



DC Repair Report
International Paper - Conway Graphics
730 Enterprise Ave
Conway, AR 72032

FolderID: 100458
FormID: 14840320

DC Repair Report Rev. 2

Location: Shop
Job Number: 100458
Serial Number: BB50R451018
Status: In For Repair
Description: 40HP GE DC 1750RPM AD328AT

Hi-Speed Job Number: 100458
Manufacturer: GE
Product Number : BB50R451018
HP/KW: 40 (HP)
RPM: 1750
Frame: AD328AT
Armature Voltage: 500 (Volts)
Field Voltage: 300 (Volts)
Field Current : 2 (Amps)
J-Box Included: No
Bearing RTDS: No
Winding RTDS: No
Mounting Orientation : Horizontal

Priorities Found: ● 3 - High ● 6 - Good

Overall Condition



1. Describe the Overall Condition of the Equipment as Received
Serviceable

P1







2. Nameplate Picture

P17



3. Distance From the End of the Shaft to the end of the Face of the Sheave/Coupling

0.125

P31



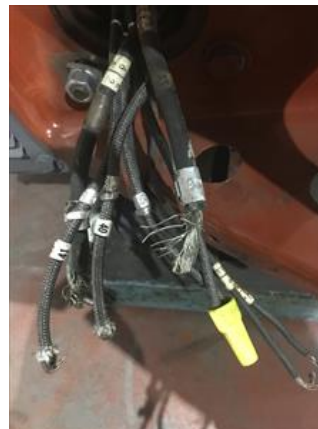
Initial Mechanical/Electrical



- | | | | |
|----|---------------------------------|---------|-----|
| 4. | Does the Shaft Turn Freely? | (Y) Yes | |
| 5. | Does Shaft Have Visible Damage? | (No) No | P22 |



- | | | | |
|----|--------------------------|--------------|-----|
| 6. | Assembled Shaft Runout | 0.001 Inches | |
| 7. | Assembled Shaft End Play | | |
| 8. | Air Gap Variation <10% | | |
| 9. | Lead Condition | (P) Pass | P59 |



- | | | | |
|-----|-----------------|----------|-----|
| 10. | Lead Length | 5 Inches | |
| 11. | Frame Condition | (P) Pass | P76 |

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.



12. Fan Condition

(P) Pass

13. Brush Information

P89

Brush Number	Quantity	Condition
T566	2	good

36A167402AAP02



14. Brush Holder Condition - Verify proper gap to Commutator

P90



Incoming Electrical Test



15. General Condition of the Armature/Commutator

P6



16. Armature Insulation Resistance to Ground

17. Field Circuit Insulation Resistance to Ground

18. Interpole Circuit Insulation Resistance to Ground

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.

19.	Field Drop Test Fields 1&2		
	Total AC Voltage	Field #1	Field #2
	120	0.425	0.423
20.	Field Drop Test Fields 3&4		
	Field #3	Field #4	
21.	Field Drop Test Fields 5&6		
	Field #5	Field #6	
22.	Field Drop Test Fields 7&8		
	Field #7	Field #8	
23.	Interpole Drop Test 1&2		
	Total AC Voltage	Interpole #1	Interpole #2
		0.101	0.104
24.	Interpole Drop Test 3&4		
	Interpole #3	Interpole #4	
25.	Interpole Drop Test 5&6		
	Interpole #5	Interpole #6	
26.	Interpole Drop Test 7&8		
	Interpole #7	Interpole #8	
27.	Armature Number of Bars - Bar to Bar Test		
	Number of Bars	Bar to Bar Test	P112



Mechanical Inspection



28.	Shaft Runout Drive End			0.001 inches
29.	Shaft Runout Armature			
	Drive End Bearing Journal	Armature Core	ODE Bearing Journal	

30. Drive End Bearing Number

6211-2Z/C3

P28



31. Drive End Bearing Quantity

1

32. Drive End Bearing Type

(Ball) Ball Bearing

33. Drive End Lubrication Type

(Grease) Grease Lubricated

34. Drive End Bearing Insulation or Grounding Device?

(NA)

35. Drive End Wavy Washer/Snap-Ring Other Retention Device?

P70



36. Drive End Bearing Condition

replace

P77



37. Opposite Drive End Bearing Number

6210 2RS/C3

P88

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.



38. Opposite Drive End Bearing Quantity	1	
39. Opposite Drive End Bearing Type	(Ball) Ball Bearing	
40. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated	
41. Opposite Drive End Bearing Insulation or Grounding Device?	(NA)	
42. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	none	
43. Opposite Drive End Bearing Condition	replace	P114



44. Signature of Technician who Performed Teardown **Terrence Holland**

Terrence Holland

45. List Parts Needed Prior to Reassembly
Bearings: 6211 & 6210. Aegis ring D.E. 2.455. Insulated 6210 sleeve.


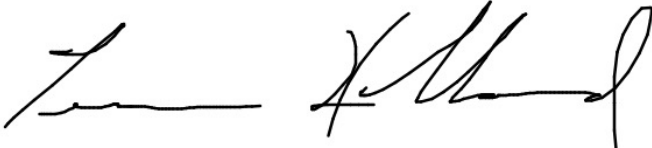
Mechanical Fits - Armature

46. Coupling Fit Closest to Bearing Housing

0 Degrees 60 degrees 120 degrees

47. Coupling Fit Closest to the End of the Shaft

0 Degrees 60 degrees 120 degrees

48.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	2.1656	2.1656	2.1656
49.	Drive End Bearing Shaft Fit Condition		(P) Pass
50.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.9684	1.9684	1.9684
51.	Opposite Drive End Bearing Shaft Fit Condition		(F) Fail
52.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
Mechanical Fits- Bearing Housings			
53.	Drive End - End Bell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.9381	3.9382	
54.	Drive End - Endbell Bearing Fit Condition		(F) Fail
55.	Opposite Drive End - End Bell Bearing Fit		P25
	0 Degrees	60 Degrees	120 Degrees
			
