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

AC Inspection as Found

acme brick
22145 US- 67
Malvern, AR 72104

FolderID: 102208
FormID: 18979767

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	

Manufacturer:	Toshiba
Product Number:	B1504FLF4USH01
Serial Number:	98303977
HP/kW:	150 (HP)
RPM:	1785 (RPM)
Frame:	445T
Voltage:	230 / 460
Current:	354/177
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	6
J-box Included:	None
Coupling/Sheave:	None
Date Received:	12/13/2023
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
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

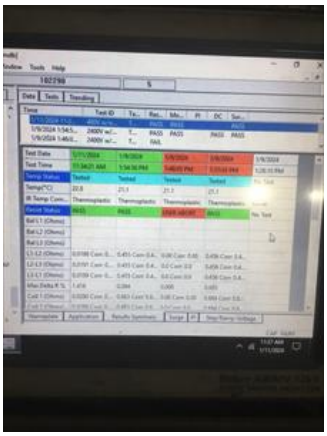
	4.	Describe the Overall Condition of the Equipment as Received ***Serviceable***	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Yes) Yes**
	6.	Does Shaft Have Visible Damage?	**(No) No**
●	7.	Assembled Shaft Runout	**0.001 Inches**
	8.	Assembled Shaft End Play	**inches**
	9.	Air Gap Variation <10%	
●	10.	Lead Condition	**(P) Pass**
	11.	Lead Length	**13.5 Inches**
	12.	Lead Numbers ***6 leads***	**1-3**
	13.	Frame Condition	**pass**

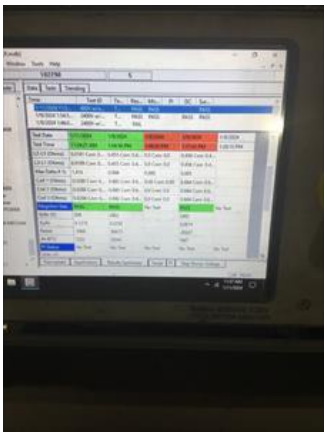
14.	Fan Condition	**(P) Pass**	P109

15.	Broken or Missing Components	**none**	

Initial Electrical Inspection

16.	Insulation Resistance/Megger	**Megohms**	P8

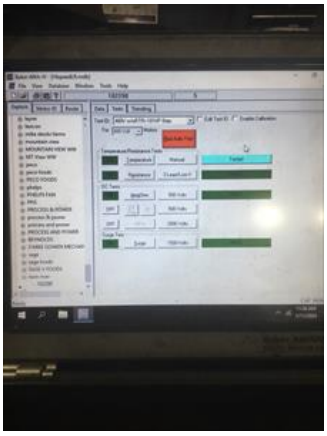


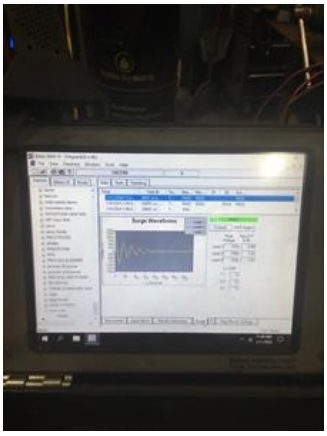


17. Winding Resistance — P20

1-2	1-3	2-3

18.	Perform Surge Test	**(P) Pass**	P58





19.	Number of Stator Slots	**60**
20.	Stator Condition	**pass**
21.	Stator Thermistors/Ohms	
22.	Stator Overloads/Ohms	

Mechanical Inspection

23.	Drive End Bearing Brand	**Koyo**	
24.	Drive End Bearing Number-	**NU 318R C3**	P28

25.	Drive End Bearing Qty.	**1**
26.	Drive End Bearing Type	**(Roller) Roller Bearing**
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	**Koyo**	P92

32.	Opposite Drive End Bearing Number-	**6318**	
33.	Opposite Drive End Bearing Qty.	**1**	
34.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
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?		
38.	Opposite Drive End Bearing Condition	**replace**	
39.	Drive End Seal		
40.	Opposite Drive End Seal		

Rotor Inspection

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

42.	Growler Test	**(Pass) Pass**	
43.	Number of Rotor Bars	**50**	
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
3.5441	**3.5441**	**3.5441**

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

0 Degrees	60 Degrees	120 Degrees
3.5434	**3.5434**	**3.5433**

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
7.481	**7.4808**	**7.4809**

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

0 Degrees	60 Degrees	120 Degrees
7.4818	**7.4819**	**7.4818**

59. Opposite Drive End - Endbell Bearing Fit Condition **(F) Fail** P38

Excessive pitting and wear.

60. Bearing Cap Condition P52

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	**pass**

61. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

62. List Machine Work Needed Below

Sleeve ODE housing fit.

63. Technician **Terrence Holland**

Root Cause of Failure

64. Failure locations

ODE housing fit.

65. Root cause of failure

ODE housing fit bad.

Dynamic Balance Report

66. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

67. Initial Balance Readings

Drive End	Opposite Drive End

68. Final Balance Readings

Drive End	Opposite Drive End

69. Technician

Mechanical Fits- Bearing Housings - Post Repair

70. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

71. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

72. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

73. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

74. End Bell Repair Sign-off

Assembly

75. QC Check All Parts for Cleanliness Prior to Assembly
76. Photograph All Major Components prior to assembly
77. Final Insulation Resistance Test
78. Assembled Shaft Endplay
79. Assembled Shaft Runout

80.	Test Run Voltage		
	Volts	Volts	Volts
81.	Test Run Amperage		
	Amps	Amps	Amps
82.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
83.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
84.	Ambient Temperature - Fahrenheit		
85.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
86.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
87.	Stator Temperatures- Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
88.	Document Final Condition with Pictures after paint		
89.	Final Pics and QC Review		