HI-SPEED INDUSTRIAL SERVICE

KEEPING YOUR FACILITY UP TO SPEED

EVERY DAY SINCE 1946

LR Motor Shop Repairs

Job Number 101821

Prepared for MOUNTAIN VIEW WASTE WATER

571 RUDDLES RD
MOUNTAIN VIEW AR 72560

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Hi-Speed Industrial Service
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Submersible Pump Repair Report

MOUNTAIN VIEW WASTE WATER
571 RUDDLES RD
MOUNTAIN VIEW, AR 72560

FolderID: 101821
FormID: 17820267

Submersible Pump Repair Report

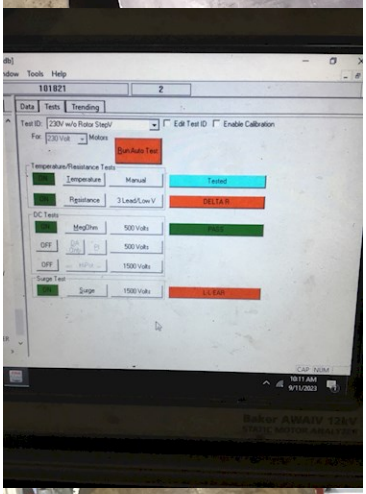
Location:	MOTOR SHOP LR
Serial Number:	G32737
Description:	5HP HYDROMATIC 1800RPM SUBMERSIBLE PUMP

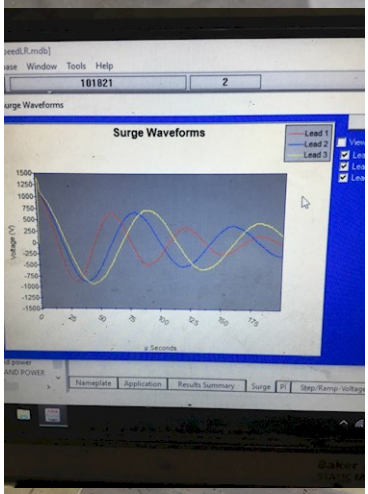
Make:	HYDROMATIC
HP:	5 (HP)
Model:	HPGF500M2-4
Serial:	G32737
V:	230 (V)
A:	29.5 (A)
RPM:	1750 (RPM)
Hz:	60 (Hz)
Phase:	1

Priorities Found: **4 - High** **18 - Good**

General

1. Job Number
2. Report Date





	3.	Customer	
Initial Pump Inspection			
	4.	Power Cord Wire Size	
	5.	Power Cord # of Conductors	**3**
	6.	Power Cord Length	**ft**
		27ft	
●	7.	Power Cord Condtion	**(P) Pass**

8.	Sensor Cord Wire Size	**AWG**

9.	Sensor Cord # of Conductors	**3**
10.	Sensor Cord Length	**ft**
	27ft	
11.	Sensor Cord Condition	**(P) Pass**
12.	Sensor Cord for Thermal Protection?	
13.	Sensor Cord for Water Protection	
14.	Bowl Condition	**(P) Pass**
15.	Impeller Condition	**(P) Pass**
16.	Number of Wear Rings	
17.	Wear Ring Condition	
18.	Wear Ring Size	
19.	Wear Ring Clearance to Impeller	
20.	Wear Ring Material	
21.	Seal Surfaces Condition	**(P) Pass**
22.	Seal Type	**Mechanical**
	X2	
23.	Number of Seals	**2**
24.	Seal Material on Rotary Face	**ceramic**
	Recommend tugston	
25.	Seal Material on Stationary Seat	
26.	Elastic Component Material	
27.	Seal OD	
28.	Seal ID	
29.	Seal Sleeve Material	
30.	Seal Plate Condition	
31.	Water Sensor in Seal Cavity?	
32.	Oil Filled Seal Cavity?	**(Y) Yes**
33.	Oil Filled Stator?	**(Y) Yes**

