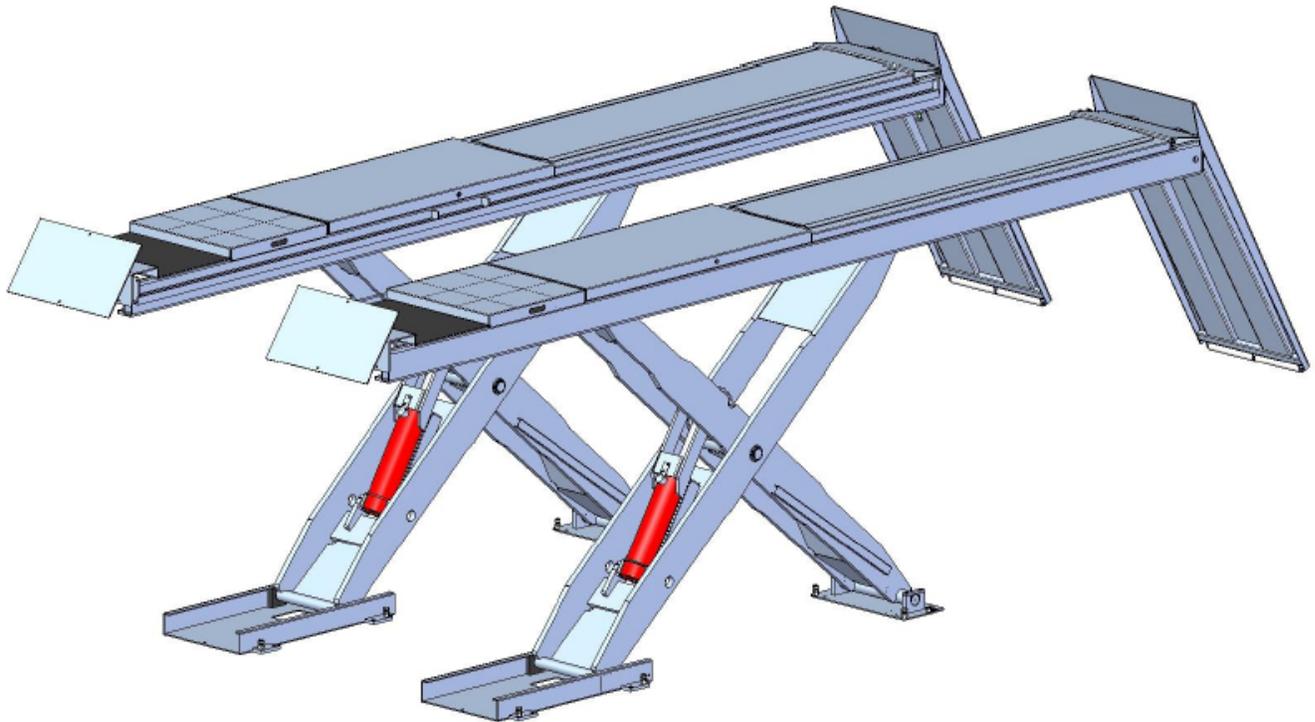


# **CL Challenger Lifts**

## **Installation, Operation & Maintenance Manual**

### **Scissor Alignment Lift**



Model SX14 & SX14R

**14,000 lbs. Capacity**

7,000 LBS. PER RUNWAY

2311 South Park Rd Louisville, Kentucky 40219

Email: [Challengerlifts@soe.freshdesk.com](mailto:Challengerlifts@soe.freshdesk.com) Phone: 800-648-5438

**IMPORTANT:** READ THIS MANUAL COMPLETELY BEFORE  
INSTALLING or OPERATING LIFT

## Symbols used in the Manual

The signage (ISO) indicated below is used within this manual to focus attention on those operations that must be performed carefully in order to guarantee safety during installation.

	<b>GENERAL DANGER</b>	Indicates that, when performing the operation, great care must be taken to prevent the onset of events that could cause serious injury or damage.
	<b>ELECTRICAL DANGER</b>	Indicates that, when performing the operation, an event (of an electrical nature) could arise leading to injury or damage.
	<b>DANGER OF PINCHING</b>	Indicates that, during installation or transport of system components, suitable lift equipment must be used and utmost attention applied.
	<b>DANGER OF FALLING</b>	Indicates that, during installation, the operator crosses zones where there is high risk of falling; always be particularly careful.
	<b>IMPORTANT</b>	Indicates that the indications or instructions described in the text must be followed to the letter. Non-compliance with the indications can be dangerous for the operator and can damage the system.
	<b>PROHIBITION</b>	Indicates that the specific activity or operating sequence must be avoided

## Technical Data

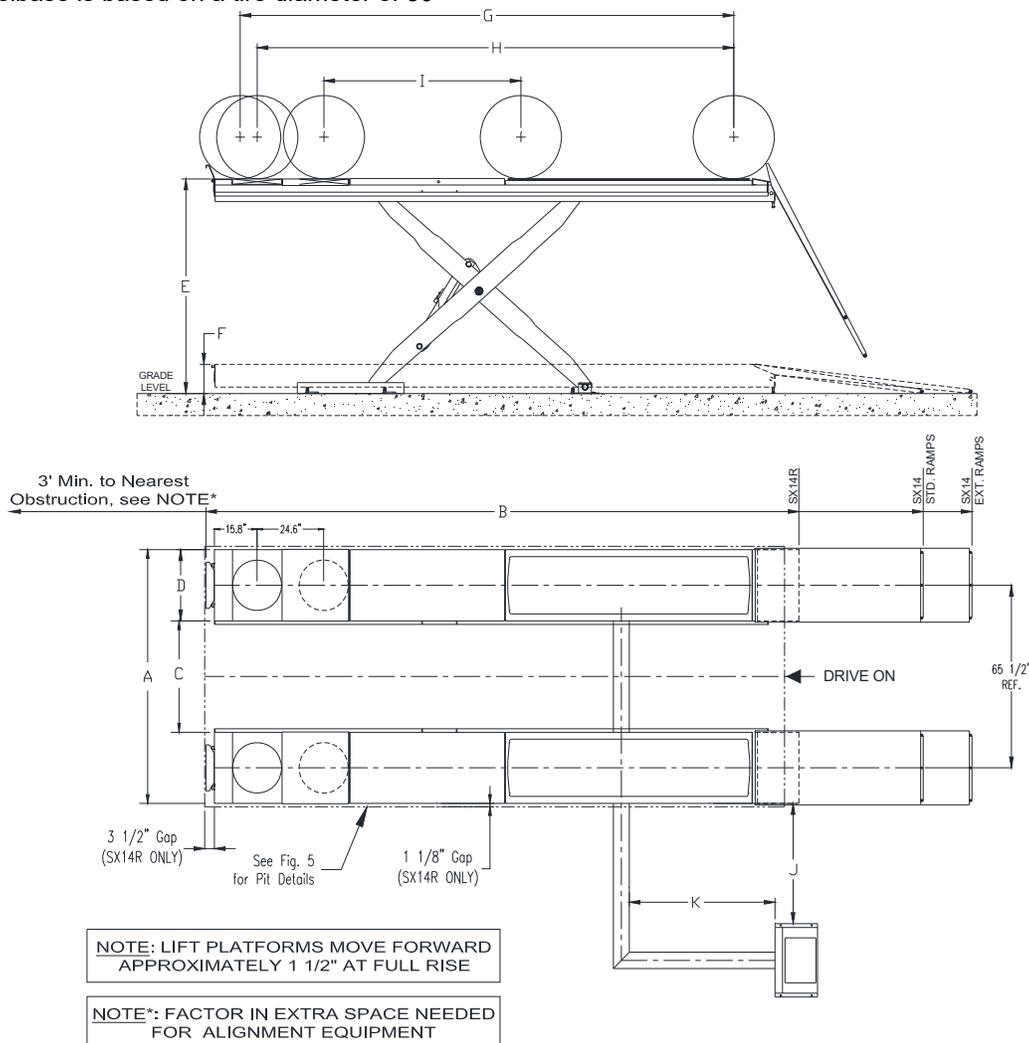
<b>LIFT CAPACITY</b>	14,000 lbs.		
<b>MOTOR POWER</b>	3 HP		
<b>ELECTRIC POWER SUPPLY</b>	1 Ph	208-240V	23 A
	3 Ph	230V	13 A
	60 Hz		
<b>PNEUMATIC SUPPLY</b>	90-120 PSI	20 CFM	Filtered and lubricated
<b>MAXIMUM HYDRAULIC PRESSURE</b>	4150 PSI		
<b>QUANTITY OF OIL</b>	5.3 Gallons (20 Liters)		
<b>UPSTROKE/DOWNSTROKE TIME</b>	75 sec / 20 sec		
<b>MIN/MAX OPERATING TEMPERATURE</b>	-10 / +40 °C		

## GENERAL DIMENSIONS

See Figure 1	SX14 (Surface Mount)		SX14R (Flush Mount)
<b>A</b> Overall Width	91 1/4"		
<b>B</b> Overall Length	265" w/ Std. Ramps (62 3/4")	283" w/ Ext. Ramps (80 3/4")	219"
<b>C</b> Distance between Platforms*	40"		
<b>D</b> Platform Width	25 1/2"		
<b>E</b> Raise Height	77"		66 1/2"
<b>F</b> Lowered Height	10 1/2"		-
<b>G</b> Max Wheelbase**	183"		
<b>H</b> Max Wheel Alignment	176"		
<b>I</b> Min 4-Wheel Alignment	70 3/4"		
<b>J</b> Distance to Controls Width	24" min. - 64" max.		
<b>K</b> Distance to Controls Length	40" min. - 74" max.		
Minimum Recommended Bay Size	14' x 28'		
Lift Shipping Dimensions & Weight	212"L x 32"W x 50"H, 6,800 lbs		
Console Shipping Dimensions & Weight	17"L x 24"W x 52"H, 330 lbs		

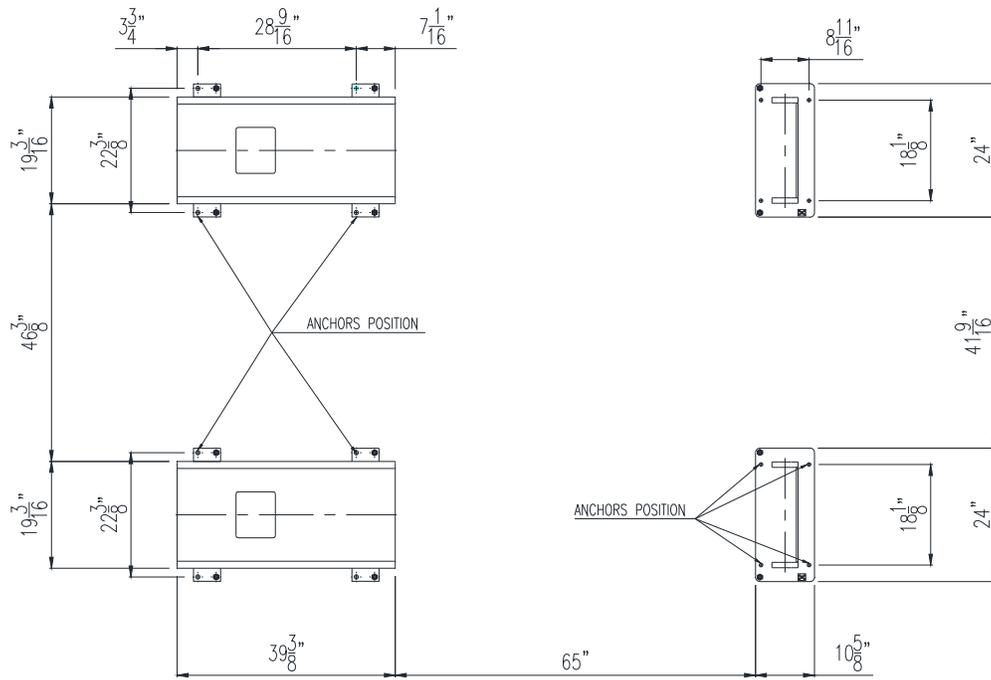
\* Dimension between Runway Sidewalls, not Jack Rails.

\*\* Wheelbase is based on a tire diameter of 30"



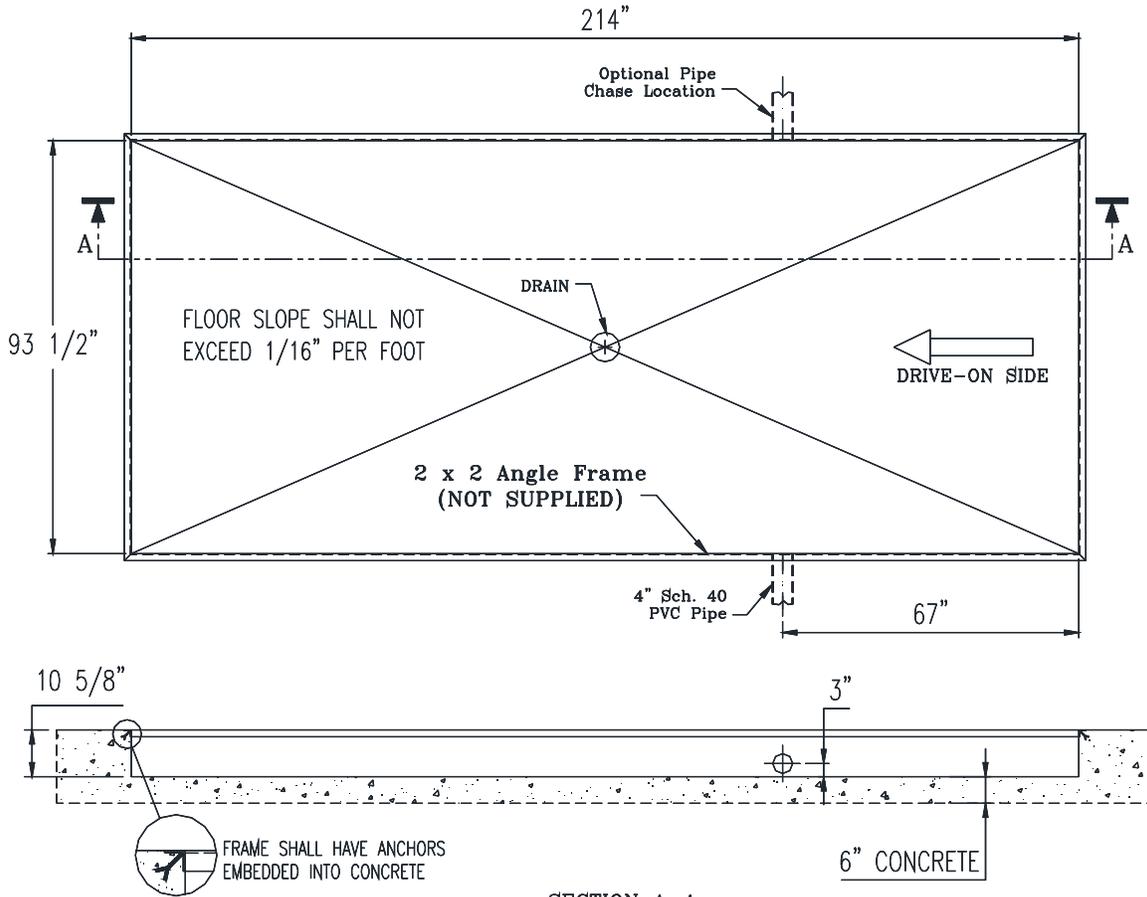
**Fig. 1 – General Layout**

## LIFT BASE LAYOUT



**Fig. 2 – Base Layout**

## PIT LAYOUT

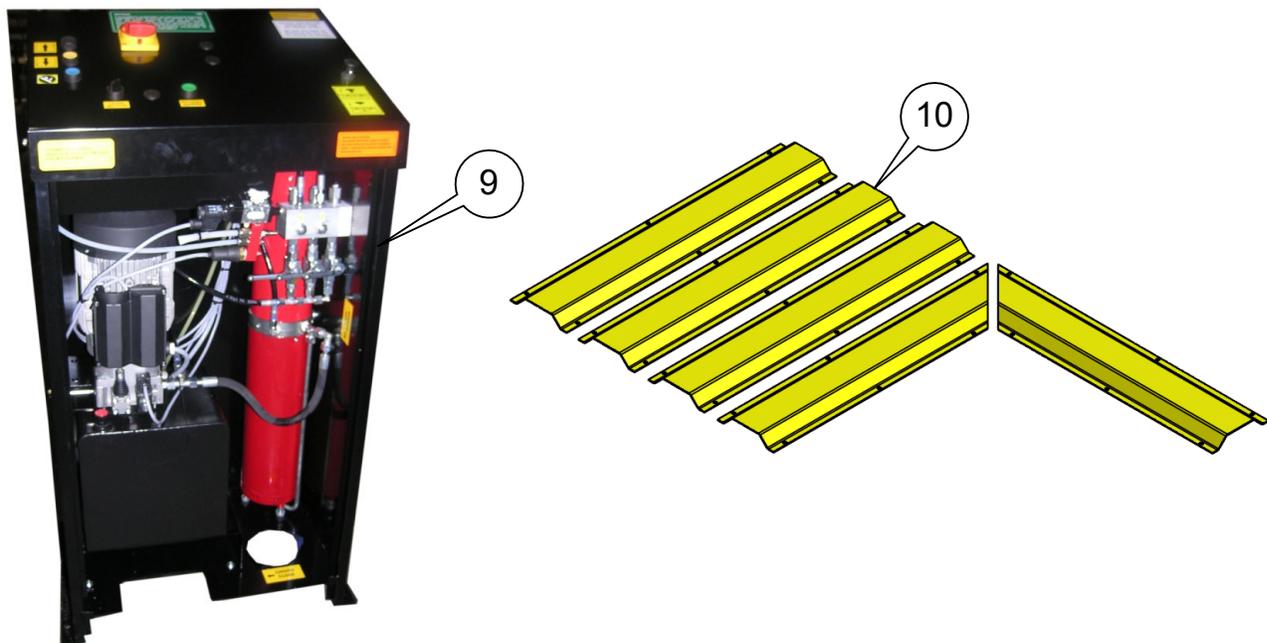
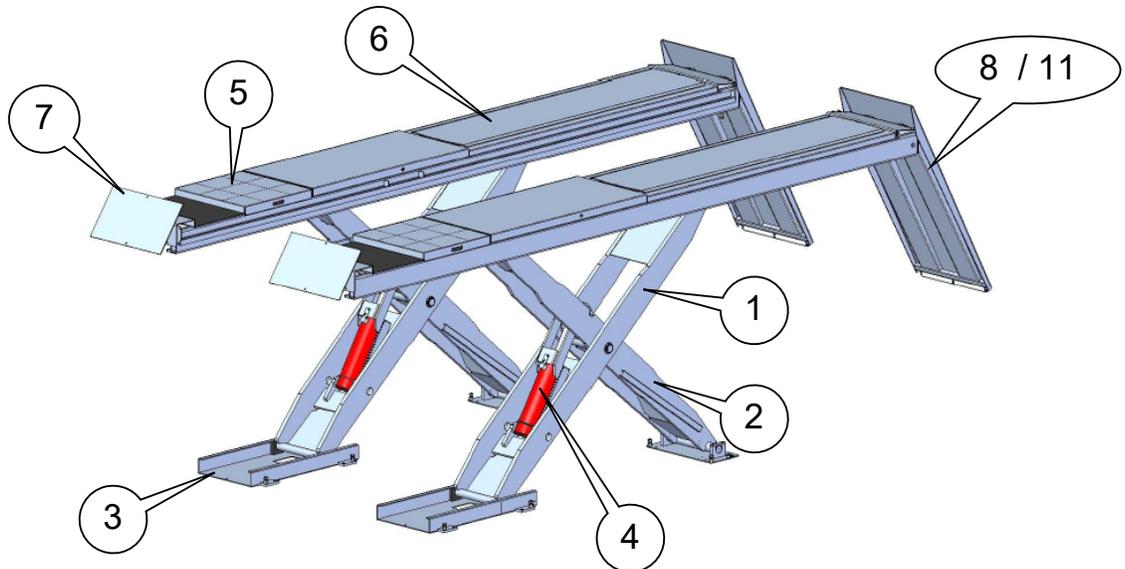


