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

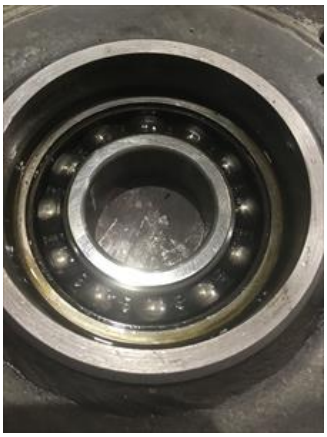
Hi-Speed Job Number:	102393
Manufacturer:	Reliance
Product Number:	P18G7185D JZ
HP/kW:	1.5 (HP)
RPM:	1755 (RPM)
Frame:	182TDZ
Voltage:	460
Current:	2.5
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.00
Enclosure:	TENV
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair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

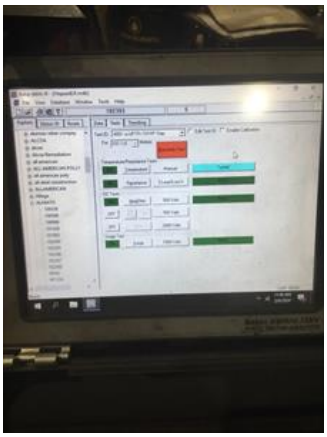
Priorities Found: **7 - Good**

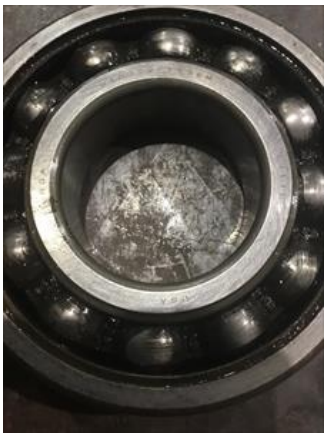
Overall Condition

1. Report Date
2. Nameplate Picture P35

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

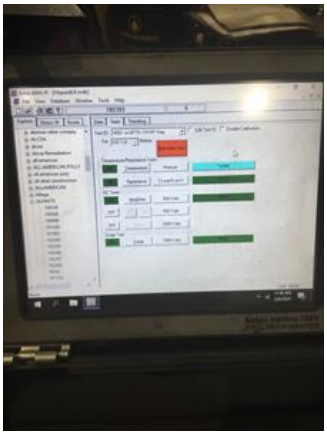






	4.	Describe the Overall Condition of the Equipment as Received ***Serviceable***	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Yes) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**Inches**
	9.	Assembled Shaft End Play	**inches**
	10.	Air Gap Variation <10%	
●	11.	Lead Condition	**(P) Pass**
	12.	Lead Length ***5' 4"***	**Inches**
	13.	DOES IT HAVE LUGS, IF SO WHAT ARE THE SPECS, STUD SIZE? AND CABLE SIZE?	
	14.	Lead Numbers	**1-3**
	15.	Frame Condition	**pass**
	16.	Fan Condition	**(N) NA**
	17.	Broken or Missing Components	**none**
Initial Electrical Inspection			

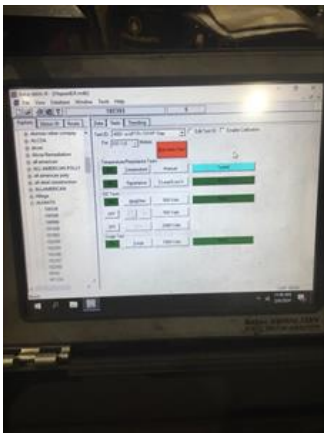
18.	Insulation Resistance/Megger	**Megohms**	P8



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

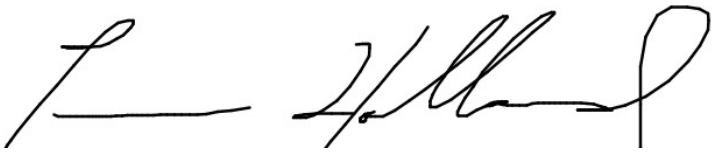
27.	Drive End Bearing Qty.	**1**
28.	Drive End Bearing Type	**(Ball) Ball Bearing**
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
30.	Drive End Bearing Insulation or Grounding Device?	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	
32.	Drive End Bearing Condition	**replace**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

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		