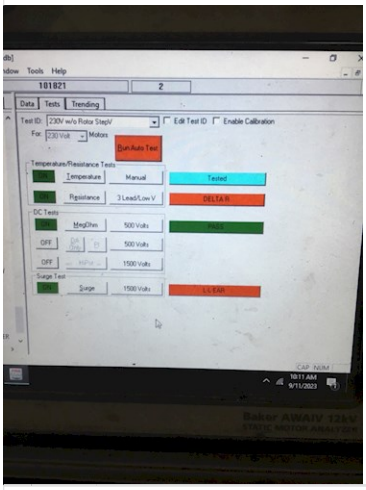
Initial Inspection

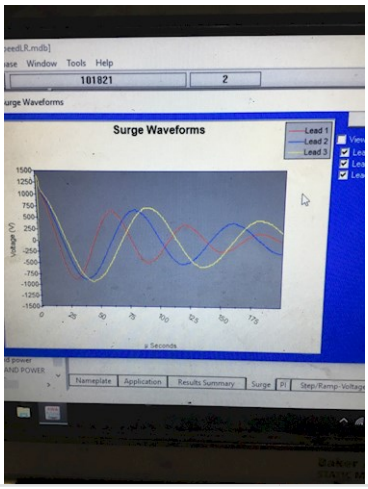
34.	Number of Leads	**3**
35.	Lead Length	**10 Inches**
36.	Lead Size	

37.	Lead Condition	**(NA) Not Applicable**
	Rewind	
38.	Lead Markings	
39.	Lead Size for Oil Filled Stator	
40.	Lug Size, Condition, and Type	
41.	Overload Required?	
42.	Winding RTD's	
43.	Winding Rtd's Condition	
44.	Shaft Run Out	
45.	Does Shaft Turn Freely	**no**
46.	Does Shaft Have Visible Damage	**no**
47.	Bearing Rtd's	
48.	Bearing Rtd's Condition	
49.	Contamination	
50.	Frame Condition	**(P) Pass**
51.	Fan Condition	
52.	Broken or missing components	
	Bolt for lower oil cavity cover it stripped	

Initial Electric Test

53.	Resistance to Ground	**Mohm**
54.	Winding Resistance 1-2	
55.	Winding Resistance 2-3	
56.	Winding Resistance 1-3	
57.	Resistive Imbalance	
58.	Hi-Pot	
59.	Surge Test	**(F) Fail**





60.	Stator Condition	
61.	Failure Location	

Initial Rotor Inspection

62.	Rotor Type	**cast aluminum**
63.	Air Gap <10% Variation	
64.	Number of Rotor Bars	**48**
65.	Number of Broken Rotor Bars	**0**
66.	Growler Test	**(P) Pass**

67.	Rotor Condition		**(P) Pass**
Mechanical Inspection			
68.	Bearing Manufacturer		**skf**
69.	Bearing DE Size		**6307**
70.	Bearing DE Type		**open ball**
71.	DE Bearing Qty.		**1**
72.	Bearing ODE Size		**6303**
73.	Bearing ODE Type		**open ball**
74.	ODE Bearing Qty.		**1**
75.	Insulated Bearing		
76.	Lubrication Type		**oil**
77.	Grease Condition		
78.	Bearing Retainers		
79.	Shaft Grounding Device		
80.	DE Seal		**(Y) Yes**
	2 mechanical seals		
81.	DE Seal Type/Size		
82.	ODE Seal		
83.	ODE Seal Type/Size		
Root Cause of Failure			
84.	Component Failure		**seals, bearings, and windings**
85.	Cause of Failure		
	Wear and water contamination		
86.	Comments		
	Recommend a tungsten mechanical seal on lower end of pump		
87.	Service Technician		
Machine Fit Inspection Report			
88.	Shaft Run Out		
89.	Initial Shaft Run Out		
90.	Final Shaft Run Out		
91.	DE Bearing Shaft Fit		
92.	DE Initial Shaft Bearing Fit Size		
	Measure 1	Measure 2	Measure 3
93.	DE Final Shaft Bearing Fit Size		
	Measure 1	Measure 2	Measure 3
94.	ODE Bearing Shaft Fit		
95.	ODE Initial Shaft Bearing Fit Size		
	Measure 1	Measure 2	Measure 3
96.	ODE Final Shaft Bearing Fit Size		
	Measure 1	Measure 2	Measure 3
97.	DE Air Seal Shaft Fit		
98.	DE Air Seal Shaft Size		
	Initial	Final	

