

# REAR STOW SIDE BOOM ASSEMBLIES

JD6xxxD



### 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

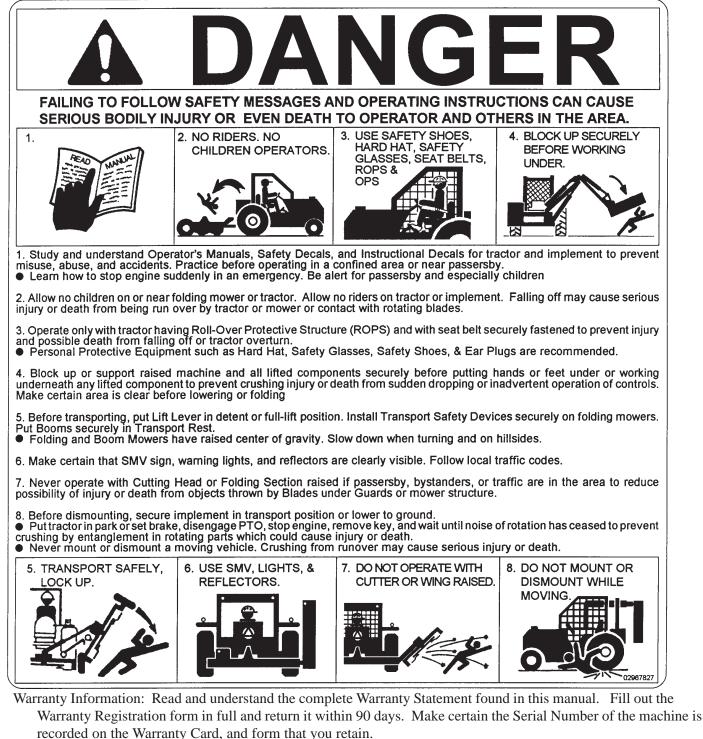
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# TO THE OWNER / OPERATOR / DEALER

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!



### FORWARD

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

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

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

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

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

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

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

MANUFACTURED BY:	DISTRIBUTED BY:	
Tiger Corporation		
3301 N. Louise Ave.		
Sioux Falls, SD 57107	1	
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www.tiger-mowers.com		

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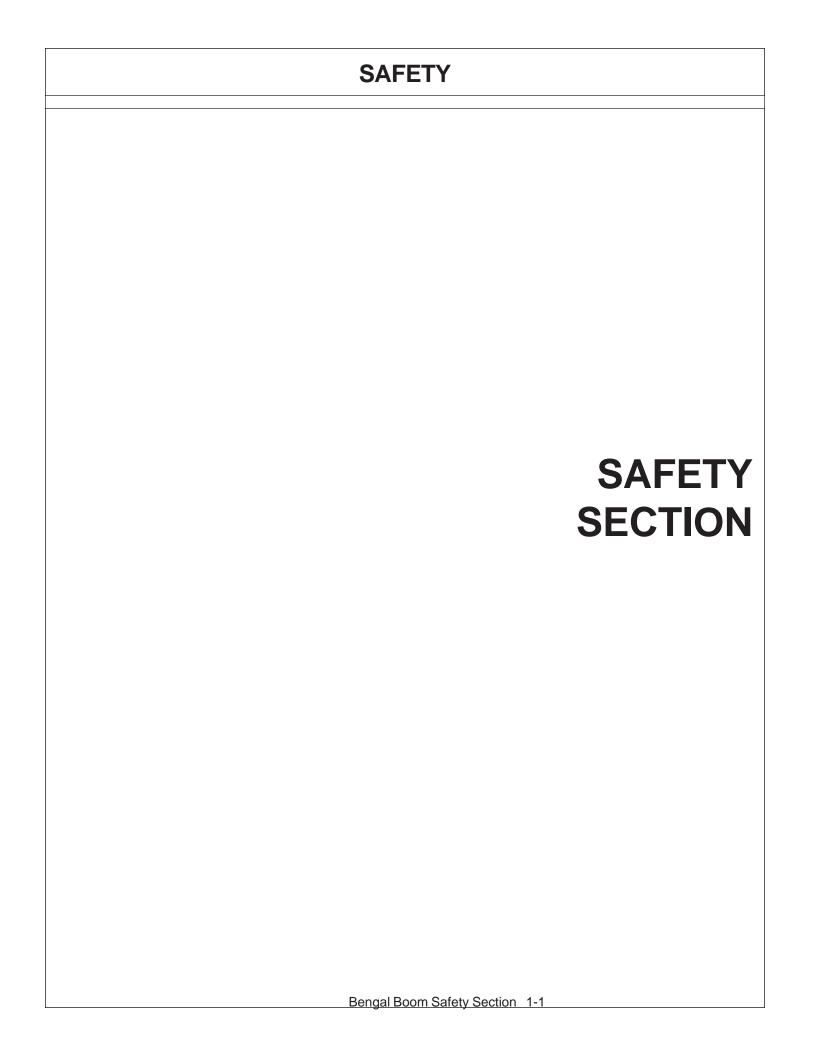


This symbol means: CAUTION – YOUR SAFETY IS AT RISK!

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

Tiger is a registered trademark.





#### **General Safety Instructions and Practices**

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

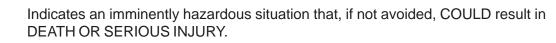


The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The symbol and signal word are intended to warn the owner / operator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

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

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

WARNING!





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)

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



PELIGRO!



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



i LEA EL INSTRUCTIVO!



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)



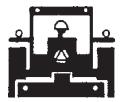
WARNING!



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



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)





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)

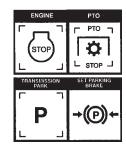


WARNING!

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.  $_{\rm (SG-8)}$ 



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)





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





Never allow children to operate or ride on the Tractor or Implement.  $$_{\rm (SG-11)}$$ 





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)





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)



Start only from seat in park or neutral. Starting in gear kills.



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)





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 knowledge-able and skilled in this procedure. (SG-15)



#### WARNING!

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

# SE PERMA-



**PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMA-NENT 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) Bengal Boom Safety Section 1-5







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)



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





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

(SG-23)



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





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)



**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)



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)



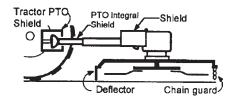
There are obvious and hidden potential hazards in the operation of this Mower. REMEMBER! This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care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



#### 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)



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)





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)



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)





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)



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 SUBSE-QUENT FAILURE AND POSSIBLE SERIOUS INJURY FROM THROWN BLADES. (SGM-10)

#### WARNING!



Do not mow with two machines in the same area except with Cab tractors with the windows closed.  $$_{\rm (SGM-11)}$$ 



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 UN-LESS:** 

- -Front and Rear Deflectors are installed and in good, working condition;
- -Mower Head is running close to and parallel to the ground without exposed Blades;
- -Passersby are outside the existing thrown-object zone;
- -All areas have been thoroughly inspected and all foreign material such as rocks, cans, glass, and general debris has been removed.
- NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected closely with any remaining debris being removed, and mowed again at desired final height. (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)



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)



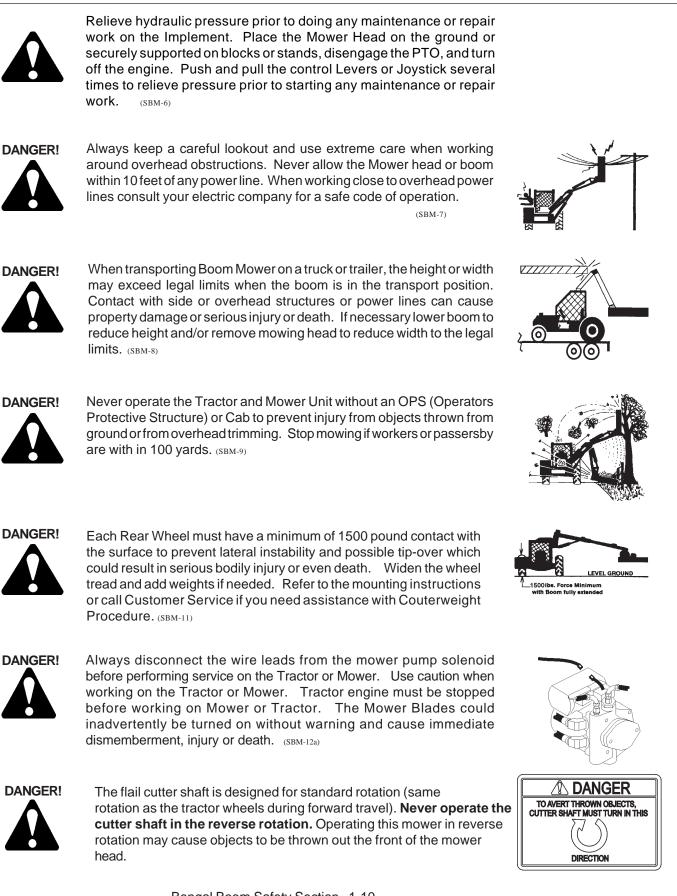


Never Leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SBM-4)





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!"** 



#### WARNING!



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

#### WARNING!



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

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



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



AWARNING Do Not OPERATE WITH BELT SHIELD REMOVED. FINGER(S) MAY BE PINCHED OFF IF CAUGHT BETWEEN V-BELT AND PULLEY. 00758194 PART NO. LOCATION

00758194 MOWER DECK



02962764 MAIN BOOM, SECONDARY BOOM, MAIN FRAME



02962765 MAIN FRAME

02965262 HYDRAULIC TANK



KEEP AWAY - ROTATING BLADES BEING HIT BY THROWN OBJECTS OR CONTACTING ROTATING BLADES CAN CAUSE INJURY OR DEATH • Stop mowing if passersby enter the area of thrown objects. (See Operator's Manual) • Use special care when Flail or Wing is raised off the ground. (See Oper. Manual) • Operate only if all Guards-Deflectors are in place and in good condition.

#### PART NO. LOCATION

02967668 MOWER DECK

02971123 HYDRAULIC TANK



#### POLYCARBONATE WINDOW

REFER TO OPERATORS MANUAL FOR CLEANING INSTRUCTIONS

DO NOT LUBRICATE WITH AUTOMATIC GREASE GUN. GREASE WITH HAND GREASE GUN ONLY. 03200285 OUTSIDE OF CAB

22645 INSIDE OF CAB

22839 MOWER DECK



IF FOREIGN OBJECTS ARE ACCIDENTLY CONTACTED, SHUT CONTROL SWITCH OFF IMMEDIATELY. DO NOT RAISE CUTTER HEAD UNTIL ALL MOVING PARTS HAVE STOPPED.



22840 INSIDE OF CAB



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

24028

24028 MOWER DECK

25387 INSIDE OF CAB



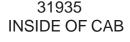
10" x 5.5" 31522 MOWER DECK, MAIN BOOM 18.25" x 10" 31523 HYDRAULIC TANK

### A WARNING

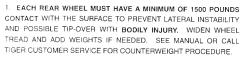
Valve section TF3009 with detented float to be used with only Boom Flail mower. DO NOT operate a Boom rotary mower with the float section installed. PART NO. LOCATION

27001 INSIDE OF CAB









2. TRANSPORT CAREFULLY! SLOW DOWN EVEN MORE ON SLOPES AND WHEN TURNING; NEVER TURN UP A SLOPE SHARPLY OR AT HIGH SPEED; AND USE EXTRA CARE IN ROUGH OR BUMPY AREAS TO PREVENT OVERTURN AND POSSIBLE CRUSHING INJURY OR DEATH. IF YOUR VIEW TO THE REAR IS BLOCKED, IT IS YOUR RESPONSIBILITY TO INSTALL MIRRORS THAT PROVIDE A REAR VIEW TO PREVENT ACCIDENTS FROM BLIND SPOTS.

3. REAR-MOUNTED BOOM MOWERS MOVE CENTER OF GRAVITY TO THE REAR AND REMOVE WEIGHT FROM FRONT WHEELS. ADD FRONT BALLAST UNTIL AT LEAST 20% OF TRACTOR'S WEIGHT IS DN FRONT WHEELS TO PREVENT REARING UP, LOSS OF STEERING CONTROL. AND POSSIBLE INJURY.

4. NEVER OPERATE UNIT WITHOUT AN OPS (OPERATOR PROTECTIVE STRUCTURE) OR CAB TO PREVENT INJURY FROM OBJECTS THROWN FROM GROUND AND OVERHEAD TRIMMING. STOP CUTTING IF ANYONE IS WITHIN 100 YARDS.

5. KEEP THE BOOM AND CUTTERHEAD AT LEAST 10 FEET FROM ELECTRIC LINES AND PIPE LINES TO PREVENT ACCIDENTAL CONTACT AND POSSIBLE SERIOUS INJURY OR EVEN DEATH.

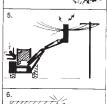
5. WHEN TRANSPORTING BOOM MOWERS ON A TRUCK OR TRAILER. THE HEIGHT OR WIDTH MAY EXCEED LEGAL LIMITS. CONTACT WITH SIDE OR OVERHEAD STRUCTURES OR POWER LINES CAN CAUSE SERIOUS INJURY OR DEATH.

LOWER BOOM TO REDUCE HEIGHT AND/OR REMOVE MOWING HEAD TO REDUCE WIDTH TO THE LEGAL LIMITS, IF NEEDED. 32707



3.







42350 MOWER DECK

32707

HYDRAULIC TANK

32708

### ATTENTION

SERVICE HYDRAULIC SYSTEM WITH UNIVERSAL TRACTOR HYDRAULIC OIL. PART NO. LOCATION

32708 HYDRAULIC TANK

## **A**CAUTION

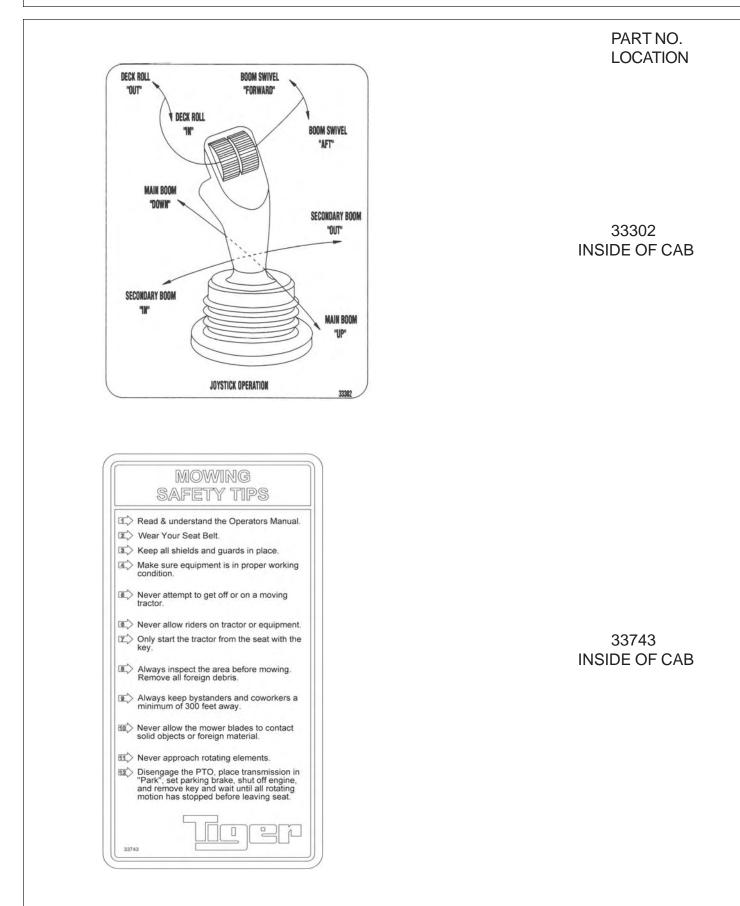
For your safety and to guarantee optimum product reliability, always use genuine TIGER replacement parts. The use of inferior "will-fit" parts will void warranty of your TIGER implement and may cause premature or catastrophic failure which can result in serious injury or death. If you have any questions concerning the repair parts you are using, contact TIGER, 3301 N. LOUISE AVE., SIOUX FALLS, SD 57107

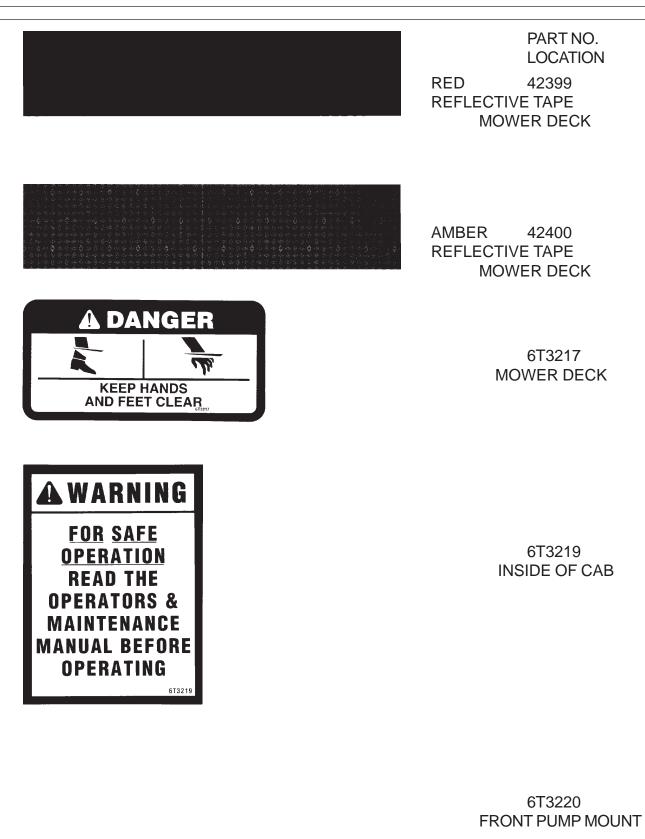
32709 INSIDE OF CAB

33224 MOWER DECK



33438 MAIN BOOM





## **A**CAUTION

LUBRICATE SPINDLE DAILY OR EVERY 10 HOURS OF USE. WITH MOWER AND TRACTOR OFF, INJECT TWO PUMPS OF TIGER SPINDLE LUBRICANT INTO SPINDLE BEFORE USING.

6T3222

DANGER

STAY CLEAR,

DISCHARGE

**OPENING** 

**NOTICE:** Engine will not start when mower is engaged.

NOTE: SEE OPERATORS MANUAL FOR SUBSTITUTE LUBRICANT AND MORE DETAILED INSTRUCTIONS. 673221 PART NO. LOCATION

6T3221 INSIDE OF CAB

6T3222 INSIDE OF CAB

6T3224 MOWER DECK



6T3224

6T3225 INSIDE OF CAB

### A WARNING

DO NOT OPERATE THIS EQUIPMENT

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



 ALLOW CUTTER ASSEMBLY TO COME TO COMPLETE STOP.
 CENTER DECK BETWEEN FRONT AND REAR TIRES.

- 3. PLACE BOOM INTO TRAVEL POSITION.
- FAILURE TO DO SO MAY RESULT IN TIRE DAMAGE AND/OR INJURY. 613231

**A** CAUTION

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

#### 6T3230 INSIDE OF CAB

PART NO.

LOCATION

6T3231 INSIDE OF CAB

6T3233 HYDRAULIC TANK

# **A** CAUTION

6T-3233

CHECK CRANKSHAFT ADAPTER DAILY FOR TIGHTNESS AND GROMMET WEAR

AS SERIOUS DAMAGE TO RADIATOR MAY RESULT FROM IMPROPER MAINTENANCE. 6T3234 6T3234 INSIDE OF CAB



6T3236 MOWER DECK

PART NO.         LOCATION         BLADE BOLTS SHOULD BE         INSPECTED HOURLY AND         RETORQUED TO 600 FT. LBS.				
DOWN MAIN BOOM UP UP UP N N N N N N N N N N N N N N N	в			
DOWN MAIN BOOM UP UP N N N N DECK ROLL SWING SHIELD BACKWARD OPEN 34206 INSIDE OF CA	В			
<b>EXAMPLANCE WARRENINGE</b> IT IS RECOMMENDED THAT THE BOLT AND LOCK NUT BE REPLACED WHENEVER BLADES ARE REPLACED. REPLACE THESE ANY TIME THEY ARE DAMAGED OR WORN AS FAILURE TO DO SO CAN LEAD TO BLADES COMING OFF CAUSING SERIOUS INJURY OR DEATH. <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANN</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b> <b>IMPORTANNA</b>	B			
<b>GREASING INSTRUCTIONS</b> <b>CUTTER SHAFT BEARING</b> <b>GREASE EVERY 8 HRS. OR DAILY</b> NOTE: If unusual environmental conditions exist-extreme temperatures, moisture, or contaminants-more frequent lubrication is required. CT22664				
GREASING INSTRUCTIONS GROUND ROLLER BEARING GREASE EVERY 8 HRS. OR DAILY NOTE: If unusual environmental conditions exist-extreme temperatures, moisture, or contaminants-more frequent lubrication is required.				
Bengal Boom Safety Section 1-22				

# **A** WARNING

DO NOT OPERATE MOWER WITH SAFETY SHIELD REMOVED.

#### TB1011 MOWER DECK

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#### **Tiger Corporation**

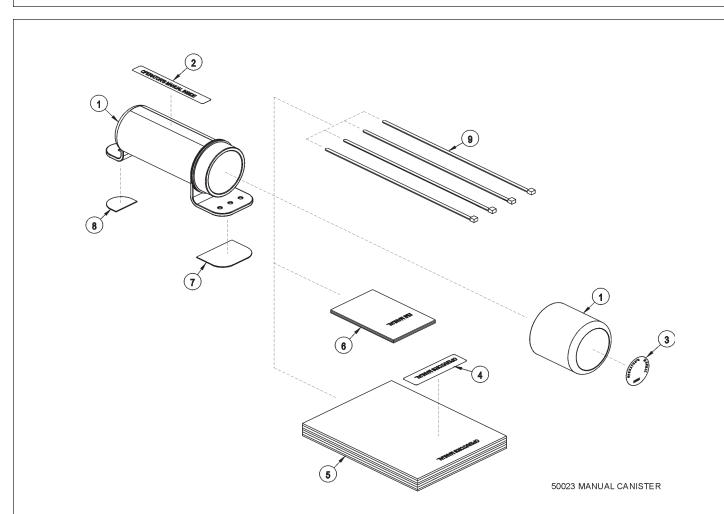
800-843-6849 www.tiger-mowers.com

Description	Application	<b>General Specification</b>	Recommended Lubricant
Tractor Hydraulics	Reservoir	JD-20C	Mobilfluid <sup>®</sup> 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 <sup>®</sup> 75W-90, Mobil 1 Synthetic Gear Lubrican
Cutter Shaft and Ground Roller Shaft (Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Drive Shaft Coupler (Rotary and Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Boom Swivel, Boom Cylinder Pivots (Rotary and Flail Boom Type)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Deck Boom Pivot & Deck Stop Adjustment (Rotary and Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Deck Spindle (Rotary)	Grease Gun	Tiger Spindle Lubricant	Mobilith SHC 220

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Tiger PN 34852 O

34852 HYDRAULIC TANK



ITEM	PARTNO.	QTY.	DESCRIPTION
1	<b>50023</b> 00776031 33997	<b>AVAIL</b> 1 1	<b>MANUAL CANISTER COMPLETE</b> ROUND MANUAL CANISTER 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 Section 2-1

#### ASSEMBLY

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

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

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

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

#### **TRACTOR PREPARATION**

- A. 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 mainframe and pump mount will be attached.
- E. Remove any front weights and weight supports.
- F. Raise the tractor onto jack-stands and remove the right and left rear wheels.

(ASM-JD-0001)

🗚 WARN IN G

#### MAINFRAME INSTALLATION

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

#### **CRANKSHAFT ADAPTER**

For JD6xxxD tractors with a front pump mount, install the John Deere pulley kit P/N: LVB24989 and follow the instructions. (ASM-JD-0250)

#### **ADJUSTING REAR WHEELS**

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

#### ASSEMBLY

#### **DRIVESHAFT AND FRONT PUMP MOUNTING**

Install driveshaft into the crankshaft adapter.

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

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

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

#### POLYCARBONATE SAFETY WINDOW

**NOTE**: Installing a boom mower requires that all right side windows be replaced or shielded by a lexan safety window. In most cases this should be done before mounting the mainframe. Carefully remove the existing right side cab windows, to be replaced with the matching polycarbonate windows provided.

Clean all of the surfaces around the window opening, once the right side windows are removed. Peel back the protective paper from the area around the window that will contact the window frame. Apply a bead of urethane window adhesive, supplied in kit, around the window opening. Carefully position the new window into position. Fill the remainder of the gap around the window with the adhesive to finish. Be sure to follow the instructions on the adhesive label when installing window.

Next, install the upper and lower door hinges along with the existing cab door hinges. To do this, you will remove the existing hinge hardware and install the existing hardware on the polycarbonate as shown in the Parts Section. Set the safety screen assembly on the hinges and attach the door to the tractor frame. Install the brackets with the hardware shown in the Parts Section. Assemble the rod with the vibration isolator and nuts and attach them to the brackets. Adjust the vibration isolator on the upper and lower brackets to achieve a good fit with the window. (ASM-JD-0061)

### **MAINFRAME INSTALLATION**

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

#### ASSEMBLY

#### SWITCHBOX WIRING

Cover all wires with plastic wire wrap provided. Route the green wires along switchbox bracket and cab frame to the steering wheel console. Route the rest of the wires along the base of the right hand console and up to the rubber boot in the bottom right corner in the rear window of the cab. The red and black wires will be connected to the auxillary power plug in the back of the cab. After all wiring is complete, secure all wires to the console with zip ties and push mounts. Take up most of the slack so the wires are out of the way and tighten the zip ties.

With the panel under the steering wheel removed to access the wires, locate the brown wire and verify that this is the neutral safety wire with a test light or meter. Then cut the brown wire and connect a green wire from the switchbox to each end of the brown wire as shown in the wiring diagram. Cut a small hole for the green wires and the wire wrap to fit through and replace the console.

The red and black wires access power for the switchbox through a John Deere auxillary power plug in the rear of the cab.

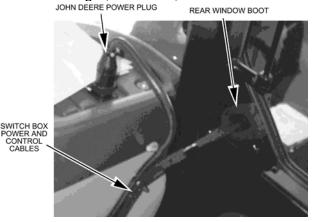
#### NOTE: The RED wire from the JD power plug should not be used because it is ALWAYS "Hot". +12 VOLTS ELECTRICAL POWER MUST BE TAKEN FROM A SOURCE LOCATION WHERE IT IS LIVE ONLY WHEN THE IGNITION SWITCH IS IN THE "ON" POSITION. THE RED WIRE MUST BE FUSED AT THE SOURCE LOCATION WITH A CLOSED END CONNECTOR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

Connect the red wire from the switchbox to the orange wire from the JD power plug. Connect the black wire from the switchbox to the black wire from the JD power plug.

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

Cut a crosshair pattern in the rubber boot in the right bottom corner of the rear window. The wires can be routed through and the rubber falls back into position. The hole should only be large enough for the wires to go through easily.

Route the Metri-Pak wires from the window boot to their location on the unit. Coil the excess wire and secure it to the tractor frame with zip ties to eliminate vibration and rubbing. (ASM-JD-0078)



34538 - CLOSED END CONNECTOR



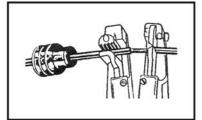
NOTE: When cutting or drilling a hole, be sure not to damage existing wires running behind panels.

## WEATHER-PACK / METRI-PACK ASSEMBLY

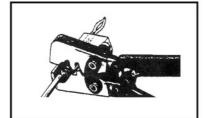
These instructions apply to both Weather-Pack and Metri-Pack connectors.

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

(ASM-C-0009)



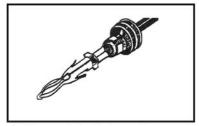
1. Apply seal to cable, before stripping insulation.



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



2. Align seal with cable insulation.

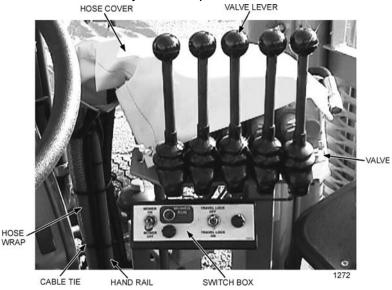


4. Crimp and visually inspect for a good crimp before installing in connector body.

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## MANUAL SWITCHBOX MOUNTING

The switchbox is to be secured to the operator's side of the control handles, or valve stand. Refer to the Parts Section for assembly and components needed.

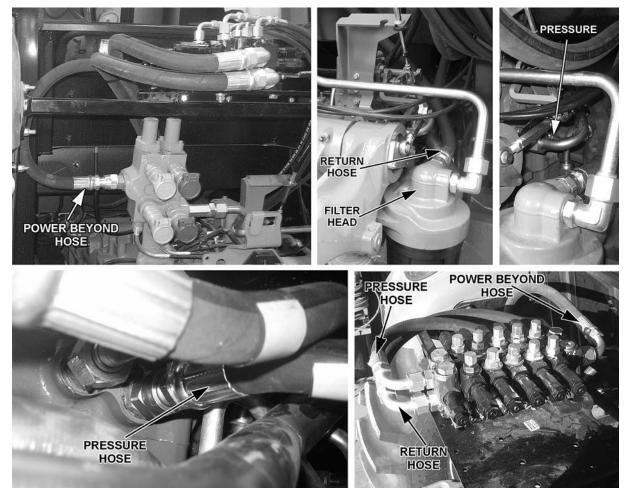


(ASM-C-0053)

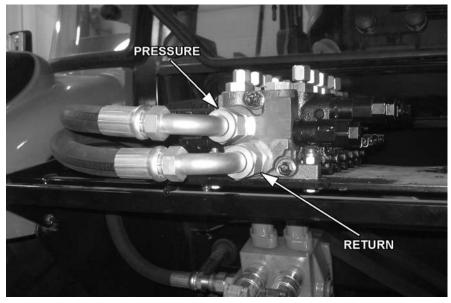
#### **TRACTOR PLUMBING**

Remove the stock pressure line to the remote valve. It will be necessary to temporarily remove other hoses and tubes that block access to connect the hoses. Install the pressure hose to the tractor pressure port. Install hose #06500783 from the power beyond port of the lift valle to the tractor SCV valve. Install pressure hose #06500782 from the tractor pressure on the side of the tractor to the upper port on the lift valve inlet. Install return hose #06500782 from lower port on lift valve inlet to the return filter on the tractor. See the Parts Section for parts used.

(ASM-JD-0242 6xxxD)



#### MANUAL LIFT VALVE PORTS

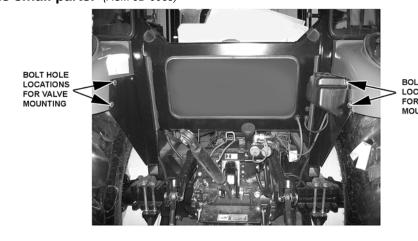


(ASM-C-0102 JD6xxxD)

#### VALVE MOUNTING

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

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



BOLT HOLE > LOCATIONS FOR VALVE MOUNTING

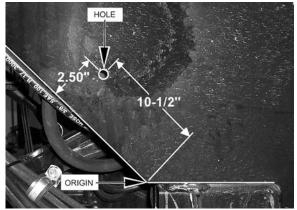
## HOSE AND WIRE ROUTING

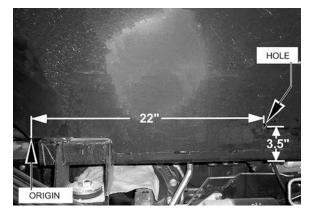
Attach two clamps to the right rear wheel well for proper hose/wire routing. Drill one hole for each clamp. Use the lower rear corner of the wheel well as an origin for measuring. The holes should be 10mm or 3/8" reamed to accept 3/8" hardware.

Measure along the back edge of the wheel well 10-1/2" from the origin. Use a square to measure  $2-\frac{1}{2}$ " up, from the last mark. Refer to the image below to see the first hole.

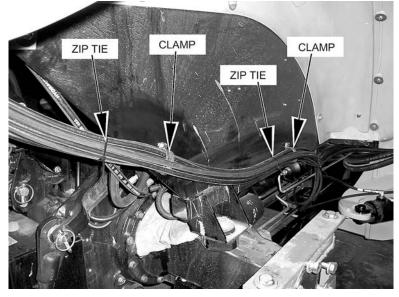
The second hole should run parallel to the bottom edge of the wheel well. Mark the hole 22" from the origin and  $3-\frac{1}{2}$ " from the bottom edge. Use the images below for reference.

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



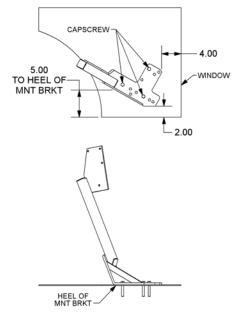


Place as many hoses in the clamp as will fit without compromising pressure. Then secure the (2) HOSE CLAMP (06520013) to the holes drilled with (1 EACH) CAPSCREW,3/8 X 1 NC (21630) and (1 EACH) NYLOCK NUT,3/8 NC (21627). The hoses that don't fit into the clamp are to be secured to the others with zip ties. For protection of hoses in contact with metal edges, wrap hoses with split hose sections and fasten with hose clamps or zip ties as needed.



## **CABLE CONTROL LEVER STAND**

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





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The rubber boot under the rear window can be cut in a crosshair pattern and, if necessary, the bottom cut through to allow it to slip over the cables and back into position. These cables will be routed to the lift valve mounted on the valve mounting plate, and should not have any sharp bends or kinks in them. Secure cables with zip ties and apply RTV sealer in and around individual cables, inside and outside of the cab for a water tight seal. Do not allow excess cable to hang unsecured on the outside of the cab. (*ASM-JD-0239*).



Assembly Section 2-9

## **\*NOTE ON HUSCO CONTROL VALVES\***

Manual, cable controlled (Husco control valve) boom mowers require check valves with integral restricting orifice (#06502036) installed in the control valve work ports that are connected to the gland ends of the main and secondary boom cylinders. This check valve allows oil to free flow into the gland end of the main and secondary boom cylinders, but restricts flow out of the cylinder, thereby providing proper boom control. This check valve, #06502036 (Vendor #1968R-.063) is similar in appearance to hose adapter #33271 and Adapter #34396, with.06 orifice. These components can be identified as follows, and are to be installed per Parts Section for the lift valve. *(ASM-HUSCO-0001)* 

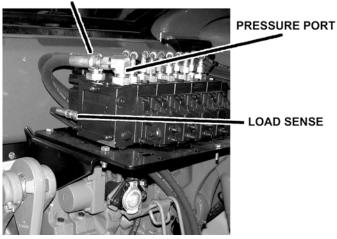


#### **ELECTRONIC LIFT VALVE PORTS**

(ASM-C-0089)

#### DANFOSS VALVE

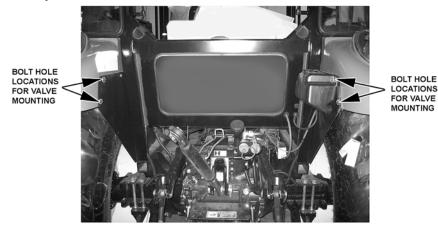
**RETURN PORT** 



**VALVE MOUNTING** 

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

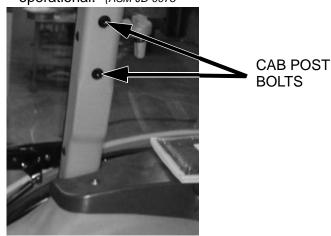
Next, attach the valve mounting plate to the mounting bracket. Align the holes on the plate to the holes on the bracket. Use the hardware shown in the Parts Section to attach the plate to the valve mounting bracket. Finally, place the valve on the valve mounting plate as shown in the Parts Section. Align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



Assembly Section 2-11

## JOYSTICK CONTROL MOUNTING

The joystick is mounted to the right hand center cab post. Find the two existing bolts above the area where the post bumps out. See the image below. Mount the joystick mounting bracket to the cab post with hardware provided. Assemble the parts as shown in the Parts Section. When operating the joystick, make sure it is positioned where the rest of the controls are fully operational. (*ASM-JD-0075* 

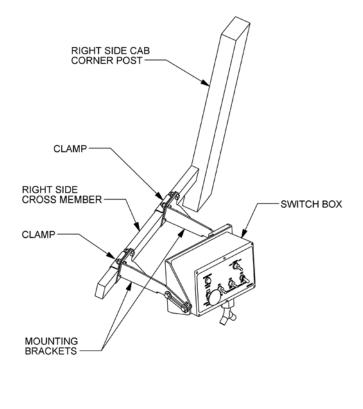




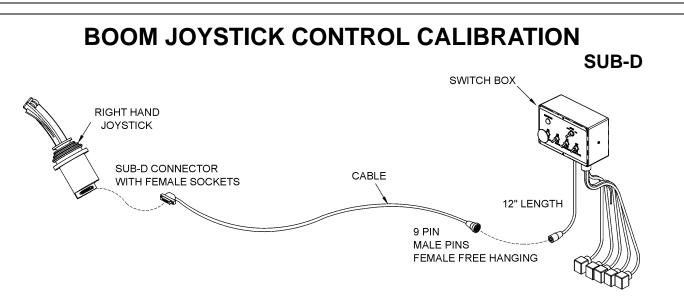
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#### JOYSTICK SWITCHBOX MOUNTING

Locate the right side front cross member of the cab frame. Clamp the switchbox mounting brackets to the cross member. See illustration below. Mount the brackets and switchbox using the hardware supplied, as noted in the Parts Section. (ASM-JD-0020)



Assembly Section 2-12



This Electronic control valve is equipped with high-resolution actuators on Boom, Side Shift, Deck Roll, and Boom Swivel functions. These actuators have active fault monitoring. The Deck Shield section does not have active fault monitoring. The joystick 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 Boom, Side Shift, and Boom 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.

#### **A 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 screwdriver 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.

## BOOM JOYSTICK CONTROL CALIBRATION (CONTINUED)

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 Boom, Side Shift or Boom 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 Electronic 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.

#### **BOOM JOYSTICK CONTROL CALIBRATION (CONTINUED)**

**BOOM:** "A" Port, Boom Up: 7-9 Seconds (Note: Roll deck to be level with ground, and lower boom until deck is on ground. Now index boom "up" function and determine the time required for boom to rise completely.)

"B" Port, Boom Down: 6-8 Seconds (Note: Roll deck to be level with ground, and raise the boom to "full up". Then index the 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.)

#### SIDE

**SHIFT**: "A" Port, Side Shift Out: 8-10 Seconds (Position deck above ground and shift completely inboard. Then index the side shift "out" function and determine the time required for the deck to shift completly outboard.)

"B" Port, Side Shift In: 8-10 Seconds (Position deck above ground and shift completely outboard. Then index the side shift "in" function and determine the time required for the deck to shift completely inboard.)

**DECK ROLL:** "A" Port, Deck Out: 7-9 Seconds (*Raise boom and shift deck so that deck can be articulated without contacting the 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 boom and shift deck so that deck can be articulated without contacting the 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.)

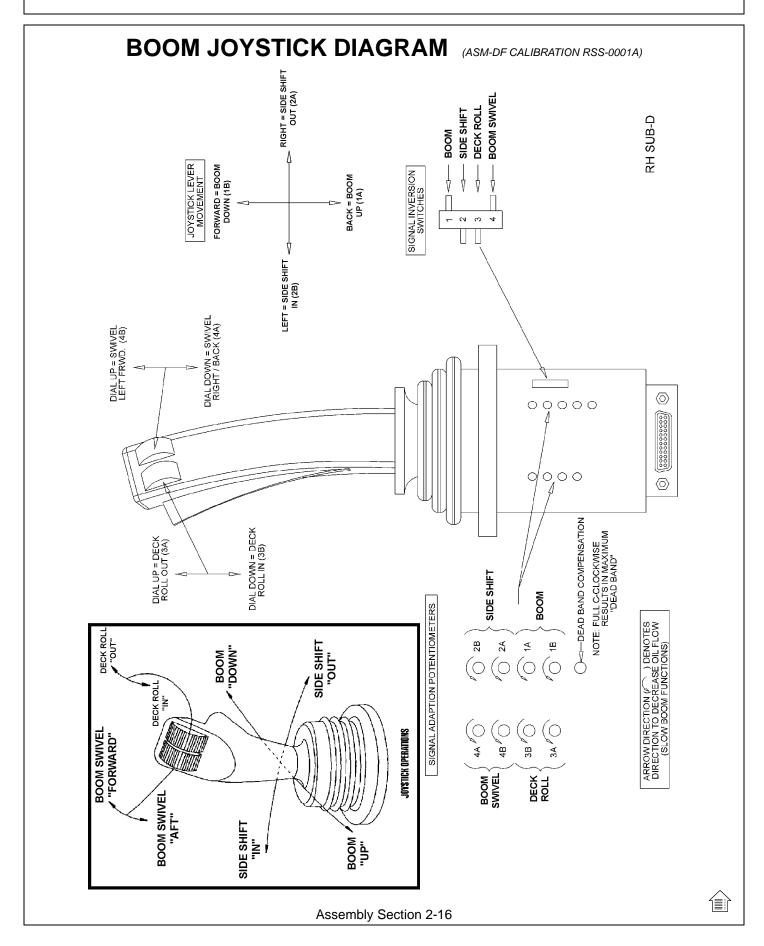
#### BOOM

SWIVEL: "A" Port, Boom Aft: 10-12 Seconds

(Position boom, rotate head to be level with ground, lower 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 full aft. Use caution when doing this, stop boom before boom contacts tire.)

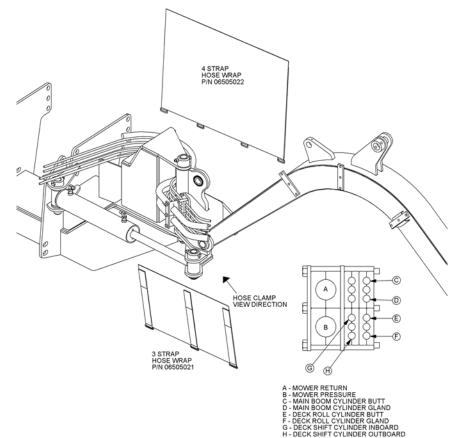
"B" Port, Boom Forward: 10-12 Seconds

(Position boom, rotate head to be level with ground, lower boom until deck is just above ground, and swivel boom aft until near tire. Then index the boom swivel "forward" function and determine the time required for the boom to swivel full forward.) (ASM-DF CALIBRATION RSS-0001)

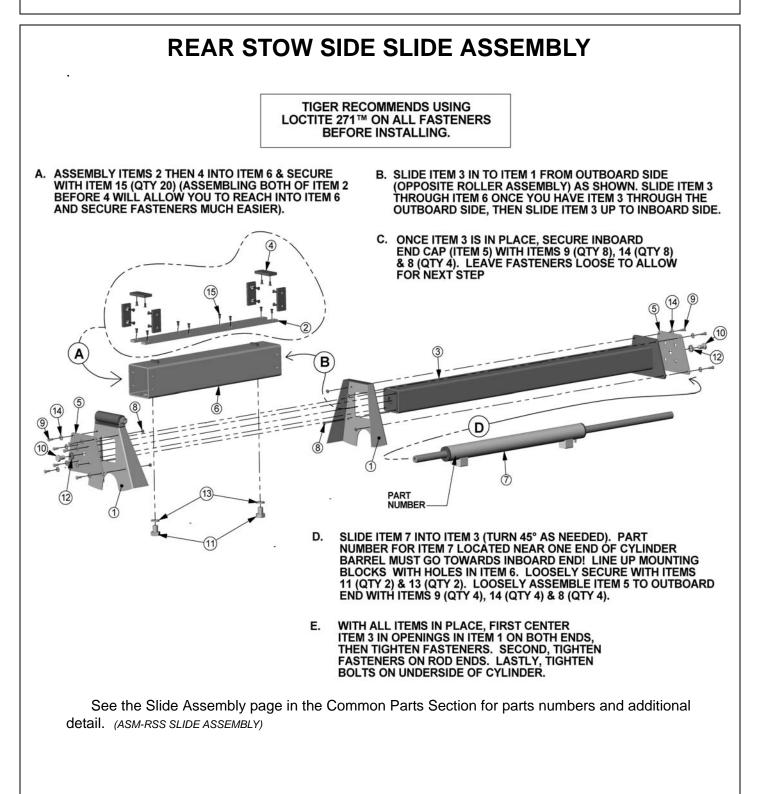


#### **REAR STOW SIDE MOWER HOSE ROUTING**

**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. To prevent hydraulic failure, DO NOT ALLOW these hydraulic hoses to BREAK or BURST. Make sure the hoses do not pinch or stretch as boom moves. Measure TWICE, check TWICE, then proceed with caution.

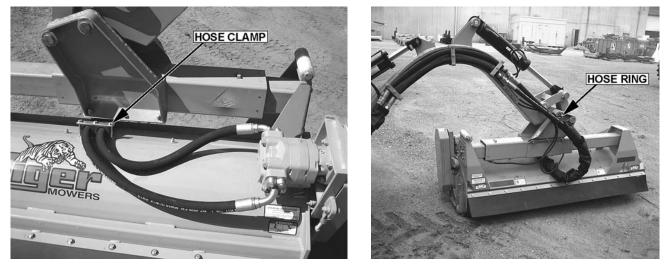


Route the hoses through the space between the swivel and the boom mounting bracket. Connect the hoses to the boom hoses and move the boom arm to a few feet from full forward. Assemble the swivel clamp and place the return hose for the motor on top and the pressure line on the bottom. Place the ¼" hoses in the hose clamp as shown above. Next, make sure there is enough slack for all hoses to pivot at the joint where the main boom arm bends in the swivel, as shown in the next image, and tighten the hoses in the clamp. (ASM-RSS HOSE ROUTING-0001A)

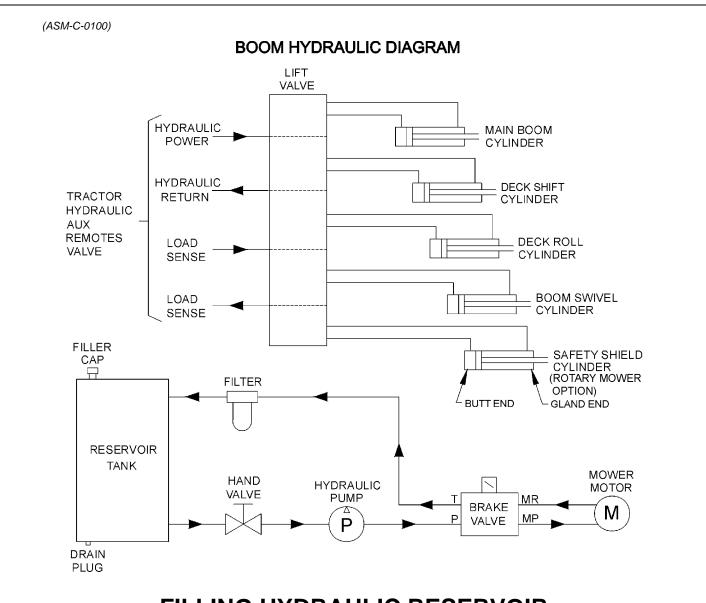


#### **REAR STOW SIDE FLAIL HOSE ROUTING**

**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. In order to prevent hydraulic failure, DO NOT ALLOW these hydraulic hoses to BREAK or BURST. Make sure the hoses do not pinch or stretch as boom moves. Measure TWICE, check TWICE, then proceed with caution.



Route the hoses from the flail motor through the space between the slider assembly and the flail deck as shown above. Clamp the hoses with hose clamp P/N 35131, but <u>do not</u> tighten at this time. Next, route the hoses from the hose clamp through the hose ring and attach them to the boom hoses. Before tightening the hose clamp, make sure the hoses do not pinch, stretch or rub on any edges when the flail head moves through its articulation and sliding. Finally, attach the hose cover P/N 06505020 between the hose clamp and the hose ring. Refer to the Parts Section for hardware. (ASM-RSS HOSE ROUTING-0002)



#### FILLING HYDRAULIC RESERVOIR

Refer to the Maintenance Section for filling specifications and hydraulic oil requirements.

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

(ASM-C-0004hydro resrv)

#### WHEEL WELL HYDRAULIC TANK INSTALLATION

Install all fittings and tubes into tank and tank filter as shown in the Parts Section illustration. Insert tank sight glass onto the tractor side of the tank.

Place the tank in the mounting bracket on the axle brace as shown in the Parts Section. Secure the tank with the hardware provided.

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. The tank breather cap is ready for use as the tank is filled. Some of these items may already be installed. (*ASM-C-0103*)

#### WHEEL SPACERS

When mounting a boom mower, a spacer kit is needed for both rear wheels (part # 06200637). After removing the wheels attach the spacer to the wheel portion of the axle with the hardware provided. When you are ready to re-attach the wheel, the wheel goes on first then the reinforcement ring and finally the hardware provided. (*ASM-JD-0099*)

## **INSTALLING O-RING FITTINGS**

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

#### **INSTALLING NATIONAL PIPE FITTINGS**

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

#### PREFORMED TUBE INSTALLATION

Lay booms on floor so that the side with the clamp plates is up. Locate all tube clamps and install them loosely onto the clamp plates.

Arrange the tubes and hoses as outlined in the Common Parts Section. Install the tubes closest to the boom arm first, being careful not to pinch the tubes. Place the other tubes outside of the first tubes. Snug all clamp bolts, but do not tighten. Check all tubes for correct alignment and that none are pinched or bent. The clamp bolts can now be tightened. (ASM-C-0085)

## **GENERAL HOSE INSTALLATION**

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

#### **HOSE COVERING**

Secure hoses together with zip ties wherever loose. Wrap the hoses between the swivel and main boom with the hose cover provided. Wrap the hoses between the main boom and secondary boom with the hose cover provided. Where hoses may contact the frame or other edges, wrap with split hose and secure with hose clamps or zip ties.

