

EVERY DAY SINCE 1946

LR Motor Shop Repairs

Job Number 104724

Prepared for ARKANSAS INDUSTRIAL MACHINERY

3804 N. NONA ST NORTH LITTLE ROCK AR 72118

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AC Inspection as Found - MOTOR SHOP LR



06/12/2025

AC Inspection as Found

ARKANSAS INDUSTRIAL MACHINERY

3804 N. NONA ST NORTH LITTLE ROCK, AR 72118

d Job Number:	104724
	Three
ıre:	TEFC
ıds:	6
cluded:	Complete
g/Sheave:	None
RTDs:	No

FolderID: 104724 FormID: 24783778

AC Inspection	n - Rev. 2		Hi-Speed Job Number:	104724
Location:	MOTOR SHOP	LR	Phase:	Three
Serial Number:	:		Enclosure:	TEFC
Description:75	KW		# of Leads:	6
			J-box Included:	Complete
			Coupling/Sheave:	None
			Bearing RTDs:	No
			Stator RTDs:	No
			Repair Stage:	Final
			Rewind:	Yes
			Shaft Machined Fit Repairs Required:	No
			Bearing Housing Machined Fit Repairs Required:	No
			Heaters:	No
			Winding Type :	Random Wound
			Bearing Type:	Rolling Element
iorities Found: 🌘	📄 2 - High 🛛	🔵 13 - Good		

Overall Condition

- 1. Report Date
- 2. Nameplate Picture



Photos of all six sides of the machine. 3.





























Received this way

	4.	Describe the Overall Condition of the Equipment as Received	
		Dirty but serviceable	
	5.	Is this a UL Listed Motor	(No) No
	6.	Is the motor water cooled or can be pressure checked before teardown	(No) No
In	itial	Mechanical/Electrical	
	7.	Does Shaft Turn Freely?	(Y) Yes
	8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
	9.	Does Shaft Have Visible Damage?	(No) No
	10.	Assembled Shaft Runout	0 Inches
	11.	Assembled Shaft End Play	0 inches
	12.	Air Gap Variation <10%	
	13.	Lead Condition	(P) Pass
	14.	Lead Length	
	15.	Does it have Lugs?, If so what is the Stud Size?	(Yes) Yes
	16.	Lead Numbers	1-6
	17.	Are the Leads insulated with Chico or other material	(No) No
	18.	Frame Condition	pass
	19.	Fan Condition	(P) Pass



20. Does motor have internal fan?

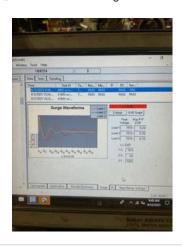
21. Broken or Missing Components

No

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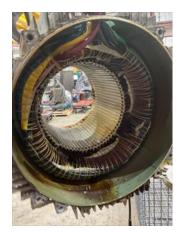
(No) No

Initial Electrical Inspection					
22.	Insulation Resistance/Megger			7392 Megohms	
23.	Winding Resistance				
	1-2	1-3	2-3		
	0.0204	0.0207	0.0201		
) 24.	Perform Surge Test			(F) Fail	



- 25. Number of Stator Slots
- 26. Stator Condition
- Insulation is brittle





rewind .winding shorted internal

72



27.	Stator Thermistors/Ohms	114.1 ohms
28.	Stator Overloads/Ohms	
Mecha	anical Inspection	
29.	Drive End Bearing Brand	SKF
30.	Drive End Bearing Number-	NU213EC



31. Drive End Bearing Qty.	1
32. Drive End Bearing Type	(Roller) Roller Bearing
33. Drive End Lubrication Type	(Oil) Oil Lubricated
34. Drive End Bearing Insulation or Grounding Device?	NA
35. Drive End Wavy Washer/Snap-Ring Other Retention Device?	SNAP RING
36. Drive End Bearing Condition	FLUTING



