



DALMIA CEMENT (B) LIMITED – Ariyalur

MECHANICAL SOP

Issue No. 02	Rev. No: 00	Effective Date: 01.11.2019	SOP/MEC/057
Issued By: M.R		Approved By: HOD-Mechanical	

MILL GEAR BOX OIL REPLACEMENT

Scope: To replace the gear box oil

Responsibility: Engineer/SH

PPE:

1. Safety helmet
2. Safety shoe
3. Mask
4. Safety goggles
5. Gloves

TOOLS:

1. spanner set
2. Crowbar

Hazard Analysis:

Risks associated:

Spill of oil

Fall of person

Mitigating Measures

Use proper oil trays

Use proper pumping device

Procedure:

- a. Take work permit as per LOTO standards.
- b. Use PPE's while working.
- c. Provide empty barrels, oil pump and hose pipes as per the requirement.
- d. Remove the drain valve dummy plug with the connection of hoses which is connected to the empty barrels.
- e. Pump out the oil in the gear box.
- f. Ensure the gear box oil emptied.
- g. Close the drain valve and circulate the flushing oil in the gear box.
- h. Remove the oil hoses and clean it.
- i. Remove the oil filters and clean it.
- j. Ensure the inlet and outlet pipes are emptied..
- k. Close the drain valve and provide dummy plug.
- l. Fix the all hose pipes and pump connections and filter (rough and fine).
- m. Start the pump and fill the fresh oil.



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- n. Ensure to check the oil leakage at hose connections and gear box doors. If any leakage arrest immediately.
- o. Check the oil level up to required level.
- p. Stop the pump and remove the pump connections.
- q. Clear the work permit for pump.
- r. Start the oil pump in local mode and check the pressures and oil flow.
- s. Clear all the LOTO permits and give clearance to start the drive.

Emergency / Emergency Shut OFF:

If any injury takes place, provide First aid and inform to the Safety department or Call Emergency number 3108/9865152222

Records/Annexure:

Refer LOTO standards/permit & JSA is enclosed below.

JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job: Replacement of Gearbox oil	Date: 01 – 09 - 2014	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job : Section engineer	Supervisor: Section Engineer	Department: Mech.	Section: Raw Mill, Cement Mill Coal mill	Approved by: HOD Mechanical.

Reqd./recommended PPE's : Safety Helmet, Safety shoe, Hand Gloves, Safety goggles. Nose mask.

Sl.No	Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What could go wrong	Corrective action
1	Opening the drain dummy plug	Burn injury	Ensure the valve before dummy should be in close condition.	Spillage of oil & hot oil may cause injury	Use trays
2	Emptying the oil	Injury	Ensure suitable pump pressure and hose connections	Fall /Slippage of men	Use tested hose pipe with proper fitting
3	Opening the hoses	Hand injury	Use proper tools.	Slippage of tools	Visual inspection before use



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S L N o	Activity	Tag / Name of the Equipment									
		Isolation Type									
		Electrical Energy					Other Energy				
1	MILL GEAR BOX OIL REPLACE MENT	Name and Tag for the Equipme nt	361 MD2 Mill Main Motor	361SR1 Classifi er	361FN3 Mill Fan	361AS1u xiliary drive Chain not to be connecte d					
		Name and Tag for the Equipme nt	331BC1 Mill feed Belt	361FN3/ Booster fan	361 LD4 hot gas inlet louwer damper (In closed Conditio n)						
		Name and Tag for the Equipme nt	361SD2 hot gas inlet shut off damper (Inc losed Conditio n)	361LD5 Raw mill fan Out let Louwer Damper (Closed Conditio n)	Triple flap gate						