



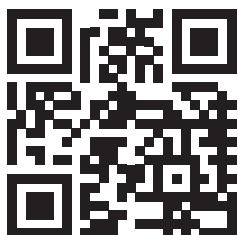
# RAILKUT T4F

Current as of 2/27/19

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## PARTS LISTING WITH MOUNTING AND OPERATING INSTRUCTIONS

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### **Tiger Corporation**

3301 N. Louise Ave.  
Sioux Falls, SD 57107  
1-800-843-6849  
1-605-336-7900  
[www.tiger-mowers.com](http://www.tiger-mowers.com)

**06030009**

# TO THE OWNER / OPERATOR / DEALER

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

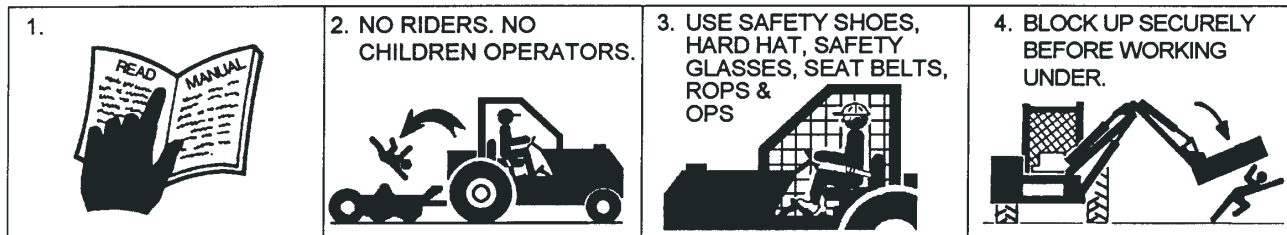
**BEFORE YOU START!!** Read the safety messages on the implement and shown in this manual. Observe the rules of safety and use common sense!

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



# DANGER

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



1. 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.

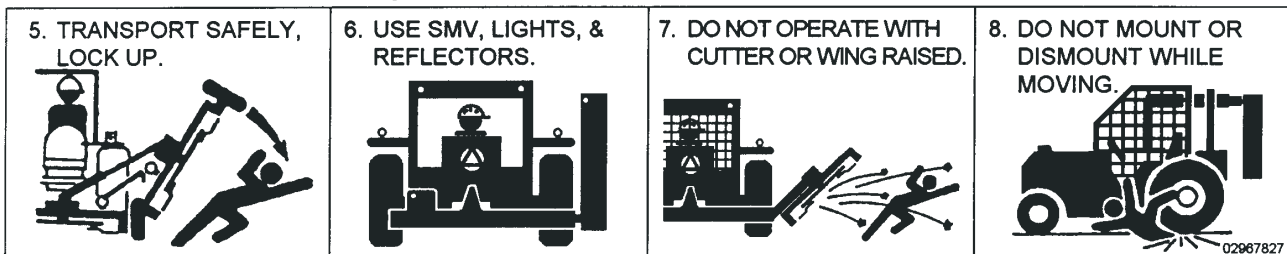
6. Make certain that SMV sign, warning lights, and reflectors are clearly visible. Follow local traffic codes.

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.



02967827

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

# FORWARD

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

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

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

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

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

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

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

MANUFACTURED BY:

**Tiger Corporation**

3301 N. Louise Ave.

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1012

**This symbol means:**

**CAUTION – YOUR SAFETY IS AT RISK!**

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

Tiger is a registered trademark.





# **SAFETY SECTION**

Safety Section 1-1

# SAFETY

## SAFETY MESSAGES

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



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

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



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



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



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



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

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

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



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





# SAFETY



Never operate the Truck or Mower until you have read and completely understood this Manual, the Truck and Auxiliary Engine Operator's Manuals, and each of the Safety Messages found in the Manuals or on the Truck and Mower. Learn how to stop the Truck and Auxiliary Engines quickly in an emergency. Never allow inexperienced or untrained personnel to operate the Truck and Mower without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (STM-1)



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



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)



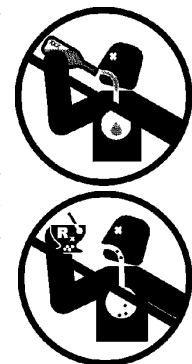
The operator of the Truck and Mower must be trained in the operation and safe use of this machine. The operator must read and completely understand the operator's manuals of the Mower, Truck and Auxiliary engine manufacturers. New operators should be trained in an open area clear of obstructions before operating on public roadways. If operation of the entire Mower unit (Truck, Auxiliary engine, and Mowing Components) is not completely understood, consult your authorized sales representative for a detailed explanation. Never allow an untrained or unqualified driver to operate the Truck and Mower. (STM-2)



The Truck driver must meet the requirements and possess a Motor Vehicle License as determined by the state in which the Truck is operated if used on public roadways. Contact your local State Department of Public Safety office for special licensing requirements to drive the Truck in your area. (STM-3)



**NEVER use drugs or alcohol** immediately before or while driving or operating the Truck. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the Truck safely. Before operating the Truck or Mower, 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 Truck and Mower 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. (STM-4)



# SAFETY



Always wear OSHA approved Personal Protective Equipment (PPE) while operating, servicing, repairing, and/or cleaning the Truck or Mower. PPE is designed to provide bodily protection during such activities.

- Personal Protective Equipment includes:
- Protective Eye Wear
- Steel Toed Safety Footwear
- Gloves
- Hearing Protection
- Close Fitted Clothing
- Hard Hat-When working around a raised Mower.
- Respirator-Depending on mowing conditions. (STM-5)



Prolonged operation of the Truck and Mower may cause operator boredom and/or fatigue affecting the safe operation of the Truck and Mower. It is recommended that the operator take scheduled work breaks to help prevent these potentially impaired operating conditions. If possible, completely shut down the Truck and Mower, exit the cab and move around stretching your arms and legs. Never operate the Truck and Mower in a fatigued or bored mental state that impairs proper and safe operation. (STM-6)



**PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!** Mower operation 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 mowers, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery. (STM-7)



Do not operate, or perform maintenance to, the Truck or Mower while wearing loose fitting clothing. Entanglement of loose clothing with the rotating elements can result in serious injury or death. Stay clear of all rotating elements at all times. (STM-8)



Verbal communication near the Truck and Mower is difficult and dangerous. Operating instructions and mowing directions should be made prior to starting the Truck. Unclear and misunderstood communication may lead to operator and bystander injury or death and equipment damage. If communication by the operator is necessary, completely shutdown and exit the Truck. Never allow anyone to approach the Truck and Mower while in operation. (STM-9)



Never allow children to play on, under, or around the Truck and Mower nor allow children to operate controls. Children can slip or fall off the Truck and be injured or killed. Children can cause the Mower components to shift or fall crushing themselves or others. (STM-10)

# SAFETY



Allow passengers only in situations where their presence is involved in the Mowing operation (operator training, supervision, maintenance or inspection). Never carry passengers who's presence distracts from the safe operation or transport of the Truck and Mower. Passengers must be seated securely and belted in the cab's passenger seat. Passengers must be instructed to keep clear of steering wheel and foot pedals. Never allow any person to ride on any other location of the Truck during operation or transport. (STM-11)



Relieve hydraulic pressure from the hydraulic circuit prior to doing any maintenance or repair work on the unit. Place the Mower boom and head in the transport position, sitting on the ground or securely blocked up. Turn off the Truck and Auxiliary engines then manually activate the hydraulic control valves several times using the manual over-ride handle to relieve hydraulic pressure prior to performing any maintenance or repair work. (STM-12)



Use extreme caution when refueling the Truck and Auxiliary Engines, fuel is highly flammable and explosive if not handled safely. Always follow these precautions to reduce the dangers involved in refueling:

- Completely shut down the Truck and Auxiliary Engines before refueling.
- Do Not refuel while smoking or near an open flame.
- Do Not store the Truck and Mower with fuel in the tank in a building where fumes can reach an ignition source.
- To prevent a fire and explosion caused by static electric discharge while filling the tank, use a plastic funnel. Avoid using a funnel that has a metal screen or filter.
- Avoid spilling fuel. Fuel is expensive and can damage plastic and painted surfaces. Clean up spilled fuel immediately.



Escaping pressurized hydraulic oil generated by hydraulic pumps has the potential to inflict serious injury and possible death. Never attempt to repair a pump or hose or tighten a connection while the system is pressurized. Always shut down the Truck and Auxiliary engines and relieve hydraulic oil pressure before performing any repairs to the hydraulic system. (STM-14)



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



# SAFETY

**WARNING**

Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)



**WARNING**

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (SG-31)

**WARNING**

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SWM-20)

**DANGER**

Never run the Truck or Auxiliary engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous and deadly to your health. If it is necessary to run the Truck or Auxiliary engine in an enclosed area, remove the exhaust fumes from the area to the outdoors with an exhaust pipe extension. If you do not have an exhaust pipe extension, or if it is not possible to use one, open doors and circulate outside air into the area. (STM-15)

**DANGER**

Start the Truck and Auxiliary engines only when seated and belted in the Truck's operator seat. Operate the Mower controls only while properly seated with the seat belt secured around you. Inadvertent movement of the Truck and/or Mower components may cause serious injury or death to the operator and passersby. Read the Truck and Auxiliary Engine operator's manuals for proper starting instructions. (STM-16)

**WARNING**

Use both hands for support when getting on and off the Truck. Use hand holds and steps on the Truck for support when boarding the Truck cab, bed, or service area. Never use the Mower control levers for support when boarding the Truck. (STM-17)

**WARNING**

Use available Truck hand holds and steps to exit the Truck cab. Make sure you have solid footing before stepping down. Be careful of your step and use extra caution when mud, ice, snow, or other matter has accumulated on the steps or handrails. Never rush to exit or jump off the Truck. (STM-18)

# SAFETY



Do not attempt to mount the Truck while the Truck is moving or Mower is running. Never attempt to mount a runaway Truck. Serious injury or death may occur from being run over by a moving Truck. (STM-19)



BEFORE leaving the Truck's seat, always engage the parking brake and set the Truck's transmission in parking gear, stop the engine, remove the key, and wait for all moving parts to stop. Never dismount a Truck that is moving or while the Truck and Auxiliary engines are running. Operate the Mower controls from the Truck seat only. (STM-20)



Always wear a seat belt while driving the Truck during operation and transport. Serious injury or even death could result from falling out of the Truck or from being involved in a collision. (STM-21)



Use extreme care when climbing onto the Truck to perform repairs, maintenance, and cleaning. Use proper stands and ladders to access areas that cannot be reached from ground level. Slipping and falling off the Truck can cause serious injury or death. (STM-22)



BEFORE leaving the Truck seat, always engage the parking brake, stop the Auxiliary and Truck engines, remove the key, and wait for all moving parts to stop. Never dismount the Truck if it is moving or while either the Auxiliary or Truck engine is running. Opening the Truck door while the mower is operating will activate the mower brake valve stopping the mower blades within 10 seconds. (STM-23)



The rotating parts of this machine continue to rotate even after the mower and auxiliary engine have been turned off. The operator should remain in his seat for 60 seconds after the brake has been set, the Truck and auxiliary engines turned off, and all evidence of rotation has ceased. (STM-24)

**“Wait a minute ... Save a life!”**



Drive from the Truck's right side only when mowing and never while traveling above 15 MPH. For transport, the Truck must be driven from the LEFT side ONLY. If the Truck is being operated from the right side, make sure the Truck's mirrors are aligned for the right side driving position. (STM-25)



Do not exceed the rated operating speed for the Truck and Auxiliary engines. Excessive operating speeds can cause engine and Mower component failures resulting in possible serious injury or death. (STM-26)

# SAFETY

**WARNING**

Do not operate the Mower if excessive vibration or noise exists. Shut down the Mower and the Truck and Auxiliary engines. Inspect the Mower to determine the source of the vibration or noise. If Mower blades or components are loose, damaged, or missing, replace them immediately. Do not operate the Mower until all necessary repairs have been performed and the Mower operates smoothly. Operating the Mower with excessive vibration can result in component failure and broken objects being thrown outward at high velocities. To reduce the possibility of property damage, serious injury, or even death, never operate the Mower with missing or damaged components. (STM-27)

**WARNING**

Use extreme caution when lowering or unfolding the Mower's Boom and Head. Make sure no bystanders are close by or underneath the mower when lowering. Allow ample clearance around the Mower when lowering or raising the boom. Use extreme caution around obstructions including bystanders, passersby, curbs, buildings, and other property. Use the Truck's horn to warn of danger when boom and mower head are being lowered. (STM-28)

**WARNING**

Before starting a mowing operation, make sure all the warning signal lights are connected, visible and working. Routinely inspect the Truck's headlights, brake lights, backup lights, and turn signal lights for operational condition. Immediately repair non-functioning lighting. Always follow all local traffic regulations while transporting the Truck on a public road. (STM-29)

**WARNING**

Always turn on all safety lights and flashers when you operate the Mower. It is recommended that you preset the beacon/strobe light switches to ON, so lights go on whenever the auxiliary engine is ON and lights go OFF whenever the auxiliary engine is turned OFF. This presetting action has the additional benefit of alerting the operator if the auxiliary engine is inadvertently left ON. (STM-30)

**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 300 feet (90 m) in front and to the sides of the tractor and mower. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see these type of items discontinue mowing. (SGM-1)

**DANGER**

There are obvious and hidden potential hazards in the operation of this Mower. **REMEMBER!** This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care is taken to insure the safety of the operator, bystanders, or passersby in the area. Do not operate this machine with anyone in the immediate area. Stop mowing if anyone is within 300 feet of mower. (SGM-02)



# SAFETY



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



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



Many varied objects, such as wire, cable, rope, or chains, can become entangled in the operating parts of the mower head. These items could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the cutting area for such objects before mowing. Remove any like object from the site. Never allow the cutting blades to contact such items. (SGM-06)



Mow at the speed that you can safely operate and control the Truck 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. (STM-31)



Do not mow in the reverse direction. Check to make sure there are no persons behind the Truck and Mower before backing up. Mow only at a slow ground speed where you can safely operate and control the Truck and Mower. Never mow an area that you have not inspected and removed debris or foreign material. (STM-32)



Do not put hands or feet under mower decks. Blade Contact can result in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (SGM-09)



SAFETY

# SAFETY



Rotary Mowers are capable under adverse conditions of throwing objects for great distances of 300 feet or more, and causing serious injury or death. Follow safety messages carefully.

- **STOP MOWING** if Front and Rear Mower Thrown Object Deflectors are worn, damaged or missing.
- **STOP MOWING IMMEDIATELY** if pedestrians or bystanders come within 300 feet of mower.
- **INSPECT AREAS** to be mowed for foreign material that can be struck by the mower blades, such as rocks, cans, glass bottles, wire and loose brush. Remove foreign materials or mark and avoid mowing these materials.
- Set mower cutting height to 6 inches minimum.

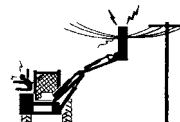
NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected closely with any remaining debris being removed, and mowed again at desired final height. (SBM-1)



Use extreme caution when raising the Mower head. Stop the Blades from turning when the Mower Head is raised and passersby are within 300 feet. 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)



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)



Inspect the entire Truck and Mower before each use. Accidents may occur or damage to the Mower may result if the Truck and Mower are not maintained in good mechanical working order.

- Check for loose bolts, worn or broken parts, pinched hydraulic hoses, and leaky or loose fittings.
- Make sure all pins are secure and safety pins equipped.
- Make sure replacement parts (blades and bolts) are the correct size and properly installed.
- Make sure all fluid levels are full and replenish as necessary.
- Make sure fuel, oil, and coolant caps are replaced and tightened.
- Check tire condition for tread wear and tire pressure at the rated PSI.
- Make sure that all safety shields and guards are attached and in good condition.
- Make sure all scheduled maintenance is up to date. (STM-33)



# SAFETY



Never attempt to repair, lubricate, adjust, clean, remove obstructions or perform any other type of service to any Mower component while the Truck or Mower is in motion or while the Auxiliary and/or Truck engine is running. Completely shut down the mowing components and the Truck and Auxiliary engines and wait for all motion to come to a complete stop before servicing the Mower. (STM-34)



Never work under the Truck, the Mower, the framework, or any lifted component unless the equipment is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (STM-35)



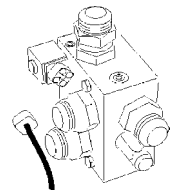
Replace bent or broken blades with new blades. NEVER ATTEMPT TO STRAIGHTEN, WELD, OR WELD HARDFACING ON BLADES SINCE THIS WILL LIKELY CRACK OR OTHERWISE DAMAGE THE BLADE WITH SUBSEQUENT FAILURE AND POSSIBLY CAUSE SERIOUS INJURY FROM THROWN BLADES. (SGM-10)



Never Leave the Truck and Mower unattended while the Mower head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (STM-36)



Always disconnect the wire leads from the Mower valve solenoid before performing service on the Truck or Mower. Use caution when working on the Truck or Mower. The Truck and Auxiliary Engines must be shut down before working on the Mower or Truck. The Mower Blades could inadvertently be turned on without warning and cause immediate dismemberment, injury or death. (STM-37)



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. Serious injury may occur from not maintaining the truck and mower in good working order. (STM-38)



NEVER work on or near any engine component that has generated heat until it has cooled down. NEVER check or replenish the fluid levels of the Truck and Auxiliary engine coolant or hydraulic circuit oil levels until sufficient time has passed (up to 2 hours) to allow the system to cool down. Contact with a hot engine component or operating fluid may result in serious injury from burns, scalding and possible death. (STM-39)

# SAFETY



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

- Equip the Truck with a fire extinguisher in an accessible location.
- The Truck is equipped with an under frame exhaust. Do Not drive the truck over dry grass or combustible material.
- Do Not smoke or have an open flame near the Mower and Truck.
- Do Not drive into burning debris or freshly burnt areas.
- Never allow clippings or debris to collect near auxiliary engine or Mower head. Periodically shut down the Truck and Mower and clean clippings and collected debris from the Truck and Mower deck areas. (STM-40)



All Safety Shields, Guards, deflectors, retractable door shields, and other Protective Safety devices must be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. **NEVER REMOVE PROTECTIVE SHIELDS AND GUARDS! NEVER MODIFY OR CUT PROTECTIVE SHIELDS OR GUARDS!** When shields or guards are removed to access areas for maintenance, they must be replaced and be in good condition before operating. Missing, broken, or worn shields, guards, and other protective devices must be replaced at once and prior to operation to reduce the possibility of injury or death from thrown objects, entanglement, or contact. (STM-41)



When transporting the Truck between mowing locations, follow all local traffic laws and regulations. Disengage all Mower controls and secure Mower head in transport position on the Truck bed. Disengage all warning signals prior to entering vehicle traffic. (STM-42)



Make sure there is no bystander, animal or obstruction such as a vehicle, building, or street sign are behind the Truck when backing up. The design of the Mower impairs operator rear vision when backing. Use extreme caution to ensure that the Truck is not backed into the path of pedestrian or vehicle traffic. Serious injury or death and property damage could result from running into, being crushed by, or run over by the Truck. (STM-43)

# SAFETY

## **WARNING**

Transport the Truck and Mower only at safe speeds. Serious accidents and injuries can result from driving this Truck at unsafe speeds. Become familiar with the driving characteristics of the Truck and how it handles before operating or transporting on streets and highways. Make sure the Truck's steering, brakes, tires, and wheels are in good condition and operate properly.

Before transporting the Truck and Mower determine the safe transport speeds for you and the machine. Make sure you abide by the following rules:

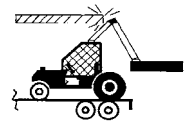
- Test the Truck and Mower at a slow speed and increase the speed slowly. Apply the brakes smoothly to determine the stopping characteristics of the Truck equipped with the Mower. As you increase the speed of the Truck, the stopping distance increases. Determine the maximum safe transport speed. When driving down a hill or on wet, rain slick, snow covered, or icy roads, the braking distance increases: use extreme care and reduce your speed. Do not operate the Truck with weak or faulty brakes.
- Obey all traffic laws and regulations. Never exceed the posted speed limit. Never exceed warning speed limits for curves and down hill operation.
- The Truck and Mower have a high center of gravity. Use extreme caution when transporting at highway speeds. Slow down for sharp corners and rough or uneven surfaces to avoid tipping or turning the Truck over.
- Only transport the Truck at the speeds determined as safe and which allow for proper control of the machine while driving and stopping during an emergency.
- When operating in traffic, use the Truck's directional indicator or signal lights to indicate your movement. Always use the Truck's flashing signal lights and other equipped warning features to alert motorist of your presence and slow moving speed while mowing. Be aware of traffic around you and watch out for the other guy. (STM-44)

## **DANGER**

Use extreme caution when operating the Truck and Mower near traffic. To alert motorist of the Mower's presence, the Truck is equipped with warning signals and flashing lights. Optional electrical lights, flashers and a warning bar light, strobe, or beacon may be positioned on top of the cab. Use all equipped warning signals to alert motorist and pedestrians of the Truck's presence and relatively slow speed. Serious injury or death and property damage may occur if a vehicle collides with the Truck. (STM-45)

## **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)



## **WARNING**

DO NOT weld or repair rotating mower components. Welds and other repairs may cause severe vibration and/or component failure resulting in part being thrown from the mower causing serious bodily injury. See your Authorized Dealer for proper repairs. (SGM-13)

## **WARNING**

The Joystick Master Control Switch must be OFF to prevent accidental movement of the boom and cutting head whenever the mower is not being operated. (SBM-16)

# SAFETY

**WARNING**

In the event of mower head or boom control failure, stop mowing and shut down the auxiliary engine. DO NOT resume mowing again until control functions are properly repaired. Only transport the truck with the mower boom and head properly stored on the bed in the transport position. DO NOT drive on public roads with boom or head extended from the truck. (STM-46)

**WARNING**

If the Auxiliary Engine controls stop functioning, immediately stop mowing and shut down the mower and auxiliary engine. If the engine cannot be shutdown by turning the ignition key to OFF, disconnect the negetative battery cable to kill the engine. DO NOT transport the truck with the auxiliary engine running. (STM-47)

**CAUTION**

Check truck tire pressure daily. Maintain tire pressure at tire manufacturer's specifications. Improper tire inflation can result in loss of steering control and premature tire failure. (STM-48)

**CAUTION**

Remove the negative battery cable from the battery before performing any electrical maintenance or repair to the truck, auxiliary engine or mower. An inadvertent electrical short or spark could cause bodily injury, electric component damage and/or ignite a fire. (STM-49)

**WARNING**

Secure the mower boom and head in the transport position as outlined below before traveling on public roads or traveling faster than 15 M.P.H.

- Turn Mower Control Switch OFF and wait until all rotation has come to a complete stop.
- Place mower on truck bed stowed in transport bracket.
- Turn Joystick Master Switch OFF.
- Turn Travel Lock Switch ON.
- Only drive truck on public roads from left side driver's position.

Failure to follow these steps could result in bodily injury or property damage. (STM-50)

**DANGER**

Maintain Truck stability when extending the boom and mower head to prevent tip-over which could cause serious injury or even death.

- DO NOT extend boom if Truck is on a side slope greater than 10% (5 degree slope).
- DO NOT drive the truck off the road shoulder or into loose or wet soils.
- When the mower boom is extended, avoid driving the truck into potholes or depressions that could cause the Truck to tip violently. (STM-51)

In addition to the design and configuration of this Truck and 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 Truck and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Truck and Equipment. (STM-52)

# SAFETY

## **PARTS INFORMATION**

### PARTS INFORMATION

Tiger mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to Tiger specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce mower performance, void mower warranties, and present a safety hazard. Use genuine Tiger mower parts for economy and safety. (SPTM-1)

**SEE YOUR TIGER DEALER**

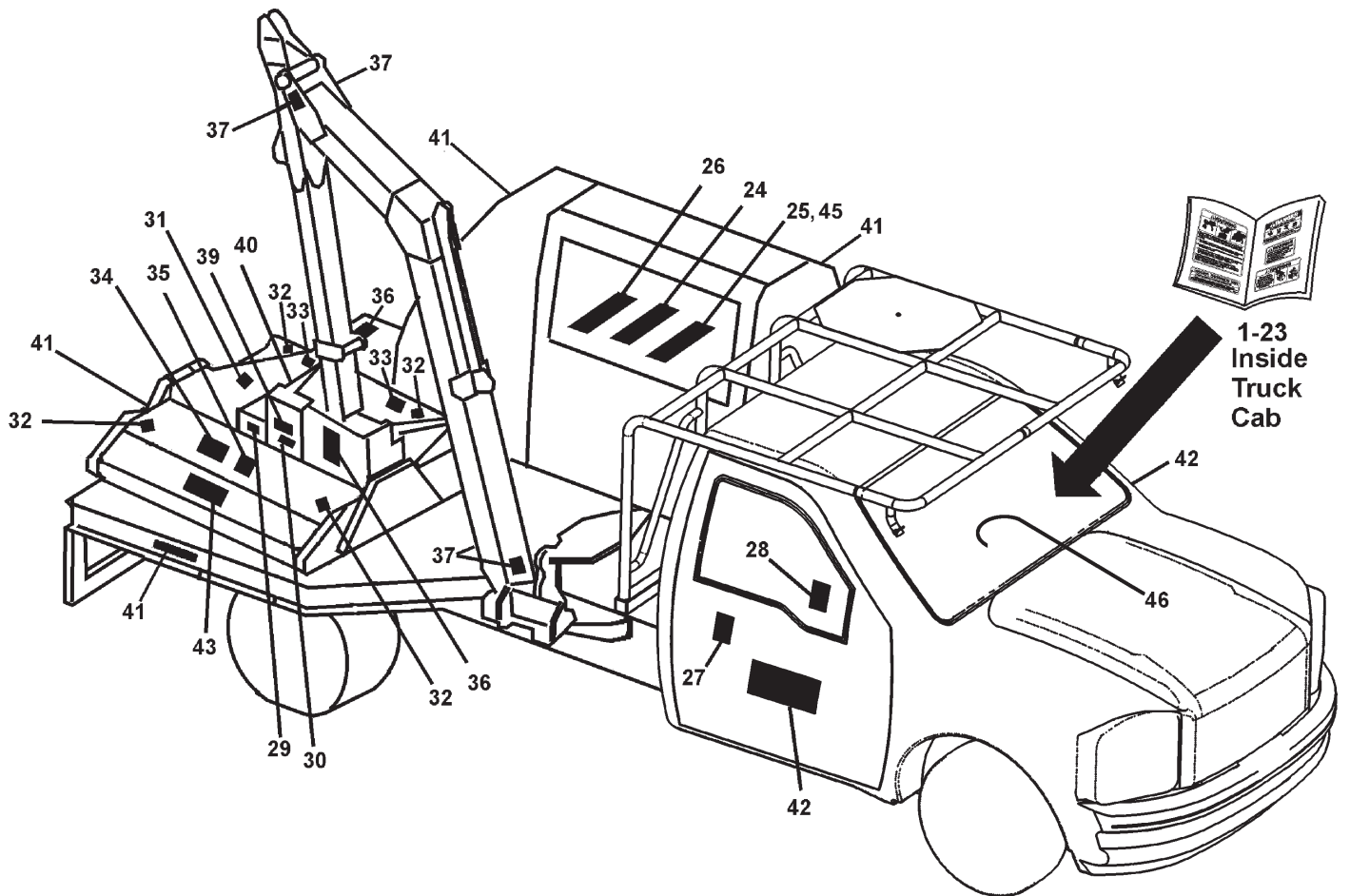
Operator's & Parts Manuals



[www.algqr.com/tpm](http://www.algqr.com/tpm)

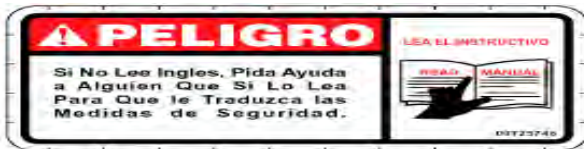
**SAFETY**

# G5: 9HM



#9A	EHM	D5 F H B C "	8 9 G 7 F -D H C B	@7 5 H C B
1-23,47	1	34745	TrucKat <sup>®</sup> Safety Information Folder	Inside Truck Cab
24	1	02966307	Use Universal Hyd. Oil	Hydraulic Tank
25	2	6T3233	Do Not Oper. w/Valve Closed	Hydraulic Tank-Both Sides
26	1	02971123	Pressurized Tank	Hydraulic Tank
27	1	22645	Polycarbonate Window	Truck Door Safety Shield
28	1	33302	Joystick Operation	Truck Window
29	1	6T3221	Lubricate Spindle	Mower Deck-Rotary
30	1	22839	Do Not Use Auto. Grease Gun	Mower Deck-Rotary Rear
31	1	42350	Blade Rotation Direction	Mower Deck-Rotary Rear
32	4	6T3217	Keep Hand and Feet Clear	Mower Deck-Rotary Front, Rear
33	2	6T3224	Discharge Opening	Mower Deck-Rotary Front
34	1	33224	Safety Shield Operation	Mower Deck-Rotary Front
35	1	TB1011	Do Not Remove Shield	Mower Deck-Rotary Front
36	2	00769737	Keep Away-Rotating Blades	Mower Deck-Rotary Front, Rear
37	6	02962764	Pinch Points	All Boom Sections
38	1	03200285	Watch Your Step	Truck Bed Rear
39	1	42400	Reflector-Amber	Mower Deck Rear
40	1	42399	Reflector-Red	Mower Deck Front
41	3	35200	TrucKat <sup>®</sup> Logo-Paw 13.5" x 3"	Truck Bed Both Sides Rear
42	2	35201	TrucKat <sup>®</sup> Logo-Tiger	Truck Door Both Sides
43	2	31522	Tiger Mowers	Mower Deck Front, Rear
45	1	34852	Lubrication specification decal	Hydraulic Tank
46	1	06550025	Decal, Height, Trans, TrucKat	Inside Cab on Dash Right Side
47	3	06550034	Decal, Danger Crush, TrucKat	Both Sides & Rear of Truck Bed

# G5 : 9HM



! G5 : 9HM-B: CFA5H-CB: C @ 9F

## ! WARNING

### TRANSPORT CLEARANCE HAZARD

- Ensure overhead obstructions are a **minimum height of 13'6"** for boom clearance during transport.
- Colliding with an overhead obstruction may cause serious bodily injury and property damage.

1292

! G5 : 9HM-B: CFA5H-CB: C @ 9F

## ! DANGER

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

	<p>2. No riders. No children operators.</p>	<p>3. Use safety shoes, hard hat, safety glasses, and seat belts.</p>	<p>4. Block up securely before working under.</p>
--	---	---	---

- Study and understand Operator's Manuals, Safety Decals, and Instructional Decals for Truck, Auxiliary Engine and Mower to prevent misuse, abuse, and accidents. Practice using mower and boom controls before operating in a confined area or near passersby.
  - Learn how to stop truck and aux. engines suddenly in an emergency. Be alert for passersby and especially children.
- Allow no children on or near mower or truck. Allow no riders on truck. Falling off may cause serious injury or death from being run over by truck or contact with rotating blades.
- Operate only with truck seat belt securely fastened to prevent injury and possible death from falling off or overturn.
  - Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, & Ear Plugs are recommended.
- 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.
- Before transporting, place mower in truck bed transport bracket and engage Transport Lock. Only transport truck on public roadways from left seat.
  - Folding and Boom Mowers have raised center of gravity. Slow down when turning and on hillsides.
- Make certain that truck lights, warning lights, and reflectors are clearly visible. Follow local traffic codes.
- Never operate with Cutting Head or Folding Section raised if passersby, bystanders, or traffic are within 300' to reduce possibility of injury or death from objects thrown by Blades under Guards or mower structure.
- Before dismounting, secure implement in transport position or lower to ground.
  - Put truck in park and set parking brake, shut down mower and auxiliary engine, stop truck 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.

	<p>6. Use lights, &amp; reflectors.</p>	<p>7. Do not operate if persons are within 300'.</p>	<p>8. Do not mount or dismount while moving.</p>
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1276

! G5 : 9HM-B: CFA5H-CB: C @ 9F

## ! DANGER

<p>Each rear wheel must have a minimum of 1500 pounds contact with the surface to prevent lateral instability and possible tip-over with bodily injury. See manual or call customer service for counterweight procedure.</p>	
<p>Transport carefully! Slow down even more on slopes and when turning; Never turn up a slope sharply or at highspeed; 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.</p>	
<p>Never operate unit without right side protective window to prevent injury from objects thrown from ground and overhead trimming. Stop cutting if anyone is within 100 yards.</p>	
<p>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.</p>	
<p>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.</p>	

1294

! G5 : 9HM-B: CFA5H-CB: C @ 9F

### MOWING SAFETY TIPS

- ☞ Read & understand the Operators Manual.
- ☞ Wear Your Seat Belt.
- ☞ Keep all shields and guards in place.
- ☞ Make sure equipment is in proper working condition.
- ☞ Never attempt to get off or on a moving tractor.
- ☞ Never allow riders on tractor or equipment.
- ☞ Only start the tractor from the seat with the key.
- ☞ Always inspect the area before mowing. Remove all foreign debris.
- ☞ Always keep bystanders and coworkers a minimum of 300 feet away.
- ☞ Never allow the mower blades to contact solid objects or foreign material.
- ☞ Never approach rotating elements.
- ☞ Disengage the PTO, place transmission in "Park", set parking brake, shut off engine, and remove key and wait until all rotating motion has stopped before leaving seat.

**Tiger**

33743

) ! G5 : 9HM-B: CFA5H-CB: C @ 9F

# G5 : 9HM

**CAUTION**

**PROCEDURE FOR TRANSPORT POSITION**

1. Turn Mower Control Switch OFF and wait until all rotation has come to a complete stop
2. Place Mower on Truck Bed retained in transport Bracket.
3. Turn Joystick Master Switch OFF.
4. Turn Travel Lock Switch ON.

Failure to follow these steps could result in bodily injury or property damage.

1295

\* !'G5 : 9HM-B: CFA5H-CB': C @ 9F

**WARNING**



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

%\$!'G5 : 9HM-B: CFA5H-CB': C @ 9F

**DANGER**

<b>THROWN OBJECTS</b> 	<b>CUTTING BLADES</b> 
--	--

DO NOT EXIT CAB UNTIL MOWER HAS BEEN SHUT DOWN AND BLADES HAVE COME TO A COMPLETE STOP.  
Being Hit by Thrown Objects or Contacting Rotating Blades can cause Serious Injury or DEATH.

1298

+!'G5 : 9HM-B: CFA5H-CB': C @ 9F

**DANGER**

<b>THROWN OBJECTS</b> 	<b>CUTTING BLADES</b> 
--	--

**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.

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%!'G5 : 9HM-B: CFA5H-CB': C @ 9F

**WARNING**

- 1) Only drive the Truck from the left drivers seat when transporting on public roads. (Above 15 MPH)
- 2) Make sure Mower Head is secured on bed in transport bracket with hydraulic transport lock ON before transporting on public roads.



1296

,!'G5 : 9HM-B: CFA5H-CB': C @ 9F

**DANGER**



**STAY CLEAR, DISCHARGE OPENING**

6T3224

%&'G5 : 9HM-B: CFA5H-CB': C @ 9F

**DANGER**



OBJECTS MAY BE THROWN BY THE BLADES AT HIGH SPEED FOR UP TO 300 FEET WITH GREAT FORCE AND MAY CAUSE SERIOUS INJURY OR DEATH. WATCH OUT FOR PASSERSBY.

BLADES ARE EXPOSED AND MAY CAUSE SERIOUS BODILY INJURY OR DAMAGE TO ANY ITEM HIT.

**DANGER:** There is only PARTIAL PROTECTION FROM THROWN OBJECTS under the SWINGING BLADE GUARD.

**DANGER:** When Cutter Head is RAISED OFF GROUND or TILTED, Thrown-Object Protection is greatly reduced in all directions.

Due to the UNAVOIDABLE HAZARD OF THROWN OBJECTS FROM BOOM CUTTERS, Operators and their Supervisors MUST BE RESPONSIBLE for avoiding these KNOWN POTENTIAL HAZARDS.

1. Never Operate Cutter with PERSONS IN THE DEBRIS DISCHARGE AREA to prevent possible SERIOUS BODILY INJURY OR DEATH from being hit by THROWN OBJECTS. STOP MOWING IF PASSERSBY COME WITHIN 300FT. WATCH OUT FOR CREW MEMBERS. KEEP CHILDREN AWAY!
2. The Operator and Supervisor Must Use SPECIAL CARE WHEN MOWING ADJACENT TO ROADWAYS AND WALKWAYS. Always mow with the MOWER AHEAD OF THE OPERATOR to throw Debris away from Roadways and Walkways and into the OPERATOR'S LINE OF SIGHT.

1297

-!'G5 : 9HM-B: CFA5H-CB': C @ 9F

%!'G5 : 9HM-B: CFA5H-CB': C @ 9F



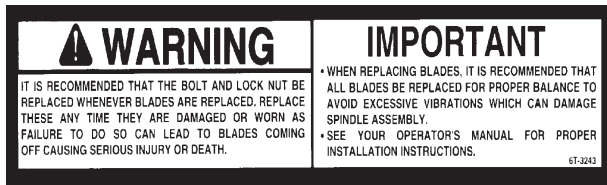
# G5 : 9HM



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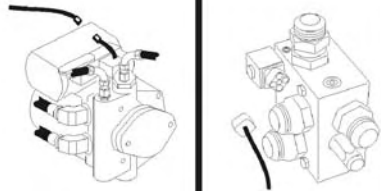


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&% !'G5 : 9HM-B: CFA5H-CB': C @ 9F

**⚠ WARNING**

Disconnect the hydraulic solenoid before performing service work on truck or mower to prevent inadvertent mower head start up.



1293

&&!G5 : 9HM-B: CFA5HCB: C@9F

**POLYCARBONATE WINDOW**

**REFER TO OPERATORS MANUAL FOR CLEANING INSTRUCTIONS**

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**⚠ 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

& !G5 : 9HM-B: CFA5HCB: C@9F

**ATTENTION**

**SERVICE HYDRAULIC SYSTEM WITH UNIVERSAL TRACTOR HYDRAULIC OIL.**

32708

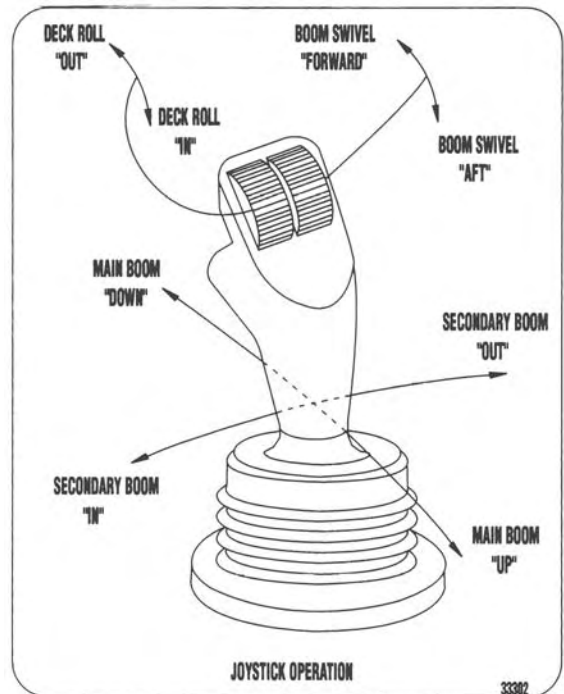
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**⚠ CAUTION**

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

6T-3233

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**⚠ 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.

6T3221

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

P/N22839

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**DANGER**  
TO AVERT THROWN OBJECTS, CUTTER SHAFT MUST TURN IN THIS DIRECTION

42350

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**WARNING**  
DO NOT OPERATE MOWER WITH SAFETY SHIELD REMOVED.

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**DANGER**  
KEEP HANDS AND FEET CLEAR

6T3217

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**DANGER**  
THROWN OBJECTS CUTTING BLADES  
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.

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**DANGER**  
STAY CLEAR, DISCHARGE OPENING

6T3224

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**WARNING**  
PINCH POINTS

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# G5 : 9HM



## Tiger Corporation

800-843-6849

www.tiger-mowers.com

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

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

Tiger PN 34852


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**Auxilliary Engine fuel source will be depleted at approximately 1/4 tank. This ensures enough fuel to return home.**

( \* ! '\$ \* ) \$\$\$-

# SAFETY

SAFETY

<b>⚠ WARNING</b>	
<b>PRESSURIZED TANK OIL FILLER CAP IS PRESSURE RELIEF CAP</b>	 02971123
<b>TO AVOID SERIOUS INJURY AND DEATH FROM HOT OIL:</b> <ul style="list-style-type: none"><li>● STAY AWAY from hot oil that may spray out of tank.</li><li>● ALLOW oil to cool down BEFORE removing cap .</li><li>● SLOWLY remove cap to relieve pressure BEFORE removing completely.</li></ul>	

<b>⚠ WARNING</b>	
 12'8" Max	 13'6" Max
<b>CLEARANCE HAZARD</b> <b>Do Not Exceed 13'-6" Maximum</b> <b>To avoid serious injury or overhead structural damage:</b> <ul style="list-style-type: none"><li>● Place mower in transport position and measure from the ground to the highest point of the machine.</li></ul> 06550025	

# SAFETY

## Federal Laws and Regulations

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

### Employer-Employee Operator Regulations

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

#### This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

#### DUTIES

Sec. 5 (a) Each employer-

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

### OSHA Training Requirements

**Title 29, Code of Federal Regulations Part 1928.57(a)(6). [www.osha.gov](http://www.osha.gov)**

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

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

Permit no riders on equipment

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

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

### Employer Responsibilities:

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

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

### Child Labor Under 16 Years of Age

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

**G5 : 9HM**



# TRUCKAT 2017 T4F

## ASSEMBLY SECTION

# ASSEMBLY

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

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

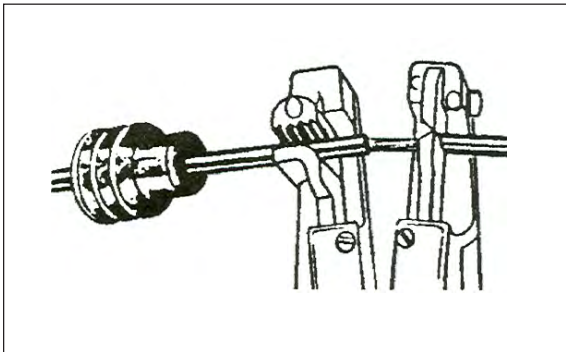
Always use a floor jack, hoist or fork lift to lift and raise heavy parts.

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

## WEATHER-PACK/METRI-PACK ASSEMBLY

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

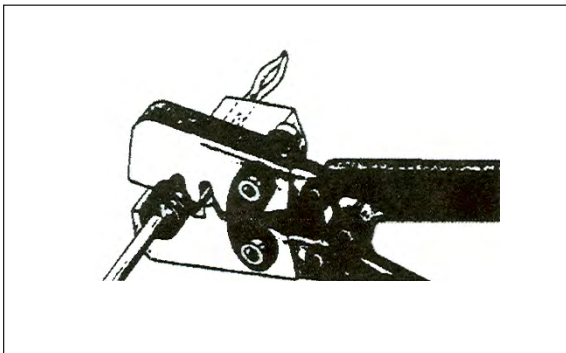
**NOTE: Use the specific tool for the type of connector you are assembling.**



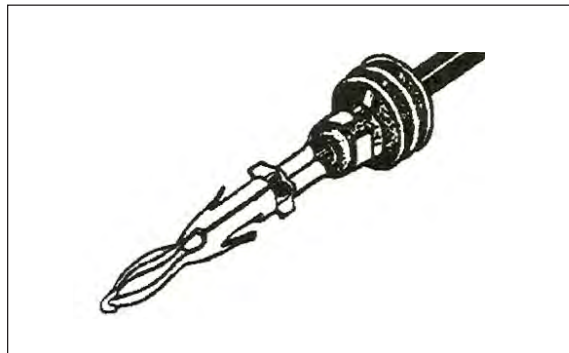
1. Apply seal to cable, before stripping insulation.



2. Align seal with cable insulation.



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

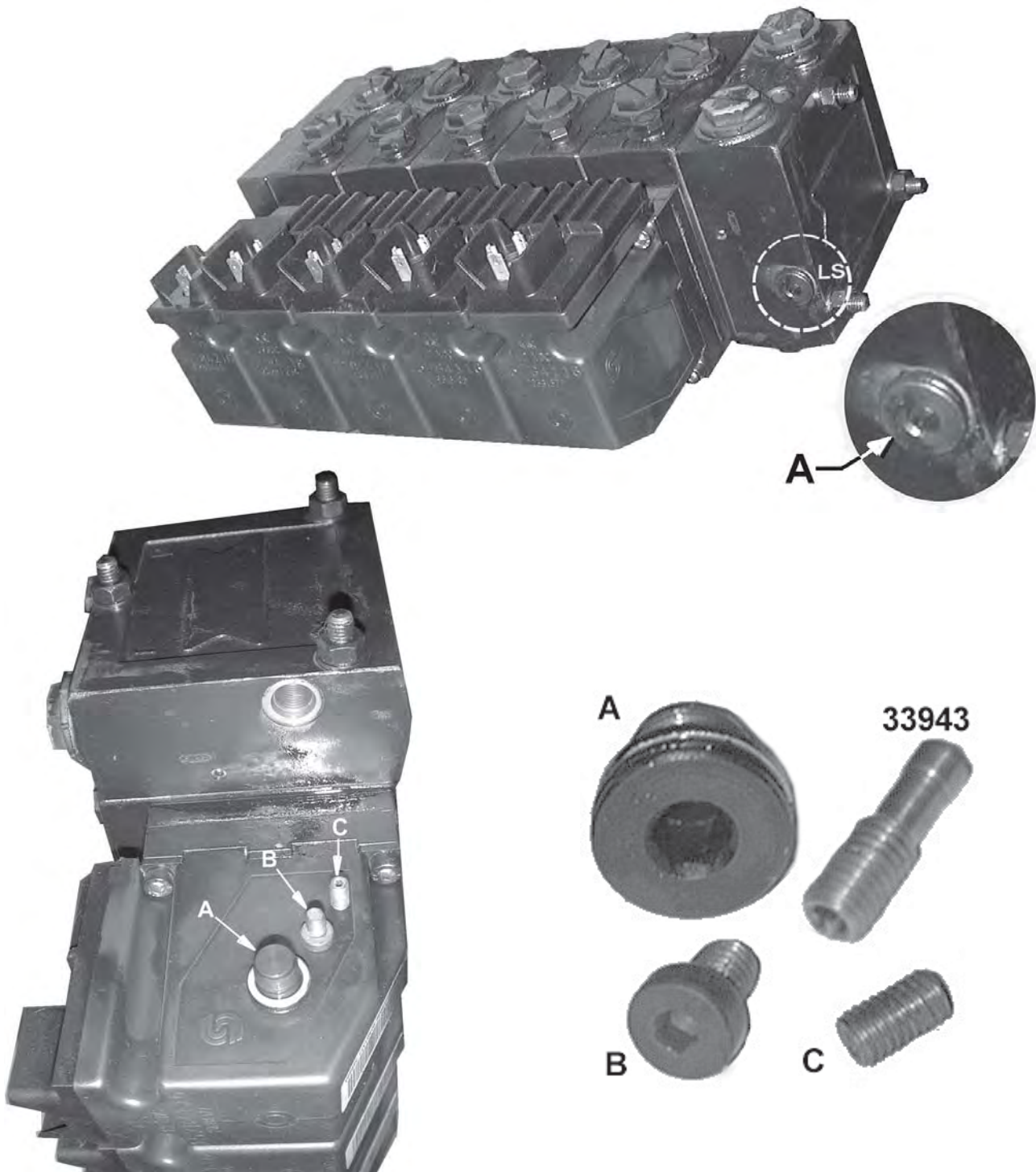


4. Crimp and visually inspect for a good crimp before installing in connector body.

# ASSEMBLY

## DANFOSS VALVE CONVERSION

Before installing the Danfoss valve, it must first be converted to an "open center" valve. The illustration below shows the location where this is done. The inlet/outlet section is labeled in three locations, the part to be converted is located closest to the "LS" or Load Sense area. Remove A, B and then C. Insert new plug (Tiger #33943) and then reinstall A.



# ASSEMBLY

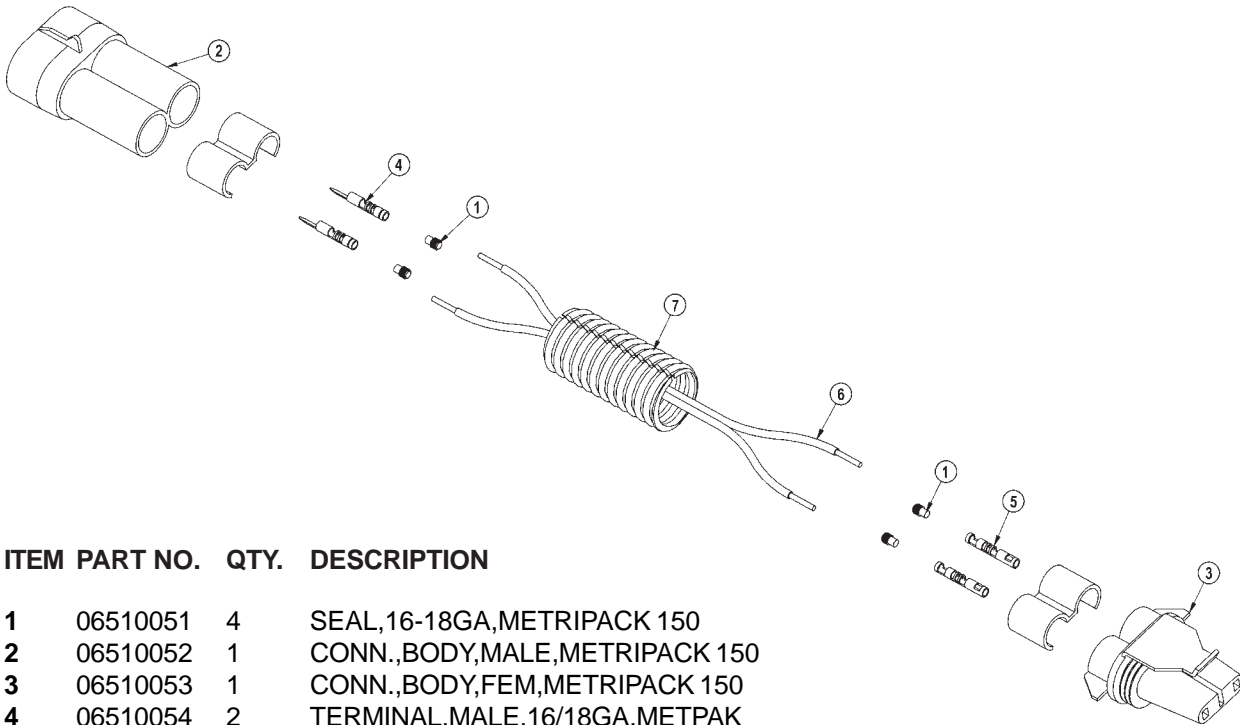
## WEIGHT MOUNTING

For all mowers using a boom, counter weight will be required for the left rear side of the bed. It will be necessary to mount all the plate weights in the left rear side truck bed frame per diagram in the parts section. Installation is most easily done with a small fork lift.

## FACTORY SETTINGS

All TruckKat® Mowers are factory assembled and adjusted for maximum performance. Any more adjustment is not required. If further joystick setting adjustment is desired, carefully follow the instructions stated on the following pages.

## METRI-PACK ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	06510051	4	SEAL,16-18GA,METRIPACK 150
2	06510052	1	CONN.,BODY,MALE,METRIPACK 150
3	06510053	1	CONN.,BODY,FEM,METRIPACK 150
4	06510054	2	TERMINAL,MALE,16/18GA.METPAK
5	06510055	2	TERMINAL,FEM,16/18GA.METPAK
6	06510065	15	WIRE,16GA,2LINE,WHITE/BLK
7	PT3905E	15	WIRE WRAP,1/2
8	06510056	2	TPA,METRIPACK 150

# ASSEMBLY

**Table 1: METRI-PACK CONNECTOR ASSY**

ITEM	PART NO.	QTY	DESCRIPTION
1	06510051	4	SEAL, 16-18GA
2	06510052	1	CONNECTOR, BODY, MALE
3	06510053	1	CONNECTOR, BODY, FEMALE
4	06540054	2	TERMINAL, MALE
5	06510055	2	TERMINAL, FEMALE
6	06510065	--	WIRE, 16GA, 2LINE
7	PT3905E	--	WIRE WRAP, 1/2"
8	06510056	2	TPA, METRI-PACK 150

## MAIN BOOM INSTALLATION

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

Attach the inner end of the main boom to the swivel bracket with the cylinder anchors positioned upward, and at a right angle to the tractor. Secure it with the horizontal hinge pin. Secure the hinge pin in the boss with capscrews, etc. (see Parts Section).

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

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

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

## GREASE HINGE PIN ZERKS ON BOOM AFTER ASSEMBLY, ONCE UNDER LOAD WITH BOOM ELEVATED AND AGAIN AT REST WITH BOOM SUPPORTED *(ASM-TRK-0012)*

## FILLING HYDRAULIC RESERVOIR

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

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

*(ASM-C-0004hydro resrv)*

# ASSEMBLY



The right and left hand Tiger wire harnesses will draw power from the same wires used to power the tail lights. Remove the tail lights from the Ford truck chassis and set aside. These will be installed into the Tiger flatbed frame later.

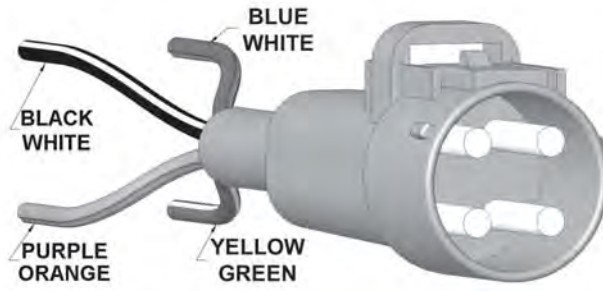
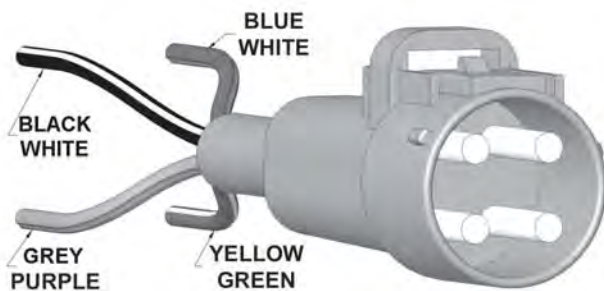
Identify the right and left taillight connectors and mark them as "RH" and "LH." Make sure there is at least 6" of wire remaining, and cut the wires to the grey connectors. Set aside. These will be used on the Tiger wire harnesses as described below.

