



PSI licensure:certification

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



CANDIDATE INFORMATION BULLETIN

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SECTION 1: INTRODUCTION

PURPOSE

The California Department of Consumer Affairs, Bureau of Automotive Repair (DCA/BAR) developed this bulletin 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 bulletin 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 bulletin 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 bulletin 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, repair and certify the braking systems on all vehicles.

Brake Class B – May test, inspect, adjust, repair and certify the braking systems on trucks over 10,000 pounds GVWR, and trailers with air brakes.

Brake Class C – May test, inspect, adjust, repair and certify the braking systems on vehicles under 10,000 pounds GVWR, and trailers without air brakes.

Lamp Class A – May inspect, adjust and certify the lighting systems on all vehicles, including motorcycles.

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 Examination Resources. Review the applicable examination plan(s) in Section IV carefully and plan an appropriate schedule of study or review.

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.

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 Job-Knowledge Domains.

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 Examination Resources.

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

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.

Handbook for Brake Adjusters and Stations and the Handbook for Lamp Adjusters and Stations.
Bureau of Automotive Repair.

Laws and Regulations Relating to Automotive Repair Dealers, Licensed Official Stations & Licensed Smog Check Stations.
Bureau of Automotive Repair, 2005.

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.

Wagner, 1981-1991 Import Anti-Lock Brake Service Manual.
Publisher's book number: WP31005,
Copyright: Mitchell International-1992

General Motors, Single Piston Disc Brakes Systems Fundamentals.
Publisher's book number: 15001.00-3, Copyright: General Motors-1986

Wagner, Hydraulic Disc & Drum Brake Diagnostic Analysis and Reconditioning Manual.
Publisher's book number: AU-1600, Copyright: Mitchell International-1988

Raybestos, Heavy Duty Air Brake Service Manual.
Publisher's book number: 4412-R,
Copyright: Mitchell International-1988

Raybestos, Anti-Lock Brake Service Manual, Domestic and Import 1990 Supplement.
Publisher's book number: 4411-S,
Copyright: Mitchell International-1990

Wagner, Domestic Anti-Lock Brake Service Manual.
Publisher's book number: WP31001,
Copyright: Mitchell International-1992

Wagner, Brake Service Manual.
Publisher's book number: WP31010,
Copyright: Mitchell International-1990

Halderman, James. Automotive Chassis Systems Brakes, Steering, Suspensions & Alignment. ISBN # 0-13-052317-8
Copyright: Prentice-Hall-1996

Ford, Automotive Brake Systems, Ford Parts & Service Division Technical Training.
Copyright: Ford Motor Company

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.

Duniggins, Boyce and Mahoney, Edward. Automotive Electricity & Electronics Concepts & Applications.
Copyright: Prentice-Hall-1996

Automotive Electrical & Electronic Systems 3rd Edition Shop Manual.
Copyright: Chek-Chart Publications

Crouse, William. Automotive Electronics & Electrical Equipment 10th edition.
Copyright: McGraw-Hill-1996

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 exam, call the Department's Licensing Division at 916-255-3145 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 the Department 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

The following are the examination plans, which are the detailed information used by Subject Matter Experts to write examination questions.

JOB-KNOWLEDGE DOMAINS FOR LICENSED BRAKE ADJUSTERS: CLASS "A" LICENSE

1. Knowledge of nomenclature (5% of the test)
 - A. Names of primary braking-system components
 - B. Names of auxiliary-system components
 - C. Names of equipment and tools needed for inspection, diagnosis and repair
 - D. Names of procedures needed for inspection, diagnosis and repair
2. Knowledge of braking systems and auxiliary systems and the relative locations of their components (18%)
 - A. Basic air-braking systems for tractors, trailers and trucks
 - Primary system
 - Emergency and parking system
 - B. Automated, computer-assisted, electronically modulated air-braking ("ABS," "anti-lock") systems for tractors, trailers and trucks
 - C. Automated, computer-assisted, electronically modulated braking systems for passenger cars
 - D. Hydraulic braking systems
 - Disc braking systems
 - Split, disc-and-drum systems
 - Drum braking systems
 - Single- and dual-master-cylinder systems
 - Power-assist braking systems
 - Emergency and parking systems
 - E. Mechanical braking systems (e.g., parking brakes)
 - Internal, expanding-shoe type
 - External, drive shaft clamp-type
 - F. Trailer braking systems
 - Electric braking systems
 - Surge brake systems
3. Knowledge of component functions and interactions (8%)
 - A. Components common to all systems
 - Tires
 - Wheels
 - Drums or discs
 - Linings for drums or discs
 - Steering and suspensions (front and rear)
 - B. Basic air-braking systems for tractors or trucks
 - Air compressor
 - Air governor
 - Holding tanks
 - Brake chambers
 - Control valves
 - Mechanical actuators
 - Gauges
 - Warning systems
 - Hoses and tubing
 - Linings
 - C. Components for ABS-equipped vehicles
 - Computer
 - Sensors
 - Actuators
 - D. Air-braking systems for trailers
 - Holding tanks
 - Control valves
 - Gladhands
 - Mechanical actuators for linings
 - Hoses and tubing
 - E. Basic hydraulic systems
 - Master cylinder

- Proportioning valve
- Calipers
- Wheel cylinders
- Hydraulic fluid
- Flexible brake lines and rigid tubing
- F. Power-assisted hydraulic systems
 - Vacuum-assisted system
 - Hydraulically-assisted system
 - Air-assisted system
- G. Mechanical systems
 - Emergency-brake handles
 - Self-adjusters for rear brakes
 - Brake cable
 - Drive-train clamp (light trucks)
 - Calipers or secondary-shoe systems
- H. Electrical systems (small RVs, light trailers)
 - Magnet
 - Rheostat
 - Wiring

4. Knowledge of tools and their uses (6%)

- Tread-depth gauge
- Brake rotor micrometer
- Drum micrometer
- Vacuum gauge
- Hydraulic-pressure gauge
- Dial indicator for measuring run-out
- Lab Scope
- Electronic scanner (ABS systems)
- Lining thickness gauge
- Pressure bleeder
- Suitable hand tools: micrometers, etc.
- Air-pressure/vacuum gauge and drum gauge
- Digital Volt Ohmmeter (DVOM), Digital Volt Multi-meter (DVMM)
- Specialized Tools: brake spring pliers, brake spoon, spring wrench, etc.

