



KEEPING YOUR FACILITY UP TO SPEED
— EVERY DAY SINCE 1946 —

LR Motor Shop Repairs

Job Number 103028

Prepared for Hormel (11974)

8201 Fraizer Pike
Little Rock AR 72206

Table of Contents



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

AC Inspection as Found

Hormel (11974)
8201 Fraizer Pike
Little Rock, AR 72206

FolderID: 103028
FormID: 20499275

AC Inspection - Rev. 2

Location: Shop
Serial Number: 1PC30043AB604JB3
Description: 220KW SIEMENS EVAL

Hi-Speed Job Number:	103028
Manufacturer:	Siemens
Product Number:	1CV3316B
Serial Number:	1PC30043AB604JB3
HP/kW:	220 (kW)
RPM:	1792 (RPM)
Voltage:	460
Current:	335A
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	6
J-box Included:	Complete
Coupling/Sheave:	Coupling
Date Received:	05/28/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: ● 2 - High ● 10 - Good

Overall Condition

1. Report Date	05/29/2024
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2. Nameplate Picture



3. Photos of all six sides of the machine.









4. Describe the Overall Condition of the Equipment as Received

Dirty

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

1.3655 inches



Initial Mechanical/Electrical

<input checked="" type="radio"/>	6. Does Shaft Turn Freely?	(Y) Yes
<input checked="" type="radio"/>	7. Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
	8. Does Shaft Have Visible Damage?	(No) No
	9. Assembled Shaft Runout	Inches
<input type="text"/>	<i>Na</i>	

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10. Assembled Shaft End Play	inches
Na	
11. Air Gap Variation <10%	na
12. Lead Condition	(P) Pass
13. Lead Length	108 Inches
14. Does it have Lugs?, If so what is the Stud Size?	
Yes	
15. Lead Numbers	1-6
16. Frame Condition	pass
17. Fan Condition	(P) Pass
18. Broken or Missing Components	na
Initial Electrical Inspection	
19. Insulation Resistance/Megger	Megohms



20. Winding Resistance		
1-2	1-3	2-3



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21. Perform Surge Test

(P) Pass



22. Number of Stator Slots 48

23. Stator Condition

Pass

24. Stator Thermistors/Ohms

Na

25. Stator Overloads/Ohms

Na

Mechanical Inspection

26. Drive End Bearing Brand na



27. Drive End Bearing Number- 6319-C4

28. Drive End Bearing Qty. 1

29. Drive End Bearing Type (Ball) Ball Bearing

30. Drive End Lubrication Type (Grease) Grease Lubricated

31. Drive End Bearing Insulation or Grounding Device? na

32. Drive End Wavy Washer/Snap-Ring Other Retention Device? wavy washer

33. Drive End Bearing Condition

Contamination



34. Opposite Drive End Bearing Brand

na




35. Opposite Drive End Bearing Number-	6319-C4
36. Opposite Drive End Bearing Qty.	1
37. Opposite Drive End Bearing Type	(Ball) Ball Bearing
38. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
39. Opposite Drive End Bearing Insulation or Grounding Device?	na
40. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	snap ring
41. Opposite Drive End Bearing Condition	

Contamination



42. Drive End Seal	Na		
43. Opposite Drive End Seal	Na		
Rotor Inspection			
44. Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast		
45. Growler Test	(Pass) Pass		
46. Number of Rotor Bars	40		
47. Rotor Condition	pass		
48. List the Parts needed for the Repair Below	6319 C4 x2		
49. Signature of Technician that Disassembled Motor			
Mechanical Fits- Rotor			
50. Shaft Runout	0.001 inches		
51. Rotor Runout			
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
Na			
52. Coupling Fit Closest to Bearing Housing			
0 Degrees	90 Degrees	120 Degrees	
Na			
53. Coupling Fit Closest to the end of the Shaft			
0 Degrees	60 Degrees	120 Degrees	
Na			
54. Drive End Bearing Shaft Fit			
0 Degrees	60 Degrees	120 Degrees	
3.7409	3.7408	3.7408	
55. Drive End Bearing Shaft Fit Condition	(P) Pass		

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56.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.7407	3.7407	3.7407
57.	Opposite Drive End Bearing Shaft Fit Condition		(P) Pass
58.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	Na		
Mechanical Fits- Bearing Housings			
59.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	Unable to get accurate measurements due to excessive wear		
60.	Drive End - Endbell Bearing Fit Condition		(F) Fail
61.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	7.8749	7.875	7.8751
62.	Opposite Drive End - Endbell Bearing Fit Condition		(P) Pass
63.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	Pass		
64.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	Na		
65.	List Machine Work Needed Below <i>DE end bell bearing fit</i>		
66.	Technician		Cw
			
