

herkules™

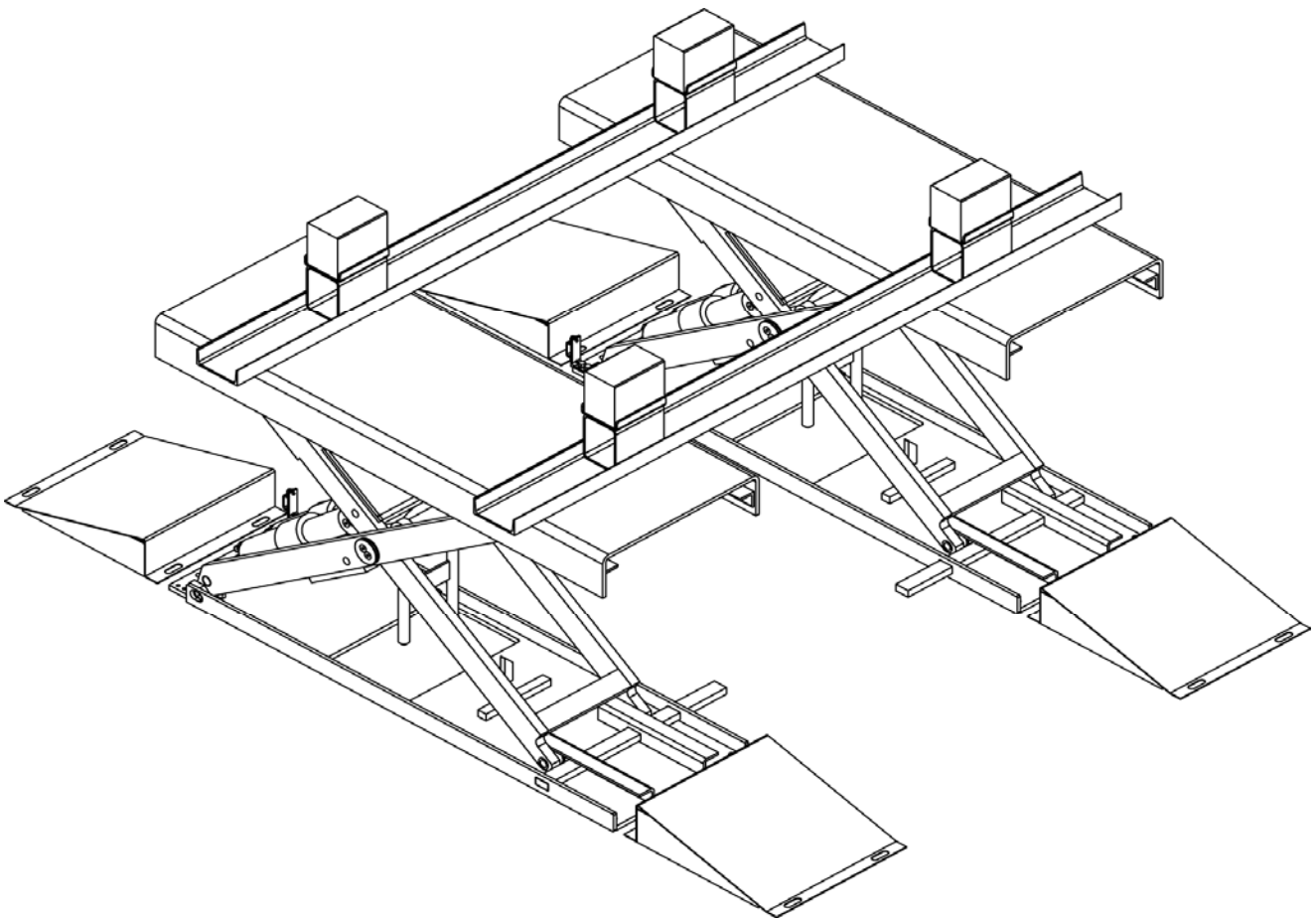
OWNERS MANUAL



This manual contains important information concerning the installation and operation of the equipment listed below.
Read manual thoroughly and keep for future reference

INSTRUCTIONS

HYDRAULIC SCISSOR LIFT PLATFORM



M0847 (T0032).xlsx

Herkules Equipment Corporation
248-960-7100
website: www.herkules.us

2760 Ridgeway Court
800-444-4351

Walled Lake, MI 48390-1662 USA
Fax 248-960-7109

e-mail: info@herkules.us

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Warning:

This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions

Caution:

This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

Limited Liability Warranty:

The limited liability warranty applies to the drive motor system, belts, belt drive system, bearings, anti-fall system, ball screw, pump system and pneumatic chambers of our Herkules lifts to the initial user against defective materials for a period of one year from the proof of purchase date.

This warranty does not apply to equipment damaged from accident, abuse, overload, misuse, negligence, improper installation, abrasive or corrosive materials, or shipping damage.

In the event of failure, the defective item must be returned, freight prepaid, to the Herkules manufacturing plant for repair or replacement. If repairs are required Herkules will not be liable for these repairs to take place in the field regardless of the application. Proof of purchase and date of purchase must be confirmed. An RGA number (Return Goods Authorization) and written approval from Herkules must be obtained before any goods can be shipped to Herkules. We reserve the right to determine whether the cause of failure is due to defective material, normal wear, and/or other causes.

