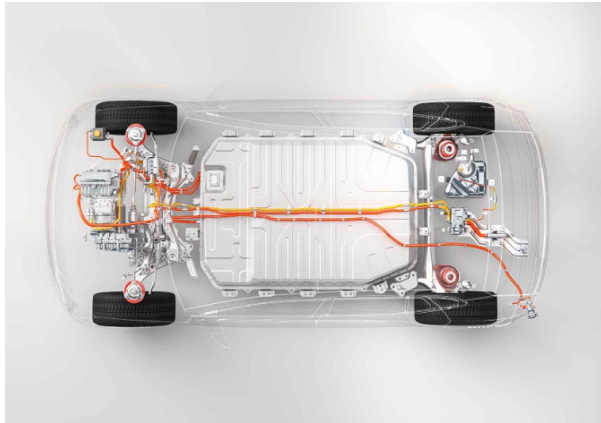


# EMC consultancy for automotive OEMs

Our expert team of EMC consultants support manufacturers facing new EMC challenges as they push vehicle electronics boundaries to introduce the latest EV and connectivity technologies



## Vehicle EMC: from palliatives to EMC-savvy design

The automotive industry has entered a period of significant disruption caused by the shift towards electrification and the demand for increased functionality and connectivity. Vehicles are becoming ever more complex from an electrical perspective, bringing new EMC challenges. The majority of these can no longer be resolved with simple palliatives (e.g. ferrites), and need to be considered in the fundamental design of a vehicle's electrical architecture.

## A team of experts delivering EMC excellence

With a wealth of EMC experience at component and vehicle level, the consultants at Applus+ 3C Test can support with and/or manage the entire EMC process for your vehicle programmes. From Concept through to Production, they ensure both legal and corporate compliance.

We have put together a specialist team that have successfully delivered EMC compliance for multiple vehicle programmes inside major OEMs over the past eight years. Not only can they offer support throughout the various vehicle development phases, but their experience and expertise will ensure that EMC best practices and design considerations are implemented, along with a robust validation process.

Our consultancy services cover:

## Vehicle EMC Programme Delivery

By engaging our EMC services as early as possible in the vehicle development phase, we can help you identify and mitigate against risks to legal and corporate EMC requirements, prevent costly countermeasures at late stages, and improve radio reception and electrical quality for a faultless customer experience. We can offer technical support from the early stages like Virtual (CAD) Development, advising on EMC considerations in the Electrical architecture, EDS, electrical packaging or system integration (including HV).

Additionally, our experts can authorize and review EMC-related documentation (specifications, test plans) and troubleshoot EMC issues, either as part of our vehicle programme delivery service or as an isolated activity.

### **Authoring of EMC Documentation**

We can support OEMs by creating or updating corporate EMC specifications and EMC test plans in order to align testing at component, system and vehicle level while ensuring smooth integration. This includes testing related to Medium and High Voltage systems on new electric-powered vehicles.

### **Specialist Problem Resolution**

The consultancy team at Arplus+ 3C Test can assist with any automotive EMC related issue. You can rely on an expert skillset for successfully diagnosing and proposing solutions to EMC non-compliances at vehicle level.

All these services can be tailored to your exact requirements and we can support in a number of ways, from periodic remote support to full or part-time residency.

Examples of the different Vehicle manufacturers consultancy services available include:

- EMC Technical Support Throughout the Virtual (CAD) Development Phases
  - Ensuring EMC Considerations are Designed into the Electrical Architecture
  - Recommendations on EDS, Electrical Packaging and System Integration (Including HV)
- Component EMC Test Plan Authoring, Reviewing and Concurrence
- Component EMC Test Report Reviewing and Recommendations
- Vehicle Test Plan Authoring
- Supporting of Vehicle Level Testing and Management of DVP (Design Validation Plan)
- Technical Support (Problem Resolution) for all Vehicle Level EMC Issues
- Authoring of Technical EMC Documentation to Support and Improve EMC, including:
  - EMC and Electrical Component Test Specifications (including HV)
  - Vehicle EMC Test Specifications (including HV)
  - EDS and Electrical Packaging Design Guidelines
  - Vehicle Grounding Requirements for EMC

