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Part 1: A Word to Owner, Operator, and Service Personnel About Safety

⚠ WARNING

FAILURE TO READ THIS BOOKLET IS A MISUSE OF THE EQUIPMENT. ANYONE WHO WILL OPERATE, SERVICE OR WORK AROUND THIS LOADER MUST FIRST READ THIS BOOKLET. DEATH OR SERIOUS INJURY MAY RESULT FROM IMPROPER USE OR MAINTENANCE OF THIS LOADER.

Introduction

Anyone who will operate, service or work around the loader should first read this manual. It is important that all workers understand the safety, operational, service, and repair requirements of the loader. Death or serious injury can result from improper use or maintenance of the loader.

As an owner or employer, it is your responsibility to know the specific requirements, governmental regulations, precautions, and work hazards that exist. You should make these known to all personnel working with the equipment or in the area. It is your responsibility to instruct the operator in the safe operation of the equipment and to provide the operator with properly maintained equipment.

It is the operator's responsibility to operate the loader with skill, good judgment and caution. Following recognized safety procedures helps to avoid accidents.

Do not allow untrained personnel, even on a temporary basis, to operate this equipment. Operators must be trained by an experienced Lightning Loader operator who is familiar with all aspects of operation, safety, and maintenance of this equipment.

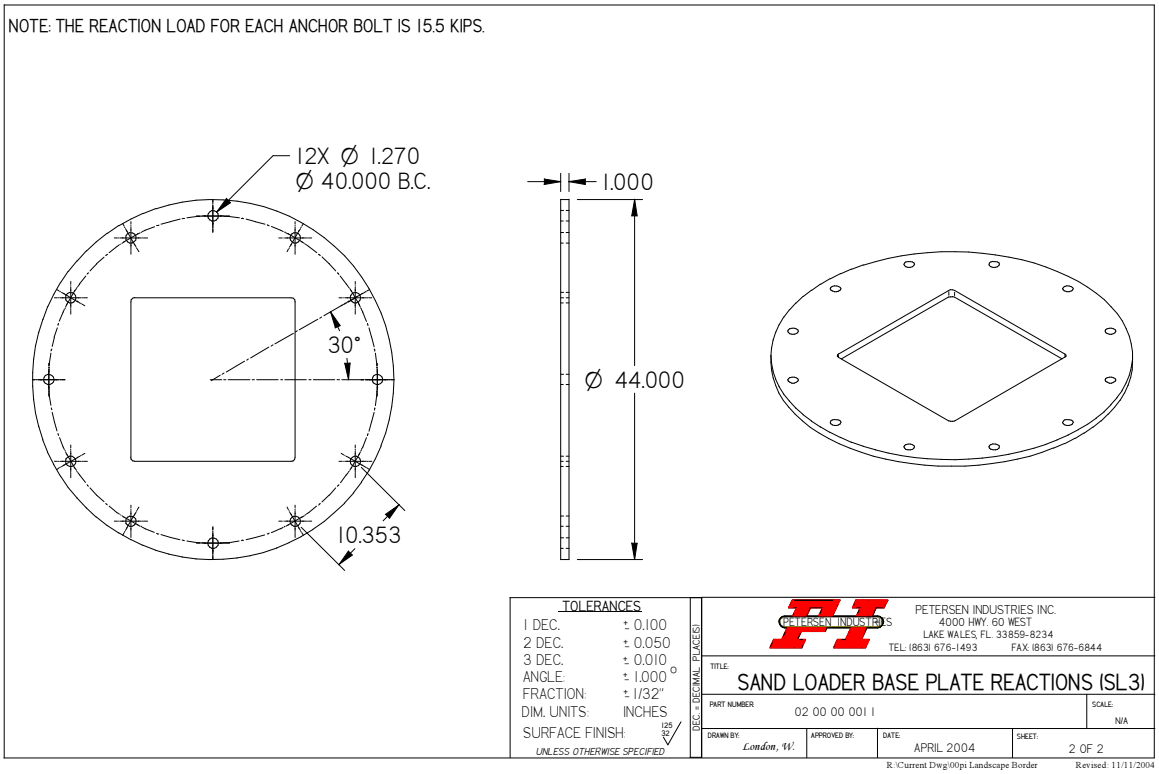
Modifications to any part of this loader can create a safety hazard and therefore shall not be made without the manufacturer's written approval. Use only factory approved parts to repair or maintain this equipment. If this equipment is rebuilt or remounted, mounting procedures and retesting is required in accordance with factory instructions.

⚠ WARNING

DO NOT OPERATE THE LOADER UNDER ANY CIRCUMSTANCE IF THERE IS REASON TO BELIEVE THE UNIT IS BROKEN OR MALFUNCTIONING. DO NOT ATTEMPT TO MOVE THE BOOM OF A BROKEN OR MALFUNCTIONING UNIT WITHOUT ASSISTANCE FROM ANOTHER CRANE OR LIFTING DEVICE. ANY ATTEMPT TO USE OR MOVE THE BROKEN OR MALFUNCTIONING UNIT COULD RESULT IN SERIOUS BODILY INJURY OR DEATH.

Part 2: Setting Up the Loader

The loader should be installed on a base that complies with the requirements stipulated in this drawing:



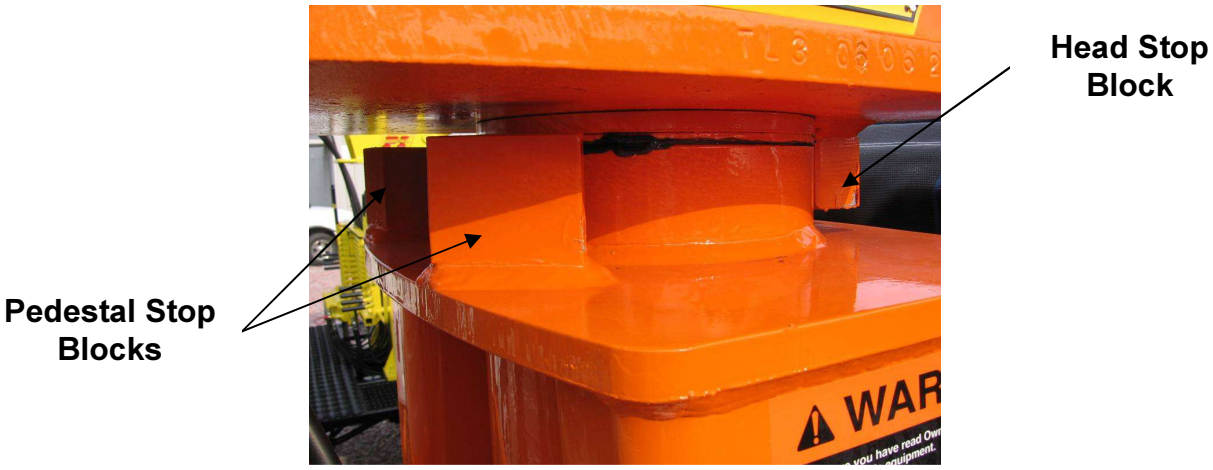
Location:

Location should be selected so that it is possible for the operator to see both the loader and the haul vehicle at all times during the loading procedure. This may require the installation of mirrors and/or cameras. There should be a clear view of the loader and vehicle from the station where the operator sits/stands to operate the unit. The loader should be installed on a flat surface in an area free from overhead obstructions. The loader and stop blocks should be installed so that it is impossible for any part of the loader to impact the scale house or other structures.

The loader should be positioned so that it is impossible for any portion of the equipment to come within the minimum required safe distance to any energized power line. Maintain a clearance of at least 10 feet between any part of the loader and any electrical line. Remember, power lines deflect in winds and additional clearances must be allowed. Death or serious injury may result from contact or arcing due to inadequate clearance to anyone working on or around the loader.

Setting the Loader Boom Swing Radius:

The swing radius is controlled by positive stops. There are two (2) stop blocks welded to the pedestal assembly and one (1) to the head assembly.



Damaged or missing head and pedestal stops poses an unsafe condition by allowing the boom to swing too far, resulting in damage to the swing motor and/or hydraulic hoses, which could also result in loss of boom swing control.

If it is necessary to replace damaged or missing stop blocks, make sure to install replacement(s) within the allowable tolerances for the boom swing radius.

Units Equipped with Model HA36 Swing Motor – Boom swing radius not to exceed 244°.

Units Equipped with Model Dinamic Oil Swing Motor – Boom swing radius not to exceed 270°.

Part 3: Daily Inspections - Before Opening Scales in the Morning

One of the most important factors in the prevention of accidents is a positive attitude towards safety. The habit of anticipating possible problems normally prevents many accidents from occurring.

Each morning, prior to opening the scales for operation, make the following inspections:

1. Check any mirrors or cameras that you have installed at the scale house for proper function and visibility and adjust if necessary.

2. Check the loader hydraulic system for any unusual conditions such as pools of hydraulic fluid, or any signs of damage or improper maintenance. The hydraulic hoses should be free from cuts and abrasions and there should be no evidence of binding or leakage.

Any insufficiencies found during this inspection must be corrected prior to use of the equipment. Only after these inspections have been made, and the operator is at the control station can the power unit be turned on.

Part 4: Safety Devices

We will now discuss some of the components designed into the loader system to ensure that safe loader control is maintained. There are hydraulic system flow devices designed into the loader system to control the flow of hydraulic fluid. Loader control and speed are essential to the safe operation of, and longevity of the loader.

To maintain safe loader control you must ensure that proper motor speed is observed, all oil flow restrictors are in place and have not been modified, and all valves are operating properly. You must not remove, or tamper with the manufacturer's recommended settings of oil flow devices.

Excessive operating speed causes erratic operation of the loader. Excessive operating speed decreases operator control and increases the stresses on the loader's supporting structures, which could cause unexpected component failure. The result of unexpected component failure could be damage to the equipment and/or serious bodily injury or death.

FLOW RESTRICTORS

Swing Actuator Restrictors: - The swing actuator flow restrictors control the swing speed of the loader boom. These restrictors are located on the swing drive motor, one on each port. These restrictors are factory preset and must not be removed or drilled out.

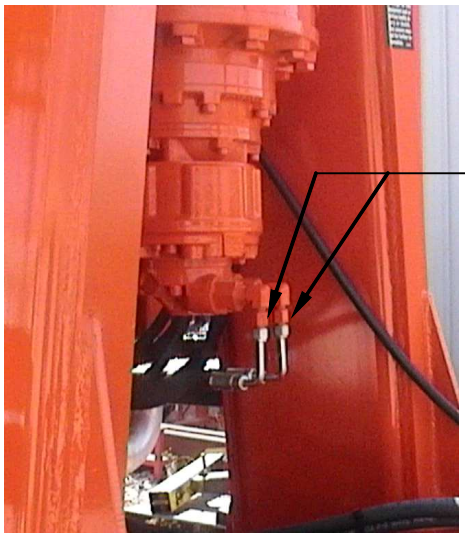
Model HA36 Rotary Actuator, Restrictor Size = .056
Model Dinamic Oil Rotary Actuator, Restrictor Size = .110

Some signs of restrictor removal or modification are:

1. Excessive boom swing speed. Full travel time should be 20 seconds, ±3 seconds, from head stop to head stop.

2. Broken or bent head (swing) stops. Catastrophic actuator damage will result if head stops are damaged or missing.

3. Excessive swing speed causes excessive wear on the main boom/tip boom connecting bolt.



Swing Actuator Restrictors:

HA36 Actuator Restrictor Size = .056

Dinamic Oil Actuator Restrictor Size = .110

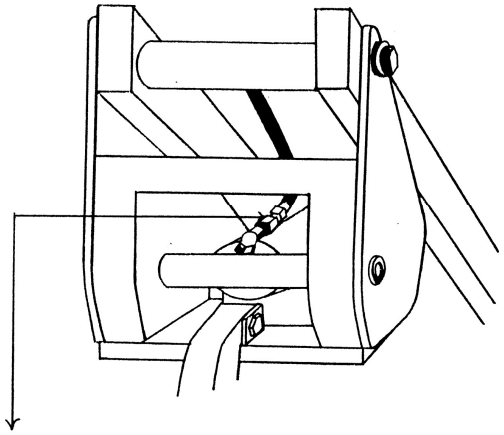
LOAD CONTROL VALVES

The load control valves are either a part of or plumbed directly onto load holding cylinders. These valves are found on the main boom lift cylinder, tip cylinder, and tip extension cylinders.

Main Boom Lift, Tip, and Tip Extension Cylinders:

One-way Restrictors: - Older model loaders use one-way flow restrictors that are plumbed to cylinder ports and have a factory preset orifice. In the event of hydraulic hose rupture, these restrictors control the decent speed of the lift and tip cylinders.

These restrictors are factory preset and must not be removed or drilled out.



Restrictor Size = .187

Counter-balance Valves: - The counter-balance valve is a cartridge type valve, mounted directly into a housing that is welded to the lift, tip, and tip extension cylinders. These valves hold the load until hydraulic pressure is applied to it causing the valve to open. This ensures the load is held in case of hose rupture, or other hydraulic system failure.

Notice to Operators: If load control valve(s) malfunction, do not attempt to adjust valves, and/or continue to use the loader. Call maintenance personnel to repair.

Counter-balance valve adjustment is not normally needed after initial installation. However, if adjustment is needed, first release load from valve and rest bucket on ground. Turn valve screw far enough out so that valve will hold load when control valve is opened and power source is off. The power source should be off when adjusting the screw, back on to lift the boom, and off again to test load holding capability of the valve.

If the cartridge valve is replaced, you must first release the load from the valve. This means the boom must be at rest on the ground, prior to removing the cartridge valve.

⚠ WARNING

FAILURE TO FOLLOW THE PRECEDING INSTRUCTIONS REGARDING COUNTER-BALANCE VALVE ADJUSTMENT AND/OR REPLACEMENT, COULD RESULT IN THE BOOM FALLING ONCE THE CARTRIDGE VALVE IS REMOVED, WHICH COULD RESULT IN DAMAGE TO THE EQUIPMENT OR SERIOUS PERSONAL INJURY OR DEATH.

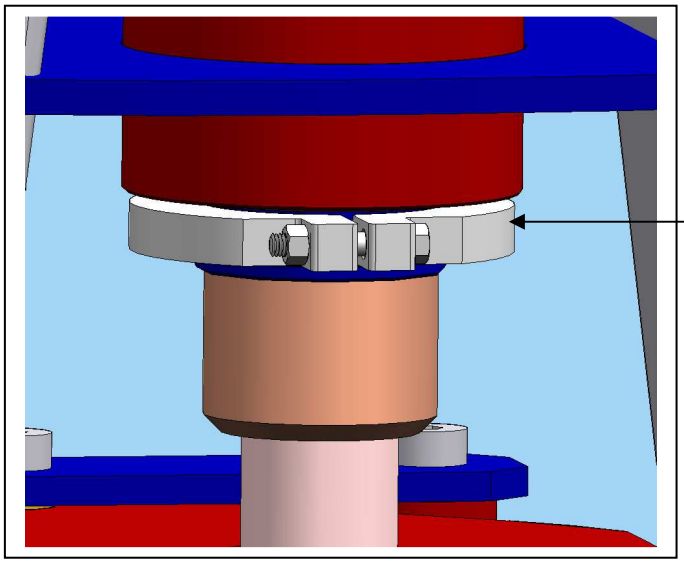
LOCK COLLAR

The lock collar is an integral part of the loader that holds the head and spindle assembly in the pedestal. The lock collar must be in place and the lock collar bolts properly torqued prior to use of the stationary loader. The lock collar must be tight against the bottom of the spindle bearing housing with a maximum gap of one-quarter inch (1/4").

Under normal operating conditions, there is very little load applied to the lock collar. Improper operating practices like excessively packing the load with the boom could put excess stress on the lock collar and therefore must be avoided.

Improper lock collar installation and/or improper operating practices, could result in the head assembly being pulled up out of the pedestal assembly. The separation of these two loader components will result in equipment damage, and could result in serious personal injury or death.

Maintenance and shop personnel must continuously check for the above listed signs of abuse, and must report their observations to the person responsible for the operation practices of the loader operators. Corrective measures must be taken to stop abusive loading practices.



Lock Collar

(Also shown on Diagram No. 1300 in “Dia. & Drawings” Section of this manual (see Item No. 9).

SAFETY SYMBOLS

Your loader has required safety decals (see following pages) that alert those operating, working around, or performing maintenance on the loader of certain safety hazards. The safety decals are used to show the consequence of human interaction with a hazard in terms of:

1. The degree of severity.
   (minor injury, severe injury, death)

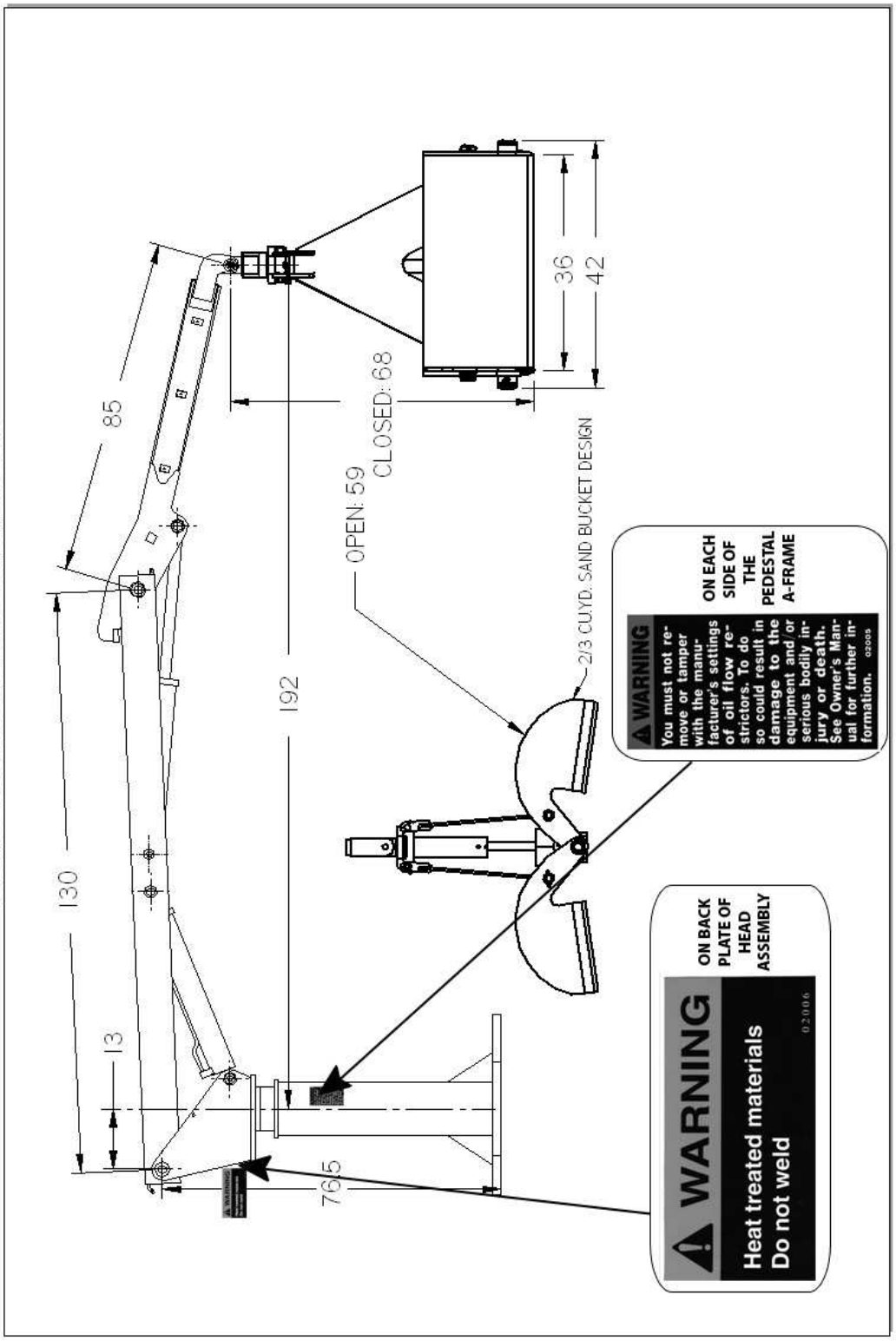
2. The probability of severity.
   (WILL result in, COULD result in)

The following definitions for identifying hazard levels are provided with their respective signal words.

DANGER Immediate hazards which WILL result in severe personal injury or death.

WARNING Hazards or unsafe practices which COULD result in severe personal injury or death.

CAUTION Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.


MODEL SL LOADER - REQUIRED SAFETY DECALS
85
130
13
765
192
OPEN: 59
CLOSED: 68
36
42
2/3 CU.YD. SAND BUCKET DESIGN
ON EACH SIDE OF THE PEDESTAL A-FRAME
WARNING
You must not remove or tamper with the manufacturer's settings of oil flow restrictors. To do so could result in damage to the equipment and/or serious bodily injury or death. See Owner's Manual for further information.
ON BACK PLATE OF HEAD ASSEMBLY
WARNING
Heat treated materials
Do not weld

Part 5: Controls

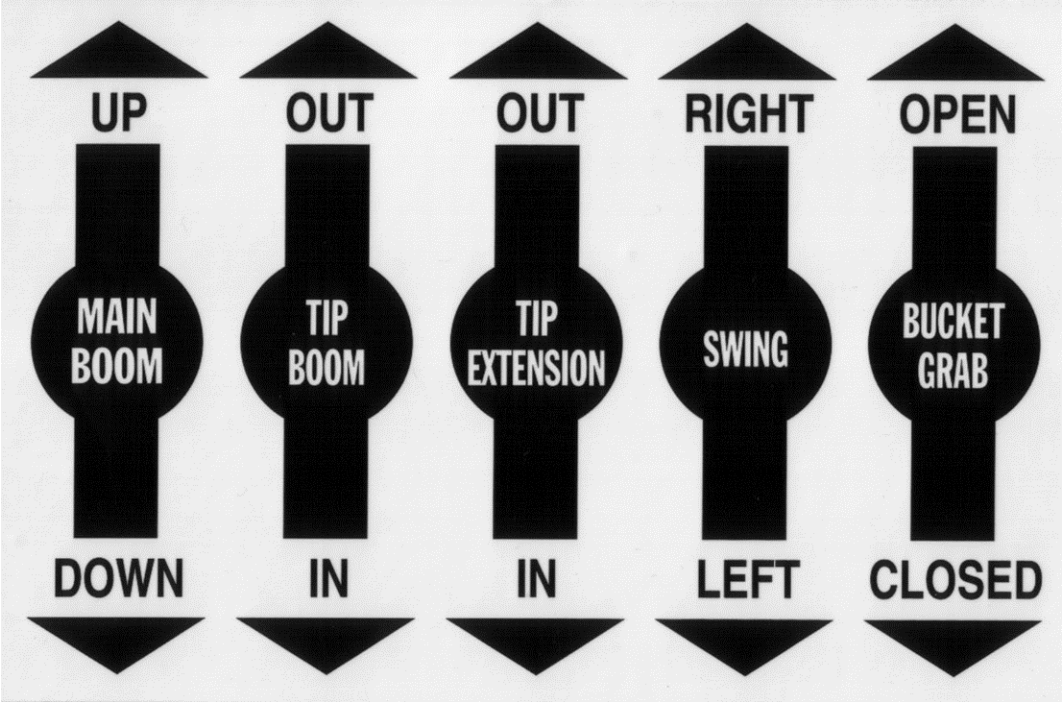
LOADER CONTROLS

There are two possible control types for stationary mount loaders, valve handle control levers, or joystick controls.

