

COUGAR ASSEMBLIES

CAT MT475B

Current as of 0F/Fì /201G



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

TO THE OWNER / OPERATOR / DEALER

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

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

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



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









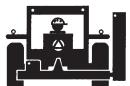




- Study and understand Operator's Manuals, Safety Decals, and Instructional Decals for tractor and implement to prevent misuse, abuse, and accidents. Practice before operating in a confined area or near passersby.
 Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children
- 2. Allow no children on or near folding mower or tractor. Allow no riders on tractor or implement. Falling off may cause serious injury or death from being run over by tractor or mower or contact with rotating blades.
- 3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seat belt securely fastened to prevent injury and possible death from falling off or tractor overturn.
 Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, & Ear Plugs are recommended.
- 4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain area is clear before lowering or folding
- 5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding mowers. Put Booms securely in Transport Rest.
- Folding and Boom Mowers have raised center of gravity. Slow down when turning and on hillsides.
- 6. Make certain that SMV sign, warning lights, and reflectors are clearly visible. Follow local traffic codes.
- 7. Never operate with Cutting Head or Folding Section raised if passersby, bystanders, or traffic are in the area to reduce possibility of injury or death from objects thrown by Blades under Guards or mower structure.
- 8. Before dismounting, secure implement in transport position or lower to ground.
 Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent crushing by entanglement in rotating parts which could cause injury or death.
 Never mount or dismount a moving vehicle. Crushing from runover may cause serious injury or death.



6. USE SMV. LIGHTS. & REFLECTORS.



7. DO NOT OPERATE WITH CUTTER OR WING RAISED.



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

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

FORWARD

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

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

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

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

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

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

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

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

Tiger is a registered trademark.



SAFETY	
	SAFETY
	SECTION
Rengal Room Safety Section 1-1	

General Safety Instructions and Practices

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



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

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



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



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



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



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

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

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



PELIGRO!



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



i LEA EL INSTRUCTIVO!

DANGER!



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

WARNING!



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



WARNING!



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



WARNING!



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

DANGER!



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

ENGINE PTO

STOP

DANGER!



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

(SG-10)



DANGER!



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

(SG-11)



WARNING!



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

12)



DANGER!



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



DANGER!



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



DANGER!



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



WARNING!



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

(SG-16)







CAUTION!



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. *Note:* Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery. (SG-17)



WARNING!



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



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

- 1. Test the tractor at a slow speed and increase the speed slowly.

 Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum safe transport speed for you and this Equipment.
- 2. Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that it is safe to operate at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum safe turning speed for you and this equipment before operating on roads or uneven ground.



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

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

Bengal Boom Safety Section 1-5

WARNING!



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

(SG-20)

WARNING!



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



WARNING!



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



DANGER!



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

(SG-23)

DANGER!



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



DANGER!



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

DANGER!



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



DANGER!



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

WARNING!



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

DANGER!



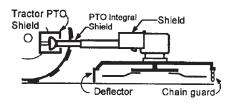
There are obvious and hidden potential hazards in the operation of this Mower. REMEMBER! This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care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



DANGER!



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



DANGER!



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

WARNING!



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



WARNING!



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

WARNING!



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

WARNING!



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

WARNING!



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



DANGER!



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

Bengal Boom Safety Section 1-8

WARNING!



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

DANGER!



Rotary and Flail Mowers are capable under adverse conditions of throwing objects for great distances (100 yards or more) and causing serious injury or death. Follow safety messages carefully. STOP MOWING IF PASSERSBY ARE WITHIN 100 YARDS UNLESS:

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

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



DANGER!



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

(SBM-2)

DANGER!



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



WARNING!



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

(SBM-4)



WARNING!



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

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



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

DANGER!



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

(SBM-7)



DANGER!



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



DANGER!



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



DANGER!



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



DANGER!



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



DANGER!



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



WARNING!



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

WARNING!



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

Tiger mowers use balanced and matched system components for blade carriers, blades, 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)



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











- 1 Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor & flail mower to prevent misuse, abuse, & accidents. Practice before operating mower in a confined area or near passersby.
- Learn how to stop engine suddenly in an emergency. Be alert for passersby and especially children.
 Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off can cause serious injury or death from being runover by tractor or mower or contact with Flail Mower Blades.
- 3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent injury and possible death from falling off or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, and Ear Plugs are recommended.
- 4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent crushing injury or death from sudden dropping or inadvertent operation of controls. Make certain that area is clear before lowering or folding.
- 5. Before transporting, put Lift Lever in detent or full-lift position. Install Transport Safety Devices securely on folding implements. Slow down when turning and on hillsides
- Install **Restrictor in folding circuit to slow down lowering and unfolding if action is faster than is desirable
- 6. Make certain that SMV sign, Warning Lights, and Reflectors are clearly visible. Follow local traffic codes.
- 7. Never operate with Flail Mower or Folding Section raised if passersby, bystanders or traffic are in the area to reduce possibility of injury or death form objects thrown by Blades under Shields or implement structure.
- 8. Before dismounting, secure flail mower in transport position or lower to ground.
- Put tractor in park or set brake, disengage PTO, stop engine, remove key, and wait until noise of rotation has ceased to prevent entanglement in rotating parts which may cause injury or death

Never mount or dismount a moving vehicle. Crushing from runover may cause injury or death.









PART NO. LOCATION

002369 HYDRAULIC TANK



00725746 INSIDE OF CAB







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 if Mower Head or Wing is raised off the ground. (See Manual). Operate only if all Guards-Deflectors are in place and in good condition.

00769737 **MOWER DECK**



PART NO. LOCATION

00758194 MOWER DECK



02962764 MAIN BOOM, SECONDARY BOOM, MAIN FRAME



02962765 MAIN FRAME

02965262 HYDRAULIC TANK

A DANGER

CUTTING BLADES





PART NO. LOCATION

02967668 MOWER DECK

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.

HYDRAULIC TANK



03200285 OUTSIDE OF CAB

02971123

POLYCARBONATE WINDOW

REFER TO OPERATORS MANUAL FOR CLEANING INSTRUCTIONS

22645 INSIDE OF CAB

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

22839 MOWER DECK

P/N22839



PART NO. LOCATION

22840 INSIDE OF CAB

WARNING

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

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. P/N 27001

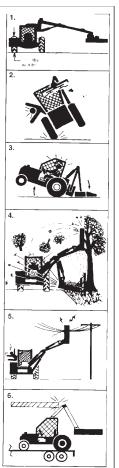
PART NO. LOCATION

27001 **INSIDE OF CAB**

31935 INSIDE OF CAB



- 1. EACH REAR WHEEL MUST HAVE A MINIMUM OF 1500 POLINDS. CONTACT WITH THE SURFACE TO PREVENT LATERAL INSTABILITY AND POSSIBLE TIP-OVER WITH BODILY INJURY. WIDEN WHEEL TREAD AND ADD WEIGHTS IF NEEDED. SEE MANUAL OR CALL TIGER CUSTOMER SERVICE FOR COUNTERWEIGHT PROCEDURE.
- 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 ON FRONT WHEELS TO PREVENT REARING UP, LOSS OF STEERING CONTROL. AND POSSIBLE INJURY.
- 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.
- 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



32707 HYDRAULIC TANK



42350 MOWER DECK

Bengal Boom Safety Section 1-16

ATTENTION

SERVICE HYDRAULIC SYSTEM WITH UNIVERSAL TRACTOR HYDRAULIC OIL.

32708

PART NO. LOCATION

32708 HYDRAULIC TANK

A CAUTION

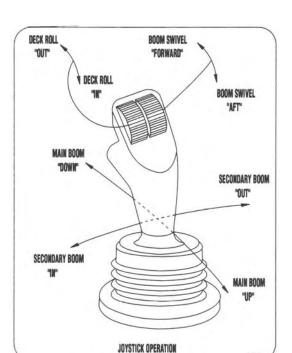
For your safety and to guarantee optimum product reliability, always use genuine TIGER replacement parts. The use of inferior "will-fit" parts will void warranty of your TIGER implement and may cause premature or catastrophic failure which can result in serious injury or death. If you have any questions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

32709 INSIDE OF CAB

33224 MOWER DECK

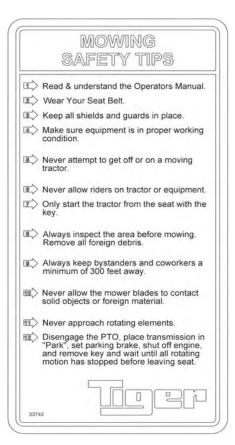


33438 MAIN BOOM



PART NO. LOCATION

33302 INSIDE OF CAB



33743 INSIDE OF CAB



PART NO. LOCATION

RED 42399 REFLECTIVE TAPE MOWER DECK



AMBER 42400 REFLECTIVE TAPE MOWER DECK



6T3217 MOWER DECK



6T3219 INSIDE OF CAB

6T3220 FRONT PUMP MOUNT

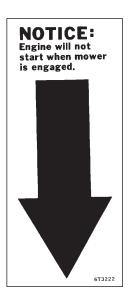
A CAUTION

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.

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**



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.

6T-323

PART NO. LOCATION

6T3230 INSIDE OF CAB

A CAUTION

- PROCEDURE FOR TRAVEL POSITION.

 1. ALLOW CUTTER ASSEMBLY TO COME TO COMPLETE STOP.
- 2. 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.

6T3231

6T3231 INSIDE OF CAB

A CAUTION

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

T-3233

6T3233 HYDRAULIC TANK

A CAUTION

CHECK CRANKSHAFT ADAPTER DAILY FOR TIGHTNESS AND GROMMET WEAR

AS SERIOUS DAMAGE TO RADIATOR MAY RESULT FROM IMPROPER MAINTENANCE.

6T3234

6T3234 INSIDE OF CAB



6T3236 MOWER DECK

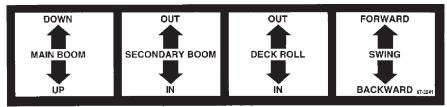
Bengal Boom Safety Section 1-21



WHEN CUTTING HEAVY BRUSH. **BLADE BOLTS SHOULD BE INSPECTED HOURLY AND** RETORQUED TO 600 FT. LBS.

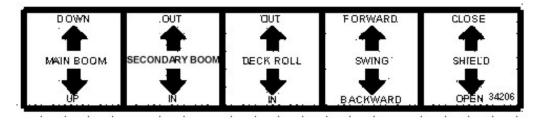
PART NO. **LOCATION** 6T3237 INSIDE OF CAB

6T3237



6T3241 INSIDE OF CAB

6T3241



34206 INSIDE OF CAB

WARNING

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IMPORTANT

• WHEN REPLACING BLADES, IT IS RECOMMENDED THAT ALL BLADES BE REPLACED FOR PROPER BALANCE TO AVOID EXCESSIVE VIBRATIONS WHICH CAN DAMAGE SPINDLE ASSEMBLY.

SEE YOUR OPERATOR'S MANUAL FOR PROPER INSTALLATION INSTRUCTIONS.

67-2243

6T3243 **INSIDE OF CAB**

GREASING INSTRUCTIONS

CUTTER SHAFT BEARING

GREASE EVERY 8 HRS. OR DAILY

NOTE: If unusual environmental conditions exist-extreme temperatures, moisture, or contaminants-more frequent lubrication is required.

6T3249A MOWER DECK

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.

6T3261 MOWER DECK



TB1011 MOWER DECK

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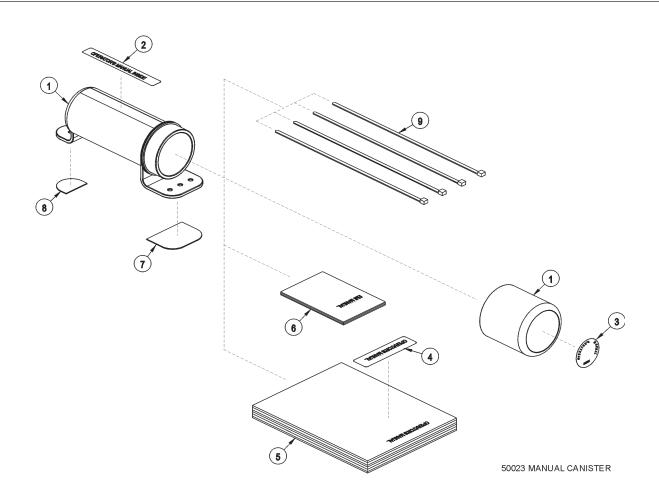
Tiger Corporation

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

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

34852 HYDRAULIC TANK

Tiger PN 34852 O



ITEM	PARTNO.	QTY.	DESCRIPTION
1	50023 00776031 33997	AVAIL 1 1	MANUAL CANISTER COMPLETE 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.

Bengal Boom Safety Section 1-24

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."

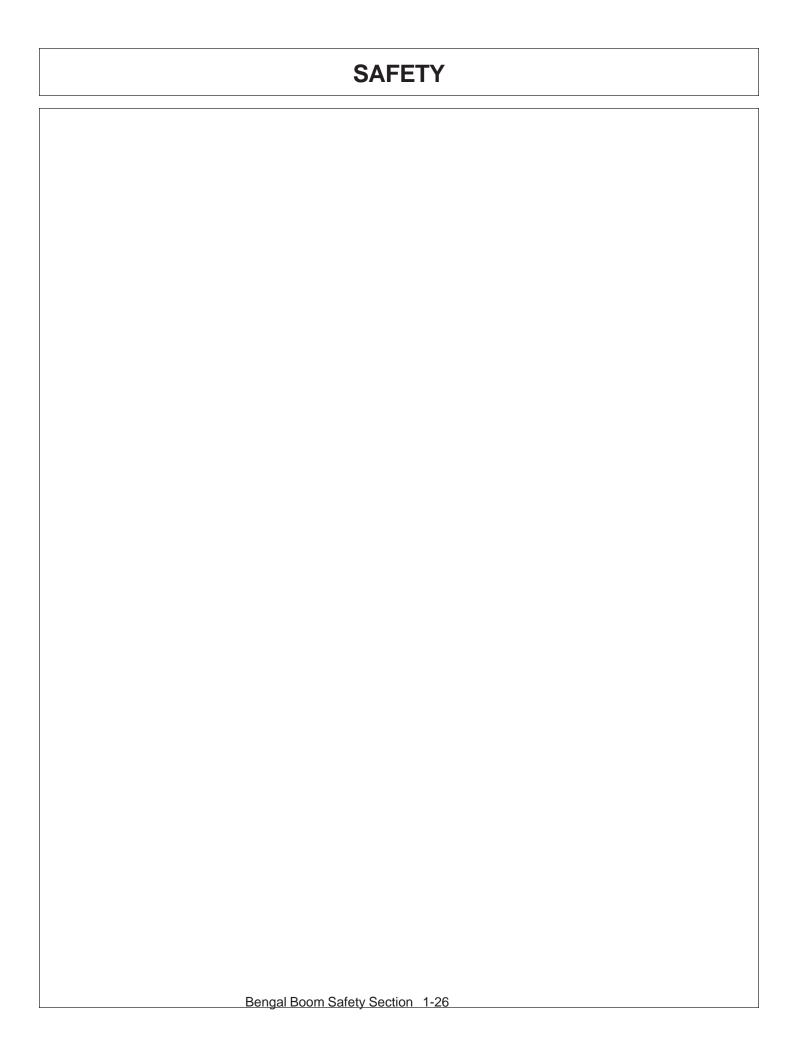
Employer Responsibilities:

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.)



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5 GG9 A 6 @M

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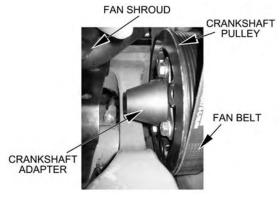
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 (ASM-JD-0001)

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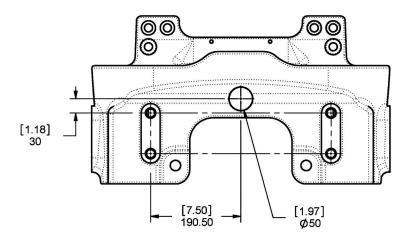
ASSEMBLY

ADJUSTING REAR WHEELS

Raise rear of tractor onto jack-stands. **Follow the instructions in the tractor owners manual #431579M2 for adjusting tires and rims.** Set the right rear tire to 38" from CL (position #7 in manual). Set the Left rear tire to 42" from CL (position #8 in manual) 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-CAT-0001)

FRONT PUMP MOUNTING

On Challenger 400 and 500 series tractors it will be necessary to drill a hole in the bolster on the front of the tractor before installing the pump mounting bracket and pump.



Install the pump mounting bracket on the front of the tractor with the hardware shown in the Parts Section illustration.

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

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

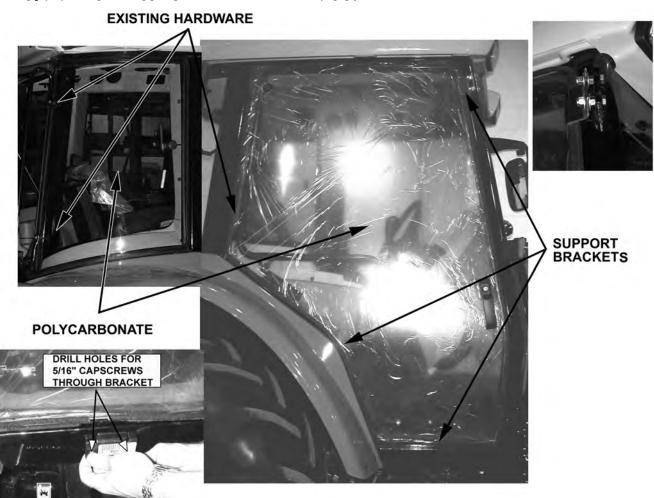
Align pump so that splined coupling can be moved back and forth by hand. Tighten pump mounting bolts in succession rechecking for spline coupling movement. Remove the pump mounting bracket bolts one at a time and apply a thread locking agent. Tighten these bolts in succession, again checking for free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

CAUTION: DO NOT START THE TRACTOR UNTIL ALL HOSES ARE ATTACHED AND TANK IS FILLED WITH PROPER OIL! STARTING THE TRACTOR AT THIS TIME WILL CAUSE SERIOUS DAMAGE TO THE PUMP. (ASM-CAT-0002rev)



5 GG9 A 6 @M

DC @M7 5 F 6 CB5 H9 'G5: 9 HM K =B8 CK



9L<5I GHACI BHB;



A5=B: F5A9 =BGH5 @@5H=CB

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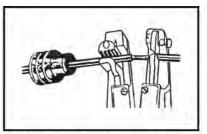
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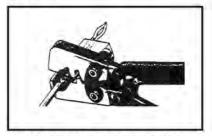
(ASM-C-0009)



Apply seal to cable, before stripping insulation.



Align seal with cable insulation.

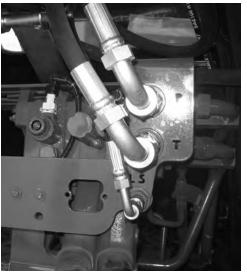


3. Put terminal in crimping tool, then



4. Crimp and visually inspect for a good

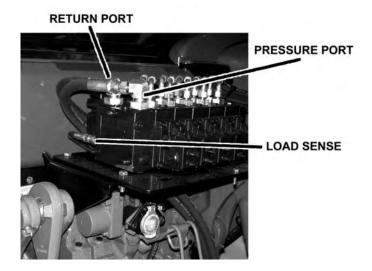
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(ASM-C-0089)**Á**

DANFOSS VALVE



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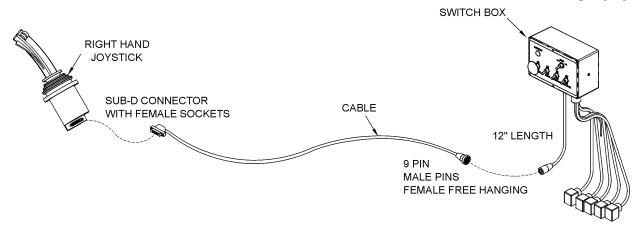
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A CAUTION

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(Note: Extend secondary boom completely; roll deck to be level with ground, and lower main boom until deck is on ground. Now index main boom "up" function and determine the time required for main boom to rise completely.)

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

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6 CCA KÁÁÁ %GEÁÚ [¦ dÊÓ [[{ÁÚ čK Ì ËF€ÂÛ^& [}å•

(Position main boom full up, roll deck out until deck cylinder is fully retracted, and bring secondary boom in completely. Then index the secondary boom "out" function and determine the time required for boom to extend out completely.)

%Ó +ÁÚ[¦dÊÓ[[{ÁQìK ÌËF€ÁÛ^&[}å•

(Position the main boom full up, roll deck out until deck cylinder is fully retracted, and extend secondary boom completely. Then index the secondary boom "in" function and determine the time required for boom to come in.)

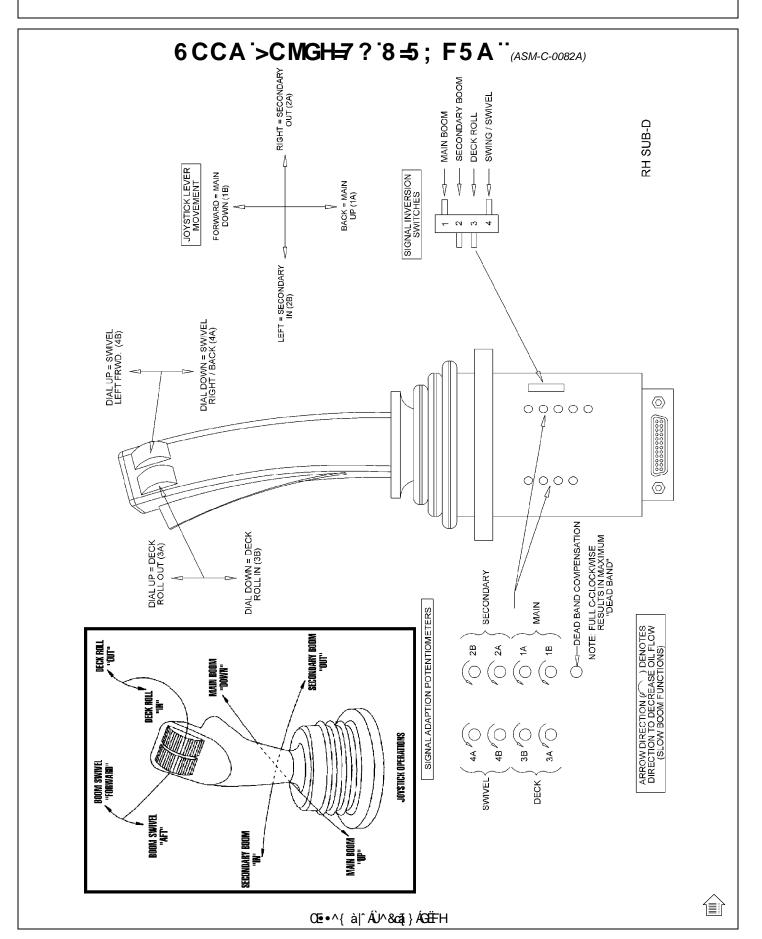
(Raise main boom to vertical, extend secondary boom out slightly so that deck can be articulated without contacting the main boom, and roll deck in until deck cylinder is completely extended. Then index the deck roll "out" function and determine the time required for the deck to roll out.)

"MOHÁU[¦ ŒÖ^&\ ÁQ KÁWWWWWWWWWWW a* ^ OĀ ĒJ ÁÙ^&[} å• ÁQa ` OÖU ÁÞUVÁ • ^ Æða ãAÛ&\^, D (Raise main boom to vertical, extend secondary boom out slightly so that deck can be articulated without contacting the main boom, and roll deck out until deck cylinder is completely retracted. Then index the deck roll "in" function and determine the time required for the deck to roll in.)

6CCA

GK = 19 @ %GEÁU[| ÁÆKÁ È ÁÙ^&[] å•Á[| ÁÛÙLÁFI ËFÎ ÁÙ^&[] å•Á[| ÁHÚÙÁBÁHUÙ (Extend booms completely; rotate head to be level with ground, lower main boom until deck is just above ground, and swivel boom full forward. Then index the boom swivel "aft" function and determine the time required for the boom to swivel full aft. Use caution when doing this, stop boom before main boom contacts tire.)

 $\label{eq:continuous} $$ \% \hat{A} = \hat$

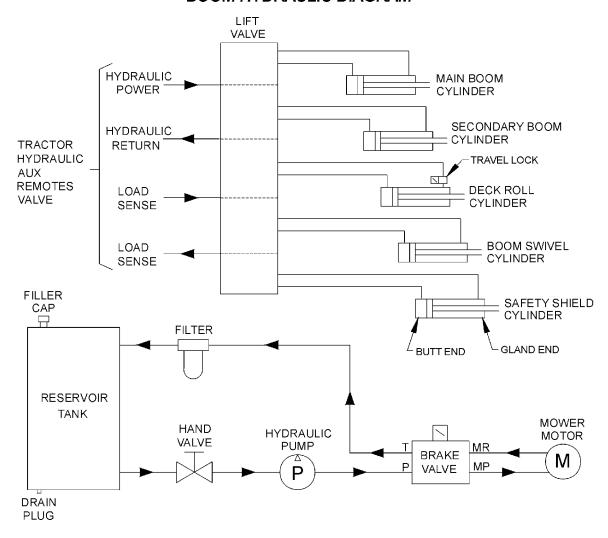


H-A-B; : CF FCH5H-B; 897?

V@Áaį ā * Á[¦Áx@Á[ææā] * Áå^&\Á&^ [ā] å^¦Á; æ Á,^^åÁş Áà^Áæåbŏ• c^å ÈÁV@Áaį ā, * Á @ ` |åÁ à^Á^^ÁæÁr€ЁÍÁ^&[]å•Á¦[{Á`||Á^¢c^}}•ā]}Á, ÁœÁ&[ā] å^¦Áş Á`||Á^dæ&aī]}ÈÁ(ASM-CAT-0009)

(ASM-CAT-0010)

BOOM HYDRAULIC DIAGRAM



G=89 < MB F 51 @7 H5 B? =BGH5 @05 H=CB

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Q) • cællhác@ Áājcº lhá æž * ^háj qí hác@ Áājcº lháQ * • āj * hí[hác@æhánÁ][āj o• hái hác@há æð hí hác@ hái æð qí lhá æj å hái hál að þái hái hác@ hái] ^ læa[læð w@hæð lhái | ^ææ@ lhácæð hái hácæð hái lhá • ^ hææ hác@hæð lhác hái að lhái lá læð l[{ ^hái -hác@ hái lёi ^aíi} } ^ å háce { • hái æð hác hæð | ^æð hái • cæð | ^åi è cæð | ^åi è (ASM-MOTOR HYDRO-0001)

:=@@B: < MBF51 @7 F9G9FJC=F

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BCH9. GHUfh]b[ˈcfˈfi bb]b[ˈmci fˈH][Yfˈa ck YfˈVYZcfYʿZ]``]b[ˈfYgYfj c]fˈk]``WUi gY gYf]ci gʻXUa U[Yˈhcˈ\ mXfUi `]Wdi a d"

(ASM-C-0004hydro resrv)

BGH5 @@B; C!F-B; : +HHB; G

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-BGH5 @@B; B5H-CB5 @D-D9 : +HH-B; G

DF9: CFA98 HI 69 BGH5 @ 5H-CB

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&[ç^\/Ásè) å Á ^ &` \^ Á, ão @Ás|æ&\ Á dā, * Á, \[çãs ^ å ÞÁ (ASM-C-0058)

5771 AI @5HCF =BGH5 @@5H=CB

GC @ BC = 8 6 F 5 ? 9 J 5 @ 9

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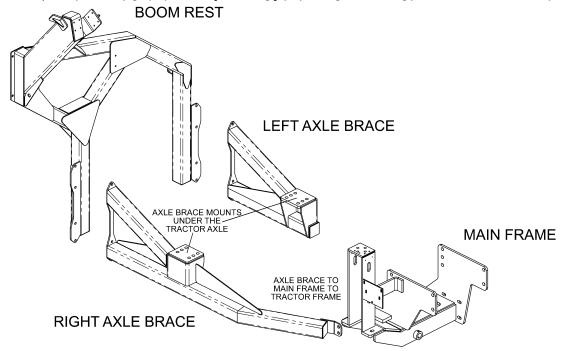
②[|Áæ|Ádæ&@[|•Á•ā]*ÁæÁa[[{Á, [¸^|ĒæÁ, @^|Á, ^ā @Á, ā|Áa^Á^` ĭā^åÁ[|ÁœÁ^æÁ^-æÁāa^Á ¸@^|ĒÁ@Á, ā|Áa^Á, ^&^•æÁ[¼ [ĭ } œÁ@Á, ^ā @Áa ÁœÁ, @^|Á•ā]*ÁœÁ[}*Áææ]•&¦^¸•ĒÁ [[&\¸æ@!•ĒÁ]ææ;æ@!•ĒÁ]ææ^!•ÁæÁæ] |æææ]/ÞÉææ)åÁ@¢Á; œÁ, `œÁ, ^lÁæ@Áaæť |æÆÁa, ÁæØÁ, æ¢Ó.

*^&æī] È

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FG5L@96F579ACIBHB;

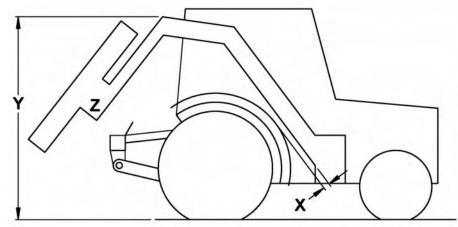


FG'6CCA'F9GH'ACI BHB;

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'!DC=BH6CCAF9GHACIBH=B;

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A5-B6CCA-BGH5@@5H-CB

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897? 5HH57<A9BH

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à[[{ Ása}{ ÈÁÁÜ^^4\Á[Á]ædo Á^8cā[}Á[¦Ásãæt'|æ{ • È

6 YZcfY'dfcWYYX]b['hc'h\'Y'Z]bU'dfYdUfUh]cb'ghYd'Xci V'Y'WY YW_'h\ Y'Wca d`YhY' UggYa V'miZtca 'h\ Y'a U]b'ZfUa Y'hc'h\ Y'Wi HhYf'\ YUX'U[U]bghih\ Y'X]U[fUa g']b'h\ Y'dUfhg' gYWNcb'Zcf'dfcdYf'd`UWYa YbhUbX'UggYa V'micZU``Wca dcbYbhg''Á(ASM-C-0060)

: **B**5 @DF9D5F5H**C**B : CF CD9F5H**C**B

ØðjæļſĒÁæļÁæ[••^•ĒÁ] ðj•ÁæjåÁ] æ̃Ç[œÁ] [ðjæÁ, ðļÁ}^^åÁq Áà^Á*!^æ•^åÁæ•Áðj•d`&c^åÁðjÁc@
{æðjæ}æþæ, æðjæ, &^Á•^&æðj Áq -Ác@æÁ; æðjææþĚÁÁV@Á@å!æjæ&Á;^•^\ç[ðjÁ&æðjææ, æðj-ÉÁA&æðjæ, æðj-ÉÁA&æðjæ, æðj-ÉÁA&æðjæ, æðj-ÉÆAÆæðj-Éæðj-Áæjæ, æðj-Áæjæ, æðj-Ææjæ, æðj-Ææjæ

AWARNING

ÓÒ 2 UÜÒ Á cæd cāj * Áj ¦Áj] ^ ¦ææāj * Ás@ Ád æ& c[¦Á [ˇ Á; ˇ • cÁ ^ æð Áæ) å Á } å ^ ¦ • cæ) å Ás@ Á • æ^ c Áæ) å Áj] ^ ¦ææāj } Á ^ & cāj } • Áj ~Ás@á Áj æ) ˇ æþ Æs[{] | ^ c^ | ^ È

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ACK9F'H9GH+B;

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H; 9F'6CCA'ACK9F CD9F5HB; BGHFI7HCBG

QÁã Ác@Áj]^|æ[|qÁ^•][] • ãã đãã Áq Áà^Á][, |^å*^æà|^Á[-Æ4æ|Á][c^} cãæ¼[]^|æã] * Áœe æbå•Áæ} åÁq Ácæ^Árç^|^|^æē] | æà|^Áj | [o^} cãæ¼[] ^| ææ] * Áœe æbå•Áæ] åÁq Ár Ár) • `|^Áq] ^• • |-Æq c@|• ÉÆæ) ā Áj | [] ^| c Áæ¢^Áj [oÆg b | ^åÆq æb ^åÁa ^Ác@ à Áa ^Ác@ à Ág | [{ Ár} ãæ£q | ¼ | Áæ&q æb ^Á; | Ár åæ e e o* åÁa ^Ác@ à Áæ æb Aæ æb Ææ æb Áæ æb Ææ æb Aæ æb Ææ æb Aæ æb Ææ æb Aæ æb Ææ æb ^A å Ææ • • |• à Ê] ^• ¼ | Áæç^• q & Áæc e d å Áæ æb Aæ æb Áæ æb Áæ æb Aæ æb Áæ æb Aæ e o* |• à Ê] *

F958 5 B8 1 B89 F GH5 B8 1 H<9 9 B H=F9 C D9 F 5 H=B; '=B GHF I 7 H=C B G 5 B8 G 5 : 9 HM G 97 H=C B C : 'H<=G A 5 BI 5 @ 5 B8 'H<9 'HF57 HCF' A 5 BI 5 @ 69 : C F9 '5 HH9 A D H=B; 'HC' I G 9 'H<9 'HF57 HCF' 5 B8 =A D @ A 9 B H'' G \mathring{A} [\mathring{A}] [\mathring{A}] \mathring{A}] \mathring{A} \mathring{A}



A PELIGRO

Uãh, [A/^A\$] * |^• Eh, ãã æhaê `åæhanda‡* ã\} Á`^Ah ãH(A/\æ4) æbæA`^A/\Adæå`: &æHæ• { ^å ãã æ• Åå^A·^* ¦ãã æå Ēdùō#d



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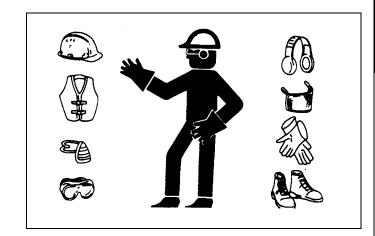
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%CD9F5HCFF9EI ≠9A9BHG

Ùæ^Á;]^¦æā;}Á;Á^``ā;{ ^} œÁ^``ā]. ^} œÁœæÁœÆÁ;]^¦æē;¦Á; ^æÁæÐ;]¦[ç^åÁÚ^!•[}æÞÁÚ|[ơ.&æā;^ÁÒ``ā].{ ^} œÁÇÚÚÒ.E -{¦Ác@Áp;àÁs[}åãā;}•Á;@}Áæææ&@;*ÉÄ;]^¦ææ;;*ÉÄ-^¦çã&ā;*ÉÆæ}åÁ^]æāā;*Ác@Ár``ā].{ ^}dĚÁÚÚÒÆæÁå^•ã*}^åÁē]¦[çãå^Á;]^¦æē[¦Á;|[ơ.&cā;}Áæ)åÁs;&|`å^•Áœ.Á[||[¸ā;*Áæ^ĉÁ;^æK

