

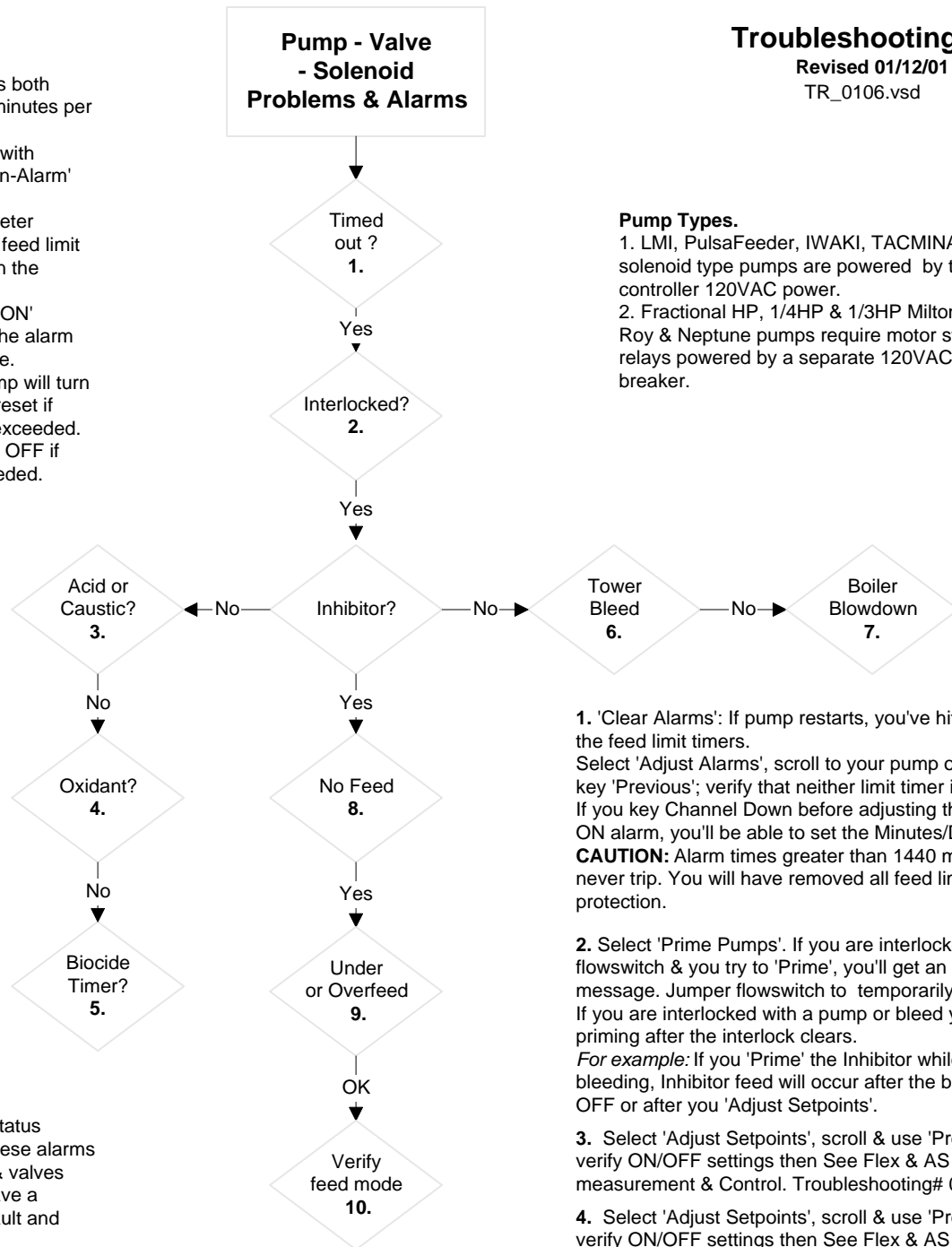
Troubleshooting# 06

Revised 01/12/01

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Feed Limit Alarms.

1. Each pump & valve has both minutes per actuation & minutes per day limits.
2. Action on alarm varies with sensor type and 'Action-on-Alarm' setting.
3. A pump with a water meter control will auto-reset the feed limit timer and set the alarm on the controlling water meter.
4. A valve|bleed with the 'ON' Action- on-alarm will set the alarm but not shut OFF the valve.
5. An Acid or Oxidant pump will turn OFF & require a manual reset if minutes per actuation is exceeded.
6. All pumps & valves turn OFF if Minutes/Day limit is exceeded. Manual reset required



Pump Types.

1. LMI, PalsaFeeder, IWAKI, TACMINA solenoid type pumps are powered by the controller 120VAC power.
2. Fractional HP, 1/4HP & 1/3HP Milton Roy & Neptune pumps require motor start relays powered by a separate 120VAC breaker.

Sensor Alarms.

1. All sensor, water and status switches have alarms. These alarms cannot turn OFF pumps & valves
2. Analog input alarms have a settable delay between fault and alarm.

Alarm Relay & Dial Out.

1. Any feed limit or sensor alarm or combination of alarms can trip the alarm relay and/or dial-out
2. Factory default is all alarms trip the alarm relay, no alarms are set to dial out.

System Alarms.

1. System alarms also trip any associated sensor. Example: A Flashing alarm will also trip the sensor which controls the blowdown valve. In this way a system alarm points to the offending control.
2. System Alarms can be disabled, trip the alarm relay or dial-out.
3. Slaved controllers trip the Master system alarm.

9. Verify that pump stroke & frequency have not been changed. If you have an alarm on the Make-up water meter, you may be hitting the feed limit alarm. - See 1. If feeding on meter - verify meter See Troubleshooting# 05.

10. Select 'Inhibitor Control' scroll to Inhibitor pump & key 'Previous': The controller will identify both the inhibitor pump and the control. *Bleed & Feed 1 on 2=* Inhibitor Pump on Relay 1, Bleed valve on Relay 2. *Feed 1 on 8%=* Percentage time feed Pump on Relay 1, 8% of every 5 minutes.

1. 'Clear Alarms': If pump restarts, you've hit one of the feed limit timers. Select 'Adjust Alarms', scroll to your pump or valve & key 'Previous'; verify that neither limit timer is zero. If you key Channel Down before adjusting the Minutes ON alarm, you'll be able to set the Minutes/Day alarm **CAUTION:** Alarm times greater than 1440 minutes will never trip. You will have removed all feed limit protection.

2. Select 'Prime Pumps'. If you are interlocked with a flowswitch & you try to 'Prime', you'll get an error message. Jumper flowswitch to temporarily bypass. If you are interlocked with a pump or bleed you will get priming after the interlock clears. *For example:* If you 'Prime' the inhibitor while bleeding, Inhibitor feed will occur after the bleed turns OFF or after you 'Adjust Setpoints'.

3. Select 'Adjust Setpoints', scroll & use 'Previous' to verify ON/OFF settings then See Flex & AS pH measurement & Control. Troubleshooting# 03

4. Select 'Adjust Setpoints', scroll & use 'Previous' to verify ON/OFF settings then See Flex & AS ORP measurement & Control. Troubleshooting# 04

5. Power OFF then ON. First screen shows you the current Biocide Timing day & day of the week. Select 'Adjust Biotiming', select target Biocide & Edit. Scroll & verify that day & time are set correctly.

6. Plug valve or solenoid into hot outlet & verify operation. Select 'Adjust Setpoints', scroll & use 'Previous' to verify ON/OFF settings then See Flex & AS Cooling Tower Conductivity. Troubleshooting# 04

7. See Flex & AS Boiler Conductivity. Troubleshooting# 02

8. Plug pump into a hot outlet & verify operation. Select 'Inhibitor Control', scroll & use 'Previous' to verify feed mode. See 10.