

Portable Light Portable Light Stands Compact Loader Backhoes

Solar Messago Portable Industrial Heaters Concrete Breakers

Solar Flashing Arrowboards

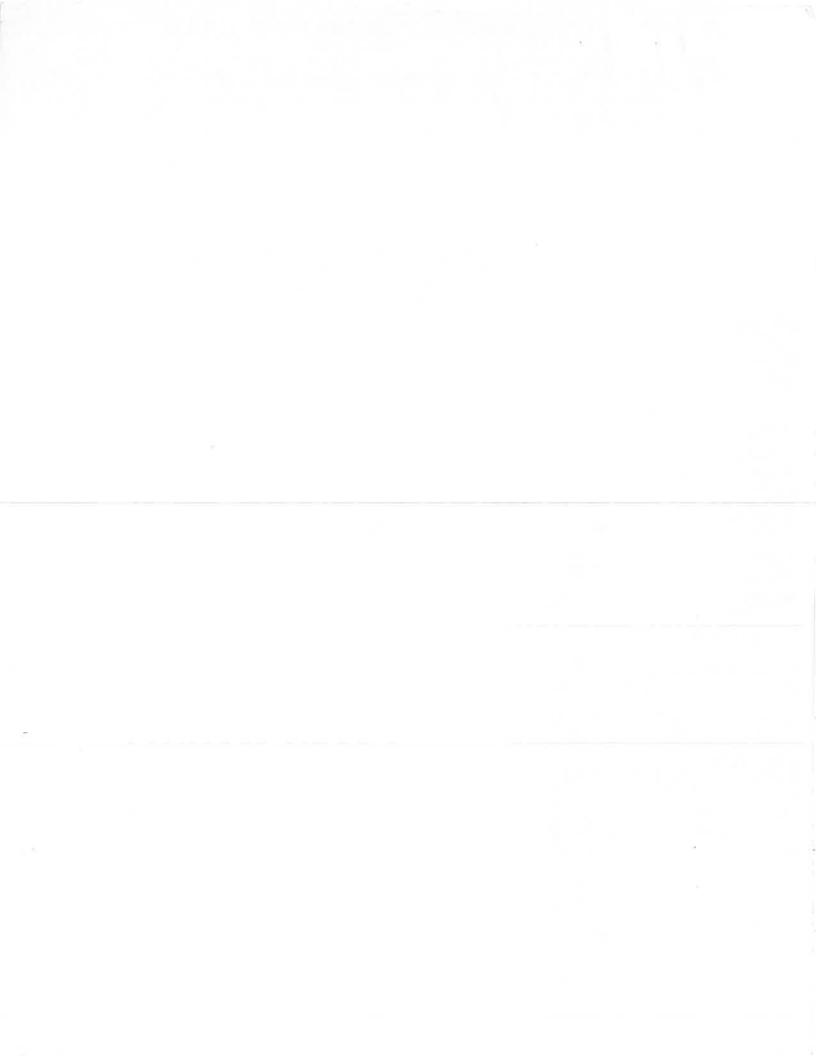
OPERATOR'S MANUAL

CONTRACTOR—MODEL 20K-25K ASSEMBLY # 0021

1502 West 4th Ave. Holdrege, NE 68949 800.562.1373 - Fax 308.995.5887

Reliability, performance, and integrity backed by over 60 years of experience





FOR PREPARING CONTRACTOR TLB FOR DELIVERY OR RENTAL

The **CONTRACTOR TLB** requires service as well as proper operation in order to provide the performance and safety it has been designed for. Never deliver or put a machine into service with known defects or missing instructions or decals. Always instruct the customer in the proper operation and safety procedures as described in the operator's manual. Always provide the manual with the equipment for proper and safe operation.

CHECK LIST:

- Visually inspect the equipment to ensure that all instructions and decals are in place and legible.
- Inspect the hydraulic system to insure all connections are tight and secure.
- Lubricate all grease fittings with recommended grease.
- Inspect all hydraulic hose for proper routing and signs of damage.
- Check the condition of the hydraulic cylinders.
- Inspect the steering system, tie rod ends, spindles and wheel bearings regularly and tighten rod ends often.
- Check the outriggers and make sure they operate properly.
- Tighten lug nuts to 80 ft/lb every 50 hours of operation.
- Inspect the loader and backhoe for damage and test for proper operation.
- Inspect the loader bucket stops for damage. (there should be at least 1/2" clearance between cylinder rod and bucket pin grease zerk).
- Inspect the electrical wiring for signs of damage.
- Inspect the park brake for proper holding strength.
- Inspect the tires to ensure good condition and proper inflation.
- Make sure the battery is fully charged and terminals are tight and clean. Insure the electrolyte is at the correct level.
- Check the service intervals for oil filters, fuel filter, air cleaner, engine oil and hydraulic oil.
- Check the engine oil, hydraulic oil and fuel levels.
- Start engine and check for hydraulic leaks and proper R.P.M. at full throttle.
- Check to make sure the operator's manual is with the equipment.
- Inspect the machine physically for damage and repair if necessary.

NOTE: See appropriate section of manual for scheduled maintenance intervals

After completing the inspection checklist, operate the loader and backhoe through a complete operation cycle, following the operating instructions in the operator's manual.



NEVER ALLOW ANYONE TO OPERATE THE EQUIPMENT WITHOUT PROPER TRAINING!

ALWAYS READ THE INSTRUCTIONS FIRST!

This manual provides the information necessary for the safe operation of the Allmand CONTRACTOR TLB.

The **CONTRACTOR TLB** standard configuration is powered by a gasoline or diesel engine connected to hydrostatic pumps that drive hydraulic motors and cylinders that move the machine. Time should be taken to understand the controls and movement of this equipment.

Specific operating instructions and specifications are contained in this publication to familiarize the operator and maintenance personnel with the correct and safe procedures necessary to maintain and operate the equipment.

Take time to read this book thoroughly. If you are uncertain about any of the information presented in the manual, contact the factory by phone at **800-562-1373** or by fax at **308-995-5887** or contact your dealer, for clarification before operation.

SAFETY SYMBOLS

The purpose of the SAFETY INFORMATION SYMBOL shown below is to attract your special attention to safety related information contained in the text.



DANGER



WARNING



CAUTION

FAILURE TO UNDERSTAND AND COMPLY WITH SAFETY RELATED INFORMATIONAL INSTRUCTIONS MAY RESULT IN INJURY TO OPERATOR OR OTHERS. IF YOU DO NOT UNDERSTAND ANY PART OF THIS INFORMATION CONTACT YOUR DEALER FOR CLARIFICATION PRIOR TO OPERATING EQUIPMENT.

NOTE

The word **NOTE** is used to bring your attention to supplementary information in relation to various aspects of proper operation and maintenance.

NOTE: Keep this manual accessible during operation to provide convenient reference.

NOTE: Any reference in this manual to LEFT or RIGHT shall be determined by looking forward while sitting in the operator's seat.

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SAFETY WARNING!
ALWAYS REPLACE ANY SAFETY AND
INSTRUCTION DECALS THAT BECOME
DAMAGED, PAINTED OR OTHERWISE
ILLEGIBLE.

Refer to these representations of the safety warning decals used on the **CONTRACTOR TLB** to insure correct ordering if replacing becomes necessary.



HIGH-PRESSURE FLUID HAZARD
To Prevent Serious Injury or Death:
Relieve pressure on system before repairing or adjusting or disconnecting.
Wear proper hand and eye protection when searching for leaks.
Keep all components in good repair.
0-191



D-158 Cover panel - upper left

D-191
Cover panel - lower right

D-189
Gauge panel - right side



ELECTROCUTION HAZARD
OVERHEAD WIRES
To Prevent Serious Injury or Death:
• Keep away from power lines.

AVOID DEATH OR GERRIQUE INJUSTY UP AND AVOID DEATH OR GERRIQUE INJUSTY UP AND AVOID AVOID AND AVOID AVOID AND AVOID AVOID AVOID AVOID AVOID AND AVOID AVOI

D-195 Rear Fender-Left of Seat

D-197 Rear Fender-Right of Seat

D-190 ROPS front left upright



D-194
ROPS front right upright

CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust from this product contains chemicals, known to the state of California, to cause cancer, birth defects, and other reproductive harms.

D-187

D-187
Gauge panel - Center



D-147

Right Frame Rail above Directional Pedal



D-193
Right Frame Rail ahead of Exhaust Pipe



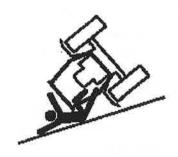
D-192 Right Fender next to Fuel Fill



D-196
Right Side of Throttle
Control

AVOID INJURY FROM ROLLOVER ACCIDENTS!

- ALWAYS WEAR YOUR SEAT BELT WHILE OPERATING THIS MACHINE.
- DO NOT ATTEMPT TO JUMP CLEAR OF A TIPPING MACHINE SERIOUS OR FATAL CRUSHING INJURIES WILL RESULT. THIS MACHINE MAY TIP OVER FASTER THAN A PERSON CAN JUMP FREE.



TO AVOID ROLLOVERS:

- Be careful when operating on a slope.
- Avoid sharp turns at high speed.
- Balance loads so weight is evenly distributed and load is stable.
- Carry loads close to the ground to aid visibility and lower center of gravity.

DO NOT OVERLOAD: Know capacity of machine.

Be careful when operating at the edge of an excavation, trench, drop-off and loading or unloading from a trailer.



AVOID INJURY FROM BACK OVER ACCIDENTS!

- BEFORE MOVING MACHINE, BE SURE ALL PERSONS ARE CLEAR OF AREA.
- ALWAYS BE ALERT FOR BYSTANDERS MOVING INTO THE WORK AREA. SIGNAL TO WARN BYSTANDERS BEFORE MOVING MACHINE.
- WHEN USING A SIGNAL PERSON, KEEP PERSON IN VIEW AT ALL TIMES. BE SURE SIGNAL PERSON IS CLEAR BEFORE BACKING UP.

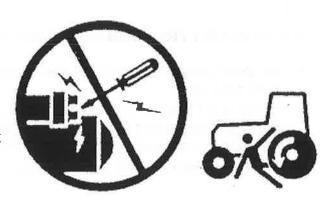


TO AVOID BACK OVER ACCIDENTS:

- Always look around before you back up. Be sure that everyone is clear of machine.
- Use a signal person when backing up if view is obstructed. Always keep signal person in view.
- Learn the meaning of all flags, signs and markings used on the job and who has the responsibility for signaling.
- Dust, heavy rain, fog, etc., can reduce visibility. As visibility decreases, reduce speed and use proper lighting.

PREVENT MACHINE RUNAWAY

- Avoid possible injury or death from machine runaway.
- Do not start engine by shorting across starter terminals.
- Never start engine while standing on the ground. Start engine only from operator's seat with transmission in neutral and park brake engaged.



AVOID INJURY FROM ROLLAWAY ACCIDENTS

- To prevent rollaway, always make sure machine is properly secured before leaving operator's seat.
- Death or serious injury may result if you attempt to mount or stop a moving machine.

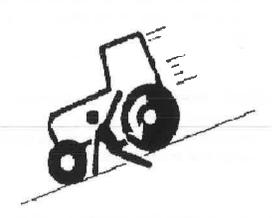


- Park machine on level ground.
- Engage park brake.
- Lower all equipment to ground.
- Stop the engine.
- Block the wheels if you park on a grade and position machine to prevent rolling.

USE SEAT BELT PROPERLY

- Use seat belt when operating machine to reduce the chance of injury from an accident such as a rollover.
- It is important to use the seat belt on ROPS equipped machines to minimize the chance of injury from an accident such as a rollover.
- Keep the seat belt in good condition.
- Carefully examine buckle, webbing and attaching hardware.
- Be sure that attaching hardware is in place.

REPLACE THE SEAT BELT IF IT DOES NOT OPERATE PROPERLY, IS DAMAGED, WORN OR DETERIORATED IN ANY WAY.





USE HANDHOLDS AND STEPS

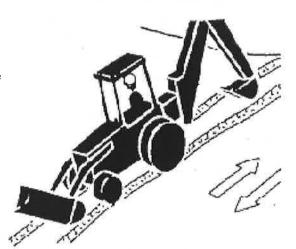
- **DO NOT** mount tractor from the right side.
- Falling is a major cause of personal injury.
- Always face the machine and use a three-point contact when mounting or dismounting the machine.
- Never jump either on or off the machine.
- Never mount or dismount a moving machine.
- Be careful of slippery conditions on platforms, steps and handrails when mounting or dismounting the machine.



DRIVE MACHINE SAFELY

AVOID DRIVING ON HILLSIDES OR STEEP SLOPES

- Set backhoe boom lock and swing lock to center the boom before driving.
- This is a potential rollover hazard and could result in a serious injury or possibly death.
- If you must drive on steep hillsides, moving the backhoe to the uphill side of the machine may make the machine more stable, depending upon working conditions.



DRIVE CAREFULLY:

- On slopes (avoid if at all possible)
- Where space is limited
- Over rough ground, curbs and tracks
- Near a ditch or excavation ALWAYS!

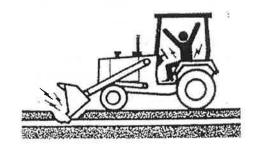
FOR TRAVELING:

- Carry loader bucket low.
- Never carry passengers.



Before digging:

- Check location of electrical cables
- Gas lines
- Water and sewer lines
- Avoid accidental machine movement



Before changing seats to operate the backhoe:

- Engage park brake.
- Lower loader bucket to the ground.

After changing positions to the rear backhoe seat:

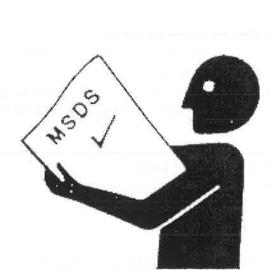
- Lower stabilizers to the ground.
- Lift rear tires off the ground so as to remove the weight from the tires.

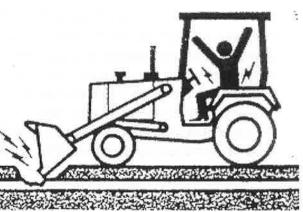
Otherwise, from the loader operator seat:

- Raise loader bucket and stabilizers
- Drive machine forward to change position
- Properly secure machine after each move.
- DO NOT dig under stabilizers!
- Stabilizers must be set on firm surfaces. Be alert to possible machine movement when raising stabilizers and loader bucket.
- Avoid swinging bucket to the downhill side of the machine when digging on a slope.
- Dump soil on the uphill side. If not, the machine has a possibility for rollover.
- Move boom slowly when raising loaded bucket to full height.
- Clear all persons from area of operation and machine movement.

HANDLE CHEMICAL PRODUCTS SAFELY

- Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with CONTRACTOR equipment include such items as lubricants, coolants, paints and adhesives.
- A Material Safety Data Sheet (MSDS) provides specific details on chemical products, physical and/or health hazards, safety procedures and emergency response techniques.
- Check the MSDS before you start any job using a hazardous chemical.
- Follow recommended procedures and only use recommended and approved equipment.





WARN OTHERS OF SERVICE WORK

- Unexpected machine movement can cause serious injury or even
- Before performing any work on the machine, attach a "DO NOT **OPERATE**" tag to the steering wheel.

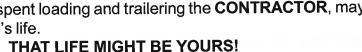


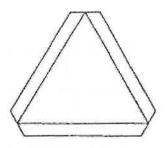
USE SAFETY LIGHTS AND DEVICES

- Install and use all safety lights and devices necessary to assure safe operation and local compliance.
- Keep all safety items in good condition. Replace any missing or damaged parts immediately.

THE CONTRACTOR SHOULD NOT BE DRIVEN ON PUBLIC ROADS FOR ANY REASON.

- Trailer to job sites or from one work location to another.
- Slow moving vehicles, such as the CONTRACTOR, present a hazard that, if involved in an accident, could result in serious injury or possibly death.
- A few minutes spent loading and trailering the CONTRACTOR, may save some one's life.





SLOW MOVING VEHICLE

PROTECT AGAINST FLYING DEBRIS

Wear safety glasses or goggles to protect from flying debris.



WEAR PROTECTIVE CLOTHING

- Wear close fitting clothing and safety equipment appropriate to the job.
- Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



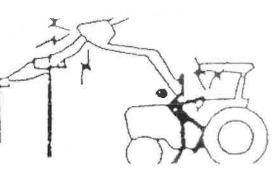
PROTECT AGAINST NOISE

- Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



AVOID POWER LINES

Keep away from power lines. Serious injury or death may result. Never move any part of the machine or load closer to power lines than 3 m. (10 ft.) plus twice the line insulator length.



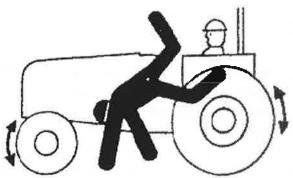
BEWARE OF EXHAUST FUMES

- Prevent asphyxiation. Engine exhaust fumes can cause sickness or death.
- If you must operate in a building, be sure there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring in enough outside air into the area.



KEEP RIDERS OFF MACHINE

- Only allow the operator on the machine. Keep riders off.
- Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine.
- Riders also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.



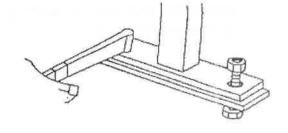
HANDLE FUEL SAFELY - AVOID FIRES

- Handle fuel with care, it is highly flammable. Do not refuel machine while smoking or when near open flame or sparks.
- Always stop engine before refueling machine.
 Do not fill fuel tank inside any building structure.
 Always attempt to refuel in the out of doors.



KEEP ROPS INSTALLED PROPERLY

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) has been loosened or removed for any reason.



TORQUE ALL 1/2" MOUNTING BOLTS TO 37 lb./ft.



CAUTION

This Roll Over Protective Structure (ROPS) has been certified to industry and/or government standards. Any damage or alteration to ROPS, mounting hardware, or seat belt voids the certification and will reduce or eliminate protection for the operator in the event of a rollover. The ROPS, mounting hardware, (proper torque-37 lb./ft) and seat belt should be checked after the first 100 hours of machine operation and every 500 hours thereafter for any evidence of damage, wear, or cracks. In the event of damage or alteration, the ROPS must be replaced prior to further operation of the machine

CONTRACTOR/TLB

GENERAL

The Allmand **CONTRACTOR** heavy-duty, compact tractor-loader-backhoe is designed for its size and maneuverability to excavate materials in areas that larger tractor-loader-backhoes can not access. The front end loader is generally used for excavating, leveling, and for back filling trenches and other types of excavations. The backhoe is generally used for excavation of soil to form a trench or opening, depending upon operator's needs, in areas where limited space is a factor.

The base unit consists of a chassis, engine, hydrostatic transmission drive system, tires and wheels, steering system, front end loader, hydraulic system, backhoe and Roll Over Protective Structure (ROPS).

CHASSIS WITH INTEGRAL HYDRAULIC RESERVOIR

The chassis frame is constructed of formed steel and all components are welded in rigid fixtures to insure consistency of each part produced.

The hydraulic reservoir consists of the left and right vertical frame posts and the upper and lower cross members. Provisions have been made in the reservoir for two 100 mesh suction strainers, a 1 1/2" oil fill opening, 1/2" NPT magnetic drain plug and oil level sight gauge. The reservoir accommodates 12 gallons of hydraulic fluid and has room for the oil to expand.

The chassis includes mounting provisions for solid rear axle and drive plate, as well as the oscillating front axle.

The chassis also includes mounting provisions for a certified ROPS which is attached with specified hardware. The ROPS can be removed and replaced without affecting certification. Refer to page 12 of this manual for instructions on this operation.

HYDROSTATIC TRANSMISSION DRIVE SYSTEM

The machine is driven by an Eaton infinitely variable hydrostatic transmission consisting of a variable displacement pump and a fixed displacement motor. The pump unit includes a servo control valve.

Control of the variable piston displacement pump is the key to controlling vehicle speed. Prime mover horsepower is transmitted by the pump when the operator moves the directional control pedal. When the variable piston pump swash plate is tilted, a positive stroke to the piston is created.

This in turn, at any given input speed, produces a certain flow from the pump. This flow is transferred through high pressure lines to the motor. The ratio of the volume of flow from the pump to the fixed displacement of the motor will determine the speed of the motor output shaft.

Speed of the output shaft is controlled by adjusting the displacement flow of the transmission. Load (working pressure) is determined by the external conditions (grade, ground conditions, etc.) and this establishes the demand on the system.

Pump and motor are contained in separate housings. Oil is drawn directly from the reservoir into the hydrostatic charge pump. This oil then passes through a 500 psi 5 micron fiberglass pressure filter. This filter has an internal bypass valve that bypasses fluid to the reservoir when the filter becomes plugged.

The motor drives a solid drive coupler bolted directly to a limited slip differential. Both the motor and differential are rigid mounted in the frame.

The park brake is a 1" band type brake which, when activated by the lever mechanism, restrains a formed steel drum mounted between the drive motor and the rear differential. The brake is activated by an adjustable hand lever conveniently located to the right of the operators seat.

POWER STEERING SYSTEM

The power steering is fully fluid linked. It consists of manually operated directional control valve and a steering cylinder that is attached to the left and right steering arms. Fluid pressure is supplied from the priority port in the gear pump to the steering control valve and is directed to the appropriate side of the steering cylinder. The steering control orbital valve is a non-load reaction design which holds the axle position whenever the operator releases the steering wheel.

HYDRAULIC SYSTEM

Reservoir" section. Total system capacity is 12 gallons. Oil leaves the reservoir through two separate suction lines: one for the hydrostatic drive system and the other supplies the auxiliary hydraulic pump. The hydrostatic drive system draws fluid from the lower reservoir cross member through the left 100 mesh suction strainer. The hydraulic transmission offers infinitely variable control of speed and direction. The operator has complete control of the CONTRACTOR with the control foot pedal for starting and stopping, in forward and reverse motion.

The auxiliary hydraulic circuit draws fluid from the lower reservoir crossmember through the right 100 mesh suction strainer. Fluid enters the accessory pump which is a 10.5 g.p.m. gear type pump with a 2.5 g.p.m. priority circuit with a 1500 p.s.i. relief valve.

The priority circuit delivers fluid to the steering control valve which is an open center valve. Fluid out of the steering control valve returns to the reservoir in the right vertical frame post. The remainder of the flow, approximately 8 g.p.m., enters the manual control valve which supplies fluid for control of the loader arm cylinders and loader bucket cylinders. The valve is equipped with a 2500 p.s.i. relief valve. Fluid to the backhoe is supplied by a power beyond port off the hydraulic control valve for the loader.

The loader control valve and backhoe control valve, both return through a 5 micron return filter and an oil cooler with a pressure bypass. The cooled oil is then returned to the left vertical frame post of the reservoir. As in all hydraulic systems, reliability depends upon clean and cool oil.

LOADER

The loader assembly is manufactured to handle most excavation and landscaping projects. Critical locations on the loader arms and cylinder mounts are reinforced with plate steel to add durability. The pivot points of the loader are constructed of high strength steel to create a wear resistant joint.

The bucket assembly is manufactured to provide a structurally stable container to excavate, transfer, and load most types of product. The cutting edge is reinforced by a 1/2" thick grader blade material spanning the full width of the bucket. The bucket working load capacity is 1/3 cubic yard.

TIRES and WHEELS

The **CONTRACTOR** is standard equipped with, $23 \times 8.5 \times 12$ tubeless tires mounted on 10×6 steel wheels with a 6 - 6" bolt pattern, for the front and 31×15.5 15 tubeless tires mounted on 15×13 " steel wheels with a 5 - 5.5" bolt pattern, for the rear. Optional rear tires are 9.5×16 , 6 ply, on 16×7 " steel wheels with 5 - 5.5" bolt pattern. Recommended tire pressure for the rear tires is 25 psi minimum, 45 psi max. Inflate front tires to manufacturer's recommended pressures.

BACKHOE

Refer to the CONTRACTOR 408A Backhoe Operators Manual, by **BRADCO**, for any general information.

ENGINE - KOHLER - GASOLINE

Power is provided by a Kohler CH25, 44.0 cu. in., 25 H.P. or a Kohler CH20, 38.1 cu. in., 20 H.P. four-cycle, V-twin cylinder, air-cooled gasoline engine. (Horsepower rating is made with engine at 3600 RPM) Engine includes: low oil pressure sensor, 12 VDC electrical system with starter and 15 amp. regulated battery charging circuit. Features llike overhead valve design, full pressure lubrication, maintenance-free electronic ignition, quick and easy access to routine service areas and use of quality, long-lasting components provide a durable and dependable power source.

INSTRUMENT PANEL AND CONTROLS

IMPORTANT: When the Low Engine Oil Pressure

indicator is activated, stop engine immediately and investigate cause of problem. Do not restart engine until problem has been corrected.

IMPORTANT: Indicator light will be ON when

switch is in RUN position and OFF after the engine starts and switch returns to the RUN position.

IMPORTANT: When Engine Alternator Low

Volts Indicator is activated, a problem is developing. It is not necessary to stop the engine immediately, but the cause should be investigated as soon as pos-

sible

NOTE: Engine will not start unless foot pedal is in the neutral position.

A MANUAL CHOKE CONTROL

B KEY SWITCH

C LEFT FOOT REST

D OPTIONAL FRONT WHEEL ASSIST PUSHBUTTON

ETHROTTLE CONTROL

F HOUR METER

G 2" PLASTIC PLUG

H WORKLIGHT TOGGLE

SWITCH

I LOW ENGINE OIL PRESSURE

INDICATOR

J HYDRAULIC OIL LEVEL SIGHT

GLASS

K LOADER HYDRAULIC

CONTROL LEVER

L FOOT PEDAL-FORWARD

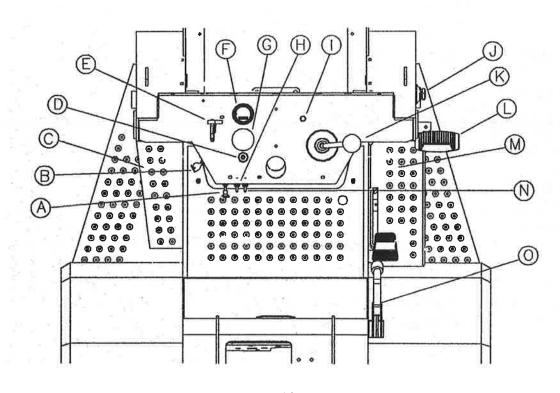
REVERSE

M RIGHT SIDE FOOT REST

N OPTIONAL FRONT WHEEL

ASSIST TOGGLE SWITCH

O PARK BRAKE



OVERALL DIMENSIONS

Weight 3460 lbs. (1456 kg)
 Length 16' 06" (5.03 m)
 Height 82" (2.08 m)
 Width 56" (1.42 m)
 Wheelbase 64.2" (1.63 m)
 Ground Clearance 9" (22.8 cm)
 Turning Radius 9' 02" (2.79 m)

TRACTOR

Kohler Command 20 or 25 Engine Transmission Eaton HD Hydrostatic Ross ME-18 Drive motor Eaton Char-Lynn Power steering Dana 44 Limited Slip Differential Hydrostatic Brakes Band type Parking brake 0 to 4.8 MPH (8 km/h) Speed range Gear pump Auxiliary hydraulic pump 8 gpm @ 2500 psi Auxiliary hydraulic output 6.5 gallons (24.6 L) Fuel tank 12 gallons (45.4 L) Hydraulic oil reservoir Tire size (Front) 23 x 8.5 - 12 31 x 15.5 - 15 Tire size (Rear) 20 p.s.i. Tire Pressure (Front) 20 p.s.i. Tire Pressure (Rear)

LOADER

 Maximum lift height (Bucket Pivot) 	90" (2.32m)
 Clearance with bucket dumped 	73" (1.85 m)
Reach @ maximum height	31" (78.8 cm)
Reach @ grade	49.5" (1.26 m)
 Bucket rollback angle 	35 degrees
■ Bucket dump angle	35 degrees
 Digging depth 	4" (10.2 cm)
■ Lift capacity	2100 lbs. (953 kg)
 SAE Lift capacity 	1500 lbs. (681 kg)
 Breakout force 	3400 lbs. (1542 kg)
 Bucket width 	56" (1.2 m)
 Bucket capacity 	1/2 yd (.38 cu. m)

Specifications are subject to change without notice

HYDROSTATIC TRANSMISSION: EATON – MODEL 70145

Displacement
Flow @ rated speed and pressure
Speed; Input
Power, Input @ 3600 RPM

1.44 in³/r (23.6 cm³/r)
20 GPM (75.7 L/min.)
3600 RPM (Max.)
35 HP (26 kw)(Max.)

Operating pressure (Max.) 3000 PSI (207 Bar) - Cont. 5000 PSI (345 Bar) - Inter.

Pump element Piston

Operating temperature 225 deg.F(107 deg.C)(Max.)

ENGINE-KOHLER COMMAND 20 COMMAND 25 **CH 20S** Model **CH25S** PA-64563 Spec PA-68554 3.03" (77 mm) Bore 3.27" (83 mm) 2.64" (67 mm) Stroke 2.64" (67 mm) 38 cu. in. (624 cc) 44.0 cu.in. (725 cc) Displacement Power @ 3600 RPM 20 HP* (14.9 kw) 25 HP* (18.4 kw) Maximum torque @2400 RPM 32 ft./lbs. (44 N/m) 39.5 ft./lbs. (54 N/m) Compression ratio 8.5:1 9.0:1 Weight 90 lbs. (41 kg) 94 lbs. (43 kg) Oil capacity (with filter) 2.1 US quarts (2 L) 2.1 US quarts (2 L) Lubrication Full Pressure w/Full Flow Filter Full Pressure w/Full Flow Filter

LOW SPEED HIGH TORQUE MOTOR - (ROSS ME Series)

Motor element
 Geroler

FUEL REQUIREMENTS

Your KOHLER engine is designed to use unleaded gasoline with a pump sticker octane rating of 87% or higher. Gasohol (up to 10% ethyl alcohol, 90% unleaded gasoline by volume) and MTBE (Methyl Tertiary Butyl Ether), unleaded gasoline (up to maximum of 15% MTBE by volume) are approved fuel for Kohler engines. Other gasoline blends are not approved. Refer to the Kohler Operator's Manual for more detailed fuel requirements.

ENGINE OIL REQUIREMENTS

Use a high quality detergent engine oil of API (American Petroleum Institute) service class SG or SH. Use of 5W-20 or 5W-30 (synthetic oil is acceptable) for operation in temperatures of 32° F. and below are recommended. Use of 10W-30 or 10W-40 for operation in temperature 0° F. and above are recommended. Refer to the Kohler Operator's Manual for more detailed engine oil requirements.

HYDRAULIC OIL REQUIREMENTS

Use a high quality multipurpose fluid with an SAE 20W/ISO 68 rating.

NOTE: The CONTRACTOR has been factory filled with HYDROCLEAR 9836.

^{*}Horsepower ratings are established in accordance with Society of Automotive Engineers - Small Engine Test Code - J1349 GROSS.

ENGINE BREAK-IN

OBSERVE ENGINE OPERATION CLOSELY

IMPORTANT: Become thoroughly familiar with the sound and feel of your new machine. Read and understand the Engine Instruction Manual included with your **CONTRACTOR**. Refer to the Engine instruction manual for seasonal fuel and oil viscosity recommendations.

NOTE: Engine is warranted to the original owner by the manufacturer.

OPERATOR RESPONSIBILITIES

- Check engine oil daily.
- Operate engine at normal loads.
- Check indicator lights and gauges (if equipped) frequently during operation.
- Avoid excess engine idling.
- Perform all engine maintenance in the Engine Instruction Manual.

NOTE: The engine owner is responsible for the performance of the required maintenance as defined by the engine manufacturer in the written instructions found in the Engine Instruction Manual provided with the engine.

CHECK INDICATORS BEFORE STARTING

Turn key switch clockwise and hold in the "RUN" position. All indicator lights must light. If any indicator fails to light, the bulb may be burned out. If bulb is not burned out and indicator fails to light up, see your authorized dealer or call the factory.

NOTE: Start engine only from the operator's seat, with the foot pedal in the neutral position and the park brake engaged.

PRE-START CHECKLIST

- CHECK oil level, add if low. Do not overfill.
- CHECK fuel level, add if low.
- CHECK cooling air intake areas and external surfaces of engine. Make sure they are clean and unobstructed.
- CHECK that the air cleaner components and all shrouds, equipment covers and guards are in place and securely fastened.

CHECK forward / reverse pedal. Make certain that the pedal is exactly in neutral; if not, the engine will not start.



WARNING: LETHAL EXHAUST GASES

Engine exhaust gases contain poisonous carbon monoxide. Carbon monoxide is odorless, colorless and can cause death if inhaled. Avoid inhaling exhaust fumes.

NEVER RUN THE ENGINE IN A CLOSED BUILDING OR CONFINED AREA WITHOUT HAVING ADEQUATE VENTILATION!

ENGINE OPERATION

COLD WEATHER STARTING TIPS

- 1. Be sure to use the proper oil for the temperature expected.
- 2. Set speed control at part throttle position.
- 3. If possible warm the battery for more starting capacity.
- 4. Use fresh fuel at all times. Do not use diesel left over from summer.

COLD WEATHER WARM-UP

In extremely cold weather conditions, an extended warm-up period will be necessary. Avoid operation of hydraulic systems until engine is thoroughly warmed up and all ice, snow and frozen mud has been removed from the machine.

NOTE: When hydraulic oil is cold it moves very slowly. Do not attempt machine operation until hydraulic oil has warmed and hydraulic systems function at close to normal times. Run engine at 1/2 speed for 15 to 20 minutes. Cycle all hydraulic systems to distribute warmed oil until all systems operate freely.

COLD WEATHER STARTING

1. For a Cold Engine: Place throttle control midway between the "slow" and "fast" positions.

For a Warm Engine: (Normal operating temperatures) Place throttle control midway between the "slow" and "fast" positions.

NOTE: Do not place the choke in the "on" position until after the engine has been turned over with the starter. Possible flooding of the engine may occur if the choke is placed in the fully "on" position before starting to crank the engine.

- 2. Start the engine by activating the key switch. Release the switch as soon as the engine starts.
- **NOTE:** Do not operate starter for more than 10 seconds without allowing 30 seconds to pass between starting attempts. Possible starter damage could result from excessive heat caused by cranking too long.
 - 3. Warm up the engine at mid throttle without load. Insufficiently warming an engine can shorten its service life.

FOR A COLD ENGINE: Gradually return the choke control to the "off" position after the engine starts and warms up.

NOTE: If the engine develops sufficient speed to disengage the starter but does not keep run ning (a false start), the engine rotation must be allowed to come to a complete stop before attempting to restart the engine. If starter is engaged while the flywheel is rotating, the starter pinion and flywheel ring gear may clash, resulting in damage to the starter or flywheel ring gear.

NOTE: If the starter does not turn the engine over, stop cranking immediately. Do not make further attempts to start the engine until the condition is corrected. See your local Kohler Engine Service Dealer for trouble analysis

FOR A WARM ENGINE

Return choke to the "off" position as soon as the engine starts.

IMPORTANT: Always check all the engine warning lights when starting. If the oil pressure light remains on, immediately stop the engine and check for the cause

STOPPING THE ENGINE

Before leaving the operator's station:

- 1. Park the machine on a level surface and lower loader bucket, backhoe bucket and any other accessories to the ground.
- 2. Engage park brake.
- 3. Place the throttle midway between the "slow" and "fast" position. Allow the engine to run at least 15 seconds before stopping the engine.
- 4. Turn the key switch to the "off" position.

Move hydraulic control levers to release hydraulic pressure from the system.

LICAUTION: PREVENT POSSIBLE INJURY FROM UNEXPECTED MACHINE MOVEMENT. NEVER RELY ON NEUTRAL POSITION OF FOOT PEDAL ALONE TO KEEP THE MACHINE FROM ROLLING. THE MACHINE CAN UNEXPECTEDLY ROLL OR MOVE UNDER POWER RESULTING IN SERIOUS INJURY OR DEATH. ALWAYS ENGAGE PARK BRAKE TO HOLD MACHINE STATIONARY!

ENGINE ANGLE OF OPERATION:

The **KOHLER COMMAND** engine can be operated at angles up to 25 degrees.

Check oil level to assure crankcase oil level is at the full mark.

NOTE: Do not operate this engine continuously at angles exceeding 25 degrees in any direction. **Serious engine damage can occur from insufficient oil supply**.

COOLING:

NOTE: If debris builds up on the grass screen or other cooling air intake areas, stop the engine immediately and clean. Running this engine with blocked or dirty air intake and cooling areas can cause extensive damage due to overheating.

ENGINE SPEED:

NOTE: Do not tamper with the governor setting to increase the maximum engine speed. Over speed is hazardous and will void engine warranty. The maximum allowable high idle speed for this engine is **3600 RPM** with no load.

BATTERY:

- The CONTRACTOR is shipped with a 12 volt, group 24 battery with a 675 CCA rating.
- Check battery electrolyte level regularly and fill as needed.
- Replace with the same group size and amp rating when replacement is needed.
 NOTE: The CONTRACTOR electrical system is a 12-volt negative (-) ground.

CAUTION: An explosive gas is produced while batteries are in use or being charged. Keep flames or sparks away from the battery area. Make sure batteries are charged in a well- ventilated area. Always wear eye protection when servicing or handling batteries.

OPERATING THE CONTRACTOR TLB

DRIVING ON PUBLIC ROADS

Become familiar with local laws and ordinances affecting driving on highways. Use "slow moving vehicle" emblems to alert motorists.

CAUTION: USE OF A SEATBELT IS REQUIRED WHEN THE CONTRACTOR IS IN OPERATION TO MINIMIZE THE CHANCE OF INJURY FROM AN ACCIDENT SUCH AS ROLL OVER.

OPERATING THE TRACTOR

- 1. Fasten seat belt
- 2. Retract backhoe bucket and dipperstick functions.
- 3. Raise backhoe boom, move it to the center, and engage boom lock.
- 4. Raise stabilizers
- 5. Switch position to the front facing seat.
- 6. Raise the loader bucket off the ground and roll bucket back.

PARKING THE MACHINE

Before leaving the operator's station, do the following:

- 1. Park the machine on a level surface.
- 2. Lower all equipment to the ground.
- 3. Move the throttle to the "slow" position.
- 4. Move the forward / reverse pedal to the neutral position.
- 5. Engage park brake.
- 6. Operate engine at 1/2 speed without load for at least 15 seconds.
- 7. Turn the key switch to the "off" position, and remove key.
- 8. Release all hydraulic pressure from the system by moving all hydraulic controls until loader bucket and backhoe are resting on the ground or on the stops.

CAUTION: PREVENT POSSIBLE INJURY FROM UNEXPECTED MACHINE MOVEMENT. NEVER RELY ON NEUTRAL POSITION OF FOOT PEDAL ALONE TO KEEP THE MACHINE FROM ROLLING. THE MACHINE CAN UNEXPECTEDLY ROLL OR MOVE UNDER POWER RESULTING IN SERIOUS INJURY OR DEATH. ALWAYS ENGAGE PARK BRAKE TO HOLD MACHINE STATIONARY! IF PARKING ON A SLOPE, PUT BLOCKS ON THE DOWNHILL SIDE OF THE WHEELS TO PREVENT MOVEMENT.

FORWARD / REVERSE PEDAL

To change direction of movement on the **CONTRACTOR** use the forward / reverse pedal, located on the right side of the tractor frame.

NOTE: Reduce speed when changing directions of travel for safety.

- 1. Lightly depress the forward pedal with the toe of the right foot to travel forward.
- 2. Lightly depress the rear pedal with the heel of the right foot to travel in reverse.

NOTE: By lightly depressing the pedals forward and reverse, torque is developed to be transferred to the drive wheels by the hydraulic motor and differential set-up.

The further the forward and reverse pedals are depressed, the faster ground speed. Torque will decrease as ground speed increases.

3. Move the forward / reverse pedal to the neutral position to stop.

NOTE: The pedal returns to a neutral detent position when pressure is released from the forward and reverse pedals.

LOADER CONTROL VALVE LEVER

The loader control valve returns to the neutral position when released, except when in the float position.

A - Move the control valve lever forward to lower loader arms.

AA - Move the control valve lever forward past the detent. This is the

float position.

- B Move the control valve lever back to raise the loader arms.
- C Move the control valve lever left to roll back the bucket.
- **D** Move the control valve lever right to dump the bucket.

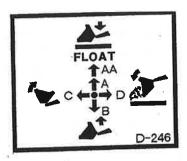
For faster loader cycle times follow these simple tips:

- 1. Run engine at fast idle.
- 2. Move the loader boom and the bucket at the same time.
- 3. **Without using force**, move control valve lever fully toward each function.



OPERATING TIPS

- Reduce speed when driving over rough terrain, carrying heavy loads, or working in a congested area.
- Whenever possible, avoid obstacles, such as rough terrain, rocks, curbs and ditches.
- In general, by decreasing machine speed the control of the machine increases.
- When the backhoe is not in use, the backhoe boom must be locked in the fully raised position. Curl the backhoe bucket up and retract dipperstick.
- When driving the CONTRACTOR, carry the loader bucket low for good visibility and machine stability.
- Walk the job site to uncover any hazards and to plan the job.
- Practicing good housekeeping on the job site will help maximize machine stability, reduce operator fatigue, and increase productivity.
- Material that is loose and fragmented dumps much easier than material that is hard and compacted.
- Excavate material in thin layers rather than jamming it into the bucket. This will allow the
 material to break up as it enters the bucket. This is especially important when moving sticky,
 wet materials



- Clean the bucket by hand, if at all possible. If rapping the bucket against the stops is the only option, then do so using MINIMUM force, to prevent cylinder damage.
- DO NOT try removing stuck material from the bucket by striking it against the ground or another object.

PREPARING TO OPERATE BACKHOE

- 1. Position loader bucket flat on the ground. Lower loader arms to raise wheels off the ground.
- 2. Engage park brake.
- 3. Switch seats to position operator facing the backhoe.
- 4. Lower stabilizers to level unit.
- 5. Disengage swing lock and backhoe boom lock.

PREPARING TO OPERATE LOADER AFTER OPERATING BACKHOE

- 1. Retract backhoe bucket and dipperstick functions. Raise backhoe boom.
- 2. Center boom and engage boom lock.
- 3. Raise stabilizers.
- 4. Switch seats to position operator facing the front end loader.

Roll back loader bucket until bottom is parallel with the ground.

MAINTENANCE INSTRUCTIONS

<u>/i\</u>

WARNING: Accidental Starts!

Before servicing the engine or equipment, always remove the ignition keys to insure there will not be any accidental start up. Make sure the equipment is in neutral and park brake set.

MAINTENANCE SCHEDULE

These required maintenance procedures should be performed at the frequency stated in the table. They should also be included as part of any seasonal tune-up.

NOTE: Every 500 hours of operation, separate the pump from the engine. Clean the splined areas and lightly grease the male portion of the pump spline. Use either Dow Corning G-N Metal Assembly Paste or #77 Assembly Paste. When remounting the pump, be certain the mating surfaces are clean and correctly aligned.

	HOURLY INTER			RVAI	RVALS		
NO.	CHECKPOINTS	5	8	100	200	500	1000
1	Check engine oil level, fill if needed		0				
2	Change engine oil with seasonal viscosity	0		0			
3	Clean air cleaner element	T		0			
4	Check battery electrolyte level			0			
5	Replace oil filter cartridge	0			0		
6	Remove cooling shrouds and clean*			0			
7	Check oil cooler fins, clean as necessary			0			
8	Check fuel tank for sediment, clean as necessary			0			0
9	Check spark plug condition and gap				0		
10	Have UTE bendix starter drive serviced**					0	
11	Check engine valve clearance**					0	
12	Replace air cleaner element					0	
13	Check electrical wiring for damaged or loose connections		0	0			
14	Tighten tie rod ends to 35 ft/lb.	0	0	0	0	0	0
15	Tighten lug nuts to 80 ft/lb.	0	0	0	0	0	0
16	Check hydraulic oil level, fill if necessary		0				
17	Check all fasteners for tightness	0	0	0			
18	Check backhoe bucket teeth, replace if necessary		0				
19	Grease all swivel points (loader and backhoe)		0				
20	Grease drive hub coupler				0		
21	Grease right foot pedal mount and center bearing mount			0			
22	Check fuel filter, replace if necessary			0			
23	Check hydraulic hoses for damage and loose connections	0	0	0			0
24	Change hydraulic return filter (see note below)				0		
25	Change hydraulic fluid and clean suction strainers				0		0
26	Lubricate crankshaft splined insert (see above)					0	
27	Check loader bucket stops for damage			0			

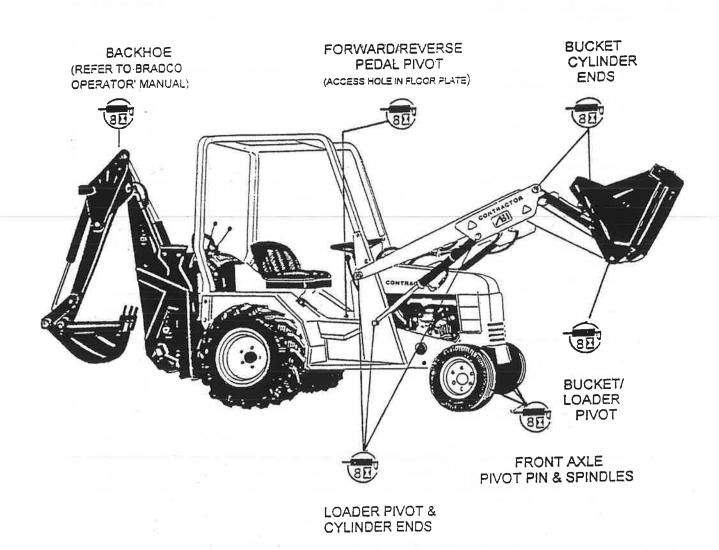
- O Indicates that jobs must be done after the first 5 hours respectively.
- * Perform these maintenance procedures more frequently under extremely dusty and dirty working conditions.
- **-Have a Kohler Engine Service Dealer perform this service.

 Hydraulic fluid should be changed every 1000 hours after the first 250 hour change.

NOTE: All daily checks should be done with every engine oil change.

NOTE: Change hydraulic return filter at the first 50 hours then every 200 hours.

The following diagram will direct maintenance personal to the lubrication points that will need to be greased on a daily schedule. Use of a multi-purpose grease is recommended.



PREPARATIONS FOR STORAGE

- 1. When preparing the **CONTRACTOR** for storage, first remove floor plate and steering column cover. Wash off all dirt and grease from all the major components and connecting hoses. Coat the exposed cylinder rods with grease and grease all the grease fittings.
- 2. IMPORTANT: When washing the CONTRACTOR, allow engine and hydraulic system to cool before washing. Cold water on a hot engine or hydrostatic pump can cause costly damage. DO NOT direct the stream of water, when washing, directly at the hydraulic system breather, it is possible to get water into the hydraulic system and contaminate the fluid.
- 3. Make sure the battery is fully charged, battery terminals are clean and have a corrosion protectant applied.
- 4. Change the engine oil and run for 5 minutes to allow the oil to penetrate to all the parts.
- 5. Drain the fuel system, fuel tank, fuel pump, and carburetor, or add a fuel stablilizer to prevent gasoline from gumming up the fuel system during storage.
- 6. Place the CONTRACTOR in a clean, dry place and cover if at all possible.



GENERAL

Proper troubleshooting begins with an organized approach to the problem at hand. Begin with investigation of the most probable cause, following the guidelines below.

Study the problem thoroughly before taking action:

- Did warning signs precede the problem? If so, what were they? What would they indicate?
- Is scheduled maintenance current on all parts and systems involved?
- Has similar trouble occurred before? What action was taken at the time?
- Can the engine be operated without further damage?



IF RUNNING INSPECTION MUST BE MADE, GET ASSISTANCE. OPERATOR SHOULD REMAIN SEATED ON MACHINE THROUGHOUT INSPECTION. SET PARKING BRAKE. MAKE SURE TRANSMISSION IS IN NEUTRAL POSITION.

