

LR Motor Shop Repairs

Job Number 104306

Prepared for Arkansas Box

100 William J Clark Drive Conway AR 72032

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AC Inspection as Found - MOTOR SHOP LR

AC Inspection - Rev. 2: GG161650008

1.0





AC Inspection as Found

Arkansas Box

100 William J Clark Drive Conway, AR 72032

FolderID: 104306 FormID: 23775639

AC Inspection - Rev. 2

Location: MOTOR SHOP LR Serial Number: GG161650008

Description: 40 HP BALDOR

Hi-Speed Job Number:	104306
Manufacturer:	Baldor
Product Number:	CAT# 05040R-BV
Spec/ID #:	SPEC# T21T2353
Serial Number:	GG161650008
HP/kW:	40 (HP)
RPM:	1750 (RPM)
Frame:	HC2115ATZ
Voltage:	Other
Service Factor:	1.0
Enclosure:	ODP
# of Leads:	6
J-box Included:	None
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

Priorities Found: 1 - High





12 - Good

Overall Condition

03/18/2025 1. Report Date

2. Nameplate Picture





3. Photos of all six sides of the machine.













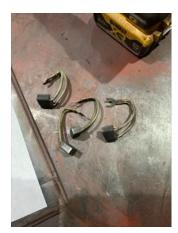






















Describe the Overall Condition of the Equipment as Received Serviceable **Initial Mechanical/Electrical** Does Shaft Turn Freely? (Y) Yes Does the shaft require T.I.R in Lathe to identify additional repairs? (No) No 6. Does Shaft Have Visible Damage? (No) No 8. Assembled Shaft Runout 0 Inches Assembled Shaft End Play inches 9. 10. Air Gap Variation <10% na 11. Lead Condition (P) Pass 12. Lead Length 12 Inches 13. Does it have Lugs?, If so what is the Stud Size? (No) No 14. Lead Numbers A1A2 F1F2P1P2 15. Frame Condition pass 16. Fan Condition (N) NA 17. Does motor have internal fan? (No) No 18. Broken or Missing Components none **Initial Electrical Inspection** 19. Insulation Resistance/Megger 20. Winding Resistance 1-2 1-3 2-3 Na



Armature passed the surge test. Fields failed



22. Number of Stator Slots

■ Ná

23. Stator Condition FIELDS NEED REWOUND





24.	. Stator Thermistors/Ohms	na	
25.	. Stator Overloads/Ohms	yes	

Mechanical Inspection

26. Drive End Bearing Brand NACHI





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?	na
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
33.	Drive End Bearing Condition	
-	Frosting	



34.	Opposite Drive End Bearing Brand	Fag
35.	Opposite Drive End Bearing Number-	6309C3



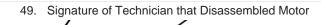
36. Opposite Drive End Bearing Qty.	1
37. Opposite Drive End Bearing Type	(Ball) Ball Bearing
38. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
39. Opposite Drive End Bearing Insulation or Grounding Device?	na
40. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	na
41. Opposite Drive End Bearing Condition	aegis rig shaft size 2.0117
Frosting	



42.	Drive End Seal	na
43.	Opposite Drive End Seal	na
Rotor	Inspection	
44.	Rotor Type/Material	(Copper Barred) Copper Barred Rotor
45.	Growler Test	(Pass) Pass
46.	Number of Rotor Bars	
-	Na	
47.	Rotor Condition	
-	Pass	



48. List the Parts needed for the Repair Below 6310C3 Bearing 6209C3 Bearing



RW

//	/ V I		
Mech	anical Fits- Rotor		
50.	Shaft Runout		0.0003 inches
51.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	0	0	0
52.	Coupling Fit Closest to Bearing Housi	ng	
	0 Degrees	90 Degrees	120 Degrees
-	Na		
53.	Coupling Fit Closest to the end of the	Shaft	
	0 Degrees	60 Degrees	120 Degrees
_	Na		
54.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.969	1.969	1.969
5 5.	Drive End Bearing Shaft Fit Condition		(P) Pass
56.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.7722	1.7723	1.7723



5 7.	Opposite Drive End Bearing Shaft Fit	Condition	(F	P) Pass
58.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
-	Pass			
Mecha	anical Fits- Bearing Housings			
59.	Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	4.3316	4.3316	4.3316	



61. Opposite Drive End - Endbell Bearing Fit				
0 De	egrees	60 Degrees	120 Degrees	
3.34	7	3.3468	3.347	
62. Opp	62. Opposite Drive End - Endbell Bearing Fit Condition			(P) Pass



