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

AC Inspection as Found

NUCOR Memphis (003974-1)
3601 Paul R Lowry Road
Memphis, TN 38109

FolderID: 152766
FormID: 20344033

AC Inspection - Rev. 2

Completed by: JAMES VALENTINE on 05/16/2024

Location:	603
Serial Number:	09F436Y900H2

Description:25 Hp Baldor From Nucor Memphis

Hi-Speed Job Number:	152766
Manufacturer:	Baldor
Serial Number:	09F436Y900H2
HP/kW:	25 (HP)
RPM:	1760 (RPM)
Frame:	284T
Voltage:	460
Current:	30 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Half
Coupling/Sheave:	Sheave
Date Received:	05/10/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
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: **64 - Good**

Overall Condition

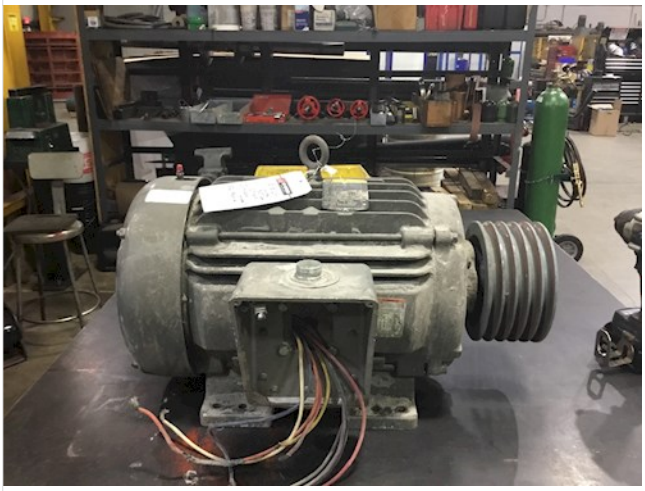
1.	Report Date	**05/10/2024**

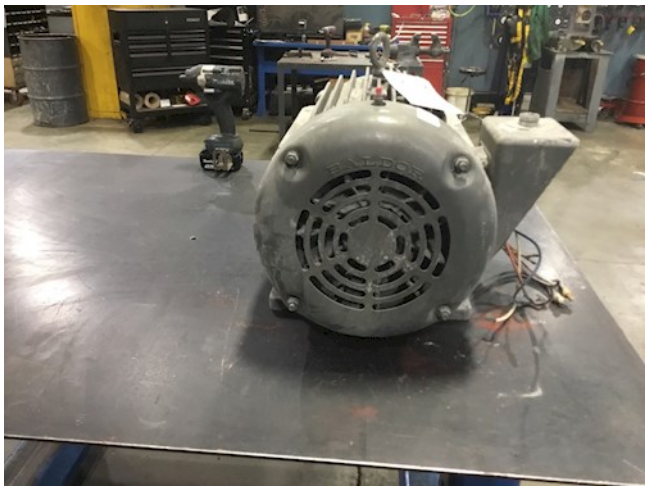
2. Nameplate Picture

P2

3. Photos of all six sides of the machine.

P3





4.	Describe the Overall Condition of the Equipment as Received ***Recon with no machine work***		
5.	Distance from the end of the shaft to the Coupling/Sheave	**2 inches**	

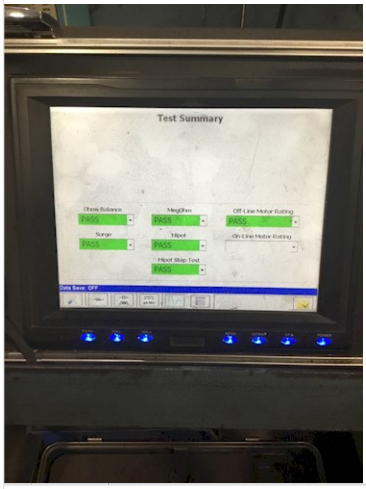
Initial Mechanical/Electrical

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	**0.001 Inches**	
10.	Assembled Shaft End Play	**0.004 inches**	
11.	Air Gap Variation <10%	**No provision for measurement**	
12.	Lead Condition	**(P) Pass**	
13.	Lead Length	**16 Inches**	
14.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
15.	Lead Numbers	**1-9**	
16.	Frame Condition	**good**	
17.	Fan Condition	**(P) Pass**	P19

