

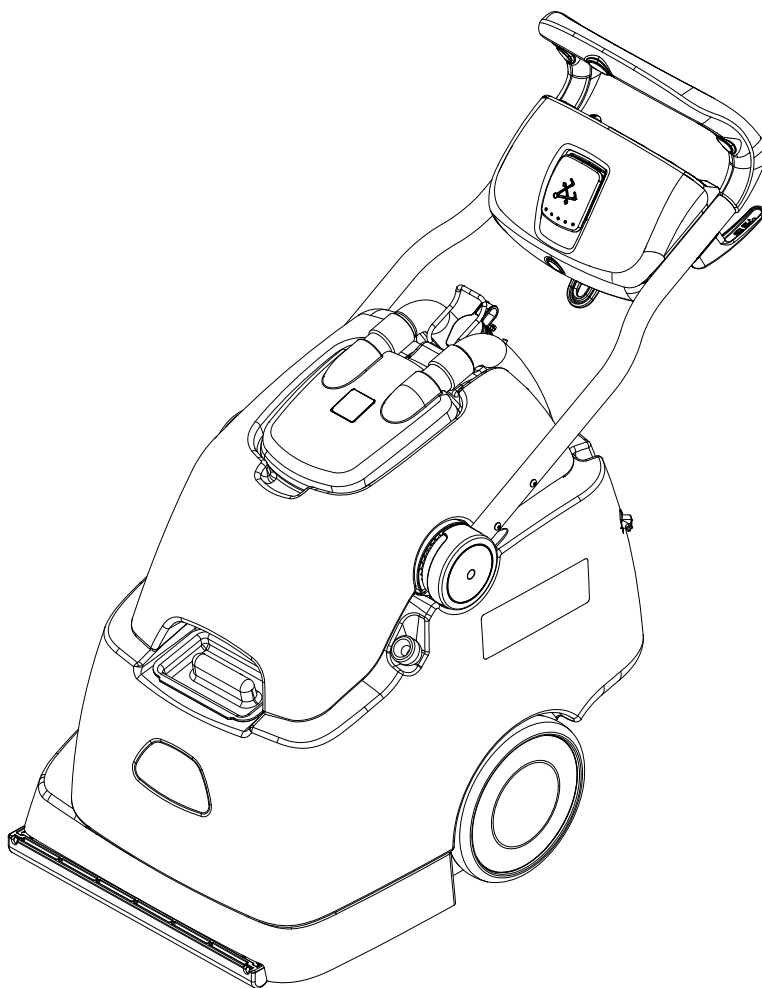
# Clipper Duo



## Carpet Extractor

### Operating Instructions (ENG)

**MODEL:** 1.008-048.0  
CLPDU



**WARNING:**

This product and accessories may contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information about this regulation: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

From Serial Number (Ref No1\*)  
\*See Serial Number Page in Spare  
Parts List or call manufacturer



Model: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Dealer: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Sales Representative: \_\_\_\_\_

### Overview

This carpet extractor is an electrical powered, portable carpet extractor intended for commercial use. The appliance sprays a cleaning solution onto the carpet, agitates the wet carpet, and then extracts the soiled solution back into the unit's recovery tank. The appliance is fitted with and a hand tool for cleaning upholstery and stairs.

## Warranty Registration

Thank you for purchasing a Kärcher North America product. Warranty registration is quick and easy. Your registration will allow us to serve you better over the lifetime of the product.

To register your product go to :

<http://warranty.karcherna.com/>

For customer assistance:

1-800-444-7654



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## How To Use This Manual

This manual contains the following sections:

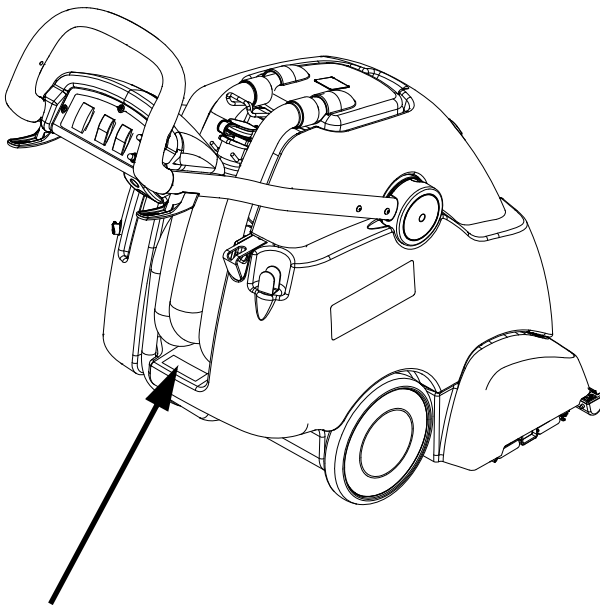
- How to Use This Manual
- Safety
- Operations
- Maintenance

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model:	_____
Date of Purchase:	_____
Serial Number:	_____
Dealer:	_____
Address:	_____
Phone Number:	_____
Sales Representative:	_____

The model and serial number of your machine are located on the back of the machine.



The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance information to keep the machine and its components in good working condition. They are listed in this general order:

- Periodic Maintenance
- Daily/Regular Maintenance
- Troubleshooting

*NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.*

*NOTE: The manual part number is located on the lower right corner of the front cover.*

# IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic precaution  
must always be followed, including the following:

**READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.**

## **! WARNING:**

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

Connect to a properly grounded outlet. See Grounding Instructions.

Do not leave the machine unattended. Unplug machine from outlet when not in use and before maintenance or service.

Use only indoors. Do not use outdoors or expose to rain.

Do not allow machine to be used as a toy. Close attention is necessary when used by or near children.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

Do not use damaged electrical cord or plug. Follow all instructions in this manual concerning grounding the machine. If the machine is not working properly, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

Do not pull or carry machine by electrical cord, use as a handle, close a door on cord, or pull cord around sharp edges or corners.

Do not run machine over cord. Keep cord away from heated surfaces.

Do not unplug machine by pulling on cord. To unplug, grasp the electrical plug, not the electrical cord.

Do not handle the electrical plug or machine with wet hands.

Do not operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

This machine is intended for cleaning carpet only.

Do not vacuum anything that is burning or smoking, such as cigarettes, matches, or hot ashes.

This machine is not suitable for picking up health endangering dust.

Turn off all controls before unplugging.

Do not operate this machine near flammable fluids, dust or vapors.

Maintenance and repairs must be done by qualified personnel.

If foam or liquid comes out of machine, switch off immediately.

## READ AND SAVE THESE INSTRUCTIONS

# CONSIGNES DE SÉCURITÉ IMPORTANTES

**Lors de l'utilisation de cette machine, des précautions de base doivent toujours être prises, y compris les précautions suivantes :  
LIRE TOUTES LES INSTRUCTIONS AVANT D'UTILISER CETTE MACHINE.**

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

Cet appareil ne doit être connecté qu'à des prises ayant une sortie de terre.

Ne pas laisser l'appareil sans surveillance lorsqu'il est branché. Débrancher lorsque l'appareil n'est pas utilisé et avant l'entretien.

Pour réduire les risques de choc électrique, ne pas utiliser à l'extérieur et ne pas aspirer de matières humides.

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.

Utiliser cet appareil conformément aux instructions du présent manuel uniquement. N'utiliser que conformément à cette notice avec les accessoires recommandés par le fabricant.

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.

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.

Ne pas débrancher en tirant sur le cordon. Tirer plutôt la fiche.

Ne pas toucher la fiche ou l'appareil lorsque vos mains sont humides.

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.

Cette machine est destinée pour nettoyer tapis seulement.

Ne pas aspirer de matières en combustion ou qui dégagent de la fumée, comme des cigarettes, des allumettes ou des cendres chaudes.

Cette machine n'est pas adaptée au ramassage de poussières dangereuses.

Mettre toutes les commandes à la position ARRÊT avant de débrancher l'appareil.

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.

L'entretien et les réparations de la machine doivent être effectués par un personnel qualifié.

Si de la mousse ou du liquide sort de la machine, la mettre hors tension immédiatement.

## LIRE ET CONSERVER CES INSTRUCTIONS

The following symbols are used throughout this guide as indicated in their descriptions:

## HAZARD INTENSITY LEVEL

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and **FOR SAFETY**. The level of hazard intensity is determined by the following definitions:



**WARNING** - Hazards or unsafe practices which COULD result in severe personal injury or death.



**CAUTION** - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

### ***FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.***

Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

#### ***FOR SAFETY:***

**DO NOT OPERATE MACHINE:**

Unless Trained and Authorized.

Unless Operation Guide is Read and understood.

In Flammable or Explosive areas.

In areas with possible falling objects

#### ***WHEN SERVICING MACHINE:***

Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine. Use manufacturer approved replacement parts.

Les symboles suivants sont utilisés dans tout ce manuel, tels que décrits ici :

## NIVEAU D'INTENSITÉ DU DANGER

Il existe trois niveaux d'intensité du danger, identifiés par des termes d'avertissement - **AVERTISSEMENT**, **ATTENTION** et **POUR VOTRE SÉCURITÉ**. Le niveau d'intensité du danger est déterminé par les définitions suivantes :

### **⚠ AVERTISSEMENT:**

**AVERTISSEMENT** - Les dangers ou des pratiques contraires à la sécurité qui **POURRAIENT** entraîner des blessures personnelles ou la mort.

### **⚠ ATTENTION:**

**ATTENTION** - Les dangers ou des pratiques contraires à la sécurité qui pourraient entraîner des blessures personnelles légères ou des dégâts sur le produit ou d'autres biens.

### ***POUR DES RAISONS DE SÉCURITÉ : Pour identifier les actions qui doivent être exécutées pour un fonctionnement sûr de l'équipement.***

Signaler immédiatement tout dommage subi par la machine ou fonctionnement défectueux. Ne pas utiliser la machine si elle ne fonctionne pas correctement. Ci-dessous se trouvent les informations indiquant les conditions potentiellement dangereuses pour l'opérateur ou l'équipement. Lire attentivement ces informations. Être conscient que ces conditions peuvent survenir. Repérer tous les dispositifs de sécurité sur la machine. Suivre les étapes nécessaires de formation du personnel qui utilise la machine.

### ***POUR DES RAISONS DE SÉCURITÉ :***

**NE PAS FAIRE FONCTIONNER LA MACHINE :**

Sauf si le personnel est formé et autorisé.

Sauf si le manuel d'utilisation est lu et compris.

Dans des zones inflammables ou explosives.

Dans des zones contenant des objets susceptibles de tomber

### ***LORS DE L'ENTRETIEN DE LA MACHINE :***

Éviter les pièces mobiles. Ne pas porter de vêtements, vestes, chemises ou manches vagues lors de l'entretien de la machine. Utiliser les pièces de rechange approuvées par le fabricant.



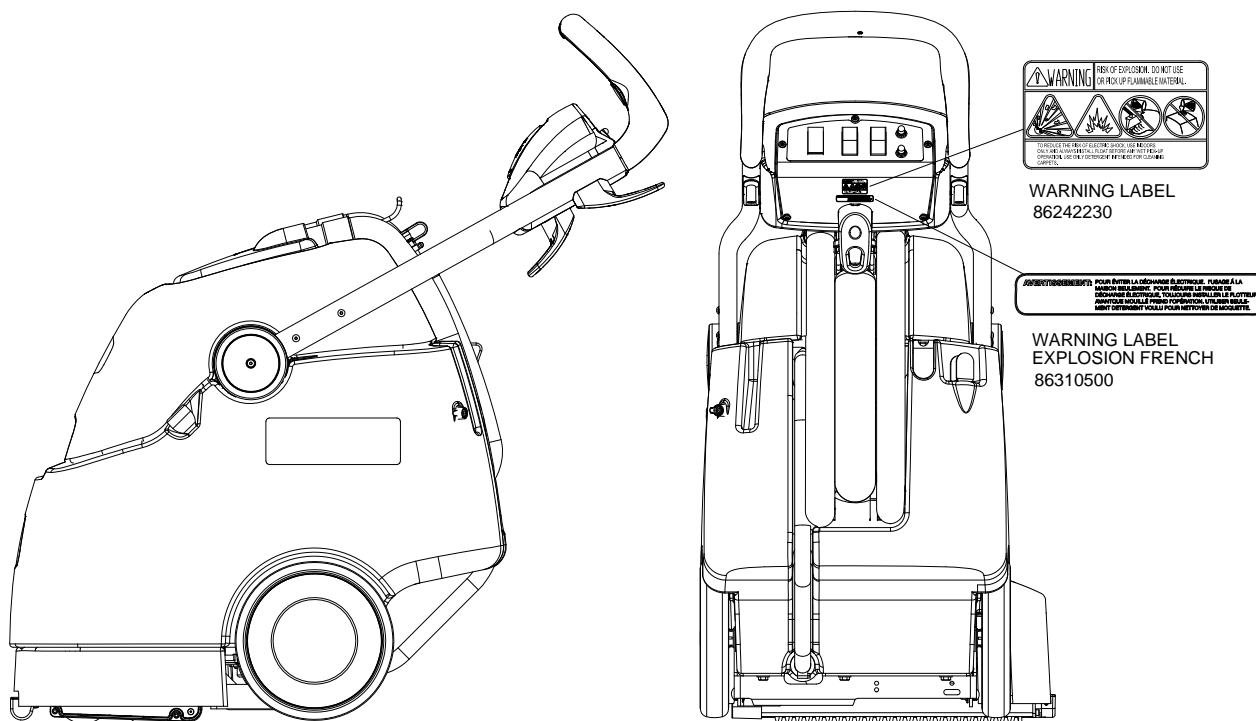
## Safety Labels

*NOTE: These drawings indicate the location of safety labels on the machine. If at any time the labels become illegible, promptly replace them.*

### Emplacement De L'étiquette De Sécurité

Les ÉTIQUETTES D'AVERTISSEMENT suivantes se trouvent sur votre unité de nettoyage. Ces étiquettes signalent les avertissements et mises en garde importantes qui doivent être suivis en tout temps. Le non respect des avertissements et mises en garde pourrait entraîner des dommages matériels, des blessures graves ou même la mort. Suivez attentivement ces instructions ! NE PAS retirer ces étiquettes.

REMARQUE : Ces dessins indiquent l'emplacement des étiquettes de sécurité sur la machine. Si, à tout moment, les étiquettes deviennent illisibles, remplacez-les rapidement.



## Grounding Instructions

### Electrical

In the USA this machine operates on a standard 15 amp 115 volt A.C. power circuit. The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors

### Extension Cords

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine, and must be limited to 50 feet (15.5m) in length.

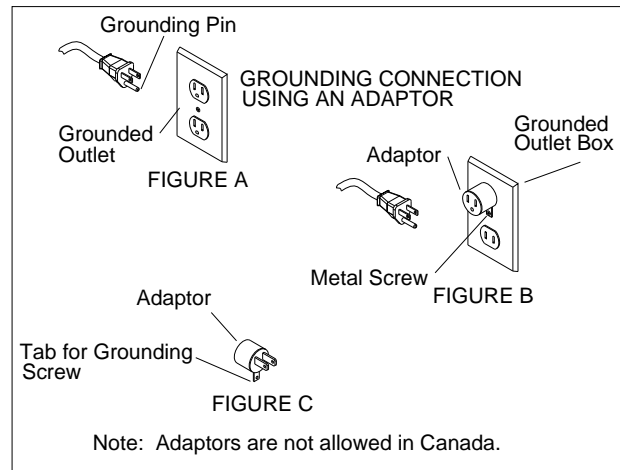
### Grounding Instructions

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.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug illustrated in sketch A. A temporary adapter looks like adapter illustrated in sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (sketch A) can be installed by a qualified electrician. The green colored rigid ear, lug or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw

### **⚠ 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.**



*NOTE: In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code.*

## Instructions De Mise À La Terre

Cet appareil doit être relié à la terre. S'il fonctionne mal ou tombe en panne, la mise à la terre fournit un chemin de résistance moindre au courant électrique pour réduire le risque d'électrocution. Cet appareil est fourni avec un cordon équipé d'un conducteur de mise à la terre d'équipement et d'une fiche de terre. La fiche doit être insérée dans une prise appropriée qui est correctement installée et mise à la terre, conformément aux codes et réglementations locales.

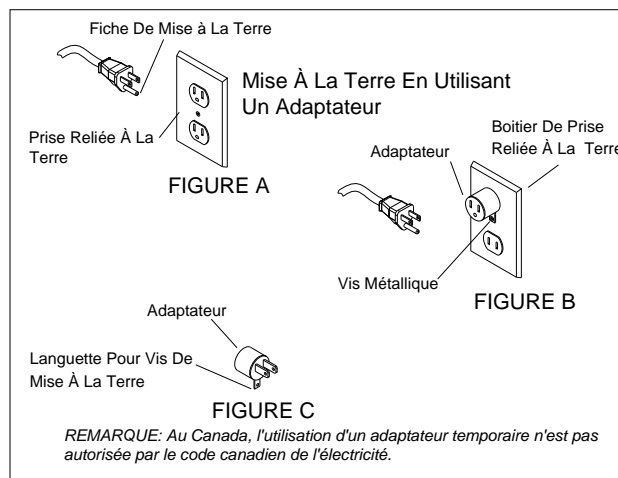
### **⚠ AVERTISSEMENT:**

**Une connexion incorrecte du conducteur de mise à la terre de l'équipement peut entraîner une électrocution. En cas de doute sur la mise à la terre de la prise murale, vérifier, avec un électricien qualifié ou un technicien d'entretien. Ne pas modifier la fiche fournie avec l'appareil- Si elle ne correspond pas à la prise murale, faire installer une prise appropriée par un électricien qualifié.**

Cet appareil doit être utilisé sur un circuit nominal de 120 volts et est équipé d'une prise de terre qui ressemble à celle illustrée dans le schéma A. Un adaptateur temporaire ressemble à l'adaptateur illustré aux schémas B et C, peut être utilisé pour brancher la fiche à une prise à 2 pôles comme illustrés au schéma B si aucune prise correctement reliée à la terre n'est disponible. L'adaptateur temporaire doit être utilisé uniquement jusqu'à ce qu'une prise correctement reliée à la terre (schéma A) puisse être installée par un électricien qualifié. La patte rigide ou le crochet de couleur verte ou l'équivalent à l'extrémité de l'adaptateur doit être connecté à une prise de terre permanente telle qu'une boîte de jonction correctement reliée à la terre. Dès lors que l'adaptateur est utilisé, il doit être maintenu en place par une vis métallique.

### *Rallonges*

Si une rallonge est utilisée, la taille du fil doit être au moins une taille plus grande que le cordon d'alimentation sur la machine, et doit être limitée à 50 pieds (15,5 millions) de longueur.



*REMARQUE : Au Canada, l'utilisation d'un adaptateur temporaire n'est pas autorisée par le code canadien de l'électricité.*

**Technical Specifications**

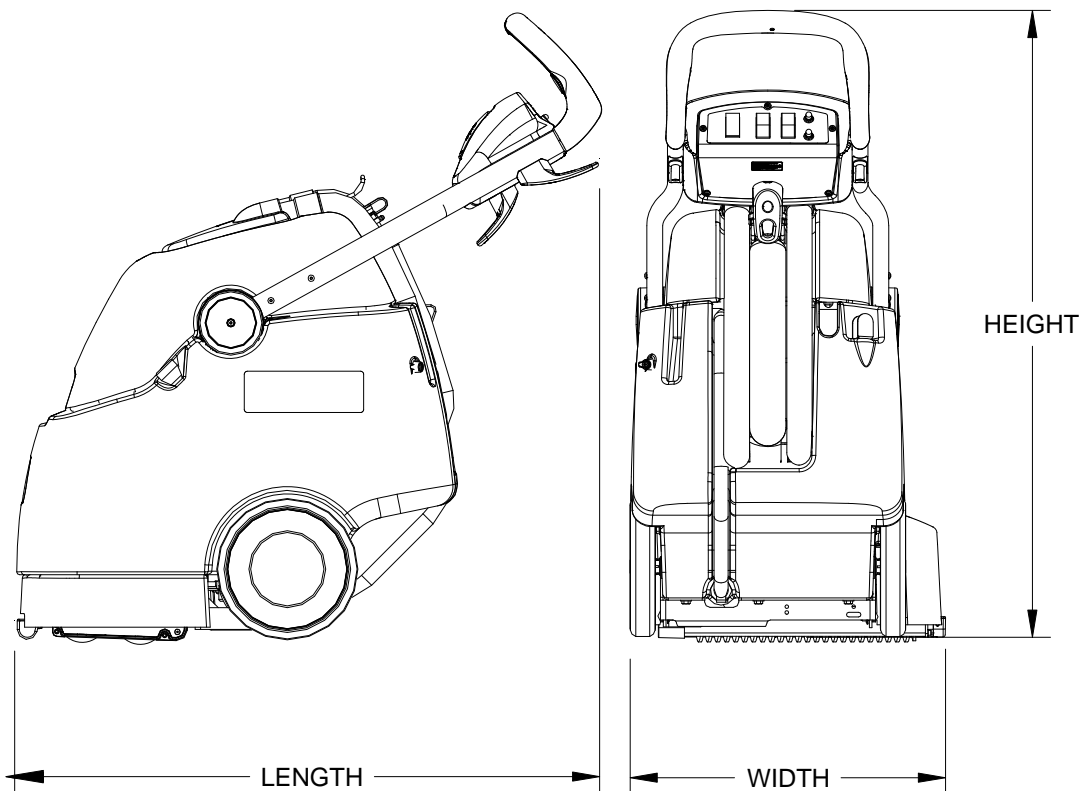
ITEM	DIMENSION/CAPACITY
Construction	Steel chassis with rotationally molded polyethylene tanks
Vacuum Motor	Three stage, bypass, 1.5 hp (1,119 watts), 100 cfm (2.8m <sup>3</sup> /min), 120" (3050 mm) waterlift
Solution Pump	100 psi (7 bar) - Restorative 50 psi (3.5 bar) - Interim
Brush Motor	1/2 hp (604 watts) AC with circuit breaker protection
Brushes	2 x 16" (406 mm), ABS core, Perform Alert™ bristle spiral pattern
Cleaning Path	16" (40.6 cm)
Flow Rate	Interim - 0.09 gpm ( 0.37 lpm) Restorative - 1.0 gpm (37.8 lpm)
Solution Spray	Interim - One quick-disconnect jet Restorative - One quick-disconnect jet
Solution Tanks	10 gallons ( 37.8 l)
Recovery Tank	10 gallons (37.8 l)
Vacuum Shoe	18" (458 mm) wide, cast aluminum
Wheels	10" (254 mm) non-marking rubber
Power Cable	50' (15 m) detachable
Weight	166 lbs (75.3 kg) with cord

**Special Notes:**

The sound pressure level at the operator's ear was measured to be 73.7 dBA. This was a nearfield, broad-band measurement taken in a typical industrial environment on a tile floor. This appliance contains no possible source of impact noise. The instantaneous sound pressure level is below 63 Pa.

The weighted root mean square acceleration at the operator's arms was measured to be below 2.5m/s<sup>2</sup>. This was a tri-axial, third-octave-band measurement made during normal operation on a composite tile floor. The measurement and related calculations were made in accordance with ISO 5349-1.

ITEM	MEASURE
Height	43 inches (1092 mm)
Length	40.5 inches (1029 mm)
Width	22 inches (559 mm)
Width of scrub path	16 inches (406 mm)



**⚠ CAUTION:**

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.

**⚠ ATTENTION:**

Cet appareil n'est pas prévu à l'usage des personnes (enfants y compris) avec des possibilités physiques, sensorielles ou mentales réduites, ou le manque d'expérience et de connaissance, à moins qu'ils aient été donnés la surveillance ou l'instruction au sujet de l'utilisation de l'appareil par une personne chargée de leur sûreté. Des enfants devraient être dirigés pour s'assurer qu'ils ne jouent pas avec l'appareil.

### How this machine works

This carpet extractor is an electrical powered, portable carpet extractor intended for commercial use. The appliance sprays a cleaning solution onto the carpet agitates the wet carpet, and then extracts the soiled solution back into the unit's recovery tank. The appliance is fitted with and a hand tool for cleaning upholstery and stairs.

The machine is designed to maintain your carpet using the Encapsulating Interim Carpet Cleaning Process. By using the Interim Carpet Maintainer in conjunction with Windsor Red Carpet Encapsulating Interim Cleaning (W450-4) or Encapsulating Interim Cleaning with Carpet Protection (W455-4) chemical solution, you can perform a regular light cleaning and grooming of your carpet very quickly, and have the carpet dry and ready for traffic within 30 minutes.

The machine is also designed to restore your carpet using carpet extraction chemicals. The machine is designed to apply cleaning solution onto carpeted floor, scrub the carpet with two counter-rotating brushes, and then vacuum the soiled water back into the recovery tank.

The machine's primary systems are the solution system, scrub system, recovery system and operator control system.

The function of the solution system is to store mixed solution and deliver solution to the appropriate spray jet. The solution system consists of the solution tank, strainer, extraction pump and interim pump, solenoid valve, spray jets, accessory hand tool, and controls. The solution tank stores solution until it is delivered through the strainer to the appropriate pump. The solenoid valve allows flow from the extraction pump to the extraction nozzle or stops flow at the extraction nozzle so that the accessory hand tool can be used. The interim pump provides flow directly to the interim nozzle. The strainer protects the pump from debris. The solution pumps control the cleaning solution flow.

The function of the scrub system is to scrub the carpet, mix the cleaning solution with the soil and lift and groom the carpet pile. The scrub system consists of two cylindrical brushes, motor, and controls. The brushes scrub the carpet as the motor drives the brushes. The counter-rotating action of the brushes grooms the carpet pile.

The function of the recovery system is to vacuum the soiled water back into the recovery tank. The recovery system consists of the vacuum shoe, vacuum motor, float ball filter, recovery tank and controls. The vacuum shoe extracts the dirty solution from the carpet as the machine moves forward. The vacuum motor provides suction to draw the dirty solution off the floor and into the recovery tank. The float ball filter protects the vacuum fan from debris and foam. The recovery tank stores the dirty solution.

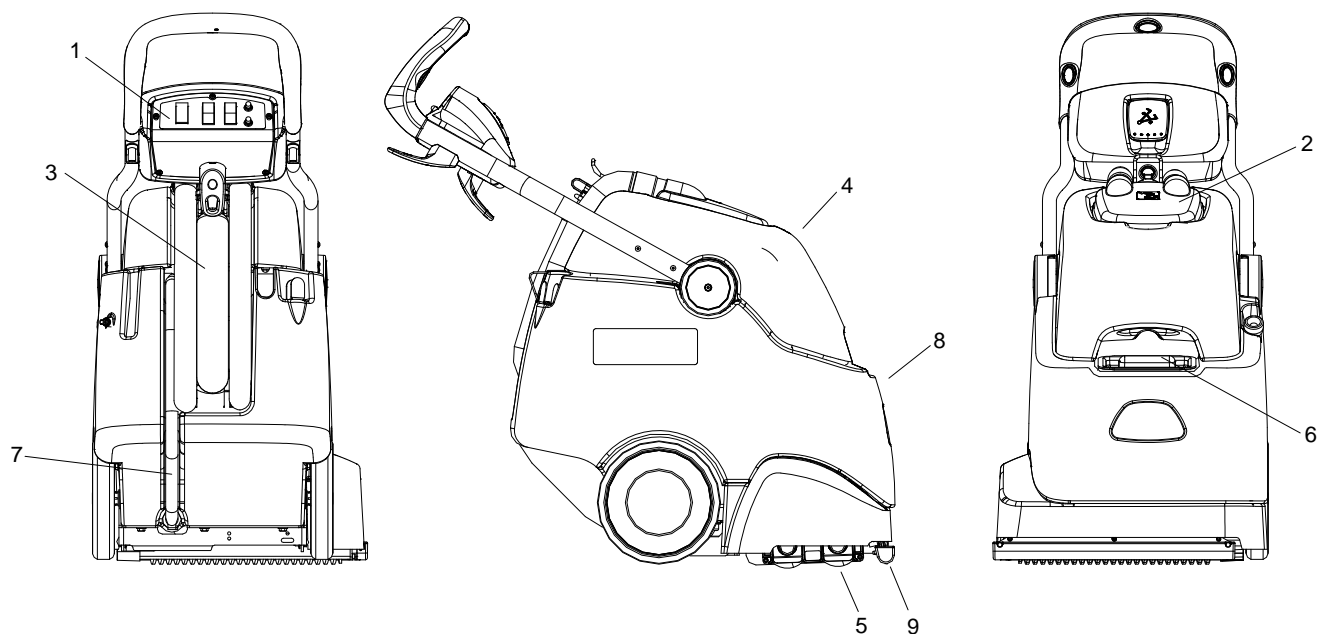
The function of the operator control system is to allow the operator to select the desired function to perform.

### **CAUTION:**

This appliance is not suitable for picking up hazardous dust.

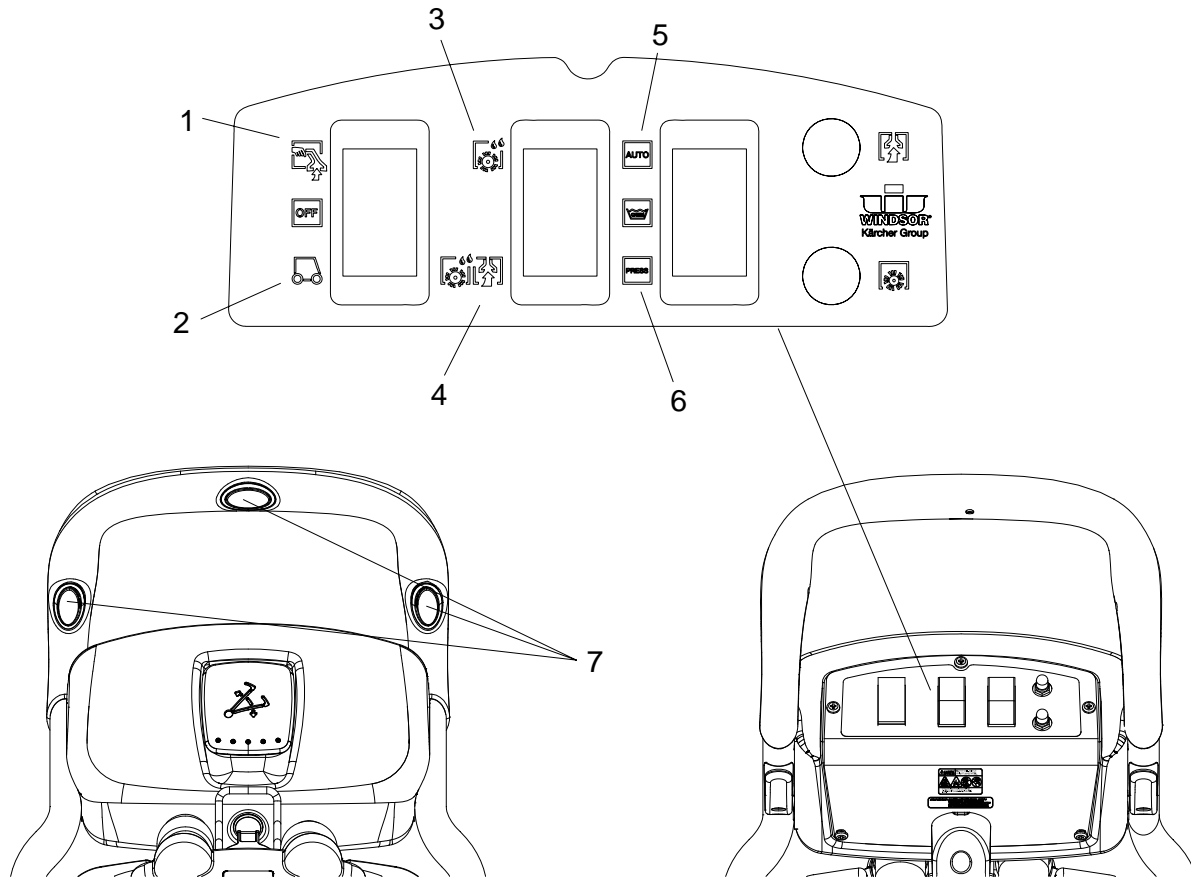
### **ATTENTION:**

Cet appareil n'est pas conçu pour aspirer des poussières dangereuses.



### Components

- 1. Control Panel
- 2. Recovery Dome
- 3. Recovery Drain Hose
- 4. Recovery Tank
- 5. Scrub Deck
- 6. Solution Fill Cover
- 7. Solution Drain Hose
- 8. Solution Tank
- 9. Vacuum Shoe



**Controls**

- 1. Hand Tool Switch
- 2. Main Switch
- 3. Light Cleaning
- 4. Deep Cleaning

- 5. Continuous Spray
- 6. Intermittent Spray
- 7. Intermittent Spray Buttons



## Filling The Solution Tank

**Do not put defoamer, solvents, spotter or prespray chemicals in the solution tank.**  
**Do not allow water to spill into vacuum motor inlet.**  
**Dry spills from top of solution tank.**

Use only the suitable chemicals listed below. Using incompatible chemicals will damage the machine. Damages of this type are not covered under warranty. Carefully read ingredients on manufacturer's label before using any product in this machine.

### CHEMICALS

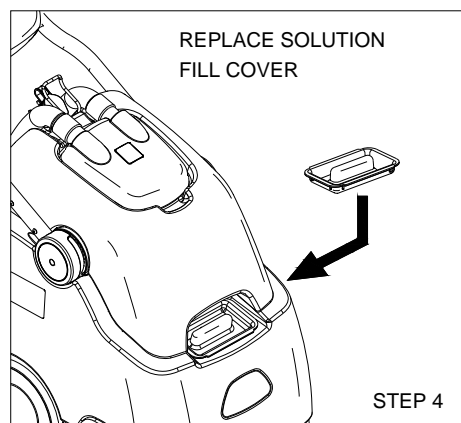
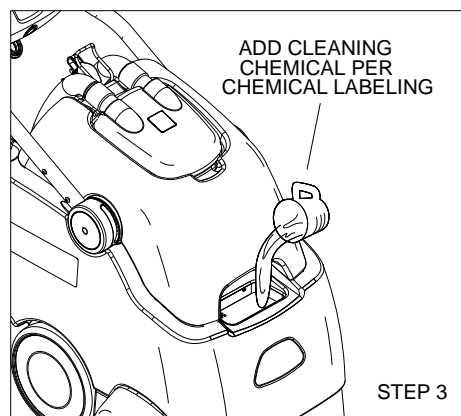
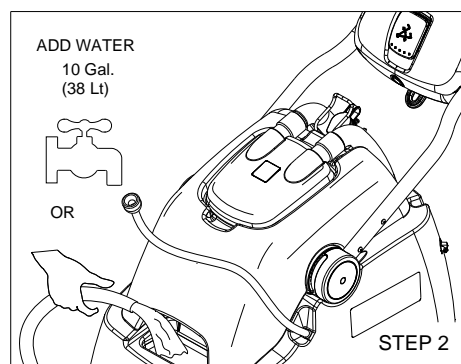
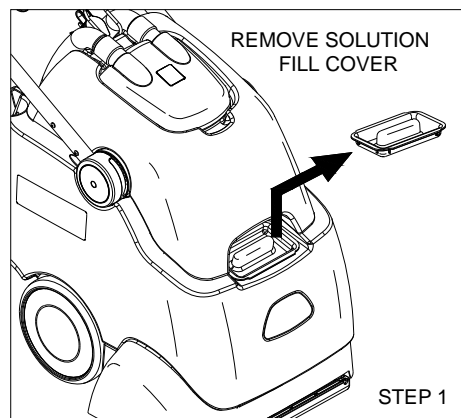
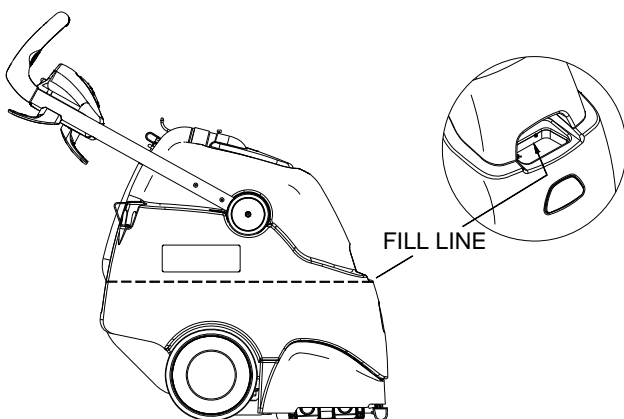
#### Suitable Chemicals

*Alkalis*  
*Detergents*  
*Hydroxides*  
*Soaps*  
*Vinegar*

#### Non-Compatible Chemicals

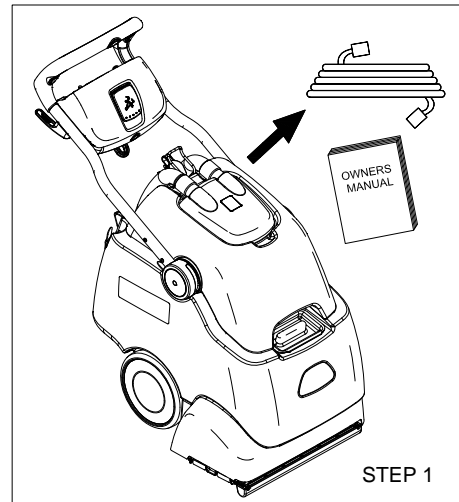
*Aldehydes*  
*Aromatic Hydrocarbons*  
*SP Butyls*  
*Carbon Tetrachloride Clorox\**  
*Chlorinated Bleaches*  
*Chlorinated Hydrocarbons*  
*Lysol\**  
*Methyl Ethel Ketone (MEK)*  
*Perchlorethylene (perc)*  
*Phenolics*  
*Trichlorethylene*  
*D-Limonene*

\* Product Trademark Names

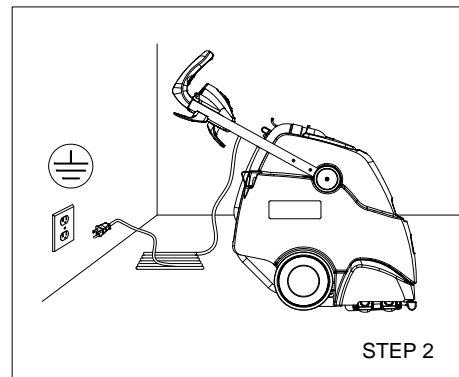


## Pre Run Setup

Remove electrical cord and literature from recovery tank. Fill solution tank (see filling instructions).



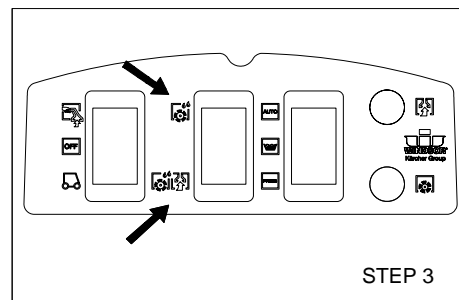
Plug cord into grounded outlet. *NOTE: Be sure dome is seated on recovery tank, and float shut-off is installed correctly.*



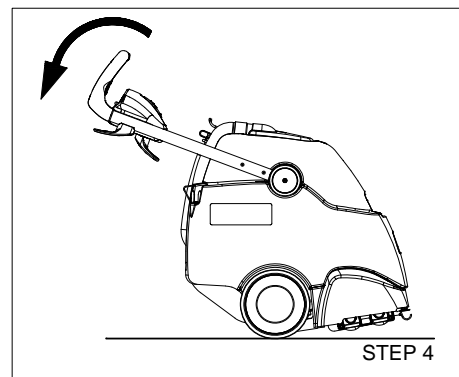
Switch the cleaning mode switch to the desired process.

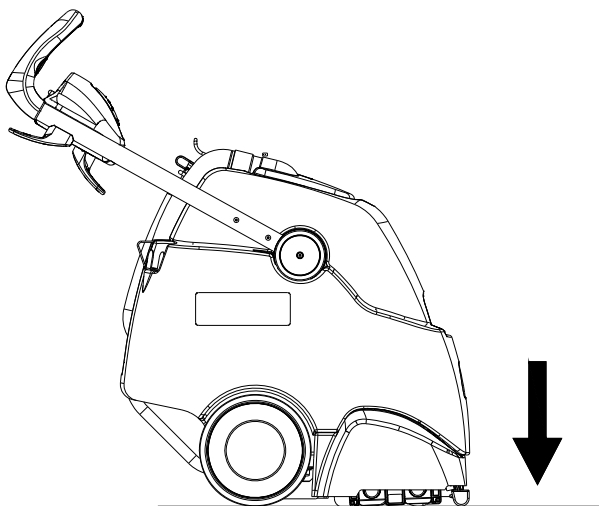
Press the top of the switch for the encapsulating Interim Carpet Cleaning Process.

Press the bottom of the switch for Deep Extraction.

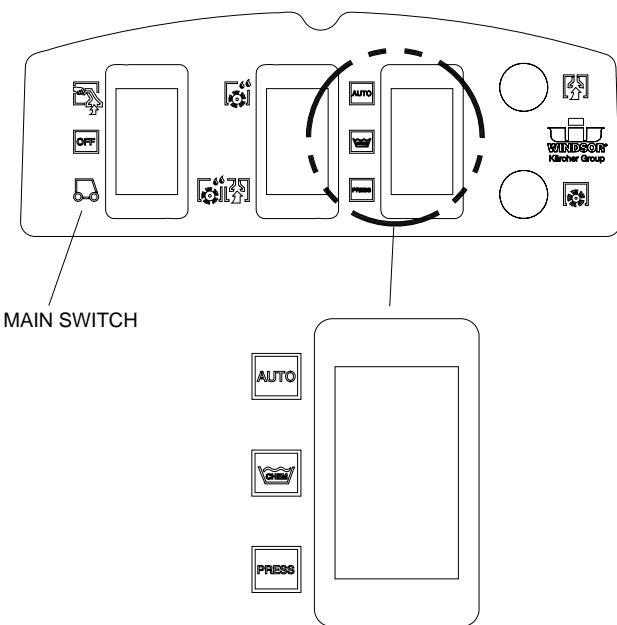


Adjust handle to comfortable operating position. Tip machine back by main handle to move to starting point.





Lower machine to floor.



Select continuous AUTO setting to start solution spray or select intermittent PRESS setting to enable use of trigger switches to start solution spray.

The intermittent PRESS setting requires the operator to hold any one of the three trigger switches in the "on" position with the fingers, and is typically used in small areas where short cleaning passes are made.

