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

AC Inspection as Found

Arauco-Malvern MDF (10298)
1275 Willamette Rd
Malvern, AR 72104

FolderID: 103921
FormID: 22715385

AC Inspection - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	43MN360319G001XX
Description:	60 HP RELIANCE

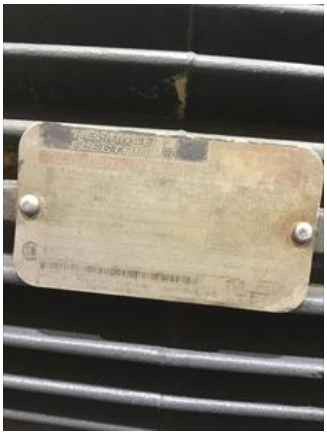
Hi-Speed Job Number:	103921
Manufacturer:	Reliance
Product Number:	M: P36G0319K
Serial Number:	43MN360319G001XX
HP/kW:	60 (HP)
RPM:	1775 (RPM)
Frame:	364T
Voltage:	230 / 460
Current:	144/72.4 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	3
J-box Included:	Half
Coupling/Sheave:	None
Date Received:	12/27/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	Yes
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **4 - High** **8 - Good**

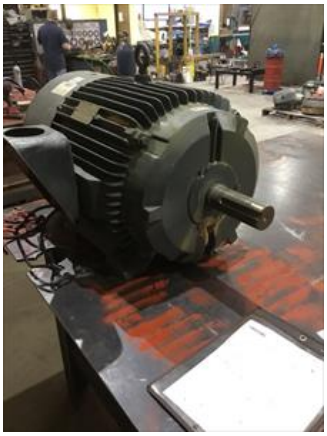
Overall Condition

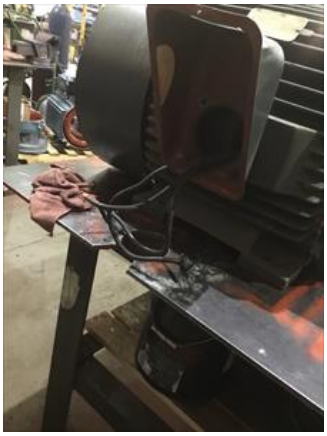
1.	Report Date	**01/06/2025**

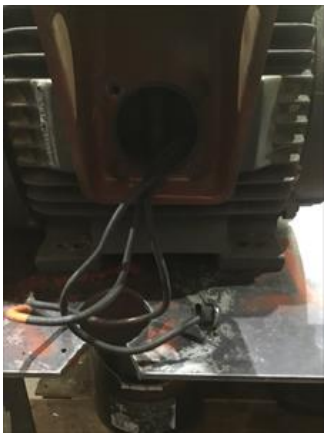
2. Nameplate Picture P37

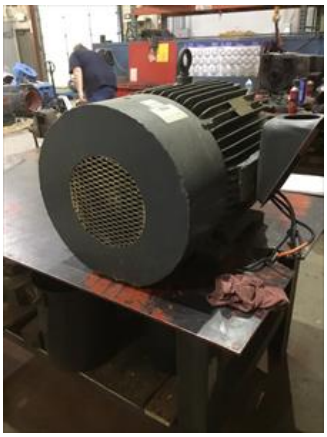


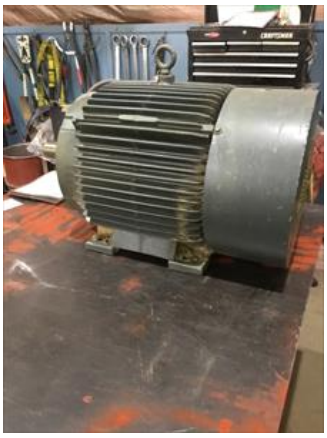
3. Photos of all six sides of the machine. P45

