

# REPLACING TEMPERAMENTAL 2D WITH 3D MACHINE VISION

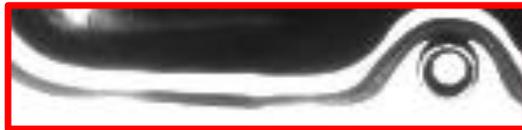
## “EYES OF AUTOMATION”

### Problem Statement

Customer A (Leading Global Automotive OEM) had been experiencing a high false reject rate (up to 18%, 540 pieces/day) from its 2D vision system inspecting the sealant dispensing process on oil pans. It’s direct pass rate target was/is 99.7%. Every time a false reject happens, it causes 6.6 second “waste time” for the operator to take manual action on it. The total waste time equaled 59.4 minute per day, which meant 126 fewer engines were being made each day. The picture below shows a typical false reject using the 2D vision which could not handle ambient light changes and/or color changes (gray-on-gray in this case).



Gray sealant being dispensed on oil pan



Actual image captured by 2D camera



Shiny Oil Pan makes Sealant Bead (white in picture above) “look” thin on 2D vision — **False NG**

### Coherix Solution

Coherix Predator3D™ helped this customer significantly reduce the daily false reject rate, resulting in increased throughput of their RTV dispensing process. Predator3D also caught true defects as shown in the color graphic on right side of this page) – also critical in real time process control.

Coherix helped the customer replace its 2D vision system with its Predator3D bead inspection and process control system in a quick plug and play sensor replacement enabling immediately real-time robust quality control. Equipped with four high-speed 3D sensors, Predator3D provides a 360° 3D view of the bead in any dispensing direction with no added complexity to robot programming. Embedded with Coherix proprietary solution software, Predator3D bead inspection provides real-time 3D information on bead width, height, volume, location, and auto repair of skips or neck-downs with no external computer needed.

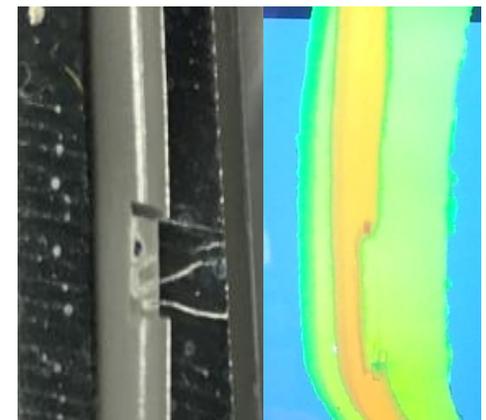


Missing a chunk of bead

### Result

Customer A successfully achieved 99.7% direct pass rate significantly reduced the number of false rejects (from 540 to 4 per day) within one week.

Besides, With Coherix Predator3D Bead inspection solution, defects can be clearly seen from the 3D images (pictures shown on the right) , and no defect parts can sneak away from Predator3D’s “Eyes of Automation”.



Thin bead