Australian Government

AURTTFX02 Inspect and service diesel fuel injection systems

DRAFT

Release: 1

AURTTFX02 Inspect and service diesel fuel injection systems

Modification History

Release	Comments
1	This unit of competency was first released in AUR Automotive Retail, Service and Repair Training Package Release 11.0.

Application

This unit describes the skills and knowledge required to inspect and service diesel fuel injection systems. It involves preparing for the task, inspecting the fuel injection system for leaks, inspecting the air filter, reporting the inspection findings, servicing and adjusting the system, and completing workplace processes and documentation.

The unit applies to those working in the automotive service and repair industry. The diesel fuel injection systems include those of agricultural machinery, heavy commercial vehicles, light vehicles, marine vessels, motorcycles, mobile plant or outdoor power equipment.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite unit(s)

No pre-requisite units

Competency field(s)

N/A

Unit sector(s)

Mechanical Miscellaneous Technical - Fuel Systems

Elements and Performance Criteria

Elements	**Performance criteria**
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*

DRAFT

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance

1. Prepare to inspect and service diesel fuel injection system	1.1 Identify job requirements from workplace instructions 1.2 Identify required information for inspection and service activity 1.3 Identify hazards and environmental issues, assess potential risks and implement control measures in line with workplace policies and procedures 1.4 Identify tools, equipment and materials required for inspection and service activity and establish serviceability according to workplace procedures
2. Inspect diesel fuel injection system	2.1 Conduct inspection according to workplace procedures, manufacturer specifications, and work health and safety (WHS), occupational health and safety (OHS) and environmental requirements 2.2 Compare inspection results with manufacturer specifications 2.3 Document and report inspection findings according to workplace procedures
3. Service diesel fuel injection system	3.1 Carry out service and adjustments according to workplace procedures, manufacturer specifications, and work health and safety (WHS), occupational health and safety (OHS) and environmental requirements 3.2 Carry out post-service testing according to workplace procedures, including engine start-up check for leaks and operation
4. Complete work processes	4.1 Conduct final inspection according to workplace procedures and confirm vehicle, machinery or vessel is ready for use 4.2 Clear work area and dispose of or recycle materials according to workplace procedures 4.3 Complete documentation according to workplace procedures

Foundation skills

This section describes the foundation skills essential to performance.

Skill	Description
Learning	• Locates required sources of information efficiently
Reading	• Interprets information from manufacturer and workshop literature when seeking service procedures and specifications relating to diesel fuel injection systems

DRAFT

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance

Oral communication	• Clarifies instructions and obtains information from customers and supervisors
Numeracy	• Clarifies instructions and obtains information from customers and supervisors
Problem solving	• Refers problems outside area of responsibility to required person

Range of conditions

N/A

DRAFT

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance

Assessment Requirements for AURTTFX02 Inspect and service diesel fuel injection systems

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- inspect and service a diesel fuel injection system on at least two different vehicles, machines or vessels.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- Individuals must be able to demonstrate knowledge of:
- methods to locate and interpret information required to inspect and service diesel fuel injection systems, including:
    - information provided by customer and supervisors
    - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to inspect and service diesel fuel injection systems, including:
    - establishing serviceability of tools and equipment
    - documentation procedures, including:
        - inspection findings, including recommendations for required repairs or adjustments
    - housekeeping procedures, including:
        - storage of equipment
        - identification, tagging and isolation of faulty equipment
        - disposal of excess materials
        - recycling procedures
- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to inspecting and servicing diesel fuel injection systems, including procedures for:
    - working with:
        - high pressure diesel fuel systems
        - high voltage diesel fuel injectors
        - stored fuel pressures
    - engine start-up and shut-down

DRAFT

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance

    - controlling fuel vapour and ventilation in enclosed engine compartments
    - selecting and using personal protective equipment (PPE)
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from fuel systems, and preventing fuel discharge to land and waterways
- purpose and operation of air filtration systems, including:
    - air pre-cleaners
    - air filters
    - housing and ducting
- applications and operation of diesel fuel injection systems and components, including:
    - fuel tank and lines
    - fuel and sedimenter filters
    - fuel supply pumps
    - mechanically controlled system components:
        - in-line and rotary injection pumps
        - injector pipes
        - injectors
        - overflow or leak-off pipes
    - electronically controlled and common rail system components:
        - high-pressure injection pumps
        - high-pressure injector pipes
        - fuel rail
        - injectors
        - overflow or fuel return system
        - electronic control unit and sensors
- inspection procedures for diesel fuel injection systems, including procedures relating to leaks, damaged piping and sedimentary sight glasses
- service and adjustment procedures for diesel fuel injection systems, including:
    - servicing sediment filters
    - replacing fuel filters
    - inspecting fuel tank breathers
    - bleeding fuel system as required
    - testing low-pressure fuel supply
    - servicing air filtration systems

DRAFT

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance

    - engine speed adjustments as required and operational testing
- post-service testing procedures for diesel fuel injection system

Assessment Conditions

Assessment of skills must take place under the following conditions:

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the diesel fuel injection systems that they have worked on, e.g. repair orders

The following resources must be made available:

- automotive repair workplace or simulated workplace
- workplace instructions
- manufacturer diesel fuel injection system specifications
- two different vehicles, machinery or vessels with diesel fuel injection systems requiring servicing
- tools, equipment and materials appropriate for inspecting and servicing diesel fuel injection systems, including low-pressure fuel test equipment.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
AURTTF102 Inspect and service diesel fuel injection systems	E	Performance criteria reworded. Foundation skills updated. Performance evidence and resources extended to vessels. Knowledge evidence updated. No change to performance outcomes.

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance

Links

Companion volumes, including implementation guides, are found on the national training register - https://training.gov.au/training/details/AUR.

DRAFT

© Commonwealth of Australia, 2026 Mining and Automotive Skills Alliance