

AC Inspection as Found Searcy Water and Sewer System (11242) 300 N. Elm Street

Searcy, AR 72145

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	F12 02134993 100 F
Decorintion:5UD	US MOTORS AERATOR

Description:5HP US MOTORS AERATOR 1200RPM 145HPZ

Ο

P37

P45

FolderID: 101670 FormID: 17473420

Hi-Speed Job Number:	101670
Manufacturer:	US Motors/Nidec
Serial Number:	F12 02134993 100 F
HP/kW:	5 (HP)
RPM:	1150 (RPM)
Frame:	145HPZ
Voltage:	230 / 460
Current:	15.4/7.7
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	Propeller
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: 🔵 9 - High

🔵 6 - Good

Overall Condition

- Report Date 1.
- 2. Nameplate Picture



Photos of all six sides of the machine. 3.









































	4.	Describe the Overall Condition of the Equipment as Received Dirty		
	5.	Distance from the end of the shaft to the Coupling/Sheave		
In	itial	Mechanical/Electrical		o
	6.	Does Shaft Turn Freely?	(Yes) Yes	
	7.	Does Shaft Have Visible Damage?	(No) No	
	8.	Assembled Shaft Runout	0.002 Inches	
	9.	Assembled Shaft End Play	inches	
	10.	Air Gap Variation <10%		
	11.	Lead Condition	(NA) Not Applicable	
	•	Rewind and cord was cut by customer/ 4 conductor #12/		
	12.	Lead Length	8 Inches	
	13.	Lead Numbers	1-9	P84

14. Frame Condition

pass

• 15	. Fan Condition	(P) Pass	P96
16	. Broken or Missing Components	na	
Initia	I Electrical Inspection		0
17	. Insulation Resistance/Megger		
18	. Winding Resistance		
	1-2	1-3 2-3	
• 19	. Perform Surge Test	(NA) Not Applicable	
	Single fazed		
20	. Number of Stator Slots	Megohms	P62
-	36		
00			
21	. Stator Condition	pass	
22	. Stator Thermistors/Ohms	na	
23	. Stator Overloads/Ohms	na	
Mech	anical Inspection		0
24	. Drive End Bearing Brand	skf	
25	. Drive End Bearing Number-	5211	
26	. Drive End Bearing Qty.	1	
27	. Drive End Bearing Type	(Other) Other	
	Double row ball bearing		
28	. Drive End Lubrication Type	(Grease) Grease Lubricated	
29	. Drive End Bearing Insulation or C	Grounding Device? na	
30	. Drive End Wavy Washer/Snap-R	ing Other Retention Device? spanner nut	

31. Drive End Bearing Condition



	skf	Opposite Drive End Bearing Brand	3
	6206	Opposite Drive End Bearing Number-	3
	1	Opposite Drive End Bearing Qty.	34
	(Ball) Ball Bearing	Opposite Drive End Bearing Type	3
	(Grease) Grease Lubricated	Opposite Drive End Lubrication Type	3
	na	Opposite Drive End Bearing Insulation or Grounding Device?	3
	na	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	3
P101	normal wear	Opposite Drive End Bearing Condition	39



4 0.	Drive End Seal	slinger	
-	Needs new		
• 41.	Opposite Drive End Seal	slinger needs new	
Rotor	Inspection		
42.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast	
43.	Growler Test	(Pass) Pass	
44.	Number of Rotor Bars	37	
45.	Rotor Condition	pass	
46.	List the Parts needed for the Repair Below		
	5211 6206 DE and ODE slingers		

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Μ	Mechanical Fits- Rotor					
	48.	Shaft Runout		0.002 inches		
	49.	Rotor Runout				
		Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing		
	50.	Coupling Fit Closest to Bearing H	lousing			
		0 Degrees	90 Degrees	120 Degrees		
	51.	Coupling Fit Closest to the end of	f the Shaft			
		0 Degrees	60 Degrees	120 Degrees		
	52.	Drive End Bearing Shaft Fit				
		0 Degrees	60 Degrees	120 Degrees		
		2.1659	2.1658	2.1659		
	53.	Drive End Bearing Shaft Fit Conc	lition	(P) Pass		
	54.	Opposite Drive End Bearing Shat	ít Fit			
		0 Degrees	60 Degrees	120 Degrees		
		1.1809	1.1808	1.1804		
	55.	Opposite Drive End Bearing Shat	it Fit Condition	(F) Fail		
	56.	Shaft Air Seal Fits				
		Drive End Air Seal	Opposite Drive End Air Seal			
Μ	echa	nical Fits- Bearing Housings			0	
	57.	Drive End - Endbell Bearing Fit				
		0 Degrees	60 Degrees	120 Degrees		
		3.9379	3.9378	3.9379		
	58.	Drive End - Endbell Bearing Fit C	ondition	(P) Pass		
	59.	Opposite Drive End - Endbell Bea	aring Fit			
		0 Degrees	60 Degrees	120 Degrees		
		2.4416	2.4417	2.4416		
	60.	Opposite Drive End - Endbell Bea	aring Fit Condition	(P) Pass		

