

Tool Setter - Electronic Calibration. (Horizontal)

Equipment.

Machine Control Software. (F4 screen page 3)
Special Fixture.

Purpose.

To set the pre-travel of the horizontal probe.

Tolerance.

± 0.0001 " (2.5 μ m)

Method.

1. Make a mark on the body of the horizontal LVDT, to reference its position in the tool setter.
2. Remove the LVDT from the tool setter.
3. Disconnect the air supply to the LVDT, and remove the center set screw from the LVDT top plate.
4. Using the vertical tool setter as a fixture, make a mark on the body of the vertical LVDT, and remove. Insert the horizontal LVDT in to the vertical tool setter casting.
5. By jogging X and Z, position the LVDT over one of the free toolposts.
6. Raise the toolpost until the surface of the toolpost comes into contact with the LVDT ruby tip. (Check this with a loupe).
7. Set the toolpost height gauge to zero.
8. Adjust the toolpost up until the toolpost gauge reads 0.008" (200 μ m)
9. In the machine control software, select page 4 of the F4 maintenance screen. Check the message bar at the bottom of the screen, to ensure "Tool Probe" is selected.
10. Insert a small screwdriver through the set screw hole, and turn the shaft until the tool probe indicator on the screen illuminates. (Note: the screwdriver should be removed between each adjustment, as it may falsely trip the LVDT).
9. Re-check from 6 above for verification.
10. Re-assemble the horizontal and vertical LVDTs back into their appropriate castings, and test horizontal LVDT stiffness.