63.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
-	Pass		
64.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
-	Pass		
65.	List Machine Work Needed Below		
	Ode end bell bearing fit bad		
66.	Technician Co sign: TRH	R	w
Root	Cause of Failure		

67. Failure locations

Field coil ode end bell bearing fit

68. Root cause of failure

Dirty bad brushes ode end bell bearing fit bad also fields need rewound

Dynamic Balance Report

69. Rotor Weight and Balance Grade

Rotor Weight Balance Grade



70.	Initial Balance Readings		
	-		
	Drive End	Opposite Drive End	
	0.06	0.39	
71	Final Balance Readings		
/ 1.	Final balance Readings		
	Drive End	Opposite Drive End	
	DIIVC LIIG	Opposite Drive End	
	0.06	0.39	
	0.00	0.00	
72	Technician		DW

MW

Rewind

73. Core Test Results - Watts loss per Pound

Pre-Burnout Post Burnout

74. Core Hot Spot Test

Pre-Burnout Post-Burnout

75. Post Rewind Electrical Test- Insulation Resistance Megohms

76. Post Rewind Polarization Index Polarization Index

77. Post Rewind Winding Resistance

1-2 1-3 2-3

78. Post Rewind Surge Test

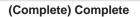
79. Post Rewind Hi-Pot micro-amps

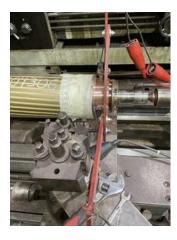
80. Technician

Assembly

MN

82. Photograph All Major Components prior to assembly



























83. Final Insulation Resistance Test

11,500 Megohms



84.	Assembled Shaft Endplay			0.003 inches
85.	Assembled Shaft Runout			0 inches
86.	Test Run Voltage			
	Volts	Volts	Volts	
	498.8	302.3		





Co sign TRH

87.	. Test Run Amperage				
	Amps	Amps	Amps		
	1.1	3.9			
88.	Drive End Vibration Readings - Inches Per Second				
	Horizontal	Vertical	Axial		
	0.04	0.03	0.02		
89.	Opposite Drive End Vibration Readings - Inches Per Second				
	Horizontal	Vertical	Axial		
	0.05	0.03	0.01		



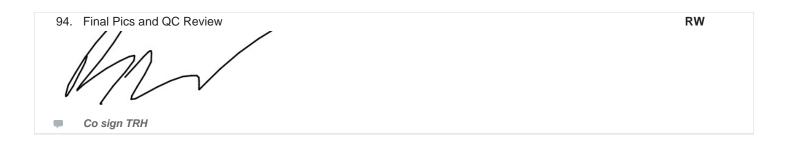








90. An	90. Ambient Temperature - Fahrenheit				
91. Dr	. Drive End Bearing Temps - Fahrenheit				
5	Minutes	10 Minutes	15 Minutes		
	Opposite Drive End Bearing Temps - Fahrenheit				
92. Op	pposite Drive End Bearing Temps - Fa	ahrenheit			
		ahrenheit 10 Minutes	15 Minutes		
			15 Minutes		





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- 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. <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.
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- 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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- 9. <u>LIMITATION OF DAMAGES.</u> HI-SPEED SHALL HAVE NO LIABILITY TO BUYER WITH RESPECT TO THE SALE OR DELIVERY OF ANY GOODS OR THE REPAIR THEREOF OR WITH RESPECT TO THE SALE OR PERFORMANCE OF ANY SERVICES, FOR LOST PROFITS, SPECIAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE OR INCIDENTAL DAMAGES OF ANY KIND OR NATURE WHETHER ARISING IN CONTRACT, TORT, GOODS LIABILITY OR OTHERWISE, EVEN IF HI-SPEED WAS ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGES. HI-SPEED SHALL NOT BE LIABLE FOR ANY DAMAGES OR DELAYS CAUSED BY ANY FAILURE TO MAKE ANY DELIVERY OF GOODS BY ANY EXPECTED TIME OR DATE OR THE FAILURE TO PROVIDE OR COMPLETE ANY SERVICES BY ANY EXPECTED DATE OR TIME. IN NO EVENT SHALL HI-SPEED BE LIABLE TO BUYER FOR ANY DAMAGES WHATSOEVER IN EXCESS OF THE TOTAL PRICE PAID FOR ALL GOODS AND/OR SERVICES HEREUNDER OR REFERENCED IN ANY QUOTATION OR THE PURCHASE ORDER.
- 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.
- 12. ABANDONED EQUIPMENT. 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.
- 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. **ASSIGNMENT.** 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. 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.