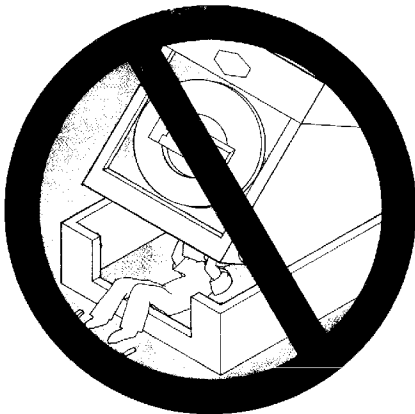
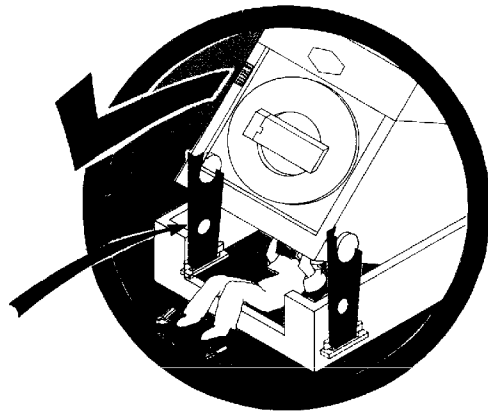


# WARNING

BEFORE PERFORMING MAINTENANCE ON A TILTED MACHINE ALWAYS: 1) INSTALL THE FACTORY-SUPPLIED SUPPORT BRACKETS. 2) LOCK POWER OFF AT THE EXTERNAL DISCONNECT SWITCH.



INSTALL SAFETY  
BRACKET BETWEEN  
TILT WHEEL AND  
CRADLE.



# READ BEFORE USING MACHINE!

MSOP0205AE/9251AV (1 of 5)

## SAFETY INSTRUCTIONS FOR MICROPROCESSOR CONTROLLED WASHER-EXTRACTORS

### READ BEFORE USING MACHINE!

#### General Safety Requirements (specific warnings, next page and throughout manual)

Improper installation, extended wear and tear without proper preventive maintenance, improper repairs, abuse, and/or modifications can render the machine unsafe for operation and contribute to serious personal injuries, **including, but not limited to, multiple fractures, traumatic amputations, or death.** It is the responsibility of the owner or his designated representative (herein referred to as the owner/user) to understand the operation of the machine and properly maintain the equipment—particularly the safety devices installed to guard against accidents.

Most regulatory authorities (including OSHA in the USA) hold the owner/user ultimately responsible for maintaining a safe working environment. Accordingly, the owner/user must recognize all foreseeable safety hazards, furnish safety instructions and guidance to all personnel who may come in contact with the installation, and provide all necessary additional safety guards, fences, restraints, devices, etc., not furnished by the equipment manufacturer or vendor.

**Laundry Facility**—The machine must be anchored in accordance with the installation instructions. The physical plant must 1) have sufficient strength and rigidity to structurally support the static and dynamic loads imposed by the machine with due respect for the machine operating speed and the expected transmitted force during extract, 2) provide adequate ventilation to carry away the heat and vapors given off, 3) provide sufficient clearance for machine movement, and 4) **restrict access by personnel, vehicles, and other moving machinery that might inadvertently enter the machine's movement area.**

**Safety Devices**—Every safety device provided with the machine has a purpose. **Never eliminate or disable any safety device, even if the machine will run without it.**

- Do not permit machine to be used with any missing guard or cover.
- Do not permit machine to be used with any malfunctioning component.

**Personnel**—A good safety program starts at the top. The owner/user should 1) impress upon all personnel the necessity of hazard avoidance and the importance of vigilance and common sense, 2) see that all personnel receive the instructions and/or training that apply to them, 3) verify that all personnel read and abide by the point-of-hazard tags on the machine and the procedure-specific precautions throughout the instruction manuals, and 4) verify that all personnel understand and abide by proper procedures and precautions.

**Maintenance**—Inspect and service the machine in accordance with the norms of good practice and with the preventive maintenance schedule. Replace belts, pulleys, brake shoes, clutch plates/tires, rollers, seals, alignment guides, etc., before they are severely worn. Immediately investigate any evidence of impending failure and make appropriate repairs (e.g., cylinder, shell, or frame cracks; drive components such as motors, gear boxes, bearings, etc., whining, grinding, smoking, or becoming abnormally hot; bending or cracking of cylinder, shell, frame, etc.; leaking seals, hoses, valves, etc.). Do not permit servicing by unqualified personnel.

## The Danger From a Rotating Cylinder

A tremendous amount of potential energy is stored in the rotating cylinder of any washer-extractor—even at slow speed, especially larger ones.

### ⚠ DANGER ⚠



**ENTANGLEMENT HAZARD.** The linen inside or hanging partially outside a turning cylinder can suddenly wrap around your hand, arm, or body and twist off/sever it. You can be killed or seriously injured.

- ⚠ DO NOT put any part of your body in this machine unless the washer-extractor power is locked OFF and tagged out at the external disconnect switch and the cylinder is fully stopped.
- ⚠ DO NOT touch the linen unless the washer-extractor power is locked OFF and tagged out at the external disconnect switch and cylinder is fully stopped.

### YOU CAN BE KILLED OR MAIMED.

- DO NOT put any part of your body in this machine while the cylinder is turning.
- DO NOT operate this machine with the door open.
- DO NOT open the door while the cylinder is turning.
- DO NOT touch the linen or load/unload machine while the cylinder is turning.
- DO NOT open the door if there is water in the machine. You can be scalded by hot water.