18.	Broken or Missing Components	**No broken or missing parts**	

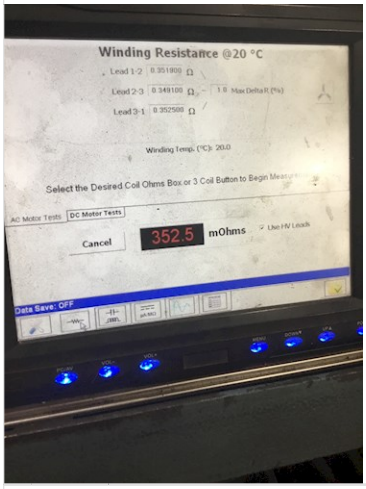
Initial Electrical Inspection

19.	Insulation Resistance/Megger	**Megohms**	P22

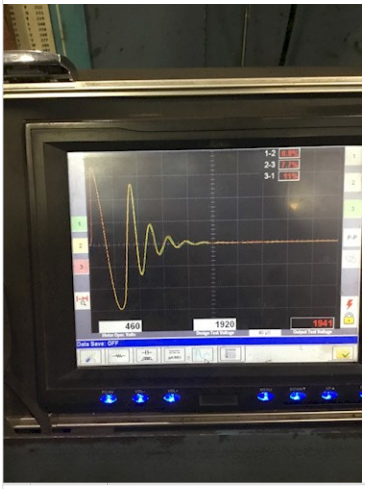


20.	Winding Resistance		P23

1-2	1-3	2-3



21.	Perform Surge Test	**(P) Pass**	P24



22.	Number of Stator Slots	**48**
23.	Stator Condition	**good**
24.	Stator Thermistors/Ohms	**n/a**
25.	Stator Overloads/Ohms	**n/a**

Mechanical Inspection

26.	Drive End Bearing Brand	**skf**

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?	**none**	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**lock washer and nut**	P35

33.	Drive End Bearing Condition	**good**	
34.	Opposite Drive End Bearing Brand	**SKF**	
35.	Opposite Drive End Bearing Number-	**6209**	
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?	**none**	
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P43

41.	Opposite Drive End Bearing Condition	**good**	
42.	Drive End Seal	**replace**	P45

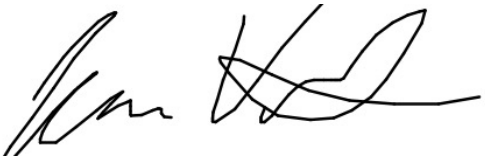
43.	Opposite Drive End Seal		**replace**	P46

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		**good**
48.	List the Parts needed for the Repair Below		

1-6311 bearing
1-6209 bearing
1- 50 mm bearing cap seal
1-70 mm bearing cap seal

49.	Signature of Technician that Disassembled Motor		**James Valentine**



Mechanical Fits- Rotor

50.	Shaft Runout		**inches**
	N/a		
51.	Rotor Runout		

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

52. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees
1.8745	**1.8745**	**1.8745**

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
1.875	**1.875**	**1.875**

54. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.1658	**2.166**	**2.166**

2.1660/2.1655

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

56. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.575	**1.5752**	**1.5752**

1.5753/1.5749

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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
good	**good**

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.725	**4.7252**	**4.7248**

4.7244/4.7253

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

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
3.1498	**3.1499**	**3.1502**

3.1496/3.1503

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

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
good	**good**

64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
good	**good**

65. List Machine Work Needed Below

None

66. Technician **James Valentine**

Root Cause of Failure

67. Failure locations

	Recondition
68.	Root cause of failure ***N/a***