

DEFENCE & ARMED FORCES EQUIPMENT SUPPORT & TESTING

Your provider of Total Quality Assurance to help you to address
the demands of an ever-evolving, innovative industry



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Intertek, a leading Total Quality Assurance provider to industries worldwide, can partner with you to meet the ever changing challenges of defence and armed forces equipment supply testing.

Through our network of more than 1,000 laboratories and offices and over 43,000 people in more than 100 countries, we deliver innovative and bespoke Assurance, Testing, Inspection and Certification solutions for our customers' operations and supply chains. We also offer a comprehensive suite of analytical and consultancy services focused on improving the safety, performance and quality of equipment supply for the defence sector around the globe. Intertek's engineers and scientists are security cleared to handle the most secure and sensitive information.

Our Total Quality Assurance expertise is delivered consistently with precision, pace and passion, enabling our customers to power ahead safely.

Our Defence Testing Capabilities

Our Total Quality Assurance offering for the defence sector includes expertise in assessing the safety and performance of your products, materials, fuels, lubricants, automotive engine development and vehicle performance, providing assistance with CE Marking, EMC and environmental testing and PPE testing.

Business assurance

Intertek is a global leader in auditing and certification for the aerospace and defence industries, helping suppliers around the world manage business risk, reduce documentation, and confidently meet customer requirements. With Intertek as your auditing and certification partner, you can gain measurable improvements that support your business strategy and objectives at every stage of the manufacturing process.

Our key services include:

- AS9100, AS9110, and AS9120 certification
- ISO 9001, ISO 14001 and ISO 27001 certification
- Sedex SMETA audits

Textile and performance product testing

Our specialist team deliver a range of textile and textile product test and evaluation solutions to the military, police, and other Government departments, including their local and extended global supply base.

With an extensive test offering covering general clothing and performance material testing, areas of speciality include personal protective equipment, general duty clothing, body armour packs, specialised regalia and accoutrements, and a variety of related accessories.

Additionally, we offer test solutions for performance and safety features such as impact protection of personal protective equipment, rain resistance of general purpose tentage, infra-red reflective performance of camouflage materials, and specialist testing for flammability of equipment to be used in public disorder situations. Bespoke value-added services include:

- Re-life projects for in-service and stored PPE
- Benchmarking for new tenders or research
- Baseline specification evaluation, audits, inspections
- Assistance with specification development

Automotive testing

Our automotive specialists offer expert advice and consultancy on everything from Type Approval legislation through to whole vehicle testing and Powertrain test and development.

We serve many consumer and commercial manufacturing industries, including automotive, electric vehicles, aerospace and marine. We evaluate to industry standards and international regulations, and deliver testing solutions for current and emerging markets such as interiors, electric/hybrid vehicles, charging components, automotive telematics, and aftermarket components. Our Milton Keynes Powertrain Development Facility includes 32 of the UK's most technologically advanced commercially available test cells for the development of conventionally fired drivelines through to the latest transmission, full powertrain and high voltage hybrid and EV systems testing.

As the automotive industry makes ever greater advances in the field of electrification of vehicle drivelines, Intertek is ideally placed to advise on technology uptake or the development and integration of hybrid and pure electric drivelines into future or legacy vehicle fleets.

The advantages to defence vehicle fleets of a pure electric driveline in terms of noise and heat signature reduction are likely to become contributory factors to the future design of the next generation of vehicles and Intertek's expertise in the EV and HEV ecosystem is unparalleled.

Electrical testing

Intertek is an accredited, trusted, world leading provider of EMC and safety testing services to commercial and military standards. From ATEX and IECEx certification, to the widely recognised ETL Mark for the US and Canada, to the Intertek RoHS Mark, our team of engineers and technicians can help you through the certification process.

Electrical safety

Electrical safety forms an integral part of the CE marking. Electrical safety tests that can be carried out include component evaluation, mechanical hazards, guarding, construction evaluation, tilting, user safety considerations, manuals and documentation, warning & cautions.

