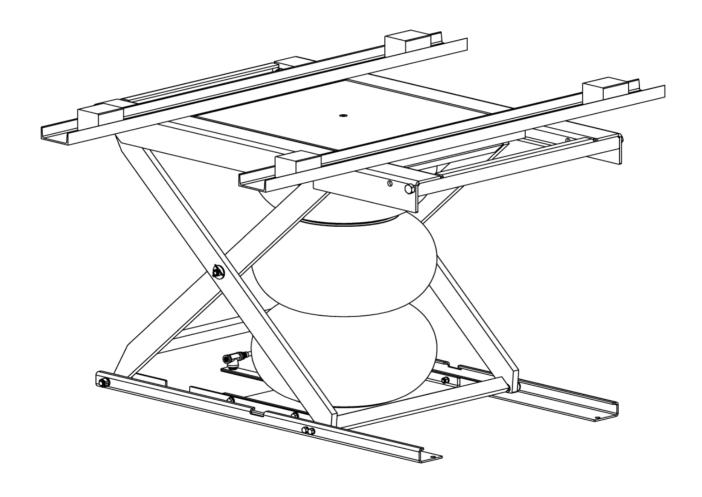
# **Inerkules**

**OWNER'S MANUAL** 



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

# VLA04



M0952-02 (VLA04 VEHICLE AIR LIFT) Herkules Equipment Corporation.xlsx

**Herkules Equipment Corporation** 248-960-7100

2760 Ridgeway Court 800-444-4351

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

website: www.herkules.us

Patents USA 7070167 4793369, 4960142, 5174317, 5193561, 5485860 Canada 1299468 & Patents Pending Made in the USA

e-mail: info@herkules.us



# **Herkules Equipment Corporation**

Herkules Equipment Corporation is the leading manufacturer of high-capacity, air-operated lifts. For more than 25 years Herkules lifts have been recognized worldwide for lifting capacity, durability, flexibility and ease of use.

Lifts powered by Herkules' proprietary Air-Bag™ technology are clean, environmentally friendly, and virtually maintenance free. Used in a variety of industrial and vehicle service applications, air bag lifts are hydraulic free and require only a compressed air connection. The heavy duty air bags are built for rugged daily use, giving your facility a lifetime of trouble-free operation.

In manufacturing plants, vehicle service shops and government facilities, Herkules air-bag lifts surpass all others for lift capacity, low cost of operation and absence of potential environmental hazards.

### **Table of Contents**

Warnings & Warranty	2 - 5
Installation	 6
Duty Cycle	 7
Duty Cycle Operation	7
Maintenance Instructions	 8
	 9
Troubleshooting Parts Layout Controller Layout	 10
Controller Layout	 11
Lift & Schematic	12- 16

### Warning Symbol

### **⚠** WARNING

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

### Caution Symbol

$oldsymbol{\Lambda}$	CAUTION
4	CAUTION

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

Model Number	
Purchase Date	
Distributor	



This product has patent protection under one or more of the following patent numbers:

7070167, 5485860, 5193561, 5174317 4960142, 4793369, 1299468 and Patents Pending

website: www.herkules.us

1002742



Serial Number

### **Limited Liability Warranty**

The limited liability warranty applies to the pneumatic chambers of our Herkules lifts and to the initial user against defective materials for a period of five years from the proof of purchase date. The limited liability warranty applies to other components 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.



#### **Tags - Operating Instructions**

# 🚹 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.

#### I. Tag - Danger stickers

# DANGER

If lift is utilized for overhead vehicle work then four quantity jack stands must be put in place to help support vehicle.

Operators not allowed under lift without the use of jack stands.





Do not put hands or feet under top.



Do not work under lift without maintenance device.



Do not stand, sit or ride on lift.

