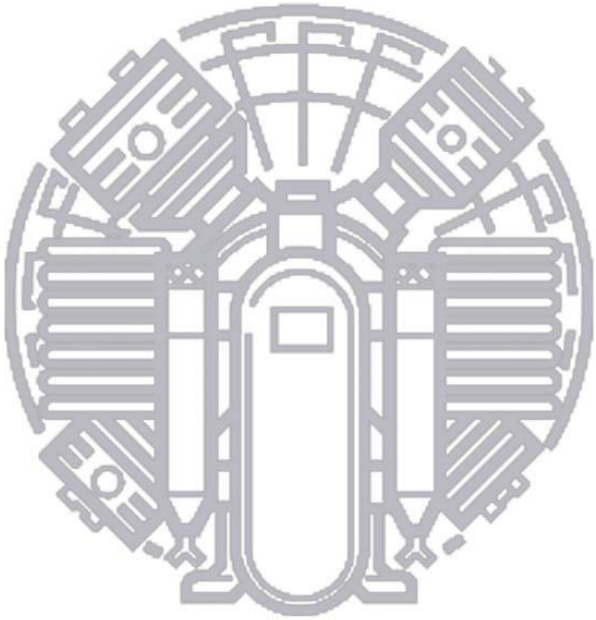
JORDAIR/BAUER
Service Manual

Breathing Air Compressor
Maintenance Log



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SAFETY RELEASE

The following document is prepared to ensure safety of operators and service technicians. The information applies to all types of high pressure breathing air compressors.

- All compressors should have a cycle counter for the drain system to provide accurate tracking for actual pressure cycles of the inter-stage and final oil and water separator. All separators have cycle life limits and failure to abide by this safety issue can result in a catastrophic failure of the separator.

- Contact the factory for the recommended cycle life limit and replacement schedule for these parts. Correct maintenance of breathing air systems ensures operator safety.

- A compressor should always have an operation cycle of 20 minutes or longer to avoid short compressor and auto-drain cycles. The compressor fill station should be sized to fill enough cylinders that the required air for filling the SCBA cylinders is equal to or more than the compressor capacity in 15 minutes of operation.

- Never operate a high pressure compressor in an unheated building where temperatures can reach 0C or lower. A water saturated filter cartridge can freeze and expand up to 10% of its diameter and cause the chamber to be over stressed and fail.

- Always ensure daily compressor checks when a remote operation switch is located at the filling position of SCBA or other breathing air cylinders.

- All breathing air compressors are to be checked operated and confirmed safe for operation each day to ensure correct operation.

- High pressure tubing downstream of the compressor is to be sized to ensure unrestricted air flow and avoid short operational cycles. Short cycles can occur from long distance and undersized tube runs.

- All compressor operators and service personnel are to be factory trained and maintain a current certificate of competence.

Following these safety recommendations will keep the compressor operators and service technicians safe and secure.

FILTER SAFETY AND INSPECTION METHODS

The safe use and maintenance of high pressure systems is an important factor to ensure both operator and service personnel safety. Of prime importance is the compressor filter system that consists of the final oil/water coalescing filter and the purification chambers. As part of this system are the check valve after the final oil/water separator, the pressure holding valve and auto-drain system.

All filters and separators that have a pressure change or cycle have to be checked for any sign of deterioration.

The other important factor is ensuring the compressor avoids short operational cycles and shortens the service life of the components. The hour meter and the filter system cycle counter monitor this. Typically the cycle counter value should be about 4 to 4.5 times the number of operating hours.

Filter systems are not designed for environments where chlorides or other contaminants may be in the ambient air. Some alloys used in the filter systems are more susceptible to stress cracking and corrosion. Preventative maintenance is critical to ensure operator safety.

INSPECTION AND MAINTENANCE:

1. Ensure the filter service and cartridge changes are done every 6 months or when the filter cartridge life is reached. Service is required according to whichever comes first. The CSA standard calls for service every 6 months.
2. Service the check valve to make sure it is operating correctly and no short compressor operator cycles are occurring.
3. Verify the cycle counter number against the hour meter for the correct ratio of cycles per hours of operation.
4. Do a very careful cleaning of the final separator and filter chambers in advance of an inspection.
5. Inspect the separator relief valve threads for wear, do not install a separator cap using the relief valve. Annual testing and resetting of all relief valves on the final separator and fill stations is recommended.
6. Use a light and do a careful inspection of the oil/water separator and the filter chambers to look for any sign of surface cracking or corrosion.
7. If any sign of surface cracking or corrosion is evident the chamber must be removed from service and a new CRN certified chamber installed in its place.
8. Both the upper and lower caps must be removed in order to do a full and complete inspection of the chamber.
9. If anything unusual is found, send a photo to the factory for guidance prior to putting the item back in service.
10. All filter systems and the components within have a rated life and pressure cycle limit. This information is available from the specific manufacturer.

Within the industry all pressure components are designed to a standard. Designs are normally done to normal and standard conditions. Subjecting pressure components to environmental chemicals in the air or temperatures below freezing can have a life reducing effect.

