### **JOB TITLE: EARTHMOVING EQUIPMENT MECHANIC**

### **ROLES AND RESPONSIBILITY**

An Earthmoving Equipment Mechanic perform skilled tasks in the mechanical repair and maintenance of heavy trucks, earth moving, and related construction equipment including road graders, gasoline and diesel powered tractors, garbage trucks, dump trucks, and dozers.

Work assignments are received in the form of general oral or written work orders, but the employee is expected to determine the nature and extent of needed repairs. General supervision is received from an Equipment Shop Foreman and work is reviewed through the proper functioning and performance of equipment repaired.



### **DAILY ACTIVITIES**

Earthmoving equipment Mechanics may perform the following tasks:

- diagnose, overhaul, repair, tune, maintain and test diesel and petrol/gas-powered vehicles, including trucks, buses, bulldozers and other earthmoving equipment, tractors, stationary engines (e.g. generators, pumps, compressors and drilling rigs) and agricultural machinery
- detect mechanical and electrical faults by using instruments that check charging and starting circuitry, batteries, ignition and ignition timing, fuel injection systems and speed control, cylinder compression, engine condition, braking efficiency, and wheel balance and alignment
- repair and maintain the hydraulic components of diesel and petrol/gas engines that are used to power attachments such as hoists, booms, scrapers, buckets and augers
- use oxy, electric, TIG and MIG welding, hand fitting or machining processes to replace or repair faulty parts.

## **QUALIFICATION PRE-REQUISITE**

Grade 10 with Mathematics s & Science or a Learnership / Apprenticeship and proof of a completed Trade Test

Learning assumed to be in place for the Learnership is:

- Communication at NQF Level 2.
- Mathematical literacy at NQF Level 2.
- Workplace safety at NQF Level 2.

### **CAREER DEVELOPMENT**

Various options career advancement exists:

- Mechanical Engineer
- Field Service Supervisor
- Field Forman
- Workshop Manager
- Plant Manger
- Technical Advisor

# SKILLS MOST USED

The following important qualities are required:

- enjoy practical and manual activities;
- mechanical aptitude;
- good at mathematics;
- physically fit;
- free from allergies to grease, oil or petrol;
- Nerves of steel";
- Passion for engines and components;
- Calm, systematic, problem solver; and
- analytical



### CHALLENGES

- You can assemble an engine 100% to specification, but sometimes it will fail.
  Then you have to re-do things, this is taking time and is costing money.
- Hydraulic systems can be a challenge if you don't have the correct fault finding equipment i.e. out in the field

#### **JOB SATISFACTION**

# It is an achievement to see a piece of plant equipment i.e. a truck or dozer leaving the plant yard and you know that you have repaired the machine and it is now fit to go to a site

 I built an engine test bench from scratch to test repaired engines before they are placed back in the plant. By doing that, I am saving the company R4,000 per hour

#### **ADVICE FOR JOB SEEKERS**

You have to be prepared to never stop learning. You must keep abreast of technology and you must not be afraid to work hard. You must have a passion for machines and the way they work



### **WORKING ENVIRONMENT**

Earthmoving Equipment Mechanics normally works in a workshop environment which is noisy, but may have to work in the country areas when repairing agricultural, earthmoving and heavy transport machinery.

### **EDUCATION AND TRAINING**

A Learnership in the following qualifications can be attended:

- National Certificate in automotive repair and maintenance at NQF level 2.
- National Certificate: Automotive Repair and Maintenance NQF Level 3

## **LENGTH OF STUDY**

The minimum period for the Learnership will be between 15 to 18 months provided all practical exposure is available in the workshop.