



**Australian Government**

# **AURTTF105 Diagnose and repair engine forced-induction systems**

**Release: 1**

# AURTTF105 Diagnose and repair engine forced-induction systems

## Modification History

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

## Application

This unit describes the skills and knowledge required to diagnose and repair faults in engine forced-induction systems. The unit involves preparing for the task, sourcing a diagnostic testing strategy, diagnosing the cause of the fault, carrying out the repair, performing post-repair testing, and completing workplace processes and documentation.

The unit applies to those who work in the automotive service and repair industry. The engine forced-induction systems include those in agricultural machinery, heavy commercial vehicles, light vehicles, marine vessels, or mobile plant machinery.

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

## Unit Sector

Mechanical Miscellaneous Technical – Fuel Systems

## Elements and Performance Criteria

| ELEMENT                                                   | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>          | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                         |
| 1. Prepare to diagnose and repair forced-induction system | 1.1 Identify job requirements from workplace instructions<br>1.2 Identify required information for diagnosis activity<br>1.3 Analyse diagnostic options and source testing strategy to identify cause of fault using workplace and manufacturer procedures<br>1.4 Identify hazards and environmental issues associated with diagnose and repair activity, assess potential risks and implement control measures in line with workplace policies and procedures |

| ELEMENT                             | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | 1.5 Identify tools and equipment required for testing strategy and establish serviceability according to workplace procedures                                                                                                                                                                                                                                                                                                                                                                            |
| 2. Diagnose forced-induction system | 2.1 Implement diagnostic tests set out in testing strategy according to manufacturer and workplace procedures, and workplace health and safety requirements<br>2.2 Identify cause of fault through analysis of diagnostic test results<br>2.3 Confirm and report cause of fault according to workplace procedures<br>2.4 Develop and report recommendations for necessary repairs according to workplace procedures                                                                                      |
| 3. Repair forced-induction system   | 3.1 Identify required information for repair activity<br>3.2 Identify tools, equipment and materials required for repair activity and establish serviceability according to workplace procedures<br>3.3 Carry out repairs according to workplace and manufacturer procedures, manufacturer specifications, workplace health and safety and environmental requirements<br>3.4 Carry out post-repair testing according to workplace procedures, workplace health and safety and environmental requirements |
| 4. Complete work processes          | 4.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use<br>4.2 Clear work area and dispose of or recycle materials according to workplace procedures<br>4.3 Complete documentation according to workplace procedures                                                                                                                                                                                                                                         |

## Foundation Skills

*This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.*

| SKILL    | DESCRIPTION                                                                                                                                                        |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Learning | <ul style="list-style-type: none"> <li>Locates required sources of information efficiently</li> <li>Develops a sequenced plan for a specific task</li> </ul>       |
| Reading  | <ul style="list-style-type: none"> <li>Interprets workplace instructions such as job cards</li> <li>Organises and interprets technical information from</li> </ul> |

| SKILL                   | DESCRIPTION                                                                                                                                                                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | workplace procedures, manufacturer procedures and manufacturer specifications                                                                                                                                                                              |
| Oral communication      | <ul style="list-style-type: none"><li>• Clarifies instructions</li><li>• Obtains information from customers and supervisors</li></ul>                                                                                                                      |
| Numeracy                | <ul style="list-style-type: none"><li>• Measures engine forced-induction components</li><li>• Uses mathematical operations</li><li>• Carries out calculations such as areas, volumes, tolerances and deviations from manufacturer specifications</li></ul> |
| Planning and organising | <ul style="list-style-type: none"><li>• Plans own work requirements</li><li>• Prioritises actions to achieve required outcomes</li><li>• Ensures tasks are completed within workplace timeframes</li></ul>                                                 |
| Technology              | <ul style="list-style-type: none"><li>• Uses precision measuring equipment</li></ul>                                                                                                                                                                       |

## Unit Mapping Information

Supersedes and is equivalent to AURTTF005 Diagnose and repair engine forced-induction systems.

## Links

Companion Volume Implementation Guide is found on VETNet -

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