



AUTOMATIC FARE COLLECTION ELECTRONIC TECHNICIAN

JC: MA100
PG: MW-III
FLSA: Non-Exempt

PC: 301
BU: 01 (SEIU)
Created: August 1987
Revised: September 18, 2007

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under general supervision, troubleshoots, maintains and performs primary and secondary repair and modifications of electrical, electronic and mechanical automatic fare collection, equipment and devices; maintains records of work performed; performs related duties as assigned.

CLASS CHARACTERISTICS

This is the journey level classification performing skilled maintenance and both primary and secondary repair of electronic and electro-mechanical automatic fare collection equipment such as ticket vendors and dispensers, and change and add fare machines. Incumbents work independently according to accepted standards of the trade, supervisory direction, and District procedures and practices. Incumbents at this level are expected to select appropriate tools, materials and approach to the work. This class is distinguished from other electronic technician classes in that the duties relate specifically to the maintenance and repair of specialized fare collection and related equipment.

REPORTS TO

This position reports to the Automatic Fare Collection Foreworker.

EXAMPLES OF DUTIES - *Duties may include, but are not limited to, the following:*

1. Repairs, removes and replaces power supplies, relays, motors, switches and related electrical components.
2. Adjusts, removes and replaces logic boards, sensors, magnetic reading/encoding devices and related electronic components.
3. Adjusts, repairs, removes and replaces mechanical mechanisms and parts such as guides, rollers, bearings, gears, chains, belts.

4. Installs new assemblies, parts and components for equipment modifications, new wiring, pins, and connectors.
5. Troubleshoots, tests and diagnoses equipment using oscilloscopes, voltage, amperage and ohm meters, magnetic field testers, calipers and related devices.
6. Performs preventive maintenance of equipment, including cleaning, lubricating, checking and adjusting all parts and components.
7. Reads work requests and discusses work to be performed with foreworkers, supervisors, work request initiators and engineers.
8. Reads and interprets manuals, drawings, procedures, specifications and schematic diagrams.
9. Determines whether equipment can be repaired in the field, and removes and sends equipment to component repair shops, maintains records of work performed, time required, parts and materials used, component serial numbers and related data; prepares brief reports of repeated maintenance problems and vandalism.
10. May modify new parts and equipment for compatibility with existing equipment and systems; may initiate recommendations for revised equipment operating instructions to reduce failure frequency.

QUALIFICATIONS

Knowledge of:

- Basic operating principles of analog and digital electronics, electrical and electronic circuitry and mechanical mechanisms
- Methods and procedures for the repair and maintenance of electrical, electronic, mechanical and electro-mechanical automatic fare collection equipment
- Methods and procedures for testing and troubleshooting automatic fare collection equipment
- Use and care of hand and power electronic and electro-mechanical testing and repair tools and equipment
- Safety practices and procedures pertaining to the work

Skill/ Ability in:

- Assessing and troubleshooting electronic, electrical, and mechanical automatic fare collection equipment problems down to the component level
- Installing, repairing and maintaining automatic fare collection equipment Using and maintaining hand and power tools and equipment used in the trade
- Reading and interpreting manuals, procedures, diagrams and schematics
- Keeping written records of work performed and parts and materials used
- Communicating tactfully and effectively with those contacted in the course of the work

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- Rapidly learn specific features of automatic fare collection equipment and maintenance procedures at the District.

MINIMUM QUALIFICATIONS

Education:

Possession of a high school diploma, GED or recognized equivalent and completion of an apprenticeship or technical training as an electronic technician. Completion of an apprenticeship or technical training as an electronic technician.

Experience:

One (1) year of (full-time equivalent) verifiable experience in the maintenance and repair of electronic and electro-mechanical equipment similar to the District's automatic fare collection equipment.

Other Requirements

Must possess a valid California driver's license and have a satisfactory driving record. Must possess adequate color vision to distinguish parts and wiring, and read diagrams. Must be physically able to lift and carry up to 75 pounds.

Must be physically able to climb, stoop and crawl to reach work.

Must be willing to work in exposure to live voltage and be willing to work underground and above ground level.

WORKING CONDITIONS

Environmental Conditions:

Shop environment; exposure to live voltage, air contamination, heat and cold; field environment; exposure to live voltage, electronic equipment, ancillary equipment and devices, and inclement weather.

Physical Conditions:

Requires maintaining physical condition necessary for lifting and carrying; climbing, stooping and crawling for prolonged periods of time.

BART EEO-1 Job Group: 4000 - Technicians
Census Code: 7100 – Elec/ Electronic Rep, Transp Eq
Safety Sensitive: N