

SIDE FLAIL ASSEMBLIES RÖÍ €Ì Í É F€€ÒÁ⁄I Q

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Tiger Corporation HH€FÁ⊃ÈŠ[žã^ÁQĘ^È

HH€FÁÞĒŠ[čã ^ÁQĘ^Ė Ùą̃ č¢Á2æ∳●ĒÛÖÁÄ Ï F€Ï 1-800-843-6849 1-605-336-7900 www.tiger-mowers.com

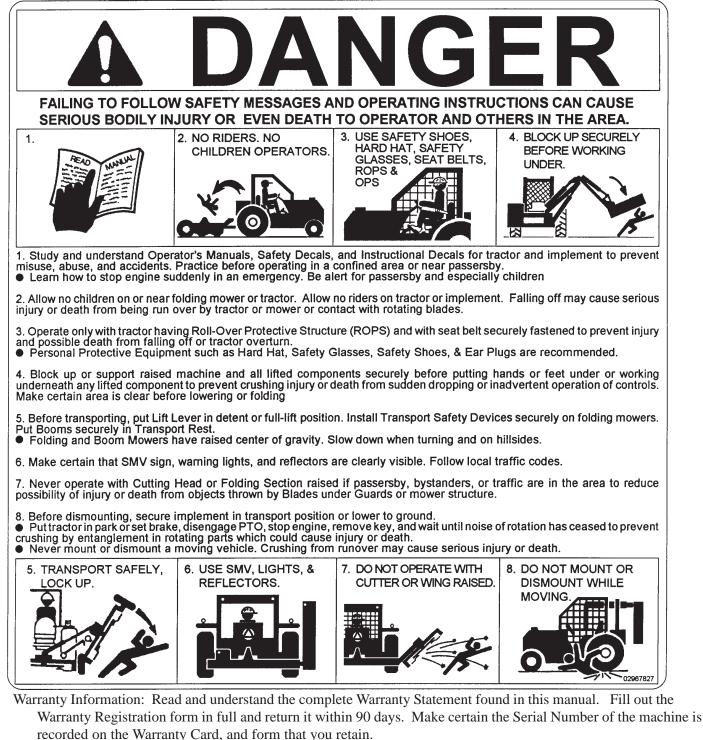
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TO THE OWNER / OPERATOR / DEALER

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 $\begin{array}{l} \textbf{BEFORE YOU START!! } \ddot{U} \approx \dot{A} \otimes \dot{A} \otimes \dot{A} \approx \dot{C} \hat{A} \wedge \bullet \bullet \neq & \bullet \dot{A} \\ \dot{U} \approx \dot{A} \otimes \dot{A} \otimes$

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



FORWARD

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

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

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

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

- Classify the problem
 - Hydraulic, electrical or mechanical Read the trouble shooting section
 - Tractor or Truck chassis Contact vehicle dealer
- If unable to correct the problem yourself, contact your local Tiger Dealer after gathering:
 - Machine model
 - Serial number _____
 - Dealer name ____
 - Detailed information about the problem including results of troubleshooting

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

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

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

GENERAL SAFETY INSTRUCTIONS AND PRACTICES

A 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 Implement. 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 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 faced 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.

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

AWARNING

Important

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

ACAUTION 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 and convenient operation or repair.

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in this Manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use good common sense to avoid hazards.



NOTE: If you want a translation of this safety section in one of the following Languages, please contact: Translations at 1502 E. Walnut Street Seguin, TX 78155; Fax: (830) 372-9529; Safety Section Translations are available in Spanish, Portuguese, French, German, Russian. PN GS01

SAFETY

SIDE FLAIL



TO AVOID SERIOUS INJURY OR DEATH DO THE FOLLOWING:

- READ, UNDERSTAND and FOLLOW Operator's Manual instructions, Warnings and Safety Messages.
- WEAR SAFETY GLASSES, safety shoes, hard hat, hearing protection and gloves when operating or repairing equipment
- WEAR appropriate breathing respirator when operating in dusty conditions to avoid respiratory diseases.
- DO NOT WEAR loose clothing or jewelry to avoid rotating parts entanglement injury.
- DO NOT USE DRUGS or ALCOHOL before or while operating equipment.
- DO NOT ALLOW anyone to operate equipment under the influence of drug or alcohol.
- **CONSULT** medical professional for medication impairment side effects.
- STAY ALERT, prolonged operation can cause fatigue, STOP and REST.

GENERAL OPERATING SAFETY

VISIBILITY CONDITIONS WHEN MOWING:

- **OPERATE IN DAYLIGHT** or with lights that gives at least 100 yards clear visibility.
- **BE ABLE TO SEE** and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects.

GROUND SPEED WHEN MOWING:

- NORMAL SPEED range is between 2 to 5mph.
- ADJUST MOWING SPEED for terrain conditions and grass type, density and cut height.
- **REDUCE MOWING SPEED** when near steep slopes, ditches, drop-offs, overhead obstructions, power lines and to avoid debris and foreign objects.

INSECT INFESTATION

AWARNING

 Do Not operate in areas where bees or insects may attack unless you WEAR PROTECTIVE CLOTHING or use enclosed tractor cab.

PTO SPEED:

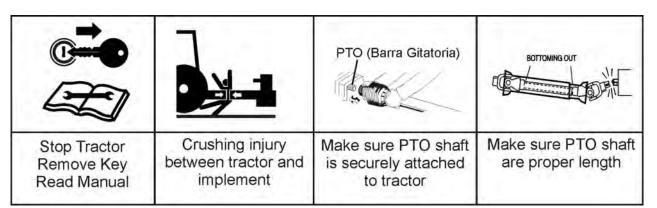
- DO NOT EXCEED IMPLEMENT RATED PTO SPEED
- AVOID exceeding rated PTO speeds that may result in broken drivelines or blade failures.

SAFETY SIGNS:

• **REPLACE** missing, damaged or unreadable safety signs immediately. PN OS01

SIDE FLAIL

CONNECTION OR DISCONNECTING IMPLEMENT SAFETY



SAFETY

A DANGER TO AVOID SERIOUS INJURY OR DEATH FROM BEING CRUSHED BY TRACTOR OR IMPLEMENT:

WHEN BACKING tractor to implement hitch:

DO NOT ALLOW BYSTANDERS between tractor and implement

BEFORE connecting and disconnecting implement hitch:

STOP TRACTOR ENGINE, place transmission into park, engage parking brake and remove key.

WHEN connecting and disconnecting implement hitch:

• DO NOT crawl or walk under raised mower

WHEN CONNECTING IMPLEMENT DRIVELINE:

TO AVOID implement driveline coming loose during operation:

- LUBRICATE yoke spring locking collar to ensure it freely slides on PTO shaft
- SECURELY seat yoke locking balls in PTO shaft groove.
- PUSH and PULL DRIVELINE on both the tractor and implement PTO SHAFTS to ensure it is SECURELY ATTACHED

TO AVOID broken driveline during operations:

- CHECK driveline for proper length between PTO shaft and implement gearbox shaft.
- Drivelines too short can pull apart or disengage.
- Drivelines too long can bottom out.
- Bottoming driveline telescoping assembly will stop sliding and become solid.
- Driveline bottoming can push through support bearings and break off PTO shaft.

CONTACT DEALER if implement driveline does not match Tractor PTO shaft:

- DO NOT USE PTO ADAPTER.
- Using a PTO adapter can cause:
- Excessive vibration, thrown objects, blade and implement failures by doubling operating speed.
- Increased working length exposing unshielded driveline areas and entanglement hazards.

DO NOT connect the Mower to a tractor with the PTO directly connected to the Tractor transmission. PN CDFM-01

SIDE FLAIL

Crushing injury Always wear seatbelt

implement falling

A DANGER

Crushing injury from roll over

TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF TRACTOR, EQUIPMENT RUN OVER, **ROLLOVER AND CRUSHING BY FALLING WING OR IMPLEMENT:**

USE ROPS and SEAT BELT equipped tractors for mowing operations.

Lock ROPS in

up position

KEEP ROPS lock in up position.

CRUSHING HAZARDS

- ALWAYS BUCKLE UP seat belt when operating tractor and equipment.
- **ONLY OPERATE** tractor and equipment while seated in tractor seat.

WHEN RAISING OR LOWERING IMPLEMENT:

- Raise or lower ONLY WHILE SEATED in tractor seat with seat belt buckled.
- Raise or lower ONLY when implement tongue is securely attached to tractor drawbar TO AVOID implement tip over.
- KEEP BYSTANDERS CLEAR of area TO AVOID crushing.

LIFTED Equipment can fall from mechanical or hydraulic failure or inadvertent Control Lever movement.

TO AVOID EQUIPMENT FALLING while working near or under lifted wings, components and A WARNING implements raised by 3-Pointed tractor hitch:

- SECURELY SUPPORT or block up raised equipment and components.
- BLOCK UP and securely support equipment before putting hands, feet or body under raised equipment or lifted components.

WHEN PARKING Implement and Tractor:

- LOWER implement, LOCK or BLOCK lifted parts before leaving equipment.
- NEVER leave implement unattended in a raised position.

TO AVOID CHILDREN FALLING OFF OR BEING CRUSHED BY EQUIPMENT:

AWARNING

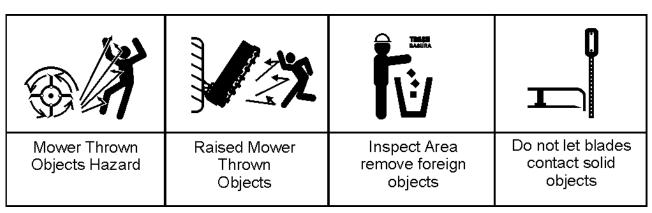
NEVER ALLOW children to play on or around Tractor or Implement.

WHEN UNHITCHING IMPLEMENT:

LOWER implement, LOCK or BLOCK lifted parts before leaving equipment. PN CHFM-01

SAFETY

THROWN OBJECT HAZARDS



SAFETY

A DANGER ROTARY MOWERS CAN THROW OBJECTS 300 FEET OR MORE UNDER ADVERSE CONDITIONS.

TO AVOID SERIOUS INJURY OR DEATH TO OPERATOR OR BYSTANDERS FROM THROWN OBJECTS:

KEEP bystanders 300 feet away

STOP MOWING IF PASSERSBY ARE WITHIN 300 FEET UNLESS:

- All THROWN OBJECT SHIELDING including, Front and Rear Deflectors, Steel Guards, Bands, Side Skirts and Skid Shoes in place and in good condition when mowing.
- Mower sections or wing are adjusted to be close and parallel to ground without exposing blades.
- MOWING AREA has been inspected and foreign materials and debris have been removed.
- **PASSERSBY** are inside enclosed vehicle.

INSPECT AREA FOR POTENTIAL THROWN OBJECTS BEFORE MOWING:

- **REMOVE** debris, rocks, wire, cable, metal objects and other foreign material from area.
- Wire, cable, rope, chains and metal objects can be thrown or swing outside deck with great velocity:
 - 1. MARK objects that cannot removed.
 - 2. AVOID these objects when mowing.

HIGH GRASS and WEED AREA INSPECTION:

- **INSPECT** for and **REMOVE** any hidden large debris.
- **MOW** at Intermediate height
- INSPECT and remove remaining debris
- **MOW** at final height.

MOWER THROWN OBJECT SHIELDING:

- **KEEP** all thrown object shielding including, Front and Rear Deflectors, Steel Guards, Bands, Side Skirts and Skid Shoes in place and in good condition when mowing.
- DO NOT OPERATE with any thrown object shielding missing, damaged or removed.

RIGHT OF WAY (Highway) MOWING

- No shielding is 100% effective in preventing thrown objects. To Reduce Possibility of Injury:
 - 1. MAINTAIN MOWER SHIELDING, side skirts, skid shoes, and blades in good operational condition,
 - 2. RAISE CUTTING HEIGHT to 6 INCHES minimum,
 - 3. INSPECT AREA thoroughly before mowing to REMOVE potential THROWN OBJECT HAZARDS,
 - 4. NEVER ALLOW BLADES to CONTACT SOLID OBJECTS like wire, rocks, post, curbs, guardrails, or ground while mowing. *PN TOFM-01*

SIDE FLAIL

THROWN OBJECTS HAZARDS (CONTINUED)

Mower Thrown Objects Hazard	Raised Mower Thrown Objects	Inspect Area remove foreign objects	Do not let blades contact solid objects

MOWER OPERATION:

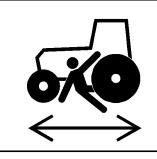
- **DO NOT** exceed mower's rated Cutting Capacity or cut non-vegetative material.
- USE ENCLOSED TRACTOR CABS when two or more mowers are operating in mowing area.
- ADJUST mower sections or wing close and parallel to ground without exposing blades
- **ADJUST** cutting **HEIGHT** to **AVOID BLADE CONTACT** with solid objects like wire, rocks, posts, curbs, guard rails and fixed obstructions.
- **DO NOT** operate mower when mower is raised or in transport position
- **STOP MOWING** immediately if blades strike heavy objects, fixed structures, metal guard rails and concrete structures:
 - 1. BLADES CAN FAIL from impact and objects can be thrown with great velocity.
 - 2. **INSPECT** and **REPLACE** any damaged blades.
 - 3. CHECK blade carrier balance and REPLACE if damaged.
- DO NOT mow in standing water TO AVOID possible BLADE FAILURE.
- AVOID MOWING in reverse:
 - 1. STOP PTO and back up mower.
 - 2. LOWER mower, engage PTO and mow forward.
- **STOP PTO** and **BLADES** when raising the mower to transport position.
- **DO NOT ENGAGE PTO** with mower in transport position.
- STOP mowing when EXCESSIVE VIBRATION occurs:
 - 1. STOP PTO and tractor ENGINE.
 - 2. **INSPECT** mower for vibration source
 - 3. REPLACE any damage parts and bent or damaged BLADES. PN TOFM-02

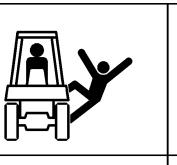
SIDE FLAIL

Safety Section 1-7

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RUN OVER HAZARDS







Operator run over hazard

Rider fall off run over hazard Rider fall off run over hazard

A DANGER TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF TRACTOR OR EQUIPMENT RUN OVER:

- USE ROPS and SEAT BELT equipped tractors for mowing operations.
- KEEP ROPS locked in UP position.
- **ONLY** start tractor while seated in tractor seat.
- ALWAYS BUCKLE UP seat belt when operating tractor and equipment.
- ONLY OPERATE tractor and equipment while seated in tractor seat.
- NEVER ALLOW RIDERS on tractor or implement.

WHEN MOUNTING AND DISMOUNTING TRACTOR:

- ONLY mount or dismount when tractor and moving parts are stopped.
- STOP ENGINE AND PTO, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor. *PN R001*

SAFETY

SIDE FLAIL

Safety Section 1-8

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PTO ENTANGLEMENT HAZARDS

	PTO (Barra Gitatoria)		BOTTOMING OUT
Entanglement hazard Do Not approach or touch a rotating PTO driveshaft	Make sure PTO shaft is securely attached Do Not Use PTO Adapter	DO NOT Operate if PTO shields are damaged or missing	Make sure PTO shafts are proper length



KEEP AWAY FROM ROTATING DRIVELINES AND ELEMENTS TO AVOID SERIOUS INJURY OR DEATH:

STAY AWAY and **KEEP** hands, feet and body AWAY from rotating blades, drivelines and parts until all moving elements have stopped.

- STOP, LOOK and LISTEN before approaching the mower to make sure all rotating motion has stopped.
- **ROTATING COMPONENTS CONTINUE** to **ROTATE** after the PTO is shut off.

PTO SHIELDING:

TO AVOID SERIOUS INJURY OR DEATH FROM ENTANGLEMENT WHEN OPERATING IMPLEMENT:

- **KEEP PTO** shields, integral driveline shields and input shields installed
- DO NOT OPERATE mower without shields and guards in place or missing
- **REPAIR OR REPLACE** if damage, broken or missing
- ALWAYS REPLACE GUARDS that have been removed for service or maintenance.
- Do Not use PTO or PTO guard as a step.

TO AVOID broken driveline during operations:

- CHECK driveline for proper length between PTO shaft and implement gearbox shaft.(*Refer to Instructions in Operation Section*)
- Drivelines too short can pull apart or disengage.
- Drivelines too long can bottom out.
 Bottoming driveline telescoping assembly will stop sliding and become solid.
- Driveline bottoming can push through support bearings and break off PTO shaft
- AVOID sharp turns or lift mower to heights to cause driveline "knocking".
- Lubricate driveshaft-telescoping components weekly.

CONTACT DEALER if implement driveline does not match Tractor PTO shaft:

• DO NOT USE PTO ADAPTER.

Using a PTO adapter can cause excessive vibration, thrown objects, blade and implement failures by doubling operating speed. Increased working length exposing unshielded driveline areas. *PN PEO1*

SIDE FLAIL

MOWER BLADE CONTACT HAZARDS



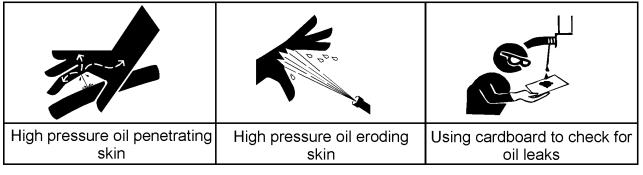
Do not put fingers underneath mower Do not put foot underneath mower

Stop Tractor Remove Key Read Manual

A DANGER KEEP AWAY FROM ROTATING BLADES TO AVOID SERIOUS INJURY OR DEATH FROM BLADE CONTACT:

- STAY AWAY and KEEP HANDS, FEET and BODY AWAY from rotating blades, drivelines and parts until all moving elements have stopped.
- DO NOT put hands or feet under mower decks
- STOP rotating BLADES disengage PTO and wait for blade to stop rotating before raising mower deck or wings
- STOP LOOK and LISTEN before approaching the mower to make sure all rotating motion has stopped. PN MBFM-01

HIGH PRESSURE OILLEAK HAZARDS



🛦 DANG ER

TO AVOID SERIOUS INJURY OR DEATH FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENERATING SKIN:

- DO NOT OPERATE equipment with oil or fuel leaks.
- KEEP all hydraulic hoses, lines and connections in GOOD CONDITION and TIGHT before applying system pressure.
- **RELIEVE HYDRAULIC PRESSURE** before disconnecting lines or working on the system.
- **REMOVE** and replace hose if you suspect it leaks. Have dealer test it for leaks.

HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE.

- WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:
- ALWAYS WEAR safety glasses and impenetrable gloves.
- USE paper or cardboard to search for leaks.
- DO NOT USE hands or body parts to search for leak.
- KEEP hands and body AWAY from pin holes and nozzles ejecting hydraulic fluid.
- Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury. *PN HP01*

SIDE FLAIL

ELECTRICAL & FIRE HAZARDS



Strike and explosion Hazard Blades Contacting Utility or Gas Lines



Do not operate near fires. Keep mower deck clear of debris

TO AVOID SERIOUS INJURY OR DEATH FROM ELECTRICAL CONTACT WHEN WORKING AROUND ELECTRICAL POWER LINES, GAS LINES AND UTILITY LINES:

- **INSPECT** mowing area for overhead or underground electrical power lines, obstructions, gas lines, cables and Utility, Municipal, or other type structure.
- **DO NOT** allow mower to contact with any Utility, Municipal, or type of structures and obstructions.
- CALL 811 and 1-800-258-0808 for identify buried utility lines.

FIRE PREVENTION GUIDELINES while Operating, Servicing, and Repairing Mower and Tractor to reduce equipment and grass fire Risk:

- EQUIP Tractor with a FIRE EXTINGUISHER
- DO NOT OPERATE mower on a tractor equipped with under frame exhaust
- DO NOT SMOKE or have open flame near Mower or Tractor
- DO NOT DRIVE into burning debris or freshly burnt area
- AVOID FIRE IGNITION by not allowing mower blade to contact solid objects like metal or rock.
- ADJUST SLIP CLUTCHES to avoid excessive slippage and clutch plate heating.
- CLEAR any grass clippings or debris buildup around mower drivelines, slip clutches, and gearboxes.
- SHUT OFF ENGINE while refueling. PN EF02

SIDE FLAIL

Safety Section 1-11

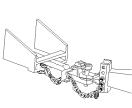
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TRANSPORTING HAZARDS











			-	
Use SMV signs and Flashing Lights	Loss of Control Stopping Hazard	Loss of Control Speeding Hazard	Use Safety Tow Chain - Tractor to Implement	Engage Transport Locks

AWARNING

TO AVOID SERIOUS INJURY AND DEATH WHEN TOWING OR TRANSPORTING EQUIPMENT:

- KEEP transport speed BELOW 20 mph to maintain control of equipment.
- **REDUCE SPEED** on inclines, on turns and in poor towing conditions.
- DO NOT TOW with trucks or other vehicles
- USE only properly sized and equipped tractor for towing equipment.
- FOLLOW all local traffic regulations.

TRACTOR REQUIREMENTS FOR TOWING OR TRANSPORTING IMPLEMENTS:

- ONLY TRANSPORT with tractor with ROPS in the raised position.
- USE properly sized and equipped tractor that exceeds implement weight by at least 20%
- KEEP 20% of tractor weight on front wheels to maintain safe steering.

BEFORE TRANSPORTING OR TOWING IMPLEMENT:

TRACTOR INSPECTION:

- CHECK steering and braking for proper operation and in good condition.
- CHECK SMV sign, reflectors and warning lights for proper operation and visibility behind unit.
- CHECK that your driving vision is not impaired by tractor, cab, or implement while seated in tractor seat.
- ADJUST your operating position, mirrors, and implement transport for clear vision for traveling and traffic conditions.

PREPARE IMPLEMENT FOR TRANSPORTING OR TOWING:

- DISENGAGE PTO
- RAISE MOWER

• **REMOVE** any cut material collected on mower deck.

TOWED MOWERS - ENGAGE TRANSPORT LOCKS AND SAFETY CHAINS:

- INSTALL center axle cylinder transport stops or pins
- ATTACH implement SAFETY CHAIN to tractor

DETERMINE STOPPING CHARACTERISTICS OF TRACTOR AND IMPLEMENT FOR TRANSPORTING OR TOWING:

BRAKING TESTS:

- APPLY brakes at increasing speeds
- Observe STOPPING distances increases with increased speeds.
- DETERMINE the maximum safe transport speed that does not exceed 20 mph

DETERMINE MAXIMUM TURNING SPEED BEFORE OPERATING ON ROADS OR UNEVEN GROUND:

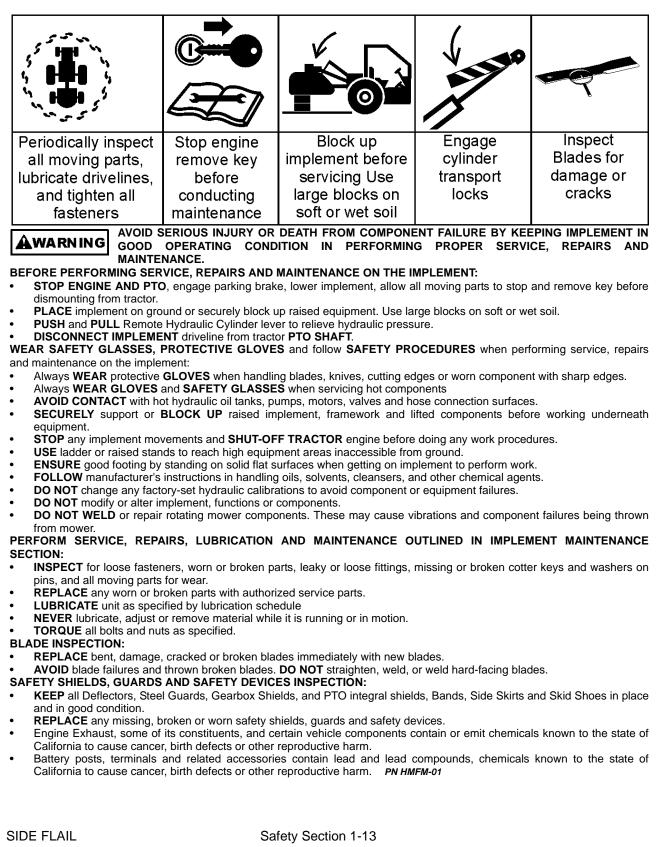
- **TEST** equipment in slowly increasing speed in turns to determine it can be operated at higher speeds.
- USE REDUCED turning speeds in sharp turns to avoid equipment turning over.

WHEN TOWING OR TRANSPORTING EQUIPMENT:

- Always WEAR SEAT BELT when operating or transporting mower.
- USE low speeds to avoid overturn with raised wings.
- USE low speeds and gradual steering on curves, hills, rough or uneven surfaces and on wet roads
- TURN ON tractor FLASHING WARNING LIGHTS.
- ALLOW clearance for implement swing while turning. PN TH02

SIDE FLAIL

HAZARDS WITH MAINTENANCE OF IMPLEMENT



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PARTS INFORMATION

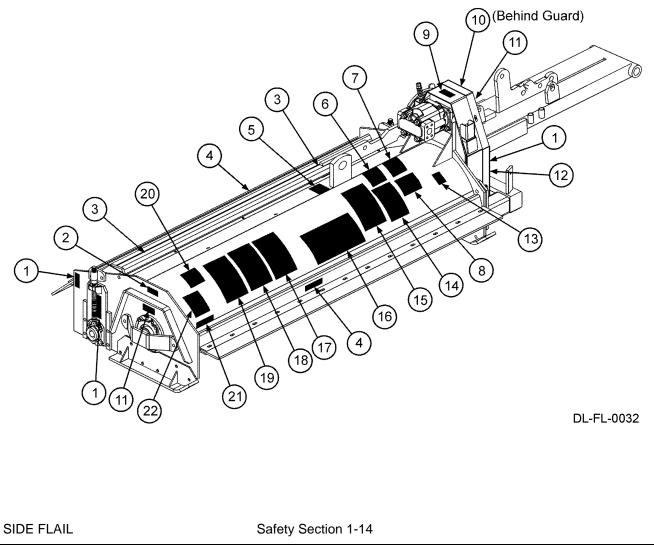
PARTS INFORMATION

Tiger mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain 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. (SPTM-1)

SEE YOUR TIGER DEALER

Decal Location

NOTE: Tiger supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Tiger cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Tiger dealer to order replacement decals.



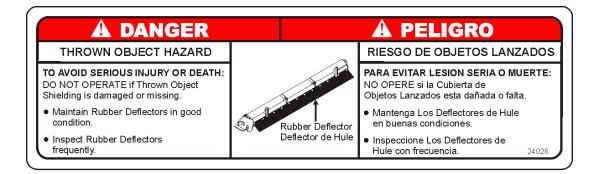
SAFETY

ITEM	PART NO.	QTY.	ТҮРЕ	DESCRIPTION
1.	6T3261	2	INSTRUCT	Greasing Instructions
2.	22839	1	INSTRUCT	Do Not Lubricate with Automatic Grease Gun
3.	42399	2	REFLECTOR	Red Reflector
4.	24028	2	DANGER	Thrown Object Hazard
5.	D703	1	DANGER	Crushing Hazard
6.	02962765	1	DANGER	Crushing Hazard & Pinch Points
7.	02965262	1	WARNING	Oil Leak Hazard
8.	D698	1	DANGER	Crushing Hazard - Injury or Death
9.	00758194	1	WARNING	Pinch Point Hazard
10.	D646	1	DANGER	Guard Missing, Do Not Operate
11.	6T3249A	2	INSTRUCT	Greasing Instructions-Cutter Shaft Bearing
12.	21405	2	INSTRUCT	Standard/Smooth Cut Measurements
13.	6T3221	1	IMPORTANT	Lubricate Spindle every 40 hours
14.	32709	1	WARNING	Use Genuine Tiger Parts
15.	D699	1	WARNING	Multi-Hazard
16.	31522	1	LOGO	Tiger Logo (10" x 5.5")
17.	D696	1	DANGER	Multi-Hazard
18.	D687	1	DANGER	Entanglement / Run Over Hazard
19.	D686	1	DANGER	Thrown Object / Crushing Hazard
20.	D706	1	INSTRUCT	Lubrication Chart - Rear Flail
21.	42400	1	REFLECTOR	Amber Reflector
22.	6T3236	1	LOGO	Made in the USA

Decal Description

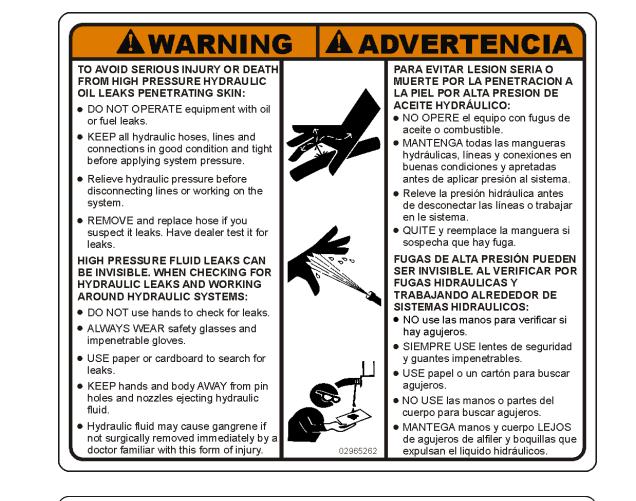








SIDE FLAIL



ADANGER

Crushing Hazard - Injury or Death

TO AVOID SERIOUS INJURY OR DEATH:

 STAND CLEAR when removing transport latch, lowering or raising wings.

- CLEAR AREA of bystanders before lowering implement wings.
- IMPLEMENT CAN FALL from hydraulic failure or accidental operation of controls.
- BLOCK UP and securely support equipment before putting hands, feet or body under raised equipment or lifted components.
- SECURELY ENGAGE transport latch before transportation or working under wing.
- FILL CYLINDERS with oil before attempting to lower implement wings.
- DO NOT OPERATE in transport position or with wings off ground.

Control of the second sec

- 13

Riesgo de Aplastamiento Lesion o Muerte PARA EVITAR LESION SERIA O MUERTE: • MANTENGASE LEJOS al quitar el cierre de

A PELIGRO

- transporte, bajando y devantando las alas. • DESOCUPE EL AREA de personas precentes antes de bajar las alas del
- presentes antes de bajar las alas del implemento.EL IMPLEMENTO PUEDE CAER del
- EL IMPLEMENTO POEDE CAER del fracaso hidráulico o por operación accidental de controles.
- BLOQUEE y soporte con seguridad antes de poner manos, pies o cuerpo debajo del equipo de componentes levantados.
- CON SEGURIDAD ACTIVE el cierre de transporte antes de la transportacion o trabajar debajo de las alas.
- LLENE LOS CILINDROS con aceite antes de intentar de bajar las alas del implemento.
 NO OPERE en posicion de transporte o con
 - las alas devantadas del la tierra. D698

SIDE FLAIL





SIDE FLAIL



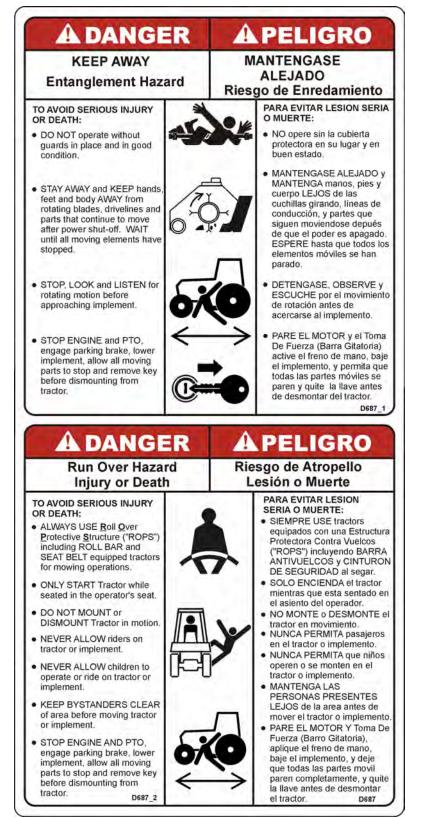
SIDE FLAIL



SIDE FLAIL

Safety Section 1-20

© 2011 Alamo Group Inc.



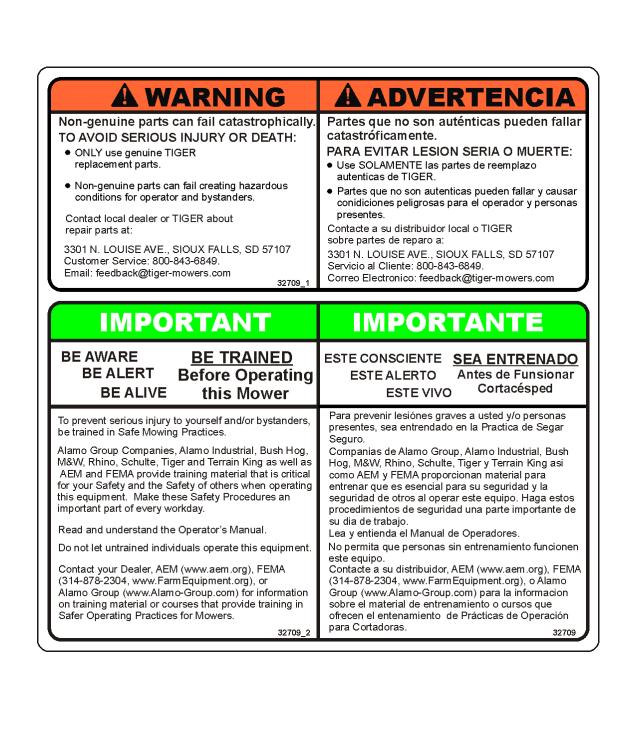
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Safety Section 1-21

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SIDE FLAIL



SIDE FLAIL

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 Training Requirements

Title 29, Code of Federal Regulations Part 1928.57(a)(6). www.osha.gov

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

Keep all guards in place when the machine is in operation;

Permit no riders on equipment

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

Employer Responsibilities:

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

- 1. Train the employee in the proper and safe operation of the Tractor and Implement.
- 2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
- 3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
- 4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
- 5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
- 6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
- 7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
- 8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

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.)

