUTY REAR GEAR BOX ASSY**



# SUPER DUTY REAR GEAR BOX ASSY

ITEM	PART NO.	QTY.	DESCRIPTION
1	30133	1	CASING
2	30134	1	CROWNWHEEL Z30
3	30135	2	PARALLEL KEY
4	28604	1	BEARING 30208
5	30136	2	OIL SEAL 40 X 62 X 7
6	30137	1	SHAFT
7	28603	2	SHIM
8	30138	1	PLUG
9	30139	1	BEARING 30207
10	30140	1	SPACER
11	30141	1	BEARING 6207
12	30142	1	INTERNAL CIRCLIP 72
13	30143	1	EXTERNAL CIRCLIP 35
14	30144	2	OIL SEAL 35 X 72 X 10
15	30145	1	SHIM
16	30146	1	SHIM
17	30147	1	PINION Z10
18	30148	1	COVER
19	30149	6	HEX BOLT M8 X 22
20	30150	6	WASHER
21	30151	1	SEAL
22	30152	1	PLUG
23	30153	1	OIL FILLER PLUG
24	30154	1	BEARING 6208

## **EXTREME DUTY 75IN REAR FLAIL - STD ROT**



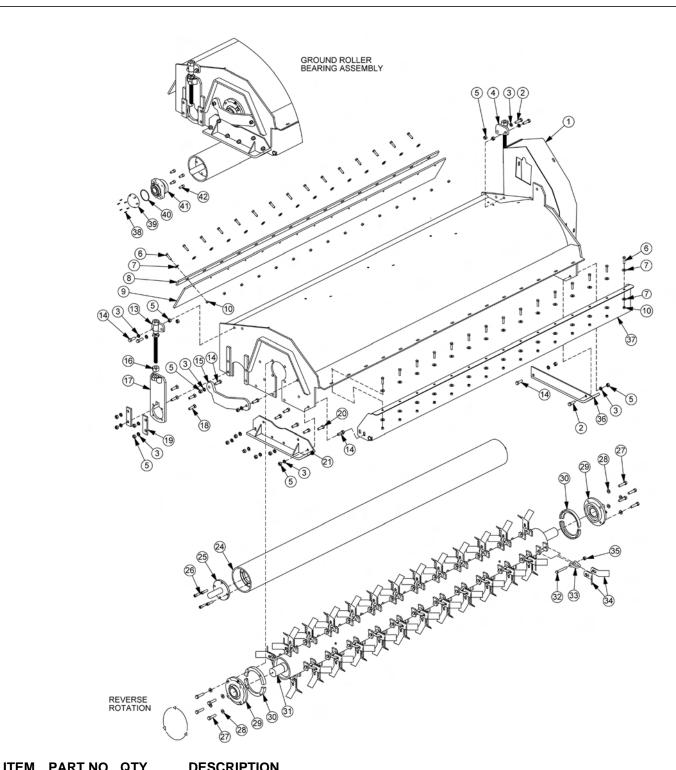
ITEM	PART NO.	QTY.	DESCRIPTION
	33036	-	75" REAR FLAIL ASSY,HD,STD ROT
1	22043J	1	BONNET,75",HD
2	21732	2	CAPSCREW,1/2" X 1-3/4",NC
3	21990	22	LOCKWASHER,1/2"

COMMON TRIPLE

## **EXTREME DUTY 75IN REAR FLAIL - STD ROT**

ITEM	PART NO.	QTY.	DESCRIPTION
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
5	21725	22	HEX NUT,1/2",NC
6	21632	26	CAPSCREW,3/8" X 1-1/2",NC
7	22016	26	FLATWASHER,3/8"
8	TF1029	2	BAR,FLAP,TSF/TRF,75"
9	TF1016	1	FLAP,DEFLECTOR,TSF/TRF,75"
10	21625	36	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	TF1402A	1	BAFFLE,FLAIL,75",HD
23	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
24	28738	1	GROUND ROLLER,75"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW, 7/16" X 1-1/2", SKT HD
	06200347	-	KIT,STRING GUARD (ITEMS 27, 28 & 30)
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
	TF1002A	-	CUTTERSHAFT ASSY,75IN
31	TF1002	1	CUTTERSHAFT,75IN
32	30411	40	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	40	KNIFE MTG CLEVIS,FLAIL
34	33714	80	KNIFE,FLAIL,STANDARD CUT
35	21677	40	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	06520242	1	FLAP,FRONT,75"
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

### **EXTREME DUTY 75IN REAR FLAIL - REV ROT**



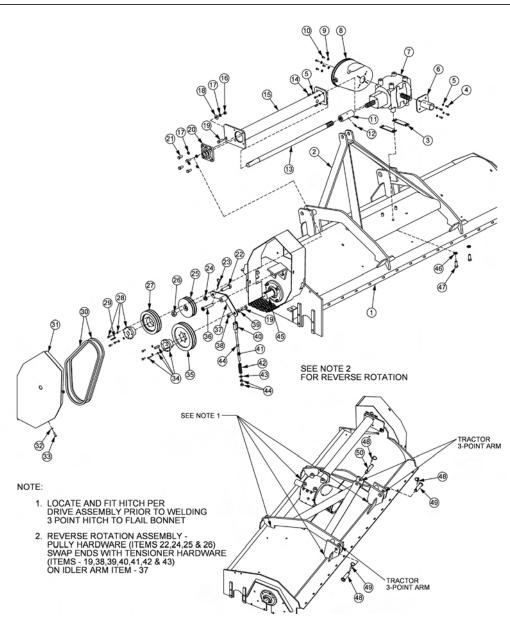
1 1 1 141	FART NO.	QII.	DESCRIPTION
	33038	-	REAR FLAIL,75IN,ASSY (STANDARD CUT)
	33040	-	REAR FLAIL,75IN,ASSY (SMOOTH CUT)
1	22043J	1	BONNET,75",HD
2.	21732	3	CAPSCREW 1/2" X 1-3/4" NC

COMMON TRIPLE

## **EXTREME DUTY 75IN REAR FLAIL - REV ROT**

ITEM	PART NO.	QTY.	DESCRIPTION	
3	21990	22	LOCKWASHER,1/2"	
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF	
5	21725	22	HEX NUT,1/2",NC	
6	21632	26	CAPSCREW,3/8" X 1-1/2",NC	
7	22016	39	FLATWASHER,3/8"	
8	TF1029	1	BAR,FLAP,TSF/TRF,75"	
9	TF1016	1	FLAP,DEFLECTOR,TSF/TRF,75"	
10	21625	36	HEX NUT,3/8",NC	
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	
24	28738	1	GROUND ROLLER,75"	
25	TF1045B	2	GRND ROLLER STUB SHAFT	
26	6T2330	8	CAPSCREW, 7/16" X 1-1/2", SKT HD	
	06200347	-	KIT,STRING GUARD (ITEMS 27, 28 & 30)	
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	
	TF1002A	-	CUTTTERSHAFT, ASSY, 75IN (STANDARD CUT) (ITEMS 31, 32, 33, 34 & 35)	
	TF1002B	-	CUTTERSHAFT, ASSY, 75IN (SMOOTH CUT) (ITEMS 31, 323, 33, 34A & 35)	
31	TF1002	1	CUTTERSHAFT,75",HD	
32	30411	40	KNIFE MOUNTING BOLT,FLAIL	
33	TF1020	40	KNIFE MTG CLEVIS,FLAIL	
34	33714	80	KNIFE,FLAIL,STANDARD CUT	
34A	TF1019F	40	KNIFE,FLAIL,SMOOTH CUT (NOT SHOWN)	
35	21677	40	NYLOCK NUT,7/16",NC	
36	TF4365	1	SKID SHOE,L/PROFILE-INNER	
37	TF1403	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	

#### **EXTREME DUTY 75IN REAR FLAIL DRIVE ASSY**



ITEM	PART NO.	QTY.	DESCRIPTION
1		1	BONNET *REFER TO CUTTER ASSY
2	31279A	1	HITCH,3-POINT
3	40454	2	SPACER
4	27508	4	CAPSCREW,8MM X 20MM(1.25)
5	6T2619	8	LOCKWASHER,8MM
6	28447E	1	GUARD,OUTPUT SHAFT
7	28505	1	GEARBOX,REAR FLAIL,COMER T22A
8	06520181	1	GUARD,PTO,GRBX
9	34948	4	FLATWASHER,8MM
10	27507	4	CAPSCREW,8MM X 15MM(1.25)
11	28914	1	COUPLING,6 SPLINE

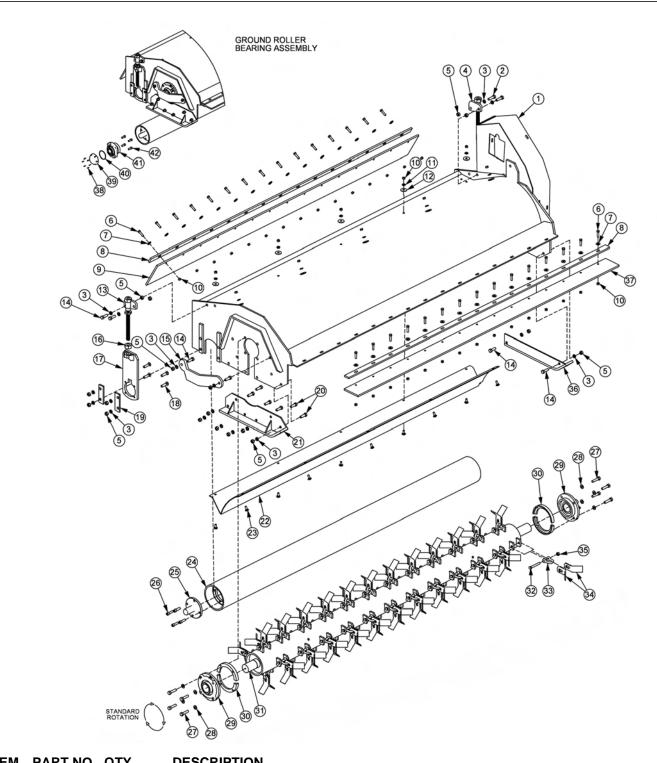
**COMMON TRIPLE** 

# **EXTREME DUTY 75IN REAR FLAIL DRIVE ASSY**

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ITEM	PART NO.	OTV	DESCRIPTION
12	6T3209	1	GREASE ZERK,1/4" DRIVE
13	28414A	1	OUTPUT EXTENSION SHAFT,75"RCM
	28416B	-	OUTPUT EXTENSION SHAFT,75"OFF
14	30162	4	CAPSCREW,SKT HD,8MM X 20MM(1.25)
15	28422A	1	SHAFT GRD,HD,75"RCM
	28424B	-	SHAFT GRD,HD,75"OFF
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(2.5),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(2.5)
27	TF3043	1	SHEAVE,7.5"
28	30049	2	BUSHING,QD,SK 1-1/4",1/4" KEY
29	28572	1	KEY,1/4"SQ X 2"
30	TF3023	2	V-BELT(630)
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		1	CUTTERSHAFT *REFER TO CUTTER ASSY
46	6T2625	4	LOCKWASHER,16MM
47	22421	4	CAPSCREW,16MM X 40MM(2.0),GR10.9
48	TF1143	3	LYNCH PIN
49	TF1120	2	PIN,CAPPED
50	TB1036	1	PIN