Cw

	1. Bearing Cap Cond	ition		P51
-	Drive End Bearin	ng Cap C	Opposite Drive End Bearing Cap	
		51 -		
	Pass			
			Processile and Proces	
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	A MIL			
	- Bastille			
		-		
6	2. End Bell Air Seal F	Fits		
	Drive End Air Se	al C	Opposite Drive End Air Seal	
6	3. List Machine Work	Needed Below		
	ODE shaft bearing	fit and DE sleeve jo	ournal on shaft	
6	4. Technician			Cw
	$1 \Lambda \Lambda$	1		
		\sim		
Dyn	amic Balance Reno	rt		
Dyn	amic Balance Repo	rt Balance Grade		
Dyn 6	amic Balance Repo 5. Rotor Weight and Rotor Weight	rt Balance Grade F	alance Grade	
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	73.	Post Rewind Winding Resistance			
		1-2	1-3	2-3	
	74.	Post Rewind Surge Test			
	75.	Post Rewind Hi-Pot			
	76.	Technician			
R	oot C	ause of Failure			
	77.	Failure locations			
		DE sleeve journal on upper part of s single fazed	shaft is worn and ODE bearing fit on sha	aft is under sized and windings are	
	78.	Root cause of failure Wear and water contamination and	single fazed windings		
M	echar	nical Fits- Rotor - Post Repair			
	79.	Shaft Runout Post Repair			
	80.	Rotor Runout Post Repair			
		Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
	81.	Coupling Fit Closest to Bearing Ho	ousing Post Repair		
		0 Degrees	90 Degrees	120 Degrees	
		5	5	3	
	82.	Coupling Fit Closest to the end of	the Shaft Post Repair		
		0 Degrees	60 Degrees	120 Degrees	
	83.	Drive End Bearing Shaft Fit Post F	Repair		
		0 Degrees	60 Degrees	120 Degrees	
	84.	Opposite Drive End Bearing Shaft	Fit Post Repair		
		0 Degrees	60 Degrees	120 Degrees	
	85.	Shaft Air Seal Fits Post Repair			
		Drive End Air Seal	Opposite Drive End Air Seal		
	00				
	86. 	Shaft Repair Sign-off	De et Demein		
IVI	ecnar	Nical Fits- Bearing Housings -	Post Repair		
	87.	Drive End - Endbell Bearing Fit Po			
		0 Degrees	60 Degrees	120 Degrees	
	88.	Opposite Drive End - Endbell Bea	ring Fit Post Repair		
		0 Degrees	60 Degrees	120 Degrees	
		0	C	U U	
	89.	Bearing Cap Condition Post Repa	ir		
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
	90.	End Bell Air Seal Fits Post Repair			
		Drive End Air Seal	Opposite Drive End Air Seal		
	91.	End Bell Repair Sign-off			
As	ssem	bly			0

- 92. QC Check All Parts for Cleanliness Prior to Assembly
- 93. Photograph All Major Components prior to assembly













94.	Final Insulation Resistance Test			
95.	Assembled Shaft Endplay			
90.	Test Run Voltage			P54
57.	Volts	Volts	Volts	1.04
Comment of Comment of Comment of Comment Comme	NOT REPORT OF THE CEREBOLOGUES Partial Technologues Partial Technologues NOT NOUTINATIN Marrier Not Noting Not			
98.	Test Run Amperage			
	Amps	Amps	Amps	
99.	Drive End Vibration Readings - Ir	iches Per Second		
	Horizontal	Vertical	Axial	

100.	Opposite Drive End Vibration	Readings - Inches Per Sec	cond	
	Horizontal	Vertical	Axial	
101.	Ambient Temperature - Fahre	enheit		
102.	Drive End Bearing Temps - F	ahrenheit		
	5 Minutes	10 Minutes	15 Minutes	
102	Opposite Drive End Bearing	Tompo Tohrophoit		
103.	5 Minutos	10 Minutos	15 Minutos	
	5 Minutes	TO MITULES	13 Minutes	
104.	Document Final Condition wit	th Pictures after paint		
105.	Final Pics and QC Review		Terrence. Holland	P105
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