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

AC Inspection as Found

Kroger
20820 interstate 30 N
Benton, AR 72019

FolderID: 102906
FormID: 20326568

AC Inspection - Rev. 2

Location:	Motor Shop
Serial Number:	32-12-200A 2A
Description:	6HP ILG IND

Hi-Speed Job Number:	102906
Manufacturer:	Other
Serial Number:	32-12-200A 2A
HP/kW:	6 (HP)
RPM:	855 (RPM)
Frame:	32
Voltage:	Other
Current:	18 (Amps)
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TENV
# of Leads:	3
J-box Included:	None
Coupling/Sheave:	None
Date Received:	05/08/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	Yes
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **5 - High** **4 - Good**

Overall Condition

1.	Report Date	**05/20/2024**

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?	**(N) No**
🔴	6.	Does the shaft require T.I.R in Lathe to identify additional repairs? ***ODE bearing journal.***	**(Yes) Yes**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout ***Couldn't perform. Motor locked up.***	**Inches**
	9.	Assembled Shaft End Play ***Na***	**inches**
	10.	Air Gap Variation <10% ***Na***	
🟢	11.	Lead Condition	**(P) Pass**

12.	Lead Length	**3 Inches**	P87

13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
14.	Lead Numbers	**1-3**	
15.	Frame Condition	**pass**	
16.	Fan Condition	**(N) NA**	
	Na		
17.	Broken or Missing Components	**none**	

Initial Electrical Inspection

18.	Insulation Resistance/Megger	**Megohms**	
	Na		
19.	Winding Resistance		

1-2	1-3	2-3

	Na		
20.	Perform Surge Test	**(NA) Not Applicable**	P57
	Windings charred		

21.	Number of Stator Slots	**54**	
22.	Stator Condition	**rewind**	
23.	Stator Thermistors/Ohms		
	Na		
24.	Stator Overloads/Ohms		
	Na		

Mechanical Inspection

25.	Drive End Bearing Brand	**KBC**
26.	Drive End Bearing Number-	P32

27.	Drive End Bearing Qty.	**1**
28.	Drive End Bearing Type	**(Ball) Ball Bearing**
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
30.	Drive End Bearing Insulation or Grounding Device?	**none**
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
32.	Drive End Bearing Condition	**locked up**
33.	Opposite Drive End Bearing Brand	**JAF**
34.	Opposite Drive End Bearing Number-	P99

35.	Opposite Drive End Bearing Qty.	**6206**

Sealed double wide

36.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
37.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
38.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?		P114

40.	Opposite Drive End Bearing Condition	**worn**	
41.	Drive End Seal	**none**	
42.	Opposite Drive End Seal	**none**	

Rotor Inspection

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

44.	Growler Test	**(Pass) Pass**	
45.	Number of Rotor Bars	**67**	
46.	Rotor Condition	**pass**	
47.	List the Parts needed for the Repair Below ***Bearings,***		
48.	Signature of Technician that Disassembled Motor	**Terrence Holland**	

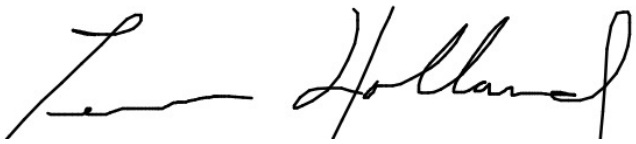
Mechanical Fits- Rotor

	49.	Shaft Runout		**inches**
		ODE shaft bearing journal out of tolerance. Unable to perform measurement.		
	50.	Rotor Runout		
		Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
		Na		
	51.	Coupling Fit Closest to Bearing Housing		
		0 Degrees	90 Degrees	120 Degrees
		Na		
	52.	Coupling Fit Closest to the end of the Shaft		
		0 Degrees	60 Degrees	120 Degrees
		Na		
	53.	Drive End Bearing Shaft Fit		
		0 Degrees	60 Degrees	120 Degrees
		1.575	**1.575**	**1.5749**
●	54.	Drive End Bearing Shaft Fit Condition		**(P) Pass**
	55.	Opposite Drive End Bearing Shaft Fit		
		0 Degrees	60 Degrees	120 Degrees
		Excessive wear. Bearing came off in housing.		
●	56.	Opposite Drive End Bearing Shaft Fit Condition		**(F) Fail**
	57.	Shaft Air Seal Fits		
		Drive End Air Seal	Opposite Drive End Air Seal	
		Na		

Mechanical Fits- Bearing Housings

	58.	Drive End - Endbell Bearing Fit		
		0 Degrees	60 Degrees	120 Degrees
		Lip worn in.		
●	59.	Drive End - Endbell Bearing Fit Condition		**(F) Fail**
	60.	Opposite Drive End - Endbell Bearing Fit		
		0 Degrees	60 Degrees	120 Degrees
		Lip worn in		
●	61.	Opposite Drive End - Endbell Bearing Fit Condition		**(F) Fail**
	62.	Bearing Cap Condition		
		Drive End Bearing Cap	Opposite Drive End Bearing Cap	
		Na		
	63.	End Bell Air Seal Fits		
		Drive End Air Seal	Opposite Drive End Air Seal	
		Na		
	64.	List Machine Work Needed Below		
		Both housing fits, and ode shaft bearing journal, and stator windings		

65. Technician **Terrence Holland**



Witness: RRW

Root Cause of Failure

66. Failure locations

Both housing fits, ode shaft bearing fit, and rewind stator.

67. Root cause of failure

Excessive amounts of moisture entered into the stator housings and bearings causing them to lock up. Also contributed to windings shorted to ground.

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

Mechanical Fits- Rotor - Post Repair

80. Shaft Runout Post Repair

81. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

82. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

83.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
84.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
85.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
86.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
87.	Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair			
88.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
89.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
90.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
91.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
92.	End Bell Repair Sign-off		
Assembly			
93.	QC Check All Parts for Cleanliness Prior to Assembly		
94.	Photograph All Major Components prior to assembly		
95.	Final Insulation Resistance Test		
96.	Assembled Shaft Endplay		
97.	Assembled Shaft Runout		
98.	Test Run Voltage		
	Volts	Volts	Volts
99.	Test Run Amperage		
	Amps	Amps	Amps
100.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
101.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
102.	Ambient Temperature - Fahrenheit		

103.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
104.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
105.	Document Final Condition with Pictures after paint		
106.	Final Pics and QC Review		