



## AC Inspection as Found

### Mondi

3501 Jefferson Pkway  
Pine Bluff, AR 71602

FolderID: 103469  
FormID: 21493147

#### AC Inspection - Rev. 2

Location: LITTLE ROCK MOTOR SHOP  
Serial Number: 8566150229  
Description: 15KW INGERSOLL-RAND

|  |                 |
|--|-----------------|
| Hi-Speed Job Number:                           | 103469          |
| Manufacturer:                                  | Ingersoll-Rand  |
| Spec/ID #:                                     | CCH: 23658566   |
| Serial Number:                                 | 8566150229      |
| HP/kW:   | 15 (kW)         |
| RPM:   | 970 (RPM)       |
| Voltage:                                       | Other           |
| Phase:   | Three           |
| Hz:  | 50 (Hz)         |
| Service Factor:                                | 1.15            |
| Enclosure:                                     | TEFC            |
| # of Leads:                                    | 6               |
| J-box Included:                                | Complete        |
| Coupling/Sheave:                               | Coupling        |
| Date Received:                                 | 09/03/2024      |
| 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: ● 2 - High ● 11 - Good

#### Overall Condition



1. Report Date

09/03/2024

2. Nameplate Picture

P37



3. Photos of all six sides of the machine.

P45







|                                      |   |         |
|--------------------------------------|---|---------|
| 4.                                   | Describe the Overall Condition of the Equipment as Received           |         |
|                                      | <i>Dirty</i>  |         |
| 5.                                   | Distance from the end of the shaft to the Coupling/Sheave             | inches  |
|                                      | <i>Flush</i>  |         |
| 6.                                   | Report Date [COPY]  |         |
| <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  |
| 11.                                  | Assembled Shaft End Play  | inches  |

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.



|     |  |          |
|-----|--|----------|
| 12. | Air Gap Variation <10%                           |          |
| 13. | Lead Condition                                   | (P) Pass |
| 14. | Lead Length                                      | 8 Inches |
| 15. | Does it have Lugs?, If so what is the Stud Size? |          |
|     | Yes  |          |
| 16. | Lead Numbers                                     | 1x6      |
| 17. | Frame Condition                                  | pass     |
| 18. | Fan Condition                                    | (P) Pass |
| 19. | Broken or Missing Components                     |          |

### Initial Electrical Inspection



|     |                              |         |    |
|-----|------------------------------|---------|----|
| 20. | Insulation Resistance/Megger | Megohms | P8 |
|-----|------------------------------|---------|----|

|                |             |                 |
|----------------|-------------|-----------------|
| Coil 1 (Ohms)  | 0.605       | Corr: 0.6...    |
| Coil 2 (Ohms)  | 0.605       | Corr: 0.6...    |
| Coil 3 (Ohms)  | 0.603       | Corr: 0.6...    |
| Megohm Stat... | PASS        | No Test         |
| Volts (V)      | 504         |                 |
| I(μA)          | 0.0006      |                 |
| Resist         | 804416      |                 |
| At 40°C        | 253375      |                 |
| Hi Status...   | N/A Test    | N/A Test        |
| Nameplate      | Application | Results Summary |

|     |                    |  |     |
|-----|--------------------|--|-----|
| 21. | Winding Resistance |  | P20 |
|-----|--------------------|--|-----|

1-2

1-3

2-3

|                |               |                 |
|----------------|---------------|-----------------|
| Test Time      | 12:53:37 PM   | 12:41:25        |
| IR Temp Cor... | Thermoplastic | None            |
| Resist Status  | PASS          | No Test         |
| Bal L1 (Ohms)  |               |                 |
| Bal L2 (Ohms)  |               |                 |
| Bal L3 (Ohms)  |               |                 |
| L1-L2 (Ohms)   | 0.403         | Corr: 0.4...    |
| L2-L3 (Ohms)   | 0.403         | Corr: 0.4...    |
| L3-L1 (Ohms)   | 0.403         | Corr: 0.4...    |
| Max Delta R %  | 0.206         |                 |
| Coil 1 (Ohms)  | 0.605         | Corr: 0.6...    |
| Coil 2 (Ohms)  | 0.605         | Corr: 0.6...    |
| Coil 3 (Ohms)  | 0.603         | Corr: 0.6...    |
| Hi Status...   | N/A Test      | N/A Test        |
| Nameplate      | Application   | Results Summary |



|                             |      |
|-----------------------------|------|
| 23. Number of Stator Slots  | 36   |
| 24. Stator Condition        | pass |
| 25. Stator Thermistors/Ohms |      |
| 26. Stator Overloads/Ohms   |      |

### Mechanical Inspection



|   |                            |
|---|----------------------------|
| 27. Drive End Bearing Brand                                 | SKF                        |
| 28. Drive End Bearing Number-                               | 6211                       |
| 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?       |                            |
| 33. Drive End Wavy Washer/Snap-Ring Other Retention Device? | 2 snap rings               |
| 34. Drive End Bearing Condition                             |                            |

P83

**Signs of fluting**



|  |                            |
|--|----------------------------|
| 35. Opposite Drive End Bearing Brand                                 | NSK                        |
| 36. Opposite Drive End Bearing Number-                               | 6309                       |
| 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?       |                            |
| 41. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device? | wavy washer                |

**Signs of fluting**



43. Drive End Seal **55-70-8**
44. Opposite Drive End Seal **45-68-8**




### Rotor Inspection

45. Rotor Type/Material **(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
46. Growler Test **(Pass) Pass**
47. Number of Rotor Bars **33**
48. Rotor Condition **pass**
49. List the Parts needed for the Repair Below  
 6211  
 6309  
 Seal/ 55-70-8  
 Seal/ 45-68-8

50. Signature of Technician that Disassembled Motor **Cw**

### Mechanical Fits- Rotor

51. Shaft Runout **inches**
52. Rotor Runout
- | Drive End Bearing Fit                            | Rotor Body    | Opposite Drive End Bearing |
|--|---------------|----------------------------|
| 53. Coupling Fit Closest to Bearing Housing      |               |                            |
| 0 Degrees  | 90 Degrees    | 120 Degrees                |
| 54. Coupling Fit Closest to the end of the Shaft |               |                            |
| 0 Degrees  | 60 Degrees    | 120 Degrees                |
| 55. Drive End Bearing Shaft Fit                  |               |                            |
| 0 Degrees  | 60 Degrees    | 120 Degrees                |
| <b>2.1658</b>                                    | <b>2.1658</b> | <b>2.1658</b>              |
56. Drive End Bearing Shaft Fit Condition **(P) Pass**

|   |  |                                |             |
|---|--|--------------------------------|-------------|
| 57.   | Opposite Drive End Bearing Shaft Fit               |                                |             |
|   | 0 Degrees  | 60 Degrees                     | 120 Degrees |
|   | 1.7717   | 1.7717                         | 1.7717      |
| 58.   | Opposite Drive End Bearing Shaft Fit Condition     |                                | (P) Pass    |
| 59.   | Shaft Air Seal Fits                                |                                |             |
|   | Drive End Air Seal                                 | Opposite Drive End Air Seal    |             |
| <b>Mechanical Fits- Bearing Housings</b>  |  |                                |             |
| 60.   | Drive End - Endbell Bearing Fit                    |                                |             |
|   | 0 Degrees  | 60 Degrees                     | 120 Degrees |
|   | 3.9388   | 3.9386                         | 3.9386      |
| 61.   | Drive End - Endbell Bearing Fit Condition          |                                | (P) Pass    |
| 62.   | Opposite Drive End - Endbell Bearing Fit           |                                |             |
|   | 0 Degrees  | 60 Degrees                     | 120 Degrees |
|   | 3.9383   | 3.9383                         | 3.9383      |
| 63.   | Opposite Drive End - Endbell Bearing Fit Condition |                                | (P) Pass    |
| 64.   | Bearing Cap Condition                              |                                |             |
|   | Drive End Bearing Cap                              | Opposite Drive End Bearing Cap |             |
| 65.   | End Bell Air Seal Fits                             |                                |             |
|   | Drive End Air Seal                                 | Opposite Drive End Air Seal    |             |
| 66.   | List Machine Work Needed Below                     |                                |             |
| 67.   | Technician   |                                | Cw          |
|                                   |  |                                |             |
|  Co sign: RRW                    |  |                                |             |
| <b>Root Cause of Failure</b>  |  |                                |             |
| 68.   | Failure locations                                  |                                |             |
|   | <i>Bearings</i>                                    |                                |             |
| 69.   | Root cause of failure                              |                                |             |
|   | <i>Contamination and fluting</i>                   |                                |             |
| <b>Dynamic Balance Report</b>  |  |                                |             |
| 70.   | Rotor Weight and Balance Grade                     |                                |             |
|   | Rotor Weight                                       | Balance Grade                  |             |

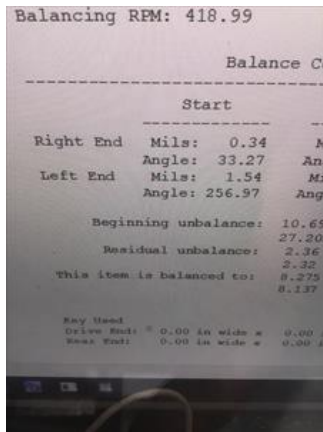


## 71. Initial Balance Readings

P11

Drive End

Opposite Drive End

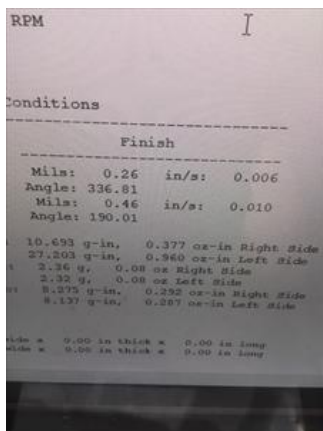


## 72. Final Balance Readings

P27

Drive End

Opposite Drive End



## 73. Technician

Cw

## Assembly

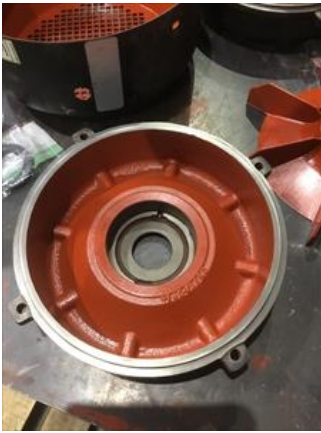


## 74. QC Check All Parts for Cleanliness Prior to Assembly

See below.

## 75. Photograph All Major Components prior to assembly

P17





|     |   |              |            |     |
|-----|---|--------------|------------|-----|
| 76. | Final Insulation Resistance Test                          | Megohms      |            |     |
|     | Pass  |              |            |     |
| 77. | Assembled Shaft Endplay                                   | 0 inches     |            |     |
| 78. | Assembled Shaft Runout                                    | 0.001 inches |            |     |
| 79. | Test Run Voltage  |              |            | P56 |
|     | Volts   | Volts        | Volts      |     |
|     | 459   | 458          | 461        |     |
|     |   |              |            |     |
| 80. | Test Run Amperage   |              |            |     |
|     | Amps  | Amps         | Amps       |     |
|     | 11.2  | 11           | 11         |     |
| 81. | Drive End Vibration Readings - Inches Per Second          |              |            |     |
|     | Horizontal  | Vertical     | Axial      |     |
|     | 0.02  | 0.02         |            |     |
| 82. | Opposite Drive End Vibration Readings - Inches Per Second |              |            |     |
|     | Horizontal  | Vertical     | Axial      |     |
|     | 0.02  | 0.02         | 0.01       |     |
| 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 |     |

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.

86. Document Final Condition with Pictures after paint

see below

87. Final Pics and QC Review

Terrence Holland

P132

*Terrence Holland*

Witness: RW

