

ROTOVAC



360i Rotary Extractor Owner's Manual

360i/01/22/2010

Congratulations on owning the new Rotovac *360i* Extraction System.

The patented rotary extraction cleaning head of the *360i* produces unparalleled cleaning results for carpet and hard surface flooring while greatly reducing operator fatigue.

Operator's responsibility

As with all equipment, proper operation and maintenance plays a vital role in the performance of the *360i*. It is therefore extremely important that this operations manual is read and understood completely before operating the *360i*.

CALL BEFORE USING FOR THE FIRST TIME !

If you are using the *360i* for the first time read the owners manual, watch the training DVD (also available on line at Rotovac.com) and then call Rotovac toll-free **before using** for valuable tips and pointers at **1-888-768-6822. (Office hours: 8:00 a.m. to 5:00 p.m. Monday through Friday P.S.T.)**

Online Service Instructions

Service instructions are available online @ www.carpet-cleaning-equipment.net, under Rotovac Manuals in the left hand column.

OVERVIEW

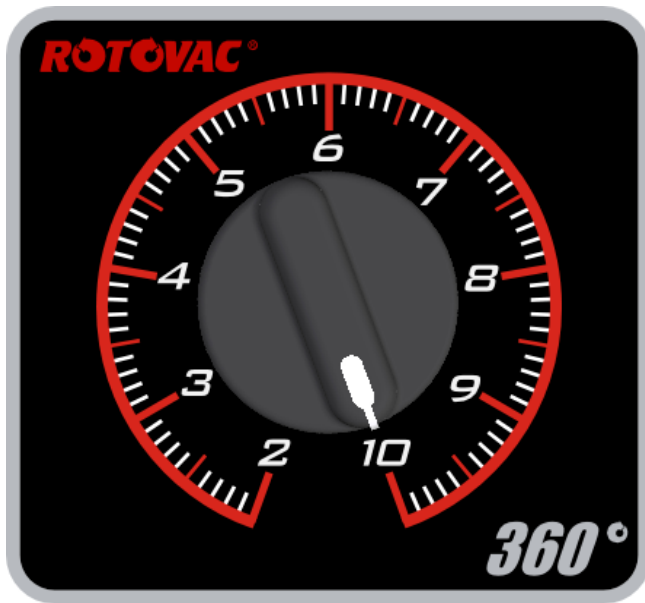
The Rotovac *360i* maneuvers in the same manner as a rotary floor buffer with a “heel and toe” left to right cleaning motion. If you have never operated a rotary floor type machine, this will take a little practice to learn how to control properly. Once mastered, operating the *360i* is a nearly effortless self propelled side to side motion. It may take a few jobs to learn how to operate the *360i* efficiently. Be patient and try it on some really dirty carpets and you will soon discover that the Rotovac *360i* cleans better, leaves it drier and is much more impressive to your customers than a traditional wand cleaning. When presented and used properly, the *360i* will impress your customers and lead to a major increase of referral and repeat business.

CONTROL:

When operating the *360i* for the first time, you can run it dry (not hooked up to an extractor) in an open carpeted area to get used to the handling characteristics. Extend the telescoping handle out to near its fully extended length. Adjust the handle angle to a low enough position so that your arms are extending almost straight down during operation. Before turning on, make sure the cleaning head is **flat and level on the carpet** and the speed control dial is turned all the way up to 10. Learn how to “hover” the *360i* in one spot without fighting it. Once you have found the center of balance and proper technique, you will find the *360i* is very easy to control. The *360i* maneuvers left and right like a rotary floor scrubber (heel and toe). Lifting up slightly on the handle causes the *360i* to move to the right. Letting down on the handle causes the *360i* to move to the left. Slightly twisting the handles clockwise moves forward, counterclockwise rearward. Combined handle movements allow motion in any direction. The on/off trigger is located under the left handle grip. The head speed control dial is located at the front of the control box. This allows adjustment of the head speed rpm. The solution valve trigger is located under the right handle grip. A red lever solution flow control valve allows for the adjustment of flow rate.

CLEANING:

With the solution trigger activated, make cleaning passes in a slow left and right motion allowing the *360i* to do the work. Overlap cleaning passes approximately 50% to assure thorough cleaning. The more soiled the carpet, the slower you should make the cleaning passes. Clean an area of approximately 4' X 4' with solution on and then let off the solution valve trigger and go back over the carpet with a vacuum only "dry pass" to provide maximum extraction for faster drying. For normal carpet cleaning spray pressure we recommend operating between 50 and 300 PSI.



SPEED CONTROL DIAL

SLOW DOWN HEAD SPEED WHEN CLEANING NEAR OBJECTS THAT HEADS COULD HIT.

The head rotation speed is adjustable from 0 to 200 RPM. This allows the operator to adjust the head speed for different types of carpets. When cleaning berber or commercial glue down, a slower speed will sometimes give better cleaning and/or drying results. Experiment for best performance. Examples of when you may want to use slower speed: 1) Over spraying-slinging water 2) Not handling properly , chattering or jumping on hard glue down carpet 3)

CAUTION:

Cleaning close to an obstacle you don't want heads to impact such as, where the tile floor meets the carpet, floor heat registers, metal thresholds, furniture legs or anything else you don't want the rotary heads to impact. 4) Dry pass on carpet that is difficult to dry such as Berber, 5) Hard surface cleaning.

HARD SURFACE BRUSH HEAD

OPERATION:

Recommended cleaning procedure: Pre-spray a section of the floor with the proper cleaning solution and then clean with the rotary brush head. When cleaning a tile floor with deep recessed grout lines you may want to use the broom stick grout brush to pre-scrub the grout lines and edges before cleaning and rinsing with the 360i brush head. You can pre-scrub with or without the vacuum turned on, and then clean, rinse and extract by activating the solution valve. A vacuum only dry pass can then be made for faster drying if needed. The brush head works well at 100 psi and it works even better at 800 psi when cleaning deep recessed grout lines. The brush head is equipped with 1.0 spray jets as standard; however you can customize with larger or smaller spray jets to suit your needs. When the nylon brush bristles become worn out, a new brush head block can be purchased and be refitted with all the other components.

BRUSH CARE:

Taking care of the brush head will increase the life and performance of the brush. After use, remove the brush from the machine, rinse them with clean water and store them, with bristle facing down or store them where the bristles will not get distorted. i.e. hang them on a wall hook or flat on a shelf. During storage, it is important not to distort the bristles in any way, especially over a long period of time. Operating water temperatures should not exceed 185° F to reduce brush distortion.

The Nylon bristles remember being straight and if the brush head is soaked in hot tap water they will return to 90% of straight.

PRECAUTIONS

Be careful not allow the rotating vacuum heads to strike any stationary objects such as **metal thresholds, floor vent registers, furniture legs etc.** Be extra careful when cleaning up next to where the carpet meets the hard floor as the rotating vacuum shoes could scratch and damage the hard floor. Reduce the head speed to avoid hard impact when cleaning close to any object that the rotary could impact.

SLOW DOWN HEAD SPEED WHEN CLEANING NEAR OBJECTS THAT HEADS COULD HIT.

Transporting

Be careful that the *360i* cleaning head does not come loose, unscrew and fall off while you are carrying or rolling it around.

Before carrying or rolling the *360i* check that the head is screwed on tight.

Warnings-

* Never allow unit to freeze. Damage due to freezing water expansion will **NOT** be covered under warranty.

* Keep motor and handle dry to avoid shorting out electrical components.

* Do not use *360i* in standing water, such as on a flooded carpet.

* Always use a grounded electrical outlet. Keep the control box on the handle dry. If the control box becomes wet, do not operate, call Rotovac for instructions.

* Always wear rubber-soled shoes when operating the *360i*

* Only trained personnel who have read this manual and understand completely the information herein should operate the *360i*.

* Regularly inspect the cleaning heads for any nicks or burrs. Grind or sandpaper away any sharp edges, nicks or burrs before use.

