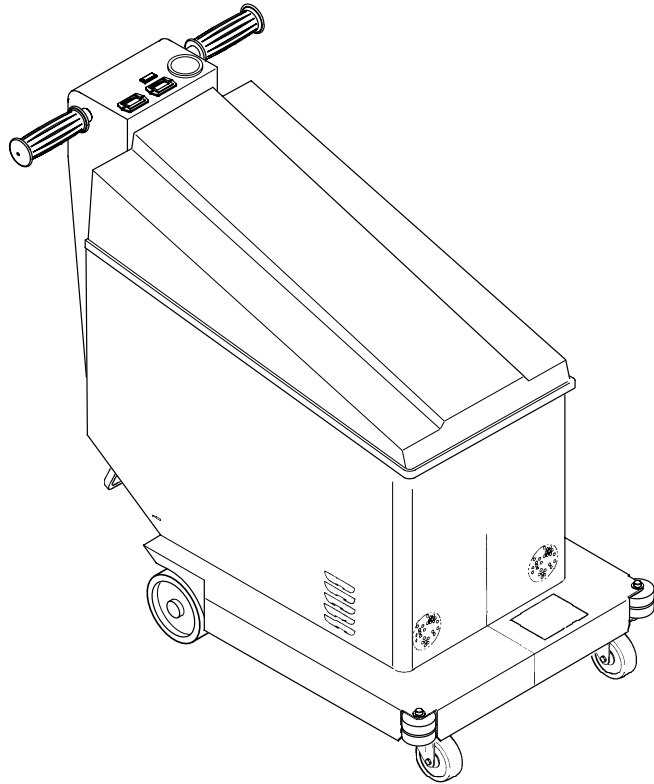
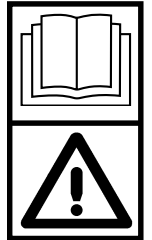


Whirlamatic™ VS 20



OPERATOR MANUAL **Advance MODELS 56393705, 56393710**



Nilfisk
Advance
setting standards

revised 1/00 Form Number 56041269

TABLE OF CONTENTS

	Page
Introduction	2
Parts and Service	2
Nameplate	2
Uncrating the Machine	2
Safety Instructions	3
Importantes mesures de sécurité	4
Preparing the Machine for Use	5
Battery Installation	5
Pad Installation	7
Dust Bag Installation	8
Operating the Machine	9
After Use	10
Maintenance	11
Maintenance Schedule	11
Battery Maintenance	11
Lubrication	11
Pad Motor Brushes	12
Drive Motor Brushes	12
Troubleshooting	13
Machine Vibration	13
Swirl Marks	13
Reduced Running Time	13

INTRODUCTION

This manual will help you get the most from your **Advance Whirlamatic™ VS 20**. Read it thoroughly before operating the machine.

This product is intended for commercial use only.

PARTS AND SERVICE

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

Call the 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.)

NAME PLATE

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

MODEL _____

SERIAL NUMBER _____

UNCRATING 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 by the trucking company that delivered it. Contact the trucking company immediately to file a freight damage claim.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precautions should always be followed, including the following:

Read all instructions before using.

WARNING!

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

- 1 Do not leave the appliance when it is plugged in. Unplug the unit from the outlet when not in use and before servicing.
- 2 To avoid electric shock, do not expose to rain. Store indoors.
- 3 Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- 4 Use only as described in this manual. Use only manufacturer's recommended attachments.
- 5 Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
- 6 Do not pull or carry by cord, use cord as a handle, close a door on a cord, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.
- 7 Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- 8 Do not handle plug or appliance with wet hands.
- 9 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.
- 10 Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- 11 Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes.
- 12 Turn off all controls before unplugging.
- 13 Use extra care when cleaning on stairs.
- 14 Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- 15 Connect to a properly grounded outlet only. See Grounding Instructions.

SAVE THESE INSTRUCTIONS

IMPORTANTES MESURES DE SÉCURITÉ

L'utilisation d'un appareil électrique demande certaines précautions:

LIRE TOUTES LES INSTRUCTIONS AVANT DE FAIRE FONCTIONNER (CET APPAREIL)

AVERTISSEMENT:

Pour réduire les risques d'incendie, de choc électrique ou de blessure:

- 1 Ne pas laisser l'appareil sans surveillance lorsqu'il est branché. Débrancher lorsque l'appareil n'est pas utilisé et avant l'entretien.
- 2 Pour réduire les risques de choc électrique, utiliser à l'intérieur seulement.
- 3 Ne pas permettre aux enfants de jouer avec l'appareil. Une attention particulière est nécessaire lorsque l'appareil est utilisé par des enfants ou à proximité de ces derniers.
- 4 N'utiliser que conformément à cette notice avec les accessoires recommandés par le fabricant.
- 5 Ne pas utiliser si le cordon ou la fiche est endommagé. Retourner l'appareil à un atelier de réparation s'il ne fonctionne pas bien, s'il est tombé ou s'il a été endommagé, oublié à l'extérieur ou immergé.
- 6 Ne pas tirer soulever ou traîner l'appareil par le cordon. Ne pas utiliser le cordon comme une poignée, le coincer dans l'embrasure d'une porte ou l'appuyer contre des arêtes vives ou des coins. Ne pas faire rouler l'appareil sur le cordon. Garder le cordon à l'écart des surfaces chaudes.
- 7 Ne pas débrancher en tirant sur le cordon. Tirer plutôt la fiche.
- 8 Ne pas toucher la fiche ou l'appareil lorsque vos mains sont humides.
- 9 N'insérer aucun objet dans les ouvertures. Ne pas utiliser l'appareil lorsqu'une ouverture est bloquée. S'assurer que de la poussière, de la peluche, des cheveux ou d'autres matières ne réduisent pas le débit d'air.
- 10 Maintenir les cheveux, les vêtements amples, les doigts et toutes les parties du corps à l'écart des ouvertures et des pièces mobiles.
- 11 Ne pas aspirer de matières en combustion ou qui dégagent de la fumée, comme des cigarettes, des allumettes ou des cendres chaudes.
- 12 Mettre toutes les commandes à la position ARRÊT avant de débrancher l'appareil.
- 13 User de prudence lors du nettoyage des escaliers.
- 14 Ne pas aspirer des liquides inflammables ou combustibles, comme de l'essence, et ne pas faire fonctionner dans des endroits où peuvent se trouver de tels liquides.
- 15 Ne brancher qu'à une prise de courant avec mise à la terre. Voir les instructions visant la mise à la terre.

CONSERVER CES INSTRUCTIONS

PREPARING THE MACHINE FOR USE

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
- 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 Advance dealer or by a qualified electrician.

The Whirlamatic may be used with three 12 volt, 185 amp hour batteries or six 6 volt batteries. The six 6 volt, 244 amp hour batteries will extend the running time of the machine.

PREPARING THE MACHINE FOR USE

To Install the Batteries...

- 1 Release the two latches at the back of the machine, tip the cover shroud forward and lift it off 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.

Figure 1 - Three 12 volt batteries

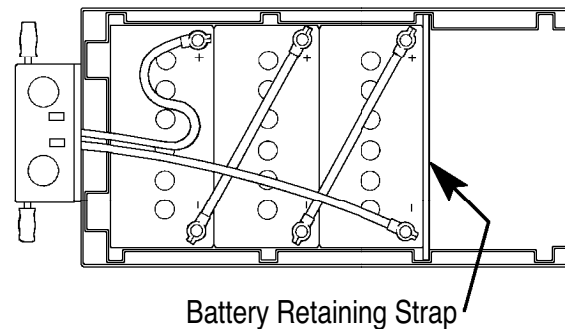
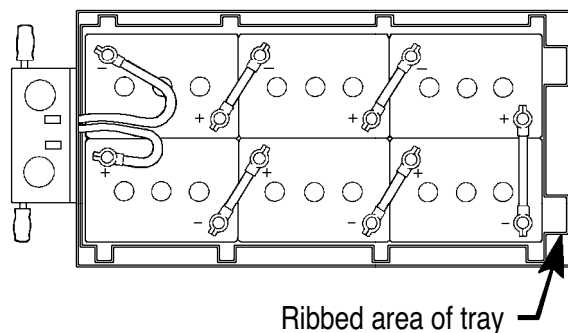


Figure 2 - Six 6 volt batteries



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 Key Switch (on the right side of the control handle) 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.

PREPARING THE MACHINE FOR USE

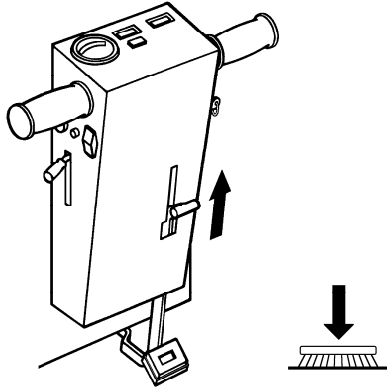
PAD INSTALLATION

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

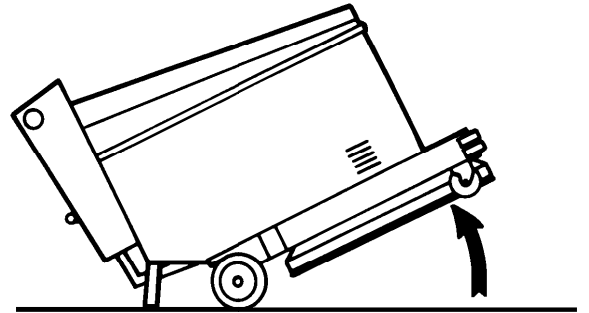
CAUTION!

Using the wrong kind of pad on this machine can damage the floor. The pad must be centered properly on the pad holder to prevent machine vibration.

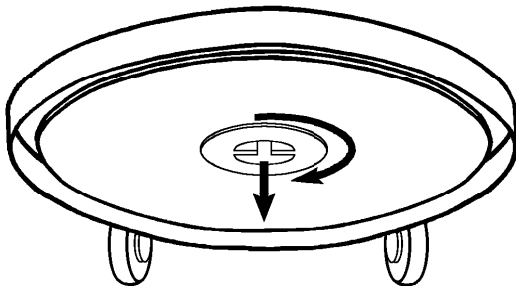
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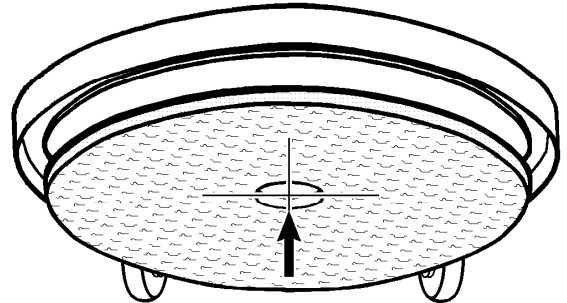
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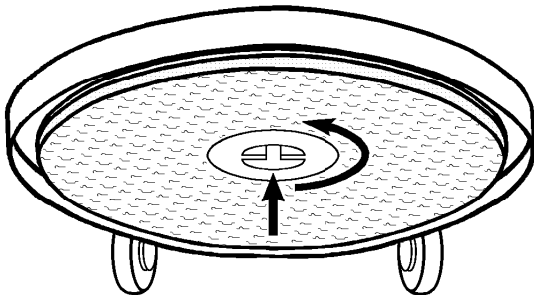
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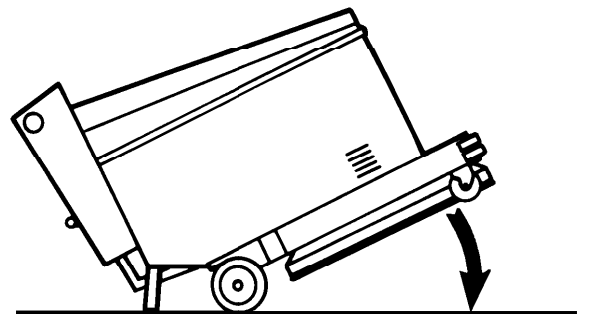
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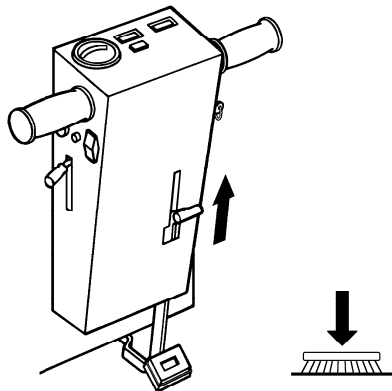
PREPARING THE MACHINE FOR USE

DUST BAG INSTALLATION

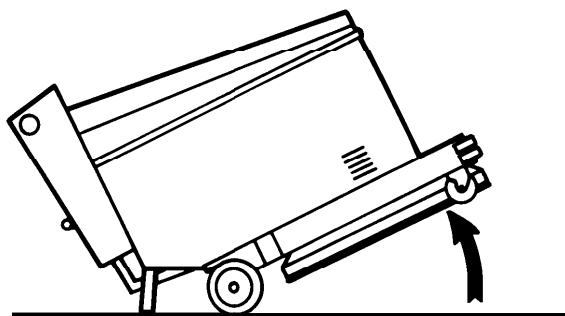
IMPORTANT!

Install two dust collector bags (Advance part number 391185) on top of the dust control housing. 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.

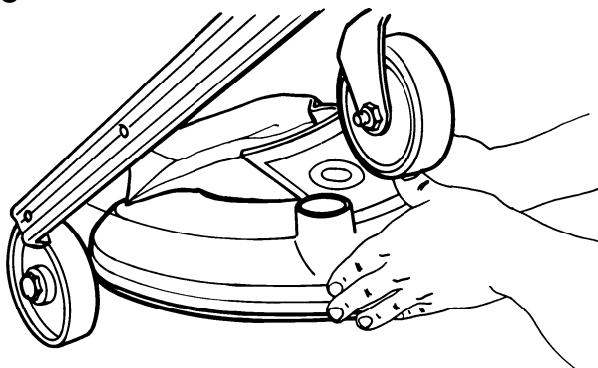
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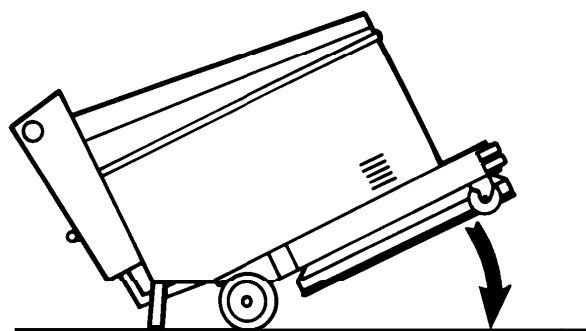
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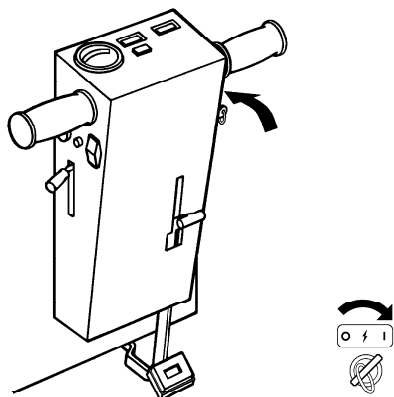
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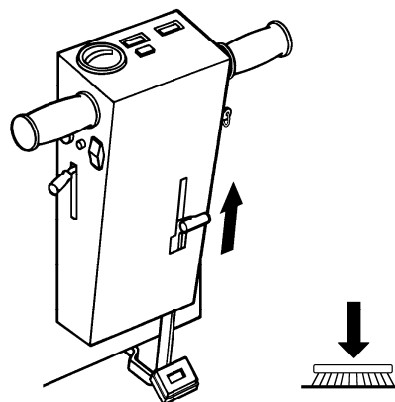
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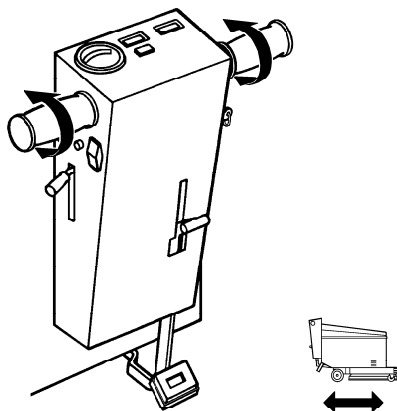
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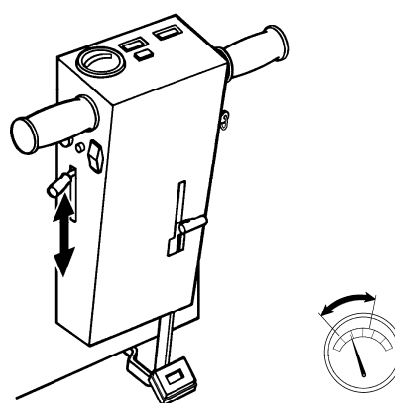
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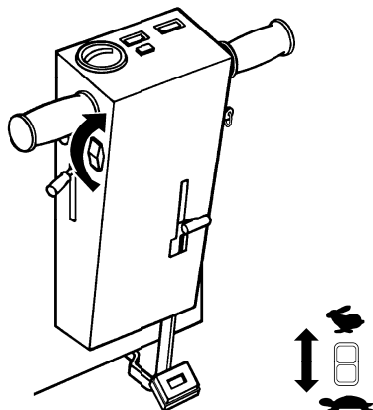
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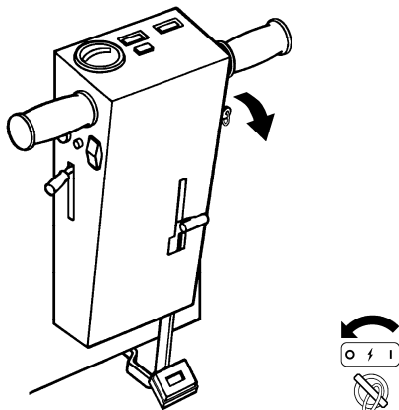


