



## **Vehicle Maintenance Technician (Composite Mechanic)**

### **Purpose**

Under general supervision, the Vehicle Maintenance Technician position performs skilled preventative, scheduled and unscheduled maintenance, troubleshooting, primary and secondary repair and modification to mechanical, electro-mechanical, pneumatic, and hydraulic equipment and components found on commuter rail diesel multiple unit (DMU) vehicles and supporting systems; performs related work as assigned.

### **Description**

This is a journey level classification performing skilled preventive maintenance, scheduled, unscheduled and emergency repair and modification on all mechanical, electrical, pneumatic and hydraulic systems and components for the District's revenue vehicles, including related subsystems and components as required by manufacturer maintenance and servicing manuals, Federal and State regulations for locomotive and passenger car maintenance and inspection and District vehicle maintenance procedures.

### **Duties and Responsibilities include, but are not limited to the following:**

*Class specifications are intended to present a descriptive list of the range of duties performed by, and minimum requirements required of, employees in the class. Specifications are not intended to reflect all duties performed within the job. SMART reserves the right to determine and amend job responsibilities.*

- Performs preventive maintenance, testing and adjustment of mechanical, electro-mechanical, pneumatic and hydraulic systems and components of rail transit vehicles.
- Inspects, troubleshoots, adjusts, repairs, and services DMU subsystems, including: diesel engines; hydrodynamic transmissions and gear drive units; truck assemblies; friction brakes; compressed air systems; sanders; exhaust systems; fuel systems; auxiliary electric systems; doors and bridgeplates; lighting; heating/ventilation/air conditioning; couplers and trainlines operators cab equipment; event recorder; CCTV; public address system; car body repair; window glazing; and carborne communications including cab signalling, automatic trip stop, train-to-wayside communications, and mobile radio.
- Locates, diagnoses and corrects trouble in engine, electrical, hydraulic, air brake and mechanical systems using test equipment and laptop computers.
- Performs secondary maintenance and repair on a variety of mechanical components, such as doors, brakes, traction motors and air conditioning.
- Per FRA regulations, performs maintenance tasks as specified and scheduled in SMART's DMU inspection, testing, and maintenance plan, including: daily and periodic passenger car / locomotive inspections; daily passenger car /locomotive brake tests; periodic brake equipment maintenance; periodic carborne signalling tests; and passenger car fire safety and on-board emergency equipment and emergency exits inspection, testing and maintenance.
- Reads and interprets schematics, service and safety manuals including schematic symbols, electrical drawings and circuit operations.
- Performs major repair to vehicles involved in accidents.
- Uses diagnostic test equipment and precision measuring devices in the course of work;

verifies performance of new or modified systems or equipment.

- Measures, tests and inspects completed work to confirm adherence to specifications.
- Uses shop equipment to recondition mechanical components; performs welding as required to complete assigned tasks.
- Reports on failures of components.
- Assures quality control using SMART's Maintenance Management Information System (MMIS) to maintain proper records and generate reports.
- Safely operates train sets and other vehicles in the course of performing assigned duties.
- Follow maintenance Standard Operating Procedures and instructions.
- Follow FRA regulations applicable to railroad workers, including railroad operating rules, train dispatcher instructions, and radio communication rules, in addition to SMART's policies and procedures for employees.
- References parts catalogues and other sources to determine correct parts for specific applications.
- References manufacturer schematics including blueprints, schematics, drawings and specifications , (manual and online), to resolve maintenance issues.
- Documents and records work performed and parts and materials used.
- May be assigned Storeroom Parts Clerk duties.
- Maintains work area in a clean and orderly fashion.
- Instruct other Vehicle Maintenance Technicians in repair procedures, troubleshooting, safety precautions and maintenance techniques, as required.
- Safely operates equipment.
- Performs other related duties as required.

## **Qualifications, Skills, Knowledge and Abilities**

### **Minimum Qualifications:**

- Must possess a high school diploma, GED or recognized equivalent.
- Minimum four (4) years of progressively responsible journey level full-time work experience successfully performing mechanical, electrical, and electronic diagnostic, maintenance and repair functions on large and complex vehicles, machinery and/or equipment, including at least one year of experience in a rail transit environment.

### **Other Qualifications**

- A certificate or degree in mechanical, electrical or electronic technology from a recognized college, university, technical or vocational school desired.
- Experience working on Diesel Multiple Units, rail vehicles and related transit equipment preferred.
- Knowledge of 49 CFR Part 229, Railroad locomotive safety standards.
- Knowledge of 49 CFR Part 238, Passenger Equipment Safety standards.