Washer-extractors are equipped with a door interlock designed to prevent 1) the door from being opened if the cylinder is turning and 2) the machine from starting unless the door is closed and locked. Some smaller machines permit the door to be opened only during the first minute of the formula and only while the machine is rotating in wash speed, whereupon the drain valve opens immediately, the formula terminates, and a brake is immediately applied providing the machine is powered with electricity.

- DO NOT operate this machine with a malfunctioning door interlock mechanism.
- DO NOT operate this machine with malfunctioning two-hand inching, if so equipped.

### ⚠ DANGER ⚠



**CRUSHING AND ENTANGLEMENT HAZARD.** Rotating cylinder starts and stops automatically. If it becomes necessary to perform maintenance to the cylinder, observe the following:

- ⚠ NEVER enter or reach into the washer-extractor cylinder unless power is locked OFF and tagged out at the external disconnect switch and cylinder is fully stopped.

## The Danger From a Damaged Cylinder

### ⚠ DANGER ⚠



**EXPLOSION HAZARD.** A damaged cylinder can rip apart during extract, hurling out metal fragments at high speed like an exploding grenade.

⚠ **DO NOT** operate the machine with any evidence of an unrepaired failure or partial failure of any portion of the cylinder.

## The Danger From a Malfunctioning Clutch System

The low speed (wash speed) drive train is disengaged during extract. At the end of extract, the extractor is designed to slow down before the low speed drive train is reengaged. **Although extremely unlikely in a properly maintained machine, a malfunction could cause the low speed drive to engage prematurely** (a possibility common to all types of industrial machines which have both high speed and low speed operating cycles).

### ⚠ DANGER ⚠



**EXPLOSION HAZARD.** Pulleys can be spun fast enough to explode into shrapnel-like fragments if the low speed drive engages during or at the end of extract.

Immediately shut down this machine if any of the following occur:

- the machine makes a sound like skidding automobile tires as it comes out of extract,
- the wash or drain clutch does not disengage or it prematurely reengages during extract,
- the wash motor and/or the drain motor V-belts jump off at the start of, during, or at the end of extract, or
- a strange whining sound at any time during extract.

⚠ **DO NOT** permit the machine to operate until the cause is found and remedied.

## The Danger From Operating Without Guards or Safety Stands

### ⚠ DANGER ⚠



**SHOCK HAZARD** will cause death or severe injury.

☞ Lock OFF and tag out 3-phase power at wall disconnect. Power switches on the Extractor control disable only control circuit power in electrical boxes.



☞ NEVER open electrical boxes without turning OFF all power to the boxes.

### ⚠ WARNING ⚠



**CRUSHING AND ENTANGLEMENT HAZARD** may result in loss of fingers or limbs.

☞ DO NOT operate the machine without all side panels securely in place. The side panels prevent access to the drive.

☞ ALWAYS make sure personnel are clear of machine before restarting.

### ⚠ WARNING ⚠



**MOVING COMPONENTS SUCH AS BELTS, HYDRAULICS, TILTING MACHINE HOUSINGS, ETC., CAN CRUSH/SEVER PARTS OF YOUR BODY AND EVEN KILL YOU.**

- DO NOT place any part of your body inside any part of the machine while it is running.
- DO NOT put any part of your body under a tilted machine unless you personally verify that both safety stands are in place.

### ⚠ WARNING ⚠



**THIS MACHINE USES HIGH VOLTAGE. YOU CAN BE SEVERELY INJURED OR KILLED IF YOU TOUCH AN ENERGIZED ELECTRICAL CONDUCTOR ON THIS MACHINE.**

☞ DO NOT open any electric box or otherwise expose any electrical device on this machine (except during maintenance, and then only by a qualified, authorized electrician).

## **The Danger From a Malfunctioning or Manually Operated Tilt System**

Tilt machines have safety limit switches and electrical interlocks designed to prevent the machine from tilting forward (rear up) unless **both** front-down limit switches are depressed and to prevent tilting rearward (front up) unless **both** rear-down limit switches are depressed. Because the safety limit switches cannot be bypassed at the operator control panel, this redundancy assures safe tilting, but only if the safety limit switches and all related components and circuitry are maintained in proper working order. It is also possible to tilt the machine manually by depressing the appropriate manual operating buttons on the ends of the hydraulic valves. Hydraulic pressure is required to lift either end manually, but an already elevated end may be lowered without running the pump.

**ELECTRICAL SAFETY INTERLOCKS ARE IGNORED WHEN THE HYDRAULIC TILTING VALVES ARE OPERATED MANUALLY.**

**The hydraulic valves must only be operated manually by competent, trained maintenance personnel who thoroughly understand the system and all the consequences of manual operations.**

**A TILTED MACHINE MAY LUNGE FORWARD OR REARWARD AND EVEN FALL OVER IF THE TILT WHEELS AT THE NON-TILTED END ARE RAISED OUT OF THEIR CRADLES—EVEN IF SAFETY STANDS ARE INSTALLED AT THE TILTED END.**

**DO NOT** operate any tilting machine unless all tilting components including but not limited to interlocks, operating switches, safety switches, etc., are functioning properly.

**NEVER** permit any portion of a person's body under a tilted machine unless the safety stands are first installed and power to the machine is turned off at the wall switch.

**DO NOT** test or perform maintenance to any portion of the tilting mechanisms such as (but not limited to) removing hydraulic valves or hoses, or any other hydraulic component, or operating the hydraulic valves manually, with any portion of any person's body under the tilted machine—even if the safety stands are installed.

**NEVER** manually tilt (lift) both ends of the machine at the same time. One end must always be seated in its cradle.

**ALWAYS** visually inspect the tilt wheels to be sure they are all fully seated in their cradles before each manual tilt up.

**ALWAYS** understand beforehand all the consequences of operating the hydraulic valves manually.