You will need to install a Weatherpak connector on the remaining wire ends protruding from the Ford truck chassis. These will connect to the Tiger wire harnesses 06512002 and 06512003. Using the table below, match the weatherpak pins with the Ford wire colors.

FORD WIRES LEFT HAND	WEATHERPAK TOWER CONN.	FORD WIRES RIGHT HAND	WEATHERPAK TOWER CONN.
LT BLUE / BROWN	PIN A - MARKER LIGHTS	LT BLUE/ BROWN	PIN A - MARKER LIGHTS
DK BLUE/ BROWN	PIN B - GROUND	DK BLUE/ BROWN	PIN B - GROUND
GREEN/ BROWN	PIN C- REVERSE/BACKUP ALARM	GREEN/ BROWN	PIN C- REVERSE / BACKUP ALARM
GREY/ BROWN	PIN D - LEFT TURN / BRAKE	GREEN/ PURPLE	PIN D - RIGHT TURN / BRAKE

Using the table below, attach the Ford left grey connector to harness 06512002 and the Ford right grey connector to harness 06512003 using the (4) bare wires on the harnesses and grey connectors.

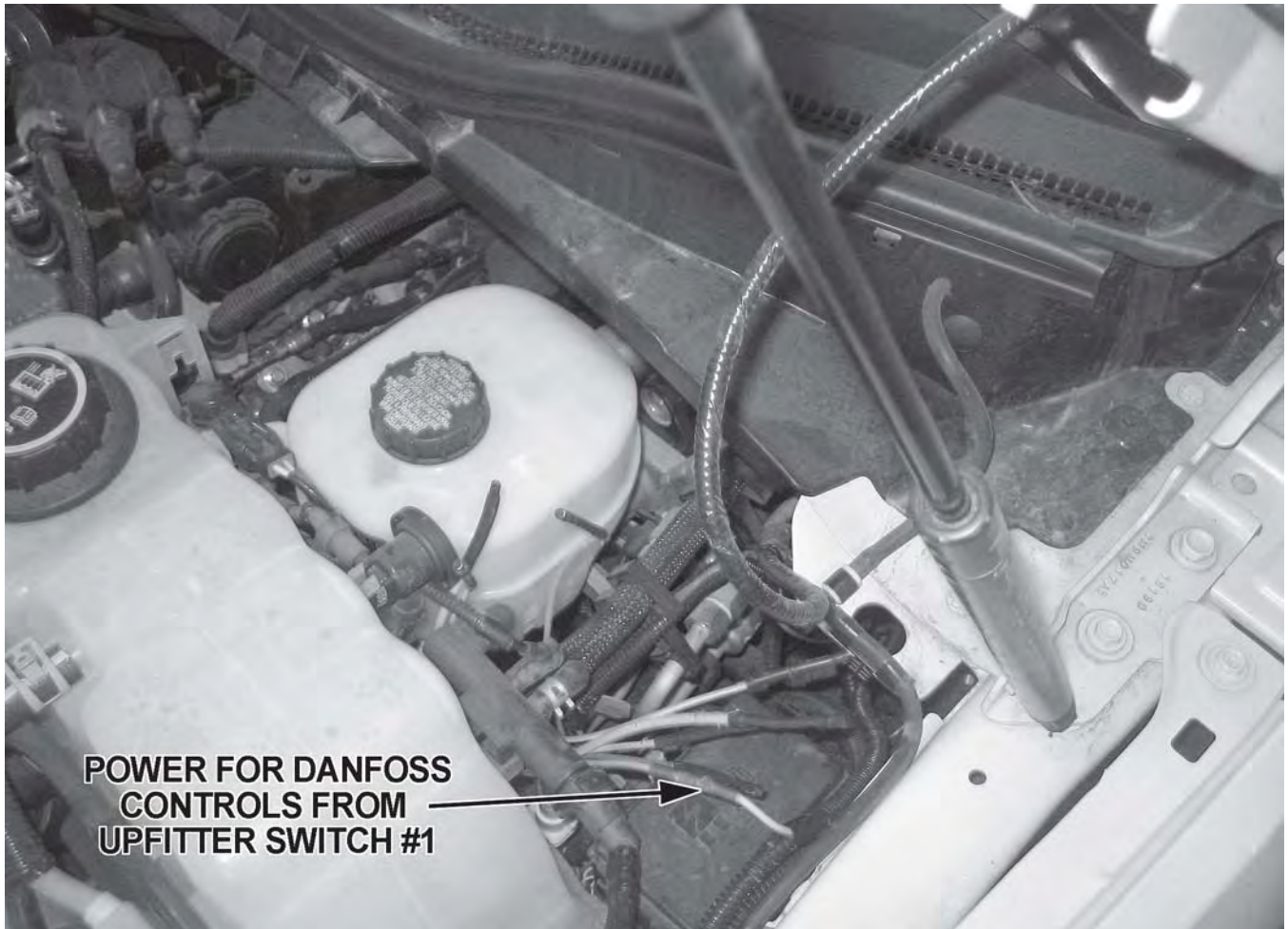
FORD CONN. LEFT HAND	06512002	FORD CONN. RIGHT HAND	06512003
LT BLUE/ BROWN	BROWN	LT BLUE/ BROWN	BROWN
DK BLUE/ BROWN	BLACK	DK BLUE/ BROWN	BLACK
GREEN/ BROWN	BLACK/ PURPLE	GREEN/ BROWN	BLACK/ PURPLE
GREY/ BROWN	ORANGE/ GREEN	GREEN/ PURPLE	ORANGE/ GREEN



## ASSEMBLY

# DANFOSS POWER

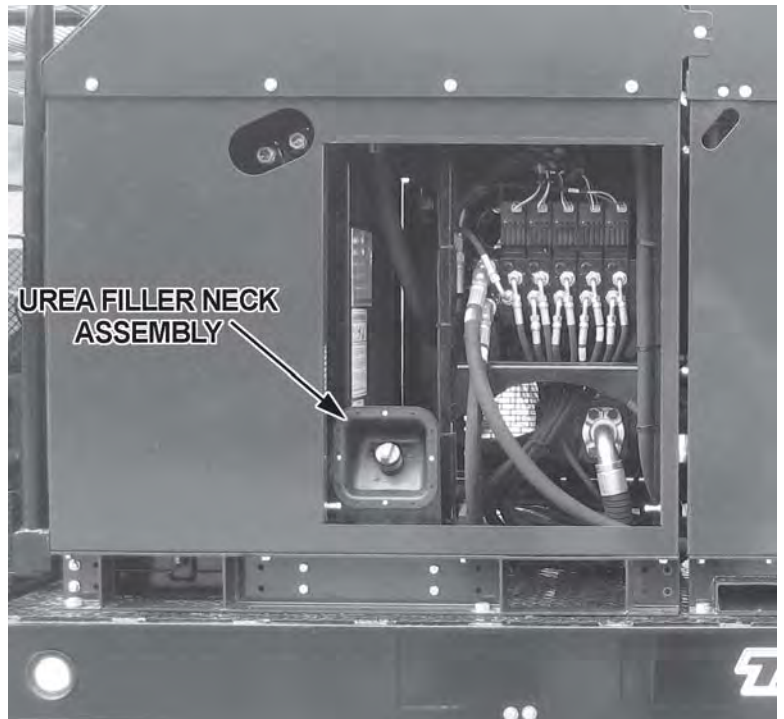
Power for the Danfoss controls connects to the truck upfitter switch #1. Look for a brown wire with a green trace. See photo below.



# ASSEMBLY

## UREA FILLER NECK ASSEMBLY

The Urea Filler Neck Mount is located on the left side of the TruckKat, and is accessed through the front left auxiliary engine panel.

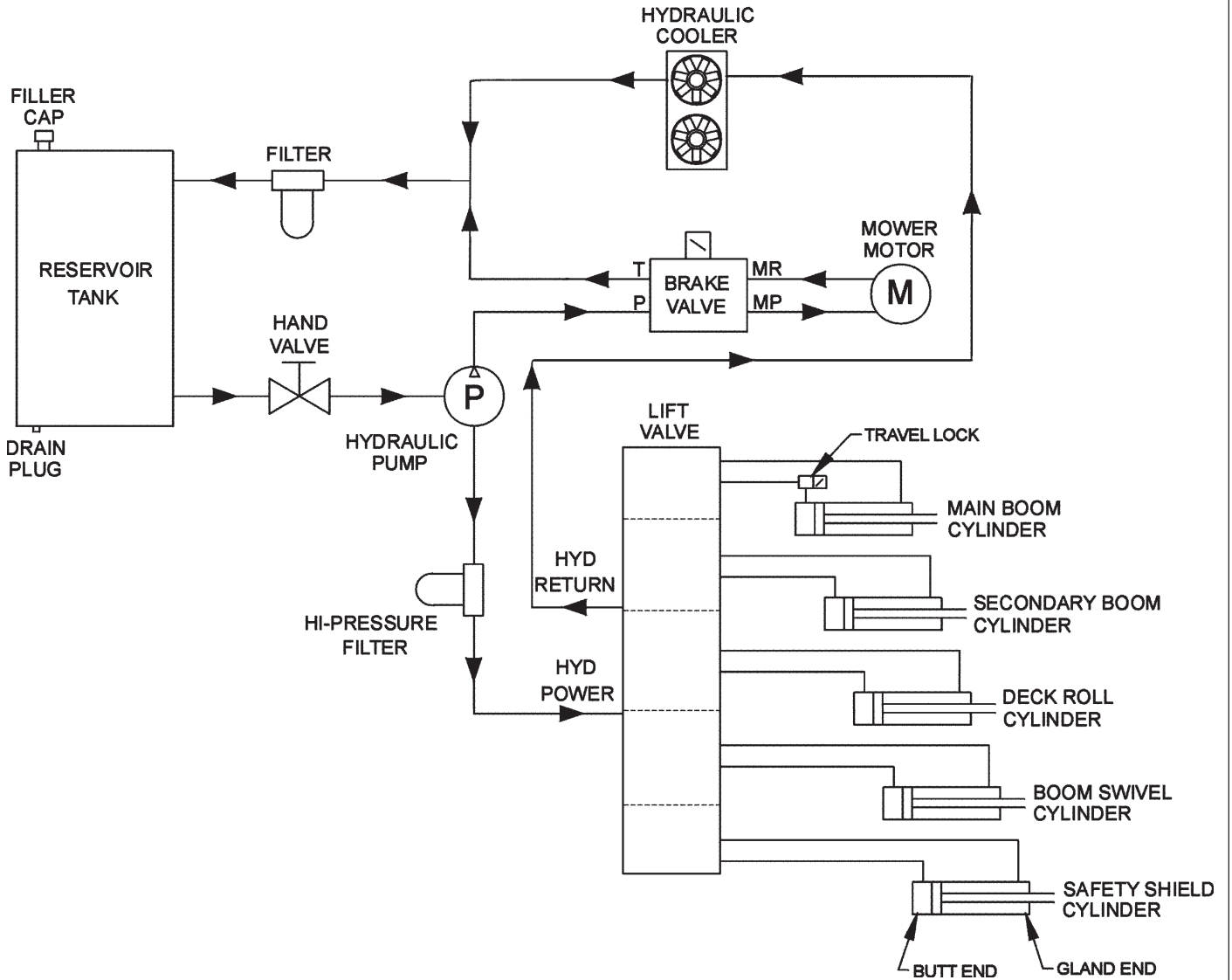




# ASSEMBLY

## TRUCKAT HYDRAULIC DIAGRAM

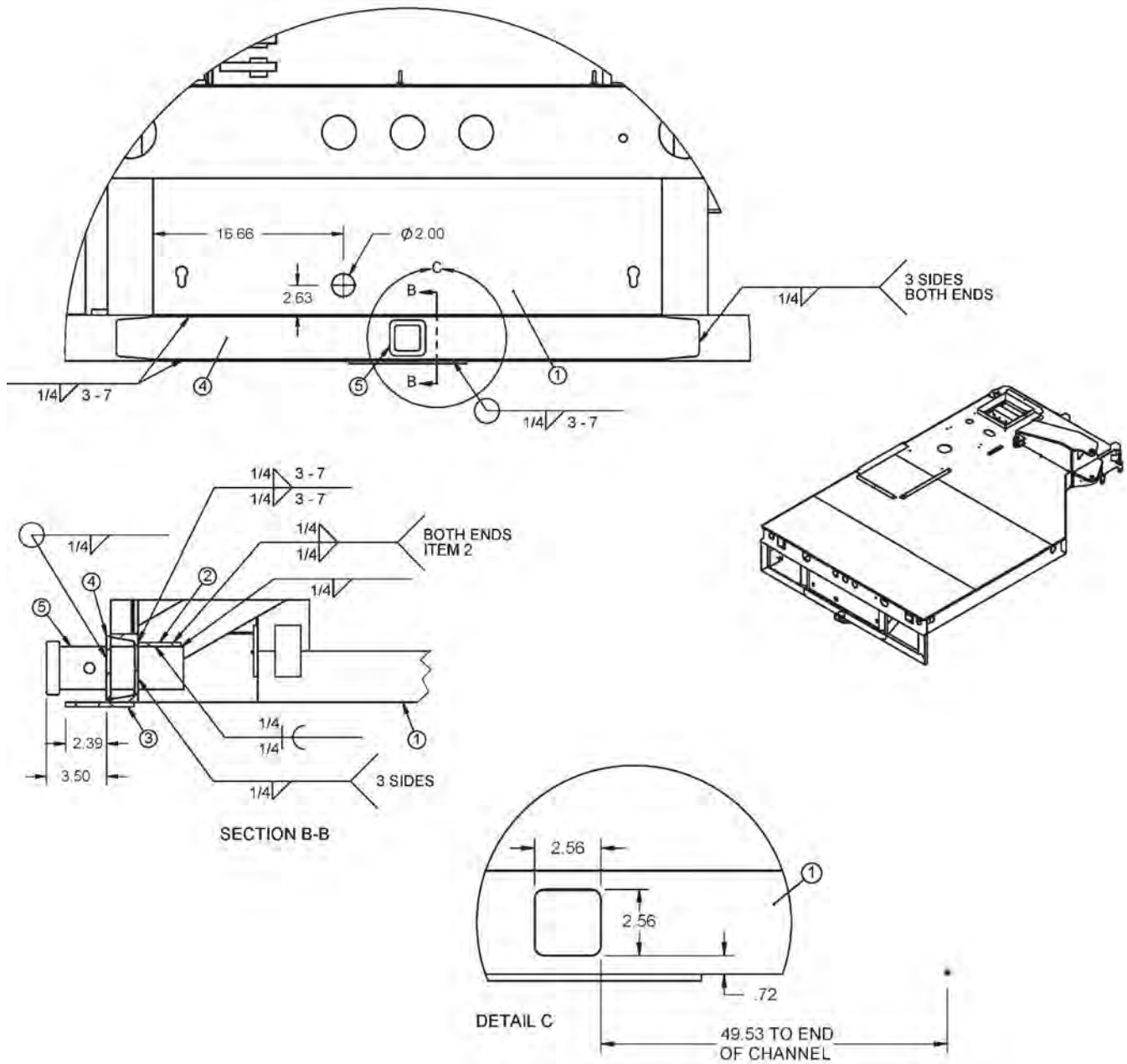
### TRUCKAT® BOOM HYDRAULIC DIAGRAM



# ASSEMBLY

## HITCH ASSEMBLY

1. Measure and make cut as shown in DETAIL C.
2. Weld Item 4 onto Item 1 then weld Item 5 to Items 1 and 4.
3. Weld Items 2 and 3 last.
4. Measure and make  $\text{Ø}2.00$  cut above the Hitch Receiver as shown below. (ASM-TRK-001)



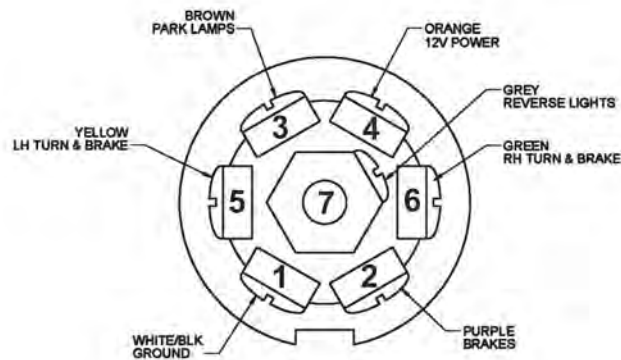
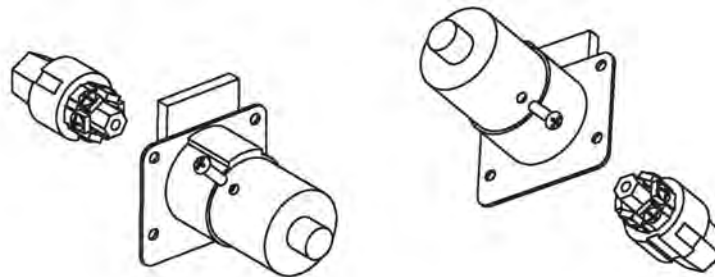
# ASSEMBLY

## REAR HITCH WIRING

1. You will need to locate the wires supplied with the truck for the rear Hitch.
2. First, cut the sealed ends off of the truck wires for the Hitch and strip them back approximately 3/8".
3. Add a Heat Shrink Butt connector to each of these wires.
4. Strip approximately 3/8" and splice the extending wire to the existing wire as shown below .
5. Crimp the Butt Connector to the splice, making sure it covers all of the exposed wire.
6. Apply heat to the Butt Connector to shrink it and cover the exposed wire.
7. Repeat steps 4 thru 6 for the rest of the wires.
8. Strip approximately 3/8" and attach the wires to the Hitch Connector following the diagram below.

### WIRE COLOR KEY

EXISTING WIRE	EXTENSION WIRE	PIN NUMBER	FUNCTION
YELLOW	YELLOW, 16GA	5	LEFT TURN & BRAKE
GREEN	GREEN, 16GA	6	RIGHT TURN & BRAKE
ORANGE	ORANGE, 16GA	4	BATTERY CHARGE
BROWN	BROWN, 16GA	3	PARK LAMPS
BLUE	PURPLE, 16GA	2	TRAILER BRAKES
GREY/BROWN	GREY, 16GA	7	REVERSE LIGHTS
BLUE/ORANGE	N/A	N/A	HIGH BRAKE LAMP
WHITE	WHITE, 14GA	1	GROUND



WIRE COLORS SHOWN ARE EXISTING TRUCK WIRES, NOT THE EXTENDING WIRES

# ASSEMBLY

## DOOR SAFETY SWITCH

The door safety switch should be installed on the right front console as shown in the photo below.

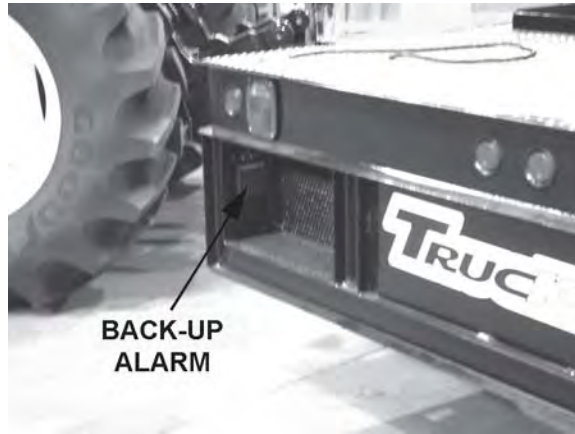


# ASSEMBLY

## BACK-UP ALARM

Locate the 2 holes on the truck chassis rear side as shown in picture below. These will be the mounting holes for the 2 mounting bolts of the alarm backup. Mount the bracket and safety switch using the hardware supplied, as noted in the Parts Section.

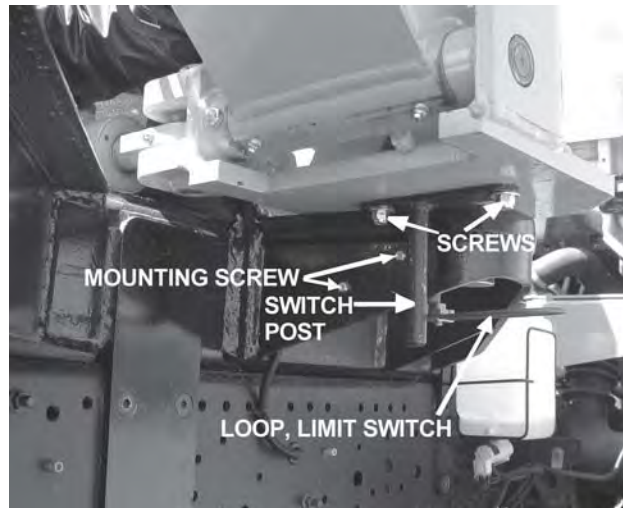
*(ASM-TRK-0015)*



## SWIVEL SAFETY SWITCH

Locate the 2 holes on the right side of truck bed and underneath of swivel shown in picture below. These will be the mounting holes for the 2 mounting bolts of the limit switch. Mount the limit switch using supplied hardware as shown in Parts Section. Mount the loop on the limit switch as shown below. Make sure that the loop is on the front side of switch post.

*(ASM-TRK-0016)*



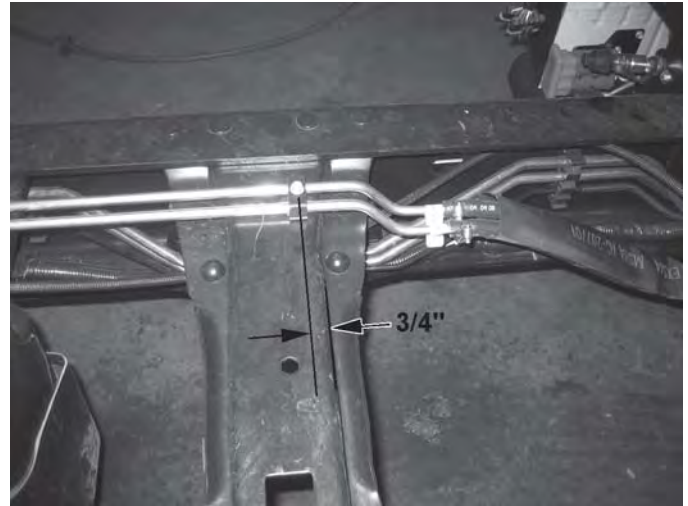
# ASSEMBLY

## PREFORMED FUEL LINE CLAMPING

1. Measure and mark 2" from the inside truck rail on both of the cross members as shown.
2. Measure and mark 3/4" from the front edge of each cross member perpendicular to the truck rails as shown below.
3. Drill a  $\text{Ø}5/32$ " hole in each cross member at the intersecting lines if desired.
4. Install the tubes and clamps using the self-tapping machine screws.



REAR FUEL LINE CLAMP



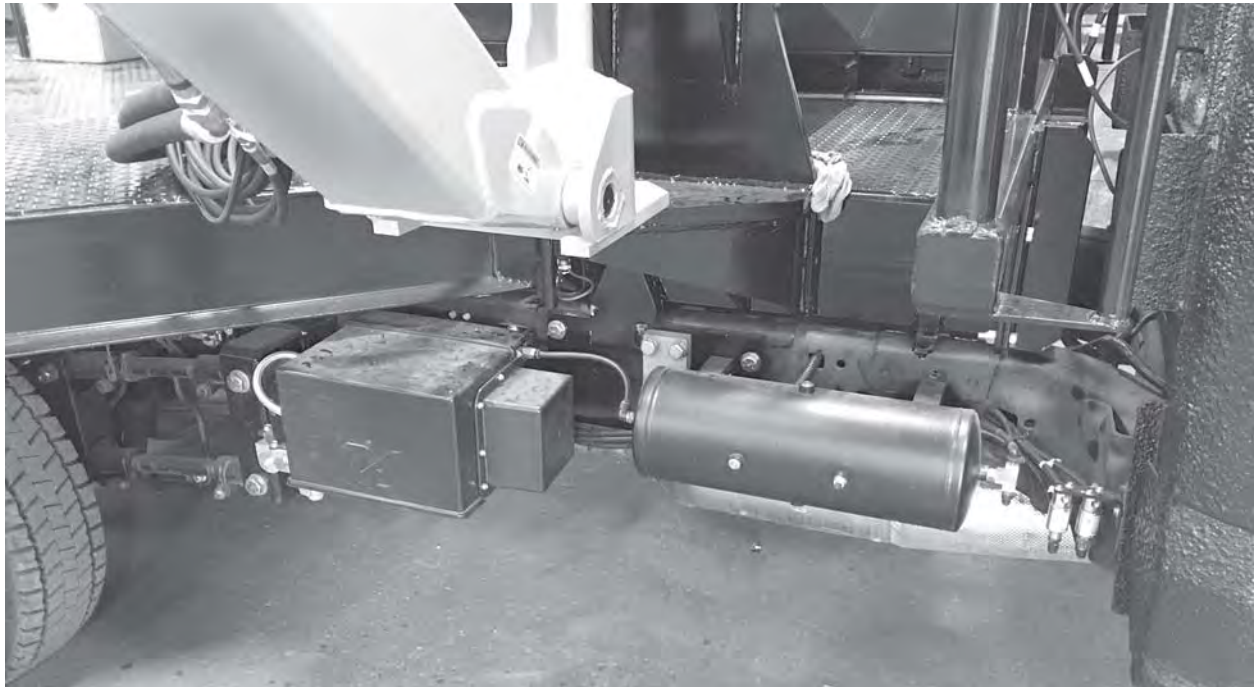
FRONT FUEL LINE CLAMP



# ASSEMBLY

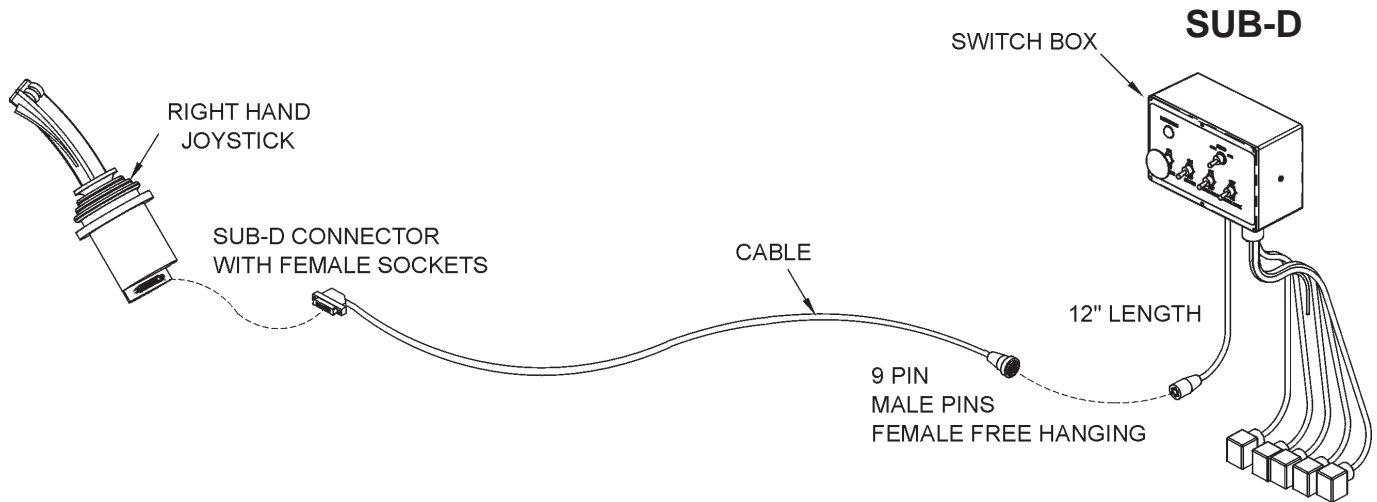
## AIR SYSTEM MOUNTING

The Kelderman Air Ride system is installed on the right side of the TruckKat, below the boom mount.



# ASSEMBLY

## BOOM JOYSTICK CONTROL CALIBRATION



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

### CAUTION!



The joystick control is equipped with signal adaption potentiometers.

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

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



# ASSEMBLY

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

## **Set the dead band compensation potentiometer first.**

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

## **Setting Signal Adaptation Potentiometers:**

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

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

# ASSEMBLY

**MAIN BOOM:** “A” Port, Boom UP: 7-9 Seconds

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

“B” Port, Boom Down: 6-8 Seconds

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

## SECONDARY

**BOOM:** “A” Port, Boom Out: 8-10 Seconds

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

“B” Port, Boom In: 8-10 Seconds

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

**DECK ROLL:** “A” Port, Deck Out: 7-9 Seconds

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

“B” Port, Deck In: Target 7-9 Seconds (but DO NOT use Limit Screw)

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

## BOOM

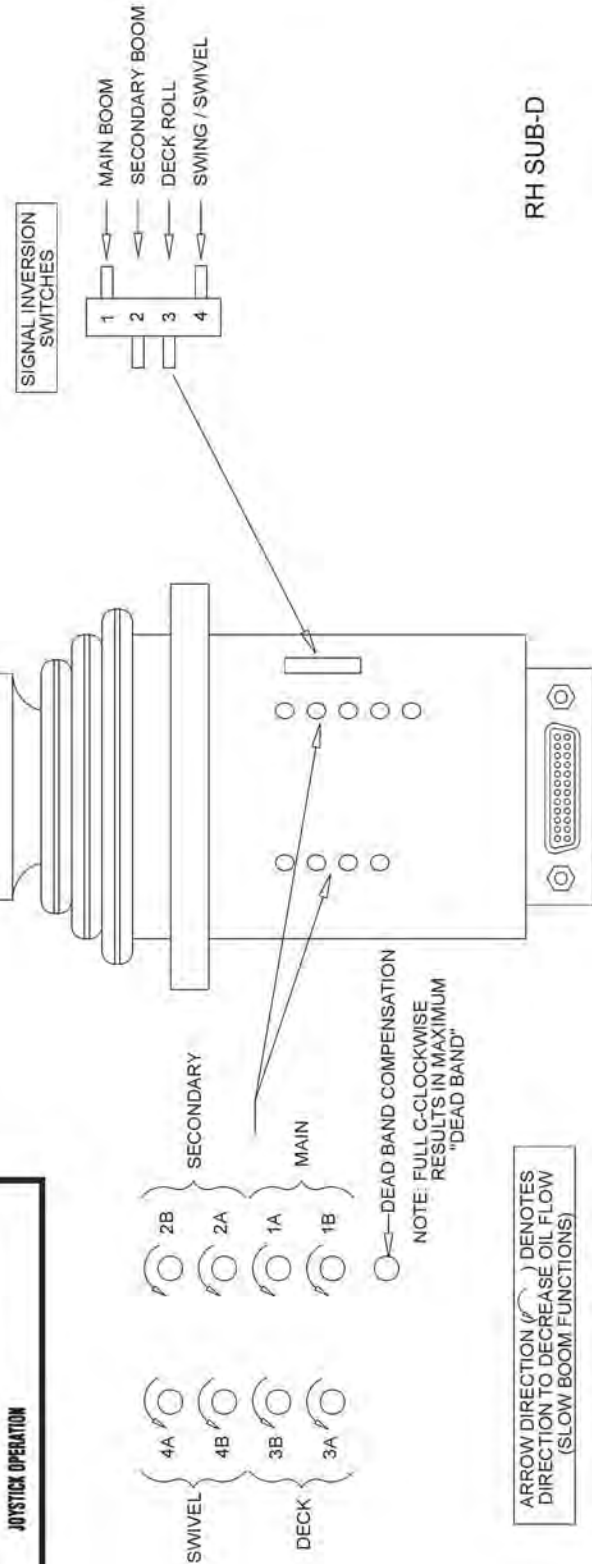
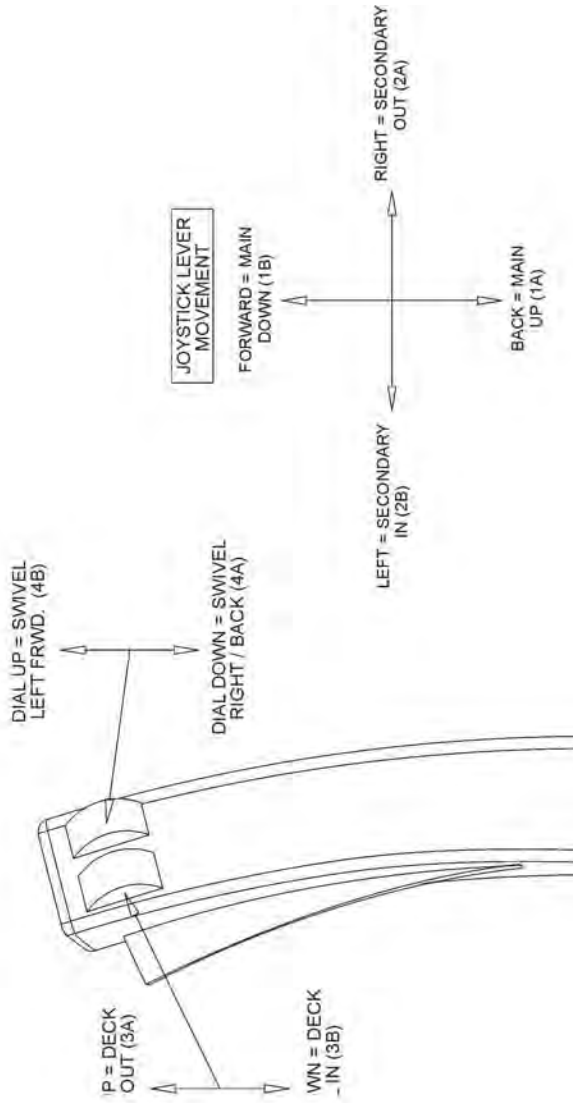
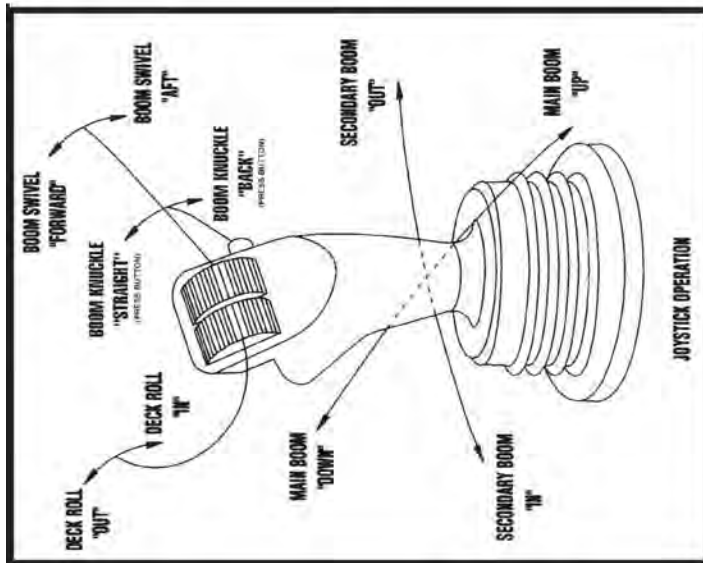
**SWIVEL:** “A” Port, Boom Aft: 11-13 Seconds

*(Extend booms completely; rotate head to be level with ground, lower main boom until deck is just above ground, and swivel boom full forward. Then index the boom swivel “aft” function and determine the time required for the boom to swivel aft. Use caution when doing this, stop boom before main boom contacts tire.)*

“B” Port, Boom Forward: 11-13 Seconds

*(Extend booms completely, rotate head to be level with ground, lower main boom until deck is just above ground, and swivel boom aft and until near tire. Then index the boom swivel “forward” function and determine the time required for the boom to swivel full forward.)*

# ASSEMBLY



RH SUB-D

# ASSEMBLY

## FINAL PREPARATION FOR OPERATION

Place operators safety information decal book and operation manual inside the truck cab where they are clearly visible to the operator. These manuals should be understood by each operator of the machine in conjunction with the safety and operation section of this book. The manuals are to be maintained in good condition as a reminder to the operator, and should be replaced if damaged.

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

### WARNING!



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

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

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

**Before operating the mower**, the cutter head and boom should be slowly moved throughout the full range of motion. Watch for any condition that would cause pinching or excess stress on the hoses. Correct any condition that occurs in which the hoses maybe damaged. While checking motion limits, you should also check that the control circuits are connected correctly according to the operators manual and the motion of the boom.

## MOWER TESTING

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

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

# TRUCKAT

## OPERATION SECTION

# OPERATION

## TRUCKAT® TRUCK MOUNTED BOOM MOWER OPERATING INSTRUCTIONS

Tiger TruckKat® Truck Mounted Boom Mowers are manufactured with quality material by skilled workers. The TruckKat® boom arm is designed to attach to and operate multiple heads for a wide range of vegetative control applications. The truck, boom arm and mowing heads are equipped with safety warning decals, protective deflectors and/or chain guards, shields, guards, and other safety features to provide operator and passerby protection. ALL safety equipment and safety warning decals must be maintained on the unit in good operational condition at all times.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the boom unit, truck or a thrown object. DO NOT operate the mower if bystanders, passersby, pets or livestock are within 300 feet of the unit.

This section of the Operator's Manual is designed to familiarize, instruct, and educate safe and proper use of the boom and attached head to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining operating instructions. Some pictures may show shields removed to enhance visual clarity. NEVER operate the boom unit without all safety equipment in place and in good operational condition. The operator must be familiar with the boom, mower and truck operation and all safety practices before beginning operation. Proper operation, as detailed in this manual, will help ensure years of safe and satisfactory use of the TruckKat® mower.

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# OPERATION

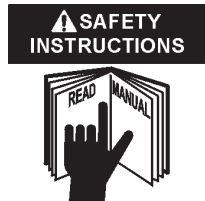
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**READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTIONS OF THIS MANUAL AND THE TRUCK AND AUXILIARY ENGINE OPERATOR'S MANUALS BEFORE ATTEMPTING TO OPERATE THE TRUCK, AUXILIARY ENGINE, BOOM UNIT AND ATTACHED HEAD.** If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the boom unit and truck.

**DANGER!**



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



**PELIGRO!**



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



# OPERATION

## 1. OPERATOR REQUIREMENTS

Safe operation of the mower is the responsibility of a qualified operator. A qualified operator has read and understands the mower, truck and auxiliary engine Operator Manuals and is experienced in truck, boom and attached head operation and all associated safety practices. In addition to the safety messages contained in this manual, safety message decals are affixed to the boom arm, mower head, and truck. If any part of the operation and safe use is not completely understood, consult an authorized dealer for a complete explanation. If the operator can not read the manuals for themselves or does not understand the information, it is the supervisor's responsibility to read and explain the manuals, operating instructions, and safety information to them.

Safe operation of this equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions while connecting, operating, servicing and repairing the boom, head, and truck. PPE is designed to provide operator protection from bodily injury and includes the following:

### Personal Protective Equipment (PPE)

- Protective eye glasses, goggles, or face shield
- Hard hat
- Steel toed safety footwear
- Gloves
- Hearing protection
- Close fitting clothing
- Respirator or filter mask



**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)





# OPERATION

## **2. TRUCK REQUIREMENTS**

The truck is equipped with safety features to provide operator protection and to warn passersby and motorists of the units presence while mowing. Maintain all safety features in good operational condition at all times. Never compromise your safety and the safety of others by operating a unit with broken, malfunctioning, or missing safety equipment.

### **2.1 Truck Operator Seating**

The truck is equipped with dual steering controls. The right side seat is for mowing only and the left side driving controls are for transporting the truck between locations. **DO NOT ATTEMPT TO TRANSPORT THE TRUCK FASTER THAN 15 MPH FROM THE RIGHT SIDE DRIVERS CONTROLS AND DO NOT ATTEMPT TO OPERATE THE MOWER WHEN SEATED AT THE LEFT SIDE.** Both seats are equipped with seat belts. The seat belt must be worn at all times the truck is driven.



### **2.2 Operator Thrown Object Protection**

The truck is equipped with a right side protective polycarbonate door panel and cab rack to shield the operator from thrown and falling objects. Replace the protective door when broken, cracked or its visibility becomes impaired because of scratches, gouges, or other damage.



# OPERATION

## 2.3 Truck Warning Lighting

The truck is equipped with a warning beacon, light bar and flashing lights to alert motorists and passersby of the truck's presence when mowing. Warning lighting must be turned on by the operator before starting to mow. The warning beacon control switch is mounted in the auxiliary engine control box. The light bar switch is located in a separate control box mounted below.



## 2.4 Truck Ballast

To provide traction when operating on flat surfaces and inclines not greater than 5°, the truck is equipped with left side counterweights. These counterweights will ensure that the left rear tire exerts down force on the ground, which is required for traction when the boom is fully extended. A truck that does not meet these criteria may lose traction when the boom is fully extended.



## 3. ENTERING AND EXITING THE OPERATOR STATION

The operator must read and completely understand this manual, the truck operator's manual and the auxiliary engine operator's manual before starting any mowing operation. If any of the operating instructions, safety warnings and safety decals are not completely understood, consult an authorized dealer for a complete explanation.

### WARNING!



**Allow passengers only in situations where their presence is involved in the Mowing operation (operator training, supervision, maintenance or inspection). Never carry passengers who's presence distracts from the safe operation or transport of the Truck and Mower. Passengers must be seated securely and belted in the cab's passenger seat. Passengers must be instructed to keep clear of steering wheel and foot pedals. Never allow any person to ride on any other location of the Truck during operation or transport. (STM-11)**

# OPERATION

## 3.1 Boarding the Truck

Use both hands and equipped handrails and steps for support when boarding the truck. Never use truck control levers for support when boarding. Seat yourself in the seat and secure the seat belt.

**DANGER!**



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**Do not attempt to mount the Truck while the Truck is moving or Mower is running. Never attempt to mount a runaway Truck. Serious injury or death may occur from being run over by a moving Truck. (STM-19)**

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## 3.2 Dismounting the Truck

Before exiting the truck, disengage the mower and wait for blade rotation to come to a complete stop. Retract the boom and stow the mower head on the truck bed and engage the transport lock. Park the truck on a level surface, set the transmission in park and apply the parking brake. Shut down the truck and auxiliary engines, remove the keys, and wait for all motion to come to a complete stop before exiting the operator's station. NEVER dismount until the truck, the engines and mower head rotation have come to a complete stop.

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

NOTE: The truck is equipped with an Operator Presence and Right Door Safety Switch. The safety switch will stop the mower if the operator is not seated in the operator's seat or if the right side door is opened while the mower is running.

**DANGER!**



---

**BEFORE leaving the Truck seat, always engage the parking brake, stop the Auxiliary and Truck engines, remove the key, and wait for all moving parts to stop. Never dismount the Truck if it is moving or while either the Auxiliary or Truck engine is running. Opening the Truck door while the mower is operating will activate the mower brake valve stopping the mower blades. (STM-23)**

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# OPERATION

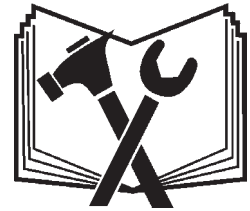
## 4. PRE-OPERATION INSPECTION AND SERVICE

Before each use, a pre-operation inspection and service of the entire truck boom mower unit must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. **DO NOT** operate the unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair costs can be avoided.

### 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 have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



### DANGER!



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

### 4.1 Truck and Auxiliary Engine Pre-Operation Inspection/Service

Refer to the truck and auxiliary engine operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to the manufacturers' recommendations. The following are some of the items that require daily service and inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- Lights and signals are clean and functional
- Seat belts are in good condition
- No oil leaks
- Radiators are free of debris
- Engine oil levels and condition
- Engine coolant levels and condition
- Power brake fluid level
- Power steering fluid level
- Fuel condition and level
- Sufficient lubrication at all lube points
- Air filter condition
- Clean mirrors and inspect for damage



# OPERATION

## 4.2 Boom Unit Pre-Operation Inspection / Service

Inspect and service the boom arm and head at the start of each day. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the unit is ready for operation, conduct the following:

- Ensure the Manual Canister is secured in the truck cab and contains the Operator's Manual.
- Ensure all decals are in place and legible. Replace missing, worn, and nonlegible decals.

**NOTE:** The Operator's Manuals and affixed Decals contain important instructions on the safe and proper use of the truck boom mower. Maintain these important safety features on the unit in good condition to ensure the information is available to the operator at all times.

### HYDRAULIC PUMP/OIL RESERVOIR INSPECTION

- Check oil reservoir level and oil condition. Hydraulic oil level should be maintained between the tank sight gauges. Add universal hydraulic oil if low.
- Change hydraulic oil filter and oil according to maintenance schedule.
- Ensure there are no oil leaks and fittings are properly connected and tightened.
- Inspect condition of hydraulic pump.
- Inspect pump drive shaft from auxiliary engine.
- Inspect oil cooler condition. Clean plugged fins using pressurized air.



### HYDRAULIC HOSE/LINE INSPECTION

- Check for hydraulic leaks along hoses, cylinders, fittings, and connections.
- Replace any hose, fitting, tubing, etc. that is damaged and/or leaking.
- Ensure that hoses have not chafed against sharp edges. If they have, inspect condition and replace if necessary. Re-route any hose that has been chafing.
- If in doubt about the condition of a hose REPLACE IT. Hose failure can result in spillage of several gallons of hydraulic fluid and result in costly down time for repairs.

# OPERATION

## BOOM MOUNT ASSEMBLY INSPECTION

- Inspect condition of boom arm mounting frames.
- Inspect condition of boom mounting bracket and arm swivel frames.
- Inspect condition of Inner Draft Beam Pin and Swivel Pin. Ensure pins are properly installed and secured in place with screws, lock washers, and nuts.
- Ensure all bolts and screws are in position and are properly torqued.

## BOOM ARM ASSEMBLY INSPECTION

- Inspect condition of each arm section weldment
- Ensure all pins are in place and secured in place with screws, lock washers, and nuts.
- Ensure all bolts and screws are properly installed and tightened.
- Check condition of bushings at pivot points.

## ROTARY HEAD INSPECTION

- Ensure all bolts are in place and properly torqued.
- Inspect blades and blade bolts for looseness and excessive wear. Blades must be replaced as complete sets to maintain carrier balance.
- Inspect thrown object protection (chain guard or rubber deflector). Replace any damaged or missing sections. Replace rubber deflector after no more than 1/3 width wear.
- Ensure the mower head is properly attached to the boom hitch. Refer to the Assembly Section for connecting the hitch and mower hydraulics.



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# OPERATION

## **FLAIL HEAD INSPECTION**

- Inspect condition of cutter knives and pins. Replace missing and broken knives. Only operate the unit with a full set of knives with comparable amount of wear to ensure cuttershaft balance.
- Inspect condition of thrown object rubber deflectors. Replace any missing and damaged sections. Replace rubber deflectors after no more than 1/3 width wear.
- Inspect condition of roller assembly and cutting height.
- Ensure the mower head is properly attached to the boom hitch. Refer to the assembly section for connecting the hitch and mower hydraulics.

## **CLEAN CUT SAW BLADE**

- Inspect condition and sharpness of blade teeth. Replace teeth if any carbide tip is missing. Use hand and arm protection when handling saw blade.
- Ensure all bolts are in place and properly torqued.
- Ensure the mower head is properly connected to the boom hitch. Refer to the Assembly Section for connecting the hitch and head hydraulics.

## **DITCHER HEAD INSPECTION**

- Inspect condition and sharpness of blades. Use hand and arm protection when handling ditcher blades.
- Ensure the ditcher head is properly attached to the boom hitch. Refer to the assembly section for connecting the hitch and head hydraulics.

# OPERATION

## 5. TRUCK OPERATION

The operator must have a complete understanding of the placement, function, and operation of all truck controls before starting the truck. Review the truck operator's manual for detailed truck operating instructions. Only start the truck while seated and belted in the operator's seat.

Truck Controls:

- Locate the ignition key/switch.
- Locate the gear shift lever.
- Locate the light control lever.
- Locate the brake pedals.
- Locate the parking brake lever.
- Locate the boom joystick.
- Locate the master switch box.
- Locate the auxiliary engine control box.

Before starting the truck ensure the following:

- A pre-operation inspection and service according to the truck operator's manual has been performed.
- The parking brake is set.
- The truck is in park.
- The mower control switch is in the OFF position.
- The joystick master switch is in the OFF position.

**IMPORTANT!** The truck is equipped with an exhaust brake. While mowing and at all other times the truck is driven at idle or speeds less than 15 mph for extended periods of time, the exhaust brake must be turned OFF (see truck operator's manual for exhaust brake control operation). Refer to the truck manufacturer operator's manual for proper operation of the exhaust brake when the truck is being driven at normal highway speeds.

**DANGER!**



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**Never run the Truck or Auxiliary engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous and deadly to your health. If it is necessary to run the Truck or Auxiliary engine in an enclosed area, remove the exhaust fumes from the area to the outdoors with an exhaust pipe extension. If you do not have an exhaust pipe extension, or if it is not possible to use one, open doors and circulate outside air into the area. (STM-15)**

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**DANGER!**



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**Start the Truck and Auxiliary engines only when seated and belted in the Truck's operator seat. Operate the Mower controls only while properly seated with the seat belt secured around you. Inadvertent movement of the Truck and/or Mower components may cause serious injury or death to the operator and passersby. Read the Truck and Auxiliary Engine operator's manuals for proper starting instructions. (STM-16)**

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# OPERATION

## **6. AUXILIARY ENGINE OPERATION**

Power to operate the boom and mower is supplied from the bed mounted auxiliary engine and hydraulic pump. The auxiliary engine uses the same fuel supply as the truck engine. The auxiliary engine ignition switch, throttle control and engine gauges (tachometer, oil pressure, engine temperature) are located in a separate control box mounted in the center of the truck cab.

To start the auxiliary engine, the Joystick Master Switch must be in the OFF position. For operator safety, the auxiliary engine will not start with the Master switch in the ON position. If the auxiliary engine can be started with the Joystick Master Switch in the ON position, immediately stop operating the unit and contact Tiger Technical Service for assistance.

**IMPORTANT: Make sure the hydraulic tank ball valves are OPEN before starting the auxiliary engine. Starting the auxiliary engine with the valves closed can result in serious system damage.**

### **RUNNING ENGINE:**

Increase or decrease engine rpm with the throttle button on the auxiliary engine control box.

### **STOPPING ENGINE:**

Reduce engine speed to idle, run at idle for 30 seconds, then turn engine ignition switch OFF.

### **MULTI-ALARM SAFETY SHUTDOWN CONTROL:**

The MULTI-ALARM are designed to protect engines against Low Oil Pressure, Low Coolant Level and High Coolant Temperature.

When ignition is first turned "ON" system self-tests for 3 seconds indicated by audio alarm and all lights flashing, followed by alarm with low oil pressure light until engine is started and oil pressure rises.

Should an alarm occur on Low Oil Pressure or High Coolant Temperature the audio will sound with corresponding light for 30 seconds followed by engine shutdown.

On Low Coolant Level, the alarm is delayed 8 seconds to assure accurate sensing followed by 30 seconds alarm with light indication before engine shutdown.

If additional engine run time is required the circuit allows two 30 second restarts followed by 2 minute delay before engine can be restarted.

# OPERATION

## Instructions: Programming VeeThree128



### Button #1:

Push Button #1: Three parameters or readouts are shown, from top to bottom of the display. Push repeatedly and it will display screen 1 through 4, and display three parameters on each screen.



### Button #2:

Push Button #2: Two parameters or readouts are shown, left and right in the display. Push repeatedly and it will display screen 1 through 4 and display two parameters on each screen.



### Button #3:

Push Button #3: One parameter or readout is shown in the display. Push repeatedly and it will display screen 1 through 4, and display one parameter on each screen.



### Button #4:

Push Button #4: Displays fault codes, or, to access main menu, push Button #4 and hold.

# OPERATION

## To edit what is displayed on any screen under Buttons #1, #2 or #3:

Push and hold any of Buttons #1,2 or 3 and a specific readout will highlight, then push + or - (Buttons #2 and 3) to select a different readout for that readout location on that screen. After using the + and - options to find the desired parameter/readout, push Button #1 to accept and shift to the next parameter on that screen or push Button #4 to exit programming.

## To change units:

1. Push and hold Button #4 to get to "Main Menu." Arrow UP or DOWN (Button #1 or 2) to get to "Protected Settings."
2. Push Button #3 to select "Protected Settings."
3. Enter 1234 as password by pushing Button #3 once to input "1" as first character, then push Button #1 to shift to second character, push Button #3 twice to input "2," then push Button #1 to shift to third character, push Button #3 three times to input "3," then push Button #1 to shift to fourth character, and push Button #3 four times to input "4," then push Button #4 to accept.
4. Then arrow UP or DOWN (Button #1 and 2) to get to "Units," then push Button #3 to select.
5. Then arrow UP or DOWN (Button #1 or 2) to go to the "Units" desired. Push Button #3 repeatedly to toggle through the various units until arriving at the desired units. Push Button #2 to go to the next "Units" parameter, and toggle Button #3 to get desired "Units" and so on.
6. Then push Button #4 three times to exit out of programming.

## To enable analog input:

1. Push and hold Button #4 to get to "Main Menu." Arrow UP or DOWN (Button #1 or 2) to get to "Protected Settings."

2. Push Button #3 to select "Protected Settings."
3. Enter 1234 as password by pushing Button #3 once to input "1" as first character, then push Button #1 to shift to second character, push Button #3 twice to input "2," then push Button #1 to shift to third character, push Button #3 three times to input "3," then push Button #1 to shift to fourth character, and push Button #3 four times to input "4," then push Button #4 to accept.
4. Then arrow UP or DOWN (Button #1 or 2) to get to "IO Setup." Then push Button #3 to select.
5. Then arrow UP or DOWN (Button #1 or 2) to get to "Input." Push Button #3 to select.
6. Push Button #3 to turn Sender ON (if OFF).
7. Push Button #3 to toggle through analog input options, and go to "Datcon DAL 100-240F."
8. Press Button #4 to accept, then push Button #4 three more times to exit programming.

## To review SPN (Suspect Program Numbers) in Display:

1. Push and hold Button #4 to get to "Main Menu." Arrow UP or DOWN (Button #1 or 2) to get to "Diagnostics."
2. Push Button #3 to select "Diagnostics."
3. Then arrow UP or DOWN (Button #1 or 2) to get to "Data Viewer," then push Button #3 to select.
4. Then toggle UP or DOWN (Button #1 or 2) to view the programs available in the display.
5. Push Button #4 three times to exit.

# OPERATION

## 7. SWITCH BOX AND JOYSTICK CONTROLS

The switchbox is mounted in the center of the truck cab. The box houses controls and a display for auxiliary engine information.

**Mower Control Switch** - Turns on the mower motor. When the motor is running the Mower Run Indicator Light will be illuminated. The Mower Control Switch must be in the OFF position to start the auxiliary engine.

