

# LR Motor Shop Repairs

# **Job Number 102556**

Prepared for REDSTONE CONSTRUCTION (12059)

505 WEST DIXON LITTLE ROCK AR 72206

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AC Inspection as Found - LR Motor Shop

AC Inspection - Rev. 2: 2019020929075

1.0



FolderID: 102556

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### **AC Inspection as Found REDSTONE CONSTRUCTION (12059)**

**505 WEST DIXON** LITTLE ROCK, AR 72206

AC Inspection - Rev. 2

Location: LR Motor Shop Serial Number: 2019020929075

Description: 10HP 3450RPM BARMASA

Priorities Found: 1 - High

9 - Good

#### **Overall Condition**

- Report Date
- Nameplate Picture















































3.	Photos of all six sides of the machine	e.		
4.	Describe the Overall Condition of the	e Equipment as Received		
	Dirty			
5.	Distance from the end of the shaft to	the Coupling/Sheave	inches	
-	Na			
Initia	I Mechanical/Electrical			
<b>6</b> .	Does Shaft Turn Freely?		(Yes) Yes	
<b>7</b> .	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	
-	Na			
10	. Assembled Shaft End Play		inches	
-	Na			
11	. Air Gap Variation <10%			
-	Na			
<b>1</b> 2	. Lead Condition		(P) Pass	
13	. Lead Length		5 Inches	
<b>1</b> 4	. Does it have Lugs?, If so what is the	Stud Size?	(No) No	
15	. Lead Numbers		9	
16	. Stator Temperature Detector Rating	and Function		
	Quantity	Rating	Quantity Passed	
-	Na			
17.	3 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
	Quantity	Rating	Quantity Passed	
	Na			
18				
19			(P) Pass	
_	. Heater Quantity, Ratings		(F) Fd55	
20		Volts/Watts	Pass/Fail	
	Quantity	voits/vvatts	F455/F4II	
-	Na			
21	. Broken or Missing Components			
	I Flectrical Inspection			

#### **Initial Electrical Inspection**

22.	Insulation Resistance/Megger		0 Megohms
23.	Winding Resistance		
	1-2	1-3	2-3
		. 0	2.0
-	Na		
24.	Perform Surge Test		(F) Fail
25.	Number of Stator Slots		30
26.	Stator Condition		
27.	Stator Thermistors/Ohms		
-	Na		
28.	Stator Overloads/Ohms		
-	Na		
Mecha	anical Inspection		
29.	Drive End Bearing Brand		nsk
30.	Drive End Bearing Number-		6308 2Z
31.	Drive End Bearing Qty.		1
32.	Drive End Bearing Type		(Ball) Ball Bearing
33.	Drive End Lubrication Type		(Grease) Grease Lubricated
34.	Drive End Bearing Insulation or Groun	iding Device?	
35.	Drive End Wavy Washer/Snap-Ring C	Other Retention Device?	snap ring
36.	Drive End Bearing Condition		worn
37.	Opposite Drive End Bearing Brand		nsk
38.	Opposite Drive End Bearing Number-		6208 2Z
39.	Opposite Drive End Bearing Qty.		1
40.	Opposite Drive End Bearing Type		(Ball) Ball Bearing
41.	Opposite Drive End Lubrication Type		(Grease) Grease Lubricated
42.	Opposite Drive End Bearing Insulation	or Grounding Device?	
43.	Opposite Drive End Wavy Washer/Sna	ap-Ring Other Retention Device?	wavy washer
44.	Opposite Drive End Bearing Condition		worn
45.	Drive End Seal		
-	Na		
46.	Opposite Drive End Seal		
-	Na		
47.	DE Sleeve Bearing Inside Diameter		
	0 degrees	120 degrees	240 degrees
		-	
-	Na		
48.	DE Sleeve Bearing Outside Diameter		
	0 degrees	120 degrees	240 degrees
	0 degrees		
	-		
-	Na		
49.	Na DE Sleeve Bearing Housing Inside Dia		040 1
	Na	ameter 120 degrees	240 degrees

