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

# AC Inspection as Found

**Georges Inc**
**1810 S. St. Louis Street**
**Batesville, AR 72501**

FolderID: 102091
FormID: 18432396

### AC Inspection - Rev. 2

| | |
|---|---|
| **Location:** | Shop |
| **Serial Number:** | 109190 B |

**Description:**3KW DERTEC 1800RPM 100L STAINLESS STEAL WITH GEARBOX

| | |
|---|---|
| **Hi-Speed Job Number:** | 102091 |
| **Manufacturer:** | Other |
| **Product Number:** | FP22SS 100L2-4 B14A |
| **Serial Number:** | 109190 B |
| **HP/kW:** | 3 (kW) |
| **RPM:** | 1750 (RPM) |
| **Frame:** | 100L |
| **Voltage:** | 230 / 460 |
| **Current:** | 9.03/5.2 |
| **Phase:** | Three |
| **Hz:** | 60 (Hz) |
| **Service Factor:** | 1.23 |
| **Enclosure:** | TEFC |
| **J-box Included:** | Complete |
| **Coupling/Sheave:** | Gear |
| **Bearing RTDs:** | No |
| **Stator RTDs:** | No |
| **Heaters:** | No |
| **Winding Type :** | Random Wound |
| **Bearing Type:** | Rolling Element |

Priorities Found: **1 - High** **6 - Good**

## Overall Condition

1. Report Date

2. Nameplate Picture P37

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

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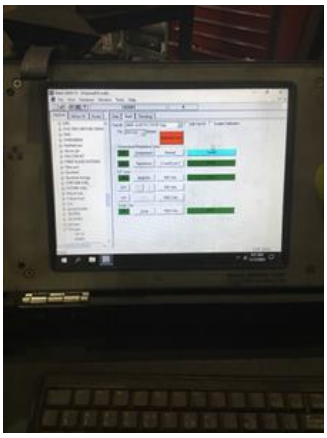

| | | | | |
|---|---|---|---|---|
| | 4. | Describe the Overall Condition of the Equipment as Received<br>***Serviceable*** | | |
| | 5. | Distance from the end of the shaft to the Coupling/Sheave | **inches** | |
| **Initial Mechanical/Electrical** | | | | |
| ● | 6. | Does Shaft Turn Freely? | **(Yes) Yes** | |
| | 7. | Does Shaft Have Visible Damage? | **(No) No** | P20 |

| | | | | |
|---|---|---|---|---|
| | 8. | Assembled Shaft Runout | | |
| | 9. | Assembled Shaft End Play | | |
| | 10. | Air Gap Variation <10% | | |
| ● | 11. | Lead Condition | **(P) Pass** | |
| | 12. | Lead Length | | |

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| | | | | |
|---|---|---|---|---|
| | 13. | Lead Numbers | **W1-W6** | |
| | 14. | Frame Condition | **pass** | |
| ● | 15. | Fan Condition | **(P) Pass** | P96 |

| | | | | |
|---|---|---|---|---|
| | 16. | Broken or Missing Components | **fan cover** | P100 |

## Initial Electrical Inspection

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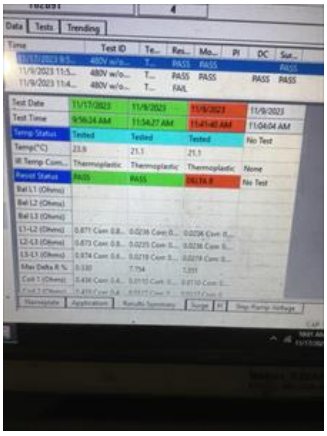
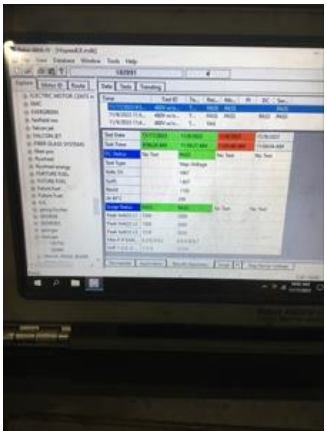
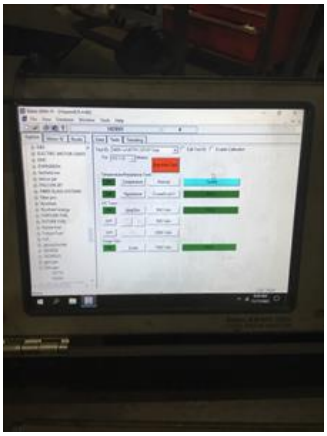
| | | | |
|---|---|---|---|
| 17. | Insulation Resistance/Megger | **Megohms** | P8 |





| | | | | |
|---|---|---|---|---|
| 18. | Winding Resistance | | | |
| | 1-2 | 1-3 | 2-3 | |

| | | | |
|---|---|---|---|
| 19. | Perform Surge Test | | P57 |



| | | |
|---|---|---|
| 20. | Number of Stator Slots | **36** |
| 21. | Stator Condition | **pass** |
| 22. | Stator Thermistors/Ohms | |
| 23. | Stator Overloads/Ohms | **.2** |

## Mechanical Inspection

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| | | | |
|---|---|---|---|
| 24. | Drive End Bearing Brand | | P14 |

| | | | |
|---|---|---|---|
| 25. | Drive End Bearing Number- | **6306 2RS** | P30 |

| | | |
|---|---|---|
| 26. | Drive End Bearing Qty. | **1** |
| 27. | Drive End Bearing Type | **(Ball) Ball Bearing** |
| 28. | Drive End Lubrication Type | **(Grease) Grease Lubricated** |
| 29. | Drive End Bearing Insulation or Grounding Device? | **none** |
| 30. | Drive End Wavy Washer/Snap-Ring Other Retention Device? | **none** |
| 31. | Drive End Bearing Condition | **replace** |
| 32. | Opposite Drive End Bearing Brand | P87 |

| | | | |
|---|---|---|---|
| 33. | Opposite Drive End Bearing Number- | **6306 2RS** | P90 |

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| | | | |
|---|---|---|---|
| 34. | Opposite Drive End Bearing Qty. | **1** | |
| 35. | Opposite Drive End Bearing Type | **(Ball) Ball Bearing** | |
| 36. | Opposite Drive End Lubrication Type | **(Grease) Grease Lubricated** | |
| 37. | Opposite Drive End Bearing Insulation or Grounding Device? | **none** | |
| 38. | Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device? | **wavy washer** | P99 |

| | | | |
|---|---|---|---|
| 39. | Opposite Drive End Bearing Condition | **replace** | |
| 40. | Drive End Seal | **30*47*7** | P102 |

| | | |
|---|---|---|
| 41. | Opposite Drive End Seal | **30*47*7** |

## Rotor Inspection

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| | | |
|---|---|---|
| 42. | Rotor Type/Material | **(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast** |

| | | |
|---|---|---|
| 43. | Growler Test | **(Pass) Pass** |
| 44. | Number of Rotor Bars | **31** |
| 45. | Rotor Condition | **pass** |
| 46. | List the Parts needed for the Repair Below<br>***(2) 6306 2RS bearings.*** | |
| 47. | Signature of Technician that Disassembled Motor | **Terrence Holland** |

## Mechanical Fits- Rotor

| | | |
|---|---|---|
| 48. | Shaft Runout | **0.001 inches** |
| 49. | Rotor Runout | |

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

50. Coupling Fit Closest to Bearing Housing

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

51. Coupling Fit Closest to the end of the Shaft

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

52. Drive End Bearing Shaft Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **1.1816** | **1.1817** | **1.1817** |

| | | |
|---|---|---|
| 53. | Drive End Bearing Shaft Fit Condition | **(P) Pass** |

54. Opposite Drive End Bearing Shaft Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **1.1816** | **1.1815** | **1.1815** |

| | | |
|---|---|---|
| 55. | Opposite Drive End Bearing Shaft Fit Condition | **(P) Pass** |

56. Shaft Air Seal Fits

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

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## Mechanical Fits- Bearing Housings

57. Drive End - Endbell Bearing Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **2.8351** | **2.8352** | **2.8351** |

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

59. Opposite Drive End - Endbell Bearing Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **2.8356** | **2.8357** | **2.8356** |

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

61. Bearing Cap Condition

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

62. End Bell Air Seal Fits

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

63. List Machine Work Needed Below

***ODE housing.***

64. Technician **Terrence Holland**

## Dynamic Balance Report

65. Rotor Weight and Balance Grade

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

66. Initial Balance Readings

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

67. Final Balance Readings

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

68. Technician

## Rewind

69. Core Test Results - Watts loss per Pound

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

70. Core Hot Spot Test

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

71. Post Rewind Electrical Test- Insulation Resistance

72. Post Rewind Polarization Index

73. Post Rewind Winding Resistance

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

74. Post Rewind Surge Test

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| | |
|---|---|
| 75. | Post Rewind Hi-Pot |
| 76. | Technician |

**Root Cause of Failure**

| | |
|---|---|
| 77. | Failure locations |
| 78. | Root cause of failure |

**Mechanical Fits- Rotor - Post Repair**

| | |
|---|---|
| 79. | Shaft Runout Post Repair |
| 80. | Rotor Runout Post Repair |

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

| | |
|---|---|
| 81. | Coupling Fit Closest to Bearing Housing Post Repair |

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

| | |
|---|---|
| 82. | Coupling Fit Closest to the end of the Shaft Post Repair |

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

| | |
|---|---|
| 83. | Drive End Bearing Shaft Fit Post Repair |

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

| | |
|---|---|
| 84. | Opposite Drive End Bearing Shaft Fit Post Repair |

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

| | |
|---|---|
| 85. | Shaft Air Seal Fits Post Repair |

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

| | |
|---|---|
| 86. | Shaft Repair Sign-off |

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

| | |
|---|---|
| 87. | Drive End - Endbell Bearing Fit Post Repair |

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

| | |
|---|---|
| 88. | Opposite Drive End - Endbell Bearing Fit Post Repair |

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

| | |
|---|---|
| 89. | Bearing Cap Condition Post Repair |

| | |
|---|---|
| Drive End Bearing Cap | Opposite Drive End Bearing Cap |

| | |
|---|---|
| 90. | End Bell Air Seal Fits Post Repair |

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

| | |
|---|---|
| 91. | End Bell Repair Sign-off |

**Assembly**

| | |
|---|---|
| 92. | QC Check All Parts for Cleanliness Prior to Assembly |
| 93. | Photograph All Major Components prior to assembly |
| 94. | Final Insulation Resistance Test |
| 95. | Assembled Shaft Endplay |
| 96. | Assembled Shaft Runout |

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| | | | |
|---|---|---|---|
| 97. | Test Run Voltage | | |
| | Volts | Volts | Volts |
| 98. | Test Run Amperage | | |
| | Amps | Amps | Amps |
| 99. | Drive End Vibration Readings - Inches Per Second | | |
| | Horizontal | Vertical | Axial |
| 100. | Opposite Drive End Vibration Readings - Inches Per Second | | |
| | Horizontal | Vertical | Axial |
| 101. | Ambient Temperature - Fahrenheit | | |
| 102. | Drive End Bearing Temps - Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |
| 103. | Opposite Drive End Bearing Temps - Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |
| 104. | Document Final Condition with Pictures after paint | | |
| 105. | Final Pics and QC Review | | |

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