* Maintain tightness of all screws at all times.

Routine Maintenance

Removing the Cleaning Head

Note: Always check that the vacuum is disabled and the felt seal remains seated in position when replacing the cleaning head.

Tools Needed: Rubber Mallet, 7/8” Wrench, Small Block

Note: In most cases removal of cleaning heads will not require the use of any tools, however, if routine maintenance and regular removal of cleaning of heads is not performed the head may become more difficult to remove and may require more forceful methods of removal.

Normal 360 Head Removal:

- 1) Lay 360 back onto handles so that cleaning head faces outwards.

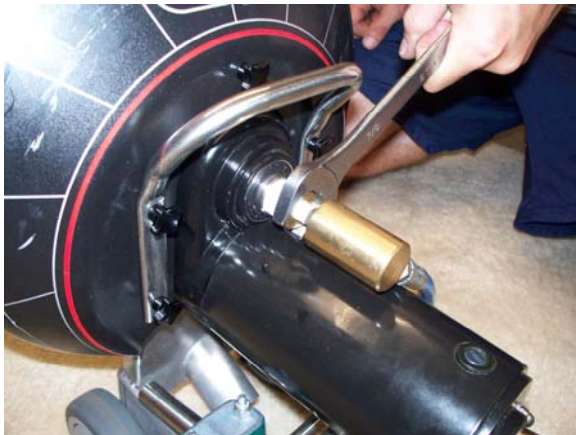


2) While facing the cleaning head, use the heel of your shoe to stomp down on the right side of a vacuum head so that the head unscrews clockwise from the motor. If the head is stuck try a rubber mallet and a block of wood.



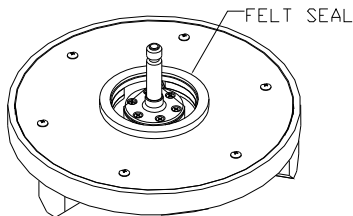
Head Stuck on 360 Removal Technique:

Should initial procedure prove unsuccessful more force may be necessary. Place a 7/8" wrench onto reducer bushing and hold firmly while repeating step 2 with more force.



Felt Vacuum Seals

Check the felt vacuum seals on the vacuum head for damage or wear. **A good felt seal is important for maximum vacuum extraction performance.** An excessively worn or torn felt seal will result in poor extraction. The felt seal will perform better and last longer if treated with a non-oily silicone spray. We prefer **Dupont Silicone/Teflon** spray, available at Home Depot.



