OPERATOR MANUAL

RELIANCE[®] 310 Utensil Washer

(12/98) Rev. 2

P-122990-103

LIMITATIONS OF LIABILITY AND INDEMNITY

IN NO CASE, WHETHER AS A RESULT OF A BREACH OF CONTRACT, BREACH OF WAR-RANTY OR TORT (INCLUDING STERIS'S OR CUSTOMER'S WILLFUL ACTS OR NEGLIGENCE OR STRICT LIABILITY) SHALL STERIS OR CUSTOMER BE LIABLE TO THE OTHER FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES INCURRED BY THE OTHER, INCLUDING, BUT NOT LIMITED TO, LOSS OF REVENUE, PROFITS OR GOODWILL. HOWEVER, NOTHING CONTAINED IN THIS AGREEMENT IS INTENDED TO RELIEVE EITHER STERIS OR CUS-TOMER FROM CLAIMS, LIABILITY, DAMAGES OR EXPENSES RESULTING FROM BODILY INJURY, INCLUDING DEATH, OR FROM PROPERTY DAMAGE INCURRED DUE TO THE WILLFUL ACTS, THE NEGLIGENCE OF OR THE STRICT LIABILITY OF THAT PARTY.

STERIS AGREES TO DEFEND, INDEMNIFY AND HOLD CUSTOMER HARMLESS FROM ANY AND ALL CLAIMS, LIABILITY, DAMAGES OR EXPENSES DUE TO PERSONAL INJURIES, INCLUDING DEATH, TO EMPLOYEES OF STERIS AND CUSTOMER AND TO THIRD PARTIES AND FOR PROPERTY DAMAGE TO THE EXTENT OF THE WILLFUL ACTS OF THE NEGLI-GENCE OF STERIS OR THE STRICT LIABILITY OF STERIS CAUSED BY THE ACTS OR OMISSIONS OF STERIS. CUSTOMER AGREES TO DEFEND, INDEMNIFY AND HOLD STERIS HARMLESS FROM ANY AND ALL CLAIMS, LIABILITY, DAMAGES OR EXPENSES DUE TO PERSONAL INJURIES, INCLUDING DEATH, TO EMPLOYEES OF CUSTOMER AND STERIS AND TO THIRD PARTIES AND FROM PROPERTY DAMAGE TO THE EXTENT OF THE WILLFUL ACTS OR THE NEGLIGENCE OF CUSTOMER OR THE STRICT LIABILITY OF CUSTOMER CAUSED BY THE ACTS OR OMISSIONS OF CUSTOMER.

WARNING - COPYING PROHIBITED

This manual is protected by Federal Copyright Law, which provides for damages of up to \$20,000, as well as criminal fines and imprisonment, for unauthorized copying. This manual contains important information on the proper use and maintenance of this washer. All personnel involved in the use of this equipment must carefully review and comply with the warnings, cautions and instructions contained in this manual. These instructions are important to protect the health and safety of personnel operating the equipment and should be retained in a conveniently accessible area for quick reference.

Complete instructions for uncrating and installing this unit, as well as an equipment drawing, have been furnished. If missing, contact STERIS for replacement copies, giving the serial, equipment and model numbers of the unit.

STERIS carries a complete line of accessories for use in this equipment. A STERIS representative will gladly review these with you.

Service Information

A thorough preventive maintenance program is essential to safe and proper equipment operation. You are encouraged to contact your STERIS representative concerning our Preventive Maintenance Agreement. Under terms of this agreement, preventive maintenance, is provided on a scheduled basis, to help assure equipment performance at peak capability and minimize untimely or costly schedule interruptions. STERIS maintains a nationwide staff of well-equipped, factory-trained technicians to provide this service, as well as on-site installation, training and expert repair services. Please contact your local STERIS representative for service details.

Advisory

This Amsco[®] Reliance[®] 310 Utensil Washer has been designed in accordance with the highest quality standards possible, and meets or exceeds all Canadian and domestic performance and safety codes.

STERIS does not intend, recommend nor represent in any way that this washer be used for the terminal disinfection or sterilization of any regulated medical device. This equipment is intended only to perform an initial step in the reprocessing of soiled, reusable medical devices, and such devices must be terminally reprocessed in accordance with current good hospital practices before each use in human patients.

