Fleck 5800 LXT & SXT Dn/Up

Service Manual

to configure the system to suit the application. The 5800 LXT timer will use the settings to calculate cycle times.

ppm or gpg

Capacity Per Unit:

Height:

Salt Setting per Regeneration:

Regenerant Flow: Upfow Downfow

System Type:

System #4: 1 Tank, 1 Meter, Immediate, or Delayed Regeneration

Rapid Rinse:

Brine Tank Refll:

g p m

g p m

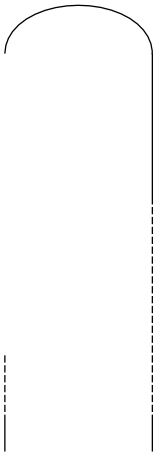
CAUTION If grid plate is used, cut
with grid plate. This is cr
tanks. The brine refll wate
grid plate and make contact

On units with a by-pass, place in by-pass position. Turn on the main water supply. Open a cold soft water tap nearby and let run a few minutes or until the plumbing is free from foreign material (usually solder) that may have resulted from the installation. Once clean, close the water tap.

Slowly place the by-pass in service position and let water fow into the mineral tank. When water fow stops, slowly open a cold water tap nearby and let water run until the air is purged from the unit.

Plug the transformer into an electrical outlet.

NOTE: All electrical connections
according to local codes. Be
uninterrupted.



recommendations, and to meet applicable plumbing codes.

1.

A Meter Delayed Control measures water usage. The system regenerates at the programmed regeneration time after the calculated system capacity is depleted. The control calculates the system capacity by dividing the unit capacity by the feedwater hardness and subtracting the reserve. The reserve

between the time the system capacity is depleted and the actual regeneration time. A Meter Delayed control will also start a regeneration cycle at the programmed regeneration time if a number of days equal to the regeneration day override pass before water usage depletes the calculated system capacity.

Control Operation During Regeneration

During regeneration, the control displays a special regeneration display. In this display, the control shows the current regeneration step number the valve is advancing to, or has reached, and the time remaining in that step. The step number that displays flashes until the valve completes driving to this regeneration step position. Once all regeneration steps are complete the valve returns to service and resumes normal operation.

The meter and time clock controls will use and display cycles:

- Rapid Rinse
- Brine Tank Refill

The filter controls will use and display cycles:

START-UP INSTRUCTIONS SXT

recommendations, and to meet applicable plumbing codes.

Program the valve control according to instructions shown

Start an immediate regeneration by holding the Extra Cycle

Ensure the drain line fow remains steady for 10 minutes or

Position the valve to the brine / slow rinse position. Ensure the unit is drawing water from the brine tank)



continued

Demand - US Units	
	Description
	Displays the days since last regeneration, 0-30.
	Displays the current fow rate, gallons per minute.
	Displays the current day of week, 1-7.
	Displays the total volume of water treated by the unit for the current day in gallons.
	Displays the total volume of water used since the last regeneration in gallons.
	Displays the software version. Version number of software. D = Downfow U = Upfow
	Displays the average water usage for day 1, in gallons.
	Displays the average water usage for day 2, in gallons.
	Displays the average water usage for day 3, in gallons.
	Displays the average water usage for day 4, in gallons.
	Displays the average water usage for day 5, in gallons.
	Displays the average water usage for day 6, in gallons.
	Displays the average water usage for day 7, in gallons.

Demand - Metric Units	
	Description
	Displays the days since last regeneration, 0-30.
	Displays the current fow rate, liters per minute.
	Displays the current day of week.
	Displays the total volume of water treated by the unit
	Displays the total volume of water used since the last regeneration, in cubic meters.
	Displays the software version. Version number of software. D = Downfow U = Upfow
	Displays the average water usage for day 1,
	Displays the average water usage for day 2,
	Displays the average water usage for day 3,
	Displays the average water usage for day 4,
	Displays the average water usage for day 5,
	Displays the average water usage for day 6,
	Displays the average water usage for day 7,

	Description
	Displays the days since last regeneration, 1-7.
	Displays the software version. Version number of software. D = Downfow U= Upfow

NOTE: The Engilsh timer will be in
timer will be in liters for all

Diagnostic Programming Mode Steps



CAUTION Before entering Master Programming, please contact your local professional water dealer.

