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

AC Inspection as Found

Novus Arkansas, LLC (11612)
7920 Sloan Drive
Little Rock, AR 72206

FolderID: 103007
FormID: 20477021

AC Inspection - Rev. 2

Location:	LR Motor Shop
Serial Number:	
Description:	1.5HP CARMAN MOTOR REPAIR

Hi-Speed Job Number:	103007
Manufacturer:	Other
Spec/ID #:	CDX18-4400-DP
HP/kW:	1.5 (HP)
RPM:	4400 (RPM)
Frame:	50
Voltage:	230 / 460
Current:	3.8/1.9
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	DP
# of Leads:	6
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	05/23/2024
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

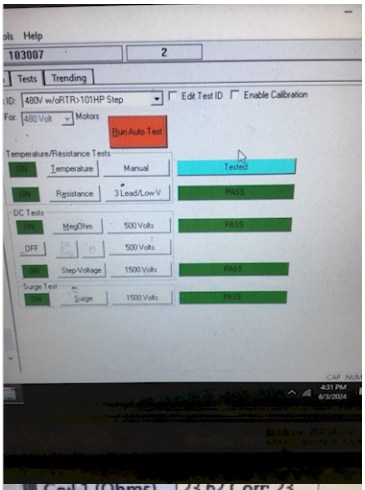
Priorities Found: **15 - Good**

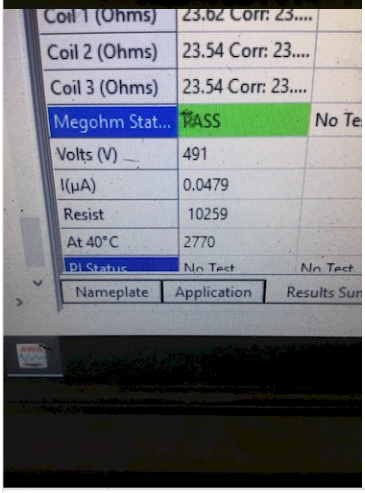
Overall Condition

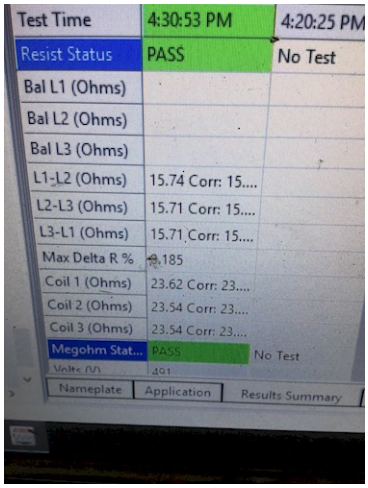
1.	Report Date	**06/04/2024**

2. Nameplate Picture P37

3. Photos of all six sides of the machine. P45

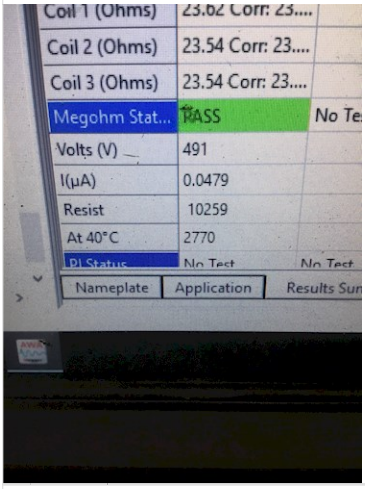






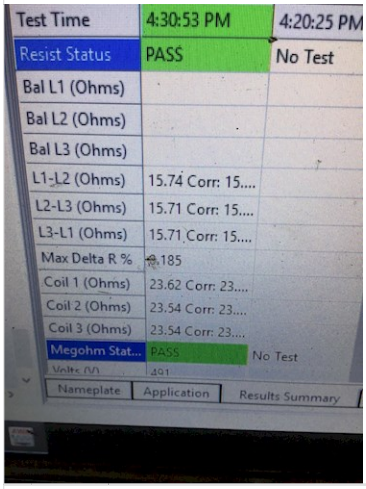
	4.	Describe the Overall Condition of the Equipment as Received ***Dirty***	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Y) Yes**
●	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout ***Na***	**Inches**
	9.	Assembled Shaft End Play ***Na***	**inches**
	10.	Air Gap Variation <10% ***Na***	
●	11.	Lead Condition	**(P) Pass**
	12.	Lead Length	**6 Inches**
●	13.	Does it have Lugs?, If so what is the Stud Size? ***Yes***	
	14.	Lead Numbers	**1-6**
	15.	Frame Condition	**pass**
	16.	Fan Condition	**(N) NA**
	17.	Broken or Missing Components ***Na***	
Initial Electrical Inspection			

