

Job Information

Job #: 141700

Date: February 3, 2020

Priority: —

Authorized OT: No

Authorized by:

Customer Information

Name: Nucor

Reason:

Contact:

Motor#: 141700

PO#:

Application: Direct Drive

Special notes:

Name Plate Information

Manufacturer: TOSHIBA

Enclosure : Open Drop Proof (ODP)

Enclosure Type image

Serial#: 8716470

Model#: DS808

Service Factor:

Frame:

Horsepower/kW: 26/52 kw

Rated RPM: 630/1280



Armature

Volts 230460

Amps 128

Fields

Volts 230460

Amps 128

Nameplate

DE

ODE

F1

F2

Top



Mechanical Inspection

Inspect bolt holes and fasteners. Validate correct fasteners.

Does the shaft turn freely?: Yes

Contaminant(s): Carbon

Shaft rotation: Bi-directional

Contaminant(s) Amt: Full

Shaft Condition: Good

Contaminant Image:

Shaft grounding device present?: No



Type of grounding device:

Shaft runout(TIR-Inbound): .001

Bearing Type Image



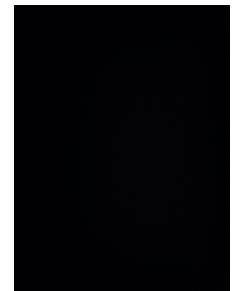
Bearing Make Image



Bearing Retainer Image



Thermal Protection



Lubrication Type: Grease

Thermal Protection device DE: N/A

Lubrication brand inbound: Unknown

Thermal Protection device ODE: N/A

Lubrication brand outbound: Mobile Polyrex EM

Grease Amt DE: Full

Grease Cond. DE: Gritty

Grease Amt ODE: Full

Grease Cond. ODE: Gritty

WEST TENNESSEE

7030 Ryburn Drive
Millington, TN 38053
Phone 901-873-5300
Fax 901-873-5301

CENTRAL ARKANSAS

6812 Lindsey Rd.
Little Rock, AR 72206
Phone 501-375-9178
Fax 501-375-4254

Mechanical Inspection (Continued)

Brushholders	Number	8
	Condition	Good
	Size	1.25 .75 1.15
	Spring type	Roller

Brushes	Number	8
	Size	E41 11-91
	Shunt Len.	3"
	Insulated	No
	TermType	

Brg Image



Shaft Image



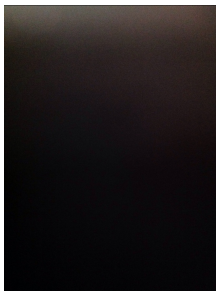
Brushing/sleeves



End bell



Water jacket: N/A



Fan: Ok



Frame cond.: Good



Motor Mount Position: Horizontal/Foot mount

Foot/Flange condition: Ok

Foot flatness: Pass



MILLINGTON, TN

LITTLE ROCK, AR

Mechanical Inspection (Continued)

Missing parts?

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

Other missing parts

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

Electrical Inspection

☐ Move armature imbalance to Assemble

Commutator: Salvageable

Winding Inspection

Meg Test IP to Flds: Bad

Polarity Check IP to Flds: No

Meg Series to Shunt: Bad

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DC Electrical Inspection

Brushes: Normal wear

Brush Image:



Brush holders: Salvageable Qty. 8

Insulators: Salvageable Qty. 4

Lead support stud: Salvageable Qty. 4

Alternate brush image:

Rocker ring: Salvageable Qty. 4



Commutator Type: Tig welded

Commutator images

Commutator Hardness: Good

Commutator Condition : Oil soaked

Commutator Film: Ok



Armature type: Factory

If other

Armature images

Failure mode: Ok

If other

Failure location: Other

If other

REBAND

Armature condition: Solid

If other

Winding color: Painted



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DC Electrical Inspection (Continued)

Armature image

Armature Test Results

Megs: Good Hi-pot: Good Core loss: Good



Fields condition

Series/Stab condition: Grounded pole

Fields condition image:

Shunts condition: Grounded pole

InterCoils condition: Ok



Fields test results

Series/Stab Meg: Bad Hi Pot: Bad Resistance: Bad

Shunts Meg: Bad Hi Pot: Bad Resistance: Bad

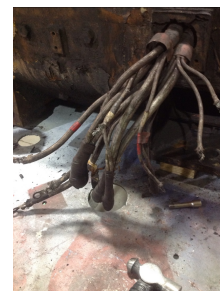
InterCoils Meg: Ok Hi Pot: Ok Resistance: Ok

Thermistors: None

Field Test image

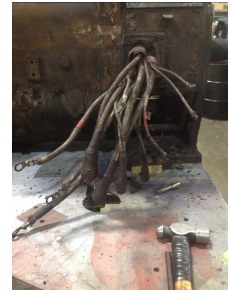
RTD: None At

Thermostat: None



Leads/jumpers: Ok

Lead jumper Image:



Conclusion

Component Failure

Fields and bearings

Cause of Failure

Carbon and grease amounts were very high in content and more than likely caused the fields too go too ground

Comments

Order 8 new brushes E41 11-91
Order 2 new bearings NJ317ECM
Cut new felt for bearing caps
Rewind field coils
Turn an under cut the com

Service Tech name: Michael Jordan

Service Tech
signature: