LAWLER
MANUFACTURING CO., INC.

INSTALLATION & MAINTENANCE MANUAL

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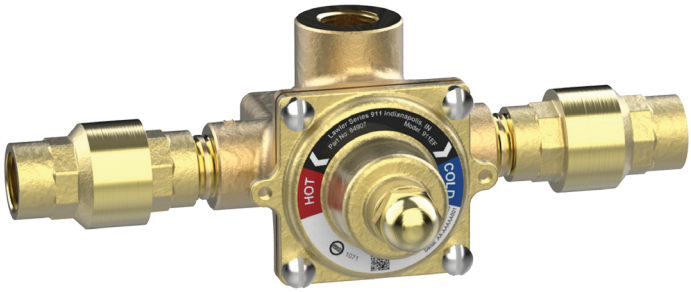
NOTICE! No mixing valve will work satisfactorily if improperly installed. We suggest, therefore, that you read these instructions carefully before installing and follow directions as outlined. Handle the mixing valve with care.



Model 911®E/F Thermostatic Mixing Valve Emergency Eye/Fashwash

CAPACITIES – MODEL 911E/F

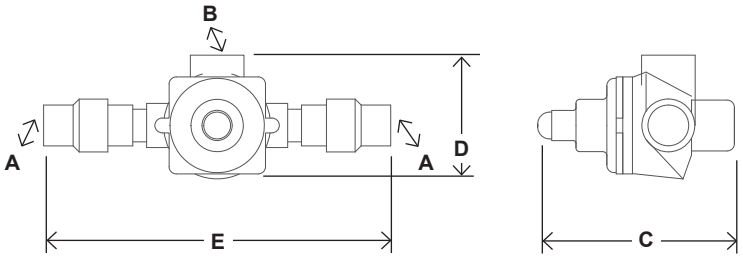
Pressure Drop PSI	5	10	20	30	45
Tempered Flow GPM	2	3	5	7	10
Tempered Flow LPM	7.5	11	18	26	38

BYPASS CAPACITIES – MODEL 911E/F

Pressure Drop PSI	5	10	20	30	45
Cold Bypass GPM	1	2	4	5	7
Cold Bypass LPM	4	7.5	15	18	26

Gallon per minute ratings may vary depending upon incoming water temperatures and pressures. Hot and cold water inlet pressures must be equal.

Valve must be installed with check valves. If shut off valves are installed in the shower line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.



CAUTION: When maintaining and adjusting the mixing valve, the delivered flushing fluid temperature shall be 60°F (15°C) to 95°F (35°C). In circumstances where chemical reaction is accelerated by flushing fluid temperature, a medical advisor should be consulted for the optimum temperature for each application.

CAUTION: When maintaining and adjusting the mixing valve, all fixtures should be isolated from use. Lawler Manufacturing Co., Inc. recommends that you work safely at all times and in a manner consistent with the OSHA Lock/Tagout standard, 29 CFR 1910.147 and other applicable standards.

This installation & maintenance manual covers all configurations of the Model 911E/F.

DIMENSIONS

Valve Number	A N.P.T.	B N.P.T.	C	D	E
911	1/2”	1/2”	5”	4”	9”

Dimensions are for reference purposes only. For rough-in dimensions please refer to Lawler’s Revit/BIM models found at temperedwater.com.

Maximum Inlet Pressure: 125 PSI

Recommended Supply Pressure: 65 PSI

Recommended Inlet Temperature: 120°F

When supplying 140°F or greater, additional outlet controls should be used.

Set Point: 85°F

ASSE 1071 Approved
ASSE Lead Free Certified

Design and specifications subject to change without notice. Please refer to **temperedwater.com** to ensure most current data sheet and other design solutions.

temperedwater.com/patents
ENG. NO. 84907-A

Operating Principle

This Series 911 Emergency Eye Wash/Face Wash mixing valve is made of a thermostat element with a stainless steel sliding piston and liner housed in a bronze casting. The thermostatic cartridge responds to temperature changes in the hot and cold water supplies. In the event the thermostatic element fails or the hot water supply fails, the valve will provide full cold water bypass flow.

Installation

After installing the mixing valve, be sure to flush the system thoroughly. Lawler recommends isolation and check valves for proper maintenance.

Testing the Mixing Valve

The mixing valve and the emergency fixtures it serves should be tested weekly for proper operation.

Valve temperature test procedure is as follows:

1. Activate eye wash fixture to observe and record the temperature of the dial thermometer (T1). If the temperature of the thermometer is not correct, readjust the mixing valve according to the section “Setting the Mixing Valve”
2. Observe the flow from the emergency fixtures to ensure an adequate flow of water.

In addition to testing for proper temperature, the cold water by-pass and hot water shut down features of the mixing valve should be tested weekly.