5. Knowledge of diagnostic procedures and tests (14%)

- A. All vehicles
 - Significance of driver's complaint
 - Road test (normal and panic stop) after inspection
 - Check for worn or damaged brake system components
 - Disc run-out / drum diameter and warpage check each for wheel
 - Steering and suspension integrity
 - Normal and panic-stop braking checks
- B. Hydraulic braking systems
 - Actuator-rod free play
 - Brake-pedal height and travel
 - Brake-fluid type, level and condition
 - Open bleeder before collapsing caliper pistons
 - Uniformity of brake-chamber pressures
 - Examine hydraulic system for leaks and blockages
 - Check integrity of hydraulic system: lines, calipers, wheel cylinders, master cylinder
- C. Air braking systems
 - Air production and pressure
 - Appropriate air distribution to components
 - Worn or damaged components
 - Angle between each slack adjuster and its actuator rod during full application and adjustment
 - Uniformity of brake-chamber pressures and sizes
- D. Electrical systems
 - Check voltage if applicable (electric trailer brakes)
 - Check electronic braking system for codes
 - Use DVOM and lab scope to diagnose electronic problems: sensors, solenoids, computers, connections
- E. Mechanical systems
 - Worn or damaged components (only; see "All vehicles," above)
- F. Warning indication system
 - Air (MIL) - ABS (MIL) - Warning Buzzer

6. Ability to use manuals and software for malfunction diagnoses and repairs (10%)

- A. Vehicle-manufacturer's manuals and software
- B. After-market manuals (Mitchell, etc.)
- C. Braking-system manufacturer's manuals
- D. Technical Service Bulletins from manufacturers
- E. Schematics with troubleshooting and corrective advice
- F. Computer diagnostics
- G. CD-based and DVD-based references

7. Knowledge of inspection procedures (10%)

- A. Common to all vehicles
 - Obtain customer authorization on work order
 - Give customer copy of estimate
 - Road test vehicle
 - Inspect emergency brake
 - Inspect emergency brake light and brake warning light for proper operation
 - Re-assemble with proper torque values
 - Road test and panic stop test
 - Fill out certificate and give to customer
 - Remove wheels, inspect and measure drums and rotors for thickness and run-out
- B. All "C" Vehicles
 - Inspect shoes and pads for thickness, cracks, fluid contamination (oil, grease, etc.)
 - Inspect backing plates and return springs (wear, missing components, damage)
 - Inspect wheel cylinders for leakage
 - Inspect steel and rubber brake lines for leakage or damage
 - Inspect master cylinder for fluid level and leakage
- C. All "B" Vehicles
 - Inspect actuator rod for free play
 - Inspect backing plates and return springs (wear, missing components, damage)
 - Inspect air compressor and air holding tanks for leakage
 - Inspect air / hydraulic lines for leakage or damage
 - Inspect master cylinder for fluid level and leakage

8. Knowledge of repair procedures (14%)

- A. All systems
 - Recognizing and replacing worn parts
 - Performing necessary adjustments
 - Cleaning and lubricating moving parts: disc-brake parts, backing plates, etc.
 - Performing road test
 - Checking steering and suspension (air, leaf or combination)
- B. Air-braking systems
 - Repairing or replacing worn or malfunctioning components: compressor, hoses, tubing, filters
 - Replacing air chamber
- C. Hydraulic braking systems
 - Flushing hydraulic fluid if required - Replacing hydraulic components if required
 - Bleeding hydraulic system
- D. Electrical / electronic systems
 - Replace wiring, sensors, solenoids, computers

9. Knowledge of appropriate safety measures (8%)

- A. Personal safety
 - Wearing safety glasses or goggles, ear protection
 - Using jack stands instead of jacks alone, chock wheels
 - Avoiding the use of compressed air to clean parts, tools, clothing
 - Using appropriate cleanser on soiled or greasy parts
 - Bleeding off pressure in pressurized systems before removing components
 - Caging the spring before removing a parking-brake chamber from an air braking system
 - Properly disposing of used fluids
 - Properly controlling brake dust and asbestos particles
- B. Customer safety
 - Installing a pressure-protection valve, to avoid loss of air-braking pressure through damage to an auxiliary system, e.g., a suspension air bag
 - Checking chassis and suspension, to keep them from causing uneven braking
 - Warning customers to avoid panic stops during the break-in period for new or repaired braking systems
 - Recognizing the need to repair an entire axle system, even though only one end shows heavy wear
 - Avoiding installation of used, as opposed to new or reconditioned parts
 - Using correct parts, e.g., correct cotter pins for axle nuts

- Using correct torque and torque sequences on wheel nuts
- Verifying that tire pressures, treads and tire sizes are adequate to keep a vehicle from pulling to one side when braked
- Using brake fluid that is appropriate for the vehicle being serviced
- Road testing brake repairs to verify repair success
- Keep customers out of shop area

