SABER BOOM ASSEMBLIES

FORD TM 115-165

Current as of 04/20/05

PARTS LISTING WITH
MOUNTING AND OPERATING
INSTRUCTIONS

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

33846

TO THE OWNER / OPERATOR / DEALER

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

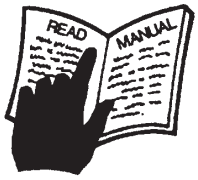
BEFORE YOU START!! Read the safety messages on the implement and shown in this manual. Observe the rules of safety and use common sense!

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

DANGER

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

1.



2. NO RIDERS. NO CHILDREN OPERATORS.

3. USE SAFETY SHOES, HARD HAT, SAFETY GLASSES, SEAT BELTS, ROPS & OPS

4. BLOCK UP SECURELY BEFORE WORKING UNDER.

1. Study and understand Operator's Manuals, Safety Decals, and Instructional Decals for tractor and implement to prevent misuse, abuse, and accidents. Practice before operating in a confined area or near passersby.
- Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children

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

3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seat belt securely fastened to prevent injury and possible death from falling off or tractor overturn.
- Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, & Ear Plugs are recommended.

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

5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding mowers. Put Booms securely in Transport Rest.
- Folding and Boom Mowers have raised center of gravity. Slow down when turning and on hillsides.

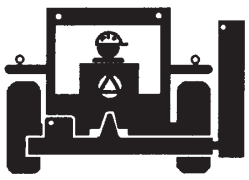
6. Make certain that SMV sign, warning lights, and reflectors are clearly visible. Follow local traffic codes.

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

8. Before dismounting, secure implement in transport position or lower to ground.
- Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent crushing by entanglement in rotating parts which could cause injury or death.
- Never mount or dismount a moving vehicle. Crushing from runover may cause serious injury or death.

5. TRANSPORT SAFELY, LOCK UP.

6. USE SMV, LIGHTS, & REFLECTORS.



7. DO NOT OPERATE WITH CUTTER OR WING RAISED.

8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.

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

FORWARD

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

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

Troubleshooting - Please, before you call, help us to help you!
Please look at the equipment to observe what is happening, then:

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

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

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

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

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

DISTRIBUTED BY:
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1-_____-_____-_____
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TABLE OF CONTENTS

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.

SAFETY SECTION

SAFETY

General Safety Instructions and Practices

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


1000

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

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

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

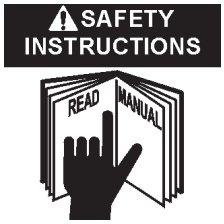
Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

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

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

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

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



SAFETY

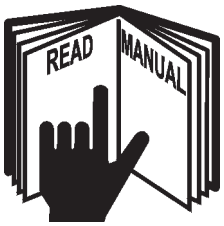
PELIGRO!

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

¡ LEA EL INSTRUCTIVO!

DANGER!

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

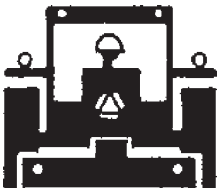


WARNING!

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

WARNING!

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



WARNING!

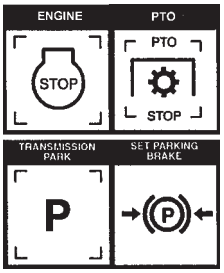
Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)

WARNING!

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

DANGER!

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



SAFETY

DANGER!

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

DANGER!

Never allow children to operate or ride on the Tractor or Implement. (SG-11)

WARNING!

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

DANGER!

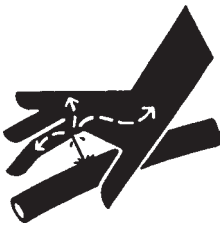
Start tractor only when properly seated in the tractor seat. Starting a tractor in gear can result in injury or death. Read the tractor operators manual for proper starting instructions. (SG-13)

DANGER!

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

DANGER!

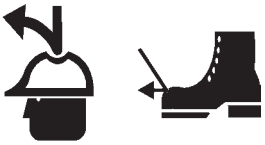
Do not operate this Equipment with hydraulic oil leaking. Oil is expensive and its presence could present a hazard. Do not check for leaks with your hand! Use a piece of heavy paper or cardboard. High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)



SAFETY

WARNING!

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



CAUTION!

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the operator over an extended period of time will cause permanent or total hearing loss. *Note:* Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery. (SG-I7)

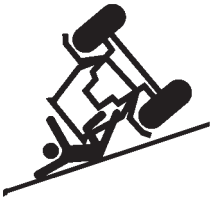
WARNING!

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

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

1. **Test the tractor at a slow speed and increase the speed slowly. Apply the brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum safe transport speed for you and this equipment.**

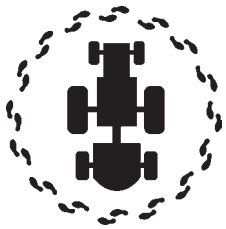
2. Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that it is safe to operate at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum safe turning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



3. Only transport the Tractor and Implement at the speeds that you have determined are safe and which allow you to properly control the equipment.

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

WARNING! Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. Make sure the tractor engine is **OFF** before working on the Implement. (SG-20)



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

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

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

DANGER! KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible serious injury or death. (SG-24)

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

DANGER!

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

DANGER!

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

WARNING!

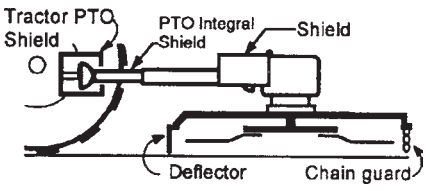
Mow only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never mow in darkness or foggy conditions where you cannot clearly see at least 100 yards in front and to the sides of the tractor and mower. Make sure that you can clearly see and identify passersby,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

DANGER!

There are obvious and hidden potential hazards in the operation of this Mower. REMEMBER! This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care is taken to insure the safety of the operator, bystanders, or passersby in the area. Do not operate this machine with anyone in the immediate area. Stop mowing if anyone is within 100 yards of mower. (SGM-2)

DANGER!

All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Chain Guards, Steel Guards, Gearbox Shields, PTO integral shields , and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SGM-3)



SAFETY

DANGER!

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

WARNING!

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

WARNING!

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

WARNING!

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

WARNING!

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

WARNING!

Do not put hands or feet under mower decks. Blade Contact can result serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SGM-9)

DANGER!

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

SAFETY

WARNING!

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

DANGER!

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

STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS UNLESS:

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

NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected closely with any remaining debris being removed, and mowed again at desired final height. (SBM-1)

DANGER!

Use extreme caution when raising the Mower head. Stop the Blades from turning when the Mower Head is raised and passersby are within 100 yards. Raising the Mower head exposes the Cutting Blades which creates a potentially serious hazard and can cause serious injury by objects thrown from the Blades or by contact with the Blades. (SBM-2)

DANGER!

Be particularly careful in transport. The Mower has raised the center of gravity for the tractor and has increased the possibility of overturn. Turn curves or go up slopes only at low speed and using a gradual turning angle. Slow down on rough or uneven surfaces. (SBM-3)

WARNING!

Never Leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SBM-4)

WARNING!

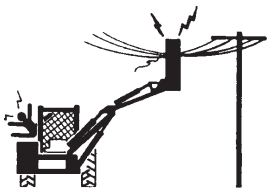
The rotating parts of this machine continue to rotate even after the Tractor has been turned off. The operator should remain in his seat for 60 seconds after the brake has been set, the PTO disengaged, the tractor turned off, and all evidence of rotation has ceased. (SBM-5)

"Wait a minute...Save a life!"

Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Mower Head on the ground or securely supported on blocks or stands, disengage the PTO, and turn off the engine. Push and pull the control Levers or Joystick several times to relieve pressure prior to starting any maintenance or repair work. (SBM-6)

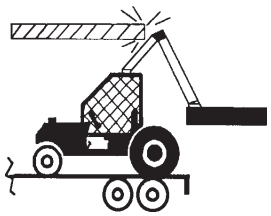
DANGER!

Always keep a careful lookout and use extreme care when working around overhead obstructions. Never allow the Mower head or boom within 10 feet of any power line. When working close to overhead power lines consult your electric company for a safe code of operation. (SBM-7)



DANGER!

When transporting Boom Mower on a truck or trailer, the height or width may exceed legal limits when the boom is in the transport position. Contact with side or overhead structures or power lines can cause property damage or serious injury or death. If necessary lower boom to reduce height and/or remove mowing head to reduce width to the legal limits. (SBM-8)



DANGER!

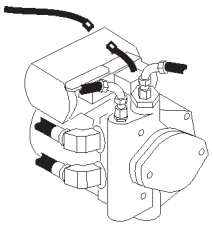
Never operate the Tractor and Mower Unit without an OPS (Operators Protective Structure) or Cab to prevent injury from objects thrown from ground or from overhead trimming. Stop mowing if workers or passersby are with in 100 yards. (SBM-9)

DANGER!

Left Rear Wheel must have a minimum of 1500 pound contact with the surface to prevent lateral instability and possible tip-over which could result in serious bodily injury or even death. Widen the wheel tread and add weights if needed. Refer to the mounting instructions or call Customer Service if you need assistance with Counterweight Procedure. (SBM-11)

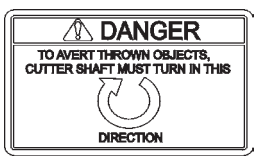
DANGER!

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



DANGER!

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



WARNING!

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

WARNING!

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

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

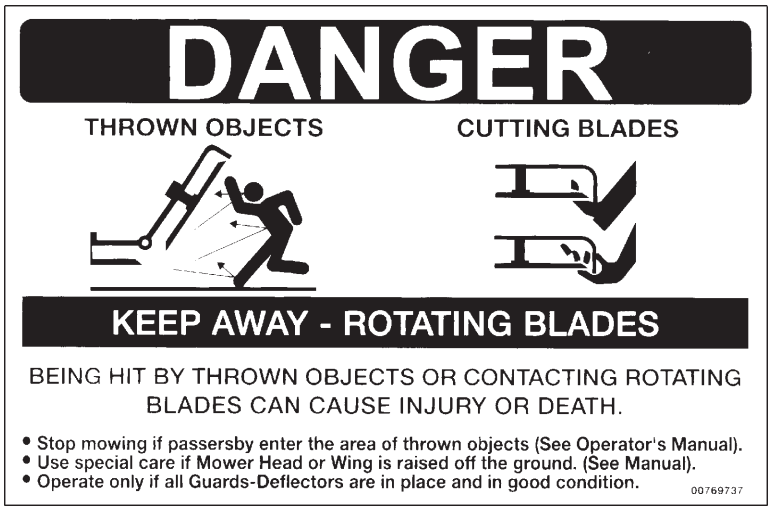
SEE YOUR Tiger DEALER

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

PART NO.
LOCATION

002369
HYDRAULIC TANK

00725746
INSIDE OF CAB



00769737
MOWER DECK

PART NO.
LOCATION

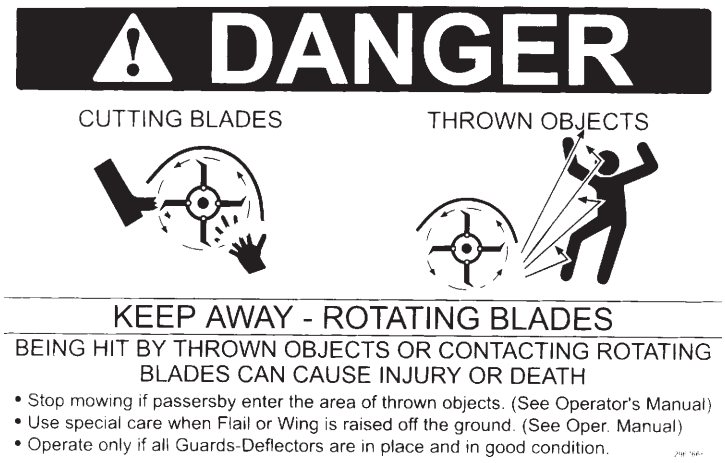
00758194
MOWER DECK

02962764
MAIN BOOM, SECONDARY BOOM, MAIN FRAME

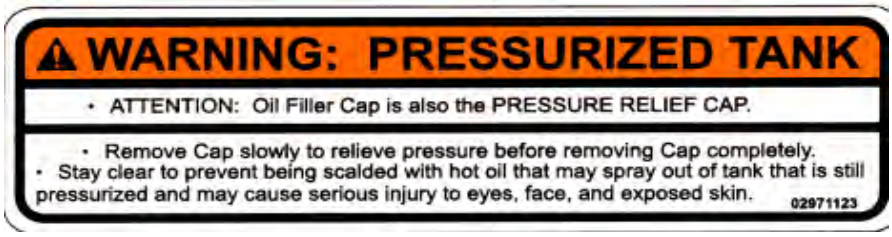
02962765
MAIN FRAME

02965262
HYDRAULIC TANK

PART NO.
LOCATION

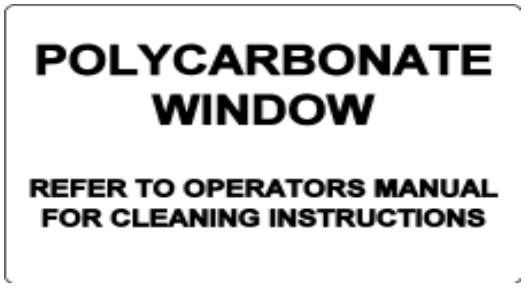


02967668
MOWER DECK



02971123
HYDRAULIC TANK

03200285
OUTSIDE OF CAB



22645
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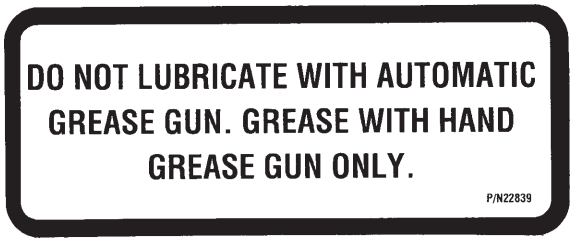


22839
MOWER DECK

PART NO.
LOCATION

22840
INSIDE OF CAB

24028
MOWER DECK

25387
INSIDE OF CAB

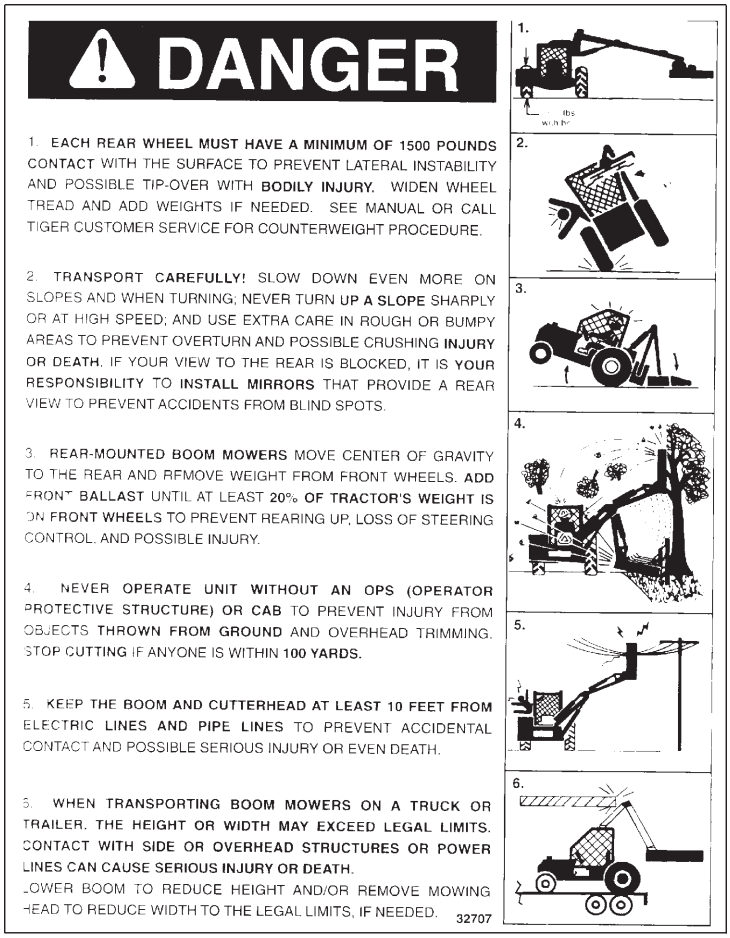
10” x 5.5” 31522
MOWER DECK, MAIN BOOM
18.25” x 10” 31523
HYDRAULIC TANK

PART NO.
LOCATION

32428
MAIN BOOM

32449
HYDRAULIC TANK

PART NO.
LOCATION



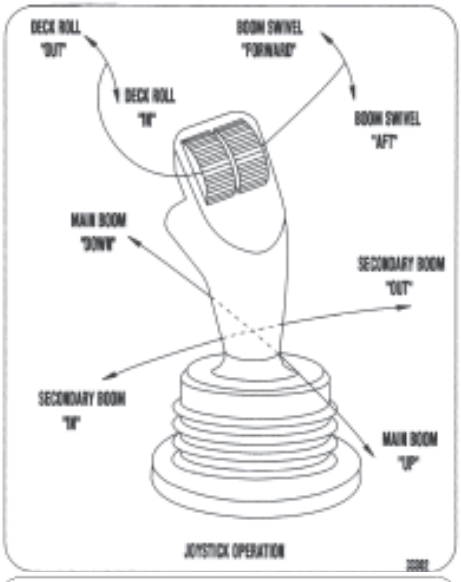
32707
HYDRAULIC TANK

32708
HYDRAULIC TANK

32709
INSIDE OF CAB

PART NO.
LOCATION

33224
MOWER DECK



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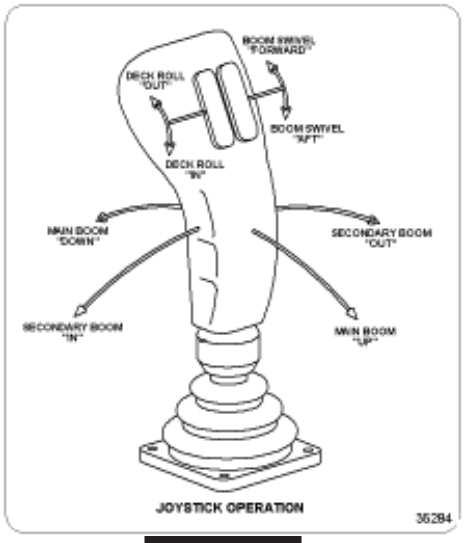


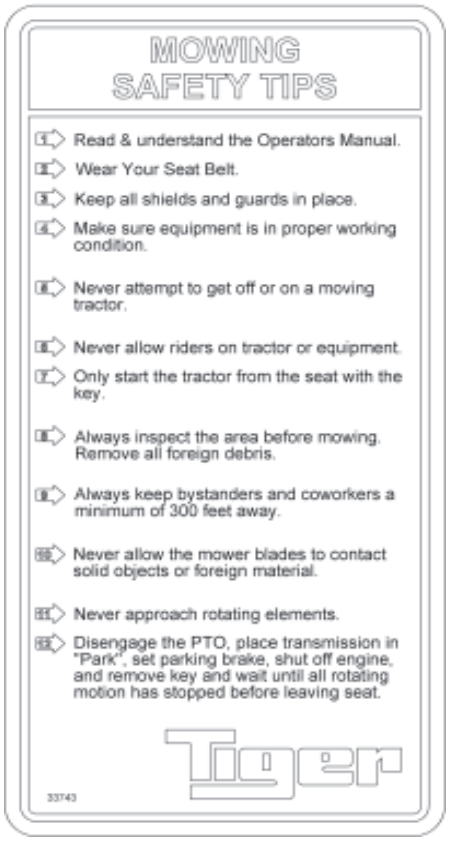
35284
INSIDE OF CAB

Tiger™

33438
MAIN BOOM

PART NO.
LOCATION

33512
INSIDE OF CAB



33743
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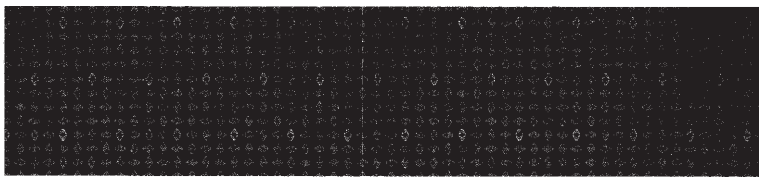
42350
MOWER DECK

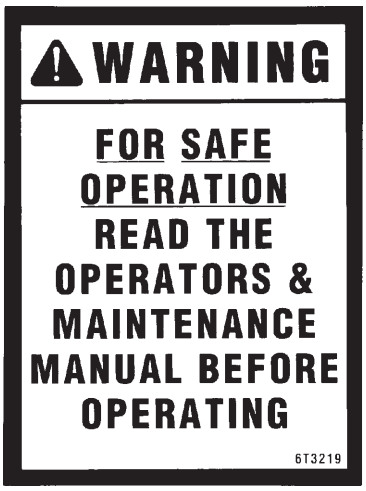
PART NO.
LOCATION

RED 42399
REFLECTIVE TAPE
MOWER DECK



AMBER 42400
REFLECTIVE TAPE
MOWER DECK

6T3217
MOWER DECK



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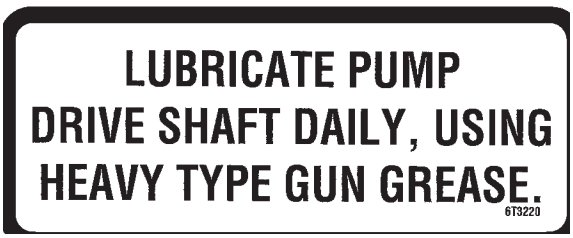
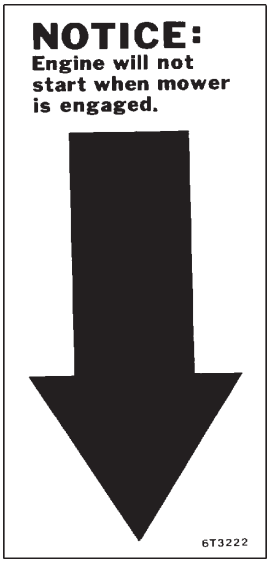


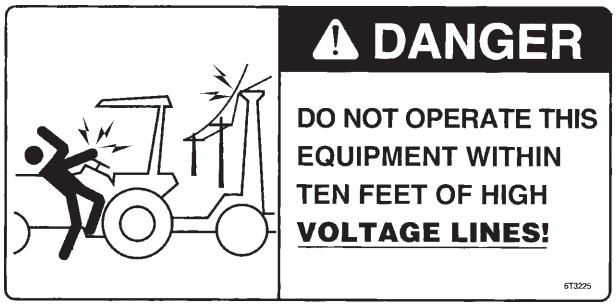
6T3220
FRONT PUMP MOUNT

PART NO.
LOCATION



6T3222
INSIDE OF CAB

6T3224
MOWER DECK



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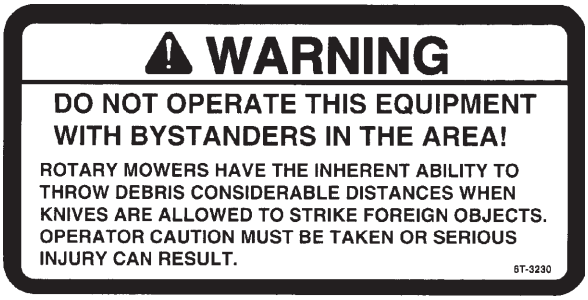
INSIDE OF CAB



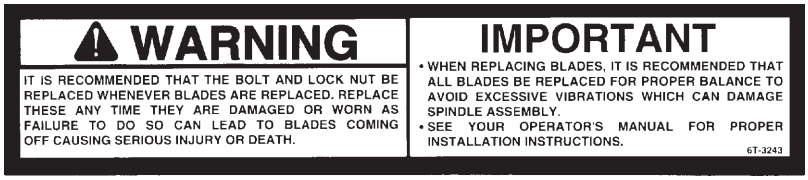
6T3230
INSIDE OF CAB

PART NO.
LOCATION

6T3233
HYDRAULIC TANK

6T3234
INSIDE OF CAB

6T3236
MOWER DECK



6T3243
INSIDE OF CAB

6T3249A
MOWER DECK

PART NO.
LOCATION

6T3261
MOWER DECK

TB1011
MOWER DECK

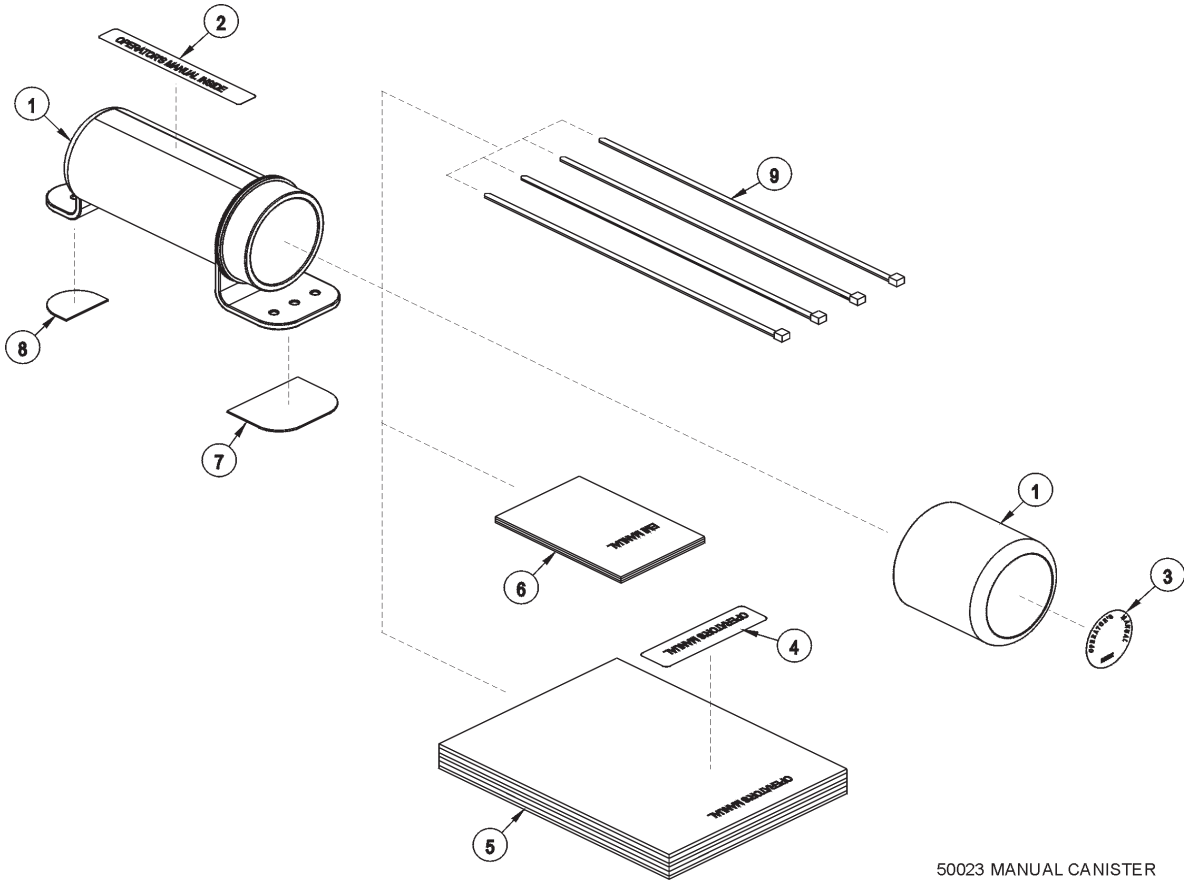
Tiger Corporation
800-843-6849
www.tiger-mowers.com

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

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

Tiger PN 34852

34852
HYDRAULIC TANK



50023 MANUAL CANISTER

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

NOTE:

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

FEDERAL LAWS AND REGULATIONS

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

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

This Act Seeks:
"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

DUTIES

Sec. 5 (a) Each employer-
(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
(2) shall comply with occupational safety and health standards promulgated under this Act.
(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

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

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

1. Train the employee in the proper and safe operation of the Tractor and Implement.

2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.

3. Permit only qualified and properly trained employees to operate the Tractor and Implement.

4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.

5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.

6. Forbid the employee operator to carry additional riders on the Tractor or Implement.

7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.

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

ASSEMBLY SECTION

ASSEMBLY

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

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

CAUTION! ved!

Use a floor jack, hoist or fork lift to lift or raise heavy parts whenever possible whether mentioned or not.

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

TRACTOR PREPARATION

A: Remove right and left hand steps.

B: Disconnect battery cables from both batteries.

C: Remove engine side panels, or raise hood to access front pulley.

D: Remove plugs from tractor casting where main frame and pump mount will be attached.

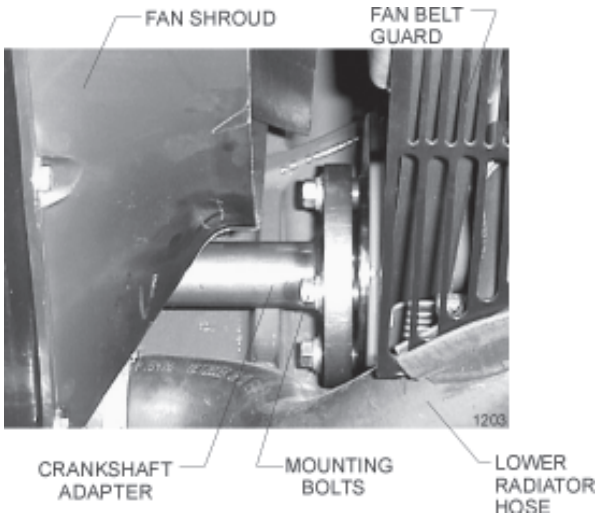
E: Remove any front weights and weight supports.

ADJUSTING REAR WHEELS

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

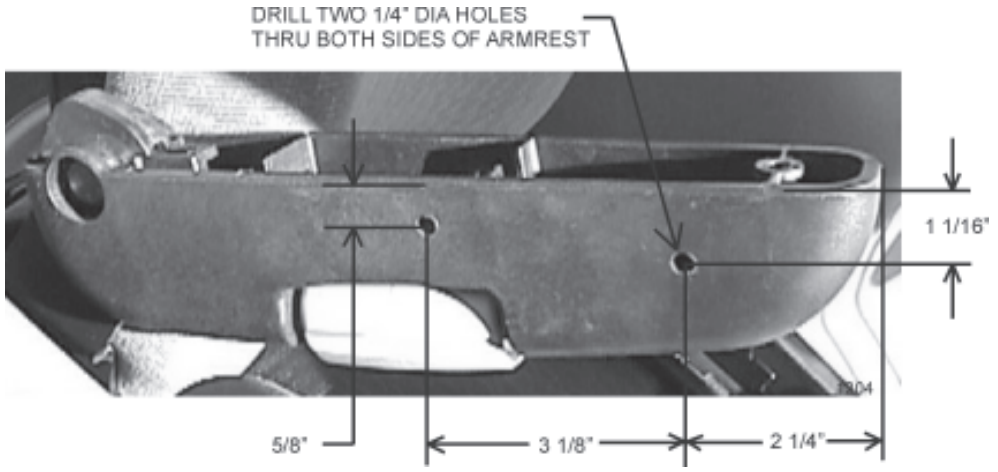
CRANKSHAFT ADAPTER

If necessary remove the four cap-screws from the crankshaft pulley. Then install the crankshaft adapter and spacer to the pulley with cap-screws and lock-washers as shown in the parts section.



JOYSTICK CONTROL MOUNTING

Mounting the joystick control will require that the right arm rest be modified for attaching the joystick holder. In doing this, the armrest pad will need to be removed by pull the arm rest all the way up / back until it stops. Remove the phillips screw on under side of the armrest and pull the pad upward. With the cover removed, two holes will need to be drilled in the arm rest for the ¼" capscrews used to mount the joystick bracket. For best results measure and mark the exact location on the outside of the armrest, use the joystick bracket as a template to verify these marks. Place a piece of protective steel between the armrest and the back seat cushion. Drill the armrest from outside in towards the seat cushion, holes should be parrallel to the top edge of armrest. **Refer to the diagram below for locating these holes**. Install the joystick bracket on the armrest with the hardware as shown in the parts section. NOTE: the bottom capscrew used to secure the joystick bracket is excessively long. Slide the armrest pad back over the armrest and install the phillips screw opposite as it was removed. Install the joystick into the bracket with the machine screws as shown in the parts section.



SWITCH BOX MOUNTING

Locate the 2 holes in the right rear corner of the cab, on top of the council. These will be the mounting holes for the back 2 mounting bolts of the switch box stand (see picture below). The third hole will have to be drilled and the reinforcement plate used on the inside as shown in the parts section.

Remove the floor covering to allow routing of wires later. Remove the cowl side, top and front panels to operators right.

Remove the cover on the pillar at the rear of the right hand door. The bottom of this pillar cover will have to be modified by cutting a ½" x ½" notch, 2" on center in from the rear side of the cover. This notch is to allow routing of the wires from the switch box down to the floor to be run to the front of the tractor.

The panel in back and to the right of the seat will also need to be modified by cutting a 1-1/2" hole for the wires and connectors for the valve and joystick to pass through. This hole is to be located 6" back (measured on floor, from lower back window) and 8" up on the side panel. NOTE: This is the furthest location that this hole may be away from the seat to allow enough cable to hook up the joystick control.

The lower rear window must be removed and rotated 180° so that the notched corner is in the upper right hand corner when standing at the back of the tractor. The cables that hook to the electronic valve, from the switch box will be routed through this notch.

SWITCH BOX WIRING

Refer to the parts section for wiring diagrams. Cover the four wires from the on / off terminal of the switch box with plastic wire wrap provided. Route the wires from the on / off terminal of the switch box through the hole that you have cut in the cab pillar cover, down to the floor. Run the wires under the lip at the edge of the floor to the front council. Remove the gauge panel under the steering wheel to access wires. Locate the black plug connector behind the dash panel. Locate the white wire with a yellow strip. This is the neutral safety wire. Cut the white with yellow strip wire and connect the green wires from the switch box as shown in the wiring diagram. The red power wire from the switch box on / off terminal may be connected to the unused, fused white plug located behind the dash. **NOTE: Be certain that the power taken for the switch box is "HOT" only when the tractor ignition is "ON". Also double check that the line is fused.**

The single red wire from the last terminal on the switch box should also be covered with wire wrap and run out the back window with the valve cables. This wire will be connected to the electronic travel lock.

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POLY-CARBONATE SAFETY WINDOW

NOTE: This should be done before mounting the main frame. Remove the right side cab windows that match the poly windows provided. Installing a boom mower requires that all of the right side glass windows be replaced with poly windows.

Peel back the protective paper from the outer edge area around the poly window that will contact the frame.

Install the outside moulding to the right rear poly window. Position the metal support tube provided to the outside, front edge of the poly window, just inside of the moulding. Once positioned, clamp the tube to the poly window. Next drill 3 holes for 3/16" pop rivets through the window to match the 3 holes in the metal tube. Pop rivet tube onto the poly window and remove clamps.

Remove weather strip from factory window and replace onto poly window. (Some newer tractors must use trim supplied in the kit. Affix ends of trim seal with 1/8" pop rivets provided).

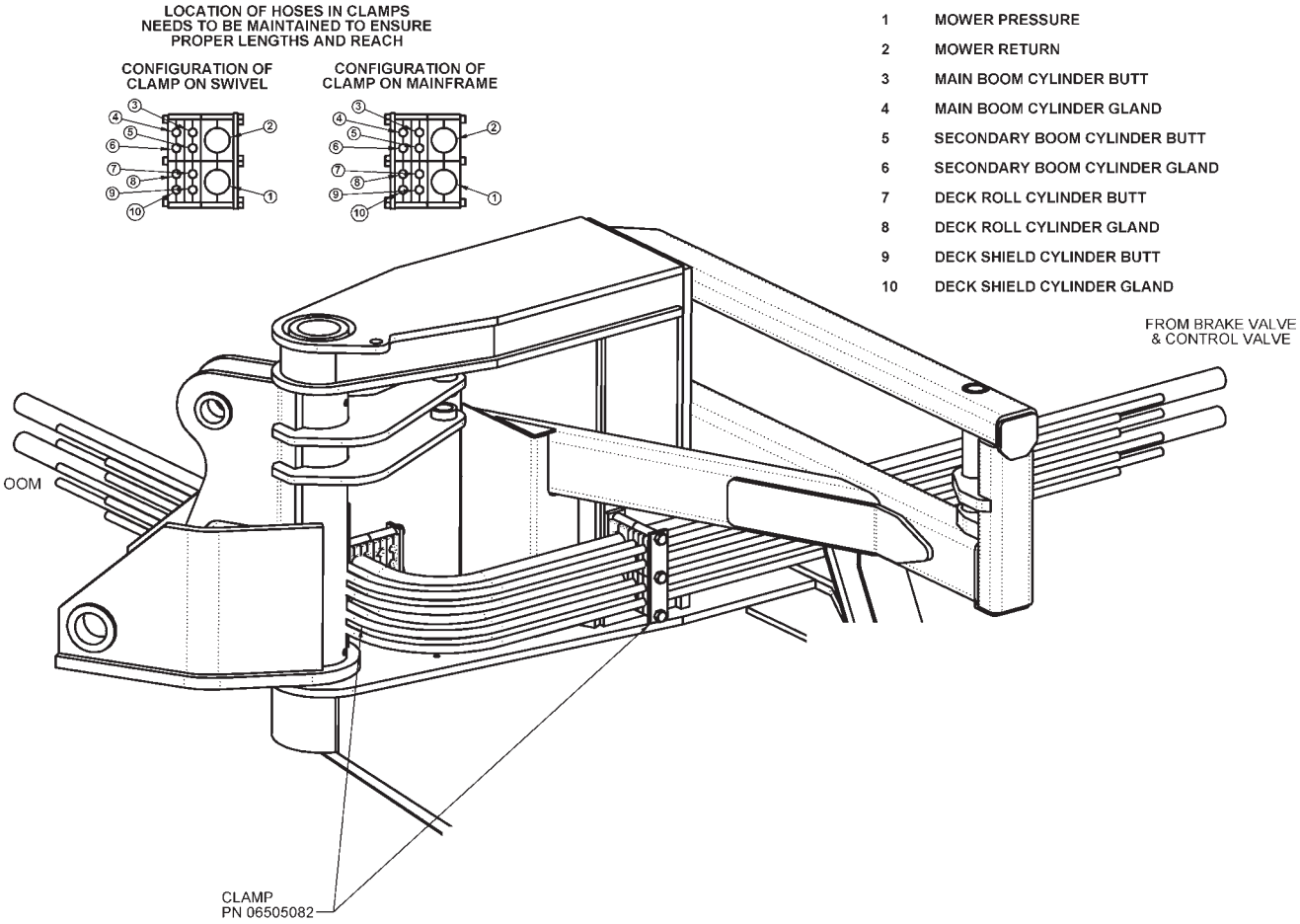
Install the poly window into place where factory window was removed (upper right rear corner first).

Next, peel back the protective paper from the edges of the provided poly door windows. Place the poly windows onto the provided door frame and secure with 19 pop rivets evenly spaced.

