



**Australian Government**

**Assessment Requirements for AURTTF106  
Diagnose and repair petrol carburettor  
systems**

**Release: 1**

# Assessment Requirements for AURTTF106 Diagnose and repair petrol carburettor systems

## Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

## 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:

- diagnose and repair a fault in each of the following different petrol carburettor systems fitted to different vehicles or engines:
  - one type of variable venturi carburettor
  - one type of multi-barrel carburettor
  - one simple carburettor.

## 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:

- methods to locate and interpret information required to diagnose and repair petrol carburettor systems, including:
  - information provided by customers and supervisors
  - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair petrol carburettor systems, including:
  - establishing serviceability of tools and equipment
  - documentation procedures
  - housekeeping procedures, including:
    - examination of tools and equipment
    - storage of equipment
    - identification, tagging and isolation of faulty equipment
    - disposal of excess materials
    - recycling procedures

- workplace health and safety (WHS) requirements relating to diagnosing and repairing petrol carburettor systems, including procedures for working with flammable petrol fuel
- environmental requirements relating to diagnosing and repairing petrol carburettor systems, including procedures for trapping, storing and disposing of fluids released from fuel system
- operating principles of petrol carburettor systems, including:
  - fuel atomisation
  - air-fuel ratios and combustion cycles
  - detonation and pre-ignition
  - venturi action
- purpose and operation of petrol carburettor systems and components, including:
  - carburettor systems, including:
    - float system
    - idle system
    - fast idle system
    - main system
    - choke system
    - power system
    - accelerating system
  - single barrel carburettor operation, including:
    - mixture correction, including air-bleed, compensating jet, and metering rod mixture correction
  - manual and automatic choke operation
  - multi-barrel carburettors, including:
    - two-barrel and four-barrel carburettors
    - two-stage carburettors, including vacuum and mechanical control of second stage
- diagnostic testing procedures for petrol carburettor systems, including procedures for:
  - fuel pump pressure, volume and vacuum testing
  - air-leak testing
  - cold-start enrichment testing
  - exhaust gas analysis
- repair procedures for petrol carburettor systems, including procedures for:
  - installing fuel pumps
  - dismantling, cleaning, repairing and reassembling carburettors
  - removing, replacing and adjusting carburettors
- post-repair testing procedures for petrol carburettor systems.

## Assessment Conditions

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

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

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- automotive repair workplace or simulated workplace
- workplace instructions
- manufacturer vehicle petrol carburettor system specifications
- three different vehicles or engines with faults in the petrol carburettor systems specified in the performance evidence
- diagnostic equipment for petrol carburettor systems, including an exhaust gas analyser,
- tools, equipment and materials appropriate for repairing petrol carburettor systems.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>