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A DANGER

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&HF57HCFF9EI F9A9BHG

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AWARNING





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OPS-B- 0001



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A DANGER

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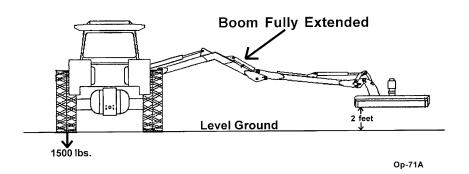
OPS-B- 0017Á

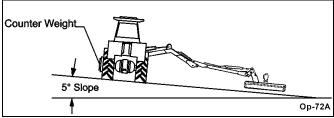


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<u>' "; 9HH+B; CB 5B8 C: : H<9 HF 57 HCF</u>

AWARNING

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A DANGER



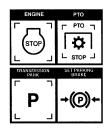
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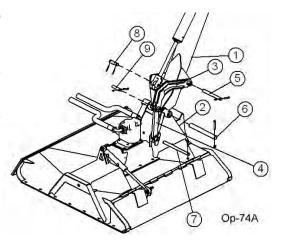
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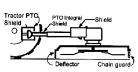
AWARNING





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AWARNING





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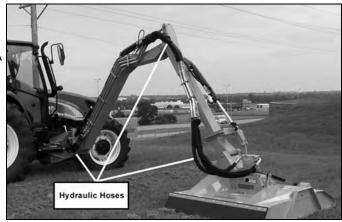
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AWARNING

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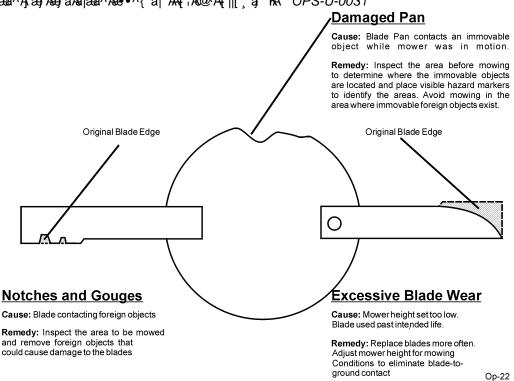
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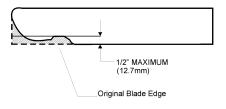
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- ″V@^Á, æc^¦ãædÁ;}Ás@^Á^æåā;*Án°å*^Á@æ•Áa^^}Á;[¦}Áse;æôÁa^Á;[¦^Ás@æ)ÁF£DQFGÈT{{D-



NOTE: Replace Blades in pairs after no more than 1/2" (12.7mm) wear $$O\,p\mbox{-}23$$

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Tractor PRE-OPERATION Inspection

	Mower ID#	Make	_	
عاقالا	Date:	Shift	_	
	\ Ug`ghcddYX`UbX`h\ Y`lfUWhcf`	Wn]cbžaU_Y`gifY`h\Y`lfUWncf`Yb[]bY`]g`c <i>ZZ</i> žU``]g`]b`dUf_`k]h\'h\Y`dUf_]b[`VfU_Y`Yb[U[YX"AU Y`[fcibX`cf`gYWifY`m`V`cW_YX`id'UbX`U``\	J_Y gi fY	

dfYggi fY`\ Ug`VYYb`fY`]Yj YX"

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

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

Operator's Signature:

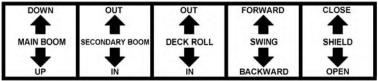
Boom PRE-OPERATION Inspection				
Mower ID#	Make			
Date:	Shift			
6 YZcfY'WcbXi Wijb['h Y']bgdYWijcbža U_Y ghcddYX'UbX'h Y'lfUWcf']g']b'dUf_'k]h a ck Yf']g'fYghjb['cb'h Y'[fci bX'cf'gYWif VYYb'fY]Yj YX"	. 'N Y' dUf_]b[Yb[U[YX"AU_Y'gifY'		
Table 1:				
Item	Condition at Start of Shift	Specific Comments if not O.K.		
The Operator's Manual is in the tractor				
All safety decals are in place and legible				
The mounting frame bolts are in place and tight				
The boom connection bolts & pins are tight				
There are no cracks in boom				
The hydraulic cylinders pins are tight				
The hydraulic pump hose connections are tight				
The hydraulic valve controls function properly				
There are no leaking or damaged hoses				
The hydraulic oil level is full				
There is no evidence of hydraulic leaks				
The blades are not chipped, cracked or bent				
The blade bolts are tight				
The deflectors are in place and in good condition				
The boom shields are in place and in good condition				
The skid shoes are in good condition and tight				
There are no cracks or holes in boom deck				
The hydraulic motor mounting bolts are tight				
The boom head spindle housing is tight and lubricated				
Operator's Signature:				

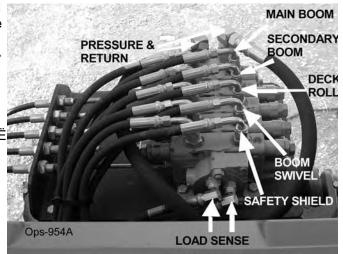
DO NOT OPERATE an UNSAFE TRACTOR or MOWER

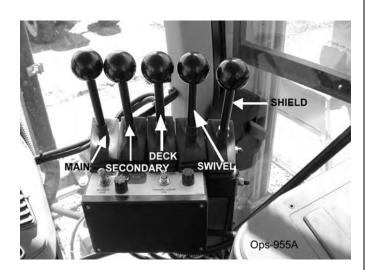
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Cable Controlled Mowers

ODÉN[}d[|Án^ç^¦Án^&æhÁā[ābæhÁt[Án@Át]}^Án@]}Án^|[¸Án@|`|åÁn^Án^æhÁn@ÁN[}d[|Áçæhç^Át[Án^{ā]åÁn@Át]^¦æet[¦Án~ o@Án^ç^¦Á-`}&aā]}•È

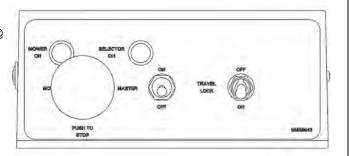






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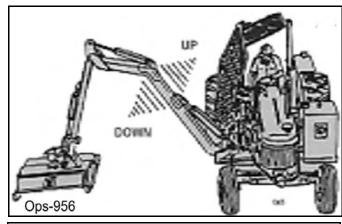
SAFETY SHIELD & DEFLECTOR OPERATION Failure to close Safety Shield and Deflector may allow objects to be thrown outward with great force which can cause property damage, bodily injury, or death. SAFETY SHIELD 1. Keep Safety Shield and Deflector fully closed when cutting grass and weeds to reduce possibility of objects being thrown outward by the Blades if persons are in the area. 2. Before Cutting brush, trimming limbs, or other such operations, raise the Deflector and Safety Shield fully to allow the blades to contact the material if area is clear of passerby. Operator must stop cutting and close shield if passerby enters the thrown objects area or blade contact area. 3. Repair or replace Safety Shield and Deflectors as DEFLECTOR needed. 4. Always transport with Safety Shield and Deflector closed. 02967867

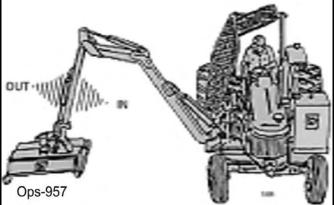
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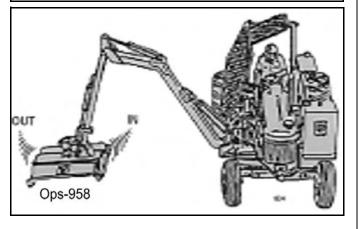
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ŠÒXÒÜÂRÁT ŒÐ ÁÓUUT

ŠÒXÒÜÆÌGÁÙÒÔUÞ֌ܟÆÓUUT







ŠÒX Ò ÜÂ HÁ Ö Ò Ô SÁ Ü U ŠŠ

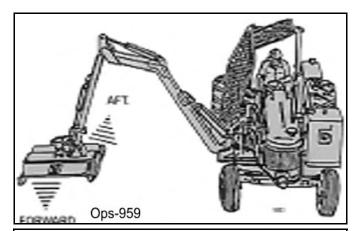
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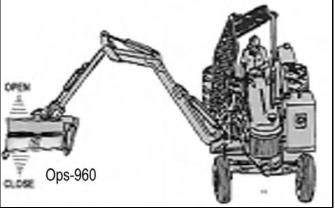
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ŠÒXÒÜÂN ÁÓUUTÁÙY QXÒŠ

ŠÒXÒÜÂÁÍ ÁÓUUT ÁÙP QÒŠÖ





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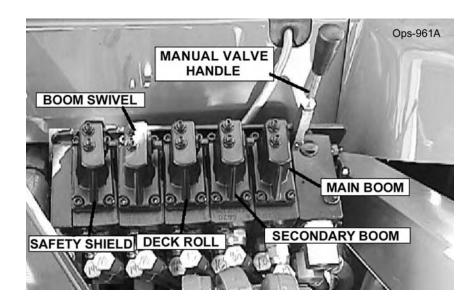
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A CAUTION

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Œe^!Ás[[{Æs Á•d],^åÁs,Á^•cÊÁdæ)•][!oÁc@Á;ãæÁd Ác@Á(æsē,c^}æð)&^Áæ&ājãcÁæ)åÁs[}ææ&oÁ[*'!Vã^!Ás^æ4^!Át[!Áæ••ã;æð)&^È

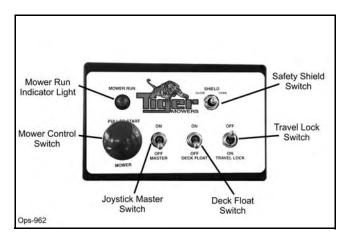
A CAUTION 8 C'BCHÁseec^{] cÁ[Á;]^¦æe^Ás@ Áşækç^Á;æ) ĕæ|^Á[¦Á;[¸ā]*Á;]^¦æeā[}•Â

Þ[c^kÁÚˇ• @ð, * Á; æ) ˇæþÁṣæḥç^Á@æ) å|^• ÁN, ઁ c+Á; ¦Á‰ç æê +Á-¦[{ Ás@ Ád æ&d; ¦Á&æàÁ, ã| Áà ¦ā, * Ác@ Á; æã; à[[{ Á%o] +ÉA^&[} à æê^ Áā[[{ Á%jō · chÉA[|| Áå^& & Á%jō · chÉæ) à Á• ¸ ãç^|Áà[[{ ÁsæchÈÚˇ || 3; * Á; æ) ˇæþÁ@æ) å|^• Át] ¸æbå Á&æà ¸ã|Á^ cÁ; æð, Áá[[{ Ásá[] } +ÉÁ** & Á** & Á** } åÁ*, ãç^|Áà[[{ Ásá[] } +ÉÁ** & Á** & Á** & Á** } åÁ*, ãç^|Áá**] æbå +È



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V@ÁÜæ^ĉÁÜ@P\åÁ; ã&@Á]^>•Áæ} åÁ&|[•^•ÁæA;@P\åÁ|&æ*°åÁ|; Áæ Á+[; ơÁ; Áb@Á&; œ^\Á@æåÈÁY @}Á; [çã; *Áæc [¦Áj,^æÁ;@Á*|[*] åÉæd; æê•Á@æç^Ác@Á*@P\åÁj,Ác@Á&|[•ãá];ÈÁY @}Á; [çã; *Áj,Áà; *•ØÁ; lÁj,Ád;^•Áæ}[ç^**![*] åÁY·ç^|Ár@Á*@P\åÁ; æÁx^Á;]^}^åÁ; l*æÁx^Á;]^}^åÁ; l*æÁx^Á;]^}^åÁ; l*æÁx^Á;]^}*aÁ|[•ãá]; EÁY @}Á; EÁZ C'Þchífi b'N YW HYYT]bhc'a UhYYTU'``Uf[Yf'N Ub'*Î`X]Ua YHYYT''

A DANGER

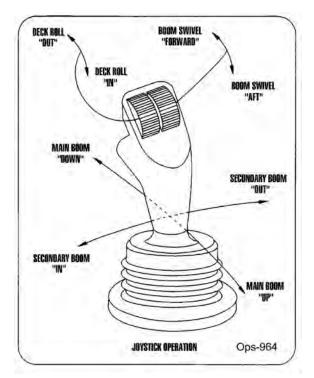
SAFETY SHIELD OPERATION

- Failure to close Safety Shield may allow objects to be thrown outward with great force which can cause property damage, bodily injury, or death.
- 1.Keep Safety Shield fully closed when cutting grass and weeds to reduce possibility of objects being thrown outward by the Blades and to prevent contact with the Blades if persons are in the area.
- 2.Before cutting brush, trimming limbs, or other such operations, raise Safety Shield fully to allow the blades to contact the material if area is clear of passersby. Operator must stop cutting and close shield if passerby enters the thrown objects area or blade contact area.
- 3.Repair or replace Safety Shield as needed. 4.Always transport with Safety Shield closed. Ops-963

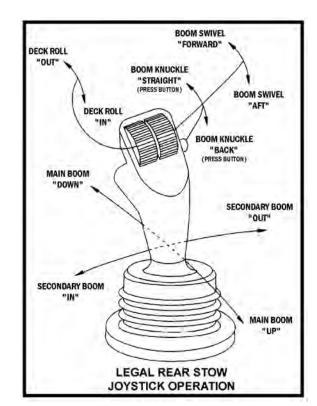
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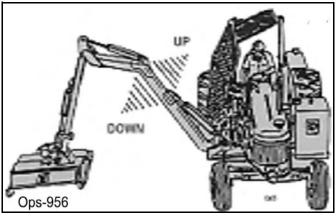
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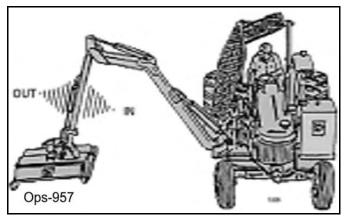
RUŸÙVÔĴSÁØY ÖÐÓŒĴSÁT UXÒÙÁT ŒÐÞÁÓUUT



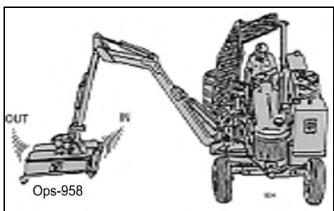


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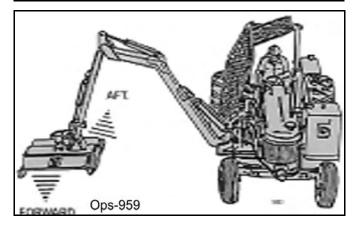
RUŸÙVÔSÁŠÒØVĐŮŐPVÁTUXÒÙÁÙÒÔUÞ֌ܟ ÓUUT



ŠÒØVÁRUŸÙVØĴSÁÜUŠŠÒÜÁT UXÒÙÁÖÒÔSÁÜUŠŠ



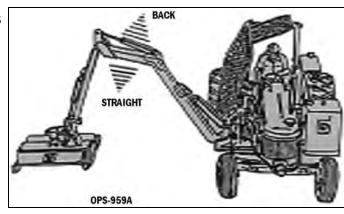
ÜŐPVÁ RUŸÙVÓDSÁÜUŠŠÒÜÁTUXÒÙ Á ÓUUT ÙY OXÒŠ



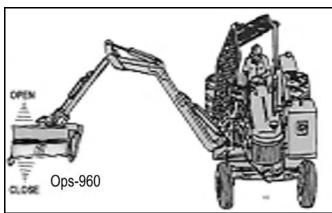
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ÜŐPVÁRUŸÙVÓSÁÜUŠŠÒ ÜÁY POŠÒÁÚÜÒ ÙÙOÞŐ ÓWVUÞÁT UXÒÙÁÓUUT ÁSÞWÔSŠÒÁJÞÁŒŠÒÕŒŠ ÜÒŒĴÁÚVUY ÁÓUUT



ÙPOÒŠÖÁ ÙY QYÔPOÇ}Á•, ãã&®Áà[¢DÁ UÚÒÜOEVÒÙ ÙOEZÒVŸÁÜPOÒŠÖ



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Ü^æåÁæHÁ æ^c Ág•d 8æI; • ĒÁÖ^8æÞÁ; Ás@ÁÓ[[{ Á, æ}Á[´Á, Æ; æcæR |ækÁæ; åÁ, ˇ|æ] |^Áœe æå•ĒÁÙ[{ ^Áå^8æÞ æ^Áæææ&@åÁ&|[•^Á[Á]æċÁ[Æ; Á; @ |^Áċ@|^Áæ; ÁæÁ; [••ã|/Áœe æååĒÁÜ/æå Áæ; åÁ; æà^Á•ˇ|^Á^[ˇ *}å^!•æ; åÁœÆÁ; æ^c Á{ ^••æ* ^•Áà^{ | 'Á[ˇÁ[ˇÁ[¸Á[] ^|æe^Ác@Áā]]|^{ ^}dĚÁS^^] Áæ|Áå^8æÞÁ&|^æ; Áæ; åÁ|^æåæà|^È Ü^]|æ&^Á[•ơÁ; ½æ; æ*^åÆå^8æÞĒÁ^~|Á[Áæ*c Ár^8æ]; Á[¼; [!^Ág; -[!{ ææī]} È

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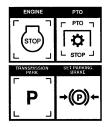


AWARNING

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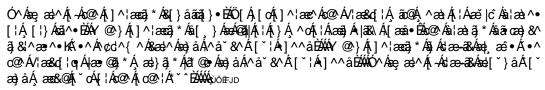
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\^• oÁs@ Á`` a] { ^} oÁsœÁsæÁ|[Á] ^^ åÁsp Ác' |} • ÈÁQQ &| ^ æ• ^ Ás@ Á| ^^ åÁs@[` * @Ás@ Ác' |} Á; } |^ Ásee^\ | ^[`Áå^c^\{ā]^Ácœeós@^Á^``ā]{^}oá8æ)Áà^Á[]^\æc^åÁæóÆ@#@\Æ-]^^åÈÁN^^A`¢d^{^A\$æ4^ c'|} ā, * Á[ç^|ÉHÖ^c^|{ ā, ^Ác@ Á(æ¢ā[`{ Ác'|}ā, * Á•] ^^å Á[| Á^[` Áæ) å Ác@á Á* ` `ā, { ^} cÁà^-, |^ []^¦ææã;*Áş}Á[æå•Áş¦Á;}^ç^}Á*;[ˇ}åÈ

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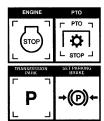
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OPS-U- 0013



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æ¸æô•Á*•^Áæ®Á/!æ&æ;4;æ³,æ³,æ³,å;*Áð;æ³&Áæ;åÁ^å* &^Á[`;Á*]^^åÈÓ^Áæ;æ³^Á;Ædææ&Áæ;`}åÁ[`Áæ)å
æ&ØÁ;°ÓÁ;!ÁæÆ,Á;œ°;Á*°ÈÁ₀₀∞∞∞+Misc)

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OPS-B- 0006





AWARNING

Þ^ç^¦ÁŠ^æç^Ác@Á([¸^¦Á'}ææc^}å^åÁ¸@Ā/Ác@Á@æåÁæiƸÁc@Á!ææn^å][•ãαā[}ÈÁÁv@^Á([¸^¦ÁS[`|åÁæ|ÁSæč•ā]*Án^¦ā[`•Áā]b`¦^Áq[Áæ)^[}^Á,@[{ā'@Á\$jæåç^¦c^}d^Á\$AÁ'}å^¦Ác@Á[[¸^!Áφċσ±β□



A DANGER



- 'CD9F5HB: H<9.6CCA1 B+1.5B8.5HH57<98.<958

H<9 `CD9F5HCF` AIGH` 7 CAD@9H9 @M`IB89FGH5B8` < CK` HC` CD9F5H9` H<9 `HF5 7 HCF` 5B8 ACK 9F5B8 '5 @@7 CBHFC @G`69: CF9 `5 HH9 A DH=B; `HC`ACK "Á/@/\$\[\] \\ \alpha\f\] \alpha\f\ \alpha\f\] \alpha\f\ \alpha\f\] \alpha\f\ \alpha\f\] \alpha\f\ \

 $\begin{array}{l} V[A^*] \bullet^* |^A A \otimes A^* \wedge A^* \otimes A^* |^A \otimes A^* |^A \otimes A^* |^A \otimes A^* \wedge A^* |^A \otimes A^* |^A$

U}|^Á[]^¦æe^Ác@Á([¸^¦Á@æåÁ¦[{Ác@Ádæ&q[¦Á[]^¦æe[¦qÁ+^æé¸ãc@Ác@Á+^æèà^|cÁ+^&`¦^|^Áæe'c^}^åÈÁdU}|^ []^¦æe^ÁæÁs[[{Ásè¸åÁr`ĭā]]^åÁ@æåÁ;}Ásæàà^åÁdæ&q[¦Ás@æóÆnÁ°ïā]]^åÁ¸ãc@ÁsÁ,[|^&æàà[}æe^Áæ^c'Ë;¦[c^&c^å ¦ã @Áaã^Á¸ãå[¸Á;¦ÆæÁ;[}Ææàà^åÁdæ&q¦Ár`ĭā]]^åÁ¸ãc@ÁsÁÜUÚÙÁæè¸åÁ;]^¦æe[¦Áræ^c'Ár&¦^^}ÈÁ

Obç[aðá[]^|æða Áða Ás@Á^ç^|•^Áða Asat]}Á, @}Á][••aða|^ÈÁQ)Á að æða]}•Á, @|^Ás@Áða[[{ Áæ)åÁ[[, ^|Á[*•óÁs^à àæ&l^åÁ[Ásæ&&l*•Áæ^Aæ}Á[, aða Ás dæ]åAsæÁl*; | ^|Ásæl/åæ&l**•Ásæ Ás dæ]åAsæÁl; | Asæl/åæ, aða ÁsæÁl; | Asæl/åæ, aða ÁsæÁl; | Asæl/åæ, aða ÁsæÁl; | Asæl/åæ, aða ÁsæÁl; | Asæl/åæ, aða AsæÁl; a

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Þ^ç^¦Á[]^¦ææ^Ác@Á[[¸^¦Á@æåÁcād°åÁa[¸}Á¸@\^Ác@Á[]^!æa[¦Á&æ)Á•^^Ác@Áa]æå^•Á;Āc@\{[¸^¦ÉN/@Áà|æå^Á&[`|åÁc@[¸Áæ)Ái¸àb^&cÁc]¸æåÁc@Á[]^¦æa[¦Á&æĕ•ā]*Á•^¦ā[`•Áā]b`¦^Á[¦å^ææÆÞÞ^ç^¦Á[]^!ææ[¦Á\Ud`&c`¦^ÈACE¸æ°Á¸^æb•Á¸^æb•Á°ĈÁ†¡æ•^•Áæ)å\Ud`&c`¦^ÈACE¸æ°Á¸^æb•Á¸^æb•Á°ĈÁ†æ•^•^•Áæ)åÁædæBåÁ@æBåÄQU]•ËŒ€€ÉËT QÙÔD

- '%: cfY][b'8 YVf]q'< UhUfXq#C j Yf\ YUX'C Vqlfi Wf|cbq

Ú|æ&^ÁÖŒPÕÒÜÁâ} • ÁæÁ^æ «ÁHE€Á^^óÁa^^[} åÁæÁ^*[} åÁæÁ^Å; ['\^åɸ] cÁŏ • ÓÁHE€Á^^óÁ; [{ 4.0 Á±0 Á±0 ÆÁ; Á±0 Á±0 ÆÁ; [6Åŏ • ÓÁHE€Á^^óÁ; [{ 9.1 Á±0 Á±0 ÆÁ; æ&æ¸ ^• Á½ Á¸ [1.1 Áѣ, ÁHE€Á; [6Å ^ 8cā;] • ÉŤ [ç^Áœæ - 4.6 Á; Ææ - 4.6 Á; Á; Áæ Á±0 ÆÁ;] * ÉŤ [ç^Áœæ - 4.6 Á; Á; Áæ Á±0 Á±0 ÆÁ; Aæ - 4.6 ÆÆ;] æ& Á±0 Á±0 Á±0 Åæ - 4.6 ÆÆ;] æ& Áæ - 4.6 ÆÆ;] æ& ÆÆ;] æÆ - 4.6 ÆÆ;] æÆ - 4.6

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Ó[[{ U]^\\ \aaaa_{\bar{q}}\} \hat{A\bar{U}^\&a_{\bar{q}}}\} \hat{A\bar{U}^\&a_{\bar{q}}}

AWARNING

- "&'CdYfUrib['GdYYX'UbX'; fci bX'GdYYX

Õ¦[ˇ] å Á•]^^å Áṭ lÁ; [¸ā]*Á¸ā|Áå^]^} å Á¹]]} Áœ Á@ ã @Ē&c]^Êæaj å Åå^}• ãc Á; Áç^*^ œæāj Àṭ Áà^Á&` œĒÁÖ[ÁÞ[c ^¢&^^åÁ ÁT ÚPÁ¸@Ā^Á;]^\ææāj * ĚŪ]^\ææ^Ác@ Á; [¸^\Áææ^áæ Áˇ||Áææ^åÁÚVUÁ·]^^åÁṭ Á; æāj œæāj Æajæå^Á·]^^åÁṭ \Ææ &|^æ) Á&` œĒŪ^-^\át Ác@ Áslææ4; [Á¸]^\ææēj * ĚŪ]^\ææēj * Áæ} å Á*^æ± æ¼ Ææ Áslææ Áslææ4; [Á¸ā] & ææ Áslææ4; [Á¸ā] & æð æð Áslææ4; [Á¸ā] & æð Aslææ4; [Á¸ā] & æð Aslææ4; [Á¸ā] & æð Aslææ4; [A¸ā] & æð Aslæ4; [A¸ā] & æð

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c@Á*^ç^\æcÂi_Ák*œāj*Á&[)åæãi}}•Áÿ&\^æ*^Ê\$æAf\[ĭ}}åÁi]^^åÁs

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- " 'CdYfUHb['H, Y'5 HUW YX'Ack Yf'< YUXq

Ü^-^¦Áq[Ác@ÁCE•^{à|^ÁÙ^&cā[}Á, -Ác@áÁ, æ) ĕæþÁq[Ár}•`¦^Ác@éÁ@æáÁáfÁ,¦[]^¦|^Áæacæ&@åÁq[Ác@Áa[[{ Ác@á&@Áæ)å @妿ĕ|æ&Áa}^•Áæ¦^Á¦[]^¦|^Á&[}}^&cåÈÁÁOPS-B-0010

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- '('Ack Yf'CdYfUhcb

V@Á[œæā,*Á;æto•Áā,Ás@áÁ;æ&@ā,^Á@æç^Áà^^},Áå^•ā}^^åÁo•ā;^åÁo•à Áóo•c^åÁf;¦Á***^åÁr•^ÈÁP[_^ç^¦ÉÓo@^Á&[`|åÁæā; ˇ][}Áāi]æ&oÁ,ão@Á@æç^Ár[|ããÁiàló%o•ɰ%@ÁæeÁr⊙^|Á**ælåÁæa‡•ÉKS[}&¦^⊙Áæà*q'^}o•Êx&ÉÉ&æĕ•ā;*Áo@{ÁgÁà^ c@[; } ÁæaÁæáç^¦^ Á@ã @Áç^|[8ãc ÈÁÞ^ç^¦Áæ|[;Á&`œ^¦Á@`æåÁ[Á&[}ææ\$cÁ*`&@Á;àb^8æ•ÈÁQ•]^&æj*Áœ@Á&`œāj*Áæ}^æá{;¦

U } &^ Á; } Áj &ææāj } ĒÁj ; ^¦Ás@^Á; [^ ¦Áå^&\Án |ā @ā^Áæà[ç^Ás@ Á; ææ°¦ãæþÁj Áà^Á& ŒÁ; [Ás@ Á; [^ Á; [^ Á; [oÁ@æç^Áj • œekoÁ}å^¦ÁæÁ[æeåÈÁYão@Áo@Ádæ&d;¦ÁæeÁæ)Ásã|^ÊÁ\}*æ*^Á;[¸^¦ÈÁÓ¦ā]*Ádæ&d;¦ÁÜÈÚÈTÈÁ]Á[ÁFJ€€Ë⊙G€€ÁÜÈÚÈTÈÁæ)å g`ck`mÁ| ^¦Á&^&\Á(fÁ';| `}åÁ\^ç^|È

OZÁJæjáÁ, [¸^¦Ás^&\Á @`jåÁs^Ásæ¦ð°åÁ[ÁsœeÁs@Ájædók_Ás@Ás^&\Á¸^ð @Ás Ásæ¦ð°åÁs^Ás@Ás[[{Ásæ}åÁjædóksæ¦ð°å -{||[.•Ás@-Á&[}d[`¦Án-Ás@-Át¦[`}åÁn[¦^Án æ-ān^Áa`¦ā,*Án[.ā,*Án]^¦ææān]•È

V@Á[œc^Á;[¸^¦Ás^&\Á;@,`|åÁse,æ°•Ás^Ásæc¦ā°åÁæœ@¦Ásœe)Ás¦æ**^åÁ;}Ás@Á\ãaÁ@,^•Á;@}Á;[¸ā;*Á;}Ás@ *¦[ˇ}åÈÖ¦æŧ*ą̄*Ác@Á[œá^Á[gæ^Á;[¸^¦Áå^&,Áq&,Áq&,Aæ^•Ác@Á•ãå^Á[æå•Á;}Ác@Áà[[{ÊÁå^&;^æ•^•Ác@Á@;•^][¸^¦ ægæajææi/^Áf Ás@ Á&` cc^¦Á@ æåiÊæn) åÁ^å` &^• Ás@ Ásæàjããĉ Áj Ás@ Ásæ&&` { ` |æg | Ás@ Ásæb¦^Áj æb Ój Ásæb¦^Áj æb Ój Ás@ Á ®Á Ås@ Ás[[{ å ˈ{ā̞ * Á̞ [ā̞ * Á̞] ^ ¦æeā[} ● È

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-") ") \$Î / '* \$Î '6 cca 'FchJfm

V@ÁÍ €-ÁBÁÎ €-Áà[[{ Á¦[œa^Áঠ• @Á{ [^¦Á ;æ• å^• āt} ^åÁ-{ ¦Á& cca} * Áঠ*• @Áæ} åÁ-{ |ãæ* ^Á*] Áḍ ÁÎ ā & @ • Áā Áå ãæ (^ c^ \ Á; \ Á; ~ | cā | | ^ Áa | æ) & @ • Ác@æ Á@æ (^ Áa e d cædÁ&¦[••Á•^&cãt} Áæd^æÁ^~ ãçæb^} cÁd Á[}^AÎ Áð; &@ à¦æ}&@È

Ö`¦ā!*Á([,^¦Á(]^¦ææā[}ÊÁc@\Á@æ);åÁc@([cd^Á(`•oÁà^ ઁ•^åÁq Áq æang œang Án}*āj^Án]^^åÁsæÁrJ€€ËGG€€ÁÜÈÚÈTÈ V@ãÁ]¦^ç^}o•Á¦æåå&æþÁ&@æ)*^•ÁājÁ[[^\Á•]ājå|^• •]^^åÊA\^å~&aj~*Ás@^Á,[••ãàājāc^Á;~Á&~cc^\Aæ••^{à|^ åæ{æ*^È

 $V@AQ[\tilde{a}[]cedA][\bullet \tilde{a}\tilde{a}] \hat{a} * Accesal[]A[Ac@Aa[][Accesal[] Accesal[$ å^•āt}^åÁq[Áµ[•ãαã[}Áx@ Á& coā]*Á@ æåÁæ)åÁμ¦[çãå^Áæ $|\tilde{a}| \tilde{a} \tilde{c}^{\hat{a}} \hat{A} | \wedge \bullet \bullet^* | \wedge \hat{A} \wedge |\tilde{a} \wedge \hat{A}| \otimes \hat{A} \otimes \hat{A} | \wedge \bullet \bullet^* | \wedge \hat{A} \otimes \hat{A} \otimes$ æ]]|aðáÁ[Ác@Áa[[{ ÈÁÖ[Á][cÁ[¦&^Ác@Á&cæ]*Á@æå

ãid Á@ anc^Ána¦aa) & @ • Án¦Án č {] • ÉAÖ and and Án∮Án@ Á }ãnÁ an Án• ĭ loÈ

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V[ÁY}•`¦^ÁœÁ&|^æ}Á&`dÊY}*āj^Á*]^^åÁ*@|`|åÁà^Á| æājæāj^åÁæÁæj;||[¢ājæe^|`ÁFJ€€Ë30€€ÁÜÈÚÈTÈÆGÁ@^Ádæ&d;| •|[¸•ÁqÁ^••Áx@à,ÁrÌ €€ÄÜÈÜÈT ÈÉÁ @àÁqÁx@Á,^¢AÁ[¸^¦Á*^æèÄÖUÁ>UVÁ;ãa^Áx@Ás,`c&@Éx@àÁ, ā|Ásæě•^Á;¦^{æč¦^ &\`&@Áæaj`¦^ÈH\Y`Yb[]bY`g\ci`X`bch'VY`cdYfUhYX`Uh'Ub mihjaY`Uh`acfY`h\Ub`&(\$\$`F"D'A"cb`h\Y`hfUWrcf HJWV ca YhYf"

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V@Á;[, ^¦Á, āļÁ] ^¦æe^Á;[¦^Á~æða³} d^ÁsjÁt** @¦Ási[}åãā]}•ÁspåÁ¸ãc@Á^••Á;[, ^¦ÁsiÁc@Á}ãç^•Áse^Á^] cÁœÁ] cÁœÁ; É QÁc@Á;[, ^¦Áà^*∄•Á;Áşãà¦æe^É4d]Ác@Ádæ&d;¦ÉÁ&@&\Á;¦Á¸ã^Á¸¦æ]]^åÁsjÁc@Á+]∄å|^Á;¦Áåæ;æ*^åÁ}ãç^•È Y@}Á^]|æ&å;*Á}ãç^•ɽ^]|æ&^Ásd|Á}ãç^•Á¸ãc@Á,^¸Á}ãç^•Á;Ár}•*¦/Áj¦[]^¦Ásæææ;&^Á•[Ác@Á;[, ^¦Á¸ãļÁ;[c çãà¦æe^ÈÁU^ç^¦^Áçãà¦ææã}}Á¸ãlÁ^•*|dÉsÁ}ãç^•Á¸ãc@Á}^~*áèÁse^Á*•^åÈ

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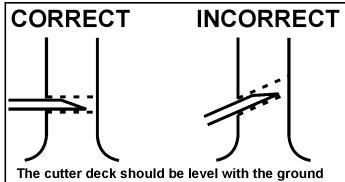
Ó^*ājÁ^æ&@Ájæ••ÁææÁc@Át]Árāā^Át¸Ác@Át^^•ÁæþåÁj[¦\Áå[]}Ájāc@Ávæ&@Á&[}•^&čçaç^Ájæ••ÈÁV•^ÁæÁj[¸Ár]^^åÁt æ‖[¸Ác@Á&čcāj*Áà|æå^•Ácāj ^Ácāj ^Ác[Á(č|&@Áæ)Á, ^||Áæ)Á&čcÁc@Áf[jāæť^ÈÁY @}Ác@ÁājātāæþÁjæ••Áœæ•Áà^^}Átæå^Ê åã^}*æ*^Ás@Á;[¸^¦ÊæðjåÁ^čč¦}Áa[[{Át[ÁæÁæ^Ádæç^Ádæç, |Áj[•ātāj}ÈÁÜ^č¦}Át[Ácædcāj*Áj[ājcÁæ)åÁ;æ4^Á;^¢cÁjæ••Ê ^c&È

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The cutter deck should be level with the ground to reduce the work required by the cutter and tractor to minimize equipment wear and damage.

One-1/180

(OPS-R-220)

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AWARNING

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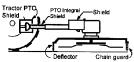
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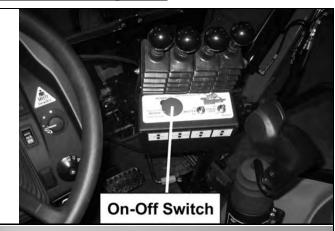
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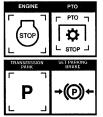
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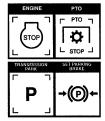


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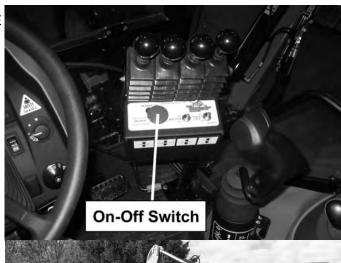
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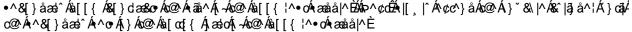
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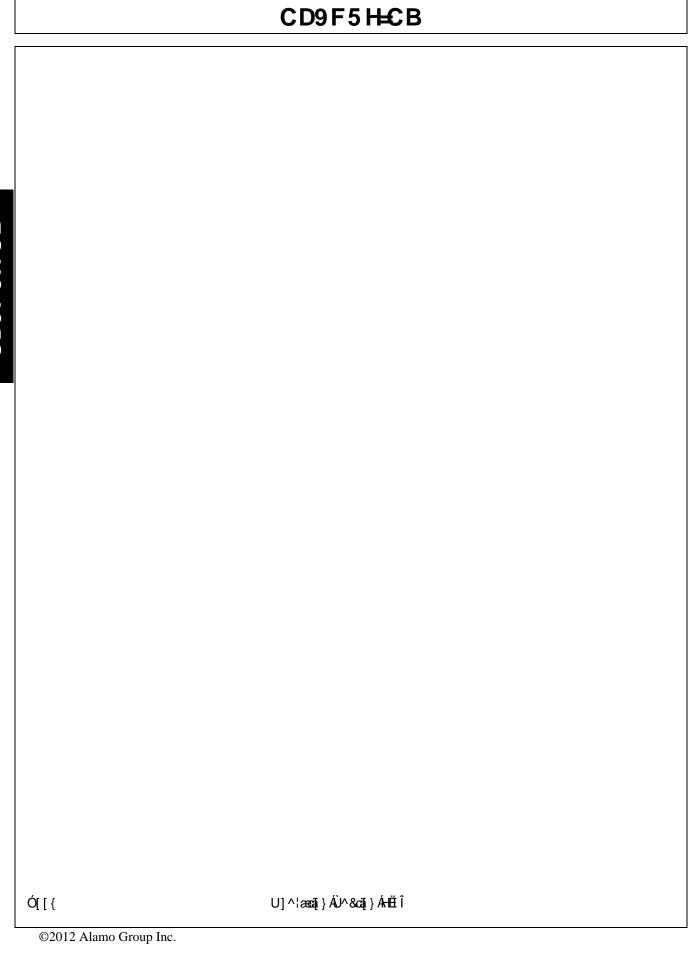
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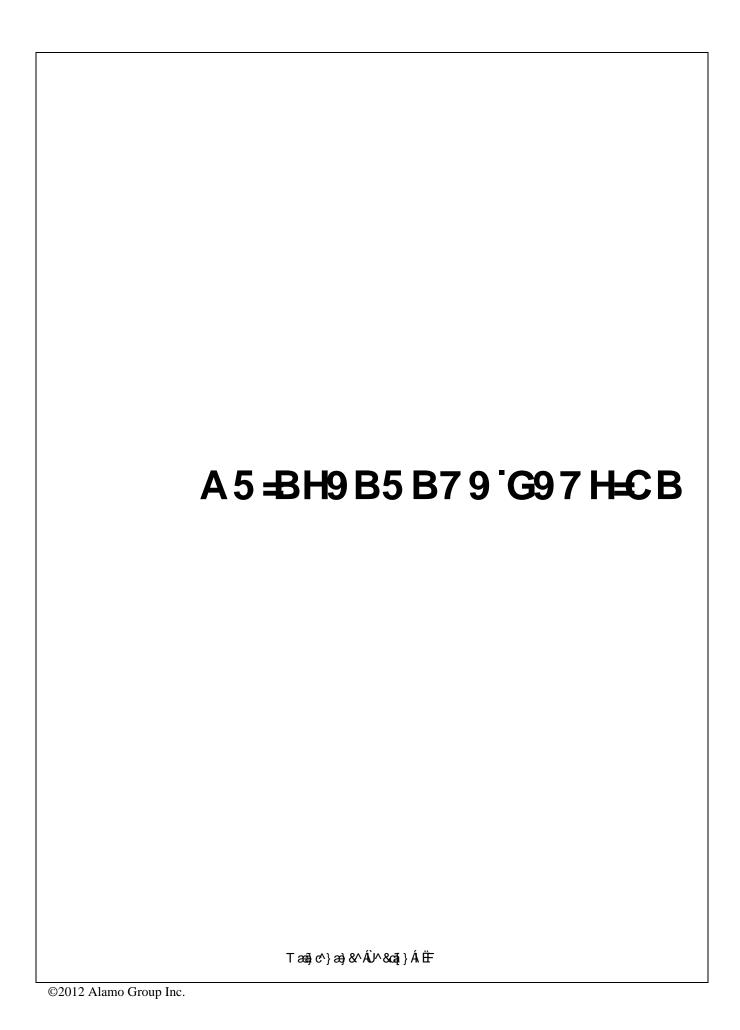
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AWARNING

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Ü^Ë[;|``^Á; @^|Á;*•Áœe^|Áã•oÁãç^Á@;`|•Á[-Á[]^|æaā[}Áæ)åÁ]^|á[åa&æ)|^Ác@|^æe^|ÈÜ^^Á[;\`^Ár]^&ãa&æaā[}• |ãre^åÁājÁc@Ádæ&c[|qÁr^|çã&^Á(æ)`æ)Á=[¦Áî[`|Á]æbá&`|æbÁ([å^|ÈÄK\YY``i[g'aighiUkUmg'VY'fY!hcfeiYX |k\YbYjYf'Uk\YY`]g'fYacjYX'UbX'fY]bghU`YX"

A DANGER

Þ^ç^!Ÿ[!\Å`}å^!Åc@ÂQ]|^{ ^}dÃc@Â; æṭ ^¸[!\ÆÄ[!Áæ)^Åã-&å &[{][}^}oÁ}|^••Ác@ÁQ]|^{ ^}oÆA^&`!^|Â*]][!&åÁ;!Áä|[&\^åÁ] q´Á]!^ç^}oÁ`åå^}Á[!Áā;æåç^!&}oÁæ|j³*Á¸@®k@Á&[`|åÁ&æě•^Á^!ąī`• ą)Ď!^Á;!ÁŶç^}Åå^ææ@ŽÁφΰο⊞ιο



Tæājo^}æ)&^ÁÛ^&aāj}ÁnÉG

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AWARNING

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AWARNING



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S}ã^Á; [*}œ]*Áà[o• Ç}ã^Á; Áàã\Á;¦Áà æå^Áàæ;D	Ô@&\	Ú¦^Ë;`à¦&&æe^Ác@i^æå•EÁc@i}Á q{¦~``^ÁqfÁn€∈ÁcEÁpà•È
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φή Τόγο		₩₩₩ŴÛTTÒÞVÙ		
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FĔŔŖŶåĔŔØĬĬĸĨŧĀŠĮ	FÈÁÁÔ @ &\ Áæ) å Á^-āļÁP^ å ÁØ * ãã						
ŒĠŠ^æ)•Á§Á∰,^ ÜUW HĒÁΘæi c°Á,^ ñ*-Áşæqç,^	CHŻÁÁ/ZŤ @ 2^}Á;¦Á^] æ 32 ^Áāccā;*•Áaa;åÁ@;•^• HŻÁÁÔ@ 33. Á;¦^••`¦^Áā;Áā;AÉ;Ãò;A ÁÁÁÁÁ;A••`¦^Áā;ÁÔ[}d[ÁXæqç,^Án@,` åÁa.^ ÁÁÁÁÁA;ÆecÁGÍ€€ÁÚÉÙÉDÈ						
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	FÈĞ[[•^ÁÓ[o• CHÁÔˇ cc^! Áæ• •^{ à ^ ÁMÁN, à æ æ æ 8^å FÈÁPˆ å ÉÁO[ˇ ãã ÁŠ[¸ CHÁŠˆ æ • Á§ Áð ^ ÜUW HÉÁOæ c Áx ð å ^ ; FÉÓ[¸ } Á× •^ CHÁÓæ c Áx ð å å ^ ; FÉÓ[¸] Á× •^ CHÁÓæ c Áx ð å å † FÉÓ[¸] Á× • 4 CHÁÓæ c &c [• ² & §] å å † FÉÓ[¸] Á ð 4 · ; I ÉŠÖ ° &c [] ð & § § § § § § § § § § § § § § § § § §						

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k j```bchWi hĒ	ŒŽ \ ^}•ã[}^¦	Á‱ (o Án) å Án) æniÁæ Á,^^å^åÈ ŒÁ MOEA bio Óar}•ni∤^¦Á,ĭ óÁ ænÁ,æe @ ¦ Á MW Á,æe @ ¦Án Á ĭ•@Á,ño@A[]Á,-Á*ĭña^È
Ack Yf'hi fbg'g`ck`m cf'bch'Uh'U`È	FEĂÔ[}cæ(a)æ)o•Á Á₩Á^•da&cā)*Án][[Á₩Á([ç^{ ^}cÁs)Á Á₩Ácædc^Ás[a°EÁ	FÈÁMÁÜ^{ [ç^Ápæl*^Á, °ơÁ, }Án ãà^Á; ~Ápæl*^ ÁWWWÁ;æl;ç^Áa [&\ÈÁÜ^{ [ç^Án]¦ā, *Éban) åÁ.•^ ÁWWWÁ,^^å ^Á;[•^Á;ã^Á!ā]Á[Á;Á, ° Án][[ÁWWWÁ;[{ Áa [&\ÈÁÔ@&\Áa [&\Áan)åÁn][[
	CHÁÙ & Ca[}Áa]^• Á∰ à• d`& c^åÁ	Á∭∭Á ¦Á&[} cæ{ ā} ææ°•Áæ}åÁ &¦ææ&@•È Á∭∭Ó ^æ}Á,æd•Á;¦Á^] æ&^ÁæÁ &¦ææ&@åÈ GĚ∭Ó@&\Á¦¦Á ā}\^•Á;¦Á;à•d`&cá[}Ƨ Á∰∭Á`&á[}Á@•^È
	HÈÀŠ[, Á, ĀÁ/cç^	HĐÁ (Ô @ & Á? ^ å ĐÁ ĐÀ) \ Á ^ ç ^ Á Đ) å Á Đ È
Di a d'k]``bchk cf_	FÈÄÔ¢&^••ãç^Á, ^æb ÁÁÁ, }Á5, c^¦}æbÁ,æbo•	FÉÁÁÁÍÖāræ∙•^{à ^Áæ);åÁ^]æāiÈ
A chcf 'k]``bchk cf_	FEÄÖ¢&^••ãç^Á¸^æb ÁÁÁÁ¸&^t}æd∮æd	FÈÁÁÁÖãaæ•^{{à ^Ása}aÁ^]æaãÈ

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Tæng c^}æng &^AÛ/^&cna[} Án E

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				Т	orque	for St	andard	Faste	ners				
Nominal Dia			\rangle	Grade 2	0	>	Grade 5			Grade 8			Grade 9
Dia.	per	Tig	htening Tor	que	Tig	htening To	rque	Tig	htening Ton	que	Tig	htening Ton	que
	inch	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain
(in.)		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20
					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-lbs
5/16	18	101	122	135	157	178	209	221	251	295	259	294	346
3/8	16	15 ft-lbs	18 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	31 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-lbs
7/16	14	24	29	32	37	42	49	52	59	70	61	70	82
1/2	13	37	44	49	57	64	75	80	90	106	94	106	125
9/16	12	53	63	70	82	92	109	115	130	154	135	153	180
5/8	11	73	87	97	113	128	150	159	180	212	186	211	248
3/4	10	129	155	172	200	227	267	282	320	376	331	375	441
7/8	9	125	150	167	322	365	429	455	515	606	533	604	710
1	8	187	225	250	483	547	644	681	772	909	799	905	1065
1 1/8	7	266	319	354	596	675	794	966	1095	1288	1132	1283	1510
1 1/4	7	375	450	500	840	952	1121	1363	1545	1817	1597	1810	2130
1 1/2	6	652	783	869	1462	1657	1950	2371	2688	3162	2779	3150	3706
							nread Se						
1/4	28	56 in-lbs			87 in-lbs		116 in-lbs						
5/16	24	112	135	150	174	197	231	245	278	327	287	325	383
3/8	24	17 ft-lbs				30 ft-lbs		37 ft-lbs	42 ft-lbs	49 ft-lbs		49 ft-lbs	58 ft-lbs
7/16	20	27	32	36	41	47	55	58	66	78	68	78	91
1/2	20	41	49	55	64	72	85	90	102	120	105	120	141
9/16	18	59	71	78	91	103	121	128	146	171	151	171	201
5/8	18	82	99	110	127	144	170	180	204	240	211	239	281
3/4	16	144	173	192	223	253	297	315	357	420	369	418	492
7/8	14	138	165	184	355	403	474	502	568	669	588	666	784
1	14	210	252	280	542	614	722	765	867	1020	896	1016	1195
1 1/8	12	298	357	397	668	757	890	1083	1227	1444	1269	1439	1693
1 1/4	12	415	498	553	930	1055	1241	1509	1710	2012	1768	2004	2358
1 1/2	12	734	880	978	1645	1865	2194	2668	3024	3557	3127	3544	4169

Torque values for 1/4 and 5/16-in series are in inch-pounds. All other torque values are in foot-pounds. K = 0.15 for "lubricated" conditions
Torque values calculated from formula T=KDF, where

K = 0.17 for zinc plated and dry conditions

K = 0.17 for zinc plated and dry conditions

D = Nominal Diameter F = Clamp Load

K = 0.20 for plain and dry conditions

			Class 4.6			class 8.8	•		Class 10.9	Class 12.9		
			C1035 4.0						C1033 10.	CIGSS 12.3		
			1	1	J 3	(8.8)			/			
		,	4.6	/				١ '	10.9	12.9		
Nominal	Pitch		htening To			htening Tor		Tightening Torque			Tightening Torque Lubed Dry plair	
			Dry Plated		Lubed			Lubed Dry Plated Dry plain				
Dia.			K = 0.17	K = 0.20	K = 0.15	K = 0.17		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.20
(mm)		(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)
3	0.5	0.28	0.32	0.38	0.73	0.82	0.97	1.0	1.2	1.4	1.2	1.6
3.5	0.6	0.44	0.50	0.59	1.1	1.3	1.5	1.6	1.9	2.2	1.9	2.5
4	0.7	0.66	0.74	0.87	1.7	1.9	2.3	2.4	2.7	3.2	2.8	3.8
5	0.8	1.3	1.5	1.8	3.4	3.9	4.5	4.9	5.5	6.5	5.7	7.6
6	1	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11	9.7	13
6	1.25	2.1	2.3	2.7	5.3	6.0	7.0	7.6	8.6	10	8.8	12
7	1	3.8	4.3	5.0	9.7	11	13	14	16	19	16	22
8	1	5.9	6.6	7.8	15	17	20	22	24	29	25	34
8	1.25	5.5	6.2	7.3	14	16	19	20	23	27	24	31
10	1.25	11	13	15	29	33	39	42	48	56	49	66
10	1.5	11	12	14	28	32	37	40	45	53	47	62
12	1.25	21	23	28	53	60	71	76	86	101	89	119
12	1.5	20	22	26	51	58	68	73	82	97	85	113
12	1.75	19	21	25	49	55	65	70	79	93	81	108
14	1.25	26	29	34	66	75	89	95	108	127	111	148
14	1.5	28	32	37	72	82	96	103	117	138	121	161
14	2	30	34	40	78	88	104	111	126	148	130	173
16	1.5	50	57	67	129	146	171	184	208	245	215	287
16	2	47	53	62	121	137	161	173	196	230	202	269
18	1.5	73	82	97	187	212	249	268	303	357	313	417
18	2.5	65	73	86	167	189	222	239	270	318	279	372
20	2.5	91	104	122	236	267	314	337	382	449	394	525
lamp los	ad calc	culated as	75% of th	ne proof lo	ad for spe	cified botts	K = 0.15 f	or "lubrica	ated" cond	litions	D = Nomin	nal Diamete

Tængi e^}ængi &^ÁÛ^&engi }ÁiÊ

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8 Yg W]dl i]cb	5 dd`] WU r]cb	; YbYfU`GdYV]Z WUr]cb	FYWca YbXYX AcV]`@Vf]WUbh
Vlæ&k[¦ÁP^妿ĕ a&∙Á	Ü^∙^¦ç[ã	RÖËG€Ô TØÁTFFHÍÐ FFIF ØÞPTGÔFHIÖÁÇØÞPG€FD	T[àá∰iáááiGi
T [ၞ^¦ÁR^妿ĕ a&rÁ‱∰ Ô[åÁl^{]^¦æeč¦^•Á√e≫Án ÙcæddËW]		OÙUÁiÎÁOE;aäÖ'^æbÖĞ[¸Áv^{]	T[àą́/ÖVÒÆÍT
Þ[¦{æ†Á^{]^¦æcï¦^•Áí F€»ÁØÁÛæàdËNJÁ‱‱∭		RÖËG€Ô TØÁTFFHÍÐ FFIF ØÞPÁTGÔFHIÖÇØÞPG€FD	T[àậų-¦ˇãâÁiGIÁ
Þ[¦{æ‡Á/^{]^¦æc°¦^∙Á FÍ»ÁØÁÙædóÁV]		Où∪ÁiîÁOE;däÖ∀^æ	T [àðļ/ÖVÒÆÍ
Pa*@ÁU]^¦æaā)*Áv^{]È Cōā[ç^ÁJ€»ÁØ		OÙUÁF€€ÁOE; œÉY^æl	T[àđ /Ö VÒÆÌT
Ø æ j ÁÜ^ælÁÕ^ælà[¢Á\\\\	₩Õ¦^æ•^	ÚŒUÁÙ^}œ@æ&ÁÒ¢d^{^ Ú¦^••`¦^ÁÕ^æ}ÁŠ`à^	T[àāļÁÜPÔÁÍÍYËÜ€ T[àāļÁFÁÛ^}c@?dãLÁÕ^æb
Ô` cc\ÁÙ@ecÁBÁÕ\[`}åÁ Ü[^\ÁÙ@ecQZ æájD	₩Õ¦^æ•^ Õ`}	Šãn©ã{ ĖÔ[{] ^¢ Ò¢d^{ ^ÁÚ¦^••`¦^ ÞŠÕŌĖÕÙUÁHG€	T[àā[*¦^æ•^ÁÔTĒÜ
Ö¦ãç^ÁÙ@ecÁÔ[*] ^¦ Ǥ æãjÁsc}åÁÜ[cæt^D	Õ¦^æ^ Õ`}	Šão©ã{ ËÔ[{] ^¢ Ò¢d^{ ^ÁÚ¦^••`¦^ ÞŠÕ ŒÜÜÙUÁHG€	T[àã[*¦^æ•^ÁÔTÉÜ
Ölãç^ÁÙ@ecÁŸ[\^Ê WÊŊājoÁBÁÙc`àÁÙ@ec	Õ¦^æ^ Õ`}	Šão©ã{ ËÔ[{] ^¢ Ò¢d^{ ^ÁÚ¦^••`¦^ ÞŠÕ ŒÜÜÙUÁHŒ€	T[àã[*¦^æe^ÁÔTÉÜ
Ó[[{ÁÛ,ãç^ Ó[[{ÁÔ^ ājå^¦ÁÚãç[o• ÇÜ[cœa^ÁBÁØ æãAŐ[[{D	Õ¦^æ^Á Õ`}	Šão©ã{ ÁÔ[{] ^¢ Ò¢d^{^Á∫!^••`!^ ÞŠÕ ©ÜÜÜU ÁHG€Á	T[àã[*¦^æe^ÁÔTËÜ
Ö^&\ÁÓ[[{ÁÚãç[cÁB Ö^&\ÁÙq[]ÁOābŏ•d;^}c Ü[cæb^ÁBÁØ æáaD	Õ¦^æ^ Õ`}	Šão©ã{ ÁÔ[{] ^¢ Ò¢d^{^ÁÚ¦^••`¦^ ÞŠÕOËŒÙUÁHG€Á	T[àã∦⊹¦^æ•^ÁÔTÉÙ
Ö^&\ ÁÙ] āj å ^ÇÜ[ææ^ D	Õ¦^æ^ Õ`}	Va*^¦Áù]ājå ^ÁŠ`à¦a&æ)c]æloó∫;{à^¦Á≘ÎÍ €€€€	T[àãão@ÂÙPÔÁGG€

Tænāje^}ænj&^Áû^&cnā[}ÁniËJ

DC @M75F6CB5H975F9/A5=BH9B5B79

V@Á];[]; lãtd^ÁWXÁse) åÁŒa; æã;}ÁÜ^•ãrœa) rÁÙ*; æ&xÁ&[æã; *Á[}ÁÙP®ÒŠÖÙÁÙWÚÒÜÔUŒVÒÖÁ]; [|^&æàà[}ææ^•ã}; ãã&æ) d^Áã;]; [ç^•Á; ^!-; { æ} &^ÈÚ^; ā; åã&Á\$|^æ; ā; *Á; *[] ^;Á; ; [] ^;Á; ; [8\å`;^•Áæ; åÁ&[{] ææãa|^Á&[^æ; ^!-éæ; *Áæ; A; *Á; ; [] ^;Á; ; [] } ; Áæ; åÁ&[{] ææãa|^Á&[^æ; A; Áæ; A; A; ; [] } ; Áæ; á[; [] } ; Áæ; á[; []] *Áæ; á[; [] *Áæ; á[; []] *Áæ; á[; []] *Áæ; á[; []] *Áæ; á[;

ԊҌ DO ŐÁ/P ÒÁUWÚ ÒÜ ÔU Œ VÁP ŒÜ Ö ËÔU Œ V

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Ô SÒ CEÐ OÐ Ó Á CEÐ Ò Þ VÙÁY ÞOÐ PÁ POSK Ò Á Ó Ò Ò ÞÁ ØU WÞ Ö Á VU Á Ó Ò Á ÔU TÚCE/OÐ SÒ Á WÞÖ Ò Ü Á SŒÓU ÜCE/U Ü Ÿ ÔU ÞÖ ON OD ÞÙK

OE `^[`• ÂÛ[| ` cā] }• Á ÂÛ[æ]• Áæ) å ÁÖ^ c^!* ^} o•

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U¦*æ}æAÛ[|ç^}æ

Ó c |ÁÔ^||[•[|ç^ S^|[•^}^ P^¢^|ÉAŒUÈÁÍI Þæ] @c@æQXTBÚÁt¦æå^D

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O#48 @ |•

T^c@2)[| Q[];[]^|

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; F5:: #=F9ACJ5@

Ó c |Ás\|[•[|ç^Áç|¦Á^{ [çæ|Á; -Á;æā] • ÊÁ; æ\ā] * Á;^} ÁB,\•ÊÁ] • ŒÁ ÊÀ œÀÈÁ @ Á • ^Á; -Á; æ•\ā] * Áæa] ^ ÊÁæâ @ • ãç^Áæa] ^ [¦Áā; oÁ^{ [çæ|Á; []•Á; []•Á; []•Á; []•Á; A|Á; Áæā] * Á --Á; |åÁ; ^æœ@!^åÁ; æē] • È

QTÚUÜVQE>VMÁQÁsaÁ, æc\läatÁsi•Á[`}åÁq[Áà^Ás]&[{]æaāa|^Ás}AæÁ•@;ldēc\{ Ác^•dĒsoÁ, āļÁ•`æţ|Ás^Á[`}åÁq[Ás^ āj&[{]æaāa|^ÁsjÁs@Áæ\låEV@Ás[}ç^!•^EÁQ;^c^!ÊfsiÁ;[cÁæt;æé•Át`^EÁZæç[¦æà|^Áj^!-{|{æ}\&^Ás^Á;[Át`æbæ)c^^ c@ædÁs&c`æpÁ\}åË•^Ás[}åãā]}•Áæçç^Ás^^}Ás`]|ā&æc^åEV@¦^-{!^Êso@•^Á^•`|o•Á•@;|åÁs^Á•^åÁæcÁsæÁæÁ;}|° æjåÁsoÁs¦-{&[{{^}}å^åÁs@ædÁ@AÁ•^!Áco•Á@Áj![å*&o•Á}å^|åc|Ásæ&c`æpÁ\}åË•^Ás[}åãāā]}•EÁ

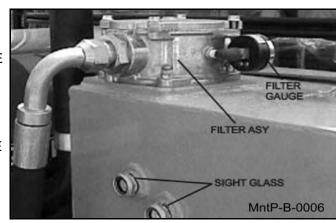
Tæāje^}æ)&^ÂÛ^&@āj}ÁnÜF€

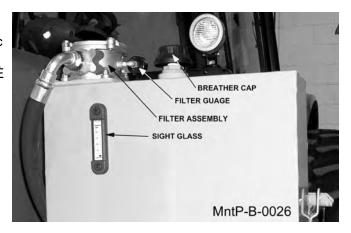
)] [Ò

F97CAA9B898: =@@B; '=BGHFI7H=CBG': CF'<MBF5I @F' F9G9FJ=CFG

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à^Á; æ \^å Á; } ÁsæÁ^ ç^ |Á` | -æ&^ EÉÁ @ oÁU ØØ+ÊÁs; å Ás; | [
• ` ~a&a` } oÁa ^ Át Ás[| Át Áse à àa } oÁo {] ^ | æe ' ^ ÈÁv • ^
& e at] Á, @ } Á\^ { [çā * Ác@ Á] | ^ • • ` | ā ^ å Áa | ^ææ@ | È
Ö [Á } [oÁ] | æ&^Á-æ&^Á; ç^ | Á[] ^ } ā * Á, @ } Á!^ { [çā * àa 6] ^ ææ 6] E
à | ^ææ@ | EÁ

QÁ^[*|Á^•^!ç ā|!Á @æ Á; [Áā @c Á*|æ•^• kÁ Á/@!^• !^• !çā|!Á @ç Á|; Ác@ Áç] Aí -Ác@ Á[] ^! • ā @A*|æ• ¼} Ác@ Á ãa^Á; -Ác@ Áæ) \ ÉÖ[Á] [OÁ;ç^!Ëā|!È V@Á^•^!ç[ā Á@æ Áa^^} Á;ç^!Ëā||^åÅ; @} ¼ āÁæ Áşãā|^ ā Ás@ Á]]^!Áā @Á æ• ÉŒÆæ) \ Áœæ Á[[Á; *&@Á;āÉs@ ^¢&^•• Á[æÂa^ Á^¢] ^||^åÁc@[** @Ác@ Á] !^•• * !ã ^å à!^æ@!È





89H5=@98'A5=BH9B5B79

ÜÒÚŠŒÔOÞÕÁOÞËZŒÞSÁPŸÖÜŒVŠOÔÁZŒŠVÒÜK

Š[[•^} Ác@Á[; ' Áà[|o•Á[; } Ác@Á[] Á&[ç^¦Á[, -Ác@Áá]c^¦ @`•ā; * ÉÀ/"; } Æ[ç^¦Á&[č] c^¦É&[&] ā; ^Á; cāļÆ[ç^¦Áā; -\^^ÉÜ^{ [ç^Áæ; åÁ^] |æ&^Áā]c^¦ÉÜ^] |æ&^Á[] Á&[ç^¦ æ; åÆ[ç^¦Áā; |o•Áā,Á]][•ãc^Á; å^¦Áæ; Á^{ [ç^åÈ

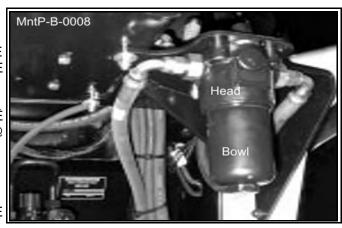


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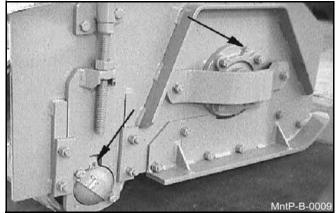
89H5=@98'A5=BH9B5B79

F9D@57=B; '<= < DF9GGIF9' < M8F5I@7 :=@H9F'9@9A9BH



; F95G=B; 71 HH9F'G<5: H!: @5=@ACK9FG

Š[&æc^Át|^æ-^Á^|\•Á|\•Á|} Áræ&@Á\} åÁ; Á&` cc^|Ár@ec@] LÊ
c@•^Áæb^Á|[&æc^åÁ|] Ár@^Áà^æ\$ā * Á&[ç^|EÁÞ[|{ æb
&[} åãā] }•Á|^` ã^Á[}^Á[|Ác_ [Á] `{] •Áā Á^æ&@
à^æ\$ā * ÉÉ •ā * ÁŠão@ã { EĎ[{] |^¢ÁÒ¢d^{ ^ÁU|^••`|^
* |^æ-^Á&[}-ā{ ā *Á[ÁÞŠÕOŒÊÜ)UÁ+G€Á] ^&ãæææā] }•È
V@á Áã Á[Áà^Áå[}^Á ão@ÁæÁ æð åæbåÁt|^æ-^Át` }Áåæāî
[|ÁæA, `\ ci f]bhYfj Ug"751 H=CB. `Cj Yf'[fYUg]b[
a UmWUi gY'dfYa Uhi fY'gYU'ZU]`i fY"

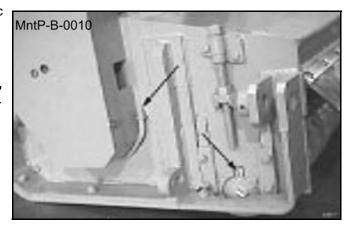


Tæaje^}æ)&^AÛ^&aai}ÁiËFG

A5=BH9B5B79

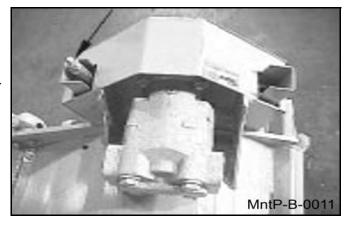
; F95G=B; ; FCI B8 FC @@9F G<5: H: @5=@

$$\begin{split} &\tilde{S}[8\varpi^{c} \mathring{A}^{c}|^{\Delta e} \mathring{A}^{c}|^{\bullet} \mathring{A}^{c}] \mathring{A}^{c} \varpi^{c} \mathring{A}^{c}|^{\bullet} \mathring{A}^{c}|^{\bullet}$$



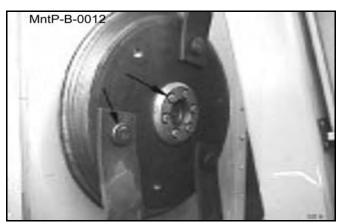
58>I GHB; #7<97?=B; 69@HH9BG=CB

\(\lambda \text{hab} \cdot \cdot \frac{\data}{\data} \righta \frac{\data}{\data} \ri



$H_{=}$ < H_{9} B=B; ?B= 9.6 C @HG.5 B8.8 =G? 6 C @HG.

 $\begin{array}{l} \text{CEe'} \mid \text{A''} \varsigma^{\wedge} \mid \text{A} \mid \text{AQ} \mid \text{A'} \mid \text{A'} \mid \text{A'} \mid \text{A'} \mid \text{A'} \mid \text{A'} \mid \text{A''} \mid \text{A''}$

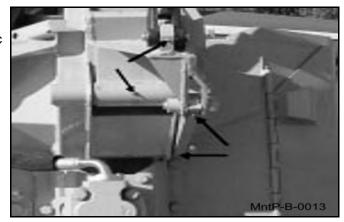


Tæn∯c^}æn}&^ÁÛ^&cn[}ÁnÉFH

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; F95GB; DCBHGCB6CCA5B8DJCH

Š[&æe^Á*!^æ•^Á^!\•Á;}Áå^&\Á;Āāç[ơ♠•^{ à|^ÊĀ;}Áo@ å^&\Á^}åÁ[Æ•^&[}åæê^Áà[[{ ÊÁæeÁ(æā;Ð^&[}åæê^ à[[{ ÁÁpā;dÊæe;åÁæeÁ,ãç^|Á^}åÁp.-Á;æā;Áà[[{ ÈÁQbb*&c Šão@ã { ËÔ[{]|^¢Á Ò¢d^{ ^Á Ú¦^••`¦^Á;!^æ•^ &[}-{¦{ā;*ÁqÁe`ŠÕOSË®ÙUÁHO€Á•]^&ãæ8ææā;}•Á`}cā; *!^æ•^Áà^*ậ•ÁqÁ;Á;![d`å^Á;[{ Á^}å•È



897? GHCD 58>I GHA9BH

U} Áà[[{ Á|æálÉA[[•^} Á[& ā] * Á] * ŒÁV*;} Áæálő• ({ ^} c à[|cÁa] ÉÁæ) åÁ*} Áå^& ÁS. ÁS. [ā] å^¦Á[* cÁa[Á* ||Á^¢¢^}•ā[} È ·lő• cÁa[|cÁ|* cÁ;} cálÁc@ Á@ æáÁs• cÁa[* &@• Ác@ Áa[[{ Ê æ) åÁcā @^} Á[[& Á;* cĚABCH9.*6 c`hig\ci`X'bch\]h Vcca `VYZcfY`Whì]bXYf`fYUW(Yg`ZI```HfUjY"



; F95G=B; 'GD=B8 @9

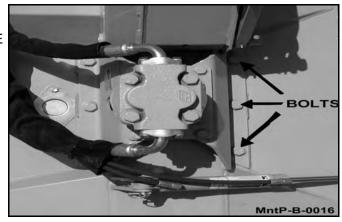
Š[&æec^Á*¦^æe^^Á-āncāj*Áį} Áāj•āá^Á[-Áå^&\ÁQ` •āj*È Qub'&oÁ Vāt^¦Á Ù]ājå|^Á Š`à¦ā&æjdÉÁ]æbóÁ}`{à^¦ €ÎÍI€€€€ÁĀjq[Á]ājå|^ÁQQ`•āj*ÈÁOĀ|Á¸ān@Á|`à¦ā&æ)c `}dāÁ|`à¦ā&æboÁ¸^^]•Á[`oÁ[-Áq[]Á•]ājå|^Á•^æÈ Š`à¦ā&æec^Án]ājå|^Á¸^^\|^Áq¦Á•ç^¦^Á,€ÁQ`¦•Áq-Á•^È



Tænāje^}ænj&^ÁÛ^&cnāj}ÁnjËFI

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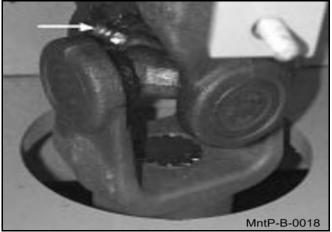
H=; < H9 B=B; 'GD=B8 @9'6 C @+IG



; F95G-B; 'DI AD'8F-J9'G<5: H7CI D@F



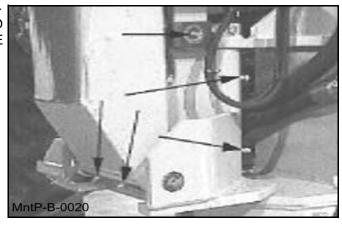
8F=J9'G<5: H'MC?9z| !>C=BH'GH| 6'G<5: H





; F95G=B; H<9.6CCA.GK=J9@

 $\tilde{S}[8ee^{A}Ac@A:^{|\cdot|\bullet|A}[Ac@A(8ee^{A})] = \tilde{A}c@A(8ee^{A}) = \tilde{A}$



Tæāje^}æ)&^ÁÙ^&cāj}Á,ËFÎ

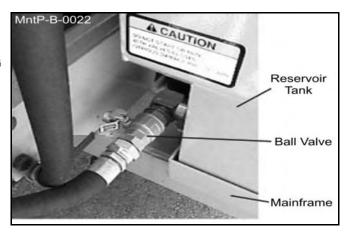
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; F95G-B; '6CCA'7M@B89FfGL'D=JCH'DC-BHG



65@@J5@J9G

V@ ÁàæļÁçæţç^Áæóc@ Á@ ålæ jæÁ^•^\ç[āÁ(æÁ,^å ﴿ Áà^Á¾[•^åÁåˇ ¦ā * Á&\cæā Á(æá, c^)æ &\Á[!Á^]æā] \ [&^å \ \• EH<9 \ 65 @@J5 @ 9 G A I GH \ 69 \ CD9 B fl UbX Y dUfU`Y` k]h ' j Uj Y L K < 9 B H F 5 7 H C F := G F 9 ! GH F H 9 8 \ C F \ DI A D := G '7 C I \ D @ 9 8 \ H C A C H C F \ C F D 'H C " Á Zæā ' \ ^Á [Á [Á [Á [Á [Á] A] Á\ ^• ` | o Á, & { } [] [} ^ } o Áæā ' \ ^Â



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c@^Áæ^Á,[¦}Ár¢&^••ãç^|°Ēå^}dĎå^-[¦{ ^åĒá,'Á,`cÁ, Æáææ)&^È

A CAUTION

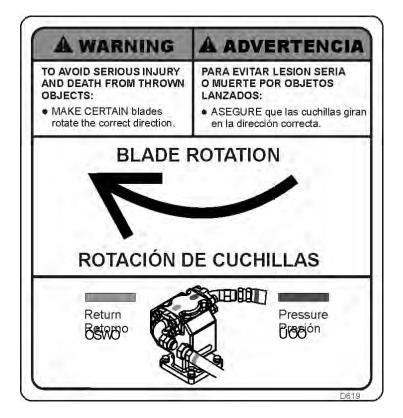
Ó|æå^•Á•@|`|åÁæd; æð•Áà^Á\^]|æ&\åÁð; Å;æðø•ÈÓ|æå^•Á; Áåãæ^\|^} oÁ; ^ð @æÁ&æ) Á&æŏ•^Á•\{ð; æð ā; àææð; &\Áæð; åÁåæd; æð^Át; Áo@Á; æ&@ð; ^Áæð; åÁ;\-[;}}^|ÈY @\}Á\^]|æ&ð; *Áæ|æå^•ÈÁæð; ^Á&æð^Át; |^]|æ&\Ác@Áæjæå^Áæ[[æðf; oæ ÉÁæð; åÁ; ææ @\•È

Important



AWARNING





Tæājo^}æ)&^ÁÛ^&cā[}ÁnÉÉÌ

FCH5FM?B=9F9D@579A9BH

- FÈ Ó^Á'` \^Á[`Á@æç^Áæá&[{]|^c^Á; ææ&@ā;*Á\^cÁ;-Á,^,Á}ãç^•Á;\Á\]|æ&^{^}cÈ
- HÈ Š à ^Ác@^æå•Á, ãc@Áæ) cãë ^ã ^ÈÁQ,• cæ|Áå[|ọ•Ác@[**@Á} ã^Áæ) å Ååã•\Á¦[{ Áà[cc[{ Áàā^Á; -Áåã·Áàæ}^Áàæ)ÈÁ Q,• cæ|Á,^, Á·^|-É[&\ā]*Á; *Á·*· o Áæ) å Áá[i ` ` ^Ác@{ Át Â.€€ÁcĒ|à•È
- IÈ V@Á}ãç^•Á@['|åÁ,ã,*Á¦^^|`Ág Áæà•[¦àÁ@]&\•Á;[{Á[]æ&oÁ,@}Ádãã,*Á;àb\&oÈÁ

K<9B'71 HH=B; '<95JM'6FI G<\(\tilde{z}\)?B=9'6C@HG'G<CI @8'69'=BGD97H98'<CI F@M'5B8 F9HCFEI 98'HC'\\\$+\\$'8FM'CF',\\$\'C=\@8':H''\@6G''

F9D@579A9BHC: FCH5FM8+G?#6@58965F

: Uʃ`i fY'hc'Zc``ck 'h\ Y'Zc``ck]b['k Ufb]b[g'UbX']bglfi Wf]cbg'a UmifYgi `h']b'gYf]ci g']b'i fmcf XUa U[Y'hc'h\ Y'Yei]da Ybhcf'dfcdYfhm'

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- HÈ 8]g_gʻa i ghVY]bgdYWMXXU]`mʻZcf`\ Ujf`]bY`WUW_gʻVYhk YYbʻgd]bX`Yʻa ci bhjb['Vc`hgʻcf`Ufci bX'h\ Y _b]ZYA ci bhjb['Vc`hg"H\ YgY`WUW_gʻ]bX]WUM`a YhU 'ZUhj[i Y`WUi gYX`VmigYj YfY`UVi gY"=ZWIUW_gʻUfY dfYgYbhih\ Y`X]g_ a i ghVY`fYd`UWXX"
- IÈ Q•]^&cÁc@Áåã\Á([ˇ}cā,*Áà[]o•Áåæā;Á,@}Á&@&\ā,*Ácā*@ò,^••Á[¬Á\}ã^Á([ˇ}cā,*Áà[]o•ÉAQÁæÁåã\{[ˇ}cā,*Áà[]o•ÉAQÁæÁåã\{[¸¸¸cā,*Áà[]o•ÉAGÁ,¸¸•OÁà¸ÁA({[ç¸åÉAc@^æå•Á&|^æa,^åÉA;^•@Ác@^æåÁ[&\ā,*Æ*]oAæ]]|ā\åÉÆæ)å cā @^}^åÁq[Ā;[]^¦Áq[;ˇ^Áçæ;^È
- ÍÈ QÁĐÁ}ã^Á;[ˇ}ợ¾*Áà[|ơਓ¢Á|[•^ÉÁo@Á^|Á|8&]*Á¸ơÁ;ˇ•ơÁs^Á^]|æ&%åÁæ•ÁæÁæ•ÁæÁæ•ÁæÁæ°ćÁ¦\8æĕợą}ÈÁЎà¦æðææ° ơ@^æå•Á¸ão@æ;ợæë-^ã^ÉČQ•œæ|Áà[|ơÁc@[ˇ*@Á\}ã^Áæ;åÁåã\Ðà|æå^Áàæ;Á-¦[{Áà[ơ[{Á•ãa^ÉÁQ)•œæ|Á•^|~ |[&\ā)*Á¸ơÁæ;åÁ[¦ˇ*Áó@{Á;Á.€€ÁdÉjà•È

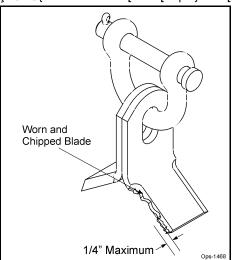
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- ″ V@ Á, æe^\ãædÁ, }Ás@ Á∧æåã, *Ánå*∧Á@æ, Áà^∧}Á, [¦}Áse, æê Áà^Á, [¦∧Ás@æ) ÁπÐ +Q}{ { D

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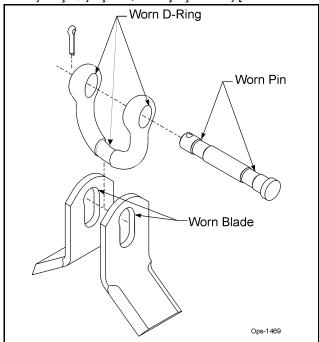
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- ″ Xãaãa|^Á&¦æ&\•Á\¦
- \mathscr{C} QÁSAÁÚ \mathring{a} Á; \mathring{A} Ü \mathring{E} Ü \mathring{a} * Á@ze Áçãa \mathring{a} a \mathring{A} [\mathring{A} \mathring

Of, æ • Á^] |æ&^ Ás@^Á, ā • Ása) å ÁÖËÜ ā * • Á @}^ç^! Á\¢&^•• ãç^Á, ^æ Ás Á; [æ&^ å ÈÁ



Important

Tænf, c^}æ) &^ÁÙ^&cnf, }Án ËÐF

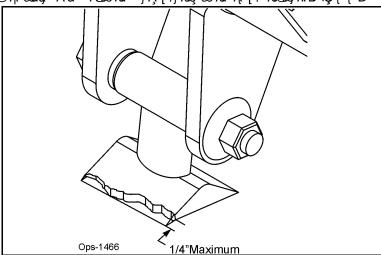
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- "UçækÁ @æk ^Á ^ækÁş •ãå ^Ás@ Áà æå ^Áà [lơÁQ | ^ÊÁ ;]
- ″ OE, Â&, a&, Ásd, ^ Áçã; ãa | ^ ÊÁ; ¦ Á
- Ű^^]Á[**^●Á§Ás@Ás|æå^qÁ*¦~æ&^Áæd^Á;¦^•^}dÁ;



Ott, æê•Á^]|æ&^Áa|æå^•Áa, Á^œ

Important

A CAUTION

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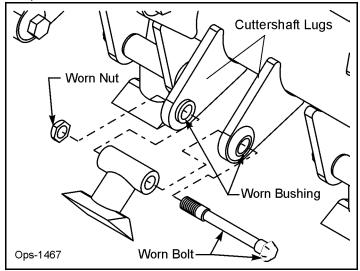
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- ″ Xãaãa,|^Á&,|æ&\•Á\¦

Øæajî'. ^Áq Á.^] |æ&^Áæà}[. { æ||^Á, [.} Áà[|o•Á; lÁà *• @ā, *•Á(æê Á|^æå Áq Á&æææ•d[] @ã&Áæajî'. ^Á[Áo@^Áà|æå^•Áæ) å ^b%æaj} ¼ Áo@Æå;[.\^} ¼ æbó, @ã&@¼ æê Á&æě•^Ár^!āj`*•Áà[åāj Áāj bǐ; ^Á; lÁå^ææ@Á



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- QÈ QE, æê•Á^] |æ&^ÁœÁ} ã^Áa[|œÁ, @}Á^] |æ&ã; *ÁœÁ} ãç^•ÈÖUÁÞUVÁÜÒWÙÒÁ/PÒÁ SÞØØÒÁÓUŠVÙÁUÜ ÞWWÙÈ
- HÈ $\mathbb{C}_{\bullet}^{\bullet}$ \mathbb
- IÈ Q• cœllÁc@Á (&\ ā * Á@¢Á * cÁ [Ác@æÁ@ÁlæAæ&^Á -Ác@Á * cÆ Áf . ælå• Ác@Á } ã^È
- ÍÈ CEI]|^ÁN/8×cãe^ÁnQiF+Á\;Á^ĭãcæb^}oÁs/Ás@0^æå.•È
- ÎÈ V[¦˘ˇ^Á,˘oÁqÁ,€ÁdĚA)à•ÈÁS}ã^Á,Čઁ•oÁqã,*Á√^^|^È

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- FÈ QÁ}ãç^•Ása¢^Áåæ(æť^åÁ;¦Áàæå|^Á[;}ĒÁœ^^Á¸ā]Á,^^åÁ(Áà^Á^]|æ&^åÁæ ÁæÁ^dŽÜ^]|æ&å;*ÁæÁ;*/AÁ}ã^ &æ;Á&æ*•^Á•^ç^¦^Áşāà;æā;}Ásà;åÁ,[••āà|^Áåæ;æť*Á(ÁsæÁ,[¸^¦È
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- IÈ OE[]|^Á{[&cãe^ÁnGiF+Á¦Á^ĭãçæ†^}cÁ[Áo@^æå∙È
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AWARNING

8 C'BCH'fY!i gY'h\ Y`cW_]b['\ YI 'bi hg'Zcf'a ci bh]b['h\ Y'_b]j Yg"=Z\ YI 'bi h'VYWca Y`ccgYzcf fYei]fY'fYa cj U'Zcf'_b]ZY'fYd`UWYa Ybh'cf'Ubmich\ Yf'fYUgcbz'h\ Yma i gh'VY'X]gWUfXYX'UbX fYd`UWYX'k]h\ 'bYk 'bi hg"

AWARNING

?b]j Yg'g\ ci `X'bchVY'k Y'XYX'cb'Zcf'UbmfYUgcb"

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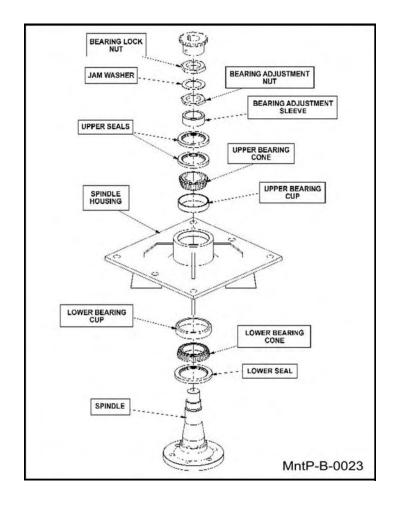
K5FB=B; °ÁŒÁ; \^••ÁT WÙVÁà^Á •^åÁq Á¸•œḍÁà^æð¸*Á&`]•ÉÀà^æð¸*Á&[}^•Æð¸åÁ^æфÈÖUÁ>UVÁ •^ÁæÁææ { ^¦
﴿Á¸•œḍÁæ&^•ÉÀà^æð¸*•ÉÁ; Á^æфÈÓ@Á¸æðoÁ¸Áæ••^{à|^Á;æÁå*Aåæ;æð^åÀÁ

BCH9 KÁV@Át¦^æ•^Á^¦\Áæ}åÁtˇ••^œ•Áæ}ÅÁ[&ææ^åÁ[}Ás@Á[]Áráæ^Á[-Ás@Á]]ājå|^Á@ˇ•āj*ÈÓ^Árˇ¦^Ás@Á]ājå|^Áæ æ••^{à|^åÆ[;|^&d^ÈÁ

Ó^Ái`¦^Áq Á, ^æ Án^^Áj¦[c^&cāj} Áæ) å Á; c@¦Áj¦[c^&cāç^Án``ā]{ ^} cÁæ•Á,^^å^å Á; @} Á; [¦\ā,*Á;} Án]ājå|^Áæ••^{à|`È

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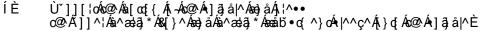
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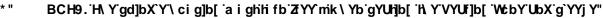


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695F=B: =BGH5@@5H=CB

- FÈ Ú¦^••Áˇ]]^¦Áà^æðā,*Á&ˇ]ÁB, q[Áo@Á•]ā,å|^ Quˇ•ā,*E
- QÈ V";}Án@Án]ājå|^Á@;*•āj*Ájç^;ÁnanjåÁj;\^••Áāj c@Áj, ^;Ánà^æhāj*Ás;]È
- IÈ Q• cæ|Ác@Á•] ā, å|^Áā, Ác@Á@; •ā, *ĒÁŠā @|^] |^••Ác@Á•] ā, å|^Áţ, Å^ææÁc@Á&[}^Á;} q; Ác@ •] ā, å|^É





- ¨È Ú¦^••Ác@Áς [Á]]^¦Ár^æ;ÞÁg q Ác@Ár] āj å|^ÁQ*•āj*ÈV@Ág}^\;ÁajÁ,-Ác@Ár^æ;Á(ˇ•σÀs^ÁNÚÉÆç æÂ;[{ c@Ás^æ;āj*ÊA[Ár¢&^••Á; àlææ;ðÁsæ;A^•&æ;A°È
- ÌÈ Q,• caḍÁc@ Áà ^æðā * Áæåbǐ• q ^} cÁ¸ cÁ¸ cÁ¸ cÁ¸ cÁ¸ cÁ¸ Áæ¸ Á; ÉĒÐ +Á&ļ^ææa; &^Áà^ç ^^} Ác@ Á, * cÁæ; åÁc@ • |^^ç^ÞÁ¸• cæḍÁc@ Áæḍ Á¸ æœ @¦ÞÁ¸ læ&ã¸* Ác@ ÁæàAB¸ q Ás@ Á ^^ ˸ æÈÞQ,• cæḍÁc@ Áà^æðā¸* Á[&\Á¸ * cÁç@ð¸ Á¸ * cD æ; åÁæà; åÁcæð æ^} Áæðæð¸• cÁbæṭ Á¸ ææ @¦Áæ; åÁæåbǐ• q ^} cÁ¸ cÆÀU^^Ác@ Áṭ ||[¸ ð¸ *Á•^&cã; } Áṭ¦Áà^æð⏠* æåbǐ• q ^} cĒ
- JÈ Ú[•ãā]}Ác@Á•]ā¸å|^ÁQ;•ā¸*ÁQ;¦ã[}æ;|^Á¸ão@ÁœÁå;æā¸ÁQ;|^Á¸iæ;}Á@;|^Á¸iæ;^Áœ;];+ÄÁÖ;|^æ;^Ác@;* @Ác@Á;^;\ ¸ão@Á/ā^;ÁÛ]ā¸å|^ÁŠ`à;B&æ;oÁÇ;æ;oÁ,`{à^;AÉ]Í|€€€€ÐÁ;}cājÁs@Á;|^æ;^Á,`;*^•Á;[{Ác@Áå;æā;ÁQ;|^È
- F€È Q cæ|Ás@Á| * ÁB q Ác@ÁB | æB ÁQ |^È

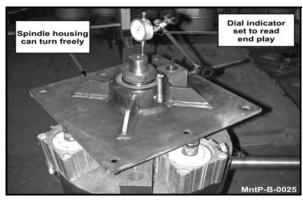
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- CÈ Ú[•ãā]}ÁæÁ(æ*)^cæRÁàæ•^ÁåãæhÁ3;åå&æ{;¦Á[}
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- HÈ Vã @^}Ác@^Áà^ædā *ÁæåĎ•d(^}cÁ)`cÁ`}dā c@!^ÁãÁÆFGÁā&@A[[ç^{^}cÁ]@}Ác@ •]ājå|^Á@`•āj*ÁāA¸Í!āNåÁ];æbåÁæ;æÂH;[{ c@^Áşã^Áæç,•E
- ÍÈ CE¢\Á@Á[&\Á,*óÁnÁða*@^}^åÊð@\^Á; *•óÁn^ÁðE€FÁn,&@Án,ÁÈ€€HÁn,&@Án,Á\^^Án,|æÁ, @}Áða*@|^Án,¦^ð,*Á] [}Áx@Á]ða|^Á@;*•ða*ÉÁ

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Ó[[{ Tæiji c^}æ) &^ÁÛ^&caji} Á ËĞÎ



Door bearing

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MntP-B-0024

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- FÈ Ô|^æ|Ás@Ásd^æ|Á,^Ásd|Á,^\•[}}^|Ás^-{\^Á[, ^\a],*Ás@Ás[[{Á, [, ^\A@æsa}È
- $\begin{array}{lll} \dot{\textbf{L}} & \dot{\textbf{L}}$
- IÈ CE|[,Ás@-Án^•c^{ Ág Ás[[|Ág Á|[[{ Ác^{}]^\:aac`\^Ás^-{\^Á^{}[çā]*Ása}^^Á@ å\ae`|a&Ás[{][}^}o•
- ÍÈ Y^ædÁÚæ^ĉÁr∣æ••^•Áæd;åÁã[]^}^dææi|^Ár∥[ç^•Á;@?}Á;[¦\ā,*Á;ãc@Á@妿ĕ|a&Á@(•^•Áæd;åÁãcā);*•È
- ÎÈ Ü^[^æ•^Áæd|ÁţājÁ; |^••ˇ|^Át|[{Ás@Á@妿ĕ|a8x/8sāl&čãoÁs^Á;æ)*æd|^Átd[\āj*Áræ&@Áçædç^Ár^8cā[}Á¸ão@Ás@Átæ&Ë d[¦Ár}*āj^Aţ~ĒANdājā^Ás@ÁTæ)*ædÁUç^!¦ãs^Á*}&cā[}ÁsÁs@Á;}ãoÁsÁ**āj]^åá¸ão@Ásè,Ár|^&dā8Aţç^!Á@妿ĕ|a8xÁ çædç^È
- ¨İÈ Waqā^Áa,[8\•ÊAnnes\Áceq)å•Á;¦ÁneA`ãneaà,|^Á;ç^¦Á@`æå,Á@;ã·οÁ;Á`]][¦οÁn@.Á¸^â*@A,-Án@.Áa[[{Án^8ca[}Áne)åÁ ¦^{[ç^A, ¦^••`¦^Á; |{Án@.Ás°|ā;å^!Á;[`}ca]*Á,ā,•È
- ÌÈ Ô@&\Á[Á^^Á;@æÁ;@Á&`|ājå^¦Á[Áà^Á^]|æ&^åÁsÁ[CÁ`}å^¦Á¦^••*¦^Áà^Á;[çāj*Ás@Á&`|ājå^¦Ájāj•Áà^Á @æjåÈV@Ájāj•Á;@`|åÁà^Á[[•^ÁæjåÁ;@`]åÁ|äå^Á;¦{Ás@ÁjājÁà[¦^Á>æjāřEÁQÁ;@Ájāj•Áæ;^Áæjåá&æjË }[ơÁà^Á;[ç^åÊÁs@Ás`|ājå^¦Á;æáÁs^Á;å^¦Á;|^••*¦^ÈÁTæà^Á;'^Ás@Áa[[{ÆG[{][}^}o*Aé*^Á;![]^¦^Á*]Ë][¦ơáÁæjåÁs@æÁs@Á;|^••*¦^ÆaÁ^[āç^åÁ;[{Ás@Ásã&čãŒÁ
- JÈ Ô^|ā;å^\Áse•^{{ à |ā}•Áse}^Á@ æç^Áse}åÁ&æ;Áæ;|Áæ|Á; @}Ás@ Ájā;•Áse}^Á^{{ [ç^åÈÀÛ`]][¦óÁs@ Á@ 妿ĕ|æZÁ&c|ā;å^\Á _ ão@ÁseÁ`ãææà|^Á@[ãróÁ;¦Ásææ&)È
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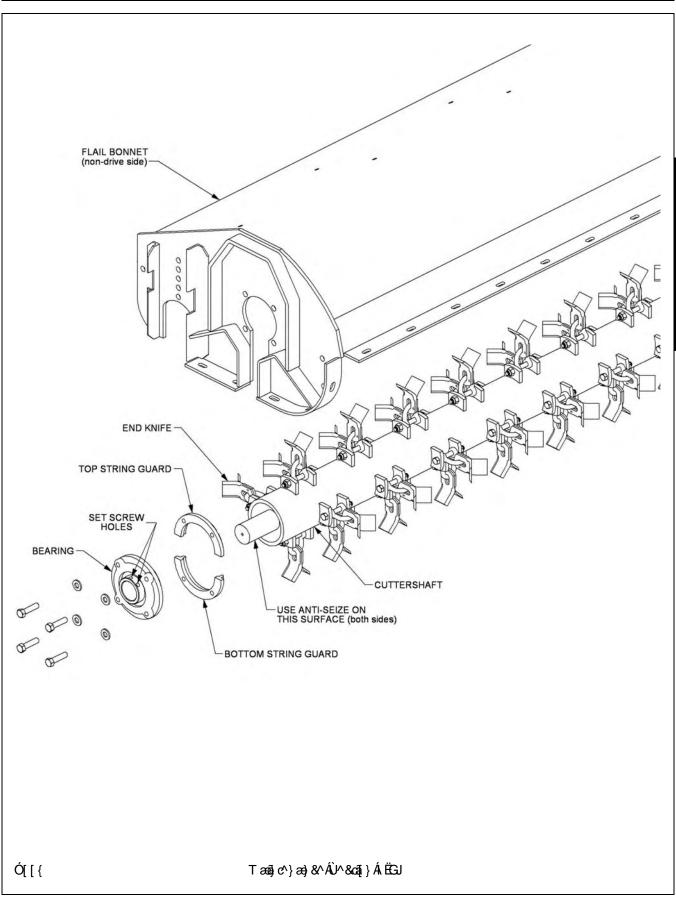
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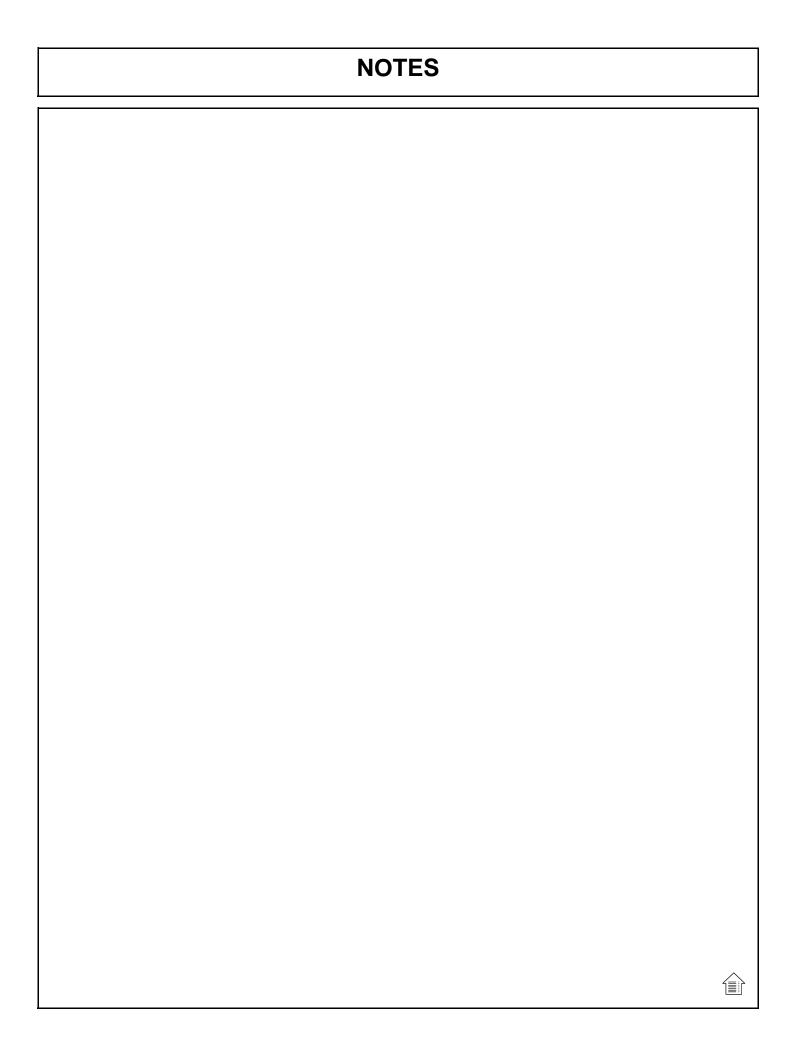
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CAT MT475B COUGAR BOOM PARTS SECTION



PART NAME INDEX

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CAT MT475B COUGAR

PARTS ORDERING GUIDE

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

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

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



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

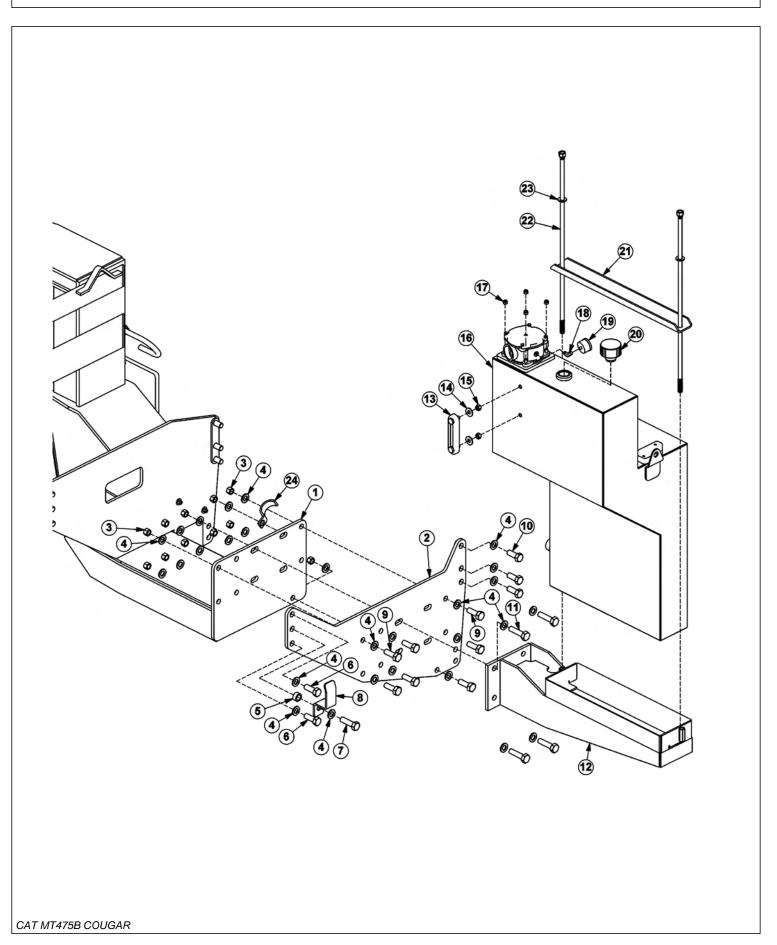
Direct any questions regarding parts to:

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

CAT MT475B COUGAR

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CAT MT475B COUGAR	

TRACTOR MOUNT KIT - LEFT SIDE

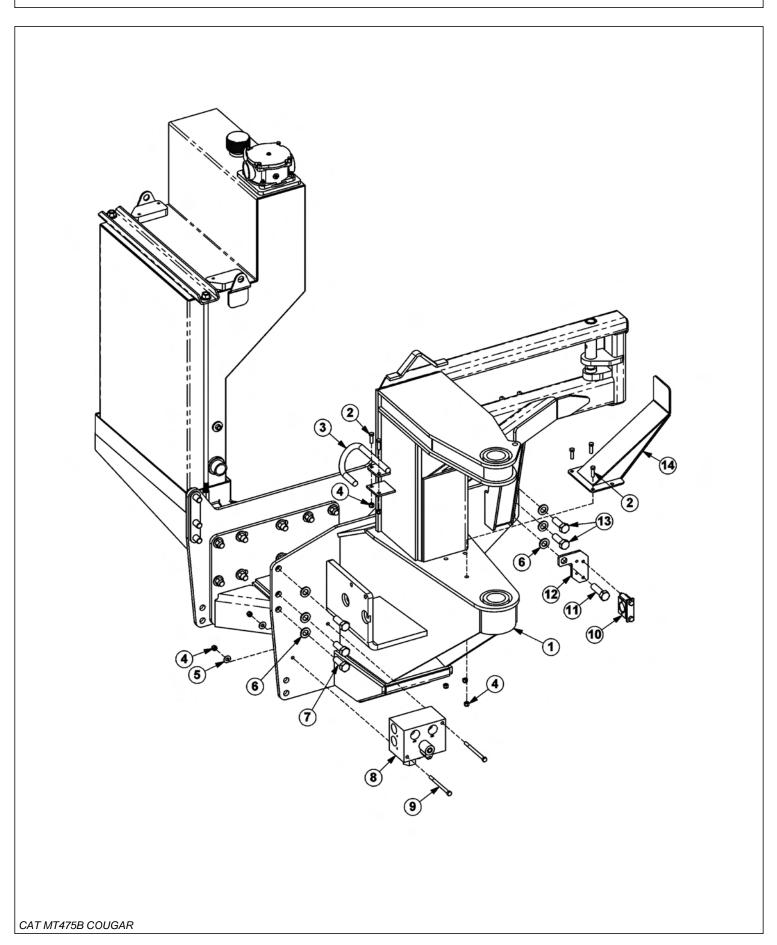


TRACTOR MOUNT KIT - LEFT SIDE

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300159	1	MAIN FRAME
2	06300164	1	UPRIGHT,FRAME,LEFT HAND
3	21825	11	HEX NUT,3/4",NC
4	33880	28	FLATWASHER,3/4",SAE
5	24849	1	SPACER
6	27282	2	CAPSCREW,20MM X 55MM,2.5P
7	25341	1	CAPSCREW,20MM X 70MM,2.5P
8	32382	1	BRACKET,HOSE
9	21833	7	CAPSCREW,3/4" X 2-1/4",NC
10	31731	3	CAPSCREW,20MM X 50MM,2.5P
11	21836	4	CAPSCREW,3/4" X 3",NC
12	06300060	1	MOUNT,HYD,TANK
13	06505067	1	SIGHT GLASS
14	22018	2	FLATWASHER,1/2"
15	21725	2	HEX NUT,1/2",NC
16	06700090	1	TANK,RESERVOIR,ASSY
17	21627	4	NYLOCK NUT,3/8"
18	TF4888	1	ELBOW,STREET,1/8"
19	6T0649	1	FILTER GAUGE
20	06505077	1	CAP,BREATHER
21	06410352	1	CHANNEL,MOUNT,TANK
22	06380014	2	TIE BOLT,SIDE TANK
23	33764	2	FLATWASHER,5/8",SAE
24	TB3012	1	CLAMP,HOSE

TRACTOR MOUNT KIT - RIGHT SIDE

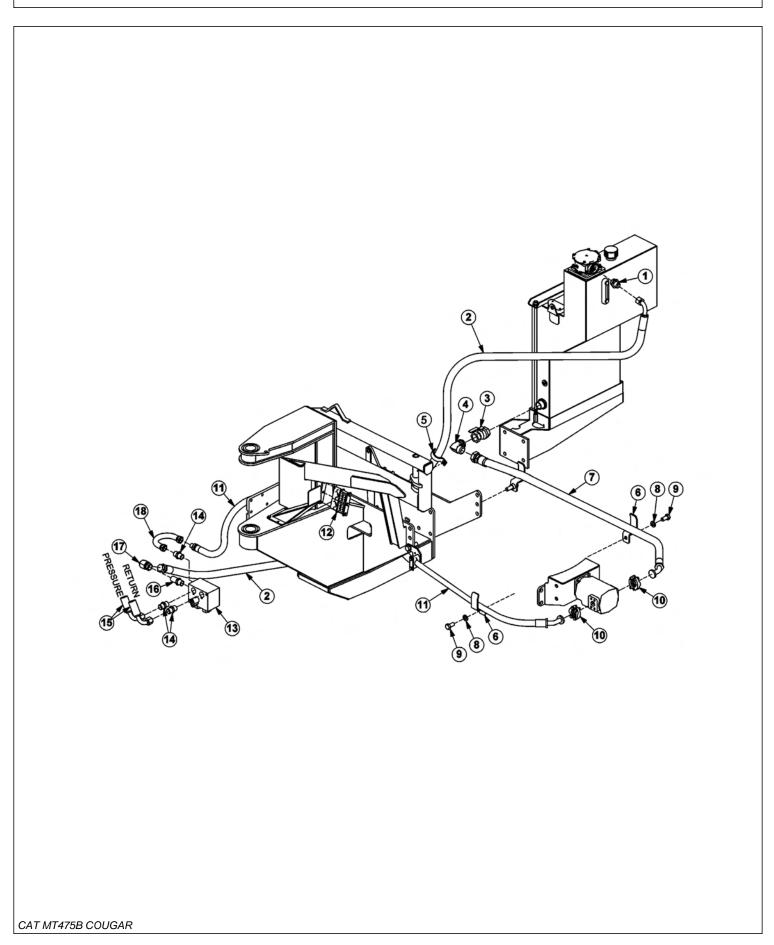


TRACTOR MOUNT KIT - RIGHT SIDE

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300159	1	MAIN FRAME
2	21631	5	CAPSCREW,3/8" X 1-1/4",NC
3	06370164	1	GUIDE,HOSE
4	21627	7	NYLOCK NUT,3/8",NC
5	22016	2	FLATWASHER,3/8"
6	33880	6	FLATWASHER,3/4",SAE
7	27282	3	CAPSCREW,20MM X 55MM,2.5P
8	06510083	1	VALVE,BRAKE,SOL
9	21644	2	CAPSCREW,3/8" X 5",NC
10	06505017	1	CLAMP KIT,HOSE
11	25341	1	CAPSCREW,20MM X 70MM,2.5P
12	34626	1	BRACKET,CLAMP
13	27281	2	CAPSCREW,20MM X 60MM,2.5P
14	06370104	1	GUIDE,HOSE,HOOK

TRACTOR MOUNT KIT - HYDRAULICS

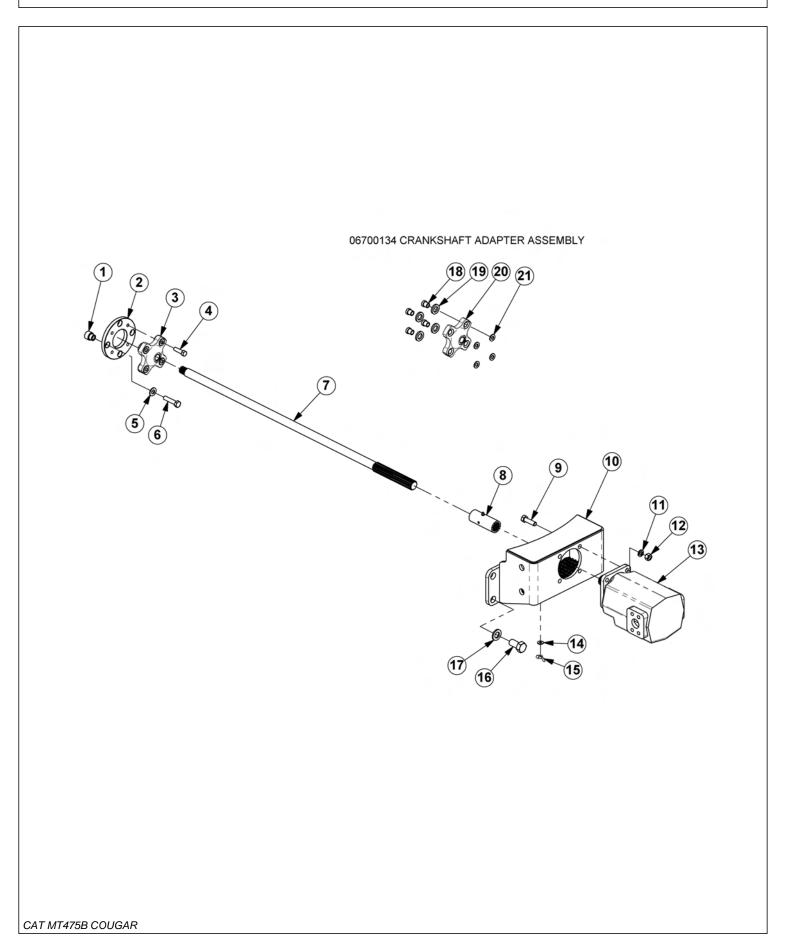


TRACTOR MOUNT KIT - HYDRAULICS

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	34064	1	ADAPTER,1-1/4"MOR X 1"MJ
2	34236	1	HOSE,1" X 83"
3	34309	1	BALL VALVE,1-1/2"
4	34655	1	ELBOW,1-1/2"MOR X 1-1/2"MJ
5		-	CLAMP,HOSE *REFER TO TRACTOR MOUNT KIT PAGE
6	32382	2	BRACKET,HOSE
7	06500582	1	HOSE,1-1/2" X 84"
8	33880	2	FLATWASHER,3/4",SAE
9	24860	2	CAPSCREW,20MM X 40MM,2.5P
10	TF4852	2	KIT,FLANGE,#20
11	06500581	1	HOSE,1" X 97"
12	06505085	1	CLAMP KIT,HOSE
13		-	BRAKE VALVE *REFER TO TRACTOR MOUNT KIT PAGE
14	33555	3	ADAPTER,1"MOR X 1"MJ
15	06500256	2	HOSE,1" X 119"
16	32869	1	NIPPLE,MALE,LONG,1"MOR X 1"MJ
17	33259	1	ELBOW,1"MJ X 1"FJX
18	06506012	1	PREFORMED TUBE,180°

DRIVESHAFT ASSEMBLY

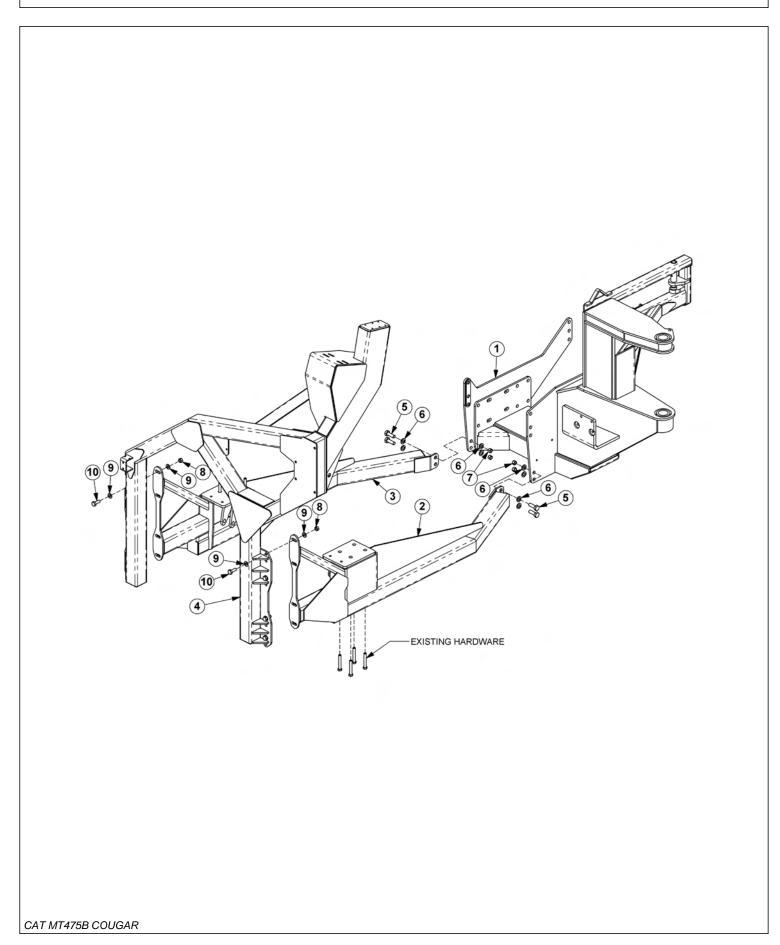


DRIVESHAFT ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06420143	4	BUSHING,CRANKSHAFT
2	06420142	1	SPACER,CRANKSHAFT
3	06700134	1	ADAPTER,CRANKSHAFT,ASSY
4	6T2260	4	CAPSCREW,7/16" X 1-1/2",NC
5	06533004	4	FLATWASHER,1/2",SAE
6	27510	4	CAPSCREW,12MM X 55MM,1.75P
7	06420065	1	DRIVESHAFT
8	6T0375B	1	COUPLER
9	21732	4	CAPSCREW,1/2" X 1-3/4",NC
10	06380022	1	MOUNT,PUMP
11	21990	4	LOCKWASHER,1/2"
12	21725	4	HEX NUT,1/2",NC
13	23152	1	PUMP
14	22014	1	FLATWASHER,1/4"
15	32519	1	WING NUT,1/4",NC
16	24860	4	CAPSCREW,20MM X 40MM,2.5P
17	33880	4	FLATWASHER,3/4",SAE
18	6T3213	4	GROMMET,STEEL,7/16"
19	06537004	4	WASHER,NEOPRENE
20	06420117	1	ADAPTER,CRANKSHAFT
21	24937	4	FLATWASHER,7/16"

AXLE BRACE ASSEMBLY - OPEN STOW



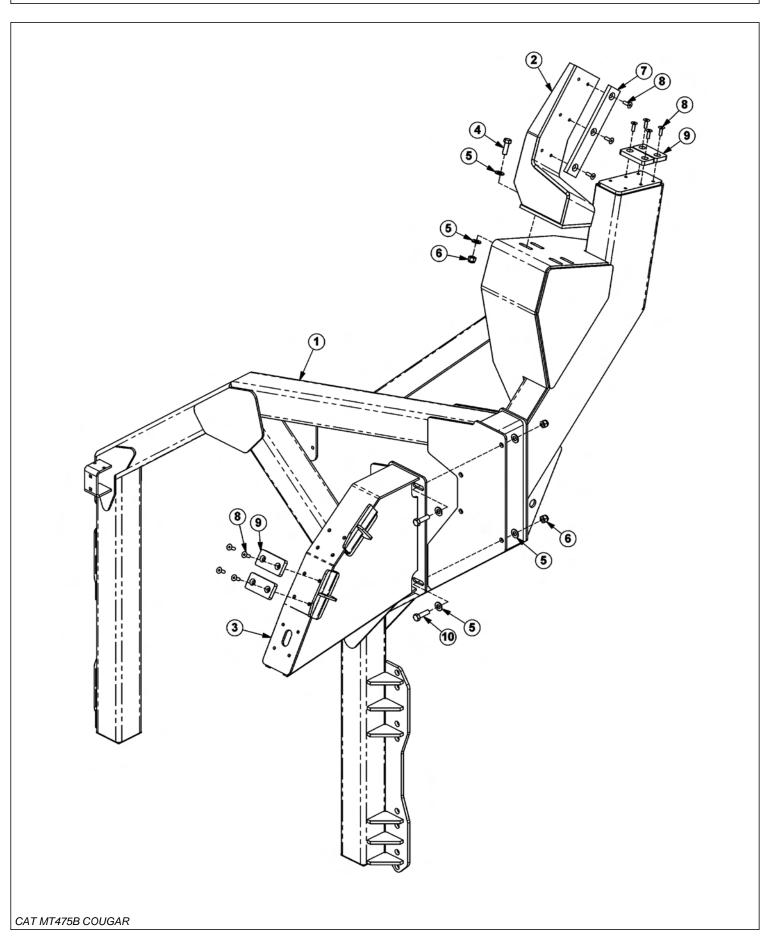
AXLE BRACE ASSEMBLY - OPEN STOW

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1		-	MAIN FRAME *REFER TO TRACTOR MOUNT PAGE
2	06300160	1	AXLE BRACE,RIGHT HAND
3	06300161	1	AXLE BRACE,LEFT HAND
4		-	BOOMREST *REFER TO BOOMREST PAGE
5	21833	4	CAPSCREW,3/4" X 2-1/4",NC
6	33880	8	FLATWASHER,3/4",SAE
7	21825	4	HEX NUT,3/4",NC
8	21777	8	NYLOCK NUT,5/8"
9	33764	16	FLATWASHER,5/8",SAE
10	21782	8	CAPSCREW,5/8" X 1-3/4",NC

CAT MT475B COUGAR

BOOMREST ASSEMBLY - OPEN STOW



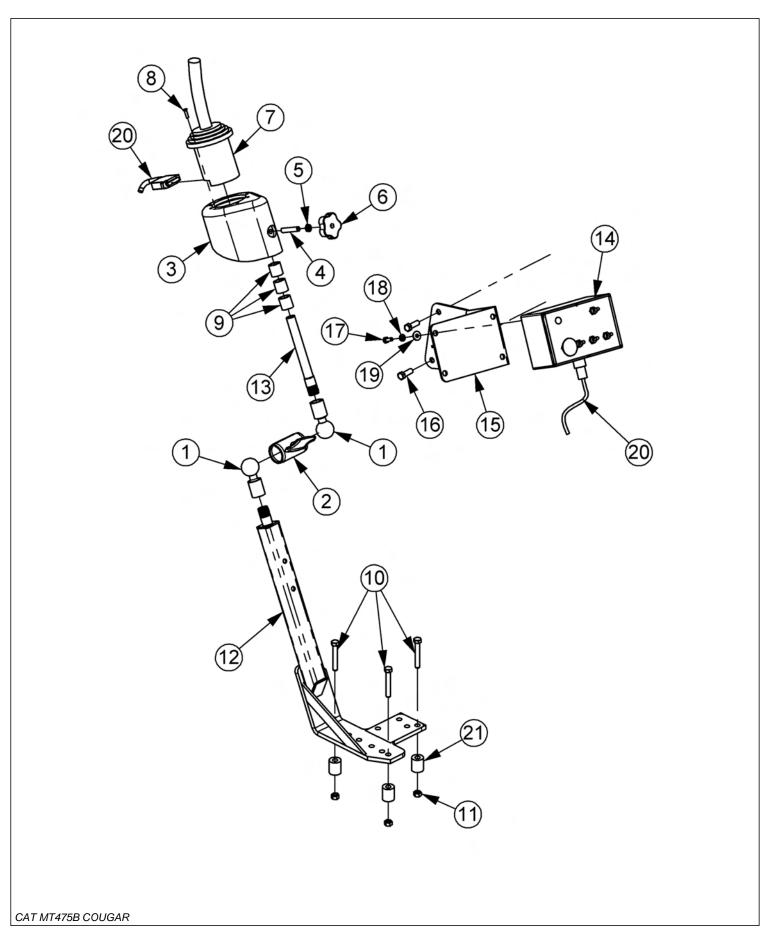
BOOMREST ASSEMBLY - OPEN STOW

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06310108	1	BOOMREST, COUGAR, 3OS
2	06310072	1	ADAPTER,UPPER
3	06310036	1	ADAPTER,LOWER
4	21731	4	CAPSCREW,1/2" X 1-1/2",NC
5	06533004	16	FLATWASHER,1/2",SAE
6	21727	8	NYLOCK NUT,1/2",NC
7	32686	1	WEARPAD,LONG
8	28734	11	CAPSCREW,SKT HD,3/8" X 1",NC
9	06520078	4	WEARPAD,SHORT
10	6T1027	4	CAPSCREW,1/2" X 1-3/4",NC

CAT MT475B COUGAR

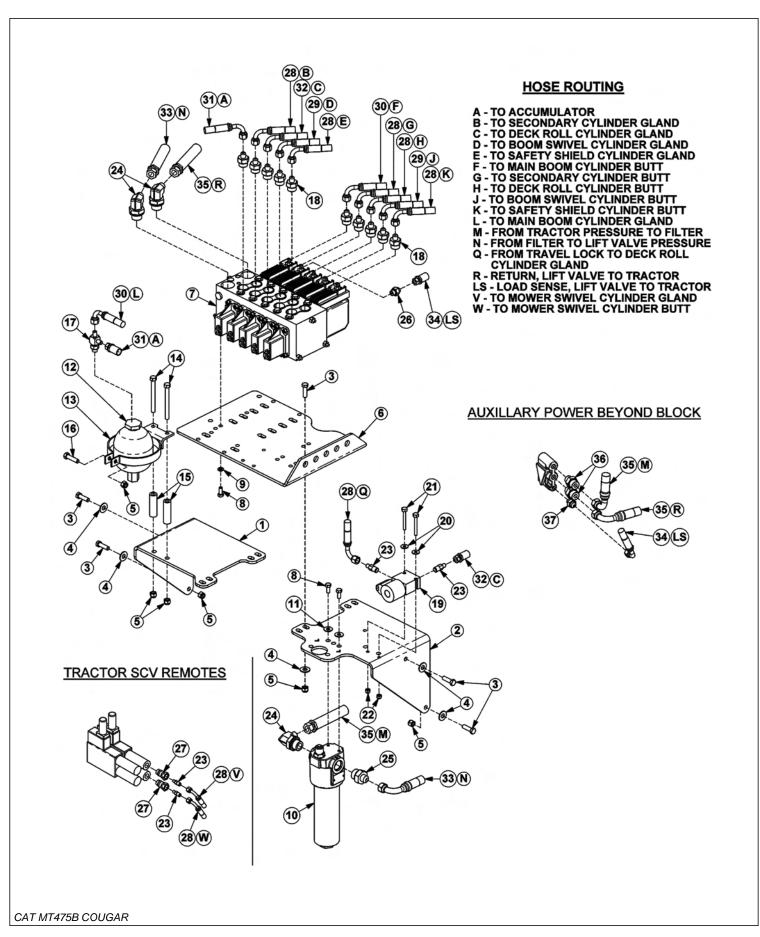
JOYSTICK AND SWITCH BOX MOUNT



JOYSTICK AND SWITCH BOX MOUNT

ITEM	PART NO.	QTY.	DESCRIPTION
1	33691	1	JOYST,4AXIS,RH,DF,W/SUB-D CONN
2	32829	4	SCREW,MACHINE,10-32 X 3/4",FLATHD
3	06510195	1	SWITCH BOX, DANFOSS
4	21585	2	CAPSCREW,5/16" X 2-1/4",NC
5	21577	2	NYLOCK NUT,5/16",NC
6	06340011	1	MNT,STND,JYSTK
7	21639	3	CAPSCREW,3/8" X 3-1/4",NC
8	21627	3	NYLOCK NUT,3/8",NC
9	41794	3	SPACER
10	06340015	1	MOUNT,SWITCH BOX
11	21529	4	CAPSCREW,1/4" X 3/4",NC
12	21986	4	LOCKWASHER,1/4"
13	22014	4	FLATWASHER,1/4"
14	06520041	2	MOUNT,RAM,BALL,1-1/2",NPT
15	06520042	1	MOUNT,RAM,ARM,1-1/2" X 2-3/4"
16	06340010	1	ROD,1/2"NPT X 7"
17	35033	1	CAN,JYSTK,CPLT
18	35204	1	KNOB,3/8",NC,INSERT
19	35206	1	HEX NUT,JAMB,3/8",NC
20	35205	1	SETSCREW,3/8" X 2",NC,KNURLED
21	33693	1	CBL,EXT,4FT,JOYST

ELECTRONIC PROPORTIONAL LIFT VALVE



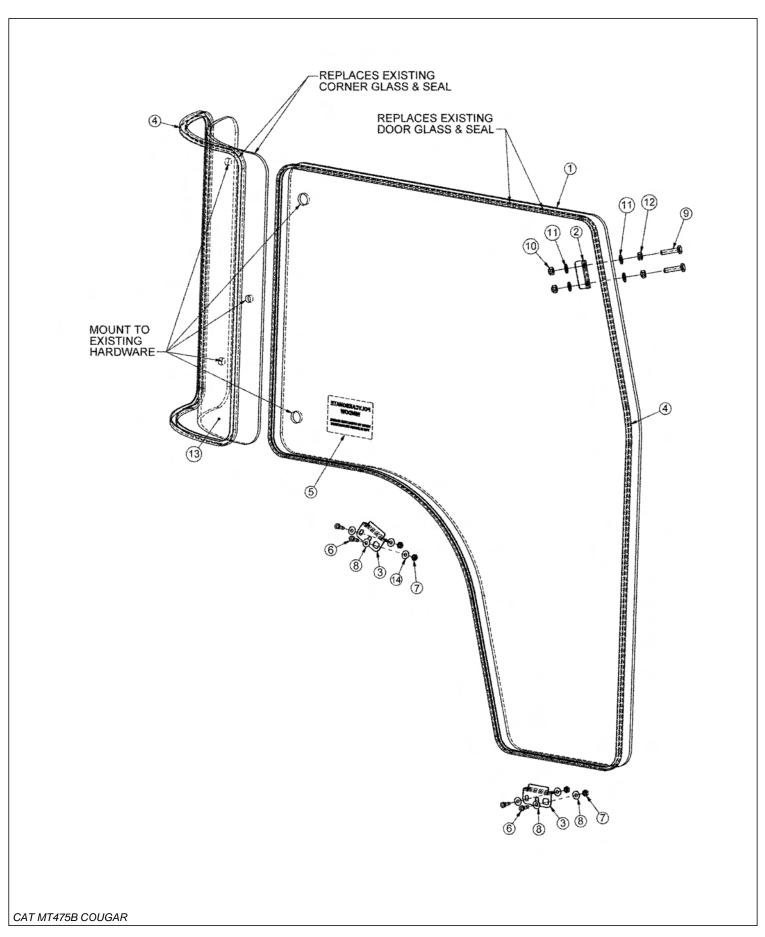
ELECTRONIC PROPORTIONAL LIFT VALVE

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06340013	1	VALVE,MOUNT,LH
2	06340014	1	VALVE,MOUNT,RH
3	21631	8	CAPSCREW,3/8" X 1-1/4",NC
4	22016	8	FLATWASHER,3/8"
5	21627	11	NYLOCK NUT,3/8",NC
6	34622	1	PLATE,MOUNT,VALVE
7	06502096	1	VALVE,5 SPOOL
8	21579	6	CAPSCREW,5/16" X 3/4",NC
9	21987	4	LOCKWASHER,5/16"
10	06505029	1	FILTER,HP,3/4"SAE,VIS IND
	06502039	1	ELEMENT,FILTER
11	22015	2	FLATWASHER,5/16"
12	24300	1	ACCUMULATOR
13	23888	1	BRACKET,ACCUMULATOR
14	21641	2	CAPSCREW,3/8" X 3-3/4",NC
15	06420054	2	SPACER
16	21632	1	CAPSCREW,3/8" X 1-1/2",NC
17	06503029	1	TEE,RUN,1/2"MOR X 3/8"MJ X 3/8"MJ
18	32807	10	ADAPTER,5/8"MOR X 3/8"MJ
19	06510050	1	TRAVEL LOCK
20	22014	2	FLATWASHER,1/4"
21	21535	2	CAPSCREW,1/4" X 2-1/4",NC
22	21527	2	NYLOCK NUT,1/2",NC
23	33271	4	ADAPTER,1/2"MOR X 3/8"MJ
24	33294	3	ELBOW,3/4"MOR X 1/2"MJ
25	33591	1	ADAPTER,3/4"MOR X 1/2"MJ
26	33392	1	ADAPTER,5/16"MOR X 3/8"MJ
27	32900	2	QUICK COUPLER,MALE
28	34358	8	HOSE,1/4" X 196"
29	06500345	2	HOSE,1/4" X 171"
30	06500149	2	HOSE,1/4" X 220"
31	06500354	1	HOSE,1/4" X 12"
32	06500188	1	HOSE,1/4" X 26"
33	33486	1	HOSE,1/2" X 45"
34	33744	1	HOSE,1/4" X 34"
35	06500339	2	HOSE,1/2" X 35"
36	06503075	2	ADAPTER,26MM X 3/4"MJ
37	06503079	1	ADAPTER,16MM X 3/8"MJ

CAT MT475B COUGAR

POLYCARBONATE SAFETY WINDOW



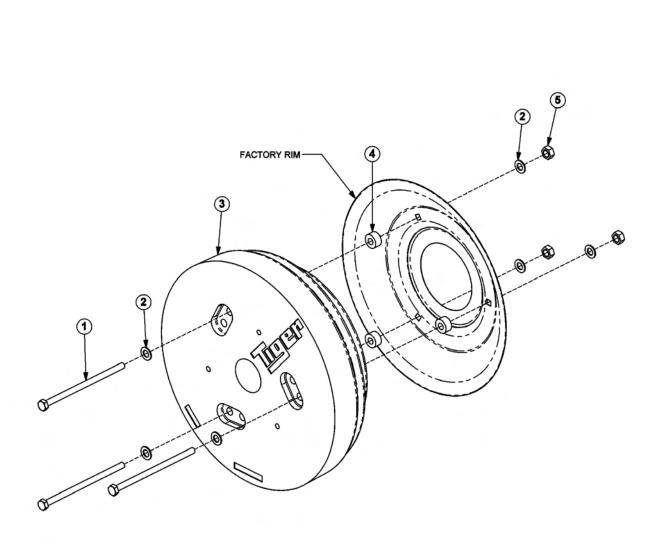
POLYCARBONATE SAFETY WINDOW

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06490010	1	POLYCARB,SFTY SCRN,DOOR
2	06410213	1	BRKT,POLYCARB
3	06520040	2	BRKT,POLY,RETAIN
4	31965	25	TRIM SEAL,3/8" CLIP X 3/4" OD (IN FEET)
5	22645	1	DECAL,POLYCARBONATE
6	21580	4	CAPSCREW,5/16" X 1",NC
7	21577	4	NYLOCK NUT,5/16",NC
8	6T2615	6	WASHER,FENDER,3/8"
9	21684	2	CAPSCREW,7/16" X 2-1/4",NC
10	21677	2	NYLOCK NUT,7/16",NC
11	22017	4	FLATWASHER,7/16"
12	21675	2	HEX NUT,7/16",NC
13	06490021	1	POLYCARB,FRMD,REAR,RH
14	22015	2	FLATWASHER,5/16"

CAT MT475B COUGAR

WHEEL WEIGHT



ITEM	PART NO.	QTY.	DESCRIPTION
1	06530200	3	CAPSCREW,7/8" X 14",NC
2	06533000	6	FLATWASHER,7/8"
3	32615	1	WHEEL WEIGHT,1700#,TAPPED
4	24958	3	SPACER
5	06531000	3	HEX NUT,7/8",NC

CAT MT475B COUGAR

COMMON COUGAR PARTS SECTION

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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.

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

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

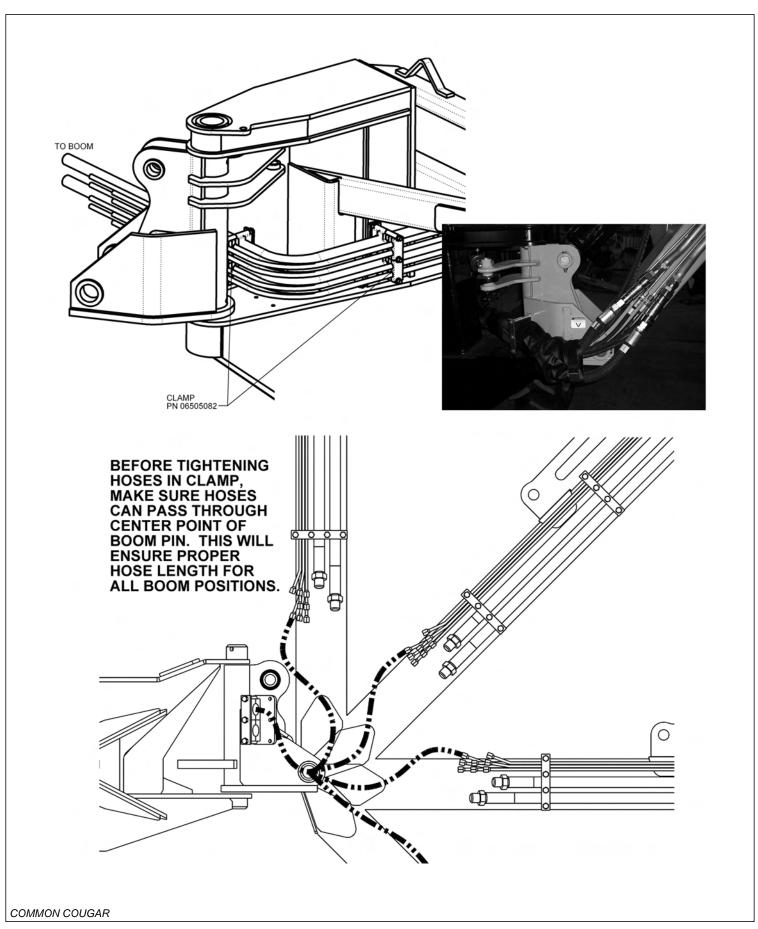


For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

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

BOOM HOSE ROUTING



BOOM HOSE ROUTING - CONTINUED

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

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

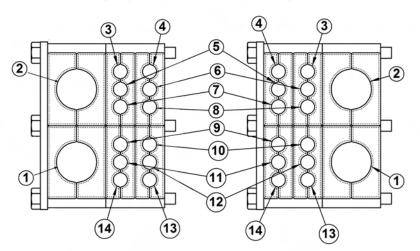
Arrange the hoses in the clamp that attaches to the main frame as shown to the left & below, with the 1" motor hoses closest to the main frame. Pull the hoses snug from the swivel to the main frame clamps, when main boom is fully forward, and tighten the hoses in the clamp.

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

LOCATION OF HOSES IN CLAMPS NEEDS TO BE MAINTAINED TO ENSURE PROPER LENGTHS AND REACH

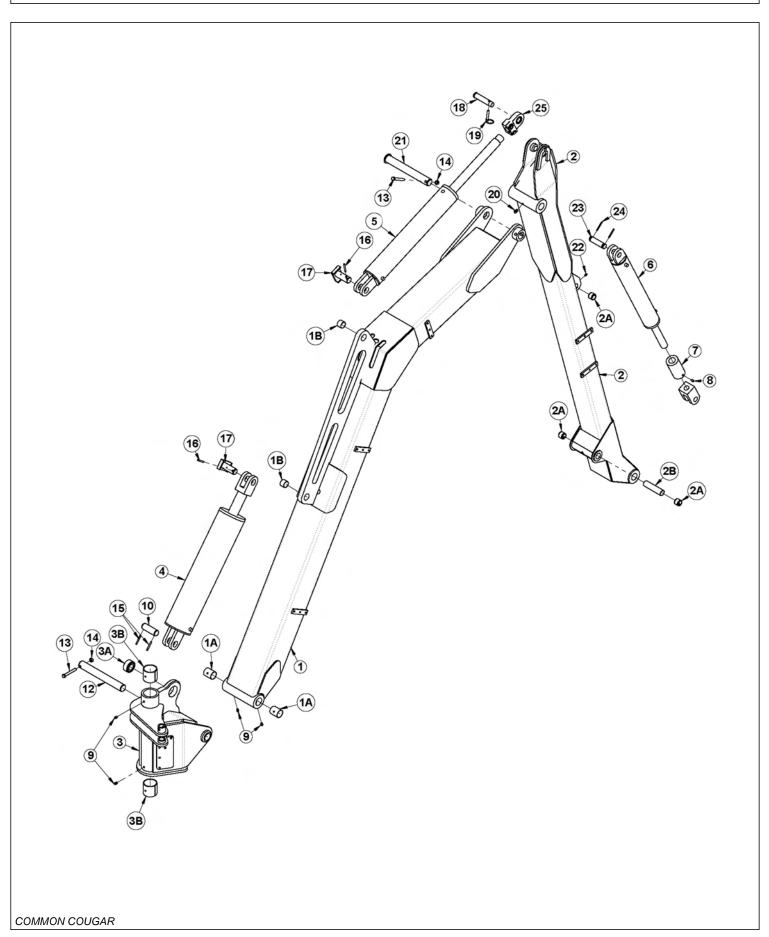
CONFIGURATION OF CLAMP ON SWIVEL

CONFIGURATION OF CLAMP ON MAINFRAME



- MOWER PRESSURE MOWER RETURN
- MAIN BOOM CYLINDER BUTT
- MAIN BOOM CYLINDER GLAND
- SECONDARY BOOM CYLINDER BUTT SECONDARY BOOM CYLINDER GLAND 5.
- 6.
- DECK ROLL CYLINDER BUTT DECK ROLL CYLINDER GLAND
- DECK SHIELD CYLINDER BUTT DECK SHIELD CYLINDER GLAND 10.
- DECK ROTATION CYLINDER BUTT DECK ROTATION CYLINDER GLAND

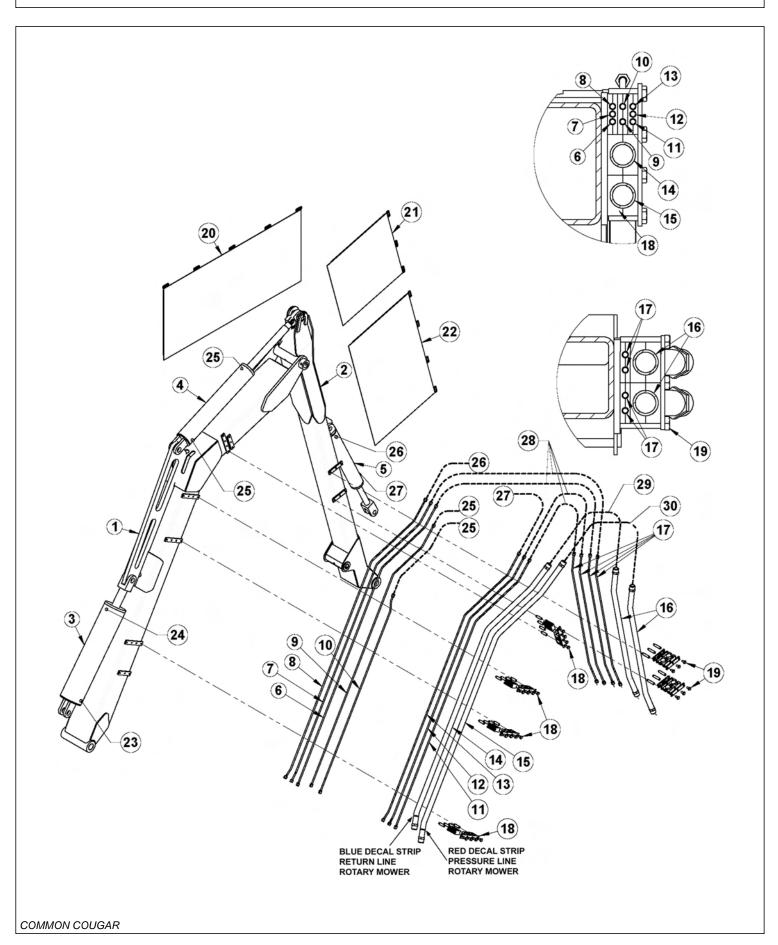
COUGAR BOOM ASSEMBLY



COUGAR BOOM ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
	06700032	-	BOOM,MAIN,IT,W/BEARINGS
1	06310010	1	WELDMENT,BOOM,MAIN
1A	32321	2	BEARING,DX,1-1/2" X 2",LONG
1B	TB1044	2	BUSHING,1-1/4"
	06700094	-	BOOM,SEC,ASSY,EXTENDED
2	30072C	1	WELDMENT,BOOM,SEC
2A	TB3010	3	BUSHING
2B	TB1035	1	SPACER
	06700150	-	SWIVEL,TRB60,ROT,22`,ASSY
3	06310080	1	WELDMENT,SWIVEL
3A	06520303	1	BEARING,SPHERICAL
3B	32322	2	BEARING,DX,2-1/2" X 2-1/2",LONG
4	06501020	1	CYLINDER,5" X 20"
5	06501022	1	CYLINDER,4" X 20"
6	06501023	1	CYLINDER,3" X 18"
7	06430140	1	SPACER,2.50" X 1.39" X 4.75",TAPPED
8	6T2272	1	SETSCREW,3/8" X 1/2"
9	6T3211	4	GREASE ZERK,1/8" X STR
10	06420100	1	PIN,2.25" X 3.69",NIT
12	06420022	1	PIN,1.50" X 12.00",W/.44" HOLES,NIT
13	21688	2	CAPSCREW,7/16" X 3-1/4",NC
14	21677	2	NYLOCK NUT,7/16",NC
15	TB1023	2	ROLLPIN,7/32" X 2"
16	6T3014	2	ROLL PIN,1/4" X 2"
17	TB1045B	2	PIN,PRIMARY CYL (BRKT HEAD)
18	TB1036	1	PIN,SEC BOOM SWIV,1" X 4-11/16"
19	TF1143	1	PIN, LYNCH,7/16" X 2"
20	6T3210	1	GREASE ZERK,1/8" X 90°
21	TB1025	1	PIN,SEC BOOM SWIV,1-1/2" X 12"
22	6T3207	1	GREASE ZERK,1/4"
23	TB1033	1	PIN,CLEVIS,1" X 4"
24	06537021	2	ROLL PIN, 5MM X 50MM
25	30172	1	CLEVIS

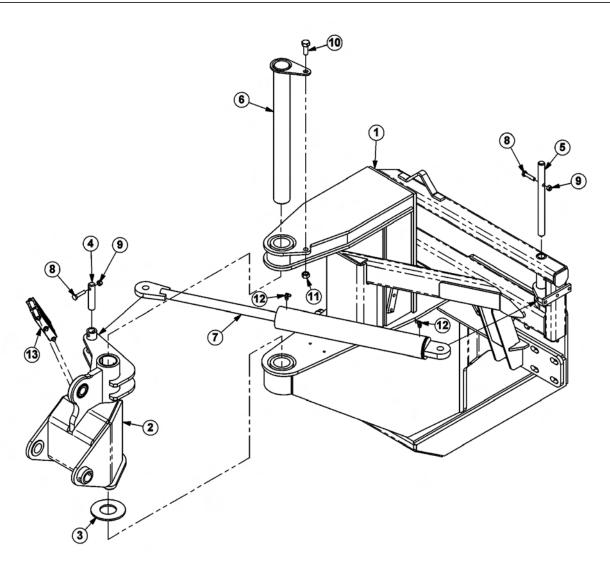
COUGAR BOOM HYD ASSEMBLY



COUGAR BOOM HYD ASSEMBLY

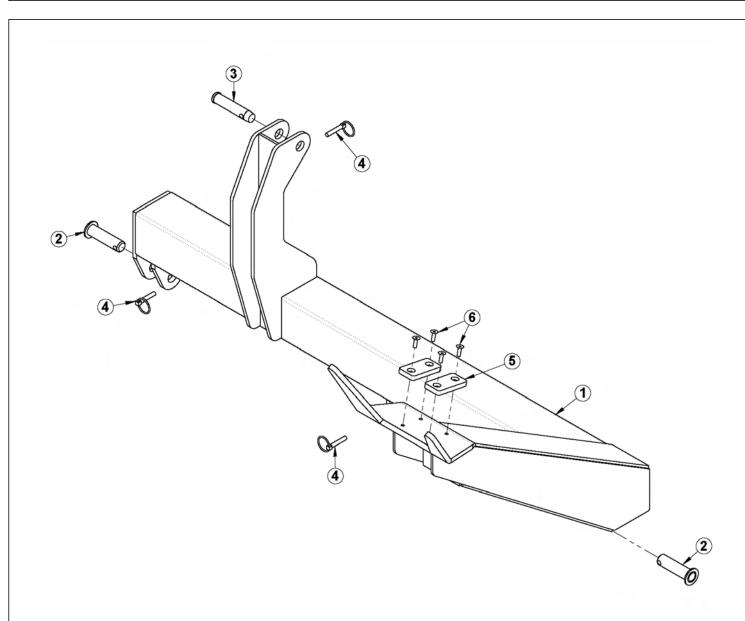
ITEM	PART NO.	QTY.	DESCRIPTION
1		1	BOOM,MAIN *REFER TO BOOM ASSY
2		1	BOOM,SEC *REFER TO BOOM ASSY
3		1	CYLINDER *REFER TO BOOM ASSY
4		1	CYLINDER *REFER TO BOOM ASSY
5		1	CYLINDER *REFER TO BOOM ASSY
6	06506013	1	PRFRMD,1,MAIN
7	06506014	1	PRFRMD,2,MAIN
8	06506015	1	PRFRMD,3,MAIN
9	06506016	1	PRFRMD,4,MAIN
10	06506017	1	PRFRMD,5,MAIN
11	06506018	1	PRFRMD,6,MAIN
12	06506019	1	PRFRMD,7,MAIN
13	06506020	1	PRFRMD,8,MAIN
14	06506021	1	PRFRMD,9,MAIN
15	06506022	1	PRFRMD,10,MAIN
16	30169	2	TUBE,PREFORMED
17	34103	4	TUBE,PREFORMED,5/16",EXT,SEC
18	06505019	4	CLAMP KIT,TUBE,1.25" X 2,.31" X 8,4PST
19	30111	2	CLAMP KIT,TUBE,1.25" X 2,.31" X 4,3PST
20	06505020	1	COVER,HOSES,KNUCKLE,RS
21	06505021	1	COVER,HOSES,SEC,RS
22	06505022	1	COVER,HOSES,ROLL,RS
23	06500149	1	HOSE,1/4" X 220"
24	34631	1	HOSE,1/4" X 126"
25	34052	2	HOSE,1/4" X 66"
26	34051	1	HOSE,1/4" X 93"
27	34050	1	HOSE,1/4" X 63"
28	34104	4	HOSE,1/4" X 42"
29	06500254	1	HOSE,1/4" X 45"
30	24488	1	HOSE,1/4" X 40"

BOOM SWIVEL ASSEMBLY



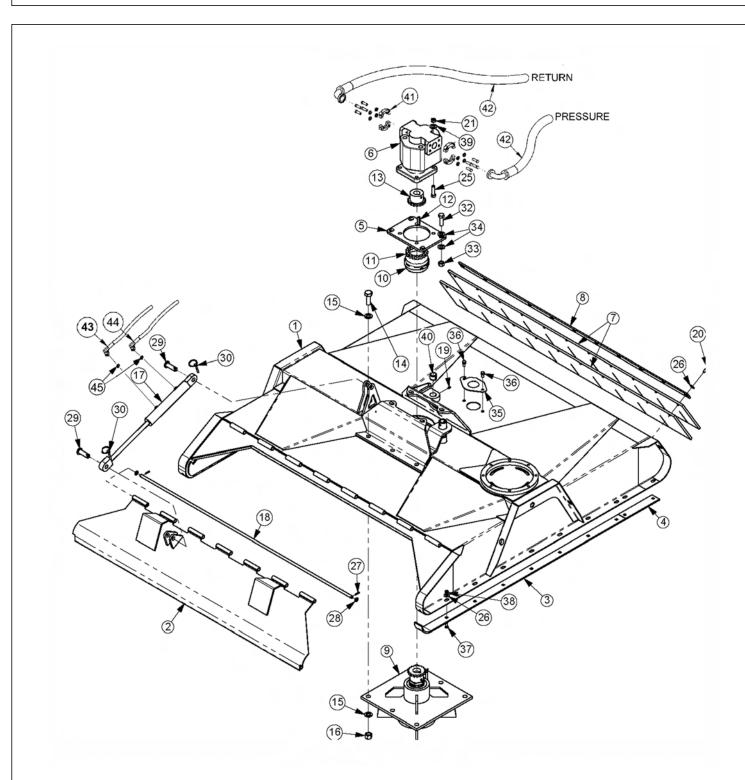
ITEM	PART NO.	QTY.	DESCRIPTION
1		-	MNFRM *REFER TO TRACTOR MOUNT KIT
2	06700150	1	SWIVEL,TRB60,ROT,22`,ASSY
3	06520250	1	BEARING,WASHER,SWING
4	32380	1	PIN,CYL,1",SWIVEL,SABER
5	33710	1	PIN,CYL,1",SWIVEL,SABER
6	32381	1	PIN,2 1/2",SWIVEL,SABER
7	33705	1	CYLINDER,3 X 17-1/2"
8	21683	2	CAPSCREW,7/16" X 2",NC
9	21677	2	NYLOCK NUT,7/16",NC
10	21782	1	CAPSCREW,5/8" X 1-3/4",NC
11	21777	1	NYLOCK NUT,5/8",NC
12	32810	2	ELBOW,1/2"MOR X 3/8"MJ
13	06505085	1	CLAMP KIT

3-POINT BOOMREST ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	06310082	1	BOOMREST,STD,3PNT
2	TF1120	2	PIN,CAPPED,1-1/8" X 3-7/8"
3	TB1036	1	PIN,SEC BOOM SWIV,1" X 4-11/16"
4	TF1143	3	PIN,LYNCH,7/16" X 2"
5	06520078	2	STRIP,REST
6	28734	4	CAPSCREW,FLT/SKT HD,3/4" X 1",NC

60IN ROTARY ROTATING MOWER ASSEMBLY

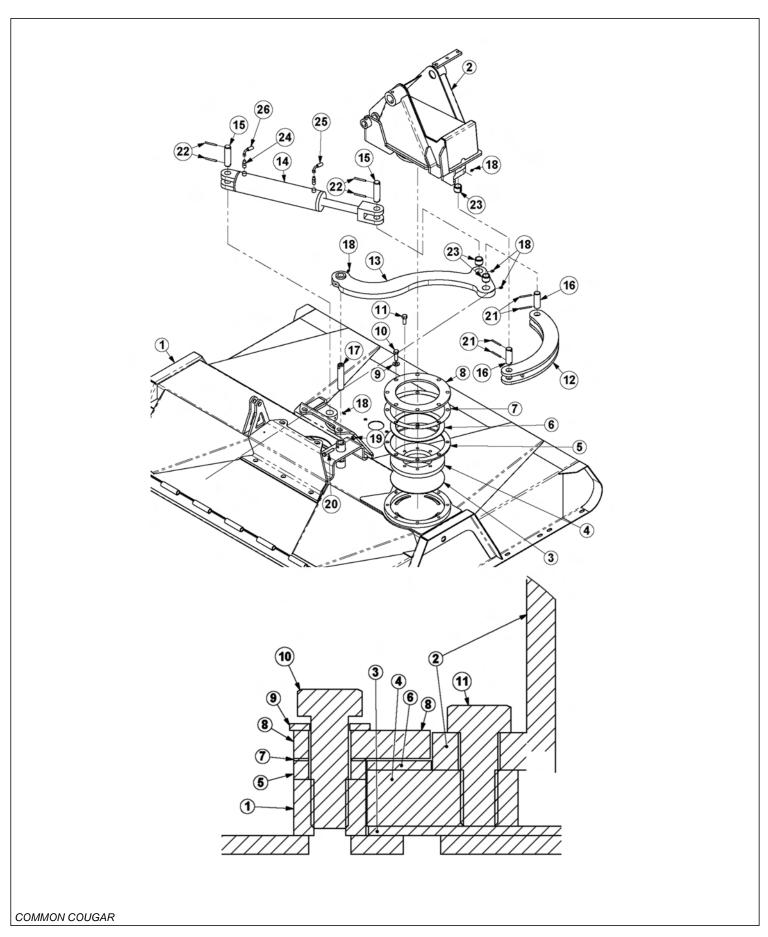


ITEM	PART NO.	QTY.	DESCRIPTION
	06741072	-	DECK,TRB60,ROT,CPLT
1	06320160	1	DECK,TRB60,ROT
2	06320162	1	SHIELD,TRB60,ROT
3	33777	2	SKID SHOE,50" RTRY

60IN ROTARY ROTATING MOWER ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
4	06401245	2	SKID SHOE,TRB60,ROT
5	33776	1	MOTOR MOUNT,PLATE,50" RTRY
6	06504011	1	MOTOR,(M365 - 1-1/2" GEAR)
7	06520238	2	FLAP,DEFLECTOR
8	06T0823	1	BAR,FLAP,TM60
9	6T1024H5	1	SPINDLE ASSY,CPLT,HD,5/8" HOLES
10	6T1033	1	COVER,COUPLING
11	6T1029	1	CHAIN,COUPLING (5016)
12	TF1124	1	KEY,5/16" SQ X 1-1/2" RND
13	21223	1	SPROCKET, 1-1/4" BORE
14	33879	6	CAPSCREW,3/4" X 2-1/4",NF GR 8
15	33880	12	FLATWASHER,3/4",GR 8,SAE
16	6T2413	6	HEX NUT,3/4",NF,GR 8
17	33785	1	CYL,1-1/2" X 8"
18	06420139	1	PIN,HINGE,TRB60,ROT
19	6T3207	1	GREASE ZERK,1/4"
20	21633	11	CAPSCREW,3/8" X 1-3/4",NC,GR8
21	21727	4	NYLOCK NUT,1/2"
22	21730	7	CAPSCREW,1/2" X 1-1/4",NC
23	21731	7	CAPSCREW,1/2" X 1-1/2",NC
25	21733	4	CAPSCREW,1/2" X 2",NC
26	22016	31	FLATWASHER,3/8",GR8
27	6T3017	2	ROLLPIN,3/16" X 1"
28	33924	2	RETAINING RING,EXTERNAL,1/2"
29	33984	2	PIN,SHIELD,50"
30	RD1032	2	PIN,LYNCH,1/4" X 2"
32	6T2290	4	CAPSCREW,5/8" X 2",NF,GR 8
33	6T2408	4	HEX NUT,5/8",NF
34	33764	8	FLATWASHER,5/8",GR 8,SAE
35	33779	1	PLATE,COVER,KNF HOLE
36	33881	2	CAPSCREW,FLG,3/8" X 3/4",NC
37	6T2270	20	PLOW BOLT,3/8" X 1",NC,GR5
38	21625	20	HEX NUT,3/8",NC
39	06533004	4	FLATWASHER
40	TB3010	1	BUSHING
41	TF4852	2	FLANGE KIT
42	06500458	2	HOSE,1" X 95", PRESSURE (RED DECAL STRIP)
	06500458	-	HOSE,1" X 95", RETURN (BLUE DECAL STRIP)
43	33601	1	HOSE,1/4" X 111"
44	06500480	1	HOSE,1/4" X 107"
45	06503057	2	ADAPTER,1/4ORB X 3/8MJ
l			

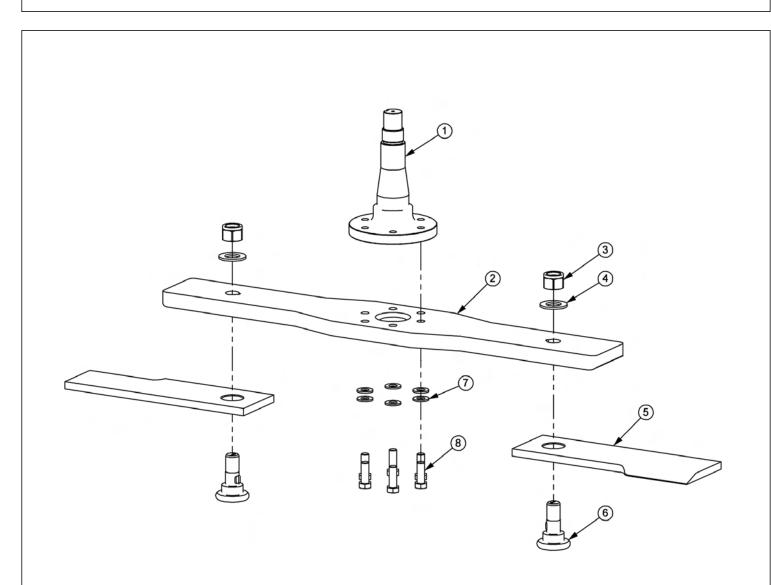
60IN ROTARY MOWER TREE ASSY



60IN ROTARY MOWER TREE ASSY

ITEM	PART NO.	QTY.	DESCRIPTION
1	06320160	1	DECK,TRB60,ROT,CPLT
2	06320163	1	TREE,TRB60,ROT
3	06497010	1	PAD,UHMW,06320163
4	06401250	1	RING,CAPTURE,06320163
5	06401251	1	RING,BOLT,06320164
6	06497011	1	RING,UHMW,06320163
7	06401253	1	RING,SHIM,06320164
8	06401252	1	RING,BOLT,06320164
9	06533004	16	FLAT WASHER,1/2",SAE,GR 8
10	6T2279	8	CAPSCREW,1/2" X 1-1/2",NC,GR8
11	21730	8	CAPSCREW,1/2" X 1-1/4",NC,GR8
12	06320164	1	LINKAGE,1,06320163
13	06741071	1	LINKAGE,2,06320163,ASSY
14	06501021	1	CYLINDER,3" X 10"
15	06420014	2	PIN,1.00" X 3.84",W/.22" HOLES,NIT
16	06420130	2	PIN,1.00" X 2.89",W/.19" HOLES
17	35191	1	PIN,SWIVEL,1" X 5"
18	6T3207	5	GREASE ZERK,1/4"
19	21627	1	NYLOCK NUT,3/8",NC
20	21634	1	CAPSCREW,3/8" X 2",NC
21	06537021	4	ROLL PIN,5MM X 50MM
22	TB1023	4	ROLLPIN,7/32" X 2"
23	TB3010	1	BUSHING,1"
24	33271	2	ADAPTER,1/2MOR X 3/8MJ
25	06500480	1	HOSE,1/4" X 107"
26	06500481	1	HOSE,1/4" X 97"

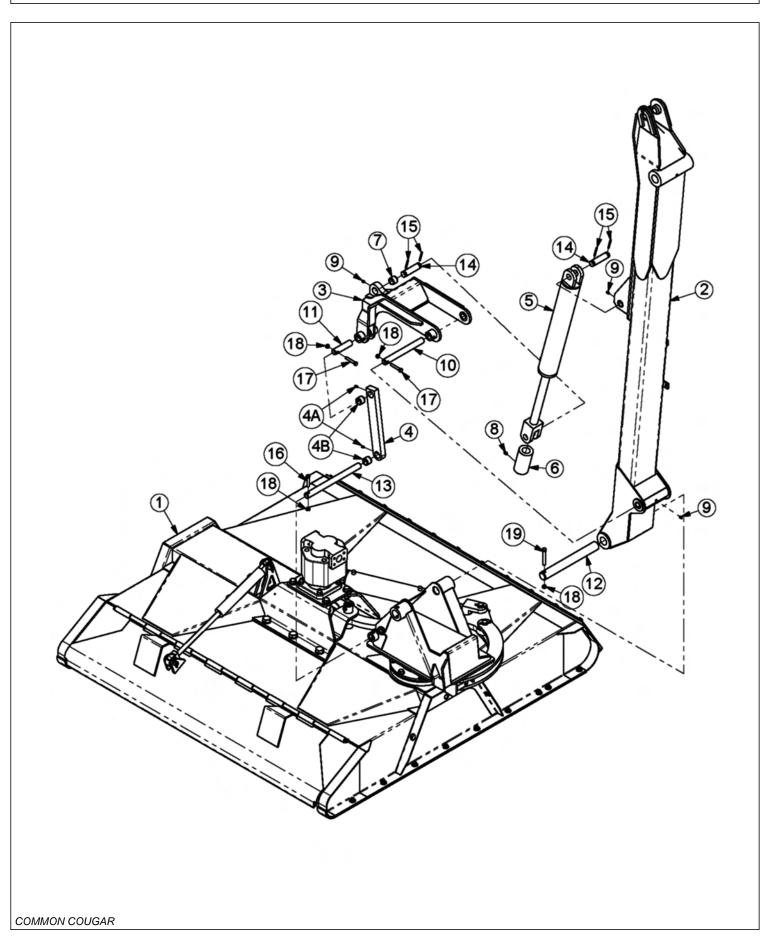
60IN ROTARY BLADE BAR AND KNIVES



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,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 1
NOTES
COMMON COUGAR

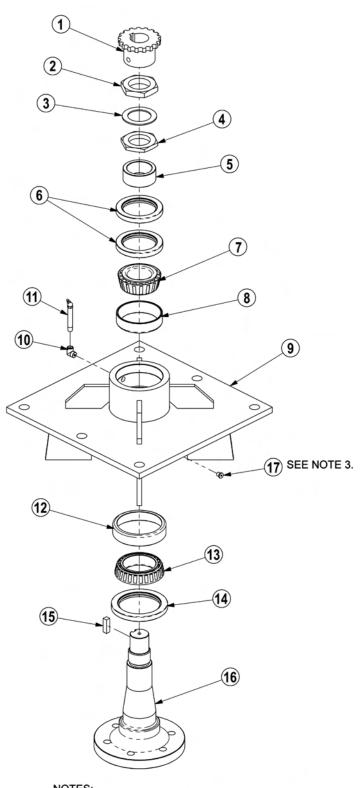
BOOM ROTARY PIVOT ASSEMBLY



BOOM ROTARY PIVOT ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	06741070	-	RTRY,TRB60,ROT,CPLT
2	06700094	-	BOOM,SEC,ASSY,EXTENDED
3	TB1032	1	PIVOT ASSY
4	TB1028	1	ARM,PIVOT,ASSY
4A	6T3207	2	ZERK,GREASE,1/4"
4B	TB3010	2	BUSHING,1"
5	06501023	1	CYLINDER,3" X 18"
6	06430140	1	SPACER,2.50" X 1.39" X 4.75",TAPPED
7	TB3010	1	BUSHING,1"
8	6T2272	1	SETSCREW,3/8" X 1/2"
9	6T3207	3	GREASE ZERK,1/4"
10	TF3097	1	PIN,DECK PVT ARM,1" X 9-1/2"
11	TB1030	1	PIN,PVT ARM,1" X 4",CAPPED
12	33985	1	PIN,BOOM,50"
13	35191	1	PIN,BOOM,50"
14	TB1033	2	PIN,CLEVIS,1" X 4"
15	06537021	4	ROLL PIN,5MM X 50MM
16	21634	1	CAPSCREW,3/8" X 2",NC
17	21635	2	CAPSCREW,3/8" X 2-1/4",NC
18	21627	4	NYLOCK NUT,3/8",NC
19	21687	1	CAPSCREW,7/16" X 3",NC

ROTARY MOWER SPINDLE ASSEMBLY



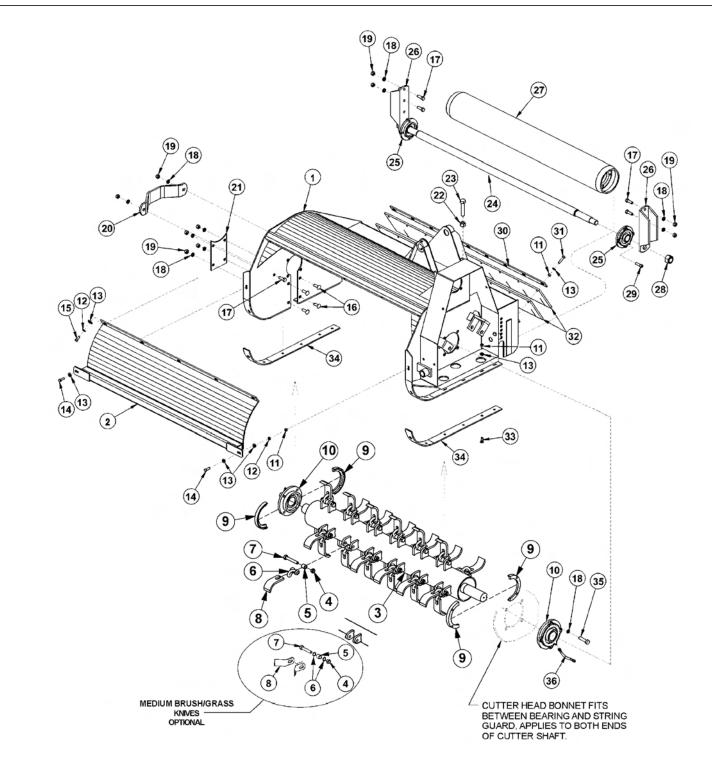
NOTES:

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

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	PT1018H5	1	SPINDLE
17	06503064	1	O-RING PLUG, 1/8"
	33993	-	SPINDLE REBUILD KIT (INCLUDES ITEMS 2 - 8 AND 12 - 15)

50IN FLAIL MOWER ASSEMBLY

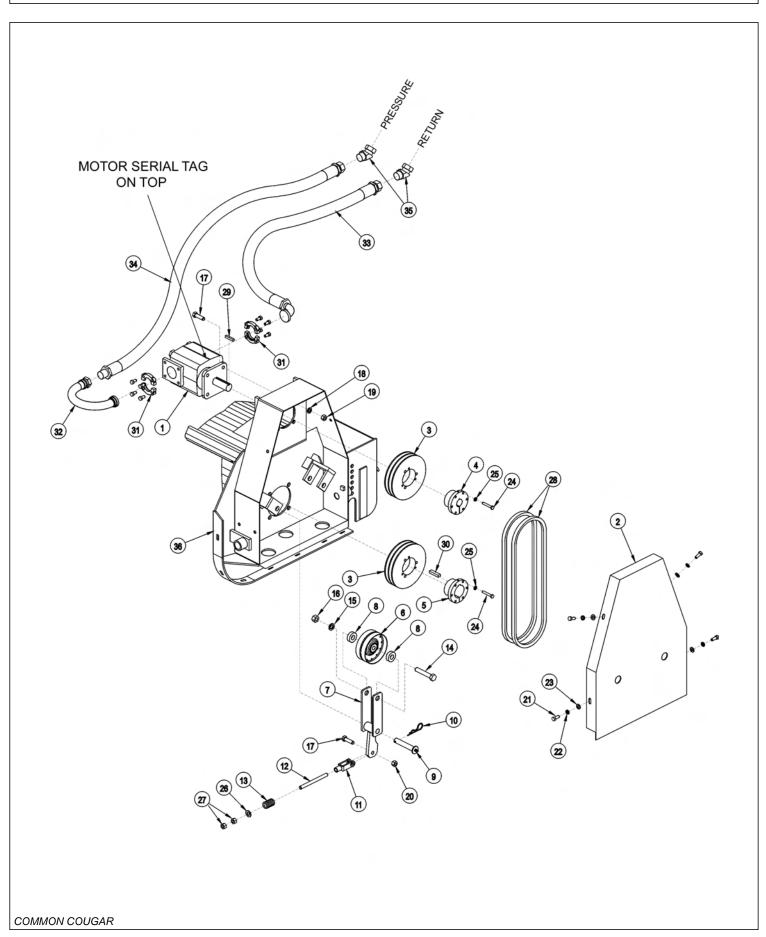


ITEM	PART NO.	QTY.	DESCRIPTION
	34787	1	FLAIL,BOOM,50,BRUSH,CPLT ASSY (LIGHT BRUSH/GRASS)
	06742133	1	FLAIL,BOOM,50,MD GRASS,CPLT ASSY (MEDIUM BRUSH/GRASS)
1	TF3003F	1	CUTTER HEAD BONNET
2	TF3004	1	FRONT SHIELD

50IN FLAIL MOWER ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
3	34783	1	TBF50 (LIGHT BRUSH/GRASS KNIFE ASSY)
	06700115	1	TBF50 (MEDIUM BRUSH/GRASS KNIFE ASSY)
4	6T2419	24	HEX NUT,9/16",NC,STOVER
5	41725.01HT	24	BUSHING,1"OD X 5/8"ID
6	34782	24	CLEVIS (LIGHT BRUSH/GRASS KNIVES)
	06430122	48	SPACER (MEDIUM BRUSH/GRASS KNIVES)
7	34786	24	CAPSCREW,9/16" X 3-1/2",NC
8	34780	24	KNIFE (LIGHT BRUSH/GRASS CUTTING)
	06521007	48	KNIFE (MEDIUM BRUSH/GRASS CUTTING)
9	31204	2	STRING GUARD SET (2 PIECES PER SET)
10	TF1018	2	FLANGE BEARING,2-3/16"
11	21625	23	HEX NUT,3/8",NC
12	21988	7	LOCKWASHER,3/8"
13	22016	30	FLATWASHER,3/8"
14	21631	2	CAPSCREW,3/8" X 1-1/4",NC
15	21630	5	CAPSCREW,3/8" X 1",NC
16	6T7031D	4	PLOW BOLT,1/2" X 1-1/2",NC
17	21731	6	CAPSCREW,1/2" X 1-1/2",NC
18	21990	18	LOCKWASHER,1/2"
19	21725	10	HEX NUT,1/2",NC
20	TF1040	1	CUTTER SHAFT GUARD
21	TF3007A	1	COVER PLATE
22	21825	1	HEX NUT,5/8",NC
23	21838	1	CAPSCREW,3/4" X 3-1/2",NC
24	TF3406	1	GROUND ROLLER TIE ROD
25	TF1022	2	FLANGE BEARING,1-3/8"
26	TF3407	2	GROUND ROLLER ADJUSTMENT BRACKET
27	TF3405	1	GROUND ROLLER
28	6T1023R	2	NYLOCK NUT,1-1/8",NF
29	6T2330	8	CAPSCREW,7/16" X 1-1/2",SOCKET HEAD
30	TB1008	1	FLAP RETAINING BAR
31	21633	9	CAPSCREW,3/8" X 1-3/4",NC
32	TB1006A	2	DEFLECTOR FLAP
33	6T2270	12	PLOWBOLT,3/8" X 1",NC
34	TF3001	2	SKID SHOE
35	06530218	8	CAPSCREW,1/2" X 1-3/4",NC
36	TF1032	1	FLANGE BEARING GREASE HOSE

