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

AC Inspection as Found

Community Water System (12207)
299 Lakeshore Drive
Greers Ferry, AR 72067

FolderID: 103538
FormID: 21700259

AC Inspection - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	C1112131247
Description:	150HP BALDOR 3560RPM

Hi-Speed Job Number:	103538
Manufacturer:	Baldor
Spec/ID #:	44E194W220
Serial Number:	C1112131247
HP/kW:	150 (HP)
RPM:	3560 (RPM)
Frame:	405TS
Voltage:	460
Current:	164. (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	ODP
# of Leads:	6
J-box Included:	Complete
Coupling/Sheave:	None
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: **2 - High** **11 - Good**

Overall Condition

1. Report Date

2. Nameplate Picture P37

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

4.	Describe the Overall Condition of the Equipment as Received		
5.	Report Date [COPY]		
Initial Mechanical/Electrical			
6.	Does Shaft Turn Freely?		**(Y) Yes**
7.	Does the shaft require T.I.R in Lathe to identify additional repairs?		**(No) No**
8.	Does Shaft Have Visible Damage?		**(No) No**
9.	Assembled Shaft Runout		**Inches**
10.	Assembled Shaft End Play		**inches**
11.	Air Gap Variation <10%		
12.	Lead Condition		**(NA) Not Applicable**
13.	Lead Length		**24 Inches**
14.	Does it have Lugs?, If so what is the Stud Size?		**(Yes) Yes**
15.	Lead Numbers		**1-6**
16.	Frame Condition		
17.	Fan Condition		
18.	Broken or Missing Components		
Initial Electrical Inspection			
19.	Insulation Resistance/Megger		**Megohms**
20.	Winding Resistance		
	1-2	1-3	2-3
21.	Perform Surge Test		
22.	Number of Stator Slots		**36**
23.	Stator Condition		
24.	Stator Thermistors/Ohms		
25.	Stator Overloads/Ohms		
Mechanical Inspection			
26.	Drive End Bearing Brand		**koyo**
27.	Drive End Bearing Number-		**6312z**
28.	Drive End Bearing Qty.		**1**
29.	Drive End Bearing Type		**(Ball) Ball Bearing**
30.	Drive End Lubrication Type		**(Grease) Grease Lubricated**
31.	Drive End Bearing Insulation or Grounding Device?		
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?		
33.	Drive End Bearing Condition		**replace**
34.	Opposite Drive End Bearing Brand		**koyo**

35.	Opposite Drive End Bearing Number-	**6312z**
36.	Opposite Drive End Bearing Qty.	**1**
37.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
38.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
39.	Opposite Drive End Bearing Insulation or Grounding Device?	
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**
41.	Opposite Drive End Bearing Condition	
	Contamination	
42.	Drive End Seal	
43.	Opposite Drive End Seal	

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
45.	Growler Test	**(Pass) Pass**
46.	Number of Rotor Bars	**28**
47.	Rotor Condition	
48.	List the Parts needed for the Repair Below	
	2 6312z	
49.	Signature of Technician that Disassembled Motor	**RHR**

Mechanical Fits- Rotor

50.	Shaft Runout	**0.001 inches**
51.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

52.	Coupling Fit Closest to Bearing Housing	

0 Degrees	90 Degrees	120 Degrees

53.	Coupling Fit Closest to the end of the Shaft	

0 Degrees	60 Degrees	120 Degrees

54.	Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees
2.3628	**2.3629**	**2.3628**

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

0 Degrees	60 Degrees	120 Degrees
2.3624	**2.3626**	**2.3625**

57.	Opposite Drive End Bearing Shaft Fit Condition	**(P) Pass**
58.	Shaft Air Seal Fits	

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.1186	**5.1188**	**5.1189**

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

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.12	**5.13**	**5.133**

Pitted needs Sleeved

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

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

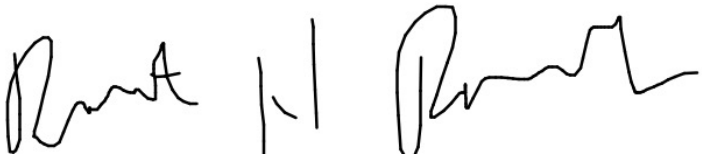
64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

65. List Machine Work Needed Below

Both end bell need sleeved

66. Technician **RHR**



Root Cause of Failure

67. Failure locations

Housing fits

68. Root cause of failure

Unknown

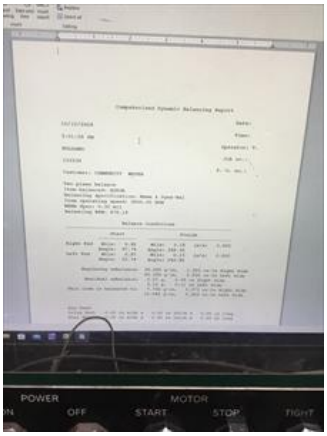
Dynamic Balance Report

69. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

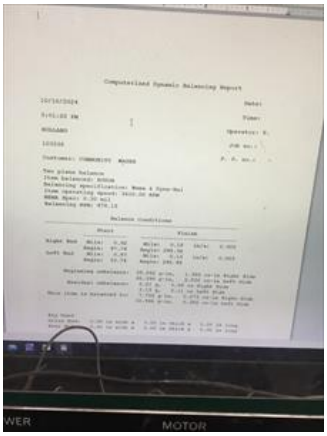
70. Initial Balance Readings P11

Drive End	Opposite Drive End
.92	**...97**



71. Final Balance Readings

Drive End	Opposite Drive End
.18	**.13**



72. Technician **Terrence Holland**

Rewind

73. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

74. Core Hot Spot Test

Pre-Burnout	Post-Burnout

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

76. Post Rewind Polarization Index **Polarization Index**

77. Post Rewind Winding Resistance

1-2	1-3	2-3

78. Post Rewind Surge Test

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

80. Technician

Mechanical Fits- Bearing Housings - Post Repair

81. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

82. Opposite Drive End - Endbell Bearing Fit Post Repair P19

0 Degrees	60 Degrees	120 Degrees
5.1186	**5.1185**	**5.1185**

83. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

84. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

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

Assembly

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

87. Photograph All Major Components prior to assembly **(Complete) Complete** P17

88.	Final Insulation Resistance Test	**171.9 Gigohms**	P31

89.	Assembled Shaft Endplay	**0 inches**
90.	Assembled Shaft Runout	**0.001 inches**

91. Test Run Voltage P56

Volts	Volts	Volts
459	**457**	**460**

Co sign RRW

92. Test Run Amperage P65

Amps	Amps	Amps
49.9	**47.1**	**46.6**

93. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.02	**0.02**	**0.01**

94. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.01	**0.02**	**0.02**

95. Ambient Temperature - Fahrenheit

96. Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

97. Opposite Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

98. Document Final Condition with Pictures after paint

Co signer: RW