Pressure Transducer

STAT*IM* 5000S units utilize a pressure transducer to measure the steam pressure in the unit. The transducer is attached to a bracket located in the right rear corner of the unit. Transducer wires are routed along the top of the armature to the Pressure Interface Board, which is attached to the P2 printer connector of the Controller Board.

Checking the Pressure Transducer

To check the pressure transducer, follow these steps:

1. Start any sterilization cycle. Allow the cycle to enter the sterilization phase of the cycle and record the temperature and pressure readings shown on the LCD.

2. Refer to Chart A. Match recorded temperatures with the chart temperatures and compare pressure readings. If recorded pressure readings are within ± 7 kPa of the chart pressure readings, the transducer is operational. If not, it must be replaced.

Chart A

	Temperature Displayed (C˚)	Pressure Displayed (kPa)
Rubber and Plastics Cycle	121 122 123 124 125	205 211 128 225 232
Wrapped, Unwrapped Heavy Duty Unwrapped Cycles	134 135 136 137 138	304 313 322 332 341

Removing the Pressure Transducer

Caution: the pressure transducer, steam generator and other components may be hot even if the unit has not been operating. Guard against burns.

To remove the pressure transducer (1), follow these steps (see Figure 1):

1. Turn the power switch (2) **OFF**, and unplug the line cord (3) (not shown). Allow time for the unit to cool.

2. Disconnect the transducer connector (4) from the top of the transducer.

1. pressure transducer
2. power switch (view obscured)
3. line cord (not shown)
4. transducer connector
5. compression nut
6. coiled transducer tube
7. solenoid valve inlet "T" fitting
8. compression nut
9. nut and washer
10. transducer bracket
11. screw and washer
12. chassis

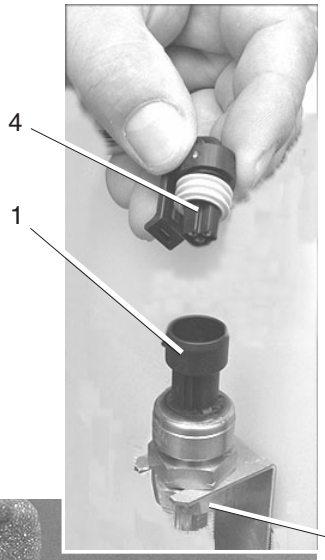
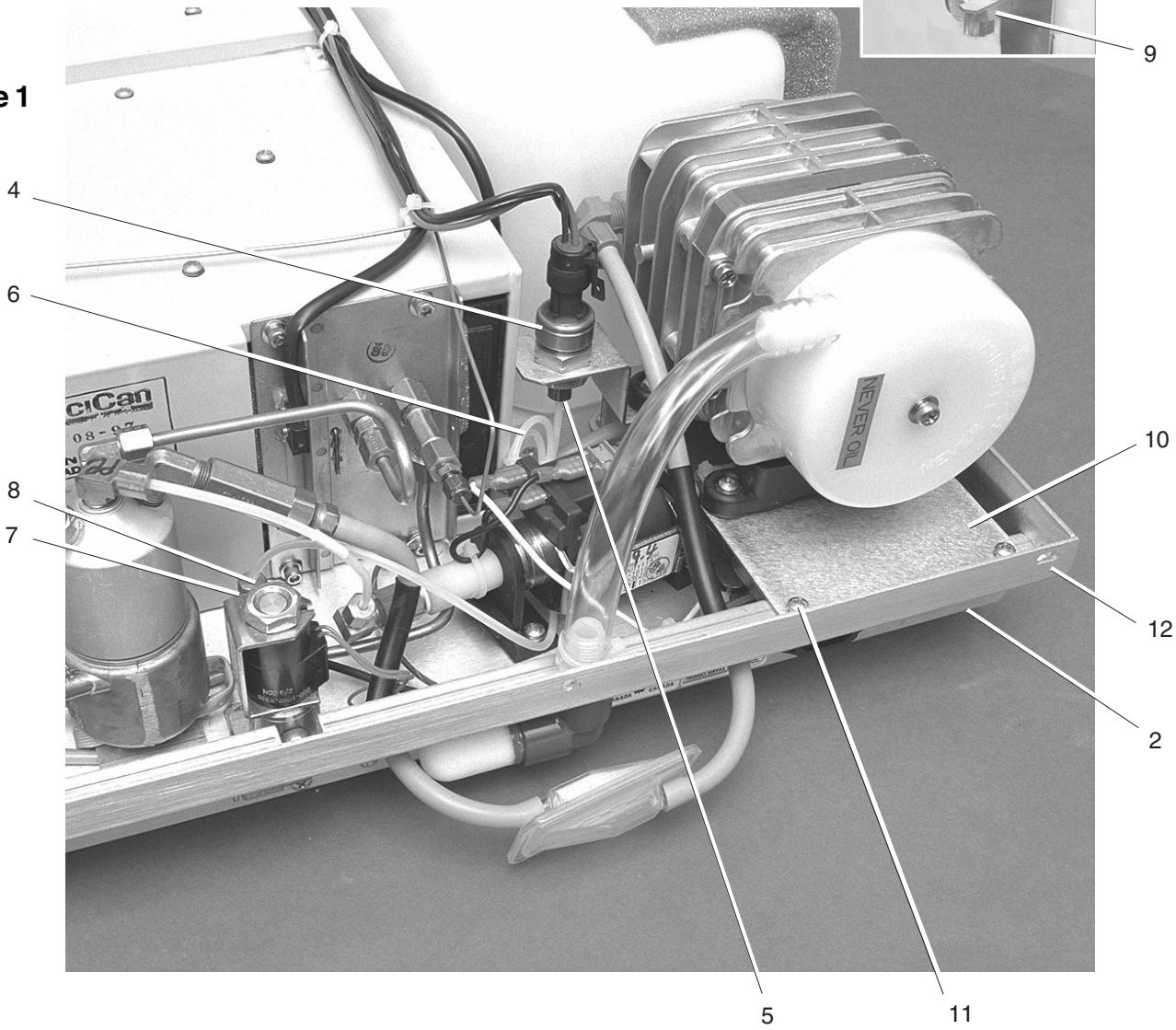


