

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

> FolderID: 101110 FormID: 16248651

## **AC Inspection as Found** City of Batesville (012100)

500 Riverbank

Batesville, AR 72501

Location:

AC Inspection - Rev. 2

Serial Number: A2102222057

Description:250HP BALDOR 3600RPM 449TS

Shop

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





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

P37

















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%





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





17. Heater Quantity, Ratings

Quantity Volts/Watts Pass/Fail

18. Broken or Missing Components

## **Initial Electrical Inspection**

0

P104

- 19. Insulation Resistance/Megger
- 20. Winding Resistance

1-2 1-3 2-3





21. Perform Surge Test

22.	Numb	or of	Stator	Slote
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23.	Stator Condition			
Mecha	nical 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 Gr	rounding Device?	none	
30.	Drive End Wavy Washer/Snap-Rin	ng Other Retention Device?		
31.	Drive End Bearing Condition		replace	
32.	Opposite Drive End Bearing Brand	d		
33.	Opposite Drive End Bearing Numb	per-	6313	
34.	Opposite Drive End Bearing Qty.		1	
35.	Opposite Drive End Bearing Type		(Ball) Ball Bearing	
36.	Opposite Drive End Lubrication Ty		(Grease) Grease Lubricated	
37.	Opposite Drive End Bearing Insula	•		
38.		/Snap-Ring Other Retention Device?		
39.	Opposite Drive End Bearing Cond	ition		
40.	Drive End Seal			
41.	Opposite Drive End Seal			
42.	DE Sleeve Bearing Inside Diamete			
	0 degrees	120 degrees	240 degrees	
43.	DE Sleeve Bearing Outside Diame			
	0 degrees	120 degrees	240 degrees	
44.	DE Sleeve Bearing Housing Inside			
	0 degrees	120 degrees	240 degrees	
45.	DE Sleeve Bearing to Housing Cle			
	0 degrees	120 degrees	240 degrees	

46.	ODE Sleeve Bearing Inside Diam	neter			
	0 degrees	120 degrees	240 degrees		
47.	ODE Sleeve Bearing Outside Dia				
	0 degrees	120 degrees	240 degrees		
40	00501 0 11 1	: L D:			
48.	ODE Sleeve Bearing Housing Ins		240 dogrado		
	0 degrees	120 degrees	240 degrees		
49.	ODE Sleeve Bearing to Housing	Clearance			
	0 degrees	120 degrees	240 degrees		
Rotor	Inspection			О	
50.	Rotor Type/Material		(Squirrel Aluminum) Squirrel		P3
	[C (C (C) ) as here		Cage Aluminum Die Cast		
10 TO					
( To					
, X					
	Control of the contro				
51.	Growler Test				
52.	Number of Rotor Bars Rotor Condition				
53. 54.	List the Parts needed for the Rep	air Below			
54.	2) 6313 bearings. Rewind stator.	all Below			
55.	Signature of Technician that Disa	ssembled Motor	Terrence Holland		
	<b>J</b>	\			
	_/	1/ // 0			
		Holles			
		•			
Mecha	nical 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 H	lousing			
	_				

90 Degrees

0 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 Cond	dition		(P) Pass
	62.	Opposite Drive End Bearing Share	ft Fit		
		0 Degrees	60 Degrees	120 Degrees	
		2.5592	2.5592		
	63.	Opposite Drive End Bearing Share	ft Fit Condition		(P) Pass
	64.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
M	echa	nical Fits- Bearing Housings			Ō
	65.	Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		5.5123	5.5124	5.5124	
	66.	Drive End - Endbell Bearing Fit C	Condition		(P) Pass
	67.	Opposite Drive End - Endbell Bea	aring Fit		
		0 Degrees	60 Degrees	120 Degrees	
		5.5123	5.5124	5.5123	
	68.	Opposite Drive End - Endbell Bea	aring Fit Condition		(P) Pass

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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

J/M

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		
70.	Drive End	Opposite Drive End	
	Drive End	Opposite Drive End	
76.	Technician		
Rewin			
77.		or Pound	
77.	Pre-Burnout	Post Burnout	
	Pre-burnout	Post Bulliout	
78.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
79.	Post Rewind Electrical Test- Insu	llation Resistance	
80.	Post Rewind Polarization Index		
81.	Post Rewind Winding Resistance	9	
	1-2	1-3	2-3
82.	Doot Dowind Curso Toot		
83.	Post Rewind Surge Test Post Rewind Hi-Pot		
84.	Technician		
	Cause of Failure		
85.	Failure locations		
0.0	Windings shorted		
86.	Root cause of failure	_	
	inical Fits- Rotor - Post Repair	r	
87.			
88.	Rotor Runout Post Repair	Data Da I	O
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
89.	Coupling Fit Closest to Bearing F	lousing Post Repair	
	0 Degrees	90 Degrees	120 Degrees
90.	Coupling Fit Closest to the end o	f the Shaft Post Repair	
	0 Degrees	60 Degrees	120 Degrees
91.	Drive End Bearing Shaft Fit Post	•	
	0 Degrees	60 Degrees	120 Degrees
92.	Opposite Drive End Bearing Sha	ft Fit Post Repair	
	0 Degrees	60 Degrees	120 Degrees
	0 2 0g. 000	00 2 0g. 000	0 _09.000
93.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
		11 - 12 - 13 - 13 - 13 - 13 - 13 - 13 -	
94.	Shaft Repair Sign-off		
	nical Fits- Bearing Housings	- Post Repair	
	J 90	•	

95.	Drive End - Endbell Bearing Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	
	<del>-</del>	0	ū	
96.	Opposite Drive End - Endbell Bearing Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	
		•	· ·	
97.	Bearing Cap Condition Post Repa	ir		
	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 Pos	·		
	Measure 1	Measure 2	Measure 3	
101				
101.	DE Sleeve Bearing Inside OD Pos	•		
	Measure 1	Measure 2	Measure 3	
400	DE Clasus Bassins Outside OD D	ant Dannin		
102.	DE Sleeve Bearing Outside OD Po Measure 1	Measure 2	Measure 3	
	weasure i	ivieasure 2	Measure 3	
103	End Bell Repair Sign-off			
	ODE Sleeve Bearing Inside ID Pos	st Repair		
	Measure 1	Measure 2	Measure 3	
105.	ODE Sleeve Bearing Outside ID P	Post Repair		
	Measure 1	Measure 2	Measure 3	
106.	ODE Sleeve Bearing Inside OD Po	ost Repair		
	Measure 1	Measure 2	Measure 3	
107.	ODE Sleeve Bearing Outside OD	Post Repair		
	Measure 1	Measure 2	Measure 3	
Assem	•			
	QC Check All Parts for Cleanlines	•		
	Photograph All Major Components	s prior to assembly		
	Final Insulation Resistance Test			
	Assembled Shaft Endplay Assembled Shaft Runout			
	Test Run Voltage			
113.	Volts	Volts	Volts	
	v Oilo	VOICE	v Oito	

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11/	Test Run Amperage			
114.		Amno	Amno	
	Amps	Amps	Amps	
115	Drive End Vibration Readings - I	nahaa Dar Sagand		
115.			A 1	
	Horizontal	Vertical	Axial	
110	Opposite Drive Find Vibration De	adiasa Jashaa Day Caasad		
116.	Opposite Drive End Vibration Re Horizontal	Vertical	Avial	
	Horizoniai	vertical	Axial	
447	Amphicust Tours and true - Fabruard	_:4		
	Ambient Temperature - Fahrenh			
110.	Drive End Bearing Temps - Fahr		4.5. Minutes	
	5 Minutes	10 Minutes	15 Minutes	
110	Drive End Bearing Temps - Fahr	onhoit 20 20 Minutos		
119.	20 Minutes	25 Minutes	30 Minutes	
	20 Millutes	25 Millutes	30 Millutes	
120	Drive End Bearing Temps - Fahr	enheit 35-45 Minutes		
120.	35 Minutes	40 Minutes	45 Minutes	
	33 Williates	40 Millates	45 Millates	
121	Drive End Bearing Temps - Fahr	enheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes	
	oo miiddoo	oo iviiii atoo	oo wiiinatoo	
122.	Opposite Drive End Bearing Ten	nps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes	
123.	Opposite Drive End Bearing Ten	nps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes	
124.	Opposite Drive End Bearing Ten	nps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes	
125.	Opposite Drive End Bearing Ten	nps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes	
126.	Stator Temperatures- Fahrenhei	t		
	5 Minutes	10 Minutes	15 Minutes	
127.	Stator Temperatures- Fahrenhei			
	20 Minutes	25 Minutes	30 Minutes	
400	0	05.45.45		
128.	Stator Temperatures- Fahrenhei		AF NA'	
	35 Minutes	40 Minutes	45 Minutes	
400	Otatan Tanananatura - Falin III	LEO CO Minutes		
129.	Stator Temperatures- Fahrenhei		CO Minuto -	
	50 Minutes	55 Minutes	60 Minutes	

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