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

# AC Recondition As Found

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

FolderID: 100836
FormID: 15814466

### AC Recondition - Rev. 2

| | |
|---|---|
| **Location:** | Shop |
| **Serial Number:** | 1MAF34079-013 NP |
| **Description:** | 40HP AQUA JET AERATOR 1200RPM 364LPZ |

| | |
|---|---|
| **Hi-Speed Job Number:** | 100836 |
| **Manufacturer:** | Reliance |
| **Product Number:** | 2404001 |
| **Serial Number:** | 1MAF34079-013 NP |
| **HP/kW:** | 40 (HP) |
| **RPM:** | 1185 (RPM) |
| **Frame:** | 364LPZ |
| **Voltage:** | 460 |
| **Current:** | 47.7 |
| **Phase:** | Three |
| **Hz:** | 60 (Hz) |
| **Service Factor:** | 1.15 |
| **Enclosure:** | TEFC |
| **J-box Included:** | Complete |
| **Coupling/Sheave:** | Propeller |
| **Bearing RTDs:** | No |
| **Stator RTDs:** | No |
| **Repair Stage:** | Final |
| **Heaters:** | No |
| **Winding Type :** | Random Wound |
| **Bearing Type:** | Rolling Element |

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

   ***Dirty/serviceable.***

5. Distance from the end of the shaft to the Coupling/Sheave

**Initial Mechanical/Electrical**

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

| | | | |
|---|---|---|---|
| | 7. Does Shaft Have Visible Damage? | **(No) No** | P20 |

| | | | |
|---|---|---|---|
| | 8. Assembled Shaft Runout | **0.005 Inches** | |
| | 9. Assembled Shaft End Play | | |
| | 10. Air Gap Variation <10% | | |
| | 11. Lead Condition | **(P) Pass** | P53 |

| | | | |
|---|---|---|---|
| | 12. Lead Length | **9 Inches** | |
| | 13. Frame Condition | **pass** | |
| | 14. Fan Condition | **(P) Pass** | P90 |

| | | | |
|---|---|---|---|
| | 15. Broken or Missing Components | **none** | |

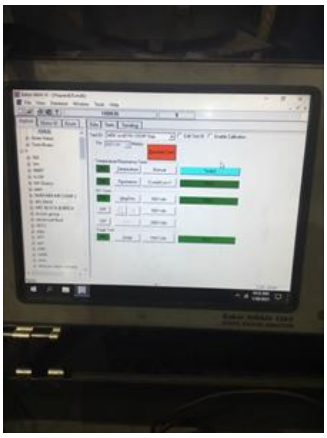
## Initial Electrical Inspection

| | | | |
|---|---|---|---|
| 16. | Insulation Resistance/Megger | **Megohms** | P8 |

| | | | |
|---|---|---|---|
| 17. | Winding Resistance | | |

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

| | | | |
|---|---|---|---|
| 18. | Perform Surge Test | **(P) Pass** | P55 |



| | | | |
|---|---|---|---|
| 19. | Number of Stator Slots | | |
| 20. | Stator Condition | **pass** | |

## Mechanical Inspection

| | | | |
|---|---|---|---|
| 21. | Drive End Bearing Number- | **6215 C3 DBL Wide DBL row.** | P12 |

| | | |
|---|---|---|
| 22. | Drive End Bearing Qty. | **1** |
| 23. | Drive End Bearing Type | **(Ball) Ball Bearing** |

| | | | |
|---|---|---|---|
| 24. | Drive End Lubrication Type | **(Grease) Grease Lubricated** | |
| 25. | Drive End Bearing Insulation or Grounding Device? | **none** | |
| 26. | Drive End Wavy Washer/Snap-Ring Other Retention Device? | **none** | |
| 27. | Drive End Bearing Condition | **replace** | P71 |

| | | | |
|---|---|---|---|
| 28. | Opposite Drive End Bearing Number- | **6313 C3** | P82 |


| | | | |
|---|---|---|---|
| 29. | Opposite Drive End Bearing Qty. | **1** | |
| 30. | Opposite Drive End Bearing Type | **(Ball) Ball Bearing** | |
| 31. | Opposite Drive End Lubrication Type | **(Grease) Grease Lubricated** | |
| 32. | Opposite Drive End Bearing Insulation or Grounding Device? | **none** | |
| 33. | Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device? | **wavy washer** | P93 |

| | | | |
|---|---|---|---|
| 34. | Opposite Drive End Bearing Condition | **replace** | |
| 35. | Drive End Seal | | |
| 36. | Opposite Drive End Seal | | |

## Rotor Inspection

| | | | |
|---|---|---|---|
| 37. | Rotor Type/Material | **(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast** | P3 |

| | | | |
|---|---|---|---|
| 38. | Growler Test | **(Pass) Pass** | |
| 39. | Number of Rotor Bars | | |
| 40. | Rotor Condition | **pass** | |
| 41. | List the Parts needed for the Repair Below | | |
| 42. | Signature of Technician that Disassembled Motor | **Terrence Holland** | |

## Mechanical Fits- Rotor

| | | | |
|---|---|---|---|
| 43. | Shaft Runout | **0.005 inches** | |
| 44. | Rotor Runout | | |

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

45. Coupling Fit Closest to Bearing Housing

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

46. Coupling Fit Closest to the end of the Shaft

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

47. Drive End Bearing Shaft Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **2.9533** | **2.9534** | **2.9533** |

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

49. Opposite Drive End Bearing Shaft Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **2.5593** | **2.5593** | **2.5594** |

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

51. Shaft Air Seal Fits

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

## Mechanical Fits- Bearing Housings

52. Drive End - Endbell Bearing Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **5.1187** | **5.1188** | **5.1188** |

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

54. Opposite Drive End - Endbell Bearing Fit

| 0 Degrees | 60 Degrees | 120 Degrees |
|---|---|---|
| **5.5123** | **5.5123** | **5.5125** |

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

56. Bearing Cap Condition P51

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

57. End Bell Air Seal Fits

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

58. List Machine Work Needed Below

***None***

59. Technician **Terrence Holland**

## Dynamic Balance Report

60. Rotor Weight and Balance Grade

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

61. Initial Balance Readings

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

62. Final Balance Readings

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

63. Technician

## Rewind

64. Core Test Results - Watts loss per Pound

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

65. Core Hot Spot Test

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

66. Post Rewind Electrical Test- Insulation Resistance

67. Post Rewind Polarization Index

68. Post Rewind Winding Resistance

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

69. Post Rewind Surge Test

70. Post Rewind Hi-Pot

71. Technician

## Root Cause of Failure

72. Failure locations

73. Root cause of failure

## Mechanical Fits- Rotor - Post Repair

74. Shaft Runout Post Repair

75. Rotor Runout Post Repair

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

76. Coupling Fit Closest to Bearing Housing Post Repair

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

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

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

| | | | |
|---|---|---|---|
| 78. | Drive End Bearing Shaft Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 79. | Opposite Drive End Bearing Shaft Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 80. | Shaft Air Seal Fits Post Repair | | |
| | Drive End Air Seal | Opposite Drive End Air Seal | |
| 81. | Shaft Repair Sign-off | | |
| **Mechanical Fits- Bearing Housings - Post Repair** | | | |
| 82. | Drive End - Endbell Bearing Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 83. | Opposite Drive End - Endbell Bearing Fit Post Repair | | |
| | 0 Degrees | 60 Degrees | 120 Degrees |
| 84. | Bearing Cap Condition Post Repair | | |
| | Drive End Bearing Cap | Opposite Drive End Bearing Cap | |
| 85. | End Bell Air Seal Fits Post Repair | | |
| | Drive End Air Seal | Opposite Drive End Air Seal | |
| 86. | End Bell Repair Sign-off | | |
| **Assembly** | | | |
| 87. | Photograph All Major Components prior to assembly | | |
| 88. | Final Insulation Resistance Test | | |
| 89. | Assembled Shaft Endplay | | |
| 90. | Assembled Shaft Runout | | |
| 91. | Test Run Voltage | | |
| | Volts | Volts | Volts |
| 92. | Test Run Amperage | | |
| | Amps | Amps | Amps |
| 93. | Drive End Vibration Readings - Inches Per Second | | |
| | Horizontal | Vertical | Axial |
| 94. | Opposite Drive End Vibration Readings - Inches Per Second | | |
| | Horizontal | Vertical | Axial |
| 95. | Ambient Temperature - Fahrenheit | | |
| 96. | Drive End Bearing Temps - Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |

| | | | |
|---|---|---|---|
| 97. | Opposite Drive End Bearing Temps - Fahrenheit | | |
| | 5 Minutes | 10 Minutes | 15 Minutes |
| 98. | Final Test Run Sign-off | | |
| 99. | Document Final Condition with Pictures after paint | | |
| 100. | Final Pics and QC Review | | |