

OWNER'S MANUAL

BGNR-30 POWERED WALKIE REACH STACKER



ACTUAL PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN



WARNING

Do not operate or service this product unless you have read and fully understand the entire contents of this manual. Failure to do so may result in property damage, bodily injury or death.

BLUE GIANT[®]

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WARNING

TO PREVENT SERIOUS RISK OF INJURY TO YOURSELF AND OTHERS OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS.

This Reach Truck may become hazardous if adequate maintenance is neglected. Therefore, adequate maintenance facilities, trained personnel and procedures should be provided. Maintenance and inspection shall be performed in conformance with the following practices:

1. A scheduled planned maintenance, lubrication and inspection system should be followed.
2. Only qualified and authorized personnel shall be permitted to maintain, repair, adjust, and inspect Reach Truck.
3. Before leaving the Reach Truck:
 - Do not park the Reach Truck on an incline.
 - Fully lower the load forks.
 - Press the emergency brake switch .
 - Set the key switch to the “OFF” position and remove the key.
4. Before starting to operate Reach Truck:
 - Be in operating position
 - Place directional control in neutral
 - Before operating Reach Truck, check functions of lift systems, directional control, speed control, steering, warning devices and brakes.
5. Avoid fire hazards and have fire protection equipment present. Do not use open flame to check lever, or for leakage of electrolyte and fluids or oil. Do not use open pans of fuel or flammable cleaning fluids for cleaning parts.
6. Brakes, steering mechanisms, control mechanisms, guards and safety devices shall be inspected regularly and maintained in legible condition.
7. Capacity, operation and maintenance instruction plates or decals shall be maintained in legible condition.
8. All parts of lift mechanisms shall be inspected to maintain them in safe operating condition.
9. All hydraulic systems shall be regularly inspected and maintained in conformance with good practice. Cylinders, valves and other similar parts shall be checked to assure that “drift” has not developed to the extent that it would create a hazard.
10. Reach Truck shall be kept in a clean condition to minimize fire hazards facilitate detection of loose or defective parts.
11. Modifications and additions which affect capacity and safe Reach Truck operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation and maintenance plates or decals shall be changed accordingly.

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CORRECT USE AND APPLICATION

The Reach Truck described in the present operator manual is an industrial Reach Truck designed for lifting and transporting load units. It must be used, operated and serviced in accordance with the present instructions. Any other type of use is beyond the scope of application and can result in damage to personnel, the Reach Truck or property. In particular, avoid overloading the Reach Truck with loads which are too heavy or placed on one side. The data plate attached to the Reach Truck or the load diagram are binding for the maximum load capacity. The Reach Truck must not be used in fire or explosion endangered areas, or areas threatened by corrosion or excessive dust.

PROPRIETOR RESPONSIBILITIES

For the purposes of the present operator manual the “proprietor” is defined as any natural or legal person who either uses the Reach Truck himself, or on whose behalf it is used. In special cases (e.g. leasing or renting) the proprietor is considered the person who, in accordance with existing contractual agreements between the owner and user of the Reach Truck, is charged with operational duties. The proprietor must ensure that the Reach Truck is used only for the purpose it is intended for and that danger to life and limb of the user and third parties are excluded. Furthermore, accident prevention regulations, safety regulations and operating, servicing and repair guidelines must be followed. The proprietor must ensure that all Reach Truck users have read and understood this operator manual. Failure to comply with the operator manual shall invalidate the warranty. The same applies if improper work is carried out on the Reach Truck by the customer or third parties without the permission of the manufacturer’s customer service department.

ADDING ACCESSORIES

The mounting or installation of additional equipment which affects or enhances the performance of the Reach Truck requires the written permission of the manufacturer. Local authority approval may also need to be obtained. Local authority approval does not however constitute the manufacturer’s approval.

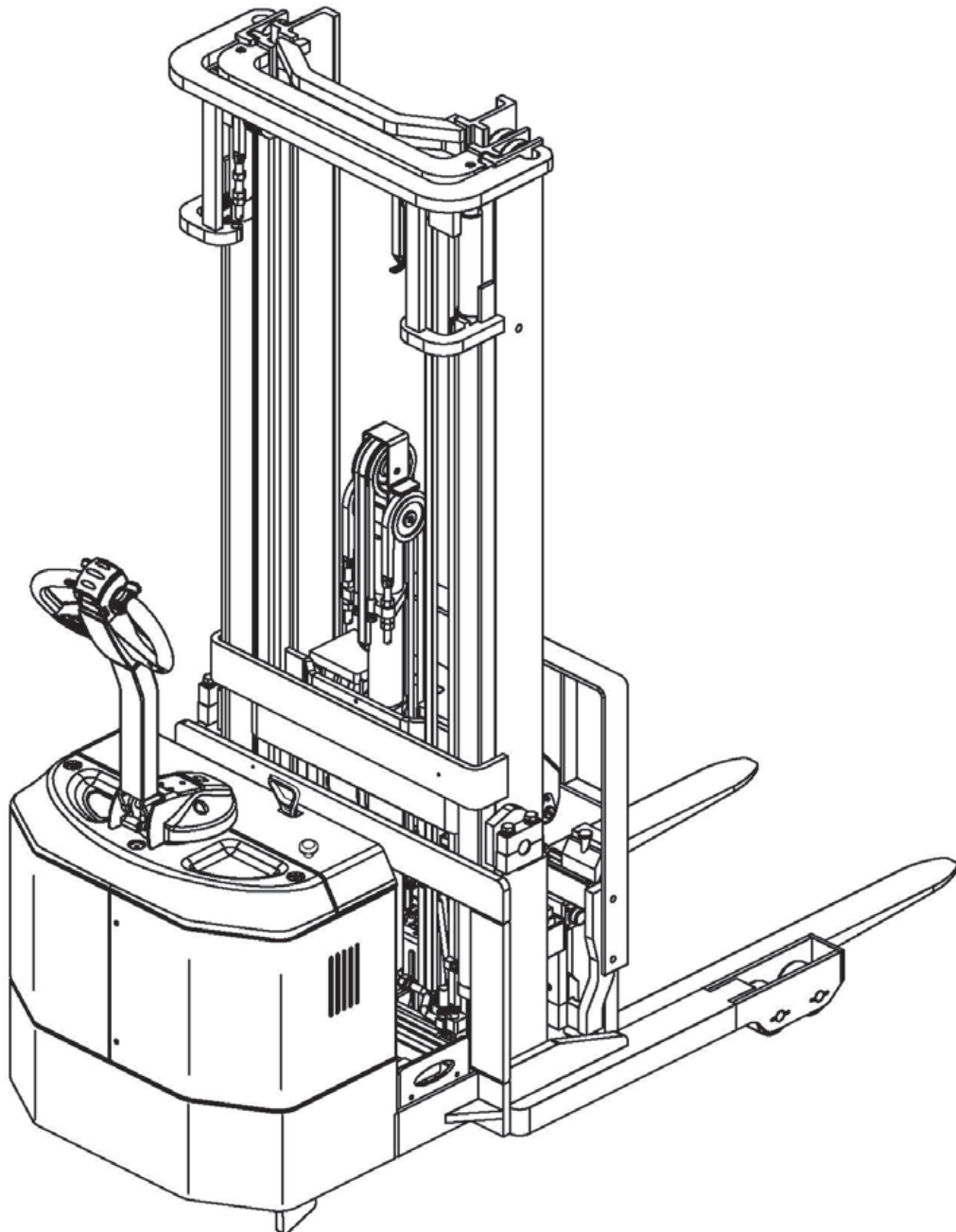
REACH TRUCK DESCRIPTION

APPLICATION

The Reach Truck is reach electric Reach Truck with a steered drive wheel.

It is designed for use on level floors to lift and transport palletised goods. Open bottom pallets or roll cages can be lifted. The capacity can be obtained from the data plate.

The capacity with respect to lift height and load center of gravity is indicated on the capacity plate.



1.0 ABOUT THE BG NR-30 WALKIE REACH STACKER

The BG NR-30 Powered Walkie Reach Stacker uses a pantograph to combine the tight maneuvering ability of a walkie straddle stacker with the operating flexibility of a counterbalanced truck. Power steering, proportional hydraulics, and tilt result in intuitive control and versatile performance.

- 3000 lb. (1363 kg) capacity at 24" (610mm) load center
- Lift height: 106", 126", 157", 189" (2292, 3200, 3988, 4801mm)
- 24V AC drive motor
- Travel speed 3.4 mph (unloaded) and 3.1 mph (under load)
- Fork size: 42" (1067mm) standard

1.1 OWNER’S PURCHASE RECORD

OWNER’S PURCHASE RECORD	
Please record information for future inquiries and to validate warranty. (See Section 2.1 for warranty validation)	
Dealer:	Date in Service:
	Number of Units:
Owner’s Name:	Order Number:
Serial Number:	Year of Construction:

The manufacturer offers a full line of dock levelers, dock safety equipment, accessories, ergonomic and scissor lift equipment, seals and shelters, and industrial trucks. Concurrent with a continuing product improvement program, specifications are subject to change without notice (see section 2.2 of this manual). Please contact the manufacturer for latest information. Some features illustrated may be optional in certain market areas.