The test procedure is as follows:

1. Test valve temperature as described in Step 1 and Step 2 above.
2. Shut off the hot water supply to the mixing valve. Observe the outlet flow from the emergency fixtures to ensure an adequate flow of cold water. A slight drop in flow may occur after shutting down the hot water supply to the mixing valve; however, the drop should be minimal and for a short duration.
3. Open the hot water supply to the mixing valve. The thermometer should return to the set temperature.
4. Shut off the cold water supply to the mixing valve. The flow of water should shut down rapidly.
5. Open the cold water supply. The thermometer should return to the set temperature.

The thermometer (T1) should be checked at least every six months.

Setting the Mixing Valve

Prior to adjusting the temperature on the emergency mixing valve be aware that prior to shipping this valve was tested and set at the factory. Please make sure that isolation valves and check valves are installed and that incoming hot and cold pressures are equal before any adjustment is made. If these parameters are not present, DO NOT proceed to “Setting the Mixing Valve” until these parameters are met. IT IS ADVISED TO CALL THE FACTORY PRIOR TO DOING ANY TEMPERATURE ADJUSTMENTS ON ANY LAWLER EMERGENCY THERMOSTATIC MIXING VALVE.

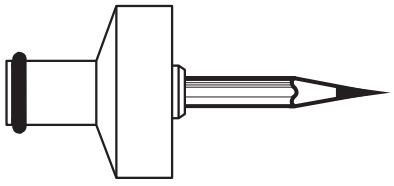
This mixing valve has been set at the factory to deliver 85°F outlet flow. Should the valve require adjustment, or an application require a different set temperature, proceed as follows:

1. Contact the proper medical and safety authorities to determine correct water temperature for the specific application.
2. Use a spanner wrench to remove the tamper-resistant cap screw.
3. Create a draw on the mixing valve by opening a downstream eye wash fixture.
4. Insert a 5/32” allen key into the cap opening of the valve (V1) and seat in the adjustment screw (not shown). Set the outlet temperature by turning the adjustment screw clockwise to reduce temperature, counterclockwise to increase temperature. Use thermometer (T1) to measure the outlet temperature.
5. Replace cap screw.

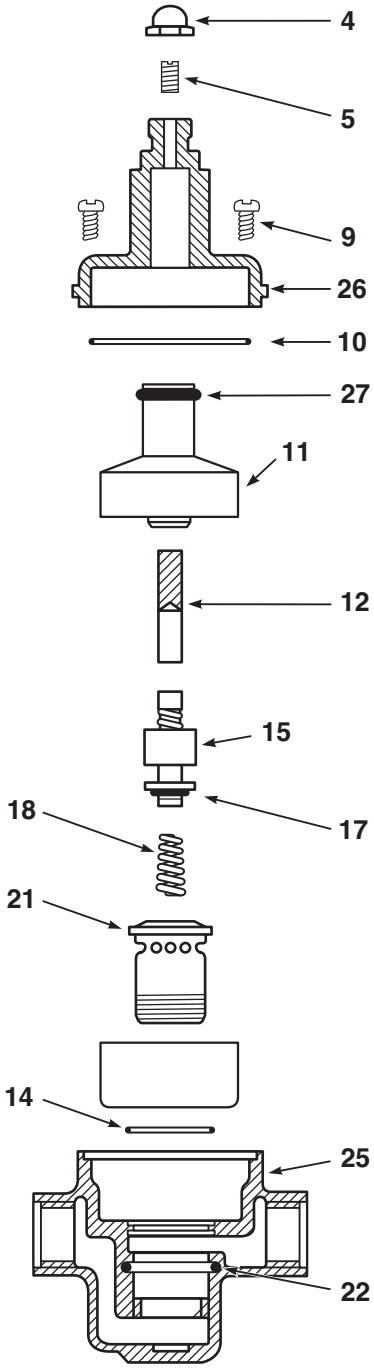
Replacing a Thermostat Cartridge

The thermostat replacement procedure is as follows:

1. Shut off the hot water supply and cold water supply to the mixing valve.
2. Remove the four cover screws (#9) and remove the front cover (#26) of the valve.
3. Remove thermostat (#11) from the valve body. No special tools are necessary.
4. Insert a dowel rod, pencil (eraser-end), or narrow pen into the open end of the thermostat. Push on the dowel rod with your hand. If the thermostat feels spongy or springy, the thermostat has lost its charge. If the thermostat feels solid or hard, the thermostat is good and operable.
5. Be sure that the stainless steel piston (#15) moves freely up and down within the liner (#21). Lime or calcium buildup should be cleaned with vinegar, green scotch pad, or fine emery cloth.



Parts Break Down



Repair Kits and Assemblies

Item	Description	Contains	Part No.
A	Repair Kit	11-12-15-18-21+B	79854-00
B	O-Ring & Gasket Kit	10-14-17-22-27	79961-00
C	Cover Assy.	4-5-10-26	78271-00
D	Piston & Liner Assembly	14-15-21-18-17	72904-60
E	Thermostat Assy.	10-11-27	78490-00

Typical Installation Figure 1

When installed at or near the water heater and without a recirculation system:

Install the valve as shown in Figure 1 with the mixing valve positioned below the hot water tank or heater. If this is not possible, pipe in a heat trap as shown.

