

LR Motor Shop Repairs

Job Number 102150

Prepared for Welspun Tubular (11685)

9301 Frazier Pike Little Rock AR 72206

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AC Inspection - Rev. 2: 3G1G184655640B

1.0



FolderID: 102150

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AC Inspection as Found

Welspun Tubular (11685)

9301 Frazier Pike Little Rock, AR 72206

AC Inspection - Rev. 2

Location: LR MOTORSHOP Serial Number: 3G1G184655640B

Description:11KW ABB 1800RPM 160M

Hi-Speed Job Number:	102150
Manufacturer:	ABB
Product Number:	M3AA 160MLA 4
Spec/ID #:	EMM16114-APN
Serial Number:	3G1F184655640B
HP/kW:	11 (kW)
RPM:	1777 (RPM)
Frame:	160M
Voltage:	460
Current:	18
Phase:	Three
Hz:	60 (Hz)
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **a 3 - High**



2 - Good

Overall Condition

Report Date

Nameplate Picture 2.



Photos of all six sides of the machine.











4. Describe the Overall Condition of the Equipment as Received *All D.E housing mount bolts missing.*

Initial Mechanical/Electrical

▶ 5. Does Shaft Turn Freely? (No) No

6. Does Shaft Have Visible Damage?

(Yes) Yes

Key way wallowed. Shaft end on D.E flaired out.





- 7. Assembled Shaft Runout
- 8. Assembled Shaft End Play
- 9. Air Gap Variation <10%





11. Lead Length 8 Inches

12. Lead Numbers

U1-V1-W1. U2-V2-W2

13. Frame Condition

14. Fan Condition (F) Fail

Fan # 3GZV 304 014-1





15. Broken or Missing Components multiple items

Fan blade broken, all four DE housing mount bolts missing.

Initial Electrical Inspection

- 16. Insulation Resistance/Megger
- 17. Winding Resistance

1-2 1-3 2-3

18. Perform Surge Test





19. Number of Stator Slots

20. Stator Condition pass

21. Stator Thermistors/Ohms 210.5 ohms





22. Stator Overloads/Ohms

Mechanical Inspection

23. Drive End Bearing Brand

Skf



25. Drive End Bearing Qty.

(Ball) Ball Bearing







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?	
30. Drive End Bearing Condition	replace
31. Opposite Drive End Bearing Brand	Skf
32. Opposite Drive End Bearing Number-	6209



33. Opposite Drive End Bearing Qty.

1

34. Opposite Drive End Bearing Type







35. Opposite Drive End Lubrication Type

(Grease) Grease Lubricated

36. Opposite Drive End Bearing Insulation or Grounding Device?



37. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
38. Opposite Drive End Bearing Condition	replace
39. Drive End Seal	

40. Opposite Drive End Seal

Rotor Inspection

41. Rotor Type/Material

(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast



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42.	Growler Test	(Pass) Pass
43.	Number of Rotor Bars	27
44.	Rotor Condition	pass
45.	List the Parts needed for the Repair Below	
	6309 & 6209 2Z/C3	
46.	Signature of Technician that Disassembled Motor	Terrence Holland

Lenn Holland

		/				
M	Mechanical Fits- Rotor					
	47.	Shaft Runout				
	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	Counting Fit Classet to the and of the	OL-4			
	50.	Coupling Fit Closest to the end of the		400 D		
		0 Degrees	60 Degrees	120 Degrees		
	51	Drive End Bearing Shaft Fit				
	01.	0 Degrees	60 Degrees	120 Degrees		
		1.7713	1.7711	1.7711		
	52	Drive End Bearing Shaft Fit Condition		(F) Fail		
	•	Minimum is 1.7718		(,) . a		
	53	Opposite Drive End Bearing Shaft Fit				
	00.	0 Degrees	60 Degrees	120 Degrees		
		1.7719	1.7718	1.7718		
	54.	Opposite Drive End Bearing Shaft Fit ((P) Pass		
		Shaft Air Seal Fits		(,) . 200		
		Drive End Air Seal	Opposite Drive End Air Seal			
		2.110 2.110 7.111 0001				
M	lecha	anical Fits- Bearing Housings				
	56.	Drive End - Endbell Bearing Fit				
		0 Degrees	60 Degrees	120 Degrees		
		Drive End - Endbell Bearing Fit Condit				
	58.	Opposite Drive End - Endbell Bearing	Fit			
		0 Degrees	60 Degrees	120 Degrees		
	50	Opposite Drive Ford Fordball Decrine	Fit Condition			
		Opposite Drive End - Endbell Bearing	rit Condition			
	υ.	Bearing Cap Condition	Opposite Drive End Bearing Con			
		Drive End Bearing Cap	Opposite Drive End Bearing Cap			
	61	pass End Bell Air Seal Fits	na			
	01.	Eliu deli Ali Seai Fits				
		Drive End Air Seal	Opposite Drive End Air Seal			

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62.	List Machine Work Needed Below			
63.	3. Technician			
Root	Cause of Failure			
64.	Failure locations			
65.	Root cause of failure			
Dynai	mic Balance Report			
66.	Rotor Weight and Balance Grade			
	Rotor Weight	Balance Grade		
67.	Initial Balance Readings			
	Drive End	Opposite Drive End		
68.	Final Balance Readings			
	Drive End	Opposite Drive End		
60	Technician			
Rewir				
70.	Core Test Results - Watts loss per Po			
	Pre-Burnout	Post Burnout		
71.	Core Hot Spot Test			
7 11	Pre-Burnout	Post-Burnout		
	1 10 Barriout	1 oot Burnout		
72.	Post Rewind Electrical Test- Insulatio	n Resistance		
73.	Post Rewind Polarization Index			
74.	Post Rewind Winding Resistance			
	1-2	1-3 2-3		
75.	Post Rewind Surge Test			
76.	Post Rewind Hi-Pot			
77.	Technician			
Mach	Mechanical Fits- Rotor - Post Renair			



78. Shaft Runout Post Repair 0.0002 inches



Welded and remachined drive diameter and keyway.

79. Rotor Runout Post Repair			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
80.	Coupling Fit Closest to Bearing Housi	ng Post Repair	
	0 Degrees	90 Degrees	120 Degrees
81.	1. Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
82.	32. Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
	1.7722	1.7722	1.7722



83.	83. Opposite Drive End Bearing Shaft Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	
84.	Shaft Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		
85.	Shaft Repair Sign-off			Gary

Mechanical Fits- Bearing Housings - Post Repair

	/ //				
Mecha	Mechanical Fits- Bearing Housings - Post Repair				
86.	Drive End - Endbell Bearing Fit Post F	Repair			
	0 Degrees	60 Degrees	120 Degrees		
87.	Opposite Drive End - Endbell Bearing	Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees		
88.	Bearing Cap Condition Post Repair				
	Drive End Bearing Cap	Opposite Drive End Bearing Cap			
89.	End Bell Air Seal Fits Post Repair				
	Drive End Air Seal	Opposite Drive End Air Seal			

90. End Bell Repair Sign-off

Assembly

- 91. QC Check All Parts for Cleanliness Prior to Assembly
- 92. Photograph All Major Components prior to assembly















93.	Final Insulation Resistance Test			
94.	Assembled Shaft Endplay			
95.	Assembled Shaft Runout			
96.	Test Run Voltage			
	Volts	Volts	Volts	
97.	Test Run Amperage			
	Amps	Amps	Amps	
98.	Drive End Vibration Readings - Inches	Per Second		
	Horizontal	Vertical	Axial	
99.	Opposite Drive End Vibration Reading	s - Inches Per Second		
	Horizontal	Vertical	Axial	
400				
	Ambient Temperature - Fahrenheit			
101.	Drive End Bearing Temps - Fahrenhei	t		
	5 Minutes	10 Minutes	15 Minutes	
400	On a site Daine Ford Descript Towns	la accesta te		
102.	Opposite Drive End Bearing Temps -			
	5 Minutes	10 Minutes	15 Minutes	
103	103. Document Final Condition with Pictures after paint			
104.	104. Final Pics and QC Review			



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