We also conduct full safety testing from our fully accredited test labs globally to provide test reports to show compliance against the Low Voltage Directive.

Hazardous locations

Intertek is highly experienced in hazardous location services for the aerospace industry. We can deliver testing, certification, preliminary design reviews, quality audits, training and consultancy to support your requirements/operations. Our facilities are the best in the UK and are fully mobile so we can come to you.

We can conduct explosive atmosphere testing to ATEX, IECEx, MIL and RTCA standards as well as installation inspections. We are also leading providers of CompEx training qualifications covering installation of electrical equipment in hazardous locations.

EMC

Our engineers have extensive knowledge of testing to military standards including MIL-STF 461, RTCA DO 160, DEF STAN 59-411 and 61-5 and EN Standards.

Environmental

Our chambers routinely test equipment for aerospace and military applications. We can test to the IEC 60068-x-y series and MIL, DEF and RTCA standards or we can design a custom test programme.

We deliver Total Quality Assurance expertise 24 hours a day, 7 days a week with our industry-winning processes and customer-centric culture

Fuel and lubricant analysis

Intertek can provide technical expertise and testing capability in all areas of fuels, lubricants and greases. Covering support for the implementation of specifications and approvals, condition monitoring of in-service oils and in-service support for issues arising in the transport, storage and use of fuels, lubricants and greases.

Our laboratories at Farnborough have a rich heritage, having been originally formed by bringing together the Royal Arsenal and the Admiralty Oil Laboratories. Intertek acquired the Fuels & Lubricants Centre (QinetiQ UK) at Farnborough in 2011. As such, our experts have vast experience and intimate knowledge of Defence Standard product specification and testing methods.

Fuel Testing

Intertek fuel laboratories test diverse fuels for full quality specifications, and follow regulatory standards such as ASTM, ISO, and IP standards. In-house expertise and analytical resources make Intertek an ideal fuel testing provider for troubleshooting, resolving trace contamination issues and gaining insight from even the most demanding of fuel analysis issues.

Fuels tested include:

- Biofuels, biomass and biodiesel
- CNG, LNG, LPG

- Diesel fuel
- Ethanol, fuel grade
- Fuel oil, gas oil, bunker fuel
- Gas-to-liquids
- Gasoline
- Jet fuel, kerosene
- Petroleum and crude oil feed-stocks
- Solid fuels

Lubricant Testing

Intertek lubricant quality testing helps customers minimize costly down-time and repairs by alerting clients to early, developing problems before they become big, expensive, and costly failures. Lubricants testing and consulting:

- Gear engine & hydraulic
- Marine lubricants
- Automotive lubricants
- Aviation lubricants
- Lubricant qualification testing services
- Ferrography testing

Grease Testing

Intertek's grease testing facilities provide assurance that the grease our clients use is performing on specification and help identify when this is no longer the case. Our laboratory is ISO 17025 accredited and can offer independent, confidential and unbiased expertise on a wide range of grease testing, assessing the physical, chemical and elemental properties of your product. We have an extensive suite of tests available including:

- Cone penetration and worked stability
- Copper corrosion
- Dropping point
- Corrosion/rust preventative properties
- Oil separation
- Evaporation loss
- Oxidation stability
- Low temperature torque
- Water washout characteristics
- Elevated temperature performance
- Fretting wear protection
- Anti-wear properties
- Wheel bearing leakage
- Compatibility of mixtures
- Dirt content
- Appearance and odour

Oil Condition Monitoring

Intertek OCM tests measure engine oils, lubricating oils, and other fluids for the detection of engine wear, lubricant quality degradation, and other problems. Operating on a global basis, Intertek oil condition monitoring laboratories offer detailed oil and lubricant testing results, presented in clear, concise reports. The laboratories provide expert oil analysis, including:

- Spectrometry
- Viscosity
- Fuel dilution
- Water detection
- Acid number
- Base number
- Particle counting
- Optical and scanning electron microscopy analysis with particle composition identification.



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