John Gray

Lead Test Development Engineer

John has a wealth of experience in many areas of engineering with a specialty in engine control and body management systems. He has a proven record of leading a team of engineers in the process of prototyping, reverse engineering, mechatronic testing and test rig development. He is skilled in the following areas:

* Mechatronic testing and repair  
  In-depth knowledge of the design and function of mechatronic units from both the electronic and mechanical angles. He is a very competent electronic engineer with excellent understanding of component function, circuit design, analog and digital signals, loads and communication. He is able to fault-find the most complex management systems in production today at both component level and system-wide.
* Test rig development  
  Has developed test rigs for literally hundreds of electronic modules, both for testing discrete circuits and complete HIL (Hardware-in-the-Loop) simulation. He is able to quickly understand a module’s design and develop a bench testing solution that will simulate an electronic module’s environment in it’s entirety.
* Engine theory  
  John’s understanding of engine theory has allowed him to mathematically simulate both petrol and diesel engines for the creation of HIL tests that fully satisfy the complex monitoring of modern engine management systems. He is fully versed on the design aspects of engine fundamentals, emissions regulation, turbocharging, fuel systems and valvetrain design.
* Engine overhaul  
  He has experience in full engine overhaul, including component analysis for wear and fatigue, tolerance measurement, sealing, ignition and fuel system overhaul, starting and charging systems and valvetrain operation.
* Software  
  Proficient at software coding in languages such as C, VB, PHP/HTML/CSS, Labview and is able to work with Matlab and Simulink.
* General Engineering  
  Capable at Gas, MIG and TIG welding, both in steel, stainless steel and aluminium. He is also familiar with machining practices using lathes and milling machines and is competent with fabrication using hand tools.

John also has experience with management, having led a team of 7 engineers in the task of developing test solutions, repair solutions and in developing procedures for a larger team of technicians. His work is not limited to engines and engine management, being very familiar with a large scope of electronic and mechatronic systems, from body control, chassis control, comfort & convenience and security.