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LR Motor Shop Repairs

Job Number 100474

Prepared for 3M-Main Plant (10001)

310 Walter Road
Little Rock AR 72216

Table of Contents

AC Recondition As Found - *MOTOR SHOP LR*

AC Recondition - Rev. 2: *NO NP*

1.0

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AC Recondition As Found

3M-Main Plant (10001)

310 Walter Road
Little Rock, AR 72216

FolderID: 100474
FormID: 14867142

AC Recondition - Rev. 2

Location: MOTOR SHOP LR

Serial Number: NO NP

Description: 100HP GE 600RPM 509Z

Hi-Speed Job Number: 100474

Manufacturer: GE

Product Number: 5KG509SN602P

HP/kW: 100 (HP)

RPM: 595 (RPM)

Frame: 509Z

Voltage: 460

Current: 134

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: TEFC

J-box Included: None

Coupling/Sheave: None

Bearing RTDs: No

Stator RTDs: No

Repair Stage: Teardown Inspection

Shaft Machined Fit Repairs
Required: Yes

Bearing Housing Machined
Fit Repairs Required: Yes

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

Priorities Found: ● 3 - High ● 4 - Good

Overall Condition

1. Report Date
2. Nameplate Picture
3. Photos of all six sides of the machine.

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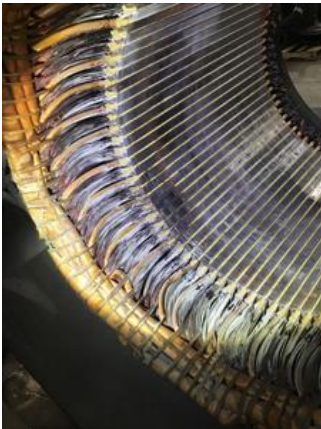




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4. Describe the Overall Condition of the Equipment as Received

Dirty

Initial Mechanical/Electrical

5. Does Shaft Turn Freely?	(No) No
6. Does Shaft Have Visible Damage?	(Yes) Yes
7. Assembled Shaft Runout	
8. Assembled Shaft End Play	
9. Air Gap Variation <10%	

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10.	Lead Condition	(P) Pass
11.	Lead Length	18 Inches
12.	Frame Condition	pass
13.	Fan Condition	(P) Pass



14.	Broken or Missing Components	shaft
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Initial Electrical Inspection

15.	Insulation Resistance/Megger	Megohms
16.	Winding Resistance	
	1-2	1-3 2-3

17.	Perform Surge Test	(F) Fail
18.	Stator Condition	

Mechanical Inspection

19.	Drive End Bearing Number-	NU320-E-XL-M1-C3
20.	Drive End Bearing Qty.	1
21.	Drive End Bearing Type	(Roller) Roller Bearing
22.	Drive End Lubrication Type	(Grease) Grease Lubricated
23.	Drive End Bearing Insulation or Grounding Device?	na
24.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	na
25.	Drive End Bearing Condition	worn
26.	Opposite Drive End Bearing Number-	6315
27.	Opposite Drive End Bearing Qty.	1
28.	Opposite Drive End Bearing Type	(Ball) Ball Bearing
29.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
30.	Opposite Drive End Bearing Insulation or Grounding Device?	na
31.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	snap ring
32.	Opposite Drive End Bearing Condition	
33.	Drive End Seal	
34.	Opposite Drive End Seal	na

Rotor Inspection

35.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
36.	Growler Test	(Pass) Pass
37.	Number of Rotor Bars	67
38.	Rotor Condition	pass

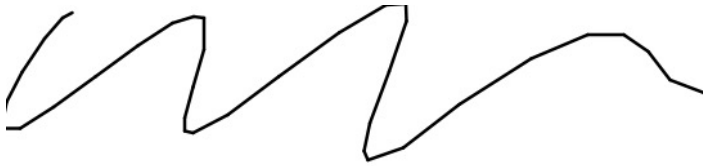
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39. List the Parts needed for the Repair Below

New shaft
NU320
6315

40. Signature of Technician that Disassembled Motor

Cw



Mechanical Fits- Rotor

41. Shaft Runout

42. Rotor Runout

Drive End Bearing Fit

Rotor Body

Opposite Drive End Bearing

43. Coupling Fit Closest to Bearing Housing

0 Degrees

90 Degrees

120 Degrees

44. Coupling Fit Closest to the end of the Shaft

0 Degrees

60 Degrees

120 Degrees

45. Drive End Bearing Shaft Fit

0 Degrees

60 Degrees

120 Degrees

46. Drive End Bearing Shaft Fit Condition

47. Opposite Drive End Bearing Shaft Fit

0 Degrees

60 Degrees

120 Degrees

48. Opposite Drive End Bearing Shaft Fit Condition

49. Shaft Air Seal Fits

Drive End Air Seal

Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

50. Drive End - Endbell Bearing Fit

0 Degrees

60 Degrees

120 Degrees

8.4646
8.4647
8.4656

51. Drive End - Endbell Bearing Fit Condition

(P) Pass

52. Opposite Drive End - Endbell Bearing Fit

0 Degrees

60 Degrees

120 Degrees

6.3000
6.3001
6.3002

53. Opposite Drive End - Endbell Bearing Fit Condition


(P) Pass

54. Bearing Cap Condition

Drive End Bearing Cap

Opposite Drive End Bearing Cap

Pass

55. End Bell Air Seal Fits	
Drive End Air Seal	Opposite Drive End Air Seal
56. List Machine Work Needed Below <i>New shaft</i>	
57. Technician	Cw
	
Root Cause of Failure	
58. Failure locations <i>Shaft and windings</i>	
59. Root cause of failure <i>Shaft broke behind bearing from intense strain causing shaft to drag iron causing windings to short</i>	



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