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

AC Inspection as Found

Arkansas Electric Coop. (11681)
17400 highway 365 south
Little Rock, AR 72206

FolderID: 104824
FormID: 24987363

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	038736
Description:	4.3 HP AMATEK

Hi-Speed Job Number:	104824
Manufacturer:	Other
Product Number:	DR858AY72X
Serial Number:	038736
HP/kW:	7.5 (HP)
RPM:	3450 (RPM)
Frame:	215TCZ
Voltage:	208-230/460
Current:	24.5/22.2/11.1
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	06/26/2025
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: **5 - High** **9 - Good**

Overall Condition

1.	Report Date	**07/09/2025**

2. Nameplate Picture P38

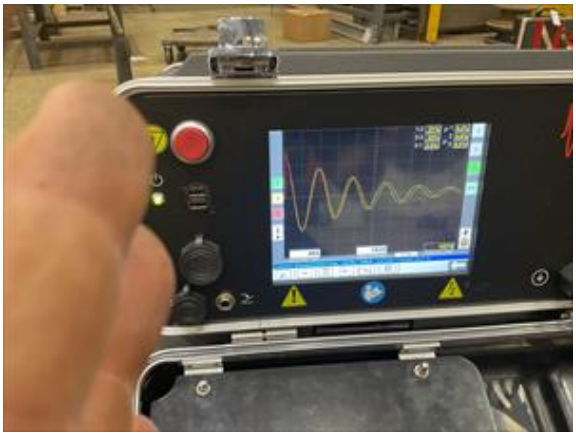
3. Photos of all six sides of the machine. P46

	4.	Describe the Overall Condition of the Equipment as Received ***Acceptable***	
	5.	Is this a UL Listed Motor	**(NO) NO**
	6.	Is the motor water cooled or can be pressure checked before teardown	**(NO) NO**
Initial Mechanical/Electrical			
●	7.	Does Shaft Turn Freely?	**(Y) Yes**
	8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(NO) NO**
	9.	Does Shaft Have Visible Damage?	**(No) No**
●	10.	Assembled Shaft Runout	**0 Inches**

	11.	Assembled Shaft End Play	**inches**	
		None		
	12.	Air Gap Variation <10%		
●	13.	Lead Condition	**(P) Pass**	
	14.	Lead Length	**Inches**	
		10"		
	15.	Does it have Lugs?, If so what is the Stud Size?	**(NO) NO**	
	16.	Lead Numbers	**1-9**	
	17.	Are the Leads insulated with Chico or other material	**(NO) NO**	
	18.	Frame Condition	**acceptable**	
●	19.	Fan Condition	**(P) Pass**	
	20.	Does motor have internal fan?	**(NO) NO**	
	21.	Broken or Missing Components		P130
		Shaft sleeve		

Initial Electrical Inspection

	22.	Insulation Resistance/Megger		**0.01233 Megohms**	
	23.	Winding Resistance			
		1-2	1-3	2-3	
		1-2 1.497300	**1-3 1.557900**	**2-3 1.487600**	
●	24.	Perform Surge Test		**(F) Fail**	P57



	25.	Number of Stator Slots	**36**	
	26.	Stator Condition	**shorted**	
	27.	Stator Thermistors/Ohms		

	28. Stator Overloads/Ohms		
Mechanical Inspection			
	29. Drive End Bearing Brand	**NACHI**	
	30. Drive End Bearing Number-	**6309ZE**	
	31. Drive End Bearing Qty.	**1**	
	32. Drive End Bearing Type	**(Ball) Ball Bearing**	
	33. Drive End Lubrication Type	**(Grease) Grease Lubricated**	
	34. Drive End Bearing Insulation or Grounding Device?		
	35. Drive End Wavy Washer/Snap-Ring Other Retention Device?		
●	36. Drive End Bearing Condition	**good**	P82

	37. Opposite Drive End Bearing Brand	**SKF**	
	38. Opposite Drive End Bearing Number-	**6206-2RS**	
	39. Opposite Drive End Bearing Qty.	**1**	
	40. Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
	41. Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
	42. Opposite Drive End Bearing Insulation or Grounding Device?		
	43. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**washers**	
●	44. Opposite Drive End Bearing Condition	**good**	P120

	45. Drive End Seal		
	46. Opposite Drive End Seal		
Rotor Inspection			
	47. Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	

	48.	Growler Test	**(Pass) Pass**
	49.	Number of Rotor Bars	**29**
●	50.	Rotor Condition	
	51.	List the Parts needed for the Repair Below	

6309zz
6206zz
Shaft sleeve
Rewind

	52.	Signature of Technician that Disassembled Motor	**Donny Spears**

Mechanical Fits- Rotor

	53.	Shaft Runout	**0 inches**
	54.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
0	**0**	**0**

	55.	Coupling Fit Closest to Bearing Housing	

0 Degrees	90 Degrees	120 Degrees

	56.	Coupling Fit Closest to the end of the Shaft	

0 Degrees	60 Degrees	120 Degrees

	57.	Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees

1.7720

●	58.	Drive End Bearing Shaft Fit Condition	**(P) Pass**
	59.	Opposite Drive End Bearing Shaft Fit	

0 Degrees	60 Degrees	120 Degrees

1.1813

●	60.	Opposite Drive End Bearing Shaft Fit Condition	**(P) Pass**
	61.	Shaft Air Seal Fits	

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

	62.	Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees

3.9383

●	63.	Drive End - Endbell Bearing Fit Condition	**(F) Fail**
	64.	Opposite Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees

2.4420

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

66. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

67. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

68. List Machine Work Needed Below

SE-Endbell
OE Endbell
Shaft sleeve
Rewind

69. Technician **Donny Spears**

STC QC

Root Cause of Failure

70. Failure locations

Winding Shorted

71. Root cause of failure

Phase to phase short

Dynamic Balance Report

72. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

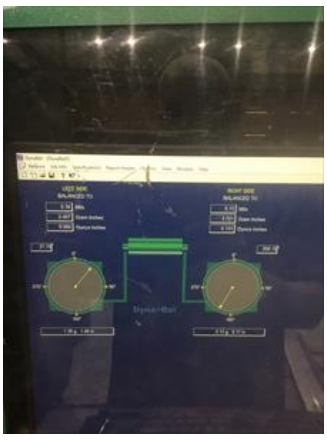
73. Initial Balance Readings

Drive End	Opposite Drive End

See below

74. Final Balance Readings P28

Drive End	Opposite Drive End
.34	**.13**



75. Technician

Rewind

76. Core Test Results - Watts loss per Pound

Pre-Burnout	Post Burnout

77. Core Hot Spot Test

Pre-Burnout	Post-Burnout

78. Post Rewind Electrical Test- Insulation Resistance

79. Post Rewind Polarization Index

80. Post Rewind Winding Resistance

1-2	1-3	2-3

81. Post Rewind Surge Test

82. THERMAL DETECTION EQUIPMENT FINAL TESTING - RTD'S/KLIXONS/THERMISTORS

83. Post Rewind Hi-Pot

84. Technician

Mechanical Fits- Bearing Housings - Post Repair

85. Drive End - Endbell Bearing Fit Post Repair P5

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

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

0 Degrees	60 Degrees	120 Degrees
2.4412	**2.4412**	**2.4412**

87. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

88. End Bell Air Seal Fits Post Repair P43

Drive End Air Seal	Opposite Drive End Air Seal

89. End Bell Repair Sign-off **RW**

Assembly

90. QC Check All Parts for Cleanliness Prior to Assembly **Terrence Holland**

91. Photograph All Major Components prior to assembly P20

92.	Was a Insulated bearing or end bell tested?	**(NA) Not Applicable**	
93.	Final Insulation Resistance Test	**Megohms**	P37

94.	Assembled Shaft Endplay	**0 inches**	
95.	Assembled Shaft Runout	**0.001 inches**	
96.	Test Run Voltage		P69

Volts	Volts	Volts

97. Test Run Amperage

Amps	Amps	Amps
3	**2.8**	**3**

98.	Motor RPM	**3594**

99. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.04	**0.05**	**0.02**

100. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.04	**0.02**	**0.02**

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 P139

105. Final Pics and QC Review **Terrence Holland**

Co sign: TLH