

Job Information

Job #: 96540

Date: February 7, 2020

Priority: —

Authorized OT: No

Authorized by:

Customer Information

Name: Kimberly Clark

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

Name Plate Information

Manufacturer: G.E.

Enclosure : Totally Enclosed
Fan Cooled

Enclosure Type image

Serial#: PGG131033

Model#: 5KAF449SS229BP

Service Factor: 1.15

Frame: 449T

Horsepower/kW: 150

Rated RPM: 1790

Rated Amps: 160

Rated Voltage: 460

Phase: 3

Cycles: 60

Special design: No



Nameplate

DE

ODE

F1

F2

Top



Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Does the shaft turn freely?: No Contaminant(s): None

Shaft rotation: Bi-directional Contaminant(s) Amt: None

Shaft grounding device present?: No Contaminant Image:



Type of grounding device: None

Shaft runout(TIR-Inbound):

Bearings DE: Worn Bearings DE make: Koyo

Insulated: No Bearing DE Size: NU 318R

Bearings ODE: Worn Bearings ODE make: Koyo

Bearing Type: Ball Bearing ODE Size: 6318 ZX

Bearings Retainer: Yes Thermal Protection: No

Retainer condition: Good Thermal Protection Type: —

Bearing Type Image



Bearing Make Image



Bearing Retainer Image



Thermal Protection



MILLINGTON, TN

LITTLE ROCK, AR

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: Hard

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: Extensions bent

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)

Brg. Image:



Bushings/sleeves image:



Water jacket: N/A

Fan: Ok

Frame cond.: Good



Motor Mount Position: Horizontal/Foot mount

Endbell type: Single piece

Missing parts?

- | | | |
|---|----------------------------------|---|
| <input checked="" type="checkbox"/> J-Box cover | <input type="checkbox"/> O-rings | <input checked="" 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: 6

Terminal Markings:

Length of leads: 10"

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:

Num broken bars:

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:



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AC Electrical Inspection (Continued)

Winding color: Painted

Winding image

Winding Thermal Protection: Yes

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

Leads/jumpers: Ok

If other, leads/jumpers:

Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Shaft Condition: Worn

Bearings Retainer: Yes

Type of grounding device: None

Bearing DE Size: NU 318R

Shaft runout(TIR-Inbound): .010

Bearing ODE Size: 6318 ZX

Retainer condition: Good



MILLINGTON, TN

LITTLE ROCK, AR

Mechanical Inspection (Continued)

Seals DE condition : None

Brg. Seats DE: Undersized

Seals DE type: N/A

If DE undersized, amt.: (Bad)

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: N/A

Bushings/sleeves DE: Ok

Seals ODE (inbound) condition : N/A

Bushings/sleeves ODE: Ok

Endbell fits/damage: Good

Foot/Flange condition: Ok

Endbell DE size: 7.4811

Foot flatness: Pass

Endbell DE insulated?: No

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

Endbell ODE size: 7.4805

—

Endbell ODE insulated?: No

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Conclusion

Component Failure

D.E bearing suffered complete cage failure. Shaft extension is bent .010 as well.

Cause of Failure

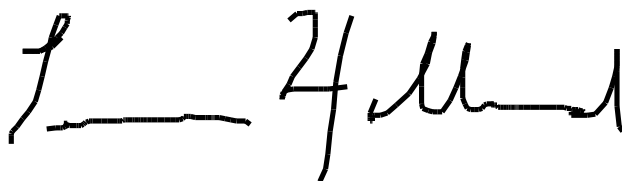
Grease dry/contaminated.

Comments

Bearing cage failure was caused by dry contaminated grease. This failure caused the drive end housing shaft opening to have multiple cracks. Also the bearing race was welded to the shaft causing significant damage. Recommend new shaft replacement because it's bent .010. I recommend an Aegis ring assembly to eliminate shaft grounding currents found on opposite drive end bearing. Also the drive end housing is missing a baffle.

Service Tech name: Terrence Holland

Service Tech signature:

A handwritten signature in black ink, appearing to read 'T. Holland'.