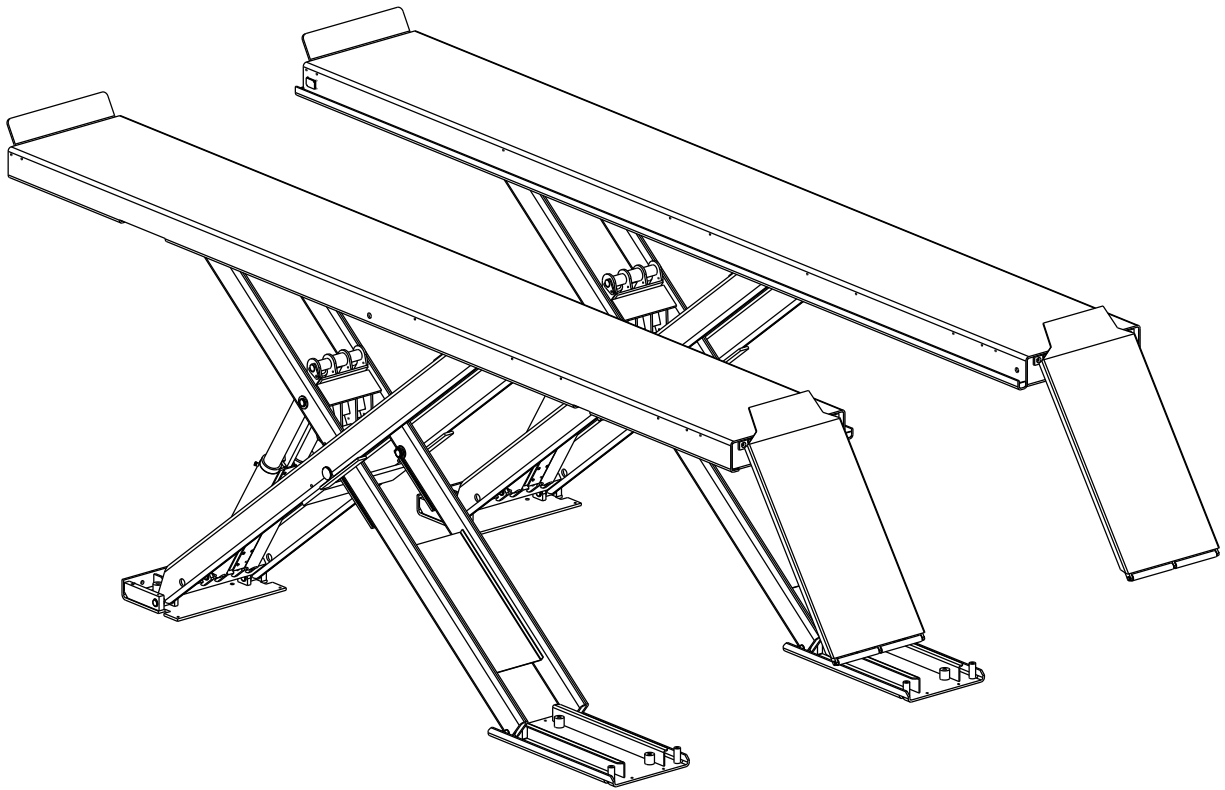


ML11 SERIES SCISSOR LIFTS

INSTALLATION INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS ENCLOSED.
READ ALL INSTRUCTIONS AND SAVE THESE
INSTRUCTIONS WITH THE LIFT



1.1 Technical data
Mechanical data
Load capacity: 11,000 lb.
Overall height: 78-3/4"
Collapsed height: 8-3/8"
Usable stroke: 70-7/8"
Platform length: 181"/204-3/4"
Platform width: 27-1/8" surface
Platform surface: plain sheet
Weight: (each platform)
ML11-46: 2975 lb.
ML11-52: 3030 lb.
5/8" Hilti Kwik Bolt III anchors required

Electrical system
Connection: Single phase/230V/60Hz
Power: 5 Hp
Current consumption: 28 A
Operating voltage: 230 V
Control voltage: 24 V
Hydraulics
Maximum operating hydraulic pressure: 3100 psi
Oil fill quantity: 35 qts. total of ATF Dextron III

OPERATING CONDITIONS: Lift is not intended for outdoor use or storage and has an operating ambient temperature range of 40-105 degrees F.

- **IMPORTANT DO NOT** power lift with 120V power.
- Protect each circuit with a time delay fuse or circuit breaker per NEC and local codes.
- The service must be sized appropriately to handle 28 full load amps if 230 volts is provided or 31 full load amps if 208 volts is provided. Consult NEC and local codes.
- 90 – 120 psi shop air at 5 cfm minimum.
- Dedicated electrical service is required.

