HYDRA-TECH INTERNATIONAL

a division of GLBH Group Manufacturing Ltd.

# Operating Manual

# CHLP 5008
# Component Handler Low Profile

6060 – 86th Avenue SE, Calgary, Alberta, Canada T2C 4L7
Telephone (403) 720 7740 Fax (403) 720 7758
Website: www.hydra-tech.net

Revised September 2014

**Making Work Safe!**

# Table of Contents

## PLEASE SIGN AFTER THE MANUAL HAS BEEN READ.

The Component Handler and its ancillary tool line is a result of years of research into the needs of industries which must push, pull, press and lift in the course of maintaining machinery.

Safety, durability and user friendly ergonomics are the basis of the design philosophy underlying the Component Handler.

The components and materials used in the manufacture of this equipment are of the highest quality. However, the components of this system are machines and machines must be operated and maintained properly to serve their purpose safely and reliably.

*** This manual contains important information regarding the operation and maintenance of this equipment. The key material is found on pages 1 through 18.

*The information contained on each of these pages is important. However, the information in* **bold letters**, <u>underlined</u>, *or otherwise highlighted has to do with safe operation and maintenance of the equipment. Failure to understand it and to follow its direction could lead to serious personal injury, or death.*

Each individual operating this equipment should read the pages noted above and sign a copy of the following certificate.

Please Print

Name of Company:_____

Name of Employee:_____

I certify that I have read the pages noted above and understand their contents. I will operate the equipment in a safe and responsible manner.

Signed:_____ Date:_____

Do not operate, perform maintenance or repairs on this product until the relevant information contained within this document has been read, understood, and the individual taking such action has been deemed competent and approved for operating and/or performing service to the equipment.

Please contact Hydra-Tech International if you have questions or suggestions which could enhance the safe operation of this equipment.

6060 – 86th Avenue SE, Calgary, Alberta, Canada T2C 4L7
Telephone (403) – 720 – 7740 Fax (403) – 720 – 7758
Website: www.hydra-tech.net

# Important Safety Information

The CHLP5008 Component Handler is specially designed to lift vertically, without side load, to a **maximum capacity of 2,268kg** (5,000 lbs).

To ensure the safe use of this equipment it is the responsibility of the owner and operator that any individual operating this equipment or working in the vicinity of this equipment is deemed to be competent, defined by the region's Safety Codes and Regulations, an example is as follows:

> Competent: in relation to a person, means adequately qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

In order for the equipment to perform as designed and safely proper maintenance must be performed periodically. Specific maintenance procedures are discussed in detail on pages 18 through 19.
**Improper operation, maintenance, lubrication and repair of this equipment may result in serious injury or death.**

The CHLP 5008 is a specially designed piece of equipment and as such should NOT be modified in any way.

Hazard warnings are identified by ⚠ and/or "DANGER", "CAUTION", "WARNING" labels in an appropriate location to bring attention to the hazard. Failure to heed hazard warning may result in serious personal injury or death.
Some, but not all, warnings, hazards, safety symbols and mechanisms are illustrated on pages 3 through 5.

**Hydra-Tech International is not capable of foreseeing every possible circumstance that may involve a potential hazard. As such, the warnings within this document and labeled on the equipment are not all-inclusive. It is the owner and operator's responsibility to first ensure that any use of this equipment not specifically recommended by Hydra-Tech International, be it operation, maintenance, lubrication or repairs, be deemed safe for the equipment operator, all persons present, and prevent damages to the equipment.**

Information, images, and specifications contained within this document are based on information available at the time it was written or last revised. The contents of this document may change over time and the latest version of this document should be obtained by the owner and/or operator prior to use of the equipment.

For further information or suggestions regarding the safe operation, maintenance and repair of the CHLP 5008 please contact Hydra-Tech International using the following contact information:

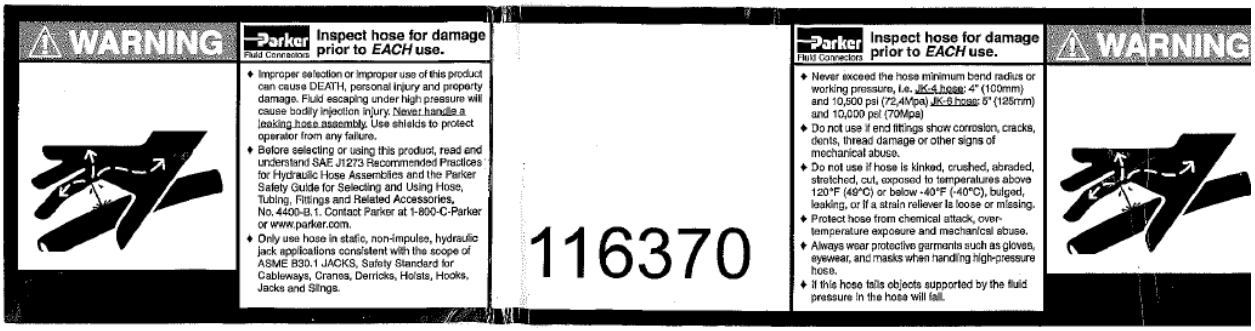
6060 – 86th Avenue SE
Calgary, Alberta, Canada T2C 4L7
Telephone (403) – 720 – 7740
Fax (403) – 720 – 7758
Website: http://www.hydra-tech.net/contactus.html

# Safety, Warning, & Hazard Illustrations

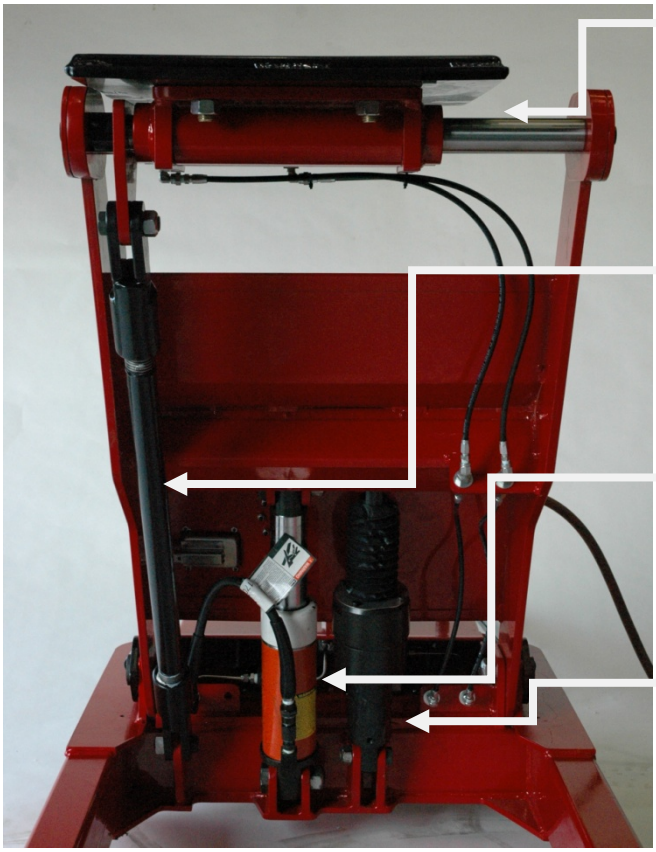

Illustrated to the left: A hazard warning indicating a potential pinch point found near the intersection of the lifting arm, handle, and frame.

Illustrated to the right: A warning label outlining some of the important safety information in regards to the hydraulic lifting mechanism, found on the cylinder on the underside of the lifting arm.


Illustrated below: A sample of the hydraulic hose warning, found on the hydraulic hose and typically most easily viewed through the Head Tilt Access Latch Door.



