

U-02a: Replace Feedback Device (Farrand Scale)

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- Although the machine is not powered up during the replacement and continuity check steps of the procedure, the machine is powered up during the alignment process. Remain clear of moving components and pinch points.
- Exercise caution when working in the control cabinet because high voltage is present.

EQUIPMENT

- open/box 7/16" wrench
- screwdriver
- analog Triplett meter
- DVM
- needle nose pliers
- scale alignment tool
- scale

RESOURCES

- electrical print



Replace Feedback Device (Farrand Scale)

1. Locate a replacement scale.

- Select a replacement scale with identical specifications. Look at the part information on the defective scale. Scales are manufactured for both inch and metric systems, as shown in the figure below.

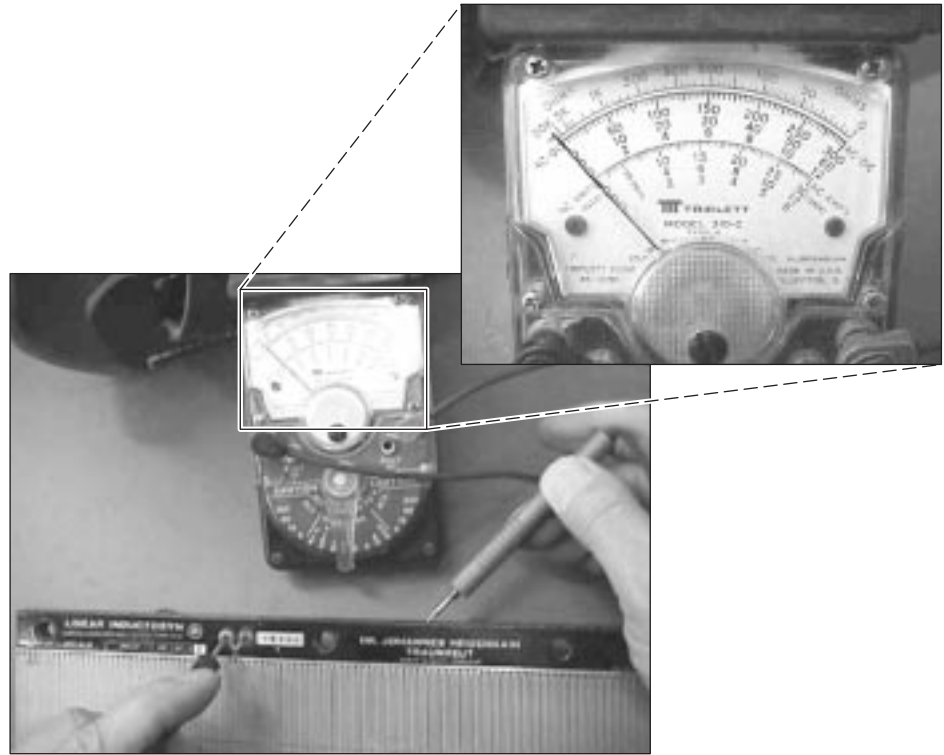


English or Metric System
Indicated Here



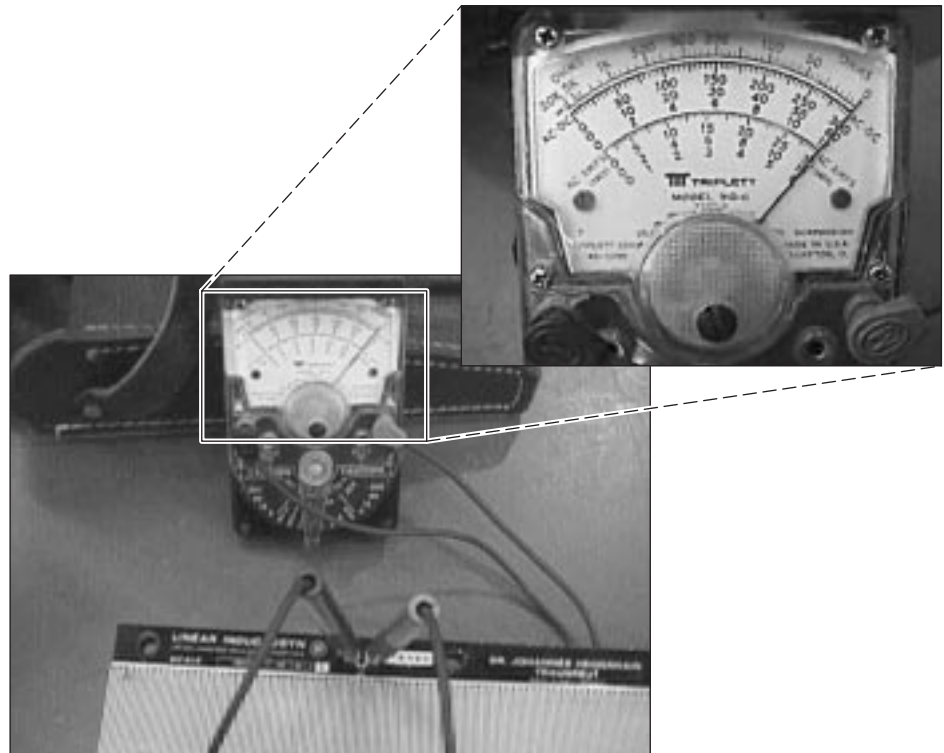
Measurement System

2. **Check the new scale with ground to ensure that the scale is operating properly.**
 - Expect a ground reading of infinity, before installing the scale. See the figure below.



Probe Placement for the Ground Check

3. **Check the new scale for continuity to ensure that the scale is operating properly.**
 - Expect a continuity reading of 4 ohms or less. See the figure below.



Probe Placement for the Continuity Check

4. **Install the scale.**
 - Install the three mounting screws hand-tight, do not over tighten them. You need to be able to nudge the scale in the right and left directions during the laser alignment process.
 - Attach the wires to the scale in the same sequence they were removed. The scale segments are attached in series.
 - Reconnect the two wires at the preamp.