



## AC Recondition As Found

### FUTURE FUEL CHEMICAL

2800 GAP RD HWY 394 SO  
BATESVILLE, AR 72501

FolderID: 100531  
FormID: 15025887

#### AC Recondition - Rev. 2

**Location:** Shop  
**Serial Number:** 7291013-001 -AK T1  
**Description:** 15/7.5HP RELIANCE 1800/900RPM  
X0286TDZ

<b>Hi-Speed Job Number:</b>	100531
<b>Manufacturer:</b>	Reliance
<b>Serial Number:</b>	7291013-001 -AK T1
<b>HP/kW:</b>	15 (HP)
<b>RPM:</b>	1800 (RPM)
<b>Frame:</b>	X0286TDZ
<b>Voltage:</b>	460
<b>Current:</b>	18.5
<b>Phase:</b>	Three
<b>Hz:</b>	60 (Hz)
<b>Service Factor:</b>	1.15
<b>Enclosure:</b>	XP
<b>J-box Included:</b>	Complete
<b>Coupling/Sheave:</b>	None
<b>Bearing RTDs:</b>	No
<b>Stator RTDs:</b>	No
<b>Repair Stage:</b>	Final
<b>Heaters:</b>	No
<b>Winding Type :</b>	Random Wound
<b>Bearing Type:</b>	Rolling Element

Priorities Found: ● 5 - High ● 4 - Good

#### Overall Condition

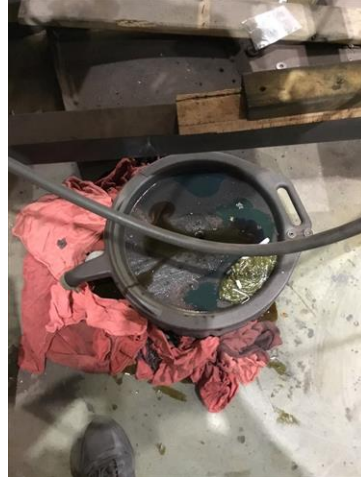


1. Report Date
2. Nameplate Picture

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3. Photos of all six sides of the machine.
4. Describe the Overall Condition of the Equipment as Received

*Filthy*

#### Initial Mechanical/Electrical

●	5. Does Shaft Turn Freely?	(Yes) Yes
	6. Does Shaft Have Visible Damage?	(No) No
●	7. Assembled Shaft Runout	1 Inches
	8. Assembled Shaft End Play	
	9. Air Gap Variation <10%	
●	10. Lead Condition	(P) Pass
	11. Lead Length	10 Inches
	12. Frame Condition	good
●	13. Fan Condition	(F) Fail
■	<i>Plastic fan is broken</i>	
	14. Broken or Missing Components	fan

#### Initial Electrical Inspection

	15. Insulation Resistance/Megger	
	16. Winding Resistance	
	1-2	1-3 2-3
●	17. Perform Surge Test	(F) Fail
	18. Stator Condition	
■	<i>Fully saturated with oil, rewind</i>	
	19. Number of Stator Slots	

#### Mechanical Inspection






21. Drive End Bearing Qty.	1
22. Drive End Bearing Type	(Ball) Ball Bearing
23. Drive End Lubrication Type	(Grease) Grease Lubricated
24. Drive End Bearing Insulation or Grounding Device?	no
25. Drive End Wavy Washer/Snap-Ring Other Retention Device?	no
26. Drive End Bearing Condition	minor frosting and false brinelling
27. Opposite Drive End Bearing Number-	6310
28. Opposite Drive End Bearing Qty.	1
29. Opposite Drive End Bearing Type	(Ball) Ball Bearing
30. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
31. Opposite Drive End Bearing Insulation or Grounding Device?	no
32. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy
33. Opposite Drive End Bearing Condition	good
34. Drive End Seal	none
35. Opposite Drive End Seal	none

#### Rotor Inspection

36. Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
37. Growler Test	(Pass) Pass
38. Number of Rotor Bars	22
39. Rotor Condition	good
40. List the Parts needed for the Repair Below 6310, 6310	
41. Signature of Technician that Disassembled Motor	

