

DATS AUTO-HYBRID TECHNOLOGY

CONTAINS

1. INTRODUCTION TO HYBRID & EV TECHNOLOGY.
 - History of the hybrid vehicles
 - The global advantages of these vehicles
 - Compare of fossil fuel source vehicle and(hybrid) twin source
 - Comparison of Hybrid & E- Vehicles
2. HIGH VOLTAGE AWARENESS TRAINING.
 - Qualification concept and high voltage concept
 - HV vehicles and safety measures
 - Safety precautions on TOYOTA Prius hybrid vehicles
- 3 EXPLANATION HYBRID DRIVE LAYOUTS.
 - Parallel system
 - Series system
 - Power split system
 - Comparison of THS & HSD
4. high voltage components (Mercedes Benz).
 - Power electronics.
 - High voltage battery.
 - Electric A/C compressor.
 - Electric machine or motor/generators.
5. DRIVING SITUATIONS IN HYBRID & EV OPERATION.
 - Alternator mode.
 - Engine drive, while charging.
 - Boost mode.
 - Regenerative braking.
 - Pure electric driving.
 - EV transmissions & Transaxles

6. POWER FLOW CIRCUIT(HIGH VOLTAGE) AND INTERLOCK CIRCUITS.

- Electric machine operation when driving
- Electric machine when charging of battery
- Routing of the interlock wiring

7. TRACTION BATTERY.

- Types of Batteries
- Location & mounting methods of batteries
- Chemical structure
- Construction of Battery assemblies
- Cooling of Batteries

8. IDENTIFYING OF THE COMPONENTS.

- Visually check the components
- Identifying the locations of the components
- Remove and install HV components

9. DEACTIVATING/ACTIVATING OF THE HIGH VOLTAGE SYSTEM.

- Perform HV deactivation and activation using diagnosis equipment
- Read out voltages at different times

10. INTRODUCTION TO PLUG IN HYBRID.

- Comparison between HYBRIDS and PLUG-IN HYBRIDS
- Components in Mercedes PLUG-IN HYBRIDS and Toyota Models

11. CHARGING OF ELECTRIC VEHICLES(MERCEDES & JAPANESE).

- Safety of Charging units
- Charge connector terminal identification
- Charging methods
- AC/ DC Charging

12. CDI, POWER ELECTRONIC AND BATTERY MANAGEMENT SYSTEM COOPERATION FOR THE SYSTEM OPERATION.

- Torque coordination for a hybrid drive system, function
- Automatic engine start, function
- Energy management for hybrid drive system, function
- Deceleration mode, function
- Recuperative braking, function

13. FAULT DIAGNOSING IN HIGH VOLTAGE AND HYBRID SYSTEM .

- Identification faults using diagnosis equipment
- Identification of defective components