

Run the Standard Pressure Test (SPT) with the Universal Pressure Test Fixture (uPTF)

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A. Purpose

This document guides field engineers on running the uPTF on the C1™, Callisto™, and Juno™ instruments. Screen captures from Juno are examples.

B. Materials and Equipment

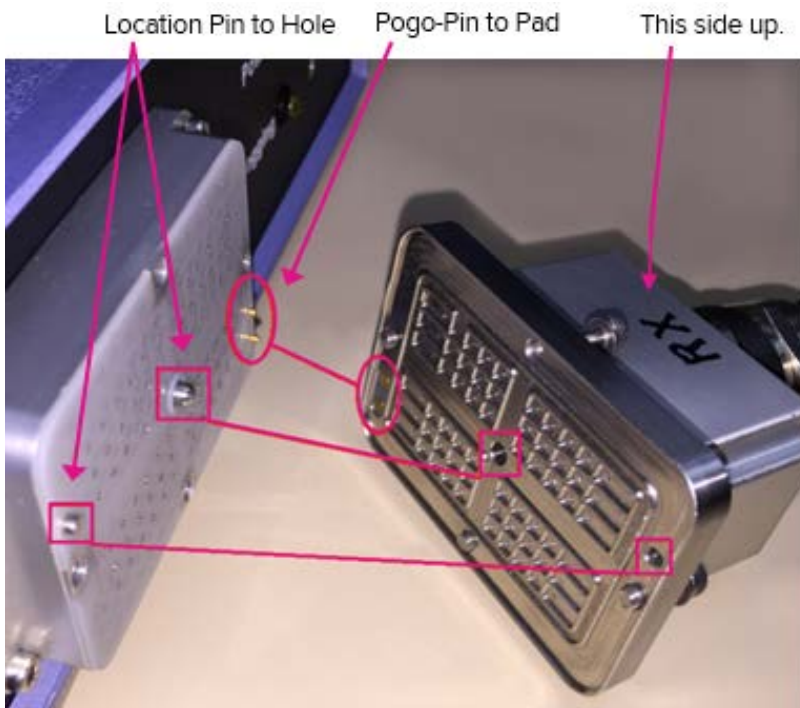
- Set of uPTFs and uPTF control box
- Standard FSE toolkit
- A mouse and a keyboard
- Callisto: The acceptable carrier for the Callisto system, which is 182x. Juno: At least three different Summit carriers. Acceptable carriers for the Juno system are 180x. Acceptable carriers for the C1 system are 178x.
- USB drive (for archiving system configuration and log files)

C. Procedure

C1. General Setup

One iteration of this test must be performed for each interface plate that has been shipped with the Juno system for installation. One iteration of this test must be performed with the single Callisto interface plate that has been shipped with the Callisto system for installation. One iteration of this test must be performed for each interface plate that has been shipped with the C1 system for installation.

- 1 Select the appropriate Universal Pressure Test Fixture (uPTF) for the interface plate to be tested with Callisto or Juno.
- 2 Connect the pneumatic connector of the uPTF to the uPTF control box:



Follow these three steps to tighten the four screws:

Step 1

Use two fingers to turn each of the four screws to the end of its track. Remember the sequence that each screw was turned.



Step 2

Tighten each of the four screws 30 degrees using the same sequence that each screw was turned in Step 1.



Step 3

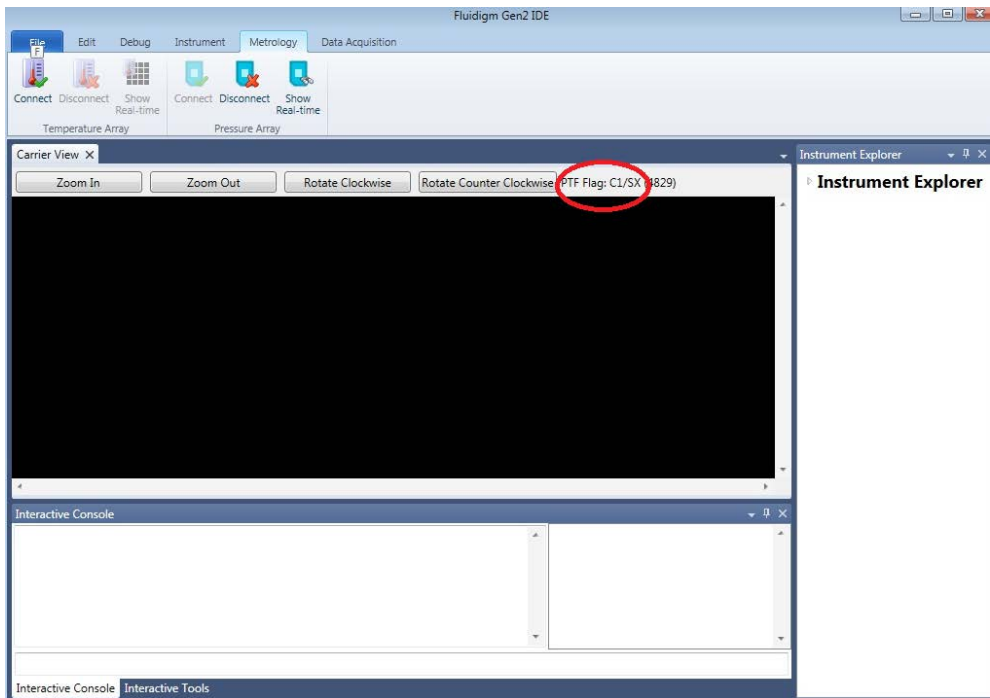
Tighten each of the four screws another 10 degrees using the same sequence that each screw was tightened in Step 2.



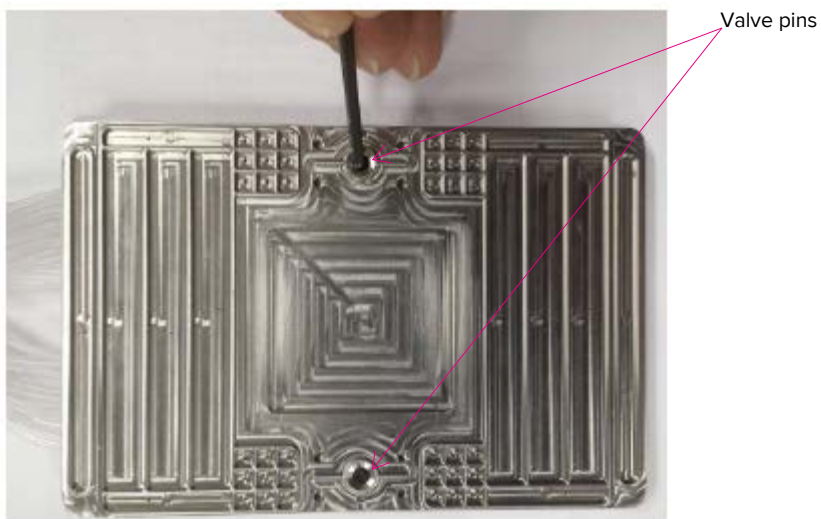
C2. Run the uPTF in IDE Mode

To run the uPTF in graphical user interface (GUI) mode, see C3. Run the uPTF in GUI Mode on page 6.

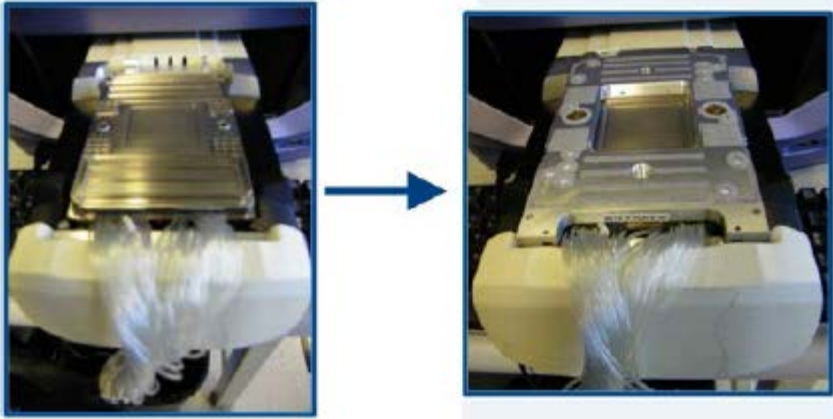
- 1 Go to **Metrology** and click **Connect** under the Pressure Array tab.
- 2 Connect the instrument in integrated development environment (IDE) mode.
- 3 Click **Show Real-time** to bring out the window of Carrier View. The type of PTF is indicated:



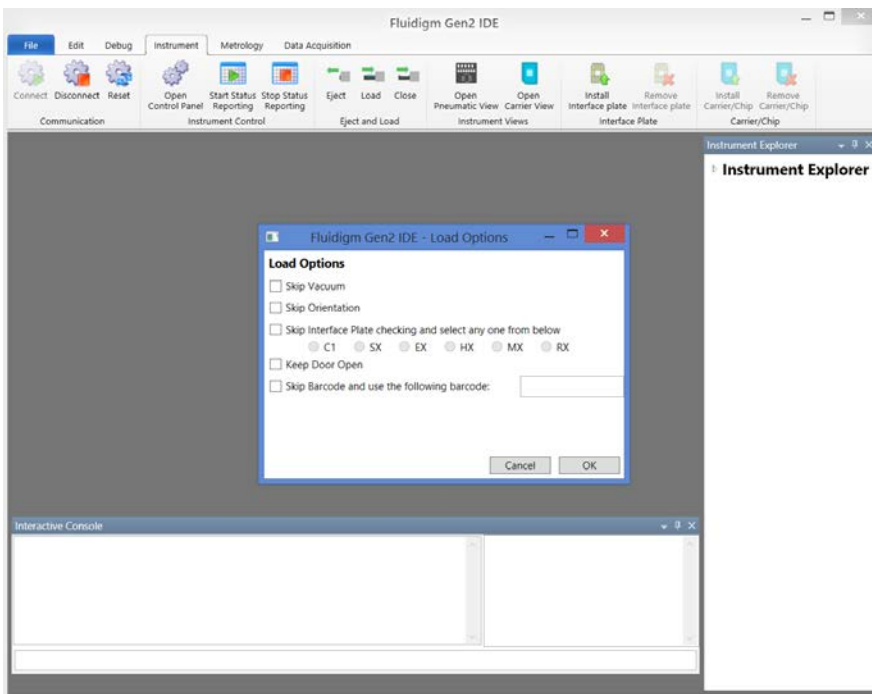
- 4 To run the pressure test, go to Instrument and click **OPEN** or **EJECT**, whichever displays.
- 5 Wipe the uPTF and the interface plate with isopropyl alcohol using a lint-free cloth.
- 6 Depress the valve pins on the uPTF to release any pressure:



- 7 Lay the uPTF down on the shuttle and the corresponding interface plate on top of the uPTF:



8 Click **LOAD**. The Load Options screen displays:



9 Tick to select:

- ✓ Skip Vacuum
- ✓ Skip Orientation
- ✓ Skip Interface Plate checking and select any one from below:

C1 SX EX HX MX RX

- ✓ Keep Door Open
- ✓ Skip Barcode and use one of the following barcodes according to the instrument:

Callisto

Interface Plates	uPTF Barcodes	SPT Script
EX	00182xxxxx	SPT Callisto V7 part A and SPT Callisto V7 part B

Juno

Interface Plates	uPTF Barcodes	SPT Script
C1	00178xxxxx	SPT C1
SX	00180xxxxx	SPT Juno
HX	00138xxxxx	SPT IFC
MX(Ax)	00151xxxxx	
RX	00166xxxxx	

- 10 Connect the uPTF in the Metrology tab, and then run the appropriate SPT script.
- 11 Verify that all test results are passed: Actuator test, Single On test, Isolation Valve test, Single Off test.
- 12 Repeat the SPT for each interface plate.
- 13 If any of the SPT results fail, contact Fluidigm technical support.

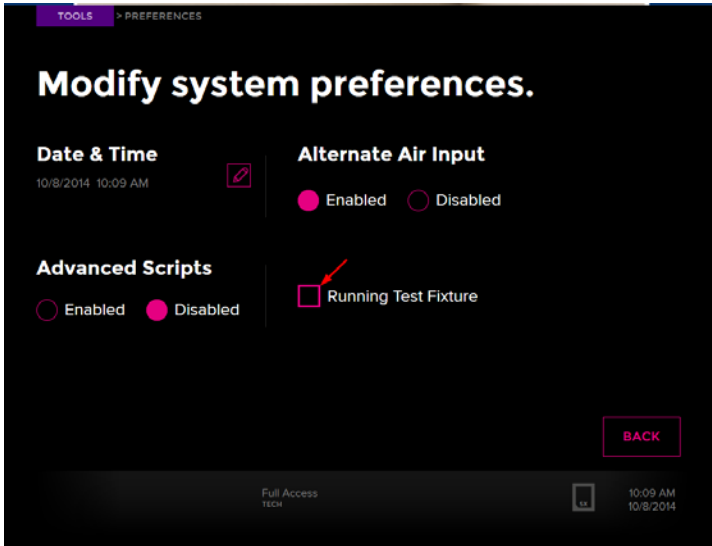
IMPORTANT The interface plate will be retained within the instrument after the SPT.

C3. Run the uPTF in GUI Mode

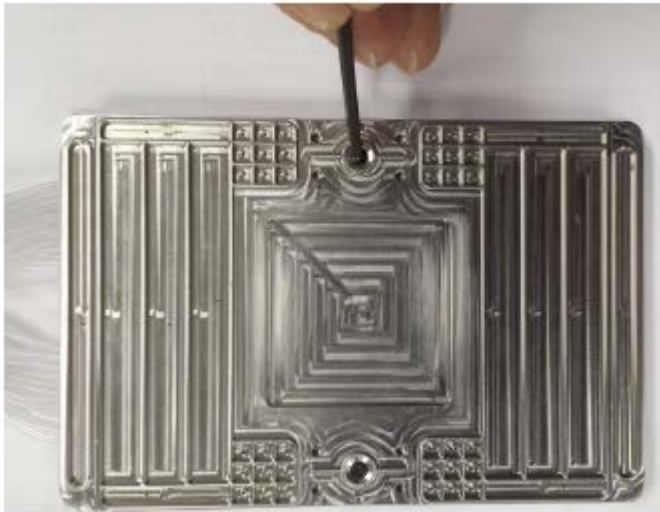
To run the uPTF in IDE mode, see C2. Run the uPTF in IDE Mode on page 3.

- 1 Connect the Universal Pressure Test Fixture (uPTF) to a USB port on the side of the instrument.
- 2 (Optional) Insert a USB drive into the slot on the other side of the instrument. The USB drive copies the data files while they are being stored at C:\Temp folder on Callisto, Juno, or C1.

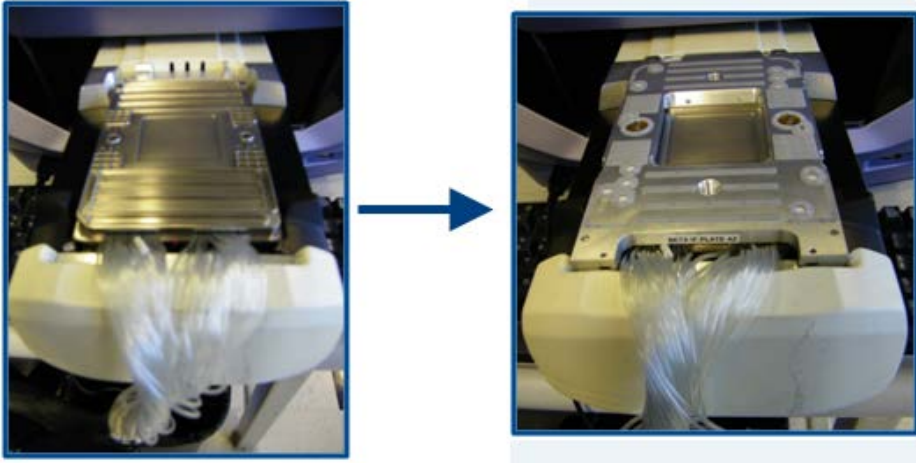
- 3 On the instrument Start screen, tap **LOG IN** at lower left, then tap the lower left screen six times. Tap **Full Access**. In the password box that appears, enter **666666**.
- 4 Select **TOOLS > Preferences**. For example, on Juno:



- 5 Tap the **Running Test Fixture** checkbox and tap **BACK**, then **BACK** again.
IMPORTANT Failure to check **Running Test Fixture** will damage the test fixture and possibly the instrument.
- 6 Wipe the PTF and the interface plate with isopropyl alcohol using a lint-free cloth.
- 7 Depress the valve pin on the uPTF to release any pressure:



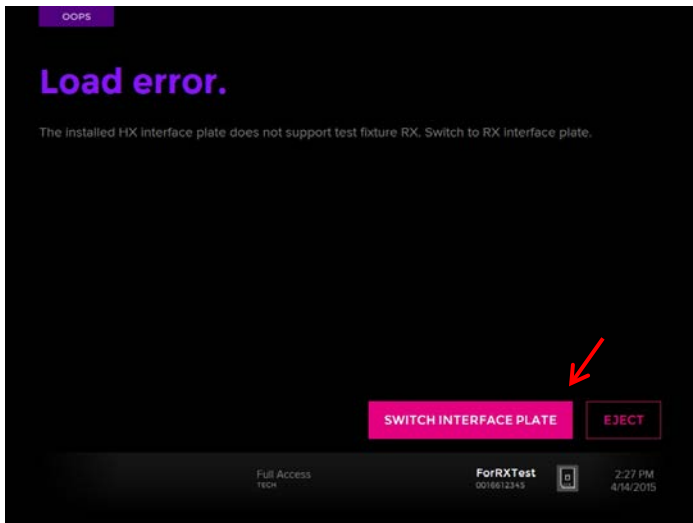
- 8 Tap **OPEN**.
- 9 Lay the uPTF down on the shuttle and the corresponding interface plate on top of the uPTF:



10 Tap LOAD.

NOTE If the installed interface plate does not support the uPTF on Juno:

- a. Tap **SWITCH INTERFACE PLATE** to eject the tray:



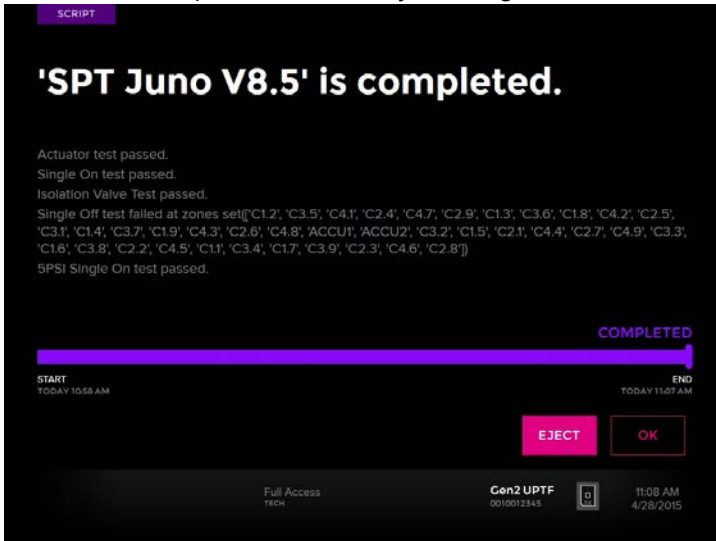
- b. Remove the metal head from the tray and disconnect the control box USB connection from the instrument.
- c. Tap **CONTINUE** and follow the screen instructions to perform the procedures of interface plate removal and installation.
- d. Plug the uPTF back into a USB port on the side of the instrument and lay the uPTF down on the shuttle.

11 On the Scripts screen, tap the appropriate script for the instrument.

- 12 Tap **RUN**. Wait until the script has run to completion. A progress bar helps track status. For example, on Juno:



- 13 When the test is complete, you will see a message similar to the one below. Note that in this example from Juno only the Single Off test failed:



- 14 Tap **EJECT**.
- 15 Verify that all test results are passed: Actuator test, Single On test, Isolation Valve test, Single Off test.
- 16 If the SPT results fail, contact Fluidigm technical support.

IMPORTANT On Juno, the interface plate will be retained within the instrument after the SPT.

D. Revision History

Revision Number	Date	Author(s)	Change Description or Rationale
B1	30 June 2016	Jay A. Martin	Replaced “USB” with “USB drive” where appropriate.
A1	31 July 2015	Jay A. Martin	Initial release

For technical support visit fluidigm.com/support.

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