# Eyes of Automation

Coherix Predator3D™ helped this customer significantly reduce false reject rate and increase throughput of their RTV dispensing process.

Problem Statement

Customer A (Leading Global Automotive OEM) has been suffering high false reject rate (up to 18%, 540 pieces/day) from its 2D vision system inspecting sealant dispensing process on oil pan, while its direct pass rate target is 99.7%. Every time a false reject happens, it causes 6.6 second waste for the operator to take manual action on it. The total waste of time can be 59.4 minute per day, which means 126 fewer engines being made. The picture below shows a typical false reject.
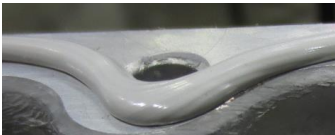
Gray sealant being dispensed on oil pan
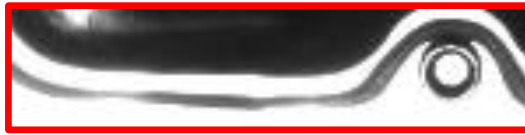

Actual image captured by 2D camera

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

Coherix Solution

The root cause of the high false reject rate problem is the temperamental 2D vision cannot handle ambient light and/or color (especially gray-on-gray for this case) change. Coherix helped the customer replace its 2D vision system with Predator3D bead inspection and process control system to perform real-time robust quality control. Equipped with four high-speed 3D sensors, Predator3D provides 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 detects skips or neck-downs with no external computer needed. The pictures on the right show the 3D inspection done by Predator3D.

Missing a chunk of bead
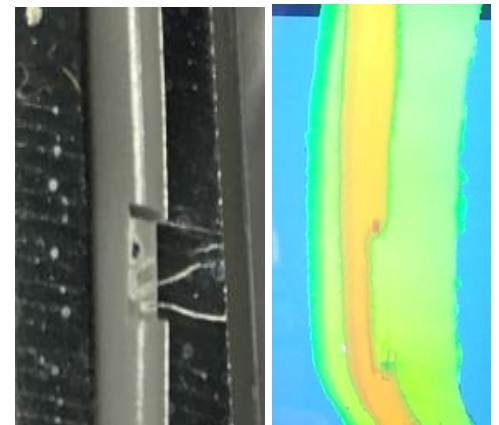
Thin bead

Result

Customer A successfully achieved 99.7% direct pass rate (0.13% false reject from Coherix Predator3D, significantly reduced from 540 to 4 per day) within one week.