On non-cab units, the pressure and return hoses from the control valve will also need to be routed inside the protective hose wrap. Cover the valve and valve fittings with the hose cover and secure with the string provided. (ASM-C-0058)

## **ACCUMULATOR INSTALLATION**

Install the accumulator bracket on the right mainframe mast or lift valve mount, if applicable, with the capscrews, lockwashers and spacers, if applicable, as shown in the Parts Section. 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).** (*ASM-C-0012*)

## SOLENOID BRAKE VALVE

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

#### TEMPERATURE GAUGE MOUNTING (OPTIONAL)

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

## WHEEL WEIGHT MOUNTING

For all tractors using a boom mower, a wheel weight will be required for the rear left side wheel. It will be necessary to mount the weight in the wheel using the long capscrews, lockwashers, flatwashers, spacers (if applicable), and hex nuts per the diagram in the Parts Section.

Installation is most easily done with a fork lift, inserting a fork in the center slot of the wheel weight. The head of the capscrews is to be toward the OUTSIDE of the weight, with flatwashers on both the inside and outside of the assembly.

The left rear tire may also be filled with a mixture of water and calcium chloride at about five pounds per gallon. Tire air pressure should be maintained according to the Maintenance Section. (ASM-C-0055)

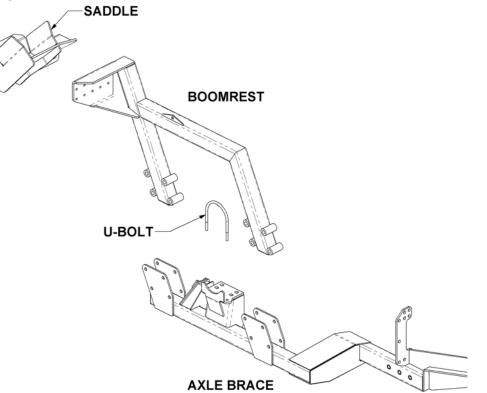
## **AXLE BRACE INSTALLATION**

With the tractor on jack-stands, remove the existing hardware on the rear axle where the axle braces will be mounted. Use a hoist to raise the axle braces to the correctly matching mounting holes on the rear axle and the mainframe. Use the hardware shown in the Parts Section to attach the braces to the tractor, DO NOT tighten until the mainframe has been positioned onto the axle braces. The mainframe hardware will not be tightened at this time.

When the mainframe is in position, remove the capscrews one at a time and apply a thread locking agent. Reinsert the capscrews and tighten / torque to values noted in the torque chart located in the Maintenance Section of this manual. (ASM-MF-0013)

#### SINGLE COLUMN BOOMREST MOUNTING

Carefully lower the boomrest and align the holes with those of the axle brace. Now install all attaching hardware, as shown in the Parts Section, loosely, to allow for the alignment with the axle brace. Tighten / torque all hardware on the axle brace and the boomrest. (ASM-JD-0251)



## MAIN BOOM INSTALLATION

Using a hoist, install the boom swivel into the mainframe as shown in the Parts Section. Line up holes in swivel and mainframe for large swivel pin and insert pin. Secure with hardware as shown.

Attach the inner end of the main boom to the swivel bracket with the cylinder anchors positioned 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).

Attach the butt end of the main boom cylinder to the swivel with the cylinder pin and roll pins shown in the Parts Section.

Install the travel lock on the rod end of the main boom cylinder. This should be facing the butt end of the cylinder after installation.

Install the fittings and hoses to the main boom cylinder per Parts Section.

## GREASE HINGE PIN ZERKS ON BOOM AFTER ASSEMBLY, ONCE UNDER LOAD WITH BOOM ELEVATED, AND AGAIN AT REST WITH BOOM SUPPORTED. (ASM-C-0013)

## 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 mainframe to the cutter head against the diagrams in the Parts Section for proper placement and assembly of all components. (ASM-C-0060)

## FINAL PREPARATION FOR OPERATION

Place operator's safety and operation decals on the steering column and side console 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 Sections of this book. The decals are to be maintained in good condition as a reminder to the operator, and should be replaced if damaged.

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.

**A**WARN IN G

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 and 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 operator's 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 operator's 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 retorqued once again after the first few hours of operation.

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

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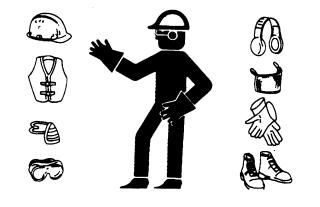
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GÁc@A[]^¦æe[¦Á&æa}}[GÁ^æåÁs@A[æa]`憕Á[¦Ás@{•^|ç^•A[¦Áå[^•A][ơ&[{]|^c^|^Á}}å^\\*•æa}åÁs@A[]^¦æeā[}A[×Ás@ ^``ā]{^}cÊĂāoÁārÁc@Á^•][}•āàājācÂ[-Ác@Á•`]^¦çãr[¦Á[Á/>æåÁæ);åÁ^¢]|æājÁc@Á(æ);`懕ÊÉ+æ^cÂ/j¦æ&ca&^•ÊÉe);å []^¦æe∄;\*Á§;∙d`&cãi}•Á§[Ác@∘Ái]^¦æe[¦È

Ùæ^Á;]^¦æaā;}Á; Á```ā;{^}ơÁ^``ā^•Ác@æÁc@A;]^¦æe[¦Á;^æbáeð;]¦[ç^åÁÚ^¦•[}æ¢ÁÚ¦[ơ&cã;^ÁÒ``ā;{^}ơ{CÚÚÒE -{ ¦Ác@ Ákj à Ákj[} å ããāj} • Á, @} Ásecca&@3, \* ÉA, ] ^ ¦æē3, \* ÉA, ^ ¦ç 3&3, \* Éba) å Á^] æā13, \* Ác@ Á~ č 13, { ^} dĚÁÚÚÒÁsa Ás^• ã } ^ å Ákj ] ¦[çãå^Áţ] ^ ¦æq[¦Áţ ¦[c^&cã] } Áse) å Ásį &|ĭ å^• Ás@^Áq ||[ ā] \* Á æ^c Á ^æk K

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- PælåÆræc
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- Õ∥ ç^•
- P^ælå;\*ÁÚ¦[c^&cáį]
- Ô|[•^ÁØãcã]\*ÁÔ|[ c@];\*
- Ü^•]ālæq[¦Áį¦ÁØājc^¦ÁTæ•\ÁQā^]^}å•Áį}Á []^¦æēāj\*Á&[}åãēāj}•DÅ(OPS-U-0002)



ADANGER



ÞOXOUA (•^ A li \* • A li A a de li @ | A i { ^ å ã e e ^ | ^ A i ^ [ ! ^ A i ] ^ ! a e i } \* A @ V¦æ&q[¦Áæ);åÁQ;]|^{ ^} dŽÖ¦\*\*•Áæ);åÁ æk&[ @[|Á, al|Áæ-^&cÁæ);Á[]^¦æq[¦ q æ¦^¦ç}^••Áæ}åÁ&[[¦å∄jææāj}Åæ}åÁc@\!^-{[!^Áæ-^&cÁc@^A[;]^!æe[¦qÁæàiajãĉÁ[ []^¦æe^Ác@^Á<``ã]{ ^}cÁ;æe^|^ĚÓ^-{;!^Á;]^¦æeã}\*Ác@^Á/¦æ&d;¦Á;¦ÁQ;]|^{ ^}cÊ æ),Á,]^¦æ[¦Á,}Á,¦^•&¦a],ca[}Á,¦Á,ç^¦Ëc@'Ë&[`}c^¦Á,^å&&æaā[}Á,``•Ó&[}•`|c æÝ (^åð&æ¢Á);¦[~^••ā]}æ¢Á^\*æåð]\*Áæ)^Á\*ãå^Á^~^&@A(^åð&ææā]}Ác@æc , [ĭ|åÁ@3);å^¦Ác@∿ãiÁseàājãĉÁ{[Á[]^¦æe∿Ác@AÔĭĭā]{^}cÁ∙æ^|∩ÉÄÞÒXÒÜ \}[,ā;\*|^Áæqh[,Áæqh^[}^ÁqtÁt]^¦ææ^Ás@ãrÁ\*``ā]{^}ơÁ;@}Ás@^ālÁæq^¦d;^••Át¦ &[[¦åā]æcā[}Á\$erÁ\$[]æāå^åÈÀÙ^¦ā[ǐ•Á\$jbĭ¦^Á(¦Á\$u^æc@Át[Át@?Át]^¦æe[¦Á(¦Á(c@;|• &{`|åÁ^•`|c/á5Ás@?Á;]^\aag;|Á5a;Á`}å^\Ás@?Á5;+`^}&^Á;A\*+Ás;|`\*•Á;|Á5a;A3;@?|ÈÉ;ùõ⊞id

CD9F5HCB

#### & HF57HCF F9EI = F9A9BHG

Q,Áscáaãã)ÁtÁtÁtæ&d;¦ÁQ;¦∙^][,^¦Áe)aÅ{ã^Á^ĭã^ÅtÁj^``ã^àÁtfÁ]^¦æe^Ác@Ás[[{ Á`}ãÉdx@ Ástæ&d;¦Á; `∙oÁsd+[Ás∧Á,¦[]^¦|` ^``ā]]^åÁt[Á]:[çãå^Á[]^!æt[¦Á]:[c^&cā[}Êtt[Áed^!cÁed]]![æ&@3]\*Áç^@3&|^Á\$:!ãç^!•Á[-Ác@Atlæ&d[:q/Á]:^•^}&^Êted)åÁt ^}•`¦^Ád;æ&d;¦Áicæà;ããĉÁ;@}Aí[;ã;\*Á;ãc@Ác@/Áa[[{Á×i||^Ár¢c^}å^åÈ

#### HFUW/cf'FYei ]fYa Ybhg'UbX'7 UdUV]`]hjYg

- CÈÙCÈÒÁa‡] | [ ç^åÁÜ[ ||ËJ ç^¦ÁÚ|[ c^&cãç^ÁÙd` &c` |^ÁÇÜ U ÚÙDÁ[ ¦ÁÜ U ÚÙÁ&æàÁa‡) åÁi^æAa^\dÈ
- $\begin{array}{c} V_{1} & = & V_{1} & = & V_{2} & =$

#### <u>&'%FCDG'UbX'GYUh6Y'h</u>

V@ Áciæ&q[¦Áį`•oÁa^Á^``ā]]^åĄ́ão@ÁæÁÜ[||ËUç^¦ËÚ¦[o^&cãç^ËÙd`&c`¦^ÁQÜUÚÙDÁQciæ&q[¦Á&æàÁ;¦Á[||ËaæbDÁea}åÁ•^æc à^|cÁt[Á]:|[c^&cÁc@A[]^¦æt[¦Á+|[{Áæ||a]\*A[~Ác@Át]æ&d[¦ÊA+]^&ãæ||^Áti`¦a]\*ÁæÁ[||A[ç^¦Á]@\^Ác@Áti'aç^¦Á&[`|åÁti^ &¦`•@åÁæ}åÁā||^åÈÁU}|^\_Á[]^¦æ^Ác@Átæ&c¦¦Á,ãc@Ác@ÁÜUÚÙÁ\$;Ác@Á!æÃ^åÁ'[•ãæ];}Áæ}åÁ^æ&\^|Aæ& V¦æ&qt¦Át[å^|•Á;[ɑ^\``ā]]^åÁ;ãc@\$e&ÜUÚÙÀse}åÁ:^æx\$a^|cA;@`|åÁ@eeç^Ás@•^Áã^Á;æçā;\*Á^æç‡\*Á^æč;¦^•Á\$;•œe|/åÅsî^Áse} æčc@l¦ã^å/åå^æl^lĚ#OPS-U-0003

AWARNING

U]^¦æe^Ac@ãAO˘`ā]{^}cA[}|^A, ãc@AeeAV!æ&c[;A^˘`ā]]^åA, ãc@Aee}Aee]]¦[ç^åA'[||E [ç^\¦Ëj¦[ơ^&aãç^Á+•^•ơ^{ (ÁÇÜUÚÙDĂÁQE, æ°•Á, ^æa/Á,^æa/Á à^|o•ĚAÚ\^¦ãt \*•Ãa b`|^Âí'; ^ç^}Ásı^æe@Á&[č|åÁ^●č|dÁ+[{Áæe|[ā]\*Á;~Ás@>Áslæ&xf¦⊞;æb@a&`|æe|^Ásič¦ā]\*Áæésč¦}[ç^¦ \_@}A6@?A[]^¦æe[¦Á&[č|åÁà^Á[ā]}^åÁ`}å^¦Ás@AÜUÚÙÉÄkµöã≞o



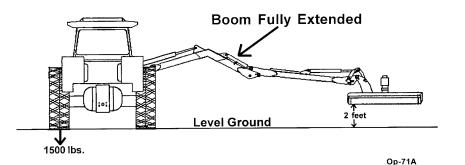
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QÁc@Átæ&d¦Á,ðilÁsh^Át]^¦æe^åÁ;^æAt¦Átæe^|^åÁ;}Áæ ] čà|ã&Á'[ ﷺ, æ Áã¢( č•oÁà^Á^ččā]] ^åÁ, ãc@Á) ¦[] ^¦ ,æb;}ā)\*Ápāt@zāj\*Áze)åÁzeAÛ∥[,ÁT[çā)\*ÁX^@284∖^ÁÇÙTXD ^{ à|^{ Á, @38.@Áad^Á&\/ad|^Áçãrãa|^Á+[{ Ác@^Á/adA[~ c@^Á`}ãdĚÁT[●oÁclæ&d[¦qrÁ@æç;^Áåã-^\^}oÁ•^ccā]\*●Á{[¦ []^¦æaāj\*ÁæjåÁd;æj•][¦cāj\*Á|ãt@cāj\*ĚÁÜ^-^¦Áq[Ác@> dæ&d[¦Á[]^¦æ@[¦@jÁ{ æ}j`æ¢Á-[¦Á`•ā]\*Ác@vÁdæ&d[¦@j |ãt@cÁ,ãa&@áæ)åÁ,]^¦æeā,\*Ás@∘Áč¦}Áãt}æ∳ÞÁ

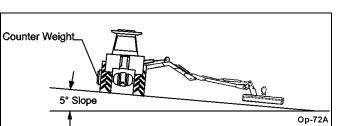
OPS-B- 0017Á



#### <u>&" `HfUWhcf`6 U`Ugh</u>

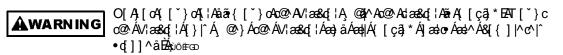


QÁc@ Á` } ãiÁā Á[ ] ^ ¦æe^ å Á[ } Á• [[ ] ^• Á\* ¦^æe^¦Ác@ə) Á' °Ê æå å ãiā[ } æ\Á & {``} & c`\, ^ ât @A , āļÁ à^Á^`` ā^ å È U] ^ ¦æaā[ } Á[ Á:@^ Á` } ãiÁ[ } Á• [[ ] ^• Á\* ¦^æe^¦Ác@ə) ÁFF ] ^ !&^} ơీÇ È Áa^\* ¦^^• DÁā Á' [ ớ\^&[ { { ^} à^ åA` } å^ ¦ æ) ^ Á&ā&č { • cæ} &^• ĚÁU } Áæátiæ&q[ ¦Á ã:@áæáti î +Á` • œã^ q Áː • cãa^Ádā^Á•] ¦^æátÊæat ÁFFÁ] ^ !&^} ớÇ È Áå^\* ¦^^• D • [[ ] ^Á; &&` !• Á; @} Á; }^Á/æátiæ&q[ ¦Áā^Áæi Áæati ` cÂi + ] \_ ^!Á@æati Á:@} Á:@ A ati à Æáti A&OPS-B- 0018



#### <u>'";9HH=B; CB5B8C::H<9HF57HCF</u>

Ó^-{¦^Át^com3}\*Á;}q[Ác@Atjæ&q[¦Éko@Atj]^¦æq[¦Átj`•OA^æåAæ)åA&[{]|^c^|^Á}å^¦•œ)åAc@Atj]|^{{ ^}ofe)åAtjæ&q[¦ []^!æq[¦Átjæ)`æ†ÞĚÁQAæ)^Ájæoqf,-Á^ão@¦Átjæ)`æ†A#rÁj[o4&[{]|^c^|^Á}å^\+•q[[åÉk&[}•`|o4æ)Áæčoq2¦ã^åÅå^æ†^¦Át[¦ æ4&[{]|^c^Ár¢]|æ)æatj}}ÉkAOPS-U-0007





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#### ''%6 cUfX]b['h\Y`HfUW/cf

W•^Ábi[c@Á@ea)å•Áea)åÁ<sup>×</sup>čāj]^åÁ@ea)妿āa•Áea)åÁc^]•Át[¦Á\*]][¦cÁ, @}}Ábi[ædåāj\*Ác@Actæsot[¦ĚÁfa^ç^¦Á\*•^Á&t[}d[| |^c^\+Á[¦Ár`]][¦cÁ, @}Ă([`}cā]\*Ác@Áciæ&qi ¦ĔÁÙ^æÁ`[`¦+^|,Áā,Ác@Á(]^¦æ[¦q/Ár^æÁæ) åÁr^&`¦^Ác@Ár^æÁa^|c æ¦[ĭ}åÅ[ĭÉ

•^¦āt`•|^Ásib`¦^åA;¦Áāļ|^åÁ;!{ Áæ;lāt\*Á;~Ása}åÁsi^āt\*Á`}A;ç^\ÈXAQAsiAs@A;[ ]^¦æe[;'e;Á^•] [ }•ãaājāc`As[Á[; A];¦àãaÁse;lÁ;¢dæ; ¦ãå^¦•ÁædÁæd|Áxã] ^•ĚÁOPS-U-0008

Þ^ç^¦Aæ|[ 、A&@a|å¦^}A([A[]^|æe^Ekläå^A[]}Ea[{^A&|[•^A([Ac@A/]a&d(]+A[] ADANGER Q]|^{ ^}dĚÁW•ĭæ||^ÉÁFÎÉEÏÁ^^æbÉĘÏ|áÁ&@ajå¦^}Á、@(Áæb^Á{æeĭ¦^Áæ);å ¦^•][}•āà|^Á&aa)Á[]^¦æe^Áo@^Áā[]|^{ ^}oÁ ão@Áæåĭ|oÁ•ĭ]^¦çãrā[}ÉÁãÁo@^^ @aaç^Á¦^aaåÁaa)åÁ`}å^¦•aa)åÁc@^ÁU]^¦aa[¦qrÁTaa)`aa+ÉÁà^^}Ádaaaj^åÁaj ] ¦[] ^¦Á[] ^¦æaā[} Á[ -Ás@^Áclæ&d[¦Áæ] åÁQ; ] |^{ ^} dÉæ] åÁæ^Á]; @ • &&æ||^Á|æł\* ^ ^ } [ \* \* @Ás[Á^ æ&@Áse) åÁs] ^ ¦æe^ Ás@ Ás[} d[|• Á\*æ• ã^ ÉÁsuõierd

Þ^ç^¦Aædi[, A&@Aäi^}A, IA; A; c@; A, ^!•[}•A; Aãa^A; }Ac@A/;a&d; IA; AQ, ] |^{ ^} CE ADANGER Øædeljā,\*Á,--Á&æd) Á^•ĭ loÁs, Á ^ ¦ā,ĭ•Ás, bǐ ¦^Á, lÁs,^æc@ezÁs,ö≣re⊡

Ö[A][oA][iA]aã{{[`}}oA@AV¦æ&d[¦A]@4AA@AA¦æ&d[¦AãA][çā]\*EAT[`}c AWARNING c@AV¦æ&qt¦A(}|^A, @}Ac@AV¦æ&qt¦Aæ}åAæ|A([çā]\*A)æbo•Aæb^A&[{]|^c^\^ •([]]^å 🛱 🖗 õõ 🗄 GD

#### '"& 8]qacibhib["h\Y`HiUWrcf

c@ Ádæ)•][¦cÁ][•ãāā]}ĚĂÁÚæ\Ác@ Ádæ&d[¦Á[}Áæá/<ç^|Á•ັ¦-æ&∧ÊÄ]|æ&∧Ác@ Ádæ)•{ã•ã}Å;Á3,Á}^č dæAæ)åÁ•∧ók@∧ ]æ\āj\*Áa¦æ\^ÈÁÛ@o4a[,}ÁœAd;æ&q[;Á^}\*āj^ÊA^{ [ç^Ác@A^^Êæa}åA;æãoA[;Áæ4|A, [cā]}Áq[Á&[{ ^Áq[Áæ4]{ [cā]} •q[]Á\\$a^-{¦^A^¢ãã∄\*Áo@Á[]^¦æq[¦qÁ^ædĚÅÞÒXÒÜÁ^æç^Áo@Á\*^æd^`}ãĂo@Átæ&q[¦É&brA^Ë&e}åÁ[[、^¦Á@æå { [ c^{ ^} ^} oÁ@eec^Á&i { ^Áti Áscé&i { ] |^c^Áti ] È

₩•^Á@eð)åÁæð)•Ásð)åÁ^¢dæÁrc"]•Á,@}Á^¢ããð;\*Áv@Ádæ&q[¦ĔÁÓ^Á&æ4^~`|Á,-Á[``|Árc^]Ásð)åÁ •^Á^¢dæÁ&eč qã;}Á,@} { ǎ å ĒÁBA^ĒÁ} [ 、ĒÁeð å Á, co@ l Á, ææ^ l Á@ee Áæ&& { ` |æe^ å Á, } Ás@ Á e^] • Áeð å Á@eð å l æð • ĒÁb ^ ç^ l Á` • @Á, l Áš { ] Á, ~Áo@ dæ&d;¦È₩OPS-B-0002

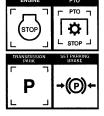
OOQUUOA/\æçāj\*As@Aslæsd[¦A.\æEBæd, æî•A.\oks@Ajæl\āj\*Aslæi^AædjåÐ[¦A.\c ADANGER .c@^Áclæ&d[¦Áclæ}•{ã•ā[}ÁājÁ]æd∖āj\*Á\*^æbÉÅåã\*^}\*æ\*^Ác@^ÁÚVUÉA•d[]Ác@^ ^}\*āj^É4/{[ç^Ác@A^^Ééee)åÁ, añaóA{¦Áee|A{,[çāj\*AjæstorÁt[Áqt]]ĚÁÚ|æ&Ac@^ d æ&d[¦År@ãeÁl^ç^¦Áð]d[ ÁæÁl[ 、Álæ)\*^Á[¦Á] æ\ð]\* Å\*^æbÁ[Á] ¦^ç^} oÁo@ Ád æ&d[ ¦  $\label{eq:constraint} \begin{array}{c} \label{eq:constraint} \label{eq:constraint} \end{tabular} & \label{eq:constraint} \end{tabular} \end{tabular} & \label{eq:constraint} \end{tabular} & \lab$ ãrÁĭ}}āj\*ĚÁU]^¦æe^Ás@A/¦æ&q[¦Á&[}d[|●Á+[{Ás@Astæ&q[¦Á+^æeAţ}]^Èsqöööo

₽ STOP - STOP ) (D)

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U]^¦æeāj}ÂÛ^&cāj}ÂĤË







#### <u>('GH5FH=B; 'H<9'HF57HCF</u>

V@?Á[]^¦æe[¦Á(`•oÁ@æeç^ÁæaÁ&[{]|^c¢Á`}å^¦•œa)åā]\*Á[~Áo@?Á]|æ&?{^}dÊA~`}&cā[}ÊAæ)åÁ[]^¦æeā[}æAá`•^Á[~Áæ4| dæ&d[¦Á&[}d[]•Áà^-{[¦^Å\*cædcā]\*Ác@?Ádæ&d[¦ÈAÚ/çã\*\_ Ác@?Ádæ&d[¦Á[]^¦æe[¦qrÁ(æ))čæ4Áæ)åÁ&[}•`|oÁæ)Áæčc@[¦ã^å å^æ4^¦Á{¦Ádæ&d[¦Á[]^¦æeā]}Á\$4,•d`&cā[}•ÁšaÁ,^^å^åÈ

Ò••^} œãe‡Á/¦æ&q[¦ÁÔ[}d[|•K

- ‴Š[&æer^Áo@^Á\$t}ãāā[}Á^^Đjãa&@Á
- ″Š[&æe^Ác@^Á\*}\*ā]^Á:@o4[,~Á&[}d[|
- ‴ŠĮ&æerÁo@rÁ@l妿ĕ|ã&Á&[}d[|Á/rç^¦∙Á
- ‴Š[&æer^Ás@∘Áā\*@Á&[}d[|Á́r¢r¦
- ‴Š[&æe^Ás@/Ás¦æ\^Å∫^åaa∲Áse}åÆkjĭc&@Á
- ‴Šį̇̃&æe∾Ás@∘ÁÚVUÁ&į́}d[¦Á
- ‴Š[&æer^Ás@°Á+HÁ;[∄]oÁ@ãa&@á&[}d[|Ár^ç^¦
- ‴Š[&æe^Ás@^Ás[[{{Á;]^}æaa]\*Á&[}d[[•Á00;^•ca&∖Á;¦Áçæqç^Ásaa}\D

Ó^-{ |^Árœdað] \* Ár@ Ár¦æ&q[ |Ár} • ` |^Ár@ Ár[ ||[ ¸ ð] \* KÁ

- ‴Ô[}å`&oÁse|Á,¦^ËceeloÁ,]^¦æaā[}Á§,●]^&cā[}Áse}åÁ^\;çã&^Áse&&[¦åā]\*Á{[Ác@/Áciæ&c[¦Á[]^¦æa[¦q/Á,æ)`æ†ÈĂ
- ‴ Taà^Á`¦^ĂaḍIÁ`ada•Ê @A\|å•Ê£aġ`åÁ;c@`¦Á æ^ĉ As^ça&^•Áxó&`¦^|^Aş A;|a&^È
- ‴ V@∿Ájæak)āj\*Ási¦æak^ÁsarÁj}ÈÁ
- ‴ V@?Ádaæ&q[¦Ádaa)•{ã•ã[}Á^ç^¦•Áæ?^Á§JÁjæ}∖Áj¦Áj^\*dæ†ÉÁ
- ‴ V@^Áa[[{{Á}]^¦ææā]\*Á&[}d[|●Áæd^Áa)Á@<sup>^</sup>Á,^`dæaÁæ)åA,<sup>\*</sup>~Á,[●ãæā,}È
- ″ V@^ÁÚVŪÁ&[}d[|Á∱^ç^¦Áãááá^}\*æ\*\*^åÈ
- ‴ V@^Á@`妿čĺã&Á^{[c^Á&[}d[|Á^ç^¦∙Áæ<^ÁşiÁo@^Á,^čdæ4Á,[•ãaā;}ÈĂ

Ü^~\A[Á@Adæ&q[|Á[,]}^\qA(æ)`æAA[|Átæ&q[|Átæ&q[|Áræed@]\*Á]|[&^å`|^•ÈÁU}|^Á\œedoó@Atæ&q[|Á]@4^Ar^æe^åAe)å à^|c^åA9jAx@Atæ&q[|Á[]^|æq[|qAt^æEŹAp^ç^|Áà^]æ•Ax@A#]}ãa[}Atjãa&@à^Ar@[|oA&ä&`ãa]\*Ax@Aræeo\*|Ar[|^}[ãaÈ CEe^\Ax@Atæ&q[|ÁY]\*3]^A#rÁ`}}3]\*ÉAeq[[ãaAæ&&ãa^}œ4As&a æ)åA`}^c]^&c^åAtæ&q[|Á[[ç^{ ^}c^{ }]

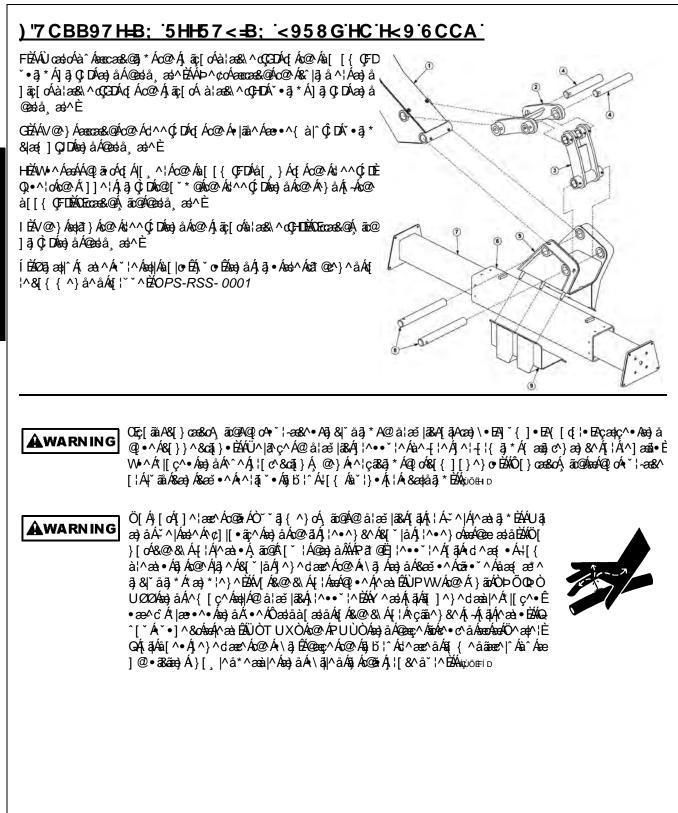
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À DANGER UcæłoÁd ﷺ [ \^ \ \ @ \ A] \[ ] ^\|^ A+^æz^åAj A@ \AV¦æ&d[ \A+^æzEA) cædāj \* Aæ dæ&d[ \Aj A\* ^æA&æj A^• ` | Aj Aj b | î ^ Aj Aæ@ŽAÜ^ æåAœ A/¦æ&d[ \Aj ] ^ \æt[ \• { عَبْ ` عَبْلَا لَا لَا اللَّهُ اللَّهُ عَنْ اللَّهُ عَنْ اللَّهُ عَنْ اللَّهُ عَنْ اللَّهُ عَنْ اللَّهُ عَنْ



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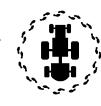
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Í 4235'Cnco q'I tqwr 'Kpe0

#### <u>\* 'DF9!CD9F5H+CB'+BGD97H+CB'5B8'G9FJ=79</u>



U^¦ājåā&æaļ^Aāj•]^&&Aæ|A[[çā]\*A]ætoA-[¦A],^ætAæ)åA|^]|æ&A,@} }^&^••æ^Ajão@faĕ o@lä^åA{^lçā&AjætoEXKŠ[[\Á[[•^Áæe c?}^!•ÊÅ][} [¦Áà![\^}Á]ætoÊÆæ)åÁ{^æt^Â[¦Á[[•^Áãœ]\*•ÈÁTæ}^Á\*`!^Áæ|Á]ā]•Á@æç^ æccæ&@3\*Á@etå\_æ^ÉXÂU^!ā[`•Á3JĎ!^Á[æ á{&&`¦Á+[{ Á[[oÁ[æa];cæa];ā]\*Ác@æ {æ&@3}^Á§JÁ[[åÁ[['\ā]\*Á[¦å^!ÉÁ;cœ



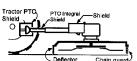


CD9F5H+CB

A DANGER

OE||AUæ∧cîAU@3\|å•EAO`ælå•Aæ)åAUæ∧cîAå∧çæX∧•A§i&|`å ∄;\*AÇa`oA}[c |ã[ãc∿åÁ1[DÁEXo@ ÁÖ^-∤^&q[¦•EAÔ@ænijÁÕ`ælå•EAUc^^|ÁÕ`ælå•EAŐ^ælà[¢ `Ù@3\|å•EAÚVUÁ5jcv\*¦ælÁ @3\|å•EæbjåÁÜ^dæ&cæbi|^ÁÖ[[¦ÂÙ@3\|å•Á(@[`|å

à^Á`•^å/kæ)åÁ(æng cæng ^å/ág Á\*[[åÁ, [\`ð]\*Á&]}åãuā]}ÈÁÁOE[|Á:æ^ĉ Á å^ça& ^4 @`|åÁà^ <sup>shaad</sup> ð]•]^&c^å/&æa/~~||^ÁeuA/^æo/&aæaaĵ Á{¦Á;ã•ð]\*Á;¦Áa¦[\^}Á&[{][}^}o EÁATã•ð]\*Éaa¦[\^}Ê [¦ÁÁ;[¦}Æa{•Á;`•/áa/^Á^]|æ&^â/AeuA;}&^Á{E Á^a`&^Ac@ Á][••āaðjãc Á;-Á9;b`¦^Á;¦Áa^æe@ —— -{[{Ác@[,}}Á;àb^&o EÁ}cæa)\*|^{{ ^}CÉA;¦Áa|æa^A&[}cæ&CÉA;ir#o





U]^¦æaāį}ÂÛ^&cāį}Á+ËJ

#### <u>\*'%HfUWfcf`DfY!CdYfUhjcb`=bgdYWfjcb#GYfj]WY</u>

Ü^\_^!Á[Á@^Át;æ&d[!Á]]^!æ@[!@;Á(æ)`æ‡Á[Á\*}•`!^Áæ &[{]|^c^Á]!^Ë]]^!ææã[}Å3;•]^&cã[}Åæ)åÁ\*&@å`|^å •^!çã&^Á ãrÁ]^! -{!{ ^åA æ&&[!å3]\*A d[Ác@ {æ}`æ&c`!^!•Á!^&[{ ^}åææã])\*ĚÁÁV@`Á-[||[, 3]\* æ^A[{ ^A[.-Ás@Aśc^{ \* As@ææÁ^``ã^Assaáj^Á\*^!çã&^Áæ)å ã•]^&cã]}K

- ĺ Vãl^Á&[}åãããį}ĐæãiÁj¦^∙∙`¦^
- ″Y@^^<mark>|Á</mark>\*\*Áà[İo•Á
- ‴Ùc^^¦aj\*Ájaj∖æ\*^
- ″ ÚVUÁ́@a∿¦åÁ
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- ‴ V¦æ&q[¦ÁÙ^æaÁà^∣oÁárÁ§JÁ\*[[åÁ&[}åãaấį}Á
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- ´ÜUÚÙÁãrÁ§jÁs@?Áæãr^åÁj[•ãaāj}
- ‴ Þ[Ádæ&d[¦Á[āļÁ∱æà•Á
- Űæåãæe[¦Á¦^^Á[√Áå^à¦ãrÁ
- ´´Ò}\*ā;^Áį́ā¦Á^ç^|Á;;à;Á%[}åã;ā;}
- Ò} \* ð} ^ Á&[ [ |æ); ơ{{^c^| (&);} å ấu [ } å ãu [ } Á
- ÚĹĹĹŔŧŀæŀ^ÁŀĬãáÁţ^ç^ĺÁ
- ÚĽĹŶĸŶŔ
- ŹŹŹŚ ( ) åãcāt j Áse) å Át^ c^ lÁ

AWARNING

- Ú ~ a&a } o { ``a l a&aca [] } Áccó ka | A ``a ^ A [ ] a o
- 0E3Á4jcצÁ&{} åã04}} Á ÓPS-U-0030



#### <u>\* "&`6 cca`l b]hDfY!CdYfUh]cb`=bgdYWh]cb`UbX`GYfj]WY</u>

Q•]^&cÁæ) åÁ•^¦çã&^Ác@ Áà[[{ Áæ;{ Áæ) à Á@ æå Á] ¦ã[¦Áq[Á[]^¦æaã]} ÈÉÁÖæ;{ æ\* ^å Áæ) å‡D¦Áà¦[\^} Á] æ;o Á• @[`|å Áà^ ¦^]æãi^åÁæ) å†D¦Á¦^]|æ&^å Áã[ { ^åãæe\*\^ÈÉÁÁ\V[Á^}•`¦^Ác@ Á`}ãóÁã:Á'^æå^Á-[¦Á[]^¦æaã]}ÊÁ&[}å`&cÁc@ Á-[||[¸ã]\*K OPS-B-0020Á





V@Á[]^¦æɛ[¦qÁ[æ]ǎahæ)åhæ^ĉhāt] • Áœ-ã¢^åÁ[} c@Á`}ãóAS[}cæājÁā[][¦œa)óAg • d`&cāj} • Á[}Ác@Á æ^ æ)åÁ]¦[]^¦Á`•^Á[ Ác@Á`čāj{ ^}cĚÁTæājœājÁc@•^ ā][¦œa)óhæ^ĉÁ^æči^• Á[}Ác@Áāj]|^{ ^}óÁjÁ[[å 8[}åãaāj}Ác[Á^}•`¦^Ác@Áāj-[¦{æaāj}Áæçæājæà|^Ác[ c@Áj]^¦æɛ[¦ÁæáÁæþÁáā] ^•È

Č) • ` ¦^ ÁadļÁ æ^ ĉ Áãt } • Áad^ Áşi Áşi (az kad) å Át\\* ãa |^ ÈÁ Ü^] |az k^Á(ã•ã) \* Êåsat æ\* ^å Êás) å Áşi|^\* ãa |^ Á å^ & ad+ ĚÁOPS-U-0011\_A



#### ØÜCET ÒÁCEÙÙÒT ÓŠŸ

- ″ Q.•]^&o/&[}åããą]}Áį,-Áį [`}cā]\*Á¦æą(^Á;^|å{ ^}cÈ
- $[Q\bullet] ^{8} \acute{A} \acute{A} [ ] \acute{a} \tilde{a} \tilde{a} [ ] \acute{A} [ \dot{A} \dot{A} ] (\tilde{a} c^{A} ] \acute{A} \dot{C} \bullet \hat{C}$



U]^¦æaāį}ÂÛ^&cāį}Á+HËF

Ü^|ā²ç^Á@å¦aĕ|a&Á¦^••ĭ¦^Á¦āĮ¦Áų[Áå[ā]\*Áæj^Á, æājơ}æj&^Á¦A^] æāiÁ[[\\Á;}áœAQ]|^{ ^} dĒ Ú|æ&^Á;@ÁT[, ^¦Á?^æåÁ;}á@Á\*¦[ĭ}åÁ;!Á^&č'|^^Á`]][¦ơ³áÁ;}Áa|[&、•Á;¦Á;œajå•Ê&ãa^}\*æ\*^ c@ÁUUUÊæjåÁči}∱(-ÁœA?\*ā]^ĚÁU\*•@ÁæjåÁ;`|ÁœA&`|^|Á@Á8[}d[|ÁŠ^ç^\+Á;¦Á7[\*•œ3&Á^ç^¦æ4Áā]^• q[Á^]ā°ç^Á;¦^••`¦^Á;¦ā]¦Áų[Áœadā;\*Áæj^Á;æajơ}a)&^Á;¦Á^]æãiÁ;[¦\ĚÁçión#□



Þ^ç^¦ÁŚ^æç^Ác@`Á{ [, ^¦Á`}æœc^}å^åÅ, @ặ^Ác@`Á@`æåÅã;Åg`Ac@`Á'æãa\*^å ][•ãīā]}ÈÁÁ/@^Á{ [, ^¦Á&[`|åÁæ‡|Á&æ`•ā]\* Ár^¦ã[`•Áā]b`¦^Á{[Áæ],^[}^Á, @ { ã @A5jazåç^¦c^}d^Ás^Á`}å^¦Ás@A{ [, ^¦∞kµcior≞D



#### OUUT ACEUT ACEUUOT OSY

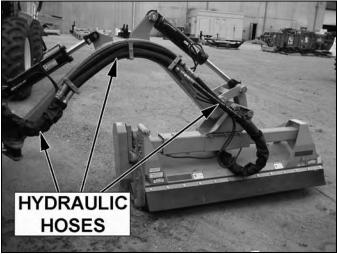
- ″ Q•]^&c%&[}åããą[}Áį́,~Ás@Aå[[{ Ásek{ Á; ^|å{ ^}c
- ″Ó}•`¦^ÁæļÁjāj•Áœh^Á§jÁj∣æ&∧È



♦^ç^¦Aæecv{]oAq[A]ĭàlä&æexEæååbੱ•dE4[¦A!^{{ [ç^A{ æex}¦ãæ4A+[{ Ao@:AQ ]|^{{ ^}}oA, @a]v^ÃavÃa, A3, { [cā]}Áړ¦Á, @a]vÁsiæ&q[¦Á\*}\*ā]vÁsiÁĭ}}ā]\*ÉÁşüö≊en

#### PYOUCENSODASOD OADD UUOOVOU Þ

- <sup>~</sup> Ô@&\Áţ¦Á@妿`|&AÁ^æt•Áæţ[}\*ÁQ\*•^•ÉĂ
   &`|ājå^\\*AġåÁācāj\*•Ȩ=ADCFH5BHÁÄÖUÁ>UVÁ
   `•^Á[`'¦Áœajå\*AţÁ&@&\Áţ¦Áţā4A^æt•ÈÁ\\\*^Áæá
   ]ā\*&^Á[~Á@æçî∱,æ]^\Áţ¦Á&ædåå[ædåÁţÁ&@&\Áţ¦Á
   @å!æ`|&AÁţā4A\*æt•ÈÁ
- ‴Q•]^&oÁo@Á&[}åããąj}Áį.~Áo@Áşæqç^Á;[`}cāj\*È



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Í 4235'Cnco q'I tqwr 'Kpe0

#### PŸÖÜŒMŚOŎÁUWT ÚÐU ŚŚĂŬÓUÓÜXU OŬ

- Ô@ &\ Á; ā,Á^•^¦ç[ā,Á^ç^|/&;)å Å; ā,Á&[}åãa; } ĔÁÇDāåÁ
   •]^&ããa; ]^Á; ā,Á%; ], D

- ″ Q•]^&o4į́ç^¦æąļÁ&[}åããąį}Áį́≁Á@妿ĕ|ã&Áj`{]È
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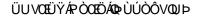
 $\hat{O}@{\ }\&\ \dot{A}c@{\ }\dot{A}_{1}^{*}\ \tilde{a}\dot{a}\dot{A}_{1}^{*}c^{/}\dot{A}_{2}^{*}\ \dot{A}c@{\ }\dot{A}^{*}^{*}\ \dot{a}_{1}^{*}a\dot{a}\ \dot{A}c@{\ }\dot{A}_{1}^{*}\ \dot{A}c@{\ }\dot{A}_{1}^{*}\ \dot{A}c@{\ }\dot{A}_{2}^{*}\ \dot{A}_{1}^{*}\ \dot{A}c@{\ }\dot{A}_{2}^{*}\ \dot{A}_{1}^{*}\ \dot{A}c@{\ }\dot{A}_{2}^{*}\ \dot{A}_{2}^{*}\  

V¦æ&q{¦É&ey}åÁœååÁţ<sup>\*</sup>áÁ<sup>6</sup>Á<sup>A</sup><sup>×</sup> a<sup>^</sup> åÈÆ É Ác@ Áceá Áceá Áceá Áceá Áceá Áceá Áceá Ác<sup>\*</sup> a Áce Ác<sup>\*</sup> a Áce Ác<sup>\*</sup> a Åt<sup>\*</sup> a Å

Ü^{ [ç^Á&æa];Á{[], |^ Áq[Á¦^|ã^ç^Á];^••`;^Áà^-[;^Á\^{ [çā];\*Á&æa];Á&[ {]|^c^|^ÈAÙœe`Á&|^æb;Áq ];^ç^}ơ\$a^ā];\*Á&æaå^åÁ;ão@Á@;ơ[(ā)Áo@æeA;æâÁ];æâÁ;`ơ[(Á@eAæa);\Áo@æAæa;Áa[4];/•••`;ã^åÁæa);å { æîÁ&æe`•^Á^;ā[`•Áā;b`;^Áq[Á^^•EÆæ&AÊ&æa];e^åÁ\ā;EAQru/2223/0 KE+

U]^¦æaāj}ÂÛ^&cāj}ÁHËFH

Í 4235'Cnco q'I tqwr 'Kpe0



- <sup>∞</sup> Q•] ^ &o/ás|æå^• Ása) å Ása|æå^ Ási[ |or Á[ | Á[ [ ^ } ^ • A æ) å Á\*¢&^ • • ão^ Á, ^ æ ÈÁÜ [ ææ\* Ás[ ÁJ € »Ás[ Á[ æ ^ Á -{ ¦ / & @ & ] \* Á\*æ• ð\* ÈÁÜ /] |æ&^ Ásæ{ æ \* ^ åÊ4 [ ; } ÊÁ æ) å Á[ ã • 3] \* Ása æ Ås[ { ] |^ c^ Á ^ o Ás[ Á { æ3j æ3j Á[ æ3 ^ Ásaææ] & ^ È



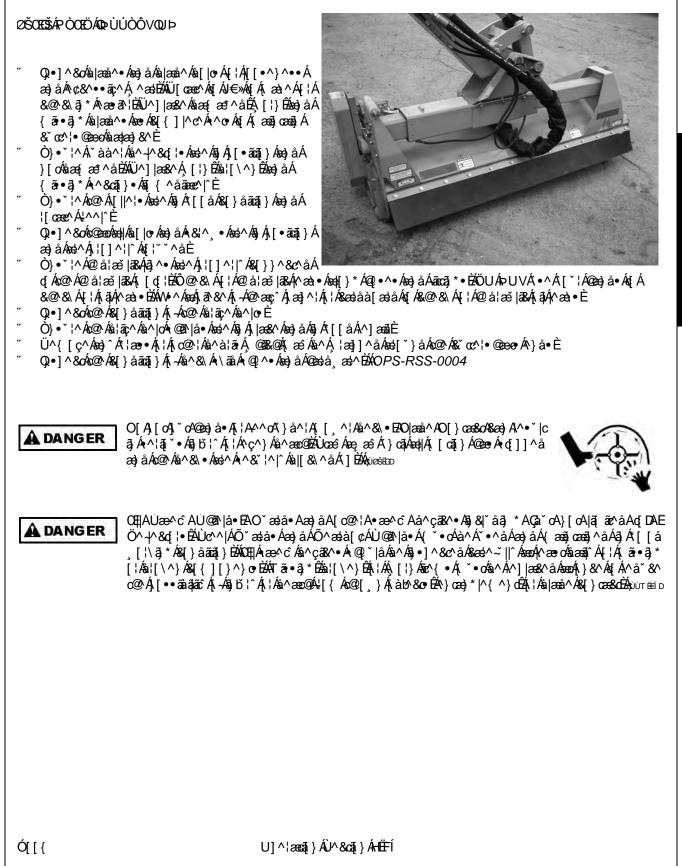


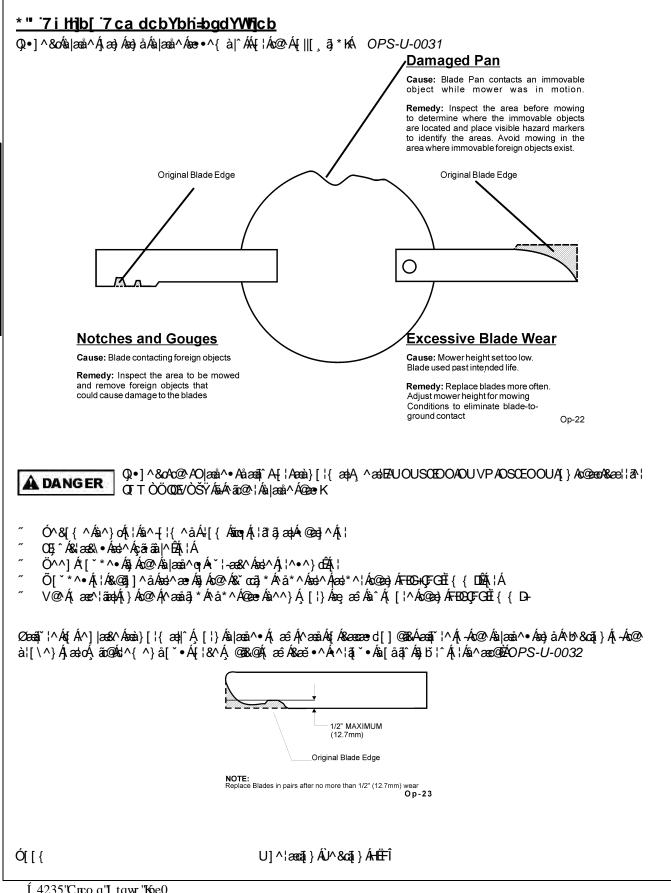
O[A][C4]čC4@ee)å•A[¦A^^C4`}å^¦A[[,^\Aå^&&)•E&O]zeå^AO[}ce&C4@ee A^{[]}^å ā]Á\*^¦ājč•Áā)b`|^Á[¦Á^ç^}Áå^æe@e&A(]]^å æ}åÁc@:Áå^& •Áæ^Á^&`\^|^Áa][&\^åA]E&\oteD



A DANGER

CEĮÁÙæ^ĉ ÁÙ@A\¦å•ĒÁÖ ٘æå•Áæ) åÁ[c@\¦Á•æ^ĉ Áå^çæX^•Á9,84] šā] \*ÁÇā ʿd›[cÁļā[æč\åÁq[DÁË Ö^-{^&q[}+ĒÁÙc^^|ÁÕ ˘æå•Áæ) åÁÕ^æà[cÁÙ@A\|å•Á{ ੱ•oÁà^Á ੱ•^åÁæ) åÁ{ æn3 cæa3, ^åÁ3,1 Å[[å , [¦\3] \*Á&[} åãā]}ÈÁ\CEĮÁ¯æ^ĉ Áå^çæX^•Á @`|åÅa^Á9;•]^&c^åÁ&æ4^~"||^Áæo4/æ cÁåæ3,1 Å[¦Á[æ\*3]\* [¦Áa¦[\^}Á&[{][}^} œEÁT ã •ā] \*ÉÉak|[\^}EÁ;¦Á,[¦}Áæ^{ eA; `•o4a^A^]|æ&^åÁæo4[}&cA; Á^å c@A[[••ãa3,ããč Á;-Á9,1 Ď]^Â;Á8,2æ@Ák[{ Á©@[, }Á;àb%&o+ÉA}œ3,2 Å] /{ ^}EÁ;¦Áa;A8]}æ&CÁ§[}æ&CÉA; 2 œ3,2 Å]





Í 4235'Crco q'I tqwr 'Kpe0

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



F cvg<""""aaaaaaaaaaaaaaaaaaaaaaa

6 YZcfY WcbXiW1jb[`ł\Y`]bgdYW1jcbžaU\_YgifY'l\Y`HfUW1cf`Yb[]bY`]g`cZZźU``fcHU1jcb \Ug`ghcddYX`UbX`l\Y`HfUW1cf`]g`]b`dU1f\_`k]l\`h\Y`dU1f\_]b[`VfU\_Y`Yb[U[YX"AU\_Y`gifY l\Y`ackYf`]g`fYgH]b[`cb`l\Y`[fcibX`cf`gYW1fY`miV`cW\_YX`id`UbX`U``\mXfUi`]W dfYggifY`\Ug`VYYb`fY`]YjYX"