#### II. Tag - Operating Instructions (P/N 1006355) Front



www.enkon.pro

www.herkules.us

1-800-444-4351

#### GENERAL OPERATING INSTRUCTIONS

- 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

1006355



#### II. Tag - Operating Instructions (P/N 1006355) Back



www.enkon.pro

www.herkules.us

1-800-444-4351

#### **⚠** 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**

- L 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

1006355

#### III. Tag - Operating Instructions - Air (P/N 1006356)





www.enkon.pro

www.herkules.us

1-800-444-4351

# OPERATING INSTRUCTIONS AIR LIFT SYSTEMS

1 See general operating instructions, cautions, and warnings tag.

#### **△ CAUTION**

- **1** Do not use an air supply with pressure exceeding 120 PSI.
- 2 Do not continue to push control lever after lift is fully raised, even though safety valve will prevent overinflation of air bag.
- 3 Always use a clean, dry air supply that is properly filtered and regulated.

#### **⚠ WARNING**

- **1** Do not modify the pressure relief valve system.
- 2 Replace the pressure relief valve with a Herkules-supplied valve annually.
- Regularly inspect air bags and valves for damage. Damaged components could cause sudden failure of the lift system. Worn or damaged components should be replaced immediately with manufacturer-provided parts.

1006356



## Installation

STEP 1

Locate lift on a level surface in a position most convenient for the loading and unloading of vehicles.

STEP 2

Obtain 1/2 NPT connector compatible with the quick disconnect on your shop air line.

NOTE: Connector not supplied with lift.

STEP 3

Install hose to 1/2 NPT hose barb on foot control valve assembly (see fig.1).

STEP 4

After connecting your shop air line to 1/2 NPT hose barb test for proper operation.

NOTE: Must use clean, dry air only. Herkules recommends using a filter/regulator.

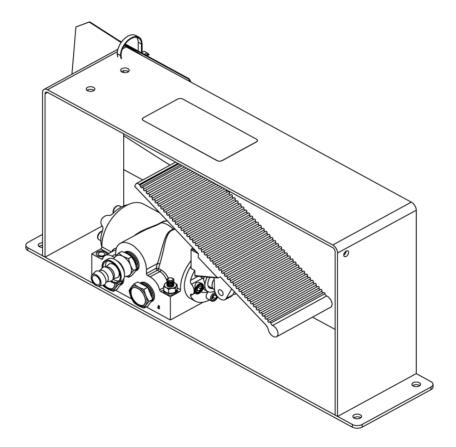


fig.1



## **Duty Cycle**

I. Lift Cycle Rating:

This lift is rated for 1 - 5 cycles per day maximum. For high cycle usage warranty does not apply.

II. Duty Cycle:

This lift is rated for approximately 7,000 - 10,000 cycles between repairs (MTBF). This lift is not rated for high duty cycles. Items that will need repair may include: 1) air bag, 2) safety ratchet, 3) scissors, 4) pivots, and 5) valves.

For heavy duty scissor lift systems that requires little maintenance Herkules recommends our Herkules Ball Screw or Belt Drive Scissor Lift Systems. These lift systems are designed and manufactured for high duty cycles and long life. Herkules recommends our electric Ball Screw or Belt Drive lift system for high cycle applications.

## **Operation**

#### STEP 1

Check the weight of the vehicle to be sure that it does not exceed the rated load capacity of the lift: 6,000 lbs.

#### STEP 2

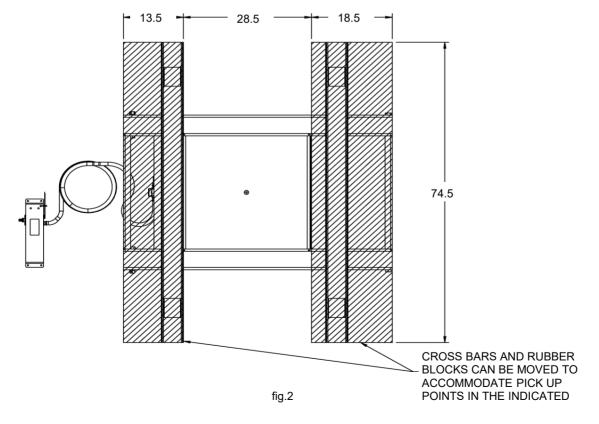
Position the vehicle over the lift so that it is approximately centered by weight over the center of the lift. Once the vehicle is in the desired position, set parking brake.

