



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

LR Motor Shop Repairs

**Job Number 100285**

Prepared for Powers Mechanical Services

5440 Northshore Drive  
North Little Rock AR 72118

# Table of Contents



Hi-Speed Industrial Service  
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901-873-5300

## AC Recondition As Found

### Powers Mechanical Services

5440 Northshore Drive  
North Little Rock, AR 72118

FolderID: 100285  
FormID: 14566629

#### AC Recondition - Rev. 2

Location: Shop  
Serial Number: G11T0047NPI 055  
Description: 40HP SIEMENS 1800RPM 324T

|                      |                     |
|----------------------|---------------------|
| Hi-Speed Job Number: | 100285              |
| Manufacturer:        | Siemens             |
| Product Number:      | 1LE24213AB112AA3    |
| Serial Number:       | G11T0047NPI 055     |
| HP/kW:               | 40 (HP)             |
| RPM:                 | 1780 (RPM)          |
| Frame:               | 324T                |
| Voltage:             | 460                 |
| Current:             | 46                  |
| Phase:               | Three               |
| Hz:                  | 60 (Hz)             |
| Service Factor:      | 1.15                |
| Enclosure:           | TEFC                |
| J-box Included:      | Complete            |
| Coupling/Sheave:     | Sheave              |
| Bearing RTDs:        | No                  |
| Stator RTDs:         | No                  |
| Repair Stage:        | Teardown Inspection |
| Heaters:             | No                  |
| Winding Type :       | Random Wound        |
| Bearing Type:        | Rolling Element     |

Priorities Found: ● 4 - High ● 4 - Good

#### Overall Condition

1. Report Date
2. Nameplate Picture



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|                                      |   |           |
|--------------------------------------|---|-----------|
| 3.                                   | Photos of all six sides of the machine.                                     |           |
| 4.                                   | Describe the Overall Condition of the Equipment as Received<br><i>Dirty</i> |           |
| 5.                                   | Distance from the end of the shaft to the Coupling/Sheave                   |           |
| <b>Initial Mechanical/Electrical</b> |   |           |
| ● 6.                                 | Does Shaft Turn Freely?   | (No) No   |
| 7.                                   | Does Shaft Have Visible Damage?   | (No) No   |
| 8.                                   | Assembled Shaft Runout  |           |
| 9.                                   | Assembled Shaft End Play  |           |
| 10.                                  | Air Gap Variation <10%  |           |
| ● 11.                                | Lead Condition  | (P) Pass  |
| 12.                                  | Lead Length   | 14 Inches |
| 13.                                  | Frame Condition   | pass      |

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14. Fan Condition

(P) Pass



15. Broken or Missing Components

*pulley coupling worn and broke along with a couple bolts for the covers*

**Initial Electrical Inspection**

16. Insulation Resistance/Megger

17. Winding Resistance

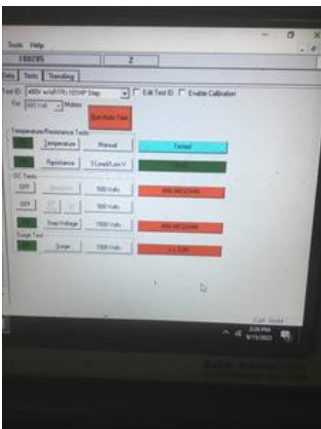
1-2

1-3

2-3

18. Perform Surge Test

(F) Fail



19. Stator Condition

**Mechanical Inspection**

20. Drive End Bearing Number- 6312

21. Drive End Bearing Qty. 1

22. Drive End Bearing Type (Ball) Ball Bearing

23. Drive End Lubrication Type (Grease) Grease Lubricated

24. Drive End Bearing Insulation or Grounding Device? na

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

26. Drive End Bearing Condition contamination


27. Opposite Drive End Bearing Number- 6312

28. Opposite Drive End Bearing Qty. 1

29. Opposite Drive End Bearing Type (Ball) Ball Bearing

30. Opposite Drive End Lubrication Type (Grease) Grease Lubricated

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|  |  |
|--|--|
| 31. Opposite Drive End Bearing Insulation or Grounding Device?                     | na   |
| 32. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?               | wavy washer  |
| 33. Opposite Drive End Bearing Condition   | water contamination                                    |
| 34. Drive End Seal   | na   |
| 35. Opposite Drive End Seal  | na   |
| <b>Rotor Inspection</b>  |  |
| 36. Rotor Type/Material  | (Squirrel Aluminum) Squirrel<br>Cage Aluminum Die Cast |
| 37. Growler Test   | (Pass) Pass  |
| 38. Number of Rotor Bars   |  |
| 39. Rotor Condition  | pass   |
| 40. List the Parts needed for the Repair Below<br><i>Bolts and pulley coupling</i> |  |
| 41. Signature of Technician that Disassembled Motor                                | Cw   |
|   |  |
| <b>Mechanical Fits- Rotor</b>  |  |
| 42. Shaft Runout   |  |
| 43. Rotor Runout   |  |
| Drive End Bearing Fit  | Rotor Body   |
| Opposite Drive End Bearing   |  |
| 44. Coupling Fit Closest to Bearing Housing  |  |
| 0 Degrees  | 90 Degrees   |
| 120 Degrees  |  |
| 45. Coupling Fit Closest to the end of the Shaft                                   |  |
| 0 Degrees  | 60 Degrees   |
| 120 Degrees  |  |
| 46. Drive End Bearing Shaft Fit  |  |
| 0 Degrees  | 60 Degrees   |
| 120 Degrees  |  |
| 2.3628   |  |
| 47. Drive End Bearing Shaft Fit Condition  | (P) Pass   |
| 48. Opposite Drive End Bearing Shaft Fit   |  |
| 0 Degrees  | 60 Degrees   |
| 120 Degrees  |  |
| 2.3626   |  |
| 49. Opposite Drive End Bearing Shaft Fit Condition                                 | (P) Pass   |
| 50. Shaft Air Seal Fits  |  |
| Drive End Air Seal   | Opposite Drive End Air Seal                            |
| <b>Mechanical Fits- Bearing Housings</b>   |  |
| 51. Drive End - Endbell Bearing Fit  |  |
| 0 Degrees  | 60 Degrees   |
| 120 Degrees  |  |
| Lips worn in   |  |
| 52. Drive End - Endbell Bearing Fit Condition                                      | (F) Fail   |

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|  |                                |             |
|--|--------------------------------|-------------|
| 53. Opposite Drive End - Endbell Bearing Fit           |                                |             |
| 0 Degrees  | 60 Degrees                     | 120 Degrees |
| 5.1196   |                                |             |
| 54. Opposite Drive End - Endbell Bearing Fit Condition | (F) Fail                       |             |
| 55. Bearing Cap Condition                              |                                |             |
| Drive End Bearing Cap                                  | Opposite Drive End Bearing Cap |             |



|   |                             |
|---|-----------------------------|
| 56. End Bell Air Seal Fits  |                             |
| Drive End Air Seal  | Opposite Drive End Air Seal |
| 57. List Machine Work Needed Below<br><i>Both end bell bearing fits</i>             |                             |
| 58. Technician  | Cw                          |
|  |                             |
| <b>Root Cause of Failure</b>  |                             |
| 59. Failure locations<br><i>Bearings, end bell bearing fits, and windings</i>       |                             |
| 60. Root cause of failure<br><i>Water contamination, wear, and short</i>            |                             |



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1. **APPLICABILITY.** The sale of any and all goods and/or services by Mock, Inc. d/b/a Hi-Speed Industrial Service ("Hi-Speed") shall be specifically conditioned upon and subject to the following terms and conditions which are incorporated by reference into any contracts and purchase orders with Hi-Speed, and which shall form and become a part of any agreement related thereto. Buyer's acceptance of any offer or quotation made by Hi-Speed for sale of any goods or services is expressly made subject to the terms and conditions set forth herein and to be so effective, Buyer need not sign or approve these Terms and Conditions to be bound hereunder provided a copy of same is provided to Buyer through any means. None of the terms and conditions contained herein may be added to, expanded, changed, modified, superseded or otherwise altered except as revised in writing and duly executed by Hi-Speed, and all orders received by Hi-Speed shall be governed only by the terms and conditions contained herein, notwithstanding any terms, conditions or provisions of any purchase order, release order, authorization or any other form issued by the Buyer. Hi-Speed hereby objects to any additional, modified, changed, deleted, altered or other terms and conditions not contained herein and notifies Buyer that any such terms or provisions are expressly rejected by Hi-Speed.
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5. **DELIVERY OF GOODS AND/OR SERVICES.** Unless otherwise identified in the quotation, all shipments are F.O.B. Hi-Speed's warehouse and the title to and all risk of loss with respect to any goods shipped shall pass to Buyer when such goods are delivered to the carrier at Hi-Speed's warehouse. Hi-Speed will use its best efforts to affect delivery by the date or dates specified in the quotation. However, Hi-Speed shall not be liable for delay in or failure to make shipment, or to perform services, by any identified date for any reason whatsoever, including but not limited to, causes beyond its reasonable control, such as strikes, fires, floods, epidemics, quarantines, restrictions, severe weather, embargos, acts of God, or public enemy, war, riot, delays in transportation or the inability to obtain necessary labor, materials or manufacturing facilities.
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8. **WARRANTIES.** Hi-Speed warrants that all goods shall conform in all material aspects to the goods identified in the quotation to Buyer and/or purchase order, and Hi-Speed makes to Buyer the manufacturer's express warranty for any goods sold to Buyer, which is offered by the manufacturer at the time of acceptance of any quotation by Buyer. This warranty is conditioned upon the installation, operation, and maintenance of the goods in accordance with the manufacturer's recommendations and/or standard industry practice and the goods at all times being operated or used under normal operating conditions for which they were designed. Hi-Speed, at its sole option, will repair or

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