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

AC Recondition As Found

Community Water System (12207)
299 Lakeshore Drive
Greers Ferry, AR 72067

FolderID: 101009
FormID: 16082721

AC Recondition - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	030004
Description:	150HP LEESON 3600RPM 405TS

Hi-Speed Job Number:	101009
Manufacturer:	Marathon
Product Number:	C405T34DB1C
Spec/ID #:	G151449.60
Serial Number:	030004
HP/kW:	150 (HP)
RPM:	3555 (RPM)
Frame:	405TS
Voltage:	460
Current:	167
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	ODP
J-box Included:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High** **5 - Good**

Overall Condition

1. Report Date

2. Nameplate Picture P37

3. Photos of all six sides of the machine. P44

	4.	Describe the Overall Condition of the Equipment as Received	
	5.	Distance from the end of the shaft to the Coupling/Sheave	
Initial Mechanical/Electrical			
	6.	Does Shaft Turn Freely?	
	7.	Does Shaft Have Visible Damage?	
	8.	Assembled Shaft Runout	
	9.	Assembled Shaft End Play	
	10.	Air Gap Variation <10%	
●	11.	Lead Condition	**(P) Pass**
	12.	Lead Length	
	13.	Frame Condition	

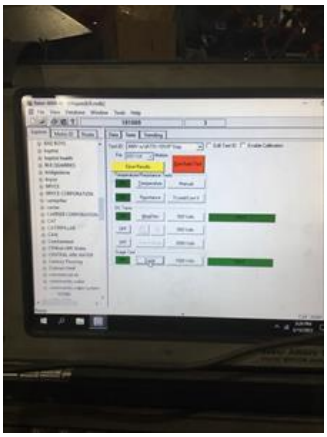
14.	Fan Condition		
15.	Broken or Missing Components		

Initial Electrical Inspection

16.	Insulation Resistance/Megger		
17.	Winding Resistance		

1-2	1-3	2-3

18.	Perform Surge Test	**(P) Pass**	P56



19.	Number of Stator Slots		
20.	Stator Condition		

Mechanical Inspection

21.	Drive End Bearing Brand	**koyo**	
22.	Drive End Bearing Number-	**6316**	P33

23.	Drive End Bearing Qty.	**1**	

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

25.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
26.	Drive End Bearing Insulation or Grounding Device?	**aegis ring mounted on outside D.E. housing**	P63

27.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
28.	Drive End Bearing Condition	**water contaminated with evidence of brinelling.**	P78

29.	Opposite Drive End Bearing Brand	**koyo**	
30.	Opposite Drive End Bearing Number-	**6314**	P86

31.	Opposite Drive End Bearing Qty.	**1**	
32.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P90

33.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
34.	Opposite Drive End Bearing Insulation or Grounding Device?	**noe**
35.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**
36.	Opposite Drive End Bearing Condition	**water contaminated.**
37.	Drive End Seal	
38.	Opposite Drive End Seal	

Rotor Inspection

39.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
40.	Growler Test	
41.	Number of Rotor Bars	
42.	Rotor Condition	
43.	List the Parts needed for the Repair Below ***6316&6314 bearings. Sleeve D.E. housing fit.***	
44.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

45.	Shaft Runout			**0.002 inches**
46.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
47.	Coupling Fit Closest to Bearing Housing			
	0 Degrees	90 Degrees	120 Degrees	
48.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
49.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	3.1498	**3.1498**	**3.1498**	
50.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
51.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.7566	**2.7566**	**2.7565**	
52.	Opposite Drive End Bearing Shaft Fit Condition			**(P) Pass**
53.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		

Mechanical Fits- Bearing Housings

54.	Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
55.	Drive End - Endbell Bearing Fit Condition			**(F) Fail**
	Lip groove worn in.			
56.	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	5.9061	**5.9063**	**5.9063**	
57.	Opposite Drive End - Endbell Bearing Fit Condition			**(P) Pass**
58.	Bearing Cap Condition			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
59.	End Bell Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
60.	List Machine Work Needed Below			
	Re-see e drive end housing fit.			
61.	Technician			**Terrence Holland**

Dynamic Balance Report

62. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

63. Initial Balance Readings

Drive End	Opposite Drive End

64. Final Balance Readings

Drive End	Opposite Drive End

65. Technician

Rewind

66. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

67. Core Hot Spot Test

Pre-Burnout	Post-Burnout

68. Post Rewind Electrical Test- Insulation Resistance

69. Post Rewind Polarization Index

70. Post Rewind Winding Resistance

1-2	1-3	2-3

71. Post Rewind Surge Test

72. Post Rewind Hi-Pot

73. Technician

Root Cause of Failure

74. Failure locations

75. Root cause of failure

Mechanical Fits- Rotor - Post Repair

76. Shaft Runout Post Repair

77. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

78. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

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

0 Degrees	60 Degrees	120 Degrees

80. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

81. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

82.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
83.	Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair			
84.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
85.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
86.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
87.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
88.	End Bell Repair Sign-off		
Assembly			
89.	QC Check All Parts for Cleanliness Prior to Assembly		
90.	Photograph All Major Components prior to assembly		
91.	Final Insulation Resistance Test		
92.	Assembled Shaft Endplay		
93.	Assembled Shaft Runout		
94.	Test Run Voltage		
	Volts	Volts	Volts
95.	Test Run Amperage		
	Amps	Amps	Amps
96.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
97.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
98.	Ambient Temperature - Fahrenheit		
99.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
100.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
101.	Document Final Condition with Pictures after paint		
102.	Final Pics and QC Review		