

# JD950

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## USER MANUAL



# CADAVER LIFT SYSTEM

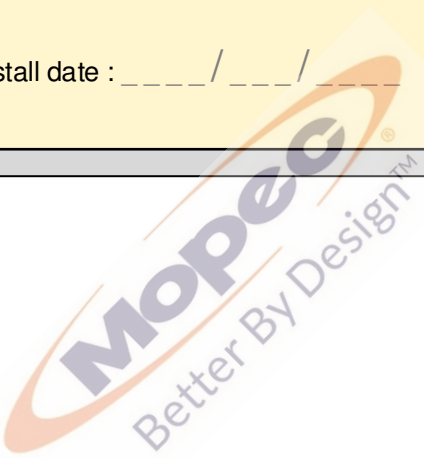
## JD950

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## 1 - Introduction

The JD950 Cadaver Scissor Lift provides a sturdy, safe, and convenient platform for transporting cadavers in morgue, hospital, and research center environments. It features a rugged and robust frame structure in a white powder-coated smooth finish. It uses an integrated hydraulic lift system for its lifting mechanism which allows it to outperform any cadaver lift in the industry. The JD950 uses caster wheels for improved maneuverability along with a handle arm that can be placed on 3 sides of the lift. A digital scale is integrated into the body lift and continuously displays the weight value in pounds or kilograms. This allows for a seamless weight measurement directly from the JD950 lift system.

## 2 - Safety

Hydraulic scissor lifts are generally safe to operate, but like all machinery, caution must be used to avoid accidental injury.

The JD950 comes with caution labels for safety awareness. However, it is the responsibility of the purchaser and/or end user of the JD950 to comply with all federal, state, and local safety standards which includes, but not limited, the placement of guards, safety labels, in the area where the lift is used and to also provide adequate training for those using the lift.

Due to its design, scissor lift injuries can be severe. It is therefore important to properly train those using this equipment on both its functionality and safety. The purchaser and/or end user must have procedures in place to prevent non-authorized personnel from using this lift.

The JD950 lift should only be used by trained and authorized personnel. The lift should also only be used to transport loads that are under the designed maximum working weight for both safety and to prevent damage to the lift.

### **PINCH POINT WARNING:**

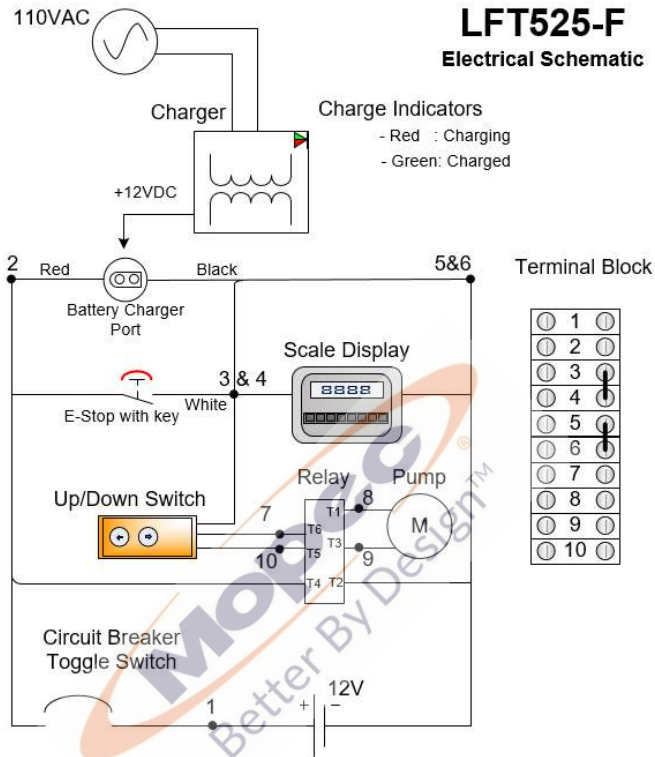
Please note that due to scissor design and conveyor rollers along with other moving parts, the JD950 has several pinch point areas. Some of these pinch point could cause severe injury. All parties using the JD950 must use caution while operating this lift and must be made aware of the safety risks associated with this unit along with its capabilities and limitations..





3 – Overview




3.1 - Electrical System

The schematic below shows the JD950 electrical design. The electrical system design was kept simple for improved reliability and robustness.



Below is a description of the different electrical components and their function.

	Component	Function
	E-stop / keys	Cuts power to the pendent switch
	Pendent	Moves the lift up or down

	Charging port	1 – For battery charging 2 – Can be used to power external devices (up to 12VDC - 2A)
	Weight indicator	Weight readout
	Charger	Charges the battery
	Breaker	Protects against shorts; allows the system to be turned off
	Relays internal to the enclosure	Power up the pump (up/down)
	Battery	12 VDC battery powers up the system

#### Electrical system operation:

Once the E-stop switch is in the ON position, power is allowed to feed the up/down pendent switch. This switch powers up the relays that then supply power to the pump motor. The polarity of the power feeding to the pump motor is controlled by the up and down pendent switches. The E-stop also interrupts power feeding the scale unit.

