

TIMKEN OK LOAD TESTER

The Timken O.K. Load Tester is a lubricant oil/grease testing instrument based on the machine produced by the Timken Company from 1935 to 1972, which originally was used to evaluate the load carrying capacity of lubricants. It is a quick and reliable test that can evaluate fundamental properties involved the research, development, and quality of lubricants.

This instrument is especially useful for Research & Development and Quality Assurance activities. Samples are easily available and can be set up quickly, making it a good choice for lubricant and EP additive evaluation and qualification, O.K. Load quantification, EP protection, Wear Prevention (WP), and frictional characteristics.

The O.K. Load Tester uses a steel bearing race which is pressed against a steel test block creating a line contact which is representative of many tribological contacts encountered in real life applications. The bearing race is attached to a spindle which rotates the race while the test block is pressed against it. A



reservoir for lubricant oil rests below the bearing race. If using grease, there is a system that feeds the grease into the contact area.

The test load is then increased until the film between the bearing race and the block is broken. The maximum load before scoring occurs is reported as the "O.K. Load". The minimum load applied required to cause scoring is reported as the "Score Load". The O.K. Load is essentially used to measure the ability of a lubricant to protect under EP as well as boundary lubrication conditions.



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Features

- Optical microscope included for scar measurements.
- Computer controlled operation with software license included.
- Availability of a variety of options

Options

- Automated Loading Arrangement
- Automated Grease Feeder
- High Temperature Fluid Bath (ambient to 200 Deg C)
- Digital Image Acquisition System (in lieu of optical microscope)

Specifications

Parameter	Specifications
Rate of loading (kg/sec)	0.9 – 1.3
Grease Feed Rate (g/min)	45 +/-9
Fluid Feeder (liter)	3.8
Motor (KW)	1.5
Temperature	Ambient to 120°C (200°C optional)
Test Specimen (block)	123mm x 123mm x 123mm
Test Specimen (ring)	12mm (diam) x 12mm (width)
Test Standards	ASTM D2509, ASTM D2782, IP 240, IP326, JIS K2220, JIS K2519