ASSEMBLY SECTION

O⊡••^{à|^ÂÛ^&cā[}}ÁGË

ASSEMBLY

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

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TRACTOR PREPARATION

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- ÔÈ Ü^{ [ç^Á;}*ā;^Á;ãa^Á;aa;^|•Ê4;¦Áæa;^Á@;[åÁ;[Áæa&^••Á;[}ơ4;`||^`È
- ÖÈ Ü^{[ç^Á,|`*•Á¦[{ Ád:æ&d[¦Á&æe•dā]*Á, @o'¦^Á;æā), √æ; ^Áæ), åA,`{]A,́[`}dÁ, ā∦Áà^Áæcæ&@°åÈ
- ÒÈ Ü^{ [ç^ Áaa) ^ Á√[} ơÁ, ^ ãt @or Áaa) åÁ, ^ ãt @oA(* `]][¦or È
- QÈ Üæ≆i^Ás@ Ástæ&q[¦Áş}q[Ásæ&\Ëœaa}å∙Ása}åÁ^{ [ç^Ás@ Áā*@Ása}åÁ^∞Á^æsA, @^|•È

(ASM-JD-0001)

CRANKSHAFT ADAPTER

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DRIVESHAFT AND FRONT PUMP MOUNTING

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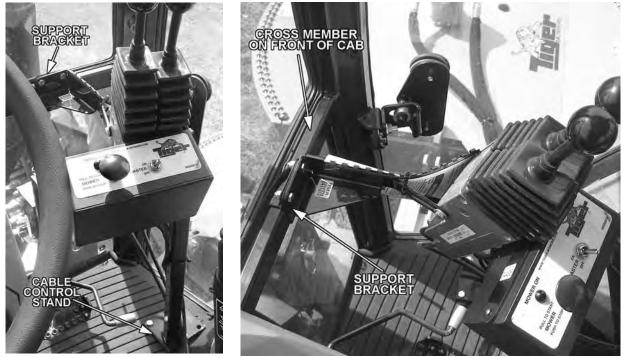
CAUTION: DO NOT START THE TRACTOR UNTIL ALL HOSES ARE ATTACHED, TANK IS FILLED WITH PROPER OIL AND BALL VALVES ARE OPEN! STARTING AT THIS TIME WILL CAUSE SERIOUS DAMAGE TO THE PUMP. (ASM-C-0091)

ADJUSTING REAR WHEELS

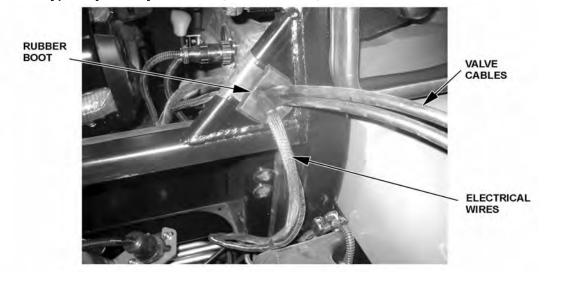
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ASSEMBLY

CABLE CONTROL INSTALLATION



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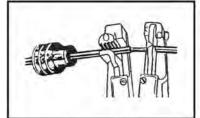
MAINFRAME INSTALLATION

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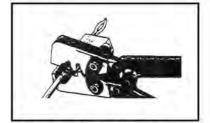
WEATHER-PACK / METRI-PACK ASSEMBLY

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



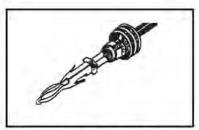
1. Apply seal to cable, before stripping insulation.



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



2. Align seal with cable insulation.



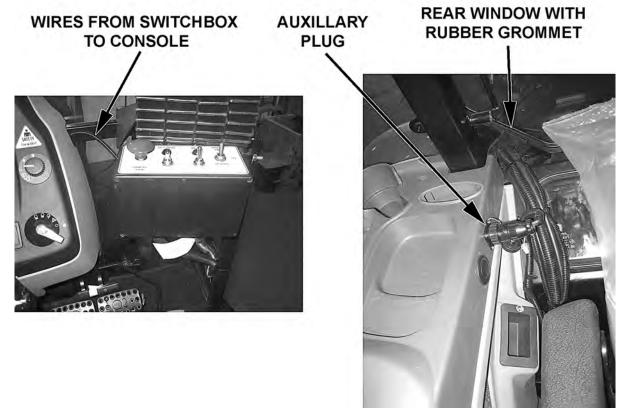
4. Crimp and visually inspect for a good crimp before installing in connector body.

ASSEMBLY

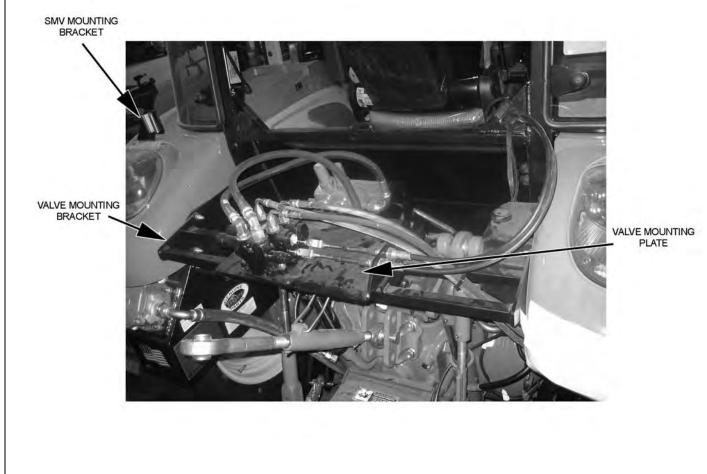
SWITCHBOX WIRING

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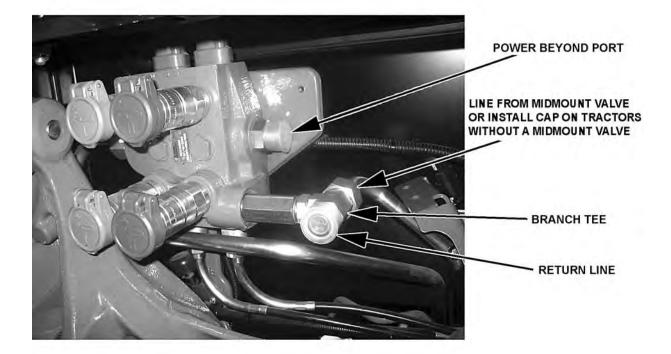


VALVE MOUNTING BRACKET



1

PRESSURE LINE INSTALLATION



RETURN LINE INSTALLATION

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MANUAL LIFT VALVE PORTS



(ASM-C-0102)

Á

MANUAL SWITCHBOX MOUNTING

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NOTE ON HUSCO CONTROL VALVES

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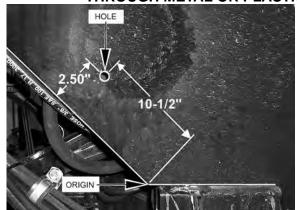


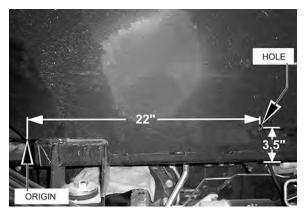
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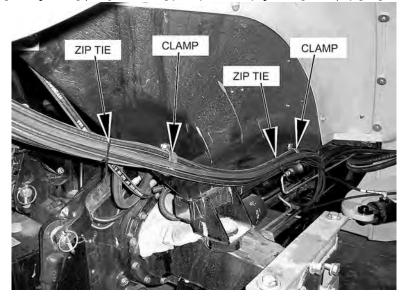
HOSE AND WIRE ROUTING

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NOTE: DO NOT CUT INTO TUBES / HOSES / WIRES WHEN DRILLING THROUGH METAL OR PLASTIC! DM(ASM-JD-0068)

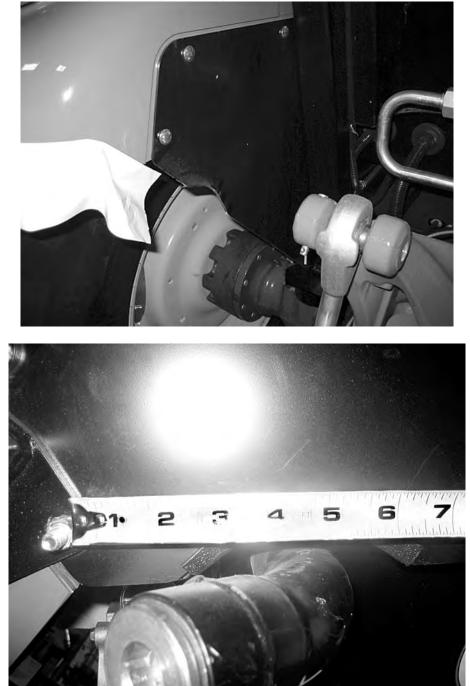






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FENDER CUT FOR WHEEL WELL TANK



FILLING HYDRAULIC RESERVOIR

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

(ASM-C-0004hydro resrv)

WHEEL WELL HYDRAULIC TANK INSTALLATION

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INSTALLING O-RING FITTINGS

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INSTALLING NATIONAL PIPE FITTINGS

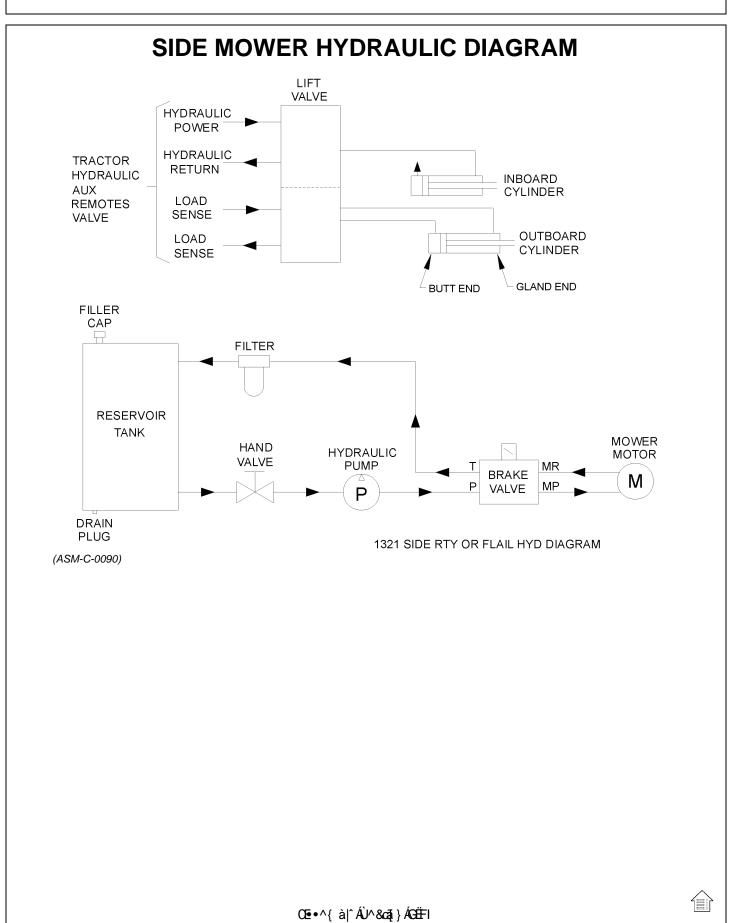
Y@}^ç^¦/áj•cælljā,* Ázid,āj,^Áãicāj,* ÉÁ, ¦ælj, Ác@Ác@^æå•Á&l[&\,ā*Ázid,å*Ázid@Ár}åDÁ,ãc@Ár,[} cælj^ĚÁQ,Ác@ãrÁ,æÊÉko@Ázid_^Á,ãllÁs/Ázid@^}^åÁj, @}Ašj,•cæll^åÉÁPUVÒKÁKQÁsrÁ,[cÁ,^&^••æ}Ák[Ázid]^ÁUË ¦āj*Ázidā,*•ÉÁ,¦ÁcQ,•^Ásj,•cæll^å/ásj,Ár,ãr,^•ĚÁ(ASM-C-0088)

GENERAL HOSE INSTALLATION

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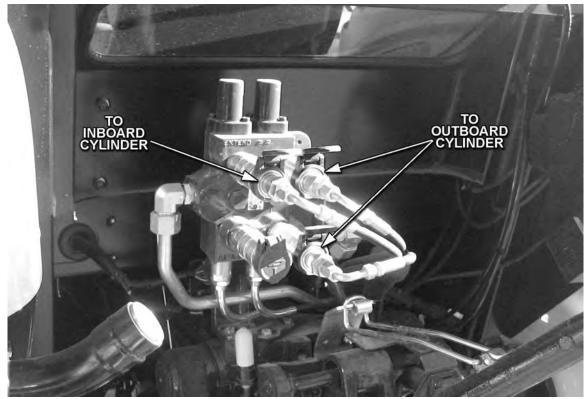
HOSE COVERING

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NO VALVE OPTION

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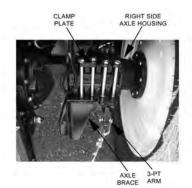
AXLE BRACE MOUNTING

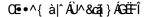
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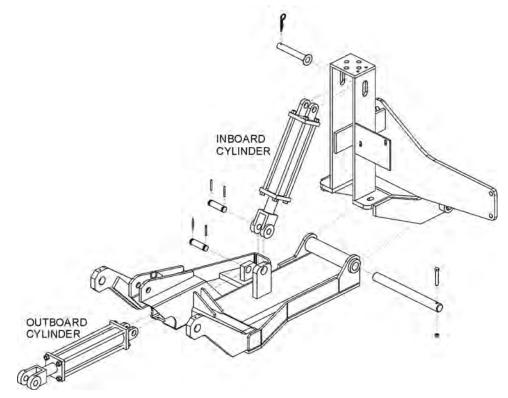
AXLE BRACE

MOUNTING BOLTS





DRAFT BEAM INSTALLATION



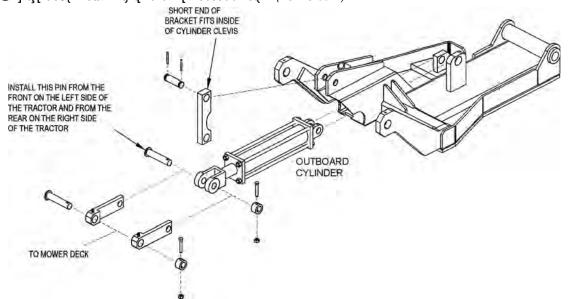
DRAFT BEAM MOUNTING

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MOWER MOUNTING

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LIFT CONTROL FEEDLINES

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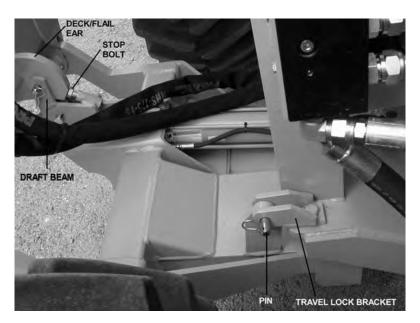
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SOLENOID BRAKE VALVE

TRAVEL LOCK MOUNTING

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STOP BOLT ADJUSTMENT

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DECK / MOTOR FEEDLINE

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Ô@&\Á{¦ÁţāµA^æ)•ÁævÁæļÁācā;*•ÁæjåÁ&[}}^&cāt}} *ÁæjåA&[}*Á*ā]*Á*Ájā*&^ÁţAjæ]^¦Áţ¦Á&æďaà[ædåÈ₩₩QÁæÁ |^æłÁæʿÁtčš]åÊA[`Áţ`*ocÁ@ch&[_]}Ác@Adæ&d[¦ÁæjåA^ch&@cA&`cos¦Á@æåAt}}Ác@A*[[`}åÈ₩Ю́A-{\^A æcos{]cāj*Át[Áā¢Ác@Ár>æÊA[`Át`*ocÁæ&c`æc>Ác@ÁācAçæqç^Á@æjå|^•Á^ç^¦æ‡Áāt[^•Át[Á^]ā°ç^Áæj^A]¦^••``¦AÁşÁc@Áā]^•È₩DO NOT USE HANDS TO CHECK FOR FLUID LEAKS!

Üænā^Áo@Ásḋ^^Á,[ā]oÁ@an&@Áæ)åÁ&@&\Ás@Ata&d[¦Áā]o`\}æ4Á@妿`|&&EÁa‡|Áq[Á,¦[]^¦Áļ^ç^|Áã-}^^å^åÈÁ{As*M-C-0079*)

FINAL PREPARATION FOR OPERATION

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Before operating the mowerÉx@ Á& cc\ delta de

MOWER TESTING

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)

MAINTENANCE SECTION

Maintenance Section 4-1

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 end of 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.
- <u>Release of energy from pressurized systems may cause inadvertent actuation of cylinders, or sudden</u> 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. The reafter 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.

🛦 DANG ER

Never work under the Implement, the fr amework, or any lif ted component unless the Implement is securely supported or blocked up to prevent s udden or inadvertent falling which could cause serious injury or even death. (SG-14)





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)

Side and Rear Flail

Maintenance Section 4-2

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 tractor's hour meter to determine when regular servicing is required.

ITEM	SERVICE	COMMENTS
Drive Shaft Yoke, U-Joint	Grease	Grease as instructed in
& Stub Shaft		detailed maintenance section
Pump Drive Shaft Coupler	Check and Lube	Insure driveshaft 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
Knives	Check	Inspect for missing or damaged
		knives, change as needed.
Belts	Check/Adjust	Check if broken, tighten as required
Main Frame and	Check	Retorque bolts to torque
Deck		specifications in this section

Daily or Every 8 Hours

Side and Rear Flail

Maintenance Section 4-3

MAINTENANCE

ITEM	SERVICE	COMMENTS
Hydraulic Fluid Level	Check	Add if required per
		fluid recommendations
Rear Flail Drive (if applicable)	Lubricate	Grease as instructed in
Bearing Flange and		detailed maintenance section
Shaft Coupler		
Cutter Shaft	Lubricate	Grease as instructed in
		detailed maintenance section
Ground Roller Bearings	Lubricate	Grease as instructed in
-		detailed maintenance section
	WEEKLY OR EVER	
ITEM	SERVICE	COMMENTS
In Tank Hyd. Fluid	Change	Change after first 50
Filter		hours only, then every
(10 micron filter)		500 hours or yearly
In-Line High Pressure	Change	Change after first 50
Filter		hours only, then every
(10 micron filter)		500 hours or yearly
1	MONTHLY OR EVER	Y 150 HOURS
Hydraulic Fluid Level	Check	Add as needed
	Clean/Check/Replace	Clean or replace
Hyd. Tank Breather	•	Element as required
Hyd. Tank Breather		Element as required
Hyd. Tank Breather Rear Tire Typ	3	Max P.S.I.
Hyd. Tank Breather Rear Tire Typ 480/80R38	Э	
Rear Tire Typ	9	Max P.S.I.

YEARLY OR EVERY 500 HOURS

ITEM	SERVICE		COMMENTS
Hydraulic Tank Fluid	Change		
In Tank Hydraulic Fluid Filter (10 micron filter)	Change		
In-Line HP Filter (10 micron filter)	Change	or	Change when indicated by restriction indicator.
Hydraulic Tank Breather	Change		

Side and Rear Flail

Maintenance Section 4-5

	TROUBLESH	OOTING
SYMPTOMS	CAUSE	REMEDY
Vibration	1. Loose Bolts	 Check all bolts and tighten to recommended torque specs.
	2. Cutter assembly	2a. Check for damaged blades, disc
	Unbalanced	or cuttershaft. Replace if needed.
		2b. Check for wire, rope, etc.
		entangled in the cutter assembly
Mower will not lift	1. Hyd. Fluid Low	1. Check and refill hydraulic fluid
	2. Leaks in line	2. Tighten or replace fittings and hoses
	3. Faulty relief valve	3. Check pressure in line. Line
		pressure should be at least 2500 PSI
	4. Kinked or blocked	4. Clean or replace lines
	5. Faulty cylinder	5. Inspect, repair or replace cylinder
Mower will not start	1. Blown fuse	1. Check fuse between mower switch
or run		and ignition/replace
	2. Ball valves closed	2. Make sure valves are open
	3. Low oil level	3. Check hydraulic tank and fill
	4. Line leak	4. Check all fittings and lines,
		re-tighten or replace
	5. Electronic	5a. Without the tractor running, turn
	solenoid faulty	the mower switch to on. A low
		audible click is not 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.
		5b. Remove the four bolts holding the
		small block to the main block. Lift
		and remove small block being
		careful not to damage O-rings/filter.
		Clean filter and re-install.

MAINTENANCE

Side and Rear Flail

Maintenance Section 4-6

		5c.	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.
Oil Temperature rises1. Belts	1. Low oil level	1.	Bring oil to proper level.
above 200 deg. F	2. Kinked or blocked hose	2.	Inspect, repair, or replace hoses.
	3. Worn pump/motor	3.	Disable and repair.
Motor runs but	1. Belts	1.	Inspect belts and pulleys. Replace
will not cut.			belts and repair as needed.
	2. Tensioner	2.	Adjust tensioner nut until flatwasher
			is flush with top of guide.
Mower turns slowly or not at all.	1. Contaminants restricting spool	1.	Remove large nut on side of large valve block. Remove spring, and use
	movement in valve body.		needle nose vise grip to pull spool from block. Check block and spool for contaminants and scratches.
			Clean parts or replace if scratched.
	2. Suction lines	2.	Check for kinks or obstruction in
	obstructed	0	suction hose.
	3. Low oil level	3.	Check Hyd. tank level and fill.
Pump will not work	1. Excessive wear on internal parts	1.	Disassemble and repair.
Motor will not work	1. Excessive wear on internal parts	1.	Disassemble and repair.

MAINTENANCE

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.

These are intended to be general specifications. See tractor operator's or service manual for exact specifications for your unit.

Description	Application	General Specification	Recommended Mobil Lubricant
Tractor Hydraulics	Reservoir	JD-20C	Mobilfluid®
Mower Hydraulics Cold Temperatures 0° I Start-Up	Reservoir F	ISO 46 Anti-Wear/ Low Temp	Mobil DTE® 15M
Normal Temperatures 15° F Start-Up		ISO 46 Anti-Wear	Nuto® H46, Mobil DTE®25
Flail Rear Gearbox	Reservoir	PAO Synthetic Extreme Pressure Gear Lube	Mobil® 1 Synthetic Gear Lubricant LS 75W-90 Mobil® Delvac Synthetic 75W-90
Cutter Shaft & Ground Roller Shaft(Flail)	Grease Gun	Lithium-Complex NLGI 2 ISO 320	Mobil Delvac® Xtreme Grease, Mobilgrease CM-S
Drive Shaft Coupler (Flail and Rotary)	Grease Gun	Lithium-Complex NLGI2-ISO 320	Mobil Delvac® Xtreme Grease, Mobilgrease CM-S
Drive Shaft Yoke, U-joint & Stub Shaft	Grease Gun	Lithium-Complex Extreme Pressure NLGI2-ISO 320	Mobilgrease CM-S