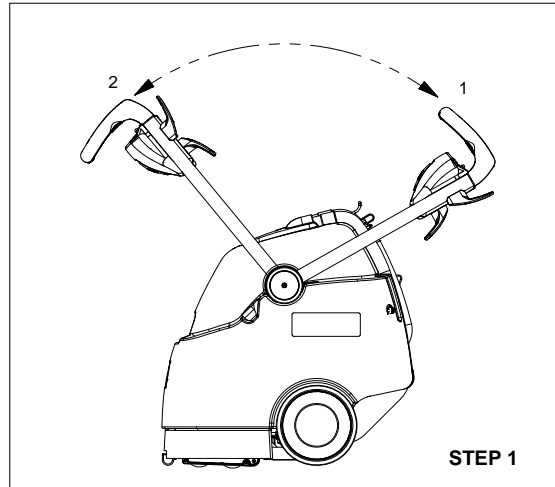
The continuous AUTO setting allows the operator to set the switch in the "on" position with one touch, and is typically used in large areas where long cleaning passes are made.

Place main switch in machine cleaning mode to start cleaning process.

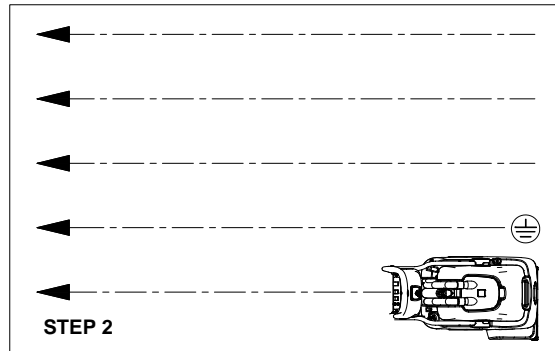
## Operating The Machine

1. This machine can be operated in either direction. For smaller areas operate the machine by pulling rearward.

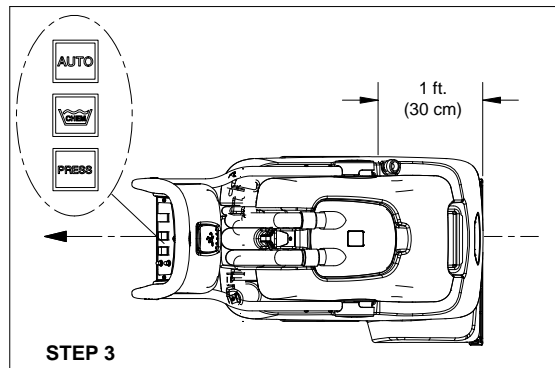
For larger unobstructed areas, flip the handle and use the machine's brush assisted propelling motion.



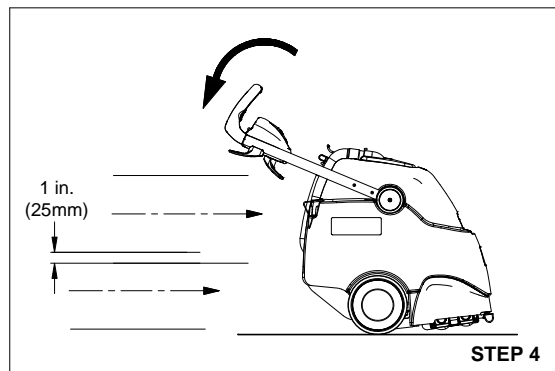
2. Start at wall closest to power outlet. For small areas, pull straight back without pushing down on handle.

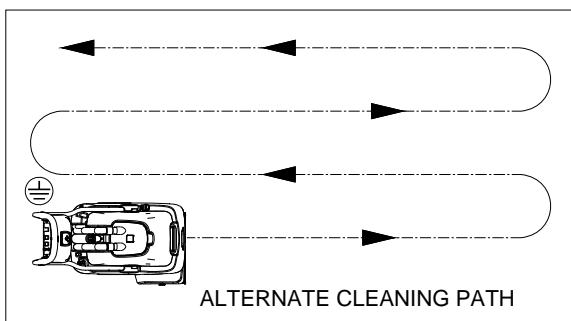


3. Release intermittent PRESS trigger switches or turn off continuous AUTO setting on solution switch approximately 1 foot before ending cleaning pass.

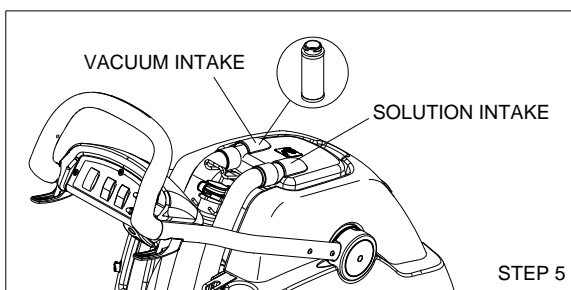


4. Push down on handle to raise vacuum shoe and brush before moving to the next cleaning pass. Overlap brush contact area approximately 1 inch.



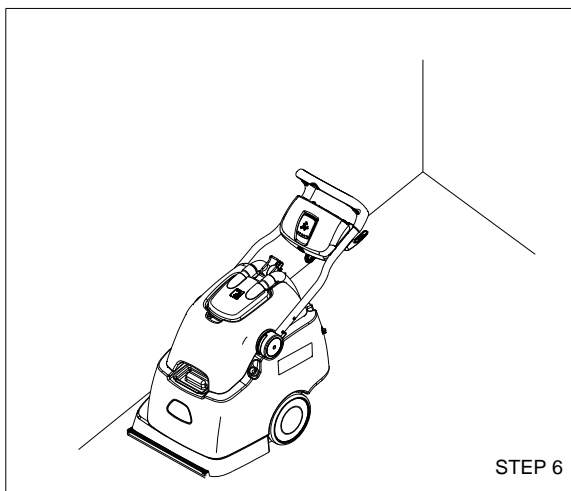


Start at wall closest to power outlet. For large areas flip handle and operate machine in parallel passes, overlapping brush path. Clean perimeter last.

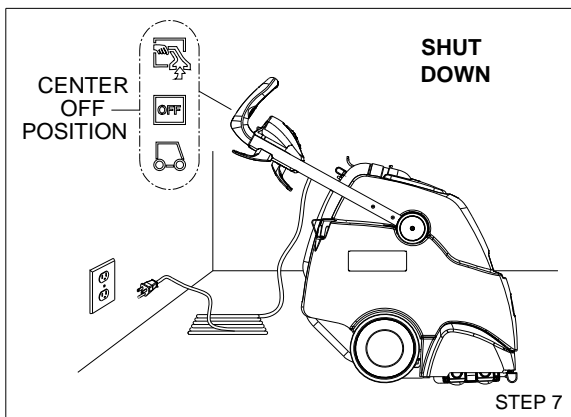


5. During operation, observe the following: This machine is equipped with clear dome to facilitate operator viewing of dirty solution and vacuum air flow.

During operation, observe the vacuum intake. Large amounts of water or foam entering the vacuum system can damage the vacuum motor. If you notice either condition, shut down the machine immediately. Empty recovery tank and/or add defoamer to recovery tank.



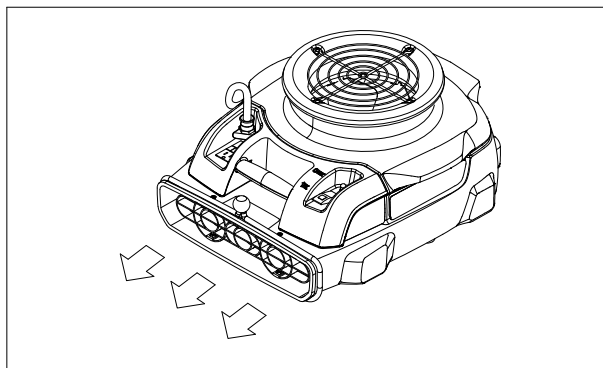
6. Use right side of machine for cleaning against walls.



7. After cleaning, turn off all controls, and carefully unplug machine.

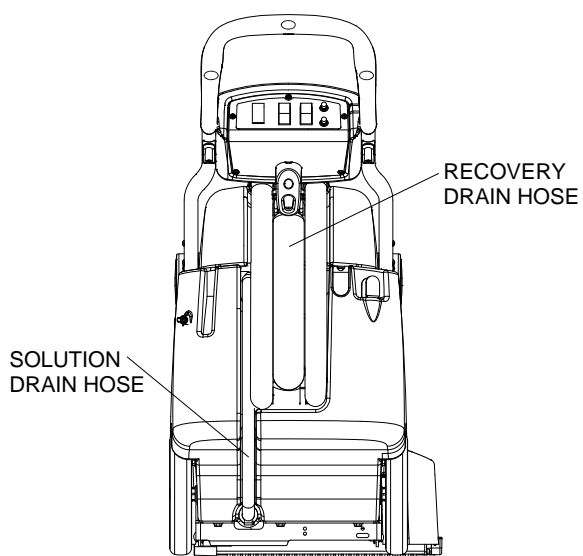
## Operations

To speed drying, use an air mover fan.



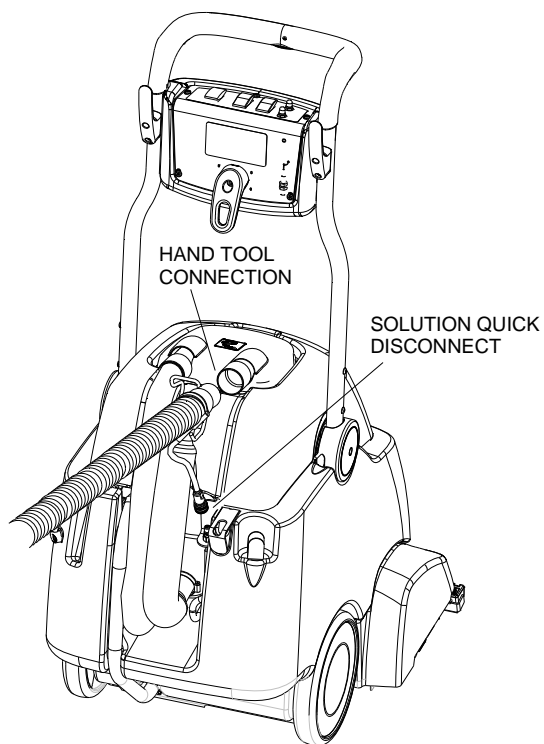
8. Empty recovery tank by releasing recovery drain hose. Use a hose with cold water to clean out the recovery tank.

Drain solution tank after each use.



**STEP 8**

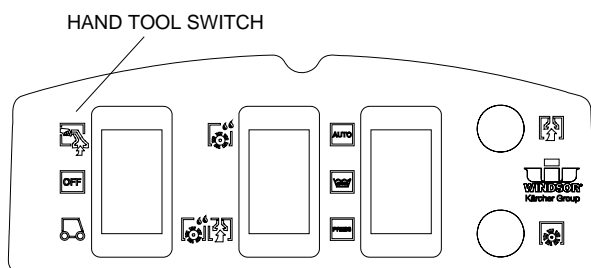
## Using The Hand Tool



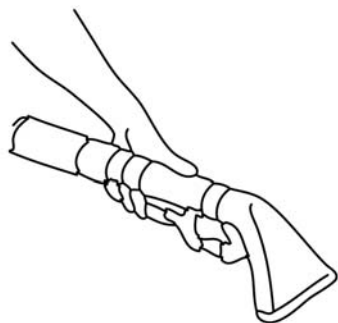
1. Use only acceptable accessory tools. See Optional Accessories section.

To connect solution hose pull back collar and insert over machine mounted fitting, then release collar to lock into place. Solution connection can remain connected at all times.

Disconnect vacuum hose and connect the hand tool to hand tool connection as shown.



2. Select hand tool switch.



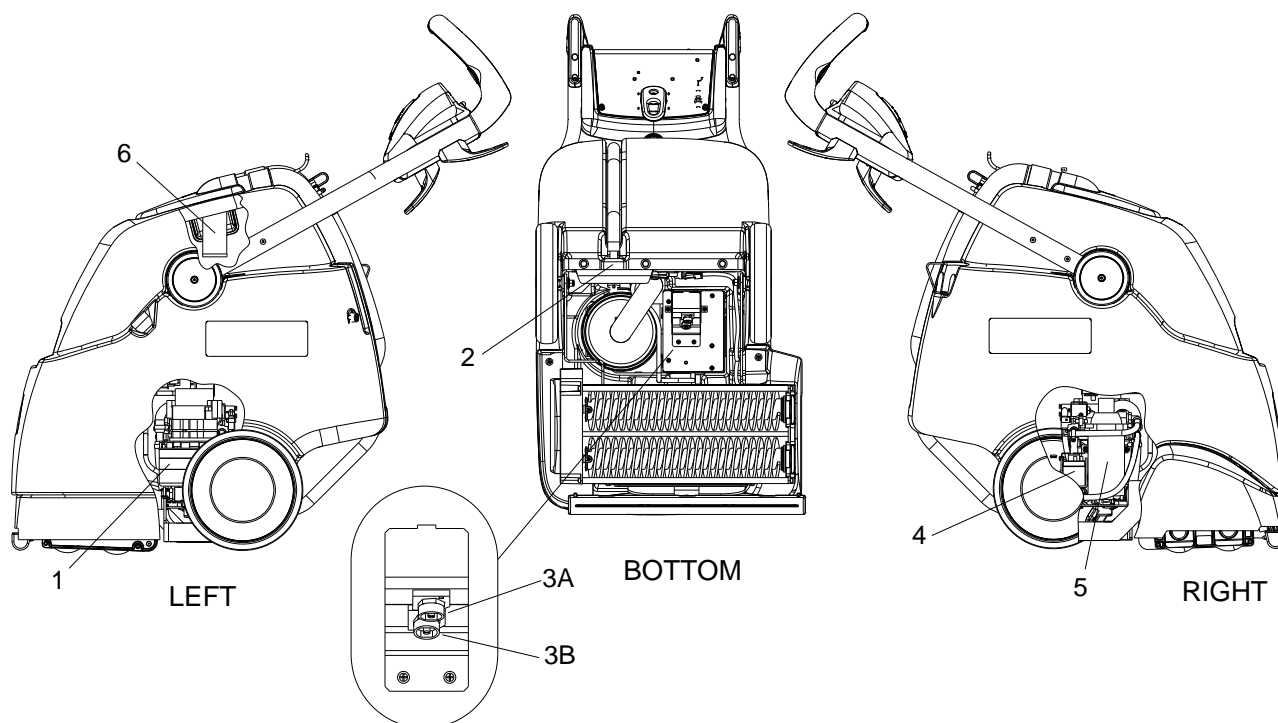
3. Squeeze handle on accessory tool to begin cleaning.

**Service Schedule**

MAINTENANCE	DAILY	WEEKLY	QUARTERLY
Check machine for cord damage	*		
Check recovery dome and gasket for damage and cleanliness	*		
Check brushes - should be clean with no lint or strings attached	*		
Remove bearing cap from end of brush. Clean bearing and cap.	*		
Inspect vac shoe for blockage; remove fibers with coat hanger, etc.	*		
Check hoses for wear, blockages, or damage	*		
Check handles, switches, and knobs for damage	*		
Run one gallon of water through solution system	*		
Clean out recovery tank, clean float screen and check float valve to make sure it moves freely	*		
Clean out solution	*		
Clean outside of all tanks and check for damage	*		
Run vac motor for at least one minute to allow motor to dry	*		
Store with dome off tank to allow the tank to dry	*		
Check all bearings for noise		*	
Check all gaskets for wear and leakage		*	
Check pump pressure; observe spray pattern and check with gauge if necessary		*	
Check and clean solution screen		*	
Check brush for wear; ensure bristles are not damaged		*	
Check condition of vac shoe and frame for damage		*	
Check overall performance of machine		*	
Check vac motor carbon brushes			*
Check belts for wear and replace as necessary			*
Check cables for fraying			*



## Components



- 1. Vacuum Motor
- 2. Solution Strainer (Inside Tank Fitting)
- 3A. Spray Jet - Extraction
- 3B. Spray Jet - Interim

- 4. Interim Solution Pump
- 5. Main Solution Pump
- 6. Float Shut-Off

### Periodic Maintenance

Twice a month, flush a white vinegar solution (One quart vinegar to two gallons of water) or anti-browning solution (mixed as directed) through the extractor. This will prevent build-up of alkaline residue in the system. If spray jets become clogged, remove the spray tips, wash them thoroughly, and blow-dry.

*NOTE: Do not use pins, wire, etc. to clean nozzles as this could destroy spray pattern.*

Periodically inspect all hoses, electrical cables and connections on your machine. Frayed or cracked hoses should be repaired or replaced to eliminate vacuum or solution pressure loss. If the cable insulation is broken or frayed, repair or replace it immediately. Do not take chances with electrical fire or shock.

### Daily / Regular Maintenance

*NOTE: Before making any adjustments or repairs to the machine, disconnect the power cord from electrical source*

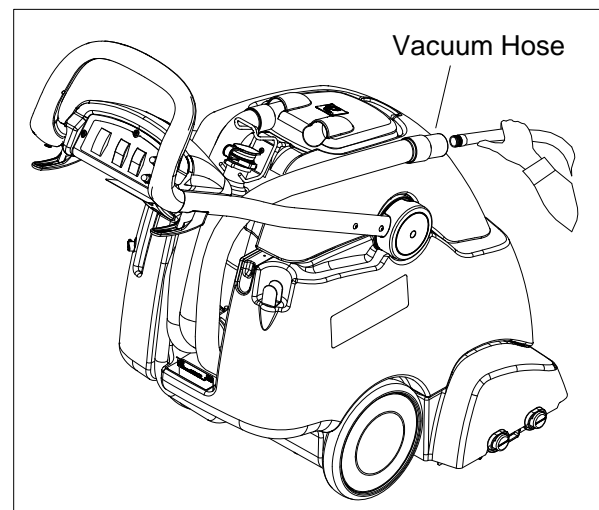
1. Empty unused cleaning solution from the solution tank.
2. Flush pumping system with 4 or 7 liters of clean, hot water.

3. After each use, rinse tank with fresh water. Periodically inspect the recovery tank and decontaminate if necessary, using a Hospital Grade Virucide or a 1-10 bleach to water solution. Waste water should be disposed of properly.
4. Check for and remove any lint or debris around vacuum shoe.
5. Check spray jets for full spray pattern.
6. Remove lint and dirt build-up from brush and housing.
7. Check float and shut-off screen and clean as necessary.

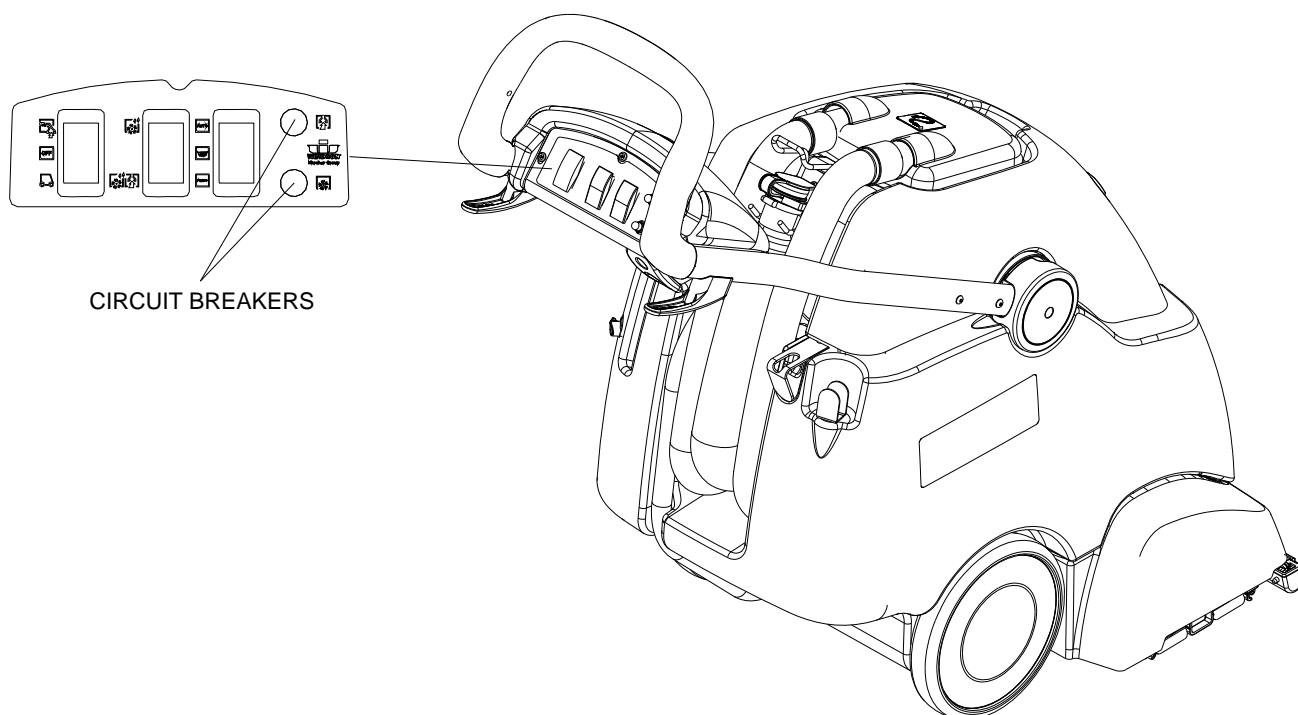
### Vacuum Shoe and Hose

*NOTE: Vacuum Shoe and hose flush should be done daily after use. Place machine over drainage area before beginning.*

1. Remove vacuum hose from dome.
2. Insert water hose into vacuum hose.
3. With water pressure on high, rinse out hose and vacuum shoe. Water should flow freely from vacuum shoe.



## Circuit Protection



## Circuit Breakers

Circuit breakers interrupt the flow of power in the event of an electrical overload. When a circuit breaker is tripped, reset it by pressing the exposed button. If a circuit breaker continues to trip, the cause should be found and corrected.

