



PSI licensure:certification

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# California Bureau of Automotive Repair Brake Adjuster and Lamp Adjuster Licensing Examinations



## CANDIDATE INFORMATION HANDBOOK

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## SECTION 1: INTRODUCTION

### PURPOSE

The California Department of Consumer Affairs, Bureau of Automotive Repair (DCA/BAR) developed this handbook to help you prepare for the Brake and Lamp Adjuster Licensing Examinations. The purpose of the examinations is to determine the basic qualifications of the applicant. We strongly recommend that you study every section carefully, well in advance of the examination date. The handbook gives recommendations for studying, information on the format of the examination, a general description of the examination and examples of the kinds of test items you will encounter.

This handbook will not give you all the knowledge that you need. It is intended to help you decide what training and/or skills you may need to pass the exam, and provide an idea of what the actual examinations are like.

### LICENSE CLASSIFICATION

There are three classes of Brake Adjuster licenses, and one class of Lamp Adjuster license. Only one class of Brake Adjuster license may be held or applied for at one time. This handbook covers Brake Adjuster and Lamp Adjuster licensing, although the licenses may be held independently of each other. The classes are:

**Brake Class A** – May test, inspect, adjust, and repair brakes and brake systems for all vehicles.

**Brake Class B** – May test, inspect, adjust, and repair brakes and brake systems on all buses, trucks, and truck tractors, trailers, and semitrailers.

**Brake Class C** – May test, inspect, adjust, and repair brakes and brake systems on trucks and truck tractors having a manufacturer's gross vehicle weight rating of less than 10,000 pounds, and all trailers and semitrailers which do not use compressed air or vacuum to actuate the brakes, and all passenger vehicles including motorcycles and motor-driven cycles.

**Lamp Adjusters** – May test, inspect, adjust, and repair lamps and related electrical systems on all vehicles.

Licensed Brake Adjusters and Lamp Adjusters may conduct inspections that lead to the issuance of Brake Certificates of Compliance and Lamp Certificates of Adjustment, and also certify that corrections have been made when an enforcement document has been issued.

### EXPIRATION OF LICENSE

Adjusters will have to pass an exam every four years to remain licensed. The license expiration dates will be adjusted so that they expire in the adjuster's birth month. Therefore, the first license you receive will be valid for 37 to 48 months.

## SECTION II: PREPARING FOR THE EXAMINATION

### WHERE TO BEGIN

The BAR Brake and Lamp Adjuster Licensing Examinations evaluate candidates' knowledge of Brake and Lamp inspection requirements, as well as adjustment and diagnoses. Examination questions are based on the BAR Brake and Lamp Adjuster Job-Knowledge Domains developed by the Department's Office of Professional Examination Services. Review the applicable examination plan(s) in Section IV carefully and plan an appropriate schedule of study or review.

### HOW THE EXAMINATIONS ARE DEVELOPED

The examinations are developed by licensed Brake and Lamp Adjusters who work within guidelines established by DCA/BAR for the licensing of many regulated trades and professions. Every attempt is made to ensure that the questions fairly and reasonably measure the competencies listed in the BAR Brake and Lamp Adjuster Examination Plans.

The questions are written in a structured setting by additional licensed adjusters and are edited and reviewed by other licensed adjusters. These efforts are overseen by the Department's Office of Professional Examination Services.

The passing score is determined by another group of licensed adjusters who evaluate the difficulty of each question as it relates to entry-level practice. These evaluations are analyzed, and the passing score is determined, with an acceptable level

of confidence that the examination separates the qualified from the non-qualified candidates. Different forms of the examination may have different passing scores. This simply means that the difficulties of the questions are somewhat different, so the passing scores are different, thereby keeping the difficulty levels the same.

### REVIEW COURSES AND PUBLICATIONS

Some persons may offer review or preparation courses or publications. We have no information to indicate that applicants who use these sources have a higher pass rate than those who do not. Courses to prepare individuals for Brake and Lamp Adjuster examinations are **not** associated with BAR, nor do course sponsors or publishers have legal access to BAR's examination materials. No publishers have legal access to BAR's examination materials. We make every effort to ensure that the contents of our examinations remain confidential and that the questions are changed frequently.

A reference list of publications that were used in the development of the adjuster examinations may be found on the following page.

### TRADE EXPERIENCE

Significant portions of the examination relate directly to actual situations. Therefore, experience you acquire performing applicable brake and electrical work increases the likelihood that you will answer these questions correctly.



## REFERENCE MATERIALS

Below is a list of the reference materials that may be of use to you when preparing to take the examination. BAR does not endorse these publications other than to disclose that they were used in the examination development process.

### ***Brake Adjuster Publications***

Listed below are reference materials used by licensed Brake Adjusters when writing questions for the Brake Adjuster Class A, B or C licensing examinations. These books are available at some public libraries, some community college libraries and bookstores, or can be ordered by many bookstores.

State of California Handbook for Brake Adjusters, Bureau of Automotive Repair.

State of California Laws & Regulations Pertaining to Automotive Repair Dealers, Smog Check Stations & Technicians, Official Lamp & Brake Adjusting Stations & Adjusters, Bureau of Automotive Repair.

Write It Right Booklet, Bureau of Automotive Repair.

Duffy, O. C. & Wright, G., Fundamentals of Medium/Heavy Duty Commercial Vehicle Systems. Burlington, MA; Jones and Bartlett Learning, LLC; (978) 443-5000, 978-1-284-04116-3.

Erjavec, J. and Thompson, R., Automotive Technology: A Systems Approach, 6<sup>th</sup> edition. Clifton Park, NY; Delmar, Cengage Learning; (800) 354-9706, 978-1-133-61231-5.

Halderman, J. D., Automotive Brake Systems, 7<sup>th</sup> Edition. Pearson Education, Inc., 978-0-13-406312-6.

Johanson, C. & Stockel M. T., Auto Brakes, 4<sup>th</sup> Edition. Burlington, MA; Jones and Bartlett Learning, LLC; (978) 443-5000, 978-1-61960-731-6.

Duffy, J. E., Auto Electricity and Electronics, 6<sup>th</sup> Edition. Tinley Park, IL; The Goodheart-Willcox Company, Inc., 978-1-61960-747-7.

VanGelder, K., Fundamentals of Automotive Technology: Principles and Practice. Burlington, MA; Jones and Bartlett Learning, LLC 2014; (978) 443-5000, 978-1-4496-2411-8.

Weighill, K., Motorcycle Maintenance Techbook. Newbury Park, CA; Haynes North America, Inc. 2004; 978-1-78521-047-1.

Advanced Circuit and Electrical Testing. San Diego, CA; ATG Automotive Training Group, Inc. 2015; (858) 486-8525.

Car and Light Truck Series - A4 Suspension and Steering. MotorAge Training; (800) 240-1968, 978-1-934855-63-8.

Car & Light Truck Series - A5 Brakes. MotorAge Training 2014; (800) 240-1968, 978-1-934855-43-0.

Code of Federal Regulations, Title 49, Parts 400-571. Office of Federal Register October 1, 2017.

Intermittent Electrical and Drivability Diagnostic Strategies. San Diego, CA; ATG Automotive Training Group, Inc. 2009; (858) 486-8525.

Medium/Heavy Truck Service - T4 Brakes. MotorAge Training 2012; (800) 240-1968, 978-1-934855-36-2.

### ***Lamp Adjuster Publications***

Listed below are reference materials used by licensed Lamp Adjusters when writing questions for the Lamp Adjuster licensing examination. These books are available at some public libraries, some community college libraries and bookstores, or can be ordered by many bookstores.

State of California Handbook for Lamp Adjusters, Bureau of Automotive Repair.

State of California Laws & Regulations Pertaining to Automotive Repair Dealers, Smog Check Stations & Technicians, Official Lamp & Brake Adjusting Stations & Adjusters, Bureau of Automotive Repair.

Write It Right Booklet, Bureau of Automotive Repair.

Duffy, J.E., Auto Electricity and Electronics, 6<sup>th</sup> Edition. Tinley Park, IL; The Goodheart-Willcox Company, Inc. 978-1-61960-747-7.

Duffy, J.E., Modern Automotive Technology, 9<sup>th</sup> Edition. Tinley Park, IL; The Goodheart-Willcox Company, Inc. 2014, 978-1-63126-375-0.

Erjavec, J. and Thompson, R., Automotive Technology: A Systems Approach, 6<sup>th</sup> edition. Clifton Park, NY; Delmar, Cengage Learning; (800) 354-9706, 978-1-133-61231-5.

Jones, D. & VanGelder, K., Automotive Electricity and Electronics. Burlington, MA; Jones & Bartlett Learning 2018; (978) 443-5000, 978-1-284-10146-1.

Klyde, M. & VanGelder K., Advanced Automotive Electricity and Electronics. Burlington, MA; Jones & Bartlett Learning, LLC 2018; (978) 443-5000, 978-1-284-10169-0.

VanGelder, K., Fundamentals of Automotive Technology: Principles and Practice. Burlington, MA; Jones and Bartlett Learning, LLC 2014; (978) 443-5000.

Advanced Circuit and Electrical Testing. San Diego, CA; ATG Automotive Training Group, Inc. 2015; (858) 486-8525.

Car and Light Truck Series - A6 Electrical/Electronic Systems. MotorAge Training 2012, 978-1-934855-28-7.

Code of Federal Regulations, Title 49, Parts 400-571. Office of Federal Register October 1, 2017.

Vision 100 Optical Headlamp Aimer Instruction Manual. Emporia, KS; American Aimers Inc. 2006; (877) 343-7703.



## SECTION III: APPLICATION PROCEDURES

### HOW TO APPLY

Applications must be complete and accurate, submitted with the appropriate fees to the BAR Licensing Unit in Sacramento. Incomplete applications will be rejected, delaying the review process.

**Renewal applications will be accepted by DCA/BAR up to 120 days before the expiration date of the license.**

Applicants who falsify applications or supporting documents may have their licenses denied, revoked or suspended.

You may take the examination once per approved application. If you fail the examination, do not appear for your examination appointment, or try to reschedule fewer than two working days before the examination, you must submit another application and applicable fee to the BAR Licensing Unit.

### SPECIAL ACCOMMODATIONS AVAILABLE

If you need special accommodations to take the examination, call BAR Licensing at 855-735-0462 to request a form. They will mail you a Request for Special Accommodations form, which must be completed and returned with your license application. You will be required to explain the disability and what special accommodation is needed. A letter from your health-care provider must be included, confirming the disability and justifying the need for special accommodations using the criteria in the request form.

**NOTE:** English as a second language is NOT a disability, and special accommodations are not granted.

### CANDIDATE ELIGIBILITY

Once a candidate is determined to be eligible, BAR will notify the examination administration contractor, PSI licensure: certification (PSI). PSI will mail a scheduling notice indicating how the candidate may schedule an exam. An examination appointment date is usually available to each candidate within two weeks.

To be eligible to take the examination, the applicant must not have any unpaid citations. Pending enforcement actions will not prohibit you from taking the examination but may prevent issuance of a license.

In addition, the law requires DCA/BAR to check a list of individuals who have not paid their family support obligations. A professional license cannot be issued or renewed for an individual who has been identified by a California District Attorney as not meeting their family support obligations. However, a temporary license (valid for 150 days) may be issued to permit resolution of the family support hold. An existing license can be suspended after notice is given to the licensee.

## SECTION IV: EXAMINATION PLANS

### BRAKE ADJUSTER CLASS A and CLASS B EXAMINATION PLAN

For persons applying for the Brake Adjuster Class A license, the tasks and knowledge statements refer to the testing, inspection, adjustment, and repair of brakes and brake systems for all vehicles.

For persons applying for the Brake Adjuster Class B license, the tasks and knowledge statements refer to the testing, inspection, adjustment, and repair of brakes and brake systems on all buses, trucks, and truck tractors, trailers, and semitrailers.

