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# Motor Shop Repairs

## **Job Number 98582**

Prepared for 3M-Main Plant (10001)

310 Walter Road Little Rock AR 72216

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### **AC Recondition Repair Report**

3M-Main Plant (10001)

310 Walter Road Little Rock, AR 72216

Priorities Found: **7 - High** 

8 - Good

	-		
General			
1.	Job Number		98582
2.	Report Date		10/12/2021
3.	Customer		3M

#### **Name Plate Information**

Manufacturer G.E.





















5.	Model	5KGS509SN601P
6.	Serial Number	
7.	Horsepower	100
8.	KW	
9.	Volts	460
10.	Amps	134
11.	RPM	595
12.	Frame	509
13.	Enclosure	TEFC
14.	Cycles	60

15.	Phase	3
16.	Service Factor	1.15
17.	Motor Mount Position	
Initial	Inspection	
18.	Number of Leads	3
19.	Lead Length	18 Inches
20.	Lead Size	
<b>2</b> 1.	Lead Condition	(P) Pass
22.	Lead Markings	1-3
23.	Lug Size, Condition, and Type	
24.	Winding RTD's	
25.	Winding Rtd's Condition	
26.	Shaft Run Out	
27.	Does Shaft Turn Freely	No
28.	Does Shaft Have Visible Damage	
29.	Bearing Rtd's	
30.	Bearing Rtd's Condition	
31.	Contamination	
32.	Frame Condition	(P) Pass
33.	Fan Condition	(P) Pass
34.	Broken or missing components	
	Fan cover is broke	





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# 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 Windings blown in slot (F) Fail



42. Stator Condition

43. Failure Locationin slot

### **Initial Rotor Inspection**

44. Rotor Type cast aluminum



45.	Air Gap <10% Variation		
46.	Number of Rotor Bars	105	
47.	Number of Broken Rotor Bars		
48.	Growler Test		
49.	Rotor Condition		
Mechanical Inspection			
50.	Bearing Manufacture	SKF	
51.	Bearing DE Size	320 NU	
52.	Bearing DE Type	roller bearing	

53.	DE Bearing Qty.	1
54.	Bearing ODE Size	6315
55.	Bearing ODE Type	ball bearing
56.	ODE Bearing Qty.	1
57.	Insulated Bearing	
58.	Lubrication Type	grease
59.	Grease Condition	(F) Fail
<b>6</b> 0.	Bearing Retainers	(Y) Yes



61.	Shaft Grounding Device	
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 DE shaft f	it, DE end bell, ODE end bell, windings
67.	Cause of Failure	
	DE bearing fit on shaft went out causing play between shaft and bearing which caused the end bell fi and causing rotor to drag iron causing windings to blow	ts to be over sized
68.	Comments	
	Recommend new shaft, bearings, machine work, and rewind	
69.	Service Technician	
Mach	ine Fit Inspection Report	
70.	Shaft Run Out	
71.	Initial Shaft Run Out	
72.	Final Shaft Run Out	
73.	DE Bearing Shaft Fit	(F) Fail
74.	DE Initial Shaft Bearing Fit Size 1	3.9362 "
75.	DE Initial Shaft Bearing Fit Size 2	3.9358 "
76.	DE Initial Shaft Bearing Fit Size 3	3.9361 "
77.	DE Finial Shaft Bearing Fit Size 1	
78.	DE Finial Shaft Bearing Fit Size 2	
79.	DE Finial Shaft Bearing Fit Size 3	
<b>8</b> 0.	ODE Bearing Shaft Fit	(F) Fail
81.	ODE Initial Shaft Bearing Fit Size 1	

82.	ODE Initial Shaft Bearing Fit Size 2	
83.	ODE Initial Shaft Bearing Fit Size 3	
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	8.4663 "
95.	DE Initial Endbell Fit Size 2	8.46599999999999999 "
96.	DE Initial Endbell Fit Size 3	8.46620000000001 "
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	
<b>104</b> .	ODE Endbell Fit	(F) Fail
105.	ODE Initial Endbell Fit Size 1	6.3007 "
106.	ODE Initial Endbell Fit Size 2	6.3019 "
107.	ODE Initial Endbell Fit Size 3	6.3013 "
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	(NA) Not Applicable
118.	Service Technician	
Balan	cing Report	

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### 119. Balance Type



120. Balance Operating Speed	400 RPM
121. Start Left End	4.15 Mills
122. Start Right End	5.98 Mills
123. Balancing Specification	
124. Finish Left End	0.17 Mills
125. Finish Right End	0.26 Mills
126. Service Technician	RW



### **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 455 Volts



134. Test Run Amps A 66 Amps



136. Test Run Amps B	69 Amps
137. Test Run Voltage Phase C	458 Volts



138. Test Run Amps C	70 Amps
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	

158. Motor Paint
(P) Pass



159. Service Technician RW

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