There are no warranties which extend beyond the description on the face hereof. Herkules disclaims any warranty of merchantability or fitness for a particular purpose in connection with the Buyer's purchase of any Product under this agreement. Damages are limited to the sales price of the Herkules system.

The terms and conditions herein represent the entire agreement between Herkules and the Buyer. Any prior / future representations do not apply.



www.enkon.pro

www.herkules.us

1-800-444-4351

GENERAL OPERATING INSTRUCTIONS

- 1** The equipment is designed solely in accordance with buyer's specifications and technical operating parameters. By using the equipment, buyer acknowledges and agrees that it has inspected the equipment; is satisfied that the equipment is of the size, design, capacity, description and manufacture selected by buyer; compliant with buyer's specifications and technical operating parameters; and solely fit for its intended purposes. Buyer acknowledges and agrees that the manufacturer shall not be liable to buyer, or any operator, for any injury, loss, damage, or expense of any kind or nature caused, directly or indirectly, by the use, operation, or maintenance of the equipment which has been modified or is otherwise not in compliance with the equipment specifications and technical operating parameters, and buyer agrees to indemnify and hold the manufacturer harmless from any such claims.
- 2** Read and understand all warnings, cautions, and instructions in the manual and tags before operating equipment.
- 3** Inspect equipment prior to use; repair or replace damaged or broken components. Keep system lubricated for proper function.
- 4** This lift is designed and engineered to be operated at a predetermined amount of duty cycles per day as specified in the manual or the Herkules approval drawing.
- 5** This lift is designed and engineered to be exclusively center loaded unless otherwise specifically specified in the manual or the Herkules approval drawing.
- 6** Secure loads to lift in order to prevent moving or tipping of load.
- 7** Install lift system only on flat, level surfaces as noted in the installation instructions. If improperly installed, lift system is subject to excessive wear, reduced life span, and lift failure.
- 8** Do not operate lift until unit has been correctly installed and adjusted as described in the manual.
- 9** Ensure proper function of safety and maintenance devices regularly.
- 10** See manual for proper use of maintenance stops.
- 11** It is the responsibility of the owner/operator to maintain legibility of all safety and instruction labels.
- 12** Herkules is not responsible for any personal injury or property damage resulting from owner/operator failure to follow instructions, cautions, and warnings.
- 13** See additional operating instructions, cautions, and warnings tags.

Warnings and Cautions — see other side of tag

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⚠ CAUTION

- 1 Keep clear of lift while in motion.
- 2 Do not operate lift while person(s) are on lift, unless it is a Herkules-engineered operator lift.
- 3 Use only manufacturer-provided replacement parts.
- 4 Maintenance stops are used for external lubrication maintenance only, lift must be unloaded.
- 5 Do not exceed rated load capacity.
- 6 This lift system was designed for a specified application. Personal injury and/or property damage may result if used outside of the original specification.
- 7 If this lift system is used outside the specification, it may not include all appropriate safety devices for your application. Compliance with all federal, state, OSHA, and local laws or codes are the responsibility of the end user.

⚠ WARNING

- 1 Lift can fail if damaged, misused, or overloaded. Use only if trained.
- 2 Death or injury can occur from improper use or care.
- 3 Inspect before use and observe rated load to avoid death or personal injury.
- 4 Always keep lift system free of all obstructions and debris.
- 5 Non-portable systems must be anchored to the ground with proper lag bolts; failure to do so could cause system to tip or fall, resulting in serious injury, property damage, or death.
- 6 Never, for any reason, put limbs or other body parts inside the lift unless safety/maintenance stops are properly engaged and overhead rigging is used.
- 7 Do not alter or modify any part of equipment.
- 8 Never use a damaged lift. Immediately remove damaged lifts from service until repairs are made.

Operating Instructions — see other side of tag

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**OPERATING INSTRUCTIONS
HYDRAULIC LIFT SYSTEMS****⚠ CAUTION**

- 1 The lift system should rise all the way to the top when the system has enough oil. The system should have its oil changed once per year.
- 2 Follow the procedure to reduce the amount of air trapped in the cylinders during installation and the initial powering of the cylinders. Failure to do so can result in unsatisfactory lift performance.
- 3 Do not adjust flow control valve from factory set position. If adjusted, the lift could travel faster than the desired safe speed, resulting in a lift malfunction and operator injury.
- 4 If post lift system is equipped with a post lift ratchet-locking anti-fall device, ensure the device releases before attempting to lower lift.

⚠ WARNING

- 1 Regularly inspect hydraulic cylinders and power system for damage. Damaged components could cause sudden failure of the lift system. Worn or damaged components should be replaced immediately with manufacturer-provided parts.
- 2 If system is leaking, remove it from operation immediately. Lock it out and tag it out of service.
- 3 Escaping fluid under pressure, even a pin-hole leak, can penetrate body tissue and cause injury or death.
- 4 If fluid penetrates skin, seek immediate medical attention.
- 5 Electrical wiring must comply with local code. Have a certified electrician make the electrical connection to the lift system power unit.

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Warning:

Ensure that all employees understand and follow instructions.