18.	Insulation Resistance/Megger	**Megohms**	P8

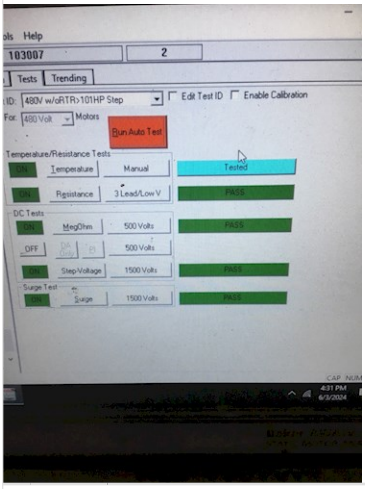


19.	Winding Resistance		P20

1-2	1-3	2-3



20.	Perform Surge Test	**(P) Pass**	P57



21.	Number of Stator Slots	**36**
22.	Stator Condition	**pass**
23.	Stator Thermistors/Ohms	**na**
24.	Stator Overloads/Ohms	**pass/0.2**

Mechanical Inspection

25.	Drive End Bearing Brand	**skf**

26.	Drive End Bearing Number-	**NJ2308 EC/C4**	
27.	Drive End Bearing Qty.	**1**	
28.	Drive End Bearing Type	**(Roller) Roller Bearing**	
29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
30.	Drive End Bearing Insulation or Grounding Device?		
	Na		
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**na**	
32.	Drive End Bearing Condition		P82
	Replace		

33.	Opposite Drive End Bearing Brand	**skf**	
34.	Opposite Drive End Bearing Number-	**NJ2308EC/C4**	
35.	Opposite Drive End Bearing Qty.	**1**	
36.	Opposite Drive End Bearing Type	**(Roller) Roller Bearing**	
37.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
38.	Opposite Drive End Bearing Insulation or Grounding Device?	**na**	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**na**	
40.	Opposite Drive End Bearing Condition		P118
	Replace		

41.	Drive End Seal	**na**	
42.	Opposite Drive End Seal	**na**	

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
44.	Growler Test	**(Pass) Pass**	

45.	Number of Rotor Bars	**46**
46.	Rotor Condition	**pass**
47.	List the Parts needed for the Repair Below ***NJ2308EC/C4 X2*** ***Shaker grease***	
48.	Signature of Technician that Disassembled Motor	**Cw**

Mechanical Fits- Rotor

49.	Shaft Runout	**inches**
	Na	

50.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	Na		
51.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
	Na		
52.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
	Na		
53.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.5753	**1.5753**	**1.5753**

54.	Drive End Bearing Shaft Fit Condition	**(P) Pass**

55.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.5754	**1.5755**	**1.5754**

56.	Opposite Drive End Bearing Shaft Fit Condition	**(P) Pass**

57.	Shaft Air Seal Fits	
	Drive End Air Seal	Opposite Drive End Air Seal
	Na	

Mechanical Fits- Bearing Housings

58.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.5426	**3.5427**	**3.5426**

59.	Drive End - Endbell Bearing Fit Condition	**(P) Pass**

60.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.5427	**3.5427**	**3.5427**

61.	Opposite Drive End - Endbell Bearing Fit Condition	**(P) Pass**

62. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

Pass

63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Na

64. List Machine Work Needed Below

Na

65. Technician **Cw**

Co sign: RRW

Root Cause of Failure

66. Failure locations

Bearings

67. Root cause of failure

Contamination

Dynamic Balance Report

68. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

69. Initial Balance Readings

Drive End	Opposite Drive End

70. Final Balance Readings

Drive End	Opposite Drive End

71. Technician

Assembly

72. QC Check All Parts for Cleanliness Prior to Assembly
73. Photograph All Major Components prior to assembly
74. Final Insulation Resistance Test **Megohms**
75. Assembled Shaft Endplay **inches**
76. Assembled Shaft Runout **inches**

77.	Test Run Voltage			P56
	Volts	Volts	Volts	

78.	Test Run Amperage			
	Amps	Amps	Amps	

79.	Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	

80.	Opposite Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	

81.	Ambient Temperature - Fahrenheit			
82.	Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	

83.	Opposite Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	

84.	Document Final Condition with Pictures after paint		
85.	Final Pics and QC Review	**Terrence Holland**	P131

Co sign: CRW