	Co sign DM		
Root Cause of Failure			
67.	Failure locations <i>Bearings and DE end bell bearing fit</i>		
68.	Root cause of failure <i>Wear and contamination and water contamination in ODE bearing</i>		
Dynamic Balance Report			

69. Rotor Weight and Balance Grade

Rotor Weight

Balance Grade



70. Initial Balance Readings

Drive End

Opposite Drive End

0.54

1.49

71. Final Balance Readings

Drive End

Opposite Drive End

0.09

0.11

72. Technician

RW

Mechanical Fits- Bearing Housings - Post Repair

73. Drive End - Endbell Bearing Fit Post Repair

0 Degrees

60 Degrees

120 Degrees

7.8745

7.8746

7.8746




74. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees

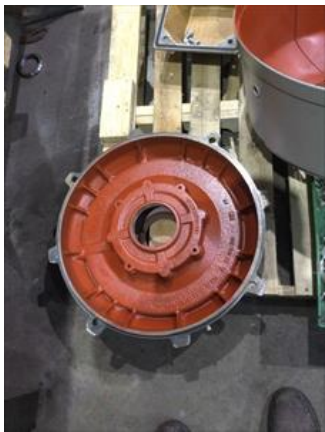
60 Degrees

120 Degrees

75. Bearing Cap Condition Post Repair		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
76. End Bell Air Seal Fits Post Repair		
Drive End Air Seal	Opposite Drive End Air Seal	
77. End Bell Repair Sign-off		Gary
Assembly		
78. QC Check All Parts for Cleanliness Prior to Assembly		RW
		

79. Photograph All Major Components prior to assembly

(Complete) Complete



80. Final Insulation Resistance Test

Megohms

 Passed hi pot

81. Assembled Shaft Endplay

inches

 82. Assembled Shaft Runout

0.0005 inches

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83. Test Run Voltage

Volts

Volts

Volts

455

55

457



Co witness TH

Y connection co witness CRW

84. Test Run Amperage

Amps

Amps

Amps

120

116.6

116.7



85. Drive End Vibration Readings - Inches Per Second

Horizontal

Vertical

Axial

0.03

0.02

0.02

With coupling.019 .02

86. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal

Vertical

Axial

0.03

0.02

0.02

87. Ambient Temperature - Fahrenheit

88. Drive End Bearing Temps - Fahrenheit

5 Minutes

10 Minutes

15 Minutes

89. Opposite Drive End Bearing Temps - Fahrenheit

5 Minutes

10 Minutes

15 Minutes

90. Document Final Condition with Pictures after paint

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91. Final Pics and QC Review

RW

Handwritten signature of the Co witness CRW.

