



Clemas & Co Ltd

Industrial Cleaning Equipment
Sales - Hire - Service

510 & 710 ET ST Operation & Maintenance



Units A3 & A4 Northway Trading Estate , Northway Lane,
Tewkesbury, Gloucestershire, GL20 8JH.

Tel: 01684 850777

Fax: 01684 850707

Email: info@clemas.co.uk

Web: www.clemas.co.uk

Security Warnings

ALWAYS KEEP THE MACHINE OUT OF THE REACH OF CHILDREN.

Do not use the machine to soak up liquid.

The machine must be used by authorised personnel only. Before cleaning or servicing the machine always turn it off.

As the machine is not provided with a parking brake or service brake, pay attention when you are using it on sloping surfaces.

Do not leave the machine unattended on sloping surfaces.

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;
- Do not leave the operating machine unattended.

The petrol-powered machine must be used in open and aired places only.

Always wear clothing suiting the kind of work you are carrying out.

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

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

The machine must only be used in presence of light.

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

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 or to sweep up cables, straps, wire or similar material.

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. 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.

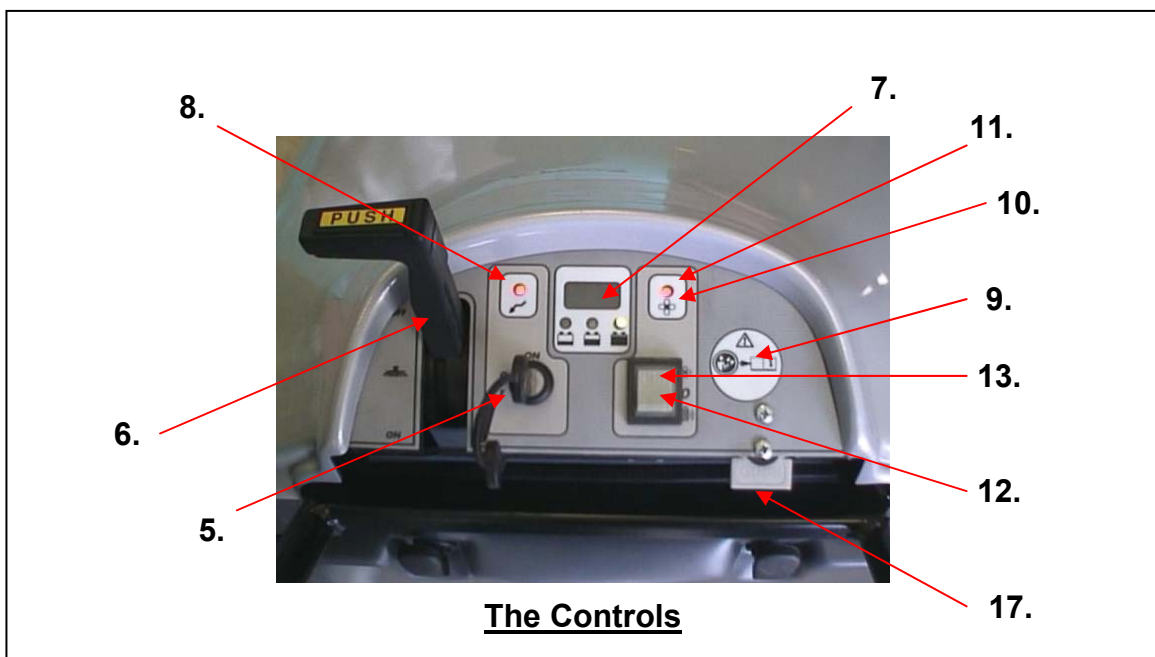
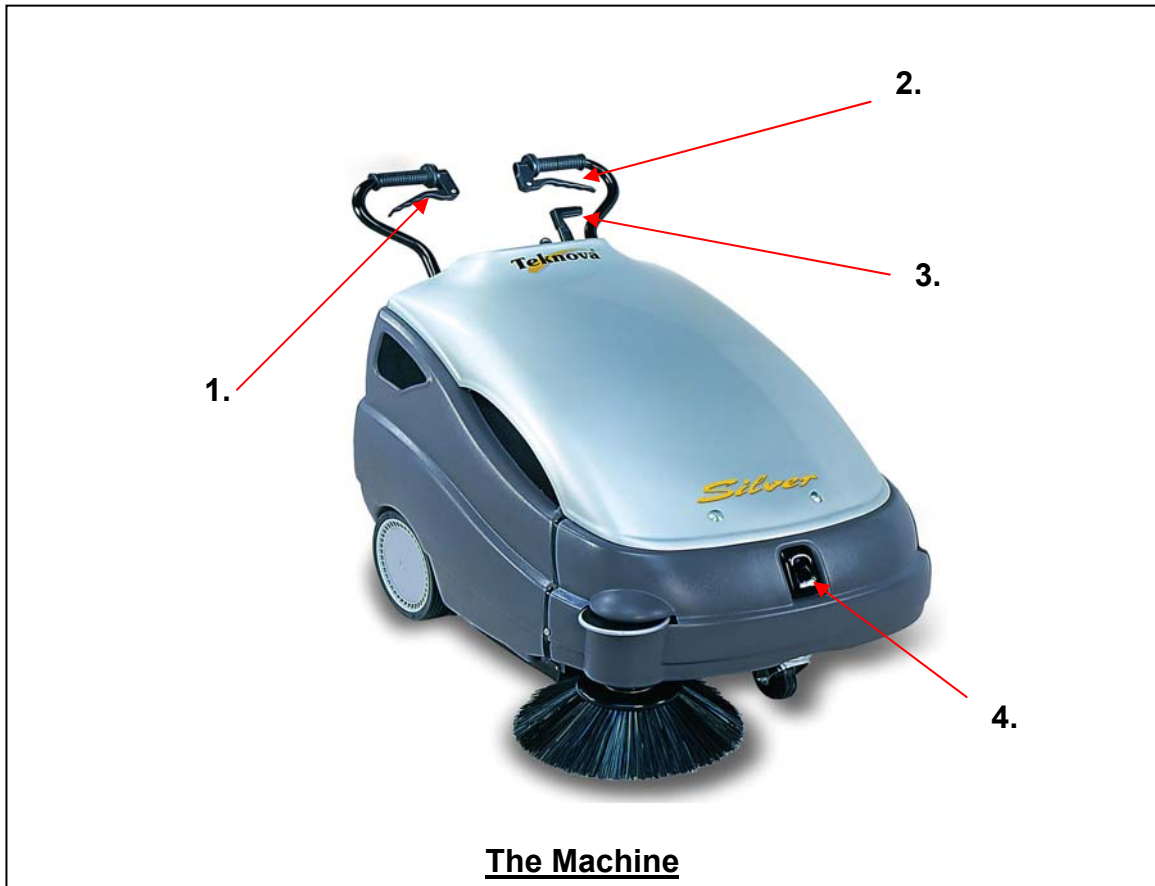
Utilization Field

