

Standards Correlations

Automotive Technology I (8506)

Task	SOL Correlations	ASE
Demonstrating Personal Qualities and Abilities		
Demonstrate creativity and innovation.	<p>English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1</p> <p>Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>	

Task	SOL Correlations	ASE
Demonstrate critical thinking and problem solving.	<p>English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1</p> <p>Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8, A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>	
Demonstrate initiative and self-direction.	<p>English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p>	

Task	SOL Correlations	ASE
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
Demonstrating Interpersonal Skills		
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1	
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1	

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	History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1	
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrating Professional Competencies		
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6	

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	History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4	
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1	
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8,	

Task	SOL Correlations	ASE
	COM.1, COM.3, COM.5, COM.8	
Demonstrate information-literacy skills.	<p>English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1</p>	
Demonstrate an understanding of information security.	<p>English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p>	

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	Mathematics: COM.10	
Maintain working knowledge of current information-technology (IT) systems.	<p>English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17</p> <p>Science: BIO.1, CH.1, ES.1, PH.1</p>	
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	<p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16</p> <p>Science: CH.1, ES.1, LS.1, PH.1, PS.1</p>	
Apply mathematical skills to job-specific tasks.	<p>English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1,</p>	

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	USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1	
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: 6.1, PH.1, PS.1	
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5	

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	History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
Examining All Aspects of an Industry		
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16	
Examine aspects of management within an industry/organization.		
Examine aspects of financial responsibility within an industry/organization.		
Examine technical and production skills required of workers within an industry/organization.		
Examine principles of technology that underlie an industry/organization.		
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16	
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16	
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16	
Addressing Elements of Student Life		
Identify the purposes and goals of the student organization.		
Explain the benefits and responsibilities of membership in the student organization as		

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a student and in professional/civic organizations as an adult.		
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		
Identify Internet safety issues and procedures for complying with acceptable use standards.		
Exploring Work-Based Learning		
Identify the types of work-based learning (WBL) opportunities.		
Reflect on lessons learned during the WBL experience.		
Explore career opportunities related to the WBL experience.		
Participate in a WBL experience, when appropriate.		
REQUIRED SUPPLEMENTAL TASKS: Lab/Shop and Personal Safety		
Identify general lab/shop safety rules and procedures.	Science: CH.1	
Utilize safe procedures for handling tools and equipment.	English: 10.5, 11.5	
Identify and use proper placement of floor jacks and jack stands.		
Identify and use proper procedures for safe lift operation.	English: 10.5, 11.5	
Use proper ventilation procedures for working in the lab/shop area.		
Identify marked safety areas.	English: 10.5, 11.5	
Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment.	English: 10.5, 11.5 Science: CH.1	
Identify the location and use of eye wash stations.	Science: CH.1	

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Identify the location of posted evacuation routes.	English: 10.5, 11.5 Science: CH.1	
Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities.	Science: CH.1	
Identify and wear appropriate clothing for lab/shop activities.	History and Social Science: VUS.1 Science: CH.1	
Secure hair and jewelry for lab/shop activities.	Science: CH.1	
Demonstrate awareness of the safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high-voltage circuits.		
Demonstrate awareness of the safety aspects of high-voltage circuits such as high intensity discharge (HID) lamps, ignition systems, and injection systems.	English: 10.5, 11.5 Science: PH.11	
REQUIRED SUPPLEMENTAL TASKS: Tools and Equipment		
Locate and demonstrate knowledge of safety data sheets (SDS).	English: 10.5, 11.5 Science: CH.1	
Identify tools and their usage in automotive applications.	English: 10.5, 11.5	
Identify standard and metric measurement designations.	English: 10.5, 11.5	
Demonstrate safe handling and use of appropriate tools.		
Demonstrate cleaning, storage, and maintenance of tools and equipment.		
Demonstrate use of precision measuring tools (i.e., micrometer, dial-indicator, dial-caliper).		
REQUIRED SUPPLEMENTAL TASKS: Preparing Vehicle for Service		
Identify information needed and the service requested on a repair order.	English: 10.5, 11.5	

Task	SOL Correlations	ASE
Identify purpose and demonstrate proper use of fender covers and mats.	English: 10.5, 11.5	
Demonstrate use of the three Cs (i.e., concern, cause, and correction).		
Review vehicle service history.	English: 10.5, 11.5	
Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and correction.		
REQUIRED SUPPLEMENTAL TASKS: Preparing Vehicle for Customer		
Ensure vehicle is prepared to return to customer per school/company policy (floor mats, steering wheel cover, etc.).		
ENGINE REPAIR: General		
Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.	English: 10.5, 10.8, 11.5, 11.8 History and Social Science: VUS.1	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair A. General Task 1
Verify operation of the instrument panel engine warning indicators.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair A. General Task 2
Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair A. General Task 3

Task	SOL Correlations	ASE
Identify service precautions related to service of the internal combustion engine of a hybrid vehicle.	English: 10.5, 11.5	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair A. General Task 7
ENGINE REPAIR: Lubrication and Cooling Systems		
Perform cooling system pressure and dye tests to identify leaks; check coolant condition and level; inspect and test radiator, pressure cap, coolant recovery tank, heater core, and galley plugs; determine needed action.	Science: PH.7	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair C. Lubrication and Cooling Systems Task 1
Inspect, replace, and/or adjust drive belts, tensioners, and pulleys; check pulley and belt alignment.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair C. Lubrication and Cooling Systems Task 2
Remove, inspect, and replace thermostat and gasket/seal.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair C. Lubrication and Cooling Systems Task 3
Inspect and test coolant; drain and recover coolant; flush and refill cooling system; use proper fluid type per manufacturer specification; bleed air as required.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level

Task	SOL Correlations	ASE
		I. Engine Repair C. Lubrication and Cooling Systems Task 4
Perform engine oil and filter change; use proper fluid type per manufacturer specification; reset maintenance reminder as required.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level I. Engine Repair C. Lubrication and Cooling Systems Task 5
AUTOMATIC TRANSMISSION AND TRANSAXLE: General		
Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.	English: 10.5, 10.8, 11.5, 11.8 History and Social Science: VUS.1	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle A. General Task 1
Check fluid level in a transmission or a transaxle equipped with a dipstick.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle A. General Task 2
Check fluid level in a transmission or a transaxle not equipped with a dipstick.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle

Task	SOL Correlations	ASE
		A. General Task 3
Check transmission fluid condition; check for leaks.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle A. General Task 4
Identify drive-train components and configuration.	English: 10.5, 11.5	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle A. General Task 5
AUTOMOTIVE TRANSMISSION AND TRANSAXLE: In-Vehicle Transmission/Transaxle		
Inspect for leakage at external seals, gaskets, and bushings.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle B. In-Vehicle Transmission/Transaxle Task 2
Drain and replace fluid and filter(s); use proper fluid type per manufacturer specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level II. Automatic Transmission and Transaxle

Task	SOL Correlations	ASE
		B. In-Vehicle Transmission/Transaxle Task 4
MANUAL DRIVE TRAIN AND AXLES: General		
Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.	English: 10.5, 10.8, 11.5, 11.8 History and Social Science: VUS.1	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles A. General Task 1
Drain and refill manual transmission/transaxle and final drive unit; use proper fluid type per manufacturer specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles A. General Task 2
Check fluid condition; check for leaks.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles A. General Task 3
MANUAL DRIVE TRAIN AND AXLES: Clutch		
Check and adjust clutch master cylinder fluid level; use proper fluid type per manufacturer specifications.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles

Task	SOL Correlations	ASE
		B. Clutch Task 1
Check for hydraulic system leaks.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles B. Clutch Task 2
MANUAL DRIVE TRAIN AND AXLES: Drive Shaft, Half Shafts, Universal Joints and Constant-Velocity (CV) Joints (Front, Rear, All, and Four-Wheel Drive)		
Check for leaks at drive assembly and transfer case seals; check vents; check fluid level; use proper fluid type per manufacturer specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles D. Drive Shaft, Half Shafts, Universal Joints and Constant- Velocity (CV) Joints (Front, Rear, All and Four-wheel Drive) Task 1
MANUAL DRIVE TRAIN AND AXLES: Differential Case Assembly		
Check and adjust differential case fluid level; use proper fluid type per manufacturer specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles E. Differential Case Assembly Task 2