2.0 INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the industrial truck. It is not intended to cover, or suggest that it does cover, all procedures necessary to ensure safe operation. All operators should be aware of and abide by all workplace safety regulations applicable to the operation of the industrial truck. These laws and regulations include but are not limited to:

- The Occupational Safety and Health Act (USA)
- Occupational Safety and Health Acts for Individual States (USA)
- Canadian Material Handling Regulations

For additional information on these regulations as well as industry standards that may apply to this product, please contact:



American National Standards Institute (ANSI)
 1430 Broadway
 New York, NY 10018
 Telephone: (212) 642-4900

Also a member of:



Loading Dock Equipment Manufacturers
 A Product Section of Material Handling Industry of America
 A Division of Material Handling Industry
 8720 Red Oak Blvd, Suite 201
 Charlotte, NC, 28217-3992
 Telephone: (704) 676-1190

2.1 WARRANTY INFORMATION

Thank you for purchasing Blue Giant products. We appreciate your business, and are confident that our product will serve you for many years to come. In the event that you experience a problem with our product, our Warranty Center is here to support the Blue Giant product(s) that you have purchased.

To validate warranty on recently purchased equipment, please complete and submit your information with our online Warranty Registration at www.bluegiant.com.

DEALER INFORMATION

Name:

Contact:

Telephone:

For more information about Blue Giant Warranty Support, please contact your local Blue Giant Equipment dealer, representative or authorized partner near you. You may also visit www.bluegiant.com or phone 1.905.457.3900.

* Note that failure to validate warranty at the time of receipt can seriously affect the outcome of any claim.

2.2 EXCLUSION OF LIABILITY

The manufacturer assumes no liability for damage or injury to persons or property which occur as a result of defects or faults in or incorrect use of dock equipment. The manufacturer also assumes no liability for lost profits, operating downtimes, or similar indirect losses incurred by the purchaser. Injury to third parties, irrespective of its nature, is not subject to compensation.

The manufacturer reserves the right to make changes at any time to the modules, components, and accessories, concurrent with its continuing product development program. Specifications, operating instructions, and illustrations included in this manual are subject to change without notice. Please contact manufacturer for the latest information.

2.3 MANUFACTURER'S NOTE

This industrial truck has been carefully inspected and tested at the manufacturer's plant prior to shipment, but should be checked upon receipt for transport damage. Any observed transport damage is to be listed on the signed copy of the freight document. Notify the freight forwarder of any damage WITHIN 48 HOURS.

2.4 SAFETY PROCEDURES

1. Do not operate this truck unless you have been trained and authorized to do so
2. Do not operate this truck until you have read and understood all of the safety information and instructions contained herein and on the truck.
3. Do not operate this truck until you have checked its condition. Give special attention to wheels, controls, lifting systems, including steering mechanism, guards, and safety devices.
4. Report the need for truck repairs to your supervisor immediately and do not operate truck until repairs are made. Neglect may cause a minor repair to become a major service problem and cause the truck to become unsafe.
5. This truck is intended for use on smooth level hard surfaces only. Do not use on ramps or grades, rough, or broken floors.
6. Do not load truck beyond capacity shown on serial name plate on truck.
7. Do not lift with the fork tips or one fork only.
8. This equipment is designed for evenly centered loads with forks completely supporting the load. Off-centering of loads can result in a dangerous operating condition and may cause damage or injury.
9. Always look in direction of travel. Use caution when visibility is obstructed by load.
10. Extreme caution must be used when handling loosely stacked/ packaged loads.
11. Watch swing clearance when turning near walls, racks, pillars, or other obstacles.
12. Start, stop, change direction, and travel smoothly. Slow down for turns and on uneven or slippery surfaces that cause the truck to slide or tip. Be aware that the truck behaves differently without a load than with a load.
13. Observe applicable traffic regulations. Yield right of way to pedestrians.
14. Do not ride on this equipment.
15. Do not carry passengers or lift personnel.
16. Before you leave the truck, fully lower lifting mechanism.

2.5 MOVING DANGER



WARNING

When the stacker lifts the fork to a height greater than 10" (254mm) for stacking operating, the stacker must move slowly and the continual travel distance must not exceed 6' (1.8m). It is prohibited to handle goods for a long distance when the height of the fork is greater than 10" (254mm).

2.6 APPLICATION ENVIRONMENT

- Ambient temperature no higher than +40°C and no lower than -25°C.
- When the ambient temperature reaches +40°C, the relative humidity should not exceed 50%. Higher relative humidity is allowed at lower temperature.
- Hard, level, smooth finished floors only.
- Use of the unit in environment with flammable and/or explosive and/or acid and/or alkali corrosive substances is prohibited.

2.7 LOADING SPECIFICATION

The unit is designed for the horizontal transportation of loads on a level, fixed base. The load must be evenly distributed on pallets or similar receptacles. The ideal loading mode is that the gravity center of heavy goods is at the central position of the fork. The maximum load-carrying capacity is shown on the appropriate designation plate and on the load sticker on the unit. When there exists defective load, the rated carrying capacity shall be reduced. If the load on the forks is one sided, there is a risk of the forks bending or the load slipping off. Supporting or shifting the load with the fork tips is to be avoided in all cases, as this results in damage to the appliance. In order to preserve the wheels and chassis the unit must not be driven over very uneven ground.

2.8 MAXIMUM INCLINE OR DECLINE GRADES

The BGNR-30 Powered Drive Straddle Truck is suitable for stacking and handling materials on hard, level, smooth finished floors only.

2.9 SAFETY WITH TALL LOADS

Transporting with tall loads (e.g. machines) changes the center of gravity of the load so unfavorably that the unit including the load, goes out of control and may overturn on a curve. Loading, (e.g. onto a truck or mobile loading ramps) is prohibited.

Conveying persons or using the unit as a form of roller skate is not permissible. Foodstuffs are only to be transported in packed form. Direct contact with the unit is to be avoided.

The accident prevention regulations for industrial trucks and the safety regulations applicable to the user must be complied with.

3.0 OPERATOR'S MANUAL SAFETY MESSAGE COLOR IDENTIFICATION

This manual includes color-coded safety messages that clarify instructions and specify areas where potential hazard exists. To prevent the possibility of equipment damage and serious injury or death, please observe strictly the instructions and warnings contained in the messages. If warning decals become damaged or missing, replace them immediately. Avoid accidents by recognizing dangerous procedures or situations before they occur.

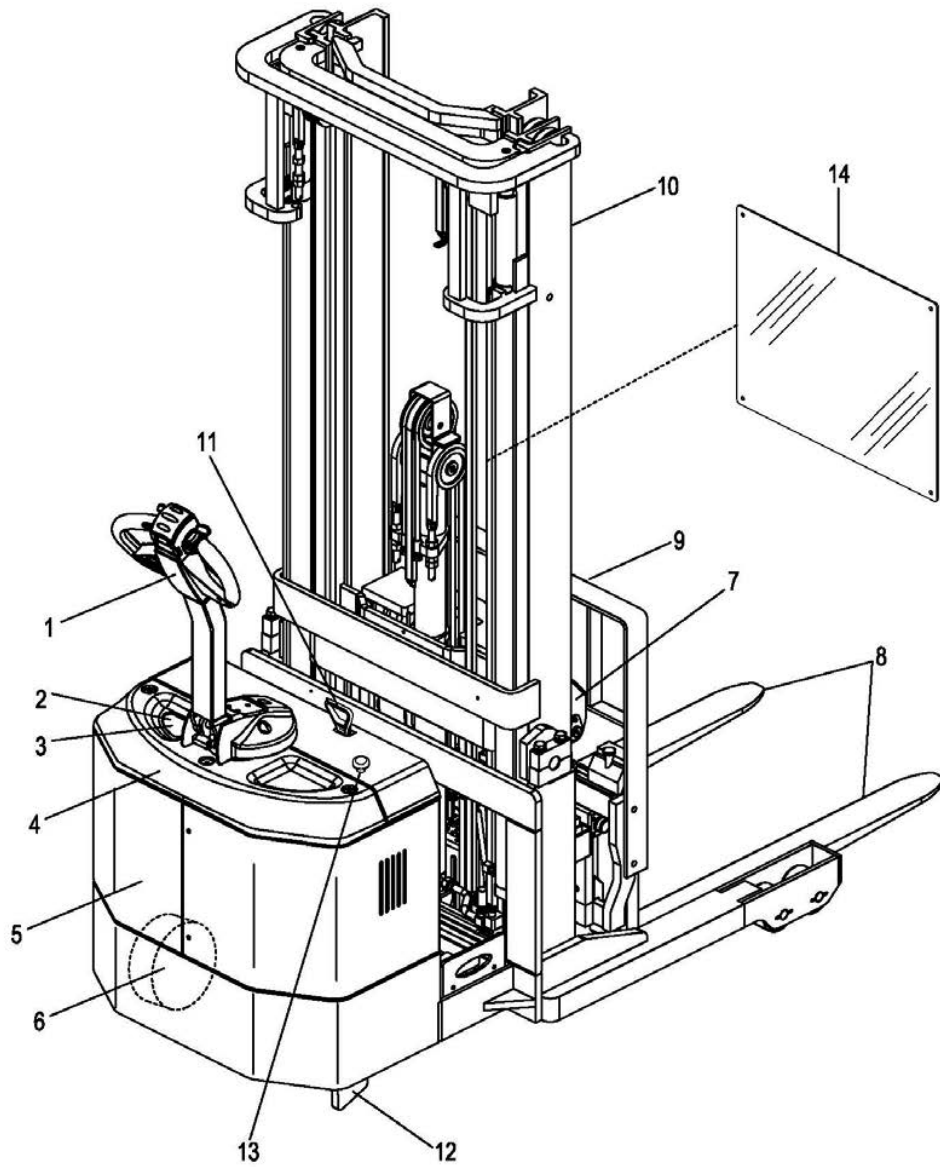
 DANGER
Serious injury or death will likely occur if the instructions are not followed.

NOTICE
Procedures marked notice must be followed in order to prevent damage to machinery.

 WARNING
Serious injury or death may occur if the instructions are not followed.

 CAUTION
Instructions marked caution concern safe operating procedure. Failure to comply may result in personal injury.

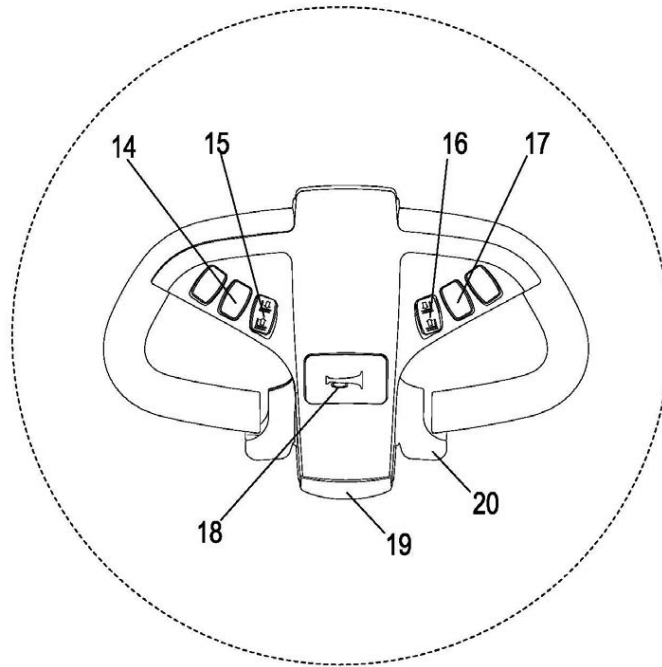
4.0 REACH TRUCK ASSEMBLIES



ITEM	COMPONENT
1	Control shaft with control shaft head drive wheel
2	Key switch
3	Combined instrument (battery discharge monitor and operating hour meter)
4	Up cover
5	Rear cowl
6	Driving wheel
7	Scissors

ITEM	COMPONENT
8	Lifting device
9	Blocking shelf
10	Hoist frame
11	Plug
12	Balance block
13	Emergency brake switch
14	Glass baffle (optional)

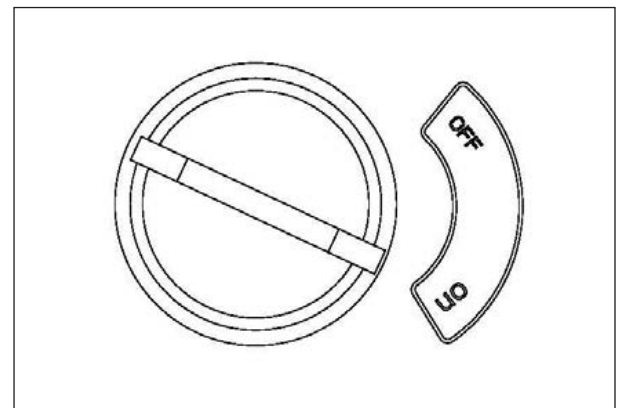
4.1 CONTROL HANDLE



ITEM	COMPONENT	FUNCTION
14	Control shaft with control shaft head drive wheel	Tilting the mast backward or forward
15	Reach backward & forward button	Rech the mast backward or forward
16	Lower & Lift switch	Lowers or raises load forks
17	Sides way switch	Sides way the fork
18	Warning signal button	Triggers a warning signal
19	Collision safety switch	Safety function which, when activated, forces the reach truck to re-verse until the switch is restored to neutral
20	Travel switch	Controls the driving speed and direction

4.1.1 KEY SWITCH

Switches control current on and off. Removing the key prevents the Reach Truck from being switched on by unauthorised personnel.



4.1.2 BATTERY DISCHARGE INDICATOR

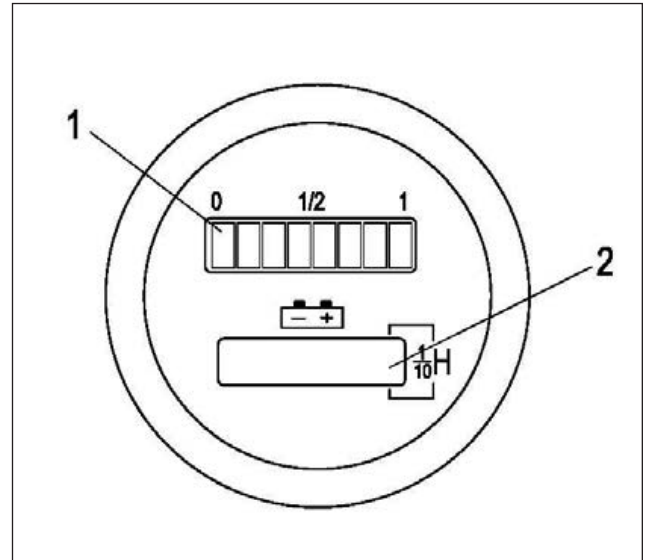
The LEDs (1) represent battery residual capacity, The LCD (2) displays the operating hours.

Battery Discharge Indicator (1)

When the Reach Truck has been released via the key switch, the battery charge status is displayed.

The colours of the LEDs (1) represent the following conditions:

COMPONENT	LED COLOR	VALUE
Standard battery residual capacity	GREEN	70 - 100%
	ORANGE	50 - 60%
	FLASHING RED	0 - 20%



Battery Discharge for 70%, A flashing red show on storage battery charge warning. Battery Discharge for 80%, Two flashing reds show on battery charge used up warning, Lifting is now inhibited. The battery must be charged.

Operating hours display(2)

Display range between 0.0 and 99,999.0 hours. Travel and lifting are logged. This is a backlit display.

Power up test

On power up the display shows:

- The operating hours
- The charge status

4.1.3 STANDARD VERSION SPECIFICATIONS

Technical specification details in accordance with JB/T3773.1-84. Technical modifications and additions reserved.

4.1.4 PERFORMANCE DATA FOR STANDARD REACH TRUCKS

ITEM	DESCRIPTION	CQE15A	UNIT
	Drive Unit	Battery	
	Operator Type	Pedestrian	
Q	Load Capacity	3300	lb
C	Load Center	23.6	in
	Travel speed, laden / unladen	3.4 / 3.7	mph
	Lifting speed, laden / unladen	28.5 / 33.4	fpm
	Lowering speed, laden / unladen	49.2 / 29.5	fpm
	Reaching speed, laden / unladen	15.7 / 15.7	fpm

ITEM	DESCRIPTION	CQE15A	UNIT	
	Maximum gradeability, laden/unladen	6 / 10	°	
	Service weight (with battery)	See form B	lb	
	Loading	Unladen, Front/Rear, fork advanced	2690/1698	lb
		Unladen, Front/Rear, fork retracted	2932/1433	lb
		Laden, Front/Rear, fork advanced	1212/6922	lb
		Laden, Front/Rear, fork retracted	2690/5247	lb
	Drive motor rating S2 60 min	4.4	kW	
	Lift motor rating at S3 15%	5.36	kW	

4.1.5 DIMENSIONS

ITEM	DESCRIPTION	CQE15A	UNIT
y	Wheelbase	54.9	in
h ₁	Height, mast lowered	83	in
h ₂	Free lift	6.3	in
h ₃	Lift height	126	in
h ₄	Height, mast extended	162.8	in
h ₇	Seat height / standing height	/	
h ₈	Height of wheel arms	5.3	in
l ₁	Overall length	88.6	in
l ₂	Length to face of forks	46.5	in
b ₁ /b ₂	Overall width	33.5/41.7	in
b ₃	Fork frame width	31.5	in
b ₅	Distance between fork arms	7.8 - 28	in
b ₄	Distance between wheel arms / loading surfaces	33.8	in
a/b	Tilt of mast / fork carriage forward / backward	3/3	°
l ₄	Reach distance	23.2	in
m ₁	Ground clearance, laden, below mast	2.75	in

ITEM	DESCRIPTION	CQE15A	UNIT
m ₂	The minimum ground clearance of frame	3.5	in
Ast	Aisle width ¹ , 1000 x 1200 pallet crossways	See Form C	in
Ast	Aisle width ¹ , 800 x 1200 pallet lengthways	See Form C	in
Wa	Outer turning radius	62.6	in
l ₇	Length across wheel arms (exclusive fork)	67.3	in
	Tyre type	PU/PU	
	Tyre size, driving wheels	Ø10.2 x 4.1	in
	Tyre size, loading wheels	Ø 4 x 2.8	in
	Tyre size, caster wheels	—	
	Wheels, number driving, caster / loading (x - drive wheels)	1x , 4	
b ₁₀	Track width, front, driving side	0	in
b ₁₁	Track width, rear, loading side	37.8	in

1) Including safety distance a = 7.87 in.