Kgo	Eqpf kkkqp"cv"Uctv" qh"Uj khv	Urgekhle'Eqoogpuu'' kh'pqv'Q0M0
Vjg'hncujkpi "nkijvu'hwpevkqp"rtqrgtn{		
Vj g'UO X''Uki p'ku''engcp''cpf ''xkıkdırg		
Vjg"\ktgu"ctg"kp"iqqf"eqpfkkqp"ykj"rtqrgt"rtguuxtg		
Vjg'yjggn'nwi ''dqnu''ctg''wijv		
Vjg'tcevqt''dtcngu''ctg''kp''i qqf ''eqpf kkqp		
Vjg'uvggtkpi 'hkpncig'ku'kp'i qqf "eqpf kkkqp		
Vj gtg"ctg"pq"xkukdrg"qkd'rgcmu		
Vjg'j {ftcwrke"eqpytqnu'hwpeykqp'rtqrgtn{		
Vj g'TQRU'qt'TQDU'Ecd'ku'kp'i qqf 'eqpf kkqp		
Vjg'ugcvdgnv'ku'kp''r meg'cpf 'kp''i qqf 'eqpf kvkqp		
Vj g"5/r qkpv"j kej "ku"kp"i qqf "eqpf kkqp		
Vjg"ftcydct"rkpu"ctg"ugewtgn{"kp"rnceg		
Vj g'RVQ'o cuvgt''uj kgrf 'ku'kp'r rceg		
Vj g"gpi kpg"qkihgxgn"ku"hwm		
Vjg'dtcng'hnvkf 'ngxgn'ku'hwm		
Vjg"rqygt"uvggtkpi "hnwkf" "gxgn"ku"hwm		
Vjg'hwgn'ngxgn'ku''cfgswcvg		
Vjg"gpi kpg"eqqrcpv"hnxkf "rgxgriku"hxm		
Vjg'tcfkcvqt'ku'htgg''qh'fgdtku		
Vj g"ckt"hkngt"ku"kp"i qqf "eqpf kkkqp		

Qrgtcvqtøu''Uki pcwtg<

# DO NOT OPERATE an UNSAFE TRACTOR or MOWER

 $\underline{V@}*A@\underline{\bullet}^{A}@\underline{I}_{A}@\underline{I}_{A}@A\underline{I}_{A}$ 

U]^¦æeāj}ÂÛ^&cāj}ÅHËËÏ

Í 4235'Cnco q'I tqwr 'Kpe0

### **Boom PRE-OPERATION Inspection**



O qy gt'KF ‰aaaaaaaaaaaaaaaa

AWARNING

6 YZcfY WcbXi Wijb[`h\Y`]bgdYWijcbža U\_Y`gi fY`h\Y`hfUWicf`Yb[]bY`]g`cZZžU``fchUhjcb`\Ug ghcddYX'UbX'h Y'hfUWrcf']g']b'dUr\_'k]h 'h Y'dUf\_]b['VfU\_Y'Yb[U[YX''AU\_Y'gifY'h Y ack Yf`]g`fYgh]b[`cb`h\Y`[fcibX`cf`gYW`fY`mV`cW\_YX`id`UbX`U``\mXfUi`]WdfYggifY`\Ug VYYb'fY]Yj YX"

# Table 1:

Kigo	Eqpfkkkqp"cv"Uctv" qh"Ujkhv	Urgekhle Eqoogpuu" kh'pqv'Q0M0			
Vj g'Qr gtcvqtøi'O cpwcn'ku'kp''y g''tcevqt					
Cmluchgv{ "f gecnu"ctg"kp"r meg"cpf "rgi kdrg					
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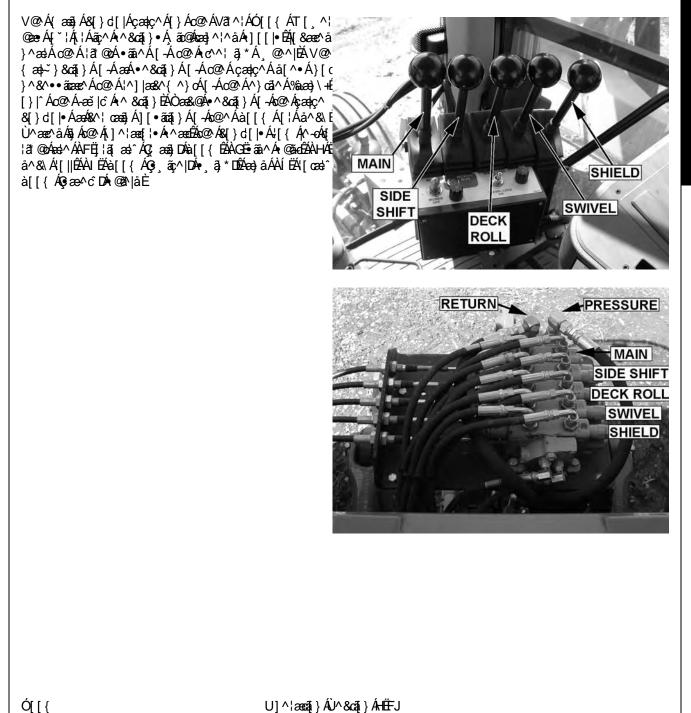
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### **DO NOT OPERATE an UNSAFE TRACTOR or MOWER**

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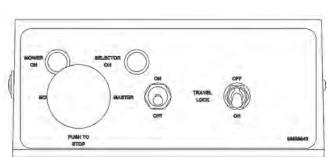
DOWN	OUT	OUT	FORWARD	CLOSE
	$\hat{\mathbf{C}}$	$\hat{\mathbf{C}}$	$\hat{\mathbf{C}}$	$\hat{\mathbf{C}}$
MAIN BOOM	SIDE SHIFT	DECK ROLL	SWING	SHIELD
$\overline{\nabla}$	$\overline{\nabla}$	$\overline{\nabla}$	$\overline{\nabla}$	$\bigcirc$
ÚP	ÍŇ	ÍŇ	BACKWARD	OPEN

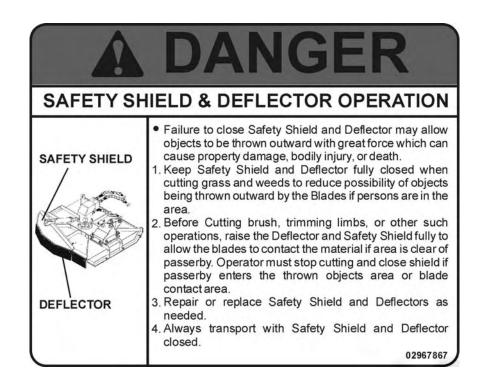


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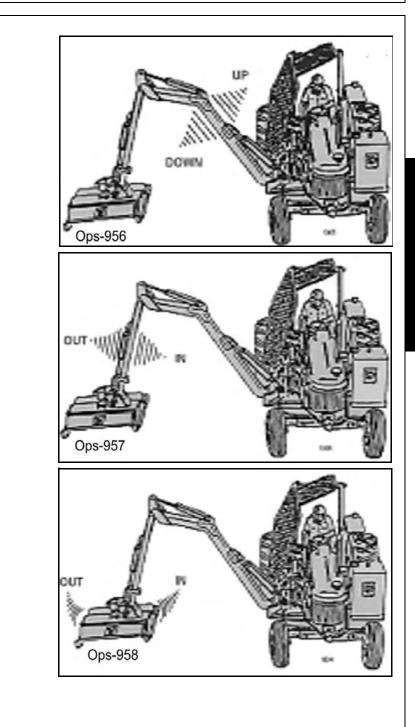
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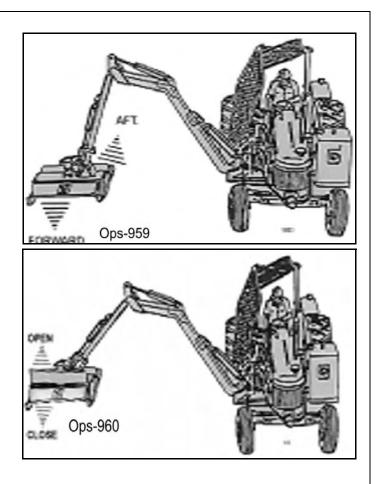
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### ŠÒXÒÜÂN ÁÓUUT ÁÙY Q(ÒŠ

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### ŠÒXÒÜÂÁÍ ÁÓUUT ÁÙP QÒŠÖ



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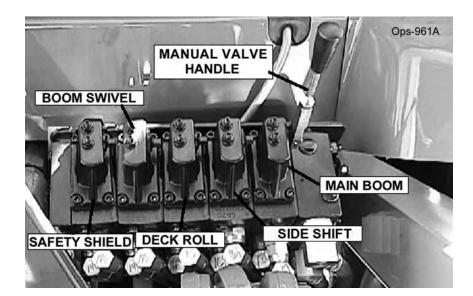
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A CAUTION 8 C B C HÁœec^{ ] cÁt[ Át] ^ ¦æe^ Ás@ Áşædç^ Át æ) čæl|^ Át[ ¦Át [ ¸ ð] \* Át] ^ ¦æeðat} } • Â

Þ[ơ\ KÁÚ\* •@ð] \* Á{ æ) čæ þýçæ þç^Á@e)) å |^• Á{b, č ch{, ¦ Á‰ç æ ÷Á+¦ [{ Ás@ Áslæ&d; ¦Á&æaàÁ āl|Ásl;ð] \* Ác@ Á{ æāj à [[{ Á‰j] +ÉA ãa^Á @e o Ýb, č chÉ4][||Ásl^&, Áþ, č chÉbe)) å Á, ãç^|Áa[[{ Ásec chÉ4Ŭ ||ð] \* Á{ æ) čæ þÁ@e)) å |^• Á[, æ å Á&æàÁ, āl|Á^c { æāj Ás[[{ Ásb, ], +ÉAsl;ð] \* Árãa^Á @e o Áng, +ÉA[||Ásl^&, Ásl, Ásp, +ÉBe)) å Á, ãç^|Ásl[[{ Ásb, ], æ å a +È

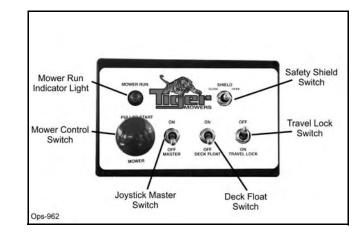


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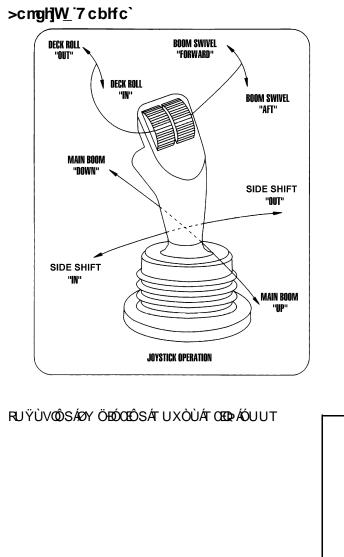
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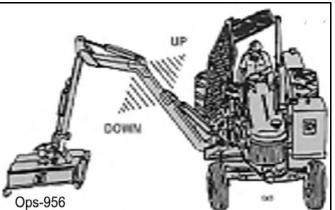


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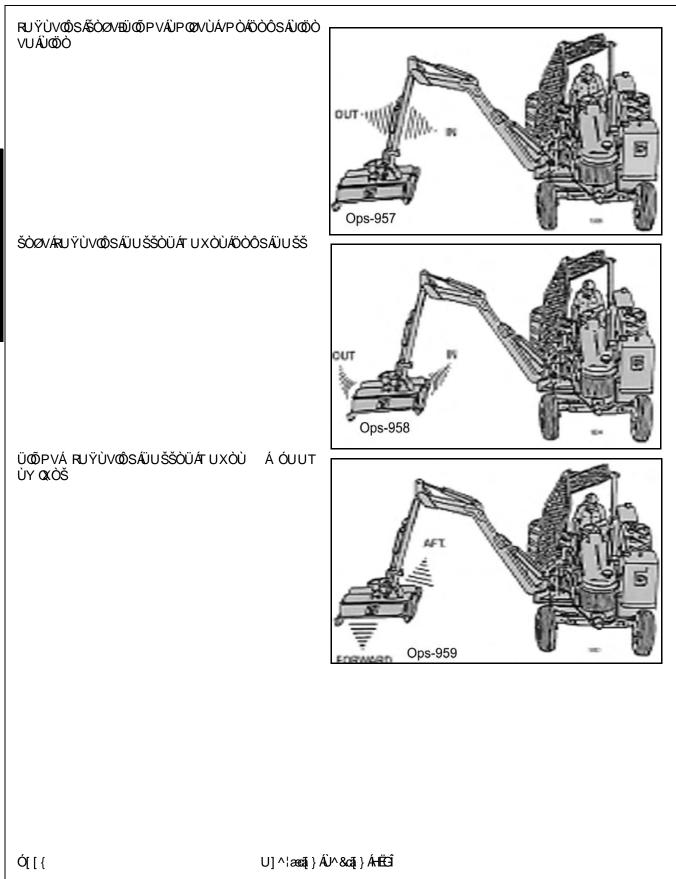
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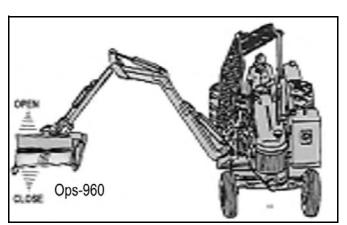
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S^^] Áæ|Á, ^¦•[} @Á, ^||Á&|^æA, Æ, [, ^¦Á;ð, &^Áa, æå^•Á&æ) Ác@[, Á, àb/&o•Á, ão@#; ¦^æÁ, ^|[&ãô Á; ¦Áæ&&[}•ãa^¦æà|^ åã æ) &^Á¥SÒÒÚÁÔŠÒOÜÁŴOPS-B-0005

♠ DANGER
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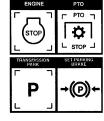
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æ) å Á\^å`&^Á`[`¦Á+]^^åÁ, @} Áč |} āj\*Á+ @ed] |^Áq[Á] |^ç^} oÁc@ Ád æ&q[¦Áæ) å Áā[] |^{ ^} oÁ+[ { č¦}āj\*Á[ç^\bŽÖ^ơ\{āj^^áo@Á(æ¢ā]`{Áč¦}āj\*Á•j^^åÁ{[¦Á´[`Áæ)åÁœãÁ``ā]{^}œá^-{!^^ []^¦æeā]\*Á[}Á[æå•Á[¦Á]^ç^}Á'¦[`}åÈ

U}|^Ástæ]•][¦Ók@@Á/¦æ&d[¦Áse]åÁQ[]|^{ ^}ÔksenÁs@Á]^^å•Á;@3&@Ásel/[`Á[ĭÁ[Á,¦[]^¦|^Á&[}d[| c@^Á~ĭãl{^}cÈ

Ó^Áse; æ\^Á; Ás@,Á] ^ ¦æeā] \* Á&[ } åãeā] • ĖŽÖ[ Á [ oÁ] ^ ¦æe^Ás@,Á/¦æ&d; ¦Á ão@Á, ^æ\Á; lÁeĕ | c´Áslæ\^• [¦Á,[¦}Áxā^•ĖÁY @}}Á;]^¦æaā;\*Á&[,}}Áxa4@aj|Á;¦Á;}Á,^oA;¦Áæaā;A(|a&\Á[æå•É&@A&\;æa;ā,\*Á&ã;æa;3,\*A&ã;æa;3,\*A&ã;æa;3,\*A ∄&\^æe^•kÁ•^Á^¢d^{ ^Á&æd^Áæ)}åÁ^å`&^Á[`¦Á]^^åĚ₩ÁY @}}Á[]^¦ææã;\*Á§iÁdæ-æ3kÁæ); æî•Á•^ c@^Á/¦æ&q[¦q\_Á|æe@a];\*Á,æe}ā];\*Áā\*@erÁæjåÁ^å\*&^Á[`¦Á]^^åĚ₩Ю́^Áæ;æ^^Áį,~Ás;æ-æ3&Áæd[`}åÁ[` a) a Á a es @ á č o Á ¦ Á @ Á c@ ¦ Á č ^ È Á í o E JD







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### <u>, "&`6 fU\_Y`UbX`8 ]Z2YfYbh]U`@cW`GYh1]b[\_</u>

T æ\^Á` \^Á@ Átæ&q \Åa\æA • Áæ\^Á\$j Á`[[å Át] ^ \æaj \* &[ } åãāj } ÈÁV;æ&q \Åa\æA • Á&æ) Áà^Á • ^ ofq Át ] ^ \æaj \* &j å^] ^ } å^ d` Áæ|[, 引 \* Á• 引 \* |^Á\^æA, @^|Áa\æd ] \* æ&aj } År] d` Áæ|[, 引 \* Á• 引 \* |^Á\^æA, @^|Áa\æd ] \* æ&aj } År] \År \Åak \* ^ c@\At At [; çã^^Á• 引 ` | cæ}^[`• \^æA, @^|Áa\æd ] \* ÈÁQUÜÁT UÙVÁÖÜQK@ ÓÁCEDÖ UÚÒÜCE/Qe ÓÁÔU ÞÖQYQI ÞÙÊA/PÒÁÓÜCESÒÁÚÒÖCEŠÙ ÙPUVŠÖÁÓÒÆSUÔSÒÖÁ/UÕÒVPÒÜÁ/UÁÚÜUXCÖÒ VPÒÁT UÙVÁÔØ2ÔÔVCXÒÁŐÜCESQ ÓÁCEÔVQI ÞĚA

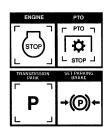
CĘ, æ̂•Áåā?}\*æ\*Aô@Átæ&q[¦Áåã~^\^}œãe¢Á[&\Á;@?} č];}]\*ÈĂY@}Á?}\*æ\*Aå@^Ádæ&q[¦Áåã~^\^}œãe¢Á[&\Á;@?} č];]\*ç^}cÁ[¦Á]ā] ãoÁc@Ádæ&q[!Á+][{Áč];}]\*ÈÄÖ`¦ā]\* }[¦{æ¢Á&`cca]\*Á&[}åãaā]}•ÊÅ[[&\ā]\*Ác@Áåã~^\^}cãe¢ ]¦[çãa^•Á,[Áa\^}^-ãoÁse}åÁ@[`|åÅ;[c%a\^Á•^åÈÁ



OPS-U- 0013

Ó^ Áse, æð^ Át, Ás@ Át,]^¦ææð, \* Ás[} å ãaða;}• ÈÄÖ[Á,[ơát,]^¦ææ^ Ás@ Á/¦æ&d; ¦Á, ão@á, ^æb, Át, Áseĕ jc° Ási¦æb, ^• È Y@} Át,]^¦ææð, \* Ásl, } ÁseA@ðal, Át, ¦Á;} Á, ^ơát, ¦Áæða, Át, |æb, Át,|æb, EŠs@ Ási¦æb, ða; \* Ásiæ, æð, & Áða, & Ae - e • ^ Ár ¢ d^{ ^ Áseæð ^ Áæð, å át å & ^ Át [` ¦Á+]^^ å Áða, Ác@ • ^ Ás(]} å ãaða;}• ÈÉY @} Át,]^¦ææða, \* Áða, Át æ-æ8£ • ∞ ár to A h@ Át / ∞ Ki = % A ha a \* Át @ Ár & M ha \* Ki \* % At [` ¦Á+] ^ . Åt & A ha & At [` ¦Á+] ^ . Åt & A ha & At [` ¦Á+] ^ . Åt & A ha & At [` ¦Á+] ^ . Åt & A ha & At [` ¦Á+] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At [` ` Át ] ^ . Åt & A ha & At ] ^ . Åt ] ] ^ . Åt ] ^ . Åt ] ^ . Åt ] ] ^ . Åt

æļ æê∙Á\*•^Ás@°ÁV¦æ&q[¦qA|æe@3)\*Á, æ}3]\*Áfat@orÁæ)åÁ\^å\*&^Á'[`¦Á+]^^åÈÉÓ^Áse, æ'^Á[~Áclæ-3&Áæd[`}åÁ'[`Áæ)å , æ&&@4\ĭoÁy[¦Ás@?A[c@?¦Át`^ÈÁQru/2226/once+



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U]^¦æcāj}ÂÛ^&cāj}ÅHËGJ

CD9F5HCB

### <u>, "'8f]j]b['h\Y`HfUWfcf`UbX`6cca</u>

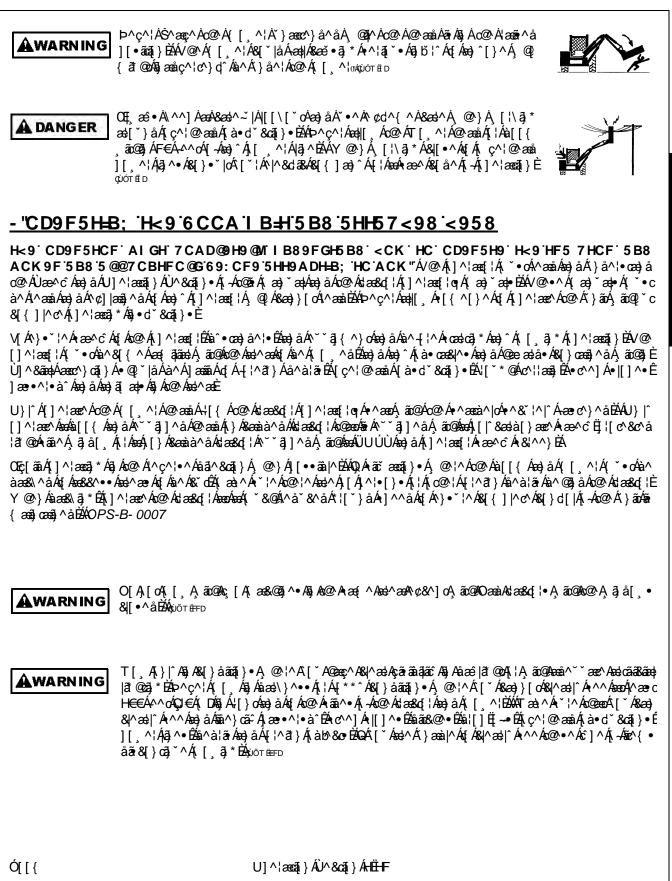
Ùœekof{,~~Á\$¦āçāj\*Áæekkerki|[, Á+]^^åAeejåÁ\*¦æatĭætiĭætiïætiætiäeki^æer^Á\*[`¦Á+]^^åÁ,@atviäetiætijäekAe[{]|^cvÁ&[}d[|Á;~Áœ dæ&d[¦ĚÁh⊃^ç^¦Á;]^¦æer^Ác@Adæ&d[¦ÁæenAi]^^å•Ás@æeA&æej}[cÁa^Aiæe^|îÁ@eejå|^åAi¦Å;@atk@Ajä|Aj¦^ç^}cAs@^Ai[]^¦æe[ --{[{ Á:d[]]āj\*Á`ā&\|î^kaŭ`}iāj\*ÁeejÁk{ ^!\*^}&î`ÈÁkQAc@Aj[,^\Aicv^¦āj\*Áj¦Ár}\*āj^Á&^æe^•Á;]^¦æetaj\*ÉA:d[]Ás@Adæ&d[¦ āj { ^åãæer\îÁee Ás@Adæ&d[¦Á;ā]Aár^Áaă-atx`|cÁq[Ák]}d[|È

V[Áæç[ãåÁ[ç^¦č']) • ÉÅålãç^Ác@Ád:æ&d[¦Ájã@Á&æ^Áæ) å ææÁ•æ^Á]^^ å• ÉÅ^]^&ãæ∯^Á, @}Á[]^!ææji\*Á[ç^! ![`\*@Á\*![`}åÉÅ&[[••ā]\*Áåãa&@•Á[|Á•|[]^•ÉÅæ) å č'}]; A\*Á &[|}^!•ÈÁ W•^Á ^¢d^{ ^A &æč qā}}Á, @} []^!ææji\*Á;}Á; A\*C^]Á[[]^•È&S^^]Á@Ád:æ&d[¦ÁsjÁæÁ[, \*^æÁj@}A\*[ā]\*Ás[,}@ajÈÁÖUÁ>UVÁ&[æ•oÁ;!Á;^^Ë ,@^|Ás[,}@ajÈ

OPS-B- 0006



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CD9F5HCB

### **AWARNING**

Þ^ç^¦Á[]^¦æe∿Ác@Á{[, ^¦Á@;æåÅcā¢cåÁå[, }Å, @r¦^Ác@;Á[]^¦æe[¦Á&æ);Ár^^Ác@;Áa]æå^•Á, Ác@; {[, ^¦ÈĂV@;Áa|æå^Á&[`|åÁc@[, Áæ);Át, àb%scÁq;, æååÁc@;Á[]^¦æe[¦Á&æĕ•ā]\*Á•^¦át`•Áā]b`¦^Á[¦ å^æe@ÈÁÞ^ç^¦Á[]^¦æe\*Ác@;Á{[, ^¦Á, ãc@[čcÁæ);ÁU]^¦æe[¦ÁÚ¦[c^&cãç^ÁÙd`&c`¦^ÈÁOE, æê•Á, ^æ •æ^c´Á\*|æe•^•Áæ);åÁscz∕@eb;åÁœedĂÇU]•Ё∈€€ÉËT©ÙÔD

### <u>- '%: cfY][b'8 YVf]g'< UnUfXg#CjYf\YUX'CVglfiWfjcbg</u>

CE, Áseh æktį Ásh Ákč oft čo chálo ofsh Áfajo] ^ & chálo kan ák [ khálo kan Ás@æar Asi ( ) a Ásh Ás ( ) a Áshæt æt ^ Asi ( ) a & chálo oft ækt@a hei Yæl Ác@[č\*@Ac@ Áæh æhi[[\ā]\* Á-[¦Á-^} & ^ Êtài[č|å^¦o Êtái[č|å^¦o Êtái[č]a Åsh Ásh ( ) a Asi ( ) a Asi ( ) a Asi a a Asi ( ) a Asi ( ) a a Asi a a Asi ( ) a Asi ( ) a a Asi a Asi ( ) a Asi ( ) a Asi ( ) a A Asi ( ) a A Asi ( ) a

 $\begin{array}{l} & (|asc^{A}OOE^{O}OU^{A}a^{2}) \bullet AscA^{asc} \circ A = E A^{A} \circ A a^{A}$ 



AWARNING

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 & WARNING

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 & (!!^8cA) [, ] \* Á]^^åAiA^3 A\* æ^A[] \* E

 & (!!^8cA) [, ] \* Á]^^åAeAe

 & (] \* AcceAc@ A\*]^^åAc

 & (] \* AcceAc@ A\*]^^åAc

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 & (] \* A\*]</

### <u>- "&`CdYfUh]b[ `GdYYX`UbX`; fci bX`GdYYX</u>

Õ¦[`}åÁ•]^^åÁã•Áæ&@a∿ç^åÁà^Ádæ)•{ã•āį}Á\*^ækÁ•^|^&aājåÁÿ[oÁà^Ác@A`}\*āj^Á[]^¦æaāj\*Á•]^^åĔÁ⁄@ []^¦æa[¦Á;æâÁà^Á^``ā^åÁş[Á∿¢]^¦ã[^}oÁ;ãc@á^^ç^¦æk/\*^ækÁæ)\*^Á&[{àājæaāj}•Áş[Áå^cº¦{āj^Ac@Aà^•oA\*^ækAe)å ¦æj\*^Á;@a&@4,\[çãa^•Á∞A,[•oAáa^ækA,^¦-[¦{æj&^A[{ Aa@Aa]}]^{{ ab}^Åa}a\*A[{oAa}\*^&a}a\*)oAslæ&a[¦Á;]^¦æaāj}ÈÁOE c@Á^ç^¦ãĉÁ;Á&`ccāj\*Á&[}åãaāj}•Á§&\^æ^Êb@Á'¦[`}åÁ]^^åÁ;Q`|åÁa^&\&\&a\*^&EOPS-B-0009

### AWARNING

### - " 'CdYfUhjb[ 'h\ Y'5 HUW YX'A ck Yf'< YUXg

V@Áà[[{ { Á&æ}, Áæccæ&@Át[ Áæ), å Át]]^¦æe^Át{`|cā]|^Á@æå, Át]}^ÁææÁæátā[ ^Át[¦ Áæá, ãå^Á¦æ)\*^Át[-Áç^\*^cæaāt]}Á&[}d[| æ]]]ā8æaāt]}•ĚÁV@Áæccæ&@åÁ@æå, Áæ^Áå^•ãt}^åÁt[¦Áåã-^¦^}cÁst]]]ā8æaāt]}•ĚÁV@Á@æå, Át@2`|å,Áa^Ár^|^&c^å,Áaæ^å [}Áx@Át[[,ā]\*Ást]]]ā8æaāt]}Ást)åÁs@Át[&æaāt]}Áx@æáx@Á`}ãxÁarAj\*Át]^¦æe^åÈ

Ü^^¦Á[Á@ÁŒ•^{ à|^ÂU^&qā[}Á[ÁœáA æ) ǎæ;Á[Á\*}•`¦^ÁœáA æå,Áæá]'[]^¦|^Áæcæ&@åÁ[Áœá&[[{ Á@a&@áæ}å @妿ĕ|&&;Áā}^•Áæ^A;¦[]^¦|^Á&[}}^&cåĚ# OPS-B-0010

 ▲ DANGER
 V@\\^Add^/{\} a\cdot a\

U]^¦æaāį}ÂÛ^&cāį}ÁĤËH

### <u>- "(`Ack Yf`CdYfUhjcb</u>

U}&^Á;}Á[&ææā;}ÊÁ[,^\Ác@A;[,^\Ás@A;[,^\ÁsaA&\Á|ð≊@;^Áæà[ç^ÁsœA;ææ^¦ãædÁ;Ás`A&čÁ;[Ás@A;[,^\Ás[^•A;[ •œekcÁ}å^\ÁæÁ[æåÈÁYão@ác@Ásæ&q;¦ÁsœÁsè;Ásã|^ÊA\}\*æ\*^Á;[,^\ÈÉÓ;ā]\*Ás!æ&q;¦ÁÜÈÜÈÈĂ]Áç;ÁFJ€€ËCC€€ÁÜÈÜÈÈÁsè;å g`ck`mÁ[, ^¦ÁsA&\Áç[Á';[`}åÁ^ç^|È

OZÁ kazápát [, ^¦Ás∧& Á @, `|åÁs ^Ásæd ¦a\*åÁ[Ásœen Ásœ Ásæd Á, ado Ás∧& Á, ^at @ Asæd ¦a\*åÁs ^Ás@ Ás[[{ Áse) åÁ, ædóksæd ¦a\*å à ^Ác@ Á\*¦[`}åÁ[||^¦ÉŠ, @}}Át[ça] \*Á;}Ác@ Á\*¦[`}åÉAY @}Ác@ Á‡æa‡Át[, ^¦Áse Ásæd ¦a\*åÁc@a\*Á, æêÉác@ Á\*¦[`}åÁ[||^¦ -{||[, •Ás@ Ás[}{ (`¦Át, -Ás@ Á\*¦[`}åÁt[¦^Á\*æetậî Ás`i]a, \*Át[, ]a;\*Át] ^¦æanati}}•È

V@Á[cæ¦^Á;[,^¦Áå^&\Á`@;`|åÁæd, æ`•Áà^Á&æd;lā\*åÁæc@¦Ás@æ)Á妿t\*^åÁ;}Ác@Ai\ãaAi@,^•Á,@}Á;[,ā;\*Á;}Ác@ \*'[`}åÈÖ¦æt\*ā]\*Ác@Á[cæ}^Á;[,^¦Áå^&\Áaj&\^æ^•Ác@Árãa^Á[æå•Á[}Ác@Áa[[{{ÊAå^&\^æ^•Ác@Á@;!•^][,^¦ æçæanaæi|^Á{{Ác@Á&;cc\*¦Á@æåÊ&æa)åÁ^å`&^•Ás@Áæàājãc´Á;Ás@Áæ&&`{`|æa[¦Ás@Á&æd;^Á;ædo4;Ás@Á,^ãt@A;A6@Áa[[{ å`¦ā;\*Á;[,ā;\*Á;]^¦æana;}•È

AWARNING

Y@}Á[cæaā]\*Á]ætoAæh^ÁāJÁ([cāt]}Éki^lāt`•ÁāJϦ^Á(æ6Á,&&člāA&æčat]}ÁārÁj[cÁ`•^åÁjÁ[lÅåæa)\*^¦Áār ]}[cÁ'^&[\*]ã^åĚÞ^ç^¦Áæa|[, Áà^•cæa)å^¦•Á,ãc@3JÁ**'\$\$`ZYYh**Á[Á&@A(æ&@3)^Á,@}A´jA]A[]^¦æaāt]}È Ò¢d^{^A&æh^Ár@[č|åÅà^Áæa:^}Á,@}Át]?¦æaāt¥Á)^ædÁ[[•^Át]àb%&orËič&@ÁæeA\*¦æç^|É4[&\•É4æa)å å^à¦ãrĚÁ/@•^Á&[}åãaāt}}•Á;@[č|åÅà^Áæç[ãå^åÈ

### <u>-")`\*\$Î`FGG`6cca`FchUfm</u>

V@Á΀+ÁÜÙÙÁs[[{ { Á¦[cæh^Áà!`•@Á{ [ ^ ^¦Á, æ å^•ā}}^åÁ-{ ¦Á&`ccā}\*Áà!`•@Áæ)åÁ-{ |ãæt^Á`]ÁdţÁG ãj&@•ÁşjÁsãæ{ ^c^!Át¦Át` |cā] |^Ási\æ}&@•Ác@æc⁄@æc^Áæ d[cæ‡Á&[••Á•^&cā]}Áæ3^æÁ^``ã;æ†^}cÁdţÁ[}^ÁCÁāj&@ à\æ}&@È

Ö`¦ā) \* Á([, ^¦Á,]^¦æaā) È É c@ Á @e) å Ác@[ cd^Á( `• A é a `•^å Á([Á, æað) cæað) Á} \* ā) ^ Á] ^^å Åæa ÆJ € E E C C € ÁÜ È LÈ È V@ar Á] ¦^ç^} or Á' æað a æd Á & @e) \* ^• Á ðj Á([, ^¦Á•] ā) å |^• •] ^^å È Á' & å & ðj \* Á c@ Á,[•• ã à ðj ác Á[ ~Á&č cơ^¦ Áæ• ^{ à | å æ{ æ\* ^ È

V@Á@;¦ã[}œ4Á][•ãa];}ā]\*Áæ&a];Á[-ÁœAà [[{ Áã å^•ã}}^åÁ[Á][•ãa];}ÁœÁ& ca]\*Á@æåÁæ)åÁ;¦[çãå^Áæ |ā[ãc^åÁ]¦^••`¦^Á^|ã-Á]@}Á^¢&^••ãç^Á]¦^••`'¦^Áa æ]][ðråÁ[ÁœÁa][{ ÉČŐ[Á][oÁ[¦&^ÁœÁ& ca]\*Á@æå ã](Á@æç^Áa;)æ)&@•Á;[Ácč{]•ÉÖæ;æ\*Aá[ÁœÁ]ãaÁ æêÁ^•`]cÈ



Ú[,^¦ā]\*Áo@Áà[[{Áå[,}ÉÁ\{¦&ā]\*Á;[,^¦Áå^&\Á;]d[Á\*¦[`}åÁ;æāÂàæ;æ\*^Á;[,^¦Áå^&\Áæ)åÁāœ; هو جمعان المنظلية ا المنظلية المنظ

V[Á^}•`¦^Áæá&|^æjÁ&`dÊ^\\*∄^Á+]^^åÁ\*@[`|åÁà^Á{æãjæãj^åÁæákæ]]¦[¢ã[ææ^\^ÁFJ€€ËGG€€ÁÜÈÚÈTĚQÁs@Á¦æ&d[¦ •[[,•Á[Á^••ÁœajÁrÌ€€ÁÜÈÉTÈÉ\*@ãoÁ[Á@Á^¢cÁ[,^¦Á^æðĚÖUÁ>UVÁãå^ÁœÁ&|`&@Źác@áÁjā|Á&æĕ•^Á;¦^{æč¦^ &|`c&@Áæãj`¦^ÈÉH\Y`Yb[]bY`g\ci`X`bch`VY`cdYfUHYX`Uh`Ubmih]aY`Uh`acfY`h\Ub`&(\$\$`F"D'A" cb`h\Y`hfUWfcf HUMY caYhYf"

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20[¦Á&ː cā) \* Áà¦`•@ÉÁãrÁã;Áǐ•č a¢|^Áà^•cÁq[]Ác@·Át¦æ&q[]Ác@·Át¦æ&q[¦Áæ) åÁ•, ãç^|Ác@·Áà[[{ Áæ) åÁ([, ^¦Áā) q[Á+[ãæet ^ÉÁV@ @g¦ã[}æa‡Á][•ãīā]}ð] \* Áæ&cāj}Å[ Ác@·Áà[[{ ÁãrÁå^•ãt}^åÁq[4]] ÅáÁq[Á][•ãīāj}Ác@·Á&ː cā] \* Á@ æåáAæ) åÁ]¦[çãa^Áæá\āj ã¢å ]¦^••`¦^Á^|ã∿-Á; @}Ár¢&^••ãç^Á;¦^••`¦^ÁárÁæ]]]ðråÁq[Á@ Áás[[{ È

A CAUTION

\_\_\_\_8 C`BCHÁ`•^Á^¢&^••ãç^Á{:¦&^Á, @}}Á][•ããā;}ā;\*Á&`ccā;\*Á@`æå,Áb;d;Á@`æç^Áà;ka;&;&@•Á[;Á•č{]•È N\_\_\_\_Öa∉; æ\*^Á{:Á;@Á}ãaÁ; æ:Á^•`|däQÁa;Áa^•oÁq:Á^oÁ;@Á&`cc^;Á@:æå,Á&æaÁæ; æ:+Á+|[, |^ÁæeÁ@:æç^Á&`ccā;\* b;à•È

ÁQÁĮ |ãæ\*^Áæ¢|•ÁĮ } ÁĮ ] ÁĮ -Á( [ , ^¦Áå^&\ Á&ě •ā) \* Ádæ&d; ¦Ádį Áà^&Į { ^Á`} • ææì|^É4( [ ç^Áœ@ Áà[[ { %@[ ¦, æå +Áæ) å Á%ul če+Áq[ Á\^]ā°ç^Áœ] ]ā) \* Á[ -Á@^Ád;æ&d; ¦ĚŠ[ , ^¦Á( [ , ^¦Áå^&\ Ádį Á';[ č] å Áæ) å Á\*@ c å[ , } Á`} ãĔŽŒe^¦Áæ¢|Á( [ œ] } Á\*d] •ÉÅ^{ [ ç^Áq] ]ãæt ^Á¦[ { Á( [ , ^¦Áå^&\ È

V@A;[,^¦Á;āļ|Á;]^¦ææ^Á;[¦^Á;~a&a?}d^Á§;Á{;`\*@¦Á&;}åãaā;}•Áæ)åÁ;ãœ4/v••Á;[,^¦ÁãÁ∞A;}ã,∿•Áæ^ÁA]œ4;@æ]È QÁc@Á;[,^¦Áà^\*ā]•Á{;Áçãà¦ææ^ÉA\*d;]Ác@Ádæ&d;¦É&&@&\Á{;¦Á;ã^A;¦æ];]^åÁā;Ác@Á\*]ā;å|^Á[¦Áåæ4;æ\*^åÁ}ã;^•È Y@}Å^]|æ&3;\*Á}ã;^•É\^]|æ&^Áæ4|Á}ã;^•Á,ãœ4;}^,Á}ã;^•Á;ãœ4;}^`æ4Á;A\*;\*`¦^Á]¦[]^¦Áàæ4æ3;&^Á\*[Ác@Á;[,^¦Á;ā|Á;[c çãà¦æe^ÉÈÙ^ç^¦^Áçãà¦ææa];Á;ā]Á^•č|dÉãaÁ}ã;^•Á;ãœ4;}^``æ4Á;^æ4ÁæA^Á\*•^åÈ

Ó^\*ājÁæÁjæ•ÁæeÁc@Á[]Árãa^Á[-Ác@Ád:^^•Áæ)åÁ[[\\Áå[,}Á,ãc@Áræ&@A&[}•^&čaç^Ájæ•ĚY@}A&čaā;\*Ád:^^•Áæ)å •@čà•ÊÁ•^ÁæÁ[,^\Á]^^åÁgÍÁæ|[,Ác@Á;ãç^•Áæ] ^ÁgÍÁ&čóæ Á,^||Áæ Á,`|&@ác@Á[|ãæ\*^È

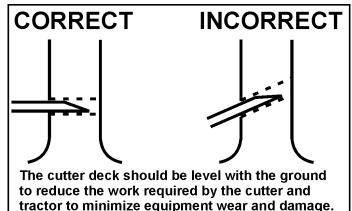
AWARNING

GÁà^•cæ)å^\•Áæ]]¦[æ&@Á,ãc@3,ÁH∈€Á^^cÁ,@4/4[[,^¦Áæ,Á3,Á1]^¦ææ4i}}Áč';}Áč';}Á{[,^¦Á\*,ã&@4/4/202+ ã[{^åãæe^|^Â/QEe²¦Á@cå[,}Ě4,^ç^¦Ár?æç^Ás@^Áslæ&d[¦Át¦Áæ4|[,Áa^•cæ)å^\•Át[Áæ4]]¦[æ&@Á,ãc@3,Á\$\$ :99HAt,Ác@Á`}ãcÁ`}ca‡Áæ4|A[[ca‡}Ád[]•Á&[{]|^c^|^È

GÁ& ‹‹‹›ˈʎ @eəo/hæqi • Áæ) å Ár ({] • ÉÁc ¦} Á( [, ^ ¦ Ár, ā& GÁv; Ákul 2020+Éáe) å Ár, āç^ |Áa[[{ ÁGAZ2V+ÉÁÞ[¦{ æļî Ác@ār Áæ&aāt} } Á, ā] &{^æá Ác@ Á&` ‹‹› ¦ Á@ æå ÈŹGA;[ (dấ4[ ||Át [, ^ ¦ Áå^ &\ Á`} æiÅæå bæ&^} o Át ás@` Ár ^ &[ } å æ³ ´ Áa[[{ Éốc@} Át], ^ ¦ Áa[[{ Át Ár• c { [, ^ ¦ Áå^ &\ Át] } Át ¦[``} å ÈŽÙ@ ont ~ Ác@ Át æ&q ¦ Éár ^ ont, æ\ ā] \* Áa¦ ^ æb Éáe‡[[, Áæ‡|Át [ cāt] Àt Á&^ æ ^ ÈÓLEÁs@ænA,[ā] o Áav/ár Ár æ^ q Ár æç^ Ás@ Át æ&q ¦ Áæ) å Á&{^ æá Á@ Á&` ‹‹›' Á@ æå• Át, æ) 过î È

Œex¦Ác@Áā•oÁa æÂ[-Á]^¦æaā]}Éžeaļ/Áa[|orÁ\*@[\*|åÁà^Á&@&\^åÁæ)åÁcāt@^}^åÁe\*^&`¦^|ÈW@a\*Á\*@[\*|åÁà^Áå[}^ ]^¦ā[åã&æa|^Á{[Á\*}•`¦^Ás@Áa[|orÁa[Á,[oÁa^&[{ ^Á[[•^Áæ)åÁ&æ\*•^Áaæ{æ\*^Á{[Ás@Á:tæ&d[¦Á,¦Á,[, ^¦É4,ŀáb,b'¦^Á{[Ás@ []^¦æa[¦È

Y@}}Á&`ccā]\*Á&;¦`•@Éžea]]¦[æ&@Á(æe^¦ãædÁ(á)Á&^Á&`c 、ãc@Ác@∘Á@^æåÁ]^¦]^}åã&ĭ|ælÁq[Á{æe∿¦ãæeHÁV@^ & ccaj \* Á^å\* ^ Á[ ~Ác@ Ás |æå^• Á• @[ ` |å Áà^ Ác@ Á[ } |^ ^|^{ ^} @• ÁājÁ&[ } œa&oÁ 、ão@Á{ æe^¦ãæ‡ÈÁV@• Áåãe@ • @[`|åÁ}[oÁ&[}œæ&oÁ,ãc@Á(ææ^¦ãæ¢ĚÁV@•Á{[.^¦ @׿åÁ æ}åÁ à|æå^•Á •@{`|åÁ à^Á {[ç^å ]^¦]^}å&&`|æ|^Á&jq[Ác@^Á[æe^\¦ãæ‡Áæe@\¦Á[(^\'&j\* .c@^Á{[ ( ^¦Á@^æåÁ[ }Á{[ ]Á[ -Á[ æe^¦ãæ†ÈÁV@^Áåãr@Áār }[oÁ§jc^}å^åÁq[Á&čoÁ;æe^¦ãæþÁ;¦Áq[Áà^ÁæÁ;^æbÁãe^{ |ã^Ác@Áa|æå^•ĚÖ[ÁÞ[ Áæ4|[ , Ác@Áa|æå^•Á;¦Áåã@ [ Á&[ } cæ&cÁc@^Á\* ¦[ ` } åÊÅ[ &\ • Á [ ¦Á•[ |ãåÁ[ àb^&c• È Ô[}œ&oÁ,ãc@Ác@\Á\*¦[`}åÁ&æ);Á^•ĭ|óÁij,Á[&\•Áæ);å •[|\$\$\$A\$[àb^&c•Áà^ā]\*Ác@2[,}}Á[`oÁ+[{ Á`}å^¦Ác@2 { [ ^ \ Á@ ~ æå Á, @ 33& @ Á& æð • ^ Á \* ^ ¦ ā[ ` • Á§, b` ¦ ð \* • Á{ c@^Á[]^¦æq[¦Áæ);åÁà^∙æa);å^¦•ÈÁV@ã;Áĉ]^Á[~ []^¦æeāį}Á&æ)Á^æåÁţÁà^}oÁ;¦Áà¦[\^}Á~č ]{ ^}œÊ æ) å Á@ædå, æl^Á, @a&@&&æ) Áa ^Áåæ) \*^¦[`•Áq Ác@^ []^¦æe[¦Áæ);åÁa`•œe);å^¦•È



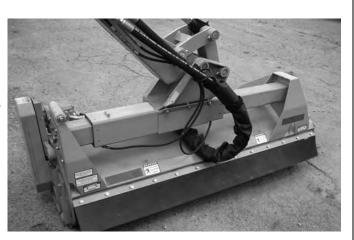
(OPS-R-220)

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U]^¦æeaji}ÂÛ^&caji}ÁHËHÍ

Ops-1480

### <u>- '\* `\* ' Î '/ `+) Î `6 cca `: `U</u>`





Ö[Á][ơÁcoh[] Á}ãç^•Át[Á&čơÁs[] }Át[Ác@Á\*¦[`}åÈÁÚ[•ãāt]}Á\*¦[`}åÁ[||^¦Át[Á;æäjaæanjá}ã^Áeó&ÁocoÁse { ājā[`{Á[-ÁCA5j&@•Áæas[ç^Ás@Á\*¦[`}åÈÁS}ã^Á&[}ææ8cÁ[¦Áj\*Á&[}ææ8cÁjå@á\*¦[`}åÅ,ā|Á&æĕ•^ ]^¦{ ænj^}ơÁsiæ{{ æ\*^Át[Á&čcơ\*¦Á@eedÉÁ}āç^•ÉáenjåÁ}ã^Áæceæ&@{ ^}ơÁjæsiorÈ

A DANGER

V@A![cææā]\*A] æboA[ Ac@ãrA[ æ&@ā]^A@æç^Aà^} A@æç^Aà^} Aå^•āt}^åAæ) åAc••c\*åA-{ ¦A¦`\*\*\*^åA`•^E P[\_^cç^¦Éb@Aà]æå^•Á&[`|åÁæãjÁ]]} Áā[ ] æ&oÁ ão@é@æçîÉ4[ |ãåÁ; àb% &o Á\*`&@æe Á[ ^cæáA`\*æå ¦æāj•Áæ) åÁ&[ } &\^c^Á+d` &c` \^•ÉÁU` &@áā[ ] æ&oÁ&[`|åÁ&æ\* •^Ác@Áà:|[\^} Á[ àb% &o Át` &@æe Á[ ^aaA\*\*\* [čç æåáÆæ¢, ^\^Á@t @éç^|[ &ãæ\*•ÉÁA/[ Á/å\* &^Ác@ Á][ • •ãaājãč Á[ -Á, |;] ^\c` Áåæ{ æ\* ^É4•^¦ā]` • ā] b`\^É4[ \Arç^} Áa^ææÆA, ^c^\Aed|[\_ Ác@ Á&` cæ] \* Áa]æå^•Á{[ & [ } ææSoÁ` &@á[ à• ææ]/• ÉAvoītio

ADANGER

Œ∥AUæ^ĉ AU@A`|å•EAO`æ¦å•Aæ)åAUæ^ĉ Aå^ça&^+Aşi &|`å ā)\*AQa`oA}[c |ā[ār^åÁq[DÁE3c@ ÁÖ^-∤^&q[+•ÉAÔ@æa)ÁÕ`æ}å•ÉAUơ^|ÁÕ`æ}å•ÉAÔ^æ}[¢ Ù@A`|å•ÉÁUYUAşi ç^\*¦æAÁ @A`]å•É&e)åAÜ^dæs&ææ}|^ÁÖ[[¦ÁÛ@A\*]å•Á @[Ў]å

