

Equipped for future demands

An engine test facility needs streamlined logistics and efficiency to produce the highest level of test data quality, day in, day out

Sierra CP

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In the automotive testing industry, the ongoing demand to meet new regulations and improve product development drives the need for capital investment. The resulting investment decisions can be challenging at best. And given the globally uncertain economic times, finding a way to reduce that burden is always welcome.

Investment in new facilities tends to be the first reaction, but if a more flexible approach is applied, there are other possibilities. For Sierra CP, the first step is to understand the customers' needs at present, and what they expect in the future. Next, a thorough evaluation of existing test equipment and facilities will yield a comprehensive understanding of the decisions that need to be made; upgrade or new, or to put it another way, evolution versus revolution.

New facilities have a high cost and impact on test cell operations. Evolutionary upgrades can have a much lower cost and limited impact on downtime. In many cases, a high percentage of an existing installation can be retained, and by taking a more flexible approach, Sierra CP can provide a less burdensome solution. Why replace the entire facility when carefully selected product upgrades can produce the same result and deliver reduced costs and downtime?

Sierra CP designs and builds new engine and vehicle



An engine being instrumented inside one of the newly installed engine test cells at Intertek, Milton Keynes, UK

test facilities, upgrades or expands existing facilities, and outfits each facility with its proprietary control software and in-cell equipment. If needed, it can also integrate other equipment brands. With over 30 years in the global automotive testing industry, Sierra CP meets clients' needs by offering consulting, upgrades, products (hardware and software), or turnkey design/build.

In recent years Sierra CP has developed a unique and successful consulting services group. Flexibility lies at its heart and is the key differentiator for every project. The company has also created a comprehensive menu of integrated test facility designs for nearly every engine and vehicle test application need. Multiple designs, including in-facility hardware and software, can be integrated,

scaled, and adapted to the requirements, efficiently. Each customer benefits from cost control, speed of completion, and the confidence in a solution that is drawn from previous successes.

After initial evaluation, a recent facility upgrade 'evolution' was determined to be the best path for a large OEM's engine manufacturing and end-of-line quality testing facility. The infrastructure was retained, but it required a new dynamometer engine conditioning equipment, and test control automation software. Ten-year-old legacy control software was replaced with the latest generation Sierra CADET data acquisition software to breathe new life into aging test cells.

With the addition of Sierra's CADET proprietary system, any additional programming and customization could now

be done in-house with relative ease. This upgrade was inexpensive and added decades to the facility's life.

In contrast, when it comes to a new facility 'revolution', there is probably no better example than the turnkey test cell project that Sierra CP designed and built for Intertek in the UK.

Sierra CP designed and constructed six highly configurable new test cells to meet the requirements for the development of new, advanced engines and powertrains, including hybrids and EVs.

The vehicle test facility project for Intertek was part of a US\$9m investment to build state-of-the-art high-specification 1,000kW test cells with associated infrastructure. All major civil construction was implemented with minimal operational disturbance of the existing test cells.

Whether its an evolution or revolution in engine and vehicle testing facilities, the best solution requires a partner that can be trusted to provide an accurate, honest evaluation of a facility, a thorough understanding of what's possible, and the experience and equipment to deliver it. ◀