#### STEP 3

Insert cross bars - QTY 2 - onto the lift. Position cross bars under the vehicle manufacturer's recommended lifting points. (See Fig. 2)

The cross bars should be oriented with the center web pointing down and the "U" of the channel facing up. Position rubber blocks at each end of the cross bars under the vehicle lifting points.

NOTE: Do not exceed the rated load capacity of the cross bars: 2,500 lbs.





STEP 4

To raise the lift, move the lever of the hand controller assembly into the UP position. Hold the lever in the UP position until vehicle has reached the desired working height, then release. The mechanical safety arms will automatically fall into position as the lift rises.

Do not continue to push the control lever after lift is fully raised, even though safety valve will prevent over-inflation of air bag.

NOTE: Check the stability of the vehicle during the lifting process, and when vehicle is at desired working height. If vehicle is unstable, immediately stop the lifting process, slowly lower the lift and reposition cross bars.

STEP 5

To lower the lift, move the lever of the hand controller assembly into the DOWN position. Hold the lever in the DOWN position until the lift is completely lowered and the vehicle's wheels are on the ground. The mechanical safety arms will swing up during descent.

NOTE: Check the stability of the vehicle during the lowering process. If vehicle is unstable, immediately stop and diagnose the issue before continuing to lower the lift.

STEP 6

Once the lift is completely lowered, remove the rubber blocks and cross bars. Drive the vehicle clear of the lift.

### **Maintenance Instructions**

STEP 1

Check clamps and hose connections periodically for tightness to prevent air leakage.

STEP 2

Make sure all moving parts are clean and unobstructed by foreign objects.

STEP 3

Clean filter element every 3 months if applicable.

STEP 4

Grease and oil pivot points once every 3 months.

Lubricate daily if lift is in high cycle application.

STEP 5

Use 90-weight gear lube (SAE 85W 140 EP) to lubricate the pivots and shafts once every 3 months or as needed.

STEP 6

Lubricate lock mechanism pivot points every 3 months or as needed.

STEP 7

Use overhead rigging when any maintenance beyond external lubrication is required.

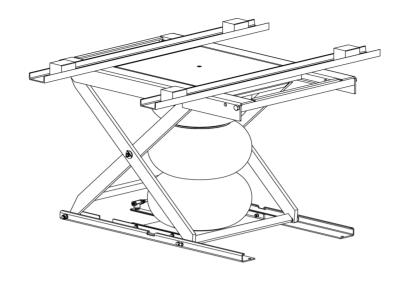


# **Troubleshooting**

Problem	Possible Solution
Lift will not go up	Check that air inlet is connected to the controller.
	2 Check to ensure lockout is not engaged (if purchased as option).
	3 Check air hoses to ensure no kinks or cuts in the line.
	4 Check to ensure no debris is preventing wheels from rolling in track.
	5 Check regulator gauge is set to minimum of 80 psi (if purchased as option).
Lift is making a hissing noise	Check all air lines to ensure they are properly connected and no leaks are occuring.
	2 Check pressure relief valve.  If pressure relief valve is "leaking" lower lift immediately. The air bag is in a state of over pressurization.
	3 Check air bag for cuts or holes.
Lift is making a squeaking noise	Lubricate center joints and wheel tracks.



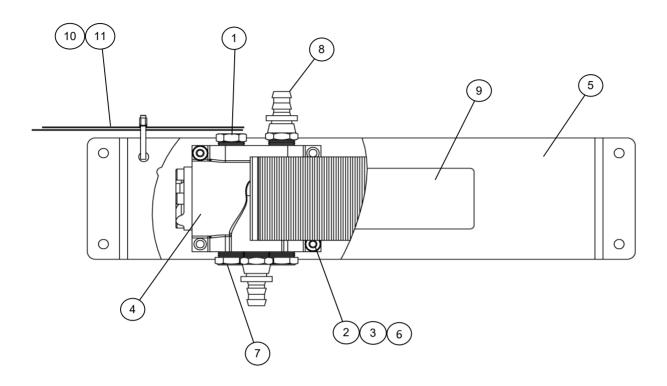
# **Parts Layout**



Part #	Description	Quantity Units	
17013	BOTTOM FRAME ASSY 37.28 X 60.5	1	EA.
17735	SCISSOR OUTER WLDMNT A≠B 34.96 X 58	1	EA.
17738	SCISSOR INNER WLDMNT C≠D 32.76 X 58	1	EA.
1008001	TOP FRAME WELDMENT 38.5 X 60.5	1	EA.
18303	AIR BAG ASSY TRPL 3.5 BAR REV. 03	1	EA.
1007868	WHEEL 1.565 OD X .765 ID STEEL	4	EA.
1002731	BLOCK WHEEL STOP FOR A1050	2	EA.
1001481	COTTER PIN 5/32 X 1.25 ZINC	2	EA.
1002626	TUBE 1.244 OD X .75 ID X 2.10 CRS	2	EA.
1002473	WASHER FLAT 3 OD X 1.313 ID X .1 Z	2	EA.
1008018	SPACER 3/4 IPS X 0.87 ST 2		EA.
1008019	SPACER 3/4 IPS X 1.37 ST	2	EA.
1008020	SPACER 3/4 IPS X 1.98 ST	4	EA.
12125	BOLT ASSY DRILLED FOR V-960	2	EA.
1001480	NUT SLOTTED HEX 5/8-11 Z	2	EA.
009-125	WASHER 2 OD X .8125 ID Z 3/4 USS Z	4	EA.
83F	BOLT HEX 1/2-13 X 1 GD 5 Z	4	EA.
1004835	BOLT FHSC 1/2-13 X 1-1/4 BLACK	1	EA.
1001193	WASHER LOCK 3/4	4	EA.
1002672	BOLT HEX 3/4-10 X 5-1/2 GD5 ,SHLDR 3-3/4" MIN. Z	2	EA.
1003386	BOLT HEX 3/4-10 X 6 GD5 Z	2	EA.
85H	WASHER LOCK 1/2 Z	4	EA.
1005454	NUT LOCK 3/4-10 BI-WAY Z	4	EA.
1008989	BOLT HEX 3/4-10 X 8 GD 9 Z	2	EA.
17034	TEE ASSY 1/2 X 3/4 NPT X 3.5 BAR	1	EA.
17024	CONTROL FOOT ASSY LIFT W/ NP EXH	1	EA.
100-332	HOSE 1/2" PUSH TO LOK	144	IN.
1007992	CROSS TUBE WELDMENT ALUMINUM	2	EA.
800-105	BLOCKS 120 X 100 X 80 MM	4	EA.
1006206	STICKER DANGER NO HAND/LEG UNDERTOP	2	EA.
1001371	STICKER 1-800 WHITE LARGE	2	EA.
1006222	STICKER MAXIMUM CAPACITY 6000 LBS	2	EA.
009-152	HERKULES LIFT SERIAL TAGS	1	EA.
1006355	TAG OPERATING INSTRUCTIONS (GENERAL)	1	EA.
1006356	TAG OPERATING INSTRUCTIONS (AIR)	1	EA.
1006323	STICKER BOX MODEL & SERIAL	1	EA.