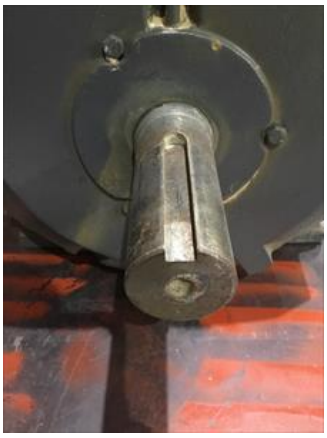


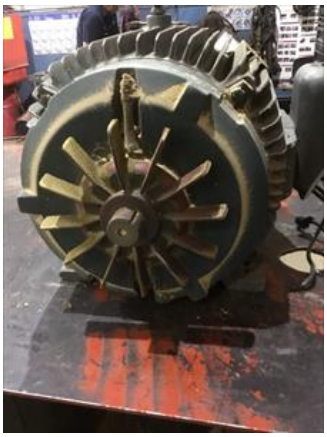


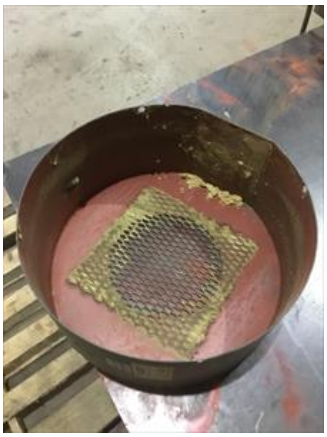


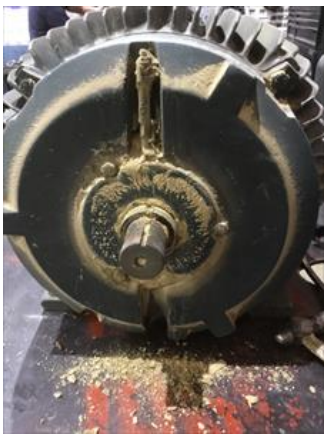


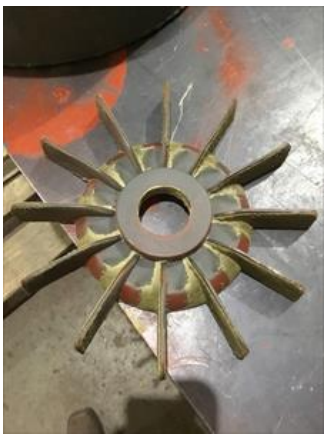


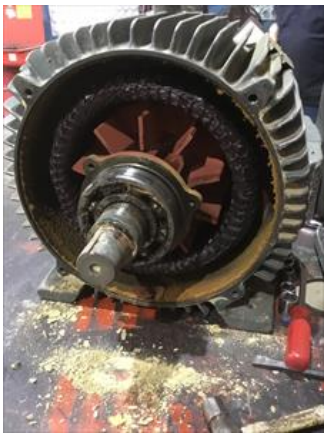


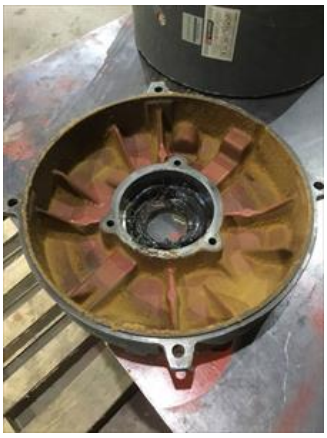


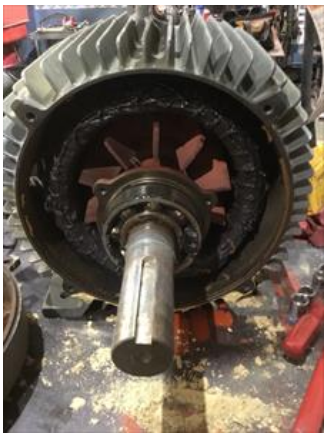


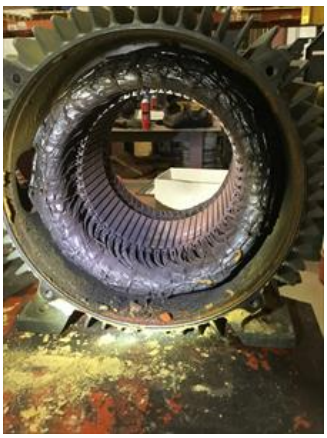


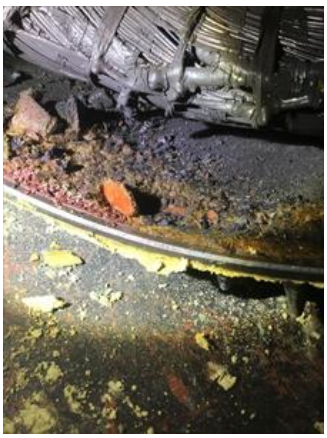


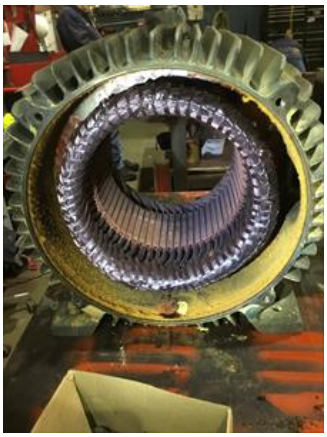










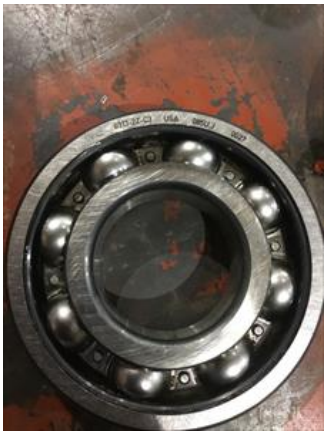


	4.	Describe the Overall Condition of the Equipment as Received ***Dirty***	
Initial Mechanical/Electrical			
	5.	Does Shaft Turn Freely?	**(Y) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**Inches**
	9.	Assembled Shaft End Play	**inches**
	10.	Air Gap Variation <10%	
	11.	Lead Condition ***Rewind***	**(NA) Not Applicable**
	12.	Lead Length	**20 Inches**
	13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**
	14.	Lead Numbers	**1-3**
	15.	Frame Condition	
	16.	Fan Condition	**(P) Pass**
	17.	Broken or Missing Components	**j-box cover and bolts**
Initial Electrical Inspection			
	18.	Insulation Resistance/Megger	**Megohms**
	19.	Winding Resistance	

1-2	1-3	2-3

	20.	Perform Surge Test ***Blown***	**(NA) Not Applicable**
	21.	Number of Stator Slots	**60**
	22.	Stator Condition	**rewind**
	23.	Stator Thermistors/Ohms	
	24.	Stator Overloads/Ohms	
Mechanical Inspection			

25.	Drive End Bearing Brand	**fag**	P12



26.	Drive End Bearing Number-	**6313**
27.	Drive End Bearing Qty.	**1**
28.	Drive End Bearing Type	**(Ball) Ball Bearing**
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
30.	Drive End Bearing Insulation or Grounding Device?	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	
32.	Drive End Bearing Condition	P82

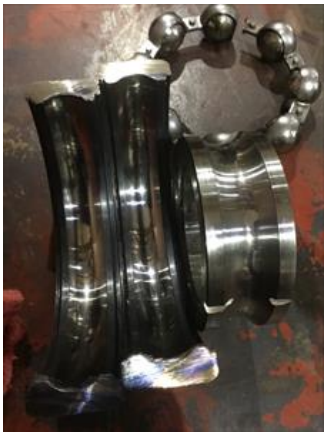
Contamination

33.	Opposite Drive End Bearing Brand	**fag**	P92

34.	Opposite Drive End Bearing Number-	**6313**

35.	Opposite Drive End Bearing Qty.	**1**	
36.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
37.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
38.	Opposite Drive End Bearing Insulation or Grounding Device?		
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
40.	Opposite Drive End Bearing Condition		P118

Contamination



41.	Drive End Seal	
42.	Opposite Drive End Seal	

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**47**
46.	Rotor Condition	**pass**
47.	List the Parts needed for the Repair Below	

6313x2
J-box cover and bolts
Aegis ring- 2.9992

48.	Signature of Technician that Disassembled Motor	**Cw**

Mechanical Fits- Rotor

49.	Shaft Runout	**inches**
50.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

51.	Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

52.	Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

53. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

2.5594-2.5595-2.5594

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

55. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

2.5592-2.5592-2.5592

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

57. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

58. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

Excessive lip worn into fit

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

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

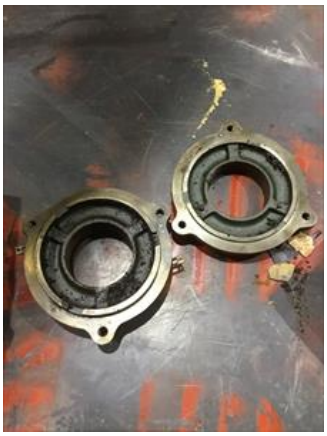
5.5117-5.5123-5.5115

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

Egg shaped

62. Bearing Cap Condition P52

Drive End Bearing Cap	Opposite Drive End Bearing Cap



63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

64. List Machine Work Needed Below

DE end bell Beaty fit

65. Technician **Cw**

Co sign: RRW

Root Cause of Failure

66. Failure locations

Bearings, winding, end bell bearing fits

67. Root cause of failure

Excessive wear and contamination

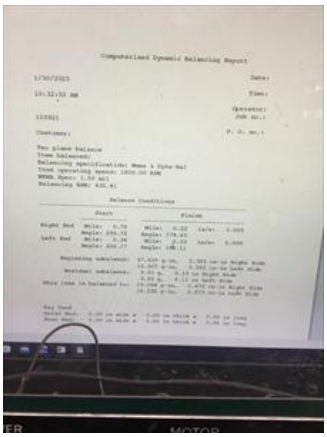
Dynamic Balance Report

68. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

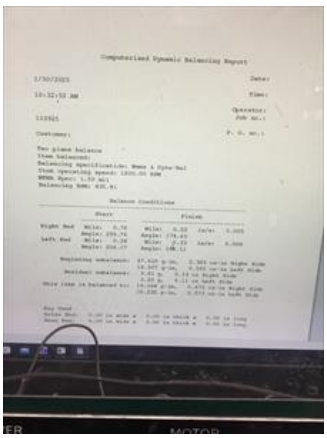
69. Initial Balance Readings P11

Drive End	Opposite Drive End



70. Final Balance Readings P27

Drive End	Opposite Drive End



71. Technician **Trevor Hall**

Rewind

72. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

73. Core Hot Spot Test

Pre-Burnout	Post-Burnout

74. Post Rewind Electrical Test- Insulation Resistance

75. Post Rewind Polarization Index

76. Post Rewind Winding Resistance

1-2	1-3	2-3

77. Post Rewind Surge Test

78. Post Rewind Hi-Pot

79. Technician

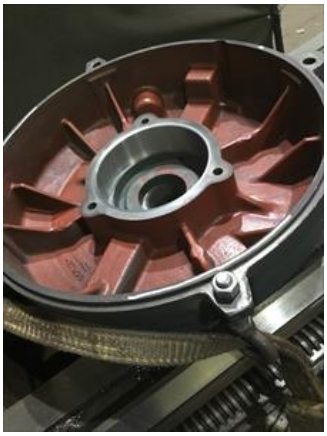
Mechanical Fits- Bearing Housings - Post Repair

