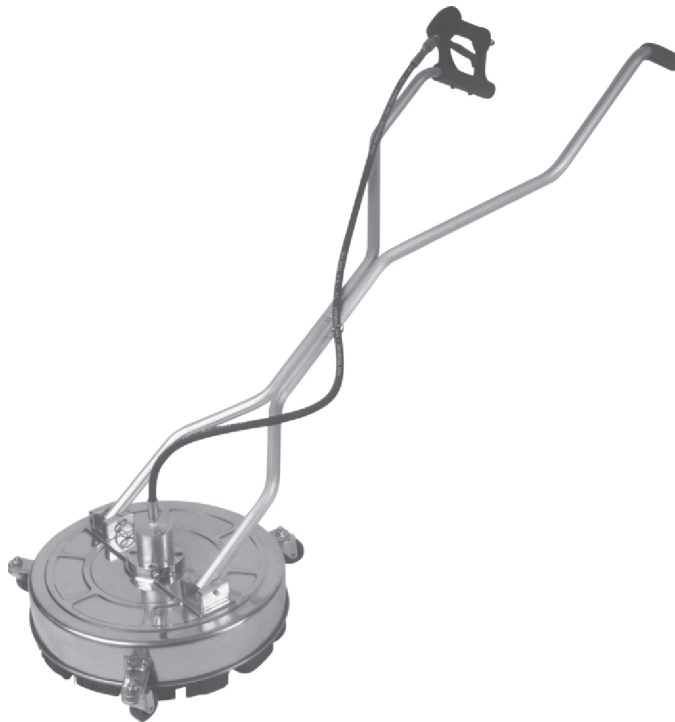


ROTARY SURFACE CLEANER

Professional Pressure Washer Accessories

Operation Instruction and Parts List Manual

Size 21 inch / 24 inch



This manual contains:

IMPORTANT WARNINGS and **INSTRUCTIONS**. READ AND RETAIN FOR REFERENCE



WARNING: To reduce the risk of injury, the user must read and understand the operators manual before using this product.

SAVE THIS MANUAL FOR FUTURE REFERENCE

VERSION: A+SC21-SC24

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INTRODUCTION

Congratulations on the purchase of your new Rotary Surface Cleaner! You can be assured this Cleaner was constructed and designed with quality and performance in mind. Each component has been rigorously tested to ensure the highest level of acceptance.

Your Rotary Surface Cleaner is equipped with a heavy duty high pressure swivel with the versatility of using this Cleaner in both cold and hot water applications. Simply connect the Rotary Surface Cleaner to your pressure washer, pull the trigger and walk behind for fast and efficient cleaning!

This manual was compiled for your benefit. The contents of this manual are based on the latest product information available at the time of publication. The manufacturer reserves the right to make changes in price, color, material, equipment, specifications or models at any time without notice.

IMPORTANT

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols below. Please read the manual and pay attention to these sections.

DANGER

DANGER indicates a imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

ALWAYS PROVIDE A COPY OF THIS MANUAL TO ANYONE USING THIS EQUIPMENT. READ ALL INSTRUCTIONS IN THIS MANUAL AND ANY INSTRUCTIONS SUPPLIED BY MANUFACTURERS OF SUPPORTING EQUIPMENT BEFORE OPERATING THIS UNIT AND ESPECIALLY POINT OUT THE "SAFETY WARNINGS" TO PREVENT THE POSSIBILITY OF PERSONAL INJURY TO THE OPERATOR.

SAFETY WARNINGS



HAZARD

RISK OF INJECTION OR SEVERE CUTTING INJURY

POTENTIAL CONSEQUENCE

Serious injury or death could occur from high pressure spray penetrating the skin.

