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# 9060 SCTS - Shaft Calibrator Touch Select

Installation Manual

The 9060-SCTS (Shaft Calibrator Touch Select) is used for testing 5mm, 8mm or 11mm proximity probe systems with a minimum probe body length of 63mm (2.5") when used as a static calibrator and a minimum probe body length of 100mm (4.0") when used with the shaft mounting adapter. It is also very useful for testing reverse mount probes with the probe holder still attached. The system can test probe systems up to 22mm in diameter.

FEATURES

- Accepts proximity probes up to 22mm (0.866")
- 4mm (0.20") range
- Minimum probe body or probe holder length is 63mm (2.5") when used as a static calibrator and a minimum probe body or probe holder length of 100mm (4.0") when used with the Shaft Mounting Adapter
- Composite plastic (POC) Shaft Mount material does not affect sensitivity, mounting strap included
- Adjusting strap for shaft diameters from 25mm to 300mm (1 to 12 inches)

GENERAL INSTRUCTIONS FOR USING THE 9060-SCTS AS A SHAFT CALIBRATION DEVICE:

1. Strap the Shaft Mounting Adapter to the shaft (rotor or connecting rod) as shown in the photograph below.
2. Adjust the straps as necessary to get a tight mounting.
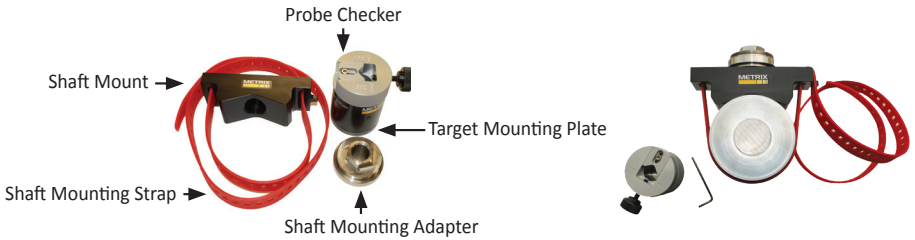
3. Remove the Probe Checker Target Mounting Plate.

4. Screw the Probe Checker onto the Shaft Mounting Adapter.

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5. Adjust the Probe Checker Assembly to the first "click" or "stop".
6. Insert the probe, or reverse mount probe and probe holder, into the Probe Checker. Adjust the probe depth so that the proximity probe gently touches the shaft (passing through the Composite Plastic Shaft Mount). Tighten the probe or probe holder into the Probe Checker unit.

WITH ENGLISH UNITS

1. Adjust the Gap Adjustment Ring to the first "click" or "stop". Gently set the probe against the shaft or target material. This is "0" mils when the probe tip is touching the shaft or target material.
2. Connect the probe / cable / driver or transmitter to a digital voltmeter so you can measure the gap voltage. At "0" gap, the proximity probe system should read less than 1 volt DC.
3. Rotate the Gap Adjustment Ring to the next "click" or "stop". This is 10 mils, generating a 10 mil gap, the voltage on the digital voltmeter should read 1.0 VDC ±0.5 VDC. Record the voltage.
4. In increments of 10 mils (the next "clicks" or "stops"), record the voltage, to the limit of the proximity probe linear range (usually 90 mils).
5. Using plotting paper, Excel or other tool the data can be plotted and the slope of the line (curve) can be measured. For 5mm and 8mm proximity probe systems the slope is usually 200 mV/mil ±5%.
6. Depending upon the situation, you may want to calculate the Incremental Scale Factor, which is the slope between points, or the deviation from a straight line, which are both API 670 requirements.
7. An Excel file to plot the static calibrator data can be found on the Metrix website at the following link (Probe Curve Template): http://www.metrixvibration.com/products/proximity/accessories/product/681/static-calibrator

