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— EVERY DAY SINCE 1946 —

LR Motor Shop Repairs

**Job Number 100090**

Prepared for Lexicon (10257)

8900 Fouche Dam Pike  
Little Rock AR

# Table of Contents

AC Recondition As Found - *SHOP*

AC Recondition - Rev. 2: 823471A-6

1.0

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## AC Recondition As Found

**Lexicon (10257)**  
8900 Fouche Dam Pike  
Little Rock, AR

FolderID: 100090  
FormID: 14181951

### AC Recondition - Rev. 2

Location: SHOP

Serial Number: 823471A-6

Description: 20HP REULAND 1800RPM WER-324S

Hi-Speed Job Number: 100090

Manufacturer: Other

Product Number: 3888-XH8787C

Serial Number: 823471A-6

HP/kW: 20 (HP)

RPM: 1800 (RPM)

Frame: WER-324S

Voltage: 230 / 460

Current: 51.2/25.6

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: TENV

J-box Included: None

Coupling/Sheave: None

Bearing RTDs: No

Stator RTDs: No

Repair Stage: Teardown Inspection

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

Priorities Found: ● 1 - High ● 6 - Good

### Overall Condition

1. Report Date
2. Nameplate Picture
3. Photos of all six sides of the machine.



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4. Describe the Overall Condition of the Equipment as Received

*Dirty*

#### Initial Mechanical/Electrical

- |                                    |           |
|------------------------------------|-----------|
| 5. Does Shaft Turn Freely?         | (Yes) Yes |
| 6. Does Shaft Have Visible Damage? | (Yes) Yes |



7. Assembled Shaft Runout

8. Assembled Shaft End Play

9. Air Gap Variation <10%

- |                    |          |
|--------------------|----------|
| 10. Lead Condition | (P) Pass |
|--------------------|----------|



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11. Lead Length	12 Inches
12. Frame Condition	pass
13. Fan Condition	(N) NA
14. Broken or Missing Components	key for clutch, a cover, ode end bell is cracked



### Initial Electrical Inspection

15.	Insulation Resistance/Megger	Megohms	
16.	Winding Resistance		
	1-2	1-3	2-3
	17. Perform Surge Test	(F) Fail	
	<i>Rotor and stator is blown</i>		
18.	Stator Condition		











### Mechanical Inspection

19. Drive End Bearing Number-	6311-2RS
20. Drive End Bearing Qty.	1
21. Drive End Bearing Type	(Ball) Ball Bearing
22. Drive End Lubrication Type	(Grease) Grease Lubricated
23. Drive End Bearing Insulation or Grounding Device?	na
24. Drive End Wavy Washer/Snap-Ring Other Retention Device?	na
25. Drive End Bearing Condition	worn
26. Opposite Drive End Bearing Number-	6311-2RS
27. Opposite Drive End Bearing Qty.	1
28. Opposite Drive End Bearing Type	(Ball) Ball Bearing
29. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
30. Opposite Drive End Bearing Insulation or Grounding Device?	na
31. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
32. Opposite Drive End Bearing Condition	worn
33. Drive End Seal	na
34. Opposite Drive End Seal	na

### Rotor Inspection

35. Rotor Type/Material	
Wound rotor	
36. Growler Test	(Fail) Fail
37. Number of Rotor Bars	

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38. Rotor Condition	windings blown	
39. List the Parts needed for the Repair Below 6311-2RS x 2 12 brushes 6014-2RS x2		
40. Signature of Technician that Disassembled Motor	Cw	
		
<b>Mechanical Fits- Rotor</b>		
41. Shaft Runout		
42. Rotor Runout		
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
43. Coupling Fit Closest to Bearing Housing		
0 Degrees	90 Degrees	120 Degrees
44. Coupling Fit Closest to the end of the Shaft		
0 Degrees	60 Degrees	120 Degrees
45. Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
 Pass		
 46. Drive End Bearing Shaft Fit Condition	(P) Pass	
47. Opposite Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
 Pass		
 48. Opposite Drive End Bearing Shaft Fit Condition	(P) Pass	
49. Shaft Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
<b>Mechanical Fits- Bearing Housings</b>		
50. Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
 Pass		
 51. Drive End - Endbell Bearing Fit Condition	(P) Pass	
52. Opposite Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
 Pass		
 53. Opposite Drive End - Endbell Bearing Fit Condition	(P) Pass	
54. Bearing Cap Condition		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
 Na		

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55. End Bell Air Seal Fits	
Drive End Air Seal	Opposite Drive End Air Seal
56. List Machine Work Needed Below	
<i>DE shaft key way is destroyed along with the clutch key way and the threaded part of the DE shaft is broke off</i>	
57. Technician	
<b>Root Cause of Failure</b>	
58. Failure locations	
<i>De shaft key way and threaded pat of the shaft broke and stator and rotor windings are blown</i>	
59. Root cause of failure	
<i>Threaded part of shaft broke allowing clutch to be loose rocking side to side wearing out keyway. Rotor windings blow from overload causing stator to blow</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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4. **BILLING AND PAYMENT TERMS.** Hi-Speed shall invoice Buyer for all goods and/or services as same are rendered at the address listed on the quotation. Payments for all goods and/or services shall be due thirty (30) days from the date of the current invoice or as otherwise set forth in the quotation. Late payments are subject to a late fee of 5% of the total invoice amount. Recurring late payments may lead to a deposit requirement on future services or sale of goods. Buyer shall be liable to Hi-Speed for any and all fees and expenses incurred by Hi-Speed to collect any invoices or to enforce these Standard Terms and Conditions, including but not limited to, attorney's fees.
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.
6. **DELIVERY SITE AND TIME FOR PERFORMANCE.** Hi-Speed and Buyer agree that time is of the essence for the purchase order and that Buyer shall fully cooperate with Hi-Speed in order to allow Hi-Speed full access to prosecute its work diligently and in an orderly manner. Buyer shall assist Hi-Speed in every way possible to avoid delaying, disrupting or interfering with the progress of Hi-Speed's work at the project site. In the event Hi-Speed's work is delayed, hindered, suspended, disrupted, re-sequenced or interfered with or rendered less efficient or more costly or adversely affected in any way as a result of acts or omissions of Buyer or other contractors or employees of Buyer or by any other reason beyond Hi-Speed's control and without the fault of Hi-Speed, then, in such event, Buyer shall be liable to Hi-Speed for any damages, additional costs, expenses, labor, materials, man hours, acceleration costs, overtime, additional jobsite overhead, extended home office overhead, and any and all other direct and indirect expenses of whatsoever nature or kind, caused in whole or in part, as a result of any of the above-referenced occurrences. Hi-Speed's project records will be the basis for computing the additional costs and damages of Hi-Speed's labor, materials, expenses and overhead related to such changes. BUYER WARRANTS THAT THE SITE FOR DELIVERY OR INSTALLATION OF ANY GOODS AND/OR FOR THE PERFORMANCE OF ANY SERVICES SHALL BE READY AND ADEQUATE FOR HI-SPEED'S DELIVERY OF GOODS AND/OR PERFORMANCE OF SERVICES AND THAT HI-SPEED SHALL HAVE FULL ACCESS THERETO, FREE OF ALL OBSTRUCTIONS. BUYER SHALL ASSUME ALL EXTRA COSTS ASSOCIATED WITH HI-SPEED'S INABILITY TO INSTALL ANY GOODS OR PERFORM ANY SERVICES AS A RESULT OF BUYER'S FAILURE TO COMPLY WITH THIS PROVISION. HI-SPEED MAY NOT INSPECT THE SITE PRIOR TO DELIVERY AND/OR INSTALLATION OF GOODS AND/OR PERFORMANCE OF SERVICES AND MAKES NO WARRANTY AS TO THE SUFFICIENCY OF THE SITE FOR THE DELIVERY AND/OR INSTALLATION OF GOODS AND/OR THE PERFORMANCE OF SERVICES AT SUCH SITE.
7. **INSPECTION/ACCEPTANCE.** All goods and services ordered pursuant to any quotation shall be subject to inspection by Buyer after delivery or performance to determine conformity with the quotation and/or purchase order and Hi-Speed's advertised or published specifications. Buyer shall have a period of thirty (30) days from shipment of goods at the delivery destination specified in the quotation within which to inspect the goods for conformity with the quotation, order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. Buyer shall have a period of thirty (30) days following completion of any services within which to inspect the services for conformity with the quotation, purchase order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. If the goods delivered or services performed do not so conform, upon delivery of notice to Hi-Speed of any discrepancy, nonconformance or rejection, Hi-Speed shall have sixty (60) days to cure the alleged discrepancy and/or nonconformance. If Hi-Speed fails to cure in this time period, Buyer shall have the right to reject such goods or services. After the cure period, goods that have been delivered and rejected, in whole or in part, shall be returned to Hi-Speed. Buyer shall notify Hi-Speed and arrange for the return of the goods as required. Should such non-conforming services be rejected Hi-Speed shall, at its sole cost, re-perform the non-conforming services. Inspection or failure to inspect on any occasion shall not affect Buyer's rights under the warranty provisions herein.
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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10. **SEVERABILITY.** The partial or complete invalidity of any provision of these Standard Terms and Conditions shall not affect the enforceability of the remainder of these Standard Terms and Conditions. If any provision is found to be invalid or unenforceable, that portion shall be modified to make it enforceable or shall be stricken and the remainder of these Standard Terms and Conditions shall enforced.
11. **GOVERNING LAW AND JURISDICTION.** Any controversy arising out of any quotation, the purchase order, the goods sold or delivered, repair or replacement thereof, or any services provided pursuant to any quotation or any purchase order, or these Standard Terms and Conditions shall be governed by the laws of the state of Tennessee without regard to any choice of law provisions and any cause of action related in any manner thereto shall be brought only in the state or federal courts of Shelby County, Tennessee.
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13. **FORCE MAJEURE.** Neither party shall be responsible for any delay or failure in performance of any party of the quotation, purchase order or these Standard Terms and Conditions to the extent that such delays or failures are caused by fire, flood, earthquake, explosion, war, embargo, government requirement, civil or military authority, acts of God, or any other circumstances beyond its reasonable control and not involving any fault or negligence on the party affected ("Condition"). If any such Condition occurs, the party delayed or unable to perform shall promptly give written notice to the other party and, if such Condition remains at the end of thirty (30) days, the party affected by the other party's delay and inability to perform may elect to (i) terminate such order or part thereof, or (ii) suspend the order for the duration of the Condition, if the Buyer is the suspending party, buy elsewhere comparable material to be sold under the order and apply to any commitment the purchase price of such purchase, and resume performance of the order once the Condition ceases, with an option in the affected party to extend the period of this order up to the length of the time the Condition endures.
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