

# LR Motor Shop Repairs

## **Job Number 100861**

Prepared for ARKANSAS INDUSTRIAL MACHINERY

3804 N. NONA ST NORTH LITTLE ROCK AR 72118

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AC Recondition As Found - Shop

AC Recondition - Rev. 2: UD1310/1573976-001-001

1.0



FolderID: 100861

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#### **AC Recondition As Found ARKANSAS INDUSTRIAL MACHINERY**

**3804 N. NONA ST** NORTH LITTLE ROCK, AR 72118

AC Recondition - Rev. 2

Location: Shop Serial Number: UD1310/1573976-001-001

Description: 22KW SIEMENS 3600RPM 160L

Hi-Speed Job Number:	100861
Manufacturer:	Siemens
Product Number:	1PP7169-2AA91ZT01
Serial Number:	UD1310/1573976-001-001
HP/kW:	22 (kW)
RPM:	3560 (RPM)
Frame:	160L
Voltage:	230 / 460
Current:	72/36
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 1 - High



7 - Good

#### **Overall Condition**

- 1. Report Date
- Nameplate Picture



Photos of all six sides of the machine.



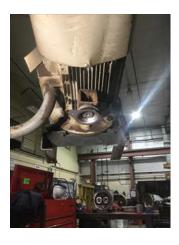




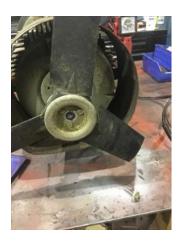






























4. Describe the Overall Condition of the Equipment as Received Serviceable

	Initia	itial Mechanical/Electrical	
(	<b>5</b>	5. Does Shaft Turn Freely?	(Yes) Yes
	6	6. Does Shaft Have Visible Damage?	(No) No
	7	7. Assembled Shaft Runout	
	8	8. Assembled Shaft End Play	
	9	9. Air Gap Variation <10%	
(	10	10. Lead Condition	(P) Pass





14.	Broken or Missing Components		D?E housing shaft opening needs to be resleeved	
Initial	Initial Electrical Inspection			
15.	Insulation Resistance/Megger			
16.	Winding Resistance			
	1-2	1-3	2-3	
17.	Perform Surge Test		(P) Pass	



18.	Number of Stator Slots	
19.	Stator Condition	pass
Mech	anical Inspection	









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?	none
25. Drive End Wavy Washer/Snap-Ring Other Retention Device?	none
26. Drive End Bearing Condition	replace
27. Opposite Drive End Bearing Number-	6209 SO C5





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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?	none
32. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	yes



33. Opposite Drive End Bearing Condition

34. Drive End Seal





replace

35. Opposite Drive End Seal

#### **Rotor Inspection**

#### 36. Rotor Type/Material



	37.	Growler Test		(Pa	ss) Pass
	38.	Number of Rotor Bars			
	39.	Rotor Condition			pass
	40.	List the Parts needed for the Repair B	elow		
		Repair kit provided by customer. DE sh	aft seal sleeve not in kit and needs to be replac	eed.	
	41.	Signature of Technician that Disassembled Motor			
M	echa	hanical Fits- Rotor			
	42.	Shaft Runout			
	43.	Rotor Runout			
		Drive End Bearing Fit	Rotor Body	Opposite Drive End Be	earing
	44.	Coupling Fit Closest to Bearing Housing			
		0 Degrees	90 Degrees	120 Degrees	
	45	Coupling Fit Closest to the end of the	Shaft		
	70.	0 Degrees	60 Degrees	120 Degrees	
		o Degrees	oo begrees	120 Degrees	
	46.	Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		1.7772	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	
		1.772	1.772	1.772	
	49.	Opposite Drive End Bearing Shaft Fit	Condition		(P) Pass
	50.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
M		anical Fits- Bearing Housings			
	51.	Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		3.9378	3.9379	3.9379	
	52.	Drive End - Endbell Bearing Fit Condit	ion		(P) Pass





- T 4	On a saite Daire Ford Fordball De	- dia a Fit O - a diti - a	(E) E-!!
54.	• •	earing Fit Condition	(F) Fail
7	Re sleeve housing fit		
55.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	pass	none	
56.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
57.	List Machine Work Needed Belo	W	
	Make sleeve for DE housing shaft	bore. Sleeve ODE housing fit	
58.	Tabletota		Terrence Holland
50.	Technician		refrence fioliana
J6.	Technician	]/ll_0	refrence fionand



60.	Initial Balance Readings		
	Drive End	Opposite Drive End	
	.43	.43	
61.	Final Balance Readings		
	Drive End	Opposite Drive End	
	.29	.23	
62.	Technician		RW



## Rewind

63. Core Test Results - Watts loss per Pound

Pre-Burnout Post Burnout

64. Core Hot Spot Test

Pre-Burnout Post-Burnout

- 65. Post Rewind Electrical Test- Insulation Resistance
- 66. Post Rewind Polarization Index
- 67. Post Rewind Winding Resistance

1-2 1-3 2-3

- 68. Post Rewind Surge Test
- 69. Post Rewind Hi-Pot
- 70. Technician

#### **Root Cause of Failure**

- 71. Failure locations
- 72. Root cause of failure

#### Mechanical Fits- Rotor - Post Repair

73. Shaft Runout Post Repair

74.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
75.	Coupling Fit Closest to Bearing Housi	-	400 B
	0 Degrees	90 Degrees	120 Degrees
76.	Coupling Fit Closest to the end of the	Shaft Post Repair	
	0 Degrees	60 Degrees	120 Degrees
			o _ og.
77.	Drive End Bearing Shaft Fit Post Repa	air	
	0 Degrees	60 Degrees	120 Degrees
78	Opposite Drive End Bearing Shaft Fit	Poet Renair	
70.	0 Degrees	60 Degrees	120 Degrees
	o Degrees	00 Degrees	120 Degrees
79.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
00	Obert Deneis Oims off		
	Shaft Repair Sign-off	ant Domain	
	anical Fits- Bearing Housings - P	•	
01.	Drive End - Endbell Bearing Fit Post F	•	120 Dograpa
	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	Occasio Di la Fall Bassica Occ	
	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	
	End Bell Repair Sign-off		
Asser	•		
	Photograph All Major Components pri	or to assembly	
87.			
	Assembled Shaft Endplay		
89.	Assembled Shaft Runout		





91. Test Run Amperage		
Amps	Amps	Amps
27	27.3	27.2



92.	Drive End Vibration Readings - Inches	Per Second	
	Horizontal	Vertical	Axial
93.	93. Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
94. Ambient Temperature - Fahrenheit			
95.	95. Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
96.	Opposite Drive End Bearing Temps -	Fahrenheit	
	5 Minutes	10 Minutes	15 Minutes
97.	97. QC Check All Parts for Cleanliness Prior to Assembly		







#### 98. Document Final Condition with Pictures after paint

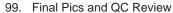












RW





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