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

AC Inspection as Found

Wonder State Box
584 Commerce Rd
Conway, AR 72058

FolderID: 100995
FormID: 16059725

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	13479504
Description:	8.6KW LENZE 3600RPM 132M

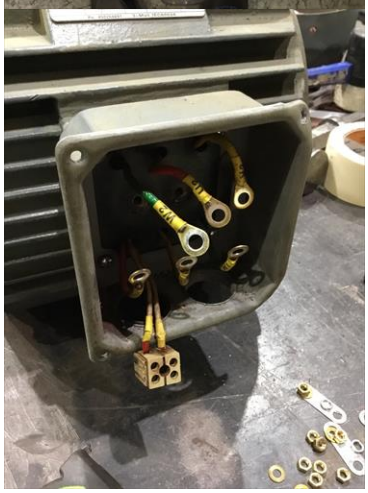
Hi-Speed Job Number:	100995
Manufacturer:	Other
Product Number:	MHERAXX132-21 V1C
Serial Number:	13479504
HP/kW:	8.6 (kW)
RPM:	3515 (RPM)
Frame:	132M
Voltage:	460
Current:	13.6
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

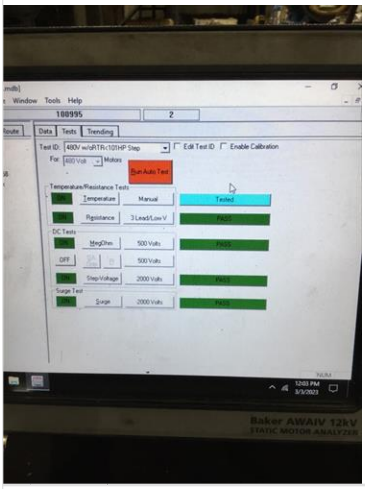
Priorities Found: **2 - High** **4 - Good**

Overall Condition

1. Report Date **03/03/2023**
2. Nameplate Picture P2

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





4.	Describe the Overall Condition of the Equipment as Received *Fair*	
5.	Distance from the end of the shaft to the Coupling/Sheave	**inches**
Initial Mechanical/Electrical		
6.	Does Shaft Turn Freely?	**(Yes) Yes**
7.	Does Shaft Have Visible Damage?	**(No) No**
8.	Assembled Shaft Runout	**Inches**
9.	Assembled Shaft End Play	**inches**
10.	Air Gap Variation <10%	

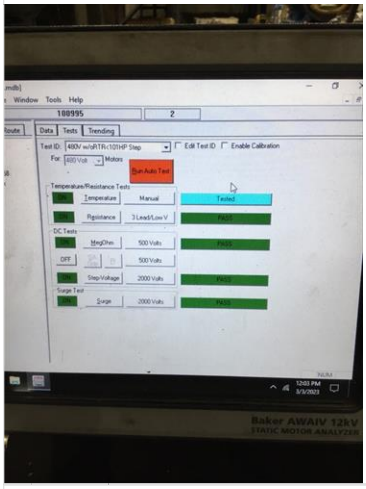
11.	Lead Condition	**(P) Pass**	
12.	Lead Length	**Inches**	
13.	Frame Condition	**good**	
14.	Fan Condition	**(P) Pass**	
15.	Broken or Missing Components		

Initial Electrical Inspection

16.	Insulation Resistance/Megger	**Megohms**	
17.	Winding Resistance		

1-2	1-3	2-3

18.	Perform Surge Test	**(P) Pass**	P18



19.	Number of Stator Slots	**0 Megohms**	
20.	Stator Condition	**good**	
21.	Stator Thermistors/Ohms		
22.	Stator Overloads/Ohms		

Mechanical Inspection

23.	Drive End Bearing Brand	**FAG**	P23

24.	Drive End Bearing Number-	**6308zz**
25.	Drive End Bearing Qty.	**1**
26.	Drive End Bearing Type	**(Ball) Ball Bearing**
27.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
28.	Drive End Bearing Insulation or Grounding Device?	
29.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	

30.	Drive End Bearing Condition	**replace**	
31.	Opposite Drive End Bearing Brand	**Korea**	P31

32.	Opposite Drive End Bearing Number-	**6308zz**	
33.	Opposite Drive End Bearing Qty.	**1**	
34.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
35.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
36.	Opposite Drive End Bearing Insulation or Grounding Device?		
37.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
	Needs replace		
38.	Opposite Drive End Bearing Condition		P38

