

# SAFETY-KLEEN MODEL 81 AGITATION PARTS WASHER Operator Booklet



**Customer should read and retain this booklet**

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**LOCAL SAFETY-KLEEN BRANCH**

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**OFFICE ADDRESS**

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**PHONE NUMBER**

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## SAFETY MEASURES



Safety in the workplace is dependent upon the proper use of this equipment and the solvent used in it. Therefore, it is important to carefully follow all safety instructions and operational procedures provided in this booklet and on the labels, as well as all instructions included in the solvent's Safety Data Sheet (SDS). Failure to do so may create a dangerous working environment.

Keep a copy of this booklet and the SDS near the equipment for quick and easy reference.



In accordance with Occupational Health and Safety Administration (OSHA) in the U.S. and the Workplace Hazardous Materials Information System (WHMIS) in Canada, this parts washer model has been tested by a Nationally Recognized Testing Laboratory (NRTL), Intertek Services, and is found to be in compliance with the following standards:

- ANSI/UL 201: The Standard for Safety for Garage Equipment
- CAN/CSA C22.2 No. 68 : The Standard for Motor Operated Appliances

### Important Safety Instructions

1. Read and understand the Operator's Booklet for this Safety-Kleen equipment before operating. Use only as described in this booklet. Use only manufacturer's supplied attachments.
2. Consult the Safety Data Sheet (SDS) for the cleaning fluid used in this equipment. The SDS provides detailed information regarding the cleaning fluid's health hazards, first aid, shipping, storage, emergency and environmental information.
3. Do not allow this machine to operate if trained operator is not on the premises.
4. Do not operate equipment that has been dropped or damaged until it has been examined by a qualified service technician.
5. Do not operate this machine in any manner that will cause splashing or cause mist to form.
6. To reduce the risk of fire, do not operate equipment in the vicinity of any open containers of flammable liquids (e.g., gasoline) or near any ignition source. Keep away from heat, spark, or flame.
7. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain. Do not operate any electrical apparatus inside the equipment.
8. Do not use below garage floor or grade level.
9. Use only in a well-ventilated area.
10. Avoid contact with cleaning fluid or vapor. Always wear appropriate personal protective equipment (gloves, apron, eyewear, respirator [where required] to meet OSHA and WHMIS protection standards. Always wear safety glasses. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses. Consult the SDS and follow all recommended safety information.
11. Do not smoke, eat, or drink in the work area. Use good personal hygiene. Wash hands thoroughly with soap and water after handling. Clean water should be available in the work areas for flushing the eyes and skin.
12. Keep hands away from tank top edges. Care must be taken as burns can occur from touching hot parts.
13. Do not modify this equipment. Modification may cause personal injury and/or property damage, and will void equipment warranty. Do not operate this equipment in any manner that can cause splashing or mist to form.
14. Do not lean into this equipment.

15. Do not place hot parts in contact with the cleaning fluid.
16. Do not clean friction materials (e.g., brake linings and clutch surfaces) in this equipment. Do not clean or degrease porous or absorbent materials, such as; cloth, leather, wood, or paper in this equipment.
17. Do not use compressed air to dry parts.
18. In an emergency, turn off the equipment and any air or electrical supply.
19. Do not operate the equipment if a leak is apparent or occurs during use. Slippery conditions can result.
20. Use caution when attempting to stop the leak (only attempt if possible to do without risk). Any leaked solvent or solvent spilled during solvent transfer and use of the cold cleaning machine shall be cleaned up immediately. Wipe rags or other absorbent material used for cleanup shall be immediately stored in covered containers for disposal or recycling. Consult the SDS for further clean-up measures. Contact your Safety-Kleen Representative.
21. Do not replace, modify, or obstruct the fusible link. Do not obstruct or hang anything on the lid. Do not leave unattended objects in the equipment that can interfere with lid closure. Lid will close automatically during a fire. Close the lid when the equipment is in use.
22. Do not attempt to manually open the lid on this equipment while it is agitating. Accidental exposure and splash over of cleaning fluid could occur. In addition, manually lifting the lid could disengage the lid linkage causing the lid to fall unexpectedly.
23. Do not directly agitate cleaning fluid by injecting gases or air.
24. Installations shall be made in accordance with the Flammable and Combustible Liquids Code, NFPA 30 or the Automotive and Marine Service Station Code, NFPA 30A, as appropriate to the intended use of the pump.

### **Save These Instructions**

## **AIR QUALITY AND ENVIRONMENTAL INFORMATION**

1. The solvent level in the machine shall not exceed:
  - a. the solvent fill line when there are no parts in the machine for cleaning
  - b. the high level liquid mark during cleaning operations.
  - c. If applicable, see the plate mounted on the inside wall of the parts washer unit. The solvent fill line is designated as "Fill B"; the high level liquid mark is designated as "Fill B with parts".
2. The solvent cleaning equipment shall be operated and maintained in proper working order, in strict accordance with the recommendations of the manufacturer. Maintain equipment to minimize leaks and fugitive emissions.
3. Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. Containers shall have a label indicating the name of the solvent/material they contain. Handle waste in accordance with local, state, and federal laws and regulations.
4. Waste solvent should not be disposed of or transferred to another party, such that greater than 20% of the waste (by weight) can evaporate into the atmosphere.
5. Close the cover if parts are not being handled in the cleaner for two (2) minutes or more, or if the device is not in use.
6. Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaning machine. No degreaser units shall be located and positioned so that ventilation from an open window blows across the opening of the solvent cleaning machine. Minimize the drafts across the top of each cold cleaning unit such that whenever the cover is open the unit is not exposed to

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### **M81 OPERATOR BOOKLET**

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drafts greater than 40 meters per minute (132 feet per minute), as measured between one (1) and two (2) meters (3.3 and 6.6 feet) upwind, at the same elevation as the tank lip.

7. If a degreasing solvent spray is used (e.g., flushing of parts using a flexible hose or other flushing device), work shall be performed only within the freeboard area of the cold cleaning machine. The solvent flushing used shall be a solid fluid stream, not an atomized or shower spray, at a pressure that does not exceed ten (10) pounds per square inch gauge (psig) as measured at the pump outlet.
8. When solvent is added to or drained from a solvent cleaning machine, the solvent shall be transferred using threaded or other leak-proof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.
9. In certain areas, solvent use records must be kept and made available to Air Quality Enforcement Officers upon request. Check your local air quality regulations.
10. Do not remove trays, platforms, or other devices designed to cover the solvent or solvent remote reservoir on any parts washer, except when adding or removing parts or to perform maintenance.

## **THE SOLVENT**



Combustible liquid that causes eye and skin irritation. May cause damage to central nervous system and kidneys. May cause respiratory irritation. May be fatal if swallowed

Use ONLY the cleaning fluid provided such as Safety-Kleen's Premium Gold Solvent or other solvents offered by Safety-Kleen Systems, INC. Do not spray aerosols into or around this equipment. Do not add water, or any other cleaning fluids or chemicals to the cleaning fluid. The use of other chemicals may cause a hazardous condition. Do not remove cleaning fluid from the equipment.

This unit has only been investigated for use with hydrocarbon based solvents (e.g., mineral spirits, petroleum distillates) with a flash point  $\geq 105^{\circ}\text{F}$  and an auto-ignition temperature  $\geq 410^{\circ}\text{F}$ .

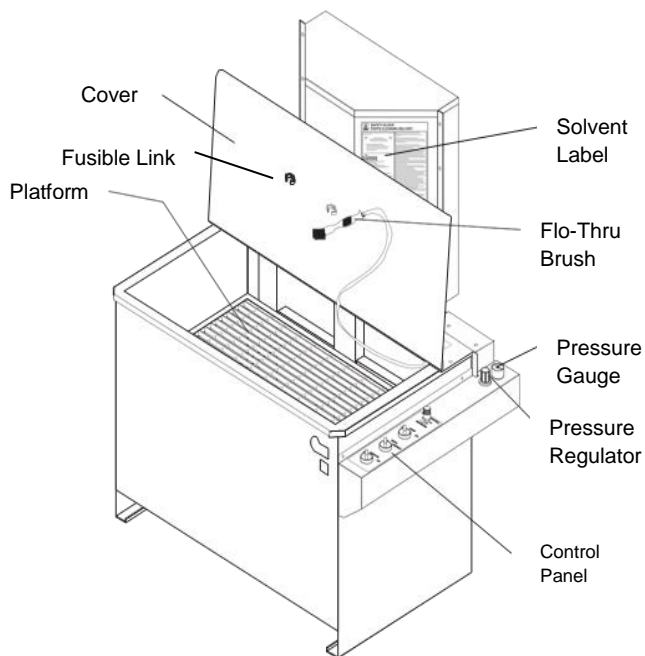
## **SAFETY-KLEEN M81 AGITATION PARTS WASHER**

The Model 81 is a heavy duty, air-operated parts washer featuring an air-operated lid that rises and lowers hands-free, leaving the operator free to perform other tasks. The unit also includes a mobile platform that, to enhance cleaning, lifts and lowers and agitates at adjustable speeds which helps to "scrub" soil and debris from the parts. A pump pulls solvent from the bottom of the vat up through the solvent hose and out of the flow-thru brush to aid in cleaning. For more heavily soiled parts, it is recommended they be soaked for a period of time to soften the soil and debris. NOTE: Do not deposit debris into the bottom of the vat as this will clog the pump.

Additionally, the Model 81 is equipped with a fusible link that employs a thermal sensor U-tube, which allows the lid to close in the event of a fire.

The maximum size of parts to be cleaned is 12" x 19" x 44". In addition, this parts washer is designed for a maximum load of 250 lb (113 kg). Do not exceed this weight.





## SPECIFICATIONS

|                          |   |
|--------------------------|---|
| <b>Floor Space</b>       |   |
| Length                   | 52" (132.1 cm)                                |
| Depth                    | 37" (91.4 cm)                                 |
| Height                   | 69" (175.3 cm)                                |
| <b>Sink Size</b>         |   |
| Length                   | 45" (114.3 cm)                                |
| Depth                    | 21" (53.3 cm)                                 |
| Height (at sink)         | 36" (91.4 cm)                                 |
| <b>Platform Size</b>     |   |
| Platform length          | 44" (111.8 cm)                                |
| Platform depth           | 19" (48.3 cm)                                 |
| Surface area             | 836 in <sup>2</sup> (5393.5 cm <sup>2</sup> ) |
| <b>Volume Capacity</b>   |   |
| Maximum Fill             | 80 U.S. Gallons (304 L)                       |
| Liquid Freeboard         | 14" (35.6 cm)                                 |
| <b>Weight Capacity</b>   |   |
| Maximum load on platform | 250 lbs. (113 kg)                             |
| Shipping weight          | 600 lbs. (272.0 kg)                           |
| Filled Weight            | 1135 lbs. (516.3 kg)                          |
| <b>Power</b>             |   |
| Air Pressure             | 3 CFM @ 80 psi                                |
| Agitation Speed          | Approx. 100 cycles / min. @ 2-4" max. stroke  |



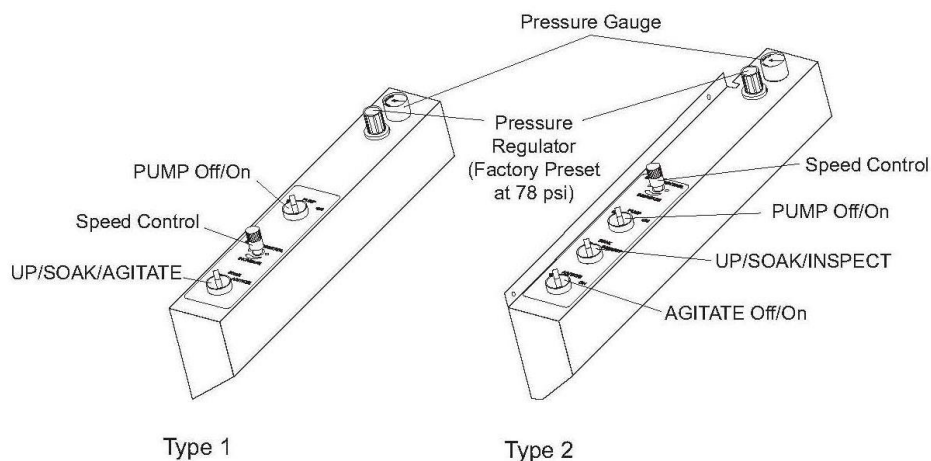
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|                       |            |
|-----------------------|------------|
| Electrical Power      | none       |
| Operating Temperature | Ambient    |
| <b>Listing</b>        | ETL / cETL |

## OPERATION

- The lid incorporates a fusible link. Parts large enough to prevent the lid from closing should never be left unattended in the cleaning area as they will interfere, in the case of a fire, with the fusible link disengaging and allowing the lid to close.
- Drain fluids and remove excess debris from dirty parts before placing them in the equipment for cleaning. The waste should be deposited into an appropriate waste container, not in the equipment.
- The Model 81 falls under the OSHA classification “remote reservoir cold cleaning machine”. Removal of the work tray will void that classification under Federal/State/Provincial solvent degreasing regulations and could cause the operator to face significant fines and penalties from the AQMD and/or the State agency. Do not remove the work tray from the equipment.
- The Model 81 is available in two types of configurations: Type 1 for single lift cylinder and Type 2 for dual lift cylinder. Each of the configurations has a slightly different control panel assembly.



1. Disassemble large parts and/or assemblies to be cleaned.
2. Ensure the air supply to the M81 is connected to the filter inlet.
3. Do not adjust the pressure regulator. This is preset from the factory.
4. Adjust flexible hose or flow-thru brush so solvent or solution is directed to inside of vat only
5. Turn “UP/SOAK/INSPECT” knob to “UP” position. The lid will open, the platform will rise.

6. Place parts to be cleaned onto platform. **NOTE: The maximum size of parts to be cleaned is 12" x 19" x 44" with a maximum load of 250 lbs. Do not exceed this weight.**

**a. SOAKING PARTS**

- Turn the "UP/SOAK/INSPECT" knob to "SOAK"
- Platform will lower and the lid will close

**b. AGITATING PARTS**

- Turn the "UP/SOAK/INSPECT" knob to "SOAK"
- Turn the "AGITATE" knob to "ON"
- Platform will lower, the lid will close and the platform will agitate
- Set the desired agitating speed via the Agitation Speed Control knob

**c. INSPECTING PARTS**

- Turn the "UP/SOAK/INSPECT" knob to "INSPECT"
- Agitation will stop and the lid will rise
- To resume cleaning turn the "UP/SOAK/INSPECT" knob to "SOAK"
- The lid will close and agitation will resume

**d. REMOVING PARTS**

- Turn the "UP/SOAK/INSPECT" knob to the "UP" position.
- Lid will open, agitation will stop and the platform will rise.
- Allow parts to drain on platform until dripping has ceased then remove parts

**TROUBLESHOOTING**

|   |   |
|---|---|
| <p>The platform does not rise when the knob is in the "up" position.</p>          | <ul style="list-style-type: none"> <li>▪ Confirm platform load is less than 250 lbs. and dirty parts are no larger than 12" x 19" x 44".</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Confirm the unit is receiving 80-120 psi.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Check that the incoming compressed airline connection to the M81.8 is secure.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Check the air-lines for kinks or blockages.</li> </ul>   |
| <p>The platform does not lower when the knob is moved to the "soak" position.</p> | <ul style="list-style-type: none"> <li>▪ Contact your Safety-Kleen Representative.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Confirm the unit is receiving 80-120 psi.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Check that the incoming compressed airline connection to the M81.8 is secure.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Check the air-lines for kinks or blockages.</li> </ul>   |
| <p>Platform goes "up" and down to "soak", but does not "agitate".</p>             | <ul style="list-style-type: none"> <li>▪ Contact your Safety-Kleen Representative.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Confirm the unit is receiving 80-120 psi.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>▪ Confirm platform load is less than 250 lbs. and dirty parts are no larger than 12" x 19" x 44"</li> <li>▪ Check that the incoming compressed airline connection to the M81.8 is secure.</li> </ul> |

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|                                |   |
|--------------------------------|---|
|                                | <ul style="list-style-type: none"><li>▪ Check the air-lines for kinks or blockages.</li></ul>                           |
|                                | <ul style="list-style-type: none"><li>▪ Contact your Safety-Kleen Representative.</li></ul>                             |
| Pump does not run.             | <ul style="list-style-type: none"><li>▪ Check the position of the PUMP On/Off switch.</li></ul>                         |
|                                | <ul style="list-style-type: none"><li>▪ Check the incoming air supply to the parts washer.</li></ul>                    |
|                                | <ul style="list-style-type: none"><li>▪ Clear any debris from the vat.</li></ul>  |
|                                | <ul style="list-style-type: none"><li>▪ Contact your Safety-Kleen Representative.</li></ul>                             |
| Pump runs but no solvent flow. | <ul style="list-style-type: none"><li>▪ Check for low solvent level beneath the parts platform.</li></ul>               |
|                                | <ul style="list-style-type: none"><li>▪ Check for blockage, cracks, or kinks in the flow-thru brush and hose.</li></ul> |
|                                | <ul style="list-style-type: none"><li>▪ Contact your Safety-Kleen Representative.</li></ul>                             |

## **SERVICE AND REPAIR**

In accordance with your service agreement with Safety-Kleen Systems, Inc., a Safety-Kleen service representative will:

- install and set up the Safety-Kleen equipment
- be your primary contact with Safety-Kleen
- put the name and phone number of the nearest Safety-Kleen branch on the equipment and/or on the inside cover of this booklet
- provide information about your service Safety-Kleen contract
- explain what solvent is provided with the equipment, provide SDS's and answer any questions

This equipment is to be serviced only by authorized Safety-Kleen personnel using an approved solvent. If you have any questions, require repairs, or need early service, contact your local branch or Safety-Kleen at 1-800-669-5740. Additional assistance can be found at [www.safety-kleen.com](http://www.safety-kleen.com).



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