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

# AC Inspection as Found

**Sage V Foods**
5901 SLOAN DRIVE
LITTLE ROCK, AR 72206

FolderID: 101627
FormID: 17347485

**AC Inspection - Rev. 2**

| | |
|---|---|
| **Location:** | MOTOR SHOP LR |
| **Serial Number:** | |
| **Description:** | 50HP BALDOR |

| | |
|---|---|
| **Hi-Speed Job Number:** | 101627 |
| **Manufacturer:** | Baldor |
| **Serial Number:** | C2204261427 |
| **HP/kW:** | 50 (HP) |
| **RPM:** | 1770 (RPM) |
| **Frame:** | 326TD |
| **Voltage:** | 230 / 460 |
| **Current:** | 117-57 |
| **Phase:** | Three |
| **Hz:** | 60 (Hz) |
| **Service Factor:** | 1.15 |
| **Enclosure:** | TEFC |
| **J-box Included:** | Complete |
| **Coupling/Sheave:** | None |
| **Date Received:** | 07/18/2023 |
| **Repair Stage:** | Final |

Priorities Found: **1 - High** **8 - 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<br>***Serviceable*** | |
| **Initial Mechanical/Electrical** | | | |
| | 5. | Does Shaft Turn Freely? | **(Yes) Yes** |
| | 6. | Does Shaft Have Visible Damage? | **(Yes) Yes** P17 |
| | | ***Key way wallowed.*** | |

| | | | |
|---|---|---|---|
| | 7. | Assembled Shaft Runout | **0.9 Inches** |
| | 8. | Assembled Shaft End Play | |
| | 9. | Air Gap Variation <10% | |
| | 10. | Lead Condition | **(P) Pass** |
| | 11. | Lead Length | |

| | | | |
|---|---|---|---|
| 12. | Lead Numbers | **1-9** | |
| 13. | Stator Temperature Detector Rating and Function | | |
| | Quantity | Rating | Quantity Passed |
| | | | |
| 14. | Bearing Temperature Detector Rating and Function | | |
| | Quantity | Rating | Quantity Passed |
| | | | |
| 15. | Frame Condition | **pass** | P105 |

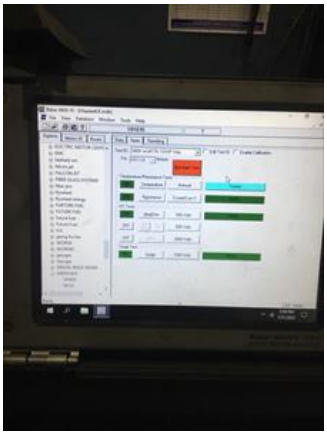
| | | | |
|---|---|---|---|
| 16. | Fan Condition | **(P) Pass** | P109 |

| | | | |
|---|---|---|---|
| 17. | Heater Quantity, Ratings | | |
| | Quantity | Volts/Watts | Pass/Fail |
| | | | |
| 18. | Broken or Missing Components | | |

## Initial Electrical Inspection

| | | | |
|---|---|---|---|
| 19. | Insulation Resistance/Megger | | |
| 20. | Winding Resistance | | |
| | 1-2 | 1-3 | 2-3 |

| | | | |
|---|---|---|---|
| 21. | Perform Surge Test | **(P) Pass** | P58 |



| | | | |
|---|---|---|---|
| 22. | Number of Stator Slots | **48 Megohms** | |
| 23. | Stator Condition | **pass** | |
| 24. | Stator Thermistors/Ohms | **none** | |
| 25. | Stator Overloads/Ohms | **none** | |

## Mechanical Inspection

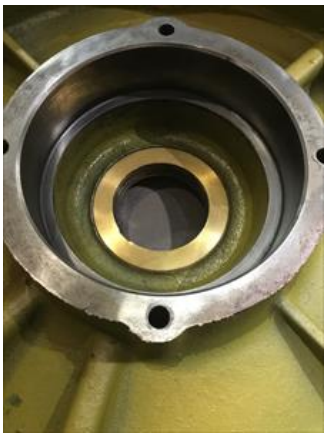
| | | | |
|---|---|---|---|
| 26. | Drive End Bearing Brand | **Peer** | |
| 27. | Drive End Bearing Number- | **6312** | P28 |

| | | | |
|---|---|---|---|
| 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? | **star washer and gland nut** | |
| 33. | Drive End Bearing Condition | **replace** | |
| 34. | Opposite Drive End Bearing Brand | **PEER** | |

