

## Job Information

Job #: 95130

Date: February 1, 2019

Priority: —

Authorized OT: No

Authorized by:

## Customer Information

Name: Moles

Reason:

Contact:

Motor#:

PO#:

Application: —

Special notes:

## Name Plate Information

Manufacturer: Reliance

Enclosure : Totally Enclosed  
Fan Cooled

Enclosure Type image

Serial#:

Model#: 7509172001

Service Factor: 1.15

Frame: 286tz

Horsepower/kW: 30

Rated RPM: 3540

Rated Amps: 3540

Rated Voltage: 230/460

Phase: 3

Cycles: 60

Special design: No

Nameplate

DE

ODE

F1

F2

Top



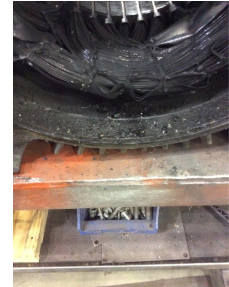
## Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Does the shaft turn freely?: No Contaminant(s): Other

Shaft rotation: CCW Contaminant(s) Amt: Other

Shaft grounding device present?: No Contaminant Image:



Type of grounding device: None

Shaft runout(TIR-Inbound): 0.80

Bearings DE: Worn Bearings DE make: SKF

Insulated: No Bearing DE Size: 6310 2RS

Bearings ODE: Worn Bearings ODE make: SKF

Bearing Type: Ball Bearing ODE Size: 6310 2RS

Bearings Retainer: Yes Thermal Protection: No

Retainer condition: Bad Thermal Protection Type: —

Bearing Type Image



Bearing Make Image



Bearing Retainer Image



Thermal Protection



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## 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: 0

Grease Cond. DE: Charred

Grease Amt ODE: 0

Grease Cond. ODE: Charred

Seals DE type: N/A

Seals DE size:

Seals DE (inbound) condition :

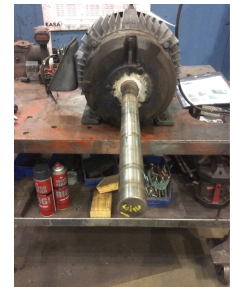
Seals ODE type: N/A

Seals ODE size:

Seals ODE (inbound) condition  
:

Shaft damage cause: Other

Shaft Image:



### WEST TENNESSEE

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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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## 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: 12in

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: 28

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: Coil head

If other, stator failure:

Stator Image:



Failure Image:



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## AC Electrical Inspection (Continued)

Winding color: Dull black

Winding image

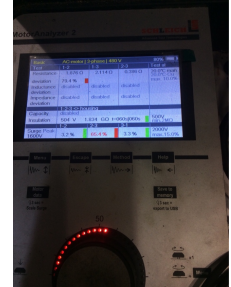
Winding Thermal Protection: No

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	3.2	65.4	3.3	79.4

Leads/jumpers: Ok

Lead jumper Image. :

If other, leads/jumpers:



## Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Shaft Condition: Damaged

Bearings Retainer: Yes

Type of grounding device:

Bearing DE Size: 6310 2RS

Shaft runout(TIR-Inbound):

Bearing ODE Size: 6310 2RS

Retainer condition: Bad



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## 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: Undersized

Seals DE (inbound) condition :

If ODE undersized, amt.: Bad

Seals ODE condition : None

Shaft damage: Replace

Seals ODE type: N/A

Seals ODE size:

Bushings/sleeves DE: Ok

Seals ODE (inbound) condition :

Bushings/sleeves ODE: Ok

Endbell fits/damage: Bad

Foot/Flange condition: Ok

Endbell DE size: 4.3400

Foot flatness: Pass

Endbell DE insulated?: No

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

Endbell ODE size: 4.3312 Good

—

Endbell ODE insulated?: No

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## Conclusion

### Component Failure

Bearings failed, bent shaft, and stator rewind, and both shaft fits are bad, and drive end housing is bad

### Cause of Failure

Drive end bearing failed

### Comments

Blower unit fan blades #2&3 rubbed into the diffusers causing excessive damage. As a result of this both the #1 & 2 diffuser plates and both fan blades need replacing. Additionally a red rag and miscellaneous washers and old wire were found in the back of the unit underneath the motor.

Service Tech name: Chris Wiley

Service Tech signature:

A handwritten signature in black ink that reads 'Chris Wiley'.**WEST TENNESSEE**

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