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SCHOOL

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Inspection Date

# **Level II**

# **Student**

# **Outcomes**

# Automotive Technician Training Standards

## Level II

# 1 – ENGINE REPAIR STUDENT OUTCOMES

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School

**Note:** All procedures listed in this document are to be performed in accordance with industry-accepted practices and/or manufacturers' recommended procedures.

**NOTE:** No Evidence = 0, Some Evidence = 1, Meets Standards = 2

SCORE			I.D.
0	1	2	NO.

				ENGINE CONSTRUCTION AND DESIGN
			21.1	Explain the principles of an internal combustion engine.
			21.2	Identify companion cylinders.
			21.3	Identify various engine classifications.
			21.4	Perform basic engine I. D
				ENGINE TESTING
			21.5	Identify and locate source of fluid leaks.
			21.6	Inspect an engine for excessive oil usage
			21.7	Perform a vacuum gauge test for engine condition.
			21.8	Perform and analyze a cylinder balance test.

			21.9	Perform an inspection and analyze cylinder leakage test.
			21.10	Perform an inspection and analyze a compression test.
			21.11	Identify abnormal engine noises.
			21.12	Verify cam timing.
			21.13	Test coolant strength (Ph., electrolysis).
			21.14	Identify causes of contaminated oil.
			21.15	Check oil pressure with a mechanical oil pressure gauge.
				<b>ENGINE MAINTENANCE</b>
			21.16	Change oil and oil filter.
			21.17	Perform valve adjustment.
			21.18	Inspect valve timing components.
				<b>HEAD AND VALVE TRAIN</b>
			21.19	Inspect and measure a cylinder head for warpage, damage or failures.
			21.20	Inspect valve train parts for wear, damage or failures.
			21.21	Inspect cam and related parts for wear, damage or failures.
			21.22	Inspect heads for cracks, broken bolts and damaged threads.
			21.23	Measure valve stem tip height.
			21.25	Measure valve guide wear and clearance.
			21.26	Measure spring installed height.
			21.27	Clean plastic, aluminum, iron or steel parts.
			21.28	Replace valve guide seals on and off the engine.
			21.29	Grind a valve face.

			21.30	Assemble head (OHC and OHV).
			21.31	Remove and replace cam (OHV, OHC).
			21.32	Remove and replace cam drive and align timing marks
			21.33	Remove and replace timing belt and align timing marks (OHC).
			21.34	Adjust valves (pushrod, OHC, shim type).
				<b>SHORT BLOCK</b>
			21.35	Inspect and measure a cylinder block for wear, damage, or failure.
			21.36	Inspect and measure a crankshaft for wear, damage, or failure.
			21.37	Inspect a bearing for wear, damage, or failure.
			21.38	Inspect and measure a piston for wear, damage, or failure.
			21.39	Inspect a flywheel and clutch assembly for wear, damage, or failure.
			21.40	Mark connecting rods and main bearing caps.
			21.41	Remove ring ridge.
			21.42	Deglaze cylinders.
			21.43	Remove and replace pressed fit harmonic balancer.
			21.44	Measure and adjust ring end gap.
			21.45	Install piston rings.
			21.46	Remove and replace galley and expansion plugs.
			21.47	Remove and replace pilot bearing.
			21.48	Install crankshaft and check main bearing clearances and end play.
			21.49	Install rear main bearing seal.
			21.50	Install piston/rod assemblies and check connecting rod bearing clearances and side clearances.
			21.51	Use manufacturer recommended sealer as required.

			21.52	Inspect oil pump and pressure relief valve.
				<b>FINAL ASSEMBLY AND START-UP</b>
			21.53	Install front crankshaft seal.
			21.54	Install heads and torque head bolts to manufacturer recommended specification.
			21.55	Prime lubrication system.
			21.56	Check accuracy of timing tab and balancer timing marks.
			21.57	Adjust mechanical and hydraulic valves.
			21.58	Install distributor and set static timing.
			21.59	Install manufacturers recommended coolant and test strength.
			21.60	Install and adjust accessory drive belts.
			21.61	Replace thermostat.
			21.62	Pressure check cooling system and radiator pressure cap.
			21.63	Check temperature gauge.
				<b>MISCELLANEOUS</b>
			21.64	Remove broken bolt or stud.
			21.65	Install thread insert.
			21.66	Use electronic repair data base for retrieval of repair procedures, maintenance specifications and technical service bulletins.

**SCORING TOTALS**

**Total 0's = \_\_\_\_\_ Total 1's = \_\_\_\_\_ Total 2's = \_\_\_\_\_**

**Multiply the 1's X 1 = \_\_\_\_\_ 2's X 2 = \_\_\_\_\_**

**Add the results to determine the TOTAL SCORE \_\_\_\_\_**

# Automotive Technician Training Standards

## Level II

### 2 – BRAKES STUDENT OUTCOMES

\_\_\_\_\_  
School

**Note:** All procedures listed in this document are to be performed in accordance with industry-accepted practices and/or manufacturers' recommended procedures.

**NOTE:** No Evidence = 0, Some Evidence = 1, Meets Standards = 2

SCORE			I.D.
0	1	2	NO.

				HYDRAULIC SYSTEM
			22.1	Check and correct brake fluid level and condition.
			22.2	Change brake fluid.
			22.3	Check brake pedal feel and travel.
			22.5	Inspect stop light operation.
			22.6	Inspect master cylinder for internal and external leaks.
			22.7	Remove and replace master cylinder.
			22.8	Bench bleed master cylinder.
			22.9	Inspect brake tubing, flexible hoses, fittings and supports.

			22.10	Bleed (manual, pressure, vacuum, or surge) hydraulic system.
				<b>DRUM BRAKES</b>
			22.11	Clean brake assembly using industry standard procedures.
			22.12	Remove, inspect, measure thickness and replace brake shoes/linings, self-adjusters and other hardware.
			22.13	Remove, inspect, measure and replace brake drums
			22.14	Inspect and service wheel bearings and seals.
			22.15	Remove and replace wheel; replace lug nuts using proper torque and tightening sequence.
				<b>DISC BRAKES</b>
			22.16	Remove, inspect and replace caliper; clean and inspect for leaks and damage to caliper housing.
			22.17	Inspect and lubricate caliper mountings.
			22.18	Remove, inspect and replace pads.
			22.19	Inspect linings for wear and condition.
			22.20	Clean, inspect, measure rotor runout and thickness, resurface.
			22.21	Remove and replace wheel; replace lug nuts using proper torque and tightening sequence.
				<b>PARKING BRAKES AND WARNING LIGHTS</b>
			22.22	Check parking brake operation.
			22.23	Adjust parking brake.
			22.24	Test parking brake indicator light.
			22.25	Remove, inspect and replace, and test brake warning light system switch.
			22.26	Test, adjust, repair or replace stop light switch.
				<b>BRAKE POWER ASSIST</b>

			22.27	Test for power booster operation and free travel.
			22.28	Inspect hoses and line of Hydro-boost system.
				<b>ANTILOCK BRAKE SYSTEMS</b>
			22.29	Check ABS warning light operation sequence; pull trouble codes and determine if sequence is correct.
			22.30	Determine ABS system type; locate hydraulic modulator electrical relays, control module and speed sensors.
			22.31	Check speed sensor clearance and signal output.
			22.32	Bleed system following manufacturer's recommendations.
			22.33	Use electronic repair data base for retrieval of repair procedures, maintenance specifications and technical service bulletins.

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**Multiply the 1's X 1 = \_\_\_\_\_      2's X 2 = \_\_\_\_\_**

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# Automotive Technician Training Standards

## Level II

### 3 – SUSPENSIONS STUDENT OUTCOMES

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School

**Note:** All procedures listed in this document are to be performed in accordance with industry-accepted practices and/or manufacturers' recommended procedures.

**NOTE:** No Evidence = 0, Some Evidence = 1, Meets Standards = 2

SCORE			I.D.
0	1	2	NO.

