

Motor Shop Repairs

Job Number 99826

Prepared for Unimin Corp - Covia(12108)

421 Main St. Guion AR 72540

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AC Recondition As Found - Shop

AC Recondition - Rev. 2: S9043405-001 004

1.0



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AC Recondition As Found

Unimin Corp - Covia(12108)

421 Main St. Guion, AR 72540

AC Recondition - Rev. 2

Location: Shop

Serial Number: S9043405-001 004

Description: 20HP BALDOR 1200RPM 286T

Hi-Speed Job Number:	99826
Manufacturer:	Baldor
Product Number:	CP4102T-4
Spec/ID #:	P28G4673A
Serial Number:	S9043405-001 004
HP/kW:	20 (HP)
RPM:	1175 (RPM)
Frame:	286
Voltage:	460
Current:	26.9
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	05/20/2022
Bearing RTDs:	No
Stator RTDs:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **a** 2 - High

2 - Good

Overall Condition

Report Date

Nameplate Picture



























3. Describe the Overall Condition of the Equipment as Received

Initial Mechanical/Electrical

- 4. Does Shaft Turn Freely?
- 5. Does Shaft Have Visible Damage?
- 6. Assembled Shaft Runout
- 7. Assembled Shaft End Play
- 8. Air Gap Variation <10%

9. Lead Condition



	10.	Lead Length	15 Inches
	11.	Frame Condition	
-	12.	Fan Condition	(P) Pass



13. Broken or Miss	ing Components			
Initial Electrical Ins	Initial Electrical Inspection			
14. Insulation Resi	stance/Megger			
15. Winding Resist	ance			
1-2	1-3	2-3		

) 16. Perform Surge Test (P) Pass



17. Stator Condition pass







Mechanical Inspection



19. Drive End Bearing Qty.

1

20. Drive End Bearing Type

(Ball) Ball Bearing



21. Drive End Lubrication Type

(Grease) Grease Lubricated



22. I	Drive End Bearing	Insulation or	Grounding Device?
-------	-------------------	---------------	-------------------

none

23. Drive End Wavy Washer/Snap-Ring Other Retention Device?

none

24. Drive End Bearing Condition

worn/grease dirty



25. Opposite Drive End Bearing Number-	6310
26. Opposite Drive End Bearing Qty.	1
27. Opposite Drive End Bearing Type	(Ball) Ball Bearing



28.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
29.	Opposite Drive End Bearing Insulation or Grounding Device?	none
30.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	yes



- 31. Opposite Drive End Bearing Condition
- 32. Drive End Seal
- 33. Opposite Drive End Seal

Rotor Inspection

34. Rotor Type/Material

(Squirrel Aluminum) Squirrel
Cage Aluminum Die Cast



35. Growler Test	(Pass) Pass
36. Number of Rotor Bars	61
37. Rotor Condition	good
38. List the Parts needed for the Repair Below	
39. Signature of Technician that Disassembled Motor	Terrence. Holland

L- 2/ll-1

N/I			F:4 -	Rotor
IVIAC	nan	ıcaı	FITC-	ROTOR

40.	Snatt	Runout	

41. Rotor Runout

Drive End Bearing Fit Rotor Body Opposite Drive End Bearing

42. Coupling Fit Closest to Bearing Housing

0 Degrees 90 Degrees 120 Degrees

43. Coupling Fit Closest to the end of the Shaft

0 Degrees 60 Degrees 120 Degrees

44. Drive End Bearing Shaft Fit

0 Degrees 60 Degrees 120 Degrees

45. Drive End Bearing Shaft Fit Condition

46. Opposite Drive End Bearing Shaft Fit

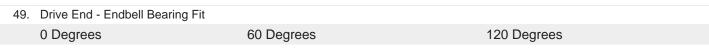
0 Degrees 60 Degrees 120 Degrees

47. Opposite Drive End Bearing Shaft Fit Condition

48. Shaft Air Seal Fits

Drive End Air Seal Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings



Bad. Lip worn in fit.



50). Drive End - Endbell Bearing Fit Condition			(F) Fail
51	Opposite Drive End - Endbell Bearing Fit			
	0 Degrees	60 Degrees	120 Degrees	
	Lip worn in fit			

Lip worn in fit.



52. Opposite Drive End - Endbell Bearing Fit Condition
 (F) Fail









54. End Bell Air Seal Fits

Drive End Air Seal Opposite Drive End Air Seal

55. List Machine Work Needed Below

56. Technician Terrence. Holland

Dynamic Balance Report

57. Rotor Weight and Balance Grade

Rotor Weight Balance Grade

58. Initial Balance Readings

Drive End Opposite Drive End

59. Final Balance Readings

Drive End Opposite Drive End

60	Technician				
	Rewind				
	Core Test Results - Watts loss per Po	und			
01.	Pre-Burnout	Post Burnout			
	r 16-Bulllout	r ost Bullout			
62.	Core Hot Spot Test				
	Pre-Burnout	Post-Burnout			
63.	Post Rewind Electrical Test- Insulation	n Resistance			
64.	Post Rewind Polarization Index				
65.	Post Rewind Winding Resistance				
	1-2	1-3	2-3		
66	Post Rewind Surge Test				
	Post Rewind Hi-Pot				
_	Technician				
	Cause of Failure				
	Failure locations				
00.	Bearings/housing fits				
70.	Root cause of failure				
	Contaminated grease and both housing	fits bad			
Mech	anical Fits- Rotor - Post Repair				
71.	Shaft Runout Post Repair				
72.	Rotor Runout Post Repair				
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing		
73.	Coupling Fit Closest to Bearing Housi				
	0 Degrees	90 Degrees	120 Degrees		
7/	Coupling Fit Closest to the end of the	Shaft Post Penair			
74.	0 Degrees	60 Degrees	120 Degrees		
	0 Degrees	00 Degrees	120 Deglees		
75.	Drive End Bearing Shaft Fit Post Repa	air			
	0 Degrees	60 Degrees	120 Degrees		
76.	Opposite Drive End Bearing Shaft Fit	·			
	0 Degrees	60 Degrees	120 Degrees		
77.	Shaft Air Seal Fits Post Repair				
	Drive End Air Seal	Opposite Drive End Air Seal			
		,,			
78.	Shaft Repair Sign-off				
Mech	anical Fits- Bearing Housings - P	ost Repair			

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79.	79. Drive End - Endbell Bearing Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees
	4.331	4.331	4.3311



80.	Opposite Drive End - Endbell Bearing Fit Post Repair			
	0 Degrees	60 Degrees	120 Degrees	
	4.3314	4.3315	4.3314	



81.	Bearing Cap Condition Post Repair				
	Drive End Bearing Cap	Opposite Drive End Bearing Cap			
82.	End Bell Air Seal Fits Post Repair				
	Drive End Air Seal	Opposite Drive End Air Seal			
83.	End Bell Repair Sign-off				
Assembly					













- 85. Final Insulation Resistance Test
- 86. Assembled Shaft Endplay
- 87. Assembled Shaft Runout





89. Test Run Amperage
Amps Amps Amps





90.	Drive End Vibration Readings - Inches	Per Second			
	Horizontal	Vertical	Axial		
91.	Opposite Drive End Vibration Readings - Inches Per Second				
	Horizontal	Vertical	Axial		
92.	Ambient Temperature - Fahrenheit				
93.	Drive End Bearing Temps - Fahrenheit				
	5 Minutes	10 Minutes	15 Minutes		
94.	Opposite Drive End Bearing Temps - Fahrenheit				
	5 Minutes	10 Minutes	15 Minutes		
95.	Final Test Run Sign-off				
96.	Document Final Condition with Pictures after paint				







97. Final Pics and QC Review

RW





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- 1. APPLICABILITY. The sale of any and all goods and/or services by Mock, Inc. d/b/a Hi-Speed Industrial Service ("Hi-Speed") shall be specifically conditioned upon and subject to the following terms and conditions which are incorporated by reference into any contracts and purchase orders with Hi-Speed, and which shall form and become a part of any agreement related thereto. Buyer's acceptance of any offer or quotation made by Hi-Speed for sale of any goods or services is expressly made subject to the terms and conditions set forth herein and to be so effective, Buyer need not sign or approve these Terms and Conditions to be bound hereunder provided a copy of same is provided to Buyer through any means. None of the terms and conditions contained herein may be added to, expanded, changed, modified, superseded or otherwise altered except as revised in writing and duly executed by Hi-Speed, and all orders received by Hi-Speed shall be governed only by the terms and conditions contained herein, notwithstanding any terms, conditions or provisions of any purchase order, release order, authorization or any other form issued by the Buyer. Hi-Speed hereby objects to any additional, modified, changed, deleted, altered or other terms and conditions not contained herein and notifies Buyer that any such terms or provisions are expressly rejected by Hi-Speed.
- 2. PRICE. All quoted prices shall remain firm and binding for a period of thirty (30) days from the date of quotation or for the period specifically stated in the quotation. The price for any and all goods and/or services ordered or approved by Buyer after thirty (30) days from the date of any quotation are subject to any increase in price that may occur after the expiration of thirty (30) days from the issuance of the quotation and the date the Buyer releases any shipment.
- 3. SCOPE OF GOODS AND/OR SERVICES. The goods and/or services provided by Hi-Speed pursuant to any quotation shall be limited exclusively to those goods and/or services expressly identified therein. Hi-Speed does not assume any responsibility and/or liability for the failure to provide any other goods and/or services not identified in any quotation. Modifications, additions or deletions to or from the scope referenced in any quotation shall only 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.
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- 8. WARRANTIES. Hi-Speed warrants that all goods shall conform in all material aspects to the goods identified in the quotation to Buyer and/or purchase order, and Hi-Speed makes to Buyer the manufacturer's express warranty for any goods sold to Buyer, which is offered by the manufacturer at the time of acceptance of any quotation by Buyer. This warranty is conditioned upon the installation, operation, and maintenance of the goods in accordance with the manufacturer's recommendations and/or standard industry practice and the goods at all times being operated or used under normal operating conditions for which they were designed. Hi-Speed, at its sole option, will repair or

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- 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.
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- 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.