

## Job Information

Job #: 96670

Date: March 20, 2020

Priority: —

Authorized OT: No

Authorized by:

## Customer Information

Name: Arauco

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

## Name Plate Information

Manufacturer: Reliance

Enclosure : Totally Enclosed  
Fan Cooled

Enclosure Type image

Serial#:

Model#: P36C0319K

Service Factor: 1.15

Frame: 364T

Horsepower/kW: 60

Rated RPM: 1775

Rated Amps: 144/72.4

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: Bi-directional Contaminant(s) Amt: None

Shaft grounding device present?: No

Type of grounding device:

Shaft runout(TIR-Inbound):

Bearings DE: Worn

Bearings DE make: FAG

Insulated: No

Bearing DE Size: 6313-2Z

Bearings ODE: Worn

Bearings ODE make: SKF

Bearing Type: Ball

Bearing ODE Size: 6313 insulated bearing

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: Unknown

Thermal Protection device ODE: —

Lubrication brand outbound: Unknown

Grease Amt DE: Full

Grease Cond. DE: Other

Grease Amt ODE: Full

Grease Cond. ODE: Other

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

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## Mechanical Inspection (Continued)

Brg. Image:



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 checked="" type="checkbox"/> 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: 9

Terminal Markings:

Length of leads: 7in

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: Worn

Lug type: NA

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: 48

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:

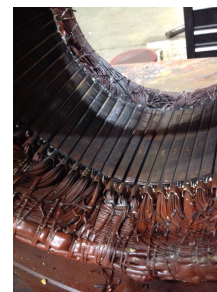
Failure location: Bottom of slot

If other, stator failure:

Stator Image:



Failure Image:



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## AC Electrical Inspection (Continued)

Winding color: Painted

Winding image

Winding Thermal Protection: No

Winding condition : Losing bond

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

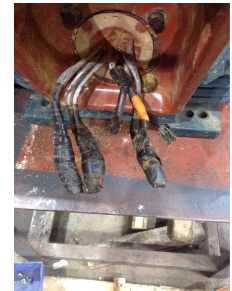
0.00

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Leads/jumpers: Other

Lead jumper Image. :



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: 6313

Shaft runout(TIR-Inbound):

Bearing ODE Size: 6313

Retainer condition: Good



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## 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: 5.5139 BAD

Foot flatness: Pass

Endbell DE insulated?: —

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

Endbell ODE size: 5.5120

—

Endbell ODE insulated?: —

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## Conclusion

### Component Failure

### Cause of Failure

### Comments

Windings are blown, DE end bell is over sized, and the bearings show normal signs of wear. Recommend new bearings, rewind, and machine work.

Service Tech name: Chris Wiley

Service Tech signature:

A handwritten signature in black ink, appearing to read 'Chris Wiley', with a long, sweeping flourish extending from the end.

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