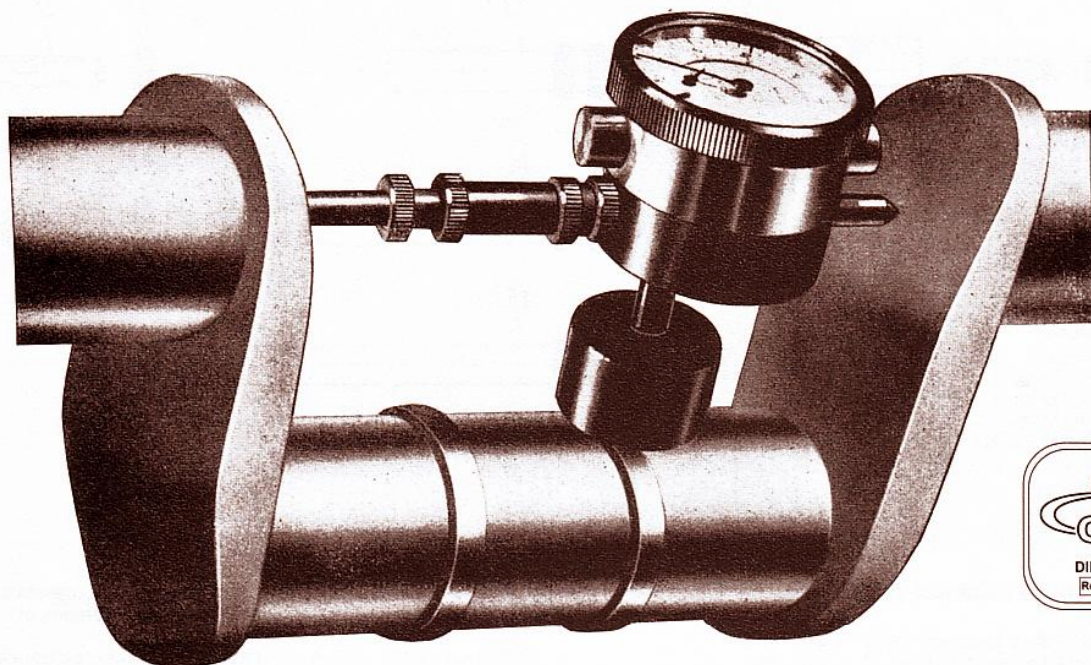


Crankshaft Gauges



Used by Service Engineers, Repairmen, Crankshaft Grinders, Production Supervisors, and Quality Control Inspectors, DIATEST Crankshaft Gauges measure the WEB DEFLECTION of crankshafts in:—

- Ready-to-operate engines or compressors.
- Assembled engines or compressors, with connecting rod in place.
- Assembled engines or compressors, with connecting rod removed.
- Dismantled crankshafts, between centres.

in the maintenance, repair, or assembly of marine engines, motor vehicle and railroad engines, compressors, etc.

Crankshaft web deflection is not to exceed the tolerance permitted by the engine or crankshaft manufacturer.

EXCESSIVE WEB DEFLECTION IS A DANGER SIGNAL.

Cause may be a faulty or damaged crankshaft, damaged bearings, poor bearing alignment, excessive bearing clearance or slackness, faulty flanging to transmission, flywheel, or vee belt pulley, etc.

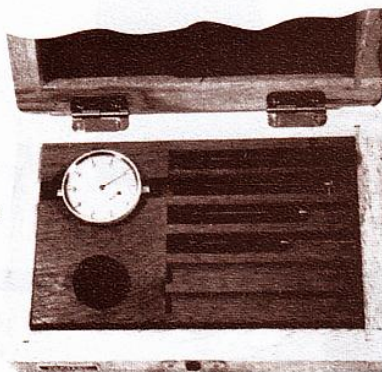
The cause of excessive crankshaft web deflection must be eliminated to prevent engine breakdown.

DIATEST Crankshaft Gauges are sturdy in design and furnished with hardened gauging points. They are ideally suited to rugged working conditions.

DIATEST Crankshaft Gauges are supplied in Sets consisting of a dial gauge unit with spring-loaded (live) gauging point and a full set of gauging extensions and fixed gauging points to suit ranges stated. The Sets come in fitted hardwood cases.

