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

AC Inspection as Found

Reynolds Metals company
1333 highway 270
Malvern, AR 72104

FolderID: 101302
FormID: 16653042

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	6300538
Description:	7.5HP RELIANCE 900RPM 256TY

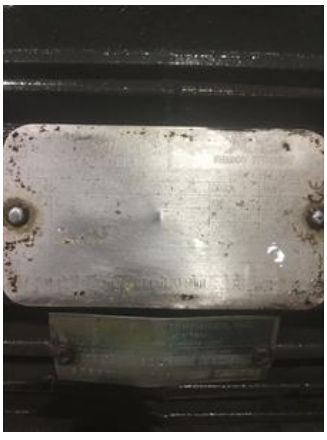
Hi-Speed Job Number:	101302
Manufacturer:	Reliance
Product Number:	6300538
HP/kW:	7.5 (HP)
RPM:	875 (RPM)
Frame:	256TY
Voltage:	460
Current:	11
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.00
Enclosure:	TENV
J-box Included:	Complete
Coupling/Sheave:	Coupling
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High** **2 - Good**

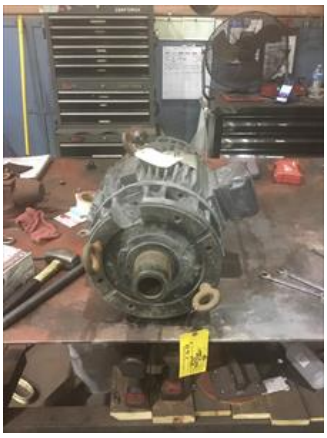
Overall Condition

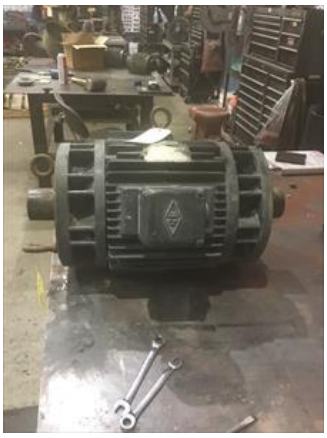
1. Report Date

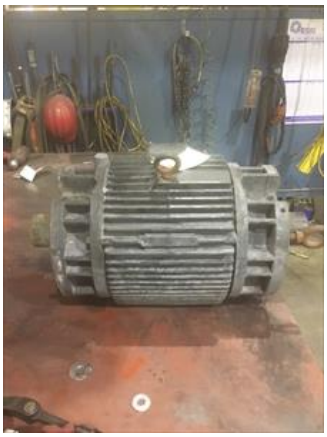
2. Nameplate Picture P37

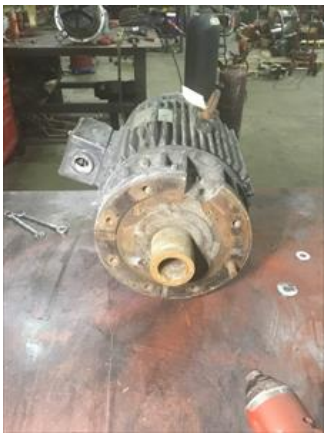


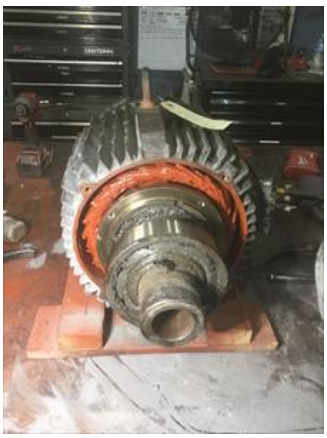
3. Photos of all six sides of the machine. P45

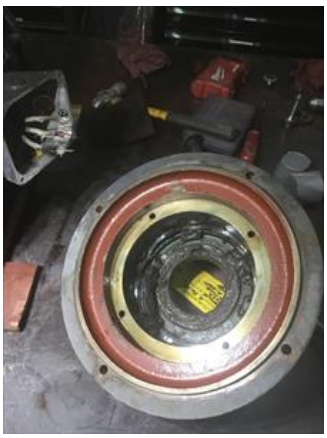


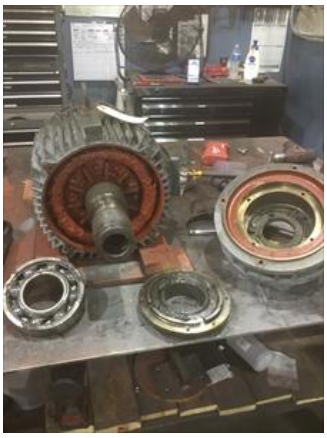


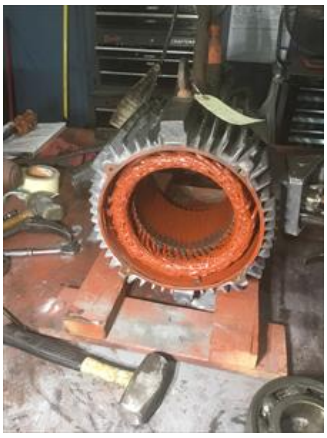


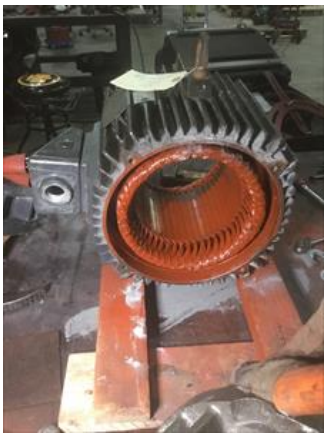


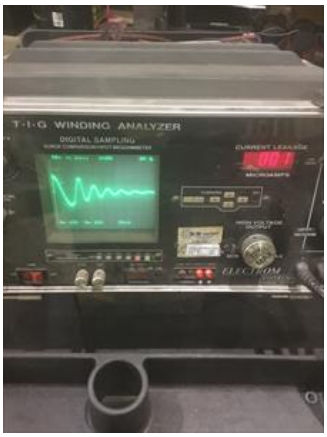


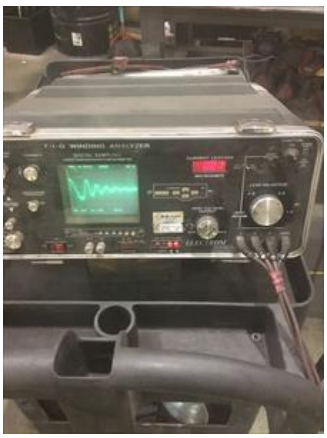


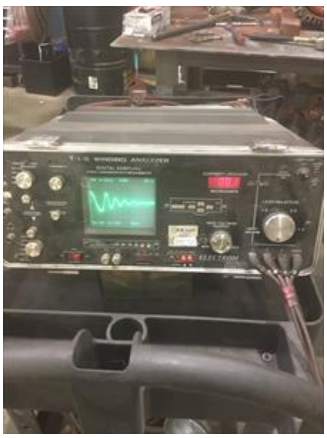


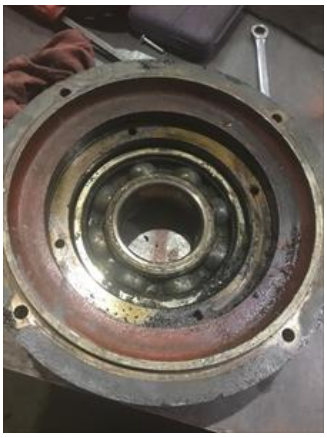


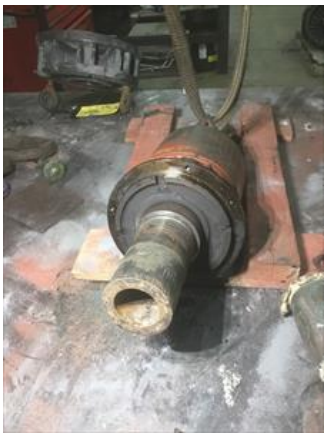


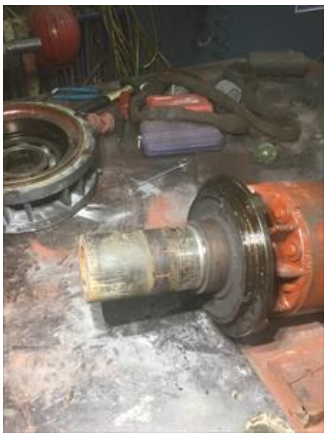


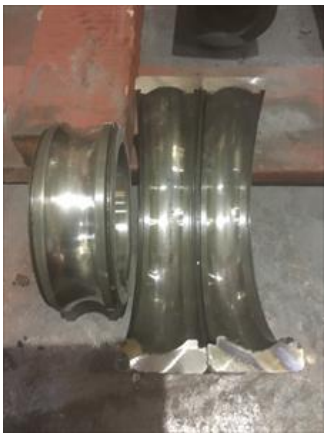




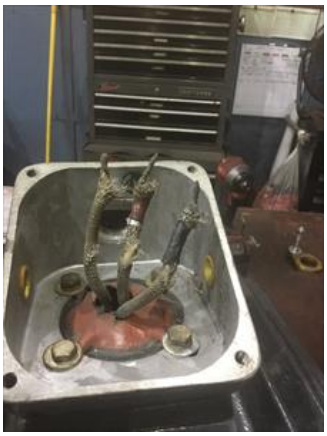








	4.	Describe the Overall Condition of the Equipment as Received	
	5.	Distance from the end of the shaft to the Coupling/Sheave	
Initial Mechanical/Electrical			
