

# PPS Product Application Note

## PPS28 Gauge Recalibration (Rev. 01)



### **Pioneer Petrotech Services Inc.**

#1, 1431 - 40th Ave. NE  
Calgary, AB T2E 8N6, Canada

Phone: 1-888-PP-GAUGE (774-2843)  
E-mail: [infopps@pioneerps.com](mailto:infopps@pioneerps.com)  
Website: [www.pioneerps.com](http://www.pioneerps.com)

---



## REVISION HISTORY

Revision	Date	Comments
00	2008-11-15	Initial release
01	2011-09-25	Revision

**Note:** The information contained in this note regarding downhole tool applications is intended through suggestion only and subject to change without notice. All descriptions and information provided is subject to current PPS Term and Condition.

### Pioneer Petrotech Services Inc.

#1, 1431 - 40th Ave. N.E.  
Calgary, Alberta, Canada T2E 8N6  
Phone: 1-403-282-7669  
Fax: 1-403-282-0509  
Total Free in Canada & USA: 1-888-PP-GAUGE (774-2843)  
E-mail: infopps@pioneerps.com  
Website: www.pioneerps.com



---

<b>REVISION HISTORY .....</b>	<b>1</b>
<b>1. Introduction.....</b>	<b>3</b>
<b>2. Recalibration .....</b>	<b>3</b>
<b>2.1 Normal operation condition.....</b>	<b>3</b>
<b>2.2 Extreme operation condition.....</b>	<b>3</b>
<b>2.3 Exception.....</b>	<b>3</b>



## How Often Does a PPS28 Quartz Pressure Gauge Need to be Recalibrated?

### 1. Introduction

All PPS28 Quartz Pressure Gauges are calibrated by using 0.01% of reading pressure reference and 0.01°C temperature reference to ensure accurate measurement. If the gauges are not exposed to significant pressure or temperature, and there is no vibration or shock during operation, the calibration remains valid indefinitely.

### 2. Recalibration

In most case, the application condition in downhole is not easy to be identified clearly. To ensure the performance of pressure gauges, we recommend that the gauges need to be recalibrated and maintained based on following operation conditions:

#### 2.1 Normal operation condition

- Operation pressure < 75% of Max. Pressure rating, and
- Operation temperature < 75% of Max. Temperature rating, and
- Total operation time < 5000 hrs

Recalibration period: **one year**

#### 2.2 Extreme operation condition

- Operation pressure > 75% of Max. Pressure rating, or
- Operation temperature > 75% of Max. Temperature rating, and
- Total operation time < 4000 hrs or Continuous operation time < 3000hrs

Recalibration period: **6 months**

#### 2.3 Exception

If the pressure reading of gauges at ambient pressure/temperature is higher or lower than your local ambient pressure, the gauges may need to be recalibrated. If the gauges are used usually in vibration or shock environment, the gauges need to be checked if recalibration is necessary.

In high pressure environment, pressure release SHALL NOT be released instantaneously, it should be released in steps in order to prevent calibration shift. If this event happened, the gauges might need re-calibration right away.



*To monitor the pressure drift of gauges, there are some simple approaches to check if the gauges need to be recalibrated:*

- *Check the pressure reading of gauges at ambient pressure/temperature;*
- *Compare the pressure reading of a gauge to another gauge (which is known with good performance) at same pressure and temperature;*
- *Verify the pressure reading by a deadweight tester at 20%, 40%, 60%, 80% and 100% of FS pressure at ambient temperature.*