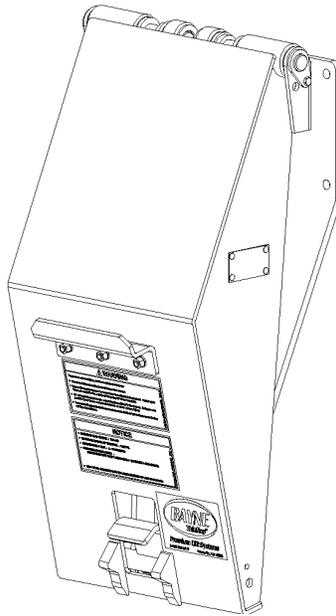




*Premium Lift Systems*

## **OPERATION AND PARTS MANUAL**



MODEL NUMBER : **Taskmaster™ Hi-Lift**

---

PART NUMBER : **1999-9100**

---

SERIAL NUMBER :

---



Environmental Solutions Group  
201 W. Main Street, Ste 300  
Chattanooga, TN 37408  
Bayne Customer Care: 800.535.2671

# Cart Lifter General Operation Guidelines

Always adhere to your company's safety guidelines when using this lifter. This includes wearing appropriate clothing and personal protective equipment, including reflective gear. Keep in mind that you are operating the lifter on public roads or alleys with moving traffic. Stay vigilant and watch out for vehicles and pedestrians.

The lifter should only be used for lifting ANSI-approved carts that are in good condition. It is not designed to be used as a step, to assist in lifting commercial containers, or to crush or break down items. Use with non-approved carts or misuse can result in serious injury or damage and will void the warranty.

Make sure the area around the lifter is free of personnel before operation. Always maintain a safe distance from the lifter to avoid pinch points that can cause serious injury.

Cart lifters can hang very low to the ground at certain points in the lift cycle. It is the operator's responsibility to move the lifter to a safe position, such as raising the lifter fully or placing the lifter in the storage position before driving. Lifters left hanging low risk bottoming out on the street, road, or alley. This can cause serious damage. Damages from bottoming out are not covered by the warranty.

It is the operator's responsibility to position the cart lifter safely before approaching any obstacles. Damages from collisions are not covered by the warranty.

## **TABLE OF CONTENTS**

	Page
I. <b>THINLINE</b> <sup>®</sup> Safety _____	3
II. <b>THINLINE</b> <sup>®</sup> Specifications _____	4
III. <b>THINLINE</b> <sup>®</sup> Installation Instructions _____	5
IV. <b>THINLINE</b> <sup>®</sup> Operation Instructions _____	13
V. <b>THINLINE</b> <sup>®</sup> Diverter Valve Information _____	16
VI. <b>THINLINE</b> <sup>®</sup> Maintenance Instructions _____	18
VII. Trouble-shooting Chart _____	19
VIII. Appendix A	
1. Unit Assembly Drawings _____	23
2. Mounting Height Drawing _____	28
3. Hydraulic Schematic Drawings _____	29
4. Diverter Valve Drawings _____	31
5. Hand Valve Drawings _____	33

SAFETY ( WI-0070-A)  
Bayne *THINLINE*<sup>®</sup> Premium Lift Systems

To prevent serious injury, death or equipment damage, read and understand this entire manual before installing, operating, repairing or adjusting your Bayne THINLINE<sup>®</sup> Premium Lift System. Those using and maintaining this equipment must be thoroughly trained and familiar with the product.

**I. Manual:**

This manual must be kept in a location that is readily available for those who operate or maintain this equipment. Additional copies may be obtained from your local dealer or directly from Bayne THINLINE<sup>®</sup> Premium Lift Systems.

**II. Lockout/Tagout Procedures:**

All applicable OSHA lockout/tagout regulations must be followed when working on this equipment. Failure to comply with these procedures can result in serious injury or death.

**III. Safety Decals:**

Safety decals attached to your Bayne THINLINE<sup>®</sup> Premium Lift System warn of hazards related to the use of this equipment. Operators must read and follow all safety instructions while using this equipment. If the safety decals are not clearly readable, new decals may be obtained from your local dealer or directly from Bayne THINLINE<sup>®</sup> Premium Lift Systems.

SPECIFICATIONS ( WI-0090-B )  
Bayne **THINLINE**<sup>®</sup> Premium Lift Systems

- A. Double acting welded cylinder.
  - Replaceable seals.
  - Double action provides smooth operation throughout the dump cycle.
- B. All bearings are made of a composite material, which provides superior compression strength along with self-lubrication, thus eliminating the need to grease the arm bearings.
- C. The lift unit measures only 12” thick in the down position.
- D. The faceplate is normally at 45 degrees in the dump position in order to completely eject all materials into the hopper. The faceplate remains outside the hopper opening in the dump position, therefore preventing any interference with the sweep of the packer blade.
- E. The lift unit operates at a cycle time of **8 to 10 seconds** for safe, fast, efficient service.

*Note : Cycle time is controlled by flowrate, as flowrate increases, cycle time decreases. In order to avoid injury and maintain manufacturer’s warranty never operate outside the cycle time listed above*

- F. Recommended flow rate is **2 to 2 1/2 GPM**.
- G. Hydraulic pressure requirements are as follows:
  - **1800 PSI** normal working pressure
  - **2500 PSI** maximum pressure
- H. Lift unit can be a bolt on type installation for easy, quick maintenance and less downtime.
- I. All parts are manufactured and kept in stock at Bayne Machine Works, Inc. for fast response to customer requests.
- J. One ( 1 ) year limited warranty from date of delivery on all units and models when properly maintained and operated within the recommended cycle time.

*All lift units and parts are inspected by our Quality Control Department before shipment to insure that you always receive the highest quality available in the lift business.*

For more information, please contact us at (800) 535-2671 or by fax at (864) 458-7519.

# INSTALLATION INSTRUCTIONS ( WI-0235-A )

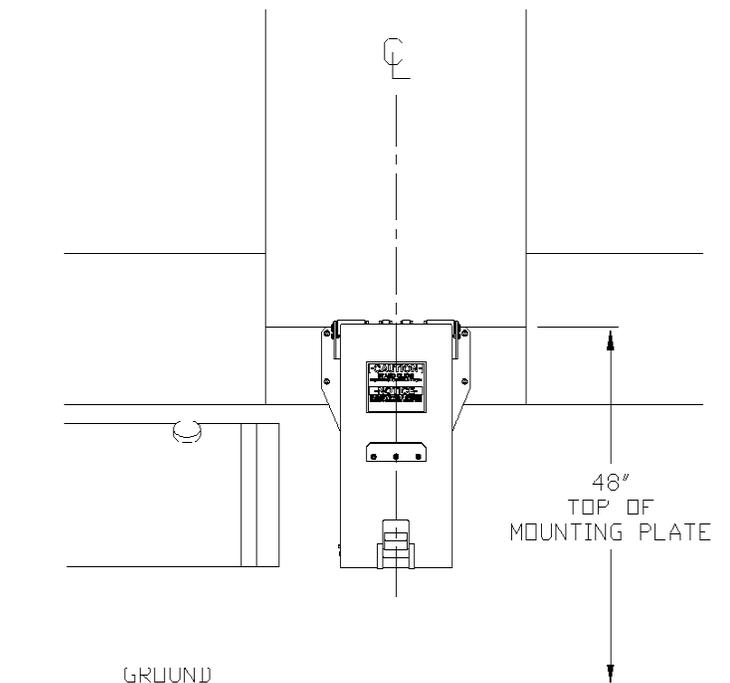
## Bayne *THINLINE*<sup>®</sup> Premium Lift Systems

The following information is intended to be a **GENERAL GUIDE** to installing the Bayne *THINLINE*<sup>®</sup> lifter on a typical refuse truck. Before starting the installation, read these instructions completely. **ALWAYS** use the proper tools, lift devices, and personal protective equipment to prevent injury while performing the installation.

**NOTE:** If a Bayne *THINLINE*<sup>®</sup> Tap-In Kit was also acquired for this installation, refer to the installation instructions included in the Tap-In Kit manual for more detailed information.

### IV. Mounting lifter(s) on the truck :

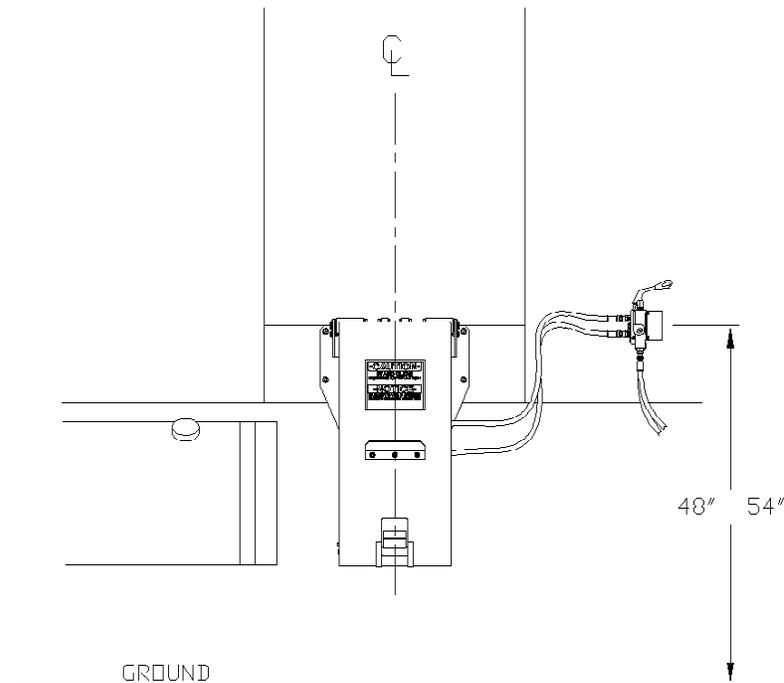
1. The truck should be emptied and cleaned before any installation. The truck should be parked on a level solid surface, a concrete floor if possible.
2. All lights, tags, steps, etc. that will interfere with the installation should be removed and/or relocated.
3. Position the lifter(s) on the sill of the truck per *figure I-1* and mounting height drawing ( *Appendix A* ) and tack weld in place. If installing with the use of a mounting plate kit for bolt-on applications, tack weld the mounting plate in place and attach the lifter using the studs, washers, and nuts supplied.



**figure I-1**

## V. Mounting hand valve(s) on the truck :

1. Choose and mark an acceptable location(s) on the truck to mount the hand valve assembly(s), approximately 48" to 54" from the ground as shown in figure I-2.
2. Remove the mounting bracket(s) from the hand valve assembly(s) and weld to the truck.
3. After the weld has cooled, paint the mounting bracket(s) to match the truck color.
4. After the paint has dried, reassemble the hand valve assembly(s) on the mounting bracket(s).



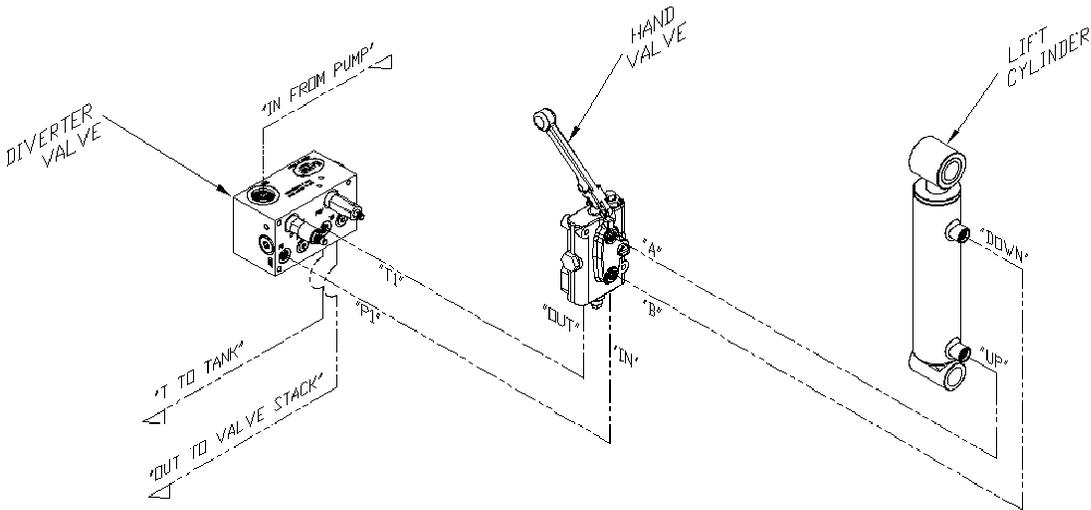
**figure I-2**

## VI. Mounting diverter valve on the truck :

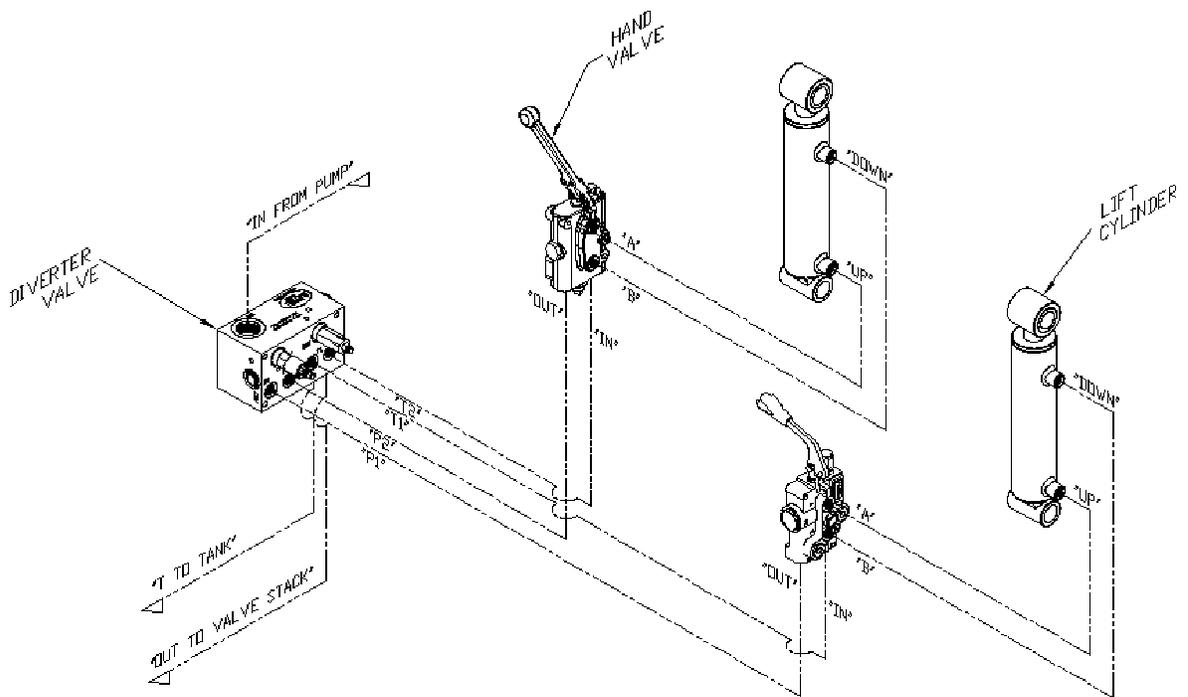
1. Choose and mark an acceptable location to mount the diverter valve assembly. This location should be near the truck's main hydraulic pressure and tank lines on the same area of the truck where the lifter is mounted.
2. Weld diverter valve mounting bracket to the truck.
3. After the weld has cooled, paint the mounting bracket to match the truck color.
4. After the paint has dried, bolt the diverter valve to the mounting bracket using the 1/4" bolts, washers, and elastic lock nuts.

## VII. Making Hydraulic Connections :

Before attempting any hydraulic connections, turn the truck's engine off and release all hydraulic pressure from the system. Refer to the hydraulic layouts ( figure I-3 ) and hydraulic schematics ( Appendix A ) while performing the following steps. Always clean & lubricate fitting threads before installation.



*Single Lifter Installation*



*Dual Lifter Installation*

**figure I-3**

1. Cut or disconnect truck's main hydraulic pressure line and install the Bayne diverter valve in series using the "IN" and "OUT" ports.
2. Connect the "T" port on the diverter valve to the truck's hydraulic tank line with an appropriate size line to handle the full system flow.
3. Connect port "P1" on the diverter valve to the "IN" port on the hand valve.

**If installing dual lifters, connect port "P2" on the diverter valve to the "IN" port on the other hand valve.**

4. Connect port "T1" on the diverter valve to the "OUT" port on the hand valve.  
*If installing dual lifters, connect port "T2" on the diverter valve to the "OUT" port on the other hand valve.*

5. Connect the "A" port on the hand valve(s) to the "DOWN" port on the rotary actuator(s).
6. Connect the "B" port on the hand valve(s) to the "UP" port on the rotary actuator(s).
7. Disassemble each hose clamp assembly and position weld plates where needed and weld in place.
8. After the weld has cooled, paint the weld plates to match the truck color.
9. After the paint has dried, reassemble the hose clamp assemblies around the hoses.

### VIII. Adjusting relief valve settings :

The diverter valve ( 1 ) ( figure I-4 ) supplies the cart lifter hydraulic system with approximately 2 GPM of oil flow. This diverter valve is equipped with a full system relief valve ( 4 ) set at 2500 psi, to protect the truck's hydraulic system from any blockages that may occur down stream of the diverter valve. The diverter valve also includes a lifter circuit relief valve ( 3 ) set at 2300 psi, to prevent the diverter valve from shutting down if a blockage occurs in the lifter circuit. There is also a relief valve ( 5 ) set at 1800 psi in the hand valve ( 2 ) to protect the lifter from excessive pressure. These relief valves are preset from the factory to operate properly on most trucks with a system pressure between 2300 and 2500 psi without any adjustment. However if any adjustment is necessary, follow these instructions.

**WARNING :** Bayne equipment is rated for a maximum pressure of 3000 psi. Operation at pressures above 3000 psi may damage equipment and cause personal injury. In order to avoid injury and maintain manufacturer's warranty never operate above 3000 psi.

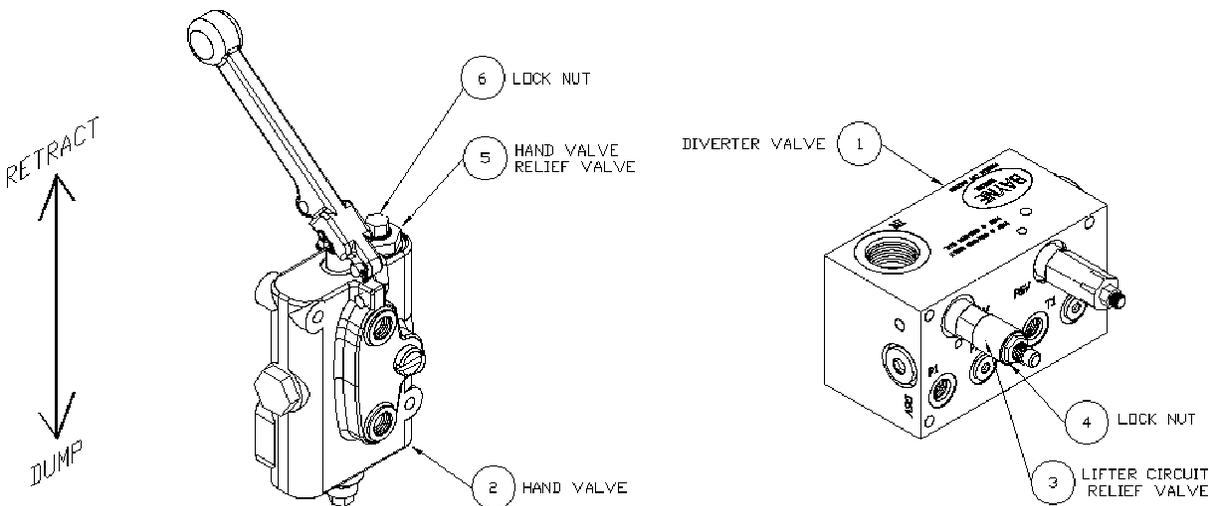
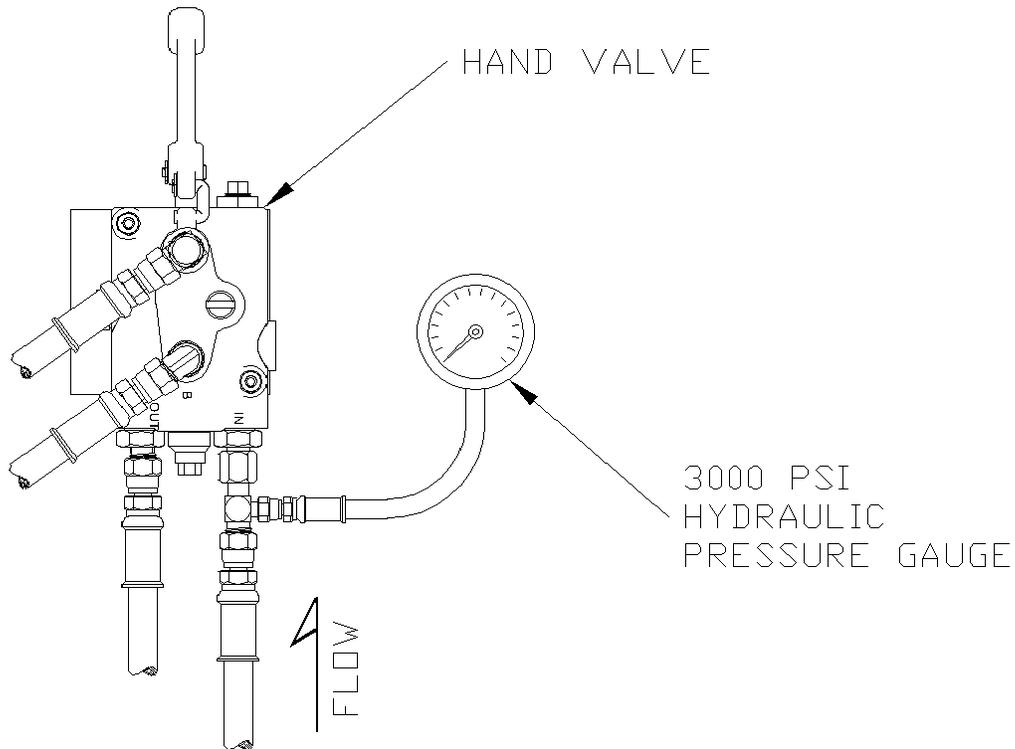


figure I-4

1. Determine the truck's system pressure setting.
2. Remove the cap nut(s) ( 8 ) ( *figure I-4* ) from the hand valve relief valve(s) ( 5 ) and turn the adjustment screw(s) clockwise until it bottoms out.
3. Loosen the lock nut ( 6 ) ( *figure I-4* ) on the lifter circuit relief valve ( 3 ) and turn the adjustment screw clockwise until it bottoms out.
4. Loosen the lock nut ( 7 ) ( *figure I-4* ) on the full system relief valve ( 4 ) and turn the adjustment screw counter-clockwise until it stops backing out.
5. Install a 3000 psi hydraulic pressure gauge with the necessary adapter in the "G" port of the diverter valve.
6. Start the truck's engine and engage the hydraulic system.
7. Operate the handle on the hand valve ( 2 ) ( *figure I-3* ) back and forth a few times to bleed all air from the lifter hydraulic system.
8. **Setting the diverter valve full system relief valve:**
  - a) Have an assistant hold the handle on the hand valve ( 2 ) ( *figure I-4* ) in the "retract" position. *If installing dual lifters hold the handle down on only one of the hand valves.*
  - b) Turn the pressure relief adjustment screw on the full system relief valve ( 4 ) clockwise until the pressure reading on the gauge is either 100 psi above truck system pressure, or if the pressure reaches a certain point and will not go any higher, set the adjustment screw 1/2 turn past that point.
  - c) Release the handle on the hand valve.
9. Turn the truck's engine off and release all hydraulic pressure from the system.
10. Remove the hydraulic pressure gauge from the "G" port of the diverter valve and reinstall the plug.
11. Install the 3000 psi hydraulic pressure gauge with the necessary adapter in the hydraulic line connected to the "IN" port of the hand valve as shown in figure I-5. *If installing dual lifters, install the hydraulic gauge at either one of the hand valves.*



**figure I-5**

12. Start the truck's engine and engage the hydraulic system.

**13. Setting the diverter valve lifter circuit relief valve:**

- a) Have an assistant hold the handle on the hand valve ( 2 ) ( *figure I-4* ) ( *with pressure gauge installed at the "IN" port* ) in the "retract" position to show pressure on the gauge.
- b) Turn the pressure relief adjusting screw on the lifter circuit relief valve ( 3 ) counter-clockwise until the pressure reading on the gauge is either 100 psi less than truck system pressure or 2300 psi, which ever is the lowest.
- c) Release the handle on the hand valve.

