

# CHEETAH ASSEMBLIES

CNH T5000 Ford TL 80-100A CAB / WOC

Current as of 08/18/2010



### PARTS LISTING WITH MOUNTING AND OPERATING INSTRUCTIONS

#### **Tiger Corporation**

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

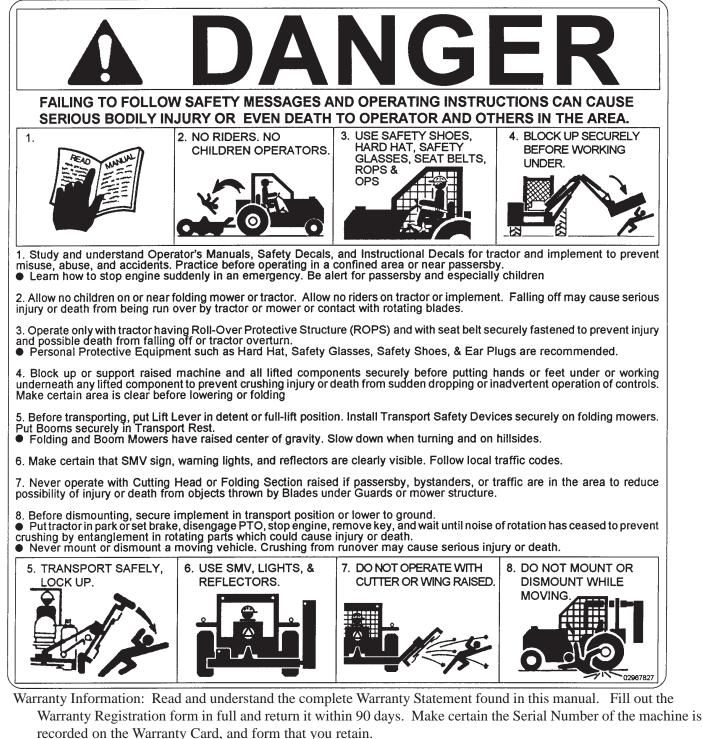
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# TO THE OWNER / OPERATOR / DEALER

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

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

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



### FORWARD

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

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

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

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

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

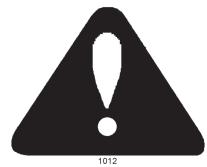
Attention Owner / Operator / Dealer: It is your obligation to read, and understand, the warranty information section located at the back of this manual denoting that the purchaser understands the safety issues relating to this machine and has received and will read a copy of this manual.

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

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

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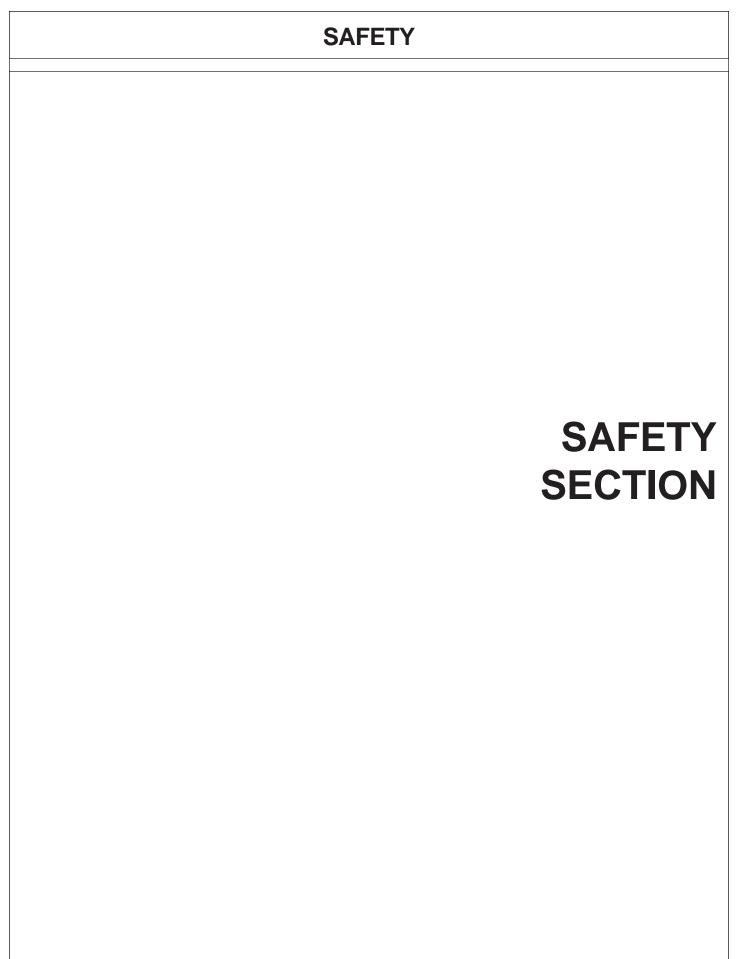


#### This symbol means: CAUTION – YOUR SAFETY IS AT RISK!

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

Tiger is a registered trademark.





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

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



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

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

DANGER!

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

WARNING!



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



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

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

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

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



PELIGRO!



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



i LEA EL INSTRUCTIVO!



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



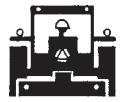
WARNING!



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



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





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



WARNING!

Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function.  $_{\rm (SG-8)}$ 



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





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







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





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





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



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



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





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



#### WARNING!

**CAUTION!** 

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

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

#### WARNING!



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

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

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

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19) Cheetah Safety Section 1-5













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

# WARNING!

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



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





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

(SG-23)



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





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



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



DANGER!

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

WARNING!

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



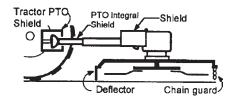
There are obvious and hidden potential hazards in the operation of this Mower. REMEMBER! This machine is often operated in heavy brush and in heavy weeds. The Blades of this Mower can throw objects if shields are not properly installed and maintained. Serious injury or even death may occur unless care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



#### DANGER!



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



#### DANGER!

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



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





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

#### WARNING!



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



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



#### WARNING!



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



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

#### WARNING!



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



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

- -Front and Rear Deflectors are installed and in good, working condition;
- -Mower Head is running close to and parallel to the ground without exposed Blades;
- -Passersby are outside the existing thrown-object zone;
- -All areas have been thoroughly inspected and all foreign material such as rocks, cans, glass, and general debris has been removed.
- NOTE: Where there are grass and weeds high enough to hide debris that could be struck by the blades, the area should be: inspected and large debris removed, mowed at an intermediate height, inspected closely with any remaining debris being removed, and mowed again at desired final height. (SBM-1)



DANGER!

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



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



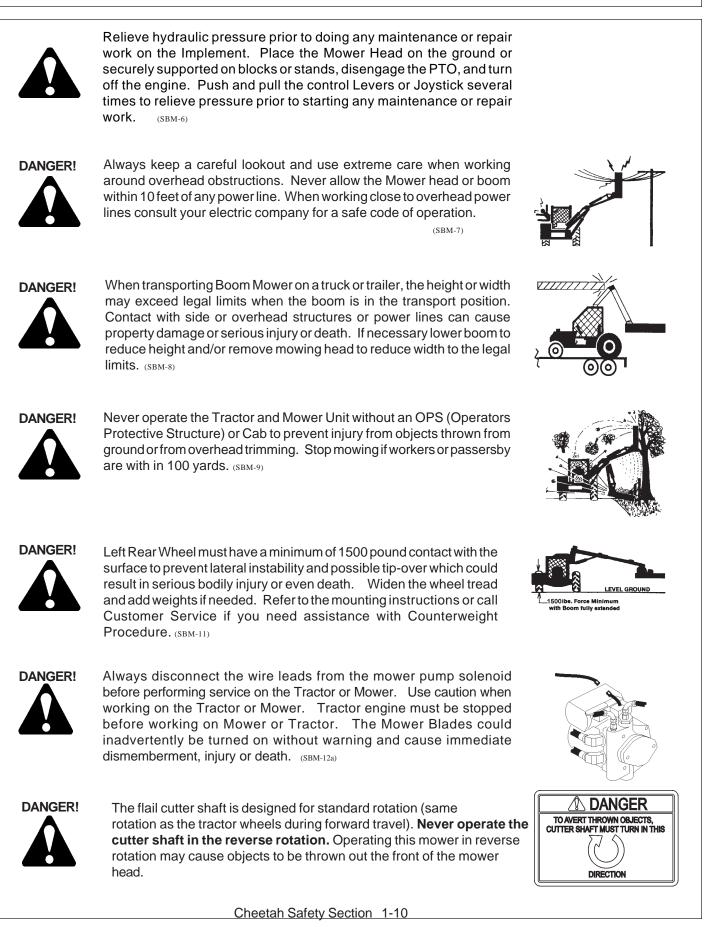


Never Leave the mower unattended while the head is in the raised position. The mower could fall causing serious injury to anyone who might inadvertently be under the mower. (SBM-4)





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



#### WARNING!



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

#### WARNING!

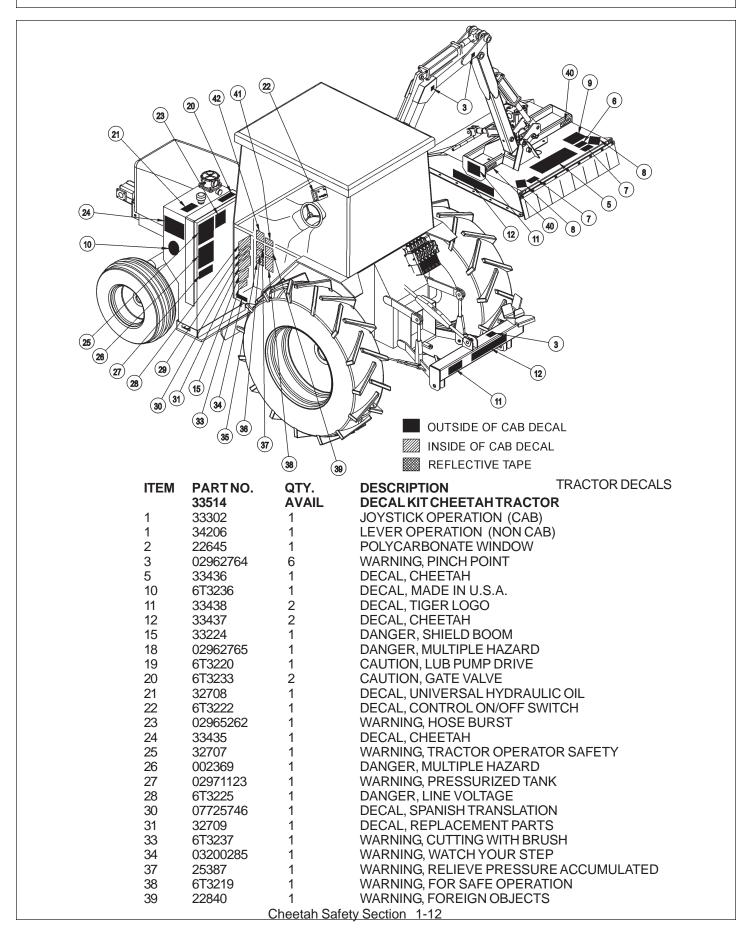


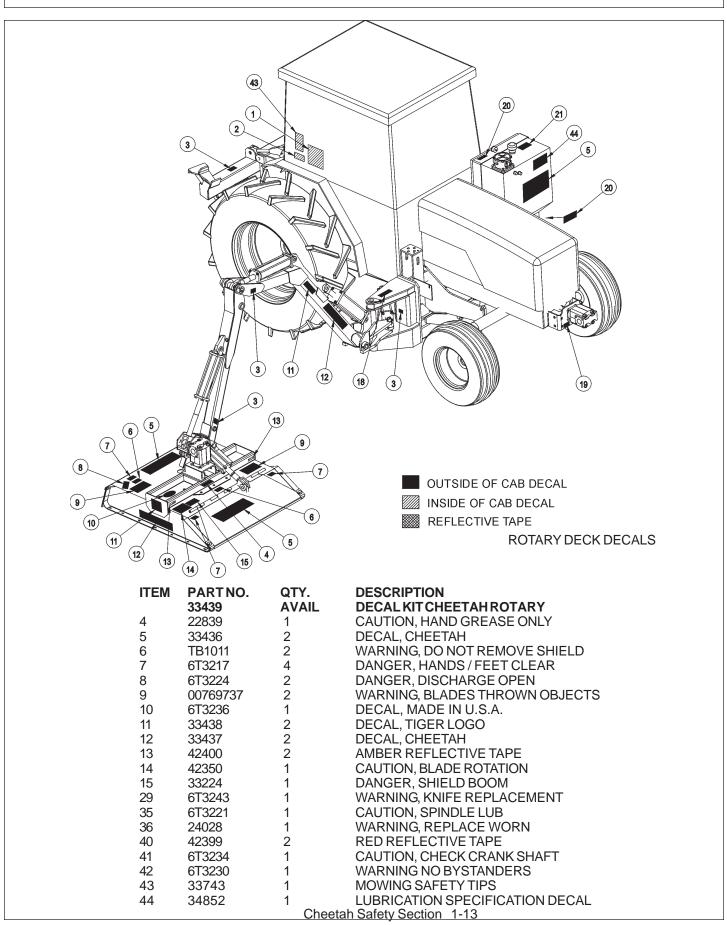
Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth or other reproductive harm. **Wash hands after handling!** 

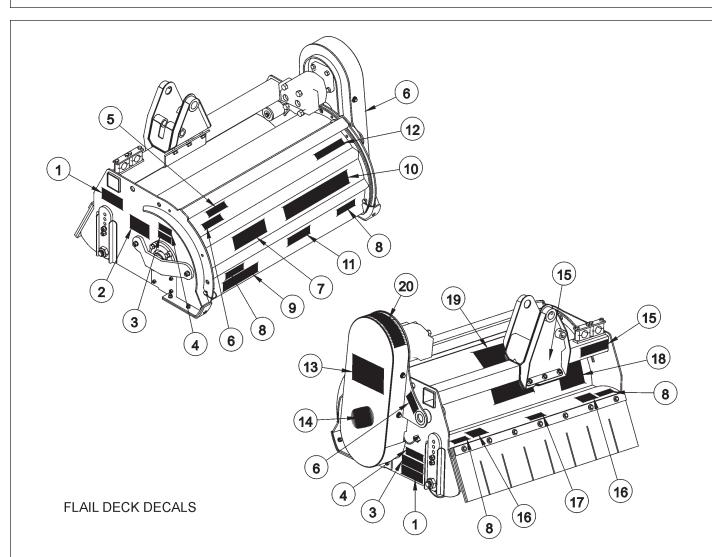
Tiger mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drive-train components and bearings. These parts are made and tested to Tiger specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The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



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







ITEM	PART NO. 33786	QTY. AVAIL	DESCRIPTION DECAL KIT CHEETAH FLAIL
1	6T3261	2	CAUTION LUBE INSTRUCTIONS
2	42350	1	DECAL, ROTATION, CUTTERSHAFT
3	6T3249A	2	DECAL, CAUTION LUBE
4	22839	2	CAUTION, HAND GREASE
5	33224	1	DANGER, SHIELD
6	TB1011	3	WARNING, DO NOT REMOVE SHIELD
7	33438	2	DECAL, TIGER LOGO
8	6T3217	4	DANGER, HANDS / FEET CLEAR
9	42400	1	AMBER REFLECTIVE TAPE
10	33437	2	DECAL, CHEETAH
11	6T3243	1	WARNING, KNIFE REPLACEMENT
12	02962764	1	WARNING, PINCH POINTS
13	33435	1	DECAL, CHEETAH
14	6T3236	1	DECAL, MADE IN U.S.A.
15	42399	2	RED REFLECTIVE TAPE
16	6T3224	2	DANGER, DISCHARGE OPENING
17	24028	1	WARNING REPLACE WORN FLAP
18	002369	1	DANGER, MULTIPLE HAZARD
19	33436	2	DECAL, CHEETAH
20	00758194	1	WARNING,BELT SHIELD



BEING HIT BY THROWN OBJECTS OR CONTACTING ROTATING BLADES CAN CAUSE INJURY OR DEATH.

Stop mowing if passersby enter the area of thrown objects (See Operator's Manual).
 Use special care if Mower Head or Wing is raised off the ground. (See Manual).
 Operate only if all Guards-Deflectors are in place and in good condition.

00769737

00725746

002369





02962764

02962765

02965262

02971123



03200285

22645

#### POLYCARBONATE WINDOW

REFER TO OPERATORS MANUAL FOR CLEANING INSTRUCTIONS

22839

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



22840

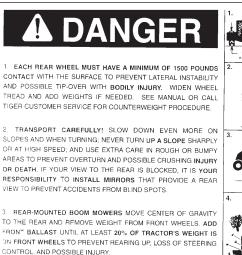
# A WARNING

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

24028

24028

25387



4. NEVER OPERATE UNIT WITHOUT AN OPS (OPERATOR PROTECTIVE STRUCTURE) OR CAB TO PREVENT INJURY FROM OBJECTS THROWN FROM GROUND AND OVERHEAD TRIMMING.

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

STOP CUTTING IF ANYONE IS WITHIN 100 YARDS.

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

LOWER BOOM TO REDUCE HEIGHT AND/OR REMOVE MOWING HEAD TO REDUCE WIDTH TO THE LEGAL LIMITS, IF NEEDED. 32700



0777

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32707

### ATTENTION

SERVICE HYDRAULIC SYSTEM WITH UNIVERSAL TRACTOR HYDRAULIC OIL.

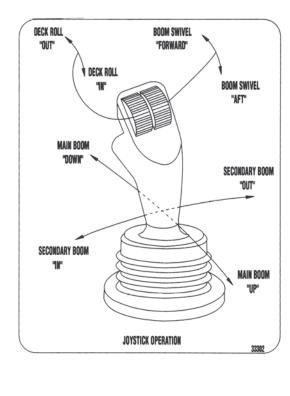
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# **A**CAUTION

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

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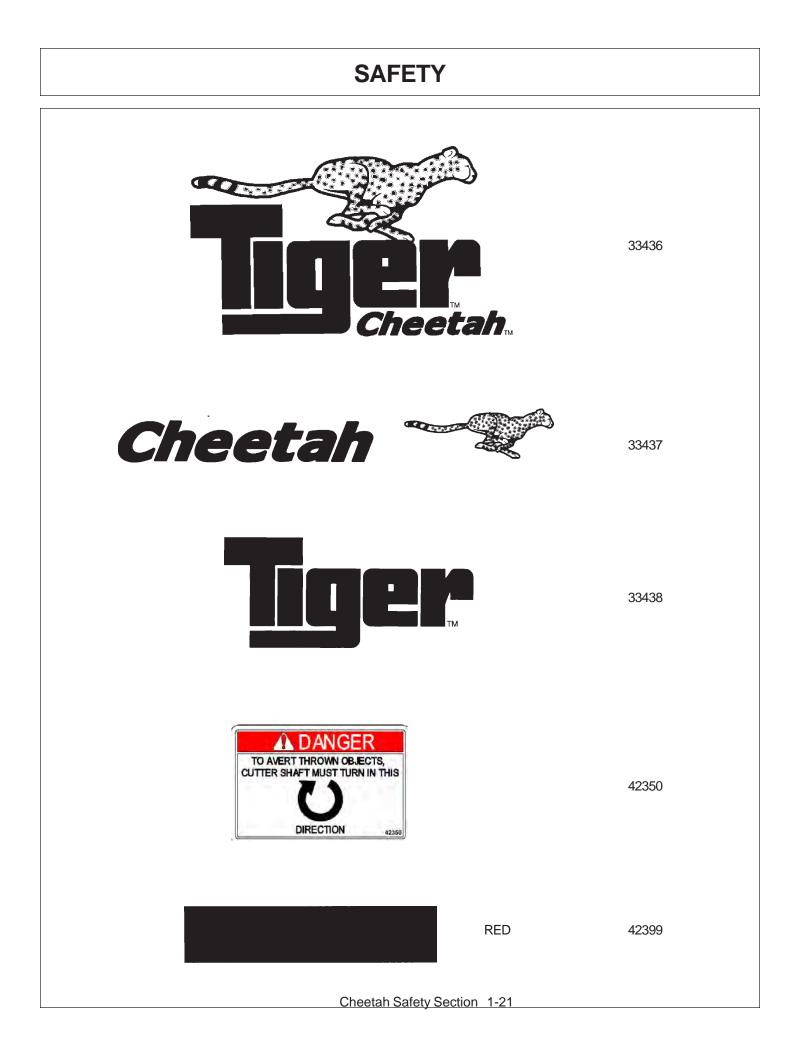
33224



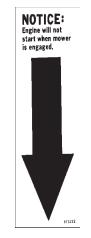
33302



33435



## SAFETY AMBER 42400 **A DANGER** 6T3217 L. **KEEP HANDS** AND FEET CLEAR **FOR SAFE OPERATION** 6T3219 **READ THE OPERATORS &** MAINTENANCE **MANUAL BEFORE OPERATING** 6T3219 6T3220 CAUTION l LUBRICATE SPINDLE DAILY OR EVERY 10 HOURS OF USE. WITH MOWER AND TRACTOR OFF, INJECT 6T3221 TWO PUMPS OF TIGER SPINDLE LUBRICANT INTO SPINDLE BEFORE USING. NOTE: SEE OPERATORS MANUAL FOR SUBSTITUTE LUBRICANT AND MORE DETAILED INSTRUCTIONS, 673221



DANGER STAY CLEAR, DISCHARGE OPENING 6T322

6T3224

6T3222



DANGER

6T3225

**DO NOT OPERATE THIS EQUIPMENT WITHIN TEN FEET OF HIGH VOLTAGE LINES!** 

6T3225

6T3230

A WARNING

DO NOT OPERATE THIS EQUIPMENT WITH BYSTANDERS IN THE AREA! ROTARY MOWERS HAVE THE INHERENT ABILITY TO THROW DEBRIS CONSIDERABLE DISTANCES WHEN

KNIVES ARE ALLOWED TO STRIKE FOREIGN OBJECTS. **OPERATOR CAUTION MUST BE TAKEN OR SERIOUS** INJURY CAN RESULT. 6T-323



DO NOT START OR RUN WITH VALVES CLOSED. (SERIOUS DAMAGE WILL OCCUR) 6T-32

6T3233

6T3234

# **A** CAUTION

CHECK CRANKSHAFT ADAPTER DAILY FOR TIGHTNESS AND GROMMET WEAR

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



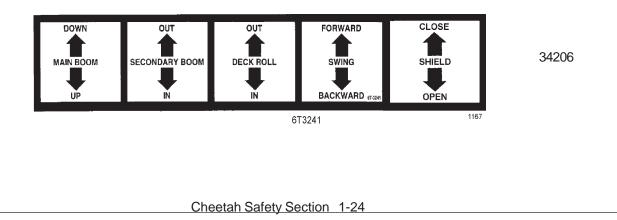
6T3236

6T3237

**WARNING** 

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

6T3237





IT IS RECOMMENDED THAT THE BOLT AND LOCK NUT BE REPLACED WHENEVER BLADES ARE REPLACED. REPLACE THESE ANN TIME THEY ARE DAMAGED OR WORN AS FAILURE TO DO SO CAN LEAD TO BLADES COMING OFF CAUSING SERIOUS INJURY OR DEATH. IMPORTANT

 WHEN REPLACING BLADES, IT IS RECOMMENDED THAT ALL BLADES BE REPLACED FOR PROPER BALANCE TO AVOID EXCESSIVE VIBRATIONS WHICH CAN DAMAGE SPINDLE ASSEMBLY. • SEE YOUR OPERATOR'S MANUAL FOR PROPER INSTALLATION INSTRUCTIONS. 6T-3243

6T3243



DO NOT OPERATE MOWER WITH SAFETY SHIELD REMOVED.

<ul> <li>Read &amp; understand the Operators Manual.</li> <li>Wear Your Seat Belt.</li> <li>Keep all shields and guards in place.</li> <li>Make sure equipment is in proper working condition.</li> <li>Never attempt to get off or on a moving tractor.</li> <li>Never allow riders on tractor or equipment.</li> <li>Only start the tractor from the seat with the key.</li> <li>Always inspect the area before mowing. Remove all foreign debris.</li> <li>Always keep bystanders and coworkers a minimum of 300 feet away.</li> <li>Never allow the mower blades to contact solid objects or foreign material.</li> <li>Never approach rotating elements.</li> <li>Disengage the PTO, place transmission in "Park", set parking brake, shut off engine, and remove key and wait until all rotation</li> </ul>		MOWING SAFETY TIPS
<ul> <li>Keep all shields and guards in place.</li> <li>Make sure equipment is in proper working condition.</li> <li>Never attempt to get off or on a moving tractor.</li> <li>Never allow riders on tractor or equipment.</li> <li>Only start the tractor from the seat with the key.</li> <li>Always inspect the area before mowing. Remove all foreign debris.</li> <li>Always keep bystanders and coworkers a minimum of 300 feet away.</li> <li>Never allow the mower blades to contact solid objects or foreign material.</li> <li>Never approach rotating elements.</li> <li>Disengage the PTO, place transmission in "Park" set parking brake shut off engine</li> </ul>		Read & understand the Operators Manual.
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"Park", set parking brake, shut off engine,	<b>EE</b> >	Never approach rotating elements.
motion has stopped before leaving seat.	82>	"Park", set parking brake, shut off engine, and remove key and wait until all rotating
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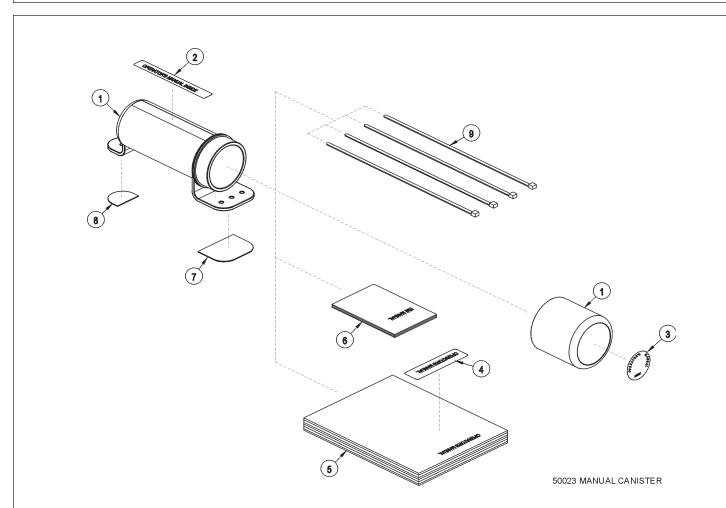
33743

		800-8	orporation 43-6849 -mowers.com
Description	Application	General Specification	Recommended Lubricant
Tractor Hydraulics	Reservoir	JD-20C	Mobilfluid <sup>®</sup> 424
Mower Hydraulics Cold Temperatures 0°F Start-up Normal Temperatures 10°F Start-up Normal Temperatures 15°F Start-up High Operating Temperatures Above 90°F Ambient	Reservoir	ISO 46 Anti-Wear/ Low Temp JD-20C ISO 46 Anti-Wear ISO 100 Anti-Wear	Mobil DTE® 15M Mobilfluid® 424 Mobil DTE® 25 Mobil DTE® 18M
Flail Rear Gearbox	Reservoir	PAO Synthetic Extreme Pressure Gear Lube	Mobilube SHC <sup>®</sup> 75W-90, Mobil 1 Synthetic Gear Lubrican
Cutter Shaft and Ground Roller Shaft (Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Drive Shaft Coupler (Rotary and Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Boom Swivel, Boom Cylinder Pivots (Rotary and Flail Boom Type)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Deck Boom Pivot & Deck Stop Adjustment (Rotary and Flail)	Grease Gun	Lithium Complex, NLGI 2 ISO 320	Mobilgrease <sup>®</sup> CM-S
Deck Spindle (Rotary)	Grease Gun	Tiger Spindle Lubricant	Mobilith SHC 220

0

Tiger PN 34852 O

34852 HYDRAULIC TANK



ITEM	PARTNO.	QTY.	DESCRIPTION
1	<b>50023</b> 00776031 33997	<b>AVAIL</b> 1 1	MANUAL CANISTER COMPLETE ROUND MANUAL CANISTER DECAL, SHEET, MANUAL CANISTER
2		*	DECAL
3		*	DECAL
4		*	DECAL
5	*	AVAIL	SPECIFIC PRODUCT MANUAL
6	33753	1	E M I SAFETY MANUAL
7	34296	1	FRONT ADHESIVE PAD
8	34297	1	REAR ADHESIVE PAD
9	6T1823	4	ZIP TIE 14" LONG

#### NOTE:

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

### FEDERAL LAWS AND REGULATIONS

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

#### **Employer-Employee Operator Regulations**

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

#### **This Act Seeks:**

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

#### DUTIES

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

#### **OSHA** Regulations

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

#### **Employer Responsibilities:**

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

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

#### Child Labor Under 16 Years of Age

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

# ASSEMBLY SECTION

Assembly Section 2-1

#### ASSEMBLY

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

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

CAUTION!



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

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

#### **TRACTOR PREPARATION**

- A: Remove right hand steps and air intake tube.
- B: Disconnect battery cables.
- C: Remove engine side panels, or raise hood to access front pulley.
- D: Remove plugs from tractor casting where main frame and pump mount will be attached.
- E: Raise the tractor onto jack-stands and remove the right rear wheels.

#### **ADJUSTING REAR WHEELS**

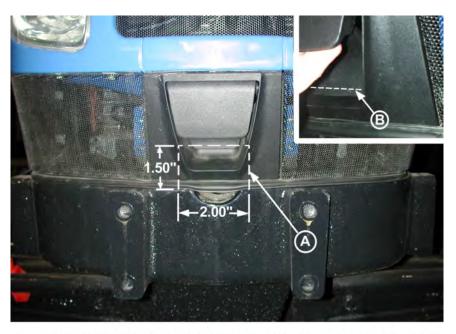
Raise rear of tractor onto jack-stands and adjust tires / rims all the way out. **Follow the instructions in the tractor owners manual for adjusting tires and rims**. NOTE: This may require switching the wheels to opposite sides of tractor. Do not reinstall wheels onto tractor until valve has been mounted (cab), and all hoses have been installed

### **CRANKSHAFT ADAPTER**

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

## **PUMP MOUNTING BRACKET**

To allow for the pump mounting bracket, a notch needs to be cut in the front hood latch housing. Refer to the image below for directions on cuttind the notch. NOTE: The battery needs to be relocated to connect the pump to the crankshaft.

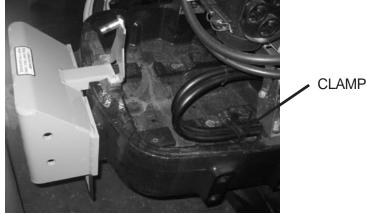


A. CUT HOOD LATCH HOUSING AS SHOWN, GROUND EDGES OF CUT SMOOTH. CUT SEAL GASKET TO MATCH.

B. CUT LOWER PORTION OF LATCH HANDLE TO MATCH CUT-OUT OF HOUSING, GRIND EDGE SMOOTH.

## **BATTERY RELOCATION**

To allow for the Tiger driveshaft from the pump to the crankshaft, the battery needs to be removed. The battery cables then have to be secured away from the driveshaft. Remove the battery by removing the capscrews and the mounting bar at the base of the battery. Use a clamp and the existing bolt hole as shown below. The battery will be relocated to a battery box which is mounted on the right side axle brace.



Assembly Section 2-3

## VALVE MOUNTING BRACKET

Attach the valve mounting brackets to the back of the cab, first. Using the 18mm capscrews, locate the existing holes under the rear window, and attach the bracket to the cab. Locate the lower straps on the bracket. Mark the holes for the bracket support. Drill the holes and add the supplied hardware. Check the parts section for the correct hardware.

## VALVE MOUNTING PLATE

Align the holes in the vavle mounting plate to the holes on the mounting bracket. Use the hardware shown in the parts section to attach the plate to the bracket.

## VALVE MOUNTING

Attach the vavle to the valve mounting plate as shown in the parts section. Align the holes on the valve assembly to the holes on the plate. Please note the placement of the valve and the hardware shown in the parts section. **Exercise caution when installing the valve, as it is extremely heavy.** 

## CABLE CONTROL LEVER STAND

Follow the directions to mount the bracket to the cab floor on the following page. Then mount the control boxes to the stand as shown in the parts section.

Cut a 2  $\frac{1}{4}$ " hole in the floor of the cab. This hole is to be located  $\frac{4}{2}$ " from the back fender, and 3  $\frac{1}{2}$ " from the edge of the door frame. Check under cab floor before cutting. Install trim lock around the metal edges of the hole, then route the cables through the hole. Next, wrap the cables with the 6" split hose at the point they pass through the hole, and secure with zip-ties.

NOTE: Read the Switch Box directions before routing the cables. Some wires use the same hole.

## **CABLE SWITCH BOX WIRING**

Refer to the parts section for wiring diagram to hook up the switch box. Cover the four wires from the switch box with plastic wire wrap provided. Route the wires from the switch box to the front console panel. Remove the console panel under the steering wheel to access wires. Locate the brown colored wire. **Using a test light or meter to verify** this wire is the neutral safety wire. Cut the brown wire and connect the green wires from the switch box as shown in the wiring diagram.

Run the white wire to the solenoid valve through the floor with the control cables. Then with the hoses to the solenoid valve. Cover the wires with wire wrap.

The red wire is to be hooked to the tractor ignition switch or an available slot in the fuse box. **NOTE: Be certain that the power taken for the switch box is** "HOT" only when the tractor ignition is "ON". Also double check that the line is fused.