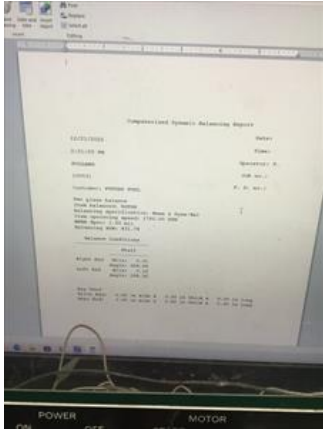
#### Mechanical Fits- Rotor

42.	Shaft Runout			0.001 inches
43.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
44.	Coupling Fit Closest to Bearing Housing			
	0 Degrees	90 Degrees	120 Degrees	

45.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
46.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.9687	1.9688	19689
47.	Drive End Bearing Shaft Fit Condition (P) Pass		
48.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.969	1.969	19690
49.	Opposite Drive End Bearing Shaft Fit Condition (P) Pass		
50.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
<b>Mechanical Fits- Bearing Housings</b>			
51.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	4.3322	4.3321	43321
52.	Drive End - Endbell Bearing Fit Condition (F) Fail		
53.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	4.3324	4.3324	4.3325
54.	Opposite Drive End - Endbell Bearing Fit Condition (F) Fail		
55.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
56.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
57.	List Machine Work Needed Below <i>Sleeve ODE, Sleeve DE</i>		
58.	Technician David Maclin		
			
<b>Dynamic Balance Report</b>			
59.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
60.	Initial Balance Readings		
	Drive End	Opposite Drive End	

Drive End

Opposite Drive End



62. Technician

**Rewind**

63. Core Test Results - Watts loss per Pound

Pre-Burnout

Post Burnout

64. Core Hot Spot Test

Pre-Burnout

Post-Burnout

65. Post Rewind Electrical Test- Insulation Resistance

66. Post Rewind Polarization Index

67. Post Rewind Winding Resistance

1-2

1-3

2-3

68. Post Rewind Surge Test

69. Post Rewind Hi-Pot

70. Technician

**Root Cause of Failure**

71. Failure locations

*Stator, DE endbell, ODE endbell*

72. Root cause of failure

**Mechanical Fits- Rotor - Post Repair**

73. Shaft Runout Post Repair

74. Rotor Runout Post Repair

Drive End Bearing Fit

Rotor Body

Opposite Drive End Bearing

75. Coupling Fit Closest to Bearing Housing Post Repair

0 Degrees

90 Degrees




120 Degrees

76. Coupling Fit Closest to the end of the Shaft Post Repair

0 Degrees

60 Degrees

120 Degrees

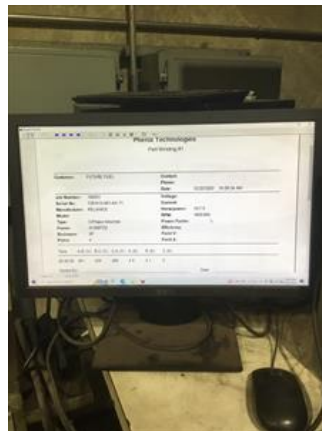
77.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
78.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
79.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
80.	Shaft Repair Sign-off		
<b>Mechanical Fits- Bearing Housings - Post Repair</b>			
81.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
	4.3308	4.3308	4.3307
			
82.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
83.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
84.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
85.	End Bell Repair Sign-off		
<b>Assembly</b>			
86.	Photograph All Major Components prior to assembly		
87.	Final Insulation Resistance Test		
88.	Assembled Shaft Endplay		
89.	Assembled Shaft Runout		
90.	Test Run Voltage		
	Volts	Volts	Volts
91.	Test Run Amperage		
	Amps	Amps	Amps

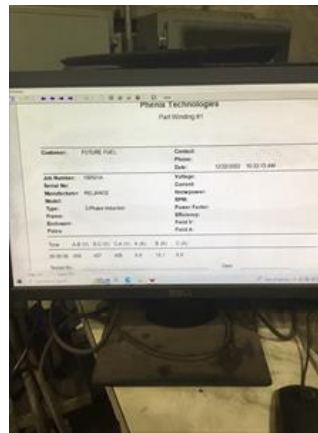


92.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
93.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
94.	Ambient Temperature - Fahrenheit		
95.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
96.	Opposite Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes
97.	Final Test Run Sign-off		
98.	Document Final Condition with Pictures after paint		

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99. Final Pics and QC Review

Terrence Holland

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