

Eyes of Automation

Coherix Predator3D™ GlassMaster™ caught Windshield urethane dispensing defects real time during the process, which helped customer prevent a major quality leakage and an expensive repair campaign.

Problem Statement

Customer A (a leading global automotive OEM) applies Urethane on every windshield in mass production before it gets assembled to the vehicle frame for water seal and frame rigidity. One batch of Urethane material in production use was beyond the shelf life, which caused viscosity deterioration and the Urethane bead was dispensed lower than the height requirement.

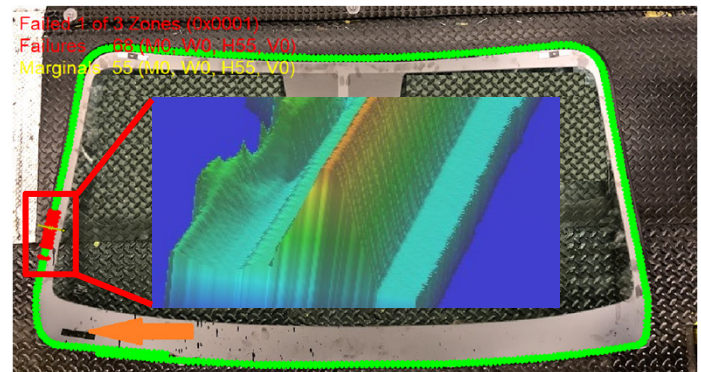
This could cause water leakage in leak test and a major tear-down for repair, which is roughly 4 hours of labor per windshield. Before Predator was implemented, they manually checked their windshield urethane for presence/absence by visual check. This low-height failure could have passed the manual check and would have caused hundreds of windshields to be assembled before the first failure made it to the leak test station.

Coherix Solution

Predator3D GlassMaster is a Robust 3D inline inspection and process control solution to high-profile windshield urethane bead dispensing process. 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. Equipped with Predator3D GlassMaster, the Customer was able to catch the low-height bead defect as the bead is being dispensed on the windshield (pictures on the right show the 3D inspection result by Predator3D GlassMaster).

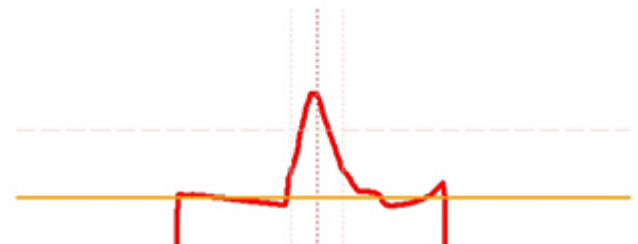
Result

With Predator3D GlassMaster integrated into the windshield assembly station, the Customer avoided a major quality leak and gained peace-of-mind for their windshield dispensing processes.



Inspection Result and 3D view of urethane bead on windshield

Inager	2	Display Index	2583
Track	0	Recipe Position	342
Classify Zone	1		
Width (mm)	7.91	(5.00 - 11.50)	
Height (mm)	10.54	(11.00 - 18.00)	



Bead height failed by GlassMaster due to Material expiration