Check the most convenient things first:

- Don't begin major work before checking all other possibilities.
- Reconsider all known facts and clues before proceeding to more in-depth work.

Correct the basic cause:

• Remember, failure of a certain part may be caused by a malfunction of another part or system.

SCHEMATICS:

This troubleshooting section incorporates electrical schematic diagrams formatted for ease of use by maintenance and for the training of personnel.



THE TROUBLESHOOTING CHART AND PROCEDURES OUTLINED IN THIS SECTION SHOULD NOT BE ATTEMPTED BY OTHER THAN EXPERIENCED MECHANICS OR PERSONNEL UNDER THE DIRECT SUPERVISION OF AN EXPERIENCED MECHANIC. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO EQUIPMENT AND/OR INJURY OR DEATH TO PERSONNEL.

TROUBLESHOOTING CHART

The troubleshooting chart lists problems that might be encountered in the operation of the **CONTRACTOR**. The remedies listed may direct the repairman to a possible faulty component.

A - ENGINE

- For engine troubleshooting charts indicating faults and recommended repair procedures, refer to Manufacturer's Operation and Maintenance Manual.
- If your particular problem is not covered or you are unsure of what steps to take, contact factory for assistance.

C - TRANSMISSION

CONTRACTOR fails to move under power:

- Parking brake set
- Inadequate oil level in hydraulic reservoir
- Control pedal or linkage broken or loose
- Inadequate oil flow through transmission suction filter
- Drive coupling mechanical failure
- Hydrostatic pump failure
- Drive motor failure

CONTRACTOR moves in neutral:

- Control pedal neutral centering device broken or out of adjustment.
- Neutral centering device return spring broken.

For detailed troubleshooting information on hydrostatic transmission, refer to Trouble Shooting Manual, Eaton Hydrostatic Transmissions, available from an Eaton representative or dealer.

C – ELECTRICAL SYSTEM

ENGINE STATUS	VOLTMETER READING	INDICATES	TO CORRECT
RUNNING	13.5 TO 14 VOLTS	NORMAL CONDITION	NONE
RUNNING	LESS THAN 13.5 VOLTS OR MORE THAN 14 VOLTS	ALTERNATOR OR REGULATOR MALFUNCTION	CONTACT DEALER
WON'T START	12 TO 12.5 VOLTS	WEAK BATTERY	CHARGE BATTERY
WON'T START	LESS THAN 12 VOLTS	WEAK BATTERY OR DEFECTIVE BATTERY CELL	CHARGE OR REPLACE BATTERY
STOPPED	EXCESSIVE CURRENT DRAW	SHORT CIRCUIT	INSPECT SYSTEM

D-HYDRAULIC SYSTEM

- Thoroughly review description of hydraulic system, pages 16 and 17 of this text.
- Use logical steps to determine cause of malfunction.
- Identify the function or functions which require troubleshooting.
- If possible, trace malfunction to source: pump, control, motor or cylinder.
- Determine if pressure or volume is inadequate for function as specified.

D-HYDRAULIC SYSTEM (continued)

Hydraulic System Pressures:

Priority circuit (steering)

1500 p.s.i. 2500 p.s.i.

Main circuit

Hydraulic System Flows:

Priority circuit

2.5 g.p.m.

Main circuit

8 g.p.m.

(Main circuit flow determined by R.P.M.)

PROBLEM	POSSIBLE CAUSE	CORRECTION
NO POWER	Inadequate pressure to steering control valve	Inspect or replace priority valve
STEERING	Inadequate pressure to steering control valve	Inspect, clean, or replace relief valve
NO LOADER LIFT OR BUCKET ROLLBACK	Inadequate pressure	Inspect, clean or replace relief valve
	Fluid flow to loader cylinders too high or too low.	Inspect or replace priority valve
INAPPROPRIATE LIFT SPEED	Cold hydraulic fluid	Warm hydraulic fluid by running engine
	Low engine R.P.M.	Move throttle control to fast position to increase R.P.M.

STEERING

Most steering problems can be corrected if the problem is properly defined. The entire steering system should be evaluated before removing any components. The steering control unit is generally not the cause of most steering problems. The following is a list of steering problems along with possible causes and suggested corrections.

PROBLEM	POSSIBLE CAUSE	CORRECTION
	Worn or malfunctioning pump	Replace pump
SLOW	Stuck flow divider	Replace flow divider
STEERING, HARD STEERING, OR	Worn pump compensator allowing system pressure to be too low	Replace pump and compensator
LOSS OF POWER ASSIST	Malfunctioning relief valve allowing system pressure to be too low	Replace the relief valve
	Overloaded steering axle	Reduce the load
WANDER-	Air in the system due to low level of oil, cavitation op pump, leaky fitting, pinched hose, etc.	Correct as needed
VEHICLE WILL	Worn mechanical linkage	Repair or replace
NOT STAY IN A	Bending of linkage or cylinder rod	Repair or replace
STRAIGHT LINE	Loose cylinder piston	Repair or replace
	Severe wear in steering orbitrol	Repair or replace
DRIFTS-VEERS SLOWLY IN ONE DIRECTION	Worn or damaged steering linkage	Replace linkage and align front end

STEERING (continued)

PROBLEM	POSSIBLE CAUSE	CORRECTION
SLIP-SLOW MOVEMENT OF STEERING WHEEL	Leakage of cylinder piston seals or accessory valve between cylinder line or ports.	Replace seals or accessory valve
FAILS TO CAUSE ANY MOVEMENT OF STEERED WHEELS	Worn steering control unit meter	Replace steering control unit
TEMPORARY HARD STEERING OR HANG-UP	*Thermal Shock	Check unit for proper operation and cause of thermal shock
ERRATIC STEERING	Air in system due to low level of oil, cavitation of pump, leaky fitting, pinched hose, etc.	Correct condition and add fluid
"SPONGY" OR SOFT	Air in hydraulic system. Most likely air trapped in cylinders or lines	Bleed air out of system
STEERING	Low fluid level	Add fluid and check for leaks
	Steering column upper shaft is loose or damaged	Tighten steering wheel nut
	Lower splines of column may be disengaged or broken	Repair or replace column
FREE WHEELING— STEERING WHEEL TURNS FREELY WITH NO FEELING	Steering control unit meter has a lack of oil. This can happen on start-up, after repair, or long periods of non- use	Usually starting engine and allowing hydraulic oil to irculate will cure the problem
OF PRESSSURE AND NO ACTION OF STEERED	No flow to steering control unit—Can be caused by:	
WHEELS	Low fluid level	Add fluid and check for leaks
	Ruptured hose	Replace hose
	Internal steering control unit damage due to "Thermal Shock"	Replace the steering control unit
FREE WHEELING— STEERING WHEEL TURNS WITH SLIGHT RESISTANCE BUT RESULTS IN LITTLE OR NO STEERED WHEEL ACTION	Cylinder piston seal blown out.	Determine the cause. Correct the cause and replace the blown seal.
EXCESSIVE FREE PLAY AT STEERING WHEEL	Loose steering wheel nut. Steering column shaft worn or damaged. There should be very little play in the unit itself	Repair or replace steering wheel connection or column
EXCESSIVE FREE PLAY AT STEERED WHEELS	Broken or worn linkage between cylinder and steered wheels	Check anchor points in steering linkage between cylinder and steered wheels
L STEERELL WIDEELS	Leaking cylinder seals	Replace cylinder seals

^{*}Thermal Shock is defined on the following page.

STEERING (continued)

PROBLEM	POSSIBLE CAUSE	CORRECTION
STEERING UNIT LOCKS UP	Large particles in meter section	Clean the unit
STEERING UNIT LOCKS OF	Insufficient hydraulic power	Check hydraulic power supply
	Severe wear and/or broken pin	Replace the unit
STEERING WHEEL	*Thermal Shock	Replace the unit
OSCILLATES OR TURNS BY ITSELF	Parts assembled wrong. Steering unit improperly timed	Correct timing
	Lines connected to wrong ports	Reconnect lines correctly
STEERED WHEELS TURN IN WRONG DIRECTION WHEN OPERTOR ACTIVATES STEERING WHEEL	Lines connected to wrong steering cylinder ports	Reconnect lines correctly

^{*}Thermal Shock - A condition caused when the hydraulic system is operated for some time without turning the steering wheel so that fluid in the reservoir and system is hot and the steering control unit is relatively cool (more than 50*F temperature differential). When the steering wheel is turned quickly the result is temporary seizure and possible damage to internal parts of the steering control unit. The temporary seizure may be followed by total free wheeling.

LOADER LIFT AND BUCKET ROLL BACK

The entire system should be evaluated before removing any components. The following is a list of problems with possible causes and suggestions for correction.

NOTE:

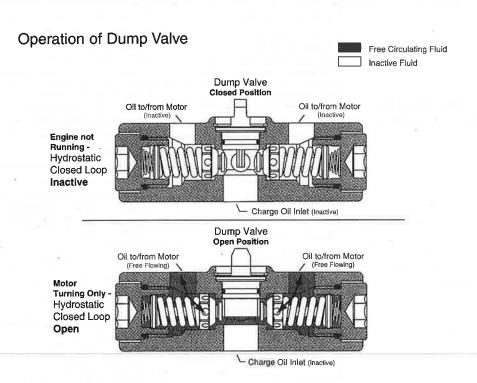
- It is important to check the loader bucket stops periodically for damage. If the stops are worn, the cylinder rods may come in contact with the bucket pin grease zerk.
- Check clearance between the rod and the zerk with the bucket rolled to the dump position.
 There should be a minimum of 1/2" clearance. If not, you must weld on the stop to increase clearance.

PROBLEM	POSSIBLE CAUSE	CORRECTION
	Worn or malfunctioning pump	Repair or replace pump
SLOW LIFT OR ROLL BACK, LOSS OF POWER	Stuck relief valve cartridge	Repair or replace
LOGS OF TOWER	Worn pump allowing system pressure to be less than specified	Repair or replace pump
	Air in the system due to low level of oil, cavitation of pump, leaky fitting, pinched hose, etc.	Determine the cause and correct the problem
SURGING OF LOADER AND BUCKET ACTIONS	Worn, or binding of , mechanical linkage	Repair or replace linkage
	Bending of linkage or cylinder rod	Repair or replace
	Loose cylinder piston	Repair or replace

LOADER LIFT AND BUCKET ROLL BACK (continued)

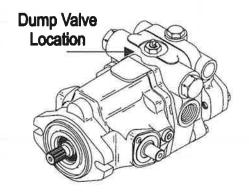
PROBLEM	POSSIBLE CAUSE	CORRECTION
	Cold hydraulic fluid	Warm fluid with engine at idle speed
	Engine speed too slow	Open throttle
	Oil leaking past control valve.	Repair or replace worn section
LOADED AND DUOKET	Oil too heavy.	Use recommended oil
LOADER AND BUCKET ACTIONS TOO SLOW	Pump damaged or worn	Repair or replace pump
	Oil leaking past cylinder seals	Replace seals
	Dirty return oil filter	Replace return oil filter
	Faulty relief valve	Clean or replace relief valve
	Broken or leaking lines	Replace defective hose and check for leaks
LOADER FAILS TO HOLD	Dirty hydraulic oil	Drain and refill oil, replace filter
UP A LOAD	Oil leaking past cylinder seals	Replace seals
	Oil leaking past control valve	Repair or replace worn section
	Faulty relief valve	Clean or replace relief valve
	Dirty oil	Drain, refill oil, replace filter
	Partially plugged suction strainer	Drain oil, clean suction strainer, and refill with new oil
	Control valve held open too long	Return control to neutral position when not in use
	Worn pump	Replace pump
OIL OVERHEATING	Relief valve set too low	Reset relief valve correctly
OIF OAFIZIEVI 1140	Oil too light for warm weather	Use recommended oil
	Engine R.P.M. too fast	Reduce throttle setting
	Damaged oil lines	Replace damaged lines
	Excessive oil flow over relief valve from poor operating techniques	Learn smoother operating techniques
	Plugged or bent oil cooler fins	Clean and/or straighten oil cooler
	Control valve tie bolts loose (if equipped	Torque bolts sequentially-50, 70, 90 in/lb.
1-, , 1	Damaged O-rings between valve sections	Replace O-rings between valve sections
EXTERNAL LEAKAGE	Damaged O-rings on valve spool	Repair control valve
LATERIAL LEARNOL	Cylinder seals damaged	Repair cylinder
	Damaged O-rings on valve drop check	Repair control valve
	Broken oil lines	Replace defective hoses and check for leaks
CYLINDER	Oil leaking past seals	Replace seals
MALFUNCTIONING	Faulty relief valve	Clean or replace valve
	Dirty valve	Clean valve
CONTROL VALVE	Scored bore or bent spool	Replace valve section
STICKING OR WORKING	Control linkage misaligned (if equipped)	Correct misalignment—tighten sequentially:50, 70, in./lb
HARD	Return spring broken or binding	Replace spring
	Foreign matter in spool bore	Clean bore

HYDROSTAT DUMP VALVE OPERATION



The purpose of the dump valve is to allow the movement of a disabled vehicle or if you have a vehicle that you just want to push a short distance, without starting the engine. When a hydrostatic driven vehicle is shut down' it is virtually impossible to move the vehicle without

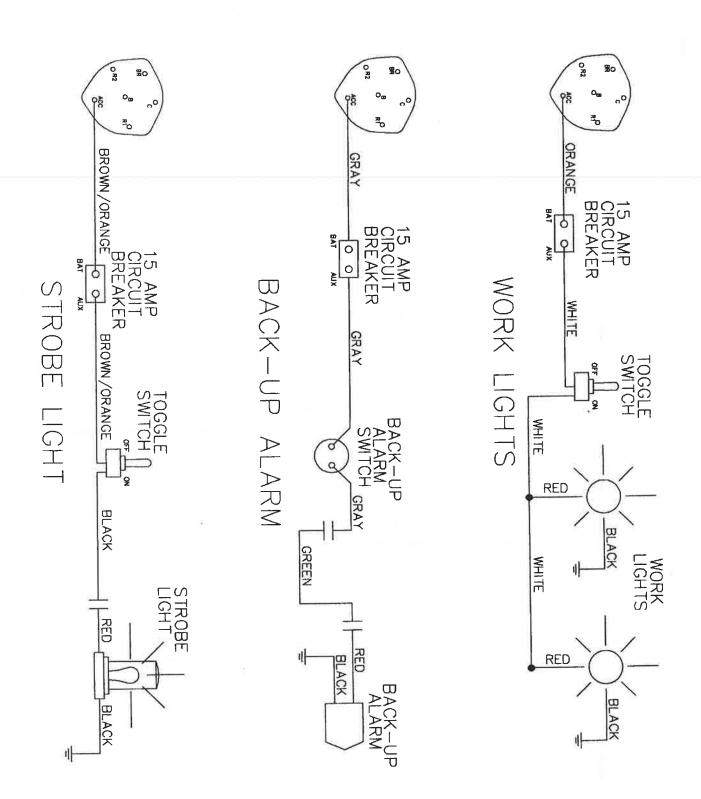
opening the hydrostatic closed loop circuit. If an attempt is made to push the vehicle the hydraulic motor becomes a pump, trying to pump oil to the hydrostatic pump. This creates a hydraulic lock between the motor and the pump. To overcome this condition, a dump valve has been installed between the high pressure relief valves in the backplate of the piston pump. The dump valve is a plug that contains a rotating stem which has a flat spade end that fits between the two ends of the high pressure relief valves. When the dump valve is in the "closed position", the relief valves are also in the closed position as shown in the top illustration. When the



dump valve stem is rotated 90 degrees, the flat spade end spreads the relief valves to the "open position" as shown in the lower illustration. This allows the oil in the hydrostatic closed loop to "by-pass" around the high pressure relief valves inside the pump backplate. The by-passing of oil inside the pump backplate will allow the motor to rotate freely when the vehicle is moved a short distance. The dump valve is intended only for moving a vehicle a very short distance and not intended for towing a vehicle behind a truck or tractor. **NOTE**: serious damage to the hydrostatic drive will result if vehicle is towed. The dump valve must be completely closed prior to normal operation of the vehicle.

WIRING SCHEMATIC FOR OPTIONAL EQUIPMENT

TLB 20K-TLB 25K



SERVICE INFORMATION

The following information has been provided to assist in making minor adjustments that are part of the routine maintenance of the **CONTRACTOR**. To remain a safe and trouble free machine, it is recommended to check the following points on a regular basis.

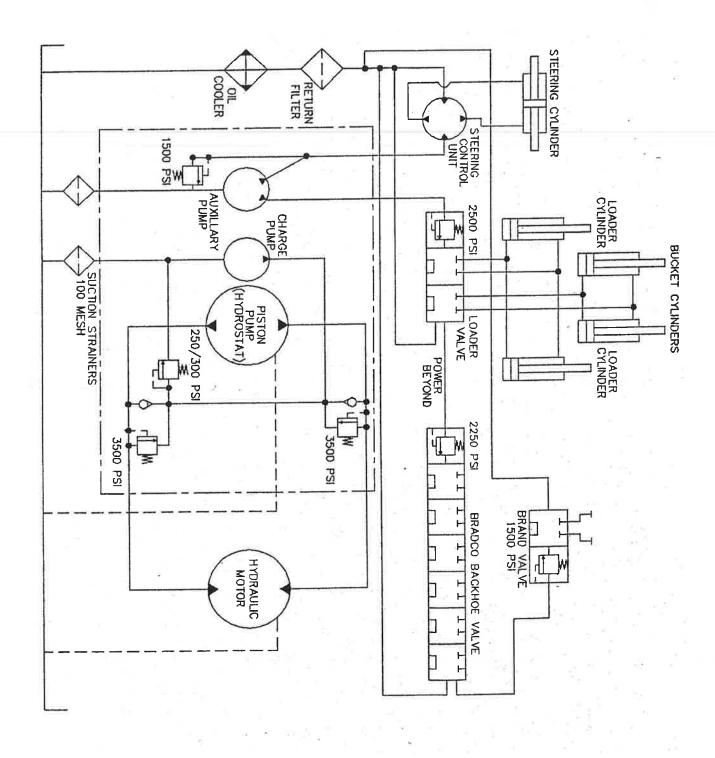
FORWARD/REVERSE PEDAL ADJUSTMENT

- Remove the floor plate and raise the back wheels of the tractor off of the ground.
 NOTE: The outriggers of the backhoe may be used to raise the rear of the tractor off of the ground. Place support stands under the tractor frame for added safety in the event a hydraulic hose were to break, allowing the tractor to possibly drop to the ground.
- 2. Locate the center bearing adjustment plate (30) on the hydrostatic transmission manual control. Using a 1/2" open/box end wrench, loosen the two 5/16-24 NF nylon insert nuts (29) retaining the center bearing plate to the center bearing mount plate weldment. Loosen the jam nut (4) on the adjusting bolt (3) at the top of the center bearing adjustment plate. Screw the adjusting bolt, in to stop forward creep and out to stop reverse creep, to pivot the top of the plate until the "creeping" of the drive wheels has stopped. Tighten the jam nut of the adjusting bolt. NOTE: Use extra caution, while making the adjustments, not to touch any hot surface, due to fact that the engine must be running while making these adjustments.*
- 3. Make certain that the two 5/16-24 NF nylon insert nuts (29) are tight after making any adjustments. The action of the center bearing against the cam of the adjusting plate can cause the center bearing adjustment plate to slide, causing the tractor to "creep" when in the neutral position. Always set the park brake when the operator leaves the drivers seat.
- 4. Re-install the floor plate and lower the tractor to the ground.

*Refer to the exploded view, **A-4A** on the following page, to get a better understanding of how the parts are assembled before attempting to make any adjustments. Space is limited in this area and knowing what to look for is quite helpful.

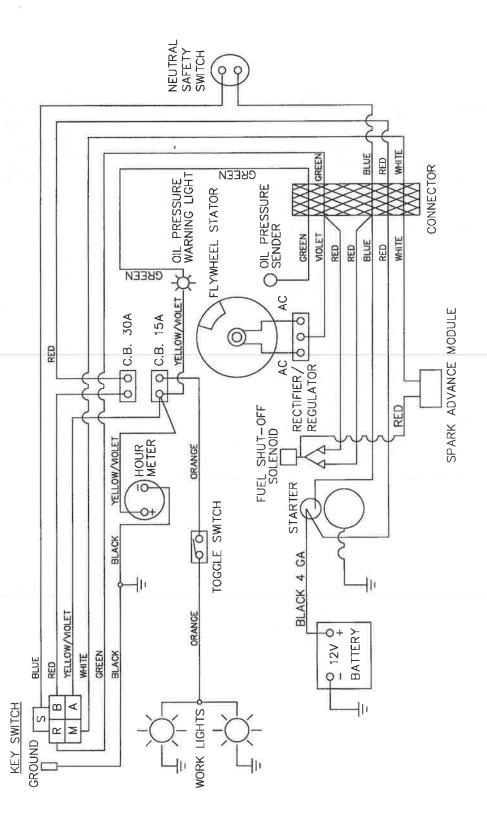
KOHLER HYDRAULIC SCHEMATIC

TLB 20K-TLB 25K



KOHLER ELECTRICAL SCHEMATIC

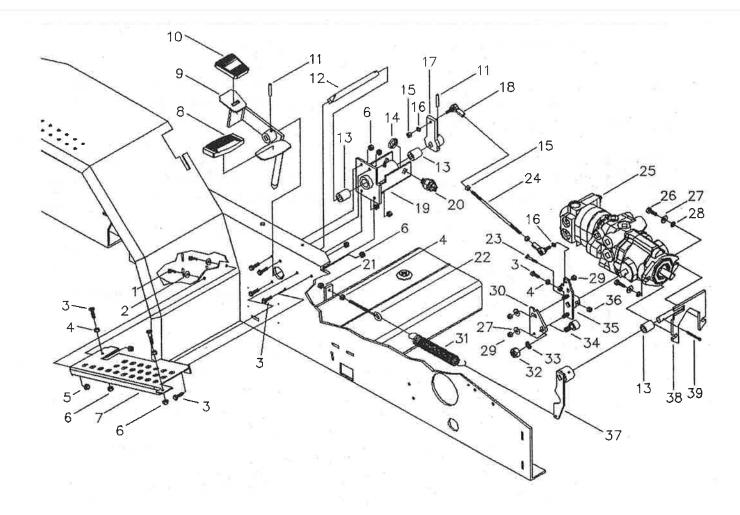
TLB 20K-TLB 25K



FORWARD/REVERSE PEDAL ASSEMBLY

TLB 20K-TLB 25K

A-4A



PARK BRAKE ADJUSTMENT

- 1. Remove the stop screw, on the side of the park brake handle end cap, and turn cap clockwise to increase the brake tension.
- 2. Replace the stop screw.

If adjustment of the park brake handle does not increase the brake tension, adjustment at the brake band actuator is required. The following information will describe how to adjust the park brake actuator.

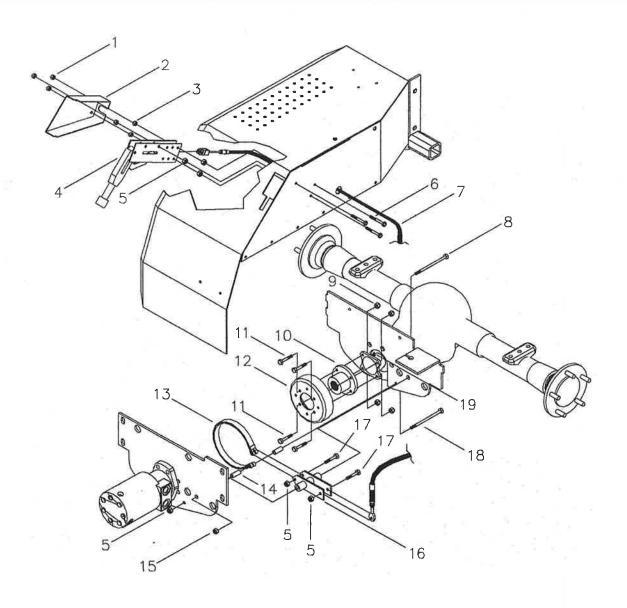
- 1. Remove the floor plate and locate the park brake assembly between the differential and the Eaton hydraulic drive motor.
- 2. Using a 7/8" open end wrench, loosen the top lock nut on the brake cable assembly (9). Using your fingers, reach under the bracket and turn the lower lock nut towards the end of the cable one complete turn of the nut.
- 3. Tighten the top lock nut and check park brake tension. If tension is too tight, loosen the end cap on the park brake handle to fine tune to the desired amount of tension. If tension is too loose, rework step #2 until desired amount of tension is acquired.*
- 4. Replace floor plate.

*Refer to **the** exploded view **A-2A** on the following page for clarification.
Helpful Hint: **Lengthening** the cable will **tighten** the park brake, **shortening** the cable will **loosen** the park brake.

PARK BRAKE ASSEMBLY

TLB 20K-TLB 25K

A-4A



ASSEMBLY PARTS AND ACCESSORIES

MAY 1999



CONTRACTOR

TLB 25K

ALLMAND BROS. INC P.O. BOX 888 HOLDREGE, NE 68949

PHONE: 308/995-4495, 1-800/562-1373

ALLMAND FAX: 308/995-5887

ALLMAND PARTS FAX: 308/995-4883



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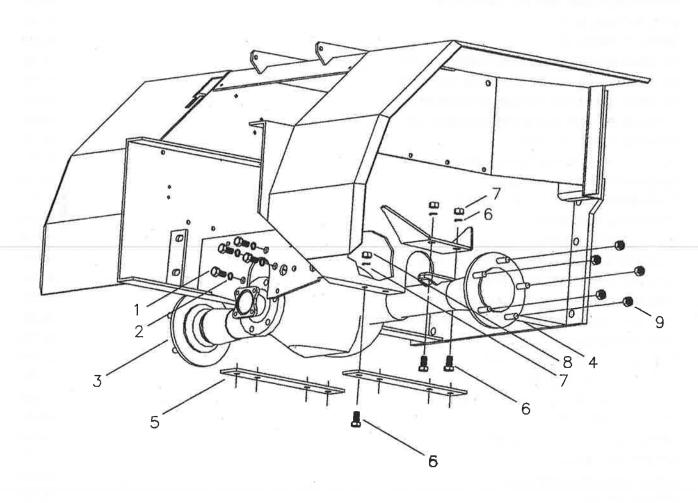
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MODEL TLB 20K-25K

A-1A



FRAME AND DIFFERENTIAL

MODEL TLB 20K-25K

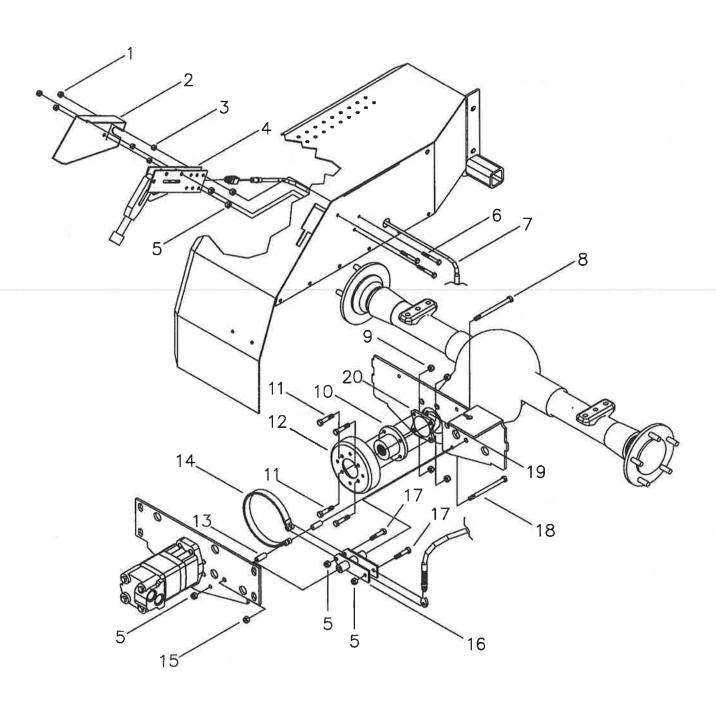
A-1B

NO	REQ'D	PART NO	DESCRIPTION
1	4	**	9/16-12 NC X 1-1/4" GRADE 5 BOLT
2	4	**	9/16 SPLIT LOCK WASHER
3	1	920150	COMPLETE REAR AXLE ASSEMBLY (489:1)
		920146	(2) SHAFT ASSEMBLY COMPLETE
		920147	(1) SEAL PINION
4		920148	(10) WHEEL STUD
5	2	92T054	AXLE CUTOUT SUPPORT
6	12	**	1/2-13 NC X 1-1/4" GRADE 5 BOLT
7	12	**	1/2 SPLIT LOCK WASHER
8	16	**	1/2-13 NC HEX HEAD NUT
9	10	920295	1/2 - 20 90 DEGREE LUG NUT
NS	2	920415	REAR WHEEL ASSEMBLY
		920316	(2) REAR WHEEL 15 X 13
		920310	(2) TIRE SUPER TERRA GRIP 31-15.50-15
NS	2	920412	REAR WHEEL ASSEMBLY
		920316	(2) REAR WHEEL 15 X 13
		920305	(2) TIRE SOFTRAC 31-15.50-15

LEGEND: NS = Not Shown

MODEL TLB 20K-25K

A-2A



PARK BRAKE ASSEMBLY PARTS

MODEL TLB 20K-25K

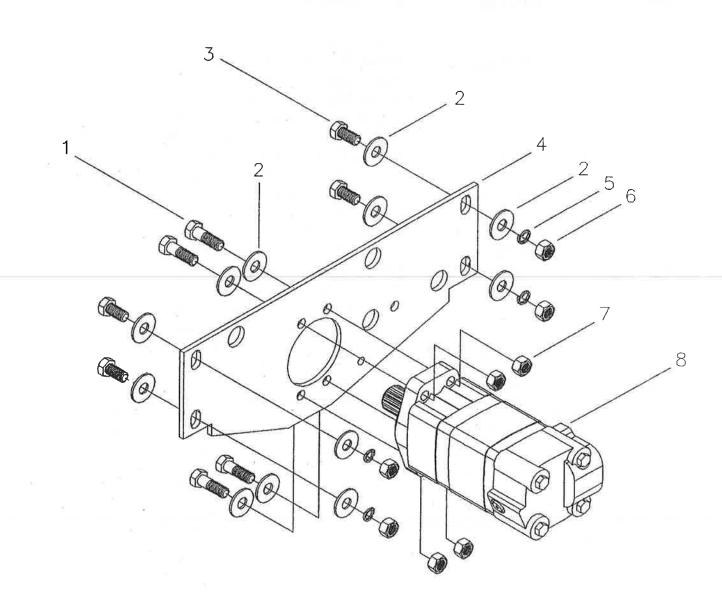
A-2B

NO	REQ'D	PART NO	DESCRIPTION
1	3	**	5/16 -18 NC KEPS NUT
2	1	92TO63	PARK BRAKE COVER
3	3	**	5/16-18 NC NYLON INSERT NUT
4	1	920220	PARK BRAKE LEVER
5	6	**	3/8 -16 NC NYLON INSERT NUT
6	3	**	5/16 -18 INC X 2 1/4 GRADE 5 BOLT
7	1	920221	BRAKE CONTROL ASSEMBLY
8	1	**	7/16 -14 NC X 5 GRADE 5 BOLT
9	4	044057	3/8-16 NC GRADE 8 NUT
10	1	92T045	DRIVE HUB COUPLER
11	4	046131	3/8-16 x 2" GRADE 8 BOLT
12	1	920223	6" BRAKE DRUM
13	2	92T092	PARK BRAKE SPACER
14	1	920222	BRAKE BAND ASSEMBLY
15	1	**	7/16 -14 NC NYLON INSERT NUT
16	1	92T064	BRAKE ACTUATOR WELDMENT
17	2	**	3/8 - 16 NC X 2 GRADE 5 BOLT
18	1	**	3/8 - 16 NC X 5 GRADE 8 BOLT
19	1	401256	1/4 - 28 NIF STRAIGHT GREASE ZERK
20	1	920150A	COMPANION FLANGE

LEGEND: NS = Not Shown

MODEL TLB 20K-25K

A-2C



DRIVE MOTOR ASSEMBLY PARTS

MODEL TLB 20K-25K

A-2D

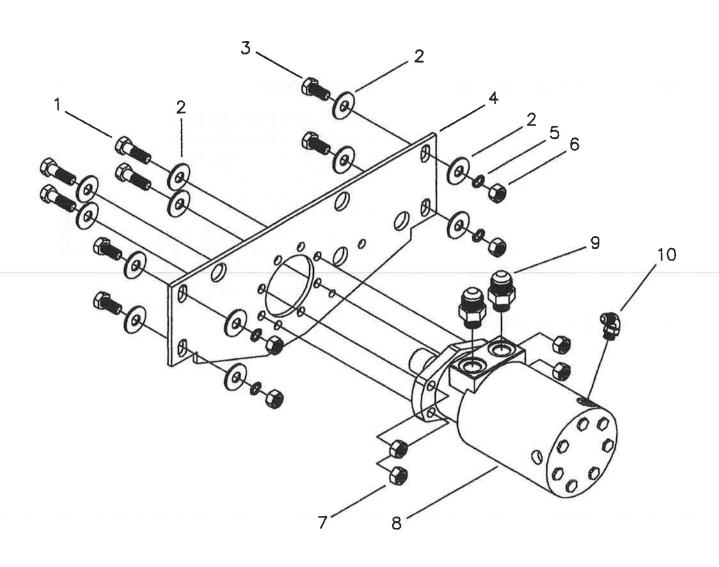
NO	REQ'D	PART NO	DESCRIPTION
1	4	**	1/2 - 13 NC X 2 GRADE 8 BOLT
2	12	**	1/2 GRADE 8 FLAT WASHER
3	4	**	1/2 - 13 NC X 1 1/4 GRADE 5 BOLT
4	1	92TO37	CROSS MEMBER, HYDRAULIC MOTOR
5	4	**	1/2 SPLIT LOCK WASHER
6	4	**	1/2 - 13 NC HEX NUT
7	4	**	1/2 - 13 NC NYLON INSERT NUT
8	1	920321	4 BOLT HYDRAULIC MOTOR, CHAR-LYNN
		920339	HYDRAULIC MOTOR, ROSS ME18
			(after SN 0002T250021)
	. NO N		(See A-2E on next page for illustration)

LEGEND: NS = Not Shown

DRIVE MOTOR ASSEMBLY (FWA)

MODEL TLB 20K-25K

A-2E



DRIVE MOTOR ASSEMBLY (FWA) PARTS

MODEL TLB 20K-25K

A-2F

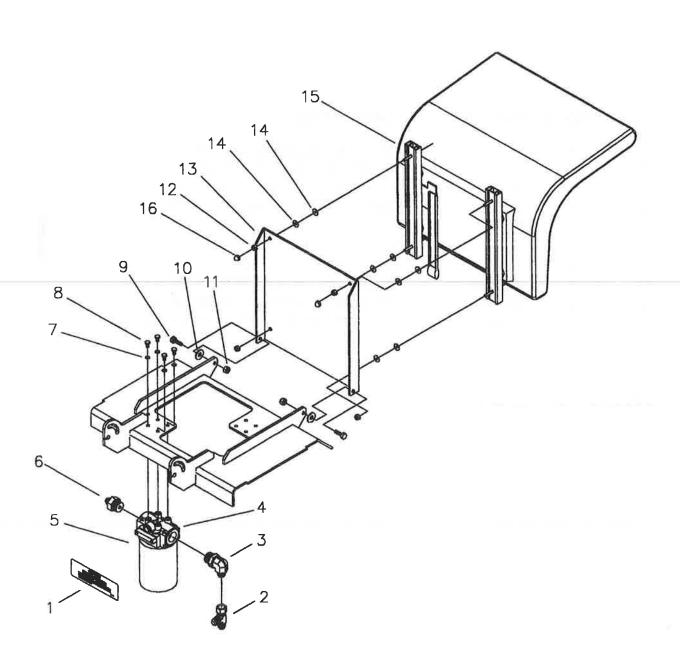
NO	REQ'D	PART NO	DESCRIPTION
1	4	**	1/2 - 13 NC X 2 GRADE 8 BOLT
2	12	**	1/2 GRADE 8 FLAT WASHER
3	4	**	1/2 - 13 NC X 1 1/4 GRADE 5 BOLT
4	1	92T037	CROSS MEMBER, HYDRAULIC MOTOR
5	4	**	1/2 SPLIT LOCK WASHER
6	4	**	1/2 - 13 NC HEX NUT
7	4	**	1/2 - 13 NC NYLON INSERT NUT
8	1	920339	4 BOLT HYDRAULIC MOTOR, ROSS ME18
9	2	920674	STRAIGHT THREAD CONNECTOR, 12-10 F50X-S
10	1	920692	STRAIGHT THREAD ELBOW, 6 C50X-S

LEGEND: NS = Not Shown

TRACTOR SEAT AND OIL FILTER ASSEMBLY

MODEL TLB 20K-25K

A-3A



TRACTOR SEAT AND OIL FILTER PARTS

MODEL TLB 20K-25K

A-3B

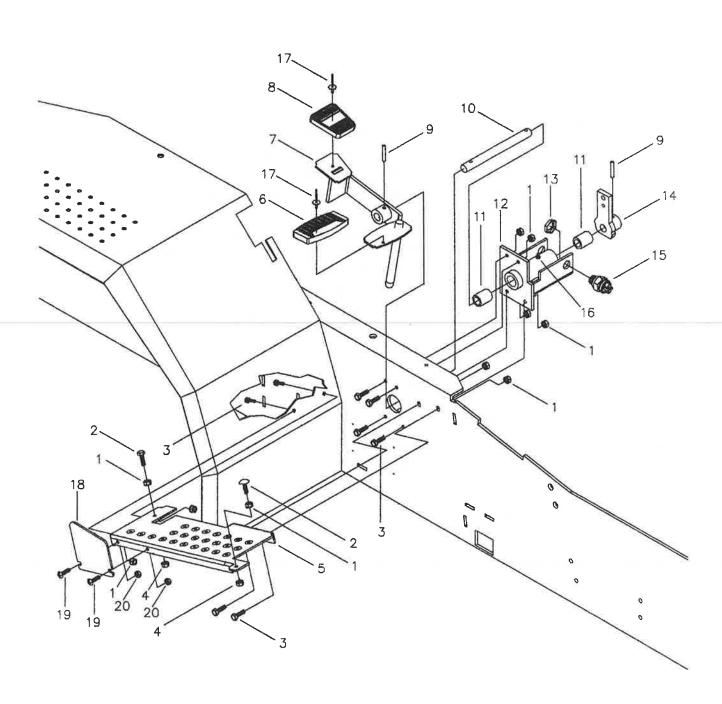
NO	REQ'D	PART NO	DESCRIPTION
1	1	DD-257	DECAL, CHANGE FILTER ELEMENT
2	1	920835	HYDRAULIC ADAPTER TEE 8R6X-S,
3	1	920821	ADAPTER STREET ELBOW 3/4 CD-S
4	1	920809	RETURN FILTER HEAD
5		920803	FIBER GLASS ELEMENT REPLACEMENT FILTER
		920335	FIBER GLASS ELEMENT REPLACEMENT FILTER
			(BEFORE S/N 9911T01)
6	1	920816	ADAPTER MALE CONNECTOR 8-12F50X-S
7	4	**	1/4 INTERNAL TOOTH LOCK WASHER
8	4	**	1/4 20 NC X 1/2 GRADE 5 BOLT
9	2	**	3/8 16 NC X 1 1/4 GRADE 5 BOLT
10	2	**	5/16 FLAT WASHER
11	2	**	3/8 16 NC NYLON INSERT NUT
12	4	**	5/16 18 NC KEPS NUT
13	1	92T196	SEAT MOUNT PLATE
14	8	**	1/4 FLAT WASHER
15	1	920245	TRACTOR SEAT W/ADJUSTERS
16	2	**	5/16" ACORN NUT

LEGEND: NS = Not Shown

FORWARD/REVERSE PEDAL ASSEMBLY

MODEL TLB 20K-25K

A-4A



FORWARD/REVERSE PEDAL ASSEMBLY PARTS

MODEL TLB 20K-25K

A-4B

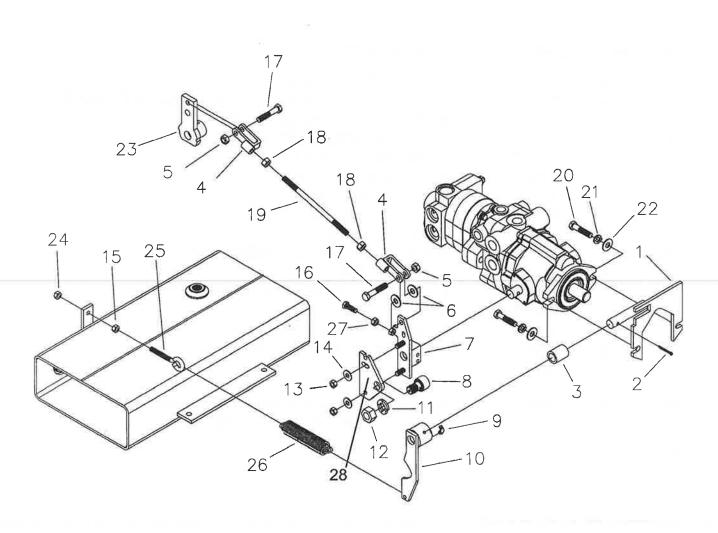
NO	REQ'D	PART NO	DESCRIPTION
1	10	**	5/16 -18 NC KEPS NUT
2	2	**	5/16 -18 NC X 1 112 FULL THREAD PAN HEAD BOLT
3	8	**	5/16 -18 NC X 1 GRADE 5 BOLT
4	2	**	5/16 -18 NC NYLON INSERT NUT
5	1	92T087	RIGHT SIDE FOOT REST
6	1	920280	PEDAL PAD, LARGE
7	1	92T085	RIGHT FOOT PEDAL
8	1	920281	BRAKE PEDAL PAD, REAR
9	2	HD145	1/4 X 1 1/2 ROLL PIN
10	1	92T086	RIGHT FOOT PEDAL PIVOT SHAFT
11	2	92T055B	PEDAL BUSHING
12	1	92T055	RIGHT FOOT PEDAL MOUNT WELDMENT
13	1	HN065	3/4 X 16 PALNUT
14	1	92T061	RIGHT FOOT PEDAL F/R LINKAGE ARM
15	1	920430	NEUTRAL SAFETY SWITCH
16	1	401256	1/4 - 28 NF STRAIGHT GREASE ZERK
17	2	**	POP RIVET
18	1	920874	RIGHT SIDE STEP PEDAL PROTECTOR
19	2	**	1/4 - 20 X 1 TRUSS HEAD SCREW
20	2	**	1/4 - 20 KEPS NUT

LEGEND: NS = Not Shown

HYDROSTAT LINKAGE ASSEMBLY

MODEL TLB 20K-25K

A-4C



HYDROSTAT LINKAGE ASSEMBLY PARTS

MODEL TLB 20K-25K

A-4D

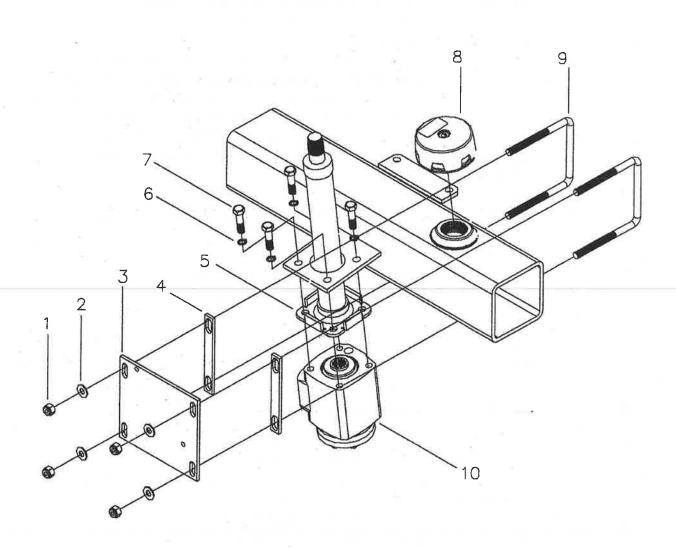
NO	REQ'D	PART NO	DESCRIPTION
1	1	92T070	CENTER BEARING PIVOT WELDMENT
2	1	HD045	5/32 X 1-1/2 COTTER PIN
3	1	92T055B	BUSHING
4	2	712572	OFFSET YOKE, 3/8 - 24 NF (AFTER SN 9707T23)
		**	5/16 SPLIT LOCKWASHER (BEFORE SN 9707T23)
5	2	HN080	3/8 -16 NC TOP LOCK NUT (AFTER SN 9707T23)
		**	5/16 -24 NF HEX NUT (BEFORE SN 9707T23)
6	2	**	3/8 SAE FLAT WASHER (AFTER SN 9707T23)
7	1	921168	LINKAGE ARM, HYDROSTAT, SQUARE BUSHING
8	1	920218	CAM FOLLOWER
9	1	401257	1/4 - 28 NF 90* GREASE ZERK
10	1	92T069	CENTER BEARING MOUNT PLATE WELDMENT
11	1	**	5/8 SPLIT LOCKWASHER
12	1	**	5/8 -18 NF HEX NUT
13	2	**	5/16 -24 NIF NYLON INSERT NUT
14	2	**	5/16 FLAT WASHER
15	2	**	5/16 - 18 NC HEX NUT
16	1	**	5/16 - 18 NC x 1" GRADE 5 BOLT
17	2	**	3/8 -16 NC x 2" GRADE 8 BOLT (AFTER SN 9707T23)
		920174	SPHERICAL ROD END - RIGHT HAND (BEFORE SN 9707T23)
18	2		3/8 - 24 NF HEX NUT (AFTER SN 9707T23)
19	1	92T155	3/8 LINK ROD (AFTER 9707T23)
		92T082	LINK ROD (BEFORE 9707T23)
20	2	**	3/8 - 16 NC x 2" GRADE 5 BOLT (AFTER SN 9706T19)
21	2	**	3/8 SPLIT LOCKWASHER
22	2	**	5/16 HARDENED STEEL FLAT WASHER (AFTER SN 9706T1
23	1	92T160	RIGHT FOOT PEDAL F/R LINKAGE ARM
24	1	**	5/16 - 18 NC NYLON INSERT NUT
25	1	HD068	5/16 - 18 NC x 3" EYE BOLT
26	1	920236	SPRING, PEDAL RETURN
27	1	**	5/16 - 24 NF HEX NUT
28	1	92T048	CENTER BEARING PLATE

LEGEND: NS = Not Shown

ORBITROL/LOADER VALVE MOUNT ASSEMBLY

MODEL TLB 20K-25K

A-6A



ORBITROL/LOADER VALVE MOUNT PARTS

MODEL TLB 20K-25K

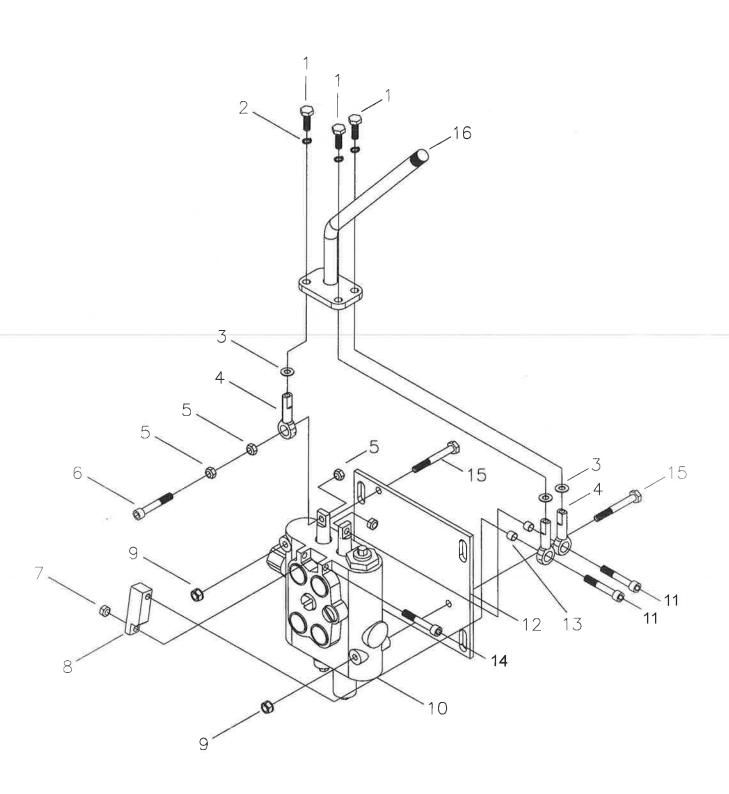
A-6B

NO	REQ'D	PART NO	DESCRIPTION
1	4	**	3/8 - 16 NC TOP-LOCK LOCK NUT
2	4	**	5/16 FLAT WASHER
3	1	92T111	VALVE MOUNTING PLATE
4	2	92T112	VALVE MOUNTING PLATE SPACER
5	1	920157	STEERING COLUMN – 11"
6	4	**	3/8 SPLIT LOCK WASHER
7	4	**	3/8 - 16 NC X 1 1/2 GRADE 5 BOLT
8	1	920322	BREATHER CAP
9	2	92T113	VALVE MOUNTING U-BOLT
10	1	920155	STEERING ORBITAL 4.23 CID

LEGEND: NS = Not Shown

MODEL TLB 20K-25K

A-6C



LOADER VALVE / HANDLE ASSEMBLY PARTS

MODEL TLB 20K-25K

A-6D

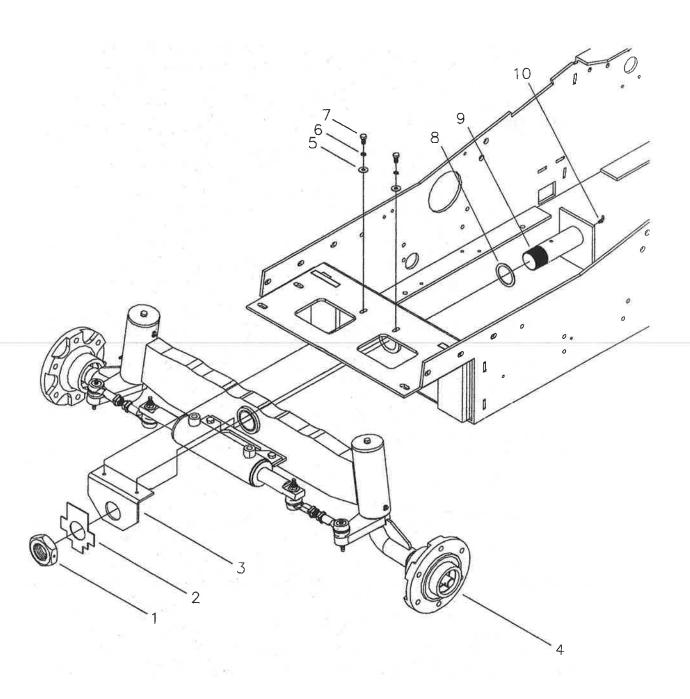
NO	REQ'D	PART NO	DESCRIPTION
1	3	**	1/4 - 28 NF X 3/4 GRADE 5 BOLT
2	3	**	1/4 SPLIT LOCK WASHER
3	3	**	1/4 FLAT WASHER
4	3	920176	FEMALE ROD END
5	5	**	1/4 - 28 NF HEX NUT
6	1	**	1/4 - 28 X 2 SOCKET HEAD CAP SCREW
7	1	**	1/4 - 28 NF NYLON INSERT HEX NUT
8	1	921023	PIVOT BLOCK LOADER VALVE
9	2	**	1/4 - 20 NC KEPS NUT
10	1	920329	EATON VALVE 2-SPOOL
11	2	048009	1/4 - 28 X 1-1/4 SOCKET HEAD CAP SCREW
12	1	92T111	VALVE MOUNTING PLATE
13	1	921022	ROD END BUSHING
14	1	**	1/4 - 28 X 1 SOCKET HEAD CAP SCREW
15	2	**	1/4 - 20 NC X 2 GRADE 5 BOLT
16	1	921020	LOADER VALVE JOYSTICK

LEGEND: NS = Not Shown

FRONT AXLE INSTALLATION

MODEL TLB 20K-25K

A-7A



FRONT AXLE INSTALLATION PARTS

MODEL TLB 20K-25K

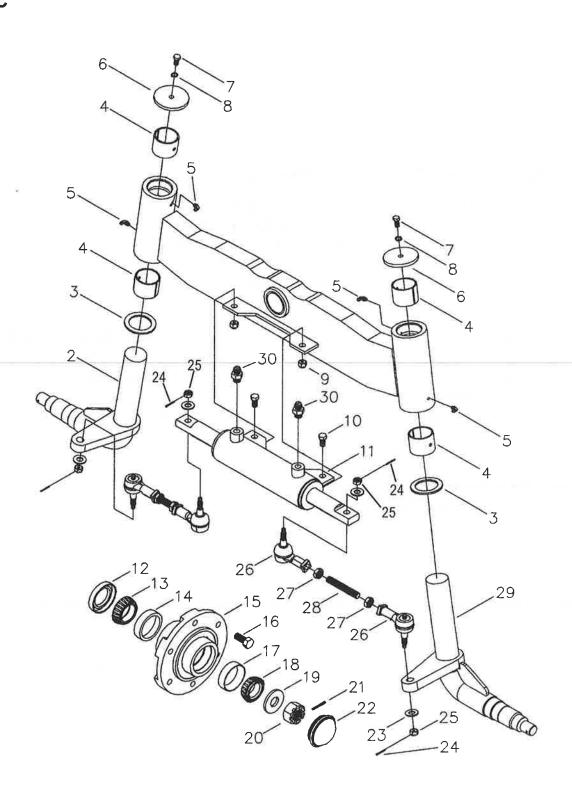
A-7B

NO	REQ'D	PART NO	DESCRIPTION
1	1	HN075	1 3/4 - 12 HEX JAM NUT
2	1	92T152	FRONT AXLE NUT PLATE
3	1	92T100	AXLE PIVOT BOLT BRACKET WELDMENT
4	1	920243	FRONT AXLE ASSEMBLY
5	2	**	5/16 FLAT WASHER
6	2	**	5/16 SPLIT LOCK WASHER
7	2	**	5/16 - 18 NC X 1 GRADE 5 BOLT
8	AR	FW063	1 3/4 I.D. X 2 1/4 O.D. MACHINE BUSHING 18 GA.
	AR	FW064	1 3/4 I.D. X 2 1/4 O.D. MACHINE BUSHING 14 GA.
	AR	FW065	1 3/4 I.D. X 2 1/4 O.D. MACHINE BUSHING 10 GA.
9	1	92TO02	PIVOT BOLT ASSEMBLY
10	5	401257	1/4 - 28 90-GREASE ZERK

LEGEND: NS = Not Shown

MODEL TLB 20K-25K

A-7C



FRONT AXLE ASSEMBLY PARTS

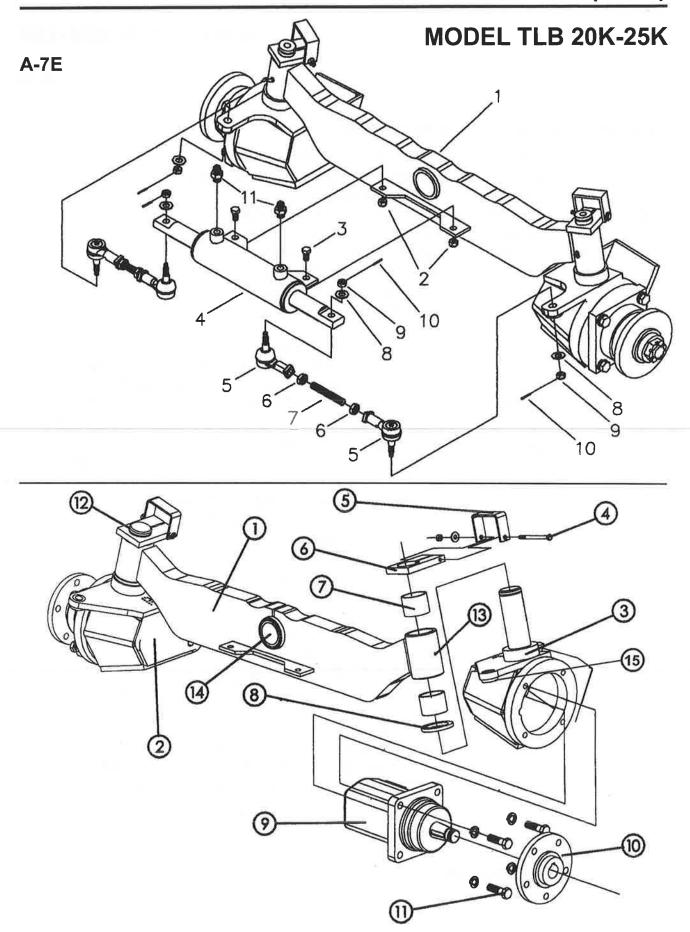
MODEL TLB 20K-25K

A-7D

NO	REQ'D	PART NO	DESCRIPTION
1	1	920203	FRONT AXLE ASSEMBLY 7/96
2	1	92T105	SHORT SPINDLE WELDMENT, RIGHT
3	2	920230	THRUSTWASHER
4	4	920340	BUSHING, 1 3/4 X 1 1/2 LONG
5	4	401257	1/4 - 28 90° GREASE ZERK
6	2	92T104	SPINDLE SLEEVE CAP
7	2	**	3/8 - 16 NC X 1 GRADE 8 BOLT
8	2	**	3/8 SPLIT LOCK WASHER
9	2	**	1/2 - 13 NC NYLON INSERT NUT
10	2	**	1/2 - 13 NC X 1 1/4 GRADE 8 BOLT
11	1	920750	STEERING CYLINDER 1:10 TAPER
12	2	920217	INNER SEAL -162289 (RIGHT SIDE NOT SHOWN)
13	2	920212	INNER BEARING -JL69349 (RIGHT SIDE NOT SHOWN)
14	2	920215	INNER BEARING RACE (RIGHT SIDE NOT SHOWN)
15	2	920214	HUB W/RACES INSTALLED (RIGHT SIDE NOT SHOWN)
16	12	920202	STUD BOLT (ONLY ONE SHOWN)
17	2	920216	OUTER BEARING RACE (RIGHT SIDE NOT SHOWN)
18	2	920213	OUTER BEARING -LM67048 (RIGHT SIDE NOT SHOWN)
19	2	920208	7/8 WASHER (RIGHT SIDE NOT SHOWN)
20	2	920207	7/8 HEX CASTLE NUT (RIGHT SIDE NOT SHOWN)
21	2	920206	COTTER PIN (RIGHT SIDE NOT SHOWN)
22	2	920205	GREASE CAP (RIGHT SIDE NOT SHOWN)
23	4	FW028	1/2 USS HARDENED LOCK WASHER
24	4	**	3/32 X 3/4 COTTER PIN
25	4	**	7/16 - 20 NF HEX CASTLE NUT
26	4	920291	TIE ROD END (LARGE)
27	4	MFO85	14mm X 1.5 JAM NUT
28	2	92T103	TIE ROD STUD 14mm X 82.5
29	1	92T102	SHORT SPINDLE SLEEVE WELDMENT, LEFT
NS	2	920419	FRONT WHEELASSEMBLY TERRAIN
		920319	(2) WHEEL 12 X 7 - 6 BOLT
		920313	(2) TIRE 23 X 8.5 - 12" SURE GRIP
NS	2	920416	FRONT WHEELASSEMBLY (OPTIONAL) includes
			(2) TITAN NHS MULTITRACK G/S 23.0 X 10.5-12
NS		92T047K	STEERING CYLINDER KIT

LEGEND: NS = Not Shown

FRONT AXLE ASSEMBLY (FWA)



FRONT AXLE ASSEMBLY (FWA) PARTS

MODEL TLB 20K-25K

A-7F

NO	REQ'D	PART NO	DESCRIPTION
1	1	920239	FRONT AXLE ASSEMBLY, FWD
2	2	**	1/2-13 NC NYLON INSERT NUT
3	2	**	1/2-13 NC x 1-1/4 GRADE 8 BOLT
4	1	920750	STEERING CYLINDER 1:10 TAPER
5	4	920291	TIE ROD END (LARGE)
6	4	MF085	14mm X 1.5 JAM NUT
7	4	921013	TIE ROD STUD
8	4	FW028	1/2 USS HARDENED LOCKWASHER
9	4	**	7/16-20 NF HEX CASTLE NUT
10	4	**	3/32 X 3/4 COTTER PIN
11	2	320076	ADAPTER 3/8 ORM - 3/8 JIC MALE 6F50X-S

LEGEND: NS = Not Shown

** = Purchase locally

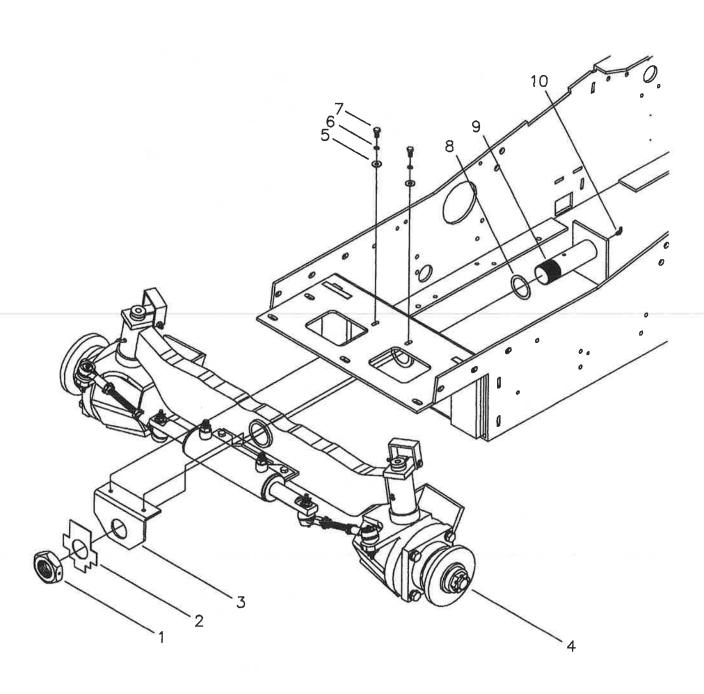
NO	REQ'D	PART NO	DESCRIPTION
1	1	923228	AXLE ALLMAND BROS. WELDMENT
2	1	923229	SPINDLE ASSEMBLY RHALLMAND BROS.
3	1	923230	SPINDLE ASSEMBLY LH ALLMAND BROS.
4	2	**	HHCS G5P 1/4-20 X 3-3/4
	2	**	WASHER, FLAT 1/4 USS PLTD
	2	**	WASHER, LOCK 1/4 PLTD
	2	**	NUT HEX 1/4-20 PLTD
5	2	923231	BRACKET HOSE LOOP
6	2	923232	CAP, SPINDLE
7	4	923233	BUSHING, CAST BRONZE
8	2	923234	SHIM, SPINDLE
9	2	923235	MOTOR, WHEEL CHARLYNN
10	2	923236	HUB, CAST 5 ON 4.5-2000 CHARLYNN
	10	**	BOLT, WHEEL 1/2-20 X 1-1/4 90D
11	8	**	HHCS G5P 1/2-13 X 1-3/4
	8	**	WASHER, LOCK 1/2 PLTD
12	2	923237	SNAP RING, EXTERNAL
13	3	923238	ZERK, GREASE STRAIGHT 1/4-28
14	1	923239	MOD-BUSHING SOLID BRONZE
15	1	921243	BUSHING, TIE ROD END

LEGEND: NS = Not Shown

FRONT AXLE INSTALLATION (FWA)

MODEL TLB 20K-25K

A-7G



FRONT AXLE INSTALLATION (FWA) PARTS

MODEL TLB 20K-25K

A-7H

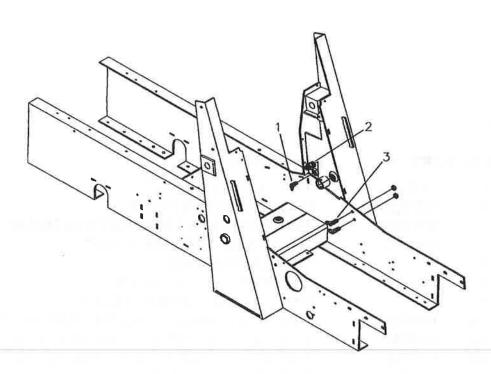
NO	REQ'D	PART NO	DESCRIPTION
1	1	HN075	1 3/4 - 12 HEX JAM NUT
2	1	92T152	FRONT AXLE NUT PLATE
3	1	92T100	AXLE PIVOT BOLT BRACKET WELDMENT
4	1	920239	FRONT AXLE ASSEMBLY, FWD
5	2	**	5/16 FLAT WASHER
6	2	**	5/16 SPLIT LOCK WASHER
7	2	**	5/16 - 18 NC X 1 GRADE 5 BOLT
8	AR	FW063	1 3/4 I.D. X 2 1/4 O.D. MACHINE BUSHING 18 GA.
	AR	FW064	1 3/4 I.D. X 2 1/4 O.D. MACHINE BUSHING 14 GA.
	AR	FW065	1 3/4 I.D. X 2 1/4 O.D. MACHINE BUSHING 10 GA.
9	1	92TO02	PIVOTBOLTASSEMBLY
10	5	401257	1/4 - 28 90° GREASE ZERK

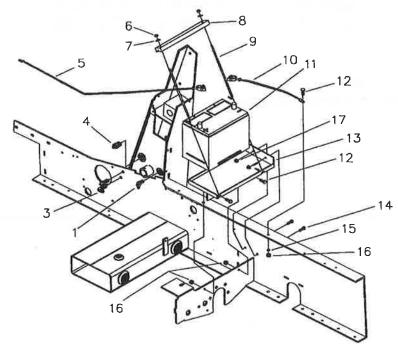
LEGEND: NS = Not Shown

BATTERY TRAY AND FITTINGS ASSEMBLY

MODEL TLB 20K-25K

A-8A





BATTERY TRAY AND FITTINGS PARTS

MODEL TLB 20K-25K

A-8B

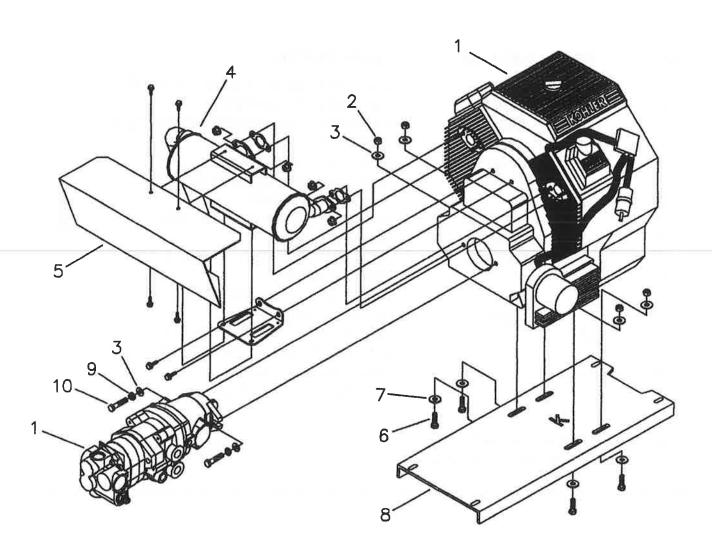
NO	REQ'D	PART NO	DESCRIPTION
1	2	920677	ADAPTER MALE ELBOW 4-4CTX-S
2	1	920663	HYDRAULIC ADAPTER
3	4	920669	HYDRAULIC BULKHEAD ADAPTER, 90°
4	1	920666	HYDRAULIC ADAPTER
5	1	BC025	POSITIVE BATTERY CABLE, 46"
6	2	**	5/16-18 NC. NYLON INSERT NUT
7	2	**	5/16 FLAT WASHER
8	1	340017	NYLON BATTERY HOLD DOWN
9	2	433507	5/16 x 11" J-BOLT
10	1	713197	NEGATIVE BATTERY CABLE, 9-1/2"
11	1	**	12 VOLT BATTERY
12	3	**	3/8-16 NC x 1" GRADE 5 BOLT
13	1	92T014	BATTERYTRAY
14	2	**	5/16-18 NC x 1" GRADE 5 BOLT
15	1	**	5/16 INTERNAL TOOTH LOCKWASHER
16	3	**	3/8-16 NC KEPS NUT
17	2	**	5/19-18 NC KEPS NUT

LEGEND: NS = Not Shown

ENGINE / EXHAUST / HYDROSTAT ASSEMBLY

MODEL TLB 20K-25K

A-9A



ENGINE / EXHAUST / HYDROSTAT PARTS

MODEL TLB 20K-25K

A-9B

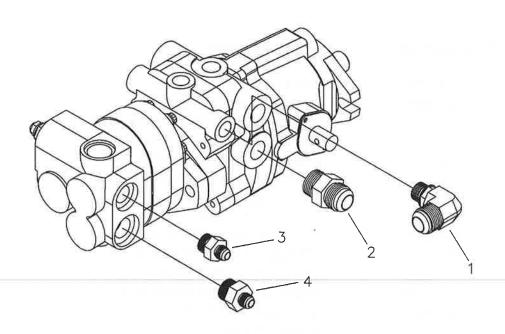
NO	REQ'D	PART NO	DESCRIPTION
1		920520	KOHLER ENGINE 20 HP
		920525	KOHLER ENGINE 25 HP
2	4	**	3/8 - 16 NC NYLON INSERT NUT
3	6	**	5/16 GRADE 8 FLAT WASHER
4	1	920908	KOHLER MUFFLER WITH PIPE
5	1	92T023	KOHLER EXHAUST HEAT SHIELD
6	4	**	3/8 - 16 NC X 2 GRADE 5 BOLT
-7	4	**	3/8 FLAT WASHER
8	1	92T025	KOHLER ENGINE MOUNT
9	2	**	3/8 SPLIT LOCKWASHER
10	2	**	3/8-16 NC x 1-3/4 GRADE 8 BOLT
11	1	920260	HYDROSTAT PUMP ASSEMBLY
		920267	(1) HYDROSTAT ONLY
		920263	(1) GEAR PUMP
NS	1	PB175	OIL DRAIN ELBOW
NS	1	PB178	OIL DRAIN PIPE
NS	1	PB180	OIL DRAIN CAP

