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Connector Test on Fuel-injection Components

Specification

A number of destructive and non-destructive tests were required on a plastic assembly used in a fuel injection assembly. The tests included:

- non-destructive tension test on a flat connector (as shown)
- insertion and withdrawal test on a bronze bush within the assembly
- insertion and withdrawal test on a spade terminal connector

Solution

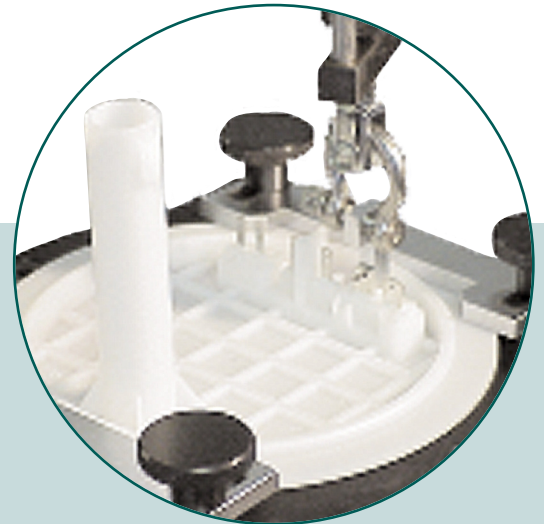
The white plastic body of the assembly was clamped in a retaining fixture mounted on a heavy-duty XY table on the base of the PCM VersaTest computer-controlled system. This allowed for quick and easy positioning below the loadcell of the various components of the assembly. An offset peg-hook fixture was mounted on a swivel and connected to the PCM loadcell. The peg hook was placed in the hole of the flat connector and a load of 250N applied. If the connector resisted this force without breaking out of the assembly, it fulfilled the requirements of the specification. The versatility of the PCM software was essential in programming the other destructive and non-destructive tests, calling on load holding, load ramping and Pass/Fail indication software commands.

System

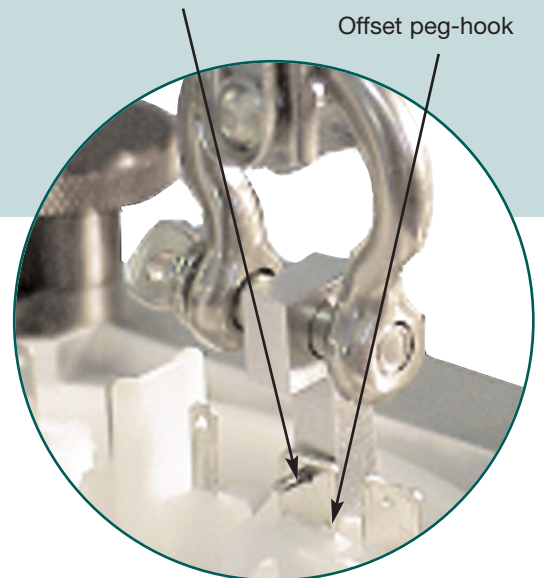
- PCM VersaTest
- 1000N PCM loadcell
- 250N PCM loadcell
- Retaining fixture on XY table
- Swivel peg hook fixture
- Bronze bush fixture
- Spade terminal fixture

Supplied to

Robert Bosch, Czech Republic



Flat connector



Offset peg-hook

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