HYDRA-TECH
JACKS & TOOLS

MOD-U-LIFT

LIFTSTAND SERIES
OPERATION MANUAL

Mod-U-Lift LiftStand Series are offered in a variety of configurations to meet your specific needs. Lift Modules come in a range of 60, 100, and 175 ton capacities with various stroke lengths

60 TON
100 TON
175 TON

HYDRA-TECH JACKS & TOOLS

MOD-U-LIFT™
LIFTSTAND SERIES
60, 100, and 175 Ton Models

March 2025

There are a few distinct differences between the standard MOD-U-LIFT Jack and the MOD-U-LIFT LIFTSTAND SERIES. It is important to note these differences to ensure that you are using the correct equipment for the task. Below is an illustration of the MOD-U-LIFT LIFTSTAND and the differences you can look for.

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TOP HANDLE ADJUSTMENT
AIR MOTOR
AIR CONTROL VALVE, & LOCKOUT
PUMP HANDLE
FIXED SADDLE
INTERLOCKING LOAD RINGS
RELIEF MANIFOLD
SUPPLY LINES
OPERATING INSTRUCTION DECAL
LOAD RING STORAGE
FILTER / LUBRICATOR
LOWER HANDLE ADJUSTMENT
LEVEL SCOOT
SQUARE LIFT STAND BASE
HYDRA-TECH INTERNATIONAL
LIFT STAND

INTRODUCTION

MOD-U-LIFT™

LIFTSTAND SERIES

A New Approach to Lifting, Securing and Maintenance Equipment.

Mod-U-Lift Systems are comprised of a lifting module and a power module. Through offering a complete system that can be separated into these two components lifting procedures can be done more safely and conveniently.

Mod-U-Lift Systems are offered in a variety of configurations to meet your specific needs. Lift Modules come in a range of lifting capacities as well as stroke length. 60, 100, and 175 ton capacities are offered and stroke lengths range between 13” (33cm) and 24” (61cm). Extensions can also be used to increase effective stoke lengths and provide higher degrees of safety for high lifts. Some products are even offered with alloy aluminum components to manage weight and provide better maneuverability.

Power Modules are offered with either air or electric motors and both produce minimal noise. The multiposition handles are designed to provide superb balance and maneuverability. With the use of the Level Scoot Bracket, using the Power Module to move your Lift Module is made even easier, providing two heights for level lifting when clearances are low and a third position that tilts the whole system with exceptional balance.

For specific information on the varieties and features of the Mod-U-Lift Systems and what can best meet your needs please contact:

Hydra-Tech International

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

SECTION 1 - SAFETY

- Dirt Kills Hydraulics!! The MOD-U-LIFT LIFTSTAND system allows you to separate the Power Module and Lift Module. The hydraulic quick couplers are a point at which dirt can enter the system. Always clean couplers carefully prior to re-connecting.
- Check the hydraulic oil level daily. The oil should fill at least 2/3 of the level gauge found on the side of the reservoir with the Lifting Ram(s) fully retracted.
- Oil that is milky has water in it and must be changed.
- Change hydraulic oil twice a year. Use good grade hydraulic oil only. For extreme cold operating conditions, Arctic grade oil may be used. (See recommendations on page 15) An optional oil heater is available for cold weather operation.
- Keep all MOD-U-LIFT LIFTSTAND System components clean. If high-pressure washers or compressed air are used, there is a risk of forcing dirt into piston wipers, oil tank breathers etc.
- MOD-U-LIFT LIFTSTAND cylinders are plumbed with a male coupler in the bottom (advance) port, and a female coupler in the top (retract) port. The Pump Modules are plumbed to match. Extension hoses have a male coupler on one end, and a female on the other. This arrangement eliminates the possibility of crossed hoses.
- For storage, auxiliary hoses should be coiled, and the male coupler connected to the female coupler. This reduces the chance for contaminants to enter the hose.
- The handle should be in the middle or lowered positions for optimum balance and maneuverability when moving the Mod-U-Lift Lift Stand.
- Lift the system only by the main handle with the handle in the vertical position.
- Carry or transport the Lifting Modules by the swing up handles mounted on the base.
- If present, use the handle on the top of the pump motor only to remove the pump from the tank.
- Never tamper with the pressure relief valve fitted in the top of the cylinder. Trapped pressure could result and possibly burst the cylinder.

