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— EVERY DAY SINCE 1946 —

Motor Shop Repairs

**Job Number 97444**

Prepared for Reynolds Metals company

1333 highway 270  
Malvern AR 72104

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AC Recondition Repair Report

1.0

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Millington, Tn 38053  
901-873-5300

## AC Recondition Repair Report

FolderID: 97444  
FormID: 9129854

Reynolds Metals company  
1333 highway 270  
Malvern, AR 72104

Priorities Found: ● 1 - High ● 8 - Good

General		
1. Job Number	97444	
2. Report Date	10/15/2020	
3. Customer	Reynolds	
Name Plate Information 		
4. Manufacturer		P4
5. Model	M90 L4	
6. Serial Number	7L4600	
7. Horsepower	3 HP	
8. KW		
9. Volts	440 Volts	
10. Amps	4.2 Amps	
11. RPM	1700 RPM	
12. Frame		
13. Enclosure	TEFC	
14. Cycles	60 HZ	
15. Phase	3 PH	
16. Service Factor		
17. Motor Mount Position		
Initial Inspection 		
18. Number of Leads		
19. Lead Length	Inches	
20. Lead Size		
21. Lead Condition	(NA) Not Applicable	
22. Lead Markings		P22
23. Lug Size, Condition, and Type		
24. Winding RTD's		
25. Winding Rtd's Condition		
26. Shaft Run Out		
27. Does Shaft Turn Freely	yes	
28. Does Shaft Have Visible Damage	no	P28
29. Bearing Rtd's		
30. Bearing Rtd's Condition		
31. Contamination		
<span style="color: green;">●</span> 32. Frame Condition	(P) Pass	P32
<span style="color: green;">●</span> 33. Fan Condition	(P) Pass	P33


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34.	Broken or missing components		
<b>Initial Electric Test</b>			
35.	Resistance to Ground		
36.	Winding Resistance 1-2		
37.	Winding Resistance 2-3	Ohm's	
38.	Winding Resistance 1-3		
39.	Resistive Imbalance	%	
40.	Hi-Pot		
41.	Surge Test		
42.	Stator Condition	good	
43.	Failure Location		P43
<b>Initial Rotor Inspection</b>			
44.	Rotor Type	squirrel cage	
45.	Air Gap <10% Variation		
46.	Number of Rotor Bars	28	
47.	Number of Broken Rotor Bars	0	
48.	Growler Test	(P) Pass	
49.	Rotor Condition	(P) Pass	P49
<b>Mechanical Inspection</b>			
50.	Bearing Manufacture	FAG	P50
51.	Bearing DE Size	6205	P51
52.	Bearing DE Type	ball bearing	
53.	DE Bearing Qty.	1	
54.	Bearing ODE Size	6208	P54
55.	Bearing ODE Type	ball bearing	
56.	ODE Bearing Qty.	1	
57.	Insulated Bearing	no	
58.	Lubrication Type	unknown grease	
59.	Grease Condition	(F) Fail	P59
	Dirty		
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		
<b>Root Cause of Failure</b>			
66.	Component Failure	windings	P66
67.	Cause of Failure	<i>Coil to coil short possibly caused by foreign debris. Also both bearings have contaminated grease.</i>	
68.	Comments		
69.	Service Technician	Terrence Holland	

## Machine Fit Inspection Report

70. Shaft Run Out	(P) Pass
71. Initial Shaft Run Out	0.001 "
72. Final Shaft Run Out	
73. DE Bearing Shaft Fit	
74. DE Initial Shaft Bearing Fit Size 1	0.9848 "
75. DE Initial Shaft Bearing Fit Size 2	0.9847 "
76. DE Initial Shaft Bearing Fit Size 3	0.9846 "
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	0.9844000000000001 "
82. ODE Initial Shaft Bearing Fit Size 2	0.9846 "
83. ODE Initial Shaft Bearing Fit Size 3	0.9845 "
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
94. DE Initial Endbell Fit Size 1	2.048 "
95. DE Initial Endbell Fit Size 2	2.0474 "
96. DE Initial Endbell Fit Size 3	2.0475 "
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
105. ODE Initial Endbell Fit Size 1	2.0471 "
106. ODE Initial Endbell Fit Size 2	2.0473 "
107. ODE Initial Endbell Fit Size 3	2.0474 "
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	(NA) Not Applicable
112. ODE Endbell Air Seal Fit	
113. ODE Initial Endbell Seal Fit Size	
114. ODE Finial Endbell Seal Fit Size	
115. Foot Flatness	(NA) Not Applicable

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116. Foot Condition	(NA) Not Applicable
117. Flange Condition	(NA) Not Applicable
118. Service Technician	Terrence Holland
	
<b>Balancing Report</b>	
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	
<b>Assembly and Final Test</b>	
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	

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157. Temp at 60 minutes

158. Motor Paint

159. Service Technician



P4.1



P4.2



P4.3



P4.4



P22.5



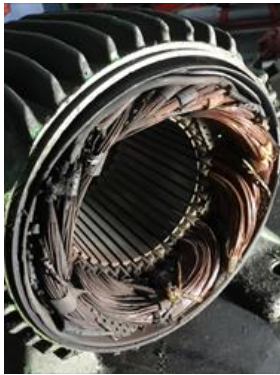
P28.6



P32.7



P33.8



P43.9



P49.10



P50.11



P51.12





**P54.13**



**P59.14:**



**P66.15**





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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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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.