Australian Government

AURMTQ101 Analyse and repair faults in performance driveline systems

Release: 1

AURMTQ101 Analyse and repair faults in performance driveline 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 analyse and repair performance transmissions, final drive and drivelines, including engine to transmission drive couplings. It involves identifying, evaluating, selecting, justifying, documenting and carrying out the most appropriate rectification method or variation. The unit includes the analysis of multi-system and intermittent faults which may be caused by operating in adverse conditions.

The unit applies to those working in the motor sport industry.

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

Unit Sector

Motorsport Technical - Driveline and Final Drives

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Identify and confirm the work requirement	1.1 Determine objective of analysis and evaluation from workplace instructions 1.2 Source and interpret specifications for driveline system 1.3 Identify, confirm and document system faults, deficiencies or discrepancies from direct and/or indirect evidence 1.4 Identify hazards associated with the work and manage risks according to safety and environmental requirements
2. Prepare for analysis and repairs	2.1 Develop or adopt evaluative criteria to meet the objective of the analysis and evaluation 2.2 Develop or identify analytical and evaluative methodology

ELEMENTS	PERFORMANCE CRITERIA
	from technical information 2.3 Identify possible causes of faults are identified from analysis of technical support information and available on-board diagnostic systems 2.4 Analyse diagnostic options and select those most appropriate to the circumstances according to evaluative criteria 2.5 Select and prepare test equipment according to manufacturer procedures and team requirements 2.6 Select and check tools and materials required to support the diagnostic process for serviceability 2.7 Prepare vehicle driveline system and components for the diagnostic process
3. Carry out analysis and determine repairs and performance enhancement strategies	3.1 Follow selected analytical and evaluative methodology according to manufacturer and workplace procedures 3.2 Carry out tests according to manufacturer and workplace procedures and safety and environmental requirements 3.3 Verify analytical and other diagnostic findings, as required, by using available alternative or optional processes 3.4 Assess analytical findings and results against the evaluative criteria 3.5 Draw valid conclusions from the available evidence and document to workplace requirements 3.6 Determine options for responding to the analysis and evaluation objective from further research of technical support information 3.7 Select and document repair or modification method from an analysis of the options, operating conditions, controlling body rules, category rules, and financial implications
4. Conduct repairs and implement performance improvement strategies	4.1 Select and prepare repair tools and materials 4.2 Carry out repairs and component replacements and adjustments according to manufacturer specifications, team requirements, and safety and environmental requirements, and without causing damage to other components or systems 4.3 Carry out post-repair testing and vehicle start-up to ensure performance and operation are to team requirements
5. Complete work processes	5.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 5.2 Clear work area and dispose of or recycle materials according to workplace procedures 5.3 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	• Locates required sources of information efficiently.
Numeracy	• Measures system components and uses basic mathematical operations, including addition and subtraction • Calculates deviations and tolerances from manufacturer specifications • Interprets units of measurement of angles and torque.
Reading	• Interprets controlling body rules, category rules and supplementary regulations • Interprets information from manufacturer and workshop literature when seeking driveline system specifications and procedures.
Planning and organising	• Plans own work requirements • Prioritises actions to achieve required outcomes • Ensures tasks are completed within workplace timeframes.
Technology	• Uses precision measuring equipment.

Unit Mapping Information

Supersedes and is equivalent to AURMTQ001 Analyse and repair faults performance driveline systems.

Links

Companion Volume Implementation Guide is found on VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1