The travel lock red wire from the switch box should also be covered with wire wrap and should run with the white wire through the grommet. This wire will be connected to the electronic travel lock located on the deck roll cylinder. The wires from the switch box are longer than needed and should carefully cut and spliced as required. Zip ties should be used to secure the wires to the tractor framework and boom hoses to eliminate vibation and rubbing.



LOCATE THIS HOLE FIRST. WITH A TAPE MEASURE & SQUARE, MEASURE 3/4" (A) FROM THE FRONT CORNER OF THE DOOR FRAME & 7" (B) FROM OUTSIDE EDGE OF DOOR FRAME



DRILL USING A 1-1/8" HOLE SAW THROUGH THE FLOORMAT.



LOCATE STAND USING HOLE. USING THE SQUARE, ROTATE STAND UNTIL REAR MOUNTING HOLE IS 4-5/8" FROM DOOR FRAME.

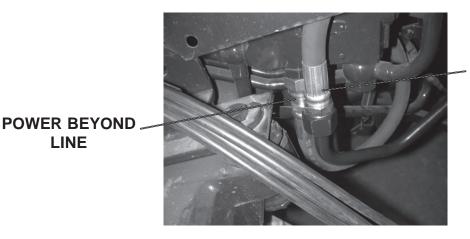


BEFORE FINAL INSTALLATION, BE SURE TO PLACE SPACERS IN HOLES.

Assembly Section 2-5

# **PRESSURE LINE INSTALLATION - HUSCO**

The hydraulic pressure line will be plumbed from the line supplying pressure to the tractor remotes. The location of the connection is by the right rear axle, see the image below. Disconnect the two lines. The pressure line comes in from the tractor. After lines are disconnected, connect the pressure hose to the female fitting and route the hose from the line to the high pressure filter, as shown in the parts section.



PRESSURE LINE

# **POWER BEYOND LINE - HUSCO**

The power beyond line will use the male connection of the tractor remote line that was disconnected when plumbing the pressure line. Route the power beyond hose from the port on the Husco valve, as shown in the parts section, to the remaining line. Connect the hose to the male fitting, as shown above.

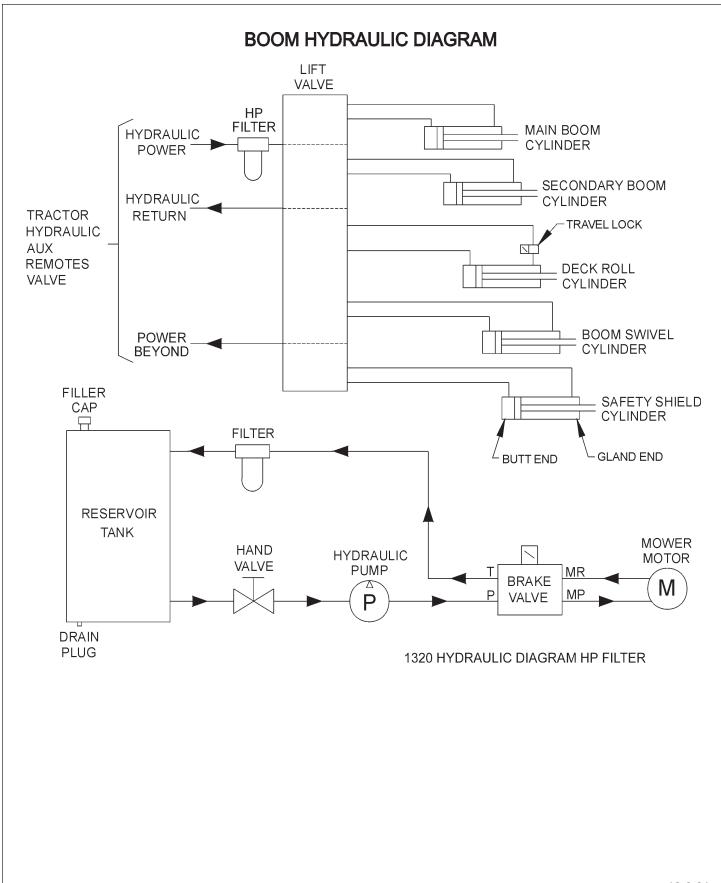
## **RETURN LINE INSTALLATION - HUSCO**

The return line will be plumed into the tank port, just below the cap of the filler neck, located under the rear window. Locate the tank port and remove the plug. Connect the adapter and the hose to the port and route the hose to the return port on the Tiger lift valve, as shown in the parts section.



**RETURN LINE** 

Assembly Section 2-6



## **HIGH PRESSURE FILTER - HUSCO**

The high pressure filter is mounted to the right valve mounting bracket with two capscrews, as shown in the parts section. Attach the two adapters to the filter. The pressure line from the tractor is plumbed to the left side of the filter. The pressure hose that is attached to the right side of the filter is routed to the pressure port of the Tiger lift valve.

## **RETURN LINE INSTALLATION - DANFOSS**

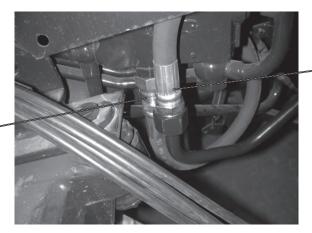
The return line will be plumed into the tank port, just below the cap of the filler neck, located under the rear window. Locate the tank port and remove the plug. Connect the adapter and the hose to the port and route the hose to the return port on the Tiger lift valve, as shown in the parts section.



- RETURN LINE

## **PRESSURE LINE INSTALLATION - DANFOSS**

The hydraulic pressure line will be plumbed from the line supplying pressure to the tractor remotes. The location of the connection is by the right rear axle, see the image below. Disconnect the two lines. The pressure line comes in from the tractor. After lines are disconnected, connect the pressure hose to the female fitting and route the hose from the line to the high pressure filter, as shown in the parts section.



RETURN FROM PRIORITY VALVE

#### PRESSURE LINE

Assembly Section 2-8

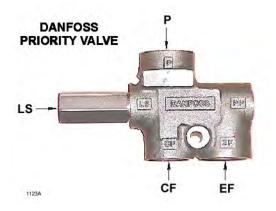
## **HIGH PRESSURE FILTER - DANFOSS**

The high pressure filter is mounted to the right valve mounting bracket with two capscrews, as shown in the parts section. Attach the two adapters to the filter. The pressure line from the tractor is plumbed to the left side of the filter. The pressure hose that is attached to the right side of the filter is routed to the "P" port of the priority valve. Refer to the Parts Section for hardware and placement of items.

## DANFOSS PRIORITY VALVE

The DanFoss lift valve needs a priority valve for the proper hydraulic flow. After routing the pressure hose to the "P" port on the priority valve. Route the hose from the "CF" port of the priority valve to the pressure port of the lift valve. Route the hose from the "LS" port of the priority valve to the load sense port of the lift valve.

Route the hose from the "EF" port of the priority valve to the male section of the tractor remote pressure line as shown in the image on the previous page. For more information refer to the Parts Section pages for a complete diagram of the tractor valve hookup.



## SWITCH BOX MOUNTING

Locate the right rear window indside of the cab as shown in the image below. While using the switch box mounting bracket as a template, find the two holes used to mount the bracket. Remove the 2 capscrews and mount the bracket to the console, as shown in the parts section. Use the hardware shown to mount the switch box to the mounting bracket.



Assembly Section 2-9

## **JOYSTICK CONTROL MOUNTING**

The joystick is mounted to the right hand center cab post. Find the two existing bolt holes to attach to. See the image below. Mount the joystick mounting bracket to the cab post with hardware provided. Assemble the parts as shown in the parts section. When operating the joystick, make sure it is positioned where the rest of the controls are fully operational.



## SWITCH BOX WIRING

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

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

## FRONT PUMP MOUNTING

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

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

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

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

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

## **BUMPER HYDRAULIC TANK INSTALLATION**

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

Attach the large mounting brackets on the front casting of the tractor. Raise the tank and secure the brackets to the tank with the hardware shown in the parts section.

With four(4) spacers and the hardware provided, reinforce the tank with the small tank mounting brackets on the inner side of the tank as shown in the parts section. The small brackets attach to the pump mounting bracket and the tank. Replace two(2) spacers if adding a grill gaurd and/or two(2) spacers if adding a hydraulic cooler.

Install the filter gauge into the filter housing so that it points to the rear of the tractor and is clearly visible to the operator. Locate the tank breather and reducer bushing (bushing may be already installed in the tank along with many of the for-mentioned parts). These will be installed after tank is filled.

## **GENERAL HOSE INSTALLATION**

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

When mounting the suction hose between the pump and the tank, the stainless steel bands that are provided must be used. CAUTION: DO NOT use regular hose clamps for this purpose.

For protection of hoses in contact with metal edges, wrap hoses with spit hose sections and fasten with hose clamps or zip ties as needed.

## **TEMPERATURE GAUGE MOUNTING**

(OPTIONAL)

Mount the temperature gauge where it is clearly visible to the operator. Attach the green ( - ) wire from the negative post on the gauge to a grounded bolt on the tractor frame. Remove paint if needed to make a good ground.

Remove the pipe plug from the side of the hydraulic reservoir, and install the temperature sensor using thread sealing tape.

Run the white wire from the (S) sensor post of the gauge to the temperature sensor on the hydraulic reservoir tank.

## MAIN FRAME MOUNTING

It may be necessary to raise the front of the tractor slightly to allow the main frame to be slid under the tractor. With an overhead hoist or floor jack, slide the frame under the tractor from the right hand side. Raise the frame up to the correctly matching mounting holes. Install the capscrews and all other hardware as shown in the main frame parts section. Remove the capscrews one at a time and apply a Loc-Tite to the threads. Reinsert the capscrews and tighten / torque to the values noted in the torque chart located in the maintenance section of this manual.

## **AXLE BRACE**

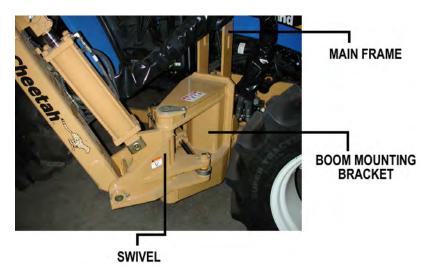
Position the right axle brace under the tractor right hand side. Raise the brace up to the matching mounting holes in the main fame and rear axle housing. Note the right side brace is installed on outside edge of the main frame and the left side brace is installed on the inside edge of the main frame. Install the axle plate with capscrews, washers and nuts as shown in the main frame parts section. Apply Loc-Tite to the threads and torque to the values noted in the torque chart located in the maintenance section of this manual.

## **BOOM MOUNTING KIT**

After mounting the main frame use a hoist to raise the boom mounting bracket so the inner draft beam pin can be inserted. Secure the pin to the main frame with the capscrew and lock nut. Add the rest of the hardware to secure the boom mounting bracket to the main frame, as shown in the parts section.

Use a hoist to raise the swivel into place. Align the swivel with the boom mounting bracket and insert the swivel pin as shown in the parts section. After inserting the swivel pin secure the pin to the boom mounting bracket with the hardware shown.

Place any needed spacers on the rod of the swivel cylinder. Add the clevis to the rod of the swivel cylinder. Using the pins and hardware shown in the parts section, attach the butt end of the cylinder to the boom mounting bracket and the clevis to the swivel.



## PREFORMED TUBE INSTALLATION

Place the booms on the floor so that side with weldnuts is upward. If mounting a ditcher head, only the main boom tube installation is required. Locate all tube clamps and install them loosely in the welded nuts on the left side of the booms.

Arrange the tubes and hoses as outlined in the parts section diagram. Install the smaller tube closest to the boom arm, being careful nut to pinch the tubes. Place the large tubes outside of the small tubes. Snug all clamp bolts, but do not tighten. Check all tubes for correct alignment and that none are pinched or bent. The clamp bolts can now be tightened.

## **BOOM INSTALLATION**

Install the boom swivel into the main frame as shown in the parts section using a hoist. Line up holes in swivel and main frame for large swivel pin and insert pin. Secure with hardware as shown.

Attach the inner end of the main boom to the boom swivel using pins and hardware as shown. Be sure that the bearings are properly installed as shown in the boom parts section.

Install main boom cylinder on the main boom with the fittings facing towards the rear of the tractor. Attach the butt end to the main boom cylinder to the swivel bracket anchor with cylinder pin and hardware shown in parts section. Attach the piston clevis to the main boom with the cylinder pin and hardware. Install all fittings into the cylinders and hoses as shown in the boom and lift valve parts sections. **NOTE: Be sure to use teflon tape on all pipe fittings (except O-rings).** 

# **DECK ATTACHMENT**

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

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

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

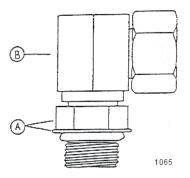
Before proceeding to the final preparation step double check the complete assembly from the main frame to the cutter head against the diagrams in the parts section for proper placement and assembly of all components.

## **HOSE COVERING**

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

## **INSTALLING O-RING FITTINGS**

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



## **INSTALLING NATIONAL PIPE FITTINGS**

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

07-07-05

# POLYCARBONATE SAFETY WINDOWS

NOTE: Installing a boom mower requires that all of the right side windows be replaced with polycarbonate. Secure the windows after all of the cab wiring and mounting is done; and before the boom arm is mounted. Locate all the hardware in the Parts Section on the Safety Screen page, for the correct hardware to used in the installation.

Remove the right rear window and the right door from the cab. Remove the hardware from both and save the hardware for use later. Wrap the trim seal around the polycarbonate door and cut the trim to match the other end so the door will seal. Wrap the rear window with the rest of the seal, in the same way as the door. Apply the adhesive in the groove of the trim seal where the polycarbonate sits and apply the trim seal to the polycarbonate. Use the existing hardware to install the polycarbonate door and rear window.

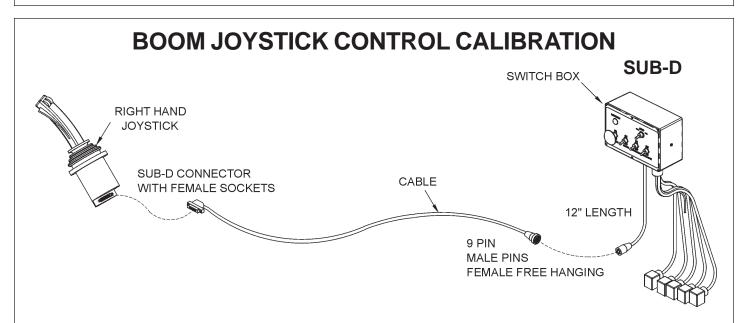
Place the supplied support brackets into position. To place the fender bracket on the door, use the hardware shown in the parts section to attach the bracket to the polycarbonate. Use the bracket as a template to drill a hole in the fender of the tractor. Then use the Tiger hardware to secure the bracket to the fender. For the bottom bracket drill two 3/8" holes through the door frame. Use the hardware shown in the parts book to secure the brackets into place.

## WHEEL WEIGHT MOUNTING

For all machines using a boom mower, a wheel weight will be required for the left side wheel. It will be necessary to mount the 500 pound wheel weight in the wheel using the long cap-screws, lock-washers, flat-washers, and hex nuts per diagram in the parts section.

Installation is most easily done with a small fork lift, inserting a fork in the center slot of the wheel weight. The head of the cap-screws is to be toward the OUTSIDE of the weight, with flat-washers on both inside and outside of the assembly.

The left rear tire must also be filled with a mixture of water and calcium chloride at about five pound per gallon. Tire air pressure should be maintained at approximately 22 P.S.I.



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

#### CAUTION!

The joystick control is equipped with signal adaption potentiometers.

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

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

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

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

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

#### **Setting Signal Adaptation Potentiometers:**

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

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



Assembly Section 2-17

#### 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: 7-9 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: 7-9 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: 5-6 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 5-6 Seconds (but DO NOT use Limit

#### Screw)

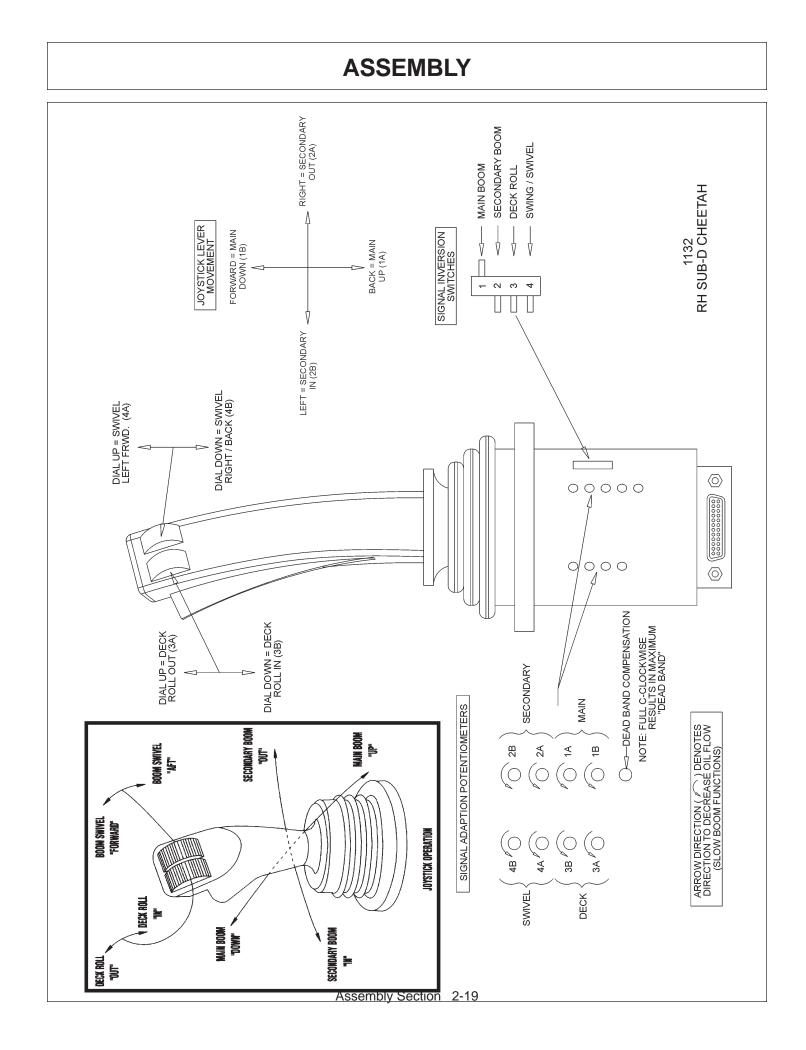
(Raise main boom to vertical, extend secondary boom out slightly so that deck can be articulated without contacting the main boom, and roll deck out until deck cylinder is completely retracted. Then index the deck roll "in" function and determine the time required for the deck to roll in.)

#### BOOM

**SWIVEL:** "A" Port, Boom Forward: 7-9 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.)

#### "B" Port, Boom Aft: 7-9 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.)



## FINAL PREPARATION FOR OPERATION

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

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

#### WARNING!



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

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

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

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

## **MOWER TESTING**

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

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

# 

Cheetah Operation Section 3-1

**Safety** is of primary importance to the owner / operator and to the manufacturer. The first section of this manual includes a list of **Safety Messages**, that, if followed, will help protect the operator and bystanders from injury or death. Many of the messages will be repeated throughout the manual. The owner / operator / dealer should know these Safety Messages before assembly and be aware of the hazards of operating this mower during assembly, use, and maintenance of this equipment.

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

DANGER!



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

WARNING!



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



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

**IMPORTANT!** 

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

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



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

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

Note that the travel lock feature is not used on the Cheetah boom mower, and the deck float feature should not be used with a rotary mower deck. The travel lock switch should remain in the "off" position at all times. Before operating the mower for the first time, confirm that the red travel lock wire from the far right terminal on the switch box has been capped, is not hooked to any other wires and has been left inside the cab.



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

WARNING!



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



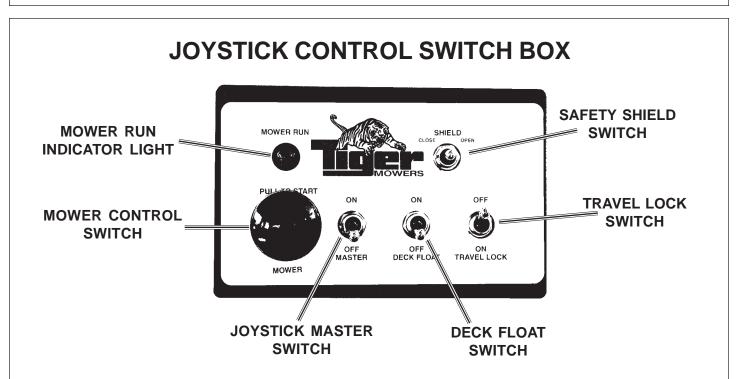
Be sure the ball valves on the mower hydraulic tank are **OPEN** before starting the tractor. Serious damage to the hydraulic system can occur if the valves are not open.



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

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

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



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

#### WARNING!



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

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

The boom functions are controlled by an electronic joystick. The Joystick Master Switch enables the joystick control for controlling the boom motion functions. This switch is to be in the "OFF" position to start the tractor and when boom is stowed for transporting the machine. The tractor will not start with the switch in the "on" position.

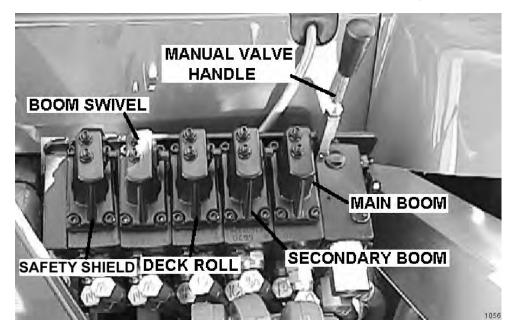


If the joystick control is not operating properly, turn the master switch to the "OFF" position. Install the manual valve handle onto valve and operate the functions individually to stow boom. After boom is stowed in rest, transport the unit to the maintenance facility and contact your Tiger dealer for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

CAUTION!

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

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



The Safety Shield switch opens and closes the shield located on the front of the cutter head. When mowing at or near the ground, always have the shield in the closed position. When mowing in brush or in trees above ground level the shield may be opened for easier cutting. Read and follow the warnings on the decal shown below. **Do not run the cutter head into material larger than 6**" diameter.



#### SAFETY SHIELD OPERATION

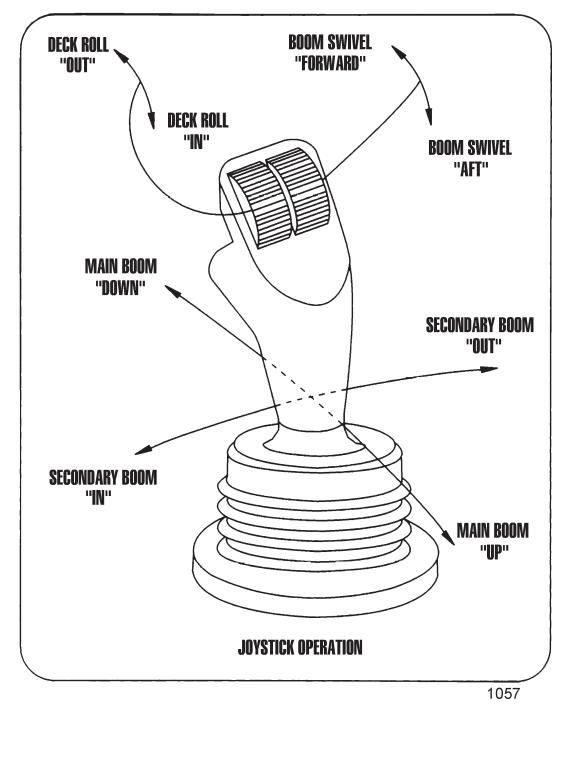
- Failure to close Safety Shield may allow objects to be thrown outward with great force which <u>can cause</u> property damage, bodily injury, or death.
- 1.Keep Safety Shield fully closed when cutting grass and weeds to reduce possibility of objects being thrown outward by the Blades and to prevent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

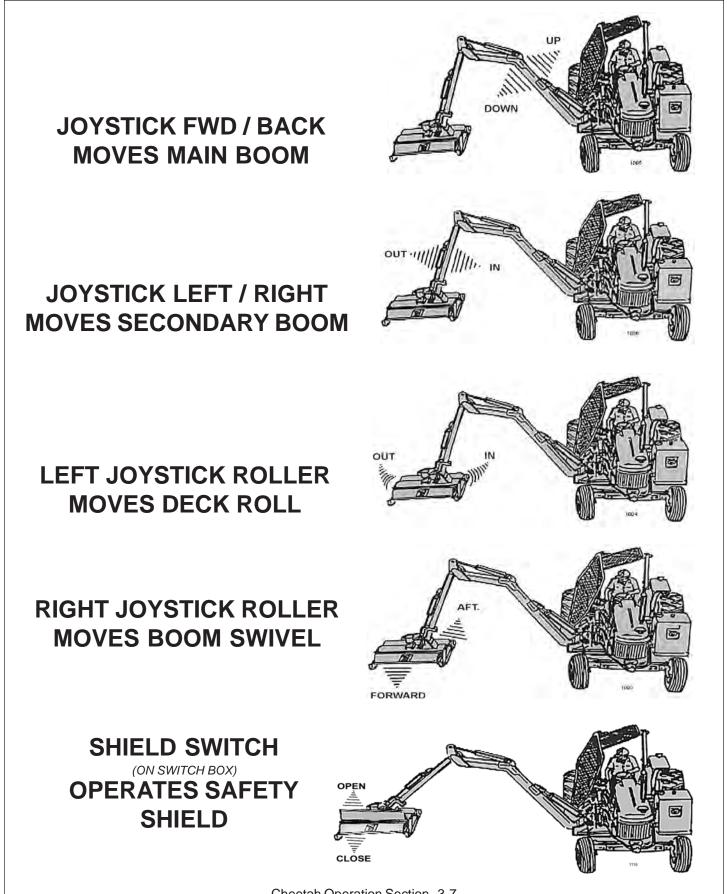
3. Repair or replace Safety Shield as needed.

4. Always transport with Safety Shield closed.

## **JOYSTICK CONTROL**

The diagrams below and on page 3-6 show the functions that are performed through the use of the joystick controller.

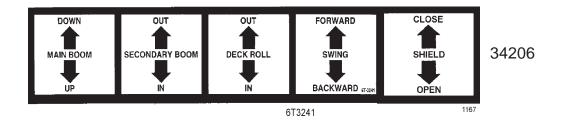




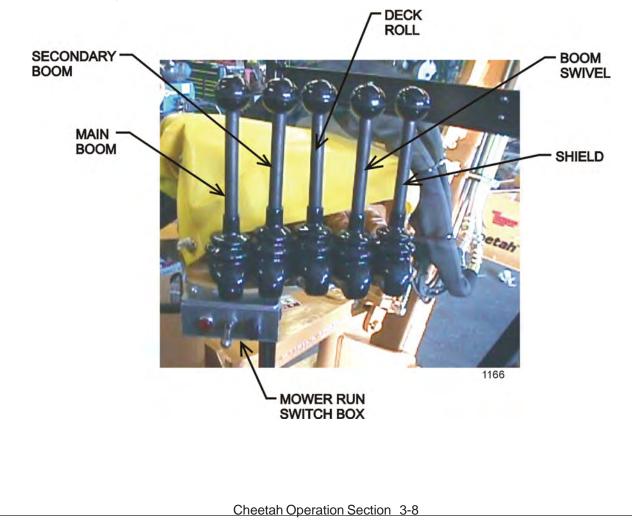
Cheetah Operation Section 3-7

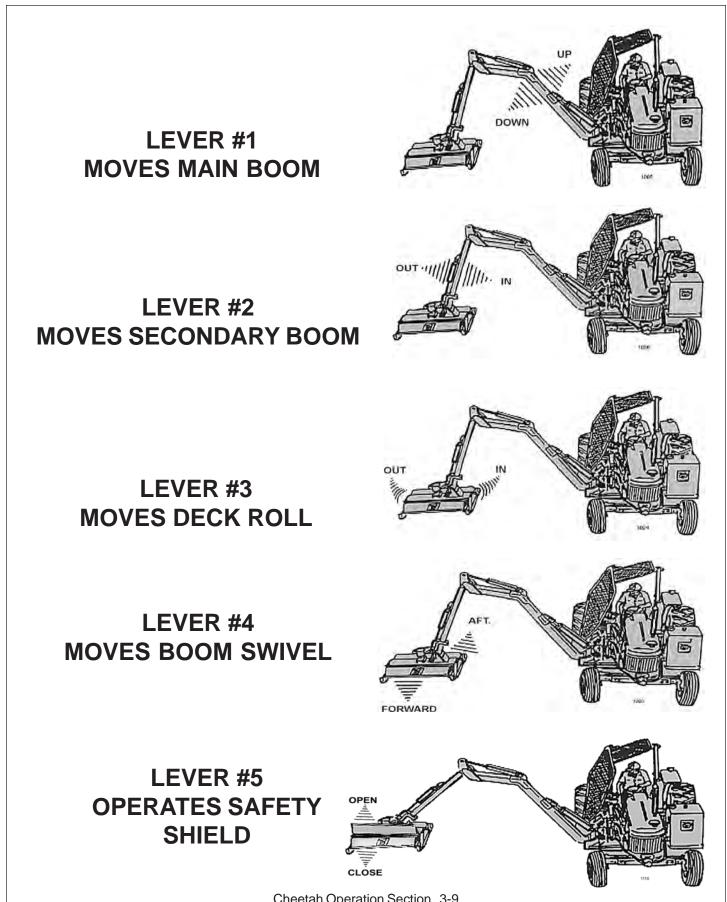
## LEVER CONTROL AND FUNCTIONS

A control lever decal similar to the one shown below should be near the control valve to remind the operator of the lever functions



The main control valve on the Tiger Boom Mower has four sections with tapered spools, located near the right side of the steering wheel. The malfunction of a section of the valve does not necessitate the replacement of the entire "bank", only the faulty section. Each section of the valve controls a certain position of the boom or deck. Seated in the operators seat, the controls from left to right are as follows: #1 -- main boom, #2 -- secondary boom, #3 -- deck roll, #4 -- boom swing and #5 -- safety shield.





Cheetah Operation Section 3-9

## **UNSTOWING BOOM**

To unstow the boom from the boom rest, slowly lift the boom up and away from 3point mounted boom rest and cab. Damage to the mower or the tractor cab may result if operator does not exercise caution whenever stowing or unstowing the boom.

## **MOWER OPERATION**



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

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

Once on location, lower the mower deck slightly above the material to be cut, so the mower does not have to start under a load. With the tractor at an idle, engage mower. Bring tractor R.P.M. up to 2200 - 2400 R.P.M. and **slowly** lower deck to ground level.

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



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



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

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

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

The Cheetah Rotary mower was designed for cutting brush and foliage up to 4 inches in diameter or mulitple branches that have a total cross section area equivalent to one 4 inch branch. Cutting multiple limbs at the same time may overload the mower, causing it to slow down or stall. Regardless of the size of material being cut, the speed of the cutter head must be maintained. To ensure that the cutter head is running at maximum speed, run the tractor at 2400 RPM during mowing operations. If the cutter head away from the foliage and allow the cutter head to regain full speed.



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



The cheetah rotary cutter head is designed for clockwise rotation (clockwise as seen from the top of the cutter head). Never operate the cutter head with a counterclockwise rotation. Operating the mower with a counterclockwise rotation will cause objects to be thrown towards the tractor!



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



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

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

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



If bystanders approach within 300 feet while mower is in operation turn mower switch "OFF" immediately! After shutdown, never leave the tractor or allow bystanders to approach within **100 yards** of the unit until all motion stops completely.

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

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

# **TRANSPORTING MOWER**

#### Transporting under the units own power:

When transporting between job sites, the following procedure should be followed: Shut off the power to the cutting head and allow all motion to come to a complete stop. Roll the mower deck all the way back until it is adjacent to the secondary boom. Slowly and carefully swivel the boom "AFT" and bring the secondary boom arm "in" until the main boom is along side the cab and the head is just above the 3point rest. Lower the main boom until it contacts the saddle on the boom rest. The unit is now ready for self transportation. Use caution at all times when maneuvering the boom arm in and out of the boom rest, or damage to the mower or the tractor may occur.



Cheetah Operation Section 3-12

#### Transporting unit by flatbed trailer:

Park flatbed on level area. Drive tractor onto center of flatbed to avoid uneven distribution of weight and staying within local width restrictions. If tractor is over width, the turnbuckels on each side of the 3-point hitch can be adjusted to pull the boom rest and boom arm over.

CAUTION!

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

# **INSPECTION SHEETS**

## **BOOM MOWER PRE-OPERATION Inspection**



Mower ID#\_\_\_\_\_ Make\_\_\_\_\_ Date:\_\_\_\_\_ Shift\_\_\_\_\_



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

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

#### Operators Signature:\_\_\_\_\_

## DO NOT OPERATE an UNSAFE TRACTOR or MOWER

## **TRACTOR PRE-OPERATION Inspection**



Tractor ID#\_\_\_\_\_ Make\_\_\_\_\_ Date:\_\_\_\_\_ Shift\_\_\_\_\_

WARNING!

