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

AC Recondition As Found

ARKANSAS INDUSTRIAL MACHINERY
3804 N. NONA ST
NORTH LITTLE ROCK, AR 72118

FolderID: 100379
FormID: 14698399

AC Recondition - Rev. 2

Location:	Shop
Serial Number:	
Description:	75KW ABB

Hi-Speed Job Number:	100379
Manufacturer:	ABB
HP/kW:	75 (kW)
Voltage:	460
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

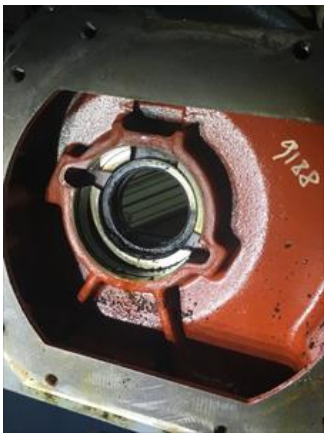
Priorities Found: **2 - High** **6 - Good**

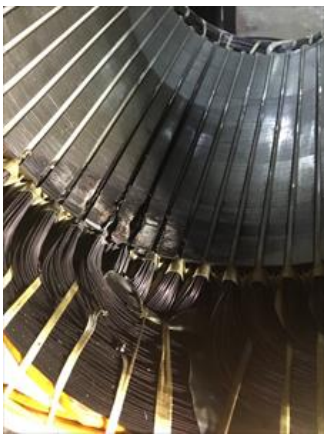
Overall Condition

1. Report Date

2. Nameplate Picture P21

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





	4.	Describe the Overall Condition of the Equipment as Received ***Saturated with oil.***	
	5.	Distance from the end of the shaft to the Coupling/Sheave	**0 inches**

Initial Mechanical/Electrical

🔴	6.	Does Shaft Turn Freely?	**(No) No**	
	7.	Does Shaft Have Visible Damage?	**(Yes) Yes**	P12

	8.	Assembled Shaft Runout	
	9.	Assembled Shaft End Play	
	10.	Air Gap Variation <10%	
🟢	11.	Lead Condition	**(P) Pass** P32

	12.	Lead Length	**12 Inches**

13.	Frame Condition	**serviceable**	
14.	Fan Condition	**(P) Pass**	
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	**(NA) Not Applicable**	
19.	Stator Condition	**core damaged and coils require rewind.**	P39

Mechanical Inspection

20.	Drive End Bearing Number-	**NU 213**	
21.	Drive End Bearing Qty.	**1**	
22.	Drive End Bearing Type	**(Roller) Roller Bearing**	
23.	Drive End Lubrication Type	**(Oil) Oil 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	**complete bearing failure.**	P43

27. Opposite Drive End Bearing Number-

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**
	Sealed bearing	
31.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**
32.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
33.	Opposite Drive End Bearing Condition	**replace**
34.	Drive End Seal	**destroyed**
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	**serviceable**
40.	List the Parts needed for the Repair Below	
41.	Signature of Technician that Disassembled Motor	**Terrence. Holland**

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	
		2.5598	**2.5597**	**2.5597**	
		Pass			
●	47.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
	48.	Opposite Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.953	**2.9532**	**2.9531**	
●	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	
		4.7498	**4.7499**	**4.7499**	
●	52.	Drive End - Endbell Bearing Fit Condition			**(P) Pass**
	53.	Opposite Drive End - Endbell Bearing Fit			P18
		0 Degrees	60 Degrees	120 Degrees	
		Excessive wear			

●	54.	Opposite Drive End - Endbell Bearing Fit Condition	**(F) Fail**	P22

55. Bearing Cap Condition P30

Drive End Bearing Cap	Opposite Drive End Bearing Cap
none	**pass**

56. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

57. List Machine Work Needed Below P37

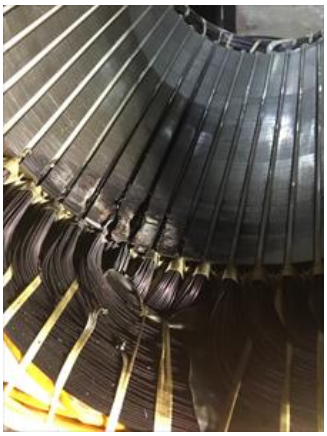
D.e. Shaft has excessive wear on seal surface spacer.D.e. Housing require sleeve for air seal fit.

58. Technician **Terrenc Holland**

Root Cause of Failure

59. Failure locations P6

D.e. Bottom center stator core damaged. D.e shoulder for seal surface spacer damaged. Sleeve needed on D.e housing.



60. Root cause of failure

D.e. Bearing race heated up and expanded. This caused a loose fit on the shaft allowing the race to move causing the rotor to drop onto the stator core which took out the windings. Recommend snap ring groove and retainer if repaired.