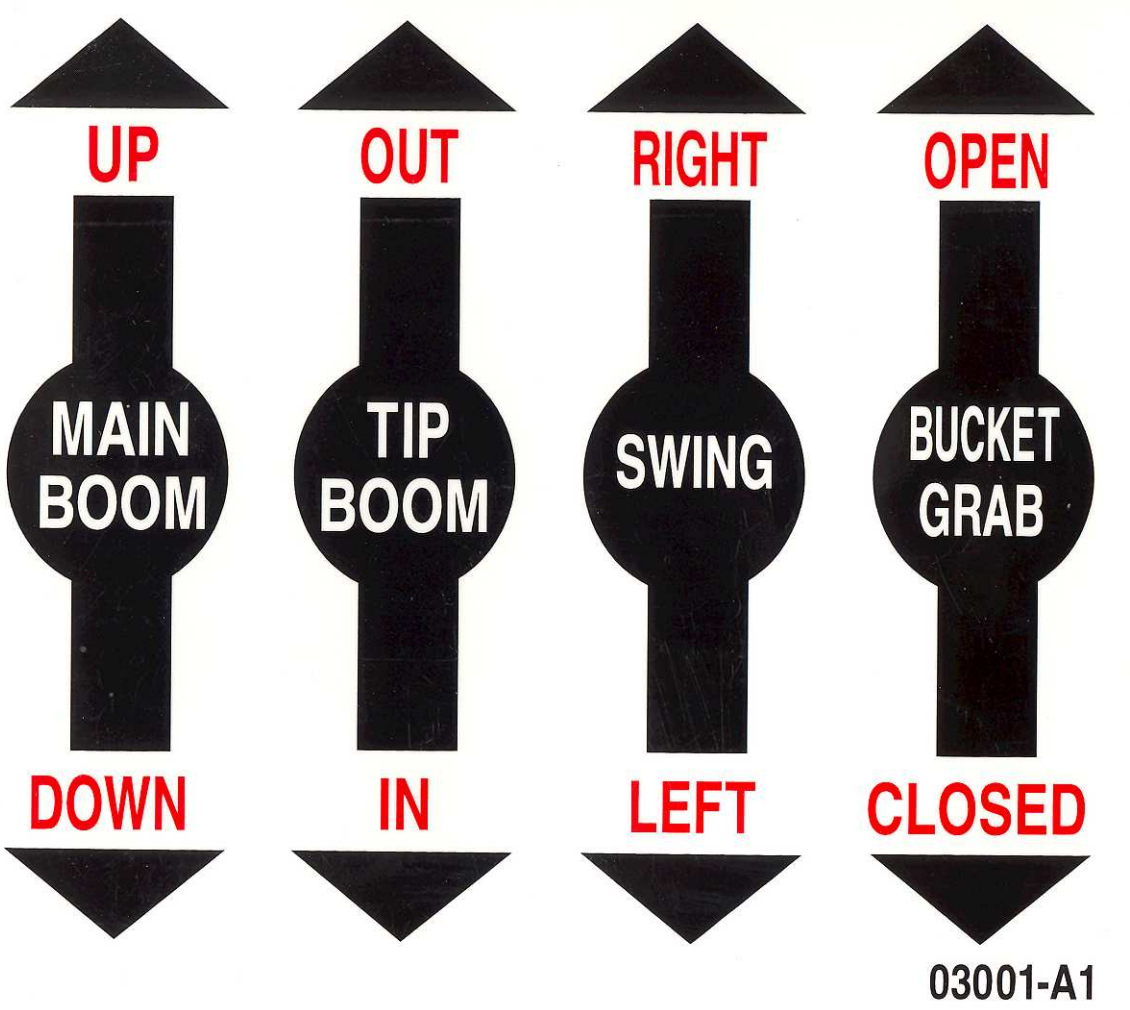
The loader control placards indicate the direction to actuate the control handles for various unit functions. The loader placard gives visual instructions for boom elevation, boom swing, tip boom elevation, tip boom extension, and bucket grab.

Control Levers

The standard Model SL3 has five (5) control handles that activate operations of the loader. The following decal shows the control handle configuration, and the arrows indicate the direction to push or pull the handle for each function.



The standard model SL2 has four (4) control handles that activate operations of the loader. The following decal shows the control handle configuration, and the arrows indicate the direction to push or pull the handle for each function.



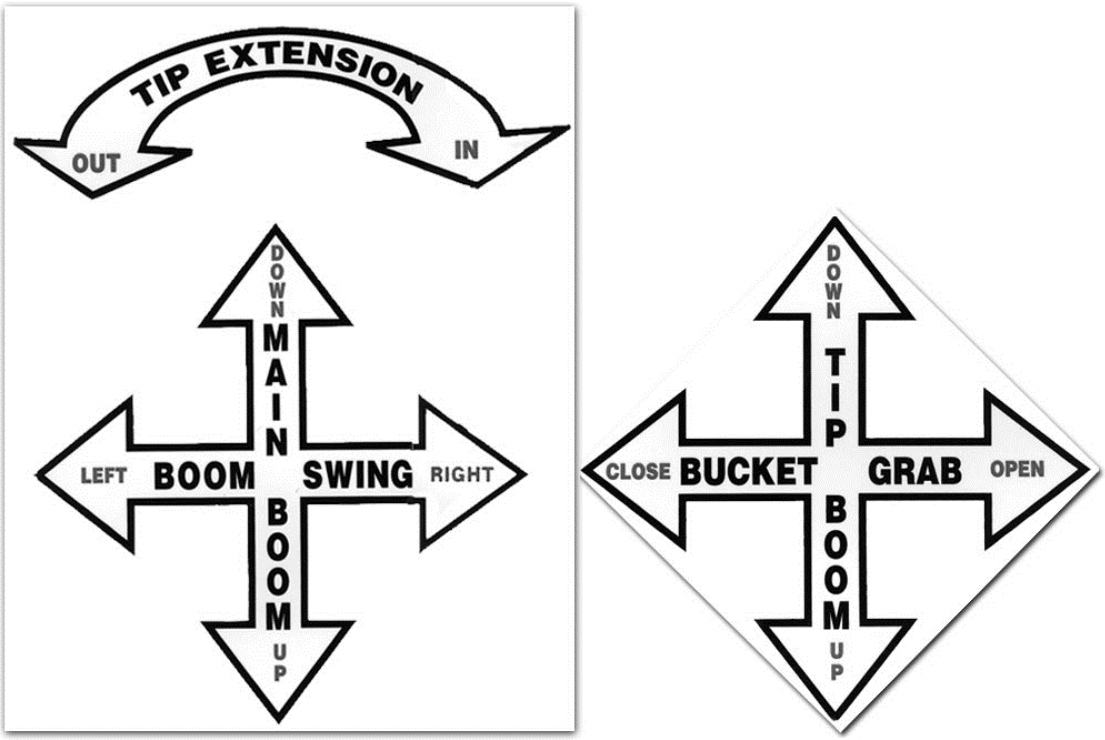
During all operations, the controls should be feathered when beginning or terminating a movement to prevent sudden starting or stopping which imposes undue shock loads on the equipment. Feather the controls by moving the valve handle smoothly from the neutral position to start motion. After a slow, smooth start, move the valve handle control to extreme for full speed. Just before stopping movement, move valve handle control smoothly back to the neutral position.

Joystick Controls

There are two (2) joystick handles.

The optimum, safe method of operating the controls is by feathering. **Do not jerk the control levers to full speed, or from one extreme to another.** Feather the controls by moving the joystick smoothly from the neutral position to start motion. After a slow, smooth start, move the joystick control to extreme for full speed. Just before stopping movement, move the joystick control smoothly back to the neutral position.

SL3 JOYSTICK CONTROLS



Left Joystick:

Boom Swing: Move handle right to make boom swing right.
Move handle left to make boom swing left.

Main Boom: Pull handle back to raise boom.
Push handle forward to lower boom.

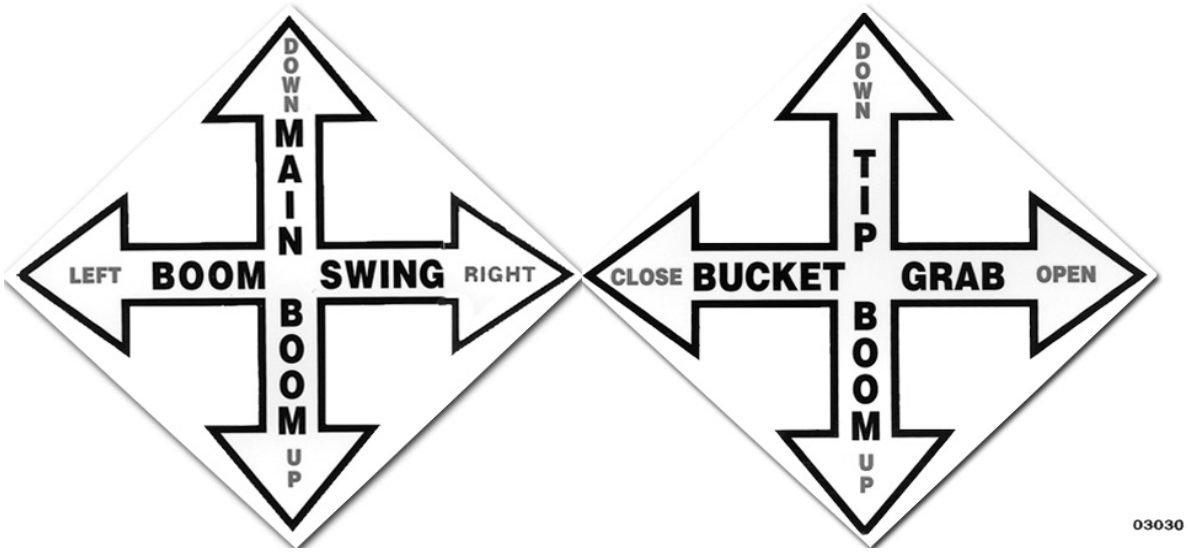
Tip Ext.: Twist handle counter-clockwise to extend tip extension out.
Twist handle clockwise to retract tip extension in.

Right Joystick:

Tip Boom: Pull the handle back to raise tip boom.
Push handle forward to lower tip boom.

Bucket Grab: Move handle right to open bucket.
Move handle left to close bucket.

SL2 JOYSTICK CONTROLS



Left Joystick:

Boom Swing: Move handle right to make boom swing right.
Move handle left to make boom swing left.

Main Boom: Pull handle back to raise boom.
Push handle forward to lower boom.

Right Joystick:

Tip Boom: Pull the handle back to raise tip boom.
Push handle forward to lower tip boom.

Bucket Grab: Move handle right to open bucket.
Move handle left to close bucket

Part 6: Training

All members of the crew must become thoroughly familiar with the operation of controls, the correct operating procedures, maximum lifting capacities, and safety precautions before operating the loader. Operator training is essential. Always be prepared for an emergency. The following pages contain numerous safety precautions, information, and operating instructions that must be observed while performing work operations.

The health, safety and well-being of each member of the crew is of primary importance. Consequently, each member has an obligation to himself, and to his fellow workers, to make sure safe operating procedures are followed. All operating regulations recommended by the manufacturer, the employer and by municipal, state and federal agencies must be observed. The operating procedures set up in this manual are Petersen's recommendations and do not necessarily cover employer and governmental regulations. Each operator must know and observe those regulations.

Become familiar with all equipment checks. You should make daily equipment inspections and be able to spot any abnormality or malfunctions before beginning an assigned task, while working or after completing the task. There is a high degree of reliability built into your equipment, but there is always a possibility of mechanical failure or power failure due to incomplete service or abnormal wear. An operator should never take another's word. He should always thoroughly check the equipment himself.

Each crew member must receive thorough instructions on the care and maintenance of this machine, thus enabling him to identify and anticipate any problems that may occur. Knowing how the equipment operates will help you recognize when it is not operating properly and that repairs or adjustments are required.

Once the haul truck is positioned on the scales and ready for balancing, please follow these precautions and procedures for loading:

Precautions and Procedures for Loading:

- The truck should be at a full stop on the scales with the parking brake set.
- Power unit must be turned on to operate loader, and turned off any time the operator is away from the control station.
- Do not operate the loader during electrical storms, when high wind conditions exist, or in poorly lighted conditions.
- Your loading area must be clear of people. Do not operate the loader if another person is within twenty feet of the equipment.
- Do not allow any person under an extended loader.
- Never load into a moving truck.
- Do not pack the load down with the bucket.
- Lower loader into coffer when away from control station. Do not leave loader suspended above scale area when away from controls.

Failure to heed these instructions can result in serious personal injury or death.

Part 7: Loading Procedures

To make the lift:

1. Turn on power unit
2. Raise boom from inside of the coffer.
3. Open the bucket, lower around materials, and close the bucket.
4. Lift and swing the load over the truck body.

The same procedures apply when removing material from the truck body.

To load less material, it is possible to control the flow by partially opening the bucket to let the material slowly pass through the bucket edges until the load is properly adjusted.

Continue the loading procedure until the truck is balanced.

Between trucks the boom should be stored inside the perimeters of the coffer, at rest on the material. Do not leave boom suspended over coffer.

Please follow these additional loading precautions at all times:

- Do not leave a load suspended when the operator is away from the control station.
- Do not attempt to lift loads exceeding manufacturer's recommended safe working capacity. See Load Chart in “Diagrams & Drawings” section of this manual.
- Do not impose lateral loads on the boom.
- Be careful not to impact any cross-braces inside the truck body.
- Turn off power unit any time operator is away from control station.

Part 1: Safety Procedures and Precautions for Service and Repair

A regular schedule of maintenance is essential to keep your unit at peak operating efficiency. Operators or service personnel responsible for the care of the unit must be completely familiar with the type and frequency of inspections, maintenance, and lubrication operations to be performed.

Always keep the loader free from sand and other foreign particles to ensure trouble-free operation and to avoid excessive wear. Air entering the oil tank carries with it small quantities of impurities and moisture. The hydraulic oil should be drained at least once a year to rid the system of any contamination and condensation.

The hydraulic circuit diagram is included in the "Diagrams & Drawings" section of this manual for service or maintenance information.

Make sure you observe the following procedures and precautions when performing maintenance and/or repairs on your equipment.

Safety Procedures and Precautions for Service and Repair
➢ Do not perform any work on the loader unless you are qualified and authorized to do so. ➢ Loader is placed where it will cause the least interference with other equipment or operations in the area. ➢ All controls at the off position and all operating features in neutral position. ➢ Do not attempt to clean, oil or service a loader when the power source is on. ➢ Deactivate means for starting. Use lockout-tagout procedure. ➢ Bucket and boom at rest on ground. ➢ Do not disconnect hydraulic connections under pressure. Hot hydraulic fluid can cause serious injury. Stay clear of hydraulic leaks as high pressure and hot hydraulic fluid can cause serious injury.

Modification to any part of the loader can create a safety hazard and therefore shall not be made without the manufacturer's written approval. It is important that you use factory replacement parts to ensure that size and capacity are as the original parts.

It is important that hydraulic components be rated at proper flow and pressure. If your loader is rebuilt or remounted, mounting procedures and retesting is required in accordance with factory instructions.

Disconnecting, removing, or disabling any part or component which controls the speed of the loader is a misuse of the loader.

The following lists inspections and maintenance which are to be conducted on your unit to help assure it is operating properly and safely. These inspections are in addition to any inspections previously listed, such as daily inspections. Check all items at the frequency listed and make necessary repairs prior to operating.

The following are minimum service requirements. Hard use or dirty operating conditions dictate more frequent inspection and maintenance.

After service adjustment, and repairs, the loader shall not be returned to service until all guards have been reinstalled, trapped air removed from the hydraulic system if required, safety devices reactivated, and maintenance equipment removed.

Part 2: Service:

EVERY 40 HOURS	
Grease all fittings.	See Grease and Maintenance Diagram in the “Diagrams & Drawings” section of this manual. Grease fittings that are worn and will not hold the grease gun, or those that have a stuck check ball, must be replaced. Grease = EP2 (Extreme Pressure)
Check hydraulic hoses for cuts or abrasions, or any evidence of binding or leakage.	Replace any damaged hoses.
Check all hydraulic fittings to make sure they are in place and do not show signs of leakage.	Replace any missing, damaged or modified fittings.
Tighten bucket brake pads.	If brake pads show excessive wear, replace. Tighten gimbal rotator bolt and tip boom gimbal bolt, if needed.
Check oil level.	All oil levels are to be checked while the oil is cold, unless otherwise specified. Oil level should be two to three (2 to 3) inches from top of tank. Planetary Gearbox Oil should be visible on site glass. Hydraulic Oil = AW32 Gear Oil = 80W Gearlube
Check lock collar for excess clearance.	Lock collar must be tight against bottom of spindle bearing housing with maximum gap of one-quarter inch (1/4").

EVERY 80 HOURS *(These requirements are in addition to the 40 hour service requirements.)*	
Re-torque boom swing actuator bolts.	HA36: 500 ft. lbs. - dry threads Planetary Gearbox: 210 ft. lbs. - dry threads
Re-torque bucket rotator bolts.	To 110 ft. lbs. - dry threads

EVERY 160 HOURS *(These requirements are in addition to the 80 hour service requirements.)*	
Examine all loader pivot points (head and pedestal, main boom, tip boom, and bucket) for visible play.	If visible play is observed at pivot points, bushings and/or pins must be replaced as needed.
Structurals - Visually inspect complete loader for damage, especially cracks in weldments.	It is necessary for your loader to clean of oil and grease for these inspections to be made. The Petersen rotating head assembly has special high strength steel components that are welded together. After welding, the entire assembly receives post-weld heat treatment. **Do not** weld on the rotating head assembly. Welding on the rotating head could reduce its load bearing capacity and fatigue life.
Fasteners - Check all pins, sheaves, retainers, bolts and nuts.	Replace damaged or missing parts.
Retighten main boom and tip boom connecting bolts.	Replace if needed.
Clean hydraulic oil filter on suction line, and replace return line filter cartridge.	
Decals - Check for presence and legibility.	Check decal listing in “Part 4: Safety Devices – Safety Symbols” of this manual for required operational and safety decals. Replace missing or illegible decals.

EVERY 3000 HOURS *(These requirements are in addition to the 160 hour service requirements.)*	
Change oil in planetary gearbox	Drain existing oil from swing gearbox and replace with 1.75 quarts of 80W gearlube.

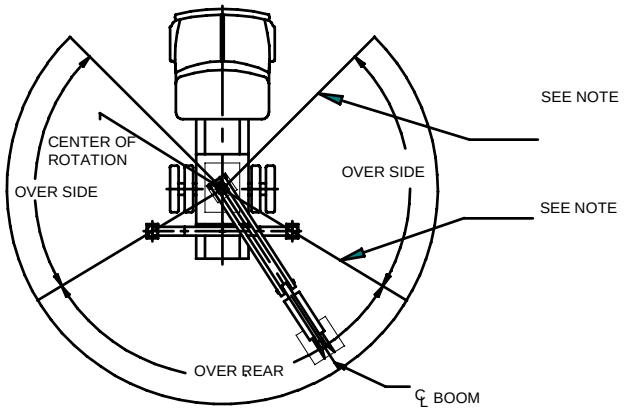
MODEL TL 2		
RADIUS	No. 1 OUTRIGGERS	No. 3 OUTRIGGERS
10 ft	5320 lb *	7100 lb
16 ft	2650 lb *	3750 lb

MODELS TL 3, PL 3, HL 3, BL 3 & DL 3 OUTRIGGERS EXTENDED		
RADIUS	TIP EXTENSION RETRACTED	TIP EXTENSION EXTENDED
10 ft	7100 lb	7100 lb
16 ft	3750 lb	4400 lb
20 ft	-	3200 lb

MODEL RL 2 WITH OUTRIGGERS EXTENDED		
RADIUS	OVER SIDE	OVER REAR
10 ft	5500 lb *	7100 lb
16 ft	3100 lb *	3750 lb

MODEL RL 3 WITH OUTRIGGERS EXTENDED			
RADIUS	OVER SIDE	OVER REAR	
		TIP EXTENSION RETRACTED	TIP EXTENSION EXTENDED
10 ft	5500 lb *	7100 lb	7100 lb
16 ft	3100 lb *	3750 lb	4400 lb
20 ft	1800 lb *	-	3200 lb

RADIUS	MODEL SL 2	MODEL SL 3	
		TIP EXTENSION RETRACTED	TIP EXTENSION EXTENDED
10 ft	7100 lb	7100 lb	7100 lb
16 ft	3750 lb	3750 lb	4400 lb
20 ft	-	-	3200 lb



NOTE: THESE LINES DETERMINE THE LIMITING POSITION OF ANY LOAD FOR OPERATION WITHIN WORKING AREAS INDICATED

LOAD DIAGRAM FOR MODELS RL 2 & RL 3

Weight of attachment to be subtracted from lift capacities. Standard Trash bucket weighs 1000 lbs.

Radii are measured in feet from the center of rotation to the center of the bucket

Loads marked with (*) are limited by the stability of the loader.

Loads for the loader on outriggers represent 85% of vehicle tipping moment when the vehicle is on firm level ground.

Boom length with tip extension retracted is 16 feet. Boom length with tip extension extended is 20 feet.

Tip Boom Extension function is not to be used for load lifting. This function is only for load reaching or to improve load-lifting capacity.