				STEERING SYSTEMS
			23.1	Inspect manual and power steering fluid levels and determine correct fluid.
			23.2	Remove, inspect and replace power steering pump belt(s).
			23.3	Inspect and replace rack and pinion inner rod ends (sockets) and bellow boots.
			23.4	Remove, inspect and replace rack and pinion mounting bushings and brackets.
			23.5	Inspect pitman arm, center-link/relay rod, idler arm and mountings.
			23.6	Remove, inspect, replace and pre-adjust tie rod sleeves, clamps and tie rod ends.
				GENERAL SUSPENSION SKILLS
			23.7	Identify lifting/jacking points for raising and supporting vehicle.

			23.8	Remove and replace wheel, replace lug nuts using proper torque and tightening sequence.
			23.9	Determine correct inflation pressure and inflate a tire to proper pressure.
			23.10	Verify tire wear pattern and determine cause.
			23.11	Identify causes of wheel/tire vibration.
			23.12	Properly rotate tires.
			23.13	Balance wheel and tire assembly.
			23.14	Dismount, inspect, repair (plug and patch) and remount tire on wheel.
			23.15	Inspect and replace shock absorbers.
				<b>FRONT SUSPENSIONS</b>
			23.16	Inspect short and long arm-type suspension system.
			23.17	Inspect MacPherson strut suspension system.
			23.18	Lubricate suspension/steering components.
				<b>REAR SUSPENSIONS</b>
			23.19	Inspect rear springs and spring insulators.
			23.20	Inspect rear suspension system control arms, links, bushings and mounts.
			23.21	Inspect rear strut cartridge or assembly.
				<b>WHEEL ALIGNMENT</b>
			23.22	Describe vehicle conditions causing wandering, pulling, hard steering and poor steering return problems.
			23.23	Measure vehicle ride height.
			23.24	Measure and adjust front and rear wheel camber.
			23.25	Measure and adjust front and rear wheel caster.

			23.26	Measure and adjust front and rear wheel toe.
			23.27	Center steering wheel.
			23.28	Measure toe-out-on-turns (turning radius).
			23.29	Measure rear wheel thrust angle.
			23.30	Use electronic repair data base for retrieval of repair procedures, maintenance specifications and technical service bulletins.

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# Automotive Technician Training Standards

## Level II

### 4 – DRIVE TRAINS STUDENT OUTCOMES

\_\_\_\_\_ School

**Note:** All procedures listed in this document are to be performed in accordance with industry-accepted practices and/or manufacturers' recommended procedures.

**NOTE:** No Evidence = 0, Some Evidence = 1, Meets Standards = 2

SCORE			I.D.
0	1	2	NO.

				<b>AUTOMATIC TRANSMISSION/TRANSAXLE</b>
			24.1	Check fluid level and condition using OEM procedures and specifications.
			24.2	Determine correct ATF for a particular unit.
			24.3	Identify and locate fluid leaks.
				<b>MAINTENANCE AND ADJUSTMENTS</b>
			24.4	Inspect and adjust fluid level and condition.
			24.5	Inspect, adjust, or replace manual shift and throttle (TV) linkages/cables.
			24.6	Replace fluids, gaskets and filters; inspect oil pan deposits, verify no leaks after replacement.
			24.7	Disconnect and inspect electrical wires and replace connectors.

				<b>IN-VEHICLE REPAIR</b>
			24.8	Inspect, adjust and replace modulator, check vacuum supply and electronic operation.
			24.9	Inspect, replace, and align power train mounts.
				<b>MANUAL TRANSMISSION AND CLUTCH</b>
			24.10	Check pedal feel.
			24.11	Adjust clutch pedal clearance/free play and replace clutch linkage components.
			24.12	Inspect and replace hydraulic clutch slave and master cylinders, lines, and hoses.
			24.13	Bleed hydraulic system.
				<b>MANUAL TRANSMISSION/ TRANSAXLE</b>
			23.14	Identify and locate fluid leak.
			23.15	Inspect fluid condition, drain and replace fluid using the OEM recommended fluid.
				<b>DRIVE SHAFT AND UNIVERSAL JOINT</b>
			24.16	Remove and replace FWD drive axle shaft.
			24.17	Remove and replace RWD drive shaft.
			24.18	Inspect and replace RWD universal joint.
			24.19	Inspect and replace CV joint and boot.
				<b>REAR WHEEL DRIVE AXLE</b>
			24.20	Inspect axle assembly for fluid leakage.
			24.21	Inspect axle for fluid level and condition.
			24.22	Drain and replace lubricant; replace with proper fluid and verify no leaks.

