



KEEPING YOUR FACILITY UP TO SPEED
— EVERY DAY SINCE 1946 —

LR Motor Shop Repairs

Job Number 103521

Prepared for CONWAY COUNTY WATER

30 H2O DRIVE
PLUMMERVILLE AR 72127

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AC Inspection as Found - *MOTOR SHOP LR*

AC Inspection - Rev. 2: *H0350VS2SLH-C*

1.0

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Millington, Tn 38053
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AC Inspection as Found
CONWAY COUNTY WATER
30 H2O DRIVE
PLUMMERVILLE, AR 72127

FolderID: 103521
FormID: 21663518

AC Inspection - Rev. 2

Location: MOTOR SHOP LR
Serial Number: H0350VS2SLH-C
Description: 350HP US

Hi-Speed Job Number:	102382
Manufacturer:	US Motors/Nidec
Product Number:	CAT# HO350V2SLH-C
Spec/ID #:	Z010828327-0001-GT-0
HP/kW:	350 (HP)
RPM:	1785 (RPM)
Frame:	447TPA
Voltage:	460
Current:	389
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	WPI
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	01/24/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	Yes
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 ● 8 - Good

Overall Condition

1. Report Date	09/20/2024
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2. Nameplate Picture



3. Photos of all six sides of the machine.





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4. Describe the Overall Condition of the Equipment as Received
Oil over filled



5. Report Date [COPY]

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	Inches
10. Assembled Shaft End Play	inches
11. Air Gap Variation <10%	
12. Lead Condition	(NA) Not Applicable
13. Lead Length	24 Inches
14. Does it have Lugs?, If so what is the Stud Size?	(No) No
15. Lead Numbers	1-1/2-2/3-3/7-7/8-8/9-9
16. Frame Condition	pass
17. Fan Condition	(N) NA
18. Broken or Missing Components	

Initial Electrical Inspection

19. Insulation Resistance/Megger	Megohms
20. Winding Resistance	

1-2

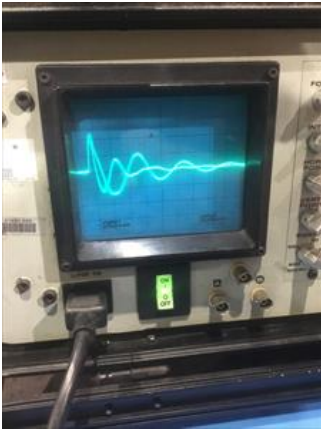
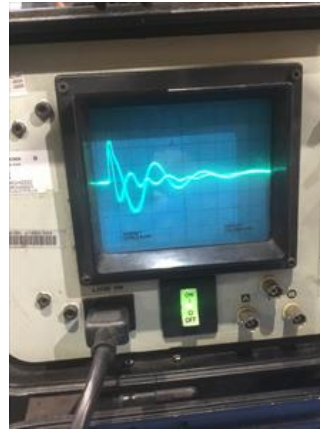
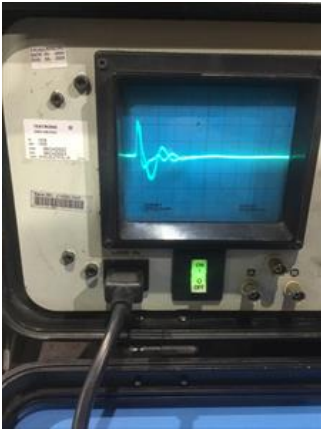
1-3

2-3

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21. Perform Surge Test

(F) Fail



- 22. Number of Stator Slots
- 23. Stator Condition
- 24. Stator Thermistors/Ohms
- 25. Stator Overloads/Ohms

Mechanical Inspection

- 26. Drive End Bearing Brand
- 27. Drive End Bearing Number- **7322**
- 28. Drive End Bearing Qty. **1**
- 29. Drive End Bearing Type **(Thrust) Thrust**
- 30. Drive End Lubrication Type **(Oil) Oil Lubricated**
- 31. Drive End Bearing Insulation or Grounding Device?
- 32. Drive End Wavy Washer/Snap-Ring Other Retention Device? **spacer**

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33. Drive End Bearing Condition

normal wear



34. Opposite Drive End Bearing Brand

35. Opposite Drive End Bearing Number-

6215

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?

40. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?

41. Opposite Drive End Bearing Condition

Normal wear



42. Drive End Seal

43. Opposite Drive End Seal

Rotor Inspection

44. Rotor Type/Material

(Squirrel Aluminum) Squirrel
Cage Aluminum Die Cast

45. Growler Test

(Pass) Pass

46. Number of Rotor Bars

47. Rotor Condition

Pass

48. List the Parts needed for the Repair Below

7322
6215

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49. Signature of Technician that Disassembled Motor

Cw



Mechanical Fits- Rotor

50. Shaft Runout inches

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

53. Coupling Fit Closest to the end of the Shaft

0 Degrees

60 Degrees

120 Degrees

54. Drive End Bearing Shaft Fit

0 Degrees

60 Degrees

120 Degrees

55. Drive End Bearing Shaft Fit Condition

(NA) Not Applicable

56. Opposite Drive End Bearing Shaft Fit

0 Degrees

60 Degrees

120 Degrees

57. Opposite Drive End Bearing Shaft Fit Condition

(NA) Not Applicable

58. Shaft Air Seal Fits

Drive End Air Seal

Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees

60 Degrees

120 Degrees

60. Drive End - Endbell Bearing Fit Condition

(NA) Not Applicable

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees

60 Degrees

120 Degrees

62. Opposite Drive End - Endbell Bearing Fit Condition

(NA) Not Applicable

63. Bearing Cap Condition

Drive End Bearing Cap

Opposite Drive End Bearing Cap

64. End Bell Air Seal Fits

Drive End Air Seal

Opposite Drive End Air Seal

65. List Machine Work Needed Below

66. Technician

Cw


 Co sign: RRW
Root Cause of Failure

67. Failure locations

Windings

68. Root cause of failure

*Coil to coil short***Dynamic Balance Report**

69. Rotor Weight and Balance Grade

Rotor Weight

Balance Grade

70. Initial Balance Readings

Drive End

Opposite Drive End

71. Final Balance Readings

Drive End

Opposite Drive End

72. Technician

Rewind

73. Core Test Results - Watts loss per Pound

Pre-Burnout

Post Burnout

74. Core Hot Spot Test

Pre-Burnout

Post-Burnout

75. Post Rewind Electrical Test- Insulation Resistance

76. Post Rewind Polarization Index

77. Post Rewind Winding Resistance

1-2

1-3

2-3

78. Post Rewind Surge Test

79. Post Rewind Hi-Pot

80. Technician

Assembly

81. QC Check All Parts for Cleanliness Prior to Assembly

82. Photograph All Major Components prior to assembly

83. Final Insulation Resistance Test

84. Assembled Shaft Endplay

85. Assembled Shaft Runout

86. Test Run Voltage

Volts

Volts

Volts

87. Test Run Amperage			
Amps	Amps	Amps	
88. Drive End Vibration Readings - Inches Per Second			
Horizontal	Vertical	Axial	
89. Opposite Drive End Vibration Readings - Inches Per Second			
Horizontal	Vertical	Axial	
90. Ambient Temperature - Fahrenheit			
91. Drive End Bearing Temps - Fahrenheit			
5 Minutes	10 Minutes	15 Minutes	
92. Opposite Drive End Bearing Temps - Fahrenheit			
5 Minutes	10 Minutes	15 Minutes	
93. Document Final Condition with Pictures after paint			
94. Final Pics and QC Review			



