

LR Motor Shop Repairs

Job Number 102901

Prepared for Almatis Inc/RCP Bauxite (10014)

4701 Alcoa Road Bauxite AR 72011

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AC Inspection as Found - LR Motor Shop

AC Inspection - Rev. 2: ID: P18G7185D

1.0



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

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AC Inspection as Found Almatis Inc/RCP Bauxite (10014)

4701 Alcoa Road Bauxite, AR 72011

Serial Number:

AC Inspection - Rev. 2

Location: LR Motor Shop

Description: 1.5 HP RELIANCE VIBE MOTOR

ID: P18G7185D

Hi-Speed Job Number:	102901
Manufacturer:	Reliance
Spec/ID #:	P18G7185D
HP/kW:	1.5 (HP)
RPM:	1755 (RPM)
Frame:	182TDZ
Voltage:	460
Current:	2.5 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.20
Enclosure:	TENV
# of Leads:	3
J-box Included:	None
Coupling/Sheave:	None
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Final
Rewind:	No
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **a 3 - High**





7 - Good

Overall Condition

1. Report Date 05/30/2024

2. Nameplate Picture



3. Photos of all six sides of the machine.















Bearing is off the shoulder.







4. Describe the Overall Condition of the Equipment as Received Serviceable

Initial Mechanical/Electrical

5. Does Shaft Turn Freely?
(Y) Yes

6. Does the shaft require T.I.R in Lathe to identify additional repairs?
(No) No

Seal surface worn.

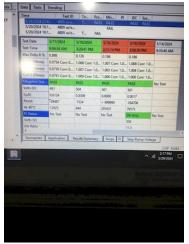


-		
8.	Assembled Shaft Runout	Inches
9.	Assembled Shaft End Play	inches
10.	Air Gap Variation <10%	
11.	Lead Condition	(P) Pass
12.	Lead Length	56.5 Inches
13.	Does it have Lugs?, If so what is the Stud Size?	(No) No
14.	Lead Numbers	1-3
15.	Frame Condition	pass
16.	Fan Condition	(N) NA
17.	Broken or Missing Components	
-	None	
	Floatrical Increation	

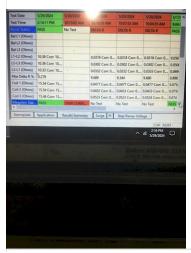
Initial Electrical Inspection

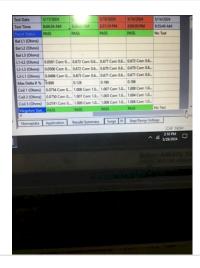
18. Insulation Resistance/Megger





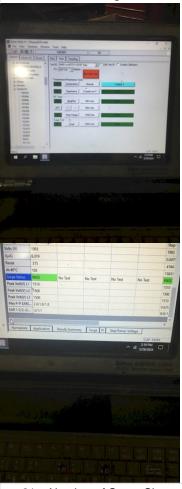
1-2 1-3 2-3





(P) Pass







21. Number of Stator Slots

36

22. Stator Condition pass

23. Stator Thermistors/Ohms

24. Stator Overloads/Ohms

Mechanical Inspection

25. Drive End Bearing Brand

FAG

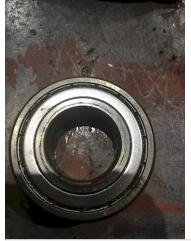
26. Drive End Bearing Number-







27. Drive End Bearing Qty.	1
28. Drive End Bearing Type	(Ball) Ball Bearing
29. Drive End Lubrication Type	(Grease) Grease Lubricated
30. Drive End Bearing Insulation or Grounding Device?	none
31. Drive End Wavy Washer/Snap-Ring Other Retention Device?	none
32. Drive End Bearing Condition	replace
33. Opposite Drive End Bearing Brand	FAG
34. Opposite Drive End Bearing Number-	6205-2Z-L038-C3





35. Opposite Drive End Bearing Qty.	1
36. Opposite Drive End Bearing Type	(Ball) Ball Bearing
37. Opposite Drive End Lubrication Type	(Grease) Grease Lubricated
38. Opposite Drive End Bearing Insulation or Grounding Device?	none
39. Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer



40. Opposite Drive End Bearing Condition

replace

National 471224



42. Opposite Drive End Seal

Rotor Inspection

43. Rotor Type/Material

(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast

44. Growler Test

(Pass) Pass

45. Number of Rotor Bars

28

46. Rotor Condition

pass

47. List the Parts needed for the Repair Below

Bearings, o-rings, DE housing seal, and shaft seal surface repair. (2) 6311-2R S1NR/C3 GJN proprietary bearings (shaker assembly)

(1) 6206-2Z/C3 and (1) 6205-2Z/C3 bearing (motor)

(1) National 471224 seal. (DE housing)

Replace 2 ea. o-rings. (Oil basin cavity)