MAINTENANCE

Side and Rear Flail

Maintenance Section 4-8

TORQUE SPECIFICATIONS

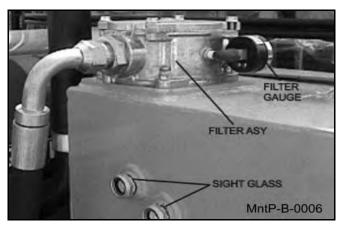
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	3/8	24	17 f	l-lbs	20 ft-lbs	23 A-lb	s 26 ft-lb	s 30 A-lbs		s 37 A-lbs	42 ft-lbs		43 A-lbs	49 ft-lbs
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	7/16													
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4 12 415 498 553 930 1055 1241 1509 1710 2012 1768 2004 values for 1¼ and 5/16-h exities are in inch-pounds. All other torque values are in foch-pounds. All other torque values are in foch-pounds. K = 0.15 for "latricated" conditions K = 0.17 for zinc plated and dry conditions K = 0.20 for all and dry conditions D = Nc Values calculated from formale T-HOF, where Class 10.9 Class 10.9 <td< td=""><td>1 1/8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	1 1/8													
Values for 1/4 and 5/16-in series are in inch-pounds. All other forque values are in foot-pounds. K = 0.15 for "Mariceld" conditions K = 0.20 for plain and dry conditions D = M F = Class 1.0 S = Cl	1 1/4													
Feld Xe outlines Feld Xe outlines Feld Xe outlines Class 8.45 Class 8.8 Class 10.9 Class 12.9 Tophering Torque Tophering Torque <th< td=""><td>1 1/2</td><td>12</td><td>73</td><td>4</td><td>880</td><td>978</td><td>1645</td><td>1865</td><td>2194</td><td>2668</td><td>3024</td><td>3557</td><td>3127</td><td>3544</td></th<>	1 1/2	12	73	4	880	978	1645	1865	2194	2668	3024	3557	3127	3544
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			Nominal Dia. (mm) 3 3,5 4 5 6 6 7 8 8 8	n form. Pitch 0.5 0.6 0.7 1.25 1 1.25	Tigi Lubed K = 0.15 (ft-lbs) 0.28 0.44 0.566 1.3 2.3 2.1 3.8 5.9 5.5	where Class 4.6 ↓ 6 ↓ 6 ↓ 6 ↓ 6 ↓ 6 ↓ 6 ↓ 6 ↓	e-Tens Prove Dry plain K = 0.20 (ff-lbs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 7.3	Tighter Lubed Dry K = 0.15 K (ft-lbs) (0.73 1.1 1.7 3.4 5.8 5.3 9.7 15 14	tionship iss 8.8 8.8 Plated Dr Plated Dr = 0.17 K ft.lbs) (ft 0.82 1.3 1.9 5.6 6.0 11 17 16	K = 0. K = 0. p for Met y plain Lub = 0.20 K = 0 1-bes) (fi-lk 0.37 1.1. 1.5 1.4 2.3 2.4 4.5 4.4 7.7 8.2 7.7 8.2 7.1 3 14 20 2.2 19 2.2	Tor zinc plat 20 for plain one 20 for plain one Class 10 10.9 Tightening T 10.9 Tightening T 20 Dry Platect 15 K = 0.17 5) (ff-lbs) 1.2,7 5,5 8,4 16 24 23	ed and dry cc dry conditioner eners .9 brongue 1 Dry plain K = 0.20 (ft-lbs) 1.4 2.2 3.2 6.5 11 11 10 19 23 27	Class Class Lubed C K = 0.15 (ft-lbp) 1.2 1.9 2.8 5.7 9.7 8.8 16 25 24	F=C
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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			Nominal Dia. (mm) 3.5 6 6 7 8 8 8 10 10 12	Pitch Pitch 0.5 0.6 0.7 1.25 1.25 1.25 1.25	In T=KDF, Tigg Lubed K = 0.15 (ft-lbs) 0.28 0.48 0.56 1.3 2.3 2.1 3.8 5.9 5.5 11 11 21	Torqu Class 4.6 4.6 4.6 0.70 Dry Plated K = 0.17 (ft-los) 0.32 0.50 0.74 1.5 2.6 4.3 6.8 6.2 13 12 23	e-Tens Prove Dry plain K = 0.20 (ff-lbs) 0.38 0.59 0.87 1.8 3.0 2.7 1.8 3.0 2.7 1.8 3.0 2.7 1.8 3.0 2.7 1.8 3.0 2.5 1.4 3.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1	Cla Tighter Lubed Dry K = 0.15 K (ft-lbs) (0.73 1.1 3.4 5.8 5.3 9.7 15 14 29 28 53	tionshi ss 8.8 8.8 8.8 Plated Dr Plated Dr 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	K = 0. K = 0. D for Met y plain Lub = 0.20 K = 0 1.05 (ft-lt 0.97 1.0 1.5 1.0	7 for zinc plat 10 for plain and 10 for plain and 10.9 Tightening T ed DryPlate 15 K = 0.17 s) (R-lbs) 1.2.7 1.5.5 8.8.8 1.6 2.4 2.3 4.8 4.8 8.6 1.45 8.8 1.6 1.24 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	ed and dry cc dry conditioners and the conditioners	Class Tightening Lubbed [K = 0.15 (ft-los) 1.2 1.9 2.8 5.7 9.7 8.8 16 25 24 49 49 47 89	F = Cl 12.9 9 Torque Dry plain K = 0.20 (R-lbs) 1.6 2.5 3.8 7.6 13 12 22 34 31 66 62 119
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			Nominal Dia. (mn) 3 35 6 6 6 7 8 8 8 10 10 10 12 12	n form. Pitch 0.5 0.6 0.7 1.25 1.25 1.25 1.25 1.25 1.25	Tigi Lubed K = 0.15 (ft-lbs) 0.26 0.44 0.666 1.3 2.3 2.1 3.8 5.9 5.5 11 11 20	where Torqu Class 4.6 4.6 Δ.7 Δ.7 Δ.7 Δ.7 Δ.7 Δ.7 Δ.7 Δ.7	e-Tens Prove Dry plain K = 0.20 (ff-lbs) 0.38 0.59 0.67 1.8 3.0 2.7 5.0 7.8 7.3 15 14 28 26	ion Rela Cla Cla Cla Cla Cla Cla Cla Cla Cla C	tionship iss 8.8 8.8 Plated Dr = 0.17 K ft-lbs) (ft 0.82 1.3 1.9 5.6 6.0 11 17 16 33 32 60 58	K = 0. K = 0. p for Met y plain Lub = 0.20 K = 0 t-bas) (fi-k 0.97 ti.1 1.5 ti.1 2.3 2.4 4.5 ti.1 7.7 8.2 7.7 7.2 13 ti.4 20 22 19 22 39 42 37 44 71 76 68 77 68	17 for zinc plat 20 for plain one 20 for plain one Class 10 10.9 Tightening T 10.9 Tightening T ed Dry Platect 1.5 1.2 1.2 1.2 1.5.5 8.8.6 16 24 23 48 45 88 88 88 88 88 88 88 88 88 88 88 88 88 88 88 82	ed and dry cc dry conditioner eners .9 1 Dry plain K = 0.20 (ft-lbs) 1 14 22 3.2 6.5 1 11 10 19 28 27 56 53 53 101 101 97	Class Class	F=Cl 12.8 9 1 Torque 12.9 9 1 Torque 12.9 12.9 12.9 13 12 12 13 12 12 13 12 12 34 31 66 62 62 119 113
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 62 121 137 161 173 198 230 202 269 18 1.5 73 82 97 187 212 249 268 303 357 313 417 18 2.5 65 73 85 167 169 222 239 270 316 279 372 20 1.5 101 115 135 270 306 360 374 424 498 437 583 20 2.5 91 104 122 236 267 314 337 382 449 394 525 <td></td> <td></td> <td>Nominal Dia. (mm) 3-5-6- 6-6-7-7-8- 8-8- 10-10- 10-12- 12-12-12-12-12-12-12-12-12-12-12-12-12-1</td> <td>n form. Pitch 0.5 0.8 1 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.</td> <td>10 T=KDF, 10 T=KDF, 10 Lubed K = 0.15 (It-lbs) 0.44 0.66 1.3 2.3 2.1 3.8 5.5 5.5 11 11 21 20 19</td> <td>Operation Operation Class 4.6 4.6 A.6 4.6 Dry Plated K = 0.17 (R-bs) 0.32 0.50 0.74 1.5 2.6 2.3 4.3 6.6 6.2 12 23 22 21</td> <td>e-Tens prove Dry plain K = 0.20 (ff.4bs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 1.3 1.5 1.4 28 26 25</td> <td>Cla Cla Cla Cla Cla Cla Cla Cla Cla Cla</td> <td>tionship ss 8.8 8.8 8.8 9.8 Plated Dr = 0.17 K ft.lbs) (10 0.82 1.3 1.9 5.6 6.0 11 17 16 33 32 60 58 55</td> <td>K = 0. K = 0. S for Met ypkin Lub = 0.20 K = 0 k-10.20 K = 0 L-15.20 K = 0 L-15.20 K = 0 0.97 1.1.1 1.1.5 1.1.1 2.3 2.2 4.5 4.3 7.7 8.2 7.7 8.2 3.9 442 3.9 442 3.9 442 3.7 40 7.1 76 68 7.7 68 7.7 68 7.7</td> <td>17 for zinc plat 20 for plain and 10.9</td> <td>ed and dry cc dry conditioner eners .9 b crque 1 Dry plain 1 K = 0.20 (ft-lbs) 1 4 2 2 3.2 8.5 1 11 1 0 1 9 2 3 2 7 5 6 5 3 3 101 1 9 9 3</td> <td>Class Class (12) Tightening Lubed [C K = 0.15] (ft-lbs) 1.2 2.8 5.7 9.7 9.7 9.7 9.7 9.7 9.7 9.7 9</td> <td>F=0</td>			Nominal Dia. (mm) 3-5-6- 6-6-7-7-8- 8-8- 10-10- 10-12- 12-12-12-12-12-12-12-12-12-12-12-12-12-1	n form. Pitch 0.5 0.8 1 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.	10 T=KDF, 10 T=KDF, 10 Lubed K = 0.15 (It-lbs) 0.44 0.66 1.3 2.3 2.1 3.8 5.5 5.5 11 11 21 20 19	Operation Operation Class 4.6 4.6 A.6 4.6 Dry Plated K = 0.17 (R-bs) 0.32 0.50 0.74 1.5 2.6 2.3 4.3 6.6 6.2 12 23 22 21	e-Tens prove Dry plain K = 0.20 (ff.4bs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 1.3 1.5 1.4 28 26 25	Cla Cla Cla Cla Cla Cla Cla Cla Cla Cla	tionship ss 8.8 8.8 8.8 9.8 Plated Dr = 0.17 K ft.lbs) (10 0.82 1.3 1.9 5.6 6.0 11 17 16 33 32 60 58 55	K = 0. K = 0. S for Met ypkin Lub = 0.20 K = 0 k-10.20 K = 0 L-15.20 K = 0 L-15.20 K = 0 0.97 1.1.1 1.1.5 1.1.1 2.3 2.2 4.5 4.3 7.7 8.2 7.7 8.2 3.9 442 3.9 442 3.9 442 3.7 40 7.1 76 68 7.7 68 7.7 68 7.7	17 for zinc plat 20 for plain and 10.9	ed and dry cc dry conditioner eners .9 b crque 1 Dry plain 1 K = 0.20 (ft-lbs) 1 4 2 2 3.2 8.5 1 11 1 0 1 9 2 3 2 7 5 6 5 3 3 101 1 9 9 3	Class Class (12) Tightening Lubed [C K = 0.15] (ft-lbs) 1.2 2.8 5.7 9.7 9.7 9.7 9.7 9.7 9.7 9.7 9	F=0
16 2 47 53 62 121 137 161 173 198 230 202 269 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 1.5 101 115 135 270 306 360 374 424 498 437 583 20 2.5 91 104 122 236 267 314 337 382 449 394 525			Nominal Dia. (mm) 3 3.5 6 6 7 8 8 8 10 10 12 12 12 12 12	Pitch 0.5 0.6 0.7 0.8 1 1.25 1.25 1.25 1.5 1.75 1.75 1.25	In T=KDF, Tigg Lubed K = 0.15 (ft-lbs) 0.28 0.44 0.66 1.3 2.3 2.3 3.8 5.9 5.5 5.1 11 21 20 19 26	Oracle Oracle Class 4.6 4.6 Arring Too Drg Plated K = 0.17 (ft-lbs) 0.32 0.50 0.74 1.5 2.6 2.3 4.3 6.6 6.12 12 2.3 2.2 2.1 2.9	e-Tens py plain K = 0.20 (ff.lbs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 7.3 14 28 28 26 34	Cla Cla Cla Cla Cla Cla Cla Cla Cla Cla	tionship ss 8.8 8.8 8.8 9.8 9.8 9.8 9.8 9.8	K = 0. K = 0. C for Met y plain Lub = 0.20 K = 0. 0.97 1.0 1.5 1.5 1.5 1.5 1.5 1.5 1.3 1.4 2.0 2.1 1.5 1.5 1.5 1.5 1.5 1.5 2.3 2.4.5 4.5 1.3 1.4 2.0 2.1 1.3 1.4 2.0 2.1 1.3 1.4 2.1 3.7 4.6 7.1 3.7 4.6 7.1 2.8 3.7 4.6 7.1 6.8 <t< td=""><td>7 for zinc plat 10 for plain and 10 for plain and 10 for plain and 10.9 1</td><td>ed and dry cc dry conditioner eners 3 3 3 3 3 3 3 4 3 3 2 4 5 5 5 3 3 2 6 5 5 1 1 1 0 1 9 3 2 3 2 6 5 5 1 1 1 1 9 3 2 5 6 5 5 1 1 1 9 9 3 2 3 2 6 5 5 1 1 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9</td><td>Class Cl</td><td>F=C0 12.9 9 10royue Dry plain K=0.20 (R-los) 1.6 1.5 3.8 7.6 13 12 22 34 36 62 119 113 108 148</td></t<>	7 for zinc plat 10 for plain and 10 for plain and 10 for plain and 10.9 1	ed and dry cc dry conditioner eners 3 3 3 3 3 3 3 4 3 3 2 4 5 5 5 3 3 2 6 5 5 1 1 1 0 1 9 3 2 3 2 6 5 5 1 1 1 1 9 3 2 5 6 5 5 1 1 1 9 9 3 2 3 2 6 5 5 1 1 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9	Class Cl	F=C0 12.9 9 10royue Dry plain K=0.20 (R-los) 1.6 1.5 3.8 7.6 13 12 22 34 36 62 119 113 108 148
18 1.5 73 62 97 187 212 249 268 303 357 313 417 18 2.5 65 73 86 167 189 222 239 270 318 279 372 20 1.5 101 115 135 270 306 360 374 424 498 437 583 20 2.5 91 104 122 236 267 314 337 382 449 394 525			Nominal Dia, (mm) 3 3 5 6 7 8 8 8 0 10 12 12 12 12 12 14 14	Pâch Pâch 0.5 0.6 0.7 0.8 1 1.25 1.25 1.25 1.25 1.25 1.25	In T=KDF, Tigg Lubed K = 0.15 (ft-lbs) 0.28 0.44 0.666 1.3 2.3 2.1 3.8 5.9 5.5 11 11 21 20 19 26 28	Operation Operation Class 4.6 4.6 Class 4.6 4.6 Operation 0.32 O.50 0.74 1.5 2.6 2.3 4.3 6.8 6.2 13 12 23 22 21 29 32 32	e-Tensi prove Dry plain K = 0.20 (ff-lbs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 7.3 15 14 28 26 25 34 37	Cla Tighter Lubed Dry K = 0.15 K (ft-lbs) (0.73 1.1 1.7 3.4 5.8 5.3 9.7 15 14 28 53 51 49 66 72	tionshi ss 8.8 8.8 8.8 Plated Dr Plated Dr = 0.17 K R.los) (1 0.82 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	K = 0. K = 0. p for Met y plain Lub = 0.20 K = 0. 0.07 1.08. 0.97 1.09. 1.09. 1.15 1.15 1.23 2.2. 4.5 4.4.5 4.5 1.5 1.5 1.5 1.5 1.5 1.5 2.2. 4.5 4.4 2.0 2.2 1.3 1.4 2.0 2.2 1.3 1.4 2.0 3.9 3.14 2.2 3.2 3.4 3.7 4.6 3.7 4.7 3.7 4.8 3.7 4.9 <t< td=""><td>7 for zinc plat 10 for plain and 10 for plain and Class 10 10.9 Tightening T ed DryPlate 15 K = 0.17 s) (R-lbs) 1.2 5.5 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2</td><td>ed and dry cc dry conditioners eners</td><td>Class Class Tightening Lubbed [K = 0.15 (ft-lbs) 1.2 1.9 2.8 5.7 9.7 8.8 16 25 24 49 47 89 85 81 111 121</td><td>F=0 12.9 9 Torque Try plain K = 0.20 (R-los) 1.6 2.5 1.6 2.5 1.6 1.3 1.2 2.2 3.4 31 66 62 62 119 113 108 148 148 148 161</td></t<>	7 for zinc plat 10 for plain and 10 for plain and Class 10 10.9 Tightening T ed DryPlate 15 K = 0.17 s) (R-lbs) 1.2 5.5 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	ed and dry cc dry conditioners eners	Class Class Tightening Lubbed [K = 0.15 (ft-lbs) 1.2 1.9 2.8 5.7 9.7 8.8 16 25 24 49 47 89 85 81 111 121	F=0 12.9 9 Torque Try plain K = 0.20 (R-los) 1.6 2.5 1.6 2.5 1.6 1.3 1.2 2.2 3.4 31 66 62 62 119 113 108 148 148 148 161
18 2.5 65 73 86 167 189 222 239 270 318 279 372 20 1.5 101 115 135 270 306 360 374 424 498 437 583 20 2.5 91 104 122 236 267 314 337 382 449 394 525			Nominal Dia. (mm) 3 3.5 6 6 6 7 7 8 8 6 7 7 8 8 6 10 10 10 12 12 12 12 12 14 14 14 14	n form. Pitch 0.5 0.6 0.7 0.8 1 1.25 1.25 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.25 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.	10 T=KDF, 10 T=KDF, 10 Lubed K = 0.15 (It-lbs) 0.44 0.66 1.3 2.1 3.8 5.9 5.5 11 11 21 20 19 26 28 20 50	Operation Operation Class 4.6 4.6 Antening Toi Dry Plated K = 0.17 (R-lbs) 0.32 0.50 0.74 1.5 2.6 2.3 4.3 6.6 6.2 13 12 23 22 21 29 32 32 34 57 57	e-Tens Pry plain K = 0.20 (ff.4bs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 15 14 28 26 25 34 37 40 67	ion Rela Cla Cla Cla Cla Cla Cla Cla Cla Cla C	tionship ss 8.8 8.8 8.8 9.8 9.8 9.8 9.8 9.8	K = 0. K = 0. S for Met y plain Lub = 0.20 K = 0 k-10.20 K = 0 L-15.20 Z Z 13.11 1.1 20.22 Z 19.20 Z Z 19.20 39.42 37.40 71.76 68.737 68.737 99.99 99.10 104.11 11.71.18	17 for zinc plat 10 for zlein one 10 for zlein one Class 10 10.9 10.9 10.9 Tigritening T red DryPlate 115 K = 0.17 121 1.9 1.27 5.5 1.9 1.24 2.8 2.8 2.4 2.8 2.4 2.8 2.4 2.5 8.8 1.6 2.4 2.5 8.8 1.16 2.4 2.5 8.8 1.16 2.4 1.08 8.8 8.8 8.1 8.1 8.2 7.9 1.08 3.117 1.26 2.08	ed and dry cc dry conditioner eners .9 b crque 1 Dry plain 1 K = 0.20 (ft-lbs) 1 4 2 2 3.2 8.5 1 11 1 0 1 9 2 3 2 7 5 6 5 3 3 101 1 9 9 7 9 3 1 127 1 38 1 148 2 45	Class Class Class (12) Tightening Lubed C K = 0.15 (ft-lbs) 1.2 2.8 5.7 9.7 9.7 9.7 9.7 9.7 9.7 9.7 9	F=0
20 1.5 101 115 135 270 306 360 374 424 498 437 583 20 2.5 91 104 122 236 267 314 337 382 449 394 525			Nominal Dia. (mm) 3 3.5 6 6 7 8 8 8 10 10 12 12 12 12 12 12 12 12 12 12 12 12 12	Pitch 0.5 0.8 0.7 0.8 1 1.25 1.5 1.25 1.5 1.25 1.5 1.5 2 1.5 2 2	In T=KDF, Tigg Lubed K = 0.15 (ft-lks) 0.24 0.666 1.3 2.3 2.1 3.8 5.9 5.5 5.1 11 21 20 20 28 28 30 50 47	Open State Open State Class 4.6 4.6 And State 4.6 Interning Torn Dry Plated K = 0.17 (ft-lbss) 0.32 0.74 1.5 2.6 2.3 4.3 6.6 6.2 12 12 23 221 29 32 34 57 53	e-Tens py plain K = 0.20 (ff.lbs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 7.3 14 28 26 25 34 37 40 67 62	Cla Cla Cla Cla Cla Cla Cla Cla	tionship ss 8.8 8.8 8.8 8.8 9.8 9.8 9.8 9.8	K = 0. K = 0. C for Met y plain Lub = 0.20 K = 0. 0.97 1.0 1.5 1.5 1.5 1.5 1.5 1.5 1.3 1.4 2.3 2.4 .5 .7.7 .7.7 .7.8 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.7 .7.8 .7.9 .7.1 .7.2 .7.3 .7.3 .7.4 .7.5 .7.6	17 for zinc plat 10 for plain and 10 for plain and 10.9 10.2 10.9 10.2 10.5 10.9 10.9 10.2 10.9 10.2 10.9 10.2 10.9 10.2 10.9 10.2 10.9 10.2 10.9 10.2 10.9 10.2 10.9 10.9 10.9 10.2 10.9	ed and dry cc dry conditioner eners .9 1 Dry plain K = 0.20 (ft-lbs) 1.4 2.2 3.2 6.5 11 10 19 29 27 55 53 101 97 97 97 97 97 97 97 127 138 148 245 230	Class Cl	F=CI 12.9 9 10 rorque Dry plain K = 0.20 (R-lbs) 1.6 2.5 3.8 7.6 13 12 22 34 36 62 119 113 108 148 161 173 287 269
20 2.5 91 104 122 236 267 314 337 382 449 394 525			Nominal Dia, (mm) 3 3 5 6 7 8 8 8 10 10 12 12 12 12 12 12 14 14 14 14 15 18	n form. Pitch 0.5 0.6 0.7 1.25 1.5 1.25 1.5 1.25 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.	In T=KDF, Tigg Lubed K = 0.15 (ft-lbs) 0.24 0.66 1.3 2.3 2.1 3.8 5.9 5.5 11 11 21 20 19 26 28 30 50 50 47 73	Orrqu Class 4.6 4.6 4.6 0.90 Plated K = 0.17 (fit-los) 0.32 0.50 0.74 1.5 2.6 2.3 4.3 6.6 6.2 13 12 23 22 21 29 32 34 57 53 82	e-Tens py plain K = 0.20 (ff-lbs) 0.38 0.59 0.87 1.8 3.0 7.8 7.3 15 14 28 26 25 34 37 40 67 62 97	Cla Tighter Lubed Dry K = 0.15 K (ft-lbs) (0.73 1.1 1.7 3.4 5.3 9.7 15 14 28 53 9.7 15 14 28 53 51 49 28 53 51 49 28 53 51 49 28 53 51 12 12 12 12 12 12 13 13 14 14 14 15 14 15 14 15 14 15 15 15 16 17 17 15 15 16 17 17 15 16 17 17 17 15 16 17 17 17 17 15 16 17 17 17 17 15 16 17 17 15 16 17 17 15 16 17 17 17 15 16 17 17 15 16 17 17 15 17 17 15 17 17 15 17 17 15 17 17 15 17 17 15 17 17 15 17 17 17 17 15 17 17 18 19 19 19 19 19 19 19 19 19 19	tionshi ss 8.8 8.8 8.8 8.8 Plated Dr = 0.17 K ft.los) (1 0.82 1.3 1.9 1.3 1.9 6.6 6.0 11 17 16 33 32 60 55 55 75 82 88 146 137 212	K = 0. K = 0. O for Met y plain Lub = 0.20 K = 0. 0.07 1.4 0.97 1.4 0.97 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.4 2.0 2.2 1.9 2.0 2.1 1.5 1.4 2.0 2.2 1.9 2.1 1.2 1.3 1.4 2.0 2.1 1.2 2.3 2.4 2.3 2.4 2.5 7.0 7.4 2.8 3.7 4.4 2.6 70 <td< td=""><td>7 for zinc plat 10 for plan and 10 for plan and 10.9 Tightening T ed DryPlate 115 K = 0.17 e) (R-lbs) 1.12 1.2 1.15 K = 0.17 e) (R-lbs) 1.12 1.2 1.2 1.2 1.2 1.2 1.2 1.</td><td>ed and dry cc dry conditioner eners</td><td>Class Class Tightening Lubbed [K = 0.15 (ft.lbs) 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2</td><td>$F=Cl \\ 12.9 \\ 9 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$</td></td<>	7 for zinc plat 10 for plan and 10 for plan and 10.9 Tightening T ed DryPlate 115 K = 0.17 e) (R-lbs) 1.12 1.2 1.15 K = 0.17 e) (R-lbs) 1.12 1.2 1.2 1.2 1.2 1.2 1.2 1.	ed and dry cc dry conditioner eners	Class Class Tightening Lubbed [K = 0.15 (ft.lbs) 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	$F=Cl \\ 12.9 \\ 9 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$
			Nominal Dia. (mm) 3 35 6 6 7 7 8 8 8 10 10 12 12 12 12 12 12 12 12 14 14 14 14 18 18	n form. Pitch 0.5 0.6 0.7 0.8 1 1.25 1.5 1.25 1.5 2 1.5 2.5	100 T=KDF, 100 Tiggi Lubed K = 0.15 (ft-lbs) 0.26 0.44 0.666 1.3 2.3 2.1 3.8 5.9 5.5 11 11 21 20 19 26 30 50 47 73 65	where Class 4.6	e-Tens Prove Dry plain K = 0.20 (ff-lbs) 0.38 0.59 0.67 1.8 3.0 2.7 5.0 7.8 3.0 2.7 5.0 7.8 15 14 28 25 34 37 40 67 62 97 86	ion Rela Cla Cla Cla Cla Cla Cla Cla Cla Cla C	tionship iss 8.8 8.8 Plated Dr = 0.17 K ft-los) 1.3 1.9 3.9 6.6 6.0 11 17 16 33 32 60 55 55 75 82 88 146 137 212 189	K = 0. K = 0. C for Met y plain Lub = 0.20 K = 0. Labs) (ff.4k) 0.37 1.1. 1.5 1.1 2.3 2.4 4.5 4.4.5 7.7 8:2. 37 1.4 7.7 8:2. 39 42: 37 44 71 76 68 73: 65 77 89 98 96 100 104 11 171 18 161 17 242 22 23	17 for zinc plat 20 for zlein one 20 for zlein one Class 10 10.9 Tightening T 10.9 Tightening T ed Dry Plates 1.12 1.27 5.5 8.8.16 1.6 2.3 2.4 2.3 2.4 2.3 1.6 2.4 2.3 1.4 2.3 1.4 2.3 1.4 2.3 1.4 2.3 1.4 2.3 1.4 2.3 1.4 2.4 2.3 1.17 1.126 4 2.08 3.017 1.126 3.030 2.270	ed and dry cc dry conditioner eners .9 1 Dry plain K = 0.20 (ft-lbs) 1 14 22 3.2 6.5 11 11 10 19 23 6.5 53 101 19 23 27 56 53 101 19 23 27 56 53 101 10 19 23 31 127 138 148 245 230 357 318	Class Tightening Lubed K 1.2 1.9 2.8 5.7 9.7 8.8 16 224 49 47 89 81 111 121 130 215 202 313 279	F=CI 12.8 9 1 Torque 12.9 9 1 Torque 12.9 12.9 12.9 13 12 22.5 3.8 7.6 13 12 22 34 31 66 62 119 113 108 148 161 173 287 269 2417 372
Clamp load calculated as 75% of the proof load for specified bolts. K = 0.15 for "lubricated" conditions D = Nominal Diameter			Nominal Dis. (mm) 3 3 5 6 6 7 8 8 8 10 10 12 12 12 12 12 12 12 12 12 12 12 12 12	Pitch 0.5 0.8 0.7 0.8 1 1.25 1.5 1.25 1.5 1.5 2 1.5 2.5 2.5	In T=KDF, In Teker, In the second s	Orgunation Class 4.6 4.6 4.6 1 0.32 0.74 1.5 2.6 2.3 4.3 6.6 6.2 12 23 221 29 32 21 29 32 34 57 53 82 73 115 104	e-Tens py plain K = 0.20 (ft-lbs) 0.39 0.87 1.8 3.0 0.59 0.87 1.8 3.0 7.8 7.3 15 14 28 26 25 34 37 40 67 62 97 86 135 122	Cla Cla Cla Cla Cla Cla Cla Cla	tionship ss 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.8	K = 0. K = 0. C for Met y plain Lub = 0.20 K = 0. 0.97 1.0 1.5 1.6 1.5 1.7 1.8 1.9 2.1 1.9 2.1 3.7 4.6 7.7 8.2 7.7 1.3 1.4 2.7 3.7 4.6 7.7 8.2 7.7 8.2 7.7 1.3 1.4 3.7 4.6 7.7 8.6 7.7 8.6 7.7 8.6 7.1 7.6 8.6 7.7 8.6 7.7 8.7	Tor zinc plat AD for plain and Crossing Class 10 Class 10 10.9 Trightening T Togetening T Togetening T Togetening T 10.9 Tightening T 10.9 Tightening T 11.12	ed and dry cc dry conditioner eners .9 1 Dry plain K = 0.20 (ft.lbs) 1.4 2.2 3.2 6.5 11 10 19 23 27 6.5 11 10 19 23 27 55 53 101 19 29 27 55 53 101 97 97 97 97 97 97 127 138 145 230 357 318 448	Class Cl	$F=CI \\ 12.9 \\ 9 \\ 1000 \\ 12.9 \\ 1000 \\ 100$
All torque values are listed in foot-pounds K = 0.17 for zinc plated, dry conditions F = Clamp Load Torque values calculated from formula T=KDF, where K = 0.20 for plain and dry conditions			Nominal Dia. (mm) 3 3 5 5 6 7 8 8 8 10 10 12 12 12 12 12 12 12 14 14 14 14 14 16 18 18 18 20 20 20 Clamp lo	Pitch Pitch 0.5 0.6 0.7 0.8 1 1.25 1.5 1.25 1.5 2.5 1.5 2.5 ad cald	In T=KDF, Tigg Lubed K = 0.15 (ft-lbs) 0.28 0.44 0.66 1.3 2.3 2.3 1.3 3.8 5.9 5.5 11 11 21 20 19 26 28 30 47 73 65 10 11 91 20 20 20 20 20 20 20 20 20 20	where Torqu Class 4.6 4.6 1000 1100	e-Tens py plain K = 0.20 (ff.lbs) 0.38 0.59 0.87 1.8 3.0 2.7 5.0 7.8 7.3 15 14 28 26 25 34 37 40 67 62 97 86 135 122 re proof loss	Cla Cla Cla Cla Cla Cla Cla Cla	tionshi ss 8.8 8.8 8.8 9.8 Plated Dr = 0.17 K ft-lbs) (1 0.82 1.3 1.9 3.9 6.6 6.0 11 1.7 1.6 33 32 60 53 55 55 55 55 75 82 88 146 137 212 169 306 267 ed bolts.K.	K = 0. K = 0. p for Met y plain Lub = 0.20 K = 0. 0.07 1.1 1.2 1.5 1.5 1.5 1.5 1.5 1.5 1.7 1.3 1.4 20 22 39 4.5 96 100 104 1171 18 161 177 249 28 2222 2360 374 360 374 3860 374 384 3860 374 374 3860 374 374 374 374 374 374	7 for zinc plat 10 for plain and 10 for plain and Class 10 10.9 Tightening T ed DryPlate 15 K = 0.17 10.9 10.0 3 117 11.2 10.8 3 117 11.2 10.8 3 117 11.2 10.8 3 117 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	ed and dry co dry conditioner eners	Class Tightening Lubed [K = 0.15 (ft.lbs) 1.2 1.9 2.8 5.7 9.7 9.7 8.8 16 25 24 47 89 85 81 111 121 130 215 202 313 279 437 D = Nomina	F=CI 12.9 9 10rque Dry plain K = 0.20 (N-lbs) 1.6 2.5 3.8 7.6 13 12 22 34 31 12 22 34 31 10 8 62 119 113 103 148 161 173 289 417 372 583 525 IDameter

MAINTENANCE

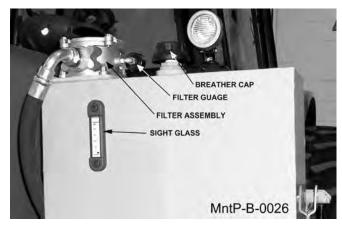
RECOMMENDED FILLING INSTRUCTIONS FOR HYDRAULIC RESERVIORS

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 reserv oir 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 on e 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.

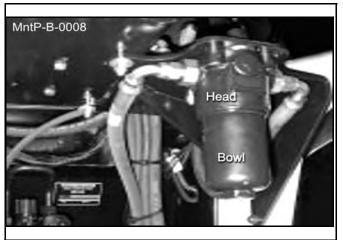


Maintenance Section 4-10

Side and Rear Flail

REPLACING HIGH PRESSURE HYDRAULIC FILTER ELEMENT:

Ensure that the system has been shut down and depressurized. Locate High Pressure Filter housing. Confirm that the element 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. Using the appropriate spanner wrench or ratchet, turn in a counterclockwise rotation, (looking at the bottom of the bowl) to remove the bowl from the head. The first couple rot ations 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 outside-in direction of flow through the element. 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 with oil. Install the new element into and on the mounting boss within the head. Ensure that the element is fully seated on the boss. Clean and inspect the o-ring that is affixed in the bowl and lubricate with oil. Using a clockwise rotation, screw the bowl back into the head, ensuring 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 be come tighter once the o-ring engages the sealing flats. Once the bowl has bottomed out, back-off the bowl by 1/6 turn. This ensures that the o-ring is seated properly within the sealing flats. Element change out and re-assembly is now complete. Start the machine and inspect the filter area, checking that the re is no oil leaking from the filter assembly. Replace the filter fir st at 50 hours of operation, then yearly (500 hours) or when indicated by restriction indicator.

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 pivots daily or every 8 hours of service.

MAINTENANCE

Side and Rear Flail

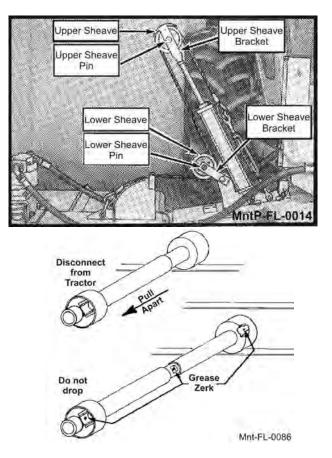
Maintenance Section 4-11

GREASING THE UPPER AND LOWER SHEAVES

Locate the grease zerks on the ends of the upper and lower sheave pins. **Mnt-R-0018** Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications into each pin until it protrudes from the ends. These should also b e greased daily or for every 8 hours of service.

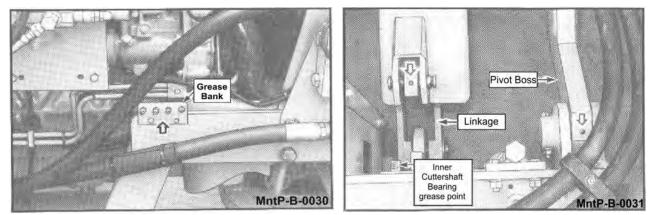
GREASING PTO SHAFTS

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.



GREASING INNER AND OUTER DRAFT BEAM PIVOT POINTS

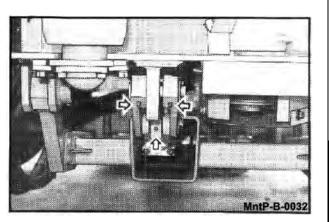
Locate the grease zerks on the inner and outer draft beam pivot bosses. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications into each zerk until grease protrudes from joints. Grease all pivot points daily or every 8 hours of service.



Side and Rear Flail

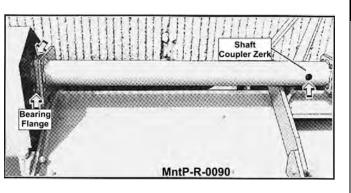
Maintenance Section 4-12

With the cutter head lowered, locate the grease zerks on the lin kage and pivot bo sses. 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 ra ise the cutter head to expose the remaining zerks on the deck tilt linka ges and on the other end of the cylinder.



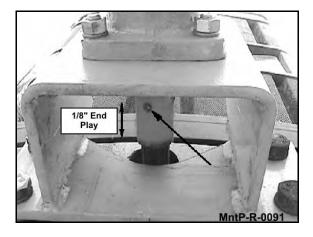
GREASING THE REAR DRIVE BEARING AND EXTENSION COUPLER SHAFT

Locate the grease zerks for the rear flail d rive 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 DRIVESHAFT COUPLER

With engine stopped, ensure driveshaft 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.



Side and Rear Flail

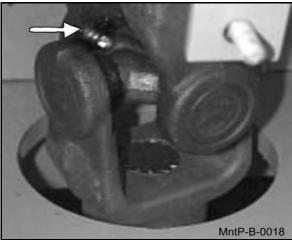
Maintenance Section 4-13

MAINTENANCE

DRIVE SHAFT YOKE, U-JOINT STUB SHAFT

With engine stopped, inject Lithium-Complex extreme pressure grease conforming to NLGI2-ISO 320 specifications into universal joints and slip yoke until grease appears at the seal. Grease them daily or every 8 hours.

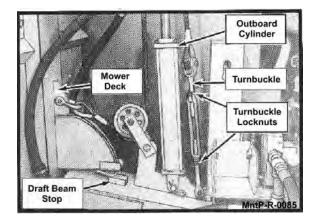






ADJUSTING THE CABLE LIFT

Extend the outboard cylinder until the mower deck touches its stop on the draft beam as shown. **NOTE:** Make sure the cable turnbuckle is loose enough to allow the cylinder to reach full extension before the head reaches the stop. Now hold the head against the stop and tighten the turnbuckle until the cable is tight. Lower and raise the head to check the adjustment. The head should touch its stop at the same time the cylinder reaches full extension. Tighten turnbuckle lock nuts securely after adjustment is complete.

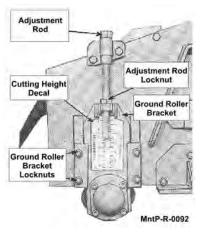


Side and Rear Flail

Maintenance Section 4-14

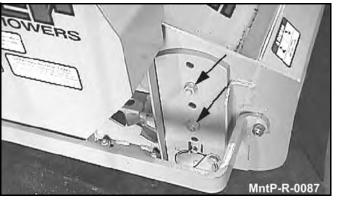
ADJUSTING THE CUTTING HEIGHT

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.



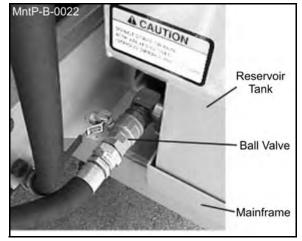
ADJUSTING STANDARD DUTY CUT HEIGHT

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 sur e that both sides of the shaft are adjusted to corresponding holes so th e shaft remains level.



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 PTO! Failure to do so will result in component failure!



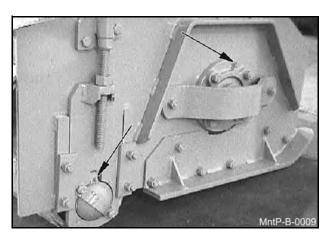


Side and Rear Flail

Maintenance Section 4-15

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 st andard 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 pu mps in each b earing, using L ithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications. This is to be done with a st andard grease gun daily or at **8 hours intervals.** *CAUTION: Over greasing may cause premature seal failure.*



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.

MAINTENANCE

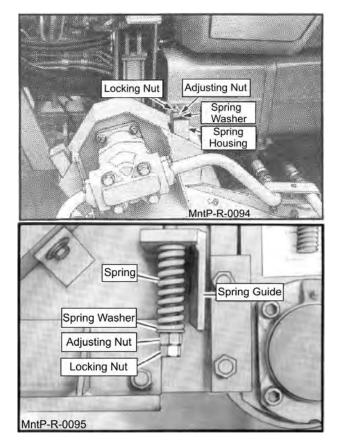
Side and Rear Flail

Maintenance Section 4-16

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 a djust until the spring washer is flush with the top of the spring housing. **MntP-R-0094** Use the same method to adjust hydraulically driven rear flails.

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



MAINTENANCE

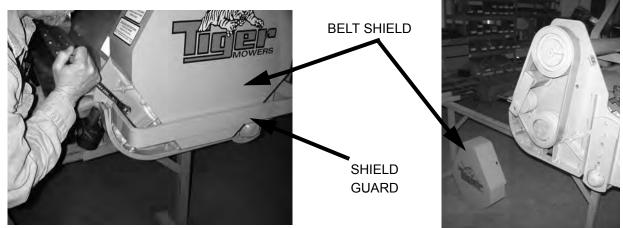
Side and Rear Flail

Maintenance Section 4-17

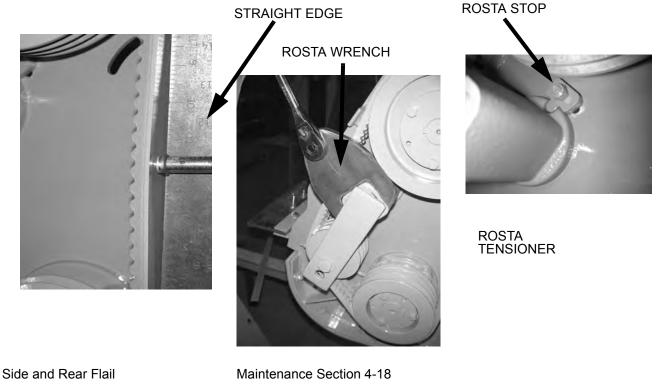
ROSTA TENSIONER

STANDARD DUTY REAR FLAILS

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

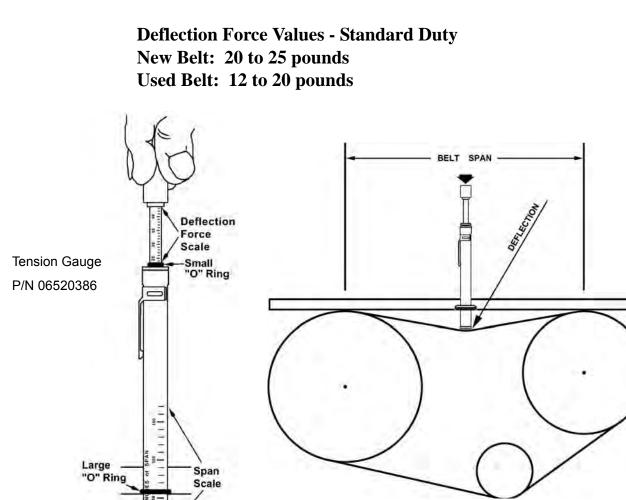


Place a straight edge over both sheaves and measure the belt tension (See TENSIONER MEASUREMENT PROCEDURE). To adjust the Rosta Tensioner, first, loos en the Rosta Stop and Rosta Bolt that secures the Rosta to the flail. Next use the Wrench (P/N 06401023 available) to adjust the tension of the belt.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



TENSIONER MEASUREMENT PROCEDURE

- 1. Measure the Belt Span (SEE SKETCH).
- 2. Position the bottom of the Large "O" Ring on the Span Scale at the measured Belt Span.
- 3. Set the Small "O" Ring on the Deflection Force Scale to Zero.
- 4. Place the tension gauge squarely on the belt at the center of the belt span. Apply a force on the plunger perpendicular to the belt span until the bottom of the Large "O" Ring is even with the bottom of a straight edge laid across the sheaves.
- 5. Remove the tension gauge and read the force applied from the bottom of the Small "O" Ring on the Deflection Force Scale.
- 6. Compare the force denoted by the Small "O" Ring with the values shown. The force should be between the values given for either a New Belt or Used Belt.
- 7. Make sure to use the force values in pounds if the span is measured in inches. Use kilograms of force if the span is measured in centimeters.
- 8. NOTE: The ratio of the deflection to belt span is 1/64 in either units of measurements.