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

Item	Condition at Start of Shift	Specific Comments if not O.K.
The Flashing lights function properly		
The SMV Sign is clean and visible		
The Tires are in good condition with proper pressure		
The Wheel Lug bolts are tight		
The tractor Brakes are in good condition		
The Steering linkage is in good condition		
There are no visible Oil Leaks		
The Hydraulic controls function properly		
The ROPS or ROPS Cab is in good condition		
The Seatbelt is in place and in good condition		
The 3-Point Hitch is in good condition		
The Drawbar pins are securely in place		
The PTO Master Shield is in place		
The Engine Oil level is full		
The Brake Fluid level is full		
The Power Steering Fluid Level is full		
The Fuel level is adequate		
The Engine Coolant Fluid level is full		
The Radiator is free of debris		
The Air filter is in good condition		

#### Operators Signature:\_\_\_\_\_

## **DO NOT OPERATE an UNSAFE TRACTOR or MOWER**

## **FRONT END LOADER PRE-OPERATION Inspection**



Mower ID#\_\_\_\_\_ Make\_\_\_\_\_

Date:\_\_\_\_\_ Shift\_\_\_\_\_

WARNING!

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

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

Operators Signature:\_\_\_\_\_

## DO NOT OPERATE an UNSAFE TRACTOR or FRONT END LOADER

Cheetah Operation Section 3-17

## **TRACTOR PRE-OPERATION Inspection**



Tractor ID#\_\_\_\_\_ Make\_\_\_\_\_ Date:\_\_\_\_\_ Shift\_\_\_\_\_

WARNING!

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

ltem	Condition at Start of Shift	Specific Comments if not O.K.
The Flashing lights function properly		
The SMV Sign is clean and visible		
The Tires are in good condition with proper pressure		
The Wheel Lug bolts are tight		
The Tractor Brakes are in good condition		
The Steering linkage is in good condition		
There are no visible Oil Leaks		
The Hydraulic controls function properly		
The ROPS or ROPS Cab is in good condition		
The Seatbelt is in place and in good condition		
The PTO Master Shield is in place		
The Engine Oil level is full		
The Brake Fluid level is full		
The Power Steering Fluid Level is full		
The Fuel level is adequate		
The Engine Coolant Fluid level is full		
The Radiator is free of debris		
The Air filter is in good condition		

### Operators Signature:\_\_\_\_\_

## DO NOT OPERATE an UNSAFE TRACTOR or FRONT END LOADER

# MAINTENANCE SECTION

Cheetah Maintenance Section 4-1

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.

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



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

#### **BREAK IN PERIOD**

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

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

### **REGULAR MAINTENANCE**

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



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

ITEM	SERVICE	COMMENTS
Pump Drive Shaft	Check and Lube	Insure drive shaft end play
Crankshaft Adapter	Check rubber grommets	Replace grommets if damaged or missing
Pivot Points	Lubricate	Inject grease until it appears at ends
Hydraulic Fittings	Check for leaks	Tighten when needed. Do Not use hands to check for leaks, see maint. Precautions
Knives	Check	Inspect for missing or damaged knives, change as needed
Knife mounting bolts (knife to disk)	Check	Re - torque to 800 ft. lbs.
Disk mounting bolts (disk to spindle)	Check	Torque to 180 ft lb lubricate Torque to 204 ft lb dry
Spindle mounting bolts (Spindle to Deck)	Check	Torque to 315 Ft lubricated Torque to 357 Ft dry
Belts	Check / Adjust	Check if broken, tighten as required
Main Frame and Deck	Check	Retorque bolts to torque specifications in this section
Hydraulic Fluid Level	Check	Add if required per fluid recommendations
Rear Flail Drive (if applicable) Bearing Flange and Shaft Coupler	Lubricate	Grease as instructed in detailed maint. section
Cutter Shaft and Ground Roller	Lubricate	Grease as instructed in detailed maint. section
Ground Roller Bearings	Lubricate	Grease as instructed in detailed maint. section
Cutter Shaft Bearings (Flail)	Lubricate	Grease as instructed in detailed maint. section

#### **DAILY OR EVERY 8 HOURS**

	WEEKLY	OR EVE	RY	50 HOURS
-				<b>COMMENTS</b> Change after the first 50 hours only, then every 500 hours, yearly or if indicated by the restriction indicator.
In-Line Hig <b>(10 micro</b> i	h Pressure Filter n filter)	Change		Change after the first 50 hours only, then every 500 hours, yearly or if indicated by the restriction indicator.
Chain Cour	bling	Check		
	MONTHLY	OR EVE	R'	Y 150 HOURS
Hydraulic F	luid Level	Check		Add as needed
Hyd. Tank E	Breather Clean	/Check/Replace	;	Clean or replace element as required
	YEARLY	OR EVER	RY	500 HOURS
Spindle Gre	ease	Change		
Hyd. Tank F	luid	Change		
In Tank Hyd <b>(10 micro</b> i	I. Fluid Filter n <b>filter)</b>	Change		
In-Line Hig <b>(10 micro</b>	h Pressure Filter n filter)	Change or		Change when indicated by restriction indicator.
Hyd. Tank E		Change		
	TRO	UBLE SH	10	OTING
SYMPTOI Vibration	1. Lo 2. Cu	<b>CAUSE</b> 1. Loose bolts 2. Cutter assembly Unbalanced		<b>REMEDY</b> Check all bolts and tighten to torque specs. in this section Check for damaged blades, disc. or cutter shaft. Replace if needed. Check for wire, rope, etc.
Mower wil	2. Lea 3. Fai	-		entangled in cutter assembly Check and refill Hyd. Fluid Tighten or replace fittings and hoses Check pressure in line. Line pressure in Control Valve should be at least 2500 P.S.I. Clean or replace line.
		ulty cylinder		Inspect, repair or replace cylinder
Mower wil or run	2. Ba 3. Lov 4. Lin	own fuse II valves closed w oil level e leak tah Maintenance s	2. 3. 4.	Check fuse between mower switch and ignition / replace Make sure valves are open Check Hyd. tank and fill Check all fittings and lines,
	Chee	tan maintenance.	Jeci	

SYMPTOMS	CAUSE	REMEDY
Mower will not start or run, cont.	1. Electronic solenoid faulty	<ul> <li>1a. Without the tractor running, turn the mower switch to on. A low audible click should be heard if the solenoid is engaging the solenoid spool. If click is not heard, leave switch in on position and with a screwdriver or other steel object, touch the small nut on the end of the solenoid. If the metallic object is not attracted to the nut, check the fuse and wiring for an open circuit. If the object is attracted but no "click" is heard, replace the solenoid.</li> <li>1b. Remove the four bolts holding the small block to the main block. Lift and remove small block being careful not to damage O-rings / filter. Clean filter and re-install.</li> <li>1c. Remove large nut on side of large valve block. Remove spring, and use needle nose vise grip to pull spool from block. Check block and spool for contaminates and scratches. Clean parts or replace if scratched.</li> </ul>
Motor runs but	1. Belts	1. Inspect belts and pulleys. Replace
will not cut.	2. Tensioner	<ul><li>belts and repair as needed.</li><li>Adjust tensioner nut until flat washer washer is flush with top of guide.</li></ul>
Motor turns slowly or not at all.	<ol> <li>Contaminants restricting spool movement in valve body.</li> </ol>	<ol> <li>Remove large nut on side of large valve block. Remove spring, and use needle nose vise grip to pull spool from block. Check block and spool for contaminates and scratches. Clean parts or replace if scratched.</li> </ol>
	<ol> <li>Suction lines obstructed</li> <li>Low oil level</li> </ol>	<ol> <li>Check for kinkes or obstruction in suction hose</li> <li>Check Hyd. tank level and fill</li> </ol>
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

Cheetah Maintenance Section 4-5

		$\square$				\$		$\square$					
Nominal Dia			/	Grade 2		/	Grade 5			Grade 8			Grade
Dia.	per inch	Tig	htening Tor	que	Tig	htening To	rque	Tig	htening Tor	que	Tig	htening Tor	que
	inch	Lubed	Dry Plated				Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry pla
(in.)		K=0.15	K=0.17	K=0.20	K=0.15	K=0.17	K = 0.20	K = 0.15	K=0.17	K = 0.20	K=0.15	K=0.17	K=0.3
Unified Coarse Thread Series													
1/4	20	49 in-Ibs	59 in-Ibs	66 in-Ibs	76 in-lbs	86 in-Ibs	101 in-lbs	107 in-Ibs	122 in-lbs	143 in-Ibs	126 in-Ibs	143 in-lbs	168 in-
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		26 ft-lbs	31 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-
7/16	14	24	29	32	37	42	49	52	59	70	61	70	82
1/2	13	37	44	49	57	64	75	80	90	106	94	106	125
9/16	12	53	63	70	82	92	109	115	130	154	135	153	180
5/8	11	73	87	97	113	128	150	159	180	212	186	211	248
3/4	10	129	155	172	200	227	267	282	320	376	331	375	441
7/8	9	125	150	167	322	365	429	455	515	606	533	604	710
1	8	187	225	250	483	547	644	681	772	909	799	905	1065
1 1/8	7	266	319	354	596	675	794	966	1095	1288	1132	1283	1510
1 1/4	7	375	450	500	840	952	1121	1363	1545	1817	1597	1810	2130
1 1/2	6	652	783	869	1462	1657	1950	2371	2688	3162	2779	3150	3708
						Eine T	hread Se	rice					
1/4	28	56 in-lbs	68 in-lbs	75 in lhe	07 in lha		116 in-lbs		100 in the	1C4 in the	111 in the	102 in Iha	100
5/16	20	112	135	150	174	197	231	245	278	327	287	325	383
3/8	24	17 ft-lbs	20 ft-lbs					37 ft-lbs		49 ft-lbs		49 ft-lbs	58 ft-
7/16	24	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

				e-rens	sion Re	lations	rip tor					
			Class 4.6			Class 8.8			Class 10.9	9	Clas	s 12.9
			$\sim$						$\square$		$P$	$\neg$
			4.6	D	(	8.8	6		10.9	<b>b</b>		12.9
		`		/			/		$\square$			
Nominal	Pitch	Tig	ntening To	rque	Tig	htening Tor	que	Tig	htening To	rque	Tighteni	ng Torque
		Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry Plated	Dry plain	Lubed	Dry plair
Dia.		K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.17	K = 0.20	K = 0.15	K = 0.20
(mm)		(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)	(ft-lbs)
3	0.5	0.28	0.32	0.38	0.73	0.82	0.97	1.0	1.2	1.4	1.2	1.6
3.5	0.6	0.44	0.50	0.59	1.1	1.3	1.5	1.6	1.9	2.2	1.9	2.5
4	0.7	0.66	0.74	0.87	1.7	1.9	2.3	2.4	2.7	3.2	2.8	3.8
5	0.8	1.3	1.5	1.8	3.4	3.9	4.5	4.9	5.5	6.5	5.7	7.6
6	1	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11	9.7	13
6	1.25	2.1	2.3	2.7	5.3	6.0	7.0	7.6	8.6	10	8.8	12
7	1	3.8	4.3	5.0	9.7	11	13	14	16	19	16	22
8	1	5.9	6.6	7.8	15	17	20	22	24	29	25	34
8	1.25	5.5	6.2	7.3	14	16	19	20	23	27	24	31
10	1.25	11	13	15	29	33	39	42	48	56	49	66
10	1.5	11	12	14	28	32	37	40	45	53	47	62
12	1.25	21	23	28	53	60	71	76	86	101	89	119
12	1.5	20	22	26	51	58	68	73	82	97	85	113
12	1.75	19	21	25	49	55	65	70	79	93	81	108
14	1.25	26	29	34	66	75	89	95	108	127	111	148
14	1.5	28	32	37	72	82	96	103	117	138	121	161
14	2	30	34	40	78	88	104	111	126	148	130	173
16	1.5	50	57	67	129	146	171	184	208	245	215	287
16	2	47	53	62	121	137	161	173	196	230	202	269
18	1.5	73	82	97	187	212	249	268	303	357	313	417
18	2.5	65	73	86	167	189	222	239	270	318	279	372
20	2.5	91	104	122	236	267	314	337	382	449	394	525
Clamp lo	ad cal	culated as	75% of th	ne proof lo	ad for spe	cified bolts.	K = 0.15 f	or "lubrica	ated" cond	itions	D = Nomir	hal Diamete
All torqu	e value	es are list	ed in foot-	pounds			K = 0.17 f	or zinc pl	ated, dry c	onditions	F = Clamp	Load

\* These are intended to be general specifications. See tractor operators or service manual for exact specifications for your tractor parts. Cheetah Maintenance Section 4-6

## LUBRICATION RECOMMENDATIONS

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

#### **POLYCARBONATE CARE & MAINTENANCE**

The proprietary UV and Abrasion Resistant surface coating on SHIELDS<sup>®</sup> SUPERCOATED<sup>™</sup> polycarbonate significantly improves performance. Periodic cleaning using proper procedures and compatible cleaners are recommended to prolong service life. Tiger Corp. polycarbonate is SUPERCOATED<sup>™</sup> 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 S Windex <sup>1</sup> Fantastik <sup>3</sup>	oaps and Detergents Top Job² Formula 409⁴	Joy² Sumalight D12	Mr. Clean <sup>2</sup> Brucodecid
•	Organic Solvents Butyl Cellosolve Neleco-Placer	Kerosene Turco 5042	Hexel, F.O. 554	Naphtha (VM&P grade)
•	Alcohols Methanol	lsopropyl		

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

#### **GRAFFITI REMOVAL**

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

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

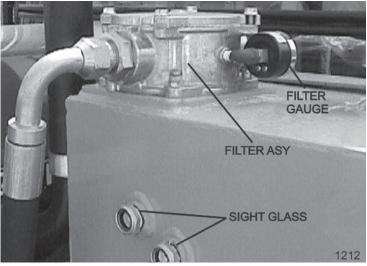
**IMPORTANT:** If a material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should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

#### RECOMMENDED FILLING INSTRUCTIONS FOR HYDRAULIC RESERVIORS

When filling or checking the oil level, the unit should be parked on a level

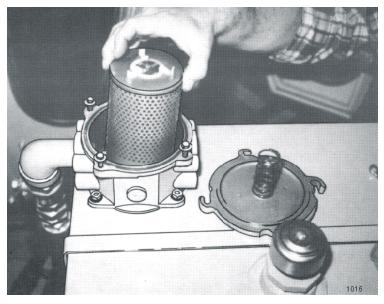
surface, shut "**OFF**", and allowed sufficient time to cool to ambient temperature. Use caution when removing the pressurized breather. Do not place face over opening when removing the breather.

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



#### **DETAILED MAINTENANCE** REPLACING IN-TANK HYDRAULIC FILTER:

Loosen the four bolts on the top cover of the filter housing. Turn cover counterclockwise until cover is free. Remove and replace filter.

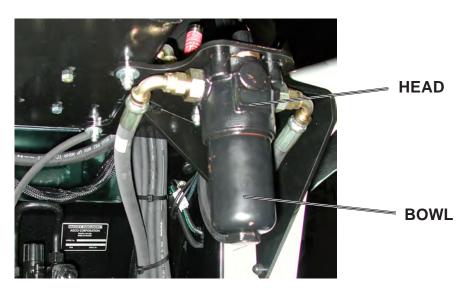


Cheetah Maintenance Section 4-9

#### **DETAILED MAINTENANCE**

#### **REPLACEING HIGH PRESSURE HYDRAULIC FILTER ELEMENT:**

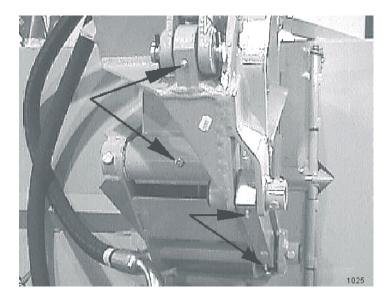
Assure system has been shut down and de-pressurized. Locate High Pressure Filter housing. Confirm that the element that is about to be installed matches the element p/n on the filter model tag. Example: V3.0510-06 (world line 100, HD049 model) Locate the bottom of the High Pressure Bowl, and use the appropriate spanner wrench –or- ratchet that matches the hex pattern. Using the spanner wrench -or- ratchet and turning in a counterclockwise rotation, (looking at the bottom of the bowl) remove the bowl from the head, The first couple rotations will seam 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 flow direction through the element is outside ~ in. 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. Install the new element into and on the mounting boss with in the head; assure 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, assuring that the bowl has not been cross threaded into the head. Continue "tighten" the bowl into the head, using the spanner wrench -orratchet, the rotation of the bowl will become tighter once the o-ring engages the sealing flats. Once the bowl has been fully inserted into the head, and the o-ring has reached the sealing flats, the bowl can no longer be "tightened" and bottoms out. Once the bowl has bottomed out, "back-off" the bowl by 1/6 turn, this assures that the o-ring is seated properly with in the sealing flats. Element change out and reassembly is now complete. Start the machine and inspect the filter area checking that there is no oil leaking from the filter assembly. This is first to be done at 50 hours of operation, then yearly(500 hours) or when indicated by restriction indicator.



Cheetah Maintenance Section 4-10

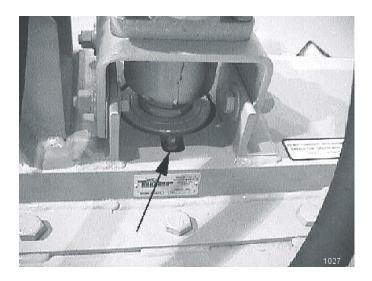
#### **GREASING PIVOT POINTS - BOOM AND SWIVEL**

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



#### **GREASING SPINDLE**

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



#### 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:

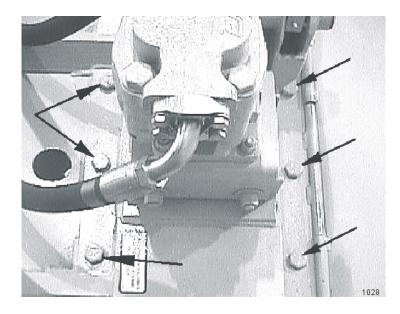
Knife mounting bolts (2ea) torque to 800 ft. lbs. lubricated Disk mounting bolts (6ea) torque to 204 ft. lbs dry or to 184 ft. lbs. lubricayed (loctite 271)



## **TIGHTENING SPINDLE BOLTS**

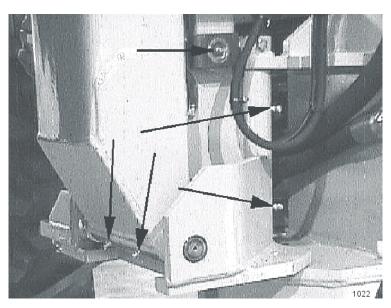
The spindle mounting bolts should be checked and retorqued daily or every 8 hours of service as follows:

Torque the (6) bolts shown below to 357 ft. lbs. dry or 315 ft. lb. lubricated (loctite 271)



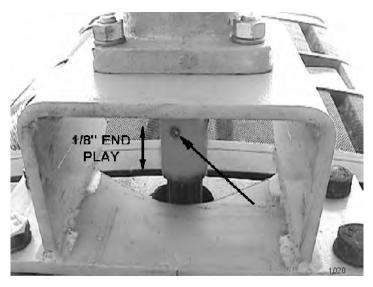
#### **GREASING THE BOOM SWIVEL**

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



#### **GREASING PUMP DRIVE SHAFT COUPLER**

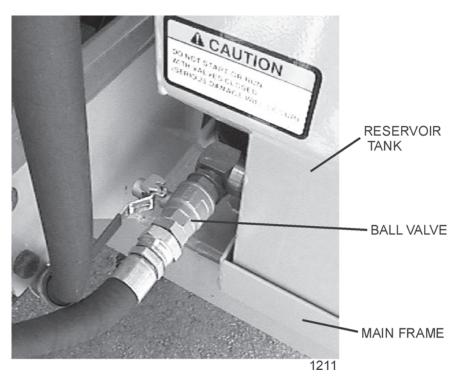
With engine stopped, ensure drive shaft alignment by grasping coupler and sliding back and forth. Coupler should slide freely with approximately 1/8" of end play. If coupler does not slide freely, inspect for loose pump mount bolts, or damaged or loose crank shaft adapter. Inject Lithium-Complex Extreme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



Cheetah Maintenance Section 4-13

### **BALL VALVES**

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



#### **GREASING BOOM CYLINDER 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.



### **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, bushings, collars, 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 50 FT. LBS. Knife must swing freely.

#### WARNING!



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 <u>not</u> be welded on for any reason.

### CHEETAH SPINDLE ASSEMBLY

INSTALLATION AND BEARING ADJUSTMENT

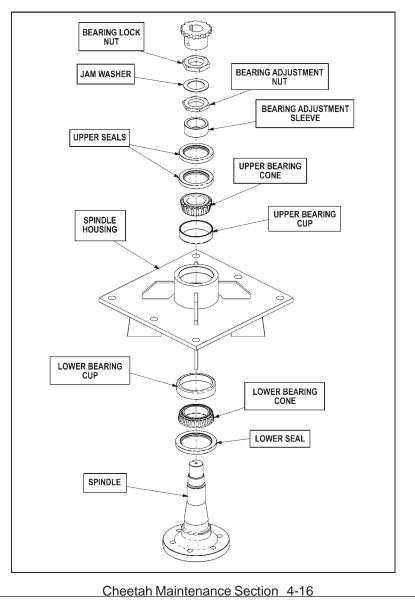
**WARNING!** A press MUST be used to install bearing cups, bearing cones, and seals. DO NOT use a hammer to install races, bearings, or seals. The parts of assembly may be damaged.

**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.

# THE SPINDLE ASSEMBLY

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



#### **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.

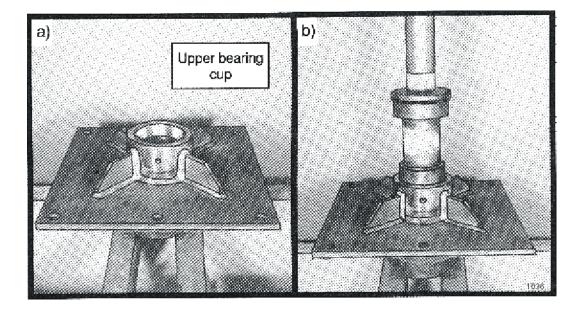
**NOTE:** The spindle housing must turn freely when seating the bearing cone and sleeve.

6 – 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.

7 - Install the bearing adjustment nut (thin nut) so there is 1/16" clearance between the nut and the sleeve. Install the jam washer, placing the tab into the key-way. Install the bearing lock nut (thick nut) and hand tighten against jam washer and adjustment nut. See the following section for bearing adjustment.

8 – 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.

9 – Install the plug into the drain hole.



Cheetah Maintenance Section 4-17

#### **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.

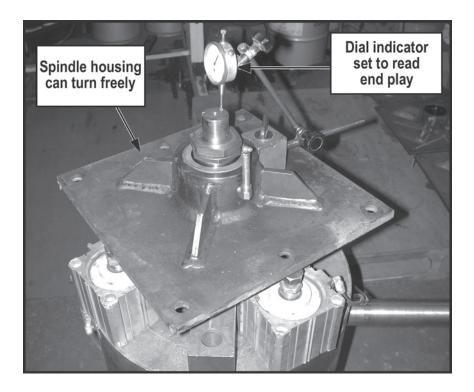
3 – Tighten the bearing adjustment nut until there is .012 inch movement when the spindle housing is pried upward away from the vise jaws.

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 in 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.



Cheetah Maintenance Section 4-18

#### 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: Check for end play in drive shaft / coupler and lubricate zerk on coupler.

\_\_\_\_\_ 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.

\_\_\_\_\_ Blade Bolts(1 1/8"): Check/Torque to 800 oiled ft lb. lubricated

\_\_\_\_\_ Check / Tourque Disk Bolts 204 ft. lbs. dry and Spindle bolts 357 ft. lbs. dry.

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

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

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

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

\_\_\_\_\_ Cutter Shaft and Ground Roller: Grease as instructed in the detailed maintenance section.

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

#### **Maintenance Section**

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

#### CNH T5000 or TL80-100A - CHEETAH BOOM MOWER

# PARTS SECTION

#### PARTS ORDERING GUIDE

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

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

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

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

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

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

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

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



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

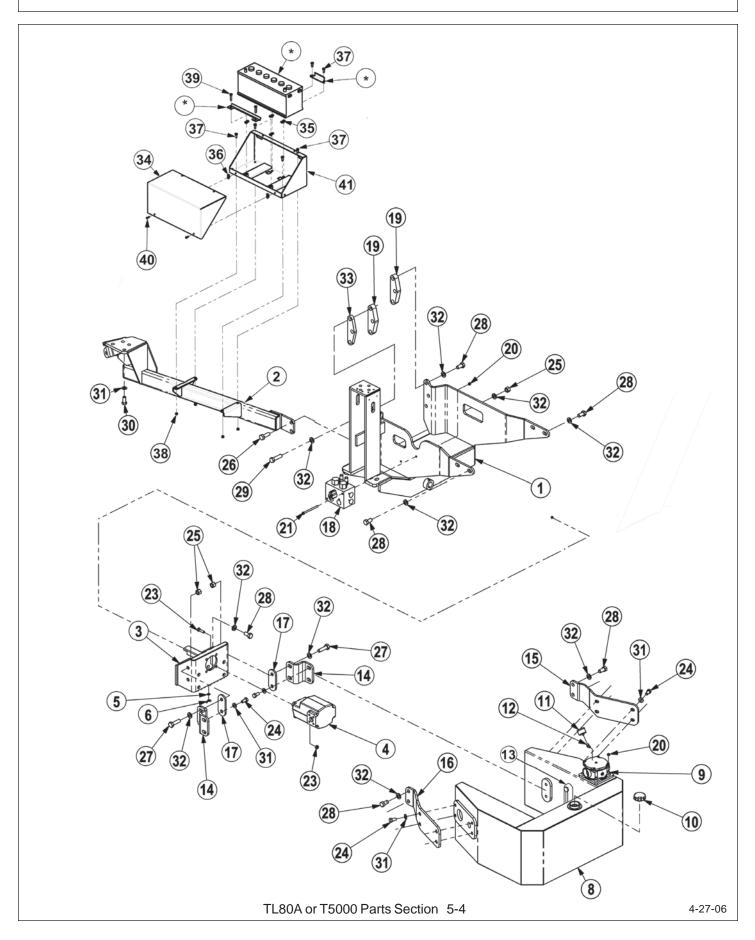
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#### COMMON CHEETAH SECTION

6-1

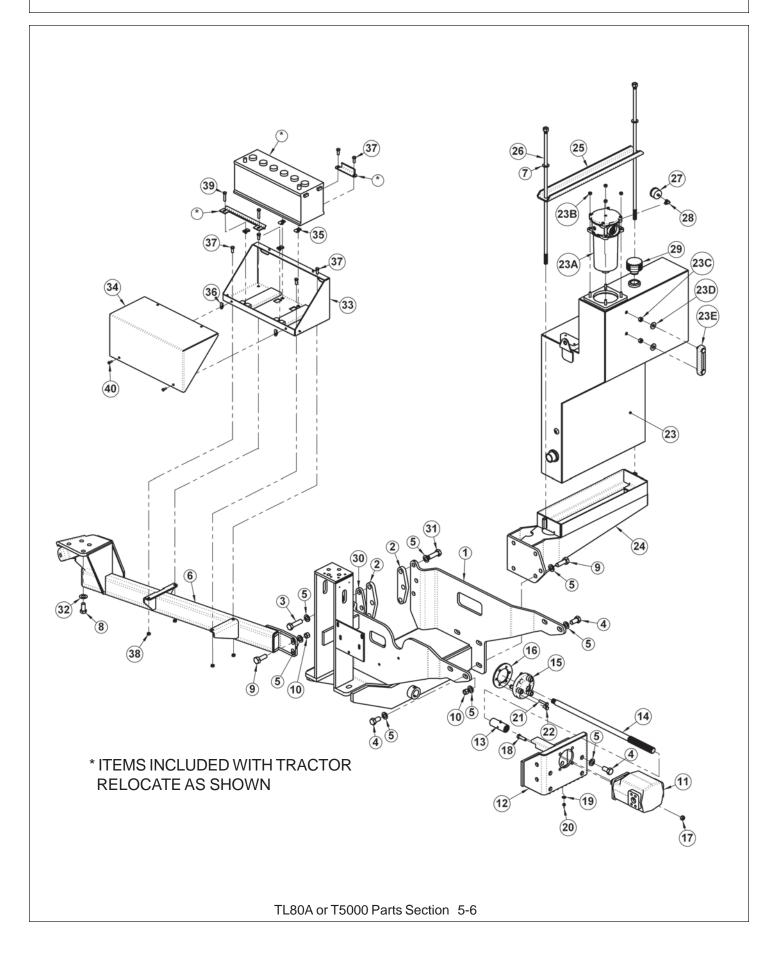
#### **BUMPER TANK - MAIN FRAME CNH T5000 or TL80-100A**



#### **BUMPER TANK - MAIN FRAME CNH T5000 or TL80-100A**

ITEM	PARTNO.	QTY.	DESCRIPTION
1	06300025	1	MNFRM,TL80-90A, ALL
2	06300039	1	AXL BRC,RH,TL80A
3	06370036	1	PUMP MNT,TL80-90A
4	23152	1	PUMP,P350-1 3/4 GEAR
5	22014	1	FLATWASHER,1/4
6	32519	1	NUT,WING,1/4-20 UNC
•	34666	*	TANK,RES,BUMP,BLANK,CPLT,ASSY
7	33700	1	REDUCER BUSHING,2MPX3/4FPHEX
8	33695	1	TANK,RES,BUMPER,BLANK
9	35269	1	FILTER ASSY, IN-TANK, JIC, 10MIC
10	31004	1	CAP, PRESSURE, 3.0PSI, 3/4MP
11	6T0649	1	FILTER GAUGE
12	TF4887	1	STREET ELBOW, 1/8 X 45
13	6T1209	2	SIGHT GLASS, TANK
14	06410150	2	PLATE, SM, MNT, RES TANK, TS135A
15	06410314	1	MNT,TANK,HYDRO,RH,TL80A
16	06410315	1	MNT, TANK, HYDRO, LH, TL80A
17	06400165	4	SPACER,COOLER,FRONT
18	06510083	1	VALVE, BRAKE, SOL, 3000PSI, METRI
19	06400342	2	SPACER,3/4", MNFRM,TL80A
20	21627	6	NYLOCK NUT, 3/8 NC
21	21644	2	CAPSCREW, 3/8 X 5 NC
22	21725	4	HEX NUT, 1/2 NC
23	21732	4	CAPSCREW, 1/2 X 1-3/4 NC
24	21780	12	CAPSCREW, 5/8 X 1-1/4 NC
25	21825	6	HEX NUT,3/4 NC
26	21833	2	CAPSCREW,3/4 X 2-1/4 NC
27	21835	4	CAPSCREW,3/4 X 2-3/4 NC
28	24860	15	CAPSCREW,20mmx40mm(2.5P)10.9
29	32285	3	CAPSCREW,20mmx75mm(2.5)GR10.9
30	06530509	4	CAPSCREW,18MMx40MM(1.5P)GR10.9
31	33764	16	FLATWASHER,5/8,GR 8,SAE
32	33880	24	FLATWASHER,3/4,GR 8,SAE
33	06400419	1	SPACER,1/2", MNFRM,TL80A
34	06411112	1	TOP,BOX,BATT,T5000
35	06537029	4	U-NUT,3/8NC,3/4 TO CENTER
36	35176	2	U-NUT,1/4,3/4 TO CENTER
37	21630	6	CAPSCREW, 3/8 x 1,NC
38	21627	4	NYLOCK NUT,3/8",NC
39	21633	2	CAPSCREW, 3/8x1 3/4,NC,GR8
40	21529	2	CAPSCREW, 1/4" X 3/4" NC
40 41	06370155	2	BOTTOM,BOX,BATT,T5000
41	00370100	I	

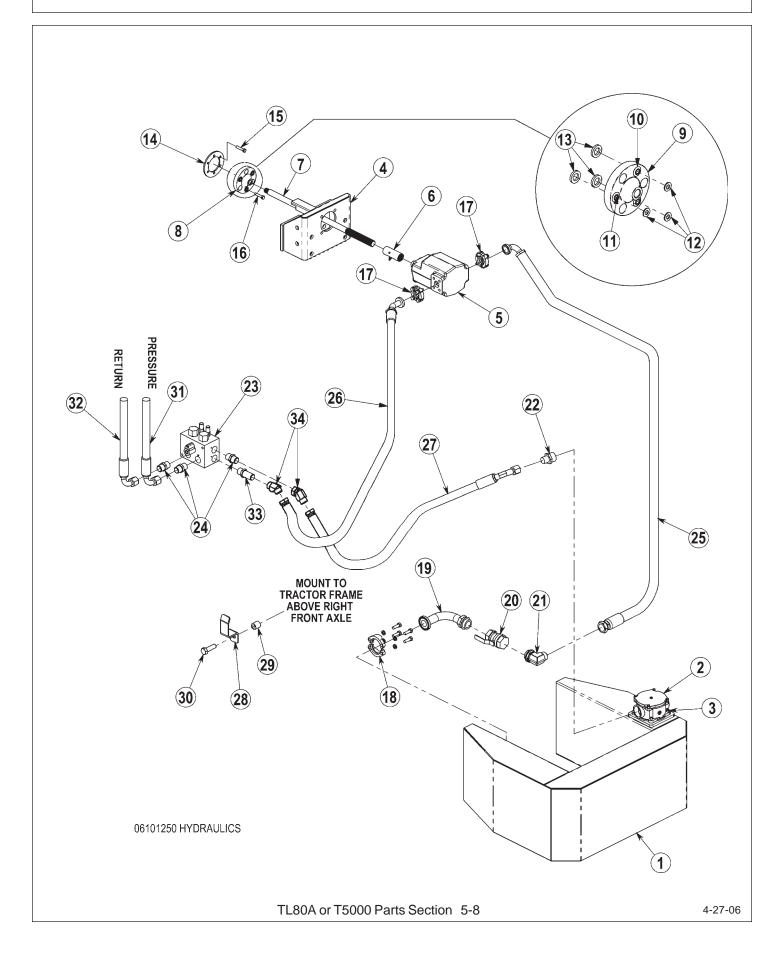
#### **UPRIGHT TANK - MAIN FRAME CNH T5000 or TL80-100A**



