

AMSCO Maintenance Manual



OFFICE AUTOCLAVE

613R - Dynalene

Model 576-A

(1/88)

P-751194-001

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*These drawings show variations of construction on early models.

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NOTES ON PRINCIPLE OF OPERATION

OFFICE PRESSURE STERILIZER MODEL 576A

FOR DETAILED OPERATION INSTRUCTIONS, SEE PART 33895 OR 454697

OPERATING VALVE

Referring to Drawing SM-366. When the valve handle is in the extreme down position (fill position), water is permitted to flow from the water pan through the bottom port of the valve and out of the middle port to the bottom of the shell. When the valve handle is in the central position (as indicated on Drawing SM-366) resting on main door hinge, all ports are blocked, thusly, valve is in the "Sterilize" position. When the valve handle is in the extreme up position (exhaust position) water and steam will flow from the bottom of the shell through the middle port, out the top port through the condenser coil (SM-380 or SM380A Reference No. 2) and into the water pan.

NOTE: A very small hole through which steam and water will be discharged, is placed in the underside of the condenser coil tube to prevent possible back siphonage.

AIR ELIMINATOR TRAP

Referring to Drawing SM-368. The trap Bellows will close between 214° F. and 218° F. This trap, while placed above the sterilizer chamber, is connected to an opening near the bottom of the chamber and functions in the same manner as the air eliminator trap on larger sterilizers. Condensation will form in the line and upon the contraction of the Bellows (SM-368 Reference No. 15) will exhaust out of air vent line into water pan.

ELECTRIC HEATERS

One 1400 watt immersion type heating element is provided; located inside the bottom of the chamber under the liner. The element is nickel plated to avoid descaling. It is connected to a thermostat (SM-379 Reference No. 8), to insure against heater burn out should insufficient water exist.

THERMOSTAT

Referring to Drawing SM-379. In the event of an insufficient amount of water or Bellows failure, the thermostat will break the circuit and turn off the unit. Heat is conducted from the heater terminals through the plate to the thermostat, which in turn breaks the circuit. After the unit has cooled and more water has been admitted to the chamber, the red reset button on front panel must be pushed inward to make contact, thus allowing current to flow to the heaters.

Referring to Drawing SM-368. Setting thermostat to desired sterilizing temperature and turning timer on, closes both temperature control and low water contact (shown on Wiring Diagram SM-191 or P-461639-001) and lights the red light which indicates that the heaters are on. When the temperature rises in the chamber it expands the thermostat Bellows which in turn pushes the bracket down. The screw fastened to the bracket makes and breaks contact on the switch. When contact is made, current flows to the red pilot light indicating the heaters are on. When contact is broken, the white pilot light is on, red pilot light is out, indicating the heaters are off.

SERVICING

Minor repairs or replacements of most small parts may be readily made in the field. However, when difficulty is experienced in obtaining satisfactory operation of either switch or Bellows, it is advisable to replace the complete assembly, and return the defective parts to the factory for correction.

The same advice pertains to the operating valve when difficulty is experienced in sealing leaks, especially around the packing nut.



AMSCO

OFFICE PRESSURE STERILIZER
For Units Shipped Before 1/75

OPERATING
INSTRUCTIONS

P-33895-091

Preliminary Preparation. Plug unit into receptacle (standard voltage is 115) (voltage specified on nameplate on rear panel). The valve handle should be in upper position. Remove reservoir cover and pour water into the opening (approximately 3 1/2 quarts) to the level even with underside of lip. (Tap water may be used but distilled or softened water will minimize scale formation in heating chamber.) Replace cover.

Recommended Exposure Period.

Surgical Instruments with or without muslin covers.....	250°F. for 15 Min.
Surgical Instruments without cover.....	270°F. for 3 Min.
Surgical Instruments with cover.....	270°F. for 7 Min.
Surgical Instruments wrapped.....	270°F. for 10 Min. or 250°F. for 20 Min.
Dressings and Small Packs in muslin covers.....	250°F. for 20 Min.
Utensils, Syringes (disassembled) and Glassware in muslin covers.....	270°F. for 7 Min. or 250°F. for 15 Min.
Rubber Gloves in muslin cover.....	250°F. for 15 Min.
Tubing in muslin cover.....	250°F. for 20 Min.
Solutions (125-200-250 ml. Pyrex flasks).....	250°F. for 25-30 Min.
Solutions (50 ml. Pyrex flasks; Test Tubes up to 100 mm.).....	250°F. for 15 Min.

Note: When thermometer indicates desired operating temperature, reset timer for exposure period desired.

Operating Technique

Item A

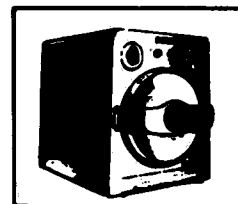
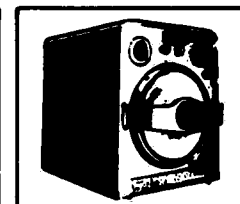
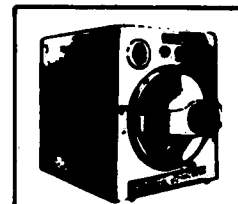


Photo above indicates door in closed position.



To remove door from chamber, turn doorknob counter-clockwise until it stops. Photo II indicates position of door in chamber after the knob is turned counter-clockwise.



Hold doorknob firmly, pull door forward and to the right. Remove door by pulling door and hinge "out and to the left," causing the left edge of the door to pass through the nose of the shell first, as indicated in the above Photo III.

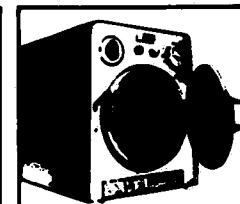
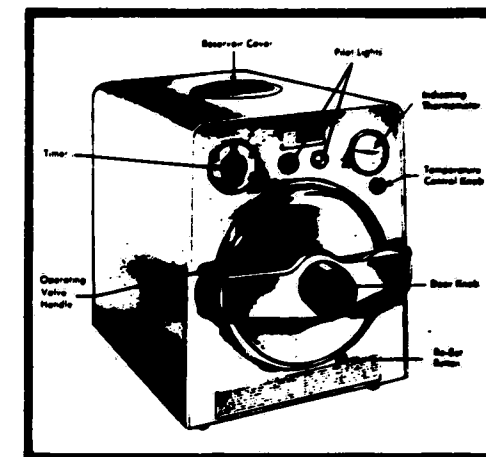


Photo above indicates door in full open position.



Load sterilizer. Pull valve handle to the extreme down position allowing water to flow into chamber. When water reaches bottom of "Water Level Indicator" push handle to the extreme up position, stopping flow of water.

To close door. Reverse procedure outlined in item A. Lower Valve Handle to top of Hinge.

(Caution. Keep door centered in nose of shell while tightening knob.) For operation at 270°, turn knob, located below thermometer, clockwise until it hits stop, then turn knob counterclockwise to adjust to temperature desired. For 250° turn knob back approximately 1/4 turn from stop.

Information. When the timer is set, the heaters come on. Within a short period of time, steam is generated and the temperature begins to rise. The locked-in air settles to the bottom of the chamber and gradually is forced out through an air-eliminating system which is controlled by a thermostatic trap. The trap closes only after all of the air has passed from the chamber. When thermometer indicates desired temperature, reset timer for exposure period desired. Should the thermometer reading indicate a temperature above or below the thermostatic knob setting, this does not mean that the sterilizer is functioning improperly. Some variances may prevail, but always work from thermometer reading. Red light indicates heaters are on. White light indicates heaters are off.

Temperature may be regulated by turning the thermostatic knob located below thermometer, clockwise to raise temperature or counterclockwise to lower temperature. If the thermostatic knob has been turned to its full extent clockwise and thermometer does not reach 270°, this is an indication that the thermostat will have to be reset.

The unit is equipped with a safety valve which will "pop-off" at approximately 34 lbs. pressure. When this occurs, it merely is signalling the release of excess pressure from within the chamber. The sterilizer can still be operated with safety, by reducing the setting on the thermostatic knob. In the event the sterilizer shuts off during a cycle, it means that there is insufficient water in the bottom of the chamber. In order to correct this, turn timer to zero, exhaust pressure, open door and allow chamber to cool.

Then push down on valve handle to fill chamber to "Water Level" mark. After filling, move handle to top position. Close door and lower handle. Restart cycle by pushing red "re-set" button located below door (do not hold). Turn on timer and red light will glow, indicating that current is on.

Warning: Do not turn timer on without water in autoclave chamber. If accidentally turned on, open door, wait 10 minutes to allow chamber to cool before adding water.

Note: To avoid possible damage to thermostat mechanism, do not push red reset button unless pilot light has been off for at least 10 minutes.

➤ **To Exhaust and Dry Load.** At end of exposure period, a bell will ring. Turn doorknob back one turn to release door. Door will release itself from shell when pressure drops. Move handle in extreme upward position. A gurgling action will indicate that the steam and unused water in the chamber is being exhausted back into the water reservoir. Open door and remove load. If drying is desired do not open door after it has released itself from shell, but allow air to enter chamber gradually. After 5 to 15 minutes, dependent upon size of load, open door and remove trays from sterilizer.

INSTALLATION AND ROUTINE MAINTENANCE SUGGESTIONS

➤ **The Office Pressure Sterilizer** is wired for operation on 115 volts AC only, unless otherwise specified on nameplate located on back of sterilizer. To place sterilizer in initial service move valve handle to top position. Remove top cover and fill reservoir, then plug into standard wall receptacle.

➤ **The Door.** To assure ease of operation and long life, place a few drops of machine oil periodically on hinge pins, and screw thread of door handle.

➤ **The Door Gasket.** When door fails to close steam-tight under normal closing pressure, without straining doorknob assembly, renew gasket which can be secured through the dealer from whom you purchased this sterilizer.

Installation Instructions: Before installing new gasket inspect and clean the gasket groove using a non-ferrous tool or material to assure proper seating.

If corrosion is evident and unable to be removed without leaving a pitted surface, door should be replaced.

Note: Gasket will leak steam at initial operation until temperature reaches approximately 260°. This is not a malfunction of

Caution: Do not operate unit with heaters on for drying purposes.

Arrangement of Loads.

(a) Instruments:

For routine sterilization of washed instruments, use only trays with perforated bottoms as supplied with the sterilizer. Place a layer of muslin or towel in bottom of tray, arrange instruments in any desired order, and then cover instruments with a final layer of muslin or towel to facilitate drying and to prevent contamination in transit.

(b) Surgical Dressings: Small Packs and Rubber Gloves:

These supplies should always be wrapped in muslin, in the autoclave tray to assure ample steam circulation. Under no conditions permit crowding of packs into large or dense masses.

(c) Empty Glassware and Utensils:

Place all containers, items of glassware and utensils (wrapped or not) on their sides or in the inverted position in the sterilizer tray.

(d) Solutions:

Remove trays from chamber of sterilizer to accommodate flasks of 250 ml. capacity or racks of test tubes. Flasks of smaller capacity may be sterilized directly in the trays.

Note: If service is required, please contact your dealer.

the door seal, but a necessity of a positive door closure under chamber pressure.

➤ **Signal Lamps.** To replace lamp, remove lens by unscrewing, thus exposing the lamp. Push and twist lamp from socket and replace with new lamp (NE-51) 105-125 volts.

➤ **Care of Chamber.** The chamber is constructed with an inner metal liner held in place by two screws which are located in the front of the liner. To remove liner from sterilizer, remove these screws, pull liner forward. Depending upon local water conditions, this inner chamber should be withdrawn (at least once each week) for inspection and cleaning of outer chamber or steam jacket to remove lime and scale deposits on the heating surface. This is necessary in order to maintain maximum efficiency. After cleaning, replace liner, making sure pin on rear of liner is engaged in fitting in chamber backhead. Replace screws.

For repairs or the replacement of parts not covered by the above routine maintenance suggestions, contact the dealer through which this sterilizer was purchased.

SPARE PARTS LIST

Timer	Part No. 33115-001	Bellows	Part No. 33151-001
Heater (115 Volt A.C.)	Part No. 33165-001	Gasket, Bellows	Part No. 33150-001
Heater (220 Volt A.C.)	Part No. 33225-001	Bellows, Air Relief	Part No. 33158-001
Thermostat (Low Water)	Part No. 455086-001	Gasket, Door	Part No. 754874-001
Switch	Part No. 33149-001		

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AMSCO

OFFICE STEAM STERILIZER
• 613-R Dynaclave
For Units Shipped After 1/75

EQUIPMENT
INSTRUCTIONS

WARNING LIQUID STERILIZATION

TO PREVENT POSSIBLE PERSONAL INJURY OR PROPERTY DAMAGE RESULTING FROM BURSTING BOTTLES AND HOT FLUID, YOU MUST FOLLOW THE RECOMMENDED PROCEDURE LISTED BELOW:

RECOMMENDED PROCEDURE:

- USE ONLY VENTED CLOSURES — DO NOT USE SCREW CAPS OR RUBBER STOPPERS WITH CRIMPED SEAL.
- USE ONLY TYPE I BOROSILICATE (PYREX) GLASS BOTTLES — DO NOT USE ORDINARY GLASS JUGS OR ANY CONTAINER NOT DESIGNED FOR STERILIZATION.
- ONLY FOLLOW PROCEDURE FOR STERILIZING FLASKED SOLUTIONS.
- DO NOT ALLOW HOT BOTTLES TO BE JOLTED. THIS CAN CAUSE HOT-BOTTLE EXPLOSIONS! DO NOT MOVE BOTTLES IF ANY BOILING OR BUBBLING IS PRESENT.
- BOTTLES SHOULD BE COOL TO TOUCH BEFORE ATTEMPTING TO MOVE THEM FROM STERILIZER TO THE STORAGE AREA.

BEFORE OPERATING THIS EQUIPMENT

1. AT THE BEGINNING OF THE DAY (Refer to Fig. 1)

a. Be sure power cord plug of sterilizer is inserted into properly grounded electric service outlet.

IMPORTANT: Before plugging in sterilizer, check data plate on back of unit for proper voltage.

b. Be sure operating valve handle is in upper position. Remove water-reservoir cover and pour water into reservoir until water level is even with underside of lip (reservoir holds approximately 3½ quarts). Replace cover. Periodically check reservoir when sterilizer is being used; replenish water when necessary.

NOTE: Since excess water will drain from the overflow tube at the rear of the sterilizer, provide a device for either catching the water or directing it to a drain. Tap water may be used but distilled or softened water will minimize scale formation in heating chamber.

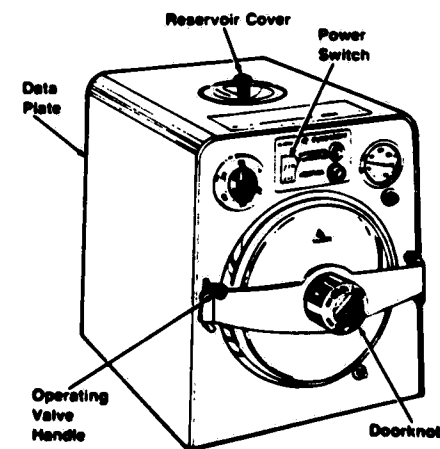


Figure 1. Sterilizer.

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2. DOOR OPERATING INSTRUCTIONS (Refer to Figs. 2 and 3).

a. **To open** — Unlock door by turning door-knob counterclockwise until it stops. While firmly holding doorknob pull door forward and to the right. Then pull door and hinge forward and to the left so that left edge of door clears nose of shell before right edge (Fig. 2B).

b. **To close** — Push door and hinge so that right edge of door enters nose of shell before left edge. Then push door forward and to the left. Lock door by turning doorknob clockwise until it stops (Fig. 3).

IMPORTANT: Keep door centered in nose of shell while turning doorknob.

OPERATING INSTRUCTIONS

1. PREPARATION

Open chamber door ... see door instructions. Pull operating valve handle down: water flows into chamber. When water in chamber reaches the Level Indicator, push operating valve handle up: water stops flowing.

2. LOAD STERILIZER

Prepare load before inserting trays into chamber.

a. **Instruments** — Only use trays supplied with sterilizer. Rinse instruments before placing them in trays.

• **Wrapped** — Place towel in bottom of tray. Wrap instruments in muslin and place them on tray.

• **Unwrapped** — Place instruments on tray in any order.

NOTE: Muslin or towel cover facilitates drying and prevents contamination in transit.

b. **Dressings, Small Packs and Rubber Tubes and Gloves** — Wrap them in muslin, and place them loosely in the trays (furnished).

c. **Empty Glassware, Syringes and Utensils** — Place empty containers (wrapped or unwrapped) on their sides or inverted in the sterilizer tray. Cover them with muslin or towel.

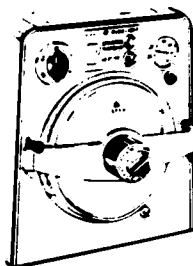


Figure 2A. Unlock Door.

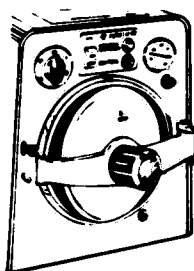


Figure 2B. Partially Open Door.

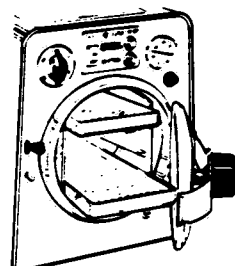


Figure 2C. Completely Open Door.

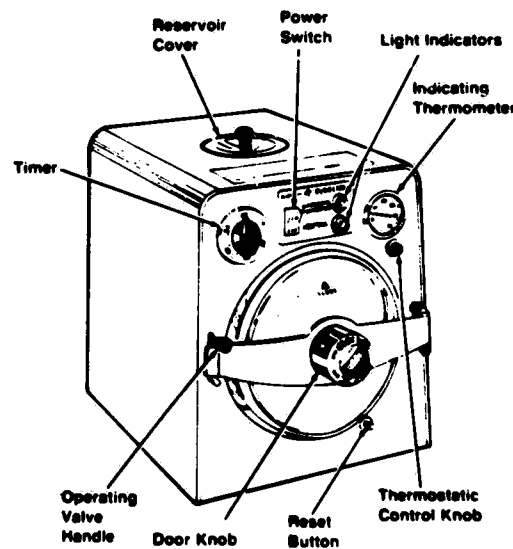


Figure 3. Controls.

WARNING

TO PREVENT POSSIBLE PERSONAL INJURY RESULTING FROM BURSTING BOTTLES AND HOT FLUID, USE ONLY BOROSILICATE (PYREX) FLASKS WITH VENTED CLOSURES FOR STERILIZING LIQUIDS.

• **SEE PAGE 6 FOR FURTHER INFORMATION.**

d. **Flasked Solutions** — Place 75 ml flasks, filled with solution, on trays in any order desired.

3. OPERATION (Refer to Fig. 3)

a. Close chamber door ... see door instructions. Then lower operating valve handle to top of hinge.

b. Press power switch to ON.

c. Turn thermostatic control knob fully clockwise.

d. Set timer for 60 minutes. Heaters and HEATING light are energized.

NOTE: Steam is generated and temperature will begin to rise. The air inside the chamber will settle to the bottom from where it will be gradually forced out through an air exhaust. The air exhaust is controlled by a thermostatic trap that closes after all the air has passed from the chamber.

e. When indicating thermometer shows desired temperature (usually 250 F or 270 F), turn thermostatic control knob counterclockwise until OPERATING TEMPERATURE light is energized.

NOTE: To regulate temperature, turn thermostatic control knob clockwise to raise temperature, counterclockwise to lower. If the thermometer does not reach the desired temperature when the thermostatic control knob is fully clockwise or the HEATING light does not come on, the thermostat must be reset. Turn timer off; wait 10 minutes then press reset button. Do not hold reset button.

CAUTION: Do not set timer if there is no water in chamber. If timer has been set, turn timer off and open door. Wait 10 minutes to allow chamber to cool before adding water or pressing reset button.

f. Set timer for desired exposure period ... see Table on this page.

NOTE: The sterilizer is equipped with a safety valve that will release when chamber pressure reaches approximately 34 psi. If the safety valve releases, excess pressure is being released from the chamber. Safe operation of the sterilizer can be continued if the thermostatic control knob is set at a lower temperature.

RECOMMENDED STERILIZATION EXPOSURE PERIODS

	250 F (121 C) Minutes	270 F (132 C) Minutes
Surgical instruments (unwrapped) without cover	15	3
Surgical instruments (unwrapped) with cover	20	10
Surgical instruments, wrapped	30	15
Dressings and small packs, wrapped	30	15
Utensils, syringes and empty glassware with cover	20	10
Rubber gloves, wrapped	20	
Rubber tubing, wrapped	20	
75 ml Square-Pak flasks filled with solution	20	

IMPORTANT: If the sterilizer shuts off during a cycle, there is insufficient water in the bottom of the chamber. Correct this situation as follows:

- (1) turn timer off and lift the operating handle to exhaust chamber pressure;
 - (2) when chamber temperature is below 212 F, unlock and open chamber door and allow chamber to cool for 10 minutes;
 - (3) pull operating valve handle down until water in chamber reaches Level Indicator, then push handle up;
 - (4) close door and lower operating valve handle to top of hinge;
 - (5) push reset button (do not hold); and
 - (6) set timer for desired exposure period after temperature is reached.
- g. A bell will sound indicating that exposure period is completed.
- h. Proceed as applicable:

(1) **Instruments, Dressing and Empty Glassware:**

- Lift operating valve handle.
- When indicating thermometer shows below 212 F, unlock door.
- If drying is desired, leave load in sterilizer for 10-20 minutes.

(2) **Flasked Solutions:**

- When indicating thermometer shows below 212 F, lift operating valve handle.
- Wait 20 minutes, then unlock door.
- After waiting for at least 10 minutes, proceed to step "i".

CAUTION: Do not use heaters for drying.

- i. Open chamber door ... see door instructions, and remove load.
- j. Press power switch to OFF.

CLEANING AND PREVENTIVE AND MINOR MAINTENANCE

CAUTION: Repairs, other than those described in these instructions, should be attempted **ONLY** by experienced mechanics fully acquainted with this equipment. Use of inexperienced, unqualified persons to work on the equipment or the installation of unauthorized parts could invalidate the warranty or result in costly damage.

WEEKLY

NOTE: The mineral content of the water will determine the cleaning frequency of the chamber.

Cleaning Chamber. Remove inner metal liner by unscrewing two screws at front of liner and pulling liner forward. Inspect heating surface of outer chamber (steam jacket) for lime and scale deposits; clean if necessary. Replace liner, be sure pin at rear of liner is engaged in fitting at chamber backhead. Replace screws.

QUARTERLY

Lubricating Chamber Door. Place a few drops of machine oil on hinge pins and screw thread of door handle.

AS REQUIRED

1. **Replacing Lamps.** Unscrew lens to expose lamp. Then push in on lamp, turn and pull straight out; replace it. Replace lens.
2. **Replacing Gasket on Chamber Door.** When door fails to close steam-tight under normal closing pressure, replace gasket. (Note: Gasket will leak steam at initial operation until temperature reaches approximately 260 F. This is necessary for positive door closure under chamber pressure.) Remove old gasket and clean the groove using a non-ferrous tool or material. (The replacement gasket is cut to provide a tight fit.) Force the new gasket into the groove, a short section at a time; **do not stretch it.** Should the gasket appear too long ... **DO NOT CUT IT** ... start over, compressing short sections into the groove, until the entire length is inserted. Never use sharp tools to push gasket into groove.

NOTE: If door is so corroded that it cannot be cleaned without pitting the surface, replace the door.

REPLACEMENT PARTS

When ordering replacement parts, please include the **part numbers** and **descriptions** listed subsequently.

To hasten service to you, include on your order the model, unit and serial numbers of this equipment.

Send your order directly to the Regional Office which serves your area. Your AMSCO representative will give you the address as well as ordering information regarding other parts.

DESCRIPTION	PART NUMBER
TIMER	P-33115-091
HEATER (120 V)	P-33165-061
HEATER (240 V)	P-33225-042
THERMOSTAT (low water)	P-455086-001
SWITCH, ON-OFF	P-89078-091
BELLOWS	P-33151-091
GASKET, Bellows	P-33150-091
BELLOWS, Air Relief	P-33158-091
GASKET, Door	P-754874-091
THERMOMETER	P-13638-091
LIGHT, Indicator, Red (120 V)	P-41083-091
LIGHT, Indicator, Red (230 V)	P-455050-001
LIGHT, Indicator, White (120 V)	P-41084-091
LIGHT, Indicator, White (230 V)	P-33696-091
LAMP, Pilot	P-23683-091

LIQUID STERILIZATION

Your AMSCO Sterilizer is designed to process liquids when borosilicate (Pyrex) flasks with vented closures are used.

Borosilicate (Pyrex) glass is recommended because it is a superior glass capable of containing higher pressures, of resisting thermal shock (such as cold air striking the hot glass), and of withstanding repeated handling.

Vented closures are recommended because, by design, they will prevent excess pressure by automatically venting a flask!

If other types of glass (such as flint glass) and non-venting (sealed) closures are used to sterilize liquids in your AMSCO Sterilizer, a potential dangerous condition, capable of causing personal injury and property damage, is created. As the liquid and residual air in a sealed flask are heated, they expand and create an internal pressure greater than the external pressure of the steam. With the weaker glass, a greater potential for bursting exists.

After the sterilization exposure, the chamber is exhausted slowly but it still exhausts more rapidly than the pressure within a sealed flask.

This pressure within the flask will exist until the residual air and the liquid have cooled (unlike a flask with a vented closure that prevents this excess pressure). Thus, the potential exists for the flask to burst and cause personal injury or property damage.

LIMITATION OF LIABILITY AND INDEMNITY

In no event, whether as a result of breach of contract, warranty or tort (including negligence and strict liability) shall American Sterilizer Company or its suppliers be liable for any consequential or incidental damages including, but not limited to loss of profits or revenues, loss of use of the Products or any associated equipment, loss of the Buyer's Products, damage to associated equipment, cost of capital, cost of substitute products, facilities, service or replacement power, downtime cost, caused by such Products, or claims of the users for such damages. Buyer and ultimate user hereby agree to indemnify the American Sterilizer Company and to hold the American Sterilizer Company harmless from any and all liability for such consequential or incidental damages. The responsibility of the American Sterilizer Company for damages due to injuries or death or the death of employees of the Buyer or ultimate user of the Product, caused by the Product, shall be limited to that portion of such damages as might be attributable to the negligence or strict liability or other tortious conduct of the American Sterilizer Company. The Buyer and ultimate user agree to indemnify the American Sterilizer Company and hold the American Sterilizer Company harmless from any further damages, indemnity or contribution. If Buyer transfers title to or leases the Products sold hereunder to any third party, Buyer shall obtain from such third party a provision affording American Sterilizer Company and its suppliers the protection of this article relating to Limitations of Liability and Indemnities.

The American Sterilizer Company's liability for any claim of any kind (including negligence and strict liability) for any loss or damage arising out of, or resulting from this agreement, or from the performance or breach thereof, or from the Products or Services furnished hereunder, shall in no case exceed the price of the specified Product, system, component or service which gives rise to the claim. Except as to title, any such liability shall terminate one year from the date of installation of any Product or upon the expiration of the warranty period applicable to each type of Product covered hereby, whichever time period expires first.

MODEL 613-R DYNACLAVE

DEFECT	REMEDY
(1) Failure of unit to "Start"	Check to insure power at receptacle. Check neon glow tube (panel lights). Remove finishing jacket, check thermostat to insure that leaf contacts are not severed.
(2) Failure to heat and attain 270° operating temperature	Check to insure that thermostat control knob is 90° to the right. If control knob is loose, turn the thermostat shaft with screwdriver (slot provided) clockwise into the shaft stop. Operate sterilizer, then set control knob so that white index line is horizontal, tighten set screw in control knob. With thermostat control knob into the stop, if situation still exists, check for excessive escapement of steam through slot in rear of finishing jacket. If steam escapement is noted, this will indicate a faulty bellows setting. Remove finishing jacket, reset bellows as per Paragraph XI of SM-369. If escapement of steam is non-existent, as explained in paragraph above, this is an indication of a faulty thermostat setting. Adjust thermostat as per Paragraph XI of SM-369.
(3) Leakage below sterilizer base after or during sterilizer operation	Check water level in water pan for over filling. Remove finishing jacket, operate sterilizer. Check visually all connections, tubing, paying particular attention to bushings, one in sterilizer back head, the other in the bottom of the sterilizer shell, to see where leakage occurs during cycle.
(4) Door leakage during sterilizer operation	Check to insure that the chamber is not overfilled initially. If leakage persists during operation, shut off sterilizer, allow to cool. Renew gasket, taking care that the gasket is uniformly installed in the gasket groove of the door. If after gasket renewal, leakage persists, shut off sterilizer. Check fit of gasket in retaining groove, to insure that it is uniform. Remove finishing jacket. Loosen the two screws holding the hinge to the front panel and saddle. Align the door in the nose of the shell, operate sterilizer. The above procedure will insure positive, unrestricted alignment of the door in the shell. Tighten the screws previously loosened, holding the hinge to the front panel and saddle. Replace finishing jacket.
(5) Lack of thermostat control	If, during operation, heat remains on (red pilot glowing constantly), turn thermostat adjusting knob counter-clockwise. If white pilot light does not come on and red pilot light off indicating heaters are off, the cause may be a faulty thermostat adjustment or the thermostat leaf contacts are sprung or "welded" together. If thermostat

MODEL 613-R DYNACLAVE

DEFECT	REMEDY
(5) Lack of thermostat control (Continued)	appears faulty, replace and reset thermostat adjustment as per Paragraph XI, SM-369.
(6) "Popping of Safety Valve"	Check to insure that sterilizer is being operated at proper operating temperature. Check to insure that sterilizer is operating correctly, maintaining set temperature, etc. If "popping" persists at operating temperature, replace "O" ring as per Paragraph IX of SM-369. If upon removal of the control housing cover, it is noted that the safety valve seat is of one piece Teflon construction, replace as per Paragraph IX SM-369.
(7) Snap Ring ejected from door post	Remove door as per Paragraph 1 of SM-369. Refer to Drawing SM-187. Clean retaining ring groove of Item 24 "Adapter" to insure that no lubricant is present in the groove. Follow procedure in reverse to reassemble.
(8) Failure of sterilizer to exhaust	Refer to Drawing SM-364. Item 2 Tube Condenser contains an orifice in the tube (at the valve end of the tube). This orifice may become clogged with lint, etc. A thorough cleaning will remedy this situation. If the operating valve handle will not move to the "UP" position (exhaust position), the difficulty is in the operating valve itself. Consult SM-366 for cut away section of valve, replace "O" rings as per Paragraph X of SM-369.
(9) Timer (a) Failure of unit to start (b) Improper time cycle (c) Failure of Timer bell to ring at end of pre-set time.	(a) Faulty switch in Timer. Remove Timer from front panel, refer to Paragraph V of SM-369. After Timer is removed, remove bell portion by removing hex retaining nut. Spray interior of Timer with silicone spray. Reassemble bell portion, operate timer (manually starting, etc.) to insure that it is functioning properly. Reassemble Timer to sterilizer. (b) This may be checked by the use of a watch or clock and compare known time against the timer. (c) Faulty Timer. All or any one of the above conditions will call for replacement of the Timer. No attempt should be made to repair the Timer, direct replacement is recommended.

DIRECTIONS FOR SERVICING REPLACEMENT OF PARTS

DOOR KNOB

I. TO REPLACE DOOR KNOB, REFERENCE NO. 16 (SEE SM-167).

Holding door firmly, remove Stop Nut, Reference No. 6. Remove Cup Washer, Reference No. 22 and Teflon Washer, Reference No. 26. Remove Door from Screw, Reference No. 16. Release Retaining Ring, Reference No. 5 and Washer, Reference No. 4. Remove knob assembly by pulling knob away from hinge. Remove Washer, Reference No. 4. Remove 3 Screws. Replace knob. To assemble, follow the above procedure in reverse.

CAUTION: Care must be taken to insure that square hole in door, Reference No. 1, is well seated on mating square of Screw, Reference No. 16.

HEATER

II. TO REPLACE HEATER (SEE SM-379 and SM-380 or SM-380A)

Remove plug from receptacle.
Syphon water from reservoir. This may be accomplished by syphoning or the following procedure:

Set machine so that nose of shell (front panel) is over sink or other receptacle. Open door, remove trays. Pull operating handle down, allowing water to flow from reservoir to chamber and out of shell into sink or receptacle. When water flow slows, tilt sterilizer forward to remove water from shell. Remove liner by removing two screws in the front of liner and pulling liner forward and out of shell.

Lay sterilizer on its side (Caution: Lay soft cloths to protect finish of jacket). Remove 4 screws, Reference No. 1 (SM-380 or SM-380A), from bottom and 3 Screws, Reference No. 1, from back of finishing jacket.

Turn sterilizer right side up, remove jacket by pulling straight up.

Remove Nut, Reference No. 5 (SM-379) from heater terminals. Remove Washer, Reference No. 10. Remove wire and nut, Reference 5 from heater terminals. Remove Heater Nut, Reference No. 2 (one per heater leg). Remove Heater through nose of shell.

Refer to Wiring Diagram (SM-191 or P-461639-001) to insure correct location of wires on terminals.

NOTE: In the process of reassembly heater must be held firmly in shell while replacing the Heater Nut, Reference No. 2.

LOW WATER THERMOSTAT REPLACEMENT

III. TO REMOVE AND REPLACE LOW WATER THERMOSTAT (SEE SM-379).

Remove finishing jacket as per Paragraph II.

Remove two wires connected to Thermostat. Remove Screw, Reference No. 7, Lockwasher, Reference No. 12 and Nut, Reference No. 11, which hold Thermostat to bracket. Replace new Thermostat, reassemble following the above procedure in reverse. Regulate thermostat position to ensure free movement of reset rod.

SWITCH REPLACEMENT

IV. TO REMOVE AND REPLACE SWITCH (SEE SM-368 — 380 or 380A — 381 or 381A).

Remove finishing jacket as per Paragraph II. Remove Thermometer, Reference No. 23 (SM-380 or SM-380A), from Control Housing Assembly, Reference No. 16 (SM-381) or Reference No. 15 (SM-381A). Loosen set screw in Switch Adjusting Knob, Reference No. 24 (SM-380 or SM-380A). Remove Knob from shaft, Disconnect Air Vent Tube, Reference No. 10 (SM-381) or Reference No. 9 (SM-381A). Remove Screws, Reference No. 11 (SM-381) or Reference No. 10 (SM-381A), holding control housing assembly to front panel. Disconnect two wires connected (by means of terminal screws) to switch. Remove screw, Reference No. 9 (SM-368), holding switch to Bracket, Reference No. 25 (SM-368).

Install new switch following the above procedure in reverse to reassemble.

To set Switch Adjusting Knob, Reference No. 24 (SM-380 or SM-380A), turn switch shaft (with a screwdriver) clockwise until it hits stop. Replace adjusting knob as follows: With Switch shaft in the extreme clockwise position (into the stop). Replace knob with white line on knob horizontal to the right (3 o'clock on a watch). Tighten set screw.

(For final adjustment of switch, see Paragraph XI.)

TIMER

V. TO REMOVE AND REPLACE TIMER (SEE SM-380 or SM-380A).

Remove finishing jacket as per Paragraph II. Remove two wires connected to Timer, Reference No. 20. Pry off indicator knob on front of timer. Remove retaining nut, holding dial plate. Remove dial plate, timer body. Install new timer following the above procedure in reverse.

NOTE: This timer has the "ON-OFF" Switch incorporated into the timer itself.

THERMOMETER

VI. TO REMOVE AND REPLACE THERMOMETER (SEE SM-380 or SM-380A).

Remove finishing jacket as per Paragraph II.

Remove Thermometer, Reference No. 23, from control housing assembly by means of an open end wrench. Replace new thermometer using pipe compound to insure against leakage.

CAUTION: Do not attempt to tighten thermometer to a point where thermometer dial pulls against front panel, causing front panel to bow and thermometer indicator to be rendered useless.

BELLOWS

VII. TO REMOVE AND REPLACE AIR VENT BELLOWS (SEE SM-366).

Remove finishing jacket as per Paragraph II. Remove 4 Screws, Reference No. 1, holding guard and control housing cover. Remove Guard, Reference No. 32 and Cover, Reference No. 2. Remove Bellows Seal Nut, Reference No. 17, and gasket, Reference No. 16. Remove Bellows Lock Nut, Reference No. 18, and the Seal Washer under the Lock Nut. (This Seal Washer is for shipping purposes and does not need to be replaced. It may be discarded.) Remove Bellows, Reference No. 15 (by means of screwdriver inserted into Bellows shaft which protrudes through the bottom of the control housing). Replace Bellows by starting thread on Bellows shaft into housing by hand being careful not to cross-thread the tapping in the housing.

When a Bellows is replaced it becomes necessary to replace the "O" Ring, Reference No. 26 as follows:

Remove "O" Ring, Reference No. 26, from Air Relief Fitting, Reference No. 14. Replace with new "O" Ring. Examine Gasket, Reference No. 3. Replace if necessary. Reassemble following instructions above in reverse.

See Paragraph XI for final adjustment.

VIII. TO REMOVE AND REPLACE THERMOSTAT BELLOWS (SEE SM-366).

Remove finishing jacket as per Paragraph II. Remove control housing assembly as per Paragraph IV. Remove 2 Screws, Reference No. 7, holding adjusting screw bracket. Remove bracket, remove Bellows, Reference No. 6, clean gasket surface on control housing body. Replace Gasket, Reference No. 5. Replace Bellows, Reference No. 6. Reassemble following instructions above in reverse.

SAFETY VALVE

IX. TO REMOVE AND REPLACE SAFETY VALVE AND SEAT. (SEE SM-366)

Remove finishing jacket as per Paragraph II. Remove 2 Bolts holding safety valve to Control Housing Cover, Reference No. 2. Remove safety valve body. Remove 4 Screws, Reference No. 1, holding guard and cover to control housing. Remove Seat, Reference No. 27, by means of pliers on the exposed edge, on the bottom side of the cover. Replace with new seat being careful not to cross-thread the seat in the cover. Tighten the seat by means of pliers until the flange of the seat is secure against the bottom of the cover. Reassemble guard and cover to control housing following the above instructions in reverse.

OPERATING VALVE

X. TO REPLACE "O" RINGS, OPERATING VALVE (SEE SM-366).

Remove finishing jacket as per Paragraph II.

Remove Operating Valve Handle, Reference No. 11.

CAUTION: Remove water from sterilizer as per Paragraph II.

Push Arm, Reference No. 2, up, thereby releasing Valve, Reference No. 4. Unscrew Nut, Reference No. 5. Remove Valve, Reference No. 4, and Nut, Reference No. 5. Remove "O" Ring, Reference No. 6. Upper Port, Reference No. 7, "O" Ring, Reference No. 6. Lower Port, Reference No. 6 and "O" Ring, Reference No. 6. Difficulty may be experienced in removing the lower "O" Ring. The use of a wire hook to remove this "O" Ring may be necessary.

CAUTION: Care must be taken to avoid scratching inside surface of valve.

For ease in replacement and for assurance of correct alignment, assemble valve components in reverse of above procedure on valve stem. Reassemble shaft to valve body.

CAUTION: Do not attempt to tighten Nut, Reference No. 5, other than is necessary to prevent leakage around valve stem.

FINAL ADJUSTMENT

XI. BELLOWS AND THERMOSTAT ADJUSTMENT. (SEE SM-368)

After servicing or replacing various control housing components, it becomes necessary to adjust the Bellows and Thermostat.

With finishing jacket removed, Bellows seal nut removed, Reference No. 17, start sterilizer as per Operating Instructions, Part No. 38895, or 454697.

At this point, the heaters are energized and the red light on (normal "come up" time is 7-8 minutes from initial starting time).

When thermometer reaches 215° turn Bellows Shaft (with screwdriver) until air ceases to escape through the air relief tube. Tighten Bellows lock nut, Reference No. 16, (on Bellows shaft). Replace Bellows seal nut.

Turn Thermostat Control Knob clockwise (to the right) into the stop. Check thermostat adjusting screw, Reference No. 22, (behind front Panel, below control housing assembly). Insure that insulated end of adjusting screw is just lightly touching the leaf contact.

When thermometer reaches 275° white light should come on, red light off. If thermometer does not reach 275°, back off on the adjusting screw (closing switch contacts). If thermometer reaches 275° and white light does not come on, tighten adjusting screw, until white light comes on and red goes out.

Points to remember: Red light indicates heater "ON".

White Light indicates heater "OFF".

Adjusting Screw "Out" (Loosen) - Raise Temperature

Adjusting Screw "In" (Tighten) - Lower Temperature

DOOR GASKET REPLACEMENT

XII. TO REPLACE DOOR GASKET (SEE SM-187).

The replacement of the door gasket is quite simple following the procedure below:

It is not necessary to remove the door from the hinge, simply remove the Gasket, Reference No. 2, being careful not to rupture the gasket retaining lip on Door, Reference No. 1. Replace with new gasket. Close door securely (to help seat the new gasket in the retaining lip on the door). Open door, check gasket to insure that it is uniformly pressed into retaining lip.

Start sterilizer as per Operating Instructions, Part No. 38895 or 454697.

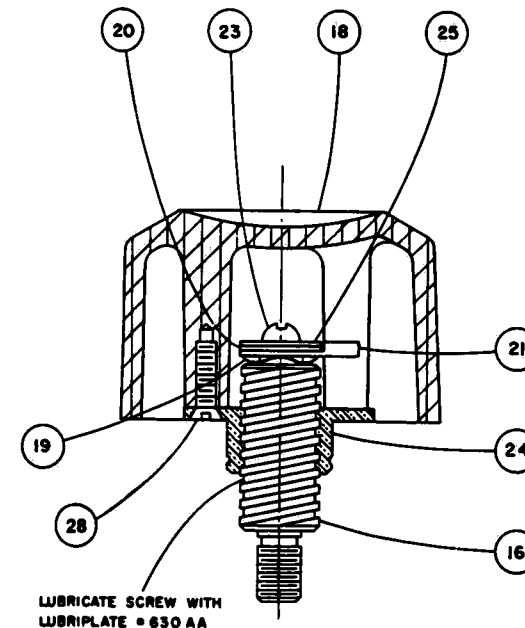
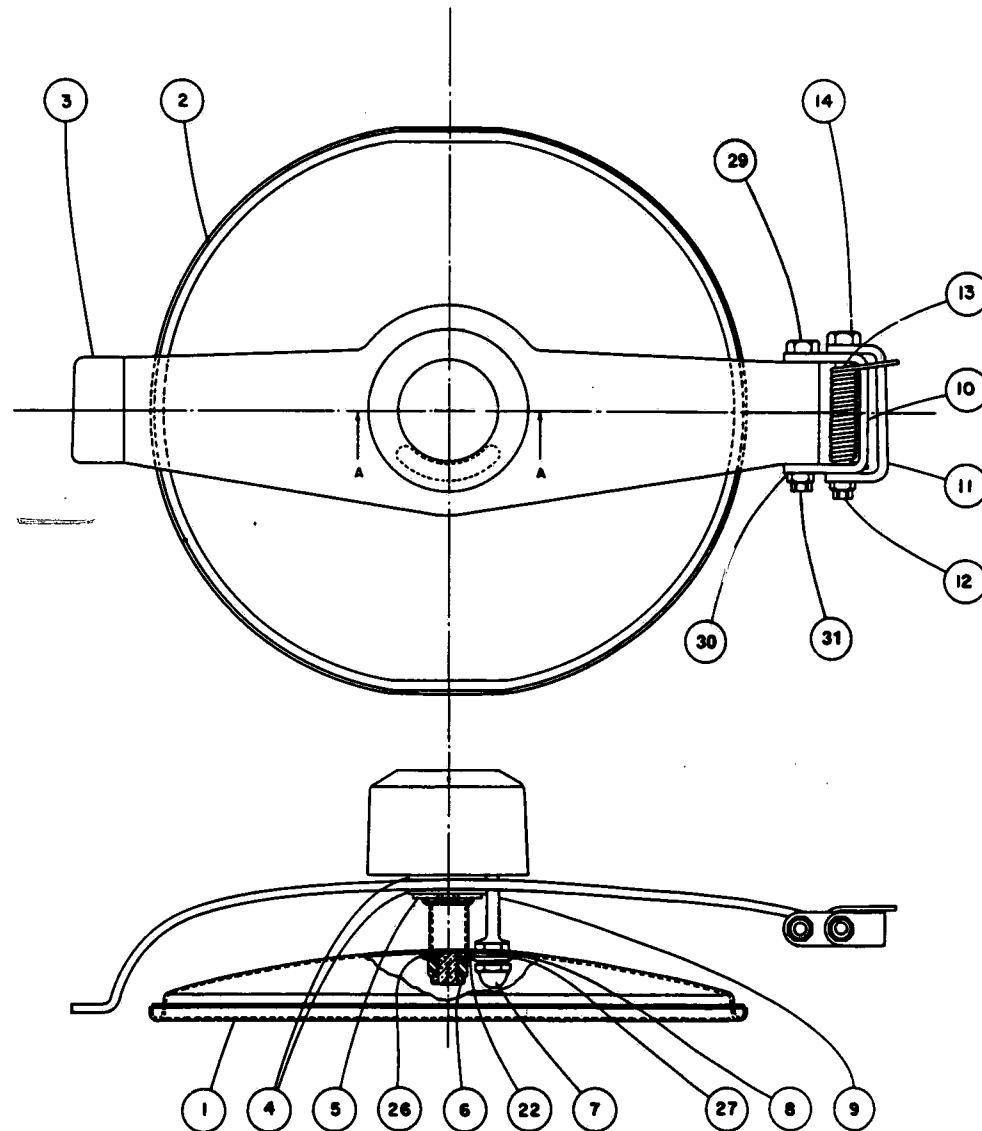
The Sterilizer is so designed and constructed so that internal pressure tends to hold the door closed thus assuring positive locking of the door in the nose of the shell.

Upon the initial cycle after a gasket replacement, steam and water may leak by the door gasket at lower temperature readings. This is normal for this type of door closure until a higher temperature is reached tending to seat the gasket. If gasket leak persists, check door alignment in shell. Check gasket. At least two 20 minute cycles should be run after door gasket replacement or any replacement of parts on the sterilizer.

SPECIAL NOTE:

The 613R sterilizer meets U.L. electrical and pressure requirements. However, it does not bear the ASME stamp. Please contact an AMSCO Regional Office when replacing the following critical components:

Door — P-33125-091
Door Assembly — P-33129-091
Shell Assembly — P-33110-061
Safety Valve — P-33154-091



SECTION A-A
ACTUAL SIZE

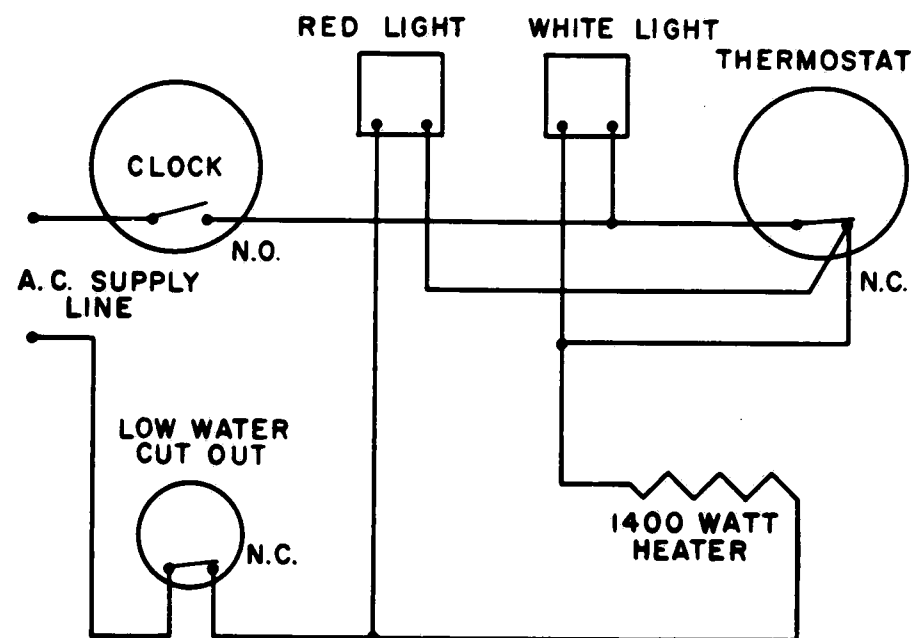
BILL OF MATERIAL			
NO.	NAME	PART NO.	QTY.
1	DOOR	33128-091	1
2	GASKET, DOOR	754874-081	1
3	HINGE	33134-082	1
4	WASHER, BRASS	33283-042	2
5	RING, RETAINING	33233-045	1
6	NUT, ELASTIC STOP	34561-082	1
7	NUT, ACORN 1/4"-20	3041-051	1
8	GASKET, TEFLON	35161-091	1
9	PIN	33126-061	1
10	HINGE, INNER	38367-063	1
11	HINGE, OUTER	33132-063	1
12	NUT, HUBLOCK 1/4"-20 S.S.	33226-082	1
13	SPRING	33131-061	1
14	SCREW, CAP 1/4"-20 x 2 1/4 S.S.	34580-082	1
16	SCREW	33125-042	1
18	KNOB	33122-091	1
19	WASHER, SPRING	33229-041	1
20	GASKET, FIBER	33169-091	1
21	CLUTCH	33124-061	1
22	WASHER, CUP S.S.	34847-061	1
23	SCREW, #10-32 x 5/8" BRASS	9313-041	1
24	ADAPTER	33123-042	1
25	WASHER, SPECIAL	33231-041	1
26	GASKET, TEFLON	35163-091	1
27	WASHER, CUP S.S.	35162-091	1
28	SCREW, 6-32 x 3/8 FL HD	3961-041	3
29	SCREW, HINGE	38365-083	1
30	NUT, HEX 10-32	8647-061	1
31	NUT, SPECIAL	38366-063	1

DOOR AND HINGE ASSEMBLY
(P-33129-091)

NOVEMBER 1957
(REV. 1/68)

SM-187

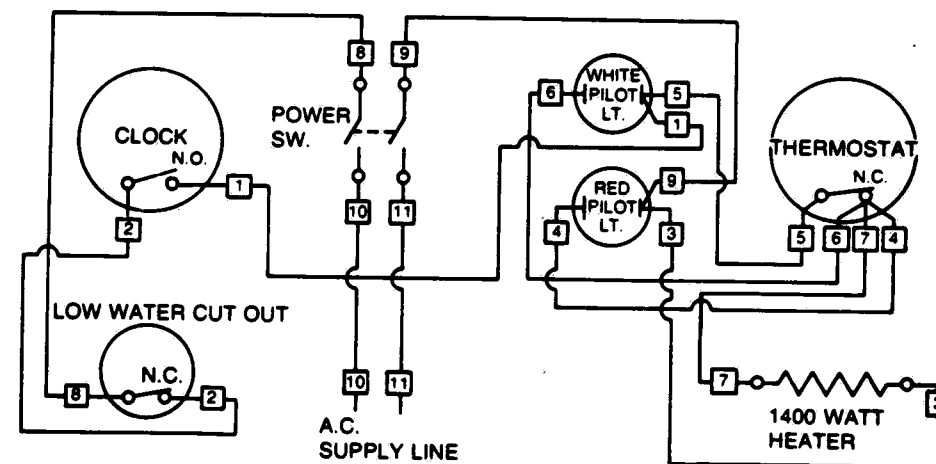
**WIRING DIAGRAM —
FOR UNITS SHIPPED BEFORE 1/75**



NOVEMBER, 1957 (REV. 1/68) **SM-191**

B-9

**WIRING DIAGRAM —
FOR UNITS SHIPPED AFTER 1/75**



P-461639-001

(REV. 7/88)

B-10

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BILL OF MATERIAL				
NO	NAME	PT. NO.	REMARKS	RD
1	GASKET, HEATER	34939-091		2
2	NUT, HEATER	P16055-045	1/2 - 20	3
3	WASHER, FLAT	17796-091	BRASS	4
4	NOT USED			
5	NUT, HEX.	8645-061	* 8 - 32 MONEL	5
6	SCREW, RD. HD.	24105-061	* 8 - 32 x 1 1/8"	1
7	BRACKET	33180-091		1
8	CUTOUT, LOW WATER*	42292-NLA		1
9	HEATER	33165-061	120 VOLTS	1
	HEATER	33225-042	240 VOLTS	
10	WASHER	19690-061	* 8 LOCK	2

HEATER AND OLD STYLE LOW WATER CUTOUT

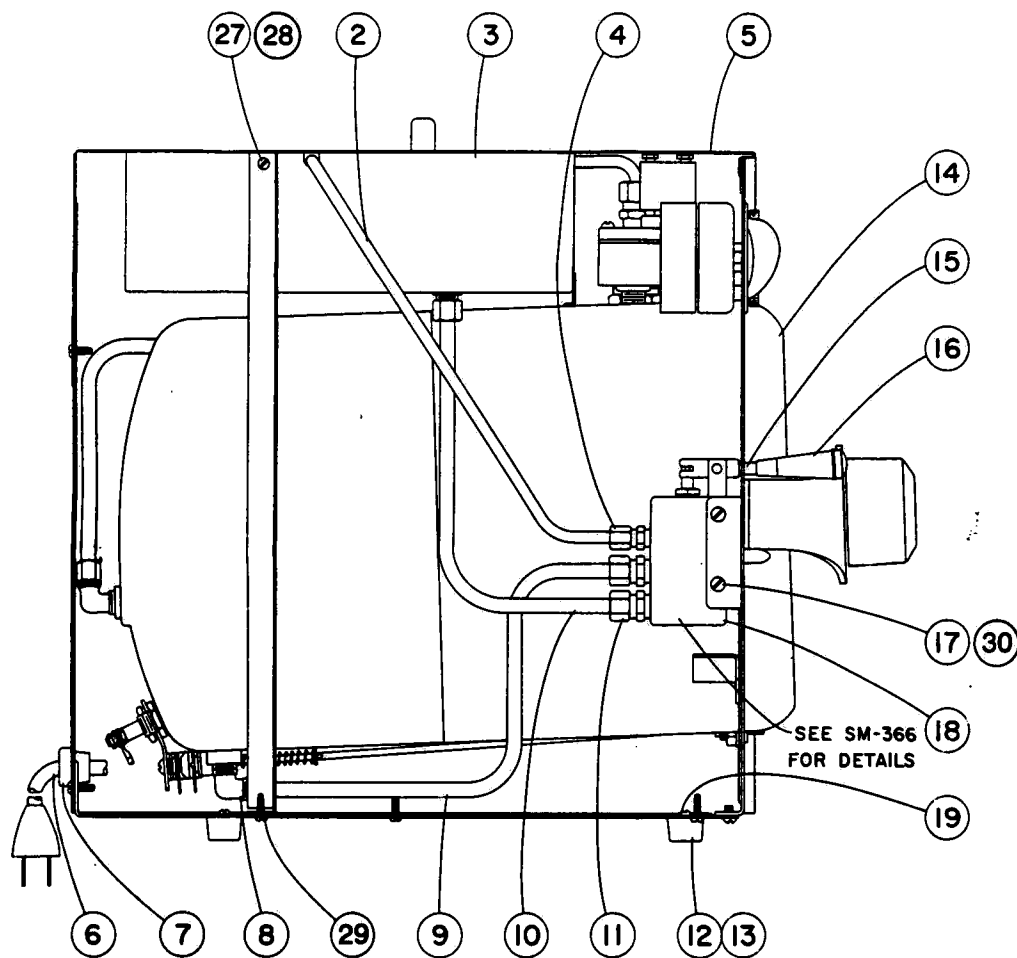
*Low Water Cutout P-42292-091 is not available.
Replace with Kit P-413687-001 (See SM-379).

(REV. 1/88)

NOVEMBER 1957

SM-202

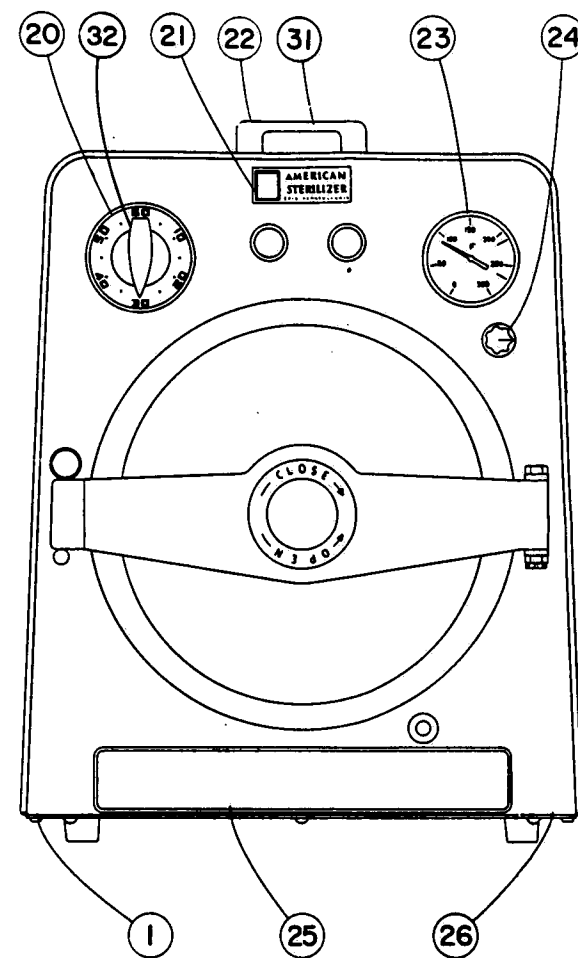
B-12



LEFT SIDE VIEW

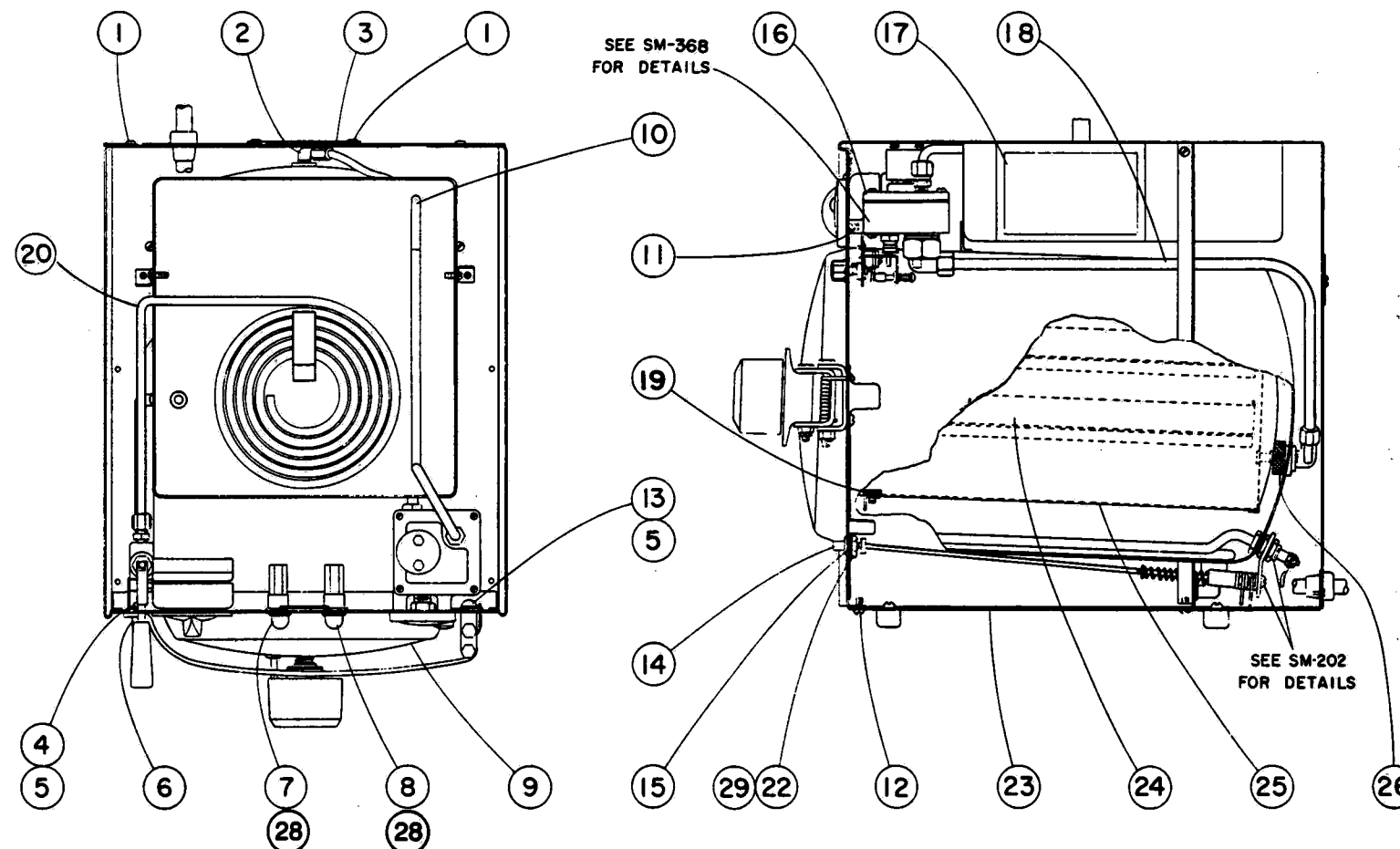
FOR ADDITIONAL DETAILS SEE SM-365

FOR UNITS SHIPPED BEFORE 1/75
WITH OLD STYLE LOW WATER CUTOUT



FRONT VIEW

BILL OF MATERIAL			
NO.	NAME	PART NO.	QTY.
1	SCREW, #6 SELF TAP	35544-045	8
2	TUBE, COND. $\frac{1}{4}$ " O.D.T.	32564-042	1
3	WATER PAN	461637-001	1
4	CONN. $\frac{1}{4}$ " O.D.T. $\frac{1}{8}$ " I.P.S.	19514-091	1
5	JACKET, FINISHING	33118-091	1
6	CORD, 3W. 115V. A.C.	56399-004	1
	CORD, 2W. 230V. A.C.	461641-001	1
	CORD, 3W. 230V. A.C.	461641-001	1
7	BUSH, 2W. 115V. A.C.	NLA	1
	BUSH, 3W. 115V. A.C.	30627-091	1
	BUSH, $\frac{3}{8}$ " W. 230V. A.C.	30636-091	1
8	ELBOW, $\frac{3}{8}$ " O.D.T. $\frac{1}{4}$ " I.P.S.	7033-091	1
9	TUBE, FILL $\frac{3}{8}$ " O.D.T.	32699-091	1
10	TUBE, RESR. $\frac{3}{8}$ " O.D.T.	32687-091	1
11	CONN. $\frac{3}{8}$ " O.D.T. $\frac{1}{4}$ " I.P.S.	22711-042	2
12	BUMPER, RUBBER	33168-091	4
13	NUT, HEX. #8-32	8645-061	10
14	SHELL	33110-061	1
15	STUD, HANDLE	33183-051	1
16	HANDLE, VALVE	33136-091	1
17	SCREW, #10-32 x $\frac{1}{2}$ " LG.	12538-061	2
18	VALVE, OPERATING	33245-091	1
19	SCREW, #8-32 x $\frac{1}{2}$ " LG.	3986-041	5
20	TIMER	33115-091	1
21	PLATE, NAME	43540-091	1
22	COVER ASSEMBLY	33428-091	1
23	THERMOMETER	13638-091	1
24	KNOB, CONTROL	33113-091	1
	OPR. INST. METAL CAL (33111)	NLA	1
26	PANEL, FRONT	NLA	1
27	SCREW, RD. HD.	13334-091	2
28	NUT, HEX	13794-041	2
29	SCREW, RD. HD.	4672-041	2
30	WASHER	10863-091	5
31	HANDLE ONLY	33137-091	1
32	KNOB, Timer	44854-091	1



TOP VIEW

FOR ADDITIONAL DETAILS SEE SM-364

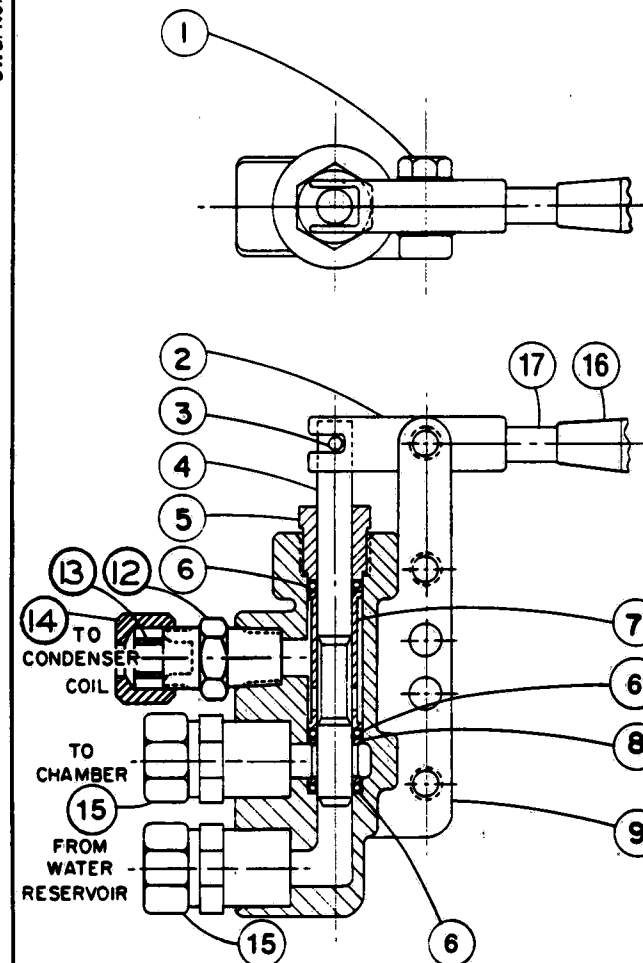
RIGHT SIDE VIEW

BILL OF MATERIAL			
NO	NAME	PART NO	QTY
1	SCREW, #6 SELF TAP	35544-045	8
2	ELBOW, $\frac{5}{16}$ O.D.T. $\frac{1}{4}$ IPS	7033-091	3
3	PLATE, NAME	27043-091	1
4	NUT, HEX. #10-32	8647-061	1
5	WASHER #10	10863-091	5
6	PIN, HINGE REST	33112-062	1
7	LIGHT, IND. RED 115V. AC	24568-091	1
7	LIGHT, IND. RED 230V. AC	29517-091	1
8	LIGHT, IND. WHT. 115V. AC	24571-091	1
8	LIGHT, IND. WHT. 230V. AC	33696-091	1
9	DOOR ASSEM.	33129-091	1
10	TUBE, VENT $\frac{1}{4}$ O.D.T.	32566-042	1
11	SCREW, FL. HD. #8-32 x $\frac{3}{8}$	4617-041	2
12	SCREW, RD. HD. #8-32 x $\frac{1}{2}$	12534-061	3
13	SCREW, RD. HD. #10-32 x $\frac{1}{2}$	12538-061	2
14	BUTTON, RESET	33145-031	1
15	BUSHING, RESET	33140-051	1
16	CONTROL HOUSING	33164-091	1
17	WIRING DIAGRAM	33282-NLA	1
18	TUBE	32711-091	1
19	SCREW-THUMB #8-32	38637-042	2
20	TUBE, CONDENSER	32564-042	1
22	NUT, HALF BRS. $\frac{1}{2}$ -13	33971-091	1
23	BASE	33119-045	1
24	TRAY	33117-044	2
25	LINER ASSEM.	53977-091	1
26	CAP - VENT	47540-091	1
27	WIRING HARNESS <small>NOT SHOWN</small>	53004-091	1
28	LAMP, PILOT	764317-708	Bx. of 10
29	WASHER	33974-091	1

FOR UNITS SHIPPED BEFORE 1/75
WITH NEW STYLE LOW WATER CUTOFF

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DWG. NO. P-33245-091



BILL OF MATERIAL			
NO.	NAME	PT. NO.	QDD
1	SCREW	33237-091	1
2	ARM	33238-042	1
3	PIN	33236-061	1
4	VALVE	33242-061	1
5	NUT	33243-091	1
6	"O" RING, TEFLON	33241-091	3
7	PORT, UPPER	33240-091	1
8	PORT, LOWER	33239-091	1
9	BODY	33244-091	1
12	RESTRICTOR	38638-091	1
13	SLEEVE	25364-091	1
14	NUT	30673-091	1
15	CONNECTOR	22711-042	2
16	HANDLE	33136-091	1
17	STUD	33183-051	1

NOTE:

DO NOT ATTEMPT TO TIGHTEN PART NO. 33243 (5) BEYOND TIGHTNESS
NECESSARY TO PREVENT LEAKAGE AROUND VALVE PART NO. 33242 (4).

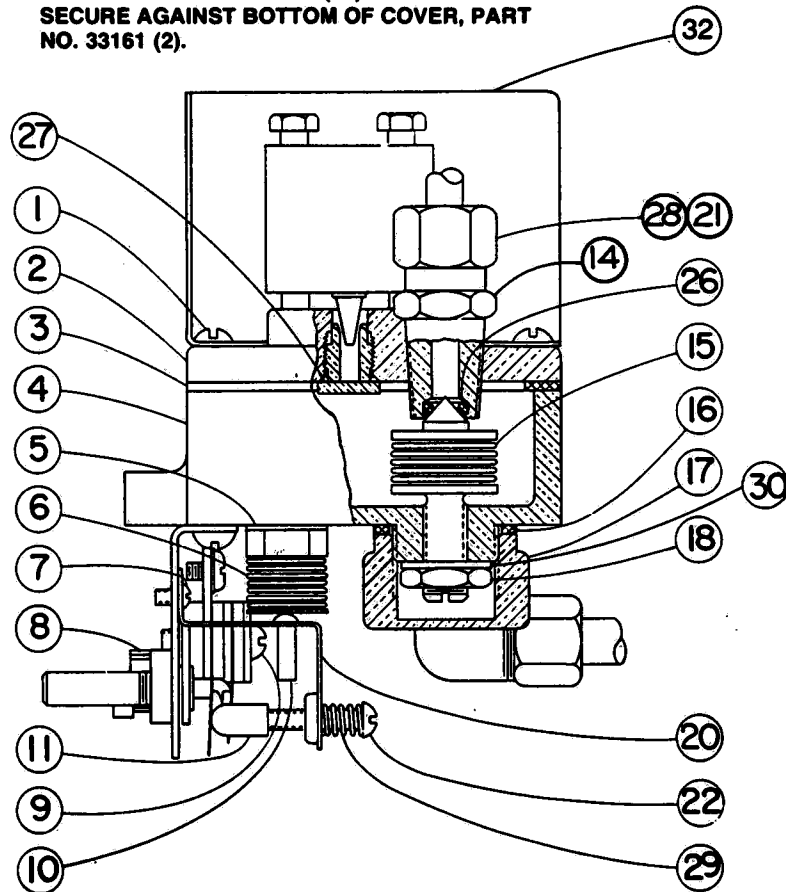
CONTROL VALVE ASSEMBLY

(P-33245-091, less handle and stud)

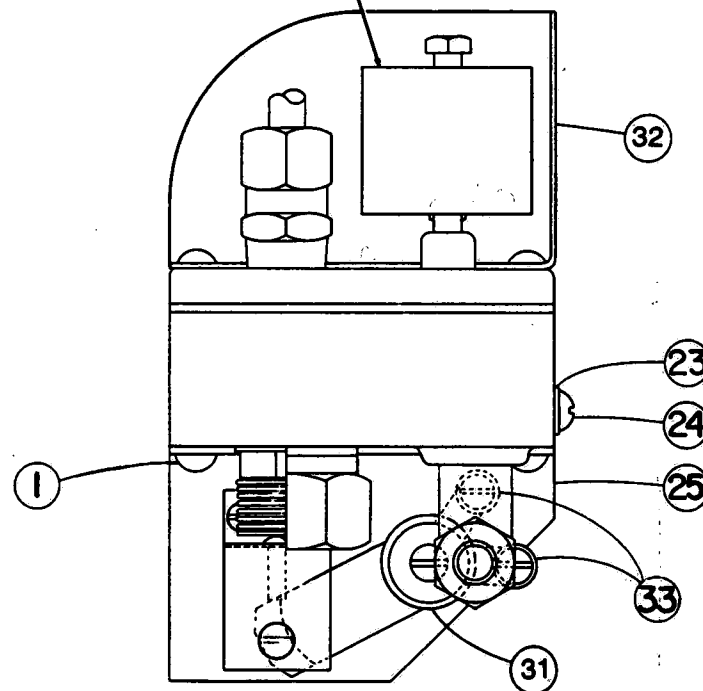
JUNE, 1960 (REV. 1/66)

NOTE:

TIGHTEN PART NO. 37103 (27) UNTIL HEAD IS SECURE AGAINST BOTTOM OF COVER, PART NO. 33161 (2).



Only Use Safety Valve
P-33154-091 in States
That Do Not Require
ASME Approval



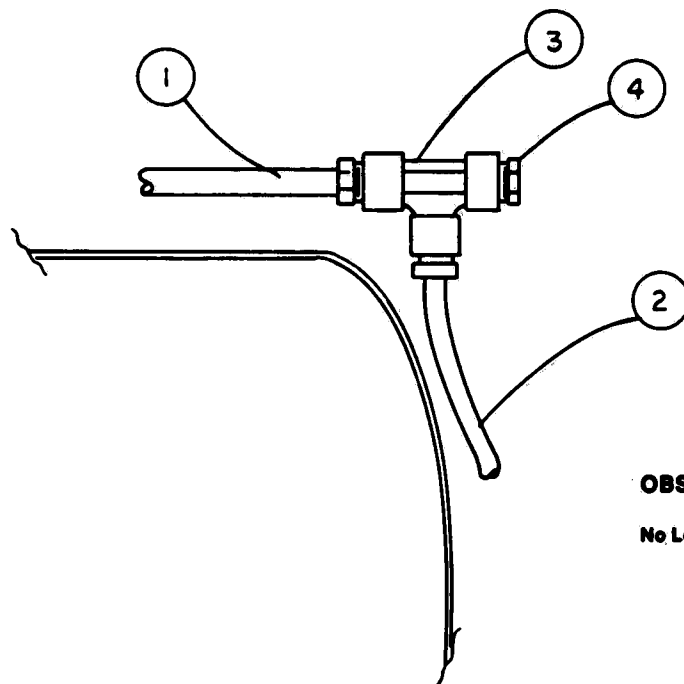
BILL OF MATERIAL			
NO.	NAME	PT. NO.	QTD.
1	SCREW, #10-32 x 1/2"	9298-041	6
2	COVER	33161-091	1
3	GASKET	33153-091	1
4	HOUSING	33163-091	1
5	GASKET	33150-091	1
6	BELLOWS	33151-091	1
7	SCREW, #4-36x3/16"	3982-041	2
8	THERMOSTAT, TEMP. CONTROL	33149-091	1
9	SCREW	3987-041	1
10	RIVET, 1/8" DIA.X3/8"	18856-091	1
11	ROD	33228-091	1
14	FITTING, RELIEF	33156-091	1
15	BELLOWS	33158-091	1
16	GASKET	33170-091	1
17	NUT, SEAL	33147-091	1
18	NUT	3045-091	1
20	BRACKET ASSEMBLY	33152-042	1
21	FERRULE	25364-091	1
22	SCREW, #6-32x1-1/4"	3966-041	1
23	GASKET	33227-091	1
24	SCREW, #8-32x1/4"	3967-041	1
25	BRACKET	33148-061	1
26	"O" RING, TEFLON	33155-091	1
27	SEAT	37103-091	1
28	NUT	30673-091	1
29	SPRING	12461-042	1
30	WASHER	41232-091	1
31	WASHER	30616-091	1
32	GUARD	454196-001	1
33	SCREW	462328-204	2

CONTROL HOUSING ASSEMBLY

(P-33164-091)

NOVEMBER, 1957 (REV. 1/88)

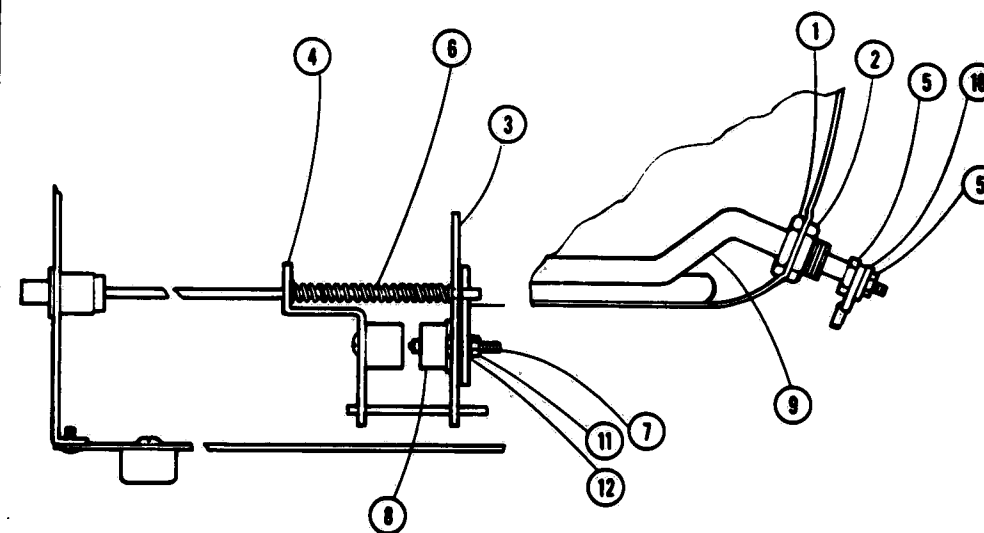
BILL OF MATERIAL			
NO.	NAME	PART NO.	REQ'D.
1	TUBE	NO LONGER AVAILABLE	1
2	TUBE	NO LONGER AVAILABLE	1
3	TEE 5/16" O.D.T. x 1/8" I.P.S.	NO LONGER AVAILABLE	1
4	PLUG, FUSIBLE	NO LONGER AVAILABLE	1



