HI-SPEED INDUSTRIAL SERVICE

KEEPING YOUR FACILITY UP TO SPEED

EVERY DAY SINCE 1946

LR Motor Shop Repairs

Job Number 104304

Prepared for TREX COMPANY

2500 TREX WAY
WINCHESTER VA 22601

Table of Contents

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

AC Inspection as Found

TREX COMPANY
2500 TREX WAY
WINCHESTER, VA 22601

FolderID: 104304
FormID: 23774297

AC Inspection - Rev. 2

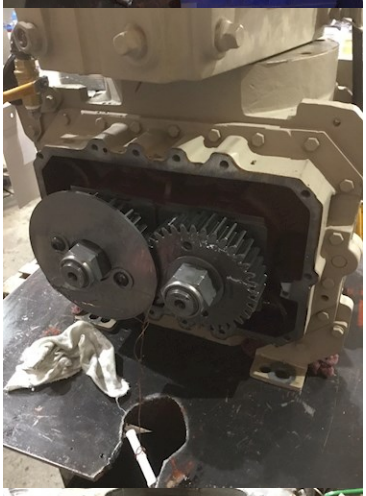
Location:	LR MOTOR SHOP
Serial Number:	2403B50031
Description:	HOWDWN ROOTS BLOWER

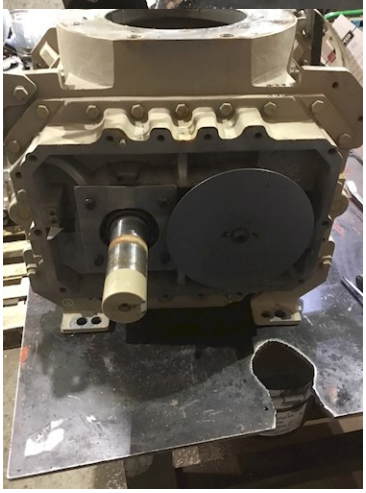
Hi-Speed Job Number:	104304
Manufacturer:	HOWDEN
Product Number:	PART#RC-2051600LB
Serial Number:	2403B50031
# of Leads:	Other
J-box Included:	None
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Bearing Type:	Rolling Element

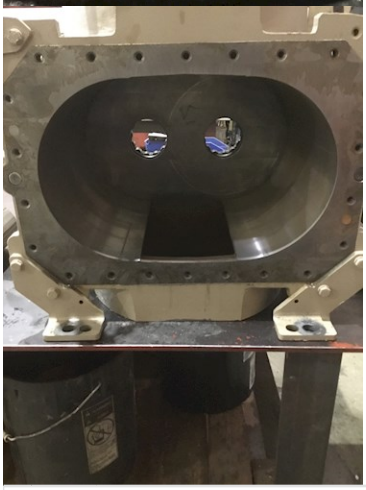
Priorities Found: **1 - High** **11 - Good**

Overall Condition

1. Report Date
2. Nameplate Picture
3. Photos of all six sides of the machine.







4.	Describe the Overall Condition of the Equipment as Received	
5.	Is this a UL Listed Motor	
6.	Is the motor water cooled or can be pressure checked before teardown	
Initial Mechanical/Electrical		
7.	Does Shaft Turn Freely?	**(Y) Yes**
8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
9.	Does Shaft Have Visible Damage?	**(No) No**
10.	Assembled Shaft Runout	**Inches**
11.	Assembled Shaft End Play	**inches**
12.	Air Gap Variation <10%	
13.	Lead Condition	
14.	Lead Length	**Inches**
15.	Does it have Lugs?, If so what is the Stud Size?	
16.	Lead Numbers	
17.	Frame Condition	
18.	Fan Condition	
19.	Does motor have internal fan?	
20.	Broken or Missing Components	
21.	Are the Leads insulated with Chico or other material	
Initial Electrical Inspection		
22.	Insulation Resistance/Megger	**Megohms**

