



## SHANGHAI JINGOO PETROLEUM APPARATUS CO., LTD.

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# Care and Use of Working Gauges

Based on the findings from oilfields and oil equipments manufacturers' use of working gauges and periodic recalibrations, due to improper management, use & care by some companies, the gauges will lose their accuracy and are no longer fit for gauging. Companies should fully realize that working gauges are precision instruments and should adhere to the following practices while using and caring the gauges:

### 1, Management

A special person shall be assigned to manage the gauges. A clear liability system & borrowing system shall be established in this regard.

### 2, Storage

Gauges should be stored unassembled on shelf in a well-controlled temperature environment. If gauges are stored with plug and ring assembled, with or without a protective coating, there is a tendency for electrolytic corrosion to develop, appearing as a discoloration of the surface in contact.

### 3, Period of Care

The gauges in use shall be cared once in a week. The gauges not in use shall be cared once half a year. Or the company can determine the proper frequency for care according to the specific conditions of environment, humidity etc.

### 4, Washing of Gauges

Gauges can only be washed with gasoline or kerosene. They cannot be washed with diesel oil or other waste oil. After being washed, the gauges in use shall be applied with a coating of quality machine oil. The gauges not in use shall be applied with a coating of petrolatum.

### 5, Periodic Recalibration

The gauges shall be recalibrated periodically. The gauges that are frequently used shall be recalibrated every half a year or according to times of use. The gauges that are not frequently used shall be recalibrated once in a year. Detailed records of calibration shall be maintained after each calibration.

### 6, Handling of Gauges

In gauging product threads, the gauges should be handled with care. Clean both gauge and product thoroughly before assembling. A light film of thin oil protects the gauge when in use and increases the life of the gauge. Dry surfaces when set up under pressure have a tendency to seize and pick up metal. Such spots cause inaccuracies in gauging if not removed. Gauges should be set up firmly on the product. A rod about 150 mm (5.91 in) long may be used for this purpose. Avoid exerting too much force while using the rod.

### 7, Temperature Difference

All instruments shall be exposed to the same temperature conditions as the product for inspection, for a time sufficient to eliminate any temperature difference. If the temperature of the product is too high, the gauges will become locked on the product. If the locking happens, you can use torch lamp to heat up the gauge slowly and evenly first, and then



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unmount the gauge. Avoid using welding torch or turning with lathe.

### **8, Deburring**

Before use, the gauges should be examined for burrs on the thread. Burrs or other rough spots should be removed with a medium-fine stone or with a fine file. Gauges should be given a periodic visual examination to look for slivers on the gauging surfaces. Those observed should be removed with a fine file or stone.

### **9, Handle and Fitting Plate**

When the handle or fitting plate of the gauge become loosened, they should be fixed and restored to the original tightness. The handle or fitting plate shall not be welded onto the gauge, otherwise the gauge will become out of shape and no longer fit for use.

Compiled by: Albert Tu