Master Programming Options			
Abbreviation		Option Abbriviation	Options
	Display Format		
	Valve Type		
	Regenerant Flow		Standard Downfow Single Backwash
			Standard Downfow Double Backwash
			Air Injection Oxidizer
			Downfow Fill First
			Upfow Brine First
			Upfow Fill First
	Control Type		
	Unit Capacity		Unit Capacity (Grains)
			Percentage Safety Factor
			Fixed Reserve Capacity
			Percentage of the system capacity to be used as a reserve
	Fixed Reserve Capacity		
			The system's day override setting
	Regen Time		The time of day the system will regenerate
	Regen Cycle Step Times		The time duration for each regeneration step. Adjustable from OFF and NOTE: If "Othr" is chosen under " . . . , C20 will be displayed alo steps RR, BD, SR, BW, RF, SP.
D5, D6, & D7	Day of Week Settings		Regeneration setting (On or Off) for each day of the week on day-of-
	Flow Meter Type		
	Meter Pulse Setting		

When the Master Programming Mode is entered, all available

continued

Control Type (Display Code CT)

Press the Extra Cycle button. Use this display to set the Control Type. This specifes how the control determines when to trigger a regeneration. For details on how the various options function, refer to the "Timer Operation SXT" section of this service manual. This option setting is identifed by "CT" in the upper left hand corner of the screen. There are four possible settings.

Abbreviation	

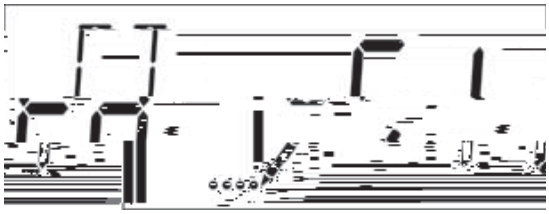


Figure 16

Unit Capacity (Display Code C)

Press the Extra Cycle button. Use this display to set the Unit Capacity. This setting specifes the treatment capacity of the system media. Enter the capacity of the media bed in grains of hardness when confguring a softener system, or desired volume capacity when confguring a flter system. This option setting is identifed by "C" in the upper left hand corner of the screen (or by "V' if volume capacity for a flter). The Unit Capacity parameter is only available if the control type has been set to one of the metered options. Use the Up and Down buttons to adjust the value as needed.



Figure 17

Range: 1-9,999,000 grains/gallon (1-9,999,000 mg)

Feedwater Hardness (Display Code H)

Press the Extra Cycle button. Use this display to set the Feedwater Hardness. Enter the feedwater hardness in grains per unit volume for softener systems, or 1 for flter systems. This option setting is identifed by "H" in the upper left hand corner of the screen. The feedwater hardness parameter is only available if the control type has been set to one of the metered options. Use the Up and Down buttons to adjust the



Figure 18

Range: 1-199 grains (mg/l)

7. Reserve Selection (Display Code RS)

Press the Extra Cycle button. Use this display to set the Safety Factor and to select the type of reserve to be used in your system. This setting is identifed by "RS" in the upper left-hand corner of the screen. The reserve selection parameter is only available if the control type has been set to one of the metered options. There are two possible settings.

Abbreviation	
	Fixed Reserve Capacity



Figure 19

Safety Factor (Display Code SF)

Press the Extra Cycle button. Use this display to set the Safety Factor. This setting specifes what percentage of the system capacity will be held as a reserve. Since this value is expressed as a percentage, any change to the unit capacity or feedwater hardness that changes the calculated system capacity will result in a corresponding change to the reserve volume. This option setting is identifed by "SF" in the upper left

adjust the value from 0 to 50% as needed.

