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

AC Inspection as Found

JA Riggs Tractor Company (10438)
9125 Interstate 30
Little Rock, AR 72209

FolderID: 102921
FormID: 20368598

AC Inspection - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	M2091560 Y 01
Description:	15KW FUJI

Hi-Speed Job Number:	102921
Manufacturer:	Other
Product Number:	MRA 2167 A
Serial Number:	M2091560 Y 01
HP/kW:	15 (kW)
RPM:	1760 (RPM)
Frame:	160L
Voltage:	230 / 460
Current:	19/24: (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	6309Z
Date Received:	05/13/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	Yes
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

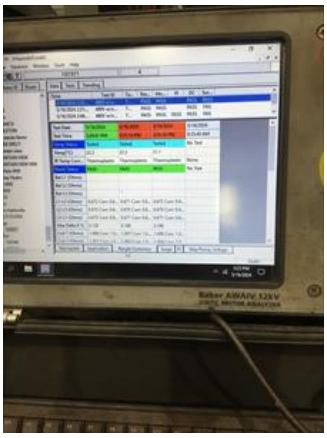
Priorities Found: **3 - High** **11 - Good**

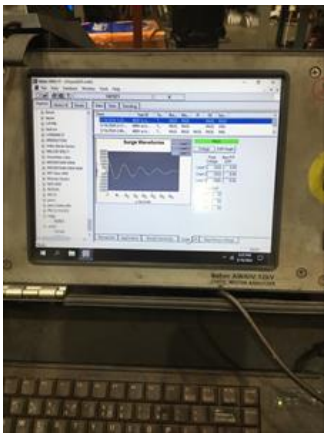
Overall Condition

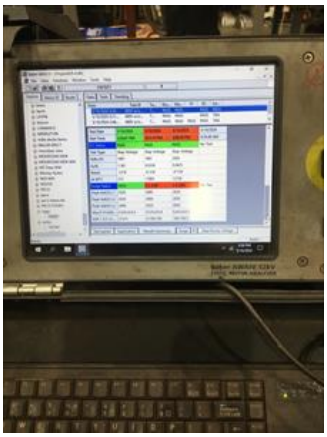
1. Report Date

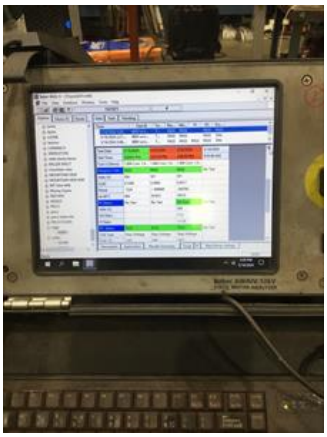
2. Nameplate Picture P37

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









	4.	Describe the Overall Condition of the Equipment as Received ***Serviceable***	
	5.	Distance from the end of the shaft to the Coupling/Sheave	**inches**
Initial Mechanical/Electrical			
●	6.	Does Shaft Turn Freely?	**(Y) Yes**
●	7.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	8.	Does Shaft Have Visible Damage?	**(No) No**
●	9.	Assembled Shaft Runout	**0.001 Inches**
	10.	Assembled Shaft End Play	**0 inches**
	11.	Air Gap Variation <10% ***Na***	

12.	Lead Condition	**(P) Pass**
13.	Lead Length	**60 Inches**
14.	Does it have Lugs?, If so what is the Stud Size?	**(Yes) Yes**
15.	Lead Numbers	**12**
16.	Frame Condition	
17.	Fan Condition	**(N) NA**
18.	Broken or Missing Components	
	N/a	

Initial Electrical Inspection

19.	Insulation Resistance/Megger	**0 Megohms**
	Copper ball at bottom stat or	
20.	Winding Resistance	

1-2	1-3	2-3

	Na
21.	Perform Surge Test **(NA) Not Applicable**
22.	Number of Stator Slots **48**
23.	Stator Condition
	Rewind
24.	Stator Thermistors/Ohms
	N/a
25.	Stator Overloads/Ohms **n/a**

Mechanical Inspection

26.	Drive End Bearing Brand	**309zz nsk**
27.	Drive End Bearing Number-	**309zz**
28.	Drive End Bearing Qty.	**1**
29.	Drive End Bearing Type	**(Ball) Ball Bearing**
30.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
31.	Drive End Bearing Insulation or Grounding Device?	
	N/a	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
33.	Drive End Bearing Condition	**replace**
34.	Opposite Drive End Bearing Brand	**snk**
35.	Opposite Drive End Bearing Number-	**6308**
36.	Opposite Drive End Bearing Qty.	**1**
37.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
38.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
39.	Opposite Drive End Bearing Insulation or Grounding Device?	
	N/a	
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**
41.	Opposite Drive End Bearing Condition	**contamination**
42.	Drive End Seal	**n/a**
43.	Opposite Drive End Seal	**n/a**

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
45.	Growler Test	**(Pass) Pass**
46.	Number of Rotor Bars	**40**

47.	Rotor Condition	**good**
48.	List the Parts needed for the Repair Below ***Rewind, bearings.***	
49.	Signature of Technician that Disassembled Motor	**RHR**

Mechanical Fits- Rotor

50.	Shaft Runout	**0.001 inches**
51.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

Na

52.	Coupling Fit Closest to Bearing Housing	

0 Degrees	90 Degrees	120 Degrees

N/a

53.	Coupling Fit Closest to the end of the Shaft	

0 Degrees	60 Degrees	120 Degrees

N/a

54.	Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees
1.7721	**1.7721**	**1.7722**

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

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

57.	Opposite Drive End Bearing Shaft Fit Condition	**(P) Pass**
58.	Shaft Air Seal Fits	

Drive End Air Seal	Opposite Drive End Air Seal

N/a

Mechanical Fits- Bearing Housings

59.	Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees
3.9375	**3.9373**	**3.9375**

60.	Drive End - Endbell Bearing Fit Condition	**(P) Pass**
61.	Opposite Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees
3.5435	**3.5436**	**3.5435**

62.	Opposite Drive End - Endbell Bearing Fit Condition	**(P) Pass**

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

Na

64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

65. List Machine Work Needed Below

None

66. Technician

Root Cause of Failure

67. Failure locations

Stator windings

68. Root cause of failure

Coils shorted.

Dynamic Balance Report

69. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

70. Initial Balance Readings P11

Drive End	Opposite Drive End

71. Final Balance Readings P27

Drive End	Opposite Drive End

72. Technician **Terrence Holland**

Rewind

73. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

74. Core Hot Spot Test

Pre-Burnout	Post-Burnout

75. Post Rewind Electrical Test- Insulation Resistance **Megohms**

76. Post Rewind Polarization Index

77. Post Rewind Winding Resistance

1-2	1-3	2-3

78. Post Rewind Surge Test

79. Post Rewind Hi-Pot

80. Technician

Assembly

81. QC Check All Parts for Cleanliness Prior to Assembly **Terrence Holland**

82. Photograph All Major Components prior to assembly P17

83.	Final Insulation Resistance Test		**1.2 Gigohms**
84.	Assembled Shaft Endplay		**0 inches**
85.	Assembled Shaft Runout		**0.001 inches**
86.	Test Run Voltage		P56

Volts	Volts	Volts
458	**458**	**460**

Witness: C. Wiley

87. Test Run Amperage

Amps	Amps	Amps
8.300000000000001	**8.300000000000001**	**8.4**

88. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.03	**0.01**	**0.03**

89. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.01	**0.04**	**0.03**

90. Ambient Temperature - Fahrenheit

91. Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

92. Opposite Drive End Bearing Temps - Fahrenheit

5 Minutes	10 Minutes	15 Minutes

93. Document Final Condition with Pictures after paint P129

94. Final Pics and QC Review **Terrence Holland** P131

Witness: D. Maclin