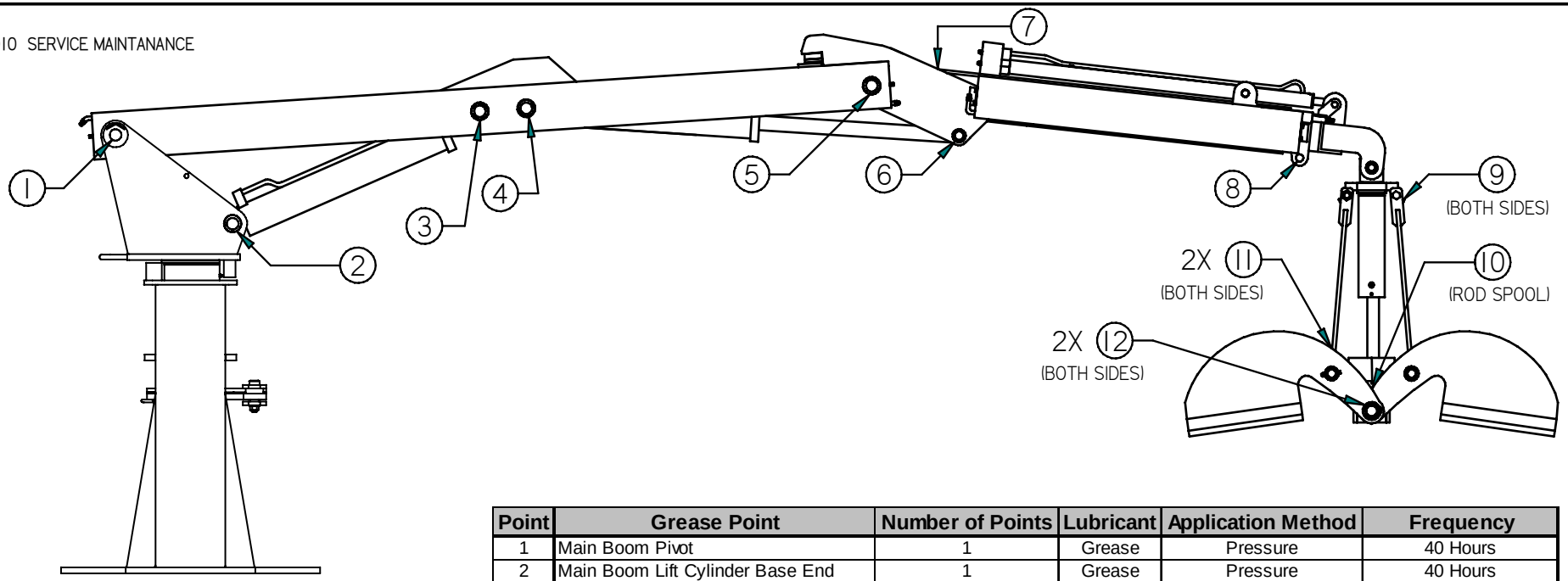
Do not use these load chart values to predict load capacities at other radii.

Tire pressures must be in accordance to the tire manufacturer's recommendations.

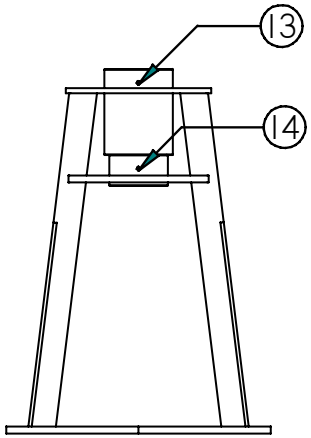
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
(863) 676 1493 FX (863) 676 6844

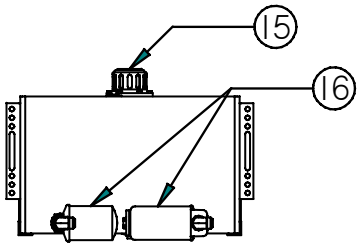
TITLE:			
LOAD CHART FOR TRASH LOADERS			
CAD NO.: 01 00 00 003 4	PART NO.:		SCALE: N/A
DRAWN BY: EJB	APPROVED:	DATE: 8/31/99	SHEET: 1 OF 1

010 SERVICE MAINTANANCE



Point	Grease Point	Number of Points	Lubricant	Application Method	Frequency
1	Main Boom Pivot	1	Grease	Pressure	40 Hours
2	Main Boom Lift Cylinder Base End	1	Grease	Pressure	40 Hours
3	Main Boom Lift Cylinder Rod End	1	Grease	Pressure	40 Hours
4	Tip Cylinder Base End	1	Grease	Pressure	40 Hours
5	Tip Boom Main Pivot	1	Grease	Pressure	40 Hours
6	Tip Cylinder Rod End	1	Grease	Pressure	40 Hours
7	Tip Extension	1	Grease	Pressure	40 Hours
8	Tip Extension Roller	1	Grease	Pressure	40 Hours
9	Bucket A Frame Connect Pivot	2	Grease	Pressure	40 Hrs / 20 Hrs service
10	Bucket Cylinder Rod Spool	1	Grease	Pressure	40 Hrs / 20 Hrs service
11	Bucket A Frame Spools	4	Grease	Pressure	40 Hrs / 20 Hrs service
12	Bucket Main Pivot	4	Grease	Pressure	40 Hrs / 20 Hrs service
13	Spindle Top Bearing Housing	1	Grease	Pressure	40 Hours
14	Spindle Bottom Bearing Housing	1	Grease	Pressure	40 Hours
15	Hydraulic Tank	1	Oil	Fill to Max. Level	40 Hours
16	Hydraulic Filters	2	-	Replace	1000 Hours





PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 LOADER LUBRICATION POINTS

PART NUMBER: 01 00 00 025 0

SCALE: N/A

DRAWN BY: London, W.

APPROVED BY:

DATE: 09/28/2006

SHEET: 1 OF 1

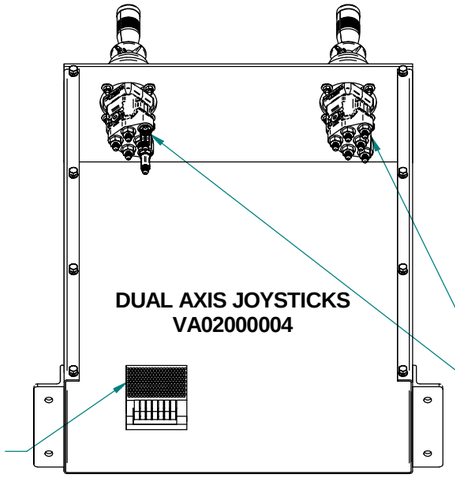
PILOT CONTROL DIAGRAM

PRESSURE

SUCTION

LEFT

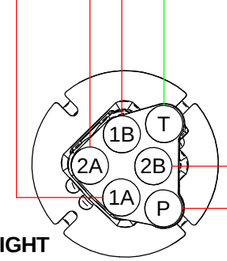
BOTTOM VIEW OF JOYSTICK LOOKING UP



DUAL AXIS JOYSTICKS
VA02000004

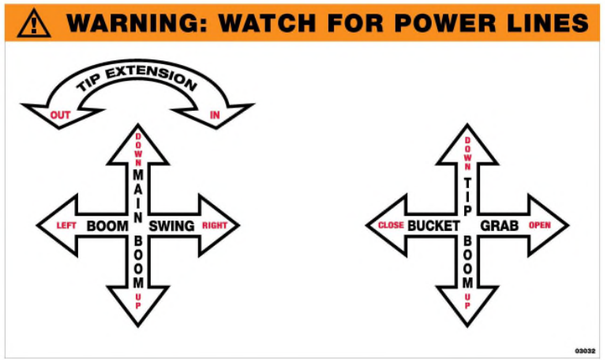
ELI6001, ELECTRICAL, AC/DC POWER SUPPLY

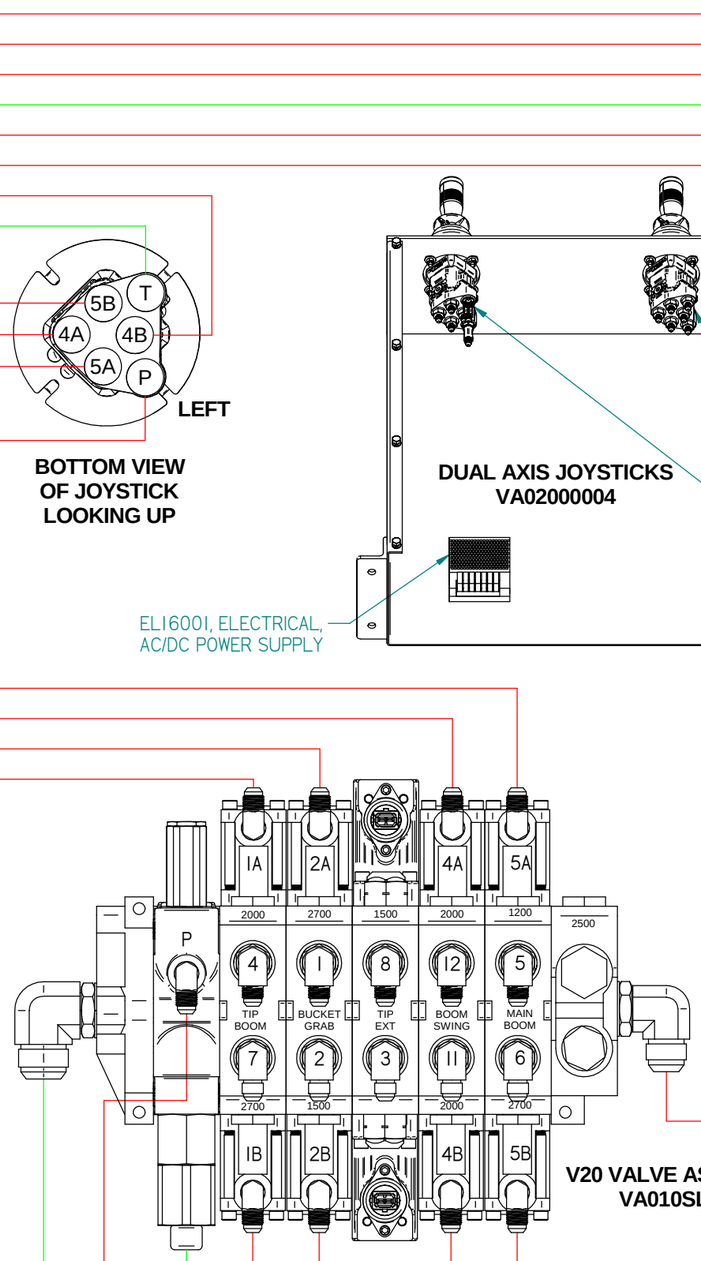
FLAT FACE OF LOWER HALF OF JOYSTICK SHOULD BE FACING RIGHT SIDE OF BOX



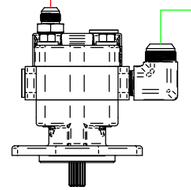
RIGHT

BOTTOM VIEW OF JOYSTICK LOOKING UP

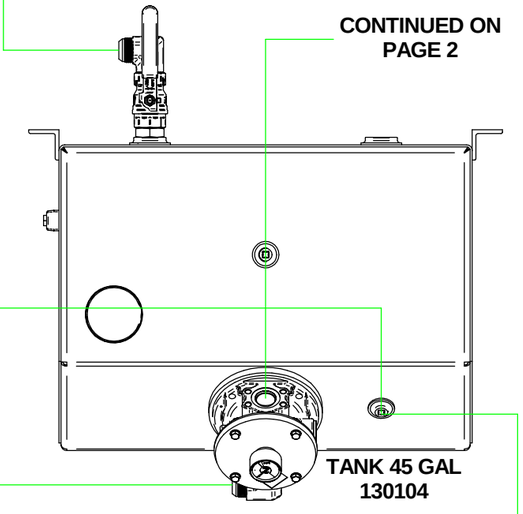




V20 VALVE ASSEMBLY
VA010SL35P



SL PUMP
HC02003



CONTINUED ON PAGE 2

TANK 45 GAL
130104

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM

PART NUMBER: 52 07 09 012 0

SCALE: NA

DRAWN BY: SWB

APPROVED BY:

DATE: 10/12/2016

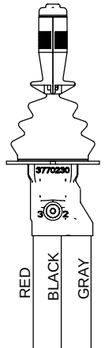
SHEET: 1 OF 5

Last Printed: 8/31/2017 by sburchfield

R:\Current Dwg\00pi Landscape Border Revised: 11/11/2004

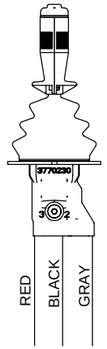
ELECTRICAL DIAGRAM

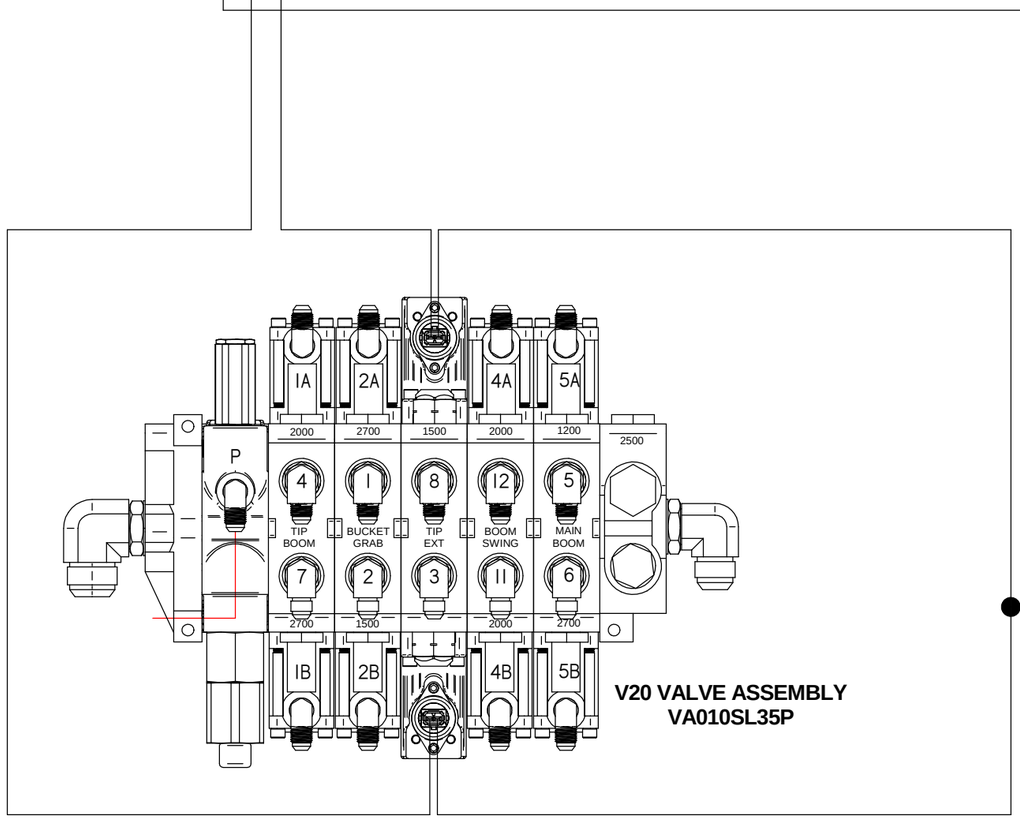
LEFT JOYSTICK



RED = COMMON
BLACK = RIGHT SWITCH
GRAY = LEFT SWITCH

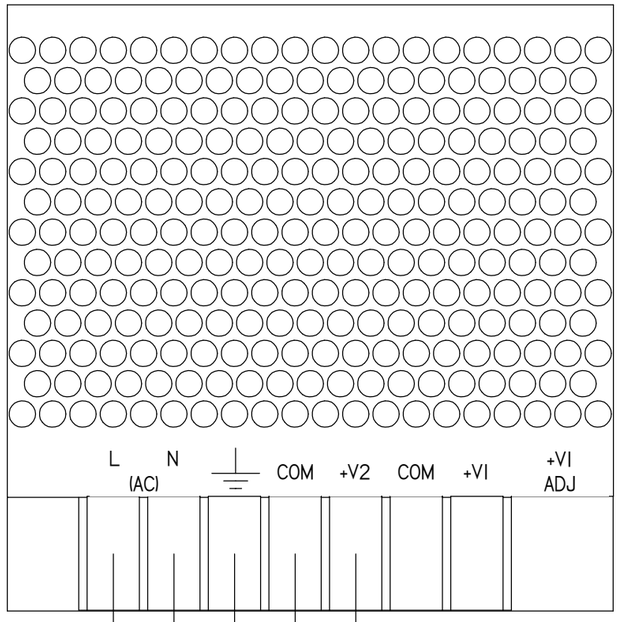
RIGHT JOYSTICK (SWITCH NOT USED)





V20 VALVE ASSEMBLY
VA010SL35P

EL16001, ELECTRICAL AC/DC POWER SUPPLY



110 V AC HOT (BLACK)

110 V AC NEUTRAL (WHITE)

110 V AC GROUND

12 V DC GROUND

12 V DC POWER

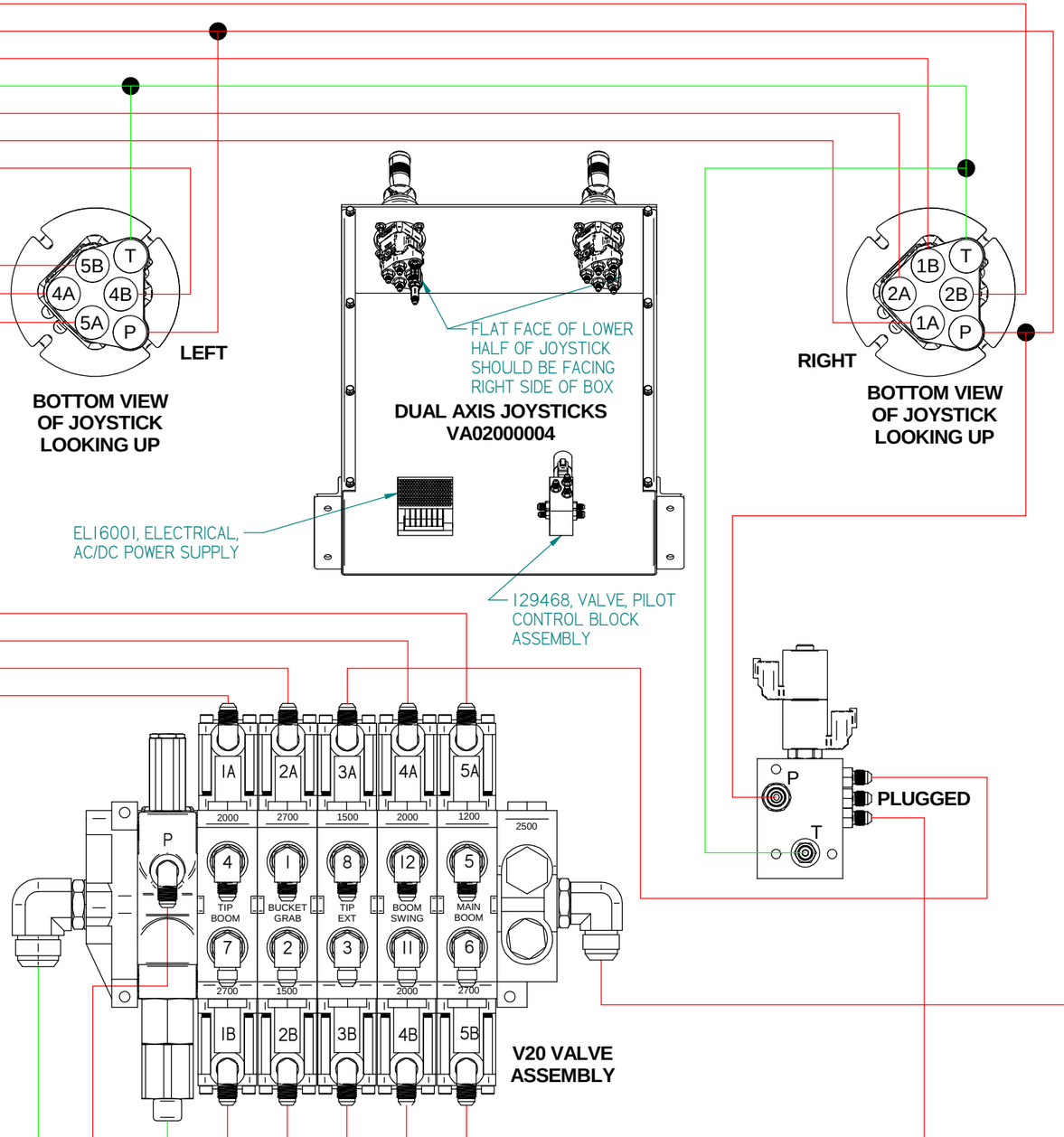
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

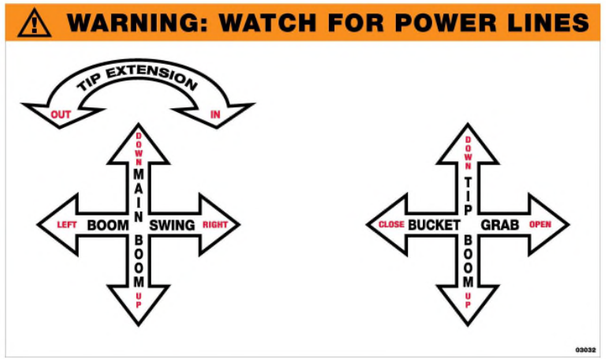
TITLE: SL3 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 012 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 2 OF 5

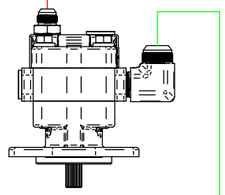
PILOT CONTROL DIAGRAM

PRESSURE

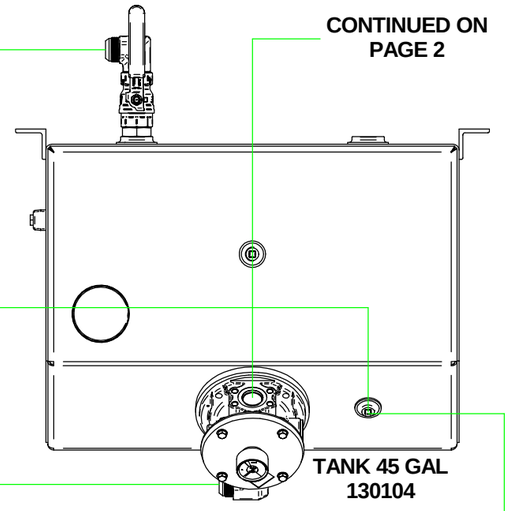
SUCTION







SL PUMP HC02003



CONTINUED ON PAGE 2

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM

PART NUMBER: 52 07 09 012 0

SCALE: NA

DRAWN BY: SWB

APPROVED BY:

DATE: 10/12/2016

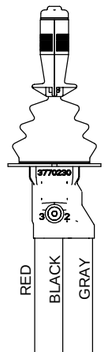
SHEET: 3 OF 5

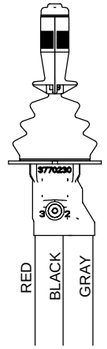
ELECTRICAL DIAGRAM

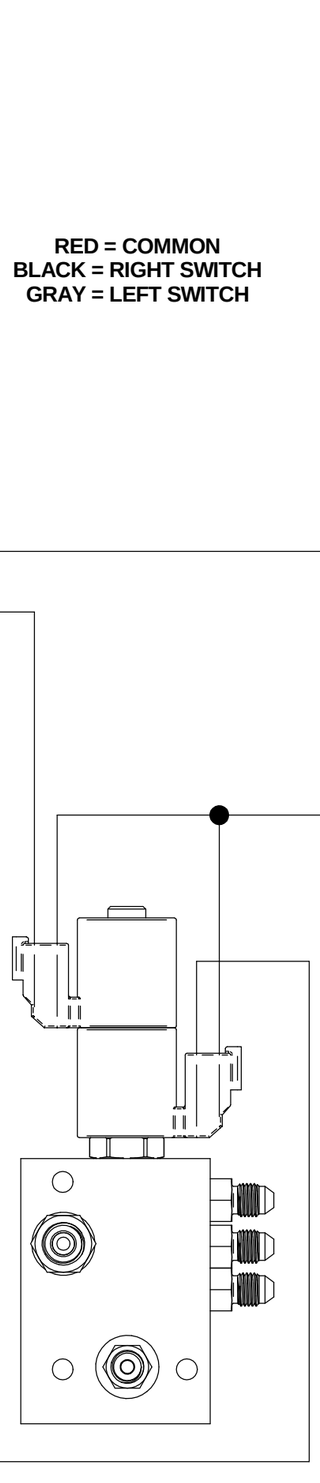
LEFT JOYSTICK

RIGHT JOYSTICK (SWITCH NOT USED)