10. Knowledge of laws and regulations (7%)

- A. Leak-down tests for particular vehicles and combinations of vehicles, with and without brake application
- B. Maximum allowable run-out on drums or rotors
- C. Required pad thickness for disc brakes and shoe thickness for drum brakes
- D. When warning indicators must turn on or turn off
- E. When an air compressor must turn on or turn off
- F. Lawful time limits, psi/min and rpm for air-pressure build-up
- G. Maximum allowable rod travel on brake pods (chambers)
- H. Required spring brakes on at least one axle of late-model tractors, trailers and trucks
- I. Positive sealing of grease and hydraulic fluid
- J. Required absence of damage (trauma and/or wear) to brake discs and pads, brake drums and shoes
- K. Maximum allowable stopping distances for given speeds, vehicle weights, road surfaces
- L. Maximum allowable angle between a slack adjuster and an actuator rod; need for identical angles at each end of axle
- M. Requirement that emergency brake hold vehicle on any road grade free of snow, ice, or loose material
- N. Requirement that dashboard air-pressure gauges be accurate within 10%
- O. Requirement that only a licensed brake adjuster complete a brake-inspection certificate, and that the adjuster perform the inspection personally
- P. Criteria that must be met before a vehicle can be lawfully certified
- Q. Criteria that must be met before an enforcement document can be lawfully cleared
- R. Consumer Protection Laws
- S. Requirement that the air brake release after an emergency stop.

**JOB-KNOWLEDGE DOMAINS FOR LICENSED BRAKE ADJUSTERS:
CLASS "B" LICENSE**

1. Knowledge of nomenclature (6% of the test)
 - A. Names of primary braking-system components
 - B. Names of auxiliary-system components
 - C. Names of equipment and tools needed for inspection, diagnosis and repair
 - D. Names of procedures needed for inspection, diagnosis and repair
2. Knowledge of braking systems and auxiliary systems and the relative locations of their components (16%)
 - A. Basic air-braking systems for tractors, trailers and trucks
 - Primary system
 - Emergency and parking system
 - B. Automated, computer-assisted, electronically modulated air-braking ("ABS," "anti-lock") systems for tractors, trailers and trucks
 - C. Hydraulic braking systems & electrical hydraulic pump
 - Assisted and unassisted disc systems
 - Assisted and unassisted drum systems
 - Split, disc-and-drum systems
 - Single- and dual-master-cylinder systems
 - Emergency-and-parking systems
 - D. Mechanical braking systems (e.g., parking brakes)
 - Internal, expanding-shoe type
 - External, drive shaft clamp-type
 - E. Electric/Hydraulic pump/hydro-boost systems
3. Knowledge of component functions and interactions (10%)
 - A. All systems
 - Tires
 - Wheels
 - Drums or discs
 - Linings for drums or discs/ lining selection & application
 - B. Basic air-braking systems for tractors or trucks
 - Air compressor
 - Air governor
 - Holding tanks
 - Brake chambers
 - Control valves
 - Mechanical actuators
 - Gauges
 - Warning systems
 - Hoses and tubing
 - Linings
 - C. Components for ABS-equipped vehicles
 - Computer - Sensors
 - Actuators
 - D. Air-braking systems for trailers
 - Holding tanks
 - Control valves
 - Gladhands
 - Mechanical actuators
 - Hoses and tubing
 - E. Basic hydraulic systems
 - Master cylinder
 - Proportioning valve
 - Wheel cylinders
 - Calipers
 - Hydraulic fluid
 - Flexible brake lines and rigid tubing
 - F. Power-assisted hydraulic systems
 - Vacuum-assisted system
 - Hydraulically/electrically assisted system
 - Air-assisted system
 - G. Mechanical systems
 - Emergency-brake handle
 - Self-adjusters for rear brakes

- Brake cable
 - Calipers or secondary-shoe systems
 - Drive-train clamp (light trucks)
- H. Steering and suspension (front and rear)

4. Knowledge of tools and their uses (6%)

- Tread-depth gauge - Brake rotor micrometer
- Drum micrometer - DVOM, DVMM
- Vacuum gauge - Hydraulic-pressure gauge
- Dial indicator for measuring run-out - Lab Scope
- Electronic scanner (ABS systems) - Lining thickness gauge
- Pressure bleeder - Suitable hand tools: micrometers, etc.
- Air-pressure/vacuum gauge and drum gauge
- Specialized Tools: brake spring pliers, brake spoon, spring wrench, etc.

5. Knowledge of diagnostic procedures and tests (16%)

- A. All vehicles
- Significance of driver's complaint
 - Wheel-bearing checks
 - Backing-plate checks
 - Normal and panic-stop braking checks
 - Checks for worn or damaged braking-system components
 - Disc run-out/drum diameter and warpage check for each wheel
- B. Air braking systems
- Air production and pressure
 - Appropriate air distribution to components
 - Angle between each slack adjuster and its actuator rod during full application and adjustment
 - Uniformity of brake-chamber pressures and size
- C. Hydraulic braking systems
- Actuator-rod free play
 - Brake-pedal height and travel
 - Brake-fluid type, level and condition
 - Open bleeder before collapsing caliper pistons
 - Visual inspection and measurement of other components
- D. Mechanical systems
- Worn or damaged components
- E. Warning indication system
- Air (MIL) - ABS (MIL) - Warning Buzzer

6. Ability to use manuals and software for malfunction diagnoses and repairs (8%)

- A. Vehicle-manufacturer's manuals and software
- B. After-market manuals (Mitchell, etc.)
- C. Braking-system manufacturer's manuals
- D. Technical Service Bulletins from manufacturers
- E. Schematics with troubleshooting and corrective advice
- F. Computer diagnostics
- G. CD-based and DVD-based references

7. Knowledge of inspection procedures (10%)

- A. All Vehicles
- Obtain customer authorization on work order
 - Give customer copy of estimate
 - Remove wheels, inspect and measure drums and rotors for thickness and run-out
 - Inspect actuator rod for free play
 - Inspect backing plates and return springs (wear, missing components, damage)
 - Inspect air compressor and air holding tanks for leakage
 - Inspect air/hydraulic lines for leakage or damage
 - Inspect master cylinder for fluid level and leakage
 - Inspect emergency brake
 - Inspect emergency brake light and brake warning light for proper operation
 - Re-assemble with proper torque values
 - Road test and panic stop test
 - Fill out certificate and give to customer

8. Knowledge of repair procedures (12%)

- A. All systems
- Recognizing and replacing worn parts: return springs, rollers, linings, seals, bearings, etc.



- Pedal-height adjustments
 - Checking steering and suspension components (air, leaf or combination)
 - Checks of braking action
 - Corrective measures for worn bearings
 - Corrective measures for damaged backing plates
 - Clean and lubricate moving parts
- B. Air-braking systems
- Repairing or replacing worn or malfunctioning components, e.g., compressor, hoses, tubing, filters
 - Replace air chamber
- C. Hydraulic braking systems
- Flush hydraulic fluid when required
 - Replace hydraulic components if required
 - Bleed hydraulic system
- D. Electrical systems
- Replace wiring, sensors, solenoids, computers

9. Knowledge of appropriate safety measures (8%)

- A. Personal safety
- Wearing safety glasses or goggles, ear protection
 - Using jack stands instead of jacks alone, chock wheels
 - Avoiding the use of compressed air to clean parts, tools, clothing
 - Using appropriate cleanser on soiled or greasy parts
 - Bleeding off pressure in pressurized systems before removing components
 - Caging the spring before removing a parking-brake chamber from an air braking system
 - Properly disposing of used fluids
 - Properly controlling brake dust and asbestos particles
- B. Customer safety
- Installing a pressure-protection valve, to avoid loss of air-braking pressure through damage to an auxiliary system, e.g., a suspension air bag
 - Checking chassis and suspension, to keep them from causing uneven braking
 - Warning customers to avoid panic stops during the break-in period for new or repaired braking systems
 - Recognizing the need to repair an entire axle system, even though only one end shows heavy wear
 - Avoiding installation of used, as opposed to new or reconditioned parts
 - Using correct parts, e.g., correct cotter pins for axle nuts
 - Using correct torque and torque sequences on wheel nuts
 - Verifying that tire pressures, treads and tire sizes are adequate to keep a vehicle from pulling to one side when braked
 - Using brake fluid that is appropriate for the vehicle being serviced
 - Road testing brake repairs to verify repair success
 - Keep customers out of shop area

10. Knowledge of laws and regulations (8%)

- A. Leak-down tests for particular vehicles and combinations of vehicles, with and without brake application
- B. Maximum allowable run-out on drums or rotors
- C. Required pad thickness for disc brakes and shoe thickness for drum brakes
- D. When warning indicators must turn on or turn off and M.I.L.
- E. When an air compressor must turn on or turn off
- F. Lawful time limits, psi/min and rpm for air-pressure build-up
- G. Maximum allowable rod travel on brake pods (chambers)
- H. Required spring brakes on at least one axle of late-model tractors, trailers and trucks
- I. Positive sealing of grease and hydraulic fluid
- J. Required absence of damage (trauma and/or wear) to brake discs and pads, brake drums and shoes
- K. Maximum allowable stopping distances for given speeds, vehicle weights, road surfaces
- L. Maximum allowable angle between a slack adjuster and an actuator rod; need for identical angles at each end of axle
- M. Requirement that emergency brake hold vehicle on any road grade free of snow, ice, or loose material
- N. Requirement that dashboard air-pressure gauges be accurate within 10%
- O. Requirement that only a licensed brake adjuster complete a brake-inspection certificate, and that the adjuster perform the inspection personally
- P. Criteria that must be met before a vehicle can lawfully be certified
- Q. Criteria that must be met before an enforcement document can lawfully be cleared
- R. Consumer protection laws

**JOB-KNOWLEDGE DOMAINS FOR LICENSED BRAKE ADJUSTERS:
CLASS "C" LICENSE**

1. Knowledge of nomenclature (4% of the test)
 - A. Names of primary braking-system components
 - B. Names of auxiliary-system components
 - C. Names of equipment and tools needed for inspection, diagnosis and repair
 - D. Names of procedures needed for inspection, diagnosis and repair

2. Knowledge of braking systems and auxiliary systems and the relative locations of their components (15%)
 - A. Computer-assisted / electronically modulated, ABS systems
 - B. Hydraulic braking systems
 - Disc braking systems
 - Split, disc-and-drum systems
 - Drum braking systems
 - Single- and dual-master cylinder systems
 - Power-assist braking systems
 - Emergency and parking systems
 - C. Mechanical braking systems (e.g., parking brakes)
 - Internal, expanding-shoe type
 - External, clamp-type, driveshaft brakes
 - D. Trailer braking systems
 - Electric braking systems
 - Surge brake systems

3. Knowledge of component functions and interactions (13%)
 - A. Components common to all systems
 - Tires
 - Wheels
 - Drums or discs
 - Linings for drums or discs
 - Steering and suspensions (front and rear)
 - Warning lights
 - B. Components for ABS-equipped vehicles
 - Computer
 - Sensors
 - Actuators
 - Accumulators
 - C. Basic hydraulic systems
 - Master cylinder
 - Proportioning valve
 - Wheel cylinders
 - Calipers
 - Flexible brake lines and rigid tubing
 - Hydraulic fluid
 - Dump Valve
 - D. Power-assisted hydraulic systems
 - Vacuum-assisted system
 - Hydraulically-assisted system
 - E. Mechanical systems
 - Emergency-brake handle
 - Self-adjusters
 - Brake cable
 - Calipers or secondary-shoe systems
 - Drive-train clamp (light trucks)
 - F. Trailer systems (small RVs, light trailers)
 - Magnet
 - Rheostat
 - Wiring
 - Surge systems

4. Knowledge of tools and their uses (7%)

- Tread-depth gauge
- Brake rotor micrometer
- Drum diameter gauge
- Vacuum gauge
- Hydraulic-pressure gauge
- Dial indicator for measuring run-out
- Lab Scope
- Electronic scanner (ABS systems)
- Lining thickness gauge
- Pressure bleeder
- Suitable hand tools: micrometers, etc.
- Digital Volt Ohmmeter (DVOM), Digital Volt Multi-meter (DVMM)
- Specialized Tools: brake spring pliers, brake spoon, spring wrench, etc.