#### **1. Customer Consultation (10%) – This area assesses the candidate’s knowledge of laws and regulations related to authorization to perform brake inspection, diagnosis, and repairs.**

Task Statements	Knowledge Statements
T1. Explain to customer the reasons for state-required brake system inspections.	K1. Knowledge of information to provide customers about state-required brake system inspections.
T2. Prepare cost estimate for performing inspection of vehicle brake and related systems.	K2. Knowledge of vehicles (e.g., special construction, salvage) that require brake certification.
T3. Prepare cost estimate for performing diagnosis or repairs of vehicle brake and related systems.	K3. Knowledge of reasons for performing brake system diagnosis or repairs on vehicles.
T4. Obtain customer authorization to perform inspection, diagnosis, or repair of vehicle brake and related systems.	K4. Knowledge of legal requirements regarding information contained in cost estimates for vehicle inspection, diagnosis, or repair.
T5. Provide customer with itemized invoices documenting all work performed and parts supplied.	K5. Knowledge of legal requirements for providing customers with initial and revised cost estimates for recommended inspection, diagnosis, and repair services.
T6. Explain itemized invoices to customers.	K6. Knowledge of legal requirements regarding customer authorization for performing vehicle brake system inspection, diagnostic testing, and repairs.
T7. Explain to customer the results of state-required brake system inspections.	K7. Knowledge of legal requirements regarding itemized final invoices to be provided to customers.
T8. Explain to customer repair options to obtain brake certificate of compliance.	K8. Knowledge of information to provide customers regarding brake system inspection failure.
T9. Review vehicle information to determine type of brake system certification (i.e., class A, class B, class C).	K9. Knowledge of information to provide customers regarding repair options.
	K10. Knowledge of requirements to clear an enforcement document.
	K11. Knowledge of methods to obtain vehicle information related to brake system certification.
	K12. Knowledge of methods to determine type of vehicle brake system certification.

**2. Inspection (45%) – This area assesses the candidate’s knowledge of methods and procedures to perform the inspection of a vehicle’s brake system and related components.**

Task Statements	Knowledge Statements
<p>T10. Test operation of warning indicators for brake and related systems (e.g., brake, ABS, traction control system, regenerative braking, TPMS).</p> <p>T11. Test operation of parking brake.</p> <p>T12. Test brake pedal operation (e.g., height, free-play, and travel).</p> <p>T13. Test operation of power-assist reserve braking.</p> <p>T14. Inspect tires (e.g., condition, pressure, tread, size, TPMS).</p> <p>T15. Perform road test on vehicles to assess brake performance (e.g., pulling, dive, grab, noise).</p> <p>T16. Assess vehicle’s maximum stopping distance at 20 mph.</p> <p>T17. Inspect brake fluid (e.g., type, condition, level).</p> <p>T18. Inspect brake system for internal fluid leaks (e.g., master cylinder, ABS).</p> <p>T19. Inspect brake system for external fluid leaks (e.g., wheel cylinders, calipers).</p> <p>T20. Inspect power-assist system for leaks (e.g., vacuum, hydraulic).</p> <p>T21. Inspect operation of rear brake lights.</p> <p>T22. Inspect suspension system for defects that affect braking.</p> <p>T23. Inspect steering system for defects that affect braking.</p> <p>T24. Inspect disc-brake assemblies for worn, missing, defective, or incorrectly installed components.</p> <p>T25. Inspect drum-brake assemblies for worn, missing, defective, or incorrectly installed components.</p> <p>T26. Inspect mechanical brake linkage for worn, missing, defective, or incorrectly installed components.</p> <p>T27. Measure drums (e.g., maximum diameter, bell-mouth, out-of-round).</p> <p>T28. Measure rotors for thickness, run-out, and parallelism.</p> <p>T29. Inspect shoes and pads for thickness, cracks, and fluid contamination (e.g., oil, grease).</p> <p>T30. Reassemble braking system after inspection.</p>	<p>K13. Knowledge of references used when inspecting vehicle brake and related systems (e.g., service publications, diagrams, flowcharts, technical service handbooks).</p> <p>K14. Knowledge of methods and procedures to identify configuration of vehicle brake and related systems.</p> <p>K15. Knowledge of tools and equipment required for brake inspection.</p> <p>K16. Knowledge of methods to calibrate brake inspection tools and equipment.</p> <p>K17. Knowledge of manufacturer recommended safety protocols (e.g., hybrid vehicles).</p> <p>K18. Knowledge of operation of warning indicators for brake and related systems (e.g., brake, ABS, TCS, regenerative braking, TPMS).</p> <p>K19. Knowledge of methods and procedures to inspect warning indicators for brake and related systems (e.g., brake, ABS, TCS, regenerative braking, TPMS).</p> <p>K20. Knowledge of methods and procedures to retrieve brake and related system diagnostic trouble codes.</p> <p>K21. Knowledge of electrical parking brake operation.</p> <p>K22. Knowledge of mechanical parking brake operation.</p> <p>K23. Knowledge of methods and procedures to test electrical parking brake operation.</p> <p>K24. Knowledge of methods and procedures to test mechanical parking brake operation.</p> <p>K25. Knowledge of methods and procedures to test brake pedal height, free-play, and travel.</p> <p>K26. Knowledge of methods and procedures to inspect power-assist reserve braking.</p> <p>K27. Knowledge of methods and procedures to inspect tire condition, pressure, tread, and size.</p> <p>K28. Knowledge of symptoms of abnormal brake operation.</p> <p>K29. Knowledge of methods and procedures to determine maximum stopping distance.</p> <p>K30. Knowledge of noises that indicate potential brake system malfunction during road test.</p> <p>K31. Knowledge of methods and procedures to determine brake fluid type, condition (e.g., contamination), and level.</p> <p>K32. Knowledge of methods and procedures to detect internal brake fluid leaks (e.g., master cylinder, ABS).</p> <p>K33. Knowledge of methods and procedures to detect external brake fluid leaks (e.g., wheel cylinders, calipers).</p> <p>K34. Knowledge of methods and procedures to inspect seals for fluid leaks related to brake system (e.g., grease, gear oil).</p> <p>K35. Knowledge of operation of power-assist systems (e.g., vacuum, hydraulic, electric).</p> <p>K36. Knowledge of methods and procedures to inspect power-assist systems (e.g., vacuum, hydraulic, electric).</p> <p>K37. Knowledge of rear brake light operation.</p> <p>K38. Knowledge of methods and procedures to inspect rear brake light operation.</p> <p>K39. Knowledge of steering system operation.</p>

<p>T31. Retrieve brake-related diagnostic trouble codes (e.g., ABS, TCS, ESP, TPMS).</p> <p>T32. Test electric brake system voltage, amperage, and resistance.</p> <p>T33. Test function of trailer breakaway system (e.g., electric, hydraulic).</p> <p>T34. Test trailer surge brake activation and calibration.</p> <p>T35. Assess inspection results to determine if vehicle meets brake certification requirements.</p> <p>T36. Complete brake certificate of compliance.</p> <p>T37. Inspect air brake system lines for leakage or damage.</p> <p>T38. Inspect operation of emergency parking brake controls (e.g., modulating control valves, tractor protection valve).</p> <p>T39. Inspect air compressor and air reservoir for leakage.</p> <p>T40. Test air supply system pressure and performance (e.g., compressor, governor, cut-in and cut-out pressure, gauges).</p> <p>T41. Test operation of audible and visual warning systems (e.g., buzzers, lights).</p> <p>T42. Test air distribution system and components (e.g., line connections, gladhands, function, leaks, contamination).</p> <p>T43. Inspect air brake valves, relays, and solenoids.</p> <p>T44. Inspect wet and dry systems for leakage.</p> <p>T45. Check angle between each slack adjuster and its actuator rod during full application and adjustment.</p> <p>T46. Verify that air brake chamber size and pressure specifications are correct for the vehicle type.</p> <p>T47. Test operation of spring brake chambers.</p> <p>T48. Test function of trailer air brake breakaway system.</p>	<p>K40. Knowledge of methods and procedures to inspect steering systems.</p> <p>K41. Knowledge of suspension system operation.</p> <p>K42. Knowledge of methods and procedures to inspect suspension systems.</p> <p>K43. Knowledge of operation of disc-brake systems.</p> <p>K44. Knowledge of methods and procedures to inspect disc-brake systems.</p> <p>K45. Knowledge of requirements regarding rotor specifications (e.g., thickness, run-out).</p> <p>K46. Knowledge of requirements regarding pad thickness for disc brakes.</p> <p>K47. Knowledge of operation of drum-brake systems.</p> <p>K48. Knowledge of methods and procedures to inspect drum-brake systems.</p> <p>K49. Knowledge of requirements regarding drum specifications (e.g., diameter, bell-mouth).</p> <p>K50. Knowledge of requirements regarding shoe thickness for drum brakes.</p> <p>K51. Knowledge of methods and procedures to reassemble vehicle components removed during inspections to manufacturer specifications (e.g., torque, bearing preload).</p> <p>K52. Knowledge of Ohm's law.</p> <p>K53. Knowledge of operation of trailer electric brake systems.</p> <p>K54. Knowledge of methods and procedures to inspect trailer electric brake systems.</p> <p>K55. Knowledge of operation of trailer breakaway systems.</p> <p>K56. Knowledge of methods and procedures to inspect trailer breakaway systems.</p> <p>K57. Knowledge of surge brake activation and adjustment.</p> <p>K58. Knowledge of methods and procedures to inspect surge brake activation and adjustment.</p> <p>K59. Knowledge of methods and procedures for adjustment of mechanical brake systems (e.g., cable, linkage).</p> <p>K60. Knowledge of criteria for state-required brake system certification of vehicles.</p> <p>K61. Knowledge of licensing requirements pertaining to who can perform a state-required brake system inspection and complete the certificate of compliance.</p> <p>K62. Knowledge of methods and procedures to determine if vehicle meets brake certification requirements.</p> <p>K63. Knowledge of methods and procedures to complete brake system certificate of compliance.</p> <p>K64. Knowledge of theory of air brake operation.</p> <p>K65. Knowledge of operation of tractor protection valve and emergency trailer brake. K66. Knowledge of methods and procedures to inspect air system lines for leakage or damage.</p> <p>K66. Knowledge of methods and procedures to inspect air system lines for leakage or damage.</p> <p>K67. Knowledge of operation of air supply systems.</p>
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- K68. Knowledge of methods and procedures to inspect air compressor and air reservoir for leaks.
- K69. Knowledge of methods and procedures to inspect air supply system pressure and performance (e.g., governor, cut-in and cut-out pressure, gauges).
- K70. Knowledge of operation of air brake valves, relays, and solenoids.
- K71. Knowledge of methods and procedures to inspect air brake system valves, relays, and solenoids.
- K72. Knowledge of operation of audible and visual warning indicators of air brake systems.
- K73. Knowledge of methods and procedures to test audible and visual warning indicators of air brake systems.
- K74. Knowledge of methods and procedures to inspect air distribution system and components (e.g., gladhands, line connections, contamination).
- K75. Knowledge of operation of air distribution system and components.
- K76. Knowledge of operation of slack adjusters.
- K77. Knowledge of methods and procedures to inspect slack adjusters.
- K78. Knowledge of operation of air brake chambers.
- K79. Knowledge of methods and procedures to inspect air brake chamber size and pressure.
- K80. Knowledge of operation of air system parking brakes (e.g., spring brakes).
- K81. Knowledge of methods and procedures to test air system parking brakes (e.g., spring brakes).
- K82. Knowledge of operation of trailer air brake breakaway systems.
- K83. Knowledge of methods and procedures to test trailer air brake breakaway systems.
- K84. Knowledge of laws and regulations regarding air supply system pressure and performance.
- K85. Knowledge of laws and regulations for requiring release of the air brake after emergency stops.



