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

AC Inspection as Found

Dassault Falcon Jet (11751)
3801 East 10th st.
Little rock, AR 72203

FolderID: 101501
FormID: 17040117

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	C1103210158
Description:	30HP BALDOR 3600RPM 286TS

Hi-Speed Job Number:	101501
Manufacturer:	Baldor
Product Number:	24CA6492
Spec/ID #:	10G408Y807G2
Serial Number:	C1103210158
HP/kW:	30 (HP)
RPM:	3520 (RPM)
Frame:	286TS
Voltage:	230 / 460
Current:	66/33
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	ODP
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

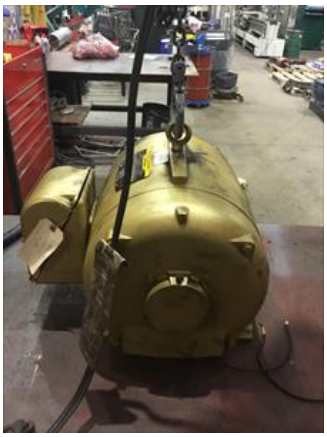
Priorities Found: **2 - High** **6 - Good**

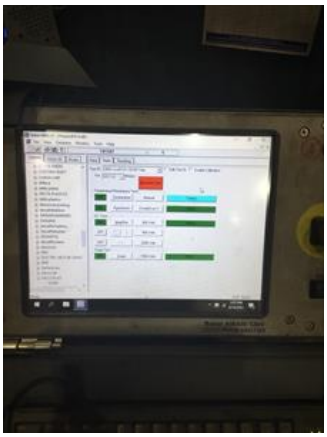
Overall Condition

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	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Yes) Yes**
	6.	Does Shaft Have Visible Damage?	**(No) No** P20

●	7.	Assembled Shaft Runout	**0.003 Inches**
	8.	Assembled Shaft End Play	
	9.	Air Gap Variation <10%	

10.	Lead Condition	**(P) Pass**	P55

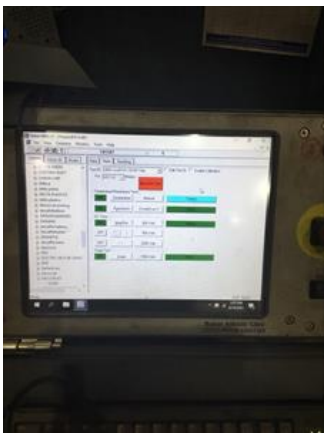
11.	Lead Length	**9.5 Inches**
12.	Frame Condition	**pass**
13.	Fan Condition	**(N) NA**
14.	Broken or Missing Components	**missing eyebolt.**

Initial Electrical Inspection

15.	Insulation Resistance/Megger	
16.	Winding Resistance	

1-2	1-3	2-3

17.	Perform Surge Test	**(P) Pass**	P57



18.	Number of Stator Slots	
19.	Stator Condition	**pass**
20.	Stator Thermistors/Ohms	
21.	Stator Overloads/Ohms	

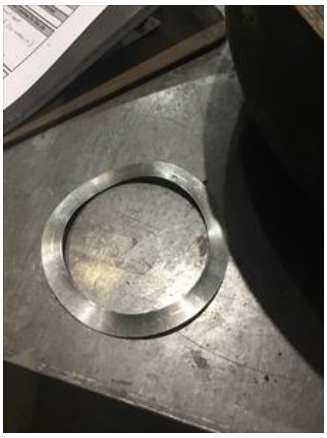
Mechanical Inspection

22.	Drive End Bearing Brand	

23.	Drive End Bearing Number-	**6310**	P32

24.	Drive End Bearing Qty.	**1**
25.	Drive End Bearing Type	**(Ball) Ball Bearing**
26.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
27.	Drive End Bearing Insulation or Grounding Device?	**none**
28.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**
29.	Drive End Bearing Condition	**welded on to shaft.**
30.	Opposite Drive End Bearing Brand	
31.	Opposite Drive End Bearing Number-	**6309** P88

32.	Opposite Drive End Bearing Qty.	**1**
33.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
34.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
35.	Opposite Drive End Bearing Insulation or Grounding Device?	
36.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	P98



37.	Opposite Drive End Bearing Condition	**replace**	P99

38.	Drive End Seal		
39.	Opposite Drive End Seal		

Rotor Inspection

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

41.	Growler Test	**(Pass) Pass**	
42.	Number of Rotor Bars		
43.	Rotor Condition	**D.E shaft fit worn**	
44.	List the Parts needed for the Repair Below ***Machine ODE housing, & d.e. bearing journal.***		

45. Signature of Technician that Disassembled Motor — **Terrence Holland**

Mechanical Fits- Rotor

46. Shaft Runout — **0.003 inches**

47. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

48. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

49. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

50. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

Bearing was welded to the shaft.

51. Drive End Bearing Shaft Fit Condition — **(F) Fail** — P76

52. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.7722	**1.7723**	**1.7723**

53. Opposite Drive End Bearing Shaft Fit Condition — **(P) Pass**

54. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

55. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.3311	**4.3313**	**4.3312**

56. Drive End - Endbell Bearing Fit Condition — **(P) Pass**

57. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

58. Opposite Drive End - Endbell Bearing Fit Condition **(F) Fail**

Lip worn in

59. Bearing Cap Condition P51

Drive End Bearing Cap	Opposite Drive End Bearing Cap
pass	**pass**

60. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

61. List Machine Work Needed Below

ODE housing fit & DE shaft bearing fit.

62. Technician **Terrence Holland**

Dynamic Balance Report

63. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

64. Initial Balance Readings

Drive End	Opposite Drive End

65. Final Balance Readings

Drive End	Opposite Drive End

66. Technician

Rewind

67. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

68. Core Hot Spot Test

Pre-Burnout	Post-Burnout

69. Post Rewind Electrical Test- Insulation Resistance
70. Post Rewind Polarization Index
71. Post Rewind Winding Resistance

1-2	1-3	2-3

72. Post Rewind Surge Test
73. Post Rewind Hi-Pot
74. Technician

Root Cause of Failure

75. Failure locations

D.E. Bearing journal bad & ODE housing fit has lip worn in.

76. Root cause of failure

Contaminated grease caused premature bearing failure.

Mechanical Fits- Rotor - Post Repair

77. Shaft Runout Post Repair
78. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

79. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

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

0 Degrees	60 Degrees	120 Degrees

81. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

82. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

83. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

84. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

85. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

86. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

87. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

88.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
89.	End Bell Repair Sign-off		
Assembly			
90.	QC Check All Parts for Cleanliness Prior to Assembly		
91.	Photograph All Major Components prior to assembly		
92.	Final Insulation Resistance Test		
93.	Assembled Shaft Endplay		
94.	Assembled Shaft Runout		
95.	Test Run Voltage		
	Volts	Volts	Volts
96.	Test Run Amperage		
	Amps	Amps	Amps
97.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
98.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
99.	Ambient Temperature - Fahrenheit		
100.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
101.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
102.	Document Final Condition with Pictures after paint		
103.	Final Pics and QC Review		