5. Knowledge of diagnostic procedures and tests (12%)

A. All vehicles

- Significance of driver's complaint
- Road test before repair (normal and panic stop)
- Check for worn or damaged brake system components
- Disc run-out/drum diameter and warpage check each for wheel
- Steering and suspension integrity

B. Hydraulic braking systems

- Brake-fluid type, level and condition - Brake-pedal height and travel
- Brake pedal free play - Examine hydraulic system for leaks and blockages
- Check integrity of hydraulic system: lines, calipers, wheel cylinders

C. Electrical systems

- Check voltage if applicable (electric trailer brakes)
- Check electronic braking system for codes
- Use DVOM and lab scope to diagnose electronic problems: sensors, solenoids, computers, connections

6. Ability to use manuals and software for malfunction diagnoses and repairs (10%)

- Vehicle-manufacturer's manuals
- After-market manuals (Mitchell, Motor, etc.)
- Braking-system manufacturer's manuals
- Technical Service Bulletins from manufacturers
- Schematics with troubleshooting and corrective advice
- Computer diagnostics
- CD-based, DVD-based and on-line references
- Specification Charts

7. Knowledge of inspection procedures (11%)

A. All Cars

- Obtain customer authorization on work order
- Give customer copy of estimate
- Road test vehicle
- Remove wheels, inspect and measure drums and rotors for thickness and run-out
- Inspect shoes and pads for thickness, cracks, fluid contamination (oil, grease, etc.)
- Inspect backing plates and return springs (wear, missing components, damage)
- Inspect wheel cylinders for leakage
- Inspect steel and rubber brake lines for leakage or damage
- Inspect master cylinder for fluid level and leakage (booster, hydro booster, supply vacuum)
- Inspect emergency brake
- Inspect emergency brake light and brake warning light for proper operation
- Re-assemble with proper torque values
- Road test and panic stop test
- Fill out certificate and give to customer

8. Knowledge of repair procedures (14%)

A. All systems

- Recognizing and replacing worn or damaged parts
- Performing necessary adjustments
- Cleaning and lubricating moving parts: disc-brake parts, backing plates, etc.
- Performing road test

B. Hydraulic braking systems

- Flushing hydraulic fluid if required

- Replacing hydraulic components if required
- Bleeding hydraulic system
- C. Electrical/electronic systems
 - Replace wiring, sensors, solenoids, computers

9. Knowledge of appropriate safety measures (7%)

- A. Personal safety
 - Wearing safety glasses or goggles
 - Using jack stands instead of jacks alone
 - Avoiding the use of compressed air to clean parts, tools, clothing
 - Using an appropriate cleanser on soiled or greasy parts
 - Bleeding off pressure in pressurized systems before removing components
 - Avoiding inflating the air bags in late-model cars, e.g., by
 - Detaching a positive battery cable to clear a computer's memory;
 - Dropping a car too hard with a jack;
 - Inadvertently hitting the air-bag sensor
 - Properly disposing of used fluids
 - Properly controlling brake dust and asbestos particles
- B. Customer safety
 - Checking chassis and suspension, to keep them from causing uneven braking
 - Recognizing the need to repair an entire axle system, even though only one end shows heavy wear
 - Using correct parts, e.g., correct cotter pins for axle nuts
 - Using correct torques and torqueing sequences on wheel nuts
 - Verifying that tire pressures and treads are adequate to keep a vehicle from pulling to one side when braked
 - Using brake fluid that is appropriate for the vehicle being serviced
 - Road testing brake repairs to verify repair success

10. Knowledge of laws and regulations (7%)

- A. Maximum allowable run-out on drums or rotors
- B. Required pad thickness for disc brakes, shoe thickness for drum brakes, caliper and cylinder clearance
- C. When warning or malfunction indicators must turn on or turn off
- D. Positive sealing of grease and hydraulic fluid
- E. Required absence of damage to brake discs and pads, brake drums and shoes
- F. Maximum allowable stopping distances for given speeds, vehicle weights, road surfaces
- G. Requirement that emergency brake hold vehicle on any road grade free of snow, ice, or loose material
- H. Requirement that only a licensed brake adjuster complete a brake-inspection certificate, and that the adjuster perform the inspection personally
- I. Criteria that must be met before a vehicle can be lawfully certified
- J. Criteria that must be met before an enforcement document can be lawfully cleared
- K. Consumer Protection Laws

JOB-KNOWLEDGE DOMAINS FOR LICENSED LAMP ADJUSTERS

1. Knowledge of nomenclature (4% of the test)

- A. Names of lamp-system components, including primary and auxiliary circuits and circuit components for automated and manual systems
- B. Names of equipment and tools for inspection, diagnoses of malfunctions and repairs
- C. Names of procedures for inspection, diagnoses of malfunctions and repair

2. Knowledge of lamp systems (6%)

- A. Two vs. four or more headlight lamps
- B. High vs. low beams
- C. Two vs. four lamps for high beams
- D. Halogen vs. non-halogen lamps (standard and HID)
- E. Flashers, turn signals, back-up and brake lamps
- F. Auxiliary Lighting: fog lamps, after-market lights (add-on center brake lamps), etc.
- G. Tail lights and side-marker lights
- H. Dash & instrument panel indicators lamps
- I. Automated vs. Manual

3. Knowledge of component functions and interactions (9%)

- A. Functions of individual components
- B. Turn-signal/brake-lamp circuits
- C. Lights that turn on and off together
- D. Separate vs. linked low-beam and high-beam circuits
- E. Daytime running lights
- F. Cornering Lamps