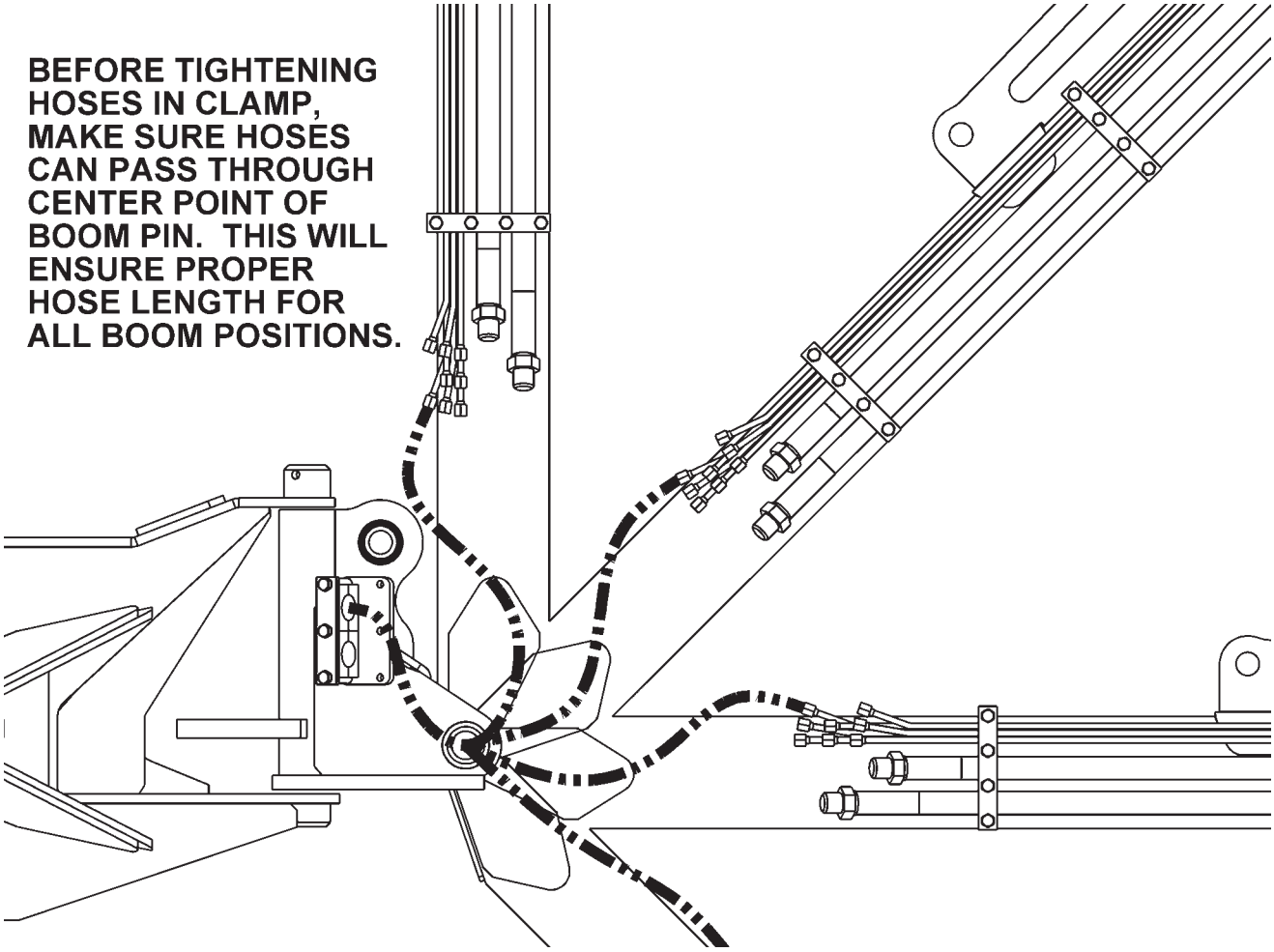
Now remove right side factory door hinge pins (do not remove the factory door). Place the door frame over the factory door and install the provided hinge pins. Carefully close poly door, locate and drill holes as required for mounting hardware in lower right hand corn of the cab, as shown in the parts section.

SABER HOSE ROUTING

WARNING NOTE: The sudden release of hydraulic pressure could cause the sudden movement of very heavy parts. Anyone in the way of these parts could be severely hurt or killed. DO NOT ALLOW these hydraulic hoses to BREAK or BURST in order to prevent hydraulic failure Make sure the hoses do not pinch or stretch as boom moves. Measure TWICE, check TWICE then proceed with caution.



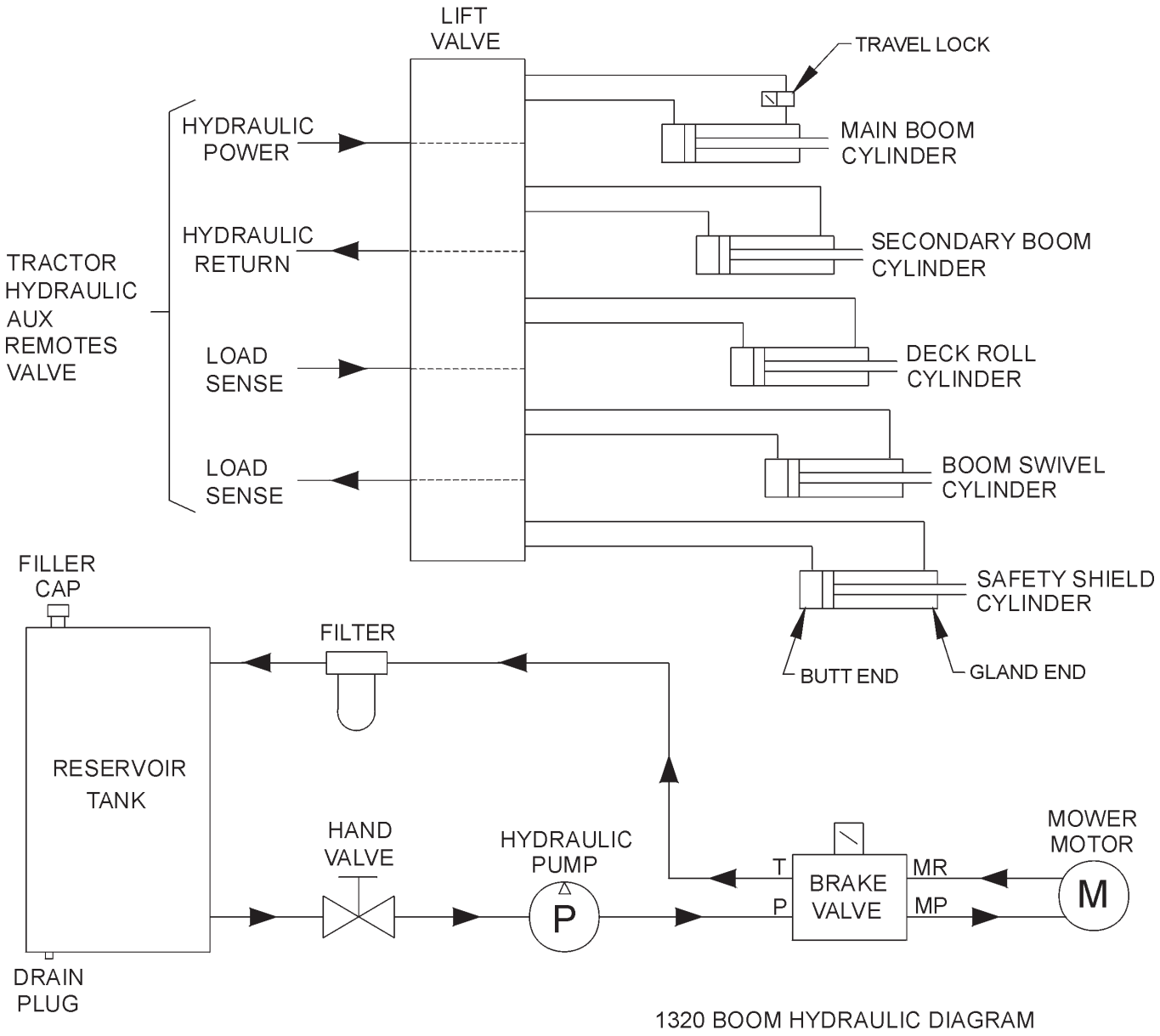
Connect the hoses to the preformed tubes and move the boom arm to the farthest forward position. Arrange the hoses in the clamp as shown in the illustration above, with the 1” motor hoses to the outside, and loosely connect to the swivel. Next, make sure there is enough slack for all hoses to pivot at the joint where the main boom arm bends in the swivel and tighten the hoses in the clamp.



Arrange the hoses in the clamp that attaches to the main frame as shown above, with the 1” motor hoses closest to the main frame. Pull the hoses snug from the swivel to the main frame clamps, when main boom is fully forward, and tighten the hoses in the clamp.

Make sure the 1” motor hoses do not kink as the boom arm is moved into the stowing position. If this happens the motor hoses will have to be tightened, because there is too much hose between clamps.

BOOM HYDRAULIC DIAGRAM



1320 BOOM HYDRAULIC DIAGRAM

MAIN FRAME MOUNTING

With an overhead hoist and / or jack-stands, raise one side of the frame up to the correctly matching mounting holes. Install cap-screws and all other hardware as shown in main frame parts section to secure the first side to the tractor casting. Next raise the second side of the frame into position and secure to tractor as done on first side. Now the ten capscrews, lockwashers and hex nuts can be installed to join the two halves of the main frame together. Remove the cap-screws that secure the main frame to the tractor one at a time and apply a thread locking agent. Reinsert the cap-screws and tighten / torque to values noted in the torque chart located in the maintenance section of this manual.

FRONT PUMP MOUNTING

Install the pump mounting bracket on the front of the tractor with cap-screws and lock-washers as shown in the parts section illustration. DO NOT tighten fasteners at this time.

Slide the pump drive shaft into the crankshaft adapter. The end with the shorter splines should be inserted into the adapter (if applicable).

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

Align pump so that splined coupling can be moved back and forth by hand. Tighten pump mounting bolts in succession rechecking for spline coupling movement. Remove the pump mounting bracket bolts one at a time and apply a tread locking agent. Tighten these bolts in succession, again checking for free movement in the drive shaft. After all bolts are torqued, the end play on the drive shaft should be 1/16” to 1/8”, and coupler should move freely with hand pressure. If end play is less than 1/16”, grind the end of the shaft to achieve the proper end play. If there is more than 1/4" of end play, return the shaft with specifications for a longer shaft.

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

HYDRAULIC TANK INSTALLATION

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

Place the tank in the mounting bracket on the main fame as shown in the parts section.

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

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

Locate the tank breather and reducer bushing (bushing may be already installed in the tank along with many of the for-mentioned parts). These will be installed after tank is filled.

GENERAL HOSE INSTALLATION

Refer to the parts section for detailed information about hoses and fittings for this application.

When mounting the suction hose between the pump and the tank, the stainless steel bands that are provided must be used. CAUTION: DO NOT use regular hose clamps for this purpose. For protection of hoses in contact with metal edges, wrap hoses with spit hose sections and fasten with hose clamps or zip ties as needed.

HOSE COVERING

Secure hoses together with zip ties wherever loose. Wrap the hoses between the main boom and secondary boom with the yellow hose cover, secure with black string provided. Where hoses may contact the frame or other edges, wrap with split hose and secure with hose clamps or zip ties. On non cab units the pressure and return hoses from the control valve will also need to be routed inside the protective clear hose wrap. Cover the valve, valve fittings with the yellow hose cover and secure with black string provided.

WHEEL WEIGHT MOUNTING

For all machines using a Saber Boom mower, a double wheel weight will be required for the left side wheel. It will be necessary to mount the large wheel weight in the wheel using the long cap-screws, lock-washers, flat-washers, and hex nuts per diagram in the parts section. The smaller wheel weight will need to be used in addition to the large one. This will be installed as shown in the parts section also.

Installation is most easily done with a small fork lift, inserting a fork in the center slot of the wheel weight. The head of the cap-screws is to be toward the OUTSIDE of the weight, with flat-washers on both inside and outside of the assembly. The left rear tire must also be filled with a mixture of water and calcium chloride at about five pound per gallon. Tire air pressure should be maintained at approximately 22 P.S.I.

TEMPERATURE GAUGE MOUNTING

(OPTIONAL)

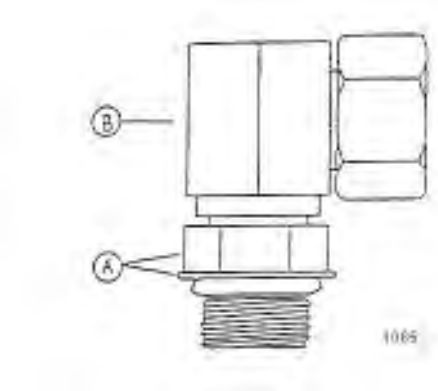
Mount the temperature gauge where it is clearly visible to the operator. Attach the green (-) wire from the negative post on the gauge to a grounded bolt on the tractor frame. Remove paint if needed to make a good ground. Remove the pipe plug from the side of the hydraulic reservoir, and install the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

BOOM REST MOUNTING

With the main frame mounted on the tractor, refer to the parts section for the hardware needed to install the boom rest. CAUTION: because of the shape and size of the boom rest it will be somewhat unstable to lift into position. Special care should be taken when installing the boom rest. Before lifting into position, install the axle brace onto the boom rest as shown. Now raise the assembly into a horizontal position and support it from the bottom with a floor jack towards the main frame mounting plate. Line up the holes where the axle brace will mount to the main frame, and install securing hardware loosely. Now raise the rear and align holes to mount to axle. Install hardware with tread locking agent and tighten / torque as specified. Align the end of the top link of the 3-point hitch with the pin on the side of the boom rest. Adjust the arm so that it fits over the pin and is snug, then lock into position. Install lynch pin provided through hole on boom rest pin.

INSTALLING O-RING FITTINGS

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



HAND RAIL MODIFICATION

The right side hand rail will need to be removed to allow room for the rear stowing boom to run along side the cab. To remove the handrail, cut it off at the top and bottom leaving approximately 2” on the tractor at each end. File the portions that are left to remove any sharp edges. Plug / cover the portions that are left of the handrail with a plastic cap.

INSTALLING NATIONAL PIPE FITTINGS

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

MAIN BOOM INSTALLATION

Install the boom swivel into the main frame as shown in the parts section using a hoist. Line up holes in swivel and main frame for large swivel pin and insert pin. Secure with hardware as shown. Inspect the inner boom end, grease hole in bearing must align with boom grease zerks. Attach the inner end of the main boom to the swivel bracket with the cylinder anchors mounting upward, and at a right angle to the tractor. Secure it with the horizontal hinge pin. Secure the hinge pin in the boss with capscrews, etc. (see parts section).

Install the fittings and hose to the butt end of the large main boom cylinder. Install the travelock with the restrictor on the rod end of the main boom cylinder. These should be facing the butt end of the cylinder after installation.

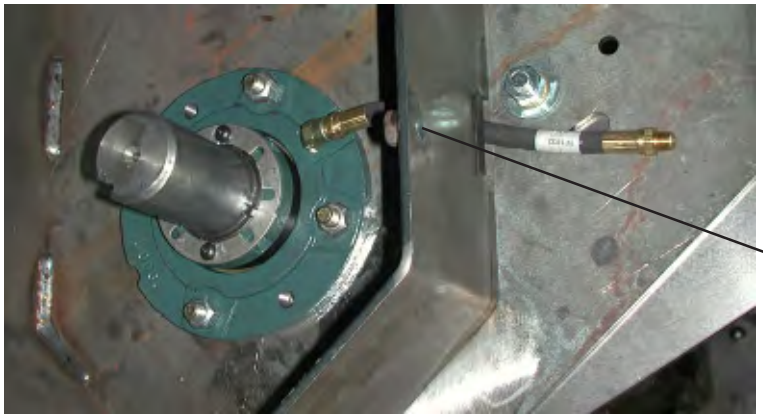
NOTE: Be sure to use teflon tape on all pipe fittings (except O-rings).

Install main boom cylinder on the main boom with the fittings facing upwards. Attach the butt end to the cylinder to the swivel bracket anchor with the special "bracket head" cylinder pin and roll pin shown in parts section. Attach the cylinder rod end clevis to the main boom with the cylinder pin and two roll pins.

GREASE HINGE PIN ZERKS ON BOOM AFTER ASSEMBLY, ONCE UNDER LOAD WITH BOOM ELEVATED AND AGAIN AT REST WITH BOOM SUPPORTED

EXTENDING ZERK ON FLAIL HEAD

Due to the belt shield covering the cutter shaft bearing on the flail head a hose, elbow, & grease zerk have been added to the bearing. Remove the existing grease zerk from the bearing and discard. Attach the elbow to the bearing. Next, the hose is attached to the elbow and routed through the belt shield(shown below) and attached to the outside of the shield. The additional zerk is connected to the end of the hose for easier bearing maintenance.



ACCUMULATOR INSTALLATION / PLUMBING

Install the accumulator bracket on tab with holes provided on the right main frame with the capscrews and lockwashers shown. Install the accumulator in the bracket and secure with the hardware shown. Install fittings and hoses to the cylinder and control valve as shown in the parts section. **Use teflon tape on all pipe fittings (except O-rings).**

DECK ATTACHMENT

Attach the head to the secondary boom using the pins and hardware shown in the parts section to attach linkages. Install the square tube on the top of the head into the head mount and secure using the mounting plate and hardware as shown. The mount should be positioned to the left side of the cutter head. Install the deck pivot cylinder using the pins and hardware also shown in the parts section.

Connect the fittings and hoses from the pivot cylinder to the small preformed tubes on the boom arm. Connect the fittings and hoses from the motor to the large preformed tubes on the boom arm.

Connect all remaining hoses from the control valve to the cylinders and / or preformed tubes on the boom arm. Refer to parts section for diagrams.

Before proceeding to the final preparation step double check the complete assembly from the main frame to the cutter head against the diagrams in the parts section for proper placement and assembly of all components.

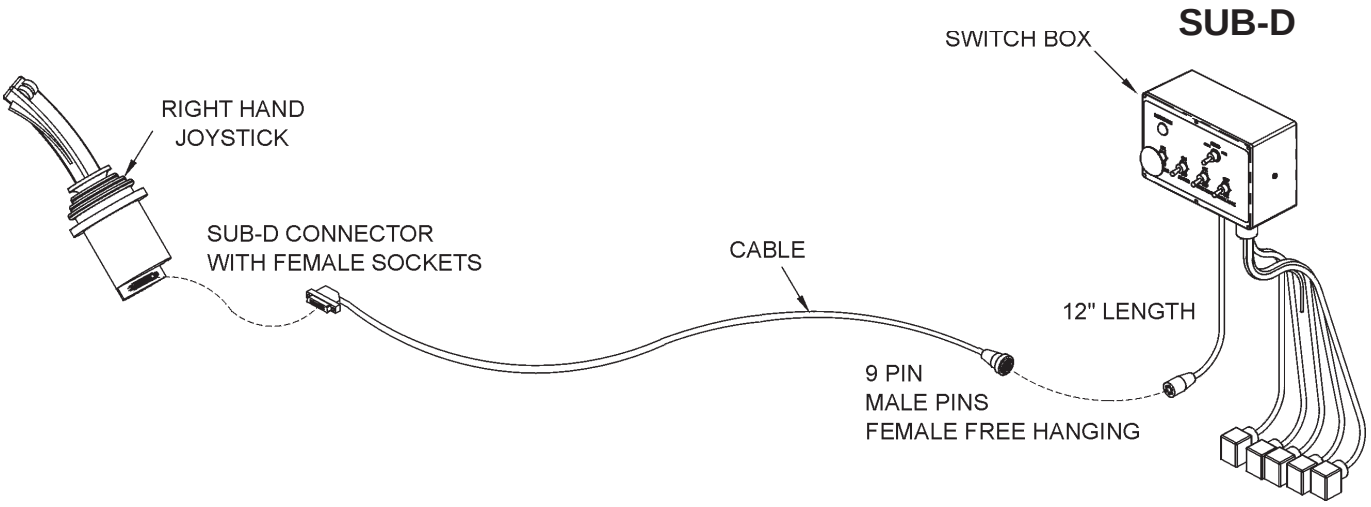
CUTTERSHAFT BEARING ASSEMBLY

Tiger Part number 06520089

1. Belt drive end:
   – Mount non-expansion bearing on this end first per bearing instructions.

2. Opposite belt drive
   – Move snap ring to outer ring groove to create an expansion bearing. This allows bearing to move axially within housing.
   – Install bearing with snap ring set to outer ring groove.
   – Slide bearing axially toward aforementioned snap ring.
   Tighten per bearing instructions. This allows bearing to move away from center of cutter shaft without creating a pre-load on the bearing.

BOOM JOYSTICK CONTROL CALIBRATION



This Danfoss PVG32 control valve is now equipped with higher-resolution actuators on Main Boom, Secondary Boom, Deck Roll, and Swivel functions. These actuators have “active fault monitoring”. The Deck Shield section does not have “active fault monitoring”. The joystick is unchanged and provides a ratio-metric voltage signal. The neutral signal voltage is half or 50% of tractor supply voltage. A 25% signal voltage will shift the valve spool to full “A-Port”, and 75% signal voltage will shift the spool to full “B-Port” in the Main, Secondary, and Swivel valve sections. On the Deck Roll function a 34% signal voltage will shift the valve spool to full “A-Port” and a 68% signal voltage will shift the spool to full “B-port”. If an actuator with active fault monitoring receives a signal from the joystick that is less than 15% or greater than 85% of supply voltage the actuator will “fault out” and shut down. Also if there is an internal failure in the actuator or if the spool position is greater than that specified by the signal voltage from the joystick, the actuator will “fault out” and shut down. An “active fault” condition causes the actuator to drive the spool to neutral, shut down, and activate a “red” LED on the top of the actuator. The active fault can be canceled by simply cycling the Master Switch “OFF” and then “ON”, which resets the fault monitoring, and causes the LED on top of the actuator be “green” again.

CAUTION!

The joystick control is equipped with signal adaption potentiometers.

These provide the capability to individually adjust the oil flow to each boom function. It is important that the boom functions do not travel too fast. Excessive boom speed can reduce the stability of the unit and decrease operator control.

Note: Use a Phillips screw driver and be sure to adjust the screws carefully! DO NOT turn the potentiometers beyond their stopping point, potentiometers are very delicate! Turning the “A” or “B” port potentiometers clockwise increases the oil flow to increase the boom function speed, and turning them counterclockwise decreases the oil flow to decrease the boom function speed. See the graphic on the next few pages for help in adjusting.

Run tractor at normal operating RPM to adjust the settings as follows.

Set the dead band compensation potentiometer first.

Set the dead band compensation potentiometer at 50%, or halfway between full clockwise and full counter-clockwise.

Setting Signal Adaptation Potentiometers:

Disconnect the Deutsch connectors from the actuators of the valve. Use a Volt/Ohm meter to measure signal voltage and adjust the signal adaptation potentiometers as needed. Pin #4 is tractor supply voltage. Pin #1 is signal voltage from the joystick, and pin #3 is ground. First measure supply voltage between pins 4 and 3. Then measure signal voltage between pins 1 and 3 while indexing the joystick function fully in both the “A” and “B” port direction. Divide the signal voltage by the supply voltage to get signal voltage as a % of supply voltage. This percentage should not be less than 25% or greater than 75% for the Main Boom, Secondary Boom, or Swivel function. This percentage should not be less than 30% or greater than 62% for the Deck Roll function. Note these initial settings for the Deck Roll function should prevent the spool from shifting into float. *After making this first adjustment to deck roll if the spool still goes into float, adjust the “B” port screw additionally counterclockwise.*

Reconnect Deutsch connectors on control cables to actuators on Danfoss valve. Run tractor until hydraulic system is at operating temperature. Now refine the adjustments of the signal adaptation potentiometers for both “A” and “B” ports for all proportional functions to achieve the following function times. Note: turning potentiometer clockwise increases the flow or the function speed, and turning them counter-clockwise decreases the flow or the function speed. Note, if during this procedure the trim potentiometer is set to full “counterclockwise” but the function is still too fast, use the mechanical stops at the manual actuator end of the valve section to further limit flow. Turn limit screw in or clockwise to limit flow. The upper limit screw limits flow to “B-port”, and the lower limit screw limits flow to “A-port”. However DO NOT adjust the limit screw on “B-port” of deck roll function. Limiting “B-port” will prevent “float” function.

MAIN BOOM: "A" Port, Boom UP: 7-9 Seconds
(Note: Extend secondary boom completely; roll deck to be level with ground, and lower main boom until deck is on ground. Now index main boom "up" function and determine the time required for main boom to rise completely.)

"B" Port, Boom Down: 6-8 Seconds
(Note: Extend secondary boom completely, roll deck to be level with ground, and raise the main boom to "full up". Then index the main boom "down" function to determine the amount of time required for the deck to contact the ground. CAUTION: Stop the boom just as the deck contacts the ground.)

SECONDARY BOOM: "A" Port, Boom Out: 8-10 Seconds
(Position main boom full up, roll deck out until deck cylinder is fully retracted, and bring secondary boom in completely. Then index the secondary boom "out" function and determine the time required for boom to extend out completely.)

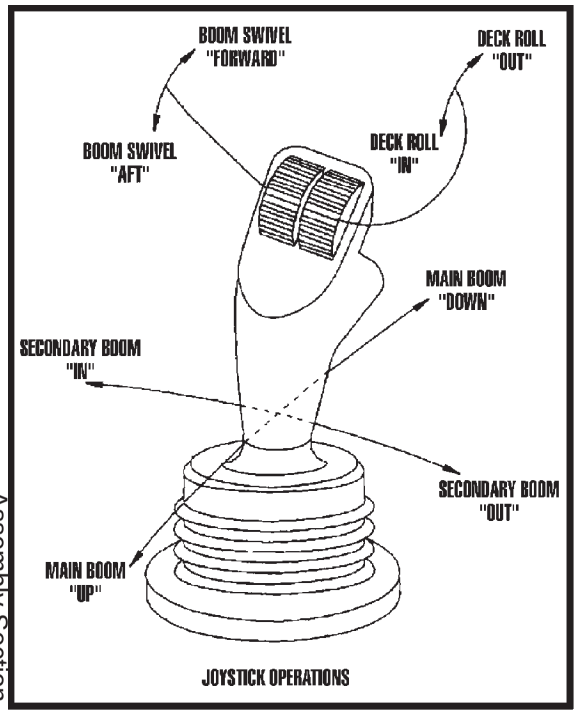
"B" Port, Boom In: 8-10 Seconds
(Position the main boom full up, roll deck out until deck cylinder is fully retracted, and extend secondary boom completely. Then index the secondary boom "in" function and determine the time required for boom to come in.)

DECK ROLL: "A" Port, Deck Out: 7-9 Seconds
(Raise main boom to vertical, extend secondary boom out slightly so that deck can be articulated without contacting the main boom, and roll deck in until deck cylinder is completely extended. Then index the deck roll "out" function and determine the time required for the deck to roll out.)

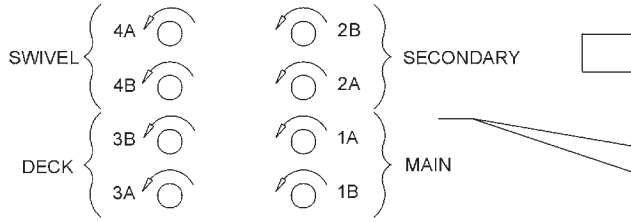
"B" Port, Deck In: Target 7-9 Seconds (but DO NOT use Limit Screw)
(Raise main boom to vertical, extend secondary boom out slightly so that deck can be articulated without contacting the main boom, and roll deck out until deck cylinder is completely retracted. Then index the deck roll "in" function and determine the time required for the deck to roll in.)

BOOM SWIVEL: "A" Port, Boom Aft: 11-13 Seconds
(Extend booms completely; rotate head to be level with ground, lower main boom until deck is just above ground, and swivel boom full forward. Then index the boom swivel "aft" function and determine the time required for the boom to swivel aft. Use caution when doing this, stop boom before main boom contacts tire.)

"B" Port, Boom Forward: 11-13 Seconds
(Extend booms completely, rotate head to be level with ground, lower main boom until deck is just above ground, and swivel boom aft and until near tire. Then index the boom swivel "forward" function and determine the time required for the boom to swivel full forward.)



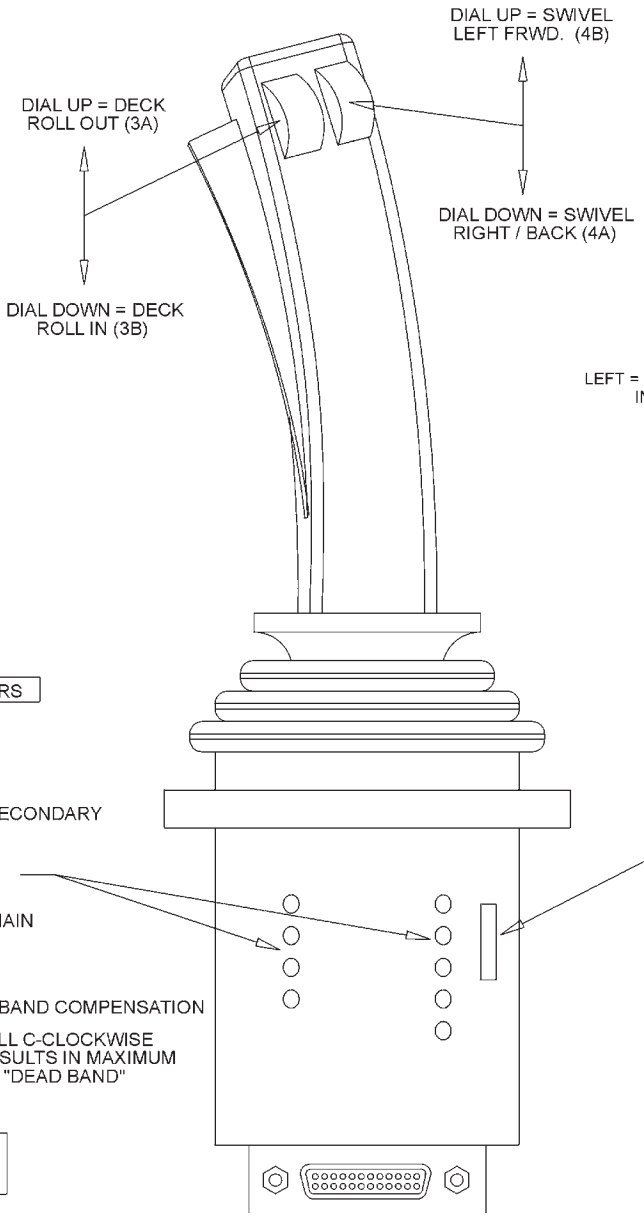
SIGNAL ADAPTION POTENTIOMETERS



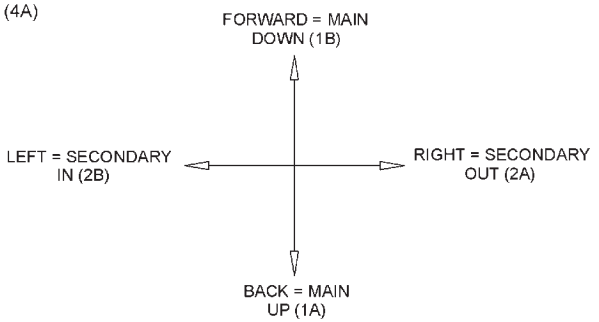
DEAD BAND COMPENSATION

NOTE: FULL C-CLOCKWISE RESULTS IN MAXIMUM "DEAD BAND"

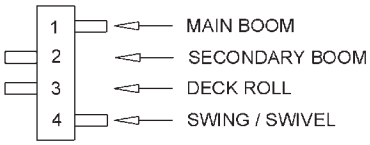
ARROW DIRECTION ( ) DENOTES DIRECTION TO DECREASE OIL FLOW (SLOW BOOM FUNCTIONS)



JOYSTICK LEVER MOVEMENT



SIGNAL INVERSION SWITCHES



RH SUB-D

FINAL PREPARATION FOR OPERATION

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

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

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

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

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

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

MOWER TESTING

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

If any parts of this assembly section, or any other section of this manual are not clearly understood you must contact your dealer or the address on the front of this manual for assistance!

OPERATION SECTION

OPERATION

Safety is of primary importance to the owner / operator and to the manufacturer. 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. Many of the messages will be repeated throughout the manual. **The owner / operator / dealer should know these Safety Messages before assembly and be aware of the hazards of operating this mower during assembly, use, and maintenance of this equipment.**

The **Safety Alert Symbol** combined with a signal word, as seen below, is intended to warn the owner / operator of impending hazards and the degree of injury possible during operation.

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

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

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

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

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

Before any operation of tractor and mower, the user should read and understand the safety and operating instructions for both the tractor and the mower. The user should also be familiar with the location and functions of the units instruments and controls. Being familiar with the machine and it's controls will increase efficiency and reduce possibility of serious injury or damage to the unit. The operator should work slowly and carefully until he feels comfortable with the machine. Speed and skill will be attained much easier if the necessary time is spent to familiarize yourself with the machine and its operations.

Since tractor makes and models vary, we recommend reading and following the operators manual provided by the manufacturer pertaining to the safe operation of your particular unit.

STARTING TRACTOR AND MOWER

Check the operators manual received from the tractor manufacturer, for their recommendation and procedures pertaining to your particular make and model.

WARNING!

When rotating parts are in motion, serious injury may occur if caution is not used or danger is not recognized. Never allow bystanders within **100 yards** of the machine when mower is in operation.

Be sure the ball valves on the mower hydraulic tank are **OPEN** before starting the tractor. Serious damage to the hydraulic system can occur if the valves are not open.

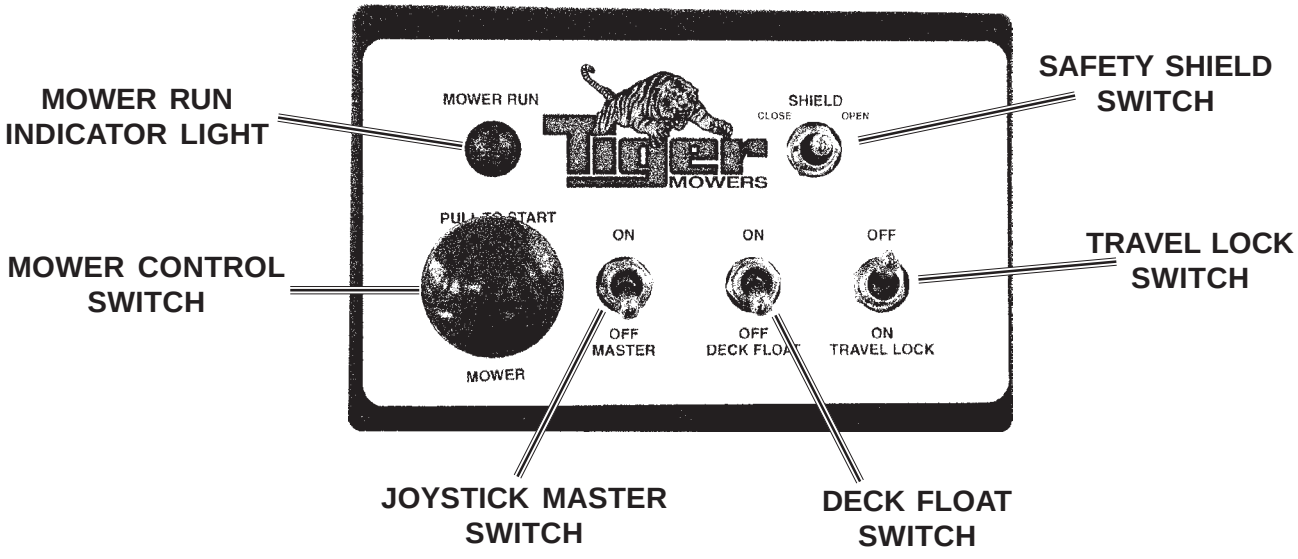
WARNING!

Check to make sure mower switch is in the "**OFF"** position. The unit is designed not to start if the switch is in the "on" position. If tractor starts with switch on, turn off tractor and contact your local Tiger dealership for assistance.

Start the tractor and allow the instruments to stabilize. Without starting the mower, practice positioning the boom and deck. Remember, speed and skill will be attained easier if the necessary time is spent familiarizing yourself with the machine and its operations. When you feel comfortable at controlling the position of the mower, return the mower to the travel position, and transport the mower to the desired mowing location.

If mowing for the first time with a Tiger Boom Mower, we recommend choosing a ditch or area relatively flat with a minimum of sign posts, guard rails, etc. As always, you should inspect the area for other objects that can cause potential hazards.

MAIN CONTROL SWITCH BOX



OPERATION

The Mower Control switch turns the mower “ON” and “OFF. This switch is to be in the “OFF” position to start the tractor. If the switch is “ON” and the tractor ignition switch is turned to “ON” the red “mower run” indicator light will come on. However, the tractor will not start with the Mower Control switch in the “ON” position. Upon starting tractor the “mower run” indicator light may flash briefly, and may flash briefly again when tractor is shut down.

WARNING!

If tractor starts with switch on, turn off tractor and contact your local Tiger dealership for assistance.

WARNING!

NOTE: **DO NOT** operate mower head while boom mower is in the boom rest! Red “Mower Run” light indicates mower is “ON” when tractor engine is running.

The boom functions are controlled by an electronic joystick. The Joystick Master Switch enables the joystick control for controlling the boom motion functions. This switch is to be in the “OFF” position when starting the tractor and when boom is stowed for transporting the machine.

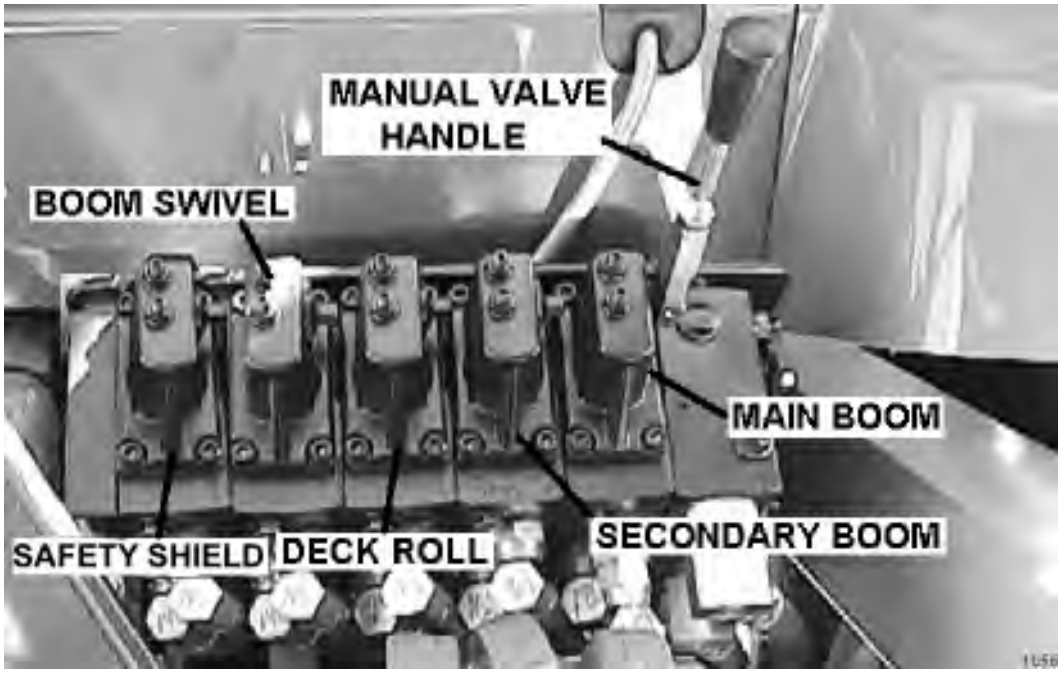
CAUTION!

If the joystick control is not operating properly, turn the master switch to the “OFF” position. Install the manual valve handle onto valve and operate the functions individually to stow boom. After boom is stowed in rest, transport the unit to the maintenance facility and contact your Tiger dealer for assistance.

CAUTION!

DO NOT attempt to operate the valve manually for mowing operations!

Note: Pushing manual valve handles “out” or “away” from the tractor cab will bring the main boom “up”, secondary boom “out”, roll deck “out”, and swivel boom “aft”. Pulling manual handles toward cab will let main boom “down”, bring secondary boom “in”, roll deck “in”, swivel boom “forward”, and “close” the safety shield.



The Master Switch also provides power to the “Deck Float”, “Shield” and “Travel Lock” Functions of the mower deck.

The Deck Float function allows the ground roller of the flail mower head to follow the contour of the ground. To operate the deck float function, the Master switch must be in the “ON” position and the Travel Lock switch must be in the “OFF” position. Lower the mower head to just touch the ground, then turn the deck float switch “ON”.

CAUTION!

The Deck Float is to be used **ONLY** when the flail mower head is on the ground. The mower head **CAN NOT** be controlled with the joystick when Deck Float is “ON”.

CAUTION!

The deck float is to be used only when mowing with a flail head, using the deck float with a rotary head may damage the mower.

The Safety Shield switch opens and closes the shield located on the front of the cutter head. When mowing at or near the ground, always have the shield in the closed position. When mowing in brush or in trees above ground level the shield may be opened for easier cutting. Read and follow the warnings on the decal shown below.

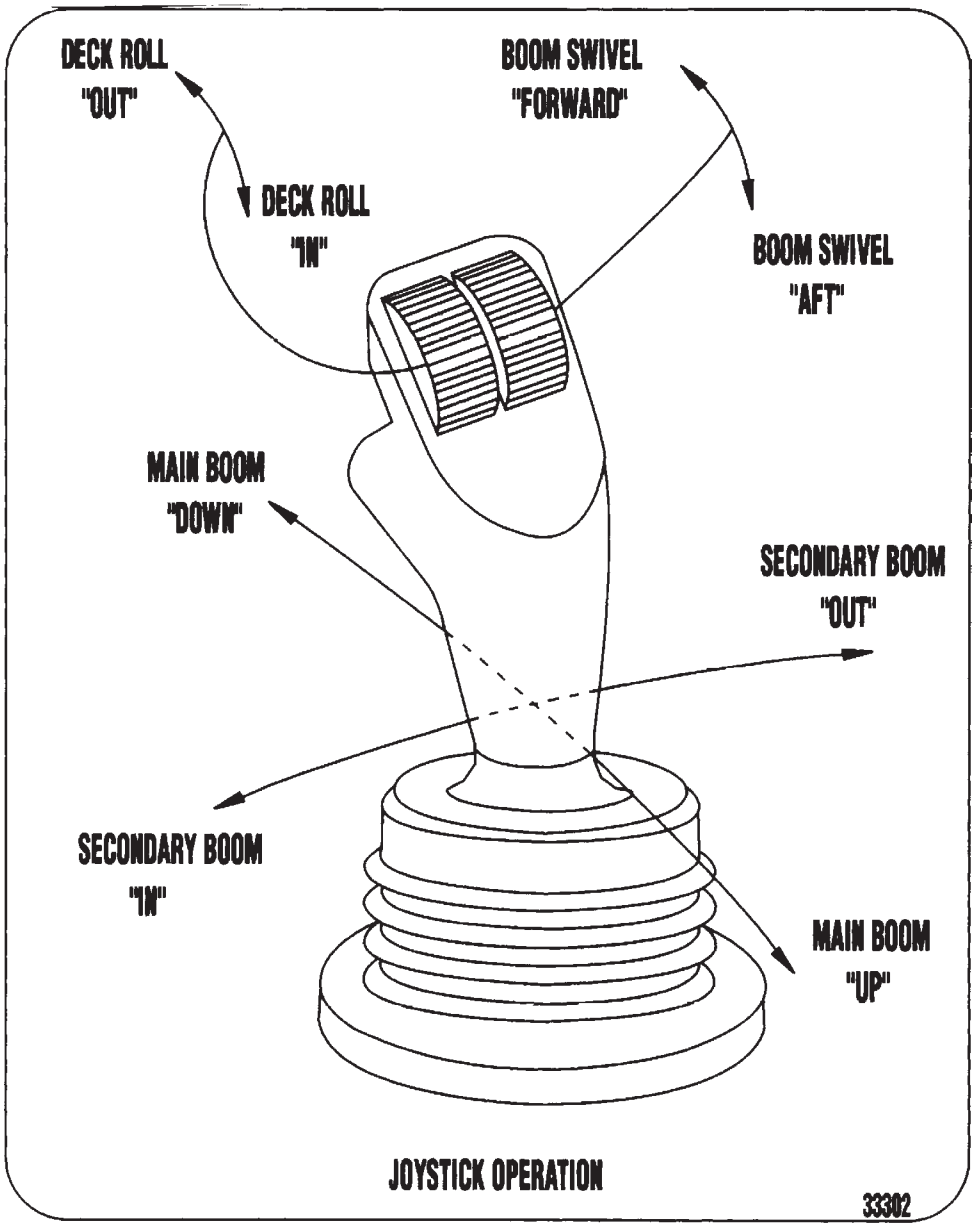
CAUTION!

The Travel Lock function locks the mower head in the up-right position for road travel. Prepare unit for travel by rolling deck completely out (mower deck rolled back adjacent to secondary boom). Then place main and secondary booms in boom rest. The Travel Lock switch can now be engaged.

NOTE: The tractor ignition switch and the Master Switch must be “ON” and the Travel Lock must be “OFF” to allow articulation of the mower deck.

JOYSTICK CONTROL

The diagrams below and on page 3-7 show the functions that are performed through the use of the joystick controller.



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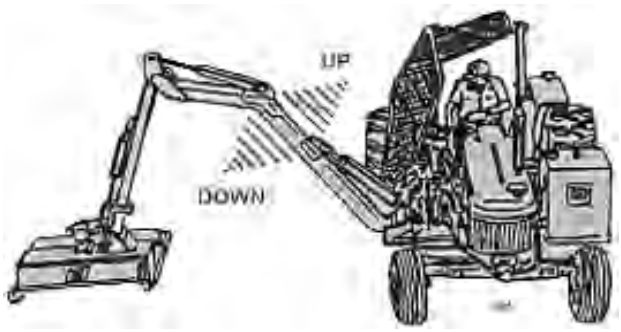
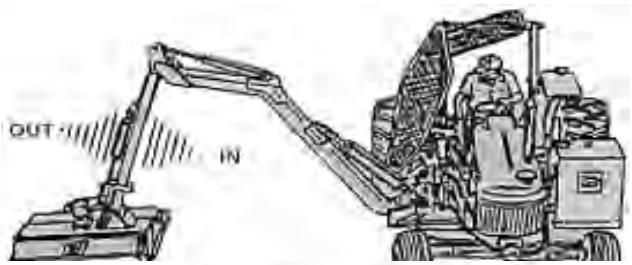
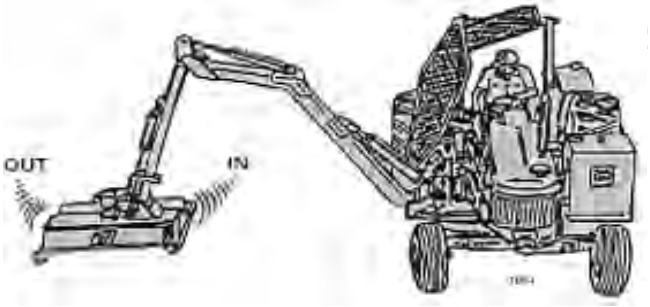
JOYSTICK FWD / BACK MOVES MAIN BOOM



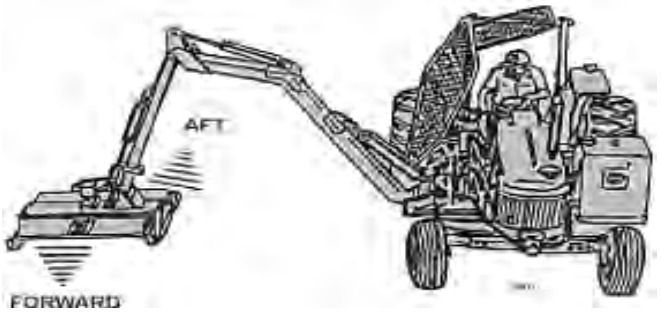
JOYSTICK LEFT / RIGHT MOVES SECONDARY BOOM



LEFT JOYSTICK ROLLER MOVES DECK ROLL



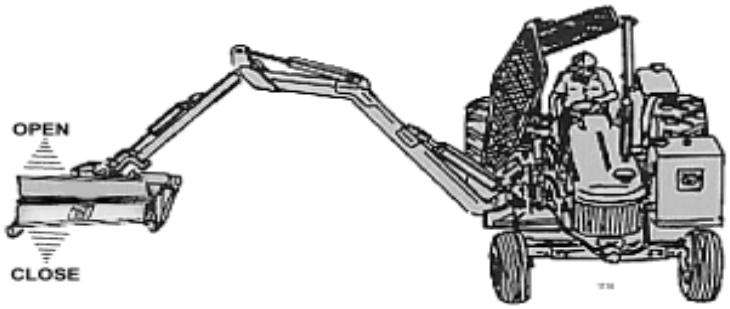
RIGHT JOYSTICK ROLLER MOVES BOOM SWIVEL



SHIELD SWITCH

(ON SWITCH BOX)

OPERATES SAFETY SHIELD



UNSTOWING BOOM

To un-stow the boom from the boom rest, proceed as follows. Extend secondary boom “OUT”, and move main boom “UP” off of horizontal support. Swivel boom “FORWARD” perpendicular to tractor and switch travel lock to “OFF”(ONLY FOR DANFOSS SWITCH). The head and booms are now ready for full operation.

SABER FLAIL

The Saber flail mower was designed for cutting brush and foliage up to 4 inches in diameter or multiple branches that have a total cross section area equivalent to one 4 inch branch. Cutting multiple limbs at the same time may overload the mower causing it to slow down or stall completely. Regardless of the size of material being cut, the cutter shaft speed must be maintained. To ensure that the cutter shaft is running at maximum speed, run the tractor at full throttle during mowing operations. If the cutter shaft slows to the point that the knives are folding back against the cutter shaft move the mower head away fron the foliage and allow the cutter shaft to regain full speed.

Operating the mower in a manner that allows the cutting knives to contact the drum will cause permanent damage to the cutter shaft drum, knives, and knife arrachment parts.

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

SABER ROTARY

The Saber Rotary mower was designed for cutting brush and foliage up to 8 inches in diameter or multiple branches that have a total cross section area equivalent to one 8 inch branch. Cutting multiple limbs at the same time may overload the mower causing it to slow down or stall completely. Regardless of the size of material being cut, the speed of the cutter head must be maintained. To ensure that the cutter head is running at maximum speed, run the tractor at full throttle during mowing operations. If the cutter head slows to the point that the knives are folding back, move the mower head away fron the foliage and allow the cutter head to regain full speed.

Operating the mower in a manner that allows the cutting knives to continually fold back will cause permanent damage to the knives, rotary disk, and spindle assembly.

The Saber Rotary cutter head is designed for clockwise rotation (clockwise as seen from the top or the currer head). **Never operate the cutter head in the counterclockwise rotation.** Operating this mower in counterclockwise rotation may cause objects to be thrown towards the tractor.

MOWER OPERATION

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

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

Once on location, lower the mower deck slightly above the foliage to be cut, so the mower does not have to start under a load. With the tractor at an idle, engage mower. Bring tractor R.P.M. up to 1900 – 2200 R.P.M. and **slowly** lower deck to ground level.

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

When using the rotary cutting head for trimming trees and shrubs, let the mower saw into them. Do not lower the mower head down directly onto a tree or stump. The mower blades are designed to cut with the end, and misuse can cause damage to the blade and a hazardous situation for the operator.

Powering the boom down, forcing mower deck onto ground may damage mower deck and it's attachment to the boom, creating a potentially hazardous situation.

To ensure a clean cut, engine speed should be maintained at approximately 1900 – 2200 R.P.M. If the tractor slows to less than 1800 R.P.M., shift to the next lower gear. DO NOT ride the clutch, this will cause premature clutch failure. **The engine should not be operated at any time at more than 2400 R.P.M. on the tractor tachometer.**

For cutting brush it is usually best to stop the tractor and swivel the boom and mower into foliage. The horizontal positioning action of the boom is designed to position the cutting head and provide a limited pressure relief when excessive pressure is applied to the boom.

DO NOT use excessive force when positioning cutting head into heavy branches or stumps. Damage to the unit may result. It is best to let the cutter head "eat away" slowly at heavy cutting jobs.

If cut debris falls on top of mower deck causing tractor to become unstable, push the joystick control “Forward” and to the “Right” to relieve tipping of the tractor. Lower mower deck to ground and shut down unit. After all motion stops, remove debris from mower deck.

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

Begin a pass at the top side of the trees and work down with each consecutive pass. When cutting trees and shrubs, use a lower speed to allow the knives time to cut as well as mulch the foliage.

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

If cutter shaft jams and stops, turn mower switch to “OFF”, and swivel boom “AFT”. Normally this action will clear the cutter head. If not, roll mower deck until adjacent to the secondary boom, then lower boom to rest mower deck on ground. Shut off the tractor, set parking brake, allow all motion to cease. At that point it is safe to leave the tractor and clear the cutter heads manually.

After the first day of operation, all bolts should be checked and tightened securely. This should be done periodically to ensure the bolts do not become loose and cause damage to the tractor or mower, or injury to the operator.

TRANSPORTING MOWER

Transporting under the units own power:

When transporting between job sites, the following procedure should be followed: Shut off the power to the cutting head and allow all motion to come to a complete stop. Roll the mower deck all the way back until it is adjacent to the secondary boom. Extend the secondary boom out to clear the boom rest. Next, swivel the boom until close to the boom rest, then position the main boom just above the horizontal boom support of the boom rest. Slowly and carefully swivel the boom “AFT” until the main boom contacts the vertical pad. Lower the main boom until it contacts the upper pad, now the secondary boom can be lowered to contact the pad on the boom rest. Lastly, place the “Travel Lock” switch on the main control switch box to the “ON” position. The unit is now ready for self transportation. (See picture of stowed boom on next page).

Transporting unit by flatbed trailer:

Park flatbed on level area. Drive tractor onto center of flatbed to avoid uneven distribution of weight and staying within local width restrictions. If boom is over local height restrictions, you will need to extend booms outward enough to clear front of tractor when boom is pivoted forward. Pivot mower deck into a horizontal position, and lower the boom until deck is slightly above trailer bed. Remove cylinder pin from outer end of the boom swivel cylinder.

CAUTION: If trailer is not perfectly level, the boom will tend to swing towards the lower side. Have other personnel ready to control its swinging motion when cylinder pin is removed.

Retract swivel cylinder and secure to main frame. Pivot boom forward to the center of flat bed. Lower deck onto the trailer bed, and shut off the tractor. The tractor and the mower head should now be chained down securely to the trailer bed.

If any part of this operating section, or any other section of this manual is not completely understood, contact your Tiger dealer or the address on the cover of this manual for assistance!

INSPECTION SHEETS

BOOM MOWER PRE-OPERATION Inspection

Mower ID#_____ Make_____

Date:_____ Shift_____

WARNING!

Before conducting the inspection, make sure the Tractor engine is off, all rotation has stop and the tractor is in the Park with the parking brake engaged. The Mower head is resting on the ground (or is securely blocked up and supported) and all hydraulic pressure has been relieved.

Item	Condition at Start of Shift	Specific Comments if not O.K.
The Operator's Manual is in the Canister on the mower		
All Safety Decals are in place and legible		
The Mounting frame bolts are in place and tight		
The Boom connection bolts & pins are tight		
There are no cracks in boom		
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 Mower shields are in place and in good condition		
The Skid shoes are in good condition & tight		
There are no cracks or holes in mower deck		
The Hydraulic motor mounting bolts are tight		
The mower head spindle housing is tight and lubricated		

Operators Signature:_____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

TRACTOR PRE-OPERATION Inspection

Tractor ID#_____ Make_____

Date:_____ Shift_____

WARNING!

Before conducting the inspection, make sure the Tractor engine is off, all rotation has stop and the tractor is in the Park with the parking brake engaged. The Mower head is resting on the ground (or is securely blocked up and supported) 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 ROPS 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		

Operators Signature:_____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

FRONT END LOADER PRE-OPERATION Inspection

Mower ID#_____ Make_____

Date:_____ Shift_____

Before conducting the inspection, make sure the Tractor engine is off, all rotation has stop and the tractor is in the Park with the parking brake engaged. The Loader is resting on the ground (or is securely blocked up and supported) and all hydraulic pressure has been relieved.

Item	Condition at Start of Shift	Specific Comments if not O.K.
The Operator's Manual is in the Canister on the mower		
All Safety Decals are in place and legible		
The Mounting frame bolts are in place and tight		
There are no cracks in Draftbeam or Yolk		
The Draftbeam/Yolk connection bolts & pins are tight		
There are no cracks or holes in mower deck		
The Hydraulic motor mounting bolts are tight		
The mower head spindle housing is tight and lubricated		
There mower deck is clear of cut grass and debris		
The Skid shoes are in good condition & tight		
Chain Guards/Deflectors are in place & in good condition		
Blade carrier retaining nut is tight		
Blades are not chipped, cracked or bent		
Blade bolts are tight		
Transport locks are in good condition		
There are no leaking or damaged hoses		
There is no evidence of Hydraulic leaks		
The Hydraulic Oil level is full		
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		
Wheel lug nuts are tight		

Operators Signature:_____

DO NOT OPERATE an UNSAFE TRACTOR or FRONT END LOADER

TRACTOR PRE-OPERATION Inspection

Tractor ID#_____ Make_____

Date:_____ Shift_____

WARNING!

Before conducting the inspection, make sure the Tractor engine is off, all rotation has stop and the tractor is in the Park with the parking brake engaged. The Loader is resting on the ground (or is securely blocked up and supported) 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 ROPS Cab is in good condition		
The Seatbelt is in place and in good condition		
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		

Operators Signature:_____

DO NOT OPERATE an UNSAFE TRACTOR or FRONT END LOADER

MAINTENANCE SECTION

MAINTENANCE

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 zerks are clean before using. Debris injected into bearings, etc. with grease will cause immediate damage.

· DO NOT use a power grease gun to lubricate bearings. These require very small and exact amounts of lubrication. Refer to the detailed maintenance section for specific lubrication instructions. **Do Not over-grease bearings**.

· Lexan windows should be washed with mild soap or detergent and luke warm water, using a soft clean sponge or **soft cloth**. DO NOT use abrasive or alkaline cleaners or metal scrapers on lexan windows!

· Be alert to maintenance indicators such as the in-tank filter pressure gauge, hydraulic reservoir sight gauge, etc. Take the required action to correct any problems immediately.

· Release of energy from pressurized systems may cause inadvertent actuation of cylinders, or sudden release of compressed springs. Before disconnecting any hoses relieve pressure by shutting tractor off, setting cutter on ground and actuating lift valve handles.

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 hole leaks. Be sure all pressure is relieved whenever disconnecting lines. Be sure all connections are tight and hoses and lines are not damaged before applying pressure.

BREAK IN PERIOD

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

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

REGULAR MAINTENANCE

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

This symbol indicates a point that needs to be greased at an interval noted in the section below. Refer to the Detailed Maintenance section for further instructions on greasing. Copy and use the Daily Maintenance sheet located at the end of this section.

DAILY OR EVERY 8 HOURS

ITEM	SERVICE	COMMENTS
Drive Shaft Yoke, U-Joint & Stub Shaft	Grease	Grease as instructed in detailed maint. section
Pump Drive Shaft Coupler	Check and Lube	Insure drive shaft end play
Crankshaft Adapter	Check rubber grommets	Replace grommets if damaged or missing
Pivot Points	Lubricate	Inject grease until it appears at ends
Hydraulic Fittings	Check for leaks	Tighten when needed. Do Not use hands to check for leaks, see maint. Precautions
Knives	Check	Inspect for missing or damaged knives, change as needed
Knife mounting bolts (knife to disk)	Check	Torque 1 3/4" knife bolt to 2,000 Ft. Lb.
Spindle mounting bolts (spindle to deck)	Check	3/4"X2 1/2" Bolt-Torque to 331 Ft. Lb.
Belts	Check / Adjust	Check if broken, tighten as required
Main Frame and Deck	Check	Retorque bolts to torque specifications in this section
Hydraulic Fluid Level	Check	Add if required per fluid recommendations
Rear Flail Drive (if applicable) Bearing Flange and Shaft Coupler	Lubricate	Grease as instructed in detailed maint. section
Cutter Shaft and Ground Roller	Lubricate	Grease as instructed in detailed maint. section
Ground Roller Bearings	Lubricate	Severe conditions may Require every 150 hrs.
Cutter Shaft Bearings (Flail)	Lubricate	Approx. every 300 hrs. except severely dirty conditions

MAINTENANCE

WEEKLY OR EVERY 50 HOURS

ITEM	SERVICE	COMMENTS
In Tank Hyd. Fluid Filter **(10 micron filter)**	Change	Change after the first 50 hours only, then every 500 hours, yearly or if indicated by the restriction indicator.
In-Line High Pressure Filter **(10 micron filter)**	Change	Change after the first 50 hours only, then every 500 hours, yearly or if indicated by the restriction indicator.
Chain Coupling	Check	

MONTHLY OR EVERY 150 HOURS

Hydraulic Fluid Level	Check	Add as needed
Hyd. Tank Breather	Clean / Check / Replace	Clean or replace element as required

YEARLY OR EVERY 500 HOURS

Spindle Grease	Change	
Hyd. Tank Fluid	Change	
In Tank Hyd. Fluid Filter **(10 micron filter)**	Change	
In-Line HP Filter **(10 micron filter)**	Change or	Change when indicated by restriction indicator.
Hyd. Tank Breather	Change	

TROUBLESHOOTING

SYMPTOMS	CAUSE	REMEDY
Vibration	1. Loose bolts	1. Check all bolts and tighten to recommended torque specs.
	2. Cutter assembly Unbalanced	2a. Check for damaged blades, disc. or cutter shaft. Replace if needed. 2b. Check for wire, rope, etc. entangled in cutter assembly
Mower will not lift	1. Hyd. Fluid low	1. Check and refill Hyd Fluid
	2. Leaks in line	2. Tighten replace fittings and hoses
	3. Faulty relief valve	3. Check pressure in line. Line pressure in Control Valve should be at least 2500 P.S.I.
	4. Kinked or blocked	4. Clean or replace lines
	5. Faulty cylinder	5. Inspect, repair or replace cylinder
Mower will not start or run	1. Blown fuse	1. Check fuse between mower switch and ignition / replace
	2. Ball valves closed	2. Make sure valves are open
	3. Low oil level	3. Check Hyd. tank and fill
	4. Line leak	4. Check all fittings and lines, re-tighten or replace

SYMPTOMS	CAUSE	REMEDY
Mower will not start or run	1. Electronic solenoid faulty	1a. **Without** the tractor running, turn the mower switch to on. A low audible click should be heard if the solenoid is engaging the solenoid spool. If click is not heard, leave switch in on position and with a screwdriver or other steel object, touch the small nut on the end of the solenoid. If the metallic object is not attracted to the nut, check the fuse and wiring for an open circuit. If the object is attracted but no "click" is heard, replace the solenoid. 1b. 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. 1c. 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 contaminates and scratches. Clean parts or replace if scratched.
Motor runs but will not cut.	1. Belts 2. Tensioner	1. Inspect belts and pulleys. Replace belts and repair as needed. 2. Adjust tensioner nut until flat washer is flush with top of guide.
Motor turns slowly or not at all.	1. Contaminants restricting spool movement in valve body. 2. Suction lines obstructed 3. Low oil level	1. 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 contaminates and scratches. Clean parts or replace if scratched. 2. Check for kinkes or obstruction in suction hose. 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.

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

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

MAINTENANCE

TORQUE SPECIFICATIONS

Torque for Standard Fasteners

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

Torque values for 1/4 and 5/16-in series are in inch-pounds. All other torque values are in foot-pounds.
Torque values calculated from formula T=KDF, where

K = 0.15 for "lubricated" conditions
K = 0.17 for zinc plated and dry conditions
K = 0.20 for plain and dry conditions

D = Nominal Diameter
F = Clamp Load

Torque-Tension Relationship for Metric Fasteners

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

Clamp load calculated as 75% of the proof load for specified bolts.
All torque values are listed in foot-pounds
Torque values calculated from formula T=KDF, where

K = 0.15 for "lubricated" conditions
K = 0.17 for zinc plated, dry conditions
K = 0.20 for plain and dry conditions

D = Nominal Diameter
F = Clamp Load

* These are intended to be general specifications. See tractor operators or service manual for exact specifications for your unit.

LUBRICATION RECOMMENDATIONS

Description	Application	General Specification	Recomended Mobil Lubricant
Tractor Hydraulics	Reservoir	JD-20C MF M1135,M1141 FNHM2C134D (FNH201)	Mobilfluid 424
Mower Hydraulics	Reservoir		
Cold Temperatures 0 F Start-Up		ISO 46 Anti-Wear - Low Temp	Mobil DTE 15M
Normal Temperatures 10 F Start-Up		JD-20C MF M1135,M1141 FNH M2C134D (FNH201)	Mobilfluid 424
Normal Temperatures 15 F Start-Up		ISO 46 Anti-Wear	Mobil DTE 25
High Operating Temp. Above 90 F		ISO 100 Anti-Wear	Mobil DTE 18M
Flail Rear Gearbox	Grease	PAO Synthetic Extreme Pressure Gear Lube	Mobil SHC 75W-90 Mobil 1 Synthetic Gear
Cutter Shaft & Ground Roller Shaft (Flail)	Grease Gun	Lithium-Complex Extreme Pressure NLGI 2 - ISO 320	Mobilgrease CM-S
Drive Shaft Coupler (Flail and Rotary)	Grease Gun	Lithium-Complex Extreme Pressure NLGI2 - ISO 320	Mobilgrease CM-S
Drive Shaft Yoke, U-Joint & Stub Shaft	Grease Gun	Lithium-Complex Extreme Pressure NLGI 2 - ISO 320	Mobilgrease CM-S
Boom Swivel Boom Cylinder Pivots (Rotary & Flail Boom)	Grease Gun	Lithium-Complex Extreme pressure NLGI2 - ISO 320	Mobilgrease CM-S
Deck Boom Pivot & Deck Stop Adjustment (Rotary & Flail)	Grease Gun	Lithium-Complex Extreme pressure NLGI 2 - ISO 320	Mobilgrease CM-S
Deck Spindle (Rotary)	Grease Gun	Tiger Spindle Lubricant part number 06540000	Mobilith SHC 220

POLYCARBONATE CARE & MAINTENANCE

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

CLEANING THE SUPERCOAT™ HARD-COAT

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

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

- Aqueous Solutions of Soaps and Detergents

Windex[1]	Top Job[2]	Joy[2]	Mr. Clean[2]
Fantastik[3]	Formula 409[4]	Sumalight D12	Brucodecid

- Organic Solvents

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

- Alcohols

Methanol	Isopropyl

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

GRAFFITI REMOVAL

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

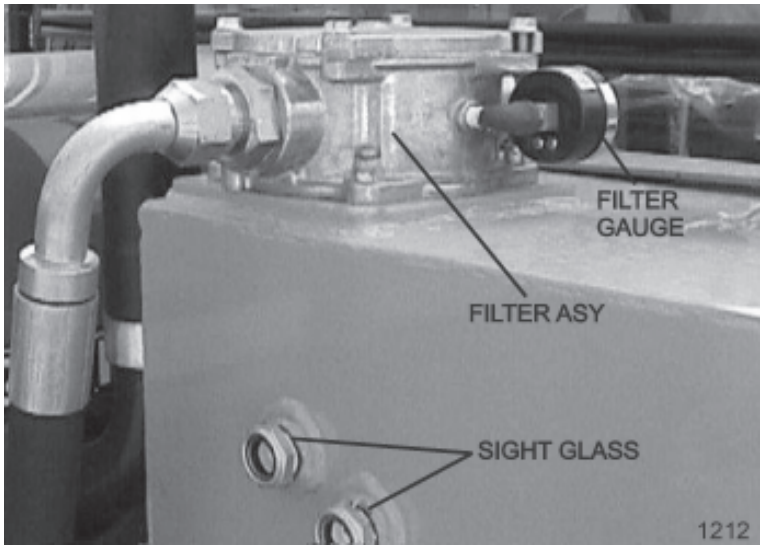
To remove labels, stickers, etc., the use of kerosene or VM&P naphtha are generally effective. When the solvent will not penetrate sticker material, apply heat (hair dryer) to soften the adhesive and promote removal.

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

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 allowed sufficient time to cool to ambient temperature. Use caution when removing the pressurized breather. Do not place face over opening when removing the breather.

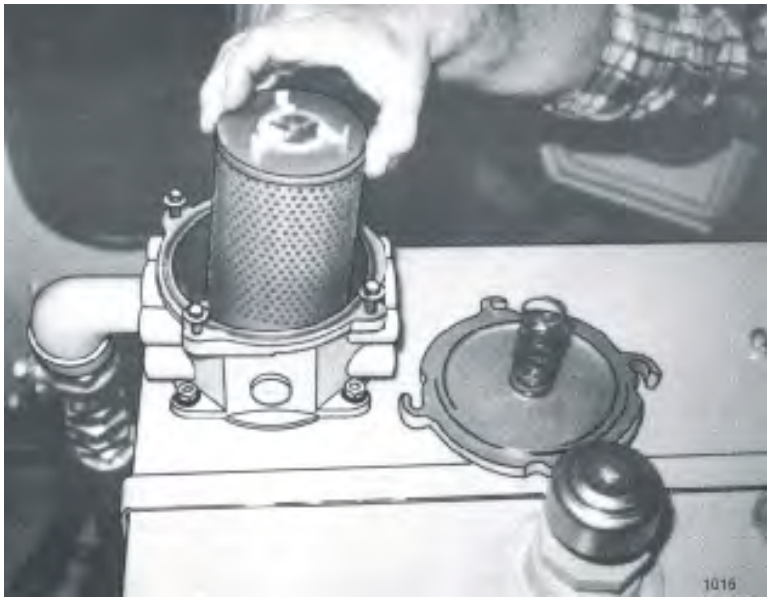
The reservior should be filled to the top of the lower sight glass on the side of the tank. Do not over-fill. The reservior has been over-filled when oil is visible in the upper sight glass. If tank has too much oil, the excess may be expelled through the pressurized breather.



DETAILED MAINTENANCE

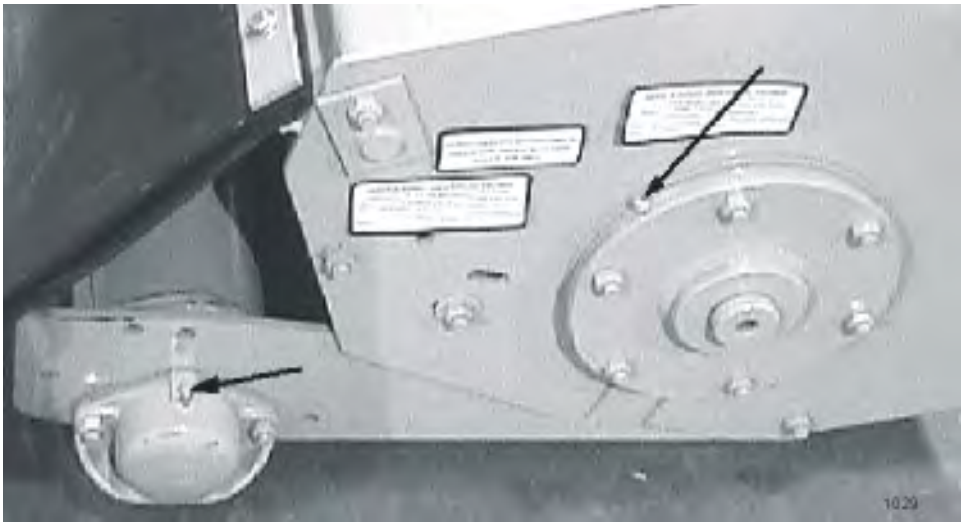
REPLACEING IN-TANK HYDRAULIC FILTER:

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.



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 pump in each bearing, using Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications. This is to be done with a standard grease gun daily or at **8 hour intervals**. **CAUTION: Over greasing may cause premature seal failure.**

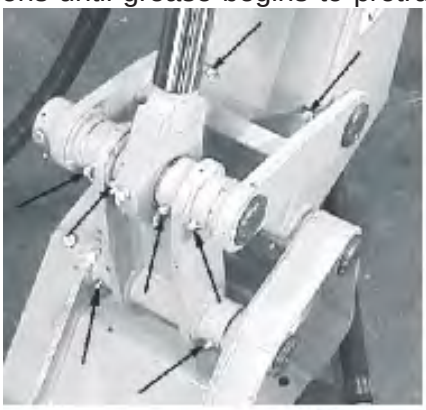


GREASING GROUND ROLLER SHAFT - FLAIL

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

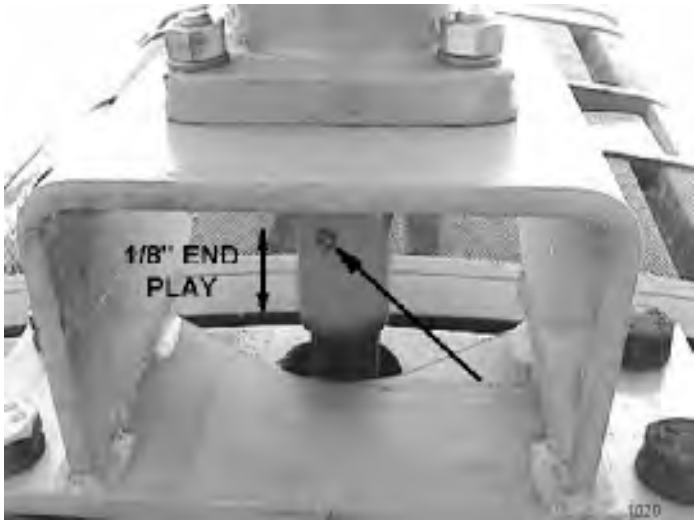
GREASING PIVOT POINTS - BOOM AND SWIVEL

Locate grease zerks (8) on deck pivot assembly, (2) on deck end of secondary boom, (2) at main / secondary boom joint, and (2) at swivel end of main boom. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications until grease begins to protrude from ends every 8 hours or daily.



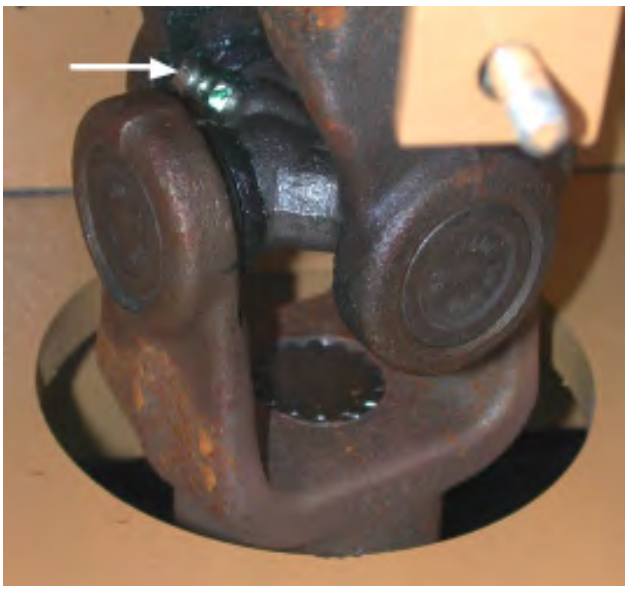
GREASING PUMP DRIVE SHAFT COUPLER

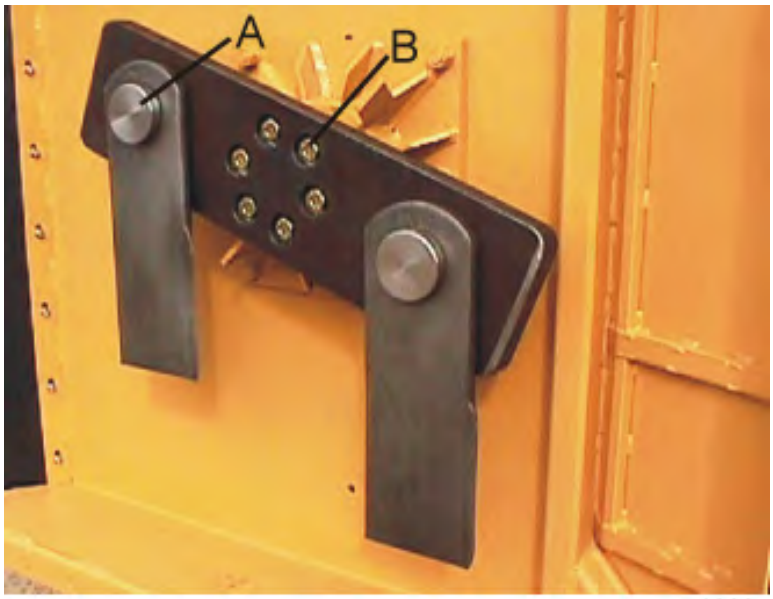
With engine stopped, ensure drive shaft alignment by grasping coupler and sliding back and forth. Coupler should slide freely with approximately 1/8" of end play. If coupler does not slide freely, inspect for loose pump mount bolts, or damaged or loose crank shaft adapter. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications into coupler until grease begins to protrude from ends. Grease daily or every 10 hours. Do not over grease.



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 untill grease appears at the seal. Grease daily or every 10 hours.

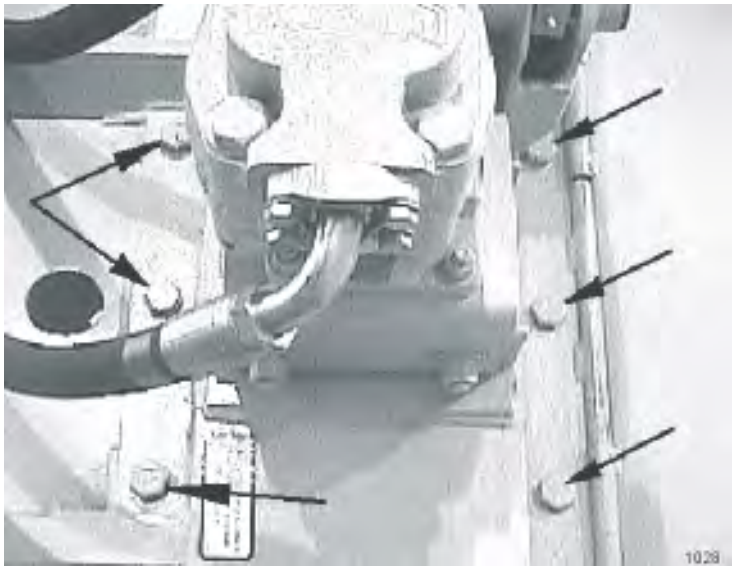




1300

-TIGHTENING KNIFE BOLTS AND DISK BOLTS - ROTARY MOWERS

Knife mounting bolts (A): Torque to 2000 Ft. Lbs., recheck daily.
Disk mounting bolts (B): Torque to 330 - 360 Ft. Lbs. wet (Loctite 271) or 500 Ft. Lbs. dry (plated bolts), recheck daily.



-TIGHTENING SPINDLE HOUSING BOLTS - ROTARY MOWERS

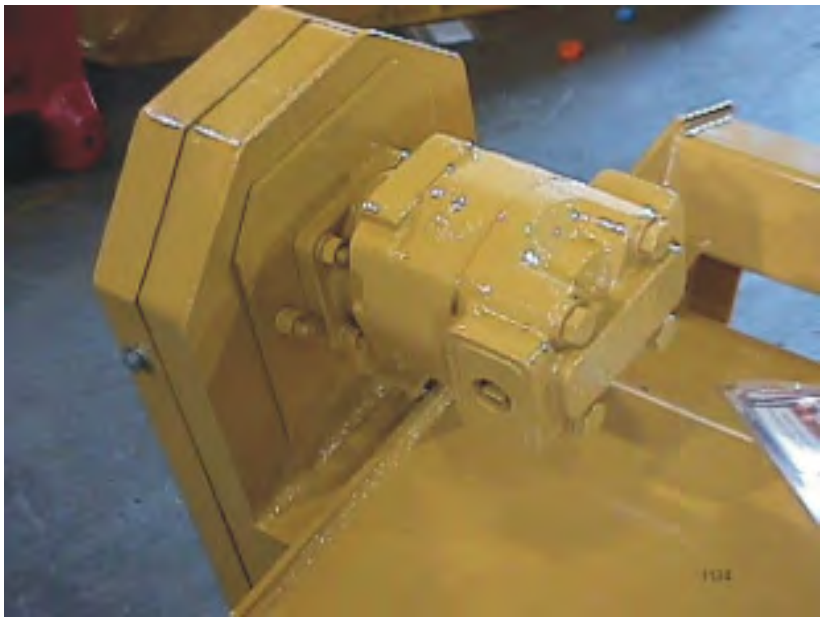
Torque Spindle mounting bolts (6) 331 Ft. Lbs., recheck daily.

GREASING SPINDLE

Locate grease fitting on inside of deck housing. Inject Tiger Spindle Lubricant, part number 06540000 into spindle housing. Fill with lubricant until lubricant weeps out of the top spindle seal. Lubricate spindle weekly or every 40 hours of use.

ADJUSTING / CHECKING BELT TENSION

To adjust belt tension or replace belts on flail cutter head, remove four bolts that secure belt cover and remove cover. Loosen the two bolts on the motor mounting plate. Adjust the motor assy. up and down to proper tension and retighten mounting plate bolts. (NOTE: Location of adjustment nuts may vary on flail cutter heads.)
Be sure to replace the belt cover BEFORE operating mower!



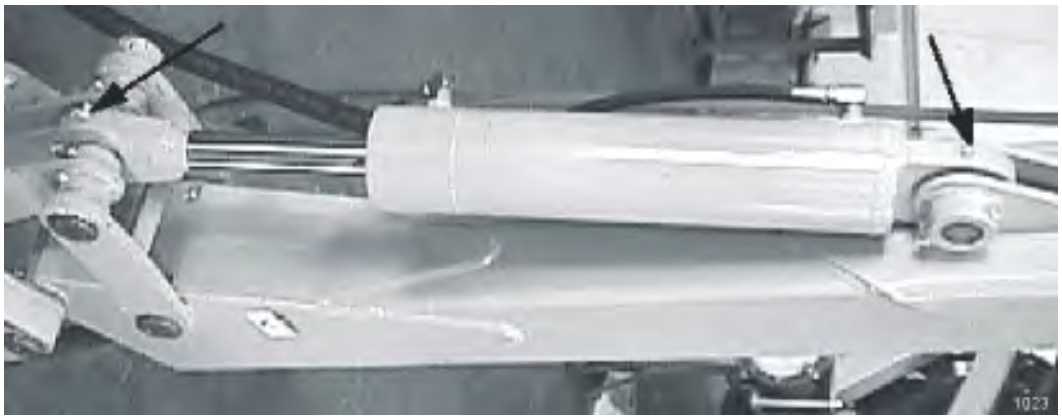
GREASING THE BOOM SWIVEL

Locate the zerks on the main swivel boss (2), main boom pivot boss (2) and on both ends of the boom swivel cylinder. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications until grease begins to protrude from ends.