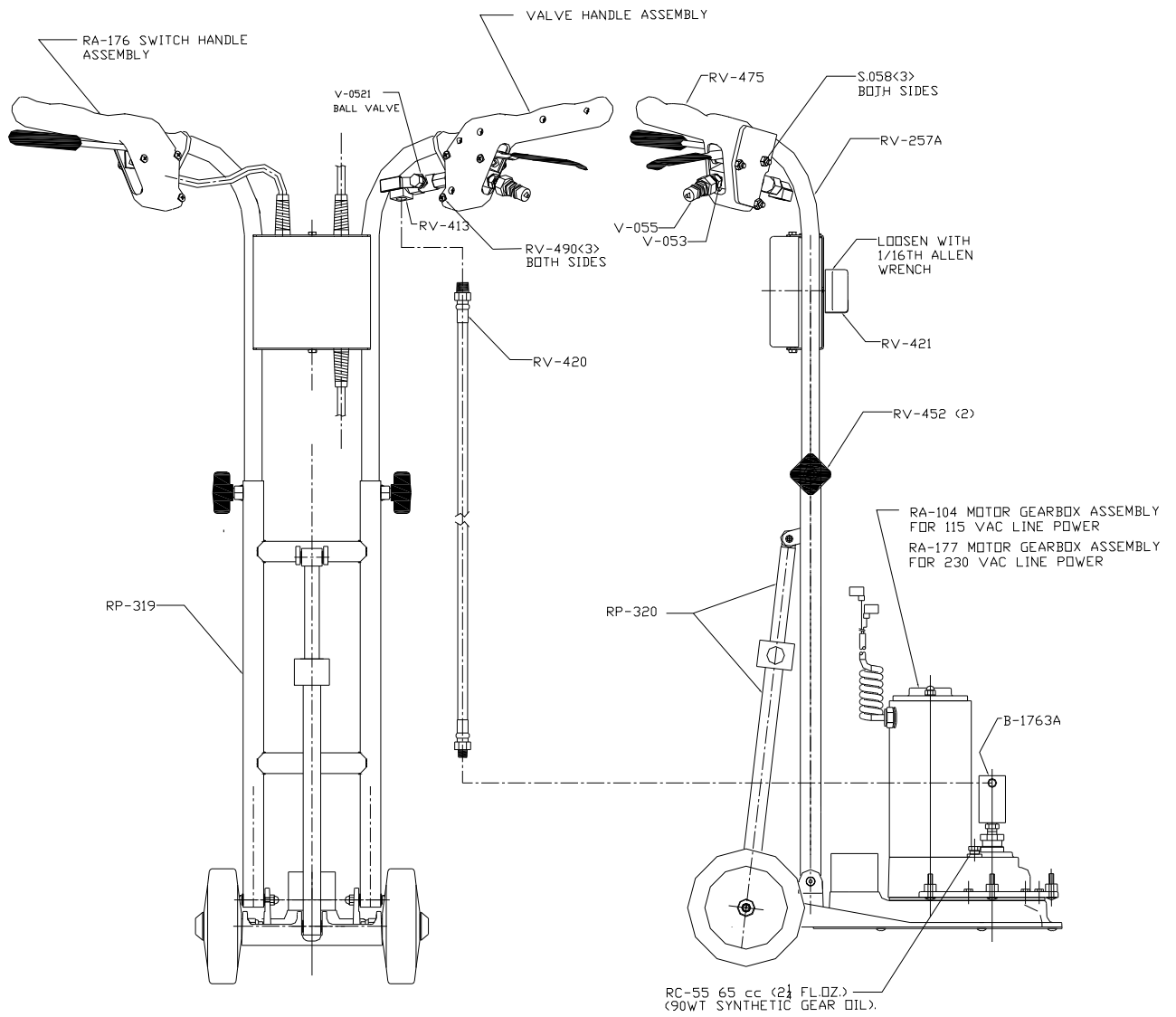
**Carpet and hard floor head
Felt Vacuum Seal**

Vacuum System Maintenance

To replace worn or damaged Vacuum Shoes, first remove the Head from the machine (see previous). The the stainless steel cover plate can then be removed by removing the 6 screws holding it in place. This allows access to the screws holding the vacuum shoes in place. If the shoes are being changed, remove the screws, and reattach new shoes. Tighten screws down securely. Make sure that the seal retainer clips are returned to their original position. When reinstalling the cover assembly, **make sure that the vacuum channels in the cover/seal match up with the channels in the molded head.** The Round Glide Discs are accessible from the underside without disassembly.