**SECTION A-A**

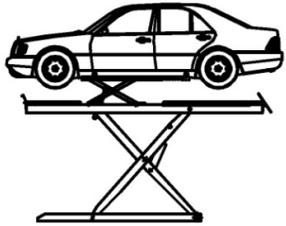
**Fig. 3 – Pit Details**

## COMPONENT LIST

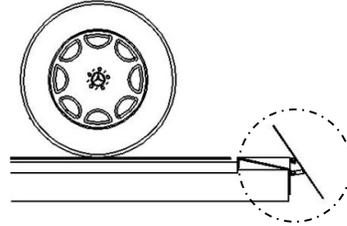
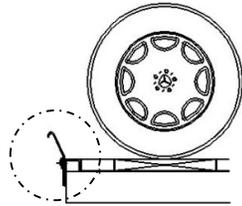
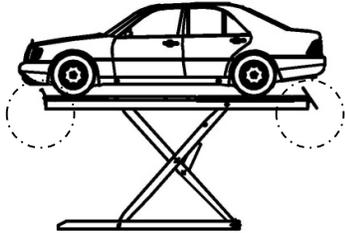
ITEM	QTY.	DESCRIPTION	ABOVE GROUND	FLUSH MOUNT
1	1	External Scissors	X	X
2	1	Internal Scissors	X	X
3	2	Base	X	X
4	2	Hydraulic Cylinder	X	X
5	2	Recess	X	X
6	2	Oscillating Plates	X	X
7	2	Front Stop	X	X
8	2	Access Ramps	X	
9	1	Control Console	X	X
10	3/1/1	Protective Pipe Ducts	X	
11	2	Union Platform		X
12	1	Hardware Box	X	X
13	2	7K Rolling Jacks	X	X
14	2	Radius Gauges	X	X
15	1	3 Phase Control Console	Optional	Optional



## IMPROPER USE



**DO NOT PERFORM** upstroke or downstroke operations with the rolling jack raised.

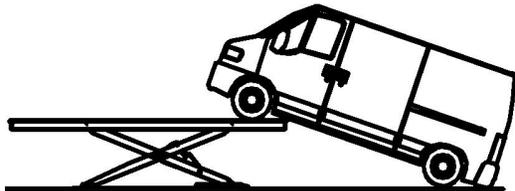
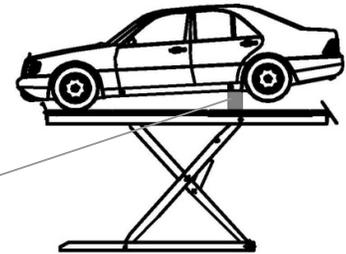


**NEVER** remove the wheel stop or the pivoting entrance ramp/union.

They prevent the vehicle from coming off the platform.



**NEVER** lift vehicles using equipment other than that approved by the manufacturer



**NEVER** lift vehicles that are only partially on the lift

### **SAFETY FEATURES**

<b>SAFETY DEVICE</b>	<b>COMPOSED OF</b>	<b>POSITION</b>	<b>IN THE EVENT OF ...</b>	<b>EFFECT ON MAIN LIFT</b>
<b>LOCKING DEVICE</b>	Mechanical lock	In both hydraulic cylinders of the 2 scissor assemblies	Leakage in the hydraulic circuit or failure of a component	Unintended descent is restricted to a maximum of 100 mm.
<b>PLATFORM ALIGNMENT CONTROL DEVICE</b>	Photocell and reflective adhesives	Photocell in one platform and reflective adhesive on the other platform	Maximum misalignment of 50 mm between the platforms	The lift stops moving.
<b>HYDRAULIC PARACHUTE DEVICE</b>	Parachute valve	In both hydraulic cylinders of the lift	Breakage of hoses	The valve blocks descent when the speed reaches a value preset by the manufacturer.
<b>WHEEL STOP DEVICES</b>	Wheel stop and entrance ramp/union	Front and rear of both lift platforms	-	Prevents the vehicle from coming off the platforms.
<b>SIGNALS</b>	Labels and Decals	See paragraph: <i>Labels and Safety Decals</i>	-	Draw attention to residual risks and precautions for use.

When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
4. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
5. Use only as described in this manual. Use only manufacturer's recommended attachments.
6. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

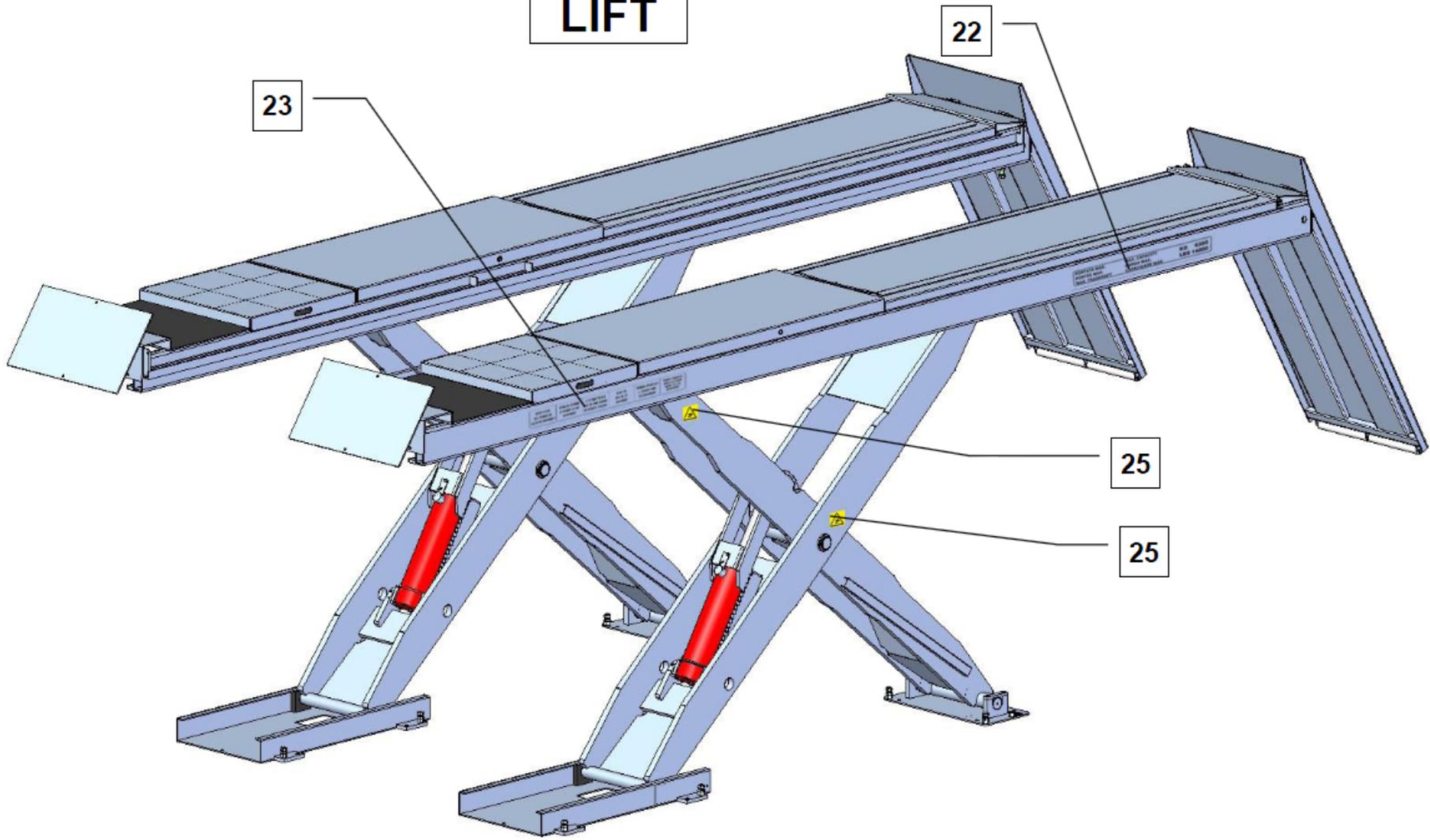
**SAVE THESE INSTRUCTIONS**

## **LABELS AND SAFETY DECALS**

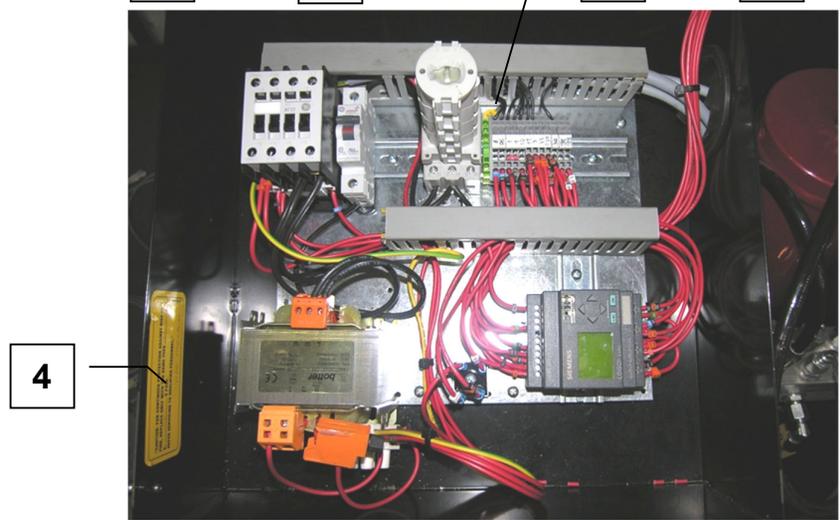
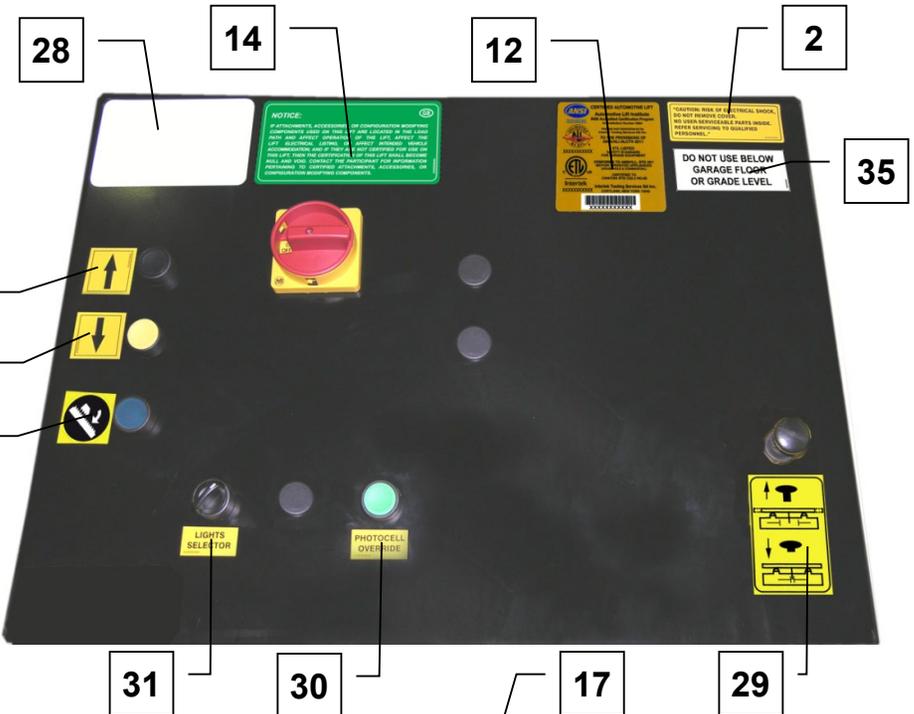
The labels must be readable and permanently attached to the equipment.  
The labels that will be furnished with the equipment, together with their relevant positions, listed here below:

<b>N.</b>	<b>LABEL DESCRIPTION</b>
2	RISK OF ELECTRIC SHOCK
3	RISK OF EXPLOSION
4	FUSE
12	ALI GOLD LABEL
14	NOTICE
16	CAUTION – WARNING – SAFETY INSTRUCTIONS
17	EARTH CONNECTION
22	MAX CAPACITY
23	DO NOT STAY NEAR THE LIFT IN MOVEMENT
25	PINCH POINT HAZARD
26	LIFTING – LOWERING
27	MECHANICAL SAFETY LOCKS
28	CHALLENGER SERIAL TAG
29	SLIP PLATES
30	PHOTOCELL OVERRIDE
31	LIGHT SELECTOR
34	BLEEDING/SYNCRONIZATION PROCEDURE
35	DO NOT USE BELOW GARAGE FLOOR OR GRADE LEVEL

# LIFT

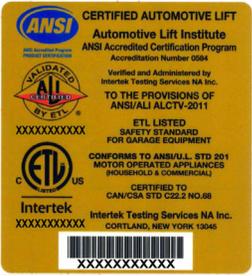


# CONTROL UNIT



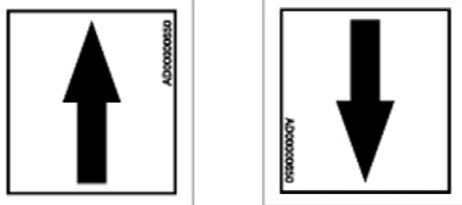
<p>LABEL 2</p>	<p><b>“CAUTION: RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.”</b></p> <p style="text-align: right;">AD00000488</p>
<p>LABEL 2A</p>	<p><b>“ATTENTION: RISQUE DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. PAS DE PARTIES EMPLOYABLES POUR L’OPERATEUR A L’INTERIEUR. DEMANDER ASSISTANCE AU PERSONNEL QUALIFIE.”</b></p> <p style="text-align: right;">AD00001002</p>
<p>LABEL 3</p>	<p><b>“WARNING: RISK OF EXPLOSION. THIS EQUIPMENT HAS INTERNAL ARCING OF SPARKING PARTS WHICH SHOULD NOT BE EXPOSED TO FLAMMABLE VAPORS. IT SHOULD NOT BE LOCATED IN A RECESSED AREA OR BELOW FLOOR LEVEL.”</b></p> <p style="text-align: right;">AD00000490</p>
<p>LABEL 3A</p>	<p><b>“ATTENTION: RISQUE D’EXPLOSION. CE DISPOSITIF CONTIENT DES PARTIES QUI PORRAIENT ETRE EXPOSEES A DES VAPEURS INFLAMMABLES. IL NE DEVRAIT DONC PAS ETRE PLACE DANS UN LIEU FERME OR AU-DESSUS DU NIVEAU DU SOL.”</b></p> <p style="text-align: right;">AD00001003</p>

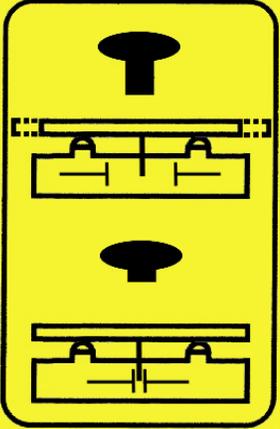
<p>LABEL 4</p>	<p><b>“CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE ..... A, ..... V FUSE. REFER SERVICING TO QUALIFIED PERSONNEL.”</b></p> <p style="text-align: right;">AD00000489</p>
<p>LABEL 4A</p>	<p><b>“ATTENTION: POUR UNE PROTECTION CONSTANTE CONTRE LES RISQUES D’INCENDIE, REMPLACER SEULEMENT AVEC LE MEME TYPE FUSIBLE ..... A, ..... V. CONTACTER DU PERSONNEL QUALIFIE.”</b></p> <p style="text-align: right;">AD00001004</p>
<p>LABEL 5</p>	<p><b>“IF CONNECTED TO A CIRCUIT PROTECTED BY FUSES, USE TIME-DELAY FUSES WITH EQUIPMENT.”</b></p> <p style="text-align: right;">AD00000491</p>
<p>LABEL 5A</p>	<p><b>“SI RACCORDE AVEC UN CIRCUIT PROTEGE PAR DES FUSIBLES, EMPLOYER DES FUSIBLES DE RETARD AVEC CETTE MACHINE.”</b></p> <p style="text-align: right;">AD00001005</p>

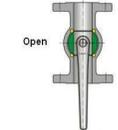
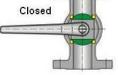
<p>LABEL 12</p>	
<p>LABEL 14</p>	<p><b>NOTICE:</b> <span style="float: right;">(GB)</span></p> <p><i>IF ATTACHMENTS, ACCESSORIES, OR CONFIGURATION MODIFYING COMPONENTS USED ON THIS LIFT ARE LOCATED IN THE LOAD PATH AND AFFECT OPERATION OF THE LIFT, AFFECT THE LIFT ELECTRICAL LISTING, OR AFFECT INTENDED VEHICLE ACCOMMODATION; AND IF THEY ARE NOT CERTIFIED FOR USE ON THIS LIFT, THEN THE CERTIFICATION OF THIS LIFT SHALL BECOME NULL AND VOID. CONTACT THE PARTICIPANT FOR INFORMATION PERTAINING TO CERTIFIED ATTACHMENTS, ACCESSORIES, OR CONFIGURATION MODIFYING COMPONENTS.</i></p> <p style="text-align: right; font-size: small;">A000000994</p>
<p>LABEL 14A</p>	<p><b>CONSIGNES DE SÉCURITÉ:</b> <span style="float: right;">(F)</span></p> <p><i>SI DES ACCESSOIRES, OU DES COMPONENTS QUI CHANGENT LA CONFIGURATION ET SE TROUVANT DANS LA ZONE DE LEVAGE, PUISSENT INFLUENCER L'OPÉRATION DU PONT, OU LE SYSTÈME ÉLECTRIQUE OU PUISSENT INFLUENCER L'ACCOMMODATION PREVUE DU VÉHICULE POSÉ SUR LE PONT, ET S'ILS NE SONT PAS CERTIFIÉS POUR ÊTRE UTILISÉS SUR CE PONT, ALORS LA CERTIFICATION DE CE SOUSDIT PONT N'EST PLUS VALABLE. CONTACTER LE PARTICIPANT POUR DES RENSEIGNEMENTS SUR LES COMPONENTS CERTIFIÉS, ACCESSOIRES, OU COMPONENTS MODIFIANTS LA CONFIGURATION.*</i></p> <p style="text-align: right; font-size: small;">A000000994</p>

<p>LABEL 16</p>	<p style="text-align: center;"><b>Automotive Lift Institute, Inc.      WL200 Series Label Kit</b></p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><b>CAUTION</b></td> <td style="text-align: center;"><b>CAUTION</b></td> <td style="text-align: center;"><b>WARNING</b></td> <td style="text-align: center;"><b>WARNING</b></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="font-size: x-small;">Lift to be used by trained operator ONLY.</td> <td style="font-size: x-small;">Authorized personnel only in lift area.</td> <td style="font-size: x-small;">Clear area if vehicle is in danger of falling.</td> <td style="font-size: x-small;">Remain clear of lift when raising or lowering vehicle.</td> </tr> </table> <p style="font-size: x-small;">The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style. Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045. Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright. www.autolift.org ©1992 by ALI, Inc. ALIWL200</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><b>NOTICE</b></td> <td style="text-align: center;"><b>NOTICE</b></td> <td style="text-align: center;"><b>WARNING</b></td> <td style="text-align: center;"><b>WARNING</b></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="font-size: x-small;">Read operating and safety manuals before using lift.</td> <td style="font-size: x-small;">Proper maintenance and inspection is necessary for safe operation.</td> <td style="font-size: x-small;">Keep clear of pinch points when lift is moving.</td> <td style="font-size: x-small;">Keep feet clear of lift while lowering.</td> </tr> </table> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;"><b>NOTICE</b></td> <td style="text-align: center;"><b>WARNING</b></td> <td style="text-align: center;"><b>WARNING</b></td> <td style="text-align: center;"><b>WARNING</b></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="font-size: x-small;">Do not operate a damaged lift.</td> <td style="font-size: x-small;">Do not override self-closing lift controls.</td> <td style="font-size: x-small;">Check wheel to prevent vehicle movement.</td> <td></td> </tr> </table> <p style="font-size: x-small;">The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style. Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045. Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright. www.autolift.org ©1992 by ALI, Inc. ALIWL200</p>	<b>CAUTION</b>	<b>CAUTION</b>	<b>WARNING</b>	<b>WARNING</b>					Lift to be used by trained operator ONLY.	Authorized personnel only in lift area.	Clear area if vehicle is in danger of falling.	Remain clear of lift when raising or lowering vehicle.	<b>NOTICE</b>	<b>NOTICE</b>	<b>WARNING</b>	<b>WARNING</b>					Read operating and safety manuals before using lift.	Proper maintenance and inspection is necessary for safe operation.	Keep clear of pinch points when lift is moving.	Keep feet clear of lift while lowering.	<b>NOTICE</b>	<b>WARNING</b>	<b>WARNING</b>	<b>WARNING</b>					Do not operate a damaged lift.	Do not override self-closing lift controls.	Check wheel to prevent vehicle movement.	
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<p>LABEL 22</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;"><b>PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT</b></td> <td style="width: 33%;"><b>MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.</b></td> <td style="width: 34%;"><b>KG 6350 LBS 14000</b></td> </tr> </table>						<b>PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT</b>	<b>MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.</b>	<b>KG 6350 LBS 14000</b>
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<p>LABEL 23</p>	<p><b>VIETATO SOSTARE NELLE VICINANZE DEL SOLLEVATORE IN MOVIMENTO</b></p>	<p><b>DEFENSE DE STATIONNER EN PROXIMITÈ DU PONT EN MOUVEMENT</b></p>	<p><b>ES IST VERBOTTEN IN DE NÄHE DER BÜHNE WAHREND DES BETRIEBES ZU BLEIBEN</b></p>	<p><b>DO NOT STAY NEAR THE LIFT IN MOVEMENT</b></p>	<p><b>PROHIBIDO SITUARSE BAJO EL ELEVADOR CUANDO ESTA EN MOVIMIENTO</b></p>	<p><b>PROIBIDO PERMANECER DEBAIXO DO ELEVADOR QUANDO ESTE ESTA EM MOVIMENTO</b></p> <p style="text-align: right; font-size: small;">A000001379</p>			

<p>LABEL 25</p>	
<p>LABEL 26</p>	
<p>LABEL 27</p>	

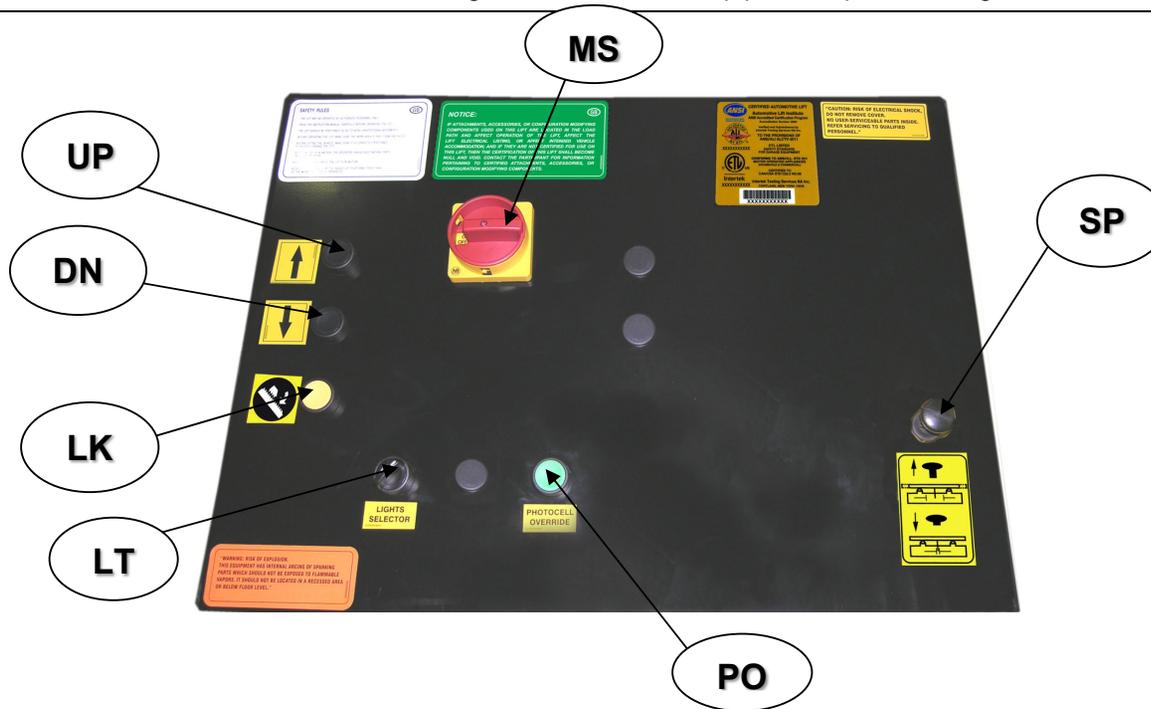
<p>LABEL 28</p>	<p><i>CHALLENGER SERIAL TAG</i></p>
<p>LABEL 29</p>	

LABEL 30	
LABEL 31	
LABEL 34	<p style="text-align: center;"><b><u>BLEEDING/SYNCHRONIZATION PROCEDURE</u></b></p> <p>1) After adding fluid to the reservoir, turn power on and ensure the disconnect switch is in the "ON" position and proceed with the following steps. <b>IMPORTANT: DO NOT skip any step.</b></p> <p>A. Ensure all 3 valves are closed, Fig 7. B. Press <b>PHOTOCELL OVERRIDE &amp; UP</b> until both platforms stop moving.<sup>*Note 1</sup> C. <b>OPEN</b> all 3 valves. D. Press <b>PHOTOCELL OVERRIDE &amp; UP</b> until both platforms stop moving. E. Bleed air from each platform cylinder, Fig 8. F. If platforms lower into a lock position, press <b>UP</b>. G. Continue bleeding until oil begins to escape. H. Press <b>UP</b> until both platforms stop moving. I. <b>CLOSE</b> all 3 valves. J. Press <b>PHOTOCELL OVERRIDE &amp; DOWN</b>.<sup>*Notes 2,3</sup> K. Repeat entire procedure.<sup>*Note 4</sup></p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="667 841 785 1062">  <p>Open</p>  <p>Closed</p> </div> <div data-bbox="793 841 995 1062">  </div> </div> <p style="text-align: center;">Fig. 7 – Valves (Hoses not shown)</p> <p><b>Note 1:</b> If platforms do not rise after pressing <b>UP</b> for 30 seconds, continue to step "C" of procedure.</p> <p><b>Note 2:</b> If platforms stop moving while lowering, <b>OPEN</b> all 3 valves and continue lowering. Once both pads are completely lowered, <b>CLOSE</b> all 3 valves and repeat the entire bleeding procedure.</p> <p><b>Note 3:</b> With platforms completely lowered, add oil to fill reservoir.</p> <p><b>Note 4:</b> The bleeding procedure should be performed at least 3 times and repeated until both platforms are synchronized thru the complete raising and lowering of the platforms and no air comes out of either bleed screw.</p> <div style="text-align: center;">  <p>Fig. 8 – Bleed Screw</p> </div> <p style="text-align: right;">SX14-SYNC 2016-02-15</p>

LABEL 35	
LABEL 35A	

## OPERATION COMMANDS

<b>MS</b>	<b>SYSTEM MAIN SWITCH:</b> Provides power to controls when turned "ON"
<b>UP</b>	<b>UP BUTTON:</b> Lift rises when pressed continuously.
<b>LK</b>	<b>LOCK BUTTON:</b> When lift is above the first lock position, the lift will lower to the nearest mechanical lock position when pressed.
<b>DN</b>	<b>DOWN BUTTON:</b> 1 By continuously pressing the <b>DN</b> button, the lift: a) Rises for 3-4 seconds to clear the mechanical locks. b) The lift begins lowering.
<b>PO</b>	<b>PHOTOCELL OVERRIDE:</b> If there is a difference in height of more than 50 mm, power to the motor will be cutoff. Use the <b>PO</b> button to exclude the photocell. By keeping the <b>PO</b> button pressed, it will be possible to use other buttons and light switch.
<b>LT</b>	<b>LIGHT CONTROL SWITCH:</b> Turns on lights mounted to platforms.
<b>SP</b>	<b>SLIP PLATES LOCKING SYSTEM:</b> Pushing this knob locks the slip plates in place. Pulling the knob allows the slip plates to move freely.



## **VERTICAL CLEARANCE**

Check the height of the area where the lift is to be installed. Clearance should be calculated based on the full raised height of the lift.



Failure by purchaser to provide adequate clearance could result in unsatisfactory lift performance, property damage, or personal injury.

## **FLOORING**

**Be certain you have the proper concrete floor to properly handle the loaded lift. Floor should be in generally good condition with no large cracks, spalling or deterioration.**

Minimum requirements for concrete are 6 inches minimum depth, with steel reinforcement, 3500 psi, cured for 28 days per local commercial practice. Floor should be level within 3/8 inch over the installation area. No anchors should be installed within 6 inches of any crack, edge, or expansion joint. If these conditions cannot be met, a pad may be poured to accommodate the lift.

Check with local building inspectors and/or permits office for any special instructions or approvals required for your installation.



Failure by purchaser to provide the recommended mounting surface could result in unsatisfactory lift performance, property damage, or personal injury.

## **LOCATION**

**This lift is approved for indoor use only.**

## **ELECTRICAL REQUIREMENTS**

For lift installation and operation, it is necessary to have a dedicated circuit with circuit breaker or time delay fuse. Refer to **Fig. 15** for circuit sizing.

## **Edition of Referenced Materials**

Where any ANSI standard or ALI materials are referenced within this manual, the most recent edition shall apply.

## **SAFETY NOTICES AND DECALS**

For your safety, and the safety of others, read and understand all of the safety notices and decals included in this manual.

**READ ENTIRE MANUAL BEFORE ASSEMBLING, INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.**

**PROPER MAINTENANCE AND INSPECTION IS NECESSARY FOR SAFE OPERATION.**

**DO NOT OPERATE A DAMAGED LIFT.**

Safety decals similar to those shown in this manual are found on a properly installed lift. Be sure that all safety decals have been attached to the control console of the lift. Verify that all authorized operators know the location of these decals and fully understand their meaning. Replace worn, faded, or damaged decals promptly.



**Do not attempt to raise a vehicle on the lift until the lift has been correctly installed and adjusted as described in**

**this manual.**

## **RECEIVING**

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by our invoice.

If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

NOTIFY **Challenger Lifts** AT ONCE if any hidden loss or damage is discovered after receipt.

**IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT.**

File your claim with **Challenger Lifts** promptly. Support your claim with copies of the bill of lading, freight bill, and photographs, if available.

## **HANDLING**

The packaged lift must only be transported and handled using dedicated hoisting equipment with a greater capacity than the lift to be handled. Lifting straps should be used during installation of lift. Weight of packaged lift and accessories can be **approx. 6000 lbs.**

**ACCEPTED OILS** – Do not use oils with detergents. *Hydraulic fluid is not provided with the lift shipment.*

- 10 wt. anti-foam, anti-rust hydraulic / biodegradable oil
- Dexron III ATF

## **TOOLS (MINIMUM REQUIRED)**

- a. Tape measure, 16ft
- b. Chalk line
- c. 4ft level
- d. 10" adjustable wrench
- e. Standard open end wrenches 5/16", 3/4"
- f. Allen wrench set
- g. Hammer drill with 1/4" & 1/2" diameter carbide tipped bits
- h. 2lb hammer
- i. Torque wrench: 50 foot-pounds minimum with 3/4" socket
- j. Screwdriver
- k. Long oil funnel

**IMPORTANT: Always wear safety glasses while installing lift.**

## **SURFACE & FLUSH MOUNT LAYOUT**

- 1) Layout the service bay according to the architect's plans or owners' instructions (**see Fig. 1**). Failure to install in this orientation can result in personal and property damage. Be certain that the proper conditions exist, see page 15.
- 2) The control console can be located on the driver side or passenger side of the lift at a maximum standard distance as shown in **Fig. 1**. **IMPORTANT: Console should be positioned so the lift operator has clear view of the vehicle and bay area during lifting/lowering.** Relocating the control console from the driver side to the passenger side will require moving the green hose blocks at the base of the unit to direct the hoses/lines to the opposite side.
- 3) Relocating the control console further away than the standard distance will require the installer to provide suitable hydraulic hoses and air lines. Additional hose covers will also be needed if installing lift in surface mount configuration. Hydraulic hoses should be 1/4" minimum ID with a minimum working pressure of 4,200 psi and a minimum burst pressure of 16,800 psi with #6 JIC fittings (1) Male x (1) Female Swivel. The air lines for the lift have outside diameters of 4mm, 6mm, and 10mm and should have a minimum working pressure of 120 psi. **Maximum dimension "E" from Fig. 1 is 20 feet IF hose and air line extensions are used.** Electrical wiring from lift should not be modified/extended for safety reasons.

## **FLUSH MOUNT PIT REQUIREMENTS**

- 4) **PRIOR TO POURING CONCRETE**, installer will need to ensure pit frame, piping, and forms conform to details shown in **Fig. 3**. Pit frame and temporary pit forms are **NOT PROVIDED** and will be the responsibility of the installer. Total pipe chase length should not exceed 13' for standard install or 20' if line extensions will be supplied by installer.

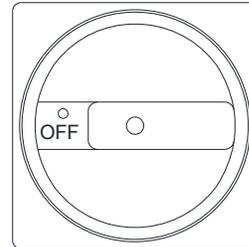
## **PLATFORM INSTALLATION**

- 5) Place packaged lift onto 4x4 pieces of lumber and remove steel end brackets.
- 6) Remove any accessories that are packaged with the platform assemblies.
- 7) **DO NOT** cut the bands securing the bases of each assembly to the platform. These keep the scissors in a collapsed position.
- 8) With the top platform assembly ready to be placed into position, place a lifting strap(s) under the assembly and carefully maneuver into position.

- 9) Repeat for other platform assembly and remove any remaining banding/packageing.
- 10) Remove all electrical/hydraulic/air lines from under platforms and route to the control console.

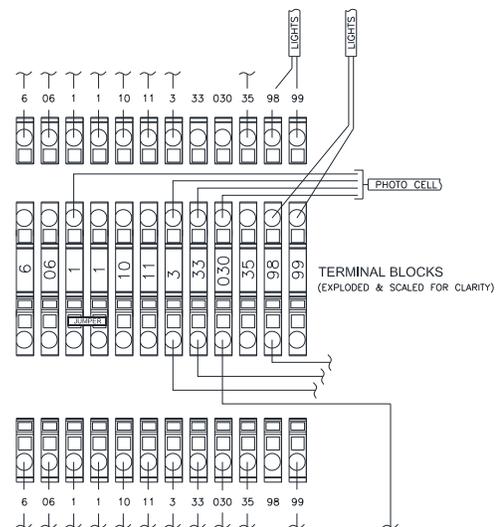
## **ELECTRICAL CONNECTIONS**

- 11) Use an Allen wrench to loosen the (2) screws on the sides of the control cover of the console.
- 12) Ensure Main Switch located on control cover is turned to the "OFF" position and open the cover.



**Fig. 4 – Main Switch**

- 13) Route electrical lines from platform assemblies thru opening in the bottom rear of the console and thru the opening in the sidewall of the upper electrical compartment.
- 14) Using the numbering on each of the supplied wires, connect each to the corresponding terminal in the console as shown in **Fig. 5**. A small flat head screwdriver will be needed for this step.



**Fig. 5 – Wiring Connections**

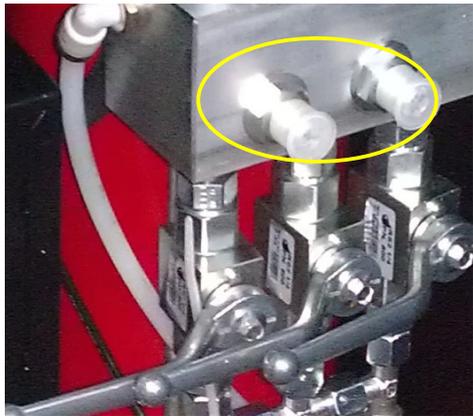
- Each lift shall have a dedicated circuit with a double-pole breaker or time delay fuse sized according to Fig. 13.
- Wiring must comply with all local electrical codes.

- 15) Ensure power to supply wiring is OFF before making following connections.
- 16) Power supply to console shall be a suitable electrical source as shown in the **Fig. 13** - Electrical Wiring Diagram. For single phase console, connect the electrical supply to the back side of the Disconnect Switch, Refer to **Fig. 13**. Note: the manual operated service disconnect switch is a 3-pole switch, only 2 of the 3 poles will be used. Connect the ground wire to the GREEN contactor beside the Disconnect Switch. Refer to **Fig. 13** for 3 phase console wiring.

**HYDRAULIC CONNECTIONS**

- 17) Route hydraulic lines thru opening in the bottom rear of the console.
- 18) Connect the hydraulic lines to the block connections inside the control unit, **Fig. 6**.

**NOTE: The hydraulic lines from the lift platforms can connect to either port.**

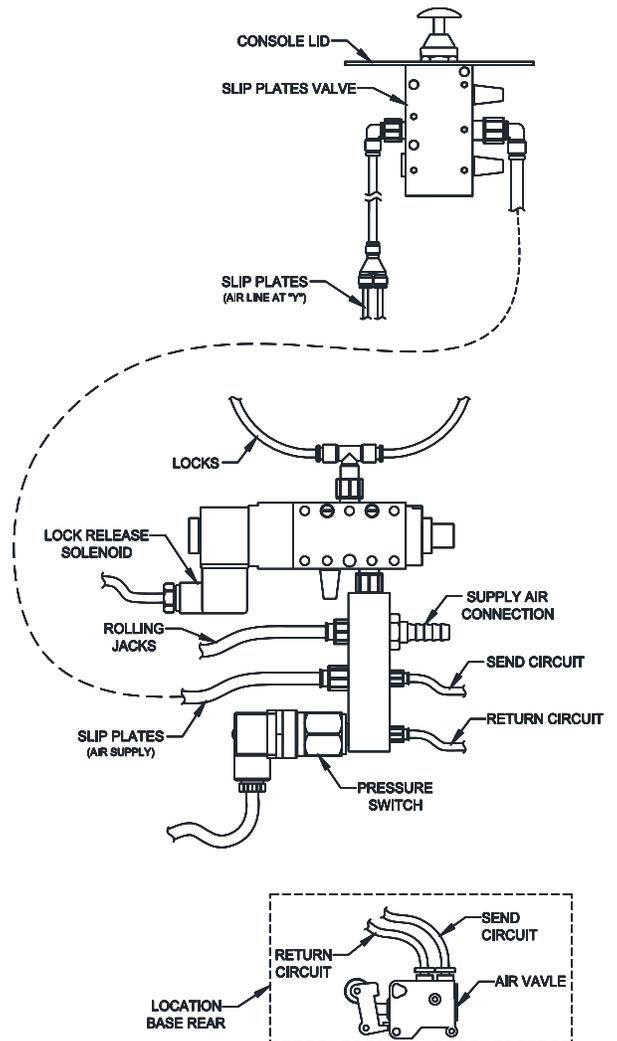


**Fig. 6 – Hydraulic Connections**

**PNEUMATIC CONNECTIONS**

- 19) The air lines from the lift can be identified using the following table. Connect each air line according to **Fig. 7**.
- 20) **IMPORTANT: Before air supply is connected, ensure the T-fitting on the side of the platform is plugged. The fitting is used for the Rolling Jack Airline Kit (40230-SX).**

Description	Line
LOCKS	6mm
ROLLING JACKS	10mm
SLIP PLATES (AIR SUPPLY)	8mm
SLIP PLATES (AIR LINE AT "Y")	6mm
SEND CIRCUIT (AIR LIMIT SWITCH <b>WHITE</b> PUSH LOCK)	4mm
RETURN CIRCUIT (AIR LIMIT SWITCH <b>RED</b> PUSH LOCK)	4mm
SUPPLY AIR CONNECTION	Barb for 3/8 I.D Hose
PRESSURE SWITCH (WIRED NORMALLY CLOSED)	
AIR VALVE (NORMALLY OPENED)	



**Fig. 7 – Pneumatic Connections**

## **BLEEDING/SYNCHRONIZING**

- 21) After adding fluid to the reservoir, turn Power on and ensure the Main Switch is turned to the "ON" position.
- 22) Ensure air supply is connected and T-fitting on runway is plugged or connected to the rolling jacks with the airline kit.

***NOTE:*** The ***UP, DOWN, LOCK,*** and ***PHOTOCELL OVERRIDE*** switches are "momentary", so the function only remains energized while the button is depressed.

### **IMPORTANT: DO NOT skip any step.**

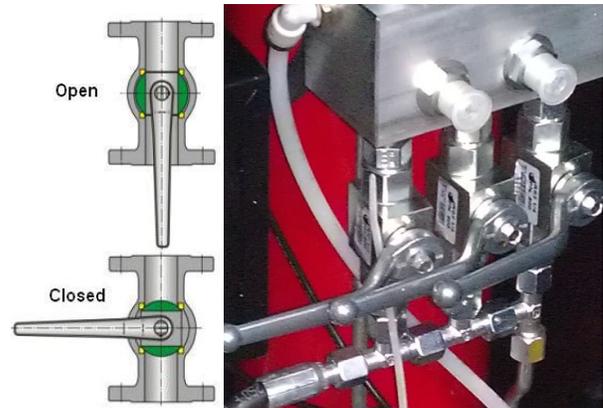
- A. Ensure all 3 valves are closed, **Fig 8**.
- B. Press ***PHOTOCELL OVERRIDE & UP*** until both platforms stop moving. \*Note 1
- C. **OPEN** all 3 valves.
- D. Press ***PHOTOCELL OVERRIDE & UP*** until both platforms stop moving.
- E. Bleed air from each cylinder, **Fig 9**.
- F. If platforms lower into a lock position, press ***UP*** for 5 seconds.
- G. Bleed cylinders until oil begins to escape.
- H. Press ***UP*** until both platforms stop moving.
- I. **CLOSE** all 3 valves.
- J. Press ***PHOTOCELL OVERRIDE & DOWN***.  
\*Notes 2,3
- K. Repeat entire procedure. \*Note 4

**Note 1:** If platforms do not rise after pressing ***UP*** for 30 seconds, continue to step "C" of procedure.

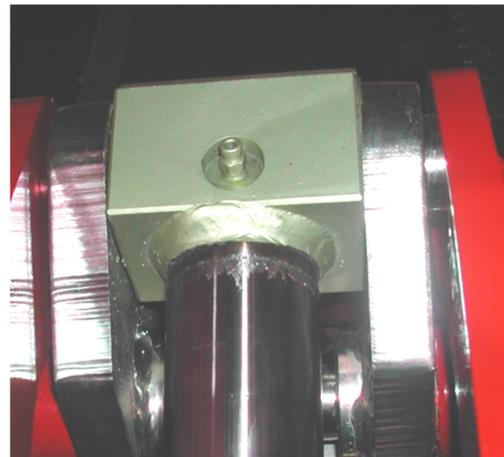
**Note 2:** If platform(s) stop moving while lowering, **OPEN** all 3 valves and continue lowering. Once both pads are completely lowered, **CLOSE** all 3 valves and repeat the entire bleeding procedure.

**Note 3:** With platforms completely lowered, add oil to fill reservoir.

**Note 4:** The bleeding procedure should be performed at least 3 times and repeated until both platforms are synchronized thru the complete raising and lowering of the platforms and no air comes out of either bleed screw.



**Fig. 8 – Valves**



**Fig. 9 – Bleed Screw**

## LEVELING

- 23) Ensure platforms are square with one another and arranged as shown in **Fig. 1** and base plates are spaced according to **Fig. 2**.

**NOTE: The (2) larger bases may need to be shifted forward or rearward.**

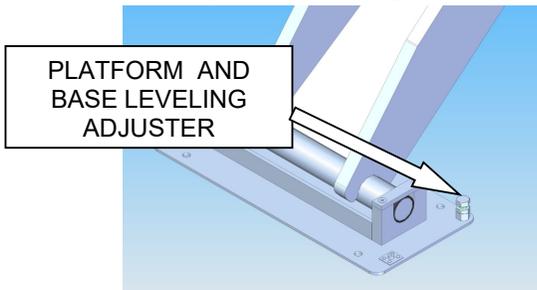
- 24) After positioning the lift and bases, ensure the lift is level per below.

**Use a spirit level to verify that deviation in any direction does not exceed:**

1/32 inch per 6 feet

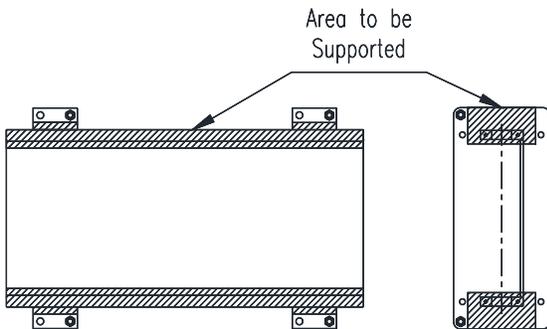
Proceed as follows:

1. Raise the lift approx. 3' off the ground.
2. Place in locks using **LOCK** button.
3. Use the LEVELING ADJUSTERS to adjust the height of the base until the surface of the runways are level, **Fig. 10**.



**Fig. 10 – Leveling Adjusters**

4. Use shims under bases in areas shown in **Fig. 11** as needed to achieve levelness. Shims may be cut to length as needed.



**Fig. 11 – Shimming Area**

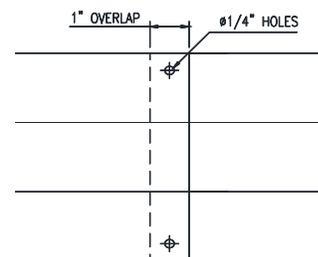
5. Ensure surface of runways are on the same plane. If not, add shims to the bases as necessary.

**NOTE: If more than 1/4" of shimming is required to achieve specified levelness, use grout with equivalent mechanical properties as concrete under appropriate base plates. The maximum acceptable grout height is 2".**

6. With all bases properly adjusted and adequately supported with shims or grout, proceed with **ANCHORING**.
7. Once anchored, lower lift and use the LEVELING ADJUSTERS to adjust the level of the platforms at the fully lowered position. Each platform should contact (6) bolts when lowered. Tighten lock nuts when done.
8. Adjust rear runway bolt to make contact with floor when lift is completely lowered.

## ANCHORING

- 25) The anchor bolts must be installed at least 6" from any crack, edge or expansion joint.
- 26) Use a concrete hammer drill with a 1/2-inch carbide bit. Tip diameter should conform to ANSI Standard B212.15 (.520 to .530). Do not use excessively worn bits or bits which have been incorrectly sharpened. A core bit may be necessary if an obstruction is encountered. Never substitute with a shorter anchor.
- 27) Recheck the layout dimensions, **Fig. 1**. With lift raised, use the (4) holes in each base plate as a template. Drill through the floor if possible.
- 28) Vacuum dust from the hole for proper holding power.
- 29) Assemble washer and nut to anchor with nut just below impact section of bolt. Drive anchor into hole until nut and washer contact base.
- 30) Tighten anchors and recheck level. Reshim if necessary. Torque to 40-foot pounds to set anchors.
- 31) After control console and center hose cover are positioned, drill (4) 1/4" holes in the corners and install supplied drive anchors.
- 32) For hose covers between control console and the lift structure, overlap sections approx. 1" and drill (2) 1/4" holes thru each connection as shown in **Fig. 12**. Total length of hose covers is approx 4 meters.



**Fig. 12 – Hose Covers**

## **OWNER/OPERATOR CHECKLIST**

- 33) Demonstrate the operation of the lift to the owner/operator and review correct and safe lifting procedures using the Lifting It Right booklet as a guide.

## **OPERATION PROCEDURE**

### **SAFETY NOTICES AND DECALS**

This product is furnished with graphic safety warning labels, which are reproduced on page 3 of these instructions. Do not remove or deface these warning labels or allow them to be removed or defaced. For your safety, and the safety of others, read and understand all of the safety notices and decals included.

### **OWNER/EMPLOYER RESPONSIBILITIES**

This lift has been designed and constructed according to ANSI/ALI ALCTV standard. The standard applies to lift manufactures, as well as to owners and employers. The owner/employer's responsibilities as prescribed by ANSI/ALI ALOIM, are summarized below. For exact wording refer to the actual standard provided with this manual in the literature pack.

**The Owner/Employer shall** insure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM, *ALI Lifting it Right safety manual*; ALI/ST, *ALI Safety Tips card*; ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; ALI/WL Series, *ALI Uniform Warning Label Decals/Placards*; and in case of frame engaging lifts, ALI/LP-GUIDE, *Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts*.

**The Owner/Employer shall** establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and the employer shall insure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

**The Owner/Employer shall** establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALIOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and the employer shall insure that the lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

**The Owner/Employer shall** maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*.

**The Owner/Employer shall** display the lift manufacturer's operating instructions; ALI/SM, *ALI*

*Lifting it Right safety manual*; ALI/ST, *ALI Safety Tips card*; ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and in the case of frame engaging lift, ALI/LP-GUIDE, *Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts*; in a conspicuous location in the lift area convenient to the operator.

### **LIFTING A VEHICLE**

- 1) Ensure that the lift is completely lowered.
- 2) Ensure slip plates and turn plates are in the locked position so they do not move during the entrance of the vehicle onto the lift.
- 3) Drive vehicle on the lift to the desired location ensuring it is centered from side to side.
- 4) Place wheel chocks behind rear tires if there is more than 1' gap from tire to ramp.

**DO NOT EXCEED 7000 POUNDS PER PAD.**

**DO NOT ATTEMPT TO LIFT THE VEHICLE WITH ONLY ONE RUNWAY, AS THIS WILL VOID THE WARRANTY**

**The vehicle should remain level during lifting.**

- 5) Raise the vehicle to a height above the desired working height.
- 6) Press the LOCK button to lower into the mechanical locks. Ensure the safety locks on both platforms engage. The vehicle should remain level when both latches are engaged. If one side engages and the other continues to descend, stop lowering the lift and check synchronization and photocell operation before continuing.

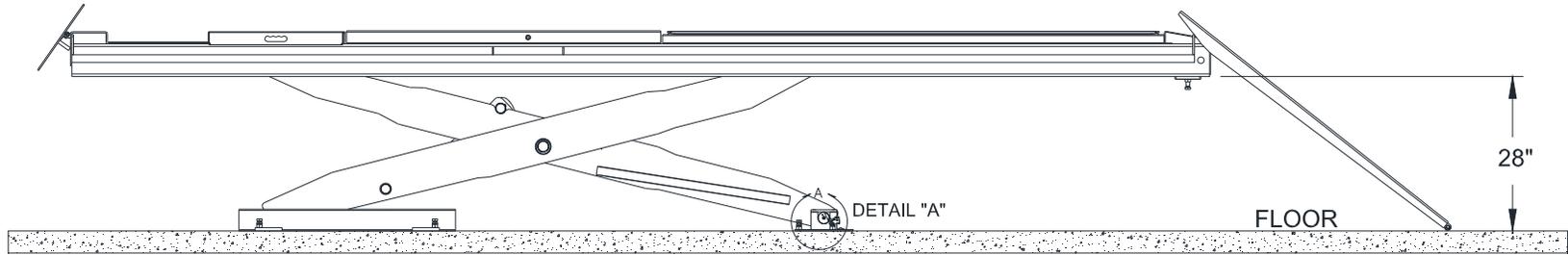
**Always lower lift into locks before entering the area beneath the vehicle.**

### **LOWERING A VEHICLE**

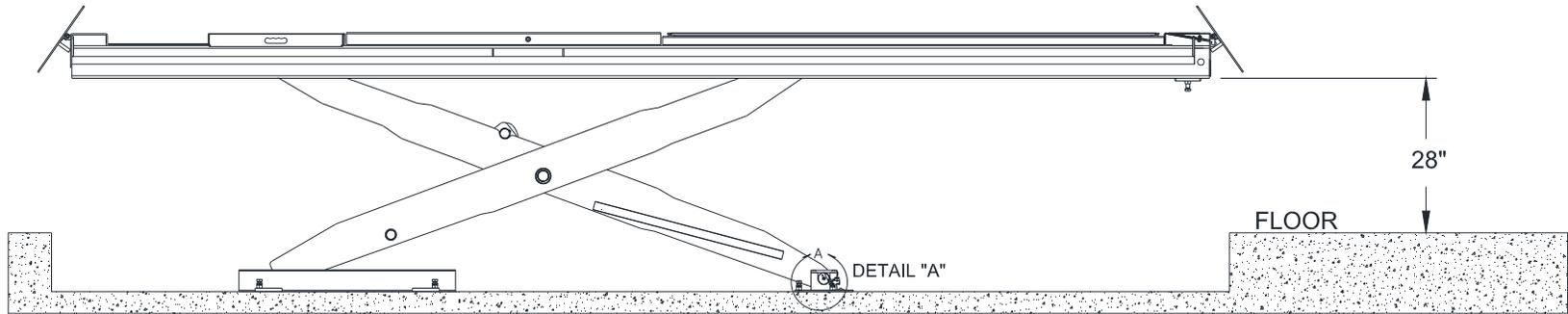
- 1) **Ensure that the area under the vehicle is clear of personnel and tools.**
- 2) Lower the vehicle by pressing the DOWN button. Lift will raise for 3-4 seconds to clear mechanical locks and then begin to lower. If pads do not stay level during lowering, discontinue lowering and check the lock mechanisms for proper functioning.
- 3) Once completely lowered, remove the wheel chocks and ensure slip plates and turn plates are in the locked position before removing vehicle from the lift.

## **AIR SWITCH BASE SETTING**

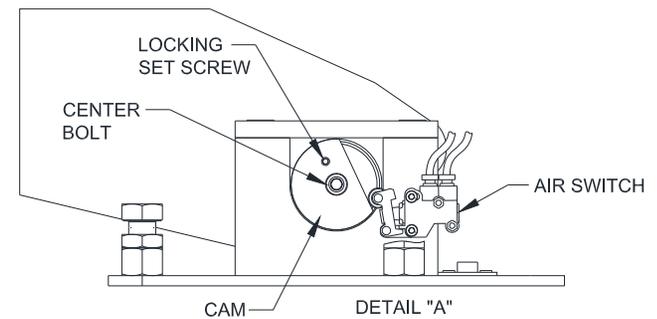
### **SURFACE MOUNT**



### **FLUSH MOUNT**

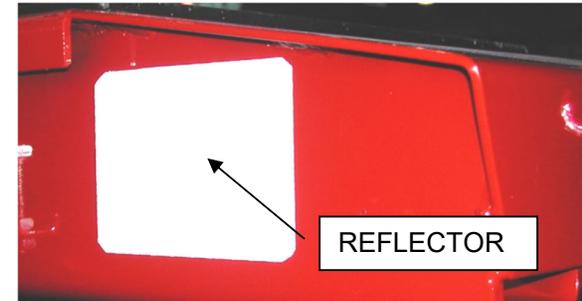


1. Raise the lift until the runway bottom is 28" off the floor.
2. Rotate the cam until the switch is activated, DETAIL "A".
3. Tighten the center bolt and locking set screw, DETAIL "A".



**PHOTOCELL**

<b>NORMAL STATUS</b>	<ul style="list-style-type: none"> <li>• GREEN LED: <b>ON</b></li> <li>• YELLOW LED: <b>ON</b></li> </ul>
<b>STOP STATUS</b>	<ul style="list-style-type: none"> <li>• GREEN LED: <b>ON</b></li> <li>• YELLOW LED: <b>OFF</b></li> </ul>
<b>POSITIONING CHECK</b>	<ul style="list-style-type: none"> <li>• Place an object above reflector and move downwards</li> <li>• check when the YELLOW LED is switched off.</li> <li>• mark the position.</li> </ul>
	<ul style="list-style-type: none"> <li>• place an object below reflector and move upwards</li> <li>• check when the YELLOW LED is switched off.</li> <li>• mark the position.</li> </ul>
	<ul style="list-style-type: none"> <li>• the work field is between the two marks.</li> </ul>
	<ul style="list-style-type: none"> <li>• adjust photocell so work field is centered on Reflector.</li> </ul>



**Functioning test**

Interrupt "photocell beam" using an object and check:

A	With vehicle lift stopped	The lift can be not activated from the control panel
B	With vehicle lift moving	The lift movement stops

## SAFETY STANDARDS FOR MAINTENANCE

Before starting the maintenance and inspection procedures, always perform the following operations:	
	<p>Always wear adequate clothing and accident-prevention equipment during the various phases of maintenance. In particular:</p> <ul style="list-style-type: none"> <li>- Overalls with snug-fitting cuffs</li> <li>- Goggles/safety glasses</li> <li>- Gloves</li> <li>- Helmet</li> <li>- Dust mask</li> <li>- Safety Harness</li> <li>- Safety shoes</li> </ul>
	<p>Always use equipment that is in good condition</p>
	<ul style="list-style-type: none"> <li>• Have on hand a portable lamp to light the areas under maintenance.</li> </ul>
	<ul style="list-style-type: none"> <li>• Identify system cut-off switches;</li> <li>• Cut off power to the electrical system before performing any operation near or on moving mechanical parts or before performing any operation on powered parts of the system.</li> <li>• Use Lock Out/Tag Out procedures to lock the cut-off switch in the open position using a padlock.</li> <li>• Make certain that the system is not repowered while maintenance work is in progress.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>NEVER operate directly on control breaker</b></li> <li>• <b>NEVER lubricate parts while they are moving</b></li> </ul>
	<ul style="list-style-type: none"> <li>• Post signs reading “DO NOT PERFORM ANY OPERATIONS, Machine Undergoing Maintenance”</li> </ul>
	<p>During maintenance or replacement of hydraulic system components,</p> <ul style="list-style-type: none"> <li>• Always prevent any foreign bodies, even very small ones, from entering the circuit as this could lead to malfunction.</li> <li>• Vent hydraulic pressure before loosening the connections</li> </ul>

## **MAINTENANCE/ INSPECTION SCHEDULE**

	<b>WHAT</b>	<b>WHERE</b>	<b>MACHINE STATUS</b>	<b>HOW</b>	<b>USE</b>
Daily	SYNCHRONIZATION	PLATFORMS	IN MOTION	VISUAL INSPECTION	SYNC PROCEDURE
Daily	MECHANICAL LOCKS	UNDER PLATFORMS	IN MOTION	VISUAL INSPECTION	
Weekly	PHOTOCELL	REAR END OF PLATFORM	IN MOTION	VISUAL INSPECTION	See "PHOTOCELL"
Weekly	AIR CONNECTIONS	PNEUMATIC CIRCUIT	IN MOTION	VISUAL INSPECTION	
Weekly	HYDRAULIC CONNECTIONS	HYDRAULIC CIRCUIT	FULLY RAISED	VISUAL INSPECTION	
Bi-Weekly	SLIDE BLOCKS	BASES & PLATFORMS	FULLY RAISED	GREASE	MOLYCOTE G-4700
Bi-Weekly	PINS AND SUPPORTS	STRUCTURE	OFF	GREASE	MOLYCOTE G-4700
Annually	TANK	HYDRAULIC UNIT	OFF	OIL CHANGE	AGIP LH 46 ESSO OSO H 46

**Periodically check the electrical safety devices and report any faults to the Challenger Lifts Technical Support.**

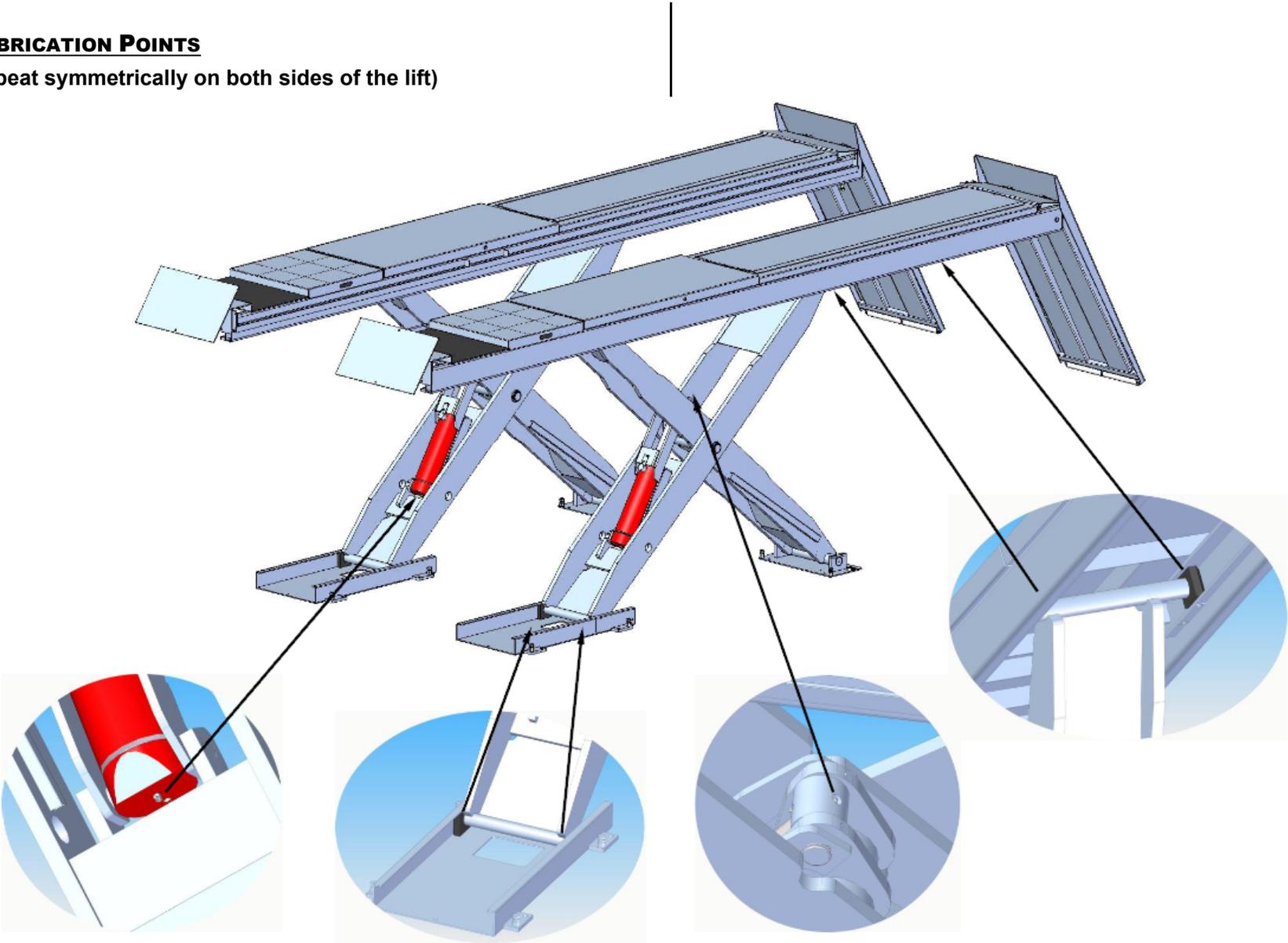
-To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment. Maintenance personnel should follow lockout/tagout instructions per ANSI Z244.1.

-The following maintenance points are suggested as the basis of a routine maintenance program. The actual maintenance program should be tailored to the installation. See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

-Replace all Safety, Warning or Caution Labels if missing or damaged (See page 8.)

**LUBRICATION POINTS**

(repeat symmetrically on both sides of the lift)



## **LUBRICANT: INFORMATION AND WARNINGS**

### **Disposal of used oil**

Do not pour used oil into the sewers, ditches or bodies of water. Keep it in special containers and deliver it to companies specialized in such disposal.

### **Leaks**

Cover any lubricant leaks with soil, sand or other absorbent material.

The contaminated area must be degreased with solvents and without leaving puddles or allowing vapors to form.

The materials used for cleaning must be disposed of in compliance with current regulations.

### **Precautions**

- Avoid contact with the skin
- Avoid the formation or spread of vapors in the environment
- Prevent spills
- Wash frequently without using aggressive cleansers
- Do not dry hands with rags soiled with oil
- Change any clothing that is dirty or greasy and always change clothes at the end of the workday
- Never smoke or eat with greasy hands
- Wear the following personal protection equipment:
  - Gloves resistant to mineral oils, and with internal lining
  - Eye protection vs. spraying of mineral oil
  - Resistant apron vs. sprays

### **First aid**

- Ingestion: contact the nearest emergency center and provide all information on the type of oil ingested
- Inhalation: in the case of exposure to high concentrations of fumes or oil vapors, bring the wounded outside and contact the nearest emergency center
- Eyes: rinse thoroughly with water and contact the nearest emergency center
- Skin: wash with soap and water.

## **MANUAL LOWERING**

Operations to be performed to lower raised platform in the event of loss of power to equipment:

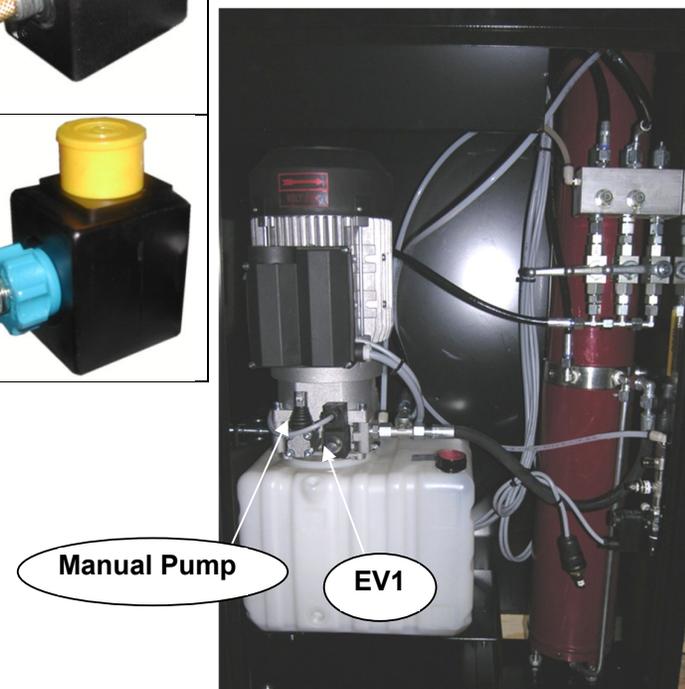
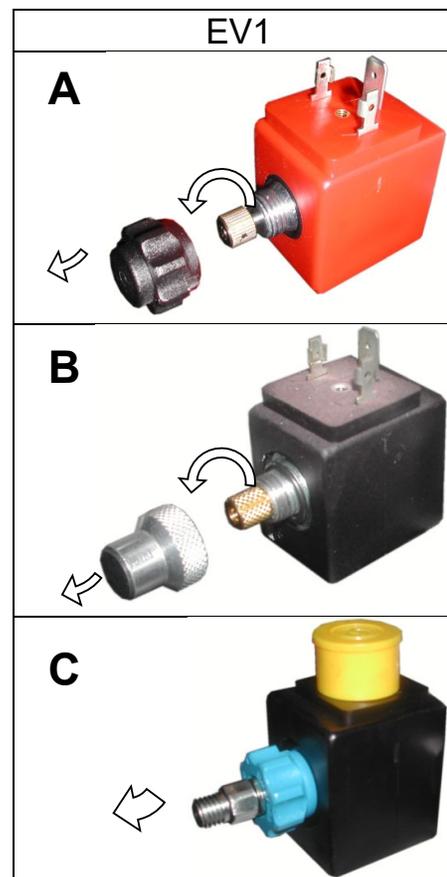
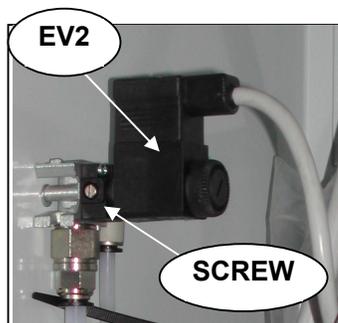


- Using pump handle, pump until the mechanical locks are no longer engaged.

- Activate Lock Release using the dedicated manual valve on solenoid valve EV2 (turn screw 90°).

ENSURE THAT MECHANICAL LOCKS ARE OPEN.

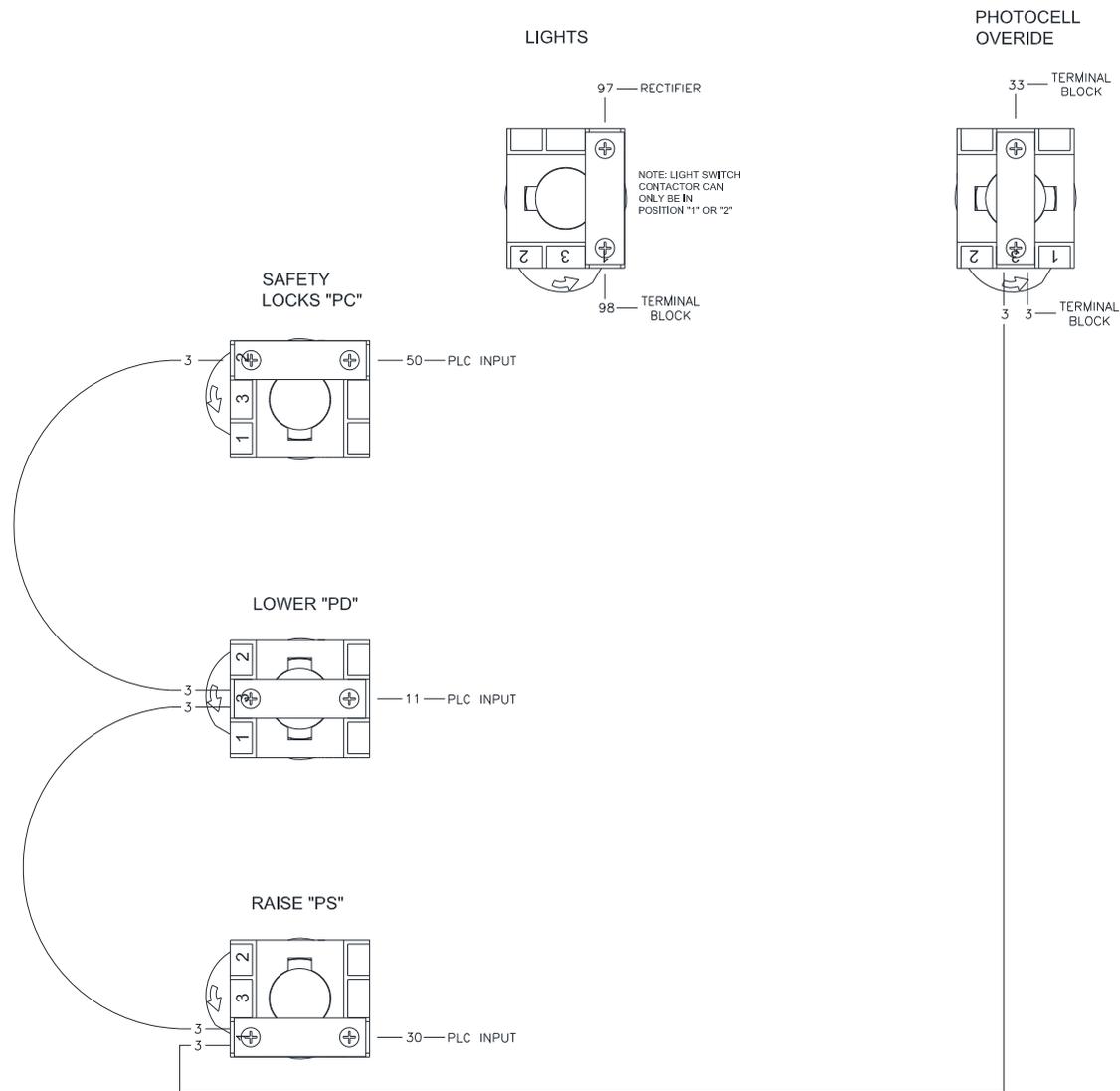
- Activate solenoid valve EV1 (see photograph: **A** or **B** or **C**) and allow the lift to lower;
- to restore, return the manual command of valve EV2 to its position and tighten the knurled pins.



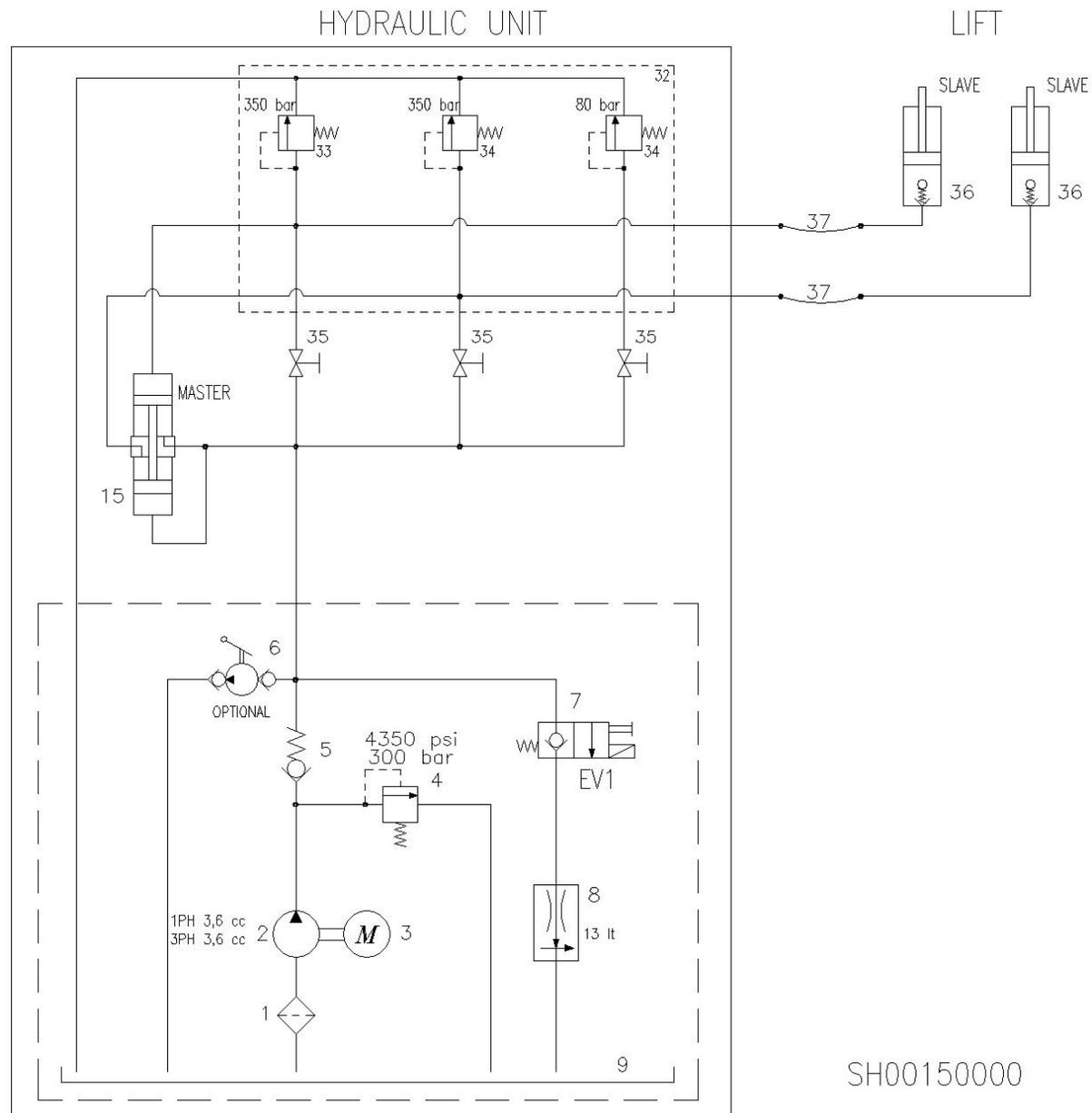
## **TROUBLESHOOTING OPERATIONS**

<b>WHAT HAPPENS</b>	<b>WHERE</b>	<b>CHECK</b>
The lift does not rise and the motor does not start	<ul style="list-style-type: none"> <li>a. FUSES</li> <li>b. THERMAL RELAY</li> <li>c. TRANSFORMER</li> <li>d. MOTOR</li> <li>e. MAIN CONTACTOR</li> <li>f. PHOTOCCELL</li> </ul>	<ul style="list-style-type: none"> <li>a.1. line fuse blown.</li> <li>a.2. 24-volt fuse blown.</li> <li>b.1. thermal relay tripped, reset.</li> <li>c.1. transformer failure, does not emit 24 volt.</li> <li>d.1. motor failure.</li> <li>e.1. contactor C1 failure</li> <li>f.1. photocell fault.</li> <li>f.2. photocells out of reading range</li> </ul>
The lift does not rise and the motor starts.	<ul style="list-style-type: none"> <li>a. HYDRAULIC PUMP</li> <li>b. LOWERING VALVE</li> <li>c. LIMIT VALVE</li> <li>d. MOTOR</li> </ul>	<ul style="list-style-type: none"> <li>a.1. O-ring seal broken.</li> <li>a.2. key broken.</li> <li>a.3. pickup tube broken.</li> <li>a.4. clamping screws loose.</li> <li>a.5. oil leakage.</li> <li>a.6. check the pressure value</li> <li>b.1. lowering valve stuck open.</li> <li>c.1. limit valve broken.</li> <li>d.1. Check that the motor turns in the direction shown by the arrow.</li> </ul>
The lift does not lower and the pressure is normal.	<ul style="list-style-type: none"> <li>a. PHOTOCCELLS</li> <li>b. TRANSFORMER</li> <li>c. PARACHUTE VALVE</li> <li>d. ELECTRIC VALVE</li> <li>e. MECHANICAL SAFETY DEVICES</li> <li>f. LOCK RELEASE VALVE</li> </ul>	<ul style="list-style-type: none"> <li>a.1. photocell fault.</li> <li>a.2. photocells out of reading range</li> <li>b.1. transformer failure, does not emit 24 volt.</li> <li>c.1. check the parachute valves on the bottom of the dual effect cylinders.</li> <li>d.1. lowering valve blocked.</li> <li>d.2. lowering valve coil failure.</li> <li>e.1. mechanical safety devices mechanically blocked.</li> <li>f.1. air blocked (does not open the mechanical safety devices).</li> <li>f.2. valve requires power.</li> </ul>



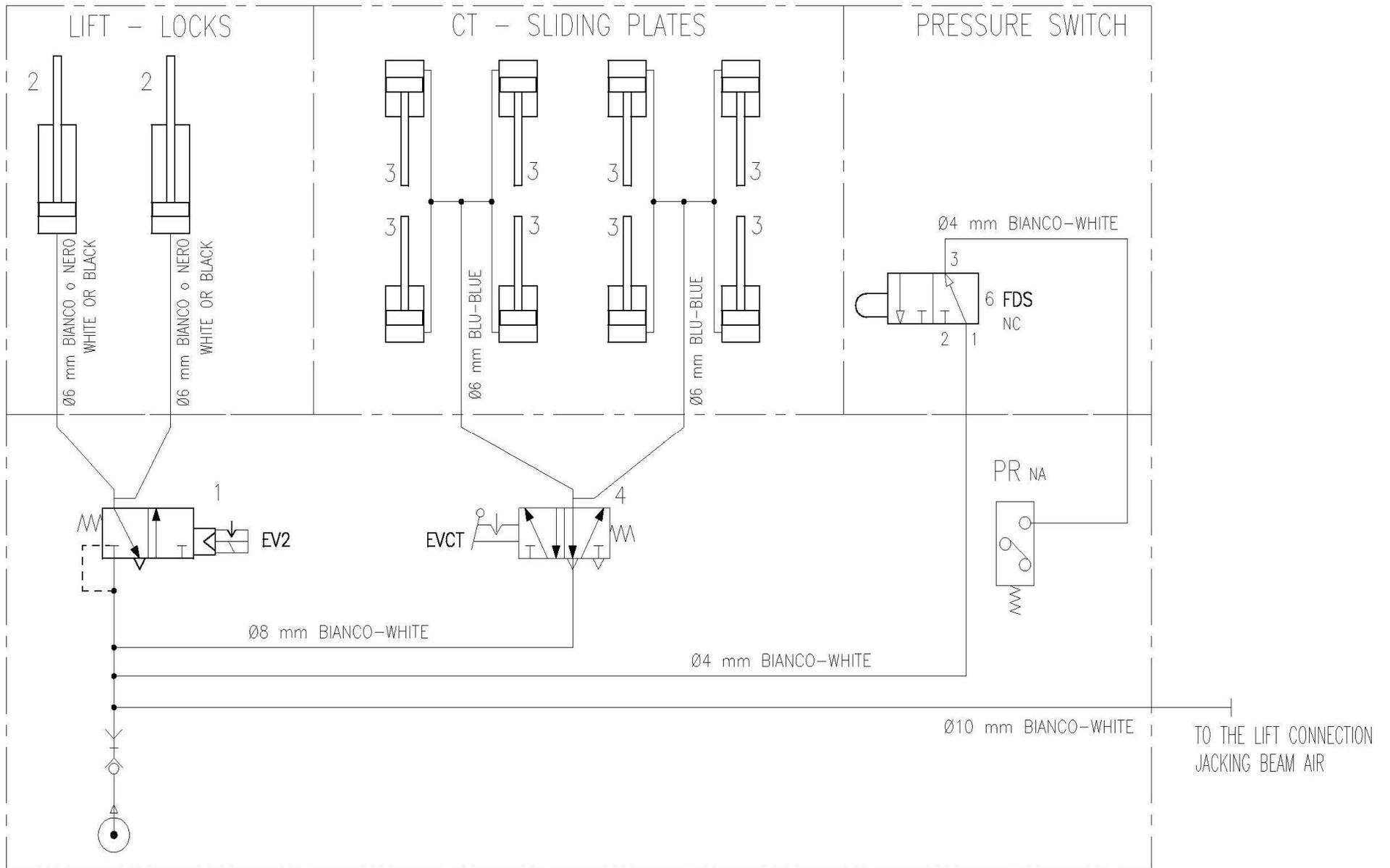


**Fig. 13 – Electrical Wiring Diagram Continued**



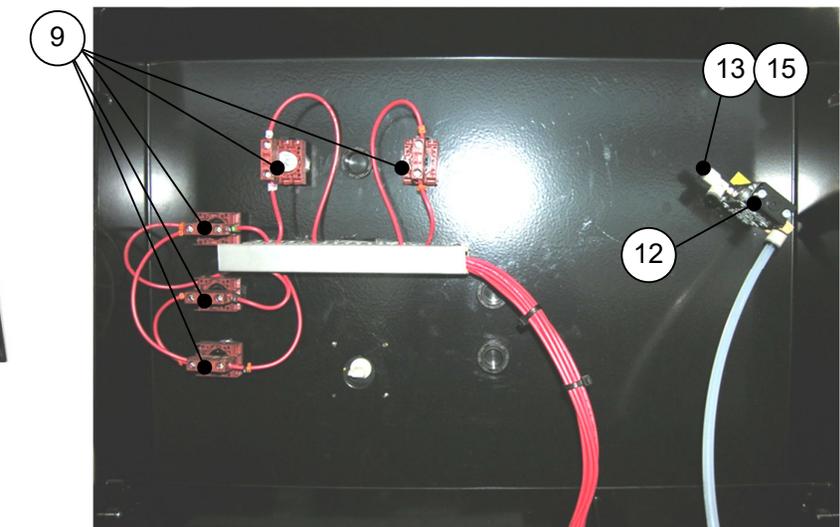
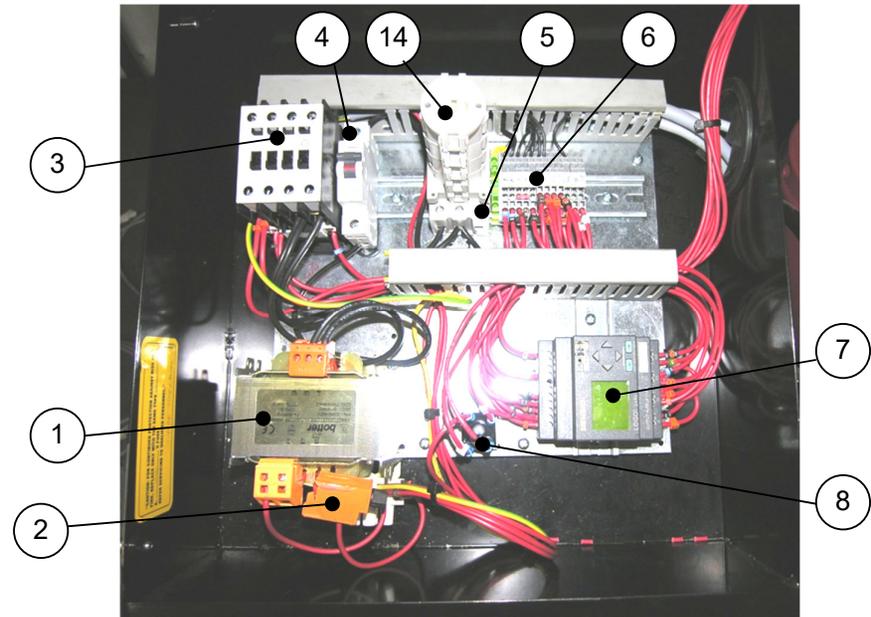
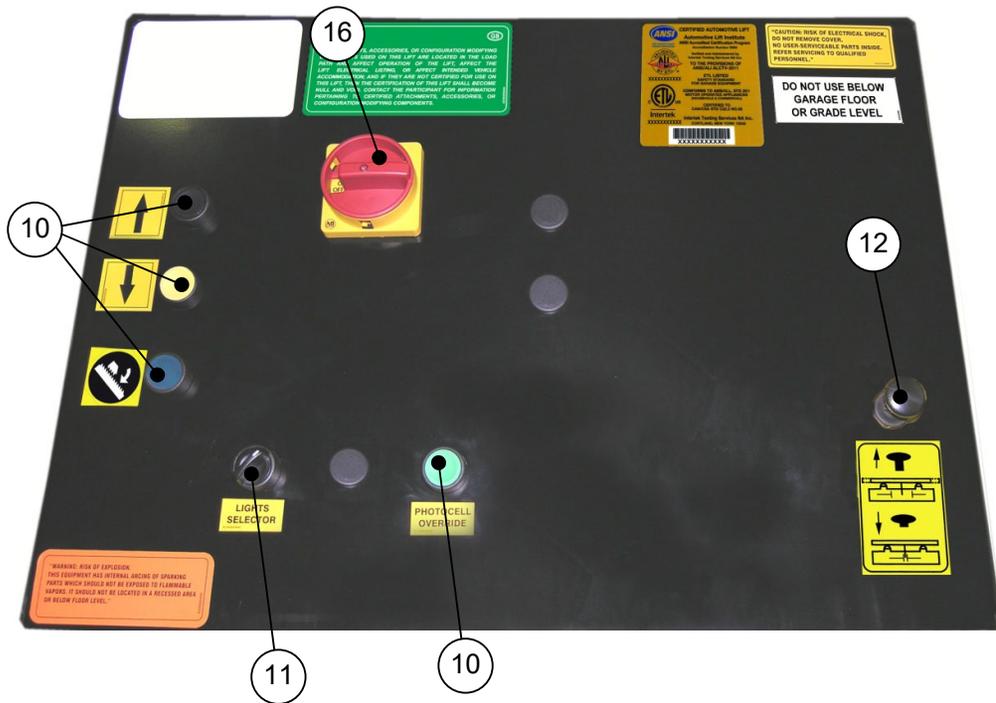
SH00150000

**Fig. 14 – Hydraulic Diagram**



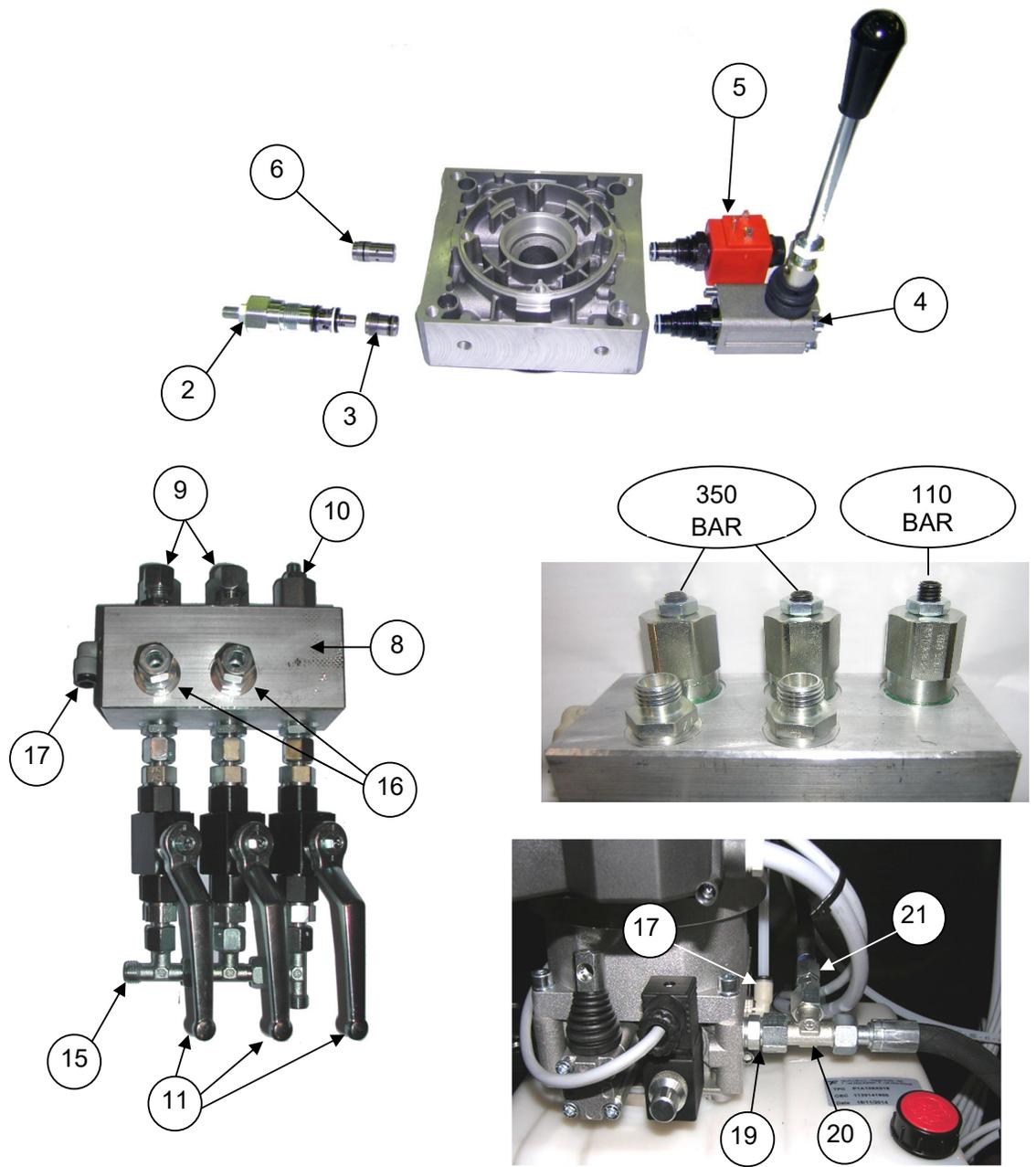
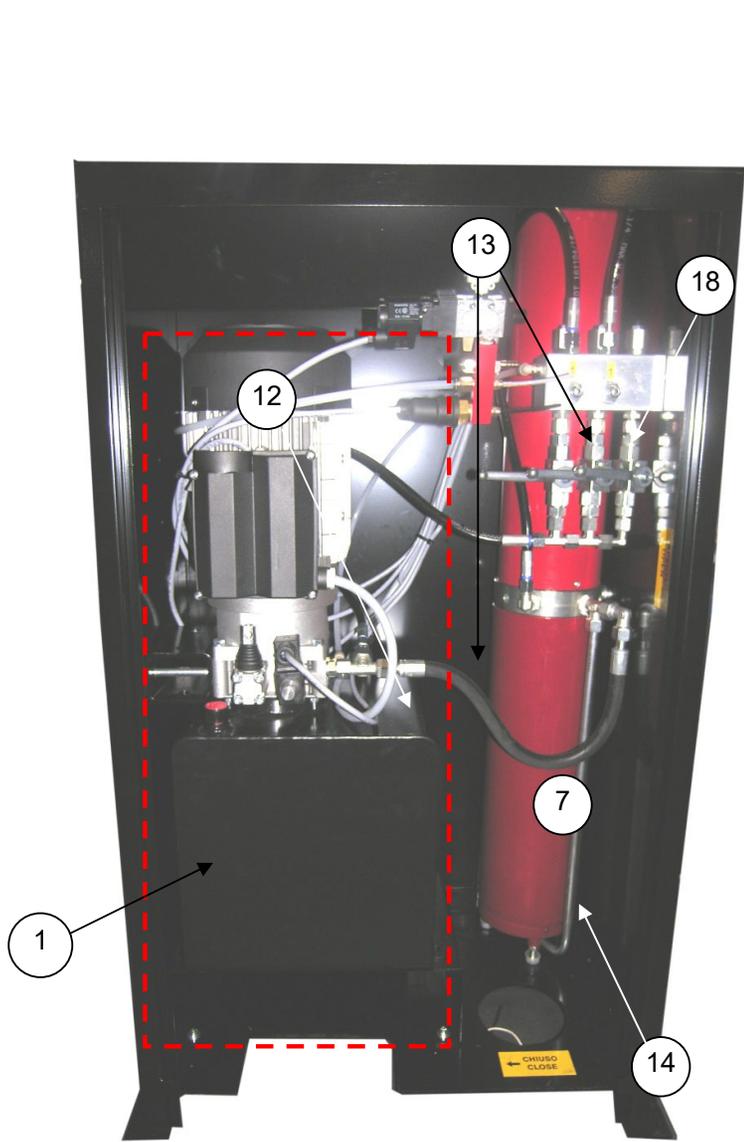
**Fig. 15 – Pneumatic Diagram**

# PARTS BREAKDOWN



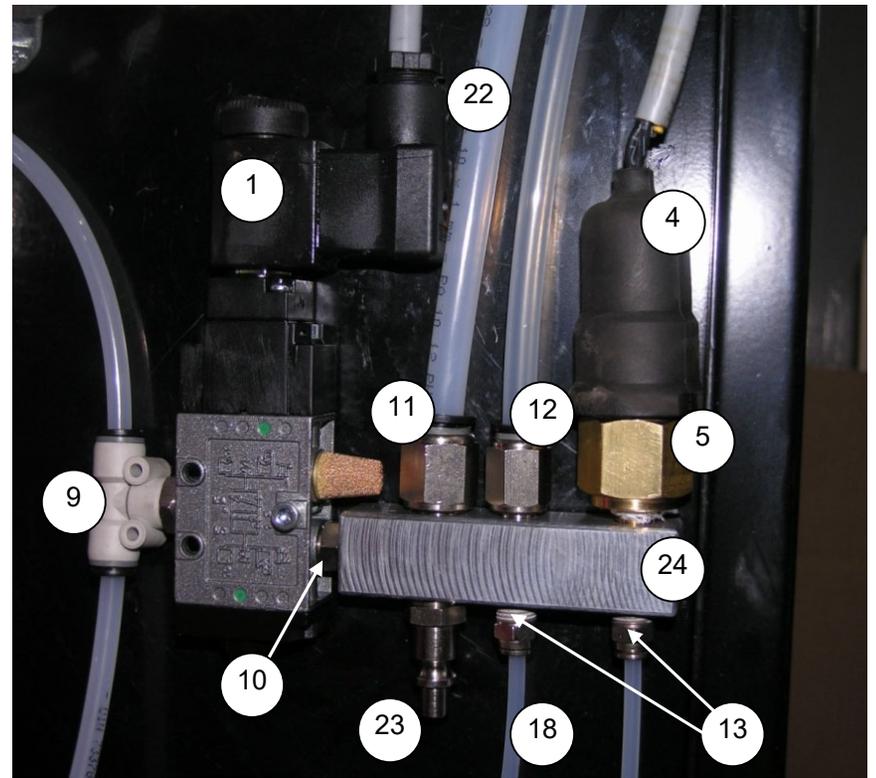
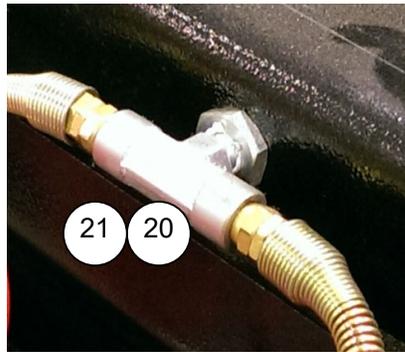
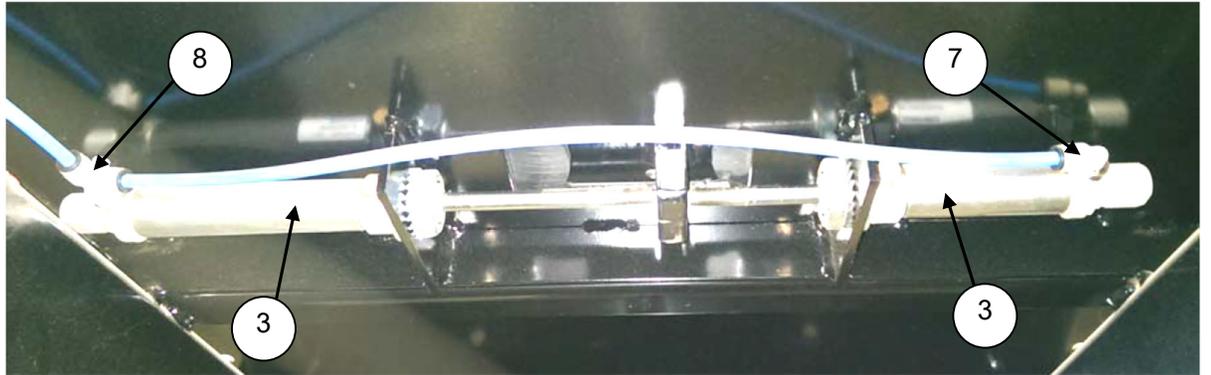
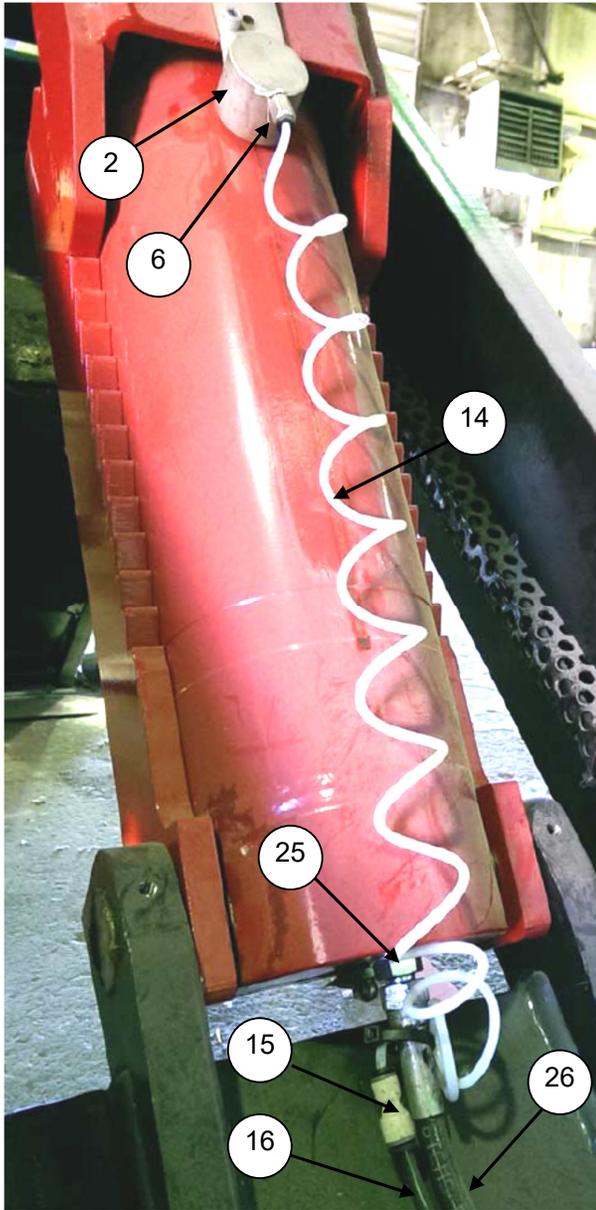
<b>Item</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
<b>1</b>	1361030010	1	Transformer
<b>2</b>	1451380000	1	Fuse
<b>3</b>	1501770000	1	Contactor
<b>4</b>	1501710100	1 (1ph) 2 (3ph)	Magnetothermic Switch
<b>5</b>	1371080000	1	Main Switch
<b>6</b>	1422070131 1422070132 1422070133 1422070135	4	Terminal Board Contactors
<b>7</b>	1556320100	1	PLC
<b>8</b>	1554090000	1	AC/DC Transformer
<b>9</b>	1411000010	5	NO Contacts
<b>10</b>	1481010010	4	Push Button
<b>11</b>	1551350071	1	Lights Control Switch
<b>12</b>	1251050005	1	Pneumatic Valve w/ Knob
<b>13</b>	1266050009	1	Pneumatic Tee Fitting
<b>14</b>	1371040001	2	Extension
<b>15</b>	1291040028	2	6mm Tube, 14M Long, Blue
<b>16</b>	1371170000	1	Turn Knob, Red

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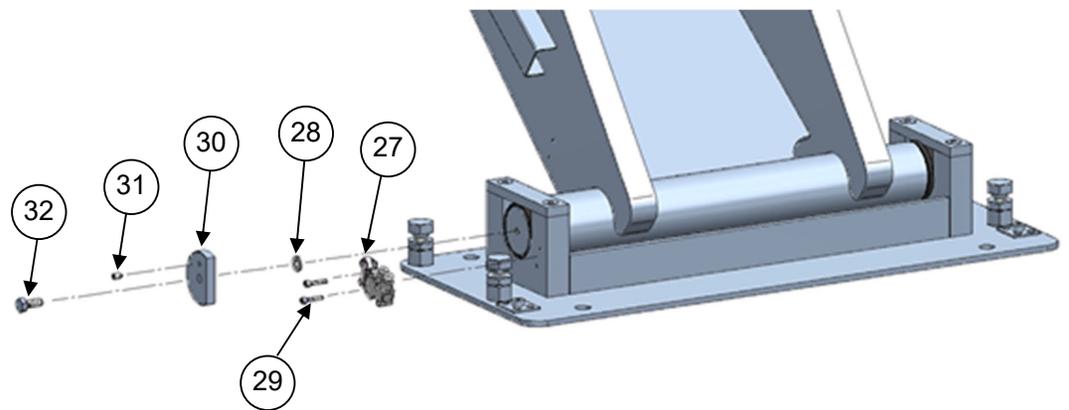
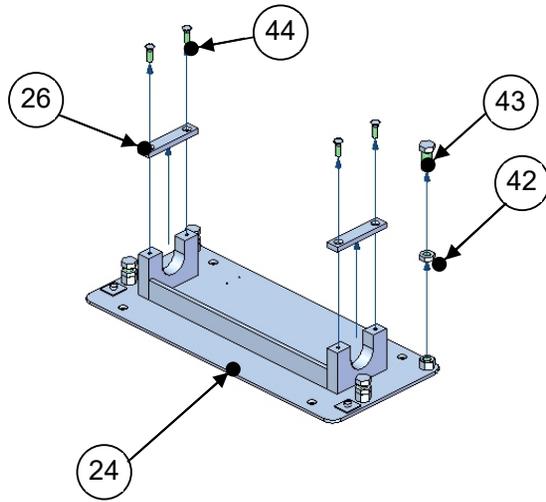
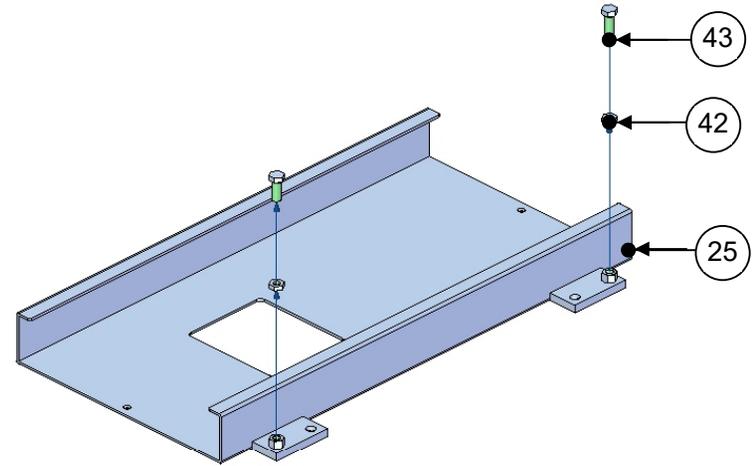
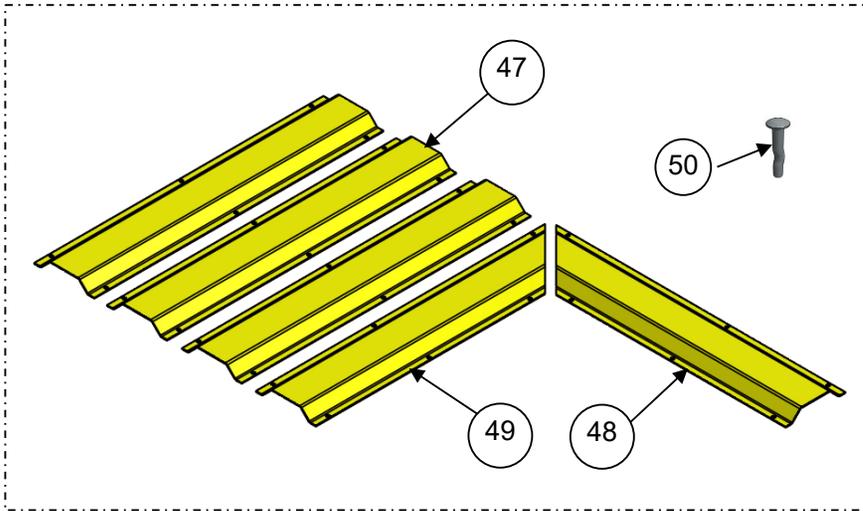
<b>ITEM</b>	<b>PART NUMBER</b>	<b>QTY.</b>	<b>DESCRIPTION</b>
1	3036026095	1	Power Unit Assembly
2	1120160101	1	Pressure Relief Valve
3	1901900013	1	Check Valve
4	1120109011	1	Manual pump with Lever
5	1901900083	1	Lowering Valve
6	1120160103	1	Throttling Valve
7	3036002470	1	Oil Divider Cylinder
8	3036025099	1	Hydraulic Block
9	1120160100	2	Relief valve, 350 BAR
10	1120160100-110	2	Relief valve, 110 BAR
11	1251120000	3	Ball Valve
12	1291010008	1	Return Tube, 8mm O.D.
13	1201967307	2	Hydraulic Hose, Straight Fittings
14	1201470507	1	Main Supply Hose
15	1164120008	3	Tee Fitting
16	1161030010	2	#6JIC x BSPP Straight Fitting
17	1265080009	2	Push Lock Elbow
18	1201210540	1	Hydraulic Hose, Elbow
19	1161090108	1	Power Unit Fitting
20	1166030008	1	Tee Fitting
21	1175010008	1	Straight Fitting