23.	Winding Resistance			
	1-2	1-3	2-3	
24.	Perform Surge Test			
25.	Number of Stator Slots			
26.	Stator Condition			
27.	Stator Thermistors/Ohms			
28.	Stator Overloads/Ohms			
Mechanical Inspection				
29.	Drive End Bearing Brand			
30.	Drive End Bearing Number-			**NJ311**
31.	Drive End Bearing Qty.			
	2			
32.	Drive End Bearing Type			**(Roller) Roller Bearing**
33.	Drive End Lubrication Type			**(Oil) Oil Lubricated**
34.	Drive End Bearing Insulation or Grounding Device?			
35.	Drive End Wavy Washer/Snap-Ring Other Retention Device?			**spacers**
36.	Drive End Bearing Condition			
37.	Opposite Drive End Bearing Brand			
38.	Opposite Drive End Bearing Number-			**NJ311**
39.	Opposite Drive End Bearing Qty.			
	2			
40.	Opposite Drive End Bearing Type			**(Roller) Roller Bearing**
41.	Opposite Drive End Lubrication Type			**(Oil) Oil Lubricated**
42.	Opposite Drive End Bearing Insulation or Grounding Device?			
43.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?			**wavy washers and spacers**
44.	Opposite Drive End Bearing Condition			
45.	Drive End Seal			
	2-2:3/4 *3-3:1/2 x2*			
46.	Opposite Drive End Seal			
	3-3:1/2 x2			
Rotor Inspection				
47.	Rotor Type/Material			
48.	Growler Test			
49.	Number of Rotor Bars			
50.	Rotor Condition			
51.	List the Parts needed for the Repair Below			
	Bearings and seals			
52.	Signature of Technician that Disassembled Motor			**Cw**

Mechanical Fits- Rotor		
53.	Shaft Runout	**inches**

54.	Rotor Runout			
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing	
55.	Coupling Fit Closest to Bearing Housing			
	0 Degrees	90 Degrees	120 Degrees	
56.	Coupling Fit Closest to the end of the Shaft			
	0 Degrees	60 Degrees	120 Degrees	
57.	Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
58.	Drive End Bearing Shaft Fit Condition			**(P) Pass**
59.	Opposite Drive End Bearing Shaft Fit			
	0 Degrees	60 Degrees	120 Degrees	
60.	Opposite Drive End Bearing Shaft Fit Condition			**(P) Pass**
61.	Shaft Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		

Mechanical Fits- Bearing Housings

62.	Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
63.	Drive End - Endbell Bearing Fit Condition			**(P) Pass**
64.	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
65.	Opposite Drive End - Endbell Bearing Fit Condition			**(P) Pass**
66.	Bearing Cap Condition			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
67.	End Bell Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
68.	List Machine Work Needed Below			
69.	Technician			**Cw**

Co sign: TLH

Root Cause of Failure

70. Failure locations

Bearings and seals

71. Root cause of failure

Ran without oil

Dynamic Balance Report

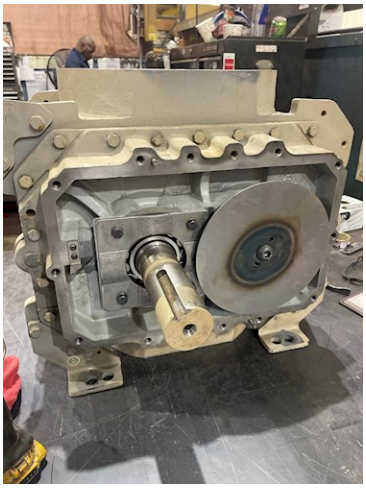
72.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
73.	Initial Balance Readings		
	Drive End	Opposite Drive End	
74.	Final Balance Readings		
	Drive End	Opposite Drive End	
75.	Technician		

Rewind

76.	Core Test Results - Watts loss per Pound		
	Pre-Burnout	Post Burnout	
77.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
78.	Post Rewind Electrical Test- Insulation Resistance		
79.	Post Rewind Polarization Index		
80.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
81.	Post Rewind Surge Test		
82.	Post Rewind Hi-Pot		
83.	Technician		

Assembly

84.	QC Check All Parts for Cleanliness Prior to Assembly
85.	Photograph All Major Components prior to assembly



86.	Final Insulation Resistance Test		
87.	Assembled Shaft Endplay		
88.	Assembled Shaft Runout		
89.	Test Run Voltage		
	Volts	Volts	Volts

