

AUTO 2390

Advanced Hybrid Vehicles: Diagnosis and Repair

Wk#	Unit #	Topic	Learning Objective/Goals	Assignment	Assessment
1	1	Introduction / Pre test	Discuss how the course content will be presented, how and when assessment will occur, and the requirements for successful completion of this course	Reading, Pre test	
	2	Basic EMV review	Review the operating characteristics unique to EMVs. Review the high voltage components common to EMVs	Reading, Lab sheets	Lab activity, Test
2	3	Safety	Recognize the safety precautions and equipment required for serving High voltage vehicles	Reading, Lab sheets	Lab activity, Test
	4	Scan tools and HEVs.	Identify the data, test procedures and DTCs unique to EMVs	Reading, Lab sheets	Lab activity, Test
3	5	Batteries	Test HV battery State of Charge and State of Health Recognize DTC's common to HV battery problems	Reading, Lab sheets	Lab activity, Test
	6	HV relays and Plug-in charging	Understand the operating principles of the system main relays Recognize the different types of charging system available and their operating requirements	Reading, Lab sheets	Lab activity, Test
4	7	Inverters, Convertors and Accessory Systems	Evaluate operation of AC/DC inverter and determine need for repair or replacement Evaluate operation of DC/DC converter and determine need for repair or replacement	Reading, Lab sheets	Lab activity, Test
5	8	Electric motor-generators	Evaluate operation of the motor/generator and determine need for repair or replacement	Reading, Lab sheets	Lab activity, Test
6&7	9	HV maintenance and component replacement	Recognize and perform some unique maintenance procedures on EMV systems. Remove and Replace some common high voltage components following proper safety procedures	Reading, Lab sheets	Lab activity, Test
7	10	ASE L3 test prep.	Understand the requirements of the ASE L3 certification test	Reading, Lab sheets	Lab activity, Test
8	11	Final Exam			Test

Note: The outline above is only an approximation. Some topics will take a bit longer, and the pace of our progress will be adjusted according to the needs and interests of the individuals in the class. Such adjustments will include the scheduling of quizzes and lab due dates.