

Unit ID: 2219

Domain

AUTOMOTIVE MECHATRONICS

Title:

Repair vehicle oil lubrication systems

Level: 3

Credits: 5

Purpose

This unit standard is intended for those who repair vehicle oil lubrication systems. People accredited with this unit standard are able to describe engine lubrication system layout, describe the lubricating oils and applications, describe different types of oil pumps, replace oil pump, replace oil filters and repair lubrication circuits.

This unit standard is intended for those who work in automotive mechatronics environment.

Special Notes

1. Entry information

Prerequisite

- *none*

2. This unit standard is to be assessed in the context of industrial safety operations and should be assessed in conjunction with other relevant technical unit standards selected from this domain.

3. Assessment evidence may be collected at a real workplace or simulated workplace in which safety operations are carried out.

4. Glossary of terms:

- '*Specifications*' refers to any, or all the following: manufacturers' specifications and recommendations, workplace specific requirements, national and international standards and legislations
- '*ISO*' refers to International Organization for Standards

5. Performance of all elements in this unit standard must comply with industry standards and workplace requirements.

6. Regulations and legislation relevant to this unit standard include the following:

- Labour Act No. 11 of 2007
- Regulations relating to the health and safety of employees at work under Schedule 1 (2) of the Labour Act No.11 of 2007
- ISO 14001 (Environmental Management Standard) and all subsequent amendments to any of the above.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and

moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Describe engine lubrication system layout

Performance Criteria

- 1.1 Engine lubrication system circuit components are identified.
- 1.2 Function of each engine lubrication system component is explained.

Element 2: Describe the lubricating oils and applications

Performance Criteria

- 2.1. Different types of lubricating oils and their grades are identified and explained.
- 2.2. Purpose of lubricating oils is explained.
- 2.3. Advantages and disadvantages of different types of oils is explained.
- 2.4. Application of different lubricating oils is explained.

Element 3: Describe different types of oil pumps

Performance Criteria

- 3.1 Different types of oil pumps are identified.
- 3.2 Methods of operation of different pumps is explained.
- 3.3 Application of the different types of oil pump is explained.

Element 4: Replace oil pump

Performance Criteria

- 4.1 Tools and equipment for removing oil pump are identified and prepared.
- 4.2 Faulty and malfunctioning oil pump is removed according to workplace procedures.
- 4.3 Functioning oil pump is replaced according to manufacturers' procedures.
- 4.4 Oil pumps are checked for correct operation according to manufacturer's procedures.

Element 5: Replace oil filters

Performance Criteria

- 5.1. Different types of oil filters are identified.
- 5.2. Operation of different types of oil filters is explained.
- 5.3. Application of different oil filters is explained.
- 5.4. Oil filters are replaced according to manufacturer's procedures.

Element 6: Repair lubrication circuits

Performance Criteria

- 6.1 Lubrication circuits are cleared of any grit and grim according to manufacturers' procedures.
- 6.2 Damaged oil circuits are repaired according to manufacturers' procedures.
- 6.3 Repairs conducted are recorded and documented according to workplace procedures.

Registration Data

Subfield:	Automotive Engineering
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