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: 152278
FormID: 19673214

AC Inspection - Rev. 2

Location:	Motorshop
Serial Number:	9VD 256TTFNA6529BA R115 R159

Description:20 HP AC Stator

Hi-Speed Job Number:	152278
Manufacturer:	Marathon
Serial Number:	9VD 256TTFNA6529BA R115 R159
HP/kW:	20 (HP)
RPM:	1775 (RPM)
Frame:	256TC
Voltage:	230 / 460
Current:	24.1 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	03/06/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	No
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: **2 - High** **9 - Good**

Overall Condition

1.	Report Date	**03/06/2024**

2. Nameplate Picture P2

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

4. Describe the Overall Condition of the Equipment as Received P4

Initial Mechanical/Electrical

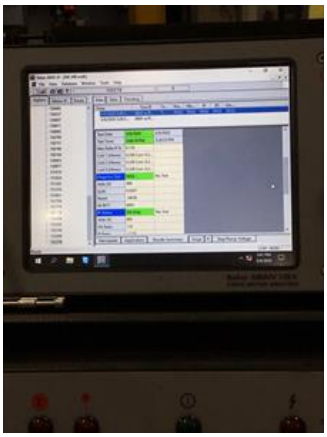
5.	Does Shaft Turn Freely?	**(Y) Yes**
6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**

7.	Does Shaft Have Visible Damage?	**(Yes) Yes**	P8
	Grove ground in shaft		

8.	Assembled Shaft Runout	**0.001 Inches**	
9.	Assembled Shaft End Play	**0.001 inches**	
10.	Air Gap Variation <10%	**no provisions for measuring**	
11.	Lead Condition	**(P) Pass**	
12.	Lead Length	**9 Inches**	
13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
14.	Lead Numbers	**1-9**	
15.	Frame Condition	**good**	
16.	Fan Condition	**(F) Fail**	
	No fan should have one		
17.	Broken or Missing Components	**missing fan**	

Initial Electrical Inspection

18.	Insulation Resistance/Megger	**6493 Megohms**	P22



19.	Winding Resistance		
	1-2	1-3	2-3
	.476	**.477**	**.476**

20.	Perform Surge Test	**(P) Pass**	P24

21.	Number of Stator Slots	**48**	
22.	Stator Condition	**acceptable**	
23.	Stator Thermistors/Ohms	**none present**	
24.	Stator Overloads/Ohms	**none present**	

Mechanical Inspection

25.	Drive End Bearing Brand	**SKF**	P29

26.	Drive End Bearing Number-	**6309C3ZZ**	
27.	Drive End Bearing Qty.	**1**	
28.	Drive End Bearing Type	**(Ball) Ball Bearing**	
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	P33

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		P36

Off shoulder

33.	Opposite Drive End Bearing Brand	**SKF**	
34.	Opposite Drive End Bearing Number-	**6210C3ZZ**	P38

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**	P43

40. Opposite Drive End Bearing Condition

41.	Drive End Seal	**yes**
	Slinger	
42.	Opposite Drive End Seal	**none present**

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**39**
46.	Rotor Condition	**good**
47.	List the Parts needed for the Repair Below	
	Fan ***6309C3zz*** ***6210c3zz***	
48.	Signature of Technician that Disassembled Motor	**Brian Goines**

Mechanical Fits- Rotor

49.	Shaft Runout		**0.001 inches**
50.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	0.001	**0.001**	**0.001**
51.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
	1.625	**1.625**	**1.625**

52.	Coupling Fit Closest to the end of the Shaft		P64
0 Degrees	60 Degrees	120 Degrees	
1.625	**1.625**	**1.625**	

53.	Drive End Bearing Shaft Fit		P65
0 Degrees	60 Degrees	120 Degrees	
1.7718	**1.7719**	**1.7719**	

Tolerance is 1.7718-1.7722

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

55. Opposite Drive End Bearing Shaft Fit P67

0 Degrees	60 Degrees	120 Degrees
1.969	**1.969**	**1.969**

Tolerance is 1.9686-1.9690

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 P70

0 Degrees	60 Degrees	120 Degrees
3.9381	**3.9381**	**3.9381**

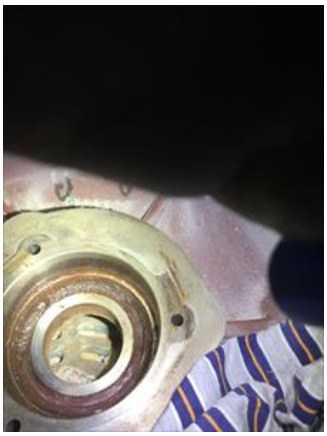
Tolerance is 3.9370-3.9379

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

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.5443	**3.5445**	**3.6452**

Tolerance is 3.5433-3.5442. Out of round and requires bore and bushing.



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 ODE end bell.

65. Technician **Brandon Woodard**

Root Cause of Failure

66. Failure locations

67. Root cause of failure