#### 14. Setting the hand valve(s) relief valve:

- a) Hold the handle on the hand valve ( 2 ) ( *figure I-4* ) ( *with pressure gauge installed at the “IN” port* ) in the “retract” position to show pressure on the gauge.
- b) Turn the pressure relief adjusting screw on the hand valve relief valve ( 5 ) counter-clockwise until the pressure reading on the gauge is either 200 psi less than truck system pressure or 1800 psi, which ever is the lowest.
- c) Release the handle on the hand valve.
- d) Turn the truck’s engine off and release all hydraulic pressure from the system.
- e) Remove the hydraulic pressure gauge from the hydraulic line connected to the “IN” port of the hand valve.
- f) *For dual lifters, install the hydraulic pressure gauge in the “IN” port of the other hand valve as shown in figure I-5, start the truck’s engine, engage the hydraulic system, and repeat step 13.*

15. The hydraulic circuit pressures are now set for optimum performance.

16. Reinstall the cap nut(s) ( 8 ) ( *figure I-4* ) on the hand valve(s) relief valve ( 5 ) to secure the correct pressure setting(s).

17. Tighten the lock nut ( 7 ) ( *figure I-4* ) on the full system relief valve ( 4 ) to secure the correct pressure setting.

18. Tighten the lock nut ( 6 ) ( *figure I-4* ) on the lifter circuit relief valve ( 3 ) to secure the correct pressure setting.

#### VI. Final operation and mounting:

1. Start the truck’s engine and engage the hydraulic system.
2. Operate the lifter(s) and bleed all air from the hydraulic system.
3. Place a cart on each lifter and operate to make sure there are no clearance problems and that the lifter engages the cart properly. Make any adjustments to the mounting position of the lifter(s) to ensure correct operation.
4. After locating an acceptable mounting position, complete the welding of the lifter(s) to the truck.

## OPERATION INSTRUCTIONS ( WI-0138-C )

### Bayne *THINLINE*<sup>®</sup> Premium Lift Systems

The Bayne *THINLINE*<sup>®</sup> Premium Lift System is a high quality durable dumper built to meet industry requirements. To insure the safety of all operators of this equipment, please read this manual carefully before operating the dumper. *FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.*

The operating stages ( figure O-1 ) in the cycle of the dumper are as follows:

- 1) **START** - The container to be dumped is placed on the lift saddle.
- 2) **DUMP** – The hydraulic cylinder extends to dump the contents of the container into the hopper. During this cycle, the lower rotating hook automatically “locks” the container to the lifter.
- 3) **RETRACT** - The hydraulic cylinder retracts to return the container to the start position. The lower rotating hook automatically retracts to “unlock” the container from the dumper.

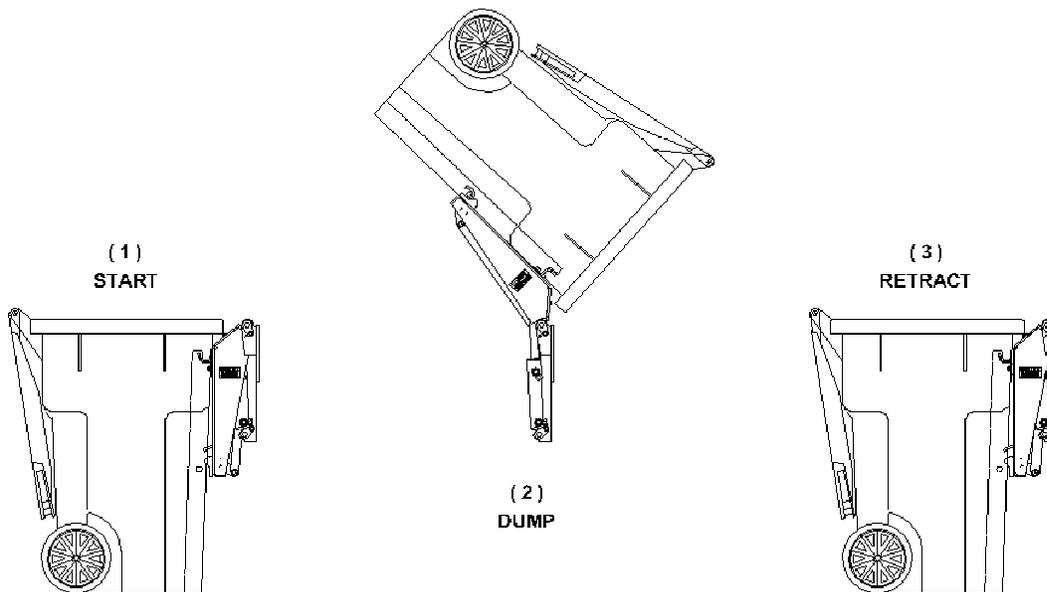


figure O-1

**Warning: Exceeding the recommended cycle time on any dumper will void the manufacturer’s warranty**

The rotational motions of the dumper are controlled with the use of a hand valve. Moving the handle on the hand valve in one direction will cause the dumper to perform the “dump” stage ( figure O-1 ). Moving the handle in the opposite direction will cause the dumper to perform the retract stage.

## SAFETY ZONES

### Stand Clear Zone

To prevent serious injury or death, operators and bystanders should remain outside the Stand Clear Zone ( figure O-2 ) at all times during the operating cycle of the lifter. If at any point during the cycle persons enter this area, the operator must stop all motion of the lifter until the area is cleared.

### Dump Zone

To prevent serious injury or death, operators and bystanders should remain outside the Dump Zone ( figure O-2 ) at all times. If it becomes necessary to enter this area, all applicable OSHA lockout/tagout regulations must be followed.

### Operator Area

To provide a clear, unobstructed view of both the Stand Clear Zone and Dump Zone, operators should remain within the Operator Area ( figure O-2 ) at all times during the operating cycle of the lifter.

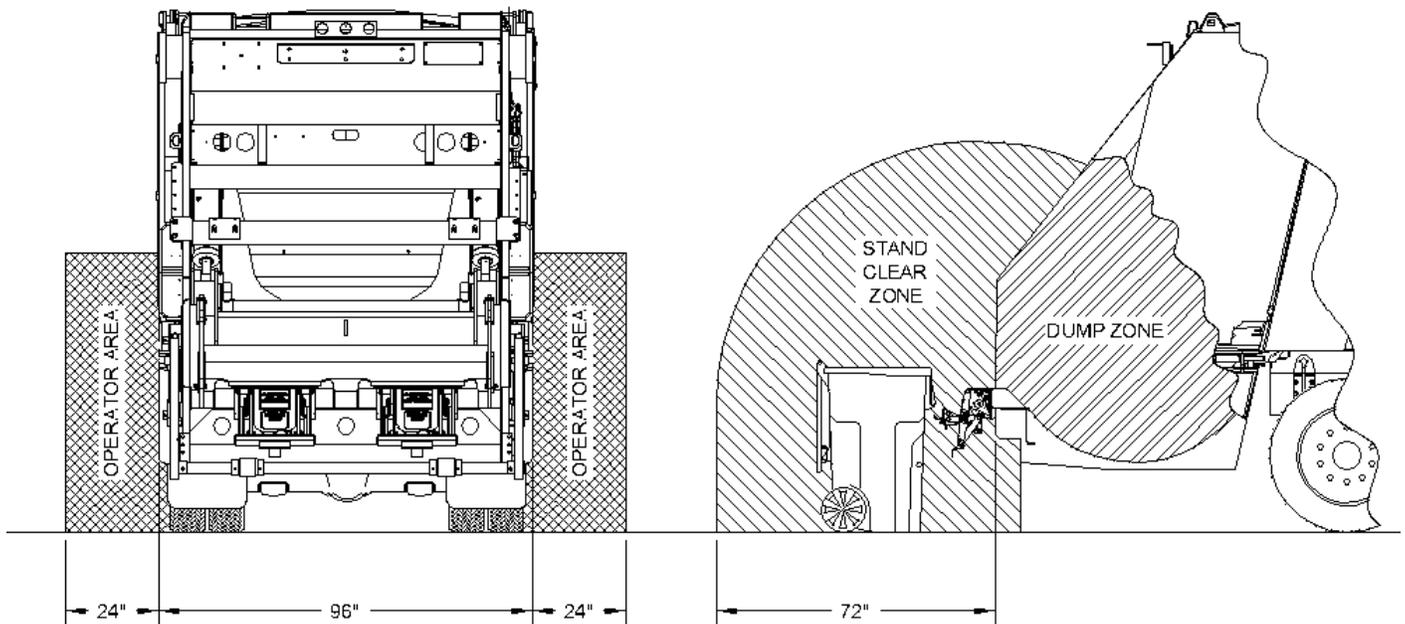
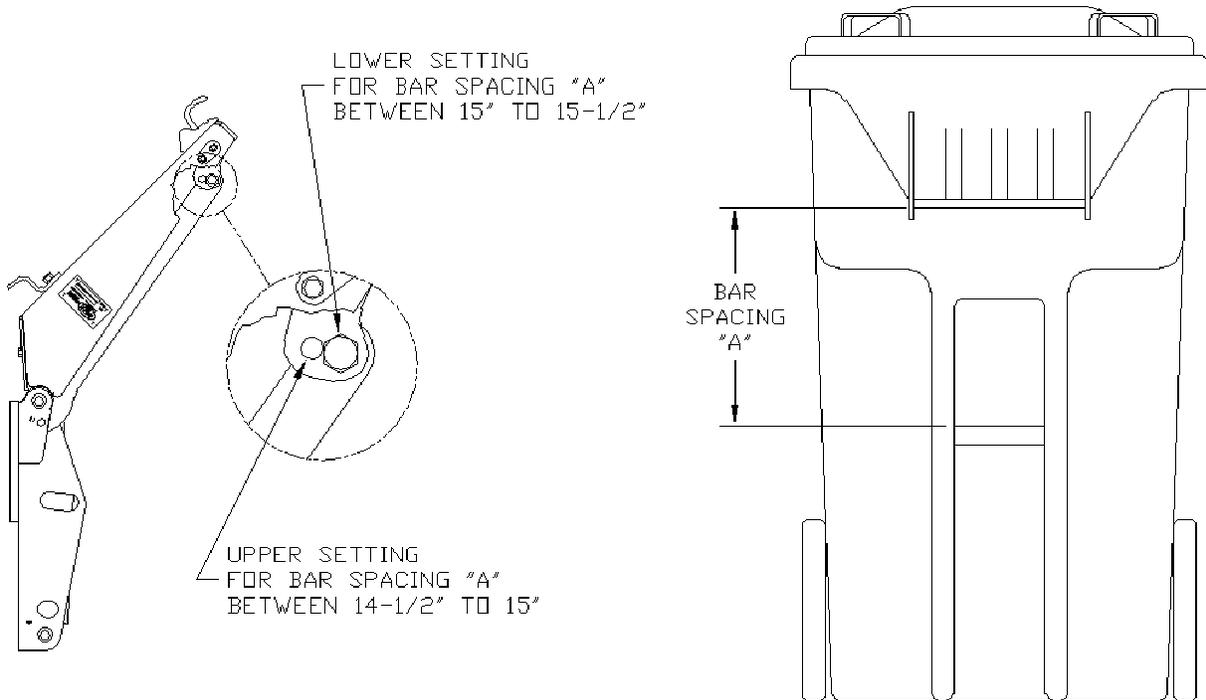


figure O-2

## LOWER HOOK ADJUSTMENT

The lower hook is equipped with two settings that must be properly adjusted to accommodate the carts being lifted. Check the distance ( **A** ) ( figure O-3 ) between the upper bar and the lower bar on the cart. If this dimension is between **15" to 15-1/2"**, leave the lower hook attachment in the lower setting. If this dimension is between **14-1/2" to 15"**, move the lower hook attachment to the upper setting.



**figure O-3**

**CAUTION:** *It is the responsibility of the owner / operator of this equipment to adjust these dimensions to be compatible with his specific application. If the bar spacing is not within either of the specified ranges, please contact us on available options for non-standard carts.*

6091/6092-0700 DIVERTER VALVE  
OPERATION AND INSTALLATION INFORMATION  
( WI-0026 )  
Bayne *THINLINE*<sup>®</sup> Premium Lift Systems

The Bayne diverter valve establishes priority flow to the lifter circuit “P1” and “P2” ports and bypasses oil to the “OUT” port, which typically supplies flow to the remainder of the truck’s hydraulic circuit. This bypass occurs only after the lifter circuit is satisfied. The priority flow is controlled by the flow regulator cartridge (FR1) (and FR2 in dual applications) in combination with the differential pressure sensing valve (DPS). This allows the valve to maintain constant flow regardless of changes in load pressure or volume flow rate. Since both the lifter circuit and bypass flow can be utilized in the operation of the truck regardless of which pressure is greater, a single pump can be used to supply two circuits or operations.

The lifter circuit flow is regulated and maintained by the flow regulator cartridge (FR1) (and FR2 in dual applications). The differential pressure sensing valve (DPS), rated for 75 gpm of flow and 3000 psi of pressure, is operated by an internal spring and dampening orifice (OR) which establishes a pressure drop across the block sufficient to ensure the correct operation of the flow regulator (FR1). For a dual diverter valve, a second flow regulator cartridge (FR2) is installed in the “FR2” cavity and a shuttle valve (DSV) is installed in place of the SAE plug in the “DSV” cavity. Once the pressure drop is established, a precision metered flow is provided to the tipper circuit(s) with additional flow being bypassed to the “OUT” port.

The operation of the diverter valve does not require the use of a tank line to be run to the “T” port. However, the efficiency of the block will be significantly increased if a tank line is installed. The logic circuit of the block will manage the flow of oil returning from the tipper circuit to ensure optimum performance. This is primarily controlled with the sequence valve (PSV) which is factory set and should not be adjusted. All oil returning from the tipper circuit will normally be regenerated into the outgoing flow to ensure that the downstream functions are not slowed in any way. When the downstream backpressure rises to a predetermined pressure, the block will redirect the flow to the “T” port to increase the overall efficiency of the block and reduce the pressure drop through the block. If the “T” port is connected to a tank line, the oil will be dumped through the block at a lower pressure. This allows downstream functions to operate at the highest possible pressure when pressure is being required. If the “T” port is blocked, the oil will be redirected back into the outgoing flow through the check valve (CV).

A relief circuit for the tipper function is controlled by a relief valve (RV), which is preset to 2300 psi. This can be adjusted to limit pressure to the tipper(s). This relief valve is more efficient than the relief in the hand valve and will operate with less noise. It is recommended that it be adjusted to relieve before the hand valve relief. It may also be used to limit the weight the lifter can dump. This may be beneficial in avoiding damage to cans resulting from overloading. This should be the only adjustment that the block may require. Any other adjustments should only be made after close consultation with Bayne’s Engineering Department to ensure proper operation.

## POSSIBLE PROBLEMS

1. The most common cause of valve failure is dirty oil. If debris becomes lodged in the cartridge valves they will malfunction. Recommended filtration level is between 15 and 25 microns. Many systems filter the oil on the return side. This does not guarantee clean oil going into the system. It is important to ensure that the tank vent filtration element is properly maintained as well. Very small contaminants may not cause the valve to stop functioning, but can cause “stiction” in the cartridges between the body and the moving spool. This can cause improper operation. A slow moving tipper is most likely the result of contamination in the flow regulator cartridge. A pulsating noise may be the result of contamination in the differential pressure sensing valve causing it to stick. If any valve malfunctions, remove and thoroughly clean the valve, being extremely careful not to score or abrade the “o” ring seals or moving parts of the valve. Be sure that the spool moves freely in the valve body.
2. The flow regulator cartridges (FR1 and FR2) are designed to operate at a designated pressure of 80 psi. This means that in order for the valve to function properly, a minimum of 80 psi is required from the supply line through the “IN” port of the valve. This can present a problem on trucks with a dry valve pump system. Normally in the dry (off) mode of the pump, a flow of approximately 2 gpm at 20 psi is required to circulate through the open center system of the truck. This is for pump lubrication in the off mode. When the diverter valve is placed in the main pressure line of the truck, a blockage occurs because of the differential pressure sensing valve needing 80 psi to initially open and allow the flow regulators function. The path of the lubrication oil is therefore stopped because the valve does not open. When the oil is blocked, the pump will rotate and cavitate in the lubricating oil, causing heat to build up over an extended period of time, possibly leading to premature pump failure. To prevent this problem from occurring, a “bleed line” circuit needs be installed on the truck to allow passage of the lubricating oil back to tank.
3. On front load residential truck applications, several considerations need to be noted. The Bayne hand valve is an open center valve that allows for the lifter circuit to maintain flow through the hand valve and back to the diverter valve when the lifter is not being operated. If flow is not maintained through the hand valve, the oil will constantly be relieving over the lifter circuit relief valve (RV) in the diverter valve, which can cause an increase in operating temperature. Certain front load box designs allow for the hand valve to be located on the arms of the truck which keeps the hand valve in the lifter circuit at all times to maintain flow. Most problems occur with applications where the hand valve is located on the box itself. In this situation, when the operator disconnects the hydraulic lines to the box, a blocked condition occurs in the lifter circuit. To prevent this problem, the pump must be turned off prior to disconnecting the box hydraulic lines. Once the lines have been disconnected from the box, it is necessary to connect the two lines for the hand valve to each other to functionally complete the lifter circuit. It is recommended that male and female quick disconnects be used opposite each other on the truck to provide an uninterrupted circuit. Once the lines have been connected and the circuit continued, the pump could then be turned on to continue operations.

## MAINTENANCE INSTRUCTIONS ( WI-0141-A )

### *Bayne THINLINE*<sup>®</sup> Premium Lift Systems

#### **NOTE:**

The most common cause of hydraulic component failure is contamination of the hydraulic fluid ( water, chips, dirt, etc. ) The Bayne *THINLINE*<sup>®</sup> Lift System comes clean from the factory. If removed, be sure the hoses, cylinder and fittings are clean before re-installing them on the unit.

Inspect your dumper on a weekly basis for loose bolts, fittings, oil leaks, etc. Tighten loose hardware as necessary and replace necessary seals to repair oil leaks.

## TROUBLE-SHOOTING CHART ( WI-0313-B )

<i>SYMPTOM</i>	<i>POSSIBLE CAUSES</i>	<i>CORRECTIVE ACTION</i>
Lifter operation very erratic.	<ol style="list-style-type: none"> <li>1. Air trapped in system.</li> <li>2. Low oil level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Bleed all air from lifter hydraulic system.</li> <li>2. Add oil to system.</li> </ol>
Cart lifter will not pick up carts.	<ol style="list-style-type: none"> <li>1. Cart overweight.</li> <li>2. Lifter system hydraulic pressure too low.</li> <li>3. Truck system hydraulic pressure too low.</li> <li>4. Faulty hand valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce loaded weight of cart.</li> <li>2. Check and adjust pressure relief on hand valve and lifter circuit relief in diverter valve.</li> <li>3. Check and adjust pressure on truck system relief and full system relief in diverter valve.</li> <li>4. Replace hand valve.</li> </ol>
Lifter operates extremely slow.	<ol style="list-style-type: none"> <li>1. Engine idle too low.</li> <li>2. Faulty hand valve.</li> <li>3. Faulty truck hydraulic pump.</li> <li>4. Trash in diverter valve.</li> <li>5. Orifice in diverter valve is too small.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust engine idle.</li> <li>2. Replace hand valve.</li> <li>3. Consult truck maintenance manual.</li> <li>4. Remove orifice from diverter valve body and clean thoroughly.</li> <li>5. Remove orifice from diverter valve body and increase diameter.</li> </ol>
Lifter operates under recommended cycle time.	<ol style="list-style-type: none"> <li>1. Engine idle too high.</li> <li>2. Orifice in diverter valve is too large.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust engine idle.</li> <li>2. Remove orifice from diverter valve body and replace with a smaller diameter.</li> </ol>

## TROUBLE-SHOOTING CHART ( WI-0313-B )

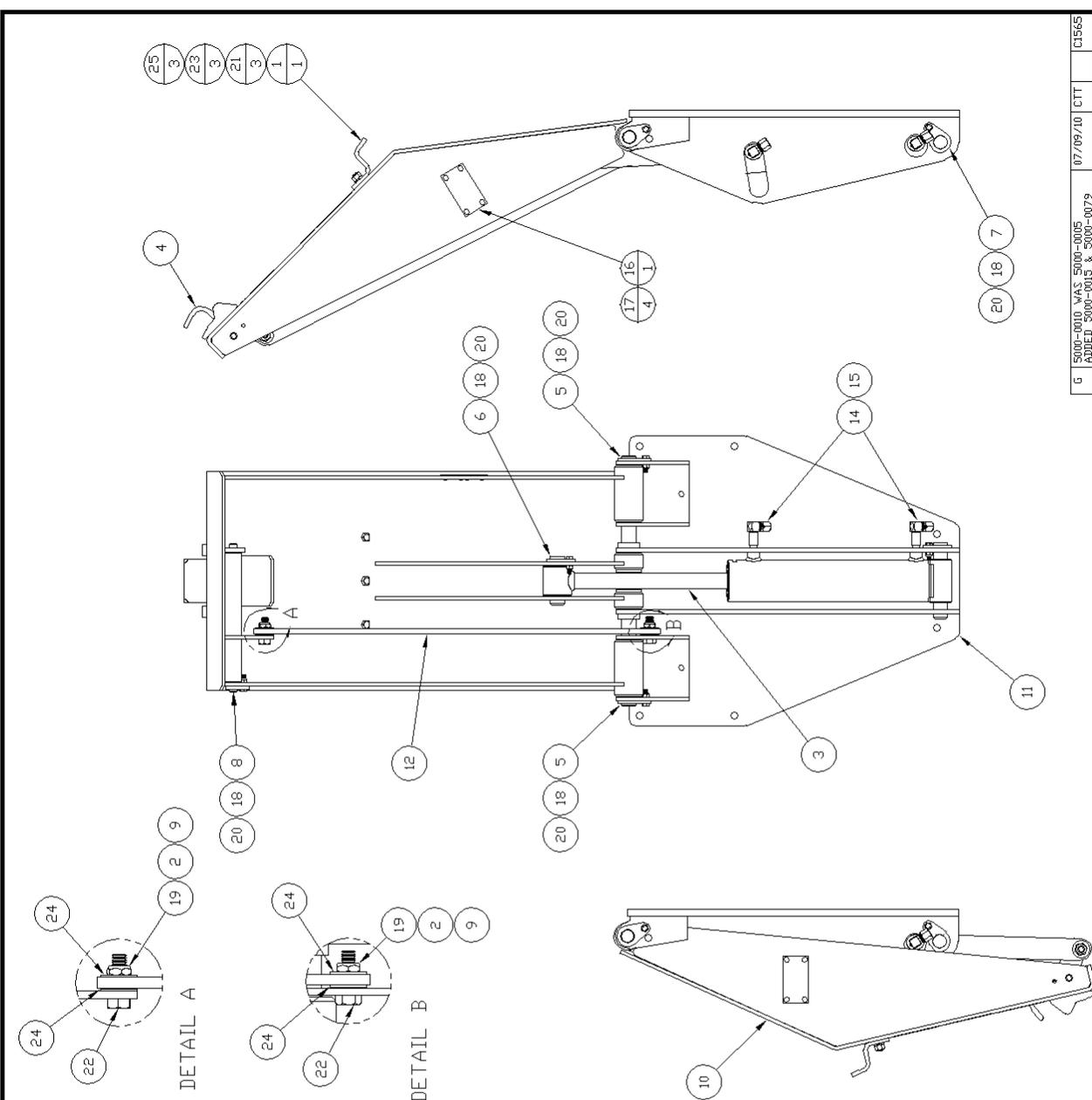
<i>SYMPTOM</i>	<i>POSSIBLE CAUSES</i>	<i>CORRECTIVE ACTION</i>
Hydraulic components down stream of diverter valve not operating or operating extremely slow.	<ol style="list-style-type: none"> <li>1. Truck system hydraulic pressure too low.</li> <li>2. Faulty full system relief valve cartridge in diverter valve.</li> <li>3. Faulty truck system relief valve.</li> <li>4. System flow is being restricted.</li> <li>5. Trash in flow regulator cartridge.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and adjust pressure on truck system relief and full system relief in diverter valve.</li> <li>2. Replace full system relief valve cartridge in diverter valve.</li> <li>3. Consult truck maintenance manual.</li> <li>4. Ensure there is proper flow throughout the hydraulic system. Remove any restrictions.</li> <li>5. Remove flow regulator cartridge from diverter valve body and clean thoroughly.</li> </ol>
Diverter valve leaking oil around cartridges.	<ol style="list-style-type: none"> <li>1. Worn or damaged seals on cartridge valves.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install diverter valve seal kit.</li> </ol>
Hand valve lever sticks in up or down position.	<ol style="list-style-type: none"> <li>1. Worn or broken spring center device.</li> <li>2. Trash in or around hand valve shift spool.</li> <li>3. Pressure ( IN ) and tank ( OUT ) ports are hooked up backwards.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install spring center kit.</li> <li>2. Disassemble and clean spool and housing.</li> <li>3. Make sure all hoses are plumbed according to the hydraulic schematic.</li> </ol>
Hand valve leaking oil around shift spool.	<ol style="list-style-type: none"> <li>1. Worn or damaged seals.</li> <li>2. Worn spool.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install hand valve seal kit.</li> <li>2. Replace hand valve.</li> </ol>

## TROUBLE-SHOOTING CHART ( WI-0313-B )

<i>SYMPTOM</i>	<i>POSSIBLE CAUSES</i>	<i>CORRECTIVE ACTION</i>
Cylinder leaking oil around rod.	1. Worn cylinder rod seals.	1. Install cylinder seal kit.
Lower hook frequently breaking or bending.	1. Lower hook not adjusted properly.  2. Bars on carts are not standard spread dimensions.	1. Adjust lower hook per Operation Instructions of this manual.  2. Replace cart or install new bars.
Lifter looses cart when dumping.	1. Lower hook not adjusted properly.  2. Bars on carts are not standard spread dimensions.  3. Lift bars on cart are bent or spread apart.	1. Adjust lower hook per Operation Instructions of this manual.  2. Replace cart or install new bars.  3. Replace cart or install new bars.
Lift bars on cart are being spread apart or damaged.	1. Lower hook not adjusted properly.  2. Bars on carts are not standard spread dimensions.	1. Adjust lower hook per Operation Instructions of this manual.  2. Replace cart or install new bars.

