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— EVERY DAY SINCE 1946 —

LR Motor Shop Repairs

Job Number 100665

Prepared for DeWaffelbakkers (10743)

10000 Crystal Hill Road
N.Little Rock AR 72113

Table of Contents



Hi-Speed Industrial Service
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AC Recondition As Found

DeWaffelbakkers (10743)

10000 Crystal Hill Road
N.Little Rock, AR 72113

FolderID: 100665
FormID: 15451007

AC Recondition - Rev. 2

Location: LR MOTOR SHOP

Serial Number: W2000365001-LL

Description: 400HP RAM INDUSTRIES
3600RPM 449TDZ

Hi-Speed Job Number: 100665

Manufacturer: Other

Product Number: N3KP29244PVFWHZ 003650

Serial Number: W2000365001-LL

HP/kW: 400 (HP)

RPM: 3575 (RPM)

Frame: 449TDZ

Voltage: 460

Current: 443

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: TEFC

J-box Included: Complete

Coupling/Sheave: None

Bearing RTDs: No

Stator RTDs: No

Repair Stage: Teardown Inspection

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

Priorities Found: ● 2 - High ● 4 - Good

Overall Condition

1. Report Date
2. Nameplate Picture



3. Photos of all six sides of the machine.

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4. Describe the Overall Condition of the Equipment as Received

Initial Mechanical/Electrical

- 5. Does Shaft Turn Freely?
- 6. Does Shaft Have Visible Damage?
- 7. Assembled Shaft Runout
- 8. Assembled Shaft End Play
- 9. Air Gap Variation <10%

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11. Lead Length	22 Inches
12. Frame Condition	pass
13. Fan Condition	(N) NA
14. Broken or Missing Components	

Initial Electrical Inspection

15. Insulation Resistance/Megger	28143 Megohms
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Test Date	12/20/2022	12/20/2022
Test Time	8:33:49 AM	8:22:53 AM
Max Delta R %	0.535	8.401
Coil 1 (Ohms)	0.01304 Corr: ...	0.01238 Corr: ...
Coil 2 (Ohms)	0.01317 Corr: ...	0.01209 Corr: ...
Coil 3 (Ohms)	0.01309 Corr: ...	0.01433 Corr: ...
Megohm Stat.	PASS	No Test
Volts (V)	501	
I(μA)	0.0178	
Relist	28143	
At 40°C	7599	
PI Status	No Test	No Test
Volts (V)		
DA Ratio		
PI Ratio		
Nameplate	Application	Results Summary

16. Winding Resistance

1-2

0.00872

1-3

0.00876

2-3

0.00874

Date	Time	Test ID	Th.	Res.	Min.	W	DC	Set
12/29/2021	10:00 AM	1000000	T.	PASS	PASS	PASS	PASS	PASS
11/15/2022	11:15 AM	1000000	T.	PASS	PASS	PASS	PASS	PASS
Test Date	12/29/2021	10:00 AM	11/15/2022	11:15 AM	11:05:31 AM			
Test Time	10:00 AM	10:00 AM	11:15 AM	11:15 AM				
Temp (°C)	25.1	25.1	25.1					
W Temp Comp.	Thermoplastic	Thermoplastic	Thermoplastic	None				
Power Status	PASS	PASS	PASS	No Test				
Ball L1 (Ohms)								
Ball L2 (Ohms)								
Ball L3 (Ohms)								
L1/L2 (Ohms)	0.00872	0.00843	0.00851	0.00851	0.00851			
L2/L3 (Ohms)	0.00876	0.00852	0.00864	0.00864	0.00864			
L3/L1 (Ohms)	0.00874	0.00851	0.00862	0.00862	0.00862			
Max Delta R %	0.535	0.401	0.357					
Cool 1 (Ohms)	0.01304	0.01238	0.01278	0.01278	0.01278			
Cool 2 (Ohms)	0.01117	0.01108	0.01112	0.01112	0.01112			
Homeplate	Application	Results Summary	Surge	PI	Stop Ramp			

17. Perform Surge Test

(P) Pass



18. Number of Stator Slots

48 Megohms

19. Stator Condition

Stator checked good

But rotor drag the iron suggest rewind



Mechanical Inspection

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20. Drive End Bearing Number-

6313



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?	no
25. Drive End Wavy Washer/Snap-Ring Other Retention Device?	
26. Drive End Bearing Condition	
27. Opposite Drive End Bearing Number-	6313



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?	no
32. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
 Needs new wavy washer	
33. Opposite Drive End Bearing Condition	
34. Drive End Seal	
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	40

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40. List the Parts needed for the Repair Below

2 6313C3 Bearings

41. Signature of Technician that Disassembled Motor

RW
Mechanical Fits- Rotor

42. Shaft Runout

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

2.5597**2.5597****2.5597**

47. Drive End Bearing Shaft Fit Condition

(P) Pass



48. Opposite Drive End Bearing Shaft Fit

0 Degrees

60 Degrees

120 Degrees

2.5592

2.5592

2.5592

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
5.5132	5.5132	5.5132



52. Drive End - Endbell Bearing Fit Condition	(F) Fail
Resleeve oversized	

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



54. Opposite Drive End - Endbell Bearing Fit Condition	(F) Fail
Resleeve oversized	

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	
De and ode end bell housing fit bad	

58. Technician	RW
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RU

Root Cause of Failure

59. Failure locations

De and ode end bell housing fit failed. rotor drag the iron

60. Root cause of failure

Stator checked good but suggest rewind and also aegis ring



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