

# Motor Shop Repairs

## **Job Number 97552**

Prepared for DEMOCRAT PRINTING

6401 LINDSEY ROAD LITTLE ROCK AR 72206

### **Table of Contents**

AC Recondition Repair Report	1.0
DC Recondition Repair Report	2.0

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.

Printed on 11/7/2020 Powered by INSPECTALL Table of Contents



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

> FolderID: 97552 FormID: 9295371

### **AC Recondition Repair Report**

**DEMOCRAT PRINTING** 6401 LINDSEY ROAD LITTLE ROCK, AR 72206

#### Priorities Found:

Priorities	Priorities Found:				
Gene	General Control of the Control of th				
1.	Job Number	97552			
2.	Report Date				
3.	Customer	DEMOCRAT PRINTING			
Name	e Plate Information		0		
4.	Manufacturer	LENZE	P5		
5.	Model				
6.	Serial Number				
7.	Horsepower				
8.	KW				
9.	Volts				
10.	. Amps				
11.	. RPM				
12.	. Frame				
13.	. Enclosure				
14.	. Cycles				
15.	. Phase	PH			
16.	. Service Factor				
17.	. Motor Mount Position				
Initial	Il Inspection				
18.	. Number of Leads				
19.	. Lead Length				
20.	. Lead Size				
21.	. Lead Condition				
22.	. Lead Markings				
23.	. Lug Size, Condition, and Type				
24.	. Winding RTD's				
25.	. Winding Rtd's Condition				
26.	. Shaft Run Out				
27.	. Does Shaft Turn Freely				
28.	. Does Shaft Have Visible Damage				
29.	. Bearing Rtd's				
30.	. Bearing Rtd's Condition				
31.	. Contamination				
32.	. Frame Condition				
33.	. Fan Condition				

	Broken or missing components
nitial	Electric Test
35.	Resistance to Ground
36.	Winding Resistance 1-2
37.	Winding Resistance 2-3
38.	Winding Resistance 1-3
39.	Resistive Imbalance
40.	Hi-Pot
41.	Surge Test
42.	Stator Condition
43.	Failure Location
	Rotor Inspection
	Rotor Type
	Air Gap <10% Variation
	Number of Rotor Bars
	Number of Broken Rotor Bars
	Growler Test
	Rotor Condition
	nical Inspection
	Bearing Manufacture
	Bearing DE Size
	Bearing DE Type
	DE Bearing Qty. Bearing ODE Size
	Bearing ODE Type
	ODE Bearing Qty.
	Insulated Bearing
	Lubrication Type
	Grease Condition
	Bearing Retainers
	Shaft Grounding Device
62.	DE Seal
63.	DE Seal Type/Size
64.	ODE Seal
65.	ODE Seal Type/Size
Root (	Cause of Failure
66.	Component Failure
67.	Cause of Failure
68.	Comments
	Service Technician
	ne Fit Inspection Report
	Shaft Run Out
	Initial Shaft Run Out
	Final Shaft Run Out
	DE Bearing Shaft Fit
7/	DE Initial Shaft Bearing Fit Size 1

76.	DE Initial Shaft Bearing Fit Size 3
77.	DE Finial Shaft Bearing Fit Size 1
78.	DE Finial Shaft Bearing Fit Size 2
79.	DE Finial Shaft Bearing Fit Size 3
80.	ODE Bearing Shaft Fit
81.	ODE Initial Shaft Bearing Fit Size 1
82.	ODE Initial Shaft Bearing Fit Size 2
83.	ODE Initial Shaft Bearing Fit Size 3
	ODE Finial Shaft Bearing Fit Size 1
	ODE Finial Shaft Bearing Fit Size 2
	ODE Finial Shaft Bearing Fit Size 3
	DE Air Seal Shaft Fit
	DE Initial Air Seal Shaft Size
	DE Final Air Seal Shaft Size
	ODE Air Seal Shaft Fit
	ODE Initial Air Seal Shaft Size
	ODE Final Air Seal Shaft Size
	DE Endbell Fit
	DE Initial Endbell Fit Size 1
	DE Initial Endbell Fit Size 2
	DE Initial Endbell Fit Size 3
	DE Final Endbell Fit Size 1
	DE Final Endbell Fit Size 2
	DE Final Endbell Fit Size 3
	DE Endbell Fit Insulated
	DE Endbell Air Seal Fit
	Initial Endbell Air Seal Fit Size
	Finial Endbell Air Seal Fit Size
	ODE Endbell Fit
	ODE Initial Endbell Fit Size 1
	ODE Initial Endbell Fit Size 2
	ODE Initial Endbell Fit Size 3
	ODE Final Endbell Fit Size 1
	ODE Final Endbell Fit Size 2
	ODE Final Endbell Fit Size 3
	ODE Endbell Fit Insulated
	ODE Endbell Air Seal Fit
	ODE Initial Endbell Seal Fit Size
	ODE Finial Endbell Seal Fit Size
	Foot Flatness
	Foot Condition
117.	Flange Condition
118.	Service Technician
Balan	cing Report
119.	Balance Type
120.	Balance Operating Speed
121.	Start Left End

