



**KEEPING YOUR FACILITY UP TO SPEED**  
— EVERY DAY SINCE 1946 —

LR Motor Shop Repairs

**Job Number 103347**

Prepared for Sage V Foods

5901 SLOAN DRIVE  
LITTLE ROCK AR 72206

# Table of Contents



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

## AC Inspection as Found

Sage V Foods  
5901 SLOAN DRIVE  
LITTLE ROCK, AR 72206

FolderID: 103347  
FormID: 21257485

### AC Inspection - Rev. 2

Location: MOTOR SHOP LR

Serial Number:

Description: 20HP NIDEC MOTOR/PEERLESS PUMP

Hi-Speed Job Number:	103347
Manufacturer:	US Motors/Nidec
Product Number:	FK51
Spec/ID #:	B087745544-0056M0004
HP/kW:	20 (HP)
RPM:	1770 (RPM)
Frame:	256JM
Voltage:	208-230/460
Current:	53.0-47.0/23.5
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.25
Enclosure:	TEFC
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	Propeller
Date Received:	08/09/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
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: ● 11 - Good

### Overall Condition

1. Report Date

08/12/2024

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4. Describe the Overall Condition of the Equipment as Received	
<i>Serviceable</i>	
5. Distance from the end of the shaft to the Coupling/Sheave	inches
<i>Pump</i>	
6. Report Date [COPY]	08/12/2024
<b>Initial Mechanical/Electrical</b>	
7. Does Shaft Turn Freely?	(Y) Yes
8. Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
9. Does Shaft Have Visible Damage?	(No) No
10. Assembled Shaft Runout	Inches
<i>Na</i>	
11. Assembled Shaft End Play	inches
<i>Na</i>	
12. Air Gap Variation <10%	
<i>Na</i>	
13. Lead Condition	(P) Pass



14. Lead Length	12 Inches
15. Does it have Lugs?, If so what is the Stud Size?	(No) No
16. Lead Numbers	1-12
17. Frame Condition	pass

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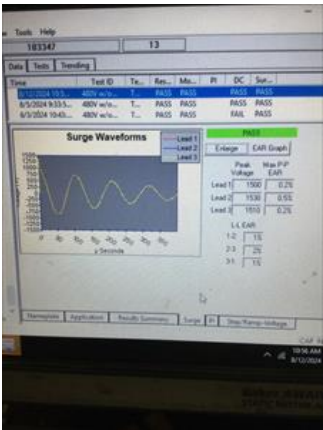
19. Broken or Missing Components

Na

Initial Electrical Inspection

20. Insulation Resistance/Megger	43834 Megohms	
21. Winding Resistance		
1-2	1-3	2-3
0.460	0.456	0.461

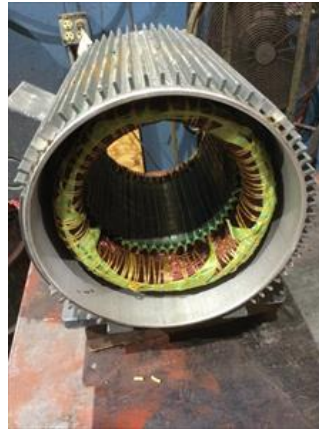
22. Perform Surge Test



23. Number of Stator Slots

24. Stator Condition

wash and bake



25. Stator Thermistors/Ohms

Na

26. Stator Overloads/Ohms

Na

### Mechanical Inspection

27. Drive End Bearing Brand

Koyo

28. Drive End Bearing Number-

6310 ZZ



29. Drive End Bearing Qty.

1

30. Drive End Bearing Type

(Ball) Ball Bearing

31. Drive End Lubrication Type

(Grease) Grease Lubricated

32. Drive End Bearing Insulation or Grounding Device?

A

33. Drive End Wavy Washer/Snap-Ring Other Retention Device?

Na



34. Drive End Bearing Condition

normal wear



35. Opposite Drive End Bearing Brand

SKF

36. Opposite Drive End Bearing Number-

6207ZZ



37. Opposite Drive End Bearing Qty.

1

38. Opposite Drive End Bearing Type

(Ball) Ball Bearing

39. Opposite Drive End Lubrication Type

(Grease) Grease Lubricated

40. Opposite Drive End Bearing Insulation or Grounding Device?

Na

41. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?

wavy washer

42. Opposite Drive End Bearing Condition

normal wear



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43. Drive End Seal

ceramic carbon pump seal



44. Opposite Drive End Seal

Na

### Rotor Inspection

45. Rotor Type/Material

(Squirrel Aluminum) Squirrel  
Cage Aluminum Die Cast



46. Growler Test

(Pass) Pass

47. Number of Rotor Bars

40

48. Rotor Condition

pass

49. List the Parts needed for the Repair Below

1-6310 Bearing. 1- 6207 Bearing

50. Signature of Technician that Disassembled Motor

RW

### Mechanical Fits- Rotor

51. Shaft Runout

0.0003 inches

52. Rotor Runout

Drive End Bearing Fit

Rotor Body

Opposite Drive End Bearing

Na

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53. Coupling Fit Closest to Bearing Housing		
0 Degrees	90 Degrees	120 Degrees
Na		
54. Coupling Fit Closest to the end of the Shaft		
0 Degrees	60 Degrees	120 Degrees
Na		
55. Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
1.969	1.969	1.969
56. Drive End Bearing Shaft Fit Condition		(P) Pass



57. Opposite Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
1.3784	1.3784	1.3784
58. Opposite Drive End Bearing Shaft Fit Condition		(P) Pass



59. Shaft Air Seal Fits	
Drive End Air Seal	Opposite Drive End Air Seal
Na	

### Mechanical Fits- Bearing Housings

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60. Drive End - Endbell Bearing Fit			
0 Degrees	60 Degrees	120 Degrees	
4.3311	4.3311	4.3311	
61. Drive End - Endbell Bearing Fit Condition			(P) Pass



62. Opposite Drive End - Endbell Bearing Fit			
0 Degrees	60 Degrees	120 Degrees	
2.8354	2.8353	2.8352	
63. Opposite Drive End - Endbell Bearing Fit Condition			(P) Pass



64. Bearing Cap Condition		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
pass		
65. End Bell Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
pass		
66. List Machine Work Needed Below		
Na		
67. Technician		RW
		
 Co sign TRH		

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Root Cause of Failure

68. Failure locations
- Pump impeller and housing wear ring bad .Impeller needs to be replaced it



Resurfaced impeller seat. Finish dia. 6.060"  
Gary



Installed new bowl wear ring. Finish I.D. 6.079  
Gary

69. Root cause of failure
- Impeller has lots of wear in the blades

Dynamic Balance Report

70. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade
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71. Initial Balance Readings

Drive End	Opposite Drive End
0.15	0.39

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Opposite Drive End



RW

**(Complete) Complete**







76. Final Insulation Resistance Test			Megohms
Pass the Hi pot			
77. Assembled Shaft Endplay			inches
78. Assembled Shaft Runout			0.0004 inches
79. Test Run Voltage			
Volts	Volts	Volts	
460	458	459	



Co sign DM

80. Test Run Amperage		
Amps	Amps	Amps
6.9	6.9	6.7



81. Drive End Vibration Readings - Inches Per Second		
Horizontal	Vertical	Axial
82. Opposite Drive End Vibration Readings - Inches Per Second		
Horizontal	Vertical	Axial
83. Ambient Temperature - Fahrenheit		
84. Drive End Bearing Temps - Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
85. Opposite Drive End Bearing Temps - Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
86. Document Final Condition with Pictures after paint		

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87. Final Pics and QC Review

RW

Co sign TRH



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