WITH METRIC UNITS

1. Adjust the Gap Adjustment Ring to the first "click" or "stop". Gently set the probe against the shaft or target material. This is "0" mils when the probe tip is touching the shaft or target material.
2. Connect the probe / cable / driver or transmitter to a digital voltmeter so you can measure the gap voltage. At "0" gap, the proximity probe system should read less than 1 volt DC.
3. Rotate the Gap Adjustment Ring to the next "click" or "stop". This is 200 µm (0.2 mm), generating a 0.2 mm gap, the voltage on the digital voltmeter should read 1.0 VDC ±0.5 VDC. Record the voltage.
4. In increments of 200 µm (0.2 mm) (the next "clicks" or "stops"), record the voltage, to the limit of the proximity probe linear range (usually 2000 µm (2.0 mm)).
5. Using plotting paper, Excel or other tool the data can be plotted and the slope of the line (curve) can be measured. For 5mm and 8mm proximity probe systems the slope is usually 7.87 mV/µm ±5%.
6. Depending upon the situation, you may want to calculate the Incremental Scale Factor, which is the slope between points, or the deviation from a straight line, which are both API 670 requirements.
7. An Excel file to plot the static calibrator data can be found on the Metrix website at the following link (Probe Curve Template): http://www.metrixvibration.com/products/proximity/accessories/product/681/static-calibrator
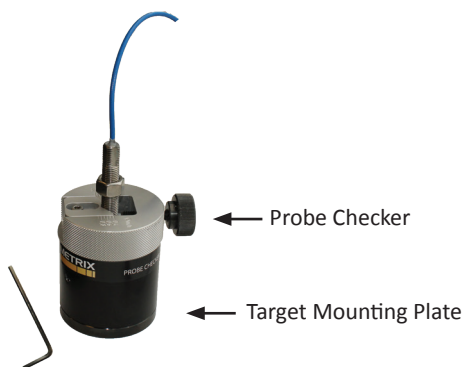
GENERAL INSTRUCTIONS FOR USING THE 9060-SCTS AS A STATIC CALIBRATION DEVICE:

1. Ensure the Target Mounting Plate with appropriate Target Material is screwed into the Probe Checker.

2. Adjust the Probe Checker Assembly to the first "click" or "stop".

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3. Insert the probe into the Probe Checker. Adjust the probe depth so that the proximity probe gently touches the target material. Tighten the probe or probe holder into the Probe Checker unit.

← Probe Checker

← Target Mounting Plate

WITH ENGLISH UNITS

1. Adjust the Gap Adjustment Ring to the first "click" or "stop". Gently set the probe against the shaft or target material. This is "0" mils when the probe tip is touching the shaft or target material.
2. Connect the probe / cable / driver or transmitter to a digital voltmeter so you can measure the gap voltage. At "0" gap, the proximity probe system should read less than 1 volt DC.
3. Rotate the Gap Adjustment Ring to the next "click" or "stop". This is 10 mils, generating a 10 mil gap, the voltage on the digital voltmeter should read 1.0 VDC ±0.5 VDC. Record the voltage.
4. In increments of 10 mils (the next "clicks" or "stops"), record the voltage, to the limit of the proximity probe linear range (usually 90 mils).
5. Using plotting paper, Excel or other tool the data can be plotted and the slope of the line (curve) can be measured. For 5mm and 8mm proximity probe systems the slope is usually 200 mV/mil ±5%.
6. Depending upon the situation, you may want to calculate the Incremental Scale Factor, which is the slope between points, or the deviation from a straight line, which are both API 670 requirements.
7. An Excel file to plot the static calibrator data can be found on the Metrix website at the following link (Probe Curve Template): http://www.metrixvibration.com/products/proximity/accessories/product/681/static-calibrator

WITH METRIC UNITS

1. Adjust the Gap Adjustment Ring to the first "click" or "stop". Gently set the probe against the shaft or target material. This is "0" mils when the probe tip is touching the shaft or target material.
2. Connect the probe / cable / driver or transmitter to a digital voltmeter so you can measure the gap voltage. At "0" gap, the proximity probe system should read less than 1 volt DC.
3. Rotate the Gap Adjustment Ring to the next "click" or "stop". This is 200 μm (0.2 mm), generating a 0.2 mm gap, the voltage on the digital voltmeter should read 1.0 VDC ±0.5 VDC. Record the voltage.
4. In increments of 200 μm (0.2 mm) (the next "clicks" or "stops"), record the voltage, to the limit of the proximity probe linear range (usually 2200 μm (2.2 mm)).
5. Using plotting paper, Excel or other tool the data can be plotted and the slope of the line (curve) can be measured. For 5mm and 8mm proximity probe systems the slope is usually 7.87 mV/μm ±5%.
6. Depending upon the situation, you may want to calculate the Incremental Scale Factor, which is the slope between points, or the deviation from a straight line, which are both API 670 requirements.
7. An Excel file to plot the static calibrator data can be found on the Metrix website at the following link (Probe Curve Template): http://www.metrixvibration.com/products/proximity/accessories/product/681/static-calibrator

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