



Clemas & Co Ltd

Industrial Cleaning Equipment
Sales - Hire - Service

1010 Sweeper Operation & Maintenance Manual



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Security Warnings

ALWAYS KEEP THE MACHINE OUT OF THE REACH OF CHILDREN.

IMPORTANT: [Clemas & Co Ltd](#) CANNOT be held responsible for damage in the event that the machine is used for purposes other than those it was designed for use.

The machine CANNOT and MUST NOT be dragged.

The machine MUST NEVER be tampered with for any reason whatsoever; in this event, [Clemas & Co Ltd](#) will accept no responsibility for improper use or damage to the machine.

The machine must be used only by qualified and authorised personnel.

For this purpose, **NEVER:**

- Use the machine to transport people;
- Touch the moving parts of the machine;
- Remove the machine's guards when it is running;
- Leave the operating machine unattended.

If you are working in a particularly dusty environment (for instance; cement factories, sawmills, marble processing factories), it is recommended to wear:

- A mask
- Protective goggles
- Gloves

NEVER LEAVE the machine with the key in the dashboard unattended.

ATTENTION: The machine has got a presence device that allows the starting up if the operator is in correct working position. The device stops the machine in the case that the operator gets up from the seat.

Do not use a jet of water in order to wash the machine.

The machine must not be used for the sucking of the toxic substances.

It is forbidden to use the machine on surfaces sloping more than 12%.

Only use the machine in the presence of light.

In case the machine is being used in a place where there's a danger of falling objects, a helmet must be worn by the operator.

Do not use the machine near to or to sweep up cables, straps, wire or similar material.

Do not start the machine with the accelerator pressed down. It could jolt forward and cause damage to people and/or things.

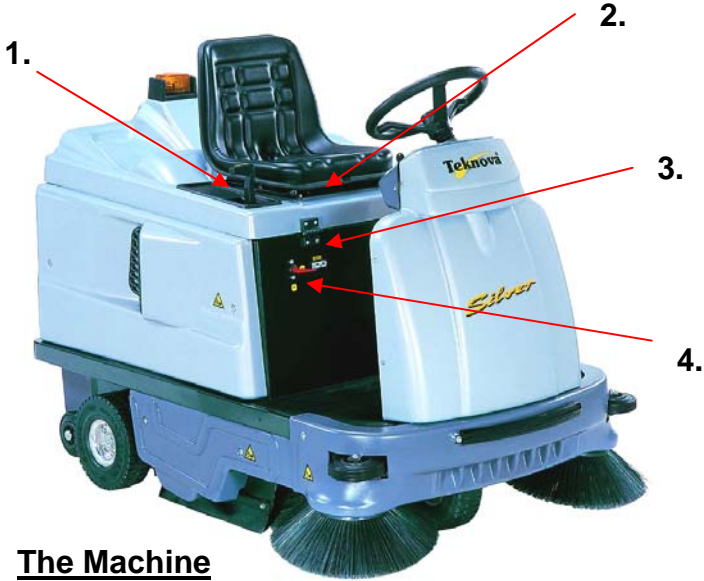
Utilization Field

The machine, composed of a brush and a suction system, is to be used **EXCLUSIVELY** to clean dry surfaces. Any other use could cause damage to people or things and is therefore **PROHIBITED**.