122	Start Right End
	Balancing Specification
	Finish Left End
	Finish Right End Service Technician
	nbly and Final Test
	Meggar Testing Reading
	Surge Test
	Hi-Pot
	Winding Resistance 1-2
	Winding Resistance 2-3
	Winding Resistance 1-3
133.	Test Run Voltage Phase A
134.	Test Run Amps A
135.	Test Run Voltage Phase B
136.	Test Run Amps B
137.	Test Run Voltage Phase C
138.	Test Run Amps C
139.	DE Horizontal Vibration Reading
140.	DE Vertical Vibration Reading
141.	DE Axial Vibration Reading
142.	ODE Horizontal Vibration Reading
143.	ODE Vertical Vibration Reading
144.	ODE Axial Vibration Reading
145.	Ambient Temp at start of Test Run
146.	Temp at 5 minutes
147.	Temp at 10 minutes
148.	Temp at 15 minutes
149.	Temp at 20 minutes
150.	Temp at 25 minutes
151.	Temp at 30 minutes
152.	Temp at 35 minutes
153.	Temp at 40 minutes
	Temp at 45 minutes
	Temp at 50 minutes
	Temp at 55 minutes
	Temp at 60 minutes
	Motor Paint
	Service Technician

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.







P5.2



P5.3



P5.4



P5.5



P5.6



FolderID: 97552 FormID: 9300199



#### **DC Recondition Repair Report**

**DEMOCRAT PRINTING** 

6401 LINDSEY ROAD LITTLE ROCK, AR 72206

Priorities Found: 14 - Good

Priorities	s Found: 14 - Good		
Gene	ral		
1.	Job Number	97552	
2.	Report Date		
3.	Customer	Democrat Printing	
Name	Plate Information		
4.	Manufacturer	Lenze	
5.	Model		
6.	Serial Number	G2Z081/420	
7.	Horsepower	НР	
8.	KW	23 KW	
9.	Armature Volts	440 Volts	
10.	Armature Amps	58 Amps	
11.	Field Voltage	210 Volts	
12.	Field Amps	3.4 Amps	
13.	RPM	3000 RPM	
14.	Frame	112	
15.	Enclosure		
16.	Service Factor		
17.	Motor Mount Position		
Initial	Inspection		0
18.	Lead Length		
19.	Lead Size		
<b>2</b> 0.	Lead Condition	(P) Pass	
21.	Lead Markings		
22.	Lug Size, Condition, and Type  Good		
23.	Winding RTD's		
24.	Winding Rtd's Condition		
25.	Shaft Run Out		
26.	Does Shaft Turn Freely		
27.	Does Shaft Have Visible Damage		
28.	Bearing Rtd's		
29.	Bearing Rtd's Condition		
30.	Contamination		
<ul><li>31.</li></ul>	Frame Condition	(P) Pass	
32.	Fan Condition	(NA) Not Applicable	
33.	Brush Condition	(NA) Not Applicable	P33

