



Electronic Service Manuals

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Serving the Cleaning Industry Since 1922

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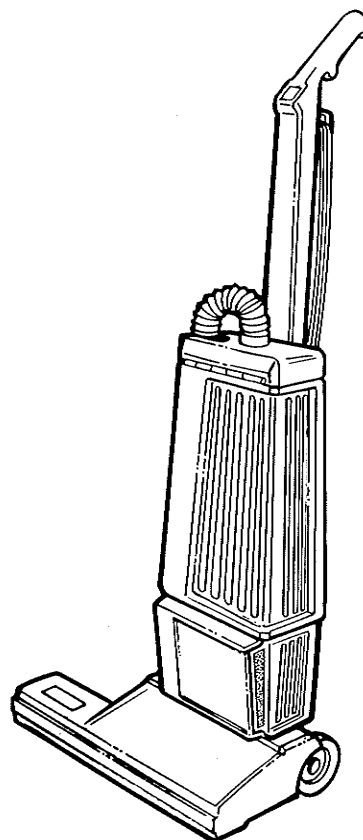
Whirlwind

Lightweight Vacuum Cleaner

MODELS: WLV101 & WLV101DLX

Operator & Parts Manual

Record Serial No. Here: _____



NOBLES INDUSTRIES
12875 RANSOM STREET
HOLLAND MI 49424

A **TENNANT** COMPANY

1-800-739-9359
616-786-2330
FAX: 1-800-678-4240
CUSTOMER SERVICE: 1-800-365-6625

173079
Rev. 04 (10-96)

IMPORTANT SAFETY INSTRUCTIONS

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

READ ALL INSTRUCTIONS BEFORE USING (THIS APPLIANCE)

WARNING - To reduce the risk of fire, electric shock, or injury:

1. Do not leave appliance when plugged in. Unplug from outlet when not in use and before servicing.
2. Do not use outdoors or on wet surfaces.
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 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. Do not use without dust bag and/or filters in place.
13. Turn off all controls before unplugging.
14. Use extra care when cleaning on stairs.
15. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.

LIRE TOUTES LES INSTRUCTIONS AVANT DE FAIRE FONCTIONNER

(CET APPAREIL)

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

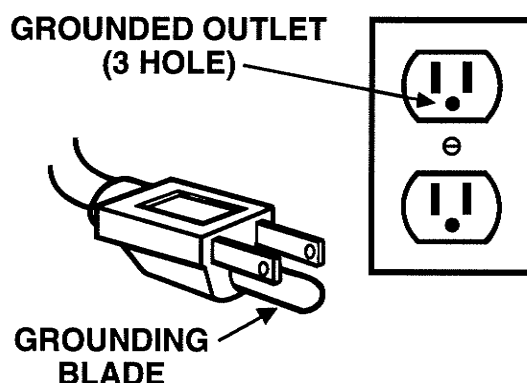
1. Ne pas laisser l'appareil sans surveillance lorsqu'il est branché. Débrancher lorsque l'appareil n'est pas utilisé et avant l'entretien.
2. Ne pas utiliser à l'extérieur et ne pas aspirer de matières humides.
3. Ne pas permettre aux enfants de jouer avec l'appareil. une attention particulière est nécessaire lorsque l'appareil est utilisé par des enfants ou à proximité de ces derniers.
4. 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 dendres chaudes.
12. Ne pas utiliser l'appareil si le sac à poussière ou le filtre n'est pas en place.
13. Mettre toutes les commandes à la position ARRÊT avant de débrancher l'appareil.
14. User de prudence lors du nettoyage des escaliers.
15. 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.

GROUNDING INSTRUCTIONS

This appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING - Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This appliance is for use on a nominal 120-volt circuit and has a grounding attachment plug that looks like the plug illustrated in sketch. Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adaptor should be used with this appliance.



INSTRUCTIONS VISANT LA MISE À LA TERRE

Cet appareil doit être mis à la terre. En cas de défaillance ou de panne éventuelles, la mise à la terre fournit au courant un chemin de moindre résistance qui réduit le risque de choc électrique. Cet appareil est pourvu d'un cordon muni d'un conducteur de terre et d'une fiche avec broche de terre. La fiche doit être branchée dans une prise appropriée correctement installée et mise à la terre conformément aux règlements et ordonnances municipaux.

AVERTISSEMENT. Un conducteur de terre mal raccordé peut entraîner un risque de choc électrique. Consulter un électricien ou un technicien d'entretien qualifié si vous n'êtes pas certain que la prise est correctement mise à la terre. Ne pas modifier la fiche fournie avec l'appareil - si elle ne peut être insérée dans la prise, faire installer une prise adéquate par un électricien qualifié.

Cet appareil est destiné à un circuit de 120 v et est muni d'une fiche de mise à la terre semblable à celle illustrée par le croquis. S'assurer que l'appareil est branché à une prise de courant ayant la même configuration que la fiche. Aucun adaptateur ne devrait être utilisé avec cet appareil.

A. SET UP AND OPERATION:

1. For North American models, connect only to a grounded 120 volt A.C. (3 hole) electrical outlet. See Figure 1.

For models sold outside North America, plug into a grounded (earthed) 240 volt A.C. power outlet.

WARNING!!! To avoid serious personal injury: Do not use on wet surfaces. Do not expose to rain. Store indoors. Disconnect power if machine is left unattended. Plug into grounded outlets only. Do not use an adapter or remove ground pin on plug. Do not use if cord is damaged. Disconnect power before servicing. Electrical service must be performed by an authorized service station or electrician. Do not use machine to recover hazardous or flammable materials. Do not use where explosive vapors or dust are present in the air.

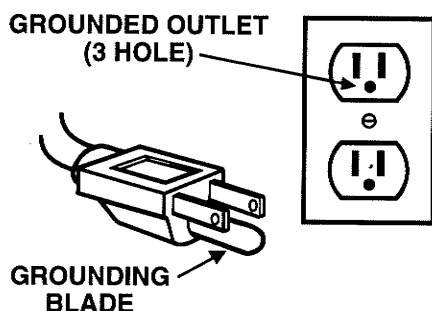


Figure 1

2. Before beginning operation, always check to make sure that there is a bag installed in the vacuum housing.

IMPORTANT! Operation without a bag or with a full bag will damage your vacuum. Damage due to these causes is NOT covered by warranty.

3. Close the vacuum housing lid and latch it.
4. Adjust the brush height by tilting the vacuum back and turning the black knob on the base housing. Select from 1 for shortest pile carpet to 6 for longest pile carpet, or any setting in between.
5. Place your right foot on the toe kick to hold the base, then pull the handle back to the vacuuming position.

6. Turn on the power switch located on the handle.
7. Begin vacuuming. When cleaning under beds or other hard to reach areas, you can lower the handle to the floor for easy clearance.
8. Periodically check the vacuum bag level. For best cleaning results, change the bag when it becomes three-quarters full.
9. When you change the bag, also check the condition of the secondary filter. If it is dusty, remove and clean it. A clogged filter can reduce airflow and cleaning power.

NOTE: If the brush stops during use, **unplug the vacuum** and dislodge any obstructions near the brush. Then, push in the brush reset button located at the rear of the vacuum, near the wheels.

B. USING ACCESSORY TOOLS:

1. You can use accessory tools with your vacuum. To attach these tools, disconnect the hose from the brush housing. Leave the other end of the hose connected to the vacuum housing.
2. Connect the accessory tool to the hose.
3. With the handle locked in the upright position, turn on the switch and begin vacuuming.

NOTE: The brush will not run while the handle is locked in the upright position. An automatic switch shuts the brush motor off in this position.

C. ROUTINE MAINTENANCE:

1. The most important step is to remove carpet strands and other clogging debris from the brush after every use. This simple step can extend the life of your brush bearings.
2. Check the vacuum bag level frequently to prevent overfilling the bag. Always dispose of paper bags when they become full, do not reuse them. If using a cloth bag, empty the bag and shake out excess dust. Also, inspect the cloth bag for tearing or holes each time you empty it.
3. Check the vacuum hose for clogging material after every use.
4. Clean the secondary filter once each month. This filter provides extra vacuum motor protection.
5. Clean the exhaust filter once each month. Press down on the top of the filter cover and remove the cover to gain access to the filter.
6. The brush on your vacuum is adjustable for maximum brush life. When the brush bristles shorten with wear, you can lower the brush shaft closer to the carpet and get extended life from the shorter brush bristles. Follow these steps:
 - a. Remove the brush plate.
 - b. Look closely at the two white bearing blocks and note that a number (1) shows on each block.
 - c. Remove the brush assembly from the brush housing.

- d. Hold the brush and rotate each of the two white bearing blocks until you see the number (2) on each block. See **Figure 2**.

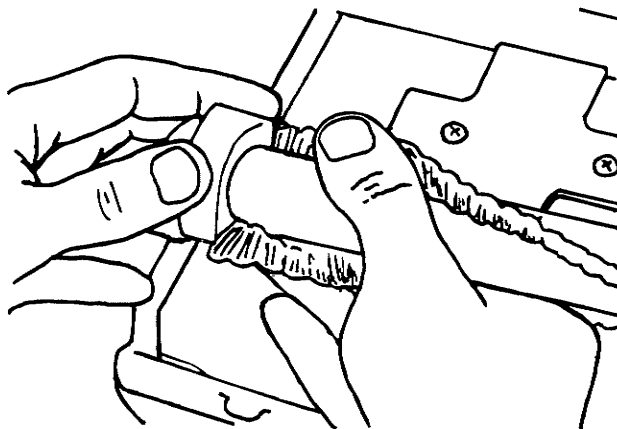


Figure 2

- e. Reinstall the brush so the number (2) shows on each block.
- f. Put the brush plate back in place.

D. GENERAL SERVICE POLICY:

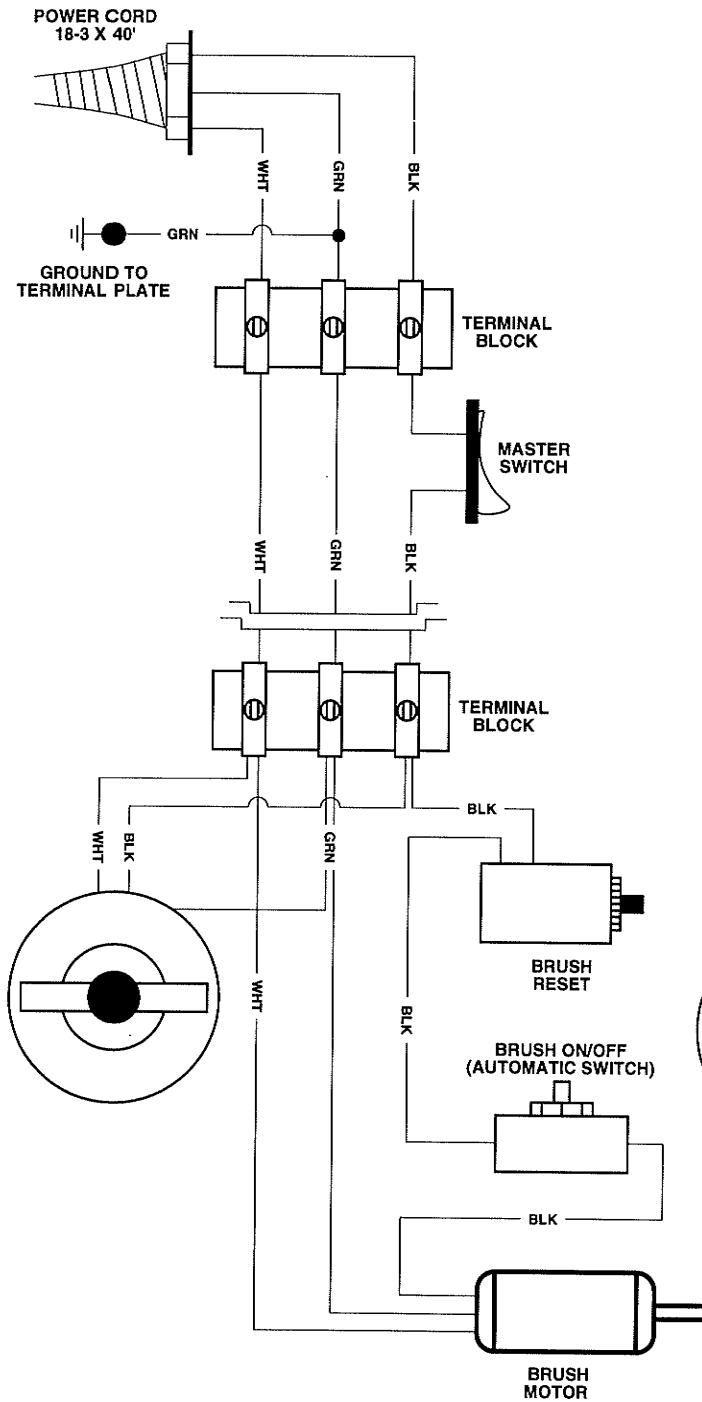
When ordering parts or requesting service, specify:

1. The model & serial number of the machine.
2. Part number.
3. Part description.

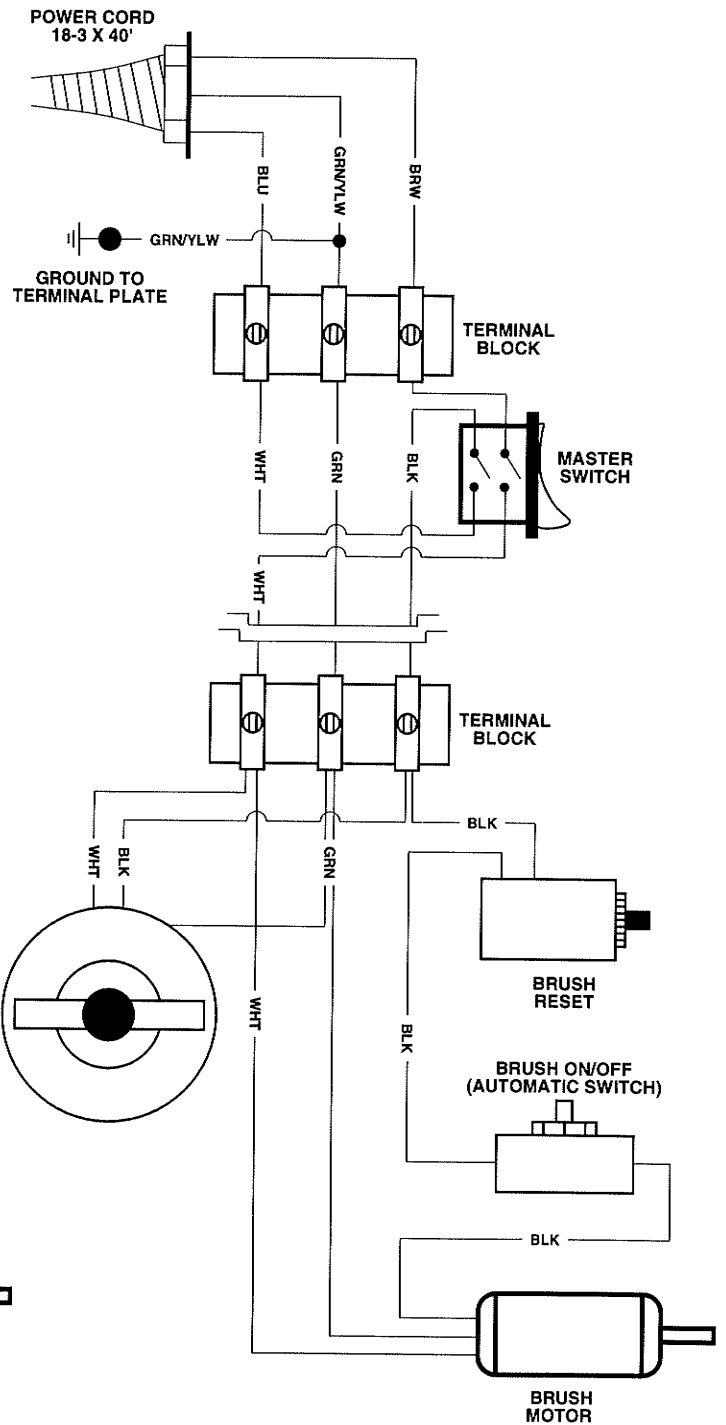
All parts returned to the factory must arrive prepaid with a Return Authorization Number issued by Customer Service. Always enclose a note indicating the problem you are experiencing with the part, your name, phone number and address.

WIRING DIAGRAMS

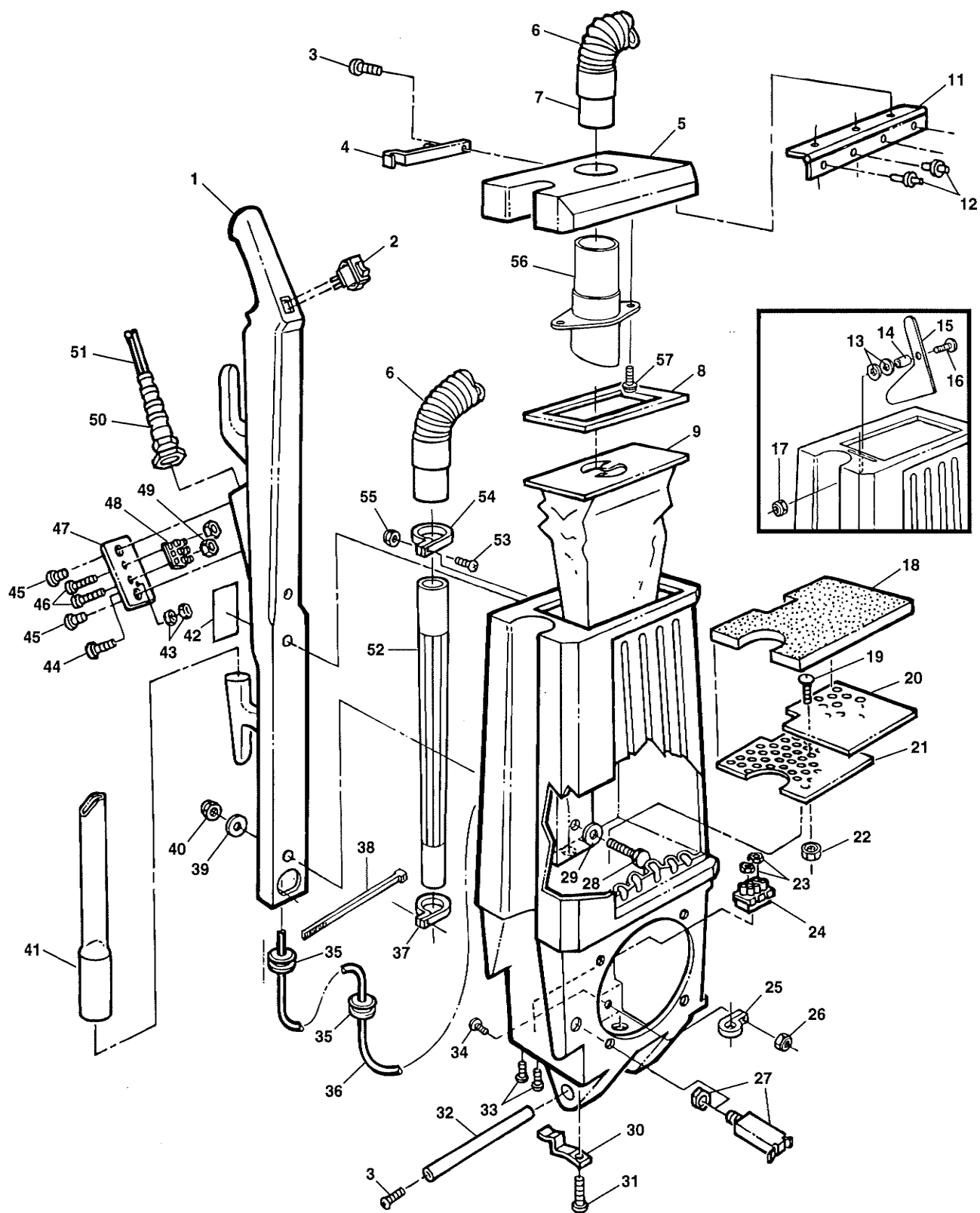
120 VOLT



220 VOLT



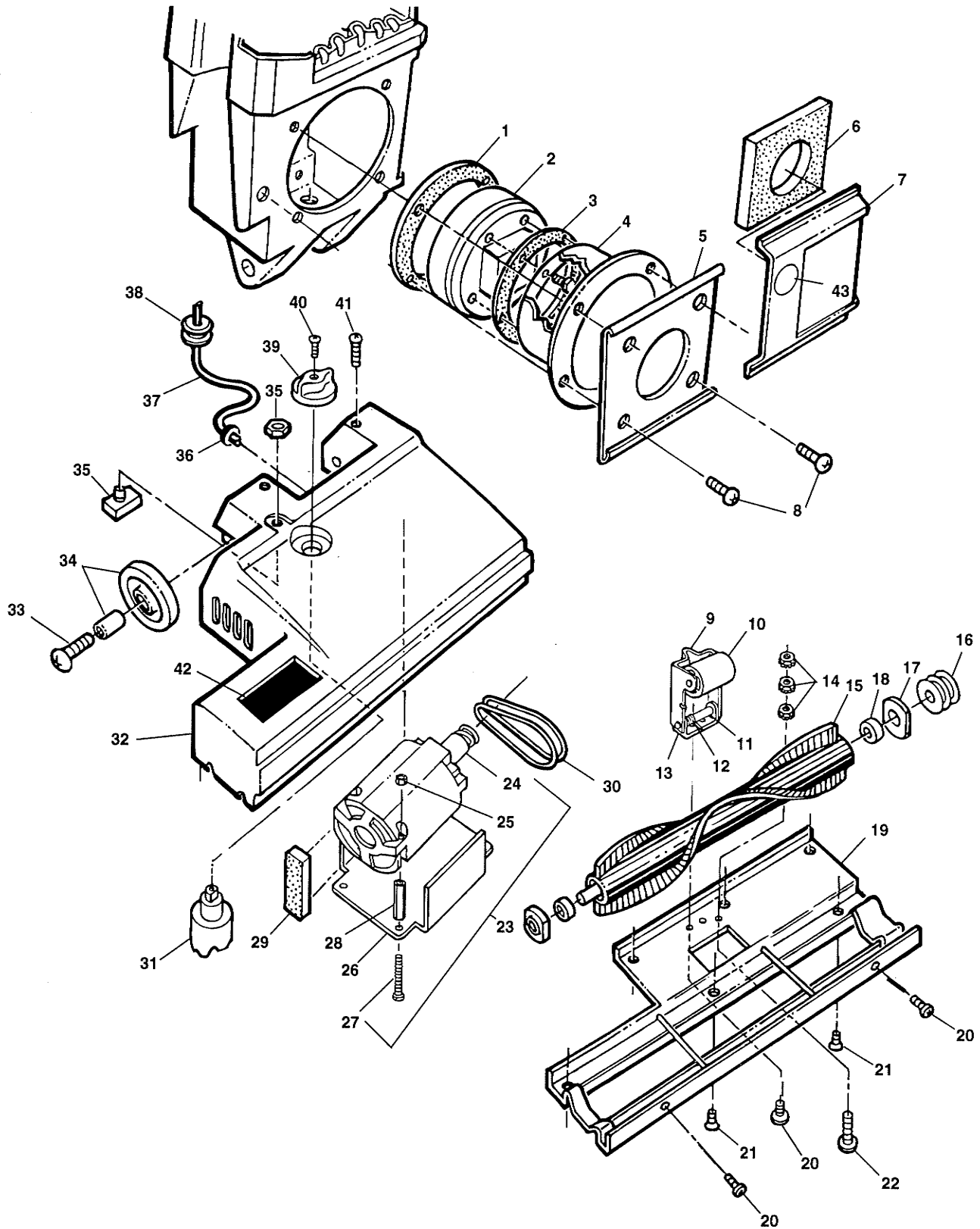
HANDLE DIAGRAM



HANDLE PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.	ITEM #	DESCRIPTION	PART #	QTY.
1.	HANDLE, RM-NDG 120V	100414	1	30.	SPRING, LATCH HANDLE	140422	2
	HANDLE, RM-NDG 220V	100415	1	31.	SCREW, 10-24X3/8	140837	2
	HANDLE, RM BL 120V	100394	1	32.	SHAFT, PIVOT	230618	1
	HANDLE, RM-BL 220V	100408	1	33.	SCREW, 6-32X1	140946	2
2.	SWITCH, ROCKER ON/OFF 120V	130717	1	34.	SCREW, 8-32X5/8	140802	1
	SWITCH, ROCKER DPST 220V	130647	1	35.	GROMMET	22868	2
3.	SCREW, 10-24X3/8	140837	3	36.	CORD 18/3X42"	130239	1
4.	LATCH, COVER	230617	1	37.	CLAMP (LITE TRAC & WHIRLWIND)	140330	1
5.	COVER, BAG RM- NLG	602710	1		CLAMP (WHIRLWIND DELUXE)	140330	2
	COVER, BAG RM-BL	602709	1	38.	WIRE TIE	130040	1
6.	HOSE, VAC	160475	1	39.	WASHER, FLAT	140027	4
7.	HOSE CUFF	160471	2	40.	NUT, LOCK	140546	2
8.	GASKET, COVER	100141	1	41.	TOOL, CREVICE	190714	1
9.	BAG, VACUUM PAPER (1PKG.=10 BAGS)	900000	1	42.	DECAL, WARNING	602595	1
10.	HOUSING, BAG RM-NDG	100411	1	43.	NUT, KEP	140519	3
	HOUSING, BAG RM-BL	100396	1	44.	SCREW, 10-24X5/8	140823	1
11.	HINGE, COVER	230626	1	45.	SCREW, 8-32X1/4	140264	2
12.	RIVET, POP (BAG HSG)	140706	4	46.	SCREW, 6-32X3/4	140879	2
	RIVET, POP (COVER)	600856	3	47.	PLATE, TERMINAL BLOCK	230619.BK	1
13.	WASHER, FLAT	140000	2	48.	STRIP, TERMINAL	130005	1
14.	BUSHING	140142	1	49.	NUT, NYLON	140534	2
15.	PLATE, BAG LOCKOUT	231046	1	50.	CORD GRIP	130166	1
16.	SCREW, 10-24X5/8	140823	1	51.	CORD, 18/3X40'4" 120V (LT & WLW)	130252	1
17.	NUT, LOCK	140552	1		CORD, 16/3X50'4" 120V (WLW DLX)	130219	1
18.	FILTER, HOUSING	102530	1		CORD, 3X1.00MMX50' 220V	600398	1
19.	SCREW, 10-24X3/8	140837	1	52.	TUBE, EXTENSION (LT & WLW)	190039	1
20.	SCREEN, BAG HSG BLACK	180634	1		TUBE, EXTENSION WLW DLX)	190039	2
21.	SCREEN, BAG HSG W/HALF MOON	180635	1	53.	SCREW, 10-24X5/8 (LT & WLW)	140823	2
22.	NUT, LOCK	140552	1		SCREW, 10-24X5/8 (WLW DLX)	140823	4
23.	NUT, NYLON	140534	2	54.	CLAMP (LT & WLW)	140327	1
24.	TERMINAL STRIP	130005	1		CLAMP (WLW DLX)	140327	2
25.	CLAMP	140304	1	55.	NUT, NYLON (LT & WLW)	140552	2
26.	NUT, LOCK	28990	1		NUT, NYLON (WLW DLX)	140552	4
27.	BREAKER, CIRCUIT 1.5AMP	130760	1	56.	ADAPTER, HOSE	160485	1
	BREAKER, CIRCUIT .8AMP	130769	1	57.	SCREW, 10-24X3/8	140197	2
28.	SCREW, 5/16-18X1 1/4	140221	2				
29.	WASHER, FLAT	140027	4				
					▼ = ASSEMBLY		
					▲ = ITEMS INCLUDED IN ASSEMBLY		

BRUSH BASE DIAGRAM



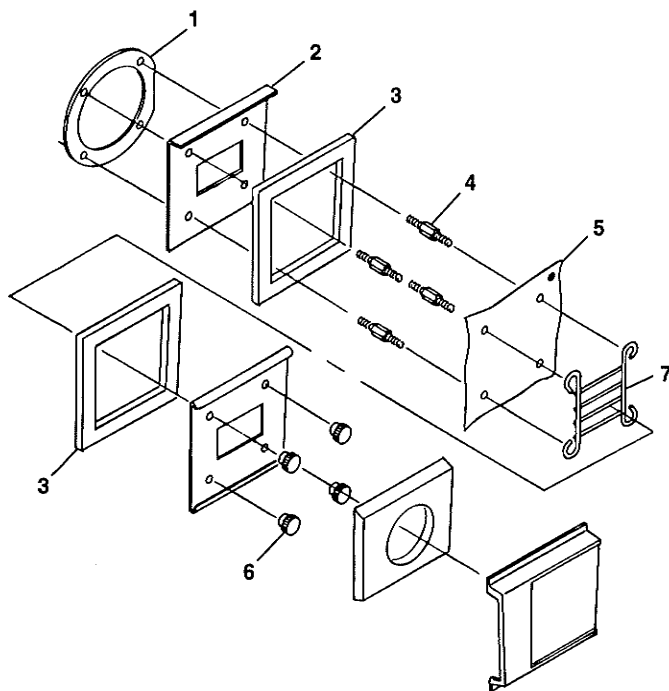
BRUSH BASE PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.	ITEM #	DESCRIPTION	PART #	QTY.
1.	GASKET, VAC COVER	100142	1	22.	SCREW, 10-24X5/8	140823	1
2.	MOTOR, VAC 120V	130988	1	23.	▼ASM., MOTOR / BRACKET 120V	701193	1
	CARBON BRUSH	190164	1		▼ASM., MOTOR / BRACKET 220V	701194	1
	MOTOR, VAC 220V	130997	1	24.	▲MOTOR, BRUSH 120V	*130398	1
	CARBON BRUSH	190159	1		▲MOTOR, BRUSH 220V	*130399	1
3.	GASKET, VAC MOTOR	100143	1	25.	▲NUT, NYLOCK	140066	4
4.	COVER, VAC MOTOR	230919	1	26.	▲BRACKET	230975	1
	GROMMET (NOT SHOWN)	240218	3	27.	▲SCREW, 6-32X1 3/4	140065	4
	SCREEN, MOTOR (NOT SHOWN)	6023	1	28.	▲SPACER	140918	4
	SCREW, 10-32X3/8 (NOT SHOWN)	140874	2	29.	▲FILTER	180637	2
5.	PLATE, COVER	230625.WH	1	30.	BELT	230349	2
6.	FILTER, EXHAUST	180633	1	31.	CAM, ADJUSTER ROLLER	230754	1
7.	COVER, EXHAUST FILTER	100793	1	32.	BASE, RM-NDG	100409	1
8.	SCREW, 10-24X1/2	140890	4		BASE, RM-BL	100398	1
9.	BRACKET, ROLLER	230753	1	33.	SCREW, 5/16-18X 1 3/4	140850	2
10.	ROLLER	26548	1	34.	WHEEL, W / BUSHING	103055	2
11.	RIVET, AXLE	140710	2	35.	SWITCH, ON-OFF SNAP ACTION	130754	1
12.	SPRING	140436	1	36.	BUSHING, STRAIN RELIEF	130110	1
13.	BRACKET, ROLLER PIVOT	230769	1	37.	CORD, 18/3X24"	130672	1
14.	NUT, KEP	140519	3	38.	GROMMET	22868	1
15.	ASM. BRUSH/BEARING/BLOCK	700098	1	39.	KNOB, ROLLER	230756	1
16.	PULLEY	230348	1	40.	SCREW, #6-1/2	140825	1
17.	BLOCK, BEARING	230429	2	41.	SCREW, 10-24X1/4	140947	2
18.	BEARING	140125	2	42.	DECAL, HEIGHT ADJUSTMENT	120044	1
19.	SHOE, CARPET	230765	1	43.	DECAL, PREVENTIVE (120V LITE TRAC ONLY)	120099	1
20.	SCREW, 8-32X1/4	140264	4	*PRIOR TO SERIAL NUMBER LT161000307CO,OLT36049JO, WH16131475DO OR OWH1633638FO ORDER MOTOR BRACKET ASSEMBLY. ▼ = ASSEMBLY ▲ = ITEMS INCLUDED IN ASSEMBLY			
21.	SCREW, 10-24X3/8	140882	6				

