

EVERY DAY SINCE 1946

LR Motor Shop Repairs

Job Number 104417

Prepared for Union Pacific-Vine St 10945

1020 N. Vine Street North Liittle Rock AR

Table of Contents

AC Inspection as Found - LR MOTOR SHOP



Union Pacific-Vine St 10945 1020 N. Vine Street North Liittle Rock, AR

AC Inspection - Rev. 2

Location:	LR MOTOR SHOP
Location.	LK WOTOK SHOP

Serial Number:

Description:1 HP NEMA

FolderID: 104417 FormID: 24042176

Hi-Speed Job Number:	104417
Product Number:	202386603-100
HP/kW:	1 (HP)
RPM:	1760 (RPM)
Voltage:	230 / 460
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.0
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Half
Coupling/Sheave:	Gear
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **15 - Good**

Overall Condition

- 1. Report Date
 - 2. Nameplate Picture



3. Photos of all six sides of the machine.



















Wavy washer is on the drive end

	4.	Describe the Overall Condition of the Equipment as Received	
		Wet and oily	
	5.	Distance from the end of the shaft to the Coupling/Sheave	
	6.	Is this a UL Listed Motor	(No) No
	7.	Is the motor water cooled or can be pressure checked before teardown	(No) No
In	nitial	Mechanical/Electrical	
	8.	Does Shaft Turn Freely?	(Y) Yes
	9.	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
	10.	Does Shaft Have Visible Damage?	(No) No
	11.	Assembled Shaft Runout	
	12.	Assembled Shaft End Play	0 inches
	13.	Air Gap Variation <10%	
	14.	Lead Condition	(P) Pass
	15.	Lead Length	6 Inches
	16.	Does it have Lugs?, If so what is the Stud Size?	
	17.	Lead Numbers	1-9
	18.	Are the Leads insulated with Chico or other material	(No) No
	19.	Frame Condition	wet



21.	Does motor have internal fan? (No) No			(No) No
22.	Broken or Missing Components	no		no
Initial Electrical Inspection				
23.	Insulation Resistance/Megger			7020 Megohms
24.	Winding Resistance			
	1-2	1-3	2-3	
	13.64	13.56	13.62	
25.	Perform Surge Test			(P) Pass



26. Number of Stator Slots



27. Stator Condition

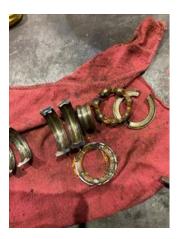


28.	Stator Thermistors/Ohms Na	
29.	Stator Overloads/Ohms	yes
Mecha	anical Inspection	
30.	Drive End Bearing Brand	Timken
31.	Drive End Bearing Number-	6305ZZ



32. Drive End Bearing Qty.	1
33. Drive End Bearing Type	(Ball) Ball Bearing
34. Drive End Lubrication Type	(Grease) Grease Lubricated
35. Drive End Bearing Insulation or Grounding Device?	
36. Drive End Wavy Washer/Snap-Ring Other Retention Device?	Wavy washer

37. Drive End Bearing Condition



38. Opposite Drive End Bearing Brand

39. Opposite Drive End Bearing Number-





40. Opposite Drive End Bearing Qty.	1
41. Opposite Drive End Bearing Type	(Ball) Ball Bearing
42. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
43. Opposite Drive End Bearing Insulation or Grounding Device?	
44. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	Snap ring
45. Opposite Drive End Bearing Condition	

Water contamination



46. Drive End Seal



47. Opposite Drive End Seal



Rotor Inspection					
48.	Rotor Type/Material (Squirrel Aluminum) Squirrel Cage Aluminum Die Cast				
49.	Growler Test				
50.	Number of Rotor Bars				
51.	Rotor Condition				
52.	52. List the Parts needed for the Repair Below				
	1-6305 ZZ C3. 2-6205 ZZ C3				
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pass 25-40-4

53. Signature of Technician that Disassembled Motor

Μ	Mechanical Fits- Rotor						
	54.	Shaft Runout			0 inches		
	•	.0002					
	55.	Rotor Runout					
		Drive End Bearing Fit	Rotor Body	Opposite Drive End B	Bearing		
	_						
	-	.0003					
	56.	Coupling Fit Closest to Bearing Housing	-				
		0 Degrees	90 Degrees	120 Degrees			
	57	Coupling Fit Closest to the end of the	Shoft				
	57.			100 Demos			
		0 Degrees	60 Degrees	120 Degrees			
	58.	Drive End Bearing Shaft Fit					
		0 Degrees	60 Degrees	120 Degrees			
	59.	Drive End Bearing Shaft Fit Condition			(P) Pass		
	60.	Opposite Drive End Bearing Shaft Fit					
		0 Degrees	60 Degrees	120 Degrees			
	61.		Condition		(P) Pass		
	62.	Shaft Air Seal Fits					
		Drive End Air Seal	Opposite Drive End Air Seal				
	_	Deer					
		Pass					
M		anical Fits- Bearing Housings					
	63.	Drive End - Endbell Bearing Fit					
		0 Degrees	60 Degrees	120 Degrees			
		2.4413	2.4413	2.4413			
	64.	Drive End - Endbell Bearing Fit Condit	tion		(P) Pass		



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RW

65	5. Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	2.0474	2.0474	2.0474	
	One satis Dates Fault - Fault all Deside	Et Oanditian		

66. Opposite Drive End - Endbell Bearing Fit Condition

(P) Pass



67.	Bearing Cap Condition	
	Drive End Bearing Cap	Opposite Drive End Bearing Cap
68.	End Bell Air Seal Fits	
	Drive End Air Seal	Opposite Drive End Air Seal
	Pass	
69.	List Machine Work Needed Below	
	None	
C	Technician	RW
Root	Cause of Failure	
71.	Failure locations	
	Water	
72.	Root cause of failure	
	Water	
-	nic Balance Report	
73.	Rotor Weight and Balance Grade	
	Rotor Weight	Balance Grade
74.	Initial Balance Readings	
	Drive End	Opposite Drive End
75.	Final Balance Readings	
	Drive End	Opposite Drive End
76.	Technician	
Assen	nbly	

77. QC Check All Parts for Cleanliness Prior to Assembly

78. Photograph All Major Components prior to assembly













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79. Final Insulation Resistance Test

80. Assembled Shaft Endplay			0 inches
81. Assembled Shaft Runout			inches
82. Test Run Voltage			
Volts	Volts	Volts	
458	456	457	

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86,500 Megohms



83. Test Run Amperage Amps

Amps	Amps	Amps	
1.5	1.5	1.5	



Co sign TRH

8	84.	. Drive End Vibration Readings - Inches Per Second				
		Horizontal	Vertical	Axial		
8	85.	Opposite Drive End Vibration Readings - Inches Per Second				
		Horizontal	Vertical	Axial		
8	86. Ambient Temperature - Fahrenheit87. Drive End Bearing Temps - Fahrenheit					
8						
		5 Minutes	10 Minutes	15 Minutes		
8	88.	Opposite Drive End Bearing Temps - I				
		5 Minutes	10 Minutes	15 Minutes		
• 6	89. Document Final Condition with Pictures after paint					
ę	90.	Final Pics and QC Review				



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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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- 16. <u>NO INDIVIDUAL LIABILITY</u>. Notwithstanding any other agreement to the contrary, the Buyer agrees that in no event will the Buyer hold and HI-Speed owner, director, officer or employee personally liable for unintentional tortious conduct or conduct that constitutes the breach of any contract between HI-Speed and the Buyer, even if the HI-Speed owner, director, officer or employee is or could be construed to be a party to such contract.