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

AC Inspection as Found

Arauco-Malvern MDF (10298)
1275 Willamette Rd
Malvern, AR 72104

FolderID: 101974
FormID: 18127311

AC Inspection - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	
Description:	75 HP TECO TEFC

Hi-Speed Job Number:	101974
Manufacturer:	TECO Westinghouse
Serial Number:	CXP7127305008
HP/kW:	75 (HP)
RPM:	1775 (RPM)
Frame:	365T
Voltage:	230 / 460
Current:	170.2 / 85.1
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	12
J-box Included:	None
Coupling/Sheave:	None
Date Received:	10/11/2023
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

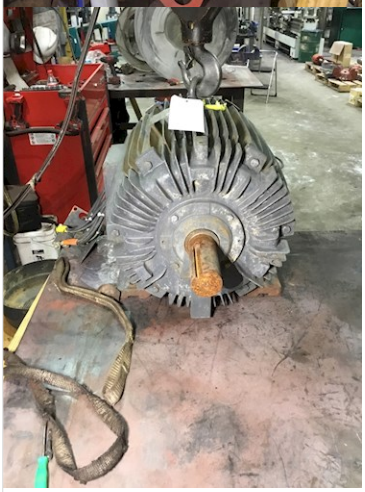
Priorities Found: **2 - High** **6 - Good**

Overall Condition

1. Report Date

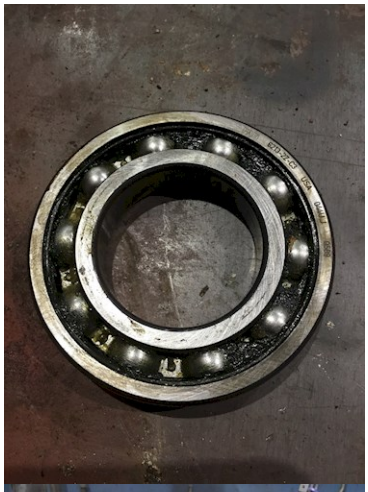
2. Nameplate Picture P37

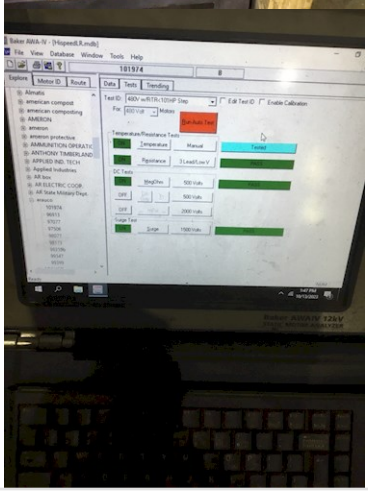
3. Photos of all six sides of the machine. P45









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**	
7.	Assembled Shaft Runout	**0.004 Inches**	
8.	Assembled Shaft End Play	**0 inches**	
9.	Air Gap Variation <10%		
	Na		
10.	Lead Condition		P56

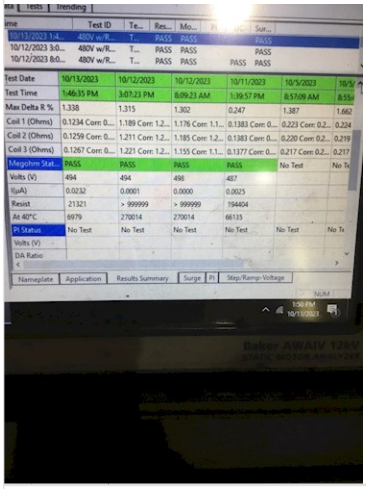
11.	Lead Length	**12 Inches**

12.	Lead Numbers	**1-12**	
	1-12) 2-10) 3-11). 4-7, 5-8, 6-9		
13.	Frame Condition	**pass**	
14.	Fan Condition	**(P) Pass**	P109

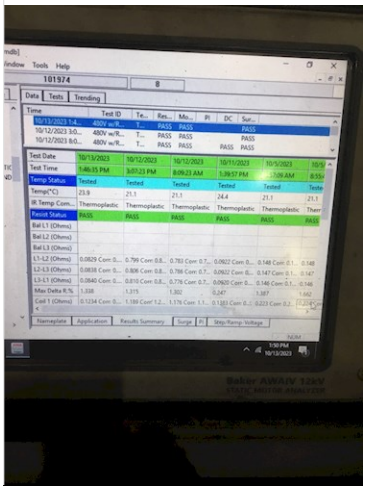
15.	Broken or Missing Components	**missing connection box.**	

Initial Electrical Inspection

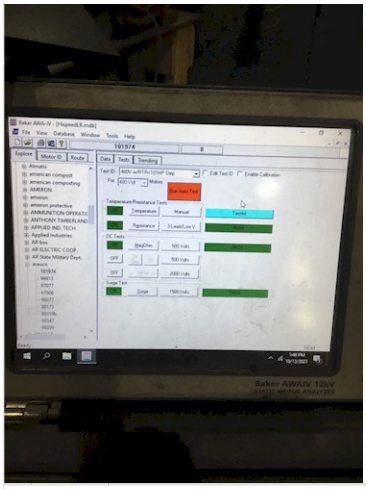
16.	Insulation Resistance/Megger	**Megohms**	P8

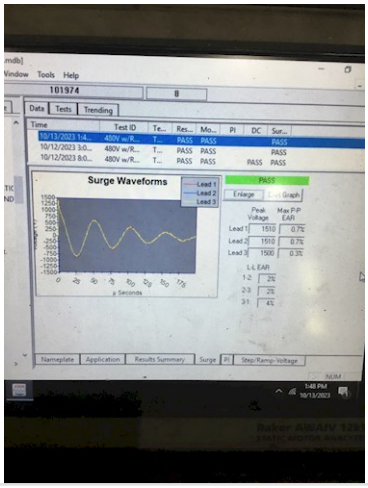


17.	Winding Resistance			P20
	1-2	1-3	2-3	



18.	Perform Surge Test	**(P) Pass**	P58





19.	Number of Stator Slots	**48**	
20.	Stator Condition	**pass**	
21.	Stator Thermistors/Ohms	**na**	
22.	Stator Overloads/Ohms	**na**	

Mechanical Inspection

23.	Drive End Bearing Brand	**FAG**	P15

24.	Drive End Bearing Number-	**6313 2Z. C3**	P28

25.	Drive End Bearing Qty.	**1**
26.	Drive End Bearing Type	**(Ball) Ball Bearing**
27.	Drive End Lubrication Type	**(Grease) Grease Lubricated**

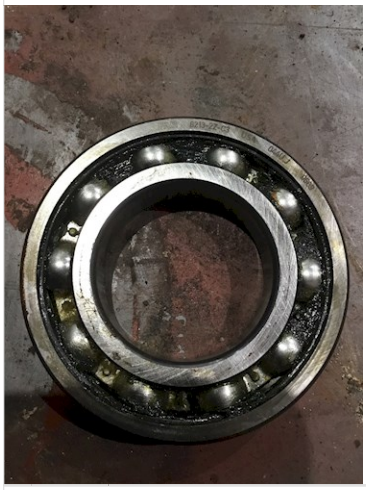
28. Drive End Bearing Insulation or Grounding Device? **Aegis** P64

29. Drive End Wavy Washer/Snap-Ring Other Retention Device? **locking cap** P75

30. Drive End Bearing Condition **replace** P80

31. Opposite Drive End Bearing Brand **Fag** P92

32.	Opposite Drive End Bearing Number-	**6213 2Z C3**	P97



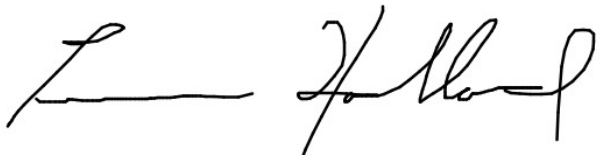
33.	Opposite Drive End Bearing Qty.	**1**	
34.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
35.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
36.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	
37.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**locking cap**	P115

38.	Opposite Drive End Bearing Condition	**replace**	
39.	Drive End Seal	**none**	
40.	Opposite Drive End Seal	**none**	

Rotor Inspection

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

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



Mechanical Fits- Rotor

47.	Shaft Runout	**0.003 inches**
48.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

Na

49.	Coupling Fit Closest to Bearing Housing	

0 Degrees	90 Degrees	120 Degrees

Na

50.	Coupling Fit Closest to the end of the Shaft	

0 Degrees	60 Degrees	120 Degrees

Na

51.	Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees
2.5594	**2.5594**	**2.5594**

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

0 Degrees	60 Degrees	120 Degrees
2.5594	**2.5595**	**2.5594**

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

55.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	

Na

Mechanical Fits- Bearing Housings

56.	Drive End - Endbell Bearing Fit			P2
	0 Degrees	60 Degrees	120 Degrees	
	5.5133	**5.5134**	**5.5133**	

57.	Drive End - Endbell Bearing Fit Condition	**(F) Fail**	
58.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	4.7256	**4.7257**	**4.7257**
59.	Opposite Drive End - Endbell Bearing Fit Condition	**(F) Fail**	P38

60. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	**pass**

61. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Na

62. List Machine Work Needed Below

Both end bell housing fits pitted and fretted.

63. Technician **Terrence Holland**

Root Cause of Failure

64. Failure locations

Housing fits bad and bearing grease was contaminated in both bearings. Recommend replacing aegis ring on d.e bearing cap. Aegis shaft dia 2.9470

65. Root cause of failure

Housing fits bad and bearing grease contaminated.

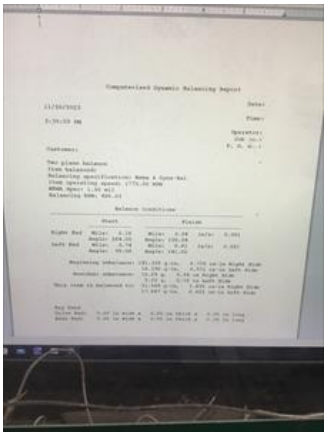
Dynamic Balance Report

66. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

67. Initial Balance Readings P11

Drive End	Opposite Drive End



68. Final Balance Readings

Drive End	Opposite Drive End

69. Technician

Mechanical Fits- Bearing Housings - Post Repair

70. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

71. Opposite Drive End - Endbell Bearing Fit Post Repair P19

0 Degrees	60 Degrees	120 Degrees
4.725	**4.725**	**4.7251**

72. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

73. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

74. End Bell Repair Sign-off **Gary**

Assembly

75. QC Check All Parts for Cleanliness Prior to Assembly

76. Photograph All Major Components prior to assembly P16

77.	Final Insulation Resistance Test		
78.	Assembled Shaft Endplay		
79.	Assembled Shaft Runout		
80.	Test Run Voltage		
	Volts	Volts	Volts
81.	Test Run Amperage		
	Amps	Amps	Amps
82.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial

	0.04	**0.06**	**0.03**
83.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
	0.03	**0.04**	**0.02**
84.	Ambient Temperature - Fahrenheit		
85.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
86.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
87.	Document Final Condition with Pictures after paint		
88.	Final Pics and QC Review	**Terrence Holland**	P128

Co witness: cw