



Level 2 Mobile Electric

Course Number 390

Course Description

This course begins with a brief review of the mobile electrical fundamentals covered in Level 1 which included the use of digital multimeters and stressed safety. This course emphasizes troubleshooting along with direct application and hands on projects aimed at real world truck electrical systems including battery, charging, lighting, starting systems, and wiring. As topics are introduced, students will be able to demonstrate them using CFC-Solar's modular multiplex training system.

Prerequisites: Mobile Electric Level 1

Course Length: 5 Days

Text Books: CFC Training Manual

Course Outline	Learning Objectives
Review Level 1 <ul style="list-style-type: none"> – Safety – Symbols – Meter review 	<ul style="list-style-type: none"> • Review Level 1
Introduction to Multiplexing <ul style="list-style-type: none"> – What is multiplexing – Abbreviations and terms – Module identification – Arrangement of modules – Communication – Freightliner – International 	<ul style="list-style-type: none"> • Introduce multiplexing • Identify abbreviations and terms • Identify types of sensors • Examine modules and control units • Investigate Wiring • Evaluate Fault Code definitions (SPN's and FMI's) • Review Module Connector Pinouts • Examine Smart Switch Programming • Describe auxiliary electrical controls • Troubleshooting Multiplex Systems using Diagnostic Equipment for Freightliner and International Trucks
Identify Types of Sensors <ul style="list-style-type: none"> – Proximity switches – Engine transducers – Speedometer – ABS Sensor – Transmission 	<ul style="list-style-type: none"> • Freightliner Modules <ul style="list-style-type: none"> ○ Bulkhead ○ Chasis ○ Instrument Control Unit ○ Power Distribution
Wiring <ul style="list-style-type: none"> – Harness identification – Data links – Wiring diagrams/schematic reading – Wiring installation and repair 	<ul style="list-style-type: none"> • International <ul style="list-style-type: none"> ○ Electrical Controller ○ Remote Power Module ○ Remote Air Solenoid Module ○ Electronic Gage Cluster ○ ABS Module ○ Engine Controls ○ Transmission Controls
PTO Pump Controls <ul style="list-style-type: none"> – Airshift – Hydraulic shift 	<ul style="list-style-type: none"> • EPA Emissions Green House Gas (GHG) Controls <ul style="list-style-type: none"> ○ Emission Sensors Identification and Control
AWD Controls	