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 Teknova 510/710 sweeper



PRACTICAL GUIDE FOR THE USER

CONTROLS – DESCRIPTION

With reference to pictures on previous page.

1. **Traction Lever:** By pressing this lever, the machine will start moving forwards. The **Silver 510 E** model isn't provided with any traction device. The machine must be manually pushed during the working phase.
2. **Flap Raise Lever**
3. **Filter Shaker Lever:** This lever operates the filter shaker to clean the filter (see the section on filter maintenance).
4. **Front Hopper Unblocking Lever**
5. **Key Switch:** This switch starts and stops all the machine's functions.
6. **Side Brush Control Lever:** Switch the lever **ON** and the side brush will move to work position and start spinning. To stop the brush, switch the lever to **OFF**.
7. **Charge Indicator Light**
8. **Power Indicator Light**
9. **Knob To Operate The Air Suction Inlet:** This opens or closes the suction valve.
10. **Suction Motor Indicator Light**
11. **Filtershaker Indicator Light**
12. **OPTIONAL: Electric Filtershaker Button**
13. **Suction Switch**
14. **OPTIONAL: Filtershaker Control**
15. **Accelerator Lever:** (on the engine version only): operate this lever to regulate the speed of the machine.
16. **OPTIONAL: Battery charger on board version**
17. **Battery Charger Socket**

STARTING THE MACHINE

ATTENTION! The machine must be used by authorised personnel only. **DO NOT** leave the machine **UNATTENDED** when it is running. Do not use the machine to soak up liquid. Take out the key before leaving the machine. **KEEP THE MACHINE OUT OF THE REACH OF CHILDREN.**

ELECTRICAL VERSION

To start the machine carry out the following operations:

- Make sure the side brush is **OFF**.
- Turn the switch **ON** (No. 5 above).
- Wait 10 seconds before the machine sets off.
- Before the machine sets working, check the charge indicator to assess whether the battery is fully charged. If it is not, proceed to recharge it.
- Pull the traction lever to start cleaning.

If necessary, operate lever, by turning it **ON** to start the side brush. If you have been using the side brush, at the end of your work remember to turn it **OFF**. Switch off the machine and remove the key from the control panel.

An automotive device will prevent you from using the machine beyond a certain battery charge limit. (10.2V) When this limit is reached, the machine will stop and the battery **must be recharged**.

ENGINE VERSION

- Make sure the side brush is **OFF**.
- Ensure that the engine has enough petrol and oil.
- Switch accelerator lever, to **START**.
- Place the key in the **ON** position.
- Open up fuel tap.
- If the engine is cold, operate the choke lever.
- Operate the start handle.

As soon as the engine starts running, shut off the choke lever if it was operated.

Act on the accelerator, to reach the required speed. At the end of your work, if you have been using the side brush **1** turn it **OFF**. Turn the accelerator lever to **START** and turn off the machine with the key. Close the fuel tap.

PRACTICAL GUIDE FOR THE USER

CORRECT OPERATION

After you have become familiar with the instructions required to start the machine, you can actually start using the sweeper to obtain the best results, it is always wise to take a few precautions. These will help you to get the best from your machine and to keep damage to a minimum. In particular:

- Do not use the machine to clean up wires, ropes or straps or soak up water and other liquids. When using the machine on light but bulky material (sheets of paper, leaves, etc.), raise the flap by means of the lever on the left of the handle so that the machine can tackle the rubbish.
- Operate the filter shaker at the end of your work (see the “Panel Filter” section. – Make sure the centre brush is correctly regulated (see the section on adjusting the centre brush).

DANGER: *Petrol is highly flammable. Keep your fuel in containers designated for the purpose. Top up your fuel tank **ONLY** when the engine is off. Do not remove the fuel tank cap when the motor is running or hot. Always fill your fuel tank in open air or in a sufficiently ventilated area. Do not smoke during this operation and do not use naked flames. If you spill fuel during this operation. DO NOT attempt to start the engine but wait for the vapour to evaporate. Always turn off the engine:*

- *Before leaving the machine unattended;*
- *Before filling the fuel tank;*
- *Before carrying out any work on the machine.*

CLEANING THE WASTE BINS

Before carrying out this operation, make sure all parts are off.

(*ATTENTION: WASTES MUST BE DISPOSED OF STRICTLY IN ACCORDANCE TO THE LAW.

FRONT BIN

Lift the locking of the hopper, located on the front casing of the machine.

Lift and turn the two bin locks.

Grasp the handle and pull the bin out of the machine.

Empty the bin (*)

To put the bin back in place.

Insert the hopper into its location, on the frame, and check that it's in the right position.

Re-hook the hopper's locking lever system.

REAR BIN

Lift and turn to 90° the two bin locks.

Grasp the handle and pull the bin out of the machine.

Empty the bin (*).

To put the bin back in place.

Fit the bin back into the machine.

Turn and press the two locks

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				■
The Tightness Of Nuts and Screws			■	
The Brushes For Wear			■	
The Gaskets For Wear and Leakages		■		
If all the functions are in working order	■			■
Check grease in the reduction unit <small>(510ET version Excluded)</small>				■

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.

BATTERY RECHARGE

When the machine is off:

- Remove the caps from there battery cells.
- Top up with distilled water.
- Plug in a battery charger.