# **Controller Layout**

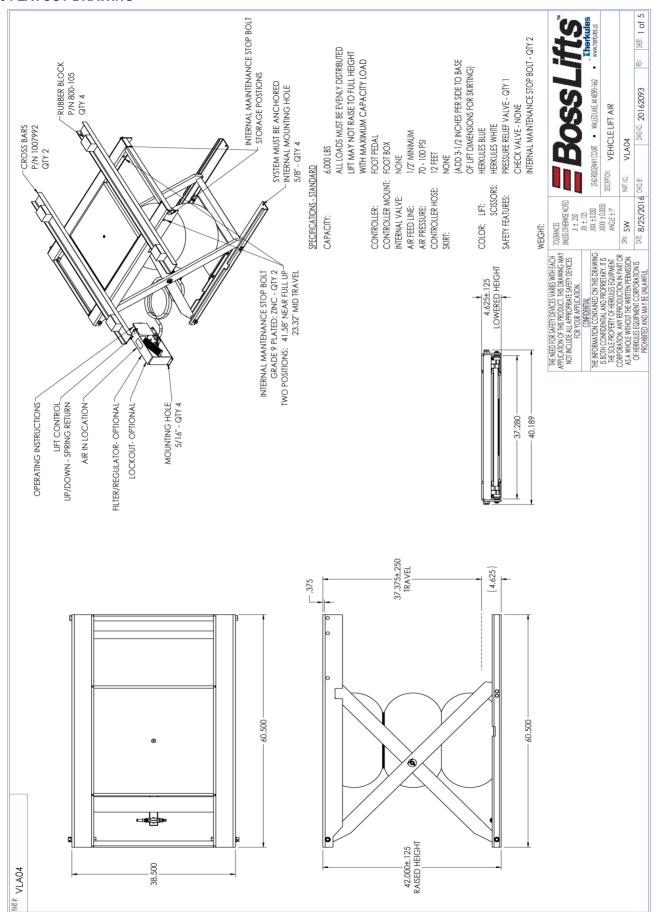


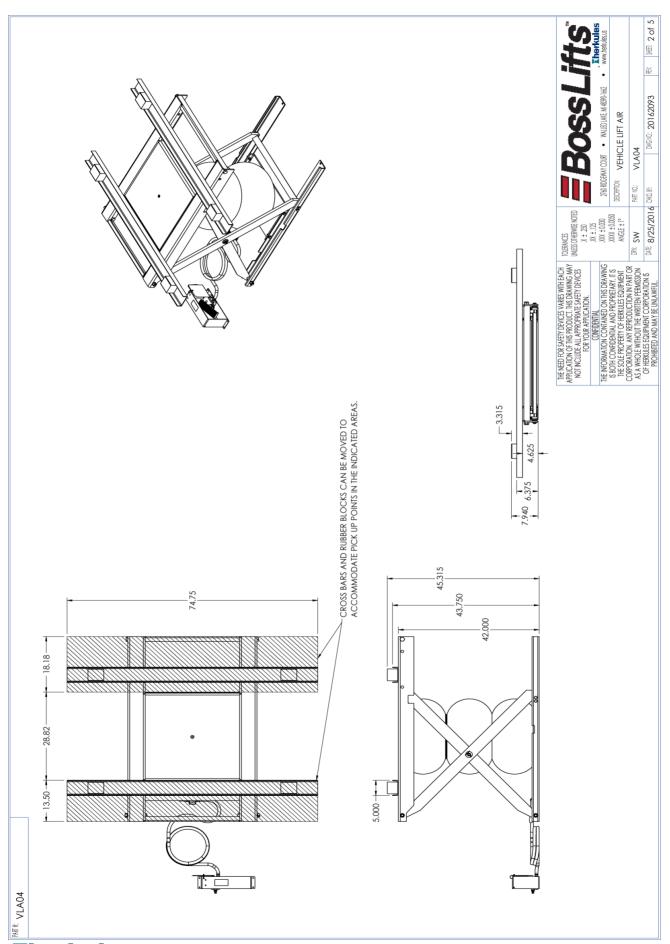
ID	Part #	Description	Qty	Units
1	59A	PLUG HEX 1/2 NPT BRASS	1	EA.
2	84	NUT HEX 1/4-20 Z	2	EA.
3	85	WASHER LOCK 1/4 Z	2	EA.
4	754	VALVE FOOT P5 POS3 SC OC 1/2NPT	1	EA.
5	10071	CONTROL MNT WLDMNT FOOT SNG	1	EA.
6	100996	BOLT FHSC 1/4-20 X 1-3/4 BLACK	2	EA.
7	1001602	VENT BREATHER 1/2 FOR LIFT CONTROLS	2	EA.
8	1003586	HOSE BARB PTL 1/2 X 1/2 NPT	2	EA.
9	1006365	STICKER LIFT UP/DOWN BLK IND.	1	EA.
10	1006355	TAG OPERATING INSTRUCTIONS (GENERAL)	1	EA.
11	1006356	TAG OPERATING INSTRUCTIONS (AIR)	1	EA.

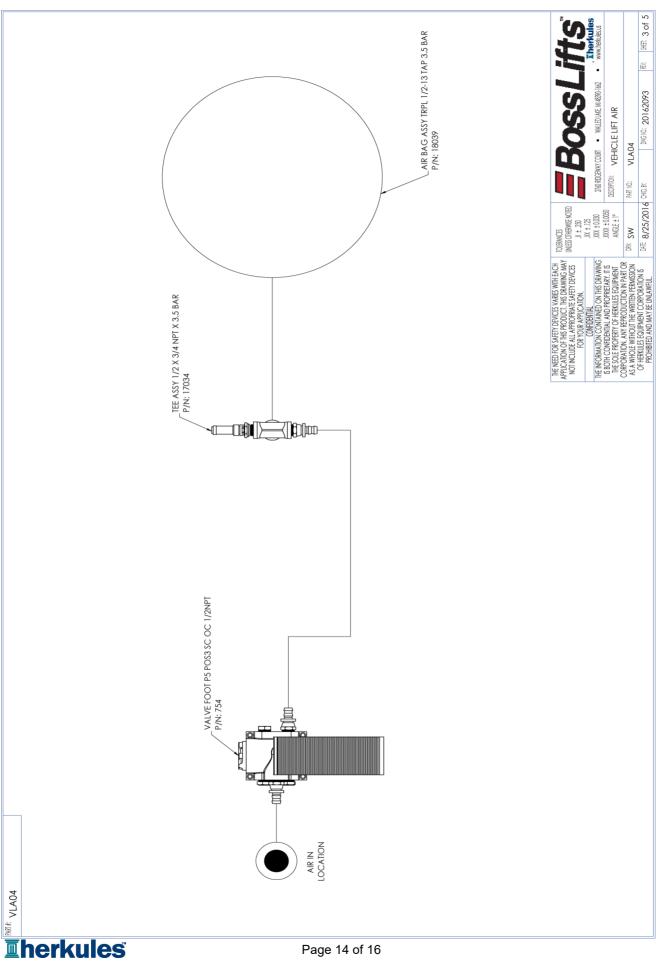
NOTE: Entire controller assembly is part number 17024.

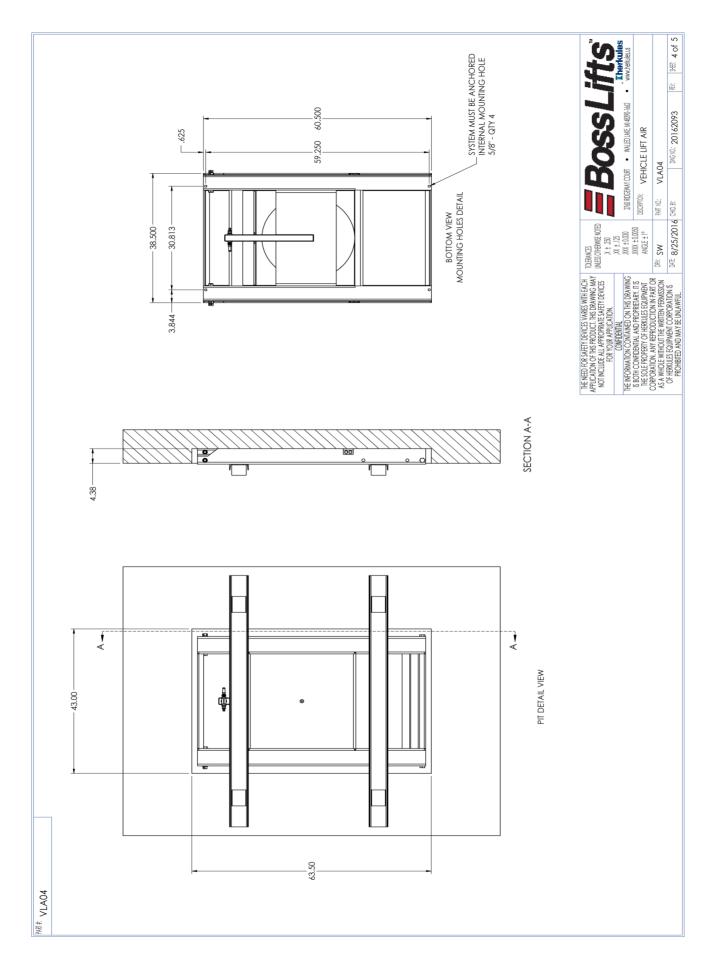


#### **VLA04 LAYOUT DRAWING**









NOTES:

LOW PROFILE AIR-OPERATED SCISSOR LIFT SYSTEM LIFT SYSTEM TYPE:

CYCLE SPEED:

40-80 SECOND (APPROX.) AMOUNT OF LIFT MOVEMENT 37.375 INCHES SPEED UP

CUSTOMER RESPONSIBLE FOR VALVES. THEREFORE, SPEEDS CAN VARY. 40-80 SECOND (APPROX.) SPEED DOWN **DUTY CYCLE:** 

ň

8 5 15 50 WEEKS / YEAR HOURS / SHIFT CYCLES / DAY SHIFTS / DAY DAYS / WEEK

LIFT MUST HAVE EVENLY DISTRIBUTED LOADS. 750 CYCLES / YEAR

LIFT IS PERMANENTLY RESTRICTED (STOPS WELDED IN PLACE) TO 4. 3.

REPEATEDLY TAKING PRESSURE RELIEF VALVE TO POP-OFF PRESSURE 37.375" OF TRAVEL AND MUST NOT BE TAKEN TO POP-OFF PRESSURE ONCE THE LIFT HAS REACHED THE RAISED HEIGHT WILL CAUSE WHEN RAISING LOAD TO THE FULL UP POSITION.

VALVES: 7.

DAMAGE TO THE LIFT.

INCLUDED INCLUDED **EXHAUST VALVE** FILL VALVE

œ

HERKULES AIR BAG IS PERMEABLE, LIFT WILL DRIFT

AIR BAG DRIFT:

APPROXIMATELY 2 INCHES OVER A 12 HOUR PERIOD.

MAINTENANCE STOPS ARE PROVIDED QTY - 2. MUST REMOVE THE LOAD AND USE OVERHEAD RIG TO BEGIN ANY INSPECTIONS OR WORK ON THE

SAFETY FEATURES:

9.

INTERNAL MAINTENANCE STOP BOLT QTY - 2 PRESSURE RELIEF VALVE QTY - 1 LIFTS WILL MOUNT TO THE FLOOR, MOUNTING HOLES 5/8" (4 QTY). TESTING PLAN:

11.

CYCLE TESTING WITH RATED LOAD FOR MINIMUM OF 10 CYCLES.

ESTIMATED WEIGHT IS APPROXIMATELY 800 POUNDS 13.

IN DAMAGE.
RESULT
INT WILL
ULL EXTEN
LIFT AT FU
OF THE
RIZATION
R PRESSU
4. OVEF
_

SAFETY INTERLOCKING/DESCENDING SYSTEM DESCRIPTION: 15

CONTROLLED DESCENT SHOULD THE AIR BAG SUDDENLY LOSE PRESSURE. WITHOUT SAFETY INTERLOCKING/DESCENDING SYSTEM IS USED TO ACHIEVE A SLOW THIS OPTION A SUDDEN LOSS OF AIR FROM THE AIR BAGS WILL CAUSE THE SYSTEM TO DROP RAPIDLY TO THE LOWERED HEIGHT.

THIS LIFT IS NOT EQUIPPED WITH A SAFETY INTERLOCKING/DESCENDING

و.

16. SYSTEM MUST BE SECURELY ANCHORED TO THE FLOOR OR DAMAGE WILL OCCUR TO THE

LIFT SYSTEM.





9