

Operating Manual



- ☑ Bioremediation Technology
- ☑ Powerful Cleaning Performance
- ☑ No Hazardous Waste Generation
- **☑** Non-Flammable



WELCOME

Congratulations!

You have purchased the state-of-the-art SmartWasher® Bioremediating Parts Washing System. The SmartWasher® systems combine a powerful cleaning solution with the bioremediating power of specially-bred Ozzy® microbes. Once a SmartWasher® has been properly installed and activated, it is literally ALIVE!

Your SmartWasher®

- IS a safer alternative than using traditional solvents
- **USES** the latest in bioremediation technology to eliminate hazardous liquid waste
- **HELPS** deregulate and detoxify your workplace and reduce government paperwork
- SAVES you money

The SmartWasher® is designed to safely and effectively remove oil and grease from automotive and industrial parts. It replaces hazardous solvent parts washers with aqueous-based degreasing solutions called OzzyJuice® and microbe impregnated particulate traps called the OzzyMat®.

The microbes impregnated into the OzzyMat® come to life in the OzzyJuice® and break down, or "eat", the grease, oil and other contaminants in the solution leaving by – products of harmless carbon dioxide and water – leaving nothing hazardous to haul away.

OzzyJuice® is an award winning, pH neutral, non-caustic, non-flammable and bioremediating degreasing solution. Working in concert with our microbes (Ozzy®) these superior products help eliminate or greatly reduce your need to dispose of hazardous waste, giving you all the performance you are accustomed to in a typical solvent parts washer without all the hazards and hassles. You have made a great decision.

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Visit Smartwasher.com for videos and product information.



Safety Instructions

Please read this instruction manual carefully and completely to ensure that your new SmartWasher® will operate at its maximum effectiveness.

When using your SmartWasher®, basic safety precautions should always be followed, including:

- **1.** Care must be taken as burns can occur from touching hot parts.
- 2. Do not operate SmartWasher® with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
- **3.** Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
- 4. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for current lower than the equipment may over heat. Care should be taken to arrange the cord so that it will not be tripped over or pulled. (Must be rated a minimum of 15A/110V)
- 5. Unplug equipment from electrical outlet when not in use for an extended period of time. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.

- **6.** To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
- Adequate ventilation should be provided when working on operating internal combustion engines.
- **8.** Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- **9.** To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- **10.** Use SmartWasher® only as described in this manual.

 Use only attachments and parts recommended by CRC Industries.
- **11.** ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
- **12.** It is good practice to wear gloves whenever using industrial cleaning fluids.



Installation and Setup

Your SmartWasher® is almost ready to use. (The OzzyMat®, support grid and false bottom of the sink are packed inside the sink.) Visually inspect for damage (minor scratches and scuffs are normal due to the molding process).

- Remove the false bottom and check to make sure the mat support grid is in the bottom of the sink.
- Remove and discard packing material.

Parts Washer Setup

- 1. Remove the OzzyMat® from its package, unfold it and lay it on the mat support grid located in the lowest level in the sink. Make sure to lay the OzzyMat® white side up.
- 2. Place the false bottom in position in the sink.
- **3.** Form the flexible nozzle to its desired shape and be sure that the parts brush is inside the sink.
- 4. DO NOT PLUG UNIT IN BEFORE ADDING OZZYJUICE®.
- **5.** At start-up, carefully add OzzyJuice® to the SmartWasher® by slowly pouring the solution directly into the sink. Refer to the chart below for amounts.
- **6.** Plug the unit into a 115VAC GFCI electrical outlet.
- 7. The SmartWasher® will take approximately four hours to heat up to its selected optimal temperature of 105°F (+-2°) (40°C) (+-1°) OR 115°F (+-2°) (46°C) (+-1°). This temperature will be maintained as long as the SmartWasher® is plugged in and full of OzzyJuice®. (If the "add fluid light" is on, the heater automatically shuts off.)