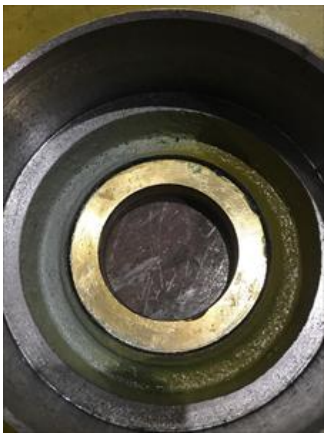
| | | | |
|---|---|---|---|
| 35. | Opposite Drive End Bearing Number- | **6312** | P99 |

| | | | |
|---|---|---|---|
| 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? | **wavy washer** | |
| 41. | Opposite Drive End Bearing Condition | **replace** | P116 |

| | | | |
|---|---|---|---|
| 42. | Drive End Seal | **in pro** | P119 |



| | | | |
|---|---|---|---|
| 43. | Opposite Drive End Seal | **in pro** | P121 |



| | | | |
|---|---|---|---|
| 44. | DE Sleeve Bearing Inside Diameter | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 45. | DE Sleeve Bearing Outside Diameter | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 46. | DE Sleeve Bearing Housing Inside Diameter | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 47. | DE Sleeve Bearing to Housing Clearance | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 48. | ODE Sleeve Bearing Inside Diameter | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 49. | ODE Sleeve Bearing Outside Diameter | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 50. | ODE Sleeve Bearing Housing Inside Diameter | | |
| | 0 degrees | 120 degrees | 240 degrees |
| 51. | ODE Sleeve Bearing to Housing Clearance | | |
| | 0 degrees | 120 degrees | 240 degrees |

## Rotor Inspection

| | | | |
|---|---|---|---|
| 52. | Rotor Type/Material | **(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast** | P3 |

| | | | |
|---|---|---|---|
| 53. | Growler Test | **(Pass) Pass** | |
| 54. | Number of Rotor Bars | **40** | |
| 55. | Rotor Condition | **shaft replacement needed.** | P40 |

***Shaft bent more than .90. And key way wallowed.***

| | | |
|---|---|---|
| 56. | List the Parts needed for the Repair Below | |

***New shaft, and new bearings.***

| | | |
|---|---|---|
| 57. | Signature of Technician that Disassembled Motor | **Terrence Holland** |

## Mechanical Fits- Rotor

| | | |
|---|---|---|
| 58. | Shaft Runout | **0.9 inches** |
| 59. | Rotor Runout | |

| | | |
|---|---|---|
| Drive End Bearing Fit | Rotor Body | Opposite Drive End Bearing |

| | | |
|---|---|---|
| 60. | Coupling Fit Closest to Bearing Housing | |

| | | |
|---|---|---|
| 0 Degrees | 90 Degrees | 120 Degrees |

61. Coupling Fit Closest to the end of the Shaft

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|

62. Drive End Bearing Shaft Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|

*Needs new shaft*

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

64. Opposite Drive End Bearing Shaft Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **2.363** | **2.3632** | **2.363** |

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

66. Shaft Air Seal Fits

| Drive End Air Seal | Opposite Drive End Air Seal |
|---|---|

## Mechanical Fits- Bearing Housings

67. Drive End - Endbell Bearing Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **5.119** | **5.1188** | **5.1188** |

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

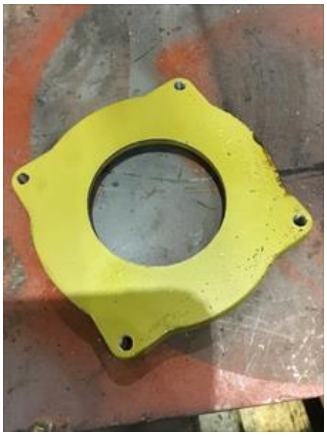
69. Opposite Drive End - Endbell Bearing Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **5.1187** | **5.1185** | **5.1186** |

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

71. Bearing Cap Condition P52

| Drive End Bearing Cap | Opposite Drive End Bearing Cap |
|---|---|
| **pass** | |



72. End Bell Air Seal Fits

| Drive End Air Seal | Opposite Drive End Air Seal |
|---|---|

73. List Machine Work Needed Below

*New shaft*

74. Technician **Terrence Holland**

## Dynamic Balance Report

75. Rotor Weight and Balance Grade

| Rotor Weight | Balance Grade |
|---|---|
| | |

76. Initial Balance Readings

| Drive End | Opposite Drive End |
|---|---|
| | |

77. Final Balance Readings

| Drive End | Opposite Drive End |
|---|---|
| | |

78. Technician

## Rewind

79. Core Test Results - Watts loss per Pound

| Pre-Burnout | Post Burnout |
|---|---|
| | |

80. Core Hot Spot Test

| Pre-Burnout | Post-Burnout |
|---|---|
| | |

81. Post Rewind Electrical Test- Insulation Resistance

82. Post Rewind Polarization Index

83. Post Rewind Winding Resistance

| 1-2 | 1-3 | 2-3 |
|---|---|---|
| | | |

84. Post Rewind Surge Test

85. Post Rewind Hi-Pot

86. Technician

## Root Cause of Failure

87. Failure locations

88. Root cause of failure

## Mechanical Fits- Rotor - Post Repair

89. Shaft Runout Post Repair

90. Rotor Runout Post Repair

| Drive End Bearing Fit | Rotor Body | Opposite Drive End Bearing |
|---|---|---|
| | | |

91. Coupling Fit Closest to Bearing Housing Post Repair

| 0 Degrees | 90 Degrees | 120 Degrees |
|---|---|---|
| | | |

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

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| | | |

| | | | |
|---|---|---|---|
| 93. | Drive End Bearing Shaft Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 94. | Opposite Drive End Bearing Shaft Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 95. | Shaft Air Seal Fits Post Repair | | |
| | Drive End Air Seal | Opposite Drive End Air Seal | |
| 96. | Shaft Repair Sign-off | | |

**Mechanical Fits- Bearing Housings - Post Repair**

| | | | |
|---|---|---|---|
| 97. | Drive End - Endbell Bearing Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 98. | Opposite Drive End - Endbell Bearing Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 99. | Bearing Cap Condition Post Repair | | |
| | Drive End Bearing Cap | Opposite Drive End Bearing Cap | |
| 100. | End Bell Air Seal Fits Post Repair | | |
| | Drive End Air Seal | Opposite Drive End Air Seal | |
| 101. | DE Sleeve Bearing Inside ID Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |
| 102. | DE Sleeve Bearing Outside ID Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |
| 103. | DE Sleeve Bearing Inside OD Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |
| 104. | DE Sleeve Bearing Outside OD Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |
| 105. | End Bell Repair Sign-off | | |
| 106. | ODE Sleeve Bearing Inside ID Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |
| 107. | ODE Sleeve Bearing Outside ID Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |
| 108. | ODE Sleeve Bearing Inside OD Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |

| | | | |
|---|---|---|---|
| 109. | ODE Sleeve Bearing Outside OD Post Repair | | |
| | Measure 1 | Measure 2 | Measure 3 |

## Assembly

| | | | |
|---|---|---|---|
| 110. | QC Check All Parts for Cleanliness Prior to Assembly | | |
| 111. | Photograph All Major Components prior to assembly | | |
| 112. | Final Insulation Resistance Test | | |
| 113. | Assembled Shaft Endplay | | |
| 114. | Assembled Shaft Runout | | |
| 115. | Test Run Voltage | | |
| | Volts | Volts | Volts |
| 116. | Test Run Amperage | | |
| | Amps | Amps | Amps |
| 117. | Drive End Vibration Readings - Inches Per Second | | |
| | Horizontal | Vertical | Axial |
| 118. | Opposite Drive End Vibration Readings - Inches Per Second | | |
| | Horizontal | Vertical | Axial |
| 119. | Ambient Temperature - Fahrenheit | | |
| 120. | Drive End Bearing Temps - Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |
| 121. | Drive End Bearing Temps - Fahrenheit 20-30 Minutes | | |
| | 20 Minutes | 25 Minutes | 30 Minutes |
| 122. | Drive End Bearing Temps - Fahrenheit 35-45 Minutes | | |
| | 35 Minutes | 40 Minutes | 45 Minutes |
| 123. | Drive End Bearing Temps - Fahrenheit 50-60 Minutes | | |
| | 50 Minutes | 55 Minutes | 60 Minutes |
| 124. | Opposite Drive End Bearing Temps - Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |
| 125. | Opposite Drive End Bearing Temps - Fahrenheit 20-30 Minutes | | |
| | 20 Minutes | 25 Minutes | 30 Minutes |
| 126. | Opposite Drive End Bearing Temps - Fahrenheit 35-45 Minutes | | |
| | 35 Minutes | 40 Minutes | 45 Minutes |
| 127. | Opposite Drive End Bearing Temps - Fahrenheit 50-60 Minutes | | |
| | 50 Minutes | 55 Minutes | 60 Minutes |

| | | | |
|---|---|---|---|
| 128. | Stator Temperatures- Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |
| 129. | Stator Temperatures- Fahrenheit 20-30 Minutes | | |
| | 20 Minutes | 25 Minutes | 30 Minutes |
| 130. | Stator Temperatures- Fahrenheit 35-45 Minutes | | |
| | 35 Minutes | 40 Minutes | 45 Minutes |
| 131. | Stator Temperatures- Fahrenheit 50-60 Minutes | | |
| | 50 Minutes | 55 Minutes | 60 Minutes |
| 132. | Document Final Condition with Pictures after paint | | |
| 133. | Final Pics and QC Review | | |