- Keep clear of nozzle and spray! Never put your hand, fingers or body directly over the spray nozzle. Keep hands and feet away from rotating spray arm and high pressure discharge spray.
- This product is to be used only by trained operators. Always keep operating area clear of all persons.
- **DO NOT** allow children to operate this unit.
- If an accident does occur, and the spray appears to have penetrated the skin, **SEEK EMERGENCY MEDICAL CARE. DO NOT TREAT AS A SIMPLE CUT!** Be prepared to tell a physician exactly what kind of cleaning agents you were using by reading the Detergent Label and the Material Safety Data Sheet provided with your detergent.
- High pressure hoses should be inspected daily for signs of wear. If evidence of failure exists, promptly replace all suspect hoses to prevent the possibility of injury from the high pressure spray. If a hose or fitting is leaking, **NEVER PLACE YOUR HAND DIRECTLY ON THE LEAK.**
- Before using rotary surface cleaner, or when quick connecting high pressure hoses, be certain the "collar" on the female quick connect is locked securely to prevent accidental discharge and that all quick coupler fittings are secure.
- **NEVER** operate the gun with the trigger wired in the open position. To prevent accidental discharge, the trigger gun should be securely locked when not in use.
- Do not make repairs or adjustments while unit is running.
- Before removing the spray nozzle or servicing the unit, **ALWAYS** shut off the unit and trigger the gun to release trapped pressure. (Even after you shut off the unit, there is high pressure water left in the unit until you release it by triggering the gun). Allow the unit to cool down and service in a clean, dry, flat area.
- **CAUTION:** Operating while moving over any raised obstacle will damage surface cleaner. If rotating spray arm strikes an object, causing a vibration, **STOP** and replace spray arm assembly. Continued operation could result in serious injury or damage to surface cleaner.



HAZARD

RISK OF BURNS

POTENTIAL CONSEQUENCE

Serious injury may occur from touching Hot Surfaces

- The Rotary Surface Cleaner is capable of accepting a maximum permissible rating of 212°F. Operating temperature under normal operating conditions is 175°. When using in a hot water application, do not touch or direct discharge stream at persons. Be cautious of hose fittings as surface temperatures are the same as the water temperature.

**HAZARD****RISK OF BODILY INJURY****POTENTIAL CONSEQUENCE**

Serious injury or death may occur from detergents contacting or penetrating the skin.

- SEEK EMERGENCY MEDICAL CARE if the spray appears to have penetrated the skin! DO NOT TREAT AS A SIMPLE CUT! Be prepared to tell a physician exactly what kind of cleaning agents you were using by reading the Material Safety Data Sheet provided with your detergent.
- Never use any solvents or highly corrosive detergents or acid type cleaners with this rotary surface cleaner.
- Protective equipment such as rubber suits, gloves and respirators are advisable, especially when using cleaning detergents.
- Keep all detergents out of the reach of children!

POTENTIAL CONSEQUENCE

Serious injury can occur from loose debris being propelled at a high speed from the spray gun.

- ALWAYS wear protective goggles when operating the unit to shield the eyes from flying debris and detergents.
- DO NOT direct spray toward fragile materials such as glass—shattering could occur.

POTENTIAL CONSEQUENCE

Injury may occur if the operator loses his balance caused by the thrust of water travelling through the spray nozzle.

- Stay alert-watch what you are doing. Do not operate the unit when fatigued or under the influence of alcohol or drugs.
- NEVER squeeze the trigger unless securely braced.
- DO NOT overreach or stand on unstable support.
- Wet surfaces can be slippery, wear protective foot gear and keep good footing and balance at all times.