Fill Amounts

| Parts Washer Unit | Start-Up Fluid |
|-------------------|--|
| SW-23 | 15 gallons (three 5-gallon containers) |
| SW-25 | 25 gallons (five 5-gallon containers) |
| SW-28 | 25 gallons (five 5-gallon containers) |
| SW-28XE | 25 gallons (five 5-gallon containers) |
| SW-37 | 25 gallons (five 5-gallon containers) |





Installation and Setup Continued

Parts Washer Operation

- 1. The pump switch is attached to a ten minute timer. Turning the switch ON (upward position) will start fluid flowing for ten minutes. To restart the flow, turn the switch OFF then ON again and the flow will restart for another ten minutes.
- **2.** Adjust the valve at the base of the nozzle to control the flow of the fluid through the nozzle. The valve at the base of the brush hose controls the flow of fluid through the brush. Both outlets can be operated independently or together.

OzzyMat®



The OzzyMat® traps sludge and dirt as small as 50 microns. It works effectively even when it appears dirty. At some point, however, it will become saturated and unable to pass fluid freely and should be changed. The FL-4 Multi-layer OzzyMat® allows you the benefit of being able to peel layers between mat changes.

OzzyMat® FL-4 Upkeep

- 1. Make sure the pump is not running.
- 2. Remove the false bottom from the sink.
- **3a.** At 1 to 3 weeks: Peel away the top layer of the OzzyMat® and wring out any excess fluid. Then, dispose of this layer according to your local regulations.
- **3b.** At 4 weeks: Remove the last layer of soiled OzzyMat® and set to one side of the filter support grid.
- 4. Remove a new OzzyMat® from its poly bag, unfold the mat and lay it on top of the filter support grid white side up.
- **5.** Roll up used OzzyMat[®] and stand vertically against the side of the sink to drain excess fluid. This will allow good fluid to drain from the used mat before disposal.
- 6. Take the old, used OzzyMat® and place it into the poly bag the new mat came in.
- **7.** Return the false bottom to its proper position.
- **8.** Discard used OzzyMat[®] in accordance with your local regulations.

CHECK LOCAL REGULATIONS:

You may be able to dispose of your used OzzyMat® as solid waste or with your other absorbent mats.



Installation and Setup Continued

OzzyJuice® Degreasing Solution

The SmartWasher® uses a specially formulated fluid which provides a combination of excellent cleaning characteristics, safety and nutrition for the Ozzy® microbes. OzzyJuice® is provided in ready-to-use containers.



Adding OzzyJuice®

Slowly pour a full container of OzzyJuice® directly into the SmartWasher® sink. The "add fluid light" should go out when you have completed this process.

To help monitor and maintain the proper fluid level, the SmartWasher® is equipped with an "add fluid light".

When the "add fluid light" light comes on the heater in the unit will turn off until an ENTIRE 5 Gallon container of OzzyJuice® is added.

The "add fluid light" light will shut off and the heater will come back on once the 5 Gallon container of OzzyJuice® is added to the SmartWasher®.

Visit Smartwasher.com for videos and product information.

Temperature Settings

- Your SmartWasher[®] should be plugged in 24 hours a day,
 7 days a week to maintain optimal temperature.
- Depending on the OzzyJuice® solution shipped with your SmartWasher®, the thermostat is factory-set to maintain fluid temperature between 105°F (+-2°) (40°C) (+-1°) AND 115°F (+-2°) (46°C) (+-1°). This temperature provides the optimum condition for effective cleaning and activity of Ozzy® microbes.
- The heater will not operate when the fluid level becomes critically low. Lift the sink and check your fluid level. When the "add fluid light" illuminates add 1 (5) gallon container of OzzyJuice®. If, after a reasonable warm-up period, the fluid temperature seems too hot or too cold, please refer to the "Troubleshooting" section of this manual.

• If the temperature falls below the recommended minimum, the system will still clean, but remediation of the hydrocarbons by the Ozzy® microbe colony will slow down. However, the microbes will not die. The Ozzy® colony will become more active when the fluid temperature reaches the appropriate level.



Pump Switch Up: 10 minutes Temperature Switch

Up: 10 minutes Up: 105°F

Down: 30 minutes Down: 115°F

CHECK LOCAL REGULATIONS:

You may be able to dispose of your used OzzyMat® as solid waste or with your other absorbent mats.



Proper Use, Care and Maintenance

Suggested Annual Maintenance

- **1.** Pump out the fluid into containers until the machine is drained.
- 2. Unplug the SmartWasher®.
- **3.** Remove the sink from the base. Inspect and remove any sludge that might have accumulated on the bottom of the unit.
- **4.** Clean the base with water to remove any debris.
- **5.** Visually check the condition of the hoses, connectors, etc. If everything appears to be in good working condition, reassemble sink, change OzzyMat®, and return the OzzyJuice® to the SmartWasher®.
- **6.** Simply perform the annual maintenance described above and then add OzzyBooster® for an extra supply of microbes to bring your fluid back into conformity. If your fluid has developed an odor, you may also add Odor Neutralizer.
- **7.** Maintenance may need to be performed more often depending on usage and/or application.