#### UPRIGHT TANK - MAIN FRAME CNH T5000 or TL80-100A

IFEM         PART NO.         OTY.         DESCRIPTION           1         0630032         1         MMFRM,TL80-40A, ALL           2         06400342         2         SPACER,34,MNFRM,TL80A           3         32285         3         CAPSCREW.20mmx75mm(2.5)GR10.9           4         24880         5         CAPSCREW.20mmx75mm(2.5)GR10.9           5         33880         21         FLATWASHER,58,GR 8,SAE           6         06300039         1         AL BRC,RW,134,MGR 4,SAE           7         33764         6         FLATWASHER,58,GR 8,SAE           8         065300039         1         CAPSCREW.34X 22.1/4 NC           10         21825         6         HEX.NUT,34 NC           11         23152         1         PUMP.P330-13/4 GEAR           12         06370036         1         PUMP.P330-13/4 GEAR           13         66024020         1         COUPLING,14 SPLINE,W/ZERK,4           14         34624         1         DRV SHF,PMP.28 13/16           150         06420029         1         ADAPTER.CRANKSHAFT,TL80A,AW/GRO           154         06420023         3         GROMMET,RUBBER           155         053216         3         GROMMET				
2         06400342         2         SPACER.3/4.MNFRM.TLB0A           3         32285         3         CAPSCREW.20mmx75mm(2.5)GR10.9           4         24960         5         CAPSCREW.20mmx475mm(2.5)P10.9           5         33800         21         FLATWASHER.3/4.GR 8.5AE           6         06300039         1         AXL BRC.RH.TLB0A           7         33764         6         FLATWASHER.5/8.GR 8.5AE           8         06535059         4         CAPSCREW.13MMx40MM(1.5)PGR10.9           9         21833         6         CAPSCREW.13MMx40MM(1.5)PGR10.9           10         21825         6         HEX NUT.3/4 NC           11         23152         1         PUMP MNT,TLB0-90A           13         6T0375B         COUPLING.14 SPLINE.W/ZERK.4           14         34624         1         COUPLING.14 SPLINE.W/ZERK.4           15         06420096         1         DRV SHF.132.5.LH THRD, T5000           16         06420030         3         GROMMET           15D         06420030         3         GROMMET           16D         06420031         SPACER.CRANKSHAFT.TLB0A           17         21725         1         HEX NUT.12 N C	ITEM	PARTNO.	QTY.	DESCRIPTION
3         32285         3         CAPSCREW.20mmx/Shmm(2.5)GR10.9           4         24860         5         CAPSCREW.20mmx/Shmm(2.5)GR10.9           5         33880         21         FLATWASHER,3/4,GR 8,SAE           6         06300039         1         AXL BRC,RM,TL80A           7         33764         6         FLATWASHER,5/8,GR 8,SAE           8         06530509         4         CAPSCREW.314 X2-114 NC           10         21825         6         HEX NUT,3/4 NC           11         23152         1         PUMP,P350-13/4 GEAR           12         06370036         1         COUPLING,14 SPLINE,W/ZERK,4           TE00-90A         TE00-90A         TE0-90A           14         34624         1         DRV SHF,PMP,28 13/16           15         0677004         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           16         06420030         3         GROMMET           150         06420031         3         WASHER,NEOPRENE           150         0657004         3         WASHER,NEOPRENE           16         06420031         GAPSCREW,10MMXS0MM(1.5 PITCH)           17         21725         1         HEX NUT,1/2 NC           18	1	06300025	1	MNFRM,TL80-90A, ALL
4         24660         5         CAPSCREW.20nmx40mm(2.5P)10.9           5         33800         21         FLATWASHER.3/4.GR 8,SAE           6         06300039         1         AXL BRC,RH,TL80A           7         33764         6         FLATWASHER.3/4.GR 8,SAE           8         06530509         4         CAPSCREW.18MWA40MM(1.5P)GR10.9           9         21833         6         CAPSCREW.34X 2-1/4 NC           10         21825         6         HEX NUT,3/4 NC           11         23152         1         PUMP.P350-13/4 GEAR           12         06370036         1         PUMP.P350-13/4 GEAR           12         06470029         1         CUUPLING.14 SPLINE.W/ZERK.4           TEX00         TLB0-90A           14         64620029         1         ADAPTER.CRANKSHAFT,TL80A           15         06770004         1         ADAPTER.CRANKSHAFT,TL80A           165         24397         3         FLATWASHER.71/6.6 SAE           175         1         ADAPTER.CRANKSHAFT,TL80A           176         21725         1         HEX NUT,1/2.NC           185         24397         3         GROMMET           190         2014	2	06400342		SPACER,3/4,MNFRM,TL80A
5         33880         21         FLATWASHER,3/4,GR 8,SAE           6         06300039         1         AXLBRC,RH,TLB0A           7         33764         6         FLATWASHER,5/8,GR 8,SAE           8         06530509         4         CAPSCREW,3/4 X 2-1/4 NC           10         21825         6         HEX NUT,3/4 NC           11         23152         1         PUMP PASO-13/4 GEAR           12         06370036         1         PUMP MNT,TL80-90A           13         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           TE80-90A           14         06420096         1         DRV SHF,PMP,28 13/16           TE000           14         06420029         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           15         06770004         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           16         06420030         3         GROMMET           15D         06537004         3         WASHER,NEOPRENE           16         06420031         SPACEC,RANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW, 10MMX20MM(1.5 PITCH)	3	32285		
6         06300039         1         AXL BRC,RH, TL80A           7         33764         6         FLATWASHER,S/8,GR 8,SAE           8         06530509         4         CAPSCREW,18MMx40MM(1.5P)GR10.9           9         21833         6         CAPSCREW,18MMx40MM(1.5P)GR10.9           10         21825         6         HEX NUT,3/4 NC           11         23152         1         PUMP P350-13/4 GEAR           12         06370036         1         PUMP PMT,TL80-90A           13         6T03778         1         COUPLING,14 SPLINE,W/ZERK,4           TL80-90A           ADAPTER,CRANKSHAFT,TL80A           TL80-90A           TL80-90A           PLATWASHER,71/6,SAE           TL80-90A           PLATWASHER,71/6,SAE		24860		CAPSCREW,20mmx40mm(2.5P)10.9
7         33764         6         FLATWASHER,5%,GCR 8,SAE           8         06530509         4         CAPSCREW,18MMX40MM(1.5P)GR10.9           9         21833         6         CAPSCREW,34X 2-1/4 NC           10         21825         6         HEX NUT,3/4 NC           11         23152         1         PUMP MNT,TL80-90A           12         06370036         1         PUMP MNT,TL80-90A           14         34624         1         COUPLING,14 SPLINE,W/ZERK,4           1500         1         DRV SHF,732,5.LH THRD,75000           15         06770004         1         ADAPTER,CRANKSHAFT,TL80A           158         24937         3         FLATWASHER,7/16,SAE           150         06320030         GROMMET         1500           150         06420030         GROMMET         160           160         06420031         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         CAPSCREW,10MX50MM(1.5 PITCH)           22         35343         CAPSCREW,10MX50MM(1.5 PITCH)           23         36509         1         TANK,RES,JD6000,ASSY           238         21627         4 <td>5</td> <td>33880</td> <td>21</td> <td>FLATWASHER,3/4,GR 8,SAE</td>	5	33880	21	FLATWASHER,3/4,GR 8,SAE
8         06530509         4         CAPSCREW, 3/4 X 2-1/4 NC           10         21825         6         HEX NUT, 3/4 NC           11         23152         1         PUMP, P350-1 3/4 GEAR           12         06370036         1         PUMP, P350-1 3/4 GEAR           12         06370036         1         PUMP, P350-1 3/4 GEAR           13         6T0375B         1         COUPLING, 14 SPLINE, W/ZERK, 4           14         34624         1         DRV SHF, 732, 5, LH THRD, T5000           15         06770004         1         ADAPTER, CRANKSHAFT, TL80A, W/GRO           158         24937         3         FLATWASHER, 71, 6, SAE           150         06637004         3         GROMMET           150         06420030         3         GROMMET, TL80A           158         64321         SPACER, CRANKSHAFT, TL80A           17         21725         1         HEX NUT, 1/2 NC           18         21732         1         CAPSCREW, 10MMX20MM(1, SPITCH)           19         22014         1         FLATWASHER, 71/4           20         32519         1         NUT, WINK, 14/4, 20 UNC           21         22254         3         CAPSCREW, 10MMX20MM(1, SP		06300039	1	AXL BRC,RH,TL80A
9         21833         6         CAPSCREW.3/4 X 2-1/4 NC           10         21825         6         HEX NUT,3/4 NC           11         23152         1         PUMP.P350-13/4 GEAR           12         06370036         1         PUMP MNT,TL80-90A           13         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           TL80-90A           14         34624         1         DRV SHF,32.5 LH THRD, T5000           14         06420029         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           15A         06420029         1         ADAPTER,CRANKSHAFT,TL80A           15B         24937         3         FLATWASHER,7/16,SAE           16C         06420030         3         GROMMET           15D         06537004         3         WASHER,NEOPRENE           15E         613218         3         GROMMET,RUBBER           16         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,10MMX50MM(1.5 PITCH)           22         32534         3         CAPSCREW,10MMX50MM(1.5 PITCH)           23         067009	7	33764	6	FLATWASHER,5/8,GR 8,SAE
10         21825         6         HEX NUT.3/4 NC           11         23152         1         PUMP PNTT.L80-90A           13         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           14         34624         1         DRV SHF,PMP,28 13/16           15         06770004         1         ADAPTER,CRANKSHAFT,TL80-40,W/GRO           15         06770004         1         ADAPTER,CRANKSHAFT,TL80-40,W/GRO           158         24937         3         FLATWASHER,7/16,SAE           150         06420029         1         ADAPTER,CRANKSHAFT,TL80-4           158         24937         3         FLATWASHER,7/16,SAE           150         06537004         3         WASHER,NEOPRENE           151         06537004         3         WASHER,NEORENE           152         613218         3         GROMMET           150         06537004         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,10MMX50MM(1.5 PITCH)           22         3533         3         CAPSCREW,10MMX50MM(1.5 PITCH)           23         06505044         1         FILTER ASSY	8	06530509	4	CAPSCREW,18MMx40MM(1.5P)GR10.9
11         23152         1         PUMP.P350-13/4 GEAR           12         06370036         1         PUMP MNT,TL80-90A           13         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           14         34624         1         DRV SHF,32.5.LH THRD,T5000           15         06770004         1         DAPTER,CRANKSHAFT,TL80A,W/GRO           158         24937         3         FLATWASHER,7/16,SAE           156         06420029         1         ADAPTER,CRANKSHAFT,TL80A           158         24937         3         FLATWASHER,7/16,SAE           150         06537004         3         WASHER,NEOPRENE           150         06537004         3         WASHER,NEOPRENE           156         6T3218         3         GROMMET           160         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,10MMX50MM(1.5 PITCH)           23         365004         1         FLTER ASSY,IN TANK COUNC           23         24627         4         NYLOCK NUT,3/8,NC           23         06505064         1         FLTER ASSY,IN TANK CO	9	21833	6	CAPSCREW,3/4 X 2-1/4 NC
12         0637036         1         PUMP MNT,TL80-90A           13         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           14         34624         1         DRV SHF,732.5.LH THRD,T5000           15         06420096         1         DRV SHFT,32.5.LH THRD,T5000           15         06420029         1         ADAPTER,CRANKSHAFT,TL80A,WIGRO           158         24937         3         FLATWASHER,7/16,SAE           150         06637004         3         WASHER,NEOPRENE           151         06637004         3         WASHER,NEOPRENE           152         6T3218         3         GROMMET           152         6T3218         3         GROMMET           154         21732         1         CAPSCREW,102 X 1-3/4 NC           17         21725         1         HEX NUT,12 NC           18         21732         1         CAPSCREW,10MMX50MM(1.5 PITCH)           23         35519         1         NUT,WING,14-20 UNC           21         22254         3         CAPSCREW,10MMX50MM(1.5 PITCH)           23         06700090         1         TANK,RES,JD6000,ASSY           23A         06505044         1         FILTER ASSY,IN TANK CPL	10	21825	6	HEX NUT,3/4 NC
13         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           TL80-90A         TL80-90A           14         34624         DRV SHF,732.5.LH THRD,T5000           15         06770004         1         ADAPTER, CRANKSHAFT,TL80A,W/GRO           15A         06420029         1         ADAPTER, CRANKSHAFT,TL80A,W/GRO           15B         24937         3         FLATWASHER,7/16,SAE           15C         06420030         3         GROMMET           15D         06537004         3         WASHER,NEOPRENE           15E         6T3218         3         GROMMET,RUBBER           16         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,104           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         06505044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           238         21627         4         NYLOCK NUT,3/8,NC           230         2018 </td <td>11</td> <td>23152</td> <td>1</td> <td>PUMP,P350-1 3/4 GEAR</td>	11	23152	1	PUMP,P350-1 3/4 GEAR
TL80-90ATL80-90A14 $34624$ 1DRV SHF,PMP,28 13/1615067700041DRV SHFT,32.5 LH THRD,T500015067700041ADAPTER,CRANKSHAFT,TL80A,W/GRO15A064200291ADAPTER,CRANKSHAFT,TL80A,W/GRO15B249373FLATWASHER,7/16,SAE15C064200303GROMMET15D065370043WASHER,NEOPRENE15E6132183GROMMET,RUBBER16064200311SPACER,CRANKSHAFT,TL80A17217251HEX NUT,1/2 NC18217321CAPSCREW,1/2 X 1-3/4 NC19220141FLATWASHER,1/420325191NUT,WING,1/4-20 UNC21222543CAPSCREW,10MMX20MM(1.5 PITCH)2306700901TANK,RES,JD6000,ASSY23A065050441FILTER ASSY,IN TANK CPLT,SAE 10 MP23B216274NYLOCK NUT,3/8,NC23C217252HEX NUT,1/2,NC23D220182FLATWASHER,1/2,WIDE23E065050671SIGHT GUAGE24063000881MNT,TANK25064103521CHANNEL,MNT,TANK,TIE-BOLT26063300542TIE BOLT,SIDE TANK,HYDRO276T6491FILTER GAUGE28TF48881STREET ELBOW,1/8 X 902906505077CAPSRER,1/2," MNFRM,TL80A30064004191SPACER,1/2," M	12	06370036	1	PUMP MNT,TL80-90A
14         34624         1         DRV SHF,PMP,28 13/16           T5000         T5000         DRV SHFT,32.5.LH THRD,T5000           15         06770004         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           15A         06420029         1         ADAPTER,CRANKSHAFT,TL80A           15B         24937         3         FLATWASHER,7/16,SAE           15C         06420030         3         GROMMET           15D         06537004         3         WASHER,NEOPRENE           15E         673218         3         GROMMET,RUBBER           16         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         06505044         1         FLTERA SSY,IN TANK K CPLT,SAE 10 MP           238         21627         4         NYLOCK NUT,3/8,NC           232         06505067         1         SIGHT GUAGE <tr< td=""><td>13</td><td>6T0375B</td><td>1</td><td>COUPLING,14 SPLINE,W/ZERK,4</td></tr<>	13	6T0375B	1	COUPLING,14 SPLINE,W/ZERK,4
T5000           14         06420096         1         DRV SHFT,32.5.LH THRD,T5000           15         06770004         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           15A         06420029         1         ADAPTER,CRANKSHAFT,TL80A           15B         24937         3         FLATWASHER,716,SAE           16C         06420030         3         GROMMET           15D         06537004         3         WASHER,NEOPRENE           16E         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING 1/4-20 UNC           21         22254         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         36505044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           23B         21627         4         NYLOCK NUT,3/8,NC           23D         22018         2         FLATWASHER,1/2, WIDE           23E         06505067         1         SIGHT GUAGE           24         06300048			TL80-90A	
14         06420096         1         DRV SHFT,32.5.LH THRD,T5000           15         06770004         1         ADAPTER,CRANKSHAFT,TL80A           15A         06420029         1         ADAPTER,CRANKSHAFT,TL80A           15B         24937         3         FLATWASHER,7/16,SAE           15C         06537004         3         WASHER,NEOPRENE           15E         6T3218         3         GROMMET,RUBBER           16         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         0670090         1         TANK,RES,JD600,ASSY           23A         06505044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           23B         21627         4         NYLOCK NUT,3/8,NC           23C         21725         2         HEX NUT,1/2,NC           23E         06505067         1         SIGHT GUAGE	14	34624	1	DRV SHF,PMP,28 13/16
15         06770004         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           15A         06420029         1         ADAPTER,CRANKSHAFT,TL80A           15E         06420030         3         GROMMET           15D         06637004         3         WASHER,NEOPRENE           15E         6T3218         3         GROMMET,RUBBER           16         06420031         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         06700090         1         TANK,RES,JD6000,ASSY           234         06505064         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           238         21627         4         NYLOCK NUT,3/8,NC           230         2018         2         FLATWASHER,1/2,WIDE           232         06505067         1         SIGHT GUAGE           24         06300088         MNT,TANK           25         06			T5000	
15A         06420029         1         ADAPTER,CRANKSHAFT,TL80A           15B         24937         3         FLATWASHER,7/16,SAE           15C         06420030         3         GROMMET           15D         06537004         3         WASHER,NEOPRENE           15E         6T3218         3         GROMMET,RUBBER           16         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX50MM(1.5 PITCH)           23         06700090         1         TANK,RES,JD6000,ASSY           23A         06505044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           23B         21627         4         NYLOCK NUT,3/8,NC           23D         22018         2         FLATWASHER,1/2,WIDE           23E         06505067         SIGHT GUAGE           24         06300088         1         MNT,TANK           25	14	06420096	1	DRV SHFT,32.5.LH THRD,T5000
15B       24937       3       FLATWASHER,7/16,SAE         15C       06420030       3       GROMMET         15D       06537004       3       WASHER,NEOPRENE         15E       6T3218       3       GROMMET,RUBBER         16       06420031       1       SPACER,CRANKSHAFT,TL80A         17       21725       1       HEX NUT,1/2 NC         18       21732       1       CAPSCREW,1/2 X 1-3/4 NC         19       22014       1       FLATWASHER,1/4         20       32519       1       NUT,WING,1/4-20 UNC         21       22544       3       CAPSCREW,10MMX50MM(1.5 PITCH)         23       06700900       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       066506067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27 <td>15</td> <td>06770004</td> <td>1</td> <td>ADAPTER,CRANKSHAFT,TL80A,W/GRO</td>	15	06770004	1	ADAPTER,CRANKSHAFT,TL80A,W/GRO
15C       06420030       3       GROMMET         15D       06537004       3       WASHER,NEOPRENE         15E       6T3218       3       GROMMET,RUBBER         16       06420031       1       SPACER,CRANKSHAFT,TL80A         17       21725       1       HEX NUT,1/2 NC         18       21732       1       CAPSCREW,1/2 X 1-3/4 NC         19       22014       1       FLATWASHER,1/4         20       32519       1       NUT,WING,1/4-20 UNC         21       22254       3       CAPSCREW,10MMX20MM(1.5 PITCH)         22       33534       3       CAPSCREW,10MMX20MM(1.5 PITCH)         23       06700090       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23B       21667       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANN NEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27<	15A	06420029	1	ADAPTER,CRANKSHAFT,TL80A
15C       06420030       3       GROMMET         15D       06537004       3       WASHER,NEOPRENE         15E       6T3218       3       GROMMET,RUBBER         16       06420031       1       SPACER,CRANKSHAFT,TL80A         17       21725       1       HEX NUT,1/2 NC         18       21732       1       CAPSCREW,1/2 X 1-3/4 NC         19       22014       1       FLATWASHER,1/4         20       32519       1       NUT,WING,1/4-20 UNC         21       22254       3       CAPSCREW,10MMX20MM(1.5 PITCH)         22       33534       3       CAPSCREW,10MMX20MM(1.5 PITCH)         23       06700090       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23B       21667       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANN NEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27<	15B	24937	3	FLATWASHER,7/16,SAE
15D       06537004       3       WASHER,NEOPRENE         15E       6T3218       3       GROMMET,RUBBER         16       06420031       1       SPACER,CRANKSHAFT,TL80A         17       21725       1       HEX NUT,1/2 NC         18       21732       1       CAPSCREW,1/2 X 1-3/4 NC         19       22014       1       FLATWASHER,1/4         20       32519       1       NUT,WING,1/4-20 UNC         21       2254       3       CAPSCREW,10MMX50MM(1.5 PITCH)         22       33534       3       CAPSCREW,10MMX20MM(1.5 PITCH)         23       06700900       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CDLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       MNT,TANK       25         23E       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE	15C	06420030		GROMMET
15E       6T3218       3       GROMMET,RUBBER         16       06420031       1       SPACER,CRANKSHAFT,TL80A         17       21725       1       HEX NUT,1/2 NC         18       21732       1       CAPSCREW,1/2 X 1-3/4 NC         19       22014       1       FLATWASHER,1/4         20       32519       1       NUT,WING,1/4-20 UNC         21       22254       3       CAPSCREW,10MMX50MM(1.5 PITCH)         23       0670090       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MIT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       STREET ELBOW,1/8 X 90         29       065050	15D	06537004		WASHER, NEOPRENE
16         06420031         1         SPACER,CRANKSHAFT,TL80A           17         21725         1         HEX NUT,1/2 NC           18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         36534         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         36534         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         3653044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           238         21627         4         NYLOCK NUT,3/8,NC           23C         21725         2         HEX NUT,1/2,NC           23B         206505067         1         SIGHT GUAGE           24         06300088         1         MNT,TANK           25         06410352         1         CHANNEL,MNT,TANK,TIE-BOLT           26         06380014         2         TIE BOLT,SIDE TANK,HYDRO           27         6T649         1         FILTER GAUGE           28         TF4888         1         STREET ELBOW,1/8 X 90	15E	6T3218		GROMMET, RUBBER
18         21732         1         CAPSCREW,1/2 X 1-3/4 NC           19         22014         1         FLATWASHER,1/4           20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX50MM(1.5 PITCH)           22         33534         3         CAPSCREW,10MMX20MM(1.5 PITCH)           23         06700090         1         TANK,RES,JD6000,ASSY           23A         06505044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           23B         21627         4         NYLOCK NUT,3/8,NC           23C         21725         2         HEX NUT,1/2, NC           23D         22018         2         FLATWASHER,1/2,WIDE           23E         06505067         1         SIGHT GUAGE           24         06300088         1         MNT,TANK           25         06410352         1         CHANNEL,MNT,TANK,TIE-BOLT           26         06380014         2         TIE BOLT,SIDE TANK,HYDRO           27         6T0649         1         FILTER GAUGE           28         TF4888         1         STREET ELBOW,1/8 X 90           29         06505077         1         CAPSCREW,20MMx65MM     <	16	06420031		SPACER,CRANKSHAFT,TL80A
19       22014       1       FLATWASHER,1/4         20       32519       1       NUT,WING,1/4-20 UNC         21       2254       3       CAPSCREW,10MMX50MM(1.5 PITCH)         22       33534       3       CAPSCREW,10MMX20MM(1.5 PITCH)         23       06700090       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAPSCREW,20MMx65MM         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM	17	21725	1	HEX NUT, 1/2 NC
20         32519         1         NUT,WING,1/4-20 UNC           21         22254         3         CAPSCREW,10MMX50MM(1.5 PITCH)           22         33534         3         CAPSCREW,10MMX50MM(1.5 PITCH)           23         06700090         1         TANK,RES,JD6000,ASSY           23A         06505044         1         FILTER ASSY,IN TANK CPLT,SAE 10 MP           23B         21627         4         NYLOCK NUT,3/8,NC           23C         21725         2         HEX NUT,1/2,NC           23D         22018         2         FLATWASHER,1/2,WIDE           23E         06505067         1         SIGHT GUAGE           24         06300088         MNT,TANK           25         06410352         1         CHANNEL,MNT,TANK,TIE-BOLT           26         06380014         2         TIE BOLT,SIDE TANK,HYDRO           27         6T0649         1         FILTER GAUGE           28         TF4888         1         STREET ELBOW,1/8 X 90           29         06505077         1         CAPSCREW,20MMx65MM           31         24879         3         CAPSCREW,20MMx65MM           32         06537029         4         U-NUT,3/8NC,3/4 TO CENTER <t< td=""><td>18</td><td>21732</td><td>1</td><td>CAPSCREW, 1/2 X 1-3/4 NC</td></t<>	18	21732	1	CAPSCREW, 1/2 X 1-3/4 NC
21       22254       3       CAPSCREW,10MMX50MM(1.5 PITCH)         22       33534       3       CAPSCREW,10MMX20MM(1.5PITCH)         23       06700090       1       TANK,RES,JDE000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEXNUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF488       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000 <tr< td=""><td>19</td><td>22014</td><td>1</td><td>FLATWASHER,1/4</td></tr<>	19	22014	1	FLATWASHER,1/4
22       33534       3       CAPSCREW,10MMX20MM(1.5PITCH)         23       06700090       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       0630088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       U-NUT,3/8NC,3/4 TO CENTER         36 <td>20</td> <td>32519</td> <td></td> <td>NUT,WING,1/4-20 UNC</td>	20	32519		NUT,WING,1/4-20 UNC
23       0670090       1       TANK,RES,JD6000,ASSY         23A       06505044       1       FILTER ASSY,IN TANK CPLT,SAE 10 MP         23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER	21	22254		CAPSCREW,10MMX50MM(1.5 PITCH)
23A       06505044       1       FILTER ASSY, IN TANK CPLT, SAE 10 MP         23B       21627       4       NYLOCK NUT, 3/8, NC         23C       21725       2       HEX NUT, 1/2, NC         23D       22018       2       FLATWASHER, 1/2, WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT, TANK         25       06410352       1       CHANNEL, MNT, TANK, TIE-BOLT         26       06380014       2       TIE BOLT, SIDE TANK, HYDRO         27       6T0649       1       FILTER AUGE         28       TF4888       1       STREET ELBOW, 1/8 X 90         29       06505077       1       CAP, BREATHER, O-RING         30       06400419       1       SPACER, 1/2", MNFRM, TL80A         31       24879       3       CAPSCREW, 20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM, BOX, BATT, T5000         34       06411112       1       TOP, BOX, BATT, T5000         35       06537029       4       U-NUT, 3/8NC, 3/4 TO CENTER         36       35176       2       U-NUT, 1/4, 3/4 TO CENTER	22	33534	3	CAPSCREW,10MMX20MM(1.5PITCH)
23B       21627       4       NYLOCK NUT,3/8,NC         23C       21725       2       HEX NUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8 NC,3/4 TO CENTER         36       35176       2       U-NUT,3/8 N,C         38       21627       4       NYLOCK NUT,3/8", NC         39       2163	23	06700090	1	TANK,RES,JD6000,ASSY
23C       21725       2       HEX NUT,1/2,NC         23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39	23A	06505044	1	FILTER ASSY, IN TANK CPLT, SAE 10 MP
23D       22018       2       FLATWASHER,1/2,WIDE         23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         4	23B	21627		NYLOCK NUT,3/8,NC
23E       06505067       1       SIGHT GUAGE         24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC <td>23C</td> <td>21725</td> <td></td> <td>HEX NUT,1/2,NC</td>	23C	21725		HEX NUT,1/2,NC
24       06300088       1       MNT,TANK         25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC	23D	22018	2	FLATWASHER,1/2,WIDE
25       06410352       1       CHANNEL,MNT,TANK,TIE-BOLT         26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC	23E	06505067	1	SIGHT GUAGE
26       06380014       2       TIE BOLT,SIDE TANK,HYDRO         27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC	24	06300088	1	
27       6T0649       1       FILTER GAUGE         28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC	25	06410352		
28       TF4888       1       STREET ELBOW,1/8 X 90         29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC		06380014	2	TIE BOLT,SIDE TANK,HYDRO
29       06505077       1       CAP,BREATHER,O-RING         30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC	27	6T0649	1	
30       06400419       1       SPACER,1/2", MNFRM,TL80A         31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC		TF4888	1	
31       24879       3       CAPSCREW,20MMx65MM         32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC				
32       06533005       4       FLATWASHER         33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW, 1/4" X 3/4" NC				
33       06370155       1       BOTTOM,BOX,BATT,T5000         34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW,1/4" X 3/4" NC			3	
34       06411112       1       TOP,BOX,BATT,T5000         35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW,1/4" X 3/4" NC				
35       06537029       4       U-NUT,3/8NC,3/4 TO CENTER         36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW,1/4" X 3/4" NC				
36       35176       2       U-NUT,1/4,3/4 TO CENTER         37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW,1/4" X 3/4" NC				
37       21630       6       CAPSCREW, 3/8 x 1,NC         38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW,1/4" X 3/4" NC				
38       21627       4       NYLOCK NUT,3/8",NC         39       21633       2       CAPSCREW, 3/8x1 3/4,NC,GR8         40       21529       2       CAPSCREW,1/4" X 3/4" NC				
39         21633         2         CAPSCREW, 3/8x1 3/4,NC,GR8           40         21529         2         CAPSCREW, 1/4" X 3/4" NC				
40 21529 2 CAPSCREW,1/4" X 3/4" NC				
I LOUA OF I SUUU PARTS SECTION 5-7	40			
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### **BUMPER TANK HYDRAULICS CNH T5000 or TL80-100A**



#### **BUMPER TANK HYDRAULICS CNH T5000 or TL80-100A**

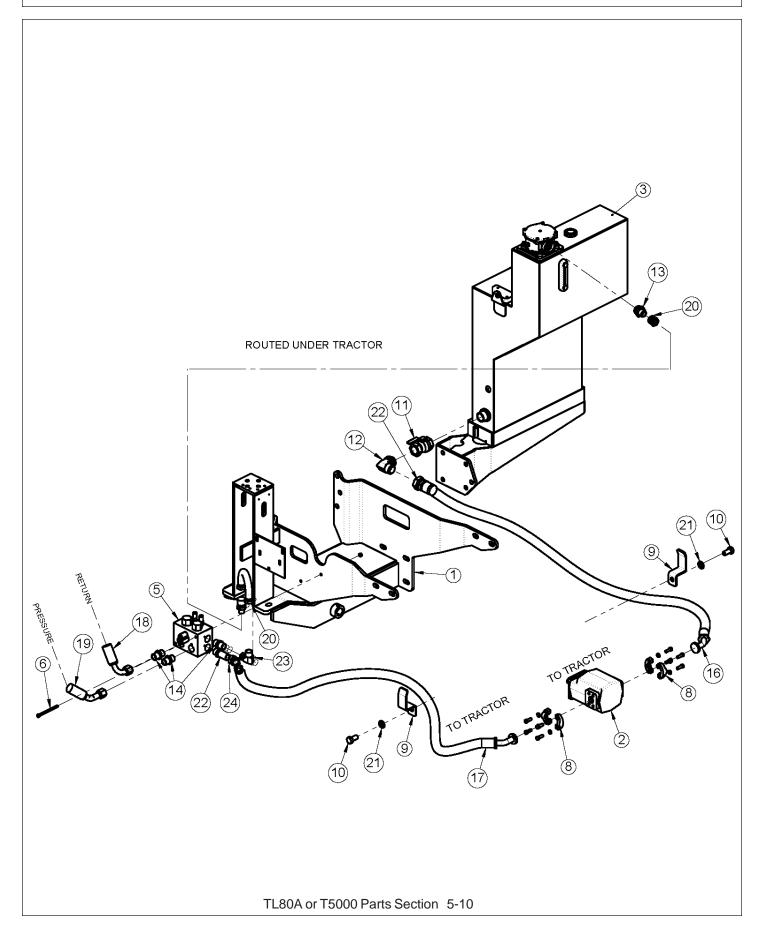
1         33695         1         TANK,RES,BUMPER,BLANK           2         35269         1         FILTER ASSY,IN-TANK,JIC,10MIC           3         21627         4         NYLOCK NUT,3/8 NC           4         06370036         1         PUMP MNT,TL80-90A           5         23152         1         PUMP,P350-1 3/4 GEAR           6         6T0375B         1         COUPLING,14 SPLINE,W/ZERK,4           7         34624         1         DRV SHF,PMP,29,TSA           02982761         1         BATTERY RELOCATION KIT           7         06420096         1         DRV SHFT,32.5,LH THRD,T5000           02986418         1         BATTERY RELOCATION KIT           7         06420029         1         ADAPTER,CRANKSHAFT,TL80A,W/GRO           9         06420029         1         ADAPTER,CRANKSHAFT,TL80A           10         6T3218         3         GROMMET,RUBBER           11         06420030         3         GROMMET,NEOPRENE,.75x1.25x.19           14         06420031         1         SPACER,CRANKSHAFT,TL80A           15         33534         3         CAPSCREW,10MMX20MM(1.5PITCH)           16         22254         3         CAPSCREW,10MMX50MM(1.5PITCH) <th>ITEM</th> <th>M PARTNO.</th> <th>QTY.</th> <th>DESCRIPTION</th> <th></th>	ITEM	M PARTNO.	QTY.	DESCRIPTION	
7       34624       1       DRV SHF,PMP,29,TSA         02982761       1       BATTERY RELOCATION KIT         7       06420096       1       DRV SHFT,32.5,LH THRD,T5000         7       06420096       1       BATTERY RELOCATION KIT         8       06770004       1       ADAPTER,CRANKSHAFT,TL80A,W/GRO         9       06420029       1       ADAPTER,CRANKSHAFT,TL80A,W/GRO         9       06420029       1       ADAPTER,CRANKSHAFT,TL80A,W/GRO         10       6T3218       3       GROMMET,RUBBER         11       06420030       3       GROMMET,10MMx.78         12       24937       3       FLATWASHER,7/16,SAE         13       06537004       3       WASHER,NEOPRENE,.75x1.25x.19         14       06420031       1       SPACER,CRANKSHAFT,TL80A         15       33534       3       CAPSCREW,10MMX20MM(1.5PITCH)         16       22254       3       CAPSCREW,10MMX50MM(1.5 PITCH)         17       TF4852       2       KIT,FLANGE,#32         19       34389       1       ELBOW,1 1/2ORBX32FLG90         20       34309       1       BALL VALVE,1 1/2 FOR         21       06503054       1       ELBOW,1 1/2	2 3 4 5	35269 21627 06370036 23152	1 4 1 1 1	FILTER ASSY,IN-TANK,JIC,10MIC NYLOCK NUT,3/8 NC PUMP MNT,TL80-90A PUMP,P350-1 3/4 GEAR COUPLING,14 SPLINE,W/ZERK,4	
02986418         1         BATTERY RELOCATION KIT           8         06770004         1         ADAPTER, CRANKSHAFT, TL80A, W/GRO           9         06420029         1         ADAPTER, CRANKSHAFT, TL80A, W/GRO           10         6T3218         3         GROMMET, RUBBER           11         06420030         3         GROMMET, TUBBER           12         24937         3         FLATWASHER, 7/16, SAE           13         06537004         3         WASHER, NEOPRENE, .75x1.25x.19           14         06420031         1         SPACER, CRANKSHAFT, TL80A           15         33534         3         CAPSCREW, 10MMX20MM(1.5PITCH)           16         22254         3         CAPSCREW, 10MMX50MM(1.5 PITCH)           17         TF4852         2         KIT, FLANGE, #20           18         TF4431         1         KIT, FLANGE, #32           19         34389         1         ELBOW, 1 1/2 ORBX32FLG90           20         34309         1         BALL VALVE, 1 1/2 FOR           21         06503054         1         ELBOW, 1 1/2 ORB x 1 1/4 MJ           22         34064         1         ADAPTER, 1 1/4MOR X 1MJ           23         06510083         1	7		1 1	DRV SHF,PMP,29,TSA	
9       06420029       1       ADAPTER,CRANKSHAFT,TL80A         10       6T3218       3       GROMMET,RUBBER         11       06420030       3       GROMMET,10MMx.78         12       24937       3       FLATWASHER,7/16,SAE         13       06537004       3       WASHER,NEOPRENE,.75x1.25x.19         14       06420031       1       SPACER,CRANKSHAFT,TL80A         15       33534       3       CAPSCREW,10MMX20MM(1.5PITCH)         16       22254       3       CAPSCREW,10MMX50MM(1.5PITCH)         17       TF4852       2       KIT,FLANGE,#20         18       TF4431       1       KIT,FLANGE,#32         19       34389       1       ELBOW,1 1/2ORBX32FLG90         20       34309       1       BALL VALVE,1 1/2 FOR         21       06503054       1       ELBOW,1 1/2 ORB x 1 1/4 MJ         22       34064       1       ADAPTER,1 1/4MOR X 1MJ         23       06510083       1       VALVE,BRAKE,SOL,3000PSI,METRI	7		1		
25065002141HOSE,1 1/4x29(1 1/4FJXx20FLG90)26065002321HOSE,1x63(1FJXx20FLG45)27065002331HOSE,1x83(1FJXx1FJX45)28323821BRACKET,HOSE29342291SPACER30248791CAPSCREW,20MMX65MM(2.5 PITCH)31065002251HOSE,1x74(1FJX90x1FJX)32065002261HOSE,1x70(1FJX90x1FJX)33328691ADAPTER,10RBx1MJ,LONG34247242SWIVEL,1MJ X 1FJX 45	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	06420029 6T3218 06420030 24937 06537004 06420031 33534 22254 TF4852 TF4431 34389 34309 06503054 34064 06510083 33555 06500214 06500232 06500233 32382 34229 24879 06500225 06500226 32869	1 3 3 3 1 3 2 1 1 3 2 1 1 1 1 1 1 1 1 1	ADAPTER,CRANKSHAFT,TL80A GROMMET,RUBBER GROMMET,10MMx.78 FLATWASHER,7/16,SAE WASHER,NEOPRENE,.75x1.25x.19 SPACER,CRANKSHAFT,TL80A CAPSCREW,10MMX20MM(1.5PITCH) CAPSCREW,10MMX50MM(1.5PITCH) KIT,FLANGE,#20 KIT,FLANGE,#20 KIT,FLANGE,#32 ELBOW,1 1/2ORBX32FLG90 BALL VALVE,1 1/2 FOR ELBOW,1 1/2 ORB x 1 1/4 MJ ADAPTER,1 1/4MOR X 1MJ VALVE,BRAKE,SOL,3000PSI,METRI ADAPTER,1 1/4MOR X 1MJ VALVE,BRAKE,SOL,3000PSI,METRI ADAPTER 1" MORB X 1" MJIC HOSE,1 1/4x29(1 1/4FJXx20FLG90) HOSE,1x63(1FJXx20FLG45) HOSE,1x83(1FJXx1FJX45) BRACKET,HOSE SPACER CAPSCREW,20MMX65MM(2.5 PITCH) HOSE,1x74(1FJX90x1FJX) HOSE,1x70(1FJX90x1FJX) ADAPTER,10RBx1MJ,LONG	

#### NOTE:

1. Loop the hose from the pump to the brake valve and the hose from the brake valve to the tank THROUGH THE HOSE BRACKET.

2. Band hoses together with zip ties wherever loose. Where hoses may contact the frame or other edges, wrap with split hose and secure with hose clamps or zip ties.

### UPRIGHT TANK HYDRAULICS CNH T5000 or TL80-100A



#### UPRIGHT TANK HYDRAULICS CNH T5000 or TL80-100A

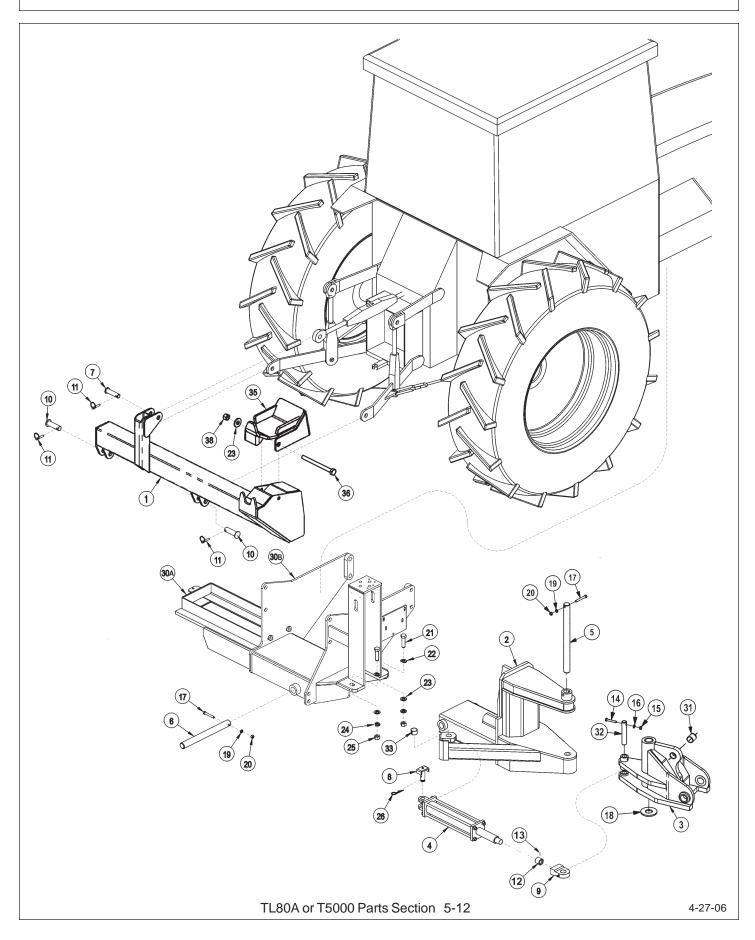
ITEM	PARTNO.	QTY.	DESCRIPTION
1	06300025	1	MNFRM,TL80-90A,ALL
2	23152	1	PUMP,P350-1 3/4 GEAR
3	06700090	1	TANK,RES,JD6000,ASSY
TL80A			, -,,
4	06300080	1	MNT,TANK
T5000			
4	06300088	1	MNT,TANK
5	06510083	1	VALVE,BRAKE,SOL,3000PSI
6	21644	1	CAPSCREW,3/8" X 5" NC
7	21627	3	NYLOCK NUT,3/8",NC
8	TF4852	2	KIT, FLANGE, #20
9	32382	2	BRACKET,HOSE
10	24860	3	CAPSCREW,20mmx40mm(2.5P)10.9
11	34309	1	BALL VALVE, 1-1/2 FOR
12	34655	1	ELBOW, 1-1/2ORBx1-1/2MJ
13	34064	1	ADAPTER,1 1/4MOR X 1MJ
14	33555	3	ADAPTER,1MORB x 1MJIC
15	06506012	1	PRFRMD,BRKVLV,4x1FJXx1FJX(180)
16	065003204	1	HOSE
17	34258	1	HOSE
18	06500233	1	HOSE
19	34082	1	HOSE
20	06500387	1	HOSE
21	33880	2	CAPSCREW,3/4
22	32869	1	ADAPTER
23	34117	1	ELBOW
24	24724	1	ELBOW,45°

#### NOTE:

1. Loop the hose from the pump to the brake valve and the hose from the brake valve to the tank THROUGH THE HOSE BRACKET.

2. Band hoses together with zip ties wherever loose. Where hoses may contact the frame or other edges, wrap with split hose and secure with hose clamps or zip ties.

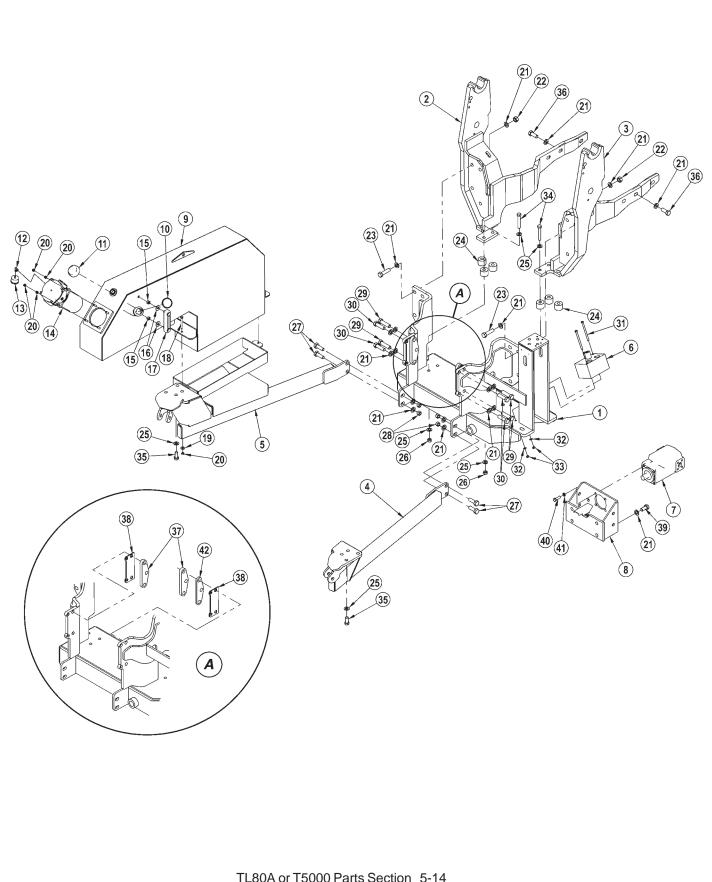
### CHEETAH BOOM / BOOM REST - CNH T5000 or TL80-100A



#### CHEETAH BOOM / BOOM REST - CNH T5000 or TL80-100A

ITEM	PARTNO.	QTY.	DESCRIPTION
1	06310023	1	BOOMREST,STD,3PNT
2	06310030	1	MNT BRKT,BOOM,GREASELESS,CHET
3	06700056	1	SWIVEL,ASSY,GREASELESS,CHET
4	34275	1	CYL,2 1/2X11 1/2,2500 PSI
5	06420013	1	PIN,1.5x18.88,W/.47 HOLE,NIT
6	6T3001	1	PIN,INNR DRFT BM 1-1/2X15-3/4
7	TB1036	1	PIN,SEC BOOM SWIV 1X4-11/16
8	TB1031	1	PIN, PVT ASSY 1 X 4 LOCKINGHEAD
9	TB3033	1	CLEVIS,W/SPHERICAL BEARING
10	TF1120	2	PIN,(CAPPED),1-1/8 X 3-7/8
11	TF1143	3	PIN,LYNCH 7/16 X 2
12	06420114	1	SPACER
13	6T2272	1	SETSCREW
14	21635	1	CAPSCREW,3/8 X 2-1/4 NC
15	21627	1	NYLOCK NUT,3/8 NC
17	21688	2	CAPSCREW,7/16 X 3-1/4 NC
18	06520049	1	BEARING,WASHER,SWING
20	21677	3	NYLOCK NUT,7/16 NC
21	21835	2	CAPSCREW,3/4 X 2-3/4 NC
22	6T2607	2	FLATWASHER,3/4,CUT
23	22021	3	FLATWASHER,3/4
24	21993	2	LOCKWASHER,3/4,GR 8
25	21825	2	HEX NUT,3/4 NC
26	6T3004	1	R-CLIP(HAIRPIN COTTER,3/16)
30A	*	REF	REFER TO MAIN FRAME PARTS
30B	*	REF	REFER TO MAIN FRAME PARTS
31	06499004	1	BEARING,.1.5x1.25x1,COMP
32	33464	1	PIN,1.00 x 5.63, W/HOLE
33	TB3010	1	BUSHING,1
35	06310027	1	BOOMREST,CHET,3PNT
36	21846	1	CAPSCREW,3/4 X 9 NC
38	21827	1	NYLOCK NUT,3/4 NC

### TRCTOR MOUNT MAIN FRAME CNH T5000 or TL90A, LOADER

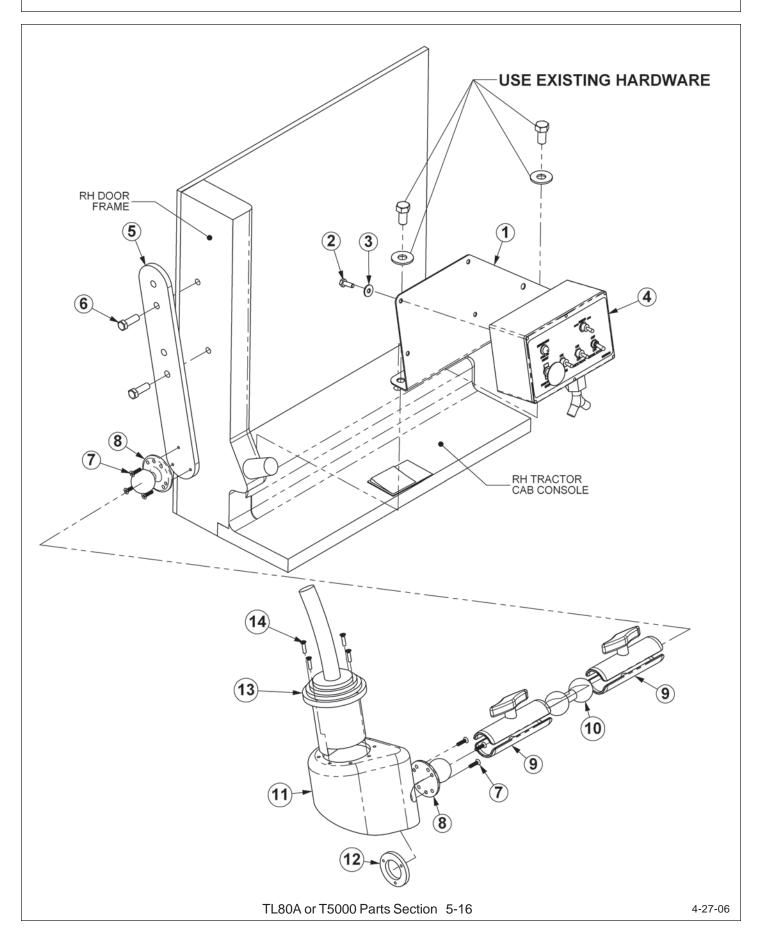


TL80A or T5000 Parts Section 5-14

## TRCTOR MOUNT MAIN FRAME CNH T5000 or TL90A, LOADER

ITEM	PART NO.	QTY.	DESCRIPTION	
1	06300062	1	MNFRM,TL90A,LDR	
2	10386925	1	LOADER MNT,LH,CNH	
3	10386926	1	LOADER MNT,RH,CNH	
4	06300039	1	AXL BRC,RH,TL80A	
5	06300071	1	AXLE BRC, ASSY	
6	06510083	1	VALVE, BRAKE, SOL, 3000PSI METRI	
7	23152	1	PUMP,P350-1 3/4 GEAR	
8	06370036	1	PUMP MNT,TL80-90A	
	06700091	*	TANK,RES,ASSY,WHEEL WELL	
9	06380015	1	TANK,RES,WHEEL WELL	
10	06505127	1	#20 SAE PLUG	
11	06505077	1	CAP, PRESSURE, 3.0PSI	
12	TF4888	1	STREET ELBOW,1/8	
13	6T0649	1	FILTER GAUGE	
14	06505044	1	FILTER ASSY, IN-TANK CPLT, SAE10, MP	
15	21725	2	HEX NUT, 1/2 NC	
16	22018	2	FLATWASHER,1/2,WIDE	
17	06505067	1	SIGHT GAGE	
18	21639	2	CAPSCREW,3/8 X 3-1/4 NC	
19	22016	2	FLATWASHER,3/8	
20	21627	6	NYLOCK NUT,3/8,NC	
21	33880	38	FLATWASHER,3/4,GR 8,SAE	
22	31722	8	HEX NUT,20MM(2.5PITCH)CLASS 8	
23	32285	8	CAPSCREW,20MM X 75MM(2.5 PITCH)	
24	06430069	6	SPCR,LDR,MNT	
25	33764	20	FLATWASHER,5/8,GR 8,SAE	
26	32838	6	HEX NUT,5/8-11UNC,GR8	
27	21833	4	CAPSCREW, 3/4 X 2 1/4,NC	
28	21825	4	HEX NUT,3/4,NC	
29	28399	4	CAPSCREW,20MM X 80MM(2.5 PITCH)	
30	25341	4	CAPSCREW,20MM X 70MM(2.5 PITCH)	
31	21644	2	CAPSCREW, 3/8 X 5 NC	
32	21988	2	LOCKWASHER,3/8	
33	21625	2	HEX NUT,3/8,NC	
34	27933	6	CAPSCREW, 5/8X 4,NC GR8	
35	06530509	8	CAPSCREW, 18MM X 40MM	
36	31731	6	CAPSCREW,20MM X 50MM(2.5 PITCH)	
37	06400342	2	SPACER,3/4,MNFRM,TL80A	
38	06400662	2	SPACER, LOADER MNT, 3/16	
39	24860	4	CAPSCREW,20MM X 50MM(2.5 PITCH)	
40	21732	4	CAPSCREW, 1/2 X 1 3/4,NC	
41	21990	4	LOCKWASHER, 1/2	
			SPACER, 1/2", MNFRM, TL80A	

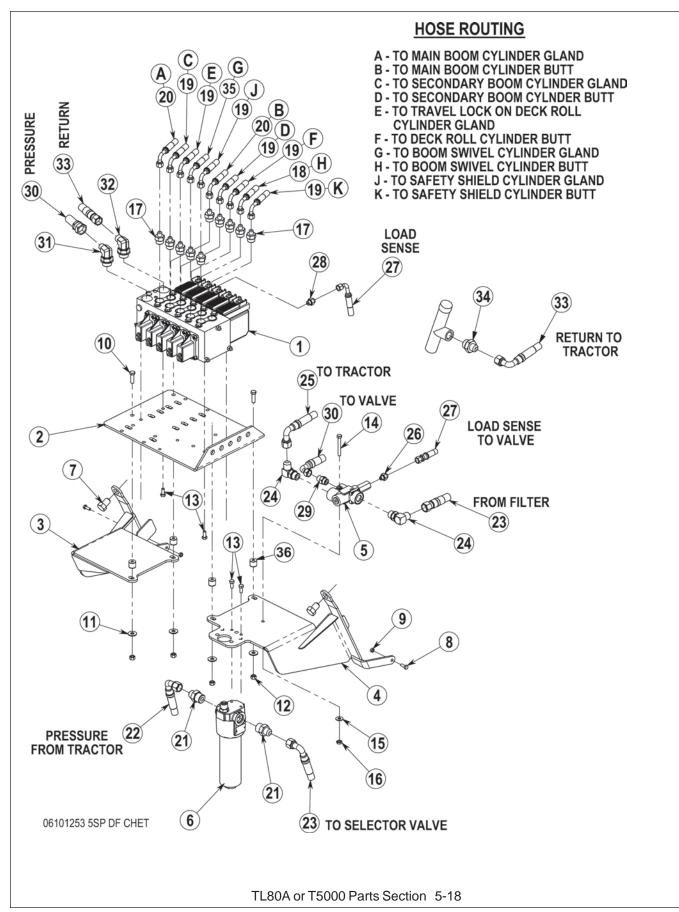
#### SWITCH BOX AND JOYSTICK - CNH T5000



#### SWITCH BOX AND JOYSTICK - CNH T5000

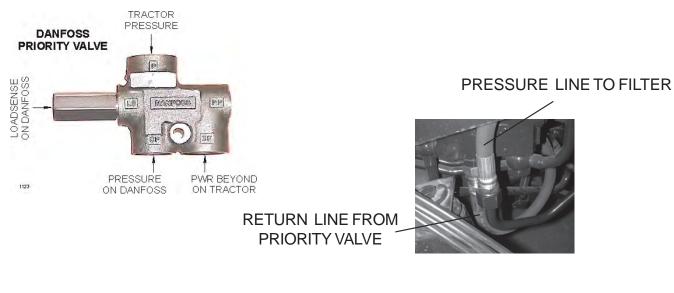
ITEM	PARTNO.	QTY.	DESCRIPTION
1	06340022	1	SWITCHBOX MNT, DF, TL80A
2	21529	1	CAPSCREW,1/4" X 3/4" NC
3	22014	1	FLATWASHER,1/4"
4	06510196	1	SWITCHBOX,DF,BOOM,PVEA
5	06340031	1	JYSTK MNT, JD5101E
6	23113	2	CAPSCREW,10MMX60MM(2.0 PITCH)
7	24889	6	SCREW, MACHINE, 10-24X3/4, FLATHD
8	06520019	2	MOUNT,RAM,BALL,1 1/2",202
9	06520020	2	MOUNT,RAM,ARM,1.50x4.63,201
10	06520290	1	MOUNT,RAM,BALL,DBL,1 1/2
11	06770022	1	CAN,JYSTK,TRUCKAT,4WD
12	06400882	1	RING,BOLT,MNT,JYSTK
13	33691	1	JOYSTICK, DANFOSS
14	32829	4	SCREW,MACHINE,10-32X3/4,FLATHD

#### LIFT VALVE - 5 SPOOL DAN FOSS - CNH T5000 or TL80-100A



#### LIFT VALVE - 5 SPOOL DAN FOSS - CNH T5000 or TL80-100A

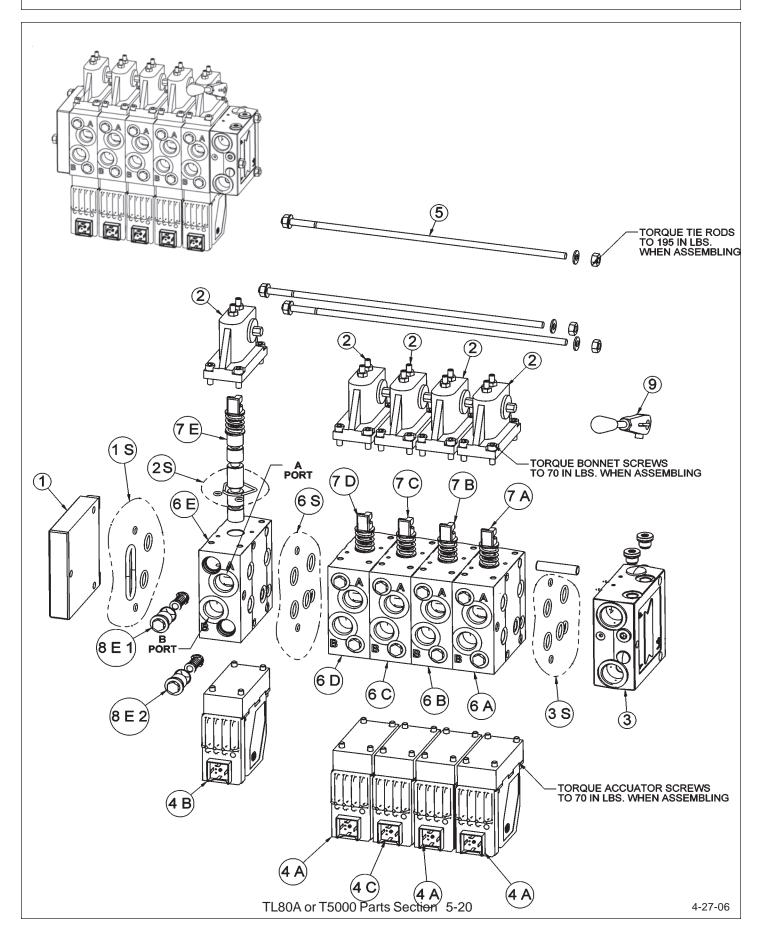
ITEM	PARTNO.	QTY.	DESCRIPTION
1	06502095	1	VALVE,5SP,32PVG
2	34622	1	PLATE, VALVE, REAR MNT
3	06340020	1	VALVE MNT, LH, TL80-100A
4	06340021	1	VALVE MNT, RH, TL80-100A
5	06502102	1	VALVE, PRIORITY, DF OLS80, 10 BAR
6	06505029	1	FILTER,HP,3/4SAE,11MIC,VIS IND
7	06530510	2	CAPSCREW,18MMx25MM(1.5P)GR8.8
8	21529	2	CAPSCREW, 1/4 X 3/4 NC
9	21527	2	NYLOCK NUT, 1/4 NC
10	21631	4	CAPSCREW,3/8 X 1-1/4 NC
11	22016	4	FLATWASHER,3/8
12	21627	4	NYLOCK NUT,3/8 NC
13	21579	6	CAPSCREW,5/16 X 3/4 NC
14	21586	1	CAPSCREW,5/16 X 2-1/2 NC
15	22015	1	FLATWASHER,5/16
16	21577	1	NYLOCK NUT, 5/16 NC
17	32807	10	ADAPTER,5/8MORB X 3/8MJ
18	33600	1	HOSE,1/4X103(3/8FJX903/8FJX)
19	06500227	6	HOSE,1/4x180(5/16MJx3/8FJX90)
20	06500228	2	HOSE,1/4x204(3/8FJXx3/8FJX90)
21	06503056	2	ADAPTER,3/4ORBx 5/8MJ
22	06500229	1	HOSE,5/8x64(5/8FJX90x3/4MFS)
23	06500230	1	HOSE,5/8x20(5/8FJXx5/8FJX90)
24	06503033	2	ELBOW,5/80RBx5/8MJ
25	06500231	1	HOSE,5/8x61(5/8FJX90x3/4FFS)
26	06503057	1	ADAPTER,1/4ORBx3/8MJ
27	06500219	1	HOSE,1/4x26
28 29	33392	1 1	ADAPTER,5/16MORB X 3/8MJ
29 30	33528	1	ADAPTER,1/2MORBX1/2MJIC
30	33488 33294	1	HOSE,1/2X25(1/2FJX90X1/2FJX) ELBOW,3/4MOR X 1/2MJIC 90
32	33648	1	ELBOW,3/4MOR × 1/2MJC 90 ELBOW,3/4MORX5/8MJ 90
33	06500236	1	
33 34	06500236	1	HOSE,5/8x38(5/8FJXx5/8FJX90) ADAPTER,3/4BSPPx5/8MJ
34 35	06503059	1	HOSE,#4x112(6FJXx6FJX90)
36	27082B	4	SPACER
50	210020	7	OFACEN



TL80A or T5000 Parts Section 5-19

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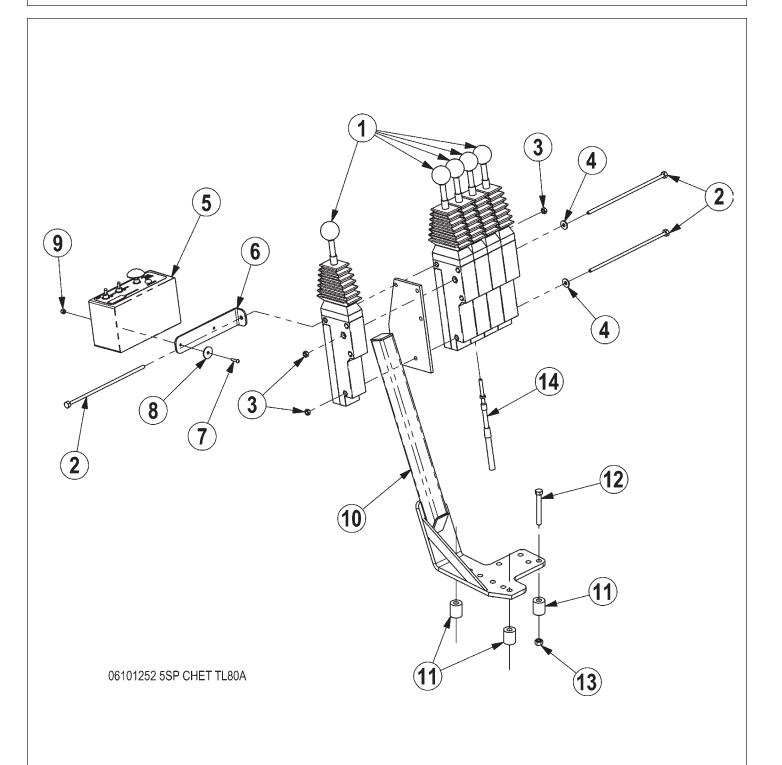
#### DAN FOSS VALVE BREAKDOWN



#### DAN FOSS VALVE BREAKDOWN

ITEM	PARTNO. QTY.	DESCRIPTION
	06502095	VLV,5SP,32PVG
1	06502074 1	
1S	06505013 1 *	END PLATE SEAL KIT
2	5	BONNET DONNET SEAL KIT
2S	06505042 1	BONNET SEAL KIT MAIN BOOM BONNET
2A 2B	33459 1 42197 1	
2B 2B	42197 1 42197 1	SECONDARY BOOM BONNET DECK ROLL BONNET
2B 2B	42197 1	BOOM SWIVEL BONNET
2B 2B	42197 1	DECK SHIELD BONNET
3	34308 1	INLET SECTION
35	06505013 1	INLET SECTION SEAL KIT
4	* 5	ELECTRONIC ACCUATOR
4 4S	34030 1	ELECTRONIC ACCUATOR SEAL KIT
43 4A	06502101 1	MAIN BOOM ELECTRONIC ACCUATOR
4A 4A	06502101 1	SECONDARY BOOM ELECTRONIC ACCUATOR
4A 4A	06502101 1	DECK ROLL ELECTRONIC ACCUATOR
4A 4A	06502101 1	BOOM SWIVEL ELECTRONIC ACCUATOR
4B	06502100 1	DECK SHIELD ELECTRONIC ACCUATOR
4D 5	06502099 1	TIE-BOLT KIT
6	* 5	SECTION
6S	06505013 1	SECTION SEAL KIT
6A	42698 1	MAIN BOOM SECTION
6B	42698 1	SEC BOOM SECTION
6C	06502076 1	DECK ROLL SECTION
6D	42698 1	BOOM SWIVEL SECTION
6E	06502077 1	SHIELD SECTION
7	* 5	SPOOL
7A	4229806 1	MAIN BOOM SPOOL
7B	4229806 1	SEC BOOM SPOOL
7C	42297 1	DECK ROLL BOOM SPOOL
7D	06502073 1	BOOM SWIVEL SPOOL
7E	42201 1	DECK SHIELD SPOOL
8	* 10	
8A1	42296 1	MAIN BOOM A PORT RELIEF
8A2	06502069 1	MAIN BOOM B PORT RELIEF
8B1	42295 1	SEC BOOM A PORT RELIEF
8B2	42295 1	SEC BOOM B PORT RELIEF
8C1	42295 1	DECK ROLL A PORT RELIEF
8C2	42295 1	DECK ROLL B PORT RELIEF
8D1	42295 1	BOOM SWIVEL A PORT RELIEF
8D2	42295 1	BOOM SWIVEL B PORT RELIEF
8E1	06502069 1	DECK SHIELD A PORT RELIEF
8E2	06502069 1	DECK SHIELD B PORT RELIEF
9	33459 1	HANDLE

