

Application Story

Using Jet Probes in Automation

The Challenge

In automation, a critical factor is downtime. If a measurement sensor breaks down, the entire assembly line could shutter while it is replaced, costing a factory thousands of dollars.

With pneumatic gauging probes, one potential failure mode is if the gaiter (or boot) is damaged or punctured, the probe will fail to extend, thus meaning a critical measurement cannot be made.

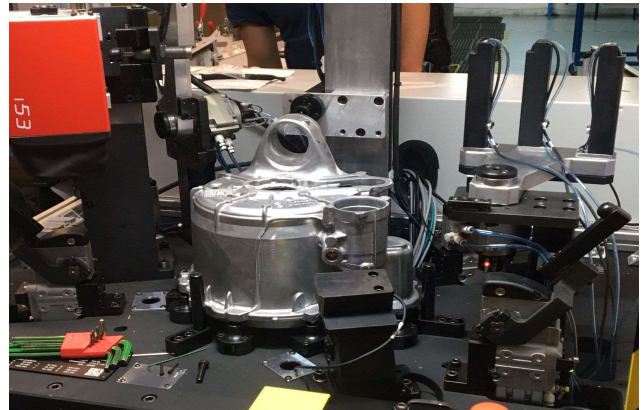
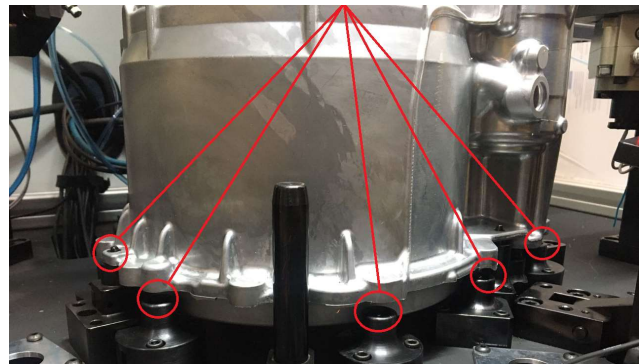
The Solution

Solartron Metrology offers **Jet Pneumatic Probes**, which operate independently of the gaiter. Even when a gaiter is damaged or punctured, the probe can still pneumatically extend as excess air goes out of a tiny hole at the side of the body. (Indicated right)

- **No Downtime:** With standard pneumatic gauging sensors or encoders, if the gaiter or boot is damaged or punctured, the probe tip will not extend until the gaiter is repaired or the entire probe is replaced, which could mean significant downtime. That is not an issue with the Jet Probe, as it will continue to function even if the gaiter is damaged, and can be repaired at a more convenient time.
- **2, 5, 10, 12 and 20 mm measurement ranges**
- **Same Performances as standard probes:** Pneumatic Jet Probes have the same resolution and repeatability as standard gauging probes. They are a similar length as well.
- **Rugged Build:** Solartron probes have been tested to millions of cycles, and are built in a stainless steel casing to withstand years of abuse, including vibration and heat.
- **Easily Network multiple sensors:** With Solartron's Orbit® network, up to **250 sensors** can be connected together, both contact and non-contact.
- **Multiple Output Options:** With Orbit®, all readings can quickly be output to a PC with Solartron provided software, or the customer's software pack as well. There are also gateways for Profinet®, Ethernet/IP®, EtherCAT®, CC-Link®, and Modbus based PLCs.



DJ/12/P 12mm Digital Pneumatic Probe checking profile form



This gauge by **Arce Tools** in Puebla, Mexico, (www.arcetools.com) utilizes DJ/12/P probes to check profile form in a motor stator housing for Tesla.

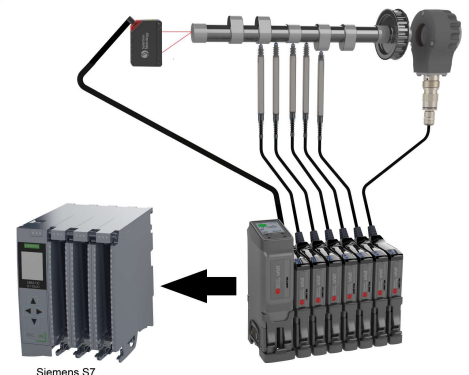
EtherNet/IP®

PROFINET®

EtherCAT®

Modbus

CC-Link



Orbit® – The Total Measurement System from Solartron Metrology

The Solartron Orbit® Digital Measuring System provides a limitless set of measurement solutions, with numerous different interfaces to computers and PLC's.



Flexures



Block Gauges



Displacement



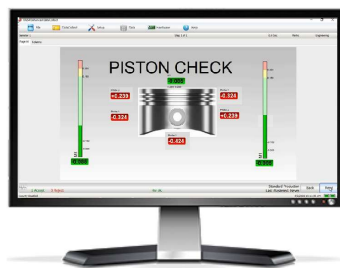
Multi Channel Wireless Gauge



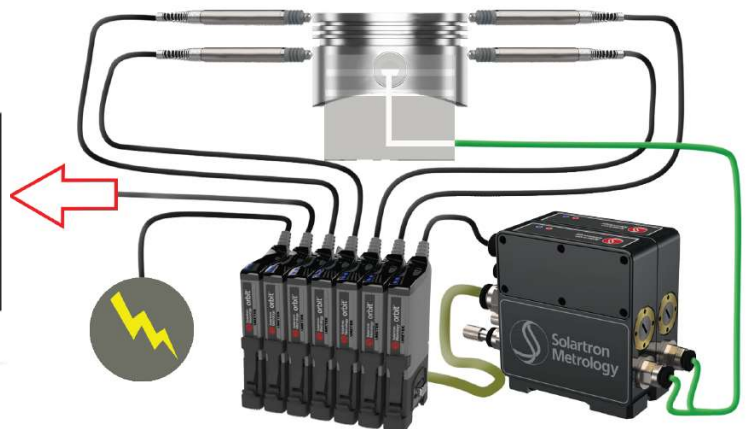
SI 8500



Bore Gauging



Orbit Gauge Software 4.0



Measurement of Piston with Air Gauging checking ID, and connected to Orbit with the Air Gauge Module. OD Checked with Digital Probes.

Digital Probes and Lasers checking an EV pouch