## **EXTREME DUTY 90IN REAR FLAIL - STD ROT**



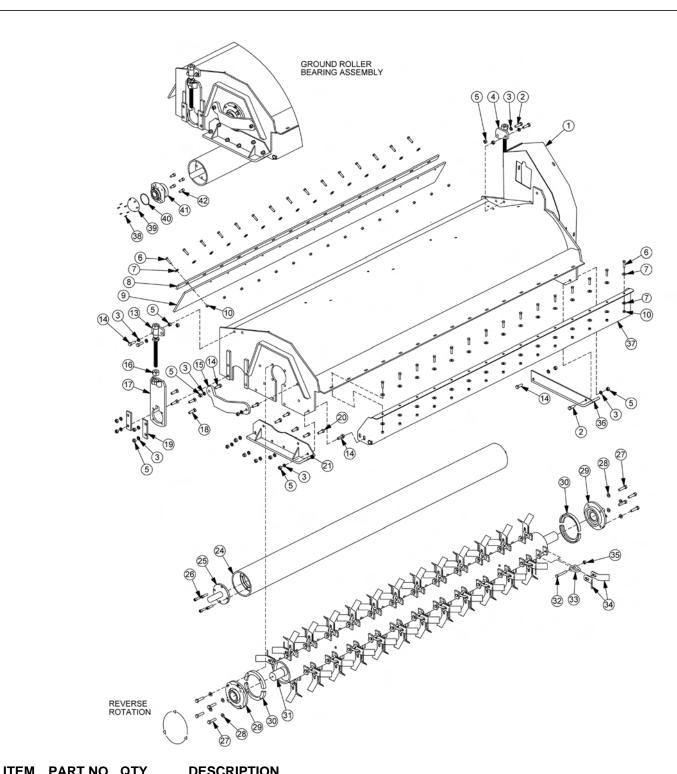
ITEM	PART NO.	QTY.	DESCRIPTION
	33002	-	REAR FLAIL ASSY,90IN
1	22044J	1	BONNET,90",HD
2	21732	2	CAPSCREW,1/2" X 1-3/4",NC
3	21990	22	LOCKWASHER,1/2"

# **EXTREME DUTY 90IN REAR FLAIL - STD ROT**

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
5	21725	22	HEX NUT,1/2",NC
6	21632	30	CAPSCREW,3/8" X 1-1/2",NC
7	22016	30	FLATWASHER,3/8"
8	TF1135	2	BAR,FLAP,TSF/TRF,90"
9	TF1116	1	FLAP,DEFLECTOR,TSF/TRF,90"
10	21625	40	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	TF1502A	1	BAFFLE,FLAIL,90",HD
23	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
24	27972A	1	GROUND ROLLER,90"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW, 7/16" X 1-1/2", SKT HD
	06200347	-	KIT,STRING GUARD (ITEMS 27, 28 & 30)
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
	TF1102A	-	CUTTERSHAFT ASSY,90IN
31	TF1102	1	CUTTERSHAFT,90"
32	30411	48	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	48	KNIFE MTG CLEVIS,FLAIL
34	33714	96	KNIFE,FLAIL,STANDARD CUT
35	21677	48	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	06520243	1	FLAP,FRONT,90"
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

#### **EXTREME DUTY 90IN REAR FLAIL - REV ROT**



11 11	FART NO.	QII.	DESCRIPTION
	33009	-	90IN REAR FLAIL ASSY (STANDARD CUT)
	33011	-	90IN REAR FLAIL ASSY (SMOOTH CUT)

1 22044J 1 BONNET,90"

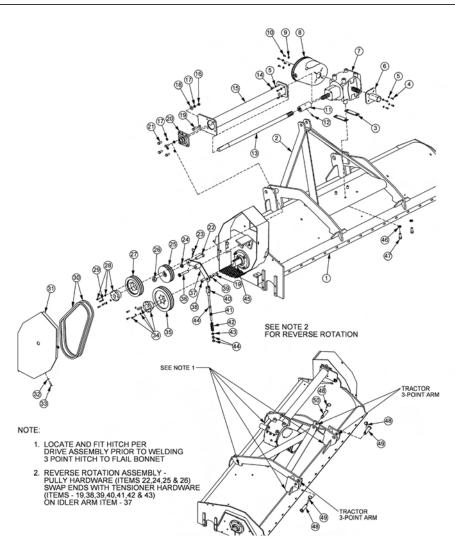
2 21732 3 CAPSCREW,1/2" X 1-3/4",NC

# **EXTREME DUTY 90IN REAR FLAIL - REV ROT**

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ITEM	PART NO.	QTY.	DESCRIPTION
3	21990	22	LOCKWASHER,1/2"
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
5	21725	22	HEX NUT,1/2",NC
6	21632	30	CAPSCREW,3/8" X 1-1/2",NC
7	22016	45	FLATWASHER,3/8"
8	TF1135	1	BAR,FLAP,TSF/TRF,90"
9	TF1116	1	FLAP,DEFLECTOR,TSF/TRF,90"
10	21625	40	HEX NUT,3/8",NC
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
24	27972A	1	GROUND ROLLER,90"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW,7/16" X 1-1/2", SKT HD
	06200347	-	KIT,STRING GUARD (ITEMS 27, 28 & 30)
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
	TF1102A	-	CUTTERSHAFT ASSY (STANDARD CUT) (ITEMS 31, 32, 33, 34 $\&$ 35)
	TF1102B	-	CUTTERSHAFT ASSY (SMOOTH CUT) (ITEMS 31, 32, 33, 34A & 35)
31	TF1102	1	CUTTERSHAFT,90"
32	30411	48	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	48	KNIFE MTG CLEVIS,FLAIL
34	33714	96	KNIFE,FLAIL,STANDARD CUT
34A	TF1019F	48	KNIFE,FLAIL,SMOOTH CUT (NOT SHOWN)
35	21677	48	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	TF1503	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

#### **EXTREME DUTY 90IN REAR FLAIL DRIVE ASSY**



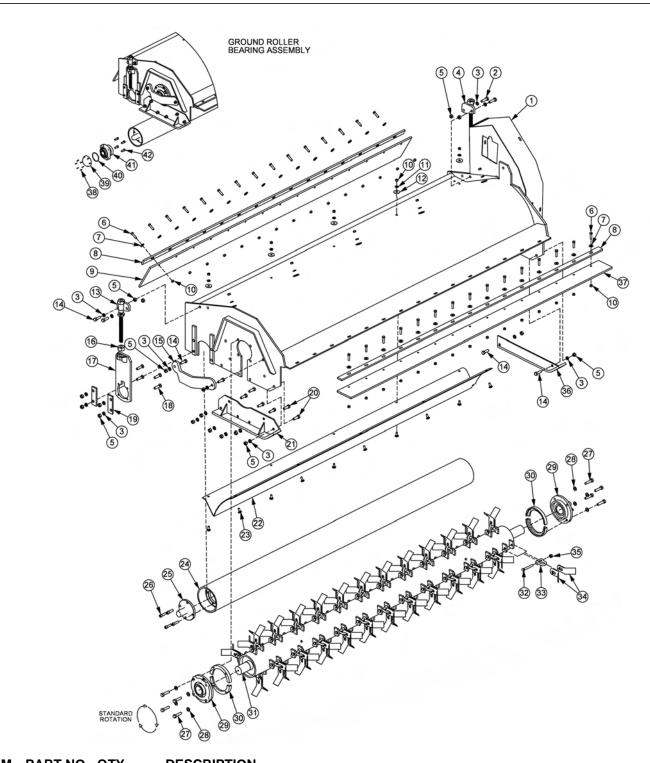
ITEM	PART NO.	QTY.	DESCRIPTION
1		1	BONNET *REFER TO CUTTER ASSY
2	31279A	1	HITCH,3-POINT
3	40454	2	SPACER
4	27508	4	CAPSCREW,8MM X 20MM(1.25)
5	6T2619	8	LOCKWASHER,8MM
6	28447E	1	GUARD,OUTPUT SHAFT
7	28505	1	GEARBOX,REAR FLAIL,COMER T22A
8	06520181	1	GUARD,PTO,GRBX
9	34948	4	FLATWASHER,8MM
10	27507	4	CAPSCREW,8MM X 15MM(1.25)
11	28914	1	COUPLING,6 SPLINE
12	6T3209	1	GREASE ZERK,1/4" DRIVE
13	28415A	1	OUTPUT EXTENSION SHAFT,90"RCM
	28416B	-	OUTPUT EXTENSION SHAFT,90"R6F
	28420B	-	OUTPUT EXTENSION SHAFT,90"OFF

# **EXTREME DUTY 90IN REAR FLAIL DRIVE ASSY**

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
14	30162	4	CAPSCREW,SKT HD,8MM X 20MM(1.25)
15	28423A	1	SHAFT GRD,HD,90"RCM
	28424B	-	SHAFT GRD,HD,90"R6F
	28428B	-	SHAFT GRD,HD,90"OFF
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(2.5),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(2.5)
27	TF3043	1	SHEAVE,7.5"
28	30049	2	BUSHING,QD,SK 1-1/4",1/4" KEY
29	28572	1	KEY,1/4"SQ X 2"
30	TF3023	2	V-BELT(630)
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		1	CUTTERSHAFT *REFER TO CUTTER ASSY
46	6T2625	4	LOCKWASHER,16MM
47	22421	4	CAPSCREW,16MM X 40MM(2.0),GR10.9
48	TF1143	3	LYNCH PIN
49	TF1120	2	PIN,CAPPED
50	TB1036	1	PIN

## **EXTREME DUTY 96IN REAR FLAIL - STD ROT**



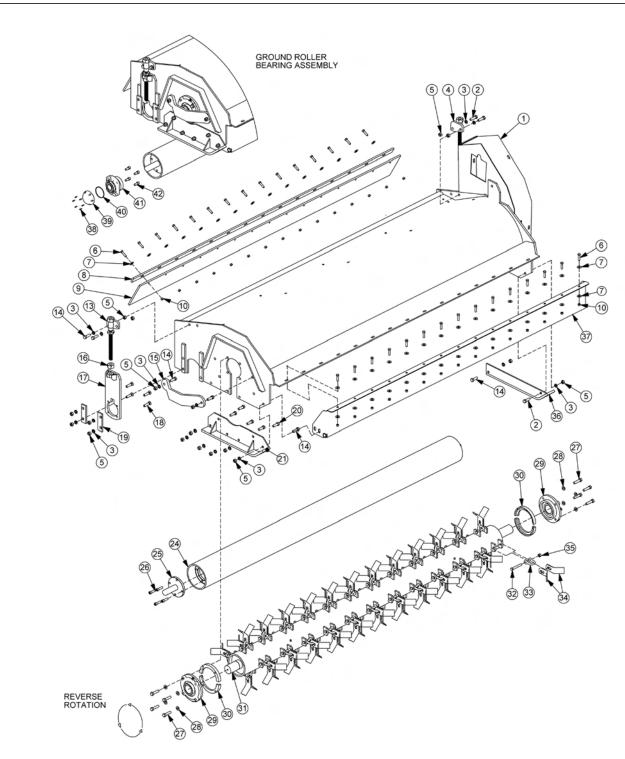
ITEM	PART NO.	QTY.	DESCRIPTION
	33005	-	REAR FLAIL ASSY,96IN
1	22045J	1	BONNET,96"
2	21732	2	CAPSCREW,1/2" X 1-3/4",NC
3	21990	22	LOCKWASHER,1/2"

