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

AC Inspection as Found

Custom Craft Poultry
3064 E Main St
Batesville, AR 72501

FolderID: 103922
FormID: 22717255

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	XWFFKA03
Description:	100 HP G.E

Hi-Speed Job Number:	103922
Manufacturer:	GE
Product Number:	5KE405SFC224B
Serial Number:	XWFFKA03
HP/kW:	100 (HP)
RPM:	1785 (RPM)
Frame:	405TC
Voltage:	460
Current:	109 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	3
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	Yes
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **11 - Good**

Overall Condition

1.	Report Date	**01/15/2025**

2. Nameplate Picture P37

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






Broken fan cover mount bolt

	4.	Describe the Overall Condition of the Equipment as Received ***Serviceable***	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Y) Yes**
●	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
●	8.	Assembled Shaft Runout	**0.003 Inches**
	9.	Assembled Shaft End Play	**0 inches**
	10.	Air Gap Variation <10%	
●	11.	Lead Condition	**(P) Pass** P69

	12.	Lead Length	**11 Inches**

13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
14.	Lead Numbers	**T1-T3**	
15.	Frame Condition	**pass**	
16.	Fan Condition	**(P) Pass**	P115

Metal fan

17. Heater Quantity, Ratings P117

Quantity	Volts/Watts	Pass/Fail
1	**120/100**	**pass**

18. Broken or Missing Components

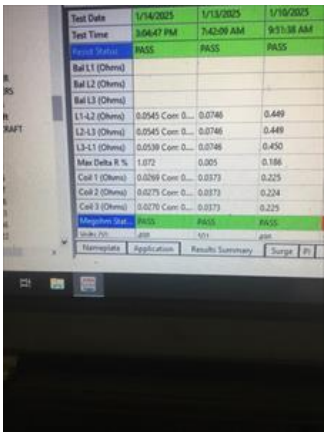
2 ea broken off bolts in ODE housing for fan cover mount bolts

Initial Electrical Inspection

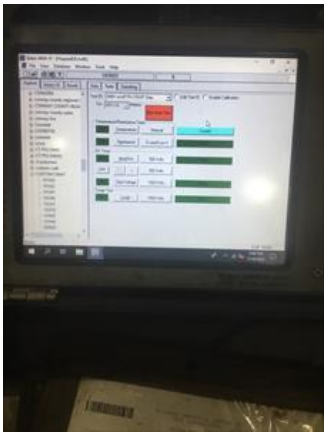
19.	Insulation Resistance/Megger	**25.53 Gigohms**	P8

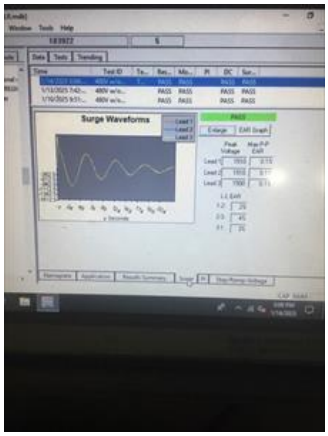
20.	Winding Resistance		P20

1-2	1-3	2-3



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





22.	Number of Stator Slots	**60**
23.	Stator Condition	**pass**
24.	Stator Thermistors/Ohms	
25.	Stator Overloads/Ohms	

Mechanical Inspection

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

27.	Drive End Bearing Number-	**6316/C3**	P32

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?	**snap ring**
33.	Drive End Bearing Condition	**frosting**
34.	Opposite Drive End Bearing Brand	P92

35.	Opposite Drive End Bearing Number-	**6314/C3**
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?	**none**	
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
41.	Opposite Drive End Bearing Condition	**replace**	
42.	Drive End Seal	**Va 100**	P120

43.	Opposite Drive End Seal		

Rotor Inspection

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

45.	Growler Test	**(Pass) Pass**	
46.	Number of Rotor Bars	**50**	
47.	Rotor Condition	**pass**	
48.	List the Parts needed for the Repair Below ***Replace bearings. Remove 2 ea broken fan cover mount bolts out of ODE housing.***		
49.	Signature of Technician that Disassembled Motor	**Terrence Holland**	

Mechanical Fits- Rotor

50.	Shaft Runout	**0.003 inches**

51. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

52. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
2.8742	**2.8744**	**2.8743**

54. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
3.1502	**3.1503**	**3.1503**

55. Drive End Bearing Shaft Fit Condition **(P) Pass**

56. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.7563	**2.7563**	**2.7564**

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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
6.6935	**6.6937**	**6.6935**

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

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.9057	**5.9061**	**5.906**

62. Opposite Drive End - Endbell Bearing Fit Condition **(P) Pass**

63. Bearing Cap Condition

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

64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

65. List Machine Work Needed Below

Remove 2 broken fan cover mount bolts from ode housing.

66. Technician **Terrence Holland**

Co sign: CRW

Root Cause of Failure

67. Failure locations

Both bearings

68. Root cause of failure

Both bearings show signs of electrical frosting and contaminated grease. Also evidence of misalignment.

Frosting and misalignment

Dynamic Balance Report

69. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

70. Initial Balance Readings

Drive End	Opposite Drive End

71. Final Balance Readings

Drive End	Opposite Drive End

72. Technician

Assembly

73. QC Check All Parts for Cleanliness Prior to Assembly
74. Photograph All Major Components prior to assembly
75. Final Insulation Resistance Test
76. Assembled Shaft Endplay
77. Assembled Shaft Runout
78. Test Run Voltage

Volts	Volts	Volts

79.	Test Run Amperage		
	Amps	Amps	Amps
80.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
81.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
82.	Ambient Temperature - Fahrenheit		
83.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
84.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
85.	Document Final Condition with Pictures after paint		
86.	Final Pics and QC Review		