- Read and understand the owner's manual before using or serving the lift.
- The load must be removed from the platform and the maintenance props installed before any work is performed on the lift.
- Ensure that all safety and warning labels stay in place and are legible. See the labels page in this manual.
- Do not use the lift if any damage or unusual noise is observed.
- Always watch the lift and any load on it carefully when it is in operation.
- The platform's load must be center of mass loaded and evenly distributed on the platform.
- Do not perform any modifications to the lift without the manufacturer's approval. Failure to receive authorization for changes to the equipment could void the warranty.
- Maintenance and repair are to be done only by personnel qualified to perform the required work.
- Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, AW 32 hydraulic oil.
- Use only replacement parts either supplied or approved by the manufacturer.

RECEIVING INSTRUCTIONS

Every unit is thoroughly tested and inspected prior to shipment. However, it is possible that the unit may incur damage during transit. If you see damage when unloading, make a note of it on the BILL OF LADING. Remove all packing and strapping material, inspect for damage. IF DAMAGE IS EVIDENT, FILE A CLAIM WITH THE CARRIER IMMEDIATELY! Also, check the unit size, type of power unit, etc., to ensure the unit is correct for the intended application.

INSTALLATION INSTRUCTION

Review this entire page before installing the lift. Consult the factory in the event there are any questions or problems at the time of installation this must be documented in writing to the manufacturer.


The scissor-lift must be removed from the shipping wood and securely anchored to the floor before use!


- The standard model scissor lift table is suitable for use indoors in most industrial locations and many commercial locations, and is typically provided as a turnkey system. Anchoring the unit to the floor and an electrical supply is typically all that is required for installation.
- Modifications or additions to the lift without prior manufacturer's authorization may void the lift's warranty (see ANSI MH29.1, Safety Requirements for Scissor Lifts, section 12.6). The addition of ancillary equipment to the platform may necessitate that its load capacity be reduced.
- The installation must be made so that it complies with all the regulations applicable to the machine and its location. The end-user must verify that the supplied equipment is installed so it will be suited to the environment in which it will be used.
- Installation must be performed by suitably trained personnel with access to the appropriate equipment. The electrical aspects of the installation should be performed by an electrician.

Installation:


1. Locate lift on a level surface. If lift is not level shim lift table to a level position.
Note: It is recommended that grout or some other solid material be placed under the lifts to ensure that no bending or warping takes place between shims.
2. If the scissor lift is installed in a pit it is very important to take care that the energy supply lines are not damaged when placing the platform.
3. Anchor lift to floor using anchors.

Start-Up Operations


 **Warning:** Observe all safety regulations!

 **Warning:** The start-up and braking ramps as well as the frequencies planned must be agreed upon with the Engineering Department of Herkules. Improperly set values and ramps of the frequency converter will result in damage to the lifting table and its modules and the guarantee claims becoming null and void.

1. Install the scissor lift at the appropriate location as described.
2. If the scissor lift is installed in a pit it is very important to take care that the energy supply lines are not damaged when installing lift.
3. Remove packaging materials and remove transport safety devices.
4. Connect the power supply to the scissor lift and observe the motor rotation to ensure the electrical supply is connected correctly.

 **Caution:** Integrate limit switches in the controller, so that the system comes to an immediate STOP when the switches are triggered. The switching points of the limit switches must not be overrun. The lifting table must **NEVER** run against the mechanical stop points!


- 5 In the event that the lift table should mistakenly lower down during the cycle, all driving elements have to be checked and replaced, if damaged.
- 6 Ensure lift system is level with the use of shims or grout.


 **Caution:** The base frame must be aligned in the horizontal position with a maximum deviation of less than 0.04" (1 mm), since the durability of the lift, bearings and of the drivetrain depend on it. Herkules recommends using the pivot bearing blocks of the scissors and the wheel guides running rails in the base frame to align the lift system to the floor.

7 If not otherwise agreed upon in writing, fix the base frame after alignment of the lift table with appropriate materials to the floor. Attach the base frame at the anchor points of the lift to ensure a firm position of the lift table. The anchor points of the scissors should also be attached in lateral direction.

8 A test run must be made in an unloaded condition. The function of the limit switch installed in the base frame has to be checked prior to the start.

9 The system may then be loaded after securing the lift to the floor.

 **Caution:** All operators and service personnel must be properly trained!

 **Caution:** Non-compliance with these notes will result in considerable damage to the lift system as well as a reduced service life and will result in the guarantee becoming null and void.


OPERATION INSTRUCTIONS

Consult ANSI MH29.1, Section 12 for the owner's/user's responsibilities regarding the operation, care, and maintenance of this machine.


Ensure that all employees involved in the operation of this lift understand and follow the following instructions!

LOADING:

The load rating, in pounds, is shown on the machine dataplate located on the right corner of the hinged end of the platform. It indicates the net capacity of the lift with the load centered and evenly distributed on the platform.


 **Warning:** If the platform's rollers are not captured. Therefore, do not overhang any load at the hinged end of the platform that could cause the roller end of the platform to tip up and dump the load. For applications involving side or end edge loading, consult the factory.


Note: The addition of any ancillary equipment to the platform by third parties must be taken into account when determining the maximum working load to be placed on the table.


 **Warning:** Do not exceed the lift's load ratings. Permanent damage to the lift or injury to personnel could result from exceeding the listed capacity.


OPERATION:

Inspect the perimeter pinch point guards' operation daily.


 **Warning:** Keep all personnel clear of the machine when it is in operation. Be certain no part of any person or object is under any part of the platform before lowering the unit.


