



Volume 1 Issue 2

Application Solutions

Automotive Industry

Electronic oxygen sensor mounting flange inspection

Problem: Customer must confirm the depth of the mounting flange on an oxygen sensor. If this depth is not correct, the sensor cannot be properly mounted and may become dislodged. As with many automotive suppliers, inspection of parts to guarantee quality is important to prevent fines or return of entire production lots at the supplier's expense.

Solution: Omron's F160 vision sensor uses edge detection and inspection with mathematical calculations to determine if the flange dimension is correct.

How it works:

Both the top and the bottom of the mounting flange are detected using edge detection tools as shown in image 1 below. Front lighting is used to illuminate the oxygen sensor. LED or fluorescent lighting can be used.

By using the F160's judgment calculation capability, the top and bottom edges are subtracted from each other to determine the height of the flange in the high-speed time frame required by the customer, as shown in image 2.

Image 1

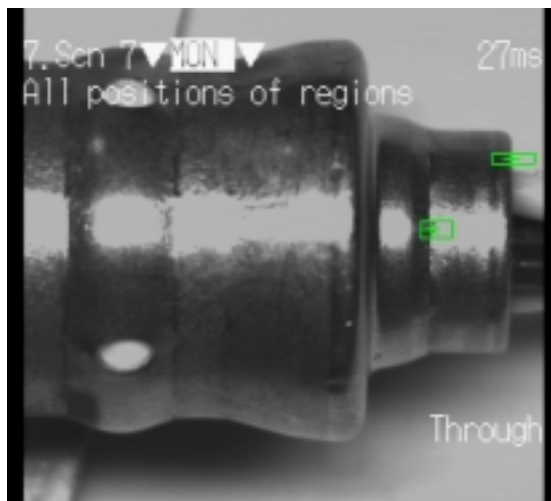


Image 2

