



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

LR Motor Shop Repairs

Job Number 101939

Prepared for CoorsTek Inc.

3315 Boone Road
Benton AR 72015

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AC Inspection as Found - *LR MOTORSHOP*

AC Inspection - Rev. 2

1.0

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

AC Inspection as Found

CoorsTek Inc.
3315 Boone Road
Benton, AR 72015

FolderID: 101939
FormID: 18066043

AC Inspection - Rev. 2

Location: LR MOTORSHOP

Serial Number:

Description: 2 HP TEK MOTOR

Hi-Speed Job Number: 101939

Manufacturer: Other

Product Number: VIGM-2-3450-3-460-60

HP/kW: 2 (HP)

RPM: 3450 (RPM)

Voltage: 460

Current: 3.6

Phase: Three

Hz: 60 (Hz)

Enclosure: TENV

J-box Included: None

Date Received: 10/03/2023

Repair Stage: Final

Priorities Found: ● 8 - High ● 7 - Good

Overall Condition

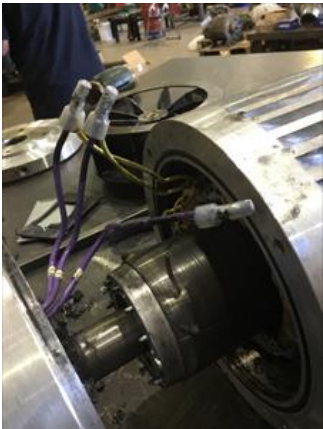
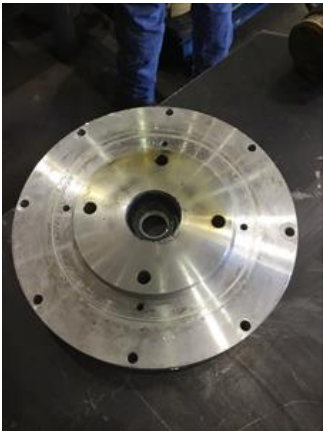
1. Report Date
2. Nameplate Picture



3. Photos of all six sides of the machine.

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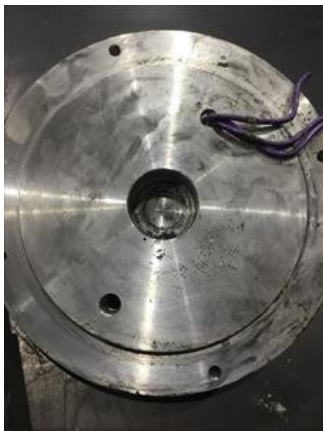
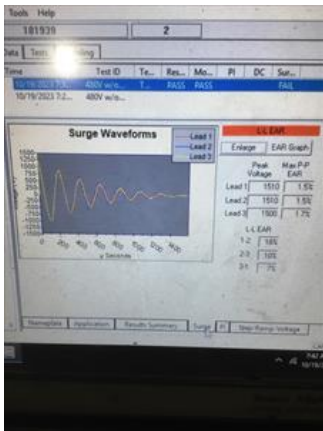


Test Time	7:34:30 AM	7:26:22 AM
Resist Status	PASS	No Test
Bal L1 (Ohms)		
Bal L2 (Ohms)		
Bal L3 (Ohms)		
L1-L2 (Ohms)	5.012 Corr: 5.0...	
L2-L3 (Ohms)	4.742 Corr: 4.8...	
L3-L1 (Ohms)	4.962 Corr: 5.0...	
Max Delta R %	5.500	
Coil 1 (Ohms)	7.676 Corr: 7.7...	
Coil 2 (Ohms)	6.891 Corr: 6.9...	
Coil 3 (Ohms)	7.321 Corr: 7.6...	
Magnetism Stat...	OK	No Test
Verbs OK	Total	
Homeplate	Application	Results Summary
	Source	PI

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Test Date	10/18/2023	10/19/2023
Test Time	7:34:30 AM	7:26:22 AM
L2-L3 (Ohms)	4.742 Core: 4.8...	
L3-L1 (Ohms)	4.962 Core: 5.0...	
Max Delta R %	5.500	
Coil 1 (Ohms)	7.676 Core: 7.7...	
Coil 2 (Ohms)	6.891 Core: 6.9...	
Coil 3 (Ohms)	7.521 Core: 7.6...	
Megohm Stat	RA55	No Test
Volts (V)	504	
I(μA)	0.1028	
Resist	4912	
At 40°C	1326	
P Status	No Test	No Test

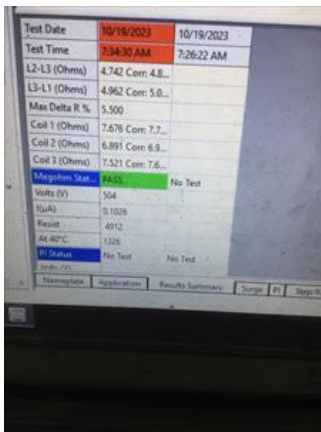
DC Status	No Test	No Test
Test Type		
Volts (V)		
I(μA)		
Resist		
At 40°C		
Surge Status	L-L EAR	No Test
Peak Volt(V) L1	1510	
Peak Volt(V) L2	1510	
Peak Volt(V) L3	1500	
Max P-P EAR	1.5/1.5/1.7	
EAR 1-2/2-3/...	18/10/7	



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4. Describe the Overall Condition of the Equipment as Received		
<i>Dirty</i>		
5. Distance from the end of the shaft to the Coupling/Sheave		inches
<i>Na</i>		
Initial Mechanical/Electrical		
6. Does Shaft Turn Freely?		(Yes) Yes
7. Does Shaft Have Visible Damage?		(No) No
8. Assembled Shaft Runout		0.001 Millimeters
9. Assembled Shaft End Play		inches
<i>Na</i>		
10. Air Gap Variation <10%		
<i>Na</i>		
11. Lead Condition		(NA) Not Applicable
<i>Rewind</i>		
12. Lead Length		6 Inches
13. Lead Numbers		1-3
14. Stator Temperature Detector Rating and Function		
Quantity	Rating	Quantity Passed
<i>Na</i>		
15. Bearing Temperature Detector Rating and Function		
Quantity	Rating	Quantity Passed
<i>Na</i>		
16. Frame Condition		pass
17. Fan Condition		(P) Pass
18. Heater Quantity, Ratings		
Quantity	Volts/Watts	Pass/Fail
<i>Na</i>		
19. Broken or Missing Components		
<i>Na</i>		
Initial Electrical Inspection		



21. Winding Resistance

1-2

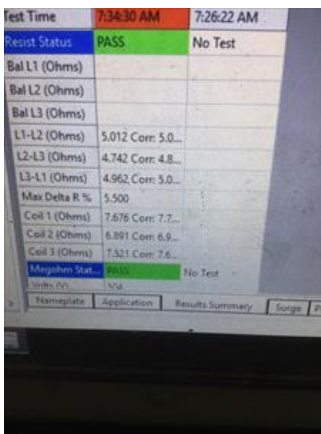
1-3

2-3

7.676

6.891

7.521



22. Perform Surge Test

(F) Fail

Good pattern but has core damage



23. Number of Stator Slots

24

24. Stator Condition


core damage

25. Stator Thermistors/Ohms

na

26. Stator Overloads/Ohms	na
Mechanical Inspection	
27. Drive End Bearing Brand	na
28. Drive End Bearing Number-	6205
29. Drive End Bearing Qty.	1
30. Drive End Bearing Type	(Ball) Ball Bearing
31. Drive End Lubrication Type	(Grease) Grease Lubricated
32. Drive End Bearing Insulation or Grounding Device?	na
33. Drive End Wavy Washer/Snap-Ring Other Retention Device?	na
34. Drive End Bearing Condition	frosting




