

Job Information

Job #: 94969

Date: December 6, 2018

Priority: —

Authorized OT: No

Authorized by:

Customer Information

Name: Magellan Midstream Partners

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

Name Plate Information

Manufacturer: Siemens

Enclosure : Totally Enclosed
Fan Cooled

Enclosure Type image

Serial#: K07T0607TE9

Model#: 1LA032425E42

Service Factor: 1.15

Frame: 324TS

Horsepower/kW: 40

Rated RPM: 3530

Rated Amps: 45

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?: Yes Contaminant(s): None

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

Shaft grounding device present?: Yes Contaminant Image:

Type of grounding device: Aegis

Shaft runout(TIR-Inbound):



Bearings DE: Worn Bearings DE make: Koyo

Insulated: No Bearing DE Size: 6312

Bearings ODE: Worn Bearings ODE make: Koyo

Bearing Type: Ball Bearing ODE Size: 6312

Bearings Retainer: Yes Thermal Protection: No

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: 1/2

Grease Cond. DE: Hard

Grease Amt ODE: 1/2

Grease Cond. ODE: Hard

Seals DE type: Slinger

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:



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7030 Ryburn Drive
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Mechanical Inspection (Continued)

Brg. Image:



Bushings/sleeves image:



Water jacket: Ok

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



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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: 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: —

Terminal

Lugs

Lug size:

Lug Attachment: —

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AC Electrical Inspection (Continued)

Rotor Type: Cast Aluminum

Rotor Condition: Ok

Num rotor bars: 22

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:



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AC Electrical Inspection (Continued)

Winding color: Painted

Winding image

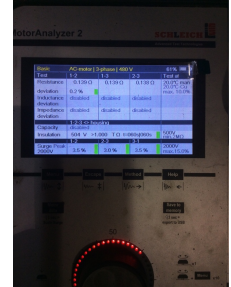
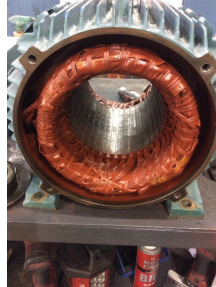
Winding Thermal Protection: No

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	0.139	0.139	0.138	0.2

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: Aegis

Bearing DE Size: 6312

Shaft runout(TIR-Inbound):

Bearing ODE Size: 6312

Retainer condition: Good



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Mechanical Inspection (Continued)

Seals DE condition : None

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: 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: 5.1191

Foot flatness: Pass

Endbell DE insulated?: No

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

Endbell ODE size: 5.1187

—

Endbell ODE insulated?: No

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Conclusion

Component Failure

Bearings

Cause of Failure

Grease contamination of Aegis ring.

Comments

Disassembly of motor revealed minor damage i.e. slight deformation to both bearings from electrical discharge. Further inspection found contaminated grease on aegis ring grounding device, which likely impaired its ability to properly dissipate electrical discharges.

Service Tech name: Terrence Holland

Service Tech signature:

A handwritten signature in black ink, reading 'Terrence Holland'.

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