**APPENDIX A**  
Assembly drawings and part numbers

ITEM	PART NO.	DESCRIPTION	QTY
1	2000-3500	SADDLE	1
2	2603-1401	LINK BUSHING	2
3	3020-1011	CYLINDER ASSEMBLY YELLOW	1
4	4900-0015	CYL. LIFT HOOK WELDMENT	2
5	4900-0021	FACE PLATE PIN WELDMENT	1
6	4900-0023	UPPER CYL. PIN WELDMENT	1
7	4900-0025	LOWER CYL. PIN WELDMENT	1
8	4900-0027	HOOK PIN WELDMENT	1
9	2603-1402	LINK SLEEVE	2
10	4900-1008	FACEPLATE WELDMENT	1
11	4900-1009	MAINFRAME WELDMENT	1
12	4900-1012	HOOK DRIVE (FINISHED)	1
13	5000-0010	WARNING LABEL	1
14	6222-0605	90° L. ADAP. (#6 JIC x #6 SAE)	2
15	6248-0006	#6 JIC CAP NUT	2
16	7500-0070	MODEL/SERIAL NAME PLATE	1
17	7500-0071	DRIVE SCREW	4
18	8901-0400	1/4-20 SELF-LOCKING NUT	5
19	9521-0800	1/2-13 SELF-LOCKING JAM NUT	2
20	9001-0408	1/4-20 x 1' HH.C.S.	5
21	9001-0608	3/8-16 x 1' HH.C.S.	3
22	9001-0812	1/2-13 x 1 1/2" HH.C.S.	2
23	9401-0600	3/8-16 HEX NUT	3
24	9600-0700	7/16" FLAT WASHER	4
25	9700-0600	3/8" LOCK WASHER	3
26	5000-0015	BAYNE LOGO LABEL	1
27	5000-0079	NOTICE LABEL	1

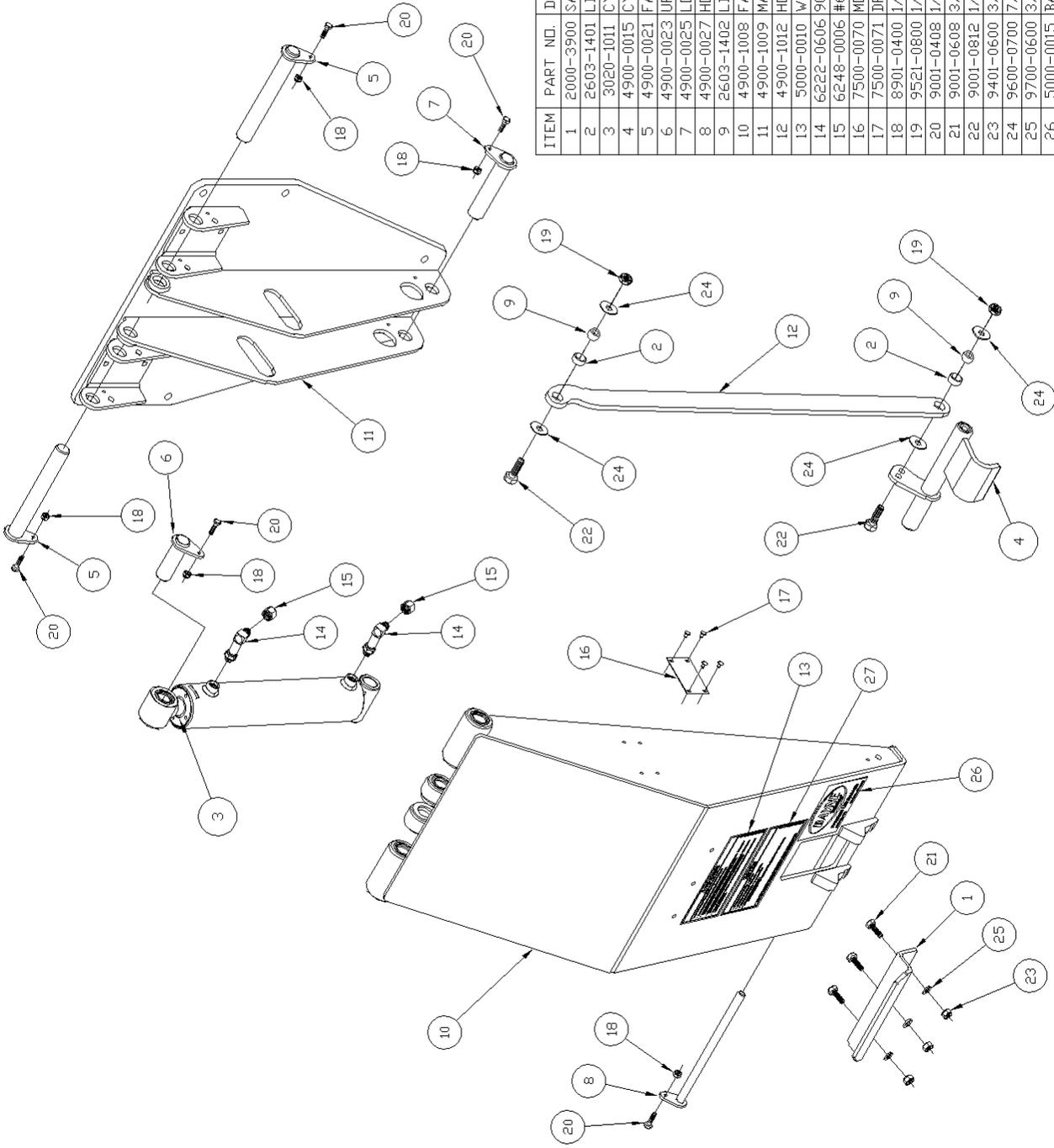


REV. NO.	DATE	BY	CHKD. BY	SCALE	SHEET OF	DWG. NO.
G	07/09/10	CTT		1=5	1	1999-9100
F	06/06/07	CTT			2	
E	06/06/07	CTT				
D	06/06/07	CTT				
C	06/06/07	CTT				
B	06/06/07	CTT				
A	06/06/07	CTT				

This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.

**BAYNE MACHINE WORKS, INC.**  
 810 FARM STAPALS ROAD - GREENVILLE, SC 29605 - 864-285-3377

CONFIDENTIAL  
 DATE: 04/04/02  
 DRAWN BY: TBR  
 SHKD BY: CTT  
 TITLE: TASKMASTER HI-LIFT  
 SCALE: 1=5  
 SHEET 1 OF 2  
 REV. G



ITEM	PART NO.	DESCRIPTION	QTY
1	2000-3900	SADDLE	1
2	2603-1401	LINK BUSHING	2
3	3020-1011	CYLINDER ASSEMBLY YELLOW	1
4	4900-0015	CYL. LIFT HOOK WELDMENT	1
5	4900-0021	FACE PLATE PIN WELDMENT	2
6	4900-0023	UPPER CYL. PIN WELDMENT	1
7	4900-0025	LOWER CYL. PIN WELDMENT	1
8	4900-0027	HOOK PIN WELDMENT	1
9	2603-1402	LINK SLEEVE	2
10	4900-1008	FACEPLATE WELDMENT	1
11	4900-1009	MAINFRAME WELDMENT	1
12	4900-1012	HOOK DRIVE (FINISHED)	1
13	5000-0010	WARNING LABEL	1
14	6222-0606	90° L. ADAP. (#6 JIC x #6 SAE)	2
15	6248-0006	#6 JIC CAP NUT	2
16	7500-0070	MODEL/SERIAL NAME PLATE	1
17	7500-0071	DRIVE SCREW	4
18	8901-0400	1/4-20 SELF-LOCKING NUT	5
19	9521-0800	1/2-13 SELF-LOCKING JAM NUT	2
20	9001-0408	1/4-20 x 1" HHCS.	5
21	9001-0608	3/8-16 x 1" HHCS.	3
22	9001-0812	1/2-13 x 1 1/2" HHCS.	2
23	9401-0600	3/8-16 HEX NUT	3
24	9600-0700	7/16" FLAT WASHER	4
25	9700-0600	3/8" LOCK WASHER	3
26	5000-0015	BAYNE LOGO LABEL	1
27	5000-0079	NOTICE LABEL	1

CONFIDENTIAL This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.

**BAYNE MACHINE WORKS, INC.**  
 810 FORT BRIGGS ROAD - GREENVILLE, SC 29605 - 864-282-3777

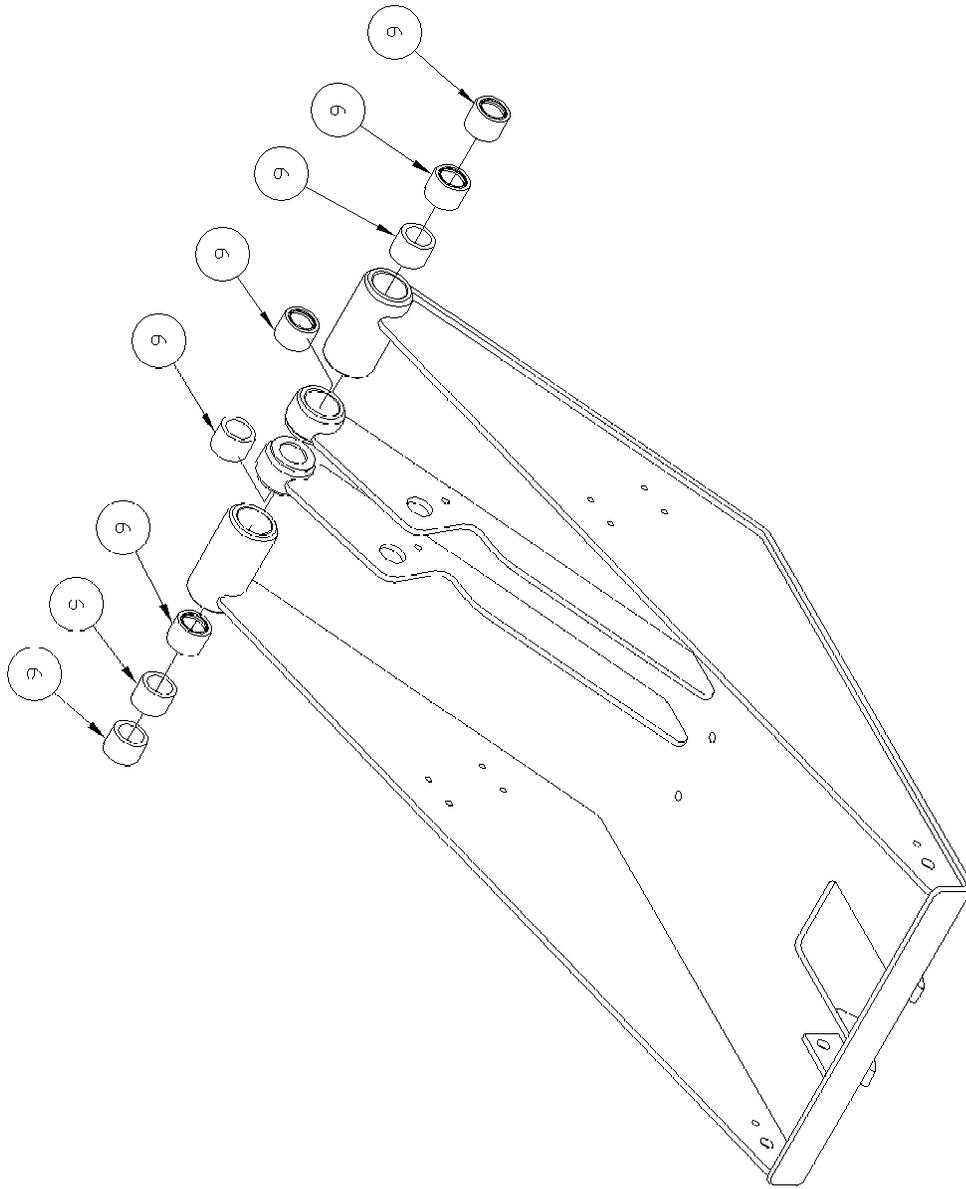
TOLERANCES IF NOT NOTED:  
 0.000 ±0.005 - 0.00 ±0.015  
 0.0 ±0.002 - ANGULAR ±0.03