# **EXTREME DUTY 96IN REAR FLAIL - STD ROT**

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
5	21725	22	HEX NUT,1/2",NC
6	21632	34	CAPSCREW,3/8" X 1-1/2",NC
7	22016	34	FLATWASHER,3/8"
8	TF1606	2	BAR,FLAP,TSF/TRF,96"
9	TF1605	1	FLAP,DEFLECTOR,TSF/TRF,96"
10	21625	44	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	TF1607	1	BAFFLE,FLAIL,96",HD
23	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
24	TF1603	1	GROUND ROLLER,96"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW,7/16" X 1-1/2", SKT HD
	06200347	-	KIT,STRING GUARD (ITEMS 27, 28 & 30)
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
	TF1602A	-	CUTTERSHAFT ASSY,96IN
31	TF1602B	1	CUTTERSHAFT,96"
32	30411	52	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	52	KNIFE MTG CLEVIS,FLAIL
34	33714	104	KNIFE,FLAIL,STANDARD CUT
35	21677	52	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	06520244	1	FLAP,FRONT,96"
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

## **EXTREME DUTY 96IN REAR FLAIL - REV ROT**



ITEM	PART NO.	QTY.	DESCRIPTION

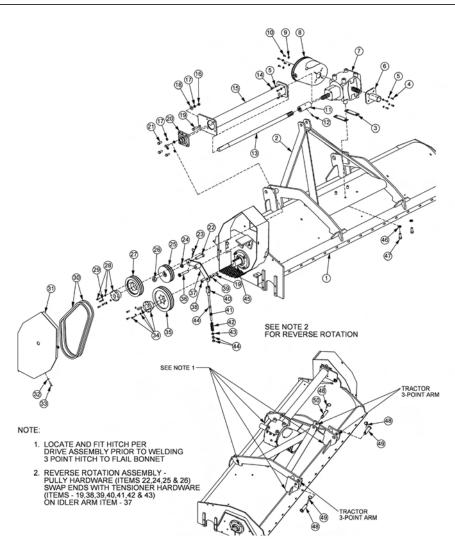
	33007	-	96IN REAR FLAIL ASSY (STANDARD CUT)
	33013	-	96IN REAR FLAIL ASSY (SMOOTH CUT)
1	22045J	1	BONNET,96"
2	21732	3	CAPSCREW,1/2" X 1-3/4",NC

# **EXTREME DUTY 96IN REAR FLAIL - REV ROT**

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
3	21990	22	LOCKWASHER,1/2"
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
5	21725	22	HEX NUT,1/2",NC
6	21632	34	CAPSCREW,3/8" X 1-1/2",NC
7	22016	51	FLATWASHER,3/8"
8	TF1606	1	BAR,FLAP,TSF/TRF,96"
9	TF1605	1	FLAP,DEFLECTOR,TSF/TRF,96"
10	21625	44	HEX NUT,3/8",NC
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
24	TF1603	1	GROUND ROLLER,96"
25	TF1045B	2	GRND ROLLER STUB SHAFT
26	6T2330	8	CAPSCREW,7/16" X 1-1/2", SKT HD
	06200347	-	KIT,STRING GUARD (ITEMS 37, 38 & 30)
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
	TF1602A	-	CUTTERSHAFT ASSY (STANDARD CUT) (ITEMS 31, 32, 33, 34 $\&$ 35)
	TF1602B	-	CUTTERSHAFT ASSY (SMOOTH CUT) (ITEMS 31, 32, 33, 34A & 35)
31	TF1602B	1	CUTTERSHAFT,96"
32	30411	52	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	52	KNIFE MTG CLEVIS,FLAIL
34	33714	104	KNIFE,FLAIL,STANDARD CUT
34A	TF1019F	52	KNIFE,FLAIL,SMOOTH CUT (NOT SHOWN)
35	21677	52	NYLOCK NUT,7/16",NC
36	TF4365	1	SKID SHOE,L/PROFILE-INNER
37	TF1608	1	FLAP 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

#### **EXTREME DUTY 96IN REAR FLAIL DRIVE ASSY**



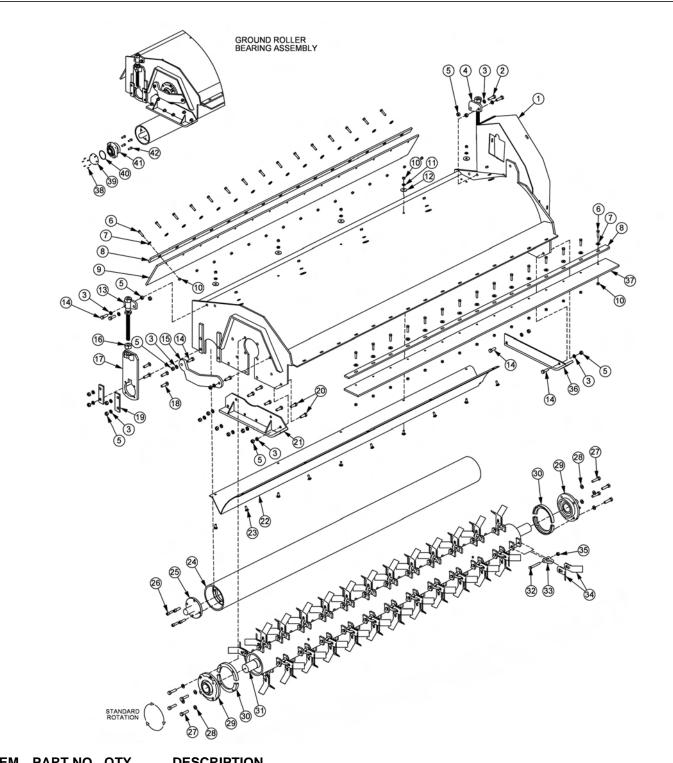
ITEM	PART NO.	QTY.	DESCRIPTION
1		1	BONNET *REFER TO CUTTER ASSY
2	31279A	1	HITCH,3-POINT
3	40454	2	SPACER
4	27508	4	CAPSCREW,8MM X 20MM(1.25)
5	6T2619	8	LOCKWASHER,8MM
6	28447E	1	GUARD,OUTPUT SHAFT
7	28505	1	GEARBOX,REAR FLAIL,COMER T22A
8	06520181	1	GUARD,PTO,GRBX
9	34948	4	FLATWASHER,8MM
10	27507	4	CAPSCREW,8MM X 15MM(1.25)
11	28914	1	COUPLING,6 SPLINE
12	6T3209	1	GREASE ZERK,1/4" DRIVE
13	28418A	1	OUTPUT EXTENSION SHAFT,96"RCM
	28420B	-	OUTPUT EXTENSION SHAFT,96"R6F
	28416B	-	OUTPUT EXTENSION SHAFT,96"RXF

# **EXTREME DUTY 96IN REAR FLAIL DRIVE ASSY**

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ITEM	PART NO.	QTY.	DESCRIPTION
	28419B	-	OUTPUT EXTENSION SHAFT,96"OFF
14	30162	4	CAPSCREW,SKT HD,8MMX20MM(1.25)
15	28426A	1	SHAFT GRD,HD,96"RCM
	28428B	-	SHAFT GRD,HD,96"R6F
	28424B	-	SHAFT GRD,HD,96"RXF
	28427B	-	SHAFT GRD,HD,96"OFF
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(2.5),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(2.5)
27	TF3043	1	SHEAVE,7.5"
28	30049	2	BUSHING,QD,SK 1-1/4",1/4" KEY
29	28572	1	KEY,1/4"SQ X 2"
30	TF3023	2	V-BELT(630)
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		1	CUTTERSHAFT *REFER TO CUTTER ASSY
46	6T2625	4	LOCKWASHER,16MM
47	22421	4	CAPSCREW,16MM X 40MM(2.0),GR10.9
48	TF1143	3	LYNCH PIN
49	TF1120	2	PIN,CAPPED
50	TB1036	1	PIN

# **EXTREME DUTY 102IN REAR FLAIL - STD ROT**



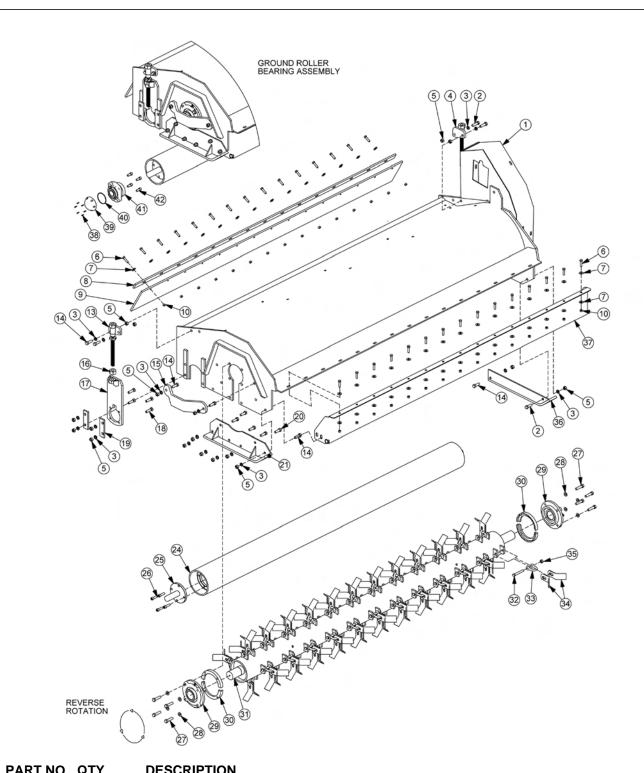
ITEM	PART NO.	QTY.	DESCRIPTION
	33027	-	REAR FLAIL ASSY,102IN
1	22046J	1	BONNET,102"
2	21732	2	CAPSCREW,1/2" X 1-3/4",NC
3	21990	22	LOCKWASHER,1/2"

# **EXTREME DUTY 102IN REAR FLAIL - STD ROT**

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
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
	06200347	-	KIT,STRING GUARD
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
	TF1707A	-	CUTTERSHAFT ASSY,102"
31	TF1707	1	CUTTERSHAFT,102"
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

