

National Apprenticeship - Occupational Profile

Craft Occupation Heavy Vehicle Mechanics

Industry Served The Commercial Motor Industry

Profile of Craft The servicing, maintenance, repair and installation of the mechanical and electrical equipment of commercial vehicles.

At the end of the apprenticeship, the craftsperson will be able to demonstrate competence in the following skills:

Core Skills

- Servicing: Carry out manufacturer's service schedule. Complete a vehicle report form
 - Engine: Carry out compression tests. Remove/overhaul cylinder heads. Diagnose turbo charger faults and remove/repair and replace components
 - Diesel Fuel System: Remove/test and refit/replace injectors. Remove/replace diesel injection components. Check exhaust emissions with smoke meter and diagnose faults. Remove/replace/time, fuel injection pumps. Remove/repair/ replace fuel lift pumps
 - Transmission: Remove/refit gearboxes. Diagnose faults in clutch, remove/replace components. Remove/replace driveshaft joints and bearings
 - Suspension: Remove/replace suspension components
 - Wheels: Balance wheels and repair punctures
 - Bodywork: Remove/replace bodywork components e.g. door locks, windows and regulators. Repair/adjustment of mechanical and hydraulic types of cab tilting and locking devices. Fit safety crash barriers and reflector markings
 - Lights Remove/replace components and focus headlights
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Specialist Skills

- Brakes: Diagnose/rectify faults in ABS brakes. Diagnose faults in air assisted hydraulic and full air brake systems. Remove/replace and adjust system components
 - Engine: Carry out complete engine overhaul
 - Hydraulics: Overhauling and fitting tipping gear, tail lift and loading/unloading crane equipment
 - Suspension: Diagnose and rectify faults in pneumatically and electronically controlled air suspension systems
 - Transmission: Diagnose faults in and overhaul gearboxes. Diagnose faults in and overhaul differential and hub-reduction units. Diagnose and rectify faults in pneumatically and electronically operated gear change, differential and inter axle locking mechanisms
 - Electrical Diagnose/rectify faults in electrical circuits using wiring diagrams and multimeter. Remove/refit vehicle entertainment systems. Install basic electrical equipment
 - Bodywork: Adjustment and overhaul/replacement of fifth wheel coupling and semi trailer king pin
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Common Skills

- Metalwork: Basic bench fitting. Gas welding, brazing, cutting and arc welding
- Brakes: Diagnose faults in hydraulic brakes system and remove/replace components
- Steering: Check and adjust steering geometry. Remove/replace steering components (manual and power assisted type steering)
- Engine: Remove/dismantle/reassemble and refit an engine. Diagnose faults in cooling system and remove/replace components
- Electrical: Diagnose/rectify faults in starting and charging systems and remove/ replace components. Diagnose/rectify faults in heating systems and remove/replace components
- Bodywork: Repair/adjustment of mechanical bodywork components e.g. door locks, windows and regulators

Personal Skills

- Communications
- Customer relations
- Adaptability
- Ability to work as a team member
- Ability to work independently
- Initiative
- Problem solving
- Planning and organisation
- Information gathering

NOTE: Integrated curriculum includes maths, science, theory, drawing and computer applications
