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

AC Recondition As Found

Johnson Controls Inc
10600 Colonel Glenn Rd. Suite 200
Little Rock, AR 72204

FolderID: 99717
FormID: 13426722

AC Recondition - Rev. 2

Location:	Shop
Serial Number:	X1602M77948
Description:	50HP Baldor 3600RPM 324TSC

Hi-Speed Job Number:	99717
Manufacturer:	Baldor
Product Number:	1200875297-000030
Spec/ID #:	M40E213W803G1
Serial Number:	X1602M77948
HP/kW:	50 (HP)
RPM:	3525 (RPM)
Frame:	324TSC
Voltage:	230 / 460
Current:	112/56
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	ODP
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	04/27/2022
Repair Stage:	Final

Priorities Found: **2 - High** **5 - Good**

Overall Condition

1. Report Date

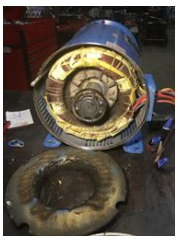
2. Nameplate Picture P21

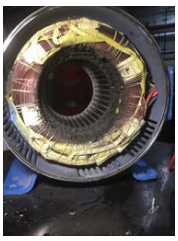












3. Describe the Overall Condition of the Equipment as Received

Good

Initial Mechanical/Electrical

4. Does Shaft Turn Freely? **(Yes) Yes**
5. Does Shaft Have Visible Damage? **(No) No** P12

6. Assembled Shaft Runout
7. Assembled Shaft End Play
8. Air Gap Variation <10%

9.	Lead Condition			**(P) Pass**	P31

10.	Lead Length			**10.5 Inches**
11.	Stator Temperature Detector Rating and Function			
	Quantity	Rating	Quantity Passed	
12.	Bearing Temperature Detector Rating and Function			
	Quantity	Rating	Quantity Passed	
13.	Frame Condition			**pass**
14.	Fan Condition			**(N) NA**
15.	Heater Quantity, Ratings			
	Quantity	Volts/Watts	Pass/Fail	
16.	Broken or Missing Components			

Initial Electrical Inspection

17.	Insulation Resistance/Megger			
18.	Winding Resistance			
	1-2	1-3	2-3	
19.	Perform Surge Test			**(F) Fail**
20.	Stator Condition			**rewind**

Mechanical Inspection

21.	Drive End Bearing Number-			**6312 2Z/C3** P8

22.	Drive End Bearing Qty.			**1**
23.	Drive End Bearing Type			**(Ball) Ball Bearing**
24.	Drive End Lubrication Type			**(Grease) Grease Lubricated**
25.	Drive End Bearing Insulation or Grounding Device?			
26.	Drive End Wavy Washer/Snap-Ring Other Retention Device?			
27.	Drive End Bearing Condition			**worn**

28.	Opposite Drive End Bearing Number-	**6309 2Z/C3**	P46

29.	Opposite Drive End Bearing Qty.	**1**
30.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
31.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
32.	Opposite Drive End Bearing Insulation or Grounding Device?	
33.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**yes**
34.	Opposite Drive End Bearing Condition	
35.	Drive End Seal	
36.	Opposite Drive End Seal	

37. DE Sleeve Bearing Inside ID

Measure 1	Measure 2	Measure 3

38. DE Sleeve Bearing Outside ID

Measure 1	Measure 2	Measure 3

39. DE Sleeve Bearing Inside OD

Measure 1	Measure 2	Measure 3

40. DE Sleeve Bearing Outside OD

Measure 1	Measure 2	Measure 3

41. ODE Sleeve Bearing Inside ID

Measure 1	Measure 2	Measure 3

42. ODE Sleeve Bearing Outside ID

Measure 1	Measure 2	Measure 3

43. ODE Sleeve Bearing Outside OD

Measure 1	Measure 2	Measure 3

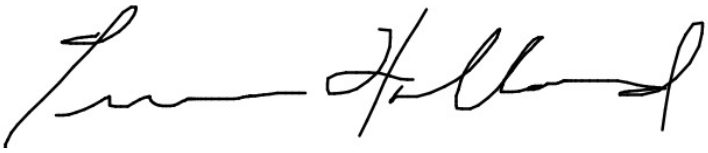
44. ODE Sleeve Bearing Inside OD

Measure 1	Measure 2	Measure 3

Rotor Inspection

45.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
46.	Growler Test	
47.	Number of Rotor Bars	
48.	Rotor Condition	**pass**
49.	List the Parts needed for the Repair Below	

50. Signature of Technician that Disassembled Motor **Terrence. Holland**



Mechanical Fits- Rotor

51. Shaft Runout

52. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

53. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

54. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

55. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.3623	**2.3623**	**2.3624**

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

57. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.7724	**1.7723**	**1.7724**

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

59. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

60. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

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

62. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.9373	**3.9371**	**3.9373**

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

64. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	

65. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

66. List Machine Work Needed Below

67. Technician **Terrence. Holland**

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

Rewind

72. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

73. Core Hot Spot Test

Pre-Burnout	Post-Burnout

74. Post Rewind Electrical Test- Insulation Resistance

75. Post Rewind Polarization Index

76. Post Rewind Winding Resistance

1-2	1-3	2-3

77. Post Rewind Surge Test

78. Post Rewind Hi-Pot

79. Technician

Root Cause of Failure

80. Failure locations

81. Root cause of failure

Mechanical Fits- Rotor - Post Repair

82. Shaft Runout Post Repair

83. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

84. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

85. Coupling Fit Closest to the end of the Shaft Post Repair

0 Degrees	60 Degrees	120 Degrees

86.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
87.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
88.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
89.	Shaft Repair Sign-off		

Mechanical Fits- Bearing Housings - Post Repair

90.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
91.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
92.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
93.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
94.	DE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
95.	DE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
96.	DE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
97.	DE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3
98.	End Bell Repair Sign-off		
99.	ODE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
100.	ODE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
101.	ODE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3

102.	ODE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3

Assembly

103.	Photograph All Major Components prior to assembly		
104.	Final Insulation Resistance Test		
105.	Assembled Shaft Endplay		
106.	Assembled Shaft Runout		
107.	Test Run Voltage		
	Volts	Volts	Volts
108.	Test Run Amperage		
	Amps	Amps	Amps
109.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
110.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
111.	Ambient Temperature - Fahrenheit		
112.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
113.	Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
114.	Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
115.	Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
116.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
117.	Opposite Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
118.	Opposite Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
119.	Opposite Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes

120.	Stator Temperatures- Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
121.	Stator Temperatures- Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
122.	Stator Temperatures- Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
123.	Stator Temperatures- Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
124.	Final Test Run Sign-off		
125.	Document Final Condition with Pictures after paint		
126.	Final Pics and QC Review		P2300