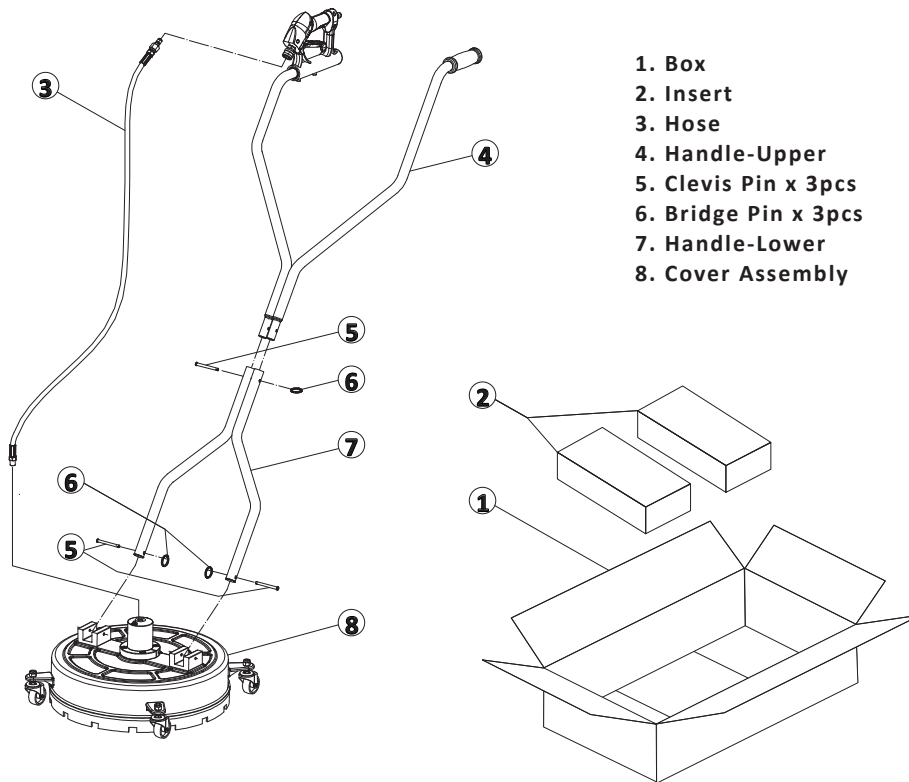
POTENTIAL CONSEQUENCE

Injury may occur from the rotary surface cleaner.

- ALWAYS hold on firmly to the handles of the Rotary Surface Cleaner when operating the unit. Failure to do so can cause the Cleaner to move dangerously. To prevent accidental discharge, the trigger gun should be securely locked when not in use.
- Always wear eye and ear protection when using the Rotary Surface Cleaner. Other protective clothing such as a rubber suit, gloves, respirator, etc., may be necessary when using detergents.
- Never make adjustments on the machine while in operation.
- DO NOT leave pressurized unit unattended. Shut off the pressure washer and release trapped pressure before leaving.
- Know how to stop the Rotary Surface Cleaner. Be thoroughly familiar with controls.
- Never place hands or feet under the cover assembly during operation to prevent injury from rotating spray arm and high pressure injection.

FEATURES

Unpack the machine and make sure that it is complete and not damaged, In case it is not complete or damaged, do not use the machine and consult your dealer. For reasons of packaging or transport, some accessory components can be supplied loose. In this case they must be assembled according to the instructions in this manual. Make sure that the components of the packaging are placed out of the reach of children.



- 1. Box
- 2. Insert
- 3. Hose
- 4. Handle-Upper
- 5. Clevis Pin x 3pcs
- 6. Bridge Pin x 3pcs
- 7. Handle-Lower
- 8. Cover Assembly

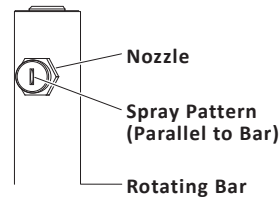
SPECIFICATIONS

Model Name	A+SC21	A+SC24
Operation Pressure (PSI/BAR)	2000-4000/138-275	2000-4000/138-275
Flow Rate (GPM/LPM)	3.0-8.0/11.35-30	3.0-8.0/11.35-30
Max Temperature (°F/°C)	212°/100°	212°/100°
Maximum RPM	2500	2500
Unit Net Weight (Kg)	11.9	13.2
Unit Shipping Weight (Kg)	13.9	15.2
Unit Shipping Dimension(CM)	89 x 59 x 29	89 x 62 x 29

INSTALLATION & PREPARATION

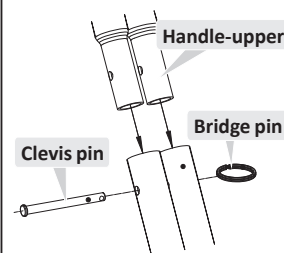
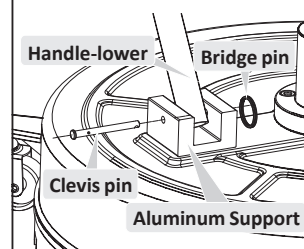
NOZZLE SELECTION & INSTALLATION:

1. Your Rotary Surface Cleaner will come installed with one set of 25020 nozzles (25 degree and 2.0 orifice).
 - a. The minimum orifice size to be used in your Rotary Surface Cleaner is half that which is being used in your pressure washer. Example: If your pressure washer uses a size 5 orifice, you will need to use a size 2.5 orifice in your Rotary Surface Cleaner. (Two nozzles are inserted in the Rotary Surface Cleaner, therefore; two nozzles x size 2.5 orifice = size 5 orifice.)
 - b. The nozzles being used should have a 15° - 25° spray pattern; anything less than a 15° spray pattern can damage the area being cleaned. Anything more than 25° may not allow the bar to rotate.
2. Nozzles should be screwed into the rotating bar. The spray fan should be parallel to the Rotating Bar. (See figure at right.)