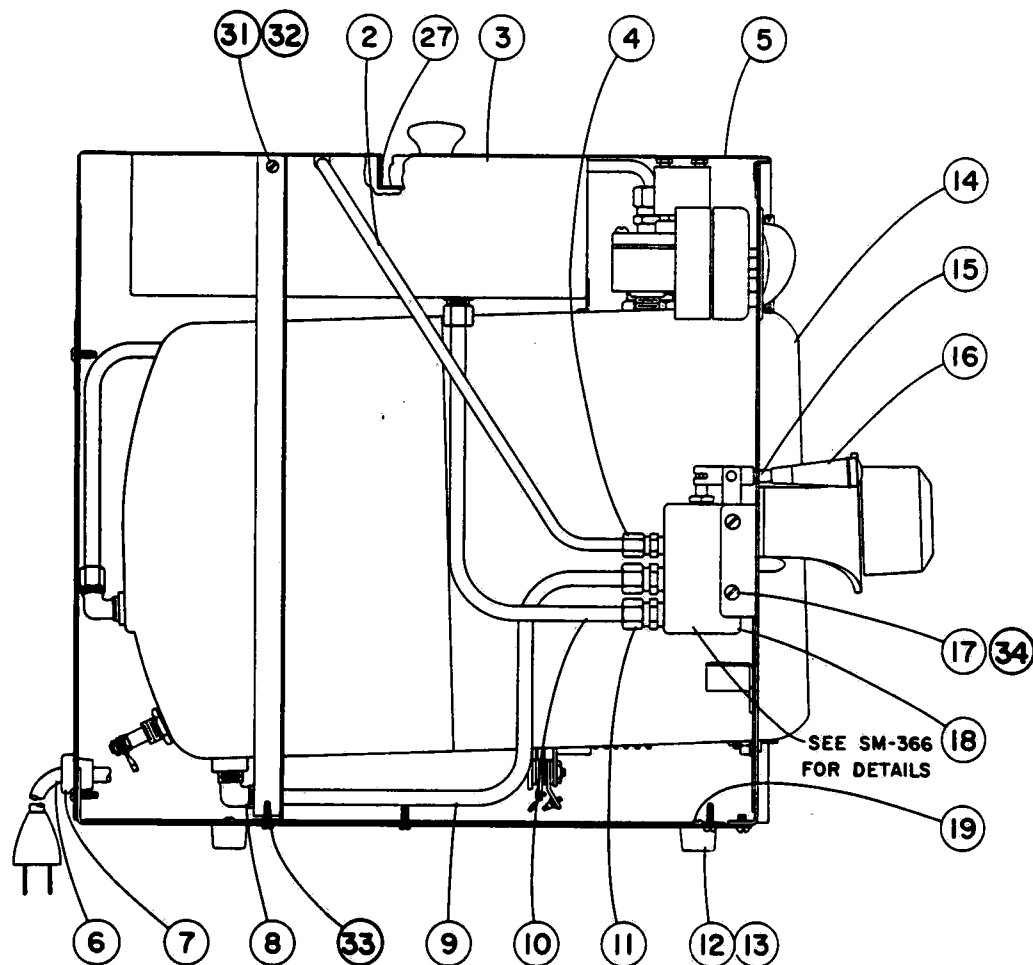
OBSOLETE
No Longer Available

FUSIBLE PLUG

BILL OF MATERIAL				
NO.	NAME	PT. NO.	REMARKS	RD
1	GASKET, HEATER	34939-091		2
2	NUT, HEATER	P16055-045	1/2"-20	2
3	PLATE	455237-001		1
4	RESET-ROD ASSY.	455243-001		1
5	NUT, HEX	8645-061	#8-32 MONEL	4
6	SPRING	33143-091		1
7	SCREW	451232-045	#4-40 X 5/8 RHMS	1
8	THERMOSTAT, LOW WATER CUTOUT	455086-001		1
9	HEATER	33165-061	120 VOLTS	1
	HEATER	33225-042	240 VOLTS	
10	WASHER	19690-061	#8 LOCK	1
11	NUT, HEX	451234-045	#4-40	1
12	LOCKWASHER	30743-045		1



HEATER AND LOW WATER CUTOUT
THERMOSTAT INSTALLATION



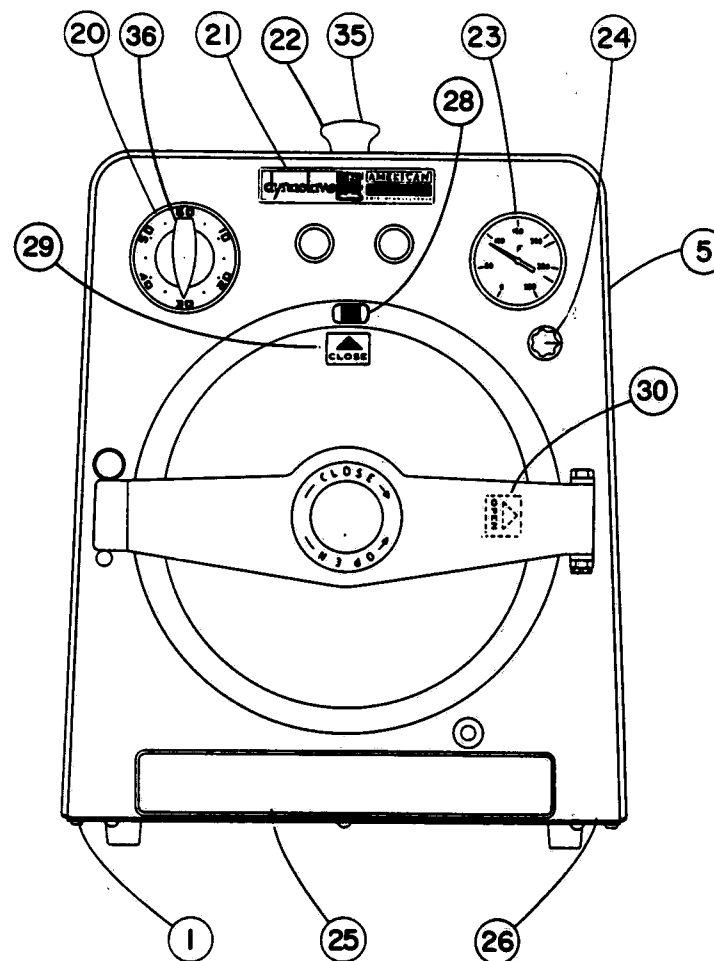
LEFT SIDE VIEW

FOR ADDITIONAL DETAILS SEE SM-381

FOR UNITS SHIPPED BEFORE 1/75
WITH NEW STYLE LOW WATER CUTOUT

NOVEMBER, 1961

(REV. 1/66)

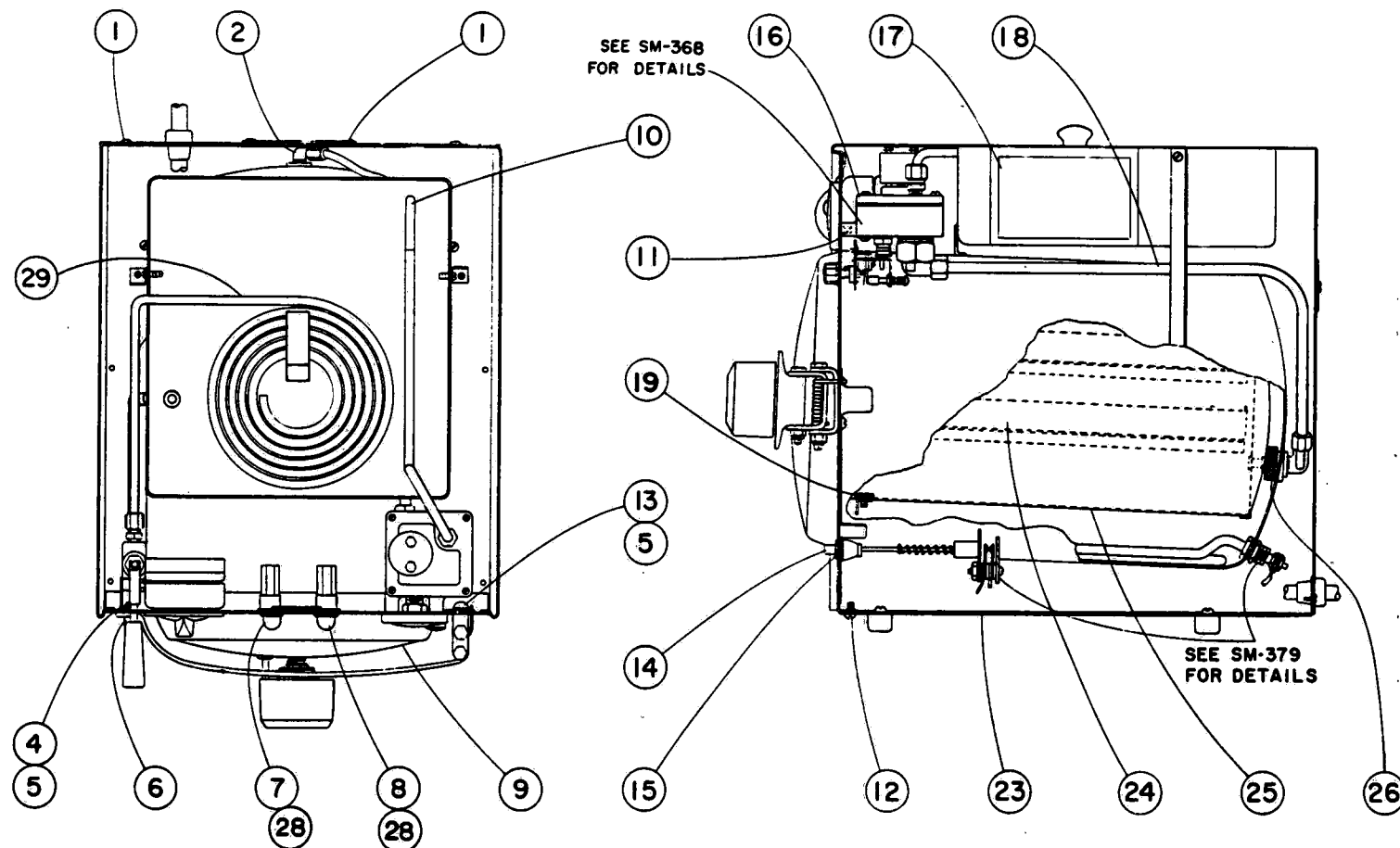


FRONT VIEW

31	SCREW, RD. HD.	13334-091	2
32	NUT, HEX	13794-041	2
33	SCREW, RD. HD.	4672-041	2
34	WASHER	10863-091	5
35	KNOB ONLY	14918-091	1
36	KNOB, Timer	44654-091	1

BILL OF MATERIAL			
NO	NAME	PART NO	QTY
1	SCREW, #6 SELF TAP	35544-045	8
2	TUBE, COND. 1/4" O.D.T.	32564-042	1
3	WATER PAN	461637-001	1
4	CONN. 1/4" O.D.T. 1/8" IPS.	19514-091	1
5	JACKET, FINISHING	33118-091	1
6	CORD, 3W. 115V. A.C.	56398-004	1
	CORD, 2W. 230V. A.C.	461641-001	1
	CORD, 3W. 230V. A.C.	461641-001	1
7	BUSH, 2W. 115V. A.C. (30622)	NLA	1
	BUSH, 3W. 115V. A.C.	30627-091	1
	BUSH, 3/8" 230V. A.C.	30636-091	1
8	ELBOW, 1/2" O.D.T. 1/4" IPS.	7033-091	3
9	TUBE, FILL. 1/2" O.D.T.	32699-091	1
10	TUBE, RES'R. 1/2" O.D.T.	32687-091	1
11	CONN. 1/2" O.D.T. 1/4" IPS.	22711-042	2
12	BUMPER, RUBBER	33168-091	4
13	NUT, HEX. #8-32	8645-061	10
14	SHELL	33110-061	1
15	STUD, HANDLE	33183-051	1
16	HANDLE, VALVE	33136-091	1
17	SCREW, #10-32 X 1/4" LG.	12538-061	4
18	VALVE, OPERATING	33245-091	1
19	SCREW, #8-32 X 1/2" LG.	3986-041	5
20	TIMER	33115-091	1
21	PLATE, NAME	43540-091	1
22	COVER ASSEMBLY	33428-091	1
23	THERMOMETER	13638-091	1
24	KNOB, CONTROL	33113-091	1
25	OPR. INST. METAL CAL. (33111)	NLA	1
26	PANEL, FRONT	NLA	1
27	PLATE, INST.	NLA	1
28	PLATE, DOOR AREA	35662-091	1
29	"CLOSE" INDICATOR, ALIGNMENT	35663-091	1
30	"OPEN" INDICATOR, ALIGNMENT	35717-091	1

