

EQUIPMENT REQUIRED

Quantity	Part Number	Description
1	TE82817	PCM II Final Test Station

REFERENCE DOCUMENTATION

Document #	Description
WAT046538	GENERIC Electrical Safety procedure
810000218	PERF SPEC, PCB, PCMTCM

DEFINITIONS AND ABBREVIATIONS

Term	Definition
USL	Upper Spec Limit
LSL	Lower Spec Limit
VDC	Volts Direct Current
I/O	Inputs/Outputs
HZ	Hertz
TTL	5 volt Logic Level
UUT	Unit Under Test
ml/min	Milliliters per minute
psi	Pounds per square inch
SFO	System Fluidics Organizer

NOTE THAT 186003765, SYSTEM FLUIDICS ORGANIZER IS THE UPPER LEVEL OF 279001290, ORGANIZER, SYSTEM FLUIDICS. TEST 186003765 AS 279001290.

TEST SPECIFICATIONS AND TRACEABILITY MATRIX

Test #	Test Specification & Condition	Acceptance criteria	Reference
1	Hi – Pot / Ground continuity	PASS	WAT046538 Electrical Safety Test Procedure
2	Rear Panel I/O (toggle each input and output and verify action)	PASS	810000218 Sec 2.6.5 Event IO
3	Pumps A, B, C Status (verify that each status input can recognize an over pressure signal from pump. -12VDC = normal & +12VDC = overpressure)	PASS	810000218 Sec 2.3.1 Pump Status Register
4	Pumps A, B, C Pressure Input (verify that each pressure input can read pressure output from pump. 0VDC = 0 psi, -10VDC = 6000 psi)	PASS	810000218 Sec 2.6.3 Pump Pressure

5	<i>Pump Control Output (verify that each pump output can control pump flow rate. 0HZ TTL = 0 ml/min, 2133HZ TTL = 10 ml/min)</i>	PASS	<i>810000218 Sec 2.6.4 BRM Relationship to Flow Rate</i>
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TESTER SETUP

- 1.1. PC "POWER" must be OFF.
- 1.2. Tester TE82817 "POWER" must be OFF.
- 1.3. Connect 50 pin ribbon cable between PC and rear of tester.
- 1.4. Plug serial cable into "COM 1" on PC.
- 1.5. Plug crossover Ethernet cable into UNIT labeled port on PC.
- 1.6. Plug IEEE cable into 488.2 port on PC.
- 1.7. Plug tester into 120/240 volt AC outlet.
- 1.8. Power up the PC and let it initialize.

The PC may be connected through a KVM (Keyboard Video, Mouse switch), if so make sure it is set for the correct computer.

- 1.9. On desktop, double click on appropriate icon "TE82817 PCM" or "TE82817 SFO".
- 1.10. Verify that the Test Software revision displayed on the tester display is the same as that shown on the front page of this procedure.

NOTE: If the PC or test program needs to be restarted, be sure to disconnect any unit being tested and to switch TE82817 power OFF

2. GROUND CONTINUITY \ HI-POT

- 2.1. Complete Electrical Safety Test per procedure document no.: WAT046538.

3. TEST SETUP

- 3.1. Set IEEE address switch for 5 (1 & 3 on, the rest off).
- 3.2. Connect RS232 serial cable into rear of unit. ("**Aux 2**" on SFO.)
- 3.3. Connect EtherNet cable into rear of unit. (**PCM only**.)
- 3.4. Connect IEEE 488 cable into rear of unit.
- 3.5. Plug event cables A & B from tester into corresponding connectors on rear of unit. Looking at the back of the unit, A is on the left.
- 3.6. Plug pump cables A, B, & C from tester into corresponding connectors on rear of unit.
- 3.7. Plug unit to be tested into UUT POWER outlet on front of tester.
- 3.8. Power up UUT with front panel switch.

4. FIRMWARE DOWNLOAD (PCM II ONLY)

This section is not necessary when testing an SFO, the download is complete.

- 4.1. From the desktop, double click on the LOADER icon.
- 4.2. In the firmware Loader Dialog, select the “Scan” box then click on the “Next” button.
- 4.3. Loader will show the Ethernet port on instrument available.
- 4.4. Select Ethernet download by clicking on it then click the “OK” button.
- 4.5. Select firmware file for PCM II, then click OK.
- 4.6. Click on the “Next” button to start downloading the software.
- 4.7. Click on the “Finish” button when the download completes.
- 4.8. Cycle instrument power.

5. SET INSTRUMENT SERIAL NUMBER (PCM II ONLY)

This section is not necessary when testing an SFO.

- 5.1. From the desktop, double click on the LOADER icon.
- 5.2. In the firmware Loader Dialog, select the “Scan” box then click the “Next” button.
- 5.3. Loader will show the Ethernet port on instrument available.
- 5.4. Right click on instrument and select “Set Serial Number”.
- 5.5. Enter the UUT serial number then click “OK”.
- 5.6. Once serial number is displayed, “CANCEL” out of loader program.

6. TEST

- 6.1. From the Desktop, select the appropriate test Icon *TE82817 PCM II* or *TE82817 SFO*.
- 6.2. From the main menu select the desired test mode. You will be prompted for operator and unit information. Enter this by keyboard or barcode scanner.

In AUTOTEST, tests will run consecutively until all are completed, regardless of whether they pass or fail. Upon the completion of each individual test, the tester will momentarily display test status and results. Testing may be stopped and the main menu will be displayed, along with test status. You can “Continue Testing Unit” or “Remove Unit From Tester”.

In MANUAL TEST, you must select each test to run from a menu. Test Status is updated after each test is finished. If a test fails, an error message is displayed and you will have an option of printing a hard copy of that test. “RETURN” to main menu when done.

7. END OF TEST

Every time a unit completes all of its tests and is removed from the test station, an INSTRUMENT FINAL TEST RECORD containing test results will be printed out. The unit must pass all tests before the Instrument Result field of the I.F.T.R. indicates PASS. The Operator must sign and date all I.F.T.R.s, then place them in the instruments folder.

- 7.1. Switch U.U.T. power off before disconnecting from tester.