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

AC Recondition Repair Report

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

Priorities Found: **15 - Good**

General

1.	Job Number	**98081**
2.	Report Date	**04/09/2021**
3.	Customer	**ALMATIS**

Name Plate Information

4.	Manufacturer	**HYUNDAI**	P5

5.	Model	**HLS449SR0608**
6.	Serial Number	**4W002K09-001**
7.	Horsepower	**200 HP**
8.	KW	**KW**
9.	Volts	**460 Volts**
10.	Amps	**231.2 Amps**
11.	RPM	**1185 RPM**
12.	Frame	**449T**
13.	Enclosure	**TEFC**
14.	Cycles	**60 HZ**
15.	Phase	**3**

16.	Service Factor	**1.15**	
17.	Motor Mount Position		

Initial Inspection

18.	Number of Leads	**6**	P13

19.	Lead Length	**10 Inches**	P20

20.	Lead Size		
21.	Lead Condition	**(P) Pass**	P42

22.	Lead Markings	**1-6**	
23.	Lug Size, Condition, and Type		
24.	Winding RTD's		
25.	Winding Rtd's Condition		

26.	Shaft Run Out	**0.001**	
27.	Does Shaft Turn Freely	**yes**	
28.	Does Shaft Have Visible Damage	**no**	P94

29.	Bearing Rtd's		
30.	Bearing Rtd's Condition		
31.	Contamination		
32.	Frame Condition	**(P) Pass**	P106

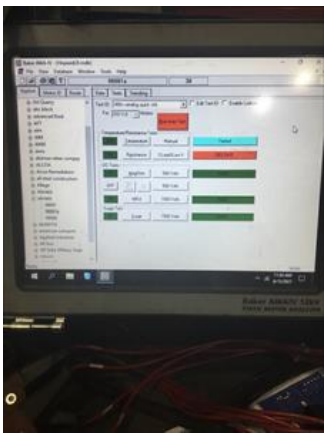
33.	Fan Condition	**(P) Pass**	P109

34.	Broken or missing components		

Initial Electric Test

35.	Resistance to Ground		

	36.	Winding Resistance 1-2		
	37.	Winding Resistance 2-3		
	38.	Winding Resistance 1-3		
	39.	Resistive Imbalance		
	40.	Hi-Pot		
●	41.	Surge Test	**(P) Pass**	P58



	42.	Stator Condition	**good**	P65

	43.	Failure Location		

Initial Rotor Inspection

	44.	Rotor Type	**squirrel cage laminate**	P4

	45.	Air Gap <10% Variation		
	46.	Number of Rotor Bars		
	47.	Number of Broken Rotor Bars		
	48.	Growler Test		
●	49.	Rotor Condition	**(P) Pass**	P50

Mechanical Inspection

50.	Bearing Manufacture	**MRC/FAG**	P1

51.	Bearing DE Size	**NU318E. M1.C3. (FAG)**	
52.	Bearing DE Type	**NU**	
53.	DE Bearing Qty.	**1**	
54.	Bearing ODE Size	**MRC 316S-HYB#1. (HYBRID)**	P43

55.	Bearing ODE Type	**MRC 316S-HYB#1 (hybrid)**	P53

	56.	ODE Bearing Qty.	**1**	
	57.	Insulated Bearing	**yes (hybrid)**	
	58.	Lubrication Type	**grease**	
●	59.	Grease Condition	**(P) Pass**	
●	60.	Bearing Retainers	**(Y) Yes**	P80

●	61.	Shaft Grounding Device	**(Y) Yes**
		Aegis	
	62.	DE Seal	
	63.	DE Seal Type/Size	
	64.	ODE Seal	
	65.	ODE Seal Type/Size	

Root Cause of Failure

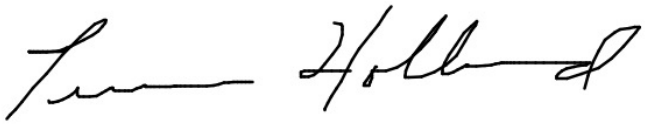
	66.	Component Failure	**Both bearings.**
		Drive end bearing had an excessive amount of electrical fluting. The opposite drive end bearing had true brinelling on the inner and outer races.	
	67.	Cause of Failure	
		Grease from the drive end housing contaminated the aegis ring grounding brushes and reduced their current grounding effectiveness.	
	68.	Comments	
		Recommend further spacing between the aegis ring and the D.E. bearing cap. Aegis size is 4.0215	

