



DALMIA CEMENT (B) LIMITED

ARIYALUR

MECHANICAL

Issue No. 02	Rev. No: 01	Effective Date: 22-07-2020	SOP/MECH/14
Issued By: M.R		Approved By: HOD (Mech)	
SOP-JSA FOR COMPRESSOR MAINTENANCE			

Scope : This SOP is applicable to Safe working for Compressor Maintenance.

Responsibility : **Section Engineer – Mech.**

Accountability : **Section Manager – Mech.**

PPE:

1. Helmet,
2. Safety shoe,
3. Ear plug,
4. Safety goggles.
5. Rubber hand Gloves.
6. Nose mask.

Tools:

1. Box Spanner set
2. Ring Spanner set
3. Waste oil collecting tray.
4. Waste oil collecting drum
5. Waste for cleaning

Hazards:

Risks associated

Mitigating Measures



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Body injury

1.Safe and tested tools and tackles

2. on job training

Training needs:

1. Fire fighting
2. Emergency preparedness
3. Lubrication handling
4. Assembly procedure

Procedure:

1. Take the Electrical & pneumatic line clearance for the compressor
2. The line clearance paper should be with the person who is working in the site.
3. Use PPE'S while working
4. Close compressor delivery valve



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5. Release air from the compressor totally, by opening the moisture traps (manual) to avoid spilling of air under pressure
6. Ensure use of hand gloves
7. Check the compressor internals if any oil leak or dust accumulation is there
8. If any leakages arrest the leak by tightening of bolts or replacement of required spares like O rings etc ..
9. Check the separate element if the **DP < 0.8** is ok or if greater than the value replaced with new one.
10. Based on oil analysis report we have to replace the oil or top up.
11. If required change the oil filter by using the proper tools and oil collecting tray.
12. Clean the after cooler and oil cooler by using the pneumatic air.
13. Clean the drier heat ex changer by using of pneumatic air.
14. Refill / top up with roto/coolant altar inject lubrication oil up to the maximum level as marked in the oil level indicator and avoid any spillage of oil
15. Re-fix oil filling plug, ensure no leakage.
16. Check the air filter (if need replaced or cleaning with 2 Bar pressure)



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17. Open delivery valve and close moisture traps (manual)

18. Clear the line clearance and inform to the CCR.

19. Return the permits to the concern engineer.

Emergency / Emergency Shut OFF:

1. If body injury is there, First aid will be given and inform to the Safety department or Call Emergency number 3108/ 9865152222

Records/Annexure:

1. JSA is enclosed below.
2. Isolation Matrix.

JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job: Compressor maintenance	Date: 12 – 09 - 2012	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job: Section Engineer	Supervisor: Section Engineer	Department: Mech.	Section: UTILITY	Approved by: HOD Mechanical
Req'd/recommended PPE: Safety helmet, Safety shoe, Safety goggles, Ear plug, nose mask & Rubber hand Gloves.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action



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Valve operation	Hand injury / Fatal	Closed the out let valve and open the drain (manual) valve	System will be pressure raised it will blasting the system	Ensure valve condition before start the work
Open all the doors	Leg and hand injury	Use proper PPE and use the door opening key and spanner	Door will be fall down Tools will be slip Air filter will be fall down	Ensure tools and tackles conditions Proper handling of air filter
Removing of Air filter	Leg and hand injury			
Cleaning of Air filter	Dust emission	First open the lock nut and use the both hands to remove the filter	Dust inhalation	Ensure using of nose mask and use low pressure air to clean the filter
Re fixing of Air filter	Leg and hand injury	Use proper PPE and use 2 bar pressure to clean the air filter		Training to them to handling the material and using of recommended tools
Top up the lubricant oil	Leg injury	Using both hands to re fixing the air filter and lock the nut with using of recommended tools	Air filter will be fall down	Before opening the oil filling plug use the tray kept below the tank area
		Use proper tray and funnel for handling the oil	Slip and oil spillage	Use the faunal to fill up the oil
Closed the doors	Leg and hand injury	Use faunal to fill up the	Slip and oil spillage	Ensure tools and tackles



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Valve operation	Hand injury	oil use the door opening key and spanner open the out let valve and closed the drain (manual) valve	Door will be fall down Tools will be slip System will be pressurized and material damaged	Ensure the valve condition after the work completion
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Isolation Matrix:

SL No	Activity			Isolation Matrix for Utility & General Equipment.							
				Isolation Type							
				Electrical Energy				Other Energy			
1	Compressor	Name and Tag for the Equipment	Isolate the Related compressor					Isolate the AIR valve & drain the air.			