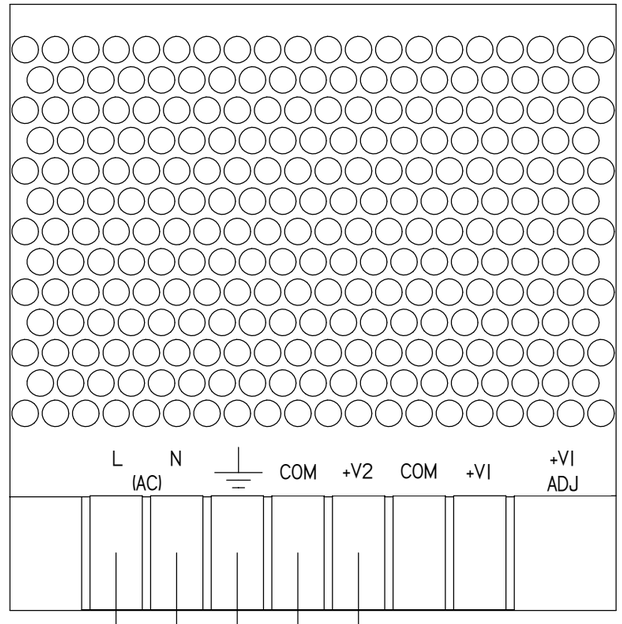
RED = COMMON
BLACK = RIGHT SWITCH
GRAY = LEFT SWITCH







EL16001, ELECTRICAL AC/DC POWER SUPPLY



110 V AC HOT (BLACK)

110 V AC NEUTRAL (WHITE)

110 V AC GROUND

12 V DC GROUND

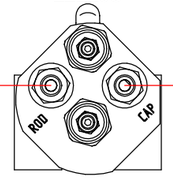
12 V DC POWER

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 012 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 4 OF 5

WORK PORT DIAGRAM

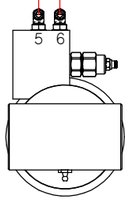
TIP EXTENSION CYLINDER
121105



TIP BOOM
MAIN BOOM SIDE

TL3 TIP BOOM
109103

TIP BOOM
BUCKET SIDE



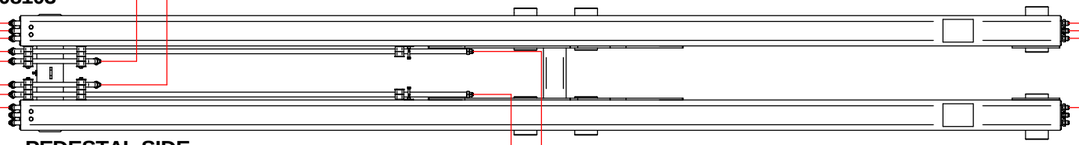
MAIN BOOM CYLINDER
121101

BOOM TUBES
(VIEW FROM PEDESTAL SIDE OF
BOOM TUBE)

BUCKET CLOSE	BUCKET OPEN	TIP EXT IN	TIP BM UP	MAIN BM UP	MAIN BM DOWN	TIP BM DOWN	TIP EXT OUT	NOT USED	NOT USED
1	2	3	4	5	6	7	8	9	10

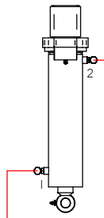
TL3 MAIN BOOM
108103

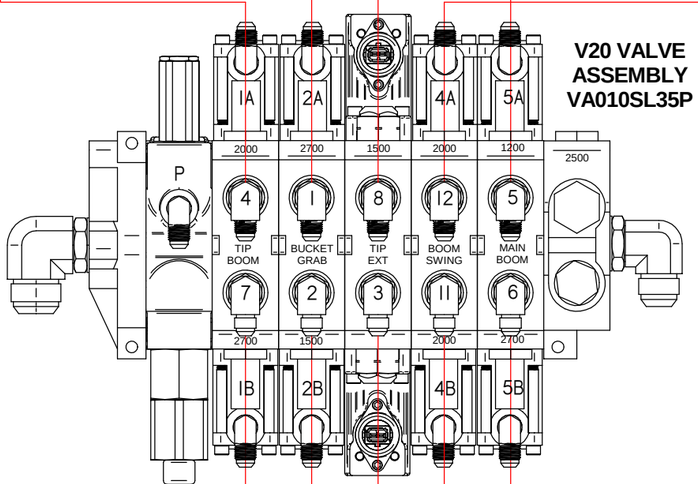
TIP BOOM SIDE



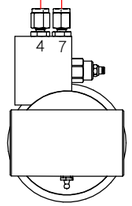
PEDESTAL SIDE

SAND BUCKET
CYLINDER
102473



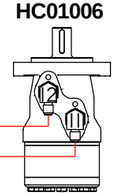


V20 VALVE
ASSEMBLY
VA010SL35P



TIP BOOM CYLINDER
121102

BOOM ROTATOR MOTOR
HC01006



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PAGE 1

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 012 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 5 OF 5

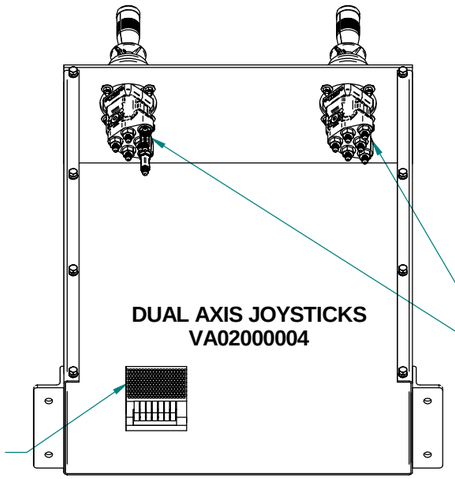
PILOT CONTROL DIAGRAM

PRESSURE

SUCTION

LEFT

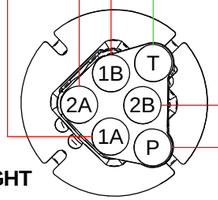
BOTTOM VIEW OF JOYSTICK LOOKING UP



DUAL AXIS JOYSTICKS
VA02000004

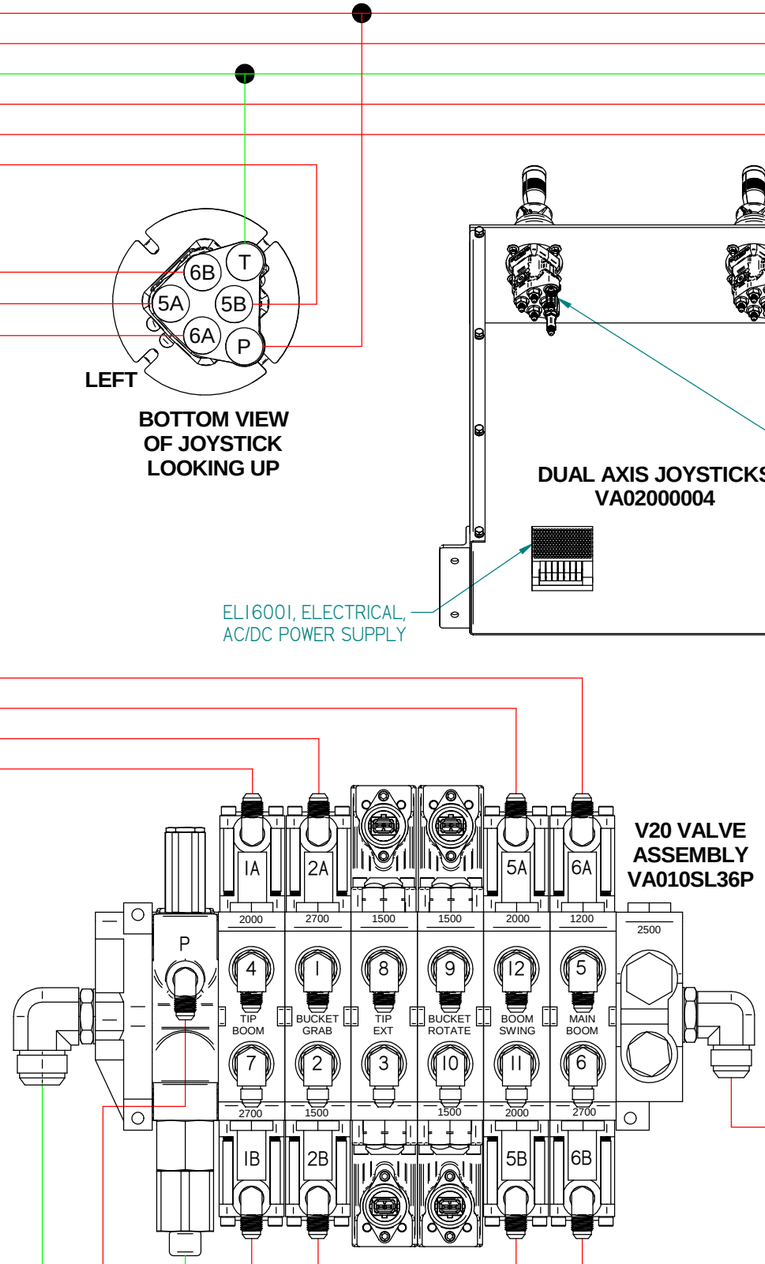
FLAT FACE OF LOWER HALF OF JOYSTICK SHOULD BE FACING RIGHT SIDE OF BOX

EL16001, ELECTRICAL, AC/DC POWER SUPPLY

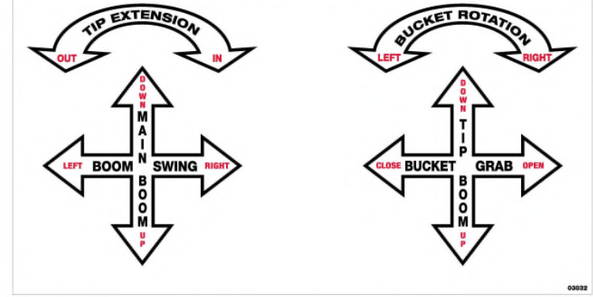


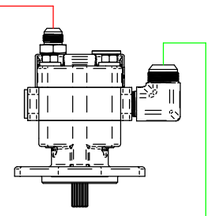
RIGHT

BOTTOM VIEW OF JOYSTICK LOOKING UP



V20 VALVE ASSEMBLY
VA010SL36P





SL PUMP
HC02003

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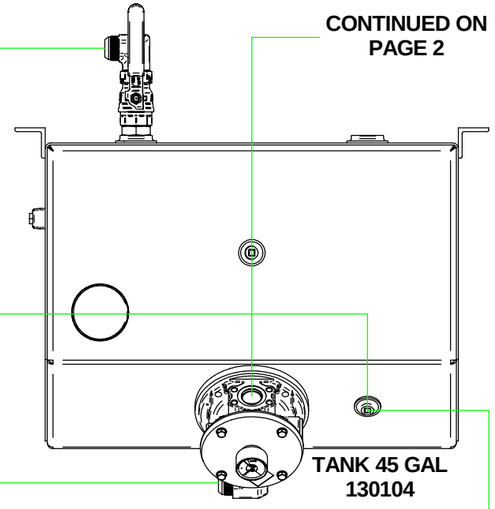


TANK 45 GAL
130104

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 013 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 1 OF 5

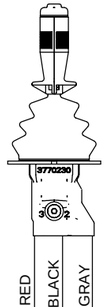
R:\Current Dwg\00pi Landscape Border Revised: 11/11/2004

Last Printed 8/31/2017 by sburchfield

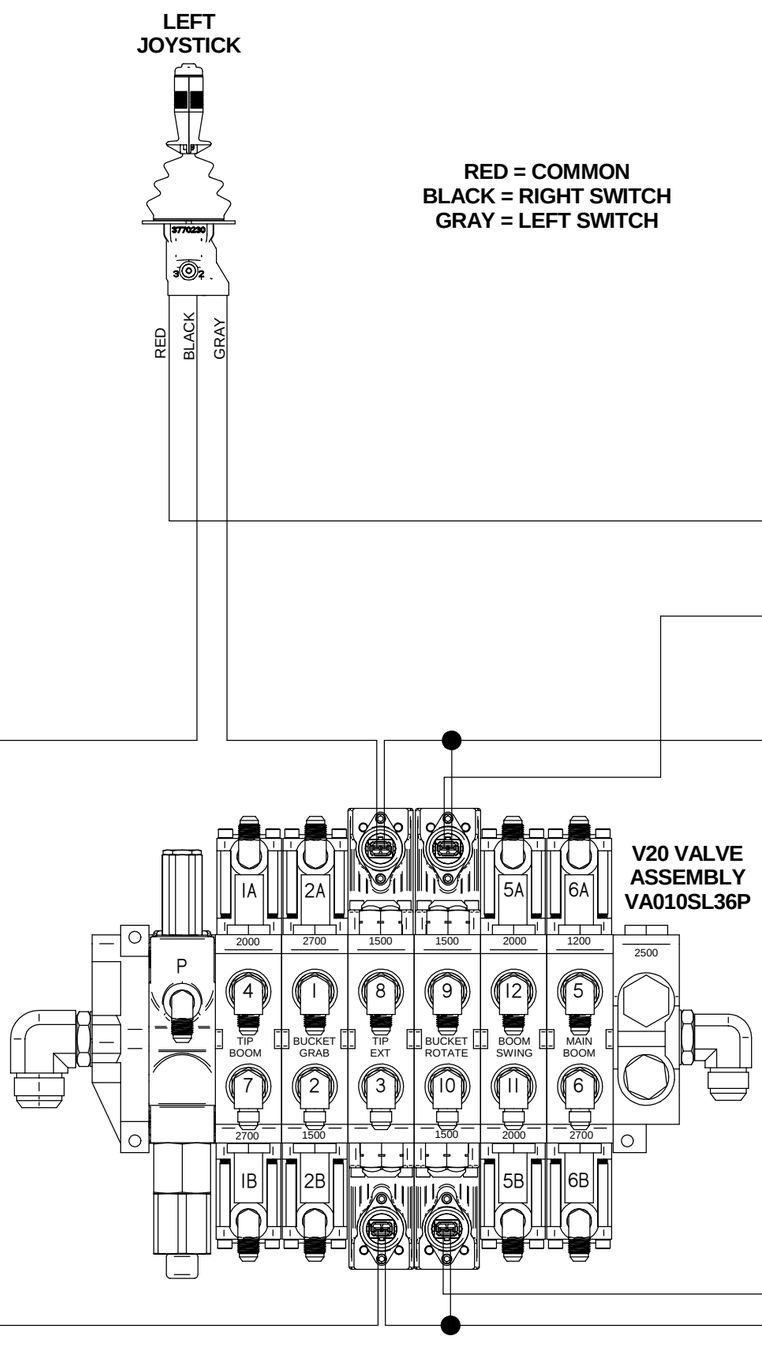
ELECTRICAL DIAGRAM

LEFT JOYSTICK

RIGHT JOYSTICK (SWITCH NOT USED)

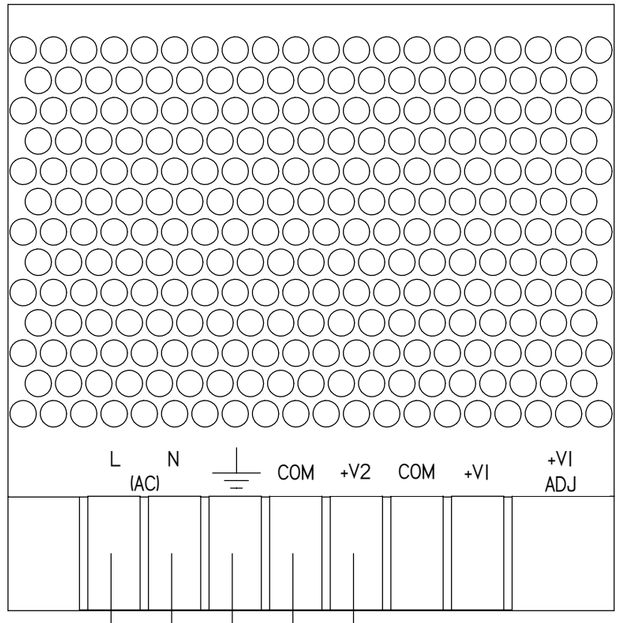


RED = COMMON
BLACK = RIGHT SWITCH
GRAY = LEFT SWITCH



V20 VALVE ASSEMBLY VA010SL36P

EL16001, ELECTRICAL AC/DC POWER SUPPLY



110 V AC HOT (BLACK)

110 V AC NEUTRAL (WHITE)

110 V AC GROUND

12 V DC GROUND

12 V DC POWER

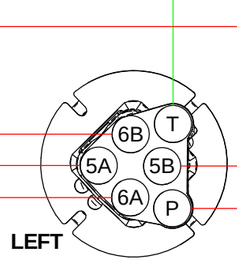
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 013 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 2 OF 5

PILOT CONTROL DIAGRAM

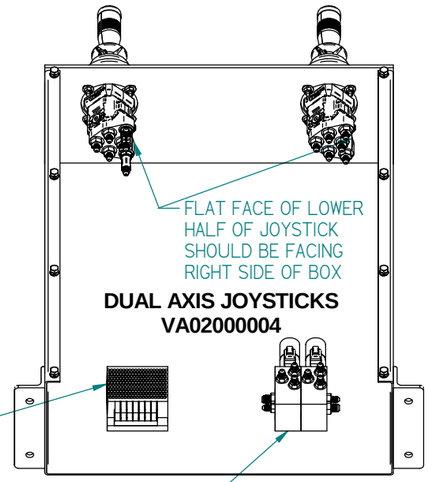
PRESSURE

SUCTION



LEFT

BOTTOM VIEW OF JOYSTICK LOOKING UP

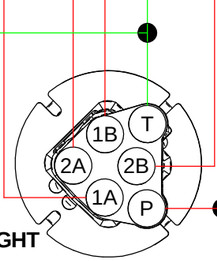


FLAT FACE OF LOWER HALF OF JOYSTICK SHOULD BE FACING RIGHT SIDE OF BOX

DUAL AXIS JOYSTICKS VA02000004

EL16001, ELECTRICAL, AC/DC POWER SUPPLY

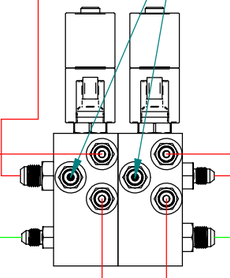
129468, VALVE, PILOT CONTROL BLOCK ASSEMBLY

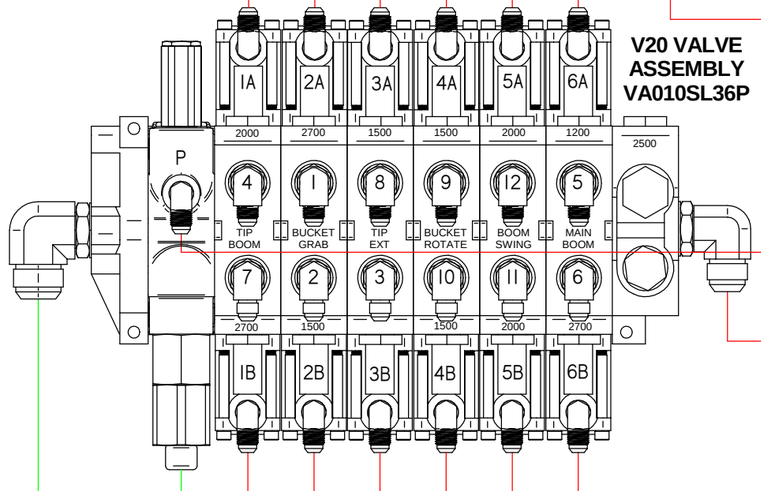


RIGHT

BOTTOM VIEW OF JOYSTICK LOOKING UP

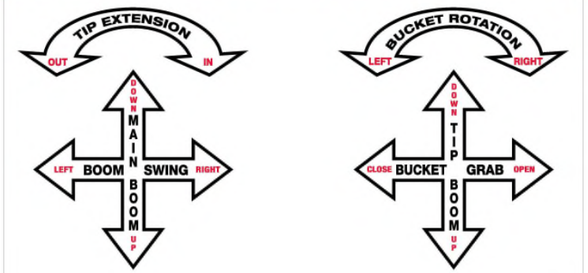
PLUGGED

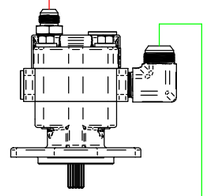




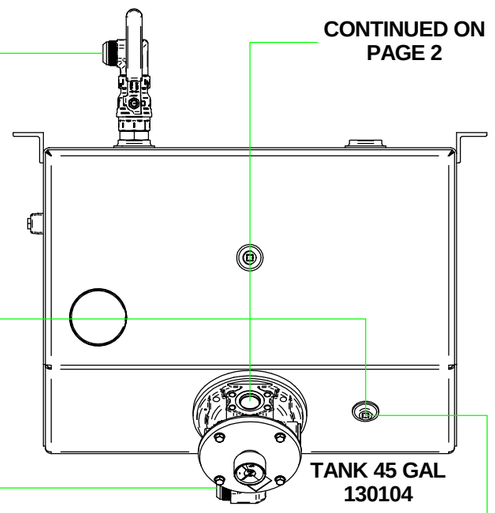
V20 VALVE ASSEMBLY VA010SL36P

WARNING: WATCH FOR POWER LINES





SL PUMP HC02003



CONTINUED ON PAGE 2

TANK 45 GAL 130104

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL3 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM

PART NUMBER:	SCALE:
52 07 09 013 0	NA

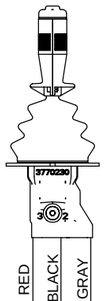
DRAWN BY:	APPROVED BY:	DATE:	SHEET:
SWB		10/12/2016	3 OF 5

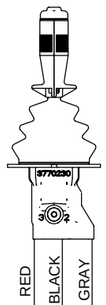
R:\Current Dwg\00pi Landscape Border Revised: 11/11/2004

ELECTRICAL DIAGRAM

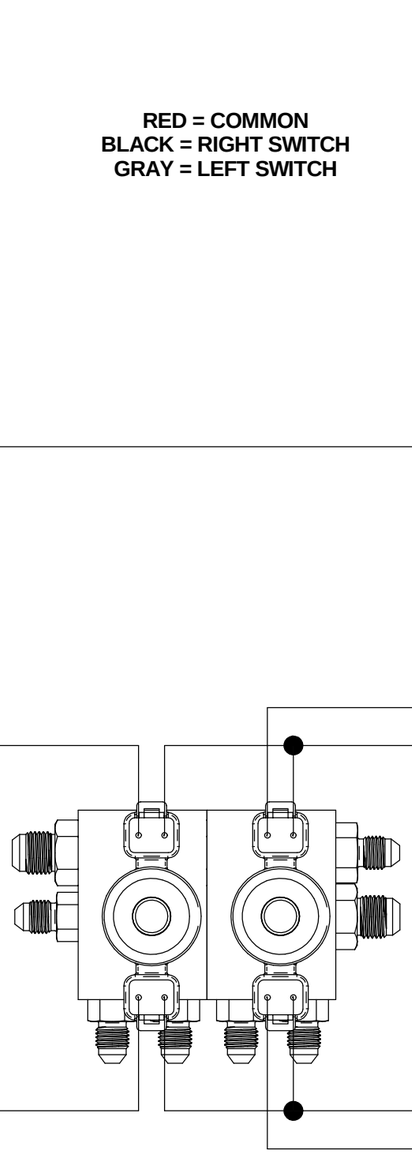
LEFT JOYSTICK

RIGHT JOYSTICK

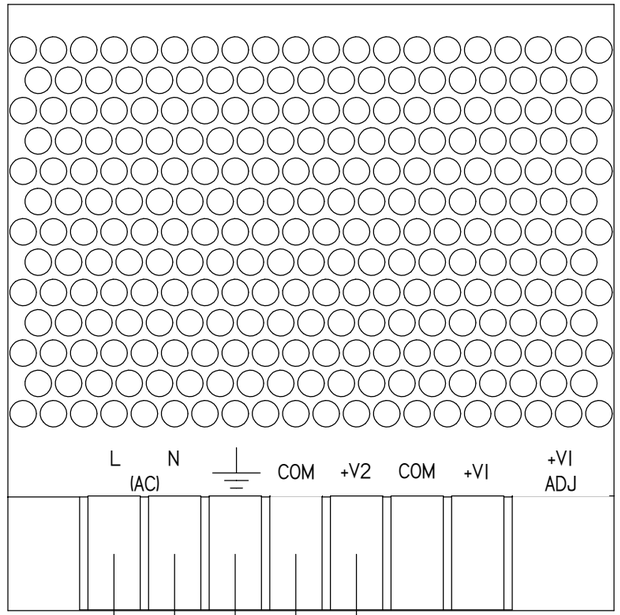




RED = COMMON
BLACK = RIGHT SWITCH
GRAY = LEFT SWITCH



EL16001, ELECTRICAL AC/DC POWER SUPPLY



110 V AC HOT (BLACK)

110 V AC NEUTRAL (WHITE)

110 V AC GROUND

12 V DC GROUND

12 V DC POWER

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
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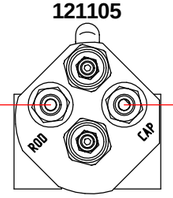
TITLE: SL3 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 013 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 4 OF 5

WORK PORT DIAGRAM

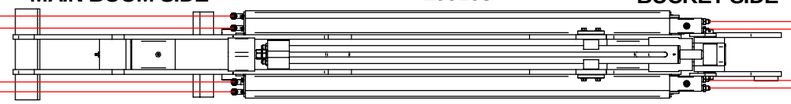
TIP EXTENSION CYLINDER
121105

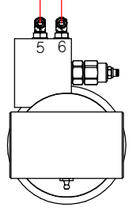


TIP BOOM
MAIN BOOM SIDE

TL3 TIP BOOM
109103

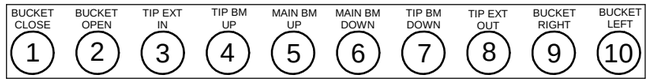
TIP BOOM
BUCKET SIDE





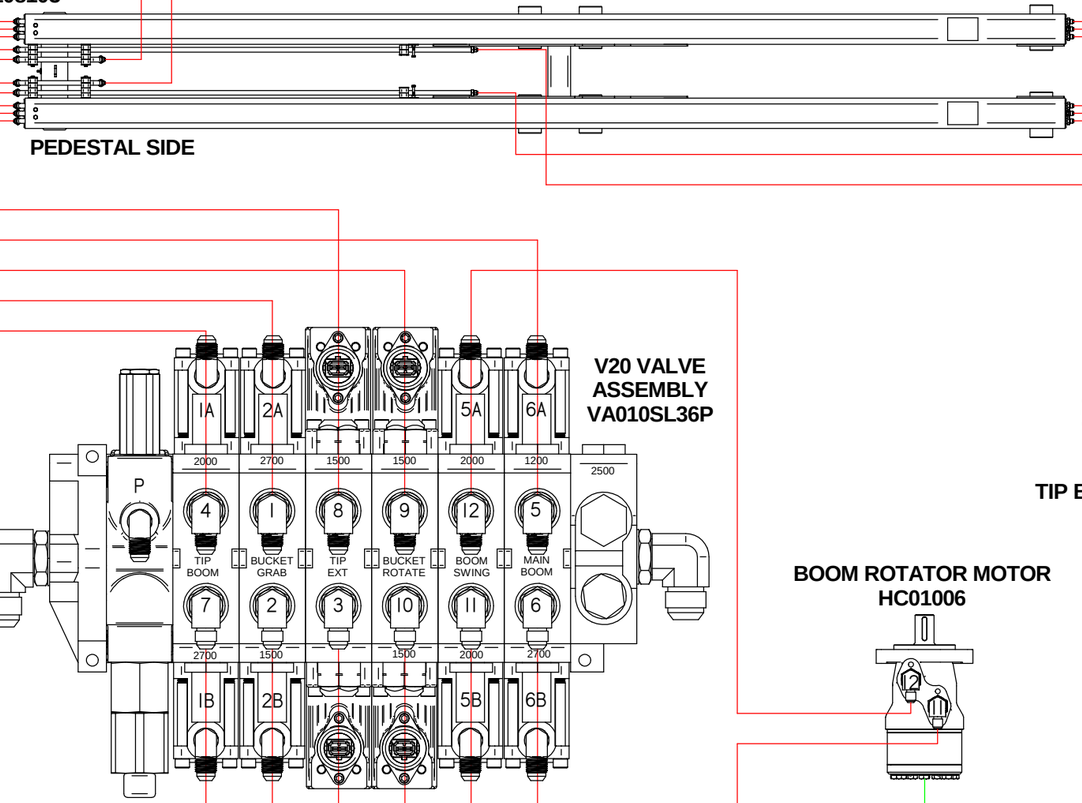
MAIN BOOM CYLINDER
121101

BOOM TUBES
(VIEW FROM PEDESTAL SIDE OF
BOOM TUBE)

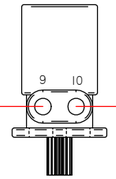


TL3 MAIN BOOM
108103

TIP BOOM SIDE

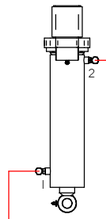


PEDESTAL SIDE

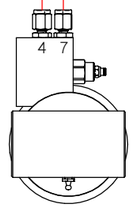


BUCKET ROTATOR
109103

SAND BUCKET
CYLINDER
102473



V20 VALVE
ASSEMBLY
VA010SL36P



TIP BOOM CYLINDER
121102

BOOM ROTATOR MOTOR
HC01006

CONTINUED ON
PAGE 1

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

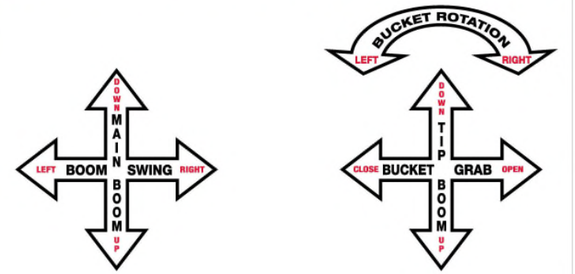
TITLE: SL3 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 013 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 5 OF 5

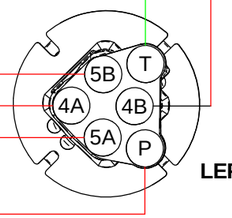
PILOT CONTROL DIAGRAM

PRESSURE

SUCTION

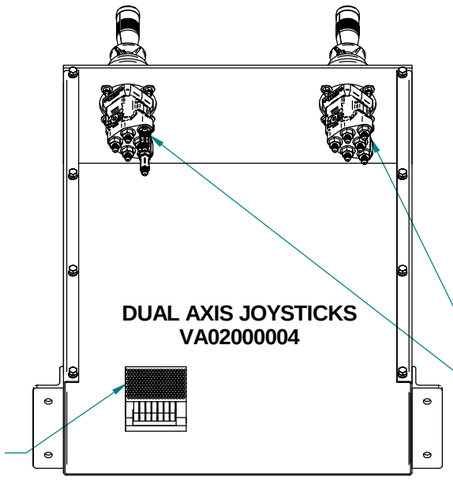
⚠ WARNING: WATCH FOR POWER LINES





LEFT

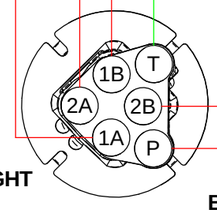
BOTTOM VIEW OF JOYSTICK LOOKING UP



DUAL AXIS JOYSTICKS
VA02000004

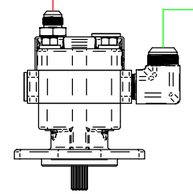
ELI6001, ELECTRICAL, AC/DC POWER SUPPLY

FLAT FACE OF LOWER HALF OF JOYSTICK SHOULD BE FACING RIGHT SIDE OF BOX



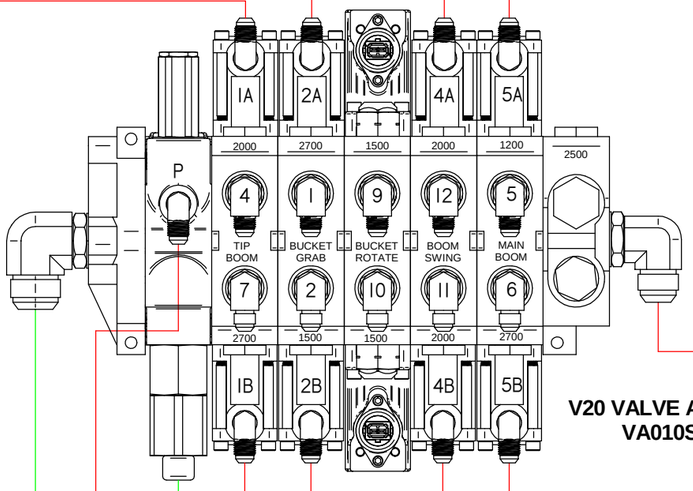
RIGHT

BOTTOM VIEW OF JOYSTICK LOOKING UP

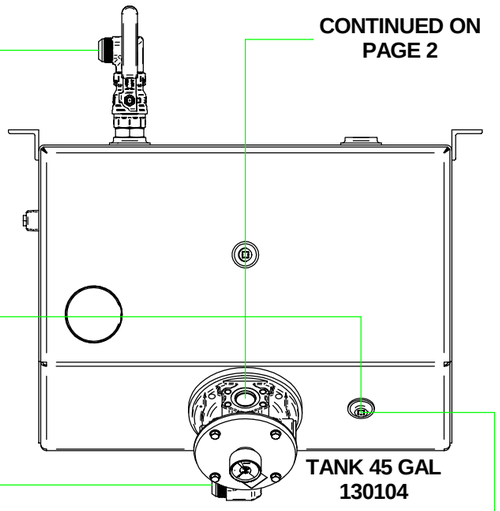


SL PUMP
HC02003

CONTINUED ON PAGE 2



V20 VALVE ASSEMBLY
VA010SL25P



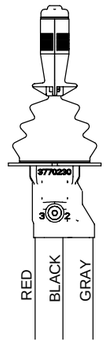
TANK 45 GAL
130104

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL2 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 014 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 1 OF 5

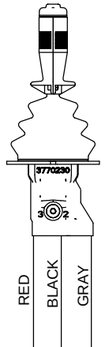
ELECTRICAL DIAGRAM

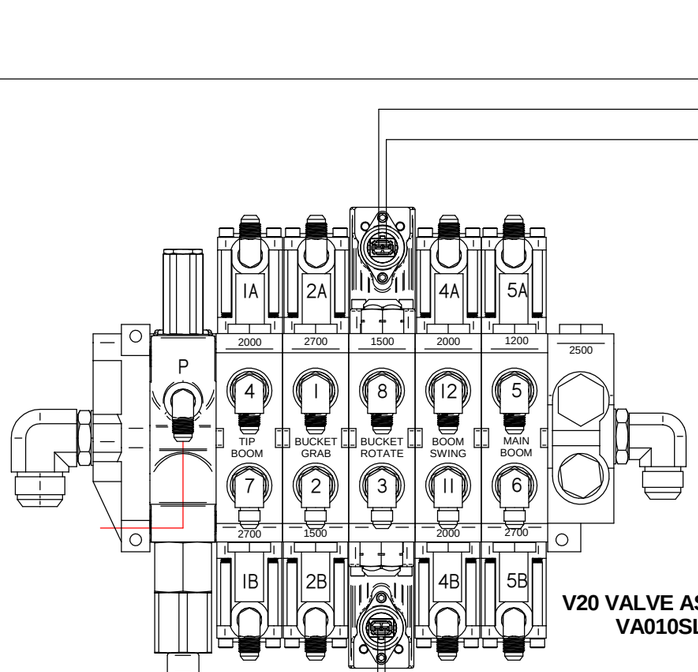
LEFT JOYSTICK



RED = COMMON
BLACK = RIGHT SWITCH
GRAY = LEFT SWITCH

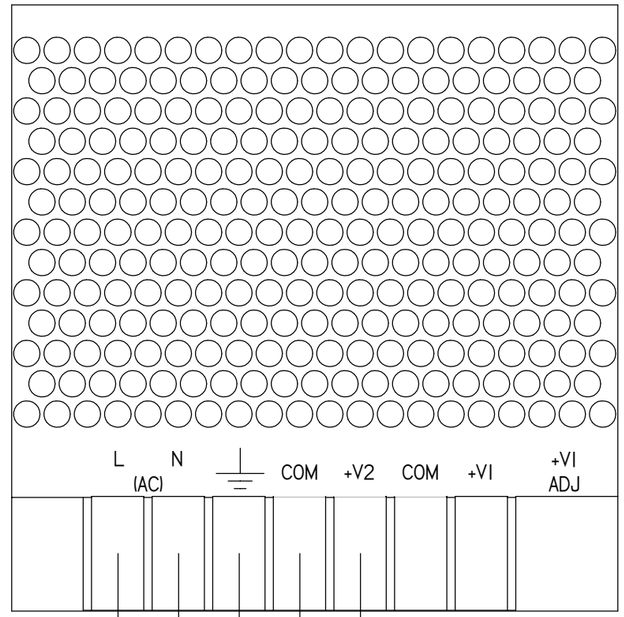
RIGHT JOYSTICK (SWITCH NOT USED)





V20 VALVE ASSEMBLY
VA010SL25P

EL16001, ELECTRICAL AC/DC POWER SUPPLY



110 V AC HOT (BLACK)

110 V AC NEUTRAL (WHITE)

110 V AC GROUND

12 V DC GROUND

12 V DC POWER

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
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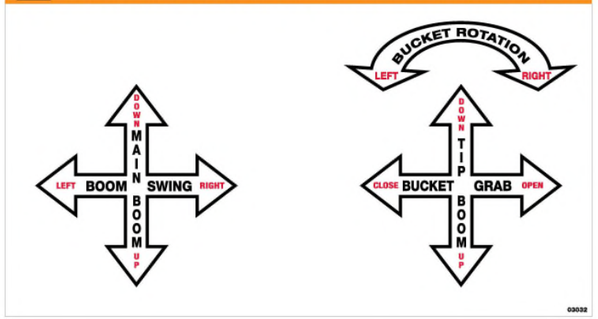
TITLE: SL2 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 014 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 2 OF 5

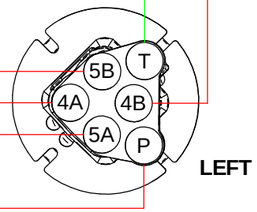
PILOT CONTROL DIAGRAM

PRESSURE

SUCTION

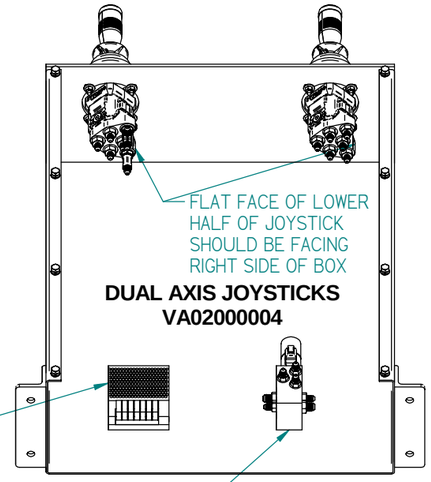
⚠ WARNING: WATCH FOR POWER LINES



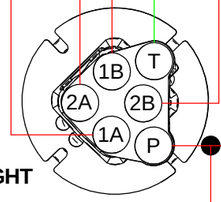


LEFT

BOTTOM VIEW OF JOYSTICK LOOKING UP



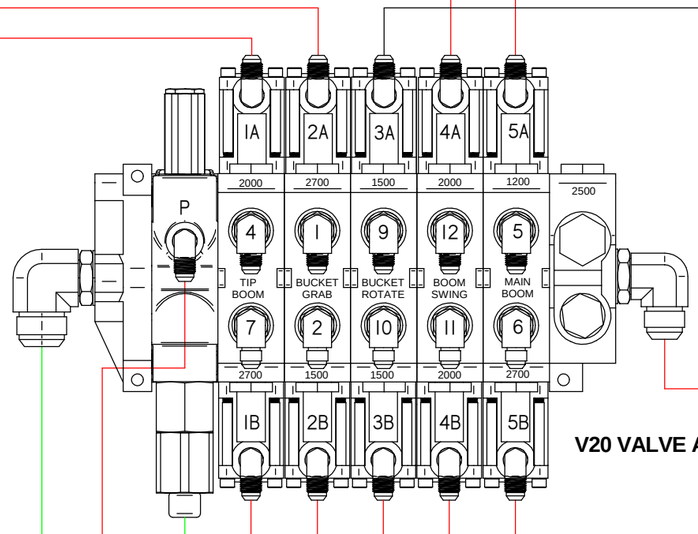
DUAL AXIS JOYSTICKS VA02000004



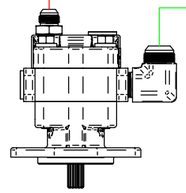
RIGHT

BOTTOM VIEW OF JOYSTICK LOOKING UP

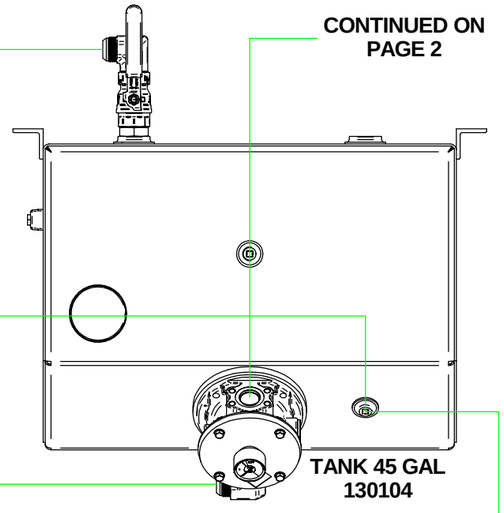
PLUGGED



V20 VALVE ASSEMBLY



SL PUMP HC02003



CONTINUED ON PAGE 2

TANK 45 GAL 130104

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

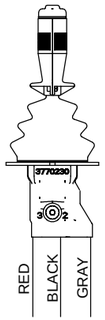
TITLE: SL2 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 014 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 3 OF 5

R:\Current Dwg\00pi Landscape Border Revised: 11/11/2004

Last Printed 8/31/2017 by sburchfield

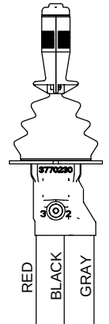
ELECTRICAL DIAGRAM

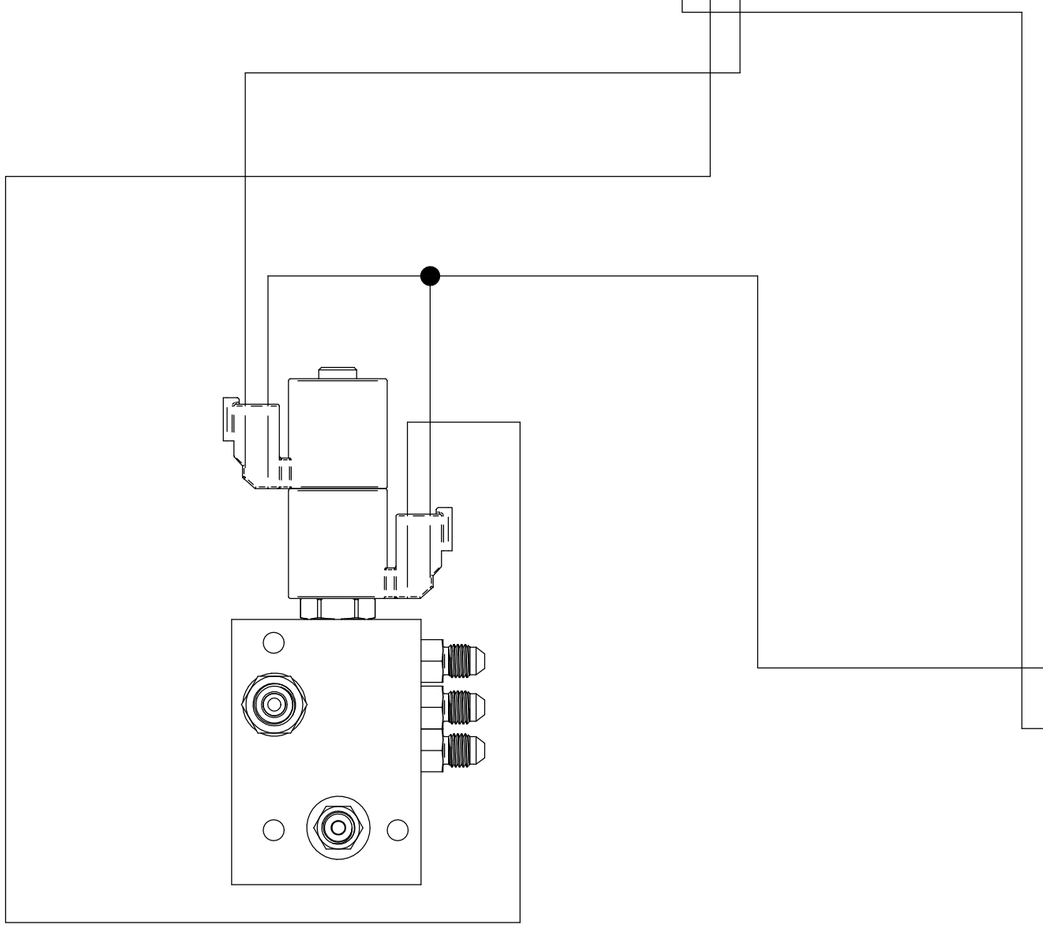
LEFT JOYSTICK



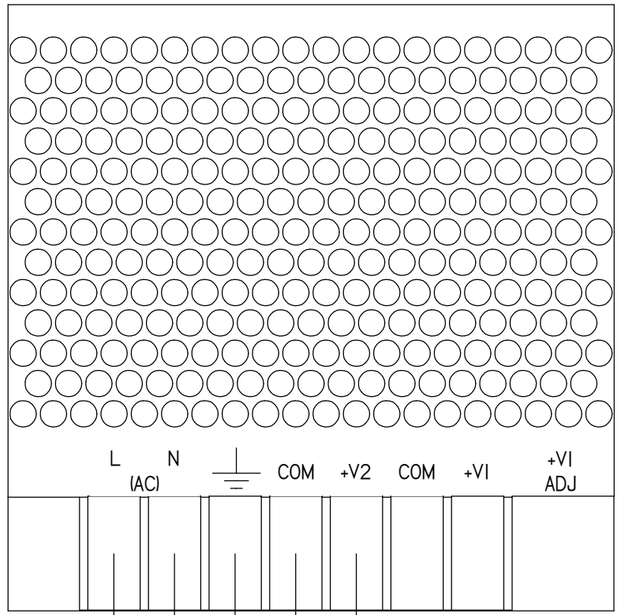
RED = COMMON
BLACK = RIGHT SWITCH
GRAY = LEFT SWITCH