Figure 1



Pressure Transducer

3. Using a 3/8-inch wrench, disconnect the compression nut (8) holding the coiled transducer tube (6), from the bottom of the transducer.

4. Using a 7/8-inch wrench or an adjustable wrench, remove the transducer nut and washer (9) securing the transducer to the bracket (10).

5. Should removal of the transducer bracket be necessary, remove the screw and washer (11) holding the bracket to the chassis (12).

6. If the transducer is damaged, discard the transducer.

Replacing the Pressure Transducer

To replace the pressure transducer (1), follow these steps (see Figure 1):

1. Make sure the power switch (2) is **OFF**, and the unit is unplugged.

2. If the transducer bracket (10) was removed, reinstall the bracket on the chassis (12) using the screw and washer (11) retained from disassembly.

3. Install the transducer in the transducer bracket using the nut and washer (9) retained from disassembly. Tighten with a 7/8-inch wrench or an adjustable wrench.

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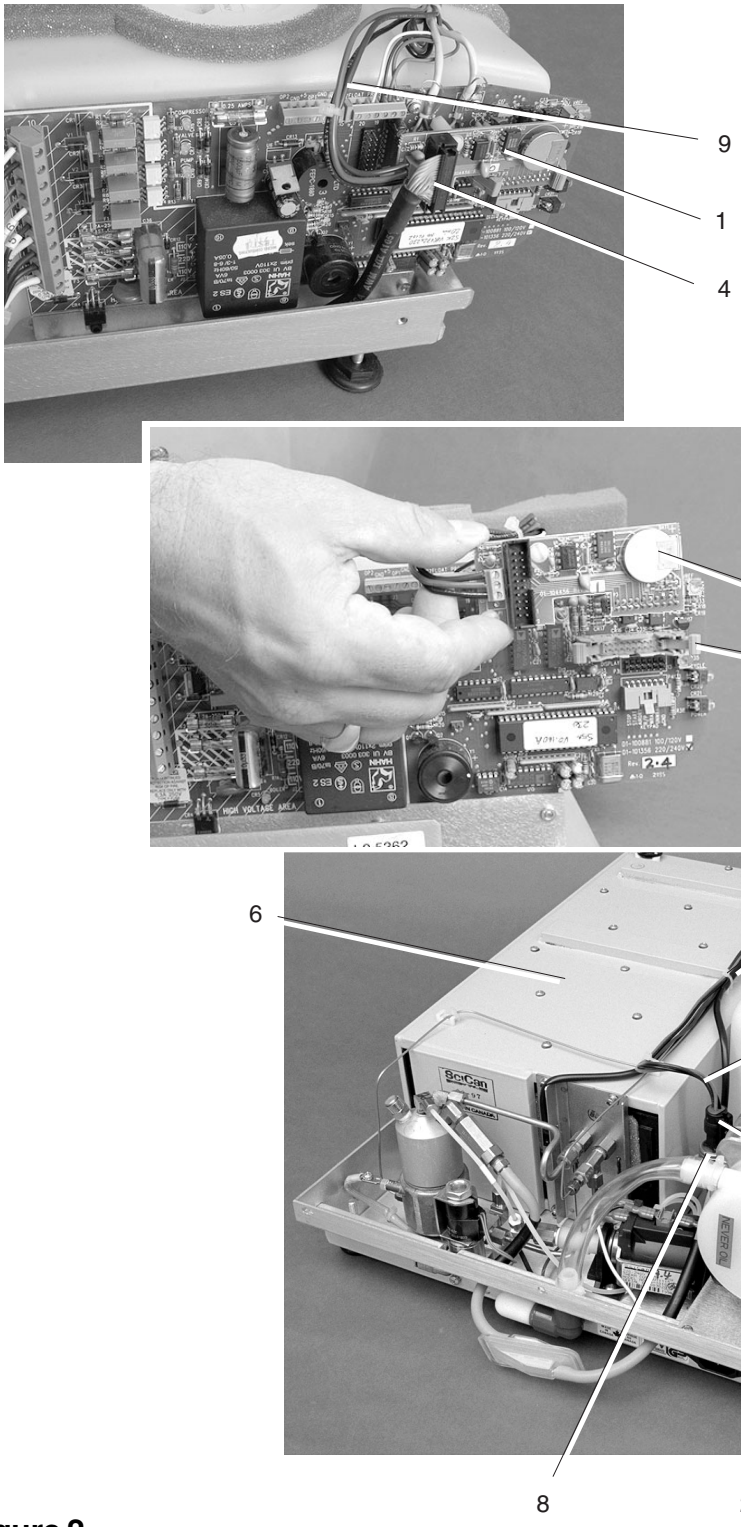
4. Reconnect the one end of the coiled transducer tube (6) to the bottom of the transducer. Thread the compression nut (8) finger tight, and then tighten the compression nut using a 3/8-inch wrench. **Do not over tighten**.

5. If required, reconnect the other end of the coiled transducer tube to the solenoid valve inlet “T” fitting (7). Thread the compression nut (5) finger tight, and then tighten the compression nut using a 3/8-inch wrench. **Do not over tighten**.

6. Hold the transducer / bracket assembly with one hand and plug the transducer connector (4) onto the transducer. Make sure the tab on the connector snaps in place.

7. Check that all fittings have been tightened and that all brackets are secured to the chassis. Reconnect the line cord (3)(not shown) and turn the power switch (2) **ON**.

8. Run a sterilization cycle and observe all fittings and tubes for leaks. Check LCD read-out for messages indicating cycle status.



1. Pressure Interface Board
2. power switch
3. line cord (not shown)
4. printer cable
5. cable tie
6. armature
7. transducer connector
8. transducer
9. transducer wires
10 ejector latches
11. Controller Board
12. battery

Figure 2

Pressure Transducer

Removing the Pressure Interface Board

Hazardous voltages are accessible on the controller board when the power is on.

STAT*IM* units contain electronic circuitry, which is static sensitive. Always wear a static strap when working with or near printed wiring boards. In addition, use static foot straps, grounding mats and grounded work surfaces when servicing microprocessor devices. Transport boards and devices in static protected bags.

The Pressure Interface Board is a piggyback board assembly, which is attached to the P2 printer connector of the Controller Board using the latch mechanism of the P2 header.

To remove the Pressure Interface Board (1) follow these steps (see Figure 2):

1. Turn the power switch (2) **OFF**, and unplug the line cord (3) (not shown).
2. Disconnect the printer cable (4) (if present) from Pressure Interface Board connector P2.
3. Disconnect the transducer wires (9) from Pressure Interface Board terminal positions P1-1 'SIG' (blue wire, signal), P1-2 'V+' (red wire V+) and P1-3 'GND' (black wire, ground).
4. Press the ejector latches (10) of Controller Board (11) connector P2 to unseat the Pressure Interface Board and remove the board.

Replacing the Pressure Interface Board

To replace the Pressure Interface Board (1) follow these steps (see Figure 2):

1. Orient the Pressure Interface Board with the component side of the board facing away from the Controller Board (11) and the P2 connector on the left-hand side. Gently seat the Pressure Interface Board onto the Controller Board P2 connector until the ejector latches are in an upright position.

Do not crush or pinch the thermocouple leads. Support the controller board to avoid excessive deflection of the controller board.

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2. Connect the transducer wires (9) to Pressure Interface Board terminal positions P1-1 'SIG' (blue wire, signal), P1-2 'V+' (red wire V+) and P1- 3 'GND' (black wire, ground).

3. Connect the printer cable (4) (if present) to Pressure Interface Board connector P2. Ensure that Pin 1 of the keyboard cable aligns with Pin 1 of Pressure Interface Board P2.

4. Plug in the line cord (3)(not shown) and turn the power switch (2) **ON**.

5. Run a sterilization cycle and observe LCD read-out for messages indicating cycle status.

6. Calibrate the thermocouples. See *Thermocouple Calibration*.

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Removing and Replacing the Battery

Observe appropriate ESD safeguards when servicing.

When installed and a printer attached, the real time clock and battery on the Pressure Interface Board replace the clock and battery found in the printer module.

The battery requires replacement when the date / time function is not preserved when power is removed.

To remove the battery (12), follow these steps (See Figure 2):