à^Á\*•^åÁaa)åÁ(ænājozanāj^åÁnjÁ\*[[åÁj[¦\āj\*Á&[}åãnāj}ÈÁAOE[|Áræ^c°Aå^ça&/•Á\*@[\*|áÁa^ aj•]^&c^åÁ&æa^~~||^ÁacoÁ^æo ókäænäj`Á[¦Á[ã\*•āj\*Á[¦Ábà¦[\^}Á&[{][}^}orEÁATã\*•āj\*ÉÅa¦[\^}Ê [¦ÁÁj[¦}Ánsc{•Á[`•óka^Á^]|æ&^åÁacoÁţ}&^Ák[Á^å`&^Ác@^Á][••ānaājāc`Á[-Ásib'|`Á[¦Ába^æo@ = -¦[{Áco@[\_}}Á[àb\*&orEÁ}cæa)\*|^{{ ^}cÉát|Ába¦æaå^Á&[}cæ&dE¢pörne

Tractor PTO Integral Shield Shield Shield Shield Deflector Chain guard

AWARNING

U]^¦æaāį}ÂÛ^&cāį}Á+HË+Î

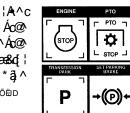
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### <u>- "+`G\ i hh]b[ `8 ck b`l\ Y`5 hh\_W(YX`< YUX!`: cf`Gh\_bXU(X`9 ei ]da Ybh</u>

V[Á@ơhá[] } Á terres & @áÁ[[, ^¦Á@æáÉÁã•óhálā] \* Á c@dæáG[¦Át[Áæá&[{]|^c/Á•d]] ÉÖ^& & aæ^ÁA} \* ā] ^ ÁÜÚT dæád[¦Át[Áæá&[{]|^c/Á•d]] ÉÖ^& & aæ^ÁA} \* ā] ^ ÁÜÚT d[Ása]/Åc@} Å terres \* at ^ Ásč cc^!@æáEV@Át[], ^!Á@æá , ā]Á&[{ ^ Ád[ÁseÁ &[{]|^c/Á•d[] Á, ãc@a}Áæá\* ĭaæa]^ æt[[`} cA[Ásta \* EČO[A][cA^} \* æt ^ Á[¦Áåã \* ] \* æt ^ Ác@ &č cc^!@æá•Áæábe Á @at @ÁÜÚT Á } |^••Ác@¦^Áã Áse} ^{ ^!\*^} & Ásta æsta } È

Úæ\Ác@Atæ&q[¦Á[}ÁæÁ|^ç^|Á`¦æ&AÊA]|æ&Ać@ dæ)•{ã••ã[}ÁāJÁ]æ\Á[¦Á}^`dæAáæ)åÁæ]]|^Ác@ ]æ\ā]\*Áalæ\AÊA\*@OÁa[,}Ác@Á^}\*ā]^ÊAA{[ [ç^Ác@ \^Êæba}åAjæãoA[¦ÁæHA[[cã[]A6[A&[AæA&[{]|^c^ •q[]Áa^-{¦^A¢¢ãã]\*Ás@Ádæ&q[¦È OPS-B-0011\_D



**On-Off Switch** 

### 

# <u>%\$"HF57HCFž6CCAž5B8"5HH57<98"<958"GHCF5;9</u>

Ú¦[]^¦|^Áj¦^]æð jð \* Áseðj å Átq[¦ðj \* Ás@ Át}ãnÁsenÁs@ Át}å Át Ás@ Át^æe [}Ást Á&¦ãn38ædÁt[Át, æðj cæðj ðj \* Áser Áseðj ]^æbæðj &^Áseðj å Átj @\]Át}•`¦^Á^æb•At Ásk^]^}åæba|^Át^¦ça8x^ÉSAV@ Át ||[,jð] \* Áseb^Á`\*\*\*•c∿å Átq[¦æt\*Aj:|[&^å`¦^•K

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U]^¦æcāį}ÂÛ^&cāį}ÁĤËHÏ

Í 4235'Cnco q'I tqwr 'Kpe0

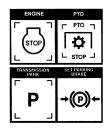
ADANGER

- Š`àl a&æec/Ásel/Át¦^æe^^Á,[ā, or Áse) å Áāl/á,ā/át^ç^l•Á æ&&[ låā] \* Át[Ás@e Á; æaā, c^}æ) &^ At`àl a&æaā] } Á • &@a` |^È
- ✓ Vât@c^}Áæd/Ás[|œ Áş[Ác@Aj.|[] ^ ¦Áş[ |˘ ^ ĚÁÔ} ˘ ¦^Á æd/Ájā • Áse) å Áj c@ ¦Á@estå, æt^Áse^Áşj Áj |æ&^È
- ‴ Úq[¦^Áo@A´}ãóAşÁæÁ&|^æ)Áæ)åÅs¦^Á[[&ææã]}È
- ´ ₩•^Á;]¦æ`Á;[`&@Ë]Á}æ;^|Á,@e¦^Á,^&^••æ;^Á [}Ásàæ^Á;^œa‡Á`¦æa&^•Á;[Á,¦^ç^}ơÁ`•o&e;a'Á;É [}ása⇔^Á;^œa‡Á`¦æa&^•Á;[Á,¦^ç^}ơA`•o&e;a'Á;É

{ æni, æni, Ác@ Ázej]^ælæ) &^Á; Ác@ Á; [¸ ^¦ÈOPS-RSS-0006

# $\begin{array}{c} \left| A \right|_{A} \left( A \right)_{A} \right|_{A} \\ \left| A \right|_{A} \left( A \right)_{A} \\ \left| A \right|_{A} \left( A \right)_{A} \\ \left| A \right|_{A} \\ \left| A \right|$

À DANGER ▷^ç^¦Áœļ[, Á&@jå¦^}Áţ Á jæĉĄţ } Ą ¦Æœj[`}åÁ';Aœj[`}åÁ';Aœj[`}åÂA';æ&d[¦Aţ¦ÁQ;]|^{{ ^}dÖ@jå¦^}Á&æjÁ c@ÁÒ`č]{ ^}cÁsejáÅs^Á]b`|^åÁşiÅaÅjb`|^åÁşiÅaÅjÅäÅ &``•@j\*Ás@{ •^|ç^•Ąţ¦Ąţc@¦•ĚÁşiötti□



**A**WARN IN G

Ú^¦-¦¦{ Ár^¦çã&^ЁÅ^] æði•Aæ)åA;à¦ã&ææ‡i}Åæ&&&[¦å∄j\*At[Ab@A(ænij c\*}æ)&^ArAc&c‡i}ÉAO}•`¦^Ao@ `}ãA\$#Áj![]^¦|^A;à¦ã&æe\*åÁæeA;]^&ãa?\*åÁ§jÁc@A;à¦ã&ææ‡i}Å&&@å`|^Aæ)åAœjiÁœjiÁQ;]|o{Ae)åÁ,`orÁæ4^ ]¦[]^¦|^Át[¦``^åÈÁA2æa‡i`¦^Át[Áj][]^¦|^Ár^¦çã&^ÊÅ^]æãiÁæ)åÁ[æanjiæanjiÁc@árÁQ;]|o{{^}oÁnjiÁr[[å []^¦æanji\*Á&[}åãa‡i}Á&[č|åÅ&æě•^Á&[{][}^^}oÁæa‡ĭ'¦^ÁæanjiÅæ)åÁ][••ãa|^Ár-^¦áti`•Á8]b`¦^Á[¦Árç^} å^ææ®ÁAjoõhip

### <u>%%HF5BGDCFH=B; H<9HF57HCF5B8=AD@A9BH</u>

Q,@;\^}cÁ@ee ætå•Á{;-Á[]^¦ææä}\*Ás@ Áti æ&d[¦ÁæajåÁā[]|^{{ ^}}cÁæjåÁs@ Á;[••āaājāč Á[-Áæ&&&ãāA} or Áæt^Á,[cÁn~~cÁa^@zjå ,@}Á[`Áājāi@á,[¦\āj\*ÁsjÁæjÁæjAæAzðÁV@;!^-{¦^Êds@ Á;]^¦æe[¦Át``•cÁv{]][^Át[[åÁtöå\*^{ ^}cÁæ}åáAæ^Á,]^¦æeā]} ]¦æ&ca&^•Á,@}Ád;aj•][¦cāj\*Ác@ Ádiæ&d[¦ÁæajåÁā[]|^{{ ^}cÁac}c^^}A[[&ææaā]}•ĚÁÓ^Á \*ēj\*Á\*[[åAtöå\*^{ ^}cÁad)å -{||[,ā]\*Á\*æ^Ád;a)•][¦cÁ]¦[&^å`¦^•Édc@ Á;[••āaājāč Á[-Áæ&&ãā^}o\*Á;@aj^Á{{ [çā]\*Ás^c,^^}A[[&ææā]}•Á&æajÁà^ •`à•æajcāæa]^Á{;ā]ā[ã^àÉdóPS-U-0017

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### <u>%%%D`UW1b['6cca'5fa'cb'6cca'5fa'FYqh!':cf'GHUbXUfX'9ei]daYbh</u>

Ó^-{ ¦^Átæ)•] [¦cā) \* Átæ&q[¦Áti^c, ^^} Á[&ææā] • É£áti^ c@Átæ&q[¦Á\*] \* ā] ^ É£átā^} \* æt ^ Ác@ Áææææ@áA@æátÊ æ) åÁ ææá4[ ¦Áteh) Å@æátÁ[ [cā] } Át[Áti[{ ^ Át[Áteb&t] { ] |^c •q[] ÈÁ4Ú]æ&^Ác@ Áti[ { Áti Áti { kel { ^ Áti Áteb&t] { ] |^c •q[] ÈÁ4Ú]æ&^Ác@ Áti[ { Áti Æteb Ati æteb Ati æteb Ati æteb • ]] [¦dæb) áÁs@} Áti ¦ Át@ Áti ^ e cætt Át, æteb I Å, ãt&@áti c@Áu ØØA[ • ãti] } ÈÁ

- ‴Ü^dæ&o4Ö^&\ÁÜ[||Á&;|∄å^¦Á&[{]|^ơ^|`È
- ‴Ù@ãoÁ;[,^¦Áaa|Áo@;Á,æÂ,čÈ
- ‴Ü^dæ&xxóko@ÁÓ[[{Á&î|ā}å^¦Á&[{]|^¢^|^È
- ″ Ù,ā),\*Áà[[{Áàæ&A\Á|[,|^Á}∂āÁáoÁá Addæa∄@A àæ&A\È
- ´´ Ò¢c^}åÁc@ÁÖ^&\ÁÜ[||Á&`|ājå^\Á`}dā/ác@Á([, ^\Á ã;Áö•o/ácaà[ç^Ácæåå|^È
- ″Ù@exá@Á([,^\Á\$)Á}á\$A;áÅá@Á[||^\Á\}\*æ\*^•Áv@Á à[cq[{ Á;Á@A;æåå|^È
- ‴Š[,^¦Á@AÓ[[{Á`}đạÁ;[,^¦Áão+Á5jd[Áæåå|^È V@Áa[[{ÁãeA;[,Á5jÁ@Ásaa)•][¦ơA;[•ãaā]}È

V[Á^{ [ç^ÁœÁa[[{ Á+[{ ÁœÁÓ[[{ ÁÜ^●dÂaæa^ c@ÁÓ[[{ Á&[{]|^c^|îÈÁÙ@ãÁc@Á{ [ ^ ^+Ái`cÁ} câ c@Á/[||^¦Áåã^^}\*æt^•Ác@Á•æåå|^ÈÁÚ^dæ&cÁc@ Ö^& ÁÜ[||Á&î]åå^¦Á&[{]|^c^|îÈÁØajæ|îÊÛ,āj\*Ác@ Ó[[{ Á[; æåÈ

OPS-RSS-0009

### <u>%%%&`HfUbgdcfh]b[`cb`DiV`]WFcUXkUmg</u>

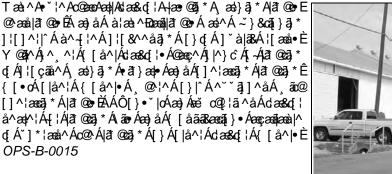
$$\begin{split} \hat{O}_{cd} & \left( \frac{A}{8} \exp \left( \frac{1}{4} + \frac{1}{4} \right) + \frac{1}{4} \exp$$



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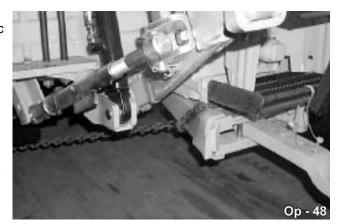
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# **MAINTENANCE SECTION**

Maintenance Section 4-1

### **General Instructions**

Tiger Mowers are designed for high performance and rugged durability, yet with simplified maintenance. The purpose of this section of the manual is to help the operator in the regular servicing of the mower. Regular maintenance at the intervals mentioned will result in the maximum efficency 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 efficent 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 overgrease bearings.
- Be alert to maintenance indicators such as the in-tank filter pressure gauge, hydraulic reservoir sight gauge, etc. Take the required action to correct any problems immediately.
- <u>Release of energy from pressurized systems may cause inadvertent actuation of cylinders, or sudden</u> <u>release of compressed springs.</u> 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 sufficent 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 sear ch for pin hose leaks. Be sure all connections are tight and hoses and lines are not damaged before applying pressure.

### **Break in Period**

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

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

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



**AWARNING** 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)

Maintenance Section 4-2

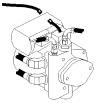
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**AWARNING** Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Mower Head on the ground or securely supported on blocks or stands, disengage the PTO, and turn off the engine. Push and pull the control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



Always disconnect the wire le ads from the mower pump solenoid before performing service on the Tractor or Mower. Use caution when working on the Tractor or Mower. Tractor engine must be stopped

before working on Mower or Tractor. The Mower Blades could inadvertently be turned on without warning and cause immediate dismemberment, injury or death. (SBM-12a)



### **Regular Maintenance**

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

Refer to the Det ailed Maintenance section for futher 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• haft Coupler	Check and Lube	Insure driveshaft end play
Crankshaft Adapter	Check rubber grommets	Replace grommets if damaged or missing
Pivot Points	Lubricate	Inject grease until it appears at end
Hydraulic Fittings	Check for leaks	Tighten when needed. Do Not use hands to check for leaks, see maint. ] recautions
Knives	Check	Inspect for missing or damaged knives, change as needed.
Spindle mouting bolts spindle to deck)	Check	Torque to 331ft. lbs. lubricated Torque to 357ft. lbs. dry
Knife mounting bolts (knife to disk or blade bar)	Check	Pre-lubricate threads, then torque to 800 ft. lbs.
Disk/Blade Bar mounting bolts (disk/blade bar to spindle)	Check	Torque to 184ft. lbs. lubricated Torque to 180ft. lbs. dry
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) Bear 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
RSS	Maintenance Section	n 4-4

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	WEEKLY O	REVER	Y 40 HOURS				
ITEM	SERVICE		COMMENTS				
Rotary Spindle	Lubricate		Every 40 hours or weekly				
	WEEKLY O		Y 50 HOURS				
ITEM	SERVICE		COMMENTS				
In Tank Hyd. Fluid Filter <b>10 micron filter</b> )	Change		Change after first 50 hours only, then every 500 hours or yearly				
In-Line High Pressure Filter ( <b>10 micron filter</b> )	Change		Change after first 50 hours only, then every 500 hours or yearly				
	MONTHLY O	R EVEF	RY 150 HOURS				
ITEM	SERVICE		COMMENTS				
Hydraulic Fluid Level	Check		Add as needed				
Hyd. Tank Breather	Clean/Check/R	eplace	Clean or replace Álement as required				
Rear Tire Type 480/80R38 18.4-34 18.4-38	Max P.S.I. 29 26 26						
	YEARLY OF		Y 500 HOURS				
ITEM	SERVICE		COMMENTS				
Spindle Grease Hyd. Tank Fluid In Tank Hyd. Fluid Filter ( <b>10 micron filter</b> )	Change Change Change						
In-Line HP Filter ( <b>10 micron filter</b> )	Change	or	Change when indicated by restriction indicator.				
Hyd. Tank Breather	Change						
RSS	Mainter	nance Secti	on 4-5				

TROUBLESHOOTING								
SYMPTOMS	CAUSE	REMEDY						
Vibration	1. Loose Bolts	<ol> <li>Check all bolts and tighten to recommended torgue specs.</li> </ol>						
	2. Cutter assembly	2a. Check for damage blades, disc						
	Unbalanced	or cuttershaft. Replace if needed.						
		2b. Check for wire, rope, etc.						
		entangled in the cutter assembly						
Mower will not lift	1. Hyd. Fluid Low	1. Check and refill @yd -luid						
	2. Leaks in line ROU	2. Tighten or 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.						
	5. Faulty cylinder	5. Inspect, repair or replace cylinder						
Mower will not start	1. Blown fuse	1. Check fuse between mower switch						
or run		and ignition/replace						
	2. Ball valves closed	2. Make sure valves are open						
	3. Low oil level	3. Check Hyd. tank and fill						
	4. Line leak	4. Check all fittings and lines,						
	5 Flootropio	re-tighten or replace						
	5. Electronic	5a. Without the tractor running, turn						
	solenoid faulty	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.						
		5b. Remove the four bolts holding the						
		small block to the main block. Lift						
		and remove small block being						
		•						
		careful not to damage O-rings/filter. Clean filter and re-install.						
		<ol> <li>Remove large nut on side of large valve block. Remove spring, and use</li> </ol>						
		needle nose vise grip to pull spool from						
		block. Check block and spool						
		for contaminates and scratches.						
		Clean parts or replace if scratched.						
		Clean parts of replace it schalched.						

### TROUBLESHOOTING

MAINTENANCE

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	IROUBLESHOUT						
SYMPTOMS	CAUSE	REMEDY					
Motor runs but will not cut. Mower turns slowly or not at all.	1. Belts	<ol> <li>Inspect belts and pulleys. Replace belts and repair as needed.</li> </ol>					
	2. Tensioner	<ol> <li>Adjust tensioner nuts tension should be 106 freq cyl/sec.</li> </ol>					
	1. Contaminants restricting spool movement in valve body.	<ol> <li>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.</li> </ol>					
	2. Suction lines obstructed	<ol><li>Check for kinks or obstructions in suction hose.</li></ol>					
	3. Low oil level	3. Check @yd. 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.					

### **TROUBLESHOOTING** (CONTINUED)

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 Section 4-7

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### **TORQUE SPECIFICATIONS**

				т	orque	for St	andard	<b>Faste</b>	ners				
Nominal threads	C	$\rangle$	Grade 2	Grade 5			$(\mathbf{G})$		Grade 8	Grade			
Dia.	per	Tightening Torque			Tightening Torque			Tig	htening Tor	que	Tig	htening Tor	que
	inch		Dry Plated				Lubed Dry Plated				Dry plain		
(in.)		K=0.15			K=0.15	K=0.17	K=0.20	K=0.15	K=0.17	K=0.20	K=0.15	K=0.17	
-					Uni	fied Coa	rse Threa	ad Series					
1/4	20	49 in-lbs	59 in-lbs	66 in-lbs	76 in-lbs	86 in-lbs	101 in-lbs	107 in-lbs	122 in-lbs	143 in-lbs	126 in-lbs	143 in-lbs	168 in-lb
5/16	18	101	122	135	157	178	209	221	251	295	259	294	346
3/8	16	15 ft-lbs	18 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	31 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-lb
7/16	14	24	29	32	37	42	49	52	59	70	61	70	82
1/2	13	37	44	49	57	64	75	80	90	106	94	106	125
9/16	12	53	63	70	82	92	109	115	130	154	135	153	180
5/8	11	73	87	97	113	128	150	159	.180	212	186	211	248
3/4	10	129	155	172	200	227	267	282	320	376	331	375	441
7/8	9	125	150	167	322	365	429	455	515	606	533	604	710
1	8	187	225	250	483	547	644	681	772	909	799	905	1065
1 1/8	7	266	319	354	596	675	794	966	1095	1288	1132	1283	1510
1 1/4	7	375	450	500	840	952	1121	1363	1545	1817	1597	1810	2130
11/2	6	652	783	869	1462	1657	1950	2371	2688	3162	2779	3150	3706
1						-							
1.14	- 20 -	to be the	co la na	75 in-lbs	log list the		hread Se		Lang Line line	ACA Do Hos	La da Los Hos	lacal is the	Goolisin
1/4 5/16	28	56 in-lbs	68 in-Ibs 135	150	174	99 in-lbs 197	116 in-lbs 231	245	139 in-lbs 278	327	287	325	383
3/8	24	17 A-lbs	20 ft-lbs		26 ft-lbs	30 ft-lbs	35 A-lbs	37 ft-lbs		49 ft-lbs	43 ft-lbs	49 ft-lbs	
7/16	20	27	32	36	41	47	55	58	42 11-10s	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	210	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 S/16-in series are in inch-pounds. All other torque values are in foot-pounds. K = 0.15 fr Torque values calculated from formula T=KDF, where K = 0.17 fr  $\kappa = 0.07$  fr

-pounds. K = 0.15 for "lubricated" conditions K = 0.17 for zinc plated and dry conditions K = 0.20 for olain and dry conditions

F = Clamp Load

	Torque-Tension Relationship for Metric Fasteners Class 4.6 Class 8.8 Class 10.9 Class 1											s12.9
			4.6	>		6.8	>	(10.9)			129	
Nomine	Pitch	Tig	Tightening Torque		Tightening Torque			Tig	htening To	Tightening Torque		
Cox.		Lubed	Drg Plated	Dry plain	Lubed	<b>Dry Plated</b>		Lubed	Dry Plated	Dry plain	Lubed	Dry plain
Dia.	1.00	K = 0.15	K=0.17	K = 0.20	K=0.15	K=0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0,20
(mm)	100	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)
3	0.5	0.28	0.32	0.38	0.73	0.82	0.97	1.0	1.2	1.4	1.2	1.6
3.5	0.6	0.44	0.50	0.59	1.1	1.3	1.5	1.6	1.9	2.2	1.9	2.5
- 4	0.7	0.66	0.74	0.87	1.7	1.9	2.3	2.4	2.7	3.2	2.8	3.8
5	0.8	1.3	1.5	1.8	3.4	3.9	4.5	4.9	5.5	6.5	5.7	7.6
6	1	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11	9.7	13
6	1.25	2.1	2.3	2.7	5,3	6.0	7.0	7.6	8.6	10	8.8	12
7	1	3.8	4.3	5,0	9.7	11	13	14	16	19	16	22
8	1	5.9	6.6	7.8	15	17	20	22	24	29	25	34
8	1.25	5.5	6.2	7.3	14	16	19	20	23	27	24	31
10	1.25	.11	13	15	29	33	39	42	48	56	49	66
10	1.5	. 11	12	14	28	32	37	40	45	53	47	62
12	1.25	21	23	28	53	60	71	76	86	101	89	119
12	1.5	20	22	26	51	58	68	73	82	97	85	113
12	1.75	19	21	25	49	55	65	70	79	93	81	108
= 14	1.25	26	29	34	66	75	89	95	108	127	111	148
14	1.5	28	32	37	72	82	96	103	117	138	121	161
14	2	30	34	40	78	88	104	111	126	148	130	173
16	1.5	50	57	67	129	146	171	184	208	245	215	287
16	2	47	53	62	121	137	161	173	196	230	202	269
18	1.5	73	82	97	187	212	249	268	303	357	313	417
18	2.5	65	73	86	167	189	222	239	270	318	279	372
20	1.5	101	115	135	270	306	360	374	424	498	437	583
20	2.5	91	104	122	236	267	314	337	382	449	394	525
The second se		A second little from the last	s 75% of t ed in foot-	And the second second	ad for spe	cified bolts				itions conditions		nal Diamete
1.1.1.1.1.1.1		string " data Provident of		mula T=KD	F, where		K = 0.20 f				, starty	

LUBRICATION RECOMMENDATIONS			
Description	Application	General Specification	Recomended Mobil Lubricant
Tractor Hydraulics	Reservoir	JD-20C MF M1135,M1141 FNHM2C134D (FNH201)	Mobilfluid 424
Mower Hydraulics Cold Temperatures 0° F Start-Up	Reservoir	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-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 NLGI2-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-ISO 320	Mobilgrease CM-S
Deck Spindle(Rotary)	Grease Gun	Tiger Spindle Lubricant part number 06540000	Mobilith SHC 220

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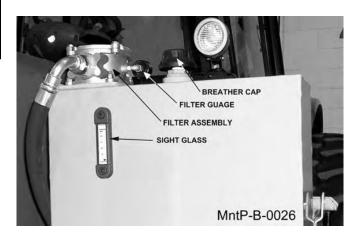
### **GRAFFITI REMOVAL**

Butyl cellosolve (for removal of paints, marking pen inks, lipstick, etc.) The use of masking tape, adhesive tape or lint removal tools work 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



The reservior should be filled to the center of the sight glass on the side of the tank. Do not over-fill. If the tank has too much oil, the excess may be expelled through the pressurized breather.

### **DETAILED MAINTENANCE**

#### REPLACING IN-TANK HYDRAULIC FILTER:

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

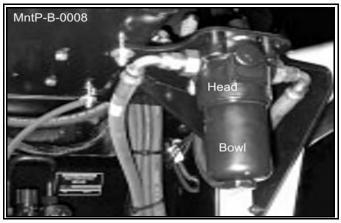


Maintenance Section 4-10

### **DETAILED MAINTENANCE**

# REPLACING HIGH PRESSURE HYDRAULIC FILTER ELEMENT:

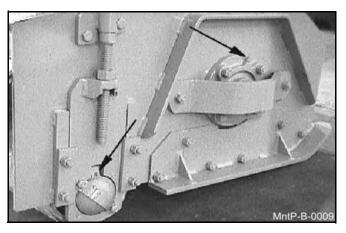
 $\hat{AO}$  sure system has been shut down and depressurized. Locate High Pressure Filter housing. Confirm that the element that is a bout to be installed matches the element p/n on the filter model tag. Example: V3.0510-06 (world line 100, HD049 model)È Locate the bottom of the High Pressure Bow|ÈÁW  $\tilde{a}$  \* the appropriate spanner wrenchÁsrÁtatchet and turning in a counterclockwise rotation, (looking at the bottom of the bowl) remove the bowl from the headÈThe first couple rotations will seem tight as the o-ring passes the sealing flats. Once the o-ring has cleared the sealing flats the



bowl should spin freely. Taking care not to drop the bowl, finish removing the bowl from the head. WARNING: bowl will be full of oil! Pour the oil from the bowl into a containerÈVhis oil should be considered contaminated à^& \* ^ the flow direction through the element is outside-in. Clean the inside of the bowl if dirtÁs present. Remove the old element from the filter head by pulling with a rot ation motion. Dispose of the us ed element properly. Remove the new element from the packaging. Using your finger, dab and lubricate the o-ring in the top of the new element. Install the new element into and on the mounting boss within the headÈ Ò sure that the element is fully seated on the boss. Clean and inspect the o-ring that is affixed in the bowl, lubricate with oil. Using a clockwise rotation, screw the bowl back into the head, ^} suring that the bowl has not been cross threaded into the head. Continue { Aighten the bowl into the head, using the spanner wrenchÁsrÁtatchetÈVhe rotation of the bowl will become tighter once the o-ring engages the sealing flats. Once the bowl has bottomed out, "back-off" the bowl by 1/6 tur n, this ^} sures that the o-ring is seated properly with in the sealing flats. Element change out and re-assembly is now complete. Start the machine and inspect the filter areaÊchecking that there is no oil leaking from the filter assembly. This is first to be done at 50 hours of operation, then yearly (500 hours) or when indicated by restriction indicator.

# **GREASING CUTTER SHAFT-FLAIL MOWERS**

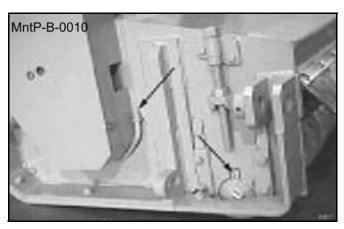
Locate grease zerks on each end of cutter shaft(s), these are located on the bearing cover. Normal conditions require one or two pumps in each bearing, using Lithium-Complex Extreme Pressure grease confirming to NLGI2-ISO 320 specifications. This is to be done with a standard grease gun daily or at 8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



MAINTENANCE

### **GREASING GROUND ROLLER SHAFT-FLAIL**

Locate grease zerks on eack end of roller tube at lower end 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 do ne with a standard grease gun daily or at 8 hour intervals. CAUTION: Over greasing may cause premature seal failure.

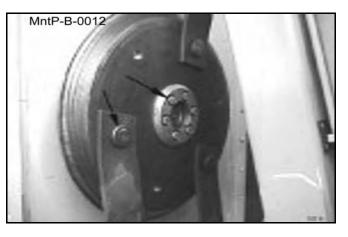


# TIGHTENING KNIFE BOLTS AND DISK BOLTS:

After every 8 hours of operation or daily, the Knife Bolts and Disk Bolts should be tightened as follows:

Knife mounting bolts torque to 800 oiled ft. lbs.

Disk mounting bolts (6ea.) torque to 204 dry or 180 oiled ft. lbs.



Maintenance Section 4-12

### **GREASING POINTS ON BOOM AND PIVOT**

Locate grease zerks on deck pivot assembly, on the deck end of the boom, and 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.



# **GREASING SPINDLE**

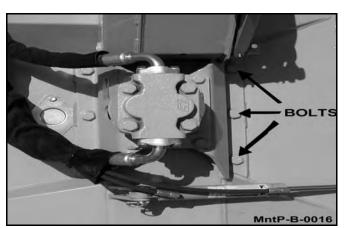
Locate grease fitting on inside of deck hou sing. Inject Tiger Spindle Lubricant, part number 06540000 into s pindle housing. Fill with lubricant until lubricant weeps out of to p spindle seal. Lubricate spindle weekly or every 40 hours of use.



Maintenance Section 4-13

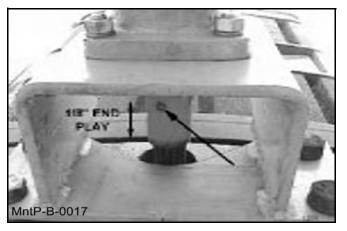
### **TIGHTENING SPINDLE BOLTS**

The spindle mounting bolts should be checked and retorqued daily or every 8 hours of service. Torque the (6) bolts shown below to 357 dry or 315 ft. lbs. lubricated.



### **GREASING PUMP DRIVESHAFT COUPLER**

With engine stopped, ensure driveshaft 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• @eec adapter. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications into coupler until grease begins to protrude from ends. Grease daily or every 8 hours. Do not over grease.



Maintenance Section 4-14

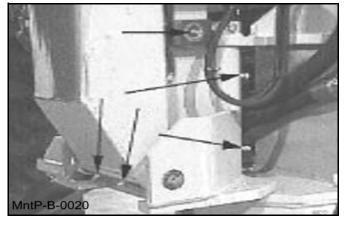
# **DRIVE SHAFT YOKE, U-JOINT STUB SHAFT**

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



# **GREASING THE BOOM SWIVEL**

Locate the zerks on the main swivel boss (if applicable), main boom pivot boss (if ap plicable) and on both ends of the boom swivel cyl inder. Inject Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specification until grease begins to protrude from ends.



Maintenance Section 4-15

MAINTENANCE

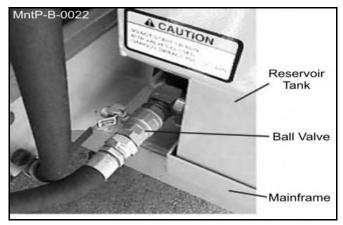
### **GREASING BOOM CYLINDER(S) PIVOT POINTS**

Locate the zerk on the butt end tang of cylinder and on rod end tang. Inject Lithium-Complex Extreme Pressure grease confirming 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 RE-STARTED OR PUMP IS COU PLED TO MOTOR OR PTO! Failure to do so will result in component failure!

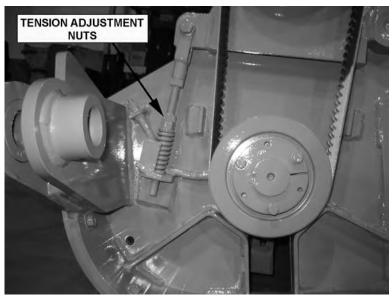


Maintenance Section 4-16

### **BELT TENSION ADJUSTMENT**

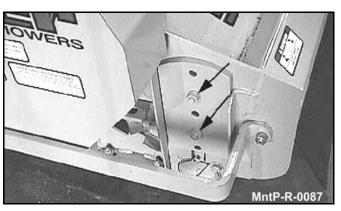
Locate the tensioning rod for the flail. Loosen the top tension adjustment nut. To tighten the belt, turn the bottom tension nut to compress the spring. To loosen the belt tension, turn the tension nut up to relax the spring. After adjustment, test the belt tension.

The tension should be 207Lbf or 106 freq cyl/sec. If the tension is as desired, turn the top tension nut down to lock the bottom tension nut into place.



# ADJUSTING RSS FLAIL CUT HEIGHT

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



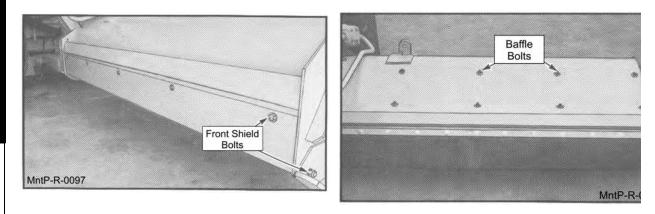
MAINTENANCE

Maintenance Section 4-17

### **REVERSING MOWER ROTATION OF RSS FLAIL MOWERS**

To reverse the rotation of the Rear Side Stow flail, you need to switch the pressure and return motor hoses at the brake valve. Make sure the tractor is shut off and the ball valve is closed. Relieve the hydraulic pressure in the system first before removing any hoses. After switching the hoses, make sure you open the ball valve or serious damage can be done to the hydraulic pump.

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



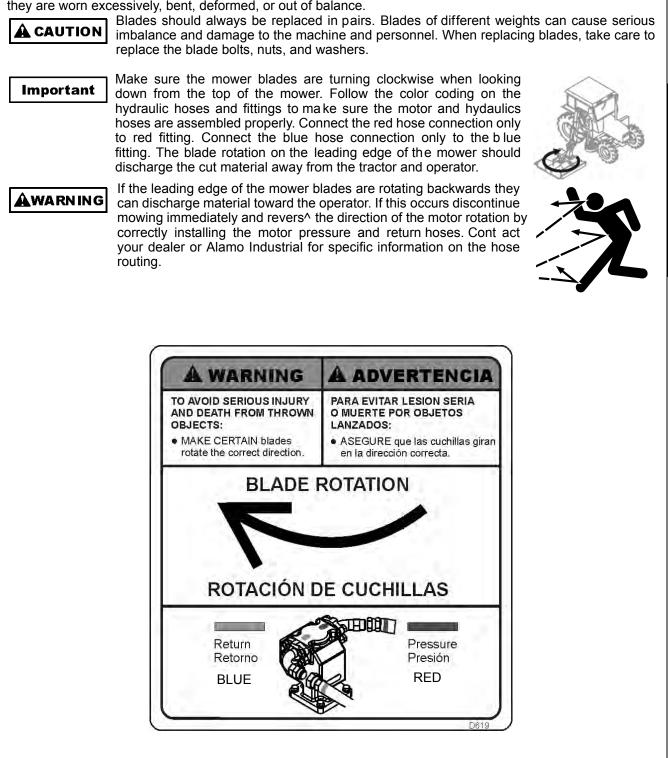
RSS

Maintenance Section 4-18

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### Blades

Check the Blades for cracks and wear and Blade Bolts for tightness, daily. Blades should be replaced when they are worn excessively, bent, deformed, or out of balance.



### **ROTARY KNIFE REPLACEMENT**

- 1. Be sure you have a complete matching set of new knives for replacement.
- 2. Remove knives and inspect holes for damage. Also watch for cracks in the disk (if applicable) around the holes.
- 3. Lube threads with anti-seize. Install bolts through knife and disk from bottom side of disk/blade bar. Install new self-locking nuts and torque them to 800 ft. lbs.
- 4. The knives should swing freely to absorb shocks from impact when striking objects.

WHEN CUTTING HEAVY BRUSH, KNIFE BOLTS SHOULD BE INSPECTED HOURLY AND RETORQUED TO 1070 DRY OR 800 OILED FT. LBS.

# **REPLACEMENT OF ROTARY DISK**

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

- 1. The bolts that attach the disk to the spindle must be grade 8. These 5/8 inch bolts are to be torqued to 204 dry or 184 oiled ft. lbs.
- 2. A thread locking agent may be applied to threads of all mounting bolts before they are installed.
- 3. Disks must be inspected daily for hairline cracks between spindle mounting bolts or around the knife mounting bolts. These cracks indicate metal fatigue caused by severe abuse. If cracks are present the disk must be replaced.
- 4. Inspect the disk mounting bolts daily when checking tightness of knife mounting bolts. If a disk mounting bolt is loose, it must be removed, threads cleaned, fresh thread locking agent applied, and tightened to proper torque value.
- 5. If a knife mounting bolt is loose, the self locking nut must be replaced as a safety precaution. Lubricate threads with an ti-seize. Install bolts through knife and disk/blade bar from bottom side. Install self locking nuts and torque them to 800 ft. lbs.

Maintenance Section 4-20

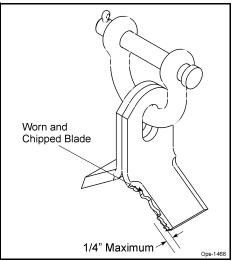
#### Flail Blades Inspection

**ADANGER** Inspect the Blades daily for ab normal wear. REPLACE ALL BLADES on the carrier IMMEDIATELY if any blades have:

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

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

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



Always replace blades in sets

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

Important

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



Never attempt to sharpen blades. OPS-U-0044

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RSS

Maintenance Section 4-21

#### Blade Pins and D-Ring Inspection

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

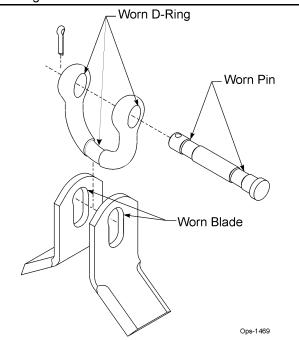
A DANGER

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

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

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

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



#### Important

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

MAINTENANCE

# **BOOM FLAIL KNIFE REPLACEMENT**

- 1. If knives are damaged or badly worn, they will need to be replaced as a set. Replacing a single knife can cause severe vibration and possible damage to the mower.
- 2. Assemble knives, clevis, bolts and nuts as shown in part section of manual.
- 3. Install locking hex nut so that the flat face of nut is towards the knife.
- 4. Apply loctite "271" or equivalent to threads.
- 5. Torque nut to 35 FT. LBS. Knife must swing freely.

#### AWARNING

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

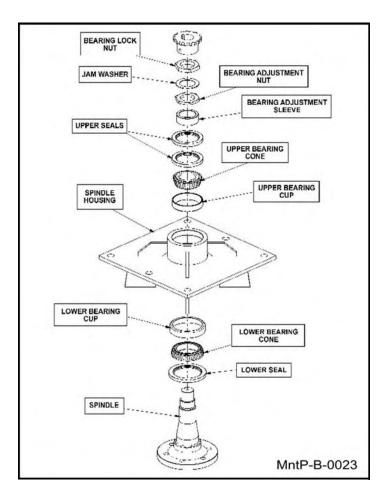
**A**WARN IN G

Knives should not be welded on for any reason.

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### THE SPINDLE ASSEMBLY

See the diagram below for identification of spindle parts, while servicing.



MAINTENANCE

### BEARING INSTALLATION

- 1. Press upper bearing cup in to the spindle housing.
- 2 Turn the spindle housing over and press in the lower bearing cup.
- 3. Place the lower bearing cone in the bearing cup. Next press t he seal into the s pindle housing. The inner lip of the seal must be DOWN, towards the bearing, so lubricant is sealed inside the housing.
- 4. Install the spindle in the housing. Lightly press the spindle to seat the cone onto the spindle.
- 5. Support the bottom of the spindle and press the upper bearing cone and bearing adjustment sleeve onto the spindle.
- 6. NOTE: The spindle housing must turn freely when seating the bearing cone and sleeve.
- 7. Press the two upper seals into the spindle housing. The inner lip of the seals must be UP, away from the bearing, so excess lubricant can escape.
- Install the bearing adjustment nut (thin nut) so there is 1-1/6" clearance between the nut and the 8. sleeve. Install the jam washer, placing the tab into the key-way. Install the bearing lock nut (thin nut) and hand tighten against jam washer and adjustment nut. See the following section for bearing adjustment.
- Position the spindle housing horizontally with the drain hole oriented "up". Grease through the zerk 9. with Tiger Spindle Lubricant (part number 06540000) until the grease purges from the drain hole.
- 10. Install the plug into the drain hole.

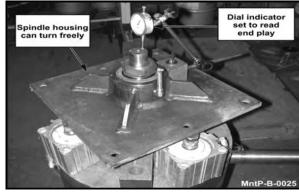
### **BEARING ADJUSTMENT**

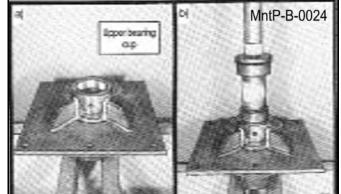
- 1. Clamp the bottom end of the spindle securely in a v ise so the spindle housing turns freely.
- 2. Position a magnetic base dial indicator on the outer diameter of the spindle housing. Locate the end of the dial indicator against the flat end of the spindle shaft. The dial indicator will now measure ac curately bearing end play.
- 3. Tighten the bearing adjustment nut until there is .012 inch mov ement when the spindle housing is pried upward away from the vise laws.
  - When there is .012 inch free play between the spindle and housing, install the bearing lock nut (thick nut). Hold the adjusting nut securely and tighten the lock nut to 300 ft. lbs. of torque.
- 5. After the lock nut is tightened, there must be .001 inch to .003 inch of free play when lightly prying up on the spindle housing.

If the end play is correct, .001 inch to .003 inch, bend tabs up on jam washer to prevent the lock nut from loosenina.

If the end play is NOT correct, loosen the lock nut and turn the adjustment nut as required and re-tighten the lock nut. Repeat first part of step 5.

4.





# **Boom Cylinder Removal and Replacement Instructions**

- 1. Clear the area of all personnel before lowering the boom mower head.
- 2. From the tractor seat with your seat belt fastened around you, |ower the boom mower head to the ground. Extend the boom to the furthest reach and lower the mower head flat on the ground. DO NOT attempt to replace the cylinders with the boom in the raised or transport position.
- 3. Shut off the tractor, engage the parking brake, place the tractor transmission in the park position, and remove the key before dismounting.
- 4. Allow the system to cool to room temperature before removing any hydraulic components
- 5. Wear afety glasses and impenetrable gloves when working with hydraulic hoses and fittings.
- 6. Release all oil pressure from the hydraulic circuit by manually stroking each valve section with the tractor engine off. Utilize the Manual Override function if the unit is equipped with an electric over hydraulic valve.
- 7. Utilize blocks, jack stands or a suitable over head hoist to support the weight of the boom section and remove pressure form the cylinder mounting pins.
- 8. Check to see that the cylinder to be replaced is not under pressure by moving the cylinder pins by hand. The pins should be loose and should slide f<sup>1</sup>[ m the pin bore easily. If the pins are tight and cannot be moved, the cylinder may be under pressure. Make sure the boom components are properly supported and that the pressure is relived from the circuit.
- 9. Cylinder assemblies are heavy and can fall when the pins are removed. Support the hydraulic cylinder with a suitable hoist or jack.
- 10. Slowly loosen the hydraulic connections to the cylinder. Carefully unscrew hose fitting and allow any remaining pressure to bleed off. Use Extreme Care. Oil must be cool, and the technician should stand to the side to prevent exposure to any hydraulic oil. Always consult the Material Safety Data Sheet and wear any required Personal Protective Equipment. A catch pan may be required to retain any spilled oil.
- 11. Cap both ends of the fitting with suitably sized metal caps.
- 12. Remove the cylinder pins starting with the ROD end cylinder pin. Make sure the cylinder is properly supported, and remove the base end cylinder pin. The cylinder may be heavy, use proper lifting techniques to lift and handle the cylinder. If needed, get assistance from another person to safely lift the cylinder from the machine.
- 13. Measure the distance between the cylinder pin holes and extend the new cylinder the correct length prior to attempting an installation.
- 14. Install the new cylinder in place and install both cylinder pins and retaining hardware.
- 15. Remove the metal caps, and re-install the hydraulic hoses.
- 16. Check the hydraulic reservoir of the boom mower to ensure there is sufficient oil. Follow the manufactures recommendations for proper oil type and filtering techniques and requirements to add oil to the system.
- 17. Clear the area of all persons prior to starting the tractor.
- 18. Consult the Operator's Manual for instruction in regard to the proper operating procedure.
- 19. From the tractor seat, with the seat belt fastened, operate the boom to ensure proper operation of the boom function.
- 20. From the tractor seat, with the seat belt fastened, operate the boom controls to fully extend and retract the new cylinder several times to purge any trapped air from the system.
- 21. From the tractor seat, with the seat belt fastened, look for signs of and oil leak. If an oil leak is observed, shut the tractor down and follow the steps to remove pressure from the hydraulic circuit. Identify the source of the leak and resolve the issue.
- 22. Upon completion of the required repairs, return to Step # 16 to recheck the cylinder for proper operation.