SECTION 2 – LIFTSTAND DO'S AND DON'T'S

DO NOT lift loads that are not on a firm level surface.

DO NOT side load Lift Stands. The top surface of the Lifting Module saddle must be parallel to the Lift Standing pad of the load to be lifted.

DO Use a sturdy level base for Lifting the load.

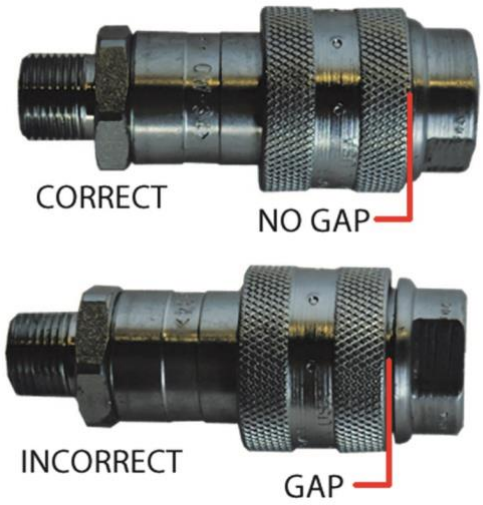
DO use an anti-skid shim between the LIFTSTAND saddle and the jack pad.

DO NOT handle hydraulic hoses under pressure! Modern jack equipment operates at 10,000 PSI. Pinholes in hoses can cause serious injury.

DO Release pressure from hoses by shutting off the Power Module, and swinging the control valve handle to the advance and retract positions. This allows trapped fluid to be returned to the tank.

DO insure the couplings are clean

DO insure the couplings are fully connected. When properly connected, there should be no gap between the rotating sleeve on the female coupler and the shoulder on the male coupler.



⚠ NEVER handle pressurized hose or fittings with your bare hands!

The load holding valve must be tested prior to each lift. In the unlikely event of a valve malfunction, the load could drop at an uncontrolled rate.

SECTION 3 – PRIOR TO LIFTING

The load holding valve must be tested prior to each lift. In the unlikely event of a value malfunction, the load could drop at an uncontrolled rate.

LOAD HOLDING VALVE TEST PROCEDURE

Raise the ram far enough to contact the load and lift it 2-3" (5-7.6cm) to take the weight of the load.

a) Insert the required load ring/rings insuring there is a gap between the saddle and the load ring. b) Turn off the motor.

c) Rotate the valve Counter Clockwise (CCW) to the "Down" position. Leave for 2 Minutes
d) After the allotted time, check to ensure that there is no creeping down, confirming the load holding valve is functioning properly.
e) If the valve does not hold, the load will have lowered onto the load ring and there will be no gap present.
f) Remove the LIFTSTAND from service.
g) Return the LIFTSTAND to Hydra-Tech for repair.

Any time a hydraulic oil leak is detected, remove the unit from service and have it repaired and tested if necessary at an authorized facility.

Note: Please contact Hydra-Tech International for current information regarding authorized facilities.

SECTION 4 - RAISING LOAD

When lifting loads, stay as far back as possible. Never expose yourself to a live load. Mechanically support all loads after they are lifted. Before you begin, clean all contact surfaces including the top of the lift cylinder, load holding rings, extensions and the saddle.

POSITIONING OF THE MOD-U-LIFT LIFTSTAND

a) Position the MOD-U-LIFT LIFTSTAND under the Jacking pad of the load to be lifted. The jacking pad should be parallel to the top of the saddle.
b) If the jacking pad is in a difficult place to reach with the complete MOD-U-LIFT unit, first position it and then separate the Lifting Module from the Power Module
c) Level Scoot System: See attached illustrations included in this manual.
d) It may be easier to position the Lift Module with the use of a Lift Module Cart (Optional).
e) Place the Power Module in the most convenient and safe position, and connect the Modules with high pressure (10,000 PSI) hoses. Hoses up to 100 feet (30.5m) in length can be used.