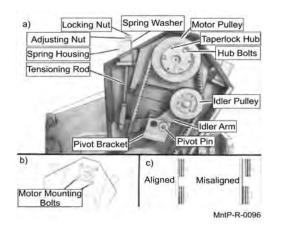
Side and Rear Flail

Maintenance Section 4-19

REVERSING MOWER ROTATION OF SIDE FLAIL MOWERS

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

Before attempting this procedure be sure all dirt is cleaned away from the motor and around all hose connections. This will prevent the oil from becoming contaminated. 1-Start by removing the belt shield from the flail mo wer. 2-Remove the locking and adjusting nut, spring washer and spring from the idler tensioning rod. 3-Disconnect the tensioning rod from the idler arm. 4-Remove the idler arm with the pulley attached.



5-Remove the idler pulley from the idler arm and reinstall in the short end of the new idler arm.

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

Now disconnect the hoses and fittings from the motor and remove the taper-lock hub and pulley from the motor by removing the three hub bolts from the existing positions and inserting simultaneously into the threaded holes. Remove the four bolts holding the motor. Rotate the motor 180° so the hump is opposite the prior position. Reinstall the motor bolts and torque to 75 ft. Ibs. 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 diagram on previous page), loosen and readjust if needed.

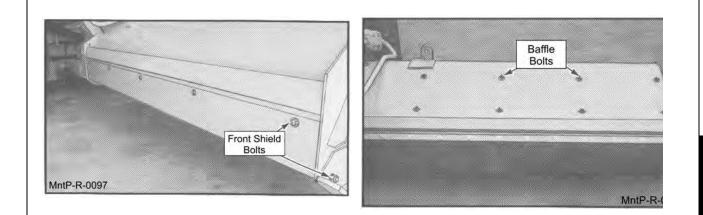
Reinstall the belts and idler tensioning rod. Tighten and lock the tensioning rod as shown previously in the Maintenance Section. Reinstall the belt shield.

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.

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.

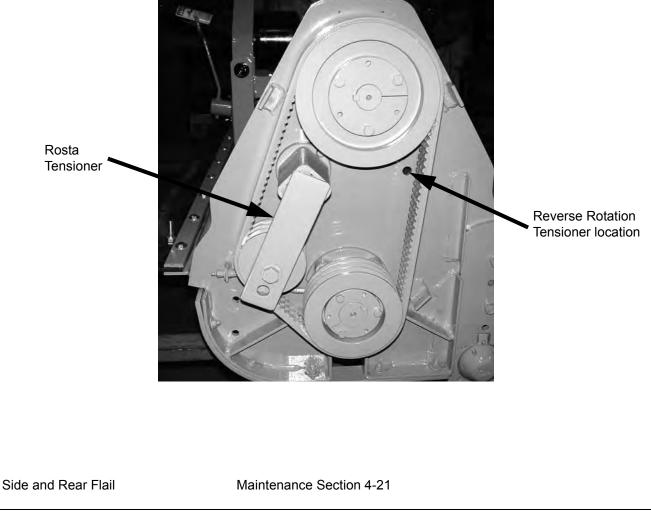
Side and Rear Flail

Maintenance Section 4-20



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 Rost a Tensioner and relocate to the Revers e Rotation Tensioner location. Using the Rosta wrench, tension the belt, then tighten the Rosta bolt. Check the tension and adjust as needed. When the correct tension is achieved install the Rosta stop and torque the bolts appropriately.



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

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

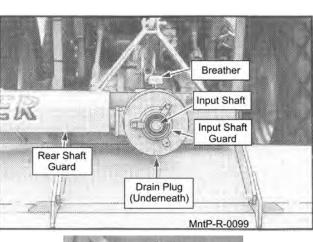
Change all the knives on the cutter shaft as required. The cutter shaft rotates in the same direction as the tractor tires when going forward for standard knives. The cutter shaft rotates opposite the tractor tires for smooth cut knives.

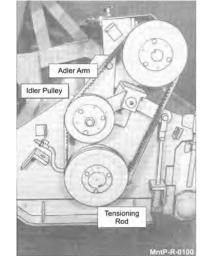
Remove the belt shield. Then remove the adjusting nuts, washer and spring from the idler tensioning

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

Tightening the adjusting nuts for the idler arm tensioner as shown previously in the Maintenance Section. Install the belt shield, the shaft guard and PTO 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.





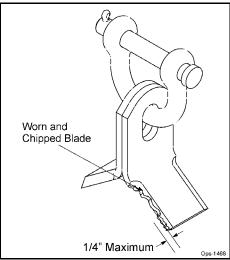
Side and Rear Flail

Flail Blades Inspection

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

- · Become bent or deformed from its original shape, or
- Wear inside the blade bolt hole, or
- Any cracks are visible, or
- · Deep gouges in the blade's surface are present, or
- Gouges or chipped areas in the cutting edge are larger than 1/4"(8mm), or
- The material on the leading edge has been worn away by more than 1/4"(8mm)
- **DO NOT** straighten, sharpen, weld or hard-face blades

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



Always replace blades in sets

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

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.

ACAUTION

Important

Never attempt to sharpen blades. *OPS-U-0044*

MAINTENANCE

Side and Rear Flail

Maintenance Section 4-23

Blade Pins and D-Ring Inspection

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

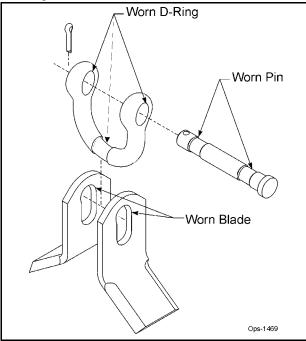


Inspect the Blade pins and D-Rings daily for abnormal wear. Make sure the cotter pins are in place and properly spread. REPLACE BLADE Pins and D-Rings IMMEDIATELY if they have:

- 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*

Side and Rear Flail

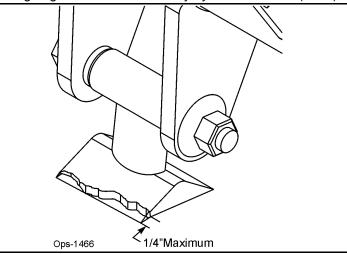
Maintenance Section 4-24

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 may fail during operation, resulting in the part failing and being thrown out from under the mower.

A CAUTION

Never attempt to sharpen blades.

OPS-U-0042

MAINTENANCE

Side and Rear Flail

Maintenance Section 4-25

Flail Axe Blade Bolt Inspection

Inspect Blade Bolts daily for wear or damage as follows:

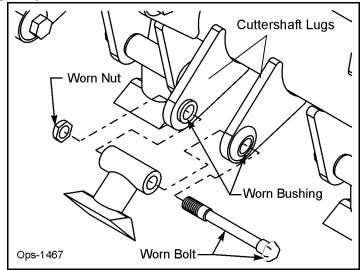
🛦 DANG ER

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*



50" FLAIL KNIFE BLADE 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 knife can cause severe vibration and possible damage to the mower. The knife should <u>not</u> be welded on for any reason.
- 2. Always replace the knife bolts when replacing the knives. **DO NOT REUSE THE KNIFE BOLTS OR NUTS.**
- 3. Assemble knives, bushings, bolts and nuts as shown in Parts Section of the manual.
- 4. Install the locking hex nut so that the flat face of the nut is towards the knife.
- 5. Apply Loctite 271 or equivalent to threads.
- 6. Torque nut to 50 ft. lbs. Knife must swing freely.

Side and Rear Flail

Maintenance Section 4-26

MAINTENANCE

DO NOT re-use the locking hex nuts for mounting the knives. If hex nut becomes loose, or required removal for knife replacement or any other reason, it must be **AWARNING** discarded and replaced with a new nut.

63" BOOM FLAIL KNIFE REPLACEMENT

- If knives are damaged or badly worn, they will need to be replaced as a set. Replacing a single knife 1. can cause severe vibration and possible damage to the mower.
- 2. Assemble knives, clevis, bolts and nuts as shown in Parts Section of 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 35 FT. LBS. Knife must swing freely.

🗚 WARN IN G

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.

AWARNING

Knives should not be welded on for any reason.

STANDARD OR HEAVY DUTY SIDE OR REAR FLAIL KNIFE REPLACEMENT

- 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. 1.
- 2. Assemble knives, clevis, bolts and nuts as shown in Parts Section of 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 35 FT. LBS. Knife must swing freely.



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

Knives should not be welded on for any reason.

AWARNIN	G
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Maintenance Section 4-27

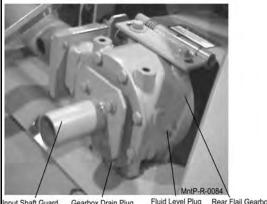
Side and Rear Flail

RECOMMENDED FILLING INSTRUCTIONS FOR REAR FLAIL GEARBOX

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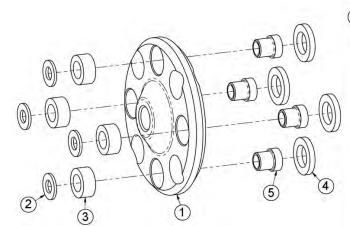
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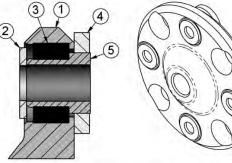


Fluid Level Plug Rear Flail Gearbox put Shaft Guard Gearbox Drain Plug

MAINTENANCE OF CRANKSHAFT ADAPTER ASSEMBLY (RIGID ENGINE MOUNT TRACTORS ONLY)

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- 1 ADAPTER, DRIVESHAFT
- 2 FLATWASHER
- 3 GROMMET, RUBBER
- 4 WASHER, NEOPRENE
- 5 GROMMET, STEEL

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Side and Rear Flail

Maintenance Section 4-29

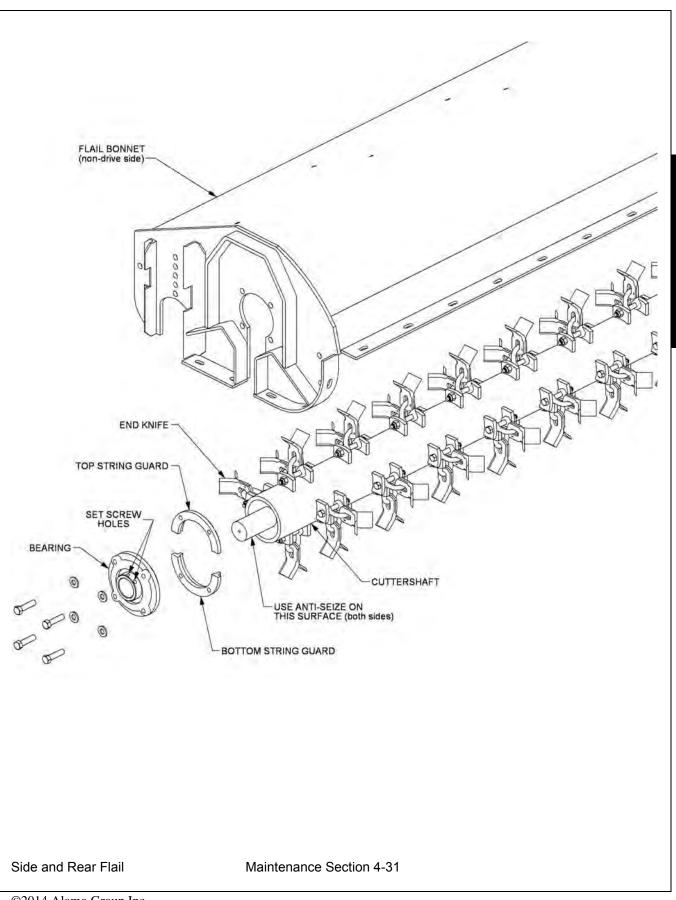
CUTTERSHAFT BEARING REPLACEMENT

- 1. Remove existing cuttershaft, bearings and string guards.
- 2. Make sure that the end knives on each end of the cuttershaft are oriented as shown.
- 3. Apply anti-seize on cuttershaft as shown on next page.
- 4. Install non-drive side bearing first.
- 5. Install the top of the string guard on the non-drive side first. Use Loctite-271 or equivalent and torque (95 ft-lb or 104ft-lb if you use an extension).
- 6. Install the bearing and top string guard on the drive side.
- 7. Center the cuttershaft between the string guards. Use Loctite-271 or equivalent and torque (95ft-lb or 104ft-lb if you use an extension) the top string guard on the drive side.
- 8. Install, use Loctite-271 or equivalent, and torque (95ft-lb or 104ft-lb if you use an extension) the bottom string guard on both sides.
- 9. Make sure the cuttershaft is centered. On the non-drive side, tighten one set-screw in the bearing onto the cuttershaft.
- 10. Remove the other set screw and drill a 5/16" hole into the cuttershaft 3/16" deep through the hole in the bearing. BE CAREFUL 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 s et screw as stated in Step 11.
- 13. Repeat steps 9 through 12 on the drive side.
- 14. Grease both bearings properly.

See illustration on next page

Side and Rear Flail

Maintenance Section 4-30



DAILY MAINTENANCE SCHEDULE

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

_ Pump Drive Shaft: Check for end play in driveshaft / coupler and lubricate at zerks.

Crankshaft adapter: If equipped with rubber grommets check condition, replace if missing or damaged.

Pivot points: Inject grease until it appears at ends.

 Hydraulic fittings: Check for leaks with paper or cardboard. Tighten fittings or replace hoses immediately.

_ Knives: Inspect for missing or damaged knives, change (only complete sets) as needed.

_ Belts: Check/Tighten/Replace belts as needed.

Main Frame/Deck: Unless otherwise specified retorque bolts according to torque specifications in this section.

____ Hydraulic Fluid Level: Add, if required, per fluid recommendations.

___ Rear Flail Drive, Bearing Flange and Shaft Couplers (if applicable): Grease as instructed in the detailed maintenance section.

_ Cutter Shaft and Ground Roller: Grease as instructed in the detailed Maintenance Section.

Service performed by:_____ Date:___/ Hour

Meter:_____

Maintenance Section

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

Side and Rear Flail

Maintenance Section 4-32

OPERATION SECTION

TIGER SIDE AND REAR FLAIL MOWER OPERATING INSTRUCTIONS

Tiger Side and Rear 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 Side and Rear 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 as sociated 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 en sure 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)



Side and Rear Flail

<u>1. OPERATOR REQUIREMENTS</u>

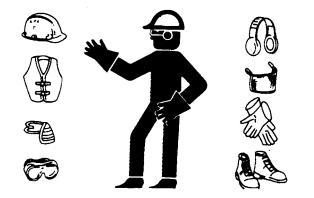
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained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

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

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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



NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator 's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to o perate the E quipment 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)



Side and Rear Flail

Operation Section 3-3

2. TRACTOR REQUIREMENTS

The tractor used to operate the mower must have the power, capacity and required equipment to safely operate the mower at a ground speed between 2 and 5 MPH. Operating the mower with a tractor that does not meet the following requirements may cause tractor or mower damage and could be a potential danger to the operator and passersby.

Tractor Requirements and Capabilities

- ASAE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Horsepower-Minimum 65 HP Min Recommended

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*

AWARNING

Operate this Equipment only with a Tractor equipped with an approved rollover-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 conditions, the Side and Rear 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.

Side and Rear Flail

2.4 Front End Weight

Maintain a minimum of 20% total tractor weight on the tractor front end at all times. Front end weight is critical to maintain steering ability and to prevent the front end from rearing up. Consult your authorized tractor dealer for front weights and carriers.

2.5 Power Take Off (PTO)

Only operate the mower on a tractor equipped to operate at 540 rpm PTO speed. Tractors operating at 540 rpm will have a 1-3/8" diameter 6-spli ne PTO shaft stub. Refer to the tractor operator's manual for operating the PTO at the proper speed.

If operating an older model tractor where the tractor's transmission and PTO utilize one master clutch, an overrunning clutch must be used between the PTO output shaft and the driveline of the mower. Consult an authorized tractor dealer to purchase and install an over-running clutch if needed.

DO NOT use a PT O 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)

AWARN IN G

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)

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)



Side and Rear Flail

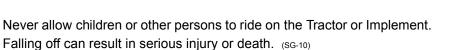
3.1 Boarding the Tractor

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

A DANGER

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)



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

3.2 Dismounting the Tractor

Before dismounting, park the tractor and implement on a reasonably level surface, apply the parking brake, idle the engine down, disengage the PTO, and lower the implement to the ground. Shut down the tractor engine according to the operator's manual, remove the key, and wait for all motion to completely stop. Never leave the seat until the tractor, its engine and all moving parts have come to a complete stop.

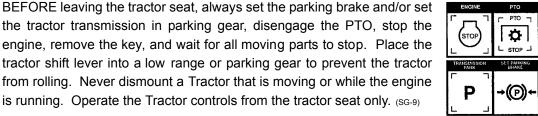
Use hand rails and steps when exiting the tractor. Be careful of your step and use extra caution when mud, ice, snow or other matter has accumulated on the steps or hand rails. Use all handrails and steps for support and never rush or jump off the tractor. OPS-U- 0009

Side and Rear Flail

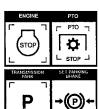
A DANGER

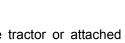
Operation Section 3-6

is running. Operate the Tractor controls from the tractor seat only. (SG-9)









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 light control switch.
- Locate the engine shut off control.
- Locate the brake pedals and the clutch.
- Locate the PTO control.
- Locate the 3-point hitch control lever.
- Locate the hydraulic remote control levers.

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 PTO control lever is disengaged.
- The 3-point hitch control lever is in the lowered position.
- The hydraulic remote control levers are in the neutral position.
- The tractor transmission levers are in park or neutral.

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

A 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)

A 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)



5. CONNECTING THE MOWER TO THE TRACTOR

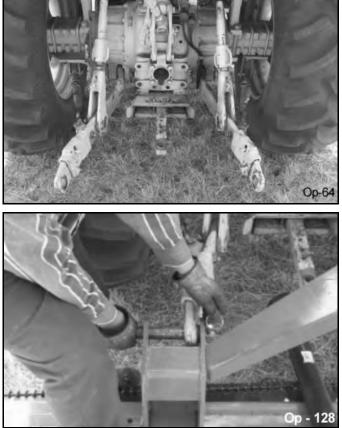
Use extreme caution when connecting the mower to the tractor. The mower should be securely resting at ground level or setting on blocks. Keep hands and feet from under the mower deck and clear of pinch points between the tractor hitch arms and mower pins. *OPS-R-0001*

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

5.1 Connecting the Rear Flail to the Tractor

- 1. Make sure the tractor is equipped with the correct PTO shaft. Change shafts if needed.
- 2. Shorten or remove the tractor drawbar to avoid interference when raising and lowering the mower.
- 3. Board the tractor and start the engine. Position the tractor to the mow er 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 3point equipment.
- 4. Turn off the tractor engine and dismount.
- 5. One lift arm at a time, a lign 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 o pposite 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 mo wer's top lin k. Insert the top link hitch pin and insert retaining pin into hitch pin.

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.



NOTE: Offset Adaptor Hitches are available to position the mower to the left or right. Mowers with Offset Adaptor hitches connect to the 3-Point hitch the same way as the mower A-frame.

Side and Rear Flail

Operation Section 3-8

OPERATION

5.2 Connecting the Side Flails to the Tractor

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



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 you r 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)

🛕 DANG ER

DO NOT allow any person under a sid e 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)



Side and Rear 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

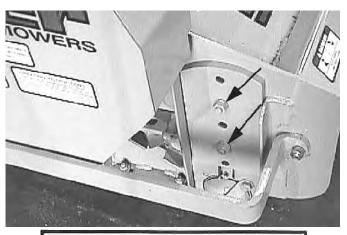
Never work under the Implement, the fr amework, or any lif ted component unless the Implement is securely supported or blocked up to prevent s udden or inadvertent falling which could cause serious injury or even death. (SG-14)

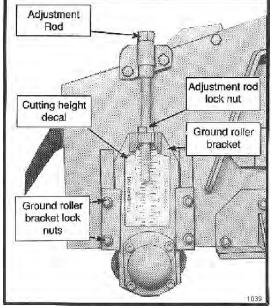


6.1 Roller Height Adjustment

- 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.
- 2. Place the tractor and mower on a le vel surface and completely lower the mower to the ground.
- Shut down the tractor, place the transmission in park, and set the parking brake before dismounting.
- 4. One section at a tim e, 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.
- 6. For Standard Duty flails, use lifting device to reposition cutter housing to desired cutting height. Align bracket holes with cutter housing, then reinstall hardware.
- 7. 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.
- 8. Lower cutter housing to the ground and remove lifting device.

Standard Duty





Side and Rear Flail

Operation Section 3-10

Heavy Duty

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 an even cut across the entire width of the mower.

6.2 Leveling Rear Flail 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 s hould always be p arallel to ground throughout the full adjustment range. Adjust cutting height of machine by raising or lowering rear roller as specified in Operation Section.



AWARNING

Do not let the Blades turn when the Mower Deck is r aised 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 s haft, pull the driveline yoke collar back and align the grooves and splines of the yoke with th ose 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*



Side and Rear Flail

When attaching the Implement input driveline to the Tractor PTO, it is important that the A WARN IN G connecting yoke spring activated locking collar slides freely and the locking balls are seated securely in the groove on the Tractor PTO shaft. Push and pull the driveline back and forth several times to ensure it is securely attached. A driveline not attached correctly to the Tractor PTO shaft could come loose and result in personal injury and damage to the Implement. (S3PT-17)

7.1 Driveline Length Check

AWARNING

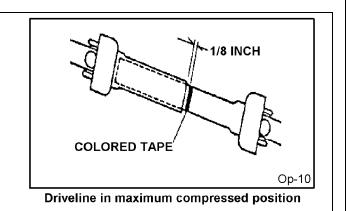
OPERATION

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)

When fitting the mower to the tractor, the telescoping driveline must be inspected to ensure that at its most compressed position, the pr ofiles 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



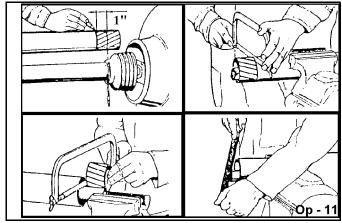
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Side and Rear Flail

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 voke 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 Implement. Never work on the Implement with the tractor PTO driveline connected and running. Rotating Parts, Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death. (S3PT-11)

Side and Rear Flail

Operation Section 3-13

OPERATION

🛦 DANG ER

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-03)

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 per formed 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

Side and Rear Flail

Operation Section 3-14



8.2 Mower Pre-Operation Inspection/Service

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

All Safety Shields, Guards and Safety devices including (but not 🛕 DANG ER limited to) - th e 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

> 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.

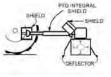
A DANGER

- 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.
- Inspect that the 3-point hitch pins are the proper size, correctly installed and secured to the tractor lift arms with retaining pins inserted.
- Ensure side mower hydraulics are secure at both ends. OPS-F-0015_A

Operation Section 3-15

Side and Rear Flail





OPERATION

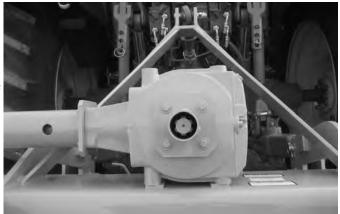
- Ensure rubber deflectors are in position and not damaged. Replace worn, broken, and missing sections immediately.
- Ensure the rollers are in good condition and rotate freely.
- Ensure the driveline integral shield is in good condition and rotate freely.
- Inspect that all bolts and screws are in position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



- 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 needed. *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



Side and Rear Flail

Operation Section 3-16

OPERATION

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



Side and Rear Flail

Operation Section 3-17

Flail Mower PRE-OPERATION Inspection



Mower ID#_____

Make _____

Shift

Date:

AWARNING

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

Table 1:

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

Operator's Signature:

DO NOT OPERATE an UNSAFE TRACTOR or BOOM

Side and Rear Flail

Operation Section 3-18

Tractor PRE-OPERATION Inspection



Mower ID#_____

Make _____

Date:

Shift

AWARNING

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

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

Operator's Signature:_____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

This Inspection Form may be freely duplicated for extra copies.

Side and Rear Flail

9. DRIVING THE TRACTOR AND IMPLEMENT

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

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

Transport only at speeds where you can maintain control of the **AWARNING** 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. Deter mine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

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

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

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



OPERATION

Side and Rear 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 o perate independently allowing single rear wheel braking action or locked tog ether 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

Raising the Mower

OPERATION

Side and Rear Flail

Operation Section 3-21

Using the tractor 3-point hitch control lever, raise the mower off the ground about 6", or just hig h enough to clear any ground obstacles. When raising the mower, make sure all connection points are securely attached and at least 1" clearance is maintained between the driveline and the deck. If necessary, place an upper lift strip on the 3-point hitch control lever to limit the height the mower can be raised to avoid driveline damage.

9.3 Driving the Tractor and Implements

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

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

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

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

Use extreme caution when operating on steep inclines.



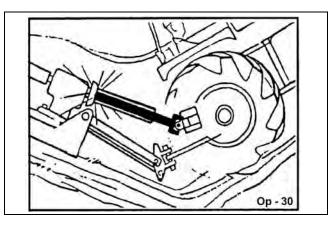


Side and Rear Flail

Operation Section 3-22

9.4 Crossing Ditches and Steep Inclines

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.

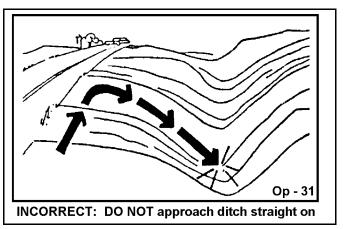




Damage resulting from over-collapse of the driveline's inner profile and its outer housing may allow the driveline to come loose from the Tractor which could cause bodily injury to the operator or bystanders and/or extensive damage to the Tractor or Implement. *OPS-R-0020*

When confronted with an incline or ditch, do not approach from an angle which is p erpendicular 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*

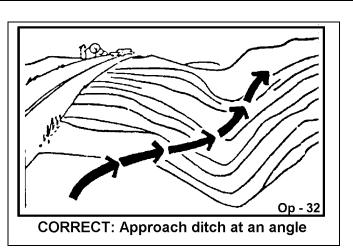


Side and Rear Flail

Operation Section 3-23

Inclines and ditches should be approached along a line which is at an angle as shown. This type of path will reduce the pos sibility of over-collapse of the driveline and resulting damage. If the gradient is so steep that such an ap proach 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 b e 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. The se manuals must be read and explained to any operator who cannot read. Never allow someone to operate the implement and tractor without complete operating instructions.

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

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



Side and Rear Flail

Operation Section 3-24

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OPERATION

AWARNING

G 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. Re move 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 on ce. 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 b lades are not da maged and the carrier is balanced before resuming operation.

Always wear your seat be It 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 sudd en movement could throw you off of the seat and under the tractor and/or mower. The seat belt is your best protection from falling off the tractor and the ROPS provides protection from being crushed during a tractor roll-over. *OPS-F-0010*





10.2 Bystanders/Passersby Precautions

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

Operation Section 3-25

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



-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

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 AWARNING 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 AWARNING in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SGM-09)

Operation Section 3-26

Side and Rear Flail

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10.4 PTO RPM and Ground Speed

Ground speed for mowing will depend upon the height, type , and dens ity 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*

AWARNING

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)

AWARNING

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)

10.5 Operating the Mower

Only operate the mower from the tractor operator's seat with the seatbelt securely fastened. The tractor must be equipped with a ROPS in the raised position or a ROPS cab.

The mower is designed to cut vegetation up to 2" in diameter. Sharp blades will produce a cleaner cut and require less power. Travel at a speed that allows the mower sufficient time to cut through the vegetation and maintain the PTO operating speed to prevent overloading the mower and tractor. Choose a driving pattern that provides the maximum pass length and minimizes turning.

Under certain conditions, tractor tires may roll some grasses down preventing them from being cut at the same height as the surrounding area. When this occurs, reduce the tractor ground speed while maintaining the operating speed of the mower. A slower ground speed will permit grasses to at least partially rebound and be cut. Taking a partial cut and/or reversing the direction of travel may also help produce a cleaner cut.

Avoid mowing in the reverse direction when possible. In situations where the mower must be backed to access areas to be cut, make sure there are no persons or other foreign debris behind the mower before mowing in reverse. When mowing in reverse, operate the tractor and mower at a reduced ground speed to ensure tractor and mower control is maintained. *OPS-R-0026*

Side and Rear Flail

Operation Section 3-27



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

AWARNING

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 300 feet (90 m) 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 these type of items discontinue mowing. (SGM-01)

AWARNING

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-08)

AWARNING

Follow these guidelines to reduce the risk of equipment and grass fires while operating, servicing, and repairing the Mower and Tractor:



-Equip the Tractor with a fire extinguisher in an accesible location.

-Do Not operate the Mower on a Tractor with an underframe exhaust.

-Do Not smoke or have an open flame near the Mower and Tractor.

-Do Not drive into burning debris or freshly burnt areas.

-Ensure slip clutches are properly adjusted to prevent excessive slippage and plate heating.

-Never allow clippings or debris to collect near drivelines, slip clutches, and gearboxes. Periodically shut down the Tractor and Mower and clean clippings and collected debris from the mower deck. (SGM-12)

Side and Rear Flail

Operation Section 3-28

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10.6 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 co me to a complete stop before exiting the tractor. *OPS-F- 0011*





11. DISCONNECTING THE MOWER FROM THE TRACTOR

Before disconnecting the mower, the PTO must be disengaged and all motion at a comp lete 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*



Side and Rear Flail

Operation Section 3-29

A DANGER

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)

A DANGER

Never stand or allow another person to stand between a running Tractor and the Mower when disconnecting the Implement from the Tractor 3-point hitch. Always shut the Tractor off completely and set the parking brake before attempting to disconnect the Mower pins from the Tractor hitch.

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 th e driveline. *OPS-F-0013*



A DANGER

Never work under the Implement, the fr amework, or any lif ted component unless the Implement is securely supported or blocked up to prevent s udden or inadvertent falling which could cause serious injury or even death. (SG-14)



OPERATION

Side and Rear Flail

Operation Section 3-30

12. 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 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

🛦 DANG ER

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)

Side and Rear Flail

Operation Section 3-31

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13. TRANSPORTING THE TRACTOR AND IMPLEMENT

Inherent hazards of operating the tractor and implement and the pos sibility 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 trans port 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 mo wer moving parts to come to a complete stop. Raise the mower sections and ensure transport locks engage and install the travel lock pins. *OPS-F- 0021*



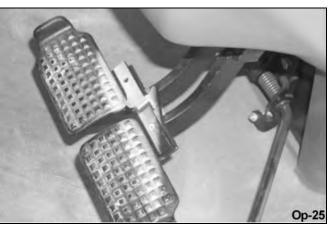


Side and Rear Flail

Operation Section 3-32

Before transporting the tractor on a public roadway or boarding a trailer for transport, the tractor brake pedals should be locked together. Lo cking 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.

13.1 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 a lert drivers of the tractor's presence. Reme mber 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 transport 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)



🛦 DANG ER

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



Side and Rear Flail

Operation Section 3-33

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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 ale rt drivers of the presence of equipment traveling on roadways at a slow speed. SMV sig ns are a triangular bright orange with reflective red trim for both easy day and night v isibility. Make sure the SMV sign is clean and visible from the rear of the unit be fore transporting the tractor and implement on a pu blic roadway. Replace the SMV emblem if faded, damaged, or no longer reflective. *OPS-U- 0020*

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

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







Operation Section 3-34

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Side and Rear 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*



OPERATION

13.2 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*



Side and Rear Flail

Operation Section 3-35

Side and Rear Flail

Operation Section 3-36

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PARTS SECTION

PART NAME INDEX

PARTS ORDERING GUIDE

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

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.

2. The Purchase Order must indicate the Name and Address of the person or organization ordering the parts, who should be charged, and if possible, the serial number of the machine for which the parts are being ordered.

3. The purchase order must clearly list the quantity of each part, the complete and correct part number, and the basic name of the part.

4. The manufacturer reserves the right to substitute parts where applicable.

 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.

