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

AC Inspection as Found

Arauco-Malvern MDF (10298)
1275 Willamette Rd
Malvern, AR 72104

FolderID: 101154
FormID: 16335876

AC Inspection - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	J04T0652TE 1
Description:	150HP SIEMENS 900RPM 447T

Hi-Speed Job Number:	101154
Manufacturer:	Siemens
Product Number:	1LA04478HE41
Serial Number:	J04T0652TE 1
HP/kW:	150 (HP)
RPM:	885 (RPM)
Frame:	447T
Voltage:	460
Current:	186
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: **2 - High** **7 - Good**

Overall Condition

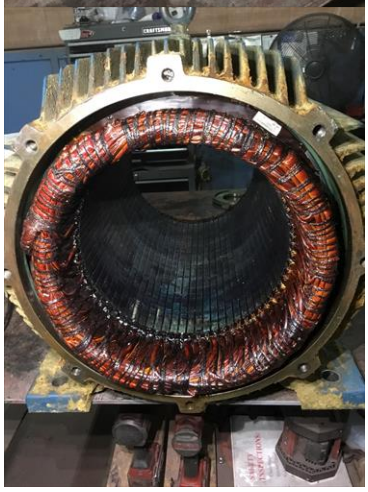
1. Report Date

2. Nameplate Picture P37

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





	4.	Describe the Overall Condition of the Equipment as Received	

Initial Mechanical/Electrical

●	5.	Does Shaft Turn Freely?	**(Yes) Yes**	
	6.	Does Shaft Have Visible Damage?	**(No) No**	
●	7.	Assembled Shaft Runout	**0.002 Inches**	
	8.	Assembled Shaft End Play		
	9.	Air Gap Variation <10%		
●	10.	Lead Condition	**(P) Pass**	P54

	11.	Lead Length	**19 Inches**	
	12.	Frame Condition		
●	13.	Fan Condition	**(P) Pass**	P91

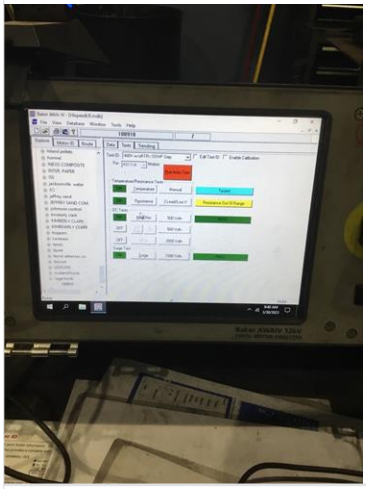
14.	Broken or Missing Components		

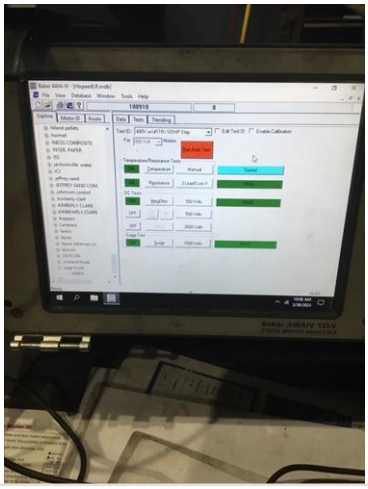
Initial Electrical Inspection

15.	Insulation Resistance/Megger		
16.	Winding Resistance		

1-2	1-3	2-3

17.	Perform Surge Test	**(P) Pass**	P57





18.	Number of Stator Slots		
19.	Stator Condition	**pass**	

Mechanical Inspection

20.	Drive End Bearing Brand	**Nachi**	
21.	Drive End Bearing Number-	**6320 Z**	P32

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?	**none**	
26.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
27.	Drive End Bearing Condition	**replace**	
28.	Opposite Drive End Bearing Brand	**ORS**	

29.	Opposite Drive End Bearing Number-	**6316 C3**	P86

30.	Opposite Drive End Bearing Qty.	**1**	
31.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P90

32.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
33.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**
34.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**snap ring**
35.	Opposite Drive End Bearing Condition	**replace**
36.	Drive End Seal	P98

37.	Opposite Drive End Seal	**none**	

Rotor Inspection

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

39.	Growler Test	**(Pass) Pass**	
40.	Number of Rotor Bars		
41.	Rotor Condition	**pass**	
42.	List the Parts needed for the Repair Below		
43.	Signature of Technician that Disassembled Motor	**Terrence Holland**	

Mechanical Fits- Rotor

44.	Shaft Runout	**0.002 inches**	
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
3.9375	**3.9376**	**3.9377**

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

50. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
3.1503	**3.1502**	**3.1502**

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

52. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

53. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
8.466200000000001	**8.4664**	**8.4663**

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

55. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
6.694	**6.6941**	**6.694**

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

57. Bearing Cap Condition P51

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

Sleeve both end bell housings.

60. Technician **Terrence Holland**

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 P27

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

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

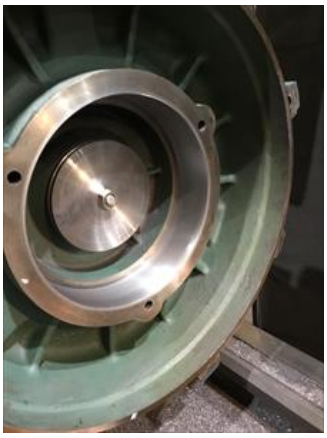
Drive End Air Seal	Opposite Drive End Air Seal

82. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

83. Drive End - Endbell Bearing Fit Post Repair P5

0 Degrees	60 Degrees	120 Degrees
8.465299999999999	**8.465199999999999**	**8.465199999999999**



84. Opposite Drive End - Endbell Bearing Fit Post Repair P20

0 Degrees	60 Degrees	120 Degrees
6.6932	**6.6933**	**6.6933**

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 **Gary**

Assembly

88. QC Check All Parts for Cleanliness Prior to Assembly P4

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		
101.	Final Pics and QC Review	**Terrence Holland**	P101