			24.23	Inspect and replace axle shaft wheel studs
			24.24	Inspect and replace axle shaft seals, bearings and retainers
				<b>FOUR WHEEL/ALL WHEEL DRIVE COMPONENTS</b>
			24.25	Inspect, adjust, and repair transfer case shifting mechanisms.
			24.26	Drain, inspect and replace transfer case lubricant; determine correct lubricant.
			24.27	Use electronic repair data base for retrieval of repair procedures, maintenance specifications and technical service bulletins.

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**Multiply the 1's X 1 = \_\_\_\_\_      2's X 2 = \_\_\_\_\_**

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# Automotive Technician Training Standards

## Level II

### 5 – HEATING & AIR CONDITIONING STUDENT OUTCOMES

\_\_\_\_\_  
School

**Note:** All procedures listed in this document are to be performed in accordance with industry-accepted practices and/or manufacturers' recommended procedures.

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SCORE			I.D.
0	1	2	NO.

				A/C SYSTEMS
			25.1	Understand requirements to earn appropriate certification.
			25.2	Identify all A/C system types, refrigerants, and oils used in all vehicles on the road.
			25.3	Connect gauges and/or recovery system.
			25.4	Conduct HV AC system performance test for proper operation of doors, duct temps, clutch operation, proper pressures/temperatures, proper component temperature and sight glass indications.
			25.5	Leak test system.
				A/C SYSTEM SERVICE
			25.6	Identify and recover refrigerant using EPA approved equipment and procedures.
			25.7	Evacuate and recharge system using EPA approved equipment and procedures.

				<b>SYSTEM COMPONENTS</b>
			25.8	Inspect, adjust and replace compressor drive belts.
			25.9	Inspect and replace belt idler pulley.
			25.10	Inspect, test, adjust and replace compressor clutch components.
			25.11	Add the proper type and amount of oil to any replacement component.
			25.12	Remove and replace O-rings or gaskets at line connections.
			25.13	Remove, inspect, repair or replace hoses, lines, mufflers or filters.
			25.14	Inspect and clean condenser fins.
			25.15	Remove, inspect and replace receiver/drier or accumulator/drier.
			25.16	Remove, inspect and replace TXV.
			25.17	Remove, inspect and replace orifice tube.
			25.18	Inspect, clean and deodorize evaporator and drain tube.
			25.19	Remove, identify, inspect and replace Schrader valves.
			25.20	Remove, inspect and replace system high pressure relief valves.
				<b>ENGINE COOLING SYSTEM</b>
			25.21	Conduct a visual inspection of cooling system.
			25.22	Perform cooling system pressure check.
			25.23	Inspect coolant condition and test freezing point.
			25.24	Recover coolant and refill system with proper coolant, purge air.
			25.25	Service a cooling system.
			25.26	Remove, inspect, replace and adjust drive belts.
			25.27	Remove, inspect, replace and test radiator/condenser electric fan and motor.
			25.28	Remove, inspect and replace radiator and heater hoses.

			25.29	Inspect, test and replace radiator cap.
			25.30	Follow the proper procedure to remove, inspect and replace radiator.
			25.31	Inspect, test, remove and replace coolant recovery tank and hose.
			25.32	Inspect, test, remove and replace thermostat.
			25.33	Understand the proper procedure to remove, inspect, test and flush heater core.
				<b>SYSTEM CONTROLS</b>
			25.34	Inspect heating, ventilation and A/C systems for proper system operation.
			25.35	Measure voltage, amps, and resistance for the compressor clutch and blower motor.
			25.36	Remove, inspect, test and replace heating and AC fuses.
			25.37	Demonstrate the proper procedure to remove, inspect, test, and replace blower motor, resistors, switches, relays diodes, and sensors.
			25.38	Use electronic repair data base for retrieval of repair procedures, maintenance specifications and technical service bulletins.