**3. Diagnosis (35%) – This area assesses the candidate’s knowledge of methods and procedures to perform diagnostic testing and diagnose a vehicle’s brake system and related components.**

Task Statements	Knowledge Statements
<p>T49. Diagnose abnormal brake operation (e.g., dive, pull, pulsation).</p> <p>T50. Perform air brake system diagnostic testing.</p> <p>T51. Perform hydraulic brake system diagnostic testing.</p> <p>T52. Perform diagnostic testing on mechanical components of the service brake system (i.e., foundation brake).</p> <p>T53. Perform parking brake diagnostic testing (e.g., mechanical, electric).</p> <p>T54. Perform power brake assist system diagnostic testing.</p> <p>T55. Perform trailer electric brake system diagnostic testing.</p> <p>T56. Perform electrical diagnostic testing related to brake system functioning.</p> <p>T57. Perform steering system diagnostic testing to determine effects on brake system.</p> <p>T58. Perform suspension system diagnostic testing to determine effects on brake system.</p> <p>T59. Perform diagnostic testing on computer-controlled systems related to brake systems (e.g., ABS, TCS, ESC, TPMS).</p> <p>T60. Evaluate diagnostic test results to determine needed repairs.</p> <p>T61. Prioritize repairs based on diagnostic test results and manufacturers’ recommendations (e.g., service publications, technical service handbooks).</p>	<p>K86. Knowledge of methods and procedures to diagnose abnormal brake operation (e.g., dive, pull, pulsation).</p> <p>K87. Knowledge of methods and procedures to diagnose air brake systems.</p> <p>K88. Knowledge of methods and procedures to diagnose hydraulic brake systems.</p> <p>K89. Knowledge of methods and procedures to diagnose mechanical brake systems.</p> <p>K90. Knowledge of methods and procedures to diagnose parking electric brake systems.</p> <p>K91. Knowledge of methods and procedures to diagnose trailer electric brake systems.</p> <p>K92. Knowledge of methods and procedures to perform electric circuit testing.</p> <p>K93. Knowledge of methods and procedures to diagnose computer-controlled braking systems (e.g., ABS, TCS, ESC, regenerative braking, TPMS).</p> <p>K94. Knowledge of methods and procedures to interpret diagnostic test results to determine needed repairs.</p> <p>K95. Knowledge of methods and procedures to diagnose relays, solenoids, and valves.</p> <p>K96. Knowledge of methods and procedures to diagnose suspension system malfunctions that affect brake system operation.</p> <p>K97. Knowledge of methods and procedures to diagnose power-assist system malfunctions that affect brake system operation.</p> <p>K98. Knowledge of methods and procedures to prioritize repairs based on diagnostic test results.</p> <p>K99. Knowledge of methods and procedures to diagnose steering system malfunctions that affect brake system operation.</p> <p>K100. Knowledge of methods and procedures to diagnose mechanical brake linkage components.</p> <p>K101. Knowledge of tools and equipment required for brake diagnosis.</p>

**4. Repair (10%) – This area assesses the candidate’s knowledge of methods and procedures related to repairing, replacing, and adjusting a vehicle’s brake system and related components.**

Task Statements	Knowledge Statements
<p>T62. Repair air brake system components.</p> <p>T63. Repair hydraulic brake system components.</p> <p>T64. Repair mechanical components of service brake systems (i.e., foundation brake).</p> <p>T65. Repair parking brake system components (e.g., mechanical, electric).</p> <p>T66. Repair trailer electric brake system components.</p> <p>T67. Repair brake-related electrical system components (e.g., lights, wiring, switches, solenoids).</p> <p>T68. Repair steering system components (e.g., tie-rod ends, bushings).</p> <p>T69. Repair suspension system components (e.g., shocks, leaf-springs).</p> <p>T70. Repair brake-related computer-controlled system failures (e.g., ABS, TCS, ESC, TPMS).</p> <p>T71. Repair leaks causing brake lining contamination.</p> <p>T72. Repair power-assist system components (e.g., vacuum, hydraulic, electric).</p>	<p>K102. Knowledge of methods and procedures to replace worn and malfunctioning components.</p> <p>K103. Knowledge of methods and procedures to adjust slack adjusters.</p> <p>K104. Knowledge of methods and procedures to repair malfunctioning components.</p> <p>K105. Knowledge of methods and procedures to perform brake system adjustments.</p> <p>K106. Knowledge of methods and procedures to machine (i.e., resurface) drums and rotors.</p> <p>K107. Knowledge of methods and procedures to retract caliper pistons.</p> <p>K108. Knowledge of methods and procedures to clean and lubricate moving parts (e.g., disc and drum brake parts, backing plates).</p> <p>K109. Knowledge of methods and procedures to perform bed-in procedures (i.e., break-in procedures).</p> <p>K110. Knowledge of methods and procedures to flush brake hydraulic systems.</p> <p>K111. Knowledge of methods and procedures to bleed brake hydraulic systems.</p> <p>K112. Knowledge of methods and procedures to bleed ABS systems.</p> <p>K113. Knowledge of methods and procedures to replace electrical/electronic system wiring.</p> <p>K114. Knowledge of methods and procedures to repair electrical/electronic system wiring.</p> <p>K115. Knowledge of methods and procedures to replace relays, sensors, solenoids, and switches.</p> <p>K116. Knowledge of methods and procedures to replace computers and modules.</p> <p>K117. Knowledge of methods and procedures to program computers and modules.</p> <p>K118. Knowledge of methods and procedures to replace warning system indicators.</p> <p>K119. Knowledge of methods and procedures to repair warning system indicators.</p> <p>K120. Knowledge of methods and procedures to replace steering system components.</p> <p>K121. Knowledge of methods and procedures to replace suspension system components.</p> <p>K122. Knowledge of methods and procedures to repair electric power-assist system components.</p> <p>K123. Knowledge of methods and procedures to repair brake vacuum power-assist system components.</p> <p>K124. Knowledge of methods and procedures to repair brake hydraulic power-assist system components.</p> <p>K125. Knowledge of methods and procedures to set bearing preload.</p> <p>K126. Knowledge of methods and procedures to repair drive-line mounted braking components.</p> <p>K127. Knowledge of methods and procedures to disable self-activating vehicle systems (e.g., brake, electric steering, air suspension) before performing repairs.</p> <p>K128. Knowledge of tools and equipment required for brake repairs.</p> <p>K129. Knowledge of methods and procedures to repair hybrid system components.</p>

## BRAKE ADJUSTER CLASS C EXAMINATION PLAN

For persons applying for the Brake Adjuster Class C license, the tasks and knowledge statements refer to the testing, inspection, adjustment, and repair of brakes and brake systems on trucks and truck tractors having a manufacturer's gross vehicle weight rating of less than 10,000 pounds, and all trailers and semitrailers which do not use compressed air or vacuum to actuate the brakes, and all passenger vehicles including motorcycles and motor-driven cycles.

<b>1. Customer Consultation (10%) – This area assesses the candidate’s knowledge of laws and regulations related to authorization to perform brake inspection, diagnosis, and repairs.</b>	
<b>Task Statements</b>	<b>Knowledge Statements</b>
<p>T1. Explain to customer the reasons for state-required brake system inspections.</p> <p>T2. Prepare cost estimate for performing inspection of vehicle brake and related systems.</p> <p>T3. Prepare cost estimate for performing diagnosis or repairs of vehicle brake and related systems.</p> <p>T4. Obtain customer authorization to perform inspection, diagnosis, or repair of vehicle brake and related systems.</p> <p>T5. Provide customer with itemized invoices documenting all work performed and parts supplied.</p> <p>T6. Explain itemized invoices to customers.</p> <p>T7. Explain to customer the results of state-required brake system inspections.</p> <p>T8. Explain to customer repair options to obtain brake certificate of compliance.</p> <p>T9. Review vehicle information to determine type of brake system certification (i.e., class A, class B, class C).</p>	<p>K1. Knowledge of information to provide customers about state-required brake system inspections.</p> <p>K2. Knowledge of vehicles (e.g., special construction, salvage) that require brake certification.</p> <p>K3. Knowledge of reasons for performing brake system diagnosis or repairs on vehicles.</p> <p>K4. Knowledge of legal requirements regarding information contained in cost estimates for vehicle inspection, diagnosis, or repair.</p> <p>K5. Knowledge of legal requirements for providing customers with initial and revised cost estimates for recommended inspection, diagnosis, and repair services.</p> <p>K6. Knowledge of legal requirements regarding customer authorization for performing vehicle brake system inspection, diagnostic testing, and repairs.</p> <p>K7. Knowledge of legal requirements regarding itemized final invoices to be provided to customers.</p> <p>K8. Knowledge of information to provide customers regarding brake system inspection failure.</p> <p>K9. Knowledge of information to provide customers regarding repair options.</p> <p>K10. Knowledge of requirements to clear an enforcement document.</p> <p>K11. Knowledge of methods to obtain vehicle information related to brake system certification.</p> <p>K12. Knowledge of methods to determine type of vehicle brake system certification.</p>

**2. Inspection (45%) – This area assesses the candidate’s knowledge of methods and procedures to perform the inspection of a vehicle’s brake system and related components.**

Task Statements	Knowledge Statements
<p>T10. Test operation of warning indicators for brake and related systems (e.g., brake, ABS, traction control system, regenerative braking, TPMS).</p> <p>T11. Test operation of parking brake.</p> <p>T12. Test brake pedal operation (e.g., height, free-play, and travel).</p> <p>T13. Test operation of power-assist reserve braking.</p> <p>T14. Inspect tires (e.g., condition, pressure, tread, size, TPMS).</p> <p>T15. Perform road test on vehicles to assess brake performance (e.g., pulling, dive, grab, noise).</p> <p>T16. Assess vehicle’s maximum stopping distance at 20 mph.</p> <p>T17. Inspect brake fluid (e.g., type,</p> <p>T18. Inspect brake system for internal fluid leaks (e.g., master cylinder, ABS).</p> <p>T19. Inspect brake system for external fluid leaks (e.g., wheel cylinders, calipers).</p> <p>T20. Inspect power-assist system for leaks (e.g., vacuum, hydraulic).</p> <p>T21. Inspect operation of rear brake lights.</p> <p>T22. Inspect suspension system for defects that affect braking.</p> <p>T23. Inspect steering system for defects that affect braking.</p> <p>T24. Inspect disc-brake assemblies for worn, missing, defective, or incorrectly installed components.</p> <p>T25. Inspect drum-brake assemblies for worn, missing, defective, or incorrectly installed components.</p> <p>T26. Inspect mechanical brake linkage for worn, missing, defective, or incorrectly installed components.</p> <p>T27. Measure drums (e.g., maximum diameter, bell-mouth, out-of-round).</p> <p>T28. Measure rotors for thickness, run-out, and parallelism.</p> <p>T29. Inspect shoes and pads for thickness, cracks, and fluid contamination (e.g., oil, grease).</p> <p>T30. Reassemble braking system after inspection.</p> <p>T31. Retrieve brake-related diagnostic trouble codes (e.g., ABS, TCS, ESP, TPMS).</p>	<p>K13. Knowledge of references used when inspecting vehicle brake and related systems (e.g., service publications, diagrams, flowcharts, technical service handbooks).</p> <p>K14. Knowledge of methods and procedures to identify configuration of vehicle brake and related systems.</p> <p>K15. Knowledge of tools and equipment required for brake inspection.</p> <p>K16. Knowledge of methods to calibrate brake inspection tools and equipment.</p> <p>K17. Knowledge of manufacturer recommended safety protocols (e.g., hybrid vehicles).</p> <p>K18. Knowledge of operation of warning indicators for brake and related systems (e.g., brake, ABS, TCS, regenerative braking, TPMS).</p> <p>K19. Knowledge of methods and procedures to inspect warning indicators for brake and related systems (e.g., brake, ABS, TCS, regenerative braking, TPMS).</p> <p>K20. Knowledge of methods and procedures to retrieve brake and related system diagnostic trouble codes.</p> <p>K21. Knowledge of electrical parking brake operation.</p> <p>K22. Knowledge of mechanical parking brake operation.</p> <p>K23. Knowledge of methods and procedures to test electrical parking brake operation.</p> <p>K24. Knowledge of methods and procedures to test mechanical parking brake operation.</p> <p>K25. Knowledge of methods and procedures to test brake pedal height, free-play, and travel.</p> <p>K26. Knowledge of methods and procedures to inspect power-assist reserve braking.</p> <p>K27. Knowledge of methods and procedures to inspect tire condition, pressure, tread, and size.</p> <p>K28. Knowledge of symptoms of abnormal brake operation.</p> <p>K29. Knowledge of methods and procedures to determine maximum stopping distance.</p> <p>K30. Knowledge of noises that indicate potential brake system malfunction during road test.</p> <p>K31. Knowledge of methods and procedures to determine brake fluid type, condition (e.g., contamination), and level.</p> <p>K32. Knowledge of methods and procedures to detect internal brake fluid leaks (e.g., master cylinder, ABS).</p> <p>K33. Knowledge of methods and procedures to detect external brake fluid leaks (e.g., wheel cylinders, calipers).</p> <p>K34. Knowledge of methods and procedures to inspect seals for fluid leaks related to brake system (e.g., grease, gear oil).</p> <p>K35. Knowledge of operation of power-assist systems (e.g., vacuum, hydraulic, electric).</p> <p>K36. Knowledge of methods and procedures to inspect power-assist systems (e.g., vacuum, hydraulic, electric).</p> <p>K37. Knowledge of rear brake light operation.</p>