TROUBLESHOOTING GUIDE

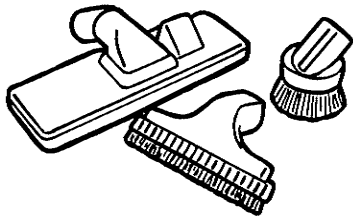
PROBLEM	CAUSE	SOLUTION
The vacuum will not pick up dirt.	1. The vacuum bag is full.	1. Install a new paper vacuum bag or empty the cloth bag.
	2. The hose is clogged.	2. Remove clogs from hose.
	3. The hose is loose from the brush base.	3. Push the hose cuff firmly into the brush base after cleaning with attachments.
	4. One or both hose cuffs are loose.	4. Hold hose in one hand and turn cuff with the other hand until it is tightly threaded onto the hose.
	5. The brush clogged and caused the brush circuit breaker to trip.	5. Unplug the machine , then remove the clog. Push the brush reset button at the rear of the vacuum.
	6. The secondary filter is clogged.	6. Remove the filter and clean or replace it.
	7. The brush drive belts are worn or broken.	7. Replace the drive belts.
The vacuum will not run.	1. The power cord is not plugged in or there is a short in the power cord.	1. Check that the power cord is plugged in and also inspect it for damage.
	2. The power outlet is not providing electricity due to a circuit breaker that has tripped in the building.	2. Try plugging the machine into another power outlet.
	3. The vacuum motor has shut off on thermal overload due to clogged hose, vacuum bag, secondary filter or exhaust filter.	3. Check all these locations for clogs.
	4. The brush clogged and caused the brush circuit breaker to trip.	4. Unplug the machine , then remove the clog. Push the brush reset button, at the rear of the vacuum.
	5. Faulty master switch.	5. Replace the switch.
	6. Loose or broken wiring inside the vacuum.	6. Consult the wiring diagram and repair wiring or take the machine to your authorized distributor for repairs.

OPTIONAL ACCESSORIES



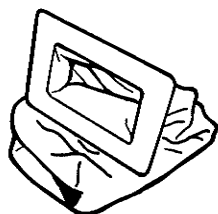
CLEAN AIR EXHAUST FILTER KIT #190951

ITEM #	DESCRIPTION	PART #	QTY.
1.	GASKET, ROUND	100142	1
2.	PLATE, REAR MOUNT	230838.WH	1
3.	GASKET, SQUARE	102562	2
4.	STANDOFF	140606	4
5.	FILTERS, CLEAN AIR (QTY 3)	900006	1
6.	KNOBS, THUMB	240239	4
7.	GRILL, DIVIDER	230839	1



ACCESSORY ATTACHMENT KIT #190713

Contains: Dusting Brush, Floor Brush and Wall/Upholstery Brush



CLOTH VACUUM BAG #900034

