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

AC Inspection as Found

HISPEED LRMR
6812 LINDSEY RD
LITTLE ROCK, AR 72206

FolderID: 102848
FormID: 20294655

AC Inspection - Rev. 2

Location: Motor Shop

Serial Number:

Description: 100 Hp Siemens From little Rock

Hi-Speed Job Number:	102848
Manufacturer:	Siemens
Serial Number:	1LA040345C41A
HP/kW:	100 (HP)
RPM:	1773 (RPM)
Frame:	405T
Voltage:	460
Current:	113 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	3
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	05/06/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High** **42 - Good**

Overall Condition

1.	Report Date	**05/06/2024**

2. Nameplate Picture P2

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

●	4.	Describe the Overall Condition of the Equipment as Received ***Good***		

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	**0.002 Inches**	
●	9.	Assembled Shaft End Play	**0.005 inches**	
	10.	Air Gap Variation <10%		
●	11.	Lead Condition	**(P) Pass**	P11

	12.	Lead Length	**26 Inches**	
●	13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
●	14.	Lead Numbers	**1-3**	
●	15.	Frame Condition	**good**	

16. Fan Condition **(P) Pass** P16

17. Broken or Missing Components **nne**

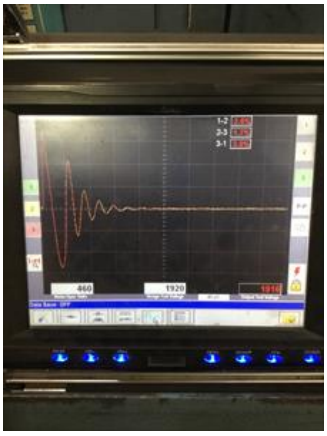
Initial Electrical Inspection

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

19. Winding Resistance P19

1-2	1-3	2-3
.064460	**.064440**	**.064230**

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



21.	Number of Stator Slots	**48**	
22.	Stator Condition	**good**	
23.	Stator Thermistors/Ohms	**n/a**	
24.	Stator Overloads/Ohms	**n/a**	

Mechanical Inspection

25.	Drive End Bearing Brand	**ntn**	
26.	Drive End Bearing Number-	**6316**	
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?	**no**	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
32.	Drive End Bearing Condition	**good**	P32

33.	Opposite Drive End Bearing Brand	**ntn**	

34.	Opposite Drive End Bearing Number-	**6316**	P34

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**	P39

40.	Opposite Drive End Bearing Condition	**good**	
41.	Drive End Seal		
42.	Opposite Drive End Seal		

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
44.	Growler Test	**(Pass) Pass**	
45.	Number of Rotor Bars	**36**	
46.	Rotor Condition	**good**	
47.	List the Parts needed for the Repair Below ***2-6316 bearings***		
48.	Signature of Technician that Disassembled Motor	**James Valentine**	

Mechanical Fits- Rotor

49.	Shaft Runout			**inches**
	N/a			
50.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
	N/a			
51.	Coupling Fit Closest to Bearing Housing			
	0 Degrees	90 Degrees	120 Degrees	
	2.879	**2.879**	**2.879**	
52.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
	2.8995	**2.899**	**2.8995**	
53.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	3.15	**3.1498**	**3.1499**	
54.	Drive End Bearing Shaft Fit Condition			**(P) Pass**

P54

55.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	3.15	**3.1502**	**3.15**	
	3.1502/3.1497			
56.	Opposite Drive End Bearing Shaft Fit Condition			**(P) Pass**
57.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
	N/a			

Mechanical Fits- Bearing Housings

58.	Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	6.6932	**6.6935**	**6.6935**	
	6.6929/6.9939			
59.	Drive End - Endbell Bearing Fit Condition			**(P) Pass**

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
6.6992	**6.6992**	**6.6994**

6.6929/6.9939

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

Bore and bush

62. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

None

63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

None

64. List Machine Work Needed Below

Opposite drive endbell bore and bush to 6316 bearing.

65. Technician **James Valentine**

Root Cause of Failure

66. Failure locations

Bearing housing

67. Root cause of failure