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

AC Inspection as Found

Almatis Inc/RCP Bauxite (10014)
4701 Alcoa Road
Bauxite, AR 72011

FolderID: 102393
FormID: 19258597

AC Inspection - Rev. 2

Location:	LR Motor Shop
Serial Number:	P18G7185D JZ
Description:	1.5HP RELIANCE 1800RPM 182TDZ SHAKER

Hi-Speed Job Number:	102393
Manufacturer:	Reliance
Product Number:	P18G7185D JZ
HP/kW:	1.5 (HP)
RPM:	1755 (RPM)
Frame:	182TDZ
Voltage:	460
Current:	2.5
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.00
Enclosure:	TENV
# of Leads:	3
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

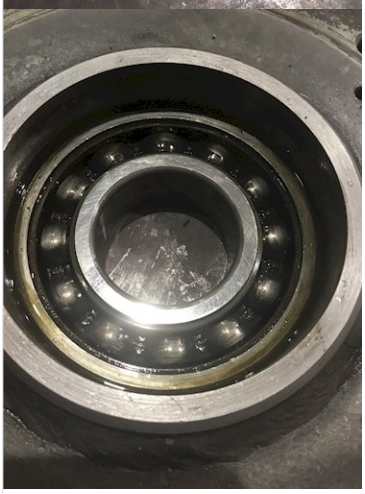
Priorities Found: **7 - Good**

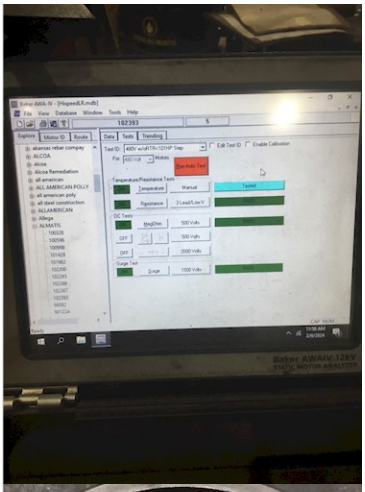
Overall Condition

1.	Report Date	**05/10/2024**

2. Nameplate Picture P35

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








	4.	Describe the Overall Condition of the Equipment as Received ***Serviceable***	

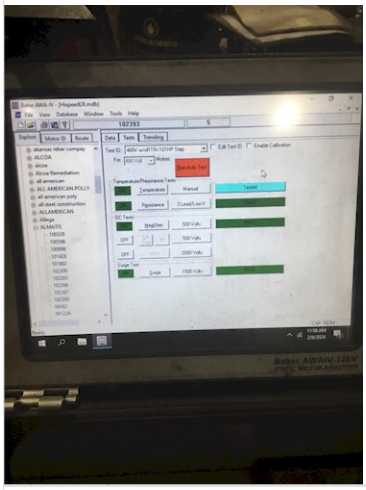
Initial Mechanical/Electrical

●	5.	Does Shaft Turn Freely?	**(Yes) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**Inches**
	9.	Assembled Shaft End Play	**inches**
	10.	Air Gap Variation <10%	
●	11.	Lead Condition	**(P) Pass**

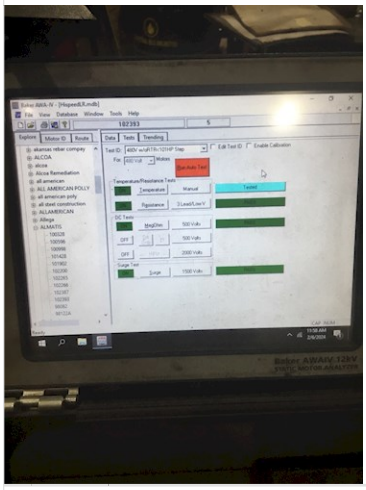
12.	Lead Length	**Inches**	
	5' 4"		
13.	Does it have Lugs?, If so what is the Stud Size?		
14.	Lead Numbers	**1-3**	
15.	Frame Condition	**pass**	
16.	Fan Condition	**(N) NA**	
17.	Broken or Missing Components	**none**	

Initial Electrical Inspection

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



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



21.	Number of Stator Slots	**36**
22.	Stator Condition	
	Oil saturation on windings but passed surge test.	
23.	Stator Thermistors/Ohms	
24.	Stator Overloads/Ohms	

Mechanical Inspection

25.	Drive End Bearing Brand	**Koyo**

26.	Drive End Bearing Number-	**6206 Z C3**	P33

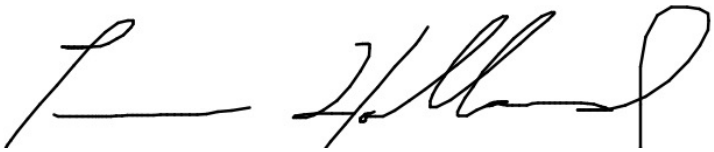
27.	Drive End Bearing Qty.	**1**	
28.	Drive End Bearing Type	**(Ball) Ball Bearing**	
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
30.	Drive End Bearing Insulation or Grounding Device?		
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?		
32.	Drive End Bearing Condition	**replace**	
33.	Opposite Drive End Bearing Brand	**Fag**	P86

34.	Opposite Drive End Bearing Number-	**6205**	
35.	Opposite Drive End Bearing Qty.	**1**	
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?		
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P99

40.	Opposite Drive End Bearing Condition	**replace**
41.	Drive End Seal	
42.	Opposite Drive End Seal	

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**28**
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	**0.002 inches**
50.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

51.	Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

52.	Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

53.	Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.1816	**1.1815**	**1.1815**

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

0 Degrees	60 Degrees	120 Degrees
0.9846	**0.9845**	**0.9845**

56.	Opposite Drive End Bearing Shaft Fit Condition			**(P) Pass**
57.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		

Mechanical Fits- Bearing Housings

58.	Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.4413	**2.4415**	**2.4414**	
59.	Drive End - Endbell Bearing Fit Condition			**(P) Pass**
60.	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.0477	**2.0476**	**2.0476**	
61.	Opposite Drive End - Endbell Bearing Fit Condition			**(P) Pass**
62.	Bearing Cap Condition			P51
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
	pass			

63.	End Bell Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
64.	List Machine Work Needed Below			
	None			
65.	Technician			**Terrence Holland**

Root Cause of Failure

66. Failure locations

O ring Seals allowed oil to leak into the stator.

67. Root cause of failure

O ring Seals allowed oil to leak into the stator.

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

Assembly

72. QC Check All Parts for Cleanliness Prior to Assembly **Terrence Holland**

73.	Photograph All Major Components prior to assembly	P16

74.	Final Insulation Resistance Test	**Megohms**
	Good	
75.	Assembled Shaft Endplay	**0 inches**
76.	Assembled Shaft Runout	**inches**

77.	Test Run Voltage			P54
	Volts	Volts	Volts	

Witness: RW

78.	Test Run Amperage		
	Amps	Amps	Amps
	1.8	**1.8**	**1.9**
79.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
80.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
81.	Ambient Temperature - Fahrenheit		
82.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
83.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
84.	Document Final Condition with Pictures after paint		P105

Witness: CW