

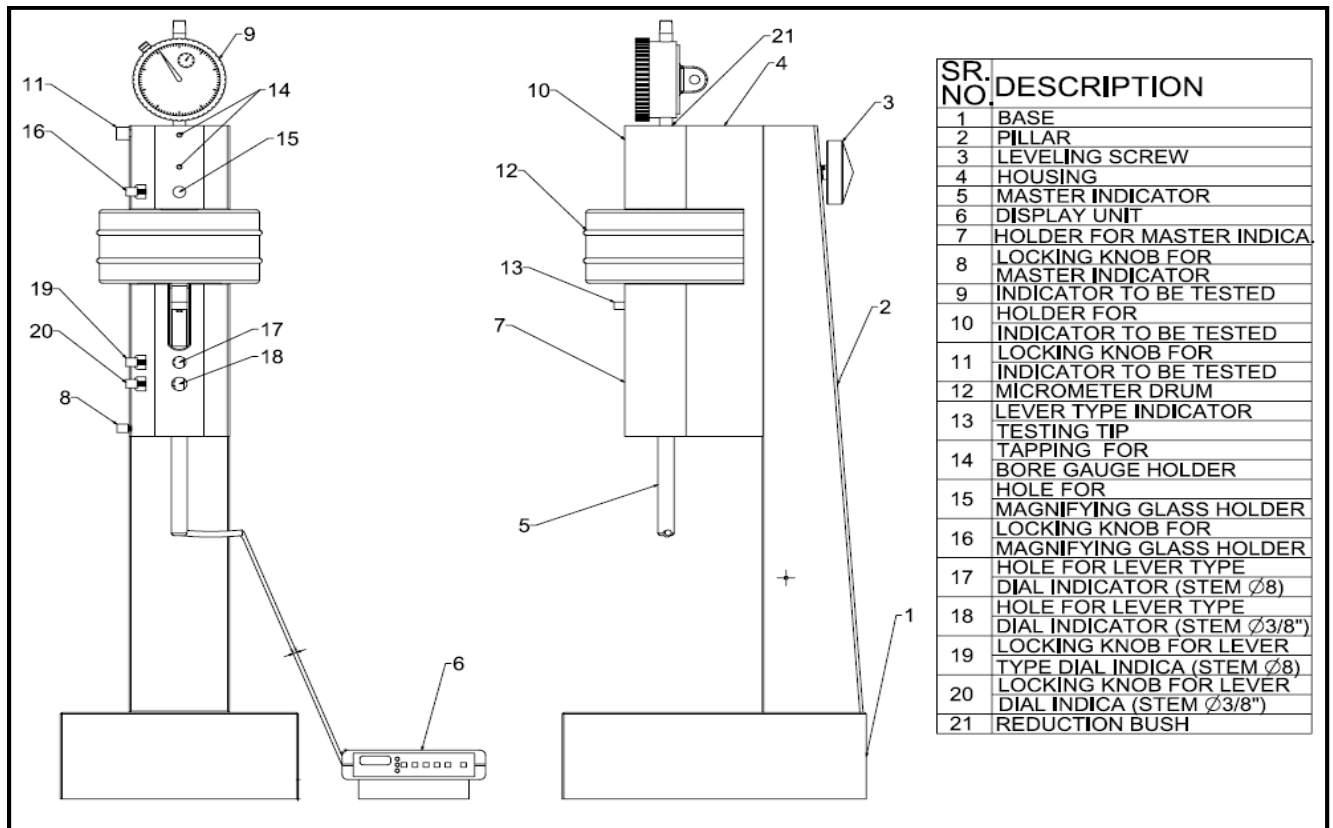
INSTRUCTION MANUAL FOR DIAL CALIBRATION TESTER (100-010)

1.0 UNPACKING THE DIAL CALIBRATION TESTER:-

- 1.1 DIAL CALIBRATION TESTER IS SECURELY PACKED IN WOODEN BOX.
- 1.2 OPEN THE BOX AND COLLECT THE CERTIFICATES.
- 1.3 CAREFULLY REMOVE THE INSTRUMENT FROM THE BOX.