⚠ **THE REAR SUPPORT LEG MUST BE LOWERED AND LOCKED INTO PLACE, AND THE HOSES DISCONNECTED PRIOR TO SEPARATING THE TWO MODULES.**

DISCONNECT THE PUMP AND LIFT MODULES

a) Clamp System: Pulling the knurled knob on the clamping lever rearward and rotating 90° to lock out. Swing the clamping lever up while holding the main Power Module handle securely.
b) If required, you may remove the Power Module from the Lifting Module. Do this by lowering and locking the rear support leg, uncoupling the quick couplers, and separating the Power Module from the Lifting Module

LIFTING THE LOAD

a) If required, insert an ANTI-SLIP shim between the saddle of the Lifting Module, and the Jack pad of the equipment to be lifted to prevent slipping; As Per ASME B30.1 1-2.9.5.1 Section C ⚠ **It is the owner and operator's responsibility to ensure that any material used as a shim is able to withstand the forces it may be exposed to and does not present any potential hazards.**
b) Move the valve control lever to the advance (raise) position.
c) Push the thumb toggle switch on the remote control pendant to ON (electric models), or open the air valve on air operated models.
d) Advance the plunger until it contacts the Lift point. Check to make sure it is correctly and safely positioned.
e) If the equipment to be lifted has a narrow Lift pad you will want to position the ram saddle to give maximum contact.

⚠ **CHECK THE OPERATION OF THE LOAD HOLDING VALVE**

f) Advance the plunger to lift the load, inserting the load rings as you go. Load holding rings should only be installed when the LIFTSTAND is not moving, and the load is deemed stable. Begin with the tallest rings. Ensure the load rings interlock as illustrated.
g) Use the Handle attached to the load rings to place the rings onto the cylinder

⚠ **LOAD RING SEATING SURFACES MUST BE KEPT CLEAN TO MAXIMIZE CONTACT AREA FOR SAFETY AND TO AVOID DAMAGING THE RINGS.**

SECURING THE LOAD

h) When you have reached the maximum required lift height, insert the final 1" load ring. Ensure that the load rings are stacked correctly and interlocked. This configuration provides the highest column strength from the Load Holding Ring stack.

⚠ **See Load Ring section for an illustration of the correct load ring configuration.**

⚠ **Keep your fingers clear of the contacting faces**

i) Rotate the control valve CCW to retract (Down).

j) Jog the motor to retract the plunger until the saddle is resting solidly on the top load ring. Do not retract the plunger past where the saddle contacts the load ring. The saddle locks the load rings together creating a mechanical column capable of safely supporting the rated capacity of the LIFTSTAND as per ASME PALD-2005.

k) Turn off Pump and Lockout as per procedure below.

The Mod-U-Lift LIFTSTAND Series Load rings are certified stands. With all necessary rings in place and the load lowered onto them, they create a mechanical column for supporting the load. As per ASME PALD-2005

l) Release the pressure in the hoses by shutting off the motor rotating the control valve between the up and down positions

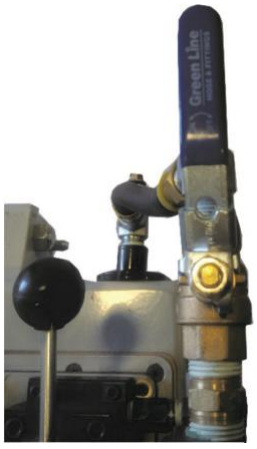
m) If required, or not yet completed, you may now remove the Power Module from the Lifting Module. Do this by lowering and locking the rear support leg, uncoupling the quick couplers, and separating the Power Module from the Lifting Module.

⚠ **The rear support leg must be lowered and locked into place, and the hoses disconnected prior to separating the two Modules.**

LOCKOUT OF THE HYDRAULIC PUMP

Once the load is secured onto the load rings, it is a requirement of AMSE PALD-2005 to have the system locked out.
Using the lockout air valve or power switch supplied attach a certified lockout according to your companies standard Lockout / Tag out procedures.
Once locked out, cycle the on / off switch, or air valve to ensure there is no operation of the pump system.

⚠ **Failing to properly follow the lockout procedure will result in a Non-Certified Support Stand as per ASME PALD-2005**



SECTION 5 – LOAD RINGS

Mod-U-Lift LIFTSTAND are designed and tested to ASME PALD-2005 and certified to be Lift Stands

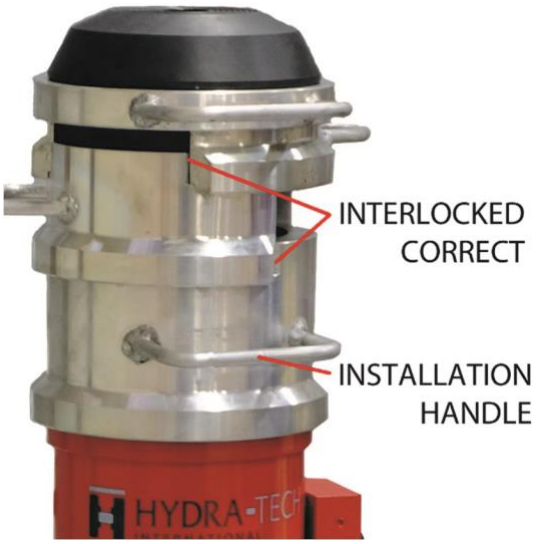
The intended function of the load holding ring is to provide a mechanical support and to achieve the Support stand Certification as per ASME PALD-2005

⚠ **NEVER WORK NEAR A LOAD THAT IS NOT PROPERLY SUPPORTED!**

CORRECT INSTALLATION OF LOAD HOLDING RINGS

a) Prior to performing the lift, ensure that the mating surfaces of the cylinder top, base ring and load rings are free of dirt.
b) Incrementally place load rings as the ram lifts the load, placing taller rings first and shorter rings last. Install the rings when the LIFTSTAND is stopped and the load is deemed stable – stay well back while the LIFTSTAND is lifting.
c) Always use handle on load rings while placing.
d) Retract the cylinder rod so that the load is at the correct height and the last ring has been placed, to ensure the load is being supported by the rings, and not the hydraulic cylinder.

⚠ **The 1" Top Load ring must always be used to lock the saddle to the load rings**



LOAD RING STATEMENT

HYDRA-TECH International Corporation states the following:

The HYDRA-TECH Lift Module / Load Holding Ring column will support a load at least 2 times the rated capacity of the Lift Module when all of the following requirements are met:

a) The LIFTSTAND is positioned on a flat, horizontal surface, sufficient load bearing capacity to support 2 times the rated capacity of the LIFTSTAND without settling or subsiding, and is;
b) Fitted with Load Holding Rings correctly positioned and on which the mating surfaces are free from debris and the cylinder rod is from supporting the load, and is;
c) Loaded in a manner which does not exert a side load or bending moment on the Cylinder / Load Holding Ring column, and is;
d) Not subjected too external, lateral forces such as side winds against the supported load, impact from other machines, etc.;

The MOD-U-LIFT LIFTSTAND load rings are certified to ASME PALD-2005

No other claim expressed or implied of any kind, including suitability for any particular application or use is made by HYDRA-TECH, or may be made on behalf of HYDRA-TECH by its agents or representatives.

SECTION 6 – LOWERING LOAD

Before you start to lower the load

If there is any possibility that someone may have added oil to the reservoir, check to make certain that the tank will have sufficient capacity to accept the oil from the cylinder. If there is any doubt, open the breather-filler plug on the tank, and monitor the oil level as the ram retracts; to be sure there is room in the tank.

RE-ATTACH THE POWER MODULE

CLAMP SYSTEM

a) Roll the Power Module to the LIFTSTAND and rotate the Power Module to the rear so that the lower portion of the Power Module mating plate will fit in the lip at the bottom of the Lift Module mating plate.
b) Rotate the Power Module forward and lower the clamping lever to clamp the two plates together.
c) Rotate the spring loaded pin 90 degrees and insure that it snaps into place to secure the clamping lever. Re-connect the quick couplers making certain they are completely seated. (see page 6.) Retract and pin the support leg.

