

Service Manual

Instrument Push/Pull Gauges - 719 Series

A. Description:

The Model 719 series is available in four different capacities as follows:

Model	Capacity x graduation	Safety factor
719-5	5 lb x 1 oz 2.25 kg x .05 kg	6
719-10	10 lb x 2 oz 4.5 kg x .05 kg	6
719-20	20 lb x 4 oz 9 kg x .1 kg	4
719-40	40 lb x 8 oz 18 kg x .2 kg	2

Precision springs individually calibrated and checked with dead weights are used in all models.

A compact, finely-built gauge whose slender shape permits its use in the narrowest areas. Extended scale length, additional graduation, sensitivity and lighter capacities recommend its use in laboratories and other demanding applications.

These popular instruments have been adapted for a variety of uses, as such fruit testing, pill crushing, resilience of rubber, etc. Construction is all brass with satin chrome finish. Rod is stainless steel.

A knurled cap alters spring zero adjustment and permits using instrument in any position.

The gauges may be equipped with maximum reading pointers at additional cost. (Add MRP to model number.)

Accuracy: ± 1 graduation.

Tare adjustment: 20% of full capacity.

Temperature range: -10°C to 40°C (14°F to 104°F).

B. Calibration Procedure:

1. Tare & Zero Adjust:

The zero adjustment knurled top (1) is located at the top of the gauge. Rotating the knurled top clockwise or counter-clockwise will move the pointer up or down. Adjustment up to 20% of full capacity is possible, and this can be used to compensate the tare.

2. Span adjustment:

a) Adjust zero

b) Apply full capacity weight to the gauge and observe the reading. If the reading is within the allowable tolerance, then no further adjustment is necessary. If the reading is outside of the allowable tolerance, then determine the percent of deviation from full capacity weight.

c) Disassemble gauge:

- remove the upper screw holding MRP post (15), post itself and

- unscrew MRP pusher (11) for gauge with MRP or remove pointer (8,10) for gauge without MRP;
 - turn the runner (4) 180° and release the set screw;
 - take out the runner (4);
 - locate two screws at the top of the outer tube and remove them;
 - take out the assembly consisted of the top (1), top calibrator (2), spring (3) and center calibrator (5);
- d) If the gauge reading is low, i.e. the pointer stops before the full capacity graduation mark, turn either calibrator slightly outward to increase the number of active spring coils.
- If the gauge reading is fast, i.e. the pointer by-passes the full capacity graduation mark, turn either calibrator slightly inward to decrease the number of active spring coils.
- A full turn of calibrator changes the gauge reading approximately by 1.7%.
- e) Assemble the gauge and repeat the span adjustment procedure until a satisfactory result is achieved.

C. Outline Drawing.

D. Replacement Parts.

E.K.	5-97	INSTRUMENT PUSH-PULL GAUGES	XA-114
DRAWN BY	DATE	JOHN CHATLTON & SONS NEW YORK, U.S.A.	OUTLINE DRAWING

ALL DIMENSIONS IN INCHES

MODEL	CAPACITY	A	B	C	D	F	H
719-5	5 lb x 1 oz	7/8	12-11/16	19-3/16	1-5/16	4	3/16
719-10	10 lb x 2 oz						
719-20	20 lb x 4 oz						
719-40	40 lb x 8 oz						
516-500	1 lb x 1/4 oz	5/8	9-13/16	16-9/16	1-13/16	4	1/8
516-500	500 g x 5 g						
516-1000	2 lb x 1/2 oz						
516-1000	1000 g x 10 g						
509-50	50 g x 2 g	5/8	5-3/16	8-7/8	1-7/8	1-1/2	1/8
509-100	100 g x 4 g						
509-250	250 g x 10 g						

