



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT
ARIYALUR
ELECTRICAL MANUAL**



Issue No. 01	Rev. No: 02	Effective Date: 07.07.2017	ELEC/SOP/005
Issued By: M.R		Approved By: HOD - ELECTRICAL	
SOP for LT Motors Maintenance			

Scope : Describing LT motor maintenance procedure to Electricians

Responsibility : Electrical Engineer

Accountability : Section In-charge

PPE:

1. Nose mask
2. Goggles
3. Rubber Hand Gloves
4. Cotton Gloves
5. Safety shoes
6. Safety helmet

Tools:

1. Megger
2. Multi meters
3. Wire brush
4. Hand Blower
5. Waste Cloth
6. Suitable spanner
7. Hammer
8. Insulated Screw driver

Hazards:

Risk Associated
Electrical Shock
Minor body injury

Mitigating Measures
Tested Electrical Rubber Hand Gloves
Safety shoes, gloves, helmet, goggles

Training needs:

1. Electrical shock recovery Training
2. Emergency preparedness
3. Fire fighting
4. First aid training



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Procedure:

1. Take the Line Clearance for the particular Motor as per ELEC/SOP/003.
2. Clean the Motor with Wire Brush, Hand Blower & Cloth, while cleaning use PPEs like Nose mask, goggles and hand Gloves.
3. Clean the Motor Cooling Fans and Check the Condition of the Cooling Fan, while cleaning use PPEs like Nose mask, goggles and hand Gloves.
4. Discharge the Motor terminals after opening the terminal box Cover.
5. Check the Power Cable Connection Tightness & Condition of Terminal Block with proper tools.
6. Check the Insulation Resistance, Winding Resistance and Inductance of the Motor winding. After checking the Insulation resistances again discharge the motor terminals.
7. Close the Motor Terminal box cover and box up with Silicon Paste to restrict the dust entry.
8. Clean the LPB and Check the Control Wiring Tightness. While cleaning use PPEs like Nose mask, goggles and hand Gloves.
9. Check the Motor and LPB Body earthing.
10. Check the Condition of LPB Actuators and Contacts.
11. Close the LPB Door Properly.
12. Clear the LC as per ELEC/SOP/004.
13. Take Trial if Possible and record all Check point in the concern Check list.

Emergency / Emergency Shut OFF:

1. If electrical shock injury or body injury is there, give First aid and inform to the Safety department or Call Emergency number 3108/9865152222/9750963761.

Records/Annexure:

1. Refer Line clearance certificates.
2. JSA as enclosed below.



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JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job: LT motor maintenance	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electrician	Supervisor: Section Engineer	Department: Electrical	Section:	Approved by:
Reqd./recommended PPE: Nose mask, Goggles, Electrical safety Gloves, Cotton Gloves, Safety shoes, Safety helmet				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Put on PPE, Take Permit				
Cleaning of Motors	Eye irritation of dust.	Wear goggles	Damaged goggles/non standard goggles/ Not wearing goggle	Periodic replacement / Proper training / Follow SOP
	Respiration problem of dust	Wear Nose mask	Damaged nose mask/Not wearing Nose mask	Periodic replacement/ Proper training/ Follow SOP
	Body injury	Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job/ Proper training / Follow SOP
Open the motor terminal box cover to discharge	Electrical shock	Use Tested Electrical Rubber Hand gloves	Damaged Gloves/ Not checked before use	Periodic replacement/ To check for Damage before use
Check the tightness of terminals	Body injury	Use proper tools	Nonstandard /damaged tools	Training for tools handling/ Periodic replacement
		Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job
Check the insulation resistance, winding resistance, Inductance Again discharge the motor Close the terminal box cover	Electrical shock	Use Tested Electrical Rubber Hand gloves	Damaged Gloves / Not checked before use	Periodic replacement/ To check for Damage before use
		Use Calibrated meters	Faulty meters	Meter shall be calibrated periodically
Clean the LPBS	Eye irritation,	Wear goggles	Damaged goggles/non	Periodic replacement



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			standard goggles	
	Respiration problem	Wear Nose mask	Damaged nose mask	Periodic replacement
	Body injury	Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job
Check the control wiring tightness	Electrical shock	Use Tested Electrical Rubber Hand gloves	Damaged Gloves	Periodic replacement
Check the Motor and LPBS body earthing, closing of LPBS, give clearance for trial	Body Injury	Use proper tools	Nonstandard /damaged tools	handling/ Periodic replacement
		Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job