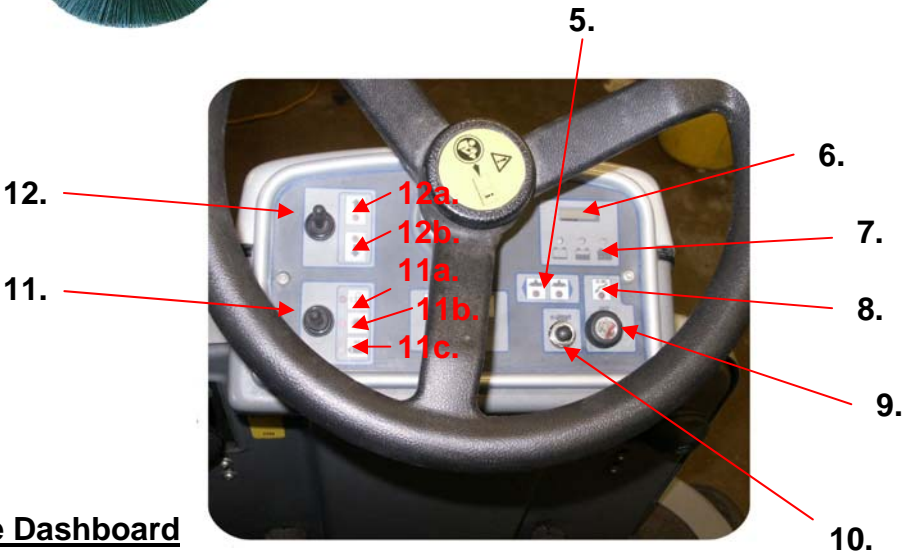
Foreword

The purpose of this manual is to inform the operator of the basic rules, safety regulations and criteria which must be observed when using, adjusting and maintaining the machine. The machine has been developed and manufactured to ensure excellent performance and ease of operation in a variety of working conditions. The machine has been checked at the factory and by us to make sure it is handed over to you in perfect working order. To maintain the machine in this condition and ensure problem free operation, it is essential to follow the routine maintenance instructions in this handbook.

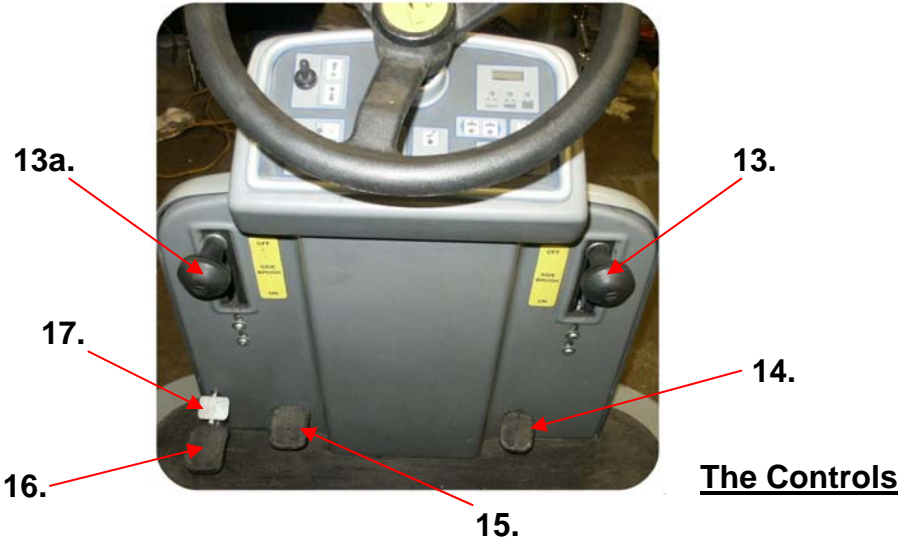
The main components of the 1010 sweeper



The Machine



The Dashboard



The Controls

PRACTICAL GUIDE FOR THE USER

CONTROLS – DESCRIPTION

With reference to pictures on previous page.

1. **Centre Brush Control Lever:** By pushing the lever back (to ON), the centre brush moves to work position and starts spinning. To stop the brush at the end of work, push the lever back to OFF.
2. **Seat Adjustment Lever:** This lever adjusts the position of the seat in the position best suiting the operator.
3. **Battery Charger Socket:** Connect a battery charger with a capacity of 24V/30A. Do not use chargers with different capacities.
4. **Battery Disabling Key:** If necessary or in hazardous situations, this key disables ALL of the machine's functions by cutting off the power supply. Before using the key to enable the battery again, remember to turn off all of the parts that are on (side brush, centre brush, fan, etc.) and to take your foot off the accelerator pedal in order to prevent the machine from the starting up abruptly and jolting forward.
5. **Indicator Light:** The side brush is working.
6. **Hour Indicator:** This indicates the total number of hours the machine worked.
7. **Indicator Light:** The batteries are being charged, see the routine maintenance section.
8. **Indicator Light:** Power on.
9. **General Key Switch:** This enables or disables all of the machine's functions.
10. **Button To Operate The Horn:** Press this button to operate the horn.
11. **Function Switch:** This switch allows you to select the work functions of the machine. Push the switch forward to turn on the suction motor. Push and hold the switch back to operate the motor vibrator for cleaning the filter.
 - 11a. **Indicator Light:** The suction motor is working.
 - 11b. **Indicator Light:** The centre brush is working.
 - 11c. **Indicator Light:** The filter shaker motor vibrator is working.
12. **Advance Switch:** By operating this switch you operate the direction of the machine.

WARNING: Before operating this switch, remember to take your foot off the accelerator, otherwise the machine will not manage to change direction.

