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LR Motor Shop Repairs

Job Number 100064

Prepared for Entergy/AP&L (10395)

1100 White Bluff Rd
Redfield AR 72132

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

Gearbox Repair Report

FolderID: 100064
FormID: 14105010

Entergy/AP&L (10395)
1100 White Bluff Rd
Redfield, AR 72132

Priorities Found: ● 11 - High ● 14 - Good

General	
1. Job Number	100064
2. Customer	Entergy White Bluff
3. Report Date	
Nameplate Information	
4. Manufacturer	Master Power Transmission
5. Horsepower	0.25
6. Serial #	7854651001GQ
7. Model #	35W654-5M879958 56CG12A192
8. Input Speed	1725
9. Output Speed	9
10. Ratio	192
11. Type	
12. Coupling Type	
13. Gearbox Application	
Initial Evaluation	
14. Oil Wear	
● 15. Oil Physical	(F) Fail
● 16. Oil Contaminants	(F) Fail
■ Metal particles	

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17. Gear Wear

(P) Pass



18. Physical Gear Condition	(P) Pass
19. Gear Contamination	(P) Pass
20. Bearing Wear	(F) Fail
Bearings are worn	
21. Bearing Physical Condition	(F) Fail
22. Bearing Contamination	(F) Fail
23. Seal Wear	(F) Fail
24. Seal Physical Condition	(F) Fail
25. Seal Contamination	
26. Environmental Conditions	
27. Signs of excessive heat	
28. Signs of lubricant leaks	(Y) Yes
Into the stator	
29. Moisture Present	(N) No
30. Ambient Temperature	
31. Humidity	
32. Gearbox Temperature	
33. Primary Drive rotated input shaft in correct direction	(Y) Yes
34. Condition of machinery guards	
35. Condition of coupling guards	
36. Type of coupler	splined shaft

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37. Condition of coupler	
● 38. Coupling Alignment	(P) Pass
● 39. Condition of housing	(P) Pass
● 40. Condition of mounting hardware	(P) Pass
● 41. Breather Vent Installed	(N) No
42. Condition of oil piping and connections	
43. Condition of switches, alarms, heaters, coolers, or other devices	
44. Condition of inspection covers	
● 45. Condition of seals and bearings	(F) Fail
● 46. Gearbox Oil Level	(P) Pass
47. Gearbox oil type and grade	
48. Correct type and grade of oil	
49. Appearance of lubricant <i>Dark and has metal particles</i>	
● 50. Shaft rotate freely	(N) No
● 51. Condition of input shaft	(P) Pass
52. Endplay of input shaft	
53. Endplay of output shaft	
● 54. Condition of output shaft	(P) Pass
● 55. Gear backlash set correctly	(Y) Yes
● 56. Gear tooth condition	(P) Pass
57. Degree of wear	
● 58. Gear tooth contact	(P) Pass
59. Type of gear tooth contact	
Comments	
60. Gearbox Comments <i>Ball bearings on input worm gear failed. Oil contaminated with metal particles</i>	
61. Service Technician	Trevor Hall
	



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901-873-5300

AC Recondition As Found

Entergy/AP&L (10395)

1100 White Bluff Rd
Redfield, AR 72132

FolderID: 100064
FormID: 14105022



AC Recondition - Rev. 2

Location: MOTOR SHOP LR

Serial Number: F1207110108

Description: 0.25HP BALDOR 1800RPM 56YZ

Hi-Speed Job Number:	100064
Manufacturer:	Baldor
Product Number:	35W654-0083G1
Serial Number:	F1207110108
HP/kW:	0.25 (HP)
RPM:	1725 (RPM)
Frame:	56YZ
Voltage:	230 / 460
Current:	1/0.5
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TENV
J-box Included:	Complete
Date Received:	07/18/2022
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: ● 2 - High ● 3 - Good

Overall Condition

1. Report Date
2. Nameplate Picture



3. Photos of all six sides of the machine.

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Printed on 7/22/2022

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2.0



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?	(No) No
7.	Does Shaft Have Visible Damage?	(No) No
8.	Assembled Shaft Runout	
9.	Assembled Shaft End Play	
10.	Air Gap Variation <10%	
● 11.	Lead Condition	(P) Pass

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12. Lead Length

8 Inches



13. Frame Condition



14. Fan Condition

15. Broken or Missing Components

Initial Electrical Inspection

16. Insulation Resistance/Megger

0 Megohms

17. Winding Resistance

1-2

1-3

2-3

18. Perform Surge Test

(F) Fail



Mechanical Inspection

20. Drive End Bearing Number-	spline
21. Drive End Bearing Qty.	0
22. Drive End Bearing Type	
23. Drive End Lubrication Type	
24. Drive End Bearing Insulation or Grounding Device?	
25. Drive End Wavy Washer/Snap-Ring Other Retention Device?	
26. Drive End Bearing Condition	
27. Opposite Drive End Bearing Number-	6203 rsr



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?	

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

wavy washer



33. Opposite Drive End Bearing Condition

worn

34. Drive End Seal

cr8624

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

41

39. Rotor Condition

40. List the Parts needed for the Repair Below

41. Signature of Technician that Disassembled Motor

Trevor Hall

Mechanical Fits- Rotor

42. Shaft Runout

0.0005 inches

43. Rotor Runout

Drive End Bearing Fit

Rotor Body

Opposite Drive End Bearing


44. Coupling Fit Closest to Bearing Housing		
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
47. Drive End Bearing Shaft Fit Condition		
48. Opposite Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
0.6694	0.6694	0.6694



●	49.	Opposite Drive End Bearing Shaft Fit Condition			(P) Pass
	50.	Shaft Air Seal Fits			
		Drive End Air Seal		Opposite Drive End Air Seal	
Mechanical Fits- Bearing Housings					
	51.	Drive End - Endbell Bearing Fit			
		0 Degrees		60 Degrees	
		120 Degrees			
	52.	Drive End - Endbell Bearing Fit Condition			

53. Opposite Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
1.5752	1.5752	1.5752



54. Opposite Drive End - Endbell Bearing Fit Condition	(P) Pass
55. Bearing Cap Condition	
Drive End Bearing Cap	Opposite Drive End Bearing Cap
56. End Bell Air Seal Fits	
Drive End Air Seal	Opposite Drive End Air Seal
57. List Machine Work Needed Below	
58. Technician	Trevor Hall
	
Root Cause of Failure	
59. Failure locations	
Windings and opposite drive bearing	
60. Root cause of failure	
Windings got hot, oil saturated and then shorted	



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