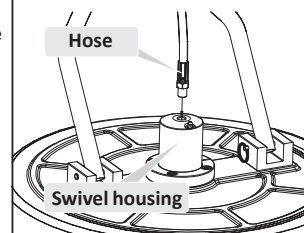
UNIT ASSEMBLY:

1. Line up the holes on the lower part of handle (7) with the holes on the cover assembly (8).
2. Insert the clevis pins (5) through the handle and cover holes and attach to the bridge pins (6).
3. Attach the upper handle (4) by lining up the hole in the upper and lower handle. Push the clevis pin (5) through the aligned hole and attach to the bridge pin (6).
4. Quick connect the Rotary Surface Cleaner hose assembly to the handle center and to the swivel located on the unit base.



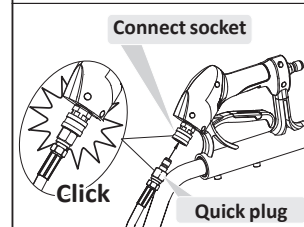
SET-UP:

1. Locate the high pressure discharge hose on your pressure washer and ensure it is securely connected to the water outlet of the pressure washer. Quick connect the other end of the high pressure discharge hose to the gun on the Rotary Surface Cleaner.
2. Connect the water supply hose, one end to your pressure washer, the other end to a pressurized water supply.



SURFACE PREPARATION:

1. Clear any loose debris from the area to be cleaned.
2. Never attempt to clean surface with objects that protrude from the surface being cleaned. Striking any raised obstacle during operation will damage machine. If contact does occur and results in vibration when operating machine, STOP and replace spray bar.



INSTALLATION & PREPARATION

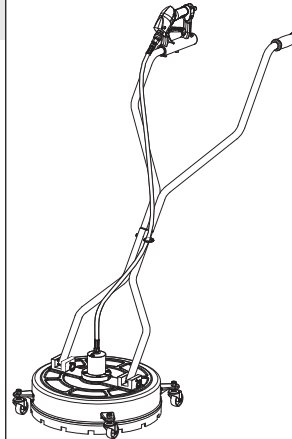
⚠ CAUTION Risk of Injury or damage to machine!!

NEVER OPERATE THE UNIT IF IT BEGINS TO VIBRATE!
Shutdown the unit and tighten the rotating bar, bolts and fittings.

PRE-START INSPECTION PROCEDURES:

1. Inspect Rotary Surface Cleaner before each use. Tighten rotating bar, bolts and fittings as needed.
2. Ensure all connections are secure. Turn the water supply completely "ON". (DO NOT START PRESSURE WASHER!)
3. Inspect hoses for kinking, cut or leaks. If found, DO NOT USE HOSE! Replace damaged hoses before starting.
4. Unlock the trigger gun and squeeze the trigger. Water will begin flowing from the nozzles of the Surface Cleaner. Ensure nozzles are not clogged and spray pattern is not erratic. Change nozzles before proceeding if problems exist.
5. Be sure that all damaged parts are replaced and that the mechanical problems are corrected prior to operation. If you need service, contact an Authorized Service Center.

COMPLETE SET UP



CLEAN UP WITH YOUR ROTARY SURFACE CLEANER

SPECIAL APPLICATION AREAS:

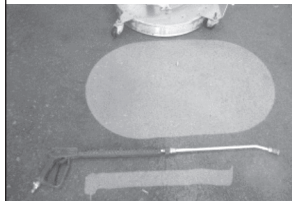
- Removing deposits, mass, algae, fuel, oil and grease from drive through pads, boat ramps, tennis courts, roofs, pools, decks, walkways, factory floors, semi trailer floors, fishing docks, and loading docks
- Cleaning off stubborn stains from asphalt and concrete surfaces
- Disinfection for the highest hygiene demands in saunas, bathroom areas, and in the catering industry.
- Great for cleaning driveways.

