

Job Information

Job #: 96071

Date: October 21, 2019

Priority: —

Authorized OT: No

Authorized by:

Customer Information

Name: Future Fuel

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

Name Plate Information

Manufacturer: U.S. motors

Enclosure : Weather Protected I (WPI)

Enclosure Type image

Serial#: 61-S306-3 A1

Model#: S306

Service Factor: 1.15

Frame: 324TP

Horsepower/kW: 40

Rated RPM: 1775

Rated Amps: 103/51.5

Rated Voltage: 230/460

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?: Yes

Contaminant(s): None

Shaft rotation: CCW

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: Other

Insulated: No

Bearing DE Size: 7220 WN MBR

Bearings ODE: Worn

Bearings ODE make: Koyo

Bearing Type: Ball

Bearing ODE Size: 6211 2Z

Bearings Retainer: Yes

Thermal Protection: Yes

Retainer condition: Good

Thermal Protection Type: —

Bearing Type Image



Bearing Make Image



Bearing Retainer Image



Thermal Protection



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)

Lubrication Type: Oil

Thermal Protection device DE: —

Lubrication brand inbound: Unknown

Thermal Protection device ODE: —

Lubrication brand outbound: Mobile Polyrex EM

Grease Amt DE: N/A

Grease Cond. DE: New

Grease Amt ODE: Full

Grease Cond. ODE: New

Seals DE type: Slinger

Seals DE size:

Seals DE (inbound) condition :

Seals ODE type: Slinger

Seals ODE size:

Seals ODE (inbound) condition
:

Shaft damage cause: None

Shaft Image:



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Mechanical Inspection (Continued)

Brg. Image:



Water jacket: N/A

Fan: N/A

Frame cond.: Good



Motor Mount Position: Horizontal/Foot mount

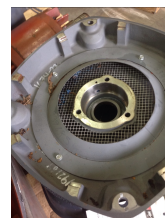
Endbell type: Single piece

Missing parts?

☐ J-Box cover ☐ O-rings ☐ J-Box

☐ HH cover ☐ Glands ☐ None

Endbell Image:



Other missing parts

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: 3

Terminal Markings:

Length of leads: 15.5

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: In slot

If other, stator failure:

Stator Image:



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AC Electrical Inspection (Continued)

Winding color: Dull black

Winding image

Winding Thermal Protection: No

Winding condition : Brittle

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

Stator test results: Rewind



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: Good

Bearings Retainer: Yes

Type of grounding device:

Bearing DE Size: 7220 WN MBR SU C1

Shaft runout(TIR-Inbound):

Bearing ODE Size: 6211 Z C3

Retainer condition: Good



MILLINGTON, TN

LITTLE ROCK, AR

Mechanical Inspection (Continued)

Seals DE condition : Worn

Brg. Seats DE: Good

Seals DE type: Slinger

If DE undersized, amt.:

Seals DE size:

Brg. Seats ODE: Good

Seals DE (inbound) condition :

If ODE undersized, amt.:

Seals ODE condition : Worn

Shaft damage: OK

Seals ODE type: Slinger

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:

Foot flatness: Pass

Endbell DE insulated?: —

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

Endbell ODE size: 3.9377

—

Endbell ODE insulated?: No

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Conclusion

Component Failure

Bottom bearing.

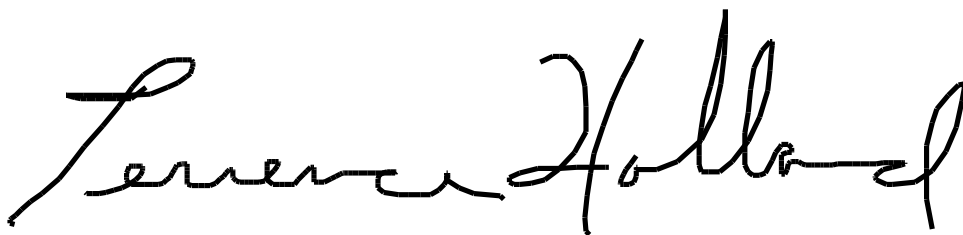
Cause of Failure

Moisture causing premature bearing failure on bottom bearing. Windings have coil to coil short.

Comments

Service Tech name: Terrence Holland

Service Tech signature:

A handwritten signature in black ink that reads 'Terrence Holland'.