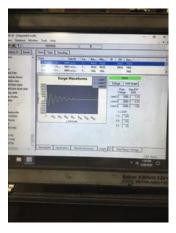
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50.	DE Sleeve Bearing to Housing C	Clearance	
	0 degrees	120 degrees	240 degrees
-	Na		
51.	ODE Sleeve Bearing Inside Dian	neter	
	0 degrees	120 degrees	240 degrees
-	Na		
52.	ODE Sleeve Bearing Outside Dia	ameter	
	0 degrees	120 degrees	240 degrees
-	Na		
53.	ODE Sleeve Bearing Housing In:	side Diameter	
	0 degrees	120 degrees	240 degrees
-	Na		
54.	ODE Sleeve Bearing to Housing		
	0 degrees	120 degrees	240 degrees
	Na		
	Inspection		
	Rotor Type/Material		(Squirrel Aluminum) Squirrel
55.	Notor Type/Material		Cage Aluminum Die Cast
56.	Growler Test		(Pass) Pass
	Number of Rotor Bars		
57.	Number of Rotor Dars		26
	Rotor Condition		26
58.	Rotor Condition List the Parts needed for the Rep	pair Below	26
58.	Rotor Condition	pair Below	26
58. 59.	Rotor Condition List the Parts needed for the Rep		Trevor Hall
58. 59.	Rotor Condition List the Parts needed for the Rep 6308 2Z 6208 2Z	assembled Motor	
58. 59.	Rotor Condition List the Parts needed for the Rep 6308 2Z 6208 2Z		
58. 59.	Rotor Condition List the Parts needed for the Rep 6308 2Z 6208 2Z	assembled Motor	
58. 59. 60.	Rotor Condition List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa	assembled Motor	
58. 59. 60.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa anical Fits- Rotor	assembled Motor	Trevor Hall
58. 59. 60. <b>Mech</b> a	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor  Shaft Runout	assembled Motor	
58. 59. 60. <b>Mech</b> a	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor  Shaft Runout Rotor Runout	assembled Motor	Trevor Hall  0.001 inches
58. 59. 60. <b>Mech</b> a	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor  Shaft Runout	assembled Motor	Trevor Hall
58. 59. 60. <b>Mech</b> a	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor  Shaft Runout Rotor Runout	assembled Motor	Trevor Hall  0.001 inches
58. 59. 60. <b>Mech</b> 61. 62.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor  Shaft Runout Rotor Runout Drive End Bearing Fit	assembled Motor  Rotor Body	Trevor Hall  0.001 inches
58. 59. 60. <b>Mech</b> 61. 62.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor Shaft Runout Rotor Runout Drive End Bearing Fit	assembled Motor  Rotor Body	Trevor Hall  0.001 inches
58. 59. 60. <b>Mech</b> 61. 62.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor Shaft Runout Rotor Runout Drive End Bearing Fit  Na  Coupling Fit Closest to Bearing Fit	Rotor Body Housing	Trevor Hall  0.001 inches  Opposite Drive End Bearing
58. 59. 60. <b>Mech</b> 61. 62.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor  Shaft Runout Rotor Runout Drive End Bearing Fit  Na  Coupling Fit Closest to Bearing H 0 Degrees	Rotor Body Housing 90 Degrees	Trevor Hall  0.001 inches  Opposite Drive End Bearing
58. 59. 60. <b>Mech</b> 61. 62.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor Shaft Runout Rotor Runout Drive End Bearing Fit  Na  Coupling Fit Closest to Bearing F 0 Degrees	Rotor Body Housing 90 Degrees	Trevor Hall  0.001 inches  Opposite Drive End Bearing
58. 59. 60. <b>Mech</b> 61. 62.	Rotor Condition  List the Parts needed for the Rep 6308 2Z 6208 2Z  Signature of Technician that Disa  anical Fits- Rotor Shaft Runout Rotor Runout Drive End Bearing Fit  Na  Coupling Fit Closest to Bearing Fit  Na Coupling Fit Closest to the end of	Rotor Body Housing 90 Degrees	O.001 inches Opposite Drive End Bearing 120 Degrees

65	Drive End Bearing Shaft Fit			
03.		CO Doggood	100 Daggara	
	0 Degrees	60 Degrees	120 Degrees	
• 00	1.5753	1.5753	1.5753	(D) Door
<ul><li>66.</li></ul>	9			(P) Pass
67.	Opposite Drive End Bearing Shaft Fit	00.5	100 D	
	0 Degrees	60 Degrees	120 Degrees	
	1.5752	1.5753	1.5753	(D) D
<ul><li>68.</li></ul>	11	Condition		(P) Pass
69.	Shaft Air Seal Fits	0 5 . 5		
	Drive End Air Seal	Opposite Drive End Air Seal		
	Na			
,	anical Fits- Bearing Housings			
	Drive End - Endbell Bearing Fit			
70.	0 Degrees	60 Degrees	120 Degrees	
	3.5433	3.5435	3.5434	
<b>7</b> 1			3.3434	(P) Pass
<b>7</b> 1.	Opposite Drive End - Endbell Bearing			(P) Pass
12.			100 Daggara	
	0 Degrees	60 Degrees	120 Degrees	
<b>7</b> 2	3.1499	3.1499	3.1499	(D) Door
<b>7</b> 3.	11	Fit Condition		(P) Pass
74.	Bearing Cap Condition	O		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap		
-	Na			
75.	End Bell Air Seal Fits			
	Drive End Air Seal	Opposite Drive End Air Seal		
	Na			
76.				
70.	Na			
77	Technician			Trevor Hall
//.	recimician			Trevor Hall
		1/		
	,			
	Cause of Failure			
78.	Failure locations			
	Windings, bearings, seal			
79.	Root cause of failure			
	Motor got hot			
-	mic Balance Report			
80.	Rotor Weight and Balance Grade			
	Rotor Weight	Balance Grade		

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81.	Initial Balance Readings			
	Drive End	Opposite Drive End		
82.	Final Balance Readings			
	Drive End	Opposite Drive End		
83.	Technician			
Rewir	nd			
84.	Core Test Results - Watts loss per Po	und		
	Pre-Burnout	Post Burnout		
-	Na			
85.	Core Hot Spot Test			
	Pre-Burnout	Post-Burnout		
-	Na			
86.	Post Rewind Electrical Test- Insulation	n Resistance		270014 Megohms
87.	Post Rewind Polarization Index			Polarization Index
	**			
	Na			
	Post Rewind Winding Resistance			
		1-3	2-3	
	Post Rewind Winding Resistance	1-3 1.270	2-3 1.267	





90. Post Rewind Hi-Pot

Na

91. Technician

RW

RHR co witness

#### Mechanical Fits- Rotor - Post Repair

92. Shaft Runout Post Repair

93.	Rotor Runout Post Repair		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
0.4	Counting Fit Classet to Booking Housi	ng Doot Donois	
94.	Coupling Fit Closest to Bearing Housi  O Degrees	90 Degrees	120 Degrees
	o Degrees	30 Degrees	120 Degrees
95.	Coupling Fit Closest to the end of the	Shaft Post Repair	
	0 Degrees	60 Degrees	120 Degrees
00	Drive Ford Decrine: Cheft Fit Dect Dec		
96.	Drive End Bearing Shaft Fit Post Repart O Degrees	60 Degrees	120 Degrees
	0 Degrees	00 Degrees	120 Degrees
97.	Opposite Drive End Bearing Shaft Fit	Post Repair	
	0 Degrees	60 Degrees	120 Degrees
00	Shaft Air Seal Fits Post Repair		
90.	Drive End Air Seal	Opposite Drive End Air Seal	
	Dive Elia Ali Geal	Opposite Drive End All Geal	
99.	Shaft Repair Sign-off		
Mecha	anical Fits- Bearing Housings - P	ost Repair	
100.	Drive End - Endbell Bearing Fit Post F		
	0 Degrees	60 Degrees	120 Degrees
101.	Opposite Drive End - Endbell Bearing	Fit Post Repair	
	0 Degrees	60 Degrees	120 Degrees
		-	3
102.	Bearing Cap Condition Post Repair		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
103.	End Bell Air Seal Fits Post Repair		
	Drive End Air Seal	Opposite Drive End Air Seal	
104.	DE Sleeve Bearing Inside ID Post Rep		
	Measure 1	Measure 2	Measure 3
105.	DE Sleeve Bearing Outside ID Post R	epair	
	Measure 1	Measure 2	Measure 3
106.	DE Sleeve Bearing Inside OD Post Re	•	Marriago
	Measure 1	Measure 2	Measure 3
107.	DE Sleeve Bearing Outside OD Post	Repair	
	Measure 1	Measure 2	Measure 3
	End Bell Repair Sign-off		
109.	ODE Sleeve Bearing Inside ID Post R Measure 1	epair Measure 2	Measure 3
	ivicasule i	iviedSule 2	iviedSuite 3

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110. ODE Sleeve Bearing Outs	110. ODE Sleeve Bearing Outside ID Post Repair		
Measure 1	Measure 2	Measure 3	
111. ODE Sleeve Bearing Inside OD Post Repair			
Measure 1	Measure 2	Measure 3	
112. ODE Sleeve Bearing Outside OD Post Repair			
Measure 