<p>T32. Test electric brake system voltage, amperage, and resistance.</p> <p>T33. Test function of trailer breakaway system (e.g., electric, hydraulic).</p> <p>T34. Test trailer surge brake activation and calibration.</p> <p>T35. Assess inspection results to determine if vehicle meets brake certification requirements.</p> <p>T36. Complete brake certificate of compliance.</p>	<p>K38. Knowledge of methods and procedures to inspect rear brake light operation.</p> <p>K39. Knowledge of steering system operation.</p> <p>K40. Knowledge of methods and procedures to inspect steering systems.</p> <p>K46. Knowledge of requirements regarding pad thickness for disc brakes.</p> <p>K47. Knowledge of operation of drum-brake systems.</p> <p>K48. Knowledge of methods and procedures to inspect drum-brake systems.</p> <p>K49. Knowledge of requirements regarding drum specifications (e.g., diameter, bell-mouth).</p> <p>K50. Knowledge of requirements regarding shoe thickness for drum brakes.</p> <p>K51. Knowledge of methods and procedures to reassemble vehicle components removed during inspections to manufacturer specifications (e.g., torque, bearing preload).</p> <p>K52. Knowledge of Ohm's law.</p> <p>K53. Knowledge of operation of trailer electric brake systems.</p> <p>K54. Knowledge of methods and procedures to inspect trailer electric brake systems.</p> <p>K55. Knowledge of operation of trailer breakaway systems.</p> <p>K56. Knowledge of methods and procedures to inspect trailer breakaway systems.</p> <p>K57. Knowledge of surge brake activation and adjustment.</p> <p>K58. Knowledge of methods and procedures to inspect surge brake activation and adjustment.</p> <p>K59. Knowledge of methods and procedures for adjustment of mechanical brake systems (e.g., cable, linkage).</p> <p>K60. Knowledge of criteria for state-required brake system certification of vehicles.</p> <p>K61. Knowledge of licensing requirements pertaining to who can perform a state-required brake system inspection and complete the certificate of compliance.</p> <p>K62. Knowledge of methods and procedures to determine if vehicle meets brake certification requirements.</p> <p>K63. Knowledge of methods and procedures to complete brake system certificate of compliance.</p>
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**3. Diagnosis (35%) – This area assesses the candidate’s knowledge of methods and procedures to perform diagnostic testing and diagnose a vehicle’s brake system and related components.**

Task Statements	Knowledge Statements
T37. Diagnose abnormal brake operation (e.g., dive, pull, pulsation).	K64. Knowledge of methods and procedures to diagnose abnormal brake operation (e.g., dive, pull, pulsation).
T38. Perform hydraulic brake system diagnostic testing.	K65. Knowledge of methods and procedures to diagnose hydraulic brake systems.
T39. Perform diagnostic testing on mechanical components of the service brake system (i.e., foundation brake).	K66. Knowledge of methods and procedures to diagnose mechanical brake systems.
T40. Perform parking brake diagnostic testing (e.g., mechanical, electric).	K67. Knowledge of methods and procedures to diagnose parking electric brake systems.
T41. Perform power brake assist system diagnostic testing.	K68. Knowledge of methods and procedures to diagnose trailer electric brake systems.
T42. Perform trailer electric brake system diagnostic testing.	K69. Knowledge of methods and procedures to perform electric circuit testing.
T43. Perform electrical diagnostic testing related to brake system functioning.	K70. Knowledge of methods and procedures to diagnose computer-controlled braking systems (e.g., ABS, TCS, ESC, regenerative braking, TPMS).
T44. Perform steering system diagnostic testing to determine effects on brake system.	K71. Knowledge of methods and procedures to interpret diagnostic test results to determine needed repairs.
T45. Perform suspension system diagnostic testing to determine effects on brake system.	K72. Knowledge of methods and procedures to diagnose relays, solenoids, and valves.
T46. Perform diagnostic testing on computer-controlled systems related to brake systems (e.g., ABS, TCS, ESC, TPMS).	K73. Knowledge of methods and procedures to diagnose suspension system malfunctions that affect brake system operation.
T47. Evaluate diagnostic test results to determine needed repairs.	K74. Knowledge of methods and procedures to diagnose power-assist system malfunctions that affect brake system operation.
T48. Prioritize repairs based on diagnostic test results and manufacturers’ recommendations (e.g., service publications, technical service handbooks).	K75. Knowledge of methods and procedures to prioritize repairs based on diagnostic test results.
	K76. Knowledge of methods and procedures to diagnose steering system malfunctions that affect brake system operation.
	K77. Knowledge of methods and procedures to diagnose mechanical brake linkage components.
	K78. Knowledge of tools and equipment required for brake diagnosis.

**4. Repair (10%) – This area assesses the candidate’s knowledge of methods and procedures related to repairing, replacing, and adjusting a vehicle’s brake system and related components.**

Task Statements	Knowledge Statements
<p>T49. Repair hydraulic brake system components.</p> <p>T50. Repair mechanical components of service brake systems (i.e., foundation brake).</p> <p>T51. Repair parking brake system components (e.g., mechanical, electric).</p> <p>T52. Repair trailer electric brake system components.</p> <p>T53. Repair brake-related electrical system components (e.g., lights, wiring, switches, solenoids).</p> <p>T54. Repair steering system components (e.g., tie-rod ends, bushings).</p> <p>T55. Repair suspension system components (e.g., shocks, leaf-springs).</p> <p>T56. Repair brake-related computer-controlled system failures (e.g., ABS, TCS, ESC, TPMS).</p> <p>T57. Repair leaks causing brake lining contamination.</p> <p>T58. Repair power-assist system components (e.g., vacuum, hydraulic, electric).</p>	<p>K79. Knowledge of methods and procedures to replace worn and malfunctioning components.</p> <p>K80. Knowledge of methods and procedures to adjust slack adjusters.</p> <p>K81. Knowledge of methods and procedures to repair malfunctioning components.</p> <p>K82. Knowledge of methods and procedures to perform brake system adjustments.</p> <p>K83. Knowledge of methods and procedures to machine (i.e., resurface) drums and rotors.</p> <p>K84. Knowledge of methods and procedures to retract caliper pistons.</p> <p>K85. Knowledge of methods and procedures to clean and lubricate moving parts (e.g., disc and drum brake parts, backing plates).</p> <p>K86. Knowledge of methods and procedures to perform bed-in procedures (i.e., break-in procedures).</p> <p>K87. Knowledge of methods and procedures to flush brake hydraulic systems.</p> <p>K88. Knowledge of methods and procedures to bleed brake hydraulic systems.</p> <p>K89. Knowledge of methods and procedures to bleed ABS systems.</p> <p>K90. Knowledge of methods and procedures to replace electrical/electronic system wiring.</p> <p>K91. Knowledge of methods and procedures to repair electrical/electronic system wiring.</p> <p>K92. Knowledge of methods and procedures to replace relays, sensors, solenoids, and switches.</p> <p>K93. Knowledge of methods and procedures to replace computers and modules.</p> <p>K94. Knowledge of methods and procedures to program computers and modules.</p> <p>K95. Knowledge of methods and procedures to replace warning system indicators.</p> <p>K96. Knowledge of methods and procedures to repair warning system indicators.</p> <p>K97. Knowledge of methods and procedures to replace steering system components.</p> <p>K98. Knowledge of methods and procedures to replace suspension system components.</p> <p>K99. Knowledge of methods and procedures to repair electric power-assist system components.</p> <p>K100. Knowledge of methods and procedures to repair brake vacuum power-assist system components.</p> <p>K101. Knowledge of methods and procedures to repair brake hydraulic power-assist system components.</p> <p>K102. Knowledge of methods and procedures to set bearing preload.</p> <p>K103. Knowledge of methods and procedures to repair drive-line mounted braking components.</p> <p>K104. Knowledge of methods and procedures to disable self-activating vehicle systems (e.g., brake, electric steering, air suspension) before performing repairs.</p> <p>K105. Knowledge of tools and equipment required for brake repairs.</p> <p>K106. Knowledge of methods and procedures to repair hybrid system components.</p>

## LAMP ADJUSTER EXAMINATION PLAN

For persons applying for the Lamp Adjuster license, the tasks and knowledge statements refer to the testing, inspection, adjustment, and repair of the lamps and related electrical systems on all vehicles.

<b>1. Customer Consultation (15%) – This area assesses the candidate’s knowledge of laws and regulations related to authorization to perform lamp inspection, diagnosis, and repairs.</b>	
<b>Task Statements</b>	<b>Knowledge Statements</b>
<p>T1. Explain to customer the reasons for state-required lamp inspections.</p> <p>T2. Prepare cost estimate for performing inspection of vehicle lamps and related electrical systems.</p> <p>T3. Prepare cost estimate for performing diagnosis or repairs of vehicle lamps and related electrical systems.</p> <p>T4. Obtain customer authorization to perform inspection, diagnosis, or repair of vehicle lamps and related electrical systems.</p> <p>T5. Provide customer with itemized invoices documenting all work performed and parts supplied.</p> <p>T6. Explain itemized invoices to customers.</p> <p>T7. Explain to customer the results of state-required lamp inspections.</p> <p>T8. Explain to customer the repair options to obtain the lamp certificate of compliance.</p> <p>T9. Review vehicle information to determine purpose of lamp certification.</p>	<p>K1. Knowledge of information to provide customers about state-required brake system inspections.</p> <p>K2. Knowledge of vehicles (e.g., special construction, salvage) that require brake certification.</p> <p>K3. Knowledge of reasons for performing brake system diagnosis or repairs on vehicles.</p> <p>K4. Knowledge of legal requirements regarding information contained in cost estimates for vehicle inspection, diagnosis, or repair.</p> <p>K5. Knowledge of legal requirements for providing customers with initial and revised cost estimates for recommended inspection, diagnosis, and repair services.</p> <p>K6. Knowledge of legal requirements regarding customer authorization for performing vehicle brake system inspection, diagnostic testing, and repairs.</p> <p>K7. Knowledge of legal requirements regarding itemized final invoices to be provided to customers.</p> <p>K8. Knowledge of information to provide customers regarding brake system inspection failure.</p> <p>K9. Knowledge of information to provide customers regarding repair options.</p> <p>K10. Knowledge of requirements to clear an enforcement document.</p> <p>K11. Knowledge of methods to obtain vehicle information related to brake system certification.</p> <p>K12. Knowledge of methods to determine type of vehicle brake system certification.</p>