35. Opposite Drive End Bearing Brand	na
36. Opposite Drive End Bearing Number-	6203
37. Opposite Drive End Bearing Qty.	1
38. Opposite Drive End Bearing Type	(Ball) Ball Bearing
39. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
40. Opposite Drive End Bearing Insulation or Grounding Device?	na
41. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer
 Needs replaced	
42. Opposite Drive End Bearing Condition	significant signs of contamination



43. Drive End Seal	o-ring
44. Opposite Drive End Seal	o-ring

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45. DE Sleeve Bearing Inside Diameter	0 degrees	120 degrees	240 degrees
Na			
46. DE Sleeve Bearing Outside Diameter	0 degrees	120 degrees	240 degrees
Na			
47. DE Sleeve Bearing Housing Inside Diameter	0 degrees	120 degrees	240 degrees
Na			
48. DE Sleeve Bearing to Housing Clearance	0 degrees	120 degrees	240 degrees
Na			
49. ODE Sleeve Bearing Inside Diameter	0 degrees	120 degrees	240 degrees
Na			
50. ODE Sleeve Bearing Outside Diameter	0 degrees	120 degrees	240 degrees
Na			
51. ODE Sleeve Bearing Housing Inside Diameter	0 degrees	120 degrees	240 degrees
Na			
52. ODE Sleeve Bearing to Housing Clearance	0 degrees	120 degrees	240 degrees
Na			
Rotor Inspection			
53. Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast		
54. Growler Test	(Pass) Pass		
55. Number of Rotor Bars	34		
56. Rotor Condition	pass		
57. List the Parts needed for the Repair Below	6205 6203 end bell bearing sleeves for both		
58. Signature of Technician that Disassembled Motor			
Mechanical Fits- Rotor			
59. Shaft Runout	0.002 millimeters		


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60. Rotor Runout			
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
Na			
61. Coupling Fit Closest to Bearing Housing			
0 Degrees	90 Degrees	120 Degrees	
Na			
62. Coupling Fit Closest to the end of the Shaft			
0 Degrees	60 Degrees	120 Degrees	
Na			
63. Drive End Bearing Shaft Fit			
0 Degrees	60 Degrees	120 Degrees	
0.9845	0.9844000000000001	0.9844000000000001	
64. Drive End Bearing Shaft Fit Condition			(P) Pass
65. Opposite Drive End Bearing Shaft Fit			
0 Degrees	60 Degrees	120 Degrees	
0.6692	0.6691	0.6692	
66. Opposite Drive End Bearing Shaft Fit Condition			(P) Pass
67. Shaft Air Seal Fits			
Drive End Air Seal	Opposite Drive End Air Seal		
Na			
Mechanical Fits- Bearing Housings			
68. Drive End - Endbell Bearing Fit			
0 Degrees	60 Degrees	120 Degrees	
Has a lip and pitting worn into bearing fit			
69. Drive End - Endbell Bearing Fit Condition			(F) Fail



70. Opposite Drive End - Endbell Bearing Fit			
0 Degrees	60 Degrees	120 Degrees	
Has a significant lip worn into bearing fit			
71. Opposite Drive End - Endbell Bearing Fit Condition			(F) Fail

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72. Bearing Cap Condition		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
Na		
73. End Bell Air Seal Fits		
Drive End Air Seal	Opposite Drive End Air Seal	
Na		
74. List Machine Work Needed Below		
<i>Both end bell bearing fits</i>		
75. Technician		Cw
		