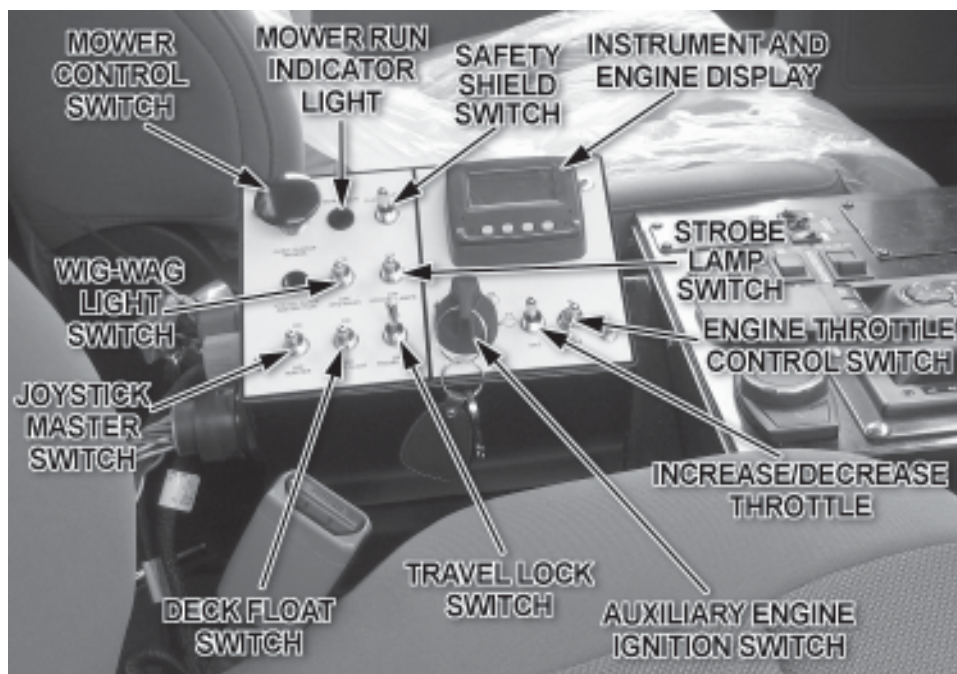
**Joystick Master Switch** - Activates the Joystick. Operating any function of the Joystick requires that the Joystick Master Switch be in the ON position. With the Joystick Master Switch in the OFF position all electrical power is disconnected from the Joystick Console. The Joystick Master Switch must be in the OFF position to start the auxiliary engine.

**Safety Shield Switch** - Opens and closes the retractable door shield on the front of the mower head. Retractable door shield not equipped on all mower heads. Opening the safety shield enables the blades to contact brush and limbs. When mowing at or near the ground, always have the shield in the closed position.

**Travel Lock Switch** - Locks the Main Boom Cylinder in position during transport. This switch must be in the ON position when the mower is stowed for transport. The auxiliary ignition switch must be in the ON position for the travel lock to be engaged. The Travel Lock Switch must be in the OFF position to allow movement of the boom.

**Deck Float Switch** - Allows the Deck Roll Cylinder to float so that the mower head follows the contour of uneven terrain. Deck Float is designed for operating flail heads that are running at ground level on a deck roller.

**Throttle Control Switch** - Provides HIGH (2300rpm), LOW (1950rpm) and IDLE(1000rpm) throttle settings. The Increase/Decrease Throttle Switch allows throttle speed to be manually adjusted between the Throttle Control Switch settings.



# OPERATION

## **DAN FOSS JOY STICK**

Positioning the boom is performed with electronic valves controlled by the operator using a single joystick. The joystick controls a total of four operations: Main Boom, Secondary Boom, Deck Roll, and Boom Swivel. Using a single joystick, many of the functions can be operated simultaneously such as the main and secondary booms for even greater speed at positioning the mower head.

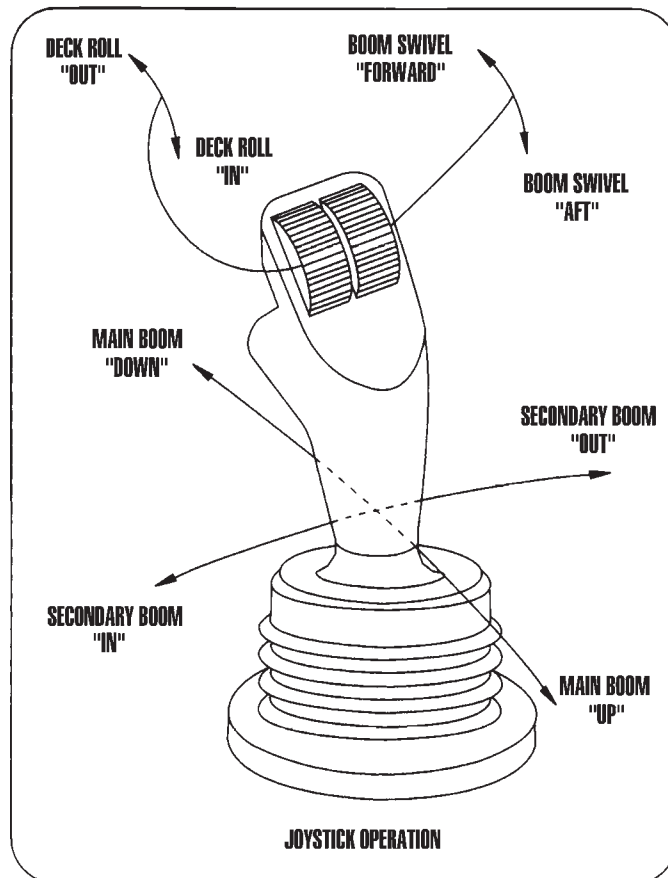
For safe and efficient boom mower operation, it is critical that the operator be experienced and feel confident in using the joystick control to position the boom. New operator's should be allowed ample time to practice using the joystick to position the boom in an open area before entering the work site. Before attempting to operate this equipment, read these instructions completely. If you have any questions concerning safety of operation, contact your dealer or Tiger Corporation.

Operating any function of the Joystick Console requires that the Joystick Master Switch be in the ON Position. With the Master Switch in the OFF position all electrical power is disconnected from the Joystick Console. Also, right side door must be closed for joystick to operate. With door open, all electronic power is disconnected from the joystick, deck float and deck shield controls.

Each joystick control and responding boom action is covered on the following page. Familiarize yourself with each function then practice in a safe, level area, CLEAR of all people, animals, and any obstructions. As always, use extreme caution when operating this machine.

Practice performing multiple functions simultaneously. With some practice, the boom should become very easy to maneuver and feel almost as it were an extension of your arm.

When the Joystick is Released, the valve will automatically return to center, and the boom will be LOCKED at the current position.



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# OPERATION

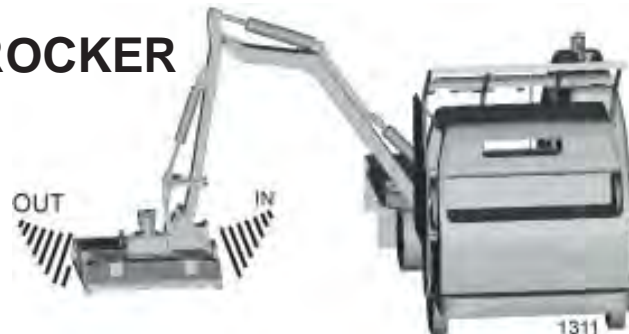
**JOYSTICK FWD / BACK  
MOVES MAIN BOOM**



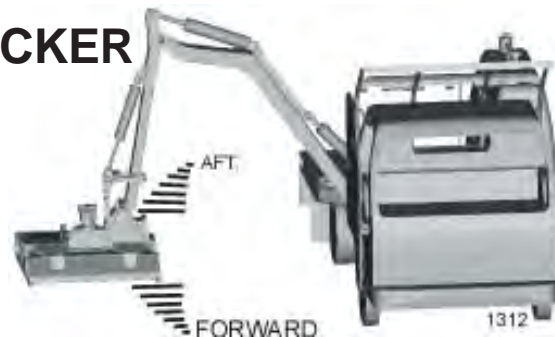
**JOYSTICK LEFT / RIGHT  
MOVES SECONDARY BOOM**



**LEFT JOYSTICK ROLLER/ROCKER  
MOVES DECK ROLL**



**RIGHT JOYSTICK ROLLER/ROCKER  
MOVES BOOM SWIVEL**



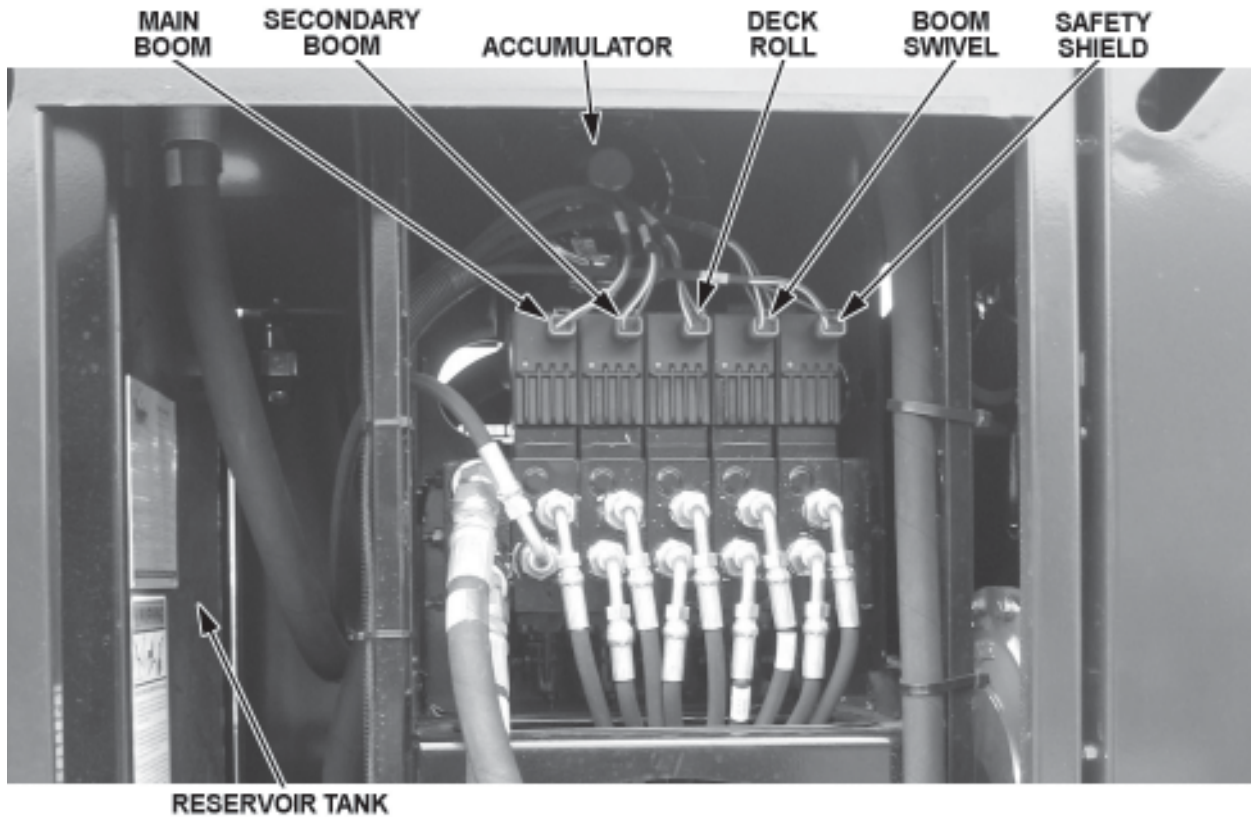
**SHIELD SWITCH  
(ON SWITCH BOX)  
OPERATES SAFETY  
SHIELD**

(OPTIONAL)



# OPERATION

## DANFOSS VALVE



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

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

Note: Pushing manual valve handles "down" will bring the main boom "down", secondary boom "in", roll deck "in", swivel boom "forward", and "close" deck shield. Pulling manual handles "up" will bring the main boom "up", secondary boom "out", roll deck "out", swivel boom "aft" and "open" deck shield.

# OPERATION

## 9. MOWER OPERATION

**THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE TRUCK AND MOWER AND ALL CONTROLS BEFORE ATTEMPTING TO MOW.** The operator must read and understand the Safety and Operation Sections of this manual and the truck and auxiliary engine operator's manuals.

Always turn on the truck's flashing lights and light bar when operating the mower to alert drivers and passersby of your presence.

**IMPORTANT:** Before sure the ball valves on the mower hydraulic tank are **OPEN** before starting the auxiliary engine. Serious damage to the hydraulic system can occur if the valves are not open.

**DANGER!**



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**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 Truck 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 item discontinue mowing.** (SGM-1)

---

**WARNING!**



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**Do not mow in the reverse direction. Check to make sure there are no persons behind the Truck and Mower before backing up. Mow only at a slow ground speed where you can safely operate and control the Truck and Mower. Never mow an area that you have not inspected and removed debris or foreign material.** (STM-32)

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# OPERATION

## 9.1 Foreign Debris Hazards / Overhead Obstructions

Before starting any mowing operation, the operator must become familiar with the area to be mowed and any obstacles and hazards contained within to ensure safety to the operator, bystanders, and equipment. Special attention should be paid to foreign debris, overhead obstructions, rough terrain, steep slopes, and passersby and animals in the area.

An area to be cut must first be inspected for objects that could be thrown or that could damage the machine. Walk through the area looking for overgrown fences, boulders and rocks, culverts, stumps or metal objects. Mark the inspected area with flags. If the area is dense and cannot be walked thoroughly it may be necessary to inspect a smaller area as well as possible, then trim away the part that has been inspected and can safely be removed. Walk each new area again and repeat the inspection before cutting more away. Repeat as often as necessary until the area is cleared. It can be damaging and/or dangerous to work the cutter in an area that had not been visually inspected.

Place DANGER signs at least 300 feet beyond the perimeter of the area to be worked, not just 300 feet from where the machine started operating! It is convenient in many cases to work in 300 foot sections. Move the first Danger sign to the beginning of the freshly cleared area, place it, then take the first cutting area flag up to the end of the freshly cleared area 300 feet away. Walk and inspect the next 300 feet and place the second cutting area flag. Pick up the second DANGER sign, and take it a further 300 feet along the road or trail. Note that in many cases the DANGER area will extend in front of and behind the machine as well as along each side. Post signs accordingly.

**WARN-  
ING!**



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

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**DANGER!**



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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.

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(SGM-6)

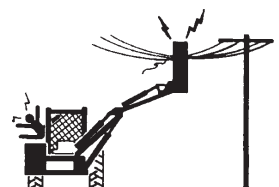
**DANGER!**



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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)

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# OPERATION

## 9.2 Bystander/Passersby Precautions

If a bystander comes within 100 yards of the truck while the mower is being operated, stop the mower at once. DO NOT start the mower again until all bystanders are well past the 100 yard distance.

**DANGER!**



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**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)**

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**DANGER!**



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**Rotary 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.**

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**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)**

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## 9.3 Operating Speed and Ground Speed

Ground speed for mowing will depend upon the height, type, and density of vegetation to be cut. For cutting heavy brush and limbs, it is usually best to stop the truck and move the head into the vegetation to be cut. Operate the auxiliary engine at 2400 rpm to maintain mower blade speed for a clean cut. Make sure that the mower has reached full speed before entering that vegetation to be cut.

## 9.4 Operating the Mower

Once on location, start the auxiliary engine and allow the engine to stabilize and reach a normal operating temperature. Turn the Travel Lock Switch to the OFF position and the Joystick Master Switch to the ON position. Increase the auxiliary engine throttle to the recommended operating speed of 2400 rpm. Using the joystick, remove the mower head from the transport position and position the deck slightly above the material to be cut. DO NOT attempt to start the mower while under a load.

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

# OPERATION

To Start the Motor on the Attached Head, pull the red Mower Control Switch knob out completely to the ON position. The Motor will advance to full operating speed within fifteen seconds. The mower will continue to operate while the Mower Control Switch is in the ON position.

To stop the motor on the mower head, maintain the auxiliary engine speed at the normal operating speed (2400 RPM) and push the Mower Control Switch in to the OFF position. The mower head hydraulic circuit is equipped with a brake valve to bring the mower to a complete stop in a short period of time. The brake is automatically activated when the mower control switch is turned to the OFF position. The mower blades will come to a complete stop.

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

## SAFETY SWITCHES

There are two safety switches that will activate the motor brake and stop the mower. These include an operator presence seat switch, a right side door switch, and a boom swing switch. These switches require that the operator be seated in the rights side seat, the right side door be closed, and the boom swung clear of the truck bed for the mower to run.

## FOR ALL MOWING OPERATIONS

PLACE TRUCK TRANSMISSION GEAR SELECTOR IN "FIRST" GEAR/SPEED.

## MOWING AT GROUND LEVEL

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

The rotary mower deck should always be carried rather than dragged on the skid shoes when mowing on the ground. Dragging the rotary mower deck increases the side loads on the boom, decreases the horsepower available to the cutter head, and reduces the ability of the accumulator to carry part of the weight of the boom during mowing operations.

## CUTTING BRUSH AND TREES

When using the rotary cutting head for trimming trees and shrubs, let the mower saw into them. Do not lower the mower head down directly onto a tree or stump. The mower blades are designed to cut with the end, and misuse can cause damage to the blade and a hazardous situation for the operator. Begin a pass at the top side of the trees and work down with each consecutive pass. When the initial pass has been made, disengage the mower, and return boom to a safe travel position. Return to starting point and make next pass, etc..

When cutting trees and shrubs, use a lower speed to allow the blades time to cut as well as mulch the foliage. **DO NOT** use excessive force when positioning cutting head into heavy branches or stumps. Damage to the unit may result. It is best to let the cutter head "eat away" slowly at heavy cutting jobs.

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

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

# OPERATION

## **Boom Rotary Cutter**

- ⇒ The Rotary Cutting Head is rated to cut vegetation up to 6" in diameter.
- ⇒ Objects tend to be thrown out from under the head in the direction of blade rotation and toward the raised edge of the shroud. Avoid cutting with the head tilted at an angle that objects would be thrown towards the truck operator station.
- ⇒ When clearing brush and small trees, start at the top of then lower the head down through the brush while sweeping from right to left. This avoids clogging the head with cut and mulched material.
- ⇒ Open the hydraulically operated door shield to allow blades to reach large diameter vegetation. Operate the mower with the door closed when cutting grass, weeds, and light brush to reduce thrown objects for safer mower operation.



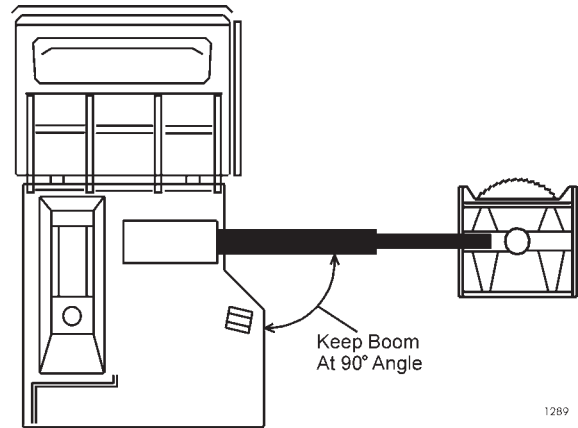
## **Boom Flail Cutter**

- ⇒ The Boom Flail Cutter can be equipped with either grass knives or brush knives. Grass knives are designed for cutting grass only. Brush knives are rated to cut material up to 2" in diameter.
- ⇒ The Boom Flail cutter is ideal for cutting hard to reach areas where a smooth cut is required.
- ⇒ Cutting height ranges from 1-6". Cutting height is set by adjusting the height of the rear roller.
- ⇒ When clearing brush and small trees, start at the top of then lower the head down through the brush while sweeping from right to left. This avoid clogging the head with cut and mulched material.
- ⇒ Open the retractable hood when cutting large diameter vegetation to allow access to the cutting knives. Close the hood to cut fallen limbs into 3/4" mulch size pieces.

# OPERATION

## Clean Cut Saw Blade

- ⇒ The Clean Cut Saw Blade is rated to cut material up to 6" in diameter.
- ⇒ Always cut with the boom positioned perpendicular (straight out) from the truck (see diagram). Cutting with the boom swung backward or forward will cause the blade to warp from "raking" through the cut material.
- ⇒ For maximum blade life, do not allow the blades to contact hard items such as the ground or metal objects.



**IMPORTANT!** Always cut with boom positioned perpendicular (straight out) from the truck.

## Ditcher Head

- ⇒ The ditcher head is designed to dig ditches and clean and reshape existing ditches for water drainage applications.
- ⇒ The ditcher is designed for either forward or reverse rotation. Forward rotation will deposit the soil away from the truck. Reverse rotation will deposit the soil between the ditcher and the truck.



# OPERATION

## **9.5 Shutting Down the Mower**

To shut down the mower, disengage the head motor by pushing in on the red knob of the Mower Control Switch. Maintain the auxiliary engine at operating speed until the mower has come to a complete stop. **DO NOT** turn the auxiliary engine off before stopping the mower head. Wait for all rotating motion to stop before proceeding to stow the boom and mower in the transport position or exiting the truck cab.

## **Returning Mower Head to Transport Position**

When preparing to return the boom arm to the boom rest, always shut down the attached head motor and give the blades enough time to come to a complete stop **BEFORE** placing the boom and head in the transport position.

### **Placing Boom Arm with 50" rotary head in Transport Position**

1. To place the boom arm in the transport position, first bring the Main Boom to its full height.
2. Extend the Secondary Boom approximately half way out and carefully swivel the Main Boom back until the mower head is positioned just over the truck bed. There is a formed transport bracket on the truck bed where the mower head must be stowed for transport.
3. Maneuver the boom to place the mower head in the transport bracket. When properly seated the head will be completely resting on the truck bed and in the bed transport bracket.
4. After mower head is stowed, index the Main Boom "down" function for 3 - 5 seconds minimum.
5. Turn travel lock switch to "ON" position and joystick master switch to "OFF" position. Throttle Auxiliary Engine to idle, run at idle for 30 seconds, then turn engine off. The mower and boom are now ready for transport or storage.



### **Placing Boom Arm with 60" rotary head in Transport Position**

1. To place the boom arm in the transport position, first bring the Main Boom to its full height.
2. Roll the mower head out completely to the deck stop.
3. Extend the Secondary Boom approximately 90 degrees to the Main Boom and carefully swivel the Main Boom "AFT" until the mower head is positioned just over the truck bed.
4. Then lower Main Boom and adjust Secondary Boom to position mower head over stowage bracket. (CAUTION: Do not move secondary boom in too far or mower head may contact hand rail or engine enclosure).
5. Now lower the Main Boom until the mower head contacts the base plate of the stowage bracket, then slowly extend the Secondary Boom until mower head contacts the vertical retaining bar of the stowage bracket.
6. After mower head is stowed, index the Main Boom "down" function for 3 - 5 seconds minimum.
7. Turn travel lock switch to "ON" position and joystick master switch to "OFF" position. Throttle Auxiliary Engine to idle, run at idle for 30 seconds, then turn engine "off". The mower and boom are now ready for transport or storage.



# OPERATION

## Placing Boom Arm with 50" snowblower in Transport Position

1. To place the boom arm in the transport position, first bring the Main Boom to its full height.
2. Roll the snowblower out completely to the deck stop.
3. Extend the Secondary Boom approximately 90 degrees to the Main Boom and carefully swivel the Main Boom "AFT" until the snowblower is positioned just over the truck bed.
4. Then lower Main Boom and adjust Secondary Boom to position snowblower over stowage bracket.
5. Now lower the Main Boom until the snowblower contacts the base plate of the stowage bracket.
6. After the snowblower is stowed, index the Main Boom "down" function for 3 - 5 seconds minimum.
7. Turn travel lock switch to "ON" position and joystick master switch to "OFF" position. Throttle Auxiliary Engine to idle, run at idle for 30 seconds, then turn engine "off". The blower and boom are now ready for transport or storage.



# OPERATION

## **10. TRUCK BOOM MOWER STORAGE**

Properly preparing and storing the mower at the end of the season is critical to maintaining its appearance and to help ensure years of dependable service. The following are suggested storage procedures:

1. Thoroughly clean all debris from the truck, boom, and head to prevent damage from rotting vegetation and standing water.
2. Lubricate all grease points and fill spindle oil levels according to maintenance lubrication schedule.
3. Tighten all bolts and nuts to the proper torque. Ensure pins and other hardware are in place and in good repair.
4. Inspect the boom arm and mower head for worn and damaged parts. Perform repairs and make replacements so that the mower will be ready for use at the start of the next season.
5. Store the unit in a clean and dry location.
6. Use spray touch-up enamel paint where necessary to prevent rust and to maintain the appearance of the mower.
7. Refer to the truck and auxiliary engine operator's manuals for preparing the truck and auxiliary engine for storage.



## **11. TRANSPORTING THE TRUCK BOOM MOWER**

Inherent dangers of operating the truck boom unit and the possibility of accidents are not left behind when you finish mowing an area. Therefore, the operator must employ good judgement and safe operation practices when transporting between locations. By using good judgement and following safe transport procedures, the possibility of accidents while moving between locations can be substantially minimized.

Do not transport the truck at speeds above 15 mph when seated at the truck's right side driving position. When transporting the truck between locations, always drive the truck from the left side driving position. Fold back the right side throttle actuator and pedal onto the floor when the truck is being driven from the left side.

Before transporting , ensure the following:

1. Auxiliary engine is completely shut down.
2. Mower head is properly seated in the bed transport bracket.
3. Mower Control Switch is in the OFF position
4. Joystick Master Switch is in the OFF position.
5. Travel Lock is in the ON position.





# OPERATION

## 11.1 Transporting on Public Roadways

The truck is classified as a motor vehicle and is subject to all inspection, license, and insurance regulations for the state that it is operated in. The driver must possess the required license to drive the unit on a public roadway.

### WARNING!



**Transport the Truck and Mower only at safe speeds. Serious accidents and injuries can result from driving this Truck at unsafe speeds. Become familiar with the driving characteristics of the Truck and how it handles before operating or transporting on streets and highways. Make sure the Truck's steering, brakes, tires, and wheels are in good condition and operate properly.**

Before transporting the Truck and Mower determine the safe transport speeds for you and the machine. Make sure you abide by the following rules:

1. Test the Truck and Mower at a slow speed and increase the speed slowly. Apply the brakes smoothly to determine the stopping characteristics of the Truck equipped with the Mower. As you increase the speed of the Truck, the stopping distance increases. Determine the maximum safe transport speed. When driving down a hill or on wet, rain slick, snow covered, or icy roads, the braking distance increases: use extreme care and reduce your speed. Do not operate the Truck with weak or faulty brakes.
2. Obey all traffic laws and regulations. Never exceed the posted speed limit. Never exceed warning speed limits for curves and down hill operation.
3. The Truck and Mower have a high center of gravity. Use extreme caution when transporting at highway speeds. Slow down for sharp corners and rough or uneven surfaces to avoid tipping or turning the Truck over.
4. Only transport the Truck at the speeds determined as safe and which allow for proper control of the machine while driving and stopping during an emergency.
5. When operating in traffic, use the Truck's directional indicator or signal lights to indicate your movement. Always use the Truck's flashing signal lights and other equipped warning features to alert motorist of your presence and slow moving speed while mowing. Be Aware of Traffic Around You and Watch Out for the Other Guy. (STM-44)

## 11.2 Hauling the Truck Boom Unit

Before hauling a loaded unit, **measure the height and width and gross weight of the complete load.** Ensure the load will be within **legal limits for all areas that it will be transported through.**

Load the unit in the center of the bed for an even weight distribution. Position the boom so that the mower head is behind the TrucKat®, then lower the boom until the head rest on bed. Use chains, heavy duty straps, cables, binders or other securing devices to securely tie down both the front and rear of the truck utilizing proper tie down points. Arrange tie-downs to pull downward and against themselves. **CAREFULLY** tension chains using binders to apply maximum tension.

While hauling the truck boom unit, make occasional stops to check that the truck has not moved or shifted and remains secured to the transporting equipment. If during transport a hard braking, sharp turning, or swerving action was performed, stop at the next safe location to inspect the security of the load.

Use extreme care when removing the devices used to secure the load. Tension in chains, straps, binders and other devices have the potential to inflict serious injury if not released properly.

# OPERATION

# **MAINTENANCE SECTION**

# MAINTENANCE

Tiger Mowers are designed for high performance and rugged durability, yet with simplified maintenance. The purpose of this section of the manual is to help the operator in the regular servicing of the mower. Regular maintenance at the intervals mentioned will result in the maximum efficiency and long life of the Tiger Mower.

When you purchase a Tiger Mower you also acquire another valuable asset, Tiger's parts organization. Our rapid and efficient service has guaranteed the customer satisfaction for many years. Tiger parts keep up with the demands for efficiency, safety and endurance expected of the Tiger Mower.

## MAINTENANCE PRECAUTIONS

- Be sure end of grease gun and zerks are clean before using. Debris injected into bearings, etc. with grease will cause immediate damage.
- DO NOT use a power grease gun to lubricate bearings. These require very small and exact amounts of lubrication. Refer to the detailed maintenance section for specific lubrication instructions. Do Not over-grease bearings.
- Lexan windows should be washed with mild soap or detergent and luke warm water, using a soft clean sponge or **soft cloth**. DO NOT use abrasive or alkaline cleaners or metal scrapers on lexan windows!
- Be alert to maintenance indicators such as the in-tank filter pressure gauge, hydraulic reservoir sight gauge, etc. Take the required action to correct any problems immediately.
- Release of energy from pressurized systems may cause inadvertent actuation of cylinders, or sudden release of compressed springs. Before disconnecting any hoses relieve pressure by shutting tractor off, setting cutter on ground and actuating lift valve handles.

**WARNING!**



**DO NOT** use hands to check for suspected leaks in hydraulic hoses! Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin and cause serious injury. If fluid is injected into skin, it must be surgically removed within a few hours or gangrene may result. Use a small piece of wood or cardboard, not hands, to search for pin hose leaks. Be sure all pressure is relieved whenever disconnecting lines. Be sure all connections are tight and hoses and lines are not damaged before applying pressure.

## BREAK IN PERIOD

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

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

# MAINTENANCE

## 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)



## 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)

## WARNING!

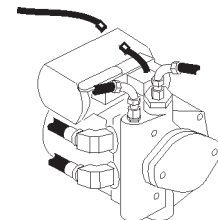


Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Mower Head on the ground or securely supported on blocks or stands, disengage the PTO, and turn off the engine. Push and pull the control Levers or Joystick several times to relieve pressure prior to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

## DANGER!



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



# MAINTENANCE

## REGULAR MAINTENANCE

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

### DAILY OR EVERY 8 HOURS

ITEM	SERVICE	COMMENTS
Pivot Points	Lubricate	Inject grease until it appears at ends
Hydraulic Fittings	Check for leaks	Tighten when needed. Do Not use hands to check for leaks, see maint. Precautions
Knives	Check	Inspect for missing or damaged knives, change or sharpen as needed
Spindle mounting bolts (spindle to deck)	Check	3/4" x 2" torque to 331 ft. lbs.
Knife mounting bolts (knife to disk)	Check	1-1/8" special bolt torque to 1070 dry or 800 oiled ft. lbs.
Disk mounting bolts (disk to spindle)	Check	5/8" x 1-3/4" bolt torque to 204 dry or 184 oiled ft. lbs.
Belts	Check / Adjust	Check if broken, tighten as required
Main Frame and Deck	Check	Retorque bolts to torque specifications in this section
Hydraulic Fluid Level	Check	Add if required per fluid recommendations
Rear Flail Drive (if applicable) Bearing Flange and Shaft Coupler	Lubricate	Grease as instructed in detailed maint. section
Cutter Shaft and Ground Roller	Lubricate	Grease as instructed in detailed maint. section

# MAINTENANCE

## WEEKLY OR EVERY 40 HOURS

ITEM	SERVICE	COMMENTS
Rotary Spindle	Lubricate	Every 40 hours or weekly

## WEEKLY OR EVERY 50 HOURS

ITEM	SERVICE	COMMENTS
In Tank Hyd. Fluid Filter <b>10 micron filter)</b>	Change	Change after first 50 hours only, then every 500 hours or yearly
In-Line High Pressure Filter <b>(10 micron filter)</b>	Change	Change after first 50 hours only, then every 500 hours or yearly

## MONTHLY OR EVERY 150 HOURS

ITEM	SERVICE	COMMENTS
Hydraulic Fluid Level	Check	Add as needed
Hyd. Tank Breather	Clean/Check/Replace	Clean or replace Element as required

## YEARLY OR EVERY 500 HOURS

ITEM	SERVICE	COMMENTS
Spindle Grease	Change	
Hyd. Tank Fluid	Change	
In Tank Hyd. Fluid Filter <b>(10 micron filter)</b>	Change	
In-Line HP Filter <b>(10 micron filter)</b>	Change or	Change when indicated by restriction indicator.
Hyd. Tank Breather	Change	

# MAINTENANCE

## TROUBLESHOOTING

SYMPTOMS	CAUSE	REMEDY
<b>Vibration</b>	1. Loose bolts  2. Cutter assembly Unbalanced	1. Check all bolts and tighten to recommended torque specs. 2a. Check for damaged blades, disc. or cutter shaft. Replace if needed. 2b. Check for wire, rope, etc. entangled in cutter assembly
<b>Mower will not lift</b>	1. Hyd. Fluid low 2. Leaks in line 3. Faulty relief valve  4. Kinked or blocked 5. Faulty cylinder	1. Check and refill Hyd Fluid 2. Tighten or replace fittings and hoses 3. Check pressure in line. Line pressure in Control Valve should be at least 2500 P.S.I. 4. Clean or replace lines 5. Inspect, repair or replace cylinder
<b>Mower will not start or run</b>	1. Blown fuse  2. Ball valves closed 3. Low oil level 4. Line leak  5. Electronic solenoid faulty	1. Check fuse between mower switch and ignition / replace 2. Make sure valves are open 3. Check Hyd. tank and fill 4. Check all fittings and lines, re-tighten or replace 5a. <b>Without</b> the tractor running, turn the mower switch to on. A low audible click should be heard if the solenoid is engaging the solenoid spool. If click is not heard, leave switch in on position and with a screwdriver or other steel object, touch the small nut on the end of the solenoid. If the metallic object is not attracted to the nut, check the fuse and wiring for an open circuit. If the object is attracted but no "click" is heard, replace the solenoid. 5b. Remove the four bolts holding the small block to the main block. Lift and remove small block being careful not to damage O-rings / filter. Clean filter and re-install. 5c. Remove large nut on side of large valve block. Remove spring, and use needle nose vise grip to pull spool from block. Check block and spool for contaminates and scratches.



# MAINTENANCE

**Motor runs but will not cut.**

1. Belts
2. Tensioner

- Clean parts or replace if scratched.
1. Inspect belts and pulleys. Replace belts and repair as needed.
  2. Adjust tensioner nut until flat washer washer is flush with top of guide.

**Motor turns slowly or not at all.**

1. Contaminants restricting spool movement in valve body.
2. Suction lines obstructed
3. Low oil level

1. Remove large nut on side of large valve block. Remove spring, and use needle nose vise grip to pull spool from block. Check block and spool for contaminates and scratches. Clean parts or replace if scratched.
2. Check for kinks or obstruction in suction hose.
3. Check Hyd. tank level and fill.

**Pump will not work**

1. Excessive wear on internal parts

1. Disassemble and repair.

**Motor will not work**

1. Excessive wear on internal parts

1. Disassemble and repair.

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

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

# MAINTENANCE

## TROUBLESHOOTING - MULTI-ALARM

V

New info available from Cummins?

# MAINTENANCE

## TROUBLESHOOTING - HYDRAULICS

SYMPTOM	CAUSE	REMEDY
<b>Hydraulic Reservoir</b>		
Low oil level	A. Improper service intervals	1. Service per maintenance manual
	B. External leaks	1. Repair leaks
Milky or dirty oil	A. Water in oil	1. Drain and replace hydraulic oil
	B. Filter failure	1. Inspect and replace filter if necessary
	C. Metal particles in oil	1. Replace hydraulic oil, find source of metal particles and repair
Discolored oil & has burnt odor	A. Kinked or crushed lines causing overheating	1. Replace lines
	B. Clogged oil cooler	1. Clean Cooler
	C. Incorrect oil viscosity	1. Replace oil per specifications in manual
<b>Hydraulic Filters</b>		
Contaminated hydraulic oil	A. Improper micron rating of filter element	1. Determine micron rating per manual, replace element
	B. Plugged element	1. Replace element
	C. Filter change interval too long	1. Decrease time between filter change
	D. Oil reservoir cap missing or filter element of cap missing	1. Replace cap or filter material in cap
	E. Ruptured element	1. Check for stuck bypass; repair or replace 2. Replace element per manual
	F. No element	1. Install proper element per manual
Bypass indicator always reads "bypass"	A. Fluid Viscosity too high	1. Check recommended viscosity in manual
	B. Broken or weak spring	1. Replace bypass spring
	C. Plugged element	1. Replace element per manual
Bypass indicator always reads filter is clean	A. No element installed	1. Install element per manual
	B. Ruptured element	1. Check for stuck bypass; repair or replace
	C. Failed bypass spring	1. Replace bypass spring
Ruptured element	A. Bypass not installed or stuck closed	1. Check housing for installed bypass 2. Check for broken spring or guide stem; replace bypass
	B. Too high of pressure for	1. Check that element size is per manual
	C. Change interval is too long	1. Decrease time between filter change
<b>Pumps</b>		
Pump makes excessive noise.	A. Air leaks in suction side of pump	1. Install a vacuum gauge in inlet of oil reservoir; if it indicates zero, air leakage may exist; check suction line for leaks
Popping or banging noise when air bubbles enter the suction side (aeration).		2. Replace pump shaft seal 3. Check that hyd oil level is above outlet 4. Check pump housing for cracks 5. Check torque of pump housing bolts
The sound of marbles being rattled together is from cavitation.	B. Aeration of fluid in reservoir	1. Return lines terminate above fluid level 2. Check fluid level; too low can cause excessive heat and foaming

# MAINTENANCE

## TROUBLESHOOTING - HYDRAULICS (CONTINUED)

SYMPTOM	CAUSE	REMEDY
<b>Pumps (Continued)</b>		
	B. Aeration of fluid in reservoir	3. Check fluid for foam by drawing a sample
	C. Plugged reservoir breather cap	1. Remove clean or replace
	D. Fluid viscosity too high	1. Drain reservoir, fill with oil per manual
	E. Worn or stuck pump parts	1. Check for solid contaminants, if found flush system and filter oil at refill 2. Check torque of pump housing bolts
	F. Improper pump installation	1. Check alignment with drive mechanism 2. Check rotation 3. Check pump RPM, operate per manual 4. Check system relief valve for proper setting
Pump fails to deliver fluid	A. Low oil level in reservoir	1. Check level, fill to middle of sight glass
	B. Pump intake restricted or plugged	1. Check that suction line valve is open 2. Check for blockage 3. Check for proper suction hose size
	C. Air leak in suction line	1. Repair leaks
	D. Pump shaft turning slowly	1. Check prime mover's RPM, operate per manual
	E. Oil viscosity too high or low	1. Drain, flush, refill per manual
	F. Pump parts worn or failed	1. Replace failed or worn parts
	G. Dirt or sludge in pump	1. Disassemble and clean pump 2. Flush system and refill per manual
Oil leakage around pump	H. Incorrect rotation	1. Check rotation of pump and prime mover
	A. Shaft seal worn	1. Remove and replace
	B. Suction or pressure line connections loose or failed	1. Tighten or replace connections
	C. Pump housing bolts loose	1. Disassemble, inspect seals for damage 2. Retorque bolts per specifications
	D. Cracked housing	1. Check relief valve pressure setting 2. Replace pump
Low or erratic pressure	A. Cold hydraulic oil	1. Operate machine to raise temperature
	B. Incorrect oil viscosity	1. Drain and refill with oil per manual
	C. Aeration or cavitation	1. See "Excessive Noise" troubleshooting
	D. Excessive pump wear	1. See "Excessive Wear" troubleshooting
	E. Pump speed too slow	1. Check RPM of prime mover and operate per manual
Excessive pump wear	A. Abrasive in hydraulic oil	1. Drain, flush, refill per manual 2. Replace all filter elements
	B. Water in oil, appears "milky"	1. Drain, flush, refill per manual 2. Replace all filter elements
	C. System pressure exceeding pump rating	1. Check for possible relief valve malfunction
	D. Incorrect oil viscosity	1. Drain, flush, refill per manual
	E. Pump misalignment	1. Check pump alignment with prime mover
	F. Aeration or cavitation	1. See "Excessive Noise" troubleshooting

# MAINTENANCE

## TROUBLESHOOTING - HYDRAULICS (CONTINUED)

SYMPTOM	CAUSE	REMEDY
<b>Actuators - Motor</b>		
Excessive Motor Noise	A. Motor/load coupling misaligned	1. Realign motor and coupling
	B. Aeration	1. Check for foaming oil 2. Check fluid level; too low can cause excessive heat and foaming 3. Return lines terminate above fluid level
	C. Cavitation	1. Check make-up check in brake valve 2. Check viscosity of oil, use oil specified 3. Warm system before operating at full RPM 4. Check for restricted inlet 5. Check pump for cavitation
Motor runs excessively hot	D. Worn or failed parts	1. Disassemble, replace parts 2. Replace motor
	A. Inlet oil is hotter than normal	1. Measure oil temp in reservoir; should not exceed 200°F 2. Check oil level in reservoir 3. Check that oil viscosity is per manual 4. If equipped with oil cooler check for obstruction 5. If operating in high ambient environment (100°F +) may have to add cooler if not so equipped
	B. Motor slippage too great	1. Disassemble, inspect, and replace worn or damaged parts
Motor runs in reverse Check plumbing and correct Motor will not turn	C. High flow rate over relief valve	1. Mower motor application excessive (ie: repetitive stalling of motor)
	A. Plumbing incorrect from valve	1.
	A. Mower jammed	1. Shut down machine, clear foliage from mower
<b>Actuators - Cylinders</b>	B. Binding at coupler	1. Check for misalignment, retorque bolts
	C. Low operating pressure	1. Check system relief setting in brake valve
	D. Pump not producing proper volume or pressure	1. Refer to "Pump" troubleshooting
	E. Seized motor parts	1. Disassemble, repair or replace parts 2. Replace motor
	Split cylinder wall	A. Excessive pressure
Buckled cylinder rod	A. Excessive compressive load	1. Excessive relief valve setting, check and correct 2. Misuse resulting in excessive load, see manual for proper operation
Cyl rod nut pulled from rod	A. Excessive tensile load	1. Excessive relief valve setting, check and correct 2. Misuse resulting in excessive load, see manual for proper operation

# MAINTENANCE

## TROUBLESHOOTING - HYDRAULICS (CONTINUED)





SYMPTOM	CAUSE	REMEDY
<b>Actuators - cylinders (Continued)</b>		
Cylinder leaking	A. Loose fitting	1. Check cylinder port fittings, tighten
	B. Leaking at rod	1. Check seal, replace worn seal

## LUBRICATION RECOMMENDATIONS





Description	Application	General Specification	Recommended Mobil Lubricant
Mower Hydraulics	Reservoir	ISO 46 Anti-Wear-Low Temp	Mobil DTE 15M
Cold Temperatures 0° F Start-Up			
Normal Temperatures 10° F Start-Up		JD-20C MF M1135,M1141 FNH M2C134D(FNH201)	Mobilfluid 424
Normal Temperatures 15° F Start Up		ISO 46 Anti-Wear	Mobil DTE 25
High Operating Temp. Above 90° F		ISO 100 Anti-Wear	Mobil DTE 18M
Cutter Shaft & Ground Roller Shaft(Flail)	Grease Gun	Lithium-Complex Extreme Pressure NLGI-ISO 320	Mobilgrease CM-S
Boom Swivel Boom Cylinder Pivots (Rotary & Flail Boom)	Grease Gun	Lithium Complex Extreme pressure NLGI2-ISO 320	Mobilgrease CM-S
Deck Boom Pivot & Deck Stop Adjustment (Rotary & Flail)	Grease Gun	Lithium Complex Extreme Pressure NLGI-ISO 320	Mobilgrease CM-S
Deck Spindle(Rotary)	Grease Gun	Tiger Spindle Lubricant part number 06540000	Mobilith SHC 220

# MAINTENANCE

## TORQUE SPECIFICATIONS

Torque for Standard Fasteners													
Nominal Dia. (in.)	threads per inch	 Grade 2			 Grade 5			 Grade 8			 Grade 9		
		Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque		
		Lubed K = 0.15	Dry Plated K = 0.17	Dry plain K = 0.20	Lubed K = 0.15	Dry Plated K = 0.17	Dry plain K = 0.20	Lubed K = 0.15	Dry Plated K = 0.17	Dry plain K = 0.20	Lubed K = 0.15	Dry Plated K = 0.17	Dry plain K = 0.20
Unified Coarse Thread Series													
1/4	20	49 in-lbs	59 in-lbs	66 in-lbs	76 in-lbs	86 in-lbs	101 in-lbs	107 in-lbs	122 in-lbs	143 in-lbs	126 in-lbs	143 in-lbs	168 in-lbs
5/16	18	101	122	135	157	178	209	221	251	295	259	294	346
3/8	16	15 ft-lbs	18 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	31 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-lbs
7/16	14	24	29	32	37	42	49	52	59	70	61	70	82
1/2	13	37	44	49	57	64	75	80	90	106	94	106	125
9/16	12	53	63	70	82	92	109	115	130	154	135	153	180
5/8	11	73	87	97	113	128	150	159	180	212	186	211	248
3/4	10	129	155	172	200	227	267	282	320	376	331	375	441
7/8	9	125	150	167	322	365	429	455	515	606	533	604	710
1	8	187	225	250	483	547	644	681	772	909	799	905	1065
1 1/8	7	266	319	354	596	675	794	866	1095	1288	1132	1283	1510
1 1/4	7	375	450	500	840	952	1121	1363	1545	1817	1597	1810	2130
1 1/2	6	652	783	869	1462	1657	1950	2371	2688	3162	2779	3150	3706
Fine Thread Series													
1/4	28	56 in-lbs	68 in-lbs	75 in-lbs	87 in-lbs	99 in-lbs	116 in-lbs	123 in-lbs	139 in-lbs	164 in-lbs	144 in-lbs	163 in-lbs	192 in-lbs
5/16	24	112	135	150	174	197	231	245	278	327	267	325	383
3/8	24	17 ft-lbs	20 ft-lbs	23 ft-lbs	26 ft-lbs	30 ft-lbs	35 ft-lbs	37 ft-lbs	42 ft-lbs	49 ft-lbs	43 ft-lbs	49 ft-lbs	58 ft-lbs
7/16	20	27	32	36	41	47	55	58	66	78	68	78	91
1/2	20	41	49	55	64	72	85	90	102	120	105	120	141
9/16	18	59	71	78	91	103	121	128	146	171	151	171	201
5/8	18	82	99	110	127	144	170	180	204	240	211	239	281
3/4	16	144	173	192	223	253	297	315	357	420	369	418	492
7/8	14	138	165	184	355	403	474	502	568	669	588	666	784
1	14	210	252	280	542	614	722	765	867	1020	896	1016	1195
1 1/8	12	298	357	397	668	757	890	1083	1227	1444	1269	1439	1693
1 1/4	12	415	498	553	930	1055	1241	1509	1710	2012	1768	2004	2358
1 1/2	12	734	880	978	1645	1865	2194	2668	3024	3557	3127	3544	4169

Torque values for 1/4 and 5/16-in series are in inch-pounds. All other torque values are in foot-pounds. K = 0.15 for "lubricated" conditions  
 Torque values calculated from formula T=KDF, where K = 0.17 for zinc plated and dry conditions  
 K = 0.20 for plain and dry conditions  
 D = Nominal Diameter  
 F = Clamp Load

Torque-Tension Relationship for Metric Fasteners													
Nominal Dia. (mm)	Pitch	 Class 4.6			 Class 8.8			 Class 10.9			 Class 12.9		
		Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque		
		Lubed K = 0.15 (ft-lbs)	Dry Plated K = 0.17 (ft-lbs)	Dry plain K = 0.20 (ft-lbs)	Lubed K = 0.15 (ft-lbs)	Dry Plated K = 0.17 (ft-lbs)	Dry plain K = 0.20 (ft-lbs)	Lubed K = 0.15 (ft-lbs)	Dry Plated K = 0.17 (ft-lbs)	Dry plain K = 0.20 (ft-lbs)	Lubed K = 0.15 (ft-lbs)	Dry plain K = 0.20 (ft-lbs)	
3	0.5	0.28	0.32	0.38	0.73	0.82	0.97	1.0	1.2	1.4	1.2	1.6	
3.5	0.6	0.44	0.50	0.59	1.1	1.3	1.5	1.6	1.9	2.2	1.9	2.5	
4	0.7	0.66	0.74	0.87	1.7	1.9	2.3	2.4	2.7	3.2	2.8	3.8	
5	0.8	1.3	1.5	1.8	3.4	3.9	4.5	4.9	5.5	6.5	5.7	7.6	
6	1	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11	9.7	13	
6	1.25	2.1	2.3	2.7	5.3	6.0	7.0	7.6	8.6	10	8.8	12	
7	1	3.8	4.3	5.0	9.7	11	13	14	16	19	16	22	
8	1	5.9	6.6	7.8	15	17	20	22	24	29	25	34	
8	1.25	5.5	6.2	7.3	14	16	19	20	23	27	24	31	
10	1.25	11	13	15	29	33	39	42	48	56	49	66	
10	1.5	11	12	14	28	32	37	40	45	53	47	62	
12	1.25	21	23	28	53	60	71	76	86	101	89	119	
12	1.5	20	22	26	51	58	68	73	82	97	85	113	
12	1.75	19	21	25	49	55	65	70	79	93	81	108	
14	1.25	26	29	34	66	75	89	95	108	127	111	148	
14	1.5	28	32	37	72	82	96	103	117	138	121	161	
14	2	30	34	40	78	88	104	111	126	148	130	173	
16	1.5	50	57	67	129	146	171	184	208	245	215	287	
16	2	47	53	62	121	137	161	173	196	230	202	269	
18	1.5	73	82	97	187	212	249	268	303	357	313	417	
18	2.5	65	73	86	167	189	222	239	270	316	279	372	
20	2.5	91	104	122	236	267	314	337	382	449	394	525	

Clamp load calculated as 75% of the proof load for specified bolts. K = 0.15 for "lubricated" conditions  
 All torque values are listed in foot-pounds K = 0.17 for zinc plated, dry conditions  
 Torque values calculated from formula T=KDF, where K = 0.20 for plain and dry conditions  
 D = Nominal Diameter  
 F = Clamp Load

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

# MAINTENANCE

## POLYCARBONATE CARE & MAINTENANCE

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

### CLEANING THE SUPERCOAT HARD-COAT

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

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

### Aqueous Solutions of Soaps and Detergents

Windex(1)	Top Job(2)	Joy(2)	Mr Clean(2)
Fantastik(3)	Formula 409(4)	Sumalight D12	Brucodecid

### Organic Solvents

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

### Alcohols

Methanol	Isopropyl
----------	-----------

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

## GRAFFITI REMOVAL

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

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

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



# MAINTENANCE

## Engine Filter Replacement

The fuel/water filter located on the outside of the engine compartment should be changed when liquid reaches the “Change Filter” markings on the filter compartment.

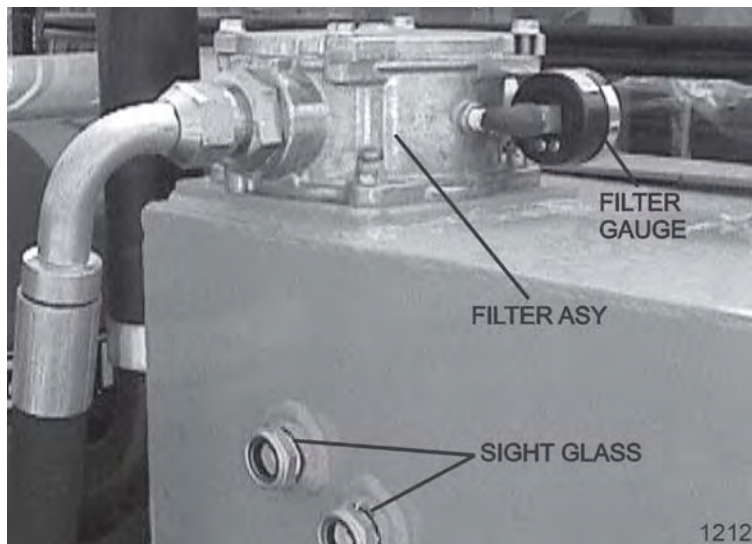


# MAINTENANCE

## RECOMMENDED FILLING INSTRUCTIONS FOR HYDRAULIC RESERVOIRS

When filling or checking the oil level, the unit should be parked on a level surface, shut “OFF”, and allowed sufficient time to cool to ambient temperature. Use caution when removing the pressurized breather. Do not place face over opening when removing the breather.

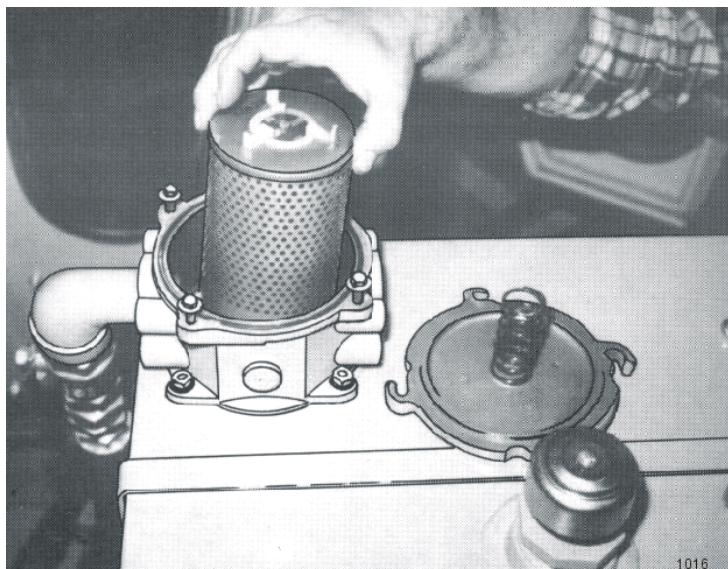
The reservoir should be filled to the top of the lower sight glass on the side of the tank. Do not over-fill. The reservoir has been over-filled when oil is visible in the upper sight glass. If tank has too much oil, the excess may be expelled through the pressurized breather.



## DETAILED MAINTENANCE

### REPLACING IN-TANK HYDRAULIC FILTER:

Loosen the four bolts on the top cover of the filter housing. Turn cover counter-clockwise until cover is free. Remove and replace dirty filter with clean **10 micron** filter. Replace top cover and cover bolts in opposite order as removed.

