# **Owner Instructions**

Warning! Read instructions before using the machine





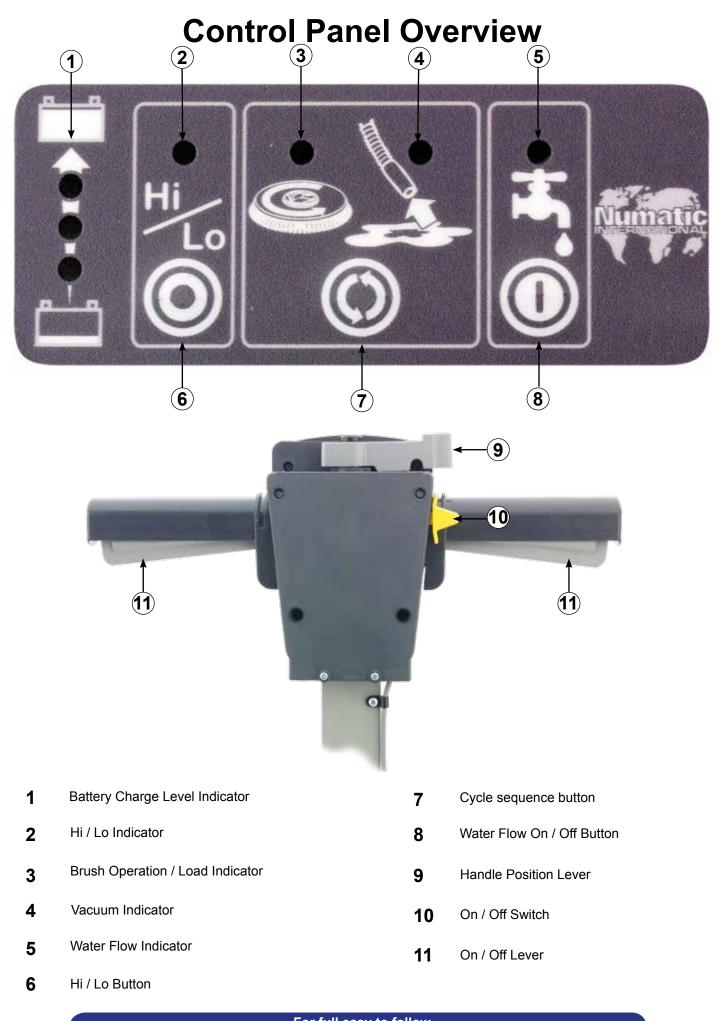
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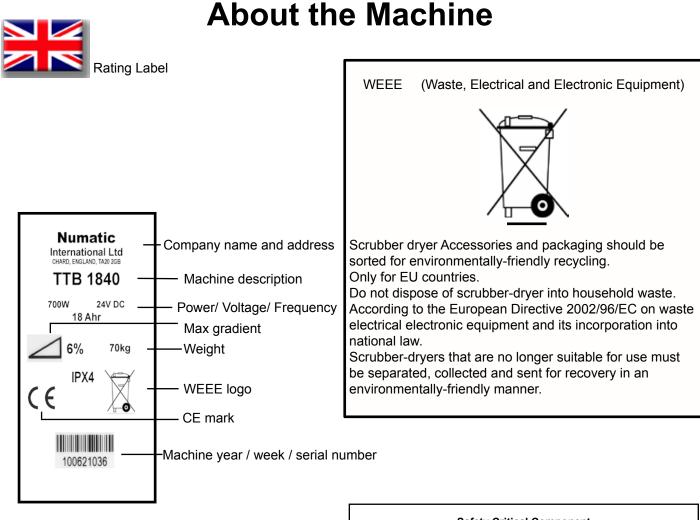


- 1. Operator control panel (see page 4)
- 2. On / Off Lever
- 3. Waste-water tank
- 4. Clean-water tank
- 5. Brush deck
- 6. Squeegee blades
- 7. Floor-tool retaining knobs
- 8. Clean-water On / Off tap
- 9. Clean-water emptying cap
- 10. Rear moving wheels
- 11. Floor-tool vacuum hose

- 12. Vacuum hose
- 13. Separator
- 14. Clean-water filler cap
- 15. Clean-water level indicator
- 16. Clean-water tank fill point
- 17. On / Off switch
- 18. Battery connector
- 19. Top tank (waste water) drainage hose
- 20. Battery
- 21. Spare / replacement battery



For full easy to follow Instructions on control panel set up and use, see machine operation set-up page 14.



#### Safety Critical Component

Charging Lead: H05VV-F x 1.0 mm<sup>2</sup> x 3 core

Battery Charger: 100 - 240 Volt (50-60 Hz)

PPE

(Personal protective equipment) that may be required for certain operations).







## Information for Scrubber Dryer

Component	Interval	Inspect for		
Charging Lead	Lead DAILY Scuffing, cracks, splits, conductors			
Brushes	Brushes DAILY Bristle damage, wear, d			
Squeegee Blade	BEFORE EACH USE	Wear, cracks, splits		
Filters	Filters BEFORE EACH USE Clogging and de			
Tanks	AFTER EACH USE	Rinse dirty water tank after use		

#### CAUTION:

Read the instruction manual before using the appliance. This product meets the requirements of IEC 60335-2-72

#### WARNING:

As with all electrical equipment care and attention must be exercised at all times during its use, in addition to ensuring that routine and preventative maintenance is carried out periodically in order to ensure its safe operation. Failure to carry out maintenance as necessary, including the replacement of parts to the correct standard could render this equipment unsafe and the manufacturer can accept no responsibility or liability in this respect. When ordering spare parts always quote the Model Number / Serial Number specified on the Rating Plate. Warning: do not use on slopes exceeding 6%.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

#### NOTE:

This machine is also suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices for other than normal housekeeping purposes.

#### CAUTION:

This machine is not suitable for picking-up hazardous dust.

Do not use on surfaces having a gradient exceeding that marked on the appliance.

The machine is not to be stored outdoors in wet conditions.

This machine is for indoor use only.

#### DO'S AND DON'TS:

DO ensure only competent persons unpack/assemble the machine.

DO keep your machine clean.

DO keep your brushes in good condition.

DO replace any worn or damaged parts immediately.

DO regularly examine the power cord for damage, such as cracking or ageing. If damage is found, replace the cord before further use.

DO only replace the power cord with the correct Numatic approved replacement parts.

DO ensure that the work area is clear of obstructions and / or people.

DO ensure that the working area is well illuminated.

DO pre-sweep the area to be cleaned.

DON'T use steam cleaners or pressure washers to clean the machine or use in the rain.

DON'T attempt machine maintenance or cleaning unless the power plug has been removed from the supply outlet.

DON'T allow any inexperienced repairs. Call the experts.

DON'T strain cable or try to unplug by pulling on cable.

DON'T leave the brush pad on the machine when not in use.

DON'T allow the machine to be used by inexperienced or unauthorised operators or without appropriate training.

DON'T use the machine without the solution tanks properly positioned on the machine, as shown in the instructions. DON'T expect the machine to provide trouble-free, reliable operation unless maintained correctly.

DON'T lift or pull the machine by any of the operating triggers, use the main handle.

DON'T remove the handle from the machine except for service and repair.

WARNING:

Only use brushes provided with the appliance or those specified in the instruction manual.

The use of other brushes may impair safety.

A full range of brushes and accessories are available for this product.

Only use brushes or pads which are suitable for the correct operation of the machine for the specific task being performed.

When detergents or other liquids are used, read the manufacturer's instructions.

It is essential that this equipment is correctly assembled and operated in accordance with current safety regulations. When using the equipment always ensure that all necessary precautions are taken to guarantee the safety of the operator and any other persons who may be affected.

Wear non-slip footwear when scrubbing. Use a respiratory mask in dusty environments.

The machine, while charging, must be positioned so that the mains plug is easily accessible.

When cleaning, servicing or maintaining the machine, replacing parts or converting to another function the power source shall be switched off.

Mains operated machines shall be disconnected by removing the power plug, and battery operated machines shall be disconnected by removing the isolating pin (Battery pack).

Machines left unattended shall be secured against unintentional movement.

Operators shall be adequately instructed as to the correct use of the machine.

If this product does not have a factory installed Numatic battery charger and batteries then it is the responsibility of the owner and user of the product to ensure that the charging system and battery combination are compatible, fit for purpose and safe to use.

#### PRECAUTIONS WHEN WORKING WITH BATTERIES

1. Always wear protective clothing e.g. face visor, gloves and overalls when working with batteries.

2. Whenever possible always use a properly designated and well-ventilated area for charging. Do not smoke or bring naked flames into the charging area.

3. Remove any metallic items from hands, wrists and neck i.e. rings, chains etc. before working on a battery.

- 4. Never rest tools or metallic objects on top of the battery.
- 5. When charging is complete disconnect from the mains supply.
- 6. The batteries must be removed from the machine before it is scrapped.
- 7. The machine must be disconnected from the supply when removing the battery.
- 8. The batteries are to be disposed of safely and in accordance with the battery directive.
- 9. Only use genuine NUMATIC replacement batteries.
- 10. Do not allow the batteries to become fully discharged; it may not be possible to recharge them.
- 11.Do not allow one battery to be discharged separately to the other.
- 12.Do not mix batteries from different machines.

13. The batteries fitted to this product are Valve Regulated Lead Acid (VRLA) gel electrolyte type. The fitting of any other type of battery may cause a safety hazard.

#### BATTERY CARE

1. Always recharge the batteries after use. This can be done at any time it is not necessary to wait until they are fully discharged; they do not develop a "memory".

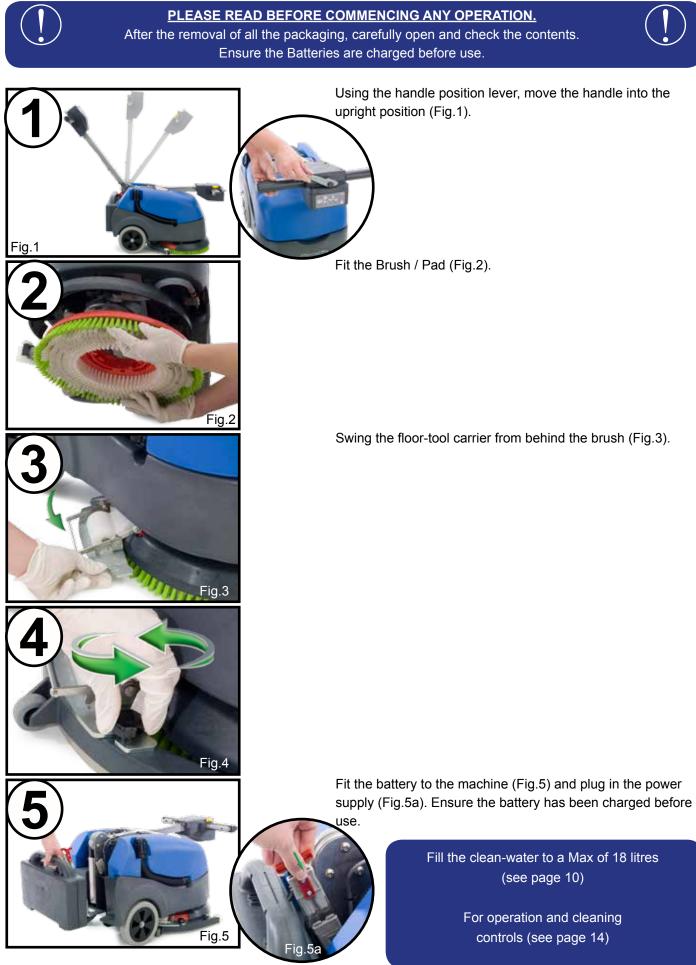
2. Leaving the charger to operate for a minimum of 4 hours after the green light has come on, at least weekly, will prolong battery life.

3. Do not store the machine with the batteries discharged.





# **Quick Set-Up Guide**



#### ALWAYS ENSURE THAT THE BATTERY IS DISCONNECTED BEFORE MAKING ANY ADJUSTMENTS



#### Fitting the brushes

Featuring the Nulock brush system.

The brush is simply pushed and twisted to lock, making fitting and removal a simple process.

Only use manufacturer supplied brushes.

This machine requires a 400mm brush or a 360mm pad.



Slide the brush / pad under the brush deck (Fig.6).

Fit the brush / pad onto the Nulock drive chuck, twist to lock the brush / pad in place (Fig.7).

Safety gloves are recommended for the changing of used brushes.

## Fitting the Floor Tool

The floor-tool has been designed for quick fitting, allowing easy squeegee blade replacement and a safety knock-off feature if the floor-tool gets snagged, whilst in transit.



Swing the floor-tool carrier to the side of the machine (Fig.8).

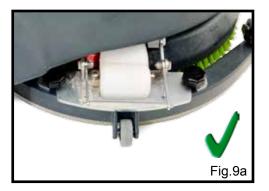
Note:

It is easier to fit the floor-tool if the weight of the machine is resting on the brush. Ensure the brush is fitted first.



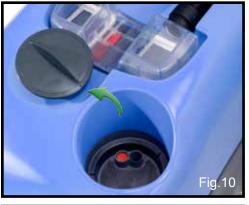
Secure to the carrier using the two knobs fitted to the floor-tool carrier (Fig.9) - (Fig.9a).

Do not over tighten the retaining knobs.



## Filling the clean-water tank

The TTB 1840 is equipped with a large 18 litre clean-water tank allowing large areas to be cleaning in a single fill.



To fill the clean-water tank, remove the filler cap (Fig.10).



Fill using a hose, bucket or a suitable container (Fig.11).

#### Note:

Great care must be taken to ensure that contaminants (leaves,hair, dirt, etc) are not allowed to enter the clean-water tank during the filling process.

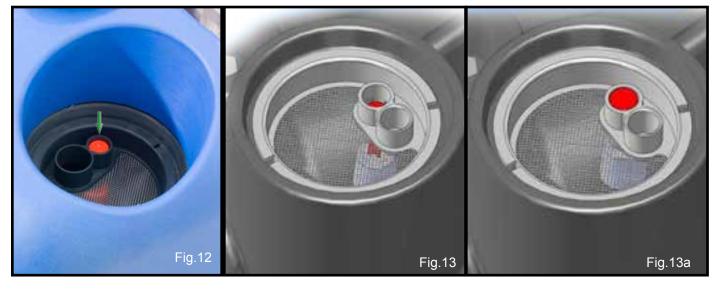
If using a bucket or similar, ensure it is always clean and free from debris.

#### Fill Level Indicator

Fill the clean-water tank to a maximum of 18 litres, including cleaning chemicals if required.

Follow chemical manufacturing guide lines.

This allows the machine to be tipped back and moved without spillage (see page 12).



Use the fill indicator (Fig.12) Showing the clean-water tank empty (Fig.13)

Showing the clean-water tank full (Fig.13a)



WHEN HANDLING AND MIXING CHEMICALS

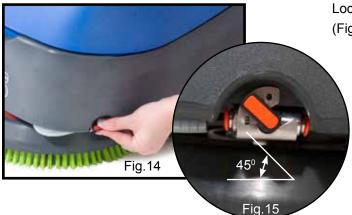
Always ensure that chemical manufacturers safety guidelines are followed. Only use chemicals recommended for use in auto scrubber-dryers.

## Control of Substances Hazardous to Health (COSHH)

For best results use a non-foaming type of chemical, dilute to the manufacturers specification. For further guidance on hazardous substances refer to health and safety instructions online. Visit http://www.hse.gov.uk/ for UK information.







Located on the left of the machine is the On / Off water tap (Fig.14).

Ideally set the tap to 45° this enables the cleaning solution to last the same time as a fully-charged battery (Fig.15).



<u>Important</u>

Do not operate machine unless the Operator Manual has been read and fully understood.

#### Pre-cleaning advice

Before performing the cleaning operation, place out appropriate warning signs and sweep or dust-mop the floor (Fig.16).



Numatic part (629044) Wet Floor sign (available if required)

## Moving the machine



<u>Caution</u>: <u>When moving or lifting the TTB 1840, follow the national safety guidelines on lifting.</u>



# Fig.17







When the bottom tank (clean water) is full the machine can be tilted to a maximum of  $45^{\circ}$  (Fig.17).

When the top tank (waste water) is full the machine can be tilted to a maximum of  $10^{\circ}$  for transporting to dumping area (Fig.18).

Transport the machine by tilting back on to the main transit wheels (Fig.19).

Weight of empty machine (Fig.20).

Without the battery pack:- 38.5Kg (85 lbs).

Battery pack weight:- 13.5Kg (30 lbs).

Complete machine :- 52Kg (115 lbs)



<u>Caution</u> Ensure both tanks are empty and the battery has been removed before attempting to lift the machine.



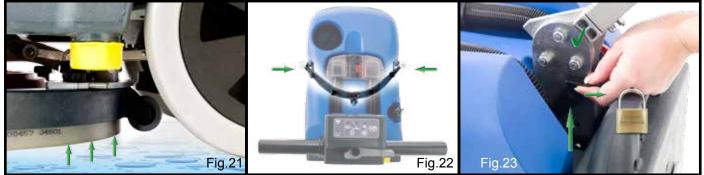
# **Machine Operation**

#### Pre-scrub mode

The TTB-1840 has been designed to cope with a variety of floor types and different levels of soiling.

On heavily soiled floors use a 'double scrub' technique.

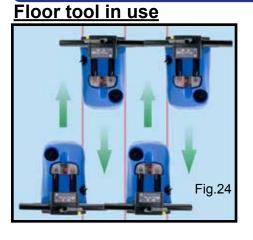
First pre-scrub the floor with the floor-tool in the raised position (Fig.21), allow the chemical time to work, then scrub the area a second time with the floor-tool lowered.



To raise the floor-tool, ensure the floor-tool carrier is central to the machine (Fig.22).

Lift the lever near the base of the handle and lock into position (Fig.23).

#### Note: The lever moves upward and backward motion to lock the floortool in the raised position.



The clean water / chemical mix is dispersed via the

'THRU-FEED' system.

The waste water is then retrieved by the floor-tool (see page 9).

Overlap the scrubbing path by 10cm to ensure an even clean (Fig.24).



If streaking occurs, wipe the floor-tool blades clean (Fig.25).

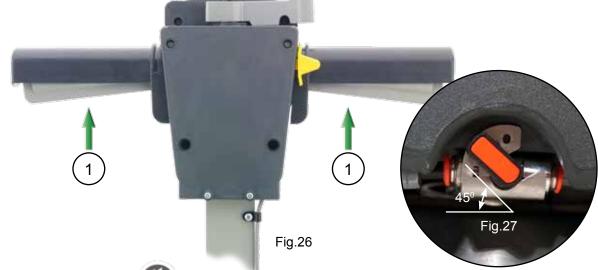
Note: Care must be taken to reduce speed when cornering or when manoeuvring around obstacles.

#### Hi - Lo Setting



The TTB 1840 provides a choice of both Hi - Lo speeds.

## Setting the cleaning controls



To activate the control panel: press the

cycle button or press a trigger (Fig.26).



To start: hold down either trigger and press the yellow start button once (Fig.26).

Whilst the brush motor is running press the tap On / OFF button for fluid control (Fig.27a), the clean tank tap must be open.

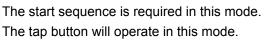
Ideally set the tap to 45° (Fig.27) this enables the cleaning solution to last the same time as a fully-charged battery .



When the triggers are released the brush motor and the cleaning solution pump will switch off, the vacuum motor will continue for 10 seconds.



e cycle button to operate the brush only



Press the cycle button again to get vacuum only. The start button and triggers are not required in this mode. (Fig.27c).

Press the cycle button to switch this mode off and return to default mode.

The panel if unused will automatically turn off after 60 seconds.

## Brush overload.

The brush LED light will flash if the brush motor has been overloaded (Fig.27d).

Releasing the handle triggers will allow the machine to stop and reset.

If the brush motor keeps overloading consider using a different type of brush. Heavy brush load decreases the available battery run time.



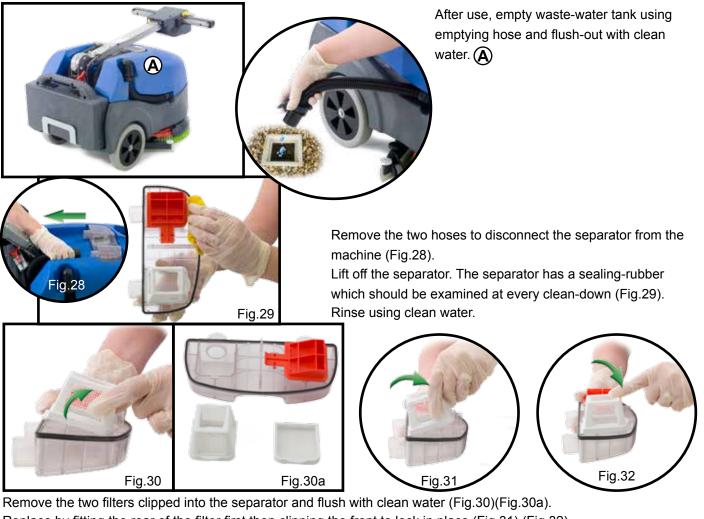


# **Regular Maintenance**

ALWAYS ENSURE THAT THE BATTERY IS DISCONNECTED PRIOR TO ANY MAINTENANCE OPERATION



The TTB 1840 has been designed with ease of use in mind, this included easy stripping-down and cleaning.



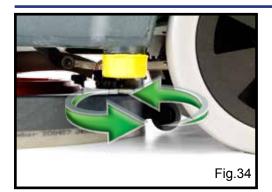
Replace by fitting the rear of the filter first then clipping the front to lock in place (Fig.31) (Fig.32).





Disconnect and remove the battery before proceeding with tank removal (Fig.33).

Once emptied the top waste-water tank can simply be lifted off. (Fig.33a).



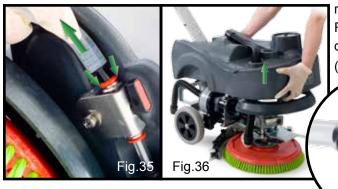
The clean-water tank can be drained via the yellow cap fitted to the left hand side of the machine. The cap has a rubber seal and might require a spanner to remove (Fig.34).

NOTE: Avoid over tightening the clean water draining cap.

# **Regular Maintenance**

Fig 36a

#### Removing the Clean Water Tank



Once the clean-water tank has been emptied, the tank can be removed.

Firstly detach the water feed pipe from the tap, this can be done by pushing the red tap clip in whilst pulling off the pipe. (Fig.35).

The black suction hose from the floor-tool simply pulls off the floor-tool (Fig.36).

Inside the clean water tank is a filter, located below the clean water inlet (Fig.36a)

Clean all hoses and filters by flushing with clean water.

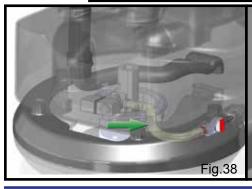
## **Replacing the Clean Water Tank**

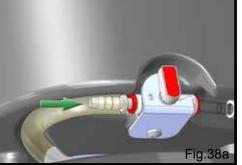


Fit the suction hose to the floor-tool (Fig.37) and pass through the hole in the clean-water tank (Fig.37a).

Place the tank onto the machine base.

**NOTE:** Ensure the water feed pipe locates in the channel moulded into the base of the tank (Fig.38).





The water feed pipe simply pushes onto the tap (Fig.38a).

## **Replacing the Waste Water Tank**





Place the suction hose as shown (Fig.39).

Place the tank onto the machine (Fig.39a).



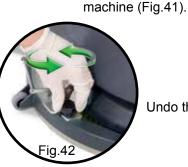
Refit the separator and reconnect the vacuum and suction hose (Fig.40).

# **Changing the Floor Tool Blades**

ALWAYS ENSURE THAT THE BATTERY IS DISCONNECTED PRIOR TO ANY MAINTENANCE







Undo the two floor-tool retaining knobs (Fig.42).

To change the floor-tool, firstly swing the floor-tool clear of the



Unscrew the four knobs securing the blade holder (Fig.43).

Remove the blade holder (Fig.44).

Replace the Squeegee blades using (606261) replacement blade set (Fig.45), fitting the blades on to the moulded location lugs.

## **Refitting the Floor Tool Blades**



(Fig.46)

Refit the blade holder, retain using the two outer knobs

Ensure the slotted blade goes to the front of the floor-tool (Fig.47).

#### Note:

The blades are designed to be reversible, thus extending their useful working life.

Refit the floor-tool using the two central knobs to the floor-tool.

Refer to Page 9 for fitting instructions.

1. Floor-tool main body
2. Blade carrier
3. Rear blade
4. Front blade (slotted)
5. Retaining Knobs x 4
Use Genuine NUMATIC spare parts. use Replacement Blade Set (606261)

# **Battery Care**

## Removing the battery



con The stor

Unplug the battery from the machine using the red connection handle (Fig.48). The battery can then be lifted from the machine for

storage or charging (Fig.49).

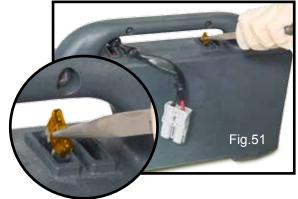
## Removing the battery pack fuse

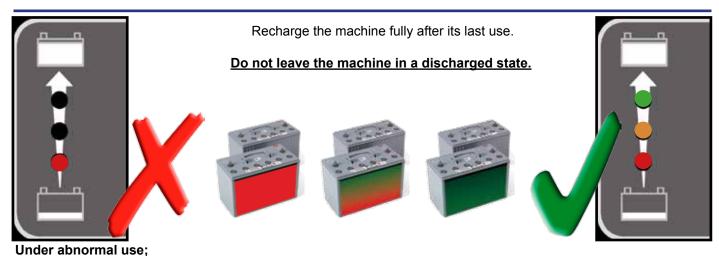
The battery pack comes with a 40 amp safety fuse fitted (Fig.50).

Replace the fuse using (208526) Numatic approved part (Fig.51).









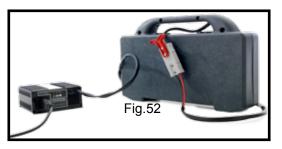
i.e. leaving the machine without charging for a period of time, we advise that you disconnect the battery from the machine.

If the machine will be standing unused for a period of 30 days or more, then batteries must be fully charged.

Batteries should be recharged every three months. Charge fully the day before you start using the machine again.

# Machine Charging

To ensure your machine remains at its maximum efficiency and prolong your battery life, please follow the simple steps below:



#### Under normal daily usage:

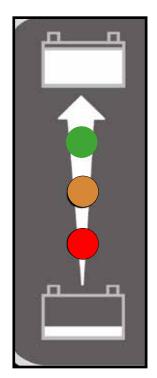
Recharge batteries after each use regardless of machine operation time (Fig.52).

