Dearborn Group Technology
Technology for In-Vehicle and Controller Area Networks

Heavy-Duty Vehicle Network Protocol Training

If You Need to Know the Protocols of Heavy-Duty Vehicles, Including CAN/J1939, J1708/J1587, and TMC RP1210, This Class is For You!

Course Content

Communications Overview - The course begins with an overview of Heavy Duty (HD) vehicle communications, including network topologies, speed requirements, current state and vehicle network futures.

Legacy Protocols & Hands-on Lab - The protocols J1708/J1587 and PLC4TRUCKS are still widely used, and an introductory understanding of them is necessary to appreciate the recent changes CAN and J1939 have brought about. A hands-on lab decoding messages from a J1587 data bus serves to de-mystify vehicle communications.

Introduction to CAN - The CAN vehicle network protocol is covered from a J1939 perspective. Coverage includes the CAN Identifier (CANID), CAN frame types (standard and extended), as well as an overview of the CAN error mechanism.

J1939 & Hands-on Lab - J1939 topics include the Parameter Group Number (PGN), Protocol Data Unit Types, large message transport, diagnostics (DTCs/faults), network troubleshooting, and component addressing. In the hands-on lab students decode messages from a J1939 data bus, obtaining numerical, bit/state, and ASCII data.

RP1210 - With a solid foundation of onboard physical protocols, we cover the ATA's Technology and Maintenance Council (TMC) Recommended Practice RP1210. It is the industry standard for vehicle to PC communications, allowing users to diagnose, download new calibrations, and reflash vehicle controllers.

RP1210 Sample Source Code - The sample source code provided to students allows them to instantly connect to and view data bus traffic on the J1708/J1587 or J1939 data bus. It displays, decodes and sends messages and can log information to a file.

Adapter Validation Tool (AVT) & Troubleshooting- To troubleshoot RP1210 Vehicle Datalink Adapters (VDAs), students are introduced to the AVT and document co-written in 2008 by the three major VDA manufacturers (including Dearborn Group) that covers troubleshooting VDAs and configuring the most prominent RP1210 diagnostic applications.

Fully Customized to Meet Your Unique Needs - As each class member's experience, job function, and goals with heavy-duty vehicle network protocols vary, we tailor the class to fit individual needs, allowing significant class interaction time.

Intended Audience

Software/Hardware/Systems/Field Application Engineers, Technicians, and Managers who are new to, or have a basic knowledge of, HD protocols and are looking to understand how these protocols "work", how they are implemented, and how they are used to diagnose and troubleshoot vehicle network problems.

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