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— EVERY DAY SINCE 1946 —

Motor Shop Repairs

**Job Number 98825**

Prepared for FUTURE FUEL CHEMICAL

2800 GAP RD HWY 394 SO  
BATESVILLE AR 72501

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AC Recondition Repair Report

1.0

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901-873-5300

## AC Recondition Repair Report

**FUTURE FUEL CHEMICAL**  
2800 GAP RD HWY 394 SO  
BATESVILLE, AR 72501

FolderID: 98825  
FormID: 11746080

Priorities Found: ● 7 - High ● 7 - Good

### General

1. Job Number	98825
2. Report Date	10/6/2021
3. Customer	FutureFuel Chemical

### Name Plate Information

4. Manufacturer	GE
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5. Model	5K4053T328B
6. Serial Number	SN6Z24031
7. Horsepower	75
8. KW	
9. Volts	460

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10. Amps	
11. RPM	1190
12. Frame	L405LPZ16
13. Enclosure	TEFC
14. Cycles	60
15. Phase	3
16. Service Factor	
17. Motor Mount Position	
<b>Initial Inspection</b>	
18. Number of Leads	3
19. Lead Length	15 Inches
20. Lead Size	
21. Lead Condition	(P) Pass



22. Lead Markings	
23. Lug Size, Condition, and Type	
24. Winding RTD's	
25. Winding Rtd's Condition	
26. Shaft Run Out	0.1
27. Does Shaft Turn Freely	yes
28. Does Shaft Have Visible Damage	yes. cracked at end of shaft



29. Bearing Rtd's	
30. Bearing Rtd's Condition	

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31. Contamination

*Grease, water, copper debris*



32. Frame Condition

**(P) Pass**

33. Fan Condition

**(P) Pass**



34. Broken or missing components

*Broken shaft. Replace*

**Initial Electric Test**

35. Resistance to Ground

36. Winding Resistance 1-2

37. Winding Resistance 2-3

38. Winding Resistance 1-3

39. Resistive Imbalance

40. Hi-Pot

41. Surge Test

**(F) Fail**

42. Stator Condition

**rewind**

*Windings blown*

**Initial Rotor Inspection**

44. Rotor Type	cast aluminum
45. Air Gap <10% Variation	
46. Number of Rotor Bars	60
47. Number of Broken Rotor Bars	0
● 48. Growler Test	(P) Pass
● 49. Rotor Condition	(P) Pass
<b>Mechanical Inspection</b>	
50. Bearing Manufacture	
51. Bearing DE Size	3216 a/c3
52. Bearing DE Type	double row ball





55. Bearing ODE Type	ball
56. ODE Bearing Qty.	1
57. Insulated Bearing	
58. Lubrication Type	grease
59. Grease Condition	(F) Fail
60. Bearing Retainers	(Y) Yes



61. Shaft Grounding Device	
62. DE Seal	
63. DE Seal Type/Size	
64. ODE Seal	
65. ODE Seal Type/Size	
<b>Root Cause of Failure</b>	
66. Component Failure	bearings, grease, shaft, windings
67. Cause of Failure	<i>Lack of lubrication and moisture in windings</i>
68. Comments	





### Machine Fit Inspection Report

70. Shaft Run Out	(F) Fail
71. Initial Shaft Run Out	0.1 "
72. Final Shaft Run Out	
73. DE Bearing Shaft Fit	(F) Fail
74. DE Initial Shaft Bearing Fit Size 1	3.149 "
75. DE Initial Shaft Bearing Fit Size 2	3.149 "
76. DE Initial Shaft Bearing Fit Size 3	3.1489 "
77. DE Finial Shaft Bearing Fit Size 1	
78. DE Finial Shaft Bearing Fit Size 2	
79. DE Finial Shaft Bearing Fit Size 3	
80. ODE Bearing Shaft Fit	(P) Pass
81. ODE Initial Shaft Bearing Fit Size 1	2.3623 "
82. ODE Initial Shaft Bearing Fit Size 2	2.3623 "
83. ODE Initial Shaft Bearing Fit Size 3	2.3623 "
84. ODE Finial Shaft Bearing Fit Size 1	
85. ODE Finial Shaft Bearing Fit Size 2	
86. ODE Finial Shaft Bearing Fit Size 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	(F) Fail
94. DE Initial Endbell Fit Size 1	3.151 "
95. DE Initial Endbell Fit Size 2	3.151 "
96. DE Initial Endbell Fit Size 3	3.151 "
97. DE Final Endbell Fit Size 1	
98. DE Finial Endbell Fit Size 2	
99. DE Final Endbell Fit Size 3	
100. DE Endbell Fit Insulated	
101. DE Endbell Air Seal Fit	
102. Initial Endbell Air Seal Fit Size	
103. Finial Endbell Air Seal Fit Size	
104. ODE Endbell Fit	(F) Fail
105. ODE Initial Endbell Fit Size 1	2.363 "
106. ODE Initial Endbell Fit Size 2	2.363 "
107. ODE Initial Endbell Fit Size 3	2.363 "
108. ODE Final Endbell Fit Size 1	
109. ODE Final Endbell Fit Size 2	
110. ODE Final Endbell Fit Size 3	

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111. ODE Endbell Fit Insulated	
112. ODE Endbell Air Seal Fit	
113. ODE Initial Endbell Seal Fit Size	
114. ODE Finial Endbell Seal Fit Size	
115. Foot Flatness	
116. Foot Condition	
<div>●</div> <div>117. Flange Condition</div> <div>Very rusted</div>	(F) Fail
118. Service Technician	Trevor Hall
	

### Balancing Report

119. Balance Type
120. Balance Operating Speed
121. Start Left End
122. Start Right End
123. Balancing Specification
124. Finish Left End
125. Finish Right End
126. Service Technician

### Assembly and Final Test

127. Meggar Testing Reading
128. Surge Test
129. Hi-Pot
130. Winding Resistance 1-2
131. Winding Resistance 2-3
132. Winding Resistance 1-3
133. Test Run Voltage Phase A
134. Test Run Amps A
135. Test Run Voltage Phase B
136. Test Run Amps B
137. Test Run Voltage Phase C
138. Test Run Amps C
139. DE Horizontal Vibration Reading
140. DE Vertical Vibration Reading
141. DE Axial Vibration Reading
142. ODE Horizontal Vibration Reading
143. ODE Vertical Vibration Reading
144. ODE Axial Vibration Reading
145. Ambient Temp at start of Test Run
146. Temp at 5 minutes
147. Temp at 10 minutes
148. Temp at 15 minutes
149. Temp at 20 minutes
150. Temp at 25 minutes

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151. Temp at 30 minutes
152. Temp at 35 minutes
153. Temp at 40 minutes
154. Temp at 45 minutes
155. Temp at 50 minutes
156. Temp at 55 minutes
157. Temp at 60 minutes
158. Motor Paint
159. Service Technician



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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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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.
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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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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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15. **ASSIGNMENT.** The rights and obligations of the parties shall neither be assigned nor delegated without the prior written consent of the other party. However, any party may assign or delegate its respective rights and obligations, in whole or in part, (i) to any subsidiary, (ii) pursuant to other financing, merger or reorganization or (iii) pursuant to any sale or transfer of substantially all of the assets of the assigning party. These Standard Terms and Conditions shall bind the heirs, successors and assigns of the parties hereto.
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