

# LR Motor Shop Repairs

# **Job Number 100457**

Prepared for Arkansas Electric Coop. (11681)

17400 highway 365 south Little Rock AR 72206

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AC Recondition As Found - MOTOR SHOP LR

AC Recondition - Rev. 2: F600

1.0



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

> FolderID: 100457 FormID: 14840142

## **AC Recondition As Found**

Arkansas Electric Coop. (11681)

17400 highway 365 south Little Rock, AR 72206

Location:

AC Recondition - Rev. 2

Serial Number: F600

Description: 7.5HP BALDOR 3600RPM 215TCZ

MOTOR SHOP LR

AMETĖK ROTRON BLOWER

Hi-Speed Job Number:	100457
Manufacturer:	Baldor
Product Number:	511570
Spec/ID #:	07H383W361G1
Serial Number:	F600
HP/kW:	7.5 (HP)
RPM:	3450 (RPM)
Frame:	215TCZ
Voltage:	230 / 460
Current:	22.2/11.1
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 7 - Good

## **Overall Condition**

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
- 5. Distance from the end of the shaft to the Coupling/Sheave

## **Initial Mechanical/Electrical**

- 6. Does Shaft Turn Freely?
- 7. Does Shaft Have Visible Damage?
- 8. Assembled Shaft Runout
- 9. Assembled Shaft End Play

## 11. Lead Condition(P) Pass



12.	Lead Length	12 Inches
13.	Frame Condition	pass
14.	Fan Condition	(P) Pass



15.	Broken or Missing Components			
Initial	Initial Electrical Inspection			
16.	Insulation Resistance/Megger			270014 Megohms
17.	Winding Resistance			
	1-2	1-3	2-3	
	1.838	1.838	1.841	

## 18. Perform Surge Test







## Stator Condition

wash and bake





## **Mechanical Inspection**

20. Drive End Bearing Number-

6309





Fatigue

21. Drive End Bearing Qty.	1
22. Drive End Bearing Type	(Ball) Ball Bearing
23. Drive End Lubrication Type	(Grease) Grease Lubricated
24. Drive End Bearing Insulation or Grounding Device?	na



26. Drive End Bearing Condition

27. Opposite Drive End Bearing Number-

6206

na





28.	Opposite Drive End Bearing Qty.	1
29.	Opposite Drive End Bearing Type	(Ball) Ball Bearing
30.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
31.	Opposite Drive End Bearing Insulation or Grounding Device?	na
32.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
33.	Opposite Drive End Bearing Condition	
34.	Drive End Seal	
35.	Opposite Drive End Seal	
Rotor	Inspection	
36.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
37.	Growler Test	(Pass) Pass
38.	Number of Rotor Bars	28
39.	Rotor Condition	



40. List the Parts needed for the Repair Below





	0 / 0				
Mech	Mechanical Fits- Rotor				
42.	Shaft Runout				
43.	Rotor Runout				
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing		
44.	Coupling Fit Closest to Bearing Housi	ng			
	0 Degrees	90 Degrees	120 Degrees		
45.	Coupling Fit Closest to the end of the	Shaft			
	0 Degrees	60 Degrees	120 Degrees		
46.	Drive End Bearing Shaft Fit				
	0 Degrees	60 Degrees	120 Degrees		
	1.772	1.772	1.772		
• 47.	Drive End Bearing Shaft Fit Condition		(P) Pass		
48.	Opposite Drive End Bearing Shaft Fit				
	0 Degrees	60 Degrees	120 Degrees		
	1.1812	1.1812	1.1812		
• 49.	Opposite Drive End Bearing Shaft Fit	Condition	(P) Pass		
50.	Shaft Air Seal Fits				
	Drive End Air Seal	Opposite Drive End Air Seal			
Mech	Mechanical Fits- Bearing Housings				

60 Degrees

3.9379



51. Drive End - Endbell Bearing Fit

0 Degrees

3.9379

52. Drive End - Endbell Bearing Fit Condition

(P) Pass

120 Degrees

3.9379

RW





54. Opposite Drive End - Endbell Bearing Fit Condition		Fit Condition	(P) Pass
55. Bearing Cap Condition			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	pass	na	



56. End Bell Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
57 List Machine Wark Needed Dale		
<ul><li>57. List Machine Work Needed Belo</li><li>58. Technician</li></ul>	w	RW
30. Technician		17.17

# Dynamic Balance Report59. Rotor Weight and Balance Grade

Rotor Weight Balance Grade

60.	Initial Balance Readings			
	Drive End	Opposite Drive End		
61.	Final Balance Readings			
	Drive End	Opposite Drive End		
62.	Technician			
Rewir	nd			
63.	Core Test Results - Watts loss per Po	pund		
	Pre-Burnout	Post Burnout		
64.	Core Hot Spot Test			
	Pre-Burnout	Post-Burnout		
	Post Rewind Electrical Test- Insulatio	n Resistance		
	Post Rewind Polarization Index			
67.	Post Rewind Winding Resistance	1.0		
	1-2	1-3	2-3	
68	Post Rewind Surge Test			
	Post Rewind Hi-Pot			
	Technician			
	Cause of Failure			
	Failure locations			
/ 1.	Drive bearing metal fatigue			
70				
	72. Root cause of failure			
	anical Fits- Rotor - Post Repair			
	Shaft Runout Post Repair			
74.	Rotor Runout Post Repair	Deter Dedu	One solts Delive Field Bearing	
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
75.	Coupling Fit Closest to Bearing House	ing Post Repair		
	0 Degrees	90 Degrees	120 Degrees	
	o Degrees	30 Degrees	120 Degrees	
76.	Coupling Fit Closest to the end of the	Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees	
	ū	•	· ·	
77.	Drive End Bearing Shaft Fit Post Rep	air		
	0 Degrees	60 Degrees	120 Degrees	
78.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
79.	Shaft Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		
80.	Shaft Repair Sign-off			
Mech	Mechanical Fits- Bearing Housings - Post Repair			

81.	Drive End - Endbell Bearing Fit Post F	Repair	
	0 Degrees	60 Degrees	120 Degrees
82.	Opposite Drive End - Endbell Bearing	Fit Post Repair	
	0 Degrees	60 Degrees	120 Degrees
83.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
84.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
85.	End Bell Repair Sign-off		
Asser	nbly		
86.	Photograph All Major Components pri	or to assembly	
87.	Final Insulation Resistance Test		
88.	Assembled Shaft Endplay		
89.	Assembled Shaft Runout		
90.	Test Run Voltage		
	Volts	Volts	Volts
	458	455	457



91. Test Run Amperage		
Amps	Amps	Amps
5.5	5.4	5.3



92.	Drive End Vibration Readings - Inches	s Per Second	
	Horizontal	Vertical	Axial
93.	Opposite Drive End Vibration Reading	gs - Inches Per Second	
	Horizontal	Vertical	Axial
94.	Ambient Temperature - Fahrenheit		
95. Drive End Bearing Temps - Fahrenheit		it	
	5 Minutes	10 Minutes	15 Minutes
96.	Opposite Drive End Bearing Temps -	Fahrenheit	
	5 Minutes	10 Minutes	15 Minutes
97.	Final Test Run Sign-off		
98.	Document Final Condition with Picture	es after paint	





99. Final Pics and QC Review RW





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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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- 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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