SM-380



TOP VIEW

FOR ADDITIONAL DETAILS SEE SM-380

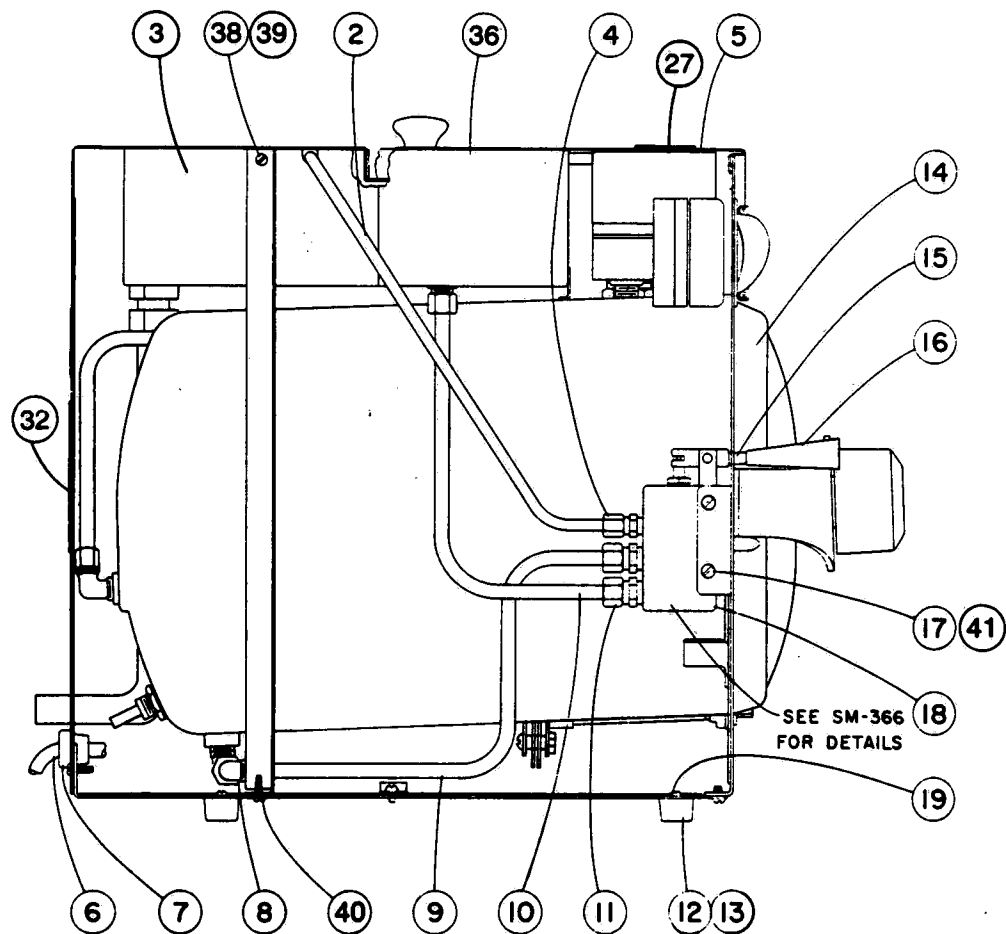
RIGHT SIDE VIEW

BILL OF MATERIAL			
NO	NAME	PART NO	QTY
1	SCREW, #6 SELF TAP	35544-045	8
2	ELBOW, $\frac{5}{16}$ " O.D.T. $\frac{1}{4}$ " IPS	7033-091	3
4	NUT, HEX. #10-32	8647-061	1
5	WASHER #10	10863-091	5
6	PIN, HINGE REST	33112-062	1
7	LIGHT, IND. RED 115V. AC	24568-091	1
	LIGHT, IND. RED 230V. AC	29517-091	1
8	LIGHT, IND. WHT. 115V. AC	24571-091	1
	LIGHT, IND. WHT. 230V. AC	33696-091	1
9	DOOR ASSEM.	33129-091	1
10	TUBE, VENT $\frac{1}{2}$ " O.D.T.	32566-042	1
11	SCREW, FL. HD. #8-32 x $\frac{3}{4}$ "	4617-041	2
12	SCREW, RD. HD. #8-32 x $\frac{3}{4}$ "	12534-061	3
13	SCREW, RD. HD. #10-32 x $\frac{3}{4}$ "	12538-061	2
14	BUTTON, RESET	33145-031	1
15	BUSHING, RESET	33140-051	1
16	CONTROL HOUSING	33164-091	1
17	WIRING DIAGRAM	33282-NLA	1
18	TUBE	32711-091	1
19	SCREW-THUMB #8-32	38637-042	2
23	BASE	33119-045	1
24	TRAY	33117-044	2
25	LINER ASSEM.	53977-091	1
26	CAP - VENT	47540-091	1
27	WIRING HARNESS NOT SHOWN	53004-091	1
28	LAMP, PILOT NOT SHOWN	764317-708	8x. of 10
29	TUBE, CONDENSER	32563-042	1

FOR UNITS SHIPPED BEFORE 1/75
WITH NEW STYLE LOW WATER CUTOUT

NOVEMBER, 1971 (REV. 1/68)

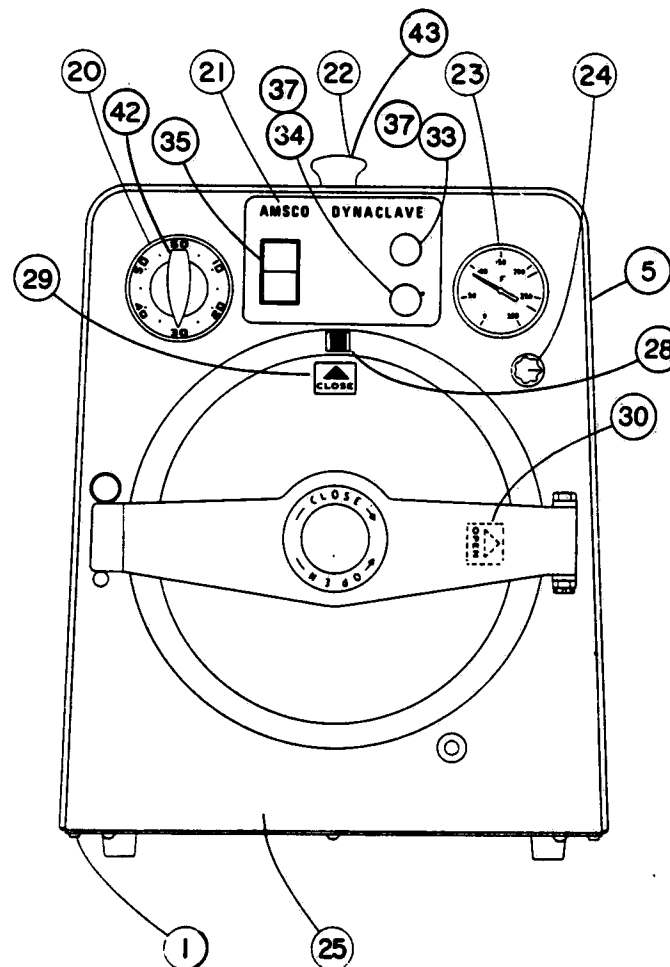
SM-381



LEFT SIDE VIEW

FOR ADDITIONAL DETAILS SEE SM-381A

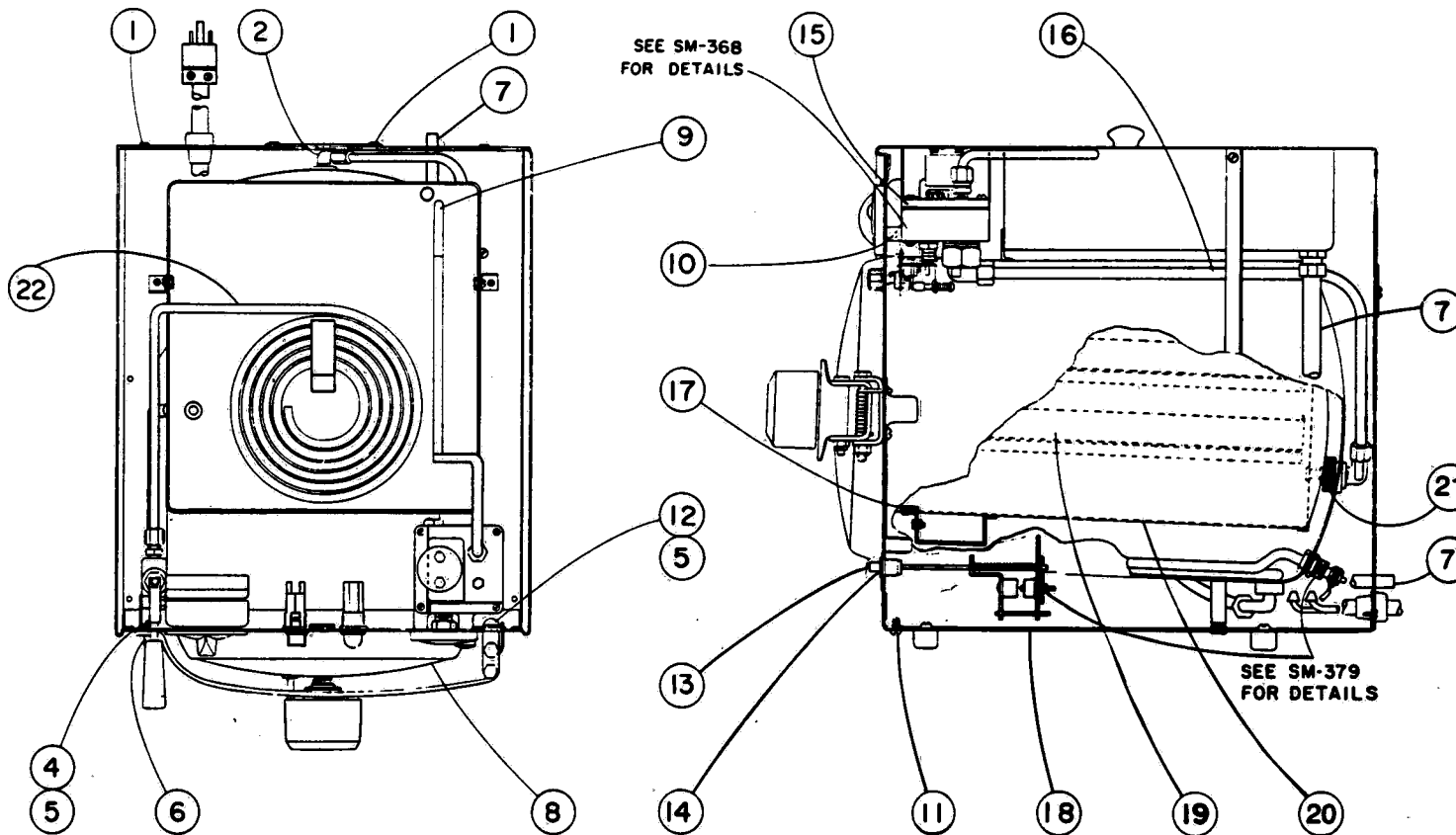
FOR UNITS SHIPPED AFTER 1/75



FRONT VIEW

BILL OF MATERIAL			
NO.	NAME	PART NO	RQD
1	Screw, #6 Self Tap.	35544-045	8
2	Tube, Cond. 1/4" O.D.T.	32563-001	1
3	Water Pan Assy.	461637-001	1
4	Conn. 1/4" O.D.T. 1/8" I.P.S.	19514-001	1
5	Jacket, Finishing	33118-001	1
6	Cord, Assy., 15A, 120V	56399-004	1
	Cord, Assy., 15A, 250V	461641-001	1
7	Bushing, Strain Relief	30627-001	1
8	Elbow, 5/16" O.D.T. 1/4" I.P.S.	7033-001	3
9	Tube, Fil. 5/16" O.D.T.	32699-001	1
10	Tube, Res'r. 5/16" O.D.T.	32697-001	1
11	Conn. 5/16" O.D.T. 1/4" I.P.S.	22711-042	2
12	Bumper, Rubber	33168-001	4
13	Nut, Hex. #8-32	8645-001	10
14	Shell	33110-001	1
15	Stud, Handle	33163-001	1
16	Handle, Valve	33136-001	1
17	Screw, #10-32 x 1/4" Lg.	12538-001	4
18	Valve, Operating	33245-001	1
19	Screw, #8-32 x 1/2" Lg.	3986-041	5
20	Timer	33115-001	1
21	Control Plate	461644-001	1
22	Cover	33428-001	1
23	Thermometer	13638-001	1
24	Knob, Control	33113-001	1
25	Panel, Front	461643-001	1
27	Decal, Operating Instruction	461645-001	1
28	Plate, Door Area	35602-001	1
29	"Close" Indicator, Alignment	35663-001	1
30	"Open" Indicator, Alignment	35717-001	1
32	Decal, Caution	150389-001	1
33	Light Indicator, White (120V)	41084-001	1
	Light Indicator, White (230V)	33698-001	1
	Light Indicator, Red (120V)	41083-001	1
	Light Indicator, Red (230V)	455050-001	1
34	Switch	89078-001	1
36	Decal, Wiring Diagram	461639-001	1
37	Lamp, Pilot (Not Shown)	764317-708	8 of 10
38	Screw, Rd. Hd.	13334-001	2
39	Nut, Hex	13784-041	2
40	Screw, Rd. Hd.	4672-041	2
41	Washer	10863-001	5
42	KNOB, Timer	44654-001	1
43	KNOB ONLY	14918-001	1

SM-380A



TOP VIEW

FOR ADDITIONAL DETAILS SEE SM-380-A

RIGHT SIDE VIEW

FOR UNITS SHIPPED AFTER 1/75

BILL OF MATERIAL			
NO.	NAME	PART NO.	QTD.
1	Screw, #6 Self Tap.	35544-045	8
2	Elbow, 5/16" O.D.T. 1/4" I.P.S.	7033-091	3
4	Nut, Hex. #10-32	8647-061	1
5	Washer #10	10863-091	5
6	Pin, Hinge Rest	33112-062	1
7	Tube, Overflow	454198-001	1
8	Door Assem.	33129-091	1
9	Tube, Vent 1/4" O.D.T.	461638-001	1
10	Screw, Fl. Hd. #8-32 x 3/8"	4617-041	2
11	Screw, RD. HD. #8-32 x 1/4"	12534-061	3
12	Screw, RD. HD. #10-32 x 1/4"	12538-061	2
13	Button, Reset	33145-031	1
14	Bushing, Reset	33140-051	1
15	Control Housing	33164-091	1
16	Tube	32711-091	1
17	Screw-Thumb #8-32	38637-042	2
18	Base	33119-045	1
19	Tray	33117-044	2
20	Liner Assem.	53977-091	1
21	Cap — Vent	47540-091	1
	Wiring Harness (Not Shown)	462326-001	1
22	Tube, Condenser	32563-042	1



**AMSCO
SERVICE**

**OFFICE AUTOCLAVE
613R - DYNACLAVE
P-751194-002**

MODEL 576A

1/88

1 of 1

