Hi-Speed Industrial Service
7030 Ryburn Dr
Millington, Tn 38053
901-873-5300

AC Inspection as Found

Arkansas Lime Company
600 Limedale Rd
Batesville, AR 72501

FolderID: 102804
FormID: 20117471

AC Inspection - Rev. 2

Location:	LITTLE ROCK MOTOR SHOP
Serial Number:	AF943097
Description:	150 HP BALDOR 1780 RPM

Hi-Speed Job Number:	102804
Manufacturer:	Baldor
Product Number:	SPEC: 18P030Z176H2
Spec/ID #:	AF943097
Serial Number:	AF943097
HP/kW:	150 (HP)
RPM:	1780 (RPM)
Frame:	445TS
Voltage:	460
Current:	167 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.00
Enclosure:	TEFC
# of Leads:	3
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	05/02/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	Yes
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **3 - High** **7 - Good**

Overall Condition

1.	Report Date	**05/02/2024**

2. Nameplate Picture P37

3. Photos of all six sides of the machine. P45

	4.	Describe the Overall Condition of the Equipment as Received ***Stator windings are blown and requires rewind. Opposite drive end needs bushing installed.***	
Initial Mechanical/Electrical			
	5.	Does Shaft Turn Freely?	**(Y) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**0.0015 Inches**
	9.	Assembled Shaft End Play	**0.001 inches**
	10.	Air Gap Variation <10%	**No Provisions for measurement**

	11. Lead Condition		P69

	12. Lead Length	**18 Inches**	
●	13. Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
	14. Lead Numbers	**1-3**	
	15. Frame Condition	**Pass**	
●	16. Fan Condition	**(P) Pass**	P115

	17. Broken or Missing Components	**Yes**	P122

Fan shroud bolts.

ODE grease fitting not lined up.

Initial Electrical Inspection

	18. Insulation Resistance/Megger	**0 Megohms**

	19.	Winding Resistance			
		1-2	1-3	2-3	
		0	**0**	**0**	
🔴	20.	Perform Surge Test		**(F) Fail**	
	21.	Number of Stator Slots		**60**	
	22.	Stator Condition		**Requires rewind**	P84

	23.	Stator Thermistors/Ohms	**N/A**	
	24.	Stator Overloads/Ohms	**N/A**	

Mechanical Inspection

	25.	Drive End Bearing Brand	**FAG**	P12

	26.	Drive End Bearing Number-	**6319 C3**	

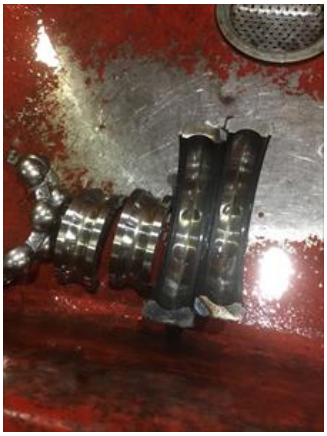
27.	Drive End Bearing Qty.	**1**	
28.	Drive End Bearing Type	**(Ball) Ball Bearing**	
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
30.	Drive End Bearing Insulation or Grounding Device?	**None**	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**Lock Nut**	P77

32.	Drive End Bearing Condition	**Normal wear**	P82

33.	Opposite Drive End Bearing Brand	**FAG**	P92

34.	Opposite Drive End Bearing Number-	**6324 C3**
35.	Opposite Drive End Bearing Qty.	**1**
36.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
37.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**

38.	Opposite Drive End Bearing Insulation or Grounding Device?	**None**	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**Wavy Washer**	
40.	Opposite Drive End Bearing Condition	**Normal wear**	P118



41.	Drive End Seal	**None**	
42.	Opposite Drive End Seal	**None**	

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
44.	Growler Test	**(Pass) Pass**	
45.	Number of Rotor Bars	**46**	
46.	Rotor Condition	**Pass**	P41

47. List the Parts needed for the Repair Below

Rewind
6319 C3
6315 C3

48. Signature of Technician that Disassembled Motor — **Brandon Woodard**

Mechanical Fits- Rotor

49.	Shaft Runout	**0.001 inches**	

50.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	0.002	**0.002**	**0.002**
51.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
	2.375	**2.375**	**2.375**
52.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
	2.375	**2.375**	**2.375**
53.	Drive End Bearing Shaft Fit		P79
	0 Degrees	60 Degrees	120 Degrees
	3.7408	**3.7408**	**3.7408**
	Tolerance is 3.7403-3.7409		

54.	Drive End Bearing Shaft Fit Condition	**(P) Pass**
55.	Opposite Drive End Bearing Shaft Fit	P89

0 Degrees	60 Degrees	120 Degrees
2.7562	**2.7562**	**2.7562**
Tolerance is 2.7560-2.7565		

56.	Opposite Drive End Bearing Shaft Fit Condition	**(P) Pass**
57.	Shaft Air Seal Fits	

Drive End Air Seal	Opposite Drive End Air Seal
Pass	**Pass**

Mechanical Fits- Bearing Housings

58. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
7.8743	**7.8743**	**7.8743**

Tolerance is 7.8740-7.8751

59. Drive End - Endbell Bearing Fit Condition **(P) Pass**

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.9079	**5.9078**	**5.908**

Tolerance is 5.9055-5.9065. Bearing spun and us oversized. Requires bore and bushing installed.

61. Opposite Drive End - Endbell Bearing Fit Condition **(F) Fail**

62. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
Pass	**Pass**

63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
Pass	**Pass**

64. List Machine Work Needed Below

Bore and bush opposite drive end end bell

65. Technician **Brandon Woodard**

Root Cause of Failure

66. Failure locations

67. Root cause of failure