



# Electronic Service Manuals

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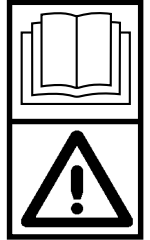
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# Whirlamatic™ UHSB 20

# Whirlamatic™ UHSBD 20



## OPERATOR MANUAL

Advance MODELS 56393500(UHSB 20)

56393600(UHSBD 20 / OBS)



**Nilfisk  
Advance**

*setting standards*

revised 10/00 Form Number 56041227

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This manual will help you get the most from your **Whirlamatic**. Read it thoroughly before operating the machine.

**Note: Bold numbers in parentheses indicate an item illustrated on page 7.**

This product is intended for commercial use only.

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## PARTS AND SERVICE

Repairs, when required, should be performed by your Authorized Nilfisk-Advance Service Center, who employs factory trained service personnel, and maintains an inventory of Nilfisk-Advance original replacement parts and accessories.

Call the NILFISK-ADVANCE DEALER named below for repair parts or service. Please specify the Model and Serial Number when discussing your machine.

(Dealer, affix service sticker here.)

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## NAME PLATE

The Model Number and Serial Number of your machine are shown on the Nameplate on the bottom of the machine. This information is needed when ordering repair parts for the machine. Use the space below to note the Model Number and Serial Number of your machine for future reference.

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

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## UNCRATE THE MACHINE

When the machine is delivered, carefully inspect the shipping carton and the machine for damage. If damage is evident, save the shipping carton so that it can be inspected. Contact the Nilfisk-Advance Customer Service Department immediately to file a freight damage claim.

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# IMPORTANT SAFETY INSTRUCTIONS

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

Read all instructions before using.

## **WARNING!**

To reduce risk of fire, electric shock, or injury:

- \* Use only as described in this manual. Use only manufacturer's recommended attachments.
- \* This machine shall be used only by properly trained and authorized persons.
- \* This machine is for dry use only and shall not be used or stored outdoors in wet conditions.
- \* Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- \* Keep sparks, flame and smoking materials away from batteries. Explosive gases are vented during normal operation.
- \* Charging the batteries produces highly explosive hydrogen gas. Charge batteries only in well-ventilated areas, away from open flame. Do not smoke while charging the batteries.
- \* Remove all jewelry when working near electrical components.
- \* Turn the key switch off (O) and disconnect the batteries before servicing electrical components.
- \* Never work under a machine without safety blocks or stands to support the machine.
- \* Do not dispense flammable cleaning agents, operate the machine on or near these agents, or operate in areas where flammable liquids exist.
- \* Do not clean this machine with a pressure washer.
- \* This machine is not approved for use on public paths or roads.
- \* Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- \* Do not operate this machine on ramps or inclines of more than 5 degrees.
- \* When operating this machine, ensure that third parties, particularly children, are not endangered.
- \* Before performing any service function, carefully read all instructions pertaining to that function.
- \* Do not leave the machine unattended without first turning the key switch off (O), removing the key and applying the parking brake.
- \* Turn the key switch off (O) before changing the pad, and before opening any access panels.
- \* Take precautions to prevent hair, jewelry, or loose clothing from becoming caught in moving parts.
- \* Do not use without dust bag and / or filters in place.
- \* Do not stand on the pad housing.
- \* This machine is not suitable for picking up health endangering dust.

## **SAVE THESE INSTRUCTIONS**

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# IMPORTANTES CONSIGNES DE SECURITE

Cette machine ne convient qu'à un usage industriel, par exemple dans les hôtels, les écoles, les hôpitaux, les usines, les boutiques et les bureaux et autres utilisations que le ménage domestique résidentiel.

Lisez toutes les instructions avant l'utilisation.

