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: 104252
FormID: 23680105

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	07H383W361G1
Description:	7 1/2 AMETEK

Hi-Speed Job Number:	104252
Manufacturer:	Other
Product Number:	511570
Serial Number:	07H383W361G1
HP/kW:	7.5 (HP)
RPM:	3450 (RPM)
Frame:	215TCZ
Voltage:	208-230/460
Current:	11.1 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	Propeller
Date Received:	03/14/2025
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **3 - High** **12 - Good**

Overall Condition

1.	Report Date	**03/14/2025**

2. Nameplate Picture P37

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

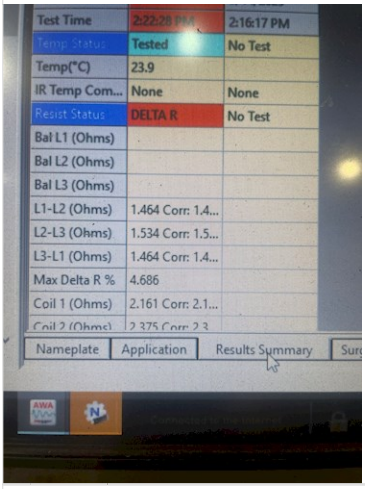
	4.	Describe the Overall Condition of the Equipment as Received ***Needs bearings, shaft fits repaired and endbell sleeved.***	
	5.	Distance from the end of the shaft to the Coupling/Sheave ***Has a shoulder***	**inches**
●	6.	Is this a UL Listed Motor	**(No) No**
●	7.	Is the motor water cooled or can be pressure checked before teardown	**(No) No**
		Initial Mechanical/Electrical	
●	8.	Does Shaft Turn Freely?	**(Y) Yes**
●	9.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	10.	Does Shaft Have Visible Damage?	**(No) No**
●	11.	Assembled Shaft Runout	**0.001 Inches**
	12.	Assembled Shaft End Play	**0 inches**
	13.	Air Gap Variation <10% ***Na***	
●	14.	Lead Condition	**(P) Pass**
	15.	Lead Length	**8 Inches**
●	16.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**
	17.	Lead Numbers	**1-9**
	18.	Are the Leads insulated with Chico or other material	
	19.	Frame Condition	**good**
●	20.	Fan Condition	**(P) Pass**
●	21.	Does motor have internal fan?	**(No) No**
	22.	Broken or Missing Components	**two broken bolts**

Initial Electrical Inspection

23.	Insulation Resistance/Megger	**2000 Megohms**	
24.	Winding Resistance		P20

1-2	1-3	2-3

In pic



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

Basket wound. Pulls good amps on test panel

26.	Number of Stator Slots	**36**
27.	Stator Condition	**Good**
28.	Stator Thermistors/Ohms	

Na

29.	Stator Overloads/Ohms	

Na

Mechanical Inspection

30.	Drive End Bearing Brand	**koyo**
31.	Drive End Bearing Number-	**6309rd**
32.	Drive End Bearing Qty.	**1**
33.	Drive End Bearing Type	**(Ball) Ball Bearing**
34.	Drive End Lubrication Type	**(Grease) Grease Lubricated**
35.	Drive End Bearing Insulation or Grounding Device?	

No

36.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**

37.	Drive End Bearing Condition	**worn**
38.	Opposite Drive End Bearing Brand	**nachi**
39.	Opposite Drive End Bearing Number-	**6206nse**
40.	Opposite Drive End Bearing Qty.	**1**
41.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**
42.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**
43.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**
44.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**no**
45.	Opposite Drive End Bearing Condition	**worn**
46.	Drive End Seal	**none**
47.	Opposite Drive End Seal	
	Na	

Rotor Inspection

48.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
49.	Growler Test	**(Pass) Pass**
50.	Number of Rotor Bars	**28**
51.	Rotor Condition	**good**
52.	List the Parts needed for the Repair Below	
	6309 2rsr 6206 2rsr	
53.	Signature of Technician that Disassembled Motor	**Trevor Hall**

Mechanical Fits- Rotor

54.	Shaft Runout	**0.001 inches**
55.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

Na

56. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees
1.3746	**1.3746**	**1.3746**

57. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
1.3746	**1.3746**	**1.3746**

58. Drive End Bearing Shaft Fit

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

59.	Drive End Bearing Shaft Fit Condition		**(F) Fail**
	Undersized		

60. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.1812	**1.1812**	**1.1811**

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

62. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
good	**good**

Mechanical Fits- Bearing Housings

63. Drive End - Endbell Bearing Fit

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

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

65. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
2.4418	**2.4419**	**2.4422**

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

Oversized

67. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
good	

68. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
good	**good**

69. List Machine Work Needed Below

Both shaft fits, opposite drive endbell

70. Technician **Trevor Hall**

Root Cause of Failure

71. Failure locations

Shaft fits, bearings and opposite drive endbell

72. Root cause of failure

Normal wear

Dynamic Balance Report

73. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

74. Initial Balance Readings P100

Drive End	Opposite Drive End

75. Final Balance Readings P200

Drive End	Opposite Drive End

76. Technician **Terrence Holland**

Mechanical Fits- Rotor - Post Repair

77. Shaft Runout Post Repair **inches**

78. Rotor Runout Post Repair

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

79. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees	90 Degrees	120 Degrees

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

0 Degrees	60 Degrees	120 Degrees

81. Drive End Bearing Shaft Fit Post Repair P400

0 Degrees	60 Degrees	120 Degrees
1.7722	**1.7722**	**1.7721**

82. Opposite Drive End Bearing Shaft Fit Post Repair P500

0 Degrees	60 Degrees	120 Degrees
1.1815	**1.1815**	**1.1815**

83. Shaft Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

84. Shaft Repair Sign-off **RW**

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Mechanical Fits- Bearing Housings - Post Repair

85. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

86. Opposite Drive End - Endbell Bearing Fit Post Repair P100

0 Degrees	60 Degrees	120 Degrees
2.4413	**2.4413**	**2.4413**

And removed broken bolts

87. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

88. End Bell Air Seal Fits Post Repair

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 P100

92.	Final Insulation Resistance Test	**Megohms**	P200

93.	Assembled Shaft Endplay		**0 inches**
94.	Assembled Shaft Runout		**0.001 inches**

95. Test Run Voltage P500

Volts	Volts	Volts
457	**455**	**459**

Without fan

Without fan

With blower fan/ run

96. Test Run Amperage P600

Amps	Amps	Amps
3.1	**3**	**3.2**

Without fan

97.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
	0.04	**0.04**	**0.05**
98.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
	0.05	**0.04**	**0.05**
99.	Ambient Temperature - Fahrenheit		
100.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
101.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
102.	Document Final Condition with Pictures after paint		
	See below		

Co sign: RRW