

LR Motor Shop Repairs

Job Number 103098

Prepared for Georges Inc

1810 S. St. Louis Street Batesville AR 72501

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AC Inspection as Found - Shop

AC Inspection - Rev. 2: C1609061077

1.0



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

> FolderID: 103098 FormID: 20682953

AC Inspection as Found

Georges Inc

Location:

1810 S. St. Louis Street Batesville, AR 72501

AC Inspection - Rev. 2

Serial Number: C1609061077

Shop

Description:25HP BALDOR EVAL

Hi-Speed Job Number:	103098
Manufacturer:	Baldor
Product Number:	BUSCH VACUUM PUMP
Spec/ID #:	12E416Y677G/MOTOR RC0630B4Z61037/BUSCH
Serial Number:	C1609061077/MOTOR, U164500139/BUSCH
HP/kW:	25 (HP)
RPM:	1180 (RPM)
Frame:	324TC
Voltage:	230 / 460
Current:	64/32A (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Date Received:	06/12/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 11 - Good

Overall Condition

1. Report Date **06/18/2024**

2. Nameplate Picture



3. Photos of all six sides of the machine.



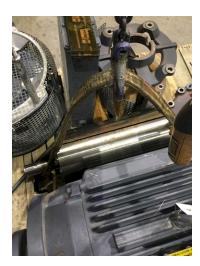














Shaft in .75



Water in the oil





















Mixed grease

inches
(Y) Yes
(No) No
(No) No
Inches
inches



(P) Pass

Hooked High Voltage



14.	Lead Length	12 Inches
15. Does it have Lugs?, If so what is the Stud Size?		(No) No
16.	Lead Numbers	1-12
17.	Frame Condition	dirty
18.	Fan Condition	(P) Pass



19.	Broken or Missing Components					
Initial	Initial Electrical Inspection					
20.	Insulation Resistance/Megger		108340 Megohms			
21.	Winding Resistance					
	1-2	1-3	2-3			
	0.241	0.245	0.239			

22. Perform Surge Test



(P) Pass

23. Number of Stator Slots

54

24. Stator Condition





- 25. Stator Thermistors/Ohms
- 26. Stator Overloads/Ohms

Mechanical Inspection

27. Drive End Bearing Brand

FAG



28. Drive End Bearing Number-

6313 C3

29. Drive End Bearing Qty.

1

30. Drive End Bearing Type	(Ball) Ball Bearing
31. Drive End Lubrication Type	(Grease) Grease Lubricated
32. Drive End Bearing Insulation or Grounding Device?	
33. Drive End Wavy Washer/Snap-Ring Other Retention Device?	
34. Drive End Bearing Condition	normal wear



35. Opposite Drive End Bearing Brand





36. Opposite Drive End Bearing Number-	6311 C3
37. Opposite Drive End Bearing Qty.	1
38. Opposite Drive End Bearing Type	(Ball) Ball Bearing
39. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
40. Opposite Drive End Bearing Insulation or Grounding Device?	
41. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
42. Opposite Drive End Bearing Condition	mixed grease in bearing





Mixed grease

43.	Drive End Seal	
44.	Opposite Drive End Seal	
Rotor	Inspection	
45.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
46.	Growler Test	(Pass) Pass
47.	Number of Rotor Bars	40
48.	Rotor Condition	pass
49.	List the Parts needed for the Repair Below	
	6312 6311 BEARING	
50.	Signature of Technician that Disassembled Motor	RW

Mecha	Mechanical Fits- Rotor				
51.	Shaft Runout		inches		
52.	Rotor Runout				
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing		
53.	Coupling Fit Closest to Bearing Housi	ng			
	0 Degrees	90 Degrees	120 Degrees		
54.	Coupling Fit Closest to the end of the	Shaft			
	0 Degrees	60 Degrees	120 Degrees		
55.	Drive End Bearing Shaft Fit				
	0 Degrees	60 Degrees	120 Degrees		
	2.3624	2.3625	2.3624		

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57.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	2.1656	2.1656	2.1656

■ 58. Opposite Drive End Bearing Shaft Fit Condition

(P) Pass



59. Shaft Air Seal Fits				
Drive End Air Seal	Opposite Drive End Air Seal			
Mechanical Fits- Bearing Housings				
60. Drive End - Endbell Bearing Fit				
0 Degrees	60 Degrees	120 Degrees		
5.1181	5.1181	5.1181		



69. Root cause of failure

Dynamic Balance Report

Motor shaft bearing fits undersized

100		Sec. 8			
	62.	Opposite Drive End - Endbell Bearing	Fit		
		0 Degrees	60 Degrees	120 Degrees	
		4.7248	4.7248	4.7248	
	63.	Opposite Drive End - Endbell Bearing	Fit Condition		(P) Pass
	64.	Bearing Cap Condition			
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
		pass	pass		
	65.	End Bell Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
	66.	List Machine Work Needed Below			
		Both shaft bearing fits are undersized			
	67.	Technician Co sign: CRW			RW
R	oot (Cause of Failure			
	68.	Failure locations			
		Oil had water init also metal shavings			



71.	Initial Balance Readings		
	Drive End	Opposite Drive End	
	0.53	0.87	
72.	Final Balance Readings		
	Drive End	Opposite Drive End	
	0.23	0.36	
73.	Technician		RW



B A I I I	E'ta Datas	D (D '-
Mochanical	LITC- PATAR	- Post Repair

wecha	Mechanical Fits- Rotor - Post Repair				
74. •	Shaft Runout Post Repair Na		inches		
75.	Rotor Runout Post Repair				
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing		
-	Na				
76.	. Coupling Fit Closest to Bearing Housing Post Repair				
	0 Degrees	90 Degrees	120 Degrees		
-	Na				
77.	Coupling Fit Closest to the end of the Shaft Post Repair				
	0 Degrees	60 Degrees	120 Degrees		
-	Na				
78.	Drive End Bearing Shaft Fit Post Repair				
	0 Degrees	60 Degrees	120 Degrees		
-	Na				

79. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees 60 Degrees 120 Degrees

Na

80. Shaft Air Seal Fits Post Repair

Drive End Air Seal Opposite Drive End Air Seal

Na

81. Shaft Repair Sign-off

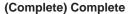
Na

Assembly

82. QC Check All Parts for Cleanliness Prior to Assembly

RW

83. Photograph All Major Components prior to assembly



























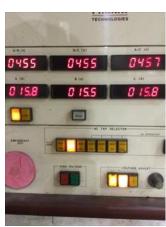


84.	Final Insulation Resistance Test Pass the Hi pot		Megohms
85.	Assembled Shaft Endplay Na		inches
86.	Assembled Shaft Runout		0.0003 inches
87.	Test Run Voltage		
	Volts	Volts	Volts
	455	454	457



Co sign CRW

88. Test Run Amperage	Test Run Amperage		
Amps	Amps	Amps	
15.8	15.5	15.8	



89. Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial
	0.04	0.01	0
90.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
	0.02	0.01	0.01
91.	91. Ambient Temperature - Fahrenheit		
-	Na		
92.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
-	Na		
93.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
-	Na		
94.	. Document Final Condition with Pictures after paint		











95. Final Pics and QC Review

RW

Co sign CRW



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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.
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- 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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- 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.