WP1 - Universal Wheel Probe
Brief Operating Instructions

Rohmann LLC

The WP1 probe was designed to allow inspection of tube-well and the bead-seat areas of aircraft wheels. The probe has a wide sensing area of 0.5 inches on either side of the radius. This allows you to rapidly scan the tube-well by indexing the probe down by 0.4" per revolution. The bead-seat radius is then inspected using the radius of the probe. The rim can then be inspected within one revolution.

Equipment required:

- Wheel reference standard and inspection procedure
- WP1-A or WP1-P probe (the difference is only in the material of the housing)
- WP1 Guide with wear-pads and probe mounting screws
- Eddy current instrument with cable to a 4-socket Fischer receptacle (on probe), configured to handle a driver-receiver sensor arrangement



Figure 1 Wheel probe WP1 with accessories

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Assembly Instructions

Cover the probe sensing surface with teflon tape.

Assemble the probe into the guide as shown in figure 2:
Mount the wear-pads, insert the probe and insert the screws.
Push the probe all the way forward and lightly tighten the
Screws to that the probe can move under a bit of pressure.



Figure 2

Place the assembly against the tube-well of the standard
And press the probe/guide in until the side wear-pads
Of the assembly touch the tube-well. This fits the assembly
To the tube-well radius (figure 3).
While holding the probe/guide in place, press the probe all
the way up against the bridge of the guide.
Then tighten the screws.



Figure 3

The probe/guide should be able to move along and around
The tube-well with a minimum of wobble, fit into the bead-seat
(figure 4) radius and onto the rim.

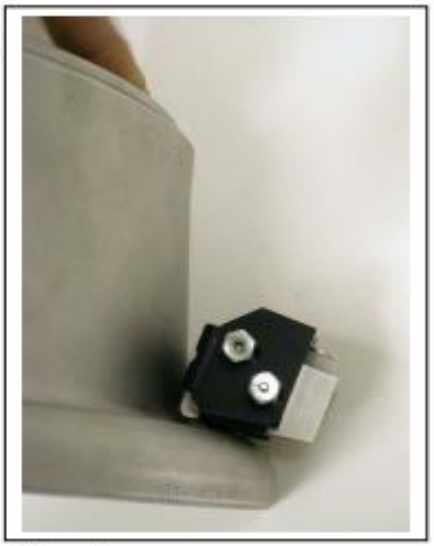


Figure 4

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Inspection:

Insert the probe cable into the probe and into your instrument. Set the frequency to 100 kHz and perform a pre-cal. Follow your procedure for the rest of the inspection.

The signals from a reference notch are shown in figures 5, 6 and 7.



Figure 5 Elotest M2 with WP1

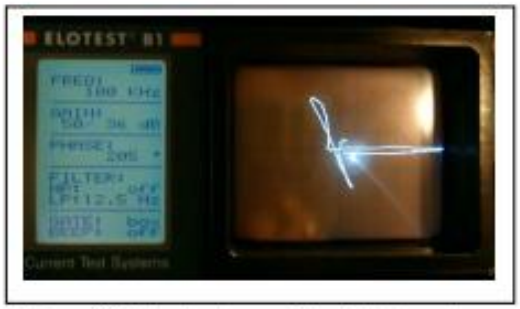


Figure 6 Spot-display on B1: notch signal

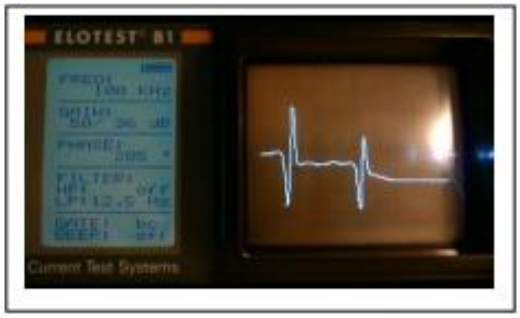
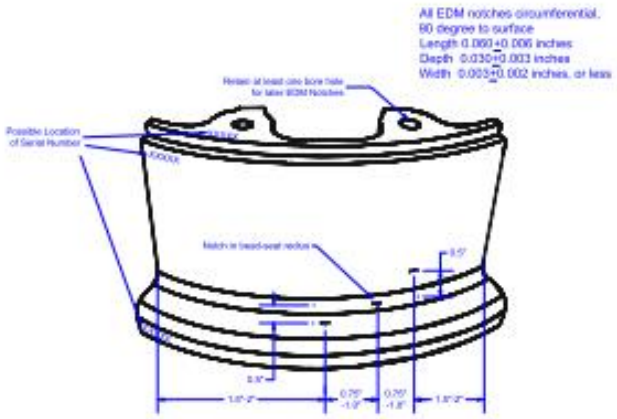


Figure 7 Time-base display of 2 notches in reference standard



Typical Reference Standard

Information subject to change.

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