2.0 INSTALLATION DIAL CALIBRATION TESTER:-

- 2.1 GENERAL CONSTRUCTION OF THE DIAL CALIBRATION TESTER IS AS SHOWN IN FIG 1.
- 2.2 PLACE INSTRUMENT ON WORKING TABLE.
- 2.3 REMOVE DUST/DIRT IF ANY WITH CLEAN CLOTH.
- 2.4 ROTATE MICROMETER DRUM SO THAT MEASURING TIP (13) MOVES TOWARDS RIGHT STOP AT ABOUT 0.5 mm AWAY FROM THE STOP LIMIT.

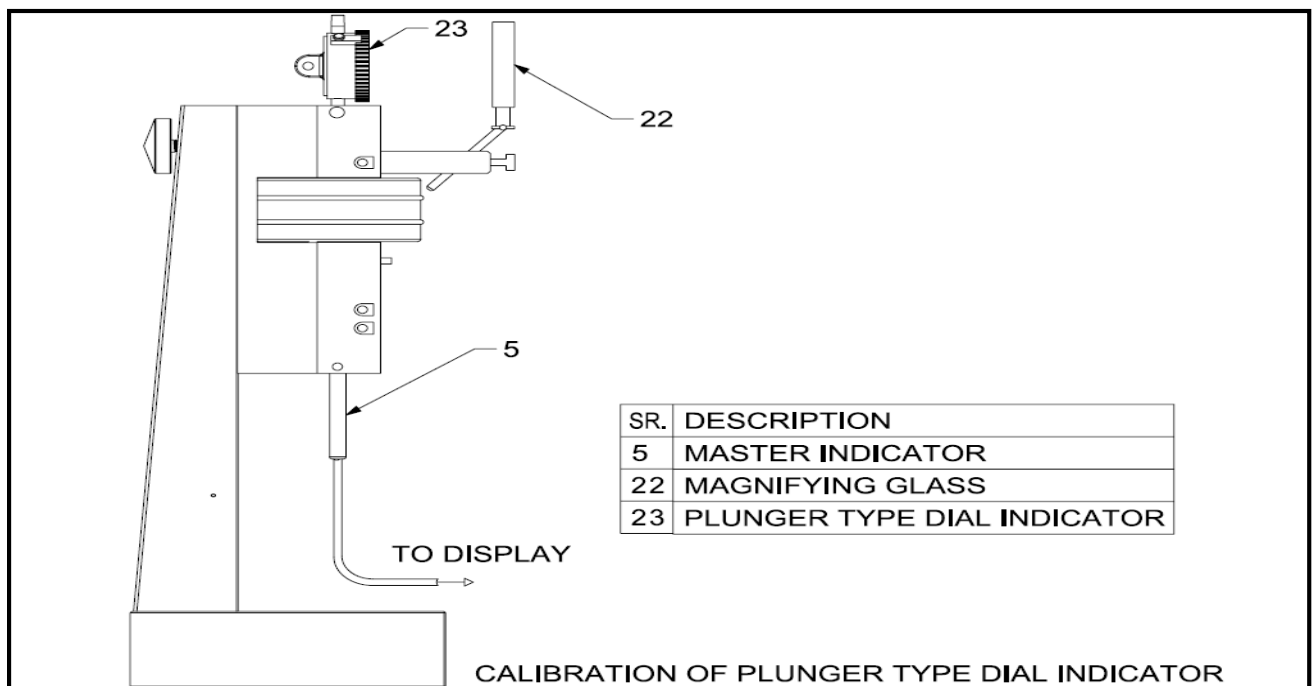


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3.0 CALIBRATION WITH DIAL CALIBRATION TESTER:-

3.1 CALIBRATIONS OF PLUNGER TYPE DIAL.

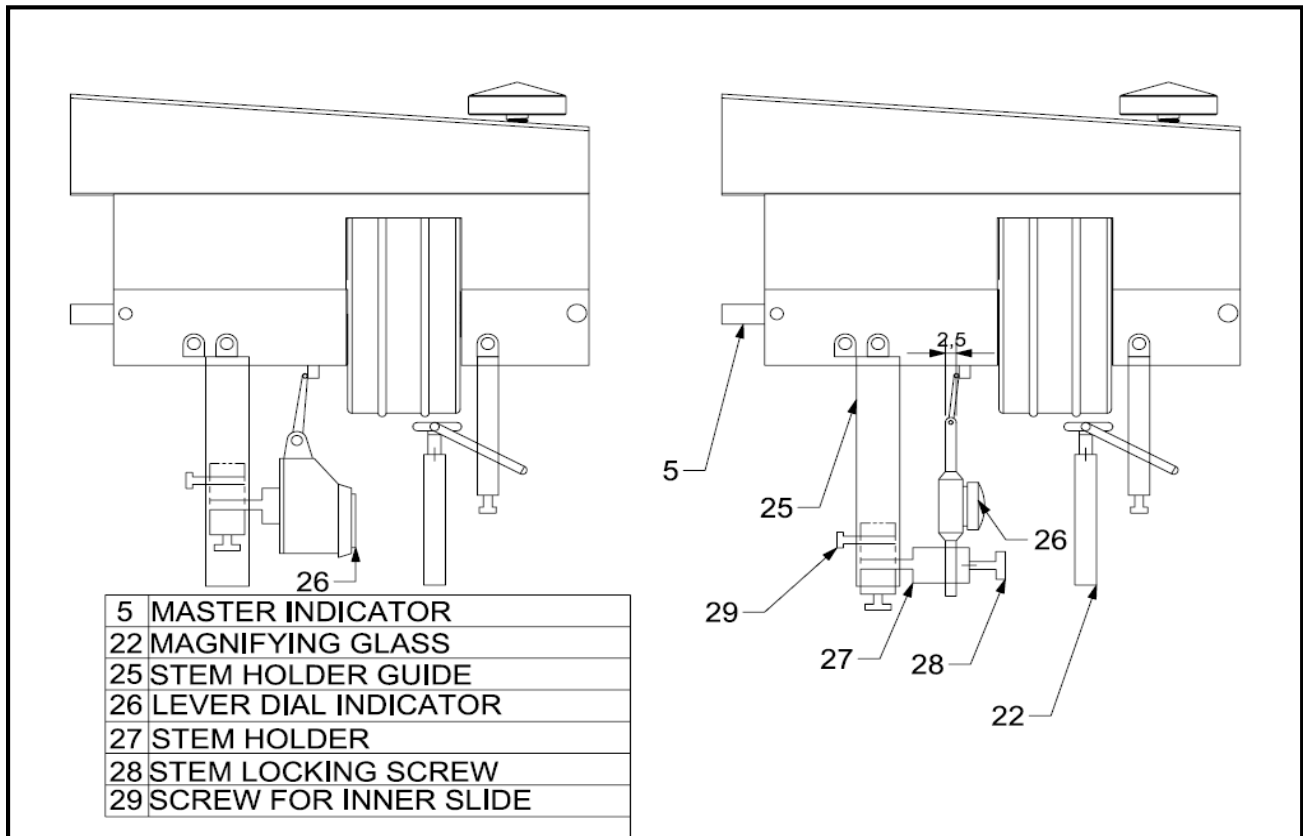
- 3.1.1 INSERT THE MASTER INDICATOR (5) IN HOUSING (7) FIT MASTER COMPLETELY .INSIDE BUSH SOTHAT FULL STROKE OF THE MASTER WILL BE UTILISED WHILE MEASURING 25 mm. THUS, PLUNGER OF MASTER INDICATOR IS FULLY COMPRESSED IN THIS CASE. SECURE MASTER INDICATOR B KNOB (8) DIAL CALIBRATION TESTER COMES WITH BUSHES OF 8 mm I.D
- 3.1.2 INSERT THE INDICATOR TO BE TESTED (9) IN HOUSING (10) UNTIL IT STARTS READING. SECURE INDICATOR BY KNOB (11).
- 3.1.3 IF INDICATOR TRAVEL IS LESS THAN 25mm, THEN ROTATE MICROMETER DRUM UNTIL INDICATOR STARTS READING OR YOU CAN USE EXTENSION OF PROPER LENGTH.EXTENSION IS FITTED TO THE INDICATOR BY REPLACING ITS BALLPOINT.
- 3.1.4 MAKE ZERO ON MASTER INDICATOR AND ON INDICATOR TO BE TESTED.
- 3.1.5 ROTATE MICROMETER DRUM UNTIL INDICATOR TO BE TESTED SHOWS DESIRED VALUE (SUPPOSE 1 mm). NOW, OBSERVE REDING OF MASTER INDICATOR (SUPPOSE 1.001 mm). THUS, ERROR IN THE INDICATOR IS 0.001mm.
- 3.1.6 THUS, THE INDICATOR CAN BE CALIBRATED AT ANY REQUIRED STEPS.



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3.2 CALIBRATION OF LEVER TYPE DIAL INDICATOR:-

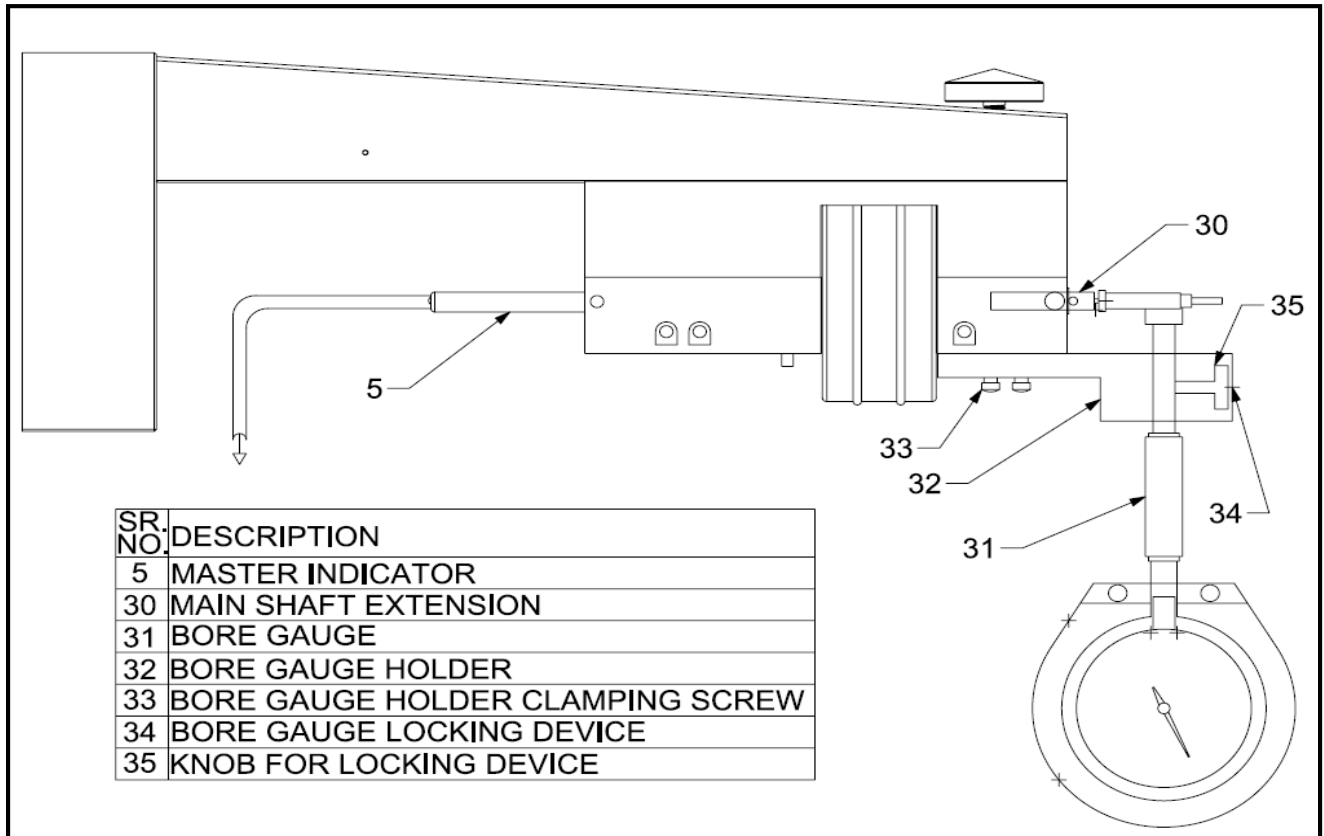
- 3.2.1 MASTER INDICATOR SHOULD BE IN ITS POSITION AS DESCRIBED IN SECTION 3.1.1
- 3.2.2 FIT THE LEVER TYPE DIAL INDICATOR WITH STEM DIA. 8mm IN THE POSITION (17). SECURE INDICATOR BY KNOB (19) BALL POINT OF LEVER TYPE PROBE SHOULD TOUCHES TO THE MEASURING TIP (13).
- 3.2.3 MAKE ZERO ON MASTER INDICATOR AS WELL AS ON LEVER TYPE INDICATOR.
- 3.2.4 ROTATE MICROMETER DRUM UNTIL LEVER TYPE INDICATOR SHOWS DESIRED VALUE (SUPPOSE 0.01mm). OBSERVE READING OF MASTER INDICATOR (SUPPOSE 0.012mm) THUS, THE ERROR IN LEVER TYPE INDICATOR IS 0.002mm.
- 3.2.5 THUS, LEVER TYPE INDICATOR CAN BE CALIBRATED AT ANY REQUIRED STEPS