Dynamic Balance Report		
76. Rotor Weight and Balance Grade		
Rotor Weight	Balance Grade	
77. Initial Balance Readings		
Drive End	Opposite Drive End	
78. Final Balance Readings		
Drive End	Opposite Drive End	
79. Technician		
Rewind		
80. Core Test Results - Watts loss per Pound		
Pre-Burnout	Post Burnout	
81. Core Hot Spot Test		
Pre-Burnout	Post-Burnout	
82. Post Rewind Electrical Test- Insulation Resistance		
83. Post Rewind Polarization Index		
84. Post Rewind Winding Resistance		
1-2	1-3	2-3
85. Post Rewind Surge Test		
86. Post Rewind Hi-Pot		
87. Technician		
Root Cause of Failure		
88. Failure locations		
<i>Bearings, end bell bearing fits , and windings</i>		
89. Root cause of failure		
<i>ODE end bell bearing fit went down causing the front to follow and causing the rotor to drag the iron pulling some of the teeth into the windings</i>		
Mechanical Fits- Rotor - Post Repair		

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90. Shaft Runout Post Repair		
91. Rotor Runout Post Repair		
Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
92. Coupling Fit Closest to Bearing Housing Post Repair		
0 Degrees	90 Degrees	120 Degrees
93. Coupling Fit Closest to the end of the Shaft Post Repair		
0 Degrees	60 Degrees	120 Degrees
94. Drive End Bearing Shaft Fit Post Repair		
0 Degrees	60 Degrees	120 Degrees
95. Opposite Drive End Bearing Shaft Fit Post Repair		
0 Degrees	60 Degrees	120 Degrees
96. Shaft Air Seal Fits Post Repair		
Drive End Air Seal	Opposite Drive End Air Seal	
97. Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair		
98. Drive End - Endbell Bearing Fit Post Repair		
0 Degrees	60 Degrees	120 Degrees
99. Opposite Drive End - Endbell Bearing Fit Post Repair		
0 Degrees	60 Degrees	120 Degrees
100. Bearing Cap Condition Post Repair		
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
101. End Bell Air Seal Fits Post Repair		
Drive End Air Seal	Opposite Drive End Air Seal	
102. DE Sleeve Bearing Inside ID Post Repair		
Measure 1	Measure 2	Measure 3
103. DE Sleeve Bearing Outside ID Post Repair		
Measure 1	Measure 2	Measure 3
104. DE Sleeve Bearing Inside OD Post Repair		
Measure 1	Measure 2	Measure 3
105. DE Sleeve Bearing Outside OD Post Repair		
Measure 1	Measure 2	Measure 3
106. End Bell Repair Sign-off		
107. ODE Sleeve Bearing Inside ID Post Repair		
Measure 1	Measure 2	Measure 3

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108. ODE Sleeve Bearing Outside ID Post Repair		
Measure 1	Measure 2	Measure 3
109. ODE Sleeve Bearing Inside OD Post Repair		
Measure 1	Measure 2	Measure 3
110. ODE Sleeve Bearing Outside OD Post Repair		
Measure 1	Measure 2	Measure 3
Assembly		
111. QC Check All Parts for Cleanliness Prior to Assembly		
112. Photograph All Major Components prior to assembly		
113. Final Insulation Resistance Test		
114. Assembled Shaft Endplay		
115. Assembled Shaft Runout		
116. Test Run Voltage		
Volts	Volts	Volts
117. Test Run Amperage		
Amps	Amps	Amps
118. Drive End Vibration Readings - Inches Per Second		
Horizontal	Vertical	Axial
119. Opposite Drive End Vibration Readings - Inches Per Second		
Horizontal	Vertical	Axial
120. Ambient Temperature - Fahrenheit		
121. Drive End Bearing Temps - Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
122. Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
20 Minutes	25 Minutes	30 Minutes
123. Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
35 Minutes	40 Minutes	45 Minutes
124. Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
50 Minutes	55 Minutes	60 Minutes
125. Opposite Drive End Bearing Temps - Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
126. Opposite Drive End Bearing Temps - Fahrenheit 20-30 Minutes		
20 Minutes	25 Minutes	30 Minutes
127. Opposite Drive End Bearing Temps - Fahrenheit 35-45 Minutes		
35 Minutes	40 Minutes	45 Minutes

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128. Opposite Drive End Bearing Temps - Fahrenheit 50-60 Minutes		
50 Minutes	55 Minutes	60 Minutes
129. Stator Temperatures- Fahrenheit		
5 Minutes	10 Minutes	15 Minutes
130. Stator Temperatures- Fahrenheit 20-30 Minutes		
20 Minutes	25 Minutes	30 Minutes
131. Stator Temperatures- Fahrenheit 35-45 Minutes		
35 Minutes	40 Minutes	45 Minutes
132. Stator Temperatures- Fahrenheit 50-60 Minutes		
50 Minutes	55 Minutes	60 Minutes
133. Document Final Condition with Pictures after paint		
134. Final Pics and QC Review		



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1. **APPLICABILITY.** The sale of any and all goods and/or services by Mock, Inc. d/b/a Hi-Speed Industrial Service ("Hi-Speed") shall be specifically conditioned upon and subject to the following terms and conditions which are incorporated by reference into any contracts and purchase orders with Hi-Speed, and which shall form and become a part of any agreement related thereto. Buyer's acceptance of any offer or quotation made by Hi-Speed for sale of any goods or services is expressly made subject to the terms and conditions set forth herein and to be so effective, Buyer need not sign or approve these Terms and Conditions to be bound hereunder provided a copy of same is provided to Buyer through any means. None of the terms and conditions contained herein may be added to, expanded, changed, modified, superseded or otherwise altered except as revised in writing and duly executed by Hi-Speed, and all orders received by Hi-Speed shall be governed only by the terms and conditions contained herein, notwithstanding any terms, conditions or provisions of any purchase order, release order, authorization or any other form issued by the Buyer. Hi-Speed hereby objects to any additional, modified, changed, deleted, altered or other terms and conditions not contained herein and notifies Buyer that any such terms or provisions are expressly rejected by Hi-Speed.
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.
12. **ABANDONED EQUIPMENT.** Hi-Speed requires that Buyer promptly pick up or provide shipment instructions for Buyer equipment or other Buyer property in Hi-Speed's possession. If equipment or other Buyer property is left with Hi-Speed and not picked up within six (6) months after Hi-Speed's final action related to the applicable property (e.g. evaluation, teardown, estimate, completion of services), Hi-Speed will consider such property abandoned and may dispose of it in accordance with applicable law. Buyer agrees to hold Hi-Speed harmless for any damage or claim for such abandoned property and acknowledges that Hi-Speed may discard or recycle it at Hi-Speed's sole and absolute discretion. Specifically, Hi-Speed may sell Buyer's abandoned property at a private or public sale and retain the proceeds to offset Hi-Speed's storage, inspection and servicing costs. For the avoidance of doubt, Hi-Speed reserves its statutory and other lawful liens for unpaid charges related to abandoned property.
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.
14. **NONWAIVER.** No course of dealing or failure of either party to strictly enforce any term, right, or condition of these Standard Terms and Conditions will be construed as a waiver of such term, right or condition. Any waiver by Hi-Speed will only be in writing and will waive no succeeding breach of a term, right or condition.
15. **ASSIGNMENT.** The rights and obligations of the parties shall neither be assigned nor delegated without the prior written consent of the other party. However, any party may assign or delegate its respective rights and obligations, in whole or in part, (i) to any subsidiary, (ii) pursuant to other financing, merger or reorganization or (iii) pursuant to any sale or transfer of substantially all of the assets of the assigning party. These Standard Terms and Conditions shall bind the heirs, successors and assigns of the parties hereto.
16. **NO INDIVIDUAL LIABILITY.** Notwithstanding any other agreement to the contrary, the Buyer agrees that in no event will the Buyer hold and Hi-Speed owner, director, officer or employee personally liable for unintentional tortious conduct or conduct that constitutes the breach of any contract between Hi-Speed and the Buyer, even if the Hi-Speed owner, director, officer or employee is or could be construed to be a party to such contract.