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**Multiply the 1's X 1 = \_\_\_\_\_      2's X 2 = \_\_\_\_\_**

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# Automotive Technician Training Standards

## Level II

### 6 – ELECTRICAL/PERFORMANCE STUDENT OUTCOMES

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School

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**NOTE:** No Evidence = 0, Some Evidence = 1, Meets Standards = 2

SCORE			I.D.
0	1	2	NO.

				GENERAL
			26.1	Identify vehicle safety restraint system precautions and disabling methods.
			26.2	Identify circuits and locate components using a wiring diagram and component locator.
			26.3	Check circuits using a test light, PowerProbe, and Logic Probe where appropriate.
			26.4	Demonstrate proper usage and application of a digital multi-meter to measure voltage, voltage drops, resistance and amperes in various circuits.
			26.5	Use an ammeter to measure current.
			26.6	Use a digital ohmmeter to check continuity and measure resistance.
			26.7	Locate test and repair a fusible link and circuit breaker.

			26.8	Remove and replace fuses.
			26.9	Use electronic repair data base for retrieval of repair procedures, maintenance specifications and technical service bulletins.
			26.10	Set up and operate a digital storage lab oscilloscope.
			26.11	Inspect wiring and vacuum hoses to identify defects.
				<b>ENGINE DIAGNOSIS</b>
			26.12	Test and evaluate an engine using a vacuum gauge.
			26.13	Perform and evaluate a compression test.
			26.14	Perform and evaluate a cylinder leak test.
			26.15	Test and evaluate an engine using an infrared gas analyzer.
			26.16	Adjust valve lash.
				<b>BATTERIES AND SERVICE</b>
			26.17	Test and evaluate battery terminal voltage.
			26.18	Perform a battery load and inductance test.
			26.19	Clean and service a battery.
			26.20	Replace a battery.
			26.21	Inspect and charge a battery per battery manufacturer.
			26.22	Jump start a vehicle using jumper cables.
				<b>STARTING SYSTEMS</b>
			26.23	Perform a starter draw test.
			26.24	Test and evaluate system voltage drops.

			26.25	Use a remote starter switch to crank an engine.
			26.26	Inspect and evaluate a starter drive mechanism and flywheel.
				<b>CHARGING SYSTEMS</b>
			26.27	Inspect and properly install an alternator drive belt.
			26.28	Perform and evaluate alternator output test.
			26.29	Perform voltage drop test on a charging system.
			26.30	Remove and replace an alternator.
				<b>LIGHTING SYSTEMS</b>
			26.31	Replace a headlight.
			26.32	Inspect and test lighting system operation.
			26.33	Perform voltage drop test on a headlight circuit.
			26.34	Aim a vehicles headlight using manufacturers procedures.
			26.35	Troubleshoot lighting circuits using appropriate test equipment.
			26.36	Test and adjust a stoplight switch.
			26.37	Locate, remove and replace flasher.
				<b>GAUGES AND WARNING DEVICES</b>
			26.38	Test and evaluate gauges and sending units.
			26.39	Test and evaluate warning light circuits and components.
				<b>HORN, WIPER/WASHER</b>
			26.40	Remove and replace horn switch.

