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

AC Inspection as Found

Tokai Carbon
3931 Carbon Plant Road
Ozark, AR 72949

FolderID: 101286
FormID: 16609587

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	8004

Description:40/10HP WESTINGHOUSE 1800/900RPM 326T

Hi-Speed Job Number:	101286
Manufacturer:	Other
Product Number:	80C16346
Serial Number:	8004
HP/kW:	40 (HP)
RPM:	1750 (RPM)
Frame:	326T
Voltage:	460
Current:	46.5/17.5
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.0
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	Sheave
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 **0.187 inches** P72

3/16 s.o.

Initial Mechanical/Electrical

6. Does Shaft Turn Freely? **(Yes) Yes**

7. Does Shaft Have Visible Damage? **(No) No** P20

8. Assembled Shaft Runout **0.001 Inches**

9. Assembled Shaft End Play

10. Air Gap Variation <10%

11.	Lead Condition	**(P) Pass**	P55
	#1,2,3. 4,5,6		

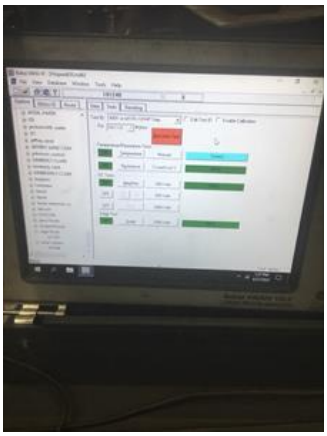
12.	Lead Length	**15 Inches**	
13.	Frame Condition	**pass**	
14.	Fan Condition	**(P) Pass**	P94

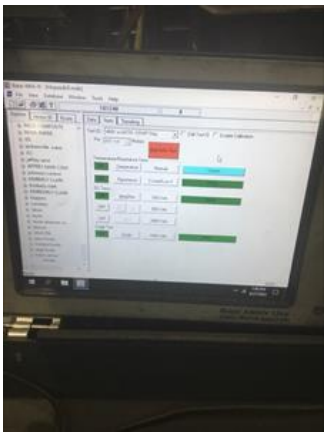
15.	Broken or Missing Components	**top connection box cover missing**	P98

Initial Electrical Inspection

16.	Insulation Resistance/Megger		

17.	Winding Resistance				
	1-2	1-3	2-3		
18.	Perform Surge Test			**(P) Pass**	P57





19.	Number of Stator Slots		
20.	Stator Condition		
21.	Stator Thermistors/Ohms		
22.	Stator Overloads/Ohms		

Mechanical Inspection

23.	Drive End Bearing Brand	**fag**	
24.	Drive End Bearing Number-		P32

25.	Drive End Bearing Qty.	**1**	

26.	Drive End Bearing Type	**(Ball) Ball Bearing**	P49

27.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
28.	Drive End Bearing Insulation or Grounding Device?	**none**	
29.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
30.	Drive End Bearing Condition	**replace**	
31.	Opposite Drive End Bearing Brand	**fag**	
32.	Opposite Drive End Bearing Number-	**6311**	P89

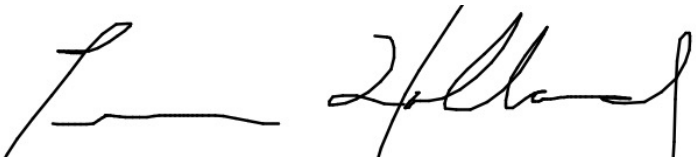
33.	Opposite Drive End Bearing Qty.	**1**	
34.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P93

35.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
36.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**
37.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
38.	Opposite Drive End Bearing Condition	**replace**
39.	Drive End Seal	**none**
40.	Opposite Drive End Seal	**none**

Rotor Inspection

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

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



Mechanical Fits- Rotor

47.	Shaft Runout	**0.001 inches**

48. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

49. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

50. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

51. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.3624	**2.3625**	**2.3624**

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

53. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.1653	**2.1654**	**2.1655**

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

55. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

56. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.118	**5.1181**	**5.1182**

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

58. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.725	**4.7248**	**4.725**

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

60. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

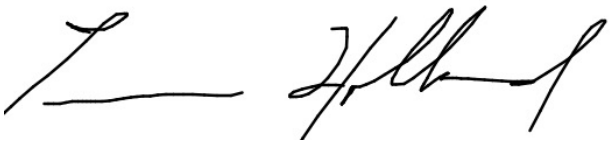
61. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

62. List Machine Work Needed Below

None

63. Technician **Terrence Holland**



Dynamic Balance Report

64. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

65. Initial Balance Readings

Drive End	Opposite Drive End

66. Final Balance Readings

Drive End	Opposite Drive End

67. Technician

Rewind

68. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

69. Core Hot Spot Test

Pre-Burnout	Post-Burnout

70. Post Rewind Electrical Test- Insulation Resistance

71. Post Rewind Polarization Index

72. Post Rewind Winding Resistance

1-2	1-3	2-3

73. Post Rewind Surge Test

74. Post Rewind Hi-Pot

75. Technician

Root Cause of Failure

76. Failure locations

77. Root cause of failure

Contaminated grease.

Mechanical Fits- Rotor - Post Repair

78. Shaft Runout Post Repair

79. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

80. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

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

0 Degrees	60 Degrees	120 Degrees

82. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

83. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

84. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

85. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

86. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

87. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

88. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

89. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

90. End Bell Repair Sign-off

Assembly

91. QC Check All Parts for Cleanliness Prior to Assembly
92. Photograph All Major Components prior to assembly
93. Final Insulation Resistance Test
94. Assembled Shaft Endplay
95. Assembled Shaft Runout
96. Test Run Voltage

Volts	Volts	Volts

97. Test Run Amperage

Amps	Amps	Amps

98. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial

99. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial

100. Ambient Temperature - Fahrenheit
101. Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

102. Opposite Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

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