 - 12a. **Indicator Light:** The direction is forward.
 - 12b. **Indicator Light:** The direction is reverse.
13. **Right Side Brush Control Lever:** By pulling and pushing down the side brush lever, the brush moves to work position and starts spinning. To stop the side brush at the end of your work, push the lever back to its initial position.
 - 13a. **Left Side Brush Control Lever:** As above in the double sided brush version.
14. **Accelerator Pedal:** Operate this pedal to regulate the speed of the machine.
15. **Flap Lifting Pedal:** Use the pedal when you are tackling bulky but light wastes. Do not keep the pedal pressed down unless it is strictly necessary.
16. **Service Brake Pedal:** Operate this pedal to stop the machine during operation.
17. **Brake Locking Pedal:** Pressing it with the service brake (16), disables the latter and engages the parking brake. To release the parking brake, press service brake (16) and the brake locking pedal will snap into it's rest position.

PRACTICAL GUIDE FOR THE USER

STARTING THE MACHINE

After checking whether the battery is charged:

1. Make sure all parts of the machine are off (centre brush, side brush, fan).
2. Make sure the battery disabling key is turned **ON**.
3. Turn the general key switch to **ON** (indicator light 8 comes on).
4. By means of the appropriate advance switch, select the direction of the machine. The relevant indicator light will come on.
5. If necessary, release the parking brake with the pedal.
6. Press the accelerator pedal to start the machine and reach the desired speed by means of the pressure of the same.

CORRECT OPERATION

After starting up:

1. Lower the centre brush by pushing the appropriate lever to **ON**.
2. If necessary, lower the side brush by operating the lever.
3. If necessary, start up the suction fan by turning on the switch.
4. If necessary, operate the flap lifting pedal.

The cleaning efficiency of the machine depends on the condition of the filter. Follow all the instructions given in the ***Routine Maintenance Section***.

CLEANING THE WASTE BIN

To empty the rear waste bin operate as follows:

- Release the bin lock
- Pull out the rear bin by grasping it by the appropriate handles.
- With the help of the wheels fitted to the bin, drag it to the disposal area.
- Put the bin back into the machine.
- Fasten the lock again.

NB: If the bin is full it will be rather heavy to handle. Therefore it is wise to entrust this operation to two operators.

ATTENTION: Wastes must be disposed of in accordance to the regulations in force.

INFORMATION

ROUTINE MAINTENANCE

ALL ROUTINE MAINTENANCE AND SPECIAL MAINTENANCE MUST BE CARRIED OUT BY COMPETENT PERSONEL OR BY AN AUTHORISED SERVICE CENTRE. ALWAYS USE ORIGINAL SPARE PARTS . ATTENTION; ALL MAINTENANCE OPERATIONS MUST BE CARRIED OUT WITH THE MACHINE TURNED OFF.

CHECK	On Delivery	Every 10 Hours	Every 50 Hours	Every 100 Hours
The Battery Liquid	■	■		
The Belts For Slackening				■
Adjust The Brake's Cable				■
The Tightness Of Nuts and Screws			■	
The Brushes For Wear			■	
The Gaskets For Wear and Leakages		■		
If All The Functions Are In Working Order	■			■
Grease The Steering Chain Up				■

The life of the battery will depend on its routine maintenance and on its discharge level. Do not allow the battery charge to drop below the limit signalled by indicator light 7.

CHARGE INDICATOR LIGHTS

GREEN LIGHT: The battery is charged:
YELLOW LIGHT: The battery is running out; recharge as soon as possible:
RED LIGHT: The battery has run out. **DO NOT** operate the machine.

Every **200** hours of work, check the state of the motor carbon brushes and replace them if they are worn. Always try to replace them before they reach 1000 hours of work.

BATTERY MAINTENANCE

The battery must be kept clean and dry. Keep the terminals and poles clean. Every 10 hours, remove the caps and check the electrolyte level. If necessary top up with distilled water.

The battery should be serviced in a properly ventilated area.
During this operation, do not expose the battery to naked flames and do not smoke.

The battery has a four hour working life; if you notice that the life of your battery is much shorter than this, check that:

- The brushes are not obstructed
- The battery is completely charged before starting work

BATTERY RECHARGE

When the machine is off:

- Remove the caps from there battery cells.
- Top up with distilled water.
- Connect the battery charger.

INFORMATION

FILTER MAINTENANCE

The filter is a component of primary importance for the correct working of the machine. Regular and correct maintenance will ensure that the machine is constantly functioning properly and working to it's highest standards.

The filter can be cleaned in two ways:

1. The electric filter shaker

This instrument is simple to use and allows you to keep the filter in perfect working order. To operate the shaker, push down the switch 11 and hold it down for a few seconds. Repeat the operation 4 or 5 times. Remember that the cleaner the filter, the better the results. This operation should be carried out after every work cycle.

DUSTY ENVIRONMENTS

If you are using the machine in a particularly dusty environment (warehouses with trucks passing, sawmills, etc.), remember that the filtershaker should be used more frequently.

