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

AC Inspection as Found

Carlisle SynTec Inc. Motor Shop.
1201 Scott Street
Senatobia, MS 38668

FolderID: 153346
FormID: 21172331

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	

Hi-Speed Job Number:	153346
Manufacturer:	GE
Product Number:	5KAF511SAA323
Serial Number:	LJFT329U001
HP/kW:	400 (HP)
RPM:	1190 (RPM)
Frame:	50117
Voltage:	460
Current:	486 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1
Enclosure:	TEFC
# of Leads:	6
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	08/31/2024
Bearing RTDs:	No
Stator RTDs:	Yes
Repair Stage:	Teardown Inspection
Rewind:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **6 - High** **48 - Good**

Overall Condition

1.	Report Date	**08/01/2024**	
2.	Nameplate Picture		P2

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






	4.	Describe the Overall Condition of the Equipment as Received ***Encoder 13/16 on the shaft*** ***Motor is a rewind***	
	5.	Report Date [COPY]	**08/01/2024**
Initial Mechanical/Electrical			
	6.	Does Shaft Turn Freely?	**(Y) Yes**
	7.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	8.	Does Shaft Have Visible Damage?	**(No) No**
	9.	Assembled Shaft Runout	**0.001 Inches**
	10.	Assembled Shaft End Play	

11.	Air Gap Variation <10%		**ıo provision for measurement**
12.	Lead Condition		**(F) Fail**
13.	Lead Length		**30 Inches**
	From j box		
14.	Does it have Lugs?, If so what is the Stud Size?		**(No) No**
15.	Lead Numbers		**1,2,3,7,8,9**
	1-7,2-8,3-9		
16.	Stator Temperature Detector Rating and Function		

Quantity	Rating	Quantity Passed
8	**100**	

17.	Frame Condition		**passed**
18.	Fan Condition		**(P) Pass**
19.	Broken or Missing Components		

Initial Electrical Inspection

20.	Insulation Resistance/Megger		**0 Megohms**
21.	Winding Resistance		P21

1-2	1-3	2-3
0	**0**	**0**

Failed

22.	Perform Surge Test		**(F) Fail**
23.	Number of Stator Slots		**72**
24.	Stator Condition		**failed** P24

25.	Stator Thermistors/Ohms		**na**

26.	Stator Overloads/Ohms	**na**	

Mechanical Inspection

27.	Drive End Bearing Brand	**koyo**	
28.	Drive End Bearing Number-	**6324c3**	
29.	Drive End Bearing Qty.	**1**	
30.	Drive End Bearing Type	**(Ball) Ball Bearing**	
31.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
32.	Drive End Bearing Insulation or Grounding Device?	**aegis ring**	
33.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**baffle between bearing and bearing cap**	
34.	Drive End Bearing Condition	**normal wear**	P34

35.	Opposite Drive End Bearing Brand	**SKF**	
36.	Opposite Drive End Bearing Number-	**6315/C3V1 0241**	
	Insucoat bearing		
37.	Opposite Drive End Bearing Qty.	**1**	
38.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
39.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
40.	Opposite Drive End Bearing Insulation or Grounding Device?	**insucoat bearing**	
41.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
42.	Opposite Drive End Bearing Condition	**normal wear**	P42

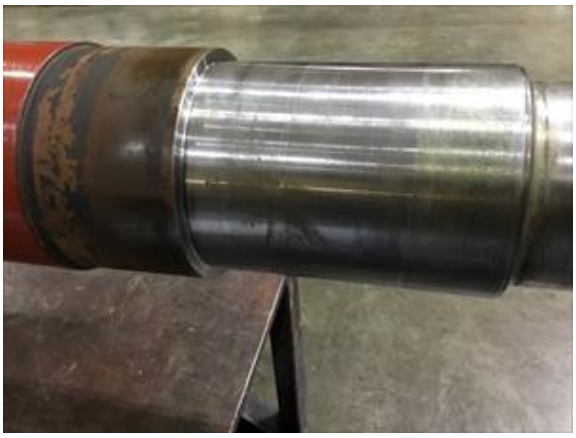
43.	Drive End Seal	**pass**	
44.	Opposite Drive End Seal	**none present**	

Rotor Inspection

45.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
46.	Growler Test	**(Pass) Pass**	
47.	Number of Rotor Bars	**58**	
48.	Rotor Condition	**passed**	
49.	List the Parts needed for the Repair Below ***(1) SKF 6315/c3v1 bearing, insucoat*** ***(1) koyo 6324c3 bearing*** ***(1) aegis ring SRG-131.9-3 FH***		
50.	Signature of Technician that Disassembled Motor	**JR Going**	

Mechanical Fits- Rotor

51.	Shaft Runout		
52.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
53.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
	4.124	**4.124**	**4.124**
54.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
	4.124	**4.124**	**4.124**
55.	Drive End Bearing Shaft Fit		P55
	0 Degrees	60 Degrees	120 Degrees
	4.7252	**4.7252**	**4.7252**
	120mm = 4.7244 Pressfit tolerance is from 4.7249 to 4.7255		



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

57. Opposite Drive End Bearing Shaft Fit P57

0 Degrees	60 Degrees	120 Degrees
2.9533	**2.9533**	**2.9533**

75mm = 2.9527 Pressfit tolerance is from 2.9529 to 2.9534

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

59. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

60. Drive End - Endbell Bearing Fit P60

0 Degrees	60 Degrees	120 Degrees
10.2375	**10.2375**	**10.2375**

260mm = 10.2362 Tolerance is from 10.2362 to 10.2375

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

62. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
6.3002	**6.3002**	**6.3002**

160mm = 6.2992 Tolerance is from 6.2992 to 6.3002

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

64. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

65. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

66. List Machine Work Needed Below

No machine work needed

67. Technician **Roger Ventrini**

Root Cause of Failure

68. Failure locations

Winding failed

69.	Root cause of failure