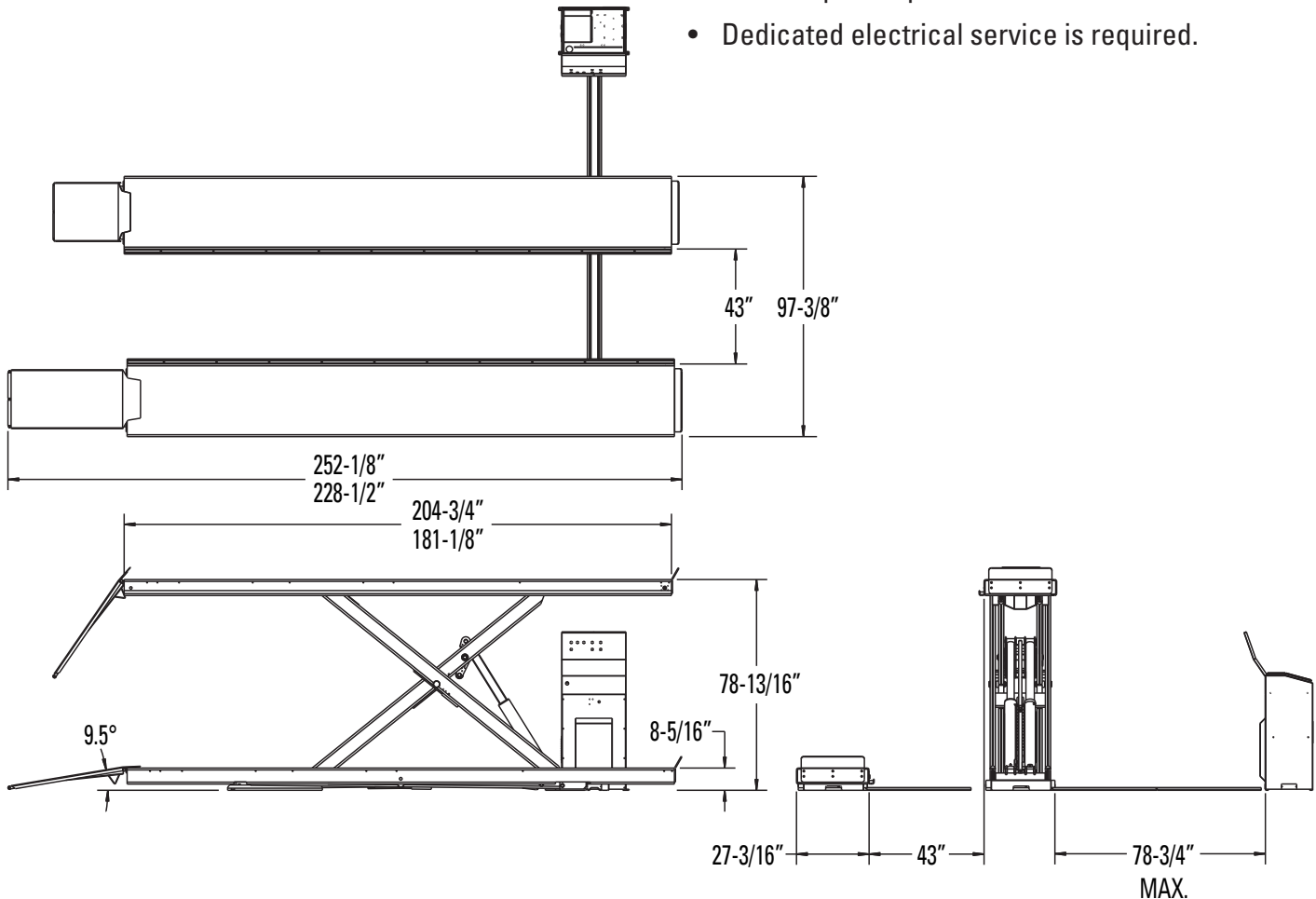


Fig. 1.1

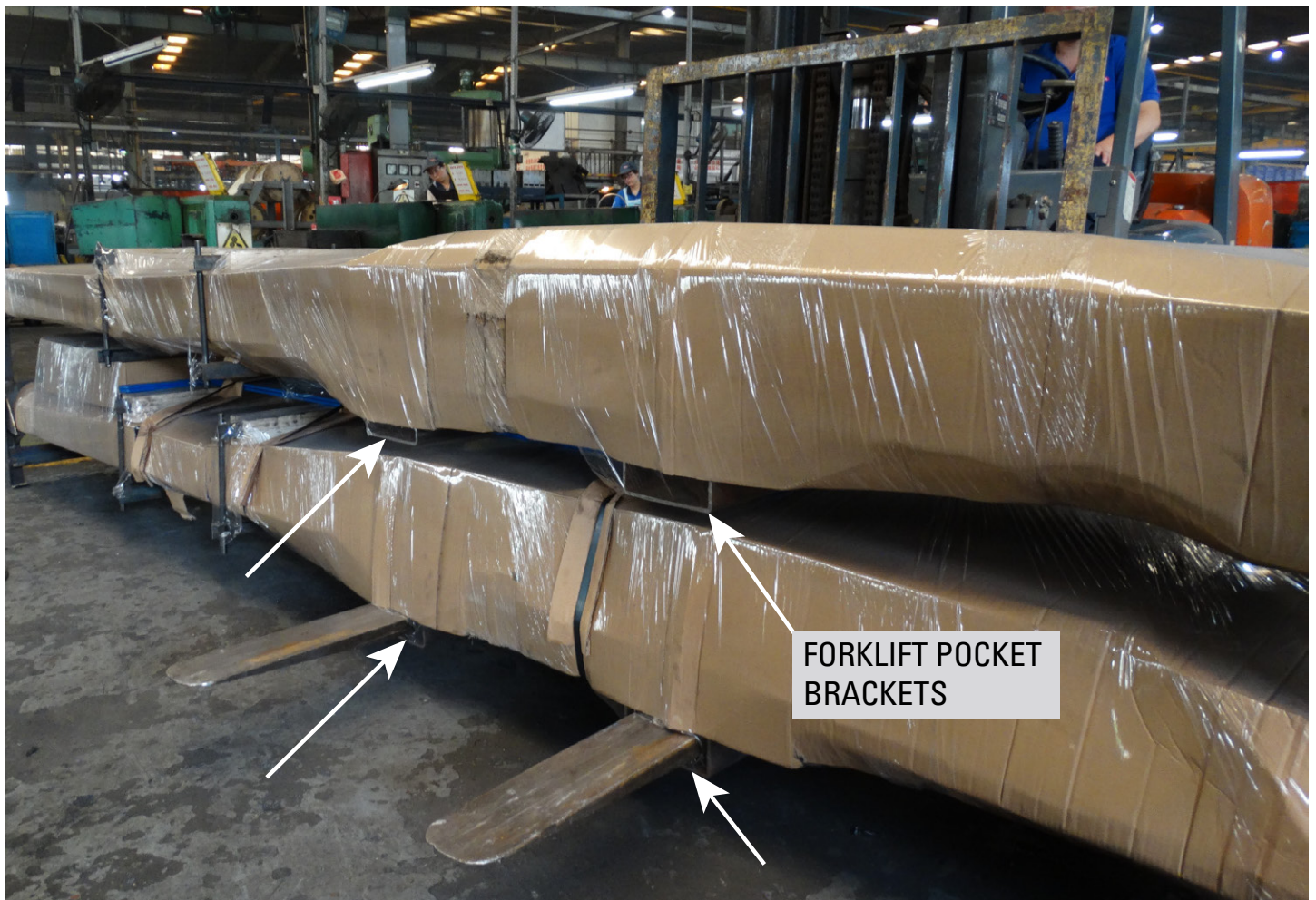
*Dimensions shown are for a 205" runway with standard ramps.

Transport

2.1 Transport to the installation location

- Inspect the shipment for any shipping damage. Immediately report any damage to your supervisor and the transportation firm.
- The transport can be performed with a forklift or a crane. When transporting with a crane, ensure that the machine does not sway too heavily.
- Remove packaging material (clear wrap and cardboard) from lift kits. **DO NOT** remove the forklift pocket brackets or the bands holding the bases to the runways at this time (see figure 2.2)
- Remove shipping brackets on each end of the runways and set each runway assembly on the floor.

Fig. 2.2 Transport



Installation

3.1 Location requirements for setup

- Avoid points of crushing and shearing between the machine and its surroundings.
- The machine may not be operated in areas at risk of explosion, or in places where the electrical equipment requires a protection type higher than NEMA 4.
- The ambient temperature must lie between 15°F and 105°F.
- The installation site must provide a sufficient load-bearing and level foundation.
- The flooring at the installation site must be of permissible floor loading strength, calculated as follows: (weight of machine + load capacity) + 50 %.
- When selecting the installation site, ensure that any noise emitted from the machine (due to design) is not further amplified.
- Place the controls in a location ensuring the operator has a clear view of the load and the machine, particularly including areas of concern. Ensure that the operator has avenues of escape if a danger arises.
- An electrical connection conforming to Chap. 1.1 "Technical data", page 2 is to be made available for the operation of the machine.
- Observe any local regulations and rules for buildings.
- Ceiling or overhead clearance should be 80" plus the height of the tallest vehicle to be serviced.

3.1.5 Component Packing List

BASE-ML11N-46/52 (181/205" lift kits)

- Left hand runway/scissor assembly
- Right hand runway/scissor assembly
- Literature package
- Hydraulic hoses
- Air lines
- Floor covers
- Anchor bolts

PU-ML11N-B (controls cabinet kit)

*AK-ML50N-46/52 (alignment kits)

- Rear wheel slip plates
- Filler plates
- RADIUS GAUGES NOT INCLUDED

*NRJ45G

- 4500# capacity wheel free device

RAMP-ML50 (standard approach ramps)

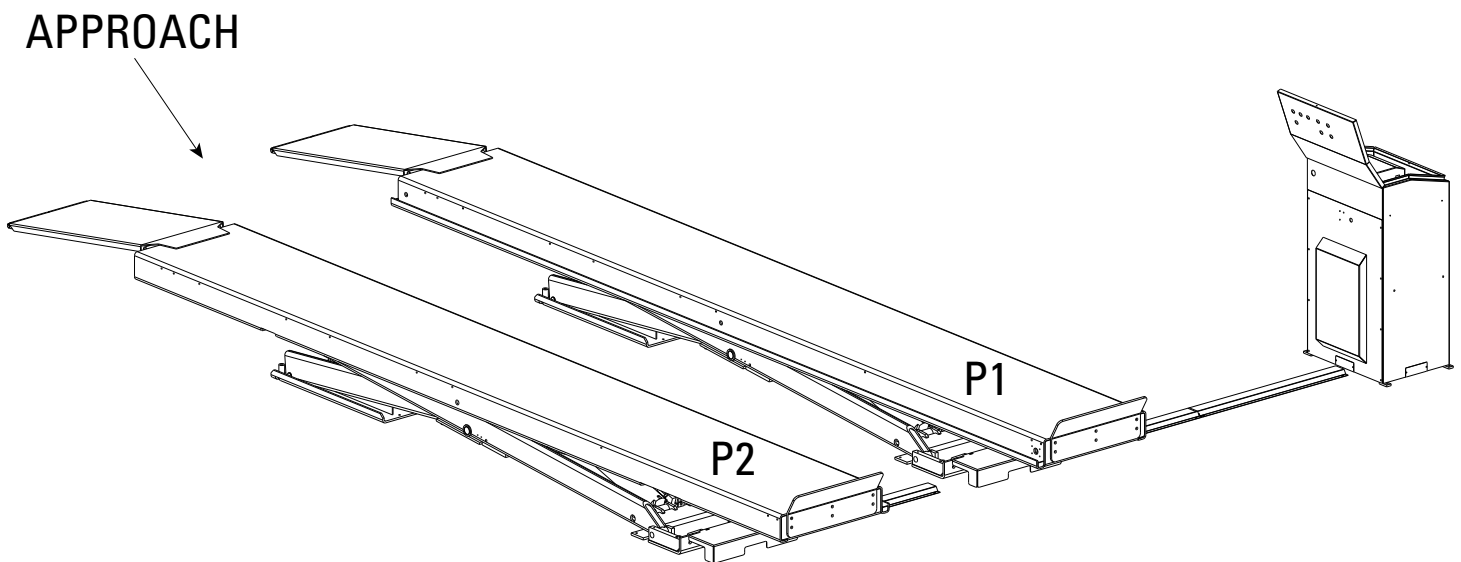
*EXRMP-SM40-1 (extended ramp kit)