### **Skill in:**

- Interpreting and applying oral and written instructions in a consistent manner.
- The use of hand tools related to rail vehicle maintenance, such as pneumatic, electrical and hydraulic, and measuring instruments.
- Computer usage including the Microsoft Office Suite;
- Reading and understanding manufacturer blueprints and schematics;
- Utilizing a maintenance management system;

- Highly technical rail vehicle maintenance.

### **Knowledge of:**

- Methods, materials, tools and equipment used in servicing, diagnosis, preventative maintenance, overhaul and repair of SMART vehicles and equipment;
- Principles of diagnosis and repair of passenger rail vehicles;
- Mechanical systems involving diesel engines, braking systems, heating systems, air conditioning systems, hydraulic transmissions, fluid systems, and electrical systems;
- Practices and principles of welding;
- Safe working practices, including techniques for safely lifting and moving heavy objects;
- Vehicle and equipment parts, accessories, parts assemblies and terminology;
- FRA, OSHA and DOT Safety regulations, including hazardous material handling and storage, and disposal;
- General first aid and shop safety practices.
- Basic math, including concepts of algebra and geometry.

### **Ability to:**

- Learn the various components, supplies and equipment of SMART's vehicles;
- Work with both car and locomotive systems, sub-systems and components of the railway vehicle stock to be maintained;
- Read and understand blueprints, manufacturers schematics and parts catalogues;
- Carry out oral and written directions;
- Maintain accurate records and files;
- Write work orders and routine reports in a clear and concise manner;
- Identify and resolve problems;
- Perform standard maintenance tasks, inspection and cleaning as required including electrical, electro-pneumatic and equipment on both car and locomotive.
- Operate a forklift and other equipment/vehicles safely;
- Possess a current Forklift Operator Certification or obtain one within sixty (60) days of employment;
- Successfully pass a pre-employment medical exam that uses the standards of the California Commercial Driver's License.
- Possess a valid California Driver's license or obtain one within sixty (60) days of employment;
- Demonstrate a Satisfactory driving record as defined below:
  - No more than two moving violations and/or "at fault" accidents within the last 3 years;
  - No "at fault" in a fatal accident within the past 5 years;
  - No leaving the scene of an accident within the past 3 years;
  - No DUI's or Reckless Driving codes within the last 7 years on the current DMV printout.
- Make logical decisions and sound judgments using common sense;
- Perform the physical requirements of the job;
- Meet established productivity standards and deadlines;
- Manage workload effectively including multiple tasks and projects;
- Demonstrate a high level of adaptability in a fast paced work environment requiring concentration, teamwork and attention to safety and detail;
- Make sound, logical decisions within a framework of rules;
- Work in a constant state of alertness and in a safe manner;
- Work irregular work hours, swing and graveyard shifts, holidays and weekends;

- Understand, read and communicate (both orally and in writing) in Standard English;
- Be available for on-call responsibility for vehicle maintenance related problems.

### **Physical Work Environment**

The physical demands and work environment are characteristic of a train, station, yard and maintenance environment; the essential functions and responsibilities of this position are performed in both a shop environment and possibly outside in various weather conditions around moving vehicles and equipment. Exposure to dust, noises, fumes, electrical, physical and mechanical hazards.

### **Physical Requirements**

On a daily basis the essential functions of the position require incumbents to climb, stoop, kneel, crouch, bend, stand and walk. To stand, walk and sit for extended periods of time, to push, pull, lift and carry boxes and other objects weighing up to 50 pounds. Must have the visual acuity and hearing capability as established per FRA standards, to perform the essential functions of the job. Some of these requirements maybe accommodated for otherwise qualified individuals requiring and requesting such accommodations.

### **Position Details:**

- Base hourly wage: \$46.79 per hour.
- There is a 12-month probationary period following appointment to this position.
- FLSA Status: Non-Exempt.
- A thorough background check will be required including, but not limited to: current and past employers, personal contacts, education verification. A credit report will be required for positions covered under Labor Code 1024.5.
  - (A complete list of background checks documents will be provided upon request).
- Position subject to Hours of Service DOT and FRA Regulations.
- Position subject to DOT and FRA Drug and Alcohol Testing Regulations.
- A pre-employment physical, including a urinalysis drug screen, will be required.
- A pre-employment psychological screening, administered by a licensed/certified psychologist, will be required.
- This position is classified under the United State's Department of Transportation (DOT) and Federal Railroad Administration (FRA) as Safety Sensitive and/or regulated under Hours of Service. Under the DOT and FRA, employees in this classification are subject to pre-employment, random, reasonable suspicion, reasonable cause, post-accident, return-to-duty and follow-up drug testing and/or alcohol breath testing.

The Sonoma Marin Area Rail Transit District is an Equal Opportunity Employer