

USER MANUAL

HG E1000

SUPER SKUB



HG E1000



**100%
ELECTRIC**

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Introduction

The HG E1000 is built for professional use in demanding urban environments. The high-quality dumper is user and service friendly and has been well known for its longevity since 1970. It is especially popular for city worksites among rental companies, landscapers, contractors and demolition companies. The HG dumper has complete safety measures that ensure the highest safety standards for users while being able to load 1000 kg.

Find out more at:

www.hg-machines.com

- Lithium battery technology
- Very low noise level
- Reduced environmental impact
- High quality and low service costs
- 12 hour run time, more than a full day's work
- Fast charging – 20 to 80% battery charge in 90 min.

Manufacturer

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HG Bulk movement
made easy.

1. Safety instructions

1.1 Read the manual

Read the manual carefully and make sure that other potential users of the machine read it as well. If the user is unaware of certain details about the machine, this could lead to hazards.

If one of the warning labels is loose, worn or damaged so that the symbol is illegible, the label must be replaced.

WARNING!

Next to a text in the manual highlights a risk of injury if users do not follow the instructions

WARNING!

Hot parts

Do not touch the electric motor during operation or when the motor has just stopped. Hot parts can cause severe burns.

WARNING!

Electric shock

We recommend the use of qualified service staff/workshop for servicing or troubleshooting, as there is a risk of electric shock. Electric shock can cause fire damage, death and/or long-term injuries.

Manuals, parts lists and instructional videos can be found at www.hg-machines.com.

WARNING!

Danger of crushing

Avoid contact with moving machine parts. This applies to both fingers and clothing, as this can lead to mutilation.

WARNING!

Danger

When servicing and parking the machine, the motor must be switched off, the ignition key removed and the main switch turned off. At HG, we always recommend qualified staff/workshops for servicing and troubleshooting.

At HG, we always recommend authorized personnel/workshop for servicing and troubleshooting.

1.2 Education

Read the instructions carefully. You should be familiar with all controls, switches, etc. and how to use the equipment correctly.

To use the motor barrow, the operator must be over 18 years of age and have normal mental condition and mobility. Relevant legislation may mandate a different age limit for operators of the motor barrow in specific situations.

Remember that the operator is responsible for any accidents or hazardous situations that may occur involving other people or their property.

The operator should be given adequate instructions for using the motor barrow. These instructions should focus on:

- The need to be careful and focused when working with self-propelled machines.
- The fact that the operator must have a good overview of what is happening in front of/behind the vehicle - especially where other people may be present.

1.3 The most common causes of accidents are

- Lack of overview.

- The operator's knowledge of the vehicle is insufficient.
- Overly steep terrain conditions.
- Insufficiently stable terrain.
- The vehicle being used in conditions with insufficient space.

1.4 Preparation

- Be sure not to wear loose clothing when driving.
- Ensure that the machine is adequately charged. HG does not recommend driving with less than 15% battery capacity.
- Ensure that the machine holds sufficient hydraulic oil for the tipping function.
- Top up hydraulic oil if required, before activating the main switch and ignition key to ON position. Never remove the hydraulic tank cap or top up the hydraulic oil while the motor is running or hot.
- In case of spilling hydraulic oil, do not attempt to turn on the machine until the hydraulic oil spilled on the machine has been removed. Hydraulic oil can create very slippery surfaces and can thus increase the risk of accidents while driving.

- If you get hydraulic oil on your skin, you should wash your skin thoroughly with soap. If irritation persists, consult a physician.
- Ingestion of hydraulic oil is potentially fatal.

1.5 Noise and vibration level

Noise level

According to ISO 6396, the max. energy equivalent sound pressure level is 71 dB (A) at the operator location, measured during tipping with an empty skip and at maximum motor speed.

According to ISO 6396, the highest energy equivalent sound pressure level is 70 dB (A) at the operator location, measured during simulated operating conditions between driving and tipping.

The uncertainty of the above measurements is ± 2 dB.

HG recommends the use of hearing protection, even if the noise is below the statutory limit.

Vibration level

According to ISO 1032, the maximum weighted arm/hand vibration level at the operator location, measured at empty skip tipping and maximum motor speed, is:

$ahv = 5.0 \text{ m/s}^2$.