80. Drive End - Endbell Bearing Fit Post Repair P5

0 Degrees	60 Degrees	120 Degrees
5.5122	**5.5122**	**5.5121**

81. Opposite Drive End - Endbell Bearing Fit Post Repair P19

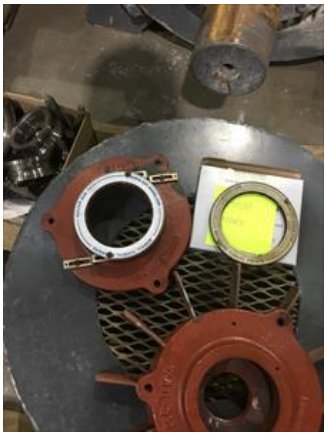
0 Degrees	60 Degrees	120 Degrees
5.512	**5.512**	**5.512**



82. Bearing Cap Condition Post Repair P24

Drive End Bearing Cap	Opposite Drive End Bearing Cap

Installed new Agis ring



83. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

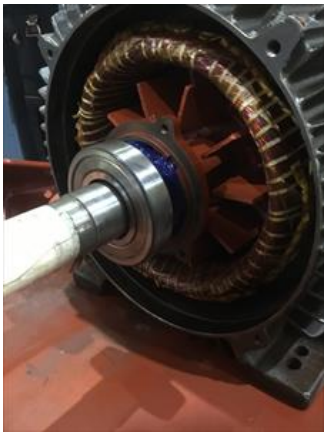
84. End Bell Repair Sign-off **Gary**

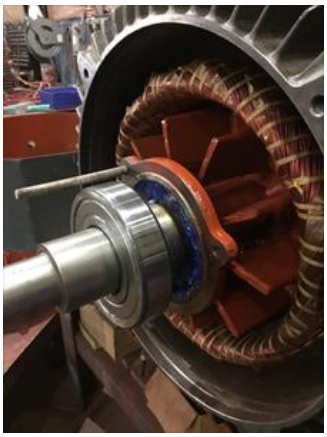
.

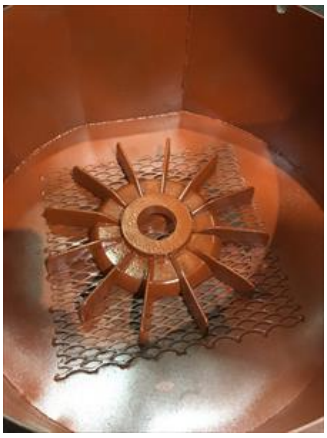
Assembly

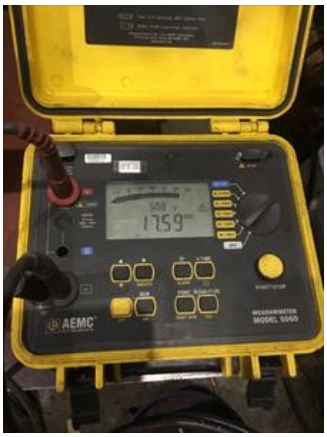
85. QC Check All Parts for Cleanliness Prior to Assembly P4

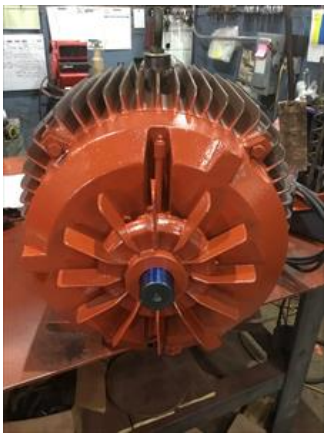
86. Photograph All Major Components prior to assembly P17



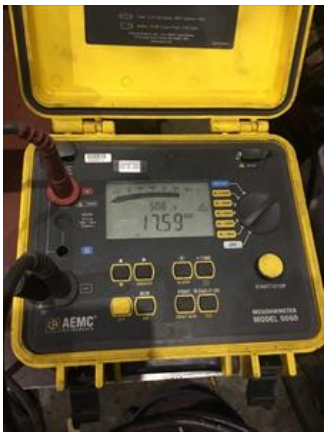






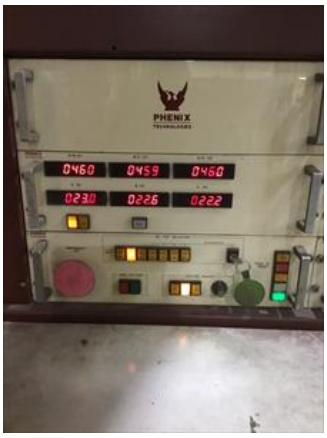


87.	Final Insulation Resistance Test	**Megohms**	P31



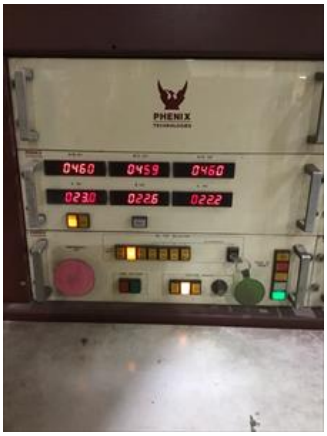
88.	Assembled Shaft Endplay	**0 inches**	
89.	Assembled Shaft Runout		
90.	Test Run Voltage		P56

Volts	Volts	Volts



91. Test Run Amperage P65

Amps	Amps	Amps
23	**23.6**	**22.2**



92. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.01	**0.02**	**0.01**

93. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.02	**0.02**	**0.02**

94. Ambient Temperature - Fahrenheit

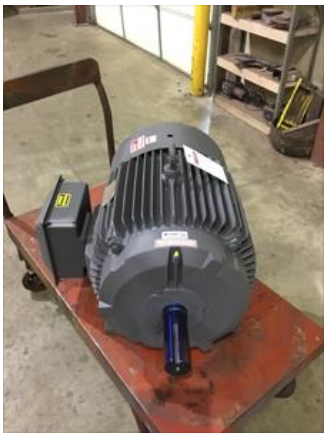
95. Drive End Bearing Temps - Fahrenheit

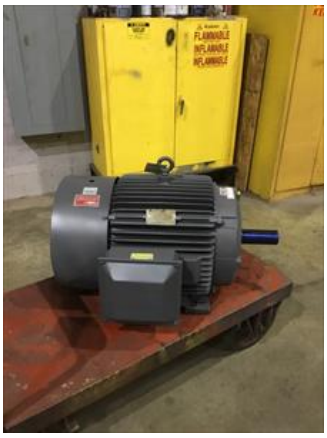
5 Minutes	10 Minutes	15 Minutes

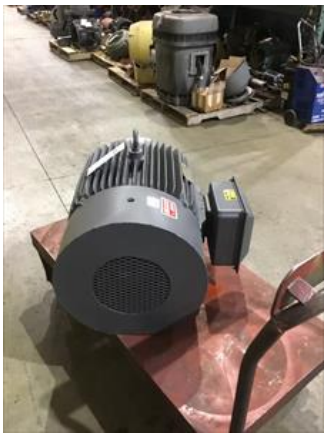
96. Opposite Drive End Bearing Temps - Fahrenheit

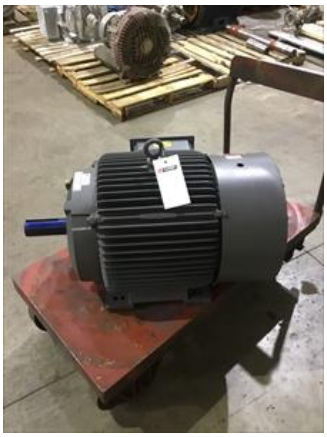
5 Minutes	10 Minutes	15 Minutes

97. Document Final Condition with Pictures after paint P129









98. Final Pics and QC Review **Terrence Holland** P131

Co sign: RRW