

| Customer Details | | |
|--|---------------------|-------------|
| VEDANTA LIMITED | <i>Contact:</i> | Kunal Singh |
| PLOT SURVEY NO.44/4 & 45/4, AMONA VILLAGE,BICHOLIM TALUKA | <i>Report date:</i> | 20-08-2017 |

Atlas Copco's **Compressor Technique Service Division** provides a complete range of aftermarket services with the aim to maximize customers' productivity to increase uptime and to reduce the cost of ownership. The division focuses on spare parts supply, professional service, and optimization and connectivity products. With 9 regional Sales & Service offices and around 70 dealerships strategically located throughout the country, Atlas Copco is just one call away to cater your service needs. Nationwide, Atlas Copco has a team of over 200 highly trained direct service engineers with vast experience of working on all models of compressed air equipment

Service Products



Service Plan : Service Plan covers all regular maintenance by certified and trained Atlas Copco service engineers and / or supply of genuine parts and lubricants as per the original manufacturer recommendations in a pro-active manner as it should be. This is the best way to lower the risk of unexpected problems allowing you to optimize your production process.



Airscan : Dedicated Energy consultants carry out complete Airscan activity consisting of flow check, leak check, power check, air quality check, maintenance assessment and provide a detailed report including cost analysis, graphs and a list of recommendations for system performance improvement.



Energy Saver / Optimizer / Central controller : Our range of ES Central Controllers will enable you to link all compressors and dryers, to lower your overall pressure band, to eliminate the need for higher working pressure and to optimize the compressor mix at all times and in turn save energy. 1 bar working pressure reduction results in 7% energy saving and further 3% through leak reduction.



Energy Recovery : With ER, energy is recovered from wasted heat from the compressor and reused in production cycle. Energy 50% to 94% of motor KW can be recovered & used to heat industrial application water.

SMARTLink : SMARTLINK gathers, compares and analyses data through GPRS connectivity. This allows you to carefully plan and prepare for service interventions. When needed, it sends out warnings in time. An additional, energy monitoring option can be obtained. As a result, service efficiency increases, precious time is gained and money is saved.



AIRNet : AIRNet is an easy & fast to install, corrosion-free, leak proof piping system which reduces cost of ownership for the compressed air piping network. AIRnet pipes are standard pre-painted. AIRnet is adaptable to any existing pipe work. Future extensions can simply be plugged in.

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| Equipment | | | |
|-------------------------|----------------------|----------------------------|---------------------|
| <i>Equipment:</i> | G132-8.5W WITH ABB M | <i>Running Hours:</i> | 23 hours |
| <i>Serial Number:</i> | PNA631185 | <i>Load Hours:</i> | 16 hours |
| <i>Visit date:</i> | 20-08-2017 | <i>Order Number:</i> | 541724 |
| <i>Contract Number:</i> | | <i>Accumulated Volume:</i> | 1000 m ³ |
| | <i>PO number:</i> | 70A/COMM | |

Work Comments

Visit type: Commissioning (Compressor 2)

1. Checked incoming supply cables size, found ok.
2. Checked earthing cable size found ok.
3. Removed all silica bags.
4. Checked water and air piping, found ok.
5. Checked and Adjusted Over load Relay setting.
6. Checked oil level, found ok.
7. Removed all transportation supports.
8. Started the compressor and checked motor direction, found ok.
9. Noted all part nos and serial nos.

Compressor type: G 132 W
Serial no: PNA 631185
Max working pressure: 8.5 bar

Controller:
Make: Atlas Copco
Type: Elektronikon MK 5 Graphic
Part no: P 1900520013
Serial no: SRN 1649A00013

Expansion Module:
Part no: P 1900520033
Serial no: SRN 1642A01312

Control Panel
Type: G132W/CP240,MKV
Serial no: ACSPL-16480-9096582615
Service Diagram no: 9096582653- REV.01

Compressor Motor
Make: ABB
Type: M2BAF315SMB4
Part no: 9096518200
Serial no: 3G2J16520090071479

Element
Part no: 1616734582
Serial no: AIA 8211875

Air receiver
Part no: 9095354100
Serial no: V 17010405

After cooler
Type: Tube and shell type
Part no: 1621205008
Serial no: CH-6536

Oil cooler
Type: Tube and shell type
Part no: 1621205008
Serial no: CH-6534

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Work Comments

Oil cooler

Type: Tube and shell type

Part no: 1621205008

Serial no: CH-6535

10. Started the compressor and took 4 hours trial, Found all working parameters are within limit.

11. Checked leakages, not found any.

12. Checked motor current, found ok.

13. Explain the operation of controller to the customer.

14. Explain maintenance schedule to the customer. Recommended to the customer to follow maintenance schedule to run the compressor in healthy condition.

15. Recommended to the customer to maintain water quality as per RS index to run the compressor in healthy condition.

16. Done SPM test, found all readings are within limit.

17. Set load unload pressure

Load pressure : 7 bar

Unload pressure : 7.5 bar

Customer Comments: The compressor is not loading & unloading while it in Remote Start stop, Please resolve this issue on priority.

NOTE: In case of any failure happens due to water quality, Atlas Copco will not be responsible.

Recommended Repair

Estimated work hour:

Time Confirmation

| Date | Service Engineer | Activity Type | Hour/km |
|------------|------------------|---------------|---------|
| 18-08-2017 | Faiyaz Shaikh | 10 | 8.00 H |
| 18-08-2017 | Faiyaz Shaikh | 30 | 3.00 H |

Material Confirmation

| Part Number | Part Description | Quantity unit |
|-------------|------------------|---------------|
|-------------|------------------|---------------|

Work Done

Operations

- ☒ Give machine description
- ☒ Record machine serial number
- ☒ Record elements part nr & serial nr
- ☒ Record all machine options
- ☒ Record motors part nr & serial nr
- ☒ Record cubicle part nr & serial nr
- ☒ Check machine condition after transport
- ☒ Remove transport locking bolts
- ☒ Check all electrical wiring
- ☒ Check torque main motor cables (cubicle)
- ☒ Check main motor overload setting
- ☒ Check fan motor(s) overload setting
- ☒ Check connection of transfo
- ☒ Check machine environment
- ☒ Check condensate drains
- ☒ Record all required dryer data
- ☒ Record all required motor data
- ☒ Switch on voltage/push reset
- ☒ Check if LED's & displays light up
- ☒ Check main motor rotation sense
- ☒ Check fan motor rotation sense (OC)
- ☒ Check for oil/air leaks
- ☒ Check the drive shaft seal
- ☒ Fill element (1 lit) with oil (unloader)
- ☒ Record all data and settings
- ☒ Check SPM readings
- ☒ Advised customer to dispose Hazardous Waste (used oil oil soaked Cotton waste used filters e - waste etc.) thru Pollution
- ☒ Control Board authorised agency

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Work Done

Operations

- ☒ Reset the Elctronikon after Preventive Maintenance
- ☒ Make Sure the Service Plan is properly set in Electronikon
- ☒ Check Software Version of Connectivity Device
- Is Storage Procedure Explained in detail to the Customer

Measurement Points

| Counter | Current Value | Unit | Date |
|-------------------------------|---------------|------|------------|
| Running hours | 23 | H | 20-08-2017 |
| Loaded hours | 16 | H | 20-08-2017 |
| Motor start | 48 | # | 20-08-2017 |
| Module time | 61 | h | 20-08-2017 |
| Load relay | 140 | # | 20-08-2017 |
| Compressor outlet temperature | 40 | °C | 20-08-2017 |
| Working pressure | 7 | Bar | 20-08-2017 |
| Ambient temperature | 30 | °C | 20-08-2017 |
| DP-airfilter | -0.0013 | Bar | 20-08-2017 |
| Outlet temperature element 1 | 83 | °C | 20-08-2017 |
| Oil injection pressure 1 | 6.1 | Bar | 20-08-2017 |
| DP-oilseparator 1 | 0.16 | Bar | 20-08-2017 |
| Motor NDE temperature | 18 | °C | 20-08-2017 |
| SPM Motor DE | 15 | dB | 20-08-2017 |
| SPM Motor NDE | 18 | dB | 20-08-2017 |
| SPM Element - P1 | 19 | dB | 20-08-2017 |
| SPM Element - P3 | 17 | dB | 20-08-2017 |
| SPM Gearbox | 21 | dB | 20-08-2017 |
| Motor Current U1 | 163 | A | 20-08-2017 |
| Motor Current V1 | 161 | A | 20-08-2017 |
| Motor Current W1 | 160 | A | 20-08-2017 |
| Coolwater in | 30 | °C | 20-08-2017 |
| Coolwater out | 38 | °C | 20-08-2017 |

| Customer Confirmation | Service Engineer Confirmation |
|---|---|
|  |  |
| Signed by Santosh Dash at 24-08-2017 17:03:04 | Signed by Faiyaz Shaikh at 24-08-2017 17:03:04 |