4. Knowledge of inspection procedures (14%)

- A. Preparing to inspect
 - Settling the suspension to a static setting
 - Checking the suspension for malfunctions or damage
 - Checking and equalizing tire inflation
 - Using a level work area; verifying the slope of a work area with a transit; correcting for slope
 - Using parallel rails to align motorcycle wheels for headlamp aiming
- B. Inspecting
 - Checking function of headlights, tail lights, brake lights, turn signals, fog and driving lights, back-up and license-plate lights, indicators
 - Checking lamps for correct height and placement
 - Checking lamps for adequate brightness
 - Checking lamps for correct color
 - Checking lenses for damage that prevents certification per Vehicle Code
 - Check lamp mounting system for damage
 - Check off-road and auxiliary lamps for proper street use

5. Knowledge of tools needed for inspections, malfunction diagnoses and repairs (5%)

- Aimers: mechanical, optical, screen, calibration
- Test light
- Digital Volt Ohmmeter (DVOM), Digital Volt Multi-meter (DVMM)
- Ammeter
- Battery load tester
- Hand tools e.g.: steering wheel puller, lock-ring remover

6. Knowledge of diagnostic procedures and tests (18%)

- A. Voltage drop test
- B. Circuit identification using a schematic
- C. Ground testing
- D. Circuit/resistance tests
- E. Test circuit integrity (wiring, connectors, overall condition)
- F. Test for open/short circuits: fuses, switches, relays, sensors
- G. Test power/charging system
- H. Test procedures for proper operation of air bag systems

7. Ability to use manuals and software for inspection, diagnosis and repair (6%)

- A. BAR lamp-adjusting handbook
- B. Appropriate aimer manual
- C. Commercial manuals and software, e.g., Mitchell, Motors, ALLDATA
- D. Component-locator & wiring-diagram manuals for particular vehicles

8. Knowledge of repair procedures and adjustments (15%)

- A. Knowledge of correct replacement procedures: identifying correct bulb, preventing damage to adjusting hardware, etc.
- B. Avoiding contaminating specific types of bulbs with skin oils
- C. Installing new wiring as needed
- D. Repairing or replacing headlamp adjusters; making the last turn of an adjuster screw a tightening turn
- E. Aiming traditional and aerodynamic headlights, relative to the normal loads and uses of the vehicle, e.g., relative to motorcycle with rider
- F. Repairing or replacing switches, e.g., headlight switch, dimmer switch, turn-signal switch, back-up-light and brake-light switches
- G. Proper disassembly of steering column and air bag when accessing turn-signal switch
- H. Replacing other faulty circuit components, e.g., fuses
- I. Checking a headlight's aim after its bulb is replaced and adjusting its aim as needed

9. Knowledge of safety measures (7%)

- A. Proper procedures when working around supplemental restraint systems
- B. Proper placement/operation of vehicle during inspection, repair, adjustment
- C. Proper lamp-handling procedures
- D. Use of correct fusible links
- E. Safe operation of vacuum or electric head light doors
- F. Exercise caution with non-fused circuits

10. Knowledge of laws and regulations (16%)

- A. Colors of lamps, lenses and reflectors, relative to location
- B. Quantities, locations, intensity and mountings of lamps, including clearance lights
- C. Lighting-system functionality required for certification
- D. Aim of headlamps and optional fog and driving lamps
- E. When fog lamps and driving lamps may operate
- F. How to find and interpret vehicle code requirements relative to year of manufacture: determining exceptions to requirements, legality of non-standard lighting systems
- G. When a certificate may be lawfully issued
- H. When an enforcement document may be lawfully cleared
- I. Legal obligations to consumers
- J. Properly filling out certificate

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, or schedule over the telephone at (877) 392-6422.

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:

Memorial Day	Closed May 26, 2008
Independence Day	Closed July 4, 2008
Labor Day	Closed September 1, 2008
Thanksgiving	Closed November 27-28, 2008
Christmas	Closed December 25, 2008

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. 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

PSI has two scheduling methods available if you wish to schedule by telephone. First, call PSI at (877) 392-6422, 24 hours a day and schedule using the Automated Registration System. Second, if you wish to contact a live operator, use this same telephone number to contact PSI registrars Monday through Friday between 4:30 am and 7:00 pm and Saturday, between 8:00 am and 2:00 pm, Pacific Time, to schedule your appointment for the test.

CANCELING AN EXAMINATION APPOINTMENT

You may cancel and reschedule an examination appointment without losing your eligibility *if your cancellation notice is received 2 days prior to the scheduled examination date*. For example, for a Monday appointment, the cancellation notice would need to be received on the previous Saturday. You may call PSI at (877) 392-6422. Please note that you may also use the automated system, using a touch-tone phone, 24 hours a day in order to cancel and reschedule your appointment.

Note: A voice mail message is not an acceptable form of cancellation. Please use the internet, automated telephone system, or call PSI and speak 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

2301 W. LINCOLN AVE, SUITE 252
ANAHEIM, CA 92801

(714) 254-1453

TAKE I-5 SOUTH TO SANTA ANA. EXIT ON BROOKHURST ST. AND MAKE A RIGHT GOING SOUTH. TURN RIGHT (WEST) ON LINCOLN AVE. RIGHT AFTER MONTEREY LN. GO HALF A BLOCK AND ENTER ON THE FIRST OR SECOND DRIVEWAY ON 2301 LINCOLN. SUITE 252 IS LOCATED ON THE SECOND FLOOR.

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.

BAKERSFIELD

5405 STOCKDALE HIGHWAY, SUITE 206

BAKERSFIELD, CA 93309

(661) 398-9354

FROM I-5 S, TAKE THE STOCKDALE HWY EXIT (253). TURN LEFT ONTO STOCKDALE HWY.

