



**LOAD
INDICATING
FLUID-END BOLTS**



TIGHTEN, TORQUE, VERIFY, CERTIFY

Introduction

The integrity of bolting a fluid end to the power end is compromised when bolts and fasteners lose tension. Due to elastic interaction, the clamping forces begin to decrease during operation as they are counteracted by the pumping forces. Vibration, temperature fluctuation, and shock add to the continuation of clamping force loss.

Our load indicating fluid-end bolts offer an optimized bolted joint integrity and a more efficient installation. By attaching a probe to the datum disc on the end of the bolt, you are able to read the load percentage value. This load indication system gives you the ability to monitor the clamp load (static or dynamic) to ensure that proper torque specification is present without a torque wrench.

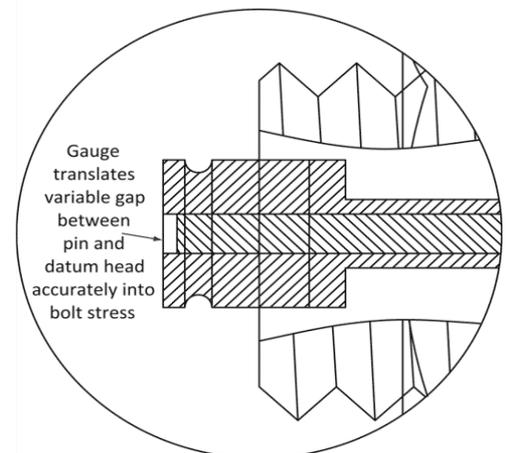


How it Works

The bolt is designed with a gauge pin inserted in the bolt head. A datum disk is then fitted on the top of the bolt head and forms a flat surface with the top of the gauge pin when the bolt is unloaded. Once the bolt is tightened, it elongates and the gauge pin is drawn into the bolt away from the datum disk surface.



Loaded Detail



Sales

Service

Parts

Leasing

Engineering

Packaging

Technical

Our load indicating bolt is design to be loaded multiple times as long as the stress remains elastic, and is certified to meet the following criteria: **ASTM A354, ASTM F606, ASTM E8, ASTM E18, ASTM F788, ASTM E709, ASTM E1444, and ASTM A388.** Bolt material is certified in compliance with **EN 10204 Type 3.1.** Standard OEM bolts are typically mass produced made of **SAE J429 Gr. 8** with machine cut threads.



Ease in Measuring the Load

A load indicator, mechanical or electrical, is calibrated to detect the differential distance between the gauge pin and datum disk. This differential distance is translated into a gauge reading that precisely indicates the bolt's loading in correlation to ultimate yield strength.

Benefits of Load Indicating Fluid-end Bolt vs Standard OEM Fluid-end Bolt

- ❖ Safer bolted joint assembly
- ❖ More efficient and accurate installation
- ❖ Reduced downtime
- ❖ Reduced inspection time
- ❖ Reduced maintenance cost with lubricant or dry
- ❖ Any tightened tool can be used
- ❖ Ability to monitor clamp load
- ❖ Tightens to +/- 5% of true clamp load
- ❖ Longer bolts are easier to torque
- ❖ Third-party certification possible without torque wrench



Fluid-End Bolt Applicability

Our Load Indicating Bolt is a direct replacement for the standard **OPI-600, GD-600, and OFM-600** OEM Fluid-end Bolt.

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