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

AC Inspection as Found

KTG USA
400 Mahannah
Memphis, TN 38107

FolderID: 152514
FormID: 20012153

AC Inspection - Rev. 2

Location: Default

Serial Number:

Description:125 HP AC

Hi-Speed Job Number:	152514
Manufacturer:	GE
HP/kW:	125 (HP)
RPM:	1190 (RPM)
Voltage:	460
Current:	139 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	3
J-box Included:	None
Coupling/Sheave:	None
Date Received:	04/04/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	No
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **4 - High** **7 - Good**

Overall Condition

1.	Report Date	**04/08/2024**
2.	Nameplate Picture	P2

3. Photos of all six sides of the machine.






4. Describe the Overall Condition of the Equipment as Received

Good condition. Drive end bearing spun on shaft and shaft requires repair. Passed all electrical tests. Drive end bearing was electric fluted. Recommend adding AEGIS ring and insulated bearing.

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	**0.001 Inches**
9.	Assembled Shaft End Play	**0.003 inches**
10.	Air Gap Variation <10%	**No Provisions for measurement**

	11.	Lead Condition	**(P) Pass**	P11

	12.	Lead Length	**20 Inches**	
	13.	Does it have Lugs?, If so what is the Stud Size?	**(Yes) Yes**	P13
		1/2"		

	14.	Lead Numbers	**None**	
	15.	Frame Condition	**Pass**	
	16.	Fan Condition	**(F) Fail**	P16
		Cracked and needs replaced		

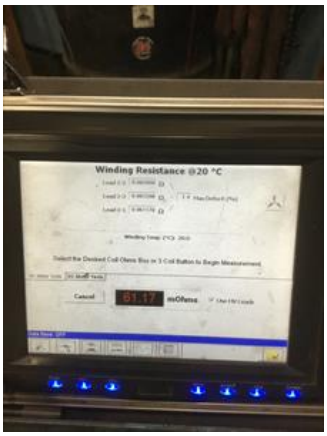
	17.	Broken or Missing Components	**None**

Initial Electrical Inspection

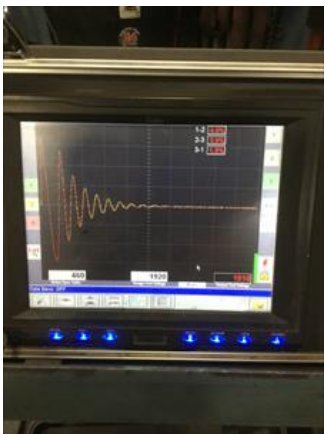
18. Insulation Resistance/Megger **92000 Megohms** P18

19. Winding Resistance P19

1-2	1-3	2-3
.06205	**.0612**	**.06117**



20. Perform Surge Test **(P) Pass** P20



21. Number of Stator Slots **72**

22. Stator Condition P22

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

Mechanical Inspection

25.	Drive End Bearing Brand	**KOYO**	P25

26.	Drive End Bearing Number-	**6318 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**
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**None**

32.	Drive End Bearing Condition	**Electrical fluting**	P32

33.	Opposite Drive End Bearing Brand	**KOYO**	P33

34.	Opposite Drive End Bearing Number-	**6318 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**
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**Snap Ring**
40.	Opposite Drive End Bearing Condition	**Normal wear** P40

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	**60**	
46.	Rotor Condition		P46

47. List the Parts needed for the Repair Below P47

Fan
6318 ZZ C3
6318 ZZ C3 insulated
Aegis ring SGR-104.3-3FH

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 P51

0 Degrees	90 Degrees	120 Degrees
3.3666	**3.3666**	**3.3666**

52. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
3.3732	**3.3732**	**3.3732**

53.	Drive End Bearing Shaft Fit			P53
	0 Degrees	60 Degrees	120 Degrees	
	3.5428	**3.5429**	**3.5425**	

Tolerance is 3.5434-3.5440
Bearing pulled of shaft. Requires repair.

54.	Drive End Bearing Shaft Fit Condition		**(F) Fail**
55.	Opposite Drive End Bearing Shaft Fit		P55
	0 Degrees	60 Degrees	120 Degrees
	3.5435	**3.5435**	**3.5435**

Tolerance is 3.5434-3.5440

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			P58
	0 Degrees	60 Degrees	120 Degrees	
	7.4812	**7.4812**	**7.4812**	

59.	Drive End - Endbell Bearing Fit Condition		**(P) Pass**
60.	Opposite Drive End - Endbell Bearing Fit		P60
	0 Degrees	60 Degrees	120 Degrees
	7.4815	**7.4815**	**7.4815**

61.	Opposite Drive End - Endbell Bearing Fit Condition		**(P) Pass**
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		
	Repair drive end shaft bearing fit. Normal turn and metalizing.		
65.	Technician		**Brandon Woodard**

Root Cause of Failure

66.	Failure locations ***Drive end bearing***
67.	Root cause of failure ***Spun on shaft.***