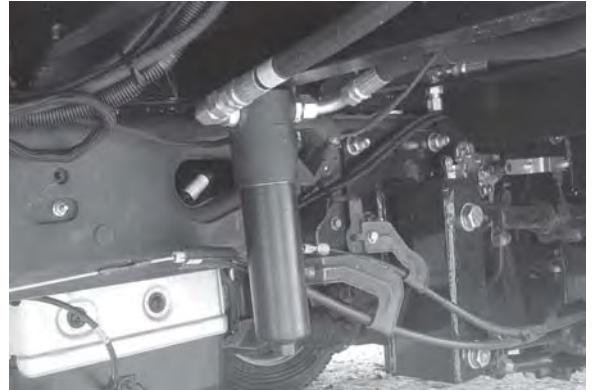


# MAINTENANCE

## DETAILED MAINTENANCE

### REPLACING HIGH PRESSURE HYDRAULIC FILTER ELEMENT:

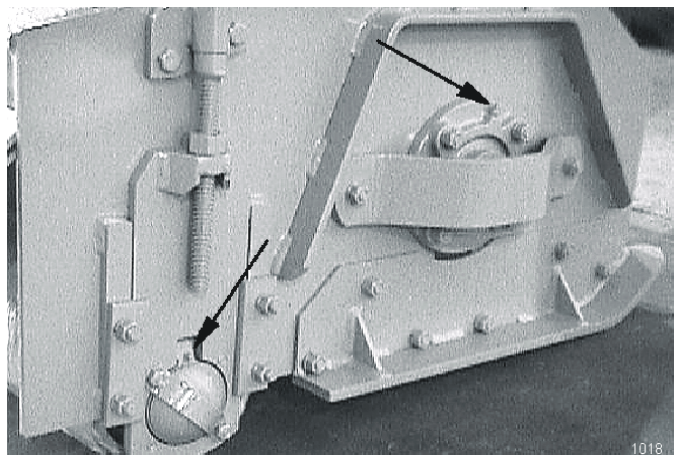
Ensure system has been shut down and de-pressurized. Locate High Pressure Filter housing. Confirm that the element that is about to be installed matches the element p/n on the filter model tag. *Example: V3.0510-06 (world line 100, HD049 model)*. Locate the bottom of the High Pressure Bowl, and using the appropriate spanner wrench or ratchet, turn in a counterclockwise rotation, (looking at the bottom of the bowl) to remove the bowl from the head. The first couple rotations will seem tight as the o-ring passes the sealing flats. Once the o-ring has cleared the sealing flats the bowl should spin freely. Taking care not to drop the bowl, finish removing the bowl from the head.



**WARNING: bowl will be full of oil!** Pour the oil from the bowl into a container. This oil should be considered contaminated due to the outside-in flow direction through the element. Clean the inside of the bowl if “dirt” is present. Remove the old element from the filter head by pulling with a rotation motion. Dispose of the used element properly. Remove the new element from the packaging. Using your finger, dab and lubricate the o-ring in the top of the new element with oil. Install the new element into and on the mounting boss within the head. Ensure that the element is fully seated on the boss. Clean and inspect the o-ring that is affixed in the bowl, lubricate with oil. Using a clockwise rotation, screw the bowl back into the head, ensuring that the bowl has not been cross-threaded into the head. Continue to tighten the bowl into the head, using the spanner wrench or ratchet. The rotation of the bowl will become tighter once the o-ring engages the sealing flats. Once the bowl has bottomed out, “back-off” the bowl by 1/6 turn, this ensures that the o-ring is seated properly with in the sealing flats. Element change out and re-assembly is now complete. Start the machine and inspect the filter area checking that there is no oil leaking from the filter assembly. Replace the element first at 50 hours of operation, then yearly (500 hours) or when indicated by restriction indicator.

### GREASING CUTTER SHAFT – FLAIL MOWERS

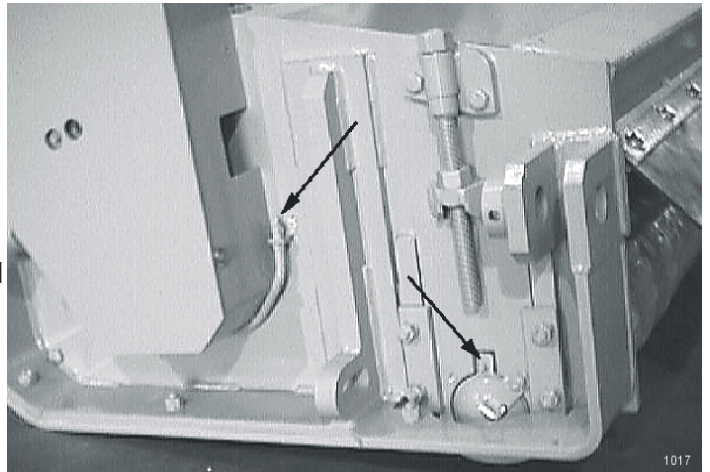
Locate grease zerks on each end of cutter shaft(s), these are located on the bearing cover. Normal conditions require one or two pump in each bearing, using Lithium-Complex Extreme Pressure grease conforming to NLGI2-ISO 320 specifications. This is to be done with a standard grease gun daily or at **8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



## MAINTENANCE

### GREASING GROUND ROLLER SHAFT – FLAIL

Locate grease zerks on each end of roller tube at lower rear of head. Normal conditions require one or two pump in each bearing, using Lithium-Complex Extreme Pressure grease conforming to NLG12-ISO 320 specifications. This is to be done with a standard grease gun daily or at **8 hour intervals**. **CAUTION: Over greasing may cause premature seal failure.**



### TIGHTENING KNIFE BOLTS AND DISK BOLTS:

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

Knife mounting bolts (3ea.) torque to 800 oiled ft. lbs.

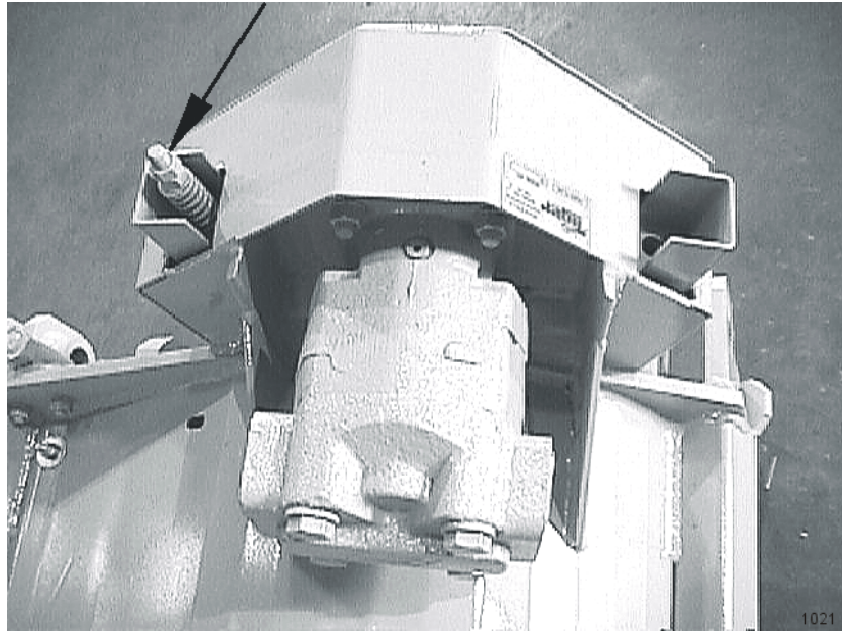
Disk mounting bolts (6ea. ) torque to 204 dry or 184 oiled ft. lbs.



# MAINTENANCE

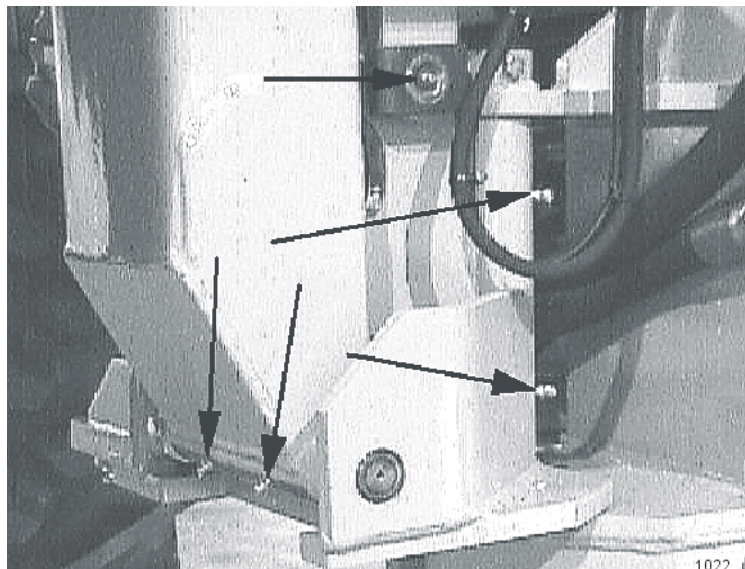
## ADJUSTING / CHECKING BELT TENSION

To adjust belt tension or replace belts on flail cutter head, remove four bolts that secure belt cover and remove cover. The hex nuts shown below can be adjusted to increase / decrease the belt tension as needed. (NOTE: Location of adjustment nuts may vary on flail cutter heads.) **Be sure to replace the belt cover BEFORE operating mower!**



## GREASING THE BOOM SWIVEL

Locate the zerks on the main swivel boss (2), main boom pivot boss (2) and on both ends of the boom swivel cylinder. Inject Lithium-Complex Extreme Pressure grease conforming to NLG12-ISO 320 specifications until grease begins to protrude from ends.



## MAINTENANCE

### GREASING BOOM CYLINDER(S) PIVOT POINTS

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

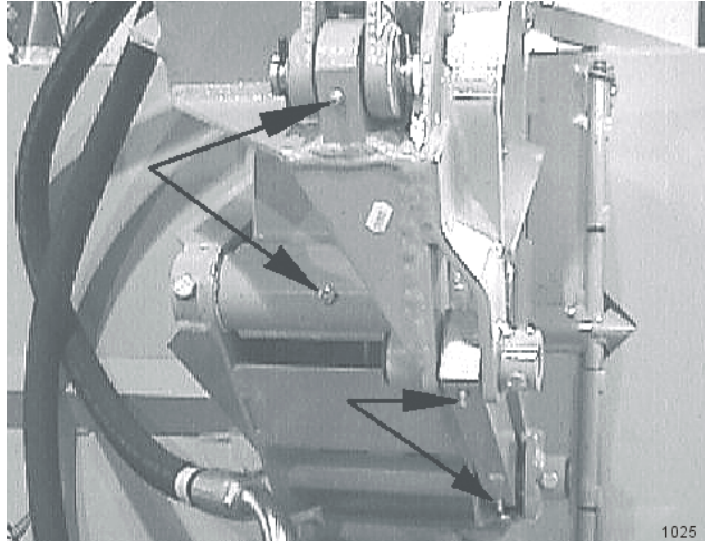
### BALL VALVES

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

# MAINTENANCE

## GREASING POINTS ON BOOM AND PIVOT

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



## DECK STOP ADJUSTMENT

Loosen locking nut. Turn adjustment bolt in, and run deck cylinder out to full extension. Adjust bolt out until the head just touches the boom, and tighten lock nut.

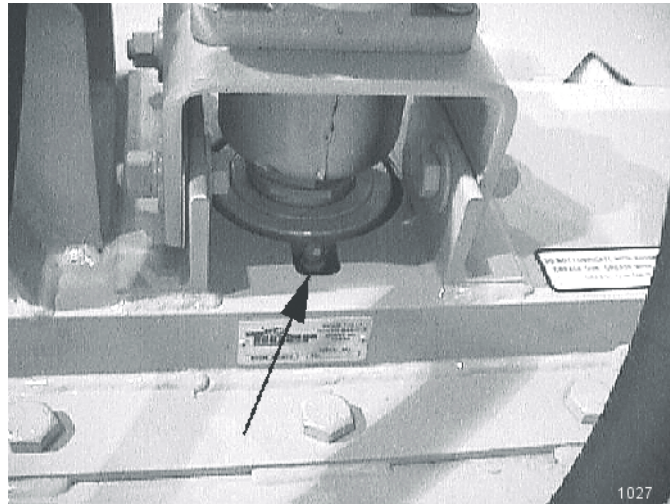
**NOTE: Bolt should not hit boom before cylinder reaches full travel.**



# MAINTENANCE

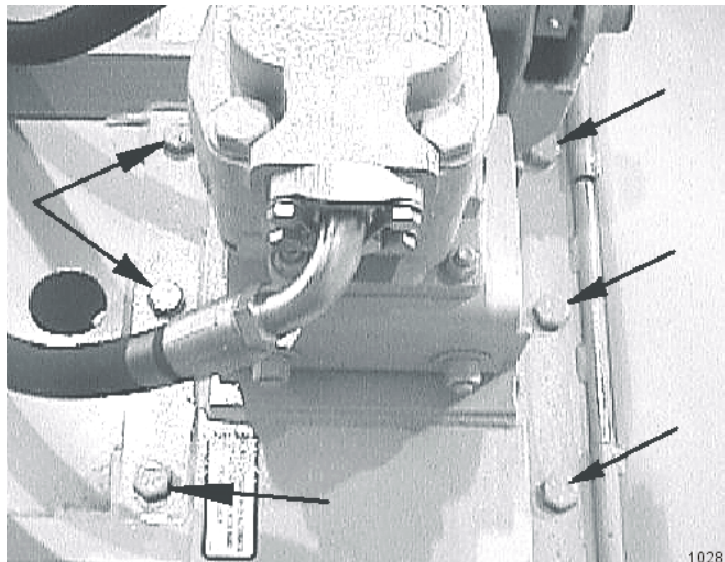
## GREASING SPINDLE

Locate grease fitting on inside of deck housing. Inject Tiger Spindle Lubricant, part number 06540000 into spindle housing. Fill with lubricant until lubricant weeps out of top spindle seal. Lubricate spindle at end of day while mower is still warm.



## TIGHTENING SPINDLE BOLTS

The spindle mounting bolts should be checked and retorqued daily or every 10 hours of service. Torque the (6) bolts shown below to 331 ft. lbs.





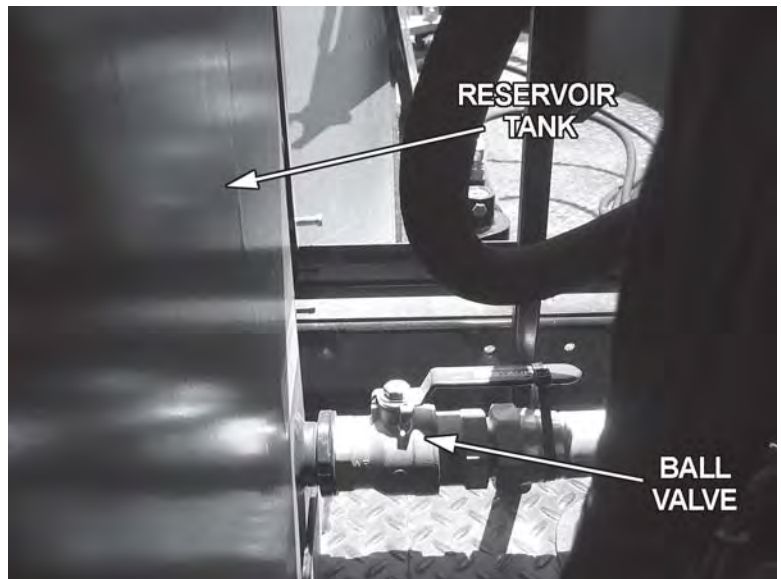
# MAINTENANCE

## GREASING BOOM CYLINDER(S) PIVOT POINTS

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

## BALL VALVES

The ball valve at the hydraulic reservoir may need to be closed during certain maintenance or repair procedures. **THE BALL VALVES MUST BE OPEN (handle parallel with valve) WHEN AUXILIARY ENGINE IS RE-STARTED!** Failure to do so will result in component failure!



# MAINTENANCE

## Blades

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

### CAUTION

Blades should always be replaced in pairs. Blades of different weights can cause serious imbalance and damage to the machine and personnel. When replacing blades, take care to replace the blade bolts, nuts, and washers.

### Important




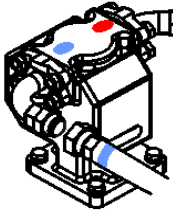
Make sure the mower blades are turning clockwise when looking down from the top of the mower. Follow the color coding on the hydraulic hoses and fittings to make sure the motor and hydraulic hoses are assembled properly. Connect the red hose connection only to red fitting. Connect the blue hose connection only to the blue fitting. The blade rotation on the leading edge of the mower should discharge the cut material away from the tractor and operator.



### WARNING

If the leading edge of the mower blades are rotating backwards they can discharge material toward the operator. If this occurs discontinue mowing immediately and reverse the direction of the motor rotation by correctly installing the motor pressure and return hoses. Contact your dealer or Alamo Industrial for specific information on the hose routing.



<b>WARNING</b>	<b>ADVERTENCIA</b>
<b>TO AVOID SERIOUS INJURY AND DEATH FROM THROWN OBJECTS:</b> <ul style="list-style-type: none"><li>• MAKE CERTAIN blades rotate the correct direction.</li></ul>	<b>PARA EVITAR LESION SERIA O MUERTE POR OBJETOS LANZADOS:</b> <ul style="list-style-type: none"><li>• ASEGURE que las cuchillas giran en la dirección correcta.</li></ul>
<b>BLADE ROTATION</b>  <b>ROTACIÓN DE CUCHILLAS</b>	
 Return Retorno	 Pressure Presión
	

D619

# MAINTENANCE

## ROTARY KNIFE REPLACEMENT

- 1 – Be sure you have a complete matching set of new knives for replacement.
- 2 – Remove knives and inspect holes for damage. Also watch for cracks in the disk around the holes..
- 3 – Install bolt through knife and disk from bottom side of disk. Install new self-locking nuts and torque them to 800 oiled ft. lbs. It is then recommended that the head of the knife mounting bolt be struck sharply with a hammer and the self-locking nut retorqued to 800 oiled ft. lbs.
- 4 – The knives should swing freely to absorb shocks from impact when striking objects.



**WHEN CUTTING HEAVY BRUSH, KNIFE BOLTS SHOULD BE INSPECTED HOURLY AND RETORQUED TO 1070 dry or 800 oiled FT. LBS.**

CAUTION!



## REPLACEMENT OF ROTARY DISK

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

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

# MAINTENANCE

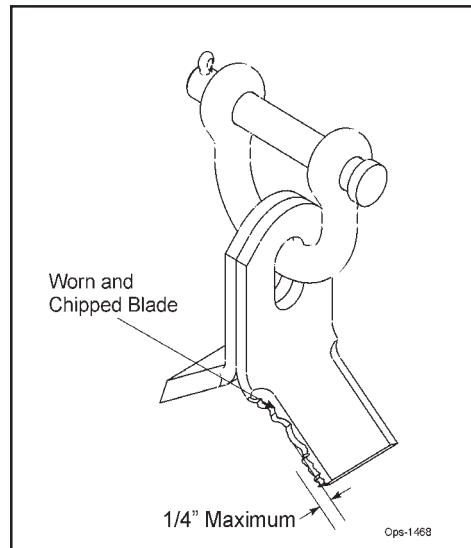
## Flail Blades Inspection

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

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

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

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



Always replace blades in sets

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

### **Important**

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

### **CAUTION**

Never attempt to sharpen blades. OPS-U-0044

# MAINTENANCE

## Blade Pins and D-Ring Inspection

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

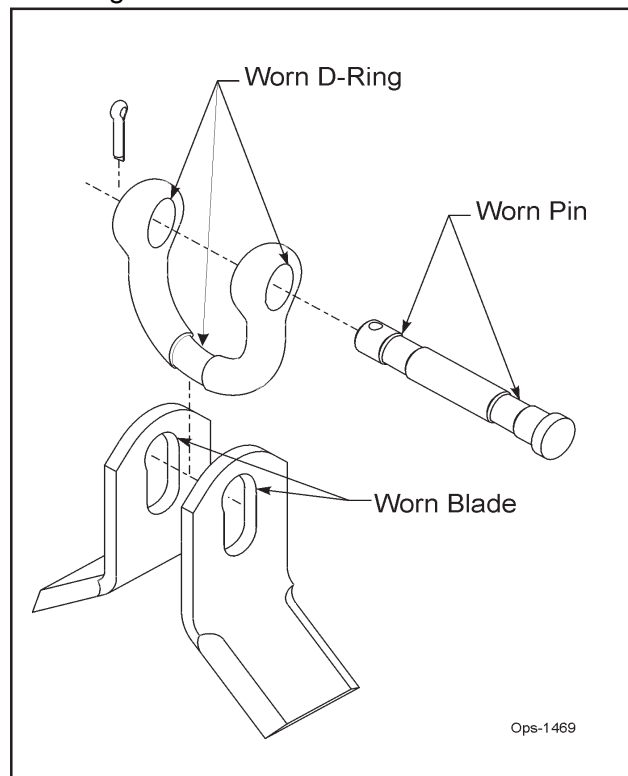


Inspect the Blade pins and D-Rings daily for abnormal wear. Make sure the cotter pins are in place and properly spread. REPLACE BLADE Pins and D-Rings IMMEDIATELY if they have:

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

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

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



### **Important**

the cotter

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

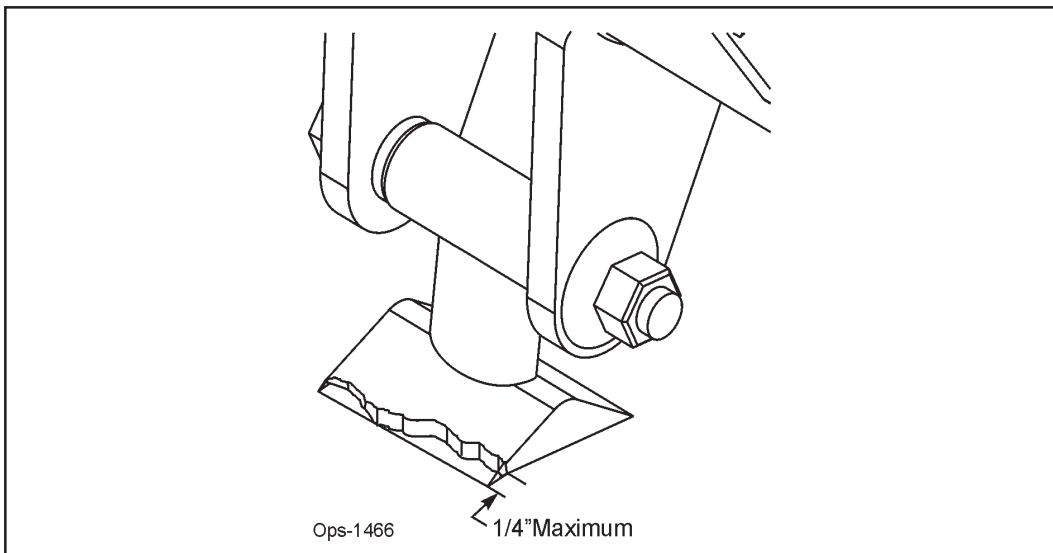
# MAINTENANCE

## Flail Axe Blades Inspection



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

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



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

Always replace blades in sets

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

### Important

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



Never attempt to sharpen blades. OPS-U-0042

# MAINTENANCE

## Flail Axe Blade Bolt Inspection

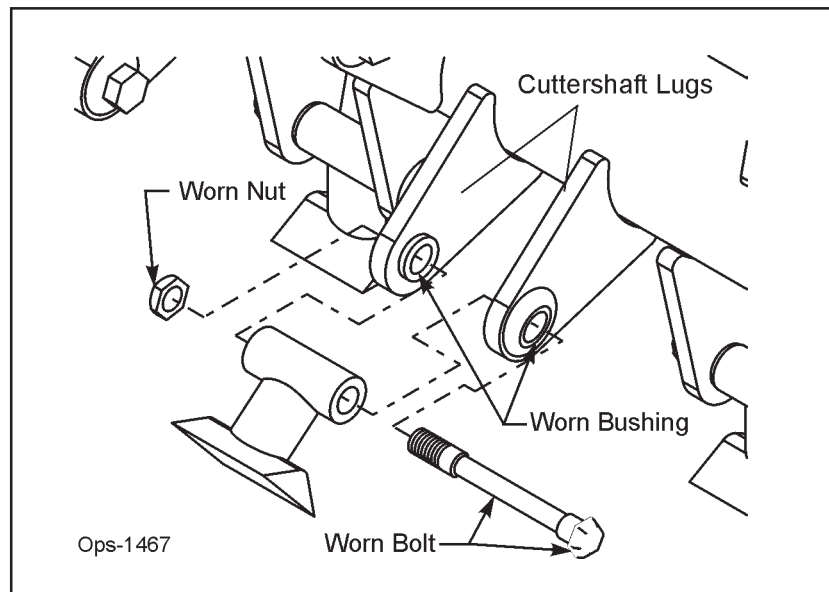
Inspect Blade Bolts daily for wear or damage as follows:

**⚠ DANGER** Inspect the Blade Bolt daily for abnormal wear. REPLACE ALL BLADE BOLTS on the carrier IMMEDIATELY if any bolts have:

- Visible cracks or
- If the blade bolt is worn or any recessed area is visible on the bolt, or
- If Blade Bolt has gouges or chipped areas. or
- If Bushing fits loose in the Rotor Shaft.

Failure to replace abnormally worn bolts or bushings may lead to catastrophic failure of the blades and ejection of the broken part, which may cause serious bodily injury or death.

Always replace Blade Bolts with new bolts and new bushings whenever replacing the Blades. To tighten bolts and nuts, first apply thread lock to nut. Make sure to tighten bolts and nuts just enough to allow the blades to swing freely and not bend the cuttershaft lugs. If cuttershaft lugs are bent together because of over tightening the blades will not swing freely. OPS-U-0043



# MAINTENANCE

## 50" FLAIL KNIFE BLADE REPLACEMENT

1. If knives are damaged or badly worn, they will need to be replaced as a set. Replacing a single knife can cause severe vibration and possible damage to the mower. The knife should not be welded on for any reason.
2. Always replace the knife bolts when replacing the knives. **DO NOT REUSE THE KNIFE BOLTS OR NUTS.**
3. Assemble knives, bushings, bolts and nuts as shown in part section of the manual.
4. Install the locking hex nut so that the flat face of the nut is towards the knife.
5. Apply loctite "271" or equivalent to threads.
6. Torque nut to 50 ft. lbs. Knife must swing freely.



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

## 63" BOOM FLAIL KNIFE REPLACEMENT

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



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



**Knives should not be welded on for any reason.**

## HEAVY DUTY SPINDLE ASSEMBLY INSTALLATION AND BEARING ADJUSTMENT

**WARNING!** A press **MUST** be used to install bearing cups, bearing cones, and seals. **DO NOT** use a hammer to install races, bearings, or seals. The parts of assembly may be damaged.

**NOTE:** The grease zerk and gussets are located on the top side of the spindle housing. Be sure the spindle is assembled correctly.

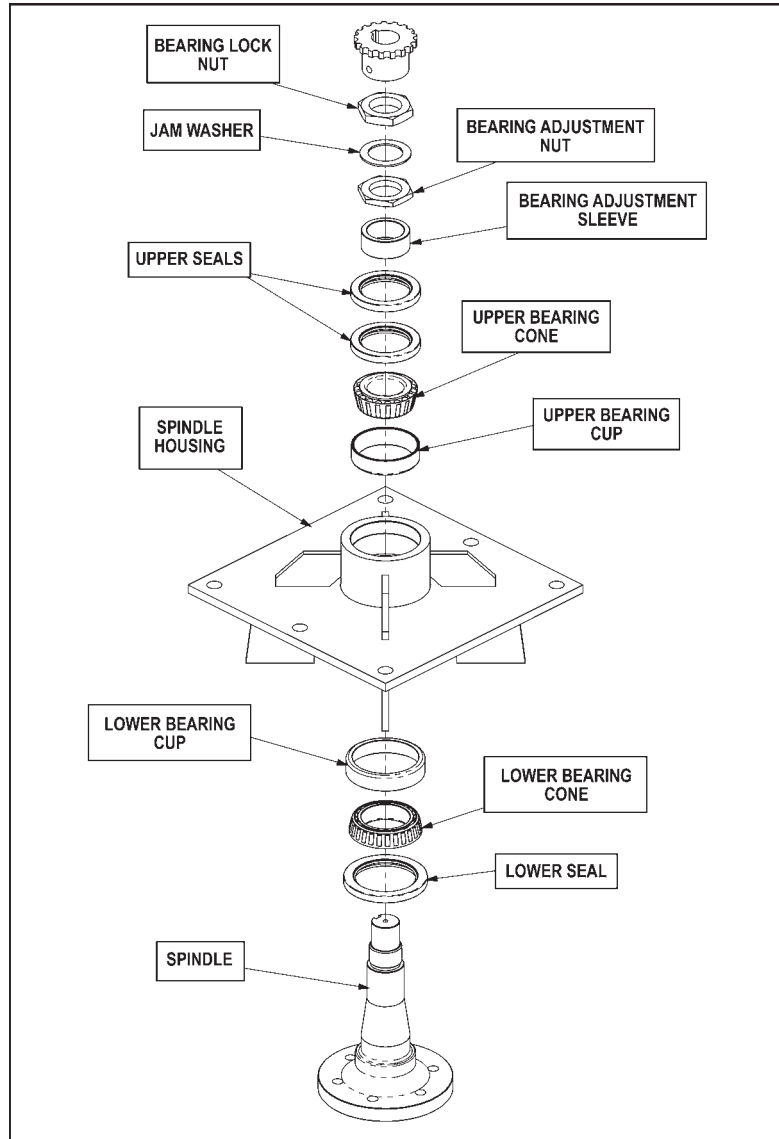
Be sure to wear eye protection and other protective equipment as needed when working on spindle assembly.



# MAINTENANCE

## THE SPINDLE ASSEMBLY

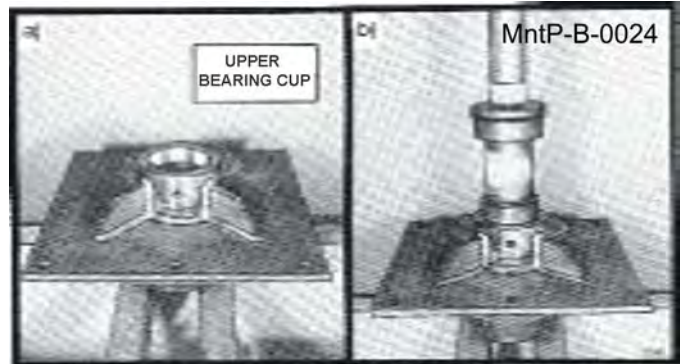
See the diagram below for identification of spindle parts, while servicing.



# MAINTENANCE

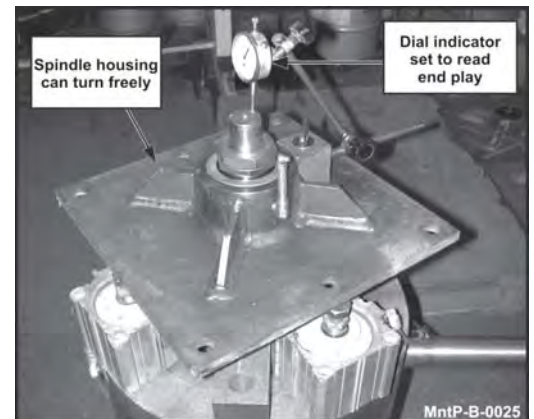
## BEARING INSTALLATION

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



## BEARING ADJUSTMENT

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



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

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

# MAINTENANCE

## Boom Cylinder Removal and Replacement Instructions

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

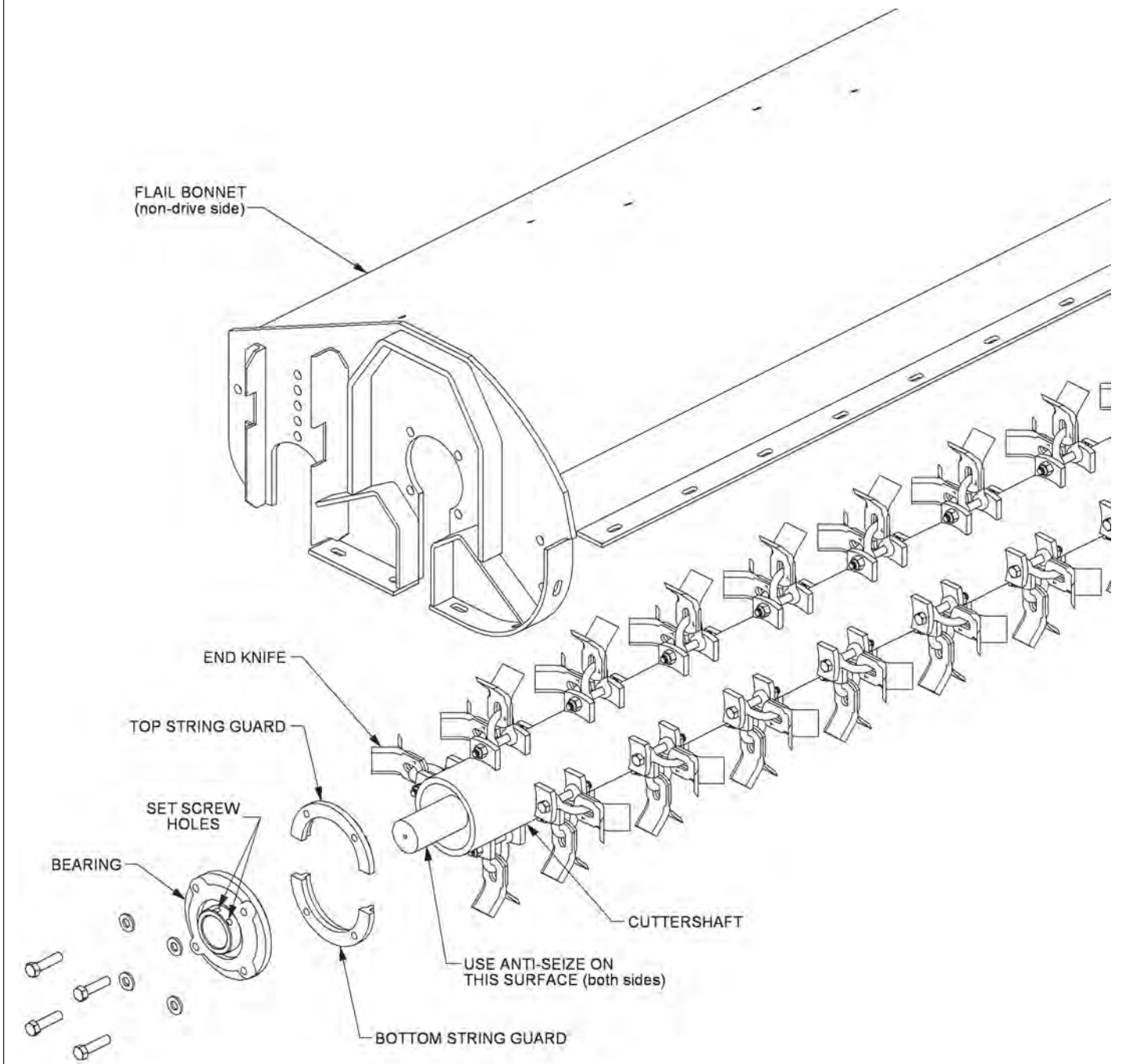
# MAINTENANCE

## CUTTERSHAFT BEARING REPLACEMENT

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

**See illustration on next page**

# MAINTENANCE



# MAINTENANCE

## DAILY MAINTENANCE SCHEDULE

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

- \_\_\_\_\_ Pump Drive Shaft: If required with drive shaft/coupler check for end play and lubricate at zerks.
  
- \_\_\_\_\_ Crankshaft adapter: If equipped with rubber grommets check condition, replace if missing or damaged.
  
- \_\_\_\_\_ Pivot points: Inject grease until it appears at ends.
  
- \_\_\_\_\_ Hydraulic fittings: Check for leaks with paper or cardboard. Tighten fittings or replace hoses immediately.
  
- \_\_\_\_\_ Knives: Inspect for missing or damaged knives, change (only complete sets) as needed.
  
- \_\_\_\_\_ Belts: Check/Tighten/Replace belts as needed.
  
- \_\_\_\_\_ Main Frame/Deck: Unless otherwise specified retorqued bolts according to torque specifications in this section.
  
- \_\_\_\_\_ Hydraulic Fluid Level: Add, if required, per fluid recommendations.
  
- \_\_\_\_\_ Rear Flail Drive, Bearing Flange and Shaft Couplers: Grease as instructed in the detailed maintenance section.
  
- \_\_\_\_\_ Cuttershaft and Ground Roller: Grease as instructed in the detailed maintenance section.

Service performed by: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Hour

Meter: \_\_\_\_\_

Maintenance Section

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

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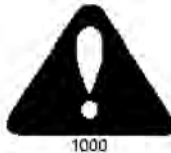


## PARTS ORDERING GUIDE

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

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

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

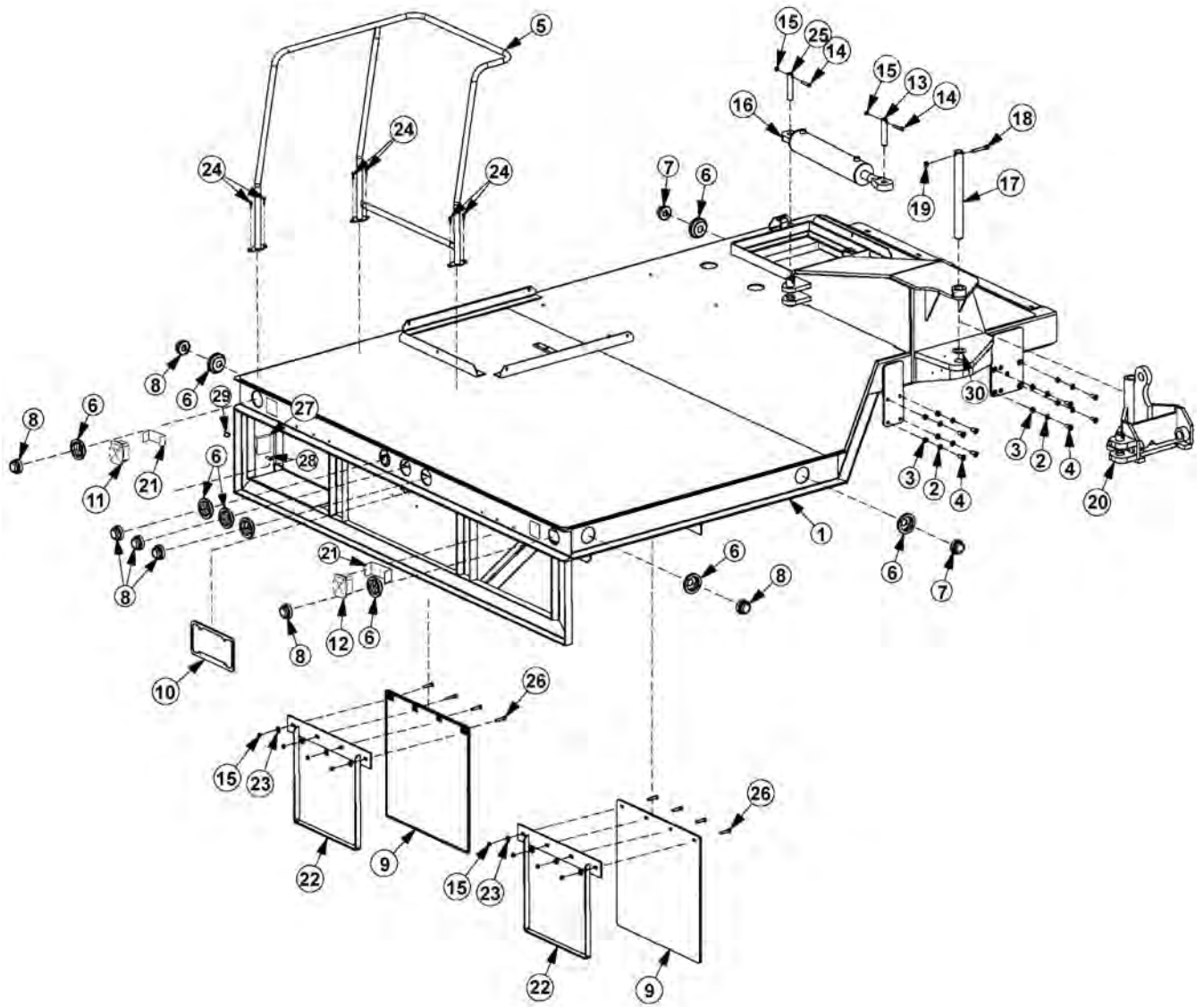


For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

Direct any questions regarding parts to:

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

# TRUCK BED ASSEMBLY

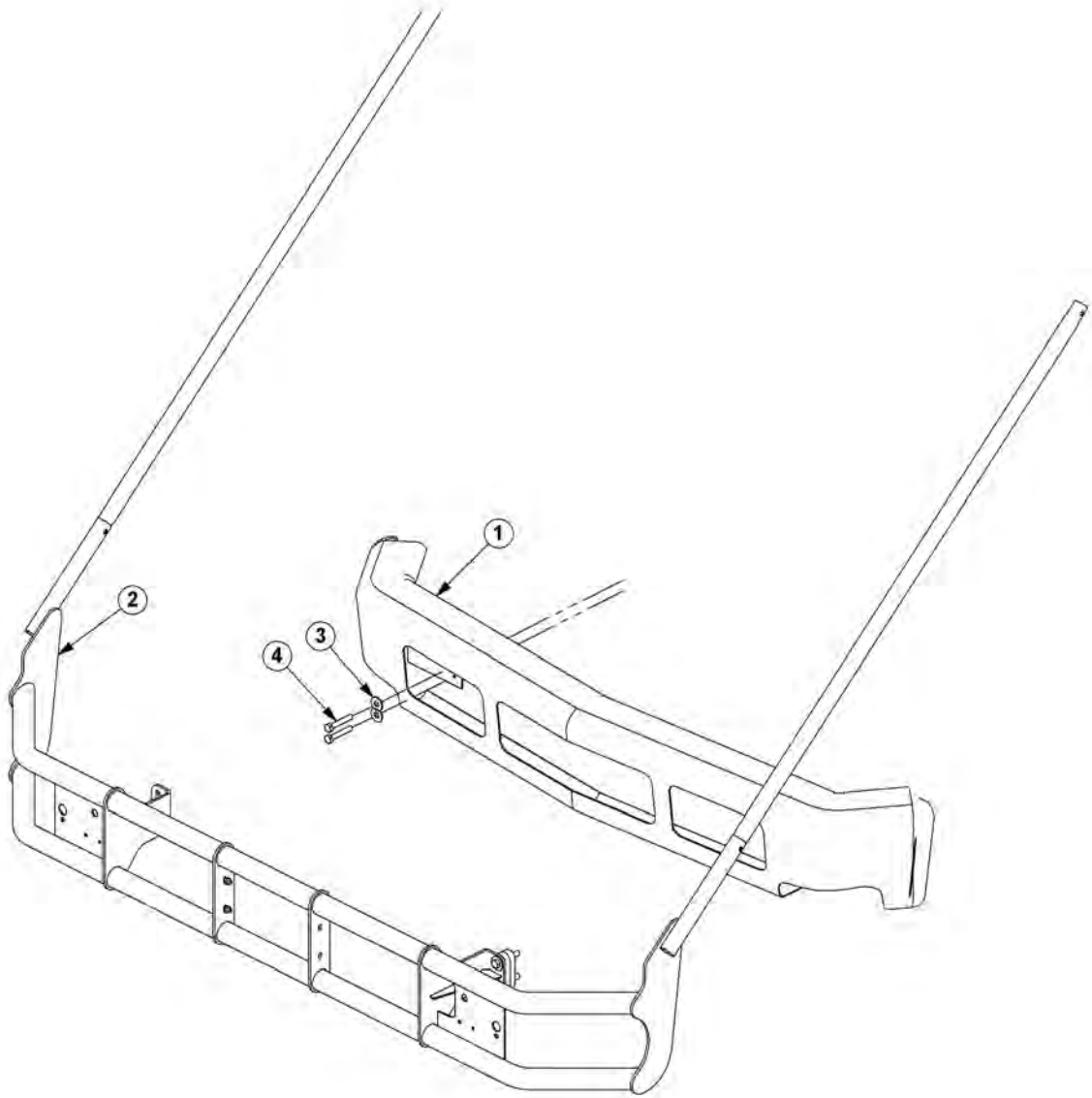


## TRUCK BED ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06300335	1	MAINFRAME
2	21992	26	LOCKWASHER,5/8"
3	6T2408	26	HEX NUT,5/8",NF
4	06530100	26	CAPSCREW,5/8" X 2",SKT HD,NF
5	35128	1	HANDRAIL
6	35116	9	LIGHT GROMMET,RUBBER
7	06510015	2	AMBER LIGHT
8	06510014	7	RED LIGHT
9	35178	2	MUD FLAP
10	-----	-	LICENSE PLATE HOLDER (EXISTING TRUCK PART)
11	-----	-	LEFT TAIL LIGHT (EXISTING TRUCK PART)
12	-----	-	RIGHT TAIL LIGHT (EXISTING TRUCK PART)
13	35190	1	PIN,1" X 5"
14	21634	2	CAPSCREW,3/8" X 2",NC
15	21627	10	NYLOCK NUT,3/8",NC
16	33705	1	CYLINDER,SWIVEL
17	TB3014	1	PIN,SWIVEL BRACKET
18	21688	1	CAPSCREW,7/16" X 3-1/4",NC
19	21677	1	NYLOCK NUT,7/16",NC
20	35017	1	BOOM SWIVEL
21	06410035	2	TAIL LIGHT BRKT
22	35180	2	RETAINER,W/BAR,MUDFLAP
23	22016	8	FLATWASHER,3/8"
24	06530202	6	CAPSCREW,3/8" X 3/4",SELF TAPPING
25	35191	1	PIN,SWIVEL TAPPED
26	21633	4	CAPSCREW,3/8" X 1-3/4",NC
27	6T3922	1	SWTCH,BACKUP ALARM
28	27260	3	SCREW,MACHINE,10-24 X 1"(RD HEAD)
29	24890	3	NYLOCK NUT,10-24
30	06520049	1	THRUST WASHER

## BUMPER ASSEMBLY

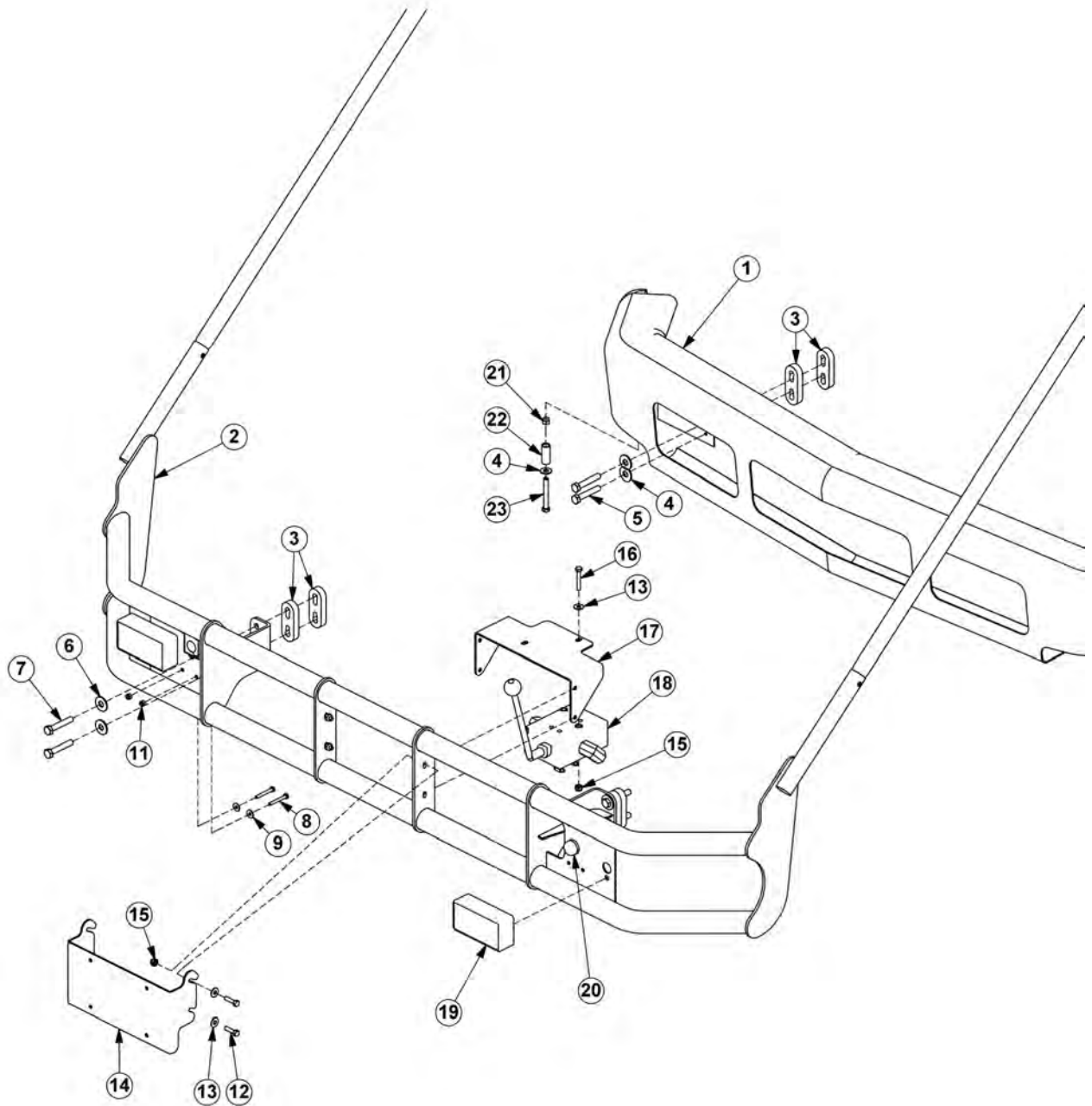


ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	BUMPER (EXISTING TRUCK PART)
2	06330029	1	BUMPER MOUNT,2011
3	-----	-	FLATWASHER (EXISTING TRUCK PART)
4	-----	-	CAPSCREW (EXISTING TRUCK PART)

**NOTES**

**NOTES**

# BUMPER MOUNT AND ASSEMBLY

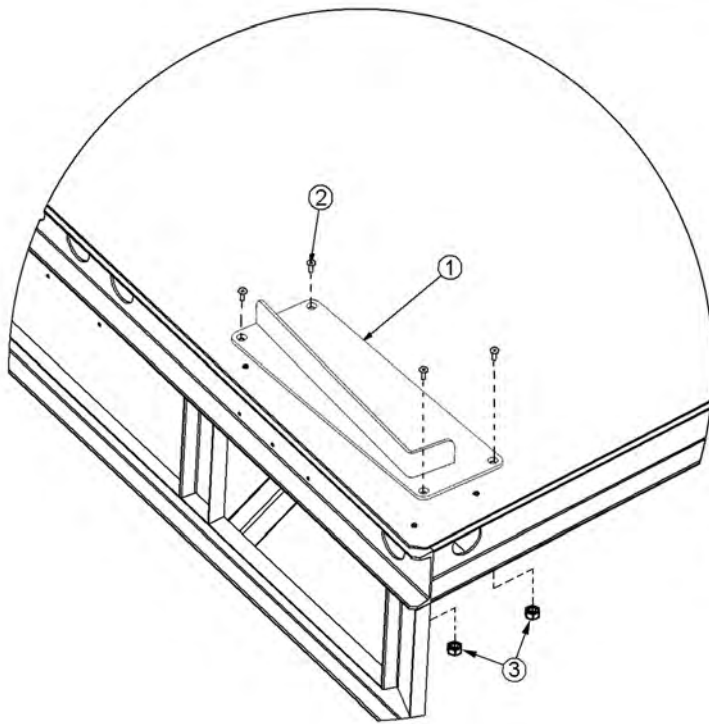


## BUMPER MOUNT AND ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	BUMPER
2	06330029	1	BUMPER MOUNT,2011
3	06400657	8	SPACER,BUMPER
4	22016	6	FLATWASHER,3/8
5	06530535	4	CAPSCREW,10MM X 60MM,1.5P
6	22018	4	FLATWASHER,1/2,WIDE
7	06530519	4	CAPSCREW,12MM X 70MM,1.75P,GR8.8
8	21534	2	CAPSCREW,1/4 X 2,NC
9	22014	2	FLATWASHER,1/4
10	06520326	2	HAND PUMP
11	21527	2	NYLOCK NUT,1/4,NC
12	21581	4	CAPSCREW,5/16 X 1-1/4,NC
13	22015	7	FLATWASHER,5/16
14	06411196	1	HOLDER,LISCENSE PLATE
15	21577	7	NYLOCK NUT,5/16,NC
16	21583	3	CAPSCREW,5/16 X 1-3/4,NC
17	06411200	1	MOUNT,VALVE,RAILGEAR
18	-----	1	VALVE,RAILGEAR
19	-----	2	WIGWAG
20	06510131	1	SWITCH,RAILGEAR,PUMP
21	21627	2	NYLOCK NUT,3/8",NC
22	06430118	2	SPACER
23	21638	2	CAPSCREW,3/8" X 3",NC

## DECK STOP - TRB

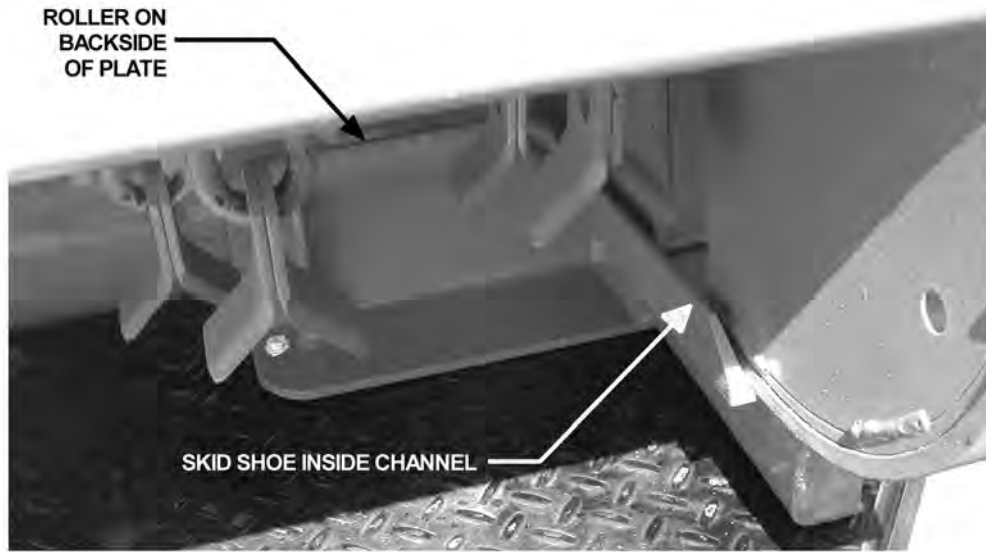


USING HARDWARE, MOUNT  
DECK STOP AS SHOWN.

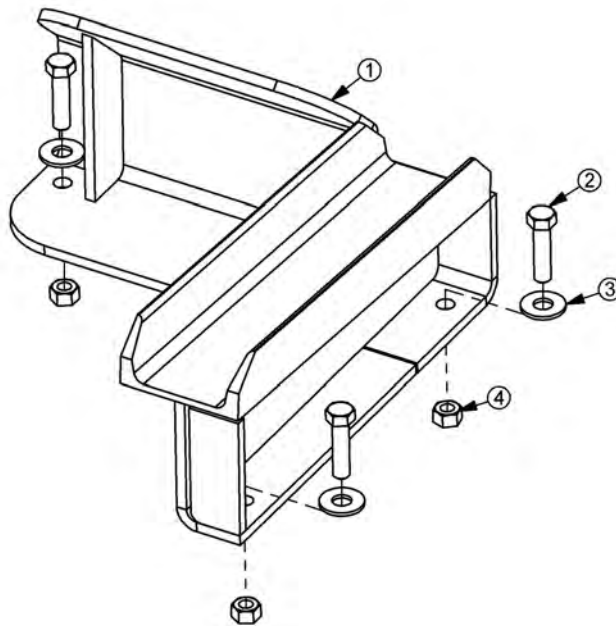
ITEM	PART NO.	QTY.	DESCRIPTION
1	35316	1	DECK STOP,60"
2	28734	4	CAPSCREW,3/8" X 1",NC,SKT HD
3	21627	4	NYLOCK NUT, 3/8" NC



## DECK STOP - TBF

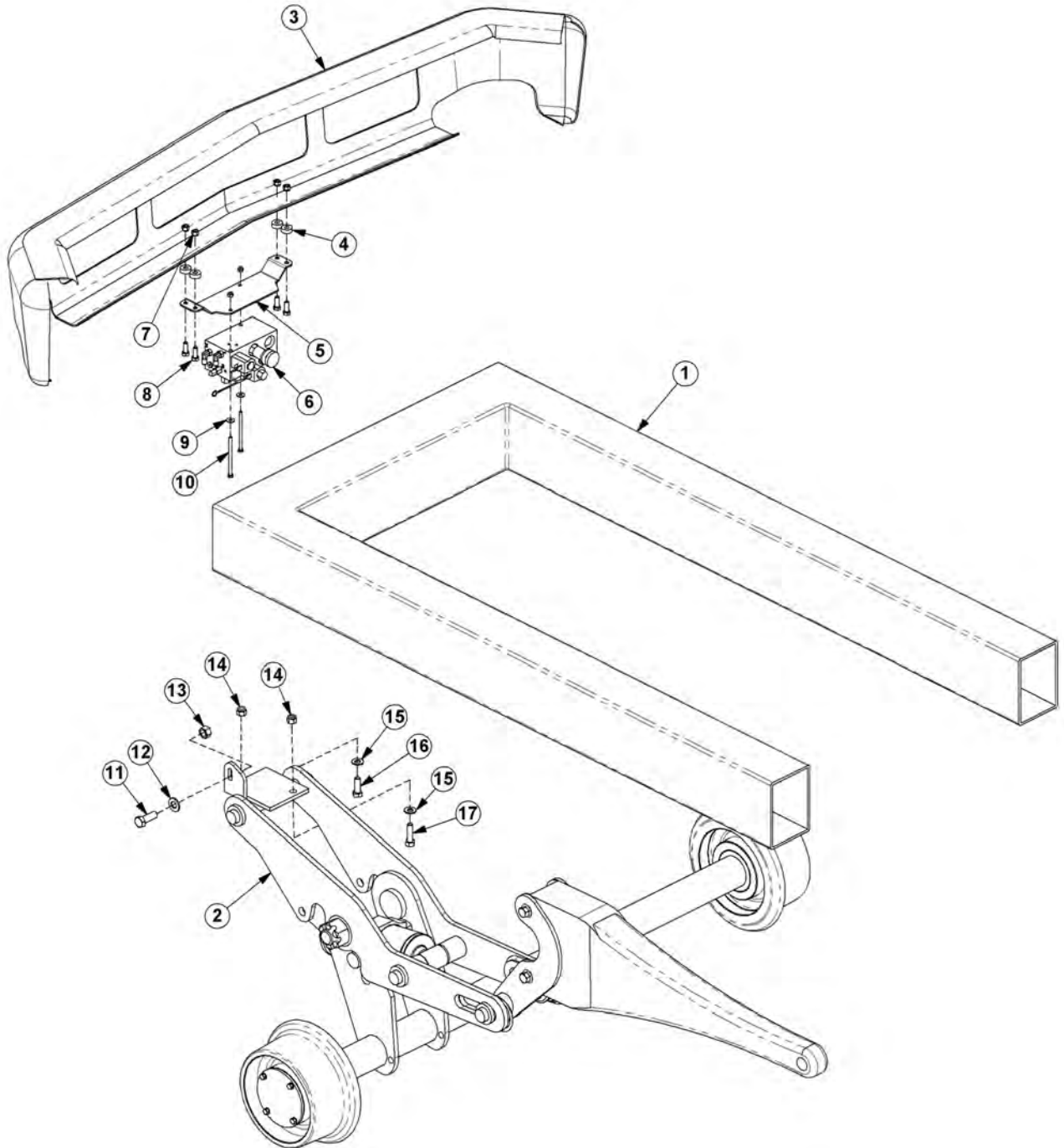


1. LOCATE DECK STOP WITH MOWER HEAD AND MARK HOLE LOCATIONS.
2. MAKE SURE HOLES ARE NOT THROUGH OR TOO CLOSE TO ANY STRUCTURES UNDER DECK.
3. DRILL HOLES WITH 13/32" BIT.
4. MOUNT 35324 WITH INCLUDED HARDWARE.



ITEM	PART NO.	QTY.	DESCRIPTION
1	35324	1	DECK STOP, TBF
2	21632	3	CAPSCREW, 3/8" X 1-1/2", NC
3	22016	3	FLATWASHER, 3/8"
4	21627	3	NYLOCK NUT, 3/8", NC

# MANIFOLD AND FRONT RAILGEAR MOUNT

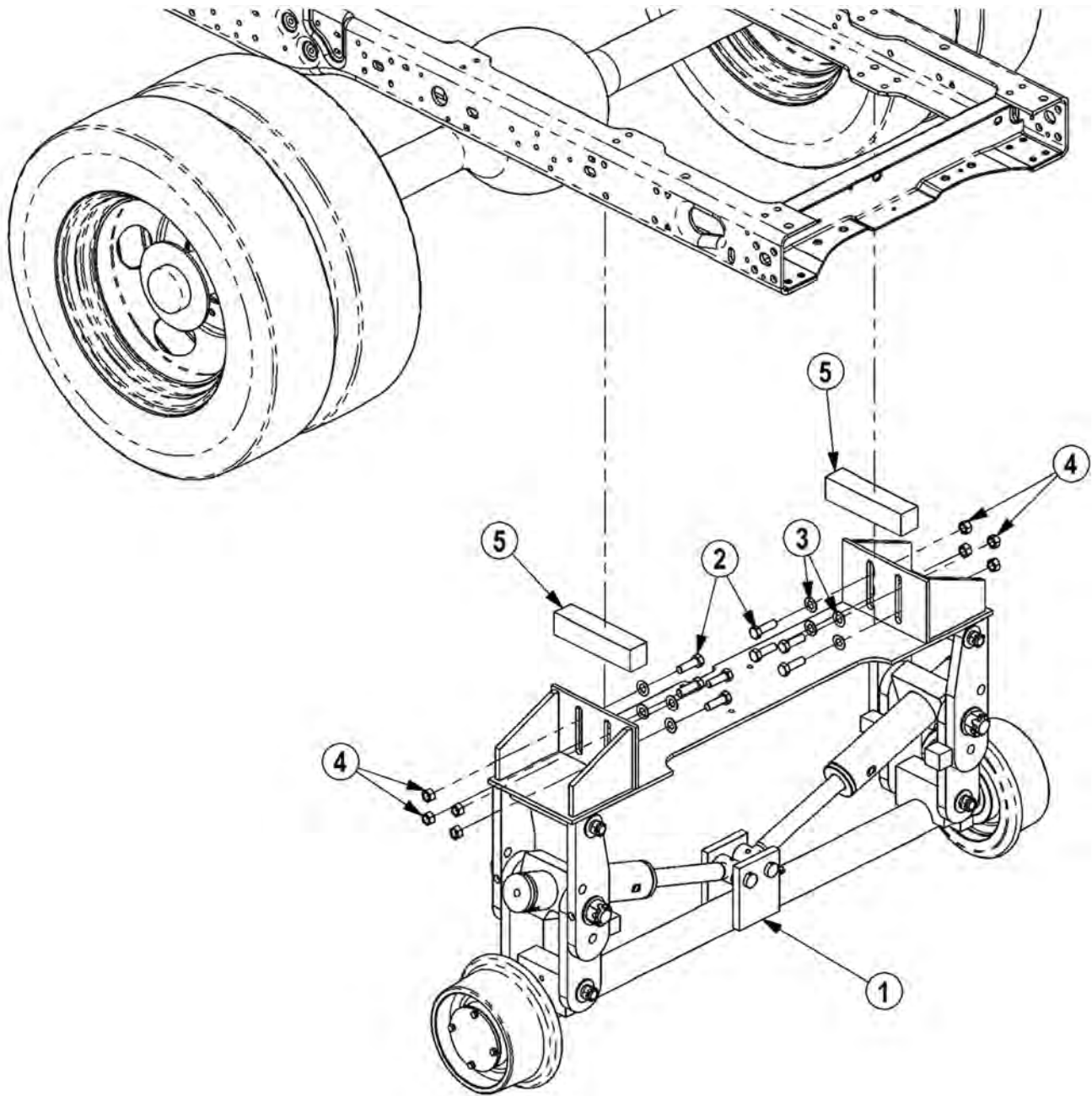


## MANIFOLD AND FRONT RAILGEAR MOUNT

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	FRNT CHASSIS
2	-----	1	FRNT RAIL GEAR
3	-----	1	BUMPER
4	27081	4	SPACER
5	06410759	1	MNT,BRKT,MANIFOLD
6	-----	1	MANIFOLD,RAIL GEAR
7	21627	4	NYLOCK NUT,3/8",NC
8	21631	4	CAPSCREW,3/8" X 1-1/4",NC
9	22014	2	FLATWASHER,1/4"
10	21542	2	CAPSCREW,1/4" X 4",NC
11	6T2259	1	CAPSCREW,5/8" X 1-3/4",NF
12	33764	1	FLATWASHER,5/8",SAE
13	21752	1	NYLOCK NUT,5/8",NF
14	21727	2	NYLOCK NUT,1/2",NC
15	06533004	2	FLATWASHER,1/2",SAE
16	6T2279	1	CAPSCREW,1/2" X 1-1/2",NC
17	6T1027	1	CAPSCREW,1/2" X 1-3/4",NC

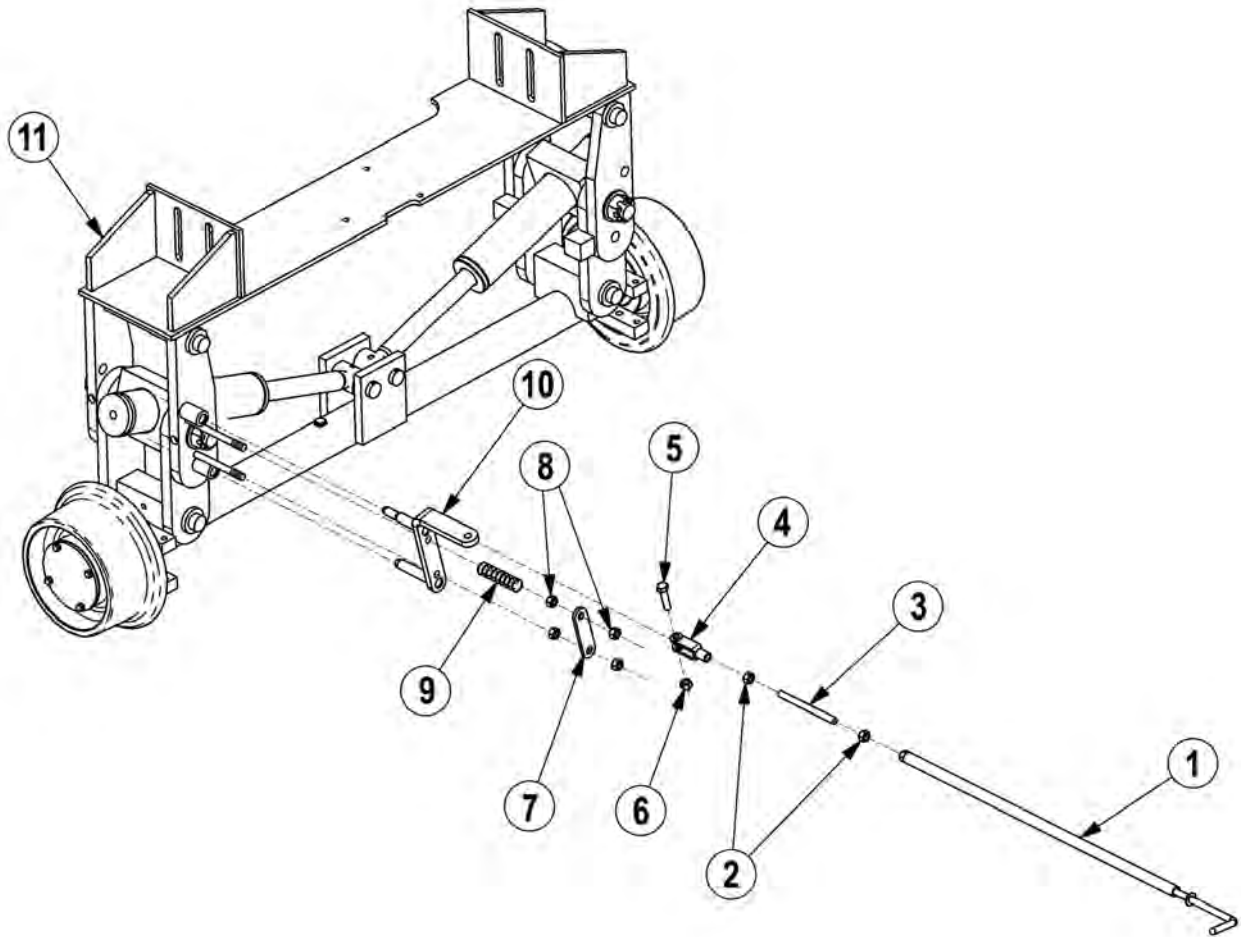
## RAILGEAR MOUNTING



ITEM	PART NO.	QTY.	DESCRIPTION
1	06520194	1	RAIL GEAR,RAILKUT
2	21784	8	CAPSCREW,5/8" X 2-1/4",NC
3	33764	16	FLATWASHER,5/8",SAE
4	21775	8	HEX NUT,5/8",NC
5	06400409	2	SPACER,2" X 2" X 16"

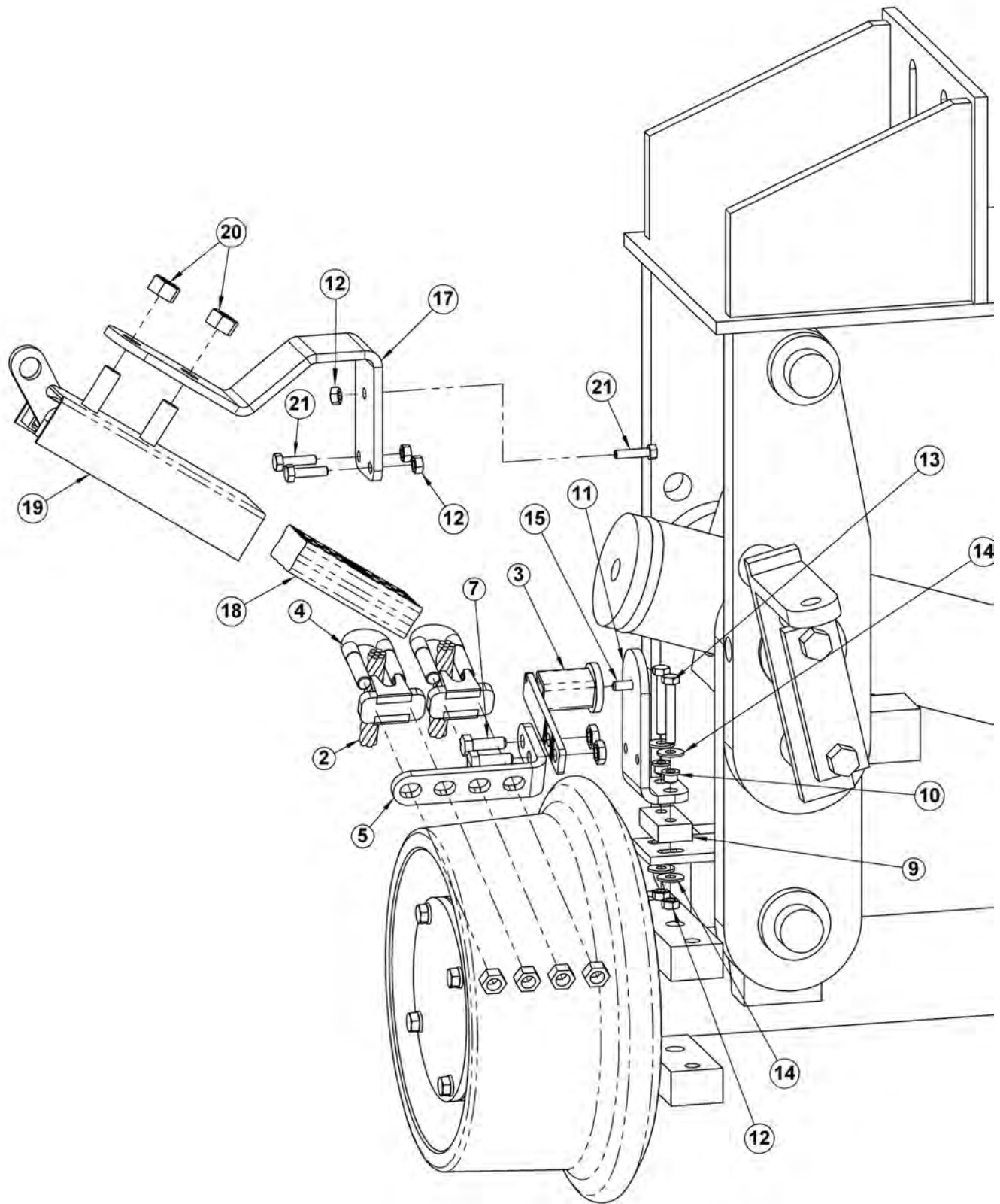
RAILKUT T4

## REAR LOCKING ARM - RAILGEAR



ITEM	PART NO.	QTY.	DESCRIPTION
1	06370166	2	LOCK,ARM,REAR,RAILKAT
2	21700	4	HEX NUT,1/2",NF
3	32481	2	ROD,THREADED,1/2-20,NF,6" LONG
4	PT3611A	2	CLEVIS,6"
5	21733	2	CAPSCREW,1/2" X 2",NC
6	21727	2	NYLOCK NUT,1/2",NC
7	06400408	2	PLATE,SPRING
8	-----	-	HEX NUT (EXISTING)
9	06520205	2	SPRING
10	06370057	2	LOCK,ARM,REAR
11	06520194	1	RAIL GEAR,RAILKAT

# SHUNT OPTION & GREASER MOUNTING - REAR RAILGEAR

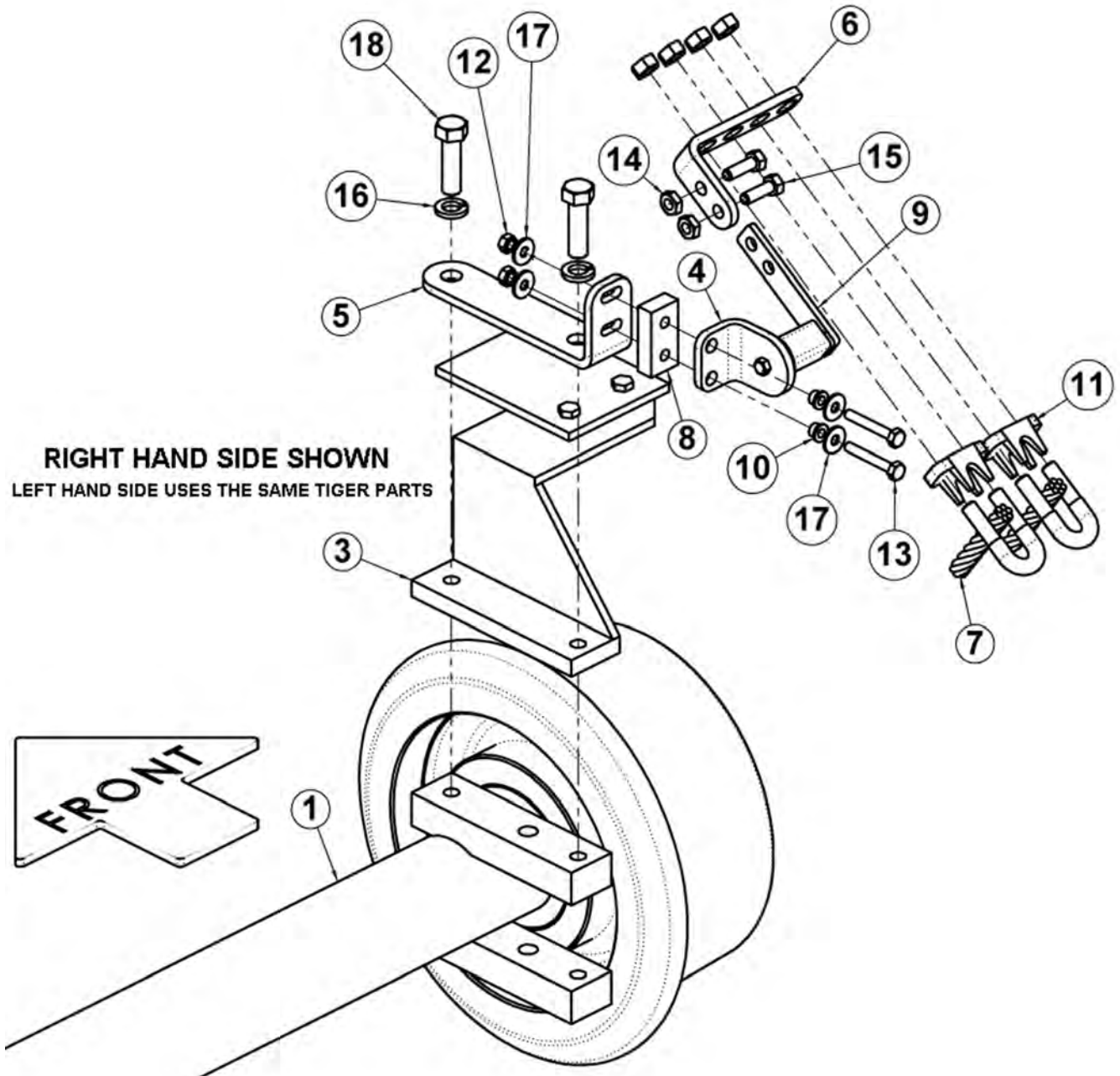


## SHUNT OPTION & GREASER MOUNTING - REAR RAILGEAR

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	REAR RAIL GEAR AXLE
2	06520248	4	STEEL CABLE,7 STRAND
3	06520251	2	TNSNR,BLT,ROSTA,SE11
4	06537014	4	U-BOLT,CABLE,1/2"
5	06410672	2	MNT,CABLE,RAILKUT
6	21577	4	HEX NUT,NYLOCK,5/16" NC
7	21580	4	BOLT,5/16 X 1 NC
8	06400748	2	MNT,UHMW,REAR,RAILKUT - IN ASSEMBLY SECTION
9	06520249	3	STRIP,.5" X 1" X 2",ISO
10	06520252	4	BUSHING,.38"OD X .25"ID X .31",.50"SHLDR
11 - 21	-----	-	REQUIRED FOR GREASER WITHOUT SHUNT
11	06410673	2	MNT,ROSTA,REAR,RAILKUT
12	21527	6	HEX NUT,NYLOCK,1/4" NC
13	21533	4	BOLT,1/4" X 1-3/4" NC
14	22014	8	FLATWASHER,1/4"
15	06530501	2	BOLT,6MM X 25MM,1.0P
17 - 21	-----	-	REQUIRED FOR GREASER WITH SHUNT
17	06410850	1	MNT,GREASER,RAILKUT
18	06520397	1	GREASE,SINGLE
---	06520398	1	GREASE,CASE (12 STICKS) (OPTIONAL)
19	06520396	1	GREASE APPLICATOR
20	21727	2	NYLOCK NUT,1/2"
21	21530	3	BOLT,1/4" X 1",NC
---	06520399	1	GREASE LOADING TOOL

# SHUNT OPTION - FRONT RAILGEAR





## SHUNT OPTION - FRONT RAILGEAR

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	AXLE
2	-----	1	LH FLAP (OTHER SIDE)
3	-----	1	RH FLAP
4	06410670	2	MNT,ROSTA,FRONT,RAILKUT
5	06410671	2	MNT,UHMW,FRONT,RAILKUT
6	06410672	2	MNT,CABLE,RAILKUT
7	06520248	4	STEEL CABLE,7 STRAND
8	06520249	2	STRIP,.5" X 1" X 2",ISO
9	06520251	2	TNSNR,BLT,ROSTA,SE11
10	06520252	4	BUSHING,.38"OD X .25"ID X .31",.50"SHLDR
11	06537014	4	U-BOLT,CABLE,1/2"
12	21527	4	HEX NUT,NYLOCK,1/4",NC
13	21533	4	CAPSCREW,1/4" X 1-3/4",NC
14	21577	4	HEX NUT,NYLOCK,5/16",NC
15	21580	4	CAPSCREW,5/16" X 1",NC
16	21990	4	LOCKWASHER,1/2"
17	22014	8	FLATWASHER,1/4"
18	6T1027	4	CAPSCREW,1/2" X 1-3/4",NC

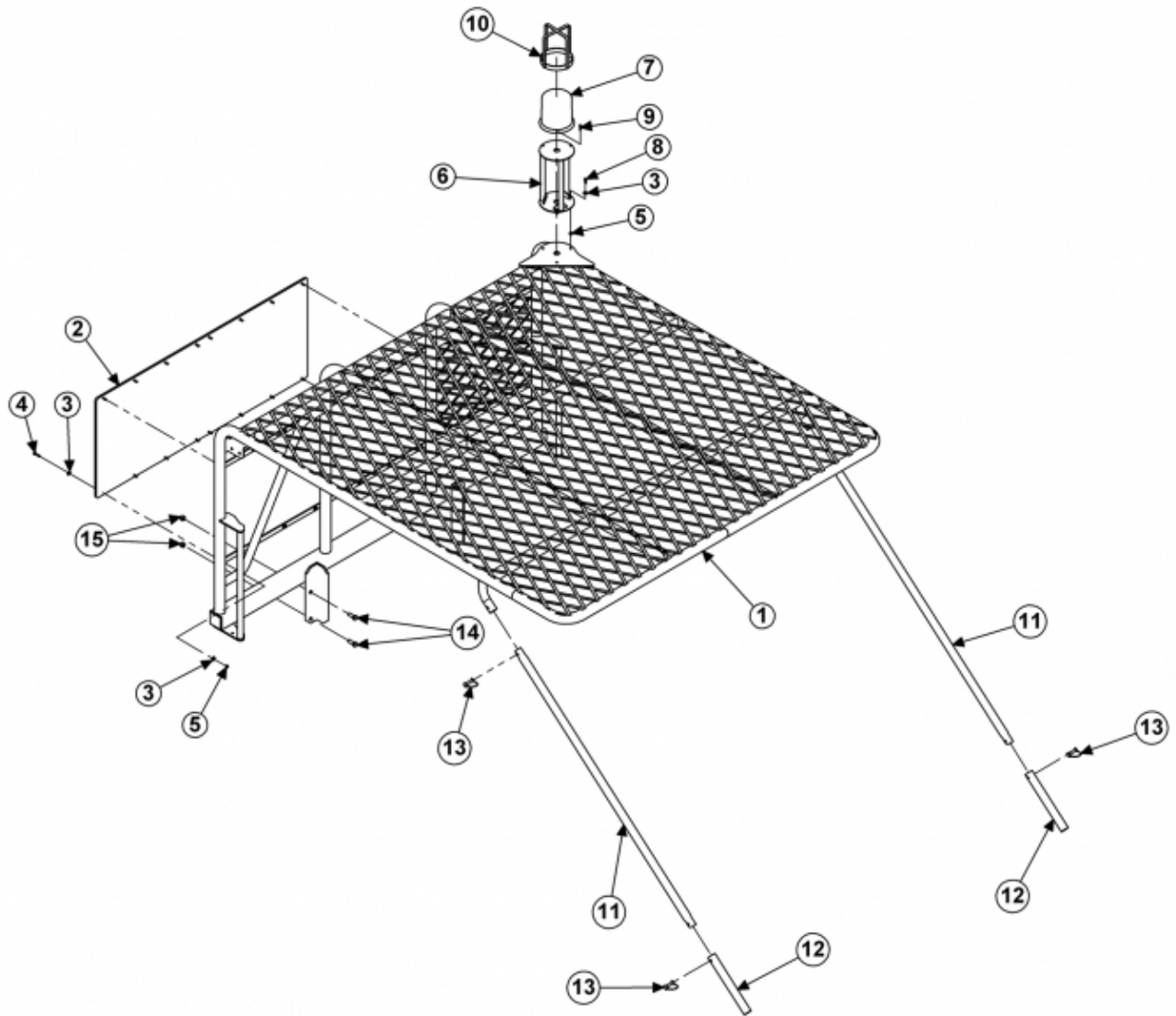


## RAILGEAR HYDRUALICS

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06500377	4	HOSE,1/4" X 47"
2	06503060	1	ELBOW,3/8"MP X 1/4"MJ45
3	06503104	1	TEE,1/4"MP X 1/4"MJ X 1/4"MJ
4	06500381	3	HOSE,1/4" X 200"
5	06520325	1	STRAINER,150MESH
6	06500537	1	HOSE,1/4" X 330"
7	31665	5	HOSE,BULK,1/2" (4.33 FEET)
8	06520326	2	PUMP,HAND,3000PSI
9	31665	13	HOSE,BULK,1/2" (12.5 FEET)
10	06500244	1	HOSE,1/4" X 16"
11	31665	15	HOSE,BULK,1/2" (14.25 FEET)
12	06503105	2	TEE,BRANCH,1/4"FJX X 1/4"MJ X 1/4"FJX
13	06520329	2	VLV,CHECK,3500PSI
14	06503109	1	TEE,BARB,1/2"
15	06503108	1	ADAPTER,BARB,1/2" X 1/2"MP
16	32899	1	ADAPTER,1/4"MJ X 1/2"MOR
17	06503112	2	ELBOW,1/2"MOR ADJ X 1/2"BARB
18	06500377	2	HOSE,1/4" X 47"
19	06505075	1	TEE,BRAKES
20	34381	6	CLAMP,HOSE,1/2"
21	06520355	1	RESERVOIR,RAILGEAR
22	06503150	1	ELBOW,1/2"MOR X 1/4"MJ45
23	-----	1	BRAKE MANIFOLD
24	-----	2	FRONT VALVE
25	-----	2	REAR VALVE
26	-----	1	PUMP
---	06520410	1	MOTOR,RAILGEAR
----	X4104002	1	PUMP AND MOTOR ASSY
27	-----	2	FRONT CYLINDER
28	-----	2	REAR CYLINDER
29	-----	4	HOSES,REAR CYLINDER

# HEADACHE RACK ASSEMBLY

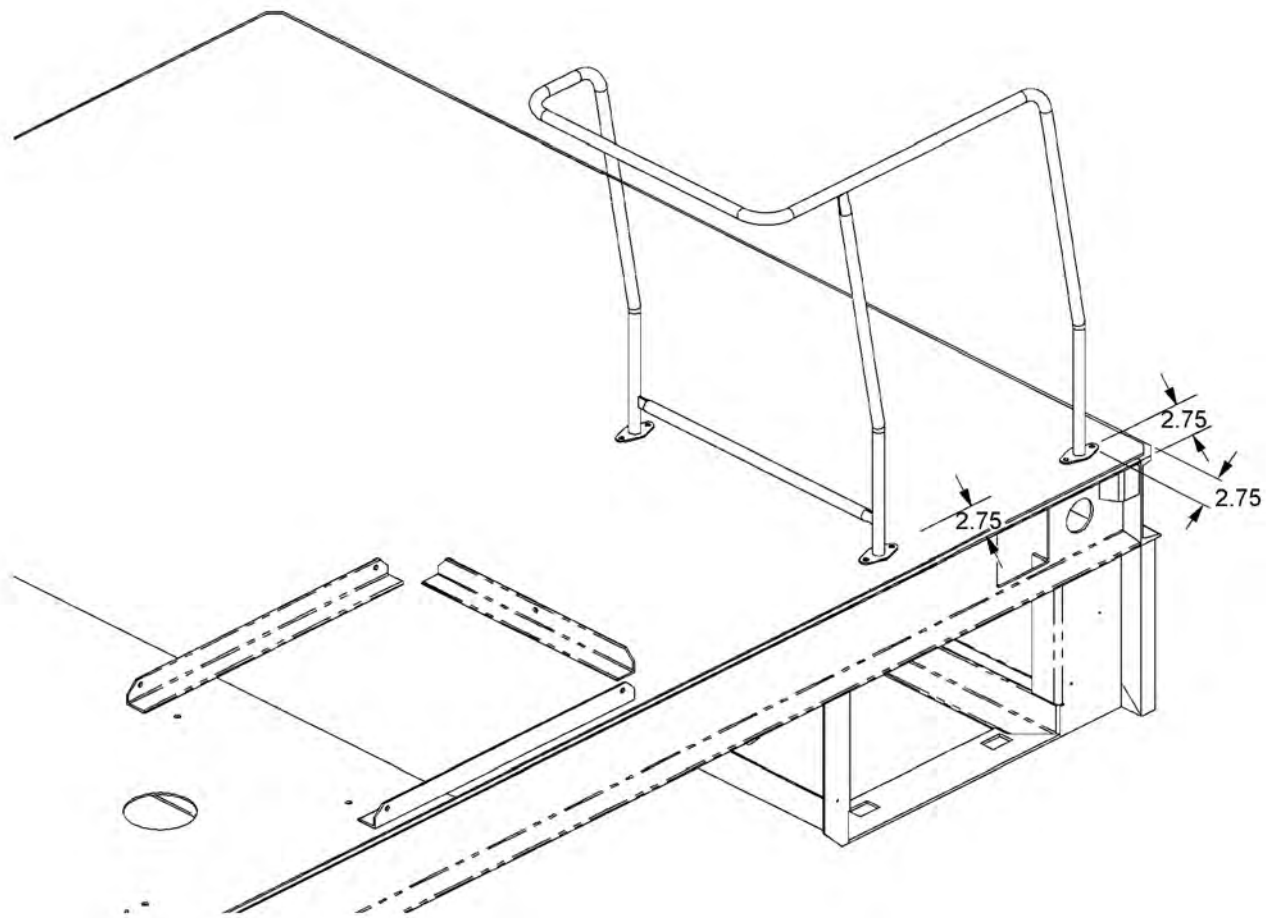


## HEADACHE RACK ASSEMBLY

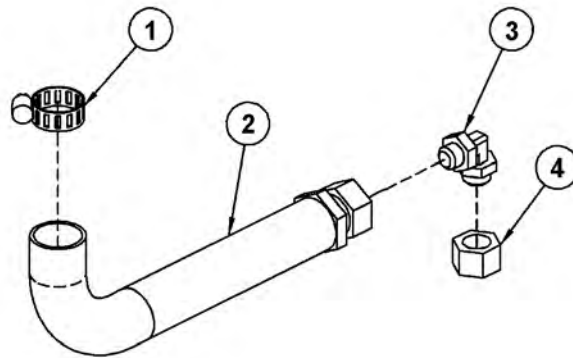
Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06330047	1	HEADACHE RACK, 17, TRUCKAT
2	06490055	1	POLYCARBONATE, 06330047
3	22014	35	FLATWASHER, 1/4"
4	21531	16	CAPSCREW, 1/4" X 1-1/4", NC
5	21527	19	NYLOCK NUT, 1/4"
6	06370054	1	STROBE MOUNT, RAILKUT
7	33883	1	STROBE LIGHT, AMBER
8	21529	3	CAPSCREW, 1/4" X 3/4" NC
9	27260	3	MACHINE SCREW, 10-24 X 1 RH
10	33896	1	STROBE GUARD, BRANCH, HIGH
11	06430008	2	BRACE, HEADACHE RACK, TRUCKAT
12	06330029	1	BUMPER MOUNT, TRUCKAT
13	33906	4	PIN, LINCH, 3/8" X 2.00 LOOP
14	21731	4	CAPSCREW, 1/2" X 1-1/2" NC
15	21727	4	NYLOCK NUT, 1/2" NC

# HANDRAIL

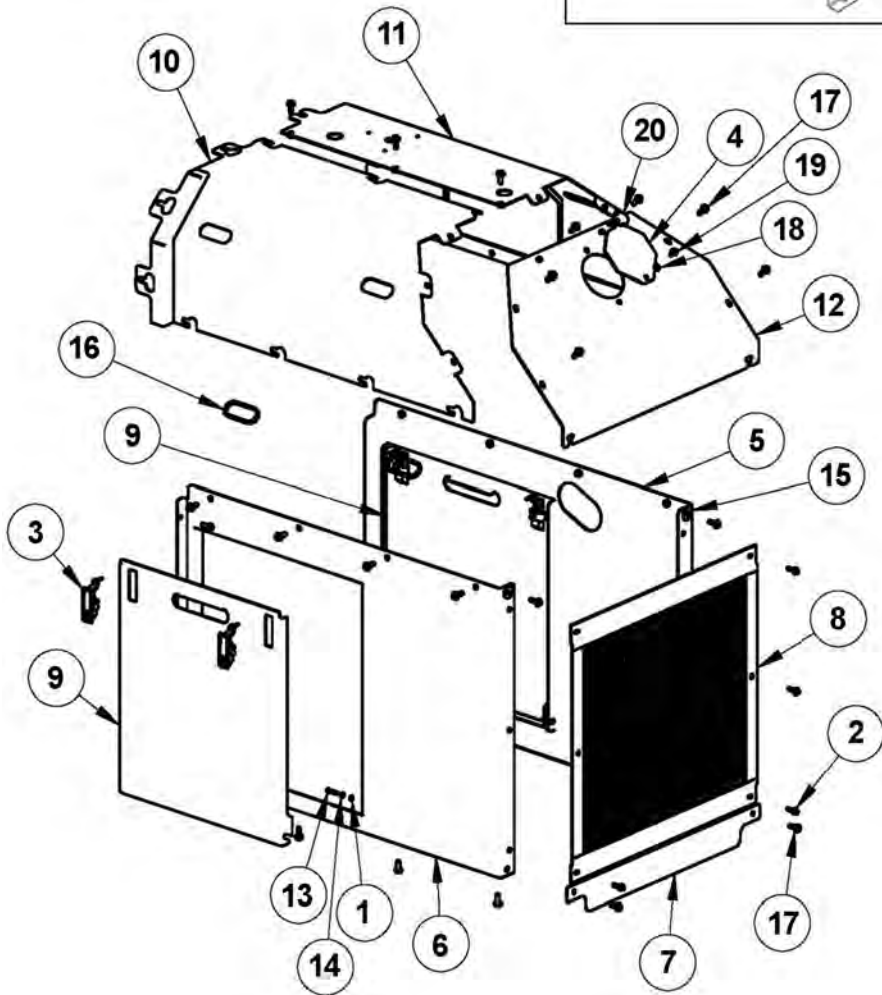
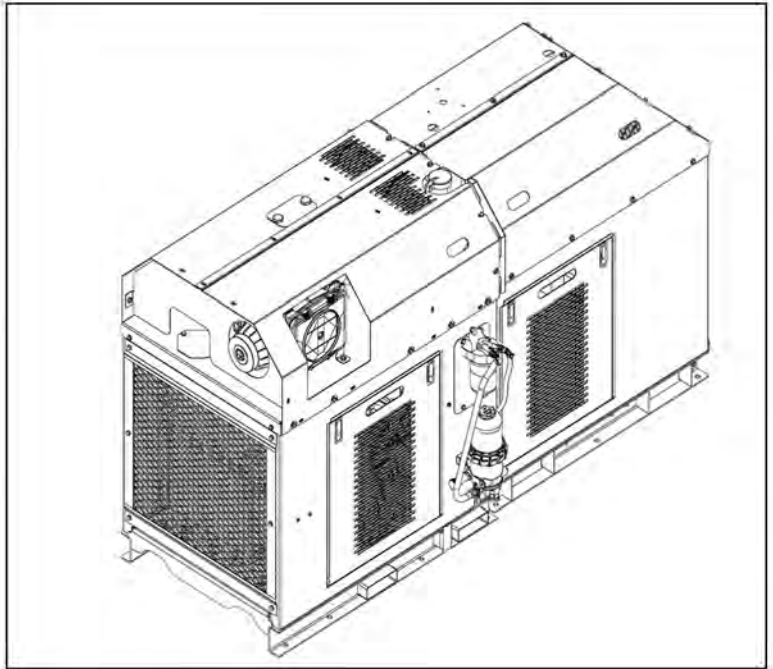


## ENGINE DRAIN



ITEM	PART NO.	QTY.	DESCRIPTION
1	33983	1	HOSE CLAMP,#10
2	06500385	1	HOSE,5/8" X 22"
3	06503096	1	ELBOW,1/2" MJ X 1/2" MJ
4	06503097	1	CAP,1/2"

# ENGINE ENCLOSURE



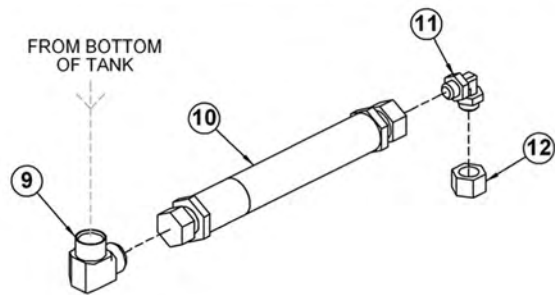
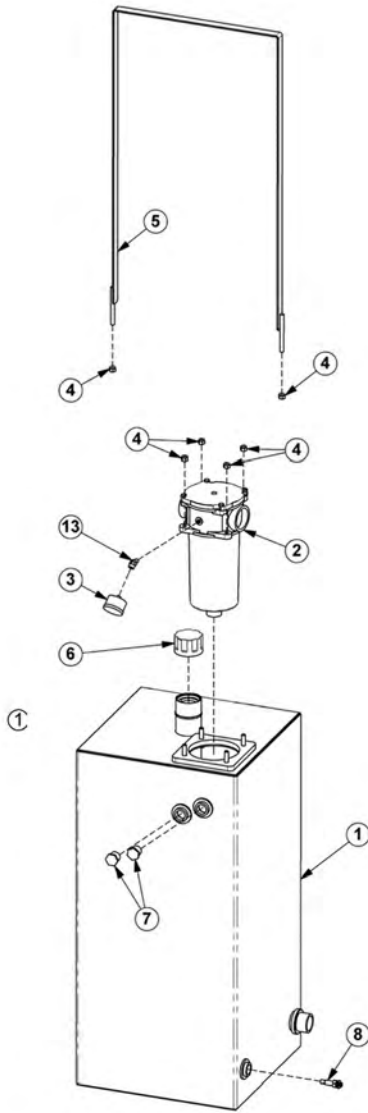


## ENGINE ENCLOSURE

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	8100028	4	NUT, LOCK 1/4-20
2	8100096	1	BOLT, HEX HEAD, FLANGE, 5/16
3	10001874	4	LATCH, DOOR, LOCKING
4	11001358	1	ASSEMBLY, FOAM KIT
5	70038149	1	COVER, RADIATOR FILL
6	70038360	1	PLATE, COVER
7	70038921	2	DOOR, ENCLOSURE
8	70039179	1	BLANKING PLATE
9	70039204	1	PANEL, ENCLOSURE TOP
10	70039205	1	PANEL, ENCLOSURE LEFT
11	70039206	1	PANEL, ENCLOSURE RIGHT
12	80000001	18	BOLT, HEX HEAD FLANGE THREAD FORMER, 5/16-18 X 3/4
13	80000127	4	BOLT, SHOULDER, 5/16 X 3/4 1/4-20 THD
14	80000129	4	WASHER, FLAT, #12
15	80000313	2	WASHER, FLAT, 3/8"
16	80000545	2	BOLT, HEX HEAD FLANGE, 1/4-20 X 1/2
17	80000650	1	WASHER, FLAT 5/16
18	80000856	8	BOLT, HEX HEAD FLANGE, 3/8-16 X 0.75
19	80001430	1	SCREW, THUMB, PLASTIC HEAD
20	80000467_9	1	GROMMET, BULK STRIP

# RESERVOIR TANK ASSEMBLY

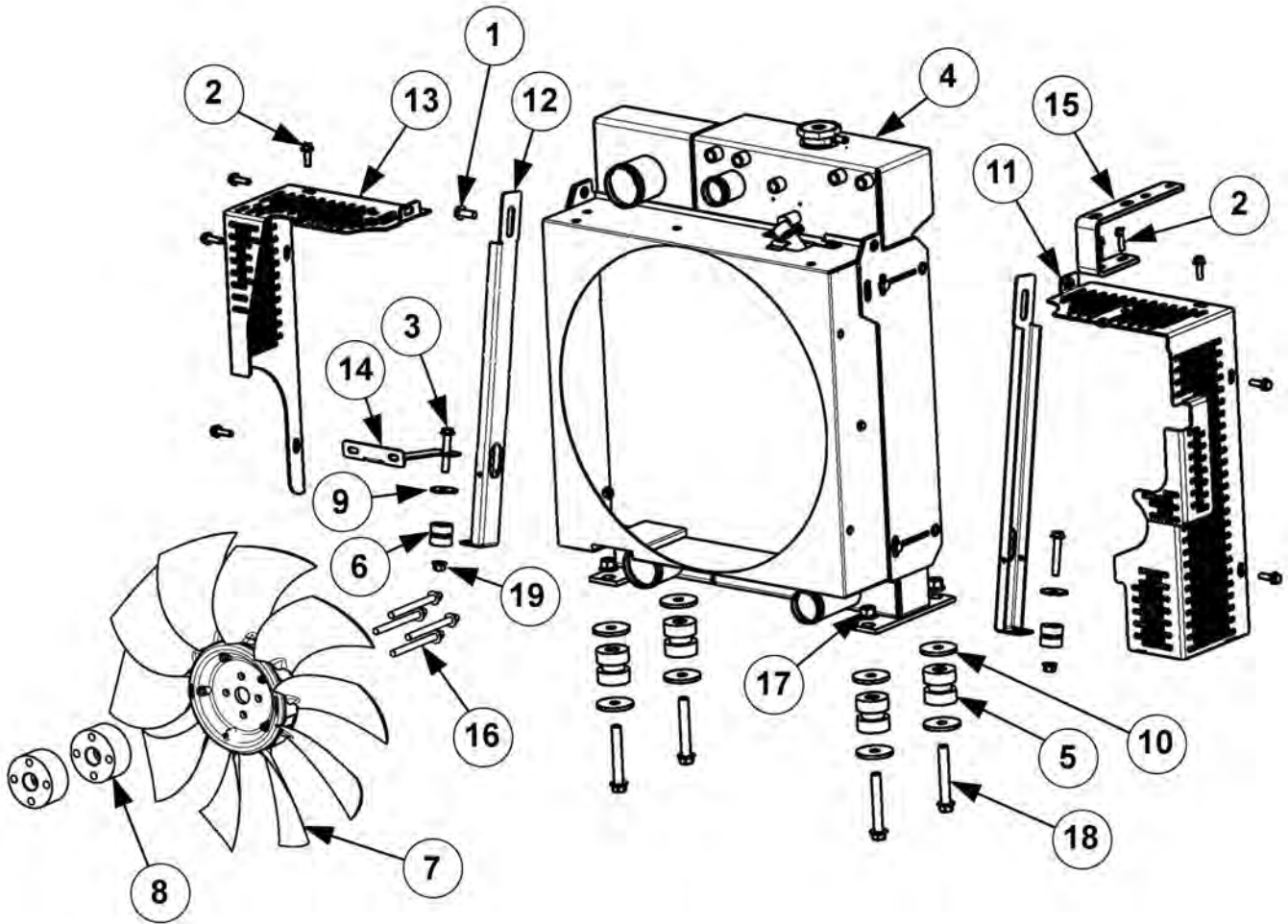


## RESERVOIR TANK ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	35082	1	RES TANK ASSY (ITEMS 1, 2,4 AND 6)
1	35002	1	RES TANK,WLDMNT
2	06505044	1	FILTER ASSY,IN-TANK CPLT
---	35259	1	ELEMENT, FILTER,10 MICRON
3	6T0649	1	FILTER GAUGE
4	21627	6	NYLOCK NUT,3/8",NC
5	35071	1	STRAP,RES TANK
6	35054	1	BREATHER CAP,FILLER NECK,O-RING
7	6T1209	2	SIGHT GLASS
8	06520072	1	OIL TEMP SENDER
9	34465	1	ELBOW,3/4"MP X 3/4"MOR
10	06500374	1	HOSE,1/2" X 18"
11	06503096	1	ELBOW,1/2"MJ X 1/2"MJ
12	06503097	1	CAP,1/2"MJ
13	TF4887	1	ELBOW,STREET,1/8" X 45°

## COOLING SYSTEM



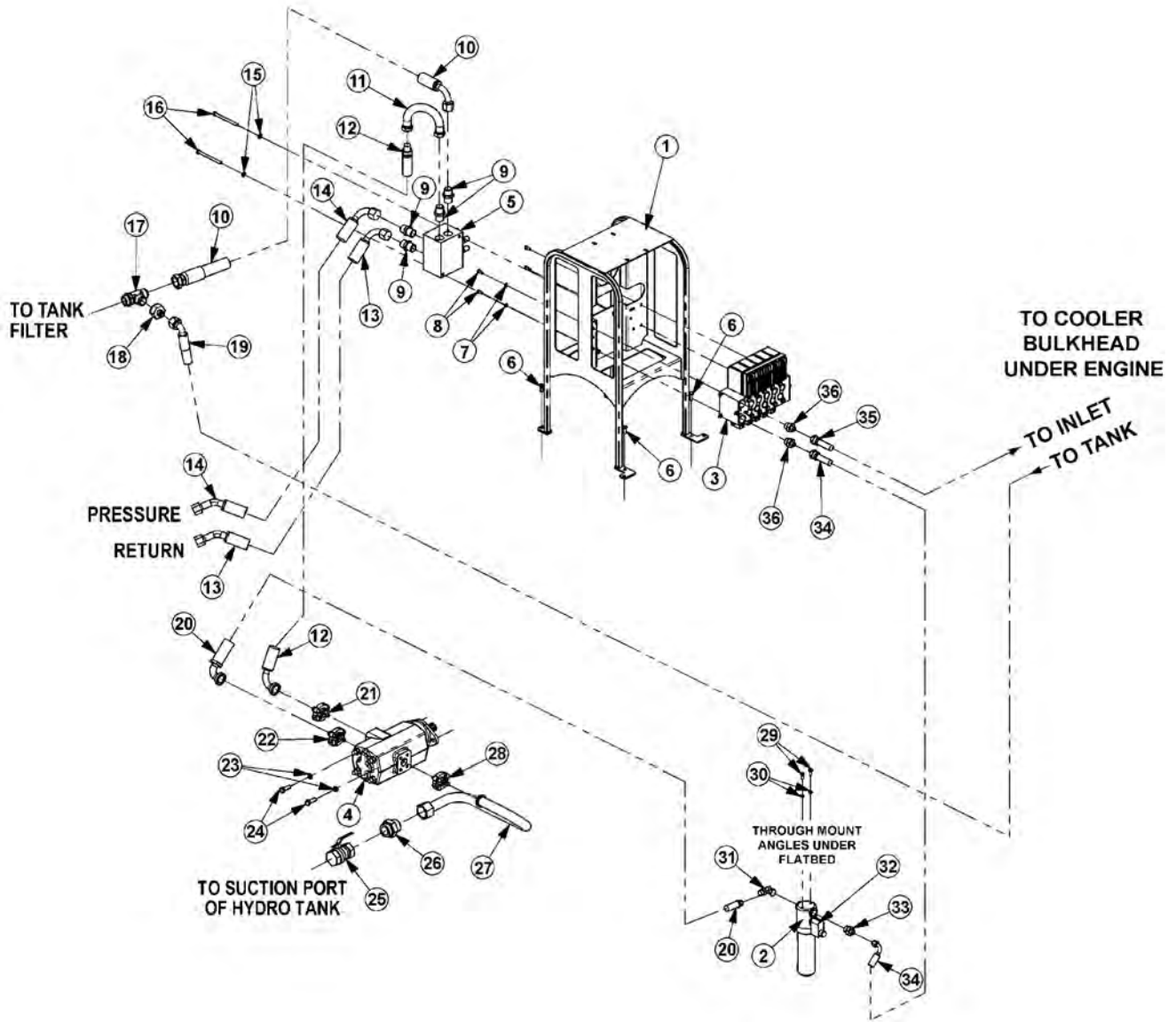
ITEM	PART NO.	QTY.	DESCRIPTION
1	8000470	2	BOLT, HEX HEAD FLANGE, 3/8 - 16 X 1
2	8100096	9	BOLT, HEX HEAD FLANGE, 5/16-18 X 1
3	80001331	2	BOLT, HEX HEAD FLANGE, 3/8-16 X 2.25
4	10001788	1	RADIATOR, W/CAC
5	11000337	4	ISOLATOR
6	11000860	2	ISOLATOR
7	11001249	1	FAN, SUCKER, 19"
8	33910129	2	SPACER, FAN, 1/5
9	70003210	2	WASHER, CINCH
10	70009330	8	WASHER, CINCH
11	70038930	1	GUARD, RH
12	70038835	2	STRUT, RADIATOR
13	70038931	1	GUARD, LH

## COOLING SYSTEM

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
14	70038934	1	CAC TUBE, SUPPORT BRACE
15	70038939	1	BRACKET, CAC TUBE SUPPORT
16	80000124	4	BOLT, HEX HEAD FLANGE, M10-1.5 X 100
17	80000306	4	NUT, HEX HEAD FLANGE, LOCK 1/2-13
18	80000320	4	BOLT, HEX HEAD FLANGE, 1/2-13 X 3-1/2
19	80000421	2	NUT, HEX HEAD FLANGE, LOCK, 3/8-16

# MOWER HYDRAULICS

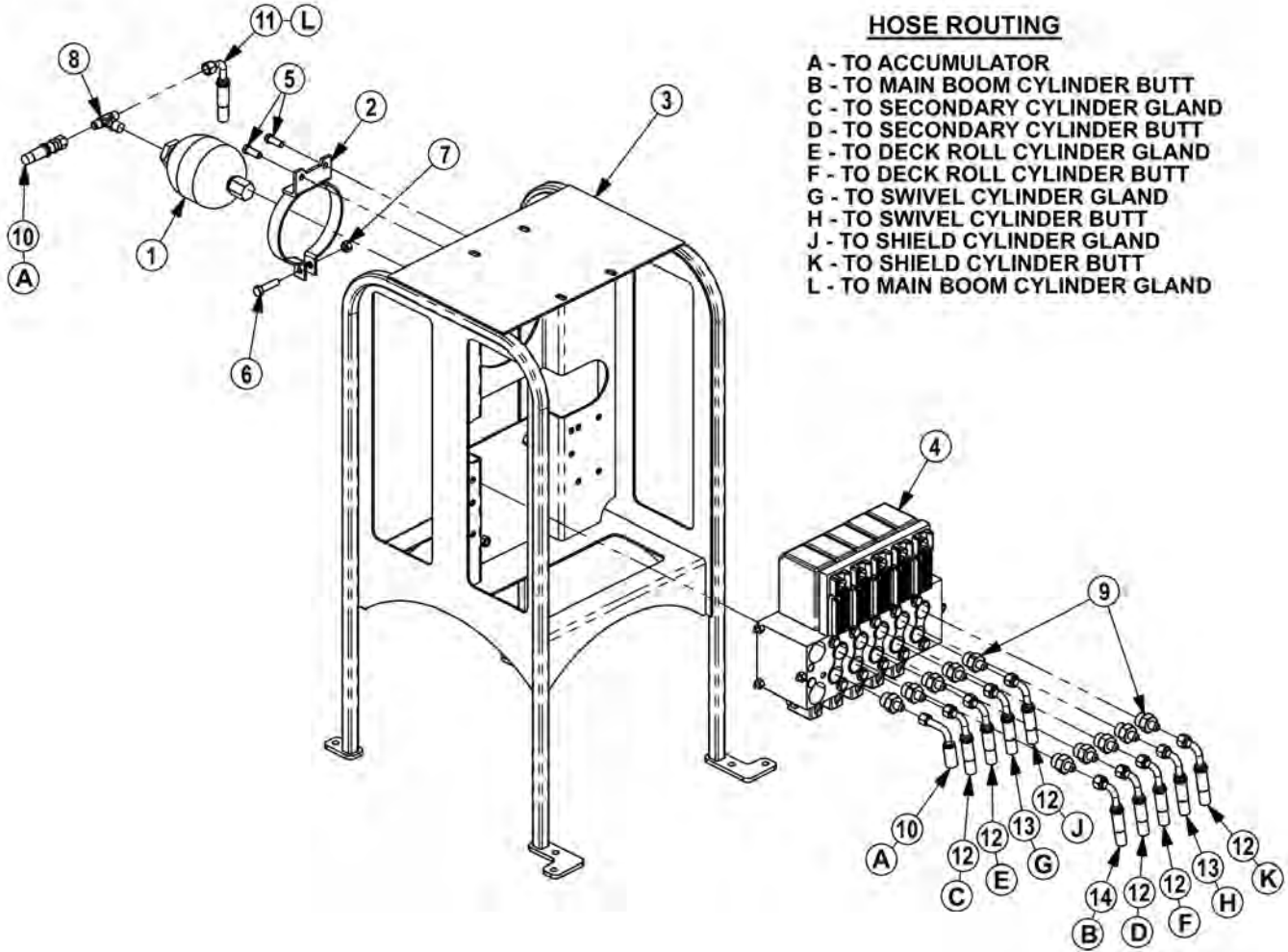


## MOWER HYDRAULICS

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06340037	1	VALVE MOUNT
2	35059	1	FILTER,HYD,HP
---	35285	1	FILTER ELEMENT,HYD,HP
3	06502098	1	VALVE,5 SPOOL,OC
4	35031	1	PUMP
5	06510083	1	VALVE,BRAKE,SOL
6	06530202	4	CAPSCREW,3/8" X 1",SELF TAPPING
7	21987	4	LOCKWASHER,5/16"
8	21579	4	CAPSCREW,5/16" X 3/4",NC
9	33555	4	ADAPTER,1"MOR X 1"MJ
10	06500585	1	HOSE,1" X 44"
11	06506012	1	TUBE,PREFORMED
12	06500584	1	HOSE,1" X 29"
13	06500055	1	HOSE,1" X 100"
14	06500054	1	HOSE,1" X 103"
15	21988	2	LOCKWASHER,3/8"
16	21644	2	CAPSCREW,3/8" X 5",NC
17	34656	1	TEE,RUN,1-1/4"MOR X 1-1/4"MJ X 1-1/4"
18	35280	1	ADAPTER,1-1/4FJ X 3/4"MJ
19	06500587	1	HOSE,3/4" X 96"
20	06500382	1	HOSE,3/4" X 47"
21	TF4852	1	KIT,FLANGE,#20
22	TF4853	1	KIT,FLANGE #16
23	21990	2	LOCKWASHER,1/2"
24	21731	2	CAPSCREW,1/2" X 1-1/2",NC
25	34309	1	BALL VALVE,1-1/2"FOR
26	34710	1	ADAPTER,1-1/2"MOR X 1-1/2"MJ
27	06500051	1	HOSE,1-1/2" X 27"
28	TF4854	1	KIT,FLANGE #24
29	27508	2	CAPSCREW,8MM X 20MM,1.25P
30	6T2619	2	LOCKWASHER,8MM
31	33280	1	ELBOW,3/4"MJ X 3/4"MOR ADJ 90
32	35330	1	RESTRICTION SENDER
33	06503023	1	ADAPTER,3/4"MOR X 3/4"MJ
34	06500496	1	HOSE,3/4" X 50"
35	06500057	1	HOSE,3/4" X 74"
36	06503043	3	ADAPTER,3/4"MOR X 3/4"MJ,45
---	6T3200	2	SPLIT HOSE,6" (NOT SHOWN)
----	6T1823	6	ZIP TIE,14 STRAPS (NOT SHOWN)

## LIFT VALVE MOUNT

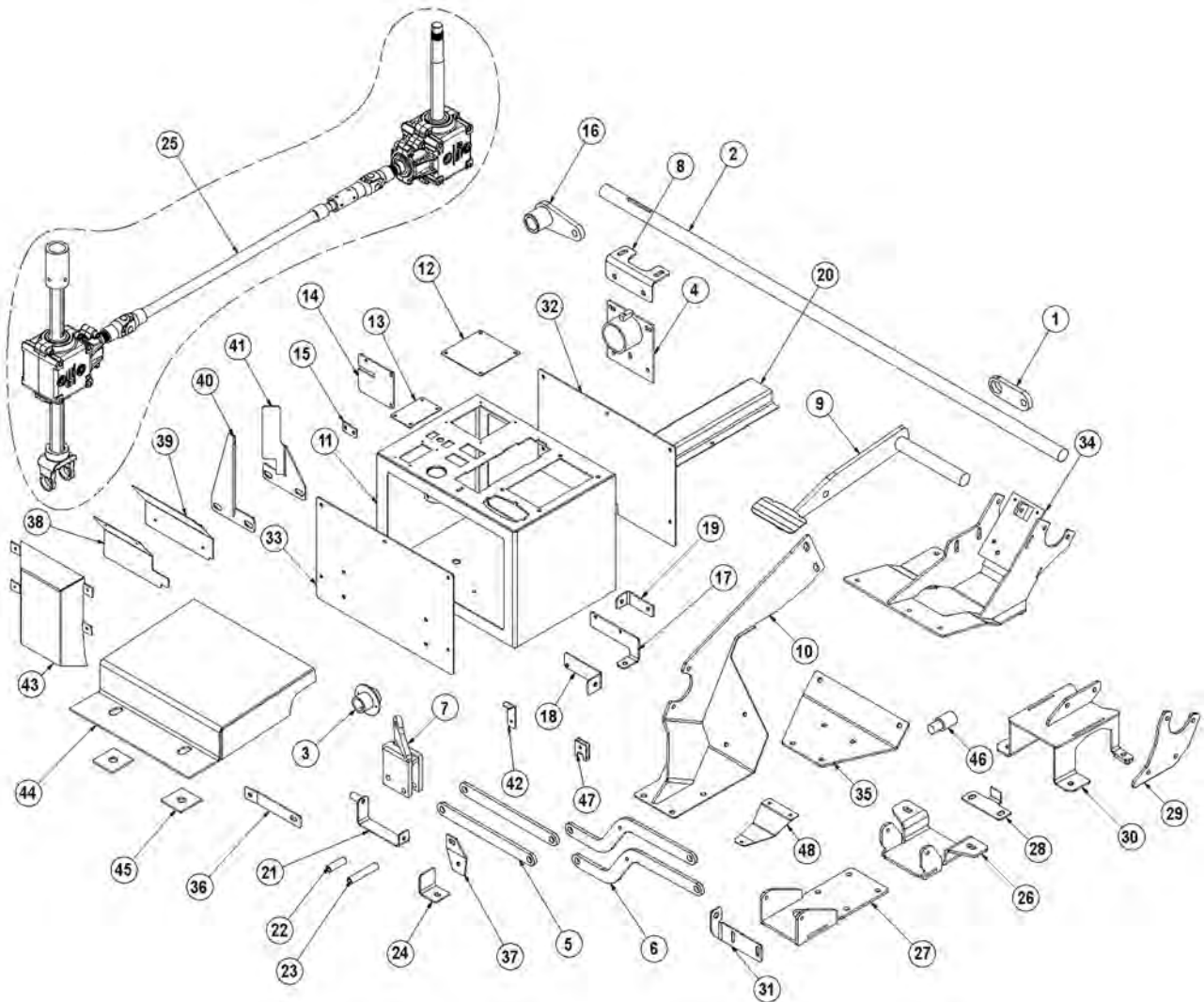


ITEM	PART NO.	QTY.	DESCRIPTION
1	24300	1	ACCUMULATOR
2	23888	1	BRKT,ACCUMULATOR
3	06340005	1	VALVE MOUNT
4	06502098	1	LIFT VALVE
5	21630	2	CAPSCREW,3/8" X 1",NC
6	21632	1	CAPSCREW,3/8" X 1-1/2",NC
7	21627	1	NYLOCK NUT,3/8",NC
8	34020	1	TEE,BRANCH,3/8" MJ X 1/2" MOR X 3/8" MJ
9	32807	10	ADAPTER,5/8" MOR X 3/8" MJ
10	35250	1	HOSE,1/4" X 44"
11	35108	1	HOSE,1/4" X 146"
12	35109	6	HOSE,1/4" X 126"
13	35110	2	HOSE,1/4" X 76"
14	35111	1	HOSE,1/4" X 140"



# NOTES

## DUAL STEER ASSEMBLY



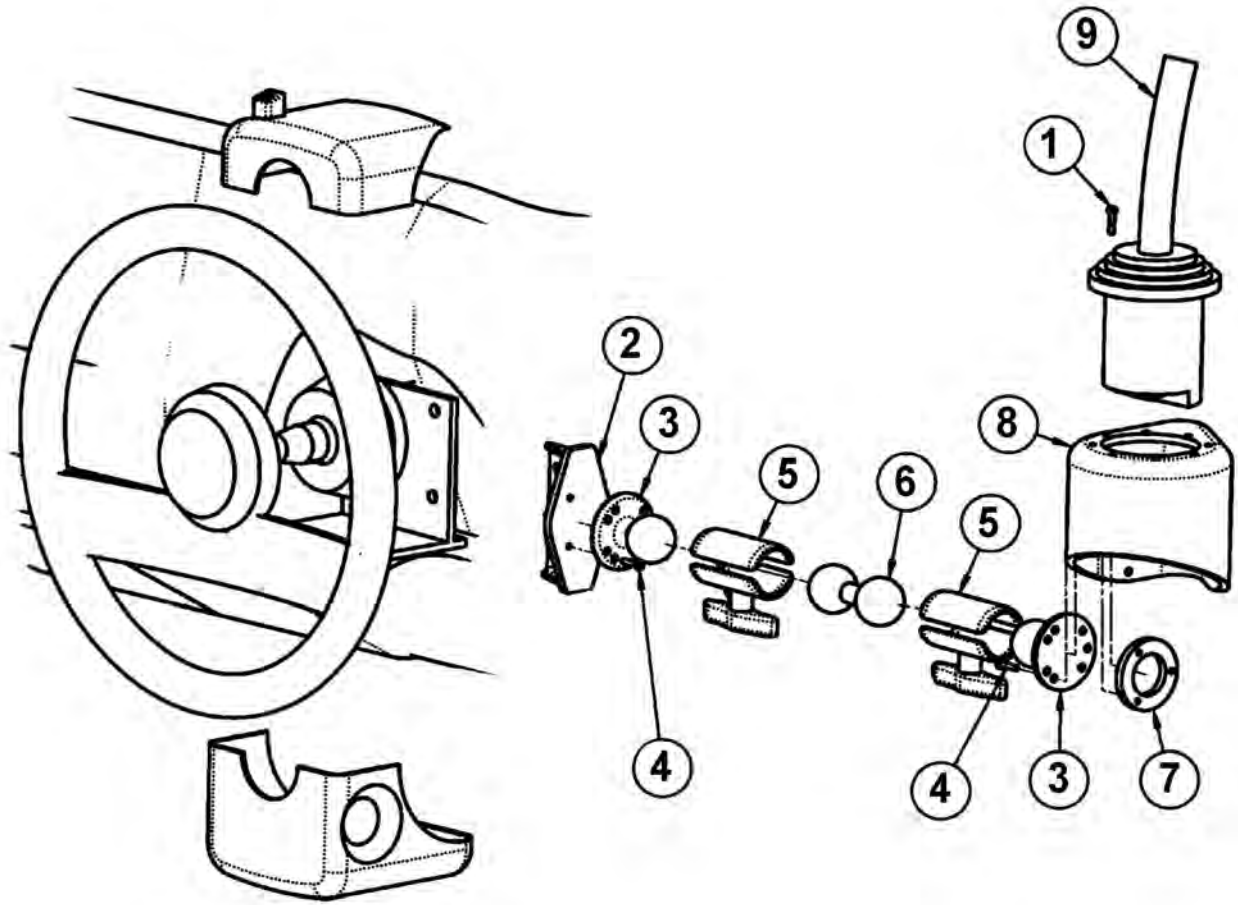
ITEM	PART NO.	QTY.	DESCRIPTION
1	00096571	1	BRACKET, BRAKE PEDAL LEG, TOP, LH
2	00098835	1	SHAFT, BRAKE PEDAL
3	00178230	1	BRACKET, WLDMT, CANCEL DIRECTION
4	00178226	1	BRACKET, WLDMT, MT G, TURN SIGNAL
5	00121179	2	BAR, LINKAGE, BRAKE, LH
6	00176478	2	BAR, LINKAGE, BRAKE, RH
7	00176482	1	ADAPTOR, WLDMT, PEDAL, BRAKE
8	00121184	1	BRACKET, SUPPORT, TURN SIGNAL
9	00178220	1	BRAKE PEDAL, WLDMT
10	00176498	1	STRG COLUMN WLDMT RH
11	00178213	1	CONTROL BOX WLDMT
12	00121811	1	COVER PL, CONTROL BOX
13	00121812	1	COVER PL, SWITCH, CONTROL BOX

## DUAL STEER ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
14	00121813	1	RETAINER, PL, CARPET
15	00178207	1	MTG PL, SHIFTER CABLE
16	00121818	1	BRAKE ARM, WLDMT, RH
17	00128214	1	BRACKET, MTG, RELAY, RH
18	00178219	1	BRACKET, MTG, RELAY, LH
19	00121874	1	SUPPORT BRACKET, SHIFT CABLE
20	00178225	1	COVER, WIRE HARNESS
21	00178223	1	BRACKET, WLDMT, HORN CONTACT
22	00178232	1	TUBE, RNDMS, 500X13GAX1.563
23	00178233	1	TUBE, RNDMS, 500X13GAX2.688
24	00178235	1	MTG TAB, CONSOLE, UPPER
25	00134042	1	CROSS SHAFT KIT
26	00136067	1	BRACKET WLDMT, STRG CLMN F R, LH
27	00136070	1	BRACKET, WLDMT, STRG, CLMN RR, RH
28	00136064	1	BRACKET, MTG, STRG, GR8X, UPR, LH
29	00316073	1	MTG PL, BEARING, BRAKE, LH
30	00136077	1	BRACKET, WLDMT, BEARING, BRAKE, LH
31	00157425	1	BRACKET, LIGHT, INDICATOR, PARK
32	00178205	1	PANEL, SIDE, CONTROL BOX, FRONT
33	00176499	1	PANEL, SIDE, CONTROL BOX, REAR
34	00176495	1	BRACKET, WLDMT, MTG PEDAL, ACCELL
35	00176469	1	BRACKET, GEARBOX, UPR, LH
36	00176474	1	BRACKET, MTG DASH SUPPORT
37	00176476	1	BRACKET, MTG DASH
38	00176470	1	FILLER, PL DASH, LH
39	00176471	1	FILLER, PL DASH, RH
40	00176472	1	BRACKET, FILLER PLATE RH
41	00176473	1	BRACKET FILLER PLATE, LH
42	00176475	1	LATCH, FUSE COVER
43	00176484	1	COVER, WLDMT, BRAKE LINKAGE
44	00178204	1	COVER, WLDMT, RESTRAINT SYSTEM
45	00178206	2	SPACER, COVER, RESTRAINT SYSTEM
46	00178215	1	BUSHING, SHAFT, LOWER
47	00178221	1	COVER, WLDMT, SHIFTER CABLE
48	00178234	1	BRACKET, STRG COLUMN

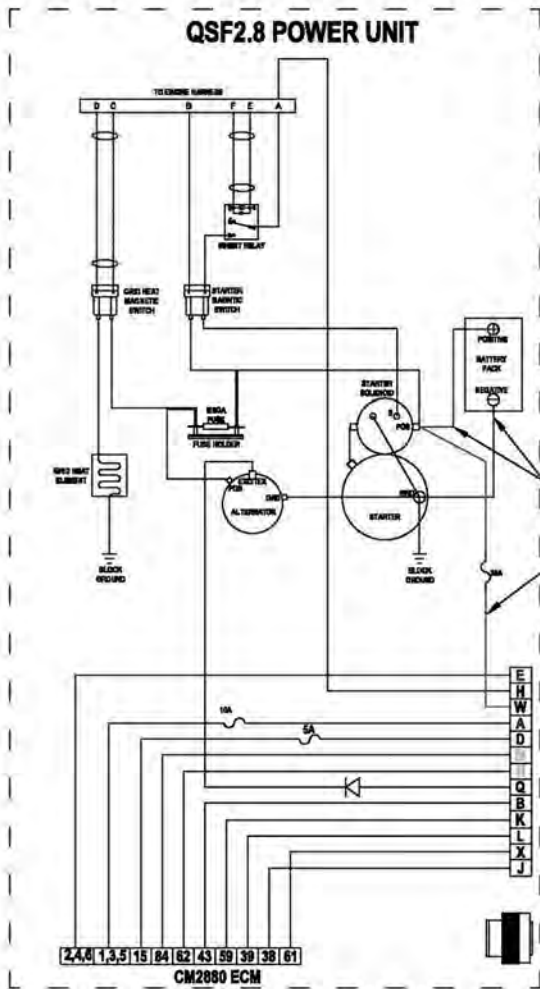
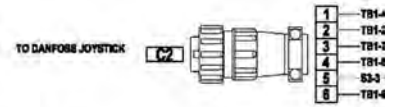
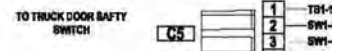
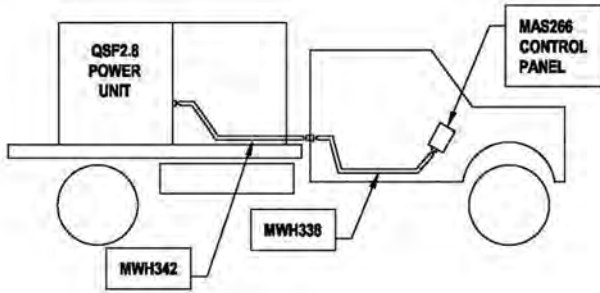
## JOYSTICK MOUNT



ITEM	PART NO.	QTY.	DESCRIPTION
1	32829	4	SCREW
2	06340036	1	MNT,JYSTK
3	06520019	2	MOUNT,RAM,BALL,1-1/2"
4	32359	6	SCREW,MCHN,10-32 X 3/4"
5	06520042	2	MOUNT,RAM,ARM,1-1/2" X 2-3/4"
6	06520290	1	MOUNT,RAM,BALL,DBL,1-1/2"
7	06400882	1	RING,BOLT,MNT,JYSTK
8	06770022	1	CAN,JYSTK
9	33691	1	JOYSTICK

# NOTES

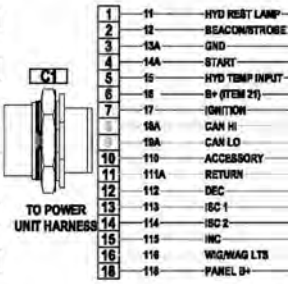
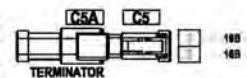
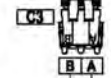
# TROUBLESHOOTING SCHEMATIC, PART 1



## TIGER MAS266 CONTROL PANEL



TO LIGHT BAR

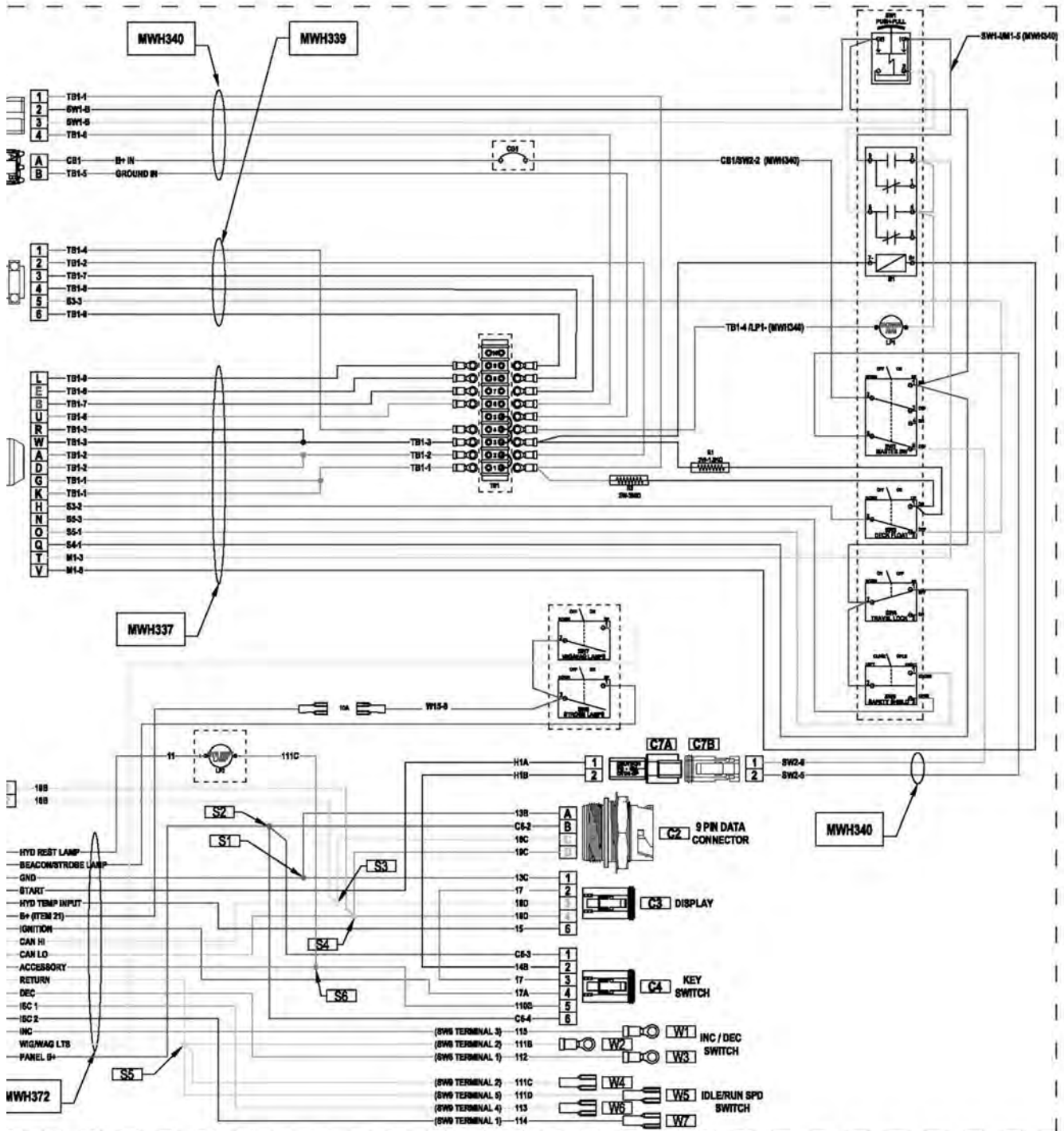


MWH342

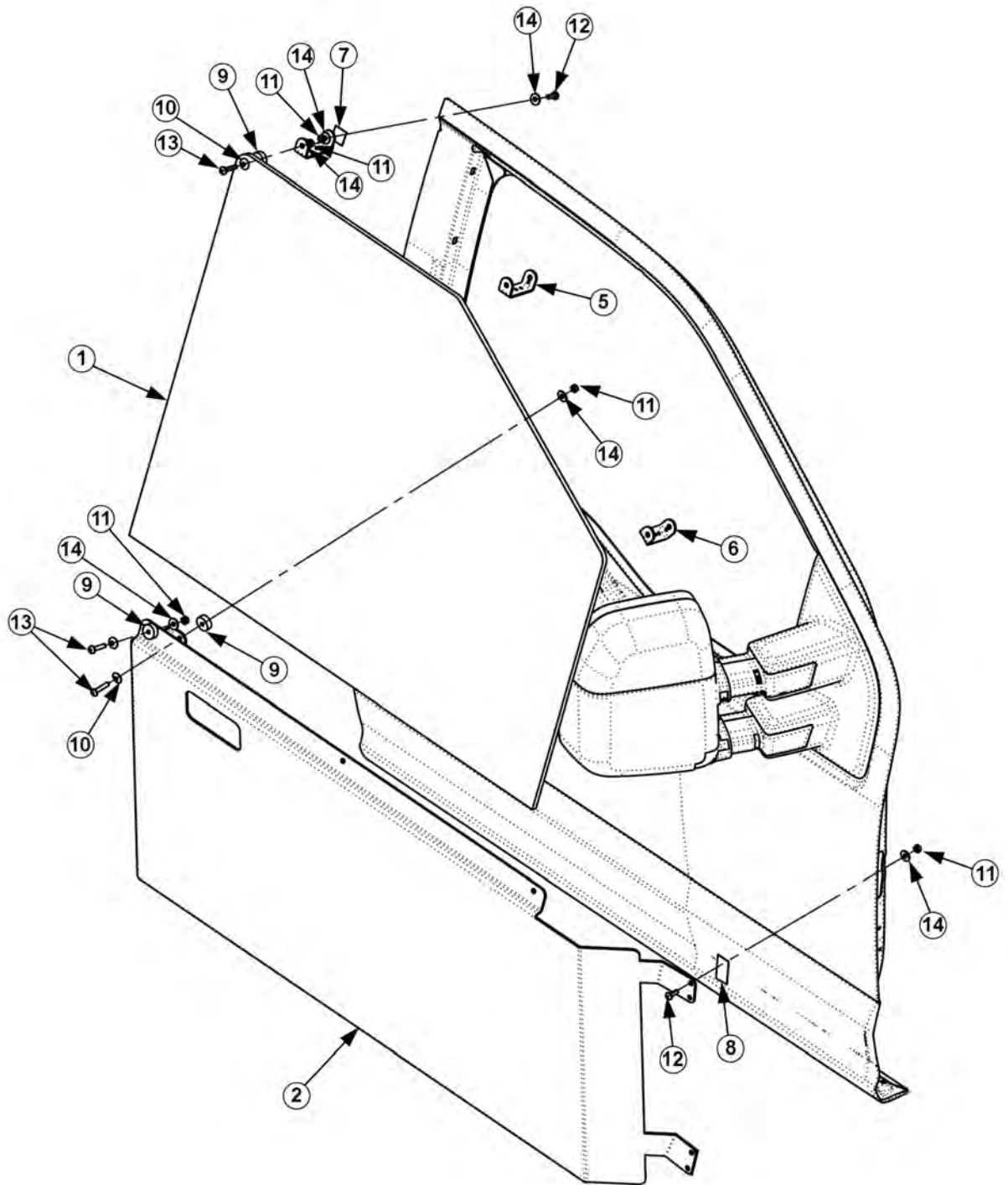
MWH338-A

MWH372

# TROUBLESHOOTING SCHEMATIC, PART 2



# SAFETY SCREEN ASSEMBLY



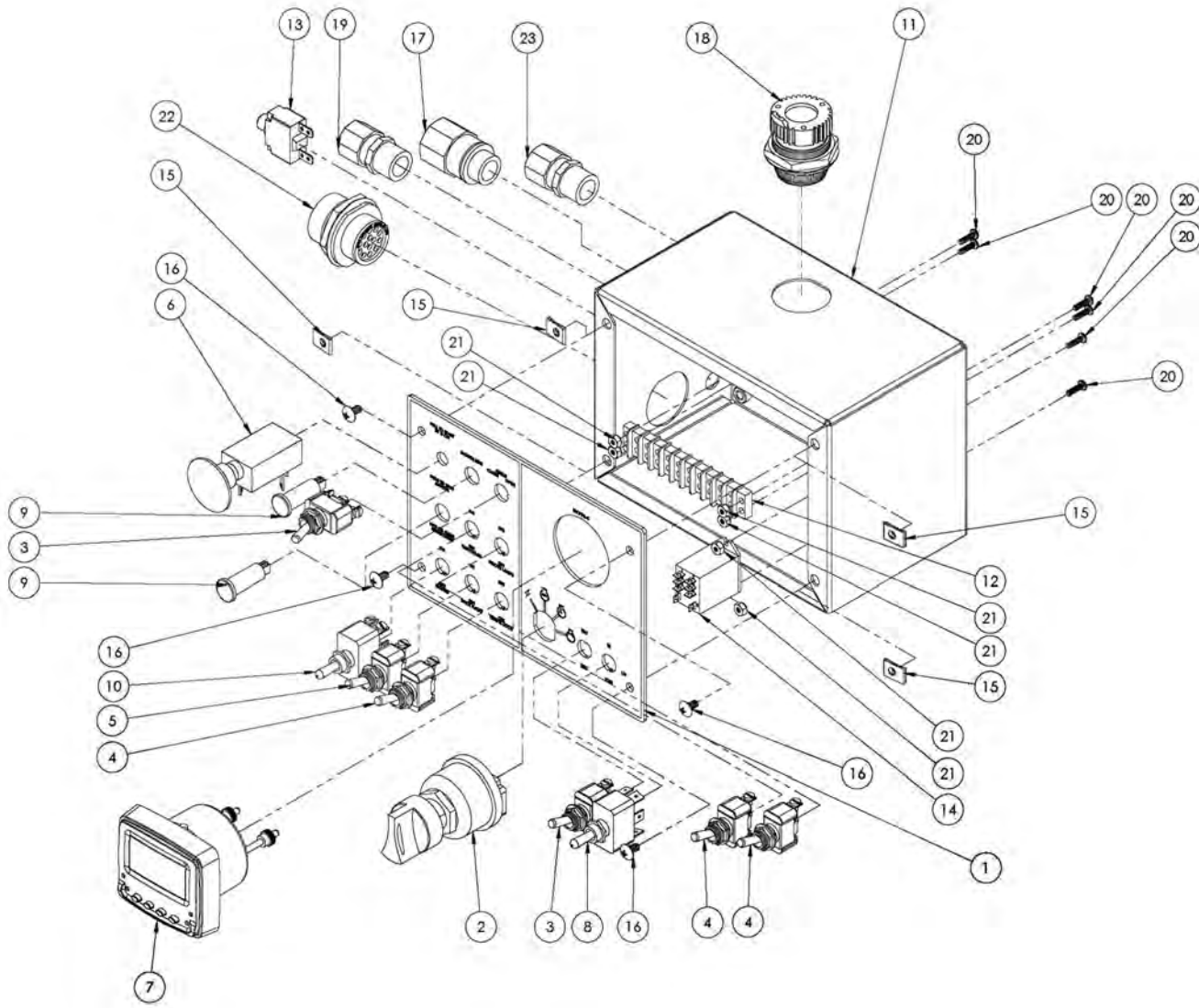


## SAFETY SCREEN ASSEMBLY

**Continued...**

<b>ITEM</b>	<b>PART NO.</b>	<b>QTY.</b>	<b>DESCRIPTION</b>
1	06490053	1	POLYCARB, TRUCKAT, 2017
2	06412680	1	DOOR, SAFETY SCREEN, TRUCKAT 2017
3	06412681	1	TAB1, SAFETY SCREEN, TRUCKAT 2017
4	06412682	1	TAB, 2, SAFETY SCREEEN, TRUCKAT 2017
5	06412683	1	TAB, 3, SAFETY SCREEN, TRUCKAT 2017
6	06412684	1	TAB 4, SAFETY SCREEN, TRUCKAT 2017
7	06497000	4	PAD, 1X1
8	06497001	2	PAD, 1X3
9	06537000	10	WASHER, NEOPRENE, .25X1X.38
10	06537001	10	WASHER, RUBBERIZED, .25 CONICAL
11	35066	18	HEX NUT, NYLOCK 1/4"
12	35067	8	MACHINE SCREW, 1/4"X3/4"NC, BUTT, SS
13	35235	10	MACHINE SCREW, 1/4"X1-1/4"NC, BUTT, SS
14	35326	22	FLATWASHER, 1/4", SS

# CONTROL PANEL ASSEMBLY

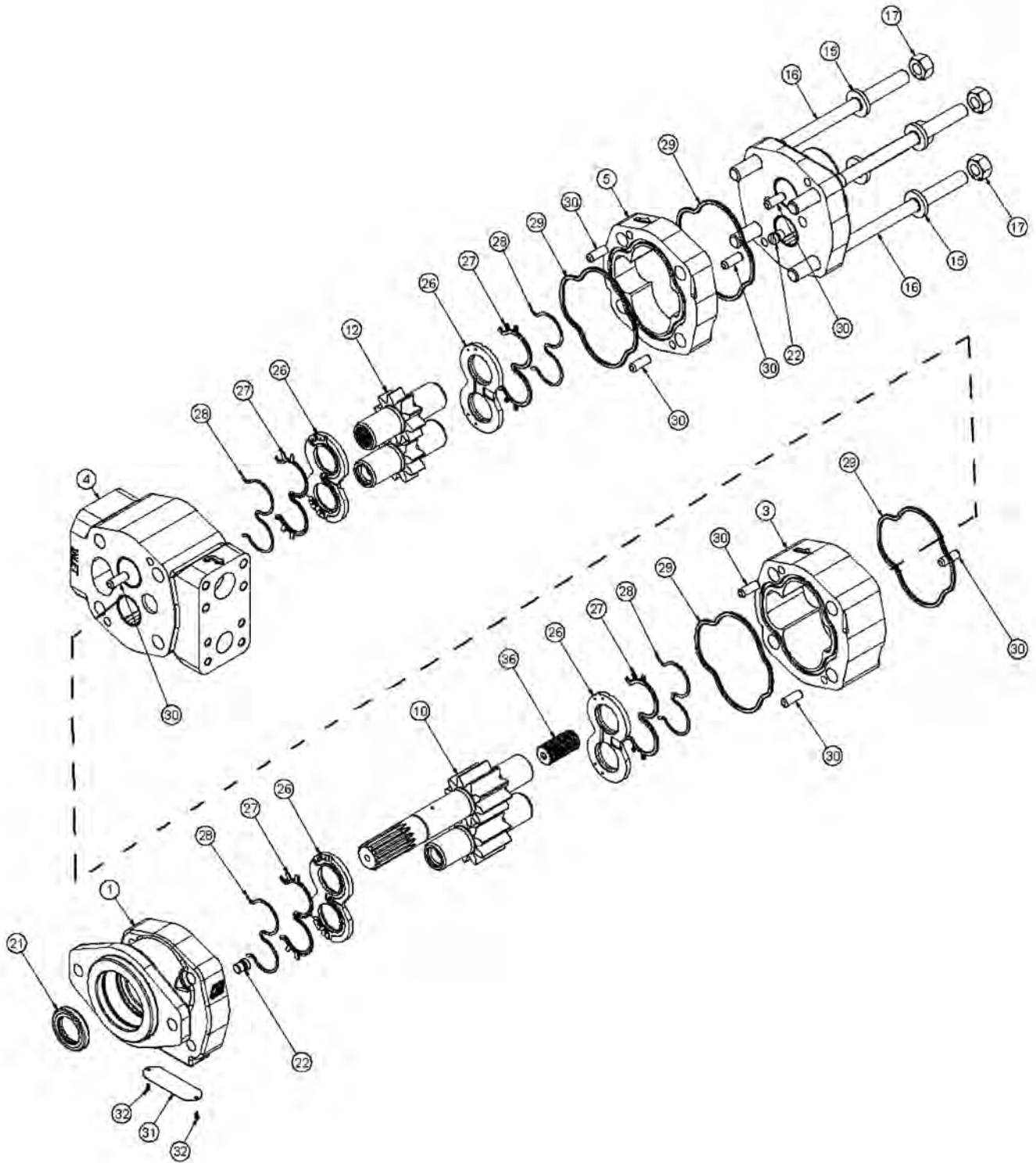


## CONTROL PANEL ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	MCP52	1	FACEPLATE, CONTROL PANEL
2	95060-01	1	SWITCH, IGNITION
3	44258	2	TOGGLE SWITCH, SPDT, (ON)-OFF-(ON)
4	44252	3	TOGGLE SWITCH, SPDT, ON-OFF
5	44254	1	TOGGLE SWITCH, SPDT, ON-OFF
6	9576-BX	1	PUSH-PULL 3 POSITION SWITCH
7	70532	1	VEECAN 128 DISPLAY
8	785-12TS95-10	1	TOGGLE SWITCH, DPDT, ON-ON-ON
9	PL-524-RC	2	12V LED PILOT LIGHT, RED
10	44262	1	TOGGLE SWITCH, DPDT, ON-ON
11	MCP51	1	BOX, CONTROL PANEL
12	47110	1	TERMINAL BLOCK, 10 POSITION
13	46497	1	CIRCUIT BREAKER, 15A
14	70178814	1	RELAY, 12V, 8 PIN
15	94808A151	4	U-STYLE CLIP-ON NUT #10-24
16	91770A240	4	#10-24, 3/8" MACHINE SCREW
17	MWH337	1	HARNESS, #1 OF 3, MOWER
18	MWH343 9 PIN	1	HARNESS, ENGINE SIDE CONTROL PANEL
19	MWH340	1	HARNESS, #3 OF 3, MOWER
20	91735A148	6	#6-32, 1/2" MACHINE SCREW
21	90715A007	6	#6-32 NYLON-INSERT LOCKOUT
22	MWH343	1	HARNESS, ENGINE SIDE CONTROL PANEL
23	MWH339	1	HARNESS, #2 OF 3, MOWER

# PUMP BREAKDOWN

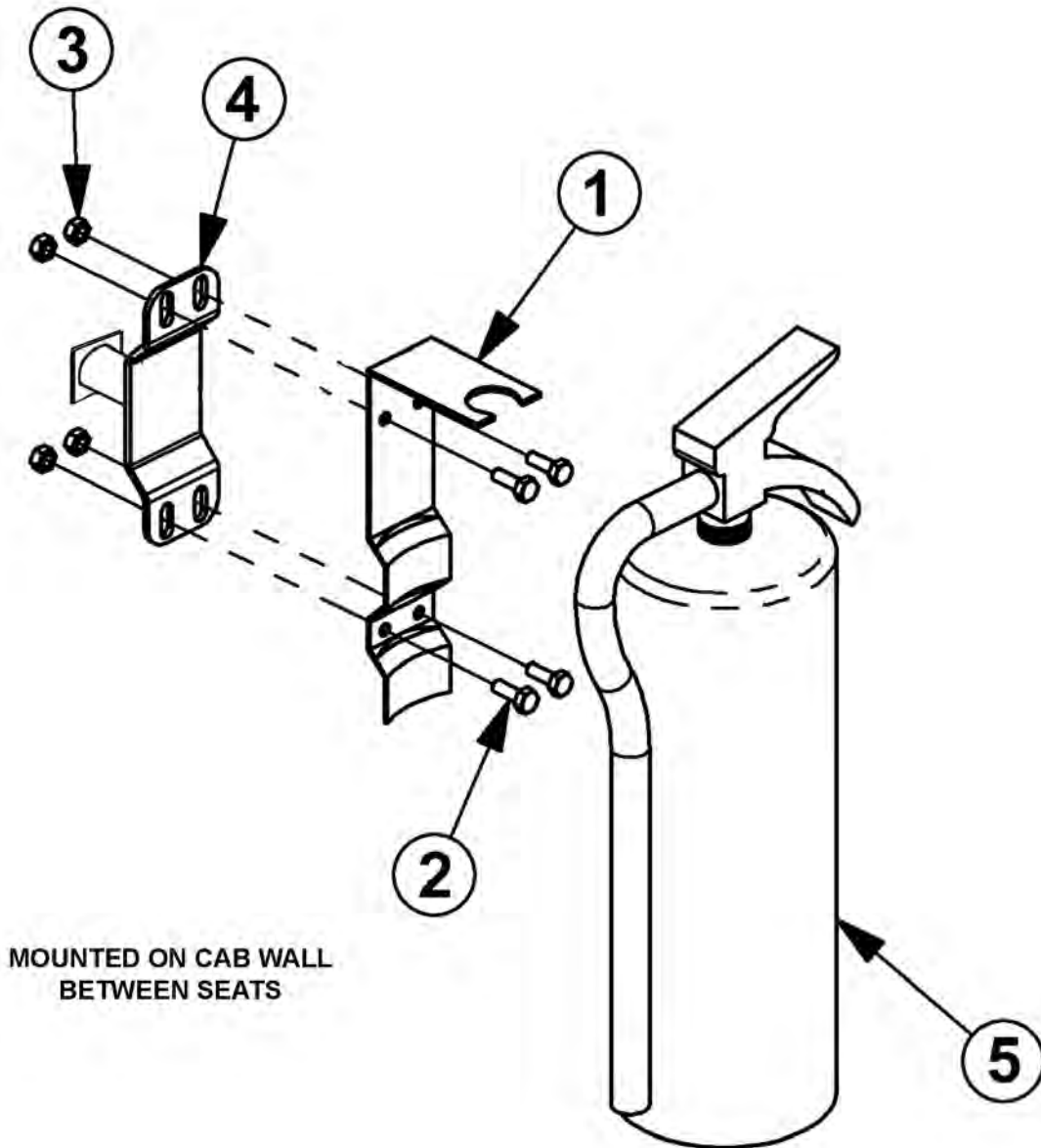


## PUMP BREAKDOWN

Continued...

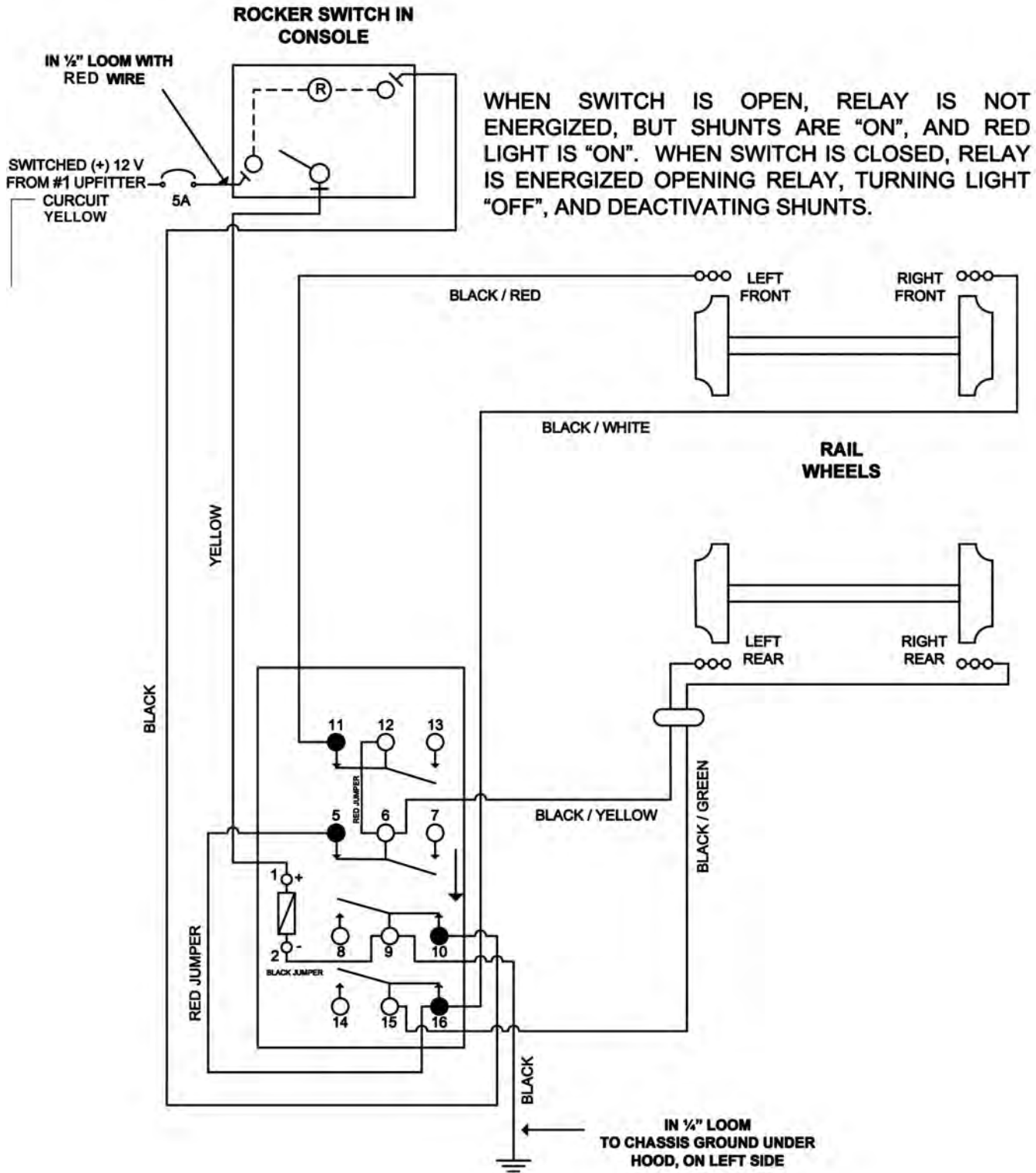
ITEM	PART NO.	QTY.	DESCRIPTION
---	35031	-	PUMP,P350
1	06504081	1	HOUSING,SEC
2	06504082	1	HOUSING,PEC
3	02965092	1	HOUSING,GEAR
4	06504083	1	HOUSING,BEARING CARRIER
5	06504084	1	HOUSING,GEAR
10	06504070	1	SET,GEAR SHAFT
12	06504085	1	GEAR,SET
15	02961917	4	WASHER
16	06504086	4	STUD
17	06504073	4	NUT,HEX
21	22765	1	SEAL,LIP
22	06504087	2	PLUG
26	02965611	4	THRPL
27	06504074	4	SEAL,CHAN
28	06504075	4	SEAL,BK-UP
29	06504076	4	SEAL,SQ-R
30	02961924	8	PIN,DOWEL
31	06504077	1	NAME PLATE
32	06504078	2	SCREW,DRIVE
36	06504079	1	SFT,CONN
---	06504080	1	SEAL KIT

## FIRE EXTINGUISHER MOUNT

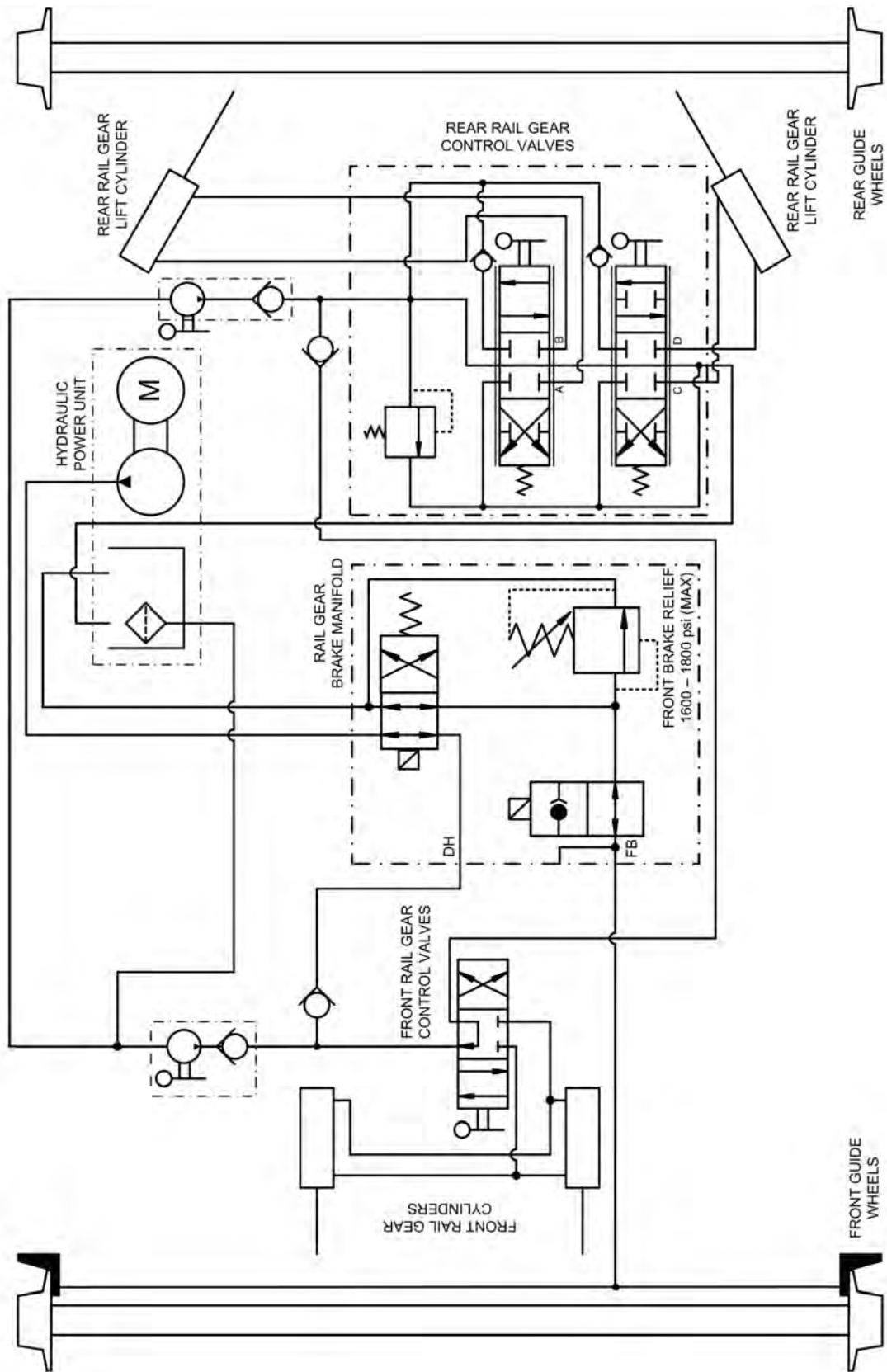


ITEM	PART NO.	QTY.	DESCRIPTION
1	32212	1	FIRE EXTINGUISHER BRACKET
2	21529	4	CAPSCREW, 1/4" X 3/4", NC
3	21527	4	HEX NUT, NYLOCK, 1/4", NC
4	06370281	1	MNT, FIRE EXTINGUISHER
5	32212	-	FIRE EXTINGUISHER, 5#, ABC

# SHUNT SCHEMATIC



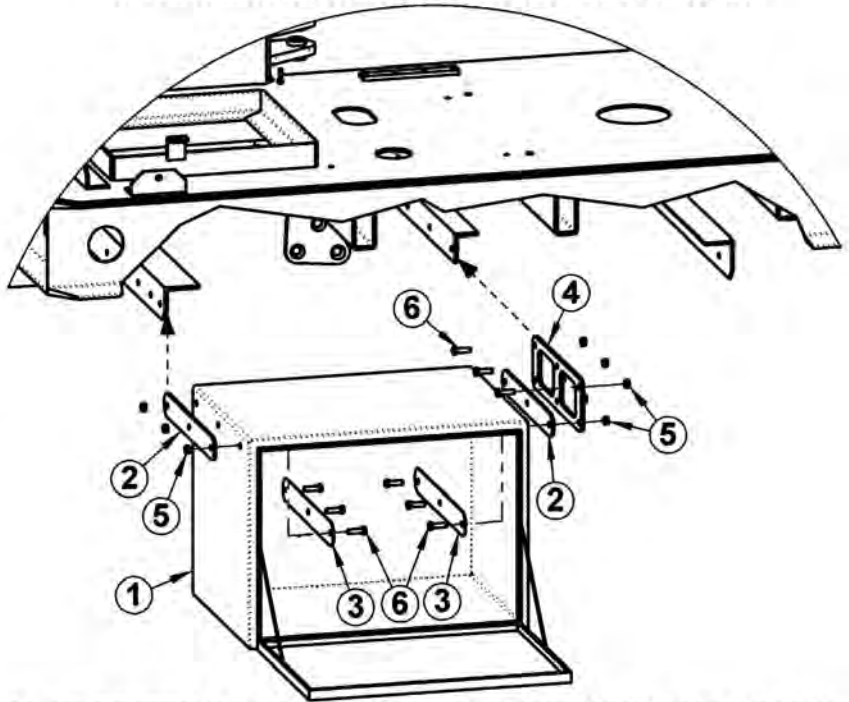
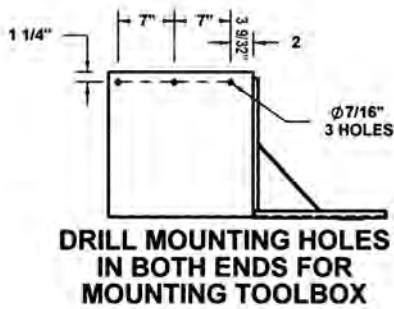
# RAILGEAR HYDRAULIC SCHEMATIC