The main breaker / toggle switch is used to shut the power to all systems.

The breaker can be reset by toggling the switch from the OFF position back to the ON position.

The charging system and other features will be discussed later in this manual.

### 3.2 - Mechanical System

The JD950 Lift uses the scissor concept allowing it to extend from 14-5/8" (37cm) to 75-5/8" (190cm). It features a replaceable handle that can be mounted on three different sides of the lift. This feature allows for an ergonomically friendly interface to the unit and improved maneuverability

within virtually all workspaces. This unit was optimized to provide the best possible access to storage racks in tight areas. The top of the lift consists of dual conveyor rollers that allow for easy loading and unloading of the cadaver trays from and onto the racks. This conveyor system also includes a positioning lock lever, located on top of the unit. This lever secures the trays during transport. An end access latch allows the user to release the tray from the opposite side of the lift. Side rails on the top of the lift keep the trays contained within the conveyor during transport. The lift also features four heavy duty caster wheels with brakes and an anti-collision bumper mounted to the front of the lift protecting the frame from damage.



### 3.3 - Hydraulic System

The JD950 is one of the heaviest duty cadaver lifts in its class. Its compact hydraulic system and scissor lift design can push over 750 lbs. from the lowest position to the maximum lift height. The hydraulic system uses a 12VDC pump that is integrated into the hydraulic cylinder.

The JD950 hydraulic system is all self-contained and operates without the need for a separate hydraulic reservoir, valves, pumps and motors. It is an all-in-one system designed to keep the JD950 as simple as possible while setting the highest possible standard in the cadaver lift field.

The remote pendent switch and its expansion cord allow the user to move the lift up and down with ease while standing at a safe distance away from the lift while it is in motion. The pendent can be stored on the lift handle using a hanging bracket.

### 3.4 – Key features

The JD950 has multiple mechanical and electrical features to assist and improve the user's experience while using the unit. These include:

- Tray roller conveyor with locking features
- Replaceable handle for both end and side operation
- Smooth and durable finish for easy cleaning
- Powerful hydraulic lift system for increased weight capacity
- Three Locking casters and one directional locking caster
- A multi-stage 5 amp, 12 VDC battery charger (110VAC / 220VAC)
- A 12 VDC hydraulic actuator with integrated pump system
- 80 Amp reversing relay to control the up and down lift direction
- Integrated digital scale with an upper limit of 1000 lbs.
- A high performance lead acid battery for demanding applications
- Remote Up/Down pendant switch with expansion cord set
- Emergency stop with key to lock the unit

### 4- Unpacking and Inspecting

Carefully inspect the exterior of the shipping container before opening. If the crate and the product have sustained damage, please contact Mopec and the freight carrier to inform them about the damage. It is important to take pictures of the shipping container showing the damaged areas and the product for record keeping and it is also very important to keep the damaged crate and container on hand for further analysis by the freight carrier and Mopec.






#### 4.1 Visual Inspection

After careful unpacking the JD950 Cadaver lift, please inspect the items in the list below prior to using the unit. The JD950 must be thoroughly checked for loose items, defects, or damage that may have occurred during shipping or packaging.



At this point, the main breaker must be in the OFF position. Some previous models have a self-resetting breaker; in this case, make sure the e-stop is in the OFF position and the key is removed while inspecting the unit for the first time.

	Item	Inspection	<input checked="" type="checkbox"/>
	E-stop / keys	<ul style="list-style-type: none"> <li>Inspect for damage</li> <li>Inspect for loose button or housing</li> <li>Ensure 2 keys are present</li> <li>Push button and remove key (system locked)</li> <li>Insert key then twist to unlock (system unlocked)</li> </ul>	<input type="checkbox"/>
	Pendent	<ul style="list-style-type: none"> <li>Check for damage</li> <li>Ensure that each button springs back after release</li> </ul>	<input type="checkbox"/>
	Pendent cord	<ul style="list-style-type: none"> <li>Inspect cord for damage or exposed wires</li> </ul>	<input type="checkbox"/>
	Charging port	<ul style="list-style-type: none"> <li>Inspect charging port for damage</li> </ul>	<input type="checkbox"/>
	Electrical enclosure	<ul style="list-style-type: none"> <li>Inspect control enclosure for damage (bottom, and corners)</li> <li>Inspect wiring coming into the enclosure for damage</li> </ul>	<input type="checkbox"/>
	Handlebar	<ul style="list-style-type: none"> <li>The handlebar must fit firmly on the handlebar mounts</li> </ul>	<input type="checkbox"/>
	Hydraulic cylinder	<ul style="list-style-type: none"> <li>Visually inspect for leaks. Use a paper towel or rubber gloves to wipe the bottom of the hydraulic cylinder and inspect for leaks</li> </ul>	<input type="checkbox"/>
	Tray support system	<ul style="list-style-type: none"> <li>Inspect the hardware on the lift for loose or damaged components</li> </ul>	<input type="checkbox"/>
	Scissor lift frame	<ul style="list-style-type: none"> <li>Inspect the frame to insure it was not bent during shipping</li> </ul>	<input type="checkbox"/>
	Weight indicator	<ul style="list-style-type: none"> <li>The weight indicator must be inspected for damage</li> </ul>	<input type="checkbox"/>

