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# LR Motor Shop Repairs

# **Job Number 103395**

Prepared for ConAgra (10859-CON)

3100 E. Main St. Russellville AR 72801

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AC Inspection as Found - MOTOR SHOP LR

AC Inspection - Rev. 2: 4AB27244CSV

1.0



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

> FolderID: 103395 FormID: 21343867

### **AC Inspection as Found** ConAgra (10859-CON)

3100 E. Main St. Russellville, AR 72801

#### AC Inspection - Rev. 2

Location: MOTOR SHOP LR Serial Number: 4AB27244CSV Description:300HP WEG EVAL

Hi-Speed Job Number:	103395
Manufacturer:	WEG
Product Number:	8048-06530
Serial Number:	4AB27244CSV
HP/kW:	300 (HP)
RPM:	3580 (RPM)
Frame:	447TS
Voltage:	460
Current:	334
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	ODP
# of Leads:	6
J-box Included:	None
Coupling/Sheave:	2-631
Date Received:	08/19/2024
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: **3 - High** 





8 - Good

#### **Overall Condition**

08/19/2024 1. Report Date

#### 2. Nameplate Picture



#### 3. Photos of all six sides of the machine.















	4.	Describe the Overall Condition of the Equipment as Received Serviceable	
	5.	Distance from the end of the shaft to the Coupling/Sheave	inches
		Na	
	6.	Report Date [COPY]	08/19/2024
Ini	itial	Mechanical/Electrical	
	7.	Does Shaft Turn Freely?	(Y) Yes
	8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
	9.	Does Shaft Have Visible Damage?	(No) No
	10.	Assembled Shaft Runout	0 Inches
	11.	Assembled Shaft End Play	inches
-	-	Na	
	12.	Air Gap Variation <10%	
	-	Na	
	13.	Lead Condition	(P) Pass





15.	Does it have Lugs?, If so what is the Stud Size?			
16.	Lead Numbers 1-6			1-6
17.	Frame Condition			pass
18.	Fan Condition			(N) NA
19.	Broken or Missing Components			
-	None			
Initial	Electrical Inspection			
20.	Insulation Resistance/Megger			2285 Megohms
21.	Winding Resistance			
	1-2	1-3	2-3	
	0.01233 0.01237 0.01235			
<b>2</b> 2.	Perform Surge Test			(P) Pass



23. Number of Stator Slots 48

24. Stator Condition Wash and bake





25. Stator Thermistors/Ohms

■ Ná

26. Stator Overloads/Ohms

■ A

#### **Mechanical Inspection**

27. Drive End Bearing Brand SKF

28. Drive End Lubrication Type (Grease) Grease Lubricated



29. Drive End Bearing Insulation or Grounding Device?

Na

30. Drive End Wavy Washer/Snap-Ring Other Retention Device?

■ Na



32. Opposite Drive End Bearing Brand

SKF

33. Opposite Drive End Lubrication Type

(Grease) Grease Lubricated



34. Opposite Drive End Bearing Insulation or Grounding Device?

Na

35. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?

Na

36. Opposite Drive End Bearing Condition

grease contamination



37. Drive End Seal

Na

38.	Opposite Drive End Seal	
-	Na	
39.	Drive End Bearing Number-	6313
40.	Drive End Bearing Qty.	1
41.	Drive End Bearing Type	(Ball) Ball Bearing
42.	Opposite Drive End Bearing Number-	6313
43.	Opposite Drive End Bearing Qty.	1
44.	Opposite Drive End Bearing Type	(Ball) Ball Bearing
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	Wash and bake
49. List the Parts needed for the Repair Below	
2-6313 Bearing	
50. Signature of Technician that Disassembled Motor	RW

Mech	anical Fits- Rotor			
51.	Shaft Runout		0 inches	
52.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
	Na			
53.	Coupling Fit Closest to Bearing Housi	ng		
	0 Degrees	90 Degrees	120 Degrees	
-	Na			
54.	Coupling Fit Closest to the end of the	Shaft		
	0 Degrees	60 Degrees	120 Degrees	
-	Na			

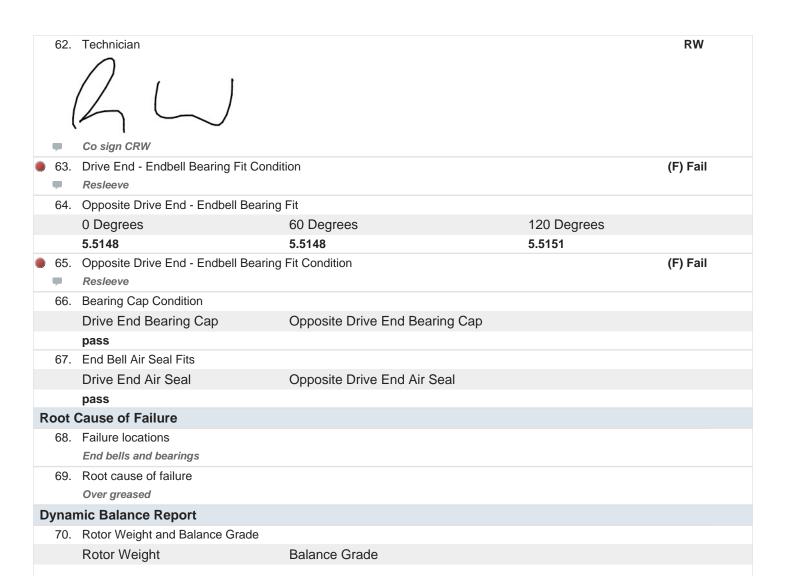
55.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.5597	2.5597	2.5597	
<b>5</b> 6.	5. Drive End Bearing Shaft Fit Condition			(P) Pass



57. Opp	57. Opposite Drive End Bearing Shaft Fit			
0 0	Degrees	60 Degrees	120 Degrees	
2.5	595	2.5595	2.9554	
58. Opr	8. Opposite Drive End Bearing Shaft Fit Condition			(P) Pass



59.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
	pass	na		
Mech	Mechanical Fits- Bearing Housings			
60.	Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	5.5136	5.5134	5.5136	
61.	List Machine Work Needed Below			
	Resleeve both end bells			





71.	Initial Balance Readings	
	Drive End	Opposite Drive End
	1.06	1.10
72.	Final Balance Readings	
	Drive End	Opposite Drive End
	.26	.24



### **Mechanical Fits- Bearing Housings - Post Repair**

74. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees
5.5123	5.5123	5.5124
5.5123	5.5123	5.5124



75. Opposite Drive End - Endbell Bearing Fit Post Repair			
0 Degrees	60 Degrees	120 Degrees	
5.5124	5.5125	5.5124	
5.5124	5.5125	5.5124	



76.	Bearing Cap Condition Post Repair	
	Drive End Bearing Cap	Opposite Drive End Bearing Cap
	pass	pass
77.	End Bell Air Seal Fits Post Repair	
	Drive End Air Seal	Opposite Drive End Air Seal
	pass	pass



### **Assembly**

79. QC Check All Parts for Cleanliness Prior to Assembly

RW



80. Photograph All Major Components prior to assembly















81.	Final Insulation Resistance Test  Pass the Hi pot		Megohms
82.	Assembled Shaft Endplay Na		inches
83.	Assembled Shaft Runout		0.0002 inches
84.	Test Run Voltage		
	Volts	Volts	Volts
	457	456	458



Co sign TRH

85. Test Run Amperage

Amps Amps Amps
67.099999999999 67.5 66.2



86.	Drive End Vibration Readings - Inches Per Second				
	Horizontal	Vertical	Axial		
	0.03	0.03	0.01		
87.	Opposite Drive End Vibration Readings - Inches Per Second				
	Horizontal	Vertical	Axial		
	0.03	0.03	0.01		
88.	Ambient Temperature - Fahrenheit				
-	Na				
89.	. Drive End Bearing Temps - Fahrenheit				
	5 Minutes	10 Minutes	15 Minutes		
-	Na				
90.	. Opposite Drive End Bearing Temps - Fahrenheit				
	5 Minutes	10 Minutes	15 Minutes		
-	Na				
91.	91. Document Final Condition with Pictures after paint				







92. Final Pics and QC Review

RW

Co sign TRH



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- 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. 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. **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.