Change the OzzyMat®

To maintain the effectiveness and performance of the OzzyJuice® change the OzzyMat® once a month.

Visit Smartwasher.com for videos and product information.

CHECK LOCAL REGULATIONS:

You may be able to dispose of your used OzzyMat® as solid waste or with your other absorbent mats.



Frequently Asked Questions

What is BIOREMEDIATION?

Bioremediation is the use of biological agents such as microbes or plants to break down or neutralize "hazardous substances" or "contaminants" thereby removing hazardous chemicals from the environment. The process of bioremediation is listed as one of the Environmental Protection Agency's (EPA) innovative technologies.

How is "Bioremediating" different from "Biodegradable"?

BIOREMEDIATION is the use of natural biological agents such as microbes to break down or neutralize "hazardous substances" or "contaminants". FOR EXAMPLE: In the SmartWasher®, Ozzy®(s), natural biological agents or microbes, break down the carbon- based contaminants (grease and oil) and turn them into harmless carbon dioxide and water. BIODEGRADABLE means that a substance or mixture is subject to or could be broken down by biological agents into smaller compounds, in its virgin state only by natural means.

Who and what is Ozzy®?

Ozzy® is the name we selected for the blend of nonpathogenic (harmless to humans) microbes in the SmartWasher® system. Our microbes, Ozzy® eat potentially harmful hydrocarbon wastes in the SmartWasher® and transform these wastes into very small quantities of carbon dioxide and water. Similar types of microbes have been used for many years in various bioremediation applications, such as oil spills, including the Gulf of Mexico spill in 2010, and the Exxon Valdez disaster in 1989.

What happens to the grease, oil and other contaminants in the SmartWasher®?

Grease, oil and other contaminants are bioremediated in the SmartWasher® – transformed into harmless, non-hazardous by-products such as carbon dioxide and water. Particulate matter, such as sand, grit, dirt and paint chips are trapped in the OzzyMat® to be disposed of properly.

How well does OzzyJuice® clean?

OzzyJuice® is extraordinarily powerful and cleans extremely well. OzzyJuice® is a surfactant-based aqueous solution that breaks down the surface tension between the grease and the part rather than dissolving it; the grease actually lifts off the parts leaving behind clean surfaces. Note that while OzzyJuice® cleans differently than hazardous solvents or mineral spirits, it is just as effective.

Will OzzyJuice® clean carburetors, transmissions, aluminum, brakes and anything else in my shop?

YES. Not only is OzzyJuice® effective on these parts, it will not damage non-metal components that may be attached to the parts being cleaned such as rubber or plastic fittings. As with all parts cleaners, some items are going to become cleaner at different rates than others due to the degree and type of grime encountered.

How often do I change the fluid (OzzyJuice®)?

If you are changing your OzzyMat® a minimum of once a month, under normal use and with proper maintenance, you should never have to change or haul away used OzzyJuice®. This is one of the biggest advantages of the SmartWasher® system. Ozzy®(s) microbes clean contaminants from the fluid through the process of bioremediation. This leaves you with clean OzzyJuice® to work with day after day.

Why is the SmartWasher® heated?

Two reasons: First, it keeps Ozzy® eating at an optimal level to clean the solution as quickly as possible. Secondly, warm solution simply cleans better than cold solution. An added benefit to warm solution: it makes it more enjoyable to work with, especially in winter.

Why doesn't OzzyJuice® damage my hands like solvents?

OzzyJuice® is a pH-neutral, non-caustic, water-based formula that will not dry, crack or irritate the skin. Solvents can be caustic and pull fat cells from the skin, possibly causing extreme drying, redness, blisters, and other dermatological problems.

Can I use OzzyJuice® in other parts washers?

We do not recommend that OzzyJuice® be used in other parts washers. The OzzyJuice® and the SmartWasher® were made to work together with variables such as specific temperatures, compensation for foam, and so on. Also remember, the Ozzy®(s) microbes are in the OzzyMat® and if the OzzyJuice® is used in another machine it will not have the Ozzy®(s) microbes to clean the fluid.



Frequently Asked Questions Continued

How much oil can I put into the SmartWasher® at a time?

As with all parts cleaners, excessive greases, oils and fluids should be disposed of prior to washing parts. The SmartWasher® can handle large, tough, dirty jobs, but was not designed to be – nor should be treated as – a waste oil dump.

Can I use other fluids in my SmartWasher®?

The SmartWasher® parts washing system has been developed to work effectively as a whole: SmartWasher®, OzzyJuice® and OzzyMat®. Other solutions may damage the machine or kill Ozzy®, thereby eliminating the advantages of the SmartWasher®. The use of other solutions in the SmartWasher® will void the warranty.

Can the SmartWasher® overheat if the OzzyJuice® gets low?

NO. The heater is automatically de-activated when the "add fluid light" indicator light is illuminated. While the pump will continue to operate, the heater will not be reactivated until (1) entire 5 gallon container of OzzyJuice® is added to the system and the "add fluid light" indicator light is off.

Can I simply add water to the SmartWasher® to adjust the fluid level?

NO. Adding water will dilute the OzzyJuice®, severely impacting its performance.

How often do I add OzzyJuice® to the SmartWasher®?

The SmartWasher® comes equipped with an "add fluid light" which illuminates when you are low on fluid. When this light is on simply add (1) 5 gallon container of OzzyJuice® to bring the fluid level up to normal. On average, with normal use, you will add (1) 5 gallon container of OzzyJuice® approximately every six to eight weeks.

How quickly can Ozzy® break down oil and grease?

Once activated, the Ozzy® (s) are constantly eating. Assuming the system is operating optimally (OzzyJuice® temperature between 105°F - 115°F and the OzzyMat® routinely changed a minimum of once every 30 days) the rate at which the hydrocarbons can remediate can approach 80% every seven days. Analyses performed on samples of used OzzyJuice® from operating SmartWasher® systems consistently show oil and grease levels in the 1,400 parts per million range. BY COMPARISON, used, non-bioremediating, aqueous cleaners can average over 20,000 parts per million of oil and grease.

How often do I change the OzzyMat®?

At least once a month. This simple act accomplishes three things: First, it keeps trapped contaminants from reaching inappropriate levels. Secondly, Ozzy® microbes are introduced into the SmartWasher® system through the OzzyMat®. Every time you change the OzzyMat® you introduce fresh Ozzy®(s) to the existing microbe colony which keeps the system working at an optimum level. Finally, changing the OzzyMat® keeps sludge from building up in the base of the unit. If the OzzyMat® is not changed regularly and allowed to become clogged, large contaminants can flow into the reservoir via the overflow holes in the sink, potentially causing sludge to build up.

Does anything kill Ozzy®?

YES. Any biocides designed to kill microbes, such as bleach and Lysol®, will kill Ozzy®; chemicals that kill living things like some strong pesticides and rat poison may be harmful to Ozzy®.

How do I dispose of the OzzyMat®?

In many areas the OzzyMat® can be disposed of in a non-leaching, sealed manner, and disposed of as solid waste. But it must always be disposed of in accordance with the National, State or local regulations.

What do I do if the OzzyMat® clogs up quickly with grease?

The FL-4 OzzyMat® has 4 layers intended to be peeled away weekly, which helps eliminate unnecessary clogging. You need to make sure you are peeling away the individual layers on a weekly basis. Change the entire OzzyMat® on the 4th week OR every month. Make sure to remove any excess grease, dirt and debris from dirty parts prior to washing.

Is there a warranty for the SmartWasher®?

The SmartWasher® is warranted against defects for one year. For more detailed information, please refer to the warranty section of this manual or visit smartwasher.com.