🔴	6.	Does Shaft Turn Freely?	**(No) No**
	7.	Does Shaft Have Visible Damage?	
	8.	Assembled Shaft Runout	
	9.	Assembled Shaft End Play	
	10.	Air Gap Variation <10%	
🟢	11.	Lead Condition	**(P) Pass** P56

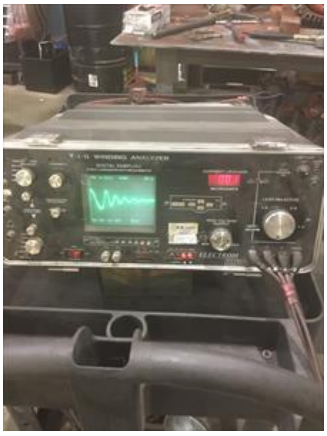


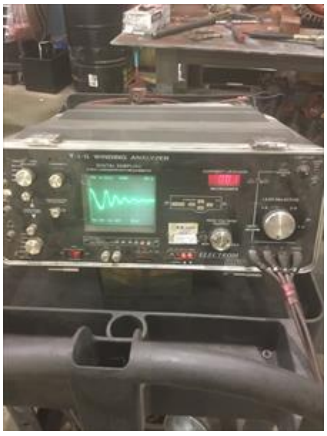
	12.	Lead Length	**4 Inches**

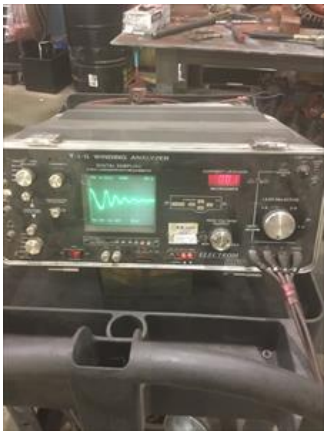
13.	Stator Temperature Detector Rating and Function				
	Quantity	Rating	Quantity Passed		
14.	Bearing Temperature Detector Rating and Function				
	Quantity	Rating	Quantity Passed		
15.	Frame Condition			**pass**	
16.	Fan Condition			**(N) NA**	
17.	Heater Quantity, Ratings				
	Quantity	Volts/Watts	Pass/Fail		
18.	Broken or Missing Components				

