

KEEPING YOUR FACILITY UP TO SPEED —— EVERY DAY SINCE 1946 ——

LR Motor Shop Repairs

Job Number 103356

Prepared for Paul Morrell Formalwear

120 S Victory St Little Rock AR 72201

Table of Contents

AC Inspection as Found - $\it LITTLE~ROCK~MOTOR~SHOP$

AC Inspection - Rev. 2: E9041.51

1.0



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

> FolderID: 103356 FormID: 21278235

AC Inspection as Found

Paul Morrell Formalwear

120 S Victory St Little Rock, AR 72201

AC Inspection - Rev. 2

LITTLE ROCK MOTOR SHOP Location:

Serial Number: E9041.51

Description: 3HP BROOK HANSEN

Hi-Speed Job Number:	103356
Manufacturer:	Other
Serial Number:	E9041.51
HP/kW:	3 (HP)
RPM:	3480 (RPM)
Frame:	W-DA182TC-M
Voltage:	230 / 460
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Half
Coupling/Sheave:	Fan
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 3 - High

9 - Good

Overall Condition

1. Report Date 09/17/2024

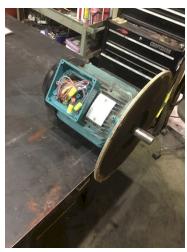
2. Nameplate Picture



3. Photos of all six sides of the machine.



















inches

- 4. Describe the Overall Condition of the Equipment as Received Dirty
- 5. Distance from the end of the shaft to the Coupling/Sheave
- Unattached
- 6. Report Date [COPY]

Initial Mechanical/Electrical

- 7. Does Shaft Turn Freely?
 (N) No
- 8. Does the shaft require T.I.R in Lathe to identify additional repairs? (No) No

9. Does Shaft Have Visible Damage?

(Yes) Yes

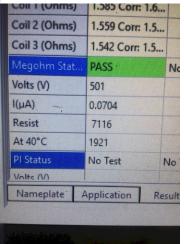
Shaft is damaged where the air gap is in end bell



10.	Assembled Shaft Runout	Inches
11.	Assembled Shaft End Play	inches
12.	Air Gap Variation <10%	
13.	Lead Condition	(P) Pass
14.	Lead Length	8 Inches
15.	Does it have Lugs?, If so what is the Stud Size?	(No) No
16.	Lead Numbers	1-9
17.	Frame Condition	
18.	Fan Condition	(P) Pass
19.	Broken or Missing Components	j-box cover and bolts for cover and fan cover

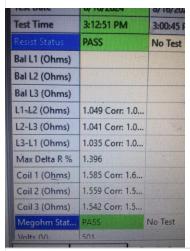
Initial Electrical Inspection

20. Insulation Resistance/Megger Megohms





1-2 1-3 2-3



22. Perform Surge Test

(P) Pass



	A Mary Mary Anna San and A Mary Mary Mary Mary Mary Mary Mary Mary	
23.	Number of Stator Slots	36
24.	Stator Condition	pass
25.	Stator Thermistors/Ohms	
26.	Stator Overloads/Ohms	
Mech	anical Inspection	
27.	Drive End Bearing Brand	
28.	Drive End Bearing Number-	6206
29.	Drive End Bearing Qty.	1
30.	Drive End Bearing Type	(Ball) Ball Bearing
31.	Drive End Lubrication Type	(Grease) Grease Lubricated
32.	Drive End Bearing Insulation or Grounding Device?	
33.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer

34. Drive End Bearing Condition

Contamination



35.	Opposite Drive End Bearing Brand	NSK
36.	Opposite Drive End Bearing Number-	6205
37.	Opposite Drive End Bearing Qty.	1
38.	Opposite Drive End Bearing Type	(Ball) Ball Bearing
39.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
40.	Opposite Drive End Bearing Insulation or Grounding Device?	
41.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	snap ring
42.	Opposite Drive End Bearing Condition	
-	Wear	



43.	Drive End Seal 30-42-7 TTO	
44.	Opposite Drive End Seal	25-37-7 NTK
Rotor	Inspection	
45.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
46.	Growler Test	(Pass) Pass
47.	Number of Rotor Bars	
48.	Rotor Condition	pass