	69.	Service Technician	**Terrence. Holland**

Machine Fit Inspection Report

●	70.	Shaft Run Out	**(P) Pass**
	71.	Initial Shaft Run Out	**0.001 "**
	72.	Final Shaft Run Out	
	73.	DE Bearing Shaft Fit	
	74.	DE Initial Shaft Bearing Fit Size 1	
	75.	DE Initial Shaft Bearing Fit Size 2	
	76.	DE Initial Shaft Bearing Fit Size 3	
	77.	DE Finial Shaft Bearing Fit Size 1	
	78.	DE Finial Shaft Bearing Fit Size 2	
	79.	DE Finial Shaft Bearing Fit Size 3	
●	80.	ODE Bearing Shaft Fit	**(P) Pass**
	81.	ODE Initial Shaft Bearing Fit Size 1	**3.1499 "**
	82.	ODE Initial Shaft Bearing Fit Size 2	**3.15 "**
	83.	ODE Initial Shaft Bearing Fit Size 3	**3.1498 "**
	84.	ODE Finial Shaft Bearing Fit Size 1	
	85.	ODE Finial Shaft Bearing Fit Size 2	
	86.	ODE Finial Shaft Bearing Fit Size 3	
	87.	DE Air Seal Shaft Fit	
	88.	DE Initial Air Seal Shaft Size	
	89.	DE Final Air Seal Shaft Size	
	90.	ODE Air Seal Shaft Fit	
	91.	ODE Initial Air Seal Shaft Size	
	92.	ODE Final Air Seal Shaft Size	
●	93.	DE Endbell Fit	**(P) Pass**
	94.	DE Initial Endbell Fit Size 1	**7.4809 "**
	95.	DE Initial Endbell Fit Size 2	**7.4807 "**
	96.	DE Initial Endbell Fit Size 3	**7.4809 "**
	97.	DE Final Endbell Fit Size 1	
	98.	DE Finial Endbell Fit Size 2	
	99.	DE Final Endbell Fit Size 3	
	100.	DE Endbell Fit Insulated	**(NA) Not Applicable**
	101.	DE Endbell Air Seal Fit	
	102.	Initial Endbell Air Seal Fit Size	
	103.	Finial Endbell Air Seal Fit Size	
●	104.	ODE Endbell Fit	**(P) Pass**
	105.	ODE Initial Endbell Fit Size 1	**6.6932 "**
	106.	ODE Initial Endbell Fit Size 2	**6.6931 "**
	107.	ODE Initial Endbell Fit Size 3	**6.6933 "**
	108.	ODE Final Endbell Fit Size 1	
	109.	ODE Final Endbell Fit Size 2	
	110.	ODE Final Endbell Fit Size 3	

111.	ODE Endbell Fit Insulated	
112.	ODE Endbell Air Seal Fit	
113.	ODE Initial Endbell Seal Fit Size	
114.	ODE Finial Endbell Seal Fit Size	
115.	Foot Flatness	**(P) Pass**
116.	Foot Condition	**(P) Pass**
117.	Flange Condition	**(NA) Not Applicable**
118.	Service Technician	**Terrence. Holland**



Balancing Report

119.	Balance Type	
120.	Balance Operating Speed	
121.	Start Left End	
122.	Start Right End	
123.	Balancing Specification	
124.	Finish Left End	
125.	Finish Right End	
126.	Service Technician	

Assembly and Final Test

127.	Meggar Testing Reading	
128.	Surge Test	
129.	Hi-Pot	
130.	Winding Resistance 1-2	
131.	Winding Resistance 2-3	
132.	Winding Resistance 1-3	
133.	Test Run Voltage Phase A	
134.	Test Run Amps A	
135.	Test Run Voltage Phase B	
136.	Test Run Amps B	
137.	Test Run Voltage Phase C	
138.	Test Run Amps C	
139.	DE Horizontal Vibration Reading	
140.	DE Vertical Vibration Reading	
141.	DE Axial Vibration Reading	
142.	ODE Horizontal Vibration Reading	
143.	ODE Vertical Vibration Reading	
144.	ODE Axial Vibration Reading	
145.	Ambient Temp at start of Test Run	
146.	Temp at 5 minutes	
147.	Temp at 10 minutes	
148.	Temp at 15 minutes	
149.	Temp at 20 minutes	
150.	Temp at 25 minutes	
151.	Temp at 30 minutes	

152.	Temp at 35 minutes
153.	Temp at 40 minutes
154.	Temp at 45 minutes
155.	Temp at 50 minutes
156.	Temp at 55 minutes
157.	Temp at 60 minutes
158.	Motor Paint
159.	Service Technician