Fermilab

Particle Physics Division
Mechanical Department Calibration
Standards/Procedures

Number: MD-CALPROC-022 **Date:** 6/26/2009

Manufacturer: Fermi-written Procedure

Model: Pressure Gauge Calibrations

Reviewer(s): James E. Tweed

This Procedure is used for:

Calibration guidelines for all mechanical gauges.

~ Pressure Gauge Calibrations ~

Pre-Calibration ~

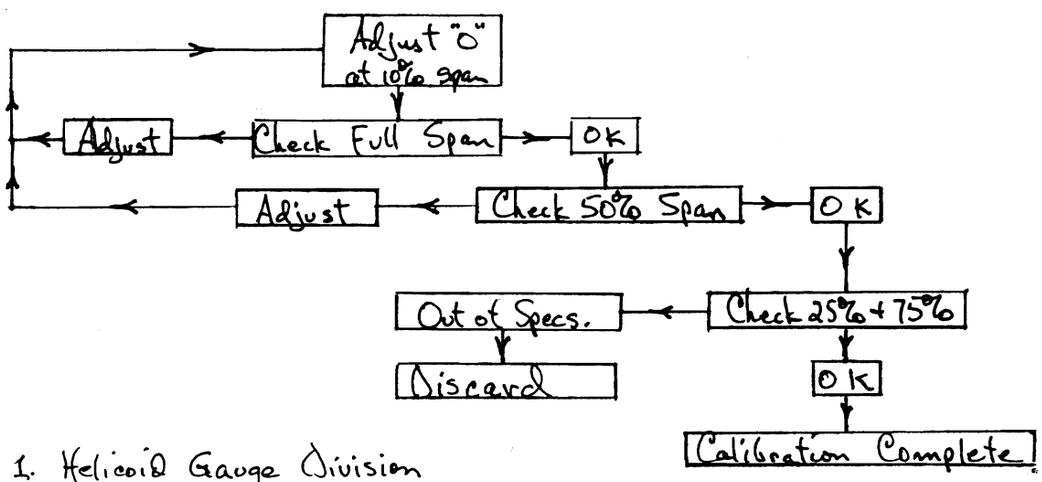
If gauge movement is clean and inside of case clean then calibration can be done - otherwise disassemble gauge and movement. Both should be cleaned, the case in Simple Green or equivalent & movement & bourbon tube in Micro. If Micro gets into bourdon tube it will have to be rinsed & dried before calibration. Assemble movement & gauge when clean.

Calibration Procedure ~

A. Exercise gauge over entire span prior to calibrating. Check for sticking, draging pointer - correct problems.

B. Set low end of span at 10% of span[1]. Check full span and adjust sliding linkage if needed. After adjusting span, recheck low end and adjust. If adjustment was made full span will have to be checked and adjusted. Continue until both are within specs.

C. Check 50% span - if adjustment is needed adjust so pointer moves in direction of error about 3 times the amount of error. Repeat section B. before rechecking 50% span. When B. is complete then 50% span can again be checked. Continue with B. and C. until within specs. 25% and 75% of span should then be checked - if within specs. calibration is complete. If out of specs, the movement is excessively worn or the bourdon tube has been stretched or damaged - discard.



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