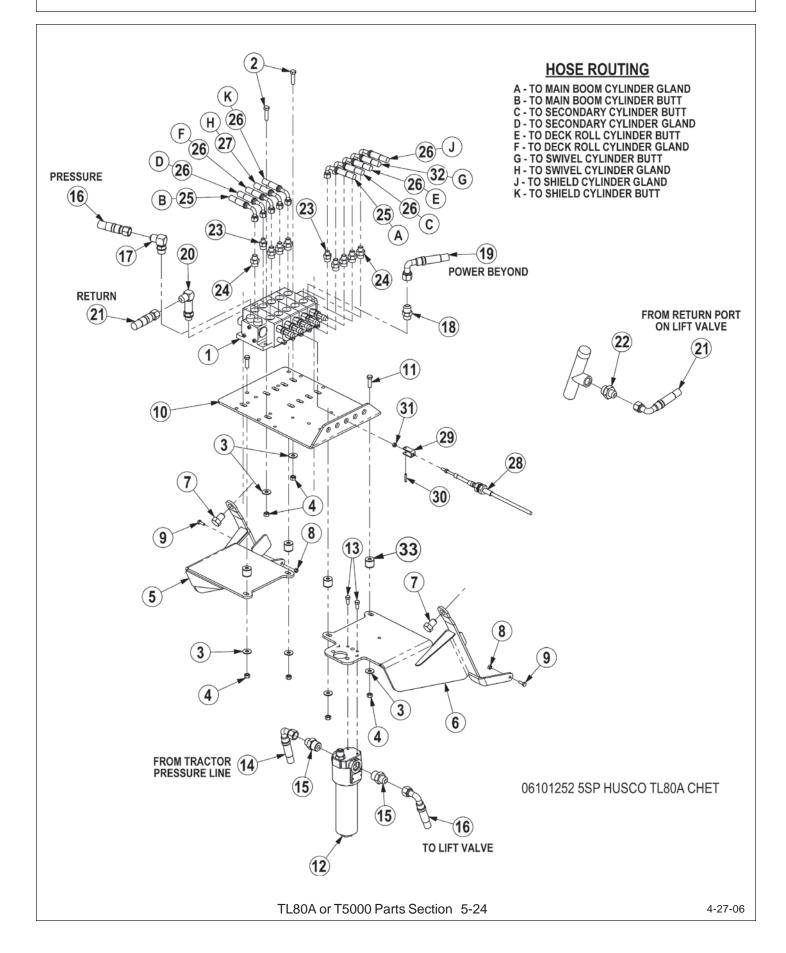
#### 5 SPOOL CBL CNTRLS - CHEETAH CNH T5000 or TL80-100A



#### 5 SPOOL CBL CNTRLS - CHEETAH CNH T5000 or TL80-100A

ITEM	PARTNO.	QTY.	DESCRIPTION
1	6T1251	5	CBL CTRL BOX,180 DEG
2	21548	3	CAPSCREW, 1/4 X 9 NC
3	21525	3	HEX NUT, 1/4 NC
4	22014	2	FLATWASHER,1/4
5	06510100	1	SWITCHBOX,BOOM,GND
6	34496	1	BRKT,SWITCHBOX,UNI
7	32359	2	SCREW, MACHINE, 8-32X3/4
8	34508	2	WASHER, FENDER, #10
9	6T3952	2	HEX NUT, 8/32 NYLOCK
10	23865B	1	CBL CTRL MT BRK,9030-FD40-JD60
11	27082B	3	SPACER
12	21637	3	CAPSCREW, 3/8 X 2-3/4 NC
13	21627	3	NYLOCK NUT, 3/8 NC
14	34623	5	CBL,CNTRL,122

#### 5 SPOOL HUSCO VALVE - CHEETAH CNH T5000 or TL80-100A



#### 5 SPOOL HUSCO VALVE - CHEETAH CNH T5000 or TL80-100A

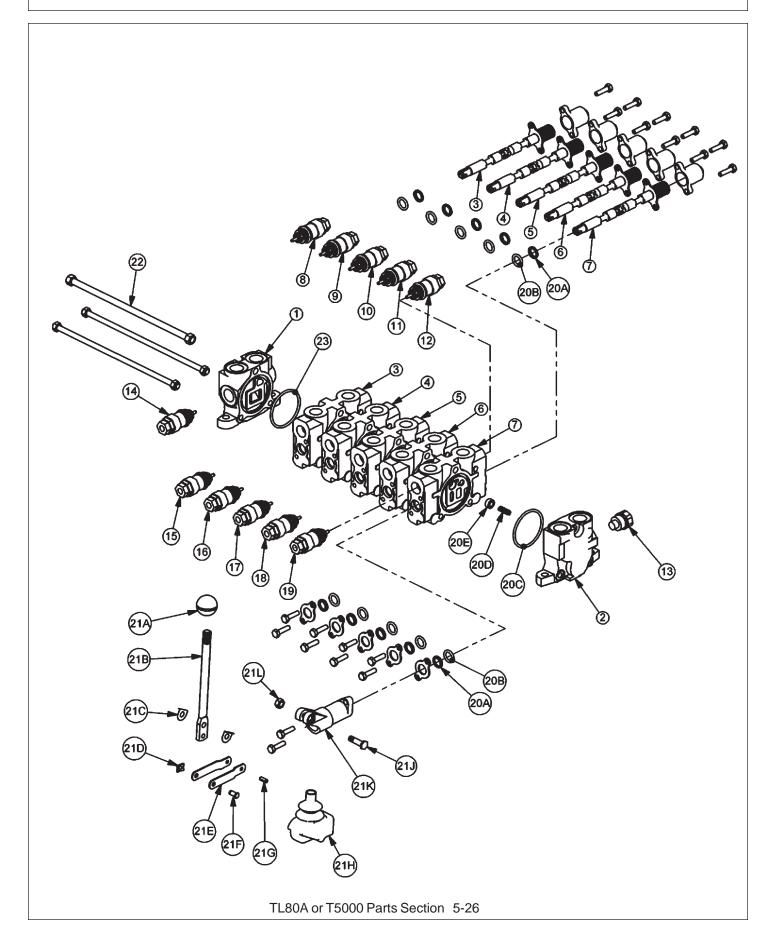
ITEM	PARTNO.	QTY.	DESCRIPTION
1	33500	1	VALVE,5SP,HSC,TRB,PB
2	21632	4	CAPSCREW, 3/8 X 1-1/2 NC
3	22016	8	FLATWASHER,3/8
4	21627	8	NYLOCK NUT, 3/8 NC
5	06340020	1	VALVE MNT,LH,TL80-100A
6	06340021	1	VALVE MNT, RH, TL80-100A
7	06530510	2	CAPSCREW,18MMx25MM(1.5P)GR8.8
8	21527	2	NYLOCK NUT, 1/4 NC
9	21529	2	CAPSCREW, 1/4 X 3/4 NC
10	34622	1	PLATE, VALVE, REAR MNT
11	21631	4	CAPSCREW,3/8 X 1-1/4 NC
12	06505029	1	FILTER,HP,3/4SAE,11MIC,VIS IND
13	21579	2	CAPSCREW,5/16 X 3/4 NC
14	06500229	1	HOSE,5/8x64(5/8FJX90x3/4MFS)
15	06503056	2	ADAPTER,3/4ORBx 5/8MJ
16	06500235	1	HOSE,5/8x49(5/8FJXx5/8FJX90)
17	06503033	1	ELBOW,5/8ORBx5/8MJ
18	06503036	1	ADAPTER,5/8ORBx5/8MJ
19	06500234	1	HOSE,5/8x65(5/8FJX90x3/4FFS)
20	33748	1	ELBOW,5/8 MORB LL x 5/8 MJ
21	06500236	1	HOSE,5/8x38(5/8FJXx5/8FJX90)
22	06503059	1	ADAPTER,3/4BSPPx5/8MJ
23	06502036	2	CHECK VALVE, W/.06 ORF, 1/2MORx3/8
24	33271	8	ADAPTER, 1/2 MOR X 3/8 MJ
25	06500228	2	HOSE,1/4x204(3/8FJXx3/8FJX90)
26	06500227	6	HOSE,1/4x180(5/16MJx3/8FJX90)
27	33600	1	HOSE,1/4X103(3/8FJX903/8FJX)
28	34623	5	CBL,CNTRL,122
29 20	6T4411	5 5	CLEVIS,CBL CTRL,3/16
30 31	6T3017 21500	5 5	ROLLPIN,3/16 X 1 HEX NUT,1/4 NF
31		э 1	
32 33	06500151 27082B	4	HOSE,#4x112(6FJXx6FJX90) SPACER
33	LIVOZD	4	JFAUER

PRESSURE LINE TO FILTER



#### POWER BEYOND FROM VALVE

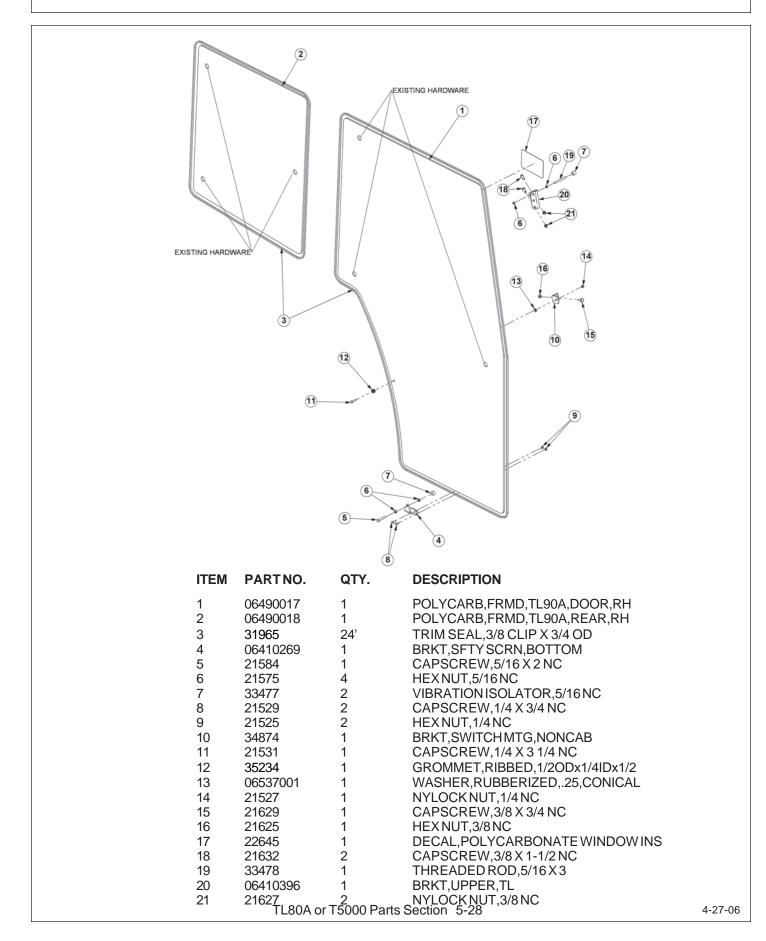
# 5SP HUSCO - POWER BEYOND (33500)



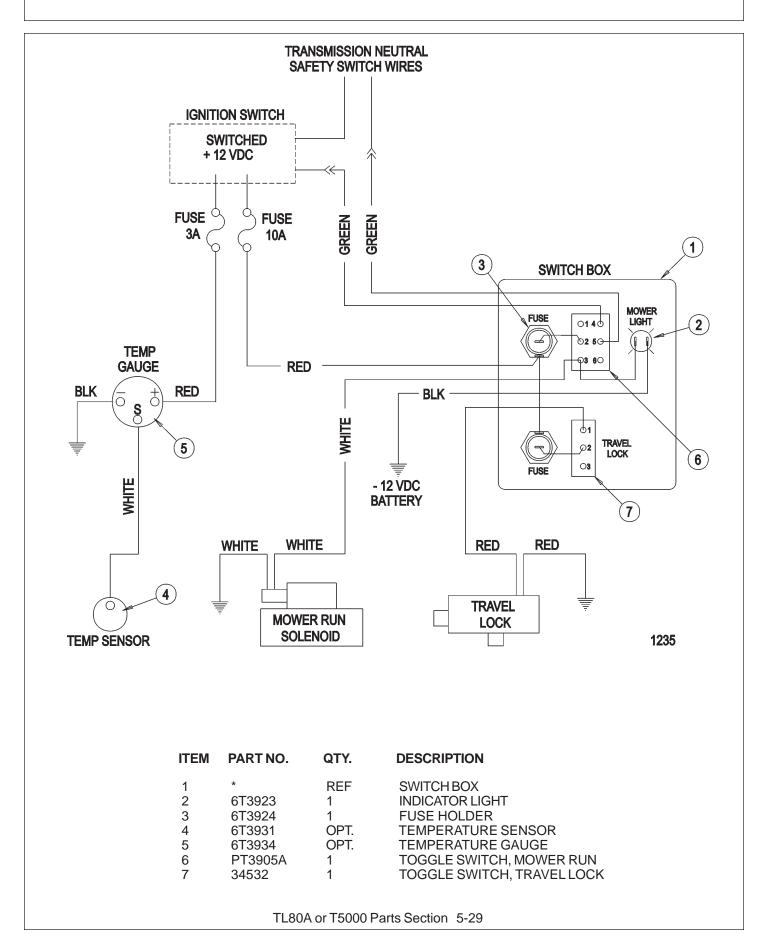
# 5SP HUSCO - POWER BEYOND (33500)

ITEM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20A	PART NO. TB1017S TB1702 TB1017P TB1017N TB1017N TB1017N TB1017N N/A TB1017K TB1017K TB1017H 22580 TB1017H 22580 TB1017F TB1017F TB1017F TB1017H 22580 TB1017A	QTY 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 5 2	DESCRIPTION INLET END COVER END COVER, POWER BEYOND VALVE SECTION (SINGLE ACTING, SPRING DETENT) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) N/A RELIEF VALVE, 2150 PSI RELIEF VALVE, 1500 PSI RELIEF VALVE, 500 PSI RELIEF VALVE, 2600 PSI RELIEF VALVE, 2500 PSI RELIEF VALVE, 1500 PSI RELIEF VALVE, 500 PSI VALVE SEAL KIT (FOR ONE SECTION) WIPER
20A		2	VIPER
20B		2	O-RING SMALL
20C		1	O-RING LARGE
20D		1	SPRING
20E		1	PUCKET
21 21A 21B 21C 21D 21E 21F 21G 21H 21J 21K 21L	TB1017L	5 1 2 1 2 1 1 1 1	LEVER KIT (FOR ONE SECTION) LEVER KNOB LEVER LEVER WASHER LEVER CLIP LINKAGE LEVER PIN ROLL PIN LEVER BOOT LEVER BOLT LEVER DUST COVER LEVER NUT
22	TB1017V	1	TIE ROD KIT
23	24214	1	O-RING, LARGE

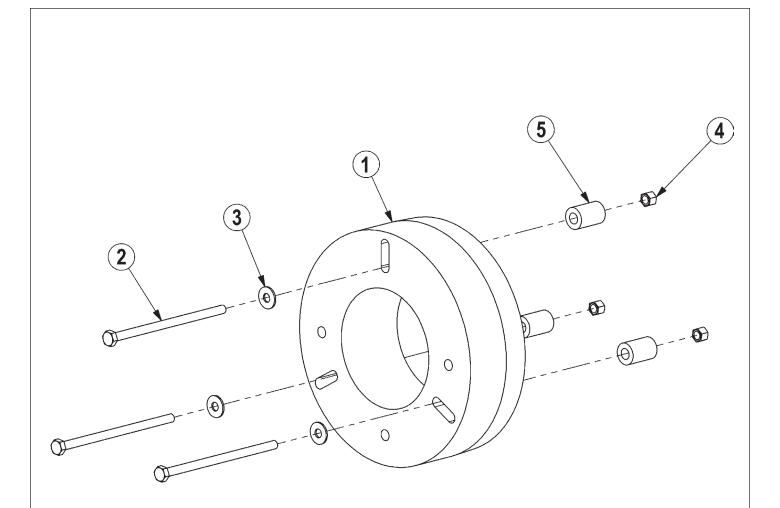
#### SAFETY WINDOW - CNH T5000 or TL80-100A, CAB



#### SOLENOID VALVE SWITCH AND WIRING



#### WHEEL WEIGHT ASSEMBLY - CNH T5000 or TL80-100A



ITEM	PARTNO.	QTY.	DESCRIPTION
1	30687	1	500# WHEEL WEIGHT
2	21956	3	CAPSCREW - 3/4 X 13
3	33626	3	FLATWASHER,3/4GR 8,USS
4	21825	3	HEX NUT,3/4 NC
5	TB3278	3	SPACER,WHL WHT,3 FORD

**CHEETAH BOOM MOWER** 

# COMMON PARTS SECTION

#### PARTS ORDERING GUIDE

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

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

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

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

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

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

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

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



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:

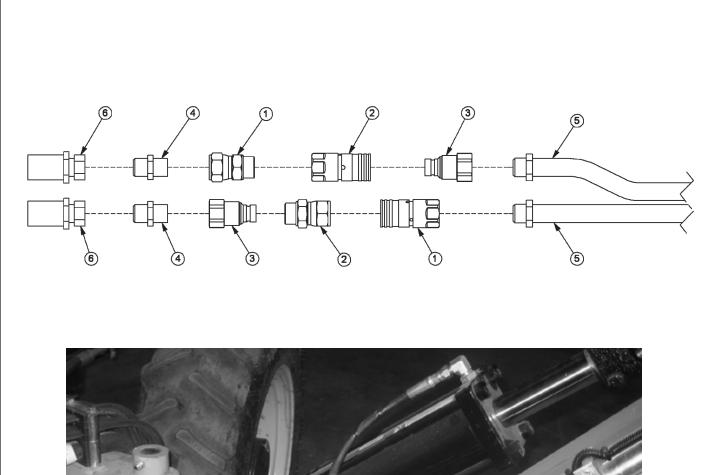
#### **Tiger Corporation**

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

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# **CHEETAH QUICK COUPLERS - MAIN BOOM**





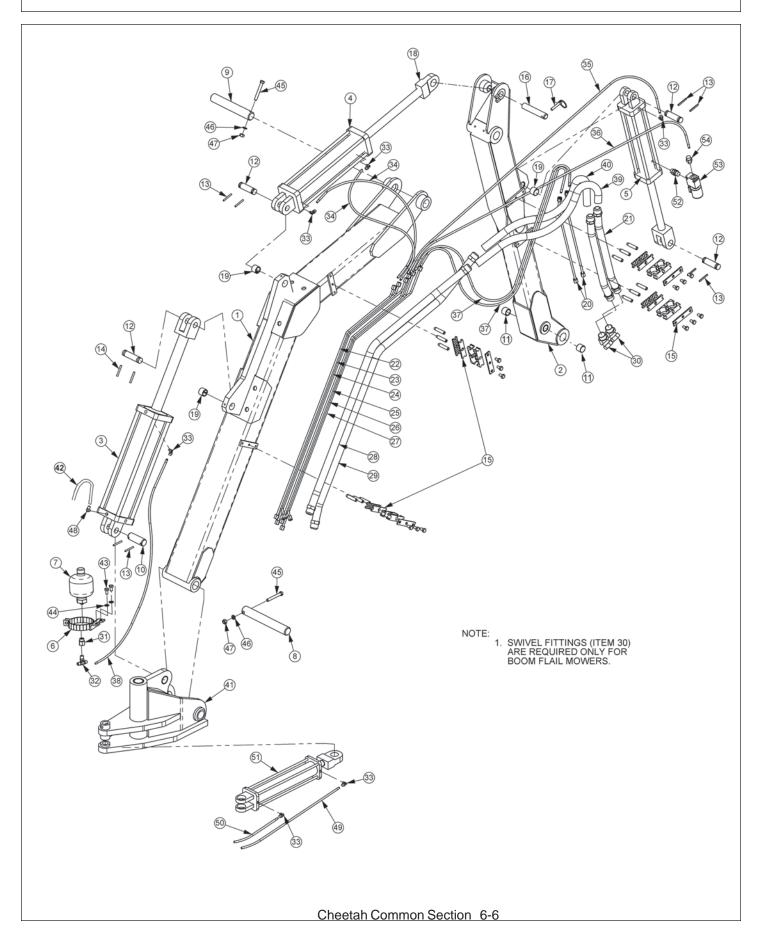
Cheetah Common Section 6-4

#### **CHEETAH QUICK COUPLERS - MAIN BOOM**

ITEM	PARTNO.	QTY.	DESCRIPTION
1	34392	2	ADAPTER,1ORBX1FJX
2	06503027	2	QUICK COUPLER, 1"SAE, FEMALE
3	06503028	2	QUCK COUPLER, 1"SAE, MALE
4	33555	2	ADAPTER,1MORBX1MJIC
5	*	REF.	PREFORMED TUBES - REFER TO BOOM ARM PARTS
6	*	REF.	#16 HOSE - REFER TO HYDRAULIC PARTS

Cheetah Common Section 6-5

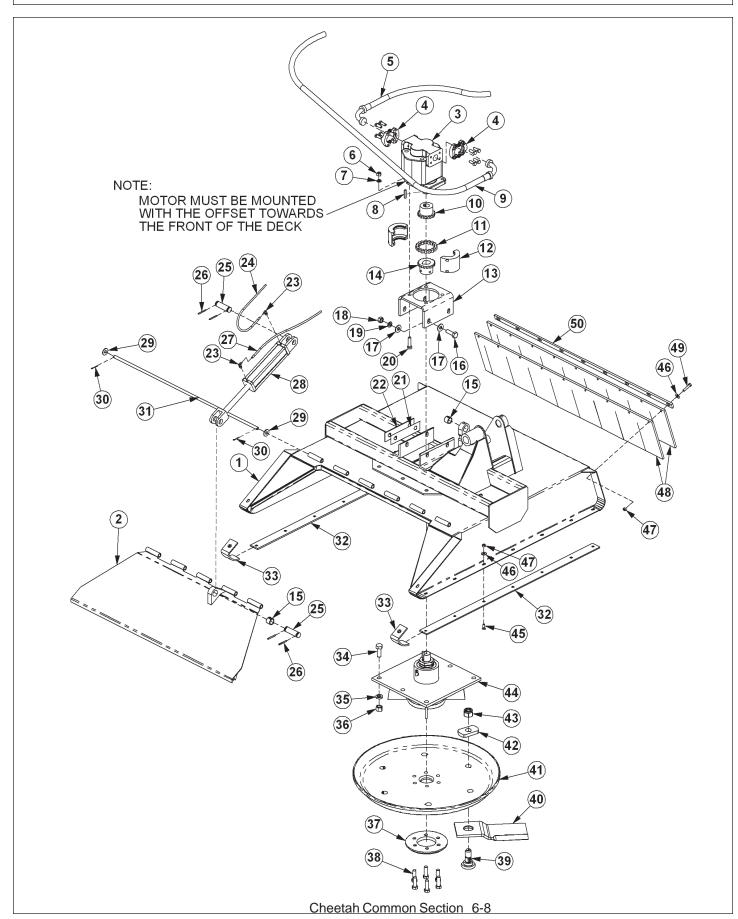
#### CHEETAH BOOM ARM ASSEMBLY



#### CHEETAH BOOM ARM ASSEMBLY

Cheetah Common Section 6-7

#### CHEETAH ROTARY MOWER DECK

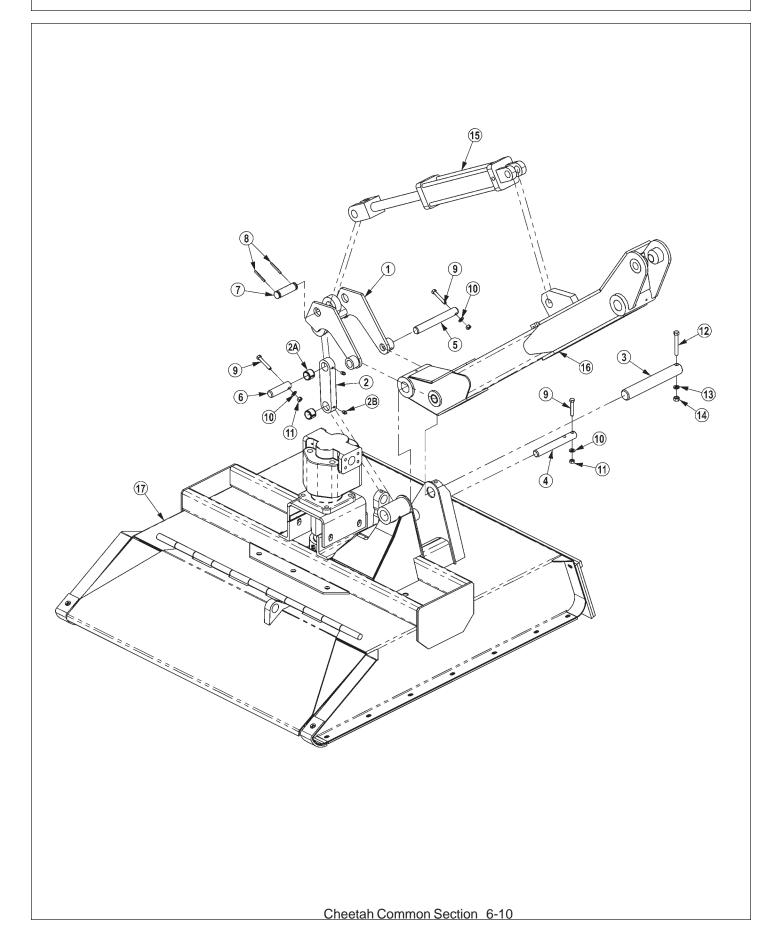


#### CHEETAH ROTARY MOWER DECK

ITEM	PARTNO.	QTY.	DESCRIPTION
	33425	AVAIL.	CHEETAH ROTARY HEAD, COMPLETE ASSY.
1	32974	1	CHEETAHROTARY DECK
2	32977	1	SHEILD
3	06504012	1	MOTOR
4	TF4852	2	FLANGE KIT
5	33433	1	HOSE 1" x 79"
6	21725	4	HEXNUT,1/2,NC
7	21990	4	LOCKWASHER,1/2
8	TF1124	4	KEY
9	24490	1	HOSE 1" x 57"
10	21223	1	SPROCKET
10	6T1029	1	CHAINCOUPLING
12	6T1033	1	COUPLING COVER
12	6T1001	1	MOTOR MOUNTING BRACKET
	*		
14		REF	REFER TO SPINDLE PARTS
15	34878	3	SPACER
16	21783	4	CAPSCREW,5/8X2,NC
17	25270	8	FLATWASHER,5/8,GR8
18	21775	4	HEXNUT,5/8,NC
19	21992	4	LOCKWASHER,5/8
20	21733	4	CAPSCREW,1/2X2,NC
21	6T0822A	2	SHIM
22	6T0822	3	SHIM
23	32810	2	ELBOW
24	33431	1	HOSE 1/4" x 72"
25	6T3003D	2	CLEVISPIN
26	TB1023	4	ROLLPIN
27	33430	1	HOSE 1/4" x 82"
28	6T7022	1	CYLINDER
29	22018	2	FLATWASHER,1/2,WIDE
30	22516	2	COTTER PIN
31	33417	1	HINGE PIN
32	32981	2	SKID SHOE
33	32982	2	SKID SHOE
34	6T2277	6	CAPSCREW,3/4X2,NF,GR8
35	21993	6	LOCKWASHER,3/4
36	6T2413	6	HEXNUT,3/4,NF,GR8
37	TB2029-5	1	BOLTPROTECTOR
38	6T2290	6	CAPSCREW,5/8X2,NF,GR8
39	34497	3	KNIFE MOUNTING BOLT
40	34686	3	KNIFE
41	06700001	1	KIT,TRB50 DISK,W/BOLT KIT
42	34878	3	SPACER
43	6T1023R	3	KNIFE MOUNTING NUT
44	*	REF	REFER TO SPINDLE PARTS
45	6T2270	20	PLOW BOLT, 3/8 X 1, NC
46	22016	29	FLATWASHER,3/8
47	21625	29	HEXNUT,3/8,NC
48	32975	2	DEFLECTOR FLAP
49	21633	9	CAPSCREW,3/8 X 1-3/4,NC
50	32988	ĩ	FLAP, RETAINING BAR
*	33890	AVAIL	KIT BLADE, BOLT, NUT (INCLUDES ITEMS 39,40 & 43)

Cheetah Common Section 6-9

## CHEETAH ROTARY PIVOT ASY.



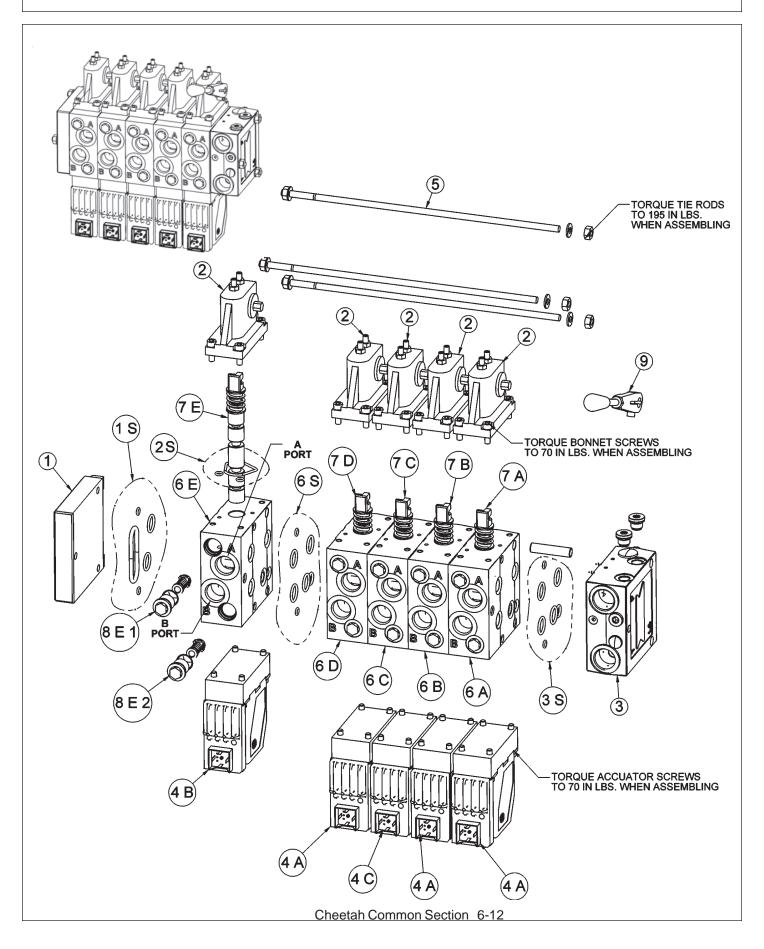
## CHEETAH ROTARY PIVOT ASY.

ITEM	PARTNO.	QTY.	DESCRIPTION
1	31267	1	PIVOTWELDMENT
2	33523	1	PIVOTLINK
2a	TB3010	2	BUSHINGS
2b	6T3207	2	GREASE ZERKS
*3	33426	1	PIN (ROTARY)
*3a	33867	1	PIN (FLAIL)
4	33427	1	PIN
5	33428	1	PIN
6	33429	1	PIN
7	6T3003D	1	CLEVISPIN
8	TB1023	2	ROLLPIN
9	21635	3	CAPSCREW - 3/8 X 2 1/4
10	21988	3	LOCKWASHER - 3/8
11	21625	3	HEX NUT - 3/8
12	21688	1	CAPSCREW - 7/16 X 3 1/4
13	21989	1	LOCKWASHER - 7/16
14	21675	1	HEX NUT - 7/16
15	*	REF	REFER TO BOOM ARM PARTS
16	*	REF	REFER TO BOOM ARM PARTS
17	*	REF	REFER TO ROTARY HEAD PARTS

NOTE: ITEM \*3 IS USED ON THE ROTARY HEAD ONLY, ITEM \*3A IS USED ON THE FLAIL HEAD ONLY.