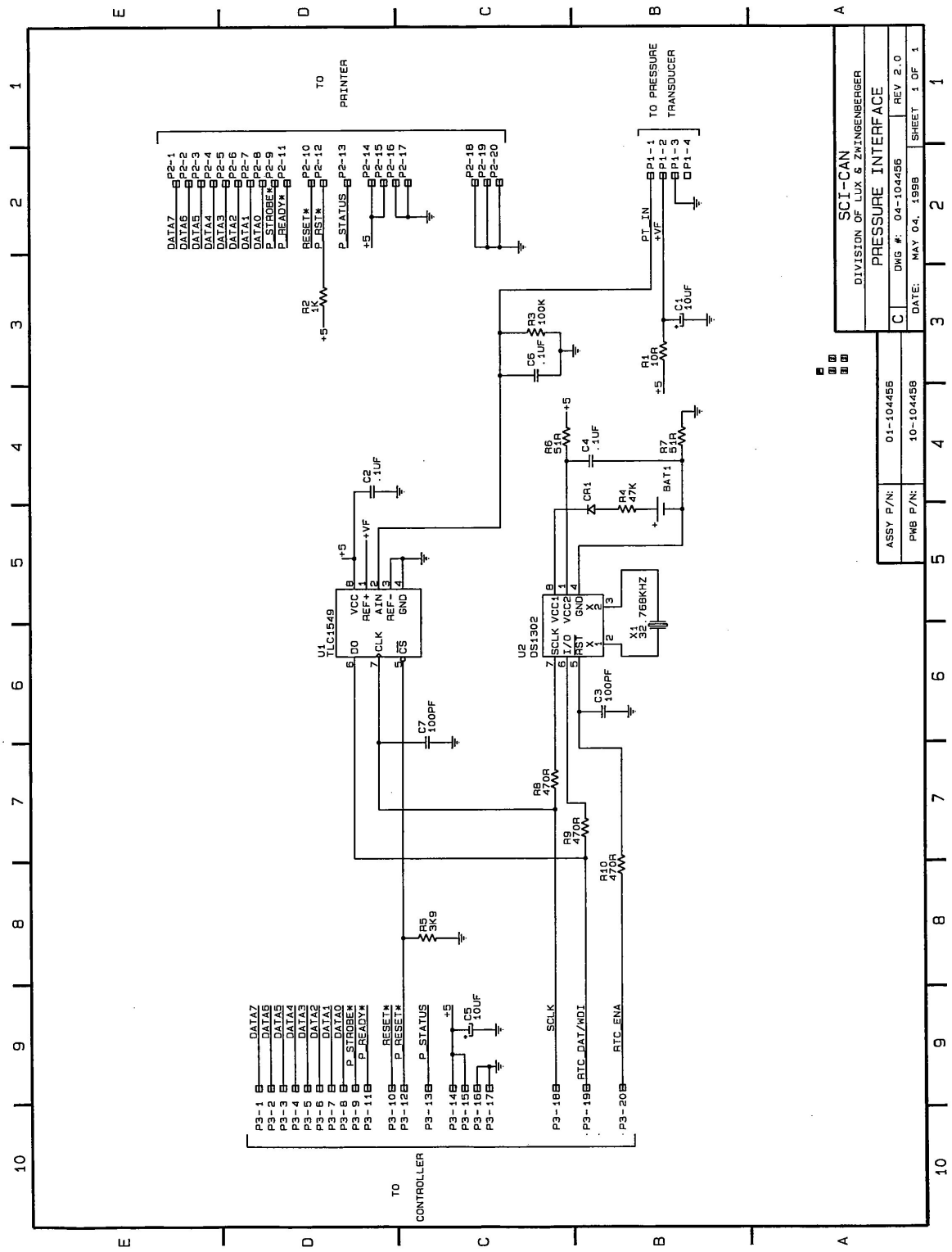
1. Remove the Pressure Interface Board as described in Removing the Pressure Interface Board.

2. Carefully desolder BAT1 from the solder side of the board. Note the orientation of the anode and cathode. Always replace the battery with a SciCan battery of equal rating and size.

   Solder the replacement battery in position BAT1. See *Pressure Interface Board Schematic*.

3. Discard the old battery. Observe all applicable environmental laws.

4. Replace the Pressure Interface Board as described in *Replacing the Pressure Interface Board*.


SCI-CAN
DIVISION OF LUX & ZWINGENBERGER
PRESSURE INTERFACE
ASSY P/N: 01-104456
PWB P/N: 10-104458
C
DWG #: 04-104456
REV 2.0
DATE: MAY 04, 1998
SHEET 1 OF 1
TO PRINTER
TO PRESSURE TRANSDUCER
TO CONTROLLER
U1 TLC1549
U2 DS1302
X1 32.768KHZ
BAT1
CR1
R1 10R
R2 1K
R3 100K
R4 47K
R5 3K9
R6 5R1
R7 5R1
R8 470R
R9 470R
R10 470R
C1 10UF
C2 .1UF
C3 100PF
C4 .1UF
C5 10UF
C6 .1UF
C7 100PF
DATA7
DATA6
DATA5
DATA4
DATA3
DATA2
DATA1
DATA0
P_STROBE*
P_READY*
RESET*
P_RST*
P_STATUS
SCLK
RTC_DAT/WDI
RTC_ENA
PT_IN
+VF
+5

Document Change Record

Document 96-104749		Title: Pressure Transducer	
Revision	ECO	Notes	Date
2.0	04-0020	Updated chapter as per prEN13060 requirements.	January 16, 2004
1.0	99-0059	New	April 14, 1999