Set	Range [distance between webs]	Dial grad.
KP-150	45 to 150 mm	0.01 mm
KP-300	60 to 300 mm	0.01 mm
KP-500	60 to 500 mm	0.01 mm
KP-150-Z	1.75 to 6"	.0005"
KP-300-Z	2.36 to 12"	.0005"
KP-500-Z	2.36 to 20"	.0005"

Sets KP-300 and KP-500, and Sets KP-300-Z and KP-500-Z use the same box, and their component parts are interchangeable. Extensions to increase the range of Set KP-300 (KP-300-Z) to 500 mm (20 in.) are available separately. Sets KP-150 and KP-150-Z use a different dial gauge unit which is not interchangeable with the two larger sets.



Given the care normally accorded to inspection equipment, the only maintenance DIATEST Crankshaft Gauges require to provide many hours of trouble-free service is a few drops of a light, resin-free oil spread on the live gauge point.

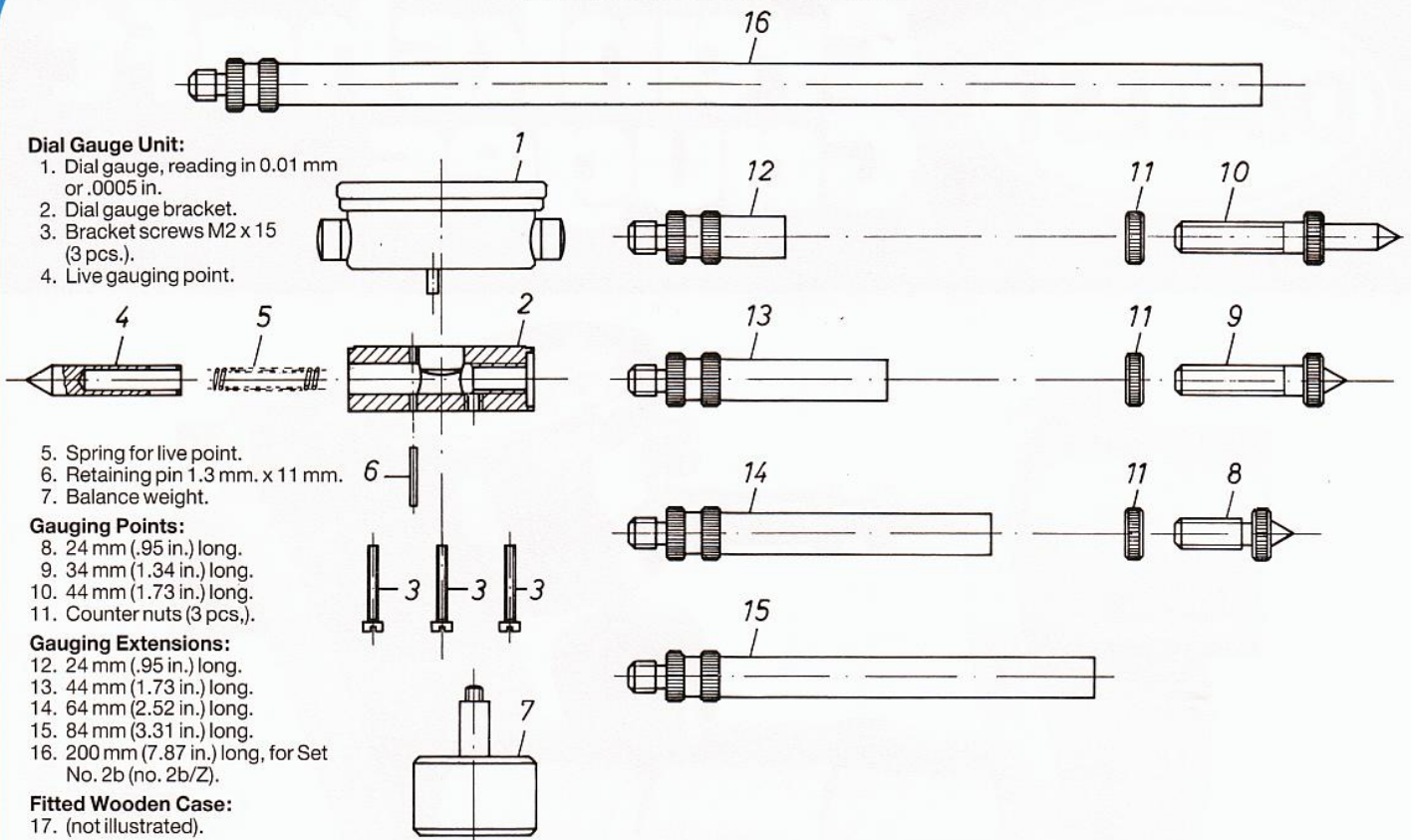
Parts and repair are provided by your supplier.

The DIATEST Crankshaft Gauge converts to a **CYLINDER GAUGE** by means of a set of ball-nosed anvils and cap, available as an accessory.

A Product of DIATEST – Hermann Költgen GmbH, Schottener Weg 6, D-64289 Darmstadt – Germany.

E-mail: info@diatest.com Internet: <http://www.diatest.com>

DIATEST Crankshaft Gauges 60 to 300 (500) mm or 2.36 to 12 (20) inches COMPONENTS AND ASSEMBLY



Dial Gauge Unit:

1. Dial gauge, reading in 0.01 mm or .0005 in.
2. Dial gauge bracket.
3. Bracket screws M2 x 15 (3 pcs.).
4. Live gauging point.

5. Spring for live point.

6. Retaining pin 1.3 mm. x 11 mm.
7. Balance weight.

Gauging Points:

8. 24 mm (.95 in.) long.
9. 34 mm (1.34 in.) long.
10. 44 mm (1.73 in.) long.
11. Counter nuts (3 pcs.).

Gauging Extensions:

12. 24 mm (.95 in.) long.
13. 44 mm (1.73 in.) long.
14. 64 mm (2.52 in.) long.
15. 84 mm (3.31 in.) long.
16. 200 mm (7.87 in.) long, for Set No. 2b (no. 2b/Z).

Fitted Wooden Case:

17. (not illustrated).

How to use DIATEST Crankshaft Gauges

1. Determine distance between webs (a), assemble extensions (2) and fixed gauging point (3) to suit, and screw into threaded bush in dial gauge unit, opposite live point (1). Overall length from tip of fully extended live point (1) to tip of fixed point (3) to be about 1 to 2 mm (.04 to .08 in.) greater than web distance (a).

2. The back of the dial gauge unit takes the balance weight to keep the dial facing upward while the gauge is suspended between the webs during crankshaft rotation. Use centre bush for horizontal upward position and outer bush for inclined upward position. Without balance weight, the indicator adopts a face down position.

3. Place gauge between webs of crankshaft so that gauging points are located in punch holes (4), centre punched where measurement of deflection is required: First, place spring-loaded (live) point (1) in one of the two punch holes (4), then locate fixed point (3) in other punch hole. Included taper angle of centre punch to be 50 to 55°. When crankshaft is not exposed, introduce the gauge through the opening in the side of the crank chamber.

4. Set dial pointer to "20" on (metric) dial by rotating indicator bezel. Turn crankshaft by hand and observe pointer movement on dial.

NOTE: Do NOT hold or manipulate indicator during the gauging operation. If view of dial is obscured during some stage of the inspection procedure use suitably held mirror to read it.

Mirrors produce a laterally inverted image. Therefore, set dial pointer NOT to zero but to a figure larger than the maximum deflection allowed, e.g. to "20" on the metric dial, and correct the reading obtained by that figure. This prevents errors caused by transposition of plus and minus when working with a mirror.

5. Read deflections at various positions of crankshaft revolution, as set out in manufacturer's inspection procedure, and enter into inspection record.

"Crankshaft Web Deflection" is defined as the difference between readings obtained at two different positions of crankshaft revolution.

Total web deflection on a crankshaft in a ready-to-operate engine should amount to no more than 0.02 to 0.03mm (approx. .0008 to .0012 in.), depending on size of engine.

