

Hyundai India Enhances Engine Quality with Computer Vision AI

The Challenge

During engine assembly, a critical step involves applying sealant to specific joints before the head cover is installed. This sealant prevents future oil leaks. However, manual application sometimes misses small gaps—leading to potential issues such as oil leaks, warranty claims, and even vehicle recalls. Traditional quality checks couldn't reliably catch these mistakes in real time, allowing defects to go unnoticed.



The Objective

Hyundai India needed a real-time, reliable solution to ensure sealant was applied correctly to every engine—eliminating missed spots, reducing the risk of recalls, and maintaining high quality standards.

The Solution

Hyundai implemented a Chooch Vision AI system integrated with high-resolution cameras on the assembly line to monitor sealant application in real time. The system ensures consistent quality through:

- **Real-time analysis** of sealant coverage and thickness
- **Immediate alerts to operators** when gaps or inconsistencies are detected
- **Instant corrective action** before the engine advances to the next production stage

The Results

99.7%
defect detection
accuracy

a dramatic improvement over manual inspections, which missed up to 15 out of every 500 engines.

- **Significant labor cost savings** by reducing the need for continuous QA supervision.
- **Automated inspection reports** for traceability and continuous improvement.
- **Consistent high-quality engine assembly**, reducing recall incidents and protecting brand reputation.

See Chooch Vision AI in Action

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