

# EVERY DAY SINCE 1946

LR Motor Shop Repairs

# Job Number 102953

Prepared for CoorsTek Inc.

3315 Boone Road Benton AR 72015

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## AC Inspection as Found

CoorsTek Inc. 3315 Boone Road Benton, AR 72015

#### AC Inspection - Rev. 2

Location:	LR MOTORSHOP
Serial Number:	2082-021
Description:5HP	1750RPM PUMP

102953 Hi-Speed Job Number: Manufacturer: Other Product Number: 80LX63.7 Spec/ID #: NA 2082-021 Serial Number: HP/kW: 5 (HP) RPM: 1750 (RPM) Frame: NA Voltage: 460 Current: 36.6 (Amps) Phase: Three 60 (Hz) Hz: Enclosure: Submersible # of Leads: 6 J-box Included: None Coupling/Sheave: Propeller Date Received: 05/17/2024 **Bearing RTDs:** No Stator RTDs: No **Repair Stage:** Final Rewind: Yes Shaft Machined Fit Repairs No **Required:** Bearing Housing Machined No Fit Repairs Required: Heaters: No Winding Type : Random Wound **Bearing Type: Rolling Element** 

# Priorities Found: **3 - High**

9 - Good

**Overall Condition** 

1. Report Date

06/03/2024

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#### 1.0

Hi-Speed Industrial Service 7030 Ryburn Dr Millington, Tn 38053 901-873-5300

> FolderID: 102953 FormID: 20411787

2. Nameplate Picture



3. Photos of all six sides of the machine.















and the second				
4.	Describe the Overall Condition of the	Equipment as Received		
	Dirty			
5.	Distance from the end of the shaft to t	he Coupling/Sheave	inch	nes
	Na			
Initial	Mechanical/Electrical			
6.	Does Shaft Turn Freely?		(Y) Y	(es
7.	Does the shaft require T.I.R in Lathe to	o identify additional repairs?	(No)	No
8.	Does Shaft Have Visible Damage?		(No)	No
9.	Assembled Shaft Runout		Inch	nes
	Na			
10.	Assembled Shaft End Play		inch	nes
	Na			
11.	Air Gap Variation <10%			
	Na			
12.	Lead Condition		(P) Pa	ass
13.	Lead Length		92 Inch	nes
14.	Does it have Lugs?, If so what is the S	Stud Size?	(No)	No
15.	Lead Numbers		1	-6
16.	Frame Condition		ра	SS
17.	Fan Condition		(N)	NA
18.	Broken or Missing Components			na
Initial	Electrical Inspection			
19.	Insulation Resistance/Megger		Megoh	ms
	Na			
20.	Winding Resistance			
	1-2	1-3	2-3	
_				

🗭 Na

		(,	
-	Windings shorted		
22.	Number of Stator Slots	36	
23.	Stator Condition	needs cleaned	
24.	Stator Thermistors/Ohms	na	
25.	Stator Overloads/Ohms	1/0.2	
Mech	anical Inspection		
	Drive End Bearing Brand	NSK	
27.	Drive End Bearing Number- OD-6208 ID-5307		
28.	Drive End Bearing Qty.	1	
29.	Drive End Bearing Type	(Other) Other	
_	Development de velopment de velopment		

-	-0.	2	(•) •
	•	Double wide double ball	
	30.	Drive End Lubrication Type	(Oil) Oil Lubricated
	31.	Drive End Bearing Insulation or Grounding Device?	na
	32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	na

21. Perform Surge Test

X

1

N

(NA) Not Applicable

#### 33. Drive End Bearing Condition

Signs of contamination



34. Opposite Drive End Bearing Brand	tpi
35. Opposite Drive End Bearing Number-	6205
36. Opposite Drive End Bearing Qty.	1
37. Opposite Drive End Bearing Type	(Ball) Ball Bearing
38. Opposite Drive End Lubrication Type	(Oil) Oil Lubricated
39. Opposite Drive End Bearing Insulation or Grounding Device?	na
40. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
41. Opposite Drive End Bearing Condition	
Signs of contomination	

Signs of contamination



42.	Drive End Seal	Double sided mechanical seal
43.	Opposite Drive End Seal	na
-	Na	
Rotor	Inspection	
44.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
45.	Growler Test	(Pass) Pass
46.	Number of Rotor Bars	44
47.	Rotor Condition	pass
48.	List the Parts needed for the Repair Below	
	Double sided mechanical seal	

in

Cw

64.	End Bell Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
	Na			
65.	List Machine Work Needed Below			
	Needs new wear wring			
66.	Technician			Cw
	$/ \Lambda$			
	1 1/2 .	-		
	(ma	in		
Root	Cause of Failure			
67.	Failure locations			
	Windings, bearings, and wear ring			
68.	Root cause of failure			
	Wear and coil to coil short			
Dyna	mic Balance Report			
69.	Rotor Weight and Balance Grade			
	Rotor Weight	Balance Grade		
70.	Initial Balance Readings			
	Drive End	Opposite Drive End		
- 4				
71.	Final Balance Readings			
	Drive End	Opposite Drive End		
72.	Technician			
Rewir	nd			
73.	Core Test Results - Watts loss per P	Pound		
	Pre-Burnout	Post Burnout		
74.	Core Hot Spot Test			
	Pre-Burnout	Post-Burnout		
75.	Post Rewind Electrical Test- Insulation	on Resistance		Megohms
76.				Polarization Index
77.	Post Rewind Winding Resistance			
	1-2	1-3	2-3	
78.	Post Rewind Surge Test			
79.	Post Rewind Hi-Pot			micro-amps
00	Technician			
60.				