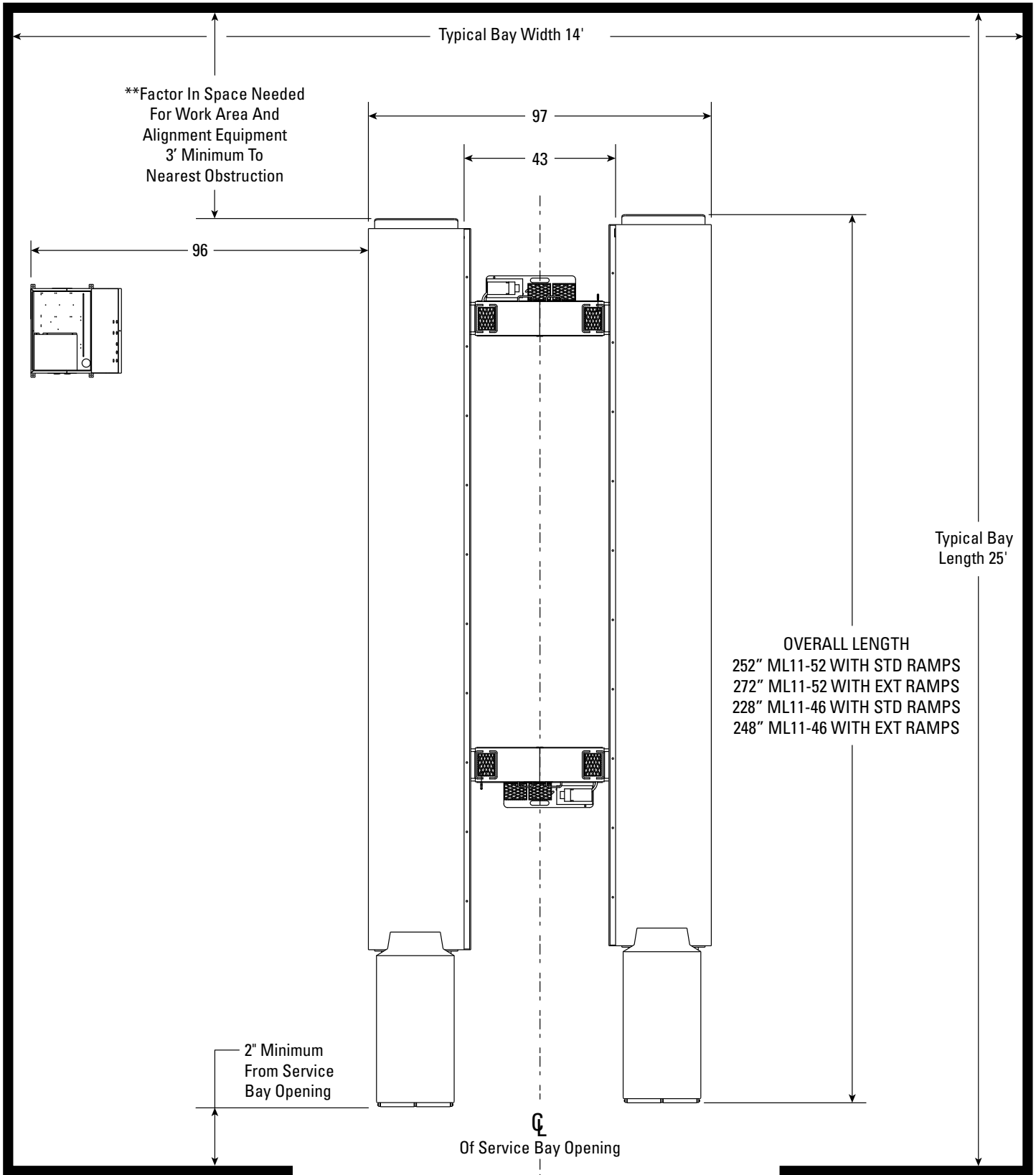
WS-ML50 (wheel stop kit)

*optional items

3.2 Installation Surface

- The lift must be placed on minimum 3000psi concrete with a thickness of at least 4" in conformity with local regulations.
- If a floor covering with the above mentioned requirements is not available, a foundation pad is needed or, some fixing points should be used, for fixing areas at least, having sufficient size and thickness (made of concrete of the same quality, as shown).
- The surface where the lift has to be installed must be even and leveled in all directions. An inclination not higher than 7/8" in drive-on lift direction and 3/8" cross-wise can be balanced with leveling wedges.
- The anchor holes must have a distance of at least 4-1/2" from the edge of the concrete.





*Recommended clearance around the lift is at least 3' for service work.

3.3 Assembly at the installation site

3.3.1 Setting up



NOTICE

Incorrect setup or assembly of the machine can lead to equipment damage and increased wear.

Mechanical assembly work

- Place the lift using a forklift, crane, or an other lifting equipment in the desired location. Each runway should be set on a support approximately 12" tall as shown in Fig. 3.3.2 (See section 1.1 for runway assembly weights). The runways should be spaced apart by 43" (Fig. 3.3.4, page 12). Once the runways are resting on the supports, carefully remove the forklift pocket brackets under each runway. Next, carefully remove the packaging holding the base plates in place and lower the base plates to the floor with the aid of a forklift or crane as shown in Fig. 3.3.3.

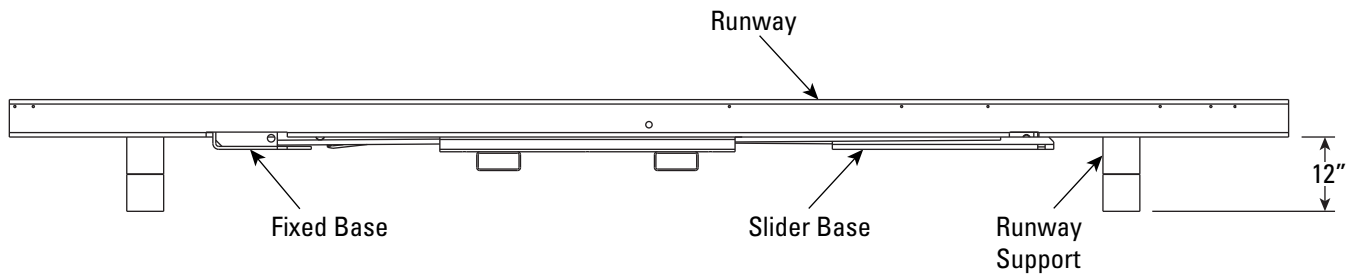


Fig. 3.3.2

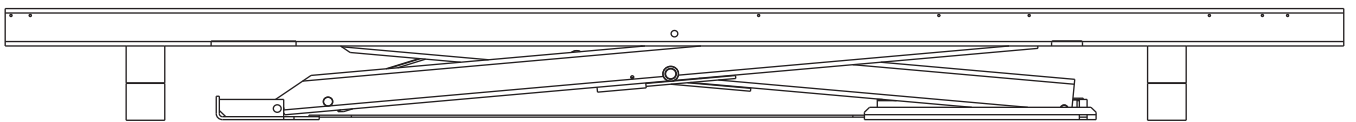


Fig. 3.3.3

Fitting the hydraulic hoses

- The control console can be set up to the right or the left of the scissor lift platform.

Note: Hoses were installed at the factory for a left hand installation. If you prefer a right hand installation, the hoses will need to be swapped.

- Place the control console in position as shown in Fig 1.1.
- Attach hoses as shown below in Fig. 3.3.5 (a hydraulic circuit diagram is included in the appendix).
- Remove the fill cap and fill the hydraulic power unit reservoir to the upper line on the sight glass (33 quarts) with fluid per the specifications in section 1.1.

The hydraulic hose installation is now complete.

*The hydraulic hose ends are engraved as shown.

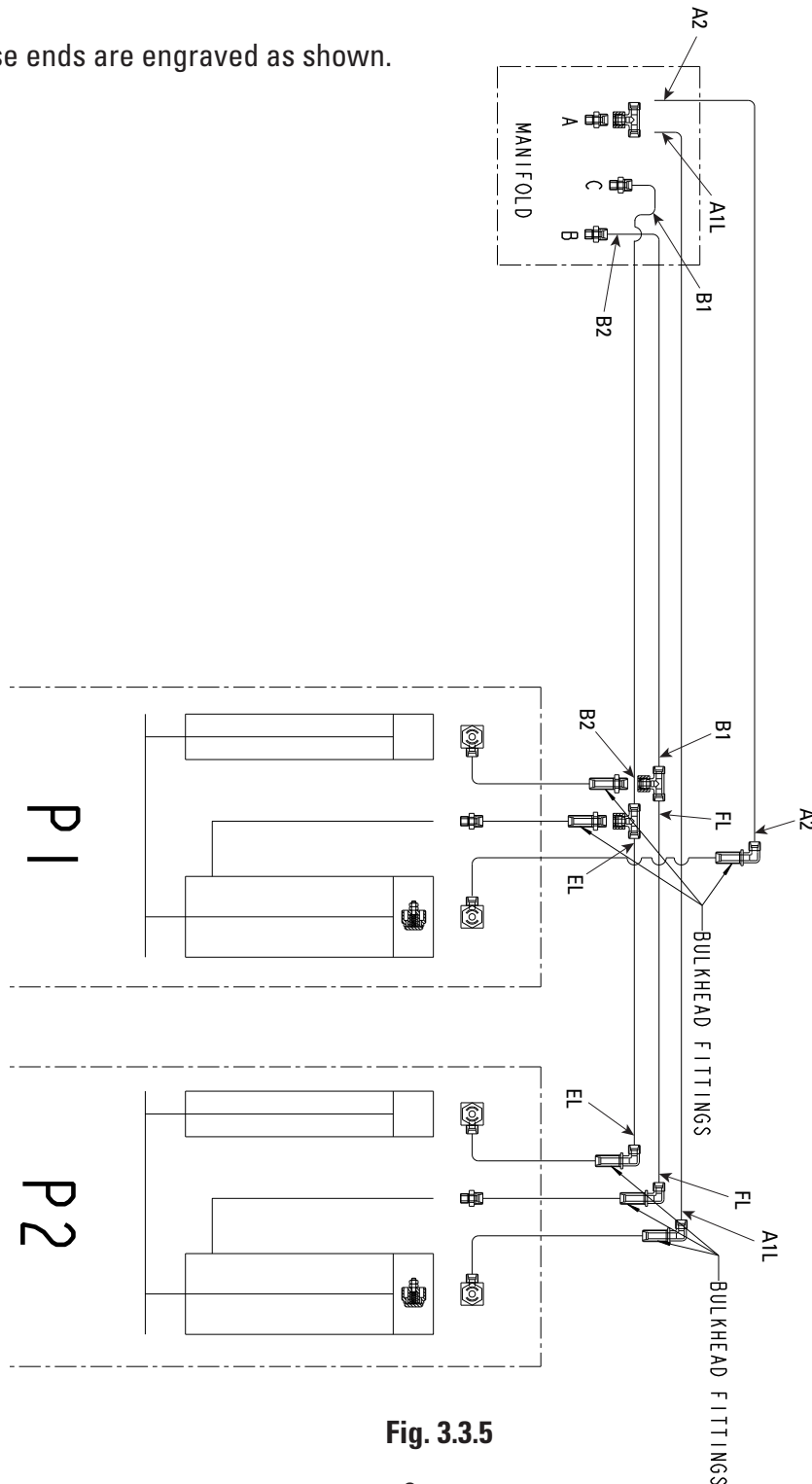



Fig. 3.3.5

3.4 Electrical installation

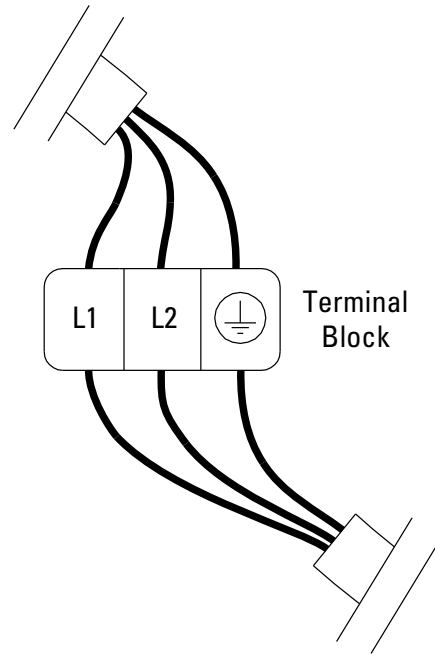


Secure the machine with a lockable main switch to prevent unauthorized operation or so that the machine can be safely disconnected from the mains electricity supply.

3.4.1 AC Service

- Secure L1 to L1 terminal.
- Secure L2 to L2 terminal.
- Secure Ground to  terminal.

From fuse panel



3.5 Adjustment

To adjust platforms properly, operate the lift with the control console as follows:

- Raise the lift (without a vehicle) up to a height of about 40", remove the runway supports, and lower onto a lock.
- Verify both platforms are leveled side to side and front to rear.

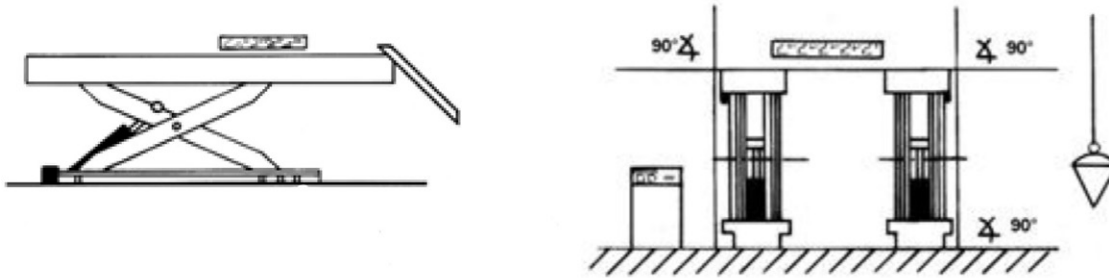


Fig. 3.5.1

- Verify the distance between runways, after leveling the lift.
- Verify the runways are square within 1/4".
- 5/8" Hilti Kwik Bolt III anchors shall be used to anchor the lift.
- Verify the based plate spacing is 83-1/2" and runways are spaced at 43" before anchoring (Fig. 3.5.2 and 3.3.4).
- Anchors are to be installed in the 11/16" diameter holes (2 on the fixed base and 4 on the slider base).
- Anchor as shown in Fig. 3.5.3. Six anchors are required for each runway/scissor.
 - Drill holes (borehole diameter: 5/8"; borehole depth: min. 4-1/2").
 - A minimum embedment depth of 2-3/4" is required.
 - Clean boreholes.
 - Insert anchors.
 - Insert washers and nuts.
 - Tighten nuts (torque 60 ft-lbs).
- Remove the base plate spacer tool that is installed between the fixed and slider bases (Fig. 3.5.2).
- Ensure the resting bolts are secured at the proper height (4-3/4") (Fig. 3.5.4).
- Seismic: Consult a qualified structural engineer and manufacturer's representative.

The mechanical installation work is complete.

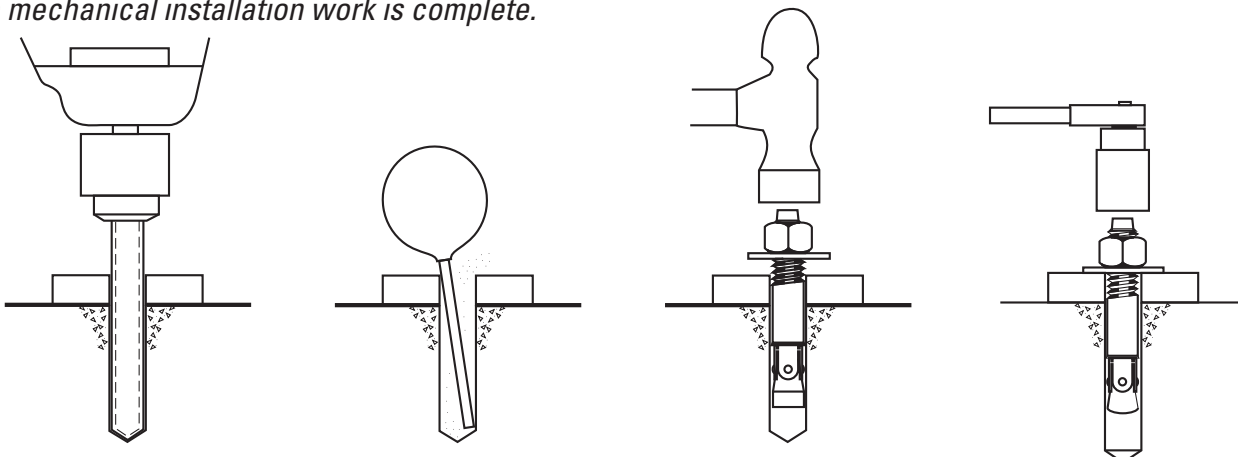


Fig. 3.5.3 fastening to the floor

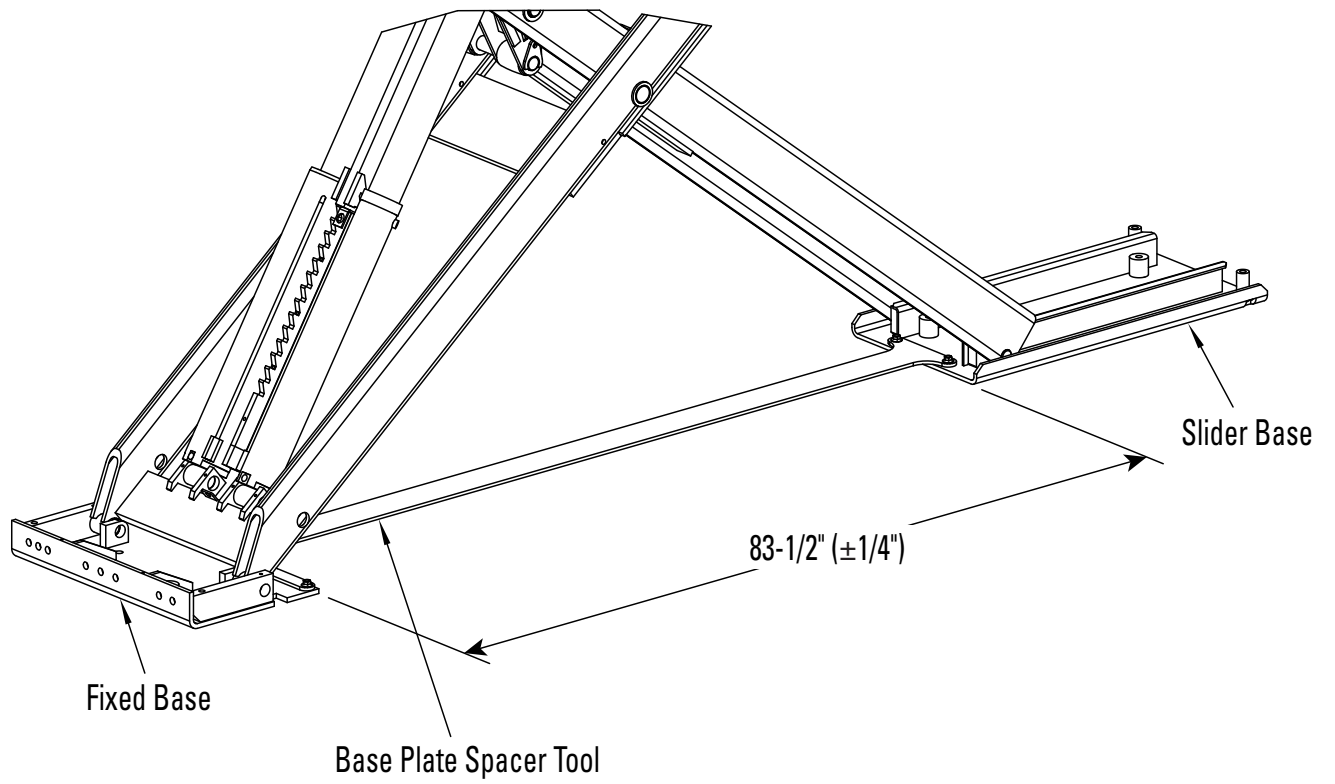


Fig. 3.5.2

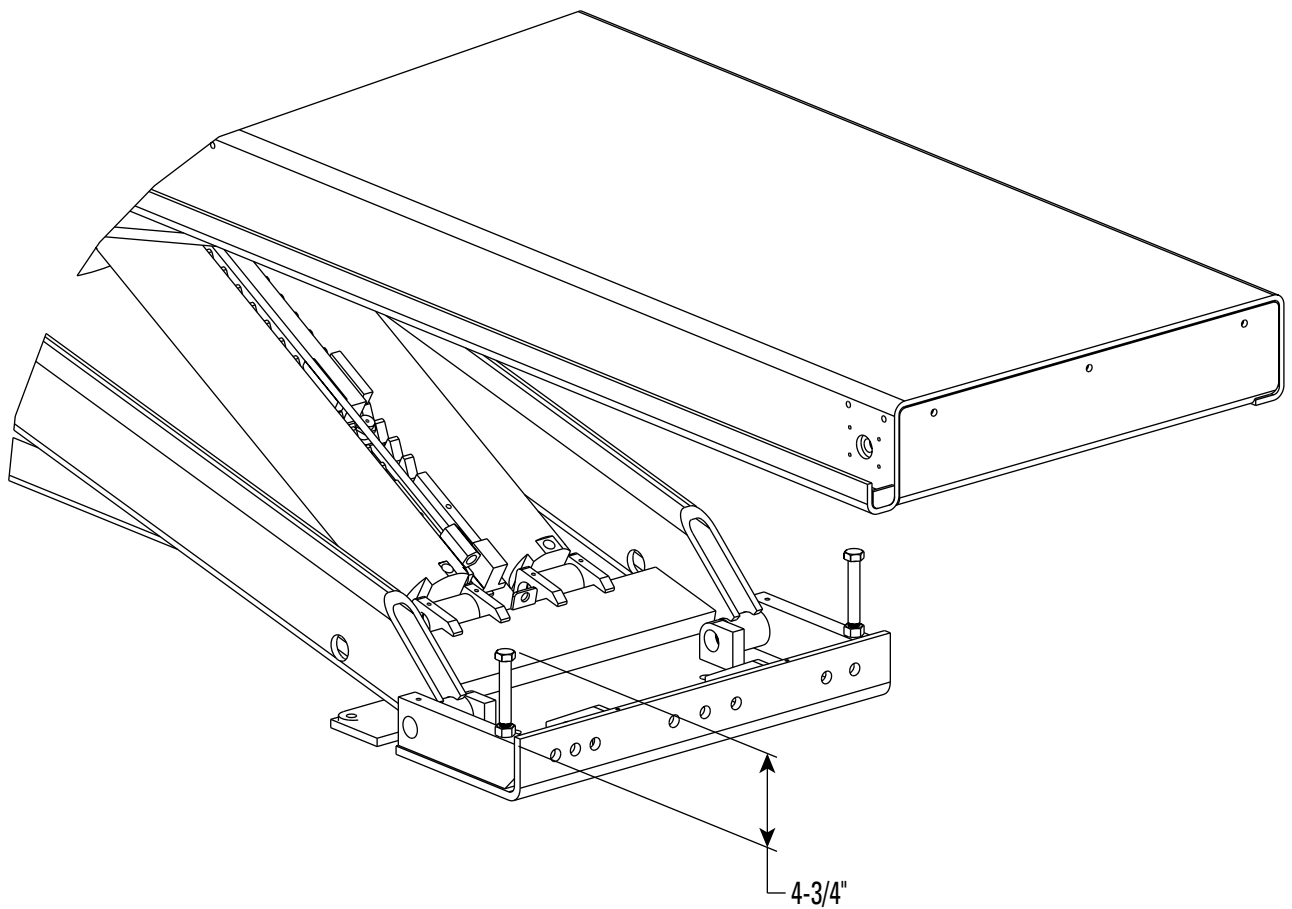
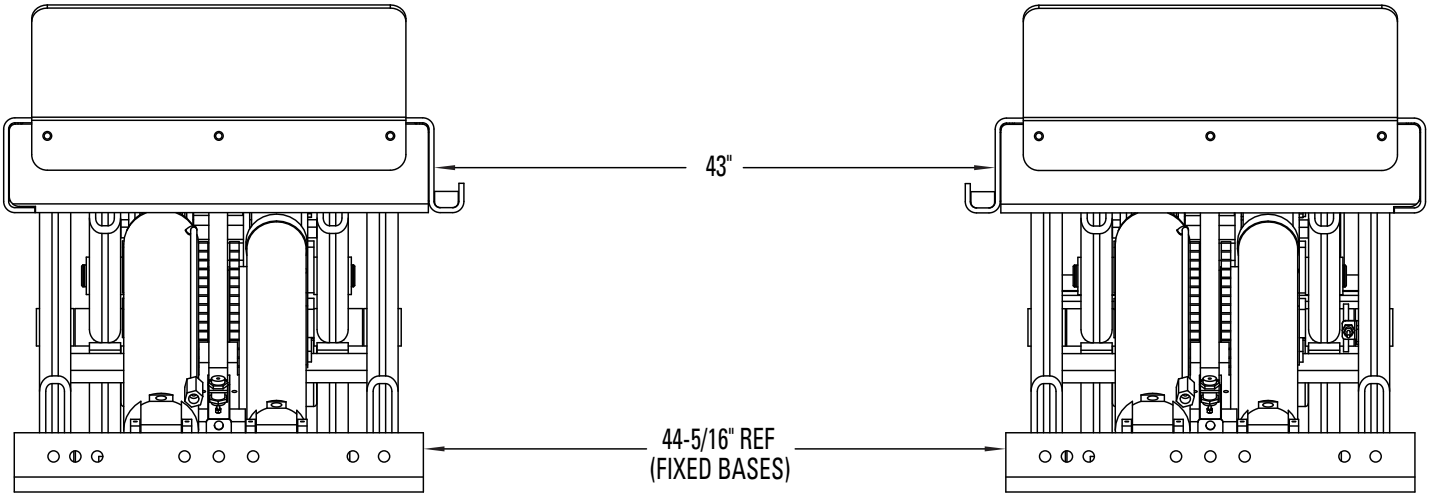


Fig. 3.5.4

VIEW FROM FRONT



VIEW FROM THE APPROACH END

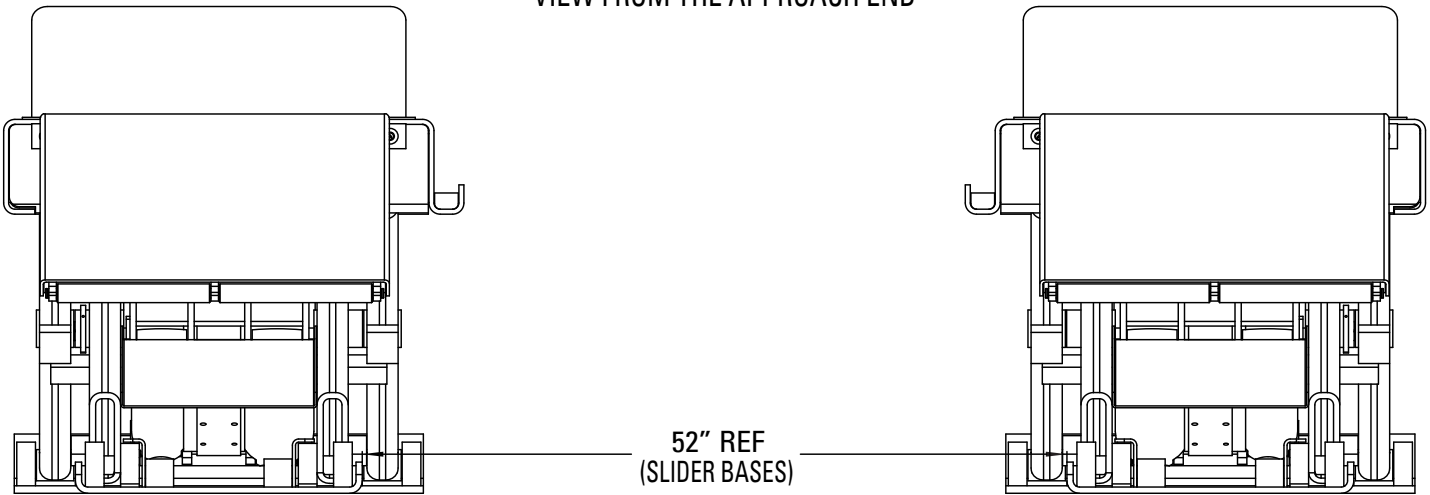
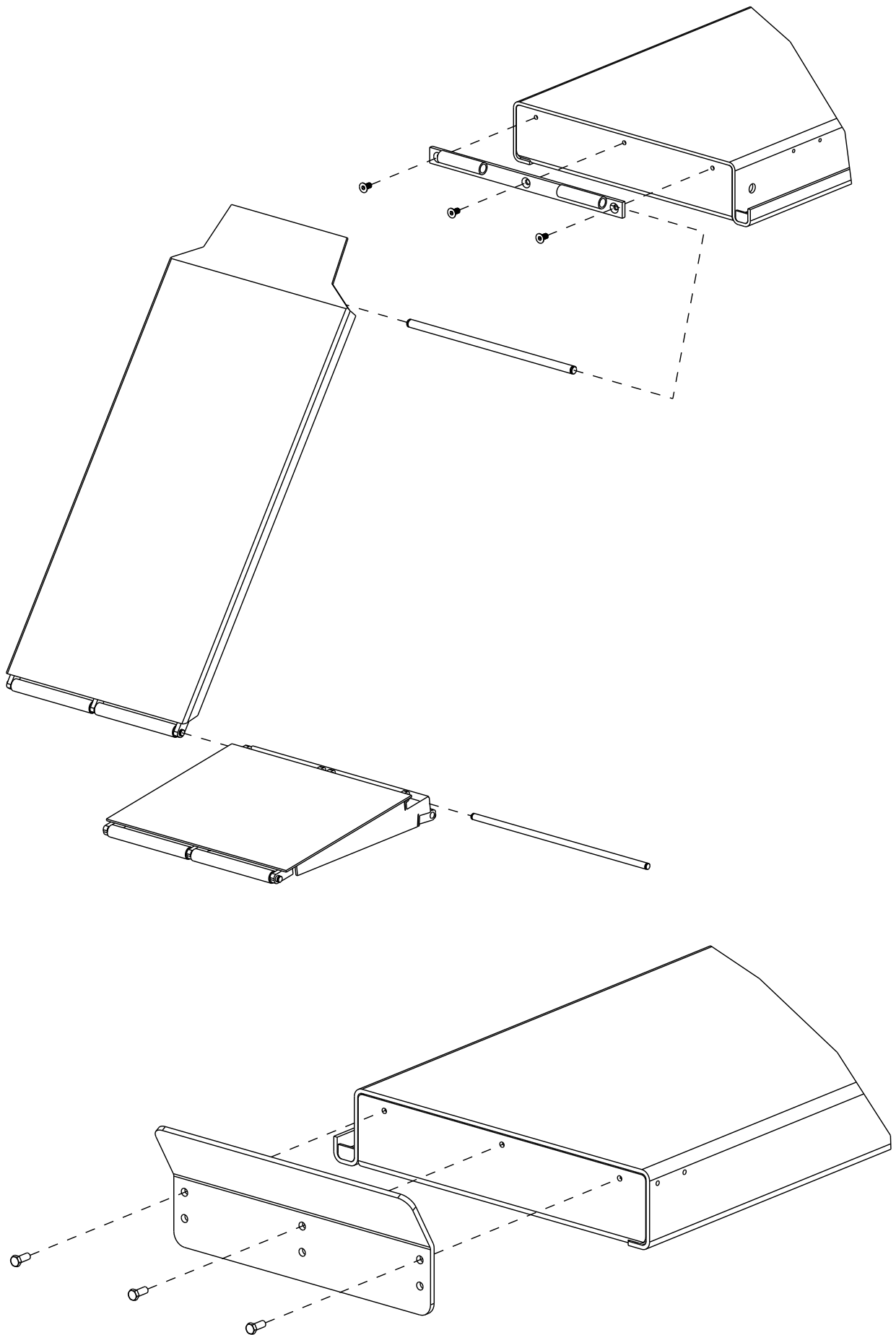
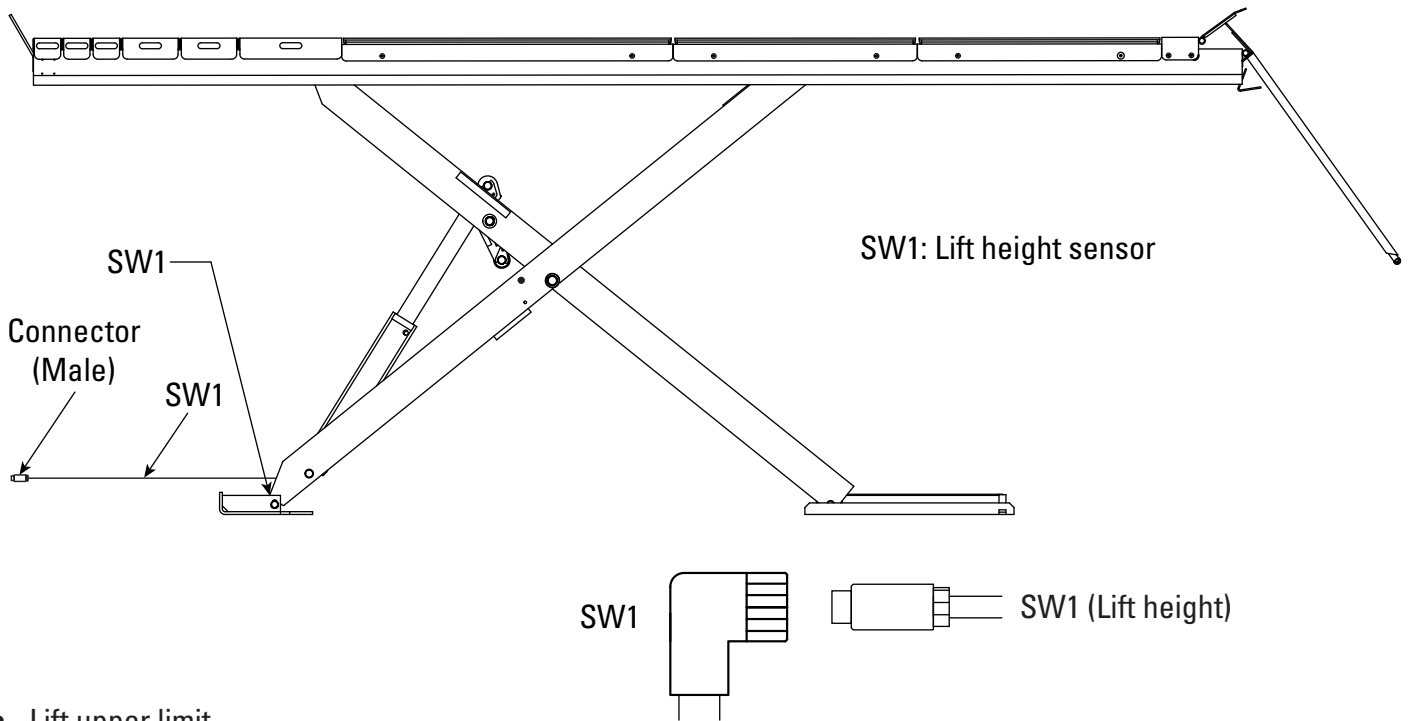


Fig. 3.3.4

Ramp/Wheel Stop Installation



3.6 Sensor Connections



- Lift upper limit.

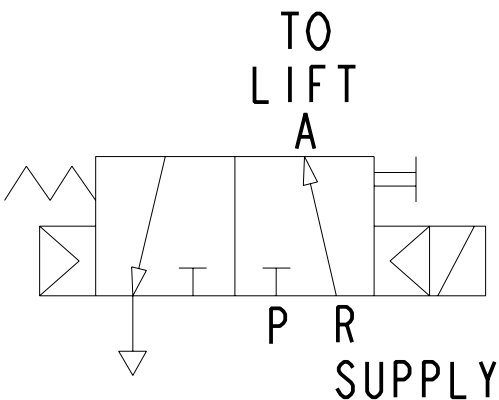
3.7 Connection of the pneumatic lines

Warning: The connection of the lift to the pneumatic system must be carried out only when the platforms have been raised to the top position to prevent mechanical safeties from disengaging unintentionally.

The pneumatic supply at site (to which the pneumatic system of the lift is connected) must be equipped with a servicing unit composed of water separator, oiler and pressure reducer.

For the connection of the pneumatic lines proceed as follows:

- Raise the lift to the top position.
- Connect the pneumatic lines pre-assembled in the runways to the console air valve outlet (port A).
- Connect the pneumatic system of the lift (inlet port R on the air valve in the console) to the pneumatic supply at site.
- Check the pneumatic control operations for proper performance.



Starting up

4.1 Basic safety instructions

Prior to the initial commissioning, a safety inspection must be performed by a qualified and authorized person. This person must confirm and document the technically flawless functioning of the machine.



In Germany, inspection according to GUV-G 945 must be carried out. For this, use the inspection log book in the appendix of this operating manual.



The following is to be checked:

- correct installation
- proper functioning of safety devices
- operational readiness

4.2 Initial commissioning

Prior to initial commissioning

Inspect the machine for visible signs of damage. If damage is detected:

- Do not switch on the machine.
- Attach or erect a notice sign prohibiting switching on the machine.
- Notify your supervisor of the detected damage.
- Only use the machine if all damage has been repaired.
- Remove any foreign objects from the scissors area.
- Remove materials and objects from the work area if they are not required.
- Check and ensure that all safety devices are functioning flawlessly.

The preparations are completed.

Before starting the machine, check and ensure the following:

- Only authorized persons are in the work area of the machine.
- No one will be endangered by the starting up of the machine.
- Measures have been taken to prevent unintended changes in the position of the load.
- A clear view is available of the load, the machine and particularly the scissors area.
- Avenues of escape are available in the event of danger.

4.3 First Starting

- After positioning the lift as specified and performing electric and hydraulic connections, the lift can be operated by following the specific procedure.
- Move the master switch to the "1" position and press the lifting button. If the lift does not operate but the motor runs regularly, check the motor for proper direction of rotation and switch the phases on the power supply line if necessary. Press the button again until platforms are fully lifted.
- Hold the switch "up" for 2-3 seconds in the upper position.
- Open the bleed screws (1) on the slave cylinder as shown in Fig. 4.3 and close them again after bleeding air from the cylinders. Press the lifting button again, then open the bleed screws again (1) Fig. 4.3 to bleed air from the cylinders.
- After tightening the bleed screws, repeat the operation to make sure there is no air in the circuit.
- The process is complete once there is a smooth stream of oil without air bubbles.
- Lower the lift to the ground, and perform several cycles with the lift unloaded to check there are no oil leaks and platforms are properly leveled.
- Press the lowering button to lower the lift.
- Perform the lifting/lowering operations 4/5 times.
- After bleeding the system, lower the lift fully and fill the hydraulic system to the top line in the sight glass gauge.

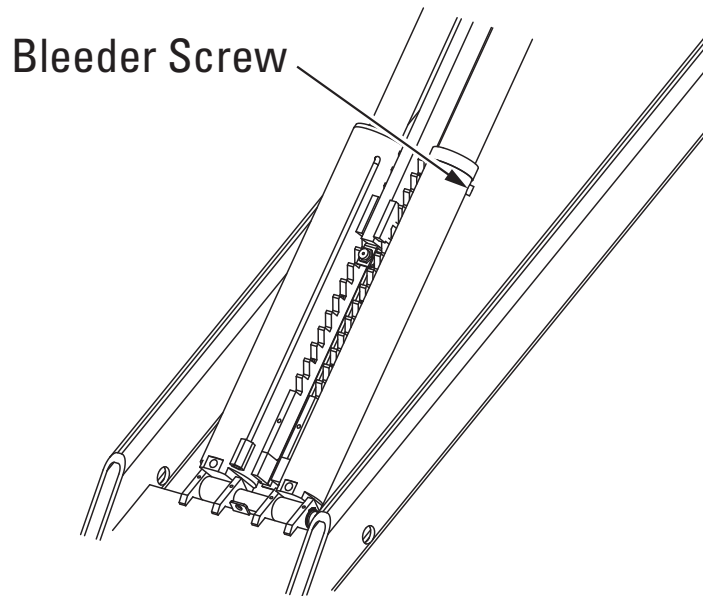


Fig.4.3

Check the following after the first startup:

All hydraulic hoses for any leaks.

Before operating the machine each time, check and ensure the following:

- Only authorized persons are in the work area of the machine.
- No one will be endangered by the starting up of the machine.
- Measures have been taken to prevent unintended changes in the position of the load.
- A clear view is available of the load, the machine and particularly the danger zone (Fig. 3-1, page 4).
- Avenues of escape are available in the event of danger.

5.1 Description of the controls

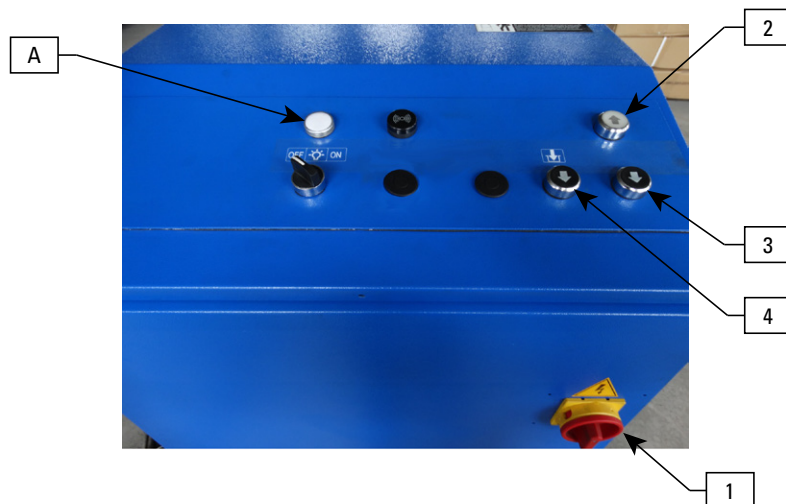


Fig. 5.1 Control device

1. Control: «Main switch»

Setting the switch to "1" switches on the power supply - control lamp (A) lights up.