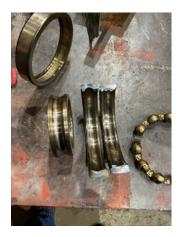
- 37. Opposite Drive End Bearing Brand
- 38. Opposite Drive End Bearing Number-



	SKF	
6215	ΖZ	C4



39. Opposite Drive End Bearing Qty.	1
40. Opposite Drive End Bearing Type	(Ball) Ball Bearing
41. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
42. Opposite Drive End Bearing Insulation or Grounding Device?	na
43. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	Snap ring
44. Opposite Drive End Bearing Condition	axial load and some frosting



45. Drive End Seal	YES
46. Opposite Drive End Seal	NA
Rotor Inspection	

48. Growler Test (Pass) Pass 49. Number of Rotor Bars 56 50. Rotor Condition pass 51. List the Parts needed for the Repair Below 1-NU213C4 roller.bearing 2-6215 ZZ C4 bearing 52. Signature of Technician that Disassembled Motor RW **Mechanical Fits- Rotor** 53. Shaft Runout 0.0004 inches 54. Rotor Runout **Drive End Bearing Fit** Rotor Body **Opposite Drive End Bearing** 0.0003 0.0003 0.0005 55. Coupling Fit Closest to Bearing Housing 0 Degrees 90 Degrees 120 Degrees

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2.3631

2.3631

2.3631

(Squirrel Aluminum) Squirrel **Cage Aluminum Die Cast**



47. Rotor Type/Material

56.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
	3.3631	2.3631	2.3631	
57.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.5603	2.5603	2.5603	
58.	Drive End Bearing Shaft Fit Condition			(P) Pass



60.	60. Opposite Drive End Bearing Shaft Fit Condition			(P) Pass
	2.9533	2.9533	2.9533	
	0 Degrees	60 Degrees	120 Degrees	
59.	Opposite Drive End Bearing Shaft Fit			



61.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	Pass		
Mecha	anical Fits- Bearing Housings		
62.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	4.7253	4.7249	4.7249



65.	Opposite Drive End - Endbell Bearing	(P) Pass			
	5.1186	5.1186	5.1186		
	0 Degrees	60 Degrees	120 Degrees		
64.	Opposite Drive End - Endbell Bearing Fit				



66. Bearing Cap Condition	
Drive End Bearing Cap	Opposite Drive End Bearing Cap
	pass



67	End Bell Air Seal Fits					
07.	Drive End Air Seal	Opposite Drive End Air Seal				
		opposite Drive End Air Ocdi				
	Pass					
68.	68. List Machine Work Needed Below					
	None					
69.	Technician			RW		
	Λ					
1						
	\sum					
1						
-	Co sign: CRW					
Root	Cause of Failure					
70.	Failure locations					
	Winding and drive bearing					
71.	Root cause of failure					
	Dr bearing had fluting . Winding insula	ion break down.				
-	mic Balance Report					
72.	Rotor Weight and Balance Grade					
	Rotor Weight	Balance Grade				
73.	Initial Balance Readings					
75.	Drive End	Opposite Drive End				
	bive Elia					
74.	Final Balance Readings					
	Drive End	Opposite Drive End				
	Technician					
Rewin						
76.	Core Test Results - Watts loss per Po					
	Pre-Burnout	Post Burnout				
77.	Core Hot Spot Test					
	Pre-Burnout	Post-Burnout				
78.	78. Post Rewind Electrical Test- Insulation Resistance79. Post Rewind Polarization Index					
79.						
80.	Post Rewind Winding Resistance					
	1-2	1-3	2-3			
01	Post Powind Surge Test					
81.	Post Rewind Surge Test Post Rewind Hi-Pot					
	Technician					
Asser						
	QC Check All Parts for Cleanliness P	rior to Assembly				
85. Photograph All Major Components prior to assembly						
86. Final Insulation Resistance Test						
87.	Assembled Shaft Endplay					
	. ,					