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



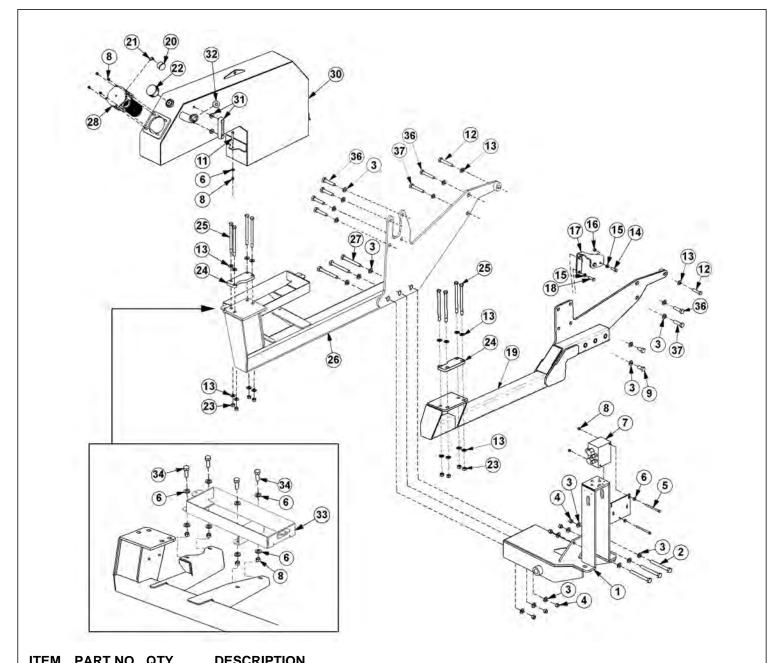
For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

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

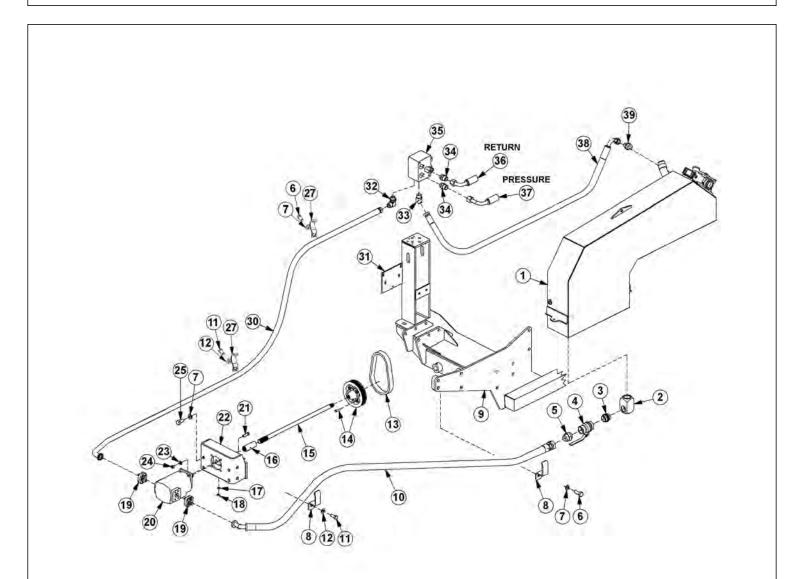


	PART NO.	QIT.	DESCRIPTION
3	28522433	3	OCI₽ HICOG
4	43: 66	5	ECRUETGY .516\$'Z '9\$.P E
5	55::2	42	HNCVY CUJ GT.516\$.UCG
6	43: 47	8	J GZ 'P WV.516\$.P E
7	43866	4	ECRUETGY .51: \$'Z '7\$.PE
8	44238	34	HNCVY CUJ GT.51: \$
9	287322: 5	3	UQNGP QKF "DTCMG"XCNXG
:	43849	34	P[NQEMPWV.51: \$.PE
;	46: 82	6	ECRUETGY .420 O 'Z '620 O .407R
32	47563	6	ECRUETGY .420 O 'Z '920 O .407R

JD5085-5100 TSF

ITEM	PART NO.	QTY.	DESCRIPTION
33	4385;	4	ECRUETGY .'51: \$'Z '5/316\$.'P E
34	44649	6	ECRUETGY .380 O 'Z '920 O .402R
35	55986	42	HNCVY CUJ GT.71: \$.UCG
36	43953	4	ECRUETGY .314\$'Z '3/314\$.PE
37	4423:	6	HNCVY CUJ GT.314\$
38	43947	4	J GZ 'P WV.314\$.P E
39	28633; 8;	3	DTCEGO CUV
3:	4394;	4	ECRUETGY .314\$'Z '3\$.PE
3;	28522523	3	CZNG'DTCEG.TJ."UE
42	8V286;	3	HKNVGT''I CWI G
43	VH6::::	3	GNDQY . "UVTGGV."31: \$
44	28727299	3	ECR.'DTGCVJ GT.'Q/TIPI
45	43997	:	J GZ 'P WV.71: \$.P E
46	28623468	3	ENCO R'RNC VG
47	439; 9	:	ECRUETGY .71: \$'Z '; \$.PE
48	8522524	3	CZNG'DTCEG.NJ
49	8V4532	5	ECRUETGY .516\$'Z'8/314\$.PE
4:	28727266	3	HKNVGT.'CUUGO DN[.''HP/VCPM
4;	2862455;	3	RNCVG. 'CZNG
52	289222; 3	3	VCPMJ[FTCWNKE.YYV.CUU]
53	28727289	3	UKI J V'I CWI G
54	28727349	3	RNW .UCG.%42
55	285: 2282	3	OPV.''VCPM''YJN''YNN.''CFL
56	43853	6	ECRUETGY .'51: \$'Z '3/316\$'PE.'I T:
57	53954	3	ECRUETGY . ''380 O ''Z ''920 O
58	53953	6	ECRUETGY . "420 O 'Z '720 O
59	494: 4	5	ECRUETGY . "420 O 'Z '770 O

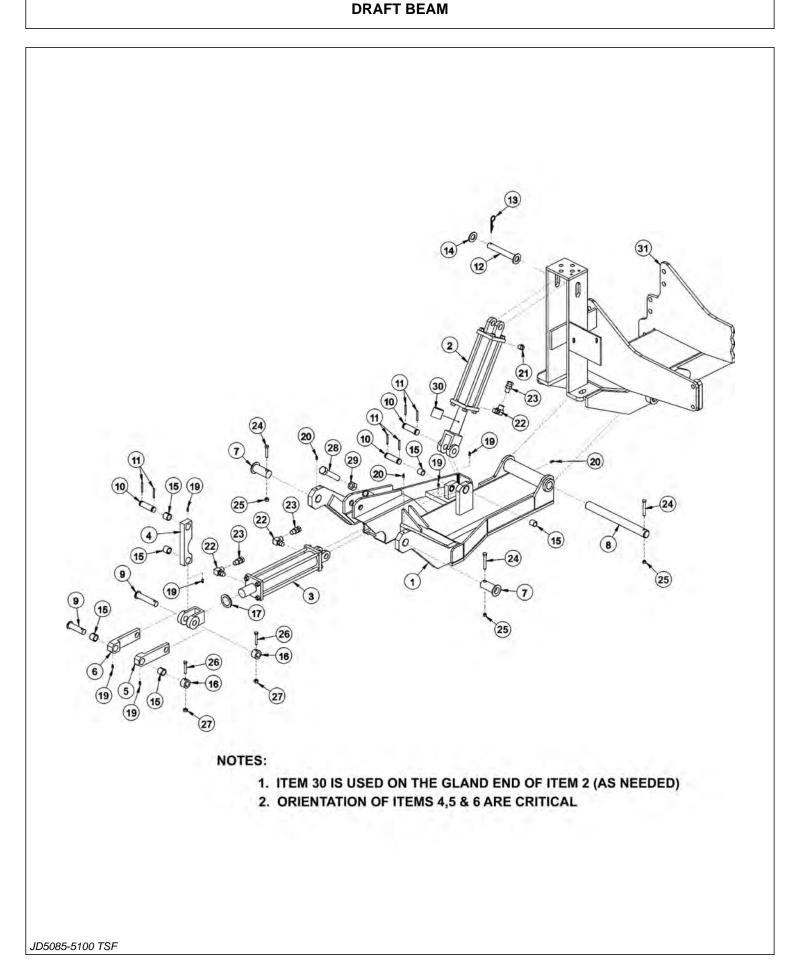
TRACTOR MOUNT KIT - HYDRAULICS



ITEM	PART NO.	QTY.	DESCRIPTION
3	/////	/	Y J GGN'Y GNN'VCP M', TGHGT'VQ'VTCE VQT'O QWP V'MKV
4	287252: 6	3	GNDQY .3/314\$HQT"Z "3/314\$HQT
5	287252: 5	3	CF CRVGT.3/314\$O QT 'Z '3/314\$O QT
6	5652;	3	DCNN"XCNXG.3/314\$HQT
7	56932	3	CF CRVGT.3/314\$O QT 'Z '3/314\$O L
8	43: 54	4	ECRUETGY .516\$"Z "4\$.PE
9	55::2	8	HNCVY CUJ GT.516\$.UCG
:	545:4	4	J QUG'DTCEMGV
;	/////	/	CZNG'DTCEG.YYV', TGHGT''VQ''VTCEVQT''OQWPV''MKV
32	28722867	3	J QUG.3/314\$'Z '322\$
33	44643	4	ECRUETGY .380 O 'Z '620 O .402R
34	55986	4	HNCVY CUJ GT.71: \$.UCG
35	T745376	3	LQJ P 'F GGT G'DGNV

JD5085-5100 TSF

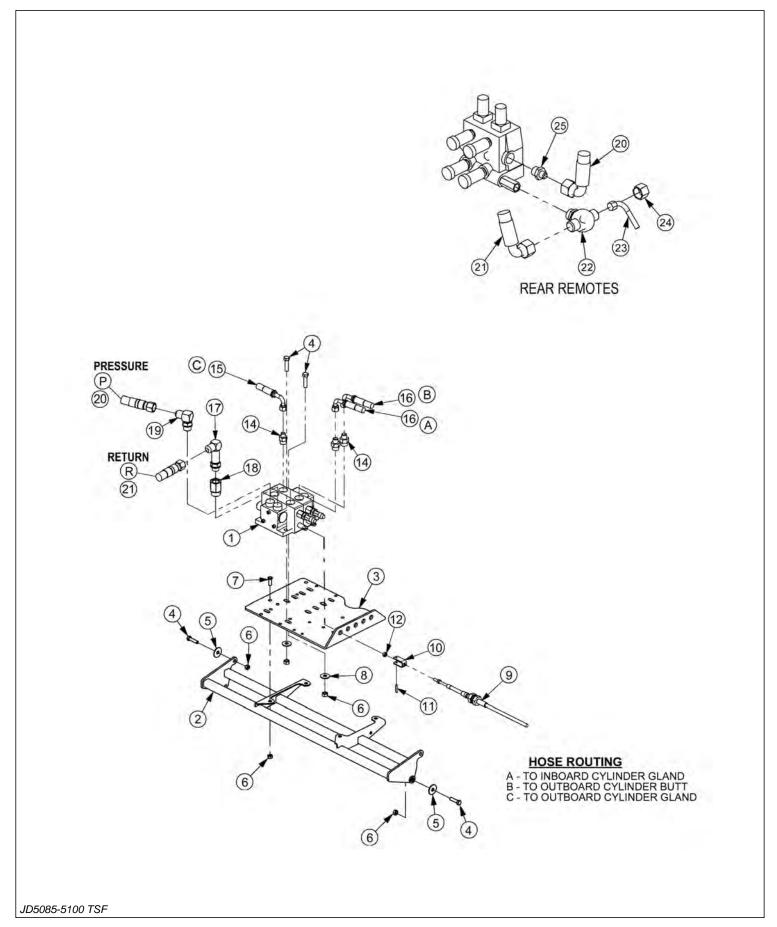
36	SJ23950		
50		3	LQJ P 'F GGT G'RWNNG['MKV
37	2864237:	3	FTKXGUJ CHV
38	8V2597D	3	EQWRNKP I
39	44236	3	HNCVY CUJ GT.316\$
3:	5473;	3	Y KP I 'P WV.316/42.WP E
3;	VH6:74	4	MKV.HNCPIG.%42
42	45374	3	RWO R
43	43954	6	ECRUETGY .3 14\$"Z "3/5 16\$.P E
44	54864	3	OQWPVKPI 'DTCEMGV.RWOR
45	28755226	6	HNCVY CUJ GT.314\$.UCG
46	43947	6	J GZ 'P WV.314\$.P E
47 4	494: 4	6	ECRUETGY .420 O 'Z '770 O .407R
49	56298	4	ENCO R'MKV.3\$
52	28722966	3	J QUGIVWDG.3\$'Z '93\$
53	/////	/	OCKP "HICOG", TGHGT "VQ "VTCEVQT 'OQWP V"MKV
54	56339	3	GNDQY .3\$0 QT 'Z '3\$0 L
55	55776	3	GNDQY .3\$O QT 'Z '3\$O L67à
56	55777	4	CF CRVGT.3\$O QT 'Z '3\$O L
57	/////	/	UQNGP QKF 'DTCMG''XCNXG'', TGHGT''VQ''VTCEVQT'O QWP V'MKV
58	2872254:	3	J QUG.3\$'Z '', 8\$"*TGVWTP +
59	2872254;	3	J QUG.3\$'Z'; 5\$"*RTGUUWTG+
5:	28722967	3	J QUG.3\$'Z '338\$
5;	56286	3	CF CRVGT .3/3 16\$0 QT 'Z '3\$0 L



ITEM	PART NO.	QTY.	DESCRIPTION
1	06350006	1	DRAFT BEAM
2	6T0151R	1	HYD. CYLINDER 3" X 10"
3	32215	1	HYD. CYLINDER 3" X 12" - STD DTY
4	TF4500A	1	PIVOT ARM
5	TF4507B	1	RIGHT LINKAGE ARM
6	TF4506B	1	LEFT LINKAGE ARM
7	30126B	2	PIN, HEAD PIVOT
8	6T3001	1	PIN, BEAM PIVOT
9	TF4519	2	PIN, LINKAGE
10	TB1033	3	PIN, CLEVIS
11	06537021	6	ROLLPIN
12	6T3005	1	PIN,1" W/ CAP
13	6T3004	1	R-CLIP HAIRPIN
14	22023	1	FLATWASHER 1"
15	TB3010	1	BUSHING 1"
16	22847A	2	BOSS, LINKAGE PIN
17	22076	1	SPACER, HYD. CYLINDER 1/4"
19	6T3207	4	GREASE ZERK 1/4"
20	6T3211	1	GREASE ZERK 1/8"
21	6T4258	1	BREATHER 1/2"
22	34244	3	ELBOW FITTING 1/2"
23	34396	3	SWIVEL RESTRICTOR
24	21688	3	CAPSCREW 7/16" X 3 1/4"
25	21677	3	NYLOCK NUT 7/16"
26	21635	2	CAPSCREW 3/8" X 2 1/4"
27	21627	2	NYLOCK NUT 3/8"
28	21831	1	CAPSCREW 3/4" X 1 3/4"
29	21825	2	HEX NUT 3/4"
30	06700095	1	CYLINDER SPACER W/SET SCREW
31		-	MAIN FRAME *REFER TO TRACTOR MOUNT PAGE

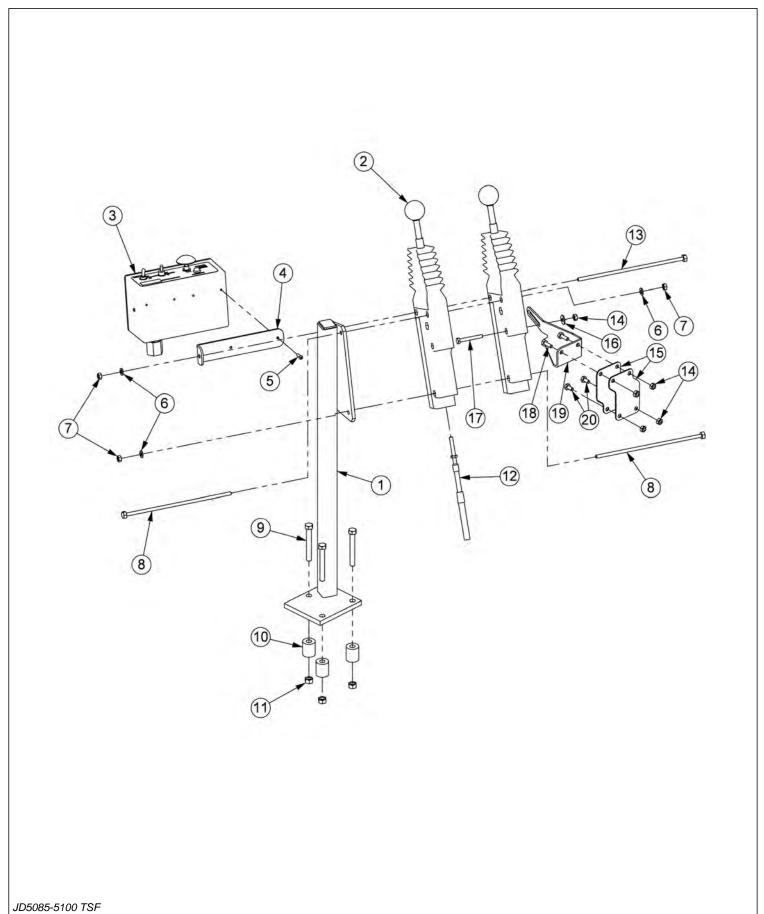
JD5085-5100 TSF

CABLE (MANUAL) LIFT VALVE 2-SPOOL



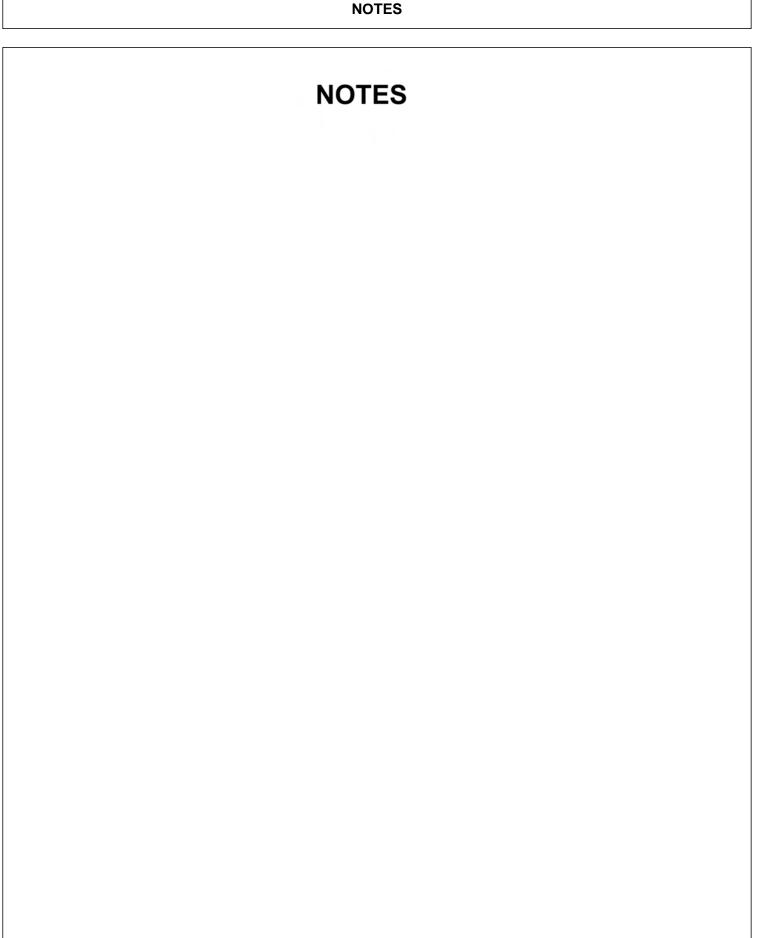
ITEM	PART NO.	QTY.	DESCRIPTION
1	06502058	1	VALVE,2SP,HSC,OC
2	06340033	1	VALVE MNT
3	34622	1	PLATE, VALVE, REAR MNT
4	21632	6	CAPSCREW,3/8" X 1-1/2",NC
5	6T2615	4	WASHER,FENDER,3/8"
6	21627	14	NYLOCK NUT,3/8",NC
7	21630	6	CAPSCREW,3/8" X 1",NC
8	22016	4	FLATWASHER,3/8"
9	06505100	2	CBL,CNTRL,108"
10	6T4411	2	CLEVIS,CBL CTRL,3/16"
11	6T3017	2	ROLLPIN,3/16" X 1"
12	21500	2	HEX NUT,1/4",NF
13	34396	2	ADAPTER,.06" RSTRCTR,1/2"MOR X 3/8"MJ
14	33271	3	ADAPTER,1/2"MOR X 3/8"MJ
15	33562	1	HOSE,1/4" X 130"
	34631	1	HOSE, 1/4" X 126" (NO VALVE OPTION ONLY)
16	33364	2	HOSE,1/4" X 120"
	34632	2	HOSE, 1/4" X 115" (NO VALVE OPTION ONLY)
17	33293	1	ELBOW,LONG,1/2"MOR X 1/2"MJ 90
18	32678	1	ADAPTER,5/8"MOR X 1/2"FOR
19	33383	1	ELBOW,5/8"MOR X 1/2"MJ X 90
20	06500467	1	HOSE,1/2" X 31"
21	06500468	1	HOSE,1/2" X 33"
22	06503130	1	TEE,BRANCH
23		-	PRFRMD TUBE (TRACTORS WITH MID-MOUNT VALVE)
24	06503129	1	CAP,3/4"FS (TRACTORS W/OUT MID-MOUNT VALVE)
25	RE267820	1	ADAPTER,PB

2 SPOOL CABLE CONTROL MOUNT



ITEM	PART NO.	QTY.	DESCRIPTION
1	31923	1	BRKT,CTRL,CBL
2	6T1251	2	CBL CTRL BOX,180 DEG
3	06510102	1	SWITCH BOX,SIDE
4	34496	1	BRKT,SWITCH BOX
5	6T3951	2	SCREW, MACHINE, 8-32 X 1/2"
6	21986	3	LOCKWASHER,1/4"
7	21525	3	HEX NUT,1/4",NC
8	21542	2	CAPSCREW,1/4" X 4",NC
9	21635	3	CAPSCREW,3/8" X 2-1/4",NC
10	27082B	3	SPACER
11	21627	3	NYLOCK NUT,3/8",NC
12	06505100	2	CBL,CNTRL,108"
13	21544	1	CAPSCREW,1/4" X 5",NC
14	21527	5	NYLOCK NUT,1/4",NC
15	06411086	2	BRKT,MNT
16	22014	1	FLATWASHER,1/4"
17	21534	1	CAPSCREW,1/4" X 2",NC
18	21529	2	CAPSCREW,1/4" X 3/4",NC
19	06411087	1	BRKT,STABILIZER
20	21528	2	CAPSCREW,1/4" X 1/2",NC

JD5085-5100 TSF



JD5085-5100 TSF

COMMON PARTS

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PARTS ORDERING GUIDE

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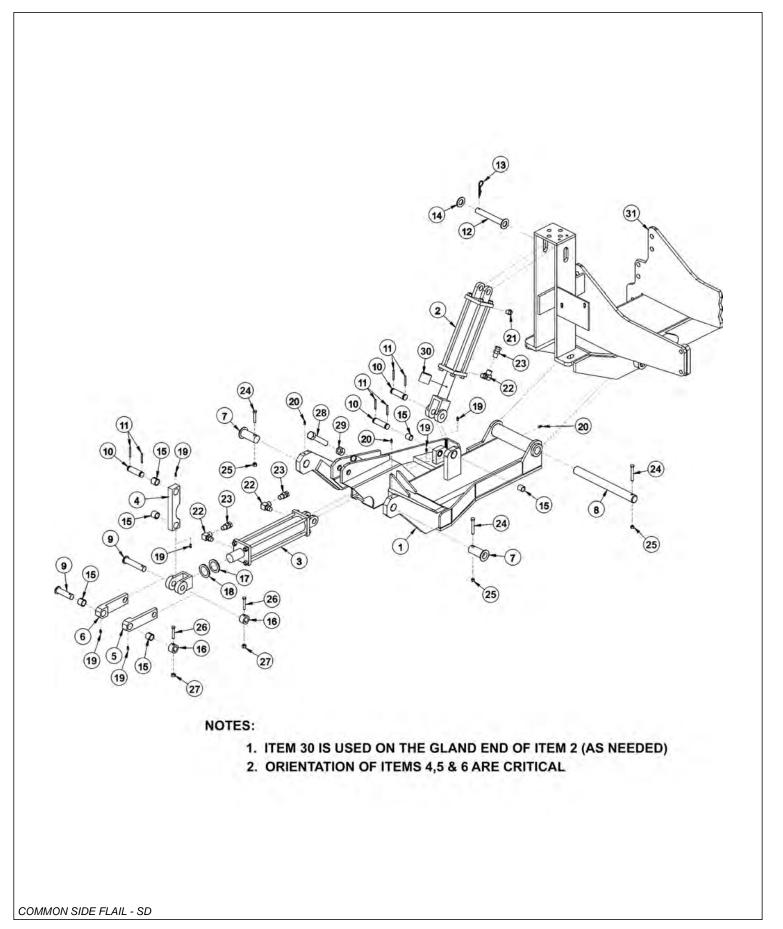
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3301 N. Louise Ave. Sioux Falls, SD 57107 1-800-843-6849 1-605-336-7900

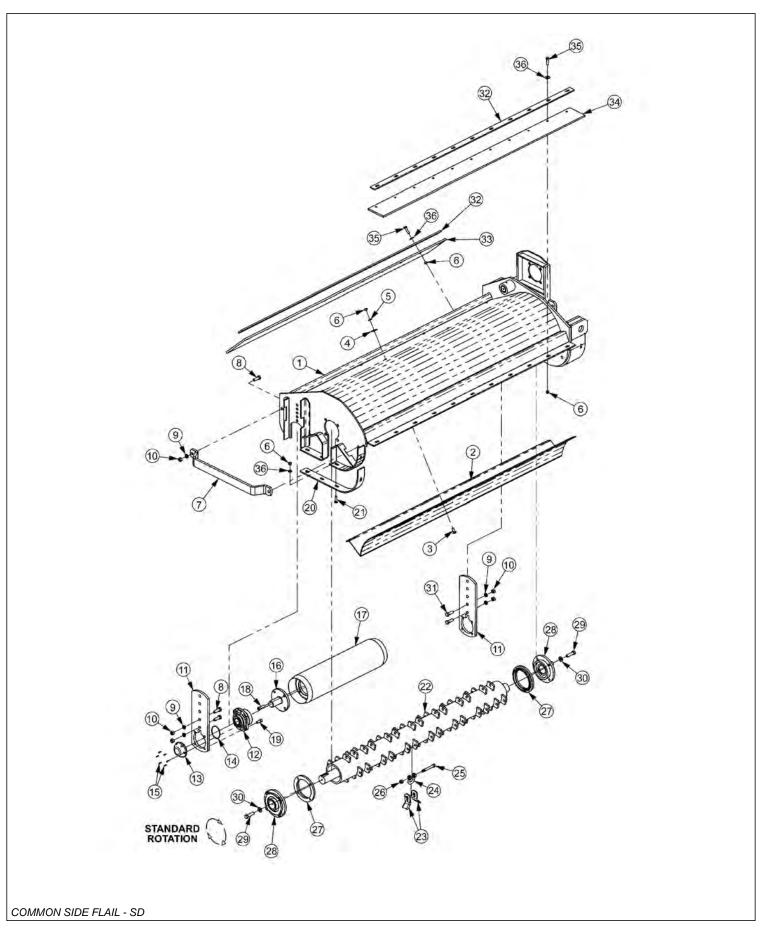
COMMON SIDE FLAIL - SD

COMBO DRAFT BEAM



ITEM	PART NO.	QTY.	DESCRIPTION
1	32143	1	COMBO DRAFT BEAM -STD DTY FLAIL
2	6T0151R	1	HYD. CYLINDER 3" X 10"
3	32215	1	HYD. CYLINDER 3" X 12" - STD DTY
4	TF4500A	1	PIVOT ARM
5	TF4507B	1	RIGHT LINKAGE ARM
6	TF4506B	1	LEFT LINKAGE ARM
7	30126B	2	PIN, HEAD PIVOT
8	6T3001	1	PIN, BEAM PIVOT
9	TF4519	2	PIN, LINKAGE
10	TB1033	3	PIN, CLEVIS
11	06537021	6	ROLLPIN
12	6T3005	1	PIN,1" W/ CAP
13	6T3004	1	R-CLIP HAIRPIN
14	22023	1	FLATWASHER 1"
15	TB3010	8	BUSHING 1"
16	22847A	2	BOSS, LINKAGE PIN
17	22076	1	SPACER, HYD. CYLINDER 1/4" (AS NEEDED)
18	22077	1	SPACER, HYD. CYLINDER 5/16" (AS NEEDED)
19	6T3207	6	GREASE ZERK 1/4"
20	6T3211	3	GREASE ZERK 1/8"
21	6T4258	1	BREATHER 1/2"
22	34244	3	ELBOW FITTING 1/2"
23	34396	3	SWIVEL RESTRICTOR
24	21688	3	CAPSCREW 7/16" X 3 1/4"
25	21677	3	NYLOCK NUT 7/16"
26	21635	2	CAPSCREW 3/8" X 2 1/4"
27	21627	2	NYLOCK NUT 3/8"
28	21831	1	CAPSCREW 3/4" X 1 3/4"
29	21825	1	HEX NUT 3/4"
30	06700095	1	CYLINDER SPACER W/SET SCREW
31		-	MAIN FRAME *REFER TO TRACTOR MOUNT PAGE

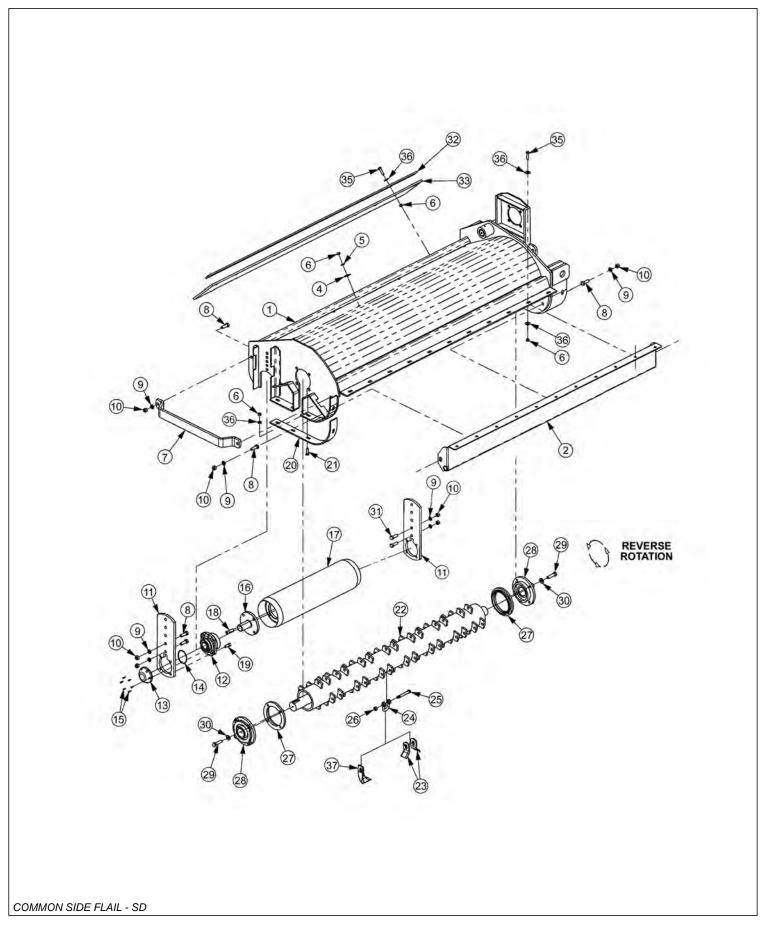
COMMON SIDE FLAIL - SD



ITEM	PART NO.	QTY.	DESCRIPTION
1	28647E	1	BONNET,63",STD,COMBO
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"

