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— EVERY DAY SINCE 1946 —

Motor Shop Repairs

Job Number 100030

Prepared for 3M-Main Plant (10001)

310 Walter Road
Little Rock AR 72216

Table of Contents



Hi-Speed Industrial Service
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AC Recondition As Found

3M-Main Plant (10001)

310 Walter Road
Little Rock, AR 72216

FolderID: 100030
FormID: 14029755

AC Recondition - Rev. 2

Location: MOTOR SHOP LR

Serial Number: M07G-3115

Description: 125HP WEG 1800RPM 444/5T

Hi-Speed Job Number: 100030

Manufacturer: WEG

Product Number: M07G-3115

HP/kW: 125 (HP)

RPM: 1780 (RPM)

Frame: 445T

Voltage: 460

Current: 138

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: TEFC

J-box Included: Complete

Coupling/Sheave: None

Date Received: 07/08/2022

Bearing RTDs: No

Stator RTDs: No

Repair Stage: Teardown Inspection

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

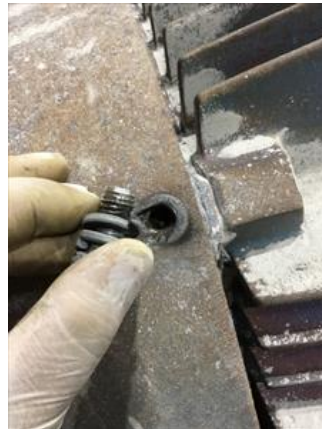
Priorities Found: ● 7 - High ● 1 - Good

Overall Condition

1. Report Date
2. Nameplate Picture



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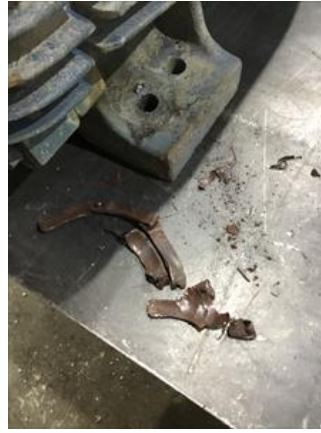


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3. Describe the Overall Condition of the Equipment as Received

Initial Mechanical/Electrical

● 4. Does Shaft Turn Freely? (No) No

5. Does Shaft Have Visible Damage?

(Yes) Yes



6. Assembled Shaft Runout

7. Assembled Shaft End Play

8. Air Gap Variation <10%

9. Lead Condition

(NA) Not Applicable

 *Rewind*

10. Lead Length

16 Inches

11. Frame Condition

good

12. Fan Condition

(F) Fail

 *Cracked*



13. Broken or Missing Components

 *Two fan cover bolts are almost worn in to and fan is cracked*

Initial Electrical Inspection

14. Insulation Resistance/Megger

15. Winding Resistance

1-2

1-3

2-3

16. Perform Surge Test

(NA) Not Applicable



17. Stator Condition

Mechanical Inspection

18. Drive End Bearing Number-	6319
19. Drive End Bearing Qty.	1
20. Drive End Bearing Type	(Ball) Ball Bearing
21. Drive End Lubrication Type	(Grease) Grease Lubricated
22. Drive End Bearing Insulation or Grounding Device?	na
23. Drive End Wavy Washer/Snap-Ring Other Retention Device?	na
24. Drive End Bearing Condition	wiped out





25. Opposite Drive End Bearing Number-	6316
26. Opposite Drive End Bearing Qty.	1
27. Opposite Drive End Bearing Type	(Ball) Ball Bearing
28. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
29. Opposite Drive End Bearing Insulation or Grounding Device?	na
30. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	snap ring and bearing cap springs
31. Opposite Drive End Bearing Condition	contamination
32. Drive End Seal	na
33. Opposite Drive End Seal	na




Rotor Inspection


34. Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
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35. Growler Test	(Pass) Pass		
36. Number of Rotor Bars			
37. Rotor Condition			
38. List the Parts needed for the Repair Below			
<i>Shaft</i> <i>6319 and 6316 bearings</i> <i>Fan</i> <i>Rewind</i> <i>New fan cover bolts</i>			
39. Signature of Technician that Disassembled Motor	Cw		
			
Mechanical Fits- Rotor			
40. Shaft Runout			
41. Rotor Runout			
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
42. Coupling Fit Closest to Bearing Housing			
0 Degrees	90 Degrees	120 Degrees	
43. Coupling Fit Closest to the end of the Shaft			
0 Degrees	60 Degrees	120 Degrees	
44. Drive End Bearing Shaft Fit			
0 Degrees	60 Degrees	120 Degrees	
 <i>Devastated</i>			



 45. Drive End Bearing Shaft Fit Condition	(F) Fail	
46. Opposite Drive End Bearing Shaft Fit		
0 Degrees	60 Degrees	120 Degrees
 Pass		
 47. Opposite Drive End Bearing Shaft Fit Condition	(P) Pass	

48. Shaft Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
Mechanical Fits- Bearing Housings		
49. Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
 Fail		
50. Drive End - Endbell Bearing Fit Condition		(F) Fail
 <i>Has a wear lip</i>		
51. Opposite Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
 Fail		
52. Opposite Drive End - Endbell Bearing Fit Condition		(F) Fail
 <i>Has a wear lip</i>		
53. Bearing Cap Condition		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
 Pass		
54. End Bell Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
55. List Machine Work Needed Below		
<i>De shaft bearing fit and de shaft key way and both end bell bearing fits</i>		
56. Technician		Cw
		
Root Cause of Failure		
57. Failure locations		
<i>Shaft, end bell bearing fits, and windings</i>		
58. Root cause of failure		
<i>DE bearing wiped out causing motor to over heat and blow the windings</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

replace any defective or non-conforming goods in accordance with the applicable manufacturer's warranty. Warranty for any defective or incorrect parts is limited to the repair or replacement of those parts. Hi-Speed warrants that all services will conform in all material respects to the description of services identified in the quotation and will be performed in a good and workmanlike manner in accordance with industry practices and standards. Should the services be reasonably rejected or not conform with the foregoing warranties, Hi-Speed shall, at its sole cost, re-perform the defective or nonconforming services. Notwithstanding the foregoing, these warranties do not extend to goods or services to the extent that such goods have been subject to misuse, neglect or abuse not caused by Hi-Speed or have been used in violation of the approved written instructions furnished to Buyer. THE FOREGOING REPRESENTS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY HI-SPEED WITH RESPECT TO ALL GOODS SOLD AND IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESS OR IMPLIED. HI-SPEED EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE. BUYER WAIVES ANY CLAIM THAT THESE EXCLUSIONS OR LIMITATIONS DEPRIVE IT OF AN ADEQUATE REMEDY AT EQUITY OR LAW OR CAUSE THIS AGREEMENT TO FAIL IN ITS ESSENTIAL PURPOSE. BUYER SHALL BE ENTITLED TO NO OTHER REMEDY OTHER THAN AS SET FORTH HEREIN, REGARDLESS OF THE CLAIM OR CAUSE OF ACTION, WHETHER BASED IN CONTRACT, TORT, NEGLIGENCE, GOODS LIABILITY, STRICT LIABILITY OR OTHERWISE.

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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.
12. **ABANDONED EQUIPMENT.** Hi-Speed requires that Buyer promptly pick up or provide shipment instructions for Buyer equipment or other Buyer property in Hi-Speed's possession. If equipment or other Buyer property is left with Hi-Speed and not picked up within six (6) months after Hi-Speed's final action related to the applicable property (e.g. evaluation, teardown, estimate, completion of services), Hi-Speed will consider such property abandoned and may dispose of it in accordance with applicable law. Buyer agrees to hold Hi-Speed harmless for any damage or claim for such abandoned property and acknowledges that Hi-Speed may discard or recycle it at Hi-Speed's sole and absolute discretion. Specifically, Hi-Speed may sell Buyer's abandoned property at a private or public sale and retain the proceeds to offset Hi-Speed's storage, inspection and servicing costs. For the avoidance of doubt, Hi-Speed reserves its statutory and other lawful liens for unpaid charges related to abandoned property.
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