Co witness CRW



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4. **BILLING AND PAYMENT TERMS.** Hi-Speed shall invoice Buyer for all goods and/or services as same are rendered at the address listed on the quotation. Payments for all goods and/or services shall be due thirty (30) days from the date of the current invoice or as otherwise set forth in the quotation. Late payments are subject to a late fee of 5% of the total invoice amount. Recurring late payments may lead to a deposit requirement on future services or sale of goods. Buyer shall be liable to Hi-Speed for any and all fees and expenses incurred by Hi-Speed to collect any invoices or to enforce these Standard Terms and Conditions, including but not limited to, attorney's fees.
5. **DELIVERY OF GOODS AND/OR SERVICES.** Unless otherwise identified in the quotation, all shipments are F.O.B. Hi-Speed's warehouse and the title to and all risk of loss with respect to any goods shipped shall pass to Buyer when such goods are delivered to the carrier at Hi-Speed's warehouse. Hi-Speed will use its best efforts to affect delivery by the date or dates specified in the quotation. However, Hi-Speed shall not be liable for delay in or failure to make shipment, or to perform services, by any identified date for any reason whatsoever, including but not limited to, causes beyond its reasonable control, such as strikes, fires, floods, epidemics, quarantines, restrictions, severe weather, embargos, acts of God, or public enemy, war, riot, delays in transportation or the inability to obtain necessary labor, materials or manufacturing facilities.
6. **DELIVERY SITE AND TIME FOR PERFORMANCE.** Hi-Speed and Buyer agree that time is of the essence for the purchase order and that Buyer shall fully cooperate with Hi-Speed in order to allow Hi-Speed full access to prosecute its work diligently and in an orderly manner. Buyer shall assist Hi-Speed in every way possible to avoid delaying, disrupting or interfering with the progress of Hi-Speed's work at the project site. In the event Hi-Speed's work is delayed, hindered, suspended, disrupted, re-sequenced or interfered with or rendered less efficient or more costly or adversely affected in any way as a result of acts or omissions of Buyer or other contractors or employees of Buyer or by any other reason beyond Hi-Speed's control and without the fault of Hi-Speed, then, in such event, Buyer shall be liable to Hi-Speed for any damages, additional costs, expenses, labor, materials, man hours, acceleration costs, overtime, additional jobsite overhead, extended home office overhead, and any and all other direct and indirect expenses of whatsoever nature or kind, caused in whole or in part, as a result of any of the above-referenced occurrences. Hi-Speed's project records will be the basis for computing the additional costs and damages of Hi-Speed's labor, materials, expenses and overhead related to such changes. BUYER WARRANTS THAT THE SITE FOR DELIVERY OR INSTALLATION OF ANY GOODS AND/OR FOR THE PERFORMANCE OF ANY SERVICES SHALL BE READY AND ADEQUATE FOR HI-SPEED'S DELIVERY OF GOODS AND/OR PERFORMANCE OF SERVICES AND THAT HI-SPEED SHALL HAVE FULL ACCESS THERETO, FREE OF ALL OBSTRUCTIONS. BUYER SHALL ASSUME ALL EXTRA COSTS ASSOCIATED WITH HI-SPEED'S INABILITY TO INSTALL ANY GOODS OR PERFORM ANY SERVICES AS A RESULT OF BUYER'S FAILURE TO COMPLY WITH THIS PROVISION. HI-SPEED MAY NOT INSPECT THE SITE PRIOR TO DELIVERY AND/OR INSTALLATION OF GOODS AND/OR PERFORMANCE OF SERVICES AND MAKES NO WARRANTY AS TO THE SUFFICIENCY OF THE SITE FOR THE DELIVERY AND/OR INSTALLATION OF GOODS AND/OR THE PERFORMANCE OF SERVICES AT SUCH SITE.
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8. **WARRANTIES.** Hi-Speed warrants that all goods shall conform in all material aspects to the goods identified in the quotation to Buyer and/or purchase order, and Hi-Speed makes to Buyer the manufacturer's express warranty for any goods sold to Buyer, which is offered by the manufacturer at the time of acceptance of any quotation by Buyer. This warranty is conditioned upon the installation, operation, and maintenance of the goods in accordance with the manufacturer's recommendations and/or standard industry practice and the goods at all times being operated or used under normal operating conditions for which they were designed. Hi-Speed, at its sole option, will repair or

replace any defective or non-conforming goods in accordance with the applicable manufacturer's warranty. Warranty for any defective or incorrect parts is limited to the repair or replacement of those parts. Hi-Speed warrants that all services will conform in all material respects to the description of services identified in the quotation and will be performed in a good and workmanlike manner in accordance with industry practices and standards. Should the services be reasonably rejected or not conform with the foregoing warranties, Hi-Speed shall, at its sole cost, re-perform the defective or nonconforming services. Notwithstanding the foregoing, these warranties do not extend to goods or services to the extent that such goods have been subject to misuse, neglect or abuse not caused by Hi-Speed or have been used in violation of the approved written instructions furnished to Buyer. THE FOREGOING REPRESENTS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY HI-SPEED WITH RESPECT TO ALL GOODS SOLD AND IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESS OR IMPLIED. HI-SPEED EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE. BUYER WAIVES ANY CLAIM THAT THESE EXCLUSIONS OR LIMITATIONS DEPRIVE IT OF AN ADEQUATE REMEDY AT EQUITY OR LAW OR CAUSE THIS AGREEMENT TO FAIL IN ITS ESSENTIAL PURPOSE. BUYER SHALL BE ENTITLED TO NO OTHER REMEDY OTHER THAN AS SET FORTH HEREIN, REGARDLESS OF THE CLAIM OR CAUSE OF ACTION, WHETHER BASED IN CONTRACT, TORT, NEGLIGENCE, GOODS LIABILITY, STRICT LIABILITY OR OTHERWISE.

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