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

AC Recondition As Found

Georges Inc
1810 S. St. Louis Street
Batesville, AR 72501

FolderID: 100874
FormID: 15910409

AC Recondition - Rev. 2

Location:	Shop
Serial Number:	C1509280487
Description:	40HP BALDOR 1800RPM 324TC

Hi-Speed Job Number:	100874
Manufacturer:	Baldor
Product Number:	CEM4110T
Spec/ID #:	12C052Y276G1
Serial Number:	C1509280487
HP/kW:	40 (HP)
RPM:	1775 (RPM)
Frame:	324TC
Voltage:	230 / 460
Current:	96/48
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **8 - Good**

Overall Condition

1. Report Date
2. Nameplate Picture

P37

	3.	Photos of all six sides of the machine.	
	4.	Describe the Overall Condition of the Equipment as Received	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Yes) Yes**
	6.	Does Shaft Have Visible Damage?	**(No) No**
	7.	Assembled Shaft Runout	
	8.	Assembled Shaft End Play	
	9.	Air Gap Variation <10%	
●	10.	Lead Condition	**(P) Pass**
	11.	Lead Length	**12 Inches**
	12.	Frame Condition	**wash**
●	13.	Fan Condition	**(P) Pass** P91

	14.	Broken or Missing Components	
Initial Electrical Inspection			
	15.	Insulation Resistance/Megger	
	16.	Winding Resistance	

1-2	1-3	2-3

●	17.	Perform Surge Test	**(P) Pass**
	18.	Number of Stator Slots	**48 Megohms**

19.	Stator Condition	**wash and bake**	P70

Mechanical Inspection

20.	Drive End Bearing Brand		
21.	Drive End Bearing Number-	**6312**	P33

22.	Drive End Bearing Qty.	**1**	
23.	Drive End Bearing Type	**(Ball) Ball Bearing**	
24.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	P60

25.	Drive End Bearing Insulation or Grounding Device?	**na**
26.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**na**
27.	Drive End Bearing Condition	
28.	Opposite Drive End Bearing Brand	

29.	Opposite Drive End Bearing Number-	**6311**	P85

30.	Opposite Drive End Bearing Qty.	**1**	
31.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
32.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	P92

33.	Opposite Drive End Bearing Insulation or Grounding Device?	**na**	
34.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P95

35.	Opposite Drive End Bearing Condition		
36.	Drive End Seal		
37.	Opposite Drive End Seal		

Rotor Inspection

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

39.	Growler Test	**(Pass) Pass**	
40.	Number of Rotor Bars	**40**	
41.	Rotor Condition	**dirty**	P38

42.	List the Parts needed for the Repair Below	
	None	
43.	Signature of Technician that Disassembled Motor	**RW**

Mechanical Fits- Rotor

44.	Shaft Runout		
45.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
46.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees

47. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

48. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.3624	**2.3624**	**2.3624**

49. Drive End Bearing Shaft Fit Condition **(P) Pass** P75

50. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.1655	**2.1655**	**2.1655**

51. Opposite Drive End Bearing Shaft Fit Condition **(P) Pass** P83

52. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

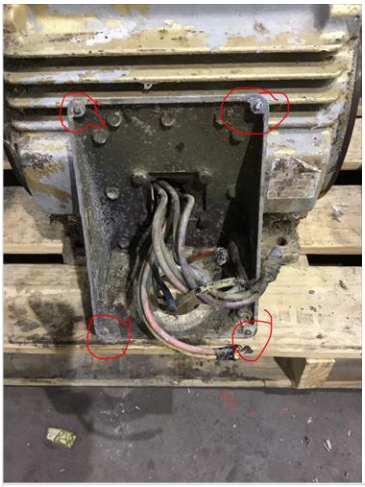
Mechanical Fits- Bearing Housings

53.	Drive End - Endbell Bearing Fit			P2
	0 Degrees	60 Degrees	120 Degrees	
	5.1183	**5.1183**	**5.1183**	

54.	Drive End - Endbell Bearing Fit Condition		**(P) Pass**
55.	Opposite Drive End - Endbell Bearing Fit		P31
	0 Degrees	60 Degrees	120 Degrees
	4.7247	**4.7247**	**4.7247**

56.	Opposite Drive End - Endbell Bearing Fit Condition		**(P) Pass**
57.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	pass	**pass**	
58.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	

59.	List Machine Work Needed Below	P64
	Broke bolts in electrical box	



60. Technician **RW**

Dynamic Balance Report

61. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

62. Initial Balance Readings

Drive End	Opposite Drive End

63. Final Balance Readings

Drive End	Opposite Drive End

64. Technician

Rewind

65. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

66. Core Hot Spot Test

Pre-Burnout	Post-Burnout

67. Post Rewind Electrical Test- Insulation Resistance

68. Post Rewind Polarization Index

69. Post Rewind Winding Resistance

1-2	1-3	2-3

70. Post Rewind Surge Test

71. Post Rewind Hi-Pot

72. Technician

Root Cause of Failure

73. Failure locations

Noisy bearings and bad connection electrical box

74.	Root cause of failure		
Mechanical Fits- Rotor - Post Repair			
75.	Shaft Runout Post Repair		
76.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
77.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
78.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
79.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
80.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
81.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
82.	Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair			
83.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
84.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
85.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
86.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
87.	End Bell Repair Sign-off		
Assembly			
88.	QC Check All Parts for Cleanliness Prior to Assembly		
89.	Photograph All Major Components prior to assembly		
90.	Final Insulation Resistance Test		
91.	Assembled Shaft Endplay		
92.	Assembled Shaft Runout		
93.	Test Run Voltage		
	Volts	Volts	Volts

94.	Test Run Amperage		
	Amps	Amps	Amps
95.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
96.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
97.	Ambient Temperature - Fahrenheit		
98.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
99.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes

100. Document Final Condition with Pictures after paint P2300

101. Final Pics and QC Review **Terrence Holland** P2400