Initial Electrical Inspection

19.	Insulation Resistance/Megger				
20.	Winding Resistance				
	1-2	1-3	2-3		
21.	Perform Surge Test			**(P) Pass**	P58



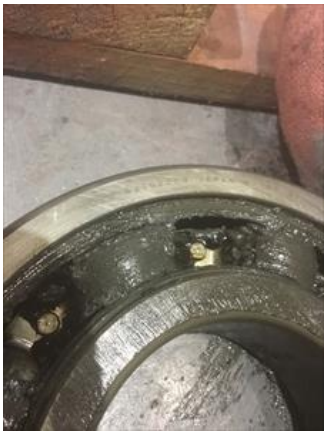




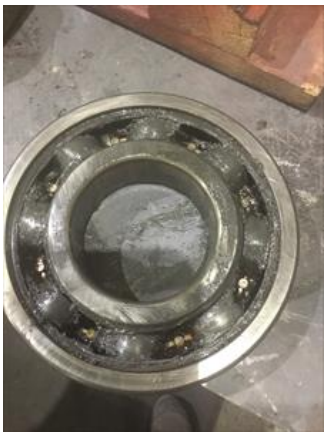
22.	Number of Stator Slots				
23.	Stator Condition			**pass**	
24.	Stator Thermistors/Ohms				
25.	Stator Overloads/Ohms				

Mechanical Inspection

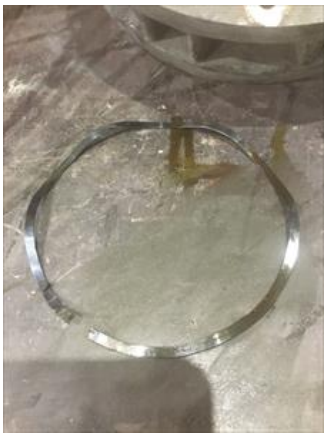
26.	Drive End Bearing Brand	**Koyo**	P12



27.	Drive End Bearing Number-	**6316**	
28.	Drive End Bearing Qty.	**1**	
29.	Drive End Bearing Type	**(Ball) Ball Bearing**	P51



30.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
31.	Drive End Bearing Insulation or Grounding Device?	**none**	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P77



33.	Drive End Bearing Condition	**replace**	
34.	Opposite Drive End Bearing Brand		
35.	Opposite Drive End Bearing Number-	**6316**	
36.	Opposite Drive End Bearing Qty.	**1**	

37.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
38.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
39.	Opposite Drive End Bearing Insulation or Grounding Device?	
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	
41.	Opposite Drive End Bearing Condition	**replace**
42.	Drive End Seal	
43.	Opposite Drive End Seal	

44. DE Sleeve Bearing Inside Diameter

0 degrees	120 degrees	240 degrees

45. DE Sleeve Bearing Outside Diameter

0 degrees	120 degrees	240 degrees

46. DE Sleeve Bearing Housing Inside Diameter

0 degrees	120 degrees	240 degrees

47. DE Sleeve Bearing to Housing Clearance

0 degrees	120 degrees	240 degrees

48. ODE Sleeve Bearing Inside Diameter

0 degrees	120 degrees	240 degrees

49. ODE Sleeve Bearing Outside Diameter

0 degrees	120 degrees	240 degrees

50. ODE Sleeve Bearing Housing Inside Diameter

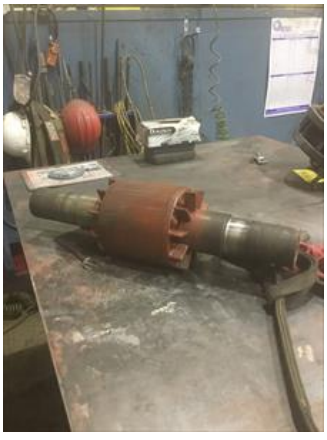
0 degrees	120 degrees	240 degrees

51. ODE Sleeve Bearing to Housing Clearance

0 degrees	120 degrees	240 degrees

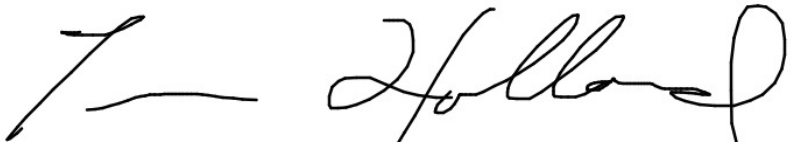
Rotor Inspection

52.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	P3



53.	Growler Test	
54.	Number of Rotor Bars	

55.	Rotor Condition	**good**
56.	List the Parts needed for the Repair Below	
57.	Signature of Technician that Disassembled Motor	**Terrence Holland**



Mechanical Fits- Rotor

58. Shaft Runout

59. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

60. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

61. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

62. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

63. Drive End Bearing Shaft Fit Condition

64. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

65. Opposite Drive End Bearing Shaft Fit Condition

66. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

67. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

68. Drive End - Endbell Bearing Fit Condition

69. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

70. Opposite Drive End - Endbell Bearing Fit Condition

71. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

72. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

73. List Machine Work Needed Below

74. Technician

Dynamic Balance Report

75. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

76. Initial Balance Readings

Drive End	Opposite Drive End

77. Final Balance Readings

Drive End	Opposite Drive End

78. Technician

Rewind

79. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

80. Core Hot Spot Test

Pre-Burnout	Post-Burnout

81. Post Rewind Electrical Test- Insulation Resistance

82. Post Rewind Polarization Index

83. Post Rewind Winding Resistance

1-2	1-3	2-3

84. Post Rewind Surge Test

85. Post Rewind Hi-Pot

86. Technician

Root Cause of Failure

87. Failure locations

88. Root cause of failure

Mechanical Fits- Rotor - Post Repair

89. Shaft Runout Post Repair

90. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

91. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

92. Coupling Fit Closest to the end of the Shaft Post Repair

0 Degrees	60 Degrees	120 Degrees

93. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

94. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

95. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

96. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

97. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

98. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

99. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

100. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

101. DE Sleeve Bearing Inside ID Post Repair

Measure 1	Measure 2	Measure 3

102. DE Sleeve Bearing Outside ID Post Repair

Measure 1	Measure 2	Measure 3

103. DE Sleeve Bearing Inside OD Post Repair

Measure 1	Measure 2	Measure 3

104. DE Sleeve Bearing Outside OD Post Repair

Measure 1	Measure 2	Measure 3

105. End Bell Repair Sign-off

106. ODE Sleeve Bearing Inside ID Post Repair

Measure 1	Measure 2	Measure 3

107. ODE Sleeve Bearing Outside ID Post Repair

Measure 1	Measure 2	Measure 3

108. ODE Sleeve Bearing Inside OD Post Repair

Measure 1	Measure 2	Measure 3

109. ODE Sleeve Bearing Outside OD Post Repair

Measure 1	Measure 2	Measure 3

Assembly

110. QC Check All Parts for Cleanliness Prior to Assembly
111. Photograph All Major Components prior to assembly
112. Final Insulation Resistance Test
113. Assembled Shaft Endplay

114.	Assembled Shaft Runout		
115.	Test Run Voltage		
	Volts	Volts	Volts
116.	Test Run Amperage		
	Amps	Amps	Amps
117.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
118.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
119.	Ambient Temperature - Fahrenheit		
120.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
121.	Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
122.	Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
123.	Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
124.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
125.	Opposite Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
126.	Opposite Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
127.	Opposite Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
128.	Stator Temperatures- Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
129.	Stator Temperatures- Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
130.	Stator Temperatures- Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes

131.	Stator Temperatures- Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
132.	Document Final Condition with Pictures after paint		
133.	Final Pics and QC Review		