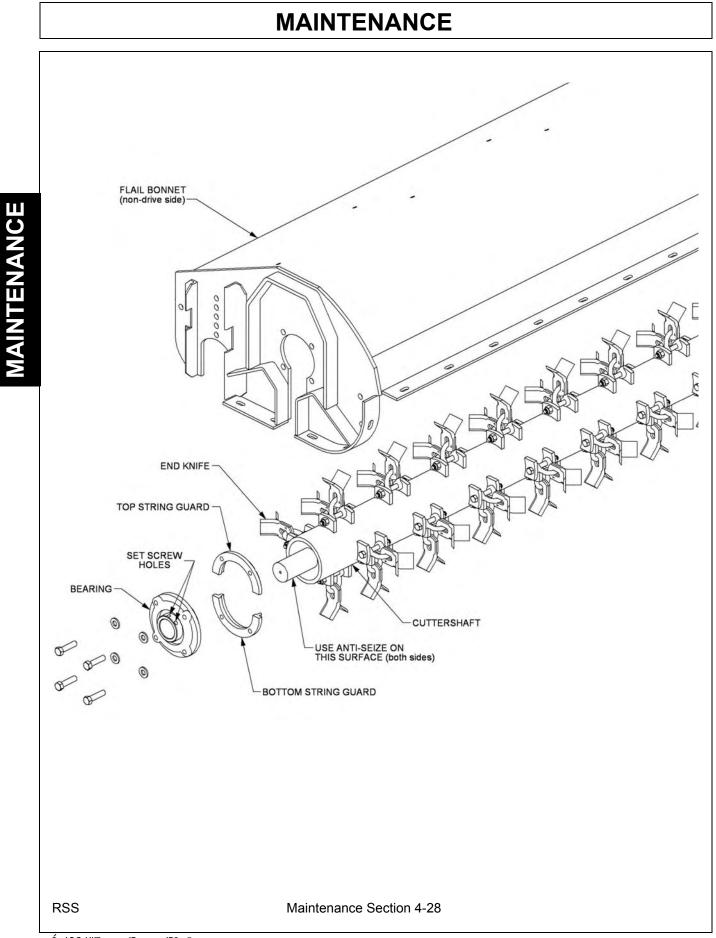
# **CUTTERSHAFT BEARING REPLACEMENT**

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

### See illustration on next page

Maintenance Section 4-27

Í 4234'Cnco q'I tqwr 'Kpe0



Í 4234'Crco q'I tqwr 'Kpe0

# DAILY MAINTENANCE SCHEDUILE

DAILT MAINTENANCE SCHEDOLE
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.
Belts: Check/Tighten/Replace belts as needed.
Main Frame/Deck: Unless otherwise specified retorqued 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: Grease as instructed in the de tailed 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.
RSS Maintenance Section 4-29



RSS

Maintenance Section 4-30

Í 4234'Cnco q'I tqwr 'Kpe0

# ...>D\*III8 REAR STOW SIDE MOWER

# PARTS SECTION

# PART NAME INDEX

RQN[ ECTDQPCVG'UCHGV[ 'Y IPFQY()) 

#### PARTS ORDERING GUIDE

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

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

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

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

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

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

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

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



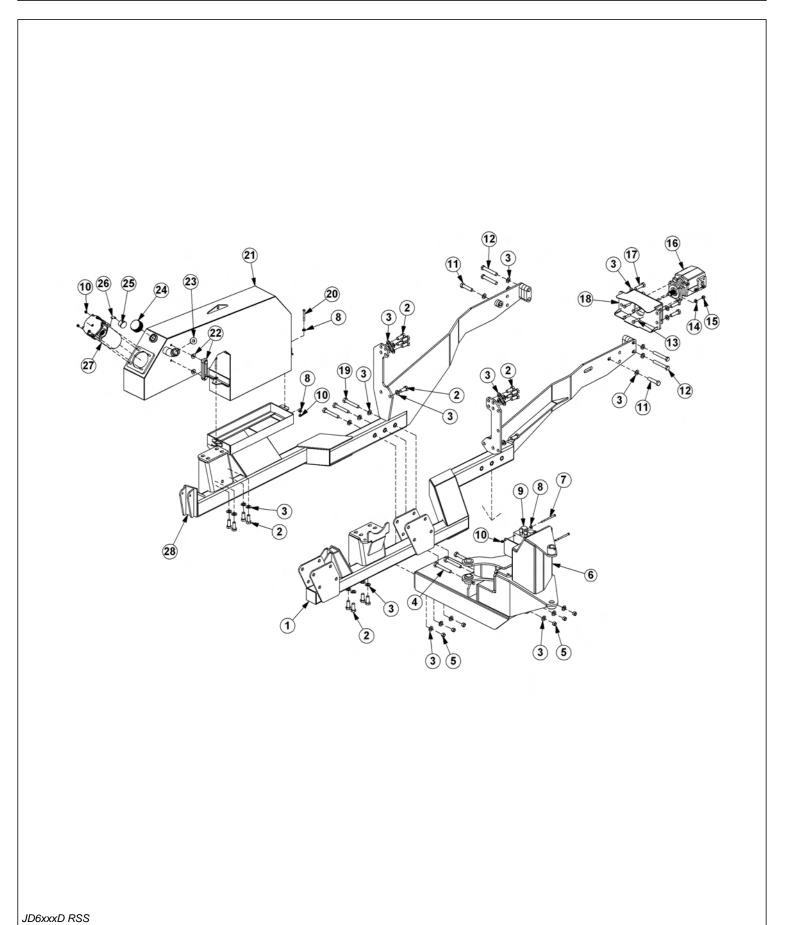
For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

#### **Tiger Corporation**

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

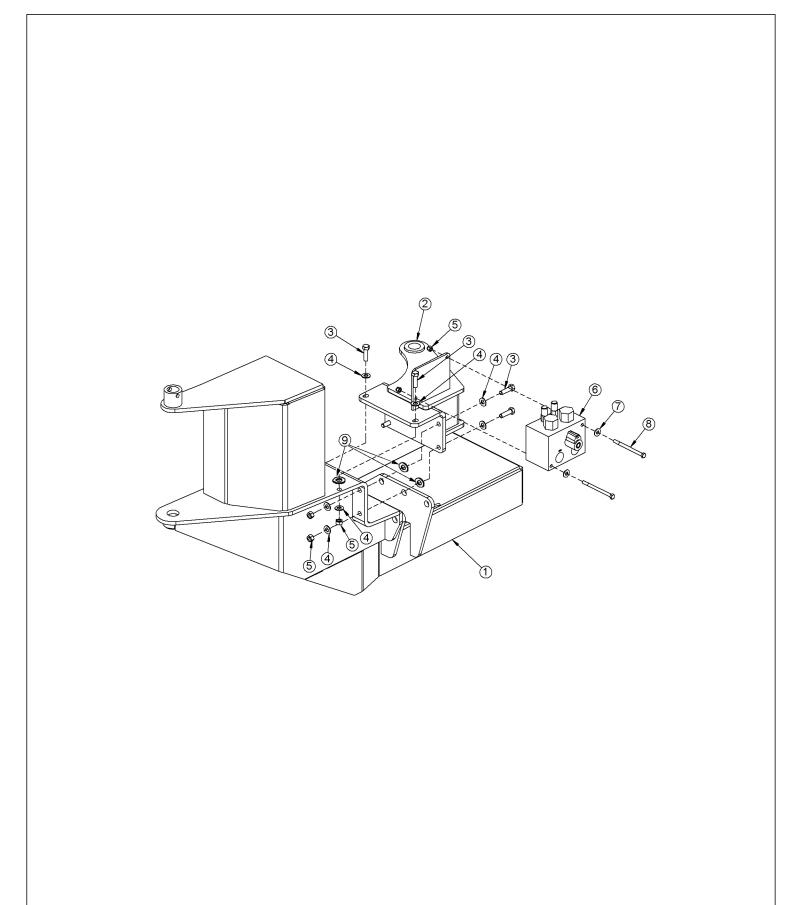
#### TRACTOR MOUNT KIT



#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
3	28522459	3	CZNG'DTCEG.TJ
4	53953	42	ECRUETGY .420 O 'Z '720 O .407R
5	55::2	64	HNCVY CUJ GT.516\$.UCG
6	8V452;	5	ECRUETGY .516\$'Z '7/314\$.PE
7	43: 47	8	J GZ 'P WV.516\$.P E
8	28522463	3	O C I₽ 'HTCO G
9	43866	4	ECRUETGY .51: \$'Z '7\$.PE
:	44238	8	HNCVY CUJ GT.51: \$
;	287322: 5	3	DTCMG"XCNXG
32	43849	:	P[NQEM'PWV.51: \$.PE
33	5292:	4	ECRUETGY .420 O 'Z ''; 20 O .407R
34	28752764	6	ECRUETGY .420 O 'Z '3520 O .407R
35	43955	6	ECRUETGY .314\$'Z '4\$.PE
36	28755226	6	HNCVY CUJ GT.314\$.UCG
37	43949	6	P[NQEMPWV.314\$.PE
38	45374	3	RWO R
39	47563	6	ECRUETGY .420 O 'Z '920 O .407R
3:	285: 2283	3	O Q WP V.RWO R
3;	43: 64	5	ECRUETGY .516\$'Z '7\$.PE
42	4385;	4	ECRUETGY .51: \$'Z '5/316\$.PE
43	289222; 3	3	J [ FTCWNKE"VCPMCUUGODN[
44	28727289	3	UKI J V'I CWI G
45	28727349	3	RNW .UCG'%42
46	28727299	3	DTGCVJ GT'ECR
47	8V286;	3	HKNVGT'I CWI G
48	VH6::::	3	UVTGGV'GNDQY .31: \$P RV
49	28727266	3	TGVWTP "HKNVGT
4:	28522457	3	CZNG'DTCEG.NJ

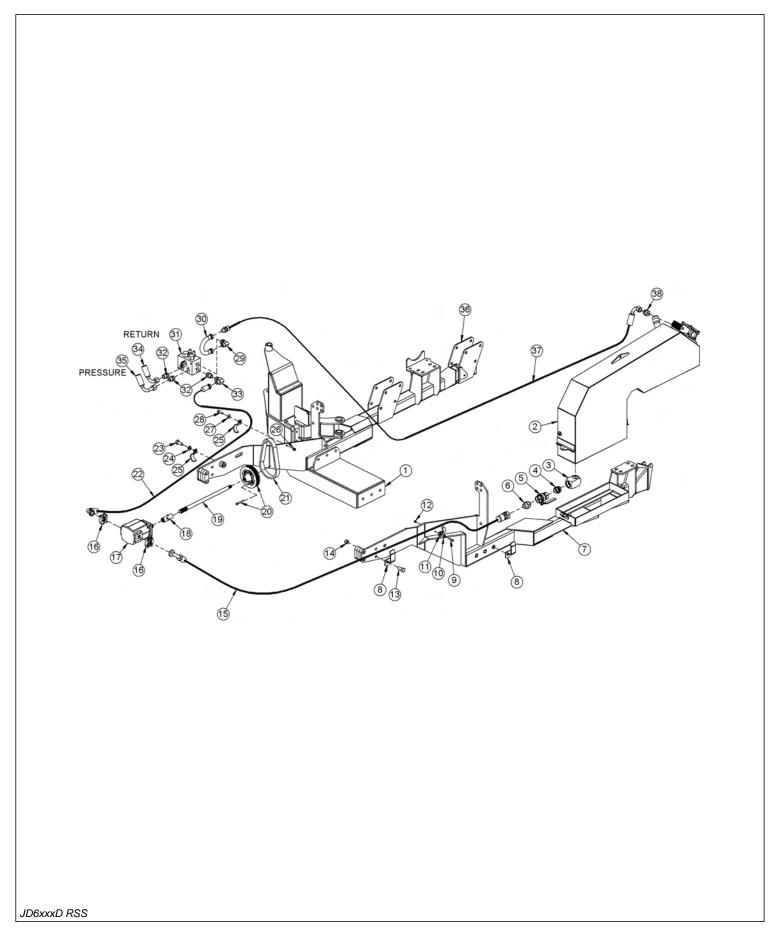
#### TRACTOR MOUNT KIT - CYLINDER TANG MOUNT



#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1		-	MAIN FRAME *REFER TO TRACTOR MOUNT KIT
2	06300242	1	CYLINDER TANG
3	6T1027	6	CAPSCREW,1/2" X 1-3/4",NC
4	06533004	12	FLATWASHER,1/2",SAE
5	21727	6	NYLOCK NUT,1/2",NC
6		-	BRAKE VALVE *REFER TO TRACTOR MOUNT KIT
7		-	FLATWASHER *REFER TO TRACTOR MOUNT KIT
8		-	CAPSCREW *REFER TO TRACTOR MOUNT KIT
9	27938	-	BUSHING, MACHINED (AS NEEDED)

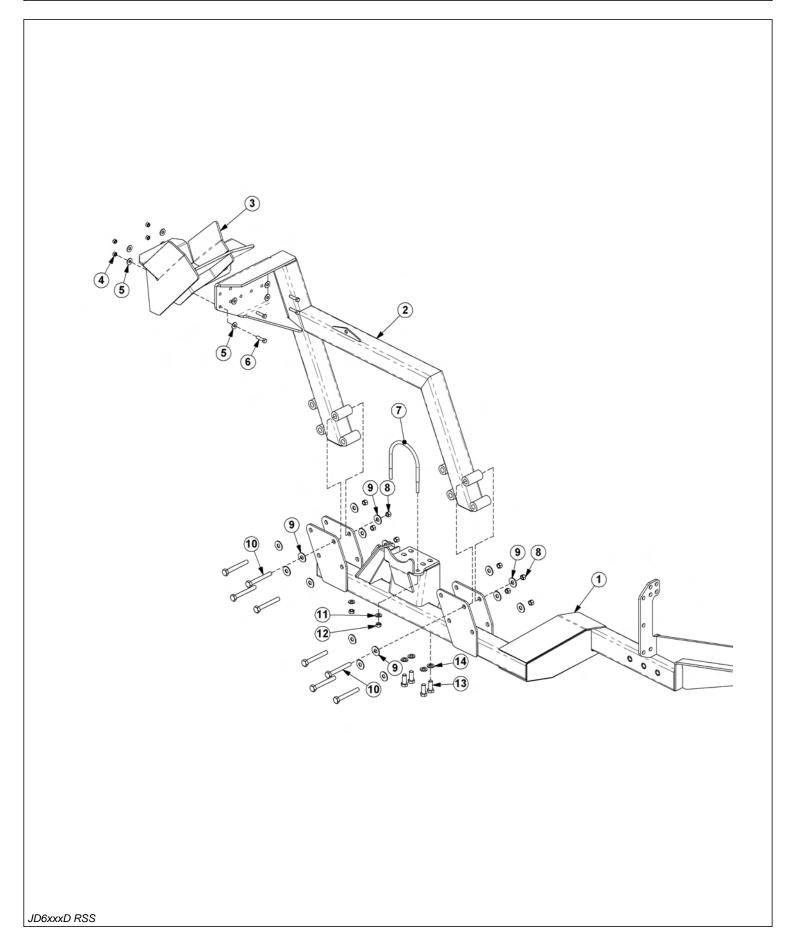
#### **TRACTOR MOUNT KIT - HYDRAULICS**



#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300241	1	MAIN FRAME
2	06700091	1	TANK, HYDRAULIC, WHEEL WELL
3	06503084	1	ELBOW,1-1/2"FOR X 1-1/2"FOR
4	06503083	1	ADAPTER,1-1/2"MOR X 1-1/2"MOR
5	34309	1	BALL VALVE,1-1/2" FOR
6	34710	1	ADAPTER,1-1/2"MOR X 1-1/2"MJ
7	06300235	1	AXLE BRACE,LH
8	32382	2	BRACKET,HOSE
9	21632	1	CAPSCREW,3/8" X 1-1/2",NC
10	22016	1	FLATWASHER,3/8"
11	06411136	1	BRACKET,HOSE
12	21627	1	NYLOCK NUT,3/8",NC
13	21832	1	CAPSCREW,3/4" X 2",NC
14	21827	1	NYLOCK NUT,3/4",NC
15	06500680	1	HOSE,1-1/2" X 107"
16	TF4852	2	KIT,FLANGE,#20
17	23152	1	PUMP
18	6T0375B	1	COUPLING
19	06420166	1	DRIVE SHAFT
20	DLV32899	1	JOHN DEERE PULLEY KIT
21	T208891	1	JOHN DEERE BELT
22	06500274	1	HOSE,1" X 74"
23	30708	1	CAPSCREW,20MM X 90MM,2.5P
24	33880	1	FLATWASHER,3/4"
25	TB3012	2	CLAMP,HOSE
26	21727	1	NYLOCK NUT,1/2",NC
27	22018	1	FLATWASHER,1/2"
28	21732	1	CAPSCREW,1/2" X 1-3/4"
29	34117	1	ELBOW,1"MOR X 1"MJ
30	06506012	1	PREFORMED TUBE
31	06510083	1	BRAKE VALVE
32	33555	3	ADAPTER,1"MOR X 1"MJ
33	33259	1	ELBOW,1"MOR X 1"FJX90
34	06500605	1	HOSE,1" X 65" (RETURN)
35	06500604	1	HOSE,1" X 67" (PRESSURE)
36	06300237	1	AXLE BRACE,RH
37	06500747	1	HOSE,1" X 115"
38	34064	1	ADAPTER,1-1/4"MOR X 1"MJ

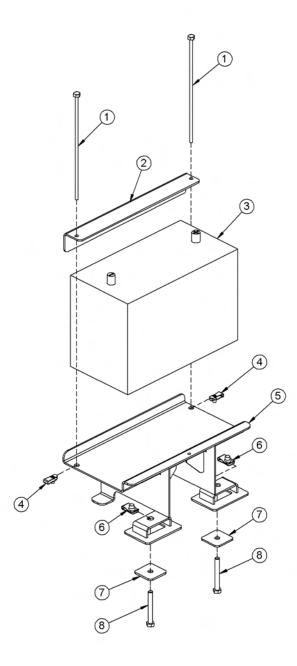
#### SINGLE COLUMN BOOMREST



#### Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300237	1	AXLE BRACE, SINGLE COLUMN
2	06310074	1	BOOMREST,SINGLE COLUMN
3	06310116	1	SADDLE
4	21725	4	HEX NUT,1/2",NC
5	06533004	8	FLATWASHER,1/2",SAE
6	21732	4	CAPSCREW,1/2" X 1-3/4",NC
7	06420127	1	U-BOLT,5/8" X 7-1/8"
8	21825	8	HEX NUT,3/4",NC
9	22021	16	FLATWASHER,3/4"
10	21843	8	CAPSCREW,3/4" X 6",NC
11	33764	2	FLATWASHER,5/8",SAE
12	6T2408	2	HEX NUT,5/8",NF
13	31731	4	CAPSCREW,20MM X 50MM,2.5P
14	33880	4	FLATWASHER,3/4",SAE

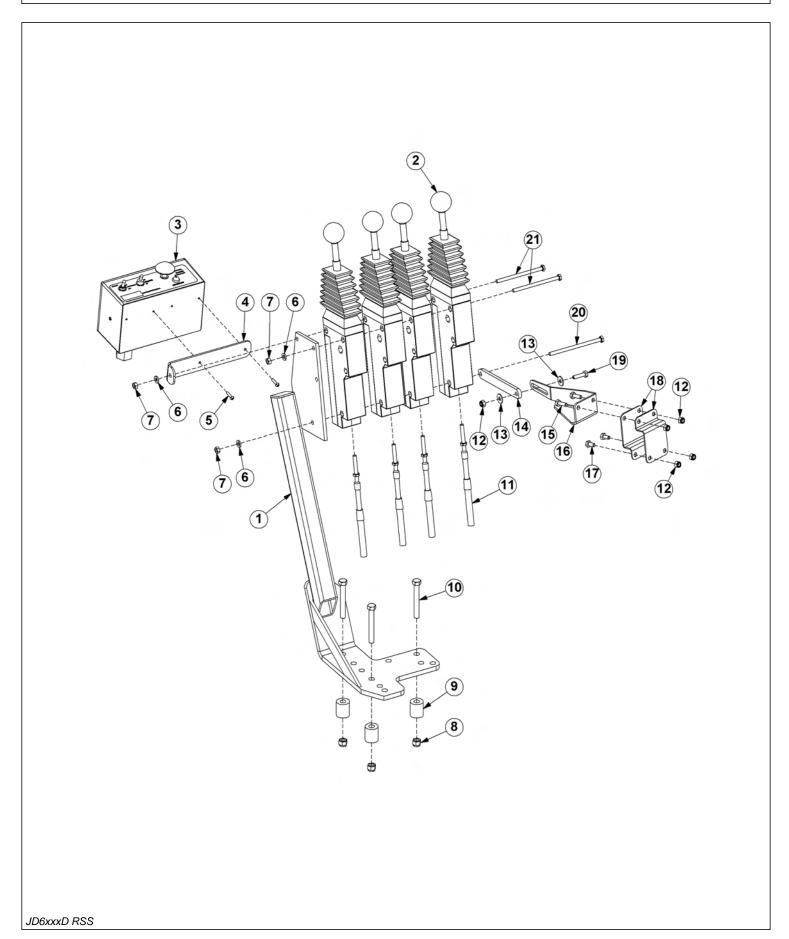
#### **BATTERY RELOCATION**



#### Continued...

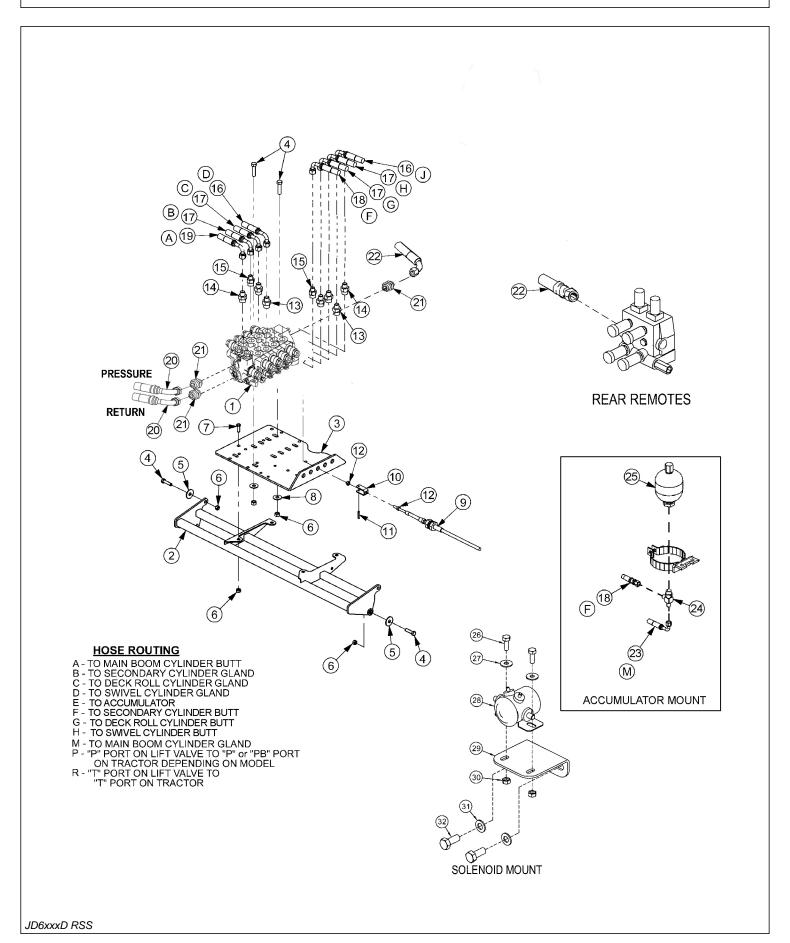
ITEM	PART NO.	QTY.	DESCRIPTION
1	28752456	2	CAPSCREW,1/4" X 10",NC
2	06411429	1	ANGLE
3		-	BATTERY *EXISTING PART
4	35176	2	NUT CLIP,1/4",NC
5	06370231	1	RELOCATION BRACKET
6	06537029	2	NUT CLIP,3/8",NC
7	064239: 6	2	SQUARE PLATE
8	21638	2	CAPSCREW,3/8" X 3",NC

#### **4 SPOOL CABLE CONTROL MOUNT**



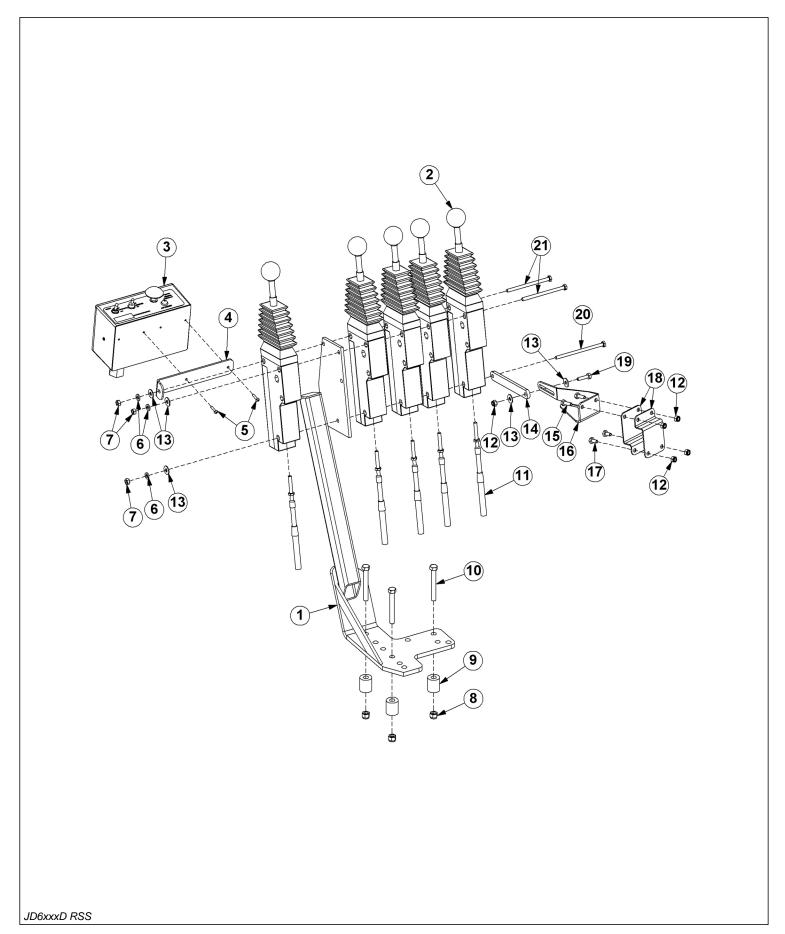
ITEM	PART NO.	QTY.	DESCRIPTION
1	23865B	1	BRKT,CTRL,CBL
2	6T1251	4	CBL CTRL BOX,180 DEG
3	06510100	1	SWITCH BOX,BOOM
4	34496	1	BRKT,SWITCH BOX
5	6T3951	2	SCREW, MACHINE, 8-32 X 1/2"
6	21986	3	LOCKWASHER,1/4"
7	21525	3	HEX NUT,1/4",NC
8	21627	3	NYLOCK NUT,3/8",NC
9	27082B	3	SPACER
10	21636	3	CAPSCREW,3/8" X 2-1/2",NC
11	06505100	4	CBL,CNTRL,108"
12	21527	5	NYLOCK NUT,1/4",NC
13	22014	2	FLATWASHER,1/4"
14	06402045	1	SUPPORT,STAND
15	21529	2	CAPSCREW,1/4" X 3/4",NC
16	06411087	1	BRKT,STABILIZER
17	21528	2	CAPSCREW,1/4" X 1/2",NC
18	06411086	2	BRKT,MNT
19	21530	1	CAPSCREW,1/4" X 1",NC
20	21547	1	CAPSCREW,1/4" X 8",NC
21	21546	2	CAPSCREW,1/4" X 7",NC

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



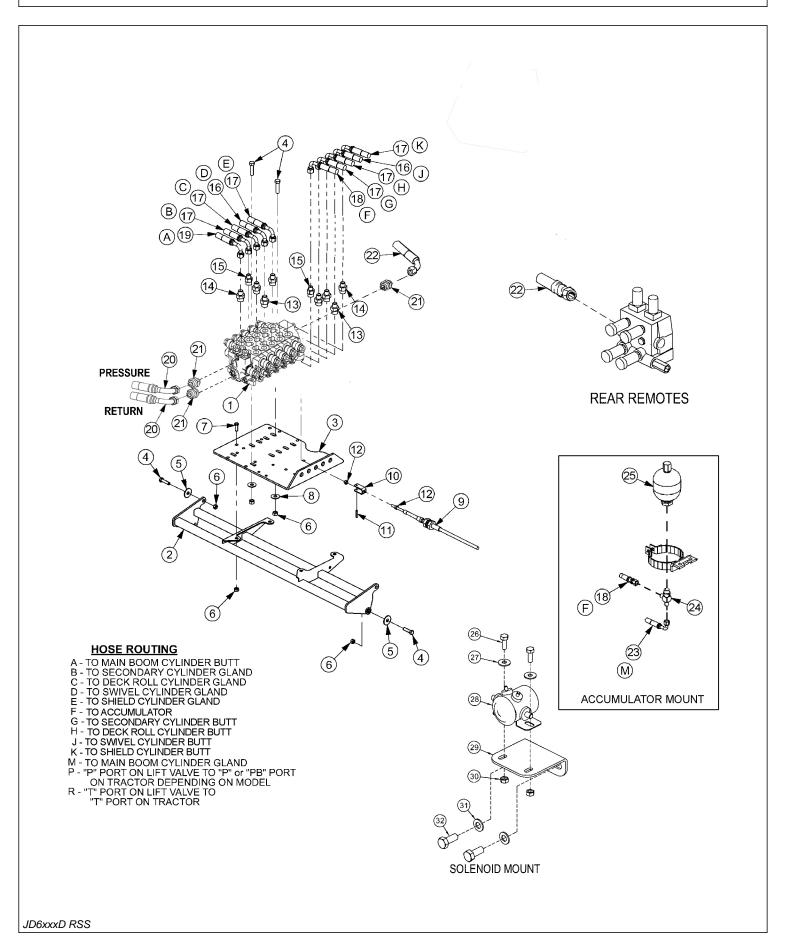
ITEM	PART NO.	QTY.	DESCRIPTION
1	06502117	1	VALVE,5SP,OC
2	06340033	1	VALVE MNT
3	34622	1	PLATE, VALVE, REAR MNT
4	21632	8	CAPSCREW,3/8" X 1-1/2",NC
5	6T2615	4	WASHER, FENDER, 3/8"
6	21627	12	NYLOCK NUT,3/8",NC
7	21630	4	CAPSCREW,3/8" X 1",NC
8	22016	4	FLATWASHER,3/8"
9	06505100	5	CBL,CNTRL,108"
10	6T4411	5	CLEVIS,CBL CTRL,3/16"
11	6T3017	5	ROLLPIN,3/16" X 1"
12	21500	10	HEX NUT,1/4",NF
13	34396	2	ADAPTER,.06"RSTRCTR,1/2"MOR X 3/8"MJ
14	33271	4	ADAPTER,1/2"MOR X 3/8"MJ
15	06502036	2	VLV,CHECK,W/.06"MOR X 1/2"MOR X 3/8"
16	33364	2	HOSE,1/4" X 120"
17	34358	4	HOSE,1/4" X 196"
18	33562	1	HOSE,1/4" X 130"
19	06500164	1	HOSE,1/4" X 216"
20	06500782	2	HOSE, 1-1/2" X 70"
21	06503023	3	ADAPTER, 3/4" ORB X 3/4" MJ
22	06500783	1	HOSE, 1-1/2" X 30"
23	33745	1	HOSE,1/4" X 100"
24	06503029	-	TEE,RUN,1/2"MOR X 3/8"MJ X 3/8"MJ
25	24300	1	ACCUMULATOR
26	21529	2	CAPSCREW,1/4" X 3/4",NC
27	22014	2	FLATWASHER,1/4"
28	6T3927	1	CONTINUOUS DUTY SOLENOID
29	06411085	1	BRKT,MNT,SOLENOID
30	21527	2	NYLOCK NUT,1/4",NC
31	32724	2	FLATWASHER,10MM
32	27513	2	CAPSCREW,10MM X 35MM,1.5P
33	33383	1	ELBOW,5/8"MOR X 1/2"MJ X 90°
34	33293	1	ELBOW,LONG,1/2"MOR X 1/2"MJ 90°
35	32678	1	ADAPTER,5/8"MOR X 1/2"FOR

# **5 SPOOL CABLE CONTROL MOUNT**



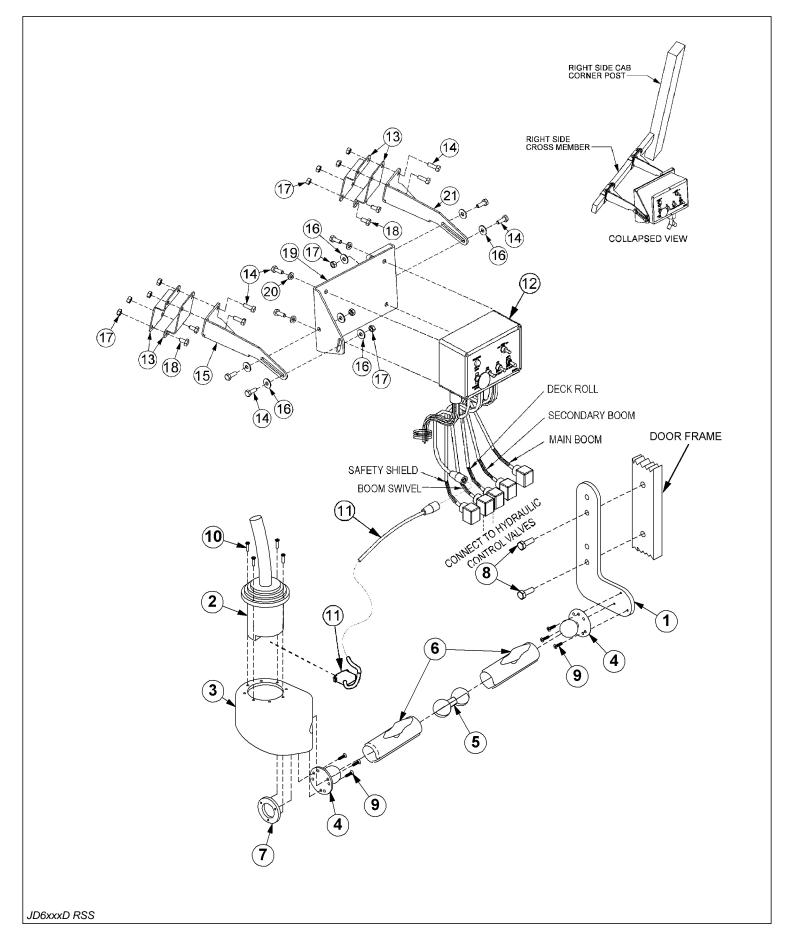
ITEM	PART NO.	QTY.	DESCRIPTION
1	23865B	1	BRKT,CTRL,CBL
2	6T1251	5	CBL CTRL BOX,180 DEG
3	06510100	1	SWITCH BOX,BOOM
4	34496	1	BRKT,SWITCH BOX
5	6T3951	2	SCREW, MACHINE, 8-32 X 1/2"
6	21986	3	LOCKWASHER,1/4"
7	21525	3	HEX NUT,1/4",NC
8	21627	3	NYLOCK NUT,3/8",NC
9	27082B	3	SPACER
10	21636	3	CAPSCREW,3/8" X 2-1/2",NC
11	06505100	5	CBL,CNTRL,108"
12	21527	5	NYLOCK NUT,1/4",NC
13	22014	5	FLATWASHER,1/4"
14	06402045	1	SUPPORT,STAND
15	21529	2	CAPSCREW,1/4" X 3/4",NC
16	06411087	1	BRKT,STABILIZER
17	21528	2	CAPSCREW,1/4" X 1/2",NC
18	06411086	2	BRKT,MNT
19	21530	1	CAPSCREW,1/4" X 1",NC
20	34332	1	CAPSCREW,1/4" X 9-1/4",NC
21	21548	2	CAPSCREW,1/4" X 9",NC

# **CABLE (MANUAL) LIFT VALVE - 5 SPOOL**



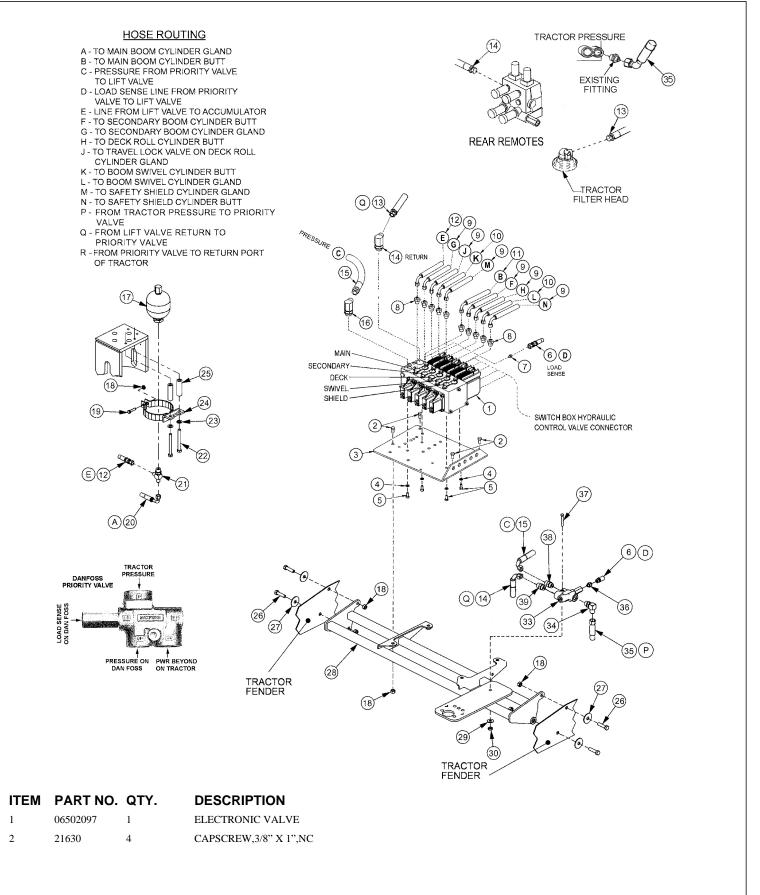
ITEM	PART NO.	QTY.	DESCRIPTION
1	06502116	1	VALVE,5SP,OC
2	06340033	1	VALVE MNT
3	34622	1	PLATE, VALVE, REAR MNT
4	21632	8	CAPSCREW,3/8" X 1-1/2",NC
5	6T2615	4	WASHER, FENDER, 3/8"
6	21627	12	NYLOCK NUT,3/8",NC
7	21630	4	CAPSCREW,3/8" X 1",NC
8	22016	4	FLATWASHER,3/8"
9	06505100	5	CBL,CNTRL,108"
10	6T4411	5	CLEVIS,CBL CTRL,3/16"
11	6T3017	5	ROLLPIN,3/16" X 1"
12	21500	10	HEX NUT,1/4",NF
13	34396	2	ADAPTER,.06"RSTRCTR,1/2"MOR X 3/8"MJ
14	33271	6	ADAPTER,1/2"MOR X 3/8"MJ
15	06502036	2	VLV,CHECK,W/.06"MOR X 1/2"MOR X 3/8"
16	33364	2	HOSE,1/4" X 120"
17	34358	6	HOSE,1/4" X 196"
18	33562	1	HOSE,1/4" X 130"
19	06500164	1	HOSE,1/4" X 216"
20	06500782	2	HOSE, 1-1/2" X 70"
21	06503023	3	ADAPTER, 3/4" ORB X 3/4" MJ
22	06500783	1	HOSE, 1-1/2" X 30"
23	33745	1	HOSE,1/4" X 100"
24	06503029	-	TEE,RUN,1/2"MOR X 3/8"MJ X 3/8"MJ
25	24300	1	ACCUMULATOR
26	21529	2	CAPSCREW,1/4" X 3/4",NC
27	22014	2	FLATWASHER,1/4"
28	6T3927	1	CONTINUOUS DUTY SOLENOID
29	06411085	1	BRKT,MNT,SOLENOID
30	21527	2	NYLOCK NUT,1/4",NC
31	32724	2	FLATWASHER,10MM
32	27513	2	CAPSCREW,10MM X 35MM,1.5P
33	33383	1	ELBOW,5/8"MOR X 1/2"MJ X 90°
34	33293	1	ELBOW,LONG,1/2"MOR X 1/2"MJ 90°
35	32678	1	ADAPTER,5/8"MOR X 1/2"FOR

### JOYSTICK AND SWITCHBOX MOUNT



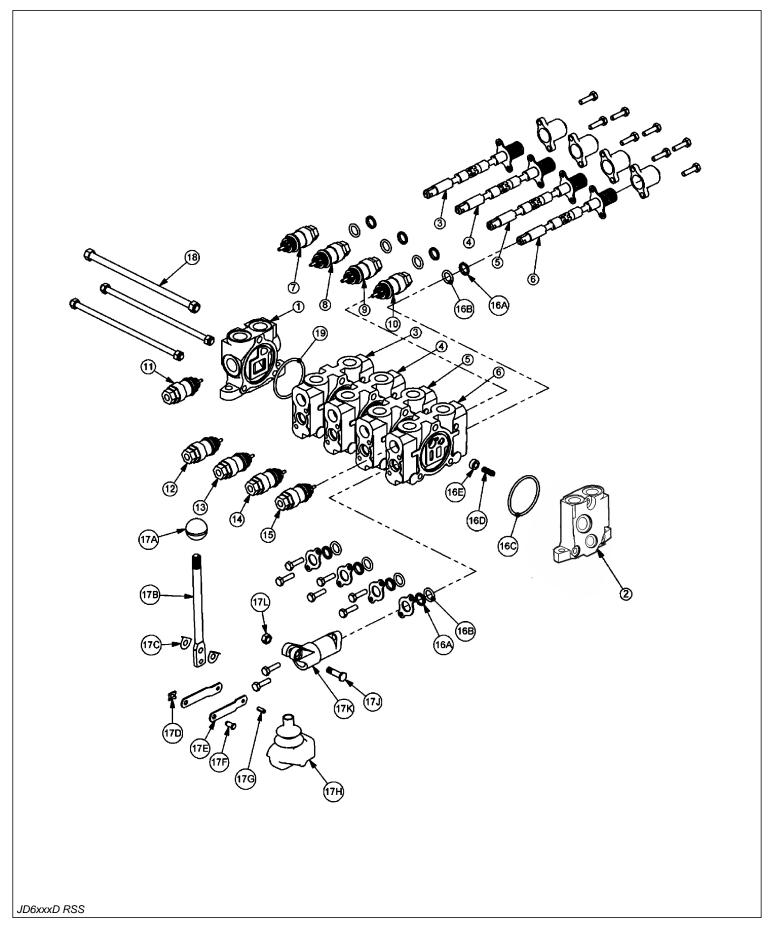
ITEM	PART NO.	QTY.	DESCRIPTION
1	06340031	1	MT,BRKT,JYSTK
2	33691	1	JOYSTICK
3	06770022	1	CAN, JOYSTICK
4	06520019	2	MOUNT,RAM BALL,1-1/2",FLANGE
5	06520290	1	MOUNT,RAM,BALL,DBL,1-1/2"
6	06520020	2	MOUNT,RAM,ARM,1-1/2" X 4-5/8",STD
7	06400882	1	RING,BOLT,MNT,JYSTK
8	23113	2	CAPSCREW,10MM X 30MM,1.5P
9	32990	6	SCREW, MACHINE, 10-32 X 1/2", RD HD
10	32829	4	SCREW, MACHINE, 10-32 X 3/4", FLT HD
11	33693	1	CBL,EXT,4FT
12	06510196	1	SWITCH BOX,DF,BOOM
13	06411086	4	BRKT,MNT
14	21529	8	CAPSCREW,1/4" X 3/4",NC
15	06411087	1	BRKT,STABILIZING,LT
16	22014	8	FLATWASHER,1/4"
17	21527	12	NYLOCK NUT,1/4",NC
18	21528	4	CAPSCREW,1/4" X 1/2",NC
19	06411116	1	BRKT,MNT,SWITCH BOX
20	21986	4	LOCKWASHER,1/4"
21	06411378	1	BRKT,STABILIZING,RT

### ELECTRONIC PROPORTIONAL LIFT VALVE MOUNT



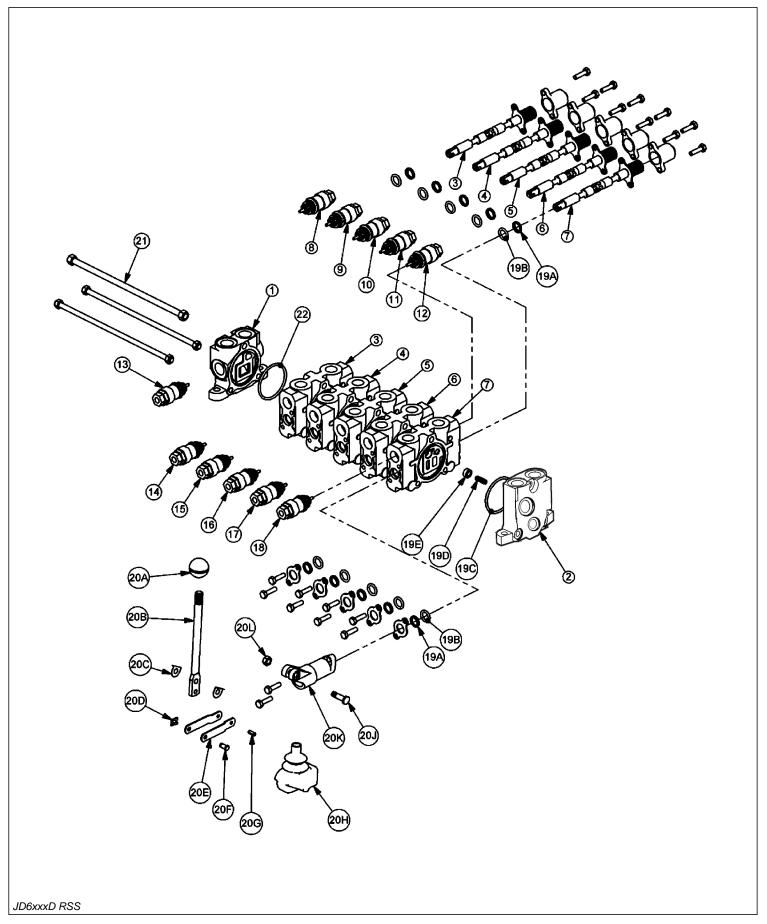
ITEM	PART NO.	QTY.	DESCRIPTION
3	34622	1	PLATE, VALVE, REAR MNT
4	21987	4	LOCKWASHER,5/16"
5	21579	4	CAPSCREW,5/16" X 3/4",NC
6	06500789	1	HOSE,3/8" X 60"
7	33392	1	ADAPTER,5/16"MB X 3/8"MJ
8	32807	10	ADAPTER,5/8"MB X 3/8"MJ
9	34358	6	HOSE,1/4" X 196"
10	33364	2	HOSE,1/4" X 120"
11	06500164	1	HOSE,1/4" X 216"
12	33562	1	HOSE,1/4" X 130"
13	06500788	1	HOSE,3/4" X 52"
14	06500786	1	HOSE, 3/4" X 52"
15	06500787	1	HOSE, 3/4" X 40"
16	33280	1	ELBOW,3/4"MJ X 3/4" MB ADJUSTABLE
17	24300	2	ACCUMULATOR
18	21627	9	NYLOCK NUT,3/8",NC
19		-	CAPSCREW *REFER TO BOOM MNT KIT PAGE
20	33745	1	HOSE,1/4" X 100"
21	06503029	1	TEE,RUN,1/2"MB X 3/8"MJ X 3/8"MJ
22		-	CAPSCREW *REFER TO BOOM MNT KIT PAGE
23		-	LOCKWASHER *REFER TO BOOM MNT KIT PAGE
24		-	BRKT *REFER TO BOOM MNT KIT PAGE
25		-	SPACER *REFER TO BOOM MNT KIT PAGE
26	21632	4	CAPSCREW,3/8" X 1-1/2",NC
27	6T2615	4	WASHER, FENDER, 3/8"
28	06340033	1	VALVE MOUNT
29	22015	1	FLATWASHER,5/16"
30	21577	1	NYLOCK NUT,5/16",NC
31	06503035	1	TEE,5/8"MJ X 5/8"FJX X 5/8"MJ
32	06500479	1	HOSE,5/8" X 30"
33	06502102	1	PRIORITY VALVE
34	06503033	1	ELBOW,5/8"MB X 5/8"MJ
35	06500785	1	HOSE,5/8" X 46"
36	06503057	1	ADAPTER,1/4"MB X 3/8"MJ
37	21585	1	CAPSCREW,5/16" X 2-1/2"
38	06503006	1	ADAPTER, 1/2" MORB X 3/4" MJ
39	06503188	1	ADAPTER,5/8"MB X 3/4" MJ

# CABLE (MANUAL) LIFT VALVE BREAKDOWN - 06502132



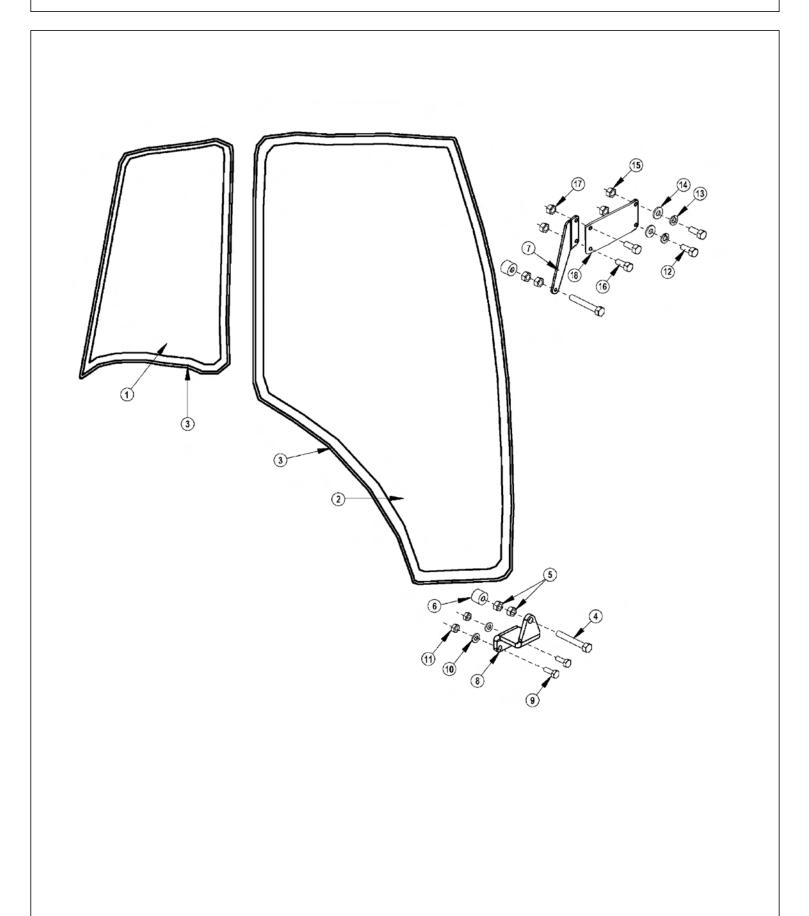
	ITEM	PART NO.	QTY.	DESCRIPTION
	1	06502149	1	INLET END COVER
	2	06502150	1	END COVER, OPEN CENTER
	3	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
	4	TB1017N	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
	5	TF3009	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
	6	TB1017Q	1	VALVE SECTION (DOUBLE ACTING, SPRING METERED)
	7	06503067	1	#10 O-RING PLUG
	8	TB1017K	1	RELIEF VALVE, 2150 PSI
	9	TB1017J	1	RELIEF VALVE, 1800 PSI
	10	TB1017H	1	RELIEF VALVE, 1750 PSI
	11	6T4209	1	#10 O-RING PLUG
	12	06502003	1	RELIEF VALVE, 2500 PSI
	13	TB1017K	1	RELIEF VALVE, 2150 PSI
	14	TB1017F	1	RELIEF VALVE, 1500 PSI
	15	TB1017H	1	RELIEF VALVE, 1750 PSI
	16	TB1017A	4	VALVE SEAL KIT (FOR ONE SECTION)
	16A		2	WIPER
	16B		2	O-RING SMALL
	16C		1	O-RING LARGE
	16D		1	SPRING
	16E		1	PUCKET
	17	TB1017L	4	LEVER KIT (FOR ONE SECTION)
	17A		1	LEVER KNOB
	17B		1	LEVER
	17C		2	LEVER WASHER
	17D		1	LEVER CLIP
	17E		2	LINKAGE
	17F		1	LEVER PIN
	17G		1	ROLL PIN
	17H		1	LEVER BOOT
	17J		1	LEVER BOLT
	17K		1	LEVER DUST COVER
	17L		1	LEVER NUT
	18	TB1017U	1	TIE ROD KIT
	19	24214	1	O-RING, LARGE
- 1				

# CABLE (MANUAL) LIFT VALVE BREAKDOWN - 06502133

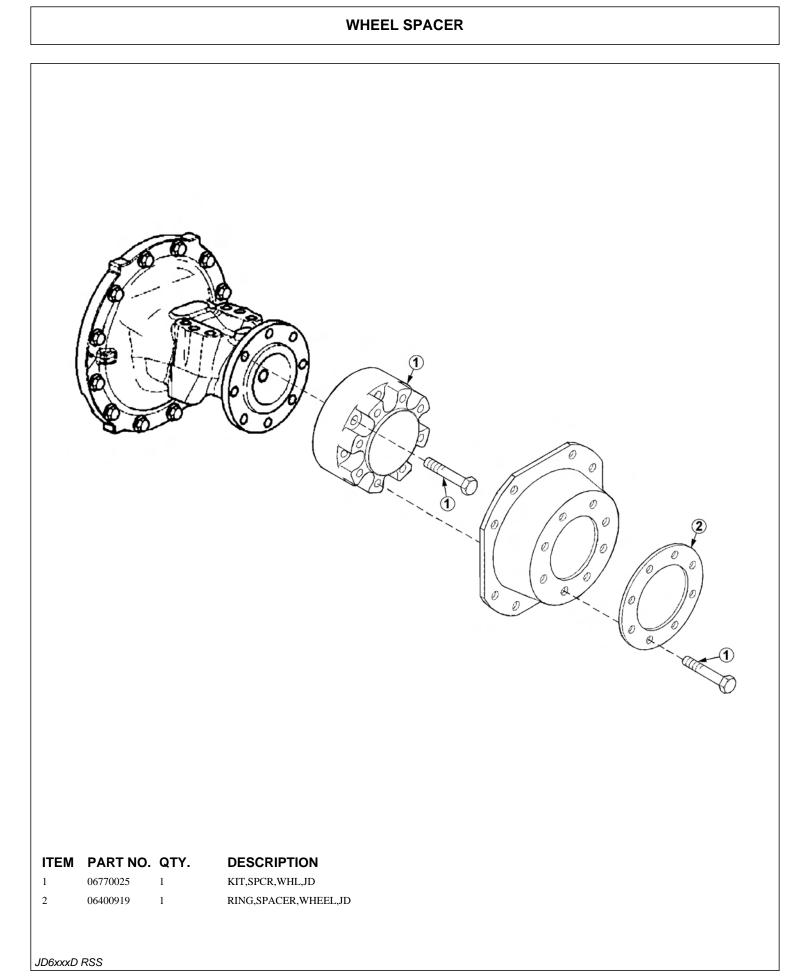


ITEM	PART NO.	QTY.	DESCRIPTION
1	06502149	1	INLET END COVER
2	06502150	1	END COVER, OPEN CENTER
3	TB1017N	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
4	TB1017N	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
5	TB1017N	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
6	TB1017Q	1	VALVE SECTION (DOUBLE ACTING, SPRING METERED)
7	TB1017N	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
8	06503067	1	#10 O-RING PLUG
9	TB1017K	1	RELIEF VALVE, 2150 PSI
10	TB1017J	1	RELIEF VALVE, 1800 PSI
11	TB1017H	1	RELIEF VALVE, 1750 PSI
12	22588	1	RELIEF VALVE, 500 PSI
13	6T4209	1	#10 O-RING PLUG
14	06502003	1	RELIEF VALVE, 2500 PSI
15	TB1017K	1	RELIEF VALVE, 2150 PSI
16	TB1017F	1	RELIEF VALVE, 1500 PSI
17	TB1017H	1	RELIEF VALVE, 1750 PSI
18	22588	1	RELIEF VALVE, 500PSI
19	TB1017A	5	VALVE SEAL KIT (FOR ONE SECTION)
19A		2	WIPER
19B		2	O-RING SMALL
19C		1	O-RING LARGE
19D		1	SPRING
19E		1	PUCKET
20	TB1017L	5	LEVER KIT (FOR ONE SECTION)
20A		1	LEVER KNOB
20B		1	LEVER
20C		2	LEVER WASHER
20D		1	LEVER CLIP
20E		2	LINKAGE
20F		1	LEVER PIN
20G		1	ROLL PIN
20H		1	LEVER BOOT
20J		1	LEVER BOLT
20K		1	LEVER DUST COVER
20L		1	LEVER NUT
21	TB1017V	1	TIE ROD KIT
22	24214	1	O-RING, LARGE

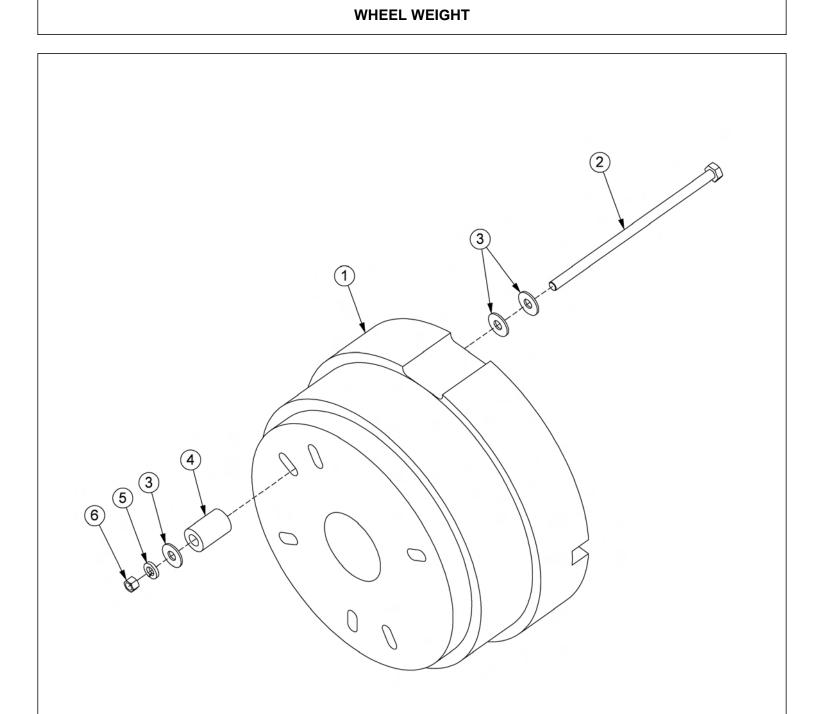
# POLYCARBONATE SAFETY WINDOW



ITEM	PART NO.	QTY.	DESCRIPTION
1	06490014	1	POLYCARB, FRMD, REAR
2	06490013	1	POLYCARB, FRMD, DOOR
3	31965	25	TRIM SEAL (IN FEET)
4	21584	2	CAPSCREW, 5/16" X 2",NC
5	21575	6	HEX NUT, 5/16" NC
6	33477	2	VIBRATION ISOLATOR
7	06410268	1	TOP BRACKET
8	06410269	1	BOTTOM BRACKET
9	21529	2	CAPSCREW,1/4" X 3/4",NC
10	21986	2	LOCKWASHER,1/4"
11	21525	2	HEX NUT,1/4",NC
12	21581	2	CAPSCREW,5/16" X 1-1/4",NC
13	6T2619	2	LOCKWASHER,8MM
14	34948	2	WASHER,8MM
15	21577	2	NYLOCK NUT,5/16",NC
	06537005	1	3M ADHESIVE
16	6T2491	2	CAPSCREW,8MM X 30MM,1.25P
17		-	HEX NUT (EXISTING HARDWARE)
18	06402263	1	BRKT,MIRROR,RELOCATING



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ITEM	PART	NO.	QTY.

