

LR Motor Shop Repairs

Job Number 102906

Prepared for Kroger

20820 interstate 30 N Benton AR 72019

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AC Inspection - Rev. 2: 32-12-200A 2A

1.0



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AC Inspection as Found

Kroger

20820 interstate 30 N Benton, AR 72019

AC Inspection - Rev. 2

Location: Motor Shop Serial Number: 32-12-200A 2A

Description:6HP ILG IND

Hi-Speed Job Number:	102906
Manufacturer:	Other
Serial Number:	32-12-200A 2A
HP/kW:	6 (HP)
RPM:	855 (RPM)
Frame:	32
Voltage:	Other
Current:	18 (Amps)
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TENV
# of Leads:	3
J-box Included:	None
Coupling/Sheave:	None
Date Received:	05/08/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	Yes
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **5 - High**





4 - Good

Overall Condition

1. Report Date 05/20/2024

2. Nameplate Picture



3. Photos of all six sides of the machine.









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

Initi	ial	Mechanical/Electrical	
• 5	5.	Does Shaft Turn Freely? (N) N	0
• 6	6.	Does the shaft require T.I.R in Lathe to identify additional repairs? (Yes) Ye	s
-)	ODE bearing journal.	
7	7.	Does Shaft Have Visible Damage? (No) N	0
3	8.	Assembled Shaft Runout Inche	s
-	ı	Couldn't perform. Motor locked up.	
Ş	9.	Assembled Shaft End Play inche	s
-)	Na	
1	0.	Air Gap Variation <10%	
-		Na	
• 1	1.	Lead Condition (P) Pas	s





13.	Does it have Lugs?, If so what is the S	Stud Size?	(No) No
14.	Lead Numbers		1-3
15.	Frame Condition		pass
16.	Fan Condition		(N) NA
-	Na		
17.	Broken or Missing Components		none
Initial	Electrical Inspection		
18.	Insulation Resistance/Megger		Megohms
-	Na		
19.	Winding Resistance		
	1-2	1-3	2-3
-	Na		
2 0.	Perform Surge Test		(NA) Not Applicable
-	Windings charred		



21.	Number of Stator Slots	54
22.	Stator Condition	rewind
23.	Stator Thermistors/Ohms	
-	Na	
24.	Stator Overloads/Ohms	
-	Na	

Mechanical Inspection

25. Drive End Bearing Brand

KBC

26. Drive End Bearing Number-





27. Drive End Bearing Qty.	1
28. Drive End Bearing Type	(Ball) Ball Bearing
29. Drive End Lubrication Type	(Grease) Grease Lubricated
30. Drive End Bearing Insulation or Grounding Device?	none
31. Drive End Wavy Washer/Snap-Ring Other Retention Device?	none
32. Drive End Bearing Condition	locked up
33. Opposite Drive End Bearing Brand	JAF
0.4 On a site Drive Ford Descripe Novel on	







35.	Opposite Drive End Bearing Qty.	6206
-	Sealed double wide	
36.	Opposite Drive End Bearing Type	(Ball) Ball Bearing
37.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
38.	Opposite Drive End Bearing Insulation or Grounding Device?	none
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	



A Committee of the Comm		
40. Opposite Drive End Bearing Condition	worn	
41. Drive End Seal	none	
42. Opposite Drive End Seal	none	
Rotor Inspection		

(P) Pass

43. Rotor Type/Material



44. Growler Test	(Pass) Pass
45. Number of Rotor Bars	67
46. Rotor Condition	pass
47. List the Parts needed for the Repair Below Bearings,	
48. Signature of Technician that Disassembled Motor	Terrence Holland

L- 4/ll-

Mechanical Fits- Rotor

49. Shaft Runout inches

ODE shaft bearing journal out of tolerance. Unable to perform measurement.

50. Rotor Runout

Drive End Bearing Fit Rotor Body Opposite Drive End Bearing

Na

51. Coupling Fit Closest to Bearing Housing

0 Degrees 90 Degrees 120 Degrees

Na

52. Coupling Fit Closest to the end of the Shaft

0 Degrees 60 Degrees 120 Degrees

Na

53. Drive End Bearing Shaft Fit

0 Degrees 60 Degrees 120 Degrees

1.575 1.5749

54. Drive End Bearing Shaft Fit Condition55. Opposite Drive End Bearing Shaft Fit

0 Degrees 60 Degrees 120 Degrees

Excessive wear. Bearing came off in housing.