Task	SOL Correlations	ASE
Drain and refill differential housing.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles E. Differential Case Assembly Task 3
Inspect and replace drive axle wheel studs.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level III. Manual Drive Train and Axles E. Differential Case Assembly Task 4
SUSPENSION AND STEERING SYSTEMS: General		
Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins.	English: 10.5, 10.8, 11.5, 11.8	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems A. General Task 1
SUSPENSION AND STEERING SYSTEMS: Related Suspension and Steering Service		
Inspect rack-and-pinion steering gear inner tie-rod ends (sockets) and bellows boots.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service

Task	SOL Correlations	ASE
		Task 1
Inspect power steering fluid level and condition.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 2
Flush, fill, and bleed power steering system; use proper fluid type per manufacturer specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 3
Inspect for power steering fluid leakage.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 4
Remove, inspect, replace, and/or adjust power steering pump drive belt.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service

Task	SOL Correlations	ASE
		Task 5
Inspect and replace power steering hoses and fittings.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 6
Inspect pitman arm, relay (center link/intermediate) rod, idler arm, mountings, and steering linkage damper.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 7
Inspect tie rod ends (sockets), tie rod sleeves, and clamps.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 8
Inspect upper and lower control arms, bushings, and shafts.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service

Task	SOL Correlations	ASE
		Task 9
Inspect and replace rebound and/or jounce bumpers.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 10
Inspect track bar, strut rods/radius arms, and related mounts and bushings.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 11
Inspect upper and lower ball joints (with or without wear indicators).		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 12
Inspect suspension system coil springs and spring insulators (silencers).		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service

Task	SOL Correlations	ASE
		Task 13
Inspect suspension system torsion bars and mounts.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 14
Inspect and/or replace front/rear stabilizer bar (sway bar) bushings, brackets, and links.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 15
Inspect, remove, and/or replace strut cartridge or assembly; inspect mounts and bushings.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 16
Inspect front strut bearing and mount.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service

Task	SOL Correlations	ASE
		Task 17
Inspect rear suspension system lateral links/arms (track bars) and control (trailing) arms.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 18
Inspect rear suspension system leaf spring(s), spring insulators (silencers), shackles, brackets, bushings, center pins/bolts, and mounts.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 19
Inspect, remove, and/or replace shock absorbers; inspect mounts and bushings.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 20
Inspect electric power steering assist system.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service

Task	SOL Correlations	ASE
		Task 21
Identify hybrid vehicle power steering system electrical circuits and safety precautions.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 22
Describe the function of suspension and steering control systems and components (i.e., active suspension and stability control).		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems B. Related Suspension and Steering Service Task 23
SUSPENSION AND STEERING SYSTEMS: Wheel Alignment		
Perform prealignment inspection; measure vehicle ride height.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems C. Wheel Alignment Task 1
Describe alignment angles (camber, caster, and toe).		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems C. Wheel Alignment

Task	SOL Correlations	ASE
		Task 2
SUSPENSION AND STEERING SYSTEMS: Wheels and Tires		
Inspect tire condition; identify tire wear patterns; check for correct tire size, application (load and speed ratings), and air pressure as listed on the tire information placard/label.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 1
Rotate tires according to manufacturer's recommendations including vehicles equipped with tire pressure monitoring systems (TPMS).		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 2
Dismount, inspect, and remount tire on wheel; balance wheel and tire assembly.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 3
Dismount, inspect, and remount tire on wheel equipped with TPMS sensor.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 4

Task	SOL Correlations	ASE
Inspect tire and wheel assembly for air loss; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 5
Repair tire following vehicle manufacturer approved procedure.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 6
Identify tire pressure monitoring systems (indirect and direct); calibrate system; verify operation of instrument panel lamps.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 7
Demonstrate knowledge of steps required to remove and replace sensors in a TPMS including relearn procedure.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level IV. Suspension and Steering Systems D. Wheels and Tires Task 8
BRAKES: General		

Task	SOL Correlations	ASE
Research vehicle service information, including fuel type, vehicle service history, service precautions, and technical service bulletins.	English: 10.5, 10.8, 11.5, 11.8	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes A. General Task 1
Describe procedure for performing a road test to check brake system operation, including an anti-lock brake system (ABS).	English: 10.5, 11.5	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes A. General Task 2
BRAKES: Hydraulic System		
Describe proper brake pedal height, travel, and feel.	English: 10.5, 11.5	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 1
Check master cylinder for external leaks and proper operation.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 2
Inspect brake lines, flexible hoses, and fittings for leaks, dents, kinks, rust, cracks, bulging, wear, and loose fittings/supports.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 3

Task	SOL Correlations	ASE
Select, handle, store, and fill brake fluids to proper level; use proper fluid type per manufacturer specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 4
Identify components of hydraulic brake warning light system.	English: 10.5, 11.5	ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 5
Bleed and/or flush brake system.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 6
Test brake fluid for contamination.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes B. Hydraulic System Task 7
BRAKES: Drum Brakes		
Remove, clean, and inspect brake drum; measure brake drum diameter; determine serviceability.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes C. Drum Brakes Task 1

Task	SOL Correlations	ASE
Refinish brake drum and measure final drum diameter; compare with specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes C. Drum Brakes Task 2
Remove, clean, inspect, and/or replace brake shoes, springs, pins, clips, levers, adjusters/self-adjusters, other related brake hardware, and backing support plates; lubricate and reassemble.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes C. Drum Brakes Task 3
Inspect wheel cylinders for leaks and proper operation; remove and replace as needed.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes C. Drum Brakes Task 4
Pre-adjust brake shoes and parking brake; install brake drums or drum/hub assemblies and wheel bearings; make final checks and adjustments.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes C. Drum Brakes Task 5
Install wheel and torque lug nuts.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes A. General Task 3
BRAKES: Disc Brakes		

Task	SOL Correlations	ASE
Remove and clean caliper assembly; inspect for leaks and damage/wear; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 1
Inspect caliper mounting and slides/pins for proper operation, wear, and damage; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 2
Remove, inspect, and/or replace brake pads and retaining hardware; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 3
Lubricate and reinstall caliper, brake pads, and related hardware; seat brake pads and inspect for leaks.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 4
Clean and inspect rotor and mounting surface; measure rotor thickness, thickness variation, and lateral runout; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 5
Remove and reinstall/replace rotor.		ASE Education Foundation

Task	SOL Correlations	ASE
		2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 6
Refinish rotor on vehicle; measure final rotor thickness and compare with specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 7
Refinish rotor off vehicle; measure final rotor thickness and compare with specification.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 8
Retract and readjust caliper piston on an integrated parking brake system.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 9
Check brake pad wear indicator; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes D. Disc Brakes Task 10
Describe importance of operating vehicle to burnish/break-in replacement brake pads according to manufacturer's recommendations.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level

Task	SOL Correlations	ASE
		V. Brakes D. Disc Brakes Task 11
BRAKES: Power-Assist Units		
Check brake pedal travel with and without engine running to verify proper power booster operation.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes E. Power-Assist Units Task 1
Identify components of the brake power assist system (vacuum and hydraulic); check vacuum supply (manifold or auxiliary pump) to vacuum-type power booster.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes E. Power-Assist Units Task 2
BRAKES: Related Systems (i.e., Wheel Bearings, Parking Brakes, Electrical)		
Remove, clean, inspect, repack, and install wheel bearings; replace seals; install hub and adjust bearings.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes F. Related Systems (i.e., Wheel Bearings, Parking Brakes, Electrical) Task 1
Check parking brake system components for wear, binding, and corrosion; clean, lubricate, adjust and/or replace as needed.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes

Task	SOL Correlations	ASE
		F. Related Systems (i.e., Wheel Bearings, Parking Brakes, Electrical) Task 2
Check parking brake operation and parking brake indicator light system operation; determine necessary action.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes F. Related Systems (i.e., Wheel Bearings, Parking Brakes, Electrical) Task 3
Check operation of brake stop light system.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes F. Related Systems (i.e., Wheel Bearings, Parking Brakes, Electrical) Task 4
Replace wheel bearing and race.		ASE Education Foundation 2017 Maintenance and Light Repair (MLR) Level V. Brakes F. Related Systems (i.e., Wheel Bearings, Parking Brakes, Electrical) Task 5