According to ISO 1032, the maximum weighted arm/hand vibration level at the operator location at simulated operating conditions between driving and tipping is measured at:

$ahv = 3.0 \text{ m/s}^2$.

The uncertainty of the above measurements is $\pm 25\%$.

1.6 Operation

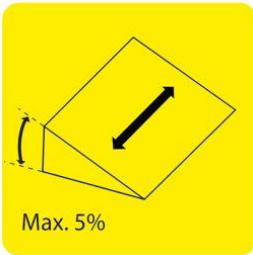
WARNING!

Failure to observe the following operating instructions may result in injury:

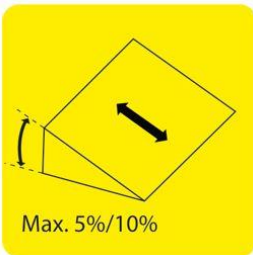
- When driving indoors, make sure you observe the rules and instructions in force on site.
- Do not use the machine in places with flammable dust or explosive gases.
- As far as possible, only use the motor barrow in daylight or in good artificial lighting.



Do not use the motor barrow with insufficient ceiling height.



Do not drive on slopes exceeding **5% (4,5 degrees)**



Do not drive across slopes exceeding: **10°** (10 degrees) on hard surfaces such as concrete and asphalt. **5°** (4,5 degrees) on compacted ground such as gravel and grass.

- In case of overturning, let go of the machine and keep your distance. Never try to hold onto the machine.
- Be aware that the driving characteristics of the motor barrow change significantly between an empty and a full skip, as the center of gravity of the motor barrow is higher when the skip is full.



Do not drive and unload close to excavations and unstable edges.

- Unloading of frozen loads or highly adhesive materials such as clay must not be performed by tipping, as the machine may tip over.
- Driving on soft, loose and uneven surfaces is prohibited, as the operator may be exposed to inappropriate loads on the body when operating the machine.
- When leaving the motor barrow, remove the ignition key and turn off the main switch.
- Always turn off the ignition and main switch before carrying out any service or repair works.
- Always turn off the ignition and main switch before charging the machine.
- Do not touch the motor or other electrical parts when the machine is on and/or running.
- The machine may only be used for transporting materials.



When reversing, the operator must pay special attention to uneven surfaces and objects that the operator may fall over or drive into.



The operator must be aware of persons in the area so that they are not crushed under the truck bed when it is being lowered.

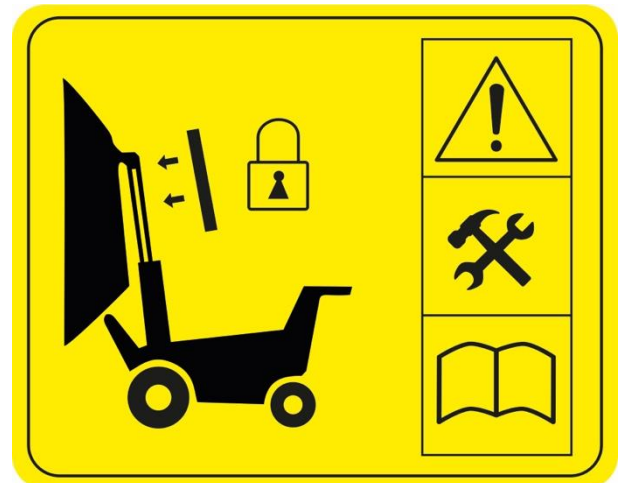
- The area around the machine must be kept tidy to avoid accidents caused by falling.

1.7 Maintenance

Each time the machine is used, visual inspection and inspection must be performed to ensure:

- That there are no leaks in the hydraulic system by hoses, tank etc.
- That there are no worn or damaged cables.
- That bolts, nuts, etc. are properly tightened.
- That the radiator grille and radiator fins on the motor are free of dirt.
- That no hydraulic oil has been spilled on or around the machine.

- That the motor barrow is stationary when the propulsion lever is not activated.
- That the safety plate activates forward movement when activated.
- That the tires have the correct pressure and are lubricated.
- That the battery pack is not defective or has loose plug connections.



