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— EVERY DAY SINCE 1946 —

LR Motor Shop Repairs

Job Number 104507

Prepared for ARKANSAS INDUSTRIAL MACHINERY

3804 N. NONA ST
NORTH LITTLE ROCK AR 72118

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AC Inspection as Found - *Shop*

AC Inspection - Rev. 2: *M: 1622-4608-80*

1.0

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AC Inspection as Found
ARKANSAS INDUSTRIAL MACHINERY
3804 N. NONA ST
NORTH LITTLE ROCK, AR 72118

FolderID: 104507
FormID: 24246500

AC Inspection - Rev. 2

Location: Shop

Serial Number: M: 1622-4608-80

Description: 140HP/104KW

Hi-Speed Job Number: 103289

Manufacturer: Siemens

Product Number: M: 1622-4608-80

HP/kW: 140 (HP)

RPM: 2510 (RPM)

Voltage: Other

Current: 194A

Phase: Three

Hz: 84.3 (Hz)

Enclosure: TEFC

of Leads: 6

J-box Included: Half

Coupling/Sheave: Gear

Date Received: 07/30/2024

Bearing RTDs: No

Stator RTDs: No

Repair Stage: Final

Rewind: No

Shaft Machined Fit Repairs
Required: No

Bearing Housing Machined
Fit Repairs Required: No

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

Priorities Found: 1 - High 12 - Good

Overall Condition

1. Report Date
2. Nameplate Picture
3. Photos of all six sides of the machine.
4. Describe the Overall Condition of the Equipment as Received
5. Distance from the end of the shaft to the Coupling/Sheave **inches**



6. Is this a UL Listed Motor **(No) No**



7. Is the motor water cooled or can be pressure checked before teardown **(No) No**

Initial Mechanical/Electrical

8. Does Shaft Turn Freely? **(Y) Yes**

9. Does the shaft require T.I.R in Lathe to identify additional repairs? **(No) No**

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

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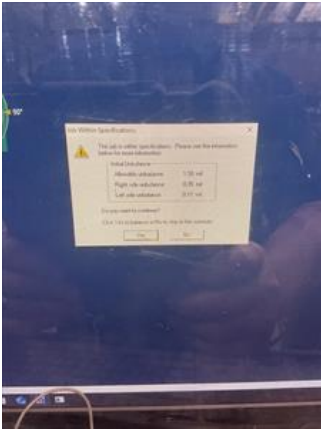
11. Assembled Shaft Runout	Inches
12. Assembled Shaft End Play	inches
13. Air Gap Variation <10%	
14. Lead Condition	(P) Pass
15. Lead Length	Inches
16. Does it have Lugs?, If so what is the Stud Size?	(No) No
17. Lead Numbers	1-6
18. Are the Leads insulated with Chico or other material	(No) No
19. Frame Condition	pass
20. Fan Condition	(P) Pass
21. Does motor have internal fan?	
22. Broken or Missing Components	
Initial Electrical Inspection	
23. Insulation Resistance/Megger	Megohms
24. Winding Resistance	
1-2	1-3 2-3
25. Perform Surge Test	(P) Pass
26. Number of Stator Slots	
27. Stator Condition	
28. Stator Thermistors/Ohms	
29. Stator Overloads/Ohms	
Mechanical Inspection	
30. Drive End Bearing Brand	
31. Drive End Bearing Number-	
32. Drive End Bearing Qty.	
33. Drive End Bearing Type	
34. Drive End Lubrication Type	
35. Drive End Bearing Insulation or Grounding Device?	
36. Drive End Wavy Washer/Snap-Ring Other Retention Device?	
37. Drive End Bearing Condition	
38. Opposite Drive End Bearing Brand	
39. Opposite Drive End Bearing Number-	
40. Opposite Drive End Bearing Qty.	
41. Opposite Drive End Bearing Type	
42. Opposite Drive End Lubrication Type	
43. Opposite Drive End Bearing Insulation or Grounding Device?	
44. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	
45. Opposite Drive End Bearing Condition	
46. Drive End Seal	
47. Opposite Drive End Seal	
Rotor Inspection	
48. Rotor Type/Material	
49. Growler Test	
50. Number of Rotor Bars	
51. Rotor Condition	
52. List the Parts needed for the Repair Below	

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53. Signature of Technician that Disassembled Motor		
Mechanical Fits- Rotor		
54. Shaft Runout	inches	
55. Rotor Runout		
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
56. Coupling Fit Closest to Bearing Housing		
0 Degrees	90 Degrees	120 Degrees
57. Coupling Fit Closest to the end of the Shaft		
0 Degrees	60 Degrees	120 Degrees
58. Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
59. Drive End Bearing Shaft Fit Condition		
60. Opposite Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
61. Opposite Drive End Bearing Shaft Fit Condition		
62. Shaft Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
Mechanical Fits- Bearing Housings		
63. Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
64. Drive End - Endbell Bearing Fit Condition		
65. Opposite Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
66. Opposite Drive End - Endbell Bearing Fit Condition		
67. Bearing Cap Condition		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
68. End Bell Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
69. List Machine Work Needed Below		
70. Technician		
Root Cause of Failure		
71. Failure locations		
72. Root cause of failure		
Dynamic Balance Report		

Rotor Weight

Balance Grade



74. Initial Balance Readings

Drive End

Opposite Drive End

75. Final Balance Readings

Drive End

Opposite Drive End

0.35

0.11

76. Technician

RW

AW

Assembly

77. QC Check All Parts for Cleanliness Prior to Assembly

RW



78. Photograph All Major Components prior to assembly

(Complete) Complete



79. Final Insulation Resistance Test

3,011 Megohms

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1.4



80. Assembled Shaft Endplay	inches	
81. Assembled Shaft Runout	0 inches	
82. Test Run Voltage		
Volts	Volts	Volts



Delta co sign CRW



Y

83. Test Run Amperage

Amps

Amps

Amps



Y

Delta

84. Drive End Vibration Readings - Inches Per Second

Horizontal

Vertical

Axial

85. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal

Vertical

Axial

86. Ambient Temperature - Fahrenheit

87. Drive End Bearing Temps - Fahrenheit

5 Minutes

10 Minutes

15 Minutes

88. Opposite Drive End Bearing Temps - Fahrenheit

5 Minutes

10 Minutes

15 Minutes

89. Document Final Condition with Pictures after paint



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90. Final Pics and QC Review

RW

BLW

Co sign: 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

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