48. Signature of Technician that Disassembled Motor

Terrence Holland

Co witness RRW

Mechanical Fits- Rotor

49. Shaft Runout 0.001 inches

	50.	Rotor Runout		
		Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	51.	Coupling Fit Closest to Bearing Housing	ng	
		0 Degrees	90 Degrees	120 Degrees
	=-	0 1 5 0	01. 6	
	52.	Coupling Fit Closest to the end of the		
		0 Degrees	60 Degrees	120 Degrees
	53.	Drive End Bearing Shaft Fit		
		0 Degrees	60 Degrees	120 Degrees
		1.5815	1.5816	1.5818
	54.	Drive End Bearing Shaft Fit Condition		(P) Pass
	55.	Opposite Drive End Bearing Shaft Fit		
		0 Degrees	60 Degrees	120 Degrees
		1.9835	1.9829	
	56.	Opposite Drive End Bearing Shaft Fit	Condition	(F) Fail
	57.	Shaft Air Seal Fits		
		Drive End Air Seal	Opposite Drive End Air Seal	
N		anical Fits- Bearing Housings		
	58.	Drive End - Endbell Bearing Fit		
		0 Degrees	60 Degrees	120 Degrees
		2.4404	2.4405	2.44
		Drive End - Endbell Bearing Fit Condition		(F) Fail
	60.	Opposite Drive End - Endbell Bearing	Fit	
		0 Degrees	60 Degrees	120 Degrees
		2.0478	2.0472	2.0472
	61.	Opposite Drive End - Endbell Bearing	Fit Condition	(F) Fail
	7	Out of round		
	62.	Bearing Cap Condition		
		Drive End Bearing Cap	Opposite Drive End Bearing Cap	
		pass		





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63.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
64.	List Machine Work Needed Below		
	Repair DE shaft seal surface. Repair De	e housing fit.	
65.	Technician		Terrence Holland
	-/		
,	/ // //	//	
/_	was the		
		/	
	Cause of Failure		
66.	Failure locations		
	Both housing fits, and ODE shaft fit.		
67.	Root cause of failure		
	Pin in weight was dislodged and laying bearings.	in the bottom of the stator. Also bearing greas	e was contaminated in both
Dynar	nic Balance Report		
68.	Rotor Weight and Balance Grade		
	Rotor Weight	Balance Grade	
69.	Initial Balance Readings		
	Drive End	Opposite Drive End	
70	Final Palance Poodings		
70.	Final Balance Readings Drive End	Opposite Drive End	
	Drive Eria	Opposite Drive End	
71.	Technician		
Mecha	anical Fits- Rotor - Post Repair		
	Shaft Runout Post Repair		inches
	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
	Ţ.	·	
74.	Coupling Fit Closest to Bearing Housi	ng Post Repair	
	0 Degrees	90 Degrees	120 Degrees
7-	Occupita a Fit Olega tradition of the	Ohaft Dant Danain	
75.	Coupling Fit Closest to the end of the	·	400 D
	0 Degrees	60 Degrees	120 Degrees
76.	Drive End Bearing Shaft Fit Post Rep	air	

60 Degrees

0 Degrees

120 Degrees





78. Shaft Air Seal Fits Post Repair

Drive End Air Seal

Opposite Drive End Air Seal

NA



79. Shaft Repair Sign-off RW

Mechanical Fits- Bearing Housings - Post Repair





81.	Opposite Drive End - Endbell Bearing	Fit Post Repair	
	0 Degrees	60 Degrees	120 Degrees
	2.0475	2.0475	2.0475



82. Bearing Cap Condition Post Repair	ir	
Drive End Bearing Cap	Opposite Drive End Bearing Cap	
83. End Bell Air Seal Fits Post Repair		
Drive End Air Seal	Opposite Drive End Air Seal	
94 End Pall Danair Cian off		D14/
84. End Bell Repair Sign-off		RW

Aven

86. Photograph All Major Components prior to assembly

(Complete) Complete

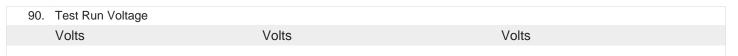








87.	Final Insulation Resistance Test Pass	Megohms
88.	Assembled Shaft Endplay	inches
89.	Assembled Shaft Runout	inches





91. Test Run Amperage
Amps Amps Amps

Witnessed by: T Holland



92.	Drive End Vibration Readings - Inche	s Per Second	
	Horizontal	Vertical	Axial
93.	Opposite Drive End Vibration Reading	gs - Inches Per Second	
	Horizontal	Vertical	Axial
94.	Ambient Temperature - Fahrenheit		
0.5	D: E 1D : E E 1	No.	
95.	Drive End Bearing Temps - Fahrenhe	eit	
95.	5 Minutes	10 Minutes	15 Minutes
95.	- ·		15 Minutes
96.	5 Minutes	10 Minutes	15 Minutes
	5 Minutes	10 Minutes	15 Minutes 15 Minutes
	5 Minutes Opposite Drive End Bearing Temps -	10 Minutes Fahrenheit	





98. Final Pics and QC Review Cw

Co sign: TRH



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- 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.
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- 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.
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- 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

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- 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.
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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.
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