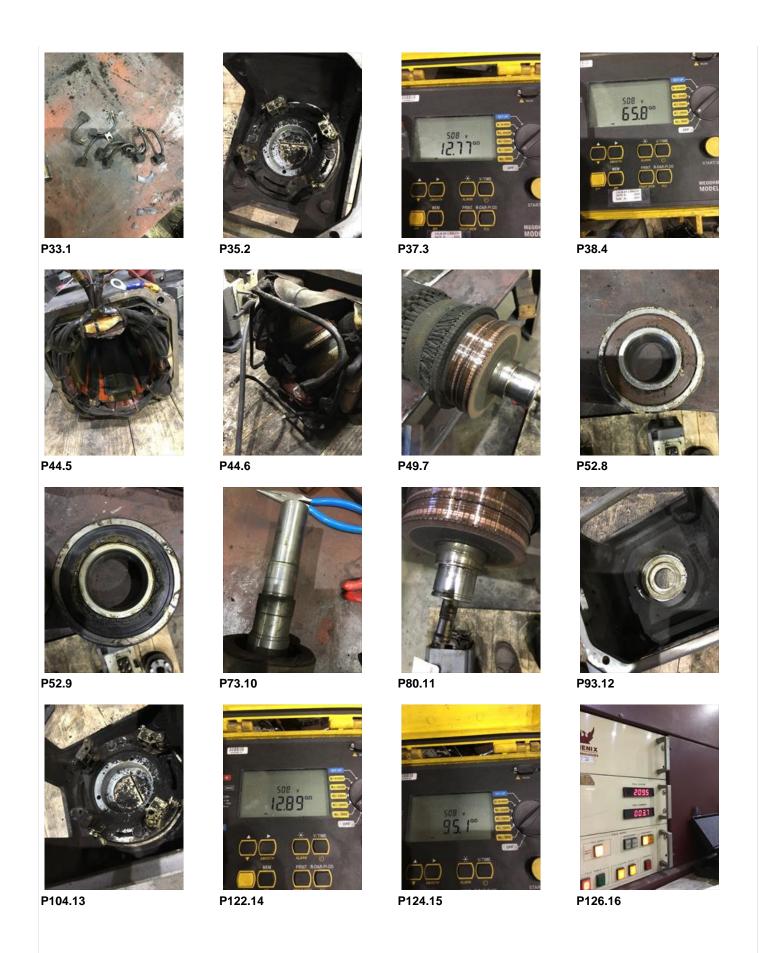
	34.	Quantity of brushes 8	
	35.	Brush Holder Assembly Condition (P) Pass	P35
	36.	Broken or missing components	
In	itial	Electric Test	O
	37.	Armature Resistance to Ground 12770 Mohm	 P37
	38.	Field Resistance to Ground 65800 Mohm	P38
	39.	Armature Hi-Pot	
	40.	Field Hi-Pot Ua	
	41.	Armature Bar to Bar Test	
	42.	DC field frame Drop Test (P) Pass	
	43.	DC Field Frame Polarity Check (P) Pass	
	44.	Field Frame Condition dirty	P44
	45.	Field Frame Failure Location	
In	itial	Armature Inspection	0
	46.	Air Gap <10% Variation	
	47.	Number of Commutator Bars 99	
	48.	Growler Test (P) Pass	
	49.	Commutator Condition (NA) Not Applicable	P49
	50.	Armature Condition dirty	
	51.	Armature Failure Location	
M	ech	anical Inspection	0
	52.	Bearing Manufacture NSK	P52
	53.	Bearing DE Size 6308 2RS	
	54.	Bearing DE Type ball	
	55.	Bearing ODE Size 6307 2RS	
	56.	Bearing ODE Type ball	
	57.	Insulated Bearing no	
	58.	Lubrication Type grease	
	59.	Grease Condition (NA) Not Applicable	
		Bearing Retainers	
	61.	Shaft Grounding Device (NA) Not Applicable	
	62.	DE Seal	
	63.	DE Seal Type/Size	
		ODE Seal	
D		ODE Seal Type/Size  Cause of Failure	
K		Component Failure	
	67.	Cause of Failure	
	68.	Comments	
	00.	Brushes	
M		Service Technician  RW  ine Fit Inspection Report	přem
IVI	acili	me i it mapection report	0