### DESCRIPTION

CAPSCREW,3/4" X 17",NC FLATWASHER,3/4",USS SPACER,2"

WHEEL WEIGHT, UNIVERSAL

3 LOCKWASHER,3/4"

1825 3 HEX NUT,3/4",NC

# NOTES

**COMMON REAR STOW SIDE** 

# **PARTS SECTION**

Common Section 6-1

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### 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 or dering replacement decals, refer to the part numbers and descriptions listed in the safety section in the front of this manual.



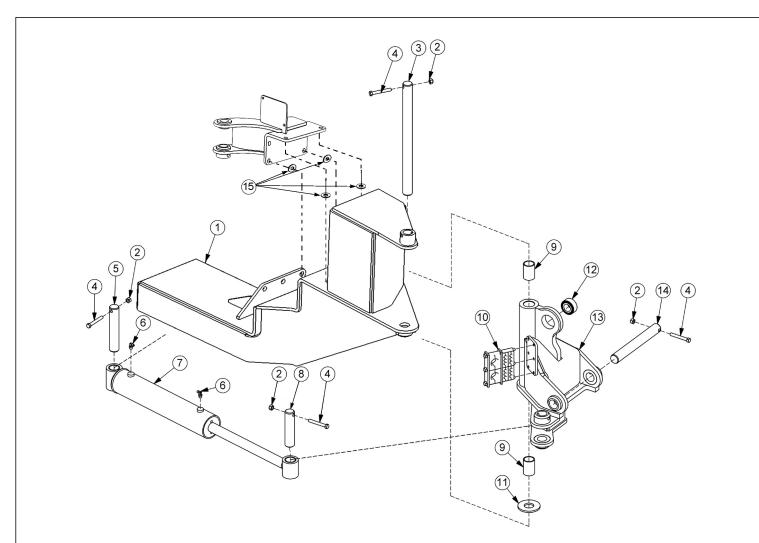
For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

# Tiger Corporation

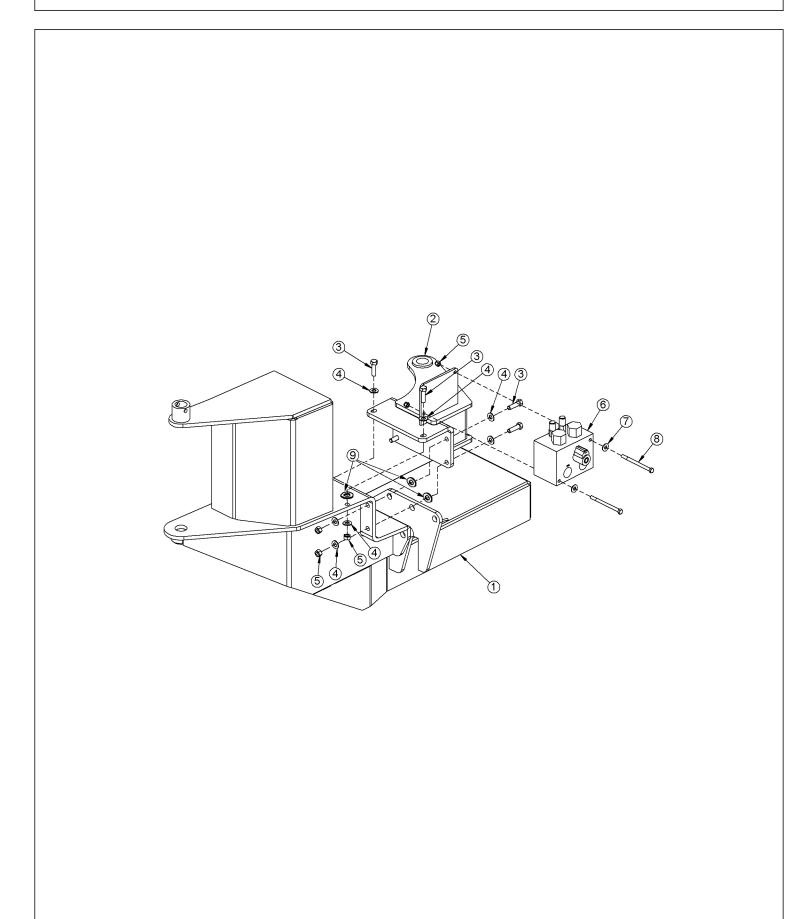
3301 N. Louise Ave. Sioux Falls, SD 57107 1-800-843-6849 1-605-336-7900

# **BOOM MOUNT KIT**



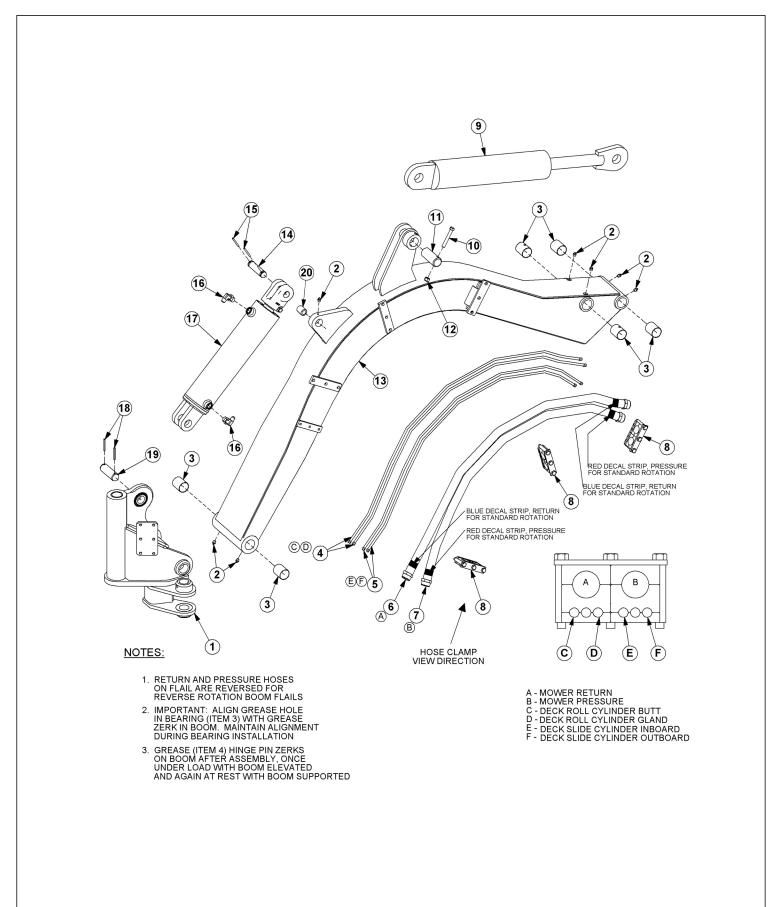
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	MAIN FRAME *REFER TO TRACTOR MOUNT KIT PAGE
2	21677	4	NYLOCK NUT,7/16",NC
3	06420013	1	PIN,1-1/2" X 19-7/8"
4	21688	4	CAPSCREW,7/16" X 3-1/4",NC
5	06420124	1	PIN,1-1/2" X 7-13/16"
6	32810	2	ELBOW,3/8"MJ X 1/2"MOR ADJ
7	06501026	1	CYLINDER,3" X 15"
8	06420099	1	PIN,1-1/2" X 6-3/16"
9	06520411	2	BEARING,1-1/2"ID X 2-1/2",COMP
10	35131	1	HOSE CLAMP
11	06520049	1	BEARING,1-1/2"ID X 1/4",COMP
12		-	BEARING, SPHERICAL *NOT FOR SALE
	06700114	1	SWIVEL ASSEBLY,COMPLETE
13	06310115	1	SWIVEL,WELDMENT
14	06420022	1	PIN,1-1/2" X 12"
15	27938	4	MACHINED BUSHING (AS NEEDED)

# CYLINDER TANG MOUNT



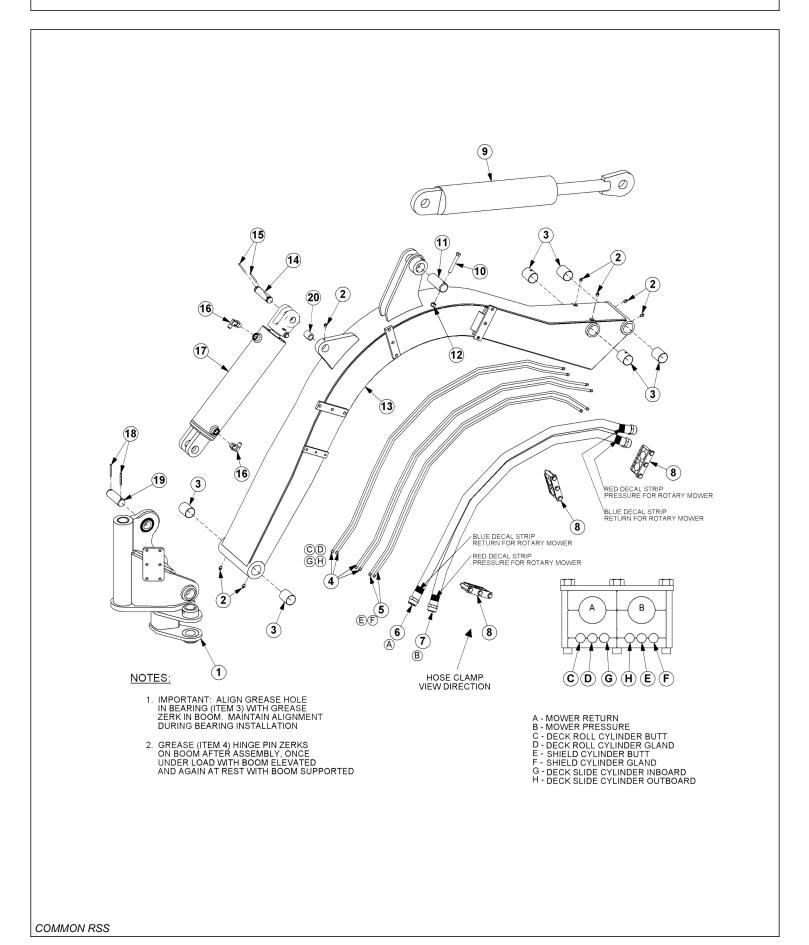
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	MAIN FRAME *REFER TO TRACTOR MOUNT KIT
2	06300242	1	CYLINDER TANG
3	6T1027	6	CAPSCREW,1/2" X 1-3/4",NC
4	06533004	12	FLATWASHER,1/2",SAE
5	21727	6	NYLOCK NUT,1/2",NC
6		-	BRAKE VALVE *REFER TO TRACTOR MOUNT KIT
7		-	FLATWASHER *REFER TO TRACTOR MOUNT KIT
8		-	CAPSCREW *REFER TO TRACTOR MOUNT KIT
9	27938	4	BUSHING, MACHINED (AS NEEDED)

### **BOOM ASSEMBLY - FLAIL**



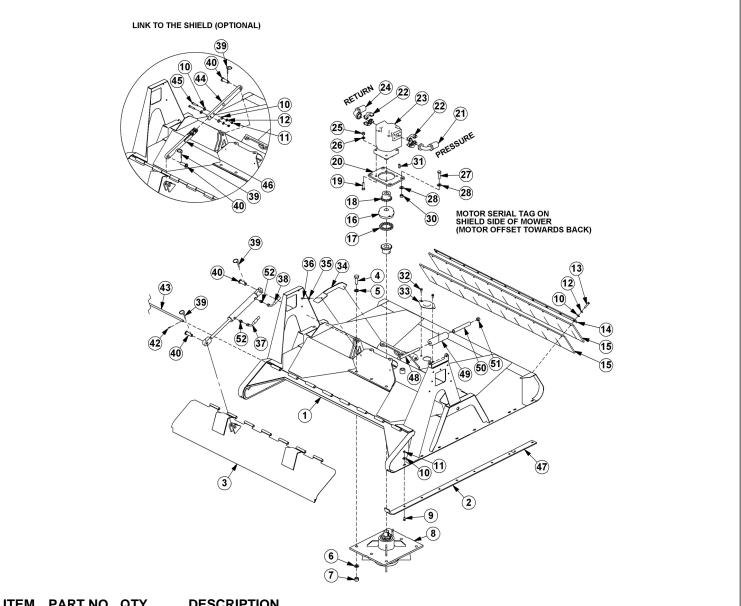
н				
	ITEM	PART NO.	QTY.	DESCRIPTION
	1		-	SWIVEL ASSY *REFER TO BOOM MOUNT KIT PAGE
	2	6T3211	7	GREASE ZERK,1/8"
	3	32321	6	BEARING
	4	06500723	2	HOSE,1/4" X 52"
	5	06500724	2	HOSE,1/4" X 70"
	6		1	HOSE *REFER TO TRACTOR SPECIFIC PARTS
	7		1	HOSE *REFER TO TRACTOR SPECIFIC PARTS
	8	06505116	3	HOSE CLAMP
	9	32365	1	CYLINDER,4" X 15",WELDED
	10	21687	1	CAPSCREW,7/16" X 3",NC
	11	32375	1	PIN,1-1/2"OD
	12	21677	1	NYLOCK NUT,7/16"
	13	06700000	1	BOOM ASSEMBLY, COMPLETE
		35331	1	BOOM WELDMENT
	14	TB1033	1	PIN,CLEVIS
	15	06537021	2	ROLL PIN,5MM
	16	32810	2	ELBOW
	17	06501028	1	CYLINDER,4" X 14",WELDED
	18	TB1023	2	ROLL PIN,7/16"
	19	06420100	1	PIN,1-1/4"OD
	20	TB3010	1	SPLIT BUSHING
Т				

### **BOOM ASSEMBLY - ROTARY**



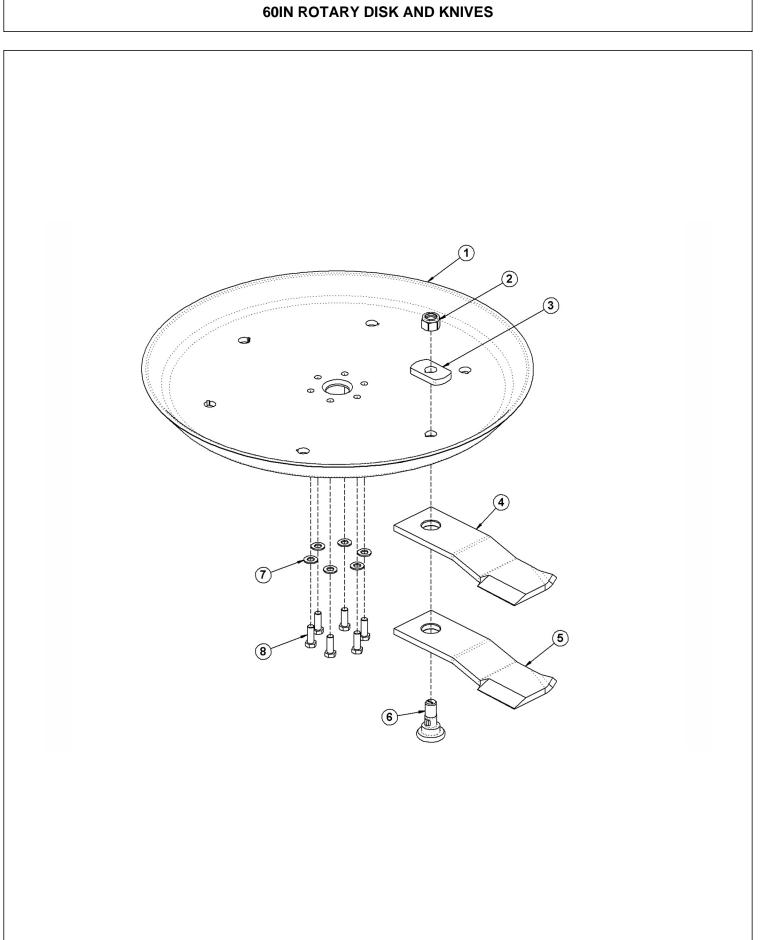
	ITEM	PART NO.	ΟΤΥ	DESCRIPTION
	1 <b>E IVI</b>	I ANT NO.	wiii.	SWIVEL ASSY *REFER TO BOOM MOUNT KIT PAGE
			-	
	2	6T3211	7	GREASE ZERK,1/8"
	3	32321	6	BEARING
	4	06500723	4	HOSE,1/4" X 52"
	5	06500724	2	HOSE,1/4" X 70"
	6		1	HOSE *REFER TO TRACTOR SPECIFIC PARTS
	7		1	HOSE *REFER TO TRACTOR SPECIFIC PARTS
	8	06505116	3	HOSE CLAMP
	9	32365	1	CYLINDER,4" X 15",WELDED
	10	21687	1	CAPSCREW,7/16" X 3",NC
	11	32375	1	PIN,1-1/2"OD
	12	21677	1	NYLOCK NUT,7/16"
	13	06700000	1	BOOM ASSEMBLY, COMPLETE
		35331	1	BOOM WELDMENT
	14	TB1033	1	PIN,CLEVIS
	15	06537021	2	ROLL PIN,5MM
	16	32810	2	ELBOW
	17	06501028	1	CYLINDER,4" X 14",WELDED
	18	TB1023	2	ROLL PIN,7/16"
	19	06420100	1	PIN,1-1/4"OD
	20	TB3010	1	SPLIT BUSHING
L				

### **60IN ROTARY MOWER**



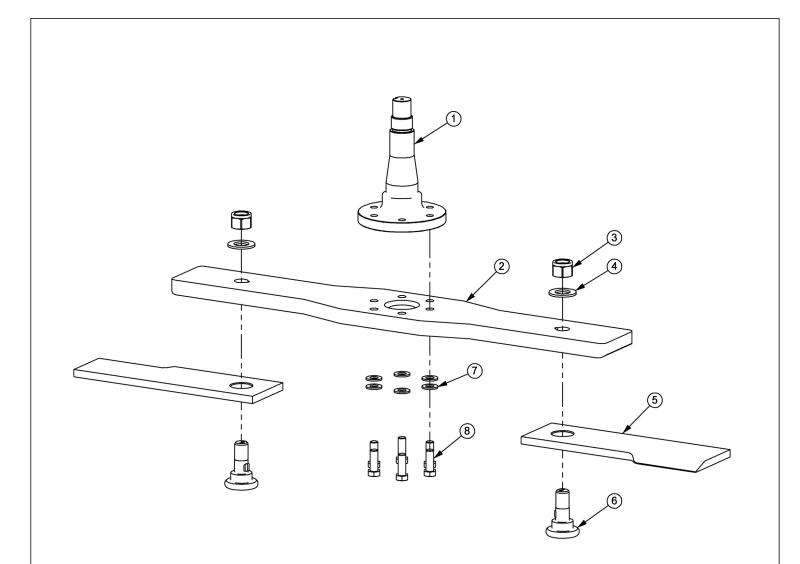
	PART NO.	QIT.	DESCRIPTION
1	06320183	1	DECK,WLDMNT,60" RTRY,RSS
2	33777	2	SKID SHOE,RTRY
3	06320162	1	SHIELD,60"RTRY
4	33879	6	CAPSCREW,3/4" X 2-1/4",NF,GR 8
5	33880	6	FLATWASHER,3/4",GR 8,SAE
6	21993	6	LOCKWASHER,3/4",GR 8
7	6T2413	6	HEX NUT,3/4",NF,GR 8
8	6T1024H5	1	SPINDLE ASSY, CPLT, HD, 5/8 HOLES
9	6T2270	16	PLOW BOLT,3/8" X 1",NC
10	22016	33	FLATWASHER,3/8"
11	21625	20	HEX NUT,3/8",NC
12	21988	11	LOCKWASHER,3/8"

ITEM	PART NO.	QTY.	DESCRIPTION
13	21633	11	CAPSCREW,3/8" X 1-3/4",NC
14	6T0823	1	FLAP RETAINER,60" RTRY
15	06520238	2	FLAP,60" RTRY
16	6T1033	1	COUPLER COVER
17	6T1029	1	COUPLER CHAIN
18	21223	1	SPROCKET
19	21733	4	CAPSCREW,1/2" X 2",NC
20	33776	1	MOTOR MOUNT, PLATE, RTRY
21	06500458	1	HOSE,1" X 95" (PRESSURE)
22	TF4852	2	FLANGE KIT,#20
23	06504011	1	MOTOR
24	06500613	1	HOSE,1" X 87" (RETURN)
25	21727	4	NYLOCK NUT,1/2",NC
26	06533004	4	FLATWASHER,1/2"
27	6T2290	4	CAPSCREW,5/8" X 2",NF,GR 8
28	33764	8	FLATWASHER,5/8",GR 8,SAE
29	21992	4	LOCKWASHER,5/8"
30	6T2408	4	HEX NUT,5/8",NF
31	TF1124	1	SQUARE KEY
32	33881	4	CAPSCREW,FLG,3/8" X 3/4",NC
33	33779	1	PLATE,COVER,KNF HOLE
34	06410439	2	COVER
35	22014	2	FLATWASHER,1/4"
36	21530	2	CAPSCREW,1/4" X 1",NC
37	06500141	1	HOSE,1/4" X 92"
38	06500443	1	HOSE,1/4" X 83"
39	RD1032	2	LYNCH PIN
40	33984	2	PIN,SHIELD
41	33785	1	CYLINDER,1-1/2" X 8"
42	6T3017	2	ROLLPIN
43	06420139	1	HINGE PIN,60" RTRY
44	33772	1	LINK,SHIELD,RTRY
45	21634	2	CAPSCREW,3/8" X 2",NC
46	33773	1	LINK 2,SHIELD,RTRY
47	06401245	2	SKID SHOE, TRB60
48	06530226	1	CAPSCREW,3/4" X 8-1/2",NC
49	35340	1	ROLLER
50	35339	1	BUSHING
51	21825	1	HEX NUT,3/4",NC
52	06503057	2	ADAPTER,1/4"MOR X 3/8"MJ



ITEM	PART NO.	QTY.	DESCRIPTION
	27167	1	BOLT KIT (INCLUDES ITEMS 7, 8 & LOCTITE)
1	34876	1	BLADE MOUNTING DISK
2	6T1023R	2	NYLOCK NUT,1-1/8",NF
3	34878	2	SPACER
4	34684	2	STANDARD GRASS KNIFE
5	34685	2	HIGH SUCTION GRASS KNIFE (OPTIONAL)
6	34497	2	KNIFE MOUNTING BOLT
7	25270	6	FLATWASHER,5/8",GR8,USS
8	6T2259	6	CAPSCREW,5/8" X 1-3/4",NF
	6T1825	1	LOCTITE (USED ON ITEM 8)
	33893	1	KNIFE KIT (ITEMS 2,4 & 6)

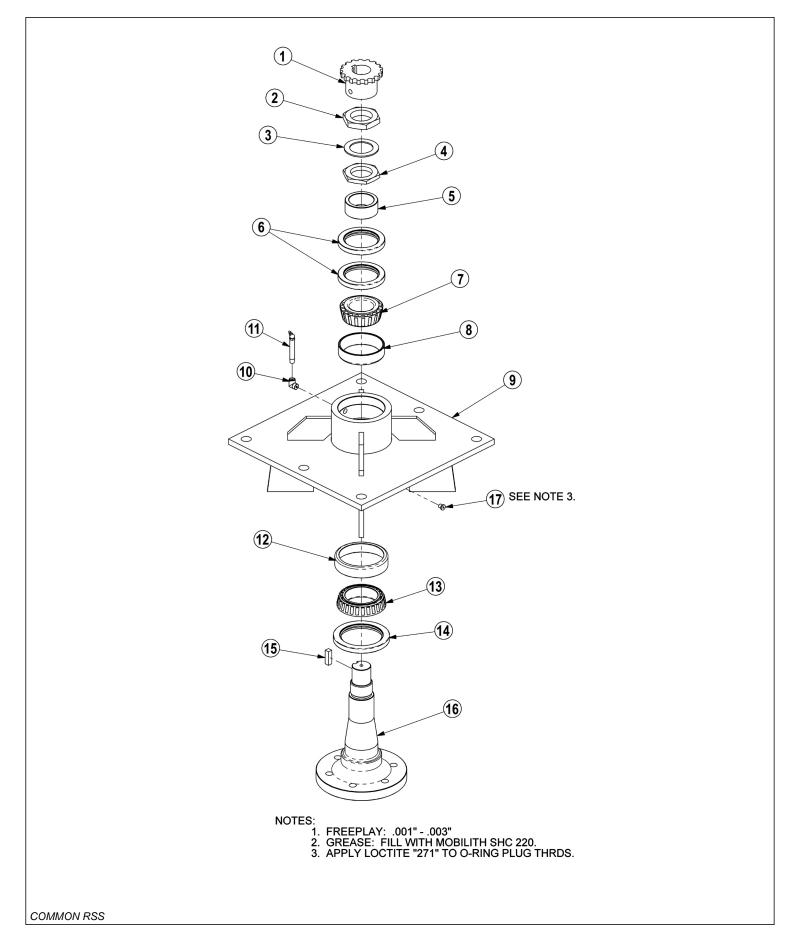
# **60IN BLADE BAR AND KNIVES**



ITEM	PART NO.	QTY.	DESCRIPTION
1	PT1018H5	1	SPINDLE
2	06400690	1	BAR,BLADE,RTRY60
3	6T1023R	2	KNIFE MTG NUT,1-1/8,NYLOCK,NF
4	06533002	2	FLATWASHER,1-1/8,GR8
5	06521001	2	KNIFE,TRB50,5/8
6	06538000	2	KNIFE MTG BOLT,5/8 SHOULDER
7	33764	6	FLATWASHER,5/8,GR 8,SAE
8	6T2259	6	CAPSCREW,5/8 X 1-3/4,NF,GR8

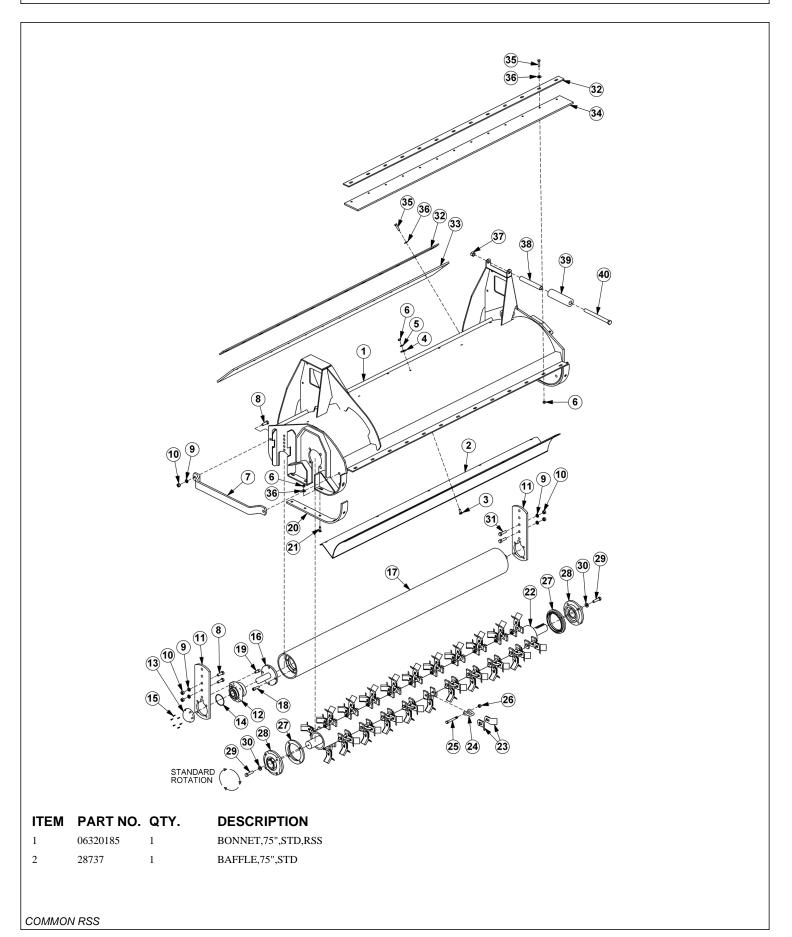
# NOTES

#### **ROTARY MOWER SPINDLE ASSEMBLY**



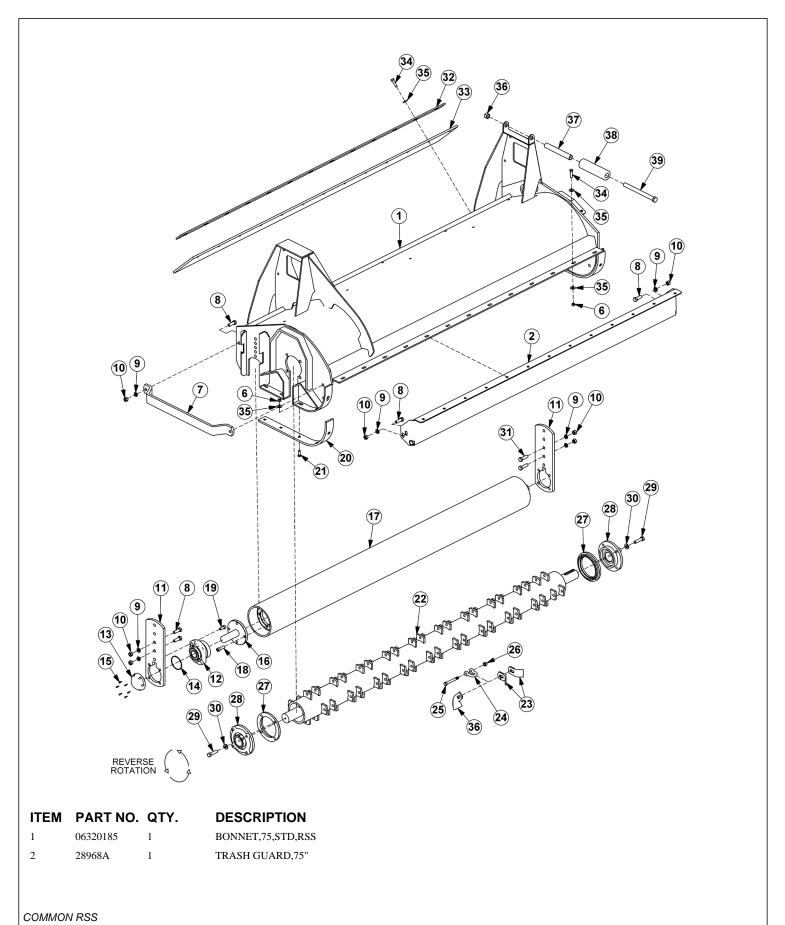
ITEM	PART NO.	QTY.	DESCRIPTION	
	6T1024H5	-	SPINDLE ASSEMBLY COMPLETE	
1	6T1031	1	SPROCKET	
2	6T1016	1	BEARING LOCK NUT - THICK	
3	22596	1	JAM WASHER	
4	6T1015	1	BEARING ADJUSTMENT NUT - THIN	
5	6T1014	1	BEARING ADJUSTMENT SLEEVE	
6	6T1011	1	UPPER SEAL - SET OF 2	
7	6T1012	1	BEARING CONE	
8	6T1013	1	BEARING CUP	
9	6T1010H	1	SPINDLE HOUSING	
10	30570	1	FITTING STREET ELBOW	
11	33990	1	GREASE ZERK	
12	6T1013H	1	BEARING CUP	
13	6T1012H	1	BEARING CONE	
14	6T1011H	1	LOWER SEAL	
15	6T1019	1	SPINDLE KEY	
16	PT1018H-5	1	SPINDLE	
17	06503064	1	O-RING PLUG, 1/8"	
	31771	-	SPINDLE REBUILD KIT (INCLUDES ITEMS 2 - 8 AND 12 - 15)	

#### **75IN FLAIL - STANDARD ROTATION**



3         6T2283         10         CARRIAGE BOLT,3/8" X 1",NC           4         6T2615         10         WASHER,FENDER,3/8"           5         21988         10         LOCKWASHER,3/8"           6         21625         46         HEX NUT,3/8",NC           7         27975A         1         GUARD,CUTTERSHAFT           8         21731         4         CAPSCREW,1/2" X 1-1/2",NC           9         21990         6         LOCKWASHER,1/2"           10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         672330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         28066A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10	ITEM	PART NO.	QTY.	DESCRIPTION
5         21988         10         LOCKWASHER,38"           6         21625         46         HEX NUT,3/8",NC           7         27975A         1         GUARD,CUTTERSHAFT           8         21731         4         CAPSCREW,1/2" X 1-1/2",NC           9         21990         6         LOCKWASHER,1/2"           10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER,75"           18         672330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B	3	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC
6         21625         46         HEX NUT,3/8",NC           7         27975A         1         GUARD,CUTTERSHAFT           8         21731         4         CAPSCREW,1/2" X 1-1/2",NC           9         21990         6         LOCKWASHER,1/2"           10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         2806A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,35"           23         33713	4	6T2615	10	WASHER, FENDER, 3/8"
7         27975A         1         GUARD,CUTTERSHAFT           8         21731         4         CAPSCREW,I/2" X 1-1/2",NC           9         21990         6         LOCKWASHER,1/2"           10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1",NC           20         2806A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT,ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,ASSY,STANDARD           24	5	21988	10	LOCKWASHER,3/8"
8         21731         4         CAPSCREW,1/2" X 1-1/2",NC           9         21990         6         LOCKWASHER,1/2"           10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020	6	21625	46	HEX NUT,3/8",NC
9         21990         6         LOCKWASHER,1/2"           10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT,57"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,716" X 3-716",NC,GR8           26         21677	7	27975A	1	GUARD,CUTTERSHAFT
10         21725         6         HEX NUT,1/2",NC           11         28735         2         GROUND ROLLER ADJ BRKT,STD DTY           12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         <	8	21731	4	CAPSCREW,1/2" X 1-1/2",NC
11       28735       2       GROUND ROLLER ADJ BRKT,STD DTY         12       06520028       2       BEARING,FLANGE,1-3/8,GRNDRLR         13       06520027       2       CAP,BEARING,GRNDRLR         14       06520029       2       O-RING,2-3/4 X 3/32",AS568A-148         15       06530001       12       CAPSCREW,SKT HD,8-32 X 1/2",SS         16       TF1045B       2       STUB SHAFT,GROUND ROLLER         17       28738       1       GROUND ROLLER,75"         18       6T2330       8       CAPSCREW,SKT HD,7/16" X 1-1/2",NC         19       6T2331       8       CAPSCREW,SKT HD,7/16" X 1-1/2",NC         20       28086A       2       SKID SHOE,STD DUTY REAR FLAIL         21       30013       10       PLOW BOLT,3/8" X 1-1/4",NC,GR5          28747       -       CUTTERSHAFT ASSY,STANDARD         22       28643B       1       CUTTERSHAFT,75"         23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC	9	21990	6	LOCKWASHER,1/2"
12         06520028         2         BEARING,FLANGE,1-3/8,GRNDRLR           13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,716",NC	10	21725	6	HEX NUT,1/2",NC
13         06520027         2         CAP,BEARING,GRNDRLR           14         06520029         2         O-RING,2-3/4 X 3/32",AS568A-148           15         06530001         12         CAPSCREW,SKT HD,8-32 X 1/2",SS           16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,716",NC            06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27 <td>11</td> <td>28735</td> <td>2</td> <td>GROUND ROLLER ADJ BRKT,STD DTY</td>	11	28735	2	GROUND ROLLER ADJ BRKT,STD DTY
14       06520029       2       O-RING,2-3/4 X 3/32",AS568A-148         15       06530001       12       CAPSCREW,SKT HD,8-32 X 1/2",SS         16       TF1045B       2       STUB SHAFT,GROUND ROLLER         17       28738       1       GROUND ROLLER,75"         18       6T2330       8       CAPSCREW,SKT HD,7/16" X 1-1/2",NC         19       6T2331       8       CAPSCREW,SKT HD,7/16" X 1",NC         20       28086A       2       SKID SHOE,STD DUTY REAR FLAIL         21       30013       10       PLOW BOLT,3/8" X 1-1/4",NC,GR5          28747       -       CUTTERSHAFT ASSY,STANDARD         22       28643B       1       CUTTERSHAFT,75"         23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9 <t< td=""><td>12</td><td>06520028</td><td>2</td><td>BEARING,FLANGE,1-3/8,GRNDRLR</td></t<>	12	06520028	2	BEARING,FLANGE,1-3/8,GRNDRLR
15       06530001       12       CAPSCREW,SKT HD,8-32 X 1/2",SS         16       TF1045B       2       STUB SHAFT,GROUND ROLLER         17       28738       1       GROUND ROLLER,75"         18       6T2330       8       CAPSCREW,SKT HD,7/16" X 1-1/2",NC         19       6T2331       8       CAPSCREW,SKT HD,7/16" X 1",NC         20       28086A       2       SKID SHOE,STD DUTY REAR FLAIL         21       30013       10       PLOW BOLT,3/8" X 1-1/4",NC,GR5          28747       -       CUTTERSHAFT ASSY,STANDARD         22       28643B       1       CUTTERSHAFT,75"         23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32	13	06520027	2	CAP,BEARING,GRNDRLR
16         TF1045B         2         STUB SHAFT,GROUND ROLLER           17         28738         1         GROUND ROLLER,75"           18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,7/16",NC            06200639         -         STRING GUARD SID           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029	14	06520029	2	O-RING,2-3/4 X 3/32",AS568A-148
17       28738       1       GROUND ROLLER,75"         18       6T2330       8       CAPSCREW,SKT HD,7/16" X 1-1/2",NC         19       6T2331       8       CAPSCREW,SKT HD,7/16" X 1",NC         20       28086A       2       SKID SHOE,STD DUTY REAR FLAIL         21       30013       10       PLOW BOLT,3/8" X 1-1/4",NC,GR5          28643B       1       CUTTERSHAFT ASSY,STANDARD         22       28643B       1       CUTTERSHAFT,75"         23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       BEARING,FLANGE,1-15/16",STD,TSF         29       0653017       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1	15	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS
18         6T2330         8         CAPSCREW,SKT HD,7/16" X 1-1/2",NC           19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,7/16",NC            06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27         33863         2         STRING GUARD,STD           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           30         06533006         8         FLATWASHER,1/2",SAE,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32	16	TF1045B	2	STUB SHAFT, GROUND ROLLER
19         6T2331         8         CAPSCREW,SKT HD,7/16" X 1",NC           20         28086A         2         SKID SHOE,STD DUTY REAR FLAIL           21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT,75"           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,7/16",NC            06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27         33863         2         STRING GUARD,STD           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029         2         BAR,FLAP,TSF/TBF,75"           33         TF1016         1         FLAP,75",FRONT           35         21632	17	28738	1	GROUND ROLLER,75"
20       28086A       2       SKID SHOE,STD DUTY REAR FLAIL         21       30013       10       PLOW BOLT,3/8" X 1-1/4",NC,GR5          28747       -       CUTTERSHAFT ASSY,STANDARD         22       28643B       1       CUTTERSHAFT,75"         23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       STRING GUARD,STD         28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,0EFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26	18	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC
21         30013         10         PLOW BOLT,3/8" X 1-1/4",NC,GR5            28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT ASSY,STANDARD           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE,MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,7/16",NC            06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27         33863         2         STRING GUARD,STD           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           30         06533006         8         FLATWASHER,1/2",SAE,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029         2         BAR,FLAP,TSF/TBF,75"           33         TF1016         1         FLAP,0EFLECTOR,TSF,75"           34         06520242         1         FLAP,75",FRONT           35         21632	19	6T2331	8	CAPSCREW,SKT HD,7/16" X 1",NC
28747         -         CUTTERSHAFT ASSY,STANDARD           22         28643B         1         CUTTERSHAFT ASSY,STANDARD           23         33713         80         KNIFE,FLAIL,SHORT           24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,7/16",NC            06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27         33863         2         STRING GUARD,STD           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           30         06533006         8         FLATWASHER,1/2",SAE,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029         2         BAR,FLAP,TSF/TBF,75"           33         TF1016         1         FLAP,0EFLECTOR,TSF,75"           34         06520242         1         FLAP,75",FRONT           35         21632         26         CAPSCREW,3/8" X 1-1/2",NC           36         22016         <	20	28086A	2	SKID SHOE, STD DUTY REAR FLAIL
22       28643B       1       CUTTERSHAFT,75"         23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       STRING GUARD,STD         28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,0EFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	21	30013	10	PLOW BOLT,3/8" X 1-1/4",NC,GR5
23       33713       80       KNIFE,FLAIL,SHORT         24       TF1020       40       KNIFE MTG CLEVIS,FLAIL         25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       STRING GUARD,STD         28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC		28747	-	CUTTERSHAFT ASSY,STANDARD
24         TF1020         40         KNIFE MTG CLEVIS,FLAIL           25         34011         40         CAPSCREW,7/16" X 3-7/16",NC,GR8           26         21677         40         NYLOCK NUT,7/16",NC            06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27         33863         2         STRING GUARD,STD           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           30         06533006         8         FLATWASHER,1/2",SAE,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029         2         BAR,FLAP,TSF/TBF,75"           33         TF1016         1         FLAP,0EFLECTOR,TSF,75"           34         06520242         1         FLAP,75",FRONT           35         21632         26         CAPSCREW,3/8" X 1-1/2",NC           36         22016         36         FLATWASHER,3/8"           37         21825         1         HEX NUT,3/4",NC	22	28643B	1	CUTTERSHAFT,75"
25       34011       40       CAPSCREW,7/16" X 3-7/16",NC,GR8         26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       STRING GUARD,STD         28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	23	33713	80	KNIFE,FLAIL,SHORT
26       21677       40       NYLOCK NUT,7/16",NC          06200639       -       STRING GUARD KIT,SD (ITEMS 27,29,30)         27       33863       2       STRING GUARD,STD         28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	24	TF1020	40	KNIFE MTG CLEVIS,FLAIL
06200639         -         STRING GUARD KIT,SD (ITEMS 27,29,30)           27         33863         2         STRING GUARD,STD           28         28683         2         BEARING,FLANGE,1-15/16",STD,TSF           29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           30         06533006         8         FLATWASHER,1/2",SAE,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029         2         BAR,FLAP,TSF/TBF,75"           33         TF1016         1         FLAP,DEFLECTOR,TSF,75"           34         06520242         1         FLAP,75",FRONT           35         21632         26         CAPSCREW,3/8" X 1-1/2",NC           36         22016         36         FLATWASHER,3/8"           37         21825         1         HEX NUT,3/4",NC	25	34011	40	CAPSCREW,7/16" X 3-7/16",NC,GR8
27       33863       2       STRING GUARD,STD         28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	26	21677	40	NYLOCK NUT,7/16",NC
28       28683       2       BEARING,FLANGE,1-15/16",STD,TSF         29       06530217       8       CAPSCREW,1/2" X 2",NC,L9         30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC		06200639	-	STRING GUARD KIT,SD (ITEMS 27,29,30)
29         06530217         8         CAPSCREW,1/2" X 2",NC,L9           30         06533006         8         FLATWASHER,1/2",SAE,L9           31         21732         2         CAPSCREW,1/2" X 1-3/4",NC           32         TF1029         2         BAR,FLAP,TSF/TBF,75"           33         TF1016         1         FLAP,DEFLECTOR,TSF,75"           34         06520242         1         FLAP,75",FRONT           35         21632         26         CAPSCREW,3/8" X 1-1/2",NC           36         22016         36         FLATWASHER,3/8"           37         21825         1         HEX NUT,3/4",NC	27	33863	2	STRING GUARD,STD
30       06533006       8       FLATWASHER,1/2",SAE,L9         31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	28	28683	2	BEARING,FLANGE,1-15/16",STD,TSF
31       21732       2       CAPSCREW,1/2" X 1-3/4",NC         32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	29	06530217	8	CAPSCREW,1/2" X 2",NC,L9
32       TF1029       2       BAR,FLAP,TSF/TBF,75"         33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	30	06533006	8	FLATWASHER,1/2",SAE,L9
33       TF1016       1       FLAP,DEFLECTOR,TSF,75"         34       06520242       1       FLAP,75",FRONT         35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	31	21732	2	CAPSCREW,1/2" X 1-3/4",NC
34         06520242         1         FLAP,75",FRONT           35         21632         26         CAPSCREW,3/8" X 1-1/2",NC           36         22016         36         FLATWASHER,3/8"           37         21825         1         HEX NUT,3/4",NC	32	TF1029	2	BAR,FLAP,TSF/TBF,75"
35       21632       26       CAPSCREW,3/8" X 1-1/2",NC         36       22016       36       FLATWASHER,3/8"         37       21825       1       HEX NUT,3/4",NC	33	TF1016	1	FLAP, DEFLECTOR, TSF, 75"
36         22016         36         FLATWASHER,3/8"           37         21825         1         HEX NUT,3/4",NC	34	06520242	1	FLAP,75",FRONT
37 21825 1 HEX NUT,3/4",NC	35	21632	26	CAPSCREW,3/8" X 1-1/2",NC
	36	22016	36	FLATWASHER,3/8"
38 35339 1 BUSHING	37	21825	1	HEX NUT,3/4",NC
	38	35339	1	BUSHING
39 35340 1 ROLLER	39	35340	1	ROLLER
40 06530226 1 CAPSCREW,3/4" X 8-1/2",NC	40	06530226	1	CAPSCREW,3/4" X 8-1/2",NC