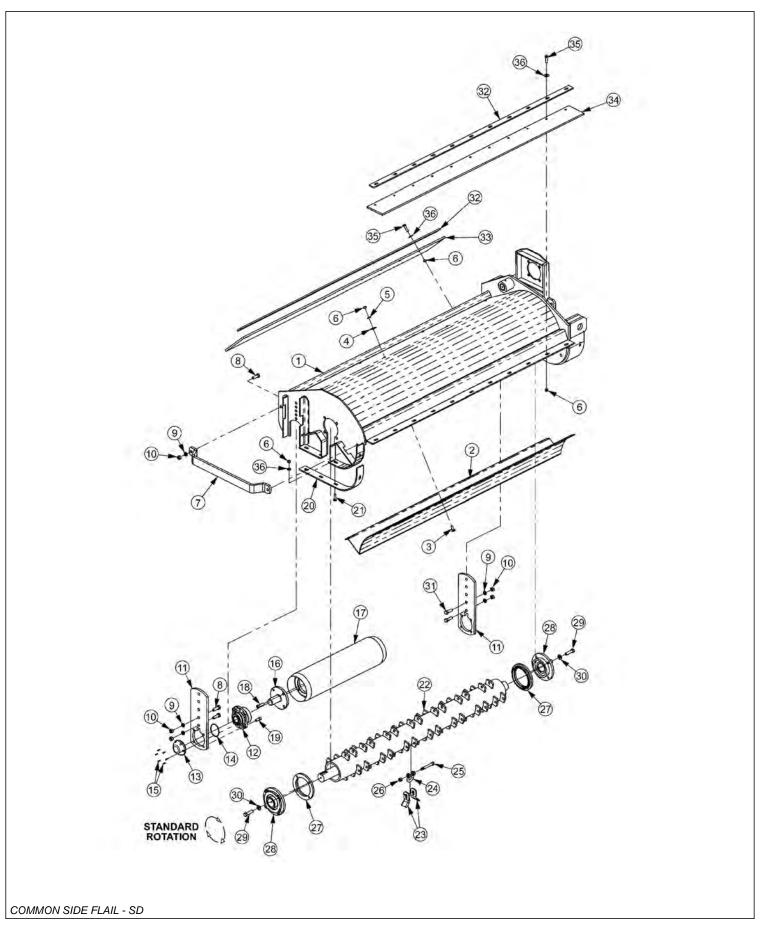
COMMON SIDE FLAIL - SD

63IN SIDE FLAIL - REVERSE ROTATION



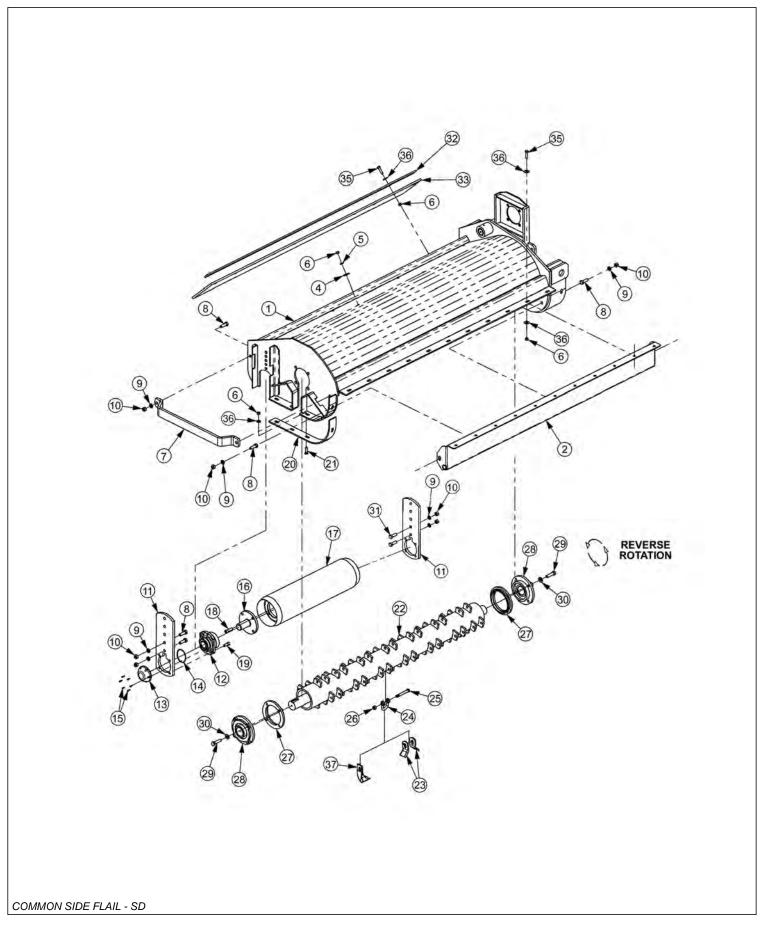
ITEM	PART NO.	QTY.	DESCRIPTION
1	28647E	1	BONNET,63",STD,COMBO
2	28969A	1	TRASH GUARD,63",REV ROT
3	6T2283	8	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	8	WASHER, FENDER, 3/8"
5	21988	8	LOCKWASHER,3/8"
6	21625	40	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	6	CAPSCREW,1/2" X 1-1/2",NC
9	21990	8	LOCKWASHER,1/2"
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	2	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 SIDE FLAIL - SD



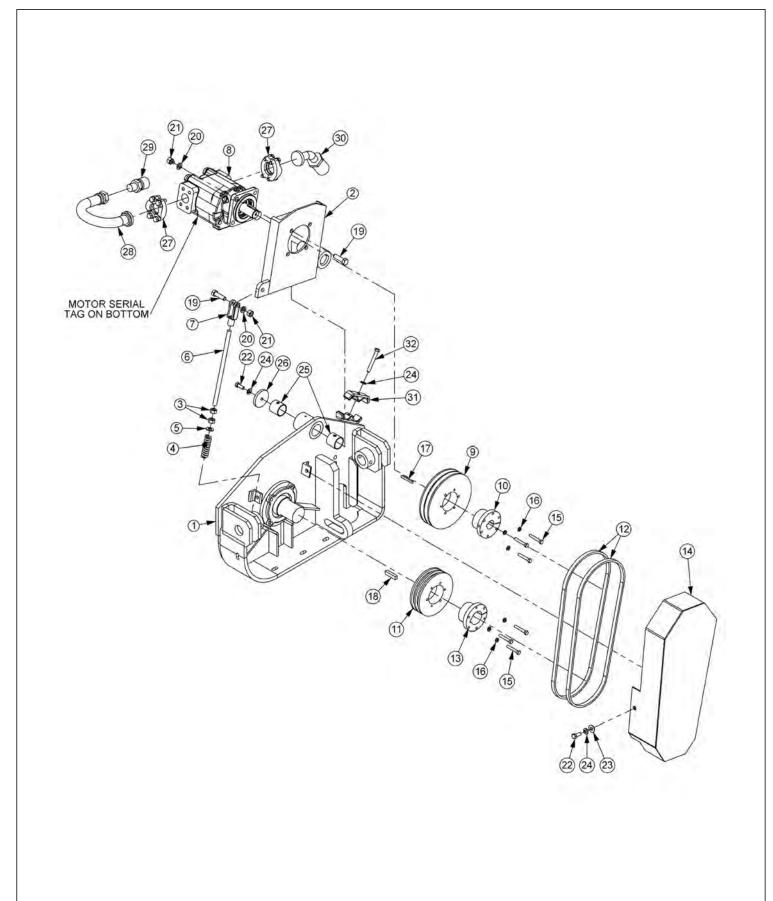
ITEM	PART NO.	QTY.	DESCRIPTION
1	28736D	1	BONNET,75",STD,T3F,RT
2	28737	1	BAFFLE,75",STD ROT-STD
3	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	10	WASHER, FENDER, 3/8"
5	21988	10	LOCKWASHER,3/8"
6	21625	46	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	4	CAPSCREW,1/2" X 1-1/2",NC
9	21990	6	LOCKWASHER,1/2"
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"

75IN SIDE FLAIL - REVERSE ROTATION



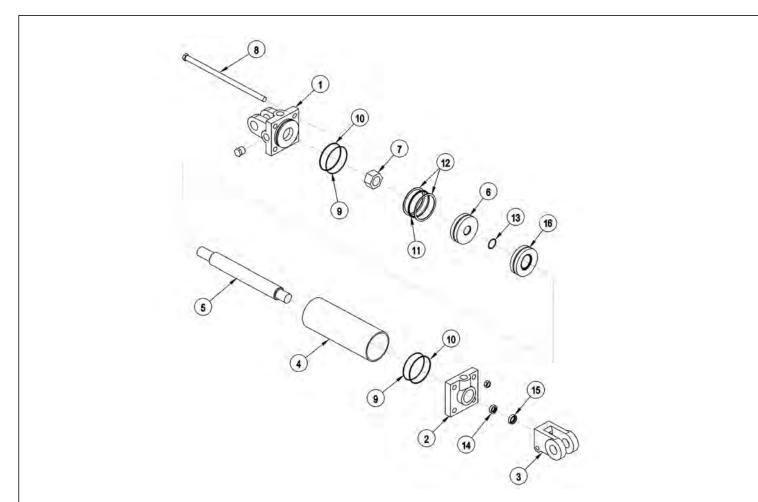
ITEM	PART NO.	QTY.	DESCRIPTION
1	28736D	1	BONNET,75,STD,T3F,RT
2	28968A	1	TRASH GUARD,75"
3	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
4	6T2615	10	WASHER, FENDER, 3/8"
5	21988	10	LOCKWASHER,3/8"
6	21625	36	HEX NUT,3/8",NC
7	27975A	1	GUARD,CUTTERSHAFT
8	21731	6	CAPSCREW,1/2" X 1-1/2",NC
9	21990	8	LOCKWASHER,1/2"
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	9	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	49	FLATWASHER,3/8"
37	28184A	40	FLAIL KNIVES (SMOOTH CUT)

SIDE FLAIL DRIVE ASSEMBLY



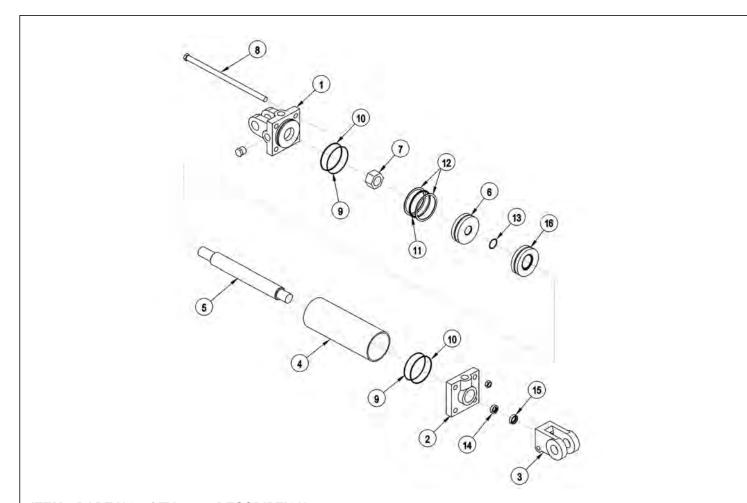
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	BONNET *REFER TO HEAD PARTS
2	28679B	1	MOTOR CHANNEL
3	21700	2	HEX NUT, 1/2", NF
4	TF3620A	1	SPRING, TENSIONER
5	27938	1	BUSHING,MACH,10DX1/2IDX14GA.
6	40496	1	ROD,THREADED,1/2NFX8
7	PT3611A	1	CLEVIS,6"
8	06504134	1	MOTOR, M350-1 3/4 GEAR
9	TF3044	1	SHEAVE,8.0
10	TF3013	1	BUSHING,QD,SK 1-1/4,1/4 KEY
11	TF3040	1	SHEAVE,6.3
12	28702	2	V-BELT,(500)
13	28723	1	BUSHING,QD,SK 1-15/16
14	28703B	1	GUARD,BELT,TSF,STD
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	3	LOCKWASHER, 3/8"
25	27580	2	BEARING,DX,1-1/2",GRM
26	28682	1	RETAINING, WASHER 2-1/2 X 5/16
27	TF4852	2	KIT,FLANGE,#20
28	34227	1	PREFORMED TUBE
29		-	HOSE (RETURN FOR STANDARD ROTATION)
30		-	HOSE (PRESSURE FOR STANDARD ROTATION)
31	TB3031	1	CLAMP,HOSE
32	21638	1	CAPSCREW,3/8 X 3,NC
1			

3IN X 10IN HYDRAULIC CYLINDER BREAKDOWN



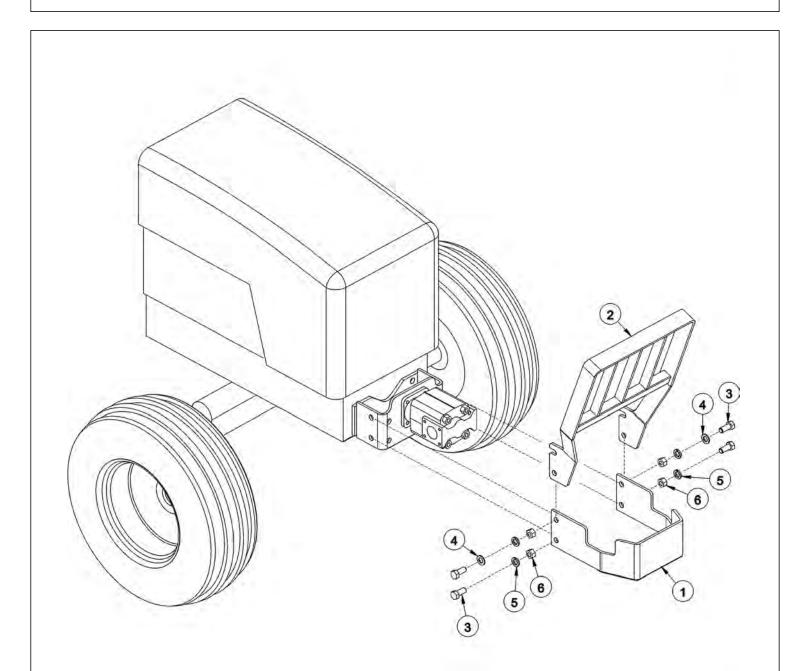
ITEM	PART NO.	QTY.	DESCRIPTION
	6T0151R	-	HYD. CYLINDER 3" X 10"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	6T0164	1	CYLINDER TUBE
5	6T0161	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	6T0176	4	TIE ROD ASY
	6T0187	-	SEAL KIT
9		2	O - RING
10		2	BACK - UP WASHER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

3IN X 12IN HYDRAULIC CYLINDER BREAKDOWN



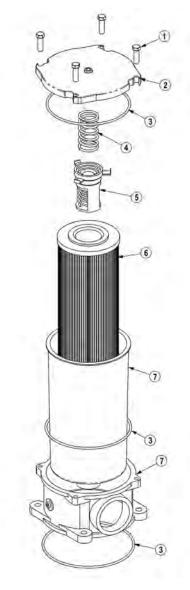
ITEM	PART NO.	QTY.	DESCRIPTION
	32215	-	HYD. CYLINDER 3" X 12"
1	6T0167	1	CYLINDER BUTT
2	6T0170	1	CYLINDER GLAND
3	6T0178	1	CLEVIS END
4	6T0204	1	CYLINDER TUBE
5	6T0203	1	PISTON ROD
6	6T0173	1	PISTON
7	6T0179	1	LOCKNUT
8	6T0205	4	TIE ROD ASY
	6T0187	-	SEAL KIT
9		2	O - RING
10		2	BACK - UP WASHER
11		1	O - RING
12		2	BACK - UP WASHER
13		1	O - RING
14		1	U - CUP
15		1	WIPER

PUMP AND GRILL GUARD OPTIONS



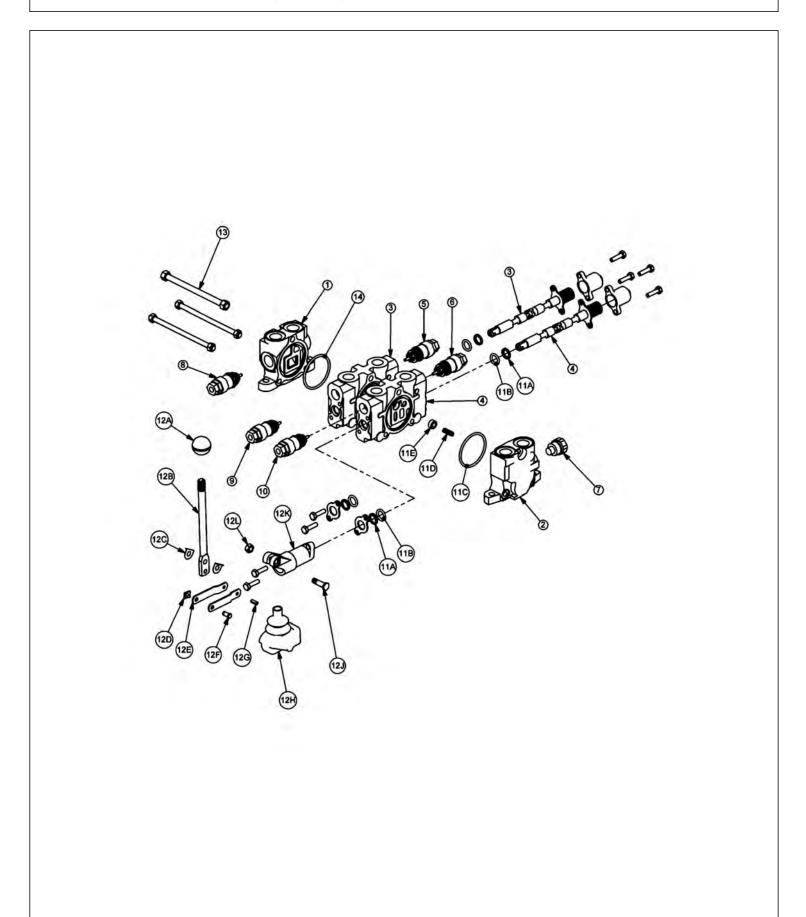
ITEM	PART NO.	QTY.	DESCRIPTION
1	32430	1	UNIVERSAL PUMP GUARD
2	32737	1	UNIVERSAL GRILL GUARD
3	21833	4	CAPSCREW,3/4" X 2-1/4",NC
4	22021	2	FLATWASHER,3/4"
5	21993	4	LOCKWASHER,3/4"
6	21825	4	HEX NUT,3/4",NC

RESERVOIR TANK FILTER ASSEMBLY



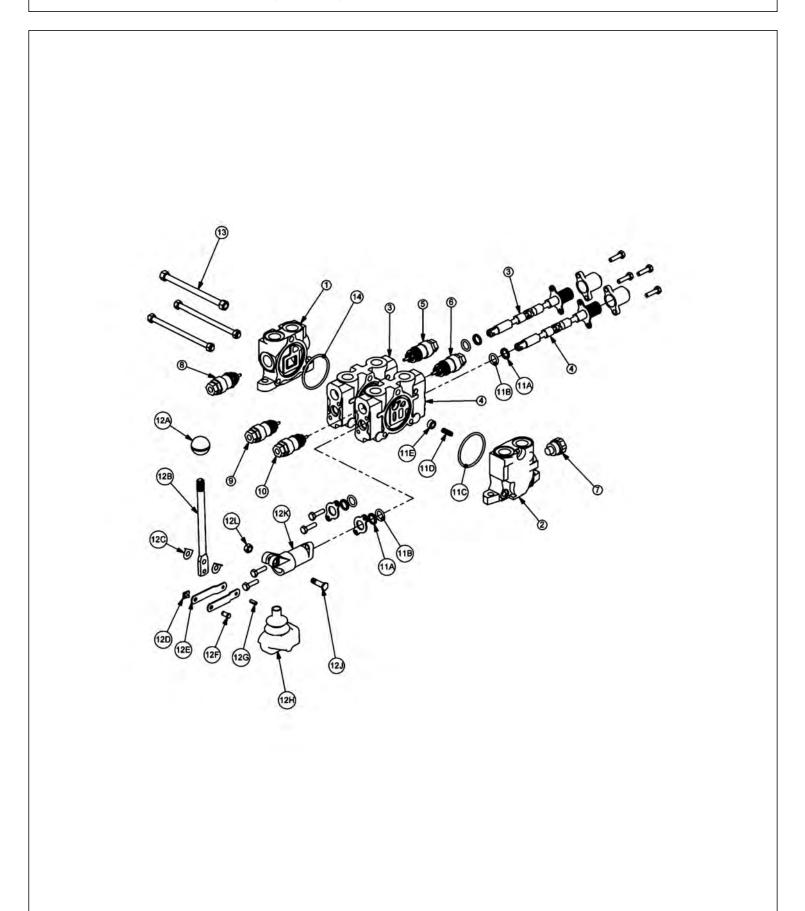
ITEM	PART NO.	QTY.	DESCRIPTION
	06505044	-	FILTER ASSY SAE 10 MICRON
1	28583	4	CAPSCREW,8MM X 25MM(1.25 PITCH)
2	06505045	1	COVER
3	06505046	1	SEAL KIT
4	06505047	1	SPRING
5	06505048	1	BYPASS
6	35259	1	FILTER,10 MIC,RETURN LINE
7	06505049	1	CAN/BODY

CABLE (MANUAL) LIFT VALVE BREAKDOWN - 30198



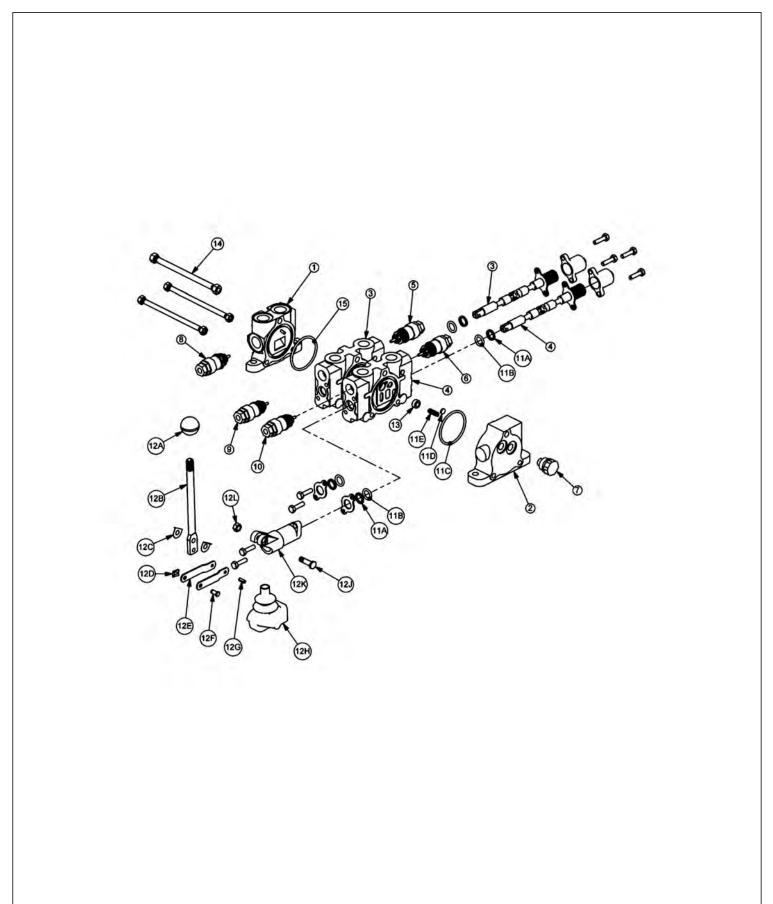
ITEM	PART NO.	QTY.	DESCRIPTION
1	TB1017S	1	INLET END COVER
2	TB1702	1	END COVER, POWER BEYOND
3	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
4	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
5	06503067	1	RELIEF PLUG
6	TF4212	1	RELIEF VALVE, 200 PSI
7	TB1017M	1	SHUT-OFF PLUG
8	TB1017E	1	RELIEF VALVE, 2250 PSI
9	TB1017M	1	SHUT-OFF PLUG
10	TB1017M	1	SHUT-OFF PLUG
11	TB1017A	2	VALVE SEAL KIT (FOR ONE SECTION)
11A		2	WIPER
11B		2	O-RING SMALL
11C		1	O-RING LARGE
11D		1	SPRING
11E		1	PUCKET
12	TB1017L	2	LEVER KIT (FOR ONE SECTION)
12A		1	LEVER KNOB
12B		1	LEVER
12C		2	LEVER WASHER
12D		1	LEVER CLIP
12E		2	LINKAGE
12F		1	LEVER PIN
12G		1	ROLL PIN
12H		1	LEVER BOOT
12J		1	LEVER BOLT
12K		1	LEVER DUST COVER
12L		1	LEVER NUT
13	TB1017X	1	TIE ROD KIT
14	24214	1	O-RING, LARGE

CABLE (MANUAL) LIFT VALVE BREAKDOWN - 31752



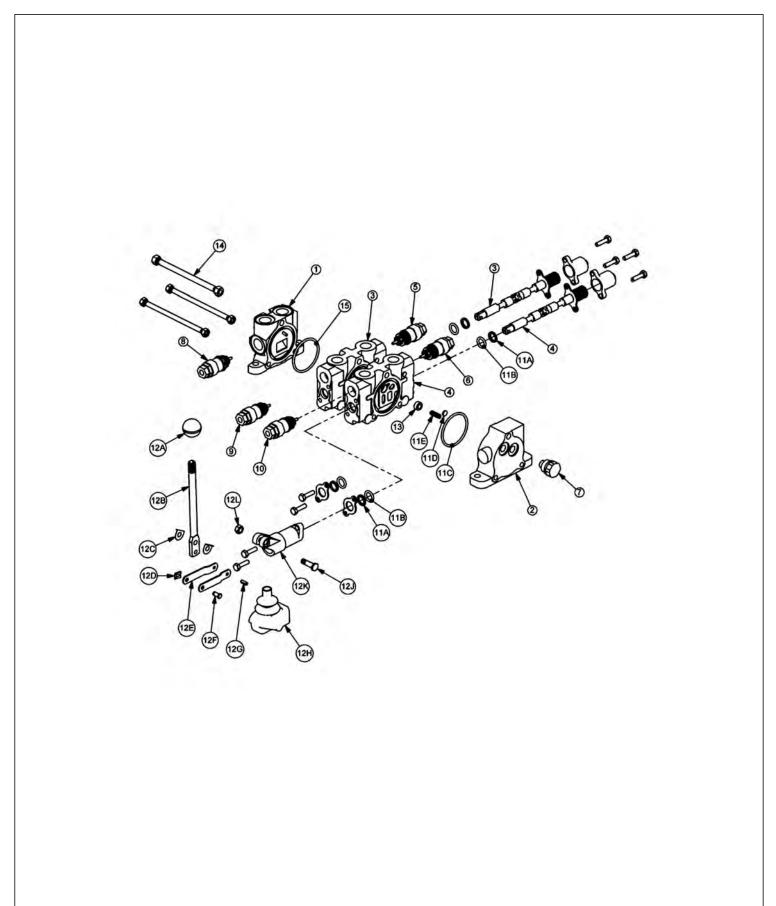
ITEM	PART NO.	QTY.	DESCRIPTION
1	TB1017S	1	INLET END COVER
2	TB1702	1	END COVER, POWER BEYOND
3	TB1017P	1	VALVE SECTION (SINGLE ACTING, SPRING DETENT)
4	TB1017P	1	VALVE SECTION (SINGLE ACTING, SPRING DETENT)
5	N/A	-	N/A
6	N/A	-	N/A
7	TB1017M	1	SHUT-OFF PLUG
8	TB1017E	1	RELIEF VALVE, 2250 PSI
9	TB1017M	1	SHUT-OFF PLUG
10	TB1017M	1	SHUT-OFF PLUG
11	TB1017A	2	VALVE SEAL KIT (FOR ONE SECTION)
11A		2	WIPER
11B		2	O-RING SMALL
11C		1	O-RING LARGE
11D		1	SPRING
11E		1	PUCKET
12	TB1017L	2	LEVER KIT (FOR ONE SECTION)
12A		1	LEVER KNOB
12B		1	LEVER
12C		2	LEVER WASHER
12D		1	LEVER CLIP
12E		2	LINKAGE
12F		1	LEVER PIN
12G		1	ROLL PIN
12H		1	LEVER BOOT
12J		1	LEVER BOLT
12K		1	LEVER DUST COVER
12L		1	LEVER NUT
13	TB1017X	1	TIE ROD KIT
14	24214	1	O-RING, LARGE

CABLE (MANUAL) LIFT VALVE BREAKDOWN - 31320



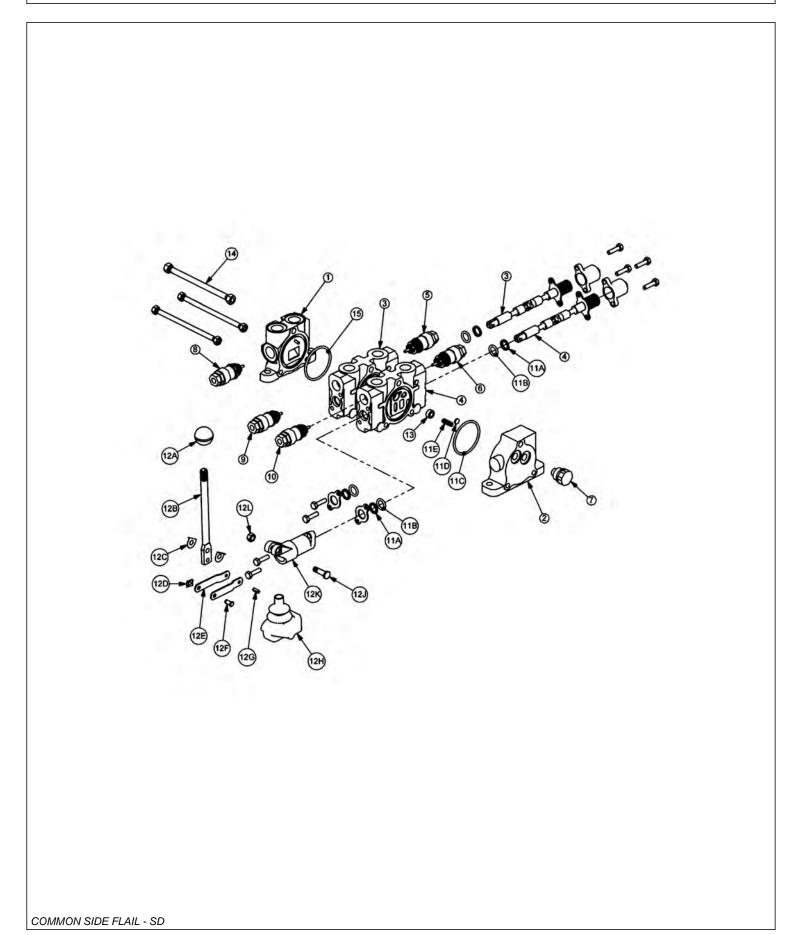
	ITEM	PART NO.	QTY.	DESCRIPTION
	1	31595	1	INLET END COVER
	2	31594	1	END COVER, LOAD SENSE
	3	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
	4	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
	5	06503067	1	RELIEF PLUG
	6	06503067	1	RELIEF PLUG
	7	N/A	-	N/A
	8	6T4209	1	RELIEF PLUG
	9	31862	1	RELIEF VALVE, 2175 PSI
	10	31862	1	RELIEF VALVE, 2175 PSI
	11	31593	2	VALVE SEAL KIT (FOR ONE SECTION)
	11A		2	WIPER
	11B		2	O-RING SMALL
	11C		1	O-RING LARGE
	11D		1	SHUTTLE DISC
	11E		1	SPRING
	12	TB1017L	2	LEVER KIT (FOR ONE SECTION)
	12A		1	LEVER KNOB
	12B		1	LEVER
	12C		2	LEVER WASHER
	12D		1	LEVER CLIP
	12E		2	LINKAGE
	12F		1	LEVER PIN
	12G		1	ROLL PIN
	12H		1	LEVER BOOT
	12J		1	LEVER BOLT
	12K		1	LEVER DUST COVER
	12L		1	LEVER NUT
	13	31603	2	COMPENSATOR
	14	TB1017X	1	TIE ROD KIT
	15	24214	1	O-RING, LARGE
1				

CABLE (MANUAL) LIFT VALVE BREAKDOWN - 31322



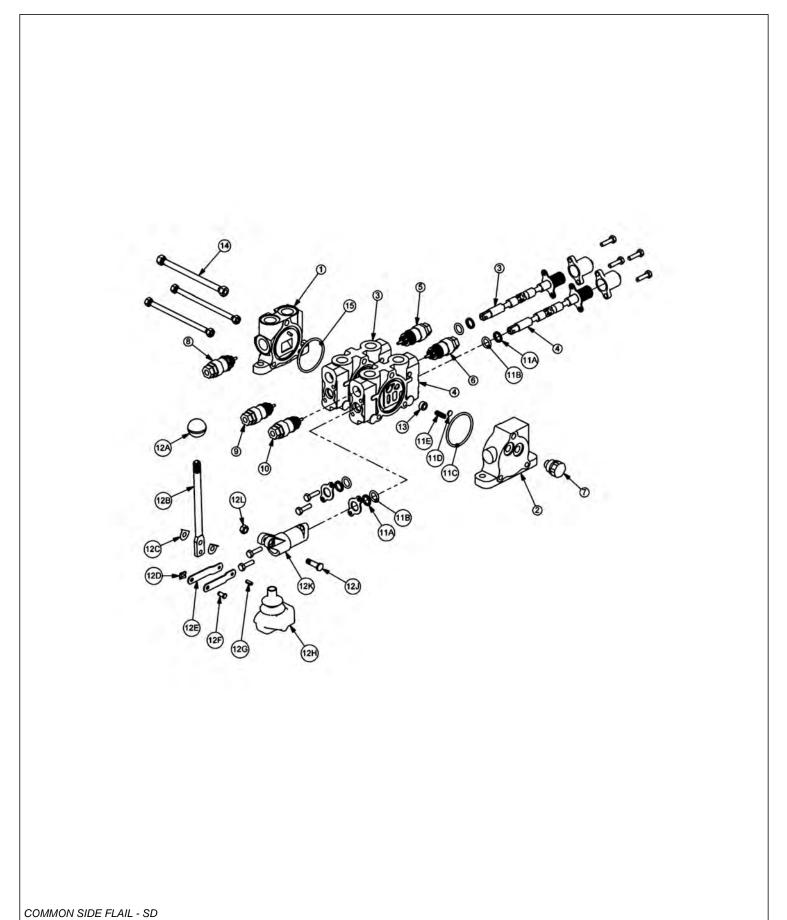
	ITEM	PART NO.	QTY.	DESCRIPTION
	1	31595	1	INLET END COVER
	2	31594	1	END COVER, LOAD SENSE
	3	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT-FLOAT)
	4	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT-FLOAT)
	5	06503067	1	RELIEF PLUG
	6	31861	1	RELIEF VALVE, 360 PSI
	7	N/A	-	N/A
	8	6T4209	1	RELIEF PLUG
	9	31862	1	RELIEF VALVE, 2175 PSI
	10	31862	1	RELIEF VALVE, 2175 PSI
	11	31593	2	VALVE SEAL KIT (FOR ONE SECTION)
	11A		2	WIPER
	11B		2	O-RING SMALL
	11C		1	O-RING LARGE
	11D		1	SHUTTLE DISC
	11E		1	SPRING
	12	TB1017L	2	LEVER KIT (FOR ONE SECTION)
	12A		1	LEVER KNOB
	12B		1	LEVER
	12C		2	LEVER WASHER
	12D		1	LEVER CLIP
	12E		2	LINKAGE
	12F		1	LEVER PIN
	12G		1	ROLL PIN
	12H		1	LEVER BOOT
	12J		1	LEVER BOLT
	12K		1	LEVER DUST COVER
	12L		1	LEVER NUT
	13	31603	2	COMPENSATOR
	14	TB1017X	1	TIE ROD KIT
	15	24214	1	O-RING, LARGE
1				

