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

AC Inspection as Found

City of Batesville (012100)
500 Riverbank
Batesville, AR 72501

FolderID: 101110
FormID: 16248651

AC Inspection - Rev. 2

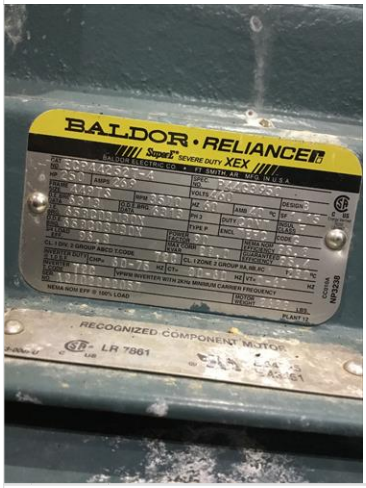
Location:	Shop
Serial Number:	A2102222057
Description:	250HP BALDOR 3600RPM 449TS

Hi-Speed Job Number:	101110
Manufacturer:	Baldor
Product Number:	ECP44252T-4
Spec/ID #:	P44G3950
Serial Number:	A2102222057
HP/kW:	250 (HP)
RPM:	3570 (RPM)
Frame:	449TS
Voltage:	460
Current:	269
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	None
Coupling/Sheave:	Coupling
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High** **8 - 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

Serviceable

5. Distance from the end of the shaft to the Coupling/Sheave **0 inches** P76

Flush

Initial Mechanical/Electrical

6. Does Shaft Turn Freely? **(Yes) Yes**
7. Does Shaft Have Visible Damage? **(No) No**
8. Assembled Shaft Runout **0.001 Inches** P26

9. Assembled Shaft End Play
10. Air Gap Variation <10%

11.	Lead Condition	**(P) Pass**	P56

12.	Lead Length	**17 Inches**
13.	Stator Temperature Detector Rating and Function	

Quantity	Rating	Quantity Passed

14.	Bearing Temperature Detector Rating and Function	

Quantity	Rating	Quantity Passed

15.	Frame Condition	**pass**
16.	Fan Condition	**(P) Pass** P104

17.	Heater Quantity, Ratings	

Quantity	Volts/Watts	Pass/Fail

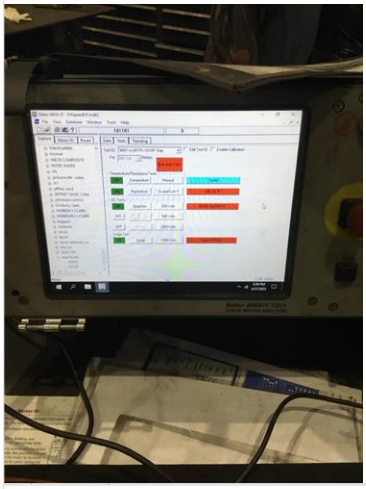
18.	Broken or Missing Components	

Initial Electrical Inspection

19.	Insulation Resistance/Megger	
20.	Winding Resistance	

1-2	1-3	2-3

21.	Perform Surge Test	**(F) Fail**	P58



22.	Number of Stator Slots	
23.	Stator Condition	

Mechanical Inspection

24.	Drive End Bearing Brand	
25.	Drive End Bearing Number-	**6313**
26.	Drive End Bearing Qty.	**1**
27.	Drive End Bearing Type	**(Ball) Ball Bearing**
28.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
29.	Drive End Bearing Insulation or Grounding Device?	**none**
30.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	
31.	Drive End Bearing Condition	**replace**
32.	Opposite Drive End Bearing Brand	
33.	Opposite Drive End Bearing Number-	**6313**
34.	Opposite Drive End Bearing Qty.	**1**
35.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
36.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
37.	Opposite Drive End Bearing Insulation or Grounding Device?	
38.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	
39.	Opposite Drive End Bearing Condition	
40.	Drive End Seal	
41.	Opposite Drive End Seal	
42.	DE Sleeve Bearing Inside Diameter	