LEVEL SCOOT

- See illustrations included in this manual.

LOWER THE LOAD

a) Place the control valve lever in the advance (raise) position.
b) With the remote control, extend the ram sufficiently to remove the first Load Holding Ring.
c) Continue to remove the rings one at a time lowering the load each time until the load is off the lift stand.
d) The Load Holding Rings should be stacked on the handle bracket beginning with the shorter rings at the bottom, and moving to the taller rings at the top.
e) Rotate the control valve to the retract (lower) position. Start the Pump to retract the ram.
f) Important: When the ram is fully retracted, stop the motor and rotate the control valve to advance. Jog the motor to advance the ram slightly (approximately 1/8” (0.3cm)). This eliminates pressure buildup in the ram during storage.
g) Swing the control valve lever to the retract position and to the advance position to bleed all the pressure from the lines. This will ensure that there will be no pressure locked in the topside of the ram or the hoses.

SECTION 7 – EXTENTIONS

Cylinder Rod Extensions are available in various heights, and are rated for the maximum lifting capacity of the LIFTSTAND only under the following circumstances:

- ⚠ THERE IS NO SIDE LOADING.
- ⚠ NOTE: ONLY ONE EXTENSION, IN COMBINATION WITH A SINGLE BASE, SHOULD EVER BE USED AT A TIME. DO NOT STACK EXTENSIONS!
- ⚠ Less than the above circumstances will reduce the capacity of the extensions. Combinations of negative circumstances such as those outlined below will cause exponential reductions in capacity.
- ☐ Install Extension adapter and secure with center bolt.
- ☐ Install Extension onto adapter, and insert retaining pin.
- ⚠ DO NOT USE MOD-U-LIFT JACK EXTENSIONS ON MOD-U-LIFT LIFTSTANDS.

SIDE LOADING

- ⚠ Wind Loading
- ⚠ Tire removal
- ⚠ External Machinery

EXTENSION LENGTH

An 8” (20.3cm) extension stack is less resistant to side loading than a 4” (10cm) extension.

⚠ IMPORTANT

Every lift must be set up with maximum safety in mind. The lifting saddle should be positioned to start as close to the Lift pad as possible.

The MOD-U-LIFT LIFTSTAND SERIES allows the operator to separate the Lift Module and place its much lighter weight on a base, to enable the operator to complete the lift using as little ram stroke, or using the shortest extension possible. This is the safest approach and should be used if there is any doubt about the total load to be lifted, or the possibility of side loading the ram or extensions.

SECTION 8 – PUMP SYSTEM

Two types of pumps are offered with the Mod-U-Lift LIFTSTAND. These are air powered and electrically powered versions.

AIR POWERED PUMP

⚠ **Air Supply Requirements: Minimum 50 CFM (1.4 M3/min) & 80 PSI (5.5 bar) with 100 PSI (7 bar) maximum.**

a) Inspect all air hoses for signs of wearing or damage.
b) Securely fasten the air hose to the air inlet bracket, with the valve in the closed position.
c) Put the directional control valve into the neutral position, in between Up and Down.
d) On the filter lubricator assembly, check to see if there is an adequate amount of lubricating fluid and that the filter is clean and intact.

SET THE DRIP RATE ON THE LUBRICATOR

a) Slowly open the air valve, allowing the flow of air through the motor.
b) Visually inspect the rate at which lubricating fluid is fed into the system and rotate the rate control valve till the lubricator drips once in approximately ten seconds.

ELECTRICALLY POWERED PUMP

⚠ **Electrical Supply: 115 volts, 1.5 HP, 15 Amps, or 230 volts 1.5 HP, 8 amps**

a) Do not tamper with electrical components.
b) Do not open motor control box while the LIFTSTAND is plugged in!
c) When cleaning the equipment take care to keep electrical components dry.
d) Check the brush indicator light prior to use, if the light is off the brushes are still functioning properly.
e) Visually inspect the attached power cord for damages prior to plugging in the Lift Stand.
f) Ensure you are using an adequate power cord, refer to the table below.

