

# EVERY DAY SINCE 1946

LR Motor Shop Repairs

## Job Number 102905

Prepared for Kroger

20820 interstate 30 N Benton AR 72019

### Table of Contents

AC Inspection as Found - Motor Shop



#### **AC Inspection as Found**

Kroger 20820 interstate 30 N Benton, AR 72019

#### AC Inspection - Rev. 2

Location:	Motor Shop
Serial Number:	32-12-200A
Description:6HP ILG IND	

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

> FolderID: 102905 FormID: 20326512

Hi-Speed Job Number:	102905
Manufacturer:	Other
Serial Number:	32-12-200A
HP/kW:	6 (HP)
RPM:	855 (RPM)
Frame:	32
Voltage:	Other
Phase:	Three
Enclosure:	TENV
# of Leads:	3
J-box Included:	None
Coupling/Sheave:	None
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**

n 🛛 🔵 4 - Good

#### **Overall Condition**

- 1. Report Date
- 2. Nameplate Picture



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05/20/2024

3. Photos of all six sides of the machine.

















4.	Describe the Overall Condition Serviceble	of the Equipment as Received		
nitia	I Mechanical/Electrical			
5.	Does Shaft Turn Freely?			(N) No
6.	Does the shaft require T.I.R in I	athe to identify additional repairs?		(No) No
7.	Does Shaft Have Visible Dama	ge?		(No) No
8.	Assembled Shaft Runout			Inches
	Na			
9.	Assembled Shaft End Play			inches
	Na			
10.	Air Gap Variation <10%			
-	Na			
11.	Lead Condition			(P) Pass
12.	Lead Length			18 Inches
13.	Does it have Lugs?, If so what i	s the Stud Size?		(No) No
14.	Lead Numbers			none
15.	Frame Condition			pass
16.	Fan Condition			(N) NA
17.	Broken or Missing Components			none
Initia	I Electrical Inspection			
18.	Insulation Resistance/Megger			0 Megohms
19.	Winding Resistance			
	1-2	1-3	2-3	
•	Na			
20.				(F) Fail
21.				54
	Stator Condition		rewind	and core repair
23.	Stator Thermistors/Ohms			
	Na Statar Overleade/Ohma			
24.	Stator Overloads/Ohms			
	nanical Inspection			<b>F</b>
	Drive End Bearing Brand			Fag
26.	Drive End Bearing Number-			6208ZZ

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?	na
31. Drive End Wavy Washer/Snap-Ring Other Retention Device?	na
32. Drive End Bearing Condition	normal wear



33.	Opposite	Drive	End	Bearing	Brand
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34. Opposite Drive End Bearing Number-

35. Opposite Drive End Bearing Qty.	1
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?	na
39. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer

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NTN

63206ZZC3



40. Opposite Drive End Bearing Condition



41.	Drive End Seal	na
42.	Opposite Drive End Seal	na
Rotor	Inspection	
43.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
44.	Growler Test	(Pass) Pass
45.	Number of Rotor Bars	66



46. Rotor Condition

dirty

47.	List the Parts needed for the Repair B 6208ZZ. 63206ZZ	elow	
48.	Signature of Technician that Disasser	nbled Motor	RW
Mecha	anical Fits- Rotor		
49.	Shaft Runout		0.001 inches
50.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
-	Na		
51.	Coupling Fit Closest to Bearing Housi		
	0 Degrees	90 Degrees	120 Degrees
	Na		
52.	Coupling Fit Closest to the end of the	Shaft	
	0 Degrees	60 Degrees	120 Degrees
_			
-			
53.	Drive End Bearing Shaft Fit	20 D	100 B
	0 Degrees 1.5752	60 Degrees 1.5752	120 Degrees 1.5752
		1.3732	1.5752

54. Drive End Bearing Shaft Fit Condition

(P) Pass

55.	Opposite Drive End Bearing Shaft Fit				
	0 Degrees	60 Degrees	120 Degrees		
		1.1809	1.1809		
56.	Opposite Drive End Bearing Shaft Fit	Condition		(F) Fail	
57.	Shaft Air Seal Fits				
	Drive End Air Seal	Opposite Drive End Air Seal			
	Na				
Mech	Mechanical Fits- Bearing Housings				
	Drive End - Endbell Bearing Fit				
001	0 Degrees	60 Degrees	120 Degrees		
	3.1506	3.1506	3.1506		
1000					
59.	Drive End - Endbell Bearing Fit Condi	tion		(F) Fail	