## 2 FOOT TOOLBOX OPTION

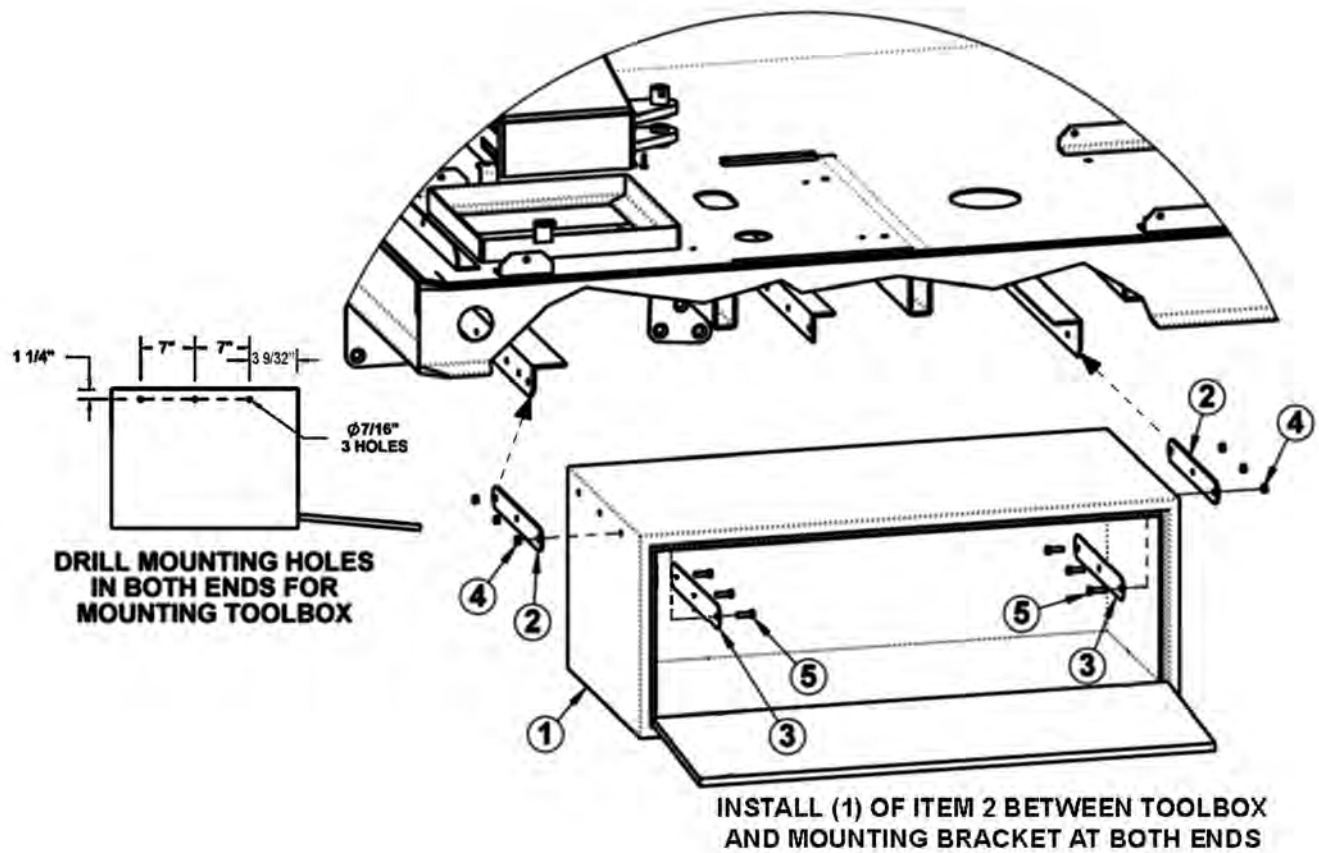
### TRUCKAT FRONT LEFT HAND FLATBED CORNER



**INSTALL (1) OF ITEM 2 BETWEEN TOOLBOX AND MOUNTING BRACKET  
INSTALL (1) OF ITEM 2 BETWEEN TOOLBOX AND ITEM 4**

ITEM	PART NO.	QTY.	DESCRIPTION
1	35319	1	TOOLBOX,18" X 18" X 24"
2	35318	2	RUBBER STRAP
3	35320	2	STRAP,INNER
4	06400940	1	MNT,TOOLBOX,TRUCKAT
5	21627	9	NYLOCK NUT,3/8",NC
6	21631	9	CAPSCREW,3/8" X 1-1/4",NC

## 4 FOOT TOOLBOX OPTION



ITEM	PART NO.	QTY.	DESCRIPTION
1	06520286	1	TOOLBOX,18" X 24" X 48"
2	35318	2	RUBBER STRAP
3	35320	2	STRAP,INNER
4	21627	6	NYLOCK NUT,3/8",NC
5	21631	6	CAPSCREW,3/8" X 1-1/4",NC

**COMMON  
PARTS SECTION**



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COMMON TRUCKAT/RAILKUT

## PART NAME INDEX

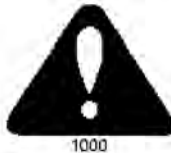
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## PARTS ORDERING GUIDE

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

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

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

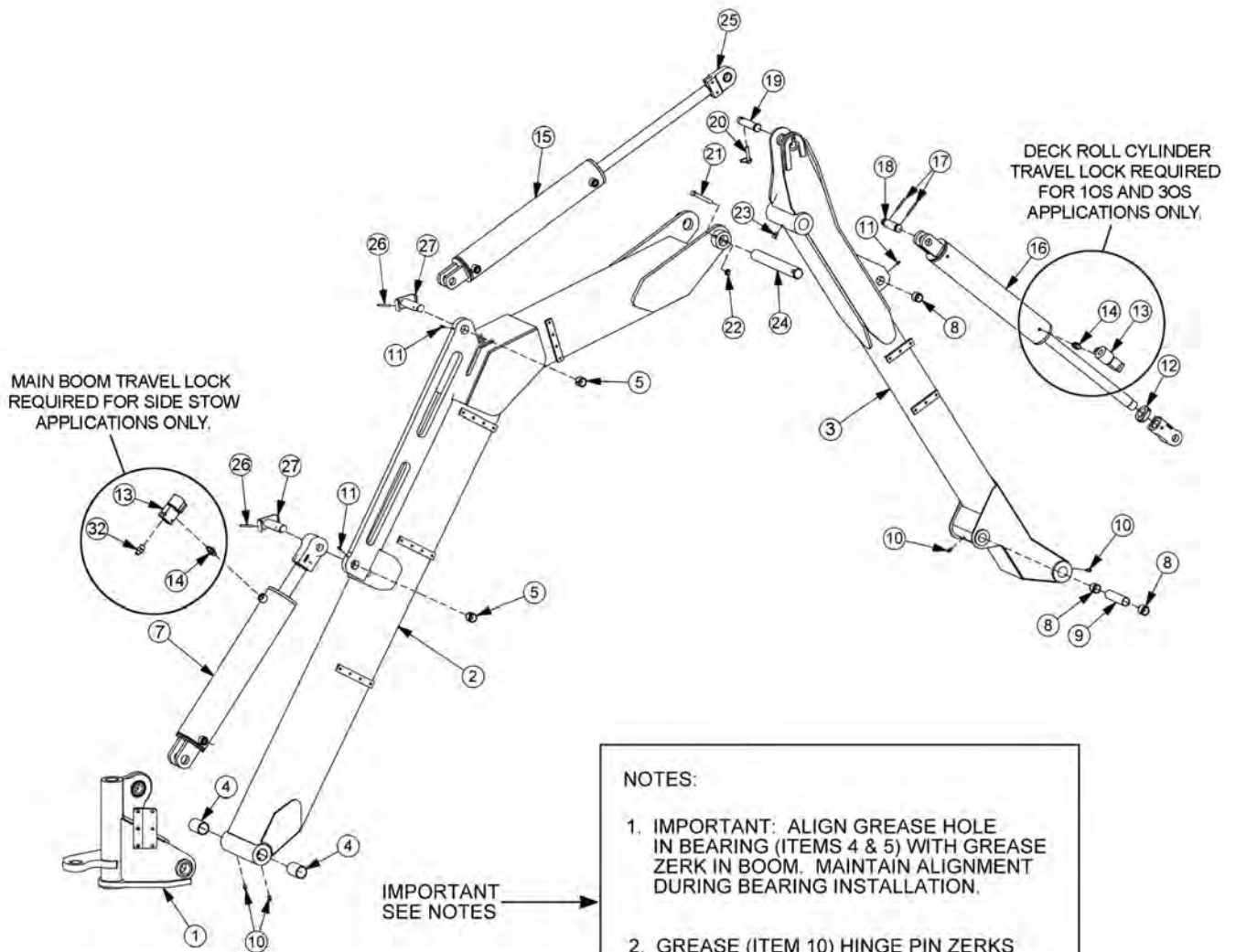


For maximum safety and to guarantee optimum product reliability, always use genuine **Tiger** replacement parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death.

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 ASSY BENGAL EXT 24 T4



**NOTES:**

1. IMPORTANT: ALIGN GREASE HOLE IN BEARING (ITEMS 4 & 5) WITH GREASE ZERK IN BOOM. MAINTAIN ALIGNMENT DURING BEARING INSTALLATION.
2. GREASE (ITEM 10) HINGE PIN ZERKS ON BOOM AFTER ASSEMBLY, ONCE UNDER LOAD WITH BOOM ELEVATED AND AGAIN AT REST WITH BOOM SUPPORTED.



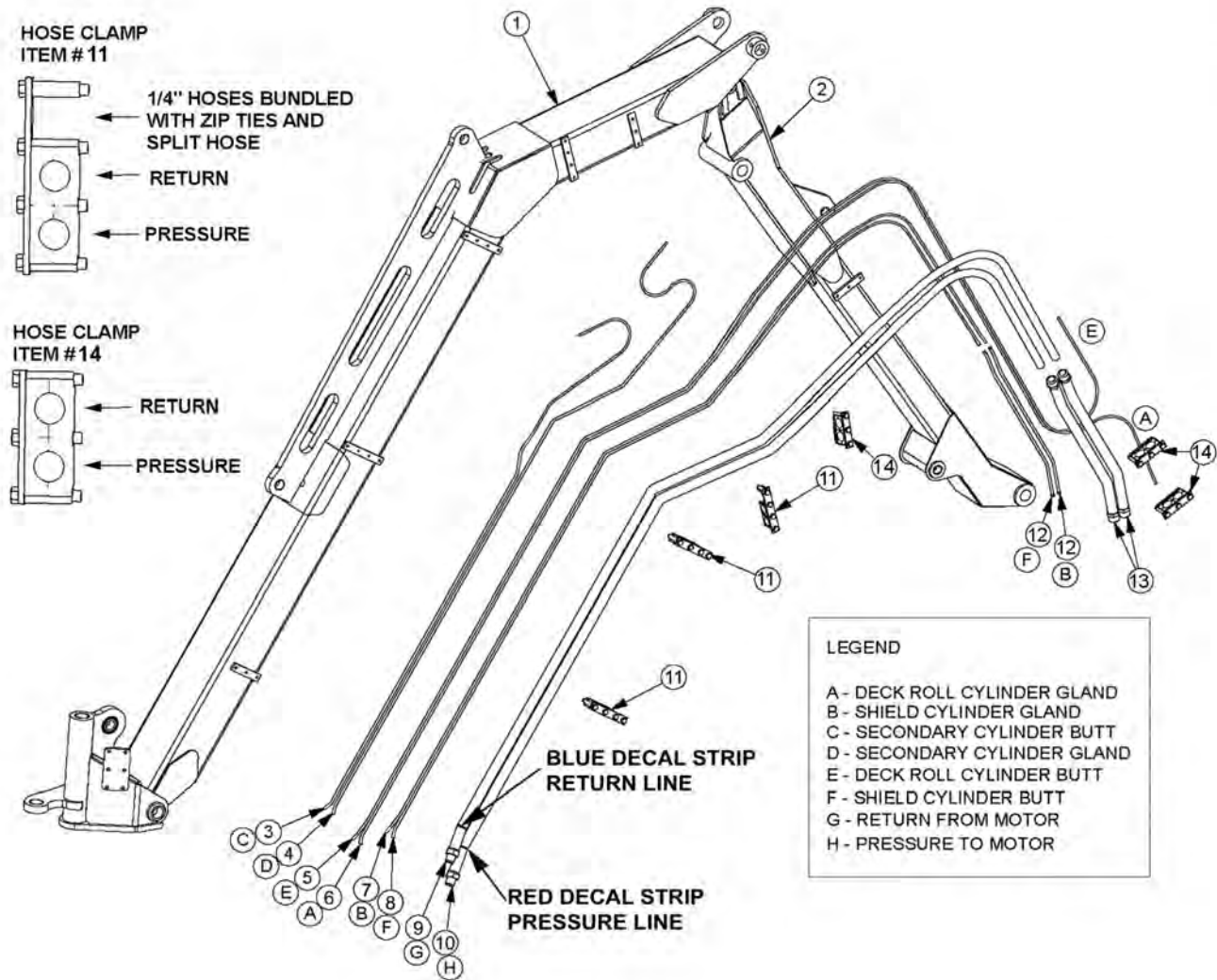
## BOOM ASSY BENGAL EXT 24 T4

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	SWIVEL ASSY *REFER TO TRACTOR MOUNT KIT
2	06700191	1	MAIN BOOM, EXT, T4
3	06700094	1	SECONDARY BOOM ARM ASSY, EXT, T4
4	32321	2	BEARING, DX, 1-1/2" X 2"
5	TB1044	2	BUSHING, 1-1/4"ID
7	06501020	1	CYLINDER, 5" X 20"
8	TB3010	3	BUSHING, 1"ID
9	TB1035	1	BUSHING,SPACER
10	6T3211	4	GREASE ZERK,1/8"
11	6T3207	3	GREASE ZERK,1/4
12	35312	1	SET COLLAR
13	06510050	1	TRAVEL LOCK,METRIPACK COIL
14	31329	1	ADAPTER,1/2ORB X 1/2ORB ADJ
15	06501022	1	CYLINDER, 4" X 20"
16	06501023	1	CYLINDER,3" X 18"
17	06537021	6	ROLL PIN,5MM
18	TB1033	1	PIN,1" X 4"
19	TB1036	1	PIN,1" X 4-11/16"
20	TF1143	1	PIN,LYNCH
21	21688	2	CAPSCREW,7/16" X 3-1/4",NC
22	21677	2	NYLOCK NUT,7/16",NC
23	6T3210	1	GREASE ZERK,1/8" X 90°
24	TB1025	1	PIN,1-1/2" X 12"
25	30172	1	CLEVIS,SPHERICAL
26	6T3014	2	ROLL PIN, 1/4" X 2"
27	TB1045B	2	PIN, PRIMARY CYLINDER

COMMON TRUCKAT/RAILKUT

# BOOM ASSY HYD BENGAL 24 T4



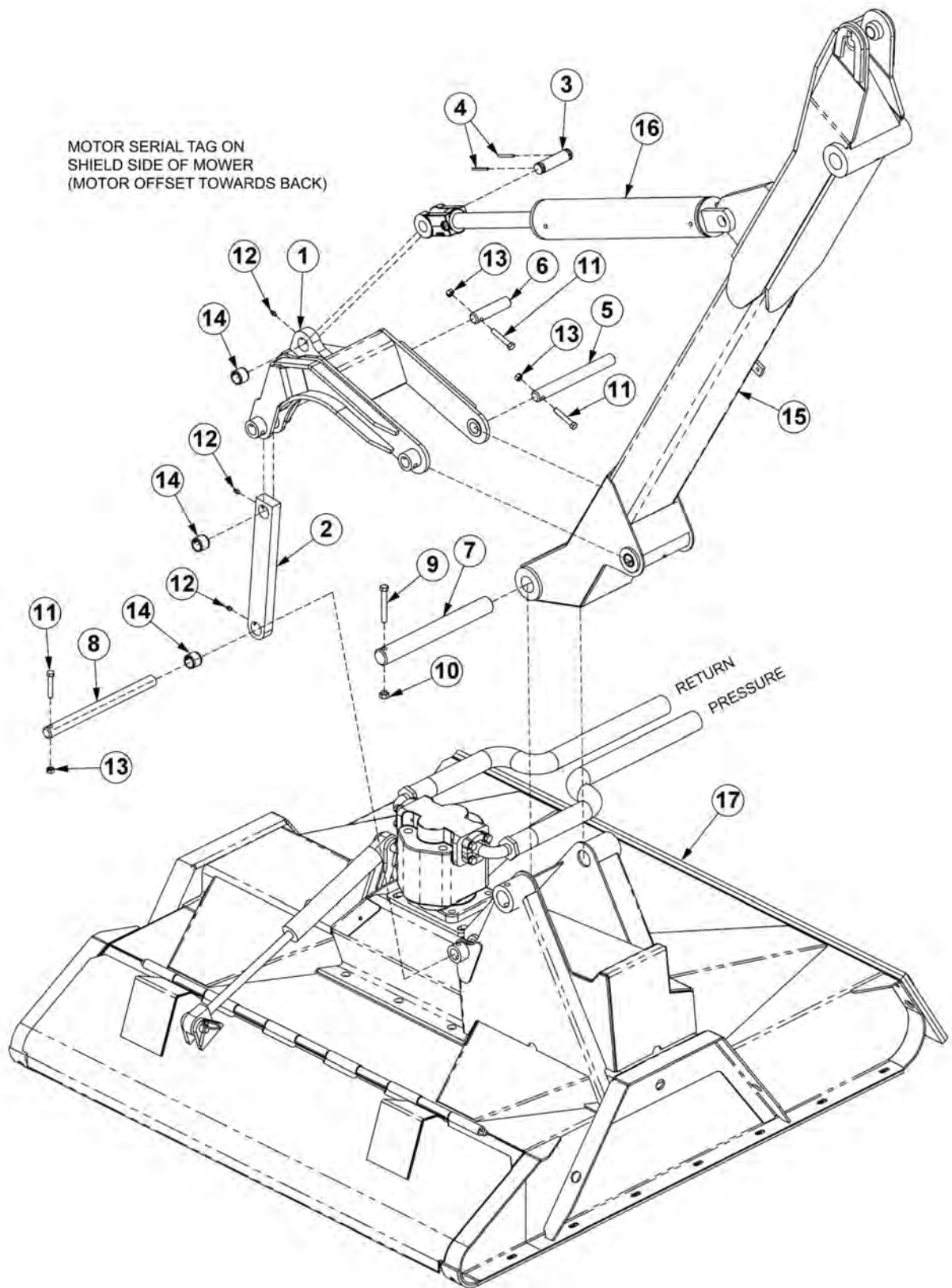
## BOOM ASSY HYD BENGAL 24 T4

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	-	MAIN BOOM *REFER TO BOOM ARM ASSY
2	-----	-	SECONDARY BOOM *REFER TO BOOM ARM ASSY
3	06500716	1	HOSE, 1/4" X 100"
4	---	1	HOSE, 1/4" X 100 "
5	06500717	1	HOSE, 1/4" X 170"
6	----	1	HOSE, 1/4" X 170"
7	06500718	1	HOSE, 1/4" X 130"
8	---	1	HOSE, 1/4" X 130"
9	06500715	1	HOSE, 1" X 198"
10	---	1	HOSE, 1" X 198"
11	06505019	3	CLAMP KIT,3 SECTION
12	34103	2	TUBE,PRFRMD,SEC BOOM
13	30169	2	TUBE,PRFRMD,SEC BOOM,HP
14	30111	2	CLAMP KIT,2 SECTION

COMMON TRUCKAT/RAILKUT

# BOOM ROTARY PIVOT ASSEMBLY



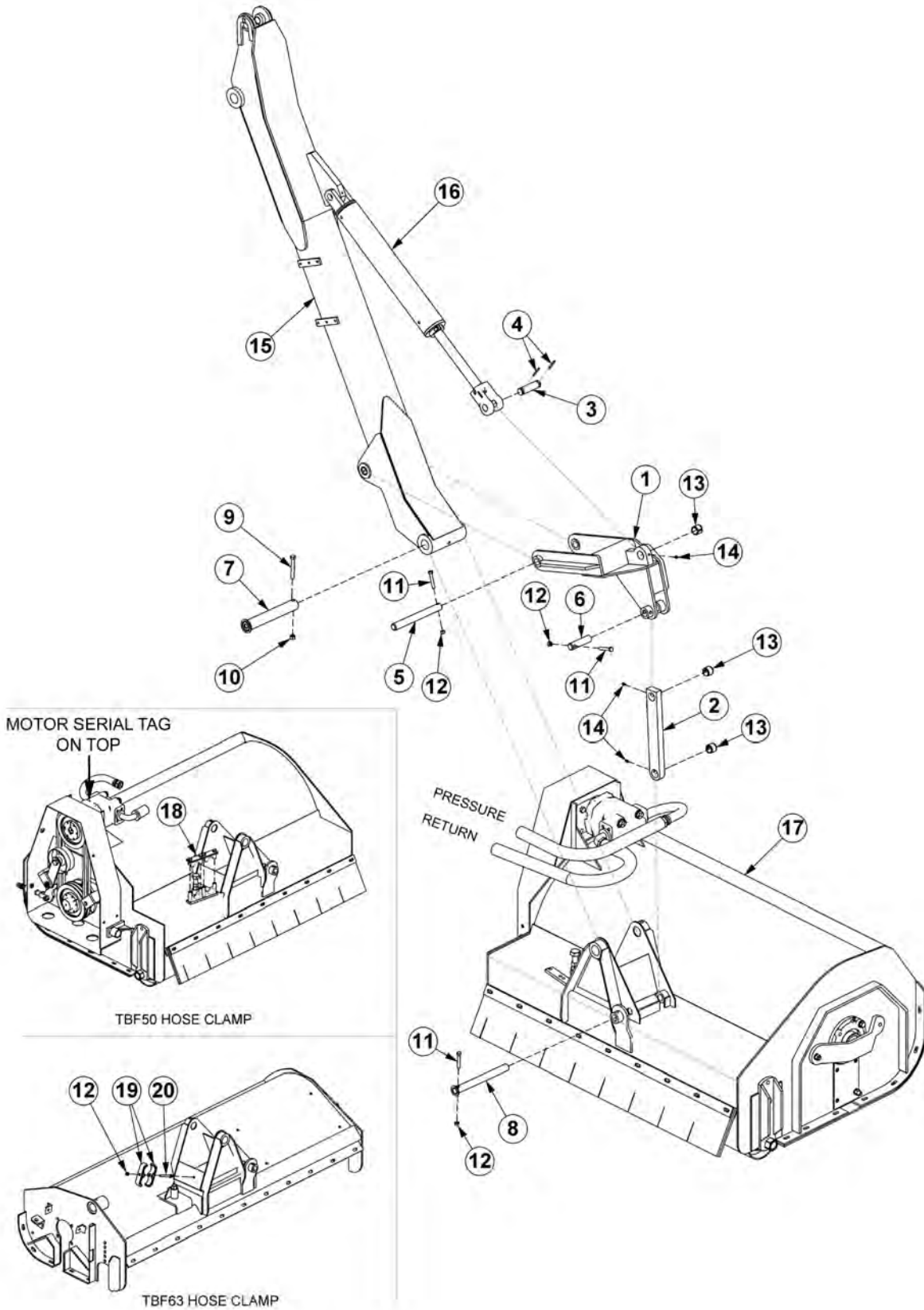
## BOOM ROTARY PIVOT ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	TB1032	1	ROTARY PIVOT ASSY
2	TB1028	1	PIVOT ARM ASSY
3	TB1033	1	PIN,CLEVIS
4	06537021	2	ROLL PIN
5	TF3097	1	PIN
6	TB1030	1	PIN
7	33985	1	PIN
8	33986	1	PIN
9	21688	1	CAPSCREW,7/16 X 3-1/4,NC
10	21677	1	NYLOCK NUT,7/16 NC
11	21635	3	CAPSCREW,3/8 X 2-1/4
12	6T3207	3	GREASE ZERK
13	21627	3	NYLOCK NUT,3/8,NC
14	TB3010	3	BUSHING
15	-----	-	SECONDARY BOOM *REFER TO BOOM ARM ASSY
16	-----	-	CYLINDER *REFER TO BOOM ARM ASSY
17	-----	-	ROTARY MOWER HEAD *REFER TO ROTARY DECK

COMMON TRUCKAT/RAILKUT

# BOOM FLAIL PIVOT ASSEMBLY



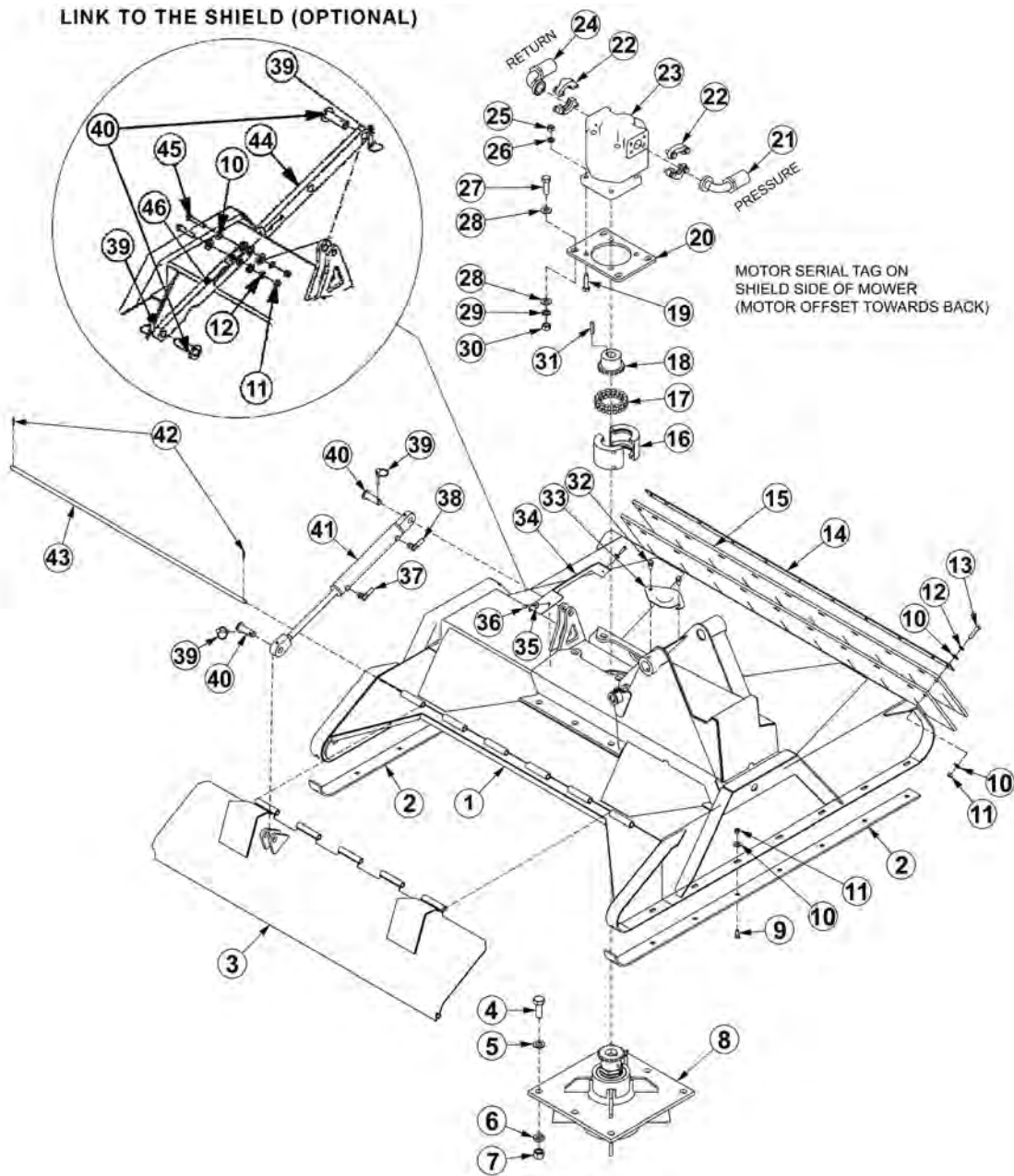
## BOOM FLAIL PIVOT ASSEMBLY

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"

COMMON TRUCKAT/RAILKUT

## 50IN ROTARY MOWER ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	33780	1	DECK,WLDMNT,50" RTRY
2	33777	2	SKID SHOE,50" RTRY
3	33754	1	SHIELD,50"RTRY
4	33879	6	CAPSCREW, 3/4 X 2 1/4,NF GR 8
5	33880	6	FLATWASHER,3/4",GR 8,SAE
6	21993	6	LOCKWASHER,3/4",GR 8
7	6T2413	6	HEX NUT,3/4,NF,GR 8
8	6T1024H5	1	SPINDLE ASSY,CPLT,HD,5/8 HOLES

COMMON TRUCKAT/RAILKUT



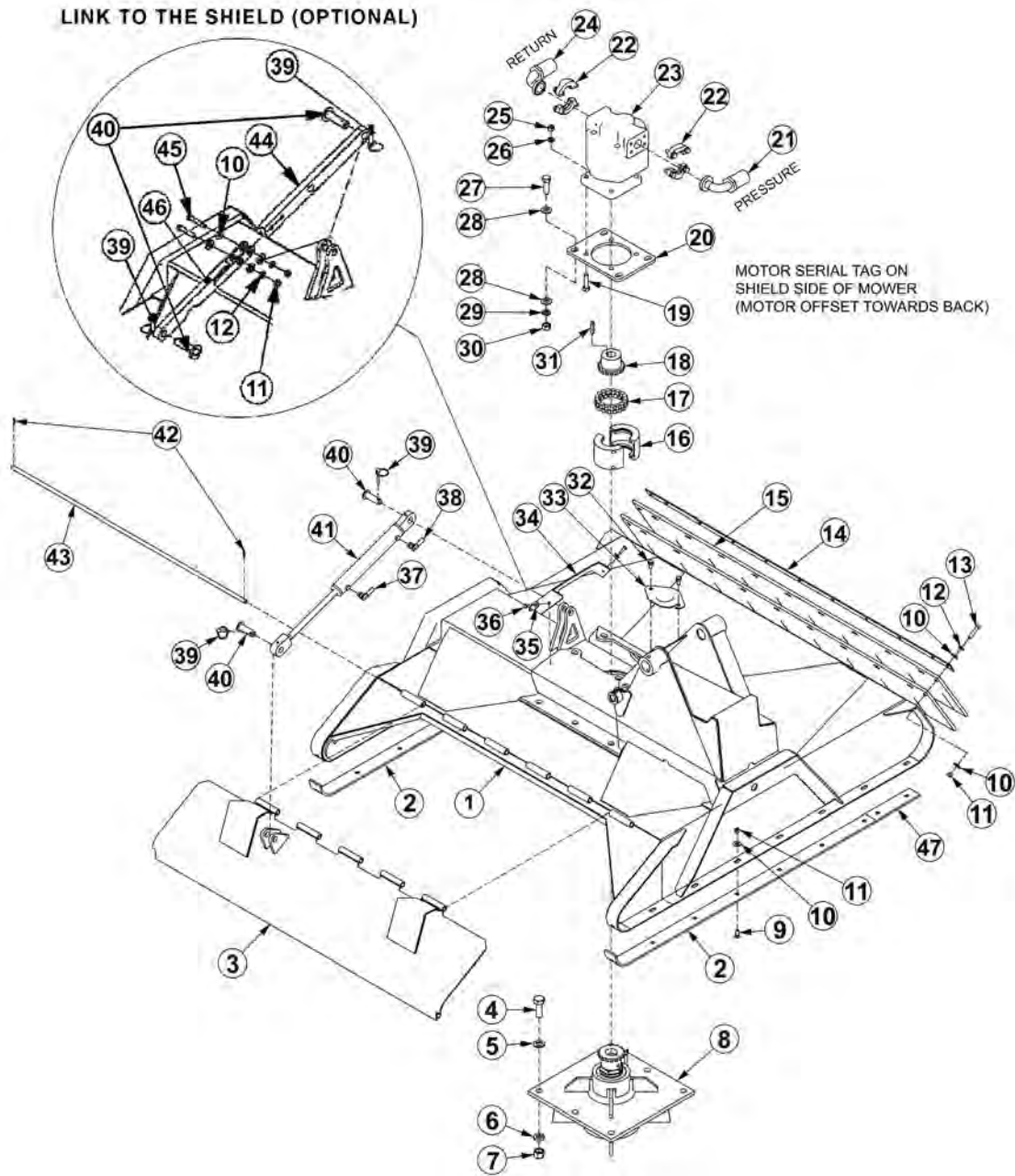
## 50IN ROTARY MOWER ASSEMBLY

**Continued...**

<b>ITEM</b>	<b>PART NO.</b>	<b>QTY.</b>	<b>DESCRIPTION</b>
9	6T2270	16	PLOW BOLT,3/8" X 1" NC
10	22016	33	FLATWASHER,3/8"
11	21625	20	HEX NUT,3/8",NC
12	21988	11	LOCKWASHER, 3/8"
13	21633	11	CAPSCREW, 3/8 X 1 3/4,NC
14	33774	1	FLAP RETAINER,50" RTRY
15	33775	2	FLAP,50" RTRY
16	6T1033	1	COUPLER COVER WITH HARDWARE AND SEALS
17	6T1029	1	COUPLER CHAIN
18	21223	1	SPROCKET
19	21733	4	CAPSCREW, 1/2 X 2,NC
20	33776	1	MOTOR MOUNT,PLATE,50" RTRY
21	24490	1	HOSE - PRESSURE (RED DECAL STRIP)
22	TF4852	2	FLANGE KIT - #20
23	06504012	1	MOTOR (M365-1 3/4" GEAR)
24	24489	1	HOSE - RETURN (BLUE DECAL STRIP)
25	21725	4	HEX NUT, 1/2" NC
26	06533004	4	FLATWASHER, 1/2"
27	6T2290	4	CAPSCREW,5/8X2,NF GR 8
28	33764	8	FLATWASHER,5/8",GR 8,SAE
29	21992	4	LOCKWASHER, 5/8
30	6T2408	4	HEX NUT, 5/8, NF
31	TF1124	1	SQUARE KEY
32	33881	2	CAPSCREW,FLG, 3/8 X 3/4,NC
33	33779	1	PLATE,COVER,KNF HOLE
34	06410439	1	COVER
35	22014	2	FLATWASHER,1/4
36	21530	2	CAPSCREW,1/4 X 1,NC
37	34187	1	HOSE 1/4" X 75"
38	34186	1	HOSE 1/4" X 66"
39	RD1032	2	LYNCH PIN
40	33984	2	PIN,SHIELD,50"
41	33785	1	1-1/2" X 8", CYLINDER, WELDED
42	6T3017	2	ROLLPIN
43	33778	1	HINGE PIN,50" RTRY
44	33772	1	LINK, SHIELD 50" RTRY (OPTIONAL)
45	21634	2	CAPSCREW, 3/8" X 2, NC
46	33773	1	LINK 2, SHIELD 50" RTRY (OPTIONAL)

COMMON TRUCKAT/RAILKUT

# 60IN ROTARY MOWER ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	06320159	1	DECK,WLDMNT,60" RTRY
2	33777	2	SKID SHOE,RTRY
3	06320162	1	SHIELD,60"RTRY
4	33879	6	CAPSCREW, 3/4" X 2 1/4",NF GR 8
5	33880	6	FLATWASHER,3/4",GR 8,SAE
6	21993	6	LOCKWASHER,3/4",GR 8
7	6T2413	6	HEX NUT,3/4",NF,GR 8
8	6T1024H5	1	SPINDLE ASSY,CPLT,HD,5/8" HOLES

COMMON TRUCKAT/RAILKUT

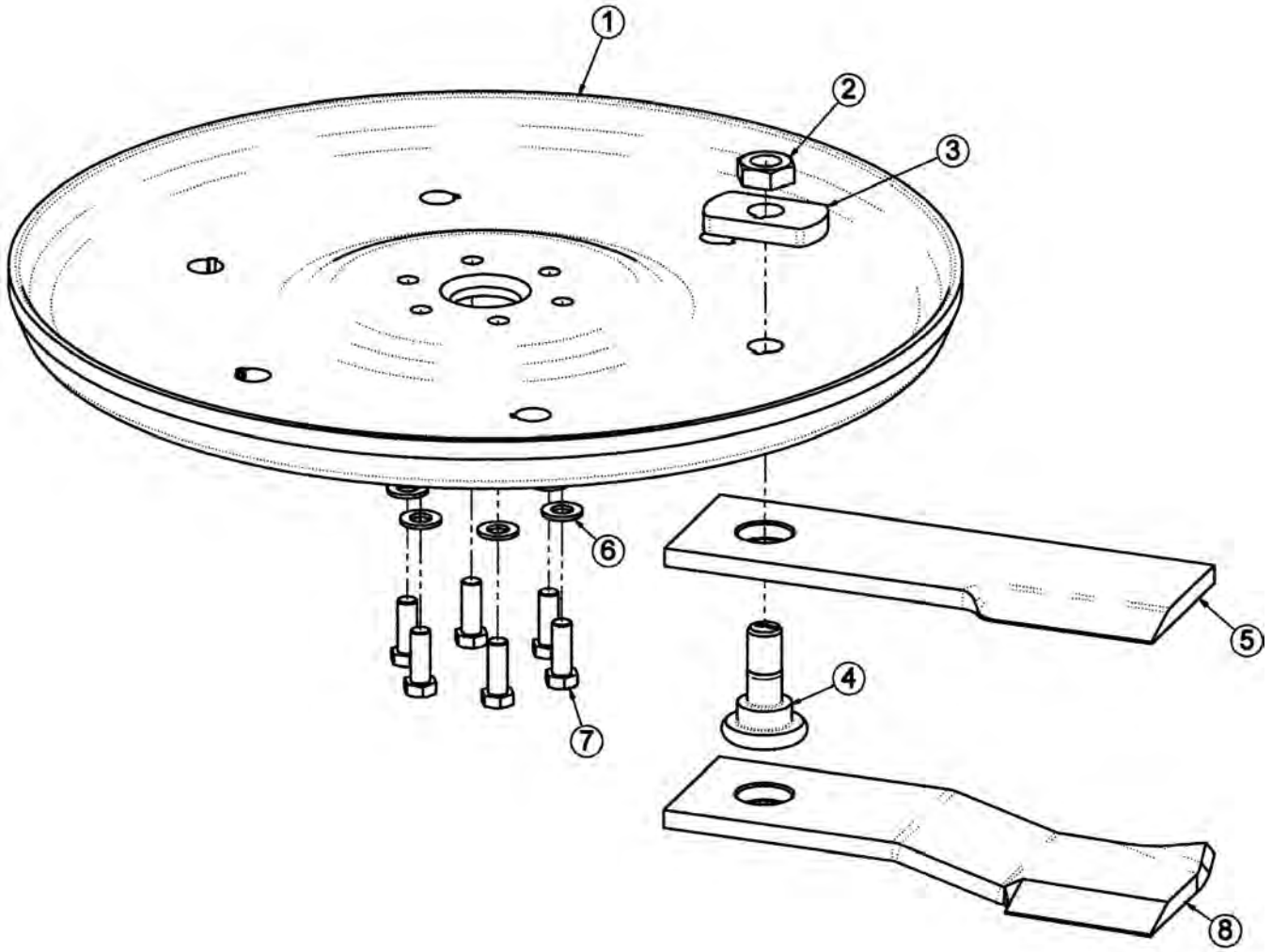
## 60IN ROTARY MOWER ASSEMBLY

**Continued...**

<b>ITEM</b>	<b>PART NO.</b>	<b>QTY.</b>	<b>DESCRIPTION</b>
9	6T2270	16	PLOW BOLT,3/8" X 1",NC
10	22016	33	FLATWASHER,3/8"
11	21625	20	HEX NUT,3/8",NC
12	21988	11	LOCKWASHER,3/8"
13	21633	11	CAPSCREW,3/8" X 1-3/4",NC
14	6T0823	1	FLAP RETAINER,60" RTRY
15	06520238	2	FLAP,60" RTRY
16	6T1033	1	COUPLER COVER WITH HARDWARE AND SEALS
17	6T1029	1	COUPLER CHAIN
18	21223	1	SPROCKET
19	21733	4	CAPSCREW,1/2" X 2",NC
20	33776	1	MOTOR MOUNT,PLATE,RTRY
21	24490	1	HOSE - PRESSURE (RED DECAL STRIP)
22	TF4852	2	FLANGE KIT - #20
23	06504011	1	MOTOR
24	24489	1	HOSE - RETURN (BLUE DECAL STRIP)
25	21725	4	HEX NUT, 1/2" NC
26	06533004	4	FLATWASHER, 1/2"
27	6T2290	4	CAPSCREW,5/8" X 2",NF GR 8
28	33764	8	FLATWASHER,5/8",GR 8,SAE
29	21992	4	LOCKWASHER,5/8"
30	6T2408	4	HEX NUT,5/8", NF
31	TF1124	1	SQUARE KEY
32	33881	4	CAPSCREW,FLG,3/8" X 3/4",NC
33	33779	2	PLATE,COVER,KNF HOLE
34	06410439	1	COVER
35	22014	2	FLATWASHER,1/4"
36	21530	2	CAPSCREW,1/4" X 1",NC
37	34187	1	HOSE 1/4" X 75"
38	34186	1	HOSE 1/4" X 66"
39	RD1032	2	LYNCH PIN
40	33984	2	PIN,SHIELD
41	33785	1	1-1/2" X 8", CYLINDER, WELDED
42	6T3017	2	ROLLPIN
43	06420139	1	HINGE PIN,60" RTRY
44	33772	1	LINK, SHIELD,RTRY (OPTIONAL)
45	21634	2	CAPSCREW, 3/8" X 2", NC
46	33773	1	LINK 2, SHIELD,RTRY (OPTIONAL)
47	06401245	2	SKID SHOE,TRB60"

COMMON TRUCKAT/RAILKUT

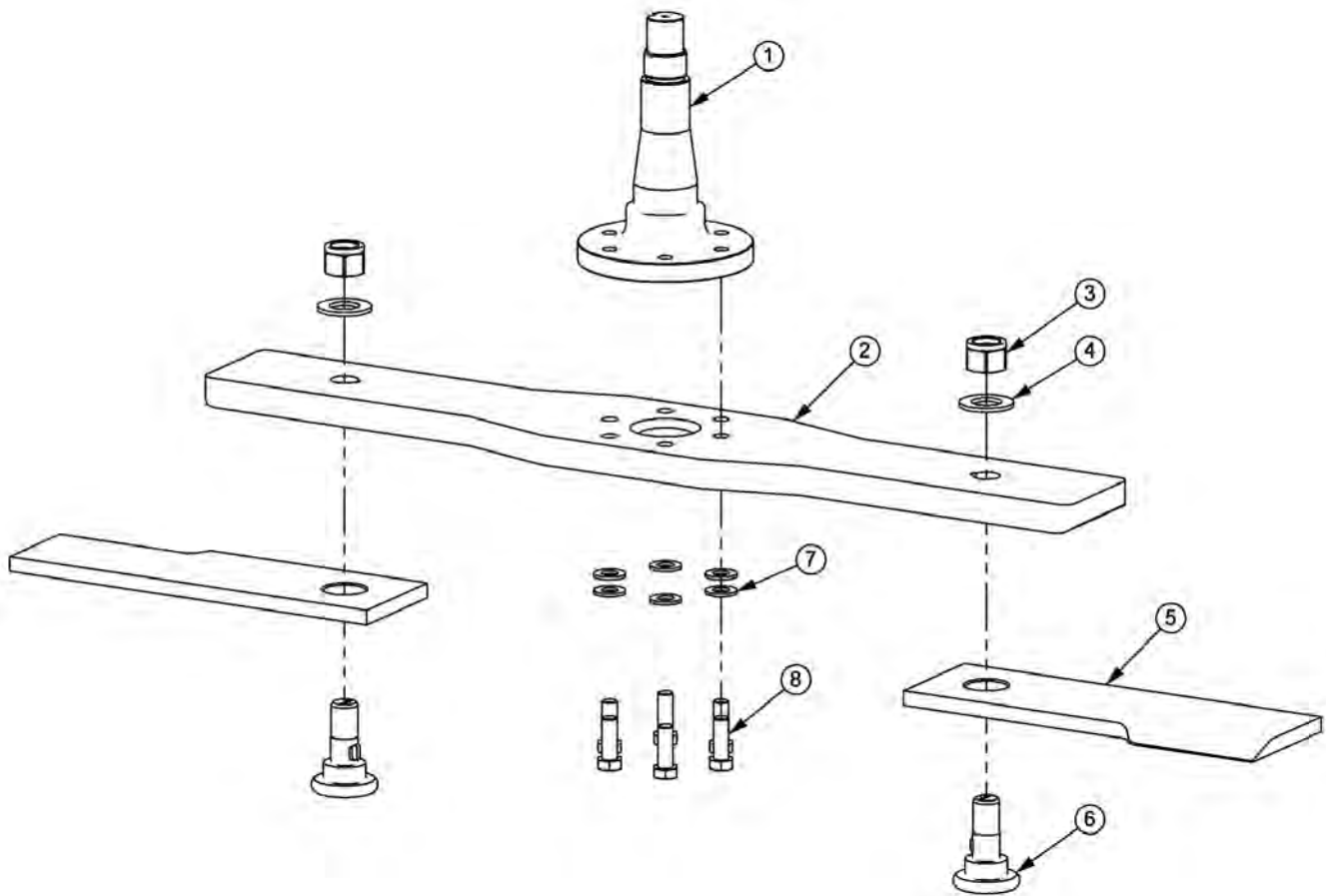
## 50IN ROTARY KNIVES AND DISH



ITEM	PART NO.	QTY.	DESCRIPTION
-----	06700089	-	KIT,TRB50,DISK,W/BOLT KIT (INCLUDES ITEMS 1,3 & 7)
1	06770003	1	BLADE MOUNTING DISK
2	6T1023R	2	NYLOCK HEX NUT 1 1/8"
3	34878	2	SPACER
4	06538000	2	KNIFE MOUNTING BOLT
5	06521001	2	STANDARD KNIFE
6	33764	6	FLATWASHER
7	6T2259	6	CAPSCREW
-----	06770012	-	BOLT KIT (INCLUDES ITEMS 6, 7 & LOCTITE)
8	06521002	2	GRASS KNIFE (OPTIONAL)
-----	6T1825	-	LOCTITE - USED ON ALL DISK MOUNTING BOLTS

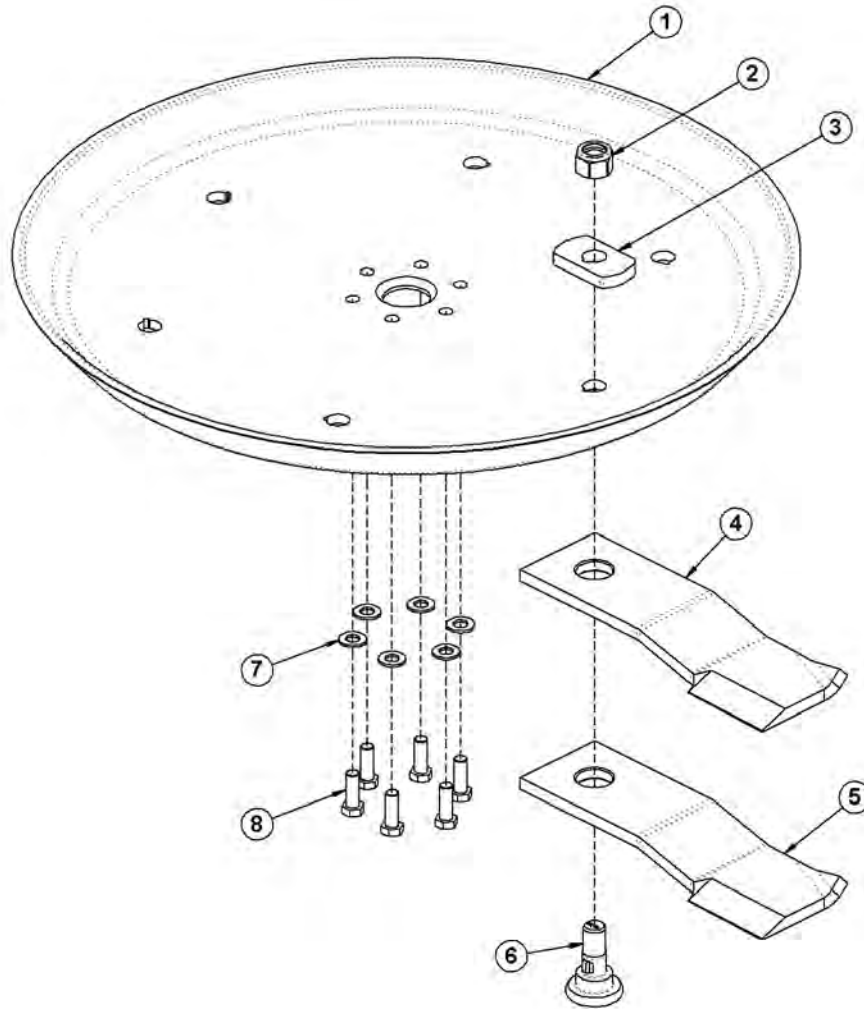
COMMON TRUCKAT/RAILKUT

## 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,TRB50,5/8
6	06538000	2	KNIFE MTG BOLT,5/8 SHOULDER
7	33764	6	FLATWASHER,5/8,GR 8,SAE
8	6T2259	6	CAPSCREW,5/8 X 1-3/4,NF,GR8

## 60IN ROTARY KNIVES AND DISH



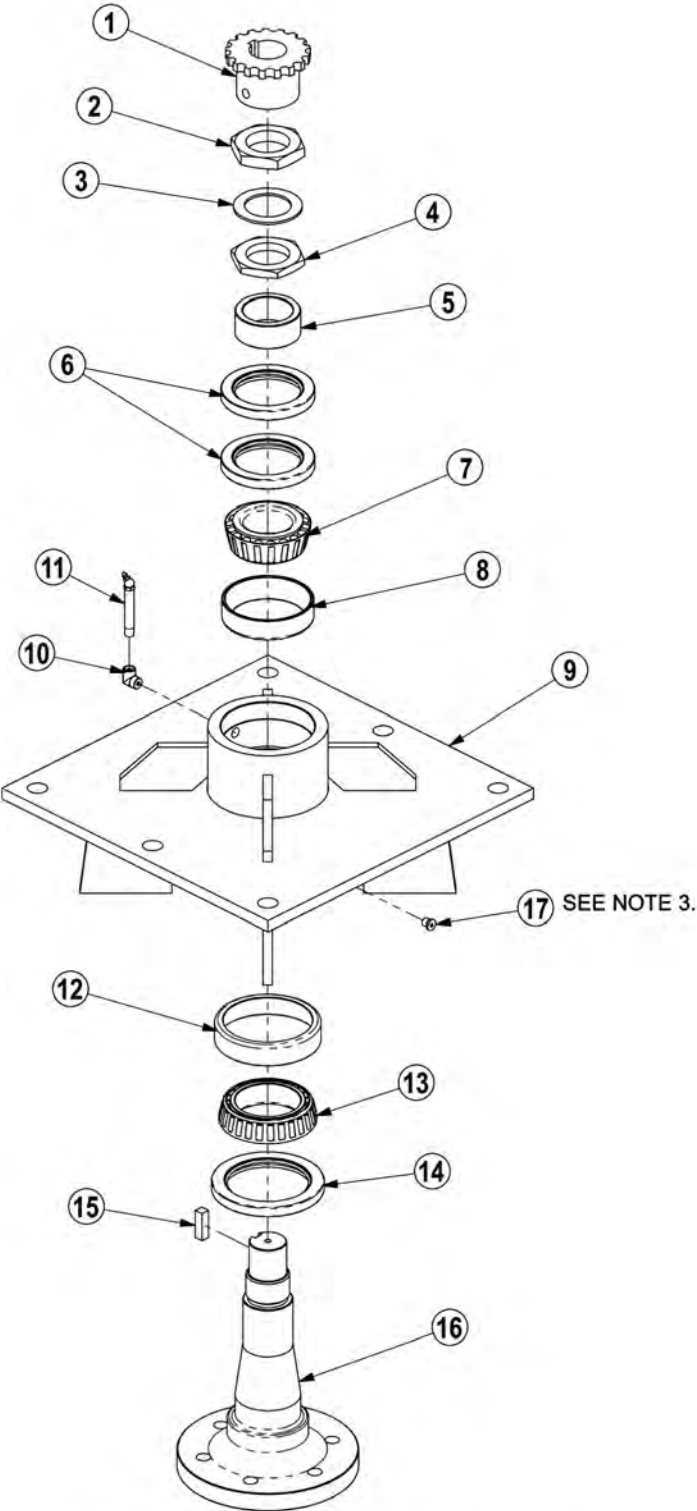
ITEM	PART NO.	QTY.	DESCRIPTION
1	34876	1	BLADE MOUNTING DISH,60"
2	6T1023R	2	NYLOCK NUT,1-1/8",NF
3	34878	2	SPACER
4	34684	2	STANDARD GRASS KNIFE
5	34685	2	HIGH SUCTION GRASS KNIFE (OPTIONAL)
6	34497	2	KNIFE MOUNTING BOLT
7	25270	6	FLATWASHER,5/8,GR8,USS
8	6T2259	6	CAPSCREW,5/8" X 1-3/4",NF,GR8
---	6T1825	1	LOCKTITE (USED ON ITEM 8)
---	27167	-	BOLT KIT (INCLUDES ITEMS 7 & 8)
---	33893	-	KNIFE KIT (INCLUDES ITEMS 2, 4 & 6)

COMMON TRUCKAT/RAILKUT

**NOTES**

**NOTES**

# ROTARY MOWER SPINDLE ASSEMBLY



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



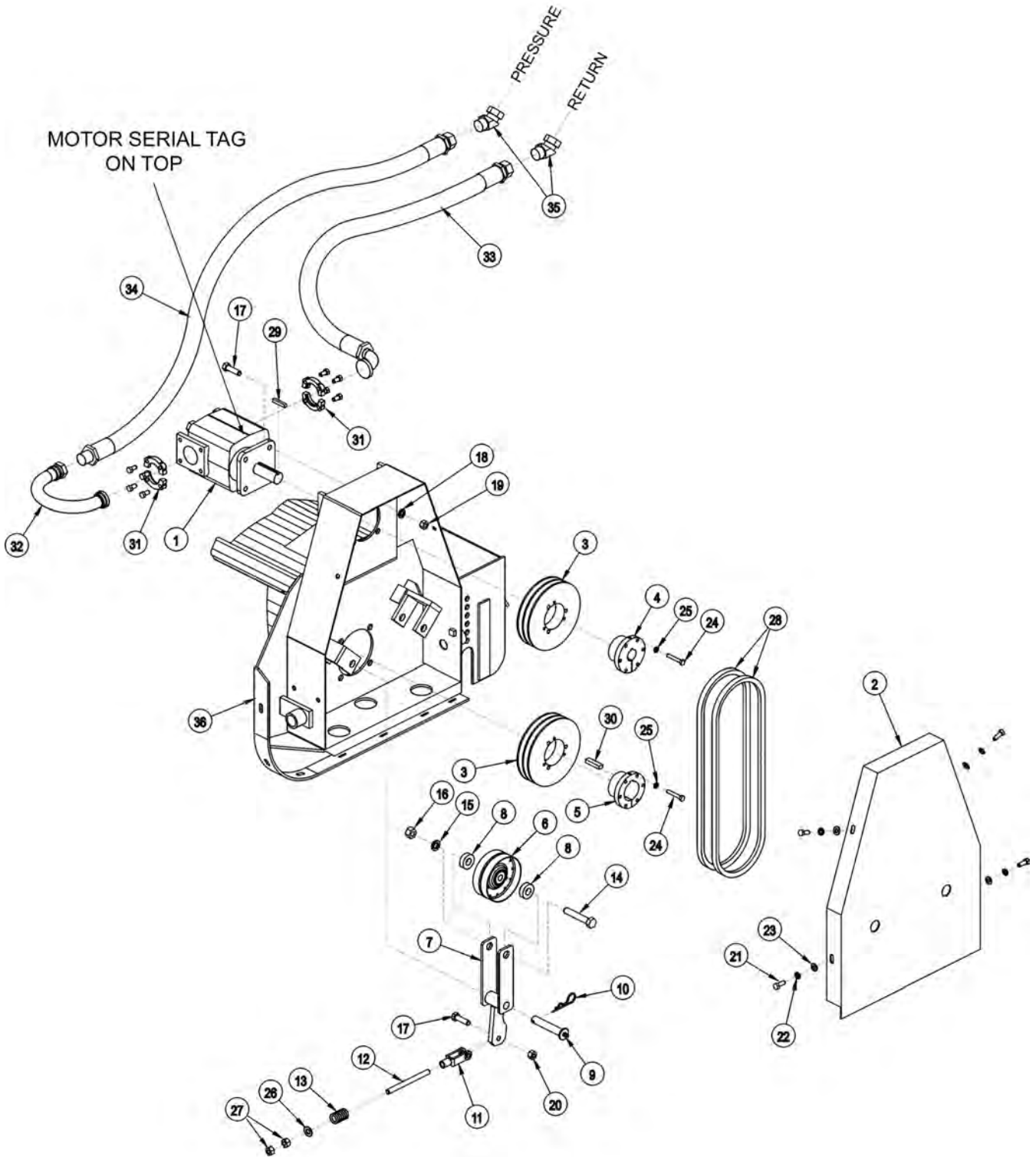
## ROTARY MOWER SPINDLE ASSEMBLY

Continued...

