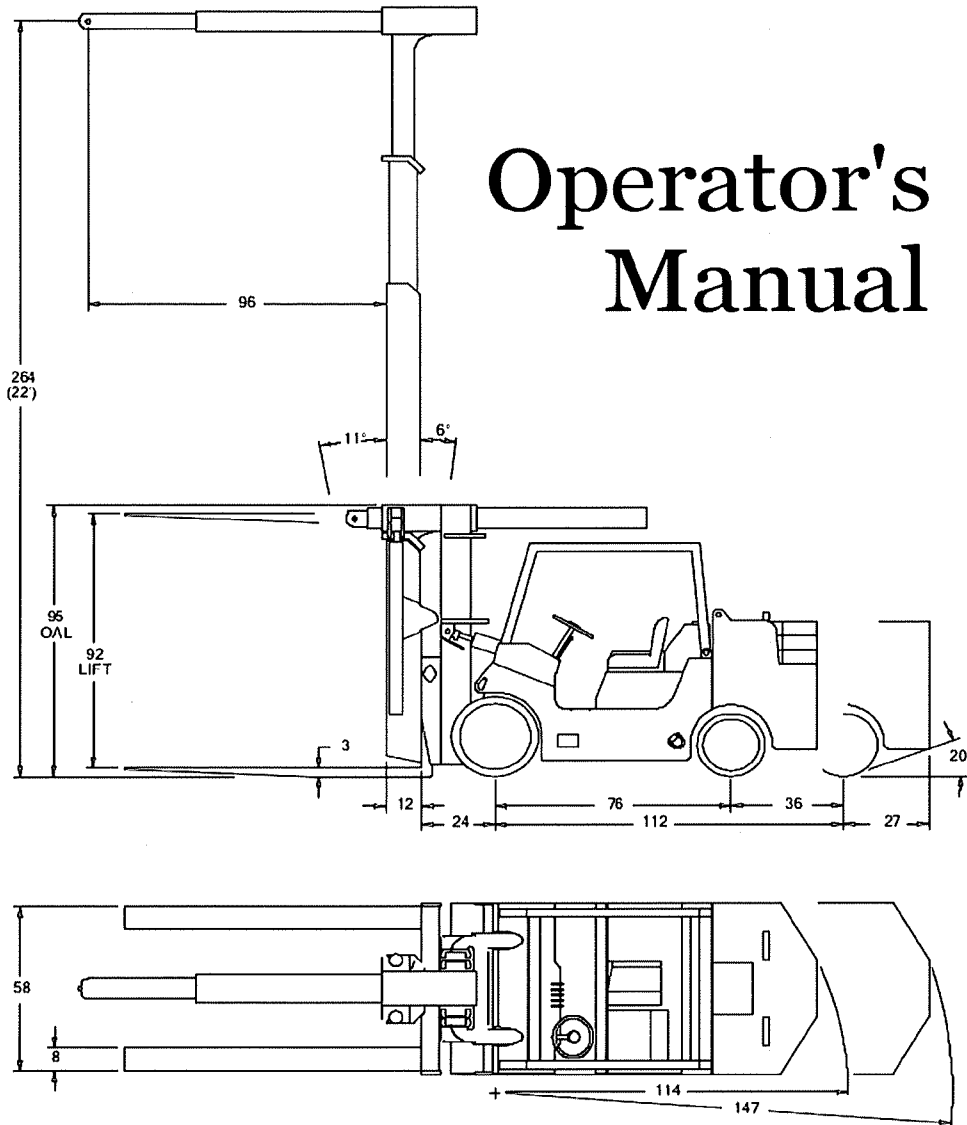


25/35

VERSA-LIFT

Operator's Manual



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Introduction

This manual will cover general safety rules, basic operations of lift truck, and a lubrication schedule. This manual cannot include all possible operating hazards and procedures, but will give a general overview.

Lift Truck Application

The Versa-Lift is a specialty cushion (solid) tired machine for moving heavy loads on smooth dry surfaces. This machine should be operated using the same safety rules as any other lift truck. The Versa-Lift also has other features not found on common lift trucks like a telescoping frame, removable counterweights and a special boom attachment. These features allow for many variations in capacity and different methods of lifting a load.

