



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

LR Motor Shop Repairs

Job Number 103377

Prepared for Reynolds Metals company

1333 highway 270
Malvern AR 72104

Table of Contents



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

AC Inspection as Found

Reynolds Metals company

1333 highway 270

Malvern, AR 72104

FolderID: 103377
FormID: 21303067

AC Inspection - Rev. 2

Location: Shop

Serial Number: C2303291062

Description: 40HP BALDOR RELIANCE EVAL

Hi-Speed Job Number: 103377

Manufacturer: Baldor

Product Number: EM2539T-G

Spec/ID #: 40E245X166G1

Serial Number: C2303291062

HP/kW: 40 (HP)

RPM: 1770 (RPM)

Frame: 324T

Voltage: 230 / 460

Current: 98/49

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: DP

of Leads: 9

J-box Included: Complete

Coupling/Sheave: None

Date Received: 08/14/2024

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:  9 - Good

Overall Condition

1. Report Date

08/19/2024

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Printed on 8/19/2024

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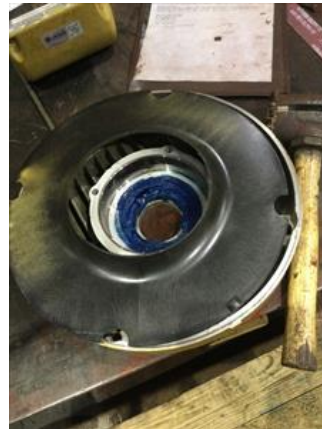
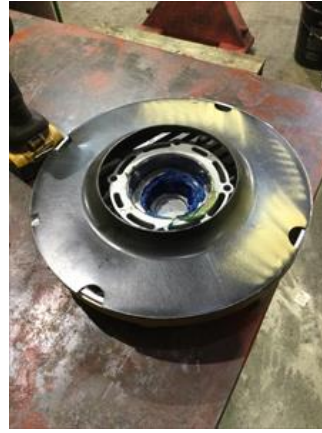
1.0

2. Nameplate Picture



3. Photos of all six sides of the machine.





4.	Describe the Overall Condition of the Equipment as Received	
	<i>Serviceable</i>	
5.	Report Date [COPY]	08/19/2024
Initial Mechanical/Electrical		
6.	Does Shaft Turn Freely?	(Y) Yes
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

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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				24 Inches
14.	Does it have Lugs?, If so what is the Stud Size?				(No) No
15.	Lead Numbers				1-9
16.	Frame Condition				pass
17.	Fan Condition				(N) NA
18.	Broken or Missing Components				none
Initial Electrical Inspection					
19.	Insulation Resistance/Megger				107695 Megohms
20.	Winding Resistance				
	1-2	1-3		2-3	
	0.165	0.164		0.166	
21.	Perform Surge Test				(P) Pass

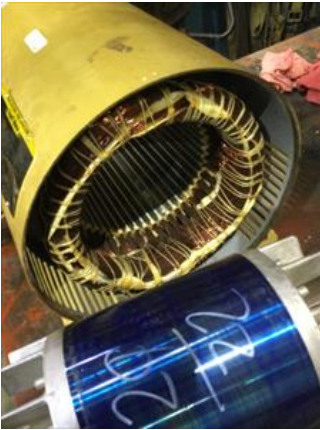


22. Number of Stator Slots	48
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23. Stator Condition

Wash and bake



24. Stator Thermistors/Ohms

na

25. Stator Overloads/Ohms

na

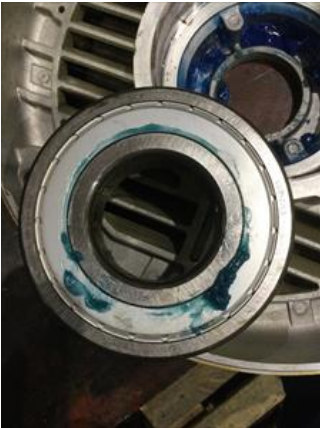
Mechanical Inspection

26. Drive End Bearing Brand

SKF

27. Drive End Bearing Number-

6312



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?

Aegis Ring



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

Na

33. Drive End Bearing Condition

normal wear



34. Opposite Drive End Bearing Brand

FAG

35. Opposite Drive End Bearing Number-

6309



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?

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Na	
40. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	Wavy washer
41. Opposite Drive End Bearing Condition	normal wear

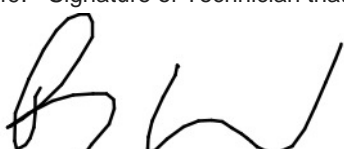


42. Drive End Seal	Na
43. Opposite Drive End Seal	Na

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 <i>1-6312 Bearing 1-6309 Bearing</i>	
49. Signature of Technician that Disassembled Motor	RW
	

Mechanical Fits- Rotor

50. Shaft Runout	0.0004 inches
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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	
2.125	2.125	2.125	



53. Coupling Fit Closest to the end of the Shaft			
0 Degrees	60 Degrees	120 Degrees	
2.125	2.125	2.125	




54. Drive End Bearing Shaft Fit			
0 Degrees	60 Degrees	120 Degrees	
2.3621	2.3621	2.3621	
55. Drive End Bearing Shaft Fit Condition			(P) Pass



56. Opposite Drive End Bearing Shaft Fit			
0 Degrees	60 Degrees	120 Degrees	
1.7718	1.7718	1.7718	
57. Opposite Drive End Bearing Shaft Fit Condition			(P) Pass



58. Shaft Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
 Pass		
Mechanical Fits- Bearing Housings		
59. Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
5.1183	5.1183	5.183

60. Drive End - Endbell Bearing Fit Condition

(P) Pass



61. Opposite Drive End - Endbell Bearing Fit

0 Degrees

60 Degrees

120 Degrees

3.9379

3.9379

3.9379

62. Opposite Drive End - Endbell Bearing Fit Condition

(P) Pass



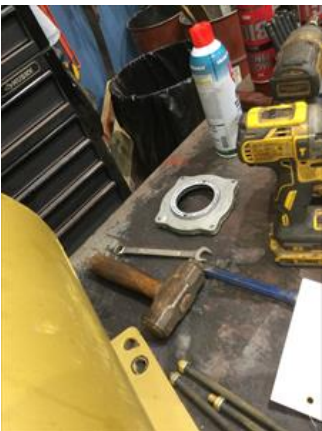
63. Bearing Cap Condition


Drive End Bearing Cap

Opposite Drive End Bearing Cap

pass

na



64. End Bell Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
pass	na	
65. List Machine Work Needed Below	None	
66. Technician	RW	
		
Co sign: CRW		
Root Cause of Failure		
67. Failure locations	Bearing	
68. Root cause of failure	Bearing	
Dynamic Balance Report		
69. Rotor Weight and Balance Grade		
Rotor Weight	Balance Grade	
70. Initial Balance Readings		
Drive End	Opposite Drive End	
71. Final Balance Readings		
Drive End	Opposite Drive End	
72. Technician		
Assembly		
73. QC Check All Parts for Cleanliness Prior to Assembly		
74. Photograph All Major Components prior to assembly		
75. Final Insulation Resistance Test		
76. Assembled Shaft Endplay		
77. Assembled Shaft Runout		
78. Test Run Voltage		
Volts	Volts	Volts
79. Test Run Amperage		
Amps	Amps	Amps
80. Drive End Vibration Readings - Inches Per Second		
Horizontal	Vertical	Axial
81. Opposite Drive End Vibration Readings - Inches Per Second		
Horizontal	Vertical	Axial
82. Ambient Temperature - Fahrenheit		

83. Drive End Bearing Temps - Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
84. Opposite Drive End Bearing Temps - Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
85. Document Final Condition with Pictures after paint		
86. Final Pics and QC Review		



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1. **APPLICABILITY.** The sale of any and all goods and/or services by Mock, Inc. d/b/a Hi-Speed Industrial Service ("Hi-Speed") shall be specifically conditioned upon and subject to the following terms and conditions which are incorporated by reference into any contracts and purchase orders with Hi-Speed, and which shall form and become a part of any agreement related thereto. Buyer's acceptance of any offer or quotation made by Hi-Speed for sale of any goods or services is expressly made subject to the terms and conditions set forth herein and to be so effective, Buyer need not sign or approve these Terms and Conditions to be bound hereunder provided a copy of same is provided to Buyer through any means. None of the terms and conditions contained herein may be added to, expanded, changed, modified, superseded or otherwise altered except as revised in writing and duly executed by Hi-Speed, and all orders received by Hi-Speed shall be governed only by the terms and conditions contained herein, notwithstanding any terms, conditions or provisions of any purchase order, release order, authorization or any other form issued by the Buyer. Hi-Speed hereby objects to any additional, modified, changed, deleted, altered or other terms and conditions not contained herein and notifies Buyer that any such terms or provisions are expressly rejected by Hi-Speed.
2. **PRICE.** All quoted prices shall remain firm and binding for a period of thirty (30) days from the date of quotation or for the period specifically stated in the quotation. The price for any and all goods and/or services ordered or approved by Buyer after thirty (30) days from the date of any quotation are subject to any increase in price that may occur after the expiration of thirty (30) days from the issuance of the quotation and the date the Buyer releases any shipment.
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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.
7. **INSPECTION/ACCEPTANCE.** All goods and services ordered pursuant to any quotation shall be subject to inspection by Buyer after delivery or performance to determine conformity with the quotation and/or purchase order and Hi-Speed's advertised or published specifications. Buyer shall have a period of thirty (30) days from shipment of goods at the delivery destination specified in the quotation within which to inspect the goods for conformity with the quotation, order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. Buyer shall have a period of thirty (30) days following completion of any services within which to inspect the services for conformity with the quotation, purchase order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. If the goods delivered or services performed do not so conform, upon delivery of notice to Hi-Speed of any discrepancy, nonconformance or rejection, Hi-Speed shall have sixty (60) days to cure the alleged discrepancy and/or nonconformance. If Hi-Speed fails to cure in this time period, Buyer shall have the right to reject such goods or services. After the cure period, goods that have been delivered and rejected, in whole or in part, shall be returned to Hi-Speed. Buyer shall notify Hi-Speed and arrange for the return of the goods as required. Should such non-conforming services be rejected Hi-Speed shall, at its sole cost, re-perform the non-conforming services. Inspection or failure to inspect on any occasion shall not affect Buyer's rights under the warranty provisions herein.
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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11. **GOVERNING LAW AND JURISDICTION.** Any controversy arising out of any quotation, the purchase order, the goods sold or delivered, repair or replacement thereof, or any services provided pursuant to any quotation or any purchase order, or these Standard Terms and Conditions shall be governed by the laws of the state of Tennessee without regard to any choice of law provisions and any cause of action related in any manner thereto shall be brought only in the state or federal courts of Shelby County, Tennessee.
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