# Safety, Warning, & Hazard Illustrations Continued



Traversing Lifting Head with Belly Pan Adapter

Level Arm

Hydraulic Lifting Mechanism

Safety Latch

Head Tilt Access Label

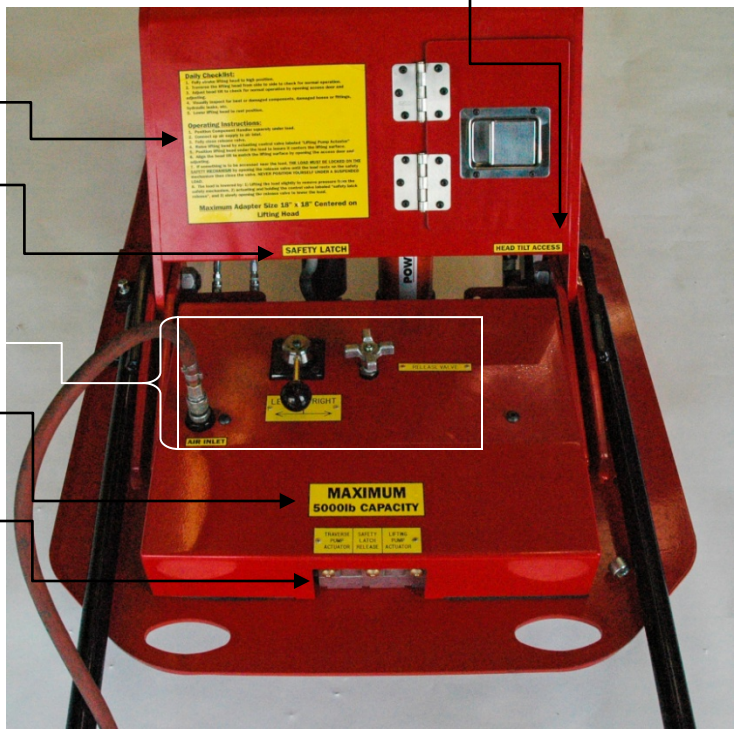
Checklist and operating instructions decal (enlarged image on Page 5)

Safety Latch Label

Air Inlet, Traversing Head Direction Selector, and Release Valve from left to right respectively

Maximum Capacity Label

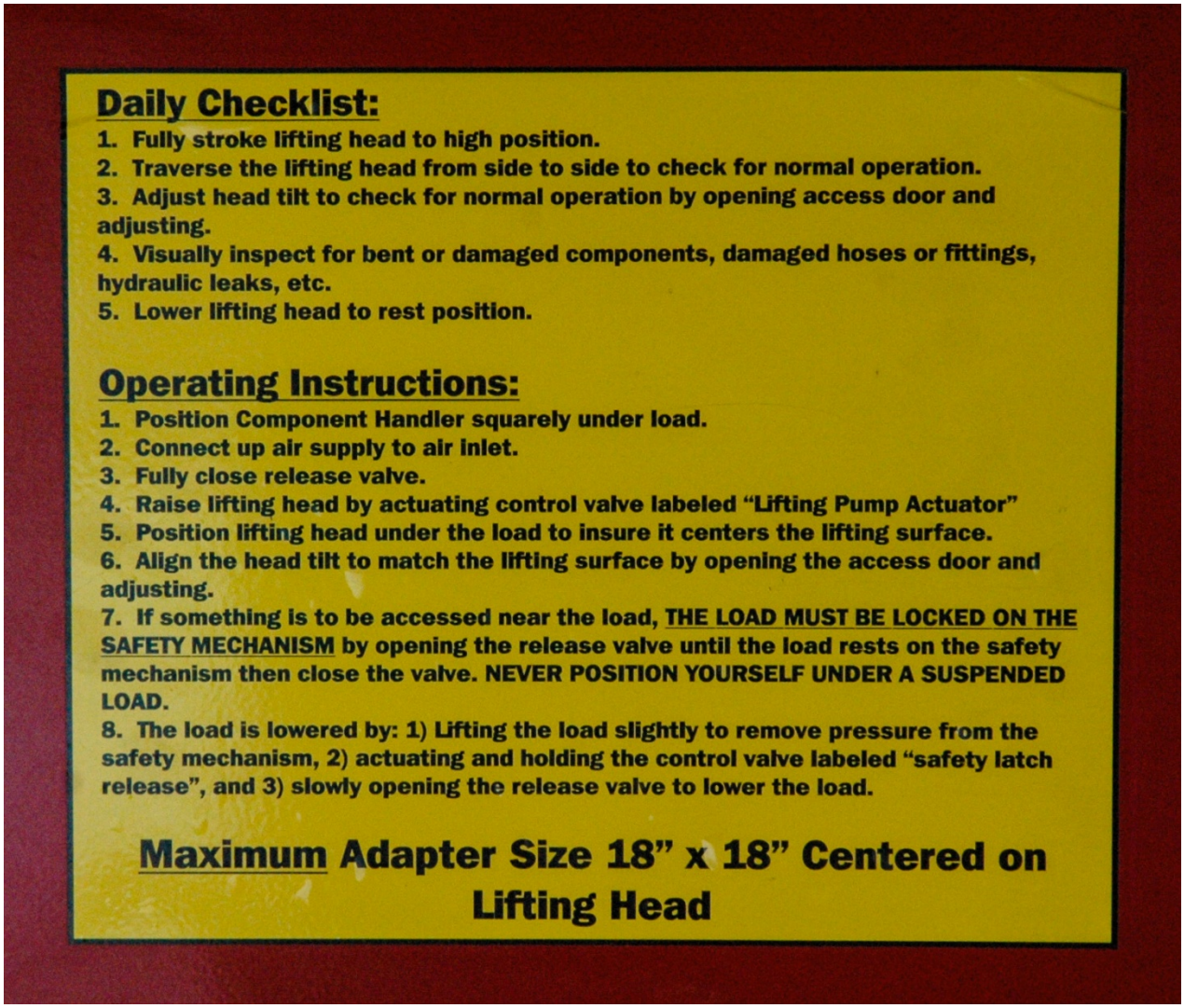
Operator Controls (enlarged image on Page 5)



# Safety, Warning, & Hazard Illustrations Continued


Illustrated left: Operator Controls

Illustrated Below: Checklist & Operating Instructions



# General Instructions

The CHLP 5008 Component Handler is a specialized tool designed to increase productivity & safety. The lifting capacity of this tool is 2,268 kg (5,000 lbs).

Primary uses for this tool would be for removal and replacement of Belly Pans, Transmissions Saddle Tanks, Pumps or other components.

The Component Handler is built on a wide base to stabilize loads regardless of the extended height.

The Hydra-Tech Component Handler incorporates an independent patented Safety Latch, which ensures the safety of the operator and the load. The Safety Latch secures the lifted load mechanically once the load is lifted. A 10" (25.4cm) retracted height provides the room to maneuver your load even in limited circumstances and access situations. The maximum extended height of 44" (111.76cm) allows you to reach the intended load in most situations.

The CHLP5008 Component Handler is powered by air over hydraulics. There are 6 operating controls on the Component Handler. They are:

1. Table Tilt Level Arm (Page 4 Top Illustration)
   To set the degree of tilt on the table.
   **NOTE: Always access through the head tilt access door.**

2. Load Lowering Release Valve (Page 4 Bottom Illustration)
   For lowering the load.

3. Table Directional Valve (Page 4 Bottom Illustration)
   To shift the table left or right.

4. Traversing Pump Actuator (Page 5 Top Illustration)
   To activate the table hydraulics.

5. Lifting Pump Actuator (Page 5 Top Illustration)
   For lifting the load.

6. Safety Latch Release (Page 5 Top Illustration)
   For releasing the independent air operated Safety Latch.

## ANY LOAD MUST BE SECURED PRIOR TO MOVEMENT.

# Operating Instructions & Checklist

## Daily Checklist:

1. Fully stroke the lifting head to the high position.

2. Traverse the lifting head in a full stroke left and right to check for normal operation.

3. Adjust the head tilt to check for normal operation by opening the access door and adjusting.

4. Visually inspect for bent or damaged components, hoses or fittings, and hydraulic leaks etc.

5. Tighten loose bolts and fittings as required.

## Setup:

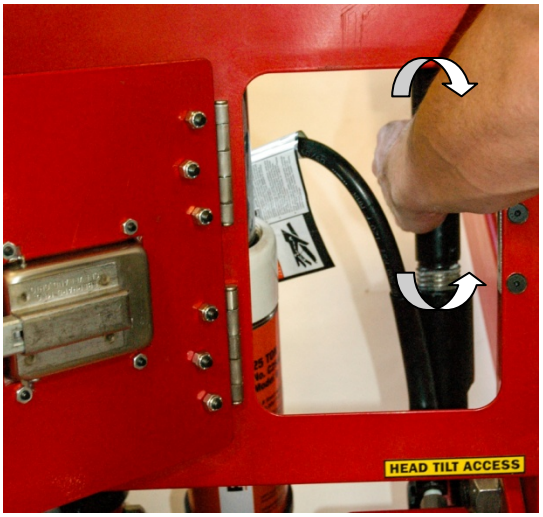
- Begin by confirming that the load to be lifted by the component handler is not in excess of the maximum capacity of 2,268 kg (5,000 lbs).
- Prior to using the CHLP 5008 a walk around inspection is to be performed; carefully assessing the equipment for leaks or damages that may impair the proper and safe operation of the equipment.
- The work area should be checked for and cleared of any hazards present in the area.
- The CHLP 5008 must be positioned centrally and squarely under the load on a level, firm surface. **FAILURE TO DO SO MAY CAUSE THE LOAD TO BECOME UNSTABLE AND FALL OFF THE COMPONENET HANDLER.**
- Prevent the CHLP 5008 wheels from moving by using adequate blocks or chocks.
- Connect the air supply (maximum 120 psi) to the air inlet found on the operators interface.
- Ensure the load lowering release valve is fully closed by rotating the valve clockwise.
- Perform a second inspection of the surrounding area to confirm that people, and potential hazards are clear of the lifting area.

## Raising:

- Position yourself at the rear of the CHLP 5008. Never expose yourself to a live load. Mechanically support all loads once they are lifted.

- Depress the button labeled “Lifting Pump Actuator”, raising the traversing lifting head until it is just below the desired contact point of the load.
  NOTE: You should hear a distinct clicking noise as the lifting arm ascends! This is caused by the mechanical lock within the Safety Latch mechanism. **IF YOU DO NOT HEAR THE SAFETY LATCH CLICKING DO NOT PROCEED FURTHER AND SERVICE THE CHLP 5008.**

- Adjust the angle of the traversing lifting head to be parallel with the surface of the loads contact point by opening the latch door labeled “Head Tilt Access” and reaching within to rotate the leveling arm. DO NOT ATTEMPT TO ACCESS THE LEVELING ARM FROM ANOTHER LOCATION AND **BEWARE OF PINCH POINTS**. Refer to the illustration to the right.




- Proceed to raise the load to the desired height.

  NOTE: If something is to be accessed near the load, **THE LOAD MUST BE LOCKED ON THE SAFETY MECHANISM** by opening the release valve, rotating it counter-clockwise, until the load rests on the safety mechanism then close the valve.

**NEVER POSITION YOURSELF UNDER A SUSPENDED LOAD.**

**Lowering:**

- Ensuring that the release valve is closed, by rotating it clockwise, begin to raise the load slightly by depressing the lifting pump actuator. This removes pressure from the safety latch mechanism.

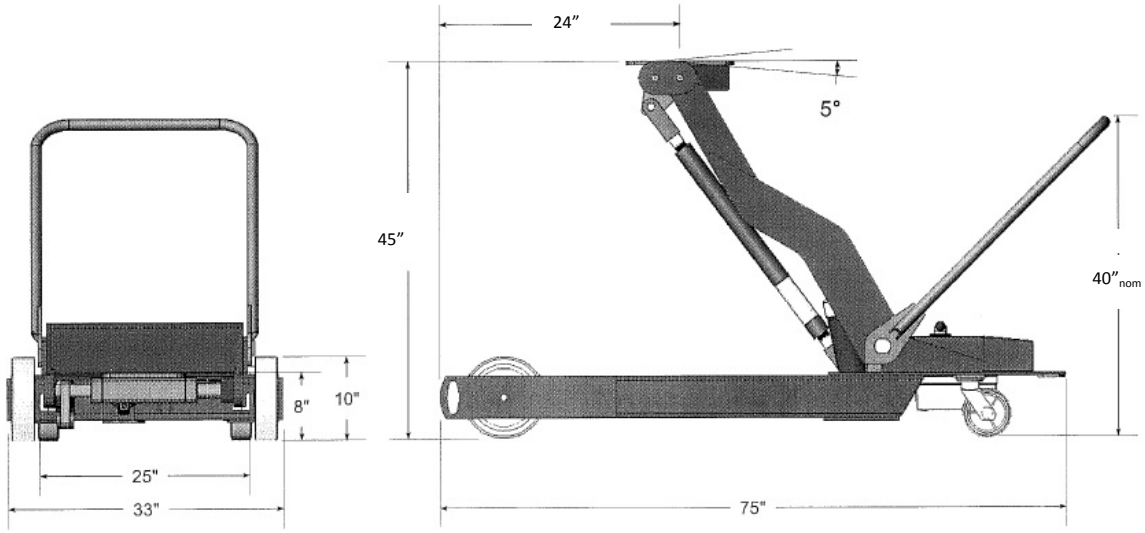
- Press and hold the safety latch release actuator with one hand and with your other hand slowly rotate the release valve counter-clockwise to lower the load.

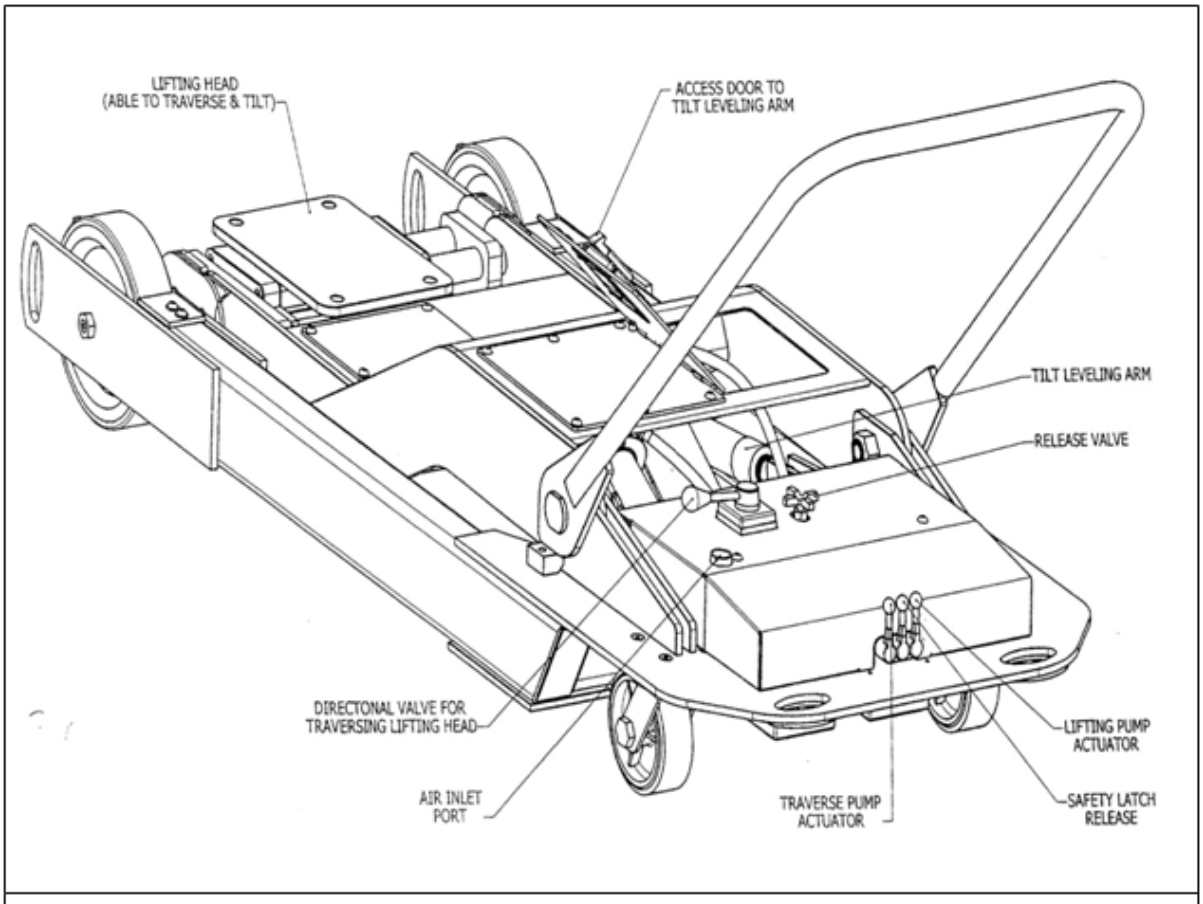
  NOTE: The speed at which the load is lowered is controlled by the rate and degree to which you open the release valve.

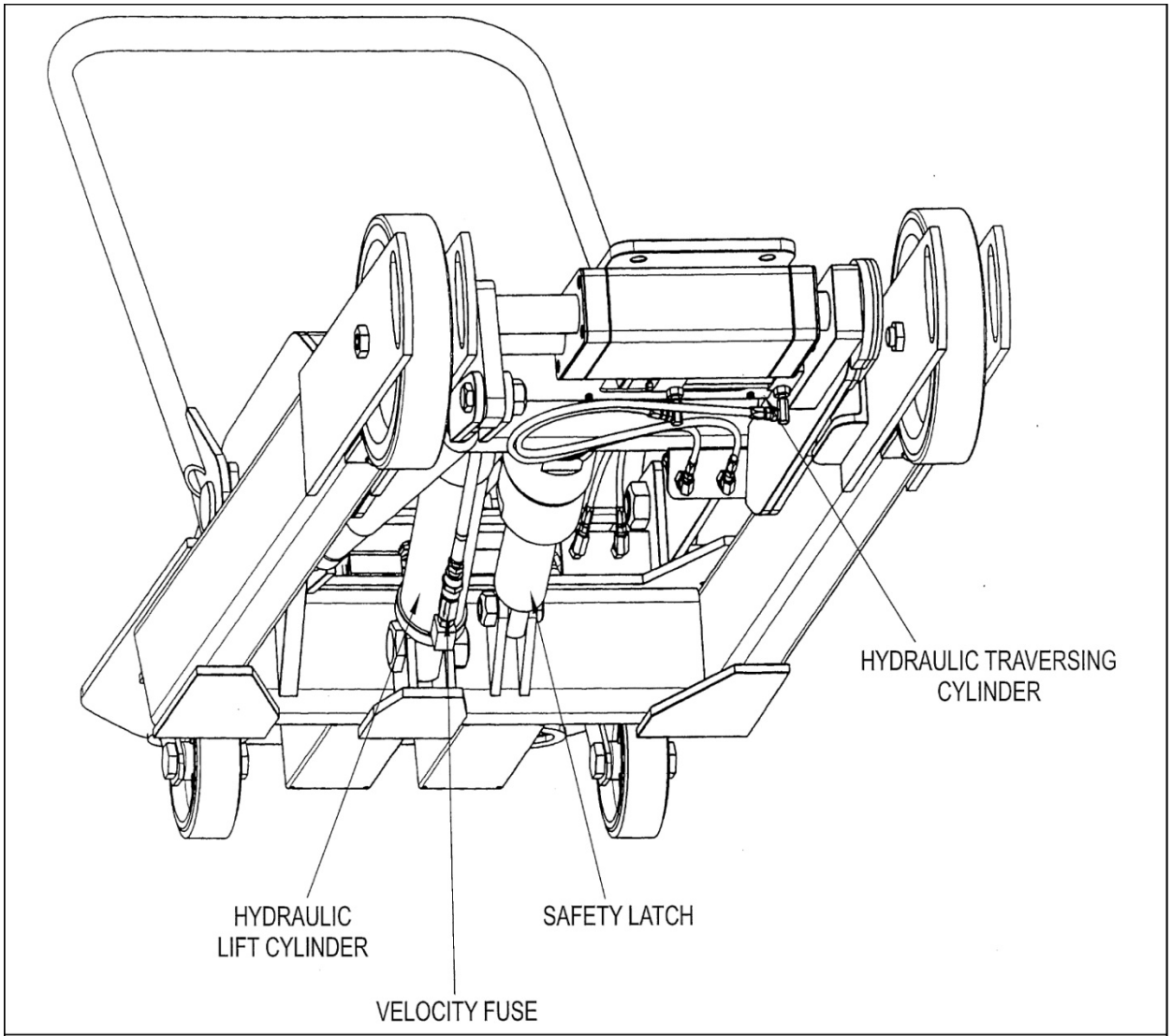
**THE LOAD SHOULD BE LOWERED SLOWLY TO REDUCE RISK OF DAMAGES, SERIOUS PERSONAL INJURY, OR DEATH.**

# Component Handler Drawings

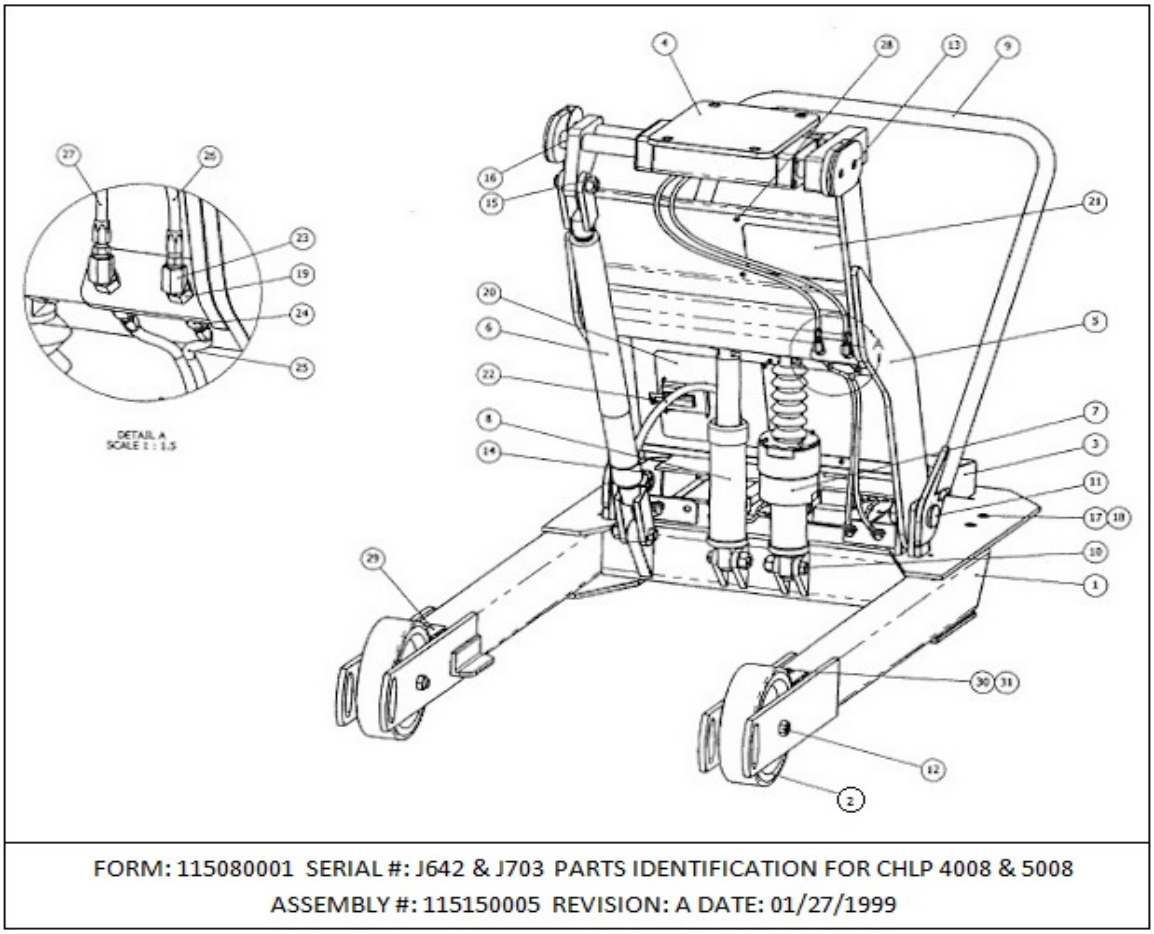
NOTE: Drawings and specifications are based on material available at the time the manual was written. Please contact Hydra-Tech International for the most current information regarding the CHLP 5008, its components and accessories.



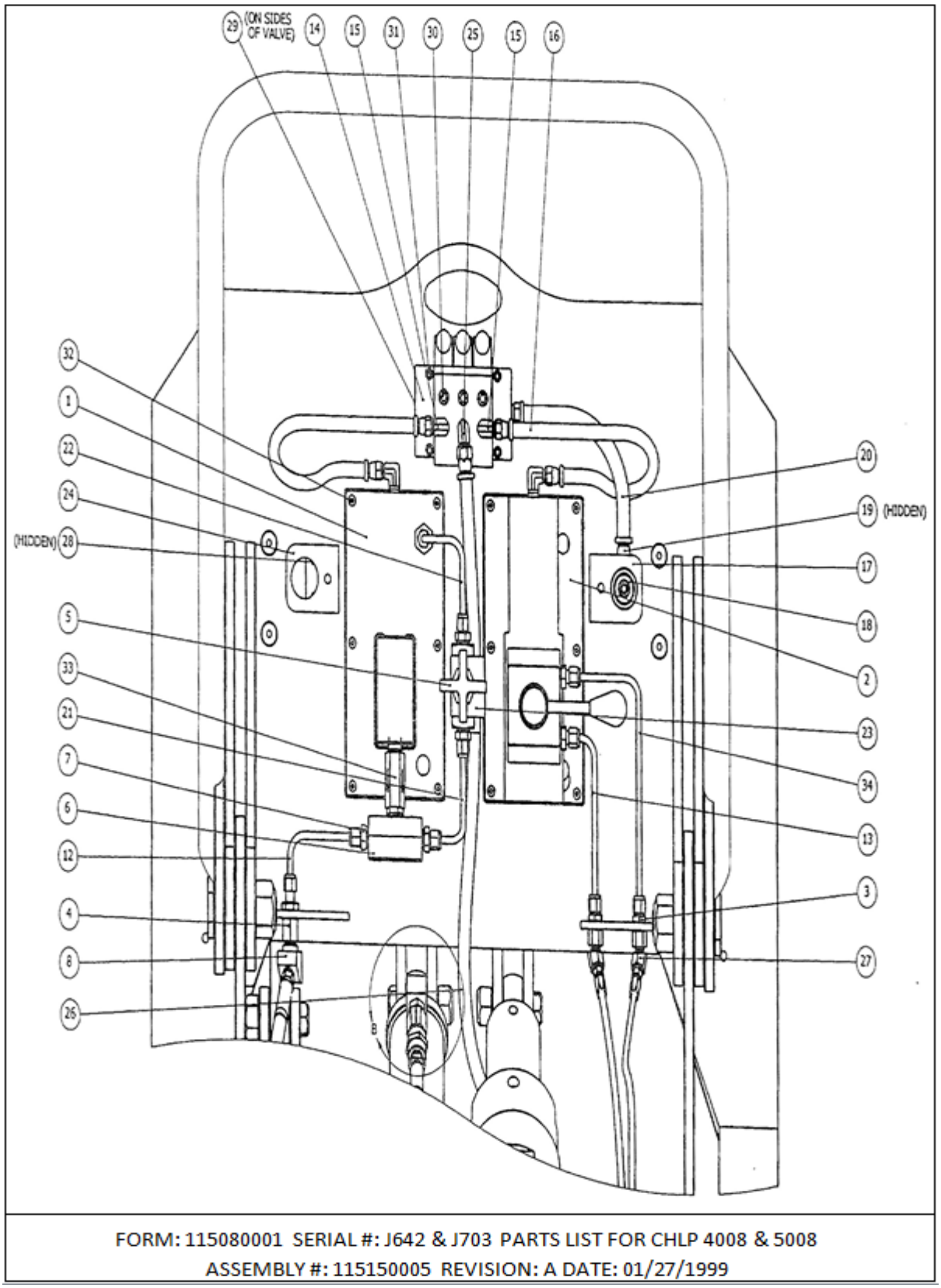



FORM: 115010002 SERIAL #: J642 & J703 PARTS IDENTIFICATION FOR CHLP 4008 & 5008
ASSEMBLY #: 115150005 & 115150007 REVISION: A DATE: 08/15/2000



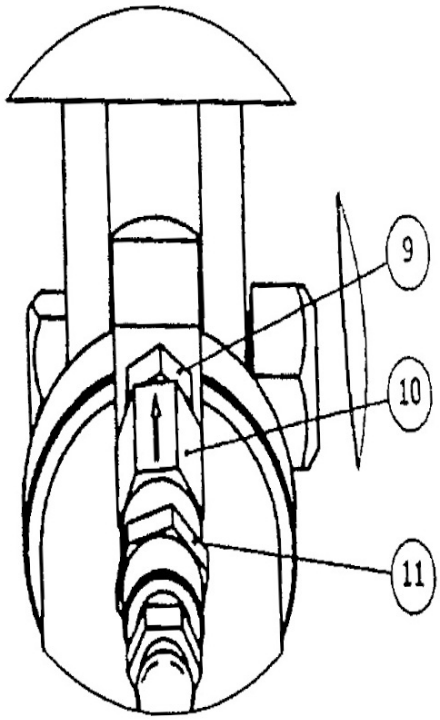

FORM: 115080001 SERIAL #: J642 & J703 PARTS IDENTIFICATION FOR CHLP 4008 & 5008
ASSEMBLY #: 115150005 REVISION: A DATE: 01/27/1999

| ITEM # | QTY. | PART # | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 115120016 | BASE FRAME |
| 2 | 2 | 192410014 | WHEEL 10" URETHANE ON CAST |
| 3 | 1 | 115110082 | REAR GUARD |
| 4 | 1 | 115130014 | HEAD ASSEMBLY |
| 5 | 1 | 115120034 | LIFT ARM ASSEMBLY |
| 6 | 1 | 115130006 | LEVEL ARM |
| 7 | 1 | 115130010 | SAFETY LATCH |
| 8 | 1 | 115140002 | HYDRUALIC CYLINDER |
| 9 | 1 | 115120045 | HANDLE |
| 10 | 6 | 115100036 | CYLINDER & SAFETY PIN |
| 11 | 2 | 115100088 | HANDLE PIN |
| 12 | 2 | 192410027 | AXLE BOLT ¾ Ø NC x 5 LG |
| 13 | 2 | 192310052 | 3/8 Ø NC X ¾ LG SOCKET FLATHEAD CAP SCREW |
| 14 | 2 | 192310009 | 1" Ø NC STOVER LOCKNUT |
| 15 | 6 | 192310002 | ¾ Ø NC STOVER LOCKNUT |
| 16 | 1 | 115130016 | SPACER TUBE |
| 17 | 8 | 192310132 | 3/8 Ø NC x 1 – ¼ LG SOCKET FLATHEAD CAP SCREW |
| 18 | 8 | 192310029 | 3/8 Ø – 16 NC LOCKNUT |
| 19 | 2 | 192300091 | -4 JIC MALE – 1/8 NPT FEMALE BULKHEAD |
| 20 | 1 | 115130016 | HINGED COVER ASSEMBLY |
| 21 | 1 | 115110092 | FRONT COVER PLATE |
| 22 | 1 | 192400118 | LIFT CYLINDER SUPPLY HOSE ASSEMBLY |
| 23 | 4 | 192300095 | STREET ELBOW 45° 1/8 NPT MALE – FEMALE |
| 24 | 2 | 192300094 | ADAPTOR -4 JIC FEMALE SWIVEL – 1/8 NPT FEMALE |
| 25 | 2 | 115400005 | LOWER TRAVERSE HOSE ASSEMBLY |
| 26 | 1 | 115400008 | UPPER TRAVERSE HOSE ASSEMBLY – LONG |
| 27 | 1 | 115400007 | UPPER TRAVERSE HOSE ASSEMBLY – SHORT |
| 28 | 12 | 192310150 | 3/8 Ø NC x 5/8 LG SOCKET BUTTONHEAD SCREW |
| 29 | 4 | 115110150 | SCRAPER PLATE |
| 30 | 8 | 192310060 | 3/8 Ø SAE WASHER |
| 31 | 8 | 192310154 | 3/8 NC x 5/8 LG SOCKET BUTTONHEAD SCREW |



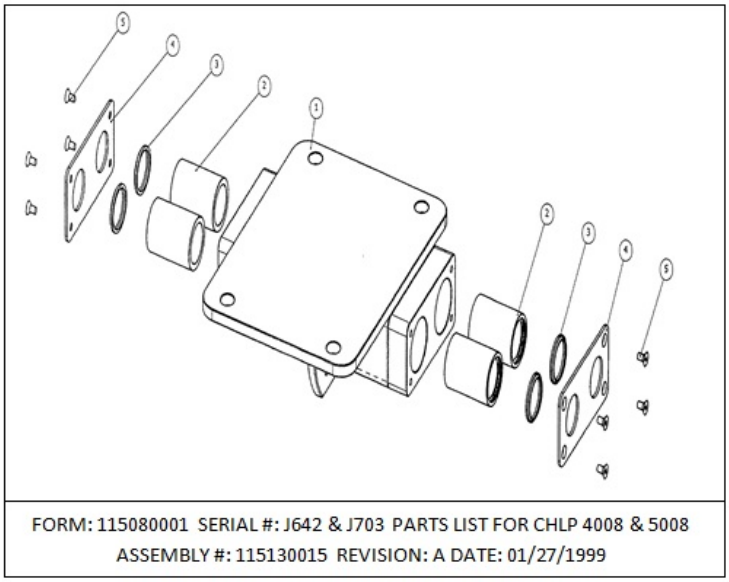

FORM: 115080001 SERIAL #: J642 & J703 PARTS LIST FOR CHLP 4008 & 5008
ASSEMBLY #: 115150005 REVISION: A DATE: 01/27/1999

*Refer to next page for detail B & parts list



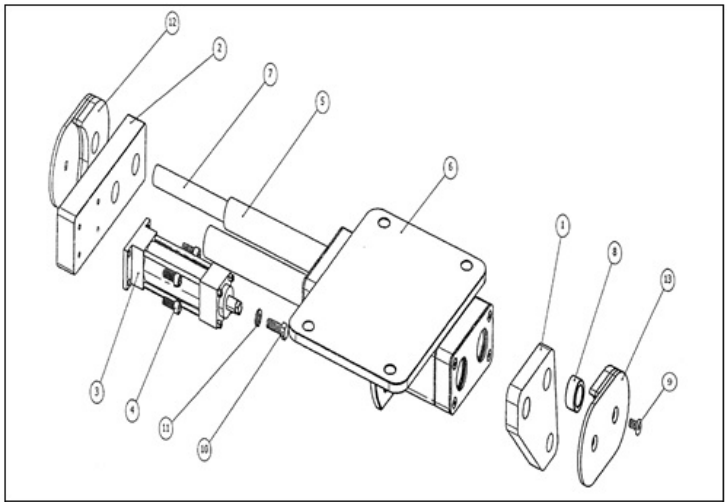

DETAIL B
SCALE 1 : 1

| ITEM # | QTY. | PART # | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 115130008 | PA6 – 10,000 psi PUMP |
| 2 | 1 | 115130007 | PA6DM – 3,000 psi PUMP |
| 3 | 2 | 192300090 | ¼ TUBE x 1/8 NPT FEMALE BULKHEAD |
| 4 | 1 | 192300055 | ¼ TUBE x ¼ NPT FEMALE BULKHEAD |
| 5 | 1 | 192430020 | NEEDLE VALVE FFG2003T |
| 6 | 1 | 192380054 | 3/8 NPT FEMALE TEE 10,000 psi |
| 7 | 4 | 192300013 | ¼ TUBE x 3/8 NPT MALE CONNECTOR |
| 8 | 1 | 192380057 | ¼ NPT 45° ELBOW MALE/FEMALE 10,000 psi |
| 9 | 1 | 192300047 | 3/8 NPT MALE PIPE NIPPLE 10,000 psi |
| 10 | 1 | 192380056 | VELOCITY FUSE 9631 |
| 11 | 1 | 192300075 | 3/8 NPT FEMALE PIPE CONNECTOR |
| 12 | 1 | 115360009 | CYLINDER ADVANCE TUBE ASSEMBLY |
| 13 | 1 | 115360011 | RIGHT TRAVERSE ADVANCE TUBE ASSEMBLY |
| 14 | 1 | 192450014 | MAC AIR VALVE |
| 15 | 4 | 192300078 | MALE 90° ELBOW -4 JIC x ¼ NPT |
| 16 | 2 | 115400003 | PUMP AIR SUPPLY HOSE ASSEMBLY |
| 17 | 1 | 115120046 | AIR SUPPLY BRACKET |
| 18 | 1 | 192300085 | BUSHING ¾ NPT – 3/8 NPT |
| 19 | 1 | 192300084 | MALE 90° ELBOW 6 JIC x 3/8 NPT |
| 20 | 1 | 115400003 | AIR INLET HOSE ASSEMBLY |
| 21 | 1 | 115360010 | LOWERING VALVE TUBE ASSEMBLY |
| 22 | 1 | 115360008 | PUMP RETURN TUBE ASSEMBLY |
| 23 | 1 | 115110094 | RELEASE VALVE MOUNT BRACKET |
| 24 | 1 | 115110093 | AIR SUPPLY MOUNT BRACKET |
| 25 | 1 | 192300089 | MALE 90° ELBOW ¼ NPT x 9/16 JIC |
| 26 | 1 | 115400004 | SAFETY LATCH AIR SUPPLY HOSE ASSEMBLY |
| 27 | 2 | 192300092 | ELBOW 45° 1/8 NPT MALE x FEMALE ADAPTER |
| 28 | 4 | 192310091 | 3/8 Ø x 5/8 LG NC HEX BOLT |
| 29 | 5 | 192300053 | 3/8 NPT PLUG |
| 30 | 3 | 192300052 | ¼ NPT PLUG |
| 31 | 4 | 192310151 | ¼ NC x 2-1/2 LG SOCKET CAP SCREW |
| 32 | 12 | 192310152 | 10-24 NC x 1-1/4 LG SOCKET BUTTON HEAD SCREW |
| 33 | 4 | 192310153 | 10,000 psi CHECK VALVE |
| 34 | 1 | 115360012 | LEFT TRAVERSE ADVANCE TUBE ASSEMBLY |



FORM: 115080001 SERIAL #: J642 & J703 PARTS LIST FOR CHLP 4008 & 5008
ASSEMBLY #: 115130015 REVISION: A DATE: 01/27/1999

| ITEM # | QTY. | PART # | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 115120036 | LIFTING HEAD |
| 2 | 4 | 1151000015 | BRONZE BUSHING |
| 3 | 4 | 959-17 | WIPER SEAL |
| 4 | 2 | 115110083 | BUSHING RETAINING PLATE |
| 5 | 8 | 192310118 | ¾ Ø NC x ½ LG FLAT HEAD CAP SCREW |

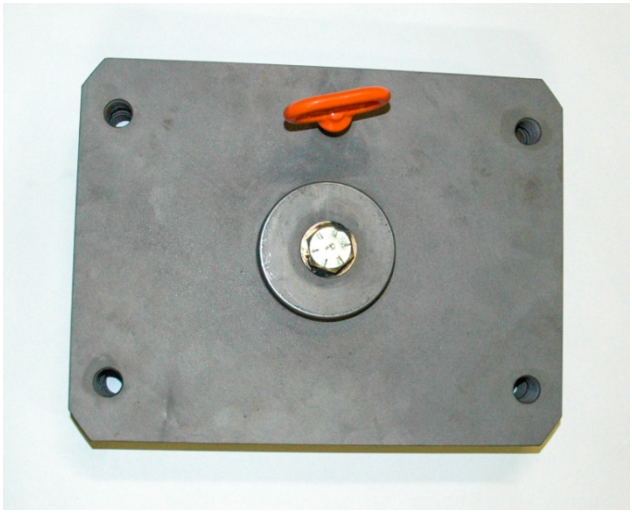


FORM: 115080001 SERIAL #: J642 & J703 PARTS LIST FOR CHLP 4008 & 5008
ASSEMBLY #: 115130014 REVISION: A DATE: 01/27/1999

| ITEM # | QTY. | PART # | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 115110070 | LEVEL ARM PLATE |
| 2 | 1 | 115110029 | CYLINDER REACTION BLOCK |
| 3 | 1 | 192320009 | HYDRUALIC CYLINDER |
| 4 | 4 | 192310094 | 3/8 Ø x 1 LG NC AHCS |
| 5 | 2 | 115100083 | SLIDE TUBE |
| 6 | 1 | 115130015 | LIFTING HEAD SUB-ASSEMBLY |
| 7 | 1 | 115100061 | GUIDE ROD |
| 8 | 1 | 115100084 | SPACER TUBE |
| 9 | 2 | 192310052 | 3/8 Ø x ¾ LG FHCS |
| 10 | 1 | 192310048 | 7/16-20 Ø NF x 1-1/4 LG HEX BOLT |
| 11 | 1 | 192310131 | 7/16 Ø LOCK WASHER |
| 12 | 1 | 115120047 | LEFT FRONT PIVOT |
| 13 | 1 | 115120048 | RIGHT FRONT PIVOT |