			26.41	Remove and replace washer motor.
			26.42	Test and evaluate horn circuit and components.
			26.43	Remove and replace wiper arms and blades.
				<b>ACCESSORY SYSTEMS</b>
			26.44	Test and evaluate radio antenna operation.
			26.45	Test accessory power receptacle circuit.
			26.46	Identify and locate supplemental restraint system (SRS) components.
				<b>IGNITION SYSTEMS</b>
			26.47	Test and evaluate ignition systems.
			26.48	Install plug wires, cap & rotor, spark plugs.
			26.49	Adjust base timing and verify ignition timing advance on distributor systems.
			26.50	Test and service ignition advance system.
				<b>FUEL SYSTEMS</b>
			26.51	Inspect for leaks to determine next action.
			26.52	Test and evaluate fuel pressure and volume on a fuel system.
			26.53	Conduct a EFI cleaning service.
			26.54	Remove and replace fuel filter on a gasoline engine.
			26.55	Test and evaluate fuel injection system components.
				<b>EMISSION CONTROL SYSTEMS</b>
			26.56	Remove, replace & test PCV system components.

			26.57	Visually inspect and test air injection system components.
			26.58	Visually inspect evaporative emission system components.
			26.59	Test and evaluate EGR system components and controls.
			26.60	Test and evaluate heated air intake (TAC) system components.
			26.61	Identify emission controls using under-hood label for various make, model and year applications.
			26.62	Locate and identify DLC
				<b>COMPUTER SYSTEMS</b>
			26.63	Setup and read a scan tool trouble codes and serial data stream.
			26.64	Clear computer memories.
				<b>MISCELLANEOUS</b>
			26.65	Properly generate and expand a repair order using "Write-it-Right" guidelines.

**SCORING TOTALS**

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**Add the results to determine the TOTAL SCORE \_\_\_\_\_**

# Automotive Technician Training Standards

## Level II

### 7 – EMISSION STUDENT OUTCOMES

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School

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**NOTE:** No Evidence = 0, Some Evidence = 1, Meets Standards = 2

SCORE			I.D.
0	1	2	NO.

				CUSTOMER COMMUNICATIONS
			27.1	Evaluate vehicle information to determine if the vehicle needs an inspection and which type of inspection is needed at what type of station.
			27.2	Determine vehicle emission requirements using vehicle emission label or the application manual and determine type of vehicle certification (e.g., California, Federal of BAR label).
			27.3	Verify customer's DMV renewal notice and vehicle information (e.g., VIN label, license number) to determine accuracy of information prior to performing smog check inspection.
			27.4	Properly generate and expand a repair order using "Write-it-Right" guidelines.
			27.5	Inform customer about the purpose(s) of the smog check program.
			27.6	Consult with the customer regarding smog check visual and functional tests.

			27.7	Inform customer of the option and scope of a pretest smog inspection.
			27.8	Inform the customer about the results using the VIR, provide a list of authorized repair smog repair dealers.
			27.9	Provide consumer with a vehicle repair cost estimate documenting recommended vehicle repairs following diagnostic testing procedures.
			27.10	Obtain consumer authorization to perform repairs on vehicle as determined by diagnostic testing.
			27.11	Consult with consumer to determine if vehicle repairs may be covered under warranty prior to performing repairs.
			27.12	Consult with consumer regarding a retest following repairs made to vehicle.
				<b>SAFETY</b>
			27.13	Perform visual safety inspection on vehicle by checking condition of vehicle components (e.g., fluid leaks) prior to performing smog check inspection.
			27.14	Evaluate vehicle throughout smog check inspection process to determine if smog check inspection should be aborted to maintain safety.
			27.15	Maintain technician safety while servicing vehicle by following recommended procedures of vehicle and equipment manufacturers.
			27.16	Maintain safety and cleanliness of the testing area.
				<b>CALIBRATION OF TEST ANALYZERS AND DEVICES</b>
			27.17	Perform calibration of emissions testing systems to ensure accurate functioning of systems during smog check inspection.
			27.18	Perform visual inspection of analyzer components (e.g., RPM pickup) to ensure accurate functioning of systems during smog check inspection.
			27.19	Inspect test analyzer devices to ensure accurate functioning of devices during smog check inspection or replace if needed.
			27.20	Perform troubleshooting procedure on test analyzer sample system to restore function of system.
			27.21	Perform troubleshooting procedures on LPFET analyzer to restore function to system.
			27.22	Perform troubleshooting procedures on fuel cap test device to restore function to system.