## **EXTREME DUTY 102IN REAR FLAIL - REV ROT**



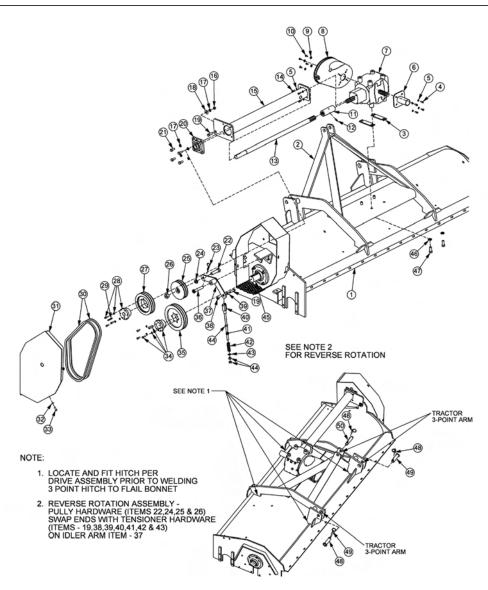
I I ⊏IVI	PART NO.	QII.	DESCRIPTION
	33030	-	102IN REAR FLAIL ASSY (STANDARD CUT)
	33033	-	102IN REAR FLAIL ASSY (SMOOTH CUT)
1	22046J	1	BONNET,102"
2	21732	3	CAPSCREW.1/2" X 1-3/4".NC

# **EXTREME DUTY 102IN REAR FLAIL - REV ROT**

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ITEM	PART NO.	QTY.	DESCRIPTION
3	21990	22	LOCKWASHER,1/2"
4	TF4335	1	ROD,GROUND ROLLER ADJ,LF
5	21725	22	HEX NUT,1/2",NC
6	21632	36	CAPSCREW,3/8" X 1-1/2",NC
7	22016	51	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
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
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
	06200347	-	KIT,STRING GUARD (ITEMS 27, 28 & 30)
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
	TF1707A	-	CUTTERSHAFT ASSY (STANDARD CUT) (ITEMS 31, 32, 33, 34 $\&$ 35)
	TF1707B	-	CUTTERSHAFT ASSY (SMOOTH CUT) (ITEMS 31, 32, 33, 34A & 35)
31	TF1707	1	CUTTERSHAFT,102"
32	30411	56	KNIFE MOUNTING BOLT,FLAIL
33	TF1020	56	KNIFE MTG CLEVIS,FLAIL
34	33714	112	KNIFE,FLAIL,STANDARD CUT
34A	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

### **EXTREME DUTY 102IN REAR FLAIL DRIVE ASSY**



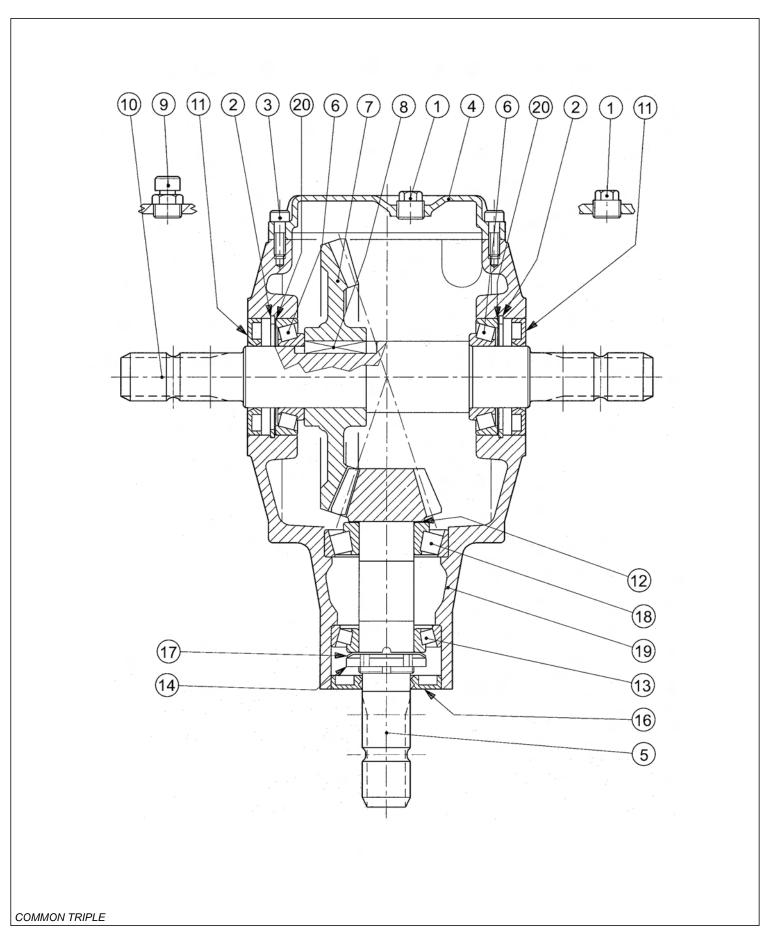
ITEM	PART NO.	QTY.	DESCRIPTION
1		1	BONNET *REFER TO CUTTER ASSY
2	31279A	1	HITCH,3-POINT
3	40454	2	SPACER
4	27508	4	CAPSCREW,8MM X 20MM(1.25)
5	6T2619	8	LOCKWASHER,8MM
6	28447E	1	GUARD,OUTPUT SHAFT
7	28505	1	GEARBOX,REAR FLAIL,COMER T22A
8	06520181	1	GUARD,PTO,GRBX
9	34948	4	FLATWASHER,8MM
10	27507	4	CAPSCREW,8MM X 15MM(1.25)
11	28914	1	COUPLING,6 SPLINE
12	6T3209	1	GREASE ZERK,1/4" DRIVE
13	28421A	1	OUTPUT EXTENSION SHAFT,102"RCM

# **EXTREME DUTY 102IN REAR FLAIL DRIVE ASSY**

ntinue	

ITEM	PART NO.	QTY.	DESCRIPTION
	28417B	-	OUTPUT EXTENSION SHAFT,102"R6F
	28419B	-	OUTPUT EXTENSION SHAFT,102"OFF
14	30162	4	CAPSCREW,SKT HD,8MM X 20MM(1.25)
15	28429A	1	SHAFT GRD,HD,102"RCM
	28425B	-	SHAFT GRD,HD,102"R6F
	28427B	-	SHAFT GRD,HD,102"ROFF
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(2.5),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(2.5)
27	TF3043	1	SHEAVE,7.5"
28	30049	2	BUSHING,QD,SK 1-1/4",1/4" KEY
29	28572	1	KEY,1/4"SQ X 2"
30	TF3023	2	V-BELT(630)
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		1	CUTTERSHAFT *REFER TO CUTTER ASSY
46	6T2625	4	LOCKWASHER,16MM
47	22421	4	CAPSCREW,16MM X 40MM(2.0),GR10.9
48	TF1143	3	LYNCH PIN
49	TF1120	2	PIN,CAPPED
50	TB1036	1	PIN

### **EXTREME DUTY REAR GEAR BOX ASSY**

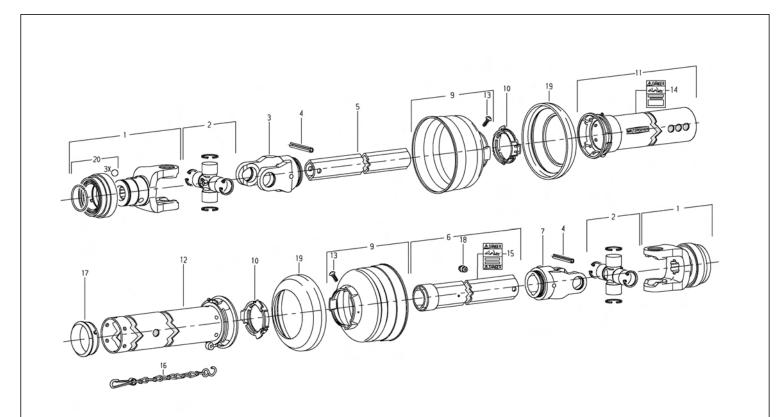


## **EXTREME DUTY REAR GEAR BOX ASSY**

### Continued...

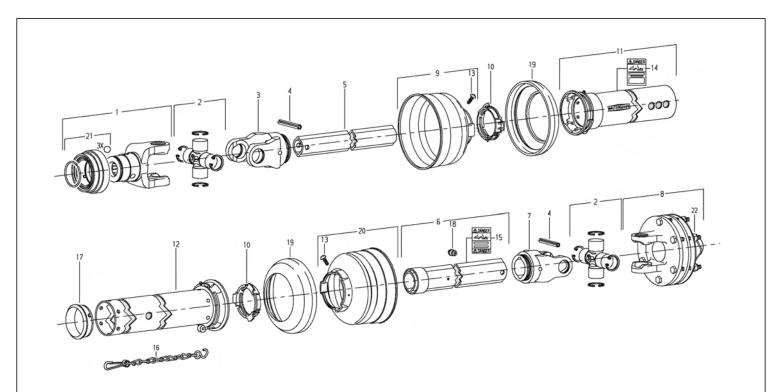
ITEM	PART NO.	QTY.	DESCRIPTION
	28505	-	GEAR BOX,REAR FLAIL,HD
1	28592	2	PLUG,1/2",GAS
2	28593	2	SNAP RING
3	28594	6	CAPSCREW,8MM X 25MM
4	28595	1	SHIM
6	28597	2	BEARING
7	28598	1	GEAR
8	28599	1	PARALLEL KEY
9	28600	1	OIL FILLER PLUG
10	28601	1	SHAFT
11	28602	2	OIL SEAL
12	28603	1	SHIM
13	28604	1	BEARING
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

## **PTO SHAFT ASSEMBLY**



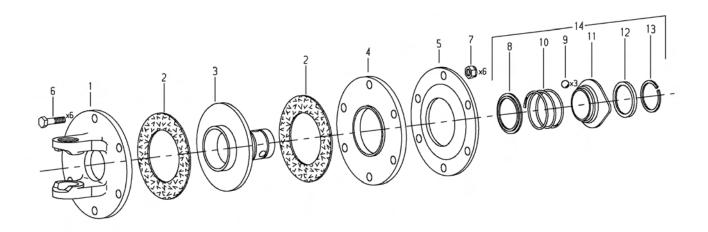
ITEM	PART NO.	QTY.	DESCRIPTION
	06520414	-	PTO,DRV SHFT,TRF
1	00775353	2	YOKE 1-3/8"-6 SPL.
2	00189700	2	CROSS & BEARING KIT
3	00775317	1	INBOARD YOKE 1B
4	00756934	2	SPRING PIN
5		1	INNER PROFILE 1B
6		1	PROFILE & SLEEVE
7	00775318	1	INBOARD YOKE 2A
9	06505010	2	GUARD CONE
10	8393	2	BEARING RING
11		1	GUARD TUBE,OUTER
12		1	GUARD TUBE,INNER
13	00759217	2	SCREW (ITEM 9)
14	00756005	1	DECAL,OUTER (ITEM 11)
15	00756004	1	DECAL,INNER (ITEM 6)
16	1416412	1	RESTRAINT CHAIN
17		1	SUPPORT BEARING
18		1	ZERK (ITEM 6)
19		2	REINFORCING COLLAR
20	00767954	-	KIT,COLLAR (ITEM 1)