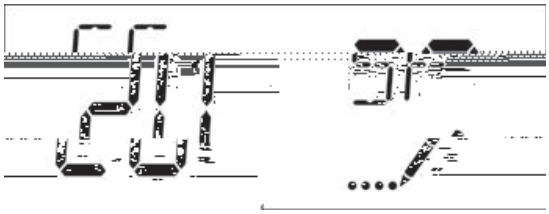


Figure 20

Range: 0-50%

9. Fixed Reserve Capacity (Display Code RC)

Press the Extra Cycle button. Use this display to set the Reserve Capacity. This setting specifes a fxed volume that will be held as a reserve. The reserve capacity cannot be set to a value greater than one-half of the calculated system capacity. The reserve capacity is a fxed volume and does not change if the unit capacity or feedwater hardness are changed. This option setting is identifed by "RC" in the upper left-hand corner of the screen. Use the Up and Down buttons to adjust the



Figure 21

Range: 0-half of the calculated

continued

Day Override (Display Code DO)

Press the Extra Cycle button. Use this display to set the Day Override. This setting specifes the maximum number of days between regeneration cycles. If the system is set to a timer-type control, the day override setting determines how often the system will regenerate. A metered system will regenerate regardless of usage if the days since last regeneration cycle equal the day override setting. Setting the day override value to "OFF" disables this function. This option setting is identifed by "DO" in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.

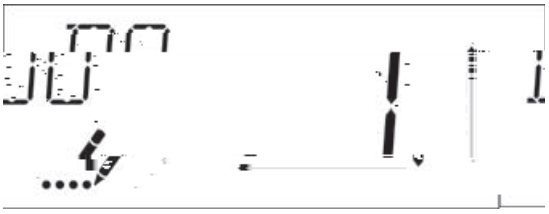


Figure 22

Range: Off-99 days

Press the Extra Cycle button. Use this display to set the Regeneration Time. This setting specifes the time of day the control will initiate a delayed, manually queued, or day override regeneration. This option setting is identifed by "RT" in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.



Figure 23

Regeneration Cycle Step Times

Press the Extra Cycle button. Use this display to set the Regeneration Cycle Step Times. The different regeneration cycles are listed in sequence based on the valve type selected for the system, and are identifed by an abbreviationn in the upper left-hand corner of the screen. The abbreviations used

Abbreviation	Cycle Step
	Rapid Rinse

If the system has been confgured with the "Other" valve type, the regeneration cycles will be identifed as C1, C2, ..., C20. Cycle steps can be programmed in any order using the Up or Down buttons with the following selections. Up to 20 individual

minutes. Setting a cycle step time to 0 will cause the control to skip that step during regeneration, but keeps the following steps available. Use the Up and Down buttons to adjust the value as needed. Press the Extra Cycle button to accept the current setting and move to the next parameter. Program the last cycle step as LC which forces the valve back to the service position.

Abbreviation	Cycle Step
	Rapid Rinse
	Refll

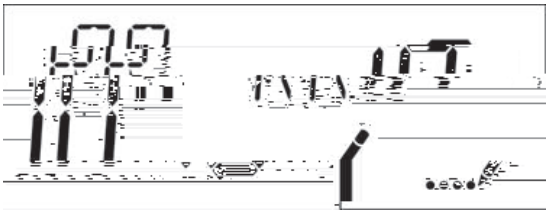


Figure 24

Range: 0-199 minutes

Press the Extra Cycle button. Use this display to set the regeneration schedule for a system confgured as Day of Week control. The different days of the week are identifed as D1, D2, D3, D4, D5, D6, and D7 in the upper left-hand corner of the display. Set the value to "ON" to schedule a regeneration or "OFF" to skip regeneration for each day. Use the Up and Down buttons to adjust the setting as needed. Press the Extra Cycle button to accept the setting and move to the next day. Note that the control requires at least one day to be set to "ON" If all

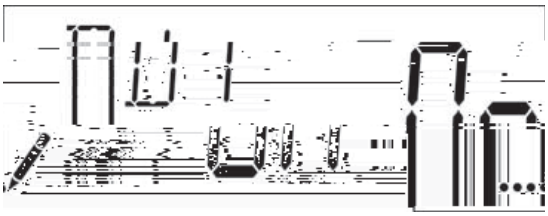


Figure 25

continued

Current Day (Display Code CD)

Press the Extra Cycle button. Use this display to set the current day on systems that have been confgured as Day of Week controls. This setting is identifed by "CD" in the upper left-hand corner of the screen. Use the Up and Down buttons to select from Day 1 through Day 7.

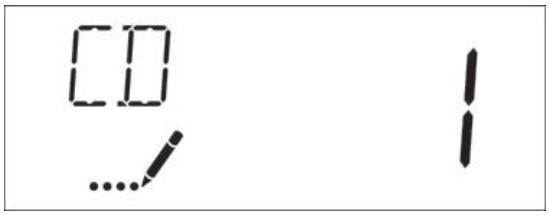


Figure 26

Flow Meter Type (Display Code FM)

Press the Extra Cycle button. Use this display to set the type of fow meter connected to the control. This option setting is identifed by "FM" in the upper left-hand corner of the screen. Use the Up and Down buttons to select one of the 8 available settings.

Abbreviation	Description

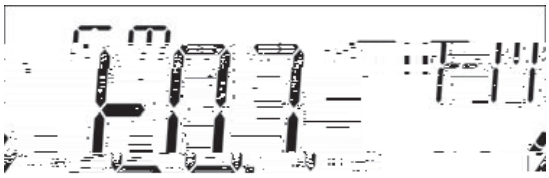


Figure 27

Meter Pulse Setting (Display Code K)

Press the Extra Cycle button. Use this display to specify the meter pulse setting for a non-standard fow meter. This option setting is identifed by "K" in the upper left-hand corner of the screen. Use the Up and Down buttons to enter the meter constant in pulses per unit volume.



Figure 28

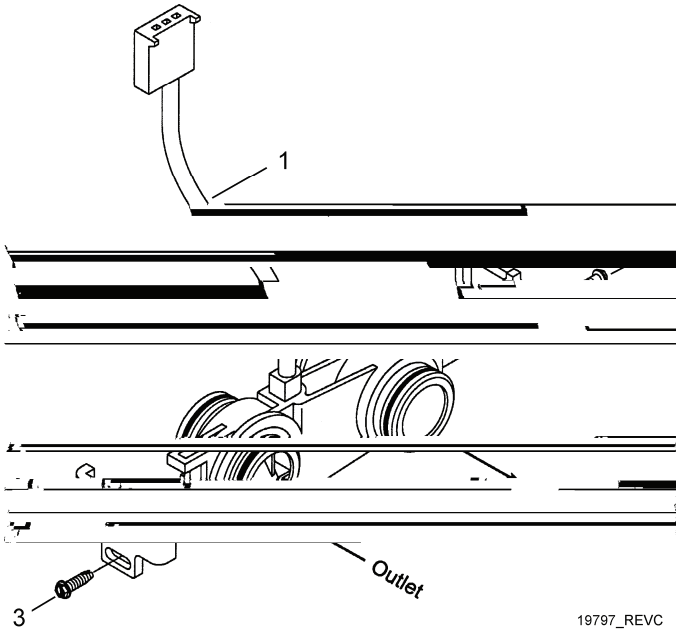
Item No.	QTY.	Part No.	Description
			Panel Gear Assembly, Downfow/ Upfow

*Call your distributor for part number.

DOWNFLOW/UPFLOW

Item No.	QTY.	Part No.	Description
			Valve Body Assy, Mixing, Downfow/Upfow (Includes Items
			Screen Injector, 5000
			Seal Injector
			Cap Injector
			Injector Cap Assy, 1610 Regulated, 5000, 20 psi, Black, Upfow
			Injector Cap Assy, 1610 Regulated, 5000, 30 psi, Black, Upfow
			Label, 0.5 gpm 1.5 lbs Salt/Min
			Label, Injector, Blank
			O-ring, -121
			O-ring, -336, 560CD
			Retainer, Distributor Tube O-ring
			Retaining Cup
			Flow Straightener
			Downfow, 5800
			Piston and Seal Kit Assy, Upfow,
			BLFC, 0.25 gpm, 5000/5600/9000
			BLFC, 0.50 gpm, 5000/5600/9000
			BLFC, 1.0 gpm, 5000/5600/9000
			DLFC, Plastic, 0.60 gpm