Troubleshooting



Issue: Machine Does Not Power On



| Process | Process Steps | Image Example |
|---------|--|---------------|
| А | Ensure outlet has 120v. | |
| В | If not, check circuit breaker or try another outlet. | |

Step 2 Check voltage at the circuit board where power cord plugs in

| Process | Process Steps | Image Example |
|---------|--|---------------|
| Α | If there is power, call CRC Technical Service. | |
| В | If there is no power, replace the power cord. | |

Replacement Part (If required)

| CRC Replacement Part: Power Cord Kit | | | |
|---|---------|-------|--|
| Machine Model Item number Legacy number | | | |
| ALL Models | 1750066 | 14863 | |



Issue: Machine Does Not Pump

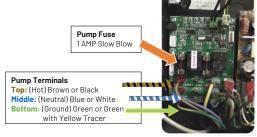


| Process | Process Steps | | |
|---------|---|--|--|
| Α | Ensure the switch is in the "On" position. | | |
| В | Ensure Pump LED is on solid (If it is go to step 2). | | |
| С | If Pump LED is <u>not</u> on solid, call CRC Technical Service. | | |



Step 2 Pump LED is SOLID

| Process | Process Steps | | |
|---------|--|--|--|
| Α | Check for 120 volts coming out of the circuit board at the connection terminals. Unplug the 1 brown or black, 1 blue or white wire, and 1 green or green with yellow tracer. | | |
| В | If 120 volts is present out of the top and bottom terminals, replace the pump. Ensure the switch is in the "ON" position when testing. | | |
| С | If 120 volts is not present, check for voltage across the fuse. If blown, replace fuse and pump. Do not replace just the fuse. | | |
| D | If the fuse is good and no voltage present, replace the control box. | | |





Troubleshooting Continued



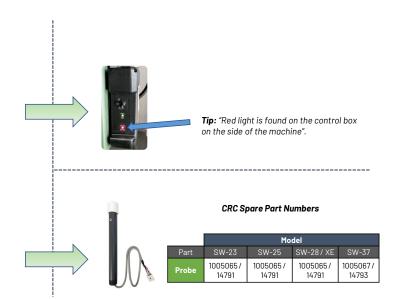
Issue: Machine Does Not Heat (Part 1)



| Process | Step Instructions | | |
|---------|--|--|--|
| Α | Check the OzzyJuice® level to ensure its above the screw on the probe. | | |
| В | If not, add more OzzyJuice® and check for the light to go out. Once the light has gone out, allow 2-3 hours for the machine to heat back up. | | |

Step 2 Is the RED ADD fluid light still on?

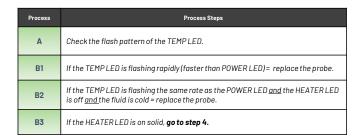
| Process | Step Instructions | | |
|---------|---|--|--|
| Α | Re-check the fluid level is above the probe screw. If not, add more OzzyJuice® until above screw. | | |
| В | If the Red light still stays on, replace the temperature probe. | | |

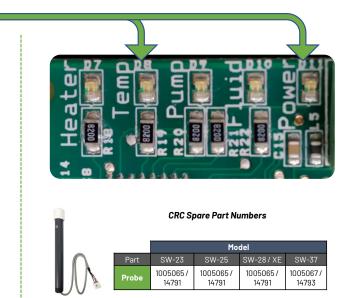




Issue: Machine Does Not Heat (Part 2)









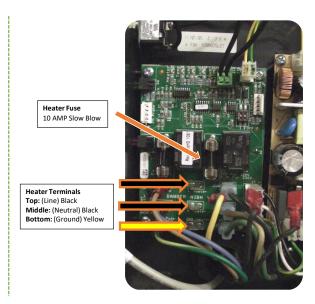
Troubleshooting Continued



Issue: Machine Does Not Heat (Part 3)

Step
Heater LED is on solid and the
OzzyJuice® is cold.

| Process | Process Steps | | |
|---------|---|--|--|
| Α | Check for 120 volts coming out of the circuit board at the connection terminals. Unplug the 2 black and 1 yellow wires. | | |
| В | If 120 volts is present out of the top and bottom terminals, you will need to replace the heater element. | | |
| С | If 120 volts is not present, check for voltage across the fuse. If blown, replace fuse and heater. Heater spec are 14.1ohms (+/- 1 ohm) across 2 black wires. | | |
| D | If the fuse is good and no voltage present, replace the control box. | | |
| * | Inspect front and back of circuit board for discoloration or burn marks, if so replace the control board assembly as well. | | |





