

Custom Machine Vision Light

Challenge: Engineer a solution to eliminate the downtime from a hotspot on 2D Datamatrix code.

Solution: EMP custom-engineered dome light.

Story: A diesel engine manufacturer was having trouble with a barcode scanning application on one of their fuel injection nozzles. The 2D Datamatrix code is printed onto the round, shiny surface of the nozzle. The Cognex DM360 scans the code before allowing the part to move on to the next station.



Unfortunately, the customer was experiencing significant downtime on a number of the barcode scanning lines. As the part comes into view of the Cognex Dataman, a vision light is triggered to illuminate the DataMatrix code. Instead of highlighting the 2D code, the vision light was creating a bright hotspot right on top of the code itself. This caused many no-reads by the Dataman.



When a noread signal is sent, the Dataman continues to trigger in hopes of getting a good read. As the Dataman triggers over and over, the production line waits until an operator is able to come over and manually rotate the part to try and remove the hotspot.

Failed testing with IR lights led to a second visit to the customer's facility. This discussion unveiled the fact that the customer had this same set-up on a different line and it was running without any hiccups. The difference in this line was the lighting set-up. The light was coming from two different angles, giving a soft glow that illuminated the 2D code without creating any hotspots.

The engineers at EMP applied the phrase "If it's not broke, don't fix it.", and decided to design a similar light for the other lines. The custom made dome light was developed inhouse at EMP and is now being utilized on a number of the lines.

Sometimes the best solution isn't always the simplest one. Call EMP today if you want to make sure you get the best solution possible!