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2. **PRICE.** All quoted prices shall remain firm and binding for a period of thirty (30) days from the date of quotation or for the period specifically stated in the quotation. The price for any and all goods and/or services ordered or approved by Buyer after thirty (30) days from the date of any quotation are subject to any increase in price that may occur after the expiration of thirty (30) days from the issuance of the quotation and the date the Buyer releases any shipment.
3. **SCOPE OF GOODS AND/OR SERVICES.** The goods and/or services provided by Hi-Speed pursuant to any quotation shall be limited exclusively to those goods and/or services expressly identified therein. Hi-Speed does not assume any responsibility and/or liability for the failure to provide any other goods and/or services not identified in any quotation. Modifications, additions or deletions to or from the scope referenced in any quotation shall only be effective if evidenced in writing and signed by Hi-Speed. The sale of any of all goods and/or services affected by such modification, addition or deletion shall be subject to these same Standard Terms and Conditions whether or not referenced therein.
4. **BILLING AND PAYMENT TERMS.** Hi-Speed shall invoice Buyer for all goods and/or services as same are rendered at the address listed on the quotation. Payments for all goods and/or services shall be due thirty (30) days from the date of the current invoice or as otherwise set forth in the quotation. Late payments are subject to a late fee of 5% of the total invoice amount. Recurring late payments may lead to a deposit requirement on future services or sale of goods. Buyer shall be liable to Hi-Speed for any and all fees and expenses incurred by Hi-Speed to collect any invoices or to enforce these Standard Terms and Conditions, including but not limited to, attorney's fees.
5. **DELIVERY OF GOODS AND/OR SERVICES.** Unless otherwise identified in the quotation, all shipments are F.O.B. Hi-Speed's warehouse and the title to and all risk of loss with respect to any goods shipped shall pass to Buyer when such goods are delivered to the carrier at Hi-Speed's warehouse. Hi-Speed will use its best efforts to affect delivery by the date or dates specified in the quotation. However, Hi-Speed shall not be liable for delay in or failure to make shipment, or to perform services, by any identified date for any reason whatsoever, including but not limited to, causes beyond its reasonable control, such as strikes, fires, floods, epidemics, quarantines, restrictions, severe weather, embargos, acts of God, or public enemy, war, riot, delays in transportation or the inability to obtain necessary labor, materials or manufacturing facilities.
6. **DELIVERY SITE AND TIME FOR PERFORMANCE.** Hi-Speed and Buyer agree that time is of the essence for the purchase order and that Buyer shall fully cooperate with Hi-Speed in order to allow Hi-Speed full access to prosecute its work diligently and in an orderly manner. Buyer shall assist Hi-Speed in every way possible to avoid delaying, disrupting or interfering with the progress of Hi-Speed's work at the project site. In the event Hi-Speed's work is delayed, hindered, suspended, disrupted, re-sequenced or interfered with or rendered less efficient or more costly or adversely affected in any way as a result of acts or omissions of Buyer or other contractors or employees of Buyer or by any other reason beyond Hi-Speed's control and without the fault of Hi-Speed, then, in such event, Buyer shall be liable to Hi-Speed for any damages, additional costs, expenses, labor, materials, man hours, acceleration costs, overtime, additional jobsite overhead, extended home office overhead, and any and all other direct and indirect expenses of whatsoever nature or kind, caused in whole or in part, as a result of any of the above-referenced occurrences. Hi-Speed's project records will be the basis for computing the additional costs and damages of Hi-Speed's labor, materials, expenses and overhead related to such changes. BUYER WARRANTS THAT THE SITE FOR DELIVERY OR INSTALLATION OF ANY GOODS AND/OR FOR THE PERFORMANCE OF ANY SERVICES SHALL BE READY AND ADEQUATE FOR HI-SPEED'S DELIVERY OF GOODS AND/OR PERFORMANCE OF SERVICES AND THAT HI-SPEED SHALL HAVE FULL ACCESS THERETO, FREE OF ALL OBSTRUCTIONS. BUYER SHALL ASSUME ALL EXTRA COSTS ASSOCIATED WITH HI-SPEED'S INABILITY TO INSTALL ANY GOODS OR PERFORM ANY SERVICES AS A RESULT OF BUYER'S FAILURE TO COMPLY WITH THIS PROVISION. HI-SPEED MAY NOT INSPECT THE SITE PRIOR TO DELIVERY AND/OR INSTALLATION OF GOODS AND/OR PERFORMANCE OF SERVICES AND MAKES NO WARRANTY AS TO THE SUFFICIENCY OF THE SITE FOR THE DELIVERY AND/OR INSTALLATION OF GOODS AND/OR THE PERFORMANCE OF SERVICES AT SUCH SITE.
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8. **WARRANTIES.** Hi-Speed warrants that all goods shall conform in all material aspects to the goods identified in the quotation to Buyer and/or purchase order, and Hi-Speed makes to Buyer the manufacturer's express warranty for any goods sold to Buyer, which is offered by the manufacturer at the time of acceptance of any quotation by Buyer. This warranty is conditioned upon the installation, operation, and maintenance of the goods in accordance with the manufacturer's recommendations and/or standard industry practice and the goods at all times being operated or used under normal operating conditions for which they were designed. Hi-Speed, at its sole option, will repair or

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11. **GOVERNING LAW AND JURISDICTION.** Any controversy arising out of any quotation, the purchase order, the goods sold or delivered, repair or replacement thereof, or any services provided pursuant to any quotation or any purchase order, or these Standard Terms and Conditions shall be governed by the laws of the state of Tennessee without regard to any choice of law provisions and any cause of action related in any manner thereto shall be brought only in the state or federal courts of Shelby County, Tennessee.
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13. **FORCE MAJEURE.** Neither party shall be responsible for any delay or failure in performance of any party of the quotation, purchase order or these Standard Terms and Conditions to the extent that such delays or failures are caused by fire, flood, earthquake, explosion, war, embargo, government requirement, civil or military authority, acts of God, or any other circumstances beyond its reasonable control and not involving any fault or negligence on the party affected ("Condition"). If any such Condition occurs, the party delayed or unable to perform shall promptly give written notice to the other party and, if such Condition remains at the end of thirty (30) days, the party affected by the other party's delay and inability to perform may elect to (i) terminate such order or part thereof, or (ii) suspend the order for the duration of the Condition, if the Buyer is the suspending party, buy elsewhere comparable material to be sold under the order and apply to any commitment the purchase price of such purchase, and resume performance of the order once the Condition ceases, with an option in the affected party to extend the period of this order up to the length of the time the Condition endures.
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