Technical Note no. : 0905
Date : 2009-05-18
Instrument : Titan
Subject : Test procedures for Titan pump and probe

Purpose:

To evaluate the performance of the Titan Probe Unit.

Solution:

How to test the **Pump Wheel** for air leak:

1) Switch Titan on by pressing either L or R on the handheld unit.

2) Select Protocol "01 Normal Tymp".

3) Use one of 3 methods:

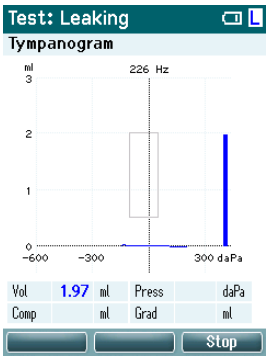
A. Use CAT40. Mount a yellow size 10 probe tip on the Titan **Probe Unit** and connect the probe tip to the 2cc cavity on the **CAT40**.

B. Use the built in 2cc cavity in Cradle: Connect the probe directly to this cavity.

C. Use **CAT55** to test titan **Probe unit** the same way as the cradle.

4) If a leak occurs during the tymp test (you can hear the pump continuously running after 3 – 5 seconds and a "Leaking" message appears on the screen), the **Pump Wheel** needs to be tightened or replaced.

Please refer to the Titan service manual page 9-13 on how to replace the Pump Wheel.



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How to tighten the pump wheel:

A. Please refer to the Titan service manual page 9-12 on how to replace the Pump Wheel.

Remove the spring plate marked with the red arrow.
Inspect the **pump wheel** and see if the motor is moving with the wheel, when turning it manually.

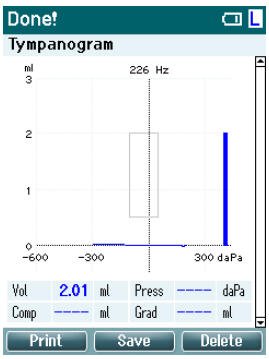
If loose continue with step B.

B. Lift up the hose and locate the hex screw holding the **pump wheel.** Be careful not to nick the hose.

C. Use a 0.9mm hex key to tighten the screw. Inspect the wheel and see if it is turning the motor. If not replace the **pump wheel**.

Continue with step 1 after reassembling Titan.

5) **The Pump Wheel is OK** if the tymp test can be executed and finished with a normal graph and correct numerical results.



How to test the **Probe Unit** on the Titan instrument:

1) Switch Titan on by pressing either L or R on the handheld unit.

2) Select Protocol “01 Normal Tymp”.

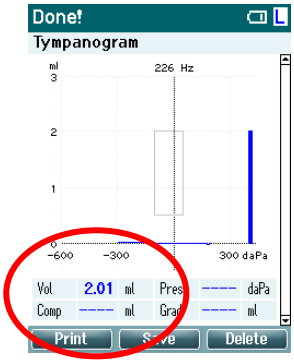
3) Use one of 3 methods:

A. Use CAT40. Mount a yellow size 10 probe tip on the Titan **Probe Unit** and connect the probe tip to the 2cc cavity on the **CAT40**.

B. Use the built in 2cc cavity in Cradle: Connect the probe directly to this cavity.

C. Use **CAT55** to test titan **Probe unit** the same way as the cradle.

4) Perform 2 to 3 tymp-tests and note the measured volume.



5) Carefully knock on the **Probe Unit** with your finger and blow carefully into the probe tip holes (minimum distance: 5 cm to your mouth to avoid moisture entering the probe) to check the robustness of the **Probe Unit**.

6) Repeat point 4).

7) If the volume measurements change significantly after point 4) is performed, the **Probe Unit** is defective.

8) If the test results are outside 2cc +/- 0,3cc after performing point 4), the **Probe Unit** is defective and must be replaced with a calibrated one.

Please contact your Interacoustics contact person for more details on how to progress.