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

AC Inspection as Found

MOTOR - KTG USA
400 Mahannah
Memphis, TN 38107

FolderID: 154703
FormID: 23298403

AC Inspection - Rev. 2

Location:	MLMR
Serial Number:	VC334038
Description:	150 HP AC

Hi-Speed Job Number:	154703
Manufacturer:	GE
Product Number:	5K445SS2080
Serial Number:	VC334038
HP/kW:	150 (HP)
RPM:	1780 (RPM)
Frame:	445T
Voltage:	460
Current:	165 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	6
J-box Included:	None
Coupling/Sheave:	None
Date Received:	01/29/2025
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	Yes
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **4 - High** **8 - Good**

Overall Condition

1.	Report Date	**02/05/2025**

2. Nameplate Picture P2

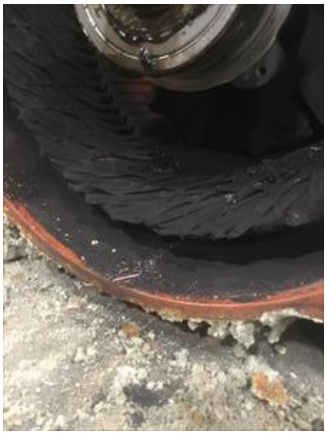
3. Photos of all six sides of the machine. P3

	4.	Describe the Overall Condition of the Equipment as Received ***Stator windings blown and requires rewind . Requires machine work to drive end.***	
Initial Mechanical/Electrical			
	5.	Does Shaft Turn Freely?	**(Y) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**0.001 Inches**
	9.	Assembled Shaft End Play	**0.002 inches**
	10.	Air Gap Variation <10%	**No Provisions for measurement**
	11.	Lead Condition	**(P) Pass**
	12.	Lead Length	**12 Inches**
	13.	Does it have Lugs?, If so what is the Stud Size? ***3/8"***	**(Yes) Yes**
	14.	Lead Numbers	**1-3/7-9**
	15.	Frame Condition	**Pass**
	16.	Fan Condition	**(P) Pass**
	17.	Does motor have internal fan?	**(No) No**
	18.	Broken or Missing Components	**None**

Initial Electrical Inspection

	19.	Insulation Resistance/Megger		**0 Megohms**
	20.	Winding Resistance		
		1-2	1-3	2-3
		0	**0**	**0**
	21.	Perform Surge Test		**(F) Fail**
	22.	Number of Stator Slots		**72**

23.	Stator Condition	**Requires rewind**	P23



24.	Stator Thermistors/Ohms	**N/A**	
25.	Stator Overloads/Ohms	**N/A**	

Mechanical Inspection

26.	Drive End Bearing Brand	**MRC**	P26

27.	Drive End Bearing Number-	**6318 C3**
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?	**None**

33.	Drive End Bearing Condition	**Normal wear**	
34.	Opposite Drive End Bearing Brand	**SKF**	P34

35.	Opposite Drive End Bearing Number-	**6314 C3**
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**
41.	Opposite Drive End Bearing Condition	**Normal wear**
42.	Drive End Seal	**VA85**
43.	Opposite Drive End Seal	**VA 60**

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
45.	Growler Test	**(Pass) Pass**
46.	Number of Rotor Bars	**58**
47.	Rotor Condition	**Pass**
48.	List the Parts needed for the Repair Below	

Rewind
Lugs
VA 80
VA65
6314 C3
6318 C3

49.	Signature of Technician that Disassembled Motor	**Brandon Woodard**

Mechanical Fits- Rotor

50.	Shaft Runout	**0.001 inches**
51.	Rotor Runout	

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
0.002	**0.002**	**0.002**

52. Coupling Fit Closest to Bearing Housing P52

0 Degrees	90 Degrees	120 Degrees
3.375	**3.375**	**3.375**

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
3.375	**3.375**	**3.375**

54. Drive End Bearing Shaft Fit P54

0 Degrees	60 Degrees	120 Degrees
3.5437	**3.5437**	**3.5437**

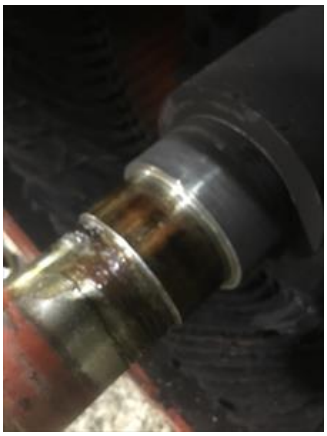
Tolerance is 3.5434-3.5440

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

56. Opposite Drive End Bearing Shaft Fit P56

0 Degrees	60 Degrees	120 Degrees
2.7561	**2.7561**	**2.7561**

Tolerance is 2.7560-2.7565



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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
Pass	**Pass**

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit P59

0 Degrees	60 Degrees	120 Degrees
7.4825	**7.482**	**7.4822**

Tolerance is 7.4803-7.4814

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

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.9058	**5.9058**	**5.9058**

Tolerance is 5.9055-5.9065

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

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
Pass	**Pass**

64. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
Pass	**Pass**

65. List Machine Work Needed Below

Bore and bush Drive end.

66. Technician **Brandon Woodard**

Root Cause of Failure

67. Failure locations

68. Root cause of failure