

## Application LC1: Automotive Dash Mat Inspection

**Problem:** A manufacturer of automotive dash mats needed to verify that a number of manually placed clips and fasteners were correct and in the proper location. There were very gross differences among the various parts.

**Solution:** Stand-alone inspection station with 4 cameras incorporated into the existing part handling system. Fluorescent illumination lighting the part from the



Figure 2: Area of the Part

top.

Part number of the inspected part is selected from a Windows recipe menu. Because the parts are large and non-rigid, they are placed onto an assembly/ inspection fixture. Part position repeatability is +/- 0.25 ". Once the part is loaded onto the fixture, the operator pushes a button that triggers the camera to acquire an image. Software tools inspect for the presence of a number of fasteners and clips. . A comparison to a series of stored data is performed. . If the part passes, a green light is illuminated and the part can be



Figure 1: Entire Part

removed from the fixture; if the part fails, a red light is illuminated and the part is locked in the fixture for assessment by supervisory personnel.



Figure 3: Machine Vision Image