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

AC Inspection as Found

Baldor Warranty Division
685 Mid America Blvd
Hot Springs, AR 71913

FolderID: 101773
FormID: 17696196

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	
Description:	WARRANTY EVAL 50 HP WITH TACH

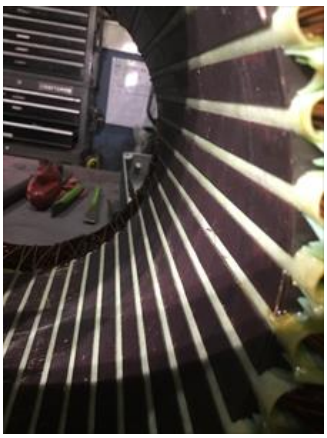
Hi-Speed Job Number:	101773
Manufacturer:	Baldor
Spec/ID #:	12G535Z279Z1
Serial Number:	C2301261467
HP/kW:	50 (HP)
RPM:	1775 (RPM)
Frame:	326T
Voltage:	230 / 460
Current:	40 / 20
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.00
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	08/24/2023
Repair Stage:	Final

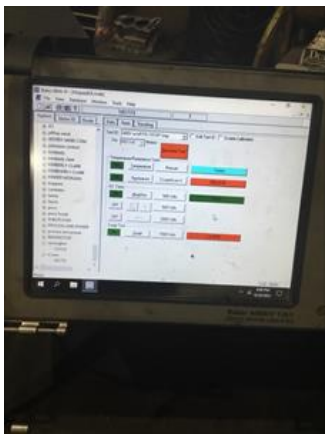
Priorities Found: **1 - High** **4 - Good**

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

Serviceable

Initial Mechanical/Electrical

5. Does Shaft Turn Freely? **(Yes) Yes**

6.	Does Shaft Have Visible Damage?	**(No) No**	P17

7.	Assembled Shaft Runout	**0.001 Inches**	
8.	Assembled Shaft End Play		
9.	Air Gap Variation <10%		
10.	Lead Condition	**(P) Pass**	P56

11.	Lead Length	**14 Inches**	
12.	Lead Numbers	**1-9**	P86

13. Stator Temperature Detector Rating and Function

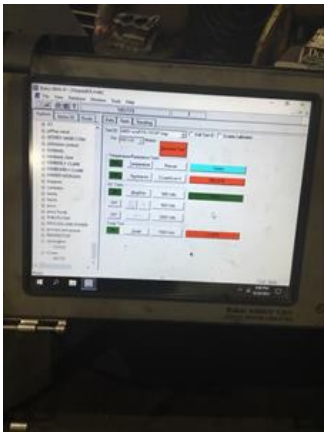
Quantity	Rating	Quantity Passed

14.	Bearing Temperature Detector Rating and Function				
	Quantity	Rating	Quantity Passed		
15.	Frame Condition			**pass**	
16.	Fan Condition			**(P) Pass**	P109

17.	Heater Quantity, Ratings				
	Quantity	Volts/Watts	Pass/Fail		
18.	Broken or Missing Components			**none**	

Initial Electrical Inspection

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



22.	Number of Stator Slots	**48**
23.	Stator Condition	**rewind**
24.	Stator Thermistors/Ohms	
25.	Stator Overloads/Ohms	

Mechanical Inspection

26.	Drive End Bearing Brand	
27.	Drive End Bearing Number-	**6312**
28.	Drive End Bearing Qty.	**1**

29.	Drive End Bearing Type	**(Ball) Ball Bearing**
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?	
33.	Drive End Bearing Condition	**pass**
34.	Opposite Drive End Bearing Brand	
35.	Opposite Drive End Bearing Number-	**6311**
36.	Opposite Drive End Bearing Qty.	**1**
37.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
38.	Opposite Drive End Lubrication Type	
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	
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**

53.	Growler Test	**(Pass) Pass**
54.	Number of Rotor Bars	**40**
55.	Rotor Condition	**pass**
56.	List the Parts needed for the Repair Below	
57.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

58.	Shaft Runout		**0.001 inches**
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		

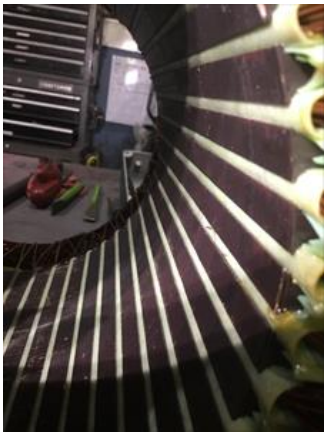
Root Cause of Failure

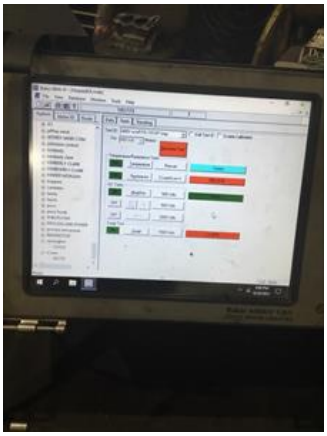
87. Failure locations

In slot inside stator.

88. Root cause of failure

Wire imbedded in stator slot penetrated the paper and windings.





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		