CABLE (MANUAL) LIFT VALVE BREAKDOWN - 06502040



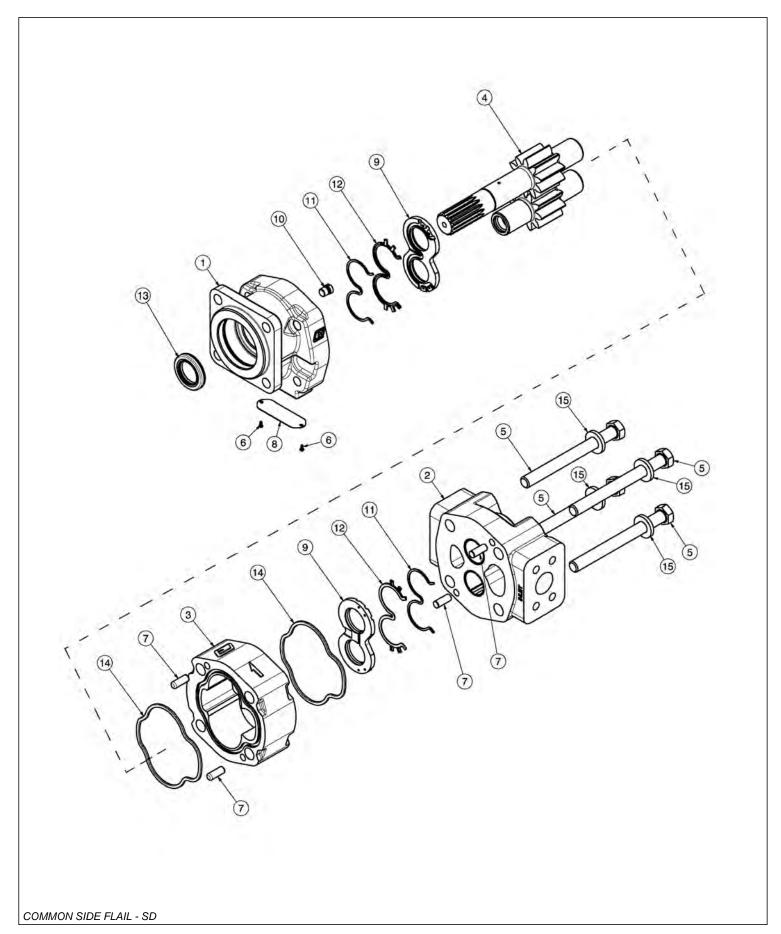
ITEM	PART NO.	QTY.	DESCRIPTION
1	31595	1	INLET END COVER
2	31594	1	END COVER, LOAD SENSE
3	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
4	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING) (REMOVE SHUTTLE DISC)
5	06503067	1	RELIEF PLUG
6	06503067	1	RELIEF PLUG
7	06503068	1	RELIEF PLUG
8	N/A	-	N/A
9	31862	1	RELIEF VALVE, 2175 PSI
10	31862	1	RELIEF VALVE, 2175 PSI
11	31593	2	VALVE SEAL KIT (FOR ONE SECTION)
11A		2	WIPER
11B		2	O-RING SMALL
11C		1	O-RING LARGE
11D		1	SHUTTLE DISC
11E		1	SPRING
12	TB1017L	2	LEVER KIT (FOR ONE SECTION)
12A		1	LEVER KNOB
12B		1	LEVER
12C		2	LEVER WASHER
12D		1	LEVER CLIP
12E		2	LINKAGE
12F		1	LEVER PIN
12G		1	ROLL PIN
12H		1	LEVER BOOT
12J		1	LEVER BOLT
12K		1	LEVER DUST COVER
12L		1	LEVER NUT
13	31603	2	COMPENSATOR
14	TB1017X	1	TIE ROD KIT
15	24214	1	O-RING, LARGE

CABLE (MANUAL) LIFT VALVE BREAKDOWN - 06502042



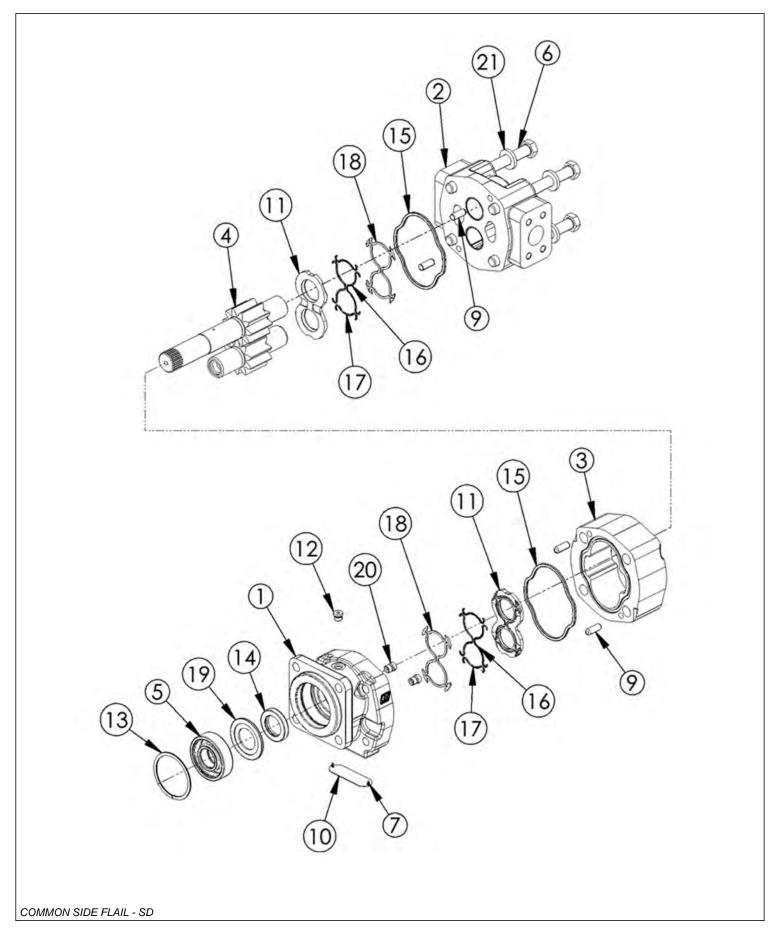
	ITEM	PART NO.	QTY.	DESCRIPTION
	1	31595	1	INLET END COVER
	2	31594	1	END COVER, LOAD SENSE
	3	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT FLOAT)
	4	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT FLOAT) (REMOVE SHUTTLE DISC)
	5	06503067	1	RELIEF PLUG
	6	31861	1	RELIEF VALVE, 360 PSI
	7	06503068	1	RELIEF PLUG
	8	6T4209	1	RELIEF PLUG
	9	31862	1	RELIEF VALVE, 2175 PSI
	10	31862	1	RELIEF VALVE, 2175 PSI
	11	31593	2	VALVE SEAL KIT (FOR ONE SECTION)
	11A		2	WIPER
	11 B		2	O-RING SMALL
	11C		1	O-RING LARGE
	11D		1	SHUTTLE DISC
	11E		1	SPRING
	12	TB1017L	2	LEVER KIT (FOR ONE SECTION)
	12A		1	LEVER KNOB
	12B		1	LEVER
	12C		2	LEVER WASHER
	12D		1	LEVER CLIP
	12E		2	LINKAGE
	12F		1	LEVER PIN
	12G		1	ROLL PIN
	12H		1	LEVER BOOT
	12J		1	LEVER BOLT
	12K		1	LEVER DUST COVER
	12L		1	LEVER NUT
	13	31603	2	COMPENSATOR
	14	TB1017X	1	TIE ROD KIT
	15	24214	1	O-RING, LARGE
-1				

FRONT HYDRAULIC PUMP BREAKDOWN



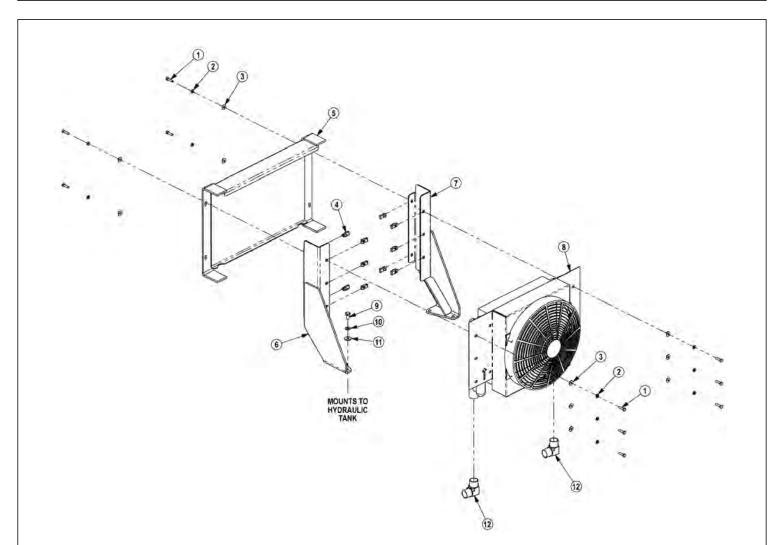
ITEM	PART NO.	QTY.	DESCRIPTION
	23152	1	PUMP ASSEMBLY,1-3/4",COMPLETE
1	22766	1	SHAFT END COVER
2	22779	1	PORT END COVER
3	22774	1	GEAR HOUSING,1-3/4"
4	22771	1	GEAR SET
5	23824	4	CAPSCREW
6	06504078	2	SCREW, DRIVE
7	22773	4	DOWEL PINS
8	06504077	1	NAMEPLATE
9	22770	2	THRUST PLATE
10	22767	1	PLUG
11	06504075	2	SEAL,BK-UP
12	06504074	2	SEAL,CHAN
13	22765	1	SEAL,LIP
14	06504076	2	SEAL,SQ-R
15	02961917	4	WASHER
	24150	1	SEAL KIT (INCLUDES 11, 12, 13 AND 14)

FLAIL MOTOR BREAKDOWN

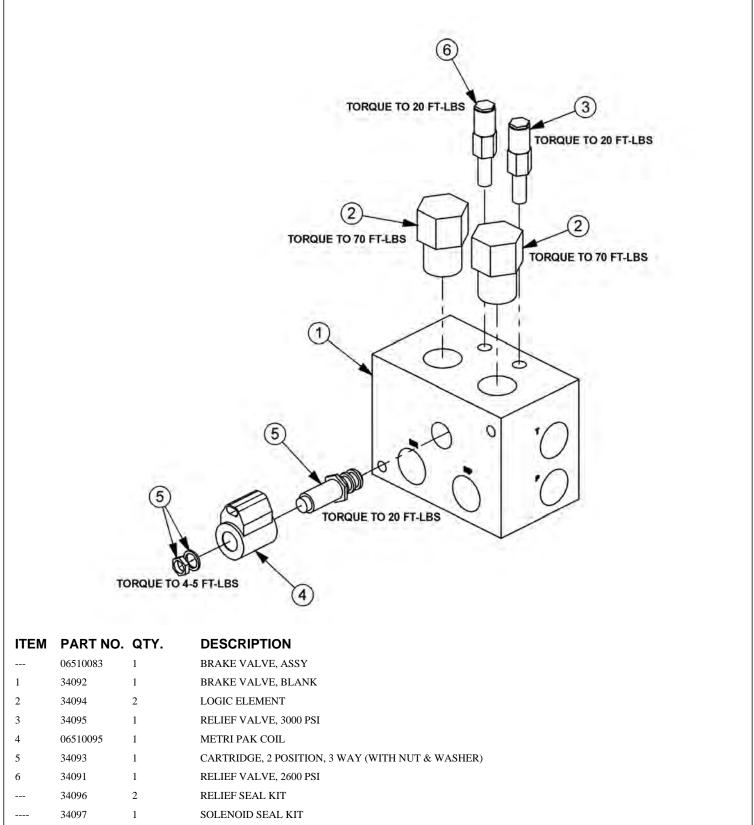


ITEM	PART NO.	QTY.	DESCRIPTION
	06504132	-	MOTOR ASSEMBLY 350 - TSF
1	06504039	1	SHAFT END COVER
2	06504040	1	PORT END COVER
3	06504041	1	GEAR HOUSING
4	06504042	1	MATCHED GEAR SET
5	TF4402	1	BALL BEARING
6	06504043	4	CAP SCREW
7	06504044	2	SET SCREW
8	06504028	1	KEY
9	06504045	4	DOWEL PIN
10		1	NAMEPLATE
11	22763759	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	06504048	1	SEAL RETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
	06504023	-	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)

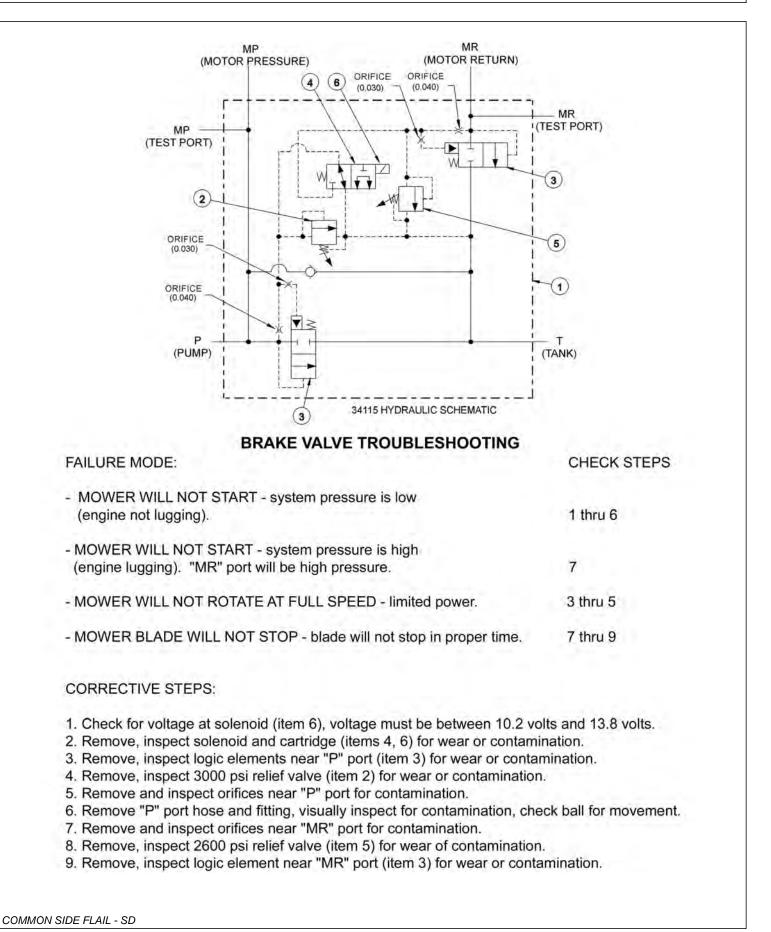
COOLER ASSEMBLY



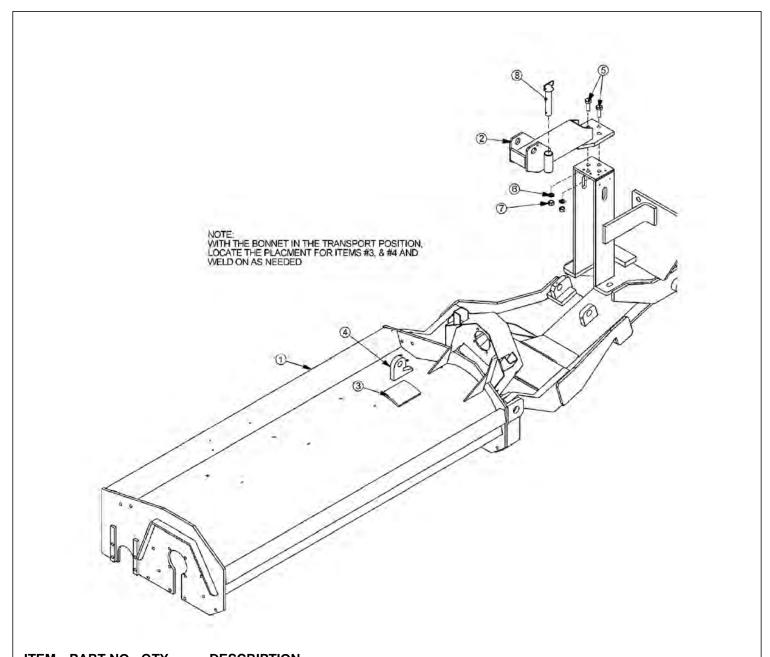
ITEM	PART NO.	QTY.	DESCRIPTION
1	21530	10	CAPSCREW,1/4 X1 NC
2	21986	10	LOCKWASHER,1/4
3	22014	10	FLATWASHER,1/4
4	35176	10	1/4 U-NUT
5	06370015	1	SCREEN,COOLER,FRNT
6	06380006	1	MNT,COOLER,BUMPER TANK,RH
7	06380007	1	MNT,COOLER,BUMPER TANK,LH
8	06510026	1	COOLER, FRONT MNT
	06510029	1	FAN ASSY, ONLY
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



--- 34098 2 ELEMENT SEAL KIT

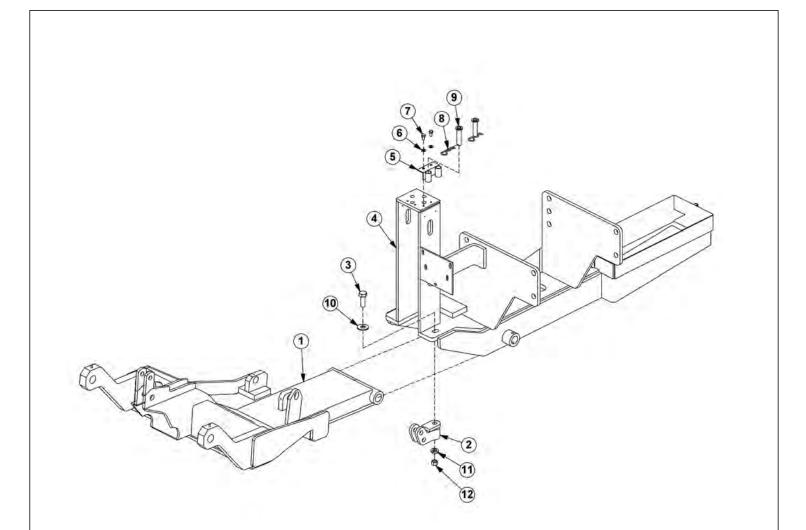


SIDE FLAIL TRAVEL LOCK



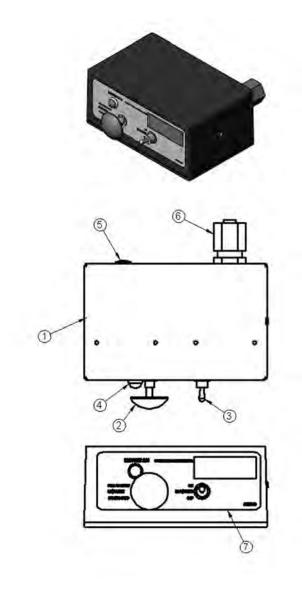
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	BONNET *REFER TO FLAIL ASSEMBLY
2	30531A	1	BRACKET, TRAVEL LOCK
3	TF4248	1	PLATE, TRAVEL LOCK
4	23745	1	TRAVEL LOCK HOOK
5	21783	2	CAPSCREW,5/8"X2" NC
6	21992	2	LOCKWASHER, 5/8"
7	21775	2	HEX NUT, 5/8" NC
8	TF4250	1	PIN, TRAVEL LOCK

DRAFT BEAM TRAVEL LOCK



ITEM	PART NO.	QTY.	DESCRIPTION
1	32143	1	DRAFT BEAM
2	6T0106	1	TRAVEL LOCK BRACKET
3	21833	1	CAPSCREW 3/4" X 2 1/4"
4		-	MAIN FRAME *REFER TO PARTS SECTION
5	33856	1	BRKT,PIN HOLDER
6	21988	2	LOCK WASHER 3/8"
7	21629	2	CAPSCREW 3/8" X 3/4"
8	6T3020	2	R - CLIP 5/32"
9	6T0107	2	TRAVEL LOCK PINS 3/4" X 3 1/4"
10	22021	1	FLAT WASHER 3/4"
11	21993	1	LOCK WASHER 3/4"
12	21825	1	HEX NUT 3/4"

SWITCH BOX



1	06514013	1
2	35226	1
3	33811	1

6T3923

34540

35227

06514014

06550018

4 5

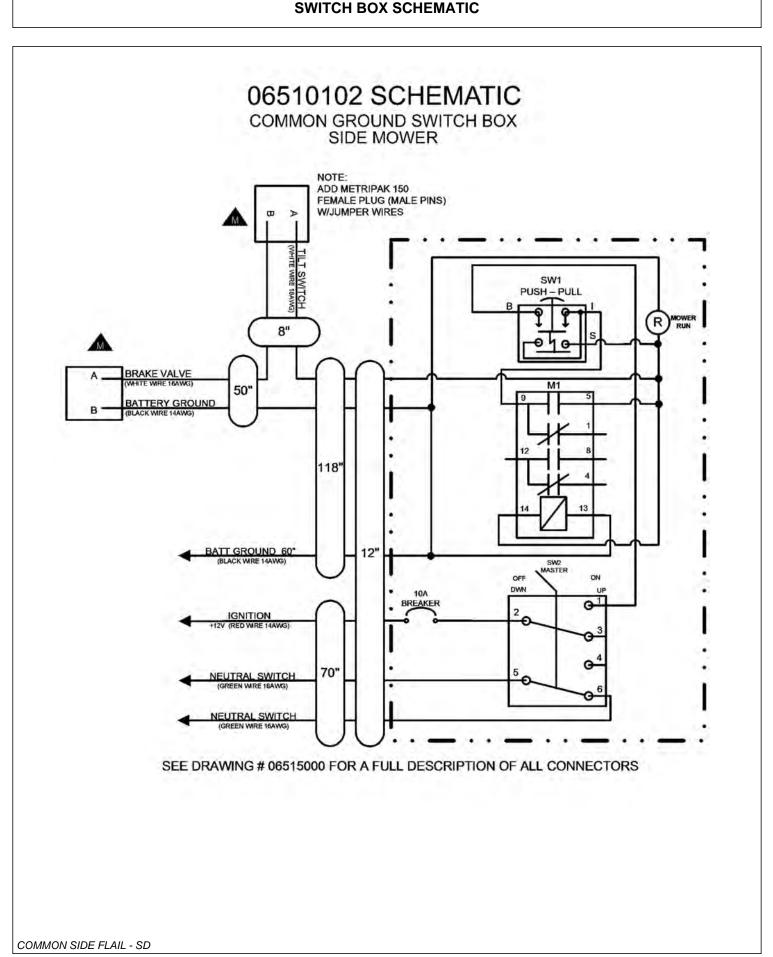
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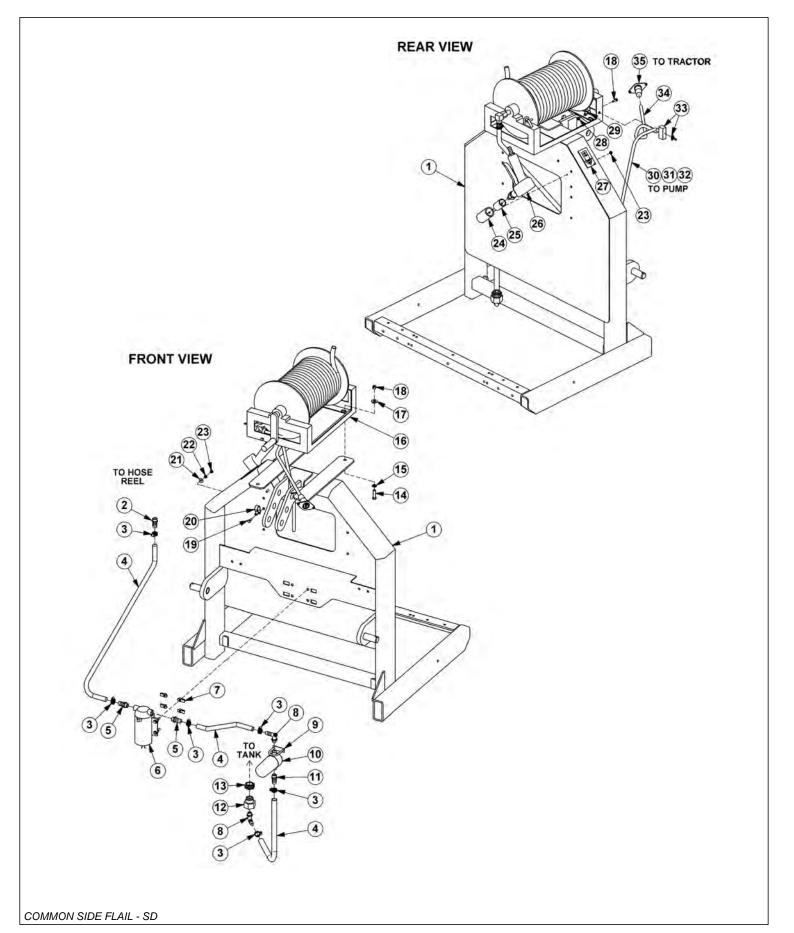
8

ITEM PART NO. QTY. DESCRIPTION

1	SWBX,ALUM,BLK,06510102
1	SWITCH, MOWER, COLEHERSEE
1	SWITCH, MASTER/DECK FLOAT
1	INDICTATOR LIGHT, ON, RED
1	BREAKER,10A,SWBX
1	STRAIN RELIEF,3/4,BLACK,NYLON
1	DECAL,SWTCHBX,TM/TSF,CG
1	RELAY, DP, DT, 12V, LY2F, 35226

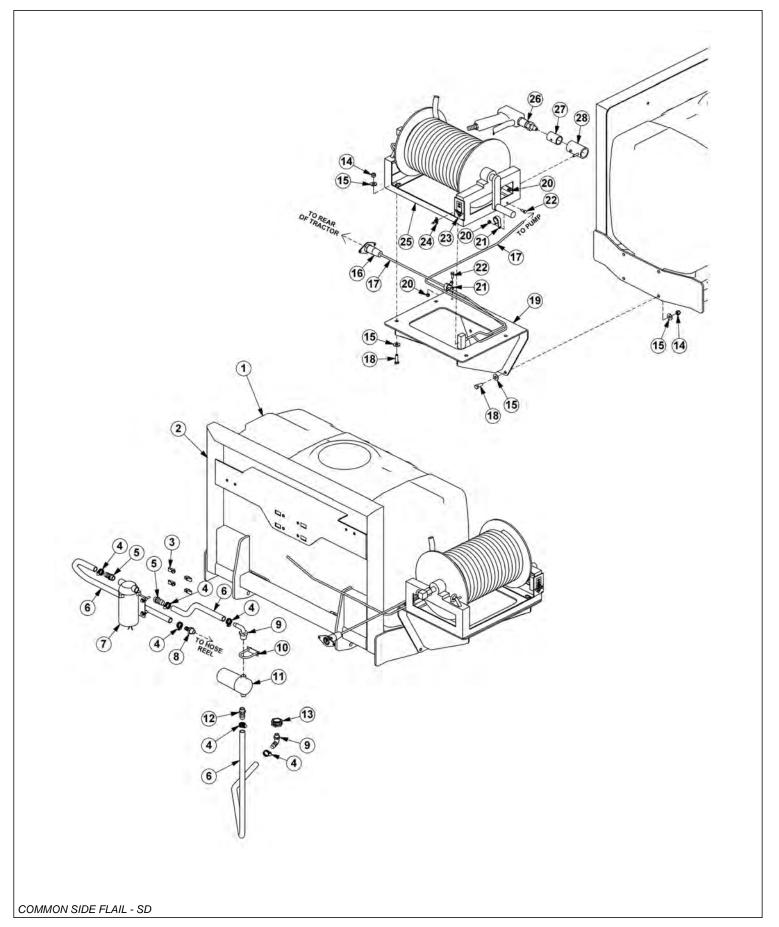


FIRE SUPPRESSION SYSTEM SECTION



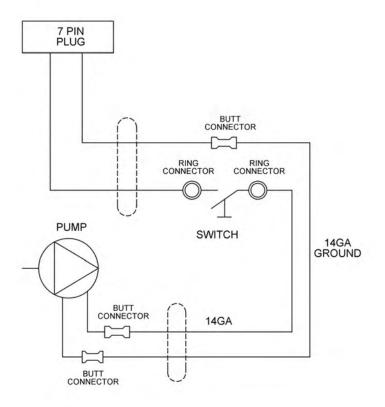
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370137	1	MOUNT,3PNT,FIRE SYS
2	06503108	1	FITTING,1/2"BARB X 1/2"MP
3	35091	6	CLAMP,HOSE,#6
4	06520469	5	HOSE,1/2",BULK (FEET)
5	06503168	2	SWIVEL,1/2"STR,POLY
6	06520359	1	PUMP,LARGE
7	35176	4	U-NUT,1/4"
8	06520367	2	ELBOW,1/2"BARB X 1/2"MP,POLY
9	27329	1	U-BOLT,1/4"
10	06520361	1	FILTER
	06520351	1	ELEMENT, FILTER
11	06520349	1	FITTING,BARB,HOSE
12	06503169	1	REDUCER, BUSHING (100 & 150 GALLON TANKS ONLY)
13	06520346	1	FITTING, BULKHEAD (50 GALLON TANKS ONLY)
14	21632	4	CAPSCREW,3/8" X 1-1/2",NC
15	21988	4	LOCKWASHER,3/8"
16	06520360	1	HOSE REEL
17	22016	4	FLATWASHER,3/8"
18	21627	4	NYLOCK NUT,3/8",NC
19	21529	2	CAPSCREW,1/4" X 3/4",NC
20	06510258	1	CLAMP,3/4"
21	22014	1	FLATWASHER,1/4"
22	21986	1	LOCKWASHER,1/4"
23	21525	2	HEX NUT,1/4",NC
24	06370121	1	HOLSTER
25	06430090	1	SLEEVE
26	06520366	1	GUN,FIRE SYS
27	6T3222	1	DECAL
28	21527	1	NYLOCK NUT,1/4",NC
29	06510257	1	CLAMP,3/8"
30	28055	5	WIRE,BLACK,14GA (FEET)
31	24200	5	WIRE,RED,14GA (FEET)
32	22802	5	WIRE WRAP (FEET)
33	PT3905A	1	SWITCH
34	06510256	4	CABLE,14GA,4WIRE (FEET)
35	06510255	1	PLUG,7PIN,TRCTR

FIRE SUPPRESSION FRONT MOUNT



ITEM	PART NO.	QTY.	DESCRIPTION
1	06520342	1	TANK,50 GALLON
2	06370204	1	MNT,TANK,FRNT,50 GALLON
3	35176	4	U-NUT,1/4,3/4 TO CENTER
4	35091	6	CLAMP,HOSE,#6
5	06503168	2	SWIVEL,1/2 STR,POLY
6	06520469	8	HOSE,1/2,SPRAYER
7	06520359	1	PUMP,FIRE KIT
8	06503108	1	FITTING,1/2"BARB X 1/2"MP
9	06520367	2	ELBOW,1/2MPX1/2BARB,POLY
10	27329	1	U-BOLT,1/4X2X1
11	06520361	1	FILTER, FIRE KIT, RAILKUT
	06520351	1	STRAINER,40 MESH
12	06520349	1	FITTING,BARB,HOSE,WETCUT
13	06520346	1	FITTING,BULKHEAD
14	21627	8	NYLOCK NUT,3/8 NC
15	22016	16	FLATWASHER,3/8,GR8
16	06510255	1	PLUG,7PIN,TRCTR
17	06510256	22	WIRE,14GA,4WIRE (FEET)
18	21631	8	CAPSCREW,3/8X1 1/4, NC,GR8
19	06370207	1	MNT, FIRE SUPPRESSION
20	21527	3	NYLOCK NUT,1/4 NC
21	06510257	2	CLAMP,3/8X1/4,INS
22	21529	2	CAPSCREW,1/4 X 3/4 NC
23	6T3222	1	DECAL,CONTROL,ON-OFF SWITCH
24	PT3905A	1	SWITCH, MOWER
25	06520360	1	HOSE REEL,FIRE KIT,RAILKUT
26	06520366	1	GUN,FIRE KIT,RAILKUT
27	06430090	1	SLEEVE,GUN,FIRE SYS
28	06370121	1	HOLSTER, FIRESYS, RAILKUT