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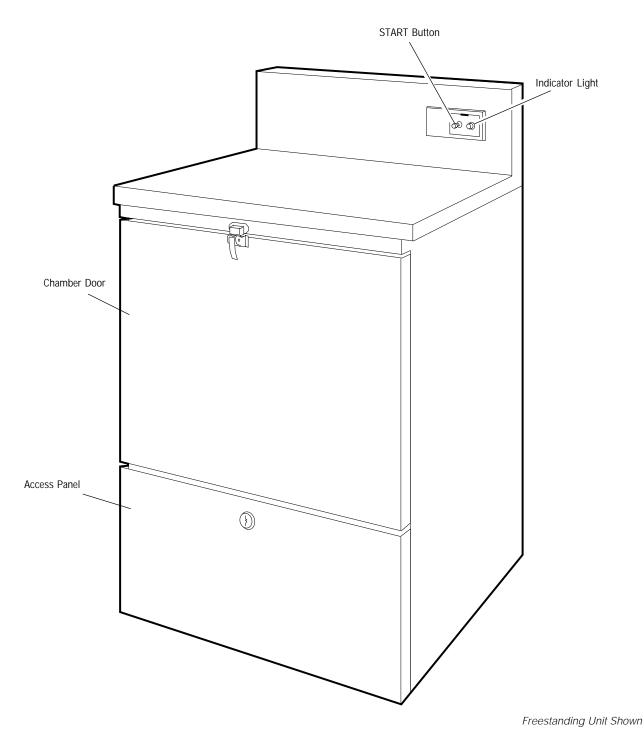


Figure 1. Amsco[®] Reliance[®] 310 Utensil Washer

Following is a summary of the safety warnings and cautions which must be observed when operating or servicing this equipment. WARNINGS indicate the potential for danger to personnel and CAUTIONS indicate the potential for damage to equipment. These precautions are repeated, where applicable, throughout the manual.

WARNING — BURN HAZARD:

After unlatching door to stop cycle, wait until water flow stops before opening door. Hot water may escape through door opening if door is opened soon.

Before inspecting and/or cleaning supply-line strainers, Allow piping to cool down.

WARNING — FALL HAZARD:

To prevent falls, keep floor dry. Promptly clean up any spills or drippage.

WARNING — UNSTERILE GOODS HAZARD:

This washer is intended for use oly in the cleaning and decontamination of reusable utensils, trays, glassware, bedpans and urinals, rubber and plastic goods, simple hard-surfaced and rigid surgical instruments such as hemostats, forceps and retractors, and other similar and related articles, to render them safe for hospital staff to handle. These washers are not intended to clean and/or disinfect or sterilize complex, significant-riskmedical devices such as dialyzers and endoscopes. Any regulated medical device which may be cleaned and decontaminated in this washer must be subject to terminal sterilization in accordance with current good hospital practices prior to each use in human patients. Failure to terminally sterilize medical devices prior to use in human patients may lead to cross-contamination and infection.

WARNING — PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

Regularly scheduled preventive maintenance, in addition to the faithful performance of the minor maintenance described below, is required for safe and reliable operation of this equipment. Contact STERIS service to schedule preventive maintenance.

Repairs and adjustments to this equipment should be made only by fully qualified service personnel. Maintenance done by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage. Contact your STERIS sales or service representative regarding service options.

WARNING — ELECTRIC SHOCK AND/OR BURN HAZARD:

Before performing any service on the unit, lock building electrical supply disconnect switch to OFF position and close unit supply valves. If unit is started during maintenance procedures, hot water may be sprayed into wash chamber.

CAUTION — POSSIBLE EQUIPMENT DAMAGE:

For effective cleaning, always load basket with nine or less utensils. Do not overload basket.

When loaded basket is in wash chamber, make sure utensils are clear of the wash arm. If movement is obstructed, wash arm may broken.

When choosing a detergent, select one with a low chloride content. Detergents with a high chloride content can be harmful to stainless steel.

Use non-abrasive cleaners when cleaning unit. Follow directions on containers and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners will damage stainless steel. Cleaners rubbed in a circular motion or applied with a wire brush or steel wool on door and chamber assemblies can be harmful to stainless steel. Do not use these cleaners on painted surfaces.

An Equipment Drawing, showing all utility and space requirements, was supplied with the washer. Clearance space, specified on Equipment Drawing, is necessary for proper operation and maintenance of unit. Uncrating and Installation Instructions were furnished with the unit. If any of these documents are missing or misplaced, contact STERIS giving the serial, equipment and model numbers of the unit. Replacement copies will be sent to you promptly.

After installing the washer according to the Uncrating and Installation Instructions, complete the following checklist to assure complete and correct installation. Or, if you desire contact your STERIS representative to schedule a technician to test your installation and demonstrate proper equipment operation.



ON OFF Lock Shutoff valves (not by STERIS), for maintenance purposes, installed on steam and water lines and in compliance with local codes, OSHA standards, etc.

Disconnect switches (not by STERIS), capable of being locked
 in OFF position only, installed in electrical supply lines near the unit and in compliance with local codes, OSHA standards, etc. (see Figure 2-1).

Note: If unit is installed next to other equipment, shutoff valves and disconnect switches should be located so that service can be shut off to one piece of equipment at a time.

- Washer positioned, as shown on Equipment Drawing, with required clearance space and in relation to building supply lines.
 - Washer is level. If necessary, add shims (not by STERIS) to level unit.
- Building cold water line supplies water to unit as specified on Equipment Drawing.
- Building hot water line supplies water to unit as specified on Equipment Drawing.
- Building steam line (required only if steam water option is installed) provides steam to unit as specified on Equipment
 Drawing.

Building waste line is connected to washer as specified on Equipment Drawing.

- Electrical supply for unit is as specified on Equipment Drawing.
- □ Floor surrounding unit has non-slip surface.

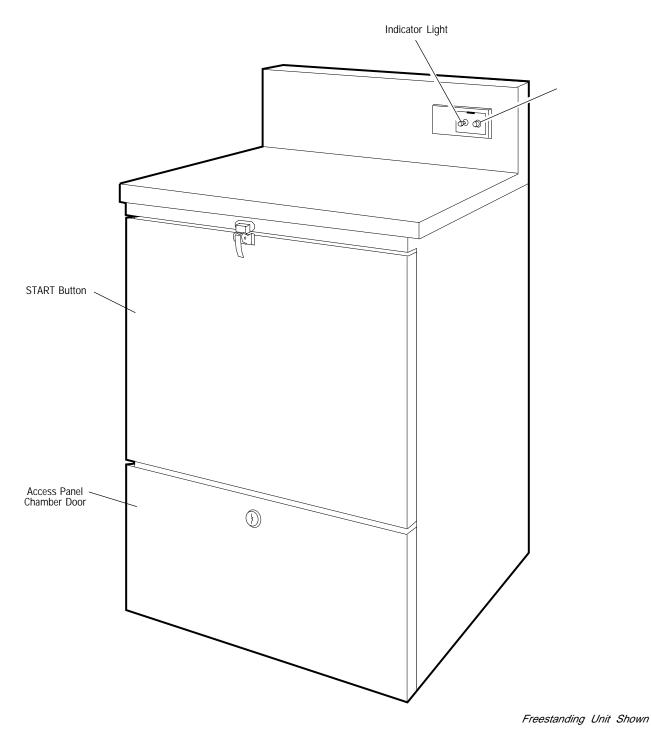


Figure 2-2. Amsco Reliance 310 Utensil Washer

OPERATING INSTRUCTIONS

Before Operating Equipment

WARNING-UNSTERILE **GOODS HAZARD: This washers** are intended for use only in the cleaning and decontamination of reusable utensils, trays, glassware, bedpans and urinals, rubber and plastic goods, simple hard-surfaced and rigid surgical instruments such as hemostats, forceps and retractors, and other similar and related articles, to render them safe for hospital staff to handle. These washers are not intended to clean and /or disinfect or sterilize complex, significant-risk medical devices such as dialyzers and endoscopes. Any regulated medical device which may be cleaned and decontaminated in this unit must be subjected to terminal sterilization in accordance with current good hospital practices prior to each use in human patients. Failure to terminally sterilize medical devices prior to use in human patients may lead to cross-contamination and infection.

WARNING - FALL HAZARD: To prevent falls, keep floors dry. Promptly clean up any spills or drippage.

Basket Preparation

- 1. Check that building electrical supply disconnect switch (circuit breaker) is positioned to ON. Verify that water and steam supply valves are open.
- 2. Open chamber door and check that bottom filter is installed and clean (see Figure 3-1).
- 3. Check that wash arm rotates freely (see figure 3-1).

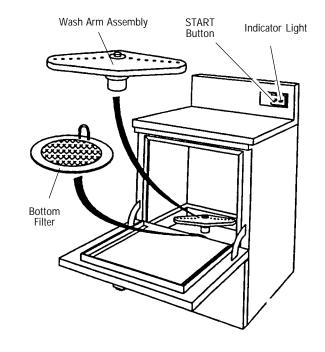


Figure 3-1. Utensil Washer

1. Rinse all utensils to remove any evident soil.

NOTE: Basket can be loaded either away from unit or while resting on open chamber door.

- 2. Place utensils in basket as folows:
 - Washbasins bottom of basin facing outside.
 - Drinking Cups upside down on small supports in the corners.
 - Emesis Basins inside of basin facing center of basket.

A



CAUTION: For effective cleaning, always load basket with nine or less utensils. Do not overload basket. • Bedpans - inside of bedpan facing center of basket with narrow end down.

- Urinals and Enema Cans upside down on the upright sections.
- 3. Typical load combinations are as follos (see Figure 3-2):

• Three washbasins, three drinking cups and three (small, medium or large) emesis basins.

• Three bedpans and three urinals or enema cans.

NOTE: For effective cleaning, do not overload basket.

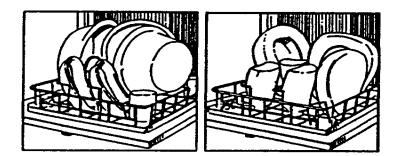


Figure 3-2. Proper Basket Preparation

A	CAUTION: When loaded basket is in wash chamber, make sure uten- sils are clear of the wash arm. If movement is obstructed, wash arm
	may break.
A	CAUTION: When choosing a de- tergent, select one with a low chlo-
	ride content. Detergents with a high
	chloride content can corrode stain- less steel.

- 1. Make sure utensils are placed correctly in basket as explained in the previous section, "Basket Preparation."
- 2. If basket was loaded away from unit, open chamber door and rest basket on door.
- 3. Slide loaded basket into wash chamber. Make sure utensils are not touching the wash arm.

NOTE: Always use a non-foaming detergent for effective cleaning and proper pump operation. To achieve maximum cleaning efficiency, select detergent appropriate to soil type being processed. Follow manufacturer's recomendations for amount of detergent to be used.

4. Pour one ounce (30 ml) of detergent onto inside of door (see Figure 3-3).

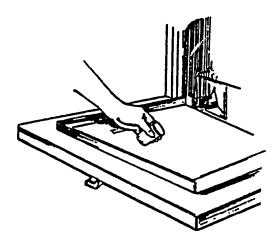


Figure 3-3. Adding Detergent

WARNING BURN HAZARD: Afetr unlatching door to stopcycle, wait until water flow stops before opening door. Hot water may escape through door opening if door is opened too soon.

A

WARNING-UNSTERILE A **GOODS HAZARD:** This unit is intended for use only in the cleaning and decontamination of reusable utensils, trays, glassware, bedpans and urinals, rubber and plastic goods, simple hard-surfaced and rigid surgical instruments such as hemostats, forceps and retractors, and other similar and related articles, to render them safe for hospital staff to handle. These washers are not intended to clean and/or didinfect or sterilize complex, significant risk medical devices such as dialyzers and endoscopes. Any regulated medical device which may be cleaned and decontaminated in this unit must be subject to terminal sterilization in accordance with current good hospital practices prior to each use in human patients. Failure to terminally sterilize medical devices prior to use in human patients may lead to cross-contamination and infection.

5. Close chamber door.

NOTE: Unit operation can be halted at any time by unlatching door, waiting for water flow to stop, and then opening chamber door. To resume cycle at beginning of phase interrupted, close door and press START.

6. Press START. Indicator light goes on.

Note: Start button and indicator light are mounted in the backsplash on the freestanding unit. On undercounter unit, START button and indicator light are mounted in the access panel.

7. Cycle proceeds through phases as follows:

- WASH utensils are washed with hot detergent water (140° to 160°F [60° to 71°C]) from building supply line for approximately 5 minutes.
- RINSE utensils are rinsed with hot water (140° to 160°F [60° to 71°C] from building supply line for approximately 45 seconds.
- FINAL RINSE utensils are rinsed by spray of very hot water (not exceeding 202°F [95°C]) heated in chamber bottom for approximately 15 or, if option applies, 30 minutes.

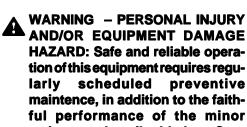
8. When cycle is complete, indicator light goes out.

9. Unlatch chamber door and rest door against latch. Leave door resting against latch to permit load to air dry and cool before removing bsket.

