

# **Motor Shop Repairs**

## Job Number 97550

Prepared for Enable Midstream- Tuckerman, AR (01155701)

210 Jackson 62 Tuckerman AR 72473

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Printed on 1/11/2021 Powered by INSPECTALL Table of Contents



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### **AC Recondition Repair Report**

**Enable Midstream- Tuckerman, AR** (01155701)

210 Jackson 62 Tuckerman, AR 72473 Performed By: Motor Shop LR 1 Date Completed: 1/11/2021

Priorities Found: **2 - High** 

7 - Good

#### General

97550 1. Job Number

2. Report Date

Customer **ENABLE MIDSTREAM** 

#### **Name Plate Information**

Manufacturer

**WESTINGHOUSE** 

















5.	Model	6N3626
6.	Serial Number	11-6N3626
7.	Horsepower	10
8.	KW	
9.	Volts	
-	220/440	
10.	Amps	
-	26/13	
11.	RPM	1750
12.	Frame	324Y

13.	Enclosure	
14.	Cycles	60
	Phase	3
16.	Service Factor	
17.	Motor Mount Position	
nitial	Inspection	
	Number of Leads	3
19.	Lead Length	12 Inches
	Lead Size	10
21.	Lead Condition	(P) Pass
	Lead Markings	none
	Lug Size, Condition, and Type	
	Winding RTD's	
25.		
26.		0.002
	Does Shaft Turn Freely	yes
	Does Shaft Have Visible Damage	minor wear
	Bearing Rtd's	
30.		
	Contamination	
J.,	None	
32.	Frame Condition	(P) Pass
	Fan Condition	(P) Pass
	Broken or missing components	(,, , , , , , , , , , , , , , , , , , ,
Initial Electric Test		
	Resistance to Ground	
36.		
	Winding Resistance 2-3	
38.	-	
	Resistive Imbalance	
	Hi-Pot	
	Surge Test	
	Stator Condition	
	Failure Location	
	Rotor Inspection	
	Rotor Type	cast aluminum with aluminum fan
45.	Air Gap <10% Variation	
	Number of Rotor Bars	29
47.		
48.	Growler Test	
49.	Rotor Condition	
	anical Inspection	
	Bearing Manufacture	NTN
51.	Bearing DE Size	63310 C3 2RSR
51. 52.	Bearing DE Size Bearing DE Type	63310 C3 2RSR deep groove heavy duty

54	Bearing ODE Size	
	Bearing ODE Size  Bearing ODE Type	63209 C3 2RSR
56.		1
57.		'
58.		polyrex em
59.		polyrex em
	Bearing Retainers	
	Shaft Grounding Device	
62.	-	(Y) Yes
02.	Pump has rope packing seal	(1) 100
	DE Seal Type/Size	
	ODE Seal	
	ODE Seal Type/Size	
	Cause of Failure	
	Component Failure	
67.		
• • •	Comments	
55.	Rope packing seal was loose/relaxed	
69	Service Technician	
	ine Fit Inspection Report	
	Shaft Run Out	
71.		
72.		
73.		(P) Pass
-	DE Initial Shaft Bearing Fit Size 1	1.969 "
75.		1.969 "
	DE Initial Shaft Bearing Fit Size 3	1.9687 "
77.		1.0007
78.		
	DE Finial Shaft Bearing Fit Size 3	
	ODE Bearing Shaft Fit	(F) Fail
	ODE Initial Shaft Bearing Fit Size 1	1.7716 "
82.	-	1.7714 "
83.	-	1.7716 "
	ODE Finial Shaft Bearing Fit Size 1	1.7710
85.	-	
86.	-	
87.		
88.		
	DE Final Air Seal Shaft Size	
	ODE Air Seal Shaft Fit	
91.		
92.		
93.		(F) Fail
94.		4.3325 "
95.		4.3323 "
96.		4.332 "
50.	DE IIIIIII EIIODOI I II OIZO O	7.002

97.	DE Final Endbell Fit Size 1	
98.	DE Finial Endbell Fit Size 2	
99.	DE Final Endbell Fit Size 3	
100.	DE Endbell Fit Insulated	
101.	DE Endbell Air Seal Fit	
102.	Initial Endbell Air Seal Fit Size	
103.	Finial Endbell Air Seal Fit Size	
<b>104.</b>	ODE Endbell Fit	(P) Pass
105.	ODE Initial Endbell Fit Size 1	3.3471 "
106.	ODE Initial Endbell Fit Size 2	3.3472 "
107.	ODE Initial Endbell Fit Size 3	3.3473 "
108.	ODE Final Endbell Fit Size 1	
109.	ODE Final Endbell Fit Size 2	
110.	ODE Final Endbell Fit Size 3	
111.	ODE Endbell Fit Insulated	
112.	ODE Endbell Air Seal Fit	
113.	ODE Initial Endbell Seal Fit Size	
114.	ODE Finial Endbell Seal Fit Size	
115.	Foot Flatness	
116.	Foot Condition	
117.	Flange Condition	
	Service Technician	
Balan	cing Report	
	Balance Type	
	Balance Operating Speed	
	Start Left End	
122.	Start Right End	
123.	Balancing Specification	
124.	Finish Left End	
125.	Finish Right End	
126.	Service Technician	
Assen	nbly and Final Test	
	Meggar Testing Reading	
	Surge Test	
	Hi-Pot	
130.	Winding Resistance 1-2	
	Winding Resistance 2-3	
132.	Winding Resistance 1-3	
133.	Test Run Voltage Phase A	
134.	Test Run Amps A	
	Test Run Voltage Phase B	
136.	Test Run Amps B	
137.	Test Run Voltage Phase C	
	Test Run Amps C	
	DE Horizontal Vibration Reading	0.0351 ln/Sec
	DE Vertical Vibration Reading	0.0337 ln/Sec
	DE Axial Vibration Reading	0.0448 In/Sec

142. ODE Horizontal Vibration Reading	0.0355 In/Sec
143. ODE Vertical Vibration Reading	0.0385 In/Sec
144. ODE Axial Vibration Reading	0.0415 In/Sec
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	
154. Temp at 45 minutes	
155. Temp at 50 minutes	
156. Temp at 55 minutes	
157. Temp at 60 minutes	
158. Motor Paint	(P) Pass









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159. Service Technician David Maclin

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- 1. APPLICABILITY. The sale of any and all goods and/or services by Mock, Inc. d/b/a Hi-Speed Industrial Service ("Hi-Speed") shall be specifically conditioned upon and subject to the following terms and conditions which are incorporated by reference into any contracts and purchase orders with Hi-Speed, and which shall form and become a part of any agreement related thereto. Buyer's acceptance of any offer or quotation made by Hi-Speed for sale of any goods or services is expressly made subject to the terms and conditions set forth herein and to be so effective, Buyer need not sign or approve these Terms and Conditions to be bound hereunder provided a copy of same is provided to Buyer through any means. None of the terms and conditions contained herein may be added to, expanded, changed, modified, superseded or otherwise altered except as revised in writing and duly executed by Hi-Speed, and all orders received by Hi-Speed shall be governed only by the terms and conditions contained herein, notwithstanding any terms, conditions or provisions of any purchase order, release order, authorization or any other form issued by the Buyer. Hi-Speed hereby objects to any additional, modified, changed, deleted, altered or other terms and conditions not contained herein and notifies Buyer that any such terms or provisions are expressly rejected by Hi-Speed.
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- 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

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- 11. **GOVERNING LAW AND JURISDICTION.** Any controversy arising out of any quotation, the purchase order, the goods sold or delivered, repair or replacement thereof, or any services provided pursuant to any quotation or any purchase order, or these Standard Terms and Conditions shall be governed by the laws of the state of Tennessee without regard to any choice of law provisions and any cause of action related in any manner thereto shall be brought only in the state or federal courts of Shelby County, Tennessee.
- 12. ABANDONED EQUIPMENT. Hi-Speed requires that Buyer promptly pick up or provide shipment instructions for Buyer equipment or other Buyer property in Hi-Speed's possession. If equipment or other Buyer property is left with Hi-Speed and not picked up within six (6) months after Hi-Speed's final action related to the applicable property (e.g. evaluation, teardown, estimate, completion of services), Hi-Speed will consider such property abandoned and may dispose of it in accordance with applicable law. Buyer agrees to hold Hi-Speed harmless for any damage or claim for such abandoned property and acknowledges that Hi-Speed may discard or recycle it at Hi-Speed's sole and absolute discretion. Specifically, Hi-Speed may sell Buyer's abandoned property at a private or public sale and retain the proceeds to offset Hi-Speed's storage, inspection and servicing costs. For the avoidance of doubt, Hi-Speed reserves its statutory and other lawful liens for unpaid charges related to abandoned property.
- 13. FORCE MAJEURE. Neither party shall be responsible for any delay or failure in performance of any party of the quotation, purchase order or these Standard Terms and Conditions to the extent that such delays or failures are caused by fire, flood, 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.
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- 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.