

# LR Motor Shop Repairs

## **Job Number 104048**

Prepared for George's

1810 S. ST LOUIS STREET Batesville AR 72501

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AC Inspection - Rev. 2: 5-9190B

1.0





### **AC Inspection as Found** George's

1810 S. ST LOUIS STREET Batesville, AR 72501

FolderID: 104048 FormID: 23130639

#### AC Inspection - Rev. 2

Location: LR MOTOR SHOP

Serial Number: 5-9190B

Description: 3.0 KW DERTEC W GEARBOX

Hi-Speed Job Number:	104048
Manufacturer:	Dertec
Product Number:	FP2SS100L2-4B14A
Serial Number:	5-9190B
HP/kW:	3.0 (HP)
RPM:	1750 (RPM)
Voltage:	480
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	6
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 1 - High

12 - Good

#### **Overall Condition**

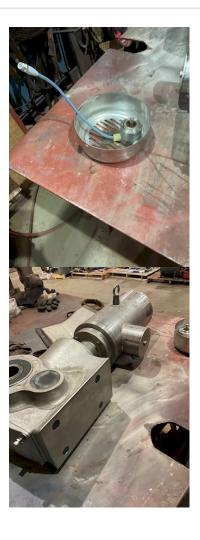
02/12/2025 1. Report Date

#### 2. Nameplate Picture



3. Photos of all six sides of the machine.









Describe the Overall Condition of the Equipment as Received
Serviceable

#### **Initial Mechanical/Electrical** Does Shaft Turn Freely? (Y) Yes Does the shaft require T.I.R in Lathe to identify additional repairs? (No) No 6. Does Shaft Have Visible Damage? (No) No 7. 8. Assembled Shaft Runout 0 Inches Assembled Shaft End Play 0 inches 9. 10. Air Gap Variation <10% na

11.	Lead Condition	(P) Pass
12.	Lead Length	10 Inches
13.	Does it have Lugs?, If so what is the Stud Size?	(No) No
14.	Lead Numbers	1-6
15.	Frame Condition	pass
16.	Fan Condition	(P) Pass



	17.	Broken or Missing Components			
		Na			
	18.	Does motor have internal fan?			(No) No
Ir	nitial	Electrical Inspection			
	19.	Insulation Resistance/Megger		79	73 Megohms
	20.	Winding Resistance			
		1-2	1-3	2-3	
		.862	.863	.859	
	21.	Perform Surge Test			(P) Pass



22. Number of Stator Slots 36

23. Stator Condition



wash and dry

24. Stator Thermistors/Ohms na

25. Stator Overloads/Ohms

Na

#### **Mechanical Inspection**

26. Drive End Bearing Brand NACHI

27. Drive End Bearing Number- 6306 2RS



28. Drive End Bearing Qty.	1
29. Drive End Bearing Type	(Ball) Ball Bearing
30. Drive End Lubrication Type	(Grease) Grease Lubricated
31. Drive End Bearing Insulation or Grounding Device?	na
32. Drive End Wavy Washer/Snap-Ring Other Retention Device?	Snap ring

#### 33. Drive End Bearing Condition

The start of frosting



34. Opposite Drive End Bearing Brand

35. Opposite Drive End Bearing Number- 6306 2 RS

**FAG** 



36. Opposite Drive End Bearing Qty.	1
37. Opposite Drive End Bearing Type	(Ball) Ball Bearing
38. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
39. Opposite Drive End Bearing Insulation or Grounding Device?	na
40. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	Wavy washer
41. Opposite Drive End Bearing Condition	
The start of frosting	



42.	Drive End Seal	yes

43. Opposite Drive End Seal yes

#### **Rotor Inspection**

44. Rotor Type/Material

(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast



45.	Growler Test	(Pass) Pass
46.	Number of Rotor Bars	32
47.	Rotor Condition	pass



48. List the Parts needed for the Repair Below 2-6306 2RS Bearings





50.	Shaft Runout	0.001 inches

51. Rotor Runout		
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
0.002	0.002	0.002
2. Coupling Fit Closest to Bearing Housing		
0 Degrees	90 Degrees	120 Degrees

Pass

5

53. Coupling Fit Closest to the end of the Shaft

0 Degrees 60 Degrees 120 Degrees

Pass

54. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.1814	1.1814	1.1814

Drive End Bearing Shaft Fit Condition

(P) Pass

RW



56. Opposite Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
1.1815	1.1815	1.1815



58.	Shaft Air Seal Fits	
	Drive End Air Seal	Opposite Drive End Air Seal

Pass

#### Mechanical Fits- Bearing Housings

	Mechanical Fits- Dearing Housings					
	59.	Drive End - Endbell Bearing Fit				
		0 Degrees	60 Degrees	120 Degrees		
		2.8352	2.8352	2.8352		
	60.	Drive End - Endbell Bearing Fit Condi	tion		(P) Pass	
	61.	. Opposite Drive End - Endbell Bearing Fit				
		0 Degrees	60 Degrees	120 Degrees		
		2.8353	2.8353	2.8353		
(	62.	. Opposite Drive End - Endbell Bearing Fit Condition			(P) Pass	
	63.	Bearing Cap Condition				
		Drive End Bearing Cap	Opposite Drive End Bearing Cap			
		Na				

64. End Bell Air Seal Fits

Opposite Drive End Air Seal Drive End Air Seal

#### Pass

65. List Machine Work Needed Below

In put shaft seal surface on gearbox

RW



Co sign CW

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

67. Failure locations

Water in con. Box and gearbox seal

68. Root cause of failure

Wear on shaft from seals also need an aegis ring shaft size 1.458

Dynai	nic Balance Report			
-	Rotor Weight and Balance Grade			
	Rotor Weight	Balance Grade		
70	Initial Balance Readings			
70.	Drive End	Opposite Drive End		
	Drive Eria	Opposite Drive End		
71.	Final Balance Readings			
	Drive End	Opposite Drive End		
72.	Technician			
	anical Fits- Rotor - Post Repair			
73.	Shaft Runout Post Repair		inches	
74.	Rotor Runout Post Repair			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
75.	Coupling Fit Closest to Bearing House	ng Post Repair		
	0 Degrees	90 Degrees	120 Degrees	
70	Counting Fit Classet to the and of the	Chaff Dagt Daggir		
76.	Coupling Fit Closest to the end of the	•	400 D	
	0 Degrees	60 Degrees	120 Degrees	
77.	Drive End Bearing Shaft Fit Post Rep	air		
	0 Degrees	60 Degrees	120 Degrees	
78.	Opposite Drive End Bearing Shaft Fit	Post Repair		
	0 Degrees	60 Degrees	120 Degrees	
		20 - 29. 000		
79.	Shaft Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		
80.	Shaft Repair Sign-off			
Assembly				
	QC Check All Parts for Cleanliness P	rior to Assembly	Trevor Hall	
82.	Photograph All Major Components pr	ior to assembly		





































83.	Final Insulation Resistance Test		2000 Megohms
84.	Assembled Shaft Endplay		0.0005 inches
85.	Assembled Shaft Runout		0.0005 inches
86.	Test Run Voltage		
	Volts	Volts	Volts
	240	238	240



87. Test Run Amperage			
Amps	Amps	Amps	
4.1	3.7	3.7	



88.	Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	
	0.01	0.01	0.02	
89.	Opposite Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	
	0.02	0.02	0.02	
90. Ambient Temperature - Fahrenheit				
91.	Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
92.	. Opposite Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
93. Document Final Condition with Pictures after paint				
94.	Final Pics and QC Review		Trevor Hall	
	_			

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