



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

Motor Shop Repairs

**Job Number 97846**

Prepared for Arkansas Box

100 William J Clark Drive  
Conway AR 72032

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DC Recondition Repair Report

1.0

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

## DC Recondition Repair Report

**Arkansas Box**  
100 William J Clark Drive  
Conway, AR 72032

*Performed By: Motor Shop LR 1*  
*Date Completed: 2/12/2021*

FolderID: 97846  
FormID: 9955069

Priorities Found: ● 13 - Good

### General

1. Job Number	97846
2. Report Date	
3. Customer	

### Name Plate Information

4. Manufacturer	EMERSON
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5. Model	2890B452005
6. Serial Number	82934-HU
7. Horsepower	40 HP
8. KW	
9. Armature Volts	500 Volts
10. Armature Amps	67.40000000000001 Amps
11. Field Voltage	300 Volts
12. Field Amps	1.85 Amps
13. RPM	1750 RPM
14. Frame	289ATZ
15. Enclosure	DP
16. Service Factor	
17. Motor Mount Position	
<b>Initial Inspection</b>	
18. Lead Length	
19. Lead Size	6
20. Lead Condition	(P) Pass
21. Lead Markings	A1 A2 F1 F2 F3 F4
22. Lug Size, Condition, and Type	
23. Winding RTD's	(NA) Not Applicable
24. Winding Rtd's Condition	(NA) Not Applicable
25. Shaft Run Out	

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26. Does Shaft Turn Freely	
27. Does Shaft Have Visible Damage	no
28. Bearing Rtd's	(NA) Not Applicable
29. Bearing Rtd's Condition	(NA) Not Applicable
30. Contamination <i>Needs ages ring</i>	



31. Frame Condition	(P) Pass
32. Fan Condition	(NA) Not Applicable
33. Brush Condition	(NA) Not Applicable



34. Quantity of brushes	2
35. Brush Holder Assembly Condition	(P) Pass



36. Broken or missing components

### Initial Electric Test

37. Armature Resistance to Ground

**94000 Mohm**

Inter poles 96.700



38. Field Resistance to Ground

**131.4 Mohm**



39. Armature Hi-Pot

40. Field Hi-Pot

**Ua**

41. Armature Bar to Bar Test

**(P) Pass**

42. DC field frame Drop Test

**(P) Pass**

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43. DC Field Frame Polarity Check	(P) Pass
44. Field Frame Condition	Wash and Bake
45. Field Frame Failure Location	
<b>Initial Armature Inspection</b>	
46. Air Gap <10% Variation	
47. Number of Commutator Bars	
48. Growler Test	(P) Pass
49. Commutator Condition	(NA) Not Applicable



50. Armature Condition	wash and bake
51. Armature Failure Location	
<b>Mechanical Inspection</b>	
52. Bearing Manufacture	SKF NTN
53. Bearing DE Size	6211-2RS



54. Bearing DE Type	ball
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55. Bearing ODE Size

6210LU



56. Bearing ODE Type	ball
57. Insulated Bearing	no
58. Lubrication Type	grease
59. Grease Condition	(NA) Not Applicable
60. Bearing Retainers	(NA) Not Applicable
61. Shaft Grounding Device	(NA) Not Applicable
62. DE Seal	(NA) Not Applicable
63. DE Seal Type/Size	
64. ODE Seal	(NA) Not Applicable
65. ODE Seal Type/Size	

#### Root Cause of Failure

66. Component Failure	brushes
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67. Cause of Failure	
68. Comments	
69. Service Technician	RW

#### Machine Fit Inspection Report

70. Shaft Run Out	
71. Initial Shaft Run Out	
72. Final Shaft Run Out	

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73. DE Bearing Shaft Fit

(P) Pass



74. DE Initial Shaft Bearing Fit 1	2.166 "
75. DE Finial Shaft Bearing Fit 1	"
76. DE Initial Shaft Bearing Fit 2	2.166 "
77. DE Finial Shaft Bearing Fit 2	
78. DE Initial Shaft Bearing Fit 3	2.166 "
79. DE Finial Shaft Bearing Fit 3	
80. ODE Bearing Shaft Fit	(P) Pass



81. ODE Initial Shaft Bearing Fit 1	1.969 "
82. ODE Finial Shaft Bearing Fit 1	
83. ODE Initial Shaft Bearing Fit 2	1.969 "
84. ODE Finial Shaft Bearing Fit 2	
85. ODE Initial Shaft Bearing Fit 3	1.969 "
86. ODE Finial Shaft Bearing Fit 3	
87. DE Air Seal Shaft Fit	
88. DE Initial Air Seal Shaft Size	
89. DE Final Air Seal Shaft Size	
90. ODE Air Seal Shaft Fit	
91. ODE Initial Air Seal Shaft Size	
92. ODE Final Air Seal Shaft Size	
93. DE Endbell Fit	(NA) Not Applicable
Bad	

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94. DE Initial Endbell Fit Size 1	3.9384 "
95. DE Final Endbell Fit Size 1	"
96. DE Initial Endbell Fit Size 2	3.9384 "
97. DE Finial Endbell Fit Size 2	
98. DE Initial Endbell Fit Size 3	3.9384 "
99. DE Final Endbell Fit Size 3	
100. DE Endbell Fit Insulated	(NA) Not Applicable
101. DE Endbell Air Seal Fit	
102. Initial Endbell Air Seal Fit Size	
103. Finial Endbell Air Seal Fit Size	
104. ODE Endbell Fit	(NA) Not Applicable
<div> <div></div> <div>Bad</div> </div>	



105. ODE Endbell Fit Insulated	(NA) Not Applicable
106. ODE Endbell Air Seal Fit	
107. ODE Initial Endbell Seal Fit Size	
108. ODE Finial Endbell Seal Fit Size	
109. Foot Flatness	(P) Pass
110. Foot Condition	(P) Pass
111. Flange Condition	(NA) Not Applicable

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112. Turn and Under Cut Armature

(NA) Not Applicable

Yes comm needs turned and under cut



113. Service Technician

RW

### Balancing Report

114. Balance Type

115. Balance Operating Speed

116. Start Left End

117. Start Right End

118. Balancing Specification

119. Finish Left End

120. Finish Right End

121. Service Technician

### Assembly and Final Test

122. Armature Meggar Testing Reading

2000 Mohm

123. Armature Hi-Pot

Ua

124. Field Frame Meggar Testing Reading

2000 Mohm

125. Field Frame Hi-Pot

126. Test Run Field Voltage

300 Volts

127. Test Run Field Amps

2 Amps

128. Test Run Armature Voltage

500 Volts

129. Test Run Armature Amps

2 Amps

130. Brushes seated

(P) Pass

131. DE Horizontal Vibration Reading

132. DE Vertical Vibration Reading

133. DE Axial Vibration Reading

134. ODE Horizontal Vibration Reading

135. ODE Vertical Vibration Reading

136. ODE Axial Vibration Reading

137. Ambient Temp at start of Test Run

138. Temp at 5 minutes

139. Temp at 10 minutes

140. Temp at 15 minutes

141. Temp at 20 minutes

142. Temp at 25 minutes

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143. Temp at 30 minutes	
144. Temp at 35 minutes	
145. Temp at 40 minutes	
146. Temp at 45 minutes	
147. Temp at 50 minutes	
148. Temp at 55 minutes	
149. Temp at 60 minutes	
● 150. Motor Paint	<b>(P) Pass</b>
151. Service Technician	<b>Trevor Hall</b>
	



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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.
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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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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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