

A. BATTERY SYSTEMS (11 questions)

1. Perform high-voltage (HV) system de-energize/disable procedure; energize/enable high-voltage system	P-1	P-1	P-1	X	X		X												
2. Identify, inspect, and use proper personal protective equipment (PPE).	P-1	P-1	P-1	X	X	X	X	X											
3. Identify, validate, and use proper electrical testing equipment and leads.	P-1	P-1	P-1	X	X	X	X												
4. Retrieve and diagnose DTCs; determine needed repairs.	P-1	P-1	P-1	X	X	X													
5. Diagnose problems caused by damaged or failed harnesses, connectors, terminals and fuses.	P-1	P-1	P-1	X	X								X						
6. Diagnose high voltage (HV) battery pack malfunctions.		P-3	P-2	X	X														
7. Remove and install high voltage battery pack.		P-3	P-2	X	X														
8. Test, diagnose and repair high voltage leaks/loss of isolation.		P-3	P-2	X	X	X	X												
9. Test, diagnose and repair high voltage battery pack heating and cooling systems.		P-3	P-2	X	X														
10. Test, diagnose, repair or replace high voltage battery pack internal components.		P-3	P-2	X	X														

B. INTERNAL COMBUSTION ENGINE (6 questions)

3. Differentiate between driveability problems caused by the internal combustion engine and/or hybrid drive system.										X									
4. Perform internal combustion engine cranking compression test; interpret results.													X						
10. Service engine cooling system.										X									

C. DRIVE SYSTEMS (9 questions)

1. Perform high-voltage (HV) system de-energize/disable procedure; energize/enable high-voltage system.				X	X														
2. Identify, inspect, and use proper personal protective equipment (PPE).				X	X														
3. Identify, validate, and use proper electrical testing equipment and leads.				X	X	X		X											
4. Retrieve and diagnose driveline DTCs; determine needed repairs.				X	X	X													
5. Diagnose problems caused by damaged or failed harnesses, connectors, terminals, and fuses.				X	X	X							X						
6. Test, diagnose and repair high voltage leaks/loss of isolation.				X	X														

D. POWER ELECTRONICS (13 questions)

1. Perform high-voltage (HV) system de-energize/disable procedure; energize/enable high-voltage system.				X	X														
2. Identify, inspect, and use proper personal protective equipment (PPE).				X	X														
3. Identify, validate, and use proper electrical testing equipment and leads.				X	X	X													
4. Retrieve and diagnose DTCs; determine needed repairs.				X	X	X													
5. Diagnose problems caused by damaged or failed harnesses, connectors, terminals, and fuses.				X	X	X							X						
6. Identify procedures necessary to establish the proper vehicle operational power mode during service (OFF, ACCESSORY, POWER ON, READY TO DRIVE).				X	X														
7. Diagnose the cause of a hybrid system warning displayed on the instrument panel and/or a driveability complaint.						X		X											

	IMMR	TST	MTST	Switch EV (Kit Car)	Switch EV Trainer	EV-601-TS_053322	EV-400_053287	EC-140H	EC-2001-07	EM-200-29	CL-1930_053283	EV-360_053325	CL-1919-06_053327	CL-1902_053242
8. Diagnose AC/DC inverter faults; perform needed repair.				x	x	x								
9. Remove and install AC/DC inverter.				x	x									
13. Diagnose DC/DC converter system; perform needed repair.				x	x									
14. Remove and install DC/DC converter.				x	x									
15. Inspect high-voltage cable condition; test for loss of isolation.				x	x									
16. Perform testing of low-voltage battery.				x	x	x								
17. Diagnose high-voltage contactor faults; perform needed repair.						x								
19. Diagnose high-voltage DC charging faults; perform needed repair.				x	x									
20. Diagnose failures in data communication bus network; determine needed repair.				x	x									
E. HYBRID SUPPORTING SYSTEMS (6 questions)														
1. Perform high-voltage (HV) system de-energize/disable procedure; energize/enable high-voltage system.				x	x									
2. Identify, inspect, and use proper personal protective equipment (PPE).				x	x									
3. Identify, validate, and use proper electrical testing equipment and leads.				x	x									
4. Retrieve and diagnose DTCs; determine needed repairs.				x	x									
5. Diagnose problems caused by damaged or failed harnesses, connectors, terminals, and fuses.				x	x						x			
9. Remove and install high voltage air conditioning compressor; identify and select proper system oil.									x					
10. Differentiate between brake hydraulic system and regenerative braking faults; determine needed repairs and procedures.				x	x									