	70.	Shaft Run Out		
	71.	Initial Shaft Run Out		
	72.	Final Shaft Run Out		
	73.	DE Bearing Shaft Fit	(P) Pass	P73
	74.	DE Initial Shaft Bearing Fit 1	1.5751 "	
	75.	DE Finial Shaft Bearing Fit 1	1.5751 "	
	76.	DE Initial Shaft Bearing Fit 2	1.5751 "	
	77.			
	78.			
	79.			
	80.	ODE Bearing Shaft Fit	(P) Pass	P80
	81.	ODE Initial Shaft Bearing Fit 1	1.3783 "	
	82.	ODE Finial Shaft Bearing Fit 1	"	
	83.	ODE Initial Shaft Bearing Fit 2	1.3783 "	
		ODE Finial Shaft Bearing Fit 2		
	85.	ODE Initial Shaft Bearing Fit 3	1.3783 "	
	86.	ODE Finial Shaft Bearing Fit 3	1.0700	
	87.			
	88.			
	89.			
	90.	ODE Air Seal Shaft Fit		
	91.	ODE Initial Air Seal Shaft Size		
	92.	ODE Final Air Seal Shaft Size		
	93.		(P) Pass	P93
	94.		3.544 "	1 33
	95.	DE Final Endbell Fit Size 1	3.344	
	96.		3.544 "	
			3.344	
	97.		3.544 "	
	98.	DE Initial Endbell Fit Size 3	3.344	
	99.			
		DE Endbell Fit Insulated		
		DE Endbell Air Seal Fit		
		Initial Endbell Air Seal Fit Size		
		Finial Endbell Air Seal Fit Size		D404
		ODE Endbell Fit	(P) Pass	P104
		ODE Endbell Fit Insulated	(NA) Not Applicable	
		ODE Endbell Air Seal Fit		
		ODE Initial Endbell Seal Fit Size	3.1598 "	
		ODE Finial Endbell Seal Fit Size		
_		Foot Flatness		
		Foot Condition	(P) Pass	
		Flange Condition	(P) Pass	
	112.	Turn and Under Cut Armature	(NA) Not Applicable	
	-	Turn and under cut Armature		
	113.	Service Technician	RW	

Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.

Robert Wiles

114.   Balance Type	Dalam	- Const. Description	
116. Balance Operating Speed  116. Start Left End  117. Start Right End  118. Balancing Specification  119. Finish Left End  120. Finish Right End  121. Service Technician  Assembly and Final Test  122. Armature Meggar Testing Reading  123. Armature Hi-Pot  124. Field Frame Meggar Testing Reading  125. Field Frame Meggar Testing Reading  126. Test Run Field Voltage  127. Test Run Field Amps  128. Test Run Field Amps  129. Test Run Armature Voltage  129. Test Run Armature Voltage  129. Test Run Armature Amps  130. Brushes seated  131. DE Horizontal Vibration Reading  132. DE Vertical Vibration Reading  133. DE Varial Vibration Reading  134. ODE Horizontal Vibration Reading  135. ODE Vertical Vibration Reading  136. ODE Varial Vibration Reading  137. Ambient Temp at start of Test Run  138. Temp at 5 minutes  140. Temp at 25 minutes  141. Temp at 25 minutes  142. Temp at 35 minutes  143. Temp at 35 minutes  144. Temp at 45 minutes  145. Temp at 45 minutes  146. Temp at 45 minutes  147. Temp at 55 minutes  148. Temp at 55 minutes  149. Temp at 55 minutes  140. Temp at 55 minutes  141. Temp at 50 minutes  142. Temp at 50 minutes  143. Temp at 50 minutes  144. Temp at 50 minutes  145. Mort Paint (P) Pass  146. Mort Paint (P) Pass  147. Temp at 50 minutes			
116. Start Left End  117. Start Right End  118. Balancing Specification  119. Finish Left End  120. Finish Right End  121. Service Technician  Assembly and Final Test  122. Armature Meggar Testing Reading  123. Armature Hi-Pot  124. Field Frame Meggar Testing Reading  125. Field Frame Hi-Pot  126. Test Run Field Voltage  127. Test Run Field Voltage  128. Test Run Armature Voltage  129. Test Run Armature Voltage  130. Brushes seated  131. DE Horizontal Vibration Reading  132. DE Vertical Vibration Reading  133. DE Akial Vibration Reading  134. ODE Horizontal Vibration Reading  136. ODE Vertical Vibration Reading  137. Ambient Temp at start of Test Run  138. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 35 minutes  143. Temp at 35 minutes  144. Temp at 35 minutes  145. Temp at 45 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 50 minutes  149. Temp at 50 minutes  140. Temp at 50 minutes  141. Temp at 50 minutes  142. Temp at 50 minutes  143. Temp at 50 minutes  144. Temp at 55 minutes  145. Temp at 40 minutes  146. Temp at 55 minutes  147. Temp at 50 minutes  148. Temp at 50 minutes  149. Temp at 50 minutes  140. Temp at 50 minutes  141. Temp at 50 minutes  142. Temp at 60 minutes  143. Temp at 50 minutes		·	
1117. Start Right End       1118. Balancing Specification         1119. Finish Left End       122. Finish Right End         121. Service Technician       121. Service Technician         Assembly and Final Test       122. Armature Meggar Testing Reading       12.72 Mohm       P122         122. Armature Hi-Pot       123. Armature Hi-Pot       125. Field Frame Meggar Testing Reading       95.099999999999999999999999999999999999		• • •	
1119. Balancing Specification         1120. Finish Left End         121. Service Technician         Assembly and Final Test         122. Armature Meggar Testing Reading       12.72 Mohm       P122         122. Armature Hi-Pot         124. Field Frame Meth-Pot       95.09999999999999 Mohm       P124         125. Field Frame Hi-Pot       20 Votts       P126         126. Test Run Field Voltage       20 Votts       P126         127. Test Run Field Amps       3.9 Amps       P127         128. Test Run Armature Voltage       438.3 Volts       P129         130. Brushes seated       (P) Pass       P129         131. DE Horizontal Vibration Reading       P129       P129         132. DE Vertical Vibration Reading       P129       P129         133. DE Axial Vibration Reading       P129       P129         134. ODE Vertical Vibration Reading       P129       P129         135. ODE Vertical Vibration Reading       P129       P129         136. ODE Axial Vibration Reading       P129       P129         137. Ambient Temp at start of Test Run       P129       P129         138. Temp at 5 minutes       P129       P129         141. Temp at 20 minutes       P129       P129         142. Te			
119. Finish Left End 120. Finish Right End 121. Service Technician Assembly and Final Test 122. Armature Meggar Testing Reading 123. Armature Meggar Testing Reading 124. Field Frame Meggar Testing Reading 125. Field Frame Meggar Testing Reading 126. Test Run Field Voltage 127. Test Run Field Voltage 128. Test Run Field Amps 129. Test Run Armature Valtage 129. Test Run Armature Amps 129. Test Run Armature Amps 120. Brushes seated 120. DE Vertical Vibration Reading 130. DE Vertical Vibration Reading 131. DE Horizontal Vibration Reading 132. DE Vertical Vibration Reading 133. DE Axial Vibration Reading 134. ODE Horizontal Vibration Reading 135. ODE Vertical Vibration Reading 136. ODE Vertical Vibration Reading 137. Armbient Temp at start of Test Run 138. Temp at 15 minutes 140. Temp at 20 minutes 141. Temp at 20 minutes 142. Temp at 35 minutes 143. Temp at 35 minutes 144. Temp at 36 minutes 145. Temp at 40 minutes 146. Temp at 55 minutes 147. Temp at 50 minutes 148. Temp at 50 minutes 149. Temp at 50 minutes 149. Temp at 50 minutes 140. Temp at 50 minutes 141. Temp at 50 minutes 142. Temp at 50 minutes 143. Temp at 50 minutes 144. Temp at 50 minutes 145. Temp at 50 minutes 146. Temp at 50 minutes 147. Temp at 50 minutes 148. Temp at 50 minutes 149. Temp at 50 minutes 140. Temp at 50 minutes		•	
120. Finish Right End 121. Service Technician  Assembly and Final Test  122. Armature Meggar Testing Reading 123. Armature Hi-Pot  124. Field Frame Meggar Testing Reading 125. Field Frame Meggar Testing Reading 126. Test Run Field Voltage 127. Test Run Field Voltage 128. Test Run Armature Voltage 129. Test Run Armature Voltage 130. Brushes seated 131. DE Horizontal Vibration Reading 131. DE Horizontal Vibration Reading 132. DE Vertical Vibration Reading 133. DE Axial Vibration Reading 134. ODE Horizontal Vibration Reading 135. ODE Vertical Vibration Reading 136. ODE Axial Vibration Reading 137. Ambient Temp at start of Test Run 138. Temp at 5 minutes 140. Temp at 15 minutes 141. Temp at 20 minutes 142. Temp at 20 minutes 143. Temp at 30 minutes 144. Temp at 35 minutes 145. Temp at 40 minutes 146. Temp at 45 minutes 147. Temp at 50 minutes 148. Temp at 55 minutes 149. Temp at 55 minutes 140. Temp at 55 minutes 141. Temp at 50 minutes 142. Temp at 50 minutes 143. Temp at 50 minutes 144. Temp at 55 minutes 145. Temp at 50 minutes 146. Temp at 50 minutes 147. Temp at 50 minutes 148. Temp at 50 minutes 149. Temp at 50 minutes 140. Temp at 50 minutes 141. Temp at 50 minutes 142. Temp at 50 minutes 143. Temp at 50 minutes 144. Temp at 50 minutes 145. Temp at 50 minutes 146. Temp at 50 minutes		•	
121. Service Technician			
Assembly and Final Test         □           122. Armature Meggar Testing Reading         12.72 Mohm         P122           123. Armature Hi-Pot         P124         Field Frame Meggar Testing Reading         95.0999999999999999 Mohm         P126           125. Field Frame Hi-Pot         126. Test Run Field Voltage         209 Volts         P126           127. Test Run Field Amps         3.9 Amps         128           128. Test Run Armature Voltage         438.3 Volts         P129           129. Test Run Armature Amps         2.3 Amps         P129           130. Brushes seated         (P) Pass         P129           131. DE Horizontal Vibration Reading         (P) Pass         P129           132. DE Vertical Vibration Reading         (P) Pass         P129           133. DE Axial Vibration Reading         Vertical Vibration Reading         Vertical Vibration Reading         Vertical Vibration Reading           135. ODE Vertical Vibration Reading		•	
122. Armature Meggar Testing Reading       12.72 Mohm       P122         123. Armature Hi-Pot       95.099999999999 Mohm       P124         125. Field Frame Meggar Testing Reading       95.099999999999 Mohm       P124         126. Test Run Field Voltage       209 Volts       P126         127. Test Run Field Amps       3.9 Amps       P126         128. Test Run Armature Voltage       438.3 Volts       P129         129. Test Run Armature Amps       2.3 Ams       P129         130. Brushes seated       (P) Pass       P129         131. DE Horizontal Vibration Reading       F150       F150         132. DE Vertical Vibration Reading       F150       F150         133. DE Axial Vibration Reading       F150       F150         134. ODE Horizontal Vibration Reading       F150       F150         135. ODE Vertical Vibration Reading       F150       F150         136. ODE Axial Vibration Reading       F150       F150         137. Ambient Temp at 5 minutes       F150       F150         138. Temp at 10 minutes       F150       F150         140. Temp at 20 minutes       F150       F150         141. Temp at 20 minutes       F150       F150         144. Temp at 35 minutes       F150       F150 <th>121.</th> <th>Service Technician</th> <th></th>	121.	Service Technician	
