



AC Recondition As Found

Union Pacific-Vine St 10945

1020 N. Vine Street

North Little Rock, AR

FolderID: 100431
FormID: 14797385

AC Recondition - Rev. 2

Location: Shop

Serial Number: Q2-D15T5728GPE

Description: 50HP SIEMENS 3600RPM 326TS

Hi-Speed Job Number: 100431

Manufacturer: Siemens

Product Number: 1LE22213BA216AA3

Serial Number: Q2-D15T5728GPE

HP/kW: 50 (HP)

RPM: 3535 (RPM)

Frame: 326TS

Voltage: 230 / 460

Current: 110/55

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: TEFC

J-box Included: Half

Coupling/Sheave: Coupling

Date Received: 10/14/2022

Bearing RTDs: No

Stator RTDs: No

Repair Stage: Final

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

Priorities Found: ● 3 - High

● 5 - Good

Overall Condition



1. Report Date

2. Nameplate Picture

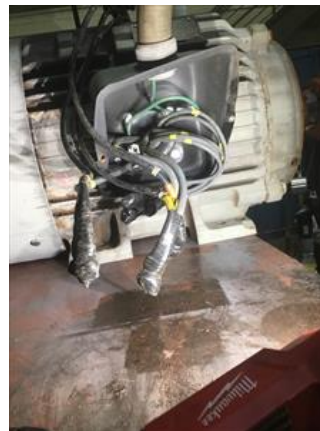
P21



3. Photos of all six sides of the machine.

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

5. Distance from the end of the shaft to the Coupling/Sheave **0.375 inches**

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Initial Mechanical/Electrical



6. Does Shaft Turn Freely? **(Yes) Yes**

7. Does Shaft Have Visible Damage? **(No) No**

P12



8. Assembled Shaft Runout **0.001 Inches**

9. Assembled Shaft End Play **inches**

10. Air Gap Variation <10%

11. Lead Condition **(P) Pass**

12. Lead Length **15 Inches**

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13. Frame Condition

pass

14. Fan Condition

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15. Broken or Missing Components

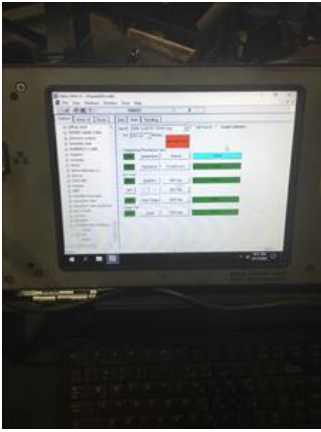
D.E. coupling

P58



Initial Electrical Inspection





17. Winding Resistance

1-2

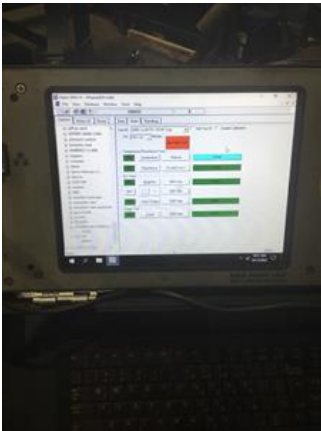
1-3

2-3

18. Perform Surge Test

(P) Pass

P35



19. Stator Condition

pass

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Mechanical Inspection



20. Drive End Bearing Number-

6312

P8



21. Drive End Bearing Qty.

1

P16



22. Drive End Bearing Type

(Ball) Ball Bearing

23. Drive End Lubrication Type

(Grease) Grease Lubricated

24. Drive End Bearing Insulation or Grounding Device?

none

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

none

26. Drive End Bearing Condition

replace



27. Opposite Drive End Bearing Number-

6210

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28.	Opposite Drive End Bearing Qty.	1	
29.	Opposite Drive End Bearing Type	(Ball) Ball Bearing	
30.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated	
31.	Opposite Drive End Bearing Insulation or Grounding Device?	none	
32.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	yes	P56
			
33.	Opposite Drive End Bearing Condition	replace	
34.	Drive End Seal	lip seal	
35.	Opposite Drive End Seal	none	
Rotor Inspection			



- | | |
|---|------------------|
| 37. Growler Test | (Pass) Pass |
| 38. Number of Rotor Bars | |
| 39. Rotor Condition | pass |
| 40. List the Parts needed for the Repair Below | |
| 41. Signature of Technician that Disassembled Motor | Terrence Holland |

Mechanical Fits- Rotor

- | | |
|------------------|--------------|
| 42. Shaft Runout | 0.001 inches |
|------------------|--------------|

- | | |
|------------------|--|
| 43. Rotor Runout | |
|------------------|--|

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
-----------------------	------------	----------------------------

- | | |
|---|--|
| 44. Coupling Fit Closest to Bearing Housing | |
|---|--|

0 Degrees	90 Degrees	120 Degrees
-----------	------------	-------------

- | | |
|--|--|
| 45. Coupling Fit Closest to the end of the Shaft | |
|--|--|

0 Degrees	60 Degrees	120 Degrees
-----------	------------	-------------

- | | |
|---------------------------------|--|
| 46. Drive End Bearing Shaft Fit | |
|---------------------------------|--|

0 Degrees	60 Degrees	120 Degrees
-----------	------------	-------------

2.363	2.363	2.3629
-------	-------	--------

- | | |
|---|----------|
| 47. Drive End Bearing Shaft Fit Condition | (P) Pass |
|---|----------|

- | | |
|--|--|
| 48. Opposite Drive End Bearing Shaft Fit | |
|--|--|

0 Degrees	60 Degrees	120 Degrees
-----------	------------	-------------

1.969	1.969	1.9692
-------	-------	--------

- | | |
|--|----------|
| 49. Opposite Drive End Bearing Shaft Fit Condition | (P) Pass |
|--|----------|