# PTO SHAFT ASSEMBLY WITH CLUTCH



ITEM	PART NO.	QTY.	DESCRIPTION
	06520415	-	PTO,DRV SHFT,TRF,CLUTCH
1	00775353	1	YOKE 1-3/8"-6 SPL.
2	00189700	2	CROSS & BEARING KIT
3	00775317	1	INBOARD YOKE 1B
4	00756934	2	SPRING PIN
5		1	INNER PROFILE 1B
6		1	PROFILE & SLEEVE
7	00775318	1	INBOARD YOKE 2A
8	00775365	1	FRICTION CLUTCH
9	06505010	2	GUARD CONE
10	8393	2	BEARING RING
11		1	GUARD TUBE,OUTER
12		1	GUARD TUBE,INNER
13	00759217	2	SCREW (ITEM 9)
14	00756005	1	DECAL,OUTER (ITEM 11)
15	00756004	1	DECAL,INNER (ITEM 6)
16	1416412	1	RESTRAINT CHAIN
17		1	SUPPORT BEARING
18		1	ZERK (ITEM 6)
19		2	REINFORCING COLLAR
20		1	GUARD CONE
21	00767954	-	KIT,COLLAR (ITEM 1)
22	0921000470	-	KIT,FLANGE (ITEM 8)

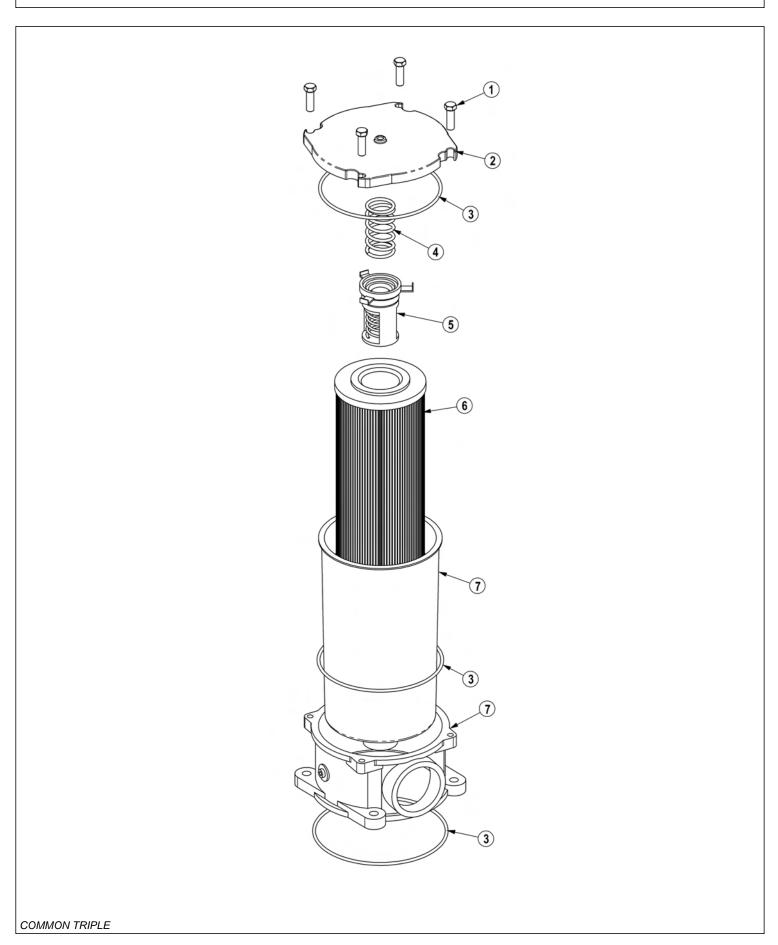
## **CLUTCH ASSEMBLY**



ITEM	PART NO.	QTY.	DESCRIPTION
	00775365		CLUTCH ASSY
1	00773303	1	FLANGE YOKE
_		-	
2		2	FRICTION DISC
3		1	HUB
4		1	THRUST PLATE
5		1	BELLE VILLE SPRING
6		6	HEX BOLT
7		6	HEX LOCKNUT
8		1	BACK-UP RING
9		3	BALL
10		1	COMPRESSION SPRING
11		1	LOCK COLLAR
12		1	BACK-UP RING
13		1	SNAP RING
14	0921000470	-	KIT(ITEMS 8 THRU 13)

NOTES 1
NOTES
COMMON TRIPLE

## **RESERVOIR TANK FILTER ASSEMBLY**

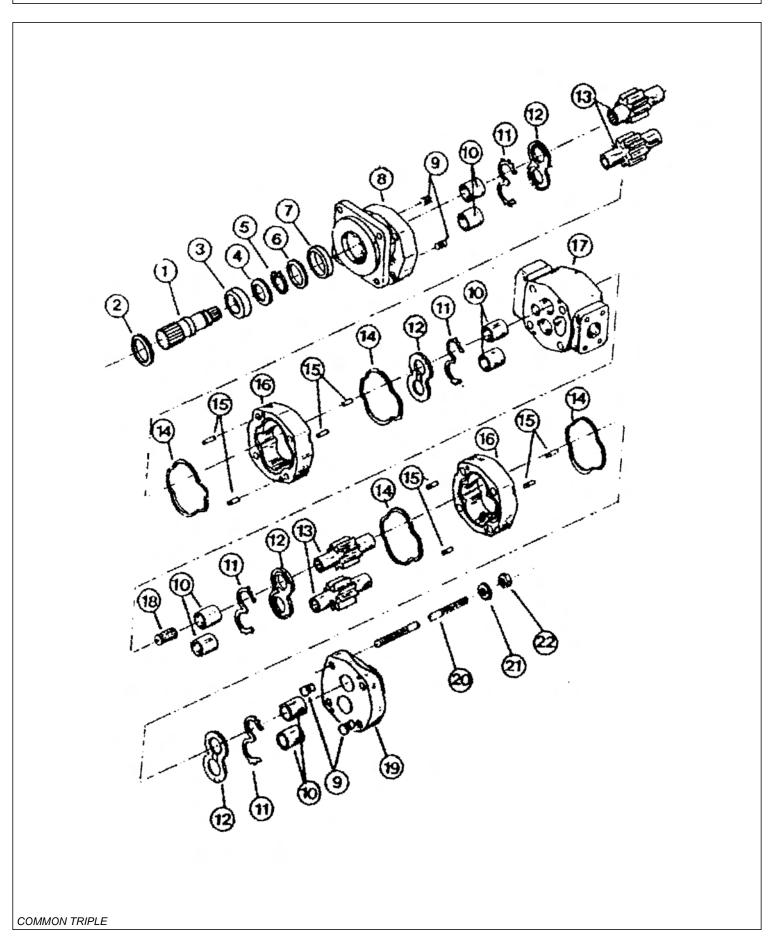


# RESERVOIR TANK FILTER ASSEMBLY

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	06505044	-	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

