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

AC Inspection as Found

Hiland Dairy (10126)
6901 I-30
Little Rock, AR 72209

FolderID: 101571
FormID: 17210602

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	313030431
Description:	25 HP STAINLESS STEEL

Hi-Speed Job Number:	101571
Manufacturer:	Other
Product Number:	XH0252PHA
Serial Number:	313030431
HP/kW:	25 (HP)
RPM:	3560 (RPM)
Voltage:	208-230/460
Current:	57.4 / 28.7
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Repair Stage:	Final

Priorities Found: **2 - High** **5 - 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**	
	7.	Assembled Shaft Runout		
	8.	Assembled Shaft End Play		
	9.	Air Gap Variation <10%		
●	10.	Lead Condition	**(P) Pass**	P56

	11.	Lead Length	**12 Inches**
	12.	Stator Temperature Detector Rating and Function	

Quantity	Rating	Quantity Passed

	13.	Bearing Temperature Detector Rating and Function	

Quantity	Rating	Quantity Passed

	14.	Frame Condition	**pass**

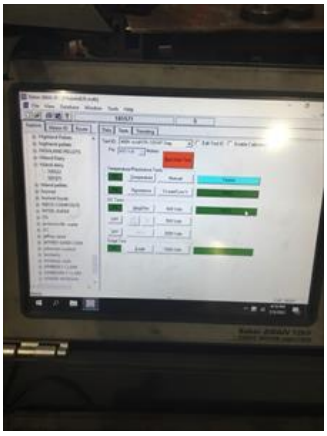
15.	Fan Condition	**(P) Pass**	P105

16.	Heater Quantity, Ratings		
	Quantity	Volts/Watts	Pass/Fail
17.	Broken or Missing Components		

Initial Electrical Inspection

18.	Insulation Resistance/Megger		
19.	Winding Resistance		
	1-2	1-3	2-3

20.	Perform Surge Test	**(P) Pass**	P58



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

Mechanical Inspection

25.	Drive End Bearing Brand	**NSK**
26.	Drive End Bearing Number-	**6310**
27.	Drive End Bearing Qty.	**1**

28.	Drive End Bearing Type	**(Ball) Ball Bearing**	P51

29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
30.	Drive End Bearing Insulation or Grounding Device?	**none**	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
32.	Drive End Bearing Condition	**replace**	P82

33.	Opposite Drive End Bearing Brand	**NSK**	
34.	Opposite Drive End Bearing Number-	**6310**	
35.	Opposite Drive End Bearing Qty.	**1**	
36.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	P106

37.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
38.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P114

40.	Opposite Drive End Bearing Condition	**replace**	
41.	Drive End Seal	**TC 50*70*8**	P118

42.	Opposite Drive End Seal	**50*70*8**	P120

43.	DE Sleeve Bearing Inside Diameter		
	0 degrees	120 degrees	240 degrees
44.	DE Sleeve Bearing Outside Diameter		
	0 degrees	120 degrees	240 degrees
45.	DE Sleeve Bearing Housing Inside Diameter		
	0 degrees	120 degrees	240 degrees
46.	DE Sleeve Bearing to Housing Clearance		
	0 degrees	120 degrees	240 degrees
47.	ODE Sleeve Bearing Inside Diameter		
	0 degrees	120 degrees	240 degrees
48.	ODE Sleeve Bearing Outside Diameter		
	0 degrees	120 degrees	240 degrees
49.	ODE Sleeve Bearing Housing Inside Diameter		
	0 degrees	120 degrees	240 degrees
50.	ODE Sleeve Bearing to Housing Clearance		
	0 degrees	120 degrees	240 degrees

Rotor Inspection

51. Rotor Type/Material

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

Mechanical Fits- Rotor

57. Shaft Runout

58. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

59. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

60. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

61. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.9691	**1.9691**	**1.9691**

62. Drive End Bearing Shaft Fit Condition

63. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.9686	**1.9687**	**1.9686**

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

65. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

66. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

67. Drive End - Endbell Bearing Fit Condition **(F) Fail** P13

68. Opposite Drive End - Endbell Bearing Fit P32

0 Degrees	60 Degrees	120 Degrees

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

70. Bearing Cap Condition P50

Drive End Bearing Cap	Opposite Drive End Bearing Cap
yes	**none**

71. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

72. List Machine Work Needed Below

Both housing fits bad

73. Technician **Terrence Holland**

Dynamic Balance Report

74. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

75. Initial Balance Readings

Drive End	Opposite Drive End

76. Final Balance Readings

Drive End	Opposite Drive End

77. Technician

Rewind

78. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

79. Core Hot Spot Test

Pre-Burnout	Post-Burnout

80. Post Rewind Electrical Test- Insulation Resistance

81. Post Rewind Polarization Index

82. Post Rewind Winding Resistance

1-2	1-3	2-3

83. Post Rewind Surge Test

84. Post Rewind Hi-Pot

85. Technician

Root Cause of Failure

86. Failure locations

Both housing fits bad.

87. Root cause of failure

Housing fits pitted.

Mechanical Fits- Rotor - Post Repair

88. Shaft Runout Post Repair

89. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

90.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
91.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
92.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
93.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
94.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
95.	Shaft Repair Sign-off		

Mechanical Fits- Bearing Housings - Post Repair

96.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
97.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
98.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
99.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
100.	DE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
101.	DE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
102.	DE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
103.	DE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3
104.	End Bell Repair Sign-off		
105.	ODE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3

106.	ODE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
107.	ODE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
108.	ODE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3

Assembly

109.	QC Check All Parts for Cleanliness Prior to Assembly		
110.	Photograph All Major Components prior to assembly		
111.	Final Insulation Resistance Test		
112.	Assembled Shaft Endplay		
113.	Assembled Shaft Runout		
114.	Test Run Voltage		
	Volts	Volts	Volts
115.	Test Run Amperage		
	Amps	Amps	Amps
116.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
117.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
118.	Ambient Temperature - Fahrenheit		
119.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
120.	Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
121.	Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
122.	Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
123.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
124.	Opposite Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes

125.	Opposite Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
126.	Opposite Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
127.	Stator Temperatures- Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
128.	Stator Temperatures- Fahrenheit 20-30 Minutes		
	20 Minutes	25 Minutes	30 Minutes
129.	Stator Temperatures- Fahrenheit 35-45 Minutes		
	35 Minutes	40 Minutes	45 Minutes
130.	Stator Temperatures- Fahrenheit 50-60 Minutes		
	50 Minutes	55 Minutes	60 Minutes
131.	Document Final Condition with Pictures after paint		
132.	Final Pics and QC Review		