RIGHT JOYSTICK (SWITCH NOT USED)





EL16001, ELECTRICAL AC/DC POWER SUPPLY



110 V AC HOT (BLACK)

110 V AC NEUTRAL (WHITE)

110 V AC GROUND

12 V DC GROUND

12 V DC POWER

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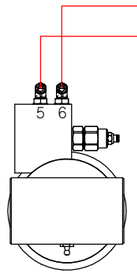
PART NUMBER: 52 07 09 014 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 4 OF 5

WORK PORT DIAGRAM



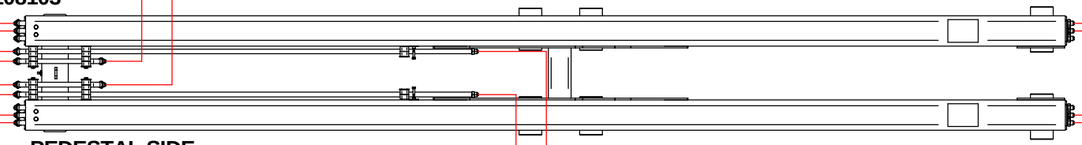
MAIN BOOM CYLINDER
121101

BOOM TUBES
(VIEW FROM PEDESTAL SIDE OF
BOOM TUBE)

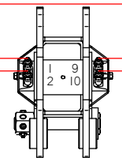
BUCKET CLOSE	BUCKET OPEN	NOT USED	TIP BM UP	MAIN BM UP	MAIN BM DOWN	TIP BM DOWN	NOT USED	BUCKET RIGHT	BUCKET LEFT
1	2	3	4	5	6	7	8	9	10

TL3 MAIN BOOM
108103

TIP BOOM SIDE

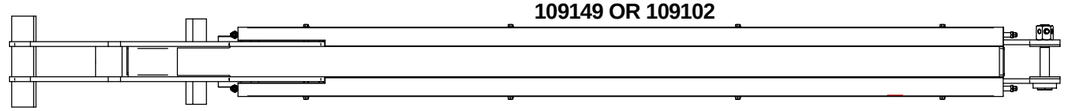


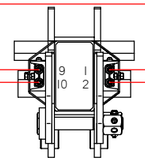
PEDESTAL SIDE



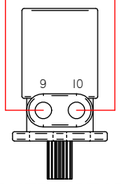
TIP BOOM
MAIN BOOM SIDE

FIXED TL3 TIP BOOM
109149 OR 109102

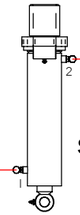




TIP BOOM
BUCKET SIDE

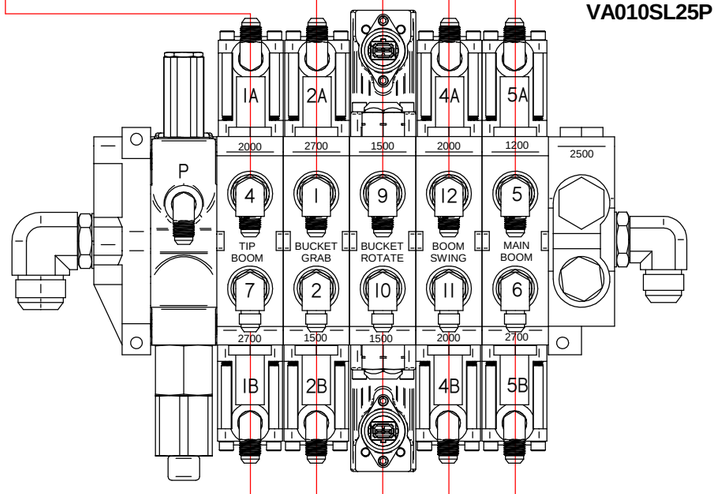


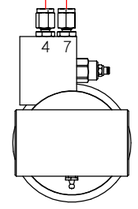
BUCKET ROTATOR
109103



SAND BUCKET
CYLINDER
102473

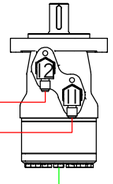
V20 VALVE ASSEMBLY
VA010SL25P





TIP BOOM CYLINDER
121102

BOOM ROTATOR MOTOR
HC01006



CONTINUED ON
PAGE 1

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL2 PILOT CONTROLS WITH BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 014 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/12/2016	SHEET: 5 OF 5

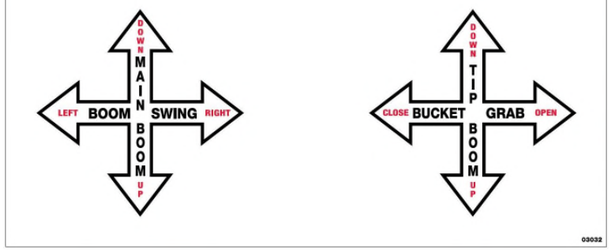
R:\Current Dwg\00pi Landscape Border Revised: 11/11/2004

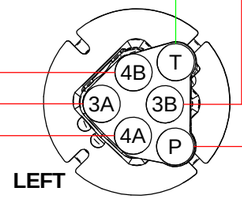
PILOT CONTROL DIAGRAM

PRESSURE

SUCTION

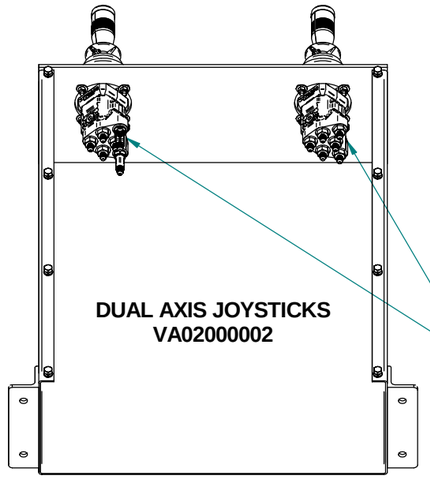
⚠ WARNING: WATCH FOR POWER LINES





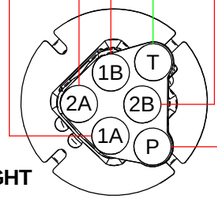
LEFT

BOTTOM VIEW OF JOYSTICK LOOKING UP



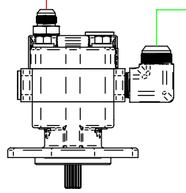
DUAL AXIS JOYSTICKS
VA02000002

FLAT FACE OF LOWER HALF OF JOYSTICK SHOULD BE FACING RIGHT SIDE OF BOX



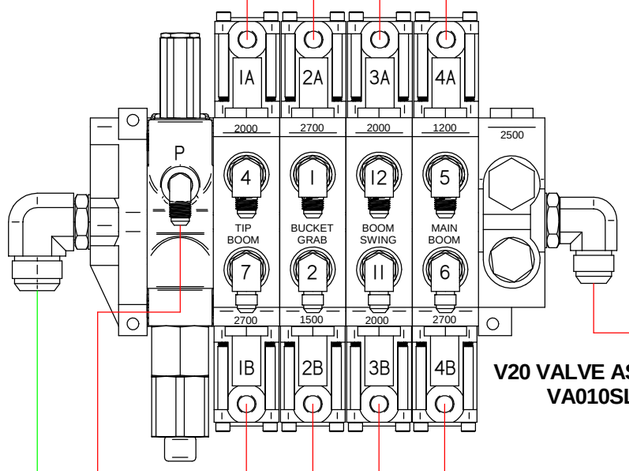
RIGHT

BOTTOM VIEW OF JOYSTICK LOOKING UP

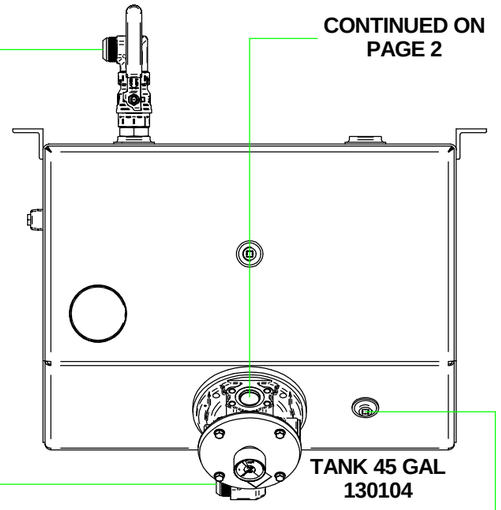


SL PUMP
HC02003

CONTINUED ON PAGE 2



V20 VALVE ASSEMBLY
VA010SL24P



TANK 45 GAL
130104

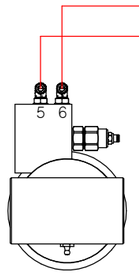
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL2 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 015 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/11/2016	SHEET: 1 OF 2

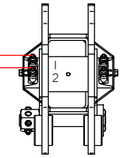
Last Printed: 8/31/2017 by sburchfield

R:\Current Dwg\00pi Landscape Border Revised: 11/11/2004

WORK PORT DIAGRAM

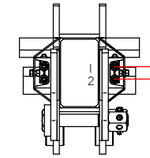


MAIN BOOM CYLINDER
121101



TIP BOOM
MAIN BOOM SIDE

FIXED TL3 TIP BOOM
109149 OR 109102



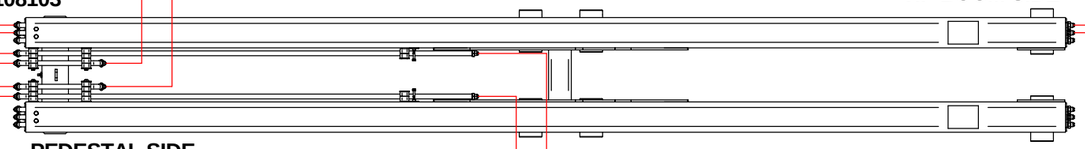
TIP BOOM
BUCKET SIDE

BOOM TUBES
(VIEW FROM PEDESTAL SIDE OF
BOOM TUBE)

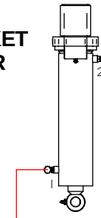
BUCKET CLOSE	BUCKET OPEN	NOT USED	TIP BM UP	MAIN BM UP	MAIN BM DOWN	TIP BM DOWN	NOT USED	NOT USED	NOT USED
1	2	3	4	5	6	7	8	9	10

TL3 MAIN BOOM
108103

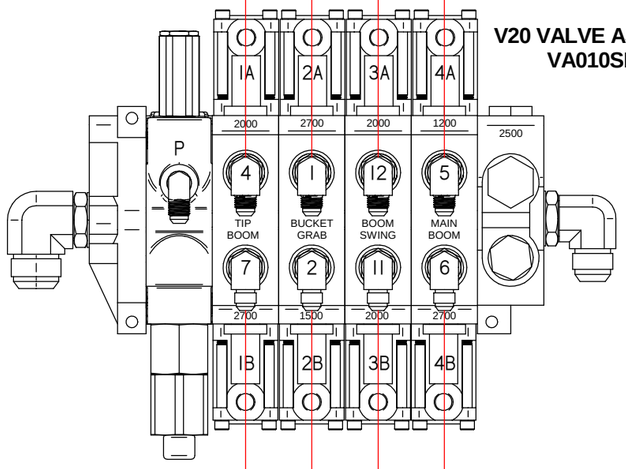
TIP BOOM SIDE



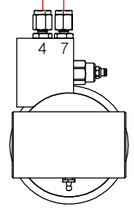
PEDESTAL SIDE



SAND BUCKET
CYLINDER
102473

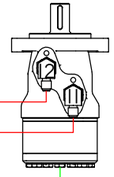


V20 VALVE ASSEMBLY
VA010SL24P



TIP BOOM CYLINDER
121102

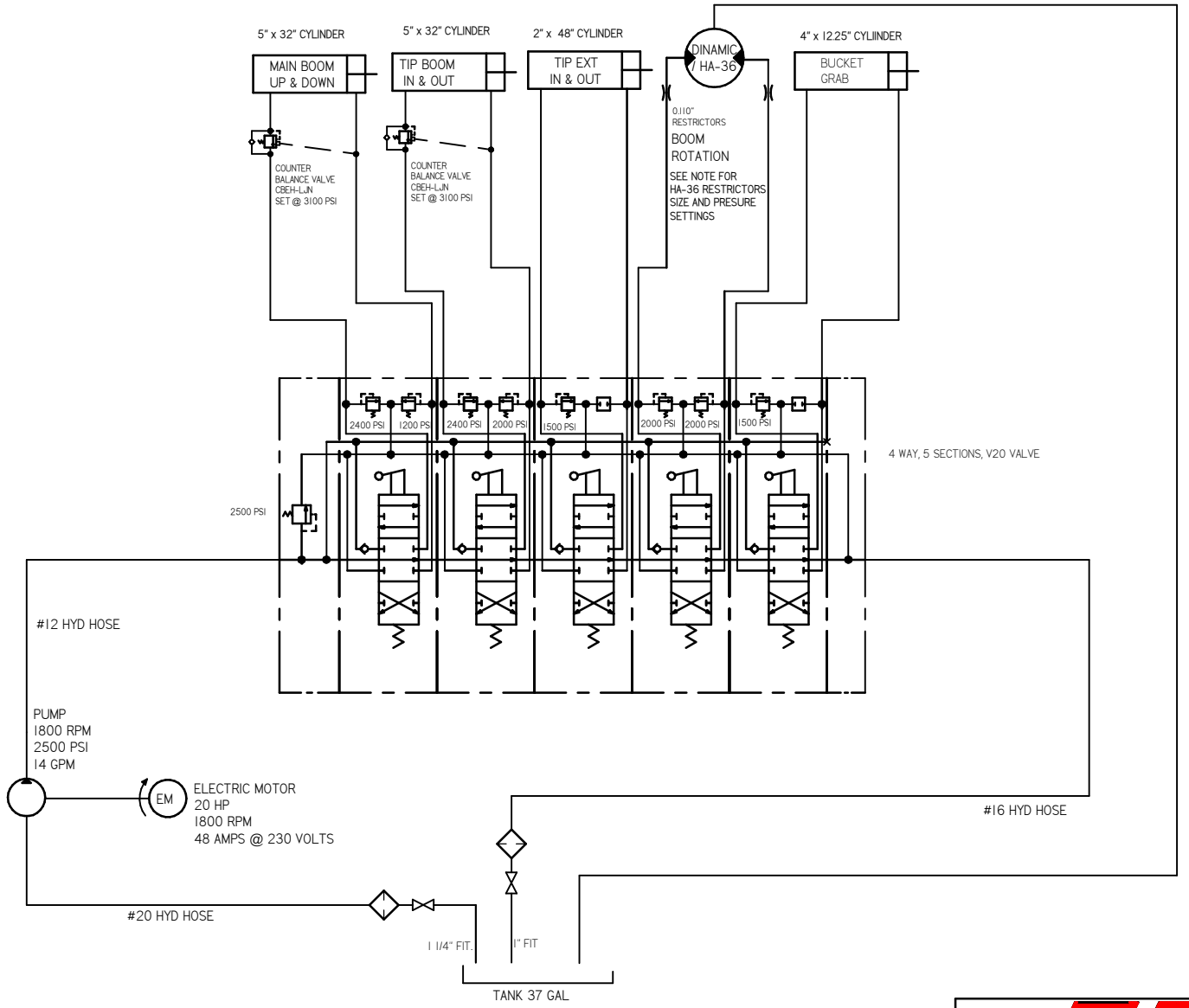
BOOM ROTATOR MOTOR
HC01006



CONTINUED ON
PAGE 1

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL2 PILOT CONTROLS WITHOUT BUCKET ROTATE PLUMBING DIAGRAM			
PART NUMBER: 52 07 09 015 0			SCALE: NA
DRAWN BY: SWB	APPROVED BY:	DATE: 10/11/2016	SHEET: 2 OF 2



NOTE: WHEN USING HA-36 INSTEAD OF DINAMIC OIL ACTUATOR USE .056" RESTRICTORS AND USE 2400 PSI PORT RELIEF VALVES ON THE V20 VALVES. WORKING PRESSURE IS 2500 PSI.

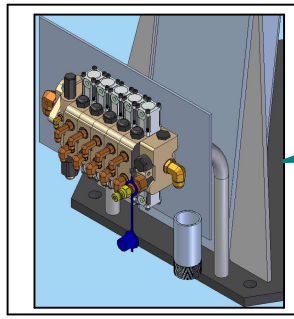
ALL HOSES GOING TO CYLINDERS OR MOTORS ARE #6 HYD HOSES.

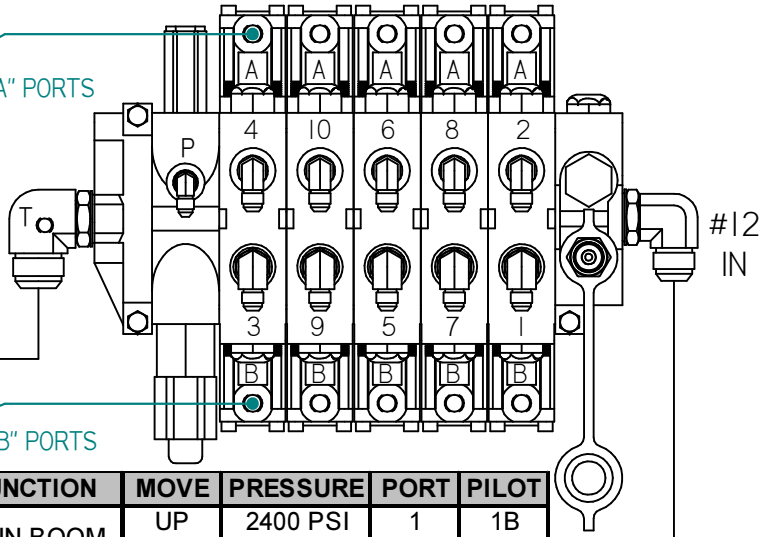
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL 33859-8234
(863) 676 1493 FX (863) 676 6844

TITLE: SL-3 HYDRAULIC CIRCUIT

CAD NO.:	PART NO.:	SCALE:
52 07 09 001 5		N/A

DRAWN BY:	APPROVED:	DATE:	SHEET:
		7/6/99	1 OF 1





FUNCTION	MOVE	PRESSURE	PORT	PILOT
MAIN BOOM	UP	2400 PSI	1	1B
	DOWN	1200 PSI	2	2A
TIP BOOM	UP	2400 PSI	3	3B
	DOWN	2000 PSI	4	4A
TIP EXTEND	OUT	1500 PSI	5	5B
	IN	2400 PSI	6	6A
BOOM SWING	LEFT	2000 PSI	7	7B
	RIGHT	2000 PSI	8	8A
BUCKET GRAB	OPEN	1500 PSI	9	9B
	CLOSE	2400 PSI	10	10A

PLUMBING:
1. CONNECT THE CONTROL VALVE TO POWER PACK WITH:
   - #16 JIC FROM THE VALVE OUTLET TO THE RETURN FILTER
   - #12 JIC FROM THE VALVE INLET TO THE PUMP OUTLET
2. PORT 11 IS RESERVED FOR LOADERS WITH SAI MOTORS ONLY
   - DCV PORTS 1 TO 11 ARE ALL #6 JIC
   - PILOT PORTS 1 TO 10 ARE ALL #6 ORB

RECOMMENDATIONS:
HIGH PRESSURE LINES: 4000 PSI WORKING PRESSURE (#6 AND #12 LINES)
LOW PRESSURE LINES: 400 PSI WORKING PRESSURE (#16 RETURN LINE ONLY)

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL-3 PILOT PLUMBING INSTRUCTIONS