56.	Opposite Drive End - Endbell Bearing Fit Condition		(F) Fail
57.	Bearing Cap Condition		
	Drive End	Opposite Drive End	
	pass		
58.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
59.	List any Machine work Needed Below	O.D.E shaft bearing journal & housing fits.	
60.	Signature of Technician Performing Measurements	Terrence Holland	
			

Root Cause of Failure

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.

61.	Failure Locations <i>Both housing fits and ode shaft bearing journal. Polish comm.</i>		
62.	Root Cause of Failure		
Commutator Data			
63.	Total Copper Segment Length		
64.	Number of Bars		
65.	Number of Wires Per Copper Bar and Size		
	Number of Wires per Bar	Wire Size	
66.	Equalizers per Copper Bar and Equalizer Wire Size		
	Equalizers per Bar	Wire Size	
67.	Document Commutator Diameter, Minimum and Max		
	Current Comm Diameter	Minimum Comm Diameter	Maximum Comm Diameter
68.	Commutator Shaft Diameter		
	Front Shaft Diameter	Back Shaft Diameter	
69.	Commutator Type		
70.	Commutator Bore		
71.	Signature of Technician Recording Data		
Dynamic Balance Report			
72.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
73.	Initial Balance Readings		
	Drive End Readings	Opposite Drive End Readings	
74.	Final Balance Readings		
	Drive End Readings	Opposite Drive End Readings	
75.	Signature of the Balance Technician		
Post Armature Rewind Testing			
76.	Post Rewind Armature Insulation Resistance to Ground		
77.	Post Rewind Field Circuit Measure the Insulation Resistance to Ground		
78.	Post Rewind Armature Number of Bars - Bar to Bar Test		
	Number of Bars	Bar to Bar Test	
79.	Post Rewind Field Circuit Insulation Resistance to Ground		
80.	Post Rewind Interpole Circuit Insulation Resistance to Ground		
81.	Post Rewind Field Drop Test Fields 1&2		
	Total AC Voltage	Field #1	Field #2
82.	Post Rewind Field Drop Test Fields 3&4		
	Field #3	Field #4	

83.	Post Rewind Field Drop Test Fields 5&6		
	Field #5	Field #6	
84.	Post Rewind Field Drop Test Fields 7&8		
	Field #7	Field #8	
85.	Post Rewind Interpole Drop Test 1&2		
	Total AC Voltage	Interpole #1	Interpole #2
86.	Post Rewind Interpole Drop Test 3&4		
	Interpole #3	Interpole #4	
87.	Post Rewind Interpole Drop Test 5&6		
	Interpole #5	Interpole #6	
88.	Post Rewind Interpole Drop Test 7&8		
	Interpole #7	Interpole #8	
Post Mechanical Repair			
89.	Post Repair Coupling Fit Closest to Bearing Housing		
	0 Degrees	60 degrees	120 degrees
90.	Post Repair Coupling Fit Closest to the End of the Shaft		
	0 Degrees	60 degrees	120 degrees
91.	Post Repair Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
92.	Post Repair Drive End Bearing Shaft Fit Condition		
93.	Post Repair Drive End Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
94.	Post Repair Drive End Opposite Drive End Bearing Shaft Fit Condition		
95.	Post Repair Drive End - End Bell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
96.	Post Repair Drive End - Endbell Bearing Fit Condition		
97.	Post Repair Opposite Drive End - End Bell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
98.	Post Repair Opposite Drive End - Endbell Bearing Fit Condition		
99.	Post Repair Bearing Cap Condition		
	Drive End	Opposite Drive End	
100.	Post Repair End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	

101.	Signature of Tech Performing Mechanical Repairs		
Assembly			
102.	Take Pictures of all Major Components Prior to Reassembly		
103.	Verify Brush Box Holders Have the Proper Clearance, and Brushes have been Seated Properly		
104.	Assembled Shaft End Play and Runout		
	Shaft Endplay	Shaft Runout	
105.	Perform No-Load Test Run, Record Armature Voltage and Current		
	Voltage	Current	
106.	Perform No-Load Test Run, Record Field Voltage and Current		
	Voltage	Current	
107.	Document Vibration Readings Drive End		
	Horizontal	Vertical	Axial
108.	Document Vibration Readings Opposite Drive End		
	Horizontal	Vertical	Axial
109.	Perform Full-Load Test Run, Record Armature Voltage and Current		
	Voltage	Current	
110.	Perform Full-Load Test Run, Record Field Voltage and Current		
	Voltage	Current	
111.	Document Vibration Readings Under Full Load Drive End		
	Horizontal	Vertical	Axial
112.	Document Vibration Readings Under Full Load Opposite Drive End		
	Horizontal	Vertical	Axial
113.	Ambient Temperature		
114.	Drive End Bearing Temps Under Full Load		
	5 Minutes	10 Minutes	15 Minutes
115.	Opposite Drive End Bearing Temps Under Full Load		
	5 Minutes	10 Minutes	15 Minutes
116.	Final Test Run Sign-Off		
117.	Document Final Condition With Pictures		
118.	Final QC Sign-Off		