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

AC Inspection as Found

Lexicon (10257)
8900 Fouche Dam Pike
Little Rock, AR

FolderID: 101787
FormID: 17717421

AC Inspection - Rev. 2

Location:	SHOP
Serial Number:	NO NP
Description:	NORD GEARMOTOR

Hi-Speed Job Number:	101787
Manufacturer:	Nord
RPM:	1800 (RPM)
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	Gear
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

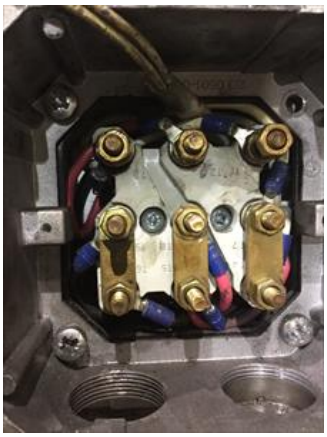
Priorities Found: **2 - High** **6 - Good**

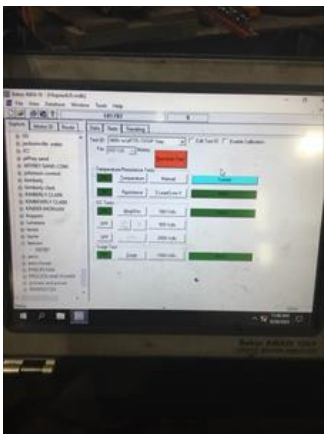
Overall Condition

1. Report Date
2. Nameplate Picture

No name plate attached.

3. Photos of all six sides of the machine. P45





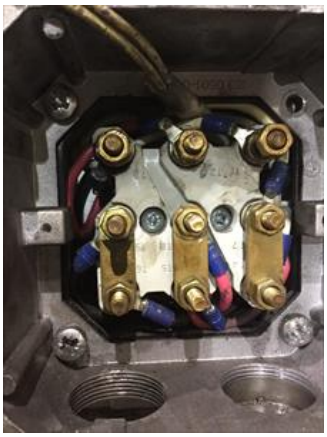
4.	Describe the Overall Condition of the Equipment as Received ***Dirty and oily but serviceable.***	
5.	Distance from the end of the shaft to the Coupling/Sheave	**inches**

Initial Mechanical/Electrical

6.	Does Shaft Turn Freely?	**(Yes) Yes**

7.	Does Shaft Have Visible Damage?	**(Yes) Yes**	P20

8.	Assembled Shaft Runout		
9.	Assembled Shaft End Play		
10.	Air Gap Variation <10%		
11.	Lead Condition	**(P) Pass**	P55

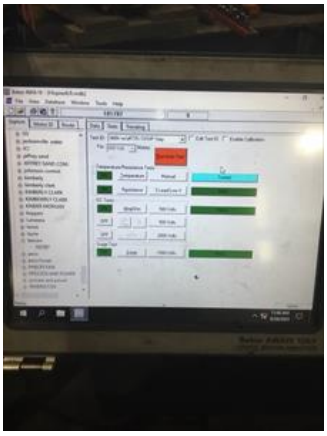


12.	Lead Length	**6 Inches**
13.	Lead Numbers	**1-9**
14.	Frame Condition	**pass**
15.	Fan Condition	**(P) Pass**
16.	Broken or Missing Components	**fan cover missing some mount bolts**

Initial Electrical Inspection

17.	Insulation Resistance/Megger		
18.	Winding Resistance		
	1-2	1-3	2-3

19.	Perform Surge Test	**(P) Pass**	P57



20.	Number of Stator Slots	**40**	
21.	Stator Condition	**pass**	
22.	Stator Thermistors/Ohms		
23.	Stator Overloads/Ohms		

Mechanical Inspection

24.	Drive End Bearing Brand	**skf**	
25.	Drive End Bearing Number-	**6308**	P30

26.	Drive End Bearing Qty.	**1**	
27.	Drive End Bearing Type	**(Ball) Ball Bearing**	P49

28.	Drive End Lubrication Type	**(Grease) Grease Lubricated**

29.	Drive End Bearing Insulation or Grounding Device?	**none**	
30.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**2 wavy washers**	
31.	Drive End Bearing Condition	**replace**	
32.	Opposite Drive End Bearing Brand	**skf**	
33.	Opposite Drive End Bearing Number-	**6308**	P90

34.	Opposite Drive End Bearing Qty.	**1**	
35.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P93

36.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
37.	Opposite Drive End Bearing Insulation or Grounding Device?	
38.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**2 snap rings, inner and outer**
39.	Opposite Drive End Bearing Condition	**replace**
40.	Drive End Seal	**40*62*7**
	Have replacement seal on hand	
41.	Opposite Drive End Seal	**40*52*7**
	Have replacement seal on hand	

Rotor Inspection

42.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**

43.	Growler Test	**(Pass) Pass**
44.	Number of Rotor Bars	**28**
45.	Rotor Condition	**pass**
46.	List the Parts needed for the Repair Below ***(2) 6308 2Z C3 bearings. Sleeve both end-bell housings***	
47.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

48. Shaft Runout

49. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

50. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

51. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

Gear is worn beyond acceptable standards. Customer was notified but wanted the motor repaired anyway without fixing the worn gear.

52. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.5751	**1.5752**	**1.5751**

53. Drive End Bearing Shaft Fit Condition — **(P) Pass**

54. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.5754	**1.5753**	**1.5754**

55. Opposite Drive End Bearing Shaft Fit Condition — **(P) Pass**

56. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

57. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

Bad. Excessive wear and pitting

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

59. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

Bad. Excessive wear and pitting

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

61. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

62. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

63. List Machine Work Needed Below

Both housing fits check bad.

64. Technician **Terrence Holland**

Dynamic Balance Report

65. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

66. Initial Balance Readings

Drive End	Opposite Drive End

67. Final Balance Readings

Drive End	Opposite Drive End

68. Technician

Rewind

69. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

70. Core Hot Spot Test

Pre-Burnout	Post-Burnout

71. Post Rewind Electrical Test- Insulation Resistance

72.	Post Rewind Polarization Index		
73.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
74.	Post Rewind Surge Test		
75.	Post Rewind Hi-Pot		
76.	Technician		

Root Cause of Failure

77.	Failure locations		
78.	Root cause of failure		

Mechanical Fits- Rotor - Post Repair

79.	Shaft Runout Post Repair		
80.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
81.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
82.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
83.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
84.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
85.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
86.	Shaft Repair Sign-off		

Mechanical Fits- Bearing Housings - Post Repair

87.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
88.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
89.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
90.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
91.	End Bell Repair Sign-off		

Assembly

92.	QC Check All Parts for Cleanliness Prior to Assembly		
93.	Photograph All Major Components prior to assembly		
94.	Final Insulation Resistance Test		
95.	Assembled Shaft Endplay		
96.	Assembled Shaft Runout		
97.	Test Run Voltage		
	Volts	Volts	Volts
98.	Test Run Amperage		
	Amps	Amps	Amps
99.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
100.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
101.	Ambient Temperature - Fahrenheit		
102.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
103.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
104.	Document Final Condition with Pictures after paint		
105.	Final Pics and QC Review		