49. List the Parts needed for the Repair Below

6206 6205 30-42-7 TTO seal 25-37-7 NTK seal 6206 sleeve

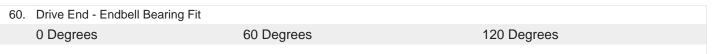
50. Signature of Technician that Disassembled Motor

Cw

Chran

Mechanical Fits- Rotor				
51	. Shaft Runout			inches
52	. Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End B	earing
53	3	•		
	0 Degrees	90 Degrees	120 Degrees	
	0 15 500 11 11 11 11	01. 6		
54	3			
	0 Degrees	60 Degrees	120 Degrees	
55	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	1.1812	1.1812	1.1812	
5 6	Drive End Bearing Shaft Fit Condition			(P) Pass
57	. Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
	0.9843	0.984400000000001	0.9844000000000001	
58	. Opposite Drive End Bearing Shaft Fit	Condition		(P) Pass
59	. Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
Mecl	nanical Fits- Bearing Housings			

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Excessive wear



19.5					
	61.	Drive End - Endbell Bearing Fit Condition		(F) Fail	
	62.	2. Opposite Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.0472	2.0472	2.0471	
	63.	Opposite Drive End - Endbell Bearing	Fit Condition		(P) Pass
	64.	Bearing Cap Condition			
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
	65.	65. End Bell Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
	66.	6. List Machine Work Needed Below			
		DE end bell bearing fit and DE shaft where shaft goes through end bell air gap			



Polished surface. Gary

67. Technician Cw

Moun

Co sign: RRW

Root Cause of Failure

68. Failure locations

Bearings and DE end bell bearing fit

69. Root cause of failure

DE bearing locked up spinning in fit wearing fit out

Dynamic Balance Report

70. Rotor Weight and Balance Grade

Rotor Weight Balance Grade

71. Initial Balance Readings

Drive End Opposite Drive End

72. Final Balance Readings

Drive End Opposite Drive End

73. Technician

Mechanical Fits- Bearing Housings - Post Repair

74. Drive End - Endbell Bearing Fit Post Repair

0 Degrees 60 Degrees 120 Degrees 2.4409 2.441



75.	Opposite Drive End - Endbell Bearing	Fit Post Repair	
	0 Degrees	60 Degrees	120 Degrees
	_	·	·
76.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
77.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
		•	

Assembly

79. QC Check All Parts for Cleanliness Prior to Assembly

 Cw



80. Photograph All Major Components prior to assembly















81.	Final Insulation Resistance Test		Megohms
82.	Assembled Shaft Endplay		inches
83.	Assembled Shaft Runout		inches
84.	Test Run Voltage		
	Volts	Volts	Volts
	Witnessed by RRW		



85. Test Run Amperage			
Amps	Amps	Amps	



86.	Drive End Vibration Readings - Inches	s Per Second	
	Horizontal	Vertical	Axial
87.	Opposite Drive End Vibration Reading	s - Inches Per Second	
	Horizontal	Vertical	Axial
88.	Ambient Temperature - Fahrenheit		
89.	Drive End Bearing Temps - Fahrenhe	it	
	5 Minutes	10 Minutes	15 Minutes
90. Opposite Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes

91. Document Final Condition with Pictures after paint







92. Final Pics and QC Review Cw

Min

Co sign: RRW



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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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- 13. FORCE MAJEURE. Neither party shall be responsible for any delay or failure in performance of any party of the quotation, purchase order or these Standard Terms and Conditions to the extent that such delays or failures are caused by fire, flood, earth quake, explosion, war, embargo, government requirement, civil or military authority, acts of God, or any other circumstances beyond its reasonable control and not involving any fault or negligence on the party affected ("Condition"). If any such Condition occurs, the party delayed or unable to perform shall promptly give written notice to the other party and, if such Condition remains at the end of thirty (30) days, the party affected by the other party's delay and inability to perform may elect to (i) terminate such order or part thereof, or (ii) suspend the order for the duration of the Condition, if the Buyer is the suspending party, buy elsewhere comparable material to be sold under the order and apply to any commitment the purchase price of such purchase, and resume performance of the order once the Condition ceases, with an option in the affected party to extend the period of this order up to the length of the time the Condition endures.
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