

AUTOMOTIVE/EQUIPMENT TECHNICIAN TITLE SERIES DEFINITIONS

I. DEFINITIONS

AUTOMOTIVE/EQUIPMENT TECHNICIAN - ENTRY

These positions perform routine preventive maintenance and minor repair work involving cars, trucks, equipment and small engines. This work includes: changing oil and oil filters, chassis lubrication, replacing belts and filters, making minor engine adjustments, maintaining fluid levels, changing and repairing tires, assisting other technicians, maintaining the outside of the vehicle, and cleaning and maintaining the shop.

AUTOMOTIVE/EQUIPMENT TECHNICIAN - DEVELOPMENTAL

Positions at this level perform semi-skilled automotive, truck and equipment-related maintenance and repairs, including all the duties of an Entry-level Technician. Perform routine preventive maintenance, including annual inspections of gasoline and diesel engines. In addition, inspect and repair various automotive front- end systems, hydraulic brake systems, exhaust systems, and electrical systems. Perform tune-ups for all types of vehicles. This is routine automotive/equipment work, which would include small engines. Assistance may be obtained from higher-level technicians. Positions at this level may be required to have a Commercial Driver's License (CDL) to road test the type of vehicles described at this level.

AUTOMOTIVE/EQUIPMENT TECHNICIAN - SENIOR

Positions at this level perform skilled automotive, light truck, heavy-duty truck, and equipment repairs, including all the duties of a Developmental-level Technician. Diagnose, trouble-shoot, and repair all external parts and accessories, and perform skilled internal repairs to engines, both gas and diesel; manual and automatic transmissions and drivelines, including transfer cases and front and rear differentials; and hydraulic systems. Perform welding and general fabrication and repair of equipment. Positions in one-person shops maintain the inventory, work orders and other records. Positions at this level may be required to have a Commercial Driver's License (CDL) to road test the type of vehicles described at this level.

Also, positions which spend the majority of time working on small engine powered equipment are found at this level. These positions diagnose, repair and overhaul small engine powered equipment, including lawn mowers, garden tractors, outboard motors, chainsaws, snowmobiles, pumps, generators, etc.

AUTOMOTIVE/EQUIPMENT TECHNICIAN - MASTER

Positions at this level perform all the duties of an Automotive/Equipment Technician - Senior, and, in addition, spend the majority of their time performing highly-skilled repairs on both gasoline- and diesel- powered automotive equipment. Such equipment includes automobiles; light and heavy-

duty trucks, including one-ton four-wheel-drive fire prevention trucks, three-ton fire prevention trucks, dump trucks, aerial bucket trucks, sign trucks, and rubbish trucks; off-road equipment, such as dozers, end loaders, graders, and backhoes; large passenger vans and buses; pavement markers; mounted augers; and fork lifts. Perform highly-skilled road testing, trouble-shooting and diagnosis of complex electronic, electrical, hydraulic and mechanical systems. This would include computer-controlled engines, transmissions, steering systems, suspensions, braking and driveline systems, including hydrostatic drive and four-wheel-drive systems. Perform complete maintenance, diagnosis, repair and overhaul of vehicle power train components. Perform skilled welding, fabrication and repair of general and special use equipment. Positions at this level are required to have a Commercial Driver's License (CDL) to road test the type of vehicles described at this level.

Some positions at this level may also function as the leadworker for a shop. These positions may maintain the inventory, work orders and other records, and fill in for the supervisor when he or she is absent.

The three main differences between the Automotive/Equipment Technician-Senior and the Automotive/ Equipment Technician-Master are that the Master-level Technician overhauls engines, transmissions and various other systems, works on all types of vehicles, including off road heavy equipment, such as dozers, end loaders, etc., and must work on diesel engines some of the time, while the Senior-level Technician does not overhaul engines, etc., and works on fewer types of vehicles.

EXAMPLES OF WORK PERFORMED

AUTOMOTIVE/EQUIPMENT TECHNICIAN - ENTRY

- 1) Change oil and oil filters.
- 2) Replace belts, hoses and filters.
- 3) Change radiator fluid.
- 4) Assist other technicians with engine tune-ups and transmission and drive train repairs.
- 5) Replace batteries and cables, test and recharge batteries.
- 6) Make minor repairs and adjustments to other small engines.
- 7) Change, rotate and repair flat tires.
- 8) Wash vehicles and clean the shop.

AUTOMOTIVE/EQUIPMENT TECHNICIAN - DEVELOPMENTAL

May perform any of the duties and responsibilities assigned to the Automotive/Equipment Technician-Entry level positions, and in addition:

- 1) Inspect heating and cooling systems. This would include flushing and refilling cooling systems and replacing water pumps, radiators, thermostats and hoses as necessary.
- 2) Inspect and repair various automotive front-end systems.
- 3) Replace shock absorbers, struts, wheel bearings, ball joints, steering bushings and tie rods.
- 4) Inspect and repair hydraulic brake systems. This would include disc, drum and 4-wheel disc brakes. Replace brake pads, shoes and hardware including wheel and master cylinders.
- 5) Adjust and maintain air brake systems on heavy-duty trucks.
- 6) Maintain, repair or replace axle seals, bearings, wheel studs and axle retainers.
- 7) Replace fuel pumps, gaskets, seals, belt tensioners, and exhaust systems.

- 8) Inspect and adjust manual and automatic transmissions. This would include linkage and cable adjustments, seal and gasket replacement and routine servicing of both manual and automatic transmissions.
- 9) Inspect, adjust and maintain manual clutches and controls on all types of vehicles.
- 10) Inspect, lube, repair or replace drive shaft, U-joints and center bearings.
- 11) Repair lights, switches and controls.
- 12) Test and repair or replace alternators and starters.

AUTOMOTIVE/EQUIPMENT TECHNICIAN - SENIOR

May perform any of the duties and responsibilities assigned to the Automotive/Equipment Technician-Developmental level positions, and in addition:

- 1) Diagnose and repair manual and power steering systems.
- 2) Diagnose and repair the electronic and electrical controls on complex steering systems.
- 3) Perform front-end alignment and four-wheel alignment on cars and trucks.
- 4) Diagnose and repair electronic and electrical problems on anti-lock brake systems, both four-wheel and rear-wheel anti-lock.
- 5) Repair and replace power brake units.
- 6) Tune-up gas and diesel engines, both standard- and computer-controlled systems.
- 7) Diagnose and repair electronic and computer-operated shift controls.
- 8) Repair all heating, cooling and air conditioning systems on cars and trucks.
- 9) Repair drivelines for two- and four-wheel drive cars, light and heavy-duty trucks, and other types of equipment.
- 10) Diagnose, repair and replace hydrostatic transmissions, engine and related assemblies on outboard motors and small engine powered equipment.
- 11) Diagnose and repair fuel systems, including carburetors and fuel injected systems.
- 12) Maintain, diagnose and repair all types of automotive front and rear drive axles.
- 13) Maintain and repair all electronic and electrical systems used on vehicles.
- 14) Replace manual and automatic transmissions.
- 15) Weld and fabricate special use equipment.
- 16) Install and service specialized police and survey electronic equipment and meters.
- 17) Certify police speedometers.

AUTOMOTIVE/EQUIPMENT TECHNICIAN - MASTER

May perform any of the duties and responsibilities assigned to the Automotive/Equipment Technician-Senior level positions, and in addition:

- 1) Diagnose, repair and overhaul all types of automotive, heavy truck and heavy equipment front and rear suspension systems, including McPherson strut and torsion bar suspensions and air suspension systems.
- 2) Inspect, repair and overhaul automotive and heavy-duty brake systems, which includes air-over-oil, hydrovac, hydroboost and full-air systems.
- 3) Repair and overhaul disc, drum and four-wheel disc brake systems.
- 4) Adjust repair and overhaul air valves, controls, all mechanical brake-related parts such as slack adjusters, air chambers, S-cams, and all mountings and brackets.
- 5) Maintain, diagnose, repair and overhaul all types of automotive front and rear drive axles.
- 6) Diagnose, maintain, repair and overhaul automotive and heavy-duty truck engines, both gas- and diesel-powered. This includes engines in cars, light and heavy-duty trucks, and various types of heavy-duty equipment.

- 7) Repair and replace all engine parts, such as bearings, crank shafts, cam shafts and hydraulic lifters, timing components, gears, chains, belts, tensioners and oil pumps.
- 8) Rebuild and repair cylinder heads and engine blocks including pistons, valves, and connecting rods.
- 9) Diagnose, repair and overhaul standard and automatic transmissions, transfer cases and auxiliary transmissions.
- 10) Road test repairs to confirm both problems and repairs.
- 11) Maintain, repair and rebuild hydraulic systems and undercarriages on heavy-duty trucks and equipment.
- 12) Diagnose, maintain and repair complex electrical, electronic and computer system problems relating to vehicles and heavy equipment.
- 13) Diagnose and repair starting, charging and ignition systems, standard and electronic.
- 14) Diagnose problems in water and foam delivery systems on specialized forest fire-fighting equipment.
- 15) Develop and test specialized forestry equipment, which includes installing wiring systems, pumps and plumbing on new forest fire-fighting equipment and vehicles.
- 16) Conduct safety checks of vehicles.
- 17) Order parts and supplies and maintain inventory control of them.
- 18) Set up and maintain a preventive maintenance program for all vehicles and equipment.
- 19) Perform skilled welding and fabrication.

II. QUALIFICATIONS

Positions in the Entry, Developmental and Senior level title may be required to have a commercial driver's license to road test vehicles. Positions in the Master level title are required to have a commercial driver's license to road test vehicles.