0 degrees	120 degrees	240 degrees

43.	DE Sleeve Bearing Outside Diameter	

0 degrees	120 degrees	240 degrees

44.	DE Sleeve Bearing Housing Inside Diameter	

0 degrees	120 degrees	240 degrees

45.	DE Sleeve Bearing to Housing Clearance	

0 degrees	120 degrees	240 degrees

46. ODE Sleeve Bearing Inside Diameter

0 degrees	120 degrees	240 degrees

47. ODE Sleeve Bearing Outside Diameter

0 degrees	120 degrees	240 degrees

48. ODE Sleeve Bearing Housing Inside Diameter

0 degrees	120 degrees	240 degrees

49. ODE Sleeve Bearing to Housing Clearance

0 degrees	120 degrees	240 degrees

Rotor Inspection

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

51. Growler Test
52. Number of Rotor Bars
53. Rotor Condition
54. List the Parts needed for the Repair Below

2) 6313 bearings. Rewind stator.

55. Signature of Technician that Disassembled Motor — **Terrence Holland**

Mechanical Fits- Rotor

56. Shaft Runout — **0.001 inches**
57. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

58. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

	59.	Coupling Fit Closest to the end of the Shaft			
		0 Degrees	60 Degrees	120 Degrees	
	60.	Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.5597	**2.5597**	**2.5597**	
●	61.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
	62.	Opposite Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.5592	**2.5592**		
●	63.	Opposite Drive End Bearing Shaft Fit Condition			**(P) Pass**
	64.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		

Mechanical Fits- Bearing Housings

	65.	Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		5.5123	**5.5124**	**5.5124**	
●	66.	Drive End - Endbell Bearing Fit Condition			**(P) Pass**
	67.	Opposite Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		5.5123	**5.5124**	**5.5123**	
●	68.	Opposite Drive End - Endbell Bearing Fit Condition			**(P) Pass**

69. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	**pass**




70. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

71. List Machine Work Needed Below

None

72. Technician **Terrence Holland**

Dynamic Balance Report

73. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

74. Initial Balance Readings

Drive End	Opposite Drive End

75.	Final Balance Readings		
	Drive End	Opposite Drive End	
76.	Technician		

Rewind

77.	Core Test Results - Watts loss per Pound		
	Pre-Burnout	Post Burnout	
78.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
79.	Post Rewind Electrical Test- Insulation Resistance		
80.	Post Rewind Polarization Index		
81.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
82.	Post Rewind Surge Test		
83.	Post Rewind Hi-Pot		
84.	Technician		

Root Cause of Failure

85.	Failure locations		
	Windings shorted		
86.	Root cause of failure		

Mechanical Fits- Rotor - Post Repair

87.	Shaft Runout Post Repair		
88.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
89.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
90.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
91.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
92.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
93.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
94.	Shaft Repair Sign-off		

Mechanical Fits- Bearing Housings - Post Repair

95.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
96.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
97.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
98.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
99.	DE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
100.	DE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
101.	DE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
102.	DE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3
103.	End Bell Repair Sign-off		
104.	ODE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
105.	ODE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
106.	ODE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
107.	ODE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3

Assembly

108.	QC Check All Parts for Cleanliness Prior to Assembly		
109.	Photograph All Major Components prior to assembly		
110.	Final Insulation Resistance Test		
111.	Assembled Shaft Endplay		
112.	Assembled Shaft Runout		
113.	Test Run Voltage		
	Volts	Volts	Volts

114.	Test Run Amperage		
	Amps	Amps	Amps
115.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
116.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
117.	Ambient Temperature - Fahrenheit		
118.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
119.	Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
120.	Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
121.	Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
122.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
123.	Opposite Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
124.	Opposite Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
125.	Opposite Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
126.	Stator Temperatures- Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
127.	Stator Temperatures- Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
128.	Stator Temperatures- Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
129.	Stator Temperatures- Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes

130.	Document Final Condition with Pictures after paint
131.	Final Pics and QC Review