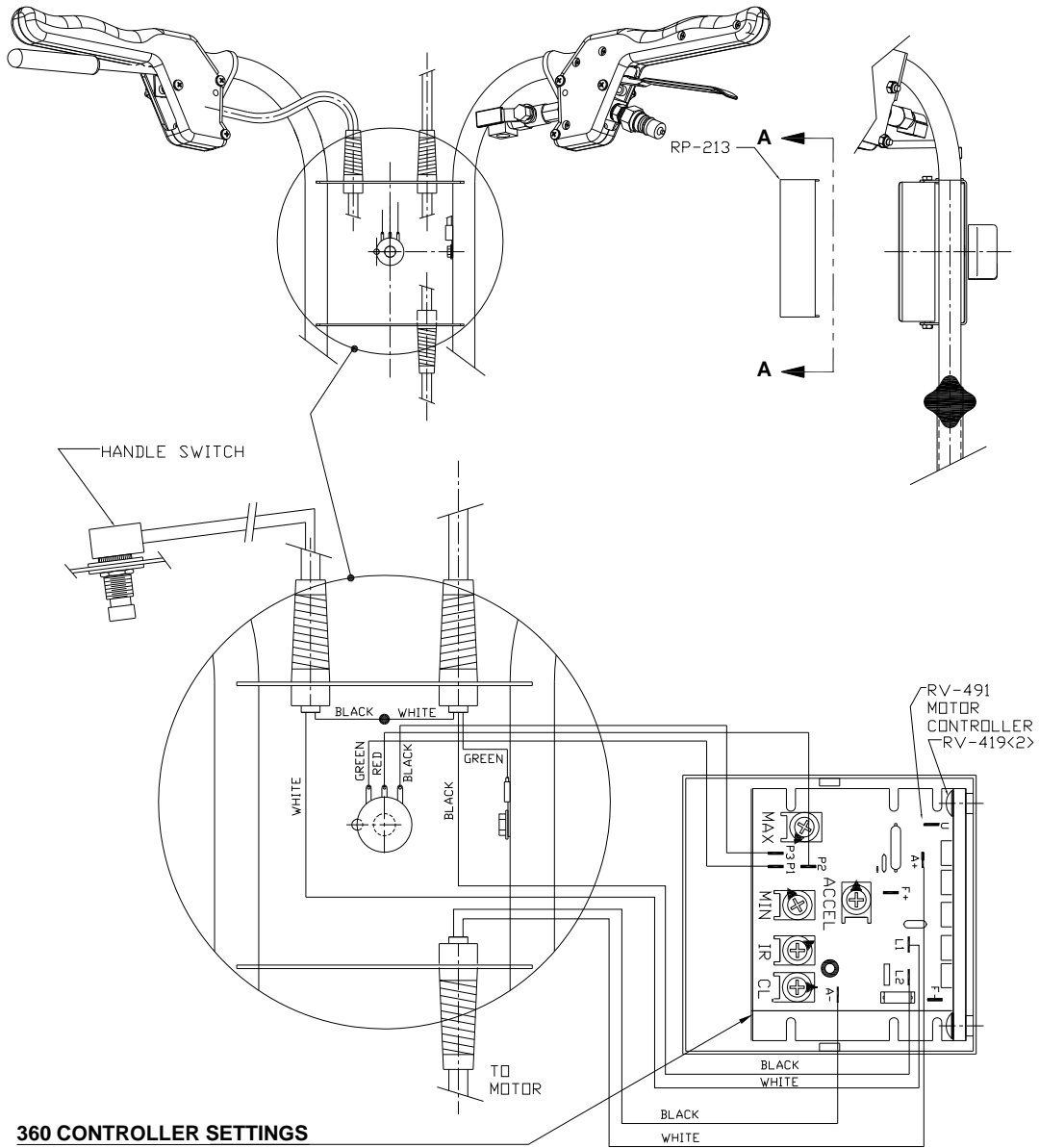
Sprayer System Maintenance

Periodically tilt the *360i* back and visually inspect the spray pattern of the jets to make sure they are not clogged or aimed in the wrong direction. The spray fan pattern should be aligned with the vacuum slots and should never go beyond the outer edge of the vacuum slot.