# FRONT HYDRAULIC PUMP BREAKDOWN

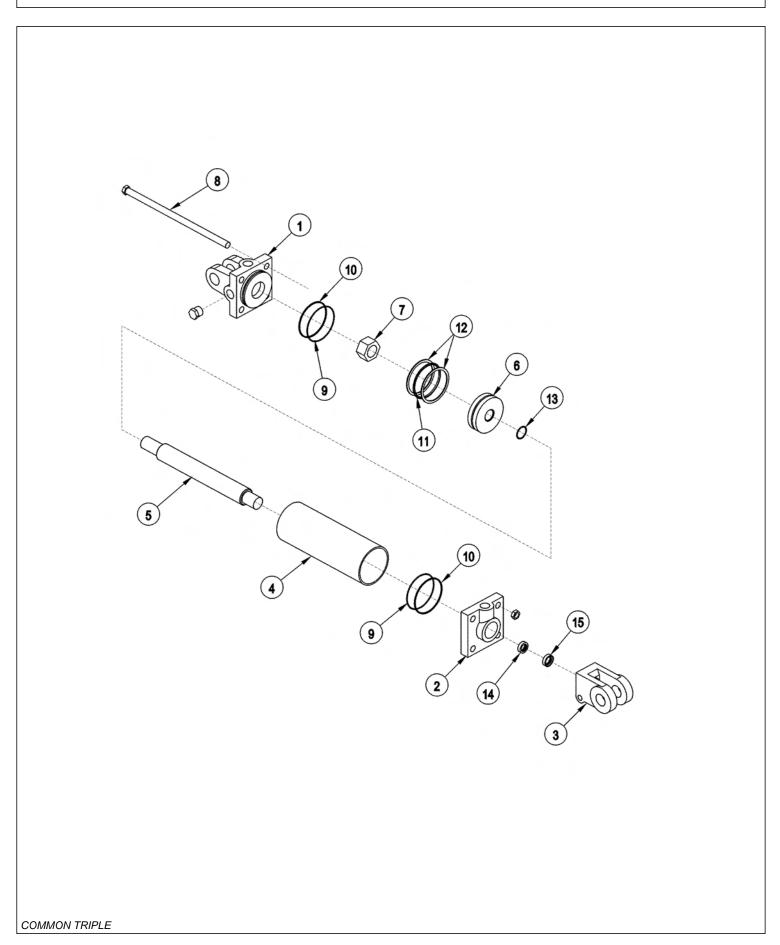


## FRONT HYDRAULIC PUMP BREAKDOWN

### Continued...

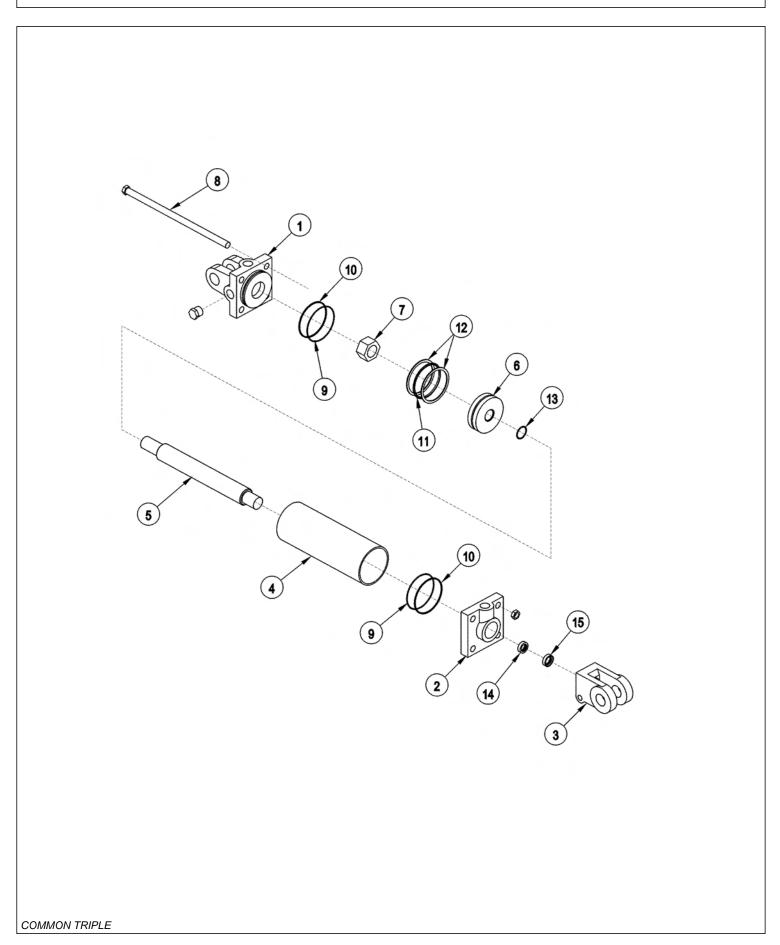
ITEM	PART NO.	QTY.	DESCRIPTION
*	TF4450	-	FRONT MOUNTED PUMP P330
1	TF4459	1	CONTINENTAL SHAFT
2	TF4451	1	SNAP RING
3	TF4452	1	OUTBOARD BEARING
4	TF4467	1	BEARING RETAINER RING
5	TF4472	1	RETAINING RING
6	TF4473	1	SPACER
7	TF4453	1	LIP SEAL
8	TF4454	1	SHAFT END COVER
9	TF4455	4	PLUG
10	TF4456	8	BUSHING
11	TF4457	4	CHANNEL SEAL
12	TF4458	4	THRUST PLATE
13	TF4466	-	MATCHED GEAR SET
14	TF4460	4	GASKET SEAL
15	TF4461	8	DOWEL PINS
16	TF4462	2	GEAR HOUSING (FOR 1-1/2" GEARS)
17	TF4463	1	BEARING CARRIER
18	TF4465	1	CONNECTING SHAFT
19	TF4468	1	PORT END COVER
20	TF4469	4	STUD
21	TF4415	4	WASHER
22	TF4471	4	NUT
*	TF4474	-	SEAL KIT (INCLUDES ITEM 7, 11, AND

14)



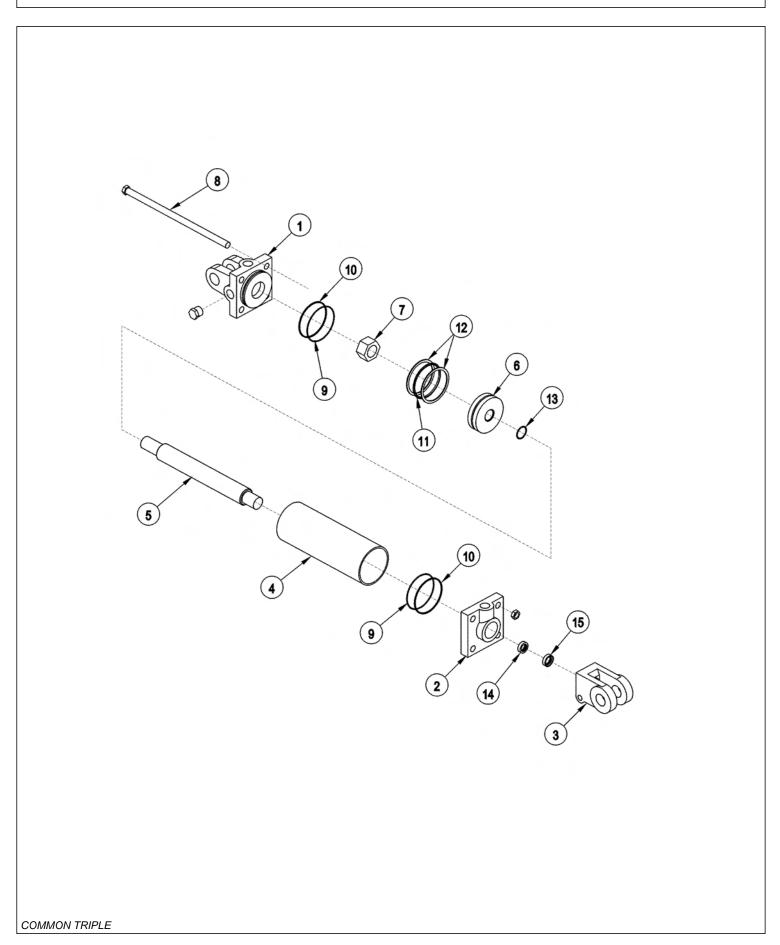
### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	31211	-	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	21749	4	TIE ROD ASY
	06501579	-	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



### Continued...

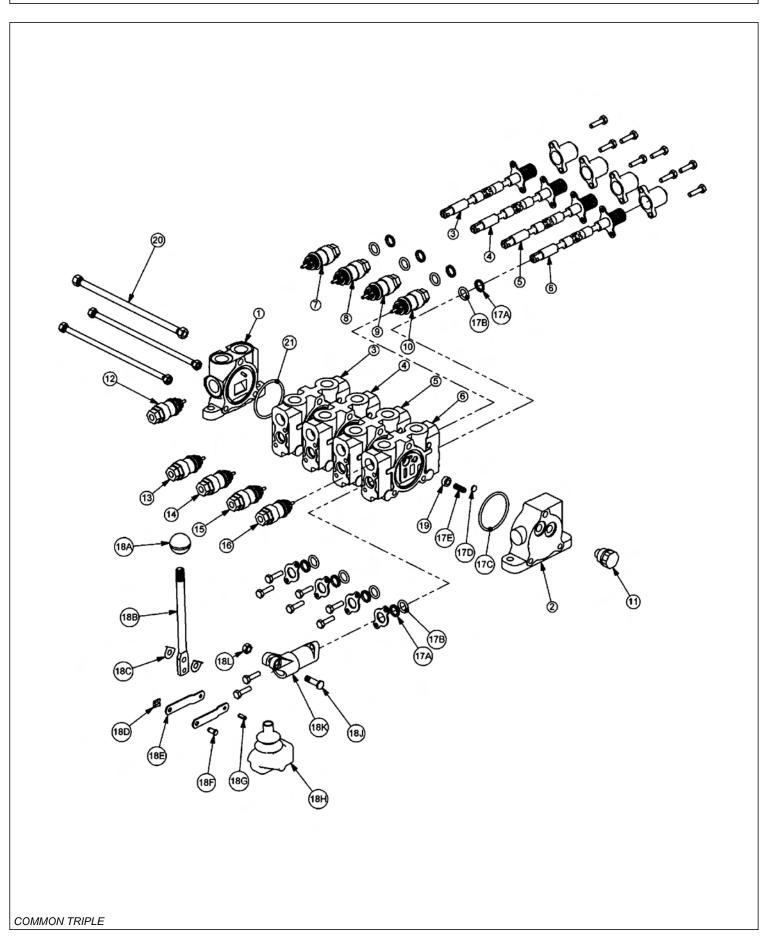
ITEM	PART NO.	QTY.	DESCRIPTION
	25343	-	CYLINDER 3" X 12"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	23870	1	CYLINDER TUBE
5	23869	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	21749	4	TIE ROD ASY
	6T0187	-	SEAL KIT
9		2	O - RING
10		2	BACK - UP WASHER
11		1	O - RING
12		2	BACK - UP WASHER
13		1	O - RING
14		1	U - CUP
15		1	WIPER



### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	32215	-	CYLINDER 3" X 12"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	6T0204	1	CYLINDER TUBE
5	6T0203	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	6T0205	4	TIE ROD ASY
	6T0187	-	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

# 4 SPOOL CABLE (MANUAL) LIFT VALVE - 31190

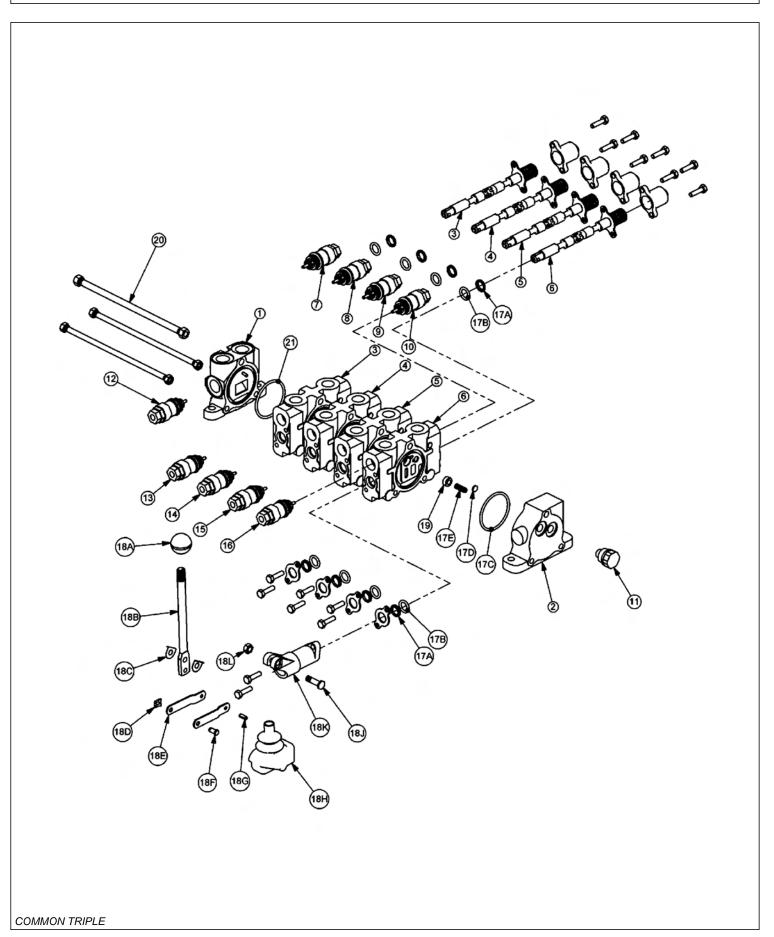


## 4 SPOOL CABLE (MANUAL) LIFT VALVE - 31190

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	31190	-	VALVE,4 SPOOL,LOAD SENSE
1	31595	1	INLET END COVER
2	31594	1	END COVER, LOAD SENSE
3	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
4	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
5	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
6	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
7	31861	1	RELIEF VALVE, 360 PSI
8	06503067	1	#10 O-RING PLUG
9	06503067	1	#10 O-RING PLUG
10	31861	1	RELIEF VALVE, 360 PSI
11	06503068	1	#6 O-RING PLUG
12	6T4209	1	#10 O-RING PLUG
13	31862	1	RELIEF VALVE, 2175 PSI
14	31862	1	RELIEF VALVE, 2175 PSI
15	31862	1	RELIEF VALVE, 2175 PSI
16	31862	1	RELIEF VALVE, 2175 PSI
17	31593	4	VALVE SEAL KIT (FOR ONE SECTION)
17A		2	WIPER
17B		2	O-RING SMALL
17C		1	O-RING LARGE
17D		1	SHUTTLE DISC
17E		1	SPRING
18	TB1017L	4	LEVER KIT (FOR ONE SECTION)
18A		1	LEVER KNOB
18B		1	LEVER
18C		2	LEVER WASHER
18D		1	LEVER CLIP
18E		2	LINKAGE
18F		1	LEVER PIN
18G		1	ROLL PIN
18H		1	LEVER BOOT
18J		1	LEVER BOLT
18K		1	LEVER DUST COVER
18L		1	LEVER NUT
19	31603	4	COMPENSATOR
20	TB1017U	1	TIE ROD KIT
21	24214	1	O-RING, LARGE

