



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

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|---|-------------|-------------------------------|--------------|
| Issue No:02 | Rev. No: 00 | Effective Date: 01.11.2019 | ELEC/SOP/047 |
| Issued By: M.R | | Approved By: HOD - ELECTRICAL | |
| SOP for Trouble shooting in travel drive clutch | | | |

Scope : Trouble shooting in live panel for control scheme only

Responsibility : Engineer/Electricians

Accountability : Electrical Manager

PPE:

1. Nose mask
2. Goggles
3. Safety shoes
4. Safety helmet
5. Rubber hand gloves

Tools:

1. Test lamp
2. Insulated tools
3. Multi meter
4. Line Tester

Hazards:

Risk Associated

Electrical Shock
Minor body injury
Electrocution (Fatal)
Electrical Flash
Electrical Fire

Mitigating Measures

Tested Electrical Rubber Hand Gloves
Safety shoes, gloves, helmet, goggles
Re- fresher Training

Training needs:

1. Emergency preparedness
2. First aid training
3. First aid including CPR training
4. Electrical safety training

Procedure:

1. Use proper PPE.
2. Only Use electrical safety shoes for trouble shooting in live panel and stand on rubber mat.



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3. Use only insulated hand tools.
4. Use tested electrical rubber hand gloves wherever required.
5. Only qualified Technician / Engineer personnel work on clutch.
6. Do not carry out the work in clutch if Place / person are in wet condition.
7. Be alert and keep yourself beside the clutch during opening the clutch cover.
8. After opening the clutch inspect and ensure that there is no live power supply in clutch coil. If required take LOTO and do necessary arrangement for isolation the power supply.
9. Ensure tightness in clutch coil wire connector.
10. Ensure clutch plate gap <0.4mm by peeler gauge.
11. Gap should adjust through adjustable nut.
12. Ensure clutch coil resistance and IR value.
13. After finishing the Job, close covers properly.
14. Switch ON the clutch power supply .
15. Ensure coil voltage 24VDC.
16. If coil volt not came. Then check SMPS and control fuse.
17. If coil voltage 24VDC came, Then should take trial with slow travel drive.
18. Ensure noise, clutch output during slow travel move condition.
19. If nothing observed, then we will take trial through fast travel drive.
20. During fast travel running, slow travel motor should not rotate.
21. If rotate slow drive motor, Then clutch gap should be increased little bit.

Emergency / Emergency Shut OFF:

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

Records/Annexure:

1. JSA as enclosed below.



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JOB SAFETY ANALYSIS:(JSA)

| Job Safety Analysis | Job: Trouble shooting in live panel | Date: | Analysis by: Section engineer | Reviewed by: Section head |
|---|-------------------------------------|---|---|---------------------------------------|
| Title of employee doing job: Engineer / Electrician | Supervisor: Section Engineer | Department: Electrical | Section: Plant | Approved by: HOD |
| Reqd./recommended PPE: Tested Electrical rubber hand gloves, Safety shoes, Safety helmet, Safety Goggle | | | | |
| Sequence of Basic Job Steps | Potential Hazards | Recommended Safe Job Procedure | What Could Go Wrong | Corrective Action |
| Opening of live panel cover | Body injury | Use suitable tools | Tool may be damaged | Inspect before use |
| | Panel flash over and Burned injury | Keep yourself beside the panel | Not follow the procedure | Tool box talk/Proper Training |
| | | Wear safety Goggles | Damaged goggles/non standard goggles/ Not wearing Goggle. | Periodic replacement/ Proper training |
| Trouble shooting | Short circuit. | Use Insulated tools | Insulation may damage. | Inspect before use |
| | | Testing tools to be hold straight | Not follow the procedure | Tool box talk/SOP Training |
| | Panel flash over and Burned injury | Wear safety Goggles / Electrical glove | Damaged goggles/non standard goggles/ Not wearing Goggle. | Periodic replacement/ Proper training |
| | | Power conductor to be covered by shroud | Failed to inspect or cover | Inspect before start the job |