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

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

AC Form Coil Winding Report

FolderID: 104304
FormID: 23827797

TREX COMPANY
2500 TREX WAY
WINCHESTER, VA 22601

LR MOTOR SHOP

Priorities Found: **1 - Good**

Stator Winding

1.	Core Length	**9.125 "**
2.	Core ID	**3.5 "**
3.	Back Iron Depth	**0.437 "**
4.	Finger Plate Width	**"**
5.	Overall Coil Length	
6.	Connection End Extension Length	
7.	Opposite Connection End Extension Length	
8.	Straight Length Bottom Side	
9.	Straight Length Top Side	
10.	Small knuckle drop Connection End	
11.	Small knuckle drop opposite connection end	
12.	Large knuckle drop connection end	
13.	Large knuckle drop opposite connection end	
14.	Connection Support Ring from Core	
15.	Opposite Connection Support Ring from core	
16.	Connection Support Ring Id	
17.	Opposite Connection Support Ring ID	
18.	Slot Depth	
19.	Slot depth under wedge	
20.	Slot Width	
21.	Lead Location	
22.	Coil Type	
23.	Tooth Width	
24.	Number of Vents	
25.	Vent Width	
26.	Before Burnout Core loss	
27.	Flux Before Burnout	
28.	Watts before burnout	
29.	Watts loss per lb. before burnout	
30.	After Burnout Core Loss	
31.	Flux After burnout	
32.	Watts After Burnout	
33.	Watts loss per lb After Burnout	
34.	Core Iron Condition	
35.	RTD's	
36.	RTD's Reading	

	37.	Motor Heaters	
	38.	Heater Qty.	
	39.	Heater Voltage	
	40.	Heater Wattage	
●	41.	Thermistors	**(Y) Yes**
	42.	Number of Poles	**2**
	43.	Slots	**36**
	44.	Number of Coils	
	45.	Coil Weight	
	46.	Lead Markings	
	47.	Grouping	
	48.	Wire Size	
	49.	Turns per coil	
	50.	Total Wires in parallel	
	51.	Wire Insulation	
	52.	Iron Skewed	
	53.	Pitch 1 to:	
	54.	Connection	
	55.	Lead Length	
	56.	Lead Size	
	57.	Number of Leads	
	58.	Megger Reading After Rewind	
	59.	Coil Machine Slot	
	60.	Coil Machine Tip	
	61.	Coil Machine Pitch	
	62.	Hi Pot Reading After Rewind	
	63.	Surge Pattern After Rewind	
	64.	Service Technician	**RHR**

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

AC Inspection as Found

TREX COMPANY
2500 TREX WAY
WINCHESTER, VA 22601

FolderID: 104304
FormID: 24403157

AC Inspection - Rev. 2

Location: LR MOTOR SHOP

Serial Number:

Priorities Found:

Overall Condition

1. Report Date
2. Nameplate Picture
3. Photos of all six sides of the machine.
4. Describe the Overall Condition of the Equipment as Received
5. Distance from the end of the shaft to the Coupling/Sheave
6. Is this a UL Listed Motor
7. Is the motor water cooled or can be pressure checked before teardown

Initial Mechanical/Electrical

8. Does Shaft Turn Freely?
9. Does the shaft require T.I.R in Lathe to identify additional repairs?
10. Does Shaft Have Visible Damage?
11. Assembled Shaft Runout
12. Assembled Shaft End Play
13. Air Gap Variation <10%
14. Lead Condition
15. Lead Length
16. Does it have Lugs?, If so what is the Stud Size?
17. Lead Numbers
18. Are the Leads insulated with Chico or other material
19. Stator Temperature Detector Rating and Function