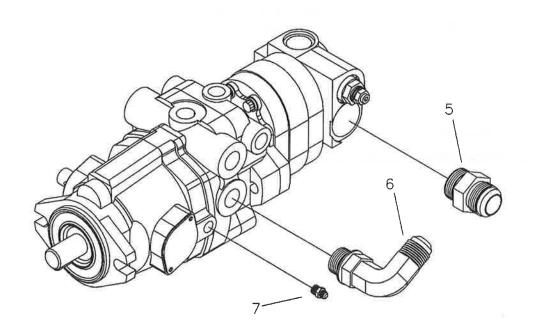
LEGEND: NS = Not Shown

HYDROSTAT AND FITTINGS ASSEMBLY

MODEL TLB 20K-25K

A-9C





HYDROSTAT AND FITTINGS PARTS

MODEL TLB 20K-25K

A-9D

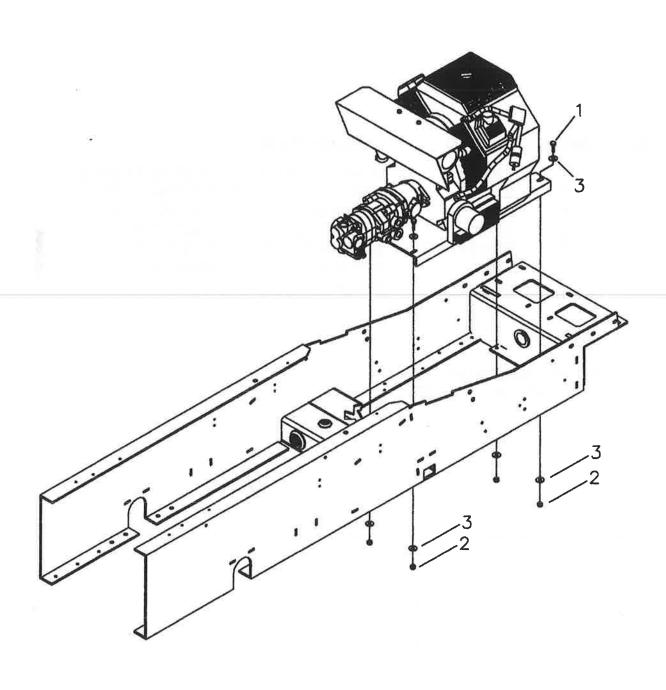
NO	REQ'D	PART NO	DESCRIPTION
1	1	920680	STRAIGHT THREAD ELBOW, 12-8 C50X-S
2	1	920682	ADAPTER, STRAIGHT THREAD, 12 F50X-S
3	1	920665	ADAPTER, MALE CONNECTOR, 6-8 F50X-S
4	1	BF090	ADAPTER, MALE CONNECTOR, 6-10 F50X-S
5	1	920683	STRAIGHT THREAD CONNECTOR, 16 F50X-S
6	1	920679	STRAIGHT THREAD ELBOW, 12 C50X-S
7	1	920678	STRAIGHT THREAD CONNECTOR, 4-6 F50X-S

LEGEND: NS = Not Shown

ENGINE AND FRAME RAIL ASSEMBLY

MODEL TLB 20K-25K

A-10A



ENGINE AND FRAME RAIL ASSEMBLY PARTS

MODEL TLB 20K-25K

A-10B

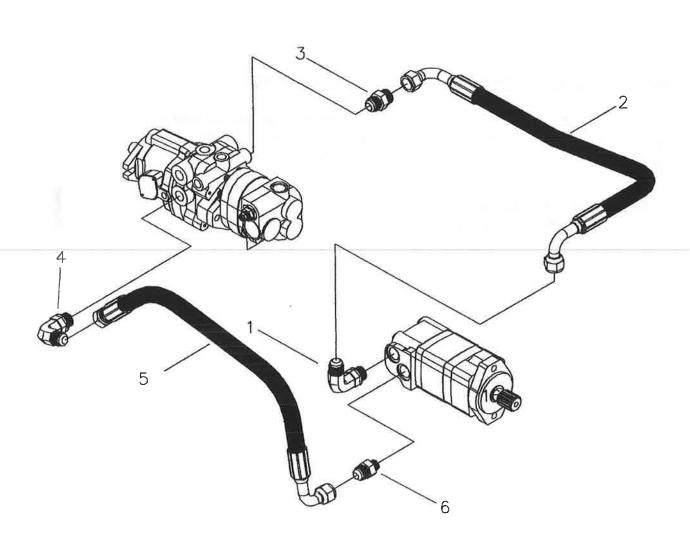
NO	REQ'D	PART NO	DESCRIPTION
1	4	**	3/8-16 x 1-1/2 GRADE 5 BOLT
2	4	**	3/8 - 16 NC NYLON INSERT NUT
3	8	**	5/16 FLAT WASHER

LEGEND: NS = Not Shown

DRIVE MOTOR HYDRAULIC HOSE ASSEMBLY

MODEL TLB 20K-25K

A-11A



DRIVE MOTOR HYDRAULIC HOSE PARTS

MODEL TLB 20K-25K

A-11B

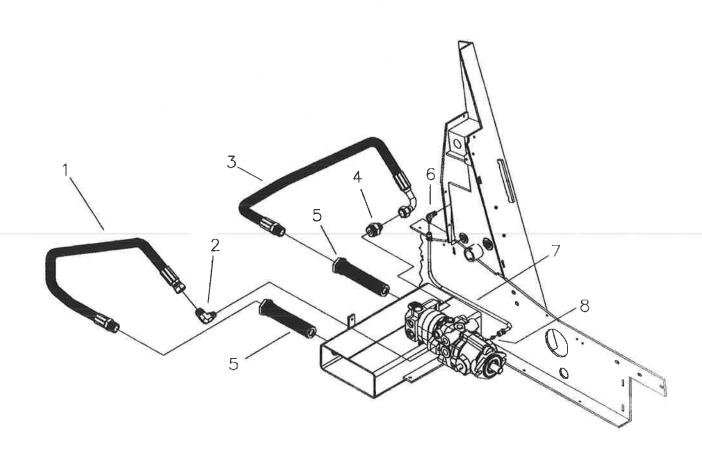
NO	REQ'D	PART NO	DESCRIPTION
1	1	920675	STRAIGHT THREAD ELBOW 12-10 C50X-S
2	1	920712	HOSE ASSEMBLY 3/4 X 23"
			12C12M-12FJX90S-12FJX90S- 270*
3	1	920682	ADAPTER STRAIGHT THREAD 12F50X-S
4	1	920679	STRAIGHT THREAD ELBOW 12 C50X-S
5	1	920713	HOSE ASSEMBLY 3/4 X 24.5"
			12C12M-12FJX-12FJX90L- 24.5
6	1	920674	STRAIGHT THREAD CONNECTOR 12-10 F50X-S

LEGEND: NS = Not Shown

HYDROSTAT HOSE ROUTING ASSEMBLY

MODEL TLB 20K-25K

A-11C



HYDROSTAT HOSE ROUTING ASSEMBLY PARTS

MODEL TLB 20K-25K

A-11D

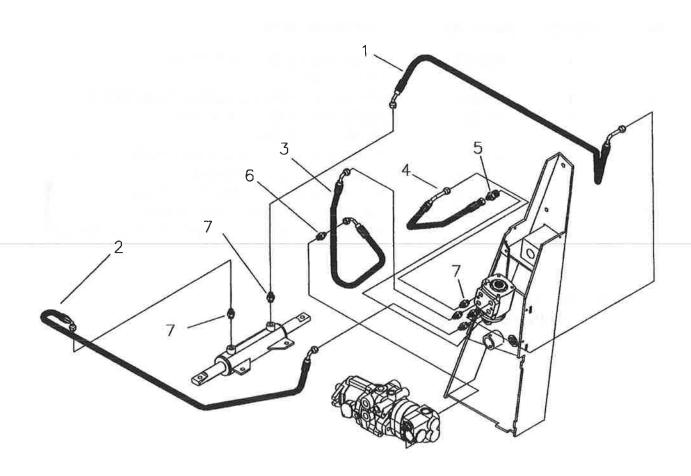
NO	REQ'D	PART NO	DESCRIPTION
1	1	920612	HOSE ASSEMBLY 3/4 X 31-1/2 16MP - 12FJX
2	1	920680	STRAIGHT THREAD ELBOW 12-8 C50X-S
3	1	920729	HOSE ASSEMBLY 1 X 31-1/2
			16MP - 16FJX90M
4	1	920683	STRAIGHT THREAD CONNECTOR 16 F50X-S
5	2	920325	FLOW EZY SUMP STRAINER
6	1	920677	ADAPTER MALE ELBOW 4-4CTX-S
7	1	H0015	1/4" FUEL LINE, YELLOW, 16-1/2"
8	1	920678	STRAIGHT THREAD CONNECTOR 4-6 F50X-S

LEGEND: NS = Not Shown

STEERING HYDRAULIC ASSEMBLY

MODEL TLB 20K-25K

A-11E



STEERING HYDRAULIC ASSEMBLY PARTS

MODEL TLB 20K-25K

A-11F

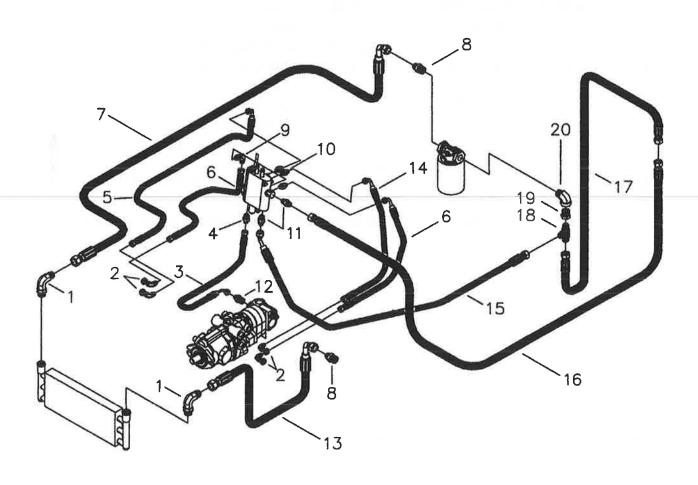
NO	REQ'D	PART NO	DESCRIPTION
1	1	920618	HOSE ASSEMBLY 3/8 X 74
			6FJX90L - 6FJX45M - 180
2	_ 1	920617	HOSE ASSEMBLY 3/8 X 62-1/2
			6FJX90S - 6FJX45M - 270°
3	1	920725	HOSE ASSEMBLY 3/8 X 31
			6FJX90S - 6FJX90S - 330°
4	1	920619	HOSE ASSEMBLY 3/8 X 20-1/2
			6FJX - 6FJX90S - 25°
5	1	920666	ADAPTER MALE CONNECTOR 6-8 FTX-S
6	1	920665	ADAPTER MALE CONNECTOR 6-8 F50X-S
7	6	320076	ADAPTER 3/8 ORM - 3/8 JIC MALE 6F50X-S

LEGEND: NS = Not Shown

COOLER/LOADER VALVE HYDRAULIC ASSY

MODEL TLB 20K-25K

A-11G



COOLER/LOADER VALVE HYDRAULIC PARTS

MODEL TLB 20K-25K

A-11H

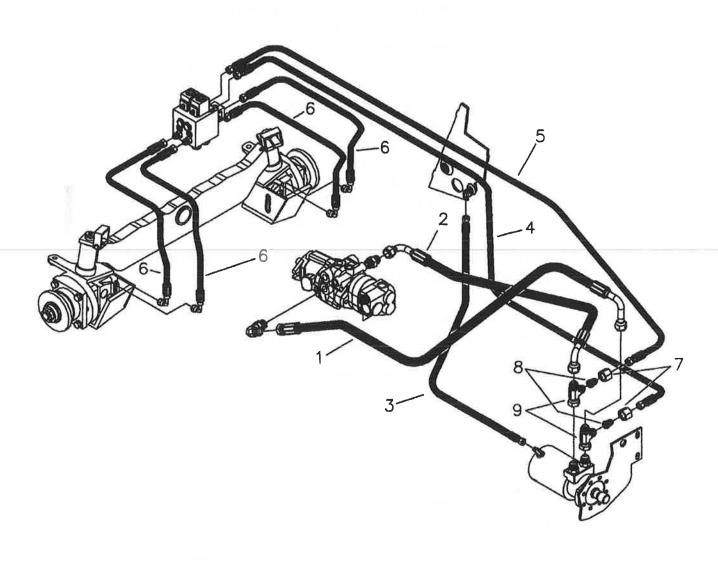
NO	REQ'D	PART NO	DESCRIPTION
1	2	920608	ADAPTER OIL COOLER
2	4	920669	BULKHEAD 900 6WETX - WLN - S
3	1	920639	HOSE ASSEMBLY 1/2 X 18 8FJX - 8FJX
4	1	920678	ADAPTER MALE CONNECTOR. 6-8 F50X-S (REPLACES 920665)
5	1	920690	HOSE ASSEMBLY 3/8 X 25 1/2 8FJX - 8FJX
6	2	920686	HOSE ASSEMBLY 3/8 X 30" 6FJX - 6FJX90S
7	1	920606	HOSE ASSEMBLY 5/8 X 92" 1 OFJX - 10FJX90S
8	2	920663	ADAPTER MALE CONNECTOR 10 - 12 FTX-S
9	1	920692	ADAPTER 90° 6C50X-S
10	3	320076	ADAPTER 3/8 ORM - 3/8 JIC MALE 6 F50X-S
11	2	920698	ADAPTER 8F50X-S
12	1	920831	ADAPTER MALE CONNECTOR, 8-10 C50X-S (REPLACES BF090)
13	1	920607	HOSE ASSEMBLY 5/8 X 49 1/2 10FJX90S - 10FJX
14	1	920688	HOSE ASSEMBLY 3/8 X 28" 6FJX - 6FJX90S
15	1	920689	HOSE ASSEMBLY 1/2 X 47 8FJX - 8FJX45M
16	1	920684	HOSE ASSEMBLY 1/2 X 84" 8FJX - 8FJX
17	1	920646	HOSE ASSEMBLY 1/2 X 56" 8FJX - 8FJX
18	1	920671	ADAPTER MALE RUN TEE 8-8-8 RTX-S
19	1	920664	ADAPTER PIPE THREAD REDUCER 3/4 - 1/2 PTR-S
20	1	920670	ADAPTER STREET ELBOW 3/4 CD-S

LEGEND: NS = Not Shown

DRIVE MOTOR HYDRAULIC ASSY

MODEL TLB 20K-25K

A-11I



DRIVE MOTOR HYDRAULIC ASSEMBLY PARTS

MODEL TLB 20K-25K

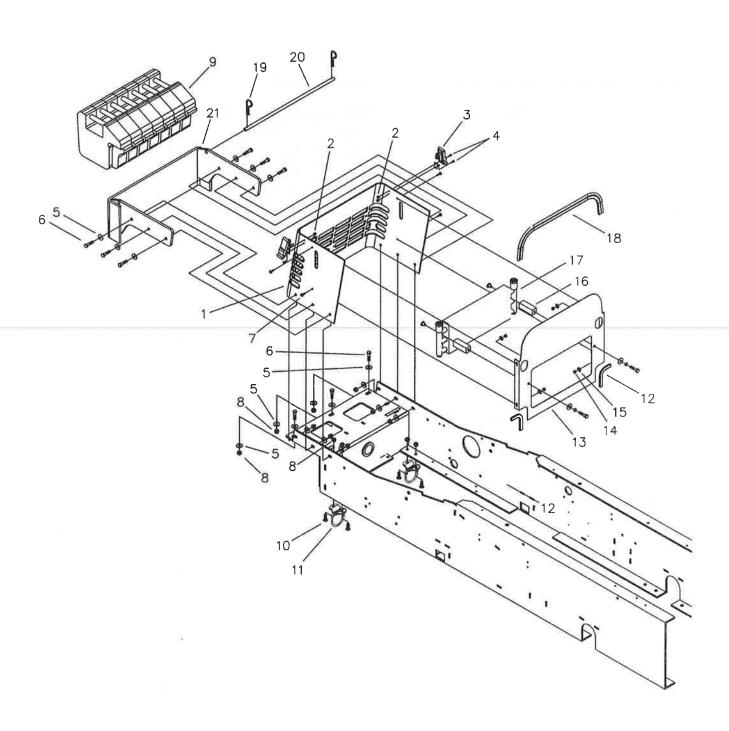
A-11J

NO	REQ'D	PART NO	DESCRIPTION
1	1	920713	HOSE ASSEMBLY 3/4 X 24-1/2 12FJX - 12FJX90L
		920613	HOSE FOR EATON DRIVE MOTOR (BEFORE SN 0002T250021)
2	1	920712	HOSE ASSEMBLY 3/4 X 23" 12FJX90S - 12FJX90S - 270°
		920614	HOSE FOR EATON DRIVE MOTOR (BEFORE SN 0002T250021)
3	1	920711	HOSE ASSEMBLY 3/8 X 22" 6FJX - 6FJX
4	1	920715	HOSE ASSEMBLY 3/8 X 61" 8FJX - 8FJX
5	1	920714	HOSE ASSEMBLY 3/8 X 62-1/2 8FJX - 8FJX
6	4		HOSE ASSEMBLY, SUPPLIED BY VENDOR
7	2	BF100	TUBE END NUT
8	2	BF099	TUBE END REDUCER, 12-8TRTX
9	2	920782	SWIVEL NUT RUN TEE, 12R6X

LEGEND: NS = Not Shown

MODEL TLB 20K-25K

A-12A



NOSE ASSEMBLY PARTS

MODEL TLB 20K-25K

A-12B

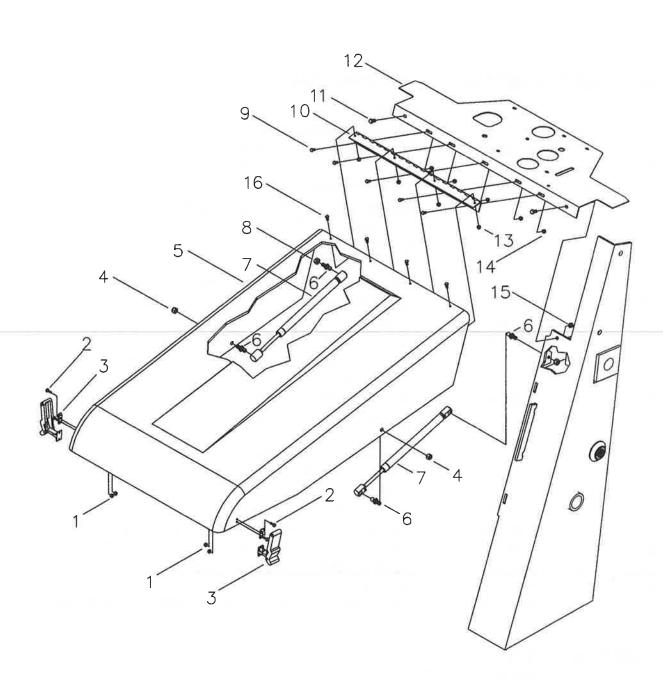
NO	REQ'D	PART NO	DESCRIPTION
1	1	92T126	NOSE
2	4	**	#8 - 32 NC KEPS NUT
3	2	920234	SOUTHCO SOFT LATCH
4	4	**	#8 - 32 NC X 1/2 SCREW
5	18	**	3/8 FLAT WASHER
6	9	**	3/8 -16 NC X 1 1/2 GRADE 5 BOLT
7	4	**	1/4 -20 NC X 3/4 SCREW
8	9	**	3/8 -16 NC KEPS NUT
9	1	**	SUITCASE WEIGHT, 20KG
10	4	**	3/8 - 16 NC X 1 GRADE 5 CARRIAGE BOLT
11	2	920021	TIE DOWN HOOK
12	2	WP051	TRIM LOK 4 1/2"
13	1	92T142	OIL COOLER / HOOD BRACE
14	4	**	1/4 - 20 NC NYLON INSERT NUT (AFTER SN 9708T18)
15	4	**	1/4 FLAT WASHER
16	1	920332	OIL COOLER MOUNT KIT
			(2) 5/16 - 18 NC X 2 GRADE 5 BOLT
			(2) 5/16 LOCK WASHER
			(2) 5/16 FLAT WASHER
			(2) RUBBER PRESSURE BLOCK
			(2) 5/16 TEE NUT
17	1	920330	OIL COOLER
18	1	WP053	TRIM LOK, 26" (SN 9704T13 TO PRESENT)
NS		WP052	TRIM LOK, END BEAD 28" (SN 9701TO2 TO 9704T13)
19	2	92T130	FRONT BUMPER WEIGHT ROD
20	1	**	HAIRPIN COTTER
21	1	92T129	FRONT BUMPER WELDMENT (HOLDS 8 WEIGHTS)

LEGEND: NS = Not Shown

HOOD/INSTRUMENT PANEL ASSEMBLY

MODEL TLB 20K-25K

A-13A



HOOD/INSTRUMENT PANEL PARTS

MODEL TLB 20K-25K

A-13B

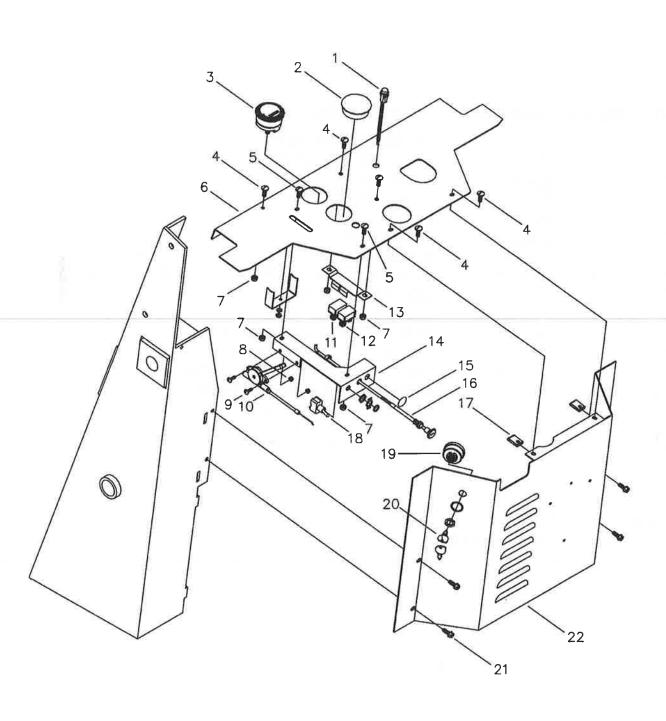
NO	REQ'D	PART NO	DESCRIPTION
1	4	**	#6 - 32 NC KEPS NUT
2	4	**	#6 - 32 NC X 3/8 SCREW
3	2	920234	SOUTHCO SOFT LATCH
4	2	**	5/16 - 18 NC ACORN NUT
5	1	920293	FIBERGLASS HOOD
6	4	330437	BALL STUD
7	2	920231	GAS SPRING, 35 LB (SN 9704TO7 TO PRESENT)
NS	2	920229	GAS SPRING, 30 LB (SN 9701TO1 TO SN 9704TO7)
8	2	**	5/16 -18 NC KEPS NUT
9	5	**	#10 -24 NC X 1/2 SCREW
10	1	92T138	HOOD HINGE STAINLESS STEEL
11	2	**	1/4 - 20 NC X 3/4 SCREW
12	1	92T135	INSTRUMENT PANEL (PANEL ONLY)
13	4	**	#10 - 24 NC NYLON INSERT NUT
14	5	**	#10 - 24 NC KEPS NUT
15	2	**	1/4 - 20 NC KEPS NUT
16	4	**	#10 - 24 NC X 3/4 SCREW

LEGEND: NS = Not Shown

INSTRUMENT PANEL ASSEMBLY

MODEL TLB 20K-25K

A-13C



INSTRUMENT PANEL ASSEMBLY PARTS

MODEL TLB 20K-25K

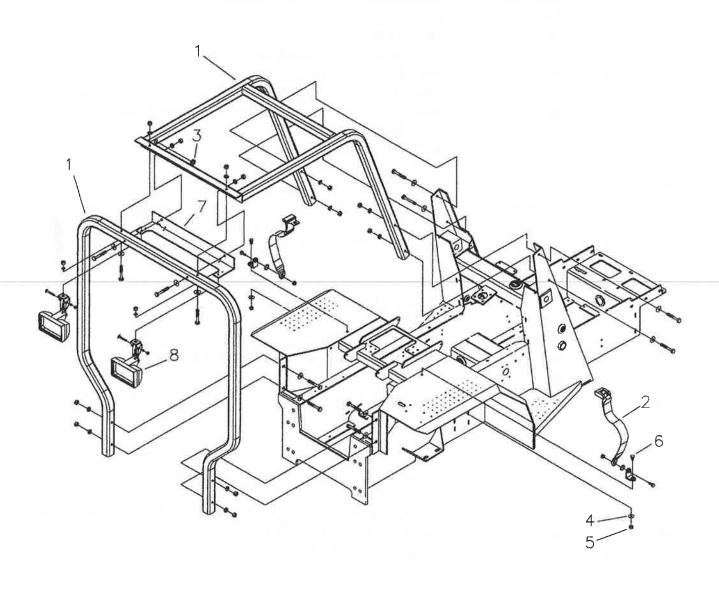
A-13D

NO	REQ'D	PART NO	DESCRIPTION
1	1	920160	WARNING LIGHT -OIL PRESSURE
2	1	640555	HOLE PLUG, 2"
3	1	340014	HOUR METER
4	5	**	1/4 - 20 NC X 3/4 SCREW
5	2	**	1/4 - 20 NC X 1/2 SCREW
6	1	92T162	MAGURA INSTRUMENT PANEL (AFTER SN 9709T22)
		92T134	INSTRUMENT PANEL (BEFORE SN 9709T22)
7	5	**	1/4 - 20 NC KEPS NUT
8	2	**	#10 - 24 NC KEPS NUT
9	2	**	#10 - 24 NC X 1/2 SCREW
10	1	920559	THROTTLE CONTROL W/CABLE (AFTER SN 9709T22)
		920226	THROTTLE CONTROL ASSEMBLY (BEFORE SN 9709T22)
11	1	620087	30 AMP CIRCUIT BREAKER
12	1	920441	15 AMP CIRCUIT BREAKER (W/WORK LIGHTS)
13	1	640163	CIRCUIT BREAKER MOUNTING BRACKET
14	1	92T161	MAGURA THROTTLE CONTROL BRACKET
			(AFTER SN 9709T22)
15	1	433328	1/2" CAP PLUG
16	1	92T171	CHOKE CONTROL 36" (AFTER SN 9709T22)
		920225	CHOKE CONTROL (BEFORE SN 9709T22)
17	2	HD216	TINNEMAN FASTENER
18	1	340009	SPST TOGGLE SWITCH (W/WORK LIGHTS)
19	1	920435	KEY SWITCH W/ 2 KEYS
20		920434	IGNITION KEY (EXTRA)
21	4	**	5/16 - 18 NC X 3/4 SELF-TAPPING SCREW
22	1	92T163	MAGURA STEERING COLUMN COVER PANEL
			(AFTER SN 9709T22)
		92T125	STEERING COLUMN COVER PANEL (BEFORE SN 9709T22)
NS	1	920426	KOHLER WIRING HARNESS
NS	3	**	5/8 CUSHION CLAMP

LEGEND: NS = Not Shown

MODEL TLB 20K-25K

A-14A



ROPS KIT ASSEMBLY PARTS

MODEL TLB 20K-25K

A-14B

NO	REQ'D	PART NO	DESCRIPTION
1	1	92T011	ROPS KIT (1) FRONT POST ASSEMBLY
			(1) REAR POST ASSEMBLY
2	1	920122A	2" LAP BELT KIT
3	1	711028	7/8 O.D. x 9/16 I.D. RUBBER GROMMET
4	2	**	7/16 FLAT WASHER
5	2	**	7/16 - 20 NF NYLON INSERT NUT
6	2	**	7/17 - 20 NF x 1 GRADE 5 BOLT
7	1	92T213	TLB LIGHT BRACKET (OPTIONAL)
8	2	920445	TRACTOR IMPLEMENT LIGHT (OPTIONAL)
NS		920123A	3" LAP BELT KIT (OPTIONAL)
NS	1	920427	LIGHT PLATE, 16/3 WIRE HARNESS

IN THE EVENT OF A ROLL OVER OR R.O.P.S. DAMAGE, THE COMPLETE R.O.P.S. SHOULD BE REPLACED INCLUDING THE HARDWARE.