## **ATTENTION!**

Pour réduire le risque d'incendie, d'électrocution, ou de blessure:

- \* Ne l'utilisez que comme décrit dans ce manuel. N'utilisez que des attachements recommandés par le fabricant.
- \* Cette machine ne doit être utilisée que par des personnes proprement formées et autorisées.
- \* Cette machine n'est destinée qu'à un usage à sec et ne doit pas être utilisée ou emmagasinée à l'extérieur par des temps pluvieux.
- \* Ne permettez pas que l'on l'utilise comme un jouet. Une attention particulière est nécessaire lorsqu'elle est utilisée par ou près d'enfants.
- \* Gardez toute étincelle, flamme ou matériaux fumants éloignés des batteries. Des gaz explosifs sont ventilés pendant un fonctionnement normal.
- \* Charger les batteries produit du gaz hydrogène hautement explosif. Ne chargez les batteries que dans des zones bien aérées, loin de toute flamme. Ne fumez pas lors de la charge des batteries.
- \* Retirez tout bijou lorsque vous travaillez près des composants électriques.
- \* Tournez l'interrupteur à clé sur (O) pour l'éteindre et déconnectez les batteries avant l'entretien des composants électriques.
- \* Ne travaillez jamais sous une machine sans cale de sécurité ou de socles pour supporter la machine.
- \* Ne répandez pas d'agents nettoyants inflammables, n'utilisez pas la machine sur ou près de ces agents, ou ne l'utilisez pas dans des zones où ces produits existent.
- \* Ne nettoyez pas cette machine avec un jet à haute pression.
- \* Cette machine n'est pas destinée à un usage sur les voies publiques.
- \* Ne mettez aucun objet dans les ouvertures. Ne l'utilisez pas avec une ouverture de bouchée; gardez-la à l'abri de la poussière, de la charpie, des cheveux et de tout ce qui pourrait réduire le flux de l'air.
- \* N'utilisez pas cette machine sur des rampes ou des plans inclinés de plus de 5 degrés.
- \* Lors de l'utilisation de cette machine, assurez-vous que des tiers, particulièrement des enfants, ne soient pas en danger.
- \* Avant d'entreprendre toute fonction d'entretien, lisez attentivement toutes les instructions se rapportant à cette fonction.
- \* Ne laissez pas la machine sans attention sans avoir d'abord tourné la clé sur (O) pour l'éteindre, avoir enlevé la clé et serré le frein à main.
- \* Tournez la clé sur la position arrêt (O) avant de changer le disque, et avant d'ouvrir tout panneau d'accès.
- \* Prenez les précautions nécessaires pour éviter que les cheveux, bijoux et vêtements amples ne soient pris dans les parties mobiles.
- \* Ne l'utilisez pas sans que le sac de poussière et / ou les filtres ne soient en place.
- \* Ne vous appuyez pas sur la chambre du disque.
- \* Cette machine n'est pas conçue pour le ramassage de poussière dangereuse à la santé.

## **CONSERVEZ CES INSTRUCTIONS**

# BATTERY INSTALLATION

## ⚠ WARNING!

Use extreme caution when working with batteries. Sulfuric acid in batteries can cause severe injury if allowed to contact the skin or eyes. Explosive hydrogen gas is vented from inside the batteries through openings in the battery caps. This gas can be ignited by any arc, spark or flame.

### WHEN SERVICING BATTERIES...

- Remove all jewelry.
- Do not smoke.
- Wear safety glasses, rubber gloves and a rubber apron.
- Work in a well-ventilated area.
- Do not allow tools to touch more than one battery terminal at a time.

## ⚠ CAUTION!

Electrical components in this machine can be severely damaged if the batteries are not installed and connected properly. Batteries should be installed by your local Nilfisk-Advance dealer or by a qualified electrician.

Your Whirlamatic comes from the factory with battery cables to connect three 12 volt batteries.

Six 6 volt batteries may be used (instead of the 12 volt batteries) to extend the running time of the machine. To install these batteries, you will need the following additional parts:

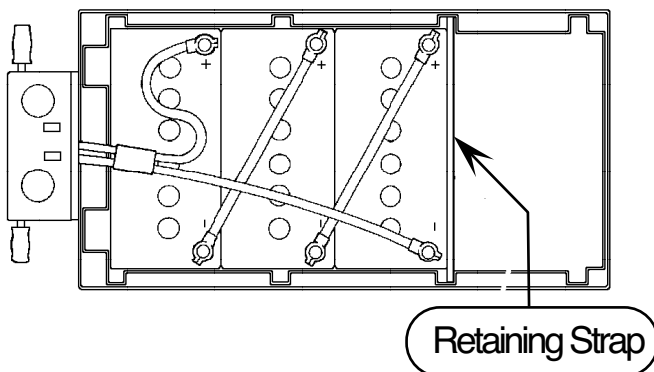
| QTY | PART NO. | DESCRIPTION    |
|-----|----------|----------------|
| 3   | 56363936 | BATTERY CABLES |
| 6   | 56372673 | BATTERY BOOTS  |
| 6   | 56478246 | TIE STRAPS     |

These items can be ordered from your local Nilfisk-Advance Distributor.

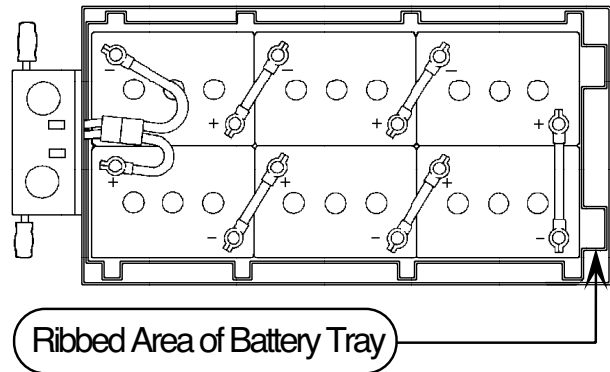
### To Install the Batteries...

- 1 Release the two latches (12) at the back of the machine, tip the cover shroud forward and lift it off of the machine. Remove the battery cables from the battery tray.
- 2 If you are using three 12 volt batteries, carefully lift them into the battery tray, arranged as shown in Figure 1. Install the battery retaining strap as shown, to hold the batteries toward the rear of the machine.  
If you are installing six 6 volt batteries, lift the battery tray out of the machine and turn it around so that the ribbed area faces toward the front of the machine, as shown in Figure 2. Carefully place the batteries into the battery tray, arranged exactly as shown. Discard the battery retaining strap - it is not required when six 6 volt batteries are used.
- 3 Make sure that the Master Switch (6) is in the OFF position.
- 4 Install the battery cables as shown in Figure 1 or Figure 2, with the terminals marked "P" on the positive battery posts and the terminals marked "N" on the negative battery posts. Position the cables so that the caps can be easily removed when it is necessary to add water to the batteries.
- 5 Tighten the nut on each battery terminal just enough to keep the terminal from being turned on the battery post. Then tighten the nut one more full turn.  
**Do not over-tighten the nuts**, or it will be very difficult to remove the terminals for future service.
- 6 Coat all of the terminals and posts with grease, petroleum jelly or spray-on battery coating (available at most auto parts stores).
- 7 Put one of the black rubber "boots" over each of the terminals and use the plastic tie straps to hold them in place.