 **Warning:** Keep all personnel clear of the vehicle during lift operation. No person shall be inside the vehicle when the lift is in operation, or in a raised position.

 **Warning:** Operator must lower the lift onto the safety stops when leaving the lift in a raised position. Let the safety stops firmly touch the floor and stop the lift, do not remove all of the load from the hydraulic cylinders. Failure to do this can result in personal injury or damage to the lift.

 **Caution:** Always carefully watch the lift and any load on it when it is in operation. The lift is furnished with either a constant-pressure (dead-man style) push button (standard) or twin foot switch (optional) control.

ROUTINE MAINTENANCE & SAFETY CHECKS

 **Warning:** Care should be taken to identify all potential hazards and comply with applicable safety procedures before beginning work.

 **Warning:** Raise the platform and install the maintenance props before beginning any inspections or work on the unit.

Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment.

(A) BEFORE EACH USE INSPECT FOR THE FOLLOWING:

- 1.) Frayed wires
- 2.) Oil leaks
- 3.) Pinched or chafed hoses
- 4.) Damage or structural deformation to the structural members, the cylinder brackets, etc.
- 5.) Unusual noise or binding, or evidence thereof.
- 6.) Proper functioning of all limit switches, including those on the perimeter pinch point guard (if applicable).

(B) INSPECT MONTHLY FOR:

- 1.) The oil level. Oil should be to the bottom of the reservoir's fill hole with the lift in the fully down position.
- 2.) Worn or damaged hydraulic hoses and electrical wires.
- 3.) Pivot point wear.
- 4.) Rollers' looseness and wear.
- 5.) Integrity of the retaining rings on all rollers and at all pivot points.
- 6.) The integrity of the frame anchor bolts, and for cracks in the concrete around them.
(Non-portable table units only.)
- 7.) Looseness, wear, or damage to the casters' bearings, mounting hardware, or surface material.
(Portable units only.)
- 8.) Proper functioning of any hand- or foot-operated mechanisms.
- 9.) Proper water level in the battery.
- 10.) Unusual noises or movement during operation.
- 11.) All the information, safety, and warning labels being in place and in good condition.
- 12.) The need to clean off dirt and debris.

(C) YEARLY INSPECTIONS

The oil should be changed to reduce the chance of oil darkens, gritty, or milky color (indicating the presence of water). Replace with an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, AW 32.

THE POWER UNIT'S OPERATION

The electric/hydraulic scissor lift utilizes an electric motor directly coupled to a gear-type hydraulic pump to produce the needed fluid pressure and flow to allow the cylinders to perform the work of lifting the platform load.


A hydraulic manifold houses the hydraulic control components, and is bolted directly onto the gear pump.

The power unit's hydraulic components are all rated for 3,000 psi working pressure.

Important parts of the power unit include:


- The electric motor. AC Motors are available for operation three-phase.
- The hydraulic fluid. The system uses HO150 hydraulic fluid. Any anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F (ISO 32 at 40°C) such as AW 32.

ELECTRICAL SYSTEM


 **Warning:** Care should be taken to identify all potential hazards and comply with applicable safety procedures before beginning work. Fully lower or securely support the platform, and ensure that system pressure and power have been removed, before attempting to work on any of the hydraulic components!


Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment

HYDRAULIC SYSTEM


 **Warning:** Care should be taken to identify all potential hazards and comply with applicable safety procedures before beginning work. Fully lower or securely support the platform, and ensure that system pressure and power have been removed, before attempting to work on any of the hydraulic components!


Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment.

 **Caution:** Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an antiwear hydraulic fluid with a viscosity of 150 SUS at 100°F Aw 32.

 **Caution:** If system leaks or any part of the hydraulic circuit is replaced, the system must be bled of 100% of all air or damage will occur to the system.