## 4 SPOOL CABLE (MANUAL) LIFT VALVE - 06502046

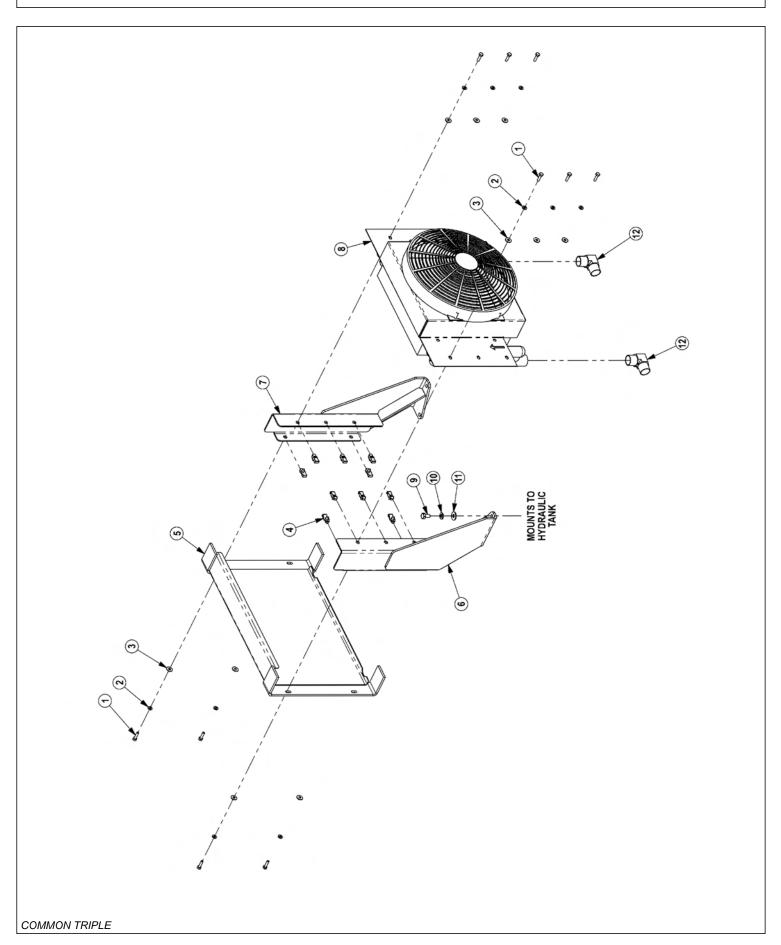


## 4 SPOOL CABLE (MANUAL) LIFT VALVE - 06502046

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	06502046	-	VALVE,4 SPOOL,LOAD SENSE
1	31595	1	INLET END COVER
2	31594	1	END COVER, LOAD SENSE
3	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
4	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
5	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
6	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
7	31861	1	RELIEF VALVE, 360 PSI
8	06503067	1	#10 O-RING PLUG
9	06503067	1	#10 O-RING PLUG
10	31861	1	RELIEF VALVE, 360 PSI
11	06503068	1	#6 O-RING PLUG
12	6T4209	1	#10 O-RING PLUG
13	31862	1	RELIEF VALVE, 2175 PSI
14	31862	1	RELIEF VALVE, 2175 PSI
15	31862	1	RELIEF VALVE, 2175 PSI
16	31862	1	RELIEF VALVE, 2175 PSI
17	31593	4	VALVE SEAL KIT (FOR ONE SECTION)
17A		2	WIPER
17B		2	O-RING SMALL
17C		1	O-RING LARGE
17D		1	SHUTTLE DISC
17E		1	SPRING
18	TB1017L	4	LEVER KIT (FOR ONE SECTION)
18A		1	LEVER KNOB
18B		1	LEVER
18C		2	LEVER WASHER
18D		1	LEVER CLIP
18E		2	LINKAGE
18F		1	LEVER PIN
18G		1	ROLL PIN
18H		1	LEVER BOOT
18J		1	LEVER BOLT
18K		1	LEVER DUST COVER
18L		1	LEVER NUT
19	31603	4	COMPENSATOR
20	TB1017U	1	TIE ROD KIT
21	24214	1	O-RING, LARGE

## **COOLER ASSEMBLY**

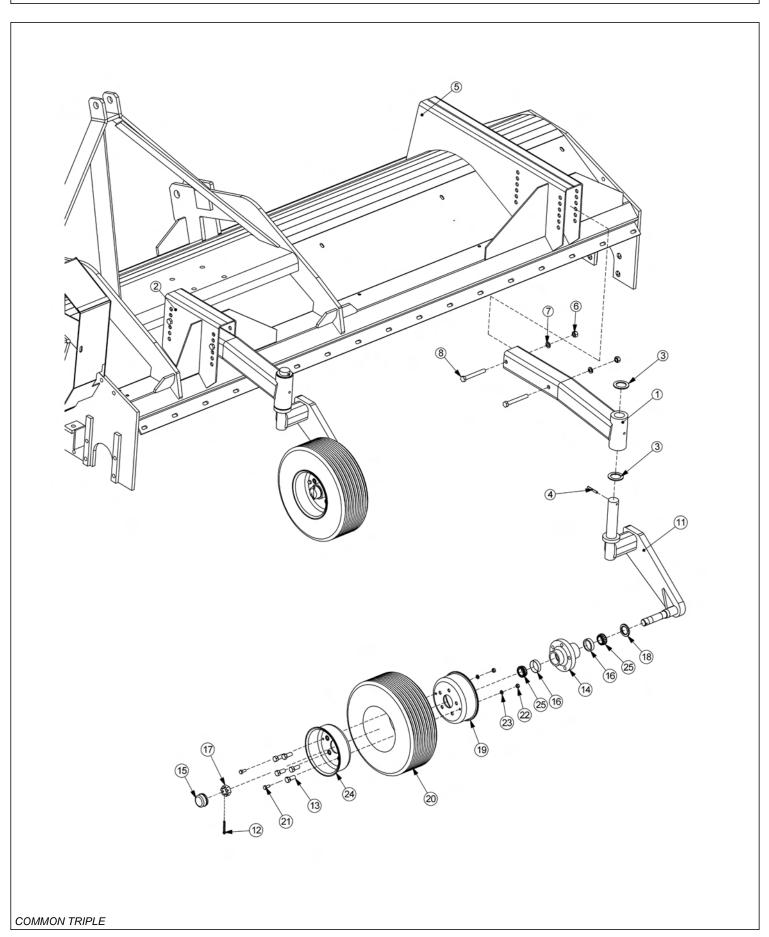


## **COOLER ASSEMBLY**

### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	21530	10	CAPSCREW,1/4 X1 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,1MOR X 1MJ90,FORGED

## **CASTER WHEEL ASSEMBLY**

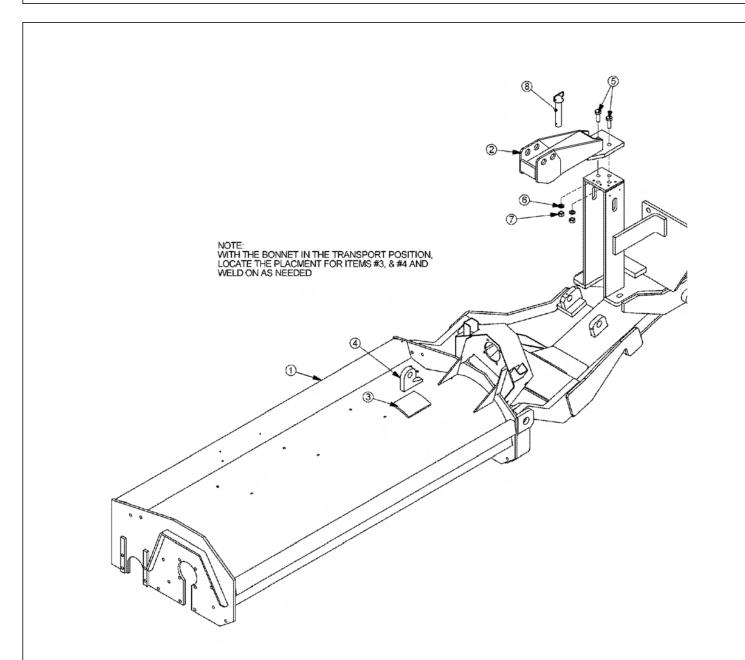


## **CASTER WHEEL ASSEMBLY**

### Continued...

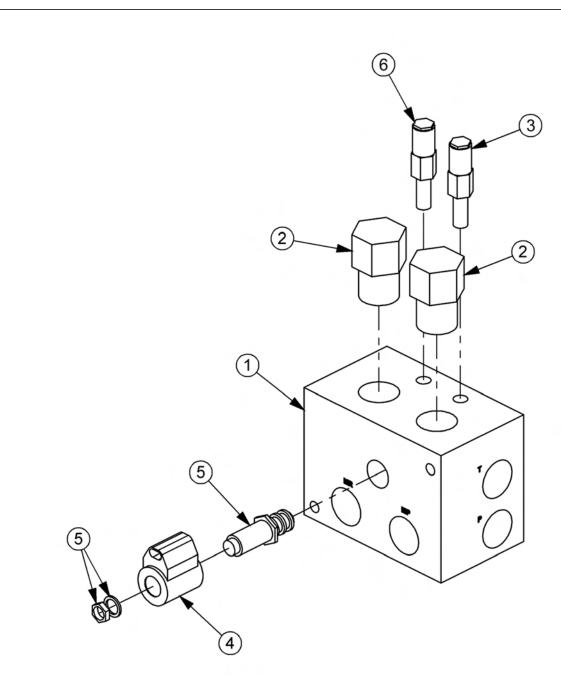
ITEM	PART NO.	QTY.	DESCRIPTION
1	TF3060	2	CASTER WHL ARM,FLAIL
2	TF3052A	1	BRKT,REAR CASTER ADJ,LF
3	6T2617	4	BUSHING,MACH,1-1/2"ID X 2-1/4"OD
4	6T3014	2	ROLL PIN,1/4" X 2"
5	TF3053	1	BRKT,REAR CASTER ADJ,RT
6	21725	4	HEX NUT,1/2",NC
7	21990	4	LOCKWASHER,1/2"
8	21741	4	CAPSCREW,1/2" X 5",NC
11	22057	2	SPINDLE,CASTER AXLE,ASSY
12	22533	2	COTTER PIN,3/16" X 2"
13	22071	10	HUB STUD
14	22066	2	HUB,CASTER
15	22070	2	DUST CAP
16	6T0836	4	CUP,CASTER WHEEL
17	22073	2	HEX NUT,1",NF(SLOTTED JAM NUT)
18	6T0838	2	SEAL
19	22696	2	RIM,REAR ROTARY CASTER
20	21416	2	TIRE,SOLID,RR-RTRY
21	21579	4	CAPSCREW,5/16" X 3/4",NC
22	21575	4	HEX NUT,5/16",NC
23	21987	4	LOCKWASHER,5/16"
24	22697	2	RIM,OUTER/RR RTRY CASTER ASSY
25	6T0830	4	BEARING,CONE,CASTER WHEEL