# Extensions & Adapters

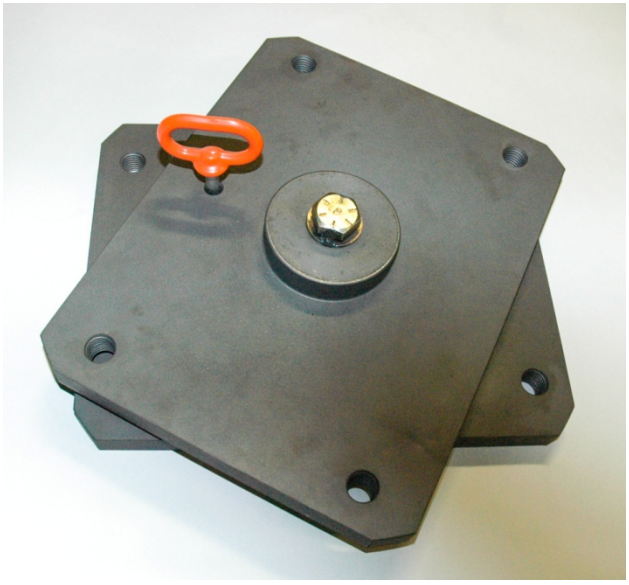
## Swivel Adapter:

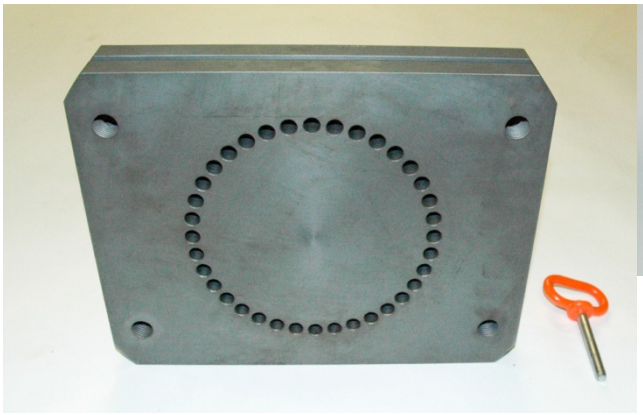


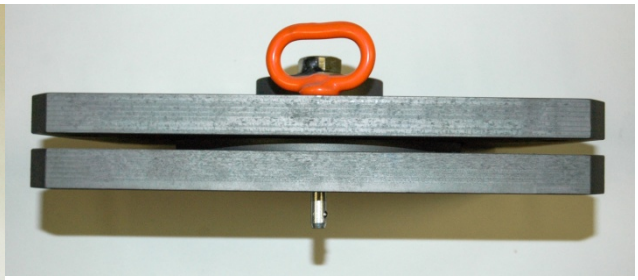
The swivel adapter is a hydraulic pump removal tool for the CAT 797B Haul Truck.

Hydra-Tech PN # 117130004

The Swivel Adapter may be used in conjunction with other adapters. An example would be the hydraulic pump adapter. The swivel combined with the hydraulic pump adapter would give you the following options: swivel the adapter 360, in addition to the 4” side shift, now offering tilting and rotation motions to be applied to the pump.







# Extensions & Adapters

## Tri-Link Adapter:

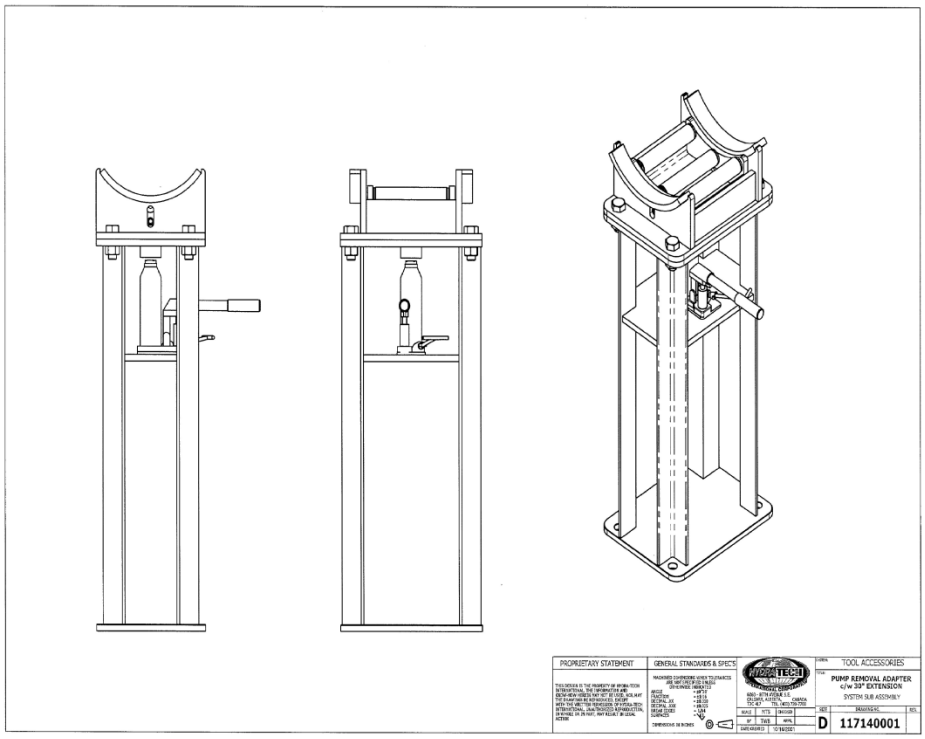
Hydra-Tech manufactures a cradle to assist in the removal and replacement of the Tri-Link on the Caterpillar 797 Truck

The Tri-Link adapter is a hydraulic pump removal tool for the CAT 797 Haul Truck

Hydra-Tech PN # 117120012

# Extensions & Adapters

## Hydraulic Pump Adapter:




The Hydraulic Pump Adapter is used as a removal tool for CAT 797B Haul Trucks.

Hydra-Tech PN# 117140001

The Hydraulic Pump Adapter bolts to the saddle on the CHLP5008. With the 44" (111.76cm) reach of the Component Handler this adapter provides a safe & efficient method of changing out Hydraulic Pumps.

## Operating Instructions:

Extend the CHLP with the adapter until it is within 2” (5cm) of the hydraulic pump. The final adjustment to the pump must be made with the hand actuated bottle jack on the adapter. (NOTE: the CHLP will provide as much as 2,268 kg (5,000 lbs) of lifting capacity). Using the CHLP 5008 to make the final adjustment could result in damage to the pump housing.

Extend the adapter to the pump with the bottle jack. The rollers on the adapter will allow the operator to rotate the pump to align bolt holes. The adapter is equipped with a load holding strap to secure the pump through the service operation.

**ALWAYS SECURE THE LOAD IN LIFTING, LOWERING AND REMOVAL FUNCTIONS.**

# Preventative Maintenance

## Daily Checklist:

1. Fully stroke the lifting head to the high position.
2. Traverse the lifting head in a full stroke left and right to check for normal operation.
3. Adjust the head tilt to check for normal operation by opening the access door and adjusting.
4. Visually inspect for bent or damaged components, hoses or fittings, and hydraulic leaks etc.
5. Tighten loose bolts and fittings as required.

REMOVE FROM SERVICE IF DAMAGE, CRACKS, BENT COMPONENTS OR HYDRAULIC LEAKS ARE FOUND.

