

EVERY DAY SINCE 1946

LR Motor Shop Repairs

Job Number 103736

Prepared for PPG (11114)

11605 VIMY RIDGE ROAD ALEXANDER AR 72002

Table of Contents

AC Inspection as Found - LITTLE ROCK MOTOR SHOP



AC Inspection as Found

PPG (11114) 11605 VIMY RIDGE ROAD ALEXANDER, AR 72002

FolderID: 103736 FormID: 22309382

AC Inspection - Rev. 2				
Location:	LITTLE ROCK MOTOR SHOP			

Serial Number:	CAT: U15E2DCR
Description:15H	P NIDEC W/ PUMP

Hi-Speed Job Number:	103736
Manufacturer:	US Motors/Nidec
Product Number:	M: R578
Serial Number:	CAT: U15E2DCR
HP/kW:	15 (HP)
RPM:	1775 (RPM)
Frame:	254TCZ
Voltage:	208-230/460
Current:	40-18.5 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.25
Enclosure:	TEFC
# of Leads:	12
J-box Included:	None
Coupling/Sheave:	Coupling
Date Received:	11/19/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element
🔵 15 - Good	

Priorities Found: **3 - High** Overall Condition

1. Report Date

🔵 1 - Low

11/19/2024

2. Nameplate Picture





3. Photos of all six sides of the machine.















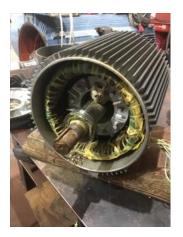


























































- 4. Describe the Overall Condition of the Equipment as Received *Dirty*
- 5. Distance from the end of the shaft to the Coupling/Sheave
 - Motor side: flush Pump side: 0.229in

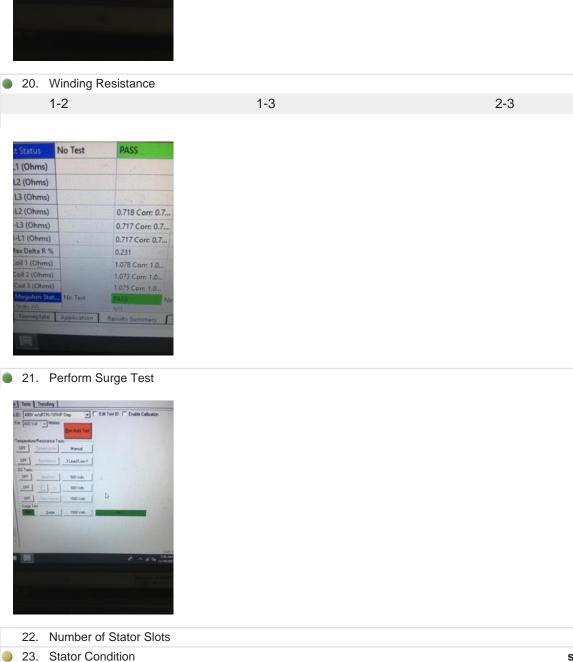
inches



Pump

Щ.

Initial Mechanical/Electrical				
6.	Does Shaft Turn Freely?	(Y) Yes		
7 .	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No		
8.	Does Shaft Have Visible Damage?	(No) No		
9.	Assembled Shaft Runout	Inches		
10	Assembled Shaft End Play	inches		
11	Air Gap Variation <10%			
12	Lead Condition	(P) Pass		
13	Lead Length	18 Inches		
14	Does it have Lugs?, If so what is the Stud Size?	(No) No		
15	Lead Numbers	1-12		
16	Frame Condition			
17	Fan Condition	(P) Pass		
18	Broken or Missing Components			
	J-box missing			
Initia	Electrical Inspection			



Coil 2 (Ohms)

Coil 3 (Ohms)

Volts (V)

1(µA)

Resist

At 40°C

1000

19. Insulation Resistance/Megger

No Test

n Tae Nameplate Application 1.073 Corr. 1.0

1.075 Corr: 1.0.

501

0.2088

Results Summar

2399

647 No Tect

48 signs of moisture 24. Stator Thermistors/Ohms 25. Stator Overloads/Ohms

Mechanical Inspection

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(P) Pass



Upper guide pump bearing 3.5476

27. Drive End Bearing Number-

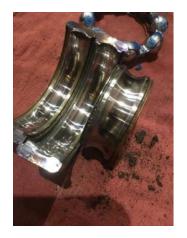


28.	Drive End Bearing Qty.	1
29.	Drive End Bearing Type	(Ball) Ball Bearing
30.	Drive End Lubrication Type	(Grease) Grease Lubricated
31.	Drive End Bearing Insulation or Grounding Device?	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	snap ring
33.	Drive End Bearing Condition	