IF INDIVIDUAL HARDWARE COMPONENTS NEED TO BE REPLACED, THEY CAN BE SOURCED LOCALLY PROVIDING THEY ARE EQUIVALENT SIZE AND GRADE.

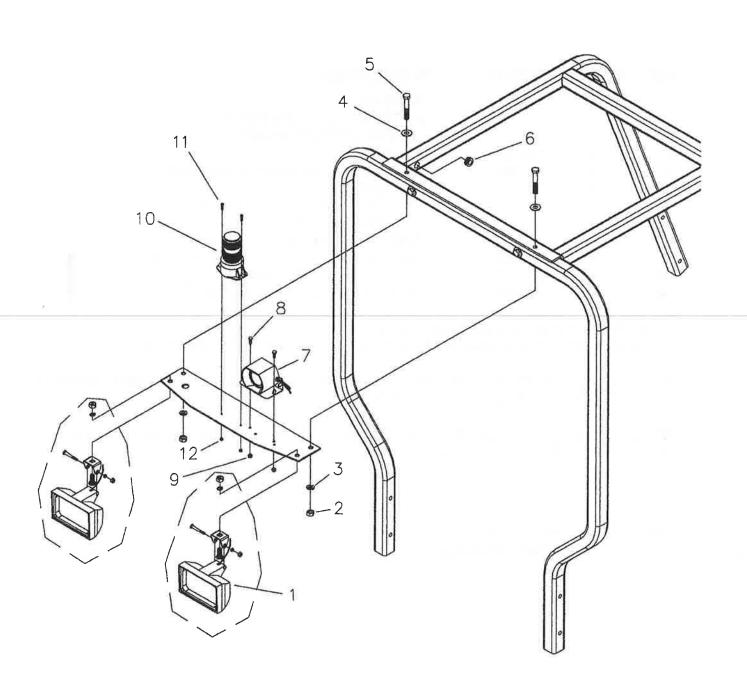
UNDER NO CIRCUMSTANCES SHOULD THE R.O.P.S. EVER BE MODIFIED OR ALTERED. IF THIS HAPPENS, CERTIFICATION WILL BE VOID.

LEGEND: NS = Not Shown

OPTIONAL BACKUP, STROBE AND WORKLIGHTS

MODEL TLB 20K-25K

A-14C



BACKUP, STROBE AND WORKLIGHT PARTS

MODEL TLB 20K-25K

A-14D

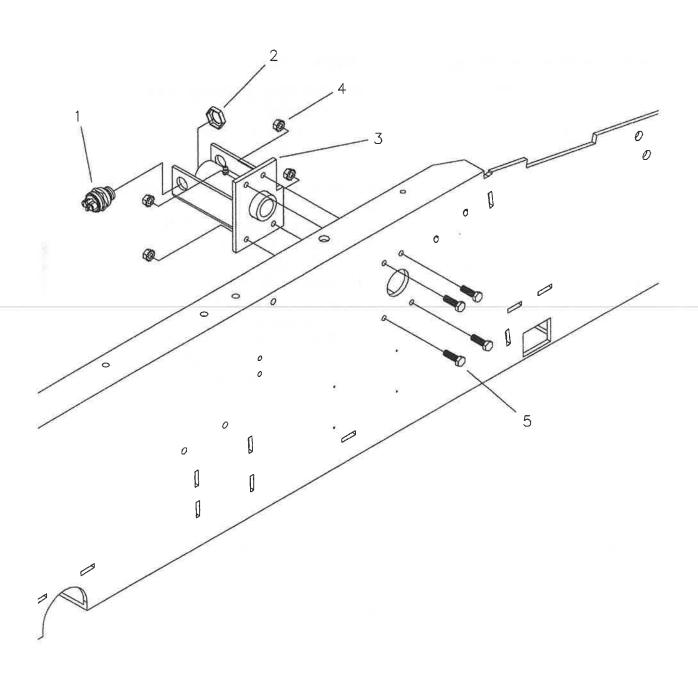
NO	REQ'D	PART NO	DESCRIPTION	
1	2	920445	TRACTOR IMPLEMENT LIGHT KIT	
2	2	**	1/2-13 NC HEX NUT	
3	2	**	1/2 SPLIT LOCKWASHER	
4	2	**	1/2 FLAT WASHER	
5	2	**	1/2-13 NC x 3 1 /4 GRADE 5 BOLT	
6	1	711028	RUBBER GROMMET 7/8 O.D. x 9/16	LD,
7	1	920432	BACK-UP ALARM	
8	2	**	1/4-20 NC x 3/4 GRADE 5 BOLT	
9	2	**	1/4-20 NC KEPS NUT	
10	1	920442	STROBE LIGHT, 12 VOLT	
11	2	**	#10-24 NC x 3/4 SCREW	
12	2	**	#10-24 NC KEPS NUT	
13	1	92T097	LIGHT MOUNTING BRACKET	
NS	1	920427	LIGHT PLATE WIRING HARNESS	
NS		920476	WORK LIGHT UPDATE KIT	
NS		920477	BACK-UP ALARM UPDATE KIT	
NS		920478	STROBE LIGHT UPDATE KIT	

LEGEND: NS = Not Shown

OPTIONAL BACKUP ALARM SWITCH ASSEMBLY

MODEL TLB 20K-25K

A-14E



OPTIONAL BACKUP ALARM SWITCH PARTS

MODEL TLB 20K-25K

A-14F

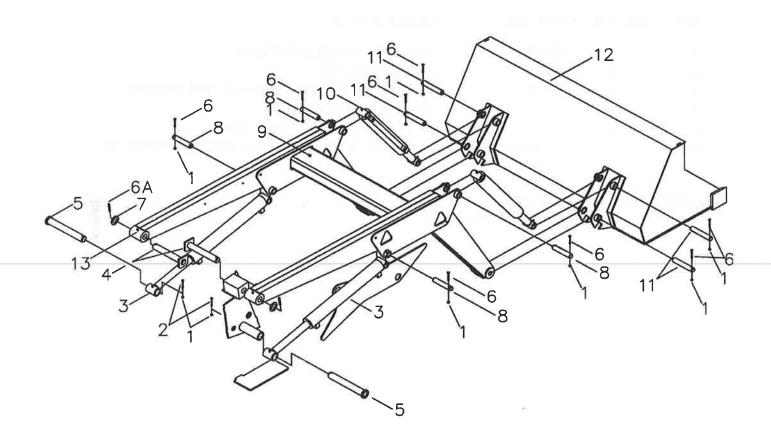
NO	REQ'D	PART NO	DESCRIPTION
1	1	920431	BACK-UP ALARM SWITCH
2	1	HN065	3/4 x 16 PALNUT
3	1 -	92T055	RIGHT FOOT PEDAL MOUNT WELDMENT
4	4	**	5/16-18 NC KEPS NUT
5	4	**	5/16-18 NC x 1 GRADE 5 BOLT
NS	1	920428	BACK-UP ALARM SWITCH WIRING HARNESS

LEGEND: NS = Not Shown

LOADER/BUCKET ASSEMBLY

MODEL TLB 20K-25K

A-15A



LOADER/BUCKET ASSEMBLY PARTS

MODEL TLB 20K-25K

A-15B

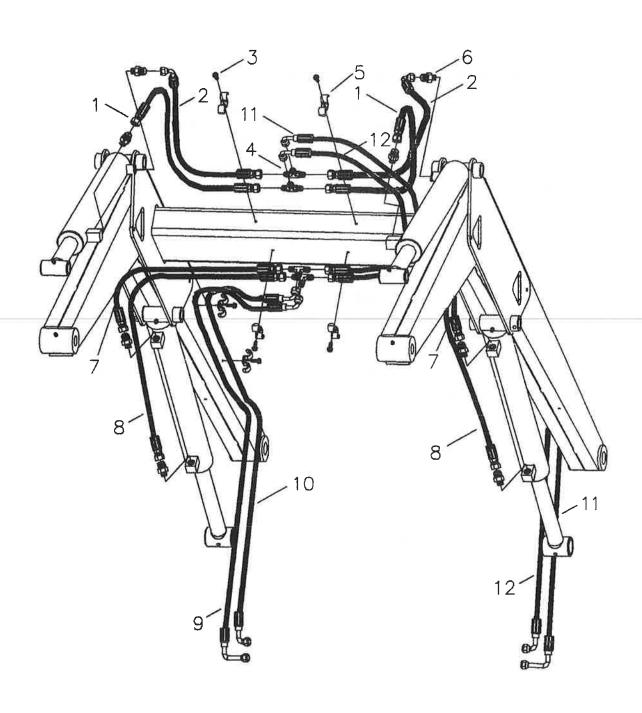
NO	REQ'D	PART NO	DESCRIPTION
1	10	**	1/4 - 20 NC NYLON INSERT NUT
2	2	**	1/4 - 20 NC X 2 1/2 GRADE 5 BOLT
3	2	92L006	LOADER LIFT CYLINDER
4	2	92L001S	LOADER PIVOT PIN WELDMENT
5	2	92L002	CYLINDER PIVOT PIN
6	8	**	½ -20 X 2" GRADE 5 BOLT
6A	2	HD149	5/16 X 2 SPIRAL ROLL PIN
7	2	92T006	UPPER LOADER PIN WASHER
8	4	92L001 M	LOADER PIN
9	1	92L001	LOADER ARM ASSEMBLY
10	2	92L007	BUCKET CYLINDER
11	4	92LO04M	BUCKET PIN
12	1	92L004	BUCKET ASSEMBLY
13	4	401256	1/4 - 28 NF GREASE ZERK, STRAIGHT
NS		92L006K	LOADER CYLINDER SEAL KIT (BUCKET & LOADER)
NS		92L007G	LOADER CYLINDER GLAND
NS		92L007P	LOADER CYLINDER PISTON
NS		92L007R	LOADER CYLINDER ROD

LEGEND: NS = Not Shown

LOADER HYDRAULIC ASSEMBLY

MODEL TLB 20K-25K

A-15C



LOADER HYDRAULIC ASSEMBLY PARTS

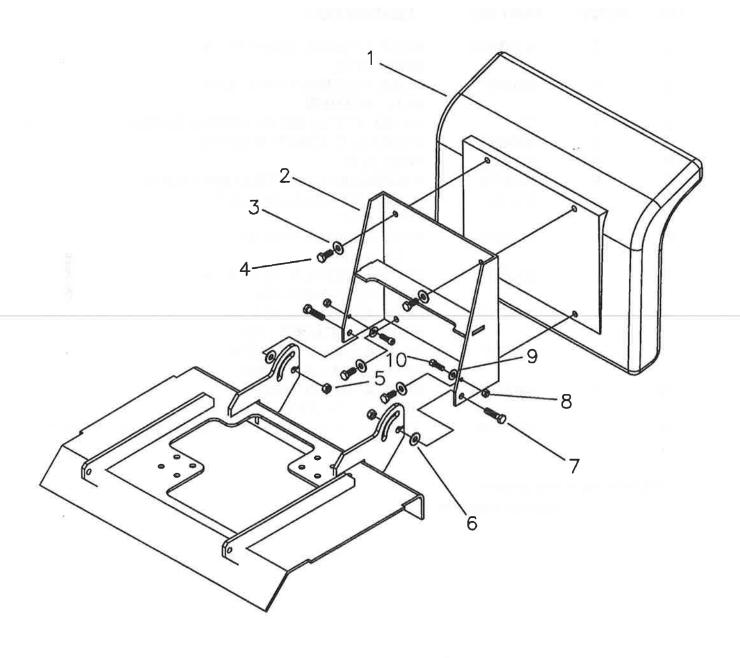
MODEL TLB 20K-25K

A-15D

NO	REQ'D	PART NO	DESCRIPTION
1	2	920625A	HOSE ASSEMBLY 3/8 X 34 1/4 6FJX - 6FJX
2	2	920627	HOSE ASSEMBLY 3/8 X 19 1/2 6FJX - 6FJX90S
3	8	**	1/4 -20 NC X 3/4 SELF-TAPPING SCREW
4	4	920668	HYDRAULIC ADAPTER 6JTX-S
5	8	920605	TUBE CLIP
6	8	320076	HYDRAULIC ADAPTER 6 ORM - 6 JICM
7	2	920623	HOSE ASSEMBLY 3/8 X 23 3/4 6FJX - 6FJX
8	2	920621	HOSE ASSEMBLY 3/8 X 41 6FJX - 6FJX
9	1	920636	HOSE ASSEMBLY 3/8 X 78 1/2 6FJX90L-6FJX90S-308°
10	1	920637	HOSE ASSEMBLY 3/8 X 78 6FJX90S - 6FJX90S - 300°
11	1	920638	HOSE ASSEMBLY 3/8 X 84 6FJX90L - 6FJX90S - 285°
12	1	920637	HOSE ASSEMBLY 3/8 X 81 6FJX90S - 6FJX90S - 305°
NS		92L006K	LOADER CYLINDER SEAL KIT (BUCKET & LOADER)

LEGEND: NS = Not Shown

A-16A



BACKHOE SEAT ASSEMBLY PARTS

MODEL TLB 20K-25K

A-16B

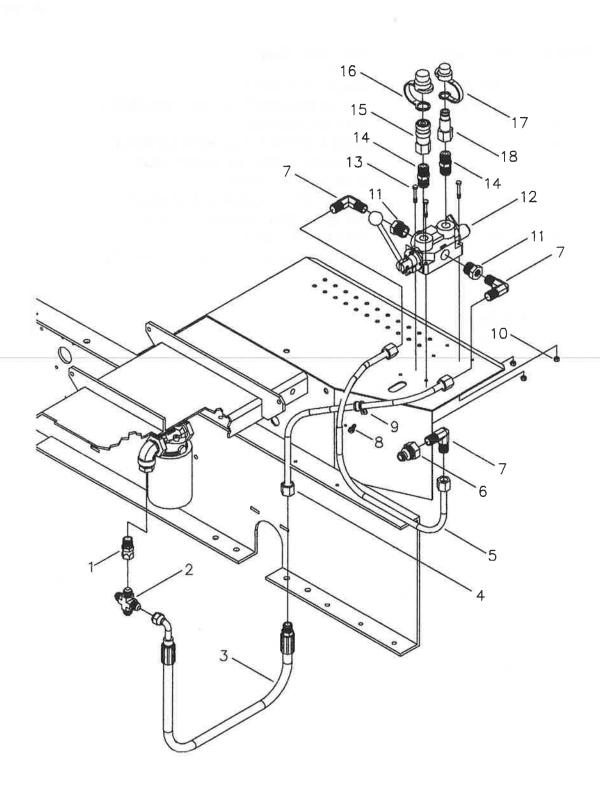
REQ'D	PART NO	DESCRIPTION
1	920246	BACKHOE SEAT
1	92B002	BACKHOE SEAT MOUNT WELDMENT
4	**	1/4 FLAT WASHER
4	**	8MM X 20MM X 1.25 HCS 8.8 BOLT
2	**	3/8-16 NC x NYLON INSERT NUT
2	**	5/16 FLAT WASHER
2	**	3/8-16 NC x 1-1/4 GRADE 5 BOLT
2	**	1/4-20 NC NYLON INSERT NUT
2	**	1/4 FLAT WASHER
2	**	1/4-20 NC x 5/8" SOCKET HEAD SCREW
	1 1 4 4 2 2 2 2 2 2	1 920246 1 92B002 4 ** 4 ** 2 ** 2 ** 2 ** 2 ** 2 **

LEGEND: NS = Not Shown

AUXILIARY VALVE ASSEMBLY

MODEL TLB 20K-25K

A-16C



AUXILIARY VALVE ASSEMBLY PARTS

MODEL TLB 20K-25K

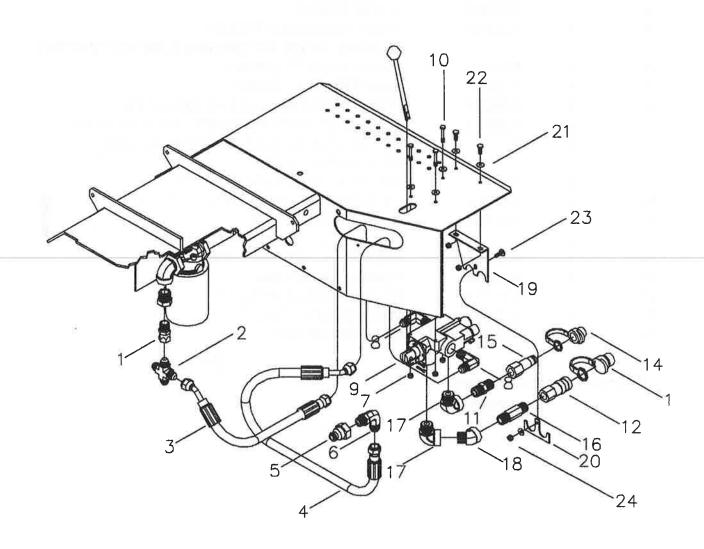
A-16D

NO	REQ'D	PART NO	DESCRIPTION
1	1	320583	SWIVEL CONNECTOR 650S-8-8
2	1	920655	UNION CROSS
3	1	920705	HOSE ASSEMBLY 1/2 X 24
			8FJX90S - HOSE FITTING (5/8 TUBE TO 1/2 HOSE)
4	11	920704	5/8 HYDRAULIC TUBING
5	1	920703	5/8 HYDRAULIC TUBING
6	1	920259	POWER BEYOND SLEEVE CK-6017-B
7	3	920701	HYDRAULIC FITTING 1/2 NPT - 5/8 TUBING 90°
8	1	**	1/4 - 20 NC X 3/4 SELF-TAPPING SCREW
9	1	**	5/8 CUSHION CLAMP
10	3	**	1/4 - 20 NC NYLON INSERT NUT
11	2	920664	HYDRAULIC FITTING 3/4 X 1/2 PTR-S
12	1	920328	DIRECTIONAL VALVE
13	3	**	1/4 - 20 NC X 1 3/4 GRADE 5 BOLT
14	2	920697	HYDRAULIC FITTING 1/2 FF-S
15	1	920650	FEMALE COUPLING
16	1	920651	FEMALE COUPLING CAP
17	1	920653	MALE COUPLING CAP
18	1	920652	MALE COUPLING

LEGEND: NS = Not Shown

A-16E

(AFTER 7/1/98)



AUXILIARY VALVE ASSEMBLY PARTS

MODEL TLB 20K-25K

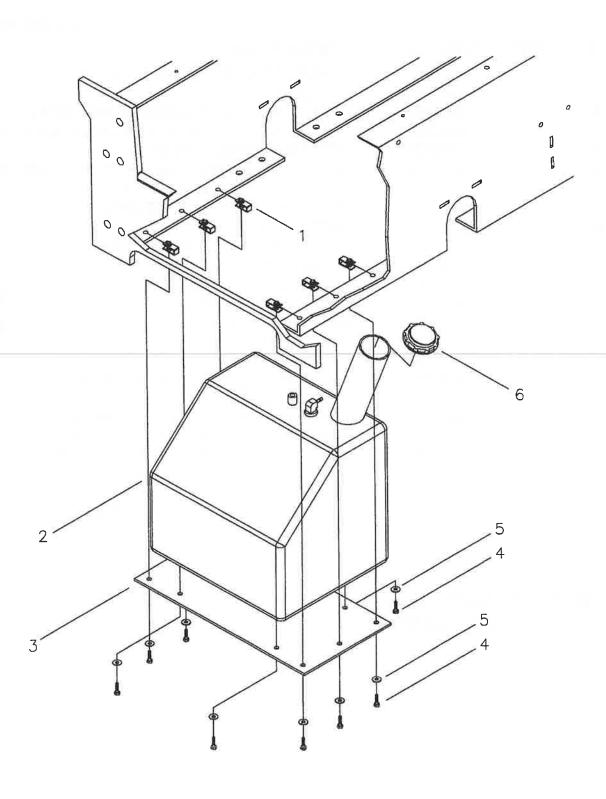
A-16F

(AFTER 7/1/98)

			V
NO	REQ'D	PART NO	DESCRIPTION
1	1	320583	SWIVEL CONNECTOR 650S-8-8
2	1	920655	UNION CROSS
3	1	920285	1/2 X 29.5-8FJX-8FJX45S (RETURN HOSE)
4	1	920286	1/2 X 61.5-8FJX-8FJX45S (PRESSURE SUPPLY)
5	1	920277	POWER BEYOND SLEEVE
6	3	320070	MALE 0 RING BOSS TO MALE JIC 37° FLARE 90°
7	3	**	1/4 - 20 NC NYLON INSERT NUT
8	2	920697	8-12 CTX-S HYDRAULIC FITTING
9	1	920328	DIRECTIONAL VALVE
10	3	**	1/4 - 20 NC X 1 3/4 GRADE 5 BOLT
11	1	320084	HYDRAULIC FITTING 1/2 FF-S
12	1	920650	FEMALE COUPLING
13	1	920651	FEMALE COUPLING CAP
14	1	920653	MALE COUPLING CAP
15	1	920652	MALE COUPLING
16	1	920298	PF10L-8-3 HYDRAULIC FITTING
17	2	920297	1/2 CD-S 10-12 PIPE THREAD 90° MALE-FEMALE
			HYDRAULIC FITTING
18	1	920296	1/2 CD 45-S PIPE THREAD HYDRAULIC FITTING
19	1	92T224	QUICK COUPLE SUPPORT BRACKET
20	1	92T225	QUICK COUPLE SUPPORT BRACKET BOTTOM
21	6	**	1/4 FLAT WASHER
22	2	**	1/4-20 X 3/4 BOLT
23	1	**	1/4-20 X 3/4 PHILLIPS HEAD SCREW
24	1	**	1/4-20 KEPS NUT