		<ul style="list-style-type: none"> <li>▪ Inspect the power cord for damage and connection to the indicator</li> <li>▪ Inspect the load cell signal cord for damage and proper connection to the indicator</li> </ul>	
	Caster wheels	<ul style="list-style-type: none"> <li>▪ The caster wheels must be inspected for damage</li> <li>▪ Ensure the brake system works properly</li> </ul>	<input type="checkbox"/>
	Charger	<ul style="list-style-type: none"> <li>▪ The unit comes with one charger</li> <li>▪ Some older models may include a pigtail extension</li> </ul>	<input type="checkbox"/>
	Breaker	<ul style="list-style-type: none"> <li>▪ Inspect the breaker / switch for damage</li> </ul>	<input type="checkbox"/>

Ensure to check the water level in the battery at least every 3 months to ensure the level is maintained. ONLY add distilled water DO NOT ADD TAP water to the battery. Ensure th battery is charged after adding water

## 4.2 First Power-up

If all the inspection points mentioned above are satisfactory, proceed to charge the battery before use. Plug the charger into the wall outlet (110VAC or 220VAC) and connect to the charging port on the lift then leave to charge for 10 hours.

Refer to the “Charging” section of this manual for more details on the charging system and process.

## 5 – Charging

The JD950 utilizes a lead acid 12 Volt battery that must be charged on a regular basis to maintain a good battery health. A smart multi-stage lead acid battery charger is provided with the JD950 unit and must be used when the unit is not in use. This charger is capable of running on both 110VAC and 220VAC (60/50Hz) and will deliver a variable charge current reaching up to 5 Amps.

### 5.1 - Charging Procedure

- 1 - Plug the charger into the lift enclosure 12VDC charging port.
- 2 - Plug the charger power cord into the 110/220VAC power outlet.
- 3 – Make sure breaker is in the ON position.
- 4 – Press E-stop to prevent operation while charging.

**Warning:** DO NOT use the lift while the battery is being charged, as this can cause damage to the battery charger.



Charger










Battery

## 6 – Operation

The JD950 is a simple lift to use. The main points to keep in mind are related to safety. The pendant controls the basic operation of the lift. Pressing the up button moves the lift up and pressing the down button moves the lift down.

### 6.1 - Tray Loading/Unloading:

The basic steps of loading a tray onto the lift are outlined in the table below.

Step	Description	Visual aid
1	While the freezer door is opened, move the lift as close to the rack/freezer as possible.	
2	Using the pendant, move the lift to the proper height to receive the tray from the rack or freezer.	
3	Fine tune the position of the lift to ensure a smooth transfer of the tray.	
4	Lock all wheels to prevent the lift from moving while sliding the tray onto the lift.	
5	Slowly manually slide the tray onto the lift and	
6	Lock the tray in place using the lock mechanism.	
7	Lower the lift to a height below 30" for safe transportation.	
8	Unlock the casters and move the lift away from the freezer.	
	<b><i>In case of an emergency, press the E-Stop and turn the breaker OFF. If the lift has an electrical or mechanical issue and should not be used, remove the key from the unit and place a "DO NOT USE" note indicating that the unit is out of order.</i></b>	

## 6.2 - Pushing the lift

The JD950 is equipped with a steer assist caster for improved steering and maneuverability. This caster is black while the braking casters have a steel finish color. When moving the lift, first depress down on the steer caster with the black pedal then push the unit from the handle. This will provide more control and maneuverability while the lift is in motion. The JD950 features a removable handle that can be placed and replaced on three different sides of the lift for convenience in different positions in any mortuary.

To prevent tip over while moving or storing the lift, please note that it must be at a height of 30" or lower.

## 7 – Scale System

The scale system uses 4 load cells, a summing board and a weight indicator. This system is the same type of system as is used in floor industrial scales, providing a robust and repeatable measurement when used properly. The scale system is calibrated prior to shipping. Yearly inspection is recommended. Calibrate as needed.

For more information on how to operate and calibrate the scale system, please refer to the corresponding scale user manual.

## 8 – System Specifications

<b>Lift Dimensions:</b> Tray: 23" Length: 95.5"(241cm) Width: 30.10" (76cm) Min height: 14-5/8" (37cm) Max height: 75-5/8" (190cm)	<b>Battery / charger:</b> Voltage: 12VDC Current: up to 525 CCA Charge time: 4 to 24 hours Full charge Up/Down cycles: 30 Battery life: 12 months under normal usage
<b>Lift wheels:</b> 5" diameter 3 casters and 1 with steer assist	<b>Operating current:</b> 40 Amps
<b>Recommended practice:</b> Work height: 32" or lower Transit height: 30" or lower	<b>Lifting weight capacity:</b> 750 lbs.
<b>Floor surface requirements:</b> Smooth with no bumps Grades below 20 degrees	<b>Maximum weight capacity:</b> 1000 lbs.
<b>Lift Weight:</b> 575 lbs.	<b>Scale:</b> Max weight limit: 1000 lbs. Unit: kg / lb (selectable) Accuracy: +/- 1 lb
	<b>Finish color:</b> Smooth white paint

## 9 - Troubleshooting

Symptom	Possible root cause	Resolution
Can't turn scale ON	Power cord unplugged	Plug in cord
	Battery voltage too low	Charge battery
	Defective indicator	Change indicator
Lift will not go up and/or down	Low battery	Charge battery
	Defective pendent	Change pendent
	Breaker tripped	Reset breaker
	Pump motor inoperable	Test and replace if needed
	Low hydraulic oil	Check and add if

		needed
<b>E-stop not working</b>	Defective e-stop button	Replace
	Stuck relay	Replace relays
<b>Breaker tripping</b>	Motor short	Replace motor
	Short in wiring	Troubleshoot and repair
	Defective breaker	Replace breaker
<b>Lift moves very slow</b>	Low hydraulic fluid	Add fluid
	Low battery	Charge or battery
	Damaged relays	Replace relays
	Damaged pump	Replace pump
	Damaged pump motor	Replace motor
<b>Scale not accurate</b>	Damaged load cell	Troubleshoot and replace
	Damaged summing board	Troubleshoot and replace
	Damaged indicator	Troubleshoot and replace
	Needs calibration	Calibrate
<b>Battery not charging</b>	Breaker OFF	Turn Breaker ON
	Charger inoperative	Replace charger
	Battery drains quick	Change battery

## 10 – Warranty

MOPEC JD SERIES CADAVER LIFT

THE BODY LIFT EQUIPMENT AND ALL PARTS THEREOF, MANUFACTURED BY MOPEC IS WARRANTED TO OUR CUSTOMERS TO BE FREE FROM DEFECTS IN MATERIAL AND CONSTRUCTION WHEN SUBJECTED TO NORMAL USE AND SERVICE. THIS WARRANTY SHALL NOT APPLY TO ANY EQUIPMENT OR PART THEREOF, WHICH HAS BEEN SUBJECT TO ALTERATIONS, ACCIDENT, MISUSE, OR WHICH HAS BEEN USED MORE THAN ITS PUBLISHED CAPACITY.

MOPEC'S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIRING OR REPLACING, WITHOUT CHARGE ANY PART OR PARTS OF SAID EQUIPMENT WHICH PROVE DEFECTIVE AND WHICH OUR EXAMINATION SHALL DISCLOSE TO OUR SATISFACTION TO BE THUS DEFECTIVE. WE DO NOT ACCEPT RESPONSIBILITY FOR CONSEQUENTIAL DAMAGE RESULTING FROM SUCH DEFECTIVE PARTS. THE PERIOD OF WARRANTY ON MOPECEQUIPMENT IS AS FOLLOWS:

**ALL EQUIPMENT:** EQUIPMENT IS WARRANTED IN ITS ENTIRETY FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SALE. THIS WARRANTY INCLUDES PARTS AND LABOR FOR COVERED REPAIRS.

MOPEC WILL ACCEPT INCOMING DEFECTIVE PARTS, ONLY WHEN SHIPMENT IS PREPAID. THIS WARRANTY CONTRACT IS IN LIEU OF ALL OTHER WARRANTIES, AND RELEASES MOPEC OF ALL OTHER OBLIGATIONS OR LIABILITIES. IT NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR PERSONS TO ASSUME ANY OBLIGATION OTHER THAN THAT COVERED IN THIS WARRANTY.

## Events and Maintenance Log

Date/ Name / Problem Description / Corrective Action / Notes

**Note:** Please follow the battery manufacture's maintenance procedures to insure proper battery health and performance.

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