Typical Installation Figure 2

When installed away from the water heater with a recirculating pump on the hot water supply line:

Install the mixing valve as shown in Figure 2. The non-circulated loop should be limited to 10 feet and must be flushed periodically.

Notes: If the valve is installed 20 feet or more from the water heater, it is important to recirculate the hot water supply to the mixing valve.

The mixing valve must be installed with inlet check valves and the shower or the Eyewash/Facewash fixture should be installed 4 to 10 feet from the mixing valve. Hot and cold water inlet pressures must be equal.

Provisions shall be made to thermally isolate the valve.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

(Installer: California law requires that this warning be given to the consumer.)

For more information: www.oehha.org/prop65

CAUTION: The cold water line must be installed so that it is not affected by excessively hot ambient temperatures. Provisions shall be made to thermally isolate the valve. Cold water pipe installed in the ceilings of boiler rooms or rooms that increase ambient temperature require a recirculating pump.

Figure 1

Valve must be installed with check valves

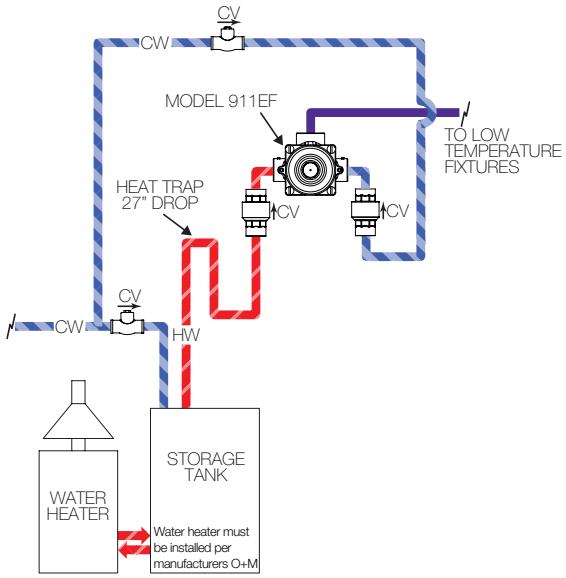
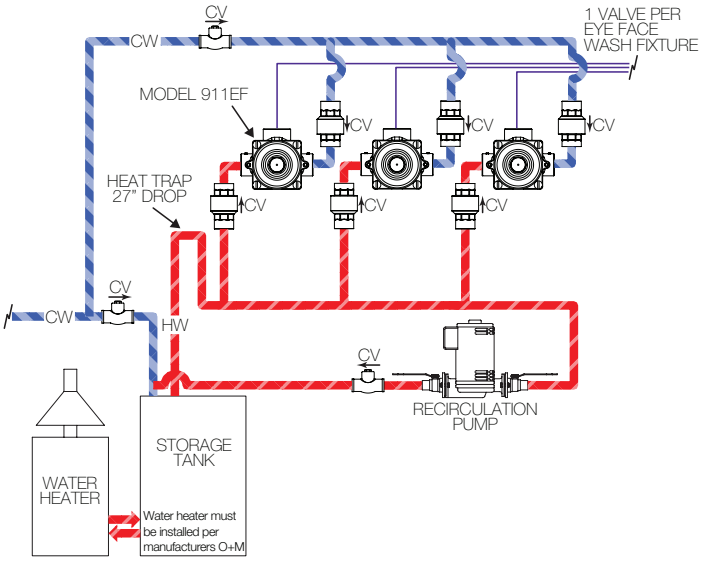


Figure 2

Valve must be installed with check valves



GUARANTEE

We guarantee the Lawler Mixing Valve to be free from defects in workmanship and material, and for a period of one year from date of purchase, will replace any parts found by us to be defective. We will not be held responsible, however, for any labor incidental to, or for any damages caused by defective material. Each mixing valve is thoroughly inspected and tested under actual conditions at our factory.

Series 911E/F Test Record
Location _____

Date	T1		Date	T1		Date	T1
Jan			July			Jan	
Feb			Aug			Feb	
March			Sept			March	
April			Oct			April	
May			Nov			May	
June			Dec			June	
July			Jan			July	
Aug			Feb			Aug	
Sept			March			Sept	
Oct			April			Oct	
Nov			May			Nov	
Dec			June			Dec	
Jan			July			Jan	
Feb			Aug			Feb	
March			Sept			March	
April			Oct			April	
May			Nov			May	
June			Dec			June	
July			Jan			July	
Aug			Feb			Aug	
Sept			March			Sept	
Oct			April			Oct	
Nov			May			Nov	
Dec			June			Dec	
Jan			July			Jan	
Feb			Aug			Feb	
March			Sept			March	
April			Oct			April	
May			Nov			May	
June			Dec			June	

YEAR YEAR YEAR YEAR YEAR YEAR YEAR YEAR

Before you use this chart please make a copy for future testing records.

CAUTION: When maintaining and adjusting the mixing valve. The delivered flushing fluid temperature shall be 60°F (15°C) to 95°F (35°C). In circumstances where chemical reaction is accelerated by flushing fluid temperature, a medical advisor should be consulted for the optimum temperature for each application.