

AC Inspection as Found NUCOR Memphis (003974-1)

3601 Paul R Lowry Road Memphis, TN 38109 FolderID: 153776 FormID: 21751584



AC.	Inspection	- Rev	2
70	mapection	- 1164.	~

Location: 603

Serial Number:

Hi-Speed Job Number:	153776
Manufacturer:	Marathon
HP/kW:	40 (HP)
RPM:	1780 (RPM)
Frame:	324T
Voltage:	230 / 460
Current:	95/47.5 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	Coupling
Date Received:	09/25/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 🔵 1 - High

🔵 50 - Good

 Overall Condition
 Image: Condition

 1. Report Date
 09/26/2024

 2. Nameplate Picture
 P2

3. Photos of all six sides of the machine.

P3







4. Describe the Overall Condition of the Equipment as Received







5. Distance from the end of the shaft to the Coupling/Sheave

1.072 inches

P5

On the shaft	
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	6.	Report Date [COPY]	09/26/2024	
In	itial I	Mechanical/Electrical		0
	7.	Does Shaft Turn Freely?	(Y) Yes	
	8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No	
	9.	Does Shaft Have Visible Damage?	(No) No	
	10.	Assembled Shaft Runout	0.001 Inches	
	11.	Assembled Shaft End Play		
	12.	Air Gap Variation <10%	no provision for measurement	
	13.	Lead Condition	(P) Pass	
	14.	Lead Length	12 Inches	
	15.	Does it have Lugs?, If so what is the Stud Size?	(No) No	
	16.	Lead Numbers	1-9	
	•	1,2,3 power 4-7,5-8,6-9		
	17.	Frame Condition	good	
	18.	Fan Condition	(P) Pass	P18
		2 set screws		



	Broken or Missing Component	s		yes	P19
) 19. •	Break came apart			yee	
	A Star T				
K					
	a martine				
1	ALCO/				
jà.					
7K	A State of the sta				
The second	& mand of				
1					
N.					
nitial E	Electrical Inspection				1
20.	Insulation Resistance/Megger			6195 Megohms	P2
_0.				eree megenne	
L3-L1 (Ohm 0.142 Con: 0.1				
-	(Ohms) 0.070 Corr: 0.0				
Contraction of the	(Ohms) 0.070 Corr: 0.0				
The second party of the local division of th	(Ohms) 0.071 Corr. 0.0				
Volts	No Test (V) 495				
I(µA)					
Resis At 40					
Nar	No Tect				
	meplate Application Results Sum				
	And in case of the local division of the loc				
21.	Winding Resistance				P2
	1-2	1-3	2-3		
	.070	.070	.071		
10.7	71 1 1				
R Temp C	tus PASS No Test				
Bal L1 (Oh	hms)				
Bal L2 (Of Bal L3 (Of					
L1-L2 (OF	hms) 0.140 Corr: 0.1				
L2-L3 (OF					
Max Delt	ta R % 1.151				
	Dhms) 0.070 Corr. 0.0				
Coil 2 (O	There a series a series of the				
Coil 3 (O	Dhms) 0.071 Com 0.0				
Coil 3 (O Manuella Narvepl					
Coil 3 (O	No Test				
Coil 3 (O Manuella Narvepl	No Test				
Coil 3 (O Memory)	Inter Parce In Tree				
Coil 3 (O Manuella Narvepl	n Szer Pakos Min Text Rate Application Results Summary 5			(P) Pass	P2:
Coil 3 (O Memory)	Inter Parce In Tree			(P) Pass	P22
Coil 3 (O Memory)	Inter Parce In Tree			(P) Pass	P22

Test Date	9/26/2024	11/23/20		Test Type	Step-Voltage				
Time	3:50:29 PM	11:30:00 /		Volts (V)	1993 0.0719				
tus .	DA Only	No Test		I(µA) Resist	27705				
	499			At 40°C	8726				
io D	3.8 >2 OL			Surge Status Peak Volt(V) L1	PASS	No Test			
US	PASS	No Test		Peak Volt(V) L2	1221201				
e	Step-Voltage			Peak Volt(V) 13		242 20			
1	0.0719			Max P-P EAR(4/0/3				
	27705		100	Nameplate	Application				
	8726 Rus pace				Sebocation 1	Results Summar			
	1012 3000	No Test							
The Del	Dia d	DC (See.) XOS (PATS -	unde Friedry Sertauste Materia * Theory I TUZE/2001 1	Test ID Te-	Res., Me., PI D MASS PASS PASS P	53 PASS.			
Surge W		PAGS 1 CAR Gauge Pada Mar PP 2000 [155 2000 [155] 2000 [155 2000 [155] 2	Warks Warkson F Contraction Contraction Warkson Wark			Connet/Voltage Connet/Voltage Connet			
tite Approxim	Bandri Samony Joige (* 19	Reference		100 00 100 107 100 107		Ampridage			
	lumber of Sta							48	
	tator Conditi							jood	
5. S	stator Thermi	stors/Ohms					none pres	sent	
26. S	stator Overloa	ads/Ohms					none pres	sent	
hani	cal Inspect	ion						0	
	rive End Bea							SKF	
		aring Number-					6312 z		P2
	5								
	Drive End Bea					(Ba	ıll) Ball Be	1 aring	
80. E	rive End Bea				(Gre		all) Ball Bea	aring	

