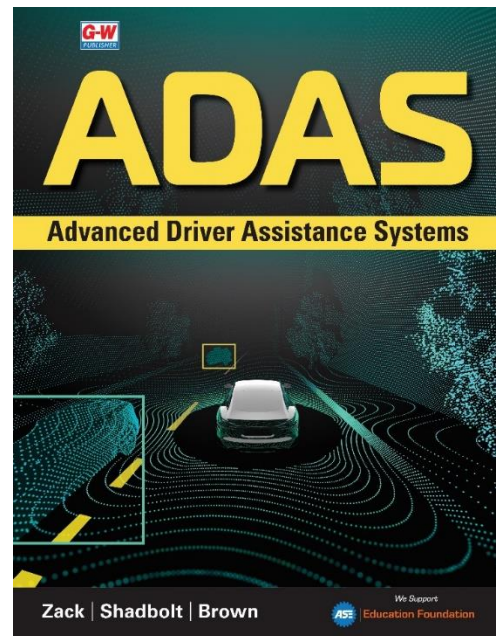




*Correlation of*  
**Advanced Driver Assistance Systems, Zack, Shadbolt, and Brown**  
**(Goodheart-Willcox Publisher ©2024)**  
to  
**ASE Education Foundation Advanced Driver Assistance Systems**  
**(ADAS) Specialist Test (L4)**  
**Task List**

The following chart correlates the Advanced Driver Assistance Systems textbook (©2024) to the 2022 ASE Education Foundation Advanced Driver Assistance Systems (ADAS) Specialist Test (L4) Task List.

For more information on the ASE Education Foundation standards, please visit [www.aseeducationfoundation.org](http://www.aseeducationfoundation.org).



Task Number and Description	ADAS Jobs
<b>A. General ADAS Service and Diagnosis</b>	
1. Inspect for damaged, missing, obstructed, modified, customized, inoperative, previously repaired or add-on vehicle components that could affect the performance of an ADAS system (including the use of non-factory specified components).	Job 5, Job 10, Job 11, Job 17
2. Determine reparability of body components that would affect the operation of an ADAS component.	Job 5, Job 10
3. Determine reparability of damaged components and related mounting locations.	Job 5, Job 6

**Correlation of *Advanced Driver Assistance Systems* to ASE Education Foundation *Advanced Driver Assistance Systems (ADAS) Specialist Test (L4) Task List* — page 2**

<b>Task Number and Description</b>	<b>ADAS Jobs</b>
4. Research applicable vehicle and service information, such as vehicle service history, service precautions, technical service bulletins, and service campaigns/recalls.	Job 2, Job 17
5. Research and identify ADAS intersystem design/configuration action with other vehicle systems (i.e., Braking, Steering, Powertrain, Active Suspension, Restraints, and TPMS).	Job 3, Job 6, Job 13
6. Verify vehicle concern and/or conduct vehicle pre-scan; determine vehicle equipment/options.	Job 4, Job 8, Job 15, Job 17
7. Use scan tool data, bi-directional controls, freeze frame data and/or diagnostic trouble codes (DTCs) to diagnose electronic systems; interpret readings and determine needed action.	Job 3, Job 12, Job 14, Job 15, Job 17
8. Read and interpret electrical schematic diagrams and symbols.	Job 14
9. Check voltage and voltage drop in electrical/electronic circuits; interpret readings and determine needed action.	Job 14
10. Check current flow in electrical/electronic circuits; interpret readings and determine needed action.	Job 14
11. Check continuity and resistances in electrical/electronic circuits and components; interpret readings and determine needed action.	Job 14
12. Check electronic circuit waveforms; interpret readings and determine needed action ASE ADAS Specialist Test Information Page 5	Job 16
13. Inspect, test, and replace components, connectors, terminals, wiring, fusible links, circuit breakers, fuses, diodes, and current limiting devices; determine needed action.	Job 14
14. Remove and replace components and modules; program, reprogram, code, initialize, and/or configure as needed.	Job 6
15. Diagnose faults and failures in ADAS such as Camera, Radar, Ultrasonic (Sonaar), LiDAR, Infrared, GPS, Head-Up Display, Driver Monitoring Systems, etc.	Job 4
16. Diagnose failures in the data bus communications network(s); determine needed action.	Job 4, Job 16
17. Determine root cause of faults.	Job 17

