

## Job Information

Job #: 95239

Date: February 19, 2019

Priority: —

Authorized OT: No

Authorized by:

## Customer Information

Name: Coorstek

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

## Name Plate Information

Manufacturer: U.S. Electric

Enclosure : Totally Enclosed  
Fan Cooled

Enclosure Type image

Serial#: ID: Z04Z051R166M

Model#: A912A

Service Factor: 1.25

Frame: 213T

Horsepower/kW: 7.5

Rated RPM: 3510

Rated Amps: 19.2/9.6

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?: No

Contaminant(s): None

Shaft rotation: —

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: SKF

Insulated: No

Bearing DE Size: 6208-2Z-J/C3

Bearings ODE: Worn

Bearings ODE make: SKF

Bearing Type: Ball

Bearing ODE Size: 6206-2Z-J/C3

Bearings Retainer: No

Thermal Protection: Yes

Retainer condition: —

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: Unknown

Thermal Protection device ODE: —

Lubrication brand outbound: Unknown

Grease Amt DE: 0

Grease Cond. DE: Charred

Grease Amt ODE: 1/4

Grease Cond. ODE: Gritty

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  
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Phone 901-873-5300  
Fax 901-873-5301

### CENTRAL ARKANSAS

6812 Lindsey Rd.  
Little Rock, AR 72206  
Phone 501-375-9178  
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## 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?

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

Endbell Image:



Other missing parts



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LITTLE ROCK, AR

## 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: 9

Terminal Markings:

Length of leads: 8"

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:

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:

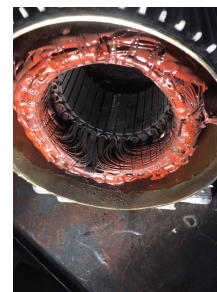
Failure location: In slot

If other, stator failure:

Stator Image:



Failure Image:



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## AC Electrical Inspection (Continued)

Winding color: Dull black

Winding image

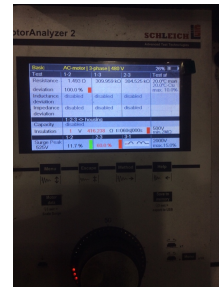
Winding Thermal Protection: No

Winding condition : Charred

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	1.4	309.9	304.5	100

Leads/jumpers: Ok

Lead jumper Image. :



If other, leads/jumpers:

## Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Shaft Condition: Other

Bearings Retainer: No

Type of grounding device:

Bearing DE Size: 6208 2Z/C3

Shaft runout(TIR-Inbound): .005

Bearing ODE Size: 6206 2Z/C3

Retainer condition: —



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## Mechanical Inspection (Continued)

Seals DE condition : None

Brg. Seats DE: Undersized

Seals DE type: N/A

If DE undersized, amt.: 1.5760 (1.5753 is max)

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: 3.1508

Foot flatness: Pass

Endbell DE insulated?: No

Does Air Gap Meet Customer or EASA spec(&lt;10% variation)?

Endbell ODE size: No sleeve

—

Endbell ODE insulated?: No

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## Conclusion

### Component Failure

Drive end bearing cage failed and opposite drive end bearing end bell housing sleeve was dislodged from the housing.

### Cause of Failure

D.E. bearing cage failed and threw shrapnel into the windings.

### Comments

Drive end shaft extension is bent .005 out of tolerance. Drive end shaft bearing fit measures too large. Actual shaft fit measures 1.5760: max allowed is 1.5753.

Service Tech name: Terrence Holland

Service Tech signature:

A handwritten signature in black ink, appearing to be 'T. Holland', written on a white background.