360i ASSEMBLY

ROTOVAC 360i - 110 VAC INTERCONNECT & SETTINGS



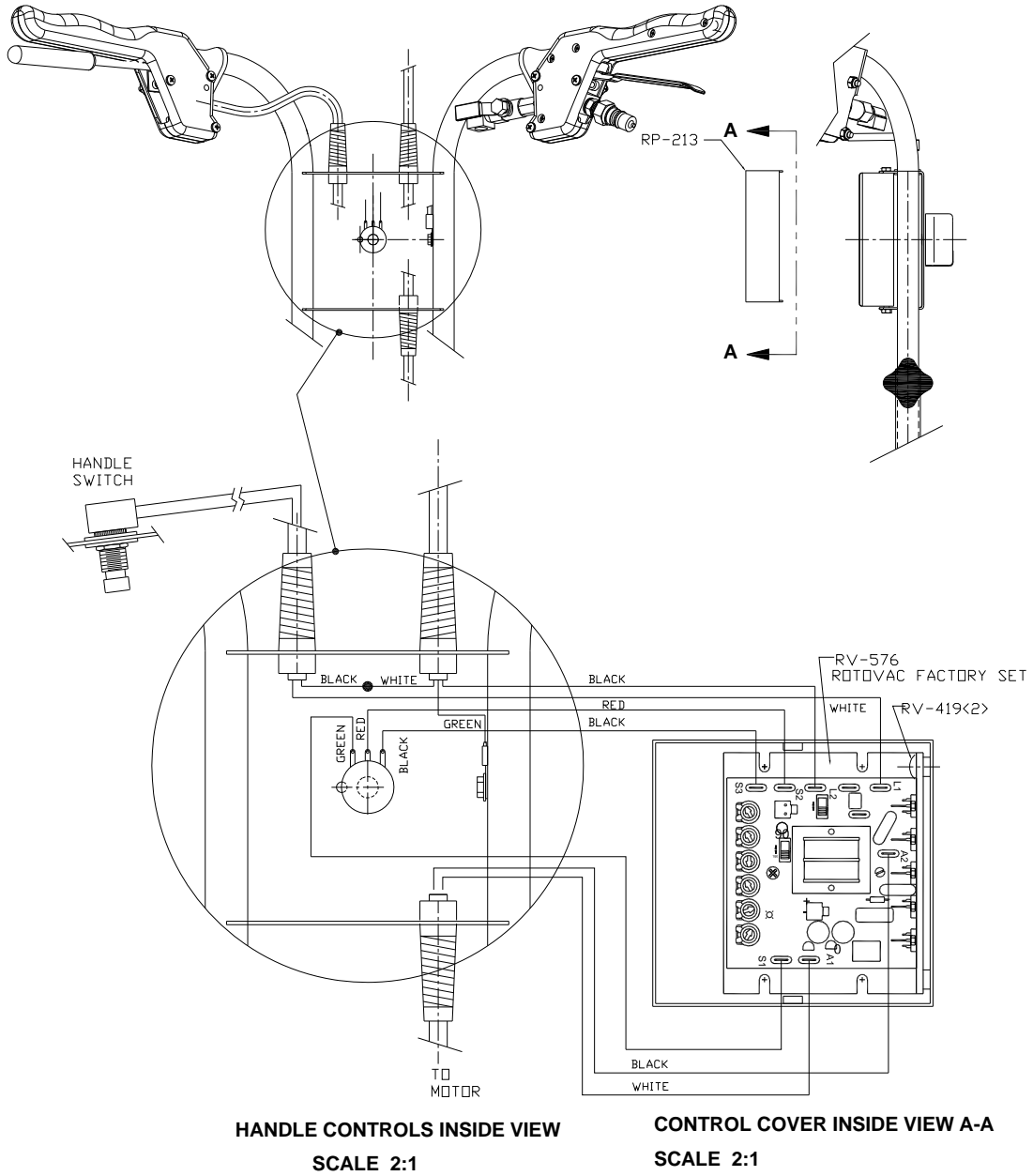
360 CONTROLLER SETTINGS

MAX: 3:00
 MIN: 8:00
 ACCEL: 9:00
 IR: 11:00
 CL: 2:00

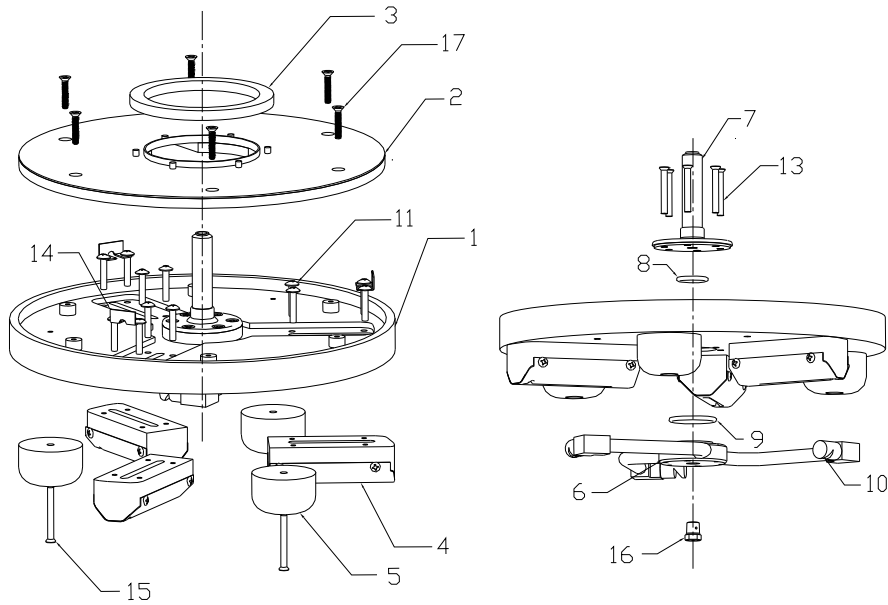
HANDLE CONTROLS INSIDE VIEW
SCALE 2:1

CONTROL COVER INSIDE VIEW A-A
SCALE 2:1

ROTOVAC 360i - CONTROLS WIRING 230 VAC INPUT POWER



Carpet Cleaning Head (RA -105A complete)

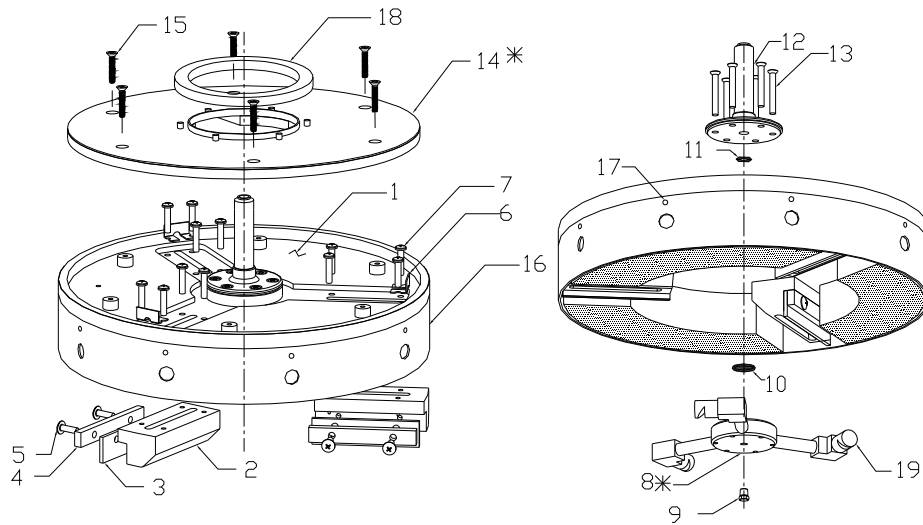


Vacuum System Maintenance

Sprayer System Maintenance

ITEM #	QUANTITY	ROTOVAC P/N	DESCRIPTION
1	1	RP-203A	VACUUM DISC
2	1	RA-106A	COVER/SEAL ASSEMBLY
3	1	RP-313	FELT SEAL
4	3	RA-113	SMOOTHGLIDE VACUUM SHOE ASSEMBLY-L.H.
5	3	RP-207A	GLIDE SHOE
6	1	RA-108	SPRAYER ASSEMBLY
7	1	A-2329AL	MALE SHAFT (LH)
8	1	RV-412	SMALL O-RING
9	1	S-023	O-RING
10	3	S-026	SPRAY JET 1.5
11	12	RV-401	ROUND HEAD SCREW
13	6	RV-609	FLAT HEAD SCREW
14	3	RP-224	GASKET RETAINER
15	3	RV-439	GLIDE SHOE SCREW
16	1	RP-269	VENT CHECK (FROM S/N 1803)
17	6	RV-497	FLAT HEAD SCREW

Hard Surface Brush Head (RA-109B complete)



Vacuum System Maintenance

Sprayer System Maintenance

ITEM #	QUANTITY	ROTOVAC P/N	DESCRIPTION
1	1	RP-264	VAC DISC W/ BRUSHES (BLUE STAGGERED)
2	3	RP-221	VACUUM/SQUEEGEE SHOE
3	3	RP-223	SQUEEGEE BLADE
4	3	RP-222A	SQUEEGEE CLAMP
5	6	RV-437	SQUEEGEE CLAMP SCREW (#10-32UNF X 5/8)
6	3	RP-224	GASKET RETAINER
7	12	RV-438	SCREW (#10-24UNC X 7/8)
8	1	RA-110	BRUSH SPRAYER ASSEMBLY
9	1	RP-269	VENT CHECK (FROM S/N 1803)
10	1	S-023	O-RING
11	1	RV-412	SMALL O-RING
12	1	A-2329AL	MALE SHAFT (LH)
13	6	RV-609	FLAT HEAD SCREW
14	1	RA-106A	COVER/SEAL ASSEMBLY
15	6	RV-497	FLAT HEAD SCREW
16	1	RV-435A	BRUSH SKIRT
17	9	RV-450	SHEET METAL SCREW
18	1	RP-313	FELT SEAL
19	3	S-0261	SPRAY JET (1.0)

360i TROUBLE SHOOTING GUIDE

1. Motor bogging down or stopping

*The *360i* has a built in torque governor that will cause the motor to bog down or stop if overloaded or used improperly. This feature ensures long motor and gear box life because it forces the operator to use the *360i* correctly and not “fight” or abuse the machine during operation. When operated correctly, the torque governor will put out plenty of power to do the job while also protecting the motor gear box from premature wear.

*NOTE: If you feel the *360i* is bogging down due to too much vacuum power, we recommend using our vacuum relief attachment P/N RV-449.

Motor running Hot.

*The *360i* drive motor is made to safely run at temperatures up to 160° F. Note that metal surfaces at 120° F can be comfortably handled for only several seconds.

2. Overspray from cleaning head, slinging water.

*Make sure spray jets are pointing slightly inward and your psi is not turned up too high. Recommend 100 to 300 psi

*Turn down the motor speed rpm.

3. Leaving carpet too wet.

*Make sure felt vacuum seal is not worn or torn.

*Turn down psi.

*Make slower vacuum only dry pass. *Turn down motor speed during dry pass. *Check to make sure your vacuum system is working properly and the filters in your extractor are not clogged with carpet lint. * Make sure top plate of cleaning head black foam gasket is aligned properly with vacuum slots, *Check vacuum on your extractor for full power.

WARRANTY

Rotovac Corporation products are warranted to be free of defects in material for 1 year as noted below:

During this warranty period, we will repair or replace, at our sole option, free of charge, any parts shown to be defective in either material or workmanship. Said parts must be returned with postage or freight pre-paid. Specific parts, such as switches, vacuum motors, pumps, fittings, etc., are also warranted for a period of 1 year from date of original purchase.

This warranty is for replacement of defective parts or workmanship only. IT DOES NOT PROVIDE FOR REPLACEMENT OF COMPLETE UNITS DUE TO DEFECTIVE PARTS. It does NOT cover normal wear items such as hoses, power cords, bumpers, carbon brushes, gaskets, etc., which require replacement as a result of ordinary usage. Also, failures caused by abuse, neglect, alterations or operation contrary to manufacturer's recommendations are not warranted.

Replacement parts are warranted only for the remainder of the original warranty period.

This warranty does not cover labor or other charges in connection with replacement parts. NO LOCAL SERVICE OR REPAIR CHARGES ARE ALLOWED UNLESS PRIOR AUTHORIZATION IS OBTAINED.

There are no other warranties, expressed or implied, made with respect to this equipment. The manufacturer assumes no responsibility for damages resulting from the use or misuse of this equipment. NOTE: This warranty is not transferable.

Rotovac Corporation

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