### SIDE FLAIL TRAVEL LOCK



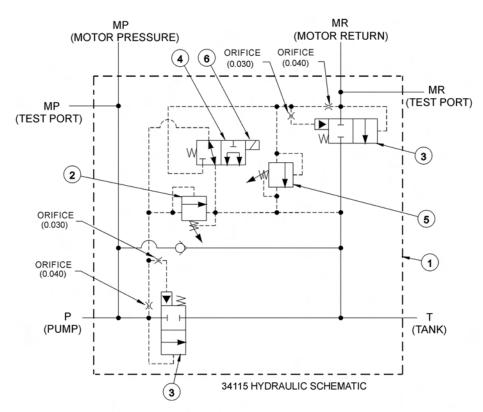
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	BONNET *REFER TO FLAIL ASSEMBLY
2	28276	1	BRACKET, TRAVEL LOCK, TRIPLE
3	TF4248	1	PLATE, TRAVEL LOCK
4	23745	1	TRAVEL LOCK HOOK
5	21783	2	CAPSCREW,5/8"X2" NC
6	21992	2	LOCKWASHER, 5/8"
7	21775	2	HEX NUT, 5/8" NC
8	TF4250	1	PIN, TRAVEL LOCK

## **BRAKE VALVE ASSEMBLY**



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

#### BRAKE VALVE HYDRAULIC SCHEMATIC



#### BRAKE VALVE TROUBLESHOOTING

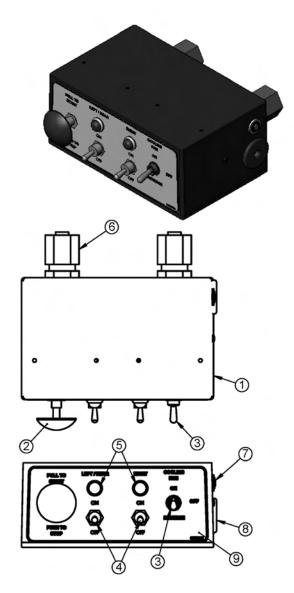
FAILURE MODE: CHECK ST
------------------------

- MOWER WILL NOT START system pressure is low (engine not lugging).
   1 thru 6
- 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. 3 thru 5
- MOWER BLADE WILL NOT STOP blade will not stop in proper time. 7 thru 9

#### **CORRECTIVE STEPS:**

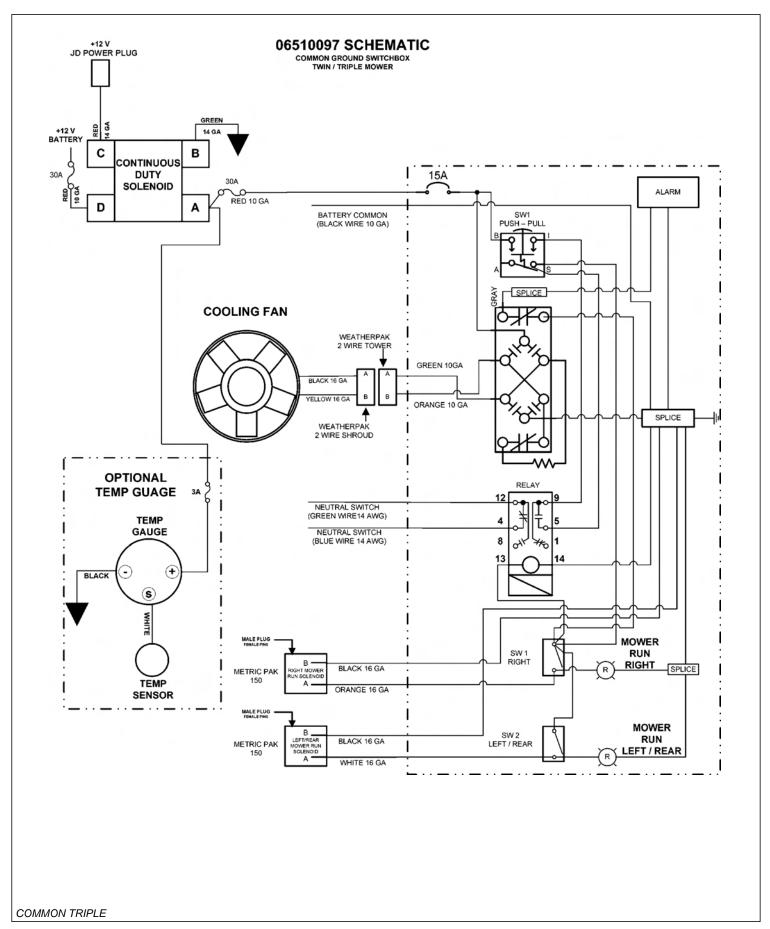
- 1. Check for voltage at solenoid (item 6), voltage must be between 10.2 volts and 13.8 volts.
- 2. Remove, inspect solenoid and cartridge (items 4, 6) for wear or contamination.
- 3. Remove, inspect logic elements near "P" port (item 3) for wear or contamination.
- 4. Remove, inspect 3000 psi relief 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.

## **SWITCHBOX SERVICE PARTS**

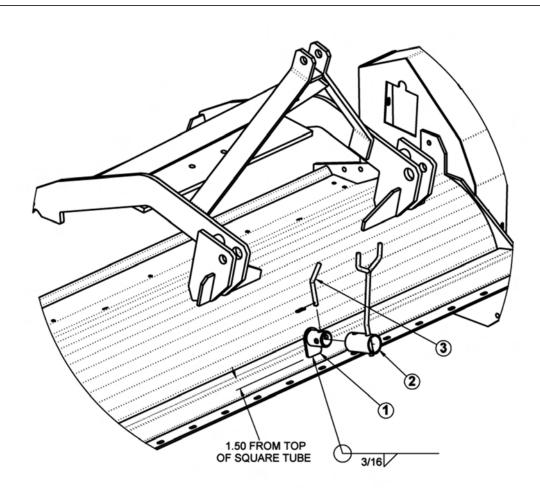


ITEM	PART NO.	QTY.	DESCRIPTION
	06510097	-	SWITCHBOX ASSEMBLY
1	06514011	1	SWBX,ALUM,BLK
2	35226	1	SWITCH,MOWER,COLEHERSEE
3	06510028	1	SWITCH,FORWARD/BRAKE/REV
4	33811	2	SWITCH,MASTER/DECK FLOAT
5	6T3923	2	INDICTATOR LIGHT,ON,RED
6	34540	2	STRAIN RELIEF,3/4,BLACK,NYLON
7	06514006	1	BREAKER,15A,SWBX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

#### **SWITCHBOX SCHEMATIC**



#### **PTO STAND**

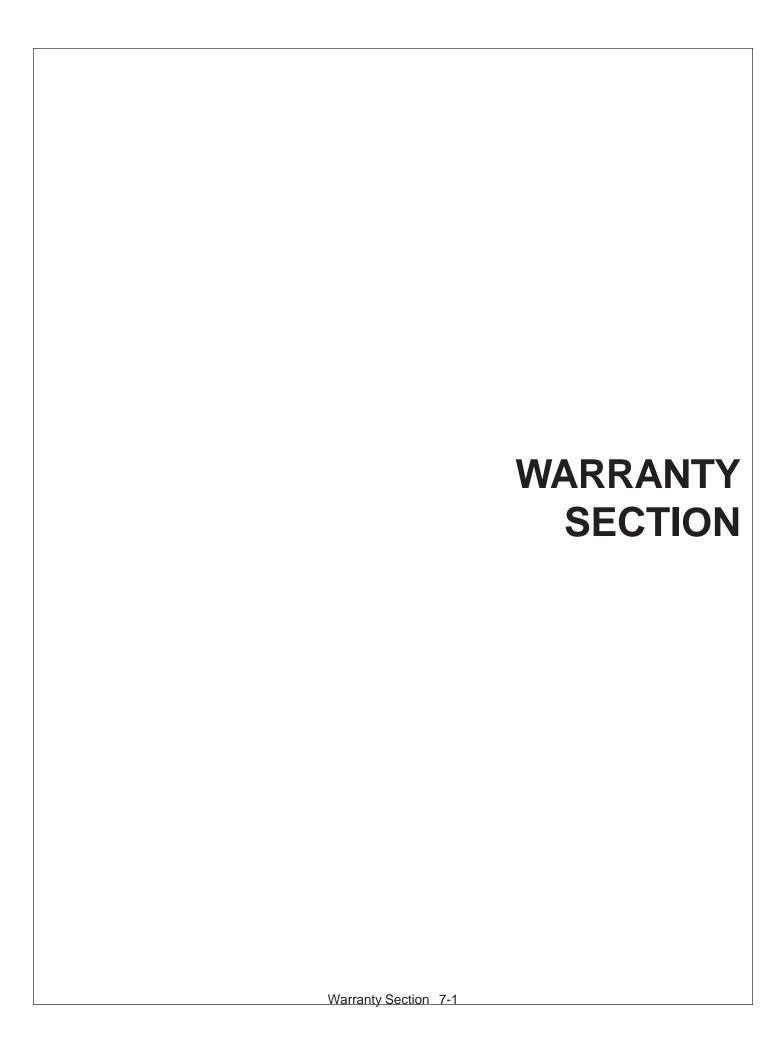


- NOTES:

  1. LOCATE ITEM 1 ON TUBE
  AS SHOWN, CENTER ON
  GEAR BOX SHAFT.
- WELD ITEM 1 AS SHOWN AFTER LOCATING 2.
- AFTER WELDING, PIN ITEM 2 IN PLACE WITH ITEM 3. 3.

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

NOTES 2
NOTES
COMMON TRIPLE



## 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!**



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 out 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 it 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

