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Motor Shop Repairs

Job Number 97663

Prepared for 3M-Main Plant (10001)

310 Walter Road
Little Rock AR 72216

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AC Recondition Repair Report

1.0

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AC Recondition Repair Report

FolderID: 97663
FormID: 9592680

3M-Main Plant (10001)

310 Walter Road
Little Rock, AR 72216

Priorities Found: ● 2 - High ● 12 - Good

General

1. Job Number	97663
2. Report Date	
3. Customer	3M

Name Plate Information

4. Manufacturer	SIEMENS	P5
5. Model		
TYPE: RGZESDX		
6. Serial Number	J05T0771EE	
7. Horsepower	250	
8. KW		
9. Volts	460	
10. Amps	280.0	
11. RPM	1185	
12. Frame	449T	
13. Enclosure		
14. Cycles	60	
15. Phase	3	
16. Service Factor	1.15	
17. Motor Mount Position		

Initial Inspection

18. Number of Leads	6	P13
19. Lead Length	16 Inches	
20. Lead Size	2	
21. Lead Condition	(P) Pass	
22. Lead Markings	1,1 2,2 3,3	
23. Lug Size, Condition, and Type		
24. Winding RTD's	(NA) Not Applicable	
25. Winding Rtd's Condition	(NA) Not Applicable	
26. Shaft Run Out		
27. Does Shaft Turn Freely	no	
28. Does Shaft Have Visible Damage		
29. Bearing Rtd's	(NA) Not Applicable	
30. Bearing Rtd's Condition	(NA) Not Applicable	
31. Contamination		
32. Frame Condition	(P) Pass	

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33. Fan Condition	(P) Pass	P109
34. Broken or missing components		
Initial Electric Test		
35. Resistance to Ground	0 Mohm	
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	
43. Failure Location	in slot	P68
Initial Rotor Inspection		
44. Rotor Type	cast aluminum	P4
45. Air Gap <10% Variation		
46. Number of Rotor Bars	0	
47. Number of Broken Rotor Bars	54	
48. Growler Test	(P) Pass	
49. Rotor Condition	(P) Pass	P50
Mechanical Inspection		
50. Bearing Manufacture	Loyola	P1
51. Bearing DE Size	NU320	
52. Bearing DE Type	Roller	
53. DE Bearing Qty.	1	
54. Bearing ODE Size	6316ZZC3	P43
55. Bearing ODE Type	ball	
56. ODE Bearing Qty.	1	P59
57. Insulated Bearing	no	
58. Lubrication Type	grease	
59. Grease Condition	(NA) Not Applicable	
The grease is hard		
60. Bearing Retainers	(Y) Yes	
61. Shaft Grounding Device	(NA) Not Applicable	
62. DE Seal	(Y) Yes	P86
Improve seal needs replaced		
63. DE Seal Type/Size		
64. ODE Seal		
65. ODE Seal Type/Size		
Root Cause of Failure		
66. Component Failure		
67. Cause of Failure		
68. Comments		
69. Service Technician		
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	(F) Fail	P39
74.	DE Initial Shaft Bearing Fit Size 1	3.9375 "	
75.	DE Initial Shaft Bearing Fit Size 2	3.9379 "	
76.	DE Initial Shaft Bearing Fit Size 3	3.9382 "	
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	P93
81.	ODE Initial Shaft Bearing Fit Size 1	3.1502 "	
82.	ODE Initial Shaft Bearing Fit Size 2	3.1502 "	
83.	ODE Initial Shaft Bearing Fit Size 3	3.1502 "	
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	(P) Pass	P129
	Out put shaft hole needs to be sleeved for inpro seal		
94.	DE Initial Endbell Fit Size 1	8.4648 "	
95.	DE Initial Endbell Fit Size 2	8.4648 "	
96.	DE Initial Endbell Fit Size 3	8.4648 "	
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	(P) Pass	P145
105.	ODE Initial Endbell Fit Size 1	6.6939 "	
106.	ODE Initial Endbell Fit Size 2	6.6939 "	
107.	ODE Initial Endbell Fit Size 3	6.6939 "	
108.	ODE Final Endbell Fit Size 1		
109.	ODE Final Endbell Fit Size 2		
110.	ODE Final Endbell Fit Size 3		
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	(P) Pass	
116.	Foot Condition	(P) Pass	
117.	Flange Condition		
118.	Service Technician	RW	

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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
- 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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P1.2



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P109.22



P129.23



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2. **PRICE.** All quoted prices shall remain firm and binding for a period of thirty (30) days from the date of quotation or for the period specifically stated in the quotation. The price for any and all goods and/or services ordered or approved by Buyer after thirty (30) days from the date of any quotation are subject to any increase in price that may occur after the expiration of thirty (30) days from the issuance of the quotation and the date the Buyer releases any shipment.
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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.
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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.
14. **NONWAIVER.** No course of dealing or failure of either party to strictly enforce any term, right, or condition of these Standard Terms and Conditions will be construed as a waiver of such term, right or condition. Any waiver by Hi-Speed will only be in writing and will waive no succeeding breach of a term, right or condition.
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.
16. **NO INDIVIDUAL LIABILITY.** Notwithstanding any other agreement to the contrary, the Buyer agrees that in no event will the Buyer hold and Hi-Speed owner, director, officer or employee personally liable for unintentional tortious conduct or conduct that constitutes the breach of any contract between Hi-Speed and the Buyer, even if the Hi-Speed owner, director, officer or employee is or could be construed to be a party to such contract.