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

AC Inspection as Found

Union Pacific-Vine St 10945
1020 N. Vine Street
North Liittle Rock, AR

FolderID: 103348
FormID: 21258032

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	12466
Description:	1.13/6.8HP OMI HOIST MOTOR

Hi-Speed Job Number:	103348
Manufacturer:	Other
Product Number:	2-5-33LH41-16T
Serial Number:	12466
HP/kW:	1.13 (HP)
RPM:	500 (RPM)
Voltage:	460
Current:	0.88
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
# of Leads:	6
J-box Included:	Half
Coupling/Sheave:	Brake
Date Received:	08/09/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
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** **7 - Good**

Overall Condition

1.	Report Date	**08/12/2024**

2. Nameplate Picture P37

3. Photos of all six sides of the machine. P45

4.	Describe the Overall Condition of the Equipment as Received ***Serviceable, but missing DE housing.***		
5.	Distance from the end of the shaft to the Coupling/Sheave	**inches**	
6.	Report Date [COPY]	**08/12/2024**	

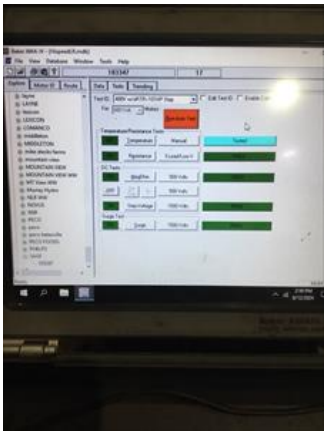
Initial Mechanical/Electrical

7.	Does Shaft Turn Freely? ***ODE. bearing is locked up.***	**(N) No**	
8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**	
9.	Does Shaft Have Visible Damage?	**(No) No**	
10.	Assembled Shaft Runout	**Inches**	
11.	Assembled Shaft End Play	**inches**	
12.	Air Gap Variation <10%		
13.	Lead Condition	**(P) Pass**	
14.	Lead Length	**6 Inches**	
15.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
16.	Lead Numbers ***1,2,3 & 4,5 6***		
17.	Frame Condition	**pass**	
18.	Fan Condition	**(P) Pass**	P116

19.	Broken or Missing Components	**fan cover missing2 bolts**	

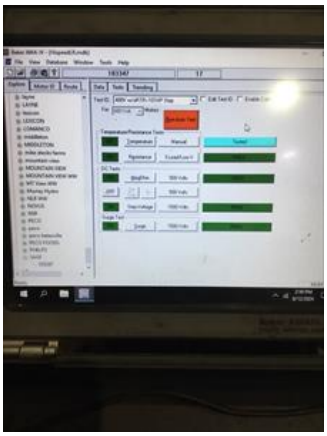
Initial Electrical Inspection

20.	Insulation Resistance/Megger	**Megohms**	P8

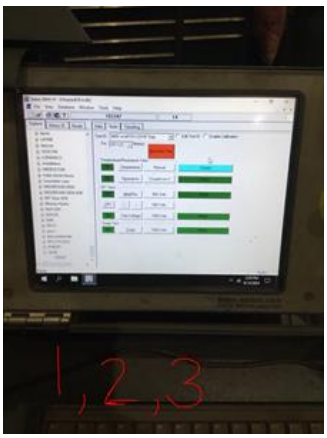


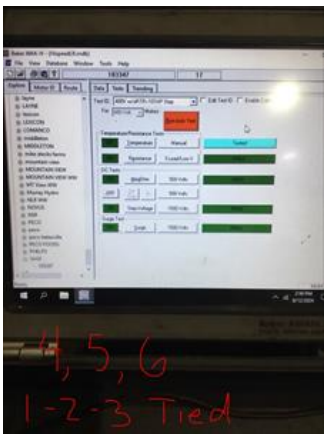
21.	Winding Resistance		P20

1-2	1-3	2-3



22.	Perform Surge Test		P57





23.	Number of Stator Slots	**36**
24.	Stator Condition	**pass**
25.	Stator Thermistors/Ohms	
26.	Stator Overloads/Ohms	

Mechanical Inspection

27.	Drive End Bearing Brand	

28.	Drive End Bearing Number-		
29.	Drive End Bearing Qty.		
30.	Drive End Bearing Type		
31.	Drive End Lubrication Type		
32.	Drive End Bearing Insulation or Grounding Device?		
33.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
34.	Drive End Bearing Condition	**locked up**	
35.	Opposite Drive End Bearing Brand	**FAG**	
36.	Opposite Drive End Bearing Number-	**6207**	P100

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?	**na**	
41.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
42.	Opposite Drive End Bearing Condition	**locked up**	
43.	Drive End Seal		
44.	Opposite Drive End Seal		

Rotor Inspection

45.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
46.	Growler Test	**(Pass) Pass**	
47.	Number of Rotor Bars	**40**	
48.	Rotor Condition	**pass**	P41

49. List the Parts needed for the Repair Below

Bearing and brake assembly

50. Signature of Technician that Disassembled Motor **Terrence Holland**

Mechanical Fits- Rotor

51. Shaft Runout **0.001 inches**

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

54. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

55. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.3		

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

57. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.3781	**1.3781**	**1.378**

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

0 Degrees	60 Degrees	120 Degrees

Not shipped with equipment

61. Drive End - Endbell Bearing Fit Condition

Not shipped with motor

62. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
2.835	**2.8348**	**2.8349**

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

None

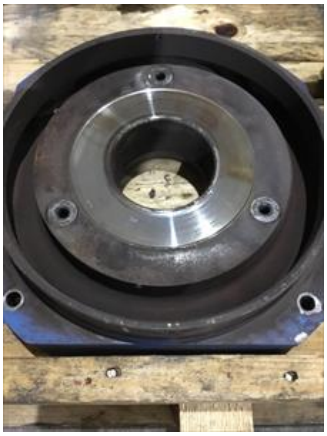
67. Technician **Terrence Holland**

Witness:

Root Cause of Failure

68. Failure locations P9

Brake assembly wear plates worn, and brake pad cracked on edges. ODE bearing completely locked up from worn out lubricants.



69. Root cause of failure

ODE bearing was completely locked up.

Dynamic Balance Report

70. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

71. Initial Balance Readings

Drive End	Opposite Drive End

72. Final Balance Readings

Drive End	Opposite Drive End

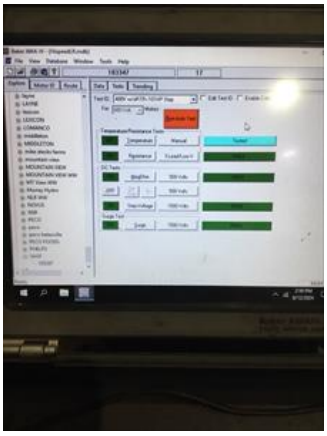
73. Technician

Assembly

74. QC Check All Parts for Cleanliness Prior to Assembly **Terrence Holland**

75. Photograph All Major Components prior to assembly P17

76.	Final Insulation Resistance Test	**Megohms**	P31



77.	Assembled Shaft Endplay		**inches**
78.	Assembled Shaft Runout		**inches**
79.	Test Run Voltage		
	Volts	Volts	Volts

Cannot run motor because of the missing de housing.

80.	Test Run Amperage		
	Amps	Amps	Amps
81.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
82.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
83.	Ambient Temperature - Fahrenheit		
84.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
85.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
86.	Document Final Condition with Pictures after paint		
87.	Final Pics and QC Review	**Terrence Holland**	P132

Witness