## General Level 1 Maintenance:

Recommended every 12 months depending on usage.

1. Clean unit
2. Inspect for leaks
3. Check for any loose bolts & tighten as required
4. Check for any cracks on main frame and lift frame
5. Replace damaged or missing safety decals
6. Inspect hoses for damage
7. Check for any loose fittings and tighten as required
8. Ensure safety latch is functioning correctly
9. Check condition of air connection quick coupler
10. Check handle pin bushings

PREVENTATIVE MAINTENANCE IS A REQUIREMENT FOR EQUIPMENT AND MACHINERY.

## Storing:

To reduce potential wear and keep the CHLP 5008 in best form it is recommended that the equipment be stored in a dry, covered location, where it is protected from the elements and potential environmental hazards. When the CHLP 5008 is being stored it should be in the fully retracted (lowered) position and any pressure within the hydraulic hoses should be removed by moving the traversing direction valve left and right several times and opening and closing the release valve.

## Repair:

Any repairs should be done by Hydra-Tech International or an approved service centre.

## Lubrication:

If required, grease can be applied to the front wheels via the greasable axle.

## Service Centres

Please contact Hydra-Tech International for current information on the closest service center to you. Contact information for Hydra-Tech International follows:

6060 – 86th Avenue SE, Calgary, Alberta, Canada T2C 4L7
Telephone (403) – 720 – 7740 Fax (403) – 720 – 7758
Website: www.hydra-tech.net

## Recommended Hydraulic Fluids

(For ambient temperatures from -20°F / -29°C to 120°F / 49°C)

Power Team AW46
Exxon Univis Extra
Texaco Rando HDAZ

Notes:

Alternate fluids may be used if they have the following characteristics:

- Pour point -45°F, viscosity 150 SUS@ 100°F
- Viscosity 45 SUS @ 210°F
- Viscosity index 150, and anti-corrosion, anti-foam, anti-oxidant, anti-rust, anti-wear and demulsifier additives

# STANDARD WARRANTY

1. **WARRANTY POLICY**. Subject to those terms and conditions contained herein, Seller warrants that all Seller products conform in all material respects to the description identified in the quotation, proposal or offer made by Seller to Buyer for the sale of its products (collectively, "**Quotation**") and will be free from defects in material and workmanship for two (2) years from the date of shipment to Buyer (except for spare parts which Seller warrants for one (1) year from the date of shipment to Buyer). Products manufactured by manufacturers other than Seller and/or its affiliates ("**Other Manufacturer's Products**") supplied by Seller to Buyer are not warranted by Seller. Other Manufacturer's Products may be warranted separately by their respective manufacturers and Seller shall, to the extent possible, assign to Buyer whatever rights Seller may obtain under any such warranties.

   **THE FOREGOING REPRESENTS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER TO BUYER AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW (INCLUDING BY STATUTE) OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

2. **WARRANTY REMEDIES**. Buyer's sole and exclusive remedy for Seller's breach of the foregoing warranties during the warranty period shall be, at Seller's sole discretion, the repair and/or replacement of any defective products (or component parts thereof) pursuant to the terms of and conditioned upon Buyer's compliance with the procedure identified in Section 5 hereof.

3. **LIMITATION OF DAMAGES. SELLER SHALL HAVE NO LIABILITY TO BUYER OR ANY END USER OF PRODUCTS OR SERVICES WITH RESPECT TO THE SALE OF PRODUCTS OR PROVISION OF SERVICES UNDER THE QUOTATION FOR LOST PROFITS OR FOR SPECIAL, CONSEQUENTIAL, EXEMPLARY, OR INCIDENTAL DAMAGES OF ANY KIND WHETHER ARISING IN CONTRACT, TORT, PRODUCT LIABILITY, STRICT LIABILITY OR OTHERWISE, EVEN IF SELLER WAS ADVISED OF THE POSSIBILITY OF SUCH LOST PROFITS OR DAMAGES. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY DAMAGES WHATSOEVER IN EXCESS OF THE TOTAL PRICE PAID BY BUYER FOR PRODUCTS AND/OR SERVICES REFERENCED IN THE QUOTATION.**

4. **INAPPLICABILITY OF, AND VOIDING OF THE WARRANTY**. This Standard Warranty does not cover defects in Seller products which are not defects in material and workmanship and may be attributed to other causes including but not limited to failure to operate and/or maintain Seller products in accordance with the applicable Seller installation and/or operator's manuals, owner's manuals, maintenance manuals, manufacturer's recommendations, and any other manuals, guidelines or recommendations of Seller concerning the maintenance and operation of Seller products that may be communicated to Buyer from time to time, side-pulling of load, shock loading, excessive jogging, eccentric loading, overloading, accidental occurrence, improper repair, improper handling or storage of products, chemical exposure and/or abnormal operating conditions not identified to and expressly and specifically accepted by Seller in writing prior to Seller's issuance of a Quotation, or any other cause that in Seller's sole discretion is not attributable to defects in material and workmanship. Failure of products to meet published performance specifications due to abnormal operating conditions beyond Seller's knowledge or control shall not be considered defects in either workmanship and/or material.

Modification of Seller products and/or incorporation of Other Manufacturer's Products into Seller products by individuals and/or organizations other than Seller shall void this Standard Warranty.

Buyer's failure to pay in full when due for the products and services provided for in a Quotation shall void this Standard Warranty.

5. **WARRANTY PROCEDURE**. To obtain warranty remedies pursuant to this Standard Warranty, Buyer must strictly adhere to the following procedure. Buyer's failure to comply with the terms of this procedure shall void this Standard Warranty.

(a) Buyer shall, within seventy-two (72) hours of any claimed non-conformance or defect in Seller products, notify Seller's Warranty Administrator in writing of the alleged non-conformance or defect.

(b) Seller shall, within a reasonable time, advise Buyer of its intention to initially accept or deny the warranty claim pursuant to the terms of this Standard Warranty. If Seller elects to initially accept the warranty claim, it shall advise Buyer of its intention to replace, repair, or otherwise further inspect the allegedly nonconforming or defective products (or component parts thereof) ("**Initial Acceptance**").

(i) **Replacement of allegedly nonconforming or defective products**. Should Seller provide Initial Acceptance of Buyer's warranty claim and elect to replace the allegedly nonconforming or defective products (or component parts thereof), or should Seller elect to provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently elect to replace the allegedly nonconforming or defective products (or component parts thereof), Seller shall within a reasonable time, ship new, comparable, replacement products to Buyer F.C.A. Seller's plant, warehouse or dock, as defined by Incoterms 2010, via the lowest cost method available.

(ii) **Repair of allegedly nonconforming or defective products**. Should Seller provide Initial Acceptance of Buyer's warranty claim and elect to repair and/or permit the repair of the allegedly nonconforming or defective products (or component parts thereof) by approved third parties, or should Seller elect to provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently elects to repair the allegedly nonconforming or defective products, Seller shall, unless otherwise agreed in writing by the Warranty Administrator, pay only those direct labor costs incurred to effectuate the repair and the cost of Seller replacement products consumed during said repair provided that the costs for all products and/or services are approved in advance in writing by Seller's Warranty Administrator.

(iii) **Inspection of allegedly nonconforming or defective products**. Should Seller provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently determine that the alleged nonconformity or defect is not covered under this Standard Warranty, Seller shall bill Buyer, and Buyer shall pay Seller any and all costs associated

(iv) with the performance of inspection of allegedly nonconforming or defective products.

6. **WAIVER. BUYER HEREBY WAIVES ANY CLAIM THAT THE EXCLUSIONS OR LIMITATIONS IDENTIFIED HEREIN DEPRIVE IT OF AN ADEQUATE REMEDY. BUYER SHALL BE ENTITLED TO NO OTHER REMEDY OTHER THAN THOSE IDENTIFIED IN SECTION 2 HEREOF WITH RESPECT TO THE PROVISION OF PRODUCTS AND/OR SERVICES BY SELLER REGARDLESS OF THE FORM OF CLAIM OR CAUSE OF ACTION, WHETHER BASED IN CONTRACT, TORT INCLUDING NEGLIGENCE, STRICT LIABILITY OR OTHERWISE.**