99.	ODE Air Seal Shaft Fit		
100.	ODE Air Seal Shaft Size		
	Initial	Final	
101.	DE Endbell Fit		
102.	DE Initial Endbell Fit Size		
	Measure 1	Measure 2	Measure 3
103.	DE Final Endbell Fit Size		
	Measure 1	Measure 2	Measure 3
	3.1498	**3.1499**	**3.1499**

Service technician: Gary

104.	DE Endbell Fit Insulated		
105.	DE Endbell Air Seal Fit		
106.	DE Endbell Air Seal Fit Size		
	Initial	Final	
107.	ODE Endbell Fit		
108.	ODE Initial Endbell Fit Size		
	Measure 1	Measure 2	Measure 3
109.	ODE Final Endbell Fit Size		
	Measure 1	Measure 2	Measure 3
110.	ODE Endbell Fit Insulated		
111.	ODE Endbell Air Seal Fit		
112.	ODE Endbell Air Seal Fit Size		
	Initial	Final	
113.	Foot Flatness		
114.	Foot Condition		
115.	Flange Condition		
116.	Service Technician		

Balancing Report

117.	Balance Type		

118.	Balance Operating Speed	
119.	Start Left End	
120.	Start Right End	
121.	Balancing Specification	
122.	Finish Left End	
123.	Finish Right End	
124.	Service Technician	

Assembly and Final Test

125.	Rotor and Impeller Balanced	**(Y) Yes**
126.	Stator Housing Refilled with Oil (if required)	**(Y) Yes**
127.	Stator Pressure Test	**(P) Pass**
128.	Seal Cavity Pressure Test	**(P) Pass**
129.	Time Under Pressure	**10 min**
130.	Overload Continuity	**(P) Pass**
131.	Water Sensor Open?	**(Y) Yes**
132.	Meggar Testing Reading	**Mohm**
	Na	
133.	Surge Test	**(NA) Not Applicable**
134.	Hi-Pot	**Ua**
	Na	
135.	Winding Resistance	

