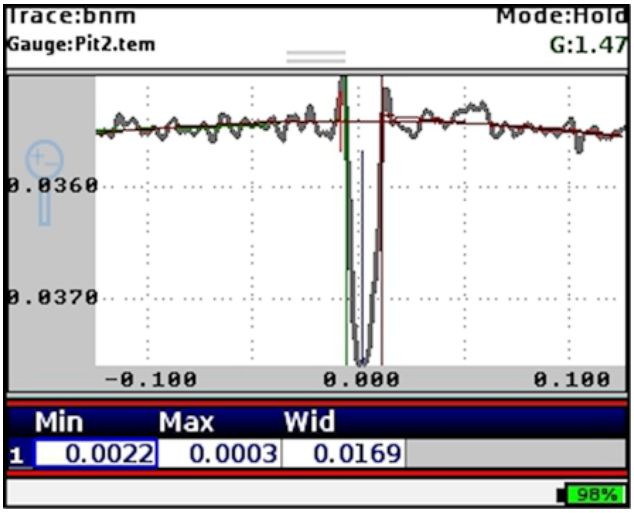
CASE STUDY

Scratch Depth Inspected with LaserGauge®

THE CHALLENGE

A heavy equipment remanufacturer refurbished used camshafts to be sold as quality used parts. To determine if the camshafts could be reworked, scratch depth had to be measured. If it was determined that the defect was deeper than 0.006”, the part was scrapped.

However, the current method of measuring was to drag the bent tip of a ball scribe over the scratch. If it was ‘felt’ by the operator using the tool, it was too deep and the part was designated for scrap. Compounding the problem is that there was no way to easily record the data for each measured part except by hand.



THE SOLUTION

During a demonstration of the LaserGauge® HS713 DSP sensor, 24 previously scrapped parts were evaluated. The HS713, with its custom algorithm for measuring scratch depth, determined that 18 of the 24 parts could be salvaged while 6 indeed had scratches at or deeper than 0.006”.

A LaserGauge® HS713 DSP sensor with a 0.75" field-of-view was chosen for the application because the sensor is specifically designed for inspecting and measuring smaller features that require a narrower field-of-view and higher scanning resolution.

Inspectors were able to make each measurement within seconds and the in or out-of-spec condition was shown by a color-coded GO/NO-GO indicator.

Using the LaserGauge® HS713 sensor, the manufacturer was able to quickly identify which of the scratches were within rework parameters and save that measured data for future reference and reduce the amount of scrapped parts.