 Eskom	Scope of Work	Camden Power Station
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Title: **Maintenance of Diesel Engines**

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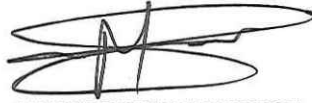


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## **1. Introduction**

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**

<b>Abbreviation</b>	<b>Explanation</b>
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 rebuild 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

Patrick Shange

Al Khumalo

## 8. Acknowledgements

Not applicable.

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