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

AC Inspection as Found

Reynolds Metals company
1333 highway 270
Malvern, AR 72104

FolderID: 101271
FormID: 16576335

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	01319850-8/22-01
Description:	75HP MARATHON 1800RPM 365T

Hi-Speed Job Number:	101271
Manufacturer:	Marathon
Product Number:	9J 365TTFS6036DU W
Serial Number:	01319850-8/22-01
HP/kW:	75 (HP)
RPM:	1780 (RPM)
Frame:	365T
Voltage:	230 / 460
Current:	172/86
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
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: **3 - 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

Initial Mechanical/Electrical

5. Does Shaft Turn Freely? **(Yes) Yes**

	6.	Does Shaft Have Visible Damage?	**(No) No**	P20

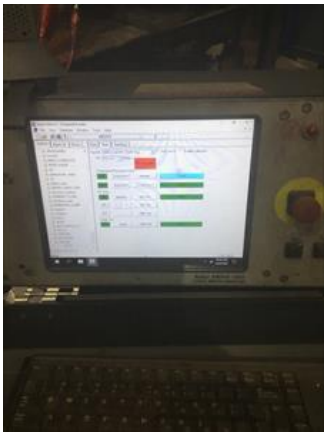
🟢	7.	Assembled Shaft Runout	**0.002 Inches**	
	8.	Assembled Shaft End Play		
	9.	Air Gap Variation <10%		
🟢	10.	Lead Condition	**(P) Pass**	P55

	11.	Lead Length	**9 Inches**	
	12.	Frame Condition		
🔴	13.	Fan Condition	**(F) Fail**	P93
		Broken		

	14.	Broken or Missing Components	**fan assembly**	

Initial Electrical Inspection

	15.	Insulation Resistance/Megger			
	16.	Winding Resistance			
		1-2	1-3	2-3	
	17.	Perform Surge Test		**(P) Pass**	P57



	18.	Number of Stator Slots			
	19.	Stator Condition			
	20.	Stator Thermistors/Ohms			
	21.	Stator Overloads/Ohms			

Mechanical Inspection

	22.	Drive End Bearing Brand			
	23.	Drive End Bearing Number-		**6314**	P32

	24.	Drive End Bearing Qty.		**1**	

25.	Drive End Bearing Type	**(Ball) Ball Bearing**	P49

26.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
27.	Drive End Bearing Insulation or Grounding Device?	**none**
28.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
29.	Drive End Bearing Condition	**replace**
30.	Opposite Drive End Bearing Brand	**SKF**
31.	Opposite Drive End Bearing Number-	**6312** P88

32.	Opposite Drive End Bearing Qty.	**1**
33.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing** P92

34.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
35.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**

36.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer broken. replacement found**	P98

37.	Opposite Drive End Bearing Condition	**replace**
38.	Drive End Seal	
39.	Opposite Drive End Seal	

Rotor Inspection

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

41.	Growler Test	
42.	Number of Rotor Bars	
43.	Rotor Condition	**pass**
44.	List the Parts needed for the Repair Below ***6314 & 6312 sleeves for both housing fits***	
45.	Signature of Technician that Disassembled Motor	

Mechanical Fits- Rotor

46.	Shaft Runout	**0.002 inches**
47.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

48.	Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

49.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
50.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.7565	**2.7566**	**2.7565**	
51.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
52.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
53.	Opposite Drive End Bearing Shaft Fit Condition			
54.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		

Mechanical Fits- Bearing Housings

55.	Drive End - Endbell Bearing Fit			P2
	0 Degrees	60 Degrees	120 Degrees	

Fail. Excess wear.

56.	Drive End - Endbell Bearing Fit Condition			**(F) Fail**
57.	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	

58. Opposite Drive End - Endbell Bearing Fit Condition **(F) Fail** P38

59. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

60. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

61. List Machine Work Needed Below

Sleeve both housing fits.

62. Technician **Terrence Holland**

Dynamic Balance Report

63. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

64. Initial Balance Readings

Drive End	Opposite Drive End

65. Final Balance Readings

Drive End	Opposite Drive End

66. Technician

Rewind

67. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

68. Core Hot Spot Test

Pre-Burnout	Post-Burnout

69. Post Rewind Electrical Test- Insulation Resistance

70. Post Rewind Polarization Index

71.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
72.	Post Rewind Surge Test		
73.	Post Rewind Hi-Pot		
74.	Technician		
Root Cause of Failure			
75.	Failure locations		
76.	Root cause of failure		
Mechanical Fits- Rotor - Post Repair			
77.	Shaft Runout Post Repair		
78.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
79.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
80.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
81.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
82.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
83.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
84.	Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair			
85.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
86.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
87.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
88.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
89.	End Bell Repair Sign-off		
Assembly			
90.	QC Check All Parts for Cleanliness Prior to Assembly		

91.	Photograph All Major Components prior to assembly		
92.	Final Insulation Resistance Test		
93.	Assembled Shaft Endplay		
94.	Assembled Shaft Runout		
95.	Test Run Voltage		
	Volts	Volts	Volts
96.	Test Run Amperage		
	Amps	Amps	Amps
97.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
98.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
99.	Ambient Temperature - Fahrenheit		
100.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
101.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
102.	Document Final Condition with Pictures after paint		
103.	Final Pics and QC Review		