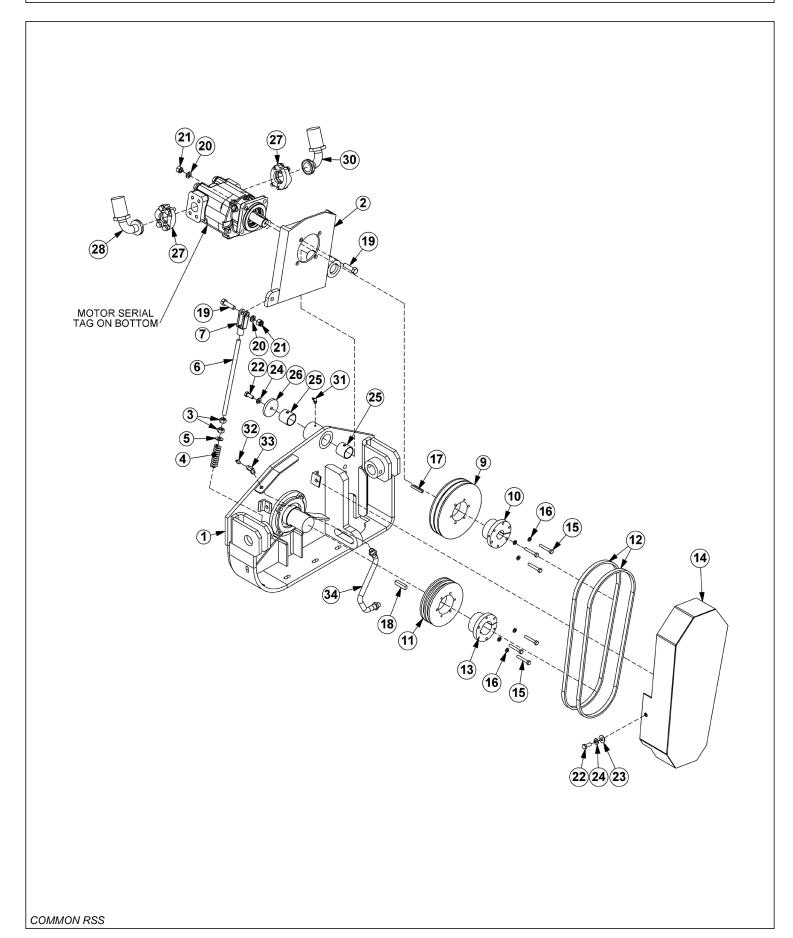
#### **75IN FLAIL - REVERSE ROTATION**



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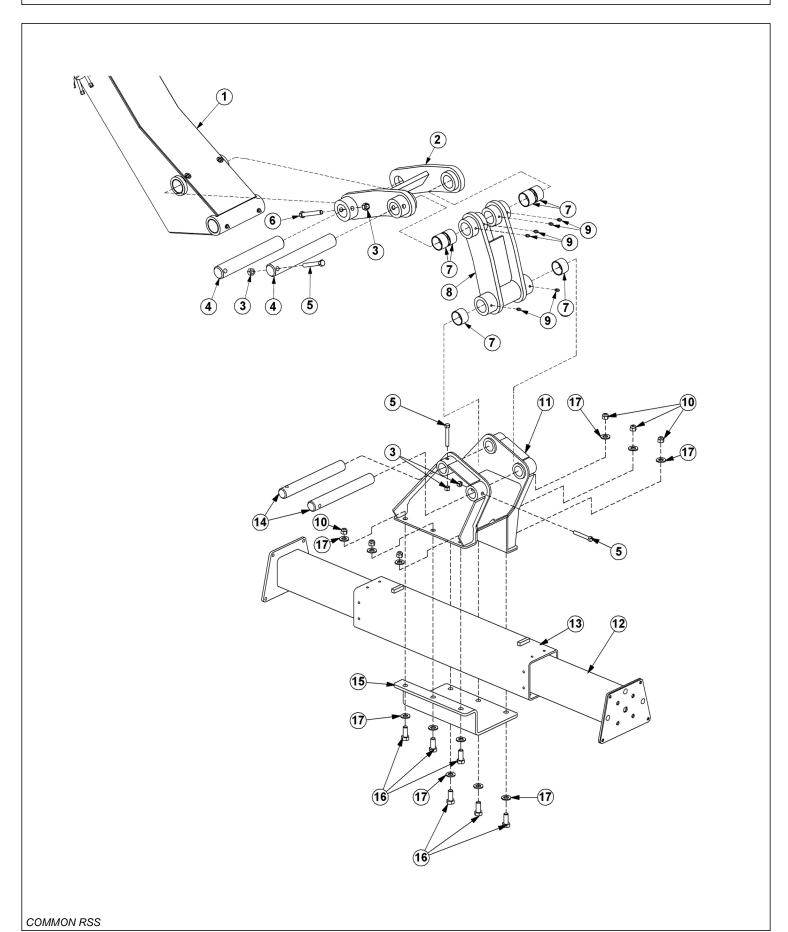
ITEM	PART NO.	QTY.	DESCRIPTION	
3	6T2283	10	CARRIAGE BOLT,3/8" X 1",NC	
4	6T2615	10	WASHER,FENDER,3/8"	
5	21988	10	LOCKWASHER,3/8"	
6	21625	36	HEX NUT,3/8",NC	
7	27975A	1	GUARD,CUTTERSHAFT	
8	21731	6	CAPSCREW,1/2" X 1-1/2",NC	
9	21990	8	LOCKWASHER,1/2"	
10	21725	8	HEX NUT,1/2",NC	
11	28735	2	GROUND ROLLER ADJ BRKT,STD DTY	
12	06520028	2	BEARING,FLANGE,1-3/8",GRNDRLR	
13	06520027	2	CAP,BEARING,GRNDRLR	
14	06520029	2	O-RING,2-3/4" X 3/32",AS568A-148	
15	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2",SS	
16	TF1045B	2	STUB SHAFT, GROUND ROLLER	
17	28738	1	GROUND ROLLER,75"	
18	6T2330	8	CAPSCREW,SKT HD,7/16" X 1-1/2",NC	
19	6T2331	8	CAPSCREW,SKT HD,7/16" X 1",NC	
20	28086A	2	SKID SHOE, STD DUTY REAR FLAIL	
21	30013	9	PLOW BOLT,3/8" X 1-1/4",NC,GR5	
	28747	-	CUTTERSHAFT ASSY,STANDARD (22, 23, 24, 25 & 26)	
	28748	-	CUTTERSHAFT ASSY, SMOOTH (22, 23, 24, 25 & 37)	
22	28643B	1	CUTTERSHAFT,75"	
23	33713	80	FLAIL KNIVES (STANDARD CUT)	
24	TF1020	40	KNIFE MTG CLEVIS,FLAIL	
25	34011	40	CAPSCREW,7/16" X 3-7/16",NC,GR8	
26	21677	40	NYLOCK NUT,7/16",NC	
	06200639	-	STRING GUARD KIT, SD (ITEMS 27,29,30)	
27	33863	2	STRING GUARD,STD	
28	28683	2	BEARING,FLANGE,1-15/16",STD,TSF	
29	06530217	8	CAPSCREW,1/2" X 2",NC,L9	
30	06533006	8	FLATWASHER,1/2",SAE,L9	
31	21732	2	CAPSCREW,1/2" X 1-3/4",NC	
32	TF1029	1	BAR,FLAP,TSF/TBF,75"	
33	TF1016	1	FLAP,DEFLECTOR,TSF,75"	
34	21632	22	CAPSCREW,3/8" X 1-1/2",NC	
35	22016	49	FLATWASHER,3/8"	
36	28184A	40	FLAIL KNIVES (SMOOTH CUT)	
37	35339	1	BUSHING	
38	35340	1	ROLLER	
39	06530226	1	CAPSCREW,3/4" X 8-1/2",NC	

## FLAIL DRIVE ASSEMBLY



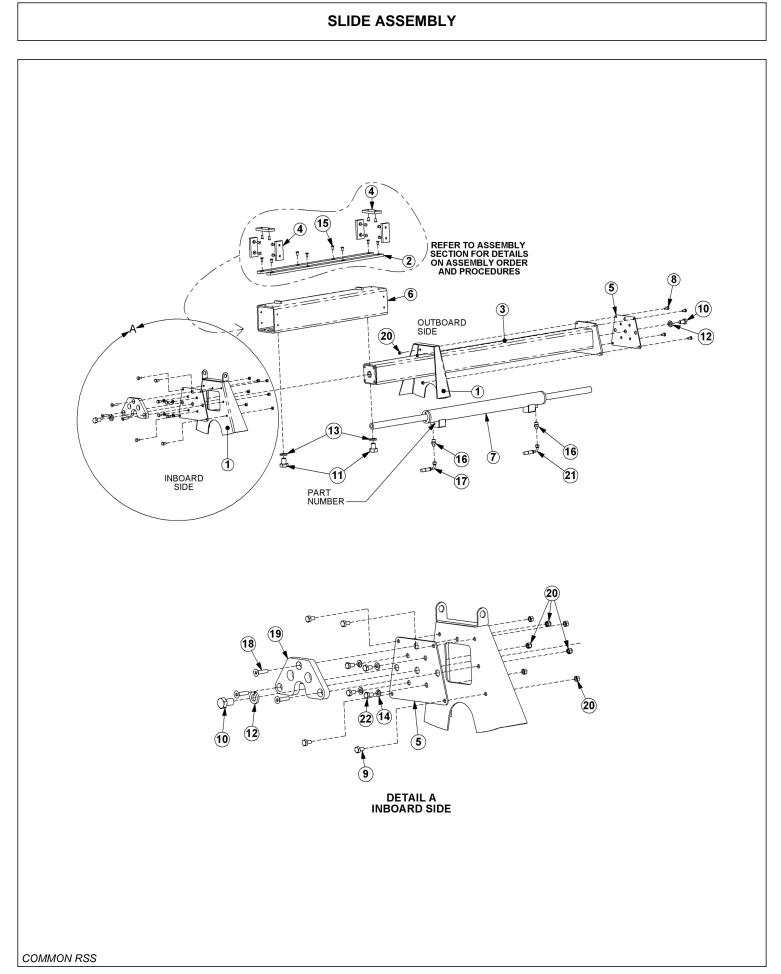
ITEM	PART NO.	QTY.	DESCRIPTION	
1		-	BONNET *REFER TO HEAD PARTS	
2	32287	1	MOTOR CHANNEL	
3	21700	2	HEX NUT,1/2",NF	
4	TF3620A	1	SPRING, TENSIONER	
5	27938	1	BUSHING,MACH,1"OD X 1/2"ID X 14GA.	
6	40496	1	ROD, THREADED, 1/2"NF X 8"	
7	PT3611A	1	CLEVIS,6"	
8	06504013	1	MOTOR	
9	TF3044	1	SHEAVE,8.0"	
10	TF3013	1	BUSHING,QD,SK 1-1/4",1/4" KEY	
11	TF3040	1	SHEAVE,6.3"	
12	28702	2	V-BELT (500)	
13	28723	1	BUSHING,QD,SK 1-15/16"	
14	32569	1	GUARD,BELT	
15	21584	6	CAPSCREW,5/16" X 2",NC	
16	21987	6	LOCKWASHER,5/16"	
17	06504028	1	KEY (KEY FROM MOTOR)	
18	26142A	1	KEY,1/2" X 1/2" X 2"	
19	21732	5	CAPSCREW,1/2" X 1-3/4",NC	
20	21990	5	LOCKWASHER,1/2"	
21	21725	5	HEX NUT,1/2",NC	
22	21630	3	CAPSCREW,3/8" X 1",NC	
23	22016	2	FLATWASHER,3/8"	
24	21988	3	LOCKWASHER,3/8"	
25	27580	2	BEARING,DX,1-1/2",GRM	
26	28682	1	RETAINING,WASHER,2-1/2" X 5/16"	
27	TF4852	2	KIT,FLANGE,#20	
28	06500616	1	HOSE,1" X 104" (RETURN FOR STANDARD ROTATION)	
30	06500617	1	HOSE,1" X 106" (PRESSURE OF STANDARD ROTATION)	
31	6T3204	1	GREASE ZERK,1/4" X 90°	
32	6T3211	1	GREASE ZERK,1/8"	
33	22085	1	ELBOW,1/8" X 90°	
34	TF1032	1	GREASE HOSE	

## **BOOM PIVOT ASSEMBLY**



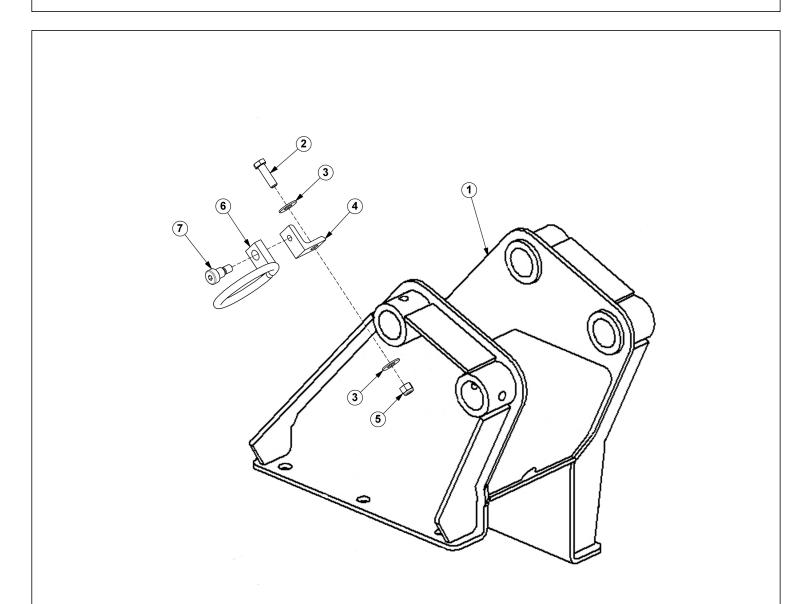
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ITEM	PART NO.	QTY.	DESCRIPTION
1		1	BOOM *REFER TO BOOM ASSEMBLY
2	32316	1	LINKAGE, BOOM TO CYLINDER
3	21677	4	NYLOCK NUT, 7/16",NC
4	32319	2	PIN,LINKAGE
5	21687	3	CAPSCREW, 7/16" X 3" NC
6	21688	1	CAPSCREW, 7/16" X 3-1/4" NC
7	32318	6	BEARING
8	32745	1	LINKAGE,CYLINDER TO TREE
9	6T3207	6	GREASE ZERK, 1/4"
10	32838	6	HEX NUT, 5/8" NC
11	06310181	1	TREE, WILDKAT
12	35334	1	TUBE,SLIDE
13	35337	1	TUBE,TREE
14	32313	2	PIN,TREE
15	06412199	1	CLAMP, TREE, WILDKAT
16	06530208	6	CAPSCREW,5/8" X 1-1/2",NC
17	33764	-	FLATWASHER, 5/8" SAE



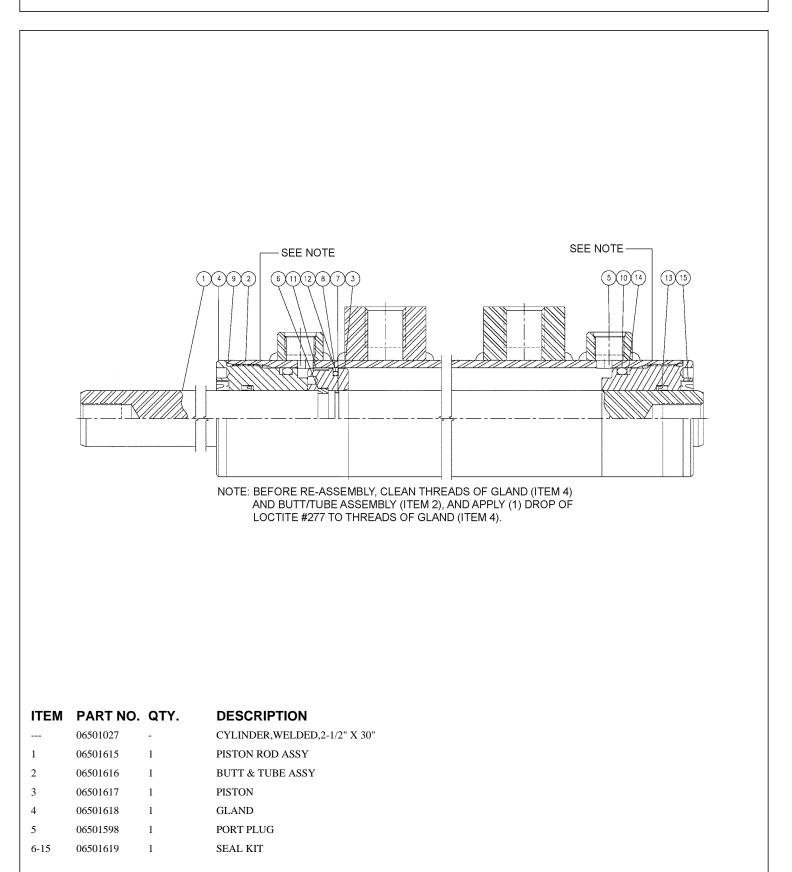
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	MOWER *REFER TO MOWER ASSEMBLY PAGE
2	35333	2	PAD,SLIDE
3	35334	1	TUBE,SLIDE
4	35335	6	PAD,SLIDE,SHORT
5	35336	2	CAP
6	35337	1	TUBE,TREE
7	06501027	1	CYLINDER,2-1/2" X 30"
8	21632	4	CAPSCREW,3/8" X 1-1/2",NC
9	21630	4	CAPSCREW,3/8" X 1",NC
10	21804	2	CAPSCREW,3/4" X 1-1/4",NF
11	21929	2	CAPSCREW,1" X 1-1/4",NC
12	21993	2	LOCKWASHER,3/4"
13	21995	2	LOCKWASHER,1"
14	21990	4	LOCKWASHER,1/4"
15	27487	20	CAPSCREW,3/8" X 5/8",NC,FLT/SKT HD
16	33271	2	ADAPTER,1/2"MOR X 3/8"MJ
17	35109	1	HOSE,1/4" X 126" (ROTARY MOWERS)
	06500449	1	HOSE,1/4" X 53" (FLAIL MOWERS)
18	06530103	3	CAPSCREW,FLT HD,3/8" X 1-1/2",NC
19	06497006	1	BUMPER,RSS
20	21627	11	NYLOCK NUT,3/8",NC
21	06500480	1	HOSE,1/4" X 107" (ROTARY MOWERS)
	06500449	1	HOSE,1/4" X 53" (FLAIL MOWERS)
22	21729	4	CAPSCREW,1/2" X 1"

## HOSE RING ASSEMBLY

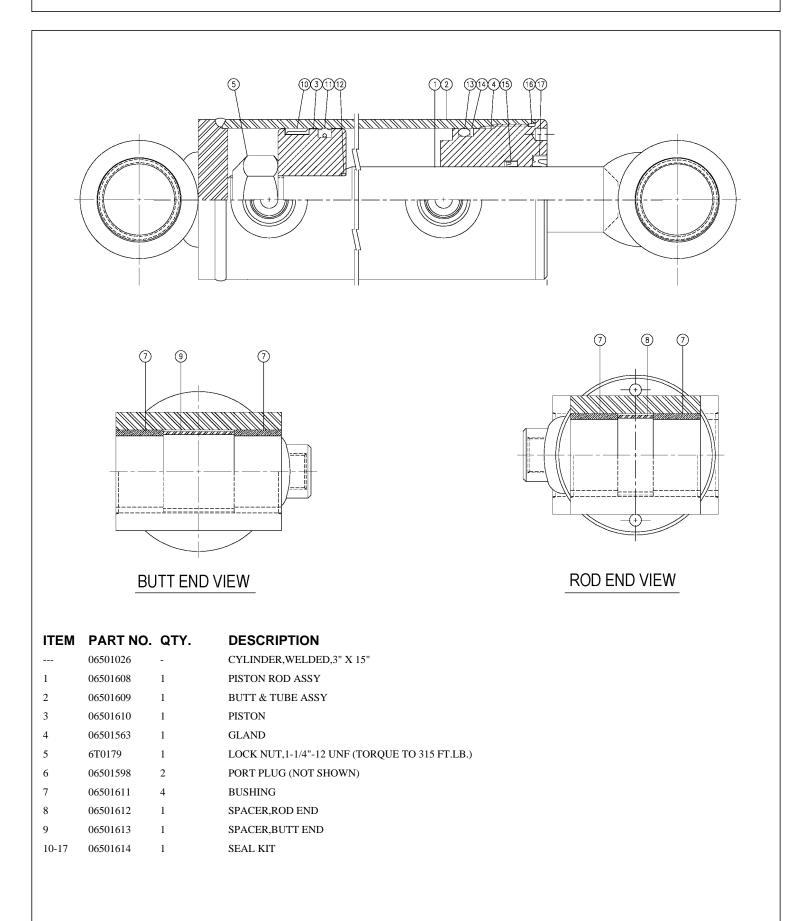


ITEM	PART NO.	QTY.	DESCRIPTION	
1		-	TREE *REFER TO BOOM PIVOT ASSY PAGE	
2	21631	1	CAPSCREW,3/8" X 1-1/4",NC	
3	22016	2	FLATWASHER,3/8"	
4	06460043	1	ANGLE,MOUNT	
5	21627	1	NYLOCK NUT,3/8",NC	
6	6310117	1	RING,HOSE	
7	06530003	1	CAPSCREW,SHOULDER,SKT HD	
	06505021	1	COVER, HOSES (BOOM TO HOSE GUIDE) *NOT SHOWN	
	06505020	1	COVER, HOSES (HOSE GUIDE TO DECK) *NOT SHOWN	

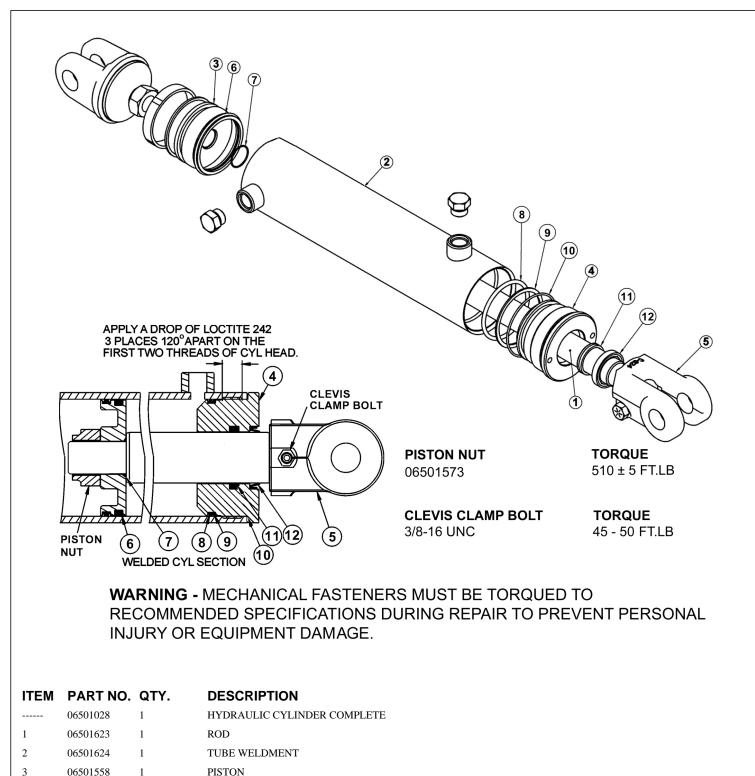
#### 2-1/2IN X 30IN CYLINDER BREAKDOWN



#### **3IN X 15IN CYLINDER BREAKDOWN**



#### **4IN X 14IN CYLINDER BREAKDOWN**

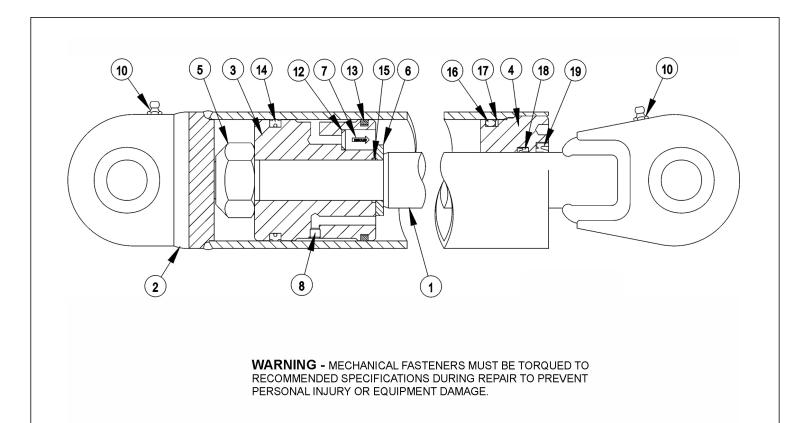


4 06501607 1 CYLINDER HEAD

5 6T0172 1 CLEVIS

----- 06501560 1 SEAL REPAIR KIT (ITEMS 6 THROUGH 12)

#### **4IN X 15IN CYLINDER BREAKDOWN**

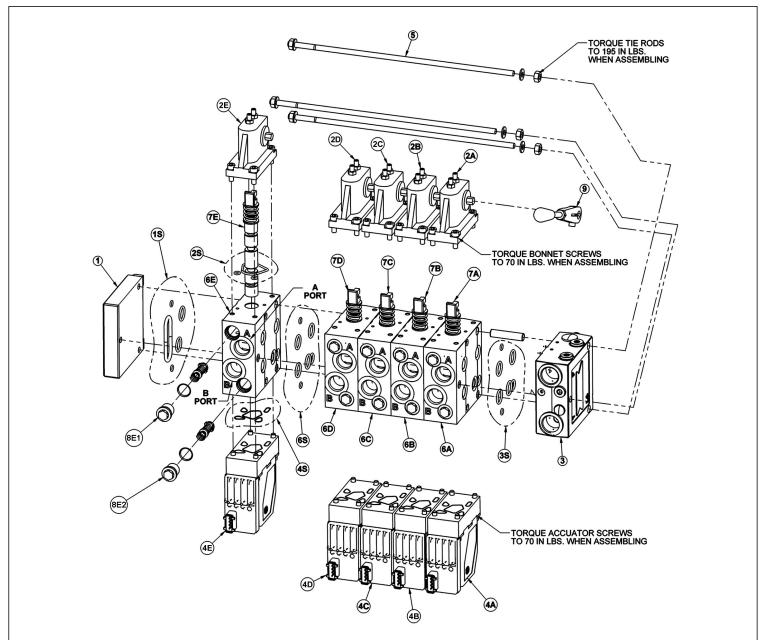


ITEM	PART NO.	QTY.	DESCRIPTION
	32365	-	CYLINDER,WELDED,4" X 15"
1	06501604	1	PISTON ROD ASSY
2	06501605	1	BUTT & TUBE ASSY
3	06501606	1	PISTON
4	06501607	1	GLAND
5	06501753	1	LOCK NUT,1-1/4"-12 UNF (TORQUE TO 510 FT.LB.)
9	33757	1	SEAL KIT, PACKING (ITEMS 12 THRU 19)
10		2	GREASE ZERK
12		1	O - RING
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	2	SPHERICAL BEARING (NOT SHOWN)

#### **NOTES 1**

## NOTES

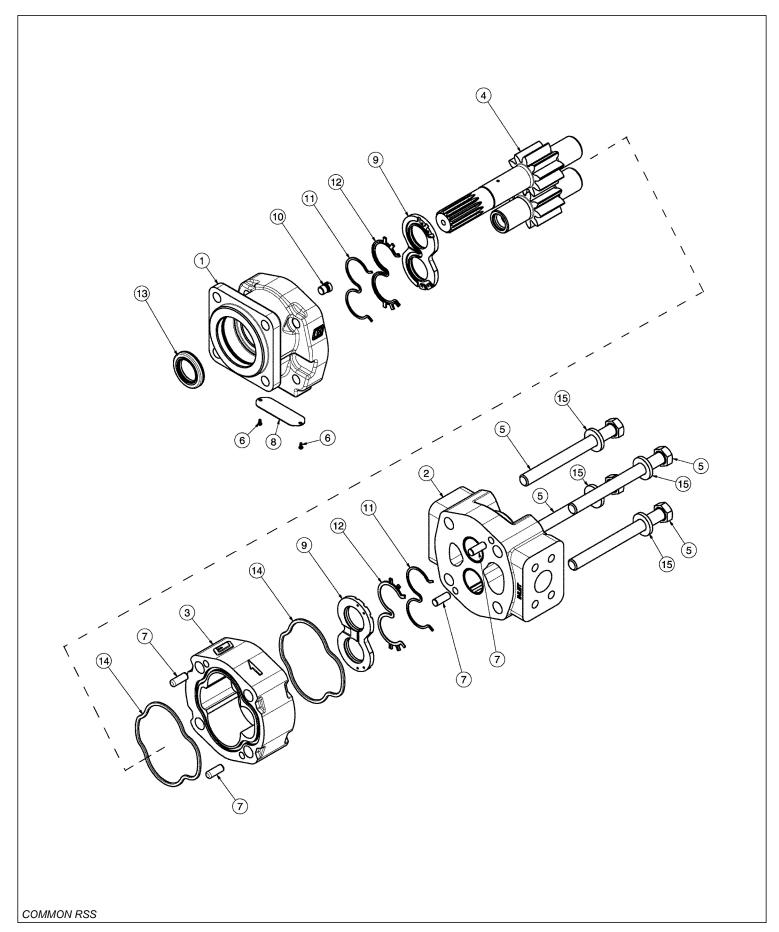
#### **5 SPOOL ELECTRONIC VALVE**



ITEM	PART NO.	QTY.	DESCRIPTION
	06502096	-	VLV,5SP,32PVG,SIDE STOW
1	06502074	1	END PLATE
1 <b>S</b>	06505013	1	END PLATE SEAL KIT
2		5	BONNET
2S	06505042	1	BONNET SEAL KIT
2A	42197	1	MAIN BOOM BONNET
2B	42197	1	SECONDARY BOOM BONNET
2C	42197	1	DECK ROLL BONNET
2D	42197	1	BOOM SWIVEL BONNET
2E	42197	1	DECK SHIELD BONNET

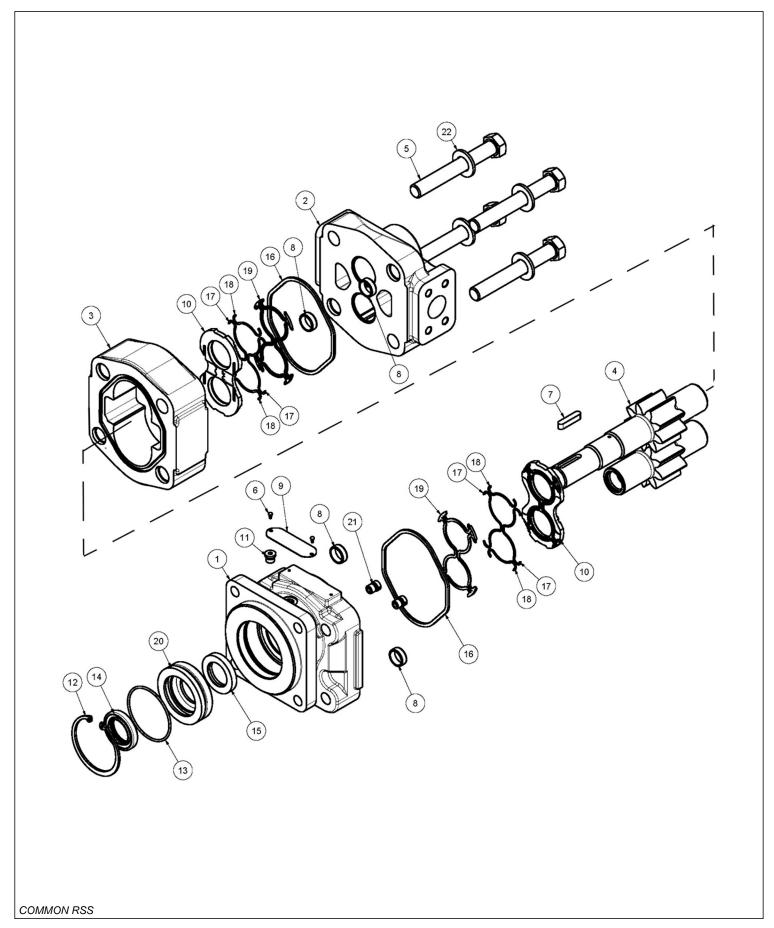
ITEM	PART NO.	QTY.	DESCRIPTION	
3	34308	1	INLET SECTION	
3S	06505013	1	INLET SECTION SEAL KIT	
4		5	ELECTRONIC ACCUATOR	
4A	06502101	1	MAIN BOOM ELECTRONIC ACCUATOR	
4B	06502101	1	SECONDARY BOOM ELECTRONIC ACCUATOR	
4C	06502100	1	DECK ROLL ELECTRONIC ACCUATOR	
4D	06502101	1	BOOM SWIVEL ELECTRONIC ACCUATOR	
4E	06502099	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 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	

## FRONT PUMP BREAKDOWN



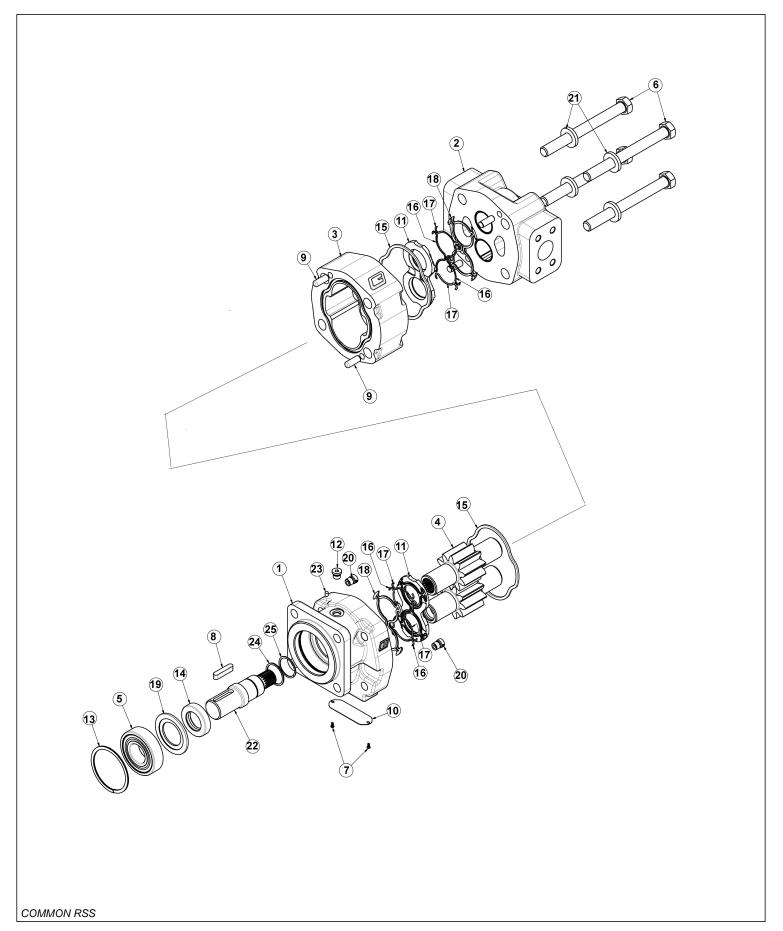
ITEM	PART NO.	QTY.	DESCRIPTION
	23152	1	PUMP ASSEMBLY,1-3/4",COMPLETE
1	22766	1	SHAFT END COVER
2	22779	1	PORT END COVER
3	22774	1	GEAR HOUSING,1-3/4"
4	22771	1	GEAR SET
5	23824	4	CAPSCREW
6	06504078	2	SCREW, DRIVE
7	22773	4	DOWEL PINS
8	06504077	1	NAMEPLATE
9	22770	2	THRUST PLATE
10	22767	1	PLUG
11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

### **ROTARY MOTOR BREAKDOWN**



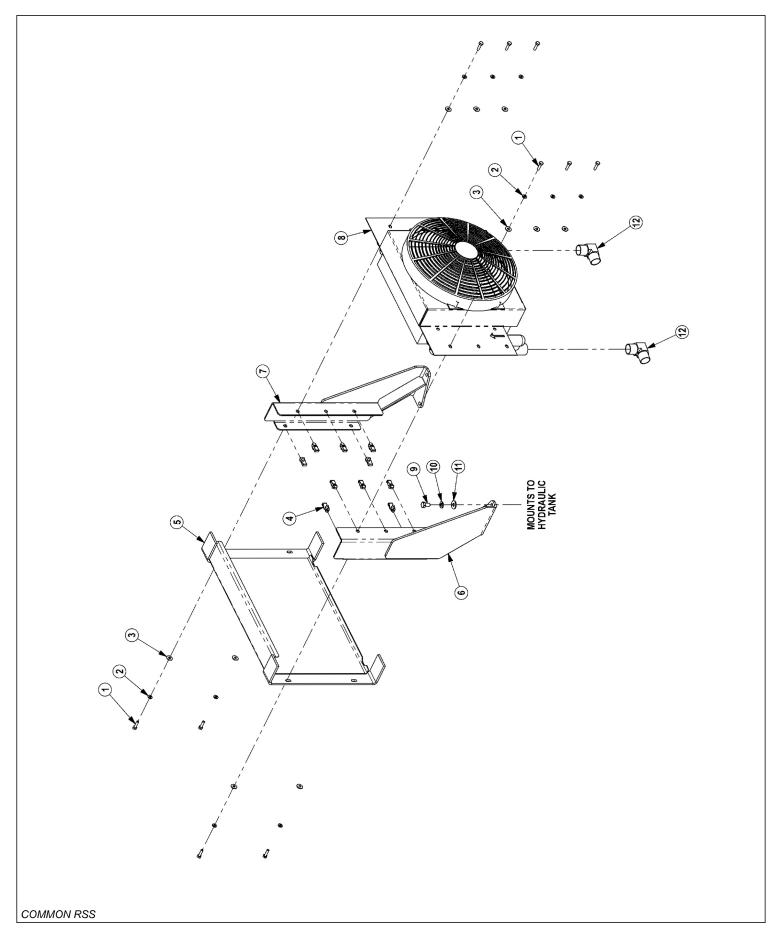
ITEM	PART NO.	QTY.	DESCRIPTION
	06504011	-	MOTOR ASSEMBLY, TRB60
1	22790	1	END,COVER
2	06504088	1	HOUSING, PEC
3	06504062	1	HOUSING, GEAR, TRB60
4	06504090	1	SET, GEAR SHAFT
5	06504104	4	CAP SCREW, TRB60
6	06504078	2	SCREW, DRIVE
7	06504092	1	KEY
8	06504093	4	PIN, DOWEL
9	06504094	1	NAME PLATE
10	06504095	2	THRPL
11	2961940	1	PLUG, ODT
12	2962200	1	RING, SNAP
13	06504096	1	O RING
14	6T5101	1	SEAL, LIP
15	06504097	1	SEAL, LIP
16	22797	2	SEAL, SQ-R
17	06504098	4	SEAL, SIDE CHAN
18	06504099	4	SEAL, END CHAN
19	06504100	2	SEAL, BK-UP
20	06504101	1	RTNR, SEAL
21	6T5809	2	CHECK ASS'Y
22	06504102	4	WASHER
	06504103	1	SEAL KIT

## FLAIL MOTOR BREAKDOWN



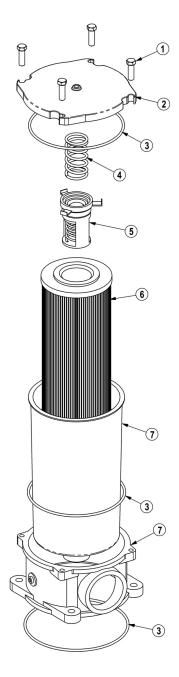
ITEM	PART NO.	QTY.	DESCRIPTION
	06504132	1	MOTOR ASSEMBLY 350 - TBF50, TBF63
1	06504141	1	SHAFT END COVER
2	06504040	1	PORT END COVER
3	06504041	1	GEAR HOUSING
4	06504117	1	MATCHED GEAR SET
5	TF4402	1	BALL BEARING
6	06504043	4	CAP SCREW
7	06504044	2	SET SCREW
8	06504028	1	KEY
9	06504045	4	DOWEL PIN
10		1	NAMEPLATE
11	0763759	1	THRUSTPLATE
12	02961940	1	PLUG, ODT (0.25)
13	TF4401	1	SNAP RING
14	06504142	1	LIP SEAL
15	TF4410	2	GASKET SEAL
16	06504046	4	SIDE SEAL
17	06504047	4	END SEAL
18	TF4407	2	BACK-UP SEAL
19	06504122	1	SEAL RETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
22	06504140	1	SHAFT
23	06504139	1	BREATHER
24	06504121	1	SPACER, BRG
25	06504119	1	SNAP RING
	06504022	1	SEAL KIT

## **COOLER ASSEMBLY - OPTION**



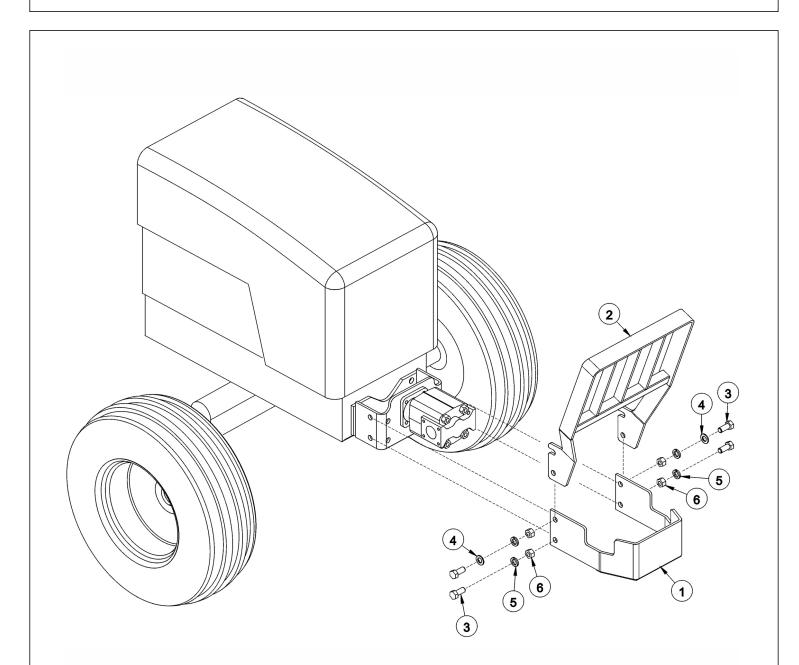
ITEM	PART NO.	QTY.	DESCRIPTION
1	21530	10	CAPSCREW,1/4 X1 NC
2	21986	10	LOCKWASHER,1/4
3	22014	10	FLATWASHER,1/4
4	35176	10	1/4 U-NUT
5	06370015	1	SCREEN,COOLER,FRNT
6	06380006	1	MNT,COOLER,BUMPER TANK,RH
7	06380007	1	MNT,COOLER,BUMPER TANK,LH
8	06510026	1	COOLER, FRONT MNT
	06510029	1	FAN ASSY, ONLY
9	21629	4	CAPSCREW,3/8 X 3/4 NC
10	21988	4	LOCKWASHER,3/8
11	22016	4	FLATWASHER,3/8
12	34117	2	ELBOW,1MOR X 1MJ90,FORGED

## **RESERVOIR TANK FILTER ASSEMBLY**



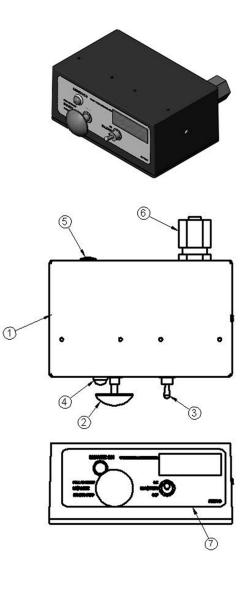
	ITEM	PART NO.	QTY.	DESCRIPTION
		06505044	-	FILTER ASSY SAE 10 MICRON
	1	28583	4	CAPSCREW,8MM X 25MM(1.25 PITCH)
	2	06505045	1	COVER
	3	06505046	1	SEAL KIT
	4	06505047	1	SPRING
	5	06505048	1	BYPASS
	6	35259	1	FILTER,10 MIC,RETURN LINE
	7	06505049	1	CAN/BODY
L				

## PUMP AND GRILL GUARD OPTIONS



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

## MANUAL LIFT VALVE SWITCH BOX



ITEM	PART NO.	QTY.
1	06514013	1
2	35226	1

6T3923

#### DESCRIPTION

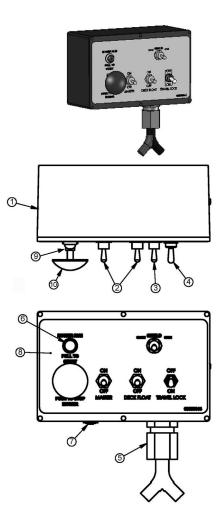
SWBX,ALUM,BLK,06510102
SWITCH, MOWER, COLEHERSEE
SWITCH, MASTER/DECK FLOAT
INDICTATOR LIGHT, ON, RED
BREAKER,10A,SWBX
STRAIN RELIEF,3/4,BLACK,NYLON
DECAL,SWTCHBX,TM/TSF,CG

35227 1 RELAY,DP,DT,12V,LY2F,35226

#### 06510102 SCHEMATIC COMMON GROUND SWITCH BOX SIDE MOWER NOTE: ADD METRIPAK 150 FEMALE PLUG (MALE PINS) W/JUMPER WIRES ≻ ω WHITE WIRE -SWITCH SW1 PUSH - PULL 16AWG) в Ġ MOWE RUN R 8" Θ Θ BRAKE VALVE А M1 50" 5 Q BATTERY GROUND в (BLACK WIRE 14AWG) 12 118" 4 13 BATT GROUND 60" 12" (BLACK WIRE 14AWG) SW2 MASTER OFF ON DWN UP 10A BREAKER **G**<sup>1</sup> IGNITION +12V (RED WIRE 14AWG) 2 Ð 3 Θ 4 Θ 70' 5 (GREEN WIRE 16AWG) Ð 6 Θ NEUTRAL SWITCH (GREEN WIRE 16AWG) SEE DRAWING # 06515000 FOR A FULL DESCRIPTION OF ALL CONNECTORS

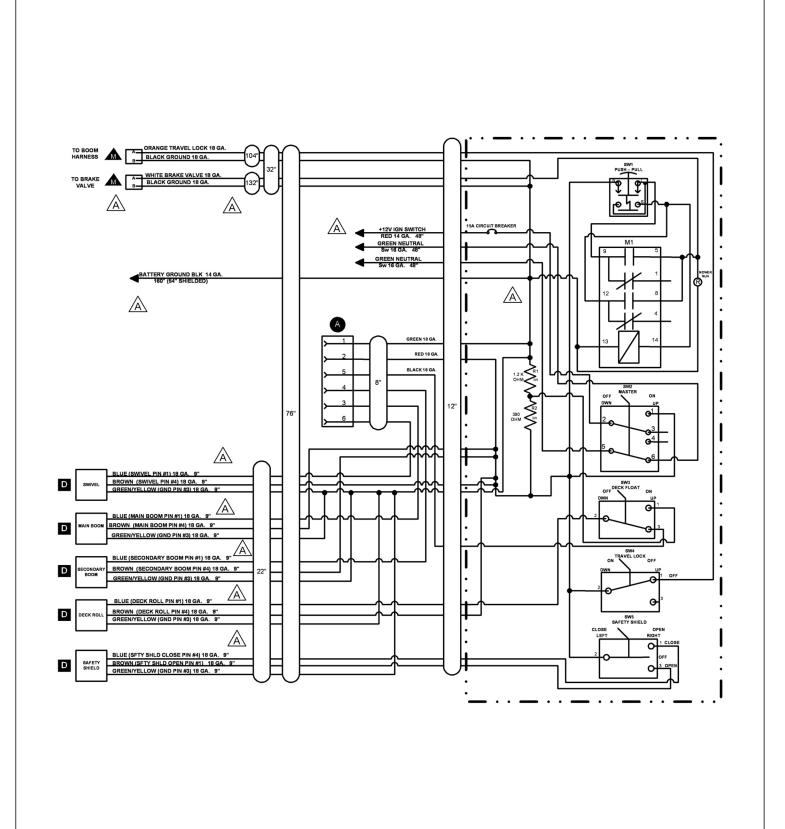
MANUAL LIFT VALVE SWITCH BOX SCHEMATIC

## **ELECTRONIC LIFT VALVE SWITCH BOX**

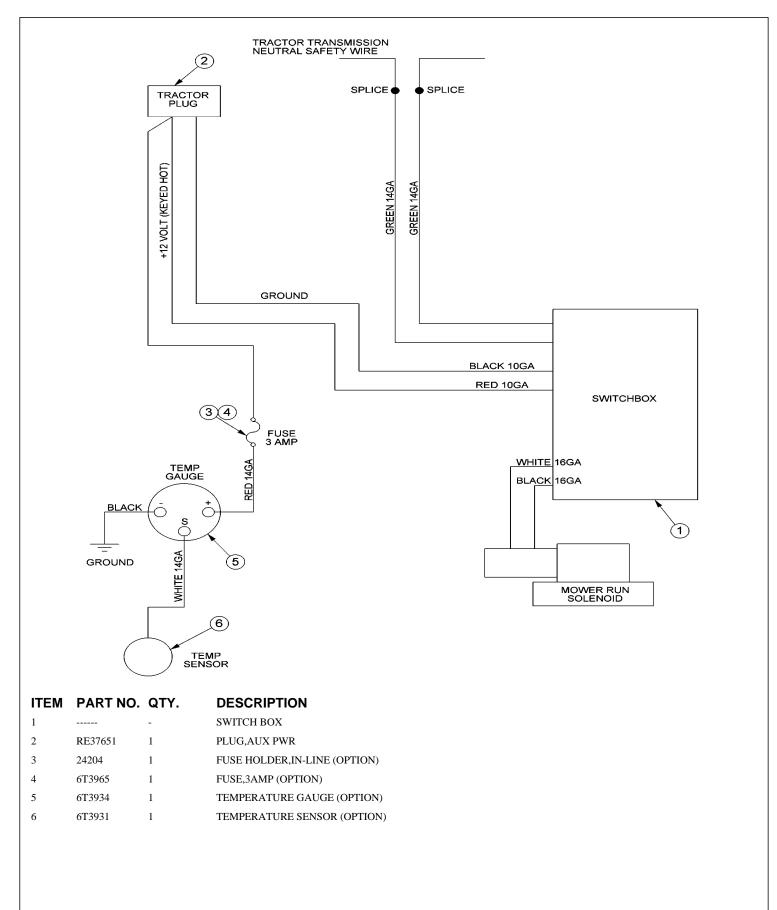


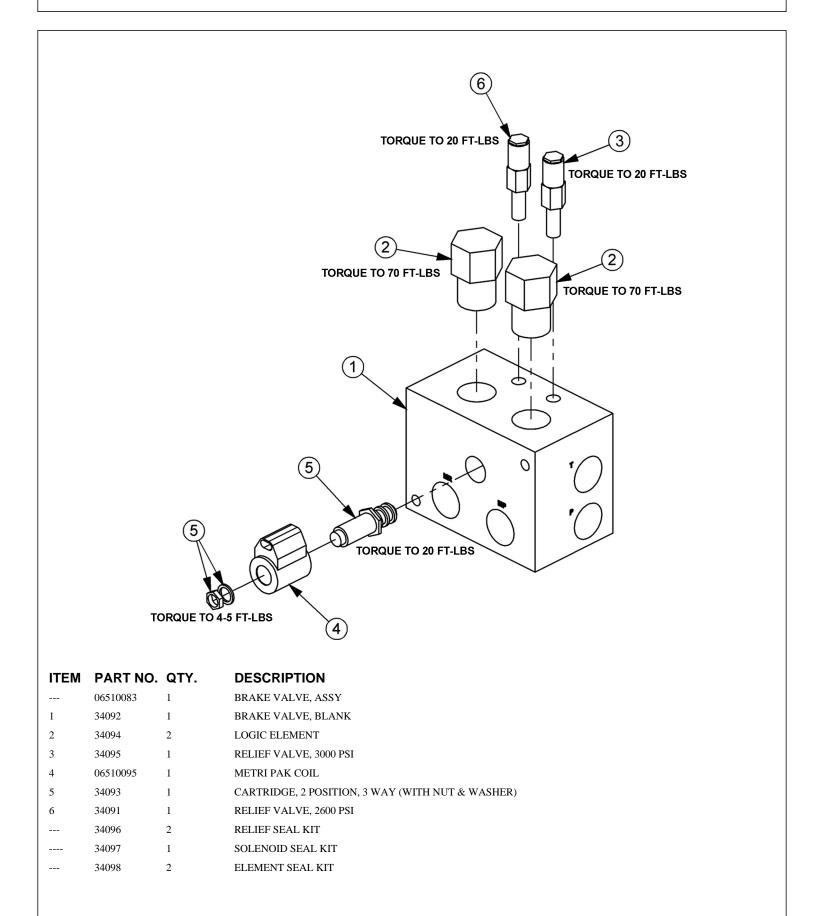
ITEM	PART NO.	QTY.	DESCRIPTION
1	06510196	1	SWBX,ASSY
2	33811	2	SWITCH, MASTER/DECK FLOAT
3	33813	1	SWITCH,SFTY SHIELD
4	34532	1	SWITCH, TRVL LCK
5	34540	1	STRAIN RELIEF,3/4",BLACK,NYLON
6	6T3923	1	INDICTATOR LIGHT, ON, RED
7	06514006	1	BREAKER,15A,SWBX
8	06550044	1	DECAL,SWBX,06510047
9	35226	1	SWITCH, MOWER, COLEHERSEE
10	35227	1	RELAY, DP, DT, 12V, LY2F, 35226

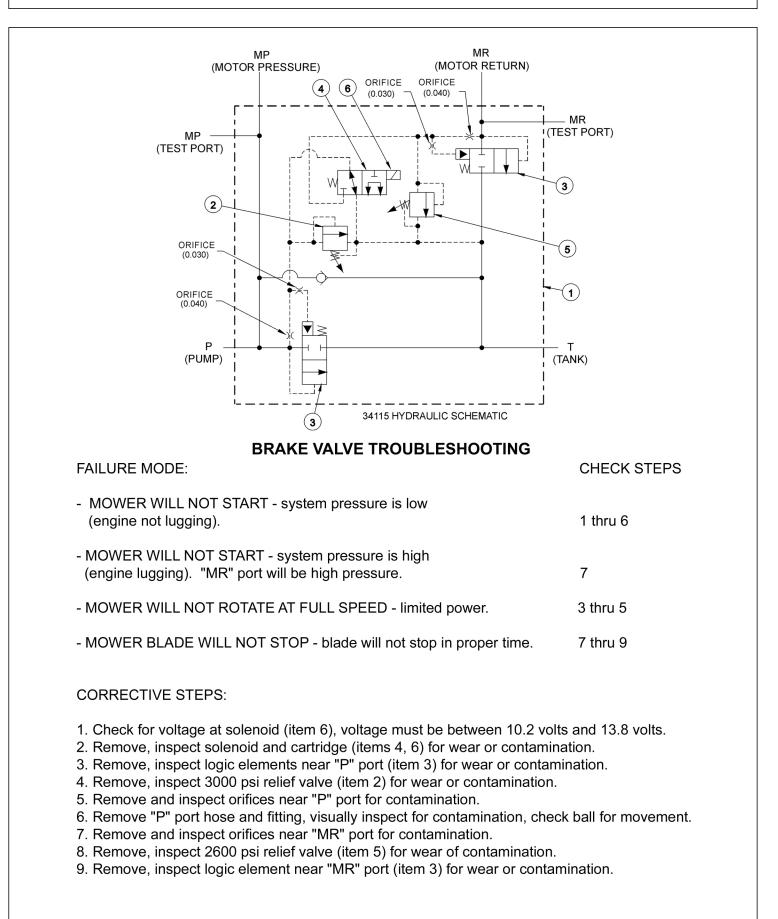
#### ELECTRONIC LIFT VALVE SCHEMATIC



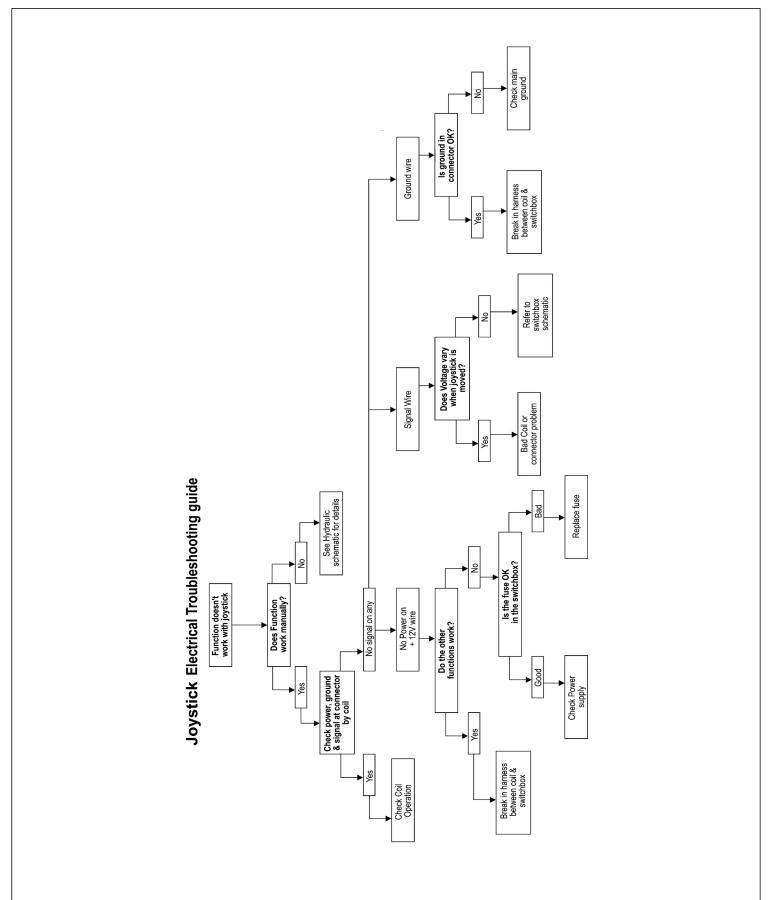
#### SOLENOID SWITCH BOX AND WIRING

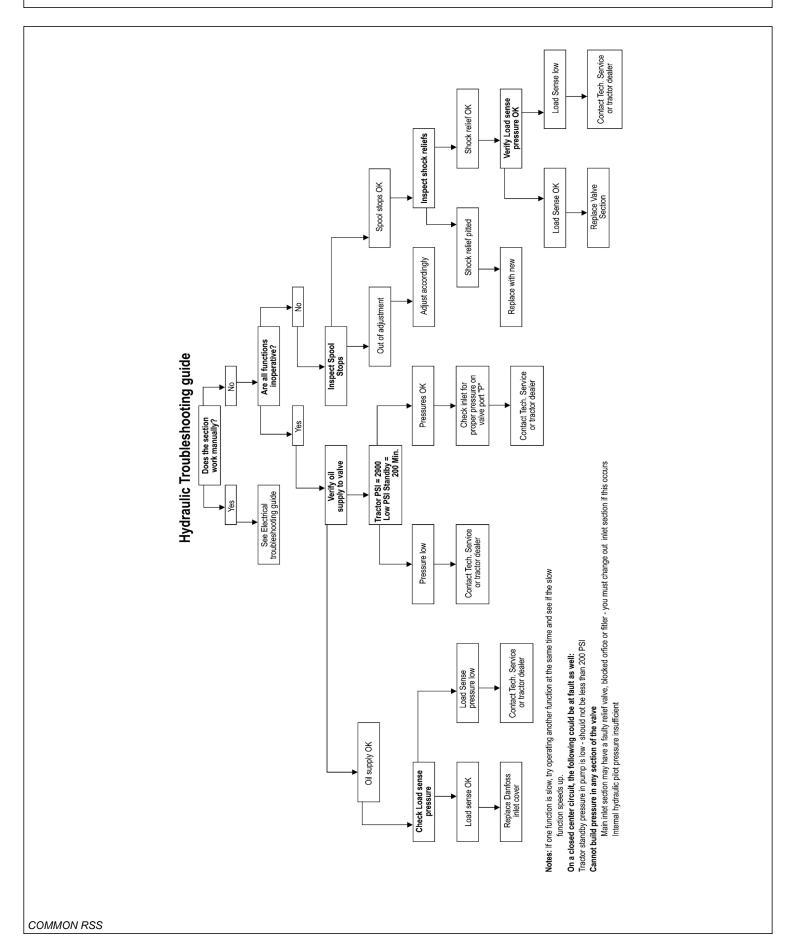






#### ELECTRICAL TROUBLESHOOTING GUIDE





#### HYDRAULIC TROUBLESHOOTING GUIDE

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Parts Section 6-56

#### 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 VoltagePin #2 – Signal VoltagePin #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 VoltagePin #2 – Signal VoltagePin #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 VoltagePin #2 – Signal VoltagePin #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.

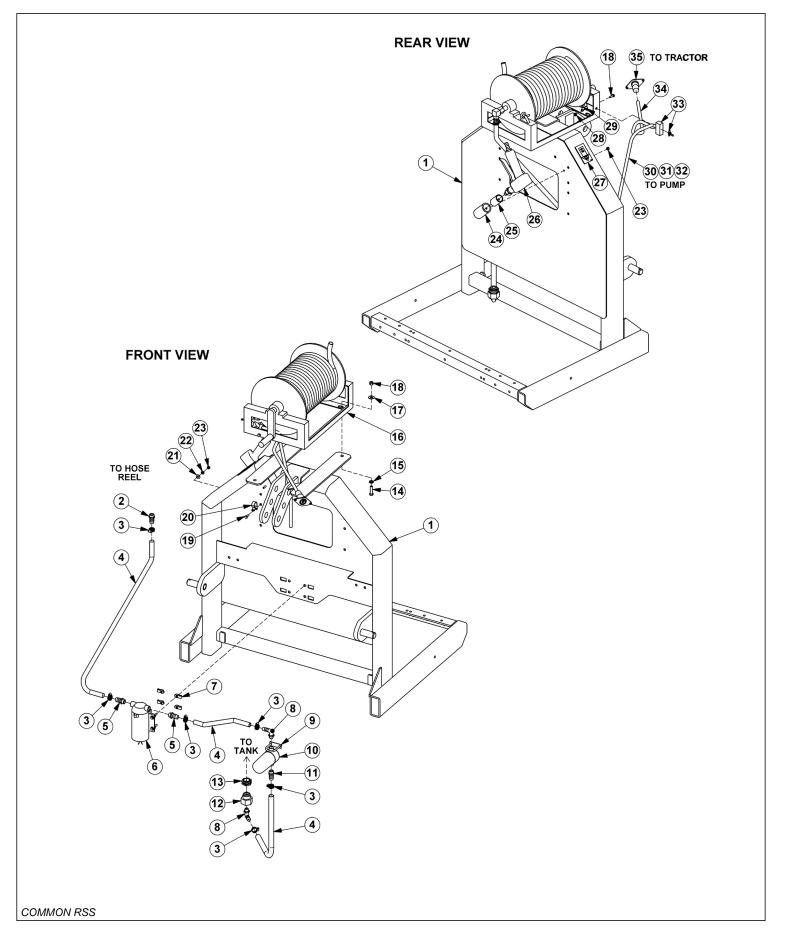
Possible electronic problems.

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

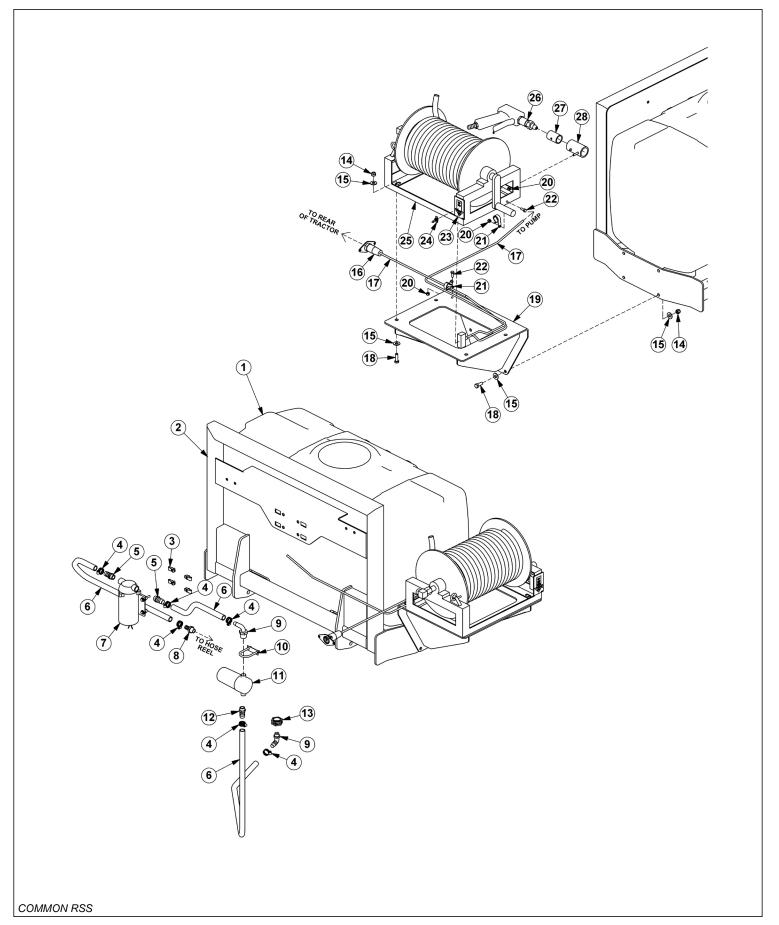
Hydraulic inspection. Install 3 pressure gauges, on the valve inlet (use M port, or tee into hose supplying oil from the pump to the inlet), on the workport that is not operating, and on the LS port.
With the spools in Neutral
Gear pump – P should be approximately 200 psi, LS = 0, workport – pressure 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.

# FIRE SUPPRESSION SYSTEM SECTION



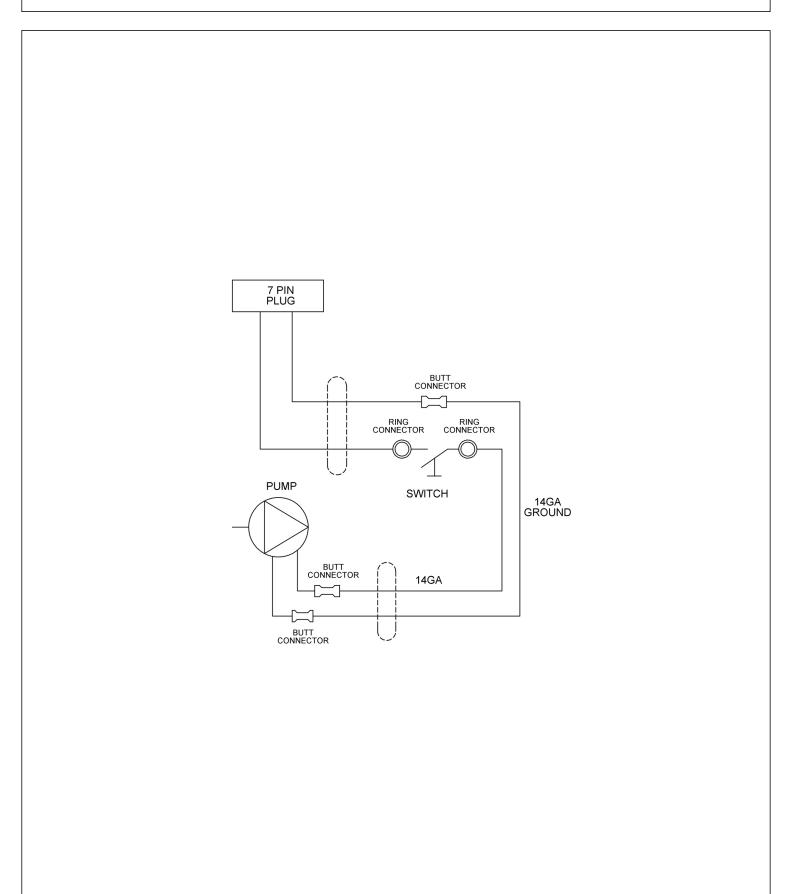
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370137	1	MOUNT,3PNT,FIRE SYS
2	06503108	1	FITTING,1/2"BARB X 1/2"MP
3	35091	6	CLAMP,HOSE,#6
4	06520469	5	HOSE,1/2",BULK (FEET)
5	06503168	2	SWIVEL,1/2"STR,POLY
6	06520359	1	PUMP,LARGE
7	35176	4	U-NUT,1/4"
8	06520367	2	ELBOW,1/2"BARB X 1/2"MP,POLY
9	27329	1	U-BOLT,1/4"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

#### FIRE SUPPRESSION FRONT MOUNT



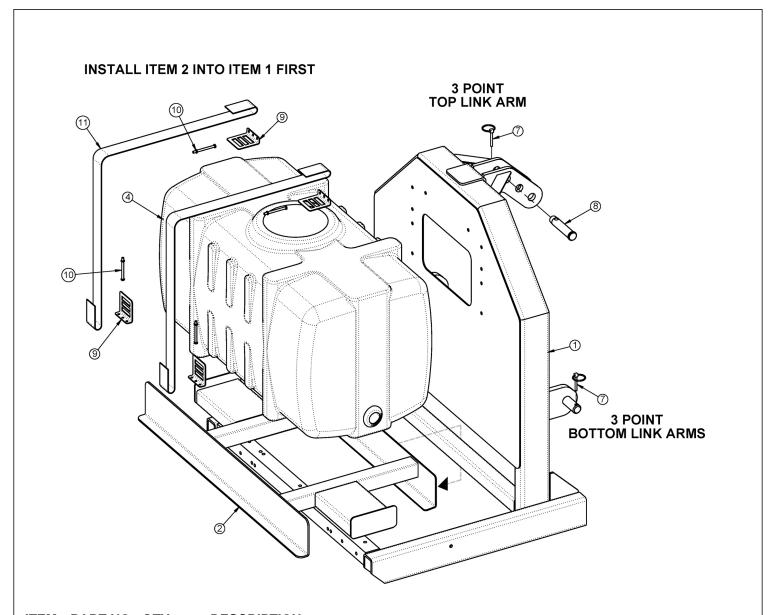
1       06520342       1       TANK,50 GALLON         2       06370204       1       MNT,TANK,FRNT,50 GALLON         3       35176       4       U-NUT,1/4,3/4 TO CENTER         4       35091       6       CLAMP,HOSE,#6         5       06503168       2       SWIVEL,1/2 STR,POLY         6       06520469       8       HOSE,1/2,SPRAYER         7       06520359       1       PUMP,FIRE KIT         8       06503108       1       FITTING,1/2"BARB X 1/2"MP         9       06520367       2       ELBOW,1/2MPX1/2BARB,POLY         10       27329       1       U-BOLT,1/4X2X1         11       06520361       1       FILTER,FIRE KIT,RAILKUT	ITEM	PART NO.	QTY.	DESCRIPTION
3       35176       4       U-NUT,1/4,3/4 TO CENTER         4       35091       6       CLAMP,HOSE,#6         5       06503168       2       SWIVEL,1/2 STR,POLY         6       06520469       8       HOSE,1/2,SPRAYER         7       06520359       1       PUMP,FIRE KIT         8       06503108       1       FITTING,1/2"BARB X 1/2"MP         9       06520367       2       ELBOW,1/2MPX1/2BARB,POLY         10       27329       1       U-BOLT,1/4X2X1	1	06520342	1	TANK,50 GALLON
4       35091       6       CLAMP,HOSE,#6         5       06503168       2       SWIVEL,1/2 STR,POLY         6       06520469       8       HOSE,1/2,SPRAYER         7       06520359       1       PUMP,FIRE KIT         8       06503108       1       FITTING,1/2"BARB X 1/2"MP         9       06520367       2       ELBOW,1/2MPX1/2BARB,POLY         10       27329       1       U-BOLT,1/4X2X1	2	06370204	1	MNT,TANK,FRNT,50 GALLON
5         06503168         2         SWIVEL,1/2 STR,POLY           6         06520469         8         HOSE,1/2,SPRAYER           7         06520359         1         PUMP,FIRE KIT           8         06503108         1         FITTING,1/2"BARB X 1/2"MP           9         06520367         2         ELBOW,1/2MPX1/2BARB,POLY           10         27329         1         U-BOLT,1/4X2X1	3	35176	4	U-NUT,1/4,3/4 TO CENTER
6         06520469         8         HOSE,1/2,SPRAYER           7         06520359         1         PUMP,FIRE KIT           8         06503108         1         FITTING,1/2"BARB X 1/2"MP           9         06520367         2         ELBOW,1/2MPX1/2BARB,POLY           10         27329         1         U-BOLT,1/4X2X1	4	35091	6	CLAMP,HOSE,#6
7         06520359         1         PUMP,FIRE KIT           8         06503108         1         FITTING,1/2"BARB X 1/2"MP           9         06520367         2         ELBOW,1/2MPX1/2BARB,POLY           10         27329         1         U-BOLT,1/4X2X1	5	06503168	2	SWIVEL,1/2 STR,POLY
8         06503108         1         FITTING,1/2"BARB X 1/2"MP           9         06520367         2         ELBOW,1/2MPX1/2BARB,POLY           10         27329         1         U-BOLT,1/4X2X1	6	06520469	8	HOSE,1/2,SPRAYER
9         06520367         2         ELBOW,1/2MPX1/2BARB,POLY           10         27329         1         U-BOLT,1/4X2X1	7	06520359	1	PUMP,FIRE KIT
10 27329 1 U-BOLT,1/4X2X1	8	06503108	1	FITTING,1/2"BARB X 1/2"MP
	9	06520367	2	ELBOW,1/2MPX1/2BARB,POLY
11 06520361 1 FILTER,FIRE KIT,RAILKUT	10	27329	1	U-BOLT,1/4X2X1
	11	06520361	1	FILTER, FIRE KIT, RAILKUT
06520351 1 STRAINER,40 MESH		06520351	1	STRAINER,40 MESH
12 06520349 1 FITTING,BARB,HOSE,WETCUT	12	06520349	1	FITTING,BARB,HOSE,WETCUT
13 06520346 1 FITTING,BULKHEAD	13	06520346	1	FITTING,BULKHEAD
14 21627 8 NYLOCK NUT,3/8 NC	14	21627	8	NYLOCK NUT,3/8 NC
15 22016 16 FLATWASHER,3/8,GR8	15	22016	16	FLATWASHER,3/8,GR8
16 06510255 1 PLUG,7PIN,TRCTR	16	06510255	1	PLUG,7PIN,TRCTR
17 06510256 22 WIRE,14GA,4WIRE (FEET)	17	06510256	22	WIRE,14GA,4WIRE (FEET)
18 21631 8 CAPSCREW,3/8X1 1/4, NC,GR8	18	21631	8	CAPSCREW,3/8X1 1/4, NC,GR8
19 06370207 1 MNT,FIRE SUPPRESSION	19	06370207	1	MNT, FIRE SUPPRESSION
20 21527 3 NYLOCK NUT,1/4 NC	20	21527	3	NYLOCK NUT,1/4 NC
21 06510257 2 CLAMP,3/8X1/4,INS	21	06510257	2	CLAMP,3/8X1/4,INS
22 21529 2 CAPSCREW,1/4 X 3/4 NC	22	21529	2	CAPSCREW,1/4 X 3/4 NC
236T32221DECAL,CONTROL,ON-OFF SWITCH	23	6T3222	1	DECAL,CONTROL,ON-OFF SWITCH
24 PT3905A 1 SWITCH,MOWER	24	PT3905A	1	SWITCH, MOWER
25 06520360 1 HOSE REEL,FIRE KIT,RAILKUT	25	06520360	1	HOSE REEL,FIRE KIT,RAILKUT
26 06520366 1 GUN,FIRE KIT,RAILKUT	26	06520366	1	GUN,FIRE KIT,RAILKUT
27 06430090 1 SLEEVE,GUN,FIRE SYS	27	06430090	1	SLEEVE,GUN,FIRE SYS
28 06370121 1 HOLSTER,FIRESYS,RAILKUT	28	06370121	1	HOLSTER, FIRESYS, RAILKUT

#### FIRE SUPPRESSION SYSTEM ELECTRICAL SCHEMATIC



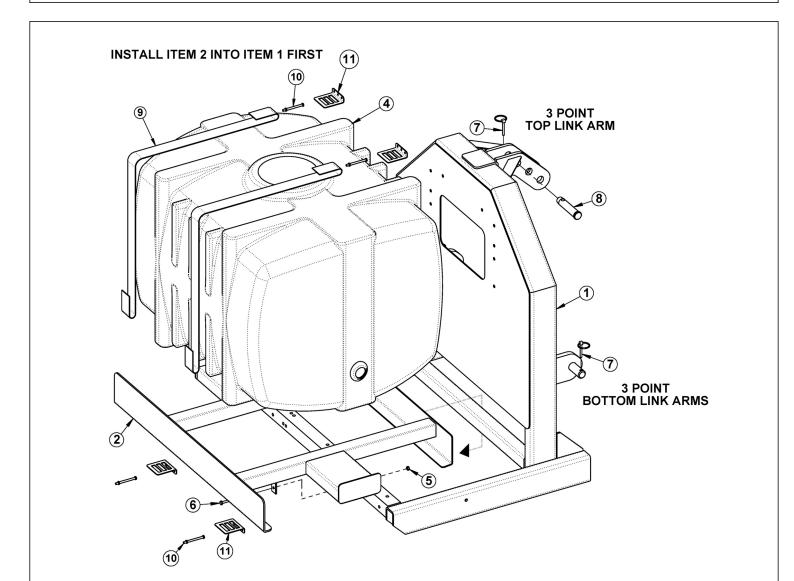
## WETCUT SECTION

#### WETCUT 50 GALLON TANK - 3PNT MOUNT

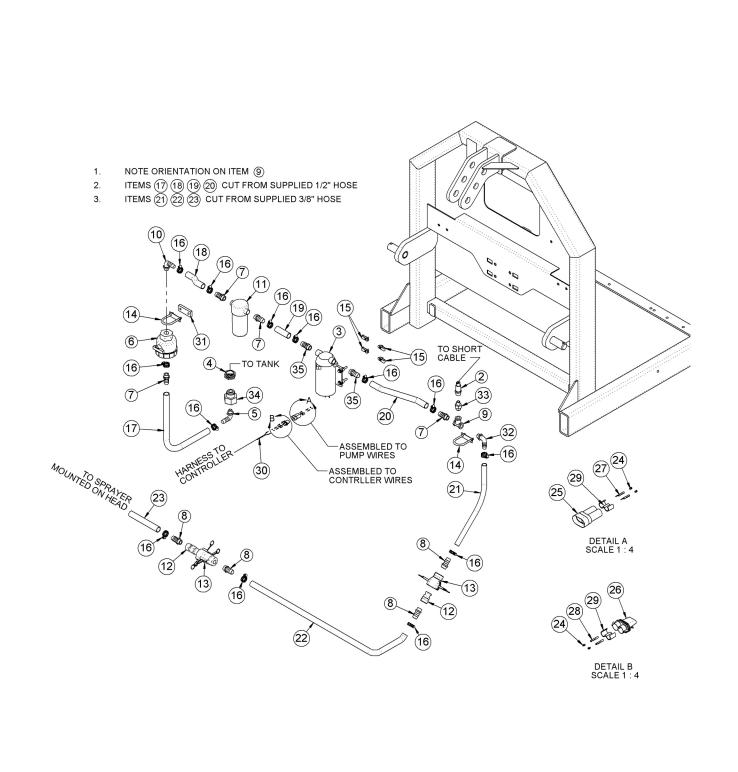


ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	06370136	1	MNT,TANK,50GAL,WETCUT
4	06520342	1	TANK,50GA.,WETCUT
7	RD1032	3	PIN,LYNCH,1/4" X 2"
8	TB1036	1	PIN,SEC BOOM SWIV,1" X 4-11/16"
9	06520343	4	ANCHOR,STRAP,WETCUT
10	06520344	4	BOLT,STRAP,TANK,WETCUT
11	06520345	2	STRAP, TANK, WETCUT

#### WETCUT 100 OR 150 GALLON TANK - 3PNT MOUNT

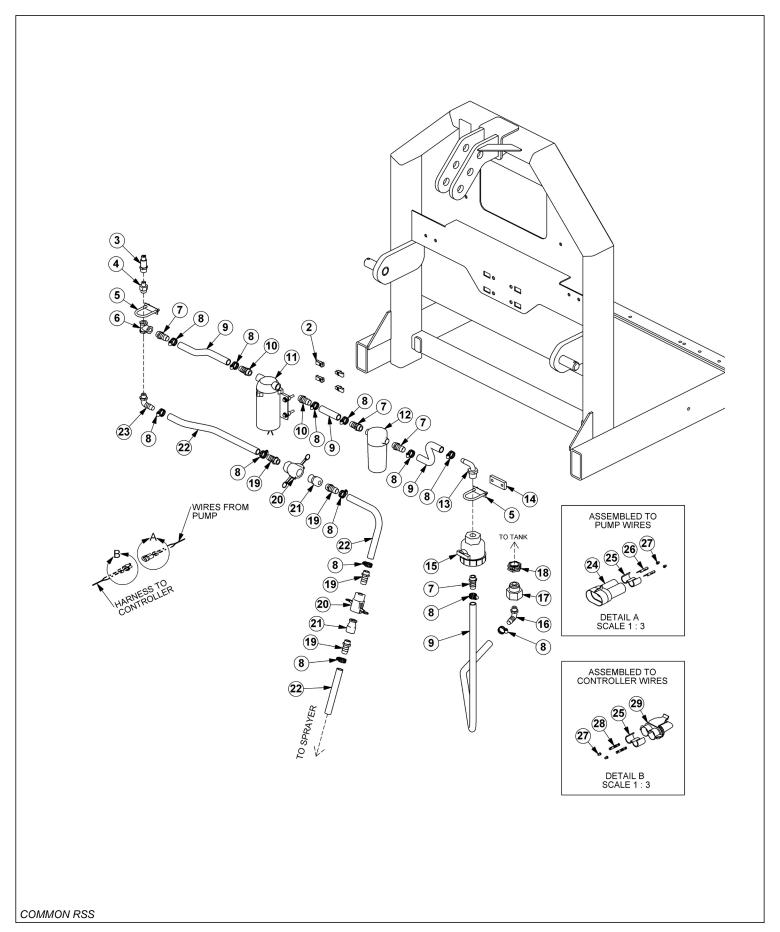


ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	06370138	1	MNT,TANK,100GAL,WETCUT
	06370139	-	MNT,TANK,150GAL,WETCUT
4	06520372	1	TANK,100GA.,WETCUT
	06520373	-	TANK,150GA.,WETCUT
5	21527	2	HEX NUT,NYLOCK,1/4",NC
6	21530	2	CAPSCREW,1/4" X 1",NC
7	RD1032	3	PIN,LYNCH 1/4" X 2"
8	TB1036	1	PIN,SEC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



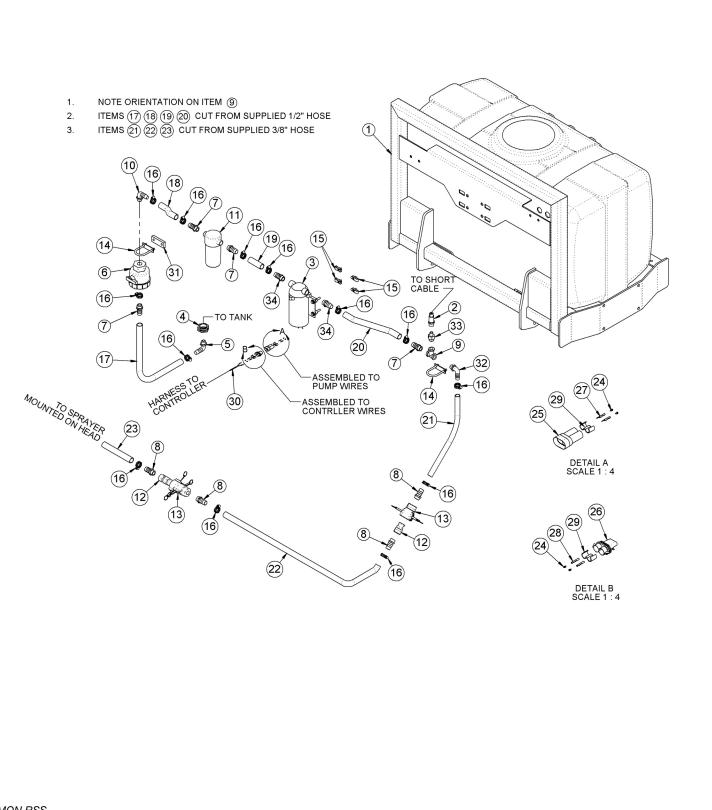
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	06520336	1	CNTRLR,SENSOR,06520333
3	06520341	1	PUMP,WETCUT
4	06520346	1	FITTING,BULKHEAD,WETCUT (50 GALLON TANKS ONLY)
5	06520347	1	FITTING,ELBOW,WETCUT
6	06520348	1	VLV,BALL,WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	06503173	4	FITTING,1/2MP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

#### WETCUT 3PNT PLUMBING - LARGE MOWERS



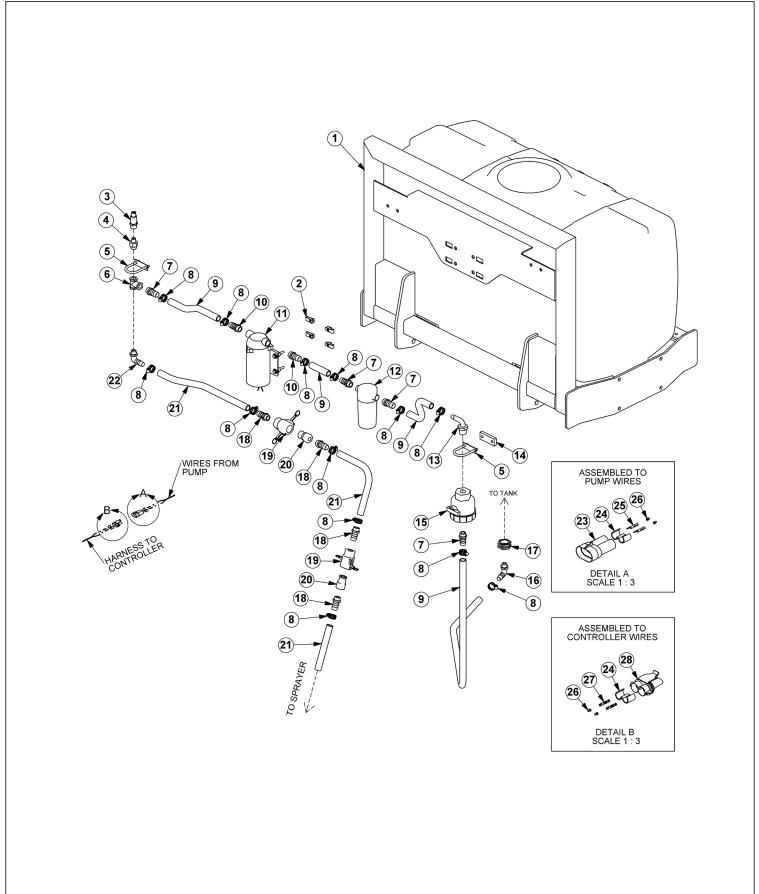
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370128	1	MNT,3PNT,UNI
2	35176	4	U-NUT,1/4,3/4 TO CENTER
3	06520336	1	CNTRLR,SENSOR,06520333
4	06520354	1	BUSHING,REDUCER,WETCUT
5	27329	2	U-BOLT,1/4" X 1" X 2"
6	06520353	1	FITTING,TEE,WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	35091	13	CLAMP, HOSE #6
9	06520469	5	1/2" HOSE (FEET)
10	06503168	2	SWIVEL,1/2" STR
11	06520359	1	PUMP,LARGE
12	06520361	1	FILTER,FIRE KIT,RAILKUT
	06520351	1	STRAINER,40MESH
13	06520367	1	ELBOW,1/2X1/2BARB,POLY
14	06401133	1	SPACER,Ø.31X1.75X.38
15	06520348	1	VLV,BALL,WETCUT
16	06520347	1	FITTING, ELBOW, WETCUT
17	06503169	1	BUSHING,1MPX1/2FP (100 & 150 GALLON TANKS ONLY)
18	06520346	1	FITTING,BULKHEAD,WETCUT (50 GALLON TANKS ONLY)
19	06503173	4	FITTING,BARB,1/2X3/8,WETCUT
20	06520401	2	QUIK CPLR,FEM,1/2,WETCUT
21	06520400	2	QUIK CPLR,MALE,1/2,WETCUT
22	06520316	-	3/8" HOSE (INCLUDED WITH SPRAYER)
23	06503165	1	ELBOW,1/2X3/8BARB,POLY
24	06510052	1	CONN.,BODY,MALE,METRIPACK 150
25	06510056	2	TPA
26	06510054	2	TERMINAL, MALE, 16/18GA. METPAK
27	06510051	4	SEAL,16-18GA,METPAK
28	06510055	2	TERMINAL, FEM, 16/18GA. METPAK
29	06510053	1	CONN.,BODY,FEM,METRIPACK 150

#### WETCUT FRONT PLUMBING - 50IN MOWERS



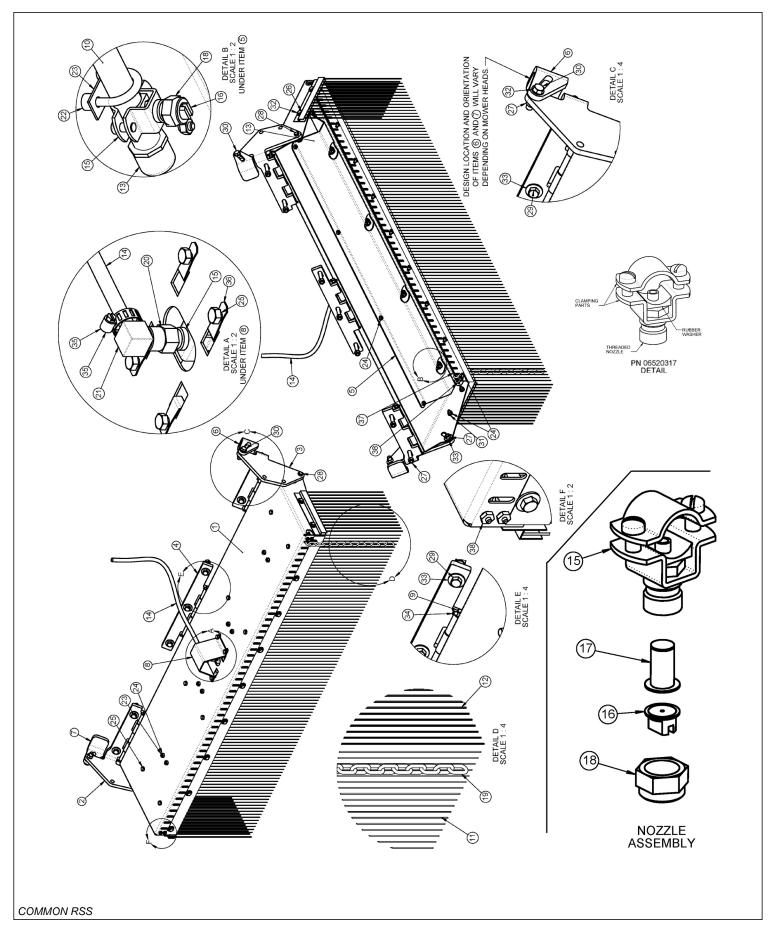
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370204	1	MNT,FRONT,UNI
2	06520336	1	CNTRLR,SENSOR,06520333
3	06520341	1	PUMP,WETCUT
4	06520346	1	FITTING,BULKHEAD,WETCUT
5	06520347	1	FITTING,ELBOW,WETCUT
6	06520348	1	VLV,BALL,WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	06503173	4	FITTING,1/2"MP X 3/8"BARB
9	06520353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

#### WETCUT FRONT PLUMBING - LARGE MOWERS



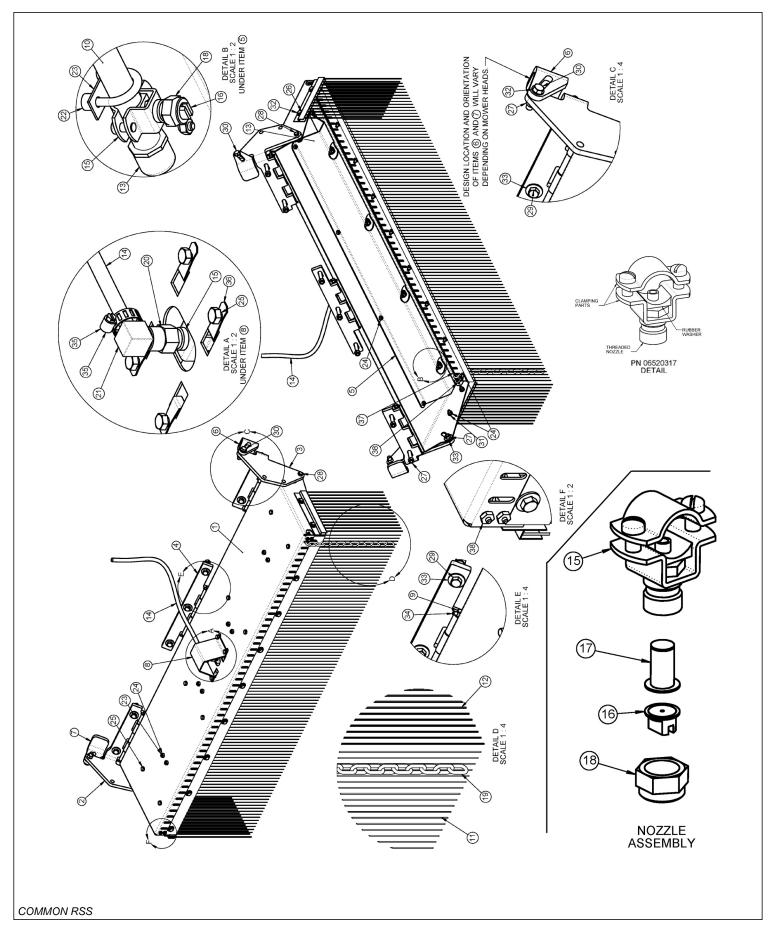
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370204	1	MNT,FRONT,UNIV
2	35176	4	U-NUT,1/4,3/4 TO CENTER
3	06520336	1	CNTRLR,SENSOR,06520333
4	06520354	1	BUSHING, REDUCER, WETCUT
5	27329	2	U-BOLT,1/4" X 1" X 2"
6	06520353	1	FITTING, TEE, WETCUT
7	06520349	4	FITTING,BARB,HOSE,WETCUT
8	35091	13	CLAMP, HOSE #6
9	06520469	5	1/2" HOSE (FEET)
10	06503168	2	SWIVEL,1/2" STR
11	06520359	1	PUMP,LARGE
12	06520361	1	FILTER, FIRE KIT, RAILKUT
	06520351	1	STRAINER,40MESH
13	06520367	1	ELBOW,1/2X1/2BARB,POLY
14	06401133	1	SPACER,Ø.31X1.75X.38
15	06520348	1	VLV,BALL,WETCUT
16	06520347	1	FITTING, ELBOW, WETCUT
17	06520346	1	FITTING,BULKHEAD,WETCUT
18	06503173	4	FITTING,BARB,1/2X3/8,WETCUT
19	06520401	2	QUIK CPLR,FEM,1/2,WETCUT
20	06520400	2	QUIK CPLR,MALE,1/2,WETCUT
21	06520316	-	3/8" HOSE (INCLUDED WITH SPRAYER)
22	06503165	1	ELBOW,1/2X3/8BARB,POLY
23	06510052	1	CONN.,BODY,MALE,METRIPACK 150
24	06510056	2	TPA
25	06510054	2	TERMINAL, MALE, 16/18GA. METPAK
26	06510051	4	SEAL,16-18GA,METPAK
27	06510055	2	TERMINAL, FEM, 16/18GA. METPAK
28	06510053	1	CONN.,BODY,FEM,METRIPACK 150

#### WETCUT 50IN SPRAYER HEAD ASSEMBLY



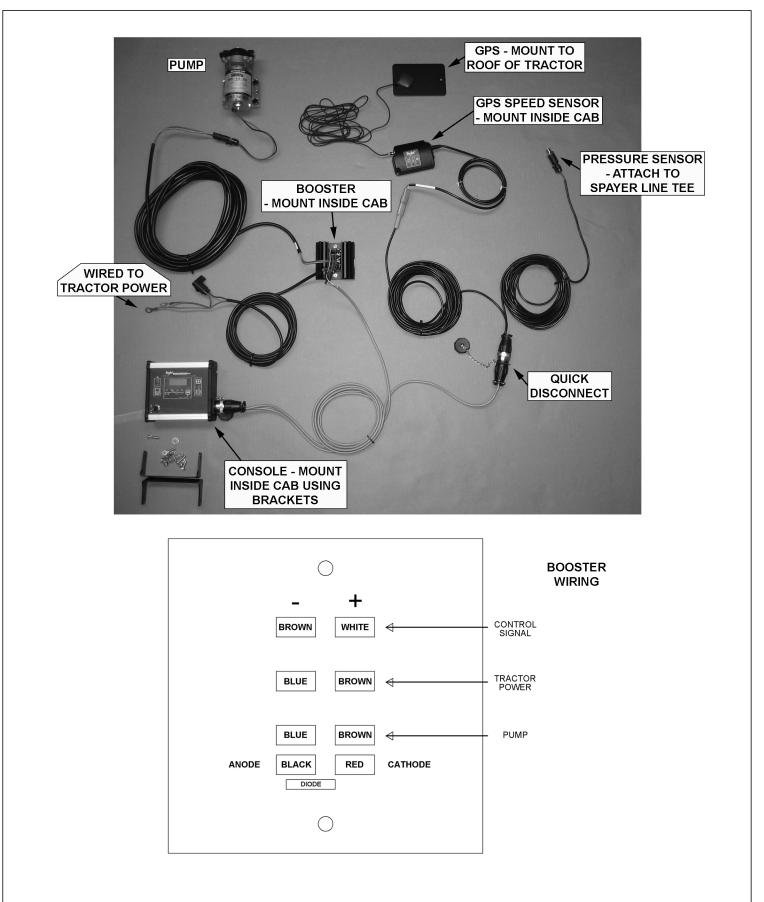
ITEM	PART NO.	QTY.	DESCRIPTION
1	06370105	1	HOOD,SPRAYER
2	06370106	1	HINGE,LH,SPRAYER
3	06370107	1	HINGE,RH,SPRAYER
4	06370108	1	HINGE,CNTR,SPRAYER
5	06410668	1	GUARD,SPRAYER,WETCUT
6	06410753	1	MNT,RH,WET CUT (FLAIL)
	06410942	1	MNT,RH,WET CUT (ROTARY)
7	06410754	1	MNT,LH,WET CUT (FLAIL)
	06410943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

#### WETCUT 60IN SPRAYER HEAD ASSEMBLY



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

#### WETCUT CABLES



## WARRANTY SECTION

Warranty Section 7-1

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### WARRANTY INFORMATION

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

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

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

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

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

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

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

#### **ONE LAST WORD**

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



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

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

### TO THE OWNER / OPERATOR / DEALER



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

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

#### **OWNER REQUIREMENTS:**

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

#### **OPERATOR REQUIREMENTS:**

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



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