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

AC Recondition As Found

Remington (10243)
2592 AR Hwy 15 N
Lonoke, AR 72086

FolderID: 101123
FormID: 16279149

AC Recondition - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	63 07345 692
Description:	20HP US MOTORS 3600RPM 254T

Hi-Speed Job Number:	101123
Manufacturer:	US Motors/Nidec
Product Number:	63 07345 692
Spec/ID #:	63 07345 692
Serial Number:	63 07345 692
HP/kW:	20 (HP)
RPM:	3505 (RPM)
Frame:	254T
Voltage:	230 / 460
Current:	51.6/25.6
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

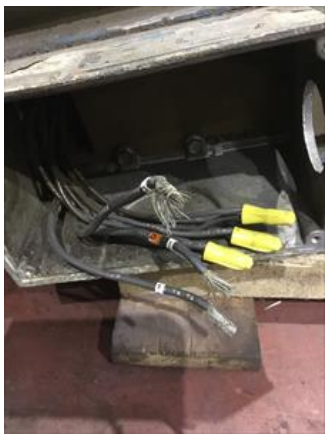
Priorities Found: **4 - High** **5 - Good**

Overall Condition

1. Report Date

2. Nameplate Picture P37

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



4. Describe the Overall Condition of the Equipment as Received

Serviceable

Initial Mechanical/Electrical

	5.	Does Shaft Turn Freely?	**(Yes) Yes**	
	6.	Does Shaft Have Visible Damage?	**(No) No**	P18

	7.	Assembled Shaft Runout	**0.015 Inches**	
	8.	Assembled Shaft End Play		
	9.	Air Gap Variation <10%		
	10.	Lead Condition	**(P) Pass**	P54

11.	Lead Length	**8 Inches**	
12.	Frame Condition	**pass**	

13.	Fan Condition	**(P) Pass**	P91

14.	Broken or Missing Components		

Initial Electrical Inspection

15.	Insulation Resistance/Megger	**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.**	P68

Mechanical Inspection

20.	Drive End Bearing Brand	**nsk**	

21.	Drive End Bearing Number-	**6310**	P32

22.	Drive End Bearing Qty.	**1**	
23.	Drive End Bearing Type	**(Ball) Ball Bearing**	P50

24.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
25.	Drive End Bearing Insulation or Grounding Device?	**none**	
26.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**snap ring**	
	Needs replacing		
27.	Drive End Bearing Condition	**worn**	
28.	Opposite Drive End Bearing Brand	**nachi**	
29.	Opposite Drive End Bearing Number-	**6207**	P86

30.	Opposite Drive End Bearing Qty.	**1**	

31.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P90

32.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
33.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**
34.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
35.	Opposite Drive End Bearing Condition	**worn**
36.	Drive End Seal	**none**
37.	Opposite Drive End Seal	

Rotor Inspection

38.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	P3

39.	Growler Test	**(Pass) Pass**
40.	Number of Rotor Bars	
41.	Rotor Condition	**pass**
42.	List the Parts needed for the Repair Below ***Repair bent shaft***	
43.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

44.	Shaft Runout	**0.017 inches**

45. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

46. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

47. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

48. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.969	**1.9689**	**1.969**

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

50. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.378	**1.3781**	**1.3781**

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

52. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

53. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.3321	**4.3325**	

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

55. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
2.8364	**2.8362**	

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

57. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	

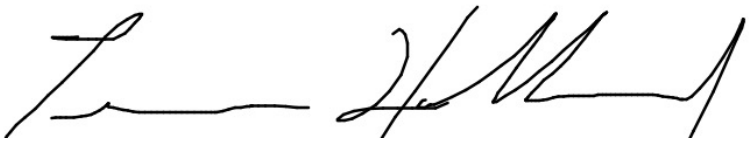
58. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

59. List Machine Work Needed Below

Repair bent d.e shaft extension. Re-sleeve both end bell housing fits.

60. Technician **Terrence Holland**



Dynamic Balance Report

61. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

62. Initial Balance Readings

Drive End	Opposite Drive End

63. Final Balance Readings

Drive End	Opposite Drive End

64. Technician

Rewind

65. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

66. Core Hot Spot Test

Pre-Burnout	Post-Burnout

67. Post Rewind Electrical Test- Insulation Resistance

68. Post Rewind Polarization Index

69. Post Rewind Winding Resistance

1-2	1-3	2-3

70. Post Rewind Surge Test

71. Post Rewind Hi-Pot

72. Technician

Root Cause of Failure

73. Failure locations

Winding coil shorted. D.E bearing cage failure.

74. Root cause of failure

Mechanical Fits- Rotor - Post Repair

75. Shaft Runout Post Repair

76. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

77. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

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

0 Degrees	60 Degrees	120 Degrees

79. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

80. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

81. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

82. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

83.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
84.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
85.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
86.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
87.	End Bell Repair Sign-off		

Assembly

88.	QC Check All Parts for Cleanliness Prior to 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.	Document Final Condition with Pictures after paint		
101.	Final Pics and QC Review		