**2. Preparation for Inspection (18%) – This area assesses the candidate’s knowledge of laws and regulations related to preparation of the work area and equipment for a lamp inspection.**

Task Statements	Knowledge Statements
<p>T10. Calibrate headlight aiming equipment.</p> <p>T11. Inspect vehicle for excessive ice, road tar, or mud that would affect headlight aim.</p> <p>T12. Settle suspension to a static setting.</p> <p>T13. Examine suspension for malfunctions and damage (e.g., sag, broken springs).</p> <p>T14. Verify that the vehicle is loaded as in its normal operating condition.</p> <p>T15. Verify correct operation of self-leveling suspension system.</p> <p>T16. Inspect alignment of wheels and rear axle tracking.</p> <p>T17. Verify that vehicle tire pressure is within specifications.</p> <p>T18. Prepare work area for lamp inspection based on vehicle being tested and aiming equipment used.</p> <p>T19. Align motorcycle wheels for headlight aiming using guide rails.</p> <p>T20. Clean lamp lenses and aiming pads.</p> <p>T21. Examine aiming pads for damage when using mechanical aimers.</p> <p>T22. Lubricate aiming adjustment screws and points of contact to enable smooth functioning.</p>	<p>K13. Knowledge of manufacturer calibration procedures for headlight aiming equipment.</p> <p>K14. Knowledge of inspection procedures for detecting excessive ice, road tar, or mud that would affect headlight aim.</p> <p>K15. Knowledge of methods and procedures to settle suspension to a static setting.</p> <p>K16. Knowledge of methods and procedures to examine suspension for malfunctions and damage (e.g., sag, broken springs).</p> <p>K17. Knowledge of methods and procedures to verify that the vehicle is loaded in its normal operating condition.</p> <p>K18. Knowledge of self-leveling suspension system operation.</p> <p>K19. Knowledge of methods and procedures to inspect alignment of wheels and rear axle tracking.</p> <p>K20. Knowledge of methods and procedures to inspect tire pressure and size.</p> <p>K21. Knowledge of methods and procedures to adjust tire pressure to specifications.</p> <p>K22. Knowledge of methods and procedures to prepare work area for lamp inspection based on vehicle being tested and aiming equipment used.</p> <p>K23. Knowledge of methods and procedures to align motorcycle wheels for headlight aiming using guide rails.</p> <p>K24. Knowledge of methods and procedures to clean lamp lenses and aiming pads.</p> <p>K25. Knowledge of methods and procedures to examine aiming pads for damage when using mechanical aimers.</p> <p>K26. Knowledge of methods and procedures to lubricate aiming adjustment screws and points of contact to enable smooth functioning.</p>

**3. Inspection (30%) – This area assesses the candidate’s knowledge of methods and procedures to perform the inspection of a vehicle’s lamp system and related components.**

Task Statements	Knowledge Statements
<p>T23. Verify that all required lamps are present and functioning correctly.</p> <p>T24. Verify that all required reflectors are present and functioning correctly.</p> <p>T25. Inspect lamps and reflectors for correct height and placement.</p> <p>T26. Inspect lamps for adequate visibility.</p> <p>T27. Inspect lamps and reflectors for correct color.</p> <p>T28. Inspect lamps and reflectors for damage.</p> <p>T29. Inspect lamp and reflector mounting systems for damage and functionality.</p> <p>T30. Verify off-road and auxiliary lamps for compliance with standards regarding street use.</p> <p>T31. Verify replacement or add-on lighting components meet legal requirements (e.g., DOT, Vehicle Code) and vehicle manufacturer specifications.</p> <p>T32. Verify headlight aim is within specifications.</p> <p>T33. Verify operation of automatic headlight leveling system.</p> <p>T34. Verify operation of adaptive headlight systems.</p> <p>T35. Verify lamp voltage is within specification.</p>	<p>K27. Knowledge of how to use references (e.g., service publications, diagrams, flowcharts, technical service handbooks) when inspecting vehicle lamp and related electrical systems.</p> <p>K28. Knowledge of methods and procedures to determine vehicle lamp and related electrical systems’ configuration.</p> <p>K29. Knowledge of methods and procedures to aim headlights.</p> <p>K30. Knowledge of operation of high and low beam systems.</p> <p>K31. Knowledge of operation of electronic control lighting systems.</p> <p>K32. Knowledge of types of headlamps (e.g., non-halogen, halogen, high intensity discharge, and light-emitting diode).</p> <p>K33. Knowledge of operation of flashers, turn signals, back-up, and brake lights.</p> <p>K34. Knowledge of operation of auxiliary lights (e.g., fog lights, cornering lights, after-market lights).</p> <p>K35. Knowledge of how to identify incandescent (i.e., regular) and LED lamps.</p> <p>K36. Knowledge of methods and procedures to inspect lamp and reflector lenses for damage.</p> <p>K37. Knowledge of methods and procedures to inspect lamp and reflector mounting system for damage.</p> <p>K38. Knowledge of laws and regulations regarding use of off-road and auxiliary lamps for street driving.</p> <p>K39. Knowledge of operation of dash and instrument panel indicator lights.</p> <p>K40. Knowledge of operation of automated and manual lighting systems.</p> <p>K41. Knowledge of operation of warning systems.</p> <p>K42. Knowledge of operation of automatic headlight leveling systems.</p> <p>K43. Knowledge of methods and procedures to inspect automatic headlight leveling system.</p> <p>K44. Knowledge of operation of adaptive headlight systems.</p> <p>K45. Knowledge of methods and procedures to inspect adaptive headlight systems.</p> <p>K46. Knowledge of operation of headlight concealment devices (e.g., vacuum, electric).</p> <p>K47. Knowledge of methods and procedures to inspect headlight concealment devices (e.g., vacuum, electric).</p> <p>K48. Knowledge of laws and regulations regarding lamp and reflector placement.</p> <p>K49. Knowledge of how to verify lamp and reflector placement.</p>

<p>T23. Verify that all required lamps are</p> <p>T36. Visually inspect electrical supply system for defects that adversely affect performance of the lamp (e.g., wiring, connectors, overall condition).</p> <p>T37. Verify operation of headlight concealment devices (e.g., vacuum, electric).</p> <p>T38. Complete lamp certificate of compliance.</p>	<p>K50. Knowledge of laws and regulations regarding lamp and reflector visibility.</p> <p>K51. Knowledge of methods and procedures to determine lamp and reflector visibility.</p> <p>K52. Knowledge of laws and regulations regarding lamp and reflector color.</p> <p>K53. Knowledge of methods and procedures for determining correct bulb application.</p> <p>K54. Knowledge of methods and procedures to complete a lamp certificate of compliance.</p> <p>K55. Knowledge of criteria for determining if the vehicle meets requirements for passing the state-required lamp inspection.</p> <p>K56. Knowledge of safety procedures when inspecting electrical systems (e.g., high-voltage).</p> <p>K57. Knowledge of licensing requirements for who can perform state-required lamp inspection and complete the certificate of compliance.</p> <p>K58. Knowledge of methods and procedures to visually inspect electrical supply system for defects (e.g., wiring, connectors, overall condition)</p>
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**4. Diagnosis (20%) – This area assesses the candidate’s knowledge of methods and procedures to perform diagnostic testing and diagnose a vehicle’s lamp system and related components.**

Task Statements	Knowledge Statements
<p>T39. Retrieve lighting system-related diagnostic trouble codes.</p> <p>T40. Perform diagnostic testing on computer-controlled systems related to lighting system (e.g., DRL, BCM).</p> <p>T41. Identify circuit and circuit components using a schematic.</p> <p>T42. Perform circuit testing (e.g., voltage, amperage, resistance).</p> <p>T43. Perform diagnostic testing of battery/charging system operation.</p> <p>T44. Perform diagnostic testing of lamp mounting components.</p> <p>T45. Perform automatic headlight leveling system diagnostic testing.</p> <p>T46. Examine headlight aiming components.</p> <p>T47. Perform diagnostic testing of headlight concealment device operation.</p> <p>T48. Perform suspension system diagnostic testing to determine effects on lighting system.</p> <p>T49. Perform steering system diagnostic testing to determine effects on lighting system.</p> <p>T50. Perform adaptive lighting system diagnostic testing.</p> <p>T51. Evaluate diagnostic test results to determine needed repairs.</p> <p>T52. Prioritize repairs based on diagnostic test results and manufacturers’ recommendations (e.g., service publications, technical service handbooks).</p>	<p>K59. Knowledge of Ohm’s law.</p> <p>K60. Knowledge of Watt’s law.</p> <p>K61. Knowledge of methods to perform a voltage drop test.</p> <p>K62. Knowledge of safety procedures when diagnosing electrical systems (e.g., high-voltage).</p> <p>K63. Knowledge of methods and procedures to perform circuit voltage, amperage, and resistance testing.</p> <p>K64. Knowledge of methods and procedures to test circuit integrity (e.g., wiring, connectors, overall condition).</p> <p>K65. Knowledge of methods and procedures to test operation of battery/charging system.</p> <p>K66. Knowledge of methods and procedures to diagnose automatic headlight leveling system.</p> <p>K67. Knowledge of methods and procedures to diagnose adaptive lighting system.</p> <p>K68. Knowledge of methods and procedures to diagnose headlight concealment device malfunction.</p> <p>K69. Knowledge of methods and procedures to retrieve diagnostic trouble codes.</p> <p>K70. Knowledge of methods and procedures to diagnose computer-controlled systems related to lighting systems (e.g., DRL, BCM).</p> <p>K71. Knowledge of methods and procedures to identify components on a schematic.</p> <p>K72. Knowledge of methods and procedures to determine if components are correctly mounted.</p> <p>K73. Knowledge of methods and procedures to diagnose headlight aiming adjuster malfunction.</p> <p>K74. Knowledge of methods and procedures to diagnose suspension system malfunctions that affect the lighting system operation.</p> <p>K75. Knowledge of methods and procedures to diagnose steering system malfunctions that affect the lighting system operation.</p> <p>K76. Knowledge of how to evaluate diagnostic test results to determine needed repairs.</p> <p>K77. Knowledge of how to prioritize repairs based on test results and manufacturer’s recommendations.</p> <p>K78. Knowledge of methods and procedures to diagnose HID headlight systems.</p> <p>K79. Knowledge of tools and equipment required for lamp diagnosis.</p>

**5. Repair (17%) – This area assesses the candidate’s knowledge of methods and procedures related to repairing, replacing, and adjusting a vehicle’s lamp system and related components.**

Task Statements	Knowledge Statements
<p>T53. Repair lighting system wiring.</p> <p>T54. Replace lighting system wiring.</p> <p>T55. Repair headlight adjusters.</p> <p>T56. Replace headlight adjusters.</p> <p>T57. Repair automatic headlight leveling system.</p> <p>T58. Aim headlights relative to normal loads and uses of the vehicle (e.g., motorcycle with rider).</p> <p>T59. Repair lamp-related computer-controlled system failures.</p> <p>T60. Repair suspension system components related to lamp inspection failures.</p> <p>T61. Repair steering system components related to lamp inspection failures.</p> <p>T62. Repair adaptive lighting systems.</p> <p>T63. Repair electrical system components related to lamp inspection failures (e.g., switches, relays, connectors).</p> <p>T64. Replace electric system components related to lamp inspection failures (e.g., bulbs, fuses, switches).</p> <p>T65. Repair headlight concealment device system components.</p> <p>T66. Repair battery/charging system components.</p> <p>T67. Repair lamp and reflector mounting system components.</p> <p>T68. Replace lamp and reflector assemblies (e.g., headlight, taillight, marker).</p>	<p>K80. Knowledge of methods and procedures to reassemble vehicle components to manufacturer specifications.</p> <p>K81. Knowledge of methods and procedures to replace lamps and related electrical components.</p> <p>K82. Knowledge of methods and procedures to replace computers and modules related to lighting systems.</p> <p>K83. Knowledge of methods and procedures to program computers and modules related to lighting systems.</p> <p>K84. Knowledge of methods and procedures to repair lamp-related computer-controlled system faults.</p> <p>K85. Knowledge of methods and procedures to adjust headlight aim.</p> <p>K86. Knowledge of methods and procedures to repair lamp-related suspension system faults.</p> <p>K87. Knowledge of methods and procedures to repair automatic headlight leveling systems.</p> <p>K88. Knowledge of methods and procedures to repair adaptive lighting systems.</p> <p>K89. Knowledge of methods and procedures to repair headlight concealment device system components.</p> <p>K90. Knowledge of methods and procedures to repair battery/charging system components.</p> <p>K91. Knowledge of how to remove and reinstall air bag system components.</p> <p>K92. Knowledge of methods and procedures to repair lamp and reflector mounting.</p> <p>K93. Knowledge of methods and procedures to replace lamp and reflector assemblies.</p> <p>K94. Knowledge of methods and procedures to replace HID lighting system components.</p> <p>K95. Knowledge of methods and procedures to replace wiring and connectors.</p> <p>K96. Knowledge of methods and procedures to repair wiring and connectors.</p> <p>K97. Knowledge of methods and procedures to repair headlight adjusters.</p> <p>K98. Knowledge of methods and procedures to replace headlight adjusters.</p> <p>K99. Knowledge of safety procedures when repairing electrical systems.</p> <p>K100. Knowledge of tools and equipment required for lamp repairs.</p> <p>K101. Knowledge of methods and procedures to replace steering components.</p>

## SECTION V: THE EXAMINATION PROCESS

### EXAMINATION SCHEDULING PROCEDURES

Once you have been approved by BAR, you are responsible for contacting PSI to schedule an appointment to take the examination. You may do so via the Internet at [www.psiexams.com](http://www.psiexams.com), or schedule over the telephone at (877) 392-6422, TTY (800) 735-2929.

Current policy allows one test attempt per application. If you do not pass the examination, do not reschedule in time (see page 5) or do not keep your examination appointment, you must reapply to BAR.

There is no additional fee beyond the amount that you paid to BAR when you applied for a license

In most California testing centers, testing does not take place on the following major holidays:

Thanksgiving	Closed November 28-29, 2019
Christmas	Closed December 24-25, 2019
New Years Day	Closed January 1, 2020
Martin Luther King Jr.	Closed January 20, 2020
Memorial Day	Closed May 25, 2020
Independence Day	Closed July 4, 2020
Labor Day	Closed September 7, 2020

#### INTERNET SCHEDULING

You may schedule for your test by completing the online Test Registration Form. The Test Registration Form is available at PSI's website, [www.psiexams.com](http://www.psiexams.com). You may schedule for a test via the Internet 24 hours a day.

1. Complete the registration form online and submit your information to PSI via the Internet.
2. Upon completion of the online registration form, you will be given the available dates for scheduling your test.
3. You will need to choose a date to complete your registration.
4. Upon successful registration, you will receive a traceable confirmation number.

#### TELEPHONE SCHEDULING

You may call PSI at (877) 392-6422, Monday through Friday between 4:30 am and 7:00 pm, and Saturday-Sunday between 6:00 am and 2:30 pm, Pacific Time, to schedule your appointment for the test.

#### CANCELING AN EXAMINATION APPOINTMENT

You may cancel and reschedule an examination appointment without forfeiting your fee *if your cancellation notice is received two (2) days prior to the scheduled examination date*. For example, for a 9:00 a.m. Monday appointment, the cancellation notice would need to be received before 9:00 a.m. on the previous Saturday. You may call PSI at (877) 392-6422.

**Note:** A voicemail or email message is not an acceptable form of cancellation. Please use the PSI Website or call PSI and speak directly to a Customer Service Representative.

#### MISSED APPOINTMENT OR LATE CANCELLATION

If you miss your appointment, you will not be able to take the examination as scheduled, further you will lose your eligibility, if:

- You do not cancel your appointment 2 days before the scheduled examination date;
- You do not appear for your examination appointment;
- You arrive after examination start time;
- You do not present proper identification when you arrive for the examination.

#### EXAMINATION SITE CLOSING FOR AN EMERGENCY

In the event that severe weather or another emergency forces the closure of an examination site on a scheduled examination date, your examination will be rescheduled. PSI personnel will attempt to contact you in this situation. However, you may check the status of your examination schedule by calling (877) 392-6422. Every effort will be made to reschedule your examination at a convenient time as soon as possible. You will not be penalized. You will be rescheduled at no additional charge.

### EXAMINATION SITE LOCATIONS

The California examinations are administered at the PSI examination centers in California as listed below:

#### **ANAHEIM**

Park Gate Center  
2301 W. LINCOLN AVE, SUITE 252  
ANAHEIM, CA 92801  
(714) 254-1453

**DIRECTIONS FROM LA: TAKE 5 SOUTH EXIT BROOKHURST AND TURN RIGHT. TURN RIGHT ON LINCOLN (PASS A SMALL STREET NAMED MONTEREY), AND GO TO THE FIRST OPEN DRIVEWAY ON THE RIGHT.**

**DIRECTIONS FROM SAN DIEGO, IRVINE, MISSION VIEJO, ETC: TAKE 5N EXIT BROOKHURST AND TURN LEFT. TURN RIGHT ONTO LINCOLN (PASS A SMALL STREET NAMED MONTEREY) AND GO TO THE FIRST OPEN DRIVEWAY ON THE RIGHT.**

**IF BROOKHURST EXIT IS CLOSED: TAKE 5 N EXIT EUCLID AND TURN LEFT. TURN RIGHT ON LINCOLN (PASS BROOKHURST AND SMALL STREET NAMED MONTEREY) AND GO TO THE FIRST OPEN DRIVEWAY ON THE RIGHT.  
\*\*\*\*KEEP IN MIND THAT THE EUCLID EXIT COMES FIRST AND THEN BROOKHURST.\*\*\*\***



OR 91 FREEWAY: TAKE 91 W EXIT BROOKHURST AND TURN LEFT. TURN RIGHT ONTO LINCOLN (PASS A SMALL STREET NAMED MONTEREY) AND GO TO THE FIRST OPEN DRIVEWAY ON THE RIGHT.

#### ATASCADERO

7305 MORRO RD, SUITE 201A  
ATASCADERO, CA 93422  
(805) 462-8983

FROM US-101 N, TAKE THE CA-41 EXIT- EXIT 219-TOWARD MORRO RD. TURN LEFT ONTO EL CAMINO REAL. Turn LEFT onto CA-41/MORRO RD.

FROM US-101 S, TAKE THE MORRO RD/CA-41 EXIT- EXIT 219, TURN RIGHT ONTO CA-41/MORRO RD.

#### BURBANK

2835 N. NAOMI STREET, SUITE 110  
BURBANK CA 91504  
(818) 566-9882

FROM I-5 SOUTH: TAKE HOLLYWOOD WAY EXIT 149. KEEP LEFT TO TAKE THE RAMP TOWARD WOODBURY UNIVERSITY. TURN LEFT ONTO N. HOLLYWOOD WAY. TURN RIGHT ONTO N. GLENOAKS BLVD. TURN RIGHT ONTO N. NAOMI ST. 2835 N NAOMI ST IS ON THE RIGHT.

FROM I-5 NORTH: TAKE BUENA VISTA STREET EXIT 148. TURN LEFT ONTO N. BUENA VISTA. TURN LEFT ONTO N. GLENOAKS BLVD. TURN LEFT ONTO N. NAOMI ST. 2835 N. NAOMI ST IS ON THE RIGHT.

#### CARSON

17420 AVALON BLVD, SUITE 205  
CARSON, CA 90746  
(310) 400-7393

FROM CA-91 E/GARDENA FWY TAKE THE AVALON EXIT. OFF RAMP WILL LEAD YOU ONTO ALBERTONI ST. MAKE A RIGHT ONTO AVALON BLVD AND WE ARE LOCATED ON THE RIGHT HANDSIDE (SAME PARKING LOT AS CARL'S JR).

FROM CA-91 W TAKE THE AVALON EXIT. MAKE A LEFT ONTO AVALON BLVD. MAKE A U-TURN ON AVALON BLVD AND ALBERTONI ST. WE ARE LOCATED ON THE RIGHT-HAND SIDE. (SAME PARKING LOT AS CARL'S JR).

#### EL MONTE - SANTA FE SPRINGS

10330 PIONEER BOULEVARD, SUITE 285  
SANTA FE SPRINGS, CA 90670  
(562) 325-8113

FROM THE I-5 NORTH TAKE NORWALK BLVD EXIT #121, TURN RIGHT ONTO NORWALK BLVD. TURN LEFT ONTO IMPERIAL HWY/CA-90. TURN RIGHT ONTO PIONEER BLVD, TESTING CENTER WILL BE ON YOUR RIGHT.

#### FRESNO

351 E. BARSTOW, SUITE 101  
FRESNO, CA 93710  
(559) 538-3975

FROM CA-41 S, TAKE THE BULLARD AVE EXIT. TURN LEFT ONTO E BULLARD AVE. TURN RIGHT ONTO N FRESNO ST. PASS THROUGH THE INTERSECTION OF FRESNO AND BASTOW AVE. TAKE THE FIRST DRIVEWAY ON THE RIGHT-HAND SIDE.

FROM CA-41 N, TAKE THE SHAW AVE EXIT TOWARD CLOVIS. TURN RIGHT ONTO E SHAW AVE. TURN LEFT ONTO N FRESNO ST. TURN LEFT INTO THE LAST DRIVEWAY BEFORE BARSTOW AVE. TESTING CENTER IS IN THE OFFICE COMPLEX ON THE SW CORNER OF BARSTOW AND FRESNO ST.

#### HAYWARD

24301 SOUTHLAND DRIVE, SUITE B-1  
HAYWARD, CA 94545  
(510) 901-7992

FROM I-880 N TOWARD OAKLAND, TAKE THE WINTON AVENUE EXIT. MERGE ONTO W WINTON AVE TOWARD HEALD COLLEGE. TURN LEFT ONTO SOUTHLAND DR.

FROM I-880 S TOWARD SAN JOSE/SAN MATEO BR, TAKE THE WINTON AVE WEST EXIT TOWARD HEALD COLLEGE. MERGE ONTO W WINTON AVE. TURN LEFT ONTO SOUTHLAND DR.

#### IRVINE

8 Corporate Park, Suite 200  
2301 W. LINCOLN AVE, SUITE 252  
IRVINE, CA 92606  
(949) 418-9653

FROM I-405 S - USE THE 2ND LANE FROM RIGHT TO TAKE EXIT 7 FOR JAMBOREE RD, THEN USE THE LEFT 2 LANES TO TURN LEFT ONTO JAMBOREE RD. GO ABOUT 1.5 MILES THEN TURN RIGHT ONTO BECKMAN AVE. TAKE THE FIRST RIGHT ONTO CORPORATE PARK. 8 CORPORATE PARK IS THE SECOND BUILDING ON THE RIGHT.

FROM I-5 S - TAKE EXIT 100 FOR JAMBOREE RD. USE THE 2ND FROM RIGHT LANE TO TURN RIGHT ONTO JAMBOREE RD. TAKE THE RAMP TO JAMBOREE RD THEN KEEP LEFT AT THE FORK TO CONTINUE ONTO JAMBOREE RD. GO ABOUT 2.2 MILES THEN TURN LEFT ONTO BECKMAN AVE. TAKE THE FIRST RIGHT ONTO CORPORATE PARK. 8 CORPORATE PARK IS THE SECOND BUILDING ON THE RIGHT.

