

FATIGUE TESTING MACHINE



The need to perform endurance tests on heavy duty leaf springs led to an investment in a servohydraulic test system that would give servotest's customers great accuracy, repeatability and versatility.

The system is designed to test either two springs simultaneously or one on its own. The actuators are mounted on either side of a support stand made up of two A frames with a large cross beam. The actuators are suspended from the extremes of the cross beam. This allows the rig to test two leaf springs at once per actuator. However, the two actuators can be combined via another horizontal beam to test one centrally positioned leaf spring when required.

The system rests on a T slotted bed plate which allows great flexibility in the positioning of the brackets to retain the springs. This means that springs of different sizes can be tested.

The large stroke of the actuator allows for testing of springs of various heights as well as tests involving long compression lengths.

SCOPE OF SUPPLY

Two off actuators with Specification:

Dynamic force rating 50kN
Preload force rating 50kN
Total Working Stroke 500mm
Servovalve: Four off two stage servovalve SV
Transducer: Coaxially mounted LVDT
Load cell

Hydraulic Power Supply Type 191D-125v:
Electric motor power; 125Hp (94kW)
Oil flow rate: 222 l/min @ 210 bar
Cooling water flow rate: 160 l/min



Dimensions:

Overall Height 4000mm
Overall Width 3000mm
Overall Depth 2500mm
Bed Plate dimensions 3000 x 2500 x 350mm

SYSTEM BENEFITS

- Multi-specimen testing.
- Great flexibility both in range of springs being tested and number being tested at any one time.
- Multiple transducers measuring load and displacement ensure high accuracy and repeatability.
- Great accuracy of digital control with wide range of safety features to ensure trouble free operation. Wide range of force, stroke and flow capabilities enables better specification matching.
- Engineered for increased service life, reliability and maintainability.

SERVOTEST

WORLD CLASS TEST AND MOTION SIMULATION

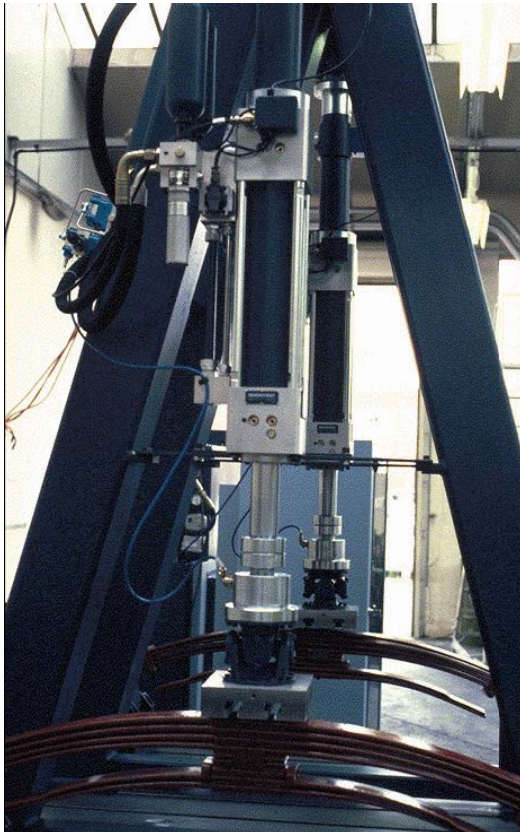


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SCRAGGING MACHINE

When Leaf springs are manufactured their ride height is not consistent. This scragging machine, positioned at the end of the production line, automatically measures the height of the spring at the ride load by measuring the force displacement hysteresis loop and then if necessary plastically deforms (scraggs) the spring by overloading it to a calculated displacement which pre-sets the spring correctly. This ride height and spring stiffness is then checked to be within limits.

This operation is automatically conducted by special software, which store the look up tables for each type of spring and saves batch data on all the springs tested.



SYSTEM BENEFITS

- Production process with simple operator set up and functioning.
- Long term reliable operation with low maintenance.
- Combined quality test and setting rig.
- Rig suitable for a wide range of spring sizes.
- Provide full batch data on the springs for quality audit and production control.

SCOPE OF SUPPLY

Two off actuators with Specification:

Dynamic force rating 150KN
Preload force rating 150KN
Total Working Stroke 440mm
Servovalve: Two off three stage servovalve SV250-5
Transducer: Coaxially mounted LVDT
Load cell

Hydraulic Power Supply Type 191D-125v:

Electric motor power; 250Hp
Oil flow rate: 222 l/min @ 210 bar
Cooling water flow rate: 333 l/min

CUSTOM UNITS OTHER THAN THOSE SPECIFIED ARE AVAILABLE.

Servotest has a policy of continuous product development, all specifications are subject to change without notice. For further information contact: Servotest, River Gardens, Feltham, Middlesex, TW14 ORD
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