LEGEND: NS = Not Shown

A-17A



FUEL TANK ASSEMBLY PARTS

MODEL TLB 20K-25K

A-17B

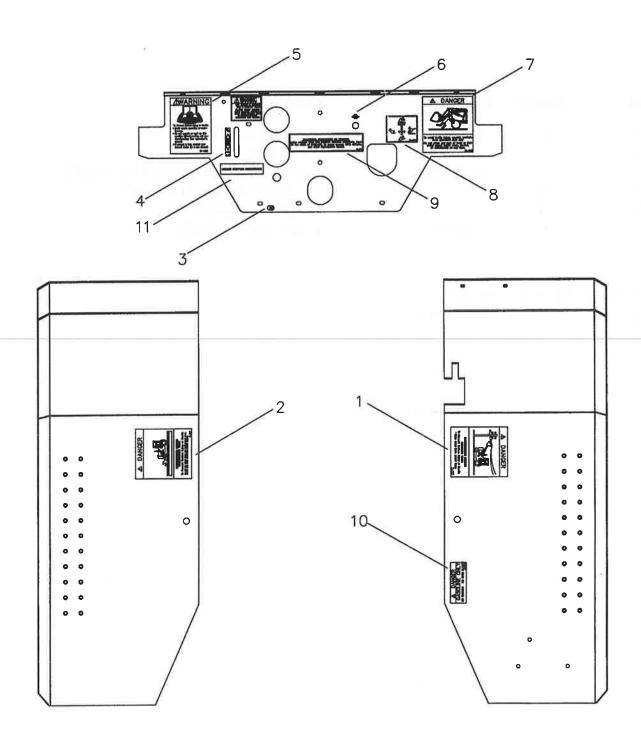
NO	REQ'D	PART NO	DESCRIPTION
1	6	920190	1/2-20 NC J-NUT
2	1	92TO93	POLY FUEL TANK
3	1	92TO94	POLY FUEL TANK MOUNTING PLATE
4	10	**	1/4 - 20 NC X 1 GRADE 5 BOLT
5	10	**	1/4 FLAT WASHER
6	1	340027	FILLER CAP, PLASTIC CAP

LEGEND: NS = Not Shown

DECALS (DASH / FENDERS)

MODEL TLB 20K-25K

A-18A



DECALS (DASH / FENDERS) PARTS LIST

MODEL TLB 20K-25K

A-18B

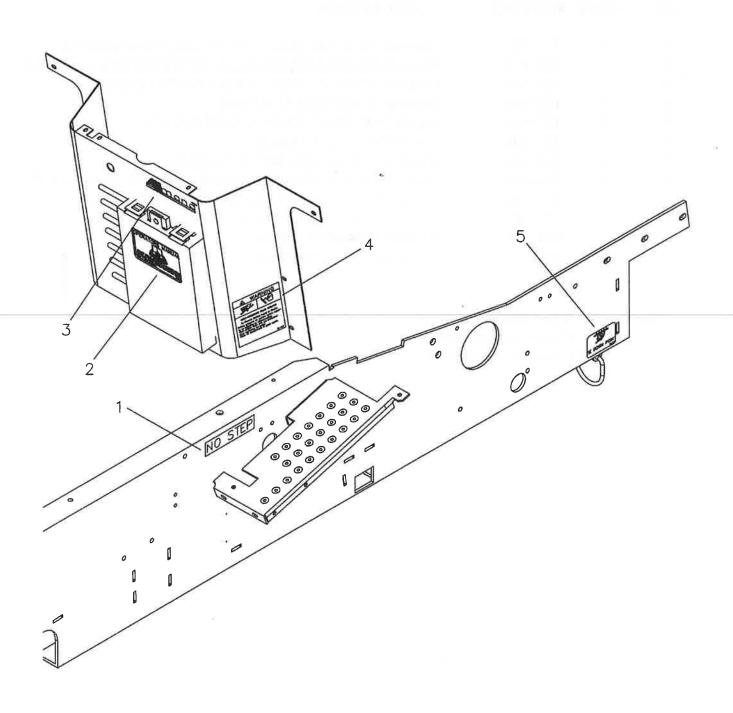
NO	REQ'D	PART NO	DESCRIPTION
1	1	DD-197	(DANGER) OVERHEAD ELECTROCUTION HAZARD
2	1	DD-195	(DANGER) UNDERGROUND ELECTROCUTION HAZARD
3	1	DD-209	LIGHTS SYMBOL (W/OPTIONAL WORK LIGHTS)
4	1	DD-196	ENGINE THROTTLE CONTROL
5	1	DD-158	(WARNING) READ OPERATORS MANUAL
6	1	DD-206	OIL PRESSURE SYMBOL
7	1	DD-189	(DANGER) TO AVOID BODILY INJURY
8	1	DD-207	LOADER JOYSTICK FUNCTIONS (BEFORE SN 9708TO6)
		DD-246	LOADER JOYSTICK FUNCTIONS (AFTER SN 9708TO6)
9	1	DD-187	CALIFORNIA PROPOSITION 65 GAS WARNING
10	1	DD-192	DANGER GASOLINE ONLY
11	1	@@	KOHLER STOPPING INSTRUCTIONS

LEGEND: NS = Not Shown

** = Purchase locally

@@ = See Kohler Dealer

A-18C



DECALS (RIGHT SIDE) PARTS LIST

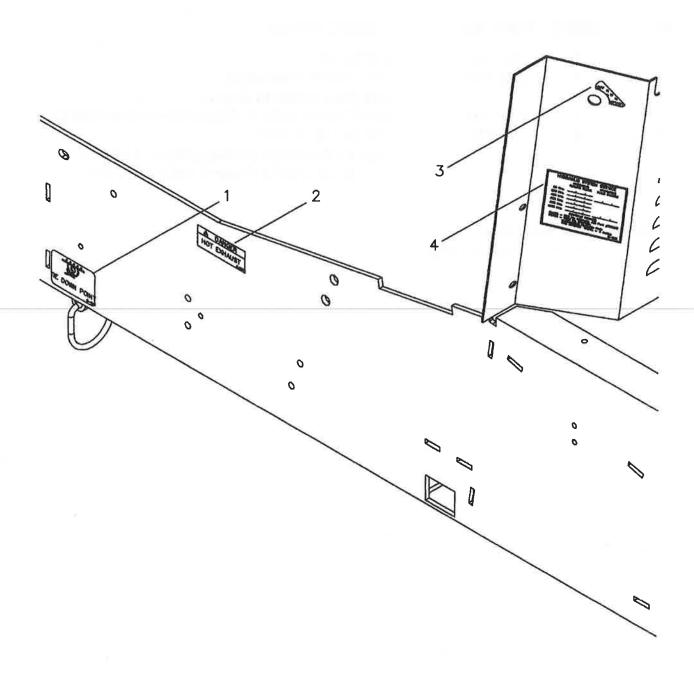
MODEL TLB 20K-25K

A-18D

NO	REQ'D	PART NO	DESCRIPTION
1	1	DD-147	NOSTEP
2	1	DD-212	OPERATORS MANUAL
3	1		ABI (INCLUDED IN D-221)
4	1	DD- 191	(WARNING) HIGH-PRESSURE FLUID HAZARD
5	4	DD-210	TIE DOWN POINT
			(2) ON TRACTOR FRAME (RIGHT & LEFT)
			(2) ON BACKHOE FRAME (RIGHT & LEFT)

LEGEND: NS = Not Shown

A-18E



DECALS (LEFT SIDE) PARTS LIST

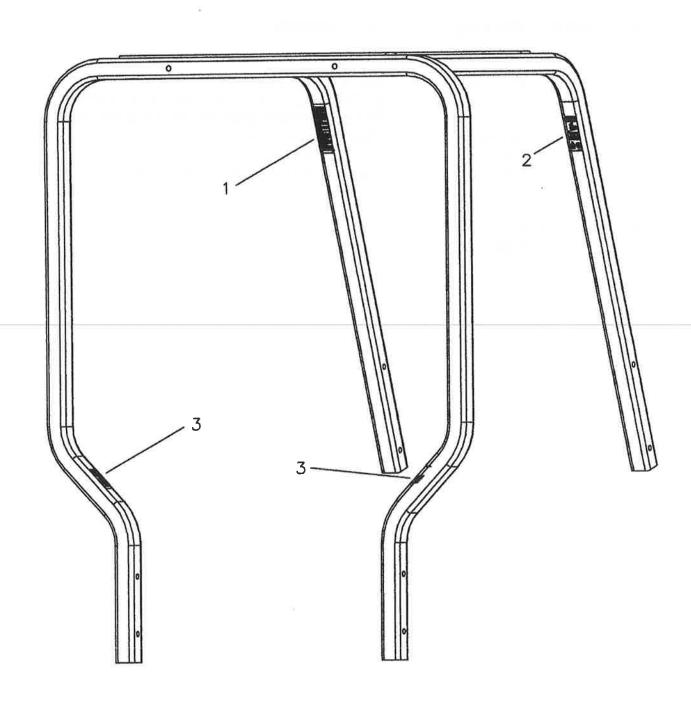
MODEL TLB 20K-25K

A-18F

NO	REQ'D	PART NO	DESCRIPTION
1	4	DD-210	TIE DOWN POINT
			(2) ON TRACTOR FRAME (RIGHT & LEFT) (2) ON BACKHOE FRAME (RIGHT & LEFT)
2	1	DD-193	(DANGER) HOT EXHAUST
3	1	920436	KEY SWITCH DECAL
4	1	DD-258	HYDRAULIC SYSTEM SERVICE DECAL

LEGEND: NS = Not Shown

A-18G



DECALS (ROPS) PARTS LIST

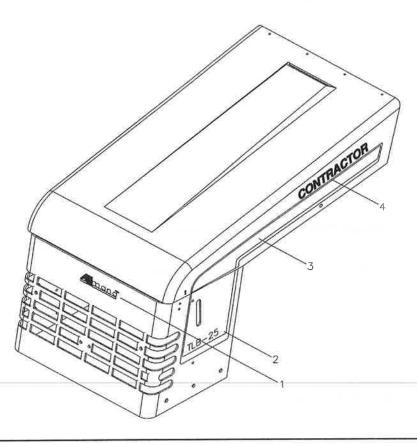
MODEL TLB 20K-25K

A-18H

NO	REQ'D	PART NO	DESCRIPTION
	4		
1	1	DD-190	(CAUTION) AVOID DEATH OR SERIOUS INJURY
2	1	DD-194	(WARNING) AVOID CRUSHING
3	2	DD-219	(WARNING) PINCH POINT

LEGEND: NS = Not Shown

A-18I



A-18K



DECALS (HOOD / NOSE) PARTS LIST

MODEL TLB 20K-25K

A-18J

NO	REQ'D	PART NO	DESCRIPTION
1	1	DD-270	ALLMAND DECAL
2	2	DD-273	DECAL TLB-25
3	1	DD-221	DECAL NOSE - HOOD SET
4	2	DD-274	CONTRACTOR

LEGEND: NS = Not Shown

** = Purchase locally

A-18L

DECALS (LOADER) PARTS LIST

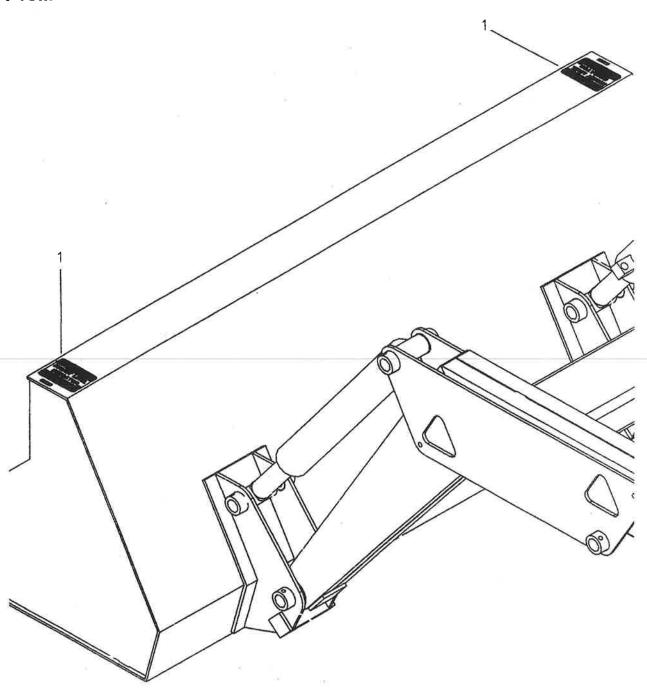
NO	REQ'D	PART NO	DESCRIPTION
1	2	DD-274	CONTRACTOR DECAL
2	2	DD-269	ALLMAND LOGO

LEGEND: NS = Not Shown

DECALS (BUCKET)

MODEL TLB 20K-25K

A-18M



DECALS (LOADER) PARTS LIST

MODEL TLB 20K-25K

A-18L

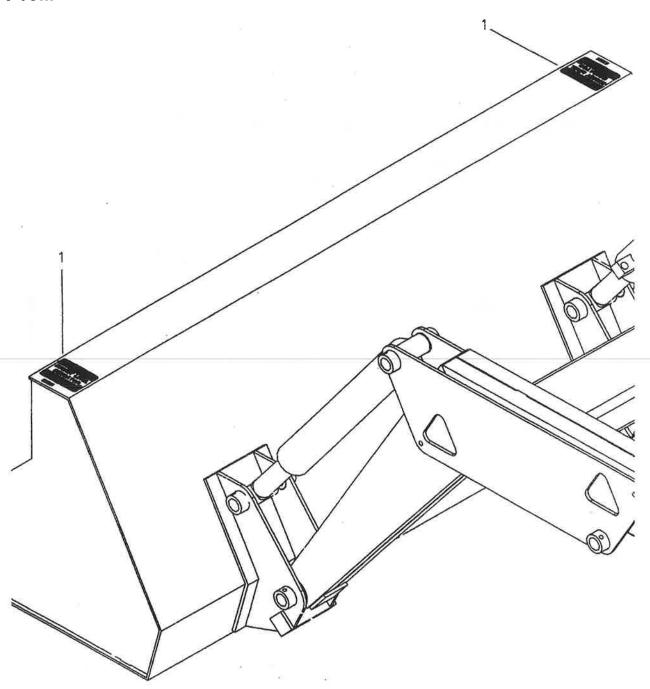
NO	REQ'D	PART NO	DESCRIPTION
1	2	DD-269	ALLMAND LOGO
2	2	DD-274	CONTRACTOR DECAL

LEGEND: NS = Not Shown

DECALS (BUCKET)

MODEL TLB 20K-25K

A-18M



DECALS (BUCKET) PARTS LIST

MODEL TLB 20K-25K

A-18N

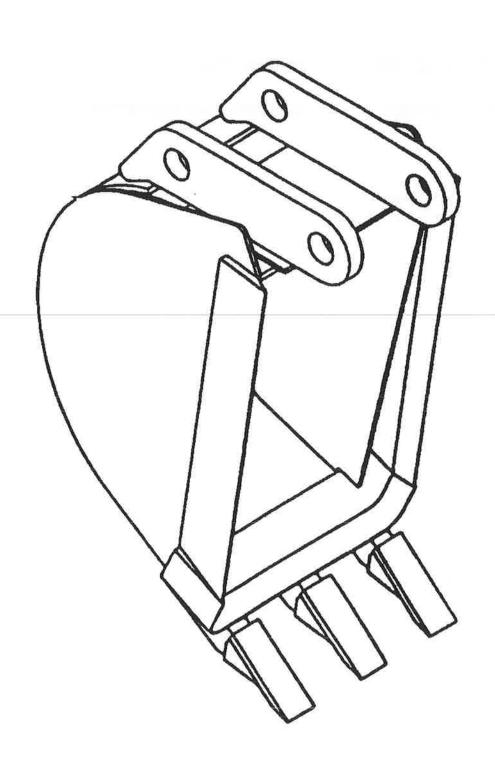
NO	REQ'D	PART NO	DESCRIPTION
1	2	DD-285	BUCKET LEVEL INDICATOR

LEGEND: NS = Not Shown

BACKHOE BUCKET OPTIONS

MODEL TLB 20K-25K

A-19A



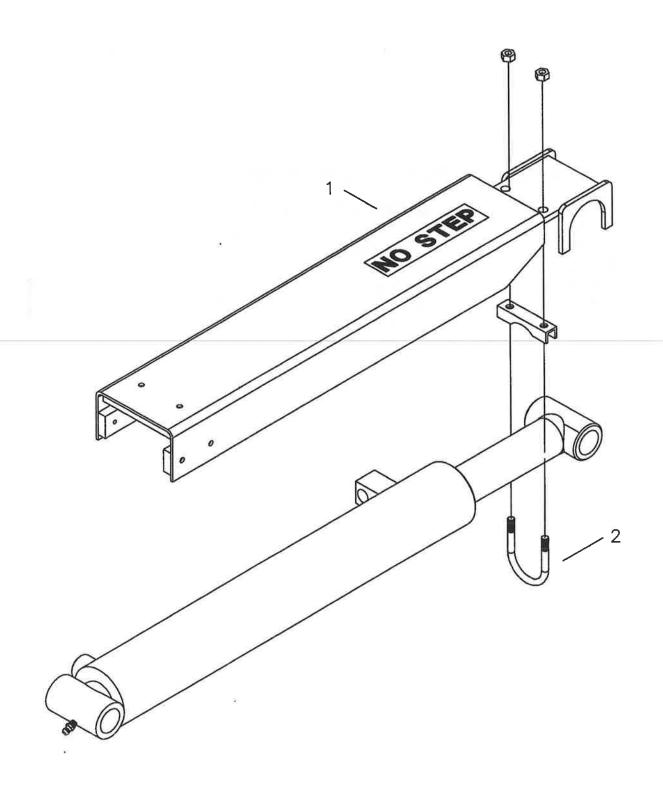
BACKHOE BUCKET OPTIONS PARTS LIST

MODEL TLB 20K-25K

A-19B

PART NUMBER	BUCKET DESCRIPTION AND SIZE
920102	BACKHOE BUCKET 40810"
920103	BACKHOE BUCKET 40812"
920104	BACKHOE BUCKET 40816"
920105	BACKHOE BUCKET 40818"
920106	BACKHOE BUCKET 40824"
920109	BACKHOE BUCKET 40836"
920149	BACKHOE QUICK ATTACH 408

A-20A



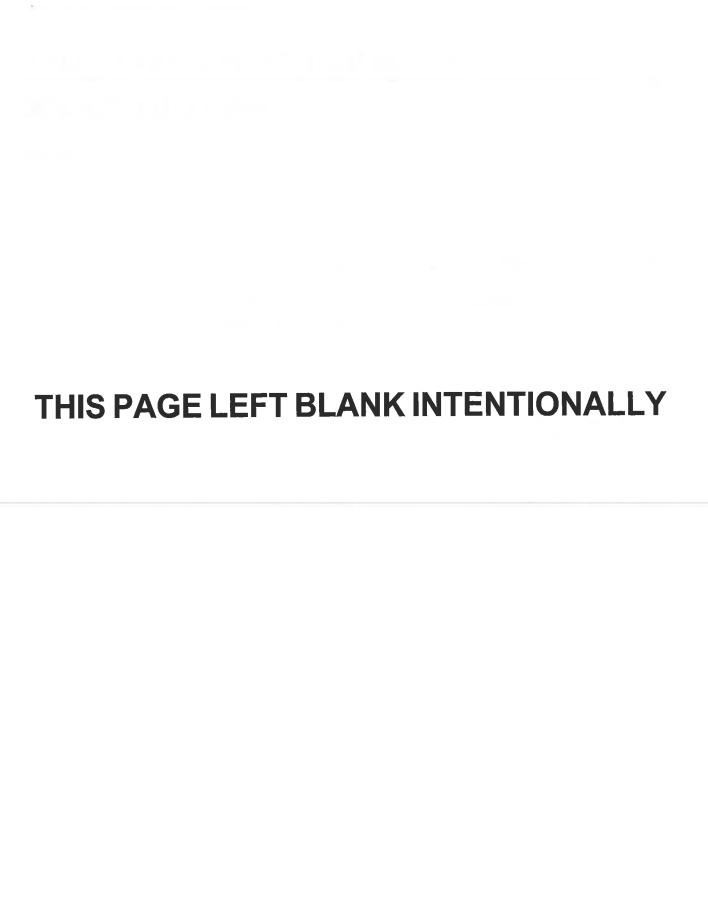
STABILIZER GUARD PARTS LIST

MODEL TLB 20K-25K

A-20B

NO	REQ'D	PART NO	370	DESCRIPTION
1	1	920169		STABILIZER GUARD
2	1	340117		1 1/2" MUFFLER CLAMP - PLATED

LEGEND: NS = Not Shown



ALLMAND * LIMITED WARRANTY

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING WARRANTIES OF MECHANTABILITY OR OF FITNESS FOR PURPOSE, AND ANY EXCEPTIONS ARE DESCRIBED IN THE PUBLISHED LIMITED WARRANTY ADDENDUM, AVAILABLE UPON REQUEST.

COMPONENTS, SUB-ASSEMBLIES AND DEVICES MANUFACTURED BY OTHER MANUFACTURERS ARE NOT COVERED BY THIS WARRANTY AND ALL WARRANTY INFORMATION FROM SUCH OTHER MANUFACTURERS IS PROVIDED WITHIN OR ACCOMPANY THESE GOODS.

Subject to the foregoing, the manufacturer, Alimand Bros. Inc., hereby warrants all equipment manufactured by Alimand Bros. Inc. to be free from defects in material and workmanship for a period of one (1) year after delivery to the original purchaser. Delivery shall be deemed for the purposes of this warranty to have occurred no later than five days following the date of sale agreement or invoice unless the purchase agreement or invoice specifically states a later delivery date in which case such delivery date shall control. The original purchaser shall be deemed to be a person who places the goods or products in actual use, and any person holding such goods solely forwholesale or retail sale purposes shall not constitute an original purchaser. PROVIDED, any leasing of these goods or other use beyond normal demonstration of same shall be deemed to be a use by an original purchaser and all warranty periods shall commence at the time of such use. During the warranty period any defective goods or parts hereof shall be repaired or replaced at manufacturer's discretion. In the event it is necessary to return such goods or parts to the factory, all transportation charges shall be prepaid and the manufacturer shall in no event pay any transportation or mileage expenses.

The obligations of the manufacturer is solely to repair or replace defective goods or parts or to refund the cost of the same if it is determined by the manufacturer.that repair or replacement will not return the goods to proper working order or utility. THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND MANUFACTURER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES. THE OBLIGATIONS OF THE MANUFACTURER HEREUNDER SHALL IN NO WAY EXCEED THE PRICE OF THE EQUIPMENT OR PART UPON WHICH SUCH LIABILITY IS BASED.

The warranty shall not extend to tires, lamps and batteries or parts which have been altered, changed, damaged or improperly installed, repaired, operated or maintained. Provided, this exclusion shall not apply to installations, repairs or other work done at the manufacturer's plant or under direct manufacturer's supervision. The Operator's Manual, to the extent covered therein, is deemed to set forth the proper procedures for operation, repair, installation and maintenance of these goods.

No representative, dealer or distributor of the company is authorized to make any changes or exceptions to this warranty unless expressly authorized in writing from the manufacturer. All warranty claims must be filed within thirty (30) days of failure.



ALLMAND BROS. INC., W. HWY. 23, P.O. BOX 888, HOLDREGE, NE 68949 (308) 995-4495

CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust from this product contains chemicals, known to the state of California, to cause cancer, birth defects, and other reproductive harms.

D-187