2) Sound pressure level at the driver's ear 74 dB(A)

FORM A:

STANDARD MAST TYPES (in)

Mast Types	Close Mast Height	Free Height	Lift Height	Extended Mast Height
	h1	h2	h3	h4
Two Stage Mast	1940	0	2700	3660
	2090	0	3000	3960
Three Stage Mast	1960	1000	4000	4955

FORM B:

SERVICE WEIGHT (include battery) (lb)

Mast Types	Mast Height	Service Weight (lb)
		CQE15A
Two Stage Mast	102.36	4160.12
	125.98	4299.01
Three Stage Mast	157.48	4629.71

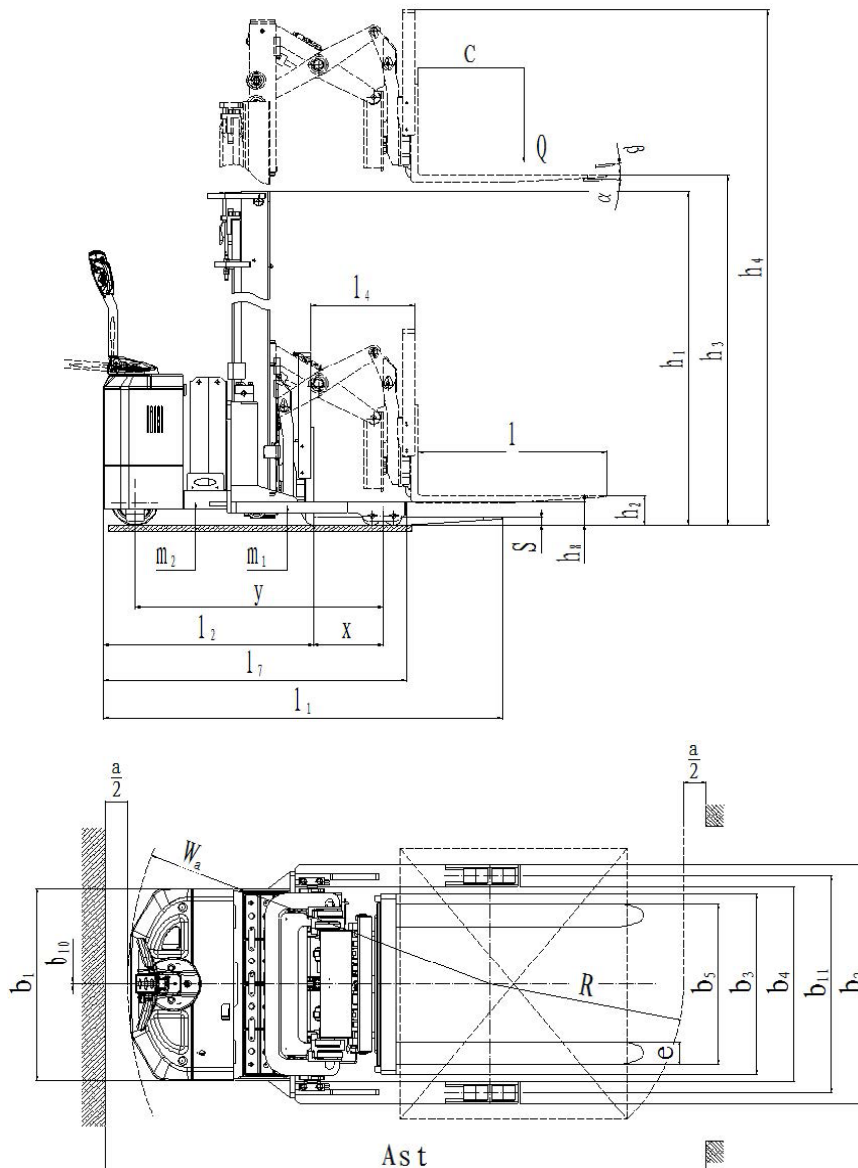
4.1.5 DIMENSIONS CON'T.

FORM C:

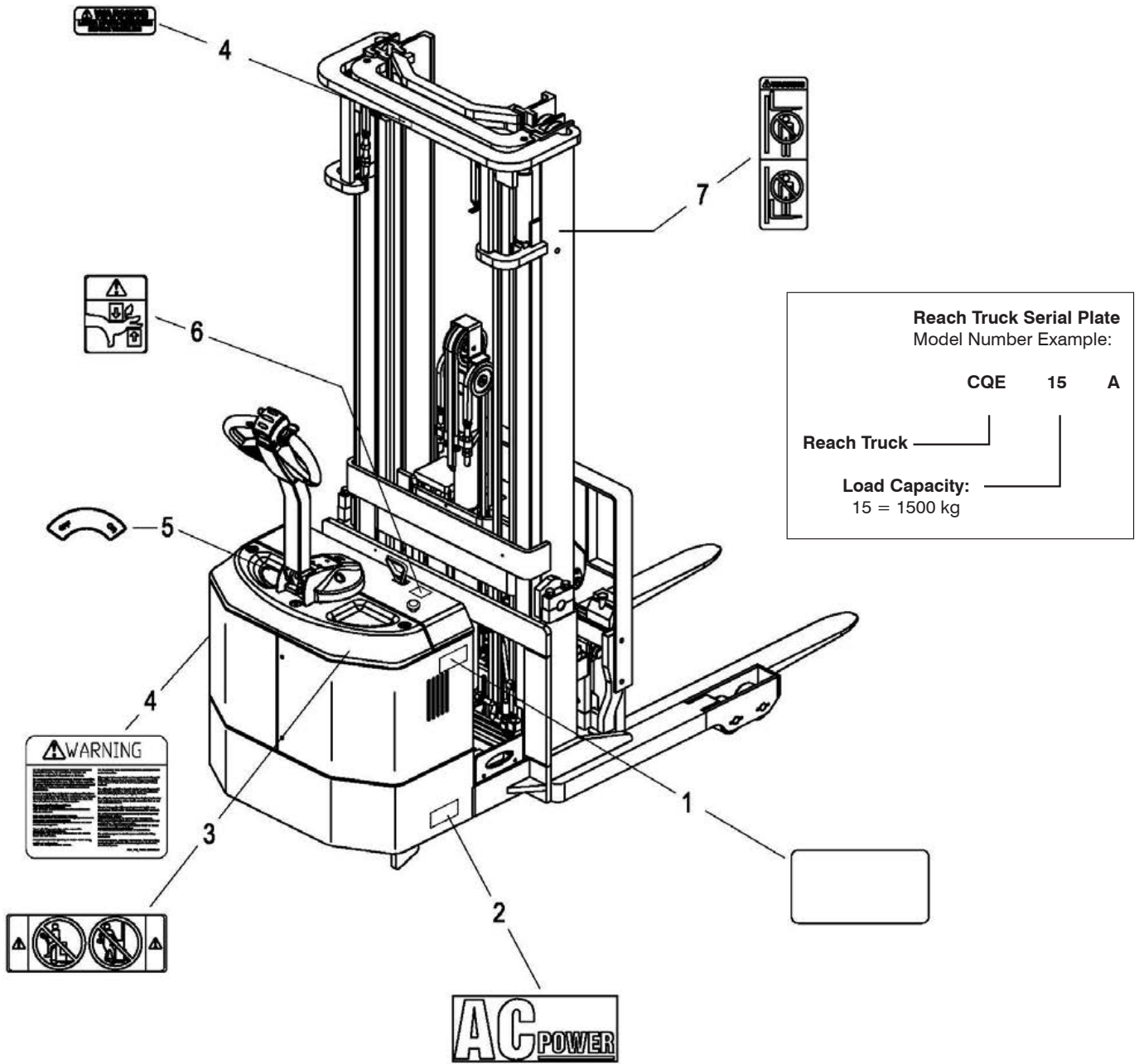
LENGTH ACROSS WHEEL ARMS		CQE15A	
Mast Types		Two Stage Mast	Three Stage Mast
Overall length (min) (lb)	l_1	88.62	89.17
Aisle width for pallets 1000 x 1200 crossways (lb)	Ast	104.06	104.45
Aisle width for pallets 800 x 1200 lengthways (lb)	Ast	105.91	106.42

FORM C:

LENGTH ACROSS WHEEL ARMS		CQE15A	
Mast Types		Two Stage Mast	Three Stage Mast
Aisle width for pallets 1000 x 1200 lengthways (lb)	Ast	107.80	108.27
Aisle width for pallets 800 x 1200 crossways (lb)	Ast	99.06	99.33



4.2 IDENTIFICATION POINTS AND SERIAL PLATES



ITEM	DESCRIPTION
1	Reach Truck Serial Plate
2	AC Power Decal
3	“Never Sit” Warning Decal
4	Operator Warning Decal

ITEM	DESCRIPTION
5	Key Switch Decal
6	“Never Put Your Hands in Inner and Outer” Decal
7	“Never Stand” Warning Decal

5.0 COMMISSIONING

5.1 USING THE REACH TRUCK FOR THE FIRST TIME

Only operate the Reach Truck with battery current. Preparing the Reach Truck for operation after delivery or transport.

Procedure:

- Check the equipment is complete.
- Check the hydraulic oil level.
- Install the battery if necessary (where required), (see “7.4 Battery Removal and Installation”) do not damage battery cable.
- Charge the battery, (see “7.3 Charging the Battery”).

When the Reach Truck is parked the surface of the tyres will flatten. The flattening will disappear after a short period of operation.

5.2 DURING BRAKE-IN

We recommended operating the machine under light load conditions for the first stage of operation to get the most from it. Especially the requirements given below should be observed while the machine is in a stage of 100 hours of operation.

- Must prevent the new battery from over discharging when early used. Please charging when remain power less than 20%.
- Perform specified preventive maintenance services carefully and completely.
- Avoid sudden stop, starts or turns.
- Oil changes and lubrication are recommended to do earlier than specified.
- Limited load is 70 – 80% of the rated load.

6.0 OPERATION

6.1 SAFETY REGULATIONS FOR THE OPERATION OF REACH TRUCKS

DRIVER AUTHORIZATION:

The Reach Truck may only be used by suitably trained personnel, who have demonstrated to the proprietor or his representative that they can drive and handle loads and have been authorised to operate the Reach Truck by the proprietor or his representative.

DRIVER'S RIGHTS, OBLIGATIONS AND RESPONSIBILITIES:

The driver must be informed of his duties and responsibilities and be instructed in the operation of the Reach Truck and shall be familiar with the operator manual. The driver shall be afforded all due rights . Safety shoes must be worn with pedestrian operated Reach Trucks.

UNAUTHORISED USE OF REACH TRUCK:

The driver is responsible for the Reach Truck during the time it is in use. He shall prevent unauthorised persons from driving or operating the Reach Truck. It is forbidden to carry passengers or lift personnel.

DAMAGE AND FAULTS:

The supervisor must be immediately informed of any damage or faults to the Reach Truck. Reach Trucks not safe for operation (e.g. wheel or brake problems) must not be used until they have been rectified.

REPAIRS:

The driver must not carry out any repairs or alterations to the Reach Truck without the necessary training and authorisation to do so. The driver must never disable or adjust safety mechanisms or switches.

HAZARDOUS AREA:

A hazardous area is defined as the area in which a person is at risk due to Reach Truck movement, lifting operations, the load handler (e.g. forks or attachments) or the load itself. This also includes areas which can be reached by falling loads or lowering operating equipment.

- Unauthorised persons must be kept away from the hazardous area.
- Where there is anger to personnel, a warning must be sounded with sufficient notice.
- If unauthorised personnel are still within the hazardous area the Reach Truck shall be brought to a halt immediately.

SAFETY DEVICES AND WARNING SIGNS:

Safety devices, warning signs and warning instructions shall be strictly observed.

6.2 OPERATE AND RUN THE REACH TRUCK

6.2.1 PREPARING

Before the Reach Truck can be commissioned, operated or a load unit lifted, the driver must ensure that there is nobody within the hazardous area.

Checks and operations to be performed before starting daily work

- Make sure the Emergency brake switch is depressed (6).
- Make sure the battery is connected.
- Insert the key in the key switch (14) and turn it to the right as far as it will go.
- Test the warning signal switch (13).

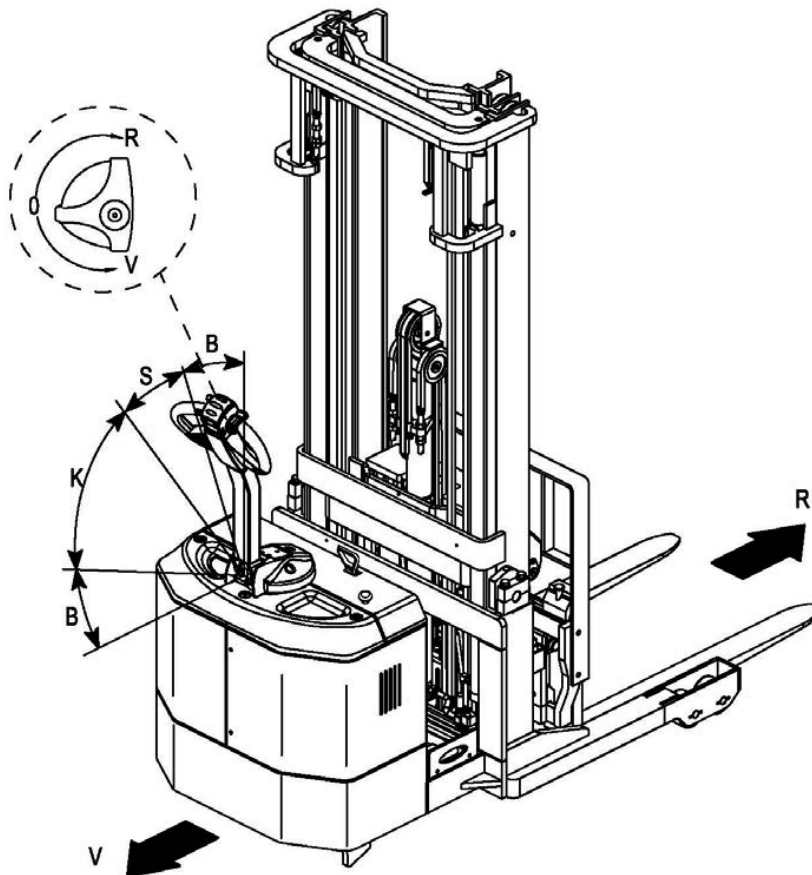
Visually inspect the entire Reach Truck (in particular wheels and load handler) for obvious damage.

WARNING

Before operating the truck, check all controls and warning devices for proper operation.
If any damage or fault is found, don't operate truck until corrected.

6.2.2 TRAVEL, STEERING, BRAKING

Do not drive the Reach Truck unless the panels are closed and properly locked.



6.2.2 TRAVEL, STEERING, BRAKING CON'T.

1. DRIVING

DRIVING IN LOW SPEED

Push the control shaft into the slow speed range (S) and set the driving switch to the desired driving direction (front or back). The bigger angle it swivels, the higher the speed will get.

DRIVING IN HIGH SPEED

Push the control shaft into the quick speed range (K) and set the driving switch to the desired driving direction (front or back). The bigger angle it swivels, the higher the speed will get. It will get different speed though the switch swivels the same angle in the different range, the speed in the quick range (K) is quicker than in the slow range(s).

2. STEERING

Apply the control handle (2) to the left or right.

3. BRAKING

The brake pattern of the Reach Truck depends largely on the ground conditions. The driver must take this into account when operating the Reach Truck. The driver must be looking ahead when travelling. If there is no hazard, brake moderately to avoid moving the load.

The Reach Truck can brake in four different ways:

- Emergency braking
- Automatic braking
- Regenerative braking
- Inversion braking

EMERGENCY BRAKING

Press Emergency brake switch(1), all electrical functions are cut out and the Reach Truck automatically brakes.

AUTOMATIC BRAKING

When the control handle (2) is released it automatically sets itself to the upper brake zone (B) and automatic braking ensues.

REGENERATIVE BRAKING

If the travel switch is set to "0", the Reach Truck automatically brakes regeneratively. When the speed below 1Km/h, the brake then applies and motor brake stop.

INVERSION BRAKING

You can set the travel switch to the opposite direction when travelling. The Reach Truck brakes regeneratively until it starts to move in the opposite direction.



WARNING

If the control handle moves slowly or not at all to the upper brake zone, the Reach Truck must be taken out of service until the cause of this fault is be rectified.



WARNING

If the travel switch moves slowly or not at all to 0, the Reach Truck must be taken out of service until the cause of this fault is be rectified. Replace the control handle if necessary.



WARNING

In hazardous situations set the control handle to the brake position or set the travel switch to the opposite direction.

6.2.3 LIFTING, TRANSPORTING AND DEPOSITING LOADS

Unsecured and incorrectly positioned loads can cause accidents

- Instruct other people to move out of the hazardous area of the Reach Truck. Stop working with the Reach Truck if people do not leave the hazardous.
- Only carry loads that have been correctly secured and positioned. Use suitable precautions to prevent parts of the load from tipping or falling down.
- Do not transport bad handbarrow (as Reach Truck and stock).
- Never stand underneath a raised load handler.
- Do not stand on the load handler.
- Do not lift other people on the load handler.
- Insert the forks as far as possible underneath the load.



WARNING

Before lifting a load unit the driver must make sure that it has been correctly stowed and does not exceed the Reach Truck's capacity. Do not lift long loads at an angle.



WARNING

Do not lift to tiptop, to avoid shorted life of oil cylinder.

6.2.3 LIFTING, TRANSPORTING AND DEPOSITING LOADS CON'T.

LIFT

Pull "Lift & Lower" switch (16) until the height you need.

LOWER

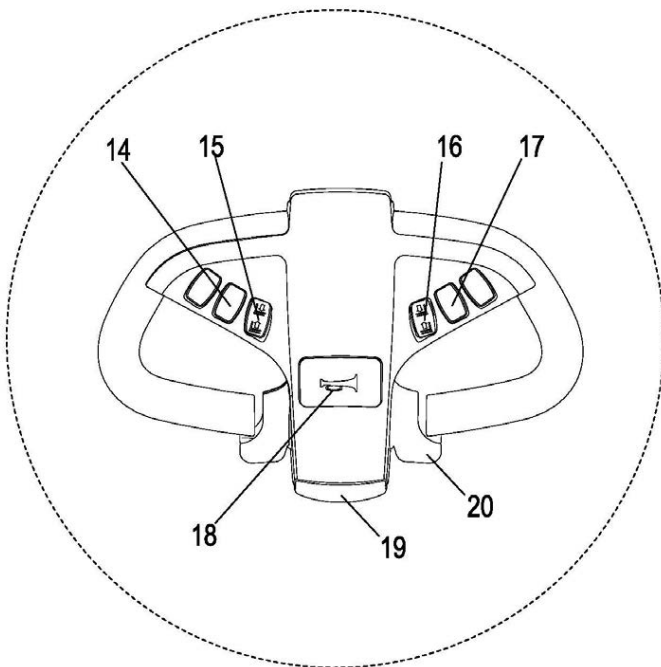
Push "Lift & Lower" switch (16) until the lowest position.

TILT FORWARD

Press "Tilting forward&backward" button (15) until the angle you need.

TILT BACKWARD

Press "Tilting forward & backward" button (15) until the angle you need.



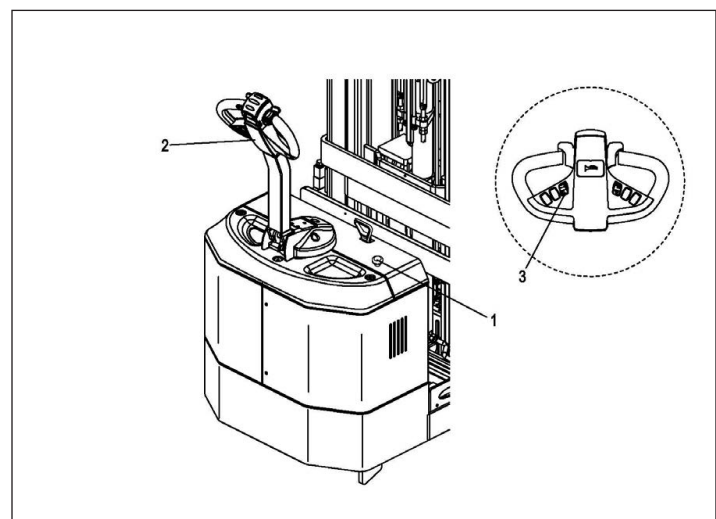
6.2.4 PARKING THE REACH TRUCK SECURELY

When you leave the Reach Truck it must be securely parked even if you only intend to leave it for a short time.

- Pull "Lower" switch (3), fully lower the load handler.
- Fully lower the forks.
- Press Emergency brake switch (1).
- Turn off the key switch and remove the key (2).

⚠ WARNING

Parking the Reach Truck securely. Forbid parking on an incline. Always fully lower the forks.



⚠ WARNING

Never tilt the mast with loads upraised 1.5m or more.
Don't lift the load when the mast was tilted forward.

7.0 BATTERY MAINTENANCE & CHARGING

7.1 SAFETY REGULATIONS FOR HANDLING ACID BATTERIES

Park the Reach Truck securely before carrying out any work on the batteries.

MAINTENANCE PERSONNEL:

Batteries may only be charged, serviced or replaced by trained personnel. The present operator manual and the manufacturer's instructions concerning batteries and charging stations must be observed when carrying out the work.

FIRE PROTECTION :

- Smoking and naked flames must be avoided when working with batteries.
- Wherever a Reach Truck is parked for charging there shall be no inflammable material or operating fluids capable of creating sparks within 2 meters around the Reach Truck.
- The area must be well ventilated.
- Fire protection equipment must be provided.



PROTECTION AGAINST ELECTRIC SHOCK:

- Battery has high voltage and energy.
- Do not bring short circuit.
- Do not approach tools to the two poles of the battery, which can cause the sparkle.

7.2 BATTERY TYPE AND DIMENSION

Battery type and dimension are acquired at fact.

When replacing or installing batteries, ensure that the battery is correctly secured in the battery compartment of the Reach Truck.

7.3 CHARGING THE BATTERY

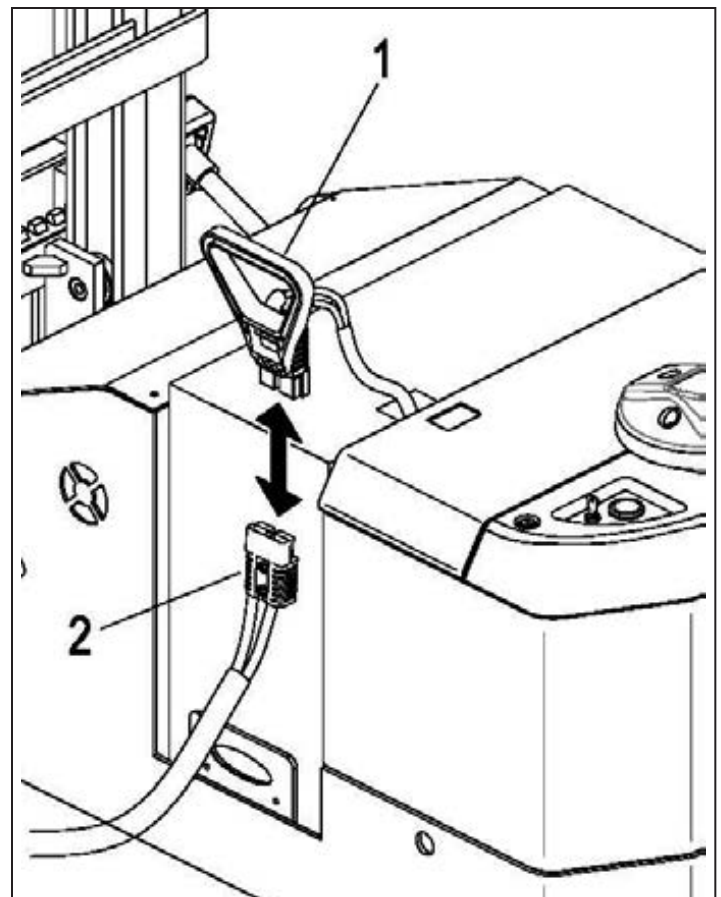
SAFETY REGULATIONS FOR CHARGING THE BATTERY:

- To charge the battery, the Reach Truck must be parked in a closed and properly ventilated room.
- Do not place any metal objects on the battery.
- Before charging, check all cables and plug connections for visible signs of damage.
- Before start and finish charging to make sure power is turned OFF.
- It is essential to follow the safety regulations of the battery and charging station manufacturers.

CHARGING STEP

- Check whether the condition is according with "Safety Regulations for Charging the Battery"
- Park the Reach Truck securely (See 6.2.4 Parking the Reach Truck Securely)
- Remove the battery plug (1)
- Connect the battery plug (1) with the charging lead of the stationary charger (2) and turn on the charger

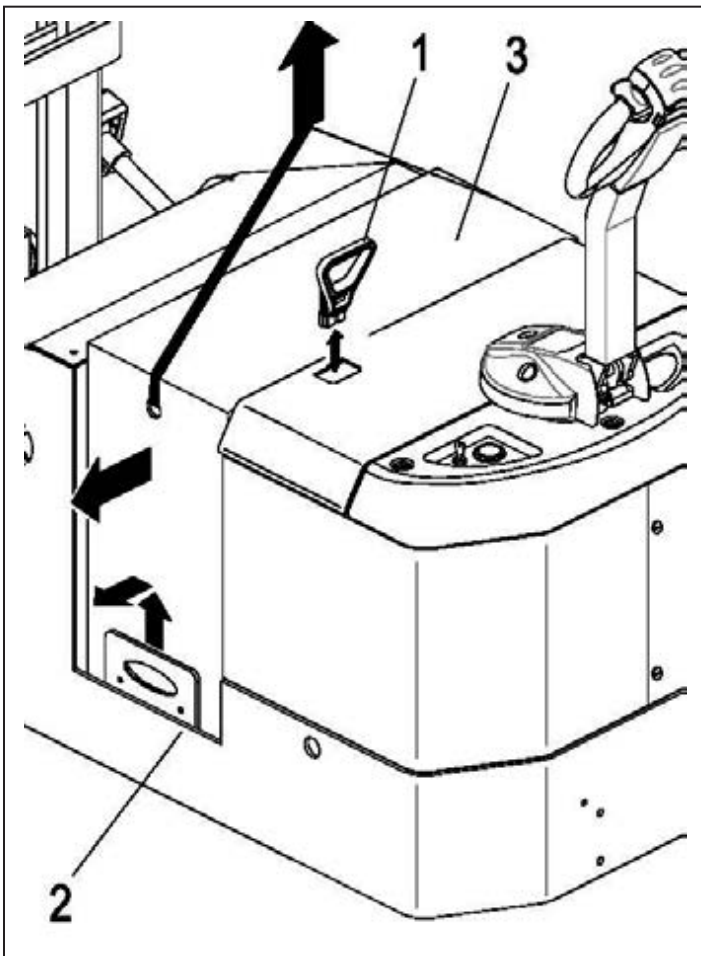
NOTE: This picture is just a sample.



7.4 BATTERY REMOVAL AND INSTALLATION

- Park the Reach Truck securely (See 6.2.4 Parking the Reach Truck Securely).
- Place the battery plug(1) or the battery cable in such a way that they will not get caught on the Reach Truck when the battery (3) is removed.
- The hooks must be attached to the eyes of the battery in such a way.
- Remove the baffle (2). Pull the battery out from the side.
- Installation is in the reverse order of operations.

NOTE: This picture is just a sample.



WARNING

The Reach Truck must be parked on level ground. To prevent short circuits, batteries with exposed terminals or connectors must be covered with a rubber mat. When transporting batteries using a crane, ensure that the crane is of adequate capacity. The lifting gear must exert a vertical pull so that the battery container is not compressed. Forbid falling lift tool on battery surface.

7.5 BATTERY MAINTENANCE

DO NOT OVERUSE BATTERY:

- If you use up the energy of battery till the forklift immovability, you will shorten its working hours.
- Shower for battery appears need for charge, please charge it quickly.

BATTERY MAINTENANCE:

WARNING

1. Do not use dry cloth or fabric to clean the battery, avoiding static to bring the explosion.
2. Unfix battery plug.
3. Clean with wet cloth.
4. Wearing glasses for protecting eyes, rubber overshoes and rubber gloves.

BATTERY STORAGE:

If batteries are taken out of service for a lengthy period they should be stored in the fully charged condition in a dry, frost-free room. To ensure the battery is always ready for use a choice of charging methods can be made:

- A monthly equalizing charge

7.6 BATTERY DISPOSAL

Batteries may only be disposed of in accordance with national environmental protection regulations or disposal laws. The manufacturer's disposal instructions must be followed.

Batteries contain an acid solution which is poisonous and corrosive. Therefore, always wear protective clothing and eye protection when carrying out work on batteries. Above all avoid any contact with battery acid.

Nevertheless, should clothing, skin or eyes come in contact with acid the affected parts should be rinsed with plenty of clean water—where the skin or eyes are affected call a doctor immediately.

Immediately neutralize any spilled battery acid.

Only batteries with a sealed battery container may be used.

The weight and dimensions of the battery have considerable affect on the operational safety of the Reach Truck. Battery equipment may only be replaced with the agreement of the manufacturer.

8.0 REACH TRUCK MAINTENANCE

8.1 OPERATIONAL SAFETY AND ENVIRONMENTAL PROTECTION

- The servicing and inspection operations contained in this chapter must be performed in accordance with the intervals indicated in the servicing checklists.
- Any modification to the Reach Truck assemblies, in particular the safety mechanisms, is prohibited. The operational speeds of the Reach Truck must not be changed under any circumstances.
- Only original spare parts have been certified by our quality assurance department. To ensure safe and reliable operation of the Reach Truck, use only the manufacturer's spare parts. Used parts, oils and fuels must be disposed of in accordance with the relevant environmental protection regulations. For oil changes, contact the manufacturer's specialist department.
- Upon completion of inspection and servicing, carry out the activities listed in the "Recommissioning" section.

8.2 MAINTENANCE SAFETY REGULATIONS

MAINTENANCE PERSONNEL:

Reach Trucks must only be serviced and maintained by the manufacturer's trained personnel.

The manufacturer's service department has field technicians specially trained for these tasks. We therefore recommend a maintenance contract with the manufacturer's local service center.

LIFTING AND JACKING UP:

When a Reach Truck is to be lifted, the lifting gear must only be secured to the points specially provided for this purpose.

When jacking up the Reach Truck, take appropriate measures to prevent the Reach Truck from slipping or tipping over (e.g. wedges, wooden blocks).

You may only work underneath a raised load handler if it is supported by a sufficiently strong chain.

CLEANING:

Do not use flammable liquids to clean the Reach Truck. Prior to cleaning, all safety measures required to prevent sparking (e.g. through short circuits) must be taken. For battery-operated Reach Trucks, the battery connector must be removed.

Only weak suction or compressed air and non-conductive antistatic brushes may be used for cleaning electric or electronic assemblies.

If the Reach Truck is to be cleaned with a water jet or a high-pressure cleaner, all electrical and electronic components must be carefully covered beforehand as moisture can cause malfunctions. After cleaning the Reach Truck, carry out the activities detailed in the "Recommissioning" section.

ELECTRICAL SYSTEM:

Only suitably trained personnel may operate on the Reach Truck's electrical system.

Before working on the electrical system, take all precautionary measures to avoid – electric shocks.

For battery-operated Reach Trucks, also de-energise the Reach Truck by removing the battery connector.

WELDING:

To avoid damaging electric or electronic components, remove these from the Reach Truck before performing welding operations.

SETTINGS:

When repairing or replacing electric or electronic components or assemblies, always note the Reach Truck-specific settings.

TIRES

The quality of tires affects the stability and performance of the Reach Truck. When replacing factory fitted tires only use original manufacturer's spare parts, as otherwise the data plate specifications will not be kept.

When changing wheels and tires, ensure that the Reach Truck does not slew (e.g. when replacing wheels always left and right simultaneously).

8.3 SERVICING AND INSPECTION

Thorough and expert servicing is one of the most important requirements for the safe operation of the Reach Truck. Failure to perform regular servicing can lead to Reach Truck failure and poses a potential hazard to personnel and equipment.

The service intervals stated are based on single shift operation under normal operating conditions. They must be reduced accordingly if the Reach Truck is to be used in conditions of extreme dust, temperature fluctuations or multiple shifts.

The following maintenance checklist states the tasks and intervals after which they should be carried out. Maintenance intervals are defined as:

- W = Every 50 service hours, at least weekly**
- A = Every 250 operating hours**
- B = Every 500 operating hours, or at least annually**
- C = Every 2000 operating hours, or at least annually**

W service intervals are to be performed by the customer.

In the run-in period - after approx. 100 service hours - or after repair work, the owner must check the wheel nuts/bolts and re-tighten if necessary.

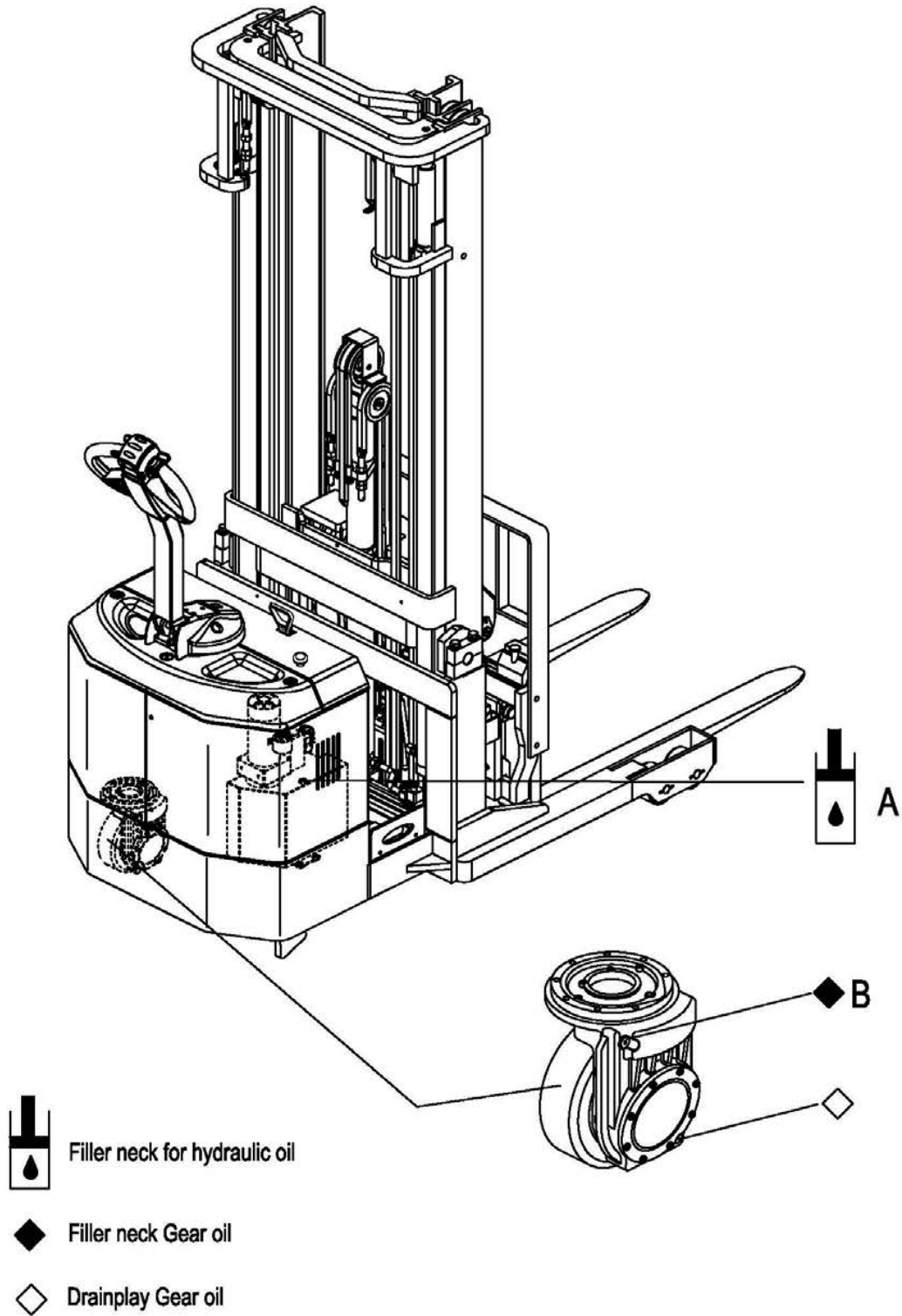
8.3.1 MAINTENANCE CHECK LIST

ITEM	DESCRIPTION	MAINTENANCE INTERVAL •			
		W	A	B	C
Braking	Check magnetic brake air gap			•	
Electrical System	Test instruments, displays and control switches	•			
	Test warning and safety device		•		
	Make sure wire connections are secure and check for damage			•	
	Test micro switch setting	•			
	Check controller and EPS controller			•	
	Fix the motor and cable			•	
Power Supply	Visually inspect battery		•		
	Visually inspect battery plug			•	
	Check battery cable connection are secure, grease terminals if necessary			•	
Travel	Check the transmission for noise and leakage			•	
	Check travel mechanism, adjust and lubricate if necessary. Check control handle recuperating function.		•		
	Check driving wheel and loading wheel for wear and damage			•	
	Check wheel bearings and attachments			•	

8.3.1 MAINTENANCE CHECK LIST CON'T.

ITEM	DESCRIPTION	MAINTENANCE INTERVAL •			
		W	A	B	C
Reach Truck Frame	Check reach truck frame for damage			•	
	Check labels are present and complete			•	
	Check mast attachment			•	
Hydraulic Operations	Test Hydraulic system		•		
	Check that hose and pipe lines and their connections are secure, check for leaks and damage		•		
	Check cylinders and piston rods for damage and leaks, make sure they are secure			•	
	Check load chain setting and tension if necessary			•	
	Visually inspect mast rollers and check contact surface wear level			•	
	Check forks, load handler for wear and damage			•	
	Check hydraulic oil level			•	
	Replace hydraulic oil				•

8.3.2 LUBRICATION SCHEDULE



8.3.3 CONSUMABLES

HANDLING CONSUMABLES TYPE MATERIAL:

Consumables must always be handled correctly. Follow the manufacturer's instructions.

Improper handling is hazardous to health, life and the environment. Consumables must only be stored in appropriate containers. They may be flammable and must therefore not come into contact with hot components or naked flames.

Only use clean containers when filling up with consumables. Do not mix consumables of different grades. The only exception to this is when mixing is expressly stipulated in the Operating Instructions.

Avoid spillage. Spilled liquids must be removed immediately with suitable bonding agents and the bonding agent/consumable mixture must be disposed of in accordance with regulations.

CODE	DESCRIPTION	USED FOR
A	HM32#	Hydraulic System
B	GL-85W-90	Gear Case

8.3.4 MAINTENANCE INSTRUCTIONS

PREPARE THE REACH TRUCK FOR MAINTENANCE AND REPAIRS:

All necessary safety measures must be taken to avoid accidents when carrying out maintenance and repairs. The following preparations must be made:

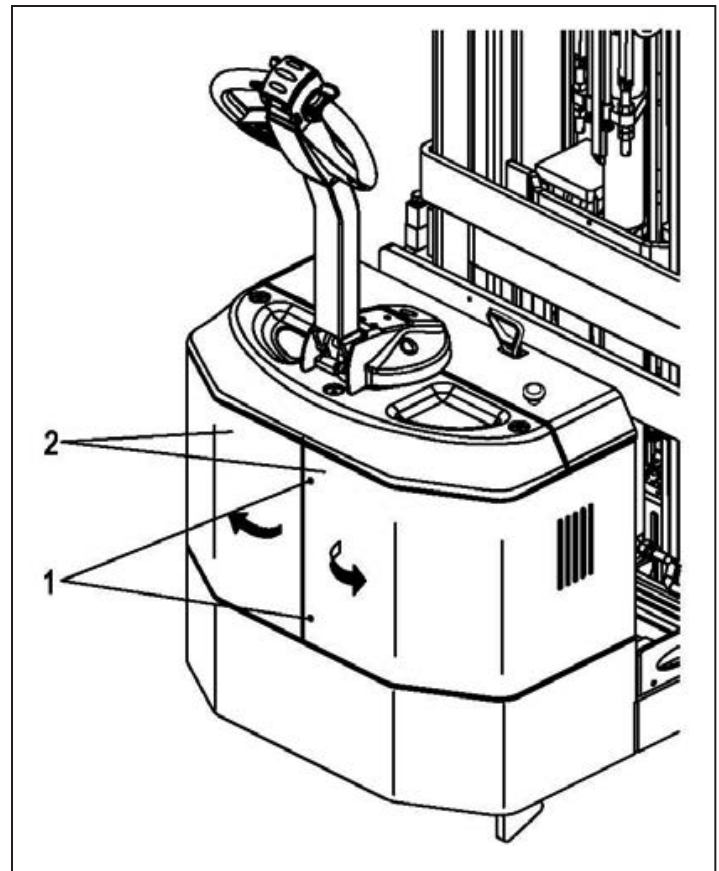
- Park the Reach Truck securely (See 6.2.4 Parking the Reach Truck Securely).
- Remove the key to prevent the Reach Truck from accidentally starting.
- When working under a raised lift Reach Truck, secure it to prevent it from tipping or sliding away.

OPEN THE COVER:

- Remove the two screws (1).
- Carefully open the panel (2).

REPLACING THE DRIVE WHEEL:


The drive wheel must only be replaced by authorised service personnel.



8.3.4 MAINTENANCE INSTRUCTIONS CON'T.


CHECK THE HYDRAULIC OIL LEVEL:

- Add hydraulic oil if you heard an explosion sound from pipe during lifting.
- Prepare the Reach Truck for maintenance and repairs (see 8.0 Reach Truck Maintenance).
- Opening the front cover.
- Add hydraulic oil of the correct grade (See 8.3.2 Lubrication Schedule).
- Add hydraulic oil until you cannot hear the explosion sound during lifting. Installation is the reverse order.

 WARNING
Forbid adding hydraulic oil within impurity.

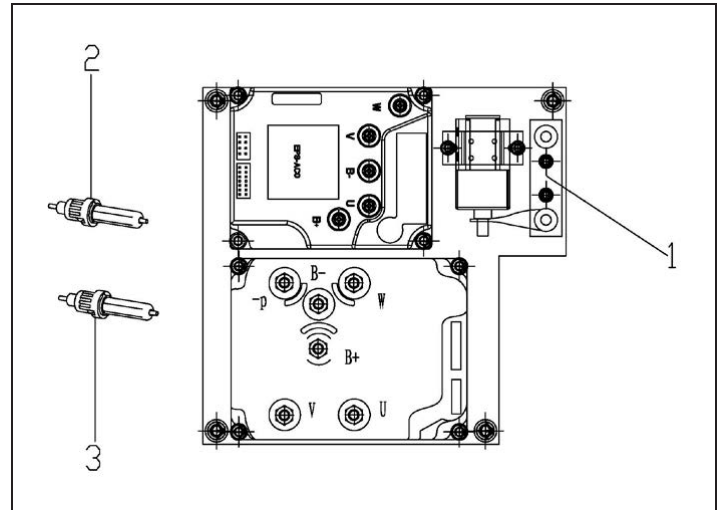
CHECK TRANSMISSION OIL LEVEL:

- Prepare the Reach Truck for maintenance and repairs (See 8.0 Reach Truck Maintenance).
- Open the panel (See 8.0 Reach Truck Maintenance).
- Turn the control handle to the right limited position.
- Check the transmission oil level, it should be at the control plug level (See 8.3.2 Lubrication Schedule).
- If necessary add transmission oil of the correct grade (See 8.3.2 Lubrication Schedule).
- Installation is the reverse order.

 WARNING
Forbid adding hydraulic oil within impurity.

CHECKING ELECTRICAL FUSES:

- Prepare the Reach Truck for maintenance and repairs (See 8.0 Reach Truck Maintenance).
- Open the front cover.
- Check rating of all fuses in accordance with table, replace if necessary.



ITEM	TO PROTECT:	RATING
1	Traction / Lifting Motor Fuse	200A
2	Battery Control Fuse	10A
3	Control System Control Fuse	10A

RECOMMISSIONING:

The Reach Truck may only be recommissioned after cleaning or repair work, once the following operations have been performed.

- Test horn
- Test Emergency brake switch
- Test brake
- Lubricate the Reach Truck in accordance with the maintenance schedule

8.4 DECOMMISSIONING THE REACH TRUCK

If the Reach Truck is to be decommissioned for more than two months, e.g. for operational reasons, it must be parked in a frost-free and dry location and all necessary measures must be taken before, during and after decommissioning as described.

On decommissioning the Reach Truck must be jacked up so that all the wheels are clear of the ground. This is the only way of ensuring that the wheels and wheel bearings are not damaged.

If the Reach Truck is to be out of service for more than 6 months, further measures must be taken in consultation with the manufacturer's service department.

8.4.1 PRIOR TO DECOMMISSIONING

- Thoroughly clean the Reach Truck.
- Check the brakes.
- Check the hydraulic oil level and replenish as necessary (See 8.0 Reach Truck Maintenance).
- Apply a thin layer of oil or grease to any non-painted mechanical components.
- Lubricate the Reach Truck in accordance with the maintenance schedule (See 8.3.2 Lubrication Schedule).
- Charge the battery (See 7.3 Charging the Battery).
- Disconnect the battery, clean it and apply grease to the terminals.
- In addition, follow the battery manufacturer's instructions.
- Spray all exposed electrical contacts with a suitable contact spray.



WARNING

Charge every month: Charge the battery.
 Battery powered Reach Trucks: The battery must be charged at regular intervals to avoid depletion of the battery through self-discharge. The sulfuration would destroy the battery.

8.4.2 RESTORING THE REACH TRUCK TO OPERATION AFTER DECOMMISSIONING

- Thoroughly clean the Reach Truck.
- Lubricate the Reach Truck in accordance with the maintenance schedule (See 8.3.2 Lubrication Schedule).
- Clean the battery, grease the terminals and connect the battery.
- Charge the battery (See 7.3 Charging the Battery).
- Check hydraulic oil for condensed water and replace if necessary.
- Start up the Reach Truck (see 6.2 Operate and Run the Reach Truck).

If there are switching problems in the electrical system, apply contact spray to the exposed contacts and remove any oxide layers on the contacts of the operating controls by applying them repeatedly.

Perform several brake tests immediately after re-commissioning the Reach Truck.

8.5 SAFETY CHECKS TO BE PERFORMED AT REGULAR INTERVALS AND FOLLOWING ANY UNUSUAL INCIDENTS

Carry out a safety check in accordance with national regulations. EP has a special safety department with trained personnel to carry out such checks. The Reach Truck must be inspected at least annually (refer to national regulations) or after any unusual event by a qualified inspector. The inspector shall assess the condition of the Reach Truck from purely a safety viewpoint, without regard to operational or economic circumstances. The inspector shall be sufficiently instructed and experienced to be able to assess the condition of the Reach Truck and the effectiveness of the safety mechanisms based on the technical regulations and principles governing the inspection of Reach Trucks.

A thorough test of the Reach Truck must be undertaken with regard to its technical condition from a safety aspect. The Reach Truck must also be examined for damage caused by possible improper use. A test report shall be provided. The test results must be kept for at least the next two inspections.

The owner is responsible for ensuring that faults are immediately rectified.

A test plate is attached to the Reach Truck as proof that it has passed the safety inspection. This plate indicates the due date for the next inspection.

8.6 FINAL DE-COMMISSIONING, DISPOSAL

Final, proper decommissioning or disposal of the Reach Truck must be performed in accordance with the regulations of the country of application. In particular, regulations governing the disposal of batteries, fuels and electronic and electrical systems must be observed.

6.0 TROUBLESHOOTING

This chapter is designed to help the user identify and rectify basic faults or the results of incorrect operation. When locating a fault, proceed in the order shown in the table.

FAULT	POSSIBLE CAUSE	ACTION
Reach truck does not start	<ul style="list-style-type: none"> • Key switch in “OFF” position • Battery charge too low • Faulty fuse • Reach Truck in charge mode 	<ul style="list-style-type: none"> • Set key switch to “I” • Check battery charge, charge battery if necessary • Test fuses • Interrupt charging
Load cannot be lifted	<ul style="list-style-type: none"> • Hydraulic oil level too low • Excessive load 	<ul style="list-style-type: none"> • Check the hydraulic oil level • Note maximum capacity (see data plate)

If the fault cannot be rectified after carrying out the remedial procedure, notify the manufacturer's service department ,as any further troubleshooting can only be performed by specially trained and qualified service personnel.

NOTES

NOTES

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