**Correlation of *Advanced Driver Assistance Systems* to ASE Education Foundation *Advanced Driver Assistance Systems (ADAS) Specialist Test (L4) Task List* — page 3**

<b>Task Number and Description</b>	<b>ADAS Jobs</b>
18. Identify calibration procedures (dynamic and/or static).	Job 4, Job 8, Job 12
19. Identify tooling required for calibration; identify proper calibration environment.	Job 7, Job 8, Job 12
20. Perform component alignment and calibration setup using tape measure, level, laser, square, string and/or plumb bob. Perform conversion of units of measurement (standard, metric, etc.).	Job 8
21. Determine the cause(s) of incorrect, incomplete or unsuccessful ADAS calibration; determine needed actions.	Job 7, Job 8, Job 17
22. Conduct a post-repair vehicle scan. Verify effectiveness of repairs.	Job 8, Job 17
23. Research and identify ADAS components, system design, configuration, and available options.	Job 4, Job 5, Job 6, Job 13
<b>B. Camera-Based Systems Service and Diagnosis</b>	
1. Verify concern and/or vehicle condition; determine if any concerns are part of normal system operation, the result of a malfunction, or the result of a previous service.	Job 2, Job 4, Job 17
2. Inspect and test for missing, obstructed, modified, inoperative, tampered, or previously repaired components.	Job 5, Job 11, Job 17
3. Research system description using technical information to determine system components, locations, and operation. Identify installed vehicle options.	Job 5, Job 6, Job 13, Job 17
4. Identify system operation using service information; determine diagnostic procedure and whether available information is adequate to proceed with effective diagnosis.	Job 2, Job 17
5. Research system to determine the enable criteria for setting and clearing diagnostic trouble codes (DTCs) and warning/malfunction indicator(s).	
6. Interpret scan tool data stream, diagnostic trouble codes (DTCs), and freeze frame data to determine system condition.	Job 3, Job 15
7. Check electronic circuit waveforms; interpret readings and determine needed action.	Job 16
8. Inspect, test, repair or replace components, connectors, terminals and wiring.	Job 6, Job 14

**Correlation of *Advanced Driver Assistance Systems* to ASE Education Foundation *Advanced Driver Assistance Systems (ADAS) Specialist Test (L4) Task List* — page 4**

<b>Task Number and Description</b>	<b>ADAS Jobs</b>
9. Diagnose failures in data communications bus network(s), determine needed action.	Job 16
10. Remove and replace components and modules; program, reprogram, code, initialize, and/or configure as needed.	Job 6
11. Identify need for calibration (dynamic and/or static).	Job 4, Job 8, Job 12, Job 17
12. Perform calibration setup including proper placement of target(s) as required; perform calibration in accordance with manufacturer specifications.	Job 8, Job 12
13. Identify optical axis misalignment and/or interference; identify mounting or structural issues which may impact or affect camera sensor calibration and/or operation; determine needed action.	
14. Determine the cause(s) of incorrect, incomplete or unsuccessful system calibration including environmental interference issues; determine needed actions.	Job 7, Job 8
15. Verify for accurate calibration, confirm repair, and road test in accordance with vehicle manufacturer procedures.	Job 4, Job 17
16. Conduct a post-repair vehicle scan. Verify effectiveness of repairs.	Job 8, Job 17
<b>C. RADAR-Based Systems Service and Diagnosis</b>	
1. Verify concern and/or vehicle condition; determine if any concerns are part of normal system operation, the result of a malfunction, or the result of a previous service.	Job 2, Job 4, Job 17
2. Inspect and test for missing, obstructed, modified, inoperative, tampered, or previously repaired components.	Job 5, Job 11
3. Research system description using service information to determine system components, locations, and operation. Identify installed vehicle options.	
4. Identify system operation using service information; determine diagnostic procedure and whether available information is adequate to proceed with effective diagnosis.	