- | | |
|-------------------------|--|
| 50. Shaft Air Seal Fits | |
|-------------------------|--|

Drive End Air Seal	Opposite Drive End Air Seal
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Mechanical Fits- Bearing Housings





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51.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	5.1194	5.1196	
	Max allowed is 5.1191		
52.	Drive End - Endbell Bearing Fit Condition		(F) Fail
53.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.5445	3.5444	3.5444
	Max allowed is 3.5442		
54.	Opposite Drive End - Endbell Bearing Fit Condition		(F) Fail
55.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	pass		
<div style="display: flex; justify-content: space-around;">   </div>			
56.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
57.	List Machine Work Needed Below		
	Re-sleeve both end bell housing fits.		
58.	Technician		Terrence Holland
			
Dynamic Balance Report			
59.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
60.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
61.	Initial Balance Readings		
	Drive End	Opposite Drive End	

62.	Initial Balance Readings		
	Drive End	Opposite Drive End	
63.	Final Balance Readings		
	Drive End	Opposite Drive End	
64.	Final Balance Readings		
	Drive End	Opposite Drive End	
65.	Technician		
66.	Technician		
Rewind			
67.	Core Test Results - Watts loss per Pound		
	Pre-Burnout	Post Burnout	
68.	Core Test Results - Watts loss per Pound		
	Pre-Burnout	Post Burnout	
69.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
70.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
71.	Post Rewind Electrical Test- Insulation Resistance		
72.	Post Rewind Electrical Test- Insulation Resistance		
73.	Post Rewind Polarization Index		
74.	Post Rewind Polarization Index		
75.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
76.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
77.	Post Rewind Surge Test		
78.	Post Rewind Surge Test		
79.	Post Rewind Hi-Pot		
80.	Post Rewind Hi-Pot		
81.	Technician		
82.	Technician		
Root Cause of Failure			
83.	Failure locations		
	<i>Housing fits</i>		
84.	Root cause of failure		
	<i>Excessive wear</i>		
Mechanical Fits- Rotor - Post Repair			
85.	Shaft Runout Post Repair		
86.	Shaft Runout Post Repair		

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87.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
88.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
89.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
90.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
91.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
92.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
93.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
94.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
95.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
96.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
97.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
98.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
99.	Shaft Repair Sign-off		
100.	Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair			

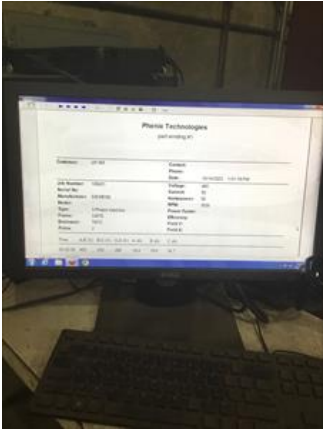
101.	Drive End - Endbell Bearing Fit Post Repair			P0
	0 Degrees	60 Degrees	120 Degrees	
	5.1185	5.1186	5.1186	
				
102.	Drive End - Endbell Bearing Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	
103.	Opposite Drive End - Endbell Bearing Fit Post Repair			P100
	0 Degrees	60 Degrees	120 Degrees	
	3.5434	3.5434	3.5435	
				
104.	Opposite Drive End - Endbell Bearing Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	
105.	Bearing Cap Condition Post Repair			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
106.	Bearing Cap Condition Post Repair			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
107.	End Bell Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		

108. End Bell Air Seal Fits Post Repair			
Drive End Air Seal		Opposite Drive End Air Seal	
109. End Bell Repair Sign-off			
110. End Bell Repair Sign-off			
Assembly			
111. Photograph All Major Components prior to assembly			
112. Photograph All Major Components prior to assembly			
113. Final Insulation Resistance Test			
114. Final Insulation Resistance Test			
115. Assembled Shaft Endplay			
116. Assembled Shaft Endplay			
117. Assembled Shaft Runout			
118. Assembled Shaft Runout			
119. Test Run Voltage			
Volts	Volts	Volts	
120. Test Run Voltage			
Volts	Volts	Volts	
121. Test Run Amperage			
Amps	Amps	Amps	
122. Test Run Amperage			
Amps	Amps	Amps	
123. Drive End Vibration Readings - Inches Per Second			
Horizontal	Vertical	Axial	
124. Drive End Vibration Readings - Inches Per Second			
Horizontal	Vertical	Axial	
125. Opposite Drive End Vibration Readings - Inches Per Second			
Horizontal	Vertical	Axial	
126. Opposite Drive End Vibration Readings - Inches Per Second			
Horizontal	Vertical	Axial	
127. Ambient Temperature - Fahrenheit			
128. Ambient Temperature - Fahrenheit			
129. Drive End Bearing Temps - Fahrenheit			
5 Minutes	10 Minutes	15 Minutes	
130. Drive End Bearing Temps - Fahrenheit			
5 Minutes	10 Minutes	15 Minutes	

131. Opposite Drive End Bearing Temps - Fahrenheit			
5 Minutes	10 Minutes	15 Minutes	
132. Opposite Drive End Bearing Temps - Fahrenheit			
5 Minutes	10 Minutes	15 Minutes	
133. Final Test Run Sign-off			
134. Final Test Run Sign-off			
135. Document Final Condition with Pictures after paint			
136. Document Final Condition with Pictures after paint			P2200







137. Final Pics and QC Review

138. Final Pics and QC Review

Terrence. Holland

P2300

Terrence Holland



