Ref: FAQ0214	Version: 1.0
Title-Pressure Transient data compression	
Made By: AB 18/09/15	(Issue 2)

Explanation of data compression on standard (old style) Transient loggers

Note the following only applies to the older style Pressure Transient Loggers. These were superseded by ones equipped with 4GB SD Card memories in 2012 and later by the GPRS Pressure Transient logger in 2014 which has an 8GB memory.

On a Pressure Transient Logger the data is stored in a compressed manner so the number of samples stored is dependant on the data. Theoretically up to 8 million readings are possible which would give 3.7 days at 25 samples per second (which is the maximum sample rate - with a slower sample rate, the time stored increases) and this has been proved on live systems. HOWEVER the actual data compression is data dependant on the fluctuation of what is being measured so you won't know in advance the exact number of samples that can be stored. Rapid and large fluctuation /variation of pressure will mean less time, stable pressure will mean more time. Also the data is always stored when recording, not just when the pressure is changing.
Therefore, it is unlikely that 8 million will be achieved most of the time in real life. If the data compresses to say 1 million readings 11 hours can be stored at 25 samples per second.

The hysteresis factor can extend the memory capacity by ignoring small variations in the sample level around a point. However if the pressure is varying by more than the hysteresis level it will have little effect.

Most customers do a trial run first to establish how and when the data fluctuates before deploying the logger for the most relevant period of time and sampling rate.

In Mid 2012, HWM introduced a new version of the Pressure transient logger equipped with an SD card – this allows for much longer logging periods (weeks and months rather than days).

Document History:

Edition	Date of Issue	Modification	Notes
1st	21/01/13	Release	
2nd	17/09/15	Format update	