TROUBLESHOOTING GUIDE

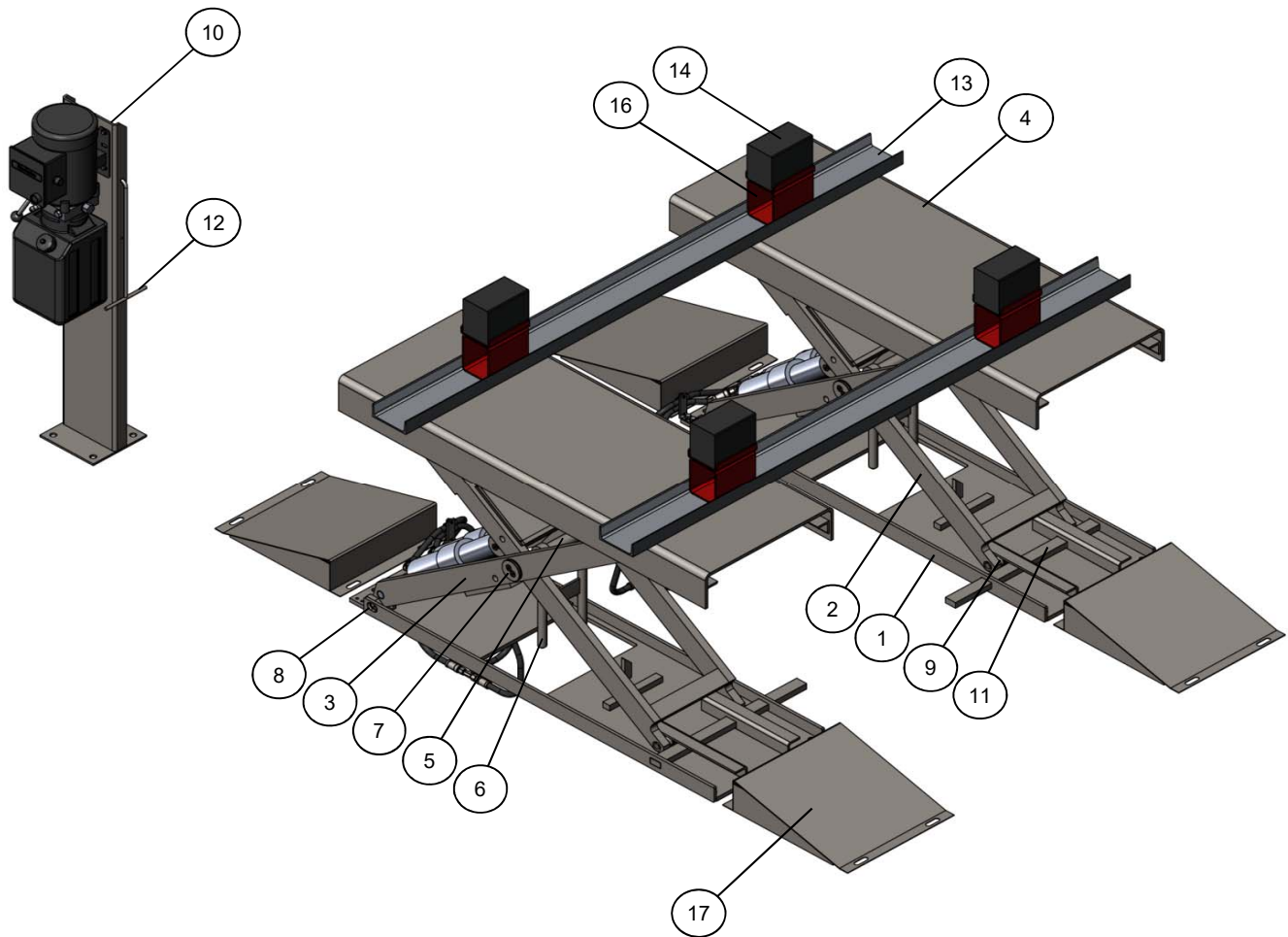
 **Warning:** Care should be taken to identify all potential hazards and comply with all applicable safety procedures before beginning troubleshooting or repairs.

 **Caution:** Before performing any troubleshooting or repairs, the load must be removed from the platform. Then either raise the platform and install the maintenance props or fully lower the platform to the floor.

Only qualified individuals trained to understand mechanical devices and their associated electrical and hydraulic circuits should attempt troubleshooting and repair of this equipment. Consult the factory for problems at time of installation, or for any problems not addressed in this manual.

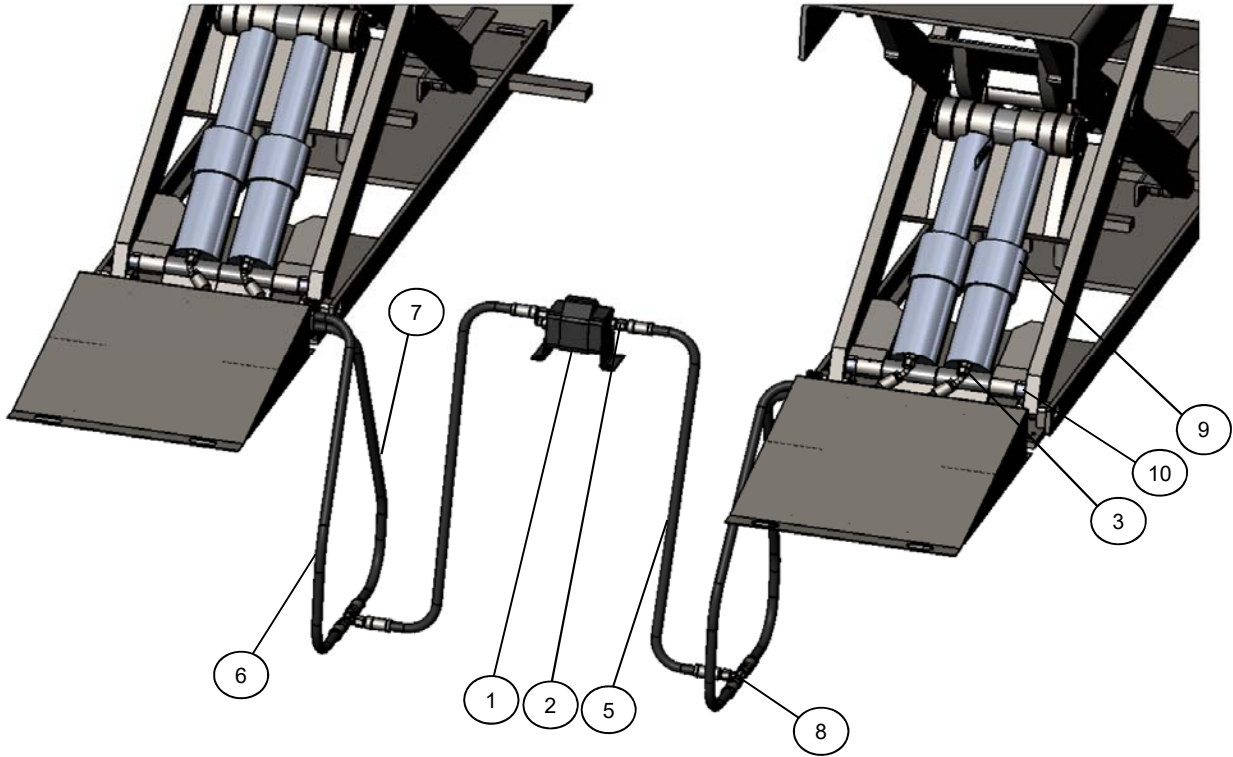
PROBLEM	POSSIBLE CAUSE(S)	ACTION
1) Problem unit doesn't run when UP button is pressed.	a) No supply voltage. b) Battery voltage low (DC units).	a) Test with meter. Check fuses, breakers, and overloads to determine the causes. b) Test with meter. Change battery if low (is motor relay LED on?)
2) Motor runs, platform doesn't move. Power unit not noisy.	a) Pump is failing to build pressure.	a) Consult factory.
3) Motor hums or pumps squeals, but the platform does not move, or the platform moves only slowly.	a) See last paragraph, above. b) Excess voltage drop to motor, due to power wire size too small, wire run too long, or incoming voltage too low. c) Motor is "single-phasing". d) Pressure relief opening at full pressure. e) Contamination holding open the lowering valve or the flow valve.	a) Same as above. b) Check power installation for adequacy. Check incoming voltage while motor is running. Correct problem found. c) Determine cause of loss of voltage on one phase; correct. d) Check for structural damage or binding of the scissor legs, etc. check for platform overload condition. e) Remove and inspect. Clean per instructions in this manual.
4) Platform raises, then drifts down.	a) See last paragraph, above.	a) Same as above.
5) Spongy or jerky platform movement.	a) Excessive air in the hydraulic cylinders.	a) Bleed air per procedures described in this manual.
6) Platform won't lower.	a) Solenoid coil is bad. b) Physical blockage of the structure. c) Solenoid valve or suction hose screen plugged.	b) Check with multimeter on diodecheck function. (Reading for ohms will not provide an accurate test of the coil.) c) Inspect for foreign material or objects that might block the leg set or its rollers. d) Remove and inspect. Clean per instructions in this manual.
7) Platform lowers too slowly.	a) Pinched hose. b) Flow control spool sticking.	a) Check pressure, supply, and return b) Remove plug from FC port; push on flow spool to ensure it is fully pressed into the cavity. Pull and clean the spool if necessary.
8) Platform lowers too quickly.	a) See last paragraph, above	a) Same as above.

T0032 Parts List



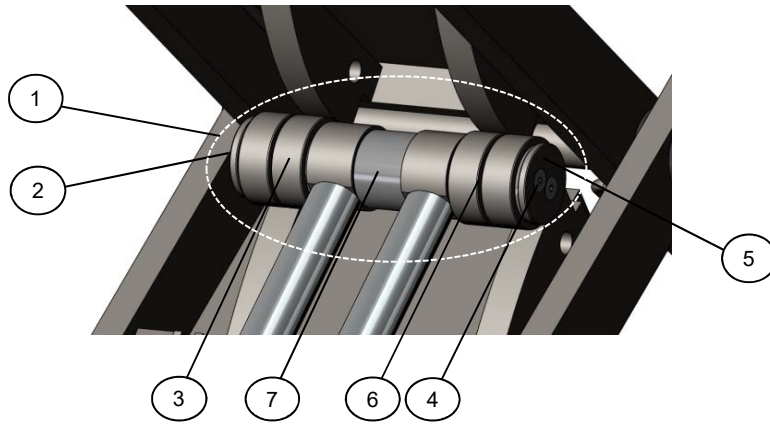
DET#	PART#	DESCRIPTION	QTY. IN LIFT	UNIT
1	16836	PLATE BOTTOM WELDMENT 16.6 X 55.13	2	EA
2	16838	SCISSOR INNER WELDMENT C≠D 12.25 X 52.13	2	EA
3	16840	SCISSOR OUTER WELDMENT A≠B 14.54 X 51.63	2	EA
4	16837	PLATE TOP WELDMENT 19.25 X 53.5 X 4.63	2	EA
5	1007122	SHAFT 1.5 OD X 14.790 W/ HOLES	2	EA
6	16524	SAFETY STOP WELDMENT	2	EA
7	1006700	END CAP 2-5/8 OD X 3/8 W/ HOLES	4	EA
8	1002627	PIN .750 OD X 2.125 CRS	8	EA
9	10881	WHEEL STEEL FOR TILT MODULE 10870	16	EA.
10	16844	CONTROL MOUNT ASSY HYD	1	EA
11	16410	SAFETY BAR 3/4 X 1-1/2 X 22 ST	2	EA
12	16525	SAFETY HOOK WELDMENT	1	EA
13	1004743	CROSS TUBE WELDMENT ALUMINUM	2	EA
14	1006207	BLOCK RUBBER 3-3/4 X 4-3/4 X 6-3/16	4	EA
15	994	BLOCK 3-7/8 X 5 X 1-1/2	4	EA.
16	15020	HEIGHT EXTENDER WLDMT 4 X 6 X 6 ST	4	EA
17	1002659	RAMP FOR T200	4	EA