PART NUMBER: 52 07 09 004 0

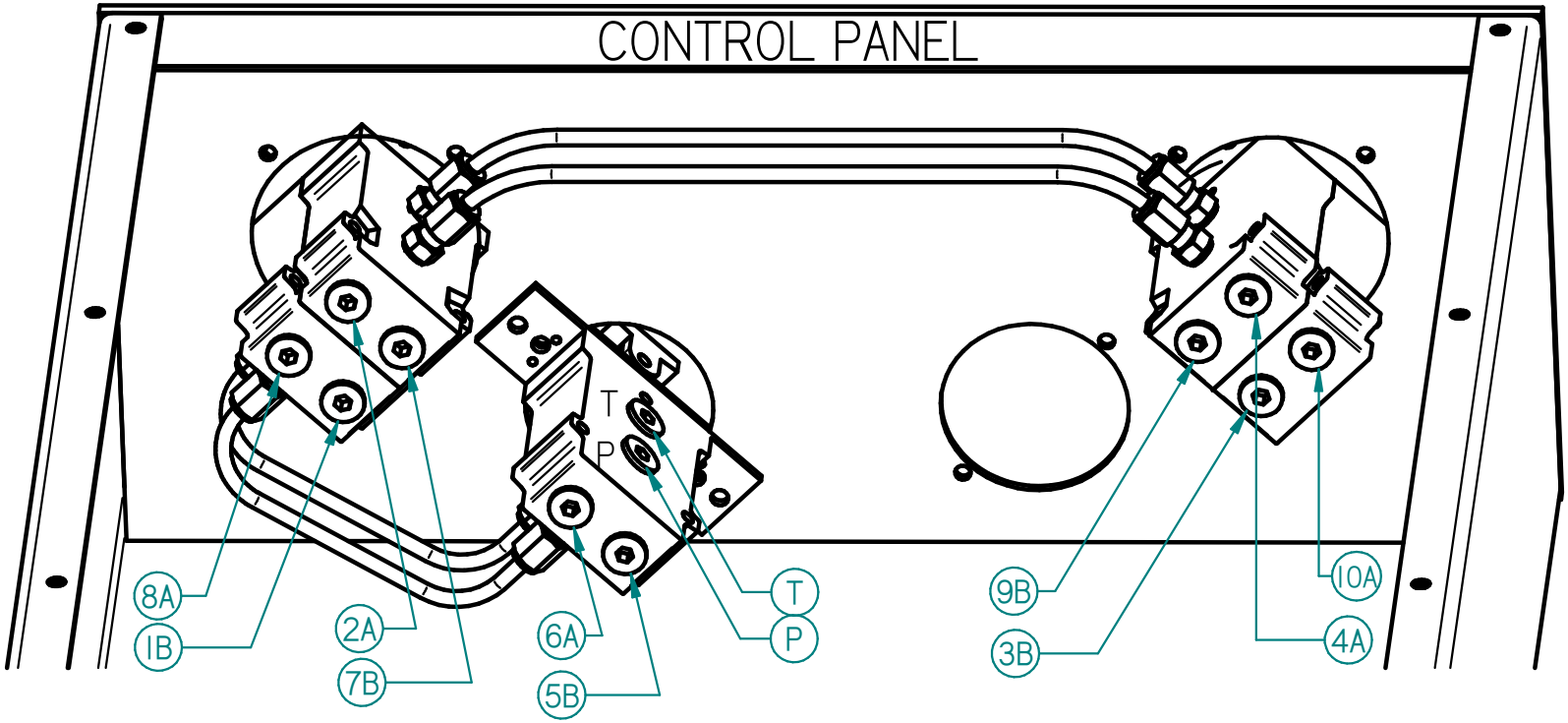
SCALE: N/A

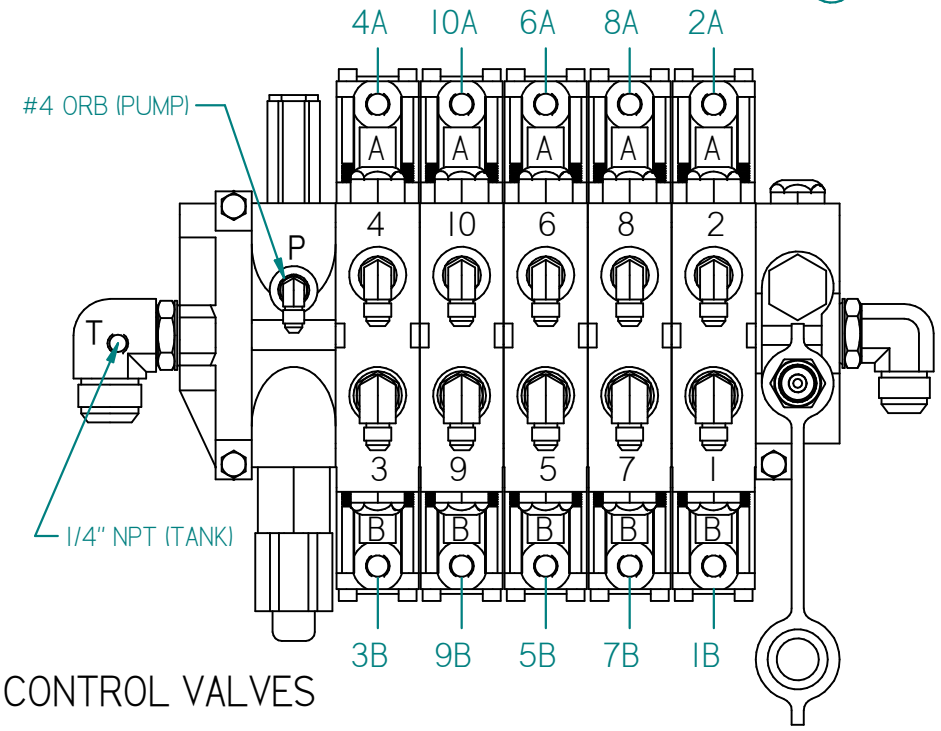
DRAWN BY: London, W.

APPROVED BY:

DATE: 10/20/2006

SHEET: 1 OF 4





CONTROL VALVES

PLUMBING:

FOLLOW THE NUMERICALLY ASSIGNED SEQUENCE OF PILOT PORTS

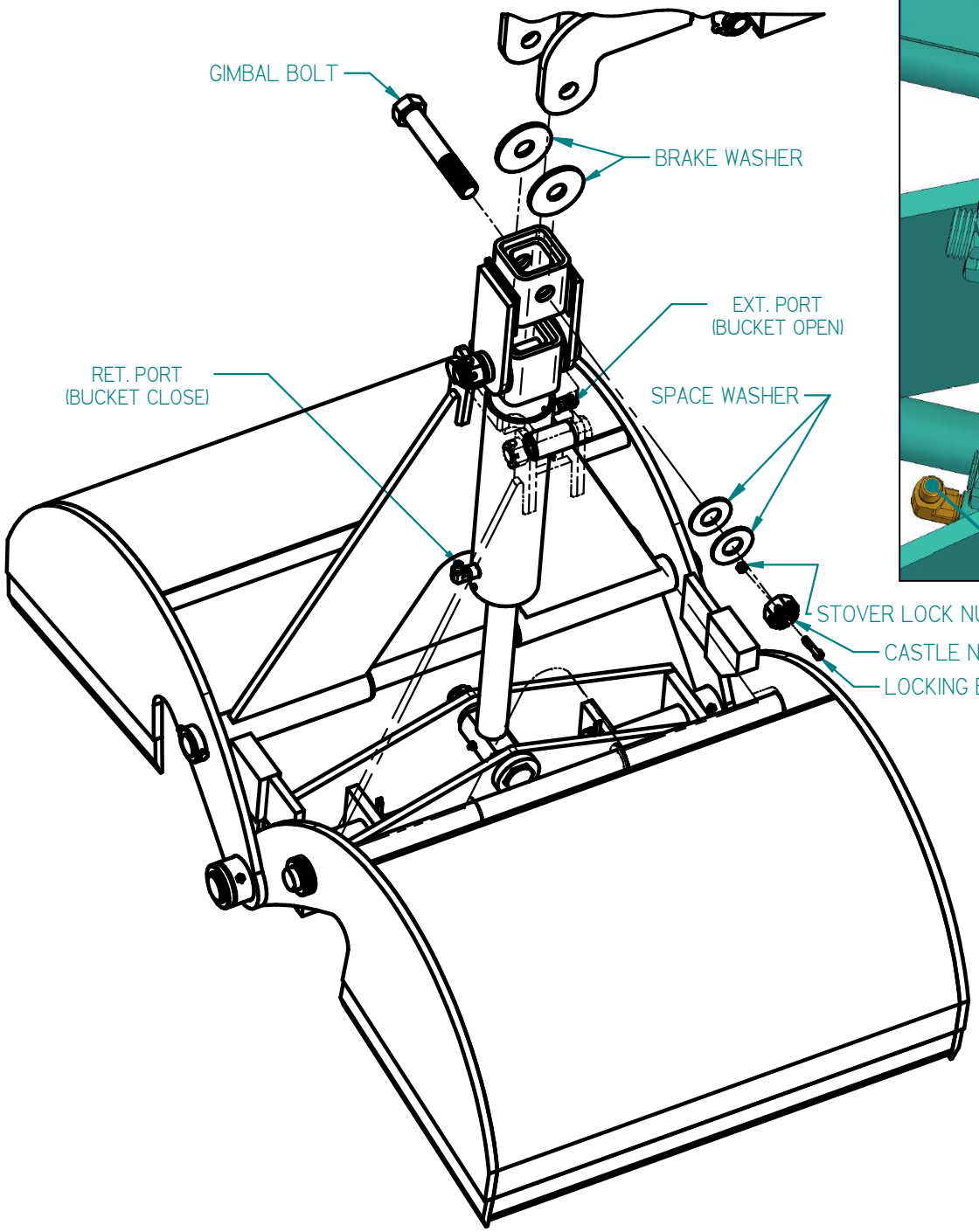
1. CONNECT THE CONTROL PANEL TO THE CONTROL VALVES WITH:
   - 1/4 OD X .030 WALL COPPER TUBING (ALLOY 122)
   - BITE TYPE FLAIRLESS TUBE FITTINGS

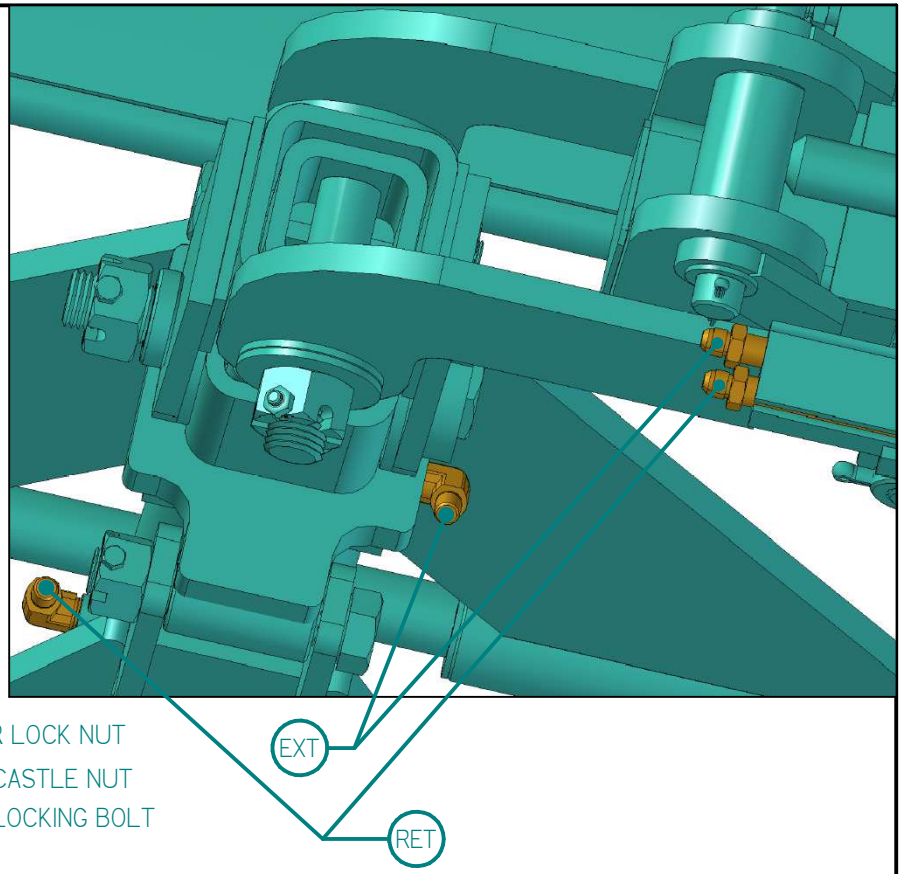
2. PORT 11 IS RESERVED FOR LOADERS WITH SAI MOTORS ONLY
   - TANK PORTS (T): 1/4 NPT AND #6 ORB
   - PUMP PORTS (P): #4 ORB AND #6 ORB
   - PILOT PORTS (1) TO (10): ARE ALL #6 ORB

PRESET WORKING PILOT PRESSURE: 300 PSI

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE:				
SL-3 PILOT PLUMBING INSTRUCTIONS				
PART NUMBER: 52 07 09 004 0				SCALE: N/A
DRAWN BY: London, W.	APPROVED BY:	DATE: 10/20/2006	SHEET: 2 OF 4	





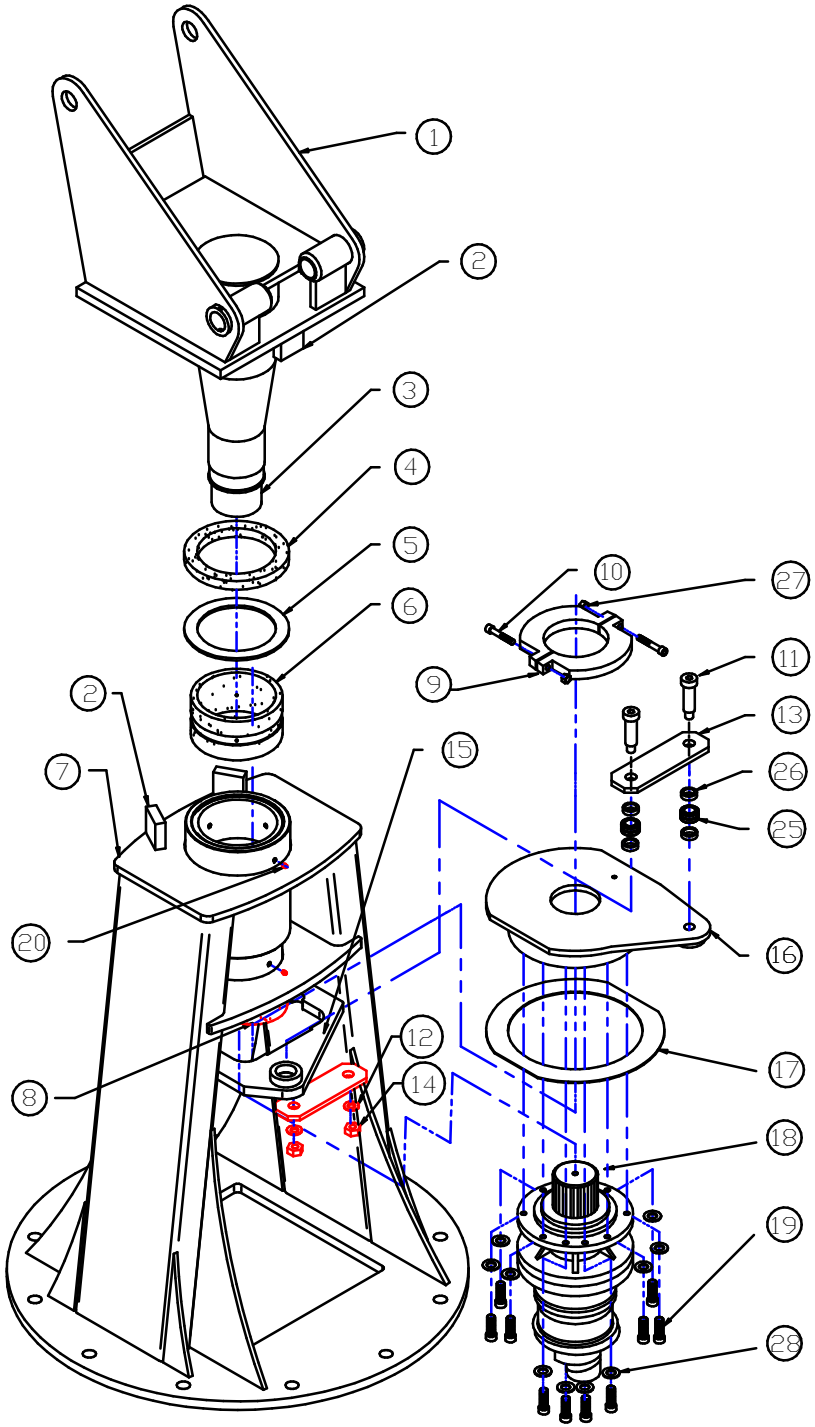
PLUMBING:

1. INSTALL BRAKE WASHERS BETWEEN GIMBAL AND TIP BOOM MOUNTING EARS
2. INSTALL ADEQUATE SPACE WASHERS BEFORE CASTLE NUT
3. USE STOVER LOCK NUT ON LOCKING BOLT

4. INSTALL EXTENSION (EXT) AND RETRACTION (RET) LINES AS SHOWN

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL-3 PILOT PLUMBING INSTRUCTIONS				
PART NUMBER: 52 07 09 004 0				SCALE: N/A
DRAWN BY: London, W.	APPROVED BY:	DATE: 10/20/2006	SHEET: 3 OF 4	



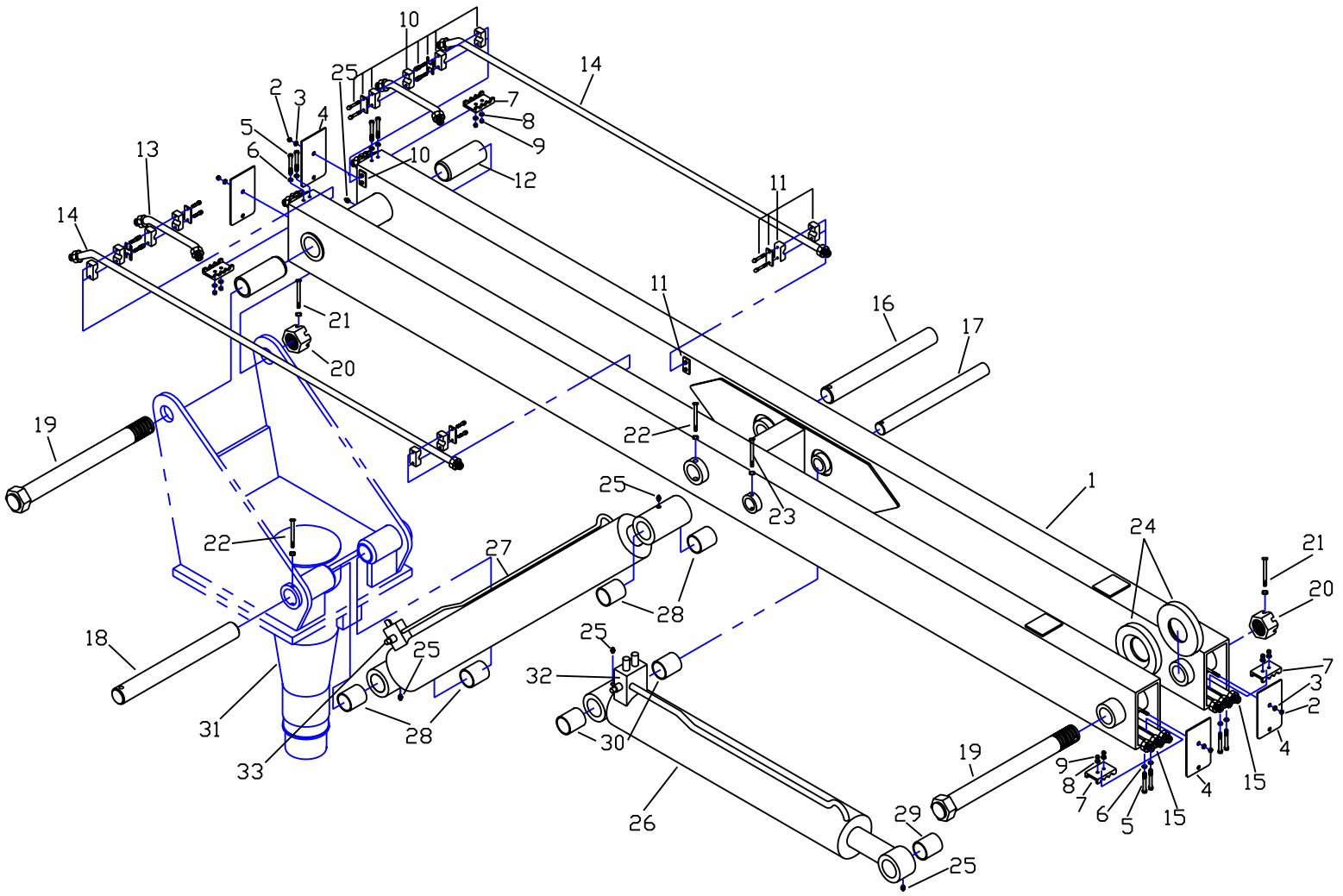
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: SL HEAD AND PEDESTAL WITH DINAMIC ROTARY ACTUATOR

PART NUMBER:	SCALE:
02 02 04 001 I	N/A

DRAWN BY:	APPROVED BY:	DATE:	SHEET:
London, W.		09/28/2006	1 OF 2

Dia. No.		Part Name	Order By This Part No.
HEAD AND PEDESTAL ASSEMBLY WITH DINAMIC OIL ROTARY ACUTATOR (DIAGRAM NO. 1300)			
1		Head and Spindle Assembly	107105
2		Head and Pedestal Stop	107173
3		Spline, Spindle	HC99005
4		Nylatron Bushing-Thrust Bearing	BU510002
5		Thrust Spacer	106210
6		Nylatron Bushing-Upper Spindle	BU509002
7		Pedestal Assembly	
8		Nylatron Bushing, Lower Spindle	BU507005
9		Lock Collar, (one side)	117103
10		Bolt, Lock Collar	BL308048U513
11		Bolt, Torque Link	BL120056U8
12		Flat Washer, Torque Link	WAF14S8
13		Torque Arm Link	114401
14		Locknut, 7/8"	NUC14U
15		Support Plate, Torque Arm Assy.	NOT SOLD SEPARATE
16		Rotary Actuator Mt. Plate, Torque Arm Assy.	114202
17		Wear Pad	BU317002
18		Dinamic Oil Rotary Actuator	HC01005
19		Bolt, Rotary Actuator	SCA1032C
20		Grease Fitting, 1/8" Straight	HF2002S
25		Bearing, Torque Link	BE04N12SF20
26		Spacer, Torque Link	114454
27		Lock Collar Nut, Stoverlock 1/2"	NUS08U
28		Lockwasher, Rotary Actuator Bolt	WAS108



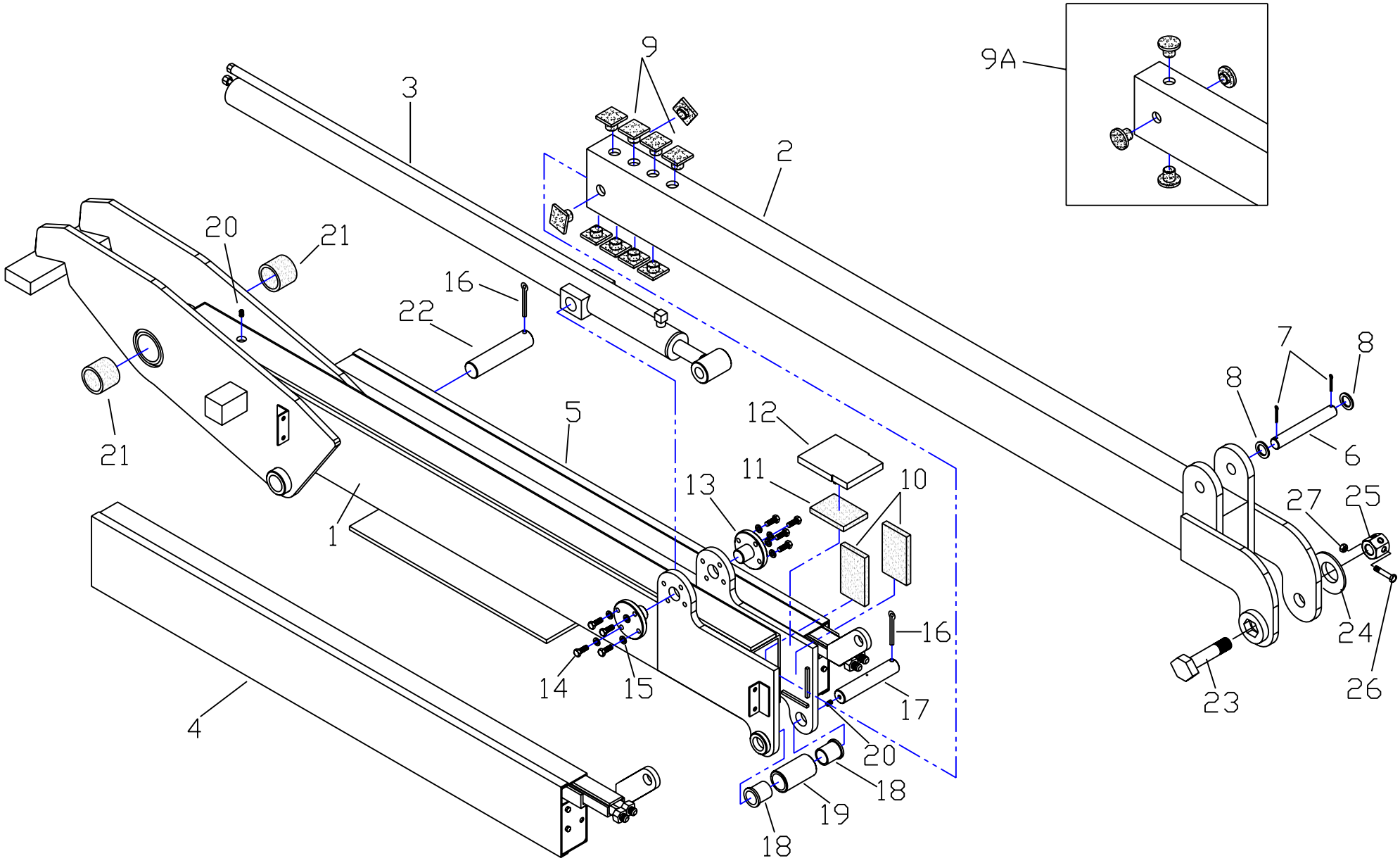
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES,FL.33859-8234
(863) 676 1493 FX (863) 676 6844

