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

AC Inspection as Found

FUTURE FUEL CHEMICAL
2800 GAP RD HWY 394 SO
BATESVILLE, AR 72501

FolderID: 102939
FormID: 20391327

AC Inspection - Rev. 2

Location:	MOTOR SHOP LR
Serial Number:	C0709280042
Description:	25HP BALDOR UL LISTED

Hi-Speed Job Number:	102939
Manufacturer:	Baldor
Spec/ID #:	I0E25IX350HI
Serial Number:	C0709280042
HP/kW:	25 (HP)
RPM:	1775 (RPM)
Frame:	224TC
Voltage:	230 / 460
Current:	61.1/30.8 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.0
Enclosure:	XP
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	05/15/2024
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

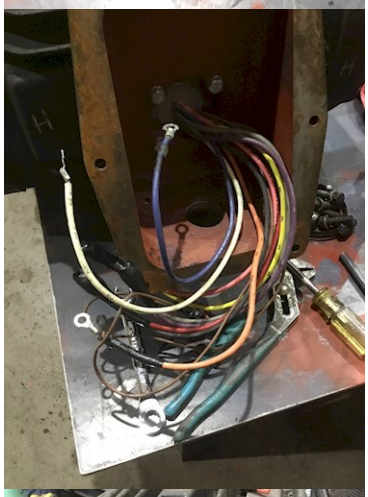
Priorities Found: **2 - High** **10 - Good**

Overall Condition

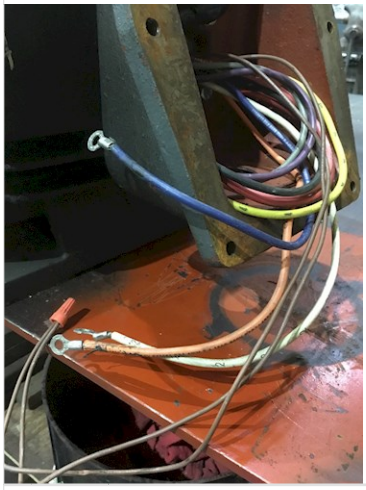
1.	Report Date	**05/24/2024**

2. Nameplate Picture P37

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

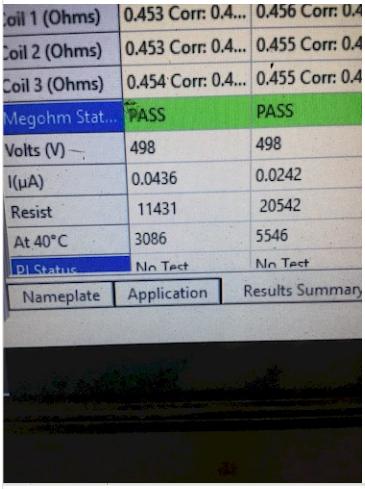


	4.	Describe the Overall Condition of the Equipment as Received ***Dirty***	
	5.	Report Date [COPY]	**05/24/2024**
Initial Mechanical/Electrical			
●	6.	Does Shaft Turn Freely?	**(Y) Yes**
●	7.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	8.	Does Shaft Have Visible Damage?	**(No) No**
	9.	Assembled Shaft Runout ***Na***	**Inches**
	10.	Assembled Shaft End Play ***Na***	**inches**
	11.	Air Gap Variation <10% ***Na***	
●	12.	Lead Condition	**(P) Pass**
	13.	Lead Length	**18 Inches**
●	14.	Does it have Lugs?, If so what is the Stud Size? ***Yes***	P93



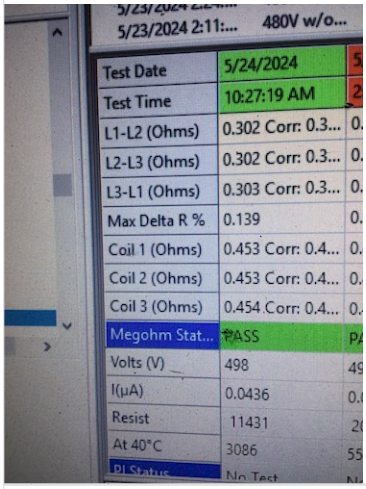
	15.	Lead Numbers	**1-9**
	16.	Frame Condition	**pass**
●	17.	Fan Condition	**(P) Pass**
	18.	Broken or Missing Components	**fan cover bolt**
Initial Electrical Inspection			

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

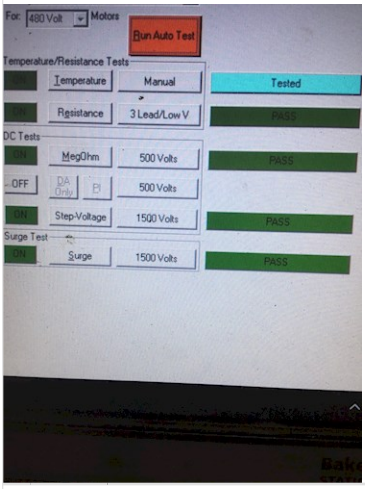


20.	Winding Resistance		P20

1-2	1-3	2-3



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



22.	Number of Stator Slots	**48**
23.	Stator Condition	**pass needs washed**
24.	Stator Thermistors/Ohms	
	Na	
25.	Stator Overloads/Ohms	**pass 0.4**