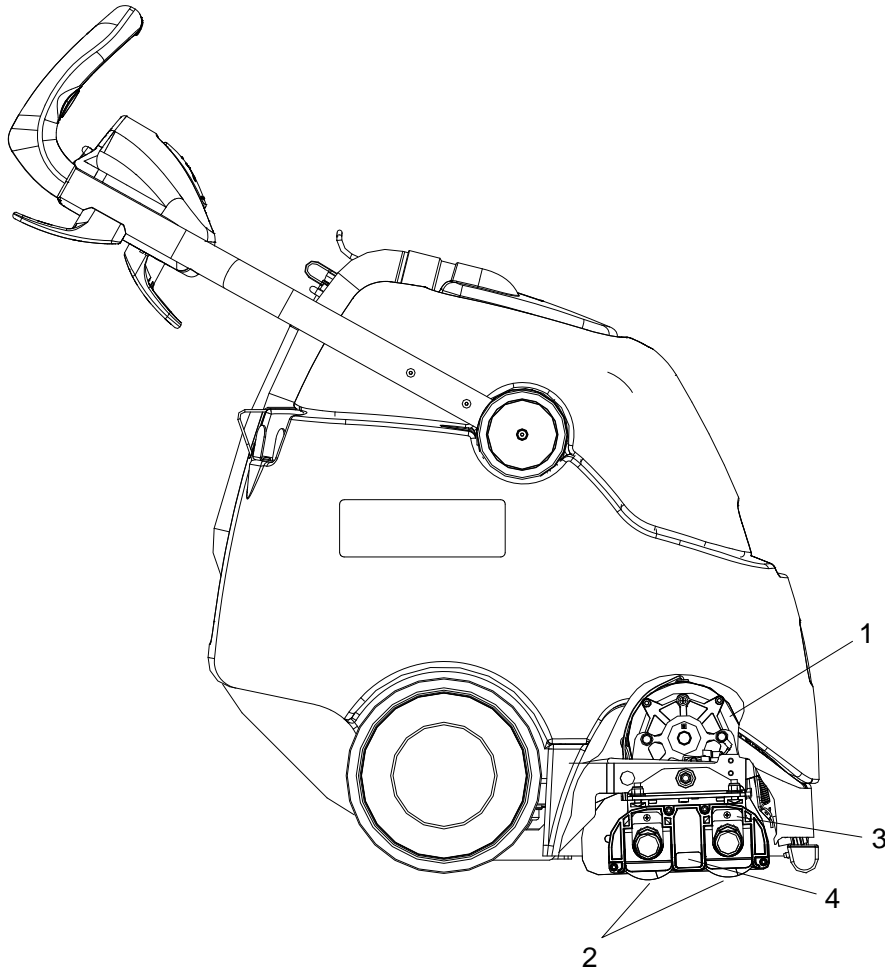


15 Amp. Protects the vacuum motor.



8 Amp. Protects the brush motor.

Scrub Deck



- 1. Scrub Brush Motor
- 2. Scrub Brushes
- 3. Retaining Clip
- 4. Brush Installation Decal

## Scrub Head

The dual cylindrical scrub head is designed to scrub chemical into the carpet. The two counter rotating brushes raise the pile of the carpet, giving it a lush groomed appearance.

The rear brush is the stiffer brush and is intended to scrub deeper and help propel the machine. It can be identified by its black color.

The front brush is the softer brush and is intended to lift and groom the carpet pile. It can be identified by the white bristles.

## Maintenance

Scrub brushes should be replaced as a set when bristle length wears to height of yellow Perform Alert™ bristles.

## Scrub Brush Removal

The scrub brushes are removed from the right side of the machine.

5. Disconnect all power and unplug machine.
6. Tip the machine back.
7. Pull out on the bottom of the retaining clip.
8. The brush assembly and end cap should drop down. Then pull the brush down far enough to clear the bottom of the housing.
9. Pull brush out with a rocking motion to free brush from drive hub.

## Bearing Cleaning

1. Remove bearing cap from end of brush.
2. Clean cap and bearings.

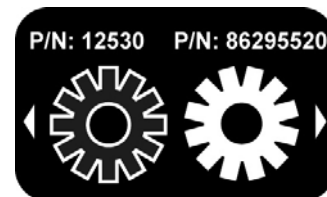


## Scrub Brush Replacement

*NOTE: See brush placement decal on brush deck. (Black brush to rear of machine and white brush to front of machine).*

### **! WARNING:**

**Only use the brushes provided with the appliance or those specified in the instructions manual. The use of other brushes may impair safety.**



1. Lift the drive side of the brush and push it onto drive hub until a positive stop is felt. The brush cannot be installed until the brush is fully seated on the drive hub.
2. Pull out on the bottom of the retaining clip.
3. Line up the end cap with the flats to each side.
4. Slide brush up into the retaining clip until it clicks in place.

### **! WARNING:**

**Only qualified maintenance personnel are to perform the following repairs**

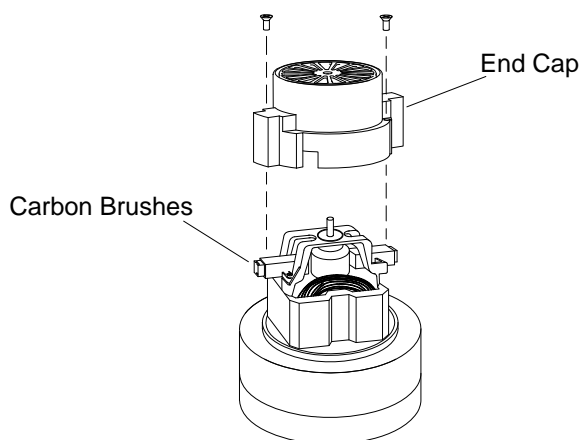
### **! AVERTISSEMENT:**

**Seul le personnel d'entretien qualifié peut effectuer des réparations.**

## Vacuum Motor Replacement

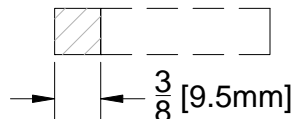
1. Turn off all switches and unplug machine.
2. Remove recovery tank.
3. Remove handle mounting assembly and set aside.
4. Disconnect and remove the solution/vacuum frame assembly through the top of the machine.
5. Remove the vacuum motor to service brushes.
6. Reverse process to install vacuum motor.

## Vacuum Motor Carbon Brushes



### Important:

These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.



Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than  $\frac{3}{8}$ " (9.5mm) long.

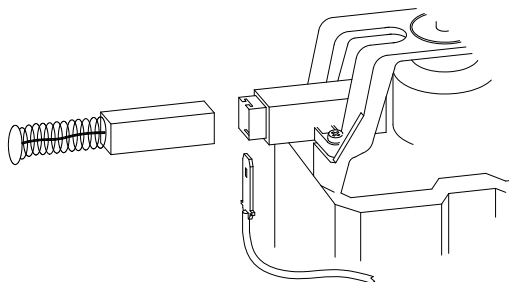
### **⚠ WARNING:**

The green ground wire must be attached for safe operation. See wiring diagram.

### **⚠ AVERTISSEMENT:**

Le fil de mise à la terre vert doit être fixé pour assurer un fonctionnement sécuritaire. Voir le schéma de câblage.

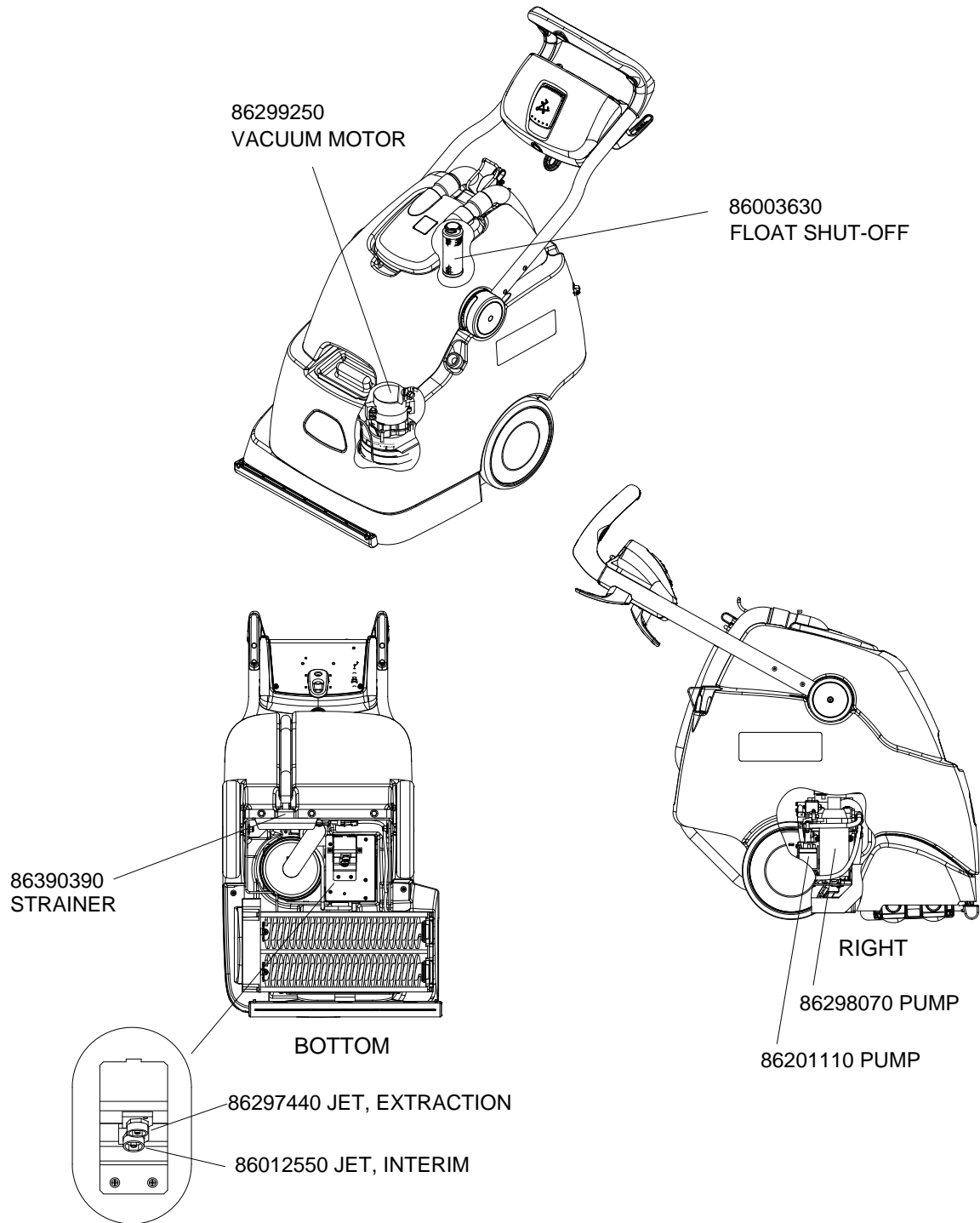
If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.



## Troubleshooting

PROBLEM	CAUSE	SOLUTION
No Power, Nothing Runs	Is the cord plugged in.	Plug in cord.
	Circuit breaker tripped in building.	Reset breaker.
	Faulty switch.	Call for service.
	Faulty power cord or pigtail.	Call for service.
Vacuum Motor Will Not Run	Vacuum circuit breaker tripped.	Reset breaker.
	Faulty main vacuum switch.	Call for service.
	Loose wiring.	Call for service.
	Faulty vac motor.	Call for service.
Vacuum Motor Runs But Suction Is Poor	Debris lodged in vac shoe.	Remove debris from vac shoe.
	Dome gasket defective or missing.	Replace as necessary.
	Vacuum hose cracked or hose cuff loose.	Replace or repair as necessary.
	Recovery tank full / float ball stuck in the up position.	Turn off vac motor. Drain and rinse recovery tank.
Poor Or No Water Flow  (Carpet Is Streaky)	Pump switch in intermittent position.	Turn to continuous or use buttons on handle
	Jets clogged or missing.	Clean using a vinegar /water solution or replace.
	Solution filter clogged.	Drain solution tank and clean solution filter.
	Faulty solenoid.	Call for service.
Brush Does Not Spin	Main switch off or in hand tool mode.	Turn main switch to machine mode.
	Brush circuit breaker tripped.	Reset circuit breaker.
	Brush belt broken.	Replace as necessary.
	Faulty brush motor.	Call for service.

**Suggested Spare Parts**







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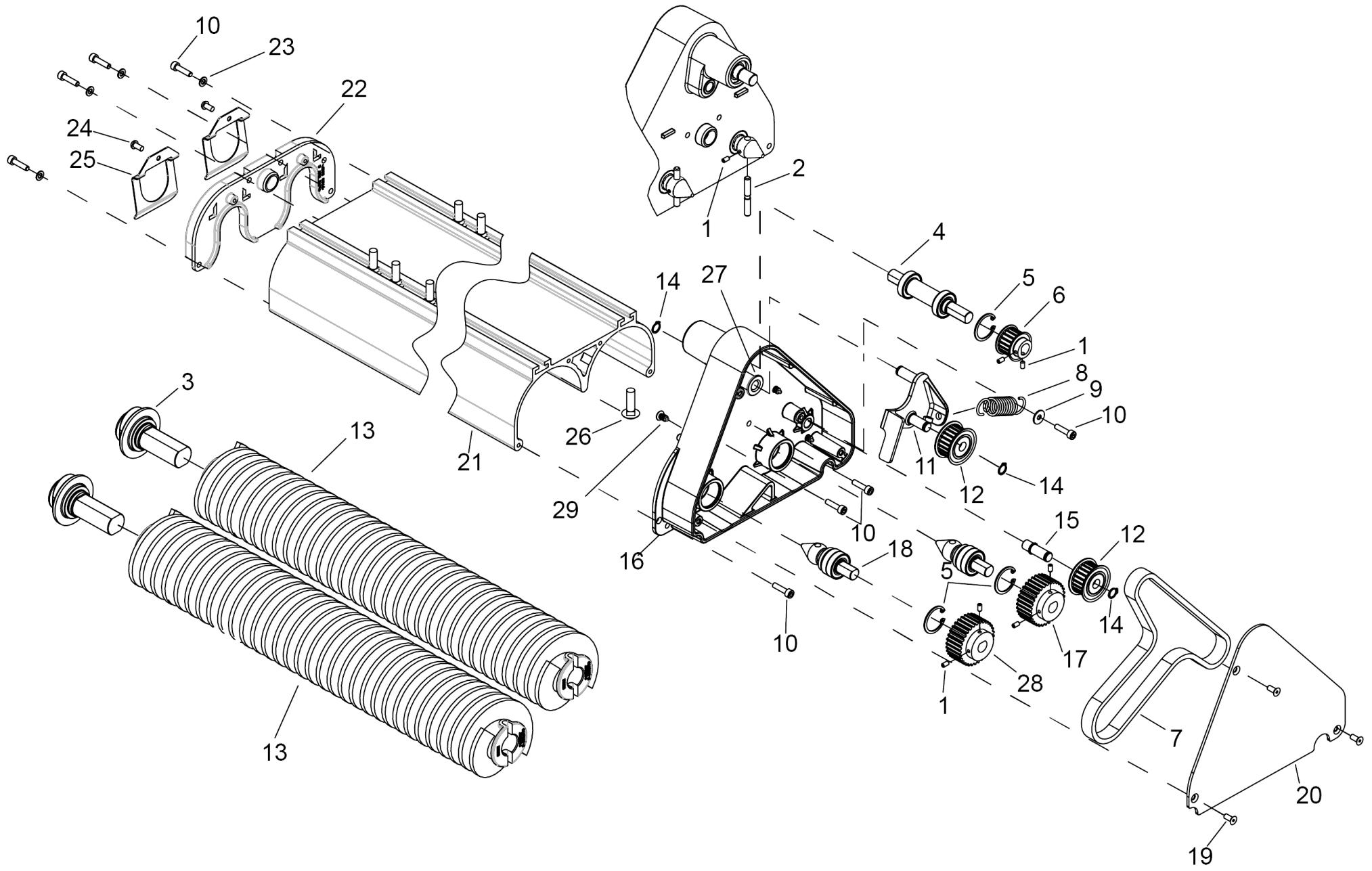
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CLIPPER DUO 16" 120 VAC (1.008-048.0)	2
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## CLIPPER DUO 16" 120 VAC (1.008-048.0)

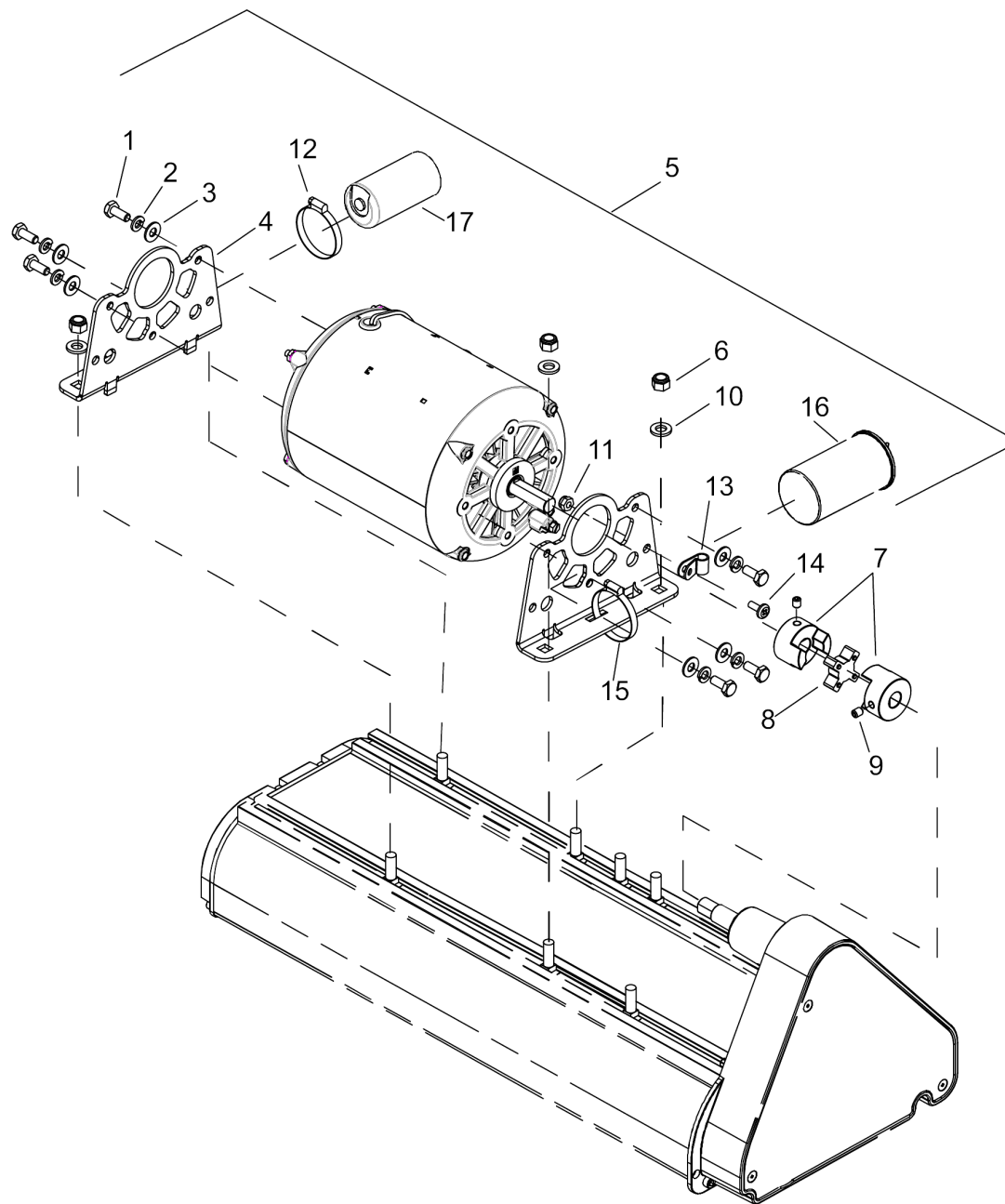
POS	Description	Quantity	Unit
10	BRUSH DECK	1.000	ST
20	BRUSH DECK MOTOR	1.000	ST
30	BRUSH DECK MOUNTING	1.000	ST
40	CONTROL PANEL	1.000	ST
50	DECAL	1.000	ST
60	HAND TOOL	1.000	ST
70	HANDLE	1.000	ST
80	HANDLE BRACKET	1.000	ST
90	HANDLE MOUNTING	1.000	ST
100	HANDLE RELEASE LEVER	1.000	ST
110	RECOVERY TANK	1.000	ST
120	SOLUTION 1	1.000	ST
130	SOLUTION 2	1.000	ST
140	SOLUTION TANK	1.000	ST
150	VACUUM SHOE	1.000	ST
160	VACUUM SHOE MOUNTING	1.000	ST
170	VACUUM	1.000	ST
180	WHEEL & AXLE	1.000	ST
190	WIRING DIAGRAM	1.000	ST
200	SERIAL NUMBER	1.000	ST

10 BRUSH DECK



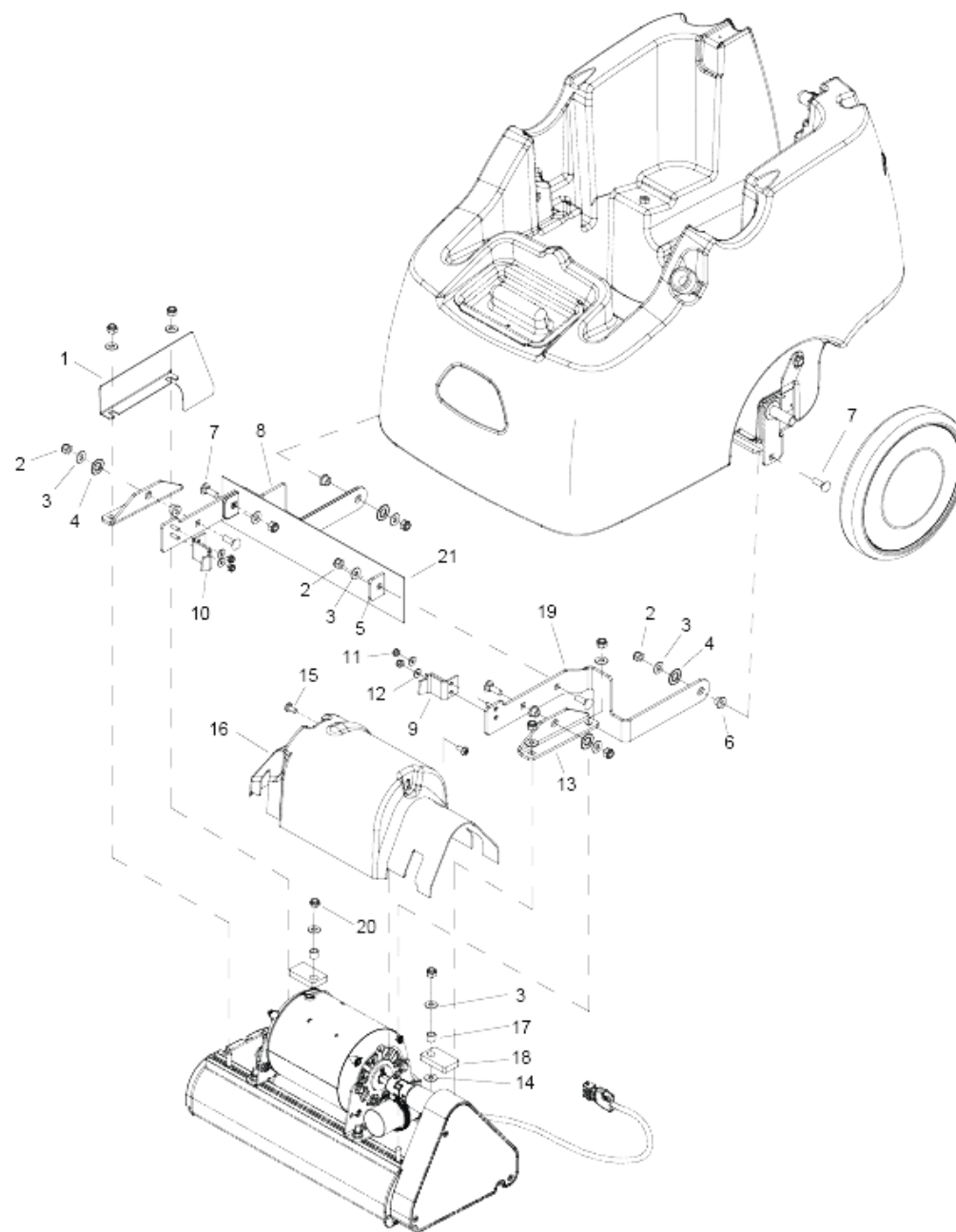
## 10 BRUSH DECK

POS	Article no.	Description	Quantity	Unit
1	8.622-378.0	Threaded pin M4X8	8.000	ST
2	8.622-417.0	SHAFT, 6.2MM BRUSH DRIVE	2.000	ST
3	8.637-307.0	ASM, BRUSH END, NON-DRIVE	2.000	ST
4	8.601-281.0	SHAFT ASM, DRIVE 16"	1.000	ST
5	8.622-352.0	RING, 28MM INT SNAP PHOSPHATE	3.000	ST
6	8.622-331.0	PULLEY, 5MM HTD, 18T, 12.7ID	1.000	ST
7	8.621-525.0	BELT, 2S 5MM HTD, DUO DRIVE	1.000	ST
8	8.622-466.0	SPRING, TENSIONER	1.000	ST
9	8.617-333.0	WASHER, M5 SS ISO7093	1.000	ST
10	8.601-499.0	SCREW, M5-.8 X 20 SCHCS SS DIN912	9.000	ST
11	8.621-587.0	BRKT, TENSIONER ARM	1.000	ST
12	8.601-278.0	PULLEY ASM, 5MM HTD 22T	2.000	ST
13	8.629-552.0	BRUSH, EXTRACTOR 16" NATURAL	1.000	ST
13	8.621-605.0	BRUSH, EXTRACTOR 16"	1.000	ST
14	8.622-349.0	RING, 10MM EXT SNAP, DIN 471	2.000	ST
15	8.622-413.0	SHAFT, TENSIONER	1.000	ST
16	8.634-387.0	HOUSING ASM, BRUSH DRIVE	1.000	ST
17	8.629-407.0	PULLEY, 36T 5MM HTD	1.000	ST
18	8.601-279.0	SHAFT ASM, BRUSH DRIVE	2.000	ST
19	8.617-297.0	SCREW, M5 X 12 PHFLHMS SS ISO7046	3.000	ST
20	8.622-287.0	PLATE, BRUSH DRIVE COVER	1.000	ST
21	8.621-778.0	EXTRUSION, DUAL BRUSH 16"	1.000	ST
22	8.621-939.0	HOUSING, BRUSH CLIP	1.000	ST
23	8.617-335.0	WASHER, M5 FLT SS ISO7089	4.000	ST
24	8.617-298.0	SCREW, KA50 X 10 OVHCS STL WN1412 ZNPLT	2.000	ST
25	8.622-463.0	SPRING, BRUSH CLIP	2.000	ST
26	8.627-713.0	SCREW, 5/16-18 X 1 CARR SS	7.000	ST
27	8.621-523.0	BEARING, BRONZE FLANGED	1.000	ST
28	8.629-406.0	PULLEY, 30T 5MM HTD	1.000	ST
29	8.635-049.0	PLUG, HOLE, 5MM DIA X 12MM L	3.000	ST



20 BRUSH DECK MOTOR

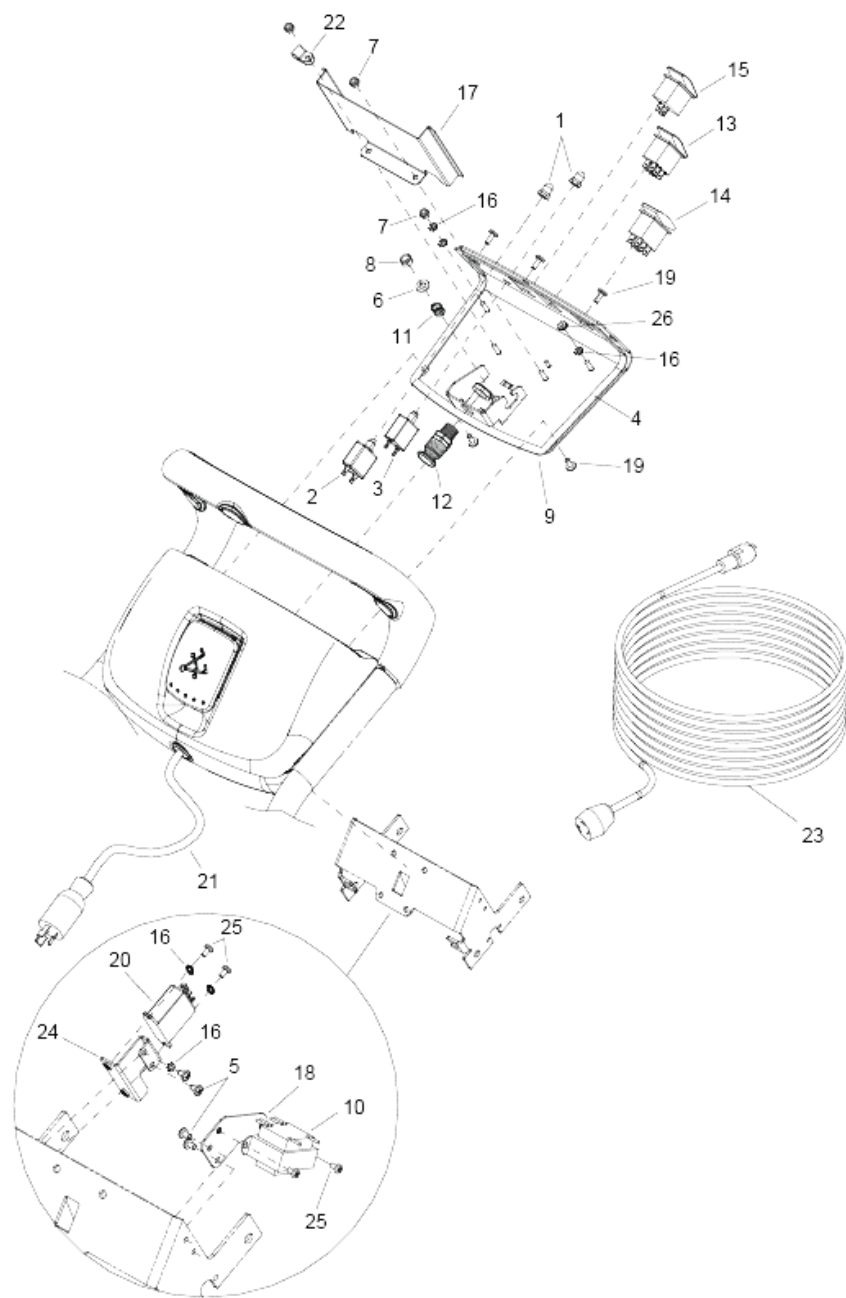
POS	Article no.	Description	Quantity	Unit	Remark
1	8.627-375.0	SCREW, 1/4-20 X .625 HHCS SS NP	6.000	ST	
2	8.617-334.0	WASHER, 1/4 SPL SS	6.000	ST	
3	8.601-063.0	WASHER, 1/4 SS	6.000	ST	
4	8.621-588.0	BRKT, MOTOR MOUNT	2.000	ST	
5	8.629-449.0	Brush motor assembly 115V	1.000	ST	INCLUDES #4, 16,17
6	8.622-229.0	NUT, 5/16-18 HEXNYLOCK SS	3.000	ST	
7	8.634-607.0	Coupler 2-JAW, 35mm	2.000	ST	INCLUDES #9
8	8.623-460.0	Coupler, SPIDER	1.000	ST	
9	8.617-296.0	SCREW, M6 X 8 SCHSET SS ISO4029	2.000	ST	
10	8.622-579.0	WASHER, 5/16 SS	3.000	ST	
11	8.600-564.0	NUT, 10-32 HEX NYLOCK STL GR2 ZNPLT	1.000	ST	
12	8.600-239.0	Clamp 1.75" WORM GEAR X .312	1.000	ST	
13	8.619-845.0	CLAMP, 5/16 dia NYLON	1.000	ST	
14	8.627-682.0	SCREW, 10-32 X .5 PHTRHMS	1.000	ST	
15	8.621-675.0	CLAMP, WORM GEAR 40 - 64MM	1.000	ST	
16	8.633-282.0	RUN CAPACITOR 25 UF	1.000	ST	
17	8.633-283.0	START CAPACITOR 150 UF	1.000	ST	





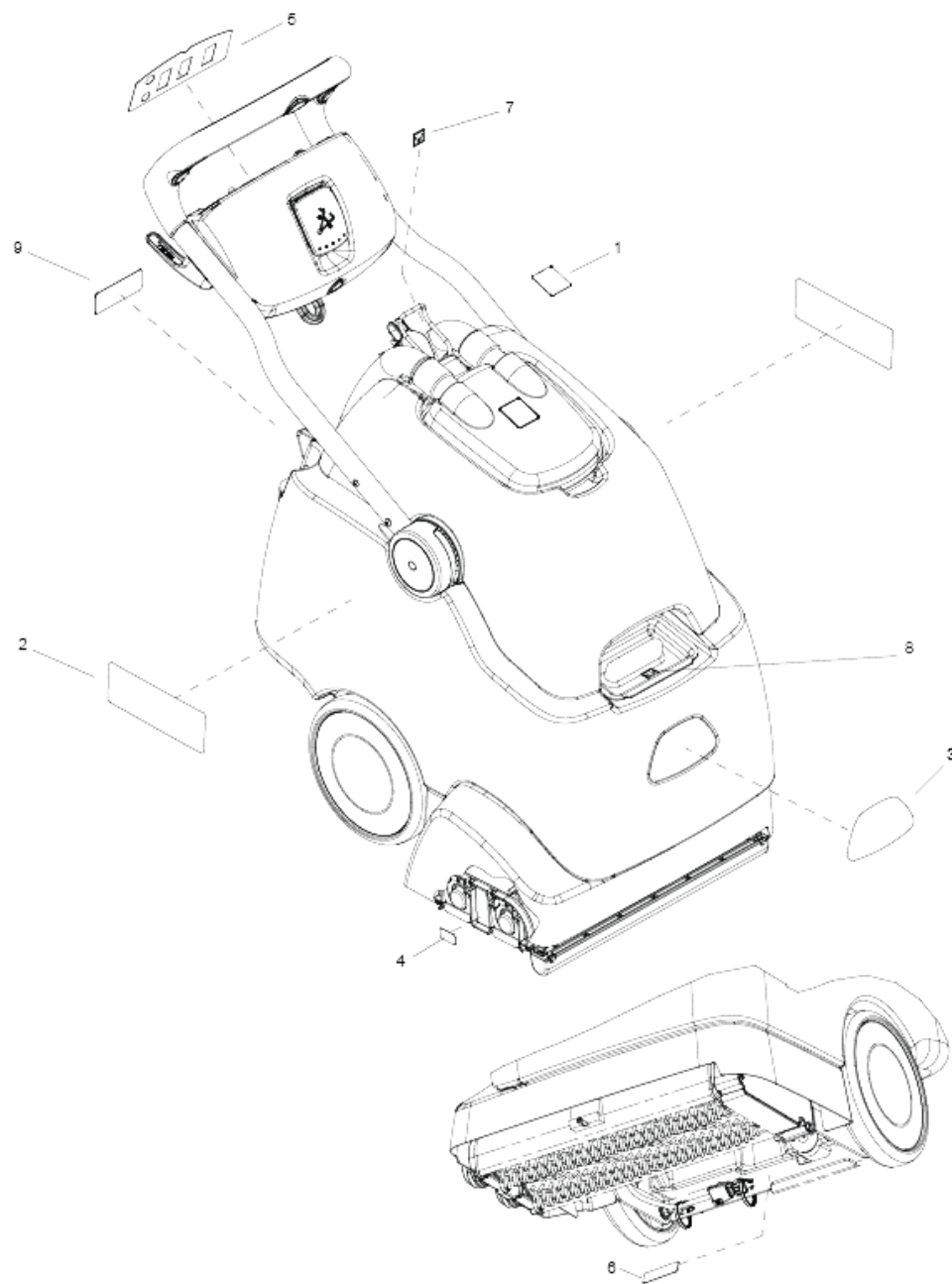
### 30 BRUSH DECK MOUNTING

POS	Article no.	Description	Quantity	Unit
1	8.630-271.0	DEFLECTOR, SPRAY	1.000	ST
2	8.627-083.0	NUT, 5/16-18 HEX NYLOCK SS	11.000	ST
3	8.601-067.0	WASHER, 5/16 FLT SS	13.000	ST
4	8.625-941.0	WASHER, .51 X 10 X .063 THR	4.000	ST
5	8.629-645.0	BRKT, DECK ARM CROSSBAR	1.000	ST
6	8.622-899.0	BUSHING, .314 X .502 X .375 FLG BRZ	4.000	ST
7	8.627-713.0	SCREW, 5/16-18 X 1 CARR SS	8.000	ST
8	8.629-501.0	BRKT, DECK ARM RIGHT	1.000	ST
9	8.629-494.0	BRKT, LEFT DECK HANGER	1.000	ST
10	8.629-495.0	BRKT, RIGHT DECK HANGER	1.000	ST
11	8.627-099.0	NUT, 10-32 HEX NYLOCK SS	4.000	ST
12	8.601-065.0	WASHER, .203 X .562 X .040 FLT	4.000	ST
13	8.607-180.0	BRKT, BRUSH DECK PIVOT	2.000	ST
14	8.622-579.0	WASHER, 5/16 SS	1.000	ST
15	8.622-374.0	SCREW, 1/4-20 X .59 PHPNHMS SS	2.000	ST
16	8.639-527.0	Cover brush deck motor	1.000	ST
17	8.600-846.0	SPACER, .500OD X .391ID X .400	2.000	ST
18	8.629-648.0	Cushion brush deck motor	2.000	ST
19	8.629-502.0	BRKT, DECK ARM LEFT	1.000	ST
20	8.627-184.0	NUT, 5/16-18 HEXTHIN NYLOCK SS	1.000	ST
21	8.636-156.0	GUARD, SPLASH	1.000	ST



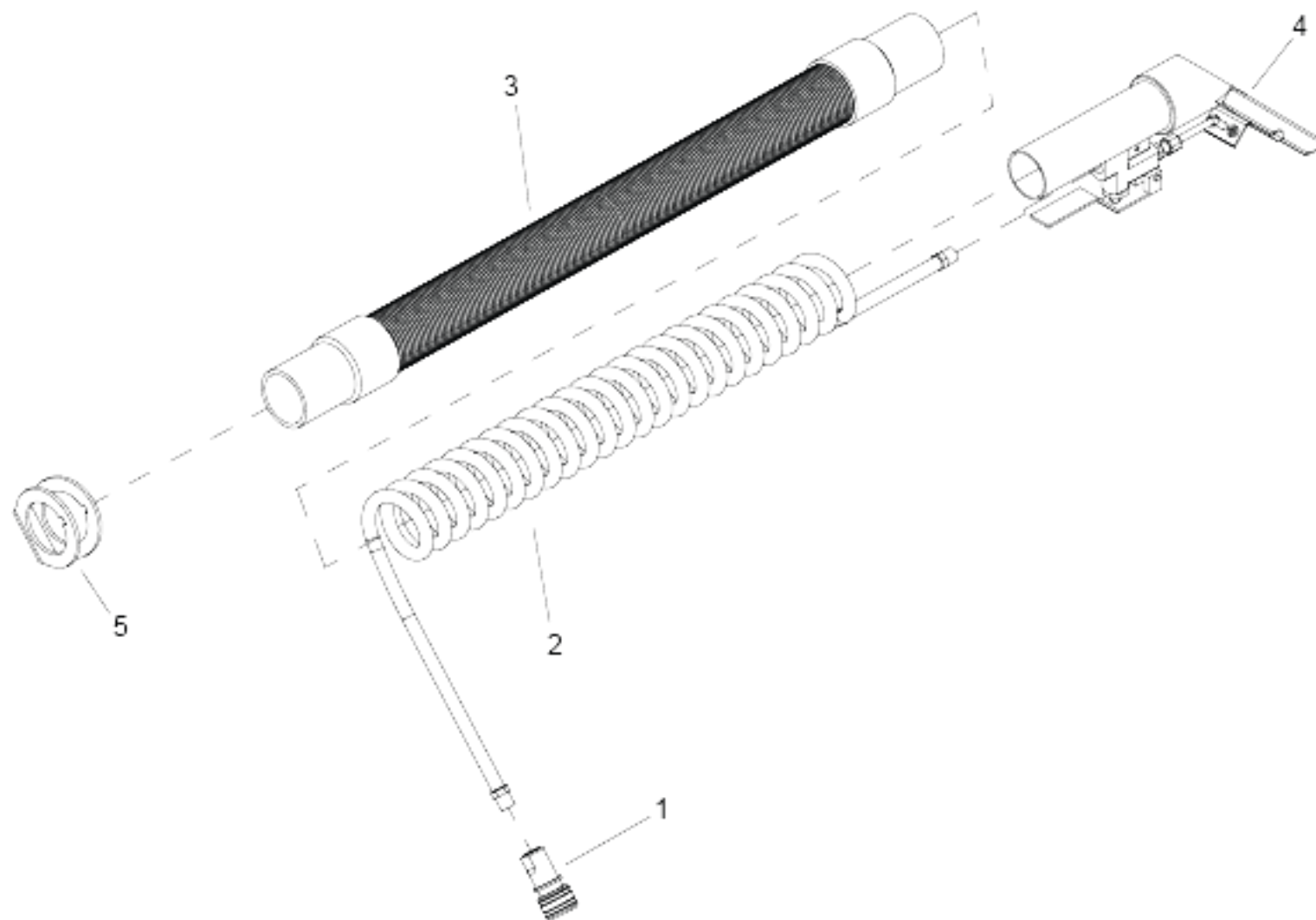
## 40 CONTROL PANEL

POS	Article no.	Description	Quantity	Unit
1	8.600-201.0	BOOT, 3/8 CIRCUIT BREAKER	2.000	ST
2	8.600-198.0	BREAKER, 15A 250VAC 50VDC	1.000	ST
3	8.621-567.0	BREAKER, 8A VDE CIRCUIT	1.000	ST
4	8.630-802.0	GASKET, HANDLE CTRL PNL	1.000	ST
5	8.617-303.0	SCREW, M4 X 6 PNHMS ISO7045 ZNPLT	4.000	ST
6	8.617-330.0	WASHER, M8 FLT SS ISO7098	1.000	ST
7	8.600-564.0	NUT, 10-32 HEX NYLOCK STL GR2 ZNPLT	3.000	ST
8	8.617-264.0	NUT, M8X1.25 NYLOCK SS	1.000	ST
9	8.622-301.0	PLATE, CONTROL PANEL, CLP DUO	1.000	ST
10	8.630-182.0	TRANSFORMER, 24V, 115V CLP DUO	1.000	ST
11	8.622-473.0	SPRING, COMP, 12MM OD X 12.7MM	1.000	ST
12	8.622-493.0	STRAIN RELIEF, 14/3 STRAIGHT	1.000	ST
13	8.600-713.0	Switch DPDT 2-POSITION ROCKER	1.000	ST
14	8.600-720.0	Switch DPDT3-POSITION ROCKER	1.000	ST
15	8.600-714.0	Switch SPST 2-POSITION ROCKER	1.000	ST
16	8.601-064.0	Washer #10 LOCK EXT STAR SS	6.000	ST
17	8.629-570.0	Bracket electrical separator	1.000	ST
18	8.639-113.0	Bracket handle transformer	1.000	ST
19	8.627-682.0	SCREW, 10-32 X .5 PHTRHMS	5.000	ST
20	8.629-869.0	RELAY, 24VAC	1.000	ST
21	8.629-775.0	Cord assembly 14/3 X 22 PGTL	1.000	ST
22	8.623-317.0	Clamp 3/8 NYLON UL/CSA	1.000	ST
23	8.623-411.0	CORD SET,14/3 SJTW-A X 50' YLW	1.000	ST
24	8.639-112.0	Bracket handle relay	1.000	ST
25	8.600-662.0	SCREW, 6-32 X .25 PHPNHMS SS	4.000	ST
26	8.600-570.0	NUT, 10-32 HEXSTRW LK STL ZNPLT	1.000	ST



