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

AC Inspection as Found

Baptist Medical Center (10043)
3333 Springhill Drive
North Little Rock, AR 72116

FolderID: 103978
FormID: 23037007

AC Inspection - Rev. 2

Location:	LR MOTOR SHOP
Serial Number:	Z0108030063
Description:	100 HP BALDOR

Hi-Speed Job Number:	103978
Manufacturer:	Baldor
Product Number:	EM2555T-4
Serial Number:	Z0108030063
HP/kW:	100 (HP)
RPM:	1780 (RPM)
Frame:	404T
Voltage:	460
Current:	115 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	ODP
# of Leads:	6
J-box Included:	None
Coupling/Sheave:	None
Date Received:	01/27/2025
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	Yes
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

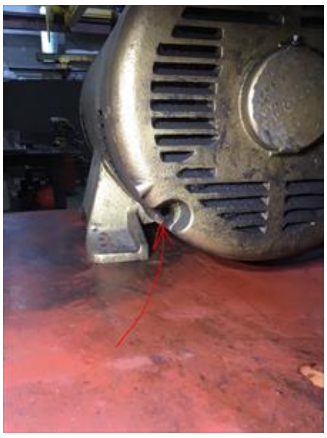
Priorities Found: **1 - High** **9 - Good**

Overall Condition

1.	Report Date	**01/27/2025**

2. Nameplate Picture P37

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



Missing mount bolt

4.	Describe the Overall Condition of the Equipment as Received ***Serviceable***	
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 inches**
10.	Air Gap Variation <10%	**good**

11.	Lead Condition	**(P) Pass**	P69

12.	Lead Length	**16 Inches**
13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**
14.	Lead Numbers	**1-6**
15.	Frame Condition	**pass**
16.	Fan Condition	
17.	Broken or Missing Components	**missing end bell mount bolt**

Initial Electrical Inspection

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

19. Winding Resistance

1-2	1-3	2-3

20.	Perform Surge Test	
21.	Number of Stator Slots	**48**

22.	Stator Condition	**rewind**	P84
	Shorted in slots		

23.	Stator Thermistors/Ohms		
24.	Stator Overloads/Ohms		

Mechanical Inspection

25.	Drive End Bearing Brand	**Nachi**	P12

26.	Drive End Bearing Number-	**6316 NSL**	P32

27.	Drive End Bearing Qty.	**1**	
28.	Drive End Bearing Type	**(Ball) Ball Bearing**	P51

Frosting

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?	**bearing cap**	P77

32.	Drive End Bearing Condition	**replace**	

33.	Opposite Drive End Bearing Brand	**SKF**	P92

34.	Opposite Drive End Bearing Number-	**6312-2Z/C3GJN**	P99

35.	Opposite Drive End Bearing Qty.	**1**	
36.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P106

Frosting

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**
40.	Opposite Drive End Bearing Condition	**replace**
41.	Drive End Seal	**none**
42.	Opposite Drive End Seal	**none**

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	P3

44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**40**
46.	Rotor Condition	**pass**
47.	List the Parts needed for the Repair Below ***None***	
48.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

49.	Shaft Runout			**0.001 inches**
50.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
51.	Coupling Fit Closest to Bearing Housing			
	0 Degrees	90 Degrees	120 Degrees	
52.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
53.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	3.1497	**3.1496**	**3.1496**	
54.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
55.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.3628	**2.3629**	**2.3628**	
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 P2

0 Degrees	60 Degrees	120 Degrees

Bad. Excessive wear.

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

Excessive wear and pitting

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.1182	**5.1181**	**5.1181**

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

62. Bearing Cap Condition P52

Drive End Bearing Cap	Opposite Drive End Bearing Cap
fail	**na**

Cracked

63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

64. List Machine Work Needed Below P67

Repair cracked DE bearing cap
Re-sleeve DE housing fit

65. Technician **Terrence Holland**

Co sign RRW

Root Cause of Failure

66. Failure locations

Windings in slot.
D.E bearing cap cracked
Sleeve D.E housing fit
Both bearings show frosting. Aegis measurement 3.7364

67. Root cause of failure P18

Stator windings shorted between slots.

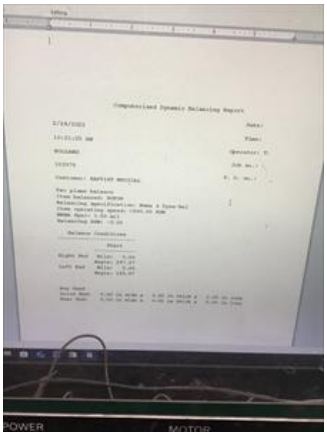
Dynamic Balance Report

68. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

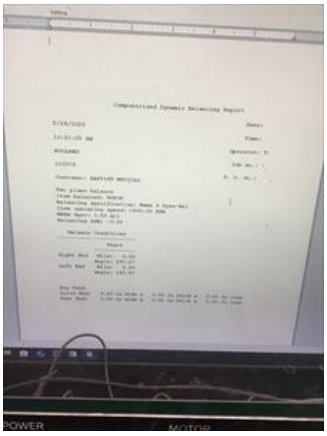
69. Initial Balance Readings P11

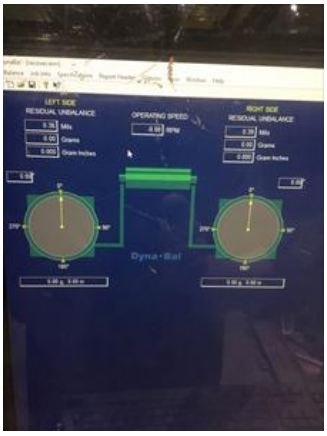
Drive End	Opposite Drive End



70. Final Balance Readings P27

Drive End	Opposite Drive End





71. Technician **Terrence Holland**

Rewind

72. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

73. Core Hot Spot Test

Pre-Burnout	Post-Burnout

74. Post Rewind Electrical Test- Insulation Resistance **Megohms**

75. Post Rewind Polarization Index **Polarization Index**

76. Post Rewind Winding Resistance

1-2	1-3	2-3

77. Post Rewind Surge Test

78. Post Rewind Hi-Pot **micro-amps**

79. Technician

Mechanical Fits- Bearing Housings - Post Repair

80. Drive End - Endbell Bearing Fit Post Repair P5

0 Degrees	60 Degrees	120 Degrees
6.6934	**6.6934**	**6.6934**

81. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

NA

82. Bearing Cap Condition Post Repair P24

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	

83. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

NA

84. End Bell Repair Sign-off **RW**

Assembly

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

86. Photograph All Major Components prior to assembly P17

87.	Final Insulation Resistance Test		**Megohms**
	Pass		
88.	Assembled Shaft Endplay		**0 inches**
89.	Assembled Shaft Runout		**0.001 inches**
90.	Test Run Voltage		P56

Volts	Volts	Volts
461	**459**	**461**

91.	Test Run Amperage	P65

Amps	Amps	Amps
40.6	**42.9**	**38.9**

92. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial

93. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial

94. Ambient Temperature - Fahrenheit

95. Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

96. Opposite Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

97. Document Final Condition with Pictures after paint

98. Final Pics and QC Review **Terrence Holland**

Co sign: RRW