2. Cleaning the filter manually

In the case in which the cleaning of the filter by the filtershaker wouldn't be effective, and every 20 working hours anyway, proceed with the manual cleaning of the filter.

Before carrying out every operation on the machine, make sure that it is switched off and that all of it's functions are disactivated, to get to this state, move the key switch to the **OFF** position.

- Lift the bonnet where the seat is located
- Slacken the wing nut on the filter box cover
- Remove the cover

Clean the filter blowing with a jet of compressed air directed towards the waste bin, so that any residual falls into the bin.

REPLACING THE FILTER

Every 200 hours of work, the filter must be replaced.

To do so:

- Lift the bonnet where the seat is located
- Slacken the wing nut on the filter box cover
- Remove the cover
- Loosen the 4 locking rings
- Loosen the 4 knobs
- Remove the filter from the filter holder.

After replacing the filter, carry out the above operations in reverse order.

NOTE: When fastening the filter, make sure that filter and gasketts are tightproof.

WARNING: To get rid of the filter, follow strictly the directing laws.

TECHNICAL INFORMATION

TEKNOVA mod. 1010 – Technical Specifications		
Version		
	1010 E (Battery)	1010 S (Petrol)
Maximum Sweeping Capacity		
With 1 and 2 side brushes	3800 – 5600 m ² /h	
Sweeping paths		
With 2 side brushes	1200 mm	
With 1 side brush	900 mm	
Main brush		
Length	700 mm	
Diameter	280 mm	
Type of transmission	Electric motor – 600 W	Hydraulic motor
Pressure adjustment	Mechanical adjustment	
Material (standard)	Polypropylene	
Brush replacement	Without the use of tools	
Side Brush/es		
Diameter	400 mm	
Rotation speed	100 rpm	
Type of transmission	Electric motor – 90 Watt	Hydraulic motor
Pressure adjustment	Mechanical adjustment	
Material (standard)	Polypropylene	
Brush replacement	Without the use of tools	
Dust Flap For Large Debris		
Debris passage height	60 mm	
Operator command	Pedal positioned on left hand side	
Waste Hopper		
Volume	65 litre	
Type of dumping system	Manual	
Dust Vacuum		
Air flow	350 m ³ /h	
Type of fan transmission	Electric motor 180 Watt	From the combustion engine by a belt
Dust Filter		
Type	Panel filter	
Filtering grade	5 micron	
Filter surface	4 m ²	
Filter replacement	Without the use of tools	
Filter Shaker		
Self cleaning system	Electric filter shaker by switch placed on the dashboard	
Motor power	Electric motor – 90 Watt	
Combustion Engine		
Manufacturer and model	-	Honda GX 160
Capacity	-	163 cc
Maximum power	-	4 kW (5,5 Hp)
Cooling system	-	Air
Fuel tank capacity	-	3,6 litre
Running time	-	4h
Oil alert system	-	Automatic engine stop in case of low oil level

TEKNOVA mod. 1010 – Technical Specifications Continued

Version		
	1010 E (Battery)	1010 S (Petrol)
Battery Supply		
Maximum battery capacity	240 Ah	45 Ah
Battery number X Voltage	4 X 6 Volt	1 X 12 Volt
Maximum running time	3,5 h	-
Electrical System		
Voltage	24 Volt	12 Volt
Circuit protection	Protection system on all motors	
Front lights	Car type	
Traction		
Type of transmission	Motor with reduction gear and rear differential	Hydraulic motor
Motor power	400 Watt	-
Maximum speed	6,2 Km/h	6,2 Km/h
Maximum climbing capacity	12 %	12 %
Wheels		
Type and diameter – front	1 Superelastic – 250 x 80	
Type and diameter - rear	2 Superelastic – 250 x 80	
Brakes		
Service brake	Drum on front wheel	
Parking brake	Drum on front wheel	
Chassis		
Material and treatment	Fe360 steel – fully coated with eposidic powder paint	
Weight & Dimensions		
Length / width / height	1500 x 920 x 1320 mm	
Empty weight without batteries	336 Kg	
Weight without batteries	350 Kg	
Ergonomics		
Seat	Adjustable	
Traction pedal	Well positioned ergonomically	
Controls	Easily understood	
Safety		
Emergency switch	Easy to reach and stops all functions on the machine	
Total “Auto” stop	If the machine is abandoned, traction and all functions will stop immediately	
Functions “Auto” stop	If the traction pedal is left still for more than 5 sec. all sweeping functions stop	
Beacons	Equipped with one beacon	

Note: These specifications are for guidance only and can change without due notice.