82. Photograph All Major Components prior to assembly





Held at 10 psi for5 min

•	83.	Final Insulation Resistance Test		Megohms	
8	84.	Assembled Shaft Endplay		inches	
8	85.	Assembled Shaft Runout		inches	
5	86.	Test Run Voltage			
		Volts	Volts	Volts	



87	. Test Run Amperage		
	Amps	Amps	Amps
	Witnessed by TH		
88	Drive End Vibration Readings - Inche	s Per Second	
	Horizontal	Vertical	Axial

	HUHZUHIAI	ventical	Axia
89.	<ol> <li>Opposite Drive End Vibration Readings - Inches Per Second</li> </ol>		
	Horizontal	Vertical	Axial
90.	90. Ambient Temperature - Fahrenheit		
91.	1. Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
92.	92. Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes

93. Document Final Condition with Pictures after paint







94. Final Pics and QC Review

Co sign: TRH

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# AC Random Coil Rewind Report

FolderID: 102953 FormID: 22007836

3315 Boone Road Benton, AR 72015

LR MOTORSHOP

Priorities Found: 🛑 1 - High

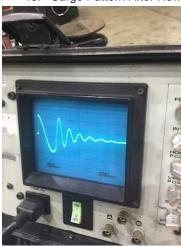
🔵 1 - Good

General			
1.	Job Number	102953	
2.	Report Date		
3.	Customer	Coortek	
-	Winding ex Dr end 1.5 Ode1.5		
Stator	Stator Winding		
4.	Core Length	4.25 "	
5.	Core ID	3.75 "	
6.	Back Iron Depth	0.5 "	
7.	Slot Depth	0.5 "	
8.	Tooth Width	0.189 "	
9.	Number of Vents	0	
10.	Vent Width	0 "	
11.	Before Burnout Core loss	(P) Pass	
12.	Flux Before Burnout		
13.	Watts before burnout		
14.	Watts loss per lb. before burnout	1.9 W/lbs.	
15.	After Burnout Core Loss		
16.	Flux After burnout		
17.	Watts After Burnout		
18.	Watts loss per lb After Burnout		
19.	Core Iron Condition		
20.	RTD's		
21.	RTD's Reading		
22.	Motor Heaters		
23.	Heater Qty.		
24.	Heater Voltage		
25.	Heater Wattage		
26.	Thermistors		
27.	Number of Poles	4	
28.	Slots	36	
29.	Number of Coils	24	
30.	Coil Weight		
31.	Lead Markings		
	1-6		

32.	Grouping	
	12of2	
<b>)</b> 33.	Multiple Wires	(N) No
34.	Wire Size	
	1#20	
35.	Turns per coil	
	29-58	
36.	Pitch 1 to:	
	7&9	
37.	Connection	
	Wye/Delta @460	
38	Lead Length	9 "
	Lead Size	16
	Number of Leads	6
	Megger Reading After Rewind	Mohms
	Coil Machine Slot	Monins
	Coil Machine Tip	
	Coil Machine Pitch	
45.	Hi Pot Reading After Rewind	Ua



46. Surge Pattern After Rewind



47. Service Technician

RHR

6LBS#20 6"Hi Tenp Glass Lead Wire #16 1 -Overlead

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- 8. WARRANTIES. Hi-Speed warrants that all goods shall conform in all material aspects to the goods identified in the quotation to Buyer and/or purchase order, and Hi-Speed makes to Buyer the manufacturer's express warranty for any goods sold to Buyer, which is offered by the manufacturer at the time of acceptance of any quotation by Buyer. This warranty is conditioned upon the installation, operation, and maintenance of the goods in accordance with the manufacturer's recommendations and/or standard industry practice and the goods at all times being operated or used under normal operating conditions for which they were designed. Hi-Speed, at its sole option, will repair or

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- 11. <u>GOVERNING LAW AND JURISDICTION.</u> Any controversy arising out of any quotation, the purchase order, the goods sold or delivered, repair or replacement thereof, or any services provided pursuant to any quotation or any purchase order, or these Standard Terms and Conditions shall be governed by the laws of the state of Tennessee without regard to any choice of law provisions and any cause of action related in any manner thereto shall be brought only in the state or federal courts of Shelby County, Tennessee.
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