## 50 DECAL

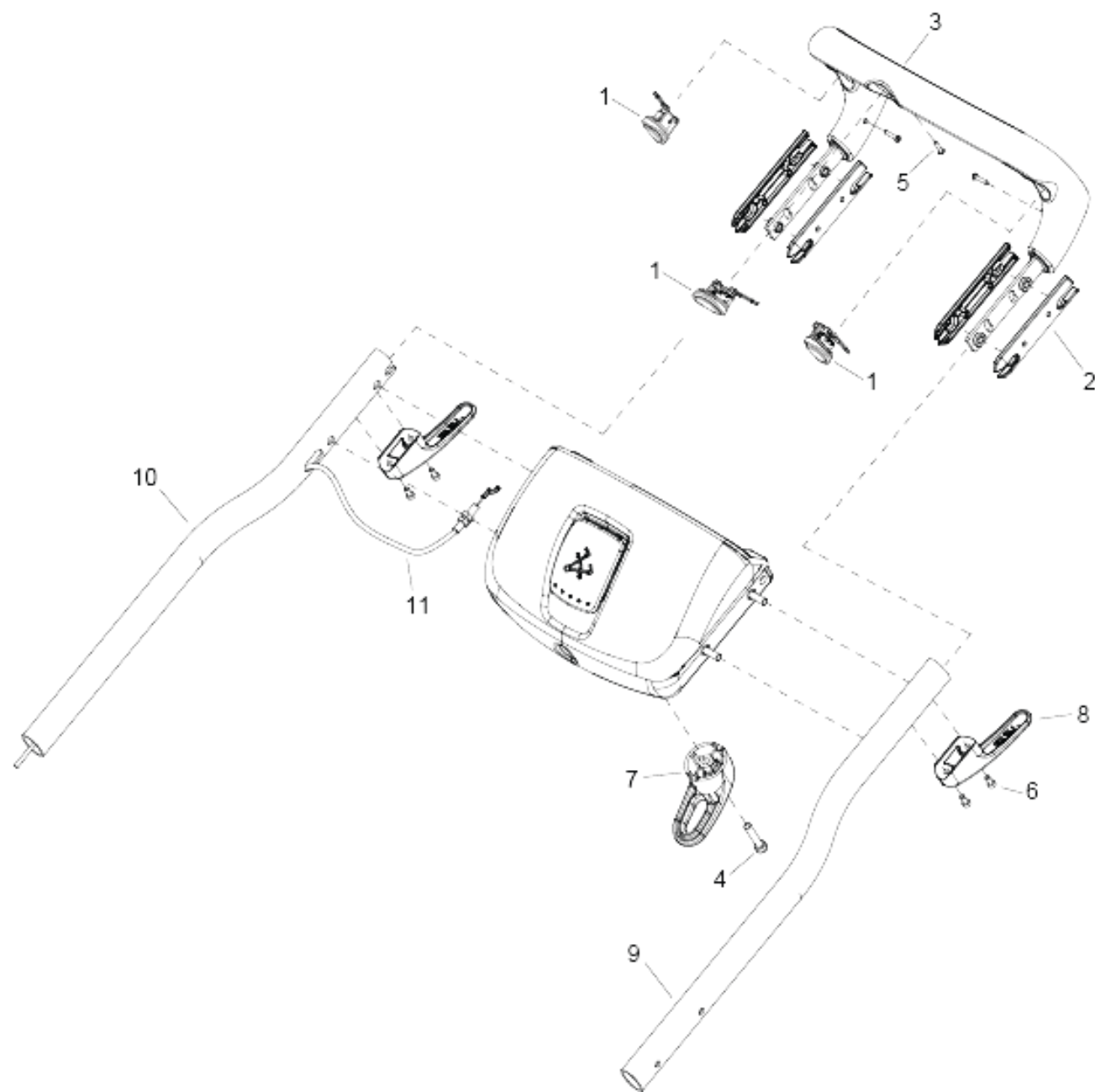
POS	Article no.	Description	Quantity	Unit
1	8.639-586.0	LABEL, DOME ACCESSORY	1.000	ST
2	8.639-590.0	Label side Clipper Duo	2.000	ST
3	8.639-540.0	LABEL, WINDSOR LOGO DOMED	1.000	ST
4	8.629-867.0	Label brush installation CLP DUO	1.000	ST
5	8.639-591.0	Label control panel CLP DUO	1.000	ST
6	8.639-046.0	Label strainer CLP DUO	1.000	ST
7	8.633-495.0	Label drainage dirty water	1.000	ST
8	8.633-599.0	Label intake fresh water	1.000	ST
9	8.633-498.0	Label wand grip locator	1.000	ST



## 60 HAND TOOL

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<b>POS</b>	<b>Article no.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>
1	8.620-081.0	Nipple 1/8 FPT QD FEM BRASS	1.000	ST
2	8.629-328.0	Hose 1/4" retractable	1.000	ST
3	8.629-329.0	Hose assembly black vacuum 38.1 X 711	1.000	ST
4	8.629-350.0	HANDTOOL, W/O HOSES	1.000	ST
5	8.629-375.0	Retainer solution hose	1.000	ST





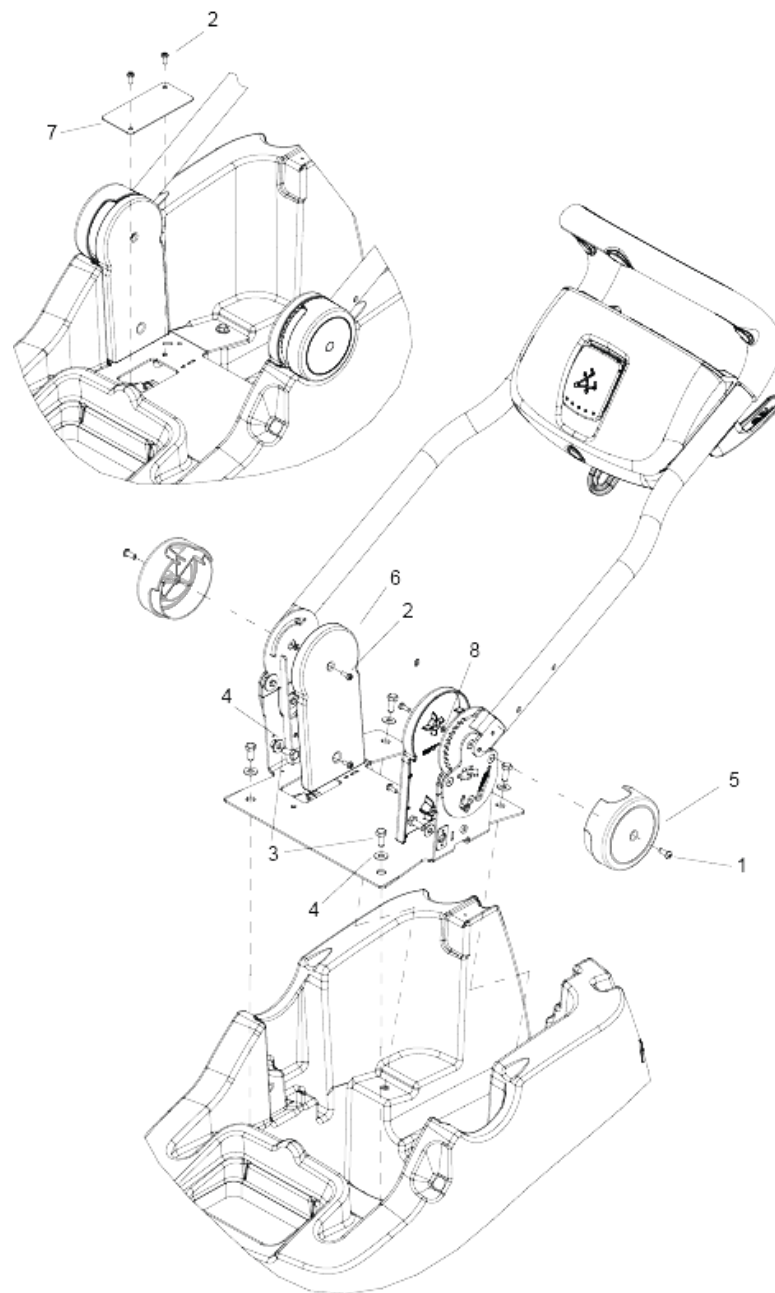
## 70 HANDLE

POS	Article no.	Description	Quantity	Unit
1	8.631-273.0	SWITCH HANDLE	3.000	ST
2	8.622-450.0	SPACER, HANDLE EXTRUSION	4.000	ST
3	8.621-866.0	HANDLE, GRIP CLIPPER DUO	1.000	ST
4	8.622-383.0	SCREW, M8-1.25 X 40 SCHCS SS ISO4762	1.000	ST
5	8.617-300.0	SCREW, KA40 X 20 OVHCS WN1413 SS	3.000	ST
6	8.629-340.0	SCREW, M5-.8 X 12 SCHCS GR10.9 ZNPLT	4.000	ST
7	8.633-561.0	HOOK, UPPER, CORD YLW	1.000	ST
8	8.621-895.0	HOOK, LOWER, CORD	2.000	ST
9	8.621-864.0	Handle extrusion left CLP	1.000	ST
10	8.621-863.0	Handle extrusion right CLP	1.000	ST
11	8.621-650.0	CABLE - ACTUATION, HANDLE	2.000	ST



## 80 HANDLE BRACKET

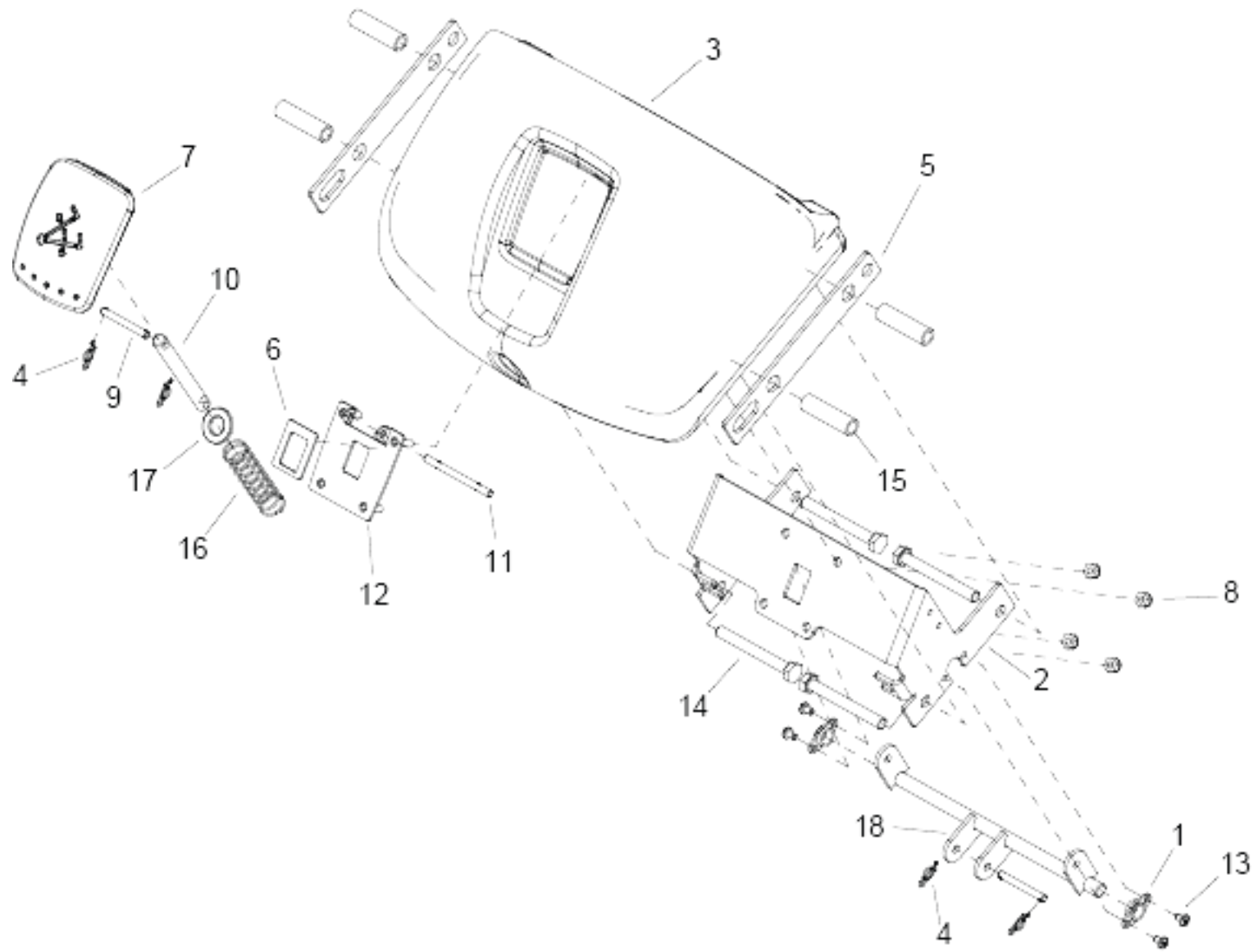
POS	Article no.	Description	Quantity	Unit	Remark
1	8.627-680.0	SCREW, 10-32 X .375 HHMS SS	4.000	ST	
2	8.627-917.0	WASHER, 10 FLT	6.000	ST	
3	8.629-683.0	Bracket handle pivot	2.000	ST	
4	8.629-686.0	Plate handle pivot latch	2.000	ST	
5	8.629-688.0	Lever handle release left	1.000	ST	
6	8.629-689.0	Lever handle release right	1.000	ST	
7		Bracket handle tank mount	1.000	ST	
8	8.629-697.0	MECHANISM MOUNT, LEFT	1.000	ST	
9	8.629-698.0	MECHANISM MOUNT, RIGHT	1.000	ST	
10	8.630-286.0	SPRING, EXT .25D X1.13L X.031W	2.000	ST	
11	8.629-884.0	SCREW, 10-32 X 1 HHMS STL ZNPLT	2.000	ST	
12	8.623-317.0	Clamp 3/8 NYLON UL/CSA	2.000	ST	
13	8.600-564.0	NUT, 10-32 HEX NYLOCK STL GR2 ZNPLT	2.000	ST	
14	8.627-440.0	SCREW, 1/4-20 X .625 SCHBTNHCS STL ZNPLT	4.000	ST	
15	8.629-883.0	SCREW, 10-32 LK STL GRA ZNPLT	2.000	ST	
16	8.631-216.0	KIT, HANDLE PIVOT LEFT	1.000	ST	INCLUDES #3,4,5,8 AND 10
17	8.632-436.0	KIT HANDLE PIVOT RIGHT	1.000	ST	INCLUDES ND 10



## 90 HANDLE MOUNTING

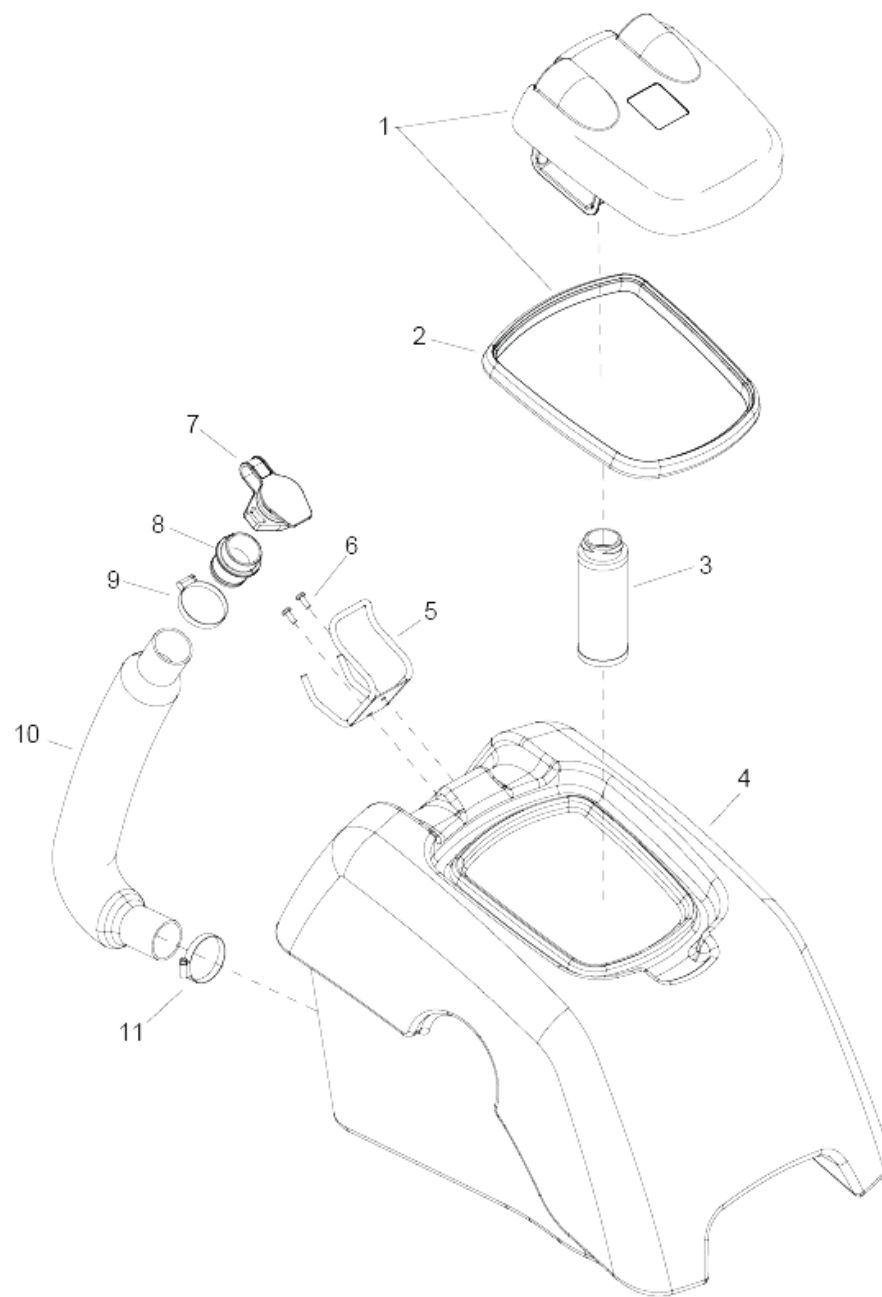
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POS	Article no.	Description	Quantity	Unit
1	8.627-440.0	SCREW, 1/4-20 X .625 SCHBTNHCS STL ZNPLT	2.000	ST
2	8.600-695.0	SCREW, 10-32 X .5 PHPNHMS	6.000	ST
3	8.627-649.0	SCREW, 5/16-18 X .625 HHCS SS	6.000	ST
4	8.601-067.0	WASHER, 5/16 FLT SS	6.000	ST
5	8.634-523.0	CAP, BRUSH ASM, CLP DUO	2.000	ST
6	8.629-577.0	CAP, HANDLE, INNER, CLP DUO	2.000	ST
7	8.629-722.0	Panel CONN. ACCESS	1.000	ST
8	8.637-964.0	WASHER, 10 NYL	2.000	ST



100 HANDLE RELEASE LEVER

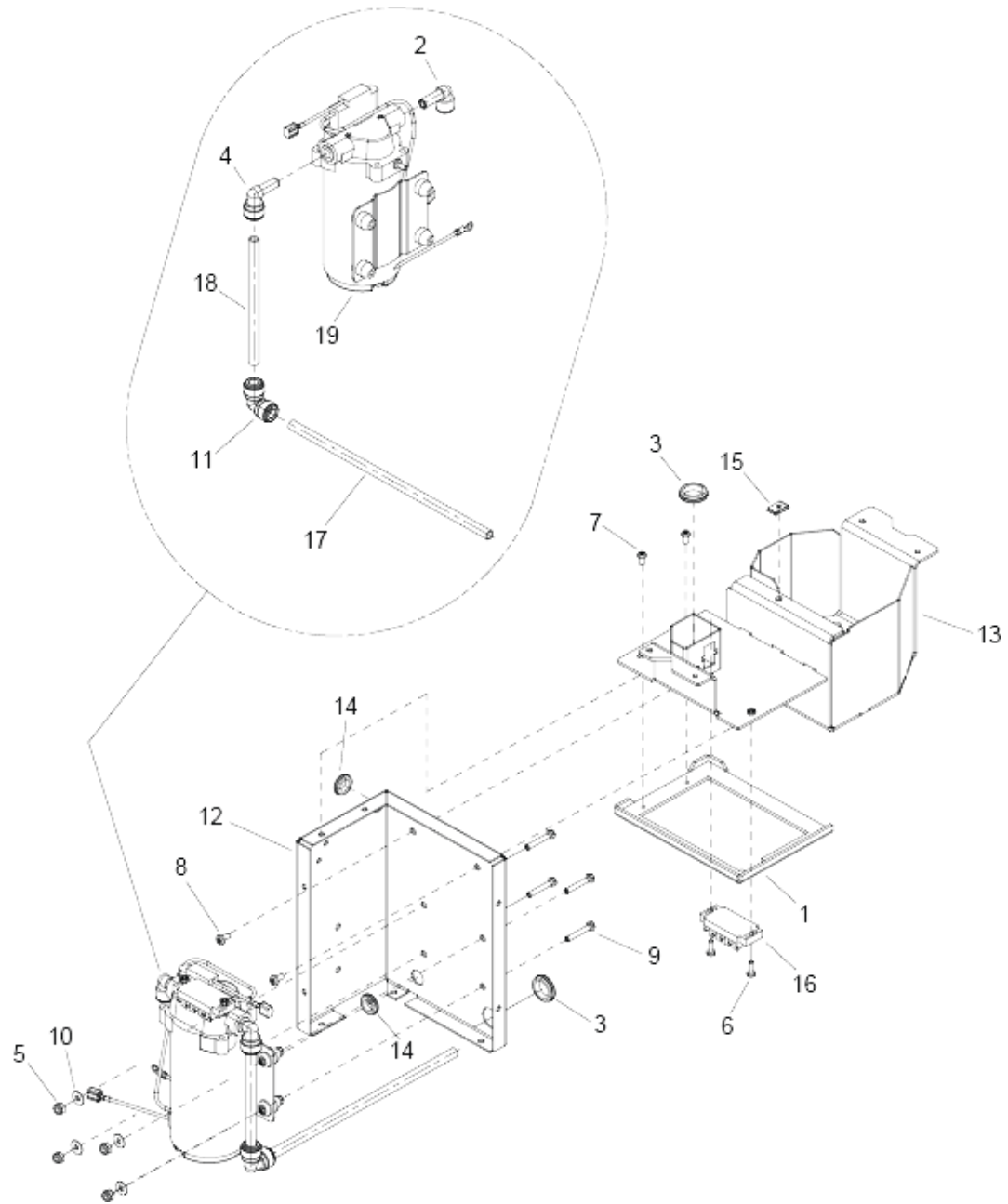
POS	Article no.	Description	Quantity	Unit
1	8.621-524.0	BEARING, FLANGE, 10MM ID	2.000	ST
2	8.621-563.0	BRACKET, LEVER, CONSOLE	1.000	ST
3	8.630-057.0	CONSOLE, BRC 45/45 C, TRM, BLK	1.000	ST
4	8.600-865.0	PIN, COTTER RING 1/4 X .041 X .844	4.000	ST
5	8.621-819.0	GASKET, CONSOLE, TUBE	2.000	ST
6	8.621-802.0	GASKET, LEVER, HANDLE	1.000	ST
7	8.633-563.0	Lever pivot handle yellow	1.000	ST
8	8.622-228.0	NUT, 10-32 HEX NYLOCK SS	4.000	ST
9	8.629-582.0	PIN, LINK M5 X 44 LCST GR35 ZNPLT	2.000	ST
10	8.622-184.0	PIN, LINK M10 X 80 LCST GR35 ZNPLT	1.000	ST
11	8.622-255.0	PIN, PIVOT, LEVER	1.000	ST
12	8.622-299.0	Plate pivot lever	1.000	ST
13	8.617-303.0	SCREW, M4 X 6 PNHMS ISO7045 ZNPLT	4.000	ST
14	8.629-337.0	SCREW, M8-1.25 X 70 HHCS GR10.9 ZNPLT	4.000	ST
15	8.622-454.0	SPACER, 8.5 ID X 45L	4.000	ST
16	8.625-497.0	SPRING, COMP 18MMOD X 83 X 2	1.000	ST
17	8.625-940.0	WASHER, .51 THR	1.000	ST
18	8.622-595.0	Welded assembly pivot shaft lever	1.000	ST





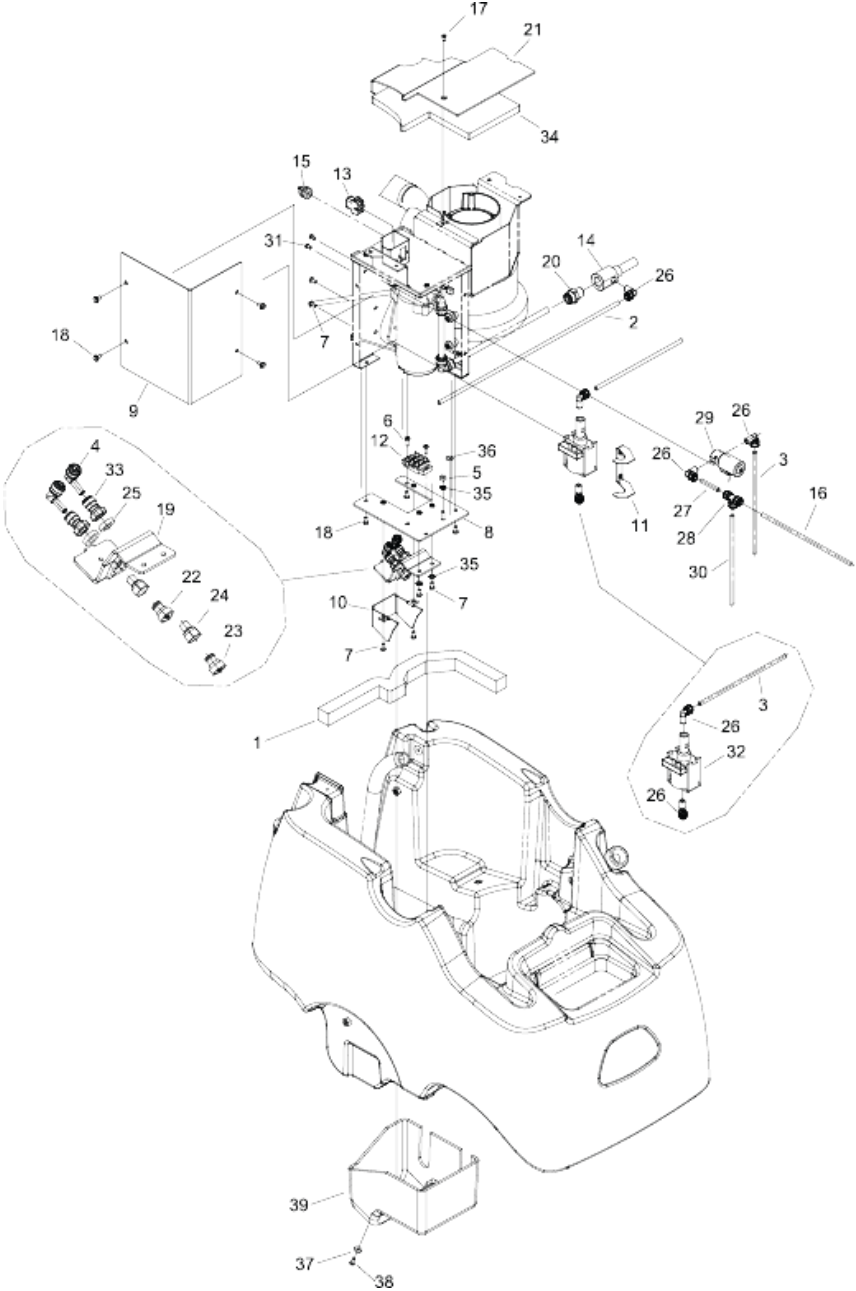
## 110 RECOVERY TANK

POS	Article no.	Description	Quantity	Unit
1	8.629-352.0	Dome assembly Clipper Duo	1.000	ST
2	8.621-818.0	GASKET, DOME CLIPPER DUO	1.000	ST
3	8.600-363.0	Float SHUT-OFF	1.000	ST
4	8.629-922.0	TANK,RECVRY, BLACK(TRIMMED)	1.000	ST
5	8.629-725.0	Hook wireform handtool	1.000	ST
6	8.600-695.0	SCREW, 10-32 X .5 PHPNHMS	2.000	ST
7	8.640-140.0	HOSE, CAP, YLW	1.000	ST
8	8.600-451.0	Hose INSERT	1.000	ST
9	8.600-240.0	Clamp 2.0" WORM GEAR X .312W	1.000	ST
10	8.629-664.0	HOSE, 1.5 X 19.0 DRAIN	1.000	ST
11	8.623-314.0	CLAMP, 2.0" WORM GEAR	1.000	ST



## 120 SOLUTION 1

POS	Article no.	Description	Quantity	Unit
1	8.630-824.0	GASKET, SOLUTION ASSY	1.000	ST
2	8.636-713.0	ELBOW, JG, 3/8 STEM X 1/4 TUBE	1.000	ST
3	8.621-836.0	GROMMET, 3/4 ID X 7/8 GROOVE	2.000	ST
4	8.636-712.0	ELBOW, JG, 3/8 STEM X 3/8 TUBE	1.000	ST
5	8.600-564.0	NUT, 10-32 HEX NYLOCK STL GR2 ZNPLT	4.000	ST
6	8.627-393.0	SCREW, 8-32 X 1/2 PHPNHMS NP	2.000	ST
7	8.600-679.0	SCREW, 10-32 X .375 SLTDHWH STL BLKOX	2.000	ST
8	8.627-429.0	SCREW, 10-32 X .375 PHPNHMS SS	2.000	ST
9	8.629-884.0	SCREW, 10-32 X 1 HHMS STL ZNPLT	4.000	ST
10	8.601-065.0	WASHER, .203 X .562 X .040 FLT	4.000	ST
11	8.636-764.0	ELBOW, UNION, JG, 3/8 TUBE	1.000	ST
12	8.629-470.0	Bracket assembly Solution	1.000	ST
13	8.629-472.0	Assembly frame solution	1.000	ST
14	8.629-793.0	GROMMET, .50ID X .06	2.000	ST
15	8.629-812.0	NUT, 8-32 SPR STL TYPEJ BLK PHOS	1.000	ST
16	8.629-912.0	TERMINAL STRIP, 4-POS, .25	1.000	ST
17	8.639-043.0	Tube nylon 3/8 X 10.75" long	1.000	ST
18	8.600-435.0	Hose 3/8ID NYL11 YLW X 5.75"	1.000	ST
19	8.636-424.0	Pump 115V 120PSI SW W/INTERNAL BY PASS	1.000	ST



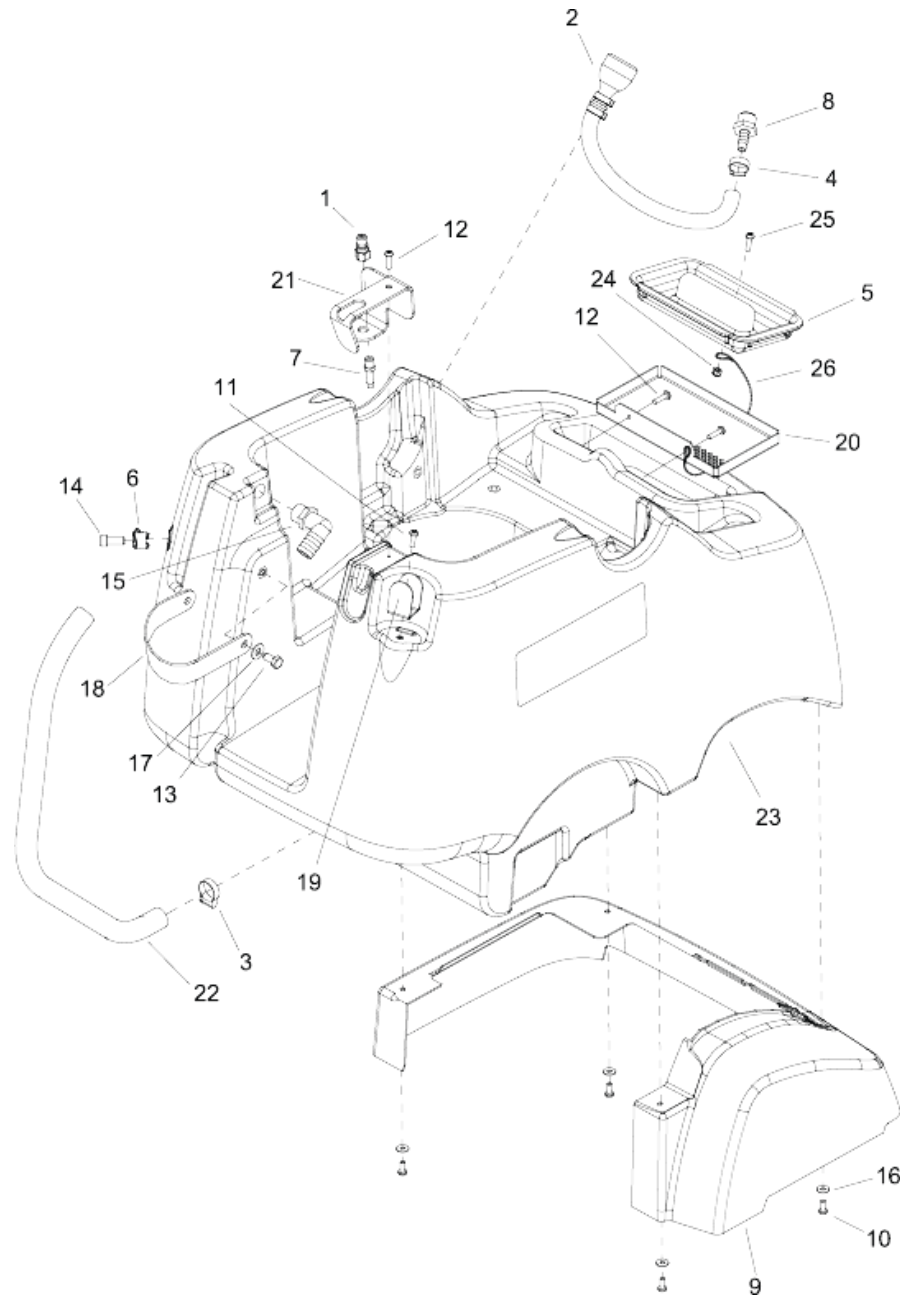
## 130 SOLUTION 2

POS	Article no.	Description	Quantity	Unit
1	8.630-262.0	Foamed material 1 X 1 X 20	1.000	ST
2	8.639-045.0	Tube nylon 1/4 X 17.5"	1.000	ST
3	8.636-721.0	Tube nylon 1/4 X 8.38	2.000	ST
4	8.636-715.0	Elbow JG 1/4 STEM X 1/4 TUBE	2.000	ST
5	8.627-078.0	Nut 8-32 HEX STL ZNPLT	1.000	ST
6	8.627-393.0	SCREW, 8-32 X 1/2 PHPNHMS NP	2.000	ST
7	8.600-652.0	SCREW, 8-32 X .375 PHPNHMS SS	6.000	ST
8	8.629-505.0	Plate bottom	1.000	ST
9	8.629-506.0	Cover side	1.000	ST
10	8.629-721.0	COVER, NOZZLE MOUNT	1.000	ST
11	8.629-785.0	CLAMP, SOLENOID PUMP	1.000	ST
12	8.629-789.0	TERMINAL STRIP, 3-POS, .25	1.000	ST
13	8.629-933.0	HARNESS, HANDLE CONNECTOR	1.000	ST
14	8.642-673.0	Strainer assembly	1.000	ST
15	8.630-031.0	BUSHING, STRAIN RELIEF	1.000	ST
16	8.636-722.0	Tube nylon 1/4 X 21 LG	1.000	ST
17	8.631-071.0	SCREW, 8-32 X 0.5 PHFLHMS STL ZNPLT	1.000	ST
18	8.600-679.0	SCREW, 10-32 X .375 SLTDHWH STL BLKOX	7.000	ST
19	8.629-809.0	ASSY, BRKT, NOZZLE MOUNT	1.000	ST
20	8.639-040.0	Connector JG 3/8MPT X 3/8 TUBE	1.000	ST
21	8.629-723.0	BAFFLE, ACOUSTIC	1.000	ST
22	8.629-744.0	JET, PROMAX, 11008	1.000	ST
23	8.601-255.0	JET, PROMAX, 11001	1.000	ST
24	8.600-457.0	JET BODY, MINI PROMAX BODY	2.000	ST
25	8.601-082.0	Washer 7/16 X 3/4 X .19RUBBER	2.000	ST
26	8.636-716.0	Elbow fixed JG 1/4 TUBE X 1/8 MPT	5.000	ST
27	8.637-336.0	Tube nylon 1/4 X 1.63	2.000	ST
28	8.636-717.0	TEE, UNION, JG, 1/4 TUBE	1.000	ST
29	8.629-729.0	Valve solenoid 120VAC 1/8 NPT	1.000	ST
30	8.637-335.0	Tube nylon 1/4 X 32	1.000	ST
31	8.635-309.0	SCREW, 8-32 X 0.313 PHPNHMS SS	2.000	ST
32	8.620-111.0	PUMP, 110/120 60HZ FLOJET	1.000	ST
33	8.636-718.0	Adapter FML 1/4 TUBE X 1/8 FPT	2.000	ST

## 130 SOLUTION 2

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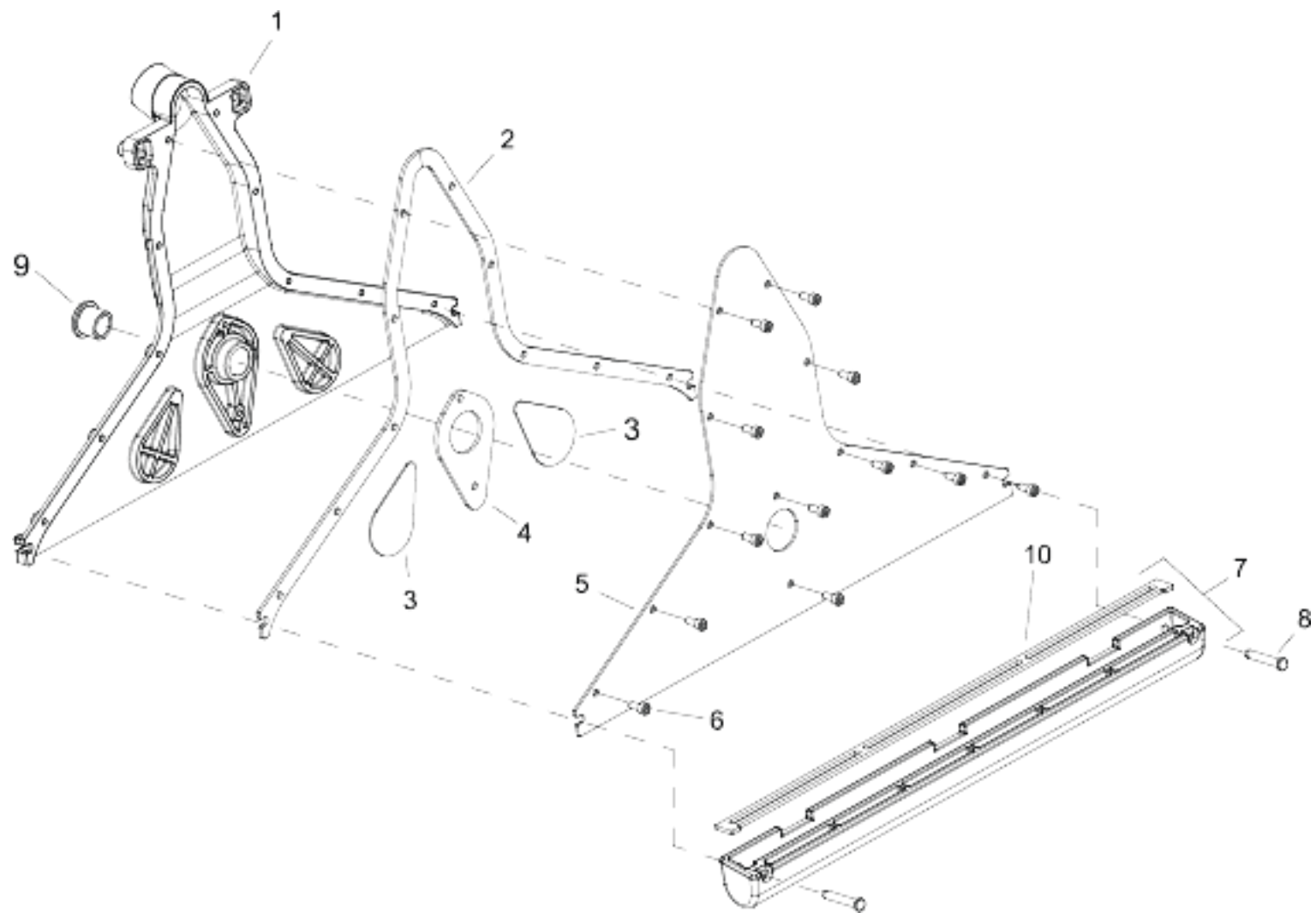
<b>POS</b>	<b>Article no.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>
34	8.630-264.0	FOAM, SOLN ASM LID	1.000	ST
35	8.601-064.0	Washer #10 LOCK EXT STAR SS	3.000	ST
36	8.624-504.0	Label ground symbol	1.000	ST
37	8.601-065.0	WASHER, .203 X .562 X .040 FLT	1.000	ST
38	8.600-680.0	SCREW, 10-32 X .5 PHPNHTF STL ZNPLT	1.000	ST
39	8.639-525.0	Cover solution assembly lower trim	1.000	ST