BENEFITS OF PRESSURE WASHER SURFACE CLEANERS:

- Huge time savings
- Easy, effortless work
- Substantially lower cost (especially labor)
- Visibly greater cleanliness
- Universally applicable
- Use with cold or hot water
- Circular design allows a zero wall clearance
- Hover action (cleaner "floats" above the ground)
- Eliminate streaking and fatigue

The following comparison chart shows the time taken to clean a typical driveway (37 sq. meter) Using 2 different components.

ATTACHMENT	TIME
Rotary surface cleaner	10 min.
Standard spray nozzle	80 min.



OPERATION

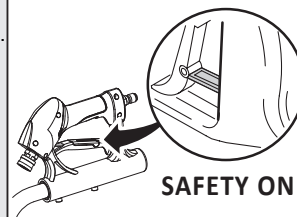
⚠ WARNING

The Following Contains Operating And Maintenance Instructions.

Do Not Attempt To Operate This Rotary Surface Cleaner Until You Have **Read And Understood All** Safety Warning And Instructions Listed In This Manual.

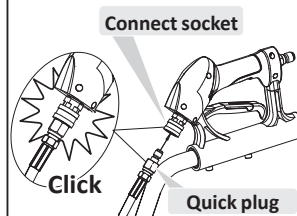
Incorrect Operation Of This Unit Can Cause Serious Injury!

Do Not Alter Or Modify This Equipment In Any Manner!



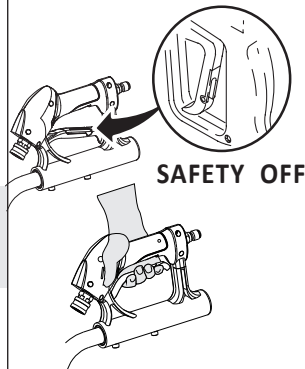
START-UP:

1. Lock the trigger gun on the Rotary Surface Cleaner by moving the safety lock lever to a 90° angle so it rests against the handle grip.
2. Ensure all connections are secure.
3. Unlock the trigger gun and squeeze the trigger while starting the Pressure Washer.
4. Water will begin flowing from the nozzles of the Surface Cleaner. Ensure nozzles are not clogged and spray pattern is not erratic. Turn the pressure washer and water supply off and change nozzles before proceeding if problems exist.
5. Walk slowly behind the unit, cleaning as you go. If striping occurs, slow down the pace. Do not allow machine to remain stationary on soft surfaces such as wood.
6. Check "weep hole" on top of the swivel periodically. Water will seep slowly. If it shoots out, shut-down the unit and replace seals and/or main seal.



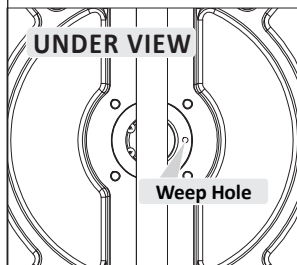
⚠ CAUTION Risk of Injury or damage to machine!!

NEVER OPERATE THE UNIT IF IT BEGINS TO VIBRATE! Shutdown the unit and tighten the rotating bar, bolts and fittings.



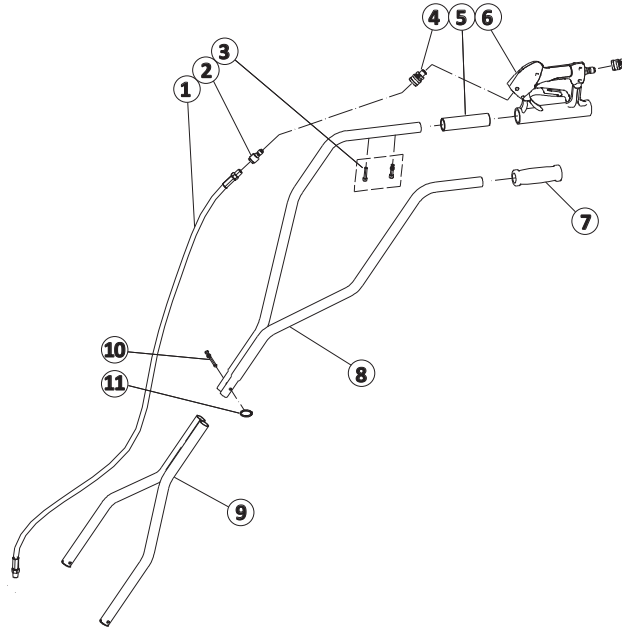
SHUT-DOWN:

1. Turn the Pressure Washer off.
2. Turn the water supply off.
3. Squeeze the trigger gun to relieve water pressure.
4. Disconnect and drain the water hose and wipe down unit. Store unit in a nonfreezing environment.



PRODUCT EXPLODED AND PARTS LIST

Handle Assembly



AVAILABLE REPAIR PARTS AND KITS

- 1. Hose, A+SC21-SC24 8.753-584.0
- 2. Coupler, 1/4" Plug, Female 8.707-136.0
- 4. 1/4" Quick Connect 8.750-696.0

KIT, SPRAY GUN, A+SC21-SC24 8.921-834.0

- 3. Screw M6X30
- 4. 1/4" Quick Connect
- 5. Sleeve
- 6. Trigger Gun

KIT, HANDLE ASSEMBLY, A+SC21-SC24 8.921-835.0

- 7. Grip
- 8. Upper Handle
- 9. Lower Handle
- 10. Clevis Pin
- 11. Clevis Pull Ring

PRODUCT EXPLODED AND PARTS LIST

Cover Assembly

KIT, HANDLE MOUNTS, A+SC21 - SC24
8.921-841.0

- 10. Clevis Pin
- 11. Clevis Ring
- 14. Handle Support

KIT, SWIVEL CLAMP, A+SC21 - SC24
8.921-842.0

- 12. Clamp Ring
- 13. Bolt

KIT, CASTER ASSEMBLY, A+SC21 - SC24
8.921-843.0

- 17. Nut M6
- 18. Spacer
- 19. Screw M6 x 14
- 20. Nut M10
- 21. Wheel Bracket
- 22. Caster Spacer
- 23. Caster Wheel

KIT, CASTER, A+SC21 - SC24
8.921-845.0

- 20. Nut M6
- 22. Caster Spacer
- 23. Caster Wheel

15. SWIVEL, A+SC21 - SC24
8.753-597.0

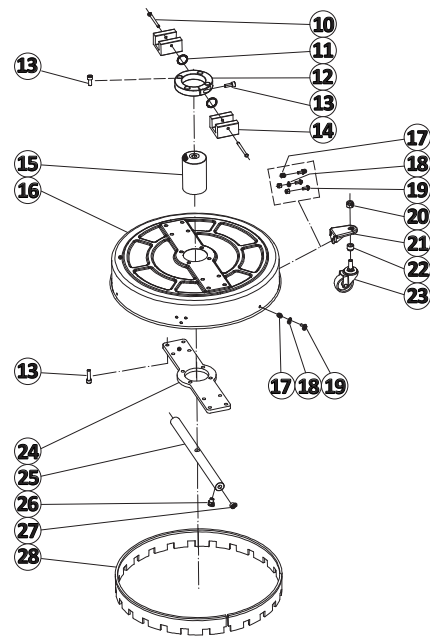
16. DECK, 21", A+SC21
8.753-598.0

16. DECK, 24", A+SC24
8.753-599.0

26. SPRAY NOZZLE 2.0, 25°
8.753-537.0

KIT, SPRAY ARM, A+SC21

- 8.921-847.0**
- 25. Spray Bar
 - 27. End Plug



KIT, SPRAY ARM, A+SC24

- 8.921-846.0**
- 25. Spray Bar
 - 27. End Plug

KIT, 21" BRUSH ASSEMBLY, A+SC21

- 8.921-848.0**
- 28. Brush Skirt
 - 17. Nut M6
 - 18. Spacer
 - 19. Screw M6 x 14

KIT, 24" BRUSH ASSEMBLY, A+SC24

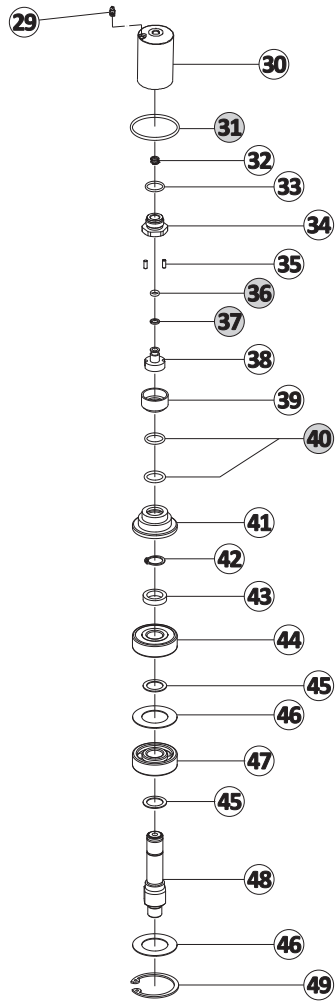
- 8.921-849.0**
- 28. Brush Skirt
 - 17. Nut M6
 - 18. Spacer
 - 19. Screw M6 x 14

