Job Information

Job #: 94649 Date: August 24, 2018

Priority: — Authorized OT: No Authorized by:

Customer Information

Name: Welspun Reason:

Contact: Motor#: PO#:

Application: — Special notes:

Name Plate Information

Manufacturer:	Siemens	Enclosure :	Totally Enclosed Fan Cooled
Serial#:	N8 204834	Model#:	1LAO 163-4YA91-Z
Service Factor:		Frame:	160M
Horsepower/kW:	11	Rated RPM:	1775
Rated Amps:	18	Rated Voltage:	460
Phase:	3	Cycles:	60
Special design:	No		

Enclosure Type image

Nameplate	DE	ODE	F1	F2	Top
			Not Available	Not Available	

WEST TENNESSEE
7030 Ryburn Drive
Millington, TN 38053
Phone 901-873-5300
Fax 901-873-5301

CENTRAL ARKANSAS
6812 Lindsey Rd.
Little Rock, AR 72206
Phone 501-375-9178
Fax 501-375-4254

Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Does the shaft turn freely?:	Yes	Contaminant(s):	Water
Shaft rotation:	Bi-directional	Contaminant(s) Amt:	Other
Shaft grounding device present?:	No	Contaminant Image:	
Type of grounding device:			
Shaft runout(TIR-Inbound):	.001		

Bearings DE:	Worn	Bearings DE make:	SKF
Insulated:	No	Bearing DE Size:	6209 C3
Bearings ODE:	Worn	Bearings ODE make:	SKF
Bearing Type:	Ball	Bearing ODE Size:	6209 C3
Bearings Retainer:	Yes	Thermal Protection:	No
Retainer condition:	Good	Thermal Protection Type:	—

Bearing Type Image

Bearing Make Image

Bearing Retainer Image

Thermal Protection

[redacted]

Not Available

[redacted]

Mechanical Inspection (Continued)

Lubrication Type:	Grease	Thermal Protection device DE:	—
Lubrication brand inbound:	Unknown	Thermal Protection device ODE:	—
Lubrication brand outbound:	Unknown		
Grease Amt DE:	1/2	Grease Cond. DE:	Watery
Grease Amt ODE:	1/2	Grease Cond. ODE:	Watery
Seals DE type:	Slinger	Seals Image:	
Seals DE size:			
Seals DE (inbound) condition :			
		Seals Image 2:	
Seals ODE type:	Slinger		
Seals ODE size:			
Seals ODE (inbound) condition :			
Shaft damage cause:	None	Shaft Image:	

Mechanical Inspection (Continued)

Brg. Image:

Bushings/sleeves image:

Water jacket: Ok

[redacted]

Not Available

[redacted]

Fan: Ok

Frame cond.: Good

Motor Mount Position: Horizontal/Foot mount

Endbell type: Single piece

Missing parts?

- ☐ J-Box cover
- ☐ O-rings
- ☐ J-Box
- ☐ HH cover
- ☐ Glands
- ☐ None

Endbell Image:

Other missing parts

Fan cover

Mechanical Inspection (Continued)

Air Gap Meaurements (N/A on Single Piece Endbell)

Does Air Gap Meet Customer or EASA spec(<10% variation)?

DE @ 0	ODE @ 0	—
DE @ 90	ODE @ 90	
DE @ 180	ODE @ 180	
DE @ 270	ODE @ 270	

AC Electrical Inspection

Number of leads: 6

Length of leads: 6”

Size of leads:

Lead condition: Good

Lug type:

Lug Condition: —

Lug size:

Lug Attachment: —

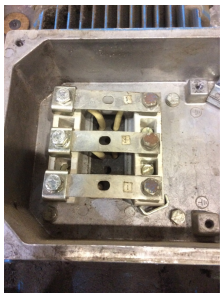
Terminal Markings:

REF: NEMA Stds. MG 1-2009, Rev. 1-2010, 2.41-Terminal Markings Identified By Color:

1-Blue
2-White
3-Orange
4-Yellow
5-Black
6-No color assigned
7-No color assigned
8-Red
P1-No color assigned
P2-Brown

Connections As Received:

Terminal



Lugs

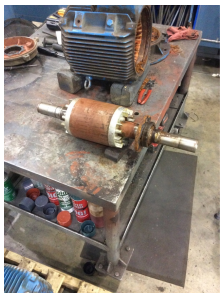
AC Electrical Inspection (Continued)

Rotor Type: Cast Aluminum

Rotor Condition: Ok

Num rotor bars:	37
Num broken bars:	0

Rotor



Rotor Test Results

Visual: Pass Growler: Pass Single phase: Pass

Stator type: Factory

If other, stator type:

Stator condition: Ok

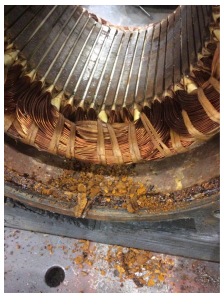
If other, stator condition:

Failure location: Other

If other, stator failure:

Stator Image:

Failure Image:

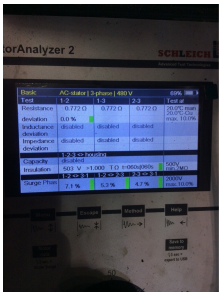


AC Electrical Inspection (Continued)

Winding color: Still has color

Winding image

Winding Thermal Protection: No



Winding condition : Solid

Winding Thermal Protection DE: —

Winding Thermal Protection ODE: —

Stator test results: Salvageable

Megs incoming: Good

Surge incoming: Good

Hi-pot incoming: Good

Winding Resistance Incoming

	Phases A to B	Phases B to C	Phases C to A	Resistive imbalance
Incoming	0.772	0.772	0.772	0

Leads/jumpers: Ok

Lead jumper Image. :

If other, leads/jumpers:

Conclusion

Component Failure

Bearings. Also found both end bell housing bearing fits oversized.

Cause of Failure

Excessive amount of moisture penetrated stator housing, causing grease contamination leading to bearing failure.

Comments

Motor checked out bad and showed grounded from initial test. After disassembly I found evidence of an excessive amount of moisture having been present resulting in large quantities of rust inside the stator. Will wash and bake stator and reassess stator winding integrity. UPDATE: Stator assembly checked good after wash and bake.

Service Tech name: Terrence Holland

Service Tech signature: