

## Job Information

Job #: 137600

Date: June 22, 2018

Priority: 1A Rush/OT

Authorized OT: Yes

Authorized by: Andrew

## Customer Information

Name: Toyota

Reason:

Contact:

Motor#: 137600

PO#:

Application: —

Special notes:

## Name Plate Information

Manufacturer: AC squirrel cage machine

Enclosure : Open Drop Proof (ODP)

Enclosure Type image

Serial#: D7912620004

Model#: FDP23/9M500 0.3 HS/S1260

Service Factor:

Frame:

Horsepower/kW:

Rated RPM: 3600/600

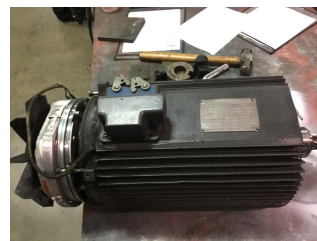
Rated Amps: 3.5/22.6

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?: No

Contaminant(s): Other

Shaft rotation: —

Contaminant(s) Amt: Other

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: 211

Bearings ODE: Worn

Bearings ODE make: SKF

Bearing Type: Ball

Bearing ODE Size: 308

Bearings Retainer: Yes

Thermal Protection: Yes

Retainer condition: Bad

Thermal Protection Type: —

Bearing Type Image



Bearing Make Image



Bearing Retainer Image



Thermal Protection



## Mechanical Inspection (Continued)

Lubrication Type: Grease

Thermal Protection device DE: N/A

Lubrication brand inbound: Mobile Polyrex EM

Thermal Protection device ODE: N/A

Lubrication brand outbound: Mobile Polyrex EM

Grease Amt DE: N/A

Grease Cond. DE: Other

Grease Amt ODE: 0

Grease Cond. ODE: Hard

Seals DE type: N/A

Seals Image:



Seals DE size: N/A

Seals DE (inbound) condition : N/A

Seals ODE type: Isolators

Seals Image 2:

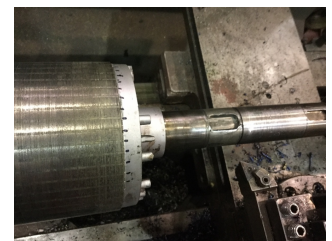


Seals ODE size:

Seals ODE (inbound) condition :  
:

Shaft damage cause: None

Shaft Image:



## Mechanical Inspection (Continued)

Brg. Image:



Bushings/sleeves image:



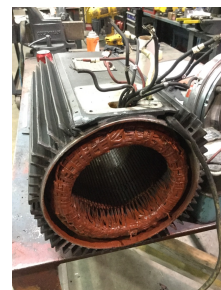
Water jacket: N/A



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

Other missing parts

Endbell Image:



D.E End bell

**WEST TENNESSEE**

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Fax 901-873-5301

**CENTRAL ARKANSAS**

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Little Rock, AR 72206  
Phone 501-375-9178  
Fax 501-375-4254



## 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: 6

Terminal Markings: 1-2-3-4-5-11-12-13-14-15 -16 black an red

Length of leads: 6"

REF: NEMA Std. MG 1-2009, Rev. 1-2010, 2.41-Terminal Markings Identified By Color:

Size of leads: 10-12

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: None

Connections As Received: Plug

Lug Condition: —

Lug size:

Lug Attachment: —

Terminal



Lugs



## AC Electrical Inspection (Continued)

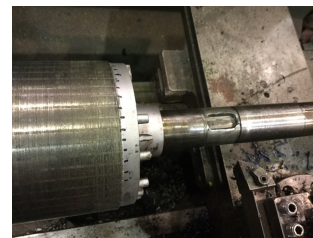
Rotor Type: Cast Aluminum

Rotor

Rotor Condition: Ok

Num rotor bars: 48

Num broken bars: 1



### Rotor Test Results

Visual: Fail

Growler: Fail

Single phase: Fail

Stator type: Factory

If other, stator type:

Stator condition: Questionable

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: Like new

Winding image

Winding Thermal Protection: Yes

Winding condition : Solid

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

Stator test results: Rewind



Megs incoming: Good

Surge incoming: Bad

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

Lead jumper Image. :

If other, leads/jumpers:





MILLINGTON, TN

LITTLE ROCK, AR

## Conclusion

### Component Failure

Brake Whole assembly is bad seal is bad turn in the stater on the connection in is bad this search test is bad the shaft on the rotor is bad the key for the keyways is bad

### Cause of Failure

The hotspot calls from the broken rotor a bar Cause the whole rotor to expand from heat which in turn caused the aluminum break pieces to heat up and cool off faster than the steel hub Which cracked the aluminum brake disc causing

### Comments

Service Tech name: Michael

Service Tech signature:

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