PRODUCT EXPLODED AND PARTS LIST

Swivel Assembly

- 29. Grease Nipple
- 30. Swivel Housing
- 31. O-Ring*
- 32. Compression Spring
- 33. O-Ring
- 34. Bolt
- 35. Pin
- 36. O-Ring*
- 37. Back up Ring*
- 38. Stem
- 39. Bearing Retainer, Small
- 40. O-Ring*
- 41. Bearing Retainer
- 42. Snap Ring
- 43. Bearing Back-up Ring
- 44. Upper Bearing
- 45. Bearing Spacer
- 46. Washer
- 47. Lower Bearing
- 48. Rotor Shaft
- 49. Snap Ring

*** Kit, Swivel Seals, A+SC21-SC24**
8.921-833.0
 (Items 31, 36, 37, 40)



TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
Inadequate cleaning power.	Not enough PSI from pressure washer.	Ensure unit produces a minimum 2000 PSI. Most effective cleaning range is 2500-4000 PSI.
	Inadequate water supply.	Turn water supply completely "ON" and/ or clean water filter on pressure washer. Ensure unit produces a minimum of 3.0 GPM.
	Engine RPM on pressure washer is too low.	Increase throttle.
	Nozzle obstructed or worn.	Clean or replace as necessary.
	Incorrect nozzle orifice size.	Insert correct nozzle.
Rotating bar will not rotate.	Seal has drag.	Allow for break-in period.
	Snap ring dislodged.	Do not use! Contact your Customer Service.
	Seal malfunction.	Do not use! Contact your Customer Service.
	Bearing failure.	Do not use! Contact your Customer Service.
Excessive vibration of Surface Cleaner OR Cleaner base is creating a suction to the surface.	Nozzle clogged.	Clean or replace.
	Rotating bar, bolts or fittings loose.	Tighten.
	Rotating bar or swivel rotor bent.	Replace.
Streaked cleaning pattern.	Insufficient water supply OR PSI of pressure washer is too low. (Won't allow Rotating Bar to move.)	Increase water supply OR ensure pressure is a minimum of 2000 PSI and GPM is a minimum of 3.0.
	Nozzle clogged.	Clean or replace.
	Cleaning too fast.	Slow down pace.
Water weeping from swivel.	Small amount of seepage is normal.	No modification is necessary.
Water shooting from swivel.	Seal malfunction.	Replace.

ACCESSORIES AND PARTS WARRANTY

LIMITED MINIMUM 90 DAY WARRANTY

We warrant to the original consumer that each new part and accessory sold by Kärcher North America (KNA) will be free from manufacturing defects in materials or workmanship in normal service for the duration specified by the original component manufacturer with a 90 day minimum from date of purchase, provided it is installed properly and the equipment is maintained in accordance with KNA'S instructions and manuals. Components manufactured by KNA, such as frames and handles have a one year warranty from date of purchase.

Our obligation under this warranty is expressly limited as to the replacement or repair, at our option, at KNA, Camas, Washington 98607, or at a service facility designated by us, for such part or parts as inspection shall disclose to have been defective.

EXCLUSIONS:

This warranty does not apply to defects caused by casualty or unreasonable use, including faulty repairs by others and failure to provide reasonable and necessary maintenance.

THE FOLLOWING ITEMS ARE NOT COVERED BY THIS WARRANTY:

WE SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, including but not limited to labor costs or transportation charges in connection with the replacement or repair of defective parts.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. We make no other express warranty, nor is anyone authorized to make any on our behalf.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion of limitation of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

TO OBTAIN WARRANTY SERVICE:

Purchaser must bring the accessory parts to an authorized KNA Dealership. For the dealership nearest you consult our web page: www.KNA.com.