Connect the charger unit to the battery and plug the charger into a suitable power supply (Fig.52a).



The battery charge state is shown by the light sequence on the front of the charger (Fig.53).

	Signal (LED)		Meaning			
		Red LED on	First phase of charge in progress			
	$\bigcirc$	Yellow LED on	Second phase of charge in progress			
		Green LED on	End of charge or maintenance phase Disconnect from power supply Switch power supply, Off then On, to restart the charging cycle			
Fig.53	☀	Red LED flashing	Unsuitable battery or charging malfunction Safety timer exceeded Internal short circuit Disconnect from power supply Switch power supply, Off then On, to restart the charging cycle			
	☀	Yellow LED flashing	Battery not connected			
			INITIAL TEST			
	<u> </u>	Green LED with 2 flashes	Battery charger configured for recharging Gel or			



Red LED with 2 flashes	Battery charger configured for recharging Lead-acid (Wet) traction batteries					
The battery meter displays the charge level of the batteries; when fully charged,						

all meter lights are illuminated (Fig.53).

As the machine is used and the batteries are discharged, the meter lights will go out from top to bottom.

If the battery-charge level is allowed to discharge to the point that only one red light remains illuminated, the operator should either replace or charge the battery.

AGM batteries

The battery supplied for this machine allows for a run time of 45 mins approx (Hi Mode), when fully charged.

The battery pack must be fully discharged and recharged over a few cycles and brushes need to be worn in to achieve maximum efficiency.

Charge time is approximately 6 hours.

Green LED with 2 flashes

Spare replacement batteries are available from your supplier.

See TTB-1840 Spares list for part numbers. The TTB-1840 come with its own stand-alone charger.

Insert the charging lead required for your country into the charger.

Connect the charger to a suitable power supply.

Once mains power is connected the red charging indicator will illuminate. To ensure a full charge, the battery should be left for a period of 6 hrs. Once fully charged, disconnect the charging lead from both the power supply and the machine.

# **Trouble-Shooting**

PROBLEM	CAUSE	SOLUTION		
Machine will not operate	Missing or blown fuses	Fit or replace fuse (page 8)		
	Battery not connected	Connect battery (page 8)		
	Low battery charge	Charge batteries (page 19/21)		
Vacuum will not operate	Vacuum not turned on	Turn on vacuum (page 17)		
Poor water pick-up	Waste-water tank full	Empty waste-water tank (page 17)		
	Clogged / blocked vacuum hose	Remove and clean (page 17)		
	Loose hose connections	Push tight connections (page 17)		
	Debris basket filter clogged / blocked	Remove and clean (page 17)		
	Separator filter clogged / blocked	Remove and clean (page 17)		
	Poor separator seal	Clean and refit (page 17)		
	Damaged separator seal	Renew (contact service dept)		
	Damaged / split vacuum hose	Renew (contact service dept)		
	Damaged floor-tool blades	Renew (contact service dept)		
	Low battery charge	Recharge batteries (page 19 /21)		
No brush / scrub function	No brushes fitted	Check and fit (page 10)		
	Brush overloaded	Reset machine (page 14, Fig.27d)		
Little or no water flow	Clean-water tank empty	Fill clean-water tank (page 11)		
	Clean-water tank filter blocked/ clogged	Remove and clean (page 17)		
	Incorrect water flow setting	Adjust tap as desired (page 14)		
Machine just 'stops' while	To much load on the brush system	Reset the machine and decrease the		
operating		brush load to best suit the floor type		
		(page 14, Fig.27d)		
	Blown fuse in Battery pack	Replace 40 Amp fuse (page 18)		

# **Specifications**

Model TTB-1840

Brush Motor	Vac Motor	Brush Sizes	Pad sizes	Weight	Protection Class	Run Tim per battery	-		Power
400W	24V 300W	400mm	360mm	52 Kg	IPX4	Hi - 35 mi Lo - 45 m	-	2 x 12	V (24V) 18Ahr
Area Performance per battery pack	Fluid Flow (Tap at 45')	Brush / Pad Pressure	Speed	Recharg time	e Cleaning Speed	Hand Arm Vibration	,	Noise	Size
1050m²	0.35 LPM (60 mins)	27.4/ 26.2 g/cm²	Hi-150 rp Lo-130rp	i n nrs	0-4.2Kph	0.6 m/s²		0.3 dB(A) 8.2 dB(A)	850mmx 1132mmx 520mm



