



# Troubleshooting Treatment Plants

All timber treatment plants have certain key sensors. In no particular order they are..

- LV1 or LV7 - Treatment vessel overfull
- LV2 - Treatment vessel full
- LV3 - Fluid In the treatment vessel
- LA - Low air sensor
- TX1 - Treatment vessel pressure sensor
- TX2 - TX10 - Storage vessel pressure sensors
- OSV - Operating Storage Vessel )

These are the sensors that the control code relies on. The following troubleshooting notes refers to some of the above sensors.

IDENTIFIED FAULT	REMEDIAL ACTIONS
The Treatment Vessel (TV) fill stage is being missed.	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li>1. Either LV1 or LV2 may be registering that the TV is full or overfull all of the time. As the plant thinks that it is full, no ofill occurs. <b>Fix - Check the sensors for foreign matter affecting the sensor. If there is none the sensor may need replacing.</b></li> </ol>
Vacuum Not being Achieved	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li>1. The door seal is not seated correctly and air is bypassing the seal. <b>Fix - Abort the cycle, open the door and make good the seal. Restart the cycle.</b></li> <li>2. Insufficient fluid in the vac pump top up tank <b>Fix - Top up the fluid in the tank to the centre line of the Vac Pumps.</b></li> <li>3. TX1 reading incorrectly <b>Fix - Ensure that the treatment vessel pressure sensor monitoring point is not blocked in any way.</b></li> <li>4. One or more vac pumps have tripped. <b>Fix - Switch off the panel, reset all visibly tripped pumps. Restart the panel and the cycle.</b> <b>Note – if the pump repeatedly trips call out a electrical engineer to investigate the problem.</b></li> </ol>
Wood not treating correctly on top of the pack	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li>1. LV2 is hitting early due to foaming of the fluid. <b>Fix - Add antifoam to the next charge to reduce the foaming.</b></li> </ol>
Low Air being recorded	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li>1. The Compressor has it's own built in starter switch and the switch is not turned on. <b>Fix - Switch on the compressor, at the compressor, and wait for the air pressure to build up to above 6 bar before commencing to treat. Have the emergency stop pressed in while waiting for the air pressure to build</b></li> <li>2. The air regulator on the side of the air panel has been adjusted to too low a value. <b>Fix – Lift the top knob on the regulator and adjust the setting to a value of 6.5 bar. Depress the knob so that it may not be inadvertently changed in the future.</b></li> </ol>

IDENTIFIED FAULT	REMEDIAL ACTIONS
TX1-TX10 sensor readings not moving.	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li data-bbox="582 203 1343 342">1. The pressure sensors on the tanks normally have a ball valve associated with them that is closed when the transmitter is being changed. This valve may have been inadvertently closed. <b>Fix - Open the ball valves and the tank readings should then read true.</b></li> </ol>
First Transfer Timeout	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li data-bbox="582 394 1343 510">1. The OSV gate valve is closed, this is the first charge of the day and the valve needs to be open. <b>Fix - Make sure that the OSV gate valve is open allowing fluid to leave and enter the tank, then restart the stage.</b></li> <li data-bbox="582 539 1343 678">2. A large amount of fluid is being transferred into the Treatment Vessel, as the charge being treated is a small one. <b>Fix - Restart the stage to fill the TV. Extend the 'First Transfer Timeout' so that next time more time is allowed for the smaller charges.</b></li> <li data-bbox="582 707 1343 790">3. Insufficient fluid in the OSV to fill the treatment vessel. <b>Fix - Treat a larger volume of wood next time or dose the OSV to a higher operating level.</b></li> </ol>
Pressure Build Timeout	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li data-bbox="582 842 1343 902">1. Not enough fluid in the storage vessel to run the charge <b>Fix – Keep more fluid in the storage tank.</b></li> <li data-bbox="582 931 1343 1014">2. Running very dry timber or Redwood <b>Fix – Restart pressure build. It just needed a bit of extra time for the absorbant wood to be treated.</b></li> <li data-bbox="582 1043 1343 1126">3. The filter pot may need clearing out. <b>Fix – Clear out the filter pot at the inlet of the pressure pump 9or the Y strainer) and restart pressure build.</b></li> </ol>
Second Transfer Timeout	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li data-bbox="582 1184 1343 1357">1. LV3 is a fork switch, the switch is not breaking and or there is foam in the system. <b>Fix - Wait five minutes for the foam in the system to dissipate and restart the stage. Before the next charge add anti-foam to the OSV or dose directly into the TV when the next charge is loaded.</b></li> <li data-bbox="582 1386 1343 1525">2. A large amount of fluid is being transferred back from the Treatment Vessel, as the charge being treated is a small one. <b>Fix - Restart the stage to empty the TV. Extend the 'Second Transfer Timeout' so that next time more time is allowed for the smaller charges.</b></li> <li data-bbox="582 1554 1343 1693">3. Wood has partially blocked the fluid drain hole within the treatment vessel. <b>Fix - Restart the stage to empty the TV. Once the charge has completed ensure that the drain point(s) within the treatment vessel is(are) free from all obstructions.</b></li> <li data-bbox="582 1722 1343 1805">4. LV3 is a float switch and you suspect that the switch is not breaking. <b>Fix – Call out a mechanical engineer to check the switch.</b></li> </ol>
Scavenge Timeout	<p><u>Possible Reasons</u></p> <ol style="list-style-type: none"> <li data-bbox="582 1868 1343 1951">1. Foam in the pipe work <b>Fix – Extend the LV3 Clear time so that the foam has time to dissipate, or apply anti foam to the next charge.</b></li> <li data-bbox="582 1980 1343 2085">2. A large charge has been run and there is a lot of run off <b>Fix – restart the scavenge cycle. It will probably clear second time around. If not contact a TSL engineer for advice.</b></li> </ol>