



DALMIA CEMENT (B) LIMITED – ARIYALUR



MECHANICAL SOP

Issue No. 01	Rev. No: 02	Effective Date: 17.10.2017	SOP/MEC/121
Issued By: M.R		Approved By: HOD Mechanical	
SOP - JSA for Hydraulic Jack Operation			

Scope: Hydraulic Jack Operation

Responsibility: Fitter

Accountability: Mechanical - Section Engineer

PPE:

1. Safety helmet,
2. Safety shoe,
3. Mask.
4. Gloves – Cotton knitted
5. Ear Plug
6. Safety belt
7. Goggles

TOOLS:

1. Pipe wrench.

Hazard Analysis:

Risks associated:

Oil Spillage

Tool Slip

Mitigating Measures

Use Nose Make, Goggles & Ear Plug.

Use appropriate tools.

Hydraulic Jack Operation:

- a) Provide a level and solid support for the entire jack base area
- b) The entire jack saddle must be in contact with the load. Movement of the load to be in the same direction as jack plunger.
- c) Never place any part of your body under the load. Ensure the load is on a solid support before venturing under.
- d) Remove the jack handle when it is not being used.



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- e) Provide a solid support for the entire cylinder base area. Use cylinder base attachment for more stability.
- f) The entire cylinder saddle must be in contact with the load. Movement of the cylinder must be parallel with the movement of the load.
- g) Do not use cylinder without saddle. This will cause plunger to "mushroom". Saddles distribute load evenly on the plunger.
- h) Do not use multiple connectors for removing or carrying the loaded.
- i) As with jacks, never place any part of your body under the load. Load must be on cribbing before venturing under.
- j) Always protect cylinder threads for use with attachments.
- k) Keep hydraulic equipment away from open fire and temperatures above 65 °C (150°F).
- l) Always read instructions and safety warnings that come with your hydraulic equipment.
- m) Don't override the factory setting of relief valves. Always use a gauge to check system pressure.
- n) Don't use handle extenders. Hand pumps should be easy to operate when used correctly.
- o) Close release valve finger tight. Using force will ruin the valve.
- p) Fill pump only to recommended level. Fill only when connected cylinder is fully retracted.
- q) Use only genuine hydraulic oil. Wrong fluid can destroy seals and pump and will render your warranty null and void your guarantee.
- r) Clean both coupler parts before connecting. Use dust caps when coupler parts are not connected.
- s) Detach cylinder only when fully retracted or use shut-off valves or safety valves to lock-in cylinder pressure.
- t) Keep hoses away from the area beneath loads.
- u) Don't kink hoses. Bending radius should be at least recommended height. Don't drive over or drop heavy objects on hoses.



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- v) Don't lift hydraulic equipment by the hoses.
- w) Never allow the cylinder to be lifted off of the ground through the couplers.



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Job Safety Analysis:

Job Safety Analysis	Job: Hydraulic jack operation	Date: 01/09/2014	Analysis by: Section Engineer	Reviewed by: section manager
Title of employee doing job: Fitter	Supervisor: Section Engineer (Mech.)	Department: Mechanical	Section: Packing Plant	Approved by: HOD Mechanical

Req'd /recommended PPE:

Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Hydraulic cylinder placing	Fall down the cylinder.	Provide a solid support for the entire cylinder base area. Use cylinder base attachment for more stability.	Not put the jack un proper level and solid support for the jack base	Before check the solid support for the cylinder base area.
Carrying load / removing the object	Body injury	Single connectors are used for removing / Carrying the load.	No. of multiple connectors used between the jack & load	Do not use multiple connectors for removing or carrying the loaded