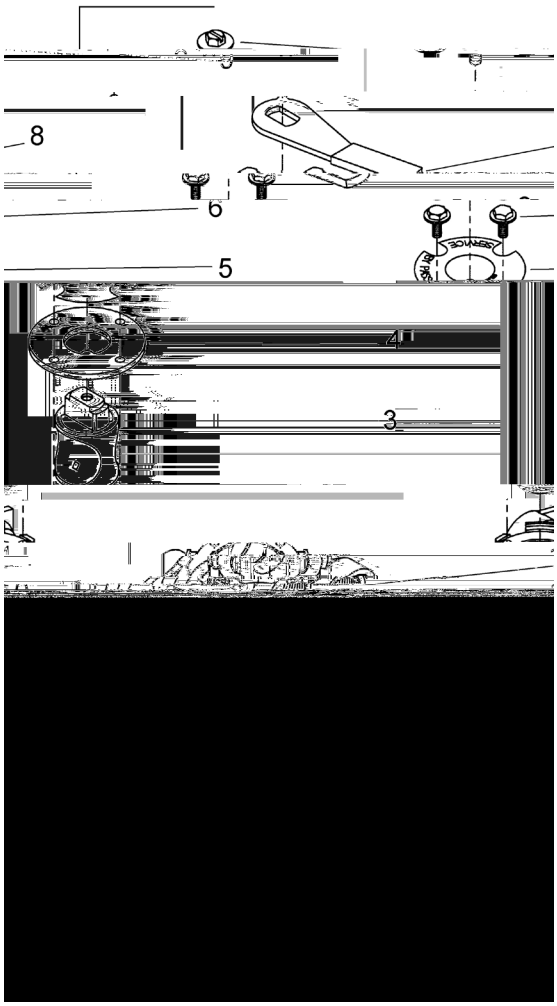
3/4" PLASTIC TURBINE BYPASS VALVE ASSEMBLY



Item No.	QTY.	Part No.	Description
			Meter Cable Assy, Turbine/SXT
			Clip, Flow Meter

Item No.	QTY.	Part No.	Description
			O-ring, -119
			Clip, Mounting
			Yoke, Angle 90 Deg, 3/4", NPT
			Yoke, Angle 90 Deg, 3/4", Sweat
			Yoke, Assy, 3/4", R/Angle 90 Deg, w/O-rings, Clips & Screws

BYPASS VALVE ASSEMBLY (PLASTIC)



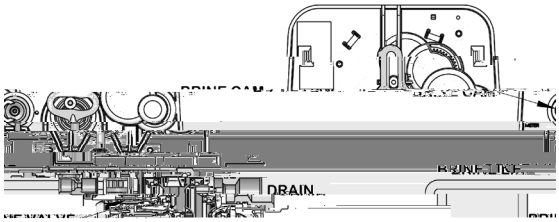
Item No.	QTY.	Part No.	Description
			Bypass Body, 3/4"
			Bypass Body, 1", SS
			Seal, Bypass, 560CD
			Plug, Bypass
			Lever, Bypass
			Bypass Valve, 5600, 3/4" NPT Black Grip Lever, SS
			Bypass Valve, 5600, 1" NPT Black Grip Lever, Stainless Steel

Not Shown:

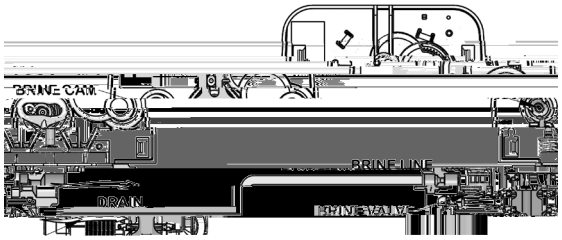
			Adapter Assy, Coupling, w/O-rings

Downflow

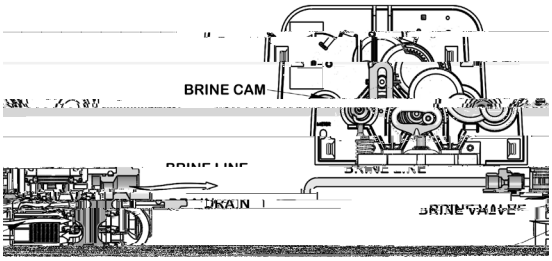
1. Service Position



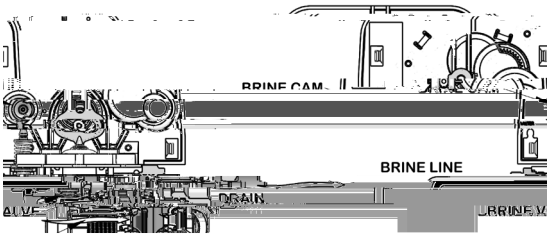
2. Backwash Position



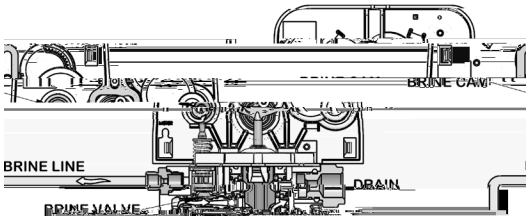
3. Brine/Slow Rinse Position



4. Rapid Rinse Position



5. Brine Tank Refll Position

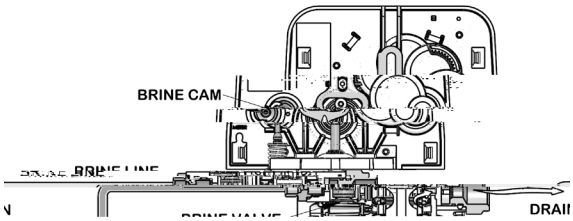


Upflow

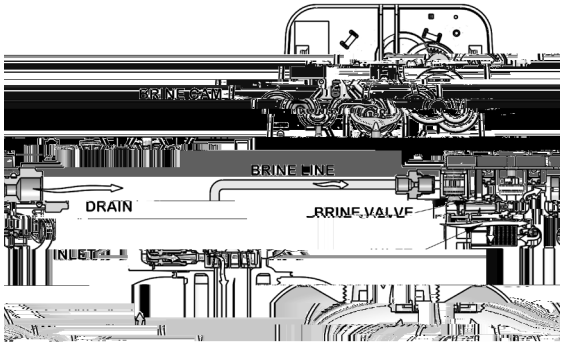
1. Service Position



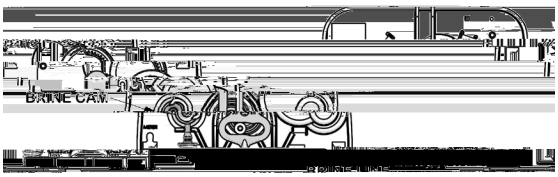
2. Backwash Position



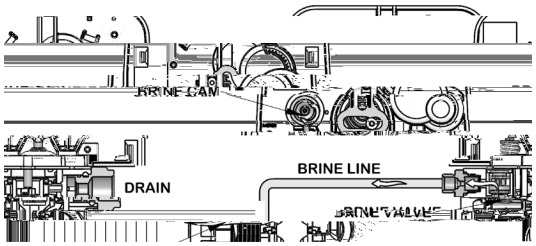
3. Brine/Slow Rinse Position



4. Rapid Rinse Position



5. Brine Tank Refll Position



TROUBLESHOOTING LXT

NOTE: Error codes appear on the In Service display.

	Error Type		Reset and Recovery
		No state changes in the optical	Unplug the unit an plug back in. Allow the control to attempt to fnd position again. Verify the optical sensor is in place with the wires connected to the

TROUBLESHOOTING SXT

NOTE: Error codes appear on the In Service display.

	Error Type		Reset and Recovery
		No state changes in the optical	Unplug the unit an plug back in. Allow the control to attempt to fnd position again. Verify the optical sensor is in place with the wires connected to the circuit board. Verify the motor and drive train components are in good condition and assembled properly. Check the valve and verify that the piston travels freely. Replace/reassemble the various components as Plug the unit back in and observe its behavior. If the error reoccurs, unplug the unit, put it into bypass and contact technical support.
		An undesired optical sensor state change occured.	Non-critical error. Extra optical sensor pulse detected. Press any
	Regen Failure	The system has not regenerated if the Control Type has been set to	Perform a Manual Regeneration to reset the error code. If the system is metered, verify that it is measuring fow by running service water and watching for the fow indicator on the display. If the unit does not measure fow, verify that the meter cable is connected properly and that the meter is functioning properly. Enter Master Programming Mode and verify that the unit is confgured properly, For the valve confguration. Check that the correct system capacity has been selected, that the day override is set properly, and that meter is identifed correctly. If the unit is confgured as a Day- setting as necessary.
			Perform a Master Reset and reconfgure the system via Master Programming Mode. After reconfguring the system, step the valve through a manual regeneration. If error continues, call technical support.
		Valve has failed to fnd position in	