TITLE: TL3 MAIN BOOM ASSEMBLY

CAD NO:	DIAGRAM No.	SCALE
02 03 04 001 4	3100	N/A

DRAWN BY:	APPROVED:	DATE:	SHEET:
E.J.B.		06/18/97	1 OF 1

Dia. No.		Part Name	Order By This Part No.
TL3 MAIN BOOM ASSEMBLY: (DIAGRAM #3100)			
1	*	Main Boom Weldment	108152
2		Nut, 3/8 - 16	NUA06U
3		Lockwasher, 3/8	WAS065
4		End Cap	108225
5		Bolt, 5/16 - 18 x 2"	BL305032U518
6		Flat Washer, 5/16	WAF05U5
7		3-Hole Pipe Clamp	CLP3C
8		Lock Washer, 5/16	WAS055
9		Nut, 5/16-18	NUA05U
10		1-Hole Stacking Hose/Pipe Clamp Assembly	CL5G210
11		1-Hole Hose/Pipe Clamp Assembly	CLH1AP
12		Bushing, Main Boom Pivot	BU503004
13		Boom Tube, 12-45	TU03002
14		Boom Tube, 62-45	TU02002
15		Boom Tube, 140-45	TU03006
16		Pin, Lift Cylinder Rod End	PI30274F
17	*	Pin, Tip Cyl Base End, 2" x 17 1/8"	PI30274F
	*	Pin, Tip Cyl Base End, 1 1/2" x 17"	PI22272F
18		Pin, Lift Cylinder Base End	PI30302F
19	*	Bolt, Main/Tip Pivot, 2" x 20"	BL132320U845
	*	Bolt, Main/Tip Pivot, 2" x 20 5/8"	BL132330U845
20		Nut, Main Boom & Tip Boom Pivot	NUB32HU
21	*	Cotter Pin, 7/16 x 4"	FA020764
	*	Bolt, 7/16" x 4" USS GR8	BL307064U814
	*	Nut, 7/16" USS Stover Lock Nut	NUS07U
22	*	Cotter Pin, 1/2 x 4"	FA020864
	*	Bolt, 7/16" x 4" USS GR8	BL307064U814
	*	Nut, 7/16" USS Stover Lock Nut	NUS07U
23	*	Cotter Pin, 5/16 x 3" for 1 1/2" Pin	FA020548
	*	Bolt, 5/16" x 4" USS GR5 for 1 1/2" Pin	BL305064U518
	*	Nut, 5/16" USS Stover Lock Nut for 1 1/2" Pin	NUS05U
	*	Bolt, 7/16" x 4" USS GR8 for 2" Pin	BL307064U814
	*	Nut, 7/16" USS Stover Lock Nut for 2" Pin	NUS07U
24	*	Thrust Washer, 7/8" Thick	BU507004
	*	Thrust Washer, 5/8" Thick	BU507008
25		Grease Fitting, 1/8" 90 Degree	HF20029
26	*	Cylinder, 5" Tip Boom (Requires 2" Pin)	121102
	*	Cylinder, 5" Tip Boom (Requires 1 1/2" Pin)	CY02008
27		Cylinder, 5" Main Boom Lift	121101
28		Bronze Bushing, Lift Cylinder	121166
29	*	Bronze Bushing, Tip Cyl Rod End, 2"	121167
	*	Bronze Bushing, Tip Cyl Rod End, 1 1/2"	121168
30	*	Bronze Bushing, Tip Cyl Base End, 2"	121166
	*	Bronze Bushing, Tip Cyl Base End, 1 1/2"	BU402014
31		Head & Spindle Assy for HA36 Actuator	107104
		Head & Spindle Assy for SS40 or SAI Actuator	107105
32	*	Cartridge Valve, Tip Boom Cylinder	VA0780T01
	*	Cartridge Valve, Tip Boom Cylinder	VA0780T02
33		Cartridge Valve, Main Boom Cylinder	VA0780T02
	*	Main Boom Assembly Less Pins & Cylinders	108103
	*	NOTE: Item numbers with an asterisk (*) may have part numbers and prices	
		different than what is shown on this pricelist. Please consult with the Petersen	
		Parts Department to help correctly identify these parts for your loader. You	
		may contact our Parts Department at 800/930-5623, ext. 229.	



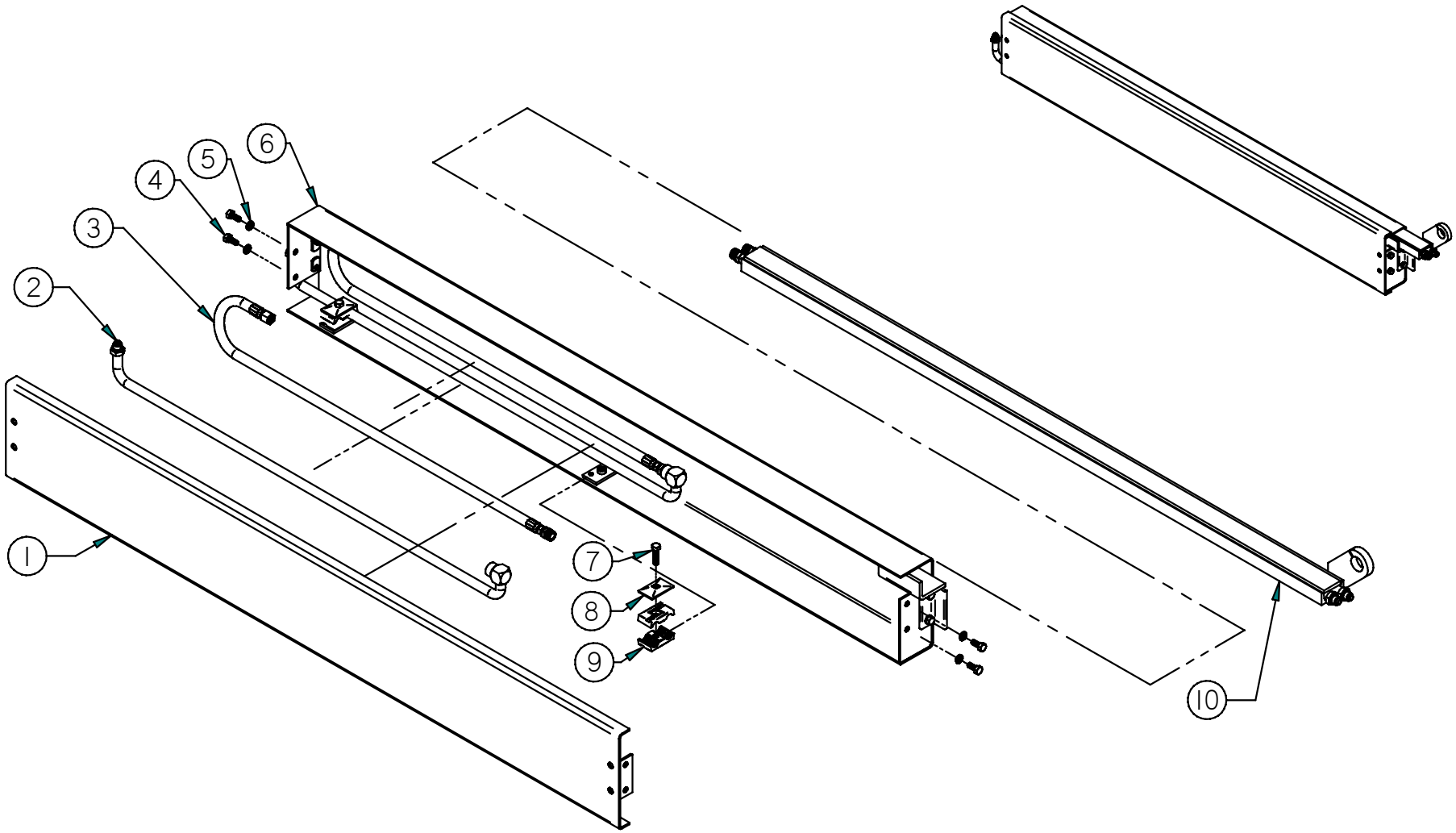
PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
(863) 676 1493 FX (863) 676 6844

TITLE: TL 3 TIP BOOM ASSEMBLY

CAD NO:	DIAGRAM No.	SCALE
02 04 04 001 2	3202	N/A

DRAWN BY:	APPROVED:	DATE:	SHEET:
E.B.		10/5/98	1 OF 1

Dia. No.		Part Name	Order By This Part No.
TL3 TIP BOOM ASSEMBLY (DIAGRAM #3202)			109103
1	*	TL3 Tip Boom Outer Weldment	109152
2	*	TL3 Tip Boom Inner Extension Weldment	109153
3		Tip Extension Cylinder	121105
4		Hose Recoil Box Assy. - Right Side	123122
5		Hose Recoil Box Assy. - Left Side	123121
6		Pin, Tip Extension Cylinder/Recoil Box	PI16112F
		Slide Mount	
7		Cotter Pin, Recoil Box Slide Mount Pin	FA020332
8		Washer, Recoil Box Slide Mount Pin	WAB1624
9	*	Wear Pad, Tip Ext Weldment (Square)	109210
9A	*	Wear Pad, Tip Ext Weldment (Round)	BU202001
10		Wear Pad, Tip Extension Outer Side	BU303003
11		Wear Pad, Tip Extension Outer Top	BU303002
12		Tip Extension Wear Plate Retainer Weldment	109154
13		Trunnion, Tip Extension Cylinder	109205
14		Bolt, Trunnion	BL306016U516
15		Lockwasher, Trunnion	WAS065
16		Cotter Pin, Tip Extension Roller/Tip Cylinder	FA020548
		Rod End	
17		Pin, Tip Extension Roller	PI18105F
18		Bushing, Tip Extension Roller	BU402007
19		Spool, Tip Extension Roller Support	115131
20		Grease Fitting, 1/8" Straight	HF2002S
21		Bushing, Tip Boom Connecting Spool	BU502008
22	*	Pin, Tip Cyl/R Connecting, 2" x 6 3/4"	PI30108F
	*	Pin, Tip Cyl/R Connecting, 1 1/2" x 6 3/4"	PI22108F
23		Bolt, Tip Boom Gimbal	BL120124U87
24		Spacer, Tip Boom Gimbal	WAB2030
25		Nut, Tip Boom Gimbal	102454
26		Bolt, 5/16-18 x 2 1/2 USS G5	BL305040U518
27		Nut, 5/16 USS Stover	NUS05U
	*	NOTE: Item numbers with an asterisk (*) may have part numbers and prices	
		different than what is shown on this price list. Please consult with the	
		Petersen Parts Department to help correctly identify these parts for your	
		loader. You may reach our Parts Department at 800/930-5623, ext. 229.	



Item Number	Title	Part Number	Quantity
1	HOSE RECOIL, COVER ASSEMBLY	123127	1
2	TUBE, TL3 HOSE RECOIL BOX - CURVED	TU04004	2
3	HOSE CUT 36" #6-S RECOIL BOX	HS10576FS	2
4	HEX BOLT 5/16-18 X 3/4 USS G5	BL305012U518	4
5	WASHER LOCK 5/16 SPLIT	WAS055	4
6	HOSE RECOIL, HOUSING ASSEMBLY - RIGHT	123126	1
7	HEX BOLT 5/16-18 X 1-1/4 UNC G5	BL305020U518	2
8	CLAMP, TOP PLATE ONLY (2-HOLE)	CL5G225	2
9	CLAMP, PLASTIC ONLY (2-HOLE) (1 SET)	CLP220	2
10	HOSE RECOIL, SLIDE ASSEMBLY - RIGHT	123124	1

PETERSEN INDUSTRIES INC.
4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: HOSE RECOIL BOX ASSEMBLY - RIGHT

PART NUMBER: 21 04 04 012 0 / 123122

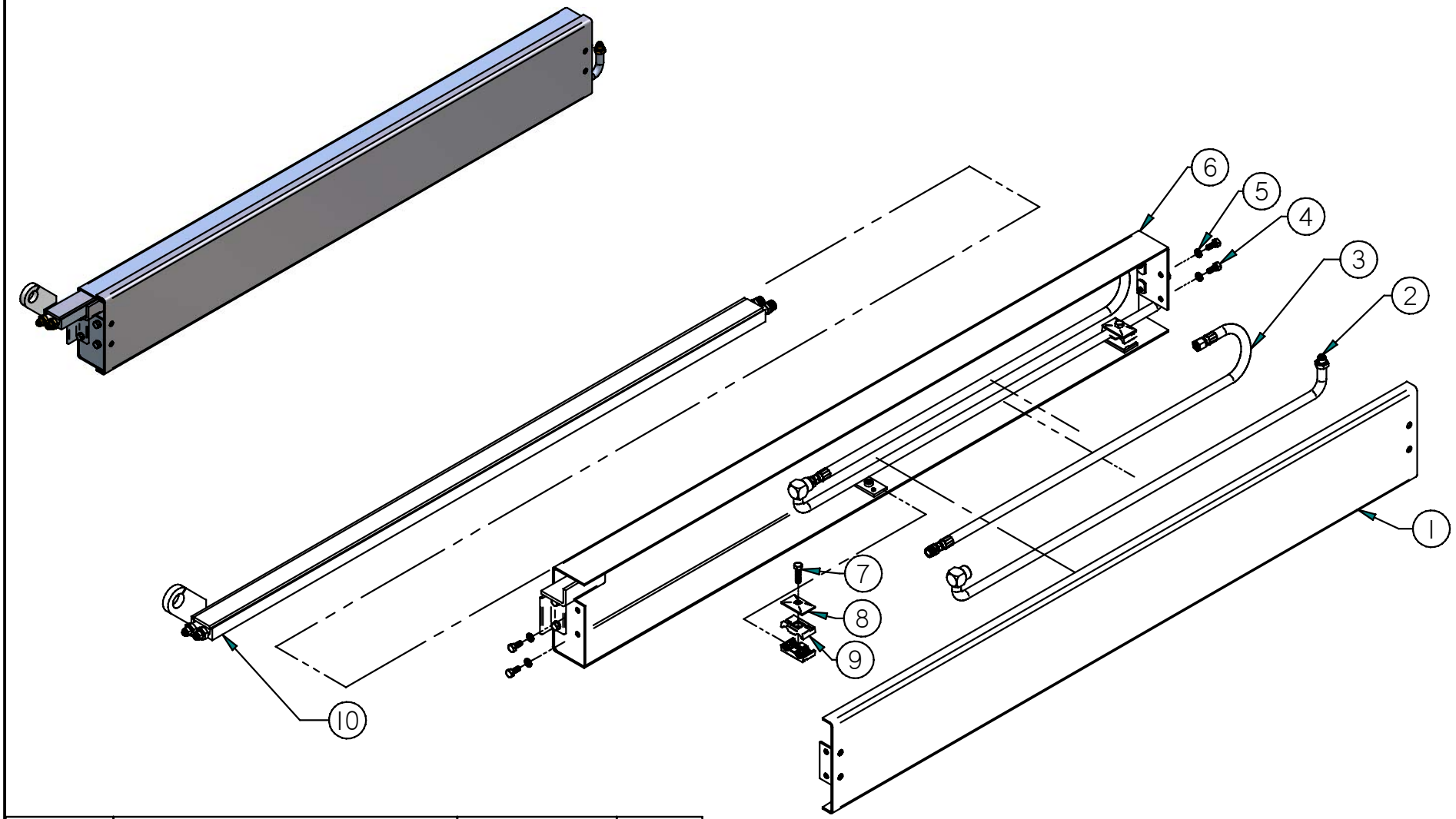
SCALE: N/A

DRAWN BY: Olvera, J.

APPROVED BY:

DATE: 5/25/2006

SHEET: 1 OF 1



Item Number	Title	Part Number	Quantity
1	HOSE RECOIL, COVER ASSEMBLY	123127	1
2	TUBE, TL3 HOSE RECOIL BOX - CURVED	TU04004	2
3	HOSE CUT 36" #6-S RECOIL BOX	HSI0576FS	2
4	HEX BOLT 5/16-18 X 3/4 USS G5	BL305012U518	4
5	WASHER LOCK 5/16 SPLIT	WAS055	4
6	HOSE RECOIL, HOUSING ASSEMBLY - LEFT	123125	1
7	HEX BOLT 5/16-18 X 1-1/4 UNC G5	BL305020U518	2
8	CLAMP, TOP PLATE ONLY (2-HOLE)	CL5G225	2
9	CLAMP, PLASTIC ONLY (2-HOLE) (1 SET)	CLP220	2
10	HOSE RECOIL, SLIDE ASSEMBLY - LEFT	123123	1

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TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: HOSE RECOIL BOX ASSEMBLY - LEFT

PART NUMBER: 21 04 04 013 0 / 123121

SCALE: N/A

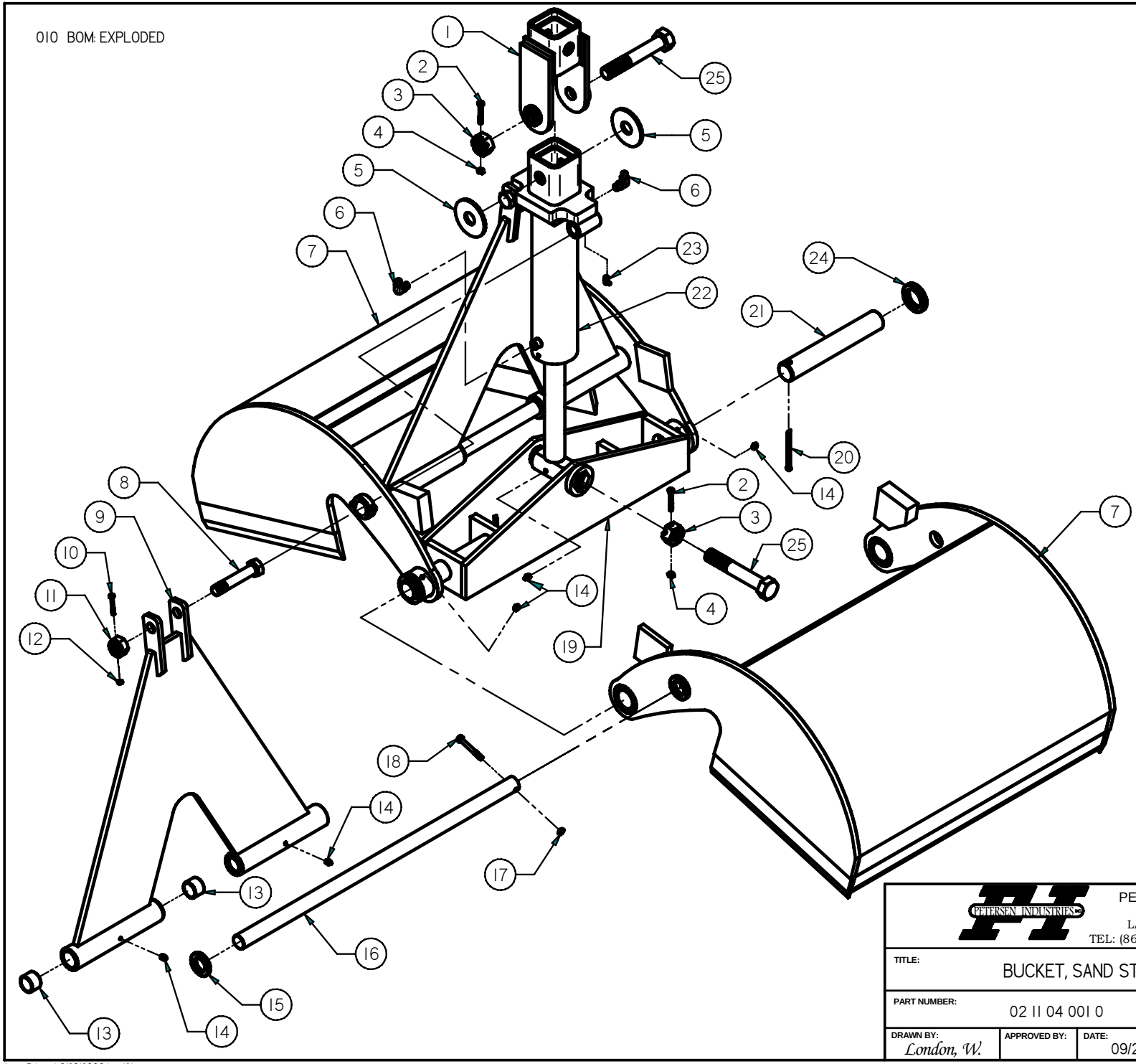
DRAWN BY: Olvera, J.

APPROVED BY:

DATE: 5/30/2006

SHEET: 1 OF 1

010 BOM: EXPLODED



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4000 S.R. 60 WEST
LAKE WALES, FL. 33859-8234
TEL: (863) 676-1493 FAX: (863) 676-6844

TITLE: BUCKET, SAND STANDARD ASSY W/ GIMBAL			
PART NUMBER: 02 11 04 001 0			SCALE: N/A
DRAWN BY: London, W.	APPROVED BY:	DATE: 09/29/2006	SHEET: 2 OF 3

NOTIFICATION OF TRANSFER OF OWNERSHIP

TO: Petersen Industries, Inc.
4000 SR 60 West
Lake Wales, FL 33859
Telephone: 800/930-5623, Ext. 256

FROM: _____

_____

_____

This is to advise you that our organization is no longer the owner of the Petersen loader listed below. We have listed the name and address of the subsequent owner. Would you please change your records accordingly.

Petersen Loader Serial Number: _____

VIN: _____

Name and Address of New Owner:

_____

_____

_____

Phone:_____

Contact: _____

BY: _____
(Name)

Date: _____