



BALTIMORE AIRCOIL COMPANY

Baltimore Aircoil International nv › Industriepark, Zone A › 2220 Heist-op-den-Berg › Belgium › www.BaltimoreAircoil.eu

Bearing Failure Checklist

The questions below are intended for BAC to determine the root-cause of the bearing failure. Below table has to be filled in prior to removing the bearings. (*) is required

1.	When was the unit delivered (*)/...../...									
2.	When was the unit put into operation (*)/...../...									
3.	How was the failure noticed (*)	Vibrations / noise / other:									
4.	How many operating hours does the bearing have before failure? Or when was the failure noticed (*) HRS/...../...									
5.	Send pictures showing the general condition of the unit, and in detail the shaft and bearings? (*)										
	* Is the shaft worn out?	YES / NO									
	* Are the locking collars properly secured?	YES / NO									
	* Are there any signs of rust, dirt,... on the bearings and shaft?	YES / NO									
6.	With which interval are the bearings being greased? (*) HRS									
7.	What lubricant is used? (*)										
8.	What's the power consumption of the fan motor? Measure current and voltages on all 3 phases.										
	<table border="1"> <tr> <td>Phase 1 :</td> <td>V</td> <td>A</td> </tr> <tr> <td>Phase 2 :</td> <td>V</td> <td>A</td> </tr> <tr> <td>Phase 3 :</td> <td>V</td> <td>A</td> </tr> </table>		Phase 1 :	V	A	Phase 2 :	V	A	Phase 3 :	V	A
Phase 1 :	V	A									
Phase 2 :	V	A									
Phase 3 :	V	A									
	Note: if a 2 speed motor is used, measure consumption at low & high speed.										
9.	Has the current increased between time of bearing failure & start-up unit?	YES / NO									
10.	Is (or has) the unit been vibrating excessively? (if yes verify below q's) (*)	YES / NO									
	a. Is the fan hitting the housing,	YES / NO									
	b. If a VFD is used, do vibrations increase together with fan speed?	YES / NO									
	c. Are there certain frequencies at which the unit vibrates? If yes; which frequencies:	YES / NO Hz									
	d. Remove the belts and run the motor. Is the motor still vibrating?	YES / NO									
11.	Rotate the shaft/fan by hand (belts loose). Does it rotate freely (without damage)? (*)	YES / NO									
12.	Are these the originally installed bearings (in BAC factory)? (*)	YES / NO									
	If the bearings have been exchanged, by whom & when?										
13.	What is the belt tension? With which interval is the tension verified & is it being documented? N HRS									
14.	Verify alignment of the sheaves, is this within tolerance? (*)	YES / NO									
15.	If multiple units are installed. Does the problem occur on all units? (*)	YES / NO									
	If no, what's the difference between the units? Do all units have the same operating hours (if not what's the ratio)?										

Before disassembling the bearings make sure to mark them according to below details:

- **Mark the direction of the belt tension / shaft load on the bearing (outer ring). (*)**
- **Place mark the bearing(s) whether it's the upper or lower bearing (*) (vertical shaft units) or drive end / non-drive end (horizontal shaft units).**
 - A. For vertical installed shafts / bearings: Also mark on the bearing what the bottom & top of the bearing is.**
 - B. For horizontal installed shafts / bearings: Also mark on the bearing at what side the drive set (sheave) is installed.**