

Troubleshooting checklist

for Galiso Hydrostatic Test Machines

Some of the items below relate to Galiso legacy systems only. Galiso REC4 Systems replace the transducer and load cell of legacy systems with digital components which allow for communication without the need for an A/D card. Galiso is also able to provide remote operation, service and support for networked REC4 Systems.

Customer Service: 1-800-854-3789 or (970) 249-0233

Note: Always check expansion problems at Zero pressure, hold at least 2 minutes and note reading every 15 secs

PROBLEM	POSSIBLE CAUSE	SOLUTION (WHAT TO DO)
<u>Expansion</u> Decreasing in ONE Jacket only (Negative Expansion)	Temperature Problem (Problem will eventually stop as temperatures stabilize.)	Check to see that all temperatures (incoming water, test jackets, filled cylinders, and ambient air temperature) are within 5 degrees of each other. (2 degrees or less on small cylinders.)
Decreasing in BOTH Jackets (Negative Expansion)	Bowl Drain Valve Leaks	Remove 1/2" plastic tubing from the bottom of the Drain Valve, and Check to see if water is dripping from the valve.
<u>Expansion unstable</u>	Air Trapped in Expansion Line.	Flush expansion lines by filling bowl with water, and removing the head seal to each jacket while it is in verify.
	Damaged Load Cell	Remove Expansion Bowl from bolt on Load Cell, and see if expansion stabilizes without load. If expansion continues to drift, Load Cell may be damaged.
	Vibration	Weigh Bowl must be stable. If there is vibration coming through the floor, or other sources, this must be isolated.
Does not change from zero, no matter what you do.	Improper Calibration: Factor set to zero.	Recalibrate Expansion following the procedure step by step as detailed in the instructions.
	Cable not connected to the computer.	Check Load Cell Cable connection to the back of the computer.

Expansion Increasing

Bowl Fill Valve Leaks

Turn off water to the machine. If the problem goes away, the Bowl fill valve is leaking. If the problem doesn't go away, then there is a low pressure leak in the test head. Remove valve from the expansion manifold and check to see if water is leaking through the valve.

Head Seal Leak

Switch heads (if another is available). If problem ceases, repair faulty head. If another head is not available, using proper Head Retaining Device, leak check head around diaphragm and boot. If any leaks exist, repair the head. Heads may be returned to Galiso for repair.

Temperature Problem. (Problem will eventually stop as temperatures stabilize.)

Check to see that all temperatures (incoming water, test jackets, filled cylinders, and ambient air temperature) are within 5 degrees of each other. (Less than 2 degrees on small cylinders.)

Expansion Decreasing
In ONE Jacket only (Negative Expansion)

Head Boot not sealing against Jacket

Check inside sealing surface of Test Jacket to ensure that the surface is smooth.
Check Boot itself for deformations.

Leak in expansion plumbing

Dry off all tubing with an air hose, and check for drops of water.

Opposite Jacket Expansion Valve Leaks

Remove **1/2"** plastic tubing from the bottom of the Valve, and check to see if water is dripping from the valve.

PROBLEM

POSSIBLE CAUSE

SOLUTION (WHAT TO DO)

Pressure and Expansion
Both are out of the ordinary - both are unstable / stay on zero.

Possible damaged A/D card

Recalibrate both pressure and expansion, note the "Calibration Factors" of each, and call Galiso. Replace A/D Card in Computer.

Pressure

Improper Calibration. Factor set to zero.

Recalibrate pressure, following the

Pressure does not change from zero, no matter what you do.

procedure step by step as detailed in the instructions.

Cable not connected to Computer

Check Transducer Cable connection to back of the computer.

Broken Transducer

Go to verify. Hit F7. Then, unplug the Transducer Cable from the back of the A/O card. If reading changes, this could indicate a broken Transducer.

**Pressure
Decreasing in BOTH jackets**

Leak in High Pressure Bleed Valve

Remove the SST tubing from the Bleed Valve (the line going out to the pit). If drops begin to form at elbow when the system is pressurized, the valve needs to be rebuilt (stem and/or seat).

Decreasing in ONE jacket only

Leak in High Pressure Tubing

Check all connections from console out to jacket that has the leak.

OPPOSITE Jacket High Pressure Valve Leaks

Remove the **1/4'** SST tubing from OPPOSITE Jacket High Pressure Valve (the line going out to the jacket). If drops begin to form at elbow when the system is pressurized, valve needs to be rebuilt (stem seat and seal).

Test Head has High Pressure Leak

Switch test heads. If problem goes to the other Jacket, Test Head needs rebuilding.

Pressure Increasing

Pump is continuing to pump even though Computer has tried to turn it off. (See also, "Pressure Unstable")

Pump Control Valve is stuck. Turn the air to the pump off. If this stops the increase, troubleshoot the control circuit from the control valve out to the pump.

Pressure Unstable

Damaged Pressure Transducer

Attach Master Gauge to the system. Pressurize to a readable pressure, and hold. If the pressure is stable on the gauge, but drifts on the Transducer, replace Transducer.