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

AC Inspection as Found

USG Interiors
850 No Broadway
Greenville, MS 38701

FolderID: 152685
FormID: 20321981

AC Inspection - Rev. 2

Location:	Millington Motorshop
Serial Number:	

Hi-Speed Job Number:	152685
Manufacturer:	Baldor
HP/kW:	100 (HP)
RPM:	1785 (RPM)
Frame:	405T
Voltage:	230 / 460
Current:	224/112 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	04/24/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **5 - High** **41 - Good**

Overall Condition

1. Report Date **05/08/2024**

2. Nameplate Picture P2

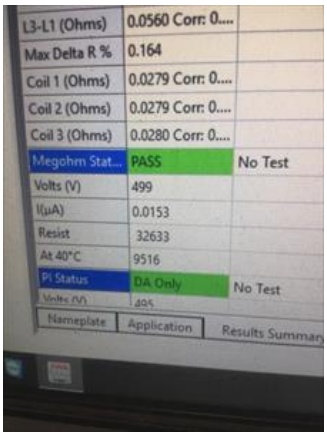
3. Photos of all six sides of the machine. P3

	4.	Describe the Overall Condition of the Equipment as Received	
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?	
●	8.	Assembled Shaft Runout	**0.001 Inches**
●	9.	Assembled Shaft End Play	**0.0005 inches**
●	10.	Air Gap Variation <10%	**ıo provision for measurement**
●	11.	Lead Condition	**(P) Pass**
●	12.	Lead Length	**12 Inches**
●	13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**

	14. Lead Numbers	**1-9**	
	15. Frame Condition		
●	16. Fan Condition	**(P) Pass**	
	17. Broken or Missing Components		

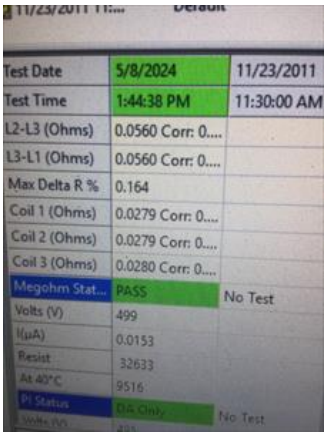
Initial Electrical Inspection

●	18. Insulation Resistance/Megger	**9516 Megohms**	P19



●	19. Winding Resistance		P20

1-2	1-3	2-3
.0279	**.0279**	**.0279**



●	20. Perform Surge Test	**(P) Pass**	P21

●	21. Number of Stator Slots	**60**

22.	Stator Condition	**good**	
23.	Stator Thermistors/Ohms	**N/A**	
24.	Stator Overloads/Ohms	**N/A**	

Mechanical Inspection

25.	Drive End Bearing Brand	**skf**	
26.	Drive End Bearing Number-	**6316 zz 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 present**	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none present**	
32.	Drive End Bearing Condition	**normal wear**	P33

33.	Opposite Drive End Bearing Brand	**skf**	
34.	Opposite Drive End Bearing Number-	**6316 zz 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 present**	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
40.	Opposite Drive End Bearing Condition	**ooks to have been ungreased**	P41

41.	Drive End Seal	**va-80**	
42.	Opposite Drive End Seal	**va-80**	

Rotor Inspection

43.	Rotor Type/Material	**(Aluminum Bar) Aluminum Barred Rotor**
44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**47**
46.	Rotor Condition	**good**
47.	List the Parts needed for the Repair Below	
	2- VA-80 lip seals ***2- 6316 zz c3 bearings***	
48.	Signature of Technician that Disassembled Motor	

Mechanical Fits- Rotor

49.	Shaft Runout		
50.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
51.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
	2.8745	**2.8745**	**2.8745**
52.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
	2.875	**2.875**	**2.875**
53.	Drive End Bearing Shaft Fit		P54
	0 Degrees	60 Degrees	120 Degrees
	3.149	**3.149**	**3.149**

80mm = 3.1496 Pressfit tolerance is from 3.1497 to 3.1502

54.	Drive End Bearing Shaft Fit Condition	**(F) Fail**

I would recommend loctiting this bearing

55. Opposite Drive End Bearing Shaft Fit P56

0 Degrees	60 Degrees	120 Degrees
3.1495	**3.1495**	**3.1493**

80mm = 3.1496 Pressfit tolerance is from 3.1497 to 3.1502

56. Opposite Drive End Bearing Shaft Fit Condition **(F) Fail**

I would recommend loctiting this bearing to

57. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

58. Drive End - Endbell Bearing Fit P59

0 Degrees	60 Degrees	120 Degrees
6.6948	**6.6948**	**6.6948**

170mm = 6.6929 Tolerance is from 6.6929 to 6.6939

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

This endbell needs to be bored and bushed

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
6.701	**6.705**	**6.698**

170mm = 6.6929 *Tol. Is 6.6929 to 6.6939*

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

This bearing has been spinning in the endbell for a while
This endbell has to be bored and bushed

62. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

64. List Machine Work Needed Below

Both endbells need to be bored and bushed

65. Technician **Roger Ventrini**

Root Cause of Failure

66.	Failure locations
67.	Root cause of failure