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3.3 CALIBRATION OF BORE GAUGE:-

- 3.3.1 MASTER INDICATOR SHOULD BE IN ITS POSITION AS DESCRIBED IN SECTION 3.1.1
- 3.3.2 LOOSE KNOB (11) AND REMOVE REDUCTION BUSH (21).
- 3.3.3 INSERT BORE GAUGE CHECKING EXTENSION (30) INTO THE HOUSING AND TIGHTEN IT ON THE THREADS OF THE SHAFT. (REFER FIG.5)
- 3.3.4 MOUNT BORE GAUGE HOLDER (32) USING SCREWS (33) ON THE HOUSING ACCORDING TO DIMENSIONS OF THE BORE GAUGE.
- 3.3.5 INSERT LOCKING DEVICE (34) IN THE SLOT OF THE BORE GAUGE HOLDER AND SECURE BORE GAUGE STEM BY KNOB (35) SO THAT MEASURING ANVIL OF THE BORE GAUGE IS APPROXIMATELY AT THE CENTERLINE OF EXTENSION (30)
- 3.3.6 NOW, ROTATE MICROMETER DRUM AND PERFORM CALIBRATION IN THE SAME MANNER AS EXPLAINED FOR DIAL GAUGES





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4.0 ACCESSORIES OF DIAL CALIBRATION TESTER:-

4.1 USING MAGNIFYING GLASS:-

4.1.1 MAGNIFYING GLASS CAN BE USED TO INCREASE READABILITY IN VARIOUS WAYS

4.2 ACCESSORY FOR LEVER TYPE DIAL INDICATOR:-

4.2.1 LEVER TYPE DIAL INDICATORS WITH STEM DIAMETER 8mm AND 3/8" ARE CALIBRATED ON THE STANDARD UNIT. FOR HOLDING LEVER DIALS WITH STEM 4 mm DIAMETER, HOLDERS ARE PROVIDED.

4.2.2 WITH THIS ACCESSORY, LEVER TYPE DIAL INDICATORS OF MAXIMUM LEVER LENGTH 40 mm CAN BE CALIBRATED.

5.0 PRECAUTIONS:-

5.1 DIAL CALIBRATION TESTER SHOULD BE USED CAREFULLY. PREVENT IT FROM DIRT AND DUST.

5.2 THE MICROMETER DRUM IS QUITE SENSITIVE AND SHOULD BE ROTATED VERY CAREFULLY.

5.3 AS ABBE'S PRINCIPLE IS FOLLOWED WHILE DESIGNING THIS INSTRUMENT, VARIATIONS IN THE READINGS CAUSED DUE TO PRESSURE ON THE DRUM ARE SAME ON BOTH INDICATORS.

5.4 DO NOT OVERLOAD THE MICROMETER DRUM.