

# LR Motor Shop Repairs

# **Job Number 100836**

Prepared for Georges Inc

1810 S. St. Louis Street Batesville AR 72501

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1.0



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# **AC Recondition As Found**

**Georges Inc** 

1810 S. St. Louis Street Batesville, AR 72501

#### AC Recondition - Rev. 2

Location: Shop

Serial Number: 1MAF34079-013 NP

Description: 40HP AQUA JET AERATOR

1200RPM 364LPZ

Hi-Speed Job Number:	100836
Manufacturer:	Reliance
Product Number:	2404001
Serial Number:	1MAF34079-013 NP
HP/kW:	40 (HP)
RPM:	1185 (RPM)
Frame:	364LPZ
Voltage:	460
Current:	47.7
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	Propeller
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 1 - High



8 - Good

### **Overall Condition**

- 1. Report Date
- 2. Nameplate Picture



Photos of all six sides of the machine.



























































- 4. Describe the Overall Condition of the Equipment as Received *Dirty/serviceable*.
- 5. Distance from the end of the shaft to the Coupling/Sheave

# **Initial Mechanical/Electrical**

6. Does Shaft Turn Freely?

(Yes) Yes

# 7. Does Shaft Have Visible Damage?





8.	Assembled Shaft Runout	0.005 Inches
9.	Assembled Shaft End Play	
10.	Air Gap Variation <10%	
11.	Lead Condition	(P) Pass



12.	Lead Length	9 Inches
13.	Frame Condition	pass
14.	Fan Condition	(P) Pass



# 15. Broken or Missing Components

none

### **Initial Electrical Inspection**

16. Insulation Resistance/Megger

Megohms



17. Winding Resistance

1-2 1-3 2-3

18. Perform Surge Test
(P) Pass



19. Number of Stator Slots

20. Stator Condition pass

#### **Mechanical Inspection**

21. Drive End Bearing Number-

6215 C3 DBL Wide DBL row.





22. Drive End Bearing Qty.	1
23. Drive End Bearing Type	(Ball) Ball Bearing
24. Drive End Lubrication Type	(Grease) Grease Lubricated
25. Drive End Bearing Insulation or Grounding Device?	none
26. Drive End Wavy Washer/Snap-Ring Other Retention Device?	none
27. Drive End Bearing Condition	replace



## 28. Opposite Drive End Bearing Number-

6313 C3







- 29. Opposite Drive End Bearing Qty.
- 30. Opposite Drive End Bearing Type (Ball) Ball Bearing
- 31. Opposite Drive End Lubrication Type (Grease) Grease Lubricated

wavy washer



34. Opposite Drive End Bearing Condition replace

35. Drive End Seal

36. Opposite Drive End Seal

#### **Rotor Inspection**

37. Rotor Type/Material

(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast



38. Growler Test (Pass) Pass

39. Number of Rotor Bars

40. Rotor Condition pass

41. List the Parts needed for the Repair Below

42. Signature of Technician that Disassembled Motor

**Terrence Holland** 

**Mechanical Fits- Rotor** 

43. Shaft Runout 0.005 inches

44. Rotor Runout

Drive End Bearing Fit Rotor Body Opposite Drive End Bearing

	45.	Coupling Fit Closest to Bearing Housing	ng		
		0 Degrees	90 Degrees	120 Degrees	
	46.				
		0 Degrees	60 Degrees	120 Degrees	
	47.	Drive End Bearing Shaft Fit		=	
		0 Degrees	60 Degrees	120 Degrees	
		2.9533	2.9534	2.9533	
	48.	gg			(P) Pass
	49.	Opposite Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.5593	2.5593	2.5594	
50. Opposite Drive End Bearing Shaft Fit Condition		Opposite Drive End Bearing Shaft Fit	Condition		(P) Pass
	51.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
N	lecha	anical Fits- Bearing Housings			
	52.	Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		5.1187	5.1188	5.1188	
	53.	Drive End - Endbell Bearing Fit Condition	iion		(P) Pass
	54.	Opposite Drive End - Endbell Bearing	Fit		
		0 Degrees	60 Degrees	120 Degrees	
		5.5123	5.5123	5.5125	
	55.	Opposite Drive End - Endbell Bearing	Fit Condition		(P) Pass
	56.	Bearing Cap Condition			
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
			pass		





57.	End Bell Air Seal Fits	
	Drive End Air Seal	Opposite Drive End Air Seal
58.	List Machine Work Needed Below	
	None	

59. Technician **Terrence Holland Dynamic Balance Report** 60. Rotor Weight and Balance Grade Rotor Weight Balance Grade 61. Initial Balance Readings Drive End Opposite Drive End 62. Final Balance Readings Drive End Opposite Drive End 63. Technician Rewind 64. Core Test Results - Watts loss per Pound Pre-Burnout Post Burnout 65. Core Hot Spot Test Pre-Burnout Post-Burnout 66. Post Rewind Electrical Test- Insulation Resistance 67. Post Rewind Polarization Index 68. Post Rewind Winding Resistance 1-2 1-3 2-3 69. Post Rewind Surge Test 70. Post Rewind Hi-Pot 71. Technician **Root Cause of Failure** 72. Failure locations 73. Root cause of failure Mechanical Fits- Rotor - Post Repair 74. Shaft Runout Post Repair 75. Rotor Runout Post Repair Opposite Drive End Bearing Drive End Bearing Fit Rotor Body 76. Coupling Fit Closest to Bearing Housing Post Repair 0 Degrees 90 Degrees 120 Degrees 77. Coupling Fit Closest to the end of the Shaft Post Repair 0 Degrees 60 Degrees 120 Degrees 78. Drive End Bearing Shaft Fit Post Repair

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120 Degrees

60 Degrees

0 Degrees

79	. Opposite Drive End Bearing Shaft Fit Post Repair			
73.	0 Degrees	60 Degrees	120 Degrees	
	0 Degrees	00 Degrees	120 Degrees	
80.	80. Shaft Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		
	2.110 2.10 / III Coa.			
81.	Shaft Repair Sign-off			
Mecha	anical Fits- Bearing Housings - P	ost Repair		
82.	Drive End - Endbell Bearing Fit Post F	Repair		
	0 Degrees	60 Degrees	120 Degrees	
83.	Opposite Drive End - Endbell Bearing			
	0 Degrees	60 Degrees	120 Degrees	
0.4	Paging Can Condition Boot Bangin			
84.	Bearing Cap Condition Post Repair	Opposite Daire Ford Booking Con		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
85.	End Bell Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		
	2.110 2.10 / III Coa.	- CPP - CO		
86.	End Bell Repair Sign-off			
Asser	nbly			
87.	Photograph All Major Components pri	or to assembly		
88. Final Insulation Resistance Test				
89.	Assembled Shaft Endplay			
90.	Assembled Shaft Runout			
91.	Test Run Voltage			
	Volts	Volts	Volts	
	T . D			
92.	Test Run Amperage		•	
	Amps	Amps	Amps	
93	Drive End Vibration Readings - Inches	s Per Second		
00.	Horizontal	Vertical	Axial	
	110112011tai	Voltion	, Mildi	
94.	Opposite Drive End Vibration Reading	gs - Inches Per Second		
	Horizontal	Vertical	Axial	
	95. Ambient Temperature - Fahrenheit			
96. Drive End Bearing Temps - Fahrenheit				
	5 Minutes	10 Minutes	15 Minutes	
97.	Opposite Drive End Bearing Temps -		4 F. Minutes	
	5 Minutes	10 Minutes	15 Minutes	
98. Final Test Run Sign-off				
	99. Document Final Condition with Pictures after paint			
	Final Pics and QC Review			

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