1-2	2-3	3-1

Na

136. Test Run

137. Test Run Voltage

Phase A	Phase B	Phase C

In picture

138. Test Run Current

Phase A	Phase B	Phase C

In picture

139. DE Vibration Reading

Horizontal	Vertical	Axial

Na

140. ODE Vibration Reading

Horizontal	Vertical	Axial

Na

141. Ambient Temp at start of Test Run **Degrees F.**

Na

142. Temp at 5 minutes **Degrees F.**

Na

143. Temp at 10 minutes **Degrees F.**

Na

144. Temp at 15 minutes **Degrees F.**

Na

145. Temp at 20 minutes — **Degrees F.**

Na

146. Temp at 25 minutes — **Degrees F.**

Na

147. Temp at 30 minutes — **Degrees F.**

Na

148. Temp at 35 minutes — **Degrees F.**

Na

149. Temp at 40 minutes — **Degrees F.**

Na

150. Temp at 45 minutes — **Degrees F.**

Na

151. Temp at 50 minutes — **Degrees F.**

Na

152. Temp at 55 minutes — **Degrees F.**

Na

153. Temp at 60 minutes — **Degrees F.**

Na

154. Motor Paint — **(P) Pass**

155. Service Technician — **Cw**

Co sign: Dw

STANDARD TERMS AND CONDITIONS FOR PURCHASE OF GOOD AND/OR SERVICES

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 bee 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.
7. **INSPECTION/ACCEPTANCE.** All goods and services ordered pursuant to any quotation shall be subject to inspection by Buyer after delivery or performance to determine conformity with the quotation and/or purchase order and Hi-Speed's advertised or published specifications. Buyer shall have a period of thirty (30) days from shipment of goods at the delivery destination specified in the quotation within which to inspect the goods for conformity with the quotation, order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. Buyer shall have a period of thirty (30) days following completion of any services within which to inspect the services for conformity with the quotation, purchase order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. If the goods delivered or services performed do not so conform, upon delivery of notice to Hi-Speed of any discrepancy, nonconformance or rejection, Hi-Speed shall have sixty (60) days to cure the alleged discrepancy and/or nonconformance. If Hi-Speed fails to cure in this time period, Buyer shall have the right to reject such goods or services. After the cure period, goods that have been delivered and rejected, in whole or in part, shall be returned to Hi-Speed. Buyer shall notify Hi-Speed and arrange for the return of the goods as required. Should such non-conforming services be rejected Hi-Speed shall, at its sole cost, re-perform the non-conforming services. Inspection or failure to inspect on any occasion shall not affect Buyer's rights under the warranty provisions herein.
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

replace any defective or non-conforming goods in accordance with the applicable manufacturer's warranty. Warranty for any defective or incorrect parts is limited to the repair or replacement of those parts. Hi-Speed warrants that all services will conform in all material respects to the description of services identified in the quotation and will be performed in a good and workmanlike manner in accordance with industry practices and standards. Should the services be reasonably rejected or not conform with the foregoing warranties, Hi-Speed shall, at its sole cost, re-perform the defective or nonconforming services. Notwithstanding the foregoing, these warranties do not extend to goods or services to the extent that such goods have been subject to misuse, neglect or abuse not caused by Hi-Speed or have been used in violation of the approved written instructions furnished to Buyer. THE FOREGOING REPRESENTS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY HI-SPEED WITH RESPECT TO ALL GOODS SOLD AND IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESS OR IMPLIED. HI-SPEED EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICLAR USE OR PURPOSE. BUYER WAIVES ANY CLAIM THAT THESE EXCLUSIONS OR LIMITATIONS DEPRIVE IT OF AN ADEQUATE REMEDY AT EQUITY OR LAW OR CAUSE THIS AGREEMENT TO FAIL IN ITS ESSENTIAL PURPOSE. BUYER SHALL BE ENTITLED TO NO OTHER REMEDY OTHER THAN AS SET FORTH HEREIN, REGARDLESS OF THE CLAIM OR CAUSE OF ACTION, WHETHER BASED IN CONTRACT, TORT, NEGLIGENCE, GOODS LIABILITY, STRICT LIABILITY OR OTHERWISE.

9. **LIMITATION OF DAMAGES.** HI-SPEED SHALL HAVE NO LIABILITY TO BUYER WITH RESPECT TO THE SALE OR DELIVERY OF ANY GOODS OR THE REPAIR THEREOF OR WITH RESPECT TO THE SALE OR PERFORMANCE OF ANY SERVICES, FOR LOST PROFITS, SPECIAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE OR INCIDENTAL DAMAGES OF ANY KIND OR NATURE WHETHER ARISING IN CONTRACT, TORT, GOODS LIABILITY OR OTHERWISE, EVEN IF HI-SPEED WAS ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGES. HI-SPEED SHALL NOT BE LIABLE FOR ANY DAMAGES OR DELAYS CAUSED BY ANY FAILURE TO MAKE ANY DELIVERY OF GOODS BY ANY EXPECTED TIME OR DATE OR THE FAILURE TO PROVIDE OR COMPLETE ANY SERVICES BY ANY EXPECTED DATE OR TIME. IN NO EVENT SHALL HI-SPEED BE LIABLE TO BUYER FOR ANY DAMAGES WHATSOEVER IN EXCESS OF THE TOTAL PRICE PAID FOR ALL GOODS AND/OR SERVICES HEREUNDER OR REFERENCED IN ANY QUOTATION OR THE PURCHASE ORDER.
10. **SEVERABILITY.** The partial or complete invalidity of any provision of these Standard Terms and Conditions shall not affect the enforceability of the remainder of these Standard Terms and Conditions. If any provision is found to be invalid or unenforceable, that portion shall be modified to make it enforceable or shall be stricken and the remainder of these Standard Terms and Conditions shall enforced.
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, earth quake, 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.