



Scope of Work

Camden Power Station

Title: **Maintenance of Diesel Engines**

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Content

| | Page |
|--|------|
| 1. Introduction | 3 |
| 2. Supporting Clauses | 3 |
| 2.1 Scope..... | 3 |
| 2.1.1 Purpose..... | 3 |
| 2.1.2 Applicability | 3 |
| 2.1.3 Normative References..... | 3 |
| 2.1.4 Informative References | 3 |
| 2.1.5 Abbreviations | 3 |
| 2.2 Roles and Responsibilities | 3 |
| 2.3 Process for Monitoring | 4 |
| 2.4 Related/Supporting Documents..... | 4 |
| 3. Scope of Work..... | 4 |
| 3.1 Scheduled maintenance activities | 4 |
| 3.2 List of diesel engines..... | 5 |
| 4. Special tools..... | 5 |
| 5. Safety management | 5 |
| 6. Revisions..... | 6 |
| 7. Development Team | 6 |
| 8. Acknowledgements | 6 |

1. Introduction

Camden Power station has a number of diesel engines which are used as a back for the system. The station also has mobile diesel engines water pumps and diesel generators which are also used during emergencies.

These diesel engines are of different brands, which are as follows Cummins, Caterpillar, Deutz, Mitsubishi, Kirloskar, Leyland. The above engines are water cooled expect Deutz and Kirloskar engines.

2. Supporting Clauses

2.1 Scope

The scope is for the maintenance of all diesel engines in Camden Power Station.

2.1.1 Purpose

The purpose for this scope of work is for the maintenance and rebuilding of all Diesel Engines by the qualified diesel mechanics and auto electrician in Camden Power Station.

2.1.2 Applicability

This document shall apply to Camden Power Station.

2.1.3 Normative References

[1] ISO 9001 Quality Management Systems

2.1.4 Informative References

[2] Occupational Health and Safety Act 85 of 1993

[3] Doc No 004/4830 Camden Power Station Safety, Health and Environment Specification.

2.1.5 Abbreviations

| Abbreviation | Explanation |
|--------------|--|
| ISO | International Organization for Standardization |
| OEM | Original Equipment Manufacturer |
| QCP | Quality Check Procedure |

2.2 Roles and Responsibilities

The Contractor maintains and supplies the spares as an when required.

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2.3 Process for Monitoring

None

2.4 Related/Supporting Documents

All new components to be supplied with guarantee certificates.

3. Scope of Work

Execute scheduled maintenance of all diesel engines for the Station. Attend maintenance breakdown for the engines as and when required. All scheduled maintenance work will be done on site and rebuilding of an engine to be done on site. All the engines rebuilt shall be guaranteed for 12 months.

Eskom representative or Quality controller to be present during dyno testing of an engine before delivery to site. Maintain water pumps on a mobile diesel engine water pump.

3.1 Scheduled maintenance activities

- Drain engine oil/add
- Replace engine oil filter
- Replace fuel filter
- Replace air filter
- Replace coolant filter
- Repair engine oil leaks if any
- Repair water leaks if any
- Check the turbo end float
- Check the exhaust system for leaks
- Check all induction hoses and clamps
- Clean and inspect radiator
- Check the coolant level
- Check oil level
- Check the radiator cooling efficiency (delta T between inlet and outlet temp)
- Check and adjust v-belts
- Check the fan drive and pulleys
- Check the safety guards
- Check all gauges for correct operations
- Prepare a service report for the engine.

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3.2 List of diesel engines

| Description/Plant area | Make | Number | Serial no. |
|--------------------------------------|-------------|--------|-----------------------------------|
| Fire diesel engine water pump | Caterpillar | 01 | Model 3406, serial 6TB22761 |
| Diesel generator | Cummins | 06 | NTA 400 IPG/CPL2025 |
| Diesel engine service water pump | Leyland | 03 | |
| Diesel engine de-minerals water pump | Deutz | 01 | Model F6L413, no.10519F7) 5885751 |
| Mobile diesel water pump | Deutz | 02 | Model F6L912-158, 108995 |
| Mobile diesel water pump | Kirloskar | 01 | Model F4L913, 04.1262/0900027 |
| Mobile diesel generator | Mitsubishi | 01 | Model S6R2-PTAA, serial.70357 |
| | | | |

Maintenance of the engines is not limited to the list above.

4. Special tools

All special tools and any other equipment necessary to operate and maintain the plant shall be provided by the contractor.

5. Safety management

The contractor shall comply with the following requirements:

- Occupational Health and Safety Act 85 of 1993
- Employer's Standards and Procedures regarding 'Health and Safety at Camden Power Station: Camden Power Station Safety, Health and Environment Specification – Doc No 004/4830

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6. Revisions

| Date | Rev. | Compiler | Remarks |
|-------------|------|-----------|-------------|
| 10 May 2018 | 01 | A Khumalo | Final draft |

7. Development Team

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8. Acknowledgements

Not applicable.

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