123. Armature Hi-Pot         124. Field Frame Meggar Testing Reading       95.09999999999999 Mohm       P124         125. Field Frame Meggar Testing Reading       95.09999999999999 Mohm       P126         126. Test Run Field Voltage       209 Votts       P126         127. Test Run Field Amps       3.9 Amps       P128         128. Test Run Armature Voltage       438.3 Volts       P129         129. Test Run Armature Amps       2.3 Amps       P128         130. Brushes seated       (P) Pass       P128         131. DE Horizontal Vibration Reading       F129       F129         132. DE Vertical Vibration Reading       F129       F129         133. DE Axial Vibration Reading       F129       F129         134. ODE Horizontal Vibration Reading       F129       F129         135. ODE Vertical Vibration Reading       F129       F129         136. ODE Axial Vibration Reading       F129       F129         137. Ambient Temp at 5 minutes       F129       F129         139. Temp at 10 minutes       F129       F129         140. Temp at 25 minutes       F129       F129         141. Temp at 20 minutes       F129       F129         144. Temp at 35 minutes       F129       F129         145. Temp at 40 mi	Assen	nbly and Final Test	0
124. Field Frame Meggar Testing Reading       95.099999999999 Mohm       P124         125. Field Frame Hi-Pot       209 Volts       P126         126. Test Run Field Voltage       209 Volts       P126         127. Test Run Field Amps       3.9 Amps	122.	Armature Meggar Testing Reading 12.72 Mohi	n P122
125. Field Frame Hi-Pot         126. Test Run Field Voltage       209 Volts       P126         127. Test Run Field Amps       3.9 Amps	123.	Armature Hi-Pot	
126. Test Run Field Voltage         209 Volts         P126           127. Test Run Field Amps         3.9 Amps         128           128. Test Run Armature Voltage         438.3 Volts         2.3 Amps         P129           129. Test Run Armature Amps         2.3 Amps         P129           130. Brushes seated         (P) Pass         (P) Pass           131. DE Horizontal Vibration Reading         (P) Pass         131           132. DE Vertical Vibration Reading         5.0 DE Axial Vibration Reading         5.0 DE Vertical Vibration Reading	124.	Field Frame Meggar Testing Reading 95.099999999999999999999999999999999999	n P124
127. Test Run Field Amps       3.9 Amps         128. Test Run Armature Voltage       438.3 Volts         129. Test Run Armature Amps       2.3 Amps       P129         130. Brushes seated       (P) Pass       (P) Pass         131. DE Horizontal Vibration Reading       ************************************	125.	Field Frame Hi-Pot	
128. Test Run Armature Voltage       438.3 Volts         129. Test Run Armature Amps       2.3 Amps       P129         130. Brushes seated       (P) Pass         131. DE Horizontal Vibration Reading	126.	Test Run Field Voltage 209 Volt	<b>s</b> P126
129. Test Run Armature Amps       2.3 Amps       P129         130. Brushes seated       (P) Pass         131. DE Horizontal Vibration Reading       (P) Pass         132. DE Vertical Vibration Reading       (P) Pass         133. DE Axial Vibration Reading       (P) Pass         134. ODE Horizontal Vibration Reading       (P) Pass         135. ODE Vertical Vibration Reading       (P) Pass         136. ODE Axial Vibration Reading       (P) Pass         137. Ambient Temp at start of Test Run       (P) Pass         138. Temp at 5 minutes       (P) Pass         140. Temp at 10 minutes       (P) Pass         141. Temp at 20 minutes       (P) Pass         142. Temp at 25 minutes       (P) Pass         144. Temp at 35 minutes       (P) Pass         145. Temp at 40 minutes       (P) Pass	127.	Test Run Field Amps 3.9 Amp	S
130. Brushes seated (P) Pass  131. DE Horizontal Vibration Reading  132. DE Vertical Vibration Reading  133. DE Axial Vibration Reading  134. ODE Horizontal Vibration Reading  135. ODE Vertical Vibration Reading  136. ODE Axial Vibration Reading  137. Ambient Temp at start of Test Run  138. Temp at 5 minutes  139. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 35 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint (P) Pass P150	128.	Test Run Armature Voltage 438.3 Volt	S
131. DE Horizontal Vibration Reading 132. DE Vertical Vibration Reading 133. DE Axial Vibration Reading 134. ODE Horizontal Vibration Reading 135. ODE Vertical Vibration Reading 136. ODE Axial Vibration Reading 137. Ambient Temp at start of Test Run 138. Temp at 5 minutes 139. Temp at 10 minutes 140. Temp at 15 minutes 141. Temp at 20 minutes 142. Temp at 25 minutes 143. Temp at 30 minutes 144. Temp at 35 minutes 145. Temp at 40 minutes 146. Temp at 45 minutes 147. Temp at 50 minutes 148. Temp at 55 minutes 149. Temp at 60 minutes	129.	Test Run Armature Amps 2.3 Amp	<b>s</b> P129
