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

AC Inspection as Found

Beasly Flooring (12083)
485 HWY 9 SPUR
MELBOURNE, AR 72556

FolderID: 103876
FormID: 22612547

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	894C-664
Description:	100HP BALDOR

Hi-Speed Job Number:	103876
Manufacturer:	Baldor
Product Number:	CAT: ECP4400T-4
Spec/ID #:	1GE32X20
Serial Number:	894C-664
HP/kW:	100 (HP)
RPM:	1780 (RPM)
Frame:	405T
Voltage:	460
Current:	114 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	3
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	12/20/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High** **12 - Good**

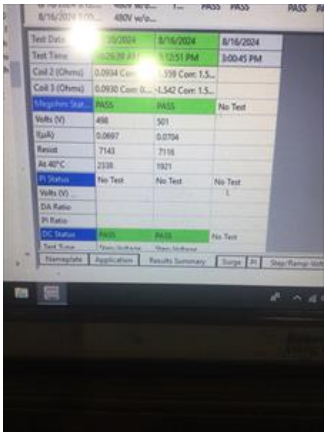
Overall Condition

1.	Report Date	**12/18/2024**

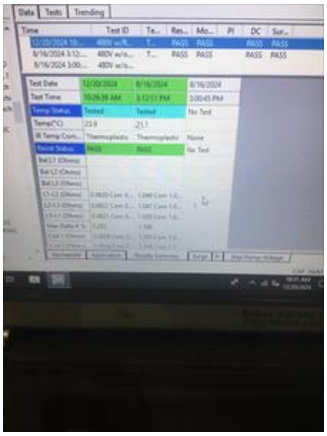
2. Nameplate Picture P37

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

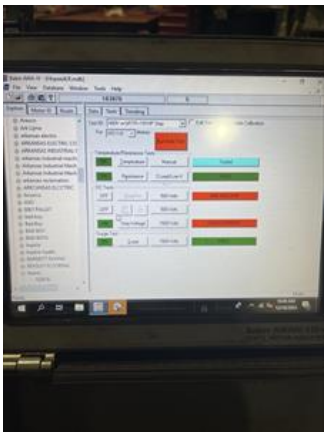
	4.	Describe the Overall Condition of the Equipment as Received	
Initial Mechanical/Electrical			
	5.	Does Shaft Turn Freely?	**(Y) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**0.003 Inches**
	9.	Assembled Shaft End Play	**0 inches**
	10.	Air Gap Variation <10%	
	11.	Lead Condition	**(P) Pass**
	12.	Lead Length	**11 Inches**
	13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**
	14.	Lead Numbers	**1-3**
	15.	Frame Condition	**pass**
	16.	Fan Condition	**(P) Pass**
	17.	Broken or Missing Components	**none**
Initial Electrical Inspection			
	18.	Insulation Resistance/Megger	**2.314 Megohms** P8

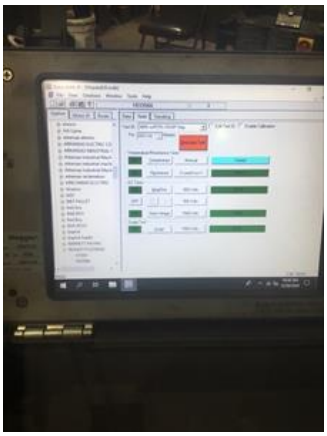


19.	Winding Resistance			P20
	1-2	1-3	2-3	
	.0620	**.0622**	**.0621**	



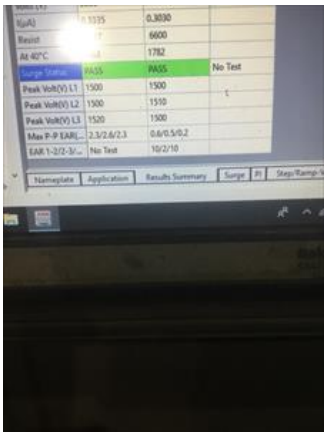
20.	Perform Surge Test	P57

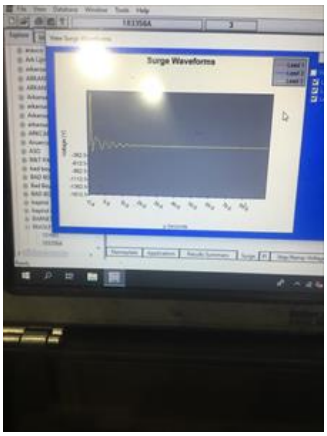




Before baking

After baking





21.	Number of Stator Slots	**60**
22.	Stator Condition	**pass**
23.	Stator Thermistors/Ohms	
24.	Stator Overloads/Ohms	

Mechanical Inspection

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

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?	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	
	Spanner nut, star washer	
32.	Drive End Bearing Condition	**replace**
	Metal fatigue	
33.	Opposite Drive End Bearing Brand	**koyo** P92

34.	Opposite Drive End Bearing Number-	**6313**
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?	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**
40.	Opposite Drive End Bearing Condition	**replace**
	Metal fatigue	
41.	Drive End Seal	**Dust seal**
42.	Opposite Drive End Seal	**Dust seal**

Rotor Inspection

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

44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**50**
46.	Rotor Condition	**pass**
47.	List the Parts needed for the Repair Below ***6316 & 6313 2Z/C3 bearings***	
48.	Signature of Technician that Disassembled Motor	**Cody McMillan**

Co sign: TRH

Mechanical Fits- Rotor

49.	Shaft Runout	**0.003 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
3.1502	**3.1502**	**3.1502**

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

0 Degrees	60 Degrees	120 Degrees
2.5596	**2.5594**	**2.5594**

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

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

58.	Drive End - Endbell Bearing Fit			P2
	0 Degrees	60 Degrees	120 Degrees	

Fail

Excessive Pitting, recommend sleeving. Verified by machinist.

59.	Drive End - Endbell Bearing Fit Condition	**(F) Fail**	P15

Excessive pitting. Verified by machinist.

60.	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	5.5122	**5.512**	**5.512**	
61.	Opposite Drive End - Endbell Bearing Fit Condition		**(P) Pass**	
62.	Bearing Cap Condition			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
	pass	**pass**		
63.	End Bell Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
64.	List Machine Work Needed Below			
	Sleeve D.E housing fit			
65.	Technician		**Terrence Holland**	

Co witness: CM

Root Cause of Failure

66. Failure locations

Bearings & bearing grease. D.E housing fit has excessive pitting.

67. Root cause of failure

Water contaminated grease caused premature bearing failure

Dynamic Balance Report

68. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

69. Initial Balance Readings

Drive End	Opposite Drive End

70. Final Balance Readings

Drive End	Opposite Drive End

71. Technician

Mechanical Fits- Bearing Housings - Post Repair

72. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

73. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

74. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

75. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

76. End Bell Repair Sign-off

Assembly

77. QC Check All Parts for Cleanliness Prior to Assembly
78. Photograph All Major Components prior to assembly
79. Final Insulation Resistance Test
80. Assembled Shaft Endplay
81. Assembled Shaft Runout
82. Test Run Voltage

Volts	Volts	Volts

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