WARNING! Always fit the safety bracket of the tipping cylinder before starting the inspection work.

1.8 Transport & Towing

In order for the machine to be towed without the motor being started, the release button on the right side below the control panel must be activated. The traction wheels are released and the machine can be moved. See pos. 10



NOTE: The release handle must always be pushed up during normal operation, as the brake is otherwise disengaged

When lifting the machine, the three attachment points on the front and on the instrument panel must be used. Attachment must be sufficiently stable and executed in such a way that

detachment cannot take place.



Lifting of the machine may **ONLY** be done with an empty container.

NEVER use the control handle, safety plates or anything else around the instrument panel to clamp the machine.

The image may differ depending on the model type.



The machine may only be transported with means of transport with sufficient ground clearance, as there is a risk of serious injury to the operator/damage to the machine and means of transport.

During transportation, the machine must be attached to the load surface or cargo hold in accordance with relevant regulations.

1.9 Disposal & Dismantling

When, many years from now, the motor barrow is worn out and has to be disposed of, HG Machines will perform the dismantling by agreement, as this should take place in an environmentally sound manner. During dismantling, the machine parts are sorted according to type of material: in other words, steel separately, rubber seals separately etc. The various types of material are then disposed of in accordance with relevant current legislation.

2. Charging and Storage

2.1 Charging

- 1) Switch off the machine at the main switch, see figure pos. 11.



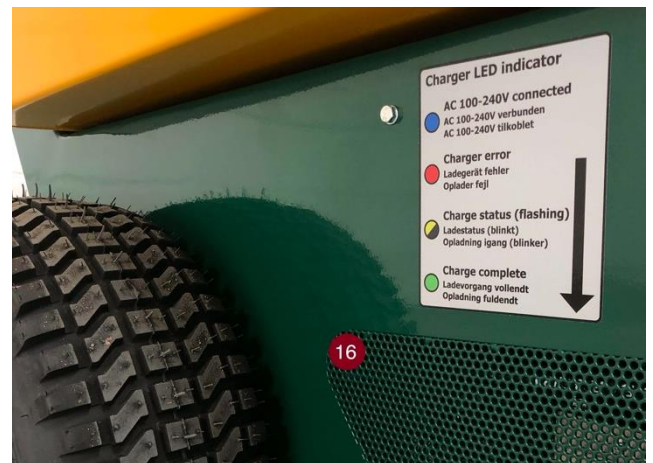
- 2) The charging plug is found behind the door on the left side of the machine seen from the direction of travel. See figure pos. 13.



- 3) Connect the plug to the mains, see figure pos. 15.



- 4) Check that the machine is charging the battery. On the right side of the machine, seen from the direction of travel, a pictogram is mounted which describes the charger's various indicator lamp states. At the bottom of the pictogram there is an arrow, below the arrow and through the ventilation holes on the side of the machine you can see the indicator lights on the charger. During charging, the yellow lamp on the charger will flash. See figure item 16.



- 5) When the machine is fully charged, the green lamp on the charger will light up steadily. Then remove the plug from the mains and roll the charging cable around the hangers on the battery door. Then close the door, see pos. 13.

6) When the machine has been inspected as described under "safety" and "precautions before start-up", it is ready for operation.

2.2 Storage

In conditions where a machine is to be stored without operation for a longer period, HG recommends that the machine's battery pack be placed in "storage mode" and with a minimum of 40% power on the battery pack.

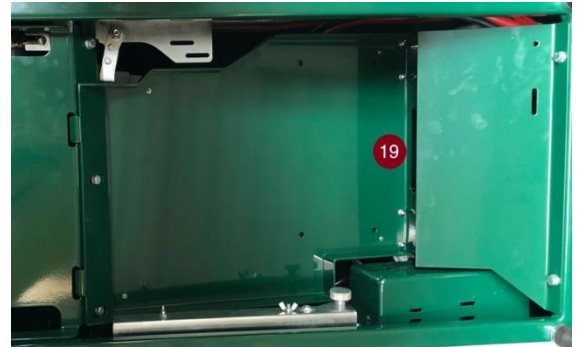
If the machine does not have at least 40% power on the battery pack at the time of the recommendation, it must be charged to this or above. The current power level can be read on the battery indicator mounted in the instrument panel. See figure item 6.



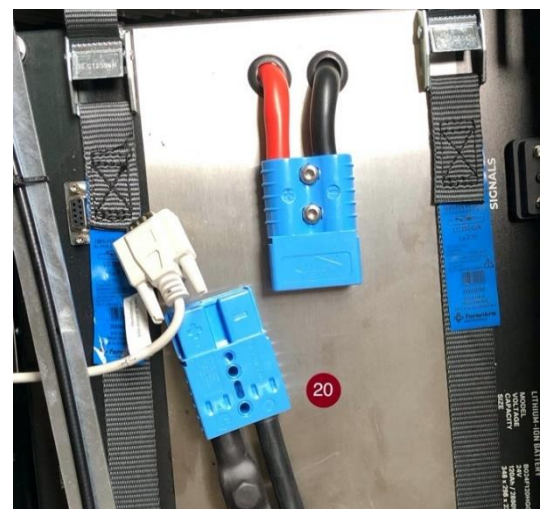
When the machine's battery pack has reached a current level of at least 40, the container load must be tipped up.



The top plate is then removed the battery compartment by lifting in the elongated hole. The plate is held in place by magnets. See figure pos. 19



The blue connector on the battery, which consists of two counterparts, is pulled apart. The gray COM connector must also be removed. See figure pos. 20. When the two blue counterparts and the COM connector are separated, the top plate for the battery compartment can be fitted again and the container can be rotated into place.



The machine is now ready for storage and will automatically go into "storage mode" as it will not register any discharge. In "storage mode" the battery pack will only consume 1-2% of operation ready level mode. However, the battery must be inspected every 2.5 months and recharged to a minimum of 40%. If the machine in use or the battery pack is to be recharged, follow the same procedure as above, where the blue connector consisting of two halves and the COM connector, instead of being separated, are instead assembled.

This is a programming plug. See pos. 21.



3. Functions

3.1 Instrument panel



1. Control handle for tipping the skip. Press up to tip, and down to lower the truck bed.
2. Emergency stop. If the emergency stop is pressed, the machine and all its functions will stop immediately. To activate the machine again after pressing the emergency stop, the emergency stop must be rotated ¼ turn clockwise, then the machine can be activated again.
3. Signal horn. When the horn is pressed, it emits a loud noise. The horn is used, for example, to prevent or avert hazardous situations.
4. Emergency stop/safety plate. Activating the plate activates forward movement so the operator does not risk getting trapped.
5. Control lever for reversing. The handle is pulled up towards the handlebar. The higher up the lever is pulled, the higher the speed.
6. Battery indicator. Shows a snapshot of the power level of the machine battery pack.
7. Control lever for forward travel. The handle is pulled up towards the handlebar. The higher up the lever is pulled, the higher the speed.
8. Key start ON/OFF - when OFF the machine is turned off; when the key is turned to ON, the machine is turned on.
9. Activation button. Pressing the button activates the machine. A green light

indicates that the machine is activated and the timer function has started. If the machine is not operated for 5 minutes, the machine will shut down and the button must be activated again for driving to take place (the timer is not active when driving the machine).

3.2 The machine's functional units

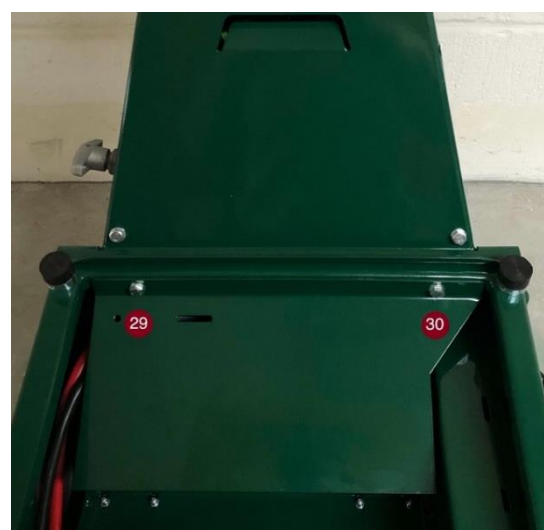
Release. If the release lever is pushed down, the electric motor is disengaged and the machine can be pushed. If the lever is pushed up, the electric motor is engaged and the machine can be operated via the control levers. See figure pos.10



Main switch seen in switched off position. When using the machine the main switch is rotated 90° clockwise. HG recommends using the turned-off position when the machine is not used for a longer period, e.g. at the end of the working day. See figure pos. 11



Filling the hydraulics. Remove the plate using the two screws and add hydraulic oil to the plastic tank. See figure pos. 29, 30 and 31.

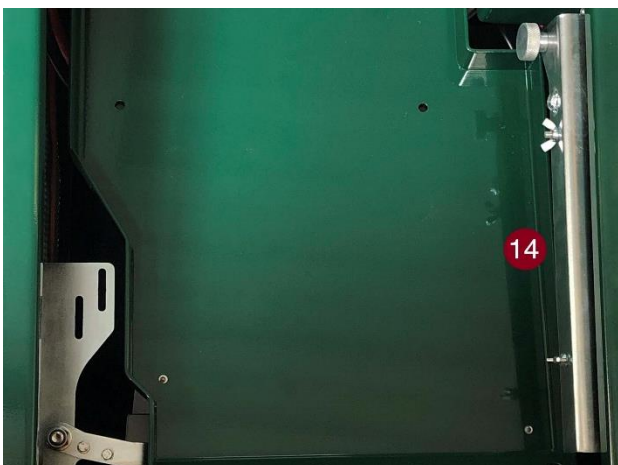




For charging, the charging connection is located behind the door. The charger can be connected to 16-30A group 220V . The plug is of the type is of the type 16A 2P+E Male type F. See figure pos. 13.



Tip protection for the container's hydraulic cylinder. The tipping protection is mounted on the cylinder's stick during service or other inspection where the container must be tipped up. See figure pos. 14.



4. Precautions before starting

Visual inspection of the machine. Make sure that the machine and all warning pictograms are intact.

Make sure the control panel buttons and handles are intact.



Tip the skip up and install the tip-locking device on the cylinder rod.



Remove the top plate for the battery compartment and visually inspect the battery packs and make sure that they are tightened so that they cannot move during driving. Tighten the battery stops if necessary. After inspection, the base plate is installed, the tip-locking device is removed and the skip is closed.

4.1 Tyre pressure and tension

To achieve optimal ergonomic conditions, all tyres must have the correct air pressure.

- Driving wheels: 53 psi/3,7 bar
- Steering wheels: 67 psi/4,6 bar.



Tighten wheels once a week.

Tightening torque: 100 Nm



Safety plate test

The safety plate must activate forward travel upon impact, so that the operator is not pinched in connection with reversing/reversing.

NOTE: Before the test is started, a free space of at least 15 meters must be ensured all the way around the machine.

Start the machine and test the plate. In order to simulate a possible pinching during reverse/reversing, the safety plate is pressed in quietly, the machine must start moving forward, the more the plate is pressed in, the faster it runs.

The machine must not be used if it does not move forward when pressed on the plate.

The system must be undamaged and able to move effortlessly.

5. Driving

Turn the main switch to the closed position. The battery pack is now connected to the machine's components.



Turn the ignition key to the ON position, the battery status indicator should now light up.

Press the activation button (now lights up green) and the machine is now active.



Check via the battery status that the machine is sufficiently charged. HG does not recommend driving with current below 10%, as this can damage and shorten the life of the batteries.



Place both hands on the handlebars so that the fingers can reach the propulsion lever. The machine moves forward by pulling up on the right side of the handle, and stops when releasing. If the left side of the handle is pulled up, the machine reverses.

NOTE: Reversing requires careful rearward orientation before starting the movement.

The direction is controlled by pulling the handlebar to the right or left during movement. Do not try to control the direction while the machine is stationary, as this will be hard on the body.

WARNING! When the forward and reverse movement handles are released, the machine must stop without delay and stand completely still. If the machine creeps slightly, **it must be immediately removed from operation** and the fault must be rectified.

The load is tipped by pushing the tipping lever up with the left hand, while still keeping the right hand on the handlebar. The speed is determined by the handle: the further it is pushed up, the faster the movement.

Before lowering the load, the operator must look around to ensure that no persons are within the range of motion of the machine. The truck bed is lowered by pressing the tipping lever down with the left hand while keeping the right hand on the handlebar. Wait until the truck bed is fully down and place both hands on the handlebar before activating forward motion.

WARNING! In case of overturning, let go of the machine and move away. Never try to hold onto the machine.

Before the operator leaves the machine, the skip must be down, the throttle fully pushed up and the motor turned off using the key switch. If the machine is completely abandoned, the key must be removed from the machine.

6. Towing and side tipping the container

In the event of maintenance, service, engine failure, hydraulic failure or power failure.

The freewheel lever is used to disengage the driving wheels so that the motor barrow can be moved with the motor off. Push down the handle

to disengage. Push up the lever to engage the motor again.



WARNING! The machine's parking brake does not work when the machine is turned off and in the disengaged state. Place a suitable object on both sides of the wheels when leaving the machine. HG does not recommend leaving the machine in the disengaged state.

In case of motor failure, the skip can be tipped up manually. This task requires two people.

There must be one person on each side of the handlebar of the machine, with their front foot in front of the steering wheels. The tipping handle is now pushed up while the truck bed is pushed up.



One person now holds the load up, while the other person mounts the safety bracket on the hydraulic cylinder.

WARNING! There is now a vacuum in the cylinder. Activate the tipping lever with the machine on to refill before removing the safety bracket.

7. Maintenance

Activity		D
Inspection	Hydraulic oil level	1
	Battery capacity	1
	Air in tyres	1
	Safety plate functionality	1
	Leaks	1
	Wires	1
	Emergency stop	1
	Machine functions	1
	Warning signs	1
	Freewheel handle	1
	Bolts and nuts are tight	1
Adjustment	Release	1
	Safety plate	1
Lubrication	Pendulum suspension	1
	Wheels	1
Retightening	Wheels	1
Cleaning	Cooling and air intake grille	1
	Dirt and other materials under the tipping bed	1
Replacement	Hydraulics filter	1
	Hydraulic oil	1
	Warning signs as needed	1

First = To be replaced when the machine has run for 20 hours.

Components must be inspected according to the supplier's recommendations. Hedensted Gruppen prescribes a major service inspection of the machine at least once per year, performed by a qualified service technician. Safety features such as the release and safety plate must be inspected every three months. All maintenance must be performed by a qualified mechanic, service technician or similar.

7.1 Maintenance Points

Safety bracket

Before starting maintenance work, the safety bracket must be installed on the tipping cylinder. Loosen the two thumb screws and remove the bracket from the inside of the machine. Remove the large thumb screw and unfold the bracket. Place it over the piston rod of the cylinder and screw in the thumb screw as a lock.



Turn off the machine

Turn the ignition key to OFF



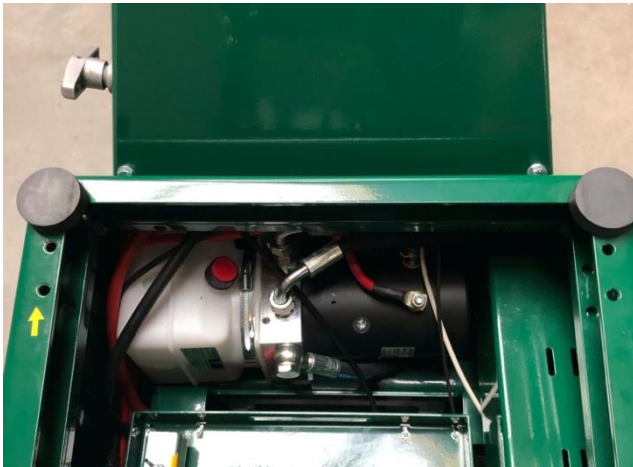
The main switch is turned to the position shown to cut off the power from the battery pack to the other electrical components of the machine.



Filling hydraulic oil

Remove the plate via the two screws.





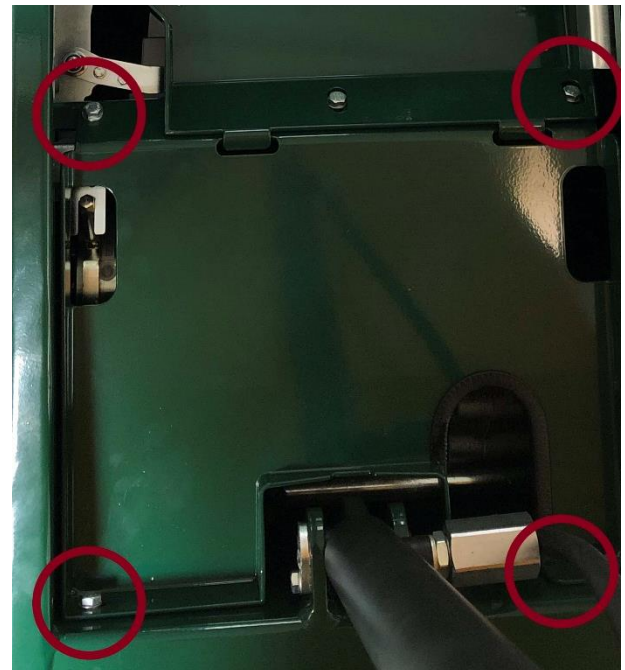
Remove the lid on the plastic container and fill with oil type Q8 Handel 46 with a clean oil jug until the container is $\frac{3}{4}$ filled. Screw the lid onto the plastic container and refit the plate with the screws.

Cleaning the battery compartment



Remove the top plate for the battery compartment and empty the compartment of foreign bodies such as sand, soil etc. If necessary, use an industrial vacuum with a plastic suction attachment (**NOT METAL or other conductive material**). Avoid contact with the battery terminals.

Cleaning the motor compartment



Remove the top plate for the battery compartment, then remove the top plate for the motor compartment using the 5 screws shown as above, then clean the motor compartment in the same way as the battery compartment.

Lubrication

Ordinary high-pressure grease can be used for lubrication.



There are grease nipples on:

- ◆ Steering wheel suspension, rocker axle
- ◆ Steering wheel, pivot shaft
- ◆ Steering wheel, axle

Air pressure in tyres

To achieve optimal ergonomic conditions, all tyres must have the correct air pressure:

Driving wheels: 53 psi/3,7 bar

Steering wheels: 67 psi/4,6 bar.



Retensioning of wheels

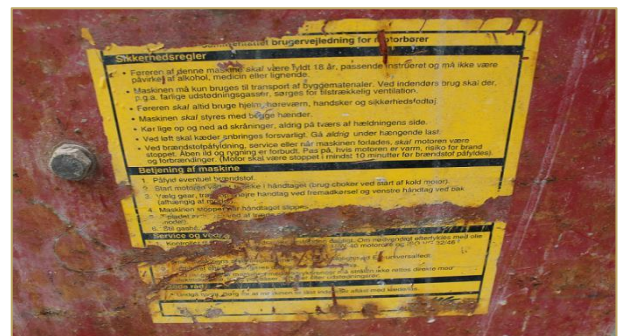
Tighten wheels once a week.

Tightening torque: 100 Nm.



Replacement of signs

Warning and control signs must be replaced if they are difficult to read. Warning signs and pictograms must be fully intact and legible.



Safety plate

In the event of an impact, the safety plate must activate forward travel so that the operator is not crushed in connection with reversing. When the machine has moved away from the operator, it must stop again. In addition to the mechanical safety, the machine has an electronic switch installed under the safety plate to ensure that the machine moves forward for 3 seconds.

Safety plate adjustment

Loosen the two lock nuts with a 13 mm wrench. Remove the locking pin from one of the angle joints and remove the head from the ball. Now turn the angle head in or out as required.

Fit the angle head and split pin, and tighten the locknut. Check that plate, pipe pins, bolts and nuts holding shafts and connections are undamaged.

Adjust the electronic switch under the safety plate so that the arm on the switch clicks/is activated just before the safety plate reaches vertical.

Test with your thigh that the machine moves forward when the plate is activated. The machine must run before your thigh touches the round handlebar.



8. FAQ

Error	Possible cause	Possible cause
The machine will not start	The machine is not turned on or lacks power.	Check main switch, ignition key, activation button is lit green and battery indicator.
The machine will not pull	Release is activated.	Push the release lever up.
The machine is heavy to control	The air pressure in the steering wheel tires is too low.	Inflate tires to maximum pressure.
The container does not tip up	The tipping handle is distorted	Adjust the handle
The container does not tip down	The hose valve activates when the platform is lowered.	Hose valve defective.
The hydraulic system is not working	The centrifugal clutch is worn.	Change the blades in the centrifugal clutch.
The machine does not drive straight.	The steering wheel or suspension is damaged and steers unevenly.	Replace the wheel or suspension.

9. Hydraulic diagram and electrical diagram

Contact HG for diagram.

10. Technical specifications

Specifications	
Width	850 mm
Length	2050 mm
Height	980 mm
Net weight	376 kg
Content in liters	400 L
Contents in kg	1000 kg
Chute height	60 cm
Driving speed, forward	0-6 km/t
Driving speed, reverse	0-3 km/t
Battery	
Litium	120 Ah
Tension	24V
Driving time	12 hours
Charger	
Plug	230V plug standard EU
0-100% charging time	3.5 hours
20-80% charging time	90 minutes
Integrated charger	22 kW
Motor	
Electric	Asynchronous three-phase electric motor 24V – 96V
Performance	2000 W
Moment	14 Nm
Other things	
Leave function	Hydraulic tip with three-way manual valve. Tip cylinder, double acting
Hydraulic tank :	2.5 liters Handel 46
Driving wheels	TR360 18 x 7 - 8
Fork wheels	4.00-4
Sound pressure:	$L_{pa, eq} = 71 \text{ dB(A) max}$ $L_{pa, eq} = 70 \text{ dB(A) simulated operation.}$
Vibrations	Weighted arm/hand level - 5 m/s ² max. Weighted arm/hand level 3 m/s ² simulated operation.

11. Warranty provisions

Warranty period

HG Denmark APS provides a guarantee for 12 months. The warranty period begins on the date of delivery.

The warranty includes

Components that must be replaced or repaired due to material or manufacturing defects.

The warranty does not cover wear and consumable parts such as:

Tires and hydraulic oil

The manufacturer's warranty expires if

The machine is used incorrectly.

The machine is used without following the instruction manual and the safety regulations.

The machine is not maintained according to the instructions or outdated spare parts are used.

The machine is used after a fault has been detected, so this results in a more expensive repair than the original fault.

When converting or connecting other electrical parts.

The owner's own insurance should cover

Fire, burglary, theft and vandalism.

Water and frost damage.

Damage caused by wind and weather.

The manufacturer's warranty does not apply in these cases

The manufacturer's approval of a claim for compensation requires that the defective part is shown to the manufacturer or its representative within two weeks after the damage has occurred. Owner rights to the damaged part(s) are transferred to the supplier of the new parts.

According to the warranty only replaces components. It therefore does not cover

Shipping costs.

Costs related to waiting time, machine owner working time and travel costs.

Operating losses and other subsequent costs.

Other things

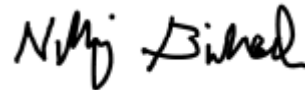
Prior to repair under warranty, the manufacturer must be contacted to agree the procedure. If the repair has been initiated or completed, it is too late to claim the warranty.

These warranty provisions can only be changed through a separate agreement.

12. EU declaration of conformity

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Hedensted, 15. Februar 2023



Nikolaj Birkerod
Adm. Direktør

Hereby declares that:

Super Skub model E1000 Type number 280200
Super Skub model E1000 Type number 280205
Super Skub model E1000 Type number 280210

Complies with:

Machinery Directive 2006/42/EC
EMC Directive 2014/30/EU
Directive on machines for outdoor use -
2000/14/EC

Using the following harmonized standards:

DS EN ISO 12100:2011
DS EN ISO 13857:2019