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

DC Repair Report

Nextwire, LLC (11959)
701 E Arkansas Ave
Star City, AR 71667

FolderID: 100118
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DC Repair Report Rev. 2

Location:	MOTOR SHOP LR
Job Number:	100118
Serial Number:	QCCAS 160SB/4 BLUE
Status:	In need of Repair
Description:	29KW OEMER 1500RPM 160S

Hi-Speed Job Number:	100118
Manufacturer:	Other
Product Number :	QCCAS 160SB/4
HP/KW:	29 (kW)
RPM:	1500
Frame:	160S
Armature Voltage:	440 (Volts)
Armature Current:	74 (Amps)
Field Voltage:	330 (Volts)
Field Current :	2.48 (Amps)
J-Box Included:	No
Bearing RTDS:	No
Winding RTDS:	No
Mounting Orientation :	Horizontal

Priorities Found: **5 - Good**

Overall Condition

1. Describe the Overall Condition of the Equipment as Received

   Good

2. Nameplate Picture P15

	3.	Distance From the End of the Shaft to the end of the Face of the Sheave/Coupling	
Initial Mechanical/Electrical			
●	4.	Does the Shaft Turn Freely?	**(Y) Yes**
●	5.	Does Shaft Have Visible Damage?	**(No) No**
	6.	Assembled Shaft Runout	**Inches**
	7.	Assembled Shaft End Play	
	8.	Air Gap Variation <10%	
●	9.	Lead Condition	**(P) Pass**
	10.	Lead Length	
●	11.	Frame Condition	**(P) Pass**

12.	Fan Condition			**(NA) Not Applicable**
13.	Brush Information			
	Brush Number	Quantity	Condition	
	S+E E49X	**4**	**worn**	
14.	Brush Holder Condition - Verify proper gap to Commutator			**good**

Incoming Electrical Test

15.	General Condition of the Armature/Commutator			**good**
16.	Armature Insulation Resistance to Ground			
17.	Field Circuit Insulation Resistance to Ground			
18.	Interpole Circuit Insulation Resistance to Ground			
19.	Field Drop Test Fields 1&2			
	Total AC Voltage	Field #1	Field #2	
	Read open.			
20.	Field Drop Test Fields 3&4			
	Field #3	FIeld #4		
21.	Field Drop Test Fields 5&6			
	Field #5	FIeld #6		
22.	Field Drop Test Fields 7&8			
	Field #7	FIeld #8		
23.	Interpole Drop Test 1&2			
	Total AC Voltage	Interpole #1	Interpole #2	
		2.9	**2.9**	
24.	Interpole Drop Test 3&4			
	Interpole #3	Interpole #4		
	2.9	**2.9**		
25.	Interpole Drop Test 5&6			
	Interpole #5	Interpole #6		
26.	Interpole Drop Test 7&8			
	Interpole #7	Interpole #8		
27.	Armature Number of Bars - Bar to Bar Test			
	Number of Bars	Bar to Bar Test		
	111	**pass**		

Mechanical Inspection

28.	Shaft Runout Drive End			**inches**
29.	Shaft Runout Armature			
	Drive End Bearing Journal	Armature Core	ODE Bearing Journal	
	0.001		**0.001**	

30.	Drive End Bearing Number	**NJ 310E C3**	P26

31.	Drive End Bearing Quantity	**1**	
32.	Drive End Bearing Type	**(Roller) Roller Bearing**	P47

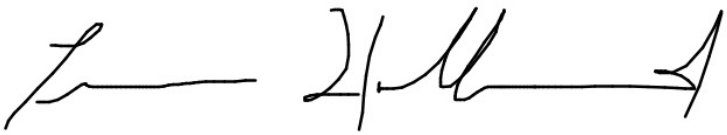
33.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
34.	Drive End Bearing Insulation or Grounding Device?	**(NA)**	
35.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
36.	Drive End Bearing Condition	**grease dirty**	
37.	Opposite Drive End Bearing Number	**6309/2Z**	P86

38.	Opposite Drive End Bearing Quantity	**1**	
39.	Opposite Drive End Bearing Type		P95

40.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
41.	Opposite Drive End Bearing Insulation or Grounding Device?	**(NA)**	
42.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**yes**	P109

43.	Opposite Drive End Bearing Condition	P112

44.	Signature of Technician who Performed Teardown	**Terrence. Holland**



45. List Parts Needed Prior to Reassembly

Rewind fields. Polish comm. recondition and replace bearings and brushes.

Mechanical Fits - Armature

46. Coupling Fit Closest to Bearing Housing

0 Degrees	60 degrees	120 degrees

47. Coupling Fit Closest to the End of the Shaft

0 Degrees	60 degrees	120 degrees

48. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

49. Drive End Bearing Shaft Fit Condition

50. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees

51. Opposite Drive End Bearing Shaft Fit Condition

52. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

53. Drive End - End Bell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

54. Drive End - Endbell Bearing Fit Condition

55. Opposite Drive End - End Bell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

56. Opposite Drive End - Endbell Bearing Fit Condition

57. Bearing Cap Condition

Drive End	Opposite Drive End

58. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

59. List any Machine work Needed Below

60. Signature of Technician Performing Measurements

Dynamic Balance Report

61. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

62. Initial Balance Readings

Drive End Readings	Opposite Drive End Readings

63. Final Balance Readings

Drive End Readings	Opposite Drive End Readings

64. Signature of the Balance Technician

Commutator Data

65. Total Copper Segment Length

66. Number of Bars

67. Number of Wires Per Copper Bar and Size

Number of Wires per Bar	Wire Size

68. Equalizers per Copper Bar and Equalizer Wire Size

Equalizers per Bar	Wire Size

69. Document Commutator Diameter, Minimum and Max

Current Comm Diameter	Minimum Comm Diameter	Maximum Comm Diameter

70. Commutator Shaft Diameter

Front Shaft Diameter	Back Shaft Diameter

71. Commutator Type

72. Commutator Bore

73. Signature of Technician Recording Data

Post Armature Rewind Testing

74. Post Rewind Armature Insulation Resistance to Ground

75. Post Rewind Field Circuit Measure the Insulation Resistance to Ground

76. Post Rewind Armature Number of Bars - Bar to Bar Test

Number of Bars	Bar to Bar Test

77. Post Rewind Field Circuit Insulation Resistance to Ground

78. Post Rewind Interpole Circuit Insulation Resistance to Ground

79. Post Rewind Field Drop Test Fields 1&2

Total AC Voltage	Field #1	Field #2

80. Post Rewind Field Drop Test Fields 3&4

Field #3	FIeld #4

81. Post Rewind Field Drop Test Fields 5&6

Field #5	FIeld #6

82. Post Rewind Field Drop Test Fields 7&8

Field #7	FIeld #8

83. Post Rewind Interpole Drop Test 1&2

Total AC Voltage	Interpole #1	Interpole #2

84. Post Rewind Interpole Drop Test 3&4

Interpole #3	Interpole #4

85. Post Rewind Interpole Drop Test 5&6

Interpole #5	Interpole #6

86.	Post Rewind Interpole Drop Test 7&8		
	Interpole #7	Interpole #8	

Post Mechanical Repair

87.	Post Repair Coupling Fit Closest to Bearing Housing		
	0 Degrees	60 degrees	120 degrees
88.	Post Repair Coupling Fit Closest to the End of the Shaft		
	0 Degrees	60 degrees	120 degrees
89.	Post Repair Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
90.	Post Repair Drive End Bearing Shaft Fit Condition		
91.	Post Repair Drive End Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
92.	Post Repair Drive End Opposite Drive End Bearing Shaft Fit Condition		
93.	Post Repair Drive End - End Bell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
94.	Post Repair Drive End - Endbell Bearing Fit Condition		
95.	Post Repair Opposite Drive End - End Bell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
96.	Post Repair Opposite Drive End - Endbell Bearing Fit Condition		
97.	Post Repair Bearing Cap Condition		
	Drive End	Opposite Drive End	
98.	Post Repair End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
99.	Signature of Tech Performing Mechanical Repairs		

Assembly

100.	Take Pictures of all Major Components Prior to Reassembly		
101.	Verify Brush Box Holders Have the Proper Clearance, and Brushes have been Seated Properly		
102.	Assembled Shaft End Play and Runout		
	Shaft Endplay	Shaft Runout	
103.	Perform No-Load Test Run, Record Armature Voltage and Current		
	Voltage	Current	
104.	Perform No-Load Test Run, Record Field Voltage and Current		
	Voltage	Current	

105.	Document Vibration Readings Drive End		
	Horizontal	Vertical	Axial
106.	Document Vibration Readings Opposite Drive End		
	Horizontal	Vertical	Axial
107.	Perform Full-Load Test Run, Record Armature Voltage and Current		
	Voltage	Current	
108.	Perform Full-Load Test Run, Record Field Voltage and Current		
	Voltage	Current	
109.	Document Vibration Readings Under Full Load Drive End		
	Horizontal	Vertical	Axial
110.	Document Vibration Readings Under Full Load Opposite Drive End		
	Horizontal	Vertical	Axial
111.	Ambient Temperature		
112.	Drive End Bearing Temps Under Full Load		
	5 Minutes	10 Minutes	15 Minutes
113.	Opposite Drive End Bearing Temps Under Full Load		
	5 Minutes	10 Minutes	15 Minutes
114.	Final Test Run Sign-Off		
115.	Document Final Condition With Pictures		
116.	Final QC Sign-Off		