DATE: 04/04/02  
 DRAWN BY: TBR  
 CHECKED BY: CTT  
 DATE: 08/26/02  
 TITLE: TASKMASTER HI-LIFT

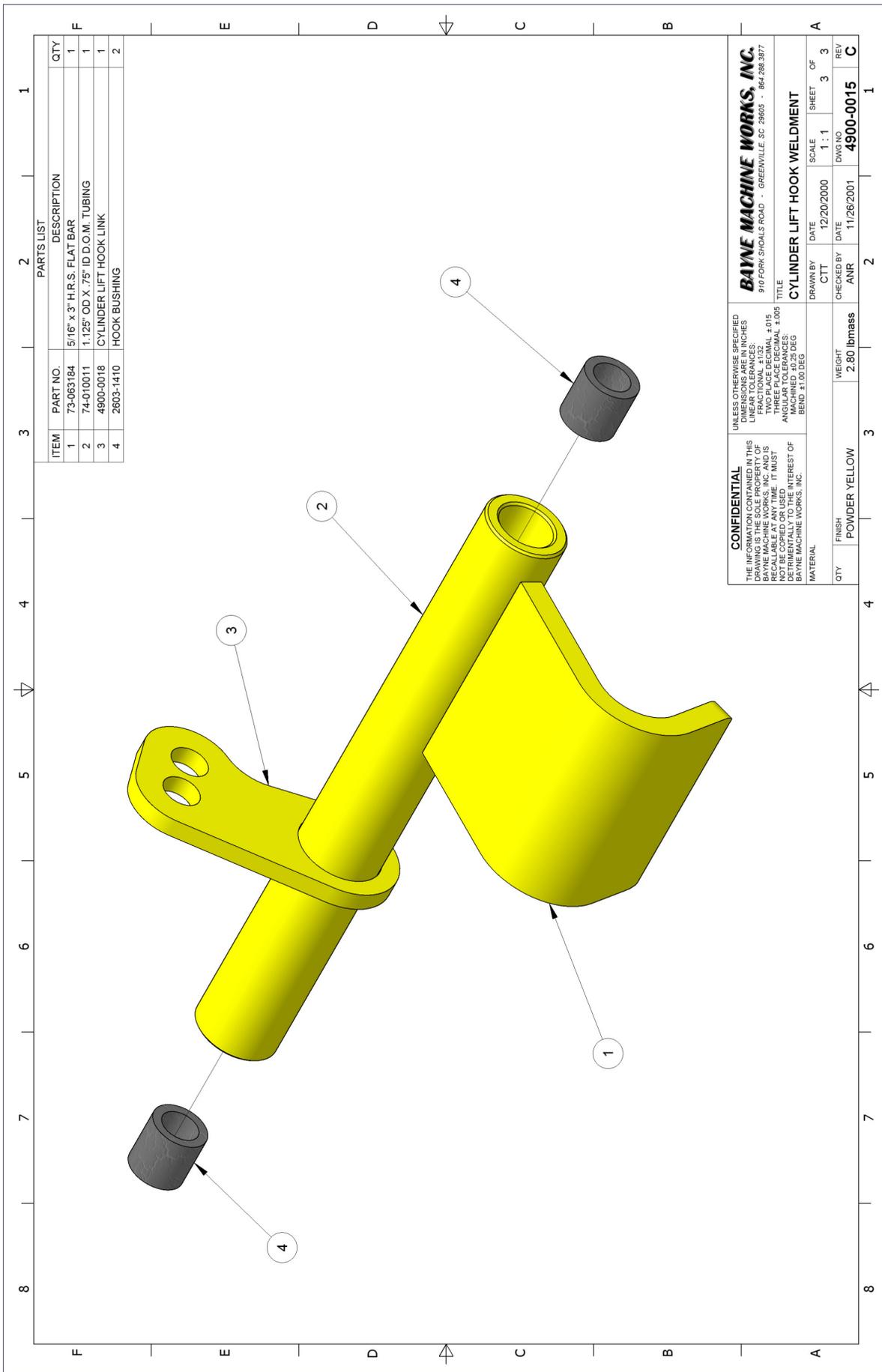
SCALE: NTS  
 SHEET 2 OF 2  
 REV. 2  
 DWG. NO.: 1999-9100



ITEM	PART NO.	DESCRIPTION	QTY
1	4900-1006	FACE PLATE BLANK	1
2	4900-1004	INNER SIDE PLATE	2
3	4900-1003	SIDE PLATE	2
4	4900-0033	CYL. LINK HINGE TUBE	2
5	4900-0004	CYL. LINK HINGE TUBE	2
6	7500-0173	STEEL WASHER	2
7	4900-0034	CYL. LIFT FACE BAR SLIDE	2
8	4900-0005	CYL. LIFT HOOK BRACKET	1
9	2603-1309	Ø1" BUSHING W/SEAL	8

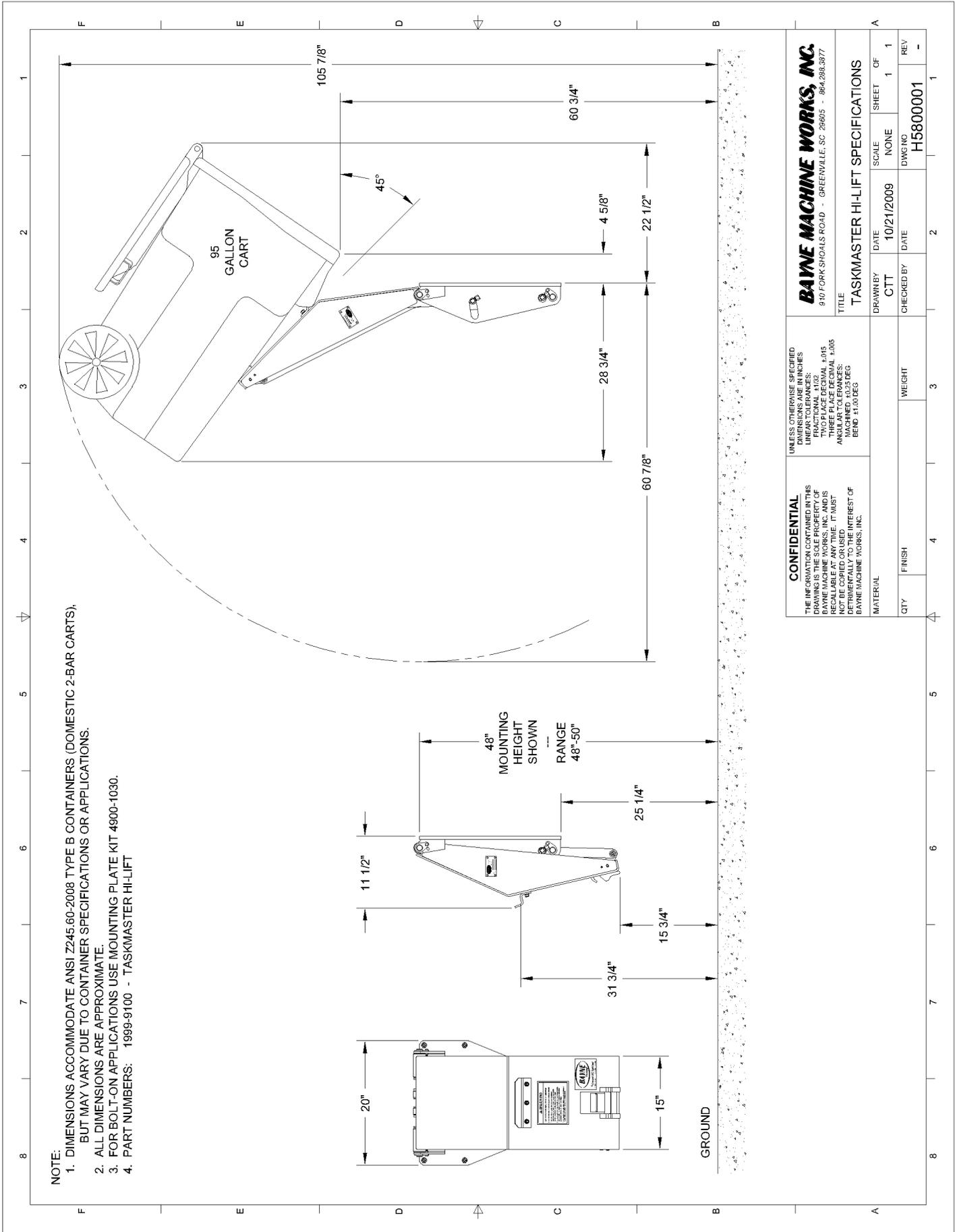


CONFIDENTIAL		This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.		SCALE:	SHEET	CF	REV.
BAYNE MACHINE WORKS, INC. 915 PARK ROAD - GREENVILLE, SC 29602 - 884-2553/7		TOLERANCES IF NOT NOTED: 0.004 ±0.005 - 0.004 ±0.015 Ø19 ±1/32" - ANGULAR ±0/28		1=3	2	2	B
DATE:	03/21/02	CHKD BY:	TBR	TITLE: TASKMASTER HI-LIFT		DWS. NO.: 4900-1003	
DATE:	03/23/02	CHKD BY:	C.T.T.	FACEPLATE VELODMNT			



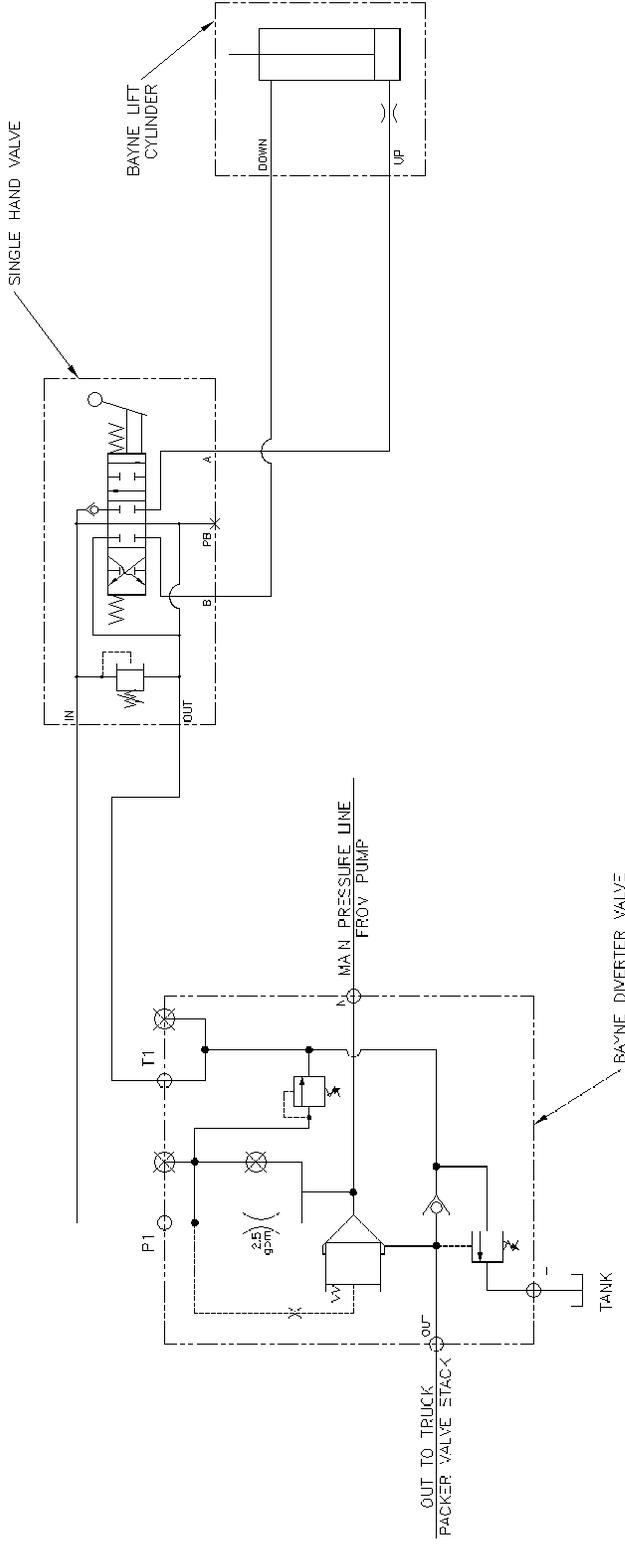
PARTS LIST			
ITEM	PART NO.	DESCRIPTION	QTY
1	73-063184	5/16" x 3" H.R.S. FLAT BAR	1
2	74-010011	1.125" OD X .75" ID O.M. TUBING	1
3	4900-0018	CYLINDER LIFT HOOK LINK	1
4	2603-1410	HOOKE BUSHING	2

<b>CONFIDENTIAL</b> UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED FRACTIONAL ±.032 TWO PLACE DECIMAL ±.015 THREE PLACE DECIMAL ±.005 ANGULAR TOLERANCES MACHINED ±0.25 DEG BEND ±1.00 DEG	DRAWN BY CTT	DATE 12/20/2000	SCALE 1:1	SHEET 1	OF 3
	QTY 1	FINISH POWDER YELLOW	WEIGHT 2.80 lbmass	CHECKED BY ANR	DATE 11/26/2001
TITLE <b>CYLINDER LIFT HOOK WELDMENT</b>			DWG NO <b>4900-0015</b>		
MATERIAL UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED FRACTIONAL ±.032 TWO PLACE DECIMAL ±.015 THREE PLACE DECIMAL ±.005 ANGULAR TOLERANCES MACHINED ±0.25 DEG BEND ±1.00 DEG			REV <b>C</b>		



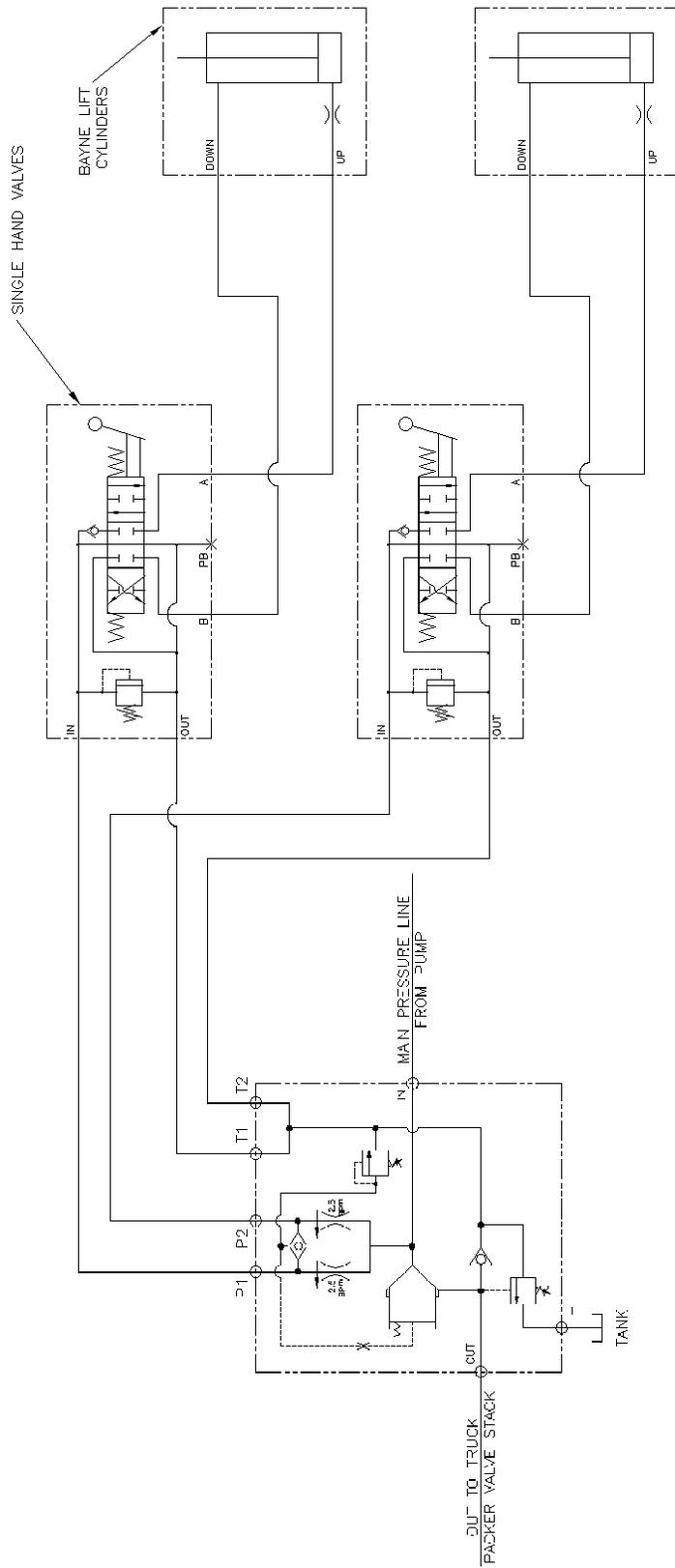
NOTE:  
 1. DIMENSIONS ACCOMMODATE ANSI Z245.60-2008 TYPE B CONTAINERS (DOMESTIC 2-BAR CARTS), BUT MAY VARY DUE TO CONTAINER SPECIFICATIONS OR APPLICATIONS.  
 2. ALL DIMENSIONS ARE APPROXIMATE.  
 3. FOR BOLT-ON APPLICATIONS USE MOUNTING PLATE KIT 4900-1030.  
 4. PART NUMBERS: 1999-9100 - TASKMASTER HI-LIFT

<b>CONFIDENTIAL</b> THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF BAYNE MACHINE WORKS, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT THE WRITTEN PERMISSION OF BAYNE MACHINE WORKS, INC.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONAL TOLERANCES: FRACTIONAL TWO PLACE DECIMAL ±.015 THREE PLACE DECIMAL ±.005 ANGLES MACHINED ±.031 DEG BEND ±1.00 DEG	
<b>TASKMASTER HI-LIFT SPECIFICATIONS</b>			
DRAWN BY	DATE	SCALE	SHEET OF
CTT	10/21/2009	NONE	1 1
CHECKED BY	DATE	DWG NO	REV
		H5800001	-



THIS IS A TYPICAL HYDRAULIC SCHEMATIC FOR A SINGLE LIFTER WITHOUT A VERTICAL INSTALLED ON A REAR OR SIDE LOAD REFUSE TRUCK.

<b>CONFIDENTIAL</b>		This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.		SCALE:	SHEET	OF	REV.
				NTS	1	1	-
<b>BAYNE MACHINE WORKS, INC.</b>		DRAWN BY:		TITLE:		DWG. NO.:	
90 -DRK SHOA, S ROAD - GREENVILLE, SC 29635 - 864-284-3377		TJT		HYDRAULIC SCHEMATIC		6900-0729	
TOLERANCES IF NOT NOTED: 0.000 - 0.005 - 0.00 - 0.0 - 0.0 - 5 3/32 - 1/32 - ANGULAR ±0.25		DATE:	CHKD BY:				
		10/19/04					



THIS IS A TYPICAL HYDRAULIC SCHEMATIC FOR DUAL LIFTERS WITHOUT VERTICALS INSTALLED ON A REAR OR SIDE LOAD RE-USE TRUCK.

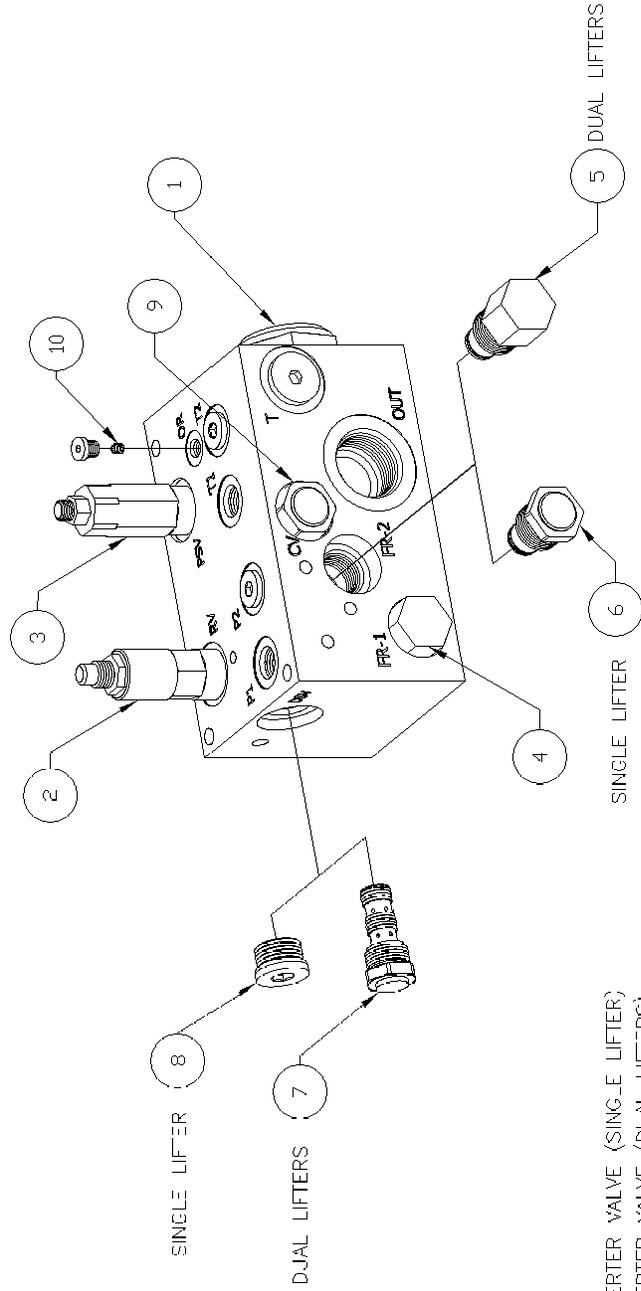
<b>CONFIDENTIAL</b>		This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.		SCALE:	SHEET	OF	REV.
				NTS	1	:	-
<b>BAYNE MACHINE WORKS, INC.</b>		DRAWN BY:		TITLE:		DWG. NO.:	
90 - DRR SHOA, S ROAD - GREENVILLE, SC 29635 - 864-282-3377		TJT		DUAL TASKMASTER HYDRAULIC SCHEMATIC		6900-C730	
		DATE:		CHKD BY:		DATE:	
		10/20/04				10/20/04	

### SERVICE PARTS

ITEM	PORT	PART NO.	DESCRIPTION	SEAL KIT	APPLICATIONS
1	DPS	6091-0716	DIFF. PRESSURE SENSING VALVE	8000-0782	ALL
2	RV	6091-0712	RELIEF VALVE	8000-0784	ALL
3	PSV	6091-0713	PRESSURE SEQUENCE VALVE	8000-0781	ALL
4	FR-1	6091-0710	FLOW REGULATOR	8000-0784	FOR DUAL LIFTERS
5	FR-2	6091-0710	FLOW REGULATOR	8000-0783	FOR SINGLE LIFTER
6		6091-0715	CAVITY PLUG	8000-0784	FOR DUAL LIFTERS
7	DSV	6091-0720	SHUTTLE VALVE	8000-0783	FOR SINGLE LIFTER
8		6246-0008	INL. 8 SAE SOCKET HEAD PLUG	8000-0784	ALL
9	CV	6091-0714	CHECK VALVE	8000-0784	ALL
10	DR	6066-0028	Ø028" DRIFTER	-	ALL

**NOTE:**

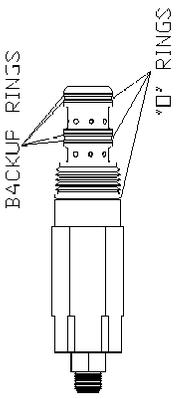
1. MAXIMUM WORKING PRESSURE 3000 PSI
2. MAXIMUM WORKING FLOW 50 GPM
3. TEMPERATURE RANGE = 160° MAXIMUM
4. PORT SIZES  
IN & OUT = #16 SAE  
T = #10 SAE
5. T1, T2, P1 & P2 = #6 SAE  
PUGGS IN SINGLE LIFTER APPLICATIONS



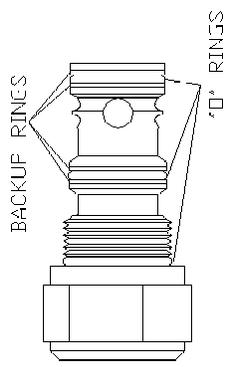
6091-0700 COMPLETE DIVERTER VALVE (SINGLE LIFTER)  
 6092-0700 COMPLETE DIVERTER VALVE (DUAL LIFTERS)

<b>CONFIDENTIAL</b>		This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.		SCALE:	SHEET	OF	REV.
BAYNE MACHINE WORKS, INC. 30 DORR SHOALS ROAD - GREENVILLE, SC 29635 - 864-282-3377		DATE:	09/24/04	1=2	1	1	A
DRAWN BY: TJT		CHKD BY:	CJT	TITLE: SINGLE/DUAL DIVERTER VALVE PARTS		DWG. NO.: M3500J05	
TO: ERANCES IF NOT NOTED: 0.00C = 0.005 - 0.00C = 0.0 - 5 0.0C = 1/32" - ANGULAR ±0.25		DATE:	10/11/04				

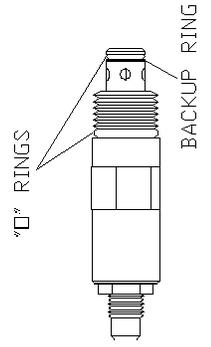
ITEM NO	PART NO.	DESCRIPTION	QTY
1	8000-0781	PRES. SEQUENCE VALVE SEAL KIT	1
2	8000-0782	PRESSURE SENSING VALVE SEAL KIT	1
3	8000-0783	SHUTTLE VALVE SEAL KIT	1
4		RELIEF VALVE SEAL KIT	1
5	8000-0784	FLOW REGULATOR SEAL KIT	1
6		FLOW REG. CAVITY PLUG SEAL KIT	1
7		CHECK VALVE SEAL KIT	1



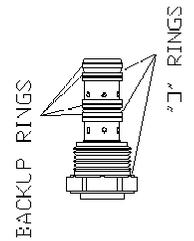
PRESSURE SEQUENCE VALVE SEAL KIT



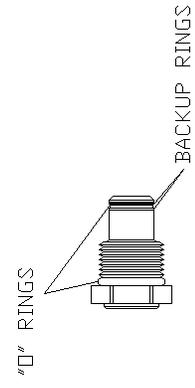
DIFFERENTIAL PRESSURE SENSING VALVE SEAL KIT



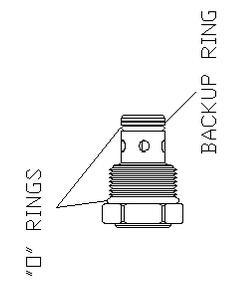
RELIEF VALVE SEAL KIT



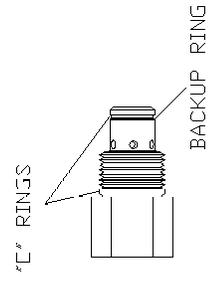
SHUTTLE VALVE SEAL KIT



FLOW REGULATOR CAVITY PLUG SEAL KIT



CHECK VALVE SEAL KIT



FLOW REGULATOR SEAL KIT

**CONFIDENTIAL** This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.

**BAYNE MACHINE WORKS, INC.**  
 90 -DORR SHOA, S ROAD - GREENVILLE, SC 29605 - 864-288-3377

TO TOLERANCES IF NOT NOTED:  
 0.000 C ± 0.005 - 0.001  
 0.000 F ± 0.005 - 0.001  
 0.000 A ± 0.005 - 0.001

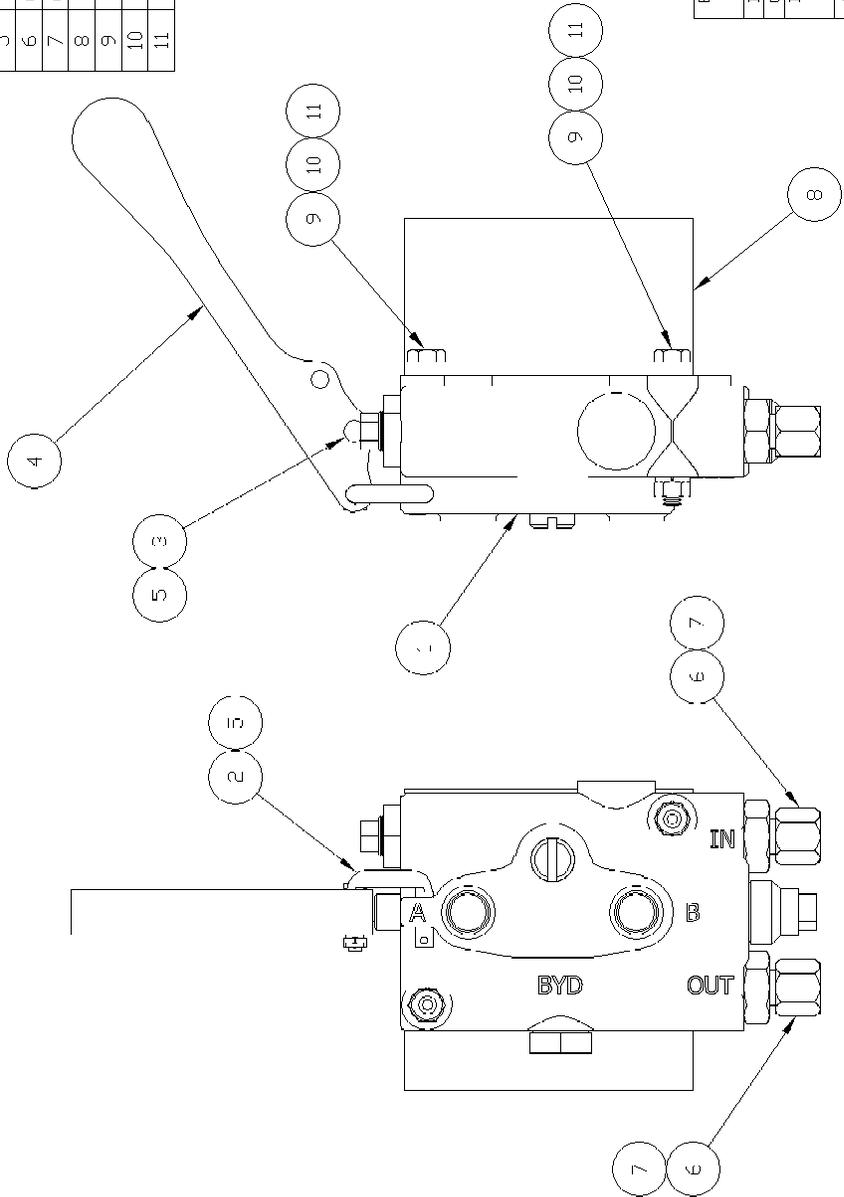
DRAWN BY: T.J.T. DATE: 09/29/04  
 CHK'D BY: DATE:

TITLE: DIVERTER VALVE SEAL KIT  
 DWG. NO.: 8000-078C

SCALE: 2=3  
 SHEET 1 OF 1  
 REV. -

ITEM	PART NO.	DESCRIPTION	QTY
1	6083-1025	HAND VALVE - 1750 PSI RELIEF	1
2	6083-1510	UNIVERSAL C-HOOK	1
3	6083-1511	CLEVIS PIN (ø3/16" x 7/8")	1
4	6083-1520	METRO/EATON H.V. HANDLE	1
5	8810-0303	COTTER PIN (1/16" x 1/2")	2
6	6220-0806	ST ADAPTER (#6 JIC x #6 SAE)	2
7	6248-0006	#6 JIC CAP NUT	2
8	7601-0003	HAND VALVE MOUNTING BRACKET	1
9	9001-0416	1/4-20 x 2" H.H.C.S.	2
10	9401-0400	1/4-20 HEX NUT	2
11	9700-0400	1/4" LOCK WASHER	2

NOTE:  
 1. SEAL REPAIR KIT P/N : 8003-C085  
 2. HANDLE REPLACEMENT KIT P/N : 6083-1501



E	6083-1025 WAS 6083-1020 ADDED 6083-1510 & 6083-1511 ADDED 6083-1520 & 8810-0303	05/24/07	CTT		CTT	C1515
D	REVISED 6083-1020 PICTORIALY	07/13/05	TJT	CTT	CTT	C1445
C	REVISED 6083-1020 PICTORIALY ADDED 6220-0806 & 6248-0006 UPDATED DRAWING & TITLE BLOCK	03/30/99	TBR	RTM	RTM	C1467
B	6083-1020 WAS 6083-0420	05/15/98	CTT	RTM	RTM	C1049
A	REVISED 7601-0003 PICTORIALY	08/27/97	EFJ	RTM	RTM	D0529
LET.	REV. REVISIONS	DATE	REV. BY	CHK. BY	E.C.R.	

CONFIDENTIAL This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.

TO: ERANCES IF NOT NOTED:  
 0.000 C = 0.005 - 0.000 C = 0.0 - 0.0 - 5  
 3/32 = 1/32 - ANGULAR ±0.25

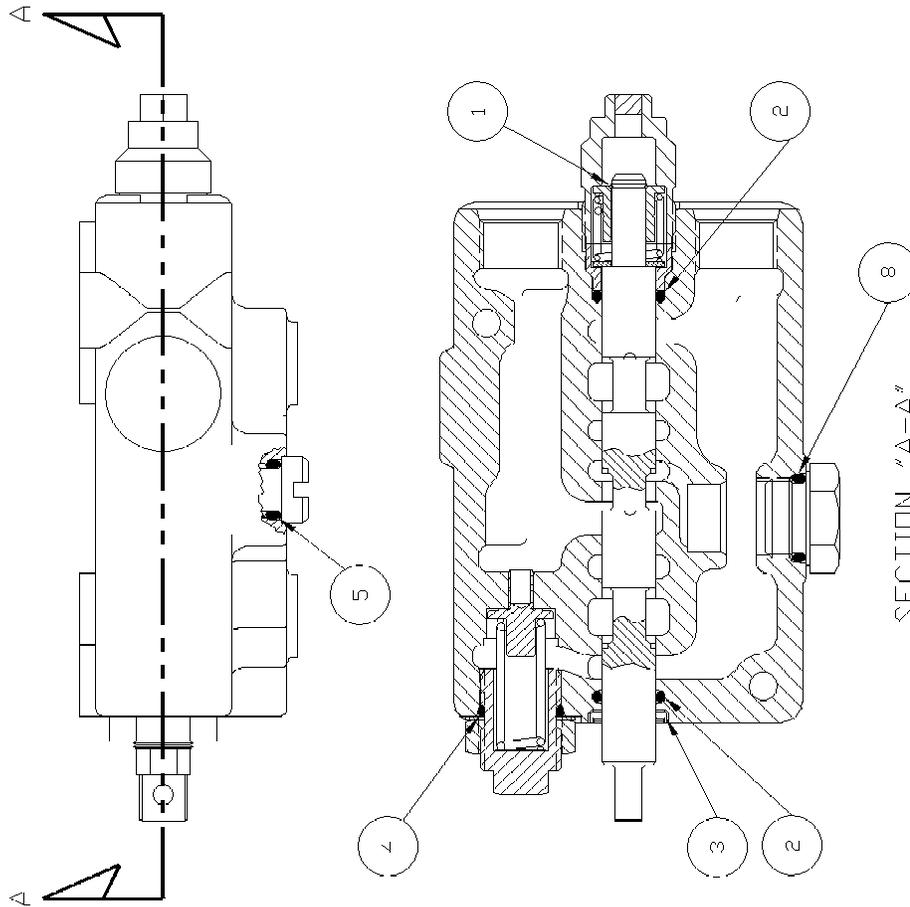
DATE: 06/07/96  
 DRAWN BY: TBR  
 CHECKED BY: BKB

SCALE: 2=3  
 SHEET 1 OF 1

TITLE: SINGLE HAND VALVE W/BRACKET  
 DWG. NO.: 6083-1010

**BAYNE MACHINE WORKS, INC.**  
 90 - DORR SHOALS ROAD - GREENVILLE, SC 29635 - 864-282-3377

ITEM NO	DESCRIPTION	QTY
1	RETAINING RING	1
2	3/32" x 1/2" I.D. O-RING	2
3	WIPER SEAL	1
4	3/32" x 41/64" I.D. O-RING	1
5	3/32" x 3/8" I.D. O-RING	1
6	1/16" x 1/2" I.D. O-RING	1
7	1/16" x 1/2" BACK-UP WASHER	1
8	3/32" x 5/8" I.D. O-RING	1
9	5/64" x 15/32" I.D. O-RING	1



NOTES:

1. ASSEMBLY INSTRUCTIONS ARE INCLUDED WITH EACH KIT.
2. ITEMS 6,7 AND 9 ARE NOT USED WITH THIS HAND VALVE.

CONFIDENTIAL		This drawing is private and confidential communication and the property of BAYNE MACHINE WORKS, INC., Greenville, S.C. It MUST NOT be copied or lent without consent of BAYNE MACHINE WORKS, INC., and must be promptly returned with tender and/or completion of order to the purchasing department.		SCALE:	SHEET	OF	REV.
BAYNE MACHINE WORKS, INC.		TO: ERANCES IF NOT NOTED:	DATE:	1=1	1	:	-
90 - DRR SHOA, S ROAD - GREENVILLE, SC 29635 - 664-288-3377	0.000 C = 0.005 - 0.000	DRAWN BY:	DATE:	TITLE: HAND VALVE SEAL REPAIR KIT		DWG. NO.: 8000-0085	
	0.000 C = 1/32" - 0.000	TJT	07/20/05				



[www.baynethinline.com](http://www.baynethinline.com)

Customer Care:  
800.535.2671

Fax:  
256.585.6762

The Heil Co.  
4301 Gault Avenue North  
Fort Payne, AL 35967