### FIGURE 1

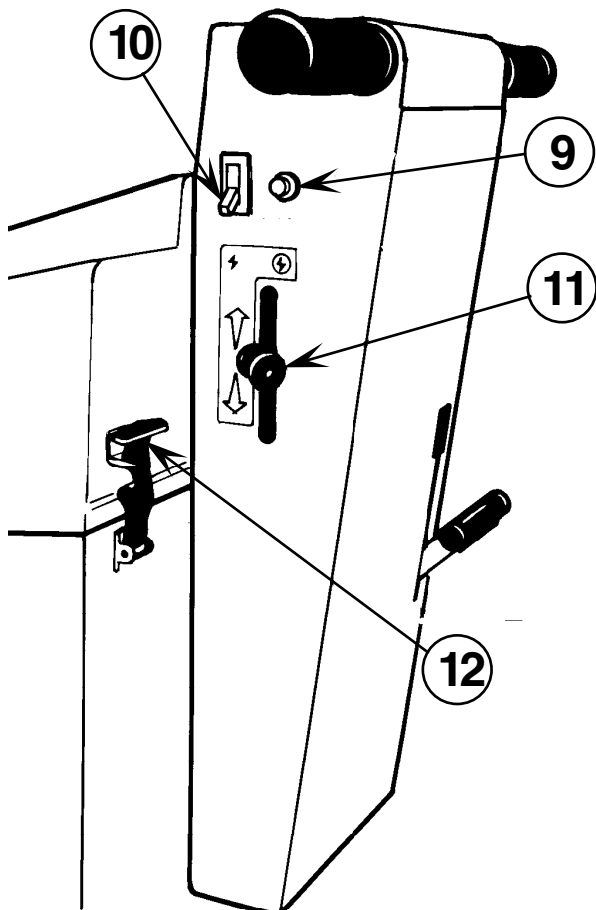
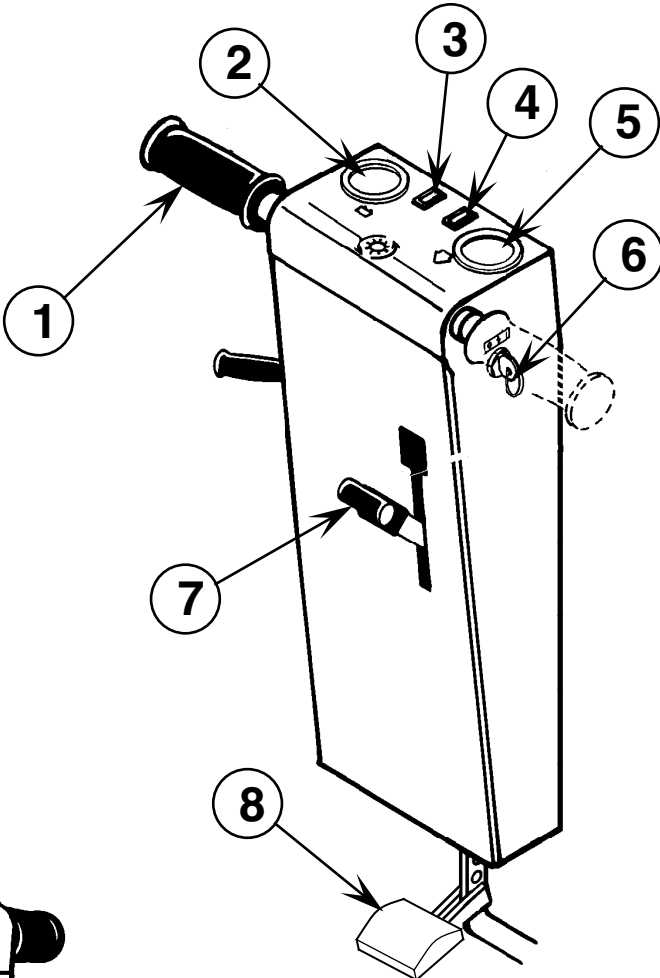


### FIGURE 2



# KNOW YOUR MACHINE

- 1 Hand Grip
- 2 Battery Meter
- 3 Power-ON Light
- 4 Motor "Needs Service" Light
- 5 Pad Pressure Meter
- 6 Master Switch
- 7 Pad Lower Lever
- 8 Pad Lift Pedal
- 9 Control Circuit Breaker
- 10 Motor Circuit Breaker
- 11 Pad Pressure Lever
- 12 Cover Shroud Latch



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# PREPARING THE MACHINE FOR USE

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## INSTALLING A PAD

Your local Nilfisk-Advance Distributor can provide the proper pads and floor finishes for use with this machine.

### ⚠ CAUTION!

Using the wrong kind of pad on this machine can damage the floor.

- 1 Lower the pad drive assembly onto the floor, using the Pad Lower Lever (7) on the back of the machine. Then push the back of the machine down until the support stand touches the floor.

### ⚠ WARNING!

Do not pull down on the front of the machine while installing or removing the pad.

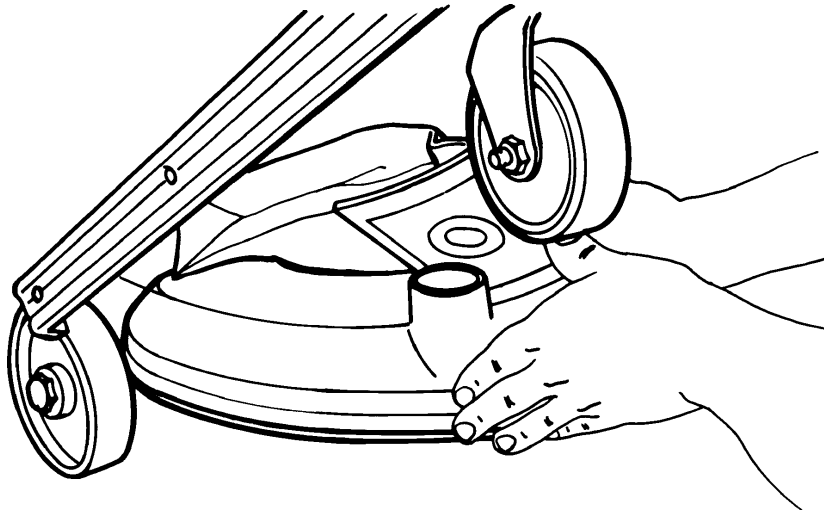
- 2 Turn the pad retainer **clockwise** to remove it from the pad holder. Carefully center a burnishing pad on the pad holder. If the pad is not centered properly, the machine will vibrate when the pad motor is started.
- 3 Install the pad retainer by turning it **counter-clockwise**. Tighten the pad retainer securely.
- 4 Put your foot on the support stand and gently lower the front of the machine to the floor.

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## INSTALLING DUST COLLECTOR BAGS

- 1 Lower the pad drive assembly onto the floor, using the Pad Lower Lever (7) on the back of the machine. Then push the back of the machine down until the support stand touches the floor.
- 2 Install two dust collector bags (Nilfisk-Advance part number 56391185) on top of the dust control housing. Reach in from the sides of the machine and push the bag opening over each of the two tubes.
- 3 Put your foot on the support stand and gently lower the front of the machine to the floor.

The dust collection system will not operate properly if the collector bags are full, if just one bag is installed, or if one or both bags are torn.



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# OPERATING THE MACHINE / AFTER USE

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## OPERATING THE MACHINE

- 1 Turn the Master Switch (6) ON. The green Power-On Light (3) will come on.
- 2 **Model 56393500:** Push the machine forward and twist the Hand Grips (1) to start the pad motor. Push the machine as slow as is necessary to obtain the desired shine.  
**Model 56393600:** Twist the Hand Grips (1) to start the pad motor and propel the machine forward.
- 3 Make long, straight passes whenever possible. Overlap each pass about 2 inches (5 cm).
- 4 **Model 56393500:** Whenever you stop moving, release the Hand Grips immediately to stop the pad motor.  
**Model 56393600:** When you release the Hand Grips, the pad motor will stop and the drive motor will stop propelling the machine.

### CAUTION!

The floor may be damaged if travel of the machine is stopped with the pad down and running.