Mechanical Inspection

26.	Drive End Bearing Brand	**na**	P12

27.	Drive End Bearing Number-	**6311**	
28.	Drive End Bearing Qty.	**1**	
29.	Drive End Bearing Type	**(Ball) Ball Bearing**	
30.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
31.	Drive End Bearing Insulation or Grounding Device?	**na**	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**spanner nut**	
33.	Drive End Bearing Condition		P82

34.	Opposite Drive End Bearing Brand	**skf**	
35.	Opposite Drive End Bearing Number-	**6309**	
36.	Opposite Drive End Bearing Qty.	**1**	
37.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
38.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
39.	Opposite Drive End Bearing Insulation or Grounding Device?		
	Na		
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	
41.	Opposite Drive End Bearing Condition		P118

42. Drive End Seal

Na

43. Opposite Drive End Seal

Na

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
45.	Growler Test	**(Pass) Pass**
46.	Number of Rotor Bars	**40**
47.	Rotor Condition	**pass**
48.	List the Parts needed for the Repair Below	

6311
6309
Need 4.5 inch OD and 6inch length brass for sleeving

49. Signature of Technician that Disassembled Motor **Cw**

Mechanical Fits- Rotor

50. Shaft Runout **inches**

0.002

51. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

Na

52. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees

Na

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees

Na

54. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.1654	**2.1654**	**5.1655**

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

56. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.772	**1.7721**	**1.7721**

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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Na

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.7253	**4.7252**	**4.7252**

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

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees

Unable to provide proper measurements due to excessive wear

62. Opposite Drive End - Endbell Bearing Fit Condition **(F) Fail**

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

Pass

64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Na

65. List Machine Work Needed Below

ODE end bell bearing fit

66. Technician **Cw**

Root Cause of Failure

67. Failure locations

Bearings

68. Root cause of failure

Contamination and fluting

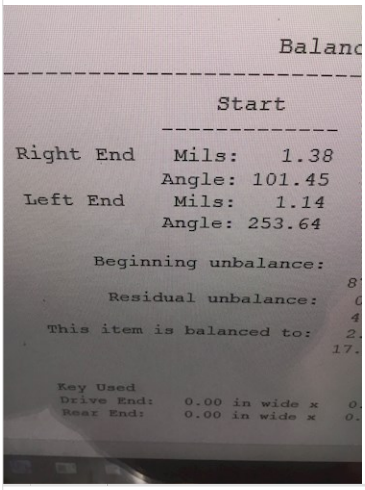
Dynamic Balance Report

69. Rotor Weight and Balance Grade

Rotor Weight	Balance Grade

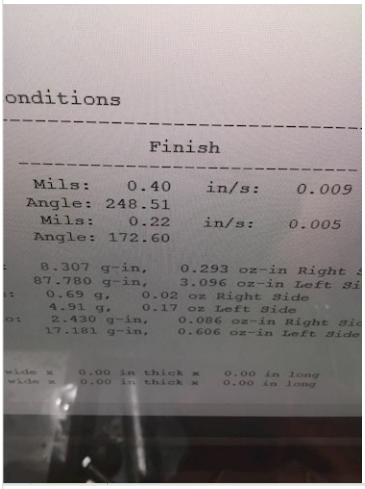
70. Initial Balance Readings P11

Drive End	Opposite Drive End



71. Final Balance Readings P27

Drive End	Opposite Drive End



72. Technician **Terrence Holland**

Assembly

73. QC Check All Parts for Cleanliness Prior to Assembly **Terrence Holland** P4

Overload ohm @ .03

74. Photograph All Major Components prior to assembly **(Complete) Complete**

75. Final Insulation Resistance Test **Megohms** P31

76.	Assembled Shaft Endplay	**0 inches**
77.	Assembled Shaft Runout	**0.002 inches**

78. Test Run Voltage P56

Volts	Volts	Volts

79. Test Run Amperage P65

Amps	Amps	Amps

80. Drive End Vibration Readings - Inches Per Second

Horizontal	Vertical	Axial
0.0372	**0.023**	**0.0355**

81.	Opposite Drive End Vibration Readings - Inches Per Second			
	Horizontal	Vertical	Axial	
	0.0461	**0.0364**	**0.0184**	
82.	Ambient Temperature - Fahrenheit			
83.	Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
84.	Opposite Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
85.	Document Final Condition with Pictures after paint		**see below**	
86.	Final Pics and QC Review		**Terrence Holland**	P131

Witness: