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

AC Inspection as Found

ARKANSAS INDUSTRIAL MACHINERY
3804 N. NONA ST
NORTH LITTLE ROCK, AR 72118

FolderID: 101767
FormID: 17683168

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	UD1604/75681462-001
Description:	30 HP SIEMENS

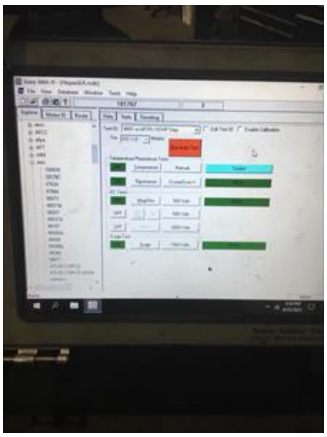
Hi-Speed Job Number:	101767
Manufacturer:	Siemens
Product Number:	1AV3166A
Serial Number:	UD1604/75681462-001
HP/kW:	30 (HP)
RPM:	3560 (RPM)
Frame:	160L
Voltage:	230 / 460
Current:	68/34
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.2
Enclosure:	TEFC
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	08/23/2023
Bearing RTDs:	No
Stator RTDs:	No
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Heaters:	No
Bearing Type:	Rolling Element

Priorities Found: **8 - Good**

Overall Condition

1. Report Date
2. Nameplate Picture P37

3. Photos of all six sides of the machine.



4. Describe the Overall Condition of the Equipment as Received

Serviceable

Initial Mechanical/Electrical

5. Does Shaft Turn Freely? **(Yes) Yes**

6.	Does Shaft Have Visible Damage?	**(Yes) Yes**	P17
	Slight damage. No machine work required		

7.	Assembled Shaft Runout		
8.	Assembled Shaft End Play		
9.	Air Gap Variation <10%		
10.	Lead Condition	**(P) Pass**	
11.	Lead Length	**60 Inches**	
12.	Lead Numbers	**1-12**	
13.	Frame Condition	**good**	
14.	Fan Condition	**(P) Pass**	P110

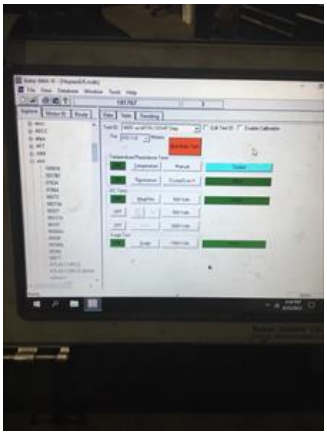
15.	Broken or Missing Components	**none**	

Initial Electrical Inspection

16.	Insulation Resistance/Megger		
17.	Winding Resistance		

1-2	1-3	2-3

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



19.	Number of Stator Slots	**36**	
20.	Stator Condition	**pass**	
21.	Stator Thermistors/Ohms		
22.	Stator Overloads/Ohms		

Mechanical Inspection

23.	Drive End Bearing Brand	**ORS**	
24.	Drive End Bearing Number-	**6309 SO C5**	P28

25.	Drive End Bearing Qty.	**1**	

26.	Drive End Bearing Type	**(Ball) Ball Bearing**	P50

27.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
28.	Drive End Bearing Insulation or Grounding Device?	**none**	
29.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P76

30.	Drive End Bearing Condition	**replace**	
31.	Opposite Drive End Bearing Brand	**ORS**	
32.	Opposite Drive End Bearing Number-	**6209 SO C5**	P98

33.	Opposite Drive End Bearing Qty.	**1**	
34.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
35.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
36.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	
37.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**snap ring**	
38.	Opposite Drive End Bearing Condition	**replace**	
39.	Drive End Seal	**VA 045**	P120

40.	Opposite Drive End Seal	**none**	

Rotor Inspection

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

42.	Growler Test	**(Pass) Pass**	
43.	Number of Rotor Bars	**28**	
44.	Rotor Condition	**pass**	P40

45. List the Parts needed for the Repair Below

VA 045 dust seal and new seal sleeve.

46.	Signature of Technician that Disassembled Motor	**Terrence Holland**

Mechanical Fits- Rotor

47.	Shaft Runout			**0.001 inches**
48.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
49.	Coupling Fit Closest to Bearing Housing			
	0 Degrees	90 Degrees	120 Degrees	
50.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
51.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	1.7721	**1.7722**	**1.7721**	
52.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
53.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	1.7722	**1.7722**	**1.7722**	
54.	Opposite Drive End Bearing Shaft Fit Condition			**(P) Pass**
55.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		

Mechanical Fits- Bearing Housings

56. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.9379	**3.938**	**3.9379**

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

58. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.3473	**3.3473**	**3.3474**

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

60. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

61. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

62. List Machine Work Needed Below

None. Replace seal sleeve.

63. Technician **Terrence Holland**

Dynamic Balance Report

64. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

65. Initial Balance Readings

Drive End	Opposite Drive End

66. Final Balance Readings

Drive End	Opposite Drive End

67. Technician

Root Cause of Failure

68. Failure locations

69. Root cause of failure P18

Excessive moisture found inside stator and housings

Mechanical Fits- Bearing Housings - Post Repair

70. Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

71. Opposite Drive End - Endbell Bearing Fit Post Repair

0 Degrees	60 Degrees	120 Degrees

72. Bearing Cap Condition Post Repair

Drive End Bearing Cap	Opposite Drive End Bearing Cap

73. End Bell Air Seal Fits Post Repair

Drive End Air Seal	Opposite Drive End Air Seal

74. End Bell Repair Sign-off

Assembly

75. QC Check All Parts for Cleanliness Prior to Assembly
76. Photograph All Major Components prior to assembly
77. Final Insulation Resistance Test
78. Assembled Shaft Endplay
79. Assembled Shaft Runout
80. Test Run Voltage

Volts	Volts	Volts

81. Test Run Amperage

Amps	Amps	Amps

82. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial

83. Opposite Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial

84. Ambient Temperature - Fahrenheit

85.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
86.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
87.	Stator Temperatures- Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
88.	Document Final Condition with Pictures after paint		
89.	Final Pics and QC Review		