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

AC Recondition As Found

3M-Main Plant (10001)
310 Walter Road
Little Rock, AR 72216

FolderID: 100625
FormID: 15358836

AC Recondition - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	OLG094023
Description:	100HP GE 1800RPM 405T

Hi-Speed Job Number:	100625
Manufacturer:	GE
Product Number:	5KS405SS2C6D11
Serial Number:	OLG094023
HP/kW:	100 (HP)
RPM:	1790 (RPM)
Frame:	405T
Voltage:	460
Current:	113
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.0
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

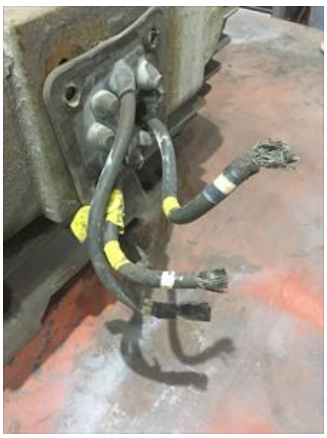
Priorities Found: **4 - High** **2 - Good**

Overall Condition

1. Report Date

2. Nameplate Picture P20

3. Photos of all six sides of the machine. P27



	4.	Describe the Overall Condition of the Equipment as Received	
Initial Mechanical/Electrical			
	5.	Does Shaft Turn Freely?	**(No) No**
	6.	Does Shaft Have Visible Damage?	**(Yes) Yes** P11

7.	Assembled Shaft Runout	
8.	Assembled Shaft End Play	
9.	Air Gap Variation <10%	
10.	Lead Condition	P32

11.	Lead Length	**8 Inches**
12.	Frame Condition	**pass**
13.	Fan Condition	P54

14.	Broken or Missing Components	

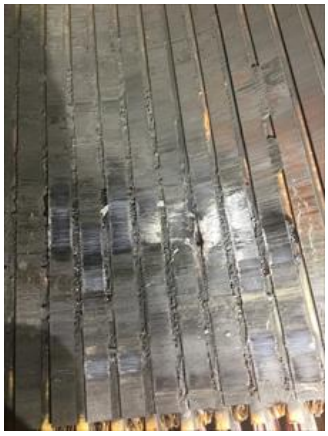
Initial Electrical Inspection

15.	Insulation Resistance/Megger	**0.01 Megohms**
16.	Winding Resistance	

1-2	1-3	2-3

17.	Perform Surge Test	**(F) Fail**
18.	Number of Stator Slots	

19.	Stator Condition	**rewind**	P43



Mechanical Inspection

20.	Drive End Bearing Number-	**6316**	P8

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	**cage destroyed**	P42

27.	Opposite Drive End Bearing Number-	**6316**	
28.	Opposite Drive End Bearing Qty.	**1**	
29.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P51

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**	P56

33.	Opposite Drive End Bearing Condition	**replace**
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	
39.	Rotor Condition	**pass**
40.	List the Parts needed for the Repair Below	
41.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

42.	Shaft Runout	**0.002 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
3.1497	**3.1498**	**3.1498**

47.	Drive End Bearing Shaft Fit Condition	**(P) Pass**
48.	Opposite Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees
2.1498	**3.145**	**3.1498**

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

Pitted

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

53. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

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

Pitted

55. Bearing Cap Condition P30

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	**pass**

56. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

57. List Machine Work Needed Below

Re-sleeve both end bell housing fits.

58. Technician **Terrence Holland**

Root Cause of Failure

59. Failure locations

Bottom of stator iron between slots. Both housing fits.

60. Root cause of failure

Coil to coil short between slots caused by D.E bearing cage failure. Bearing grease was hardened and contaminated.