FROM I-5 N TOWARD BAKERSFIELD, KEEP LEFT TO TAKE CA-99 N VIA EXIT (221) TOWARD BAKERSFIELD/FRESNO. TAKE THE CA-58 E EXIT TOWARD TEHACHAPI/MOJAVE. TAKE THE EXIT ON THE LEFT TOWARD CAL STATE UNIV/STOCKDALE HWY/BRUNDAGE LANE. TURN LEFT ONTO WIBLE RD. TURN SLIGHT LEFT ONTO STOCKDALE HWY.

CARSON

17420 S. AVALON BLVD, SUITE 205

CARSON, CA 90746

(310) 217-1066

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

9420 TELSTAR, SUITE 138

EL MONTE, CA 91731

(626) 442-4112

FROM I-10 E TOWARD SAN BERNARDINO, MERGE ONTO ROSEMEAD/CA 19 S TOWARD LONG BEACH. TURN LEFT ONTO E. TELSTAR AVE.

FROM I-10 W TOWARD LOS ANGELES, TAKE THE ROSEMEAD BLVD/CA-19 EXIT TOWARD PASADENA. TAKE THE ROSEMEAD BLVD RAMP TOWARD LONG BEACH. MERGE ONTO ROSEMEAD BLVD/CA-19 S. TAKE A LEFT ONTO E. TELSTAR AVE.

FRESNO

351 E. BARSTOW, SUITE 101

FRESNO, CA 93710

(559) 221-9006

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) 784-1114

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.

REDDING

2861 CHURN CREEK, UNIT C

REDDING, CA 96002

(530) 221-0945

ON 299 FROM EAST TAKE RAMP ONTO I-5 S. TAKE EXIT #677/REDDINGCYPRESS AVE. TURN LEFT ON E CYPRESS AVE. TURN RIGHT ON CHURN CREEK RD.

ON 299 FROM WEST TURN RIGHT ON MARKET ST (CA-273 S). TURN LEFT ON TEHEMA ST (CA-299 E). CONTINUE TO FOLLOW CA-299 E. TAKE EXIT #2A/RED BLUFF/SACRAMENTO ONTO I-5 S. TAKE EXIT #677/REDDING/CYPRESS AVE. TURN LEFT ON E CYPRESS AVE. TURN RIGHT ON CHURN CREEK RD.

ON I-5 FROM NORTH TAKE EXIT #677/ REDDING/CYPRESS AVE. TURN LEFT ON E CYPRESS AVE. TURN RIGHT ON CHURN CREEK RD
ON I-5 FROM SOUTH TAKE EXIT #677/ REDDING/CYPRESS AVE. TURN RIGHT ON E CYPRESS AVE. TURN RIGHT ON CHURN CREEK RD

ON HWY 44 FROM EAST TAKE RAMP TOWARD VICTOR AVE. TURN LEFT ON VICTOR AVE. TURN RIGHT ON E CYPRESS AVE. TURN LEFT ON CHURN CREEK RD.

FROM ALL DIRECTIONS, FRONT BUILDING IS 2881 CHURN CREEK, DRIVEWAY INTO COMPLEX IS DIRECTLY ACROSS FROM MAJOR MUFFLER ON EAST SIDE OF CHURN CREEK. 2861 IS FIRST BUILDING ON THE LEFT.

RIVERSIDE

RIVERSIDE TECHNOLOGY BUSINESS PARK

1660 CHICAGO AVE, SUITE M-15

RIVERSIDE, CA 92507

(951) 680-9720

FROM I-215 N TOWARD RIVERSIDE/SAN BERNARDINO, TAKE THE COLUMBIA AVENUE EXIT. TURN RIGHT ONTO E LA CADENA DR. TURN LEFT ONTO COLUMBIA AVE. TURN RIGHT ONTO CHICAGO AVE. TURN LEFT ONTO MARLBOROUGH AVE AND END AT 1660 CHICAGO AVENUE.

FROM I-215 S TOWARD SAN BERNARDINO/RIVERSIDE, TAKE THE EXIT TOWARD COLUMBIA AVENUE. TURN SLIGHT RIGHT ONTO INTERCHANGE DR. TURN LEFT ONTO PRIMER ST. TURN LEFT ONTO COLUMBIA AVE. TURN RIGHT ONTO CHICAGO AVE. TURN LEFT ONTO MARLBOROUGH AVE AND END AT 1660 CHICAGO AVENUE.

SACRAMENTO

9719 LINCOLN VILLAGE DR.

BUILDING 100, SUITE 100

SACRAMENTO, CA 95827

(916) 363-6455

FROM SAN FRANCISCO/VALLEJO ON I-80 E, TAKE US-50 E TOWARD SACRAMENTO/SOUTH LAKE TAHOE. TAKE BRADSHAW ROAD, EXIT 13, TURN RIGHT ONTO BRADSHAW ROAD. TURN IMMEDIATE LEFT ONTO LINCOLN VILLAGE DR.

SAN DIEGO

5440 MOREHOUSE DRIVE, SUITE 3300

SAN DIEGO, CA 92121

(858) 658-0786

FROM I-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 I-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

SANTA ROSA

160 WIKIUP DRIVE, SUITE 105

SANTA ROSA, CA 95403



(707) 544-6723

FROM US-101 N, MERGE ONTO FULTON RD. TURN RIGHT ONTO AIRPORT BLVD. TURN RIGHT ONTO OLD REDWOOD HWY. TURN LEFT ONTO WIKIUP DR.

FROM US-101 S, TAKE THE AIRPORT BLVD EXIT. TAKE THE RAMP TOWARD MARK WEST AREA/LARKFIELD WIKIUP. TURN LEFT ONTO AIRPORT BLVD. TURN RIGHT ONTO OLD REDWOOD HWY. TURN LEFT ONTO WIKIUP DR.

SANTA CLARA

2936 SCOTT BLVD

SANTA CLARA, CA 95054

(408) 844-0004

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.

