

AUTO ELECTRICIAN, 3707

Summary of Duties : Diagnoses, tests, adjusts, and repairs automotive, truck and construction equipment, electrical and fuel supply parts, systems and accessories; and does related work.

Distinguishing Features : An Auto Electrician performs skilled work in the specialized auto electrical field. Much of the work is done from work orders without detailed working instructions. Occasionally, the work is checked upon completion by a supervisor or by an inspector. It is the responsibility of an Auto Electrician to decide upon the details of work execution and to turn out work as rapidly as possible without sacrificing the quality of the work.

Examples of duties : Cleans, tests, diagnoses, adjusts, repairs and overhauls and assembles distributors, generators, alternators, rectifiers, starters, magnetos, mechanical and solid state voltage regulators, electric and vacuum windshield wipers, air conditioning systems, carburetors, fuel pumps, and other fuel injection systems; electronic controls on auto and truck transmission and ignition systems, parts; traces open and short circuits; repairs and replaces defective ignition and lighting wires;

Tests coils, condensers, on-board computers, computer-controlled engine systems, emission control systems, gauges, instruments, electromechanical hydraulic systems, air-conditioning compressors and controls, heating systems, distributors, and other electrical parts; tests ignition circuits and sets timing; tunes engines; may make compression tests and cylinder leak-down tests, and road test automotive equipment for proper performance; may repair 110-volt generators and regulators, wheel balancers and small electric tool motors; may completely rewire fire apparatus and other vehicles; may repair 220-volt motors and heaters, rescue breathing apparatus, stationary and portable engines; may install wiring outlets; may install service, troubleshoot and repair portable and mobile generator units, and appurtenant equipment for use on transportation vehicles; may install, repair and test vehicle pollution control devices.

Installs, repairs, and replaces lights including emergency lights; adjusts headlights; repairs and replaces gas and oil gauges, ammeters, switches, and fuse blocks; installs, repairs, and replaces horns, sirens, and heaters; services storage batteries; uses testing devices to inspect alignment, beam deflection, and intensity of headlights; may make emergency automotive electrical repairs in the field; uses small lathes, drill presses, bench grinders, engine analyzers, compression and vacuum gauges, and other tools of

the trade; writes requisitions and draws materials and supplies from

the stockroom; and occasionally may be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications : A good knowledge of the standard practices, processes, materials, parts, tools, and equipment of the trade and of the assembly, adjustment, maintenance, and repair of automotive electrical, electronic and fuel systems and equipment; a good knowledge of the analysis and tuning of automotive engines; skill in the use of trade tools; the ability to perform journey-level work in the field of automotive electricity; the ability to follow oral and written instructions; the ability to write routine orders and reports; and the ability to comprehend and interpret electrical wiring diagrams and schematics.

Completion of a recognized three-year apprenticeship as an auto electrician; or attainment of journey-level rank as an auto electrician; or three years of full-time paid journey-level experience as an equipment mechanic performing auto electrical work; or five years of experience as a helper to a journey-level auto electrician is required.

License : A valid California driver's license and a good driving record are required. The following licenses may be required for some positions: Motor Vehicle Pollution Control Installer Adjuster and/or qualified Test and Repair Mechanic License; Motor Vehicle Lamp Installer Adjuster License; valid Class 1 or 2 California driver's license.

Physical Requirements : Strength to perform average lifting of less than 35 pounds and occasionally over 70 pounds; back and leg coordination such as stooping, kneeling, crouching and crawling involved in activities such as removing and replacing electrical equipment and rewiring electrical systems in cramped spaces; arm, hand and finger dexterity involved in activities such as reaching, handling, and feeling; and good eyesight.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the person's limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.