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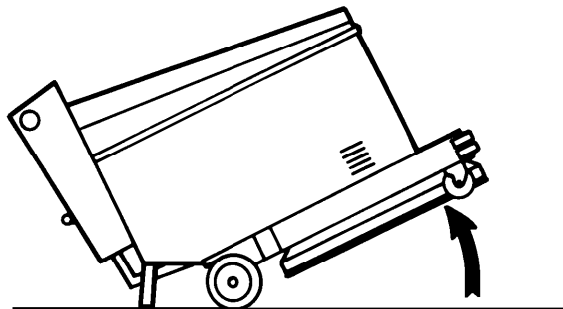


AFTER USE

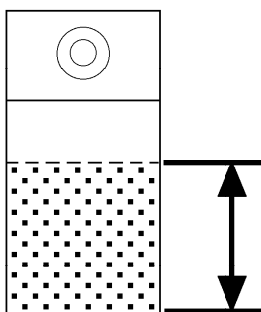
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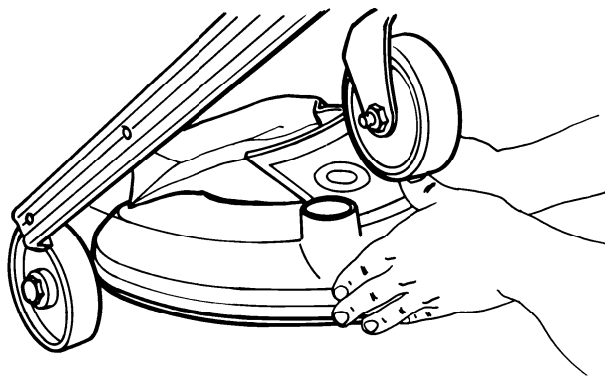
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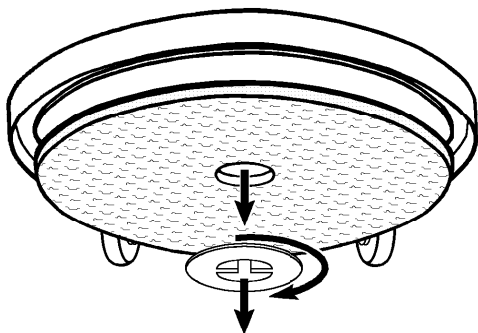
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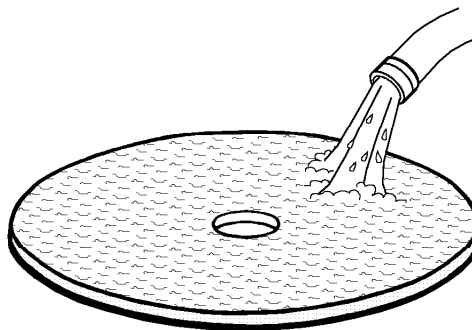
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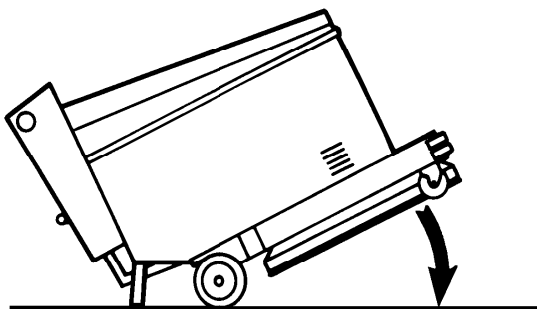
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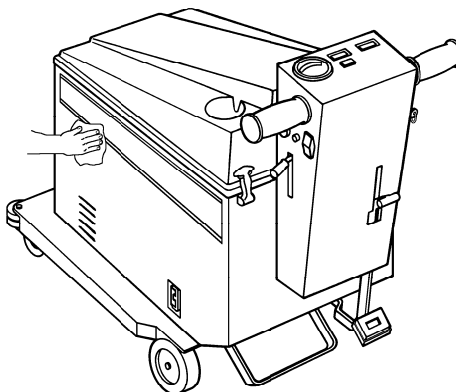
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MAINTENANCE SCHEDULE

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

BATTERY MAINTENANCE

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 Open the cover shroud.
- 2 Push the connector from the charger into the connector from the batteries on the side of the machine.
- 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.

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.

MAINTENANCE

PAD MOTOR BRUSHES

A red light 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 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.

DRIVE MOTOR BRUSHES

Have your local Advance Dealer check the drive motor brushes once a year.

IMPORTANT!

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

MACHINE VIBRATION

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

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, adjust the Pad Pressure Lever 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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