FIRE SUPPRESSION SYSTEM ELECTRICAL SCHEMATIC

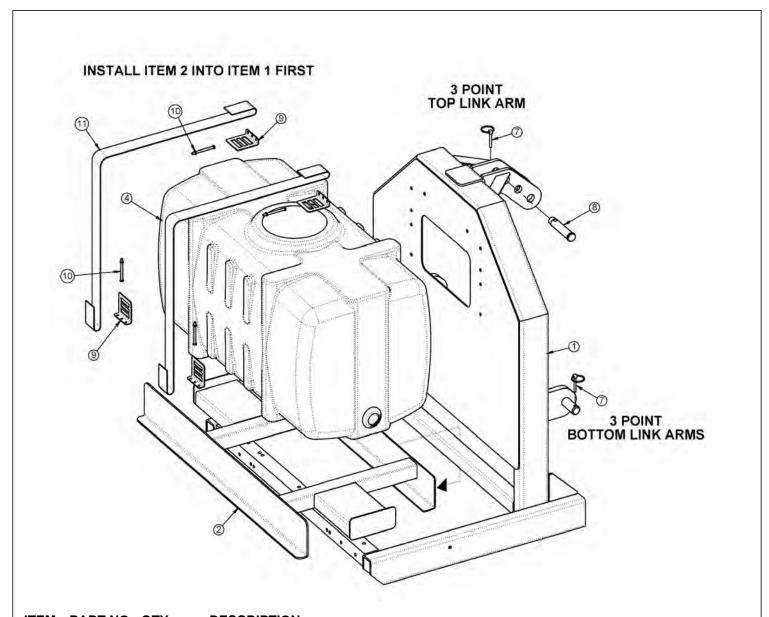


WETCUT

	WETCUT SECTION
COMMON SIDE FLAIL - SD	

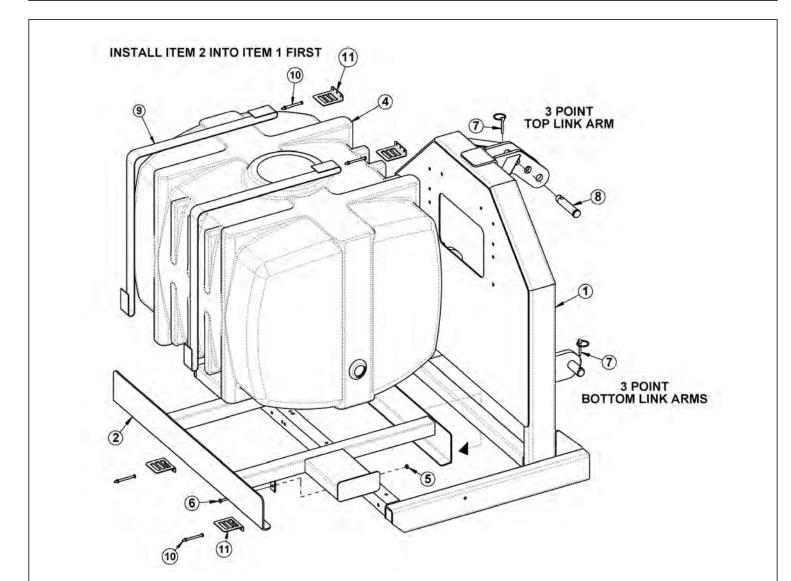
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WETCUT 50 GALLON TANK - 3PNT MOUNT

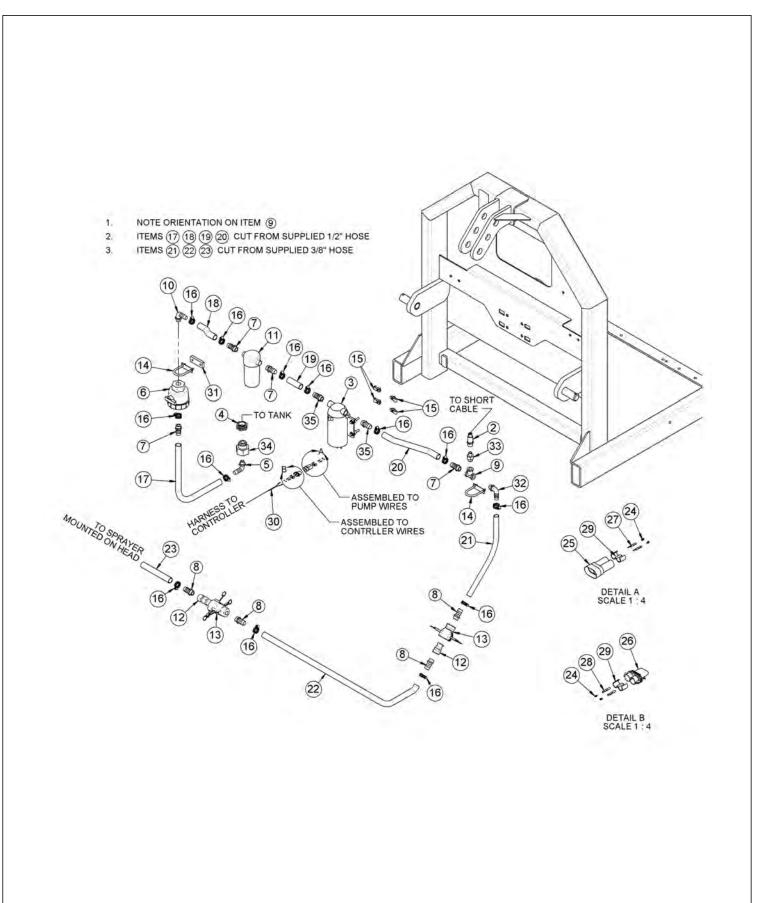


ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	06370136	1	MNT,TANK,50GAL,WETCUT
4	06520342	1	TANK,50GA.,WETCUT
7	RD1032	3	PIN,LYNCH 1/4" X 2"
8	TB1036	1	PIN,SEC BOOM SWIV 1X4-11/16"
9	06520343	4	ANCHOR, STRAP, WETCUT
10	06520344	4	BOLT,STRAP,TANK,WETCUT
11	06520345	2	STRAP, TANK, WETCUT

WETCUT 100 OR 150 GALLON TANK - 3PNT MOUNT

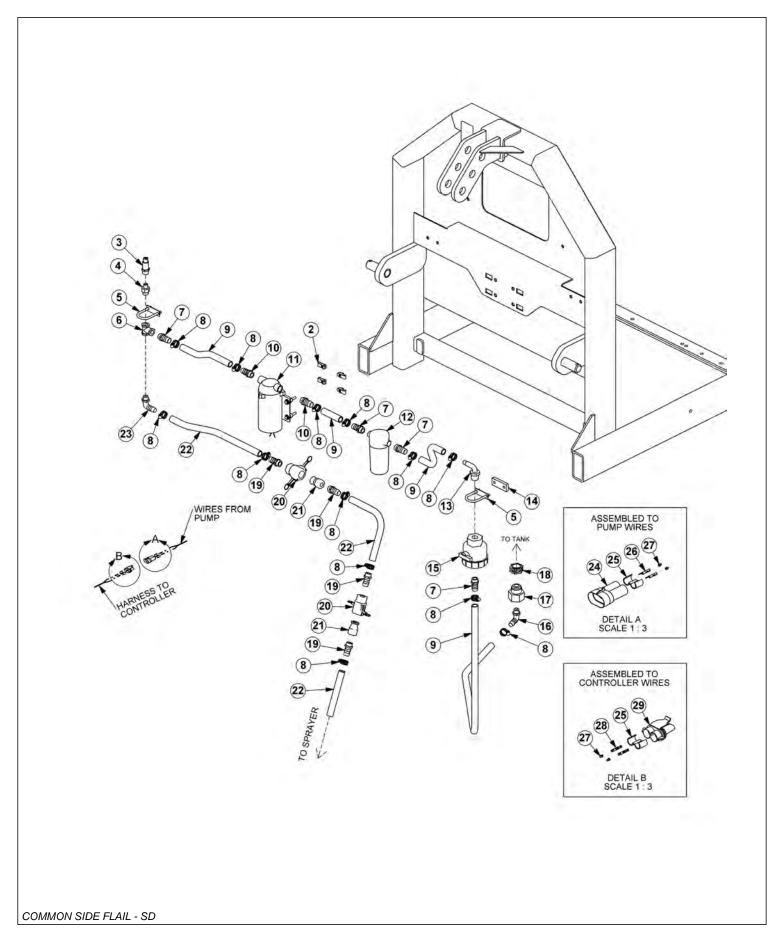


ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	06370138	1	MNT,TANK,100GAL,WETCUT
	06370139	-	MNT, TANK, 150GAL, WETCUT
4	06520372	1	TANK,100GA.,WETCUT
	06520373	-	TANK,150GA.,WETCUT
5	21527	2	HEX NUT,NYLOCK,1/4" NC
6	21530	2	CAPSCREW,1/4" X 1" NC
7	RD1032	3	PIN,LYNCH 1/4" X 2"
8	TB1036	1	PIN,SEC BOOM SWIV 1X4-11/16"
9	06520345	2	STRAP, TANK, WETCUT
10	06520344	4	BOLT,STRAP,TANK,WETCUT
11	06520343	4	ANCHOR, STRAP, WETCUT



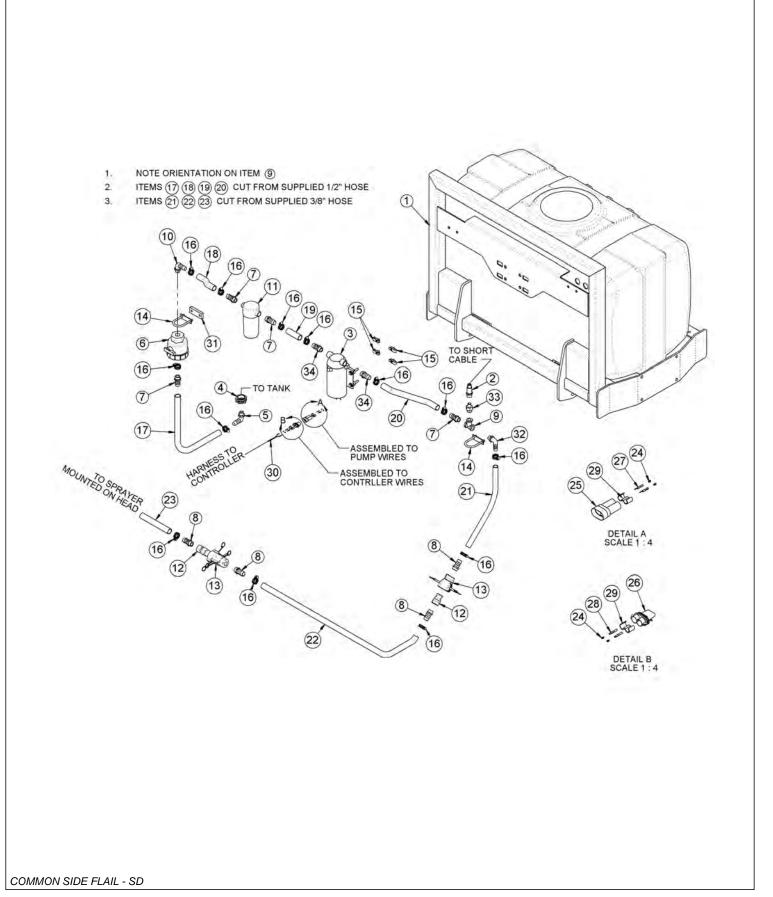
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	06520336	1	CNTRLR,SENSOR,06520333
3	06520341	1	PUMP,WETCUT
4	06520346	1	FITTING,BULKHEAD,WETCUT (50 GALLON TANKS ONLY)
5	06520347	1	FITTING,ELBOW,WETCUT
6	06520348	1	VLV,BALL,WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	06503173	4	FITTING,1/2MP X 3/8"BARB
9	06520353	1	FITTING, TEE, WETCUT
10	06520367	1	ELBOW,1/2" X 1/2"BARB,POLY
11	06520361	1	FILTER,FIRE KIT,RAILKUT
12	06520400	2	QUIK CPLR,MALE,1/2",WETCUT
13	06520401	2	QUIK CPLR,FEM,1/2",WETCUT
14	27329	2	U-BOLT,1/4" X 1" X 2"
15	35176	4	U-NUT,1/4",3/4" TO CENTER
16	35091	13	CLAMP, HOSE #6
17 - 20	06520469	5	1/2" HOSE (FEET)
21 - 23	06520316	-	3/8" HOSE (INCLUDED WITH SPRAYER)
24	06510051	4	SEAL,16-18GA,METPAK
25	06510052	1	CONN.,BODY,MALE,METRIPACK 150
26	06510053	1	CONN.,BODY,FEM,METRIPACK 150
27	06510054	2	TERMINAL, MALE, 16/18GA. METPAK
28	06510055	2	TERMINAL,FEM,16/18GA.METPAK
29	06510056	2	TPA
30	06520337	1	INCLUDED WITH CONTROLLER
31	06401133	1	SPACER,Ø.31" X 1.75" X .38"
32	06503165	1	ELBOW,1/2"MP X 3/8"BARB
33	06520354	1	BUSHING,REDUCER,WETCUT
34	06503169	1	BUSHING,1"MP X 1/2"FP (100 & 150 GALLON TANKS ONLY)
35	06503176	2	FITTING,BARB,3/8"MP X 1/2"BARB

WETCUT 3PNT PLUMBING - LARGE MOWERS



ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	35176	4	U-NUT,1/4,3/4 TO CENTER
3	06520336	1	CNTRLR,SENSOR,06520333
4	06520354	1	BUSHING,REDUCER,WETCUT
5	27329	2	U-BOLT,1/4" X 1" X 2"
6	06520353	1	FITTING,TEE,WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	35091	13	CLAMP, HOSE #6
9	06520469	5	1/2" HOSE (FEET)
10	06503168	2	SWIVEL,1/2" STR
11	06520359	1	PUMP,LARGE
12	06520361	1	FILTER,FIRE KIT,RAILKUT
	06520351	1	STRAINER,40MESH
13	06520367	1	ELBOW,1/2X1/2BARB,POLY
14	06401133	1	SPACER,Ø.31X1.75X.38
15	06520348	1	VLV,BALL,WETCUT
16	06520347	1	FITTING, ELBOW, WETCUT
17	06503169	1	BUSHING,1MPX1/2FP (100 & 150 GALLON TANKS ONLY)
18	06520346	1	FITTING,BULKHEAD,WETCUT (50 GALLON TANKS ONLY)
19	06520352	4	FITTING,NIPPLE,1/2X3/8,WETCUT
20	06520401	2	QUIK CPLR,FEM,1/2,WETCUT
21	06520400	2	QUIK CPLR,MALE,1/2,WETCUT
22	06520316	-	3/8" HOSE (INCLUDED WITH SPRAYER)
23	06503165	1	ELBOW,1/2X3/8BARB,POLY
24	06510052	1	CONN.,BODY,MALE,METRIPACK 150
25	06510056	2	TPA
26	06510054	2	TERMINAL, MALE, 16/18GA. METPAK
27	06510051	4	SEAL,16-18GA,METPAK
28	06510055	2	TERMINAL, FEM, 16/18GA. METPAK
29	06510053	1	CONN.,BODY,FEM,METRIPACK 150

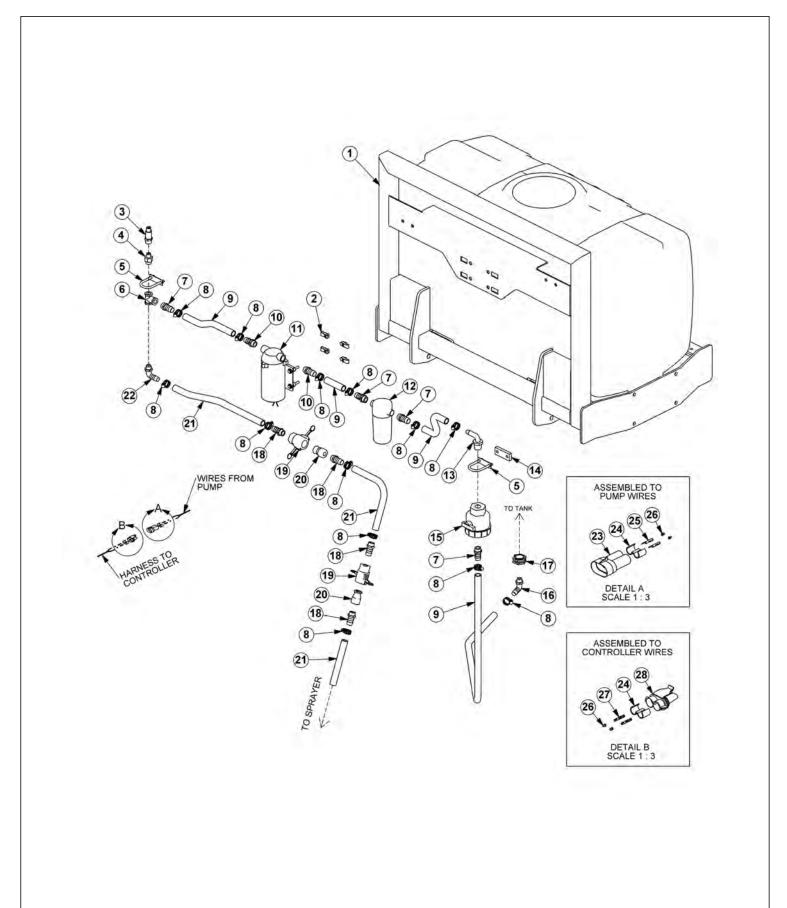
WETCUT FRONT PLUMBING - 50IN MOWERS



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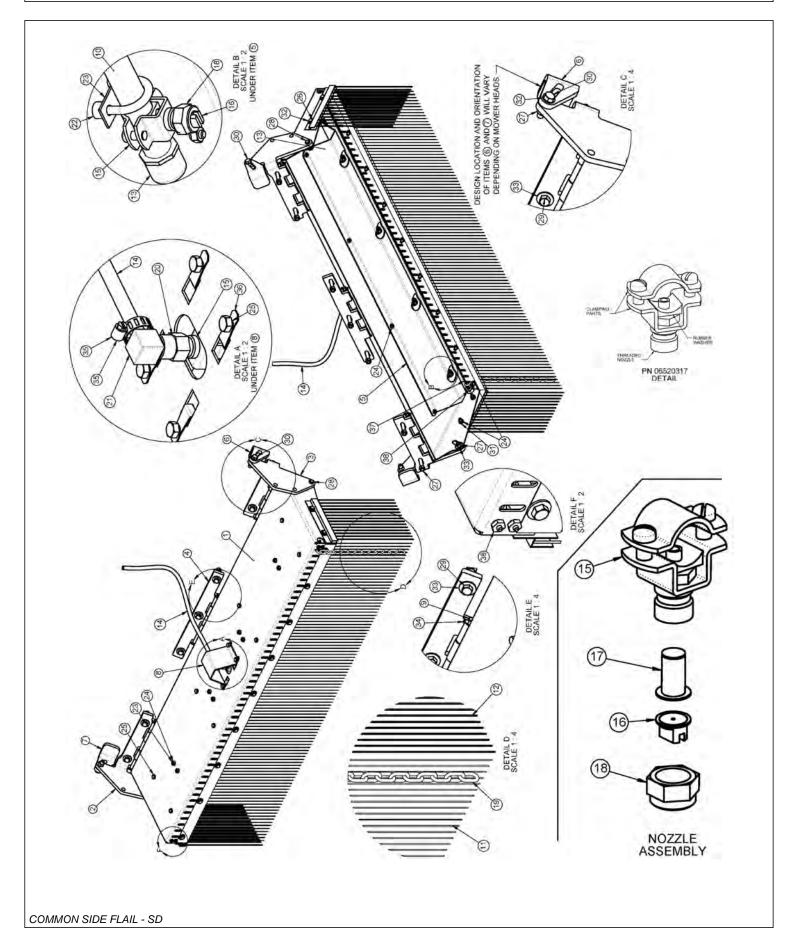
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370204	1	MNT,FRONT,UNI
2	06520336	1	CNTRLR,SENSOR,06520333
3	06520341	1	PUMP,WETCUT
4	06520346	1	FITTING,BULKHEAD,WETCUT
5	06520347	1	FITTING,ELBOW,WETCUT
6	06520348	1	VLV,BALL,WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	06503173	4	FITTING,1/2"MP X 3/8"BARB
9	06520353	1	FITTING, TEE, WETCUT
10	06520367	1	ELBOW,1/2"MP X 1/2"BARB,POLY
11	06520361	1	FILTER, FIRE KIT, RAILKUT
	06520351	1	STRAINER,40MESH
12	06520400	2	QUIK CPLR,MALE,1/2",WETCUT
13	06520401	2	QUIK CPLR,FEM,1/2",WETCUT
14	27329	2	U-BOLT,1/4" X 1" X 2"
15	35176	4	U-NUT,1/4",3/4" TO CENTER
16	35091	13	CLAMP,HOSE #6
17 - 20	06520469	5	1/2" HOSE (FEET)
21 - 23	06520316	-	3/8" HOSE (INCLUDED WITH SPRAYER)
24	06510051	4	SEAL,16-18GA,METPAK
25	06510052	1	CONN.,BODY,MALE,METRIPACK 150
26	06510053	1	CONN.,BODY,FEM,METRIPACK 150
27	06510054	2	TERMINAL, MALE, 16/18GA. METPAK
28	06510055	2	TERMINAL,FEM,16/18GA.METPAK
29	06510056	2	TPA
30	06520337	1	INCLUDED WITH CONTROLLER
31	06401133	1	SPACER,Ø.31" X 1.75" X .38"
32	06503165	1	ELBOW,1/2"MP X 3/8"BARB,POLY
33	06520354	1	BUSHING,REDUCER,WETCUT
34	06503176	2	FITTING,3/8"MP X 1/2"BARB

WETCUT FRONT PLUMBING - LARGE MOWERS



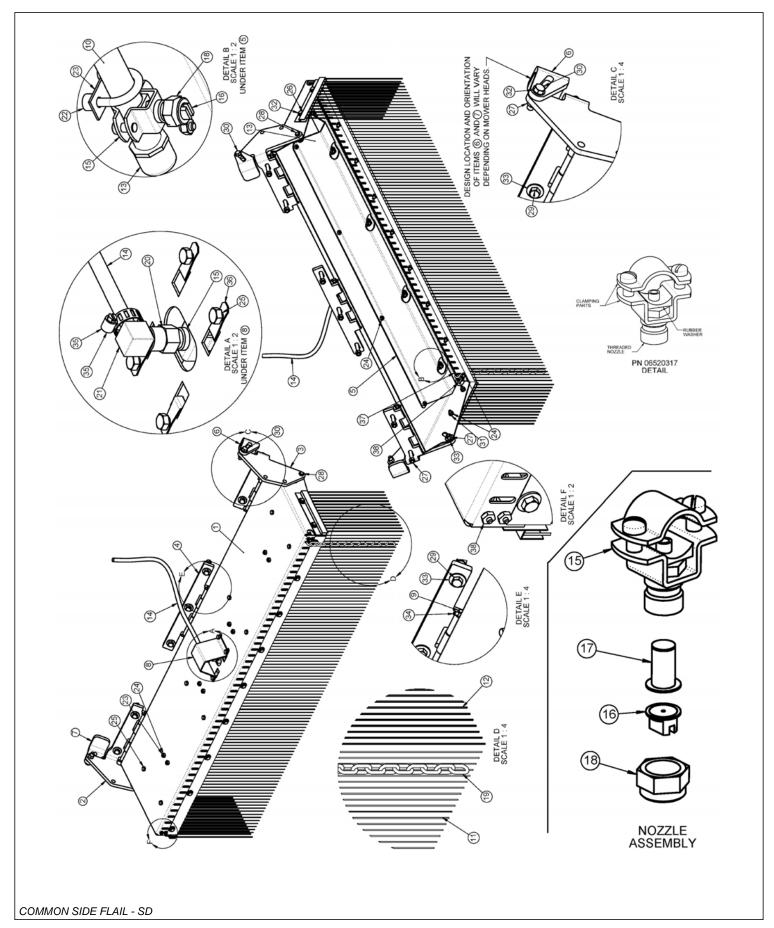
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370204	1	MNT,FRONT,UNIV
2	35176	4	U-NUT,1/4,3/4 TO CENTER
3	06520336	1	CNTRLR,SENSOR,06520333
4	06520354	1	BUSHING,REDUCER,WETCUT
5	27329	2	U-BOLT,1/4" X 1" X 2"
6	06520353	1	FITTING, TEE, WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	35091	13	CLAMP, HOSE #6
9	06520469	5	1/2" HOSE (FEET)
10	06503168	2	SWIVEL,1/2" STR
11	06520359	1	PUMP,LARGE
12	06520361	1	FILTER, FIRE KIT, RAILKUT
	06520351	1	STRAINER,40MESH
13	06520367	1	ELBOW,1/2X1/2BARB,POLY
14	06401133	1	SPACER,Ø.31X1.75X.38
15	06520348	1	VLV,BALL,WETCUT
16	06520347	1	FITTING, ELBOW, WETCUT
17	06520346	1	FITTING,BULKHEAD,WETCUT
18	06520352	4	FITTING,NIPPLE,1/2X3/8,WETCUT
19	06520401	2	QUIK CPLR,FEM,1/2,WETCUT
20	06520400	2	QUIK CPLR, MALE, 1/2, WETCUT
21	06520316	-	3/8" HOSE (INCLUDED WITH SPRAYER)
22	06503165	1	ELBOW,1/2X3/8BARB,POLY
23	06510052	1	CONN.,BODY,MALE,METRIPACK 150
24	06510056	2	TPA
25	06510054	2	TERMINAL, MALE, 16/18GA. METPAK
26	06510051	4	SEAL,16-18GA,METPAK
27	06510055	2	TERMINAL, FEM, 16/18GA. METPAK
28	06510053	1	CONN.,BODY,FEM,METRIPACK 150

WETCUT 50IN SPRAYER HEAD ASSEMBLY



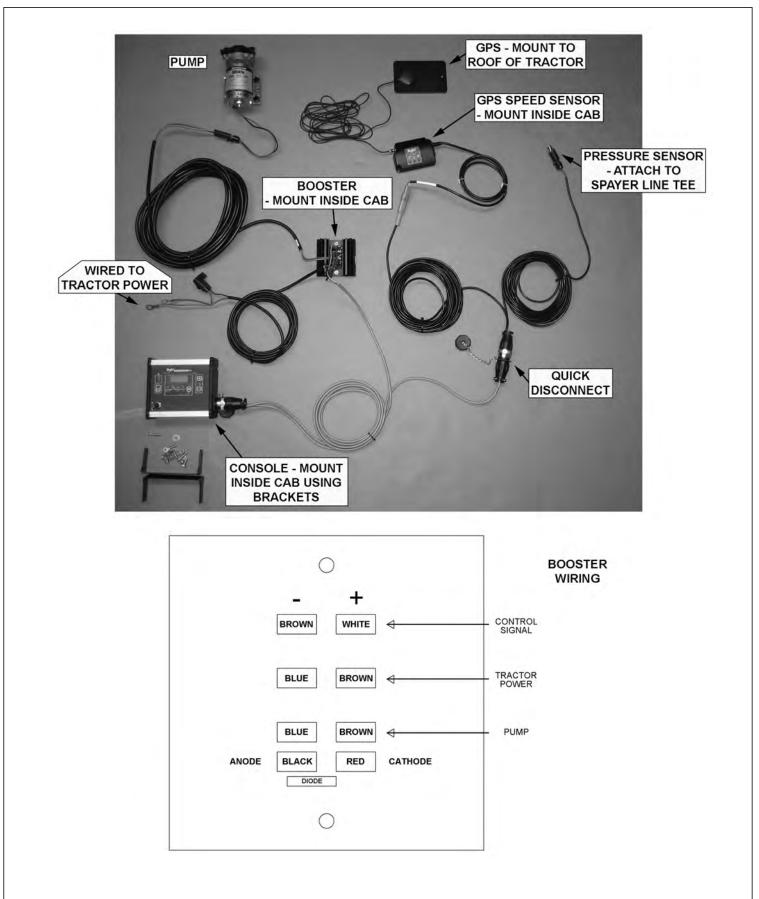
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370105	1	HOOD,SPRAYER
2	06370106	1	HINGE,LH,SPRAYER
3	06370107	1	HINGE,RH,SPRAYER
4	06370108	1	HINGE,CNTR,SPRAYER
5	06410668	1	GUARD,SPRAYER,WETCUT
6	06410753	1	MNT,RH,WET CUT (FLAIL)
	06410942	1	MNT,RH,WET CUT (ROTARY)
7	06410754	1	MNT,LH,WET CUT (FLAIL)
	06410943	1	MNT,LH,WET CUT (ROTARY)
8	06410796	1	GUARD,HOSE,WETCUT
9	06420069	3	PIN,HINGE,WET CUT
10	06497003	1	TUBE,LG,SPRAYER
11	06499012	1	SKIRT,ANTI SPRAY,50
12	06499013	2	SKIRT,ANTI SPRAY,7
13	06520314	2	TUBE,CAP,SPRAYER
14	06520316	15	HOSE, SPRAYER (FEET)
15	06520317	5	NOZZLE,SPRAYER
16	06520319	4	TIP,NOZZLE,SPRAYER
17	06520320	4	FILTER,NOZZLE,SPRAYER
18	06520321	4	NUT,NOZZLE,SPRAYER
19	06520322	49	CHAIN,.18" X 1.31" X 13LINKS
20	06520381	1	ADAPTER,1/4"NPT,WETCUT
21	06520382	1	ELBOW,BARB,3/8" X 1/4"NPT
22	06520383	8	SPACER,.50"O.D. X .252"I.D. X .38",NYLON
23	32550	4	U-BOLT,1/4" X 1" X 1" X 1-3/4"
24	21527	29	HEX NUT,NYLOCK,1/4",NC
25	21528	12	CAPSCREW,1/4" X 1/2",NC
26	21529	13	CAPSCREW,1/4" X 3/4",NC
27	21625	11	HEX NUT,3/8",NC
28	21630	2	CAPSCREW,3/8" X 1",NC
29	21634	7	CAPSCREW,3/8" X 2",NC
30	21632	2	CAPSCREW,3/8" X 1-1/2",NC
31	21986	4	LOCKWASHER,1/4"
32	22014	15	FLATWASHER,1/4"
33	22016	9	FLATWASHER,3/8",GR8
34	34698	6	ROLL PIN, PLAIN, 3/16" X 7/8"
35	35091	1	CLAMP,HOSE #6
36	35176	4	U-NUT,1/4",3/4" TO CENTER
37	06520376	5	CABLE,3/16"
38	06537022	2	U-BOLT,CABLE,3/16"

WETCUT 60IN SPRAYER HEAD ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	06370210	1	HOOD,SPRAYER
2	06370106	1	HINGE,LH,SPRAYER
3	06370107	1	HINGE,RH,SPRAYER
4	06370108	1	HINGE,CNTR,SPRAYER
5	06411234	1	GUARD,SPRAYER,WETCUT
6	06410753	1	MNT,RH,WET CUT (FLAIL)
	06410942	1	MNT,RH,WET CUT (ROTARY)
7	06410754	1	MNT,LH,WET CUT (FLAIL)
	06410943	1	MNT,LH,WET CUT (ROTARY)
8	06410796	1	GUARD,HOSE,WETCUT
9	06420069	3	PIN,HINGE,WET CUT
10	06497009	1	TUBE,LG,SPRAYER
11	06499018	1	SKIRT,ANTI SPRAY,60
12	06499013	2	SKIRT,ANTI SPRAY,7
13	06520314	2	TUBE,CAP,SPRAYER
14	06520316	15	HOSE, SPRAYER (FEET)
15	06520317	6	NOZZLE,SPRAYER
16	06520319	5	TIP,NOZZLE,SPRAYER
17	06520320	5	FILTER,NOZZLE,SPRAYER
18	06520321	5	NUT,NOZZLE,SPRAYER
19	06520322	61	CHAIN,.18" X 1.31" X 13LINKS
20	06520381	1	ADAPTER,1/4"NPT,WETCUT
21	06520382	1	ELBOW,BARB,3/8" X 1/4"NPT
22	06520383	10	SPACER,.50"O.D. X .252"I.D. X .38",NYLON
23	32550	5	U-BOLT,1/4" X 1" X 1" X 1-3/4"
24	21527	33	HEX NUT,NYLOCK,1/4",NC
25	21528	15	CAPSCREW,1/4" X 1/2",NC
26	21529	13	CAPSCREW,1/4" X 3/4",NC
27	21625	13	HEX NUT,3/8",NC
28	21630	2	CAPSCREW,3/8" X 1",NC
29	21634	7	CAPSCREW,3/8" X 2",NC
30	21632	4	CAPSCREW,3/8" X 1-1/2",NC
31	21986	4	LOCKWASHER,1/4"
32	22014	33	FLATWASHER,1/4"
33	22016	11	FLATWASHER,3/8",GR8
34	34698	6	ROLL PIN, PLAIN, 3/16" X 7/8"
35	35091	1	CLAMP,HOSE #6
36	35176	4	U-NUT,1/4",3/4" TO CENTER
37	06520376	6	CABLE,3/16" (FEET)
38	06537022	2	U-BOLT,CABLE,3/16"

WETCUT CABLES



WARRANTY SECTION

Warranty Section 7-1

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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



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