**Correlation of *Advanced Driver Assistance Systems* to ASE Education Foundation *Advanced Driver Assistance Systems (ADAS) Specialist Test (L4) Task List* — page 5**

<b>Task Number and Description</b>	<b>ADAS Jobs</b>
5. Research system to determine the enable criteria for setting and clearing diagnostic trouble codes (DTCs) and warning/malfunction indicator(s). Page 6 ASE ADAS Specialist Test Information	
6. Interpret scan tool data stream, diagnostic trouble codes (DTCs), and freeze frame data to determine system condition.	Job 3, Job 15
7. Check electronic circuit waveforms; interpret readings and determine needed action.	Job 16
8. Inspect, test, repair or replace components, connectors, terminals, and wiring.	Job 6, Job 14
9. Diagnose failures in data communications bus network(s); determine needed action.	Job 16
10. Remove and replace components and modules; program, reprogram, code, initialize, and/or configure as needed.	Job 6
11. Identify need for calibration (dynamic and/or static); perform calibration setup including proper placement of target(s); perform calibration in accordance with manufacturer specifications.	Job 4, Job 8, Job 12, Job 17
12. Identify mechanical alignment, mounting, paint refinishing, body repair, and structural issues which may affect calibration and/or operation; determine needed action.	Job 9, Job 10
13. Determine the cause(s) of incorrect, incomplete or unsuccessful system calibration including environmental interference issues; determine needed actions.	Job 7, Job 8
14. Verify for accurate calibration, confirm repair, and road test in accordance with vehicle manufacturer procedures.	Job 4, Job 17
15. Conduct a post–repair vehicle scan. Verify effectiveness of repairs.	Job 8, Job 17
<b>D. Ultrasonic (Sonar)-Based Systems Service and Diagnosis</b>	
1. Verify concern and/or vehicle condition; determine if any concerns are part of normal system operation, the result of a malfunction, or the result of a previous service.	Job 2, Job 4, Job 17
2. Inspect and test for missing, obstructed, modified, inoperative, tampered, or previously repaired components.	Job 5, Job 11, Job 17

**Correlation of *Advanced Driver Assistance Systems* to ASE Education Foundation *Advanced Driver Assistance Systems (ADAS) Specialist Test (L4) Task List* — page 6**

<b>Task Number and Description</b>	<b>ADAS Jobs</b>
3. Research system description using service information to determine system components, locations, and operation. Identify installed vehicle options.	Job 2, Job 5, Job 13, Job 17
4. Identify system operation using service information; determine diagnostic procedure and whether available information is adequate to proceed with effective diagnosis.	Job 2, Job 17
5. Research system to determine the enable criteria for setting and clearing diagnostic trouble codes (DTCs) and warning/malfunction indicator(s).	
6. Interpret scan tool data stream, diagnostic trouble codes (DTCs) and freeze frame data to determine system condition.	Job 3, Job 15
7. Check electronic circuit waveforms; interpret readings and determine needed action.	Job 16
8. Inspect, test, repair or replace components, connectors, terminals, and wiring.	Job 6, Job 14
9. Diagnose failures in data communications bus network(s), determine needed action.	Job 16
10. Remove and replace components and modules; program, reprogram, code, initialize, and/or configure as needed.	Job 6
11. Identify need for calibration (dynamic and/or static); perform calibration setup including proper placement of target(s); perform calibration in accordance with manufacturer specifications.	Job 4, Job 8, Job 12, Job 17
12. Identify mechanical alignment, mounting, paint refinishing, body repair, and structural issues which may affect ultrasonic sensor calibration and/or operation; determine needed action.	Job 10
13. Determine the cause(s) of incorrect, incomplete or unsuccessful system calibration including environmental interference issues; determine needed actions.	Job 7, Job 8
14. Verify for accurate calibration, confirm repair, and road test in accordance with vehicle manufacturer procedures.	Job 4, Job 17
15. Conduct a post-repair vehicle scan. Verify effectiveness of repairs.	Job 8, Job 17