56.		Condition	(F) Fail
57.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	Na		
	anical Fits- Bearing Housings		
58.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	Lip worn in.		
59.	Drive End - Endbell Bearing Fit Cond	ition	(F) Fail
60.	•		(1)1 all
00.	0 Degrees	60 Degrees	120 Degrees
	o Begrees	00 Degrees	120 Degrees
-	Lip worn in		
61.	Opposite Drive End - Endbell Bearing	Fit Condition	(F) Fail
62.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
•	Na		
63.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
-	Na		
	List Machine Work Needed Below		
٠	Both housing fits, and ode shaft bearing	g journal, and stator windings	
65.	Technician		Terrence Holland
	- > /		
	\mathcal{S}		
/	and the same of th		
_	Witness: RRW	1	
,	Cause of Failure		
	Failure locations		
55.	Both housing fits, ode shaft bearing fit	and rewind stator.	
67.	Root cause of failure		
٠.,		d into the stator housings and bearings causing	g them to lock up. Also contributed
	to windings shorted to ground.		•
-	nic Balance Report		
68.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
69.	Initial Balance Readings		
	Drive End	Opposite Drive End	
70.	Final Balance Readings		
	Drive End	Opposite Drive End	

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71. Technician Rewind 72. Core Test Results - Watts loss per Pound Pre-Burnout Post Burnout 73. Core Hot Spot Test

Post-Burnout

74. Post Rewind Electrical Test- Insulation Resistance

Megohms



Pre-Burnout

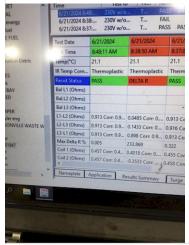
75. Post Rewind Polarization Index

76. Post Rewind Winding Resistance

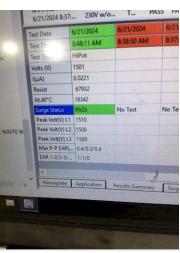
1-2

1-3

2-3



77. Post Rewind Surge Test (Pass) Pass



78.	Post Rewind Hi-Pot		micro-amps
79.	Technician		Ztw
Mecha	anical Fits- Rotor - Post Repair		
80.	Shaft Runout Post Repair		0.001 inches
81.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	0.001	0.0015	0.002
82.	Coupling Fit Closest to Bearing Housing	ng Post Repair	
	0 Degrees	90 Degrees	120 Degrees
83.	Coupling Fit Closest to the end of the	Shaft Post Repair	
	0 Degrees	60 Degrees	120 Degrees
84.	Drive End Bearing Shaft Fit Post Repa	air	
	0 Degrees	60 Degrees	120 Degrees
	1.5751	1.5751	1.575



85. Opposite Drive End Bearin	g Shaft Fit Post Repair	
0 Degrees	60 Degrees	120 Degrees
1.1812	1.1812	1.1812



86. Shaft Air Seal Fits Post Repair		
Drive End Air Seal	Opposite Drive End Air Seal	
87. Shaft Repair Sign-off		Gary ,Robert

Mechanical Fits- Bearing Housings - Post Repair

88. Drive End - Endbell Bearing Fit Post Repair

0 Degrees 60 Degrees 120 Degrees 3.1499 3.1499 3.1499







90.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
91.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
92.	End Bell Repair Sign-off		RW
K			
Asse	·		
93. QC Check All Parts for Cleanliness Prior to Assembly Cw			
94.	Photograph All Major Components pr	or to assembly	
95.	Final Insulation Resistance Test		Megohms
-	Pass		
96.	Assembled Shaft Endplay		inches
97.	Assembled Shaft Runout		inches





99. Test Run Amperage
Amps Amps Amps



00. Drive End Vibration Readings - Inches Per Second				
Vertical	Axial			
Opposite Drive End Vibration Readings - Inches Per Second				
Vertical	Axial			
102. Ambient Temperature - Fahrenheit				
103. Drive End Bearing Temps - Fahrenheit				
10 Minutes	15 Minutes			
04. Opposite Drive End Bearing Temps - Fahrenheit				
10 Minutes	15 Minutes			
105. Document Final Condition with Pictures after paint				
	Vertical Readings - Inches Per Second Vertical Tenheit To Minutes Temps - Fahrenheit To Minutes			







106. Final Pics and QC Review

Cw

Co sign: RRW



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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.
- 3. SCOPE OF GOODS AND/OR SERVICES. 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 bee 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. <u>DELIVERY OF GOODS AND/OR SERVICES.</u> 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.
- **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 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. <u>WARRANTIES.</u> 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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- 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. **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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- 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.
- 14. <u>NONWAIVER.</u> No course of dealing or failure of either party to strictly enforce any term, right, or condition of these Standard Terms and Conditions will be construed as a waiver of such term, right or condition. Any waiver by Hi-Speed will only be in writing and will waive no succeeding breach of a term, right or condition.
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- 16. NO INDIVIDUAL LIABILITY. 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.