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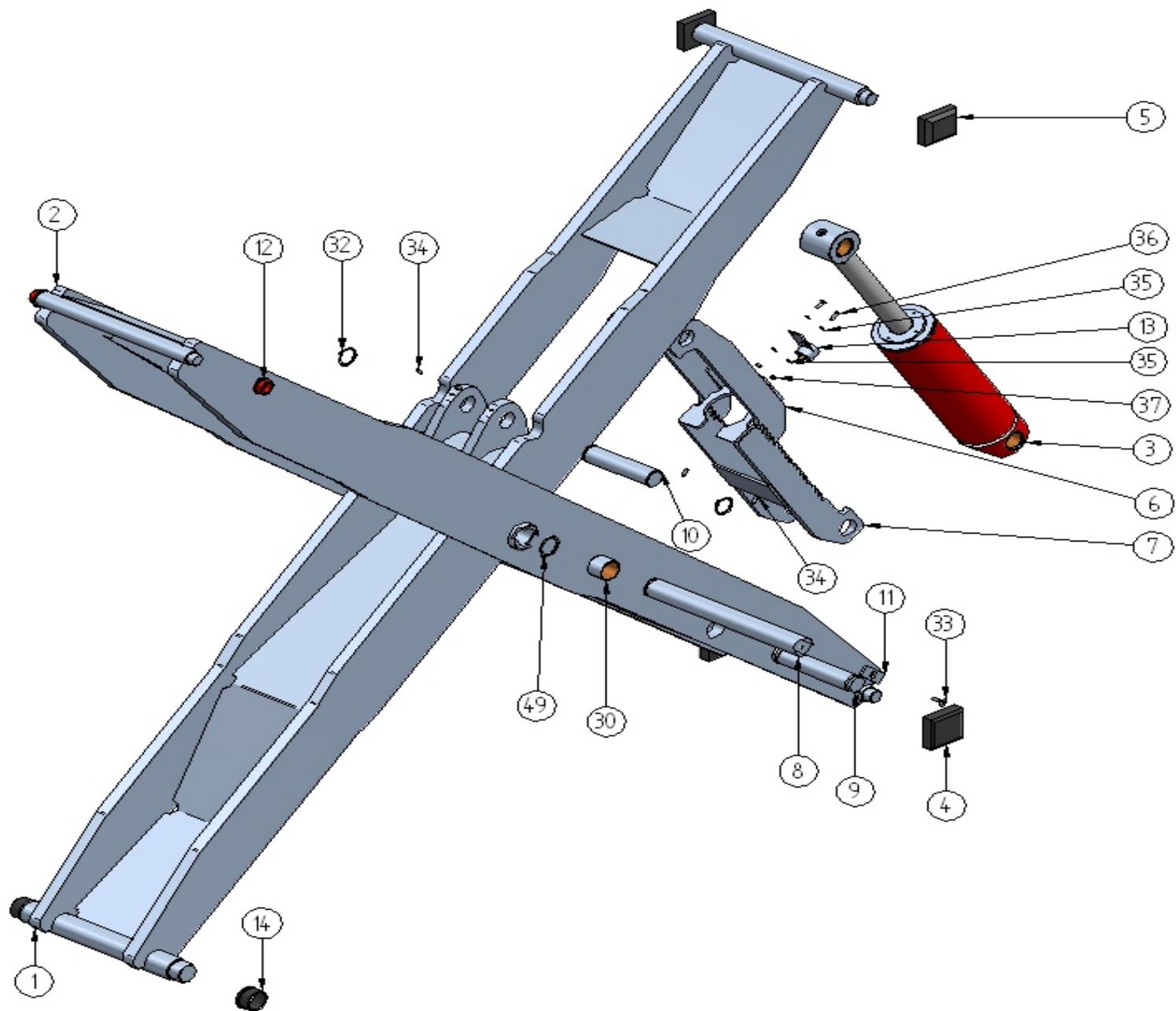
<b>ITEM</b>	<b>PART NUMBER</b>	<b>Qty.</b>	<b>Description</b>
<b>1</b>	1281130000	1	Lock Release Solenoid Valve, 24V
<b>2</b>	3036055730	2	Lock Release Air Cylinder
<b>3</b>	1251042060	4	Slip Plate Lock Cylinder
<b>4</b>	1211110001	1	Protective Cap
<b>5</b>	1211110050R	1	Pressure Switch
<b>6</b>	1265010109	2	4mm Push Lock Fitting
<b>7</b>	1265060009	4	Push Lock Elbow
<b>8</b>	1266050009	4	Tee Fitting
<b>9</b>	1266060009	1	Tee Fitting
<b>10</b>	1261090009	1	Union Fitting
<b>11</b>	1264070009	1	10mm Push Lock Fitting
<b>12</b>	1264020009	1	8mm Push Lock Fitting
<b>13</b>	1264050009	2	4mm Push Lock Ffitting
<b>14</b>	1291040038	2	4mm Spiral Tube
<b>15</b>	DX77-54	2	6mm x 4mm Push Lock Reducer
<b>16</b>	1291020008	2	6mm Tube, 14M Long
<b>18</b>	1291060008	2	4mm Tube, 8M Long
<b>19</b>	1262090110	2	6mm Push Lock Y-Union (NOT SHOWN)
<b>20</b>	1263040009	1	Tee Fitting, 1/4" FNPT
<b>21</b>	1265040000	1	10mm Push Lock Elbow
<b>22</b>	1291050008	1	10mm Tube, 14M Long
<b>23</b>	1264110009	1	Hose Barb Fitting
<b>24</b>	3036062580	1	Pneumatic Manifold Block
<b>25</b>	DX77-49	2	#6JIC x BSPP Straight Fitting
<b>26</b>	1201404810	2	Long Hydraulic Hose, 236"

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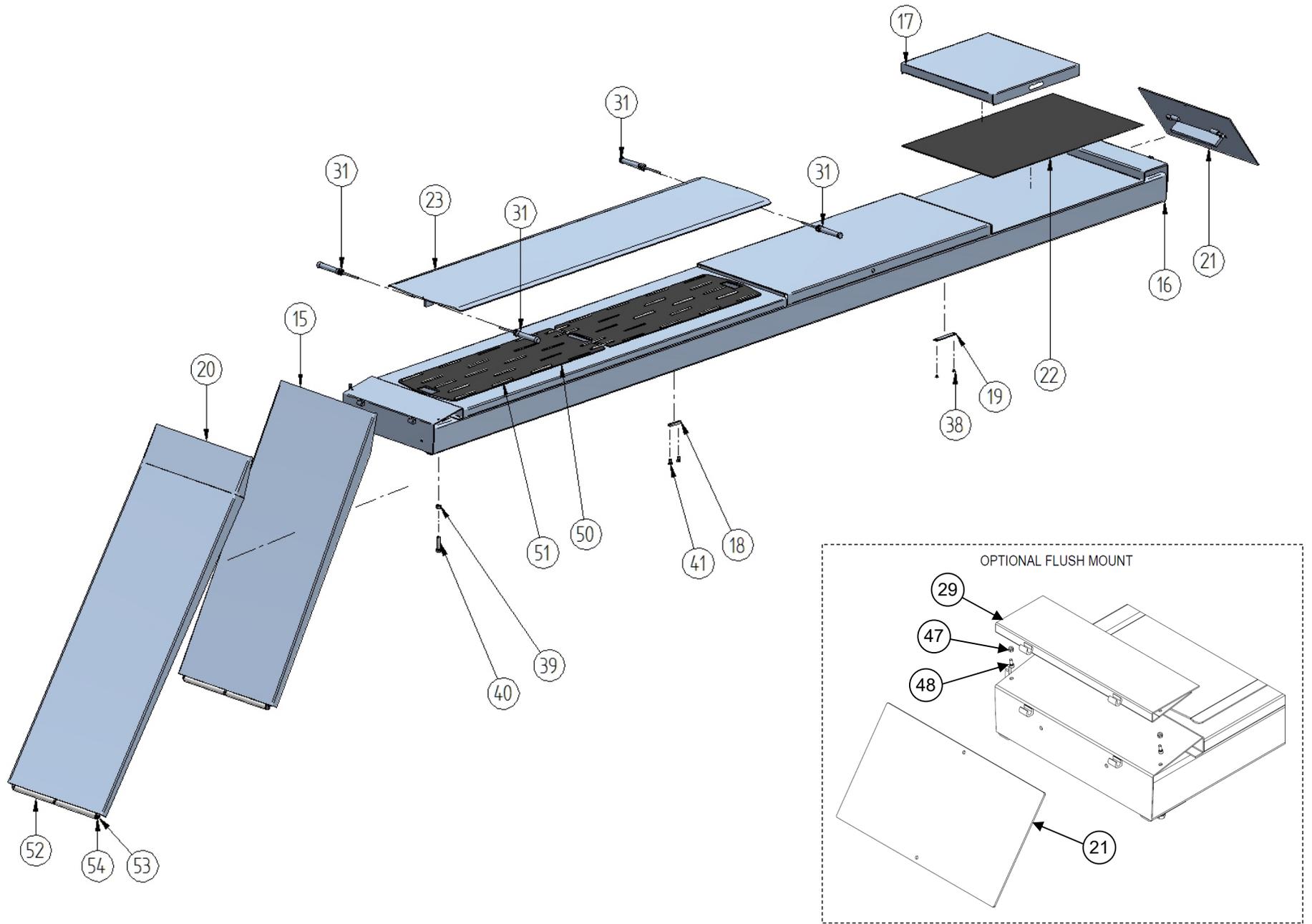
<b>ITEM</b>	<b>PART NUMBER</b>	<b>QTY.</b>	<b>DESCRIPTION</b>
<b>24</b>	3036058067	1	Rear Base
<b>25</b>	3036058080	1	Front Base
<b>26</b>	3036058078	2	Capture Plate
<b>27</b>	1401680000	1	Microswitch
<b>28</b>	1061080000	1	M8 Washer
<b>29</b>	1011040200	2	M4 x 20 Socket Head Screw
<b>30</b>	3036062590	1	Cam
<b>31</b>	1022060101	1	M6 x 10 Set Screw
<b>32</b>	1003080200	1	M8 x 20 Hex Bolt
<b>42</b>	X10-095	6	M16 Hex Nut
<b>43</b>	1003160400	6	M16 x 40 Hex Bolt
<b>44</b>	1012080300	4	M8 x 30 Flat Head Screw
<b>45</b>	1061040000	2	M4 Flat Washer
<b>46</b>	1011040100	2	M4 x 10 Pan Head Screw
<b>47</b>	30501	3	Straight Hose Cover
<b>48</b>	30503-1	1	Angled Hose Cover Left
<b>49</b>	30503-2	1	Angled Hose Cover Left
<b>50</b>	484985	30	¼" x 1 ½" Drive Anchor

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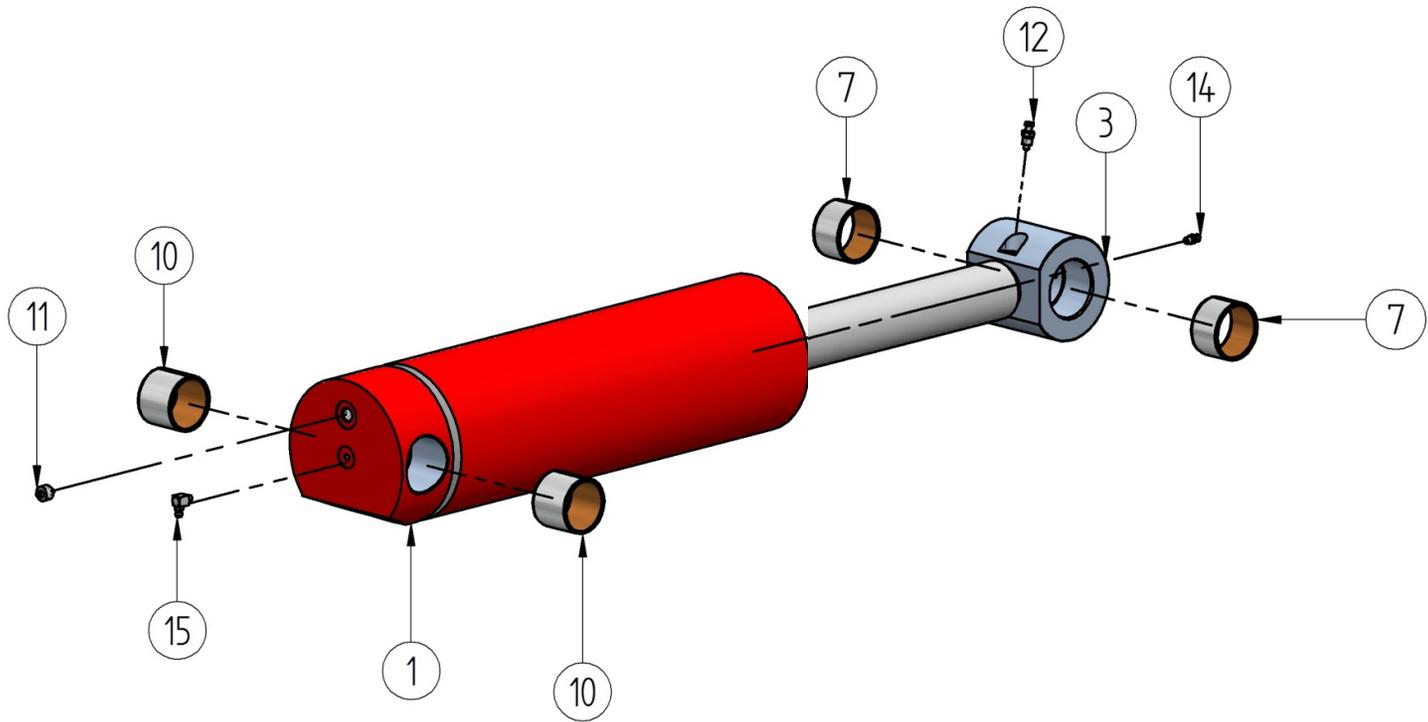
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	3036062200	2	Inner Scissor Weldment
2	3036062100	2	Outer Scissor Weldment
3	3036062301	2	Lifting Cylinder
4	3036062505	4	Lower Slide Block
5	3036062520	4	Upper Slide Block
6	3036062420	2	Safety Lock Arm
7	3036062400	2	Safety Lock Base
8	3036062515	2	50mm Center Pin
9	3036062510	2	45mm Cylinder Base Pin
10	3036062500	2	45mm Cylinder Rod Pin
11	3036055009	2	Anti Rotation Plate
12	3036055076	4	Bushing
13	3036055730	2	Lock Release Cylinder
14	3036058306	4	Bushing
30	1141490000	2	Bushing
32	1071450003	4	45mm Snap Ring
33	1012100300	2	M10 x 30 FHSCS
34	1023080200	8	M8 x 20 Cone Point Set Screw
35	31115	8	M6 Flat Washer
36	X10-051	4	M6 x 20 Hex Bolt
37	X10-034	4	M6 Hex Nut
49	1071500004	2	50mm Snap Ring

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ITEM	PART NUMBER	QTY.	DESCRIPTION
15	3036056348	2	Standard Ramp
16	3036062600	1	Driver Side Platform
17	3036062625	2	Filler Platform
18	3036062525	2	Plate
19	3036001300	2	Plate
20	3036806280	2	Extended Ramp (Optional)
21	3036001132	2	Wheel Stop/ Ramp
		4	Wheel Stop/ Ramp Flush Mount (Optional)
22	3036062615	2	Plastic Sheet
23	3036815830	2	Rear Slip Plate
29	3036001500	2	Flush Mount Spacer (Optional)
31	1251042060	8	Slip Plate Locking Cylinder
38	VS10-31-08	4	M8 x 12 Flat Head Screw
39	X10-095	2	M16 Hex Nut
40	1003160700	2	M16 x 70 Hex Bolt
41	MR6-002	4	M10 x 20 Hex Bolt
47	1056080000	4	M8 Lock Nut (Optional)
48	Q4P09-006	4	M8 x 20 SHCS (Optional)
50	3036815832	4	Platic Pad
51	3036051687	72	Plastic Roller
52	3020191531	4	Roller
53	3020191532	2	Pin
54	1071140003	4	14mm Snap Ring

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ITEM	PART NUMBER	QTY.	DESCRIPTION
7	1141590000	4	Bushing
10	1141590110	4	Bushing
11	1281220011	2	Parachute Valve
12	1131100005	2	Bleed Screw
14	1141030000	2	Greasing nipple
15	1141050000	2	Greasing nipple

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# **REVISIONS**

2025/01/02 – UPDATED ANSI/ALI REFERENCE MATERIAL. UPDATED COVER SHEET.