T0032 Parts List



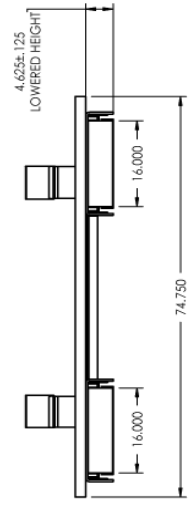
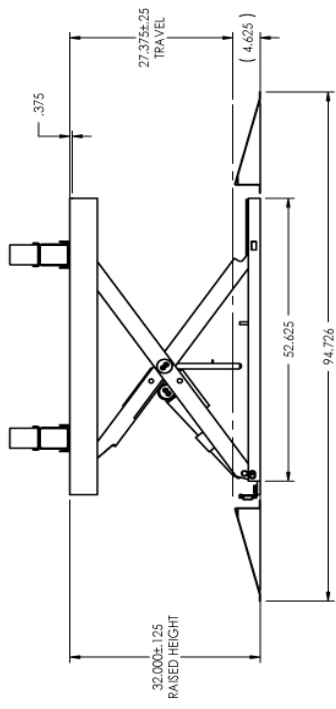
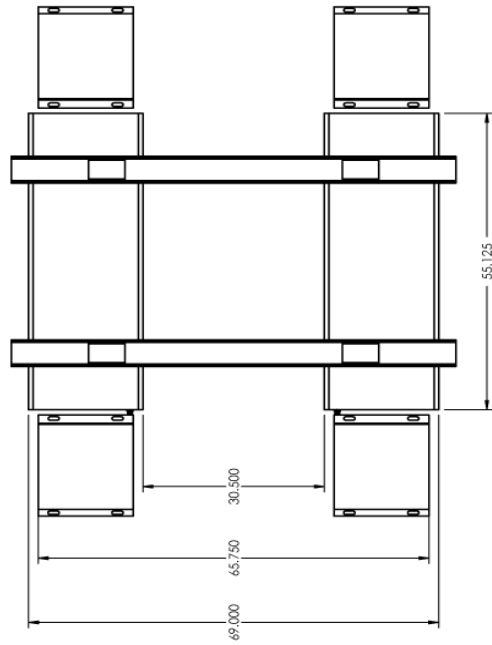
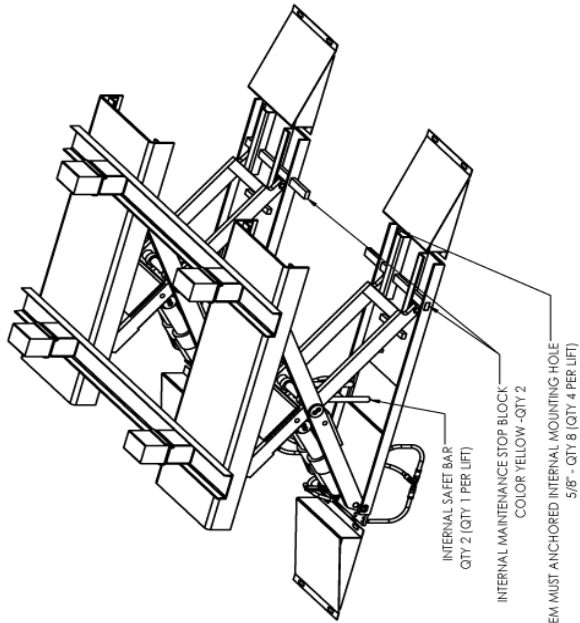
DET#	PART#	DESCRIPTION	QTY. IN	
			LIFT	UNIT
1	1007520	FLOW DIVIDER ROTARY GEAR 3.5 GPM	1	EA
2	1004508	CONNECTOR 3/8 NPT X 9/16-18 JIC	3	EA
3	1005937	CONN. 9/16-18 JIC X 9/16-18 O-RING	4	EA
4	1004982	HOSE ASSY 3/8 x 144" HYD 3000PSI	1	EA
5	1004661	HOSE ASSY 3/8 x 60" HYD 3000PSI	2	EA
6	1008017	HOSE ASSY 3/8 x 36" HYD 3000PSI	2	EA
7	1008015	HOSE ASSY 3/8 x 48" HYD 3000PSI	2	EA
8	1004951	TEE UNION 9/16-18 JIC STEEL	2	EA
9	16843	CYLINDER ASSY 2.5" BORE X 6.63" STK	4	EA
10	1007713	SHAFT 1 OD X 14.5	2	EA

T0032 Parts List



DET#	PART#	DESCRIPTION	QTY. IN LIFT	UNIT
1	16426	CARRIAGE ASSEMBLY 3 OD X 10	2	EA
2	1007160	SHAFT 1.5 OD X 9.35 W/ HOLES	2	EA
3	16114	WHEEL ASSY 3 OD X 1.5 ID X 1 ST	8	EA
4	1000613	BOLT FHSC 3/8-16 X 3/4 BLACK	2	EA
5	1006700	END CAP 2-5/8 OD X 3/8 W/ HOLES	4	EA
6	1007101	SPACER 2.5 OD X 1.51 ID X 0.1 PL	12	EA
7	1007161	SPACER 2.5 OD X 1.51 ID X 1.625	2	EA

