

MOTORCYCLE ENGINE TESTING

Problem:

A motorcycle manufacturer is testing various parts of an engine to make sure the rigid manufacturing and quality standards are being met.

Test Requirement:

Three separate tests are required:

1. Leak Test the flywheel cavity, cam chest cavity, cylinder deck, and oil pump mounting face @ 25 psig with a reject rate of 12 scc/m.
2. Leak Test the transmission cavity @ 10 psig with a reject leak rate of 8 scc/m.
3. Leak Test the high pressure oil feed passageway, lifter bores, oil filter mount and both oil jet assemblies @ 60 psig with a max. reject leak of 8 scc/min.

CTS Solution:

Cincinnati Test Systems developed a single-station leak detection test stand that can be manually loaded and unloaded. A robot interface was also provided. The leak tests are performed by the CTS Sentinel I-24 mass flow instrument. Control is provided by an Allen-Bradley SLC-5/05 PLC with an operator interface through a PC.

