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Southern Worcester County Regional Vocational School District
BAY PATH REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL
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 Curriculum Coordinator

VT.VAUTO.2.A.03.01	X:Electrical Accessories	Diagnose incorrect wiper operation; diagnose wiper speed control and park problems; perform necessary action.
VT.VAUTO.2.L.01	X:Electrical Accessories	Diagnose incorrect washer operation; perform necessary action.
VT.VAUTO.2.L.01.01	X:Electrical Accessories	Diagnose and repair accessories.
VT.VAUTO.2.L.01.02	X:Electrical Accessories	Diagnose incorrect operation of motor-driven accessory circuits; determine necessary action.
VT.VAUTO.2.L.01.03	X:Electrical Accessories	Diagnose incorrect heated glass operation; determine necessary action.
VT.VAUTO.2.L.01.04	X:Electrical Accessories	Diagnose incorrect electric lock operation; determine necessary action.
VT.VAUTO.2.S.01	X:Electrical Accessories	Diagnose incorrect operation of cruise control systems; determine necessary action.
VT.VAUTO.2.S.01.01	X:Electrical Accessories	Activate bi-directional controls when applicable using a scan tool.
VT.VAUTO.2.S.02	Y:Basic Hybrid Theory	Identify and describe hybrid electrical circuits.
VT.VAUTO.2.S.02.01	Y:Basic Hybrid Theory	Identify and describe high-voltage circuits of electric or hybrid electric vehicle and related safety precautions.
VT.VAUTO.2.S.02.02	Y:Basic Hybrid Theory	Identify and describe hybrid vehicle auxiliary (12v) battery service, repair and test procedures.
VT.VAUTO.2.BB.01	Y:Basic Hybrid Theory	Describe the operation of a regenerative braking system.
VT.VAUTO.2.BB.01.01	Y:Basic Hybrid Theory	Identify and describe hybrid vehicle power steering system electrical circuits and safety precautions.
VT.VAUTO.2.BB.01.02	Y:Basic Hybrid Theory	Describe hybrid vehicle internal combustion engine service precautions.
VT.VAUTO.2.BB.01.03	Y:Basic Hybrid Theory	Research service information to identify location of high voltage disconnect switch.
VT.VAUTO.2.BB.01.04	Z:General Engine Problems	Identify, test and repair leaks, abnormal sounds and odors commonly associated with engine malfunctions.
VT.VAUTO.2.BB.01.05	Z:General Engine Problems	Inspect engine assembly for fuel, oil, coolant and other leaks; determine necessary action.
VT.VAUTO.2.BB.02	Z:General Engine Problems	Identify abnormal engine noise or vibration concerns; determine necessary action.
VT.VAUTO.2.BB.02.01	Z:General Engine Problems	Identify abnormal exhaust color, odor and sound; determine necessary action.
VT.VAUTO.2.BB.02.02	Z:General Engine Problems	Adjust valves on engines with mechanical or hydraulic lifters.
VT.VAUTO.2.BB.02.03	Z:General Engine Problems	Perform general engine diagnostic procedures.
VT.VAUTO.2.BB.02.04	Z:General Engine Problems	Interpret engine performance concern; determine necessary action.
VT.VAUTO.2.BB.02.05	Z:General Engine Problems	Perform engine absolute (vacuum/boost) manifold pressure tests; determine necessary action.
VT.VAUTO.2.BB.02.06	Z:General Engine Problems	Inspect and test mechanical and electrical fuel pumps and pump control systems for pressure, regulation and volume; perform necessary action.
VT.VAUTO.2.CC.03.02	Z:General Engine Problems	Inspect the integrity and test the catalytic converter and heat shield(s); perform necessary action.
VT.VAUTO.2.CC.03.03	Z:General Engine Problems	Verify accurate camshaft timing.
VT.VAUTO.2.DD.01	Z:General Engine Problems	Perform cylinder power balance test; determine necessary action.
VT.VAUTO.2.DD.01.01	Z:General Engine Problems	Perform cylinder compression tests; determine necessary action.
VT.VAUTO.2.DD.01.02	Z:General Engine Problems	Perform cylinder leakage test; determine necessary action.
VT.VAUTO.2.DD.01.03	Z:General Engine Problems	Identify engine mechanical, electrical, fuel and ignition concerns with engine diagnostic equipment.
VT.VAUTO.2.DD.01.04	Z:General Engine Problems	Retrieve and record stored On the Board Diagnostics II (OBD II) diagnostic trouble codes; clear codes.
VT.VAUTO.2.DD.01.05	Z:General Engine Problems	Inspect, diagnose and repair cooling system concerns.
VT.VAUTO.2.DD.01.06	Z:General Engine Problems	Verify engine operating temperature; determine necessary action.
VT.VAUTO.2.DD.01.07	Z:General Engine Problems	Remove and replace thermostat.
VT.VAUTO.2.DD.01.08	Z:General Engine Problems	Perform cooling system pressure tests; check coolant condition; inspect and test radiator, pressure cap, coolant recovery tank and hoses; perform necessary action.
VT.VAUTO.2.DD.01.09	Z:General Engine Problems	Inspect and test mechanical/electrical fans, fan clutch, fan shroud/ducting, air dams and fan control devices; perform necessary action.
VT.VAUTO.2.DD.01.10	AA:Ignition Systems	Diagnose and repair engine performance concerns relative to the ignition primary circuit.
VT.VAUTO.2.DD.01.11	AA:Ignition Systems	Inspect and test ignition primary circuit wiring and components; perform necessary action.
VT.VAUTO.2.DD.01.12	AA:Ignition Systems	Inspect and test ignition system pick-up sensor or triggering devices; perform necessary action.
VT.VAUTO.2.DD.01.13	AA:Ignition Systems	Inspect and test ignition coil(s); perform necessary action.
VT.VAUTO.2.DD.01.14	AA:Ignition Systems	Inspect, diagnose and repair coil over plug ignition systems (i.e., new).
VT.VAUTO.2.DD.01.15	AA:Ignition Systems	Identify ignition system related problems such as no-starting engine misfire, spark knock, power loss, concerns on vehicles with electronic ignition (i.e., distributor less and distributor) systems.
VT.VAUTO.2.DD.02.02	AA:Ignition Systems	Diagnose and repair engine performance concerns relative to the ignition secondary circuit.
VT.VAUTO.2.DD.02.04	AA:Ignition Systems	Inspect and test ignition system secondary circuit wiring and components; perform necessary action.
VT.VAUTO.2.EE.01	BB:Emissions Control Systems	Identify and diagnose common causes of positive crankcase ventilation and evaporative emissions system concerns.
VT.VAUTO.2.EE.01.01	BB:Emissions Control Systems	Diagnose oil leaks, emissions and drivability problems resulting from malfunctions in the positive crankcase ventilation (PCV) system; determine necessary action.
VT.VAUTO.2.EE.01.02	BB:Emissions Control Systems	Inspect, test and service positive crankcase ventilation (PCV) filter/breather cap, valve, tubes, orifices and hoses; perform necessary action.
VT.VAUTO.2.EE.01.03	BB:Emissions Control Systems	Identify emissions and drivability problems resulting from malfunctions in the evaporative emissions control system.
VT.VAUTO.2.EE.01.04	BB:Emissions Control Systems	Inspect and test components and hoses of evaporative emissions control system; perform necessary action.

VT.VAUTO.2.EE.01.05	BB:Emissions Control Systems	Interpret evaporative emission related diagnostic trouble codes (DTCs); determine necessary action.
VT.VAUTO.2.EE.02	BB:Emissions Control Systems	Identify and diagnose common causes of catalytic converter, secondary air and exhaust gas recirculation system concerns.
VT.VAUTO.2.EE.02.01	BB:Emissions Control Systems	Inspect and test catalytic converter performance.