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"
-----	31771	-	SPINDLE REBUILD KIT (INCLUDES ITEMS 2 - 8 AND 12 - 15)

COMMON TRUCKAT/RAILKUT

# 50IN FLAIL DRIVE ASSEMBLY



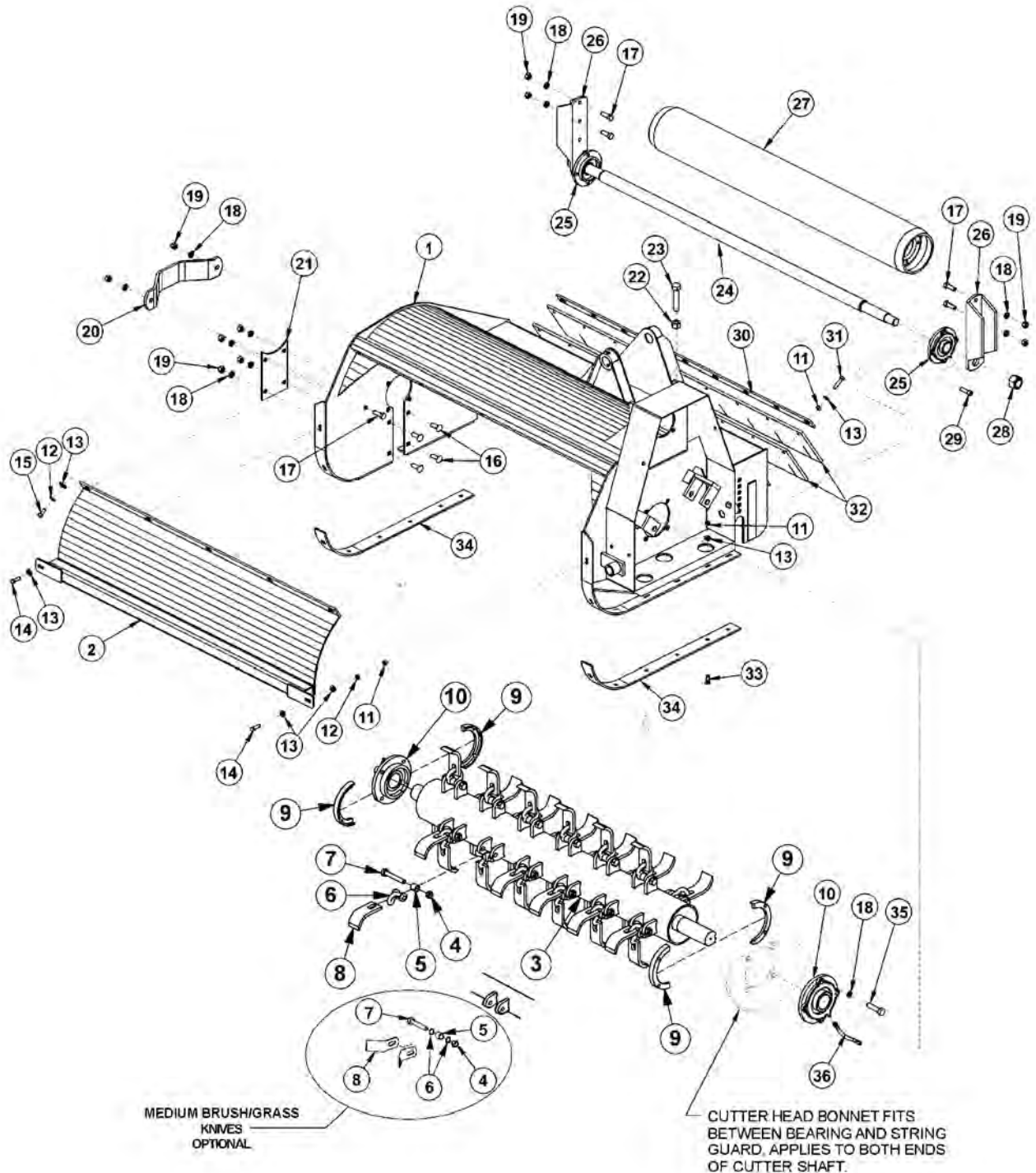
## 50IN FLAIL DRIVE ASSEMBLY

Continued...

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

COMMON TRUCKAT/RAILKUT

# 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

COMMON TRUCKAT/RAILKUT

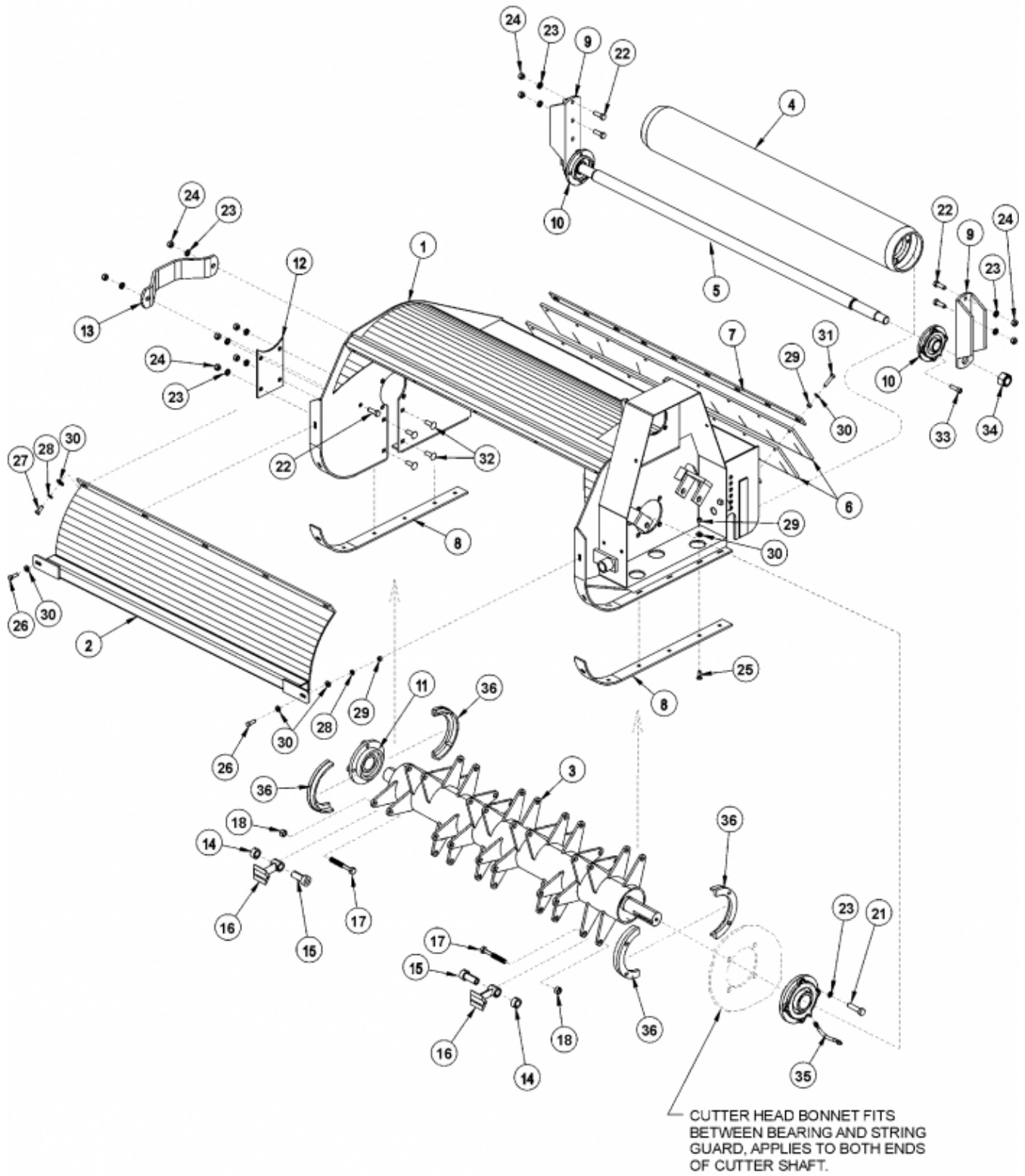
## 50IN FLAIL MOWER ASSEMBLY

Continued...

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

COMMON TRUCKAT/RAILKUT

# 50IN FLAIL MOWER ASSY, HDB KNIVES



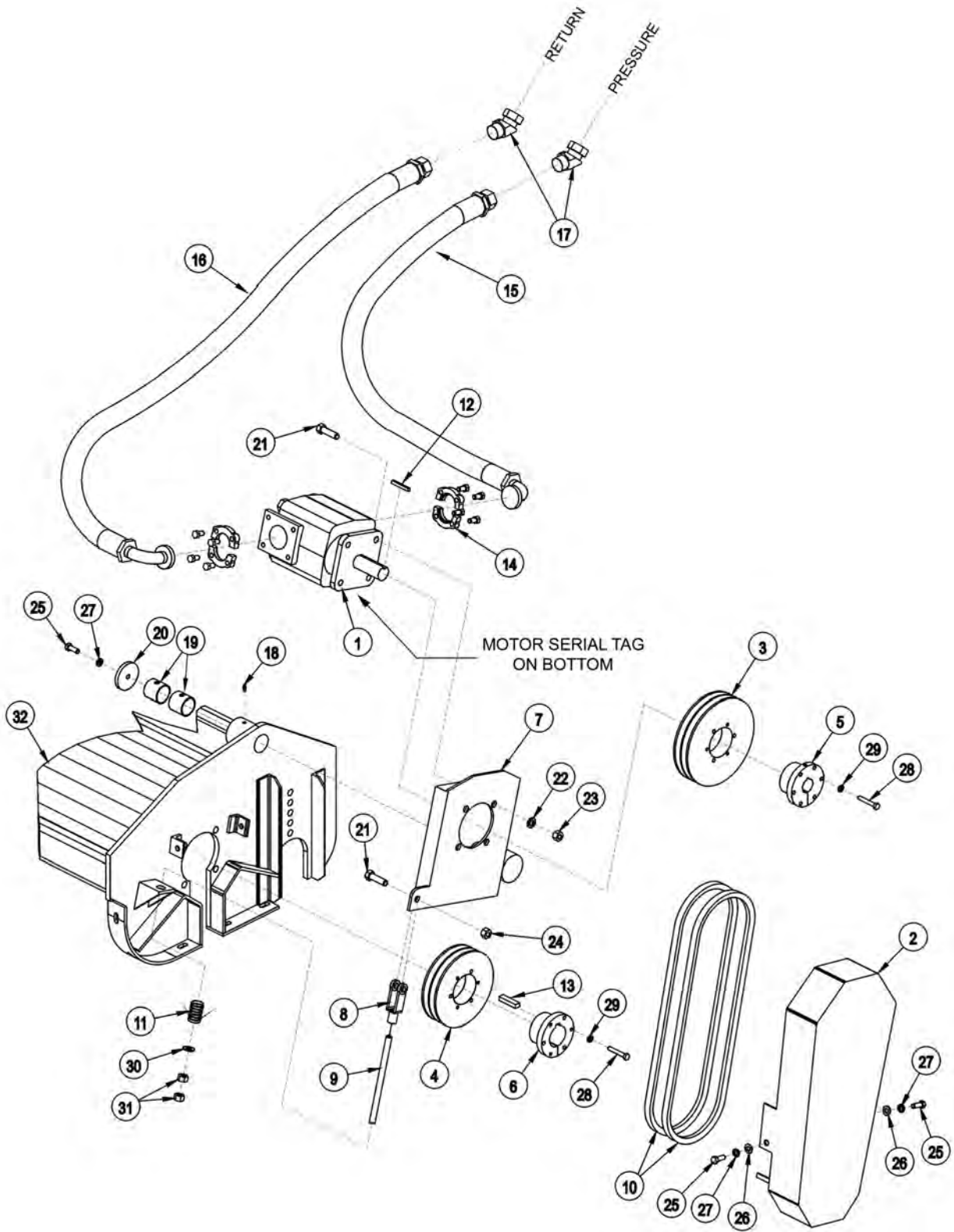
## 50IN FLAIL MOWER ASSY, HDB KNIVES

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
---	06742135	1	FLAIL,BOOM,50,CPLT ASSY
1	06320145	1	CUTTER HEAD BONNET
2	TF3004	1	FRONT SHIELD
3	33717	1	TBF50,CUTTERSHAFT,PASS THRU KNIVES
4	TF3405	1	GROUND ROLLER
5	TF3406	1	GROUND ROLLER TIE ROD
6	TB1006A	2	DEFLECTOR FLAP
7	TB1008	1	FLAP RETAINING BAR
8	TF3001	2	SKID SHOE
9	TF3407	2	GROUND ROLLER ADJUSTMENT BRACKET
10	TF1022	2	FLANGE BEARING,1-3/8"
11	TF1018	2	FLANGE BEARING,2-3/16"
12	TF3007A	1	COVER PLATE
13	TF1040	1	CUTTER SHAFT GUARD
14	33858	24	SPACER,COLLAR
15	33857	24	SHOULDER,BUSHING
16	46399.01	24	KNIFE,FLAIL,FORGED
17	33854	24	CAPSCREW,5/8" X 4-1/2",NC
18	32674	24	HEX NUT,5/8",NC
21	21732	8	CAPSCREW,1/2" X 1-3/4",NC
22	21731	6	CAPSCREW,1/2" X 1-1/2",NC
23	21990	18	LOCKWASHER,1/2"
24	21725	10	HEX NUT,1/2",NC
25	6T2270	12	PLOWBOLT,3/8" X 1",NC
26	21631	2	CAPSCREW,3/8" X 1-1/4",NC
27	21630	5	CAPSCREW,3/8" X 1",NC
28	21988	7	LOCKWASHER,3/8"
29	21625	23	HEX NUT,3/8",NC
30	22016	30	FLATWASHER,3/8"
31	21633	9	CAPSCREW,3/8" X 1-3/4",NC
32	6T7031D	4	PLOW BOLT,1/2" X 1-1/2",NC
33	6T2330	8	CAPSCREW,7/16" X 1-1/2",NC,SCKT HD
34	6T1023R	2	NYLOCK NUT,1-1/8",NF
35	TF1032	1	FLANGE BEARING GREASE HOSE
36	31204	2	STRING GUARD SET (2 PIECES PER SET)

COMMON TRUCKAT/RAILKUT

# 63IN FLAIL DRIVE ASSEMBLY





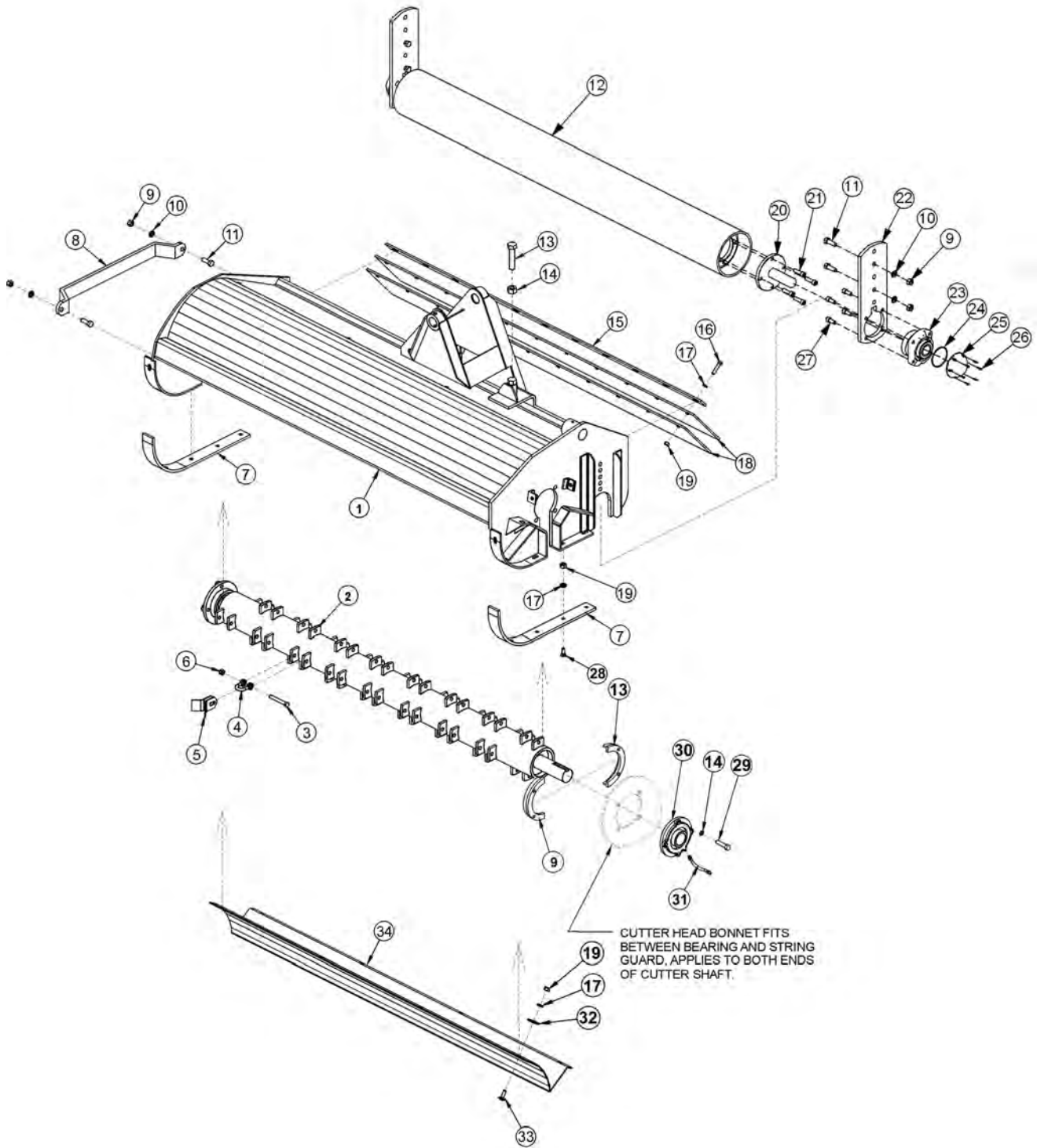
## 63IN FLAIL DRIVE ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
1	06504013	1	MOTOR (M350-1 3/4 GEAR)
2	32569	1	BELT GUARD
3	TF3044	1	UPPER SHEAVE
4	TF3040	1	LOWER SHEAVE
5	TF3013	1	BUSHING
6	28723	1	BUSHING
7	28679B	1	MOTOR CHANNEL
8	PT3611A	1	CLEVIS
9	40496	1	THREADED ROD
10	28702	2	BELT
11	TF3620A	1	TENSIONER SPRING
12	28572	1	SQUARE KEY
13	26142A	1	SQUARE KEY
14	TF4852	2	FLANGE KIT
15	30308	1	HOSE,1 X 69 - PRESSURE
16	30309	1	HOSE,1 X 78 - RETURN
17	24724	2	SWIVEL FITTING
18	TF1033	1	GREASE ZERK
19	27580	2	BUSHING
20	28682	1	MOTOR CHANNEL WASHER
21	21732	5	CAPSCREW 1/2" X 1 3/4"
22	21990	4	LOCKWASHER 1/2"
23	21725	4	HEX NUT 1/2"
24	6T2418	1	STOVER NUT 1/2"
25	21630	3	CAPSCREW 3/8" X 1"
26	22016	2	FLATWASHER 3/8"
27	21988	3	LOCKWASHER 3/8"
28	21584	6	CAPSCREW 5/16" X 2"
29	21987	6	LOCKWASHER 5/16"
30	27938	1	FLATWASHER 1/2"
31	21700	2	HEX NUT 1/2" NF
32	-----	-	CUTTER HEAD *REFER TO MOWER ASSY

COMMON TRUCKAT/RAILKUT

# 63IN FLAIL MOWER ASSEMBLY



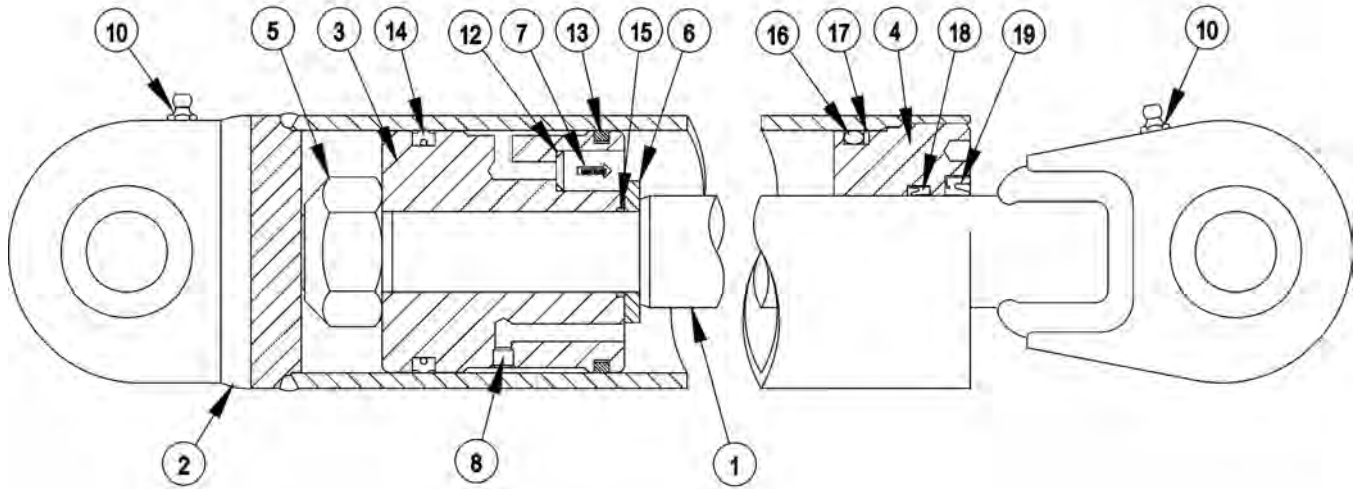
## 63IN FLAIL MOWER ASSEMBLY

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
-----	06200271	-	FLAIL,BOOM,63,GRASS,CPLT ASSY
1	28659H	1	CUTTER HEAD BONNET
2	28743	-	CUTTER SHAFT / KNIFE ASSY STANDARD GRASS
-----	28642C	1	CUTTER SHAFT,63,STD
3	34011	36	FLAIL KNIFE MOUNTING BOLT
4	TF1020	36	FLAIL KNIFE MOUNTING CLEVIS
5	33713	72	FLAIL KNIFE - STANDARD
6	21677	36	NYLOCK NUT
7	28086A	2	SKID SHOE
8	27975A	1	CUTTER SHAFT GUARD
9	21725	14	HEX NUT 1/2"
10	21990	14	LOCKWASHER 1/2"
11	21731	6	CAPSCREW 1/2" X 1 1/2"
12	06320235	1	GRNDRLLR,8,63
13	33863	2	STRING GUARD,STD
14	06533006	8	FLATWASHER,1/2",SAE,L9
15	28700	1	FLAP RETAINING BAR
16	21633	11	CAPSCREW 3/8" X 1 3/4"
17	21988	28	LOCKWASHER 3/8"
18	28701	2	DEFLECTOR FLAP
19	21625	28	HEX NUT 3/8"
20	TF1045B	2	GROUND ROLLER STUB SHAFT
21	6T2330	8	CAPSCREW 7/16" X 1 1/2" SOCKET HEAD
22	28735	2	ADJUSTABLE ROLLER BRACKET
23	06520028	2	BEARING,FLANGE,1-3/8,GRNDRLLR
24	06520029	2	O-RING
25	06520027	2	CAP,BEARING,GROUNDROLLER
26	06530001	12	CAPSCREW,SKT HD,8-32 X 1/2,SS
27	6T2331	8	CAPSCREW 7/16" X 1" SOCKET HEAD
28	6T2270	10	PLOW BOLT 3/8" X 1 1/4"
29	06530217	8	CAPSCREW 1/2" X 2",L9
30	28683	2	FLANGE BEARING
31	TF1032	1	FLANGE BEARING GREASE HOSE
32	6T2615	7	FENDER WASHER 3/8"
33	6T2283	7	CARRIAGE BOLT 3/8" X 1"
34	28665A	1	BAFFLE (INSIDE UPPER REAR OF CUTTER HEAD)

COMMON TRUCKAT/RAILKUT

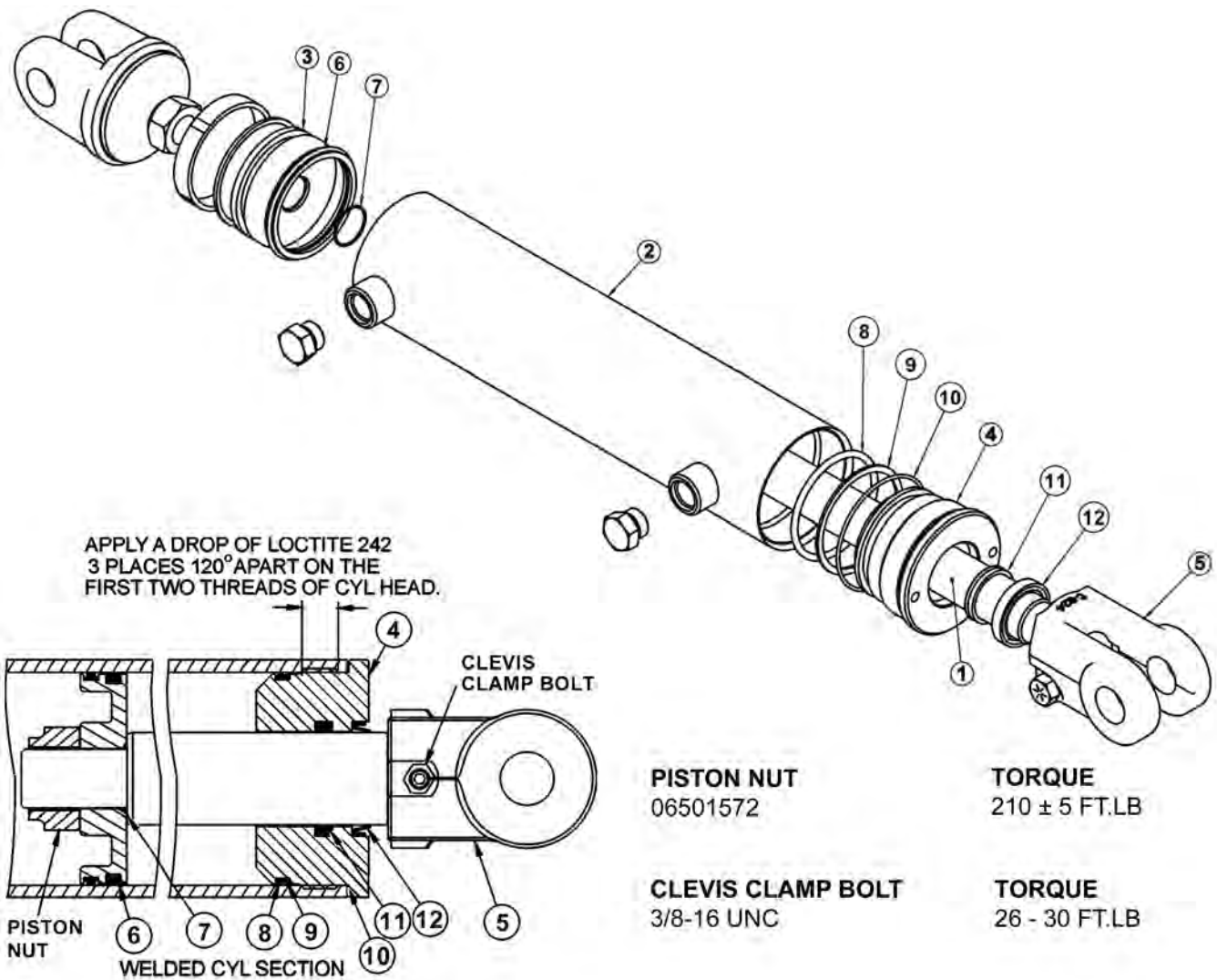
## 3IN X 17-1/2IN WELDED CYLINDER BREAKDOWN



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

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

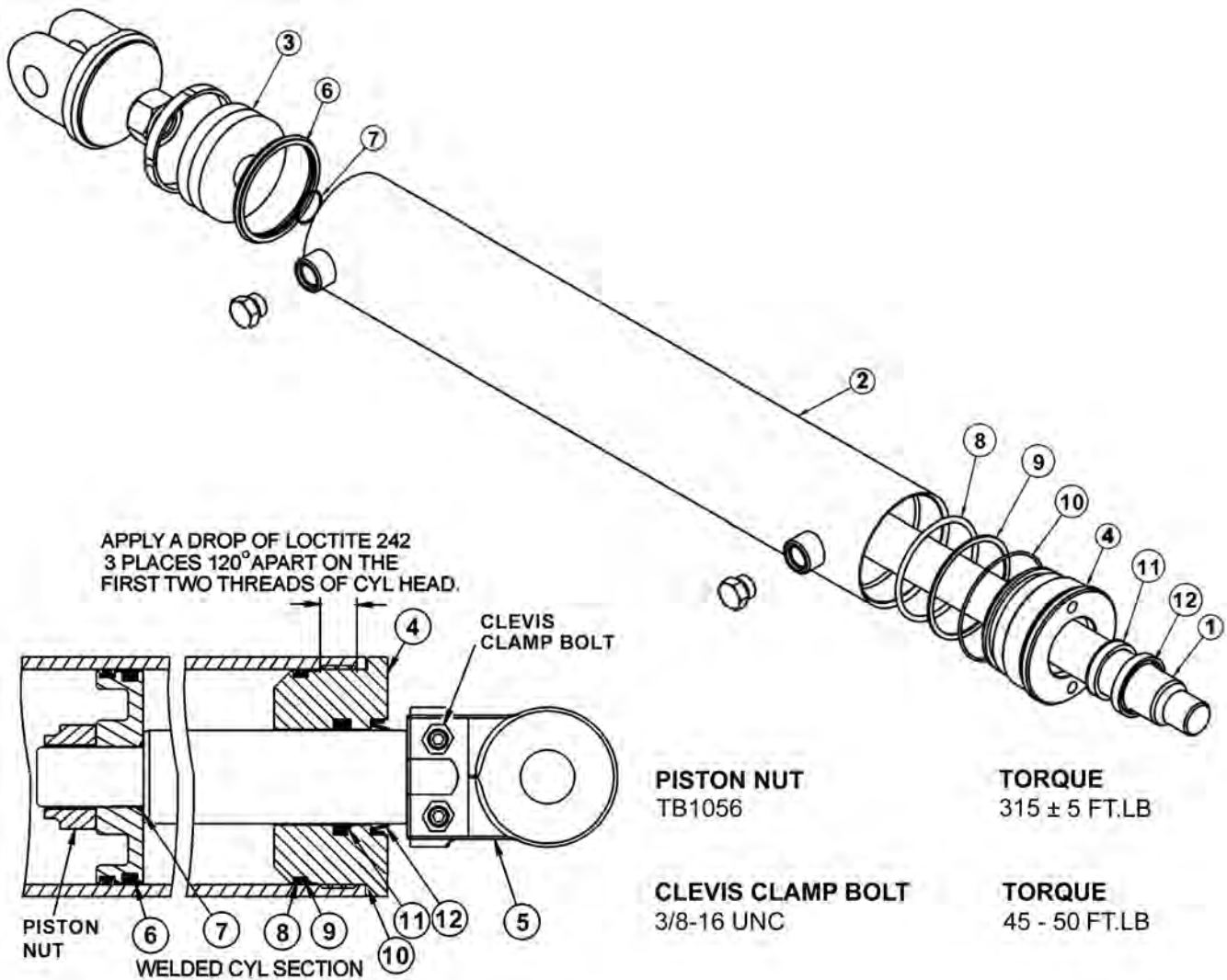
## 3IN X 18IN WELDED CYLINDER BREAKDOWN



**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)

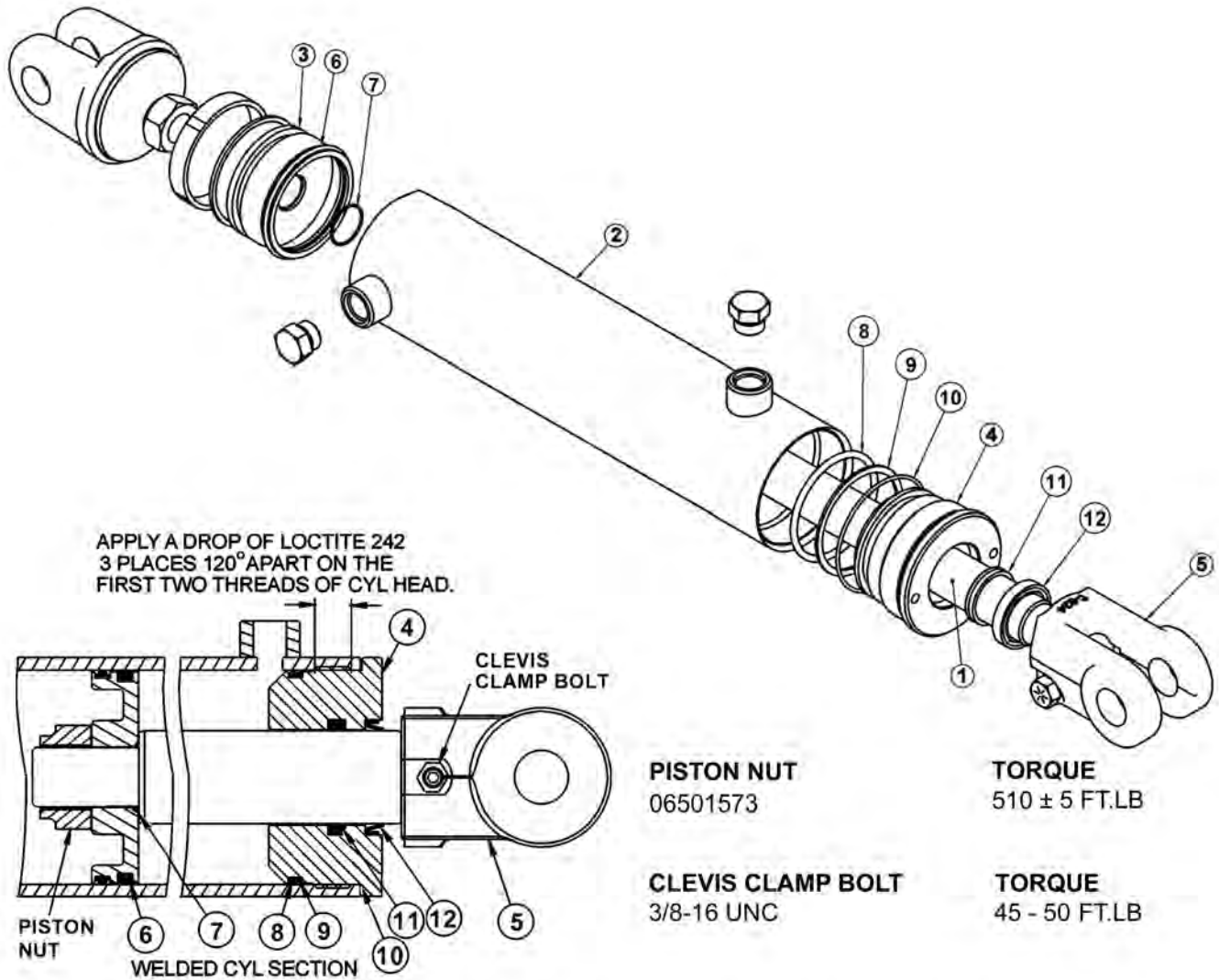
### 3-1/2IN X 20IN WELDED CYLINDER BREAKDOWN



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

ITEM	PART NO.	QTY.	DESCRIPTION
-----	06501024	-	HYDRAULIC CYLINDER COMPLETE
1	06501565	1	ROD
2	06501566	1	TUBE WELDMENT
3	06501567	1	PISTON
4	06501568	1	CYLINDER HEAD
5	TB3033	-	CLEVIS
-----	06501569	-	SEAL REPAIR KIT (ITEMS 6 THROUGH 12)

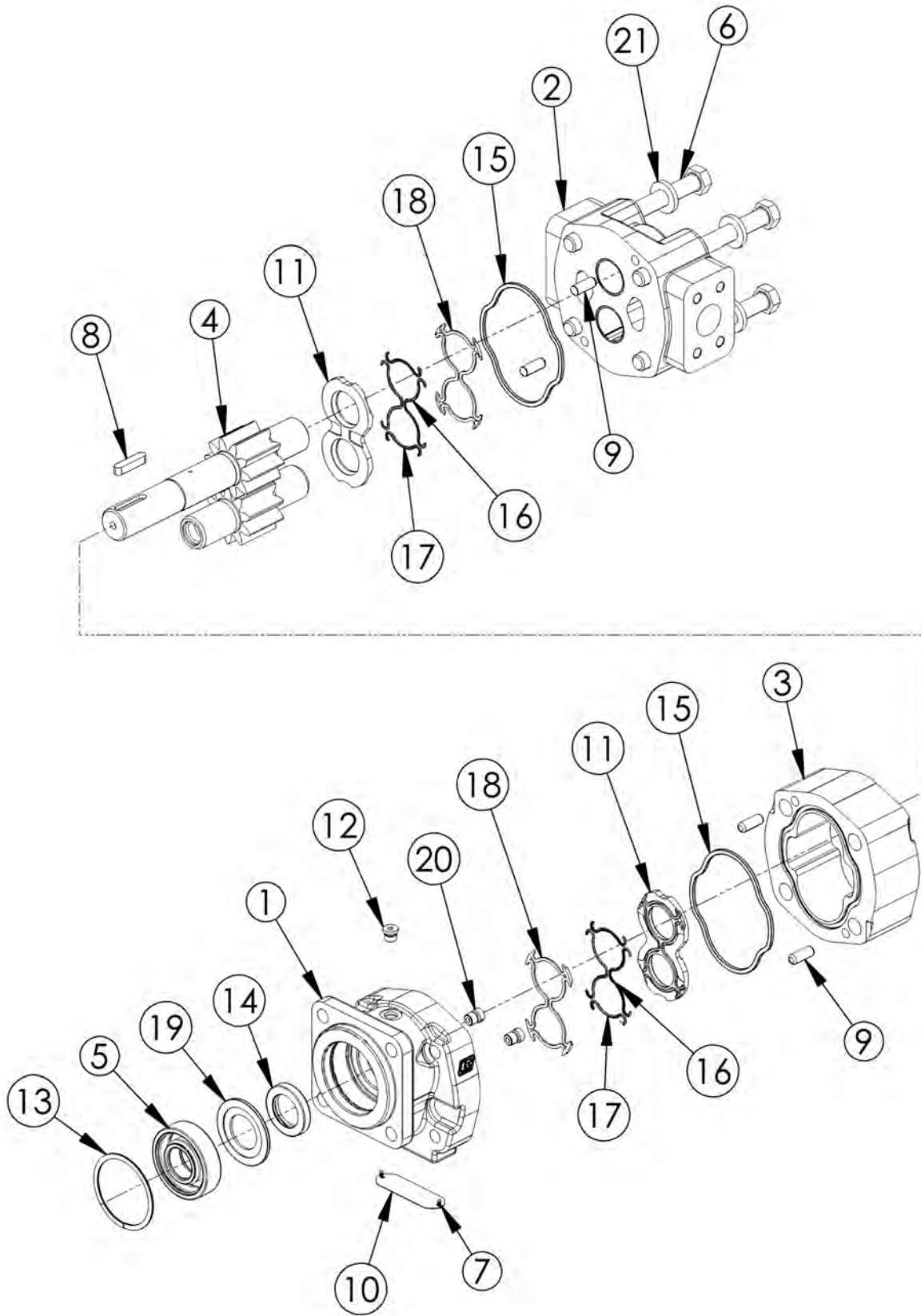
## 4IN X 20IN WELDED CYLINDER BREAKDOWN



**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)

# 50IN AND 63IN FLAIL MOTOR BREAKDOWN



COMMON TRUCKAT/RAILKUT



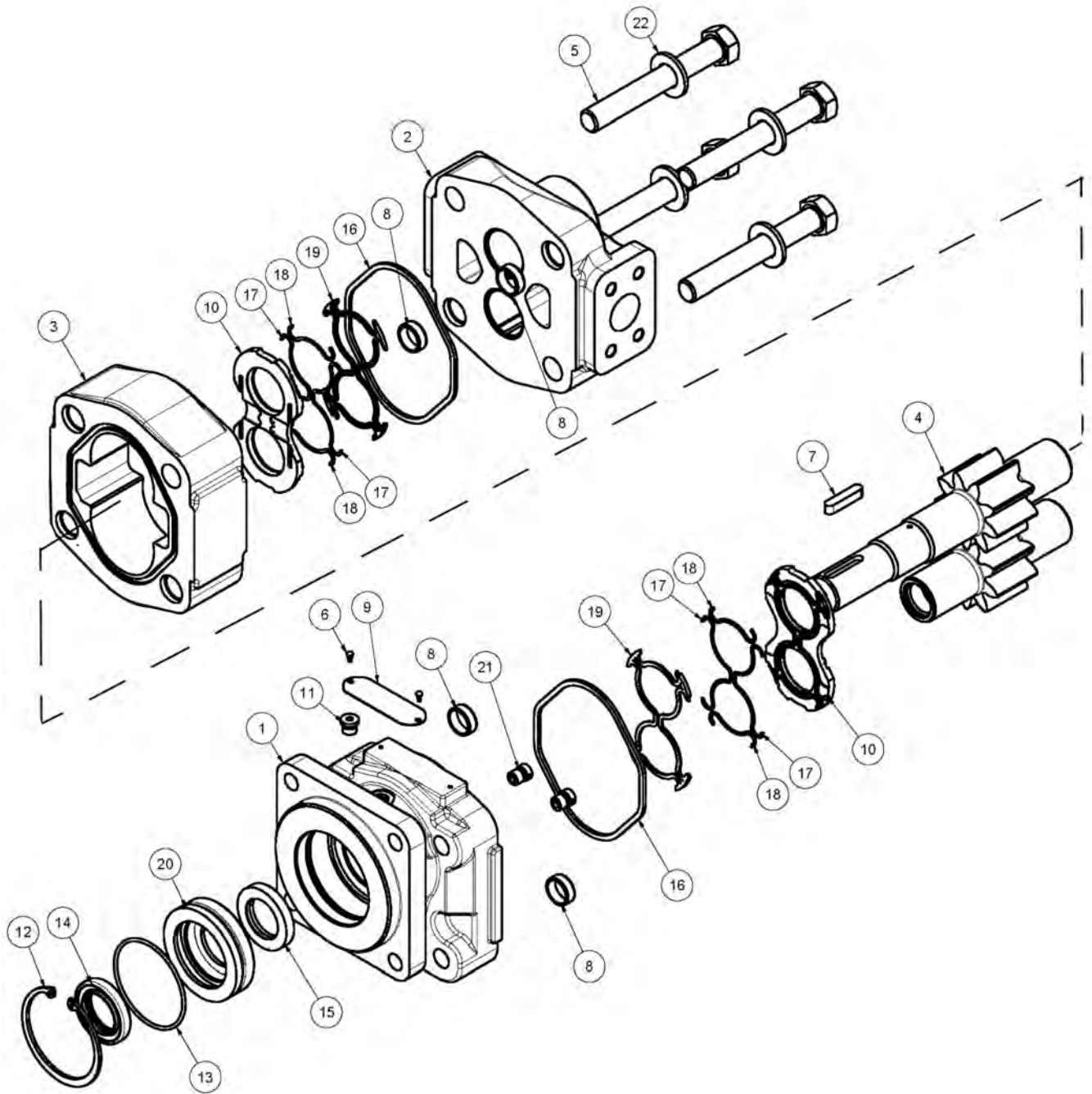
## 50IN AND 63IN FLAIL MOTOR BREAKDOWN

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)

COMMON TRUCKAT/RAILKUT

# 50IN AND 60IN ROTARY MOTOR BREAKDOWN



COMMON TRUCKAT/RAILKUT

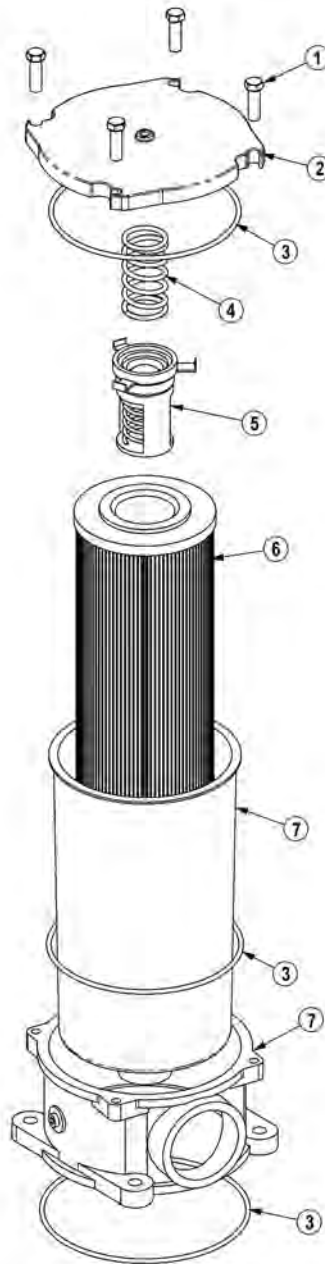
## 50IN AND 60IN ROTARY MOTOR BREAKDOWN

Continued...

ITEM	PART NO.	QTY.	DESCRIPTION
	06504011	-	MOTOR ASSEMBLY,TRB60
	06504012	-	MOTOR ASSEMBLY,TRB50
1	22790	1	HOUSING, SEC
2	06504088	1	HOUSING, PEC
3	06504062	1	HOUSING, GEAR,TRB60
-----	06504089	-	HOUSING, GEAR,TRB50
4	06504090	1	SET, GEAR SHAFT
5	06504104	4	CAP SCREW,TRB60
-----	06504091	-	CAP SCREW,TRB50
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

COMMON TRUCKAT/RAILKUT

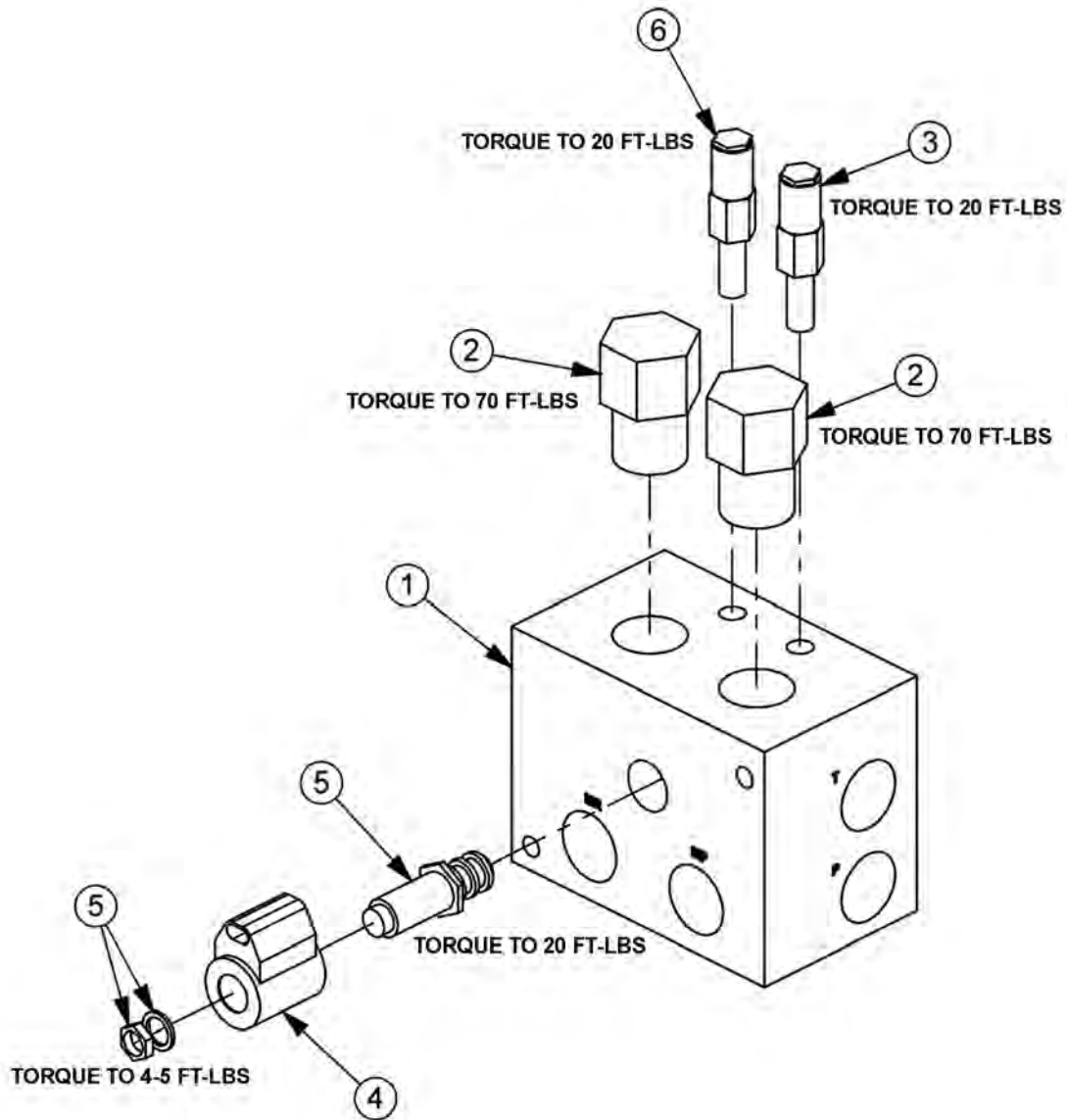
## RESERVOIR TANK FILTER ASSEMBLY



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

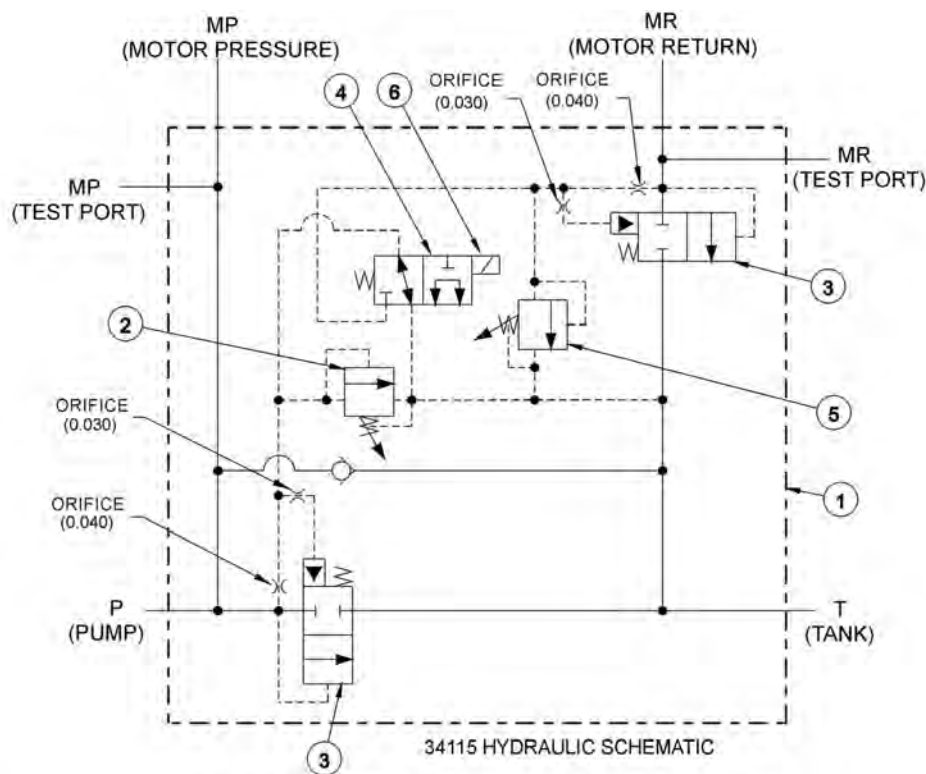
COMMON TRUCKAT/RAILKUT

## 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:

- MOWER WILL NOT START - system pressure is low (engine not lugging).
- 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.
- MOWER BLADE WILL NOT STOP - blade will not stop in proper time.

#### CHECK STEPS

- 1 thru 6
- 7
- 3 thru 5
- 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.

**WARRANTY  
SECTION**





## WARRANTY INFORMATION

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

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

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

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

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

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

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

## **ONE LAST WORD**

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



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



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