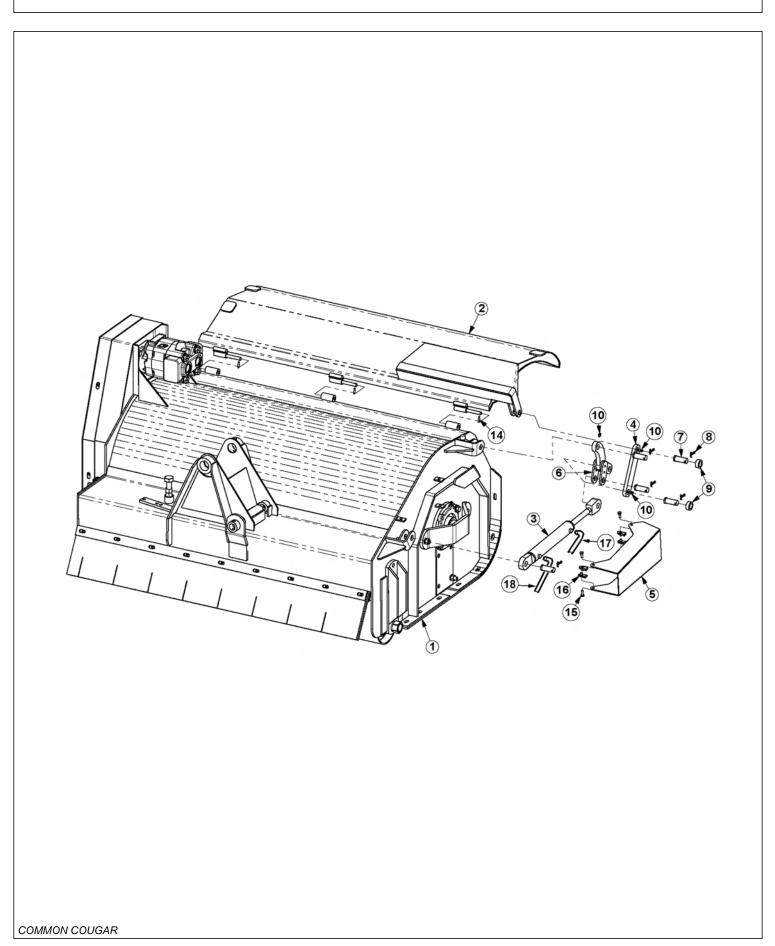
50IN FLAIL DRIVE ASSEMBLY



50IN FLAIL DRIVE ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	06504013	1	MOTOR (M350-1 3/4" GEAR)
2	TF3006	1	BELT GUARD
3	TF3043	2	SHEAVE
4	TF3013	1	BUSHING
5	TF3011	1	BUSHING
6	TF3034	1	IDLER PULLEY
7	TF3205	1	IDLER ARM
8	TF3206	2	IDLER PULLEY SPACER
9	TF3605	1	IDLER ARM PIN WITH ZERK
10	6T3004	1	R - CLIP
11	PT3611A	1	CLEVIS
12	32481	1	THREADED ROD
13	TF3620	1	COMPRESSION SPRING
14	21789	1	CAPSCREW 5/8" X 3 1/2"
15	21992	1	LOCKWASHER 5/8"
16	21775	1	HEX NUT 5/8"
17	21732	5	CAPSCREW 1/2" X 1 3/4"
18	21990	4	LOCKWASHER 1/2"
19	21725	4	HEX NUT 1/2"
20	6T2418	1	LOCK NUT 1/2"
21	21630	4	CAPSCREW 3/8" X 1"
22	21988	4	LOCKWASHER 3/8"
23	22016	4	FLATWASHER 3/8"
24	21584	6	CAPSCREW 5/16" X 2"
25	21987	6	LOCKWASHER 5/16"
26	27938	1	FLATWASHER 1/2"
27	21700	2	HEX NUT 1/2" NF
28	TF3021	2	BELT
29	TF1125	1	SQUARE KEY
30	TF1025	1	SQUARE KEY MOTOR
31	TF4852	2	FLANGE KIT
32	31124	1	PREFORMED TUBE
33	31218	1	HOSE - RETURN
34	31219	1	HOSE - PRESSURE
35	24724	2	SWIVEL FITTING
36		-	CUTTER HEAD *REFER TO CUTTER HEAD ASSY

50IN FLAIL HYD SHIELD ASSEMBLY

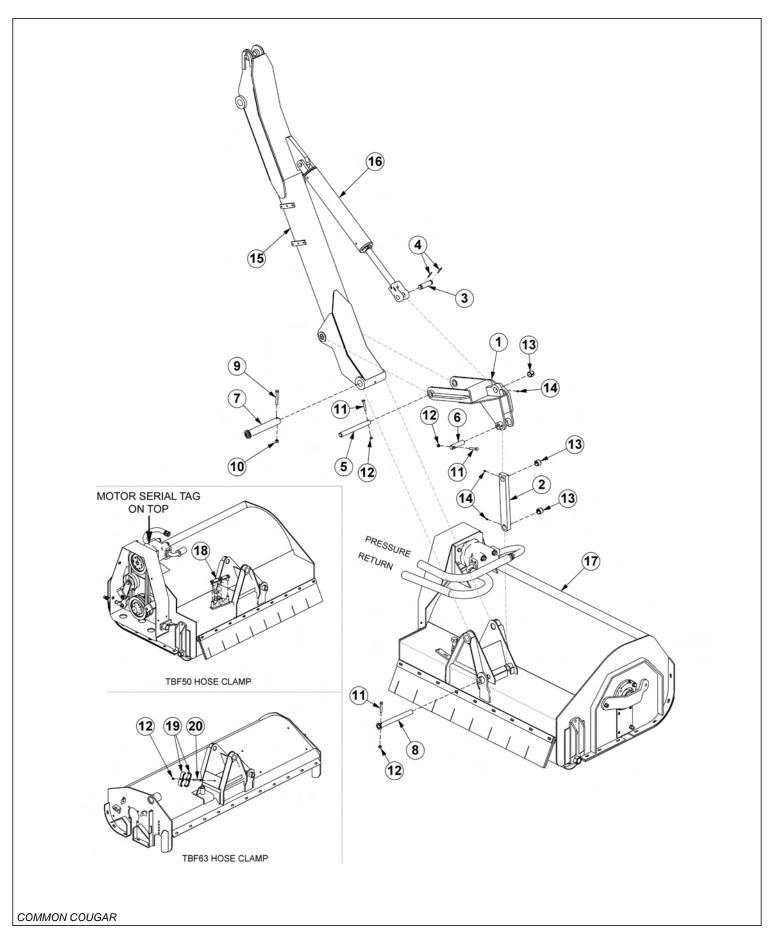


50IN FLAIL HYD SHIELD ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06742078	1	TBF50,BRUSH,HS,CPLT
2	06320171	1	SHIELD,HYDRO,TBF50
3	33785	1	CYLINDER,1.5" X 8"
4	06401255	1	LINK,1,TBF50,HS
5	06370150	1	SHIELD,CYL,TBF50,HS
6	06370143	1	LINK,2,TBF50,HS
7	06537028	5	PIN,.75" X 1.61",SHLDR,5/32" CTTR
8	22523	5	COTTER PIN,5/32" X 1-1/4"
9	34518	2	SPACER,1-1/4" X 13/16" X 1/2"
10	6T3207	3	GREASE ZERK,1/4"
11	33477	1	VIBRATION ISOLATOR,5/16",NC
12	06420036	1	ROD,THREADED,1/4" X 1-1/4",NC
13	21525	2	HEX NUT,1/4",NC
14	34698	3	ROLL PIN, PLAIN,3/16" X 7/8"
15	21529	4	CAPSCREW,1/4" X 3/4",NC
16	35176	4	U-NUT,1/4",3/4" TO CENTER
17	06500487	1	HOSE,1/4" X 117"
18	06500486	1	HOSE,1/4" X 107"

BOOM FLAIL PIVOT ASSEMBLY

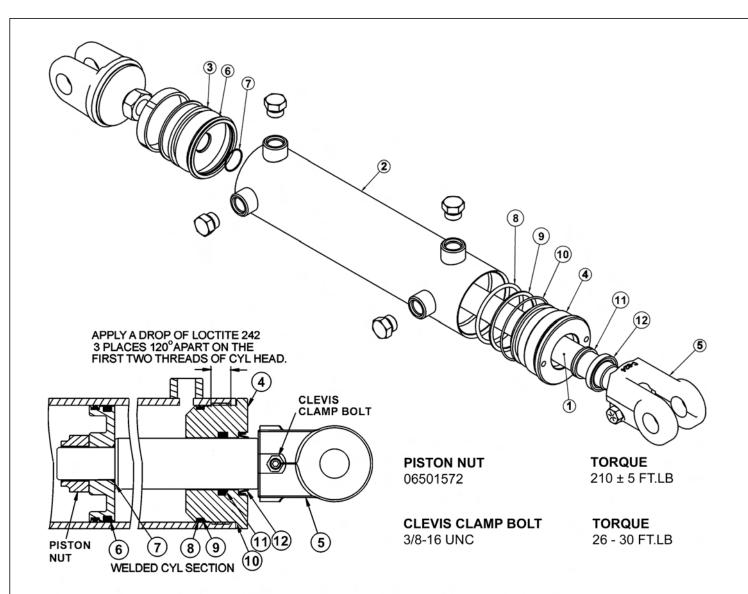


BOOM FLAIL PIVOT ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	TF3015	1	FLAIL PIVOT ASSY
2	TB1028	1	PIVOT ARM ASSY
3	TB1033	1	PIN CLEVIS
4	06537021	2	ROLL PIN
5	TF3097	1	PIN
6	TF3090	1	PIN
7	TB1024	1	PIN
8	TB1027	1	PIN
9	21688	1	CAPSCREW 7/16" X 3 1/4"
10	21677	1	NYLOCK NUT 7/16"
11	21635	3	CAPSCREW 3/8" X 2 1/4"
12	21627	4	NYLOCK NUT 3/8"
13	TB3010	3	BUSHING
14	6T3207	3	GREASE ZERK
15		-	SECONDARY BOOM *REFER TO BOOM ARM ASSY
16		-	CYLINDER *REFER TO BOOM ARM ASSY
17		-	FLAIL MOWER HEAD *REFER TO FLAIL ASSY
18	31723	1	CLAMP KIT,TBF50 (USED ON 50" FLAIL)
19	TB3031	2	DOUBLE HOSE CLAMP (USED ON THE 63" FLAIL)
20	21638	1	CAPSCREW 3/8" X 3"

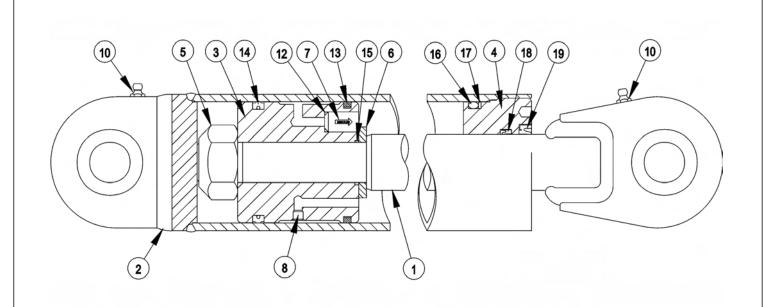
3IN X 10IN WELDED CYLINDER BREAKDOWN



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

	ITEM	PART NO.	QTY.	DESCRIPTION
		06501021	-	HYDRAULIC CYLINDER COMPLETE
	1	06501550	1	ROD
	2	06501551	1	TUBE WELDMENT
	3	06501552	1	PISTON
	4	06501553	1	CYLINDER HEAD
	5	06501554	1	CLEVIS
		06501555	-	SEAL REPAIR KIT (ITEMS 6 THROUGH 12)
1				

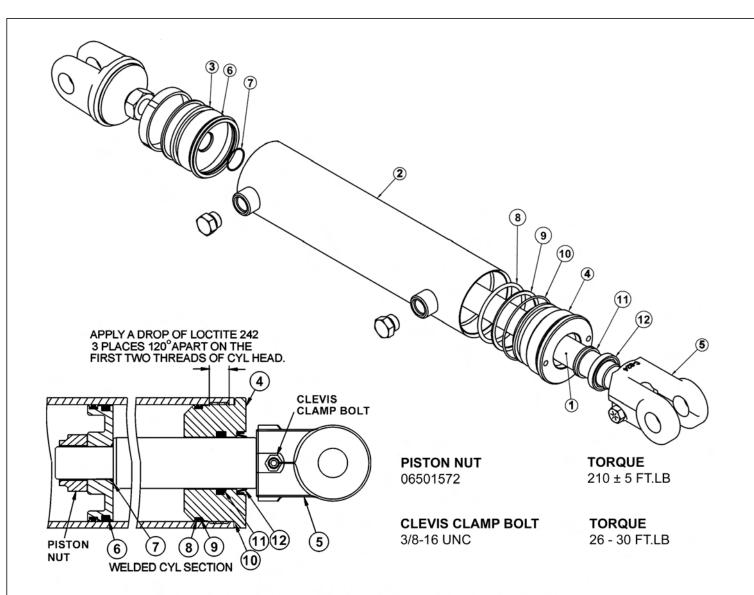
3IN X 17-1/2IN WELDED CYLINDER BREAKDOWN



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

l	ITEM	PART NO.	QTY.	DESCRIPTION
l		33705	-	CYLINDER,WELDED,3" X 17-1/2"
l	1	34571	1	PISTON ROD ASSY
l	2	34572	1	BUTT & TUBE ASSY
l	3	34573	1	PISTON
l	4	34574	1	GLAND
l	5	34575	1	LOCK NUT,1"-14 UNS (TORQUE TO 315 FT.LB.)
l	6	34576	1	SPACER
l	7	34577	1	CHECK VALVE, KEPNER
l	8	34578	1	ORIFICE
l	9	33761	1	SEAL KIT, PACKING (ITEMS 12 THRU 19)
l	10		2	GREASE ZERK
l	12		1	O - RING
l	13		1	CAST IRON PISTON RING
l	14		1	CROWN SEAL
l	15		1	O - RING
l	16		1	O - RING
l	17		1	BACK - UP WASHER
l	18		1	U - CUP
	19		1	WIPER
	20	34334	-	SPHERICAL BEARING (NOT SHOWN)
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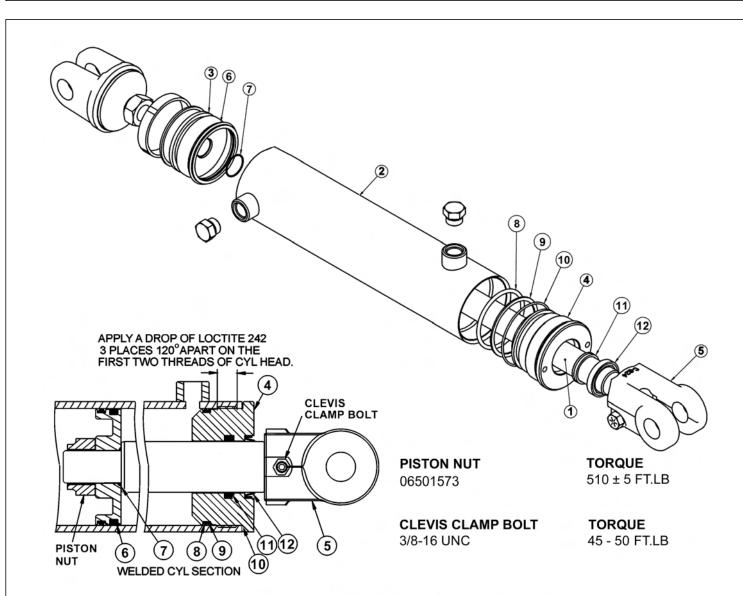
3IN X 18IN WELDED CYLINDER BREAKDOWN



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

ITEM	PART NO.	QTY.	DESCRIPTION
	06501023	-	HYDRAULIC CYLINDER COMPLETE
1	06501561	1	ROD
2	06501562	1	TUBE WELDMENT
3	06501552	1	PISTON
4	06501563	1	CYLINDER HEAD
5	06501554	1	CLEVIS
	06501564	-	SEAL REPAIR KIT (ITEMS 6 THROUGH 12)

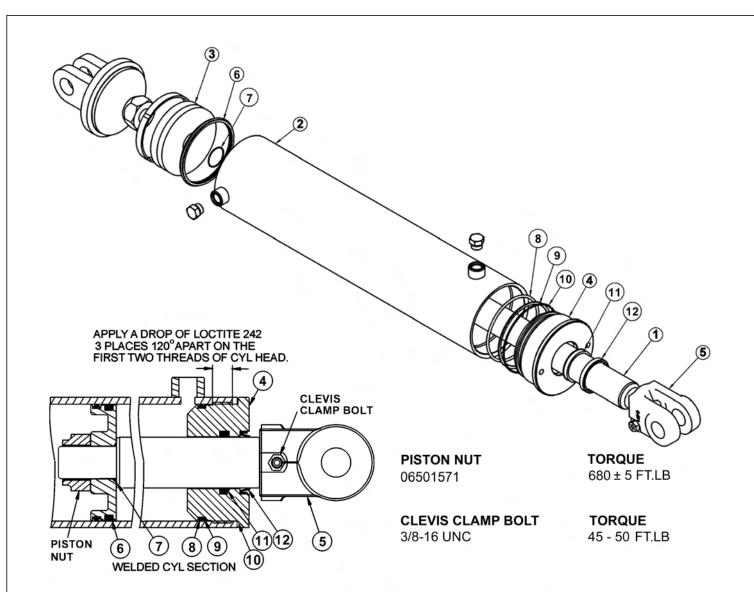
4IN X 20IN WELDED CYLINDER BREAKDOWN



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

ITEM	PART NO.	QTY.	DESCRIPTION
	06501022	-	HYDRAULIC CYLINDER COMPLETE
1	06501556	1	ROD
2	06501557	1	TUBE WELDMENT
3	06501558	1	PISTON
4	06501559	1	CYLINDER HEAD
5	6T0172	1	CLEVIS
5A	30172	-	CLEVIS (FOR EXTENDED BOOM)
	06501560	-	SEAL REPAIR KIT (ITEMS 6 THROUGH 12)
COMMON COUGAR			

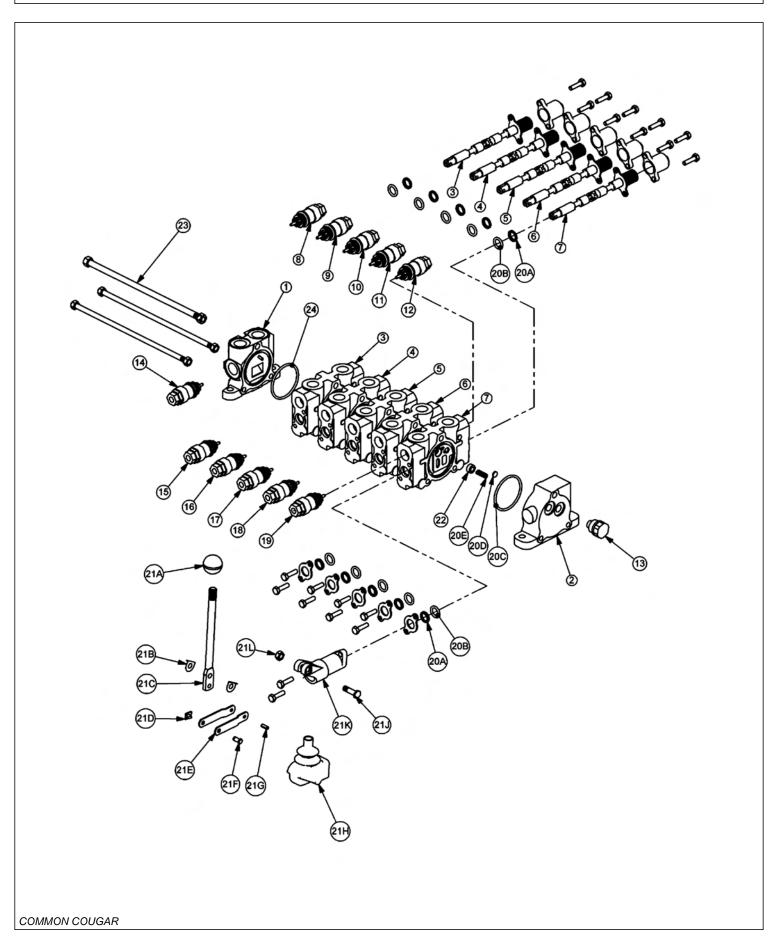
5IN X 20IN WELDED CYLINDER BREAKDOWN



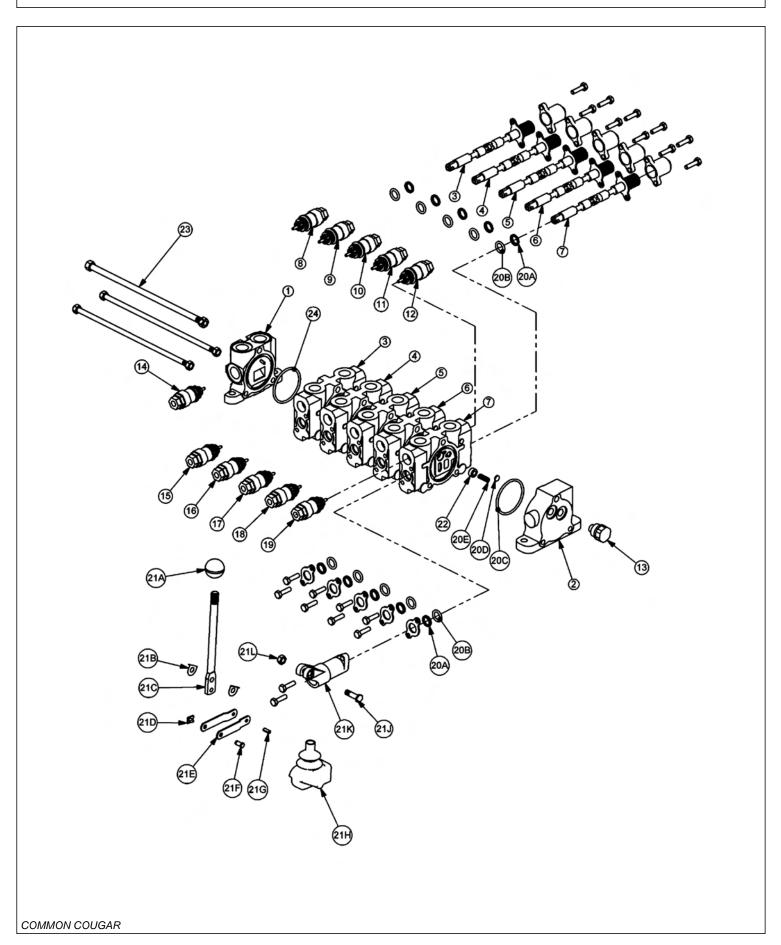
WARNING - MECHANICAL FASTENERS MUST BE TORQUED TO RECOMMENDED SPECIFICATIONS DURING REPAIR TO PREVENT PERSONAL INJURY OR EQUIPMENT DAMAGE.

ITEM	PART NO.	QTY.	DESCRIPTION
	06501020	-	HYDRAULIC CYLINDER COMPLETE
1	06501544	1	ROD
2	06501545	1	TUBE WELDMENT
3	06501546	1	PISTON
4	06501547	1	CYLINDER HEAD
5	06501548	1	CLEVIS
	06501549	-	SEAL REPAIR KIT (ITEMS 6 THROUGH 12)

NOTES 2
NOTES
COMMON COUGAR



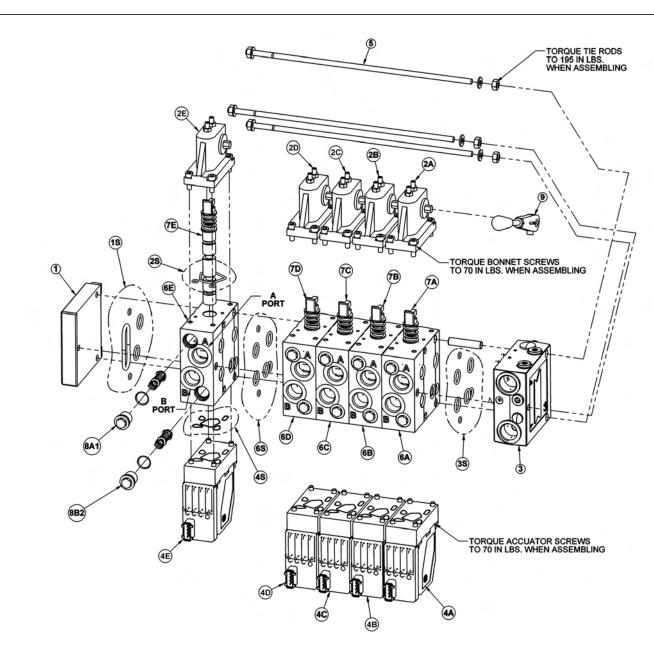
ITEM	PART NO.	QTY.	DESCRIPTION
1	31595	1	INLET END COVER
2	31594	1	END COVER, LOAD SENSE
3	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
4	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
5	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
6	31598	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING, METERED)
7	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING) (REMOVE SHUTTLE DISC)
8	06503067	1	RELIEF PLUG, #10 O-RING
9	TB1017K	1	RELIEF VALVE, 2500 PSI
10	TB1017J	1	RELIEF VALVE, 2175 PSI
11	TB1017H	1	RELIEF VALVE, 1750 PSI
12	22588	1	RELIEF VALVE, 500 PSI
13	06503068	1	RELIEF PLUG, #6 O-RING
14	6T4209	1	RELIEF PLUG, #10 O-RING
15	06502085	1	RELIEF VALVE, 3000 PSI
16	TB1017F	1	RELIEF VALVE, 1750 PSI
17	TB1017F	1	RELIEF VALVE, 1750 PSI
18	TB1017H	1	RELIEF VALVE, 1750 PSI
19	22588	1	RELIEF VALVE, 500 PSI
20	31593	5	VALVE SEAL KIT (FOR ONE SECTION)
20A		2	WIPER
20B		2	O-RING SMALL
20C		1	O-RING LARGE
20D		1	SHUTTLE DISC
20E		1	SPRING
21	TB1017L	5	LEVER KIT (FOR ONE SECTION)
21A		1	LEVER KNOB
21B		1	LEVER
21C		2	LEVER WASHER
21D		1	LEVER CLIP
21E		2	LINKAGE
21F		1	LEVER PIN
21G		1	ROLL PIN
21H		1	LEVER BOOT
21J		1	LEVER BOLT
21K		1	LEVER DUST COVER
21L		1	LEVER NUT
22	31603	5	COMPENSATOR
23	TB1017V	1	TIE ROD KIT
24	24214	1	O-RING, LARGE



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ITEM	PART NO.	QTY.	DESCRIPTION
1	31595	1	INLET END COVER
2	31594	1	END COVER, LOAD SENSE
3	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
4	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING)
5	31600	1	VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT)
6	31598	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING, METERED)
7	31597	1	VALVE SECTION (DOUBLE ACTING, CENTER SPRING) (REMOVE SHUTTLE DISC)
8	06503067	1	RELIEF PLUG, #10 O-RING
9	TB1017K	1	RELIEF VALVE, 2500 PSI
10	TB1017J	1	RELIEF VALVE, 2175 PSI
11	TB1017H	1	RELIEF VALVE, 1750 PSI
12	22588	1	RELIEF VALVE, 500 PSI
13	06503068	1	RELIEF PLUG, #6 O-RING
14	6T4209	1	RELIEF PLUG, #10 O-RING
15	06502003	1	RELIEF VALVE, 2500 PSI
16	TB1017F	1	RELIEF VALVE, 1750 PSI
17	TB1017F	1	RELIEF VALVE, 1750 PSI
18	TB1017H	1	RELIEF VALVE, 1750 PSI
19	22588	1	RELIEF VALVE, 500 PSI
20	31593	5	VALVE SEAL KIT (FOR ONE SECTION)
20A		2	WIPER
20B		2	O-RING SMALL
20C		1	O-RING LARGE
20D		1	SHUTTLE DISC
20E		1	SPRING
21	TB1017L	5	LEVER KIT (FOR ONE SECTION)
21A		1	LEVER KNOB
21B		1	LEVER
21C		2	LEVER WASHER
21D		1	LEVER CLIP
21E		2	LINKAGE
21F		1	LEVER PIN
21G		1	ROLL PIN
21H		1	LEVER BOOT
21J		1	LEVER BOLT
21K		1	LEVER DUST COVER
21L		1	LEVER NUT
22	31603	5	COMPENSATOR
23	TB1017V	1	TIE ROD KIT
24	24214	1	O-RING, LARGE

5 SPOOL ELECTRONIC VALVE



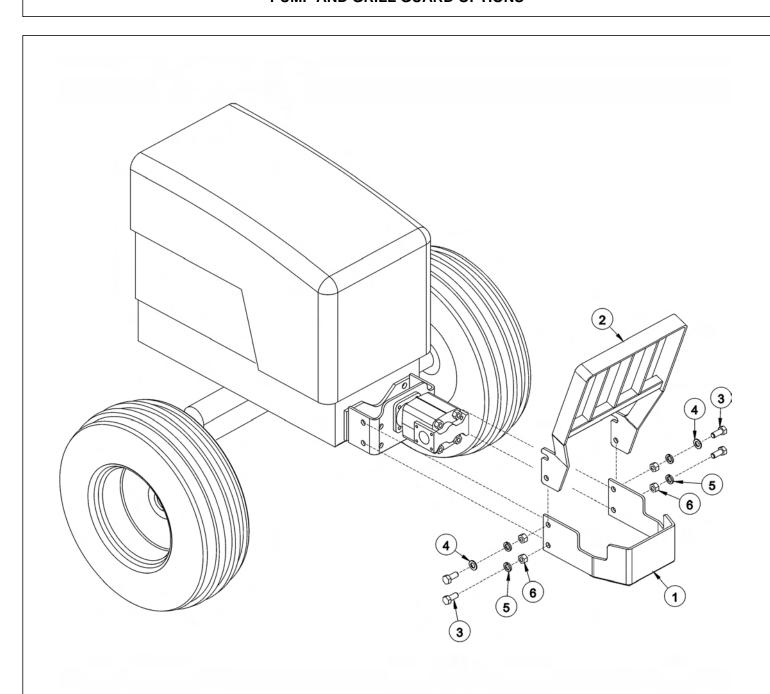
ITEM	PART NO.	QTY.	DESCRIPTION
	06502096	-	VLV,5SP,32PVG,SIDE STOW
1	06502074	1	END PLATE
1S	06505013	1	END PLATE SEAL KIT
2		5	BONNET
2S	06505042	1	BONNET SEAL KIT
2A	42197	1	MAIN BOOM BONNET
2B	42197	1	SECONDARY BOOM BONNET
2C	42197	1	DECK ROLL BONNET
2D	42197	1	BOOM SWIVEL BONNET
2E	42197	1	DECK SHIELD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

5 SPOOL ELECTRONIC VALVE

Continued...

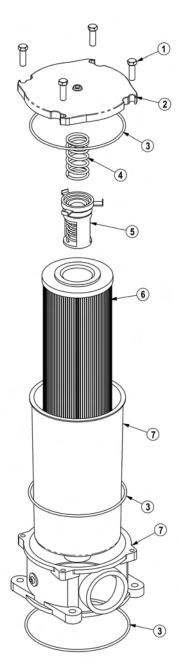
ITEM	PART NO.	QTY.	DESCRIPTION
3	34308	1	INLET SECTION
3S	06505013	1	INLET SECTION SEAL KIT
4		5	ELECTRONIC ACCUATOR
4A	06502101	1	MAIN BOOM ELECTRONIC ACCUATOR
4B	06502101	1	SECONDARY BOOM ELECTRONIC ACCUATOR
4C	06502100	1	DECK ROLL ELECTRONIC ACCUATOR
4D	06502101	1	BOOM SWIVEL ELECTRONIC ACCUATOR
4E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

PUMP AND GRILL GUARD OPTIONS



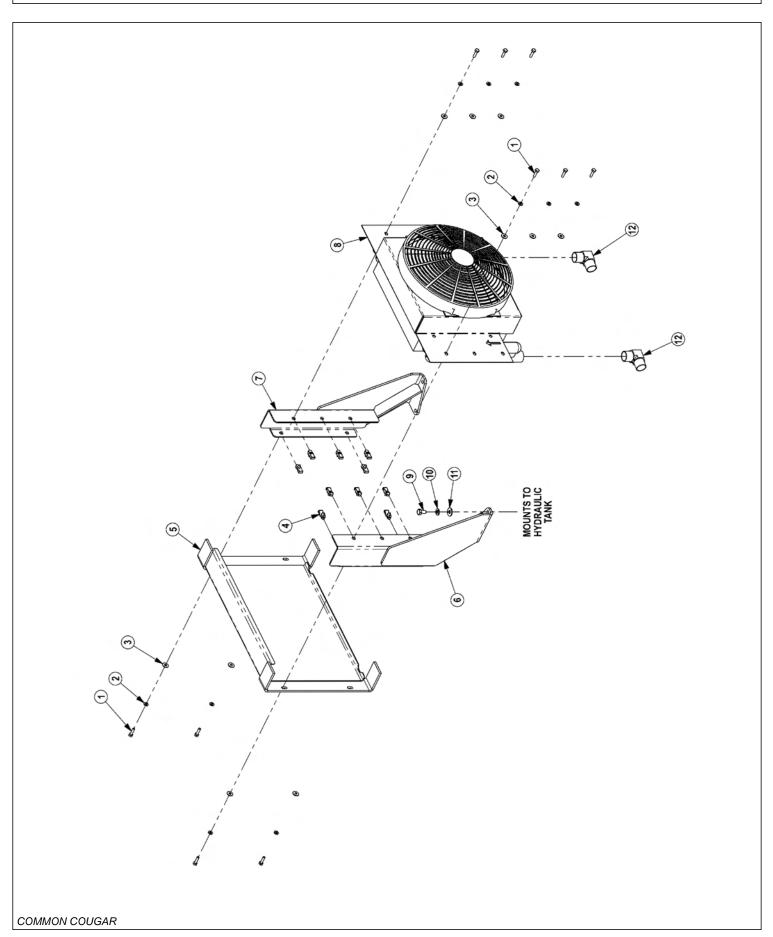
ITEM	PART NO.	QTY.	DESCRIPTION
1	32430	1	UNIVERSAL PUMP GUARD
2	32737	1	UNIVERSAL GRILL GUARD
3	21833	4	CAPSCREW,3/4" X 2-1/4",NC
4	22021	2	FLATWASHER,3/4"
5	21993	4	LOCKWASHER,3/4"
6	21825	4	HEX NUT,3/4",NC

RESERVOIR TANK FILTER ASSEMBLY



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

COOLER ASSEMBLY

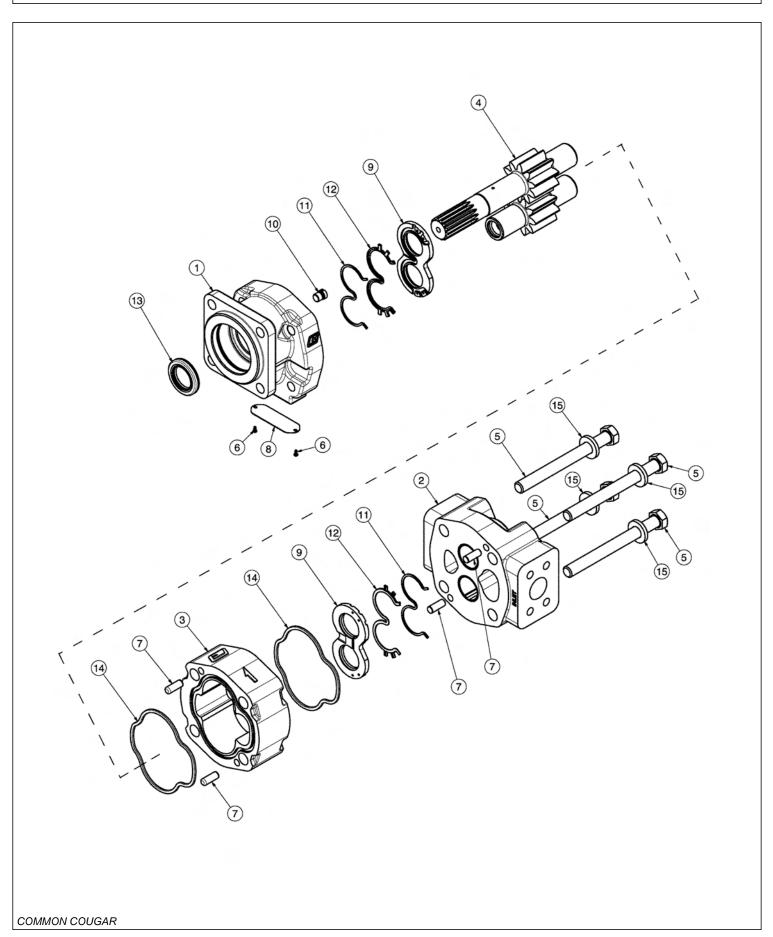


COOLER ASSEMBLY

Continued...

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

FRONT HYDRAULIC PUMP

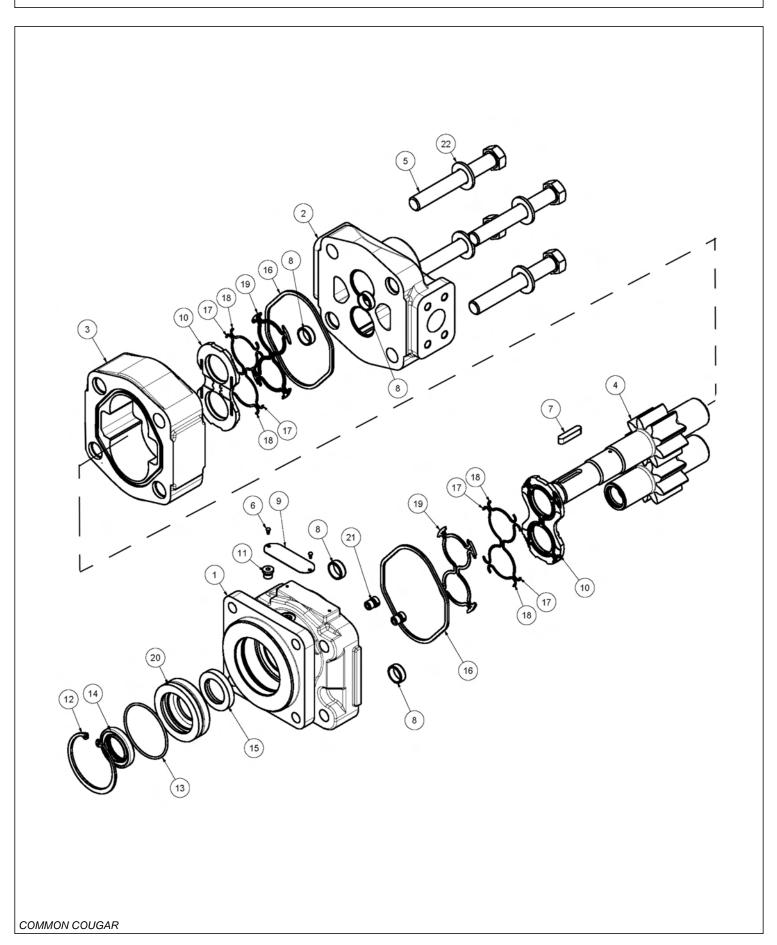


FRONT HYDRAULIC PUMP

Continued...

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)

60IN ROTARY MOTOR BREAKDOWN

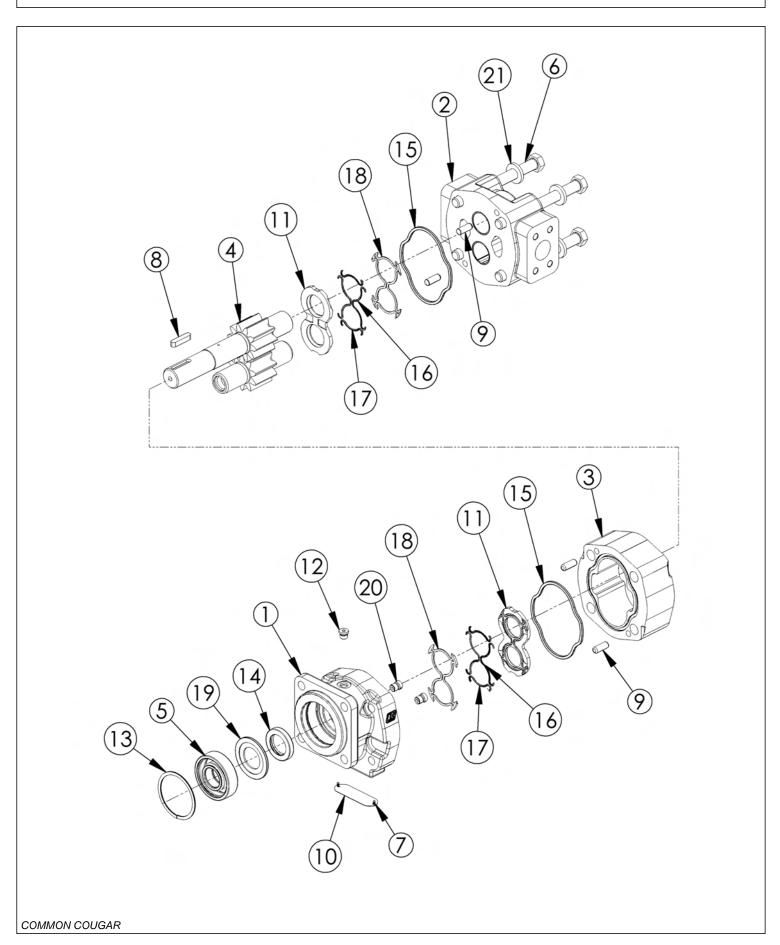


60IN ROTARY MOTOR BREAKDOWN

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	06504011	-	MOTOR ASSEMBLY,TRB60
1	22790	1	HOUSING, SEC
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	-	SEAL KIT

50IN FLAIL MOTOR BREAKDOWN

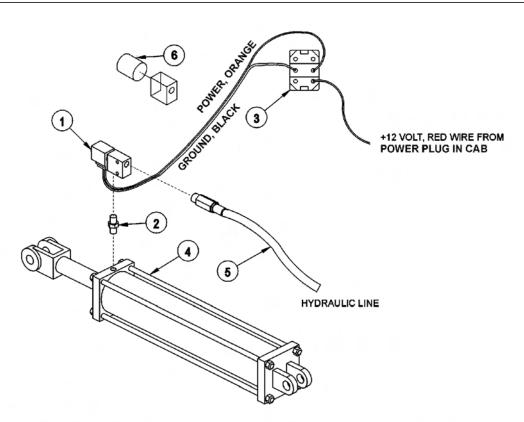


50IN FLAIL MOTOR BREAKDOWN

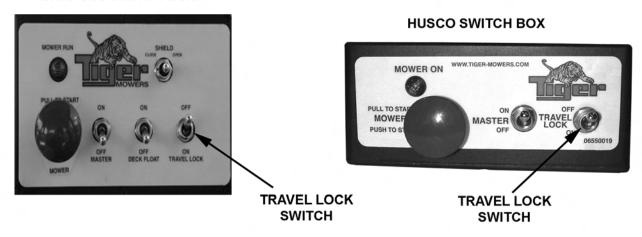
Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	06504013	-	MOTOR ASSEMBLY 350 - TBF50, TBF63
1	06504039	1	SHAFT END COVER
2	06504040	1	PORT END COVER
3	06504041	1	GEAR HOUSING
4	06504042	1	MATCHED GEAR SET
5	TF4402	1	BALL BEARING
6	06504043	4	CAP SCREW
7	06504044	2	SET SCREW
8	06504028	1	KEY
9	06504045	4	DOWEL PIN
10		1	NAMEPLATE
11	763759	2	THRUSTPLATE
12	02961940	1	HEX PLUG
13	TF4401	1	SNAP RING
14	06504049	1	LIP SEAL
15	TF4410	2	GASKET SEAL
16	06504046	4	SIDE SEAL
17	06504047	4	END SEAL
18	TF4407	2	BACK-UP SEAL
19	06504048	1	SEAL RETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
	06504023	-	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)

BOOM TRAVEL LOCK

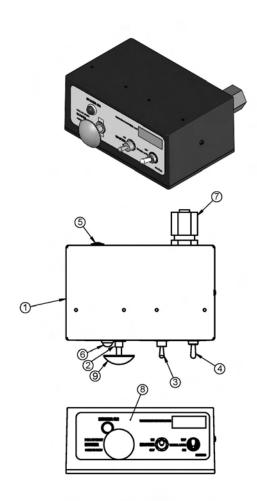


DANFOSS SWITCH BOX



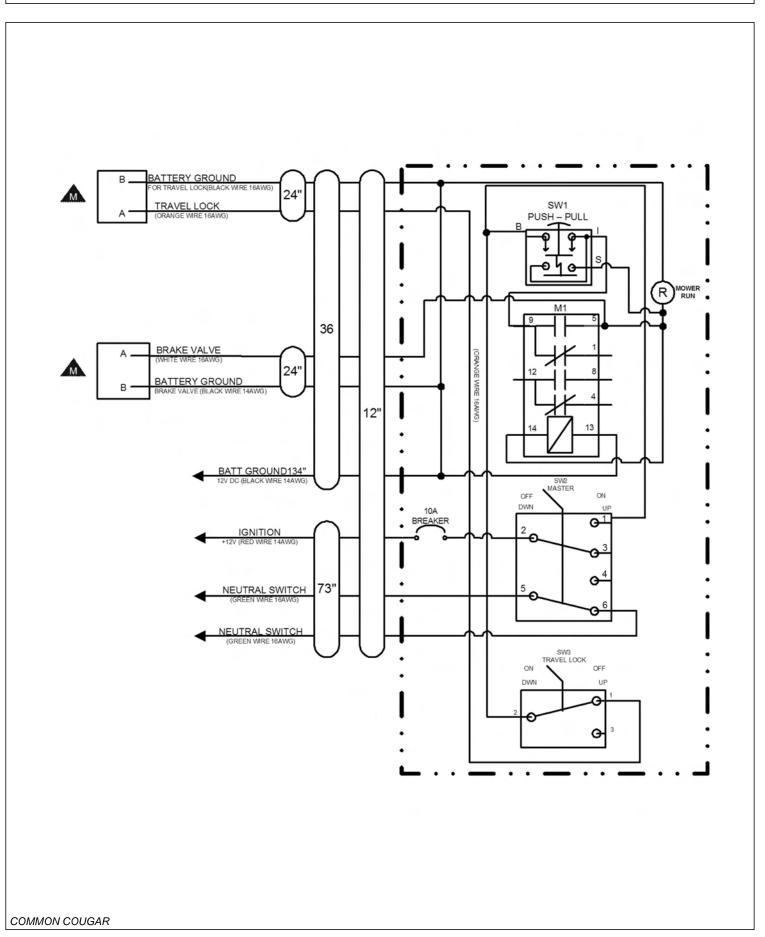
ITEM	PART NO.	QTY.	DESCRIPTION
1	06510050	1	HYDRAULIC TRAVEL LOCK VALVE
2	31611	1	ADAPTER - BOOM
3	34532	1	SWITCH,TRAVEL LOCK
4		-	MAIN BOOM CYLINDER *REFER TO BOOM ASSY
5		-	HOSE / FITTINGS *REFER TO BOOM HYD ASSY
6	06510092	1	COIL ,TRAVEL LOCK

MANUAL LIFT VALVE SWITCH BOX

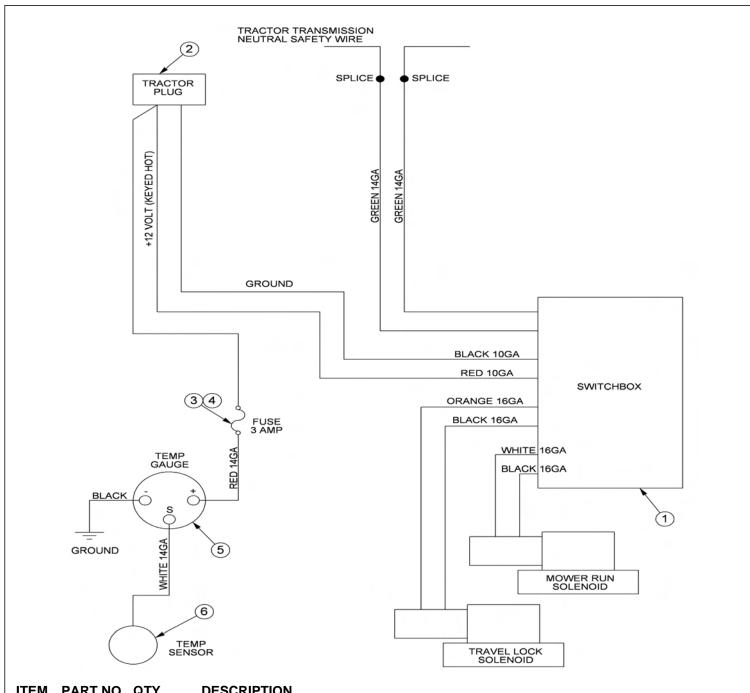


ITEM	PART NO.	QTY.	DESCRIPTION
1	06514012	1	SWBX,ALUM,BLK,06510100
2	35226	1	SWITCH,MOWER,COLEHERSEE
3	33811	1	SWITCH,MASTER/DECK FLOAT
4	34532	1	SWITCH,TRVL LCK
5	06514014	1	BREAKER,10A,SWBX
6	6T3923	1	INDICTATOR LIGHT,ON,RED
7	34540	1	STRAIN RELIEF,3/4,BLACK,NYLON
8	06550019	1	DECAL,SWTCHBX,BOOM,CG
9	02964063	1	KNOB,RED
10	35227	1	RELAY,DP,DT,12V,LY2F,35226

MANUAL LIFT VALVE SCHEMATIC

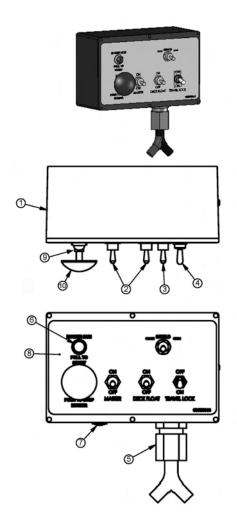


SOLENOID SWITCH BOX AND WIRING



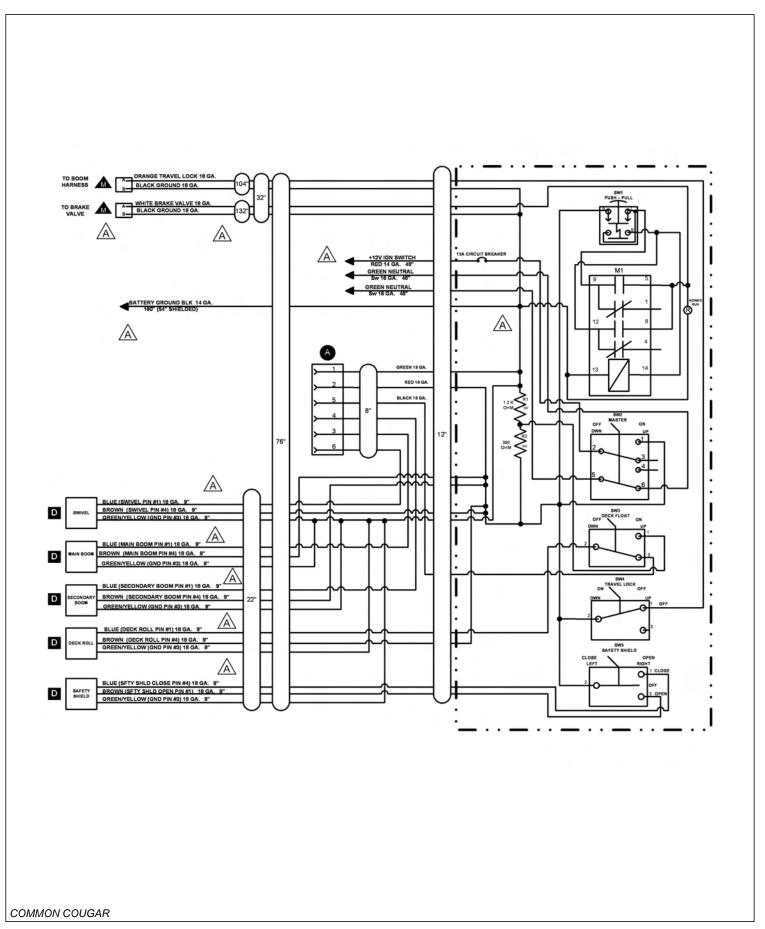
ITEM	PART NO.	QTY.	DESCRIPTION		
1		-	SWITCH BOX		
2	RE37651	1	PLUG,AUX PWR		
3	24204	-	FUSE HOLDER, IN-LINE (OPTION)		
4	6T3965	-	FUSE,3AMP (OPTION)		
5	6T3934	-	TEMPERATURE GAUGE (OPTION)		
6	6T3931	-	TEMPERATURE SENSOR (OPTION)		
COMMON COLICAR					
COMMON COUGAR					

ELECTRONIC LIFT VALVE SWITCH BOX

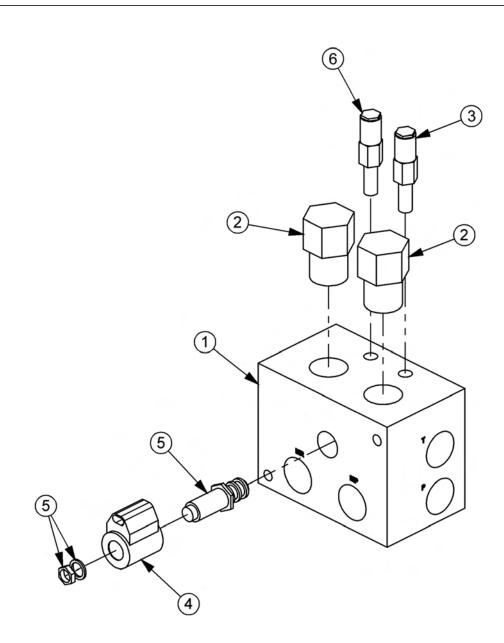


ITEM	PART NO.	QTY.	DESCRIPTION
1	06510196	1	SWBX,ASSY
2	33811	2	SWITCH,MASTER/DECK FLOAT
3	33813	1	SWITCH,SFTY SHIELD
4	34532	1	SWITCH,TRVL LCK
5	34540	1	STRAIN RELIEF,3/4",BLACK,NYLON
6	6T3923	1	INDICTATOR LIGHT,ON,RED
7	06514006	1	BREAKER,15A,SWBX
8	06550044	1	DECAL,SWBX,06510047
9	35226	1	SWITCH,MOWER,COLEHERSEE
10	02964063	1	KNOB,RED
11	35227	1	RELAY,DP,DT,12V,LY2F,35226

ELECTRONIC LIFT VALVE SCHEMATIC

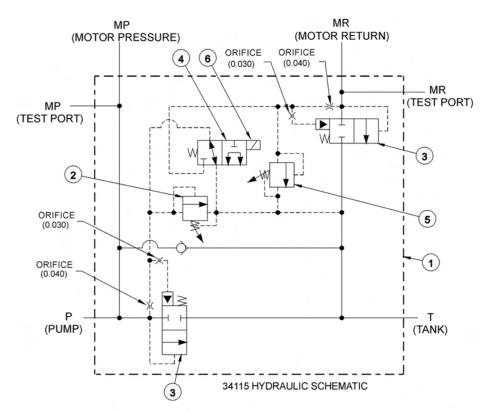


BRAKE VALVE ASSEMBLY



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

BRAKE VALVE HYDRAULIC SCHEMATIC



BRAKE VALVE TROUBLESHOOTING

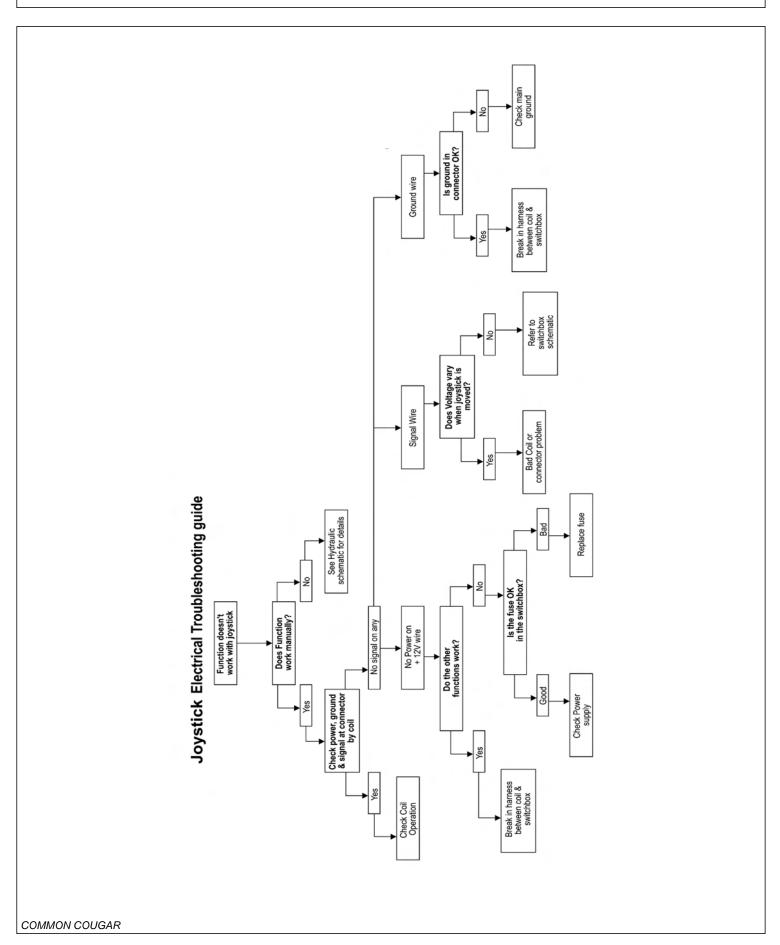
FAILURE MODE:	CHECK STEPS
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- MOWER WILL NOT START system pressure is low (engine not lugging).
 1 thru 6
- MOWER WILL NOT START system pressure is high
 (engine lugging). "MR" port will be high pressure.
- MOWER WILL NOT ROTATE AT FULL SPEED limited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

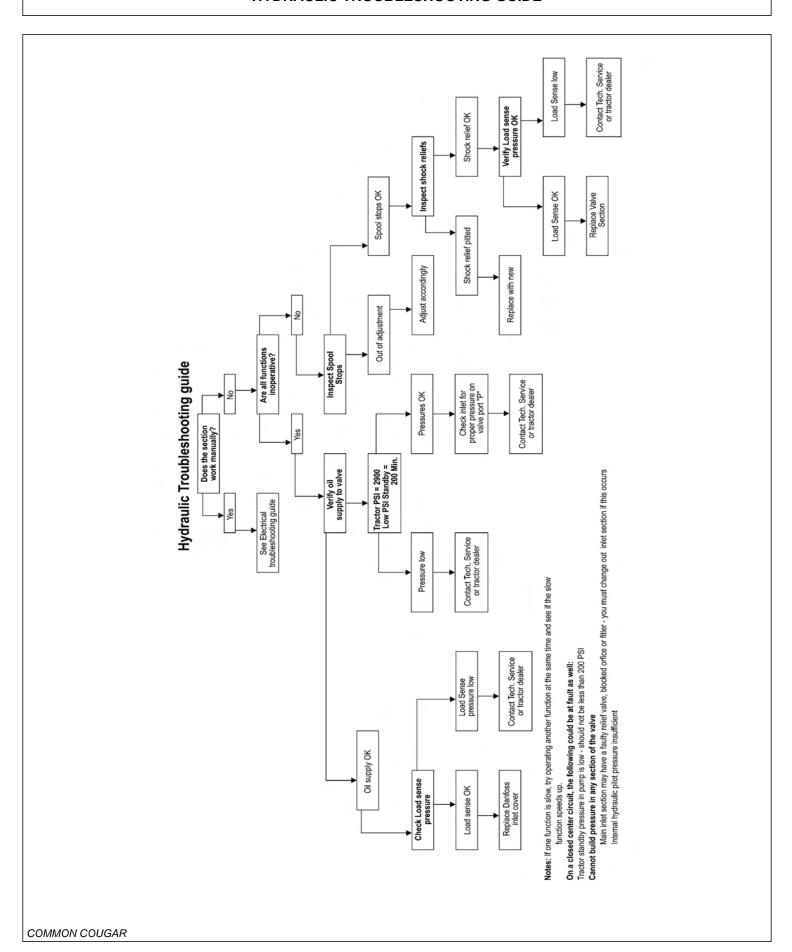
CORRECTIVE STEPS:

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

ELECTRICAL TROUBLESHOOTING GUIDE



HYDRAULIC TROUBLESHOOTING GUIDE



TROUBLESHOOTING

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

TROUBLESHOOTING - CONTINUED

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.

COMMON COUGAR

NOTES 3
NOTES
COMMON COUGAR

CLEAN CUTTER HEAD				
	CLEAN CUTTER			
	SECTION			
COMMON COUGAR				

CLEAN CUTTER ASSEMBLY



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



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

CLEAN CUTTER BLADE MOUNTING

The CLEAN CUTTER blade was designed for installation onto a standard TRB50 spindle. It is equipped with replaceable carbide tipped teeth. Carbide is very hard, it will chip or break on inpact. Handle the saw blade with care. DO NOT roll saw on any hard surface or allow it to strike a hard object. Set it down on a piece of belting or wood to avoid damaging carbide tips. Install two temperary(2) threaded studs into (2) opposite holes in the spindle. Align the bolt holes in adapter (part number 33875) with the studs and slide adapter over studs, be sure to index adaper so as the protruding 2 7/8" diameter pilot on the adapter faces outward away from spindle. Then slide the saw blade (part number 33874) over the studs and onto the 2 7/8" diameter pilot of the adapter. NOTE: Orient blade for clockwise rotation (blade rotates clockwise when looking down on top of mower deck). Then slide the collar (part number 33876) over the studs with the chamfered edge of collar to the outside, be sure the counterbore bolt holes face outward. Apply Loctite "271" to the threads of the 5/8-18 x 3" UNF Grade 8 bolts (part number 33877), and install lock washers (part number 21992) onto the bolts, then install bolts through collar, blade, and adapter into the spindle. Remove the threaded studs, and replace with bolts and lockwashers. Torque bolts in an alternating pattern to 184 Ft-lbs.



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.



CLEAN CUTTER OPERATION



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.



OPERATING INSTRUCTIONS

Inspect clean cutter saw before each use. Re-torque spindle bolts to 204 Ft-lbs. Inspect blade around collar and near the teeth for bends and cracks. Check for loose, broken, chipped, dull of missing teeth. Tighten all loose teeth by hammering and or replacing rivets. If teeth are broken, chipped, or missing or if blade is cracked or becomes bent remove blade and have it repaired at an approved service center. Call Tiger Service Department for replacement parts and service.

The TRB50 Clean Cutter is intended for clean cutting trees and brush up to six (6) inches in diameter maximum. Turn mower "ON" while tractor is running at idle RPM. Then increase tractor speed to 1,950 RPM maximum. Note, this tractor engine speed produces a mower speed of 1,500 RPM. **DO NOT operate the clean cutter mower at speeds in excess of 1,500 RPM.** If saw blade wobbles in excess of two (2) inches while tractor is idling, **STOP**, remove the blade and have it repaired in an approved service center. Call Tiger Service Department for replacement parts and service.

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

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

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

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

CLEAN CUTTER OPERATION - CONTINUED



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



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



WARNING!



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



DANGER!



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



WARNING!



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

COMMON COUGAR

CLEAN CUTTER MAINTENANCE

MAINTENANCE INSTRUCTIONS

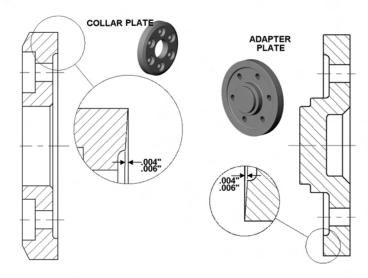
Inspect clean cutter saw before each use. Re-torque spindle bolts in an alternating pattern to 204 ft-lbs. Check for loose, broken, chipped, dull or missing teeth. Tighten all loose tooth assemblies by hammer and or replacing rivets. If teeth tips are broken, chipped, or missing, replace tip or replace entire tooth assembly. **NEVER RUN SAW BLADE WITH MISSING TOOTH ASSEMBLY.** If saw blade is cracked, becomes bent or wobbles in excess of two (2) inches while the tractor is idling, **STOP**, remove blade and have it repaired at an approved service center. Call Tiger Service Department for replacement parts and service.

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

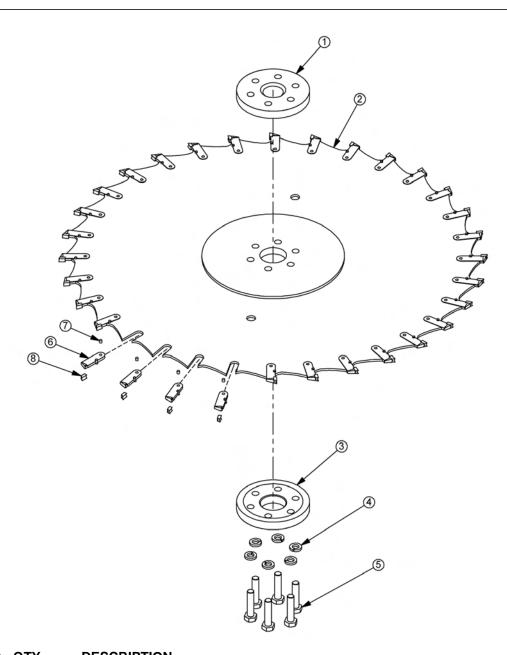
Check adapter and collar every time saw is changed, maintain the .004 to .006 inch taper (see figure below) on inside face (surface against saw blade) of these two (2) items. Always clean inside face of adapter and collar before mounting the blade. If adapter or collars are worn, chipped, or damaged,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

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

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



CLEAN CUTTER BLADE AND TEETH PARTS



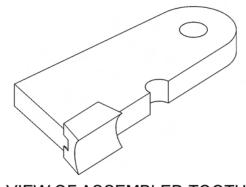
IIEM	PART NO.	QTY.	DESCRIPTION
1	06420024	1	ADAPTER,SAW,TRB50,RNFRCD
2	06520224	1	BLADE, 48" SAW WITH TEETH
3	06420037	1	COLLAR,SAW,TRB50,RNFRCD
4	33764	6	FLATWASHER,5/8,GR 8,SAE
5	06530209	6	CAPSCREW,5/8 X 3 3/4 NF, GR 8
6	06520225	30	TOOTH WITH RIVET, SAW BLADE
7	34703	30	TOOTH RIVET, SAW BLADE
	34704	-	RIVET REMOVER TOOL (NOT SHOWN)
8	34702	30	TOOTH TIP, SAW, CARBIDE
	34705	-	SHARPENING TOOL (NOT SHOWN)

COMMON COUGAR

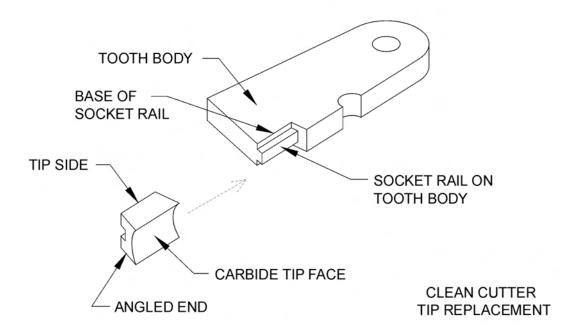
CARBIDE TIP REPLACEMENT

CARBIDE TIP REPLACEMENT

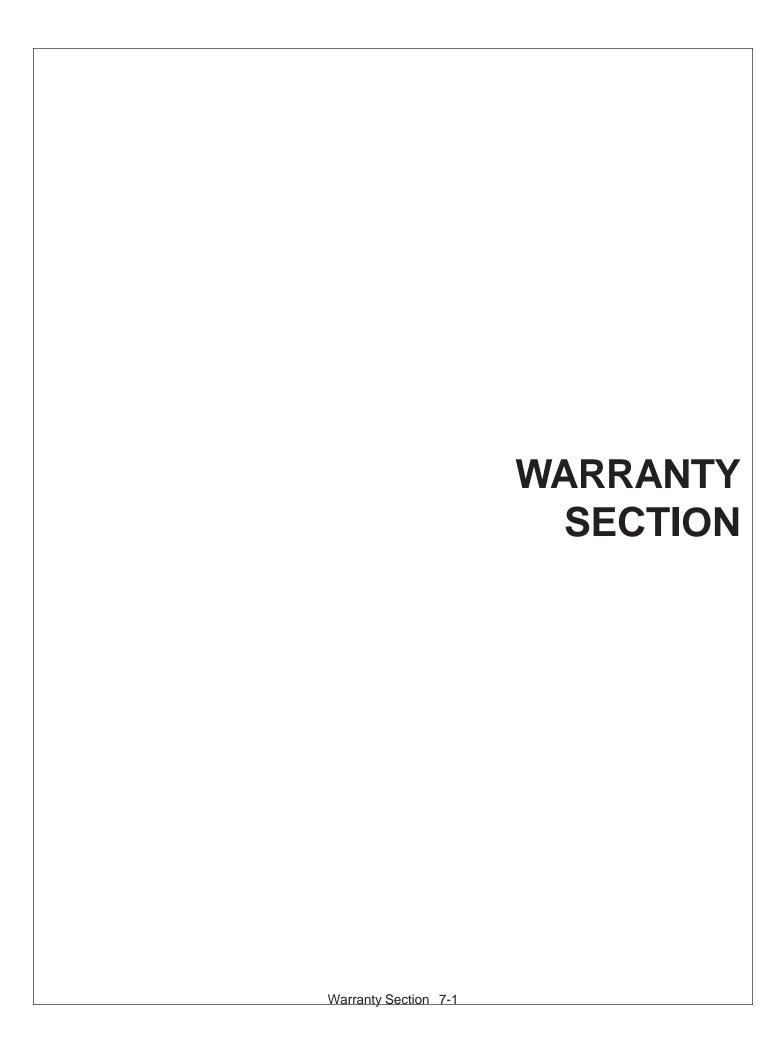
- 1. Heat face of tip to dull orange, remove tip, then brush tooth body clean of all debris (carbon).
- 2. Apply acetone to socket rail on tooth body and allow it to evaporate. Dab on soldering paste (black flux) to socket rail of tooth body and slide pre-tinned tip into place.
- Then heat tip sides and base of socket rail to ensure silver solder flows completely around base of tip. Grasp tip with tweezers and gently twist tip back and forth to ensure complete bonding of silver solder.
- 4. Discontinue heat, and allow to cool. Then check braze by gently tapping tip with rubber mallet.



VIEW OF ASSEMBLED TOOTH



NOTES
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NOTES
COMMON COUGAR



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