			27.23	Inspect dynamometer to ensure safe operation prior to performing calibration.
			27.24	Perform troubleshooting procedures on dynamometer to restore function to system.
				<b>EMISSIONS TEST(S) PROCEDURES</b>
			27.25	Validate technician authorization to perform emissions test by entering access code into analyzer.
			27.26	Prepare vehicle for LPFET test.
			27.27	Perform LPFET test as required by vehicle type.
			27.28	Prepare vehicle for emissions test by warming engine to operating temperature prior to performing emissions test.
			27.29	Perform pretest smog test inspection.
			27.30	Perform two speed idle (TSI) test as prompted by analyzer to evaluate vehicle emissions.
			27.31	Prepare vehicle for emissions test by operating cooling fan to prevent overheating of vehicle during ASM emissions test as prompted by analyzer.
			27.32	Perform acceleration simulation mode (ASM) test as prompted by analyzer to evaluate vehicle emissions.
			27.33	Perform BAR-OIS test as prompted by analyzer to evaluate vehicle emissions.
				<b>VISUAL INSPECTION</b>
			27.34	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to detect the presence of fuel leaks.
			27.35	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify fuel induction system on vehicle.
			27.36	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of fuel evaporative (EVAP) system on vehicle.
			27.37	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of other emission related components on vehicle.
			27.38	Verify vehicle emissions components to determine whether components are original to the vehicle or permitted substitutes for the vehicle.

			27.39	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of positive crankcase ventilation (PCV) system on vehicle.
			27.40	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of sensors, switches, and computers on vehicle.
			27.41	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of exhaust gas recirculation (EGR) system on vehicle.
			27.42	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of ignition spark control system(s) on vehicle.
			27.43	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of proper exhaust gas treatment systems, (e.g., catalytic converters, etc.) on vehicle.
			27.44	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of air injection (AIS) system on vehicle.
			27.45	Perform visual smoke test.
			27.46	Perform comprehensive visual inspection of vehicle as prompted by test analyzer to verify installation of thermostatic air cleaner (TAC) system on vehicle.
				<b>FUNCTIONAL TEST(S)</b>
			27.47	Evaluate function of the exhaust gas recirculation system as prompted by the analyzer by following vehicle manufacturers procedure.
			27.48	Evaluate ignition timing of the vehicle as prompted by the analyzer by following vehicle manufacturers procedure.
			27.49	Evaluate vehicle's malfunction indicator light (MIL) by performing functional test.
			27.50	Perform OBD II test as prompted by the analyzer to determine vehicles readiness indicator and code status.
				<b>DIAGNOSIS</b>
			27.51	Evaluate emissions results (e.g., excessive HC, excessive CO, excessive NOx) to identify vehicle system(s) that need diagnostic testing.
			27.52	Evaluate OBD II results to identify vehicle system(s) that need diagnostic testing.
			27.53	Evaluate vehicle to determine if failure was due to a defective condition or tampering.

			27.54	Perform diagnostic testing on vehicles system(s) that indicate failure during smog check inspection to identify areas of repair.
			27.55	Evaluate diagnostic readings to determine if a system failure in a vehicle may be causing other systems to fail.
			27.56	Inspect the vehicle to verify the failure identified on the vehicle inspection (VIR) prior to performing diagnostic testing.
				<b>PERFORMING AND VERIFYING REPAIRS</b>
			27.57	Evaluate diagnostic testing results to determine if components of vehicle need to be cleaned, repaired or replaced.
			27.58	Replace components of vehicle as indicated by vehicle diagnosis.
			27.59	Repair components of vehicle as indicated by vehicle diagnosis.
			27.60	Clean components of vehicle as indicated by vehicle diagnosis.
			27.61	Perform tests to determine if the vehicle repairs are successful.

**SCORING TOTALS**

**Total 0's = \_\_\_\_\_                      Total 1's = \_\_\_\_\_                      Total 2's = \_\_\_\_\_**

**Multiply the 1's X 1 = \_\_\_\_\_      2's X 2 = \_\_\_\_\_**

**Add the results to determine the TOTAL SCORE \_\_\_\_\_**