

# LR Motor Shop Repairs

## **Job Number 100836**

Prepared for Georges Inc

1810 S. St. Louis Street Batesville AR 72501

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AC Recondition As Found - Shop

AC Recondition - Rev. 2: 1MAF34079-013 NP

1.0



FolderID: 100836

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### **AC Recondition As Found**

**Georges Inc** 

Location:

1810 S. St. Louis Street Batesville, AR 72501

AC Recondition - Rev. 2

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
- Nameplate Picture



Photos of all six sides of the machine.



















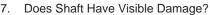


- 4. Describe the Overall Condition of the Equipment as Received *Dirty/serviceable*.
- 5. Distance from the end of the shaft to the Coupling/Sheave

#### **Initial Mechanical/Electrical**

6. Does Shaft Turn Freely?

(Yes) Yes





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



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



15. Broken or Missing Components

none

(No) No

#### **Initial Electrical Inspection**

16. Insulation Resistance/Megger

Megohms



17. Winding Resistance

1-2 1-3 2-3

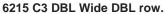
● 18. Perform Surge Test (P) Pass



- 19. Number of Stator Slots
- 20. Stator Condition pass

#### **Mechanical Inspection**

21. Drive End Bearing Number-







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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-



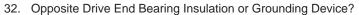




29.	Opposite Drive End Bearing Qtv	<i>/</i> .

30. Opposite Drive End Bearing Type (Ball) Ball Bearing

31. Opposite Drive End Lubrication Type (Grease) Grease Lubricated



none

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

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.	Coupling Fit Closest to the end of the	Shaft		
		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.	Drive End Bearing Shaft Fit Condition			(P) Pass
	49.	Opposite Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.5593	2.5593	2.5594	
	50.	50. Opposite Drive End Bearing Shaft Fit Condition			(P) Pass
	51.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
M	Mechanical 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 Condit	tion		(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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60 Degrees

0 Degrees

120 Degrees

79.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
80.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
81	Shaft Repair Sign-off		
	anical Fits- Bearing Housings - P	ost Repair	
	Drive End - Endbell Bearing Fit Post F	•	
ŭ <u>_</u> .	0 Degrees	60 Degrees	120 Degrees
	0 20g.000	00 D0g.000	120 Dog.coo
83.	83. Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
84.	84. Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
0.5	End Dall Air Coal Fita Doot Danair		
00.	End Bell Air Seal Fits Post Repair	Onnesite Drive Ford Air Cool	
	Drive End Air Seal	Opposite Drive End Air Seal	
86.	End Bell Repair Sign-off		
Assen	· -		
	Photograph All Major Components pri	ior to assembly	
	Final Insulation Resistance Test	•	
89.	Assembled Shaft Endplay		
90.	Assembled Shaft Runout		
91.	Test Run Voltage		
	Volts	Volts	Volts
	457	456	456



92.	Test Run Amperage		
	Amps	Amps	Amps
	24.3	24.5	23.6



93.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
	0.05	0.06	0.03
94.	94. Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
	0.03	0.05	0.03
95.	95. Ambient Temperature - Fahrenheit		
96. Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes
97. Opposite Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes
98.	Final Test Run Sign-off		
99. Document Final Condition with Pictures after paint			







100. Final Pics and QC Review

RW



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