The life of the battery will depend on it's routine maintenance and its discharge level. Do not allow the battery charge to drop below the limit signalled by indicator lights. Go to the max. discharge level, the machine stops and needs to be recharged in order to restart work.

BATTERY CHARGER on board

After having lifted the front hopper of the machine, connect the battery charger to the feeding. (Check the tension).

A safety device stops the machine from starting during the recharging operation.

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.
ONLY 710 ET: 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.

INFORMATION

FILTER MAINTENANCE

Cleaning The Filter

The filter is one of the machine's main components. It is essential for the best results from your machine. If you notice that dust forms when the machine is at work, check the filter.

The filter is cleaned as follows:

SWITCH OFF THE SUCTION BEFORE STARTING THE OPERATION

A – Press and release the lever of the appropriate filter shaker. The lever operates a rod that will unclog the filter. Repeat this operation 5 or 6 times.

Electric Version Model – OPTIONAL

By means of the button, the electric filtershaker is activated.

For the filter cleaning keep the button pressed for roughly 5 seconds. Repeat the operation 3 to 4 times.

Petrol Version Model – OPTIONAL

By means of the command, the filter shaker is activated.

For the filter cleaning keep command for roughly 5 seconds. Repeat the operation 3 to 4 times.

B – Apart from the filter shaker, it is advisable every now and again to remove the machine's filter and clean it out with a blast of air or a vacuum cleaner.

For this purpose, the filter is removed as follows:

- Remove the rear bin
- Lift the blocking handle
- Rotate the handle, in order to remove the filter.
- Remove the filter while holding up the filter shaker rod.
- To remount the filter, carry out the operation in reverse order.
- **ATTENTION:** The filter features an arrow that shows you the direction in which it should be fitted.

DUSTY ENVIRONMENTS

If you are using the machine in a particularly dusty environment (cement factories, sawmills, marble processing factories), it is wise to use the filter shaker more frequently.

REPLACING THE FILTER

Every 200 hours of work, the filter must be replaced. Follow the operations listed in point B.

After the filter has been remounted, make sure the gasket and filter are dust tight.

WASTES MUST BE DISPOSED OF IN ACCORDANCE TO THE LAW.

TECHNICAL INFORMATION

TEKNOVA mod. Silver 510 – Technical Specifications

Version		
	510 ET (Battery)	510 ST (Petrol)
Maximum Sweeping Capacity		
With side brush	2500 m ² /h	
Sweeping paths		
With side brush	670 mm	
Main brush		
Length	500 mm	
Diameter	240 mm	
Type of transmission	Belt from the 360 Watt electric motor	Belt from the Honda motor gearbox
Pressure adjustment	Mechanical adjustment	
Material (standard)	Polypropylene	
Brush replacement	With the use of tools	
Side Brush/es		
Diameter	380 mm	
Rotation speed	135 rpm	
Type of transmission	Belt	
Pressure adjustment	-	
Material (standard)	Polypropylene	
Brush replacement	With use of tools	
Dust Flap For Large Debris		
Debris passage height	25 mm	
Operator command	Lever on the left hand side	
Waste Hopper		
Volume	35 litre	
Type of dumping system	Manual	
Dust Vacuum		
Air flow	200 m ³ /h	
Type of fan transmission	Electric motor	Fan on the Honda motor shaft
Dust Filter		
Type	Panel filter	
Filtering grade	5 micron	
Filter surface	1,9 m ²	
Filter replacement	Without the use of tools	
Filter Shaker (Option)		
Self cleaning system	Electric filter shaker by switch placed on the dashboard	
Motor power	Electric motor – 90 Watt	
Battery Supply		
Maximum battery capacity	140 Ah	45 Ah
Battery number x voltage	1 x 12 Volt	1 x 12 Volt
Maximum running time	4 h	-

TEKNOVA mod. Silver 510 – Technical Specifications Continued

Version		
	510 ET (Battery)	510 ST (Petrol)

