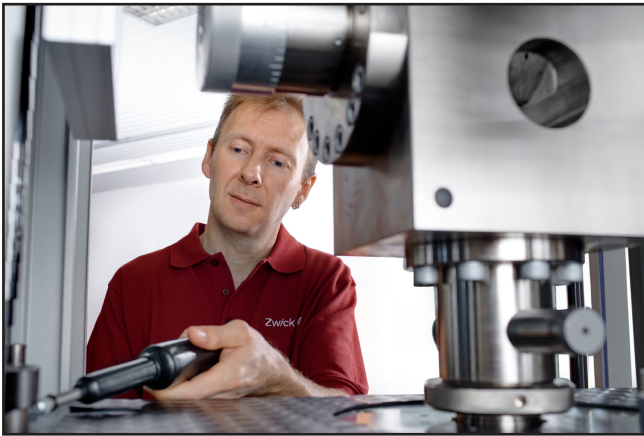


## Product Information

### Service and support for servo-hydraulic materials testing machines



#### Inspection and calibration

During inspections problem areas can be discovered at an early stage and rectified. Left unresolved these could lead to flawed test results and faulty products.

The general condition, operation and in particular the safety-critical areas of servo-hydraulic materials testing machines should be checked on a regular cyclical basis.

However, inspections are not carried out simply to maintain reliability and full operational capability. They are also necessary to satisfy the requirements of standards such as EN ISO 7500-1, which set out the need for inspection in advance of calibration.

In turn, calibration ensures that the materials testing machine delivers highly accurate, reliable test results. Regularly calibrated testing systems operate with maximum possible measurement accuracy. In this way erroneous test results are eliminated.

#### Service and support

Servo-hydraulic testing machines have universal application for materials and component testing under pulsating or alternating loads, with periodic or random signals. Quasi-static and dynamic loads are also easily achieved.

Regular inspections and calibration, together with maintenance of hydraulic components such as oil, filters and hoses, are essential requirements for reliable test results.

If the recommendations below are followed, the operational capability of the testing system will be maintained, service life increased and reliable test results can be guaranteed.

#### What sets us apart

- Wide-ranging calibration portfolio
- Extensive experience and expertise gained from over 10,000 calibrations annually
- Low measurement uncertainty for highly accurate test results
- Large number of measuring points enables us to cover the entire force and measurement ranges
- Inspection of your materials testing machine as part of the calibration process
- Adjustment free of charge where required
- Fast, flexible service provided by our many expert service technicians
- Calibration of other makes of testing machine
- Independence, efficiency and precision
- Internationally recognized calibration certificates

	Inspection and calibration	Oil and filter change	Hydraulic hoses change
Basis	EN ISO 7500-1	EN ISO 4413	DIN 20066
Interval	annually	every 2 years	every 6 years (for standard requirements)
Benefits	<ul style="list-style-type: none"> <li>• Safety for operator and machine</li> <li>• Compliance with standards</li> <li>• Extension of machine life expectancy</li> </ul>		

## Product Information

Service and support for servo-hydraulic materials testing machines



### Oil analysis

Constantly increasing demands on the reliability, availability and cost-effectiveness of hydraulic systems call for ever-cleaner hydraulic fluids.

The size and number of particles are both critical elements in the progress of wear in the system. Not every particle actually causes damage to the system, but the smaller the number of critical particles, the lower the probability of damage to components.

Oil analysis can be performed at regular intervals by our Zwick service technicians during on-site support visits; both the quality and the suitability of the hydraulic oil will be verified.

If impurities or other factors are found to be having an adverse effect on your hydraulic power-pack, Zwick can take appropriate action to restore the oil quality in your hydraulic power-pack to the required level.

### Oil and filter change

During operation, hydraulic oils are subject to wear and aging and must be changed at regular intervals. The need for this can be determined during a Zwick on-site support visit.

Alternatively we recommend a preventive oil and filter change every two years to ensure that the hydraulic system is supplied with "fresh" oil.

This will minimize wear to all hydraulic components and extend the service life of your testing system.

### Hydraulic hose change

Using life-expired hydraulic hoses can be dangerous. As well as causing long-term damage to your machine, hydraulic oil escaping under high pressure or whipping hoses can present an increased safety hazard for your employees and yourself.

To eliminate these hazards, caused for example by wear, aging or damage, hydraulic hoses must be replaced after a defined period of use or storage, depending on requirements.

### Advantages at a glance

- Reduced costs through elimination of component wear
- Avoidance of unscheduled machine downtime, system failures or lost production
- Operational capability and reliability of your hydraulic instruments secured
- Observance of statutory maintenance intervals (DIN 20066 and BGR237 / BGI5100)
- Active reduction of accident risk
- Cost saving and increased machine availability (in combination with oil analysis)
- One-stop customer support available from Zwick