Replacement Part Numbers









| Model | SW-23 | SW-25 | SW-28 / XE | SW-37 |
|-------------|-----------------|-----------------|-----------------|-----------------|
| Probe | 1005065 / 14791 | 1005065 / 14791 | 1005065 / 14791 | 1005067 / 14793 |
| Heater | 1005072 / 14798 | 1005073 / 14799 | 1005073 / 14799 | 1005121 / 14855 |
| Heater Fuse | 1750059 / 14794 | 1750059 / 14794 | 1750059 / 14794 | 1750059 / 14794 |
| Pump | 1005141 / 14879 | 1004888 / 14285 | 1004888 / 14285 | 1005140 / 14878 |
| Pump Fuse | 1750060 / 14795 | 1750060 / 14795 | 1750060 / 14795 | 1750060 / 14795 |
| Control Box | 1005124 / 14858 | 1005123 / 14857 | 1005123 / 14857 | 1005125 / 14859 |



Troubleshooting Continued

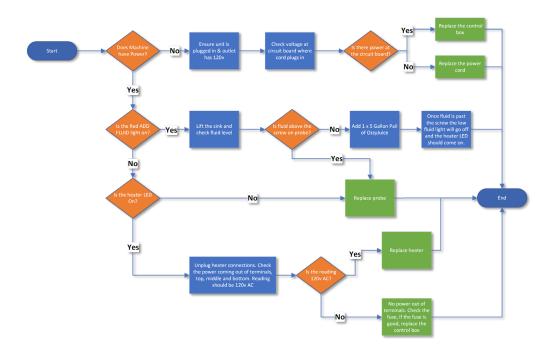


CR@ Machine Cleaning Performance Guide

| Issue | Possible Cause | Suggested Solution |
|--|----------------------------|---|
| OzzyJuice® does not clean | Lack of filter maintenance | Replace OzzyMat® with a new mat, soak mat for 10 minutes and allow microbes to clean solution over night. Usage of CRC OzzyBooster® recommended. Review options with Technical Service. |
| Parts are flash rusting after cleaning Part has been cleaned to bare metal and is exposed to atmospheric conditions | | 1) Dry part and apply lubricant or corrosion inhibitor, such as CRC 3-36®, Power Lube®, SP-400™, Rust-Block™, or paint. |
| Sink is slow to drain Filter Mat has become clogged Filter basket has become blocked | | Peel a filter layer or change Filter Mat if due for monthly service. Safely unblock filter basket. |
| Fluid has odor Lack of filter maintenance | | Replace OzzyMat® with a new mat, soak mat for 10 minutes and allow microbes to clean solution over night. Usage of CRC OzzyBooster® recommended. Review options with CRC Technical Service. |



Troubleshooting Flow Chart





Warranty Registration

DISCALIMER

The SmartWasher® is designed exclusively for removing oil and grease from automotive and industrial parts, and then remediating the residue. Any other use of the system, such as dumping waste oil, is not recommended and will cause damage to the system.

CRC Industries, Inc. cannot be responsible for any damage resulting from improper, inappropriate, or unauthorized use.

IN ADDITION

The OzzyMat® must be disposed of in accordance with the Federal, State, and local regulations. In many areas, the OzzyMat® can be disposed of in a non-leaching, sealed manner and disposed of as ordinary solid waste in accordance with the Federal, State, and local regulations.

The OzzyMat® needs to be changed a minimum of once a month or every 30 days. Under normal use and with proper maintenance, used OzzyJuice® should never need to be changed or hauled away.

CRC Industries, Inc. accepts no responsibility or liability for users' failure to comply with the Federal, State, and local regulations.

WARRANTY

CRC Industries, Inc. will replace, at no charge to the original purchaser (end user), any part or parts found to be defective in material or workmanship, when part is returned to our factory within 12 (twelve) months from date of purchase.

Transportation charges to be paid by the purchaser. In the event of any modification to the unit, misuse, negligence, or accident, or the use in the SmartWasher® system of fluids or filters other than those specifically authorized by CRC Industries, Inc., the warranty is void.

EXCEPT FOR THE PARTS WARRANTY SET FORTH ABOVE, CRC INDUSTRIES, INC. MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO THE SMARTWASHER, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARANTY OF FITNESS FOR A PARTICULAR PURPOSE, WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE. IN NO EVENT SHALL CRC INDUSTRIES, INC. BE LIABLE FOR CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, LOST PROFITS OR REVENUES OR DIMINUTION IN VALUE.

The manufacturer reserves the right to make changes in design or improvements to its product without imposing any obligation on itself to install the same on its product previously sold.



CRC Industries, Inc. smartwasher.com 800.556.5074