88.	Assembled Shaft Runout			
89.	Test Run Voltage			
	Volts	Volts	Volts	
90.	Test Run Amperage			
	Amps	Amps	Amps	
91.	Drive End Vibration Readings - Inches			
	Horizontal	Vertical	Axial	
92.	Opposite Drive End Vibration Reading	js - Inches Per Second		
	Horizontal	Vertical	Axial	
00				
	. Ambient Temperature - Fahrenheit			
94.	Drive End Bearing Temps - Fahrenhe	it		
	5 Minutes	10 Minutes	15 Minutes	
95.				
	5 Minutes	10 Minutes	15 Minutes	
97.	Final Pics and QC Review			



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- 1. <u>APPLICABILITY.</u> 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.
- 3. <u>SCOPE OF GOODS AND/OR SERVICES.</u> The goods and/or services provided by Hi-Speed pursuant to any quotation shall be limited exclusively to those goods and/or services expressly identified therein. Hi-Speed does not assume any responsibility and/or liability for the failure to provide any other goods and/or services not identified in any quotation. Modifications, additions or deletions to or from the scope referenced in any quotation shall only be effective if evidenced in writing and signed by Hi-Speed. The sale of any of all goods and/or services affected by such modification, addition or deletion shall be subject to these same Standard Terms and Conditions whether or not referenced therein.
- 4. <u>BILLING AND PAYMENT TERMS.</u> 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 Buver 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 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

TermsAndConditions

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- 10. <u>SEVERABILITY</u>. The partial or complete invalidity of any provision of these Standard Terms and Conditions shall not affect the enforceability of the remainder of these Standard Terms and Conditions. If any provision is found to be invalid or unenforceable, that portion shall be modified to make it enforceable or shall be stricken and the remainder of these Standard Terms and Conditions shall enforced.
- 11. <u>GOVERNING LAW AND JURISDICTION.</u> 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.
- 12. <u>ABANDONED EQUIPMENT.</u> Hi-Speed requires that Buyer promptly pick up or provide shipment instructions for Buyer equipment or other Buyer property in Hi-Speed's possession. If equipment or other Buyer property is left with Hi-Speed and not picked up within six (6) months after Hi-Speed's final action related to the applicable property (e.g. evaluation, teardown, estimate, completion of services), Hi-Speed will consider such property abandoned and may dispose of it in accordance with applicable law. Buyer agrees to hold Hi-Speed harmless for any damage or claim for such abandoned property and acknowledges that Hi-Speed may discard or recycle it at Hi-Speed's sole and absolute discretion. Specifically, Hi-Speed may sell Buyer's abandoned property at a private or public sale and retain the proceeds to offset Hi-Speed's storage, inspection and servicing costs. For the avoidance of doubt, Hi-Speed reserves its statutory and other lawful liens for unpaid charges related to abandoned property.
- 13. FORCE MAJEURE. Neither party shall be responsible for any delay or failure in performance of any party of the quotation, purchase order or these Standard Terms and Conditions to the extent that such delays or failures are caused by fire, flood, earth quake, explosion, war, embargo, government requirement, civil or military authority, acts of God, or any other circumstances beyond its reasonable control and not involving any fault or negligence on the party affected ("Condition"). If any such Condition occurs, the party delayed or unable to perform shall promptly give written notice to the other party and, if such Condition remains at the end of thirty (30) days, the party affected by the other party's delay and inability to perform may elect to (i) terminate such order or part thereof, or (ii) suspend the order for the duration of the Condition, if the Buyer is the suspending party, buy elsewhere comparable material to be sold under the order and apply to any commitment the purchase price of such purchase, and resume performance of the order once the Condition ceases, with an option in the affected party to extend the period of this order up to the length of the time the Condition endures.
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- 16. <u>NO INDIVIDUAL LIABILITY</u>. Notwithstanding any other agreement to the contrary, the Buyer agrees that in no event will the Buyer hold and HI-Speed owner, director, officer or employee personally liable for unintentional tortious conduct or conduct that constitutes the breach of any contract between HI-Speed and the Buyer, even if the HI-Speed owner, director, officer or employee is or could be construed to be a party to such contract.