Wear

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6309-2RS



34. Opposite Drive End Bearing Brand

Lower guid bearing 1.5038

35. Opposite Drive End Bearing Number-



36. Oppos	ite Drive End Bearing Qty.	1
37. Oppos	ite Drive End Bearing Type	(Ball) Ball Bearing
38. Oppos	ite Drive End Lubrication Type	(Grease) Grease Lubricated
39. Oppos	ite Drive End Bearing Insulation or Grounding Device?	
40. Oppos	ite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer

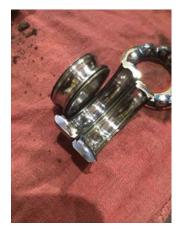
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NACHI

6207-2RS

41. Opposite Drive End Bearing Condition



42.	Drive End Seal		
43.	Opposite Drive End Seal		
Rotor	Inspection		
44.	Rotor Type/Material		(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
45.	Growler Test		(Pass) Pass
46.	Number of Rotor Bars		40
47.	Rotor Condition		pass needs cleaned
4 8.	List the Parts needed for the Repair B 6309-2RS 6207-2RS Need J-box and cover	elow	
	Arin		
Mech	anical Fits- Rotor		
50.	Shaft Runout		inches
51.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
52.	Coupling Fit Closest to Bearing Housi	ng	
	0 Degrees	90 Degrees	120 Degrees
53.	Coupling Fit Closest to the end of the	Shaft	
	0 Degrees	60 Degrees	120 Degrees
54.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.772	1.7722	1.7722
55.	Drive End Bearing Shaft Fit Condition		(P) Pass
	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.3776	1.3777	1.3777

5	7.	Opposite Drive End Bearing Shaft Fit	Condition	(P) Pass
5	8.	Shaft Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
		inical Fits- Bearing Housings			
5	9.	Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
		3.9375	3.937	3.9371	
		Drive End - Endbell Bearing Fit Condit		(P) Pass
6	1.	Opposite Drive End - Endbell Bearing			
		0 Degrees	60 Degrees	120 Degrees	
	~	2.8372	2.8369	2.837	
		Opposite Drive End - Endbell Bearing	Fit Condition		(F) Fail
6	3.	Bearing Cap Condition			
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
6	4.	End Bell Air Seal Fits			
Ŭ		Drive End Air Seal	Opposite Drive End Air Seal		
6	5.	List Machine Work Needed Below			
		ODE end bell bearing fit Upper bearing guide for pump			
6	6.	Technician			Cw
		Okin			
Pee		Co sign: RRW Cause of Failure			
		Failure locations			
0	1.	Bearings and ODE end bell bearing fit			
6	8	Root cause of failure			
0	0.	Wear			
Dyn	nan	nic Balance Report			
-		Rotor Weight and Balance Grade			
	0.	Rotor Weight	Balance Grade		
7	0.	Initial Balance Readings			
		Drive End	Opposite Drive End		
7	1.	Final Balance Readings			
		Drive End	Opposite Drive End		
7.	2.	Technician			
Mechanical Fits- Bearing Housings - Post Repair					
7	3.	Drive End - Endbell Bearing Fit Post R	lepair		
		0 Degrees	60 Degrees	120 Degrees	

74.	Opposite Drive End - Endbell Bearing	Fit Post Repair		
	0 Degrees	60 Degrees	120 Degrees	
	0 209.000	00 203.000	120 209,000	
75.	Bearing Cap Condition Post Repair			
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
76.	End Bell Air Seal Fits Post Repair			
	Drive End Air Seal	Opposite Drive End Air Seal		
	End Bell Repair Sign-off			
Asser	•			
	QC Check All Parts for Cleanliness Pr	-		
	Photograph All Major Components pri	or to assembly		
	Final Insulation Resistance Test			
	Assembled Shaft Endplay			
	Assembled Shaft Runout			
83.	Test Run Voltage	N/ 1/	N/ 1/	
	Volts	Volts	Volts	
84.	Test Run Amperage			
	Amps	Amps	Amps	
85	Drive End Vibration Readings - Inches	s Per Second		
00.	Horizontal	Vertical	Axial	
	Tionzontal	Vertiour	/ 0101	
86.	Opposite Drive End Vibration Reading	gs - Inches Per Second		
	Horizontal	Vertical	Axial	
	Ambient Temperature - Fahrenheit			
88.	Drive End Bearing Temps - Fahrenheit			
	5 Minutes	10 Minutes	15 Minutes	
89.	Opposite Drive End Bearing Temps -	Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes	
90.	Document Final Condition with Picture	es after paint		
91.	Final Pics and QC Review			



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

- 1. <u>APPLICABILITY.</u> 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. <u>SCOPE OF GOODS AND/OR SERVICES.</u> 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 be 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.
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- 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 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 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 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

TermsAndConditions

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- 11. <u>GOVERNING LAW AND JURISDICTION.</u> 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. <u>ASSIGNMENT.</u> 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. <u>NO INDIVIDUAL LIABILITY</u>. 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.