Quantity	Rating	Quantity Passed

20. Bearing Temperature Detector Rating and Function

Quantity	Rating	Quantity Passed

21. Frame Condition
22. Fan Condition
23. Does motor have internal fan?
24. Heater Quantity, Ratings

Quantity	Volts/Watts	Pass/Fail

25. Broken or Missing Components

Initial Electrical Inspection

26. Insulation Resistance/Megger

27.	Winding Resistance		
	1-2	1-3	2-3
28.	Perform Surge Test		
29.	Number of Stator Slots		
30.	Stator Condition		
31.	Stator Thermistors/Ohms		
32.	Stator Overloads/Ohms		
Mechanical Inspection			
33.	Drive End Bearing Brand		
34.	Drive End Bearing Number-		
35.	Drive End Bearing Qty.		
36.	Drive End Bearing Type		
37.	Drive End Lubrication Type		
38.	Drive End Bearing Insulation or Grounding Device?		
39.	Drive End Wavy Washer/Snap-Ring Other Retention Device?		
40.	Drive End Bearing Condition		
41.	Opposite Drive End Bearing Brand		
42.	Opposite Drive End Bearing Number-		
43.	Opposite Drive End Bearing Qty.		
44.	Opposite Drive End Bearing Type		
45.	Opposite Drive End Lubrication Type		
46.	Opposite Drive End Bearing Insulation or Grounding Device?		
47.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?		
48.	Opposite Drive End Bearing Condition		
49.	Drive End Seal		
50.	Opposite Drive End Seal		
51.	DE Sleeve Bearing Inside Diameter		
	0 degrees	120 degrees	240 degrees
52.	DE Sleeve Bearing Outside Diameter		
	0 degrees	120 degrees	240 degrees
53.	DE Sleeve Bearing Housing Inside Diameter		
	0 degrees	120 degrees	240 degrees
54.	DE Sleeve Bearing to Housing Clearance		
	0 degrees	120 degrees	240 degrees
55.	ODE Sleeve Bearing Inside Diameter		
	0 degrees	120 degrees	240 degrees
56.	ODE Sleeve Bearing Outside Diameter		
	0 degrees	120 degrees	240 degrees
57.	ODE Sleeve Bearing Housing Inside Diameter		
	0 degrees	120 degrees	240 degrees

58.	ODE Sleeve Bearing to Housing Clearance		
	0 degrees	120 degrees	240 degrees

Rotor Inspection

59.	Rotor Type/Material		
60.	Growler Test		
61.	Number of Rotor Bars		
62.	Rotor Condition		
63.	List the Parts needed for the Repair Below		
64.	Signature of Technician that Disassembled Motor		

Mechanical Fits- Rotor

65.	Shaft Runout		
66.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
67.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
68.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
69.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
70.	Drive End Bearing Shaft Fit Condition		
71.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
72.	Opposite Drive End Bearing Shaft Fit Condition		
73.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	

Mechanical Fits- Bearing Housings

74.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
75.	Drive End - Endbell Bearing Fit Condition		
76.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
77.	Opposite Drive End - Endbell Bearing Fit Condition		
78.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
79.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
80.	List Machine Work Needed Below		
81.	Technician		

Root Cause of Failure			
82.	Failure locations		
83.	Root cause of failure		
Dynamic Balance Report			
84.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
85.	Initial Balance Readings		
	Drive End	Opposite Drive End	
86.	Final Balance Readings		
	Drive End	Opposite Drive End	
87.	Technician		
Rewind			
88.	Core Test Results - Watts loss per Pound		
	Pre-Burnout	Post Burnout	
89.	Core Hot Spot Test		
	Pre-Burnout	Post-Burnout	
90.	Post Rewind Electrical Test- Insulation Resistance		
91.	Post Rewind Polarization Index		
92.	Post Rewind Winding Resistance		
	1-2	1-3	2-3
93.	Post Rewind Surge Test		
94.	Post Rewind Hi-Pot		
95.	Technician		
Mechanical Fits- Rotor - Post Repair			
96.	Shaft Runout Post Repair		
97.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
98.	Coupling Fit Closest to Bearing Housing Post Repair		
	0 Degrees	90 Degrees	120 Degrees
99.	Coupling Fit Closest to the end of the Shaft Post Repair		
	0 Degrees	60 Degrees	120 Degrees
100.	Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
101.	Opposite Drive End Bearing Shaft Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
102.	Shaft Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	

103.	Shaft Repair Sign-off		
Mechanical Fits- Bearing Housings - Post Repair			
104.	Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
105.	Opposite Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
106.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
107.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
108.	DE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
109.	DE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
110.	DE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
111.	DE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3
112.	End Bell Repair Sign-off		
113.	ODE Sleeve Bearing Inside ID Post Repair		
	Measure 1	Measure 2	Measure 3
114.	ODE Sleeve Bearing Outside ID Post Repair		
	Measure 1	Measure 2	Measure 3
115.	ODE Sleeve Bearing Inside OD Post Repair		
	Measure 1	Measure 2	Measure 3
116.	ODE Sleeve Bearing Outside OD Post Repair		
	Measure 1	Measure 2	Measure 3
Assembly			
117.	QC Check All Parts for Cleanliness Prior to Assembly		

118. Photograph All Major Components prior to assembly

119.	Final Insulation Resistance Test		
120.	Assembled Shaft Endplay		
121.	Assembled Shaft Runout		
122.	Test Run Voltage		
	Volts	Volts	Volts
123.	Test Run Amperage		
	Amps	Amps	Amps
124.	Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
125.	Opposite Drive End Vibration Readings - Inches Per Second		
	Horizontal	Vertical	Axial
126.	Ambient Temperature - Fahrenheit		
127.	Drive End Bearing Temps - Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes

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

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.