⚠ **If using a portable welder, ensure that the lifting equipment is unplugged prior to use. This prevents grounding through the motor on the Lift Stand.**

⚠ **Starting current for motors can be up to 2 times the operating current. Use the correct breaker size.**

ELECTRICAL CABLE SIZING

Ensure the proper cable size is used. Failing to properly size the cable can result in over heating of the cable, motor, or a low voltage at the motor causing high current and burnout.

Current At Full Load (Amps)	Cord Size AWG (mm²) 3.2 Volt Drop			
	Length of Cord			
	0-25 feet (0-8 m)	25-50 feet (8-15 m)	50-100 feet (15-30 m)	100-150 feet (30-45 m)
6	18 (.82)	16 (1.33)	14 (2.09)	12 (3.32)
8	18 (.82)	16 (1.33)	12 (3.32)	10 (5.37)
10	18 (.82)	14 (2.09)	12 (3.32)	10 (5.37)
12	16 (1.33)	14 (2.09)	10 (5.37)	8 (8.37)
14	16 (1.33)	12 (3.32)	10 (5.37)	8 (8.37)
16	16 (1.33)	12 (3.32)	10 (5.37)	8 (8.37)
18	14 (2.09)	12 (3.32)	8 (8.37)	8 (8.37)
20	14 (2.09)	12 (3.32)	8 (8.37)	6 (13.30)
22	14 (2.09)	10 (5.37)	8 (8.37)	6 (13.30)
24	14 (2.09)	10 (5.37)	8 (8.37)	6 (13.30)
26	12 (3.32)	10 (5.37)	8 (8.37)	6 (13.30)
28	12 (3.32)	10 (5.37)	6 (13.30)	4 (21.29)
30	12 (3.32)	10 (5.37)	6 (13.30)	4 (21.29)

PREVENTATIVE MAINTENANCE

With all equipment preventative maintenance is a necessity to ensure proper and safe operation of the equipment.

⚠ **Lifting and load supporting equipment; failing to provide proper inspections and maintenance could result in serious injury.**

DAILY CHECKLIST

a) Check lubricator supply oil
b) Check hydraulic oil level, Cylinder in the retracted position.
c) Visually inspect for bent or damaged components, hoses or fittings, and hydraulic leaks etc.
d) Visually inspect all air or electrical cables for damage
e) Tighten loose bolts and fittings as required.
f) Under no load, fully stroke the LIFTSTAND system.
g) Inspect all load rings, and extensions for damage

LEVEL 1 MAINTENANCE

Recommended every 12 months depending on usage

a) Clean unit
b) Inspect for leaks
c) Change Hydraulic Oil
d) Change filter in lubricator system

e) Check for any loose bolts & tighten as required
f) Check for any cracks on the equipment
g) Replace damaged or missing safety decals
h) Inspect hoses for damage
i) Check for any loose fittings and tighten as required
j) Check condition of air connection quick coupler or electrical cord

LEVEL 2 TESTING AND RE-CERTIFICATION

Every 3 years the LIFTSTAND should be returned to Hydra-Tech to have a recertification completed. This will include a tear down inspection, rebuild/replace as necessary, and a complete load test.

REPAIR

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

RECOMMENDED HYDRAULIC FLUIDS & LUBRICATING FLUIDS

(For ambient temperatures from -20°F / -29°C to 12QOF)

- 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 / -43°C, viscosity 150 SUS@ lOOOf
- Viscosity 45 SUS @ 210°F / 99°C
- Viscosity index 150, and anti-corrosion, anti-foam, anti-oxidant, anti-rust, anti-wear and demulsifier additives

For air powered units the recommended lubricating fluid for the air motor is:

- F442 Turbine Oil

STORAGE

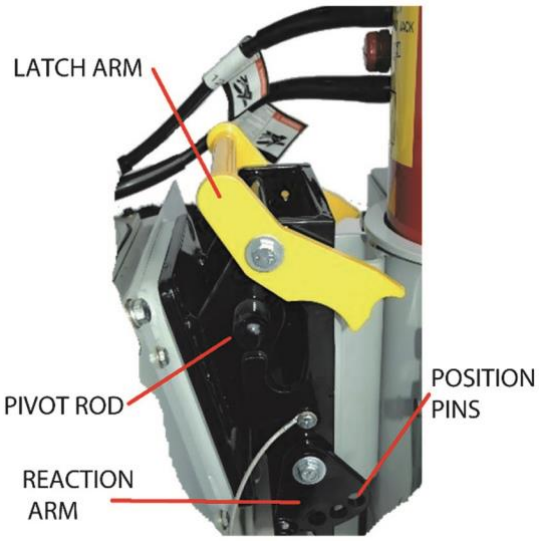
To reduce potential wear and keep the Mod-U-Lift LIFTSTAND System in specified working order, it is recommended that the equipment be stored in a dry, covered location, where it is protected from the elements and potential environmental hazards. When the Mod-U-Lift System is being stored it should be 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.

SECTION 9 – LEVEL SCOOT

The level scoot bracket is a mounting mechanism that is designed to securely lock the Mod-U-Lift Power Module to the Lift Module and disconnect the two quickly and with ease.

This system consists of:

- Pivot Rod
- Position Pins
- Latch Arm
- Reaction Arm



The level scoot bracket is designed to be configured in three different positions. This allows for easier maneuvering of the lift unit in the workspace. This is done with the reaction arm and position pins.

Refer to illustration 1 (Right) for position designations.

- Position 1, the lift unit will be moved in a straight tilt.
- Position 2 offers ½" (1.27cm) of level clearance over the ground.
- Position 3 offers 1" (2.54cm) of level clearance over the ground.

ATTACHING THE LEVEL SCOOT

a) Insert the two pins into the reaction arm, in the desired position for best maneuverability. Ensure that the pins are attached to the bracket with a cable to prevent them from being lost.
b) Maneuver the power module so that the pivot rod on the power modules bracket pushes the latch arm back and moves into the groove. Refer to illustration 2 (right).
c) Inspect to confirm the latch arm has returned to the vertical position, locking the pivot arm in place. Refer to Illustration 3 for an example of a properly secured level scoot bracket.

DETACHING THE LEVEL SCOOT

⚠ **LOWER AND SECURE THE POWER MODULES FOOT! Refer to the illustration 4 (below).**

a) Disconnect the hydraulic hoses between the lift module and the power module.

b) Remove the two pins from the reaction arm, allowing it to swing freely. Ensure that the pins are attached to the bracket with a cable to prevent them from being lost.

c) Apply light pressure to the power module handle in the direction of the lift until pressure is removed from the latch arm. Then turn the latch arm in the direction of the power module and lower the power module onto the support foot.

d) The power module can now be maneuvered away from the lift.

SECTION 10 - TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Jerky action	-Air in system -Internal leakage in cylinder -Low oil level in reservoir	** Cycle cylinder fully up and down -Have lift module serviced - Bring oil back up to proper level
Pump operates but will not move piston/ raise load	-Low oil level in reservoir -Filter screen is plugged -Relief valve(s) are set wrong -Control valve needs serviced	-Check oil level in reservoir. Add oil and bleed the system -Clean screen and reservoir. -Have unit serviced -Service control valve
Piston extends but will not retract	-Retract couplers not seated -Pump not developing enough pressure to operate the load holding valve	-Remove pressure from lines, disconnect, clean, and reconnect couplers, confirming seal (page 6)
Noisy pump	-Low oil level in reservoir -Air in system -Worn pump	-Bring oil to proper level -Check pump intake tubing and seals for places where air may enter -Cycle cylinder fully up and down -Have serviced by a qualified technician
Ram extends part way and stops	-Low oil level in reservoir -Couplers not seated -Cylinder is damaged	-Bring oil to proper level -remove pressure from lines, disconnect, clean, and reconnect couplers, confirming seal (page 6) -Have Lift Module serviced
Cylinder or fitting leak oil	-Seals worn/damaged fittings loose	-Have serviced by qualified technician
Oil vents from cylinder port relief valve when raising ram	-Couplers not seated or defective -Faulty relief valve	-If screw style, tighten coupler so female collar is up against shoulder of male coupler -Replace if defective -Have unit serviced
Cylinder advances more slowly than normal	-Oil too thick or dirty -Restricted hose or fitting -Needle valve on optional manifold closed -Pump worn -Cylinder worn -Quick coupler not fully tightened	-Change to clean oil of SAE weight suitable for temperature -Open needle valve -Isolate and replace -Have Pump Modules serviced -Have Lift Modules serviced -Retighten couplers

SECTION 11 – 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.

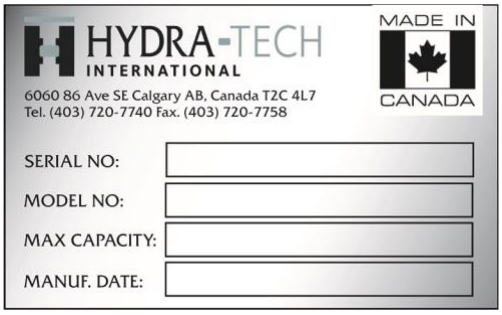
ii. Repair of allegedly nonconforming or defective products. Should Seller provide Initial Acceptance of Buyer's warranty claim and elect to repair and/or permit the repair of the allegedly nonconforming or defective products (or component parts thereof) by approved third parties, or should Seller elect 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.

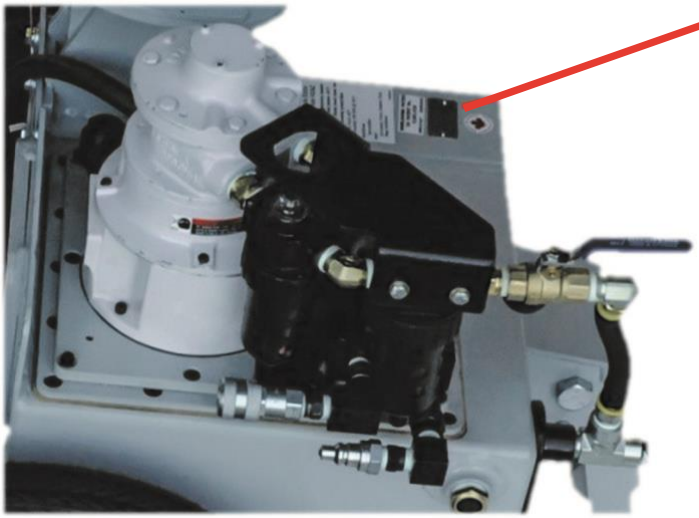
iii. Inspection of allegedly nonconforming or defective products. Should Seller provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently determine that the alleged nonconformity or defect is not covered under this

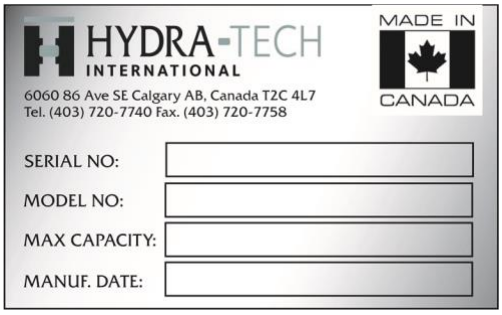
Standard Warranty, Seller shall bill Buyer, and Buyer shall pay Seller any and all costs associated with the performance of inspection of allegedly nonconforming or defective products.

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.

IDENTIFICATION







EMPLOYEE CERTIFICATION SHEET

PLEASE SIGN AFTER THE MANUAL HAS BEEN READ.

The MOD-U-LIFT SYSTEM 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 MOD-U-LIFT SYSTEM.

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 10.

The information contained on each of these pages is important, however, the information in bold letters, underlined, 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.

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