Truck Curriculum Outline

1. Overall instructions
   1. At least one PowerPoint for each module
   2. At least one Lab sheet for each module
2. Unit 1 – Operations
   1. Module TD1: Using the ADAS System
      1. 1.1 Operation
         1. Demonstrate the basic operation of the ADAS system in the vehicle.
         2. Know how to use/disable the various ADAS systems.
         3. Demonstrate how to use/disable the various ADAS systems.
      2. 1.2 Troubleshooting - Know warning lights, and indicators that might illuminate, what they mean and proper response in the event the system is not working properly
      3. 1.3 Pre-Trip Checks
         1. Know how obstacles with the radar and camera systems can affect operation.
         2. Know about the addition of accessories and how it can affect operation.
         3. Perform all Pre-Checks to ensure safe operation.
3. Unit 2 – Maintenance and Repair
   1. Module TM1: Introduction to ADAS Systems
      1. 1.1 Operation
         1. Dash Indicators
         2. Vehicle Functions
         3. Set/Turn on/off functionality
      2. 1.2 Components
         1. Camera
         2. Radar
         3. Parking Aid Sensors
         4. Side Object Sensors
         5. Lidar
         6. Sensor/System Integration
      3. 1.3 Diagnostics
         1. Network Test
         2. System Functionality
         3. EMS
         4. Network Modules
      4. 1.4 Repair/Replace
         1. Pre-Service Inspection
            1. Battery
            2. Radar
            3. Camera
            4. Side Object Detection
            5. Loose Connections
            6. Inside Cab
      5. 1.5 Calibration – Static/Dynamic Calibration
   2. Module TM2: ADAS Networks
      1. 2.1 Operation
         1. Network/Modules
         2. Data “Packet”
         3. Module Identifier
         4. Network Speed
      2. 2.2 Components
         1. Diagnostic Connector – 2-pin
         2. Coloring System
         3. Wiring Diagrams
      3. 2.3 Diagnostics
         1. Network Test
         2. DVOM System Check
         3. Oscilloscope Pattern Creation
         4. Time Division Modification
      4. 2.4 Repair/Replace
         1. Wiring Repair
         2. Replacing Module
         3. Programing Module
      5. 2.5 Calibration/Culmination/Assessment
         1. Network Test
         2. U-Codes
         3. Communication Codes
   3. Module TM3: ADAS Components
      1. 3.1 Operation - Describe the inputs and outputs of the ADAS control system.
      2. 3.2 Components - Describe the function of all ADAS components and what type of signal they produce/receive.
      3. 3.3 Diagnostics - Diagnose the component and root cause of an ADAS failure.
      4. 3.4 Repair/Replace
         1. Repair or replace components in the ADAS system.
         2. Properly mount and replace components.
      5. 3.5 Calibration/Culmination/Assessment - Perform any module programming needed for component replacement.
   4. Module TM4: ADAS Calibration
      1. 4.1 Perform ADAS Calibration following manufacturer sequence.