140 SOLUTION TANK

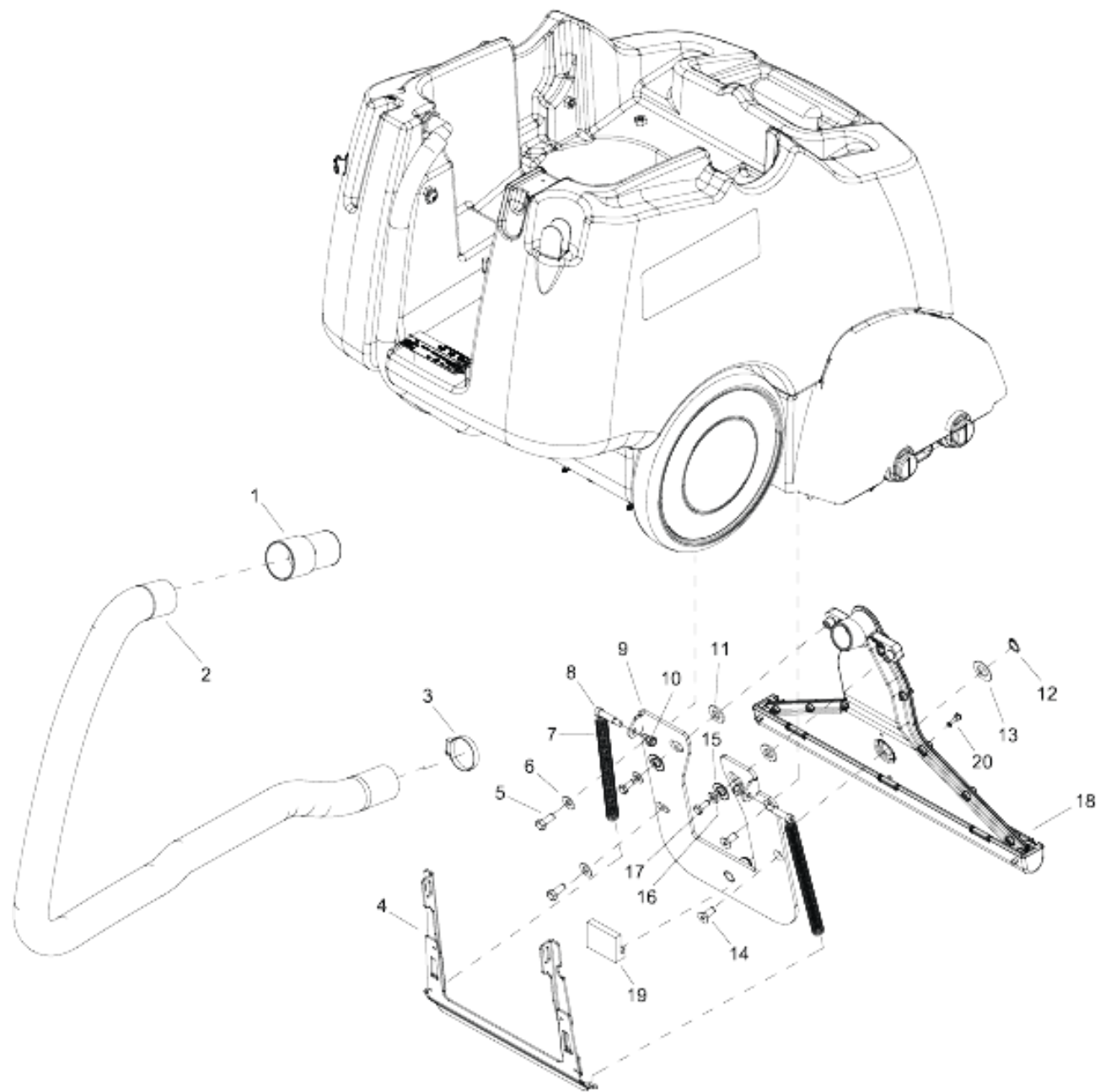
POS	Article no.	Description	Quantity	Unit
1	8.620-082.0	Nipple 1/8	1.000	ST
2	8.626-069.0	HOSE ASM, FCT ADPTR X 60"	1.000	ST
3	8.623-311.0	CLAMP, 1.0" WORM GEAR	1.000	ST
4	8.623-309.0	CLAMP, 1/4 ID HOSE	1.000	ST
5	8.623-479.0	COVER, CLP SOLUTION	1.000	ST
6	8.623-846.0	HOOK, STRAP	1.000	ST
7	8.637-361.0	CONNECTOR, JG, 1/4 TUBE X 1/8 MNPT	1.000	ST
8	8.619-792.0	HOSEBARB, 1/2MPT X 3/8 NYL DL	1.000	ST
9	8.639-526.0	SHROUD, FRONT	1.000	ST
10	8.600-686.0	SCREW, 10-16 X .5 PHPNHMS HL SS	4.000	ST
11	8.627-616.0	SCREW, 10-32 X .625 PHPNHMS STL BLKOX	1.000	ST
12	8.627-629.0	SCREW, 10 X .75 PPNHMS HI LOW ST BLK ZN	3.000	ST
13	8.627-649.0	SCREW, 5/16-18 X .625 HHCS SS	1.000	ST
14	8.627-705.0	SCREW, 5/16-18 X .75 SCHCS SS	1.000	ST
15	8.624-079.0	HOSEBARB, 1/2MPT X3/4 90D	1.000	ST
16	8.601-065.0	WASHER, .203 X .562 X .040 FLT	4.000	ST
17	8.601-067.0	WASHER, 5/16 FLT SS	1.000	ST
18	8.629-762.0	STRAP, HAND TOOL	1.000	ST
19		BRKT, HANDTOOL HOSE	1.000	ST
20	8.629-939.0	BAFFLE, FILL PORT	1.000	ST
21		BRKT, BOTTLE & QD MOUNT	1.000	ST
22	8.629-959.0	HOSE, 3/4ID X .12W CLR X 25"	1.000	ST
23		TANK, SOLN, TRIM	1.000	ST
24	8.627-092.0	NUT, 6-32 HEX NYLOCK SS	1.000	ST
25	8.627-395.0	SCREW, 6-32 X .5 PHPNHMS SS	1.000	ST
26	8.624-608.0	LANYARD, 18.0 W/LOOP & EYE	1.000	ST





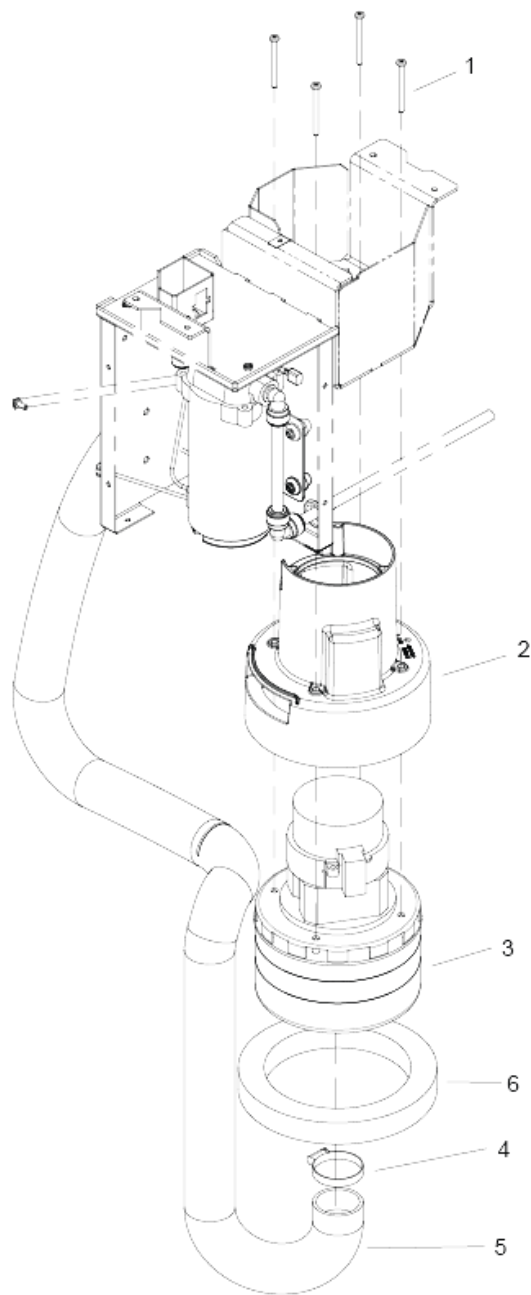
150 VACUUM SHOE

POS	Article no.	Description	Quantity	Unit
1		VACUUM SHOE, 18"	1.000	ST
2		GASKET, 18" VAC SHOE OUTER	1.000	ST
3		GASKET, 18" VAC SHOE SIDE	2.000	ST
4		GASKET, 18" VAC SHOE CENTER	1.000	ST
5		PLATE, 18" VACUUM SHOE	1.000	ST
6	8.617-295.0	SCREW, M5-.8 X 12 SHCS SS DIN912	12.000	ST
7	8.629-317.0	WIPER ASM 18"	1.000	ST
8	8.629-319.0	PIN, CLEVIS 1/4 X 1.5 STL ZNPLT	2.000	ST
9		BEARING, BRONZE FLANGED	1.000	ST
10		GASKET, 18" WIPER	1.000	ST



160 VACUUM SHOE MOUNTING

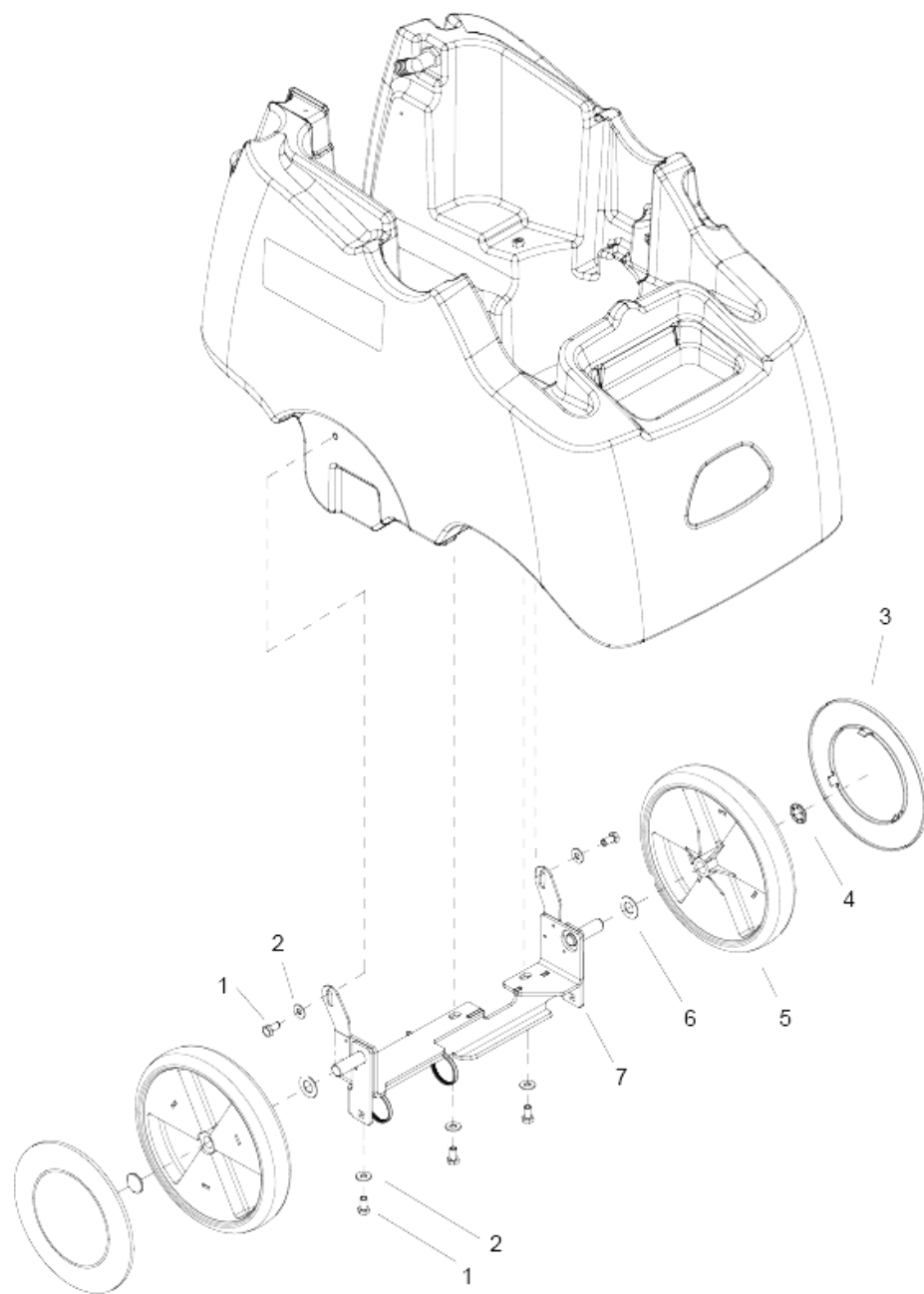
POS	Article no.	Description	Quantity	Unit
1	8.600-301.0	Collar HOSE 1.5" BLK A 2161	1.000	ST
2	8.600-429.0	Hose 1.5 BLK VAC X 45"	1.000	ST
3	8.600-239.0	Clamp 1.75" WORM GEAR X .312	1.000	ST
4		ASM, TRAVEL LIMITER	1.000	ST
5	8.627-649.0	SCREW, 5/16-18 X .625 HHCS SS	2.000	ST
6	8.601-067.0	WASHER, 5/16 FLT SS	2.000	ST
7	8.629-503.0	SPRING, EXT .562DX 6.0LX .072W	2.000	ST
8	8.627-828.0	SHOULDER BOLT, 5/16 X .875	2.000	ST
9		BRKT ASM, VAC SHOE MOUNT	1.000	ST
10	8.600-581.0	NUT, 1/4-20 HEX NYLOCK SS	2.000	ST
11	8.625-942.0	WASHER, .510 X 1 THR	2.000	ST
12	8.627-275.0	RING, 5/8 EXTERNAL SNAP	1.000	ST
13	8.601-073.0	WASHER, 5/8 X .64 X 1.188 SS	1.000	ST
14	8.629-808.0	SCREW, 5/16-18 X .75 SCHFLHCS SS	2.000	ST
15	8.625-941.0	WASHER, .51 X 10 X .063 THR	2.000	ST
16	8.601-063.0	WASHER, 1/4 SS	2.000	ST
17	8.627-375.0	SCREW, 1/4-20 X .625 HHCS SS NP	2.000	ST
18	8.629-316.0	VAC SHOE ASM, 18"	2.000	ST
19		BLOCK, DECK LINKAGE	1.000	ST
20	8.601-499.0	SCREW, M5-.8 X 20 SCHCS SS DIN912	1.000	ST



## 170 VACUUM

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<b>POS</b>	<b>Article no.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>
1	8.630-030.0	SCREW, 8-15 X 2 PHPNHSMS ZN TYPEA	4.000	ST
2	8.621-748.0	COVER, VAC MOTOR	1.000	ST
3		ASSY, VAC MOTOR	1.000	ST
4	8.600-239.0	Clamp 1.75" WORM GEAR X .312	1.000	ST
5	8.600-429.0	Hose 1.5 BLK VAC X 45"	1.000	ST
6	8.630-262.0	Foamed material 1 X 1 X 20	1.000	ST



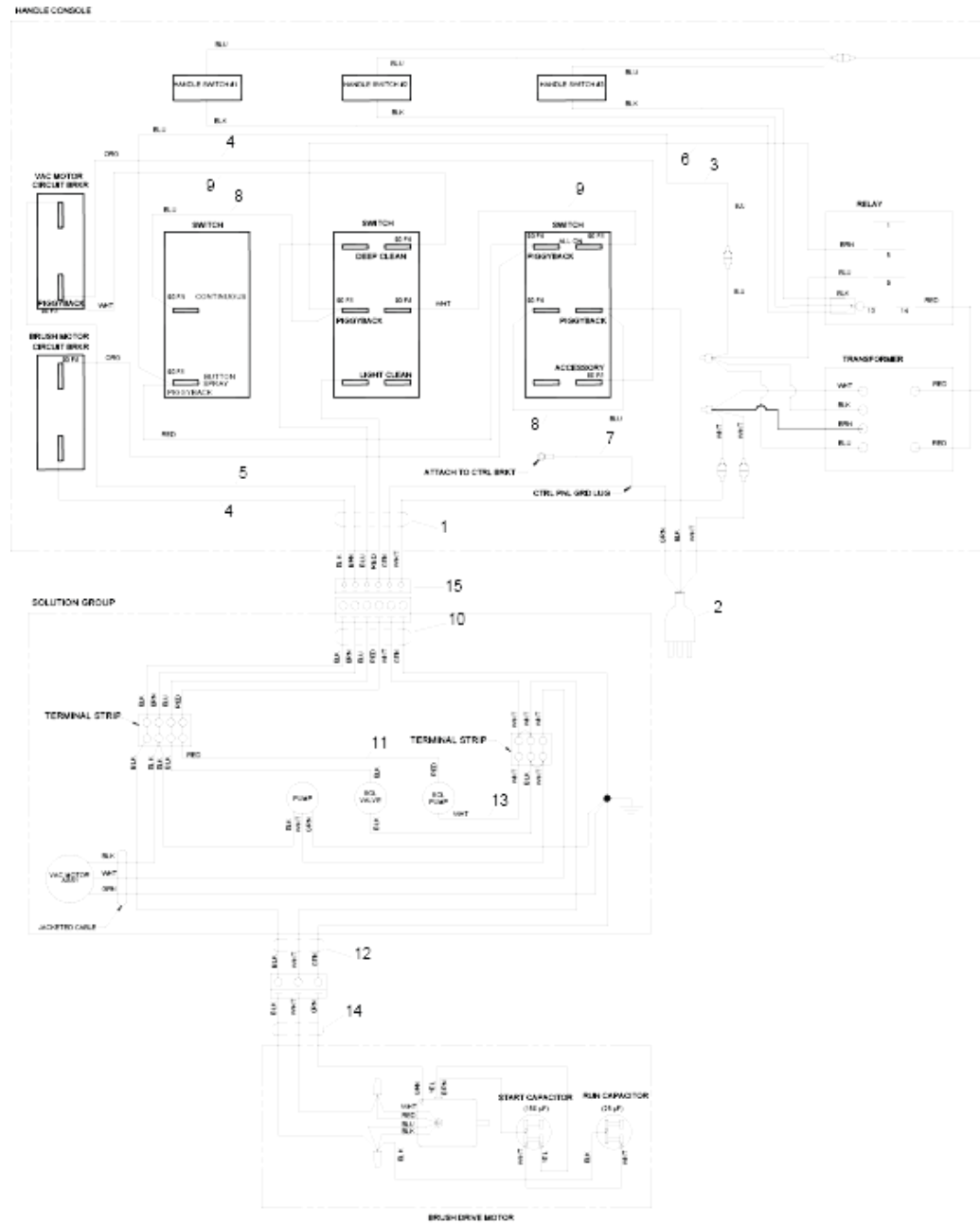
## 180 WHEEL & AXLE

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POS	Article no.	Description	Quantity	Unit
1	8.627-649.0	SCREW, 5/16-18 X .625 HHCS SS	5.000	ST
2	8.601-067.0	WASHER, 5/16 FLT SS	5.000	ST
3	8.630-007.0	HUBCAP, 9.75" WHEEL, BLACK	2.000	ST
4	8.600-166.0	HUBCAP, 5/8" SHAFT	2.000	ST
5	8.622-605.0	WHEEL, 9.75" X 1.5"	2.000	ST
6	8.601-073.0	WASHER, 5/8 X .64 X 1.188 SS	2.000	ST
7		AXLE ASM, CLIPPER DUO	1.000	ST



# 190 WIRING DIAGRAM



## 190 WIRING DIAGRAM

POS	Article no.	Description	Quantity	Unit
1	8.629-606.0	HARNESS, CLIPPER DUO HANDLE	1.000	ST
2	8.629-775.0	Cord assembly 14/3 X 22 PGTL	1.000	ST
3		WIRE, 540MM BLU/18 76046XSTRIP	1.000	ST
4		WIRE, 240MM ORG/18 76031X76046	2.000	ST
5		WIRE, 150MM RED/18 76031X76046	1.000	ST
6		WIRE,605MM BRN/18 76046X76047L	1.000	ST
7	8.626-821.0	WIRE, 15" GRN/18 76008 X 76008	1.000	ST
8		WIRE, 80MM BLU/18 76031X76046	2.000	ST
9		WIRE, 150MM WHT/18 76046X76046	2.000	ST
10	8.629-933.0	HARNESS, HANDLE CONNECTOR	1.000	ST
11		WIRE, 10"WHT/14 76029 X 76029	1.000	ST
12	8.629-934.0	HARNESS, BRUSH DECK	1.000	ST
13		WIRE, 10" RED/14 76029 X 76029	1.000	ST
14	8.629-422.0	BRUSH DECK WIRING HARNESS	1.000	ST
15	8.631-217.0	KIT, HANDLE HARNESS CONNECTOR	1.000	ST