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: 101955
FormID: 18100027

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	870183882.06.06.001
Description:	SEW GEARMOTOR 1800RPM 160M

Hi-Speed Job Number:	101955
Manufacturer:	SEW Eurodrive
Product Number:	R107DV160M4-KS
Serial Number:	870183882.06.06.001
RPM:	1740 (RPM)
Frame:	160M
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	Gear
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **5 - High** **3 - Good**

Overall Condition

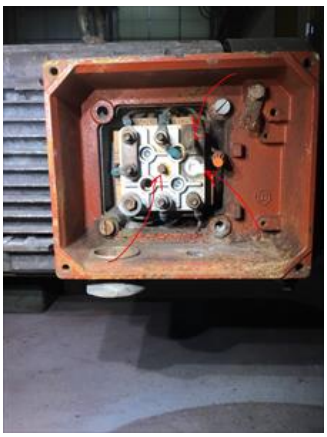
1. Report Date
2. Nameplate Picture P37

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

4.	Describe the Overall Condition of the Equipment as Received		
	Rusted and dirty.		
5.	Distance from the end of the shaft to the Coupling/Sheave	**0 inches**	P72

Initial Mechanical/Electrical

🔴	6.	Does Shaft Turn Freely?	**(No) No**	
	7.	Does Shaft Have Visible Damage?	**(No) No**	
🟢	8.	Assembled Shaft Runout	**0.002 Inches**	
	9.	Assembled Shaft End Play		
	10.	Air Gap Variation <10%		
🔴	11.	Lead Condition	**(F) Fail**	P55
		Multiple lead connection terminal posts broken.		



	12.	Lead Length	**6 Inches**	
	13.	Lead Numbers	**1-9**	
	14.	Frame Condition	**pass**	
●	15.	Fan Condition	**(F) Fail**	P96

Missing

16. Broken or Missing Components **multiple** P100

Connection block terminals broken, fan assembly missing, and ode housing broken and multiple gears stripped from wear.

Initial Electrical Inspection

	17.	Insulation Resistance/Megger			
	18.	Winding Resistance			
		1-2	1-3	2-3	
●	19.	Perform Surge Test		**(P) Pass**	P57

	20.	Number of Stator Slots	**36**
	21.	Stator Condition	**pass**
	22.	Stator Thermistors/Ohms	**none**

23.	Stator Overloads/Ohms	**none**	

Mechanical Inspection

24.	Drive End Bearing Brand		P14

25.	Drive End Bearing Number-	**6309 2Z/C3**	P30

26.	Drive End Bearing Qty.	**1**	
27.	Drive End Bearing Type	**(Ball) Ball Bearing**	
28.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
29.	Drive End Bearing Insulation or Grounding Device?	**none**	
30.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**snap ring and spacer**	P73

31.	Drive End Bearing Condition	**replace**	
32.	Opposite Drive End Bearing Brand	**skf**	

33.	Opposite Drive End Bearing Number-	**6209 2rs**	P90

34.	Opposite Drive End Bearing Qty.	**1**	
35.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
36.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
37.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	
38.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P99

39.	Opposite Drive End Bearing Condition	**replace**	
40.	Drive End Seal	**40*62*7**	P102

41.	Opposite Drive End Seal	**45*62*8**	P103

Rotor Inspection

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

43.	Growler Test	**(Pass) Pass**
44.	Number of Rotor Bars	**28**
45.	Rotor Condition	**pass**
46.	List the Parts needed for the Repair Below	
47.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

48.	Shaft Runout		**0.002 inches**
49.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
50.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees

51. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

52. Drive End Bearing Shaft Fit

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

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

54. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.7716	**1.7717**	**1.7716**

55. Opposite Drive End Bearing Shaft Fit Condition **(F) Fail**

56. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

57. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.9376	**3.9375**	**3.9375**

58. Drive End - Endbell Bearing Fit Condition

59. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.3477	**3.3478**	**3.3478**

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

61. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

N/A

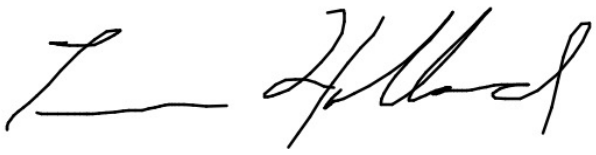
62. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

63. List Machine Work Needed Below

ODE housing fit worn beyond limits.

64. Technician **Terrence Holland**



Dynamic Balance Report

65. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

66. Initial Balance Readings

Drive End	Opposite Drive End

67. Final Balance Readings

Drive End	Opposite Drive End

68. Technician

Rewind

69. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

70. Core Hot Spot Test

Pre-Burnout	Post-Burnout

71. Post Rewind Electrical Test- Insulation Resistance

72. Post Rewind Polarization Index

73. Post Rewind Winding Resistance

1-2	1-3	2-3

74. Post Rewind Surge Test

75. Post Rewind Hi-Pot

76. Technician

Root Cause of Failure

77. Failure locations

Multiple Gearbox gears worn. Motor shaft output gear worn. Connection box mount block needs replacing. Ode housing broken and needs re-sleeved. Fan assembly missing.

78. Root cause of failure

Mechanical Fits- Rotor - Post Repair

79. Shaft Runout Post Repair

80. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

81. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

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

0 Degrees	60 Degrees	120 Degrees

83. Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

84. Opposite Drive End Bearing Shaft Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

85. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

86. Shaft Repair Sign-off

Mechanical Fits- Bearing Housings - Post Repair

87.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
88.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
89.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
90.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
91.	End Bell Repair Sign-off		
Assembly			
92.	QC Check All Parts for Cleanliness Prior to Assembly		
93.	Photograph All Major Components prior to assembly		
94.	Final Insulation Resistance Test		
95.	Assembled Shaft Endplay		
96.	Assembled Shaft Runout		
97.	Test Run Voltage		
	Volts	Volts	Volts
98.	Test Run Amperage		
	Amps	Amps	Amps
99.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
100.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
101.	Ambient Temperature - Fahrenheit		
102.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
103.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
104.	Document Final Condition with Pictures after paint		
105.	Final Pics and QC Review		