60.	Opposite Drive End - Endbell Bearing			
	0 Degrees	60 Degrees	120 Degrees	
6	2.4448	2.4448	2.4448	
61.	Opposite Drive End - Endbell Bearing	Fit Condition		(F) Fail
	Resleeve			
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			
64.	List Machine Work Needed Below			
	Both end bell bearing fits are bad and t	he ode shaft bearing fit bad		
65.	Technician			RW
	Co witness TRH			
Root	Cause of Failure			
66.	Failure locations			
	Both end bell bearing fits are bad ode s	haft bearing fit bad		

#### 67. Root cause of failure

Bearing fits went down and rotor drug the iron causing the winding to short out



Dynai	mic Balance Report		
68.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
69.	Initial Balance Readings		
	Drive End	Opposite Drive End	
70	Final Dalance Deadings		
70.	Final Balance Readings	Oraș șeite Drive Frad	
	Drive End	Opposite Drive End	
71.	Technician		
Rewir	nd		
72.	Core Test Results - Watts loss per Po	und	
	Pre-Burnout	Post Burnout	
73.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
74			
74.		n Resistance	
	Post Rewind Polarization Index		
76.	Post Rewind Winding Resistance	4.0	0.0
	1-2	1-3	2-3
77.	Post Rewind Surge Test		
78.	Post Rewind Hi-Pot		
79.	Technician		
Mecha	anical Fits- Rotor - Post Repair		
80.	Shaft Runout Post Repair		
81.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
82.	Coupling Fit Closest to Bearing Housi	ng Post Panair	
02.			120 Dogroop
	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 Rep	air	
	0 Degrees	60 Degrees	120 Degrees
85.	Opposite Drive End Bearing Shaft Fit	Post Repair	
	0 Degrees	60 Degrees	120 Degrees
86.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
87.	Shaft Repair Sign-off		
Mecha	anical Fits- Bearing Housings - P	ost Repair	
88.	Drive End - Endbell Bearing Fit Post I	Repair	
	0 Degrees	60 Degrees	120 Degrees
		-	
89.	Opposite Drive End - Endbell Bearing	Fit Post Repair	
	0 Degrees	60 Degrees	120 Degrees
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	
	End Bell Repair Sign-off		
Asser	-		
93.	QC Check All Parts for Cleanliness P	rior to Assembly	
94.	Photograph All Major Components pr	ior to assembly	
95.	Final Insulation Resistance Test		
96.	Assembled Shaft Endplay		
97.	Assembled Shaft Runout		
98.	Test Run Voltage		
	Volts	Volts	Volts
99.	Test Run Amperage		
	Amps	Amps	Amps
100.	Drive End Vibration Readings - Inche	s Per Second	
	Horizontal	Vertical	Axial
101.	Opposite Drive End Vibration Reading	gs - Inches Per Second	
	Horizontal	Vertical	Axial
102.	Ambient Temperature - Fahrenheit		
	Ambient Temperature - Fahrenheit Drive End Bearing Temps - Fahrenhe	it	
	•	it 10 Minutes	15 Minutes

104. Opposite Drive End Bearing	g Temps - Fahrenheit	
5 Minutes	10 Minutes	15 Minutes
105. Document Final Condition with Pictures after paint		
106. 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.
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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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- 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.
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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.
- 15. <u>ASSIGNMENT.</u> The rights and obligations of the parties shall neither be assigned nor delegated without the prior written consent of the other party. However, any party may assign or delegate its respective rights and obligations, in whole or in part, (i) to any subsidiary, (ii) pursuant to other financing, merger or reorganization or (iii) pursuant to any sale or transfer of substantially all of the assets of the assigning party. These Standard Terms and Conditions shall bind the heirs, successors and assigns of the parties hereto.
- 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.