33.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	none present	
 33. 34. 	Drive End Wavy Washer/Snap-Ring Other Retention Device? Drive End Bearing Condition	none present normal wear	P34
 35. 	Opposite Drive End Bearing Brand	NTN	
• 36.	Opposite Drive End Bearing Number-	6311 zz c3	P36
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	
40.41.	Opposite Drive End Bearing Insulation or Grounding Device? Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	none present wavy washer	P41
• 42.	Opposite Drive End Bearing Condition	normal wear	P42



Rotor Inspection (Aluminum Bar) A 45. Rotor Type/Material Bar Bar	resent			
Rotor Inspection 45. Rotor Type/Material (Aluminum Bar) A Bar 46. Growler Test (Pather Parts) 47. Number of Rotor Bars (Pather Parts) 48. Rotor Condition (Pather Parts) 49. List the Parts needed for the Repair Below 1- CR-34256 lipseal 1- 6312 2RS C3 bearing (Pather Parts)	iminum ed Rotor is) Pass 40 good			
 45. Rotor Type/Material (Aluminum Bar) A Bar 46. Growler Test (Pather 100) 47. Number of Rotor Bars 48. Rotor Condition 49. List the Parts needed for the Repair Below 1- CR-34256 lipseal 1- 6312 2RS C3 bearing 	d Rotor 40 good			
Bar 46. Growler Test 47. Number of Rotor Bars 48. Rotor Condition 49. List the Parts needed for the Repair Below 1- CR-34256 lipseal 1- 6312 2RS C3 bearing	d Rotor s) Pass 40 good			
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 48. Rotor Condition 49. List the Parts needed for the Repair Below 1- CR-34256 lipseal 1- 6312 2RS C3 bearing 	good			
 49. List the Parts needed for the Repair Below 1- CR-34256 lipseal 1- 6312 2RS C3 bearing 				
1- CR-34256 lipseal 1- 6312 2RS C3 bearing	P4			
1- 6312 2RS C3 bearing				
1- 6312 2RS C3 bearing				
50. Signature of Technician that Disassembled Motor	gel Hill			
Mechanical Fits- Rotor				
	inches			
52. Rotor Runout				
Drive End Bearing Fit Rotor Body Opposite Drive End B	aring			

	53.	Coupling Fit Closest to Bearing Ho	busing		
		0 Degrees	90 Degrees	120 Degrees	
	54.	Coupling Fit Closest to the end of	the Shaft		
		0 Degrees	60 Degrees	120 Degrees	
		C .	5	5	
	55.	Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.3627	2.3627	2.3627	
		Tol. 2.3628-2.3623			
	56.	Drive End Bearing Shaft Fit Condi	tion		(P) Pass
	57.	Opposite Drive End Bearing Shaft			
		0 Degrees	60 Degrees	120 Degrees	
		2.1658	2.1655	2.1658	
		Tol. 2.1660-2.1655			
	58.	Opposite Drive End Bearing Shaft	Fit Condition		(P) Pass
	59.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
		good	good		
Me	echa	nical Fits- Bearing Housings			
	60.	Drive End - Endbell Bearing Fit			
_		0 Degrees	60 Degrees	120 Degrees	
		5.1688	5.1687	5.1688	
		Tol.5.1181-5.1191			
	61.	Drive End - Endbell Bearing Fit Co	pndition		(P) Pass
	62.	Opposite Drive End - Endbell Bea			
		0 Degrees	60 Degrees	120 Degrees	
		4.725	4.7252	4.7252	
1		Tol. 4.7244-4.7253		-	
	63.	Opposite Drive End - Endbell Bea	ring Fit Condition		(P) Pass
		Bearing Cap Condition	5		
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
		N/A	N/A		
	65.	End Bell Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
		good	good		
	66.	List Machine Work Needed Below	-		
		No machine work needed			
	67.	Technician			
Ro	oot C	ause of Failure			
	68.	Failure locations			
		Brake			
	69.	Root cause of failure			