This also applies to excessive pressure cycles. The larger the pressure change the shorter the component cycle life. It is recommended that filter component selection should have a design pressure rating above the system operating pressure. This improves the pressure component safety factor as well as increasing cycle life potential.

Proper inspection, service and maintenance will help to keep these systems safe to operate and provide safety to the operational personel.

Model _____

Serial no. _____

Jordair Job no. _____

Year of mfg. _____

Date of commissioning _____

Warranty period _____

Phone # service hotline _____

STAMP (Dealer) Date

Sticker dealer data

JORDAIR COMPRESSORS INC.

TECHNICAL SPECIFICATION AND TEST REPORT

SOLD TO: SAMPLE

SHIPPED TO:

Date Prepared:

Sales Order No: _____

Application: _____

JORDAIR SALESPERSON: _____

Test Date: _____

Shipping: Air ☐ Ground ☐ Prepaid ☐ Collect ☐

Crate: Standard ☐ Export ☐

MECHANICAL SECTION

	BASE DATA	TEST DATA		BASE DATA	TEST DATA
Compressor Model:			Compressor Serial No:		
Compressor: RPM			Compressor Chrg - SCFM		
Suction: PSIG			Inlet Filter Element No:		
1st Stage: PSIG			Separator Element No:		
2nd Stage: PSIG			1st Filter Cartridge No:		
3rd Stage: PSIG			2nd Filter Cartridge No:		
4th Stage: PSIG			3rd Filter Cartridge No.		
5th Stage: PSIG			CO Monitor No:		
Oil: PSIG			Moisture Monitor No:		
Low Oil PSIG Shutdown:			Auto Drain No:		
High Temp.Shutdown - F°			Drain Solenoid No:		
Final Shutdown: PSIG			Hour Meter No:		
			Motor Pulley No:		
Max. Working: PSIG			Motor Bushing No:		
Final Relief Valve Model			Drive Belt Size:		
Final Relief Valve Set Pressure: PSIG			Compressor Oil - LITRES Compressor Oil (Type):		
PMV Setting: PSIG			Compressor Oil Level:		
System Leak Test At Operating PSIG:			Compressor Oil Filter Autodrain Cycle Counter		

ELECTRICAL SECTION

	BASE DATA	TEST DATA		BASE DATA	TEST DATA
Motor Manufacturer:			Control Volts		
Model:			Control Current - AMPS		
Motor Base Type:			PLC Model#		
H.P.:			PLC Chip #		
Volts:					
Full Load Current - AMPS			L1: L2: L3:		
Motor Phase:					
Hertz					
Serial No:					
Speed - RPM					
S.F.					

Filter labels, please note that all filters must be **changed as a set**.

	Separator	First Filter	Second Filter	Third Filter
Cart No.	1. _____	2. _____	3. _____	4. _____
Cart Life Hrs.	1. _____	2. _____	3. _____	4. _____
O-Ring No.	1. _____	2. _____	3. _____	4. _____
Back-Up Ring No.	1. _____	2. _____	3. _____	4. _____
Design Pressure PSI	1. _____	2. _____	3. _____	4. _____
Test Pressure PSI	1. _____	2. _____	3. _____	4. _____

COMMENTS:

COMPRESSOR ASSEMBLED BY: _____ DATE: _____

COMPRESSOR INSPECTED BY: _____ DATE: _____

COMPRESSOR TESTED BY: _____ DATE: _____

DATE REQUESTED: _____

SCHEDULED TO SHIP: _____

Introduction form for the Operator

By adding themselves to this list, the person that signs it confirms having been given a yearly introduction/instruction about the function and operation of the compressor unit.

Furthermore they have been informed about the relevant safety rules and regulations (CSA)

This form is to be kept safely with the other company documents (acceptance documentation, instruction manual) and is to be produced if requested by supervisory authorities (CSA/Worksafe, OH&S)

Seq-no.	Surname	Name	Place	Date	Signature	Instructor's name/company
1						
2						
3						
4						
5						
6						
7						
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11						
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13						
14						
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16						
17						
18						
19						
20						

Table of Contents

1. Check oil level, run up machine, confirm proper operation & shutdown pressure (Weekly, prior to operation)

Name of person in charge	Compressor operating hours*	Refilled oil quantity	Date

* According to “Hour Meter” or other source

Check oil level, run up machine, confirm proper operation & shutdown pressure (cont'd)

Name of person in charge	Compressor operating hours*	Refilled oil quantity	Date

* According to "Hour Meter" or other source

Check oil level, run up machine, confirm proper operation & shutdown pressure (cont'd)

Name of person in charge	Compressor operating hours*	Refilled oil quantity	Date

* According to "Hour Meter" or other source

Check oil level, run up machine, confirm proper operation & shutdown pressure (cont'd)

Name of person in charge	Compressor operating hours*	Refilled oil quantity	Date

* According to "Hour Meter" or other source

2. Cartridge & Oil change (Every 6 months or as required)

Name of person in charge	Compressor operating hours*	Air Test	Date

* According to “Hour Meter” or other source

Cartridge change (cont'd)

Name of person in charge	Compressor operating hours*	Air Test	Date

* According to "Hour Meter" or other source

Cartridge change (cont'd)

Name of person in charge	Compressor operating hours*	Air Test	Date

* According to "Hour Meter" or other source

Cartridge change (cont'd)

Name of person in charge	Compressor operating hours*	Air Test	Date

* According to "Hour Meter" or other source

3. Every 500 Operating hours / 6 months / actual operating hours: _____

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 16		
Oil type change:_____		
Installation of maintenance kit …..-a		
Breathing air test		
Miscellaneous		

4. Every 1000 Operating hours / every 2 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 17		
Oil type change:_____		
Installation of maintenance kit …..-ab		
Breathing air test		
Auto-drain service & service/replace check valve		

5. Every 1500 Operating hours / every 3 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 17		
Oil type change:_____		
Installation of maintenance kit …..-a		
Breathing air test		
Miscellaneous		

6. Every 2000 Operating hours / every 4 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 16		
Oil type change:_____		
Installation of maintenance kit …..-abc		
Breathing air test		
Auto-drain service & service/replace check valve		

7. Every 2500 Operating hours / every 5 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 17		
Oil type change:_____		
Installation of maintenance kit …..-a		
Breathing air test		
Miscellaneous		

8. Every 3000 Operating hours / every 6 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 17		
Oil type change:_____		
Installation of maintenance kit …..-ab		
Breathing air test		
Auto-drain service & service/replace check valve		

9. Every 3500 Operating hours / every 7 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 16		
Oil type change:_____		
Installation of maintenance kit …..-a		
Breathing air test		
Miscellaneous		

10. Every 4000 Operating hours / every 8 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 17		
Oil type change:_____		
Installation of maintenance kit …..-abc		
Breathing air test		
Auto-drain service & service/replace check valve		

11. Every 4500 Operating hours / every 9 years / actual operating hours: _

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 17		
Oil type change:_____		
Installation of maintenance kit …..-a		
Breathing air test		
Miscellaneous		

12. Every 5000 Operating hours / every 10 years / actual operating hours: _____

Maintenance work	Done	Date / Signature
Compressor maintenance acc.to schedule chapter 16		
Oil type change:_____		
Installation of maintenance kit …..-ab		
Breathing air test		
Auto-drain service & service/replace check valve		

13. Filling hoses

Half-year	Maintenance Work	Date / Signature
1	Hose test according to TRG 402/8.2	
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
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14. Every 5 years (Pressure vessels)

Year	Maintenance Work	Date / Signature
5	Internal inspection of pressure vessels	
10		
15		
20		

15. Every 10 years (Pressure vessels)

Year	Maintenance Work	Date / Signature
10	Water pressure test of pressure vessels	
20		

16. Load Cycles (Pressure vessels)

Date	Operating hours	Load Cycles*	Total Load Cycles

* Load cycles are all dynamic pressure load changes in the pressure vessel; refer to operating manual

17. Maintenance schedule breathing air compressor units

Service and inspection acc. to calendar:
Service and inspection acc. to operating hours:
Change filter cartridge
Change gaskets, o--rings included in maintenance kit
additional gaskets, o--rings (not included in maintenance kit)
Change intake and pressure valves at the latest
Change intake filter cartridge
Change piston liner
Change sintered metal filters
Change v--belt(s)
Check automatic condensate drain adjustment, pressure loss
Check cylinders, piston rings, change if required
Check function of automatic condensate drain
Check function of monitoring devices (if fitted)
Check intake and pressure valves
Check intermediate pressures and oil pressure
Check oil level, oil change, oil filter change
Check pistons
Check piston liner
Check pressure switch, pressure maintaining valve
Check pressure vessels, record no. of load cycles
Check temperature sensors, replace if required (if fitted)
Check tightness of safety valves
Check v--belt(s) and fan wheel
Clean separator, empty condensate collecting tank
Functional test, final inspection, test run
Leak test
Make test report, apply test stickers
Service automatic condensate drain, check function, replace worn of defective parts
Visual check of coolers

The service interval starts from the beginning after the last maintenance work in this list

1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years
500	1000	1500	2000	2500	3000	3500	4000
X	X	X	X	X	X	X	As required
X	X	X	X	X	X	X	X
							As required
	X		X		X		X
X	X	X	X	X	X	X	X
			X				X
X	X	X	X	X	X	X	X
							X
X	X	X	X	X	X	X	X
							As required
X	X	X	X	X	X	X	X
							X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X		X		X		X	
X	X	X	X	X	X	X	X
							X
			X				X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
			X				X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
	X		X		X		X
X	X	X	X	X	X	X	X

18. Modifications

Designation / Description	Part Numbers	Date / Signature

19. Replaced Parts

Designation	Part Number	Manufacturer's Part Number		Date / Signature
		Old	New	

Designation	Part Number	Manufacturer's Part Number		Date / Signature
		Old	New	

Dear Customer,

We are happy to give you advice on any questions regarding your JORDAIR/BAUER compressor and help as soon as possible with any arising problems.

JORDAIR COMPRESSORS INC.
Toll Free: 1-800-940-8101
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NOTES: