

Job Information

Job #: 95412

Date: April 4, 2019

Priority: —

Authorized OT: No

Authorized by:

Customer Information

Name: Phelps fan

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

Name Plate Information

Manufacturer:	Siemens	Enclosure :	Totally Enclosed Fan Cooled
Serial#:	Q2-6151033GNF1-2	Model#:	IEE23214CU112A A3
Service Factor:	1.15	Frame:	445T
Horsepower/kW:	125	Rated RPM:	1785
Rated Amps:	113	Rated Voltage:	460
Phase:	3	Cycles:	60
Special design:	No		

Enclosure Type image



Nameplate

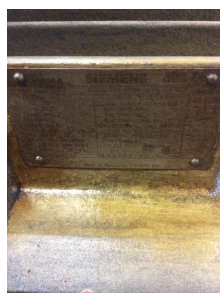
DE

ODE

F1

F2

Top



Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Does the shaft turn freely?: Yes

Contaminant(s): None

Shaft rotation: Bi-directional

Contaminant(s) Amt: None

Shaft grounding device present?: No

Contaminant Image:



Type of grounding device:

Shaft runout(TIR-Inbound):

Bearings DE: Worn

Bearings DE make: NSK

Insulated: No

Bearing DE Size: NU 318 E

Bearings ODE: Worn

Bearings ODE make: Other

Bearing Type: Cylindrical roller

Bearing ODE Size: 6316 2Z/C3

Bearings Retainer: Yes

Thermal Protection: Yes

Retainer condition: Good

Thermal Protection Type: —

Bearing Type Image



Bearing Make Image



Bearing Retainer Image



Thermal Protection

Mechanical Inspection (Continued)

Lubrication Type: Grease

Thermal Protection device DE: —

Lubrication brand inbound: Mobile Polyrex EM

Thermal Protection device ODE: —

Lubrication brand outbound: Mobile Polyrex EM

Grease Amt DE: Full

Grease Cond. DE: Charred

Grease Amt ODE: Full

Grease Cond. ODE: Charred

Seals DE type: N/A

Seals DE size:

Seals DE (inbound) condition :

Seals ODE type: N/A

Seals ODE size:

Seals ODE (inbound) condition
:

Shaft damage cause: None

Shaft Image:



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 (Continued)

Water jacket: N/A

Fan: Ok

Frame cond.: Good



Motor Mount Position: Horizontal/Foot mount

Endbell type: Single piece

Missing parts?

- | | | |
|--------------------------------------|----------------------------------|--------------------------------|
| <input type="checkbox"/> J-Box cover | <input type="checkbox"/> O-rings | <input type="checkbox"/> J-Box |
| <input type="checkbox"/> HH cover | <input type="checkbox"/> Glands | <input type="checkbox"/> None |

Endbell Image:



Other missing parts

Mechanical Inspection (Continued)

Air Gap Measurements (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: —

Terminal Markings:

Length of leads:

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

Size of leads:

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

Lead condition: Good

Lug type:

Connections As Received:

Lug Condition: Good

Terminal

Lugs

Lug size:

Lug Attachment: Acceptable



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: In slot

If other, stator failure:

Stator Image:



Failure Image:



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AC Electrical Inspection (Continued)

Winding color: Dull black

Winding image

Winding Thermal Protection: No

Winding condition : Solid

Winding Thermal
Protection DE: —Winding Thermal
Protection ODE: —

Stator test results: Rewind



Megs incoming: Bad

Surge incoming: Bad

Hi-pot incoming: Bad

Winding Resistance Incoming

	Phases A to B	Phases B to C	Phases C to A	Resistive imbalance
Incoming	0.0	0.0	0.0	100

Leads/jumpers: Ok

If other, leads/jumpers:

Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Shaft Condition: Good

Bearings Retainer: Yes

Type of grounding device:

Bearing DE Size: NU 318 E

Shaft runout(TIR-Inbound):

Bearing ODE Size: 6316 2Z/C3

Retainer condition: Good



MILLINGTON, TN

LITTLE ROCK, AR

Mechanical Inspection (Continued)

Seals DE condition : None

Brg. Seats DE: Good

Seals DE type: N/A

If DE undersized, amt.:

Seals DE size:

Brg. Seats ODE: Good

Seals DE (inbound) condition :

If ODE undersized, amt.:

Seals ODE condition : None

Shaft damage: OK

Seals ODE type: N/A

Seals ODE size:

Bushings/sleeves DE: Ok

Seals ODE (inbound) condition :

Bushings/sleeves ODE: Ok

Endbell fits/damage: Good

Foot/Flange condition: Ok

Endbell DE size: 7.4813

Foot flatness: Pass

Endbell DE insulated?: No

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

Endbell ODE size: 6.6945 (bad)

—

Endbell ODE insulated?: No

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Conclusion

Component Failure

Windings/Bearings.

Cause of Failure

Windings had excessive amounts of grease contamination which helped contribute to premature motor failure.

Comments

O.D.E. End bell housing fits checked bad. Rewind required.

Service Tech name: Terrence Holland

Service Tech signature:

A handwritten signature in black ink, appearing to read 'T. Holland', with a stylized flourish at the end.