1033

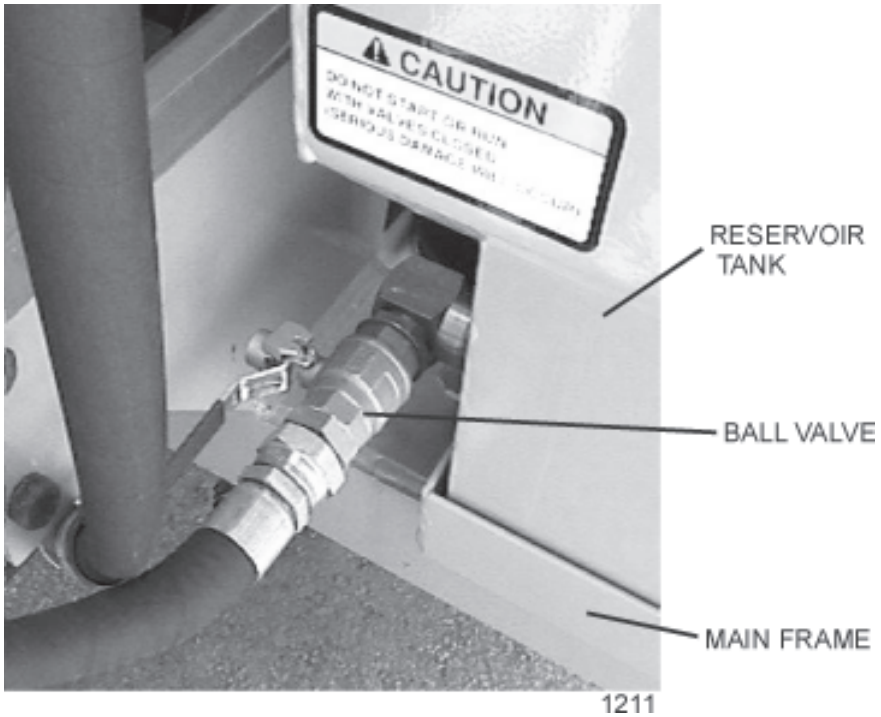
GREASING BOOM CYLINDER(S) PIVOT POINTS

Locate the zerk on the butt end tang of cylinder and on rod end tang. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications until grease begins to protrude from ends. This procedure is to be used on the main boom cylinder, secondary boom cylinder, deck pivot, and swivel cylinders daily or at 8 hour intervals.



BALL VALVES

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



REPLACING HAMMER KNIVES

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. The knives should not be welded on for any reason. When replacing knives, replace bushings, bolts and locknuts.

Apply Loctite “271” to threads and install the locking hex nuts so that the flat face of the nut is towards the knife. Torque the hex nut to 176 Ft. Lbs.

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

SABER FLAIL CUTTER SHAFT BEARING INSTALLATION

1. Clean both ends of cutter shaft.
2. Grease bearing assemblies by hand including the seal, and insert threaded end of taper lock sleeve into the seal side of bearing assemblies.
3. Insert drive end of cutter shaft through side plate of bonnet assembly, slide other end into slot of opposite side plate, and center shaft in bonnet assembly.
4. CAUTION: Carefully slide bearing assemblies (seal side first) over end of shaft. Install retaining washer and nut onto threaded end of taper lick sleeve, but do not tighten. DO NOT SUPPORT THE CUTTER SHAFT WITH THE BEARING ASSEMBLIES AT THIS TIME. SUPPORT THE CUTTER SHAFT AT THE DRUM. Ensure that cutter shaft is centered in bonnet assembly, then carefully slide bearing assemblies into place against bonnet side plate. (Note: the seal at inside of bearing assembly must slide over 2 1/4” O.D. seal surface at end of shaft drum.) Temporarily bolt the bearing assemblies to the side plate with two (2) bolts and standard nuts.
5. Tighten taper lock nuts until taper lock sleeves are snug to shaft and inside of bearings, and nuts and retaining washers are snug against bearings. Then turn nuts another 1/4 turn plus enough to align notch in nuts with a locking tab on the retaining washer. Bend locking tab into notch of nut.
6. Apply grease to seal of outer bearing cover assemblies.
7. Remove the two (2) nuts securing the bearing assemblies. Carefully install outer bearing cover assemblies (with integral seals), and secure with six (6) bolts and lock nuts.
8. Grease bearings with grease gun after assembly is completed.

DAILY MAINTENANCE SCHEDULE

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

_____ Pump Drive Shaft: If required with drive shaft / coupler check for end play 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.

_____ Knife Bolts(1 3/4"): Check/Torque to 2,000 Ft Lb.

_____ Disk Bolts/Spindle Bolts(3/4" X 2"): Check/Torque to 331 Ft Lb.

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

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

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

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

_____ Cutter Shaft and Ground Roller: Grease as instructed in the detailed maintenance section

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

Maintenance Section

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

PARTS SECTION

PARTS ORDERING GUIDE

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

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

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

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

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

5. Some parts may be unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a purchase order.

6. The manufacturer reserves the right to change prices without prior notice.

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

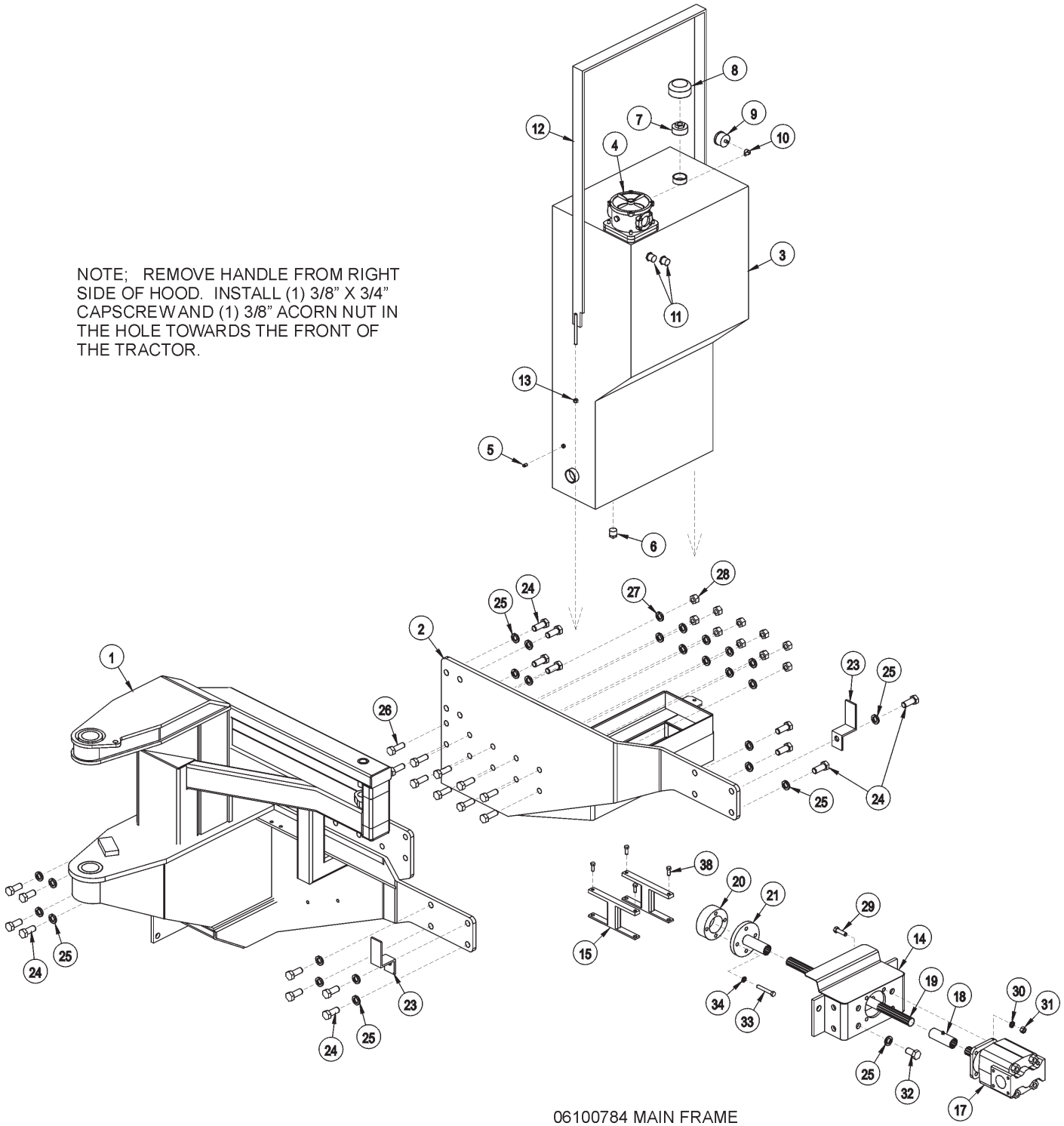
Direct any questions regarding parts to:

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

PARTS SECTION TABLE OF CONTENTS

TRACTOR MOUNT KIT - MAIN FRAME

NOTE; REMOVE HANDLE FROM RIGHT SIDE OF HOOD. INSTALL (1) 3/8" X 3/4" CAPSCREW AND (1) 3/8" ACORN NUT IN THE HOLE TOWARDS THE FRONT OF THE TRACTOR.

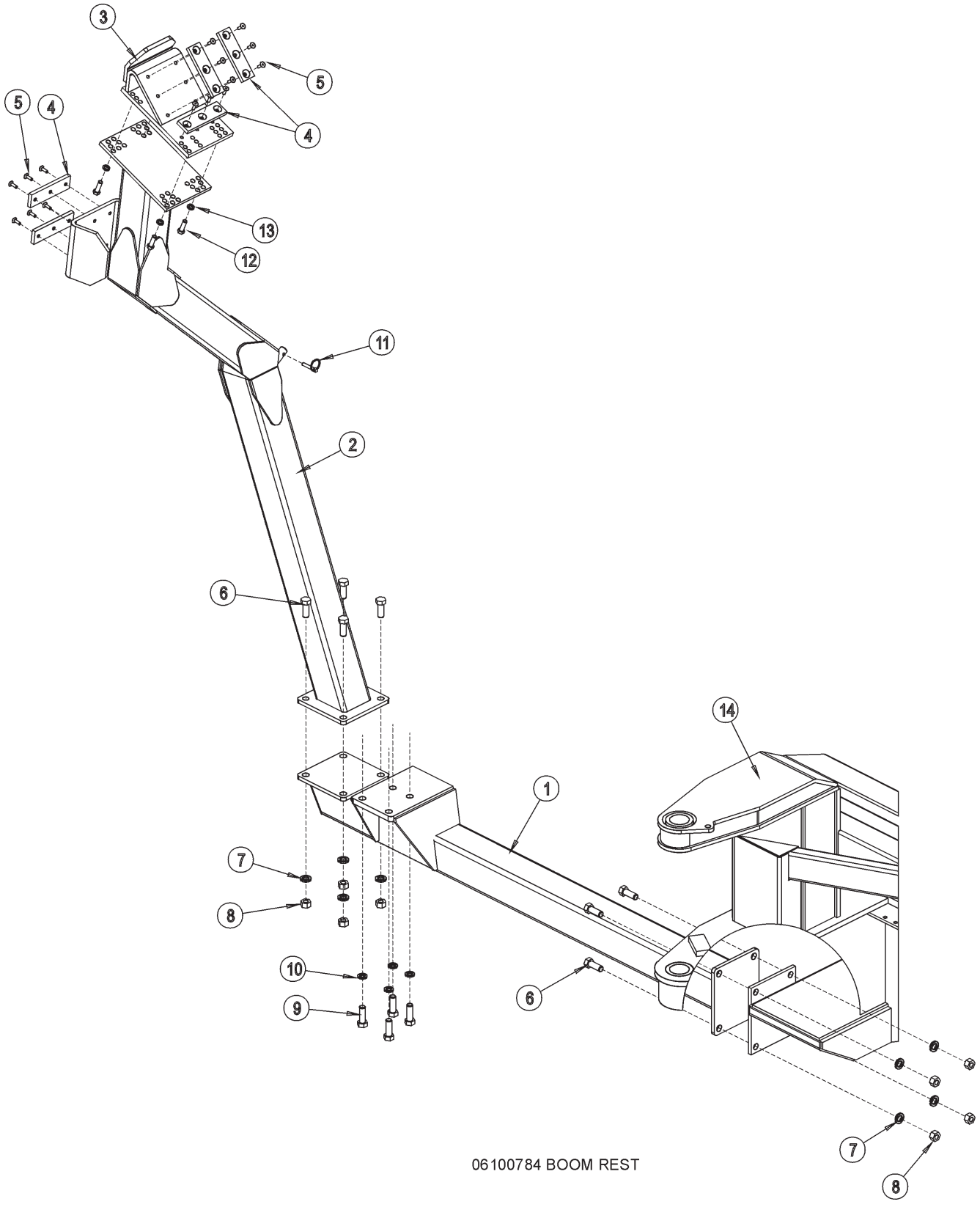


06100784 MAIN FRAME

TRACTOR MOUNT KIT - MAIN FRAME

ITEM	PART NO.	QTY.	DESCRIPTION
1	32762	1	MAIN FRAME
2	32761	1	MAIN FRAME - RESERVOIR TANK MOUNT
	28193	**AVAIL.**	**RESERVOIR TANK ASSY.**
3	28192D	1	RESERVOIR TANK
4	6T0640	1	IN-TANK FILTER ASSY.
5	6T4197	1	PIPE PLUG
6	6T4200	1	PIPE PLUG
7	33700	1	REDUCER BUSHING
8	31004	1	TANK BREATHER
9	6T0649	1	FILTER GAUGE
10	TF4888	1	STREET ELBOW
11	6T1209	2	TANK SIGHT GLASS
12	28191B	1	TANK STRAP
13	21627	2	NYLOCK NUT - 3/8"
14	32408	1	PUMP MOUNTING BRACKET
15	32411	2	BATTERY LIFT BRACKET
17	23152	1	PUMP
18	6T0375B	1	DRIVE SHAFT COUPLER W/ ZERK
19	34280	1	PUMP DRIVE SHAFT
20	32410	1	DRIVE SHAFT SPACER
21	6T0379	1	CRANKSHAFT ADAPTER
23	32382	2	HOSE BRACKET
24	31731	16	CAPSCREW - 20MM X 50MM
25	24881	20	LOCKWASHER - 20MM
26	21833	10	CAPSCREW - 3/4" X 2 1/4"
27	21993	10	LOCKWASHER - 3/4"
28	21825	10	HEX NUT - 3/4"
29	21732	4	CAPSCREW - 1/2" X 1 3/4"
30	21990	4	LOCKWASHER - 1/2"
31	21725	4	HEX NUT - 1/2"
32	24860	4	CAPSCREW - 20MM X 40MM
33	21688	4	CAPSCREW - 7/16" X 3 1/4"
34	21989	4	LOCKWASHER - 7/16"
38	21630	4	CAPSCREW - 3/8" X 1"
39	6T1823	24	ZIP TIE WHERE NEEDED - NOT PICTURED
40	6T1822	36	ZIP TIE WHERE NEEDED - NOT PICTURED
41	21629	1	CAPSCREW - 3/8" X 3/4" (NOT PICTURED - FOR HOOD)
42	32754	1	ACORN NUT - 3/8" (NOT PICTURED - FOR HOOD)

TRACTOR MOUNT KIT - BOOM REST

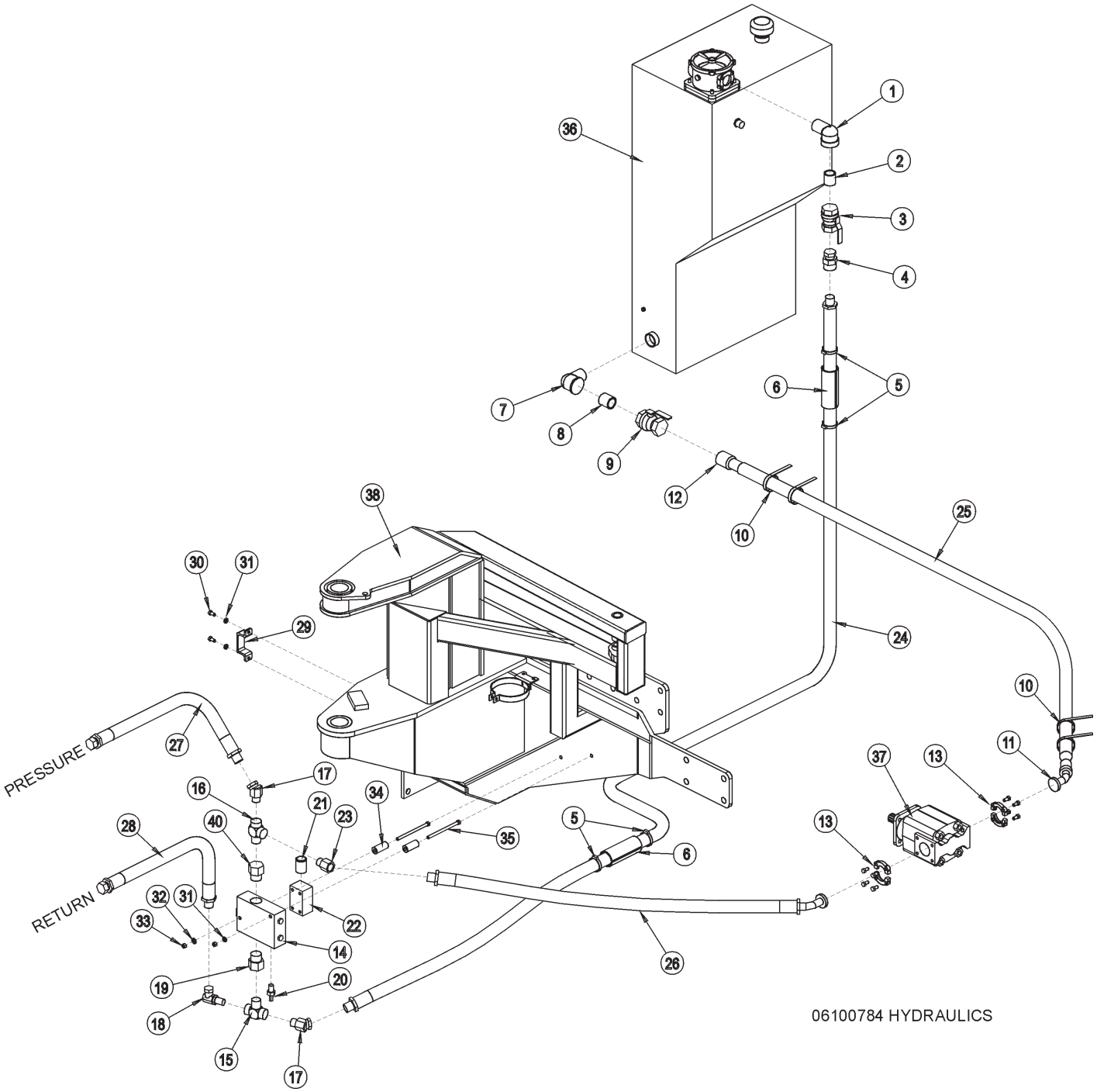


06100784 BOOM REST

TRACTOR MOUNT KIT - BOOM REST

ITEM	PART NO.	QTY.	DESCRIPTION
1	32764	1	AXLE BRACE
2	32776	1	BOOM REST
3	32777	1	BOOM REST TOP BRACKET
4	32685	5	WEAR PAD
5	28734	15	CAPSCREW - 3/8" X 1" BEVELED HEAD
6	21832	8	CAPSCREW - 3/4" X 2"
7	21993	8	LOCKWASHER - 3/4"
8	21825	8	HEX NUT - 3/4"
9	22463	4	CAPSCREW - 18MM X 55MM
10	32584	4	LOCKWASHER - 18MM
11	TF1143	1	LYNCH PIN - SECURES 3-POINT ARM TO BOOM REST
12	21730	4	CAPSCREW - 1/2" X 1 1/4"
13	21990	4	LOCKWASHER - 1/2"
14	**REF.**	*****	**MAIN FRAME - SEE MN. FRM. PARTS**

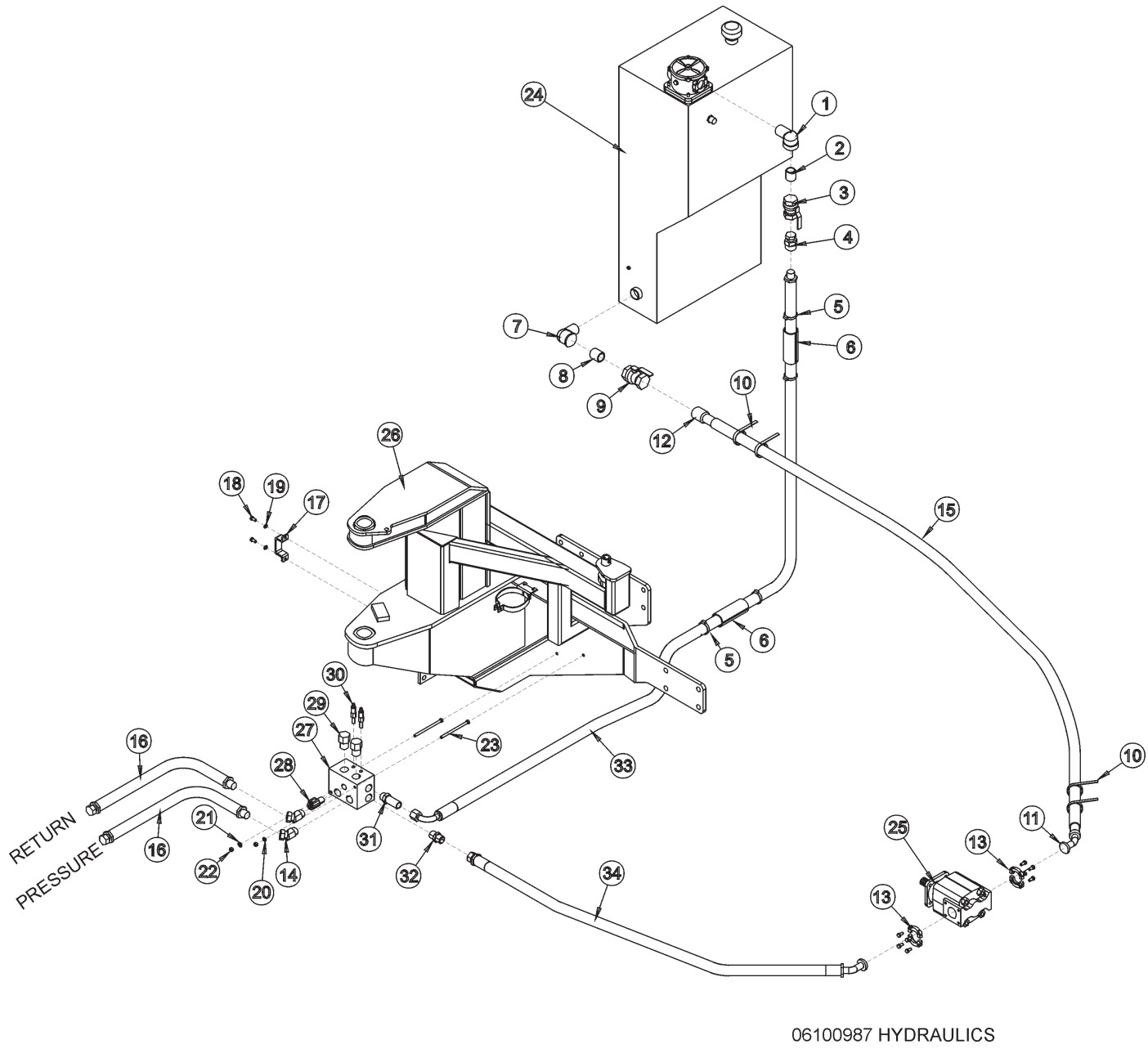
TRACTOR MOUNT KIT - HYDRAULICS



TRACTOR MOUNT KIT - HYDRAULICS

ITEM	PART NO.	QTY.	DESCRIPTION
1	6T3601	1	STREET ELBOW
2	6T3825	1	NIPPLE
3	6T4237	1	BALL VALVE
4	33458	1	UNION 1 1/4”
5	6T1822	36	ZIP TIE 8”
6	6T3200	2	SPLIT HOSE - Secure with zip ties
7	6T3612	1	STREET ELBOW
8	6T3801	1	NIPPLE
9	6T4238	1	BALL VALVE
10	6T3018	4	BANDIT CLAMPS
11	22631	1	FLANGE
12	6T3800	1	NIPPLE
13	TF4852	2	FLANGE KIT
14	33556	1	SOLENOID VALVE ASY
15	33256	1	TEE BRANCH
16	33553	1	TEE RUN
17	33554	2	ELBOW 45
18	33260	1	ELBOW 90
19	33424	2	ADAPTER 1 1/4”
20	6T3910	1	RELIEF VALVE
21	6T3906	1	SOLENOID
22	6T3907	1	SOLENOID BLOCK
23	33555	1	ADAPTER 1”
24	33571	1	HOSE 1” X 68”
25	22897	5'	HOSE 1 1/2” SUCTION
26	33550	1	HOSE 1” X 65”
27	33545	1	HOSE 1” X 84”
28	33546	1	HOSE 1” X 94”
29	32704	1	HOSE CLAMP
30	21629	2	CAPSCREW - 3/8" X 3/4"
31	21988	3	LOCKWASHER - 3/8"
32	6T2665	1	STAR LOCKWASHER - 3/8"
33	21625	2	HEX NUT - 3/8"
34	31290	2	SPACER
35	32694	2	CAPSCREW - 3/8" X 6"
36	*	**REF.**	**RESERVOIR TANK - REFER TO MAIN FRAME PARTS**
37	*	**REF.**	**PUMP - REFER TO MAIN FRAME PARTS**
38	*	**REF.**	**MAIN FRAME - REFER TO MAIN FRAME PARTS**
39	6T1823	24	ZIP TIE 14” (NOT SHOWN)
40	32867	1	ADAPTER 1 1/4” MOR

TRACTOR MOUNT KIT - HYDRAULICS, BRAKE VALVE

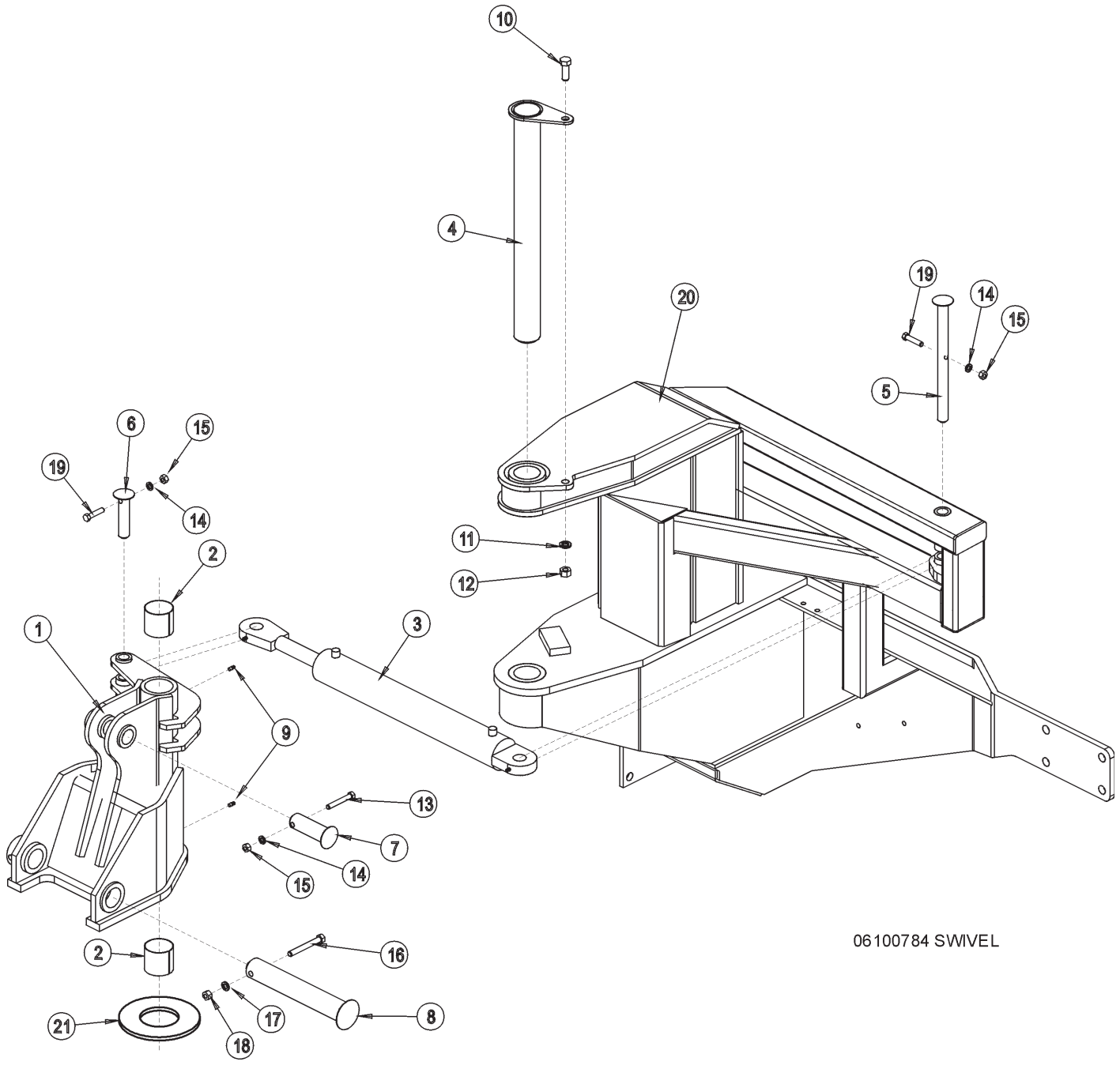


06100987 HYDRAULICS

TRACTOR MOUNT KIT - HYDRAULICS, BRAKE VALVE

ITEM	PART NO.	QTY.	DESCRIPTION
1	6T3601	1	STREET ELBOW
2	6T3825	1	NIPPLE
3	6T4237	1	BALL VALVE
4	33458	1	UNION 1 1/4”
5	6T1822	36	ZIP TIE 8”
6	6T3200	2	SPLIT HOSE - Secure with zip ties
7	6T3612	1	STREET ELBOW
8	6T3801	1	NIPPLE
9	6T4238	1	BALL VALVE
10	6T3018	4	BANDIT CLAMPS
11	22631	1	FLANGE
12	6T3800	1	NIPPLE
13	TF4852	2	FLANGE KIT
14	33554	2	ELBOW 1”MORB X 1”MJIC45
15	22897	5'	HOSE 1 1/2” SUCTION
16	33546	2	HOSE 1” X 94”
17	32704	1	HOSE CLAMP
18	21629	2	CAPSCREW - 3/8" X 3/4"
19	21988	2	LOCKWASHER - 3/8”
20	21988	1	LOCKWASHER - 3/8"
21	6T2665	1	STAR LOCKWASHER - 3/8"
22	21625	2	HEX NUT - 3/8"
23	32694	2	CAPSCREW - 3/8" X 6"
24	*	REF.	**RESERVOIR TANK - REFER TO MAIN FRAME PARTS**
25	*	REF.	**PUMP - REFER TO MAIN FRAME PARTS**
26	*	REF.	**MAIN FRAME - REFER TO MAIN FRAME PARTS**
	34116	AVAIL.	**BRAKE VALVE ASSEMBLY, 3500PSI RELIEF**
27	34092	1	VALVE BLOCK
28	34093	1	SOLENOID
29	34094	2	LOGIC ELEMENT
30	34091	1	RELIEF, 2600 PSI
**	34090	1	RELIEF, 3500 PSI
31	32869	1	ADAPTER
32	33555	1	ADAPTER 1”MORB X MJIC
33	34216	1	HOSE, 1” x 69”
34	33547	1	HOSE, 1” x 66”
35	6T1823	24	ZIP TIE 14” (NOT SHOWN)

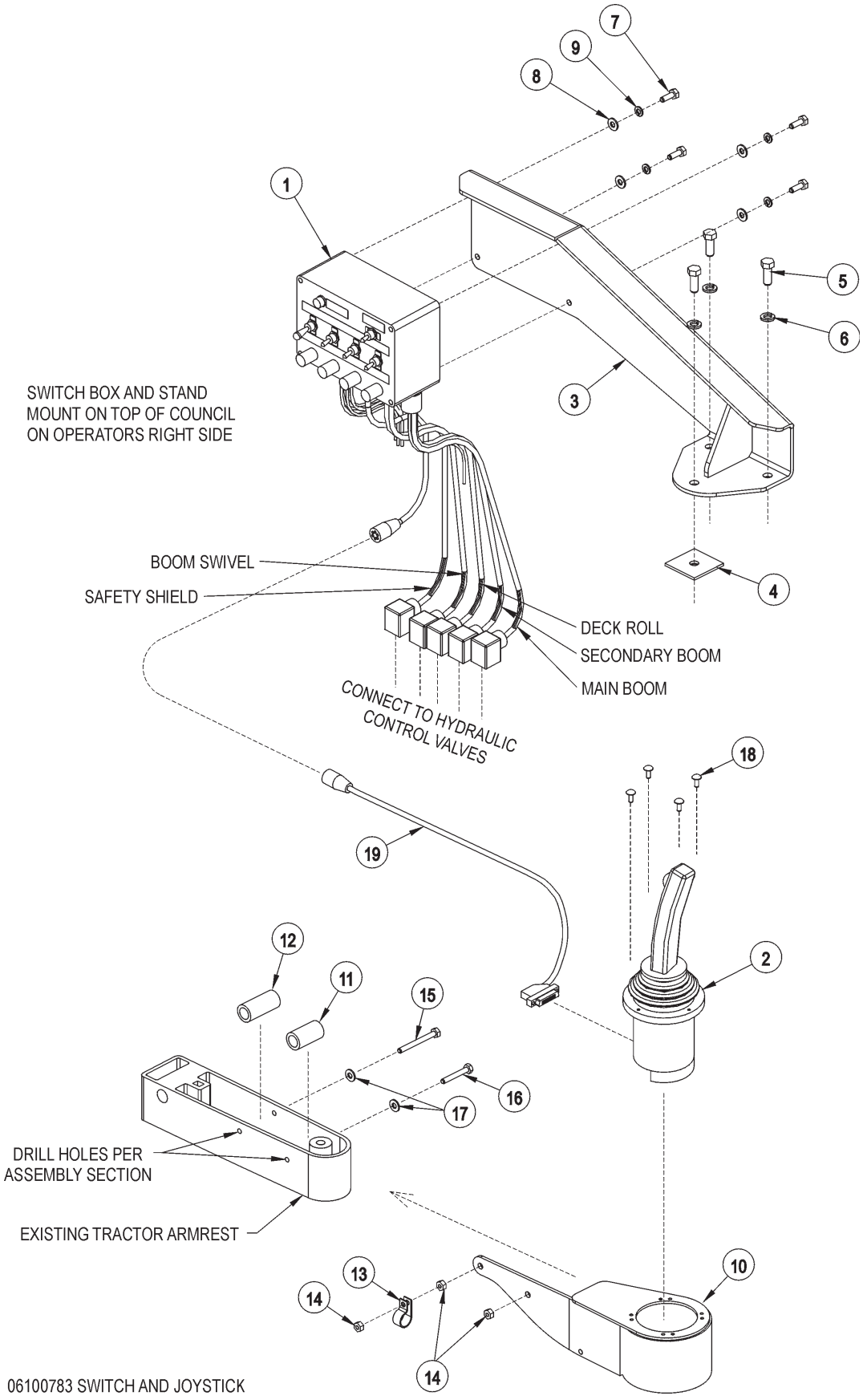
TRACTOR MOUNT KIT - BOOM SWIVEL



TRACTOR MOUNT KIT - BOOM SWIVEL

ITEM	PART NO.	QTY.	DESCRIPTION
1	32376	1	BOOM SWIVEL
2	32322	2	BEARING
3	06501001	1	CYLINDER
4	32381	1	PIN
5	33710	1	PIN
6	32380	1	PIN
7	32372	1	PIN
8	32378	1	PIN
9	6T3211	2	GREASE ZERK
10	21782	1	CAPSCREW - 5/8" x 1 3/4"
11	21992	1	LOCKWASHER - 5/8"
12	21775	1	HEX NUT - 5/8"
13	21687	1	CAPSCREW - 7/16" X 3"
14	21989	3	LOCKWASHER - 7/16"
15	21675	3	HEX NUT - 7/16"
16	21741	1	CAPSCREW - 1/2" X 4"
17	21990	1	LOCKWASHER - 1/2"
18	21725	1	HEX NUT - 1/2"
19	21683	2	CAPSCREW - 7/16" X 2"
20	*	REF.	**MAIN FRAME - REFER TO MAIN FRAME PARTS**
21	06520250	1	BEARING

SWITCH BOX AND JOYSTICK

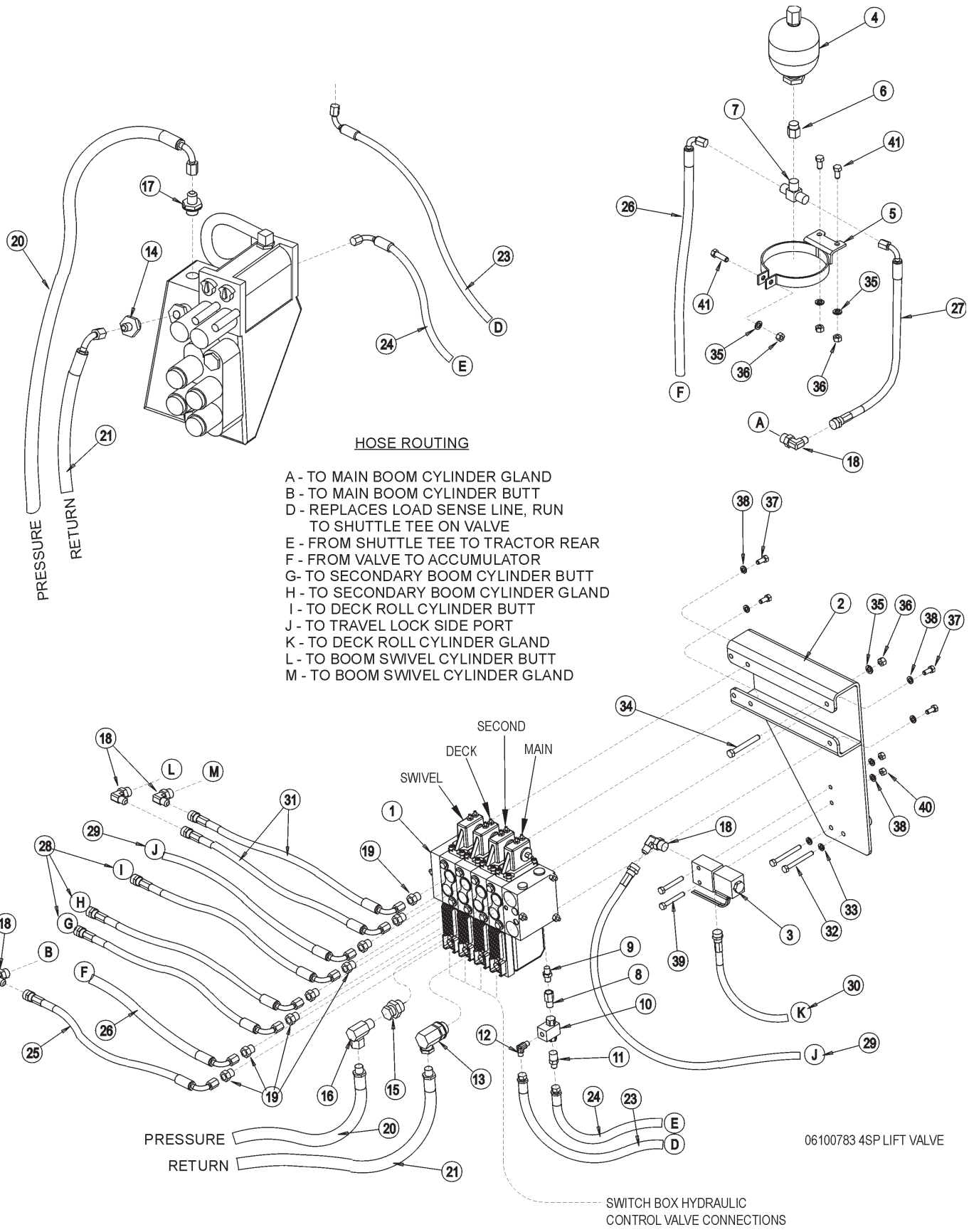


06100783 SWITCH AND JOYSTICK

SWITCH BOX AND JOYSTICK

ITEM	PART NO.	QTY.	DESCRIPTION
1	32498	1	SWITCH BOX
2	33691	1	JOYSTICK CONTROL
3	32772	1	SWITCH BOX MOUNTING BRACKET
4	32774	1	REINFORCEMENT PLATE
5	21630	3	CAPSCREW - 3/8" X 1"
6	21988	3	LOCKWASHER - 3/8"
7	21529	4	CAPSCREW - 1/4" X 3/4"
8	22014	4	FLATWASHER - 1/4"
9	21986	4	LOCKWASHER - 1/4"
10	33632	1	ARMREST BASE BRACKET
11	33633	1	FRONT SPACER 3/4” x 1 3/8”
12	33634	1	REAR SPACER 3/4” x 1 11/16”
13	33604	1	CABLE CLAMP
14	21527	3	NYLOCK NUT 1/4”
15	21536	1	CAPSCREW 1/4” X 2 1/2”
16	21535	1	CAPSCREW 1/4” X 2 1/4”
17	22014	2	FLATWASHER 1/4”
18	32829	4	CAPSCREW 10-32 X 3/4”
19	33693	1	CABLE - JOYSTICK 4’
20	33518	1	FUSE 10AMP NOT SHOWN

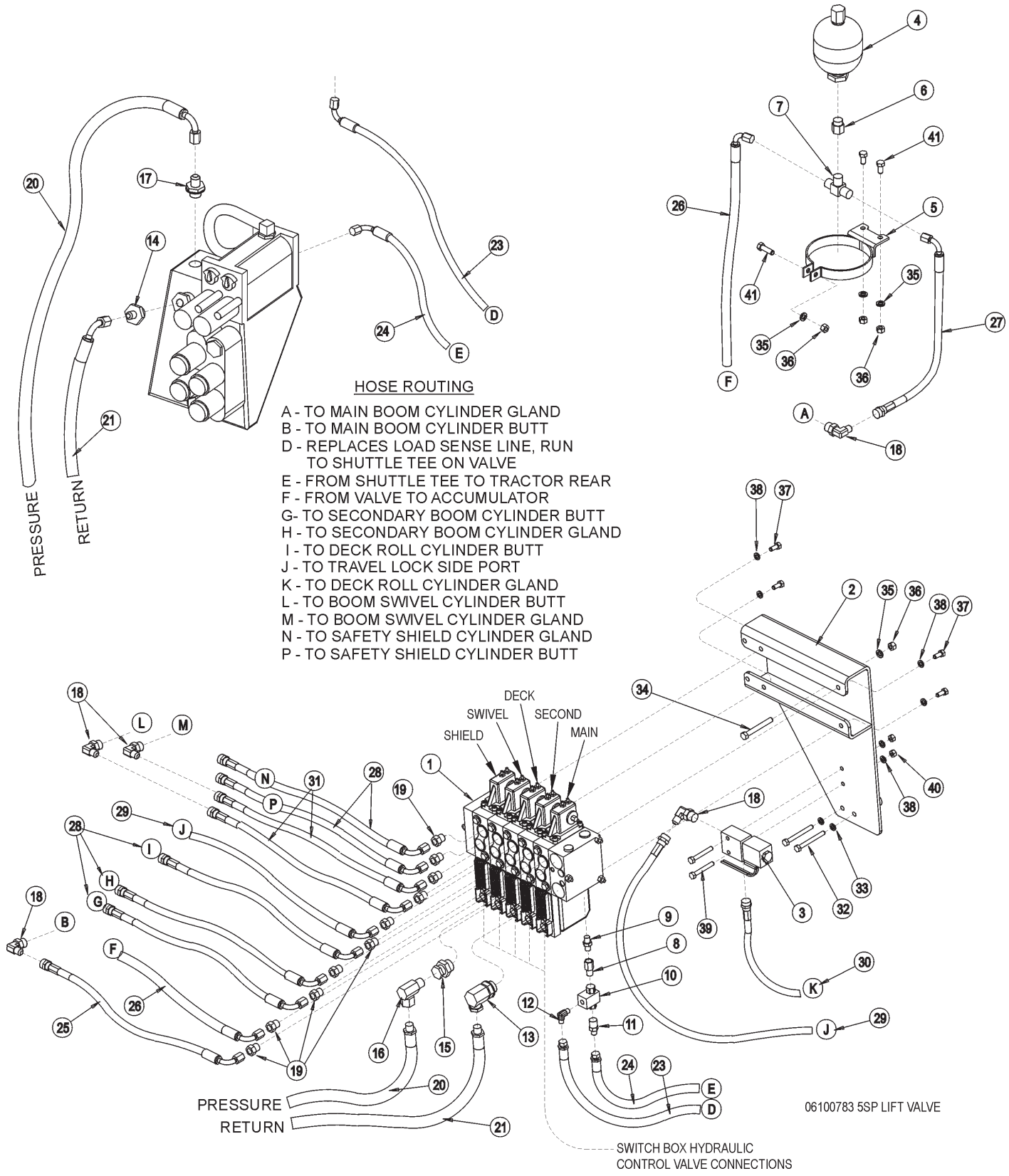
LIFT VALVE,4-SP - SABER



LIFT VALVE, 4-SP - SABER

ITEM	PART NO.	QTY.	DESCRIPTION
1	32001	1	ELECTRONIC VALVE - 4 SPOOL
2	32770	1	VALVE MOUNTING PLATE
3	31328	1	TRAVEL LOCK VALVE
4	24300	1	ACCUMULATOR
5	23888	1	ACCUMULATOR MOUNTING BRACKET
6	28917	1	ADAPTER 1/2”
7	32821	1	TEE 3/8”
8	33392	1	ADAPTER 5/16”
9	33652	1	UNION 1/4”
10	33388	1	SHUTTLE TEE 1/4”
11	33389	1	UNION 1/4”
12	33646	1	ELBOW 1/4”
13	33648	1	SWIVEL 3/4”
14	33645	1	ADAPTER 5/8”
15	33292	1	ADAPTER 3/4”
16	33293	1	SWIVEL 1/2”
17	33463	1	ADAPTER
18	32810	5	ELBOW 1/2”
19	32807	8	ADAPTER 5/8”
20	33649	1	HOSE -PRESSURE 1/2” X 50”
21	33647	1	HOSE -RETURN 5/8” X 47”
23	33651	1	HOSE -REPLACE EXISTING LOAD SENSE LINE 1/4” X
33”	24	33565	1 HOSE 1/4” X 30”
25	32814	1	HOSE 3/8” X 178”
26	32812	1	HOSE 3/8” X 107”
27	32813	1	HOSE 3/8” X 117”
28	32815	3	HOSE 3/8” X 148”
29	32811	1	HOSE 3/8” X 16”
30	32817	1	HOSE 3/8” X 143”
31	32816	2	HOSE 3/8 X 130”
32	22197	2	CAPSCREW - 8MM X 90MM
33	6T2619	2	LOCKWASHER - 8MM
34	21638	1	CAPSCREW - 3/8" X 3"
35	21988	4	LOCKWASHER - 3/8"
36	21625	4	HEX NUT - 3/8"
37	21579	4	CAPSCREW - 5/16" X 3/4"
38	21987	6	LOCKWASHER - 5/16"
39	21585	2	CAPSCREW - 5/16" X 2 1/4"
40	21575	2	HEX NUT - 5/16"
41	21631	3	CAPSCREW - 3/8" X 1 1/4"

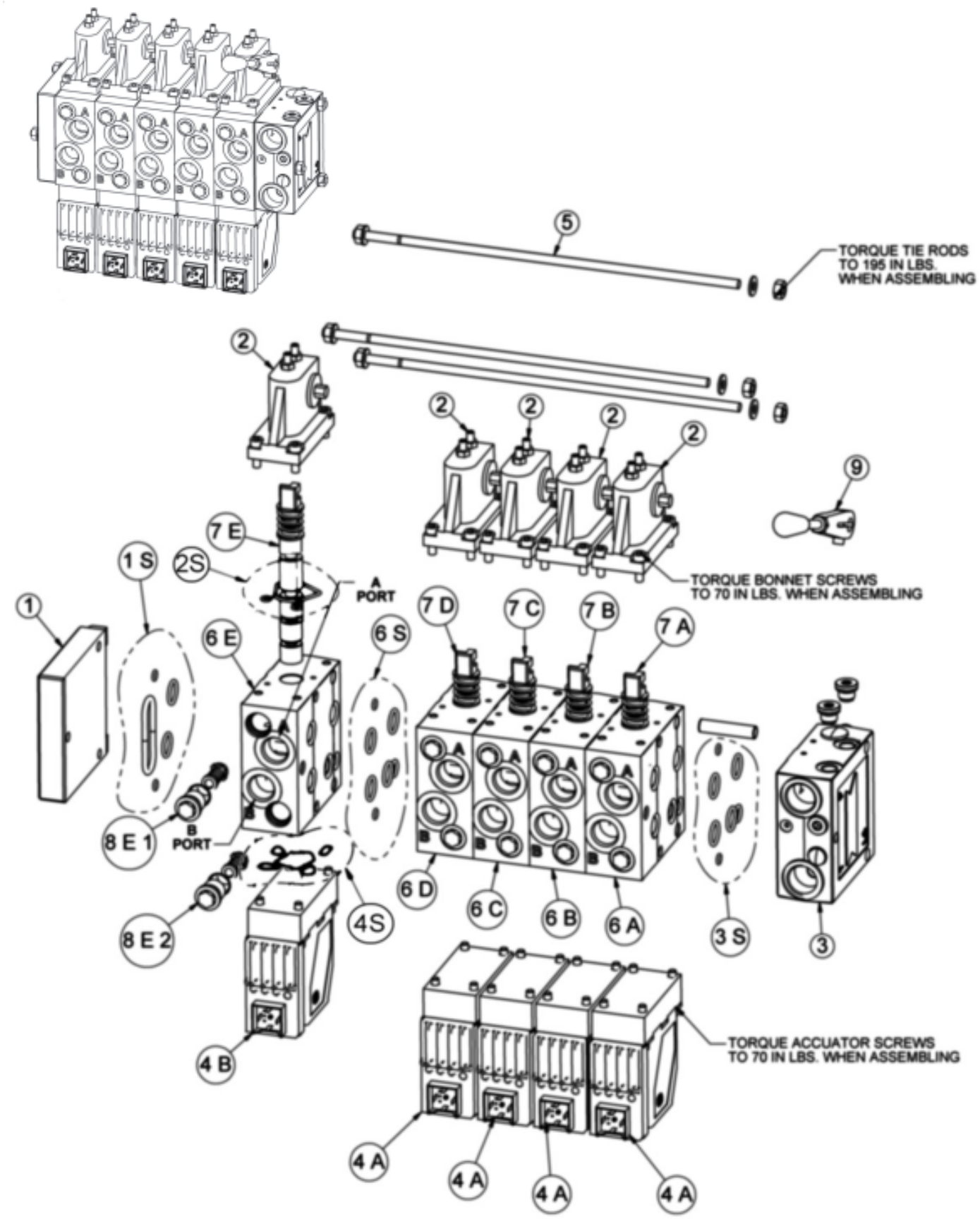
LIFT VALVE,5-SP - SABER



LIFT VALVE, 5-SP - SABER

ITEM	PART NO.	QTY.	DESCRIPTION
1	33291	1	ELECTRONIC VALVE - 5 SPOOL
2	32770	1	VALVE MOUNTING PLATE
3	31328	1	TRAVEL LOCK VALVE
4	24300	1	ACCUMULATOR
5	23888	1	ACCUMULATOR MOUNTING BRACKET
6	28917	1	ADAPTER 1/2”
7	32821	1	TEE 3/8”
8	33392	1	ADAPTER 5/16”
9	33652	1	UNION 1/4”
10	33388	1	SHUTTLE TEE 1/4”
11	33389	1	UNION 1/4”
12	33646	1	ELBOW 1/4”
13	33648	1	SWIVEL 3/4”
14	33645	1	ADAPTER 5/8”
15	33292	1	ADAPTER 3/4”
16	33293	1	SWIVEL 1/2”
17	33463	1	ADAPTER
18	32810	5	ELBOW 1/2”
19	32807	10	ADAPTER 5/8”
20	33649	1	HOSE -PRESSURE 1/2” X 50”
21	33647	1	HOSE -RETURN 1/2” X 47”
23	33651	1	HOSE -REPLACE EXISTING LS LINE 1/4” X 33”
24	33565	1	HOSE 1/4” X 30”
25	32814	1	HOSE 3/8” X 178”
26	32812	1	HOSE 3/8” X 107”
27	32813	1	HOSE 3/8” X 117”
28	32815	5	HOSE 3/8” X 148”
29	32811	1	HOSE 3/8” X 16”
30	32817	1	HOSE 3/8” X 143”
31	32816	2	HOSE 3/8” X 130”
32	22197	2	CAPSCREW - 8MM X 90MM
33	6T2619	2	LOCKWASHER - 8MM
34	21638	1	CAPSCREW - 3/8" X 3"
35	21988	4	LOCKWASHER - 3/8"
36	21625	4	HEX NUT - 3/8"
37	21579	4	CAPSCREW - 5/16" X 3/4"
38	21987	6	LOCKWASHER - 5/16"
39	21585	2	CAPSCREW - 5/16" X 2 1/4"
40	21575	2	HEX NUT - 5/16"
41	21631	3	CAPSCREW - 3/8" X 1 1/4"

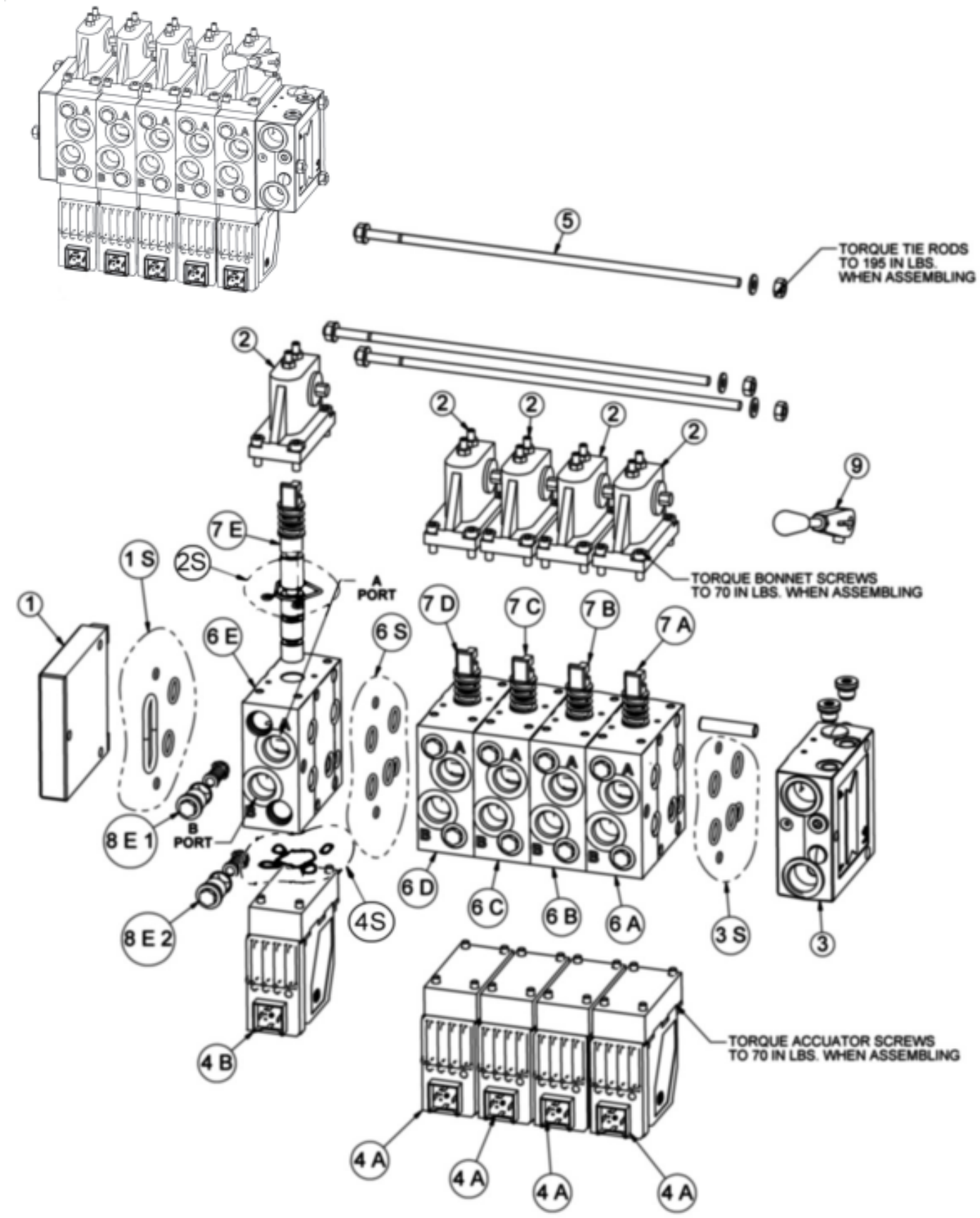
4SP DANFOSS - LIFT VALVE (32001)



4SP DANFOSS - LIFT VALVE (32001)

ITEM	PART NO.	QTY.	DESCRIPTION
	32001		VLV,4SP,32PVG
1	06502074	1	END PLATE
1S	06505013	1	END PLATE SEAL KIT
2	*	5	BONNET
2S	06505042	1	BONNET SEAL KIT
2A	33459	1	MAIN BOOM BONNET
2B	06502073	1	SECONDARY BOOM BONNET
2B	06502073	1	DECK ROLL BONNET
2B	06502073	1	BOOM SWIVEL BONNET
2B	NA	*	NA
3	34308	1	INLET SECTION
3S	06505013	1	INLET SECTION SEAL KIT
4	*	5	ELECTRONIC ACCUATOR
4S	34030	1	ELECTRONIC ACCUATOR SEAL KIT
4A	4243906	1	MAIN BOOM ELECTRONIC ACCUATOR
4A	4243906	1	SECONDARY BOOM ELECTRONIC ACCUATOR
4A	4243906	1	DECK ROLL ELECTRONIC ACCUATOR
4A	4243906	1	BOOM SWIVEL ELECTRONIC ACCUATOR
4B	NA	*	NA
5	42202	1	TIE-BOLT KIT
6	*	5	SECTION
6S	06505013	1	SECTION SEAL KIT
6A	42698	1	MAIN BOOM SECTION
6B	42698	1	SEC BOOM SECTION
6C	06502076	1	DECK ROLL SECTION
6D	42698	1	BOOM SWIVEL SECTION
6E	NA	*	NA
7	*	5	SPOOL
7A	42697	1	MAIN BOOM SPOOL
7B	42697	1	SEC BOOM SPOOL
7C	4242106	1	DECK ROLL BOOM SPOOL
7D	06502073	1	BOOM SWIVEL SPOOL
7E	NA	*	NA
8	*	10	ANTI CAV/SHOCK RELIEF
8A1	42650	1	MAIN BOOM A PORT RELIEF
8A2	06502069	1	MAIN BOOM B PORT RELIEF
8B1	42650	1	SEC BOOM A PORT RELIEF
8B2	42295	1	SEC BOOM B PORT RELIEF
8C1	42296	1	DECK ROLL A PORT RELIEF
8C2	42295	1	DECK ROLL B PORT RELIEF
8D1	42295	1	BOOM SWIVEL A PORT RELIEF
8D2	42295	1	BOOM SWIVEL B PORT RELIEF
8E1	NA	*	NA
8E	NA	*	NA
9	33459	1	HANDLE

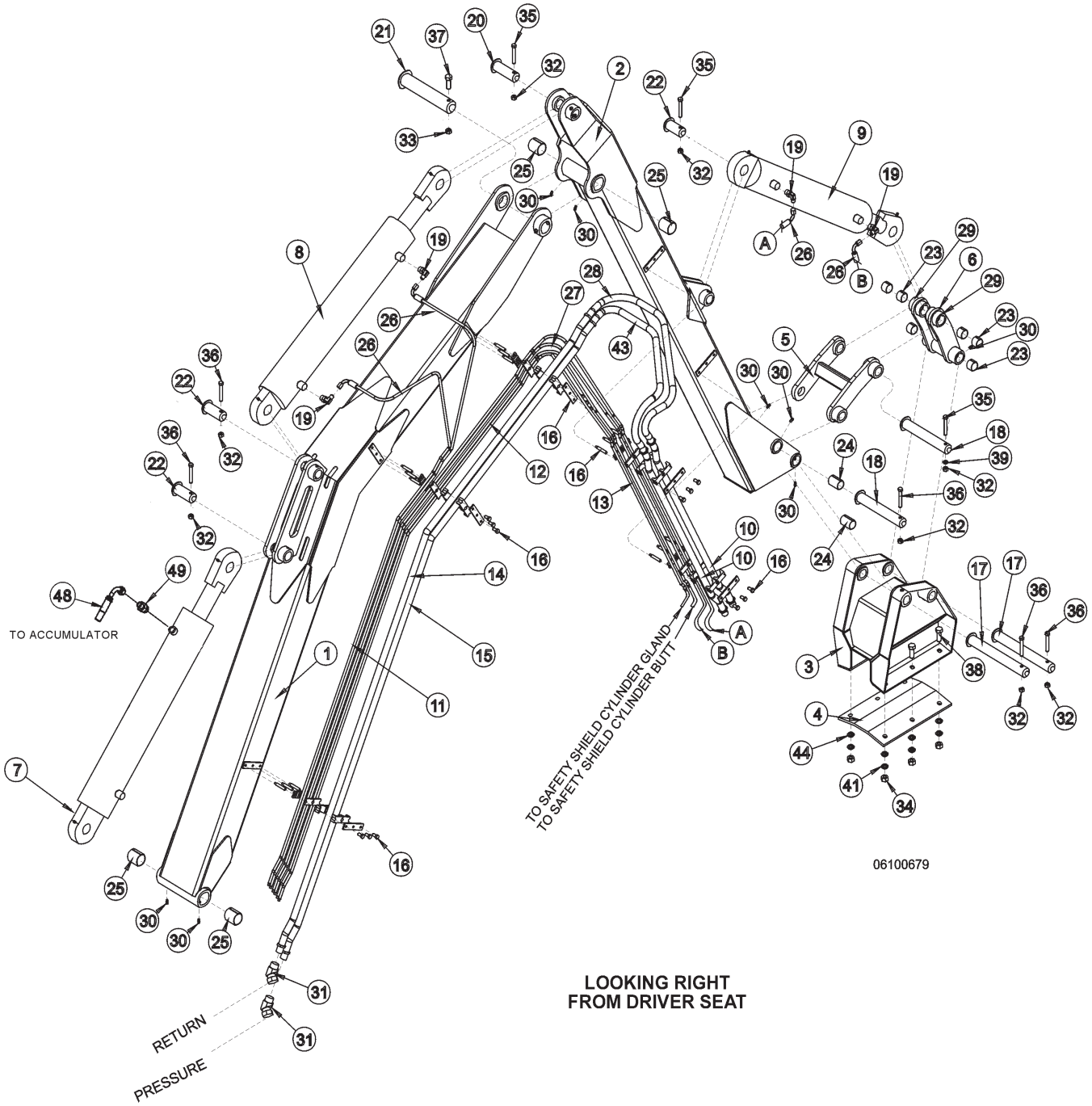
5SP DANFOSS - LIFT VALVE (33291)



5SP DANFOSS - LIFT VALVE (33291)

ITEM	PART NO.	QTY.	DESCRIPTION
	33291		VLV,5SP,32PVG
1	06502074	1	END PLATE
1S	06505013	1	END PLATE SEAL KIT
2	*	5	BONNET
2S	06505042	1	BONNET SEAL KIT
2A	33459	1	MAIN BOOM BONNET
2B	42197	1	SECONDARY BOOM BONNET
2B	42197	1	DECK ROLL BONNET
2B	42197	1	BOOM SWIVEL BONNET
2B	42197	1	DECK SHIELD BONNET
3	34308	1	INLET SECTION
3S	06505013	1	INLET SECTION SEAL KIT
4	*	5	ELECTRONIC ACCUATOR
4S	34030	1	ELECTRONIC ACCUATOR SEAL KIT
4A	4243906	1	MAIN BOOM ELECTRONIC ACCUATOR
4A	4243906	1	SECONDARY BOOM ELECTRONIC ACCUATOR
4A	4242206	1	DECK ROLL ELECTRONIC ACCUATOR
4A	4243906	1	BOOM SWIVEL ELECTRONIC ACCUATOR
4B	42200	1	DECK SHIELD ELECTRONIC ACCUATOR
5	42202	1	TIE-BOLT KIT
6	*	5	SECTION
6S	06505013	1	SECTION SEAL KIT
6A	42698	1	MAIN BOOM SECTION
6B	42698	1	SEC BOOM SECTION
6C	06502076	1	DECK ROLL SECTION
6D	42698	1	BOOM SWIVEL SECTION
6E	06502077	1	SHIELD SECTION
7	*	5	SPOOL
7A	42697	1	MAIN BOOM SPOOL
7B	42697	1	SEC BOOM SPOOL
7C	4242106	1	DECK ROLL BOOM SPOOL
7D	06502073	1	BOOM SWIVEL SPOOL
7E	42201	1	DECK SHIELD SPOOL
8	*	10	ANTI CAV/SHOCK RELIEF
8A1	42650	1	MAIN BOOM A PORT RELIEF
8A2	06502069	1	MAIN BOOM B PORT RELIEF
8B1	42650	1	SEC BOOM A PORT RELIEF
8B2	42295	1	SEC BOOM B PORT RELIEF
8C1	42296	1	DECK ROLL A PORT RELIEF
8C2	42295	1	DECK ROLL B PORT RELIEF
8D1	42295	1	BOOM SWIVEL A PORT RELIEF
8D2	42295	1	BOOM SWIVEL B PORT RELIEF
8E1	06502069	1	DECK SHIELD A PORT RELIEF
8E2	06502069	1	DECK SHIELD B PORT RELIEF
9	33459	1	HANDLE

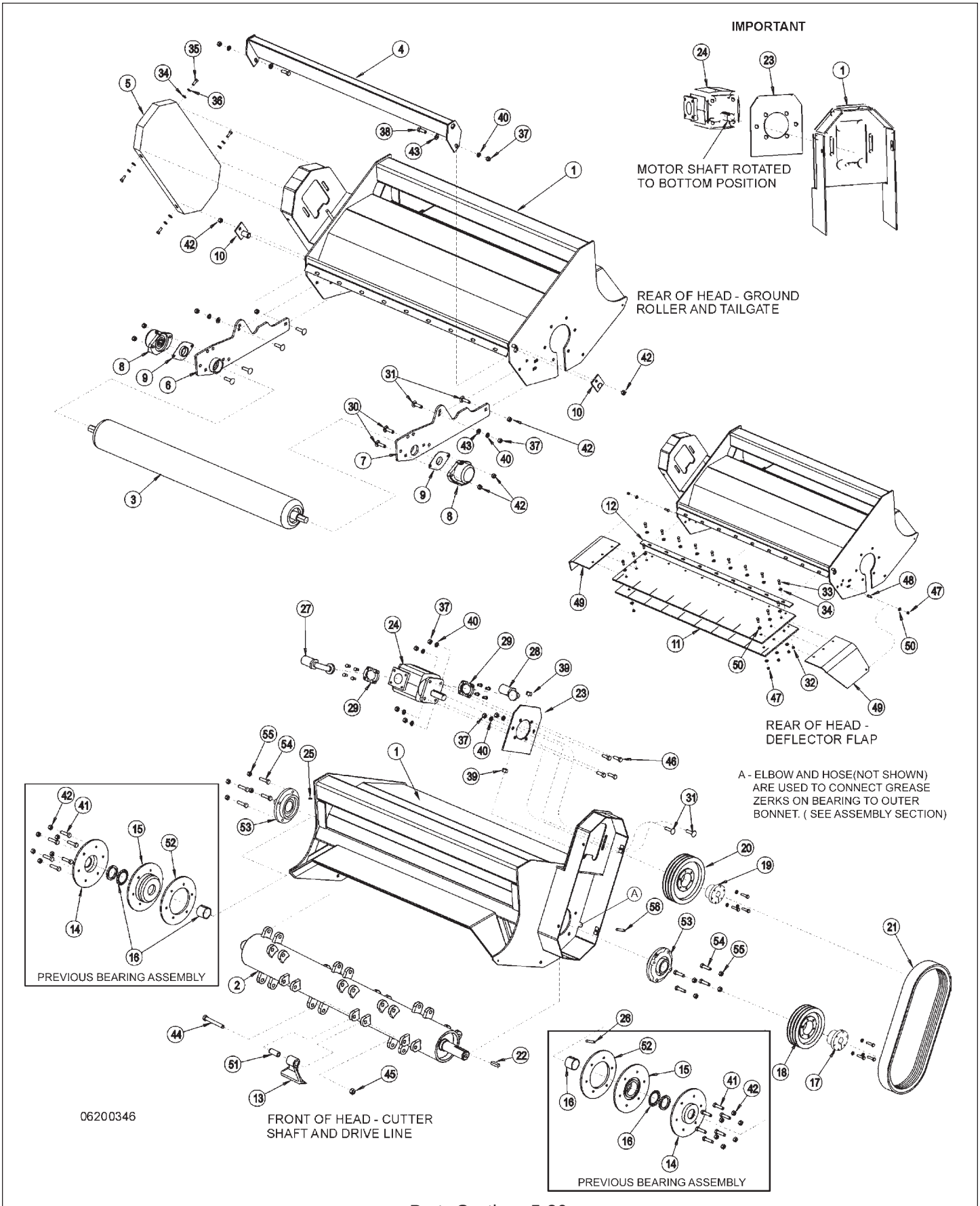
SABER BOOM ASSEMBLY



SABER BOOM ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	32743	1	MAIN BOOM W/BEARING
2	32744	1	SECONDARY BOOM W/BEARING
3	32311	1	MOUNT - SWIVEL HEAD
4	32309	1	MOUNT HEAD PLATE
5	32316	1	LINKAGE - BOOM TO CYLINDER
6	32745	1	LINKAGE W/BEARING - CYLINDER TO SWIVEL
7	32363	1	CYLINDER
8	32364	1	CYLINDER
9	32365	1	CYLINDER
10	33542	2	PREFORMED TUBE 1” X 42 1/8”
11	32627	2	PREFORMED TUBE 3/8” X 65”
12	32628	4	PREFORMED TUBE 3/8” X 91”
13	32629	4	PREFORMED TUBE 3/8 X 40”
14	33541	1	PREFORMED TUBE 1” X 93 1/4”
15	33540	1	PREFORMED TUBE 1” X 93 3/8”
16	33215	5	TUBE CLAMP KIT
17	32313	2	PIN
18	32319	2	PIN
19	32810	6	ELBOW
20	32372	1	PIN
21	32374	1	PIN
22	32375	3	PIN
23	32318	6	BEARING
24	32321	4	BEARING
25	32362	4	BEARING
26	32818	4	HOSE 3/8” X 24”
27	32680	4	HOSE 3/8” X 43”
28	33544	1	HOSE 1” X 40”
29	6T3207	6	GREASE ZERK
30	6T3211	8	GREASE ZERK
31	24724	2	SWIVEL
32	21675	8	HEX NUT - 7/16"
33	21725	1	HEX NUT - 1/2"
34	6T2408	6	HEX NUT - 5/8"
35	21687	3	CAPSCREW - 7/16" X 3"
36	21688	5	CAPSCREW - 7/16" X 3 1/4"
37	21741	1	CAPSCREW - 1/2" X 4"
38	6T2290	6	CAPSCREW - 5/8" X 2"
39	21989	8	LOCKWASHER - 7/16"
40	21990	1	LOCKWASHER - 1/2"
41	21992	6	LOCKWASHER - 5/8"
42	35260	1	HOSE COVER (NOT SHOWN - COVERS #27,28 & 43)
43	33543	1	HOSE 1” X 39”
44	25270	12	FLATWASHER - 5/8” USS

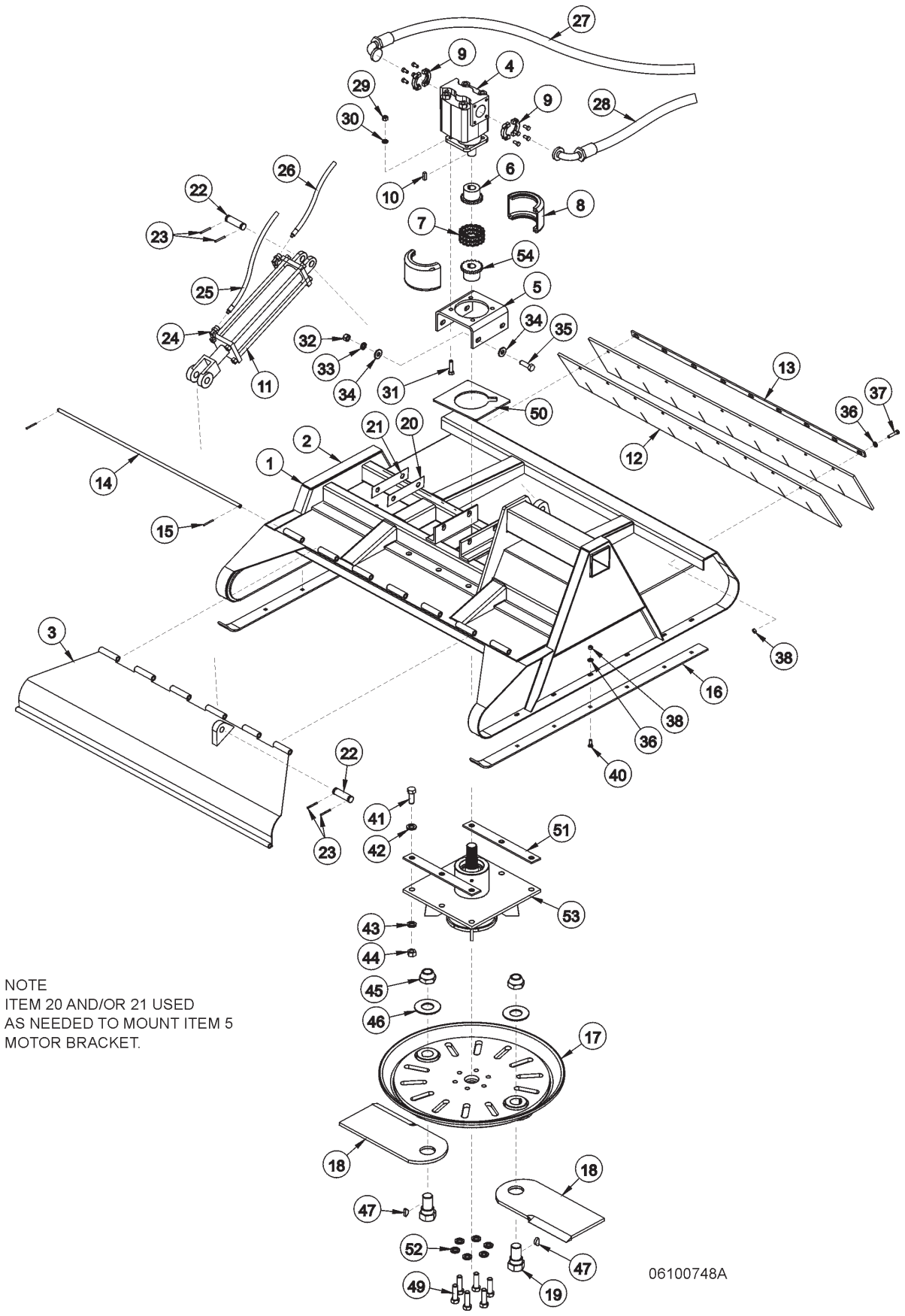
SABER FLAIL HEAD ASSEMBLY



SABER FLAIL HEAD ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	32220	1	BONNET
	32673	**AVAIL.**	**CUTTER SHAFT - COMPLETE WITH KNIVES**
2	32198	1	CUTTER SHAFT
3	32199	1	GROUND ROLLER
4	32218	1	TAILGATE
5	32302	1	BELT COVER
6	32301	1	GROUND ROLLER MOUNT - RIGHT
7	32300	1	GROUND ROLLER MOUNT - LEFT
8	703976	2	ROLLER BEARING
9	002037	2	ROLLER BEARING SEAL
10	02969051	2	PIN
11	32635	2	DEFLECTOR FLAP
12	32636	1	DEFLECTOR FLAP BAR
13	33622	18	CUTTER BLADE
14	02966560	2	**(PREVIOUS ASSY) -**BEARING COVER
15	06520234	2	**(PREVIOUS ASSY) -**CUTTER SHAFT BEARING
16	02957168	2	**(PREVIOUS ASSY) -**BEARING ADAPTOR
17	02967328	1	BUSHING
18	02967325	1	PULLEY - 8 1/2" DIA.
19	32696	1	BUSHING
20	02967327	1	PULLEY - 9 3/4" DIA.
21	02967774	1	BELT SET
22	02958198	1	KEY
23	32404	1	MOTOR MOUNT
24	**06504013**	**1**	**MOTOR**
	23174	1	MOTOR
25	6T3211	1	GREASE ZERK
26	TF1028	1	**(PREVIOUS ASSY) -**GREASE ZERK
27	33551	1	HOSE - **PRESSURE** TO MOTOR 1" X 50"
28	33552	1	HOSE - **RETURN** FROM MOTOR 1" X 57"
29	TF4852	2	FLANGE KIT
30	27625	4	CARRIAGE BOLT - 1/2" X 1 3/4"
31	6T2267	6	CARRIAGE BOLT - 1/2" X 1 1/2"
32	21625	9	HEX NUT - 3/8"
33	21633	15	CAPSCREW - 3/8" X 1 3/4"
34	22016	13	FLATWASHER - 3/8"
35	21629	4	CAPSCREW - 3/8" X 3/4"
36	21988	4	LOCKWASHER - 3/8"
37	21725	10	HEX NUT - 1/2"
38	21731	2	CAPSCREW - 1/2" X 1 1/2"
39	21775	2	HEX NUT - 5/8"
40	21990	10	LOCKWASHER - 1/2"
41	6T1025	12	**(PREVIOUS ASSY) -**CAPSCREW - 1/2" X 2"
42	6T2418	20	**(PREVIOUS ASSY) -**HEX NUT - 1/2" GRADE 8 STOVER
43	22018	4	FLATWASHER - 1/2" WIDE
44	33346	18	CAPSCREW - SPECIAL BLADE RETAINING PARTS
45	32674	18	HEX NUT - SPECIAL BLADE RETAINING PARTS
46	21732	4	CAPSCREW - 1/2" X 1 3/4"
47	21627	8	NYLOCK NUT - 3/8"
48	21631	2	CAPSCREW - 3/8" X 1 1/4"
49	32713	2	FLAP
50	6T2615	14	FENDER WASHER - 3/8"
51	33621	18	BUSHING
52	33738	2	**(PREVIOUS ASSY) -**BEARING SPACER
53	06520089	1	BEARING, SABER, CUTTERSHAFT
54	06530205	12	CAPSCREW, 7/16" X 1 1/2"(Installed from inside bonnet)
55	24701	8	HEX NUT, 7/16"
56	TF1033	1	GREASE ZERK

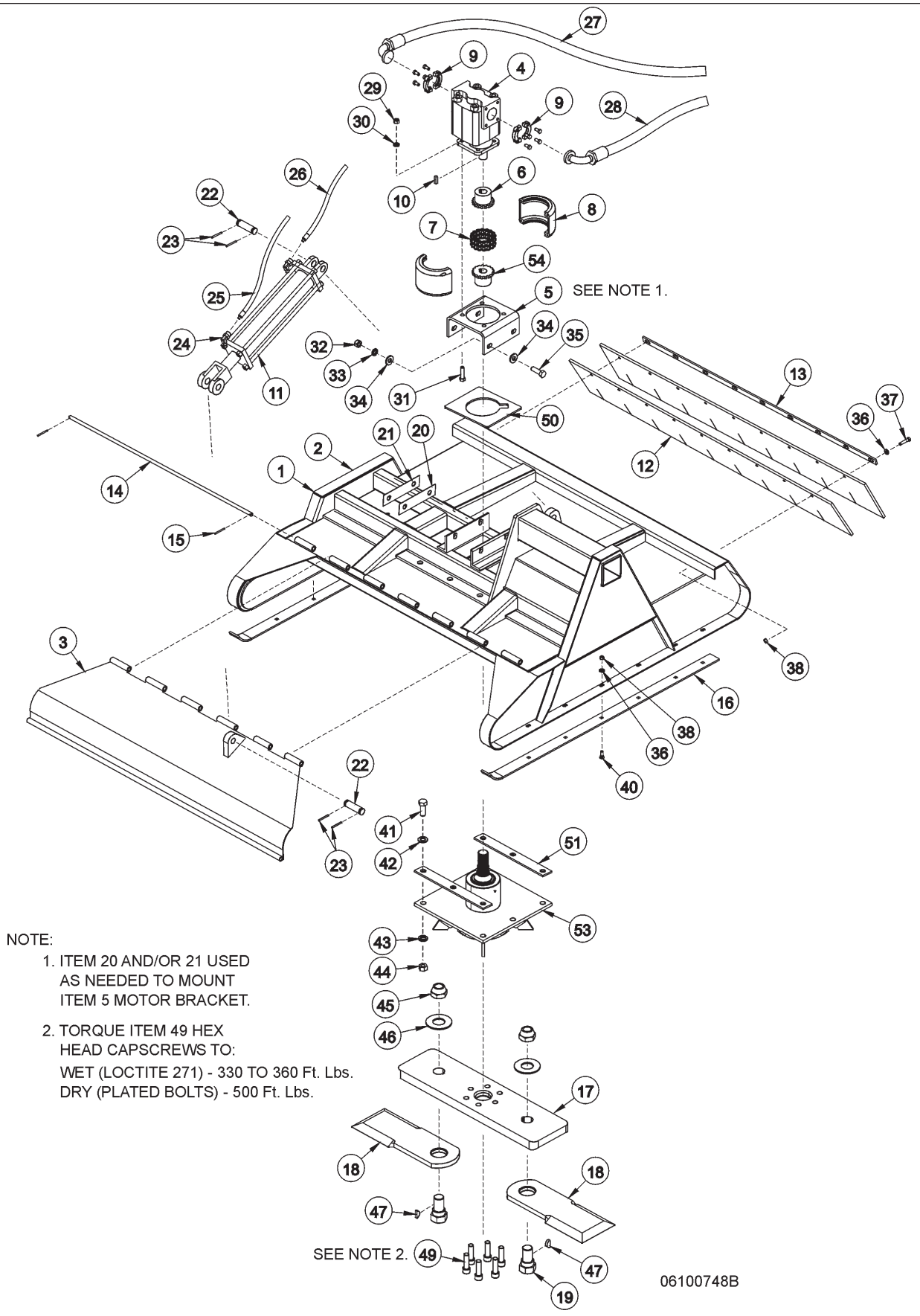
SABER ROTARY ASSEMBLY



SABER ROTARY ASSEMBLY

ITEM	PART NO.	QTY	DESCRIPTION
1	**06100748**	**OPT.**	**SABER ROTARY HEAD, COMPETE**
2	32914	1	DECK, 50" ROTARY SABER
3	32915	1	SHIELD, 50 ROTARY SABER
4	**06504012**	**1**	**CURRENT MOTOR**
	23173	1	ORIGINAL MOTOR
5	33198	1	MOTOR MOUNTING BRACKET
6	21223	1	SPROCKET, MOTOR
7	6T1029	1	CHAIN COUPLING
8	6T1033	1	COVER COUPLING
9	TF4852	2	FLANGE KIT
10	TF1124	1	KEY, WOODRUFF
11	33185	1	CYLINDER
12	32952	2	DEFLECTOR FLAP
13	33211	1	RETAINING BAR, FLAP
14	32951	1	HINGE PIN, SHIELD
15	33924	2	ROLLPIN, HINGE PIN
16	32936	2	SKID SHOE
17	32976	1	DISK, KNIVE MOUNTING
18	33977	1	KNIVES, SET OF 2, ROTARY, 3/4"
19	34883	2	BOLT, KNIFE
20	6T0822	3	SHIM, MOTOR MOUNT, THIN
21	6T0822A	3	SHIM, MOTOR MOUNT, THICK
22	6T3003D	2	CLEVIS PIN
23	TB1023	4	ROLL PIN, CLEVIS
24	32810	2	ELBOW FITTING
25	33223	1	HOSE, CYLINDER 3/8" X 70"
26	33222	1	HOSE, CYLINDER 3/8" X 59"
27	33548	1	HOSE, MOTOR 1" X 76"
28	33549	1	HOSE, MOTOR 1" X 66"
29	21725	4	HEX NUT - 1/2 NC
30	21990	4	LOCK WASHER - 1/2
31	21733	4	CAPSCREW - 1/2 X 2 NC
32	6T2408	4	HEX NUT - 5/8 NF
33	21992	4	LOCK WASHER - 5/8
34	33764	8	FLAT WASHER - 5/8
35	6T2290	4	CAPSCREW - 5/8 X 2 NF
36	22016	25	FLAT WASHER - 3/8
37	21633	9	CAPSCREW - 3/8 X 1-3/4 NC
38	21625	25	HEX NUT - 3/8 NC
40	6T2270	14	PLOW BOLT - 3/8 X 1 NC
41	33879	6	CAPSCREW - 3/4 X 2-1/2 NF
42	33880	6	FLAT WASHER - 3/4
43	21993	6	LOCK WASHER - 3/4
44	6T2413	6	HEX NUT - 3/4 NF
45	33860	2	HEX NUT, KNIFE
46	33859	2	FLAT WASHER, KNIFE
47	PT209	2	KEY, WOODRUFF
49	6T2277	6	CAPSCREW - 3/4 X 2 NF
50	33614	1	PLATE, SPINDLE COLLAR
51	33616	2	SHIM,STRAP, SPINDLE
52	33880	6	FLATWASHER 3/4"
53	*	REF	REFER TO SPINDLE PARTS
54	*	REF	REFER TO SPINDLE PARTS
*	33891	AVAIL	KIT,BLADE(INCLUDES ITEMS 18,19,39,45,46,47)

SABER ROTARY ASSEMBLY

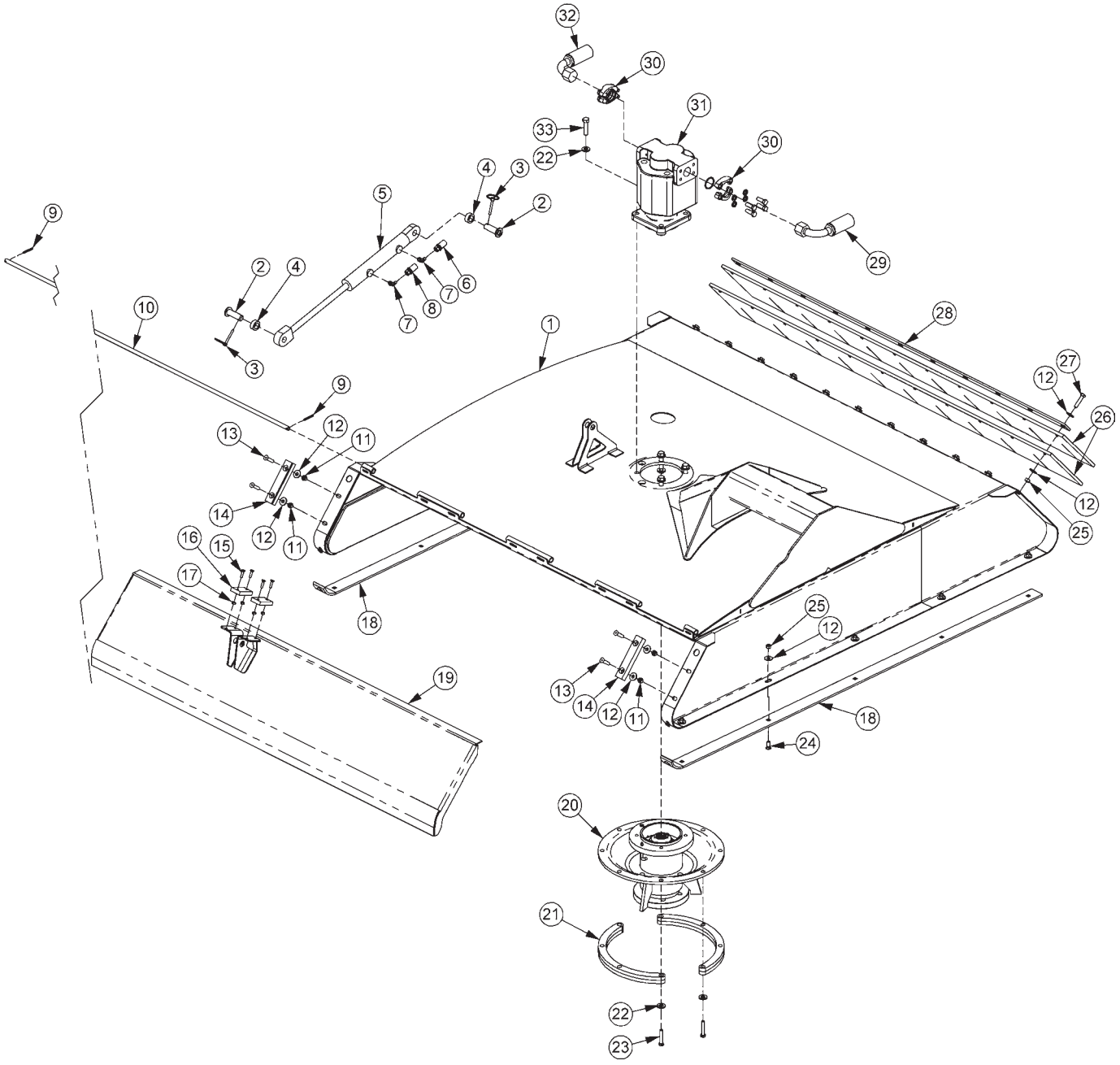


9-23-02

SABER ROTARY ASSEMBLY

ITEM	PART NO.	QTY	DESCRIPTION
1	**06100748**	**OPT.**	**SABER ROTARY HEAD, COMPETE**
2	32914	1	DECK, 50" ROTARY SABER
3	32915	1	SHIELD, 50 ROTARY SABER
4	**06504012**	**1**	**CURRENT MOTOR**
	23173	1	ORIGINAL MOTOR
5	33198	1	MOTOR MOUNTING BRACKET
6	34479	1	SPROCKET, MOTOR
7	34482	1	CHAIN COUPLING
8	34483	1	COVER COUPLING
9	TF4852	2	FLANGE KIT
10	TF1124	1	KEY, WOODRUFF
11	33185	1	CYLINDER
12	32952	2	DEFLECTOR FLAP
13	33211	1	RETAINING BAR, FLAP
14	32951	1	HINGE PIN, SHIELD
15	33924	2	ROLLPIN, HINGE PIN
16	32936	2	SKID SHOE
17	34509	1	BAR, KNIVE MOUNTING
18	33203	1	KNIVES, SET OF 2, ROTARY,3/4"
19	34883	2	BOLT, KNIFE
20	6T0822	3	SHIM, MOTOR MOUNT, THIN
21	6T0822A	3	SHIM, MOTOR MOUNT, THICK
22	6T3003D	2	CLEVIS PIN
23	TB1023	4	ROLL PIN, CLEVIS
24	32810	2	ELBOW FITTING
25	33223	1	HOSE, CYLINDER 3/8" X 70"
26	33222	1	HOSE, CYLINDER 3/8" X 59"
27	33548	1	HOSE, MOTOR 1" X 76"
28	33549	1	HOSE, MOTOR 1" X 66"
29	21725	4	HEX NUT - 1/2 NC
30	21990	4	LOCK WASHER - 1/2
31	21733	4	CAPSCREW - 1/2 X 2 NC
32	6T2408	4	HEX NUT - 5/8 NF
33	21992	4	LOCK WASHER - 5/8
34	33764	8	FLAT WASHER - 5/8
35	6T2290	4	CAPSCREW - 5/8 X 2 NF
36	22016	25	FLAT WASHER - 3/8
37	21633	9	CAPSCREW - 3/8 X 1-3/4 NC
38	21625	25	HEX NUT - 3/8 NC
40	6T2270	14	PLOW BOLT - 3/8 X 1 NC
41	33879	6	CAPSCREW - 3/4 X 2-1/2 NF
42	33880	6	FLAT WASHER - 3/4
43	21993	6	LOCK WASHER - 3/4
44	6T2413	6	HEX NUT - 3/4 NF
45	33860	2	HEX NUT, KNIFE
46	33859	2	FLAT WASHER, KNIFE
47	PT209	2	KEY, WOODRUFF
49	34475	6	HEX HD CAPSCREW - 3/4 X 2 NF
50	33614	1	PLATE, SPINDLE COLLAR
51	33617	2	SHIM,STRAP, SPINDLE
53	*	REF	REFER TO SPINDLE PARTS
54	*	REF	REFER TO SPINDLE PARTS
*****	**33891**	**AVAIL**	**BLADE KIT (INCLUDES ITEMS 18,19,39,45,46,47)**

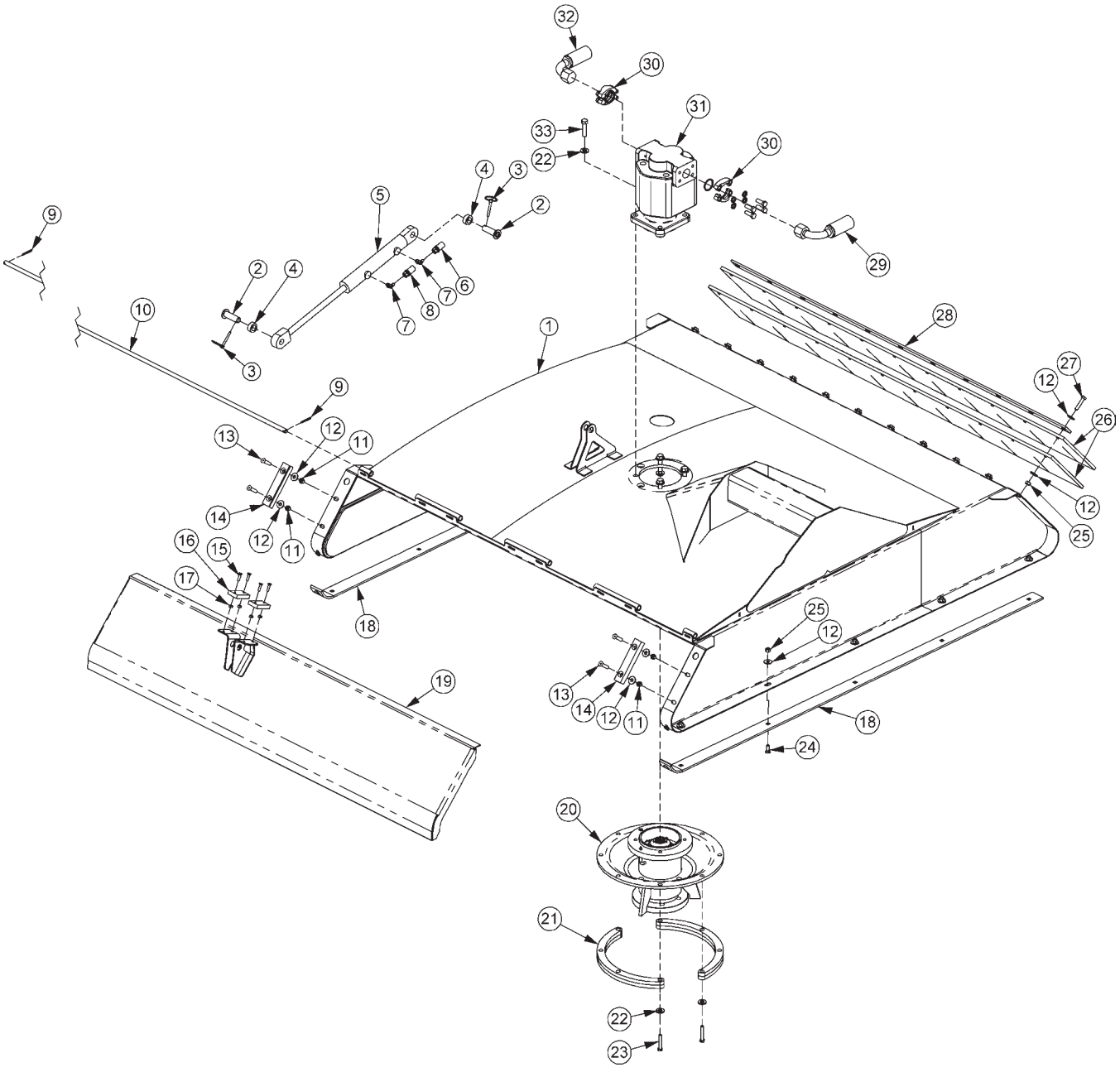
STANDARD 60” ROTARY MOWER ASSEMBLY



STANDARD 60” ROTARY MOWER ASSEMBLY

ITEM	P/N	QTY	DESCRIPTION
1	06320102	1	DECK,WLDMNT,60" SBR RTRY
2	33984	2	PIN,SHIELD,50"
3	RD1032	2	LYNCH PIN
4	34518	2	SPACER
5	33785	1	CYLINDER,1-1/2 x 8,WELDED
6	33222	1	HOSE,#4 x 59
7	06503055	2	ELBOW,1/4ORB x 3/8MJ
8	33223	1	HOSE,#4 x 70
9	6T3017	2	ROLLPIN,3/16 x 1
10	06420074	1	PIN,HINGE,RTRY60
11	21627	4	NYLOCK NUT,3/8 NC
12	22016	38	FLATWASHER,3/8
13	06530103	4	CAPSCREW,SKT/FLT,3/8 x 1-1/2
14	06520231	2	BUMPER,SHIELD,RTRY60
15	06530101	4	CAPSCREW,SKT/FLT,1/4 x 1
16	06520239	2	PAD,SHIELD
17	21527	4	NYLOCK NUT,1/4 NC
18	06410593	2	SHOE,SKID,RTRY60
19	06320101	1	SHIELD,RTRY60
20	34980	1	SPINDLE ASSY,TM60
21	06320011	2	SPACER,TSR,SPINDLE
22	06533004	12	FLATWASHER,1/2,SAE,GR8
23	06530207	8	CAPSCREW,1/2 x 2,NF,GR8
24	6T2270	12	PLOW BOLT,3/8 x 1,NC
25	21625	23	HEX NUT,3/8 NC
26	06520238	2	FLAP,DEFLECTOR,RTRY60
27	21633	11	CAPSCREW,3/8 x 1-3/4,NC
28	6T0823	1	BAR,FLAP,TM60
29	33549	1	HOSE,#16 x 66,PRESSURE
30	TF4852	2	KIT,FLANGE,#20
31	06504016	1	MOTOR,M365-1 1/4SPLINE,SEALED
32	33548	1	HOSE,#16 x 76,RETURN
33	6T1025	4	CAPSCREW,1/2 x 2,NC,GR8

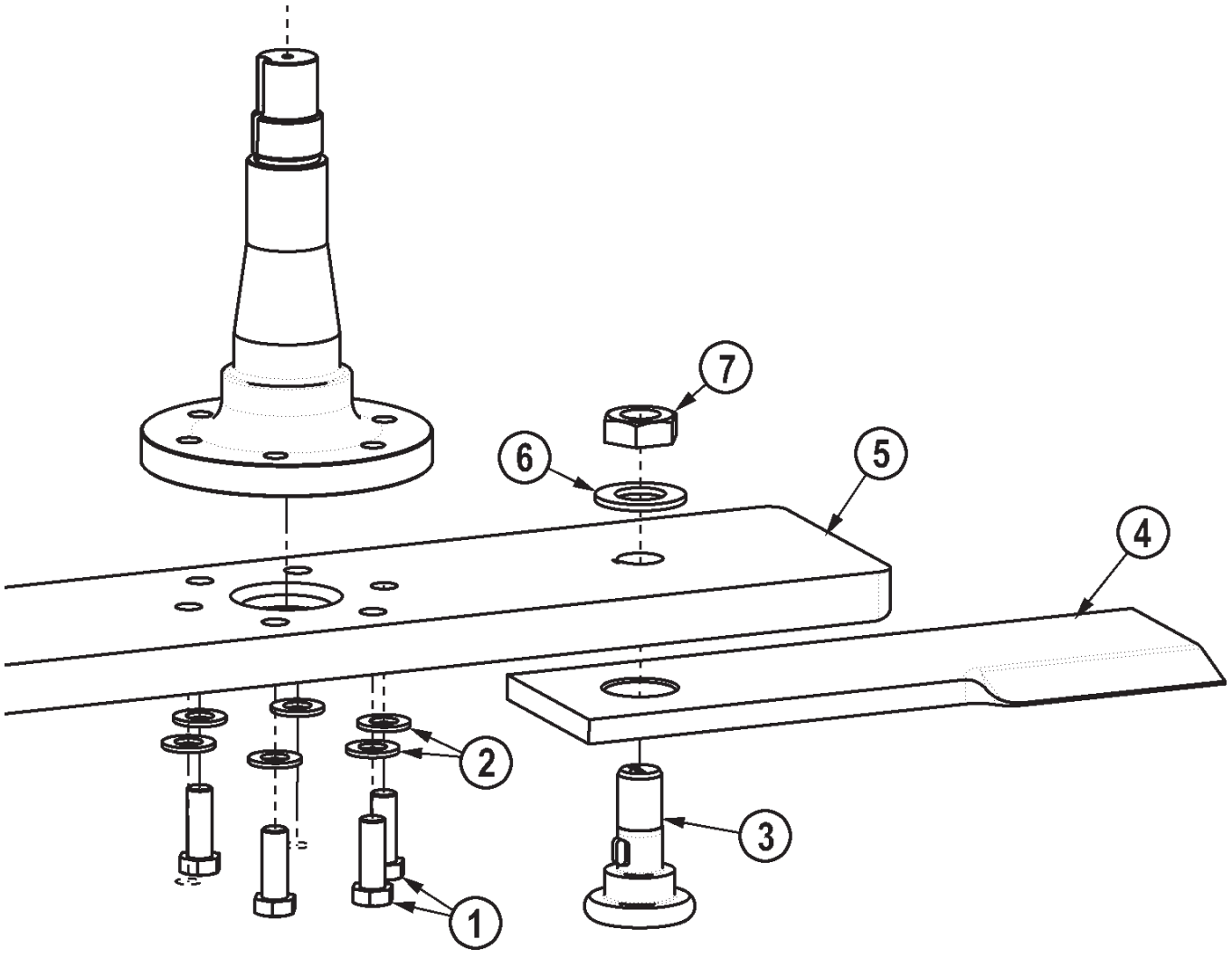
LIGHT WEIGHT 60” ROTARY MOWER ASSEMBLY



LIGHT WEIGHT 60” ROTARY MOWER ASSEMBLY

ITEM	P/N	QTY	DESCRIPTION
1	06320105	1	DECK,WLDMNT,60",SBR LT WT,RTRY
2	33984	2	PIN,SHIELD,50"
3	RD1032	2	LYNCH PIN
4	34518	2	SPACER
5	33785	1	CYLINDER,1-1/2 x 8,WELDED
6	33222	1	HOSE,#6 x 59
7	06503055	2	ELBOW,1/4ORB x 3/8MJ
8	33223	1	HOSE,#6 x 70
9	6T3017	2	ROLLPIN,3/16 x 1
10	06420074	1	PIN,HINGE,RTRY60
11	21627	4	NYLOCK NUT,3/8 NC
12	22016	38	FLATWASHER,3/8
13	06530103	4	CAPSCREW,SKT/FLT,3/8 x 1-1/2
14	06520231	2	BUMPER,SHIELD,RTRY60
15	06530101	4	CAPSCREW,SKT/FLT,1/4 x 1
16	06520239	2	PAD,SHIELD
17	21527	4	NYLOCK NUT,1/4 NC
18	06410593	2	SHOE,SKID,RTRY60
19	06320101	1	SHIELD,RTRY60
20	34980	1	SPINDLE ASSY,TM60
21	06320011	2	SPACER,TSR,SPINDLE
22	06533004	12	FLATWASHER,1/2,SAE,GR8
23	06530207	8	CAPSCREW,1/2 x 2,NF,GR8
24	6T2270	12	PLOW BOLT,3/8 x 1,NC
25	21625	23	HEX NUT,3/8 NC
26	06520238	2	FLAP,DEFLECTOR,RTRY60
27	21633	11	CAPSCREW,3/8 x 1-3/4,NC
28	6T0823	1	BAR,FLAP,TM60
29	33549	1	HOSE,#16 x 66,PRESSURE
30	TF4852	2	KIT,FLANGE,#20
31	06504016	1	MOTOR,M365-1 1/4SPLINE,SEALED
32	33548	1	HOSE,#16 x 76,RETURN
33	6T1025	4	CAPSCREW,1/2 x 2,NC,GR8

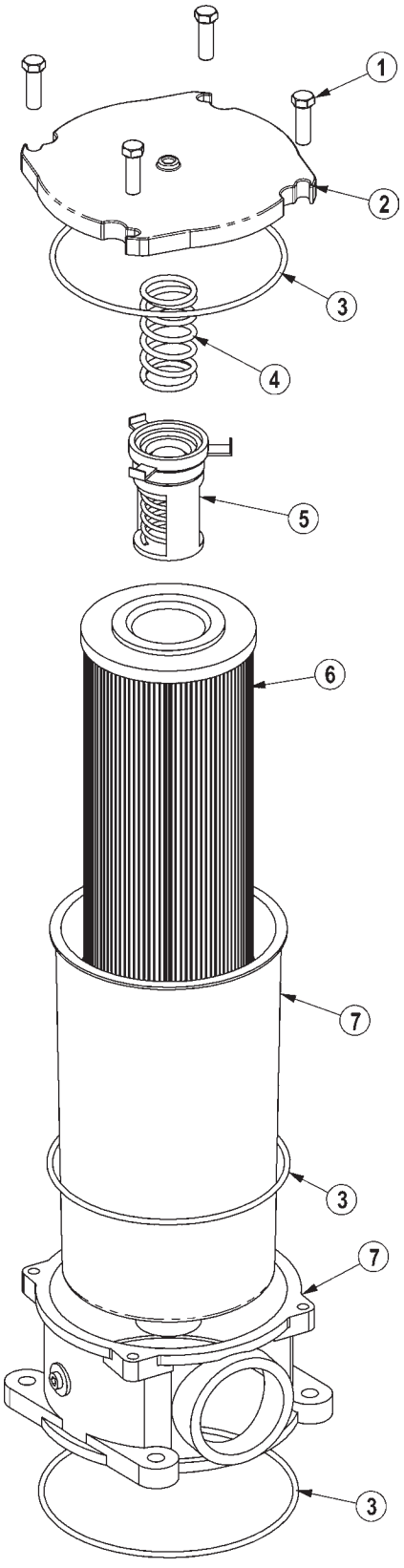
60” ROTARY BLADE BAR AND KNIVES



60” ROTARY BLADE BAR AND KNIVES

ITEM	PART NO.	QTY.	DESCRIPTION
1	6T2259	6	CAPSCREW,5/8 x 1 3/4 NF GR 8
2	33764	6	FLATWASHER,5/8,GR 8, SAE
3	06538000	2	KNIFE MTG BOLT,5/8 SHOULDER
4	06521001	2	KNIFE,TRB50,5/8
5	06400690	1	BAR,BLADE,RTRY60
6	06533002	2	FLATWASHER,1 1/8,GR 8
7	6T1023R	2	KNIFE MTG NUT,1-1/8 NYLOCK NF

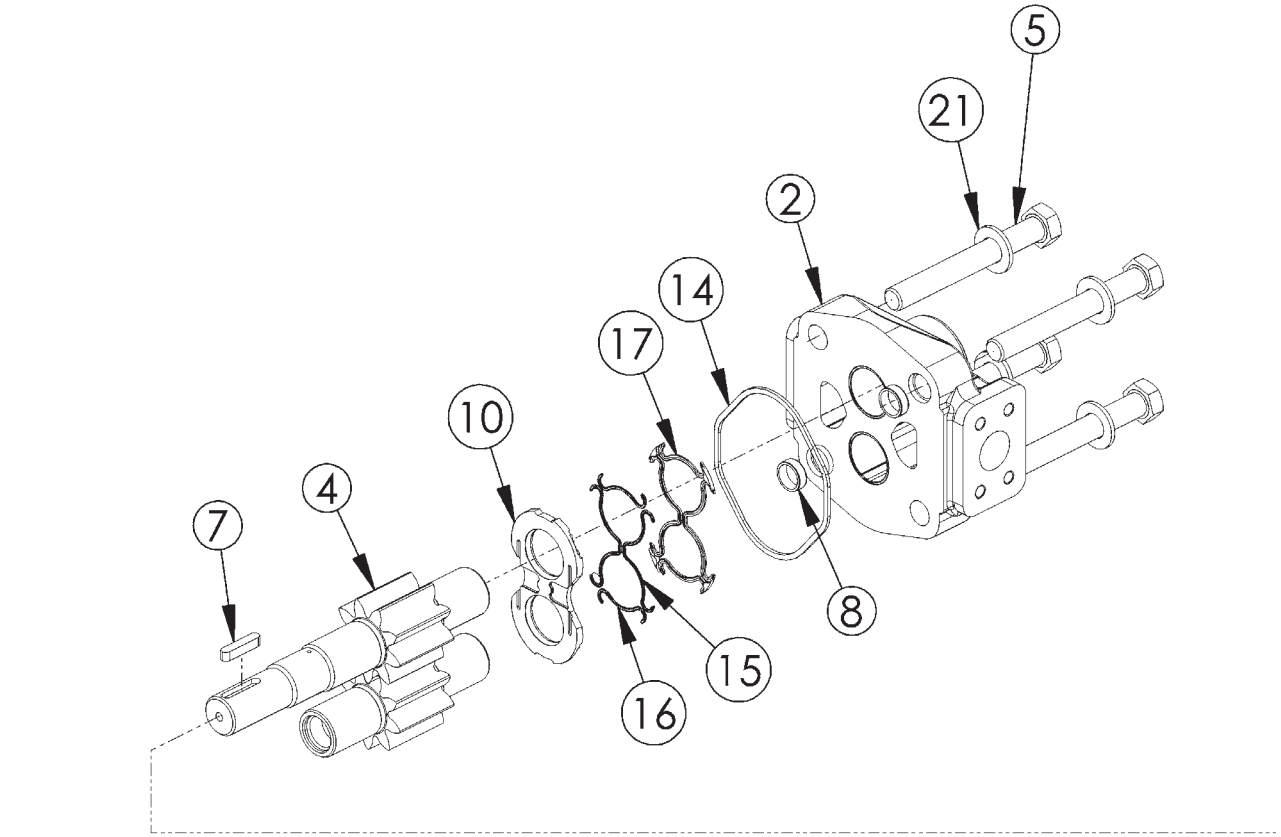
RESERVOIR TANK FILTER ASSEMBLY

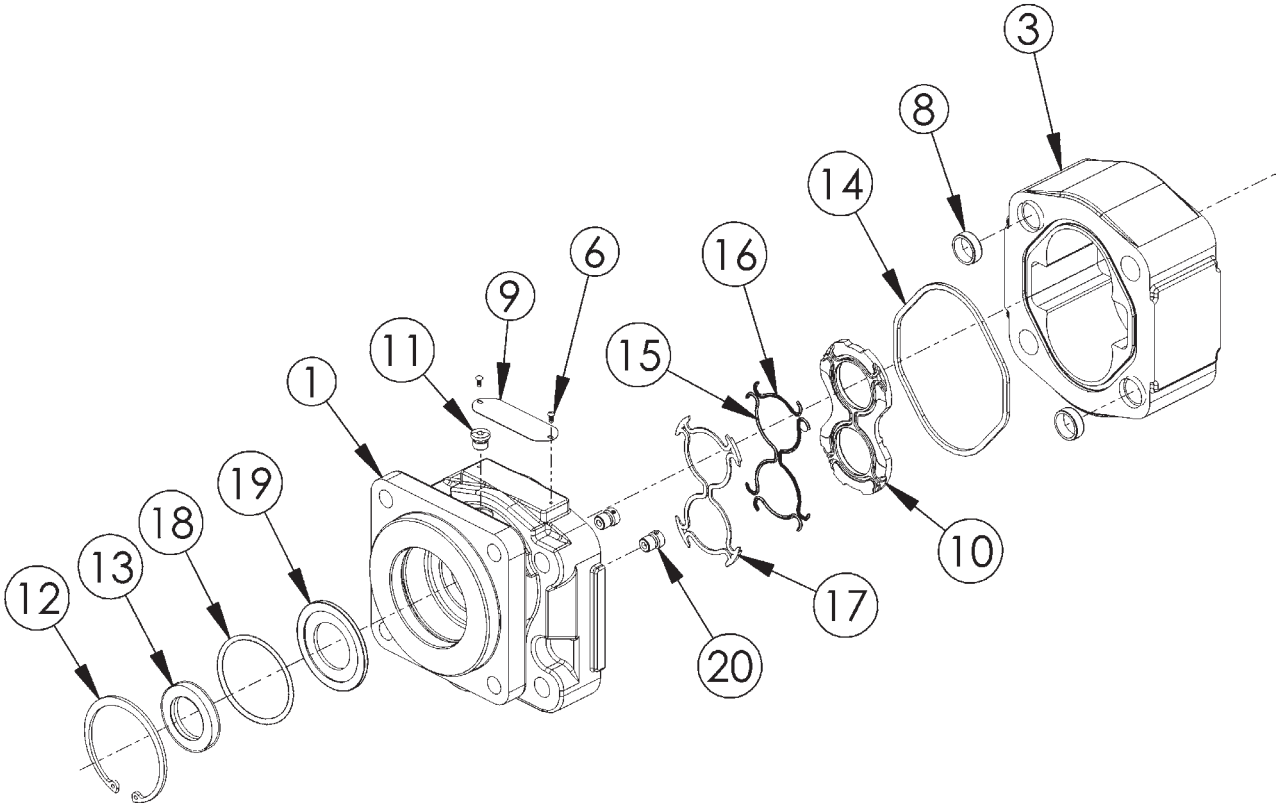


RESERVOIR TANK FILTER ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
	06505044	**AVAIL**	**FILTER ASSY SAE 10 MICRON**
1	28583	4	CAPSCREW,8MMX25MM(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

SABER ROTARY MOTOR - HIGH PRESSURE

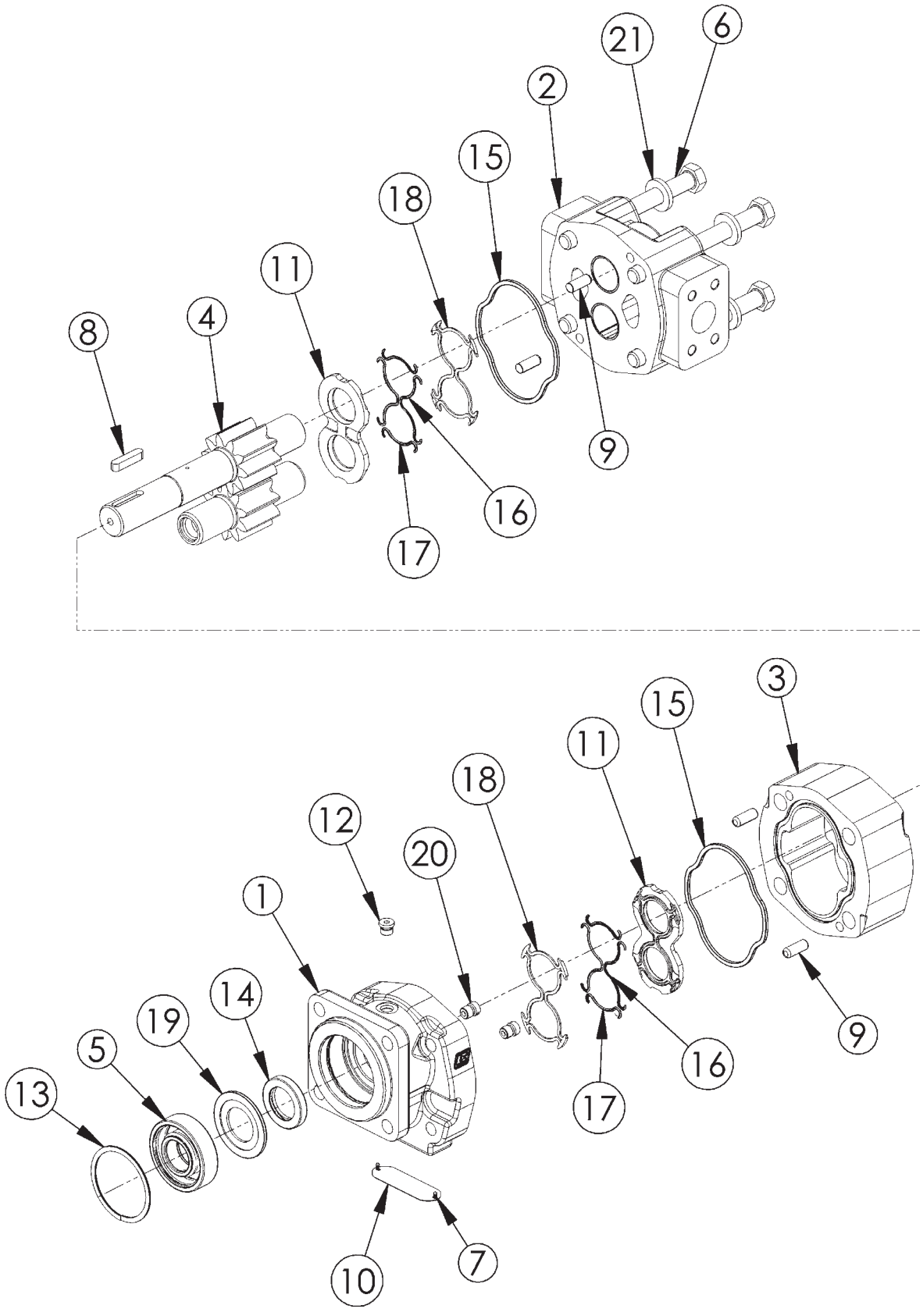




SABER ROTARY MOTOR - HIGH PRESSURE

ITEM	PART NO.	QTY.	DESCRIPTION
*****	**06504012**	**AVAIL**	**MOTOR ASSEMBLY - SABER ROTARY**
1	22790	1	SHAFT END COVER
2	06504025	1	PORT END COVER
3	02404206	1	GEAR HOUSING
4	06504038	1	MATCHED GEAR SET
5	06504037	4	CAP SCREW
6	06504027	2	SET SCREW
7	06504028	1	KEY
8	02962201	4	DOWEL PIN
9		1	NAMEPLATE
10	06504029	2	THRUSTPLATE
11	02961940	1	HEX PLUG
12	6T5200	1	SNAP RING
13	06504030	1	LIP SEAL (INCLUDED IN SEAL KIT)
14	22797	2	GASKET SEAL (INCLUDED IN SEAL KIT)
15	06504031	4	SIDE SEAL (INCLUDED IN SEAL KIT)
16	06504032	4	END SEAL (INCLUDED IN SEAL KIT)
17	06504033	2	BACK-UP SEAL (INCLUDED IN SEAL KIT)
18	06504034	1	SPACER
19	06504035	1	SEAL RETAINER
20	22791	2	CHECK ASSEMBLY
21	06504036	4	WASHER
*	06504022	AVAIL	SEAL KIT (INCLUDES 13, 14, 15, 16 AND 17)

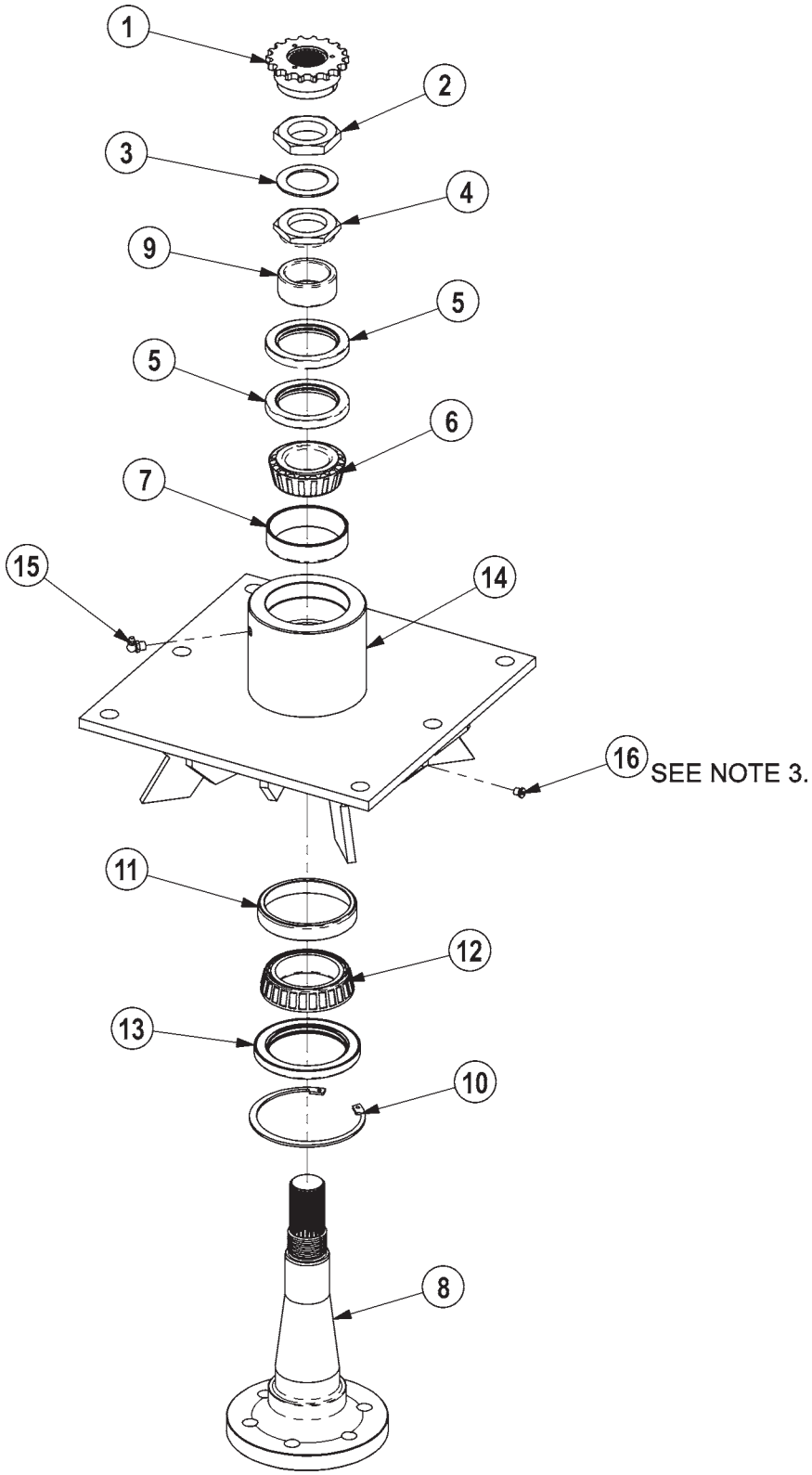
SABER FLAIL MOTOR - HIGH PRESSURE



SABER FLAIL MOTOR - HIGH PRESSURE

ITEM	PART NO.	QTY.	DESCRIPTION
*****	**06504013**	**AVAIL**	**MOTOR ASSEMBLY 350 - SABER FLAIL**
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	763759	2	THRUSTPLATE
12	02961940	1	HEX PLUG
13	TF4401	1	SNAP RING
14	06504049	1	LIP SEAL (INCLUDED IN SEAL KIT)
15	TF4410	2	GASKET SEAL (INCLUDED IN SEAL KIT)
16	06504046	4	SIDE SEAL (INCLUDED IN SEAL KIT)
17	06504047	4	END SEAL (INCLUDED IN SEAL KIT)
18	TF4407	2	BACK-UP SEAL (INCLUDED IN SEAL KIT)
19	06504048	1	SEAL RETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
*	06504022	AVAIL	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)

SPINDLE ASSEMBLY



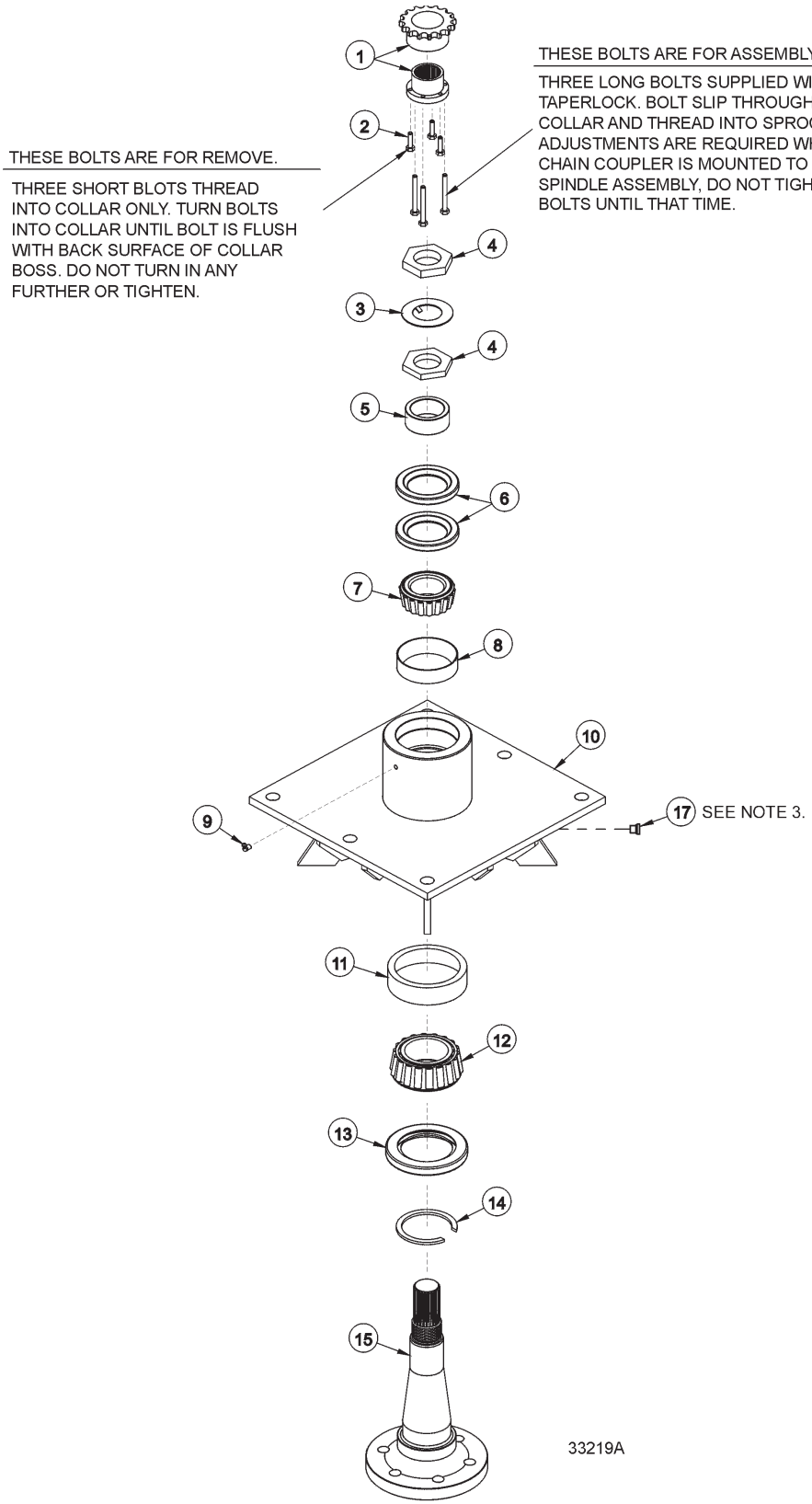
NOTES:

1. FREEPLAY: .001" - .003"
2. GREASE: FILL WITH MOBILITH SHC 220.
3. APPLY LOCTITE "271" TO O-RING PLUG THRDS.

SPINDLE ASSEMBLY

ITEM	PART NO.	QTY	DESCRIPTION
	33219	**OPT.**	**SPINDLE ASSY 50" ROTARY**
1	33197	1	SPROCKET, SABER
2	6T1016	1	BEARING LOCKNUT - THICK
3	22596	1	JAM WASHER
4	6T1015	1	BEARING ADJUST NUT - THIN
5	6T1011	2	UPPER SEAL - SMALL
7	6T1012	1	BEARING CONE - SMALL
8	6T1013	1	BEARING CUP - SMALL
8	33186	1	SPINDLE, SABER
9	33248	1	BEARING ADJUST SLEEVE
10	33202	1	SNAP RING
11	33200	1	BEARING CUP - LARGE
12	33199	1	BEARING CONE -LARGE
13	33201	1	LOWER SEAL - LARGE
14	32953	1	SPINDLE HOUSING, SABER
15	6T3210	1	GREASE ZERK
16	06503064	1	O-RING PLUG, 1/8"

SPINDLE ASSEMBLY



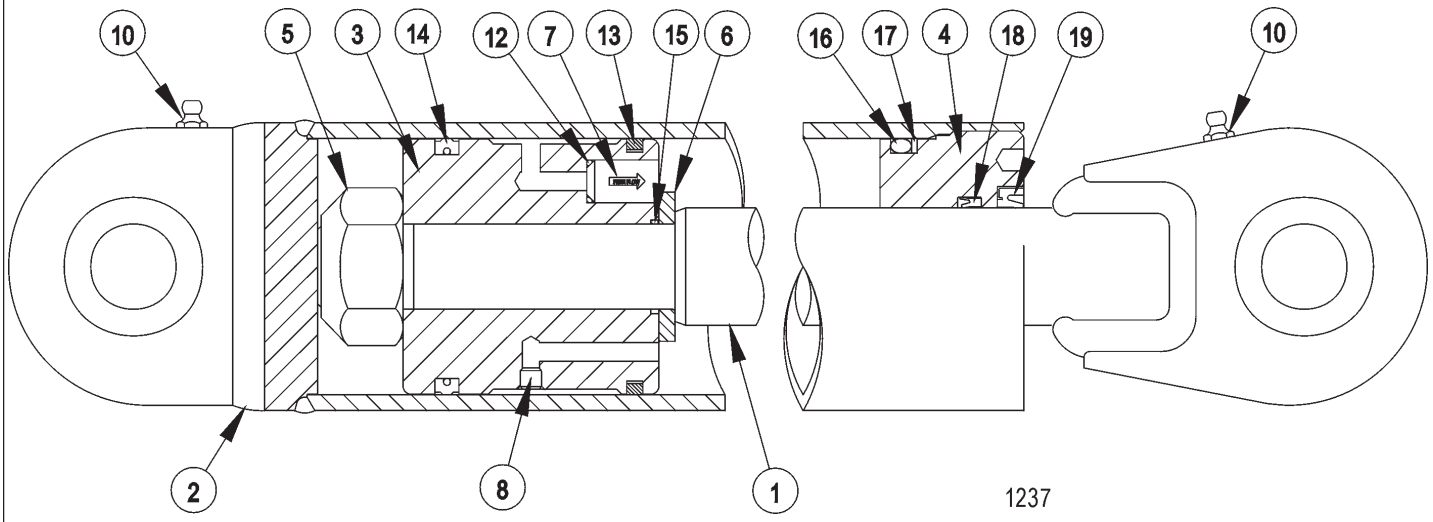
NOTES:
1. FREEPLAY: .001" - .003"
2. GREASE: FILL WITH MOBILITH SHC 220.
3. APPLY LOCTITE "271" TO O-RING PLUG THRDS.

3-12-02

SPINDLE ASSEMBLY

ITEM	PART NO.	QTY	DESCRIPTION
	33219	**OPT.**	**SPINDLE ASSY 50" ROTARY**
1	34480	1	TAPERLOCK SPROCKET
2	21530	3	CAPSCREW 1/4" X 1"
3	22596	1	JAM WASHER
4	6T1015	2	BEARING LOCK NUT - THIN
5	33248	1	BEARING ADJUST SLEEVE
6	6T1011	2	UPPER SEAL - SMALL
7	6T1012	1	BEARING CONE - SMALL
8	6T1013	1	BEARING CUP - SMALL
9	6T3210	1	GREASE ZERK
10	32953	1	SPINDLE HOUSING, SABER
11	33200	1	BEARING CUP - LARGE
12	33199	1	BEARING CONE -LARGE
13	33201	1	LOWER SEAL - LARGE
14	33202	1	SNAP RING
15	33186	1	SPINDLE, SABER
17	06503064	1	O-RING PLUG, 1/8"

WELDED CYLINDER



3" X 30" CYLINDER #33705

ITEM	PART NO.	QTY.	DESCRIPTION
1	34571	1	PISTON ROD ASY
2	34572	1	BUTT & TUBE ASY
3	34573	1	PISTON
4	34574	1	GLAND
5	34575	1	LOCK NUT
6	34576	1	SPACER
7	34577	1	CHECK VALVE, KEPNER
8	34578	1	ORIFICE
9	33761	1	SEAL KIT, PACKING (INCLUDES ITEMS 12 THRU 19)
10		2	GREASE ZERK
12		1	O - RING
13		1	CAST IRON PISTON RING
14		1	CROWN SEAL
15		1	O - RING
16		1	O - RING
17		1	BACK - UP WASHER
18		1	U - CUP
19		1	WIPER
20	34334	AVAIL	SPHERICAL BEARING (NOT SHOWN)

WELDED CYLINDER

4" X 27" CYLINDER #32365

ITEM	PART NO.	QTY.	DESCRIPTION
1	34580	1	PISTON ROD ASY
2	34581	1	BUTT & TUBE ASY
3	34582	1	PISTON
4	34583	1	GLAND
5	34584	1	LOCK NUT
9	33757	1	SEAL KIT, PACKING (INCLUDES ITEMS 12 THRU 19)
10		2	GREASE ZERK
12		1	O - RING
13		1	CAST IRON PISTON RING
14		1	CROWN SEAL
15		1	O - RING
16		1	O - RING
17		1	BACK - UP WASHER
18		1	U - CUP
19		1	WIPER
20	34335	AVAIL	SPHERICAL BEARING (NOT SHOWN)

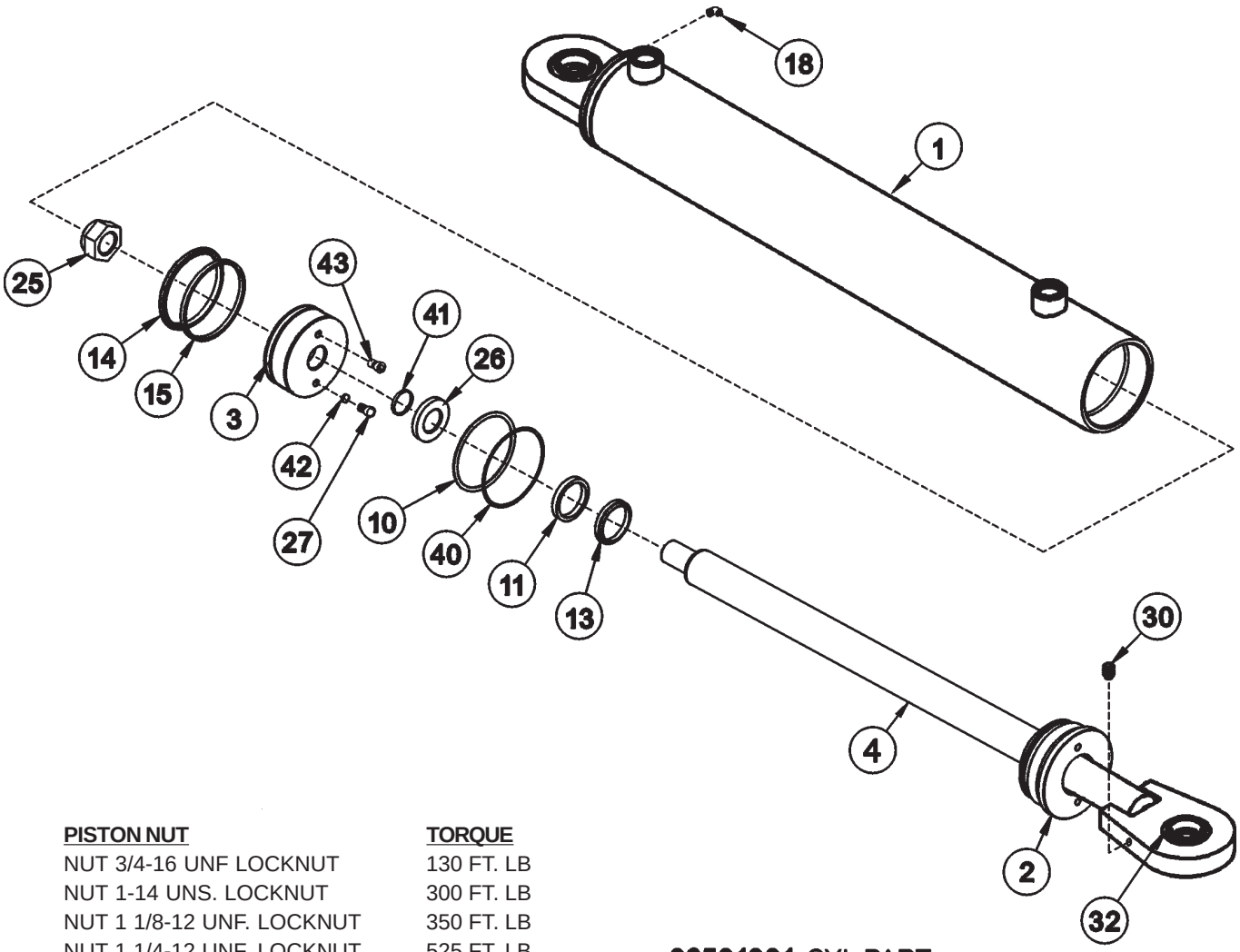
4 1/2" X 39" CYLINDER #32364

1	34586	1	PISTON ROD ASY
2	34587	1	BUTT & TUBE ASY
3	34588	1	PISTON
4	34589	1	GLAND
5	34590	1	LOCK NUT
9	33758	1	SEAL KIT, PACKING (INCLUDES ITEMS 12 THRU 19)
10		2	GREASE ZERK
12		1	O - RING
13		1	CAST IRON PISTON RING
14		1	CROWN SEAL
15		1	O - RING
16		1	O - RING
17		1	BACK - UP WASHER
18		1	U - CUP
19		1	WIPER
20	34335	AVAIL	SPHERICAL BEARING (NOT SHOWN)

5" X 41" CYLINDER #32363

1	34592	1	PISTON ROD ASY
2	34593	1	BUTT & TUBE ASY
3	34594	1	PISTON
4	34595	1	GLAND
5	34596	1	LOCK NUT
7	34597	1	CHECK VALVE, KEPNER
8	34598	1	ORIFICE
9	33759	1	SEAL KIT, PACKING (INCLUDES ITEMS 12 THRU 19)
10		2	GREASE ZERK
12		1	O - RING
13		1	CAST IRON PISTON RING
14		1	CROWN SEAL
15		1	O - RING
16		1	O - RING
17		1	BACK - UP WASHER
18		1	U - CUP
19		1	WIPER
20	34335	AVAIL	SPHERICAL BEARING (NOT SHOWN)

3” x 17 1/2” WELDED CYLINDER PARTS

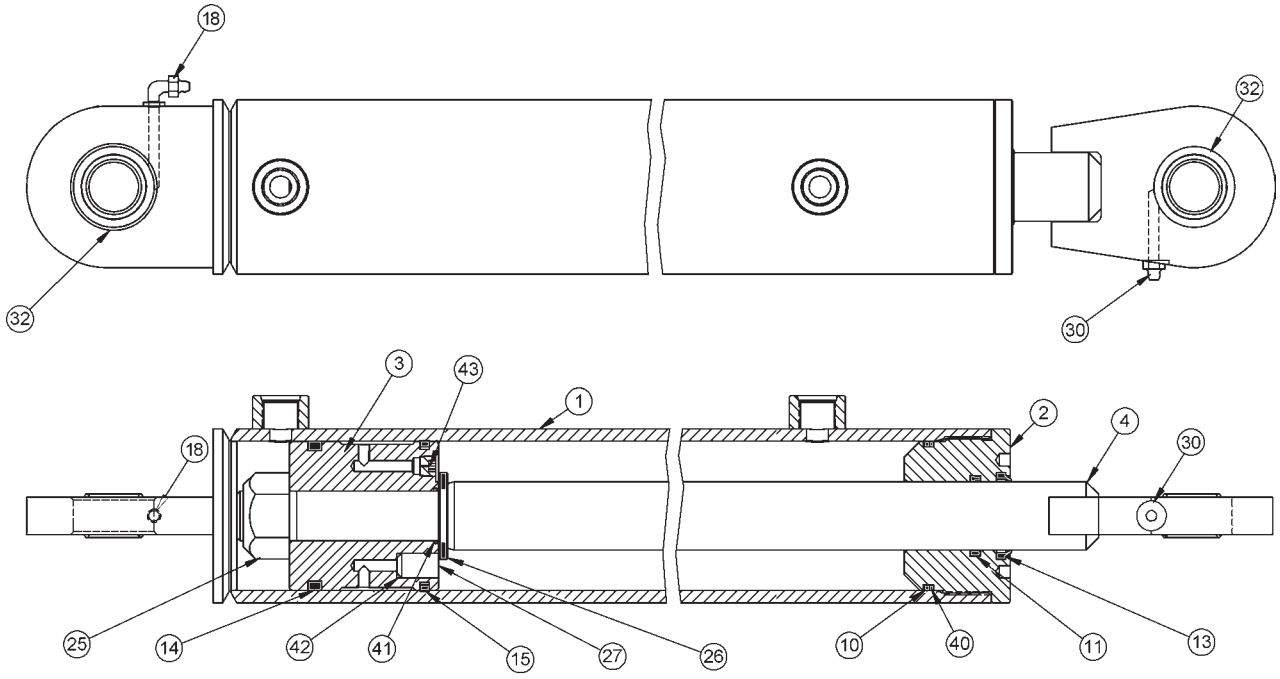


06501001 CYL PART

PISTON NUT	TORQUE
NUT 3/4-16 UNF LOCKNUT	130 FT. LB
NUT 1-14 UNS. LOCKNUT	300 FT. LB
NUT 1 1/8-12 UNF. LOCKNUT	350 FT. LB
NUT 1 1/4-12 UNF. LOCKNUT	525 FT. LB
NUT 1 1/2-12 UNF. LOCKNUT	750 FT. LB

ROD CLEVIS SET SCREW	TORQUE
3/8-16 UNC	20 FT. LB

3” x 17 1/2” WELDED CYLINDER PARTS

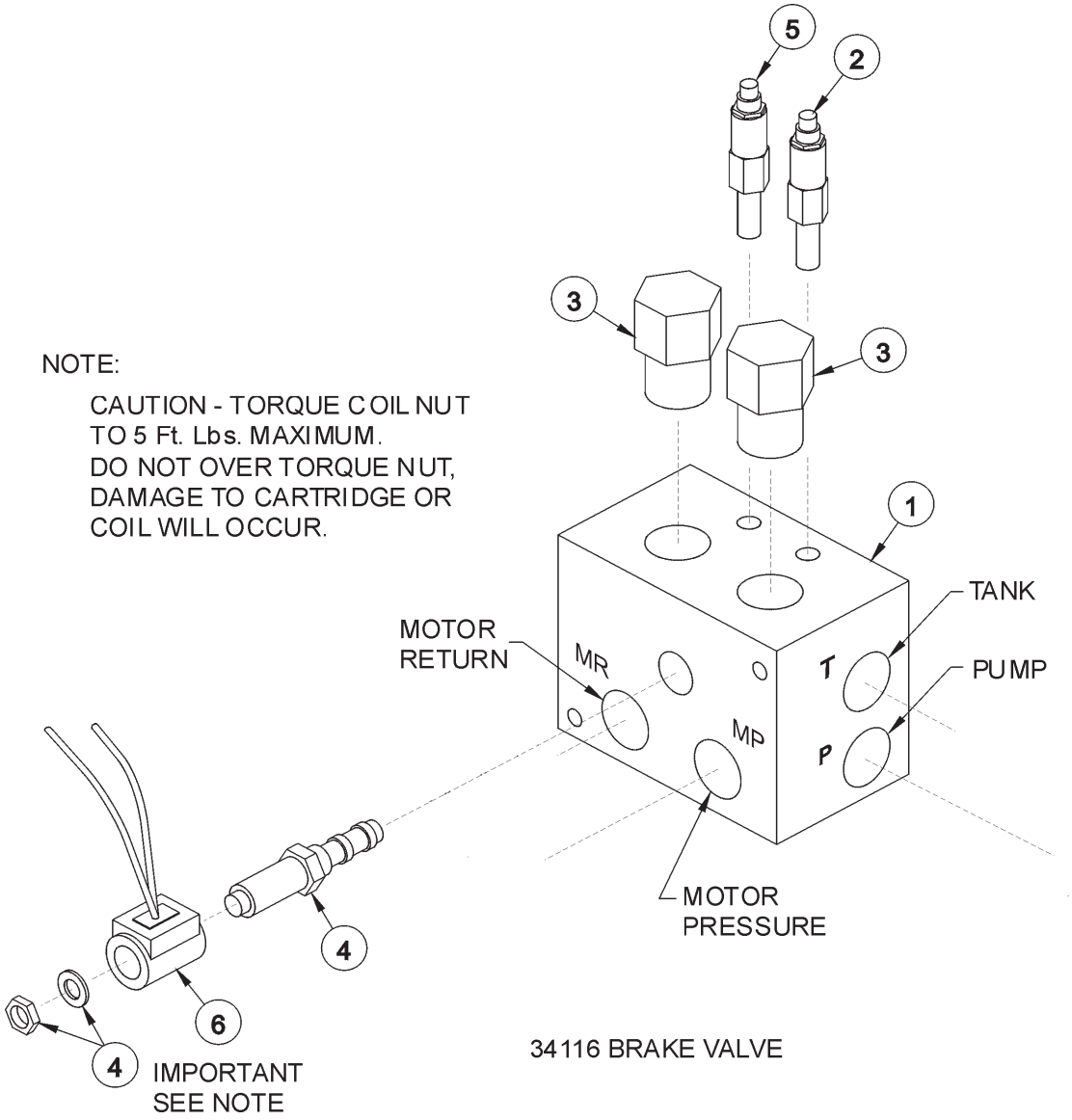


WARNING - MECHANICAL FASTENERS MUST BE TORQUED TO RECOMMENDED SPECIFICATIONS DURING REPAIR TO PREVENT PERSONAL INJURY OR EQUIPMENT DAMAGE.

ITEM	PART NO.	QTY.	DESCRIPTION
*****	**06501001**	**AVAIL**	**HYDRAULIC CYLINDER COMPLETE**
1	06501506	1	TUBE WELDMENT
2	34901	1	CYLINDER HEAD
3	06501508	1	PISTON
4	06501507	1	ROD W/ CLEVIS
10	*	1	O-RING, 2 3/4 x 3
11	*	1	ROD SEAL
13	*	1	ROD WIPER
14	*	1	PSP SEAL
15	*	1	PISTON SEAL, CAST IRON
18	6T3204	1	ZERK, ELBOW
25	34906	1	LOCKNUT
26	06501505	1	WASHER
27	06501503	1	CHECK VALVE
30	6T3207	1	ZERK
32	06501502	2	BEARING, SHPERICAL
40	*	1	BACKUP SEAL
41	*	1	O-RING, 1 x 1 1/8
42	*	1	O-RING, 3/8 x 1/2
43	06501504	1	ORIFICE
	06501501	AVAIL	SEAL REPAIR KIT (INCLUDES ITEMS WITH “*”)

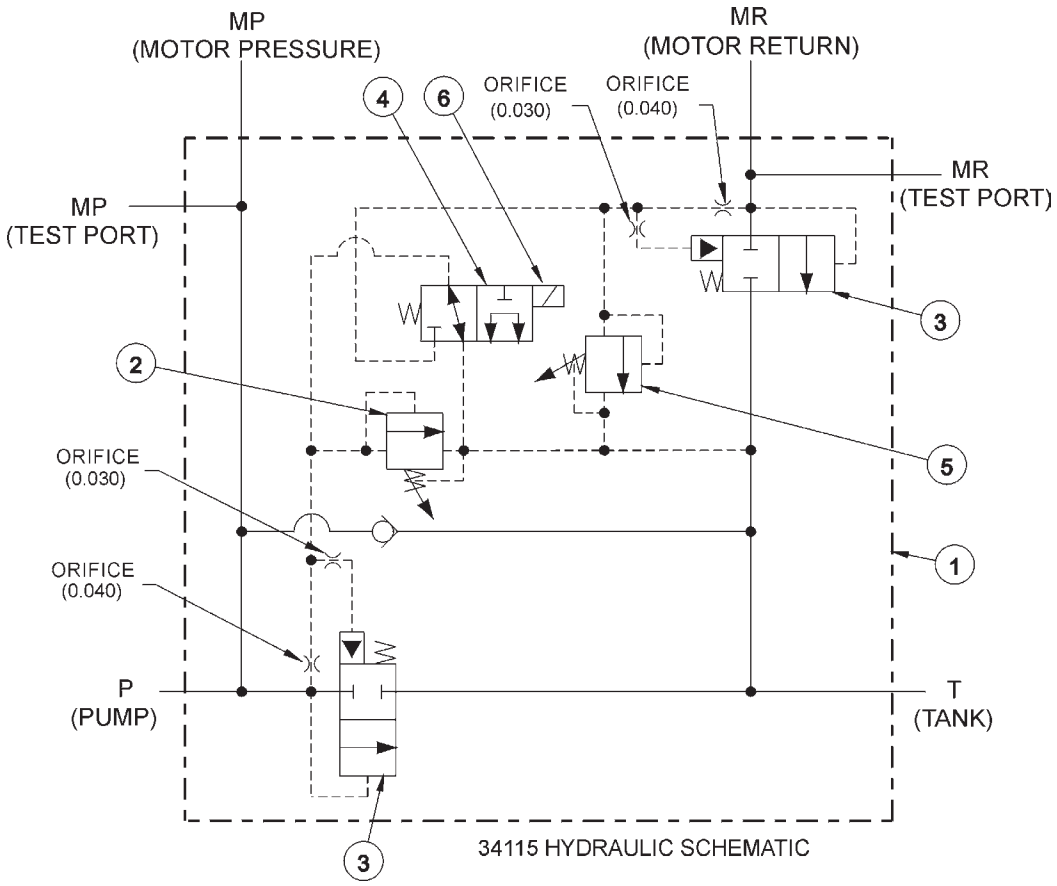
NOTE - ALL SEALS AND WEAR RINGS MUST BE PURCHASED IN COMPLETE SEAL REPAIR KIT.

SOLENOID BRAKE VALVE ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
*	34116	AVAIL	SOLENOID BRAKE VALVE ASSEMBLY - HIGH PRESSURE
1	34092	1	BRAKE VALVE, BLANK
2	34090	1	RELIEF VALVE, 3500 PSI
3	34094	2	LOGIC ELEMENT
4	34093	1	CARTRIDGE, 2 POSITION, 3 WAY (WITH NUT & WASHER)
5	34091	1	RELIEF VALVE, 2600 PSI
6	34699	1	COIL, 12 VDC, BRAKE VALVE
**	34096	2	RELIEF SEAL KIT
**	34097	1	SOLENOID SEAL KIT
**	34098	2	ELEMENT SEAL KIT
7	33555	1	ADAPTER
8	34117	2	ELBOW, 45°
9	33554	1	ELBOW, 90°

SOLENOID BRAKE VALVE HYDRAULIC SCHEMATIC



BRAKE VALVE TROUBLESHOOTING

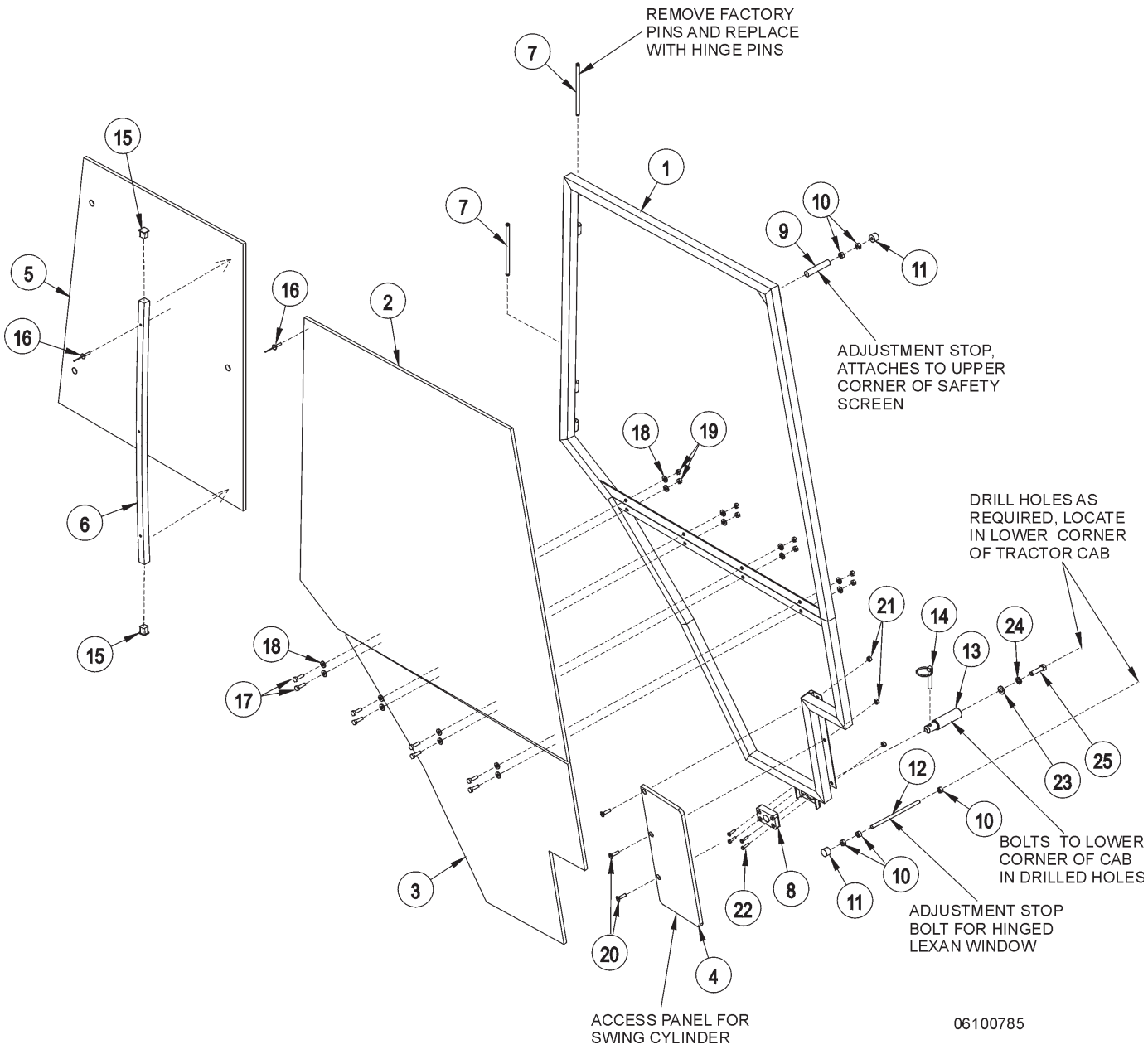
FAILURE MODE:	CHECK STEPS
- MOWER WILL NOT START - system pressure is low (engine not lugging).	1 thru 6
- MOWER WILL NOT START - system pressure is high (engine lugging). "MR" port will be high pressure.	7
- MOWER WILL NOT ROTATE AT FULL SPEED - limited power.	3 thru 5
- MOWER BLADE WILL NOT STOP - blade will not stop in proper time.	7 thru 9

CORRECTIVE STEPS:

1. Check for voltage at solenoid (item 6), voltage must be between 10.2 volts and 13.8 volts.
2. Remove, inspect solenoid and cartridge (items 4, 6) for wear or contamination.
3. Remove, inspect logic elements near "P" port (item 3) for wear or contamination.
4. Remove, inspect 3500 psi relief valve (item 2) for wear or contamination.
5. Remove and inspect orifices near "P" port for contamination.
6. Remove "P" port hose and fitting, visually inspect for contamination, check ball for movement.
7. Remove and inspect orifices near "MR" port for contamination.
8. Remove, inspect 2600 psi relief valve (item 5) for wear of contamination.
9. Remove, inpect logic element near "MR" port (item 3) for wear or contamination.

7-25-02

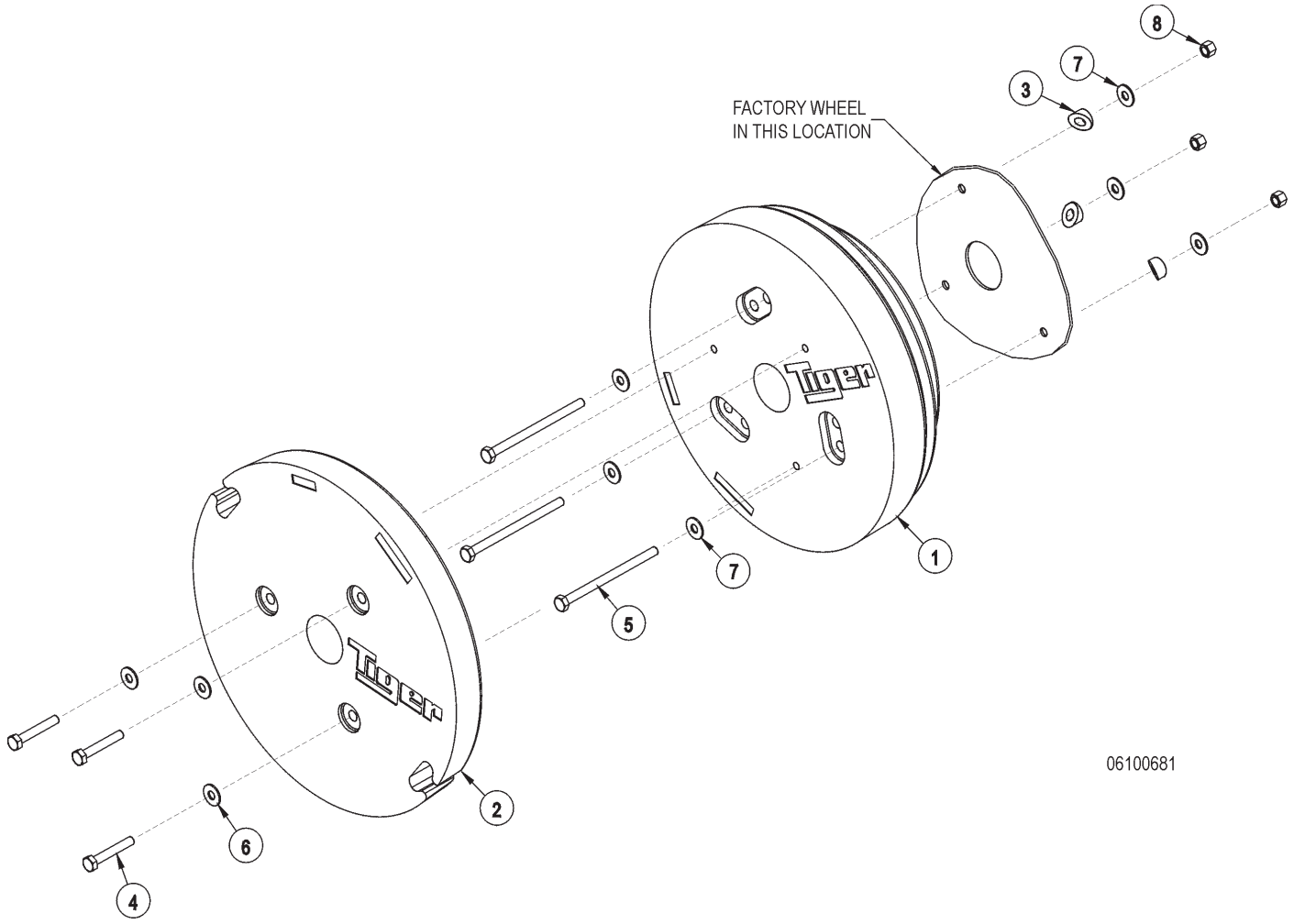
LEXAN WINDOW



LEXAN WINDOW

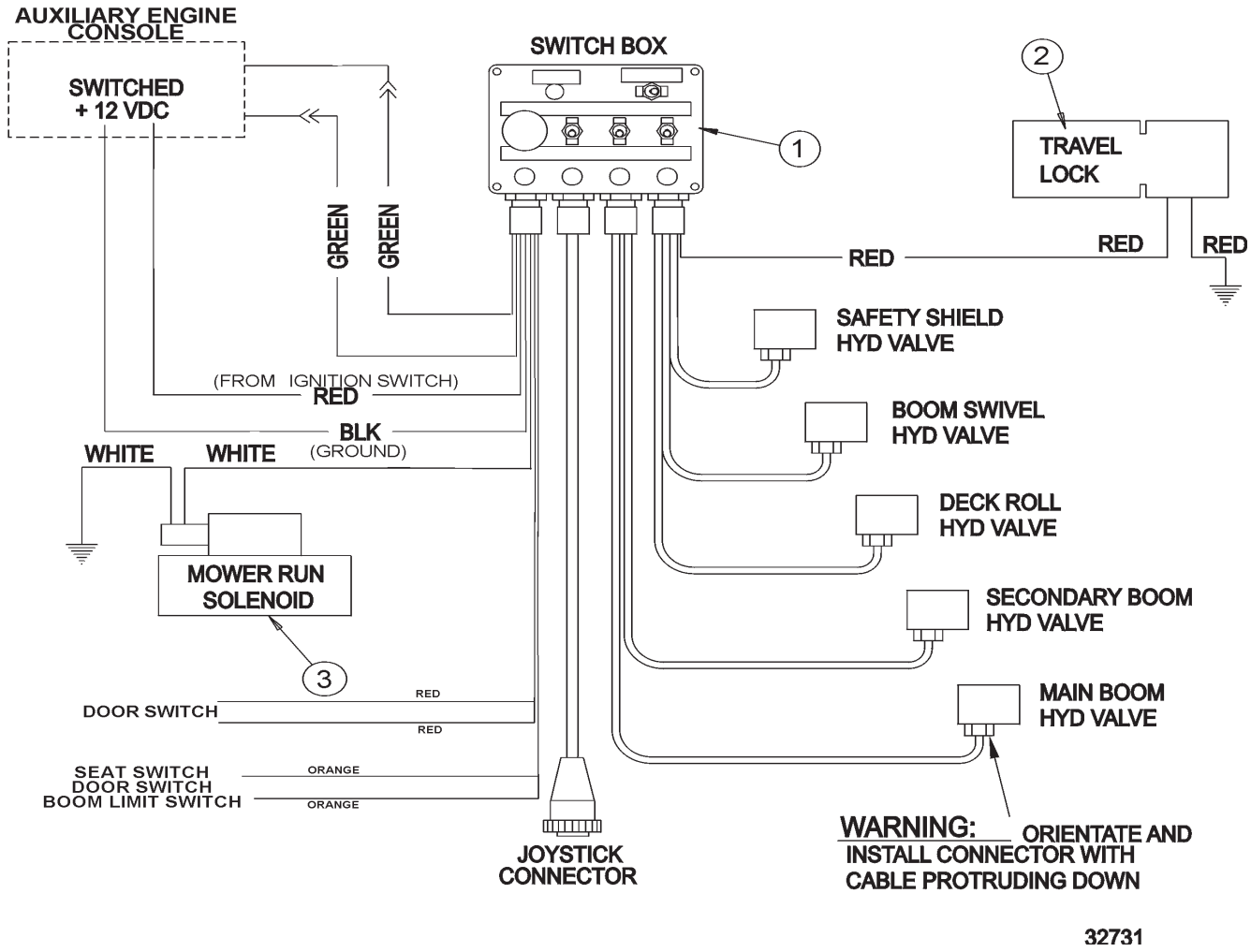
ITEM	PART NO.	QTY.	DESCRIPTION
1	33637	1	SAFETY SCREEN FRAME
2	33642	1	LEXAN TOP SAFETY WINDOW
3	33643	1	LEXAN BOTTOM SAFETY WINDOW
4	33644	1	LEXAN CORNER SAFETY WINDOW
5	27470C	1	LEXAN REAR SAFETY WINDOW
6	30011	1	WINDOW BRACE
7	33641	2	HINGE PIN
8	32998	1	GROMMET
9	33478	1	ROD THREADED 5/16” x 3”
10	21575	5	HEXNUT- 5/16
11	33477	2	VIBRATION ISOLATOR
12	33654	1	ROD THREADED 5/16” x 6 1/2”
13	33653	1	PIN SAFETY SCREEN
14	RD1032	1	LYNCH PIN
15	30180	2	PLASTIC PLUG
16	6T3954	26	POP RIVET
17	21530	8	CAPSCREW - 1/4
18	22014	16	FLAT WASHER - 1/4
19	21525	8	HEXNUT - 1/4
20	33697	3	CAPSCREW FLAT HEAD -1/4
21	21502	3	NYLOCK NUT - 1/4
22	24889	4	MACHINE SCREW - 10-24
23	22016	1	FLAT WASHER -3/8
24	21988	1	LOCK WASHER - 3/8
25	21630	1	CA[SCREW - 3/8 x 1”

WHEEL WEIGHT



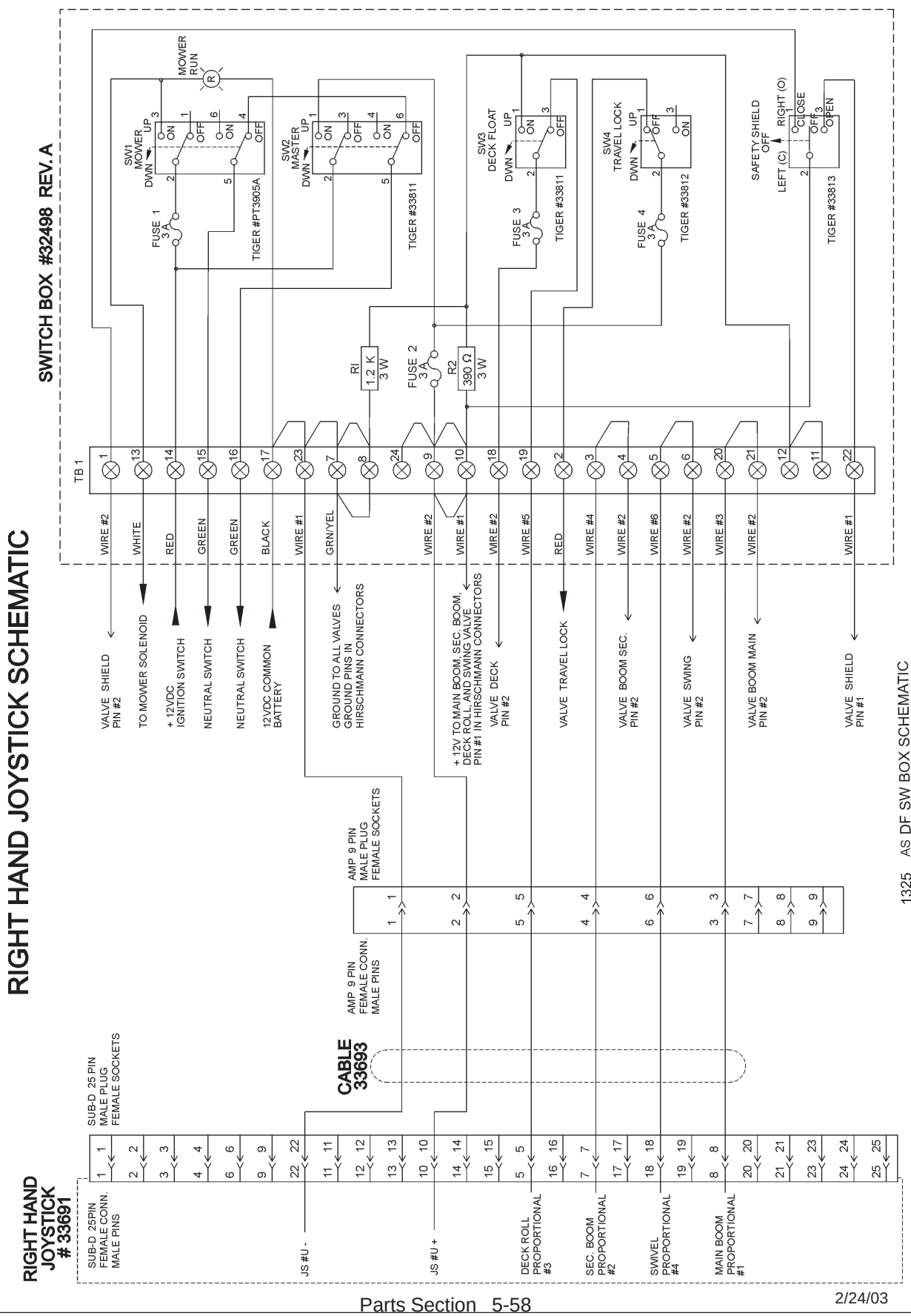
ITEM	PART NO.	QTY.	DESCRIPTION
1	32615	1	1700# INNER WHEEL WEIGHT
2	32518	1	850# OUTER WHEEL WEIGHT
3	31735	3	BOLT SPACER
4	21842	3	CAPSCREW, 3/4" X 5"
5	06530200	3	CAPSCREW, 7/8" X 14"
6	22021	3	FLATWASHER, 3/4"
7	06533000	6	FLATWASHER, 7/8" GR8
8	06531000	3	HEX NUT, 7/8" NC, GR8

SOLENOID SWITCH BOX AND WIRING



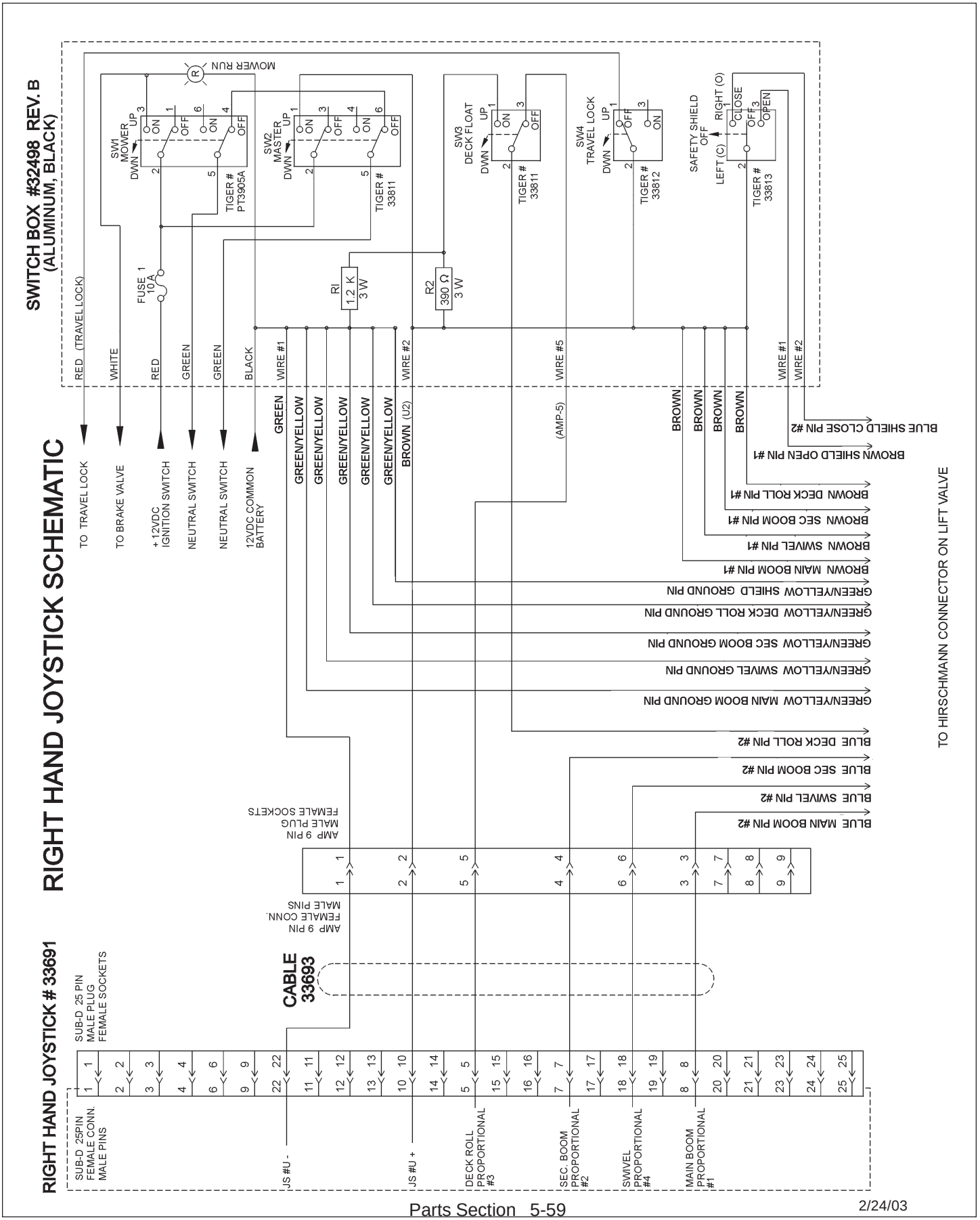
ITEM	PART NO.	QTY.	DESCRIPTION
1	6T3934	OPT.	OIL TEMPERATURE GUAGE
2	6T3931	OPT.	TEMERATURE SENSOR
3	REF.	*	SWITCH BOX - REFER TO LIFT VALVE
4	REF.	*	TRAVEL LOCK - REFER TO HYDRAULICS
5	REF.	*	SOLENOID - REFER TO MAIN FRAME

SWITCH BOX SCHEMATIC



2/24/03

SWITCH BOX SCHEMATIC



2/24/03

JOYSTICK TROUBLESHOOTING

Boom operation not responding to joystick movement.

Isolate hydraulic vs. electronic symptom.

Turn off electronic master switch (preventing electronic actuator on valve from attempting to hold spool in neutral position). With tractor engine running, operate the valve section with the manual handle. If function operates normally, continue with electronic inspection. If function does not operate normally, continue with hydraulic inspection.

Electronic inspection.

Connect a voltmeter to the cable connector of the valve section that is not operating. This will allow you to measure supply and signal voltage when the joystick is operated.

Main, Secondary, and Swivel Valves – signal voltage should be 50% of supply voltage with joystick in Neutral position, up to 75% of supply voltage in B direction, down to 25% of supply voltage in A direction. Signal voltage should change smoothly with lever movement.

Pin #1 – Supply Voltage Pin #2 – Signal Voltage Pin #gnd – ground

Deck Roll Valve or Float Valve – signal voltage should be 50% of supply voltage with joystick in Neutral position, up to 65% of supply voltage in B direction, down to 35% of supply voltage in A direction. Signal voltage should change smoothly with lever movement. Signal voltage should be approximately 75% of supply voltage when float switch is operated.

Pin #1 – Supply Voltage Pin #2 – Signal Voltage Pin #gnd – ground

Shield Valve or On/Off Valve – Voltage on pin #1 should be equal to supply voltage when switch is operated in A direction. Voltage on pin #2 should be equal to supply voltage when switch is operated in B direction.

Pin #1 – Signal Voltage Pin #2 – Signal Voltage Pin #gnd – ground

If none of the valve will operate with electrical signal, verify that there is oil pressure at the valve inlet. Electrical Valves must have pilot supply oil to move the spools.

Possible electronic problems.

Open circuit (broken wire, bad connection or loose connection in switch box).
Shorted to positive, ground, or other.
Incorrect voltage signal from joystick.

Continued on next sheet

Hydraulic inspection.

Install 3 pressure gauges, on the valve inlet (use M port, or tee into hose supplying oil from the pump to the inlet), on the workport that is not operating, and on the LS port.

With the spools in Neutral

Gear pump – P should be approximately 200 psi, LS = 0, workport – pressure on cylinder or function.
LS pump – P should equal pump standby pressure, LS = 0, workport – pressure on cylinder or function.
Pressure Comp pump – P should equal pump standby pressure, LS = 0, workport – pressure on cylinder or function.

Gear pump – P should be approximately 200 psi higher than LS, LS should equal workport, workport – pressure on cylinder or function.
LS pump – P should be LS + standby, LS should equal workport, workport – pressure on cylinder or function.
Pressure Comp pump – P should equal pump standby pressure, LS should equal workport, workport – pressure on cylinder or function.

Operate one spool, measure pressures with function at end of travel or stop

Gear pump – P should equal valve relief setting or workport shock valve setting. LS should equal workport. Workport should equal relief setting or workport shock valve setting.
LS pump – P should equal valve relief setting, pump max pressure setting, or workport shock valve setting. LS should equal workport. Workport should equal relief setting, pump max pressure setting, or workport shock valve setting.
Pressure Comp pump – P should equal pump standby pressure, LS should equal workport. Workport should equal pump standby pressure or workport shock valve setting.

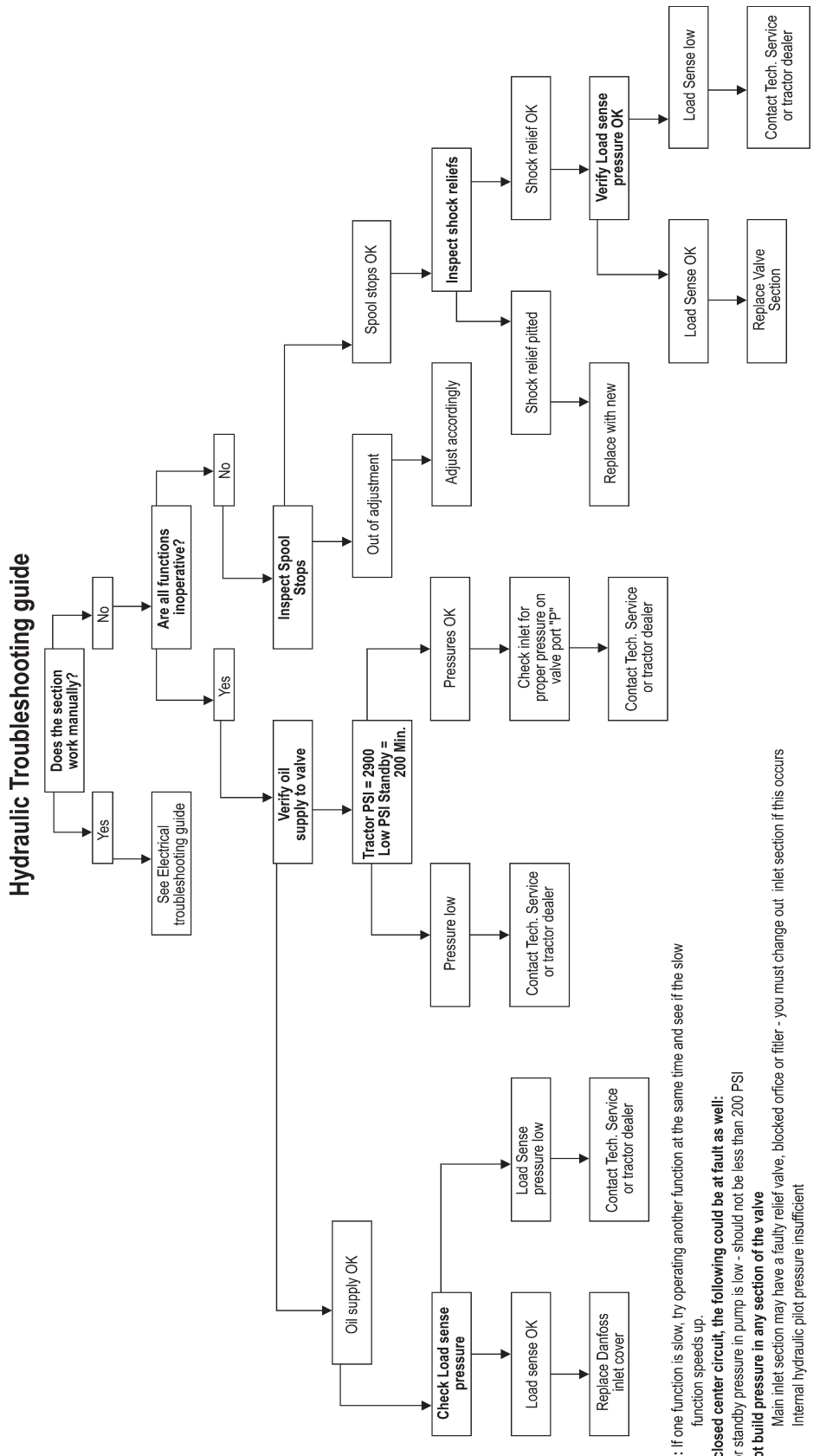
Operate more than one spool.

Gear pump – P should approximately 200 psi higher than LS. LS should equal highest workport pressure. Workport – pressure on cylinder or function.
LS pump – P should be LS + standby pressure. LS should equal highest workport pressure. Workport – pressure on cylinder or function.
Pressure Comp pump. P should equal pump standby pressure. LS should equal highest workport pressure. Workport – pressure on cylinder or function.

Possible hydraulic problems.

Cylinder leak.
LS signal leaking to tank before reaching pump LS port.
Hydraulic system or pump not supplying flow to valve.

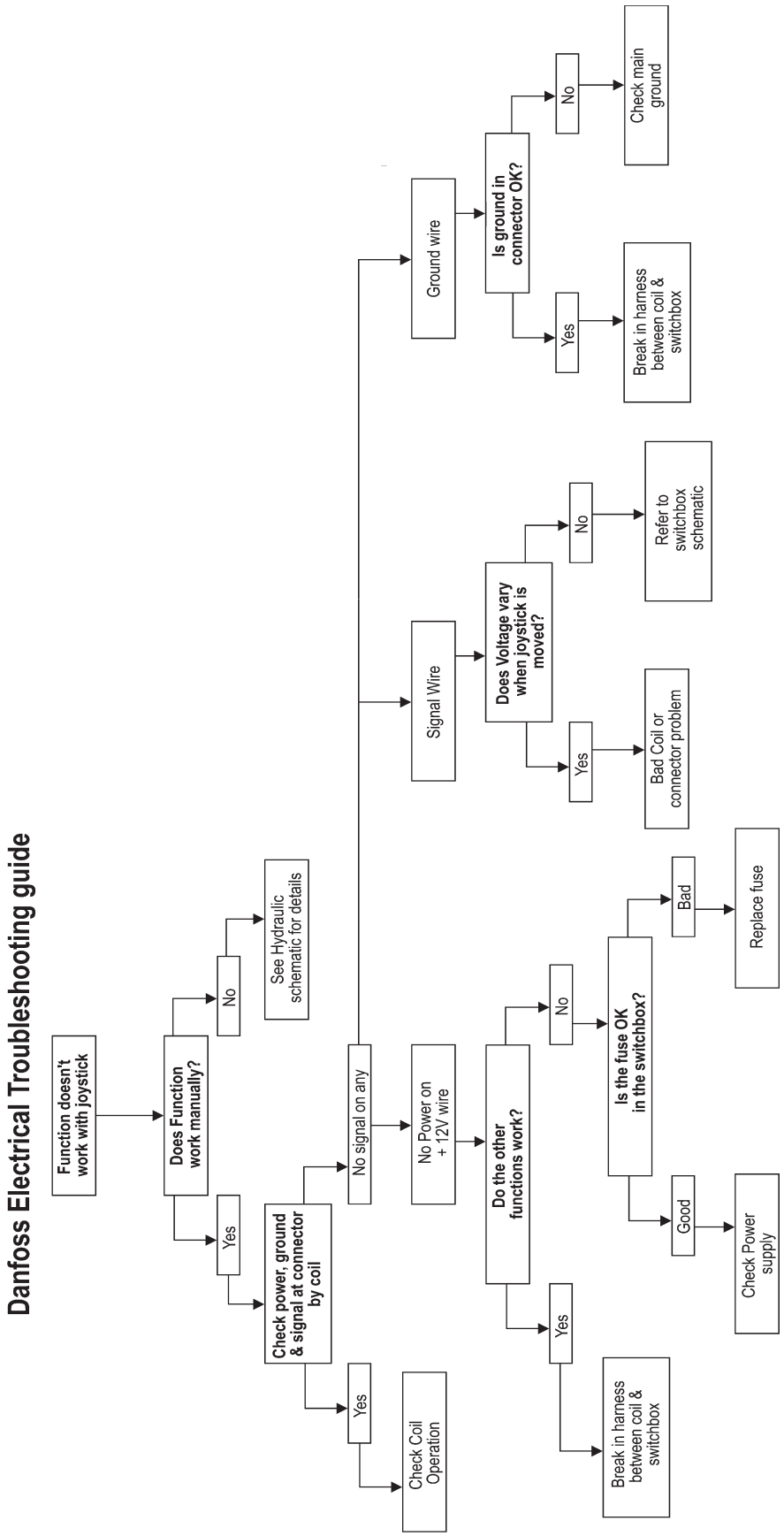
HYDRAULIC - TROUBLESHOOTING GUIDE



Notes: If one function is slow, try operating another function at the same time and see if the slow function speeds up.

On a closed center circuit, the following could be at fault as well:
Tractor standby pressure in pump is low - should not be less than 200 PSI

Cannot build pressure in any section of the valve
Main inlet section may have a faulty relief valve, blocked orfice or fitler - you must change out inlet section if this occurs
Internal hydraulic pilot pressure insufficient


Danfoss Electrical Troubleshooting guide
Function doesn't work with joystick
Does Function work manually?
No
See Hydraulic schematic for details
Yes
Check power, ground & signal at connector by coil
Yes
Check Coil Operation
No signal on any
No Power on + 12V wire
Do the other functions work?
No
Is the fuse OK in the switchbox?
Bad
Replace fuse
Good
Check Power supply
Yes
Break in harness between coil & switchbox
Ground wire
Is ground in connector OK?
No
Check main ground
Yes
Break in harness between coil & switchbox
Signal Wire
Does Voltage vary when joystick is moved?
No
Refer to switchbox schematic
Yes
Bad Coil or connector problem

CLEAN CUTTER SECTION

ASSEMBLY - CLEAN CUTTER

CAUTION!

Failure to follow the following warnings and instructions may result in serious injury or damage to the equipment or property!

CAUTION!

WARNING: The blade alone weighs approximately 145 lbs. Be sure its weight can be supported before attempting to replace. The use of a lift mechanism will ease replacement.

CLEAN CUTTER BLADE MOUNTING

The CLEAN CUTTER blade was designed for installation onto a standard SABER spindle. It is equipped with replaceable carbide tipped teeth. Carbide is very hard, it will chip or break on inpact. Handle the saw blade with care. **DO NOT** roll saw on any hard surface or allow it to strike a hard object. Set it down on a piece of belting or wood to avoid damaging carbide tips. Install two temperary(2) threaded studs into (2) opposite holes in the spindle. Align the bolt holes in adapter (part number 34767) with the studs and slide adapter over studs, be sure to index adaper so as the protruding 2 7/8" diameter pilot on the adapter faces outward away from spindle. Then slide the saw blade (part number 33874) over the studs and onto the 2 7/8" diameter pilot of the adapter. **NOTE:** Orient blade for clockwise rotation (blade rotates clockwise when looking down on top of mower deck). Then slide the collar (part number 34768) over the studs with the chamfered edge of collar to the outside, be sure the counterbore bolt holes face outward. Apply Loctite "271" to the threads of the 3/4-16 x 3 1/4" UNF Grade 8 bolts (part number 34769), and install lock washers (part number 21993) onto the bolts, then install bolts through collar, blade, and adapter into the spindle. Remove the threaded studs, and replace with bolts and lockwashers. Torque bolts in an alternating pattern to 298 Ft-lbs.

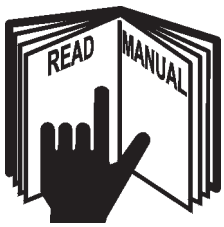
DANGER!

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

OPERATION - CLEAN CUTTER

DANGER!

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



OPERATING INSTRUCTIONS

Inspect clean cutter saw before each use. Re-torque spindle bolts to 331 Ft-lbs. Inspect blade around collar and near the teeth for bends and cracks. Check for loose, broken, chipped, dull of missing teeth. Tighten all loose teeth by hammering and or replacing rivets. If teeth are broken, chipped, or missing or if blade is cracked or becomes bent remove blade and have it repaired at an approved service center. Call Tiger Service Department for replacement parts and service.

The SABER Clean Cutter is intended for clean cutting trees and brush up to eight (8) inches in diameter maximum. Turn mower "ON" while tractor is running at idle RPM. Then increase tractor speed to 1,950 RPM maximum. Note, this tractor engine speed produces a mower speed of 1,500 RPM. **DO NOT operate the clean cutter mower at speeds in exess of 1,500 RPM.** If saw blade wobbles in exess of two (2) inches while tractor is idling, **STOP**, remove the blade and have it repaired an an approved service center. Call Tiger Service Department for replacement parts and service.

Allow saw to accelerate to maximum speed before moving into foliage. Advance mower head smoothly in foliage. Allow saw to cut through material, do not force or over feed. If saw slows excessively, move the head out of the foliage, and allow the saw to achieve maximum speed. **DO NOT** move up or down or roll mower head while cutting through heavy foliage. **DO NOT** use clean cutter mower on the ground. The saw blade is equipped with carbide tips, which are very hard. Striking rocks, steel, concerte, or other similar debris will break these tips.

Badly worn teeth increase stress to the saw blade and require more horsepower to cut than sharp teeth. Set-up a scheduled maintenance program for the saw before the teeth are dull. The saw will last longer, product a better cut, cut large diameter foliage without binding, and will cost less to operate.

Check adapter and collar every time saw is changed, maintain the .004 inch taper on face (surface against the saw blade) of these two (2) items. Always clean adapter and collar before mounting the blade. If adapter or collars are worn or damaged, they must be replaced.

Familiarize yourself with the machines operation and correct operating safety precautions.

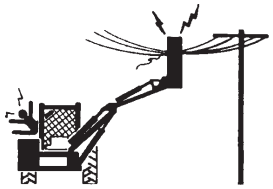
OPERATION - CLEAN CUTTER

WARNING!

Excessive wobble will generate heat in the blade, rapidly accelerating the loss of tension. The overheated blade will then rub against the foliage as it is cutting, again increasing the heat in the blade and intensifying the wobble. The blade may then weaken, crack and eventually fail. **NEVER RUN A BLADE THAT IS CRACKED OF BENT.**

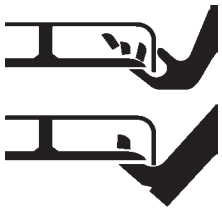
DANGER!

Always keep a careful lookout and use extreme care when working around overhead obstructions. Never allow the Mower head or boom within 10 feet of any power line. When working close to overhead power lines consult your electric company for a safe code of operation. (SBM-7)



WARNING!

Do not put hands or feet under mower decks. Blade Contact can result serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SGM-9)



DANGER!

Never operate the Tractor and Mower Unit without an OPS (Operators Protective Structure) or Cab to prevent injury from objects thrown from ground or from overhead trimming. Stop mowing if workers or passersby are with in 100 yards. (SBM-9)

WARNING!

CAUTION: Never leave the key in the ignition switch. Also personal injury or death can occur from sudden dropping or inadvertent operation of the controls. Make certain the area is clear before lowering or raising the deck.

MAINTENANCE - CLEAN CUTTER

MAINTENANCE INSTRUCTIONS

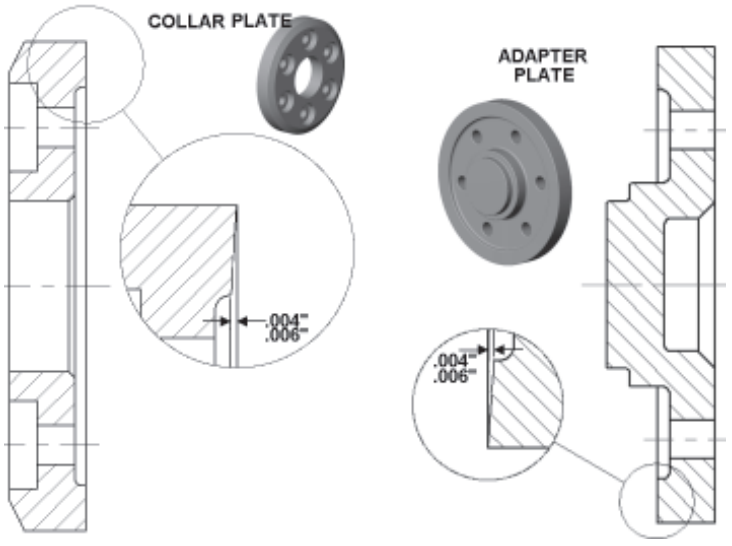
Inspect clean cutter saw before each use. Re-torque spindle bolts in an alternating pattern to 331 ft-lbs. Check for loose, broken, chipped, dull or missing teeth. Tighten all loose tooth assemblies by hammer and or replacing rivets. If teeth tips are broken, chipped, or missing, replace tip or replace entire tooth assembly. **NEVER RUN SAW BLADE WITH MISSING TOOTH ASSEMBLY.** If saw blade is cracked, becomes bent or wobbles in excess of two (2) inches while the tractor is idling, **STOP**, remove blade and have it repaired at an approved service center. Call Tiger Service Department for replacement parts and service.

These saw blades are pre-tensioned after the tooth assemblies are riveted in place. This pre-tensioning ensures that the blade runs true and remains true under normal cutting load. Removal of more than one or two complete tooth assemblies at a time may effect the tensioning of the blade. Before cutting always check for wobble while machine is running at idle. If blade wobbles in excess of two (2) inches, **STOP**, remove blade and have it repaired at an approved service center. The teeth tips can be replaced without removing the tooth bodies from the saw blade (see TIP REPLACEMENT PROCEDURE). This method is preferred over the entire removal of tooth assemblies.

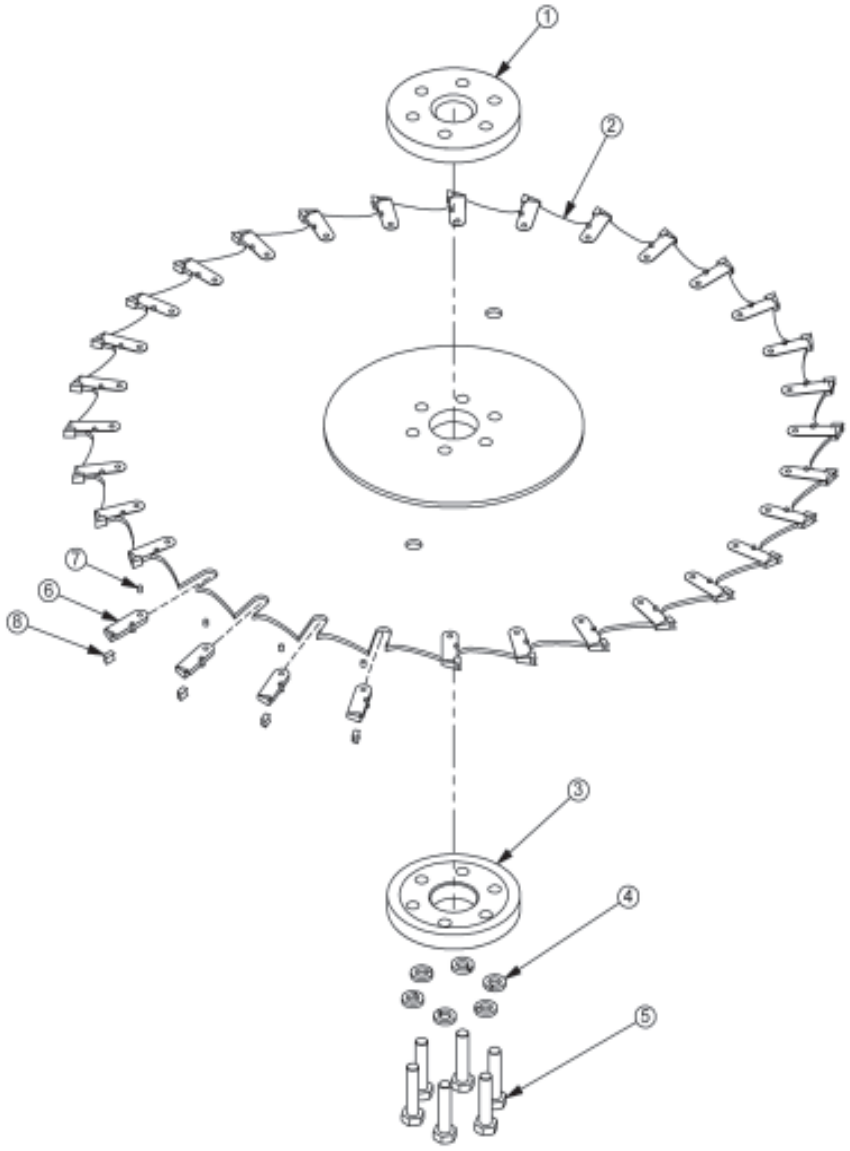
Check adapter and collar every time saw is changed, maintain the .004 to .006 inch taper (see figure below) on inside face (surface against saw blade) of these two (2) items. Always clean inside face of adapter and collar before mounting the blade. If adapter or collars are worn, chipped, or damaged, they must be replaced.

Any saw blade (regardless of condition) that has seen regular use should be serviced at least once a year at an approved service center.

Spare saw blades should be stored in a dry environment and transported only on the wooden crates that are supplied with the saw blade.



CLEAN CUTTER BLADE AND TEETH PARTS



ITEM	PART NO.	QTY.	DESCRIPTION
1	06420025	1	ADAPTER,SAW,SABER,RNFRCD
2	06520224	1	BLADE, 48" SAW WITH TEETH
3	06420038	1	COLLAR, SAW BLADE - SABER
4	33880	6	FLATWASHER,3/4,GR 8,SAE
5	06530210	6	CAPSCREW,3/4 x 3 3/4 NF, GR 8
6	06520225	30	TOOTH WITH RIVET, SAW BLADE
7	34703	30	TOOTH RIVET, SAW BLADE
8	34702	30	TOOTH TIP, SAW, CARBIDE
*	34705	AVAIL	SHARPENING TOOL (NOT SHOWN)
*	34704	AVAIL	RIVET REMOVER TOOL (NOT SHOWN)

(UPDATED NOVEMBER '07)

TIP REPLACEMENT PROCEDURE

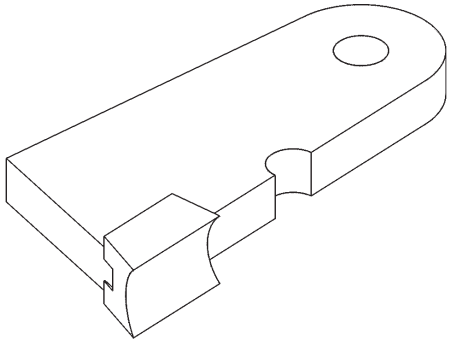
CARBIDE TIP REPLACEMENT

1. Heat face of tip to **dull orange**, remove tip, then brush tooth body clean of all debris (carbon).

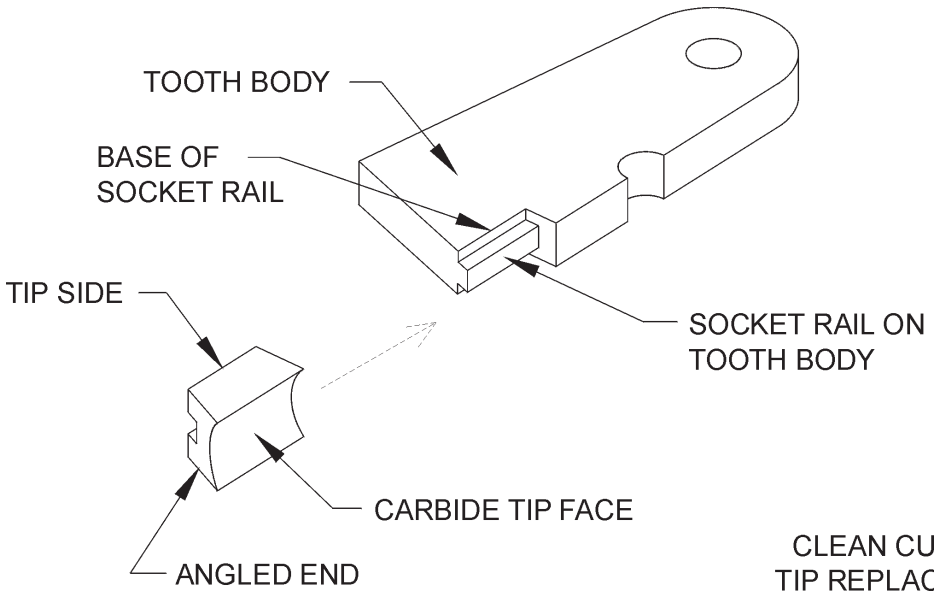
2. Apply acetone to socket rail on tooth body and allow it to evaporate. Dab on soldering paste (black flux) to socket rail of tooth body and slide pre-tinned tip into place.

3. Then heat tip sides and base of socket rail to ensure silver solder flows completely around base of tip. Grasp tip with tweezers and gently twist tip back and forth to ensure complete bonding of silver solder

4. Discontinue heat, and allow to cool. Then check braze by gently tapping tip with rubber mallet.



VIEW OF ASSEMBLIED TOOTH



CLEAN CUTTER
TIP REPLACEMENT

WARRANTY SECTION

WARRANTY INFORMATION

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

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

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

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

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

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE EXPRESSED HEREIN.

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

ONE LAST WORD

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

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

Printed in USA