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 one of the following valid forms of government-issued identification before you may examine:

- An unexpired California Driver License with a photo; or
- an unexpired California Department of Motor Vehicles Identification Card with a photo; or
- a current U.S. military-issued (active duty) identification 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 and re-entry into the testing room after an approved absence. If a candidate passes the examination, the thumbprint record will be destroyed. If a candidate abandons his or her application for licensure, as determined by the appropriate regulatory authority, the thumbprint will also be destroyed. If a candidate is unsuccessful, the thumbprint record will be retained by PSI to ensure proper identification on any subsequent examination attempts. If the thumbprint doesn't match upon exit and re-entry, the candidate shall be disqualified from the examination, his or her test results invalidated and the appropriate regulatory entity will be notified of the occurrence. The taking of the thumbprint is an additional measure to enhance examination security. The Department's Office of Examination Resources shall ensure that the appropriate safeguards for the storage and destruction of the thumbprint records are in place.
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. These items must be worn upon check-in, while you wait to enter the testing room and during your initial seating for the examination.

3. There are timing mechanisms available at the test site and on the computer console to help candidates keep track of time during the test administration time. Watches or other timekeeping devices are not permitted in the examination rooms.
4. Only one candidate will be allowed to take a restroom break at a time. Candidates are required to sign out when you leave the room and when you return. 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, which will take appropriate action.
5. The following items are not permitted in the examination rooms:
 - Cellular telephones, personal digital assistants (PDAs), recording devices, pagers, purses, notebooks, notebook computers, reference or readings material, music players, radios, electronic games, calculators or briefcases.
 - Personal items including watches, backpacks, wallets, pens, pencils, or other writing devices, food, drinks (unless medically required) and good-luck items.
 - Hats, baseball caps, or visors (with the exception of religious apparel), coats, shawls, hooded clothing, heavy jackets or overcoats.
 - 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 shall return these items to their vehicle or other place of safekeeping. Neither PSI nor the Department of Consumer Affairs shall be responsible for the items. Any candidate possessing the prohibited items in the examination room shall have his or her test results invalidated, and PSI shall notify the appropriate regulatory entity of the occurrence.
6. Copying or communicating examination content is a violation of PSI security policy and existing law. Either one shall result in the disqualification or invalidation of examination results, the denial of your license, and may subject the candidate to criminal prosecution.

SPECIAL TESTING CONSIDERATIONS

AMERICANS WITH DISABILITIES ACT (ADA)

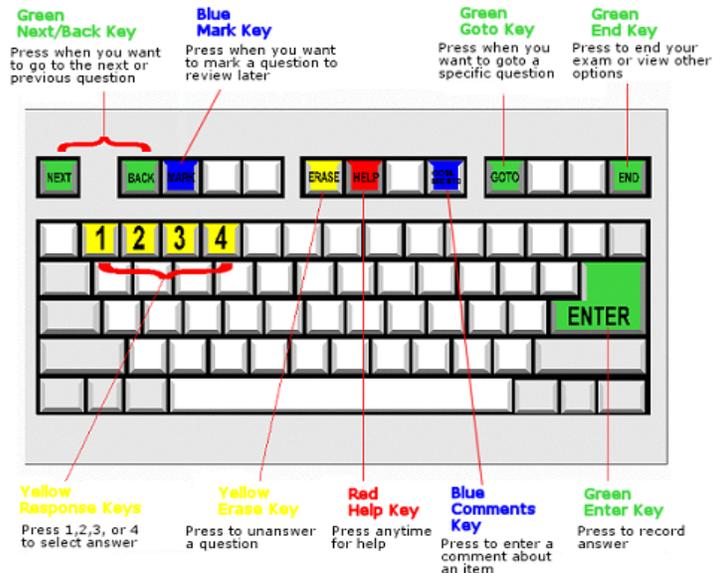
Candidates with a physical or mental impairment that substantially limits a major life activity may be eligible for accommodation in the testing process to assure you that the examination accurately reflects knowledge, skills or abilities. BAR and PSI are fully compliant with ADA guidelines and will provide reasonable accommodations. Scheduling services are also available via our Telecommunications Device for the Deaf (TDD) by calling 800-790-3926.

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

Taking the PSI examination by computer is simple. You do not need any computer experience or typing skills. You will use fewer keys than you use on a touch-tone telephone. All response keys are colored and have prominent characters. An illustration of the special keyboard is shown here.



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 to the computer and keyboard 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 as part of the tutorial so that you may practice using the keys, answering questions, and reviewing your answers.

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.

EXAMINATION QUESTION EXAMPLE

During the examination, you should press 1, 2, 3, or 4 to select your answer. You should then press "ENTER" to record your answer and move on to the next question. A sample question display is shown.

Question: 3 of 40 Answered: 2 Unanswered: 1 Marked: 0 View: All Time Left(Min): 359

3. What do the stars on the United States of America's flag represent?

(Choose from the following options)

1. Presidents

2. Colonies

3. States

4. Wars

<< Back Next >>

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 Bulletin 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	99*	66*
Brake Class A	2.5 Hours	122*	82*
Brake Class B	2.0 Hours	99*	68*
Brake Class C	2.0 Hours	98*	66*

* 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:

- For each multiple-choice question, you may select only one answer.
- 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.**
- Some questions will require you to use provided reference materials to find the correct answer.
- Suggestions for taking multiple-choice examinations:
 - Your first answer is often your best answer. Don't spend too much time on any one question.
 - If more than one answer seems to be correct, choose the answer that seems correct most often.

SAMPLE EXAMINATION QUESTIONS

Brake Adjuster Practice Items

- 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 bulletin 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 can write to PSI to request a duplicate of your score report. Please include your name, candidate identification number, and date of the test.

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
10240 Systems Parkway
Sacramento, CA 95827-3006

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.



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