

CURRICULUM VITAE

PERSONAL DETAILS

Name : Samuel Ockom
Date of Birth : 14th July, 1986
Telephone : +233542786477
E-Mail Address : ockomsamuel@yahoo.com
Profession : Electrician
Language Spoken : English and Fante
Nationality : Ghanaian
Marital Status : Married
Divers lances : B andC

QUALIFICATION CERTIFICATE

Anglo gold Ashanti mining training center : Auto electrical trade certificate
Samatta Institute and Technology : EET, 1, 2 and 3
Takoradi Technical Institute : Electrical Installation work

EDUCATIONAL BACKGROUND

Institution : Anglo gold Ashanti mining training center Obuasi
Year : February 2012 to February 2015
Certificate : Auto Electrical Apprenticeship Trade Certificate

Institution : British Council
Year : 9th June 2010 to 10th June 2010
Certificate : Professional Success and Employment Skills

Institution : Samatta Institute of Technology
Year : 2007 – 2010
Certificate : Electrical Engineering Technicians (part 1, 2 and 3).

Institution : Takoradi Technical Institute
Year : 2003 – 2007
Certificate : Electrical installation work

Institution : Certificate for Business Development and Training (UMass Amherst)
Year : January 2005.
Certificate : Basic Business Skills

Institution : Nana Katabra 'A' Junior High School.
Year : 2000 -2003.
Result Slip : Basic Education Certificate Examination (B.E.C.E).

PROFESSIONAL TRAINING

Liebherr Training center, Tarkwa Asaman Ghana.

| Date | / | Course ref. | / | Title |
|-------------|----------|--------------------|----------|---|
| 02-19-14 | | LMG-437-GE-001 | | R9250 General Electric's (L1) |
| 06-11-13 | | LEC-CL1 | | R9250Component Location R9250 Undercarriage |
| 05-16-13 | | LEC-BLH1 | | Basic Hydraulic Module 1 |
| 05-08-13 | | LMG-411-CS-001 | | R9350 Cooling System (L1) |
| 05-02-13 | | LEC-SR996B | | Safety Module R996B |
| 05-02-13 | | LEC-BLE1 | | Basic Electric Module 1 |
| 03-07-13 | | LEC-SR9250 | | Safety Module R9250 |
| 09-04-12 | | LMG-411-PM-001 | | R9350 Planned Maintenance |
| 08-21-12 | | LMG-411-GS-001 | | R9350 Grease System (L1) |

- Pumps
- Trimming System (Travelling of Liebherr Machines)
- The Can System (Control area network)
- The Air Condition System
- Dampening System

WORKING EXPERIENCE

Company : Liebherr Mining Ghana
Job Title : Electrician
Duration : 16th November 2011 to 1st June 2020

Company :National Service (Tebeso 1 Primary, Ashanti)
Job Title :Teacher
Duration :2010 to 2011

Company : Electricity Company of Ghana Limited
Job Title : Electrician (Attachment)
Duration : 3rd July to 5th October 2009

Job Duties:

Preventive Maintenance

Carried out 250, 500 and 2000 hour preventive maintenance on Liebherr excavators;

During above mentioned maintenance periods, the operator will be asked to park the machine on a level ground, I tag out and lock out the machine to be washed. During the washing I assemble the required tools and gather my electrical schematics (Drawings), back – log from the planning office. After the machine is washed, I remove the tag out and lock out for the machine to travel to PM area. Then I begin my maintenance procedures according to the manufactures specifications.

1. Check all working light inside the valve bank, pump room, engine room and all outside lights.
2. Check the proximity switches by activate the joystick for boom up and down, stick open and closed, bucket open and close.
3. Check the revolving lights on the counter weight and on the cabin top as well as travelling alarm by moving the machine a short distance, forward and backward.
4. Check all five emergency stop switches by activating them to shut down the engine one by one.
5. Check if the pre – lub system is functioning by starting the machine again.
6. Check if the air condition system is really cooling by switching it on.
7. Check if the greasing system is functioning and shuts down automatically.

The maintenance crew will tag out and lock out, and the maintenance will then start fully. With my hand tools, I then open the alternator cover and have a look at the belt: the same applies to the air condition compressor belt, then cover it up if no defect is found. I check for loose connectors around electrical boxes inside the pump room (that is E1036 and E1038).The solenoid on the servo block too is checked for loose contact and defective connectors to flow solenoid (that is Y3m -1, Y3-2, and Y3-3, Y4) then also the power solenoid and break solenoid (Y7). The second speed solenoid is checked (that is Y136 and Box E1035-1 up to E1035-4).It harness and connector are checked for loose and defective by moving the connectors and inspecting them. The main electrical boxes E1003 inside the elevation and E1005 inside the operator’s cabin are cleaned. The electrical boxes E1022-1 for the ladder and E1022-2 for service station are also maintained by opening them, cleaning the inside and checking for loose contacts. The wipers, the horn, the operator seat, the ladder up and down revolving lights are also checked for good operation. These jobs were done by using my hand tools, portable multi-meter and electrical schematics. The maintenance will last for 12 to 18 hours.

Breakdown Repairs

Electrical breakdown repairs on Liebherr excavators. Normal problems encountered are;

1. Problem

Ardent sparking system problems – loose cable or broken cable lug; tripped breaker or blown fuses; faulty fuel valve (electrically controlled)

Solution

Loose cable refixed, broken lugs are replaced; tripped breakers are reset and blown fuses are replaced, but only after rectifying the main problem which is the electric fuel valve, which is replaced with a new one.

2. Problem

Control Area Network (CAN)- Machine will display error codes E311 and E312, which mean that there is a loose or broken cable in the CAN

Solution

Test all CAN cable to find faulty one(s), connect loose cables and/or replace broken ones.

3. Problem

Pump 3 contamination symbols on machine display, which means there is dirt/contamination in the hydraulic oil.

Solution

Hydraulic oil is sucked out of the machine with a vacuum pump, the hydraulic oil sensor is removed, cleaned and placed back, and then the hydraulic oil is changed with new oil.

4. Problem

Cooling system (hydraulic) symbol appears on machine display, which indicates that the hydraulic cooling fan is not functioning.

Solution

Check the resistance value of the solenoid and replace if it is faulty, or join any broken cable from the electrical box to the hydraulic fluid cooling pump

5. Problem

Machine is digging slow, usually indicating a faulty or dirty speed sensor (B12)

Solution

Remove sensor, clean with contact spray, fix back on flywheel by screwing sensor fully into flywheel and then turning it back one-quarter turn.

6. Problem

Ladder cannot lock, caused by faulty or loose relay inside of electrical box (E1022-1)

Solution

Check relay coil, if loose, fix properly, if broken, replace

7. Problem

Machine cannot swing, caused by a faulty swing brake solenoid (Y7)

Solution

Test solenoid with multi-meter and replace if faulty

8. Problem

Machine cannot swing left or cannot swing right, caused by a faulty left (Y150, YR150,) or right (Y155, YR155) direction solenoid

Solution

Test solenoid with multi-meter and replaced if faulty

9. Problem

Coolant temperature high on machine display, indicating coolant fan not functioning

Solution

Check connector to coolant temperature sensor (B2), fix loose connector or replace broken connector

10. Problem

Coolant level low on machine display (machine will shut down automatically)

Solution

Open radiator and check coolant level and top up as necessary

11. Problem

Machine cannot move, caused by faulty hydraulic pump, faulty travelling motor

Solution

Check current going to solenoids, then check each track's solenoid that feeds the hydraulic motor, change them if faulty. If current and solenoids are good, hand over.

Air – condition breakdown repairs

Air-Condition breakdown repairs on Liebherr excavator. Normal problem encountered are;

- **Problem:** Faulty a/c compressor-supply: loose cable or broken cable lug: tripped breaker; or clutch burnt normally with a smell.
Solution: loose cables are fixed, broken lugs are replaced; tripped breakers are reset and blown fuses are replaced, a new a/c compressor is fixed and top up with refrigerant oil and charged to machine standard until cooling is obtained.
- **Problem:** Low pressure on a/c control panel- Normally leakage within the a/c systems could be fittings to the heat exchangers or valves on the a/c compressor or dryer or hose burst.
Solution: Check all if valves and fittings are loose is tighten if is defective is been replaced and if any hose is leaking is replaced and vacuum for a while and top up with refrigerant oil and charged to system required standard to obtained cooling.
- **Problem:** High pressure on a/c control panel, it occurs when there is blockage in the a/c system normally in the heat exchangers, expansion valve, dryer and hoses.
Solution: All the components are checked to rectify the block component and is then replaced with new one. The system is then vacuum for a while, top up with refrigerant oil and charged to required standard to obtained cooling.
- **Problem:** Faulty a/c control switch; it occurs when there is internal short-circuit within the switch
Solution: A new a/c control switch is ordered from store and installed and tested if is ok then the machine is given to production.

Liebherr Machines Worked on

- R944
- R994 B both Back Hoe and Shovel
- R9350
- R9250
- R984C
- R994-200 Series

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