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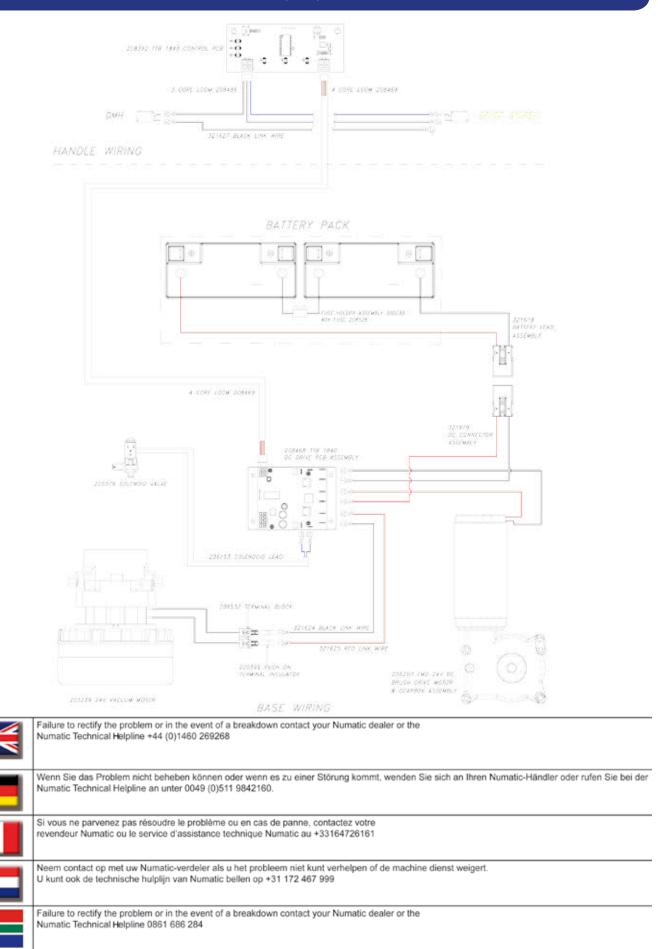
## **Recommended Spare Parts - TTB-1840**

	606105	400mm Scrubbing Brush (MDA-21)			606400	360mm Drive Board Padloc	
606260	TTB-1840 BATTER	Y PACK (BOXED)	606261		TTB-1840 REPLACEMENT BLADE SET		
606266				5	TTB-1840 FILLER CAP ASSEMBLY		
606267	TTB-1840 BATTER	Y & CHARGER PACK (EURC	) 237268	}	FILLER CAP LID		
606268	TTB-1840 BATTERY & CHARGER PACK (SWISS)			2	TTB-1840 SEPERATOR FILTER		
606269	TTB-1840 BATTER	TTB-1840 BATTERY & CHARGER PACK (CSA)			TTB-1840 GRIT BASKET		
606270	TTB-1840 BATTERY & CHARGER PACK (SOUTH AFRICA)			ļ	TTB-1840 SUCT	ION HOSE	
606271	TTB-1840 BATTER	213055	5	TTB-1840 VAC HOSE			
606272	TTB-1840 CHARGE	208471		CONSTANT TENSION CLIP			
606273	TTB-1840 CHARGE	303997	,	TTB-1840 DUMP-HOSE ASSEMBLY			
606274	TTB-1840 CHARGE	208448	}	TANK DRAIN CAP			
606275	TTB-1840 CHARGE	TTB-1840 CHARGER PACK (CSA)			REPLACEMENT 40AMP FUSE		
606276	TTB-1840 CHARGE	TTB-1840 CHARGER PACK (SOUTH AFRICA)			M5 KNOB (BLACK)		
606277	TTB-1840 CHARGE	208537	,	CONSTANT TENSION CLIP (VAC HOSE)			



## TTB-1840

#### DRW-7279 (A06) 06:08:2012



## EU Declaration of Conformity

## EU DECLARATION OF CONFORMITY

We hereby declare under our sole responsibility that the following equipment fulfils all the relevant provisions of the following EU Directives:

Machinery Directive 2006/42/EC EMC Directive 2004/108/EC RoHS Directive 2011/65/EU

## Machine Description: Type: TTB 1840 series

## **Scrubber Dryer**

## Manufactured by:

Numatic International Limited

Relevant standards upon which conformity is declared include:

IEC 60335-1:2010 IEC 60335-2-72:2002 +A1:2005 +A2:2006

EN 55014-1:2006 EN 55014-2:1997 +A1:2001 BS EN 62233:2008

A technical construction file for this equipment is retained at the manufacturer's address under the authorisation of the following signatory:

## Name:Allyn Boyes

Position: Technical Manager





Bril

Date: 01 /01/2013

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