Combustion Engine		
Manufacturer and model	-	Honda GX 100
Capacity	-	97 cc
Maximum power	-	2,5 Hp
Cooling system	-	Air
Fuel tank capacity	-	1,4 litre
Oil alert system	-	Automatic engine stop in case of low oil level
Electrical System		
Voltage	12 Volt	
Circuit protection	Protection system on all motors	
Traction		
Type of transmission	Belt from the reduction gear	Belt from the Honda motor
Motor power	130 Watt	-
Maximum speed	5 Km/h	5 Km/h
Wheels		
Type and diameter – front	100	
Type and diameter - rear	250	
Brakes		
Parking brake	Pedal on the rear	
Chassis		
Material and treatment	Fe360 steel – fully coated with eposidic powder paint	
Weight & Dimensions		
Length / width / height	120 x 72 x 92 mm	
Weight without batteries	75 Kg	78 Kg
Without batteries (Empty tank)	63 Kg.	63 Kg.
With batteries (Empty tank)	-	112 Kg.
Ergonomics		
Flap lifting lever	Well positioned ergonomically on the handle	
Traction lever	Well positioned ergonomically on the handle	
Controls	Easily understood	
Safety		
Emergency key switch	Easy to reach and stops all functions on the machine	
Major Accessories Upon Request		
Filter shaker	√	
No marker rubber	√	

TECHNICAL INFORMATION

TEKNOVA mod. Silver 710 – Technical Specifications

Version		
	710 ET (Battery)	710 ST (Petrol)
Maximum Sweeping Capacity		
With side brush	3500 m ² /h	
Sweeping paths		
With side brush	860 mm	
Main brush		
Length	690 mm	
Diameter	240 mm	
Type of transmission	Belt from the 400 Watt electric motor	Belt from the Honda motor gearbox
Pressure adjustment	Mechanical adjustment	
Material (standard)	Polypropylene	
Brush replacement	With the use of tools	
Side Brush/es		
Diameter	380 mm	
Rotation speed	135 rpm	
Type of transmission	Belt	
Pressure adjustment	-	
Material (standard)	Polypropylene	
Brush replacement	With use of tools	
Dust Flap For Large Debris		
Debris passage height	25 mm	
Operator command	Lever on the left hand side	
Waste Hopper		
Volume	50 litre	
Type of dumping system	Manual	
Dust Vacuum		
Air flow	200 m ³ /h	
Type of fan transmission	Electric motor	Fan on the Honda motor shaft
Dust Filter		
Type	Panel filter	
Filtering grade	5 micron	
Filter surface	1,9 m ²	
Filter replacement	Without the use of tools	
Filter Shaker (Option)		
Self cleaning system	Electric filter shaker by switch placed on the dashboard	
Motor power	Electric motor – 90 Watt	
Battery Supply		
Maximum battery capacity	140 Ah	45 Ah
Battery number X Voltage	1 x 12 Volt	1 x 12 Volt
Maximum running time	4 h	-

TEKNOVA mod. Silver 710 – Technical Specifications Continued

Version		
	710 ET (Battery)	710 ST (Petrol)

Combustion Engine		
Manufacturer and model	-	Honda GX 100
Capacity	-	97 cc
Maximum power	-	2,5 Hp
Cooling system	-	Air
Fuel tank capacity	-	1,4 litre
Oil alert system	-	Automatic engine stop in case of low oil level
Electrical System		
Voltage	12 Volt	
Circuit protection	Protection system on all motors	
Traction		
Type of transmission	Belt from the reduction gear	Belt from the Honda motor
Motor power	130 Watt	-
Maximum speed	5 Km/h	5 Km/h
Wheels		
Type and diameter – front	100	
Type and diameter - rear	250	
Brakes		
Parking brake	Pedal on the rear	
Chassis		
Material and treatment	Fe360 steel – fully coated with eposidic powder paint	
Weight & Dimensions		
Length / width / height	120 x 92 x 92 mm	
Weight without batteries	96 Kg	99 Kg
Ergonomics		
Flap lifting lever	Well positioned ergonomically on the handle	
Traction lever	Well positioned ergonomically on the handle	
Controls	Easily understood	
Safety		
Emergency key switch	Easy to reach and stops all functions on the machine	
Major Accessories Upon Request		
Filter shaker	√	
No marker rubber	√	

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