Cheetah Common Section 6-11

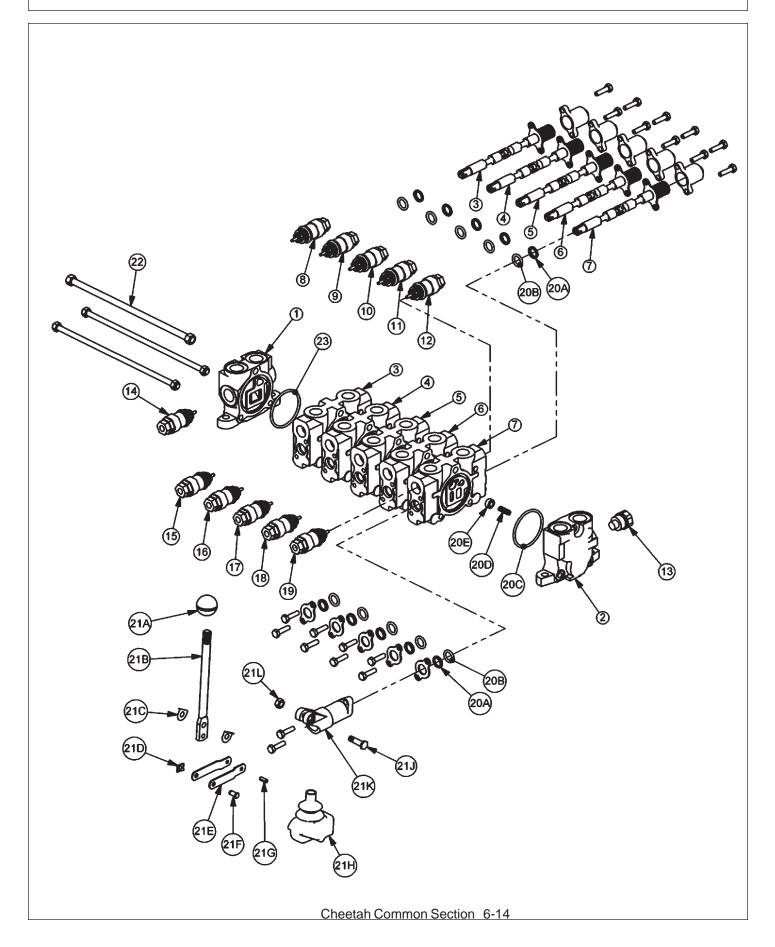
#### **DAN FOSS VALVE (06502095)**



# DAN FOSS VALVE (06502095)

I	ТЕМ	PARTNO.	QTY.	DESCRIPTION
		06502095		VLV,5SP,32PVG
1	1	06502074	1	END PLATE
	1 <b>S</b>	06505013	1	END PLATE SEAL KIT
	2	*	5	BONNET
	2S	06505042	1	BONNET SEAL KIT
	2A	33459	1	MAIN BOOM BONNET
	2B	42197	1	SECONDARY BOOM BONNET
	2B	42197	1	DECK ROLL BONNET
	2B	42197	1	BOOM SWIVEL BONNET
	2B	42197	1	DECK SHIELD BONNET
	3	34308	1	INLET SECTION
	3S	06505013	1	INLET SECTION SEAL KIT
4	4	*	5	ELECTRONIC ACCUATOR
	4S	34030	1	ELECTRONIC ACCUATOR SEAL KIT
	4A	06502101	1	MAIN BOOM ELECTRONIC ACCUATOR
	4A	06502101	1	SECONDARY BOOM ELECTRONIC ACCUATOR
	4A	06502101	1	DECK ROLL ELECTRONIC ACCUATOR
	4C	06502100	1	BOOM SWIVEL ELECTRONIC ACCUATOR
	4B	06502101	1	DECK SHIELD ELECTRONIC ACCUATOR
	5	06502099 *	1	TIE-BOLT KIT
6	6		5	SECTION
	6S	06505013	1	SECTION SEAL KIT
	6A	42698	1	MAIN BOOM SECTION
	6B	42698	1	SEC BOOM SECTION
	6C	06502076	1	DECK ROLL SECTION
	6D	42698	1	BOOM SWIVEL SECTION
-	6E	06502077 *	1	SHIELD SECTION
1	7		5	SPOOL
	7A 7D	4229806	1	
	7B	4229806	1	SEC BOOM SPOOL
	7C	42297 06502072	1	
	7D 7E	06502073	1	BOOM SWIVEL SPOOL
c	7E B	42201 *	1 10	DECK SHIELD SPOOL ANTI CAV/SHOCK RELIEF
c	8A1	42296	10	MAIN BOOM A PORT RELIEF
	8A2	42290 06502069	1	MAIN BOOM & PORT RELIEF MAIN BOOM B PORT RELIEF
	8B1	42295	1	SEC BOOM A PORT RELIEF
	8B2	42295 42295	1	SEC BOOM & FORT RELIEF
	8C1	42295	1	DECK ROLL A PORT RELIEF
	8C2	42295	1	DECK ROLL B PORT RELIEF
	8D1	42295	1	BOOM SWIVEL A PORT RELIEF
	8D2	42295	1	BOOM SWIVEL & PORT RELIEF
	8E1	06502069	1	DECK SHIELD A PORT RELIEF
	8E2	06502069	1	DECK SHIELD & FORT RELIEF
¢	9	33459	1	HANDLE
•	-		•	

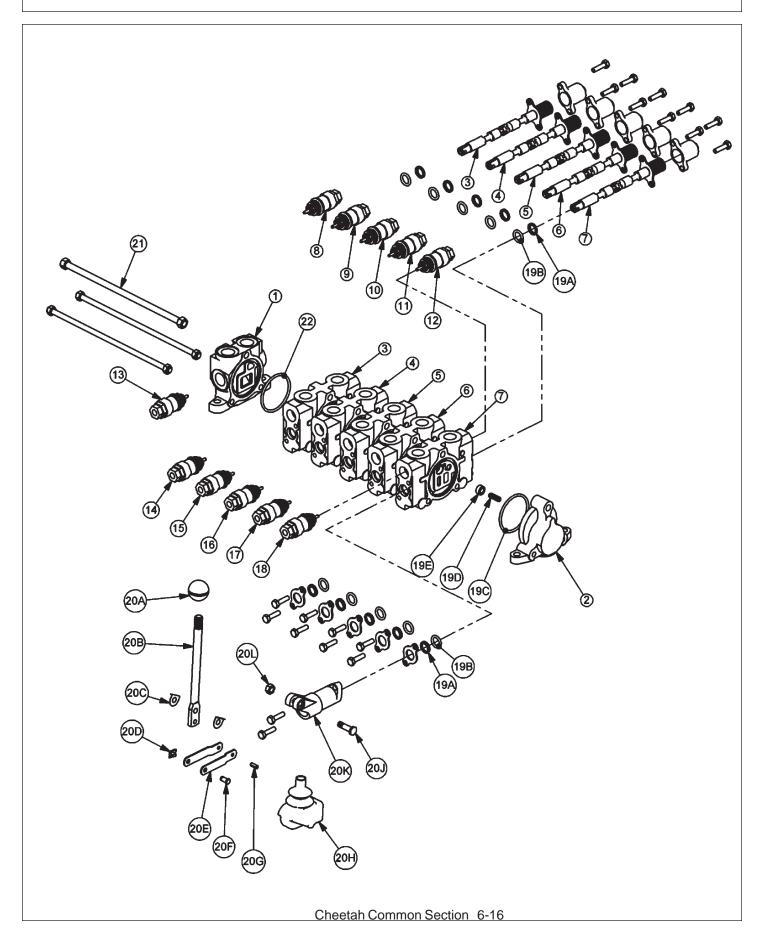
# 5SP HUSCO - POWER BEYOND (33500)



# 5SP HUSCO - POWER BEYOND (33500)

ITEM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20A 20B	PART NO. TB1017S TB1702 TB1017P TB1017N TB1017N TB1017Q TB1017Q TB1017N N/A TB1017K TB1017K TB1017H 22580 TB1017H 22580 TB1017F TB1017F TB1017F TB1017F TB1017A	QTY 1 1 1 1 1 1 1 1 1 1 1 1 1	DESCRIPTION INLET END COVER END COVER, POWER BEYOND VALVE SECTION (SINGLE ACTING, SPRING DETENT) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) VALVE SECTION (DOUBLE ACTING, SPRING METERED) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) N/A RELIEF VALVE, 2150 PSI RELIEF VALVE, 1800 PSI RELIEF VALVE, 1750 PSI RELIEF VALVE, 500 PSI RELIEF VALVE, 2600 PSI RELIEF VALVE, 1500 PSI RELIEF VALVE, 1500 PSI RELIEF VALVE, 1500 PSI RELIEF VALVE, 500 PSI
20C		1	O-RING LARGE
20D		1	SPRING
20E		1	PUCKET
21 21A 21B 21C 21D 21E 21F 21G 21H 21J 21K 21L	TB1017L	5 1 2 1 2 1 1 1 1 1	LEVER KIT (FOR ONE SECTION) LEVER KNOB LEVER LEVER WASHER LEVER CLIP LINKAGE LEVER PIN ROLL PIN LEVER BOOT LEVER BOLT LEVER DUST COVER LEVER NUT
22	TB1017V	1	TIE ROD KIT
23	24214	1	O-RING, LARGE

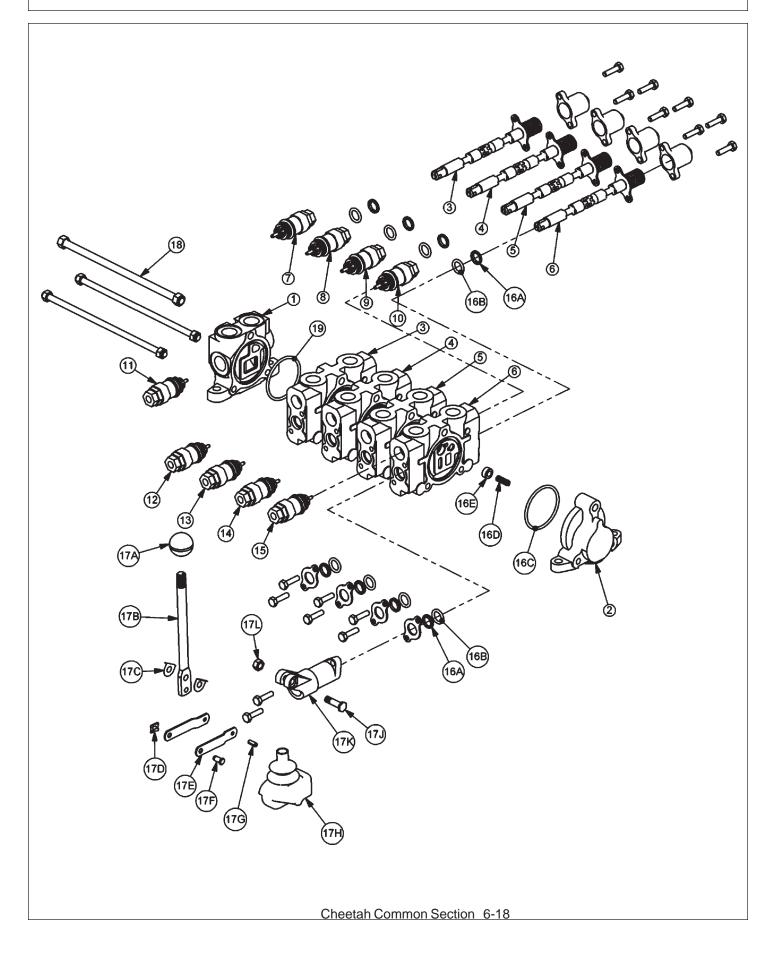
# **5SP HUSCO - OPEN CENTER (34287)**



# **5SP HUSCO - OPEN CENTER (34287)**

ITEM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PART NO. TB1017S TB1701 TB1017P TB1017N TB1017N TB1017Q TB1017N N/A TB1017K TB1017K TB1017K TB1017H 22580 06502037 TB1017F TB1017F TB1017F TB1017H 22580	QTY 1 1 1 1 1 1 1 1 1 1 1 1 1	DESCRIPTION INLET END COVER END COVER, OPEN CENTER VALVE SECTION (SINGLE ACTION, SPRING DETENT) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) VALVE SECTION (DOUBLE ACTING, SPRING METERED) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) N/A RELIEF VALVE, 2150 PSI RELIEF VALVE, 1750 PSI RELIEF VALVE, 500 PSI RELIEF VALVE, 2600 PSI RELIEF VALVE, 1500 PSI
19 19A 19B 19C 19D 19E	TB1017A	5 2 2 1 1 1	RELIEF VALVE, 500PSI VALVE SEAL KIT (FOR ONE SECTION) WIPER O-RING SMALL O-RING LARGE SPRING PUCKET
20 20A 20B 20C 20D 20E 20F 20G 20H 20G 20H 20J 20K 20L	TB1017L	5 1 2 1 2 1 1 1 1	LEVER KIT (FOR ONE SECTION) LEVER KNOB LEVER LEVER WASHER LEVER CLIP LINKAGE LEVER PIN ROLL PIN LEVER BOOT LEVER BOLT LEVER DUST COVER LEVER NUT
21 22	TB1017V 24214	1 1	TIE ROD KIT O-RING, LARGE

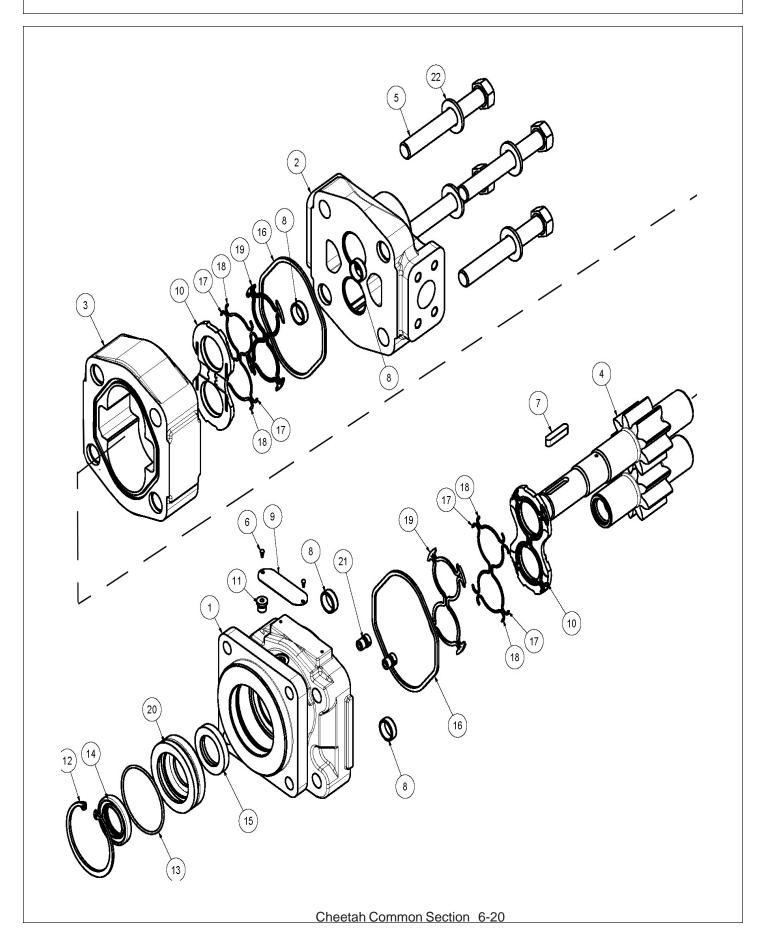
# 4SP HUSCO LIFT VALVE - FLAIL - OPEN CENTER (27671)



# 4SP HUSCO LIFT VALVE - OPEN CENTER (27671)

1 2 3 4 5 6 7	PART NO. TB1017S TB1701 TB1017P TB1017N TF3009 TB1017Q N/A	<b>QTY</b> 1 1 1 1 1 1	DESCRIPTION INLET END COVER END COVER, OPEN CENTER VALVE SECTION (SINGLE ACTING, SPRING DETENT) VALVE SECTION (DOUBLE ACTING, CENTER SPRING) VALVE SECTION (DOUBLE ACTING, DETENT - FLOAT) VALVE SECTION (DOUBLE ACTING, SPRING METERED) N/A
8 9 10 11 12 13 14 15	TB1017K TB1017J TB1017H 06502037 06502003 TB1017F TB1017F TB1017H	1 1 1 1 1 1 1	RELIEF VALVE, 2150 PSI RELIEF VALVE, 1800 PSI RELIEF VALVE, 1750 PSI RELIEF VALVE, 2600 PSI RELIEF VALVE, 2500 PSI RELIEF VALVE, 1500 PSI RELIEF VALVE, 1750 PSI
16 16A 16B 16C 16D 16E	TB1017A	4 2 1 1 1	VALVE SEAL KIT (FOR ONE SECTION) WIPER O-RING SMALL O-RING LARGE SPRING PUCKET
17 17A 17B 17C 17D 17E 17F 17G 17H 17J 17K 17L	TB1017L	4 1 2 1 2 1 1 1 1	LEVER KIT (FOR ONE SECTION) LEVER KNOB LEVER LEVER WASHER LEVER CLIP LINKAGE LEVER PIN ROLL PIN LEVER BOOT LEVER BOOT LEVER BOLT LEVER DUST COVER LEVER NUT
18 19	TB1017U 24214	1 1	TIE ROD KIT O-RING, LARGE

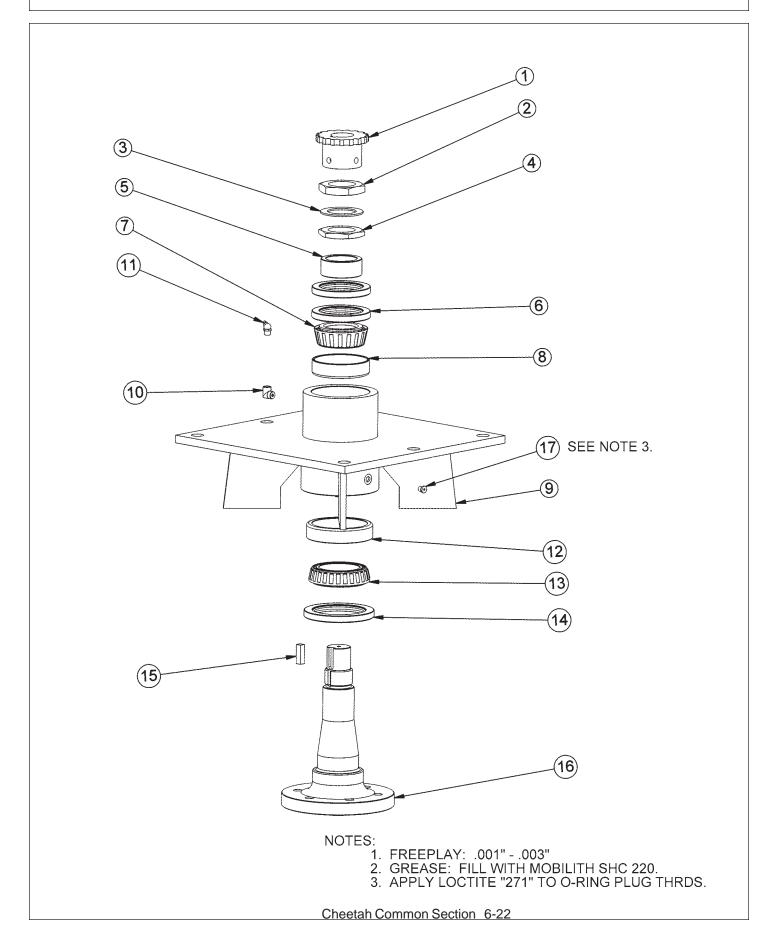
## CHEETAH ROTARY MOTOR



#### CHEETAH ROTARY MOTOR

ITEM	PART NO.	QTY.	DESCRIPTION
*	06504012	AVAIL	MOTOR ASSEMBLY - CHEETAH ROTARY
1	22790	1	SHAFT END COVER
2	06504088	1	PORT END COVER
3	02404289	1	GEAR HOUSING
4	06504090	1	MATCHED GEAR SET
5	06504091	4	CAP SCREW
6	06504078	2	SETSCREW
7	06504092	1	KEY
8	06504093	4	DOWEL PIN
9	06504094	1	NAMEPLATE
10	06504095	2	THRUST PLATE
11	02961940	1	HEX PLUG
12	02962200	1	SNAP RING
13	06504096	1	O-RING
14	6T5101	1	LIP SEAL
15	06504097	1	LIP SEAL
16	22797	2	SEAL, SQ-R
17	06504098	4	SEAL, SIDE CHAIN
18	06504099	4	SEAL, END CHAIN
19	06504100	2	SEAL, BK-UP
20	06504101	1	RTNR, SEAL
21	6T5809	2	CHECKASSY
22	06504102	4	WASHER

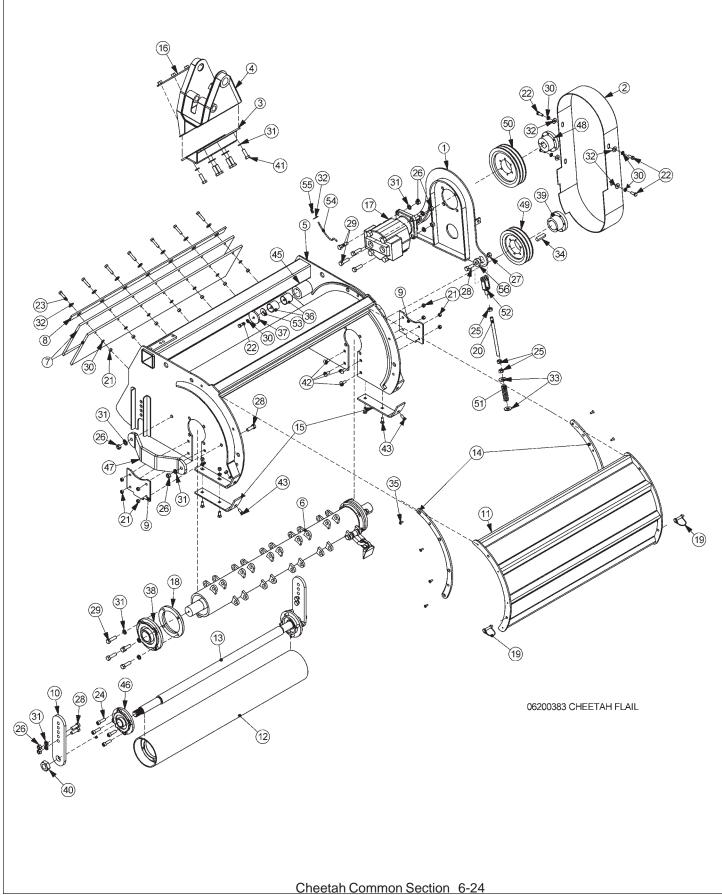
#### **ROTARY SPINDLE ASSEMBLY**



## **ROTARY SPINDLE ASSEMBLY**

ІТ	EM F	PARTNO.	QTY.	DESCRIPTION
1	6	6T1031	1	SPROCKET
2	6	ST1016	1	BEARING LOCK NUT - THICK
3	2	22596	1	JAM WASHER
4	6	ST1015	1	BEARING ADJUSTMENT NUT - THIN
5	6	ST1014	1	BEARING ADJUSTMENT SLEEVE
6	6	ST1011	1	UPPER SEAL - SET OF 2
7	6	ST1012	1	BEARING CONE
8	6	ST1013	1	BEARINGCUP
9	3	33423	1	SPINDLE HOUSING
10	) 3	30570	1	STREETELBOW
11	6	ST3208	1	GREASE ZERK
12	2 6	6T1013H	1	BEARINGCUP
13	6	ST1012H	1	BEARINGCONE
14	. 6	ST1011H	1	LOWER SEAL
15	5 6	ST1019	1	SPINDLE KEY
16	5 F	PT1018H5	1	SPINDLE
17	' (	6503064	1	O-RING PLUG, 1/8"

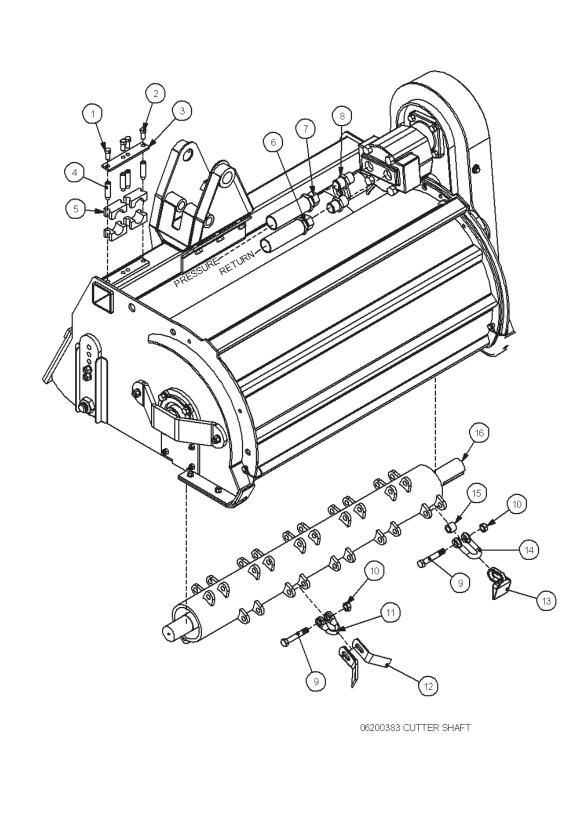
## CHEETAH FLAIL HEAD ASSY.



## CHEETAH FLAIL HEAD ASSY.

ITEM	P/N	QTY	DESCRIPTION
1	33808	1	MOUNT, DRIVE, CHEETAH, FLAIL
2	33806	1	SHIELD, DRIVE, CHEETAH, FLAIL
3	33805	1	MOUNT, PLATE, TREE, TBFS-40H
4	33804	1	MOUNT, TREE, CHEETAH, FLAIL
5	33803	1	TBFS-40H,WLDMNT,BONNET
6	33801	1	CUTTERSHAFT,ASSY,BRUSH,CHEETAH
*	33802	1	CUTTERSHAFT,ASSY,GRASS,CHEETAH, (OPTIONAL)
7	33797	2	FLAP, DEFLECTOR, CHEETAH, FLAIL
8	33796	1	RETAINING BAR,FLAP,CHEETAH,FLAIL
9		2	
	33795		CAP,SLOT,CHEETAH,FLAIL
10	33794	2	ADJ BRKT, GROUND ROLLER, CHEETAH, FLAIL
11	33793	1	SHIELD, SFTY, CHEETAH, FLAIL
12	33792	1	GROUND ROLLER, CHEETAH
13	33791	1	GROUND ROLLER, SHAFT, CHEETAH
14	33790	2	RUNNER,POLY
15	33789	2	SKID SHOE,CHET,FLAIL
16	33787	1	BAR,NUT PLATE
17	06504019	1	CURRENT MOTOR, TBF 40S-H (END PORTING)
	33868	1	ORIGINAL MOTOR, TBF 40S-H (END PORTING)
18	33863	2	STRING GUARD,STD
19	33906	2	PIN,LINCH,3/8x2,LOOP
20	40496	1	ROD,THREADED,1/2"NFx8"
21	21625	21	HEX NUT,3/8",NC
22	21630	5	CAPSCREW, 3/8 x 1,NC
23	21633	7	CAPSCREW, 3/8 x 1 3/4,NC
24	6T2330	8	CAPSCREW, 7/16 x 1 1/2, SOCKET HEAD
25	21700	3	HEX NUT, 1/2", NF
26	21725	10	HEX NUT, 1/2" NC
27	21723	1	NYLOCK NUT, 1/2
28		7	
	21731		CAPSCREW, 1/2 X 1 1/2,NC
29	21732	12	CAPSCREW, 1/2 x 1 3/4,NC
30	21988	18	LOCKWASHER, 3/8"
31	21990	24	LOCKWASHER, 1/2"
32	22016	12	FLATWASHER,3/8"
33	22018	3	FLATWASHER,1/2",WIDE
34	26142A	1	KEY,1/2" x 1/2" x 2"
35	27486	8	CAPSCREW,FLT/SKD HD,1/4x5/8NF
36	27580	2	BEARING,DX,1-1/2",GRM
37	28682	1	RETAINING,WASHER 2-1/2 X 5/16
38	28683	2	BEARING,FLANGE,1-15/16"STD TSF
39	28723	1	BUSHING,QD,SK 1-15/16
40	6T1023R	2	KNIFE MTG NUT,1-1/8" NYLOCK NF
41	6T2279	6	CAPSCREW, 1/2 X 1 1/2,NC,GR 8
42	6T2283	8	CARRIAGE BOLT,3/8" X 1"NC
43	6T2270	6	PLOW BOLT,3/8" X 1" NC
44	6T3204	2	GREASE ZERK,1/4" X STR
45	6T3207	2	GREASE ZERK,1/4" X STR
46	TF1022	2	BEARING,FLANGE,1-3/8"
40 47	TF1022 TF1040	2	GUARD, CUTTER SHAFT
48	TF3013	1	BUSHING,QD,SK 1-1/4"
49	TF3040	1	SHEAVE,6.3
50	TF3044	1	SHEAVE,8.0
51	TF3620A	1	SPRING, TENSIONER
52	PT3611A	1	CLEVIS,6"
53	6T2615	1	WASHER, FENDER 3/8"
54	TF1032	1	HOSE,3/16" X 8"(1/8MP X 1/8MP)
55	TF1033	1	GREASE ZERK,1/8" FPT
56	TF3610	1	BUSHING
**	TF3021	2	V-BELT,(560),(NOT SHOWN)
	·		ommon Section 6-25

## CHEETAH FLAIL - CUTTER SHAFT ASSY.

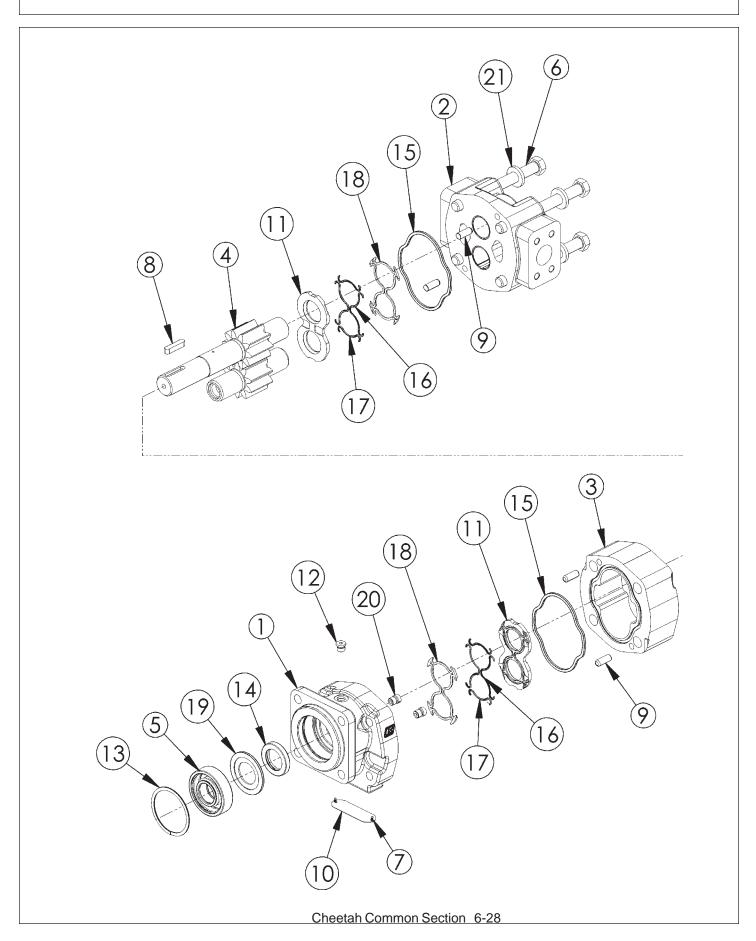


Cheetah Common Section 6-26

## CHEETAH FLAIL - CUTTER SHAFT ASSY.

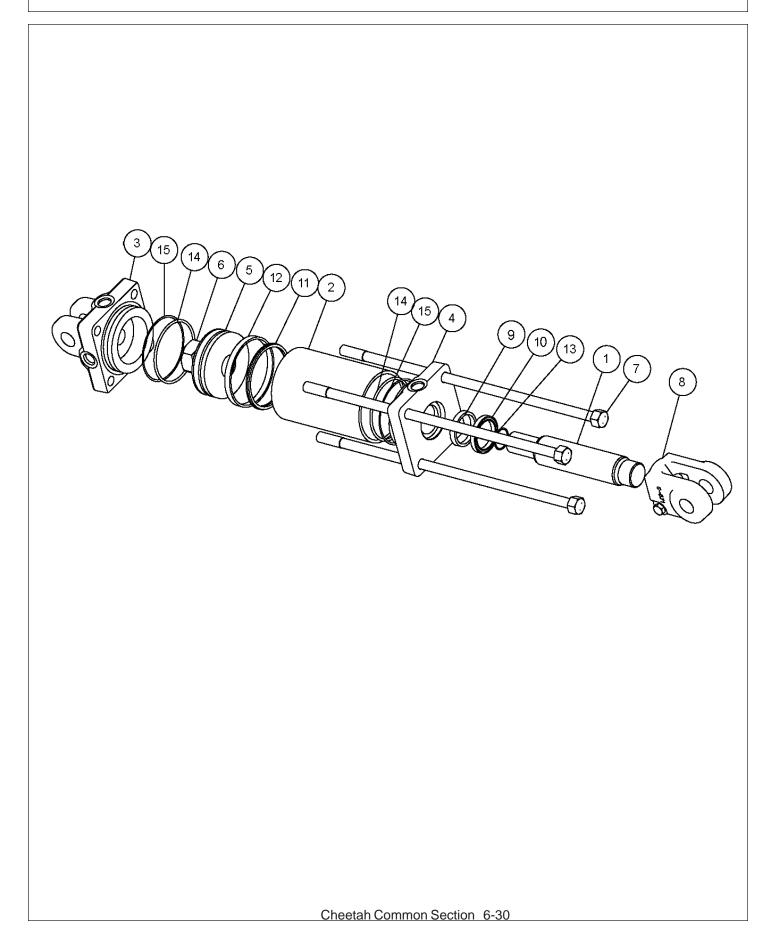
ITE	M P/N	QTY	DESCRIPTION
1	31723	1	CLAMP KIT, TBF50
2	21679	4	CAPSCREW, 7/16" X 1" NC
3	31955	1	PLATE, TOP, CLAMP, TBF
4	31916	4	POST, CLAMP, HOSE, 3000PSI
5	31917	4	CUSHION, CLAMP, HOSE, 3000PSI
6	33904	1	HOSE, 1" X 102" (FJX X FJX)
7	33905	1	HOSE, 1" X 94" (FJX X FJX)
8	33555	2	ADAPTER, 1"MORB X 1"MJIC
	33802	1	CUTTERSHAFT, ASSY, GRASS, CHEETAH
9	33925	20	CAPSCREW,9/16 x 3.44,NC, GR 8 MOD
10	6T2419	20	HEX NUT,9/16" NC, GR8
11	33736	20	CLEVIS,1-9/16"x1/2" I.D.
12	33714	20	KNIFE, FLAIL, STANDARD
	33801	1	CUTTERSHAFT, ASSY, BRUSH, CHEETAH
13	33721	20	BLADE, BRUSH, FLAIL
14	33720	20	CLEVIS, 2-7/16" X 1/2" I.D.
15	33719	20	BUSHING, 1" O.D. X 5/8" I.D.
16	33800	1	CUTTERSHAFT, WELDMENT, CHEETAH
*	33927	2	HOSE, SLEEVE, CHEETAH, FLAIL, SM (NOT SHOWN)
*	33928	2	HOSE, SLEEVE, CHEETAH, FLAIL, LG (NOT SHOWN)
*	6T123	12	ZIP TIES (NOT SHOWN)

# CHEETAH FLAIL MOTOR

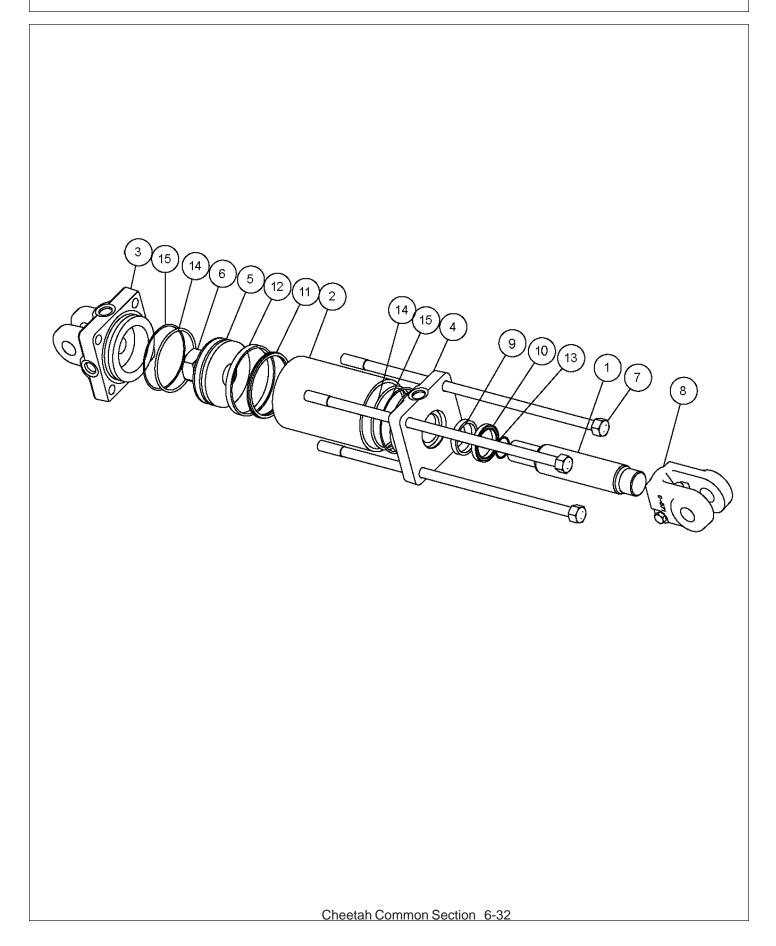


## CHEETAH FLAIL MOTOR

ITEM	PART NO.	QTY.	DESCRIPTION
*	06504019	AVAIL	MOTOR ASSEMBLY 350 - CHEETAH FLAIL
1	06504039	1	SHAFT END COVER
2	06504060	1	PORT END COVER
3	06504041	1	GEAR HOUSING
4	06504042	1	MATCHED GEAR SET
5	TF4402	1	BALLBEARING
6	06504043	4	CAP SCREW
7	06504044	2	SET SCREW
8	06504028	1	KEY
9	06504045	4	DOWEL PIN
10		1	NAMEPLATE
11	763759	2	THRUSTPLATE
12	02961940	1	HEX PLUG
13	TF4401	1	SNAP RING
14	06504049	1	LIP SEAL (INCLUDED IN SEAL KIT)
15	TF4410	2	GASKET ŠEAL (INCLUDED IN SEÁL KIT)
16	06504046	4	SIDE SEAL (INCLUDED IN SEAL KIT)
17	06504047	4	END SEAL (INCLUDED IN SEAL KIT)
18	TF4407	2	BACK-UP SEAL (INCLUDED IN SEAL KIT)
19	06504048	1	SEALRETAINER
20	6T5809	2	CHECK ASSEMBLY
21	02961917	4	WASHER
*	06504023	AVAIL	SEAL KIT (INCLUDES 14, 15, 16, 17, AND 18)
			· · · · · · · · · · · · · · · · · · ·



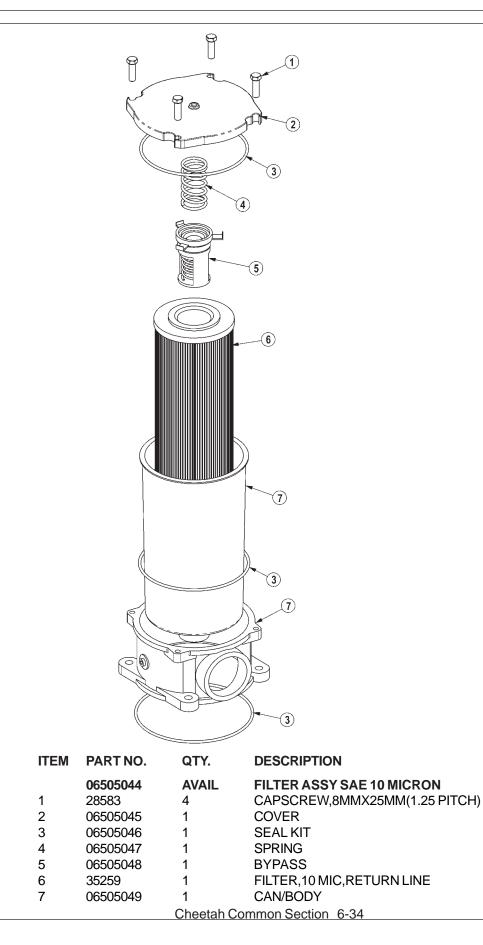
ITEM	2" X 6" CY PART NO.	LINDER QTY.	# 6T7022 DESCRIPTION	
	FARTINO.	QTT.	DESCRIPTION	
1	6T0162D	1	PISTON ROD	
2	6T0165D	1	CYLINDER TUBE	
3	6T0167D	1	CYLINDER BUTT	
4	6T0170D	1	CYLINDER GLAND	
5	6T0173D	1	PISTON	
6	6T0179D	1	LOCK NUT	
7	6T0176D	4	TIE-RODASSY	
8	6T0178D	1	CLEVISASSY	
0	6T0187D	AVAIL	SEAL KIT	
9	*	1	U-CUP	
10	*	1	WIPER	
11	*	1	CROWN SEAL	
12	*	N/A	N/A	
	*			
13	*	1	O-RING	
14	т. ^	2	O-RING	
15	*	1	BU-WASHER	
			DER # 33731	
ITEM	PART NO.	QTY.	DESCRIPTION	
1	33833	1	PISTON ROD	
2	33834	1	CYLINDER TUBE	
3	33835	1	CYLINDER BUTT	
3 4		1	CYLINDER GLAND	
	33836	-		
5	33837	1	PISTON	
6	33838	1	LOCK NUT	
7	33840	4	TIE-ROD ASSY	
8	33842	1	CLEVISASSY	
	33843	AVAIL	SEAL KIT	
9	*	1	U-CUP	
10	*	1	WIPER	
11	*	1	CROWN SEAL	
12	*	N/A	N/A	
13	*	1	O-RING	
14	*	2	O-RING	
15	*	1	BU-WASHER	
			INDER # 34275	
ITEM	PART NO.	QTY.	DESCRIPTION	
1	06501576	1	PISTON ROD	
2	06501575	1	CYLINDER TUBE	
2	06501574	1	CYLINDER BUTT	
3 4		1	CYLINDER GLAND	
	33836	-		
5	33837	1	PISTON	
6	33838	1		
7	06501577	4	TIE-RODASSY	
8	N/A	N/A	CLEVISASSY	
	06501578	AVAIL	SEAL KIT	
9	*	1	U-CUP	
10	*	1	WIPER	
11	*	1	CROWN SEAL	
12	*	N/A	N/A	
13	*	1	O-RING	
14	*	2	O-RING	
15	*	1	BU-WASHER	
-		-	Common Section 6-31	
		Uneeran		



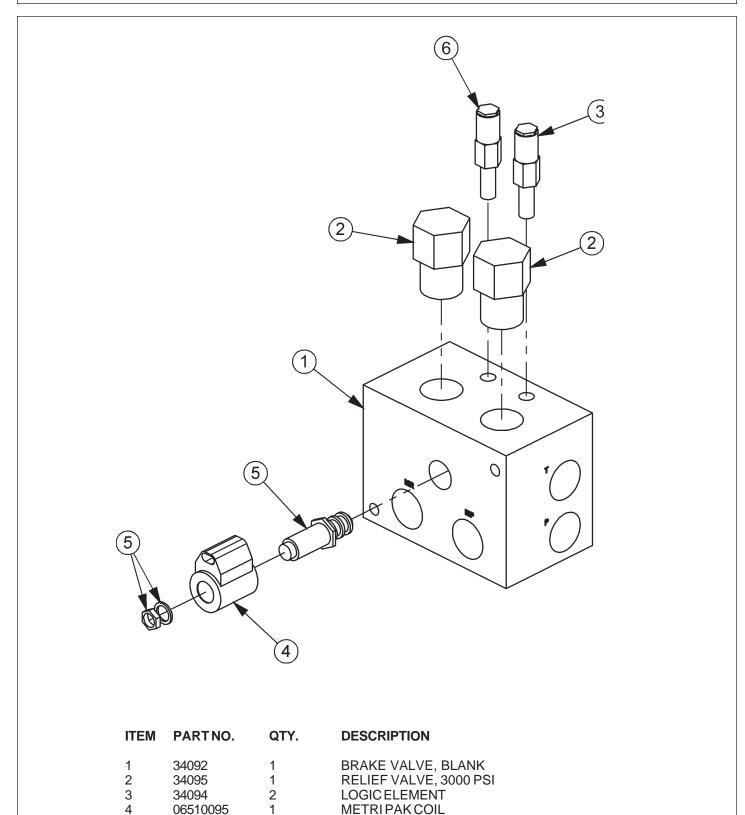
ITEM	3 1/2" X 1 PART NO.	14" CYLIND QTY.	ER # 33703 DESCRIPTION
1	33822	1	<b>PISTON ROD</b>
2	33823	1	CYLINDER TUBE
3	33824	1	CYLINDER BUTT
4	33825	1	CYLINDER GLAND
5	33826	1	PISTON
6	33827	1	LOCK NUT
7	33829	4	TIE-RODASSY
8	6T0178	1	CLEVISASSY
	33832	AVAIL	SEAL KIT
9	*	1	U-CUP
10	*	1	WIPER
11	*	1	CROWN SEAL
12	*	N/A	N/A
13	*	1	O-RING
14	*	2	O-RING
15	*	1	<b>BU-WASHER</b>

ITEM	4" X 14 PART NO.	" CYLINDER QTY.	# 33702 DESCRIPTION
1	33814	1	<b>PISTON ROD</b>
2	33816	1	CYLINDER TUBE
3	6T0169	1	CYLINDER BUTT
4	6T0171	1	CYLINDER GLAND
5	33817	1	PISTON
6	6T0175	1	LOCK NUT
7	33819	4	TIE-RODASSY
8	6T0172	1	CLEVIS ASSY
	33821	AVAIL	SEAL KIT
9	*	1	U-CUP
10	*	1	WIPER
11	*	1	CROWN SEAL
12	*	1	BEARING RING
13	*	1	O-RING
14	*	2	O-RING
15	*	1	<b>BU-WASHER</b>

#### **RESERVOIR TANK FILTER ASSEMBLY**



#### **BRAKE VALVE ASSEMBLY W/ METRI PAK**



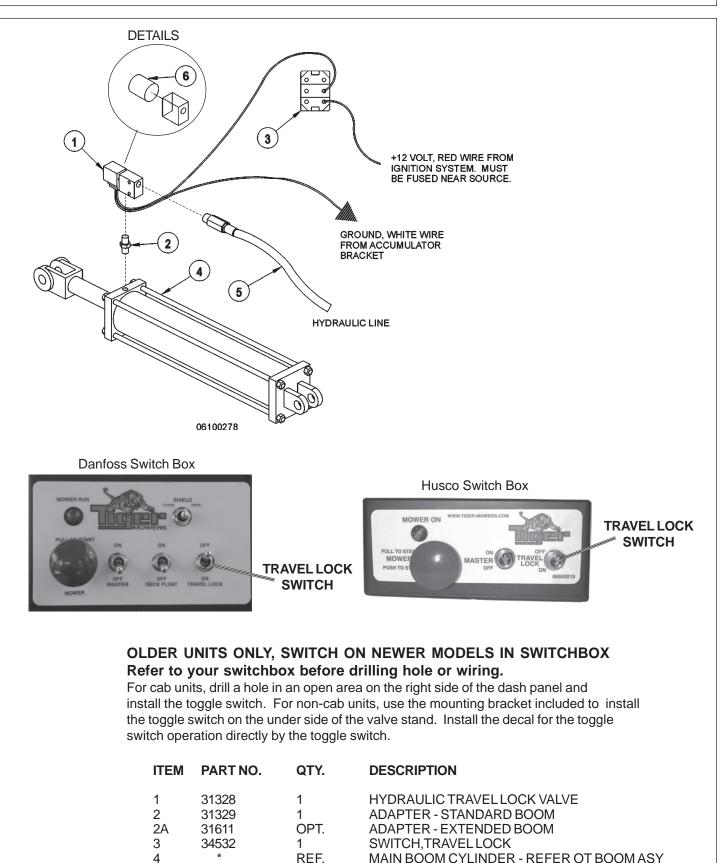
CARTRIDGE, 2 POSITION, 3 WAY (WITH NUT & WASHER)

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34093

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#### **BOOM TRAVEL LOCK**



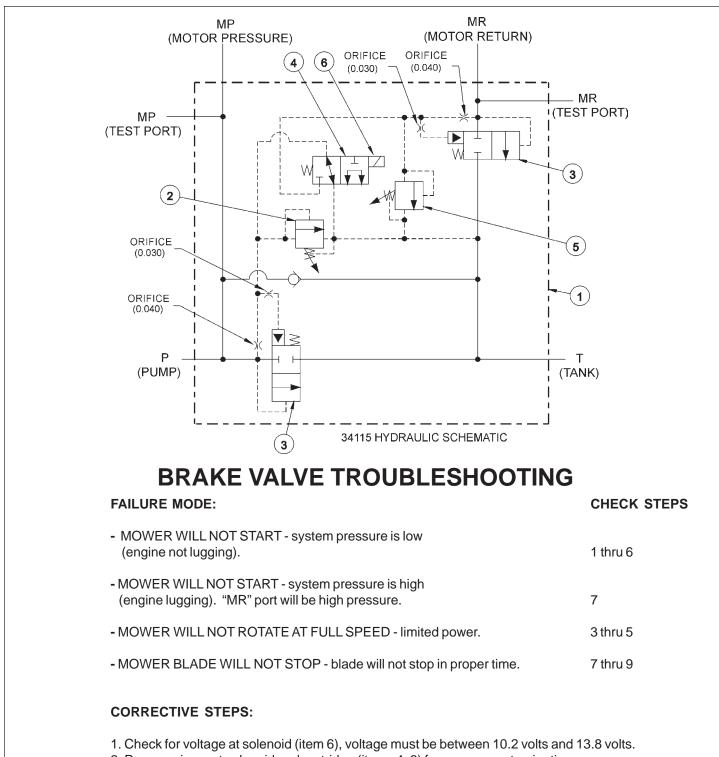
MAIN BOOM CYLINDER - REFER OT BOOM ASY REF. HOSE / FITTINGS - REFER TO BOOM ASY REF. COIL, TRAVEL LOCK 34796 1

\*

5

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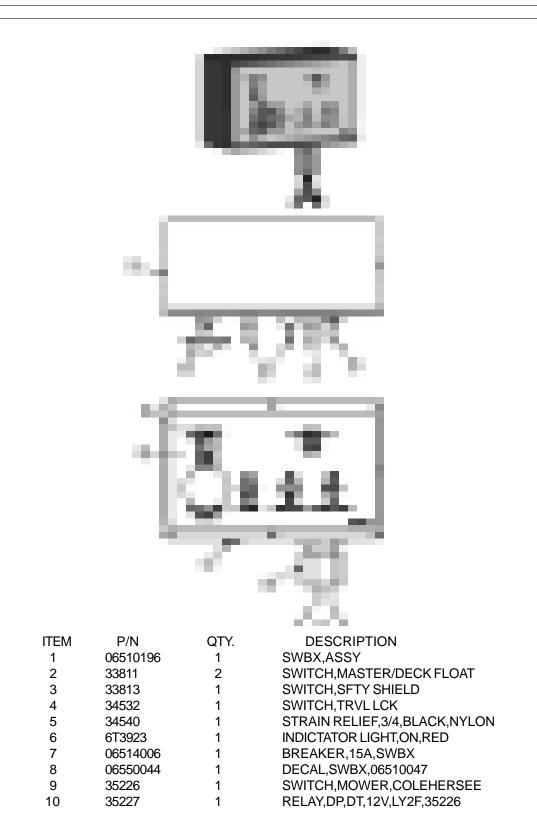
#### SOLENOID BRAKE VALVE HYDRAULIC SCHEMATIC



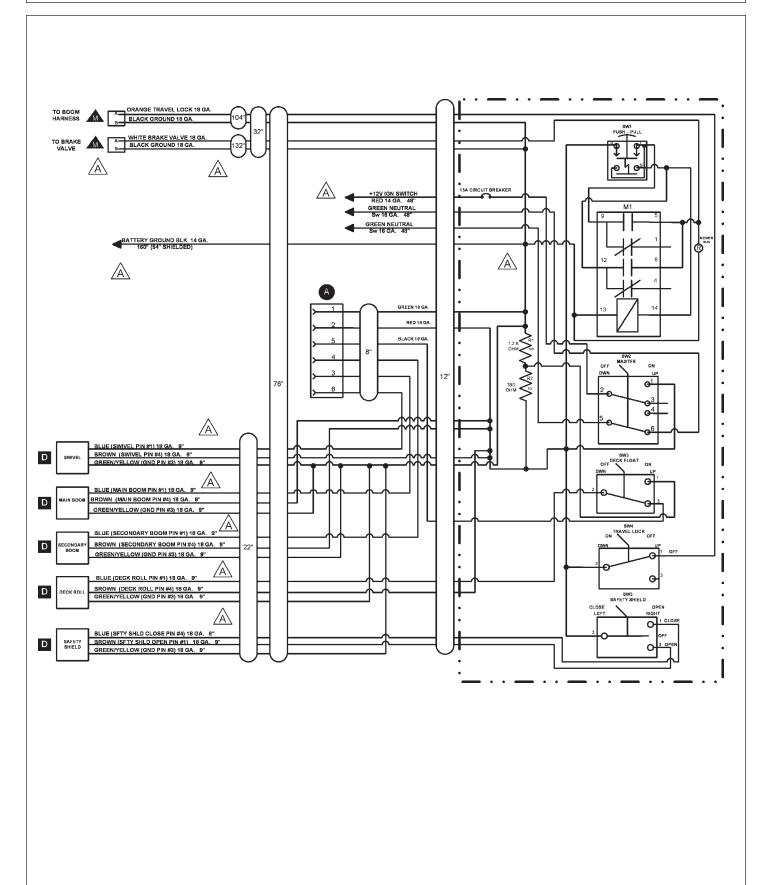
2. Remove, inspect solenoid and cartridge (items 4, 6) for wear or contamination.

- 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, inpect logic element near "MR" port (item 3) for wear or contamination.

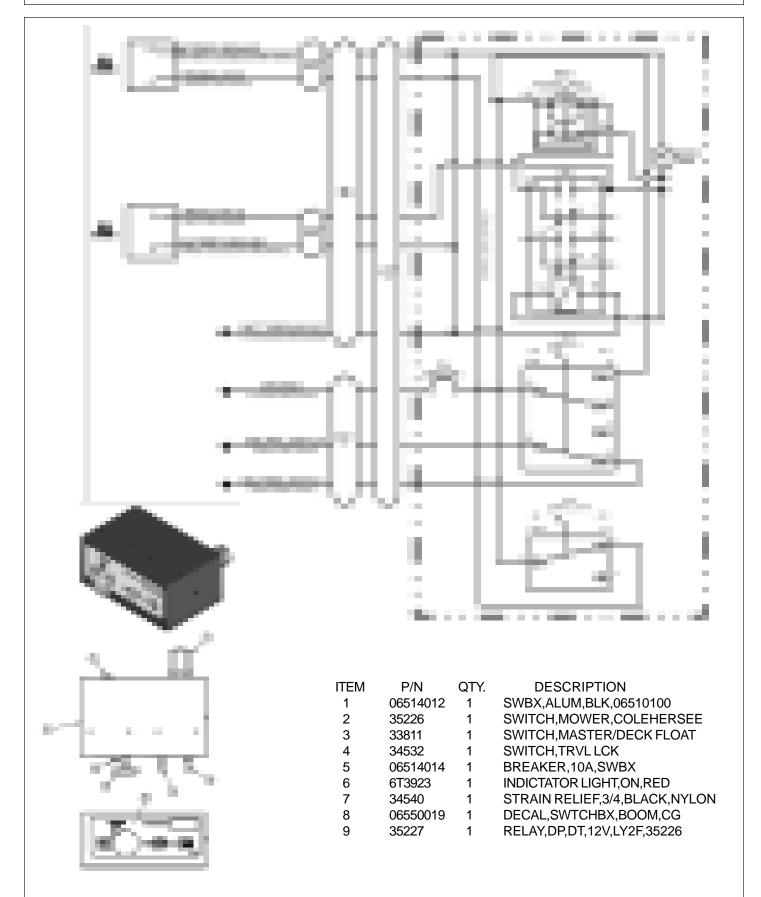
#### JOYSTICK SWITCHBOX SERVICE PARTS



## JOYSTICK SWITCHBOX SCHEMATIC (06510196)



## **HUSCO CONTROLS SWITCHBOX**

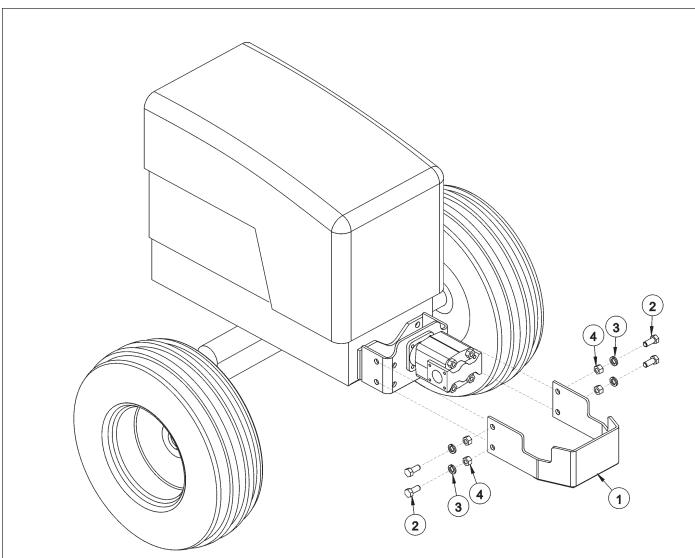


Cheetah Common Section 6-40

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Cheetah Common Section 6-41

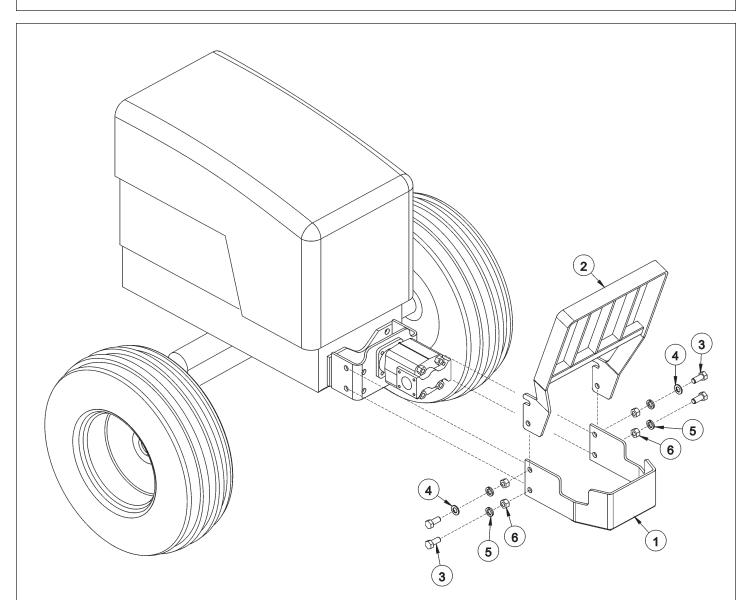
## **OPTIONAL PUMP GUARD KIT**



06200342

ITEM	PARTNO.	QTY.	DESCRIPTION
1	32430	1	UNIVERSAL PUMP GUARD
2	21831	4	CAPSCREW - 3/4 X 1 3/4
3	21993	4	LOCKWASHER - 3/4
4	21825	4	HEX NUT - 3/4

#### **OPTIONAL PUMP AND GRILL GUARD KIT**



06200349

ITEM	PARTNO.	QTY.	DESCRIPTION
1 2 3 4 5	32430 32737 21833 22021 21993	1 1 4 2 4	UNIVERSAL PUMP GUARD UNIVERSAL GRILL GUARD CAPSCREW - 3/4 X 2 1/4 FLATWASHER - 3/4 LOCKWASHER - 3/4
6	21825	4	HEX NUT - 3/4

#### TROUBLESHOOTING

#### JOYSTICK TROUBLESHOOTING

#### Boom operation not responding to joystick movement.

Isolate hydraulic vs. electronic symptom.

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

#### Electronic inspection.

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

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

Pin #1 – Supply Voltage Pin #2 – Signal Voltage Pin #6

Pin #gnd – ground

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

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

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

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

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

#### Possible electronic problems.

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

Continued on next sheet

Cheetah Common Section 6-44

## TROUBLESHOOTING

#### Hydraulic inspection.

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

With the spools in Neutral

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

LS pump – P should equal pump standby pressure, LS = 0, workport – pressure on cylinder or function.

Pressure Comp pump – P should equal pump standby pressure, LS = 0, workport – pressure on cylinder or function.

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

LS pump – P should be LS + standby, LS should equal workport, workport – pressure on cylinder or function.

Pressure Comp pump – P should equal pump standby pressure, LS should equal workport, workport – pressure on cylinder or function.

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

Gear pump – P should equal valve relief setting or workport shock valve setting. LS should equal workport. Workport should equal relief setting or workport shock valve setting.

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

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

Operate more than one spool.

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

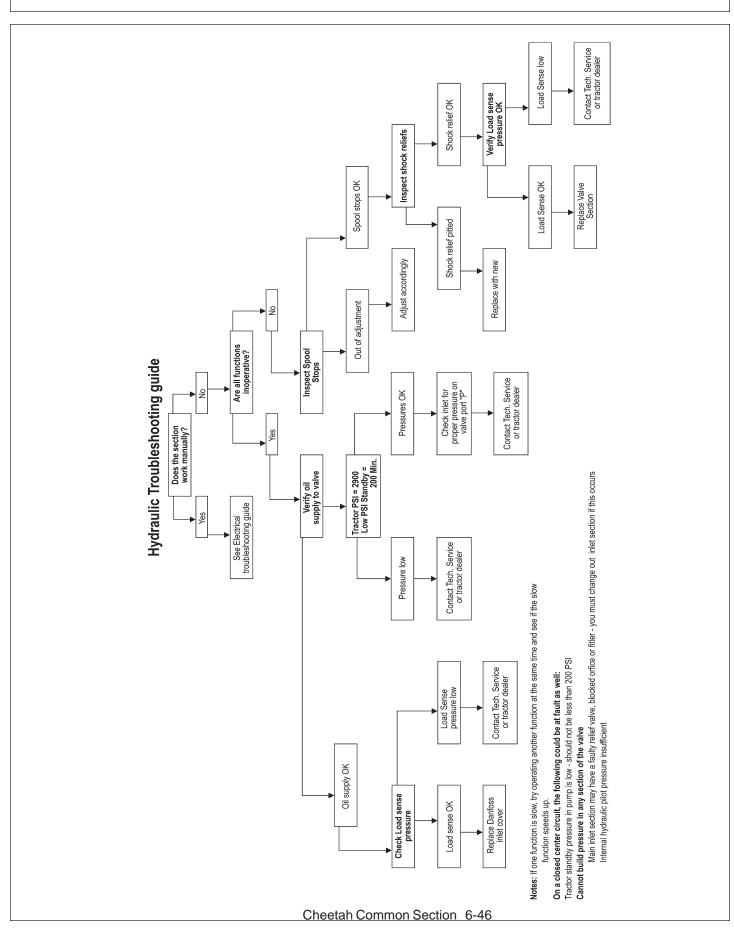
LS pump – P should be LS + standby pressure. LS should equal highest workport pressure. Workport – pressure on cylinder or function.

Pressure Comp pump. P should equal pump standby pressure. LS should equal highest workport pressure. Workport – pressure on cylinder or function.

#### Possible hydraulic problems.

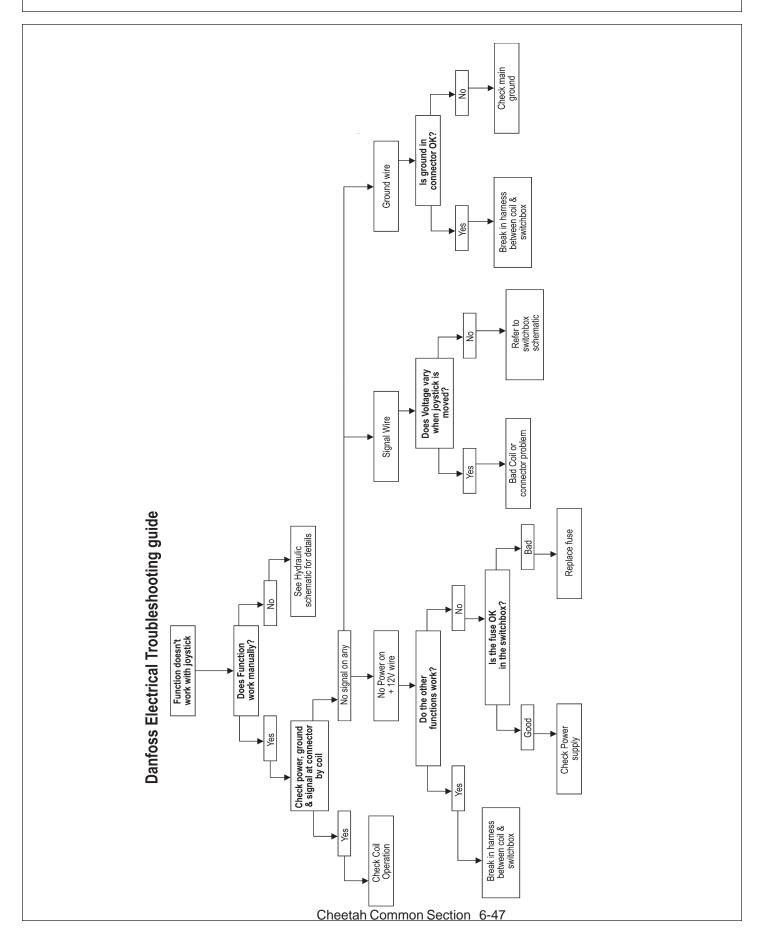
Cylinder leak.

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



#### **HYDRAULIC - TROUBLESHOOTING GUIDE**

## **ELECTRICAL - TROUBLESHOOTING GUIDE**



# NOTES

Cheetah Common Section 6-48

# WARRANTY SECTION

Warranty Section 7-1

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#### WARRANTY INFORMATION

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

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

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

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

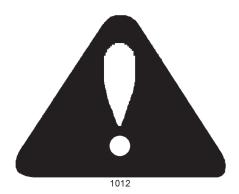
No agent or person has authority to alter, add to or waive the above warranties which are agreed to be in the only warranties, representations or promises, expressed or implied, as to the quality or performance of the products covered and which do not include any implied warranty of merchantability or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

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

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

#### **ONE LAST WORD**

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



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

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

## TO THE OWNER / OPERATOR / DEALER



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

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

#### **OWNER REQUIREMENTS:**

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

#### **OPERATOR REQUIREMENTS:**

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



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