132. DE Vertical Vibration Reading 133. DE Axial Vibration Reading 134. ODE Horizontal Vibration Reading 135. ODE Vertical Vibration Reading 136. ODE Axial Vibration Reading 137. Ambient Temp at start of Test Run 138. Temp at 5 minutes 139. Temp at 10 minutes 140. Temp at 15 minutes 141. Temp at 20 minutes 142. Temp at 25 minutes 143. Temp at 30 minutes 144. Temp at 35 minutes 145. Temp at 40 minutes 146. Temp at 45 minutes 147. Temp at 55 minutes 148. Temp at 55 minutes 149. Temp at 60 minutes	<b>130.</b>	Brushes seated (P) Pas	S
133. DE Axial Vibration Reading 134. ODE Horizontal Vibration Reading 135. ODE Vertical Vibration Reading 136. ODE Axial Vibration Reading 137. Ambient Temp at start of Test Run 138. Temp at 5 minutes 139. Temp at 10 minutes 140. Temp at 15 minutes 141. Temp at 20 minutes 142. Temp at 25 minutes 143. Temp at 30 minutes 144. Temp at 35 minutes 145. Temp at 40 minutes 146. Temp at 45 minutes 147. Temp at 50 minutes 148. Temp at 55 minutes 149. Temp at 60 minutes 149. Temp at 60 minutes	131.	DE Horizontal Vibration Reading	
134. ODE Horizontal Vibration Reading 135. ODE Vertical Vibration Reading 136. ODE Axial Vibration Reading 137. Ambient Temp at start of Test Run 138. Temp at 5 minutes 139. Temp at 10 minutes 140. Temp at 15 minutes 141. Temp at 20 minutes 142. Temp at 25 minutes 143. Temp at 30 minutes 144. Temp at 35 minutes 145. Temp at 40 minutes 146. Temp at 45 minutes 147. Temp at 50 minutes 148. Temp at 55 minutes 149. Temp at 60 minutes 149. Temp at 60 minutes	132.	DE Vertical Vibration Reading	
135. ODE Vertical Vibration Reading  136. ODE Axial Vibration Reading  137. Ambient Temp at start of Test Run  138. Temp at 5 minutes  139. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass  P150	133.	DE Axial Vibration Reading	
136. ODE Axial Vibration Reading  137. Ambient Temp at start of Test Run  138. Temp at 5 minutes  139. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 50 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass  P150	134.	ODE Horizontal Vibration Reading	
137. Ambient Temp at start of Test Run  138. Temp at 5 minutes  139. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	135.	ODE Vertical Vibration Reading	
138. Temp at 5 minutes  139. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	136.	ODE Axial Vibration Reading	
139. Temp at 10 minutes  140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	137.	Ambient Temp at start of Test Run	
140. Temp at 15 minutes  141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	138.	Temp at 5 minutes	
141. Temp at 20 minutes  142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	139.	Temp at 10 minutes	
142. Temp at 25 minutes  143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	140.	Temp at 15 minutes	
143. Temp at 30 minutes  144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	141.	Temp at 20 minutes	
144. Temp at 35 minutes  145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	142.	Temp at 25 minutes	
145. Temp at 40 minutes  146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	143.	Temp at 30 minutes	
146. Temp at 45 minutes  147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	144.	Temp at 35 minutes	
147. Temp at 50 minutes  148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	145.	Temp at 40 minutes	
148. Temp at 55 minutes  149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	146.	Temp at 45 minutes	
149. Temp at 60 minutes  150. Motor Paint  (P) Pass P150	147.	Temp at 50 minutes	
● 150. Motor Paint (P) Pass P150	148.	Temp at 55 minutes	
· ·			
151. Service Technician RW	<b>150.</b>	Motor Paint (P) Pas	<b>s</b> P150
	151.	Service Technician RV	I



Hi-Speed Industrial Service disclaims all warranties, both express and implied, relating to the information, reports, opinions and analysis disclosed to the Customer by Hi-Speed. Hi-Speed shall not be liable for any errors or omissions, or any losses, injury or damages arising from the use of such information, reports, opinions and analysis by the Customer.





P129.17

P150.18



#### 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. <u>BILLING AND PAYMENT TERMS.</u> 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. <u>DELIVERY OF GOODS AND/OR SERVICES.</u> 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.
- **DELIVERY SITE AND TIME FOR PERFORMANCE.** Hi-Speed and Buver 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. <u>WARRANTIES.</u> 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. <u>LIMITATION OF DAMAGES.</u> 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. <u>SEVERABILITY.</u> 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. <u>NONWAIVER.</u> 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.