

## OPERATING INSTRUCTIONS

### GENERAL SAFETY GUIDELINES



**WARNING!** Do not operate this truck unless you have been trained to use it, authorized to do so and have checked it is in good condition. The operator should read all of the warning signs and instructions here and on the truck before using it. The truck is strictly forbidden to lift or carry a person.



**NOTE:** Battery must be charged prior to first use.

1. In case of any failure or fault, please stop using the truck until it can be properly repaired.
2. Do not repair the truck without professional training and authorization.
3. Protective shoes should be worn when working with this truck according to local safety regulations.
4. Keep a two-foot distance between the truck and any person not operating it.
5. Never place any part of your body in the lifting mechanism or under the forks or bed.
6. Do not operate on uneven ground or in a dangerous environment.
7. The truck should not be driven on public roads.
8. The truck may only be driven into an elevator or loading platform with enough load capacity to support the truck. The operator must confirm this point before entering elevator or loading platform. Passengers must enter the elevator after proper parking of the truck and walk out of the elevator before moving the truck.
9. The truck should always be driven with the height of the forks in the lowest position except when placing or moving a load.
10. The truck should always be parked on a level surface. The forks must be lowered to their lowest position. Always turn the ignition to the "OFF" position. Always remove the ignition key from the electrical lock when leaving the truck.
11. The truck should not be modified in any way from its original form.
12. Safe operating temperature range: 41–104° F.
13. Charge battery in a dry, well-ventilated area and keep away from any source of fire.

### TRUCK ON ANOTHER VEHICLE'S LOADING PLATFORM OR ON A GANGWAY

1. Before the truck is driven from a loading bay and onto a vehicle, the operator must always check the maximum load capacity of the gangway. There should also be suitable devices that prevent the gangway from sliding.
2. The operator must also check the maximum load capacity of the vehicle. There should also be suitable devices to prevent the vehicle from moving.

### TRUCK ON A RAMP OR INCLINE

1. The forks of the truck should always face the up-slope direction.
2. Never turn around or turn the truck sideways on a ramp.

### ROUTINE CHECKLIST BEFORE START-UP

- Check for any defect of the truck (especially on the wheels).
- Check if battery is fixed firmly and cable connected properly.

### START-UP OF TRUCK

- Pull out emergency shut-off switch.
- Insert key into electric lock switch and turn clockwise to position "I".
- Battery capacity meter should indicate the current capacity.
- Check to ensure the horn is working correctly.
- Check the brake function on the control handle.

## OPERATING INSTRUCTIONS CONTINUED

Figure 1

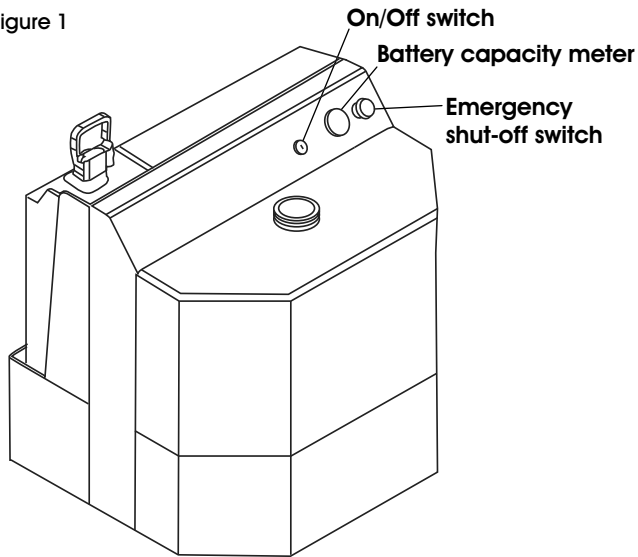
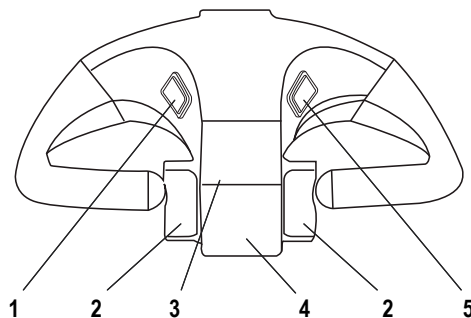


Figure 2



1	LOWER Button
2	FWD/BWD CONTROL Wheel
3	HORN Button
4	EMERGENCY STOP Button
5	RAISE Button

## OPERATION OF THE TRUCK

### EMERGENCY SHUT-OFF SWITCH

- All electric control functions are cut off when the emergency shut-off switch is pressed. (See Figure 1)

### EMERGENCY STOP BUTTON

- Truck will automatically brake when button is pressed. (See Figure 2)

### BRAKING

- Release the control handle and the truck automatically brakes.
- The control handle will return to upright position.

### DRIVING

- Drive speed is controlled by the FWD/BWD control wheel. (See Figure 2)

### LIFTING OF FORKS

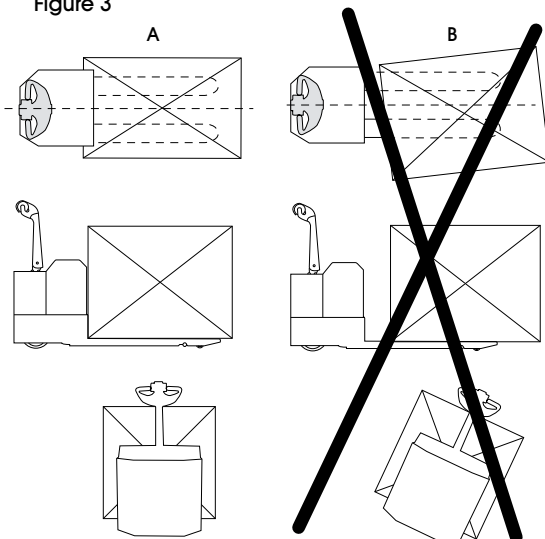
- Press the "RAISE" button to raise the forks to required height. (See Figure 2)

### LOWERING OF FORKS

- Press the "LOWER" button to lower the forks to required height. (See Figure 2)

## SAFE-LOADING GUIDELINES

Figure 3



**CAUTION!** Before loading cargo, the operator must check to confirm the cargo is properly placed on the pallet and the weight of cargo is within the load capacity of the truck. Load weight should be evenly distributed between the two forks.

1. Do not handle unstable or loosely stacked loads.
2. Do not overload the truck.
3. Always center loads on the forks, not at the end of the forks. (See Figure 3)
4. The capacity of the truck assumes an evenly distributed load with the center of the load being at the halfway point of the length of the forks.
5. Make sure that length of the forks matches the length of the pallet load.

# TECHNICAL SPECIFICATIONS

Figure 4

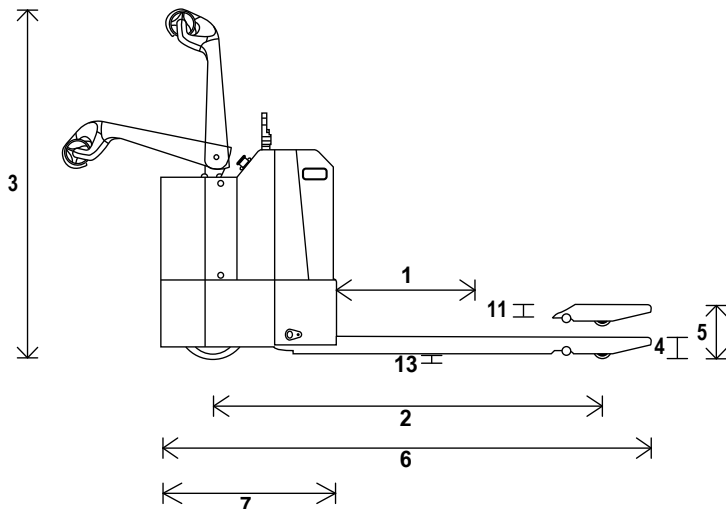
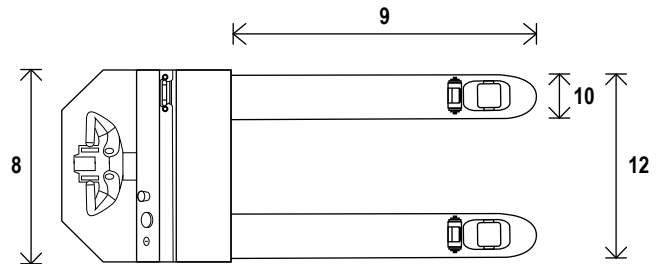


Figure 5



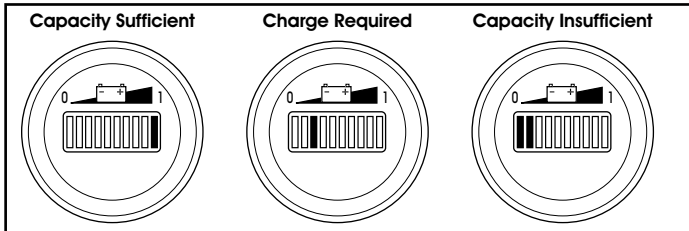
DESCRIPTION	KEY	SPECIFICATION
Model Number	-----	H-3405
Power Supply	-----	Electric
Type of Operation	-----	Pedestrian
Capacity/Rated Load	-----	4,500 lbs.
Load Center Distance	1	24"
Wheelbase	2	59.7"
Weight (including battery)	-----	1,168 lbs.
Tire Size - Drive End	-----	10 x 3.5"
Tire Size - Load End	-----	3.2 x 2.8"
Handle Height in Neutral Position	3	52"
Fork Height Lowered	4	3.2"
Fork Height Raised	5	7.9"
Overall Length	6	73"
Length of body	7	25"
Overall Width	8	28.6"
Fork Length	9	48"
Fork Width	10	6.3"
Fork Thickness	11	2.4"
Overall Fork Width	12	26.7"
Floor Clearance (center of wheelbase)	13	.9"
Turning Radius	-----	67"
Travel Speed (laden/unladen)	-----	3.1/3.2 mph
Lifting Speed (laden/unladen)	-----	5.4/4 sec
Lowering Speed (laden/unladen)	-----	3.9/5.2 sec
Maximum Usable Incline	-----	8°
Brakes	-----	Electric-magnetic
Drive Motor	-----	1.5 kw
Lifting Motor	-----	0.8 kw
Battery Voltage	-----	24v / 165Ah
Sound Level	-----	<70 db
Steering Arc	-----	180°

# MAINTENANCE

## BATTERY CAPACITY METER

1. The charge status of the battery is indicated on the battery capacity meter with ten indicator bars for each 10% increase. With the consumption of battery capacity, the bars will descend downwards from the top. (See Figure 6)

Figure 6



2. The truck will automatically cut off lifting functions when the battery reaches 20%.
3. The battery of the pallet truck should be charged fully and regularly. When "Capacity Insufficient" alarm flashes on battery capacity meter during operation, please charge the battery immediately.

## MAINTENANCE AND CHARGE OF BATTERY

1. The H-3405 pallet trucks are equipped with a specific charger to charge the battery. The charger should be plugged into a standard 120 volt outlet.



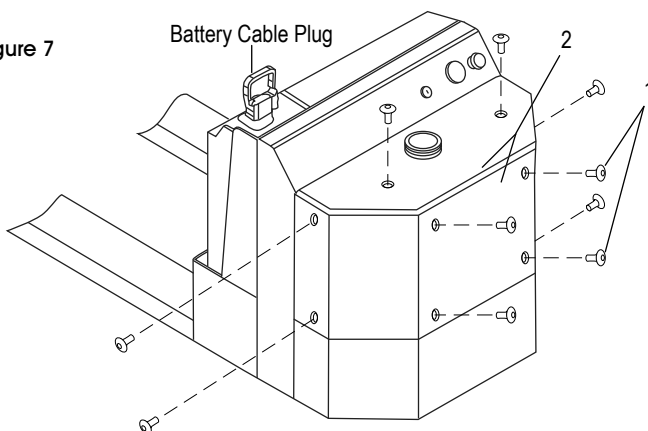
**CAUTION!** Before connecting the charger to the battery, make sure the emergency shut-off switch and key switch are in the "OFF" position. Charge the battery in a dry, well-ventilated area and keep away from any source of fire.



**NOTE:** If the truck is not in use, battery charges should be performed no less than once per month.

2. Disconnect the battery cable plug from the battery and attach to the charger. (See Figure 7)

Figure 7



3. Press the "ON" switch on the charger.

4. The charger will adjust the current according to residual capacity of the battery automatically which ensures the battery is charged correctly. After charging the battery, the charger indicator lights turn green and charger stops automatically. Battery charging generally takes 7-8 hours.

## BALANCE CHARGING THE BATTERY



**NOTE:** With time the battery will need to be balanced and should be done in accordance with the maintenance schedule noted in this manual.

1. Connect the charger to a standard 120V outlet.



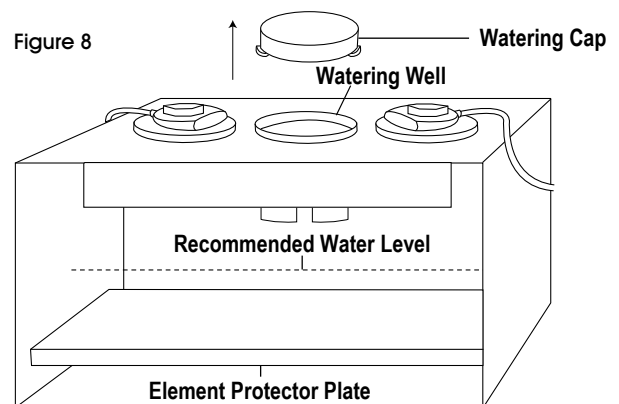
**CAUTION!** Before connecting the charger to the battery make sure the emergency shut-off switch and key switch are in the "OFF" position. Charge the battery in a dry, well-ventilated area and keep away from any source of fire.

2. Disconnect the battery cable plug from the battery and attach to the charger. (See Figure 7)
3. Push the balance button on the charger so it illuminates.
4. Press the "ON" switch on the charger.
5. The charger will adjust the current according to residual capacity of the battery automatically, which ensures the battery is charged correctly.

## BATTERY CHECKING AND FILLING PROCEDURE



**NOTE:** With time, water will evaporate from the batteries and must be refilled in accordance with the maintenance schedule noted in this manual.



1. Open the watering cap on the battery. (See Figure 8)
2. Make sure the water completely covers the Element Protector Plate within the battery. (See Figure 8)
3. Add distilled water if necessary. Close the watering cap.



**NOTE:** Do not overfill the battery. Water level should be between the plates in the battery and the bottom of the watering well.

## MAINTENANCE CONTINUED


### PREPARATION OF TRUCK TO BE REPAIRED OR MAINTAINED

Prepare all necessary safety measures to avoid a possible accident during the course of repair and maintenance by taking the following precautions:

1. Park the truck safely.
2. Press emergency shut-off switch and disconnect the battery.

### INSPECTION OF HYDRAULIC OIL CAPACITY

1. Remove the ten bolts (1). (See Figure 7)
2. Remove covers (2). (See Figure 7)
3. Check the capacity of hydraulic oil in oil tank.

 **NOTE:** During inspection of hydraulic oil capacity, forks and carriage must be lowered to the minimum height.

### INSPECTION OF ELECTRIC FUSE

1. Remove the ten bolts (1). (See Figure 7)
2. Remove covers (2). (See Figure 7)
3. Consult the chart to check the current rating of all fuses, and replace if necessary.

CODE	PROTECTION PURPOSE	CURRENT RATING
FU1	Main Circuit Fuse	10A
FU01	Traveling Control Fuse	200A

### USE OF TRUCK AFTER MAINTENANCE

Finish the following operations before using the truck:

1. Clean the truck.
2. Check the brakes.
3. Check the emergency shut-off switch.
4. Check the horn.

## MAINTENANCE OF THE TRUCK


### OPERATION AND ENVIRONMENTAL SAFETY

1. The instructions in the table in "Maintenance List" should be performed based on the time interval specified.

2. To ensure the safety and reliability of truck operation, only spare parts from manufacturer should be used.
3. Any parts replaced, including oils, must be disposed of according to related environmental protection regulations.

### SAFETY RULES FOR PALLET TRUCK MAINTENANCE

1. **MAINTENANCE STAFF** – Repair and maintenance should be performed only by qualified professionals.
2. **CLEANING OPERATION** – Flammable fluid is strictly forbidden in the cleaning of the truck. Before cleaning starts, safety measures must be taken to avoid sparking caused by a short circuit. Any cleaning should be performed after disconnecting the battery. All electric elements and electronic assemblies can only be cleaned by compressed air or by an anti-static brush.
3. **OPERATION OF ELECTRICAL SYSTEM** – Maintenance of electrical system of the truck should be performed by trained professionals only. Before any maintenance of electrical system, protection measures to avoid electric shock should be taken by disconnecting the battery from the truck.
4. **WHEELS** – The condition of the wheels will greatly affect stability and driving performance. Wheels should be replaced in pairs, e.g., both left and right.
5. **LIFTING CHAINS** – Without lubrication, the lifting chains will wear out prematurely. The time interval in the maintenance list is applicable for normal operation. In case of poor operating conditions (dust, temperature), it is necessary to increase lubrication accordingly.
6. **HYDRAULIC OIL PIPE** – The oil pipe should be replaced every six years.

 **NOTE:** The maintenance cycle stated in maintenance list refers to normal conditions with single shift operation. Under dusty conditions, extreme temperatures or under multiple operating shifts, the maintenance cycle should be shortened accordingly.

7. Please perform maintenance according to the following table:

CODE	MAINTENANCE SCHEDULE
W1	Every 50 working hours, at least once per week
M3	Every 500 working hours, at least once per 3 months
M6	Every 1,000 working hours, at least once per 6 months
M12	Every 2,000 working hours, at least once per 12 months

# MAINTENANCE LIST

			MAINTENANCE TIME INTERVAL			
			Standard = ●	W	M	M
			Refrigerated Location = ■	1	3	6
Chassis and Truck Frame	1.1	Inspection of any damage of bearings		●		
	1.2	Inspection of all joints and bolts		●		
Drive Train	2.1	Inspection for any leakage in the driving system		●		
	2.2	Inspection of oil level of driving system		●		
	2.3	Lubricate moving parts			■	●
Wheels	3.1	Inspection for general wearing and damage		●		
	3.2	Inspection of bearings inside wheels and ensure fit with wheels		●		
Steering System	4.1	Inspection of steering operation motion		●		
Braking System	5.1	Inspection of reset function		●		
	5.2	Inspection of wear of brake wheel		●		
	5.3	Inspection of brake connection, adjust if necessary		●		
Lifting Equipment	6.1	Inspection for any blockage of loading wheel		●		
	6.2	Inspection of any wearing or damage of edge of forks	■	●		
Hydraulic System	7.1	Inspection of any leakage or damage of all joints	■	●		
	7.2	Inspection of any leakage or damage of hydraulic cylinder	■	●		
	7.3	Inspection of oil capacity	■	●		
	7.4	Replace hydraulic oil and filter			■	●
	7.5	Inspection of adjustment function of pressure regulator			■	●
Electrical System	8.1	Inspection of connection of all cables		●		
	8.2	Inspection of amperage of fuse		●		
	8.3	Inspection of safety, reliability and function of switches and unlocking cam equipment		●		
	8.4	Inspection of connector; replace worn part if necessary		●		
	8.5	Inspection of function of alarm equipment	■	●		
Motor	9.1	Inspection of wearing state of carbon brush		●		
	9.2	Inspection of safety of motor attachment		●		
	9.3	Clean motor frame, inspection of wear of commutator		■	●	

## MAINTENANCE LIST CONTINUED

			Maintenance Time Interval			
Standard = ●			W	M	M	M
Refrigerated Location = ■			1	3	6	12
Battery	10.1	Check water level in battery cells and fill if necessary.	●			
	10.2	Balance the charge of the batteries.		●		
	10.3	Inspection of capacity of acid and voltage of battery	■	●		
	10.4	Inspection of safety device of connection terminal, apply grease if necessary	■	●		
	10.5	Clean connector of battery, inspection of tightness of fit	■	●		
	10.6	Inspection of damage of battery cable, replace it if necessary		●		
Lubrication	11.1	Inspect and lubricate all parts as necessary	■	●		
Integrated Measurement	12.1	Inspection of the grounding of electrical system				●
	12.2	Inspection of driving speed and braking distance				●
	12.3	Inspection of lifting and lowering speed				●
	12.4	Inspection of emergency shut-off		●		

## TROUBLESHOOTING

OPERATING ISSUE	CAUSES	RECOMMENDATIONS
Truck does not move.	Disconnection of battery. Key switch at "0" position. Emergency shut-off switch on. Battery capacity consumed. Fuse damaged.	Check connection of battery and reconnect it if necessary. Put key switch at "I" position. Release the emergency shut-off switch. Check battery capacity and charge battery if necessary. Check fuses.
Forks will not raise.	Control valve is blocked by dirty fluid. Battery capacity consumed Fuse damaged.	Check hydraulic oil and clean control valve. Replace hydraulic oil if necessary. Check battery capacity and charge battery if necessary. Check fuses.
Traveling too slow.	Battery capacity low.	Check battery capacity indicator, charge if necessary.

For all other issues please contact Uline.

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