- 5 Watch the Pad Pressure Meter (5) as you operate the machine. The Pad Pressure Lever (11) is adjusted properly when the meter stays in the green area most of the time, with occasional readings in the red area.  
If the meter reads in the red area, pull the Pad Pressure Lever (11) upward.  
If the meter reads in the black area, move the Pad Pressure Lever (11) downward.

NOTE: It is normal for the reading on the Pad Pressure Meter (5) to change as the machine moves over an uneven floor.

- 6 If the Circuit Breaker (10) for the pad motor trips, raise the Pad Pressure Lever (11) a little, reset the Circuit Breaker and resume operation.

---

## AFTER USE

- 1 Turn the Master Switch (6) OFF and tip the machine back on its support stand.
- 2 Check the bags on top of the dust control housing. Replace them if they are more than half full or if they are damaged.
- 3 Check the skirt around the dust control housing. The skirt should be replaced if it is worn out or torn.
- 4 Remove the pad from the pad holder and clean it thoroughly with soap and water. Allow pads to dry completely before using them again.
- 5 Gently lower the front of the machine onto the floor.
- 6 Remove dust and dirt from the outside of the machine by wiping with a damp cloth.
- 7 Store the machine in a clean, dry place.

### CAUTION!

DO NOT store your Whirlamatic outdoors.

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## MAINTENANCE SCHEDULE

| MAINTENANCE ITEM                | DAILY | MONTHLY |
|---------------------------------|-------|---------|
| Charge Batteries                | •     |         |
| Check/Replace Dust Bags         | •     |         |
| Check/Replace Skirt             | •     |         |
| Clean Pad                       | •     |         |
| Lubrication                     |       | •       |
| Check/Service Pad Motor Brushes |       | •       |

## BATTERY MAINTENANCE AND CHARGING

Charge the batteries each time the machine is used for 1 hour or longer, or whenever the Battery Meter reads in the red area.

### To Charge the Batteries...

- 1 Remove the cover shroud and pull the gray battery connectors apart.
- 2 Push the connector from the charger into the connector from the batteries.
- 3 Follow the instructions on the battery charger.
- 4 Check the fluid level in all battery cells after charging the batteries. Add distilled water, if necessary, to bring the fluid level up to the bottom of the filler tubes.

### CAUTION!

To avoid damage to floor surfaces, wipe water and acid from the top of the batteries after charging.

### CAUTION!

Acid can spill onto the floor if the batteries are overfilled.

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## LUBRICATION

Lubricate all pivot points of the pad raise/lower assembly with a dry film silicone lubricant.

Grease the fittings on the front casters and on the rear wheels once a month.

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## PAD MOTOR BRUSHES

A Red Light (4) on the control panel indicates when the carbon brushes in the pad drive motor need to be replaced. When this light glows, STOP USING THE MACHINE and contact your local Nilfisk-Advance distributor to have the brushes serviced.

### CAUTION!

The pad drive motor can be damaged beyond repair if the machine is used with the red light glowing.

### IMPORTANT!

Motor damage resulting from failure to service carbon brushes is not covered under warranty. See the Limited Warranty statement.

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## DRIVE MOTOR BRUSHES - MODEL 56393600 ONLY

Have your local Nilfisk-Advance distributor check the brushes once a year.

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## TROUBLESHOOTING

### MACHINE VIBRATION

- 1 Pad is not centered properly. Remove the pad and reinstall.
- 2 Defective pad. Replace.

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### SWIRL MARKS

- 1 Pad is too aggressive for the floor finish.
- 2 Pad is dirty. Check and replace.

---

### REDUCED RUNNING TIME

- 1 Pad pressure too high. Check the Pressure Meter (5) adjust the Pad Pressure Lever (11) so the Pressure Meter stays in the green area most of the time.
- 2 Batteries need to be charged.
- 3 Batteries need water. Add just enough to cover the plates in each cell. Then charge the batteries and check the water level again.



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