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

AC Recondition As Found

Almatis Inc/RCP Bauxite (10014)
4701 Alcoa Road
Bauxite, AR 72011

FolderID: 100915
FormID: 15984938

AC Recondition - Rev. 2

Location:	LR Motor Shop
Serial Number:	F220-50-W04W048R125M
Description:	75HP US MOTORS 1800RPM 365T

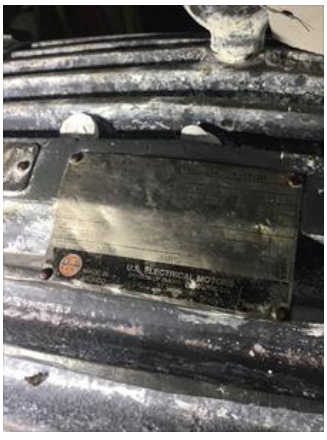
Hi-Speed Job Number:	100915
Manufacturer:	US Motors/Nidec
Serial Number:	F220-50-W04W048R125M
HP/kW:	75 (HP)
RPM:	1780 (RPM)
Frame:	365T
Voltage:	230 / 460
Current:	178/89
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	None
Coupling/Sheave:	Coupling
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High**

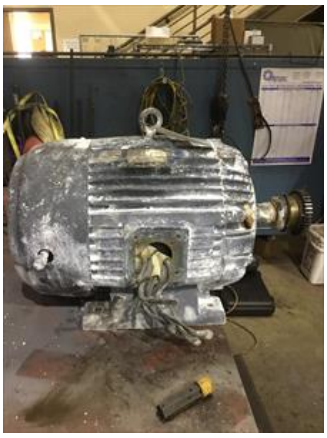
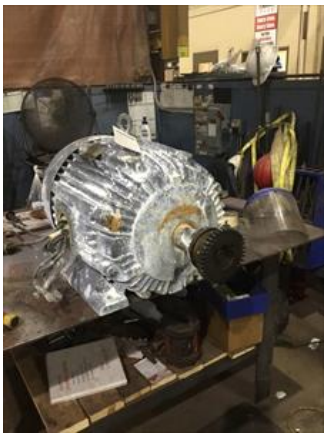
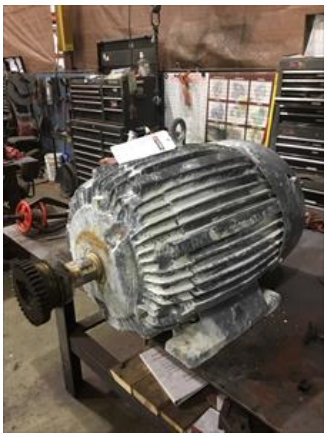
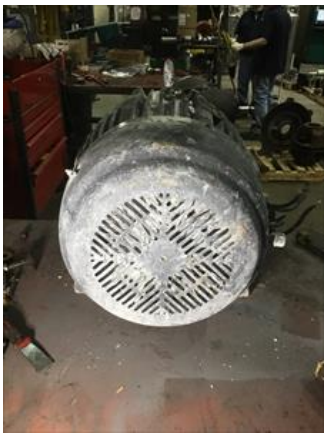
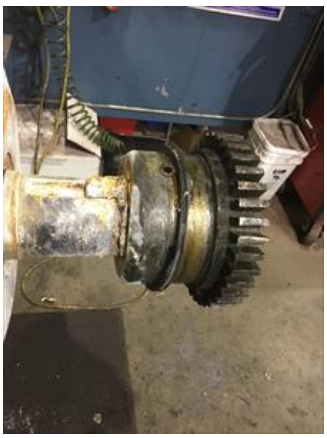
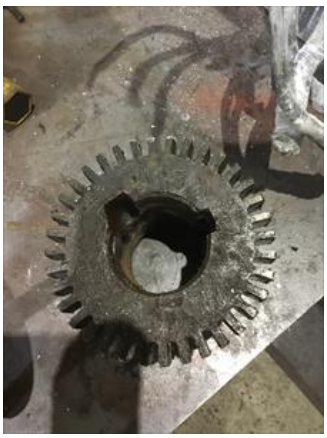
Overall Condition

1. Report Date

2. Nameplate Picture P37



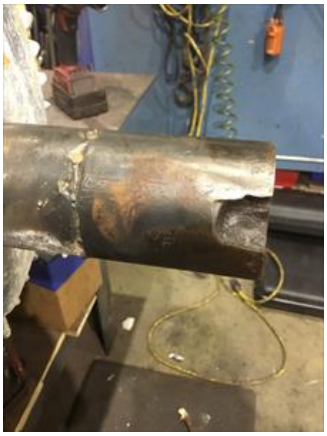
3. Photos of all six sides of the machine. P44

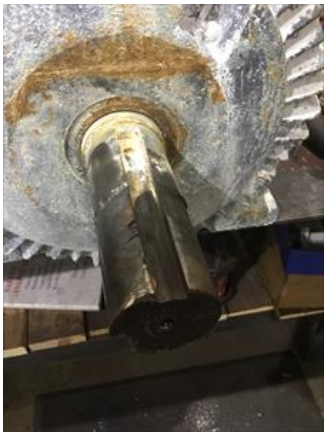







	4. Describe the Overall Condition of the Equipment as Received	
	5. Distance from the end of the shaft to the Coupling/Sheave	
Initial Mechanical/Electrical		
	6. Does Shaft Turn Freely?	**(No) No**

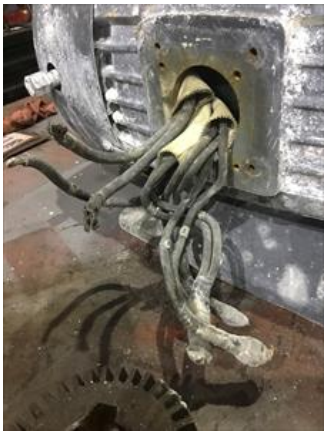
7.	Does Shaft Have Visible Damage?	**(Yes) Yes**	P20

Replacement needed.





8.	Assembled Shaft Runout		
9.	Assembled Shaft End Play		
10.	Air Gap Variation <10%		
11.	Lead Condition		P53



12.	Lead Length		
13.	Frame Condition		
14.	Fan Condition		
15.	Broken or Missing Components		

Initial Electrical Inspection

16.	Insulation Resistance/Megger		
17.	Winding Resistance		

1-2	1-3	2-3

18.	Perform Surge Test		
19.	Number of Stator Slots		
20.	Stator Condition		

Mechanical Inspection

21.	Drive End Bearing Brand		
22.	Drive End Bearing Number-		
23.	Drive End Bearing Qty.		
24.	Drive End Bearing Type		

25.	Drive End Lubrication Type
26.	Drive End Bearing Insulation or Grounding Device?
27.	Drive End Wavy Washer/Snap-Ring Other Retention Device?
28.	Drive End Bearing Condition
29.	Opposite Drive End Bearing Brand
30.	Opposite Drive End Bearing Number-
31.	Opposite Drive End Bearing Qty.
32.	Opposite Drive End Bearing Type
33.	Opposite Drive End Lubrication Type
34.	Opposite Drive End Bearing Insulation or Grounding Device?
35.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?
36.	Opposite Drive End Bearing Condition
37.	Drive End Seal
38.	Opposite Drive End Seal

Rotor Inspection

39.	Rotor Type/Material
40.	Growler Test
41.	Number of Rotor Bars
42.	Rotor Condition
43.	List the Parts needed for the Repair Below
44.	Signature of Technician that Disassembled Motor

Mechanical Fits- Rotor

45.	Shaft Runout		
46.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
47.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
48.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
49.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
50.	Drive End Bearing Shaft Fit Condition		
51.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
52.	Opposite Drive End Bearing Shaft Fit Condition		
53.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	

Mechanical Fits- Bearing Housings

54.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
55.	Drive End - Endbell Bearing Fit Condition		

56. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

57. Opposite Drive End - Endbell Bearing Fit Condition

58. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

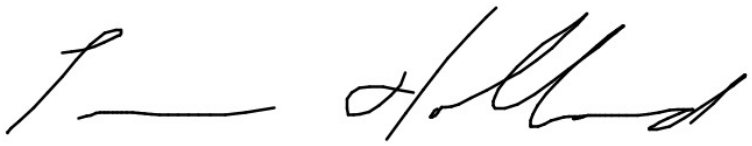
59. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

60. List Machine Work Needed Below

Needs new shaft made

61. Technician **Terrence Holland**



Dynamic Balance Report

62. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

63. Initial Balance Readings

Drive End	Opposite Drive End

64. Final Balance Readings

Drive End	Opposite Drive End

65. Technician

Rewind

66. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

67. Core Hot Spot Test

Pre-Burnout	Post-Burnout

68. Post Rewind Electrical Test- Insulation Resistance

69. Post Rewind Polarization Index

70. Post Rewind Winding Resistance

1-2	1-3	2-3

71. Post Rewind Surge Test

72. Post Rewind Hi-Pot

73. Technician

Root Cause of Failure

74. Failure locations

75. Root cause of failure

Mechanical Fits- Rotor - Post Repair

76. Shaft Runout Post Repair

77. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

78. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

79. Coupling Fit Closest to the end of the Shaft Post Repair

0 Degrees	60 Degrees	120 Degrees

80. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

81. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

82. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

83. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

84. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

85. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

86. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

87. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

88. End Bell Repair Sign-off

Assembly

89. Photograph All Major Components prior to assembly

90. Final Insulation Resistance Test

91. Assembled Shaft Endplay

92. Assembled Shaft Runout

93. Test Run Voltage

Volts	Volts	Volts

94. Test Run Amperage

Amps	Amps	Amps

95.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
96.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
97.	Ambient Temperature - Fahrenheit		
98.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
99.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
100.	Final Test Run Sign-off		
101.	Document Final Condition with Pictures after paint		
102.	Final Pics and QC Review		