General Safety Rules

- Inspect the lift truck before operations
- Never drive under the influence of drugs or alcohol
- Wear the proper safety equipment when required
- Be aware of no smoking areas
- Don't block safety or emergency equipment
- Watch for pedestrians
- Slow down when on slippery or loose surfaces
- Know your weight and axle loads when crossing floors
- Know your available capacity, load weight and the load center before attempting a lift
- Always use your seat belt
- No riders on the lift truck
- Do not lift anyone on the forks
- Do not allow anyone to walk under raised forks
- Sound horn when crossing intersections
- Watch out for people in your work area
- Keep under the overhead guard when lifting
- Keep hands and legs inside the operator's station
- If the load blocks your view, go backward
- Never turn on a grade
- Carry the load tilted back whenever possible
- Don't jump from a tipping lift truck. Stay in the seat
- Chock wheels of trailer when docking the machine
- Keep hands and legs out of all pinch points
- Stay clear of telescoping frame when operating
- Never park on a grade
- Set the parking brake when stopped

Operating Hazards

- Fast turning with an empty truck can turn over easier than a loaded truck
- Sharp turns with a load up can turn the truck over even when moving slowly
- Rear steering swings the tail of the machine out into possible obstacles or out of the aisle
- Telescoping frame with steer turned moves the lift truck sideways
- Never carry loose or uneven materials
- Spread the forks to fit the load
- Long loads reduce the capacity consult the capacity chart
- Avoid swinging the load with the boom
- Boom capacity is with a vertical mast
- Watch low overhead structures
- Operate machine in a well ventilated area

Accidents happen when:

- 1. The operator is not properly trained.**
- 2. The operator is not experienced with the lift truck.**
- 3. Basic safety rules are not followed.**
- 4. The truck was not maintained in a safe operating condition.**

Operating Procedures

How To Operate

Be sure that the operator understands the information in the operator's manual as well as general safety procedures for operating a lift truck. Check over the machine to make sure it is in good working condition. Put the safety belt on and follow the instructions above for starting the machine.

Starting Procedure

The right foot control pedal is the speed control forward as well as backward and must be in the centered neutral position in order for the engine to be started. Check to see that the parking brake knob located on the dash, to the operator's right, is pushed in so that the brake will be set when started. The engine idle control is also on the dash and should be adjusted to a low idle and then the ignition key can be turned to start the engine. Check gauges for normal conditions for water temperature and oil pressure.

Speed Selection

The Versa-Lift has two speeds which can be selected at any time by flipping the switch on the dash. The low speed is for when more power and finer control are required to handle a load and high speed is for traveling with no load. The foot pedal control on the right regulates speed forward and backward in whichever speed you have selected.

Brake

There are no service brakes on this machine because the hydrostatic transmission accelerates and decelerates the machine using the right foot control pedal. The only brake is a parking brake and it is spring actuated and hydraulically released so whenever the engine is off the brake is set. However, when the engine is running, the brake knob on the dash must be pushed to set the brake and pulled to release it.

ALWAYS SET THE PARKING BRAKE WHILE PARKED. THE MACHINE MAY MOVE EVEN WHEN THE OPERATORS FOOT IS OFF THE PEDAL.

The brake should be used during normal operations for holding the machine steady especially on inclines. The hydrostatic transmission is capable of holding the machine on an incline by applying the pedal in the opposite direction but for holding over long periods of time use the brake.

Hand Lever Controls

The control levers on the right control the lift, tilt and boom lift in order left to right. The levers are pulled to get lift or to tilt the mast back and the levers are pushed for lowering or tilting the mast forward. The frame extension is controlled by an electric switch on the dash. **THE OPERATOR MUST TURN AND LOOK AROUND THE BACK OF THE MACHINE TO MAKE SURE NO ONE IS NEAR WHEN MOVING THE FRAME. THE STEER WHEELS SHOULD BE IN THE STRAIGHT POSITION BEFORE TELESCOPING THE FRAME BECAUSE TURNED STEER WHEELS WILL SHIFT THE FRONT OF THE MACHINE SIDE TO SIDE.**

Fork Removal And Installation

The carriage has two fork shafts to make it easier to remove the forks. Unbolt the carriage shaft retainers on both sides of the carriage shaft. Pull out the shaft to release the fork. Repeat the procedure for the other side. The installation of the forks should be performed in the opposite order ending with the carriage shaft retainers being securely fastened. A large pinch bar is provided to aid in the positioning of the forks. Notches have been placed above the carriage bar to gain leverage on the fork eye.

Boom Removal and Installation

The boom attachment should be removed utilizing the boom stand provided. The horizontal boom should be extended all the way out so it will balance on the boom stand. Remove the retainer pin at the bottom of the boom and disconnect the hydraulics (The hydraulic quick-disconnects have a pressure release valve built into them and should be set to the closed position before disconnecting). Lower the boom onto the boom stand posts until the boom is released. The installation of the boom is performed in the opposite order ending with the installing of the retainer pin. The boom can also be lifted off the carriage using the lifting eyes on the upper stage if the pin connecting the upper stage to the intermediate stage is in place.

Boom Vertical Extension

The boom has two hydraulic cylinders that are attached to the intermediate stage and are controlled by the third hydraulic lever on the operator's dash. The upper boom stage can be lifted by disconnecting the boom cylinders from the intermediate stage and raising them into the upper stage sockets. The boom retainer pin connecting the intermediate stage to upper stage must be relocated to the lugs that connect the stationary boom to the intermediate stage (This is required to keep the intermediate stage from being dragged up with the upper stage). **IF A LOAD IS BEING LIFTED WITH THE UPPER STAGE, THE PINS MUST BE INSTALLED ON THE ROD END OF THE CYLINDERS. DO NOT USE THE CYLINDER SOCKETS ON THE UPPER BOOM TO LIFT A LOAD. THE UPPER BOOM SOCKETS ARE ONLY TO BE USED WHEN LIFTING THE UPPER BOOM SECTION WITHOUT A LOAD.** A rectangular pin is supplied in the storage compartment that will fit into a hole in the upper stage to retain it. The boom cylinders can then be lowered and pinned to the intermediate stage for achieving greater height.

Boom Horizontal Extension

The horizontal boom is to be extended back and forth to the required position for lifting each load in order to keep the center of gravity of the load as close to the boom face as possible. This is done by pulling the horizontal retainer pin and then turning the crank until a hole is lined up for the horizontal retainer pin to be installed. THE HORIZONTAL BOOM RETAINER PIN MUST BE IN PLACE AT ALL TIMES EXCEPT WHILE MOVING THE HORIZONTAL BOOM. THE HORIZONTAL BOOM COULD COME OUT OF THE SOCKET IF THE PIN IS NOT IN PLACE.

Boom Lifting Eye Insert

The lifting eye insert is retained by a pin into the end of the horizontal boom. This insert can be removed and turned around if the double lifting eye end is required. THE LIFTING EYE INSERT CANNOT BE SLID OUT OF ITS LOCATION (FULLY INSERTED) TO ACHIEVE MORE REACH. DO NOT REPLACE THE LIFTING EYE INSERT WITH OTHER LONGER EXTENSIONS WITHOUT CONSULTING THE FACTORY.

Remote Controls (Optional)

The remote control system is activated by the MANUAL/REMOTE switch located on the dash. The remote control transmitter hangs around the neck and buckles to the waist. Switch the XMIT toggle to the ON position and the red light beside the switch will flash showing the transmitter is on. The ENGINE switch is used to start the engine and to shut it off. The IDLE switch should be set to IDLE when starting the engine and then 1500 and 2000 RPM can be selected for more engine power and speed. The SLOW/FAST switch allows for all functions on the remote to be fine tuned if slower and smoother operation is required. The DRIVE, MAST, TILT, BOOM, optional WINCH, and STEER levers are all proportional controls where the function is faster when the lever is pushed.

Maintenance Guide

Lubrication

Location	# of Fittings	# of Hours
Steer axle linkage and king pin bearings	10	50
Mast roller bearings	18	50
Steer axle/counterweight pivot bearings	2	100
Mast mounting trunnion bearings	2	100
Tilt cylinder pins	4	100
Steer axle wheel bearings	--	2000

Engine Lubrication

Replace oil and filter at 50 hours.

Ignition

Check spark plugs and distributor cap at 1000 hours. Engine tune-up at 2000 hours.

Fuel System

Replace fuel filter at 2000 hours.

Air Intake

Replace air filter at 250 hours.

Cooling System

Check coolant condition at 1000 hours. Drain and flush radiator at 2000 hours.

Hydrostatic Transmission

Replace filter located on pump (KEEP FILTER AREA CLEAN) at 250 hours.

Hydraulic System

Check oil level at 50 hours. Replace in-tank filter at 500 hours. Change oil at 2000 hours. Change breather cap at 2000 hours. **Use universal hydraulic fluid.**

Wheel Ends

Check fluid level at 250 hours. Drain and replace oil at 2000 hours.

Critical Fastener Torque Specifications

Location	Foot-pounds
Drive wheel lug nuts	350
Wheel end mounting bolts	200
Tilt cylinder rod eye clamp bolts	90
Counterweight mounting bolts	400
Steer cylinder clamp bolts	175
Seat mounting nuts	15

Part Replacement

Call 785-594-7474 to order parts. Please have the part numbers at hand – see your parts manual.

25/35 Versa-Lift with 0 Counterweight Slabs

Slab Weight (lbs)
1900

Number of Slabs
0

Standard Wheel Base (in)
76

Lift Capacities w/Forks Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
		Load Center From Fork Face (in)	24	16300	18900
36	13000		15100	17100	19200
48	10800		12500	14200	16000
60	9300		10700	12200	13700
72	8100		9400	10700	11900
84	7200		8300	9500	10600

Lift Capacities w/Boom Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
		Load Center From Boom Face (in)	12	15500	18100
24	12400		14400	16500	18500
36	10300		12000	13700	15400
48	8800		10300	11800	13200
60	7700		9000	10300	11600
72	6900		8000	9100	10300
84	6200		7200	8200	9200
96	5600		6500	7500	8400

Lift Capacities w/Forks & Boom (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
		Load Center From Boom Face (in)	24	11400	13500
36	9500		11200	12900	14600
48	8100		9600	11100	12500
60	7100		8400	9700	11000
72	6300		7500	8600	9700
84	5700		6700	7700	8800
96	5200		6100	7000	8000

***All Load Capacities are rated with the mast vertical.

25/35 Versa-Lift with 1 Counterweight Slabs

Slab Weight (lbs)
1900

Number of Slabs
1

Standard Wheel Base (in)
76

Lift Capacities w/Forks Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
Load Center From Fork Face (in)	24	19000	22000	25000	28000
	36	15100	17500	19900	22300
	48	12600	14600	16600	18600
	60	10800	12500	14200	15900
	72	9400	10900	12400	13900
	84	8400	9700	11000	12400

Lift Capacities w/Boom Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
Load Center From Boom Face (in)	12	18200	21200	24200	27200
	24	14500	16900	19300	21700
	36	12100	14100	16100	18100
	48	10300	12000	13800	15500
	60	9000	10500	12000	13500
	72	8000	9400	10700	12000
	84	7200	8400	9600	10800
	96	6600	7700	8700	9800

Lift Capacities w/Forks & Boom (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
Load Center From Boom Face (in)	24	13600	15900	18300	20700
	36	11300	13300	15300	17200
	48	9700	11400	13100	14800
	60	8400	9900	11400	12900
	72	7500	8800	10100	11500
	84	6700	7900	9100	10300
	96	6100	7200	8300	9400

***All Load Capacities are rated with the mast vertical.

25/35 Versa-Lift with 2 Counterweight Slabs

Slab Weight (lbs) Number of Slabs Standard Wheel Base (in)
 1900 2 76

Lift Capacities w/Forks Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
Load Center From Fork Face (in)	24	21600	25100	28500	31900
	36	17300	20000	22700	25500
	48	14400	16600	18900	21200
	60	12300	14300	16200	18100
	72	10800	12500	14200	15900
	84	9600	11100	12600	14100

Lift Capacities w/Boom Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
Load Center From Boom Face (in)	12	20900	24300	27700	31100
	24	16700	19400	22100	24800
	36	13900	16100	18400	20700
	48	11900	13800	15800	17700
	60	10400	12100	13800	15500
	72	9200	10700	12200	13700
	84	8300	9700	11000	12400
	96	7500	8800	10000	11200

Lift Capacities w/Forks & Boom (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
Load Center From Boom Face (in)	24	15700	18400	21100	23900
	36	13100	15300	17600	19900
	48	11200	13100	15100	17000
	60	9800	11500	13200	14900
	72	8700	10200	11700	13200
	84	7800	9200	10500	11900
96	7100	8300	9600	10800	

***All Load Capacities are rated with the mast vertical.

25/35 Versa-Lift with 3 Counterweight Slabs

Slab Weight (lbs)
1900

Number of Slabs
3

Standard Wheel Base (in)
76

Lift Capacities w/Forks Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
		Load Center From Fork Face (in)	24	24300	28200
36	19400	22500	25500	28600	23800
48	16200	18700	21300	23800	20400
60	13800	16000	18200	20400	17800
72	12100	14000	15900	17800	15800
84	10700	12400	14100	15800	12700

Lift Capacities w/Boom Only (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
		Load Center From Boom Face (in)	12	23500	27400
24	18800	21900	24900	28000	23300
36	15600	18200	20700	23300	19900
48	13400	15600	17800	19900	17400
60	11700	13600	15500	17400	15500
72	10400	12100	13800	15500	13900
84	9400	10900	12400	13900	11300
96	8500	9900	11300	12700	10800

Lift Capacities w/Forks & Boom (lbs)					
		Counterweight Extension (in)			
		0	12	24	36
		Load Center From Boom Face (in)	24	17800	20900
36	14800	17400	19900	22500	19300
48	12700	14900	17100	19300	16800
60	11100	13000	14900	16800	15000
72	9900	11600	13300	15000	13500
84	8900	10400	11900	13500	12200
96	8100	9500	10800	12200	10800

***All Load Capacities are rated with the mast vertical.