Setting the switch to "0" switches off the power supply - control lamp (A) goes dark.

The «main switch» can be locked with a padlock. This secures the machine against unintentional operation.

2. Control: «Lift»

By pressing the «Lift» control, the platform raises.

The movement stops as soon as the control is no longer held pressed (deadman control).

3. Control: «Lower»

By pressing the «Lower» control, the platform lowers.

The movement stops as soon as the control is no longer held pressed (deadman control).

When the Euro Stop is reached, the lowering motion stops in order to prevent crushing and other hazards. If the lowering motion is to be resumed, press the «Lower» control again. The platform continues to lower and a warning signal sounds.

4. «Lower to latched position» control

By pressing the «Lower to latched position», control, the platform lowers into the next latched position.

After every raising or lowering, the lift platform should be moved into the latched position.

A. «Lamp

Provides operating status of the lift. If solid normal operation. If flashing then equalization sensor is ignored.

5.2 Lifting and lowering the vehicle



NOTICE

Incorrect driving on the platform.

Risk of damaging the scissor lift platform or the vehicle.

- The platform must be completely lowered.
- Only drive onto the platform slowly and with caution.
- Avoid sudden braking.
- For lifting, the vehicle must be centered on the platform.

Moving the platform and lifting the vehicle

- Lower the platform completely.
- Drive the vehicle slowly and cautiously to the middle of the platform.
- Press the «Lift» control and continue raising the platform.

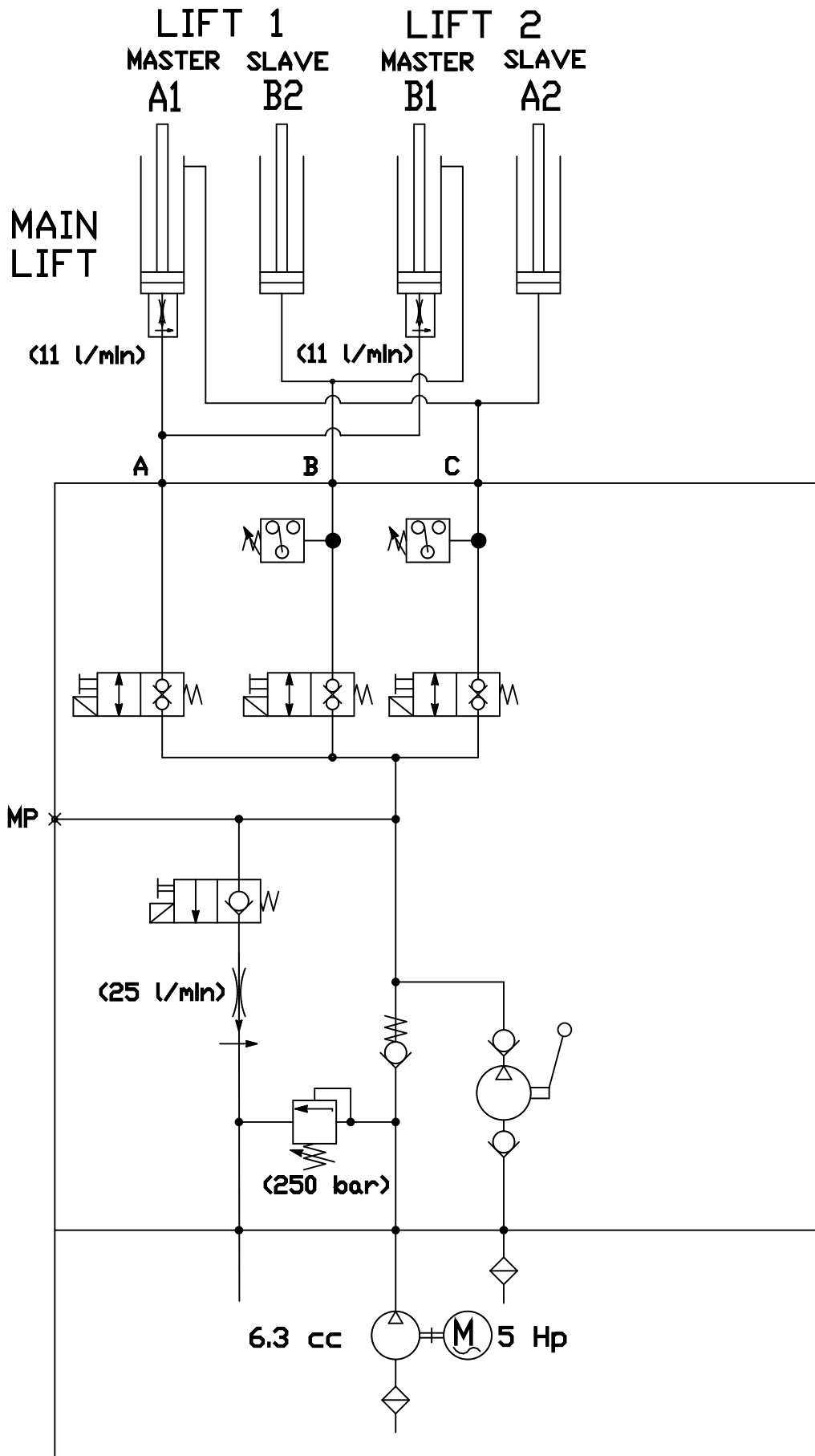
The vehicle can now be raised to the desired height and lowered onto the nearest lock.

Lowering the platform and bringing off the vehicle

- Press the «Lower» control and lower the platform. When the Euro Stop sensor is reached, the lowering motion stops.
- Press the «Lower» control again. The platform continues lowering with a warning tone.
- Lower the platform completely.

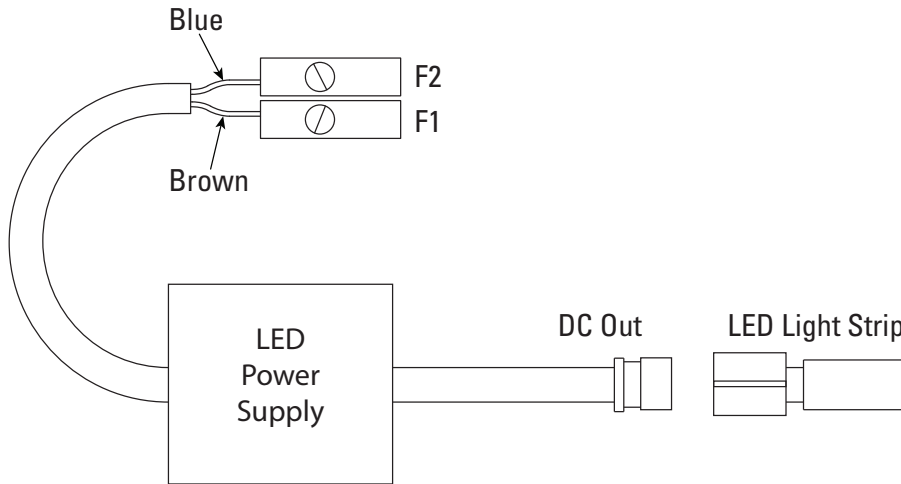
The vehicle can now be driven slowly and carefully off the platform.

6.1 Appendix A Lift Schematics



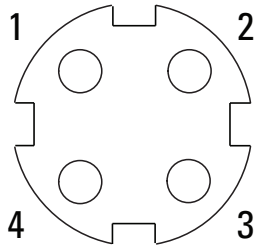
7.1 Appendix B Lift Kit Information

7.2 Light Kit



- Connect blue wire from LED power supply to F2.
- Connect brown wire from LED power supply to F1.
- Plug LED light strip to DC output of LED power supply.

7.3 Sensor Connector Pinouts



- Secure brown wire in pin 1 location, 24V DC.
- Secure blue wire in pin 3 location, GND.
- Secure black or white wire in pin 4 location, Signal.

NOTES:

Vehicle Service GroupSM
2700 Lanier Drive
Madison, IN 47250, USA
1-800-640-5438
www.vsgdover.com



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