39.	Drive End Seal		
40.	Opposite Drive End Seal		

Rotor Inspection

41.	Rotor Type/Material	**(Aluminum Bar) Aluminum Barred Rotor**	
42.	Growler Test	**(Pass) Pass**	
43.	Number of Rotor Bars	**26**	
44.	Rotor Condition	**fair**	
45.	List the Parts needed for the Repair Below		

46.	Signature of Technician that Disassembled Motor	**Trent**

Mechanical Fits- Rotor

47.	Shaft Runout	**inches**
48.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

49.	Coupling Fit Closest to Bearing Housing	

0 Degrees	90 Degrees	120 Degrees

50.	Coupling Fit Closest to the end of the Shaft	

0 Degrees	60 Degrees	120 Degrees

51.	Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees

52.	Drive End Bearing Shaft Fit Condition	
53.	Opposite Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees

54.	Opposite Drive End Bearing Shaft Fit Condition	
55.	Shaft Air Seal Fits	

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

56.	Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees
3.555	**3.555**	**3.555**

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

0 Degrees	60 Degrees	120 Degrees
3.547	**3.55**	**3.55**

59.	Opposite Drive End - Endbell Bearing Fit Condition	**(F) Fail**
60.	Bearing Cap Condition	

Drive End Bearing Cap	Opposite Drive End Bearing Cap

61.	End Bell Air Seal Fits	

Drive End Air Seal	Opposite Drive End Air Seal

62.	List Machine Work Needed Below	
63.	Technician	

Dynamic Balance Report

64. Rotor Weight and Balance Grade

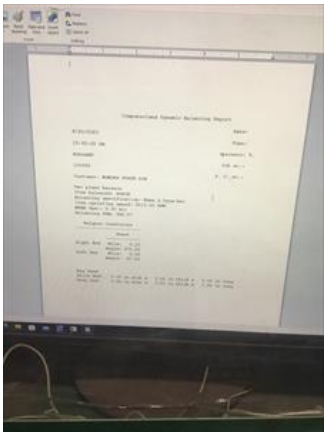
Rotor Weight	Balance Grade

65. Initial Balance Readings

Drive End	Opposite Drive End

66. Final Balance Readings P66

Drive End	Opposite Drive End



67. Technician

Rewind

68. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

69. Core Hot Spot Test

Pre-Burnout	Post-Burnout

70. Post Rewind Electrical Test- Insulation Resistance

71. Post Rewind Polarization Index

72. Post Rewind Winding Resistance

1-2	1-3	2-3

73. Post Rewind Surge Test

74. Post Rewind Hi-Pot

75. Technician

Root Cause of Failure

76. Failure locations

77. Root cause of failure

Mechanical Fits- Rotor - Post Repair

78. Shaft Runout Post Repair

79. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

80. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

81. Coupling Fit Closest to the end of the Shaft Post Repair

0 Degrees	60 Degrees	120 Degrees

82. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

83. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

84. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

85. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

86. Drive End - Endbell Bearing Fit Post Repair P86

0 Degrees	60 Degrees	120 Degrees
3.5435	**3.5436**	**3.5435**

87. Opposite Drive End - Endbell Bearing Fit Post Repair P87

0 Degrees	60 Degrees	120 Degrees
3.5436	**3.5437**	**3.5436**

88. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

89. End Bell Air Seal Fits Post Repair

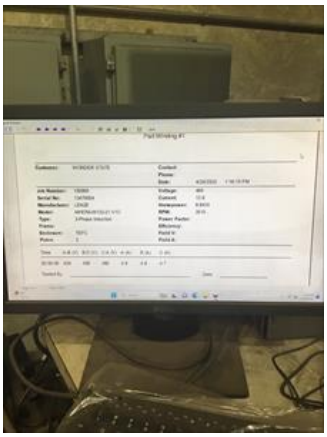
Drive End Air Seal	Opposite Drive End Air Seal

90. End Bell Repair Sign-off **Gary**

Assembly

91. QC Check All Parts for Cleanliness Prior to Assembly

92. Photograph All Major Components prior to assembly P92



93.	Final Insulation Resistance Test		
94.	Assembled Shaft Endplay		
95.	Assembled Shaft Runout		
96.	Test Run Voltage		
	Volts	Volts	Volts
97.	Test Run Amperage		
	Amps	Amps	Amps
98.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial

99.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
100.	Ambient Temperature - Fahrenheit		
101.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
102.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
103.	Document Final Condition with Pictures after paint		
104.	Final Pics and QC Review	**Terrence Holland**	P104