PART #: T0032



LIFT SPECIFICATIONS

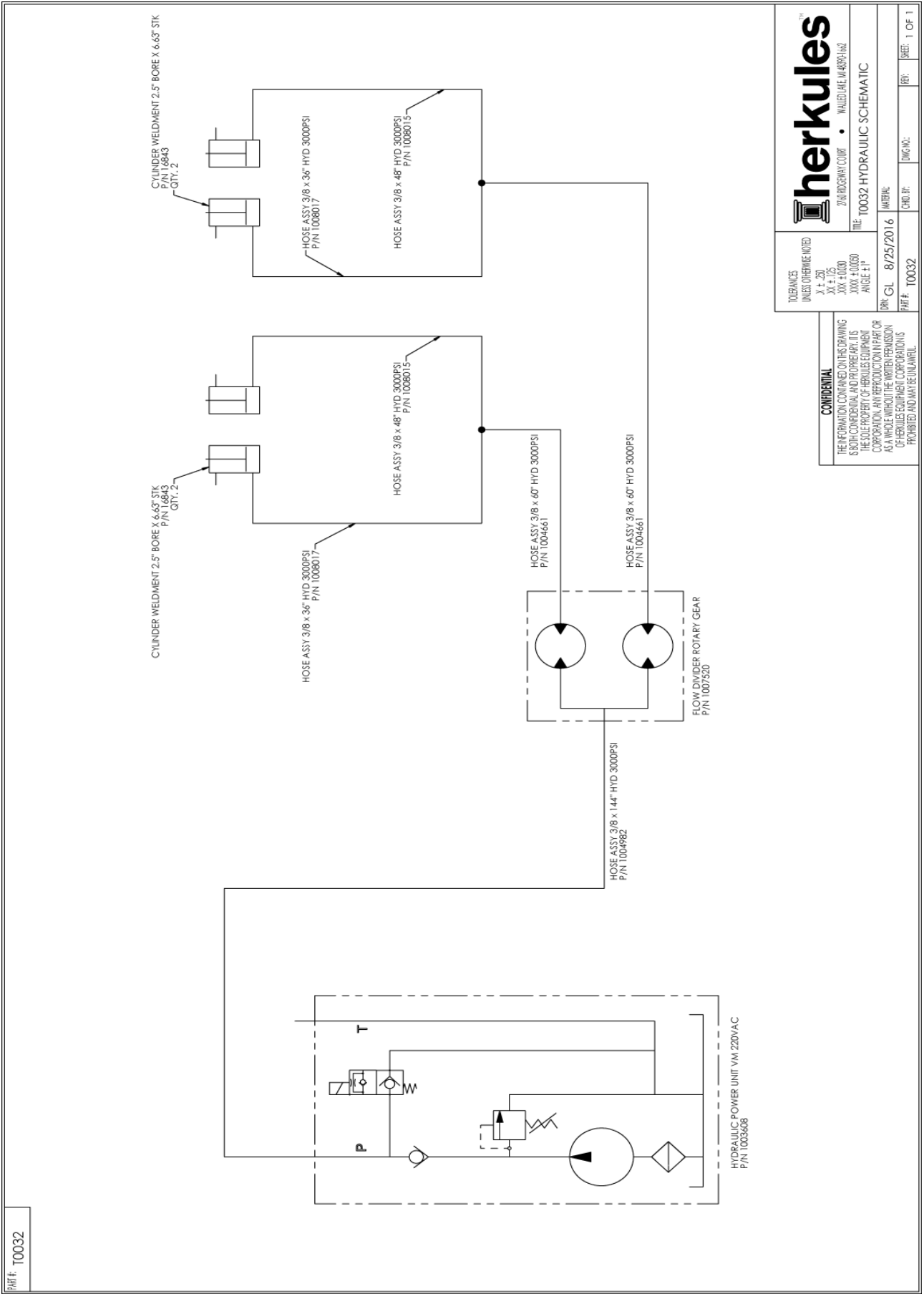
- CAPACITY: 8,000 LBS
- CONTROLLER: MANUAL
- CONTROLLER MOUNT: PEDESTAL
- SKIRT: NONE
- COLOR: HERKULES RED
- SCISSORS: HERKULES WHITE
- PEDESTAL: HERKULES RED
- SAFETY FEATURES: MAINTENANCE BLOCK - QTY 2
SAFETY BAR FEATURE - QTY 2
SAFETY HOOK - QTY 1

INTERNAL SAFETY BAR QTY 2 (QTY 1 PER LIFT)
INTERNAL MAINTENANCE STOP BLOCK COLOR YELLOW-QTY 2
SYSTEM MUST ANCHOR INTERNAL MOUNTING HOLE 5/8" - QTY 8 (QTY 4 PER LIFT)

CONFIDENTIAL
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		28180 ROYAL COURT • WALKER LAKE, WA 98916-1662	
TOLERANCES UNLESS OTHERWISE NOTED X ± .251 XX ± .125 XXX ± 0.030 XXXX ± 0.030 ANGLE ± 1°		TITLE: TANDEM HYDRAULIC LIFT	
DATE: 8/26/2016	DRAWING NO: 20162136	REV:	SHEET: 1 OF 1
PART #: T0032	DRAWING:	REV:	SHEET:

T0032 Layout Drawing



PART #: T0032