ONCE PARKED, PROCEED THROUGH THE FRONT ENTRANCE AND TAKE THE ELEVATOR TO THE SECOND FLOOR. THE TEST CENTER IS IN SUITE 200.

#### REDDING

2861 CHURN CREEK, UNIT C  
REDDING, CA 96002  
(530) 221-0945

FROM I-5 S, TAKE THE CYPRESS AVENUE EXIT (677). TURN RIGHT ONTO E. CYPRESS AVE. TURN RIGHT ON CHURN CREEK RD.

FROM I-5 N TOWARDS SACRAMENTO, TAKE THE CYPRESS AVE EXIT (677). TURN LEFT ONTO E. CYPRESS AVE. TURN RIGHT ONTO CHURN CREEK RD.

FROM 299 E TOWARDS REDDING, START GOING WEST ON CA-299. MERGE ONTO I-5 S RAMP ON THE LEFT TOWARDS SACRAMENTO. TAKE THE CYPRESS AVE EXIT (677). TURN LEFT ONTO E. CYPRESS AVE. TURN RIGHT ONTO CHURN CREEK RD.

FROM 299 W TOWARDS REDDING. START GOING EAST ON CA-299 TOWARDS WEAVERVILLE/REDDING. FROM 299 EAST TURN RIGHT ONTO CA-273/CA-299 E/MARKET STREET. TURN LEFT ONTO CA-299-E. MERGE ONTO I-5 S VIA EXIT 2A TOWARDS RED BLUFF/SACRAMENTO. TAKE THE CYPRESS AVE EXIT (677). TURN LEFT ONTO E. CYPRESS AVE. TURN RIGHT ONTO CHURN CREEK RD.

#### RIVERSIDE

7888 MISSION GROVE PARKWAY S., SUITE 130  
RIVERSIDE, CA 92508  
951-565-8037

FROM THE CA-91W TOWARD RIVERSIDE/BEACH CITIES, TAKE THE CENTRAL AVENUE EXIT TOWARD MAGNOLIA CENTER. TURN LEFT ONTO CENTRAL AVE. CENTRAL AVE BECOMES ALESSANDRO BLVD. VEER TO THE RIGHT, THEN STAY STRAIGHT TO GO ONTO TRAUTWEIN RD (YOU WILL PASS COMMUNICATIONS CENTER DR). TURN LEFT ONTO MISSION GROVE PKY W.

FROM THE HIGH DESERT/SAN BERNARDINO AREA 215 S, WHERE THE 60 FWY, 91 FWY AND THE 215 FWY SPLIT, TAKE 215S (SIGNS FOR THE 60 EAST INDIO). TAKE EXIT 27C FOR ALESSANDRO BLVD, TURN RIGHT ONTO E ALESSANDRO BLVD, TURN LEFT ONTO MISSION GROVE PKWY S.

#### SACRAMENTO

8950 CAL CENTER DR, SUITE 158  
SACRAMENTO, CA 95826  
916-476-5926

FROM US-50 E: USE THE RIGHT TWO LANES TO TAKE EXIT 11 FOR WATT AVE. USE THE RIGHT 2 LANES TO TURN RIGHT ONTO WATT AVE. USE THE LEFT LANE TO TURN LEFT AT THE FIRST CROSS STREET ONTO FOLSOM BLVD. USE THE LEFT TWO LANES TO TURN LEFT ONTO MANLOVE RD. TURN LEFT ONTO CAL CENTER DR. BUILDING 8950 WILL BE ON THE LEFT. FROM US-50 W: USE THE RIGHT TWO LANES TO TAKE EXIT 11 FOR WATT AVE. USE THE LEFT 2 LANES TO TURN LEFT ONTO WATT AVE. USE THE LEFT LANE TO TURN LEFT AT THE FIRST CROSS STREET ONTO FOLSOM BLVD. USE THE LEFT TWO LANES TO TURN LEFT ONTO MANLOVE RD. TURN LEFT ONTO CAL CENTER DR. BUILDING 8950 WILL BE ON THE LEFT.



**SAN DIEGO**

5440 MOREHOUSE DRIVE, SUITE 2300  
SAN DIEGO, CA 92121  
(858) 550-5940

*FROM 1-805 S, TAKE THE SORRENTO VALLEY RD/MIRA MESA BLVD EXIT. TURN LEFT ONTO MIRA MESA BLVD, TURN LEFT ONTO SCRANTON ROAD. TURN RIGHT ONTO MOREHOUSE DRIVE.*

*FROM 1-805 N TOWARD LOS ANGELES, TAKE THE MIRA MESA BLVD/VISTA SORRENTO PKWY EXIT. TURN RIGHT ONTO MIRA MESA BLVD. TURN LEFT ONTO SCRANTON RD. TURN RIGHT ONTO MOREHOUSE DR.*

*ADDITIONAL PARKING CAN BE FOUND (on top of the AT&T building) BY CONTINUING ON MOREHOUSE PAST OUR BUILDING AND TURNING LEFT AT THE NEXT DRIVEWAY UP THE HILL*

**SAN FRANCISCO**

150 EXECUTIVE PARK BLVD., STE 2400  
SAN FRANCISCO, CA 94134  
(415) 844-0008

*I-80 W BECOMES US-101 S. TAKE EXIT 429 A TOWARD MONSTER PARK/TUNNEL AVE. TAKE THE RAMP TOWARD 3COM PARK. TURN RIGHT ONTO ALANNA RD. TURN LEFT ONTO EXECUTIVE PARK BLVD.*

**SANTA CLARA**

2936 SCOTT BLVD  
SANTA CLARA, CA 95054  
(408) 844-0008

*FROM US-101 N, TAKE THE SAN TOMAS EXPWY/MONTAGUE EXPWY EXIT- EXIT 392. TAKE THE SAN TOMAS EXPWY RAMP. MERGE ONTO SAN TOMAS EXPY/CR-G4. TURN LEFT ONTO SCOTT BLVD.*

*FROM I-880 S TOWARD SAN JOSE, TAKE THE MONTAGUE EXPWY EXIT (7). TAKE THE MONTAGUE EXPWY WEST RAMP. MERGE ONTO MONTAGUE EXPY/CR-G4 E. TURN LEFT ONTO E TRIMBLE RD. E TRIMBLE RD BECOMES DE LA CRUZ BLVD. TURN SLIGHT RIGHT ONTO CENTRAL EXPY/CR-G6 W. TURN SLIGHT RIGHT ONTO SCOTT BLVD.*

**SANTA ROSA**

160 WIKIUP DRIVE, SUITE 105  
SANTA ROSA, CA 95403  
(707) 791-3113

*FROM US-101 N, TAKE MARK WEST SPRINGS/RIVER ROAD EXIT. TURN RIGHT ON MARK WEST SPRINGS. TURN LEFT AT OLD REDWOOD HIGHWAY. TURN RIGHT ON WIKIUP DRIVE. FIRST DRIVEWAY ON RIGHT.*

*FROM US-101 S, TAKE MARK WEST SPRINGS/RIVER ROAD EXIT. TURN LEFT ON MARK WEST SPRINGS. TURN LEFT AT OLD REDWOOD HIGHWAY. TURN RIGHT ON WIKIUP DRIVE. FIRST DRIVEWAY ON RIGHT.*

**VENTURA**

4245 MARKET ST, SUITE 208  
VENTURA, CA 93003  
(805) 650-5220

*FROM US-101N, TAKE THE TELEPHONE ROAD EXIT 65. TURN LEFT ONTO TELEPHONE ROAD. TURN RIGHT ONTO MARKET STREET.*

**VISALIA**

3400 W MINERAL KING AVE, SUITE D  
VISALIA, CA 93291  
(559) 627-6700

*FROM CA-99N, MERGE ONTO CA-198E VIA EXIT 96 TOWARD VISALIA/SEQUOIA NAT'L PARK. TAKE THE EXIT TOWARD DEMAREE STREET. MERGE ONTO W NOBLE AVENUE. TURN LEFT ONTO S COUNTY CENTER DRIVE. TAKE THE 1<sup>ST</sup> LEFT ONTO W MINERAL KING AVENUE.*

**WALNUT CREEK**

175 LENNON LANE, SUITE 203  
WALNUT CREEK, CA 94598  
(925) 906-9165

*FROM I-5N, KEEP LEFT TO TAKE I-580W TOWARD TRACY/SAN FRANCISCO. MERGE ONTO I-680N VIA EXIT 44B TOWARD SACRAMENTO/WALNUT CREEK/CONCORD. TAKE THE YGNACIO VALLEY ROAD EXIT AND TURN RIGHT. TURN LEFT ONTO LENNON LANE. ROAD EXIT AND TURN RIGHT. TURN LEFT ONTO LENNON LANE.*





## REPORTING TO THE EXAMINATION SITE

On the day of the examination, you must arrive at least 30 minutes prior to your scheduled appointment time. This allows time for check-in and identification verification and provides time to familiarize yourself with the examination process. If you arrive late, you may not be admitted to the examination site and you may forfeit your examination registration fee. Even though candidates will be thumb printed, you are still required to comply with any identification requirements established by the appropriate regulatory entity.

### REQUIRED IDENTIFICATION AT EXAMINATION SITE

You must provide 2 forms of identification. *One of these forms of identification must be:*

- A valid unexpired California Driver License with a photo.
- A valid unexpired California Department of Motor Vehicles Identification Card with a photo.
- A current U.S. military-issued (active duty) identification card.
- A current U.S. government-issued passport card.

The second ID must have your signature and preprinted legal name. All identification provided must match the name on the License application submitted to BAR.

If you cannot provide the required identification, you must call (877) 392-6422 at least 3 weeks prior to your scheduled appointment to arrange a way to meet this security requirement. *Failure to provide all of the required identification at the time of the examination without notifying PSI is considered a missed appointment, and you will not be able to take the examination.*

### CALIFORNIA EXAMINATION SECURITY LAW

Section 123 of the California Business and Professions Code states: “It is a misdemeanor for any person to engage in any conduct which subverts or attempts to subvert any licensing examination or the administration of an examination, including, but not limited to:

- Conduct which violates the security of the examination materials;
- Removing from the examination room any examination materials without authorization;
- The unauthorized reproduction by any means of any portion of the actual licensing examination;
- Aiding by any means the unauthorized reproduction of any portion of the licensing examination;
- Paying or using professional or paid examination-takers for the purpose of reconstructing any portion of the licensing examination;
- Obtaining examination questions or other examination material, except by specific authorization either before, during, or after an examination; or
- Selling, distributing, buying, receiving, or having unauthorized possession of any portion of a future, current, or previously administered licensing examination.
- Communicating with any other examinee during the administration of a licensing examination.

- Copying answers from another examinee or permitting one’s answers to be copied by another examinee.
- Having in one’s possession during the administration of the licensing examination any books, equipment, notes, written or printed materials, or data of any kind, other than the examination materials distributed, or otherwise authorized to be in one’s possession during the examination.
- Impersonating any examinee or having an impersonator take the licensing examination on one’s behalf.

Nothing in this section shall preclude prosecution under authority provided for in any other provision of law. In addition to any other penalties, a person found guilty of violating this section, shall be liable for the actual damages sustained by the agency administering the examination not to exceed ten thousand dollars (\$10,000) and the costs of litigation.”

### IMPORTANT INFORMATION ABOUT TAKING AN EXAMINATION

1. All candidates will have their thumbprint taken during examination check-in. The thumb print must be matched after candidates return from a restroom break and any time the candidate leaves and returns to the test site after check-in.
2. The temperature in the testing room is maintained at a moderate level. Candidates are advised to layer clothing. Acceptable layered clothing includes lightweight shirts, sweaters, and pullovers without pockets or hoods. These items must be worn upon check-in, while you wait to enter the testing room, and during your initial seating for the examination. If the layered item is removed during the examination, you will be required to store it in the lobby while time continues to count down on your examination. Outerwear (coats, heavy jackets, vests, shawls, scarves, etc.) is not allowed in the testing rooms.
3. There are timing mechanisms available in the testing room and on the computer console to help candidates keep track of time during the test administration. Candidates are not permitted to bring watches or other timekeeping devices into the testing rooms.
4. Only one candidate will be allowed to take a restroom break at a time. Candidates are required to sign out when leaving and returning to the testing room. If a candidate’s restroom break takes longer than 5 (five) minutes, a proctor will check on the candidate and will notify the applicable regulatory entity of the occurrence. The regulatory entity will investigate and take appropriate action.
5. The following is a non-exhaustive list of personal items that are not permitted in the testing rooms:

Purses	Briefcases/daypacks/luggage
Cellular phones	Pagers
Drinks (including water)	Food/candy/snacks/gum
Good luck items	Luggage
Calculators	Reading materials
Textbooks	Notes
Any recording device	Smart devices
Electronic devices	Headphones or earphones/earbuds



Personal pens or pencils	Therapeutic items
Cameras	Over-the-counter medication
Weapons	Fashion scarves
Hats/baseball caps/visors*	Sunglasses**
Bulky, large or noisy jewelry***	Prescription drugs****

\*Headwear worn for religious purposes is subject to inspection.

\*\*Prescription and non-prescription eyeglasses may not be worn for the photo. Eyeglasses subject to inspection.

\*\*\*Jewelry that is allowed into the examination room is subject to inspection.

\*\*\*\*Drugs that are medically necessary during the pendency of the examination may be brought into the examination site, in a container bearing a proper prescription label with the name of the candidate and of the drug; any such medication is subject to examination by a proctor upon check-in.

Examination proctors will have considerable discretion to refuse permission of clothing and/or items that compromise the integrity or security of the examination.

During the check-in process, all candidates will be asked if they possess any of the prohibited items and all candidates will be asked to empty their pockets. If prohibited items are found during check-in, candidates must return these items to their vehicle or other place of safekeeping. Neither PSI nor the Department of Consumer Affairs will be responsible for the items. Any candidate possessing prohibited items in the testing room will have his or her examination results invalidated, and PSI will notify the appropriate regulatory entity of the occurrence.

- Shoes must be worn at all times and feet are not permitted on the chairs. Feet must remain on the floor during examinations.
- Copying any portion of the examination content by any means, or communicating examination content for the purpose of aiding its unauthorized reproduction, whether before, during, or after the examination, is a violation of PSI security policy and existing law. Either one may result in the disqualification or invalidation of examination results, the denial of your license, and may result in criminal prosecution.
- If a candidate is asked by a proctor to step into the lobby during your examination, the proctor will suspend the candidate's examination, so all remaining test time will be retained.

Only candidates, and those individuals with prior regulatory entity approval, are allowed to be present in the testing sites.

If candidates require that an exception be made to ANY of the abovementioned security procedures, candidates must contact their regulatory entity PRIOR to the date of their examination. The regulatory entity must provide the exception to PSI. NO EXCEPTIONS WILL BE MADE ON THE DAY OF THE EXAMINATION.

## SPECIAL TESTING CONSIDERATIONS

### AMERICANS WITH DISABILITIES ACT (ADA)

Candidates with a physical or mental impairment that substantially limits a major life activity may be eligible for accommodation in the testing process to assure you that the examination accurately reflects knowledge, skills or abilities. BAR and PSI are fully compliant with ADA guidelines and will provide reasonable accommodations. Scheduling services are also available via our Telecommunications Device for the Deaf (TDD) by calling 800-735.2929.

### ACCOMMODATION PROCEDURES

Candidates requiring special testing arrangements due to a physical or mental impairment must submit a request to BAR for such arrangements at the time of application. Please see Page 4 for details.

## TAKING THE EXAMINATION BY COMPUTER

The examination will be administered via computer. You will be using a mouse and computer keyboard.

### IDENTIFICATION SCREEN

You will be directed to a semiprivate testing station to take the examination. When you are seated at the testing station, you will be prompted to confirm your name, identification number, and the examination for which you are registered.

### TUTORIAL

Before you start your examination, an introductory tutorial is provided on the computer screen. The time you spend on this tutorial, up to 15 minutes, DOES NOT count as part of your examination time. Sample questions are included following the tutorial so that you may practice answering questions, and reviewing your answers.

### TEST QUESTION SCREEN

The "function bar" at the top of the test question screen provides mouse-click access to the features available while taking the examination.



One question appears on the screen at a time. During the examination, minutes remaining will be displayed at the top of the screen and updated as you record your answers.

**IMPORTANT:** After you have entered your responses, you will later be able to return to any question(s) and change your response provided the examination time has not run out.

## **TIPS FOR PREPARING FOR YOUR EXAMINATION**

The following suggestions will help you prepare for your examination.

Planned preparation increases your likelihood of passing.

- Start with a current copy of this Candidate Information Handbook and use the examination content outline as the basis of your study.
- Read study materials that cover all the topics in the content outline.
- Take notes on what you study. Putting information in writing helps you commit it to memory and it is also an excellent business practice. Underline or highlight key ideas that will help with a later review.
- Discuss new terms or concepts as frequently as you can with colleagues. This will test your understanding and reinforce ideas.
- Your studies will be most effective if you study frequently, for periods of about 45 to 60 minutes. Concentration tends to wander when you study for longer periods of time.
-

## SECTION VI: THE LICENSING EXAMINATION

### THE LICENSING EXAMINATION

Examination	Length of Time	# of Items	Minimum Passing Score
Lamp Class A	2.0 Hours	100*	72*
Brake Class A	2.5 Hours	125*	89*
Brake Class B	2.0 Hours	100*	72*
Brake Class C	2.0 Hours	100*	74*

\* Actual number of questions and passing score may vary, depending on the actual exam version. Check BAR publications or the BAR Web site for the latest information.

### MULTIPLE-CHOICE QUESTIONS

Multiple-choice questions are used throughout the examination. These are questions in which four answers are provided, only one of which is correct.

Examination candidates should carefully read the following:

1. For each multiple-choice question, you may select only one answer.
2. There is no penalty for guessing. Scores are based on the number of overall correct answers. **It is to your advantage to answer as many questions as you can.**
3. Some questions will require you to use provided reference materials to find the correct answer.
4. Suggestions for taking multiple-choice examinations:
  - a. Your first answer is often your best answer. Don't spend too much time on any one question.
  - b. If more than one answer seems to be correct, choose the answer that seems correct most often.

#### SAMPLE EXAMINATION QUESTIONS

##### Brake Adjuster Practice Items

1. An electronic controller for an anti-lock brake system begins to detect a possible wheel lock-up. To what part does the controller send signals to counteract the lock-up?
  - A. Accumulator.
  - B. Solenoid-valve body.
  - C. Pressure switch.
  - D. Electronic pump motor.
2. What is the maximum allowable stopping distance at 20 MPH for a single vehicle with a GVWR over 10,000 pounds?
  - A. 25 feet
  - B. 30 feet
  - C. 40 feet
  - D. 45 feet

3. For vacuum-assisted brakes on passenger cars, what are the three stages of power booster operation?
  - A. Atmospheric pressure, vacuum, partial vacuum.
  - B. Primary, secondary, neutral.
  - C. Boost, return, pressure.
  - D. Released, holding, applied.
4. Which valve protects an air-brake system against excessive air pressure build-up?
  - A. The double check valve
  - B. The pressure-reducing valve
  - C. The safety valve
  - D. The relay emergency valve

##### Lamp Adjuster Practice Items

1. Which of the following are NOT parts of the exterior lighting?
  - A. Dome lights
  - B. Headlights
  - C. Tail lights
  - D. Fog lights
2. A vehicle's emergency flashers are on. All bulbs light up properly but do not flash. What is the most likely problem?
  - A. A faulty ground
  - B. A faulty turn-signal flasher
  - C. A loss of voltage to the signals
  - D. A faulty emergency flasher
3. How are back-up lights on most vehicles activated?
  - A. Manual switch under the dash
  - B. Switch on the transmission or shifter linkage
  - C. Switch on the clutch linkage
  - D. Mercury switch activated by the vehicle's rearward movement

(Correct answers to these questions can be found on the next page.)

## SECTION VII: AFTER THE EXAMINATION IS OVER

### EXAMINATION RESULTS

At the end of your test, you will receive a printed Score Report. The report indicates your overall score, including the number of questions answered correctly, and whether you passed or failed.

To pass the examination, you must correctly answer a predetermined minimum number of questions for the entire examination. Your total score, the minimum passing score and the scores for each of the sections of the examination will be identified on your score report. The scores for each of the sections are provided to give you more details about your performance on the examination. You may refer to the examination plans in this handbook for the specific knowledge, skills and abilities needed for each section. Only correctly answered questions count toward your examination score.

A license will be issued and mailed to candidates who pass, within 20 days.

#### CONFIDENTIALITY OF EXAMINATION RESULTS

Examination results are the property of the person who took the examination, and will not be released to anyone else without the written permission of the candidate.

#### DUPLICATE SCORE REPORTS

You may request a duplicate score report after your examination by emailing [scorereport@psionline.com](mailto:scorereport@psionline.com) or by calling 800-733-9267.

### RETAKE AN EXAMINATION

Once you have received your Examination Eligibility Notice, you will be allowed one attempt to pass the examination. If you do not pass your examination, you must reapply to BAR, submitting the appropriate application and fee to:

Department of Consumer Affairs  
Bureau of Automotive Repair  
Licensing Unit  
P.O. Box 989001  
West Sacramento, CA 95798-9001

If you wish to send your application and fees by overnight delivery, send to:

Department of Consumer Affairs  
Bureau of Automotive Repair  
Licensing Unit  
10949 N Mather Blvd  
Rancho Cordova, CA 95670

BAR will then notify PSI of your eligibility to test, and PSI will mail another Examination Eligibility Notice to you. After you receive this Notice, call (877) 392-6422 to schedule another examination appointment.

Answers to sample examination questions.

Brake Adjuster Practice Items: 1. B; 2. C; 3. D; 4. C  
Lamp Adjuster Practice Items: 1. A; 2. D; 3. B

## SECTION VIII: OBTAINING A LICENSE

After passing the examination, your record is sent back to DCA/BAR to review for enforcement actions, as well as family support actions before a license may be issued. Once your record is found to be clear, a license will be mailed to you. If the record is clear, your license should be mailed to you within 20 days of passing the examination. **No additional fees are collected before the license is issued.**

A person may not perform the duties of a licensed adjuster without a current license. Adjusters must pass an examination every four years to remain licensed. The license expiration dates are adjusted so that the licenses expire in the month of the adjuster's birthday. Therefore, licenses are valid for 37 to 48 months, depending upon the adjuster's birth month and month in which the candidate passes the licensing examination.

Before BAR can issue an adjuster license to you, BAR must have all information and the application must be completely filled out. The Chief of the bureau is responsible for maintaining the

information you provide. The information may be transferred to other government agencies if the agencies need it to perform their legal duties. You have a right to review the records maintained on you by this bureau, unless the records are identified as confidential information and exempted in Section 1798.3 of the Information Practices Act.

**Disclosure of your Social Security number to BAR is mandatory.** Section 30 of the Business and Professions Code and Pub. L. 94-455 [42 w. 405(c)(2)(C)] authorizes collection of your Social Security number. Your Social Security number will be used exclusively for tax enforcement purposes and for purposes of compliance with any judgment or order for family support in accordance with section 11350.6 of the Welfare and Institutions Code. If you fail to provide your Social Security number, your application will not be processed and you will be reported to the Franchise Tax Board, which may assess a \$100 penalty against you.



**BAR Mail Room**  
**10949 N Mather Blvd**  
**Rancho Cordova, CA 95670**