VT.VAUTO.2.EE.02.02	BB:Emissions Control Systems	Inspect and test mechanical components of secondary air injection systems; perform necessary action.
VT.VAUTO.2.EE.02.03	BB:Emissions Control Systems	Inspect and test the operation of electrical components and circuits or air injection systems; perform necessary action.
VT.VAUTO.2.EE.02.04	BB:Emissions Control Systems	Identify emission and drivability problems caused by malfunctions in the exhaust gas recirculation (EGR) system.
VT.VAUTO.2.EE.02.05	BB:Emissions Control Systems	Inspect, test, service and replace components of the EGR system, including EGR tubing, exhaust passages, vacuum/pressure controls, filters and hoses; perform necessary action.
VT.VAUTO.2.FF.01	BB:Emissions Control Systems	Inspect and test electrical/electronic sensors, controls and wiring of exhaust gas recirculation (EGR) systems; perform necessary action.
VT.VAUTO.2.FF.01.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Perform appropriate cylinder Head Repair.
VT.VAUTO.2.FF.01.02	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Diagnose, remove and replace cylinder head(s).
VT.VAUTO.2.FF.01.03	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Clean and visually inspect a cylinder head for cracks; check gasket surface areas for warpage and surface finish; check passage condition; determine necessary action.
VT.VAUTO.2.FF.01.04	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Demonstrate appropriate valve, valve train, and camshafts service techniques.
VT.VAUTO.2.FF.01.05	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Identify overhead cam, dual overhead cam, and overhead valve engines.
VT.VAUTO.2.GG.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect pushrods, rocker arms, rocker arm pivots and shafts for wear, bending, cracks, looseness, and blocked oil passages (orifices); determine necessary action.
VT.VAUTO.2.GG.01.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Check drive gear wear and backlash, sprocket and chain wear, overhead cam drive sprocket(s), drive belt(s), belt tension, tensioners, camshaft retulor ring/tone-wheel, and valve timing components; verify correct camshaft timing.
VT.VAUTO.2.GG.01.02	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect and replace camshaft and drive belt/chain.
VT.VAUTO.2.GG.01.03	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Establish camshaft position sensor indexing.
VT.VAUTO.2.GG.01.04	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Identify, assess and repair cylinder block and internal components.
VT.VAUTO.2.GG.01.05	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Identify block cylinder arrangement.
VT.VAUTO.2.GG.01.06	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Identify abnormal sounds.
VT.VAUTO.2.HH.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Identify abnormal exhaust color.
VT.VAUTO.2.HH.01.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Remove, inspect, or replace crankshaft vibration damper (harmonic balancer).
VT.VAUTO.2.HH.01.02	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Measure crankshaft end play, compare to specification; determine necessary action.
VT.VAUTO.2.HH.01.04	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Assess and repair engine cooling systems.
VT.VAUTO.2.HH.01.05	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Perform cooling system pressure and dye tests to identify leaks; check coolant condition and level; inspect and test radiator, pressure cap, coolant recovery tank, and heater core; determine necessary action.
VT.VAUTO.2.HH.01.06	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Identify causes of engine overheating.
VT.VAUTO.2.HH.01.07	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect, replace, and adjust drive belts, tensioners, and pulleys; check pulley and belt alignment.
VT.VAUTO.2.HH.01.08	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect and test coolant; drain and recover coolant; flush and refill cooling system with recommended coolant; bleed air as required.
VT.VAUTO.2.HH.02.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect, remove, and replace water pump.
VT.VAUTO.2.HH.02.04	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Remove and replace radiator.
VT.VAUTO.2.HH.02.05	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect and test fan(s) (electrical or mechanical), fan clutch, fan shroud, and air dams.
VT.VAUTO.2.II.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Engine Lubrication.
VT.VAUTO.2.II.01.01	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Perform oil pressure tests; determine necessary action.
VT.VAUTO.2.II.01.02	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect auxiliary coolers; determine necessary action.
VT.VAUTO.2.II.01.03	CC:**Advanced** Demonstrate appropriate engine repair techniques.	**Advanced** Inspect, test, and replace oil temperature and pressure switches and sensors.
VT.VAUTO.2.II.01.04	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Demonstrate appropriate vehicle service techniques.
VT.VAUTO.2.II.02	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Identify and interpret transmission/transaxle concern, differentiate between engine performance and transmission/transaxle concerns; determine necessary action.
VT.VAUTO.2.II.02.01	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Research applicable vehicle and service information fluid type, vehicle service history, service precautions, and technical service bulletins.
VT.VAUTO.2.II.02.02	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Diagnose fluid loss condition concerns; determine necessary action.
VT.VAUTO.2.II.02.03	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Check fluid level in a transmission or a transaxle equipped with a dip-stick.
VT.VAUTO.2.II.02.04	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Check fluid level in a transmission or a transaxle not equipped with a dip-stick.
VT.VAUTO.2.II.02.05	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Perform pressure tests (including transmissions/transaxles equipped with electronic pressure control); determine necessary action.
VT.VAUTO.2.II.02.06	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Diagnose noise and vibration concerns; determine necessary action.
VT.VAUTO.2.II.03	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Perform stall test; determine necessary action.
VT.VAUTO.2.II.03.01	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Perform lock-up converter system tests; determine necessary action.
VT.VAUTO.2.II.03.02	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member (power flow) principles.
VT.VAUTO.2.II.03.03	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Diagnose electronic transmission/transaxle control systems using appropriate test.
VT.VAUTO.2.II.03.04	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Diagnose pressure concerns in a transmission using hydraulic principles (Pascal's Law).
VT.VAUTO.2.II.03.05	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Inspect, adjust, and replace external manual valve shift linkage, transmission range sensor/switch, and park/neutral position switch.
VT.VAUTO.2.II.03.06	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Inspect for leakage; replace external seals, gaskets, and bushings.
VT.VAUTO.2.II.03.07	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Inspect, test, adjust, repair, or replace electrical/electronic components and circuits including computers, solenoids, sensors, relays, terminals, connectors, switches, and harnesses.

VT.VAUTO.2.II.03.08	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Demonstrate appropriate out of vehicle service techniques.
VT.VAUTO.2.JJ.01	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Remove and reinstall transmissions/transaxle and torque converter; inspect engine core plugs, rear crankshaft seal, dowel pins, dowel pin holes, and mating surfaces.
VT.VAUTO.2.JJ.01.01	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Inspect, leak test, and flush or replace transmission/transaxle oil cooler, lines, and fittings.
VT.VAUTO.2.JJ.01.02	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Inspect converter flex (drive) plate, converter attaching bolts, converter pilot, converter pump drive surfaces, converter end play, and crankshaft pilot.
VT.VAUTO.2.JJ.01.03	DD:**Advanced** Automatic Transmission/Transaxle	**Advanced** Describe the operational characteristics of a continuously variable transmission (CVT).
VT.VAUTO.2.JJ.02	EE:**Advanced** Manual Transmission and Drive-Train	**Advanced** Demonstrate appropriate hub, joint, shaft, and yolk techniques.
VT.VAUTO.2.JJ.02.01	EE:**Advanced** Manual Transmission and Drive-Train	**Advanced** Diagnose constant-velocity (CV) joint noise and vibration concerns; determine necessary action.
VT.VAUTO.2.JJ.02.02	EE:**Advanced** Manual Transmission and Drive-Train	**Advanced** Diagnose universal joint noise and vibration concerns; perform necessary action.
VT.VAUTO.2.JJ.02.03	EE:**Advanced** Manual Transmission and Drive-Train	**Advanced** Inspect, remove, and replace front wheel drive (FWD) bearings, hubs, and seals.
VT.VAUTO.2.JJ.02.04	EE:**Advanced** Manual Transmission and Drive-Train	**Advanced** Inspect, service, and replace shafts, yokes, boots, and universal/CV joints.