Overhaul a Stanadyne diesel fuel injection pump

Level 4
Credits 6

Purpose This unit standard is for people in the diesel fuel injection industry. People credited with this unit standard are able to: dismantile a Stanadyne fuel injection pump and complete an inspection report; renew and replace Stanadyne fuel injection pump components and reassemble pump; and bench test a Stanadyne fuel injection pump assembly and adjust settings.

Subfield Motor Industry
Domain Automotive Fuel Systems and Exhaust
Status Registered
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Entry information Recommended: Unit 24224, Demonstrate knowledge of Stanadyne diesel fuel injection pumps, or demonstrate equivalent knowledge and skills.

Replacement information This unit standard and unit standard 24224 replaced unit standard 15398.

Accreditation Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB) NZ Motor Industry Training Organisation (Incorporated)

Accreditation and Moderation Action Plan (AMAP) reference 0014
This AMAP can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Special notes
1 Legislation relevant to this unit standard includes but is not limited to – Health and Safety in Employment Act 1992.
2 Definitions
Company requirements refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – company specifications and procedures, work instructions, manufacturer specifications, product quality specifications, and legislative requirements.
Service information may include but is not limited to – technical information of a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions and specifications; technical terms and descriptions; and detailed illustrations. This can be accessed in hard copy or electronic format and is normally sourced from the manufacturer.
Suitable tools and equipment means industry approved tools and equipment that are recognised within the industry as being the most suited to complete the task in a professional and competent manner with due regard to safe working practices.

3 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.

Elements and performance criteria

Element 1
Dismantle a Stanadyne fuel injection pump and complete an inspection report.

Performance criteria

1.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range personal safety, safety of others, workshop safety, environmental safety, tools and equipment safety.

1.2 Suitable tools and equipment are selected and used to enable the pump assembly to be dismantled and inspected in accordance with service information.

1.3 The fuel pump assembly is dismantled on a stripping jig in accordance with service information.

1.4 All parts are cleaned to enable an inspection to be carried out in accordance with company requirements.

1.5 A condition report is completed in accordance with company requirements.

Range inspection of parts, identifying and recording faults, recommending repairs and replacement of parts.
Element 2

Renew and replace Stanadyne fuel injection pump components and reassemble pump.

Performance criteria

2.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range personal safety, safety of others, workshop safety, environmental safety, tools and equipment safety.

2.2 Suitable tools and equipment are selected and used to enable the components to be replaced and the pump assembly to be reassembled in accordance with service information.

2.3 All parts determined as requiring replacement are ordered from a supplier in accordance with company requirements.

Range interpreting parts catalogues, using updates and supersessions, obtaining pricing and delivery details.

2.4 The pump is reassembled in accordance with service information.

Element 3

Bench test a Stanadyne fuel injection pump assembly and adjust settings.

Performance criteria

3.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range personal safety, safety of others, workshop safety, environmental safety, tools and equipment safety, safety precautions when working with fuel at high pressure.

3.2 Suitable tools and equipment are selected and used to enable the pump assembly to be tested and adjustments made in accordance with service information.

3.3 The fuel pump assembly is mounted and set up for testing and setting on the test bench in accordance with test bench instructions.

3.4 The fuel pump assembly is tested, and settings adjusted, in accordance with service information.

Range calibration, automatic advance, timing mark checked.

3.5 The fuel pump assembly is removed from the test bench with fuel inlets and adjustments sealed in accordance with company requirements.
Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the NZ Motor Industry Training Organisation (Incorporated) info@mito.org.nz if you wish to suggest changes to the content of this unit standard.