Shutdown

- 1. Leave door resting against latch during shutdown to air chamber.
- 2. Close unit supply valves.
- 3. Position building electrical supply disconnect swicht (circuit breaker) to OFF.
- 4. Clean unit as described in Section 4, Routine Maintenance.

ROUTINE MAINTENANCE



maintence, in addition to the faithful performance of the minor maintence described below. Contact STERIS Engineering Service to schedule preventive maintennce.

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: repairs and adjustements to this equipment should be made only by fully qualified service personnel. Non-routine maintenance performed by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty or result in costly damage. Contact your Steris representative regarding service options.

WARNING-FALL HAZARD: To prevent falls, keep floors dry. Promptly clean up any spills or drippage. Procedures described in this section should be performed at regular intervals as indicated. The indicated frequencies are minimums and should be increased with increased usage of the equipment. Should a problem occur, refer to Section 5, Trouble-shooting.

Any maintenance procedures not included in this section should be performed only by a qualified technician. These procedures are decribed in the Maintenance Manual, P-764323-118, available from your STERIS representative.

Daily

Cleaning Procedures

After last cycle of the day, allow unit to cool and then remove and clean bottom filter (see Figure 4-1). Clean filter while it is still wet, before foreign metter dries.

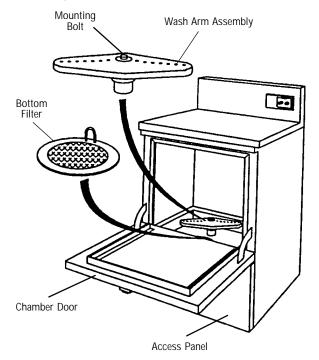


Figure 4-1. Utensil Washer

CAUTION: Use non-abrasive cleaners when cleaning unit. Follow directions on containers and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners rubbed in a circular motion or applied with a wire brush or steel wool will scratch and dull stainless steel. Do not use these cleaners on painted surfaces.

Weekly

1. Clean unit exterior as follows to remove general and stubborn stains.

- a. Using a damp cloth or sponge, apply cleaner in a backand-forth motion, in same direction as surface grain.
- b. Thoroughly wipe off cleaner.
- c. Polish surface with a clean, dry, lint-free cloth.

NOTE: If interior is stained, clean to remove general or stubborn stains by using a damp cloth or sponge. Apply cleaner in backandforth motion, in same direction as surface grain. Thoroughly wipe off cleaner and polish surface with a clean, dry, lint-free cloth.

- 3. Clean wash arm assembly as follows:
 - a. Remove mounting bolt and lift wash arm out of chamber (see Figure 4-1).
 - b. Insert a wire (approximately the wire gauge of a large paper clip) into spray nozzles and push sediment through nozzles into wash arm.

c. Rinse wash arm under running water to clean out sediment.

d. Place wash arm in chamber bottom and fasten down with mounting bolt.

- 4. Clean building supply-line strainers as follows:
 - a. Close building supply lines: hot water, cold water and, if unit is equipped with steam-heated option, steam.
 - b. Allow piping to cool, then remove and clean strainers.
 - c. Replace strainers and open building supply lines.

Monthly

NOTE: Depending on hardness of water being used, it may be necessary to remove hard water deposits more often. Remove deposits from chamber and accessories whenever deposits become visible.

Remove hard water deposits from chamber and basket as follows:

- 1. Open chamber door and rest empty basket on open door. Slide basket into wash chamber.
- 2. Pour 3ounces (80 ml) of a descaling liquid into chamber.
- 3. Close door and press START.
- 4. Upon completion of cycle, press START and run a second cycle to completely rinse the system.
- 5. At completion of second cycle, ulatch door and rest door against latch. Leave door resting against latch to permit unit to air dry.

WARNING — BURN HAZARD: Before inspecting and/or cleaning supply-line strainers, allow piping to cool down.

TROUBLESHOOTING



WARNING – ELECTRIC SHOCK AND/OR BURN HAZ-ARD: Before performing any service on the unit, lock building electrical supply disconnect switch to OFF position and close unit supply valves. If unit is started during maintenence procedures, hot water may be sprayed into wash chamber.

service options.

This section describes the types of washer malfunctions likely to accur and indicates probable causes and corrective actions.

If you are unable to correct the problem with use of the Troubleshooting Chart, or if a problem occurs that is not described on the chart, please call your local STERIS representative. A factorytrained tecnitian will promptly place your washer in proper working condition. **Never permit unqualified persons to perform service on the washer.**

Troubleshooting Chart

PROBLEM	POSSIBLE CAUSE AND CORRECTION	
 Cycle does not start when START button is pressed. 	 Building power supply disconnect switch (circuit breaker) OFF – =position to ON. 	
	2) Chamber door not fully closed — close and latch door.	
 Insufficient or no water entering chamber through wash arm. 	 Unit not level — add shims under unit frame as necessary. Supply valves not fully open — open building and unit supply valves. Supply line pressure must be between 35 and 50 psig (241 and 345 kPa). Wash arm nozzles clogged — clean nozzles. Bottom filter clogged — clean filter. 	
 Insufficient or no water entering chamber during filling. 	 Supply valves not fully open — open building and unit supply valves. Supply line pressure must be between 35 and 50 psig (241 and 345 kPa) 	

Troubleshooting Chart (continued)

PROBLEM	POSSIBLE CAUSE AND CORRECTION		
 Too much water entering chamber during filling. Water going to overflow drain. 	 Unit not level — add shims under unit frame as necessary. Water-level float is stuck — clean off foreign matter from float. 		
	 Chamber not draining fully because drain line plugged — flush out drain line. 		
 Temperature of water entering chamber during WASH and/or RINSE phase is below 140°F (60°C). 	 Building supply water temperature below 140°F (60°C) — increase temperature of supply water. 		
6. Temperature of very hot water during FI- NAL RINSE phase is below 195°F (90°C).	 If unit is equipped with steam-heated option, steam supply valves not fully open — open building and unit steam supply valves. Supply line pressure must be between 30 and 50 psig (207 and 345 kPa). 		
7. Steam escapes from unit.	 Cold water supply valves not fully open — open building and unit cold water supply valves. Supply line pressure must be be- tween 35 and 50 psig (241 and 345 kPa). 		
8. Water leaks from unit.	1) Unit not level — add shims under unit frame as necessary.		
	2) Water-level float is stuck —clean off foreign matter from float.		
9. Load comes out dirty at end of cycle.	 Utensils not adequately pre-rinsed — rinse utensils before loading to remove any evident soil. 		
	2) Incorrect detergent being used — use recommended proucts.		
	 Not enough detergent poured into chamber — pour one ounce (30 ml) of detergent onto inside of chamber door before starting cycle. 		

REPLACEMENT PARTS AND PRODUCTS

Ordering Information

Use only STERIS authorized parts on this equipment. Use of unauthorized parts will void the warranty. To order replacement parts and/or supply products, proceed as follows:

- 1. Include the part number and description as listed below.
- 2. Include the model and serial numbers of your equipment on your order.
- 3. Send your order directly to the STERIS Sales and Service Center serving your area.

Contact your STERIS representative if you need parts that are not listed below.

Replacement Parts and Products

The parts listed in this section are those that would be necessary to do minor maintenance on this washer.

Table 6-1. Replacement Parts

DESCRIPTION	PART NUMBER
Door: GASKET, Chamber Door	P-117950-049
Control: SWITCH, Pushbutton, START and LIGHT, Red THERMOSTAT	P-117950-368 P-117950-184
Electrical Control Box: FUSE, 1 Amp	P-117950-081
Pump: GASKET, Rubber SEAL, Carbon SEAL, Rubber SPRING	P-117950-145 P-117950-141 P-117950-140 P-117950-138
Valves: SOLENOID VALVE, Hot/Cold Water, CAMCO SOLENOID VALVE, Diverter Drain SPRING, Drain Valve TRAP, Steam VALVE, Steam	P-117950-214 P-117950-221 P-117951-030 P-117950-183 P-117950-179
Miscellaneous: RETAINING CLIP, OTS (Parallel) (Electric-heated Units only) RETAINING CLIP, OTS (90") (Electric-heated Units only)	P-117902-480 P-117902-912

Publications listed in this section are those associated with the use and maintenance of this dryer.

When ordering, please include the part number (if applicable), description and quantity of each publication requested. Order directly from your STERIS representative.

PUBLICATION	PART NUMBER
Tech Data Sheet	SD-317
Catalog	ES-2035
Uncrating/Installation Instructions	P-122990-599
Maintenance Manual	P-764323-183
Equipment Drawings: Reliance 310, Undercounter/Freestanding Reliance 310, Freestanding/Base-mounted	P-122990-457 P-122990-443