

# EVERY DAY SINCE 1946

LR Motor Shop Repairs

## Job Number 103870

Prepared for Union Pacific-Vine St 10945

1020 N. Vine Street North Liittle Rock AR

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AC Inspection as Found - Shop



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

> FolderID: 103870 FormID: 22579848

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

Union Pacific-Vine St 10945 1020 N. Vine Street North Liittle Rock, AR

#### AC Inspection - Rev. 2

Location:	Shop
Serial Number:	C1301170787

Description:50HP BALDOR 3530RPM

Hi-Speed Job Number:	113870
Manufacturer:	Baldor
Product Number:	CAT: 2013000068
Spec/ID #:	40E218W743G1
Serial Number:	C1301170787
HP/kW:	50 (HP)
RPM:	3530 (RPM)
Frame:	324TSC
Voltage:	230 / 460
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.25
Enclosure:	ODP
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	Coupling
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **2 - High** 

🔵 8 - Good

#### **Overall Condition**

1. Report Date

12/12/2024

#### 2. Nameplate Picture



3. Photos of all six sides of the machine.















4.	Describe the Overall Condition of the Equipment as Received Dirty	
5.	Distance from the end of the shaft to the Coupling/Sheave	0.3285 inches
Initial	Mechanical/Electrical	
6.	Does Shaft Turn Freely?	(Y) Yes
• 7.	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
8.	Does Shaft Have Visible Damage?	(No) No
9.	Assembled Shaft Runout	Inches
	Na	
10.	Assembled Shaft End Play	inches
	Na	
11.	Air Gap Variation <10%	
	Na	
12.	Lead Condition	(P) Pass
13.	Lead Length	12 Inches
14.	Does it have Lugs?, If so what is the Stud Size?	(Yes) Yes
15.	Lead Numbers	1-12
16.	Frame Condition	pass
17.	Fan Condition	(N) NA
18.	Broken or Missing Components	
	Na	
Initial	Electrical Inspection	

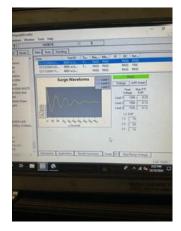
19.	Insulation Resistance/Megger		797	7 Megohms
20.	Winding Resistance			
	1-2	1-3	2-3	
	.127	.125	.126	
. 04	Daufaum Cuurna Taat			

21. Perform Surge Test

(P) Pass

36

wash and bake



- 22. Number of Stator Slots
- 23. Stator Condition



24.	Stator Thermistors/Ohms	na
25.	Stator Overloads/Ohms	
	Na	
Mecha	anical Inspection	
26.	Drive End Bearing Brand	SKF

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#### 27. Drive End Bearing Number-



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?	NA
33.	Drive End Bearing Condition	frosting



34. Opposite Drive End Bearing Brand	FAG
35. Opposite Drive End Bearing Number-	6309



36. Opposite Drive End Bearing Qty.

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1.4

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?	wavy washer
41. Opposite Drive End Bearing Condition	frosting



42.	Drive End Seal			
	Na			
43.	43. Opposite Drive End Seal			
Rotor	Inspection			
44.	Rotor Type/Material		(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast	
45.	Growler Test		(Pass) Pass	
46.	Number of Rotor Bars		28	
47.	Rotor Condition		pass	
48.	List the Parts needed for the Repair B	elow		
	6312 6309 ZZ C3 BEARING			
	AN			
Mecha	anical Fits- Rotor			
50.	Shaft Runout		0.0003 inches	
51.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
	Na			
52.	52. Coupling Fit Closest to Bearing Housing			
	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	
	2.3624	2.3624	2.3624	
55.	Drive End Bearing Shaft Fit Condition			(P) Pass
56.	Opposite Drive End Bearing Shaft Fit			
00.	0 Degrees	60 Degrees	120 Degrees	
	1.7721	1.7721	1.7721	
57.				(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
	5.1185	5.1185	5.1185



61.	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	3.9383	3.9383	3.9379	
62.	Opposite Drive End - Endbell Bearing	Fit Condition		(F) Fail
-	Resleeve			
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		
-	Na			
65.	List Machine Work Needed Below			
	Ode end bell bearing fit			
66.	Technician	RW		
141/				
/	A1			

 Failure locations Bearings ODE END BELL bearing fit contaminated grease
 Root cause of failure Bearings over greased windings very dirty

Dynamic Balance Report
69. Rotor Weight and Balance Grade
Rotor Weight
Balance Grade



70.	Initial Balance Readings			
	Drive End	Opposite Drive End		
	.25	.50		
71.	Final Balance Readings			
	Drive End	Opposite Drive End		
	.28	.23		
72.	Technician			RW
Co sign TRH				
Mechanical Fits- Bearing Housings - Post Repair				
73.	Drive End - Endbell Bearing Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	

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Α

74. Opposite Drive End - Endbell Bearing Fit Post Repair			
0 Degrees	60 Degrees		120 Degrees
3.9376	3.9377		3.9377
75. Bearing Cap Cor			
Drive End Bear	ing Cap Opposite Driv	e End Bearing Cap	
🗭 Na			
76. End Bell Air Sea	Fits Post Repair		
Drive End Air S	Seal Opposite Driv	e End Air Seal	
Na			
77. End Bell Repair	Sign-off		Gary
Assembly			
78. QC Check All Parts for Cleanliness Prior to Assembly			RW
79. Photograph All Major Components prior to assembly			(Complete) Complete



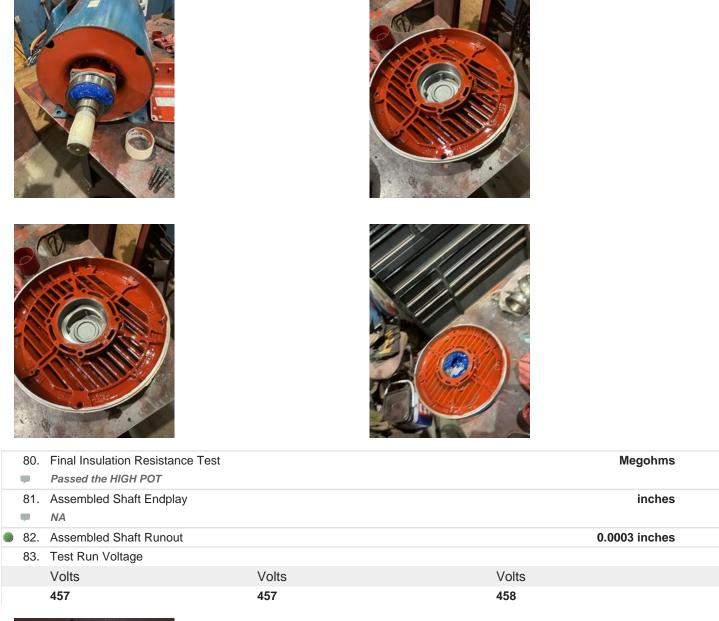














Co sign TRH

84. Test Run Amperage			
Amps	Amps	Amps	
14.7	14.3	14.8	



85.	Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	
•	Na			
86.	Opposite Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	
•	Na			
87.	Ambient Temperature - Fahrenheit			
•	Na			
88.	Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
•	Na			
89.	Opposite Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
-	Na			

90. Document Final Condition with Pictures after paint







Co sign TRH

RW



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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 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.
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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.