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

AC Inspection as Found

FEDERAL METAL COMPANY
1200 PIKE AVENUE
NORTH LITTLE ROCK, AR 72114

FolderID: 104101
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AC Inspection - Rev. 2

Location:	LR MOTOR SHOP
Serial Number:	R000189690
Description:	2 HP ROSSI

Hi-Speed Job Number:	104101
Manufacturer:	Rossi
Product Number:	2589026
Spec/ID #:	8087591
Serial Number:	R000189690
HP/kW:	2 (HP)
RPM:	1740 (RPM)
Frame:	90LB
Voltage:	460
Current:	2.9 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	6
J-box Included:	Half
Coupling/Sheave:	None
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: **2 - High** **11 - Good**

Overall Condition

1.	Report Date	**02/05/2025**

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?	**(Y) Yes**	
●	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**	
	7.	Does Shaft Have Visible Damage?	**(No) No**	P26

●	8.	Assembled Shaft Runout	**0.002 Inches**	
●	9.	Assembled Shaft End Play	**0 inches**	
	10.	Air Gap Variation <10%		
●	11.	Lead Condition	**(P) Pass**	P69

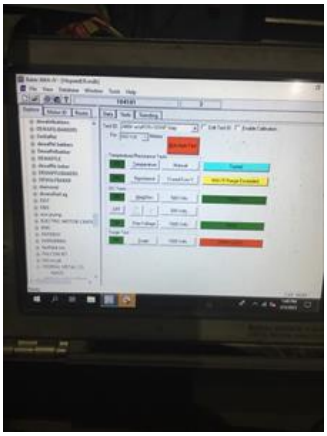
12. Lead Length **8 Inches**

13.	Does it have Lugs?, If so what is the Stud Size?	**(Yes) Yes**		
14.	Lead Numbers	**1-6**		
15.	Frame Condition	**pass**		
16.	Fan Condition	**(F) Fail**		P115

17.	Does motor have internal fan?	**(No) No**		
18.	Broken or Missing Components	**fan assembly**		

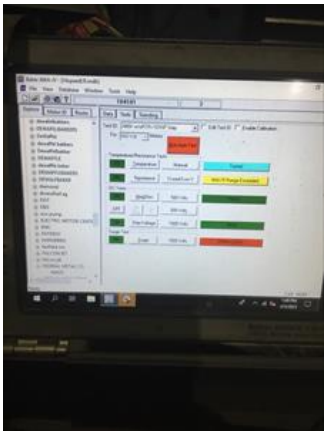
Initial Electrical Inspection

19.	Insulation Resistance/Megger	**Megohms**		P8



20.	Winding Resistance			
	1-2	1-3	2-3	

21.	Perform Surge Test	**(F) Fail**	P57



22.	Number of Stator Slots	**36**
23.	Stator Condition	**rewind**
24.	Stator Thermistors/Ohms	
25.	Stator Overloads/Ohms	

Mechanical Inspection

26.	Drive End Bearing Brand	**ISB EMS**	
27.	Drive End Bearing Number-	**6205ZZ**	P32

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?	**none**
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**
33.	Drive End Bearing Condition	**replace**
34.	Opposite Drive End Bearing Brand	**ISB EMS**

35.	Opposite Drive End Bearing Number-	**6205ZZ**	P99

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?	**none**
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
41.	Opposite Drive End Bearing Condition	**replace**
42.	Drive End Seal	**25-46-7** P120

Check good

43.	Opposite Drive End Seal	**25-46-7**	P123

Check good

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
45.	Growler Test	**(Pass) Pass**
46.	Number of Rotor Bars	**28**
47.	Rotor Condition	**pass**
48.	List the Parts needed for the Repair Below	

(2) 6205 2Z bearings
Fan assembly
Rewind stator

49.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Co sign:

Mechanical Fits- Rotor

50.	Shaft Runout	**0.002 inches**
51.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

52.	Coupling Fit Closest to Bearing Housing	

0 Degrees	90 Degrees	120 Degrees

53.	Coupling Fit Closest to the end of the Shaft	

0 Degrees	60 Degrees	120 Degrees

54.	Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees
0.9844000000000001	**0.9843**	**0.9844000000000001**

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

0 Degrees	60 Degrees	120 Degrees
0.984	**0.984**	**0.9841**

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

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

59.	Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees
2.0472	**2.0472**	**2.0473**

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

0 Degrees	60 Degrees	120 Degrees
2.0474	**2.0472**	**2.0473**

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

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
n/a	**n/a**

64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

65. List Machine Work Needed Below

None

66. Technician **Terrence Holland**

Co sign:

Root Cause of Failure

67. Failure locations

Windings
Fan assembly broken

68. Root cause of failure P18

Windings show open on testing analyzer. Cause of failure unknown.

Dynamic Balance Report

69. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

70. Initial Balance Readings

Drive End	Opposite Drive End

71. Final Balance Readings

Drive End	Opposite Drive End

72. Technician

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		
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		
82.	Photograph All Major Components prior to assembly		
83.	Final Insulation Resistance Test		
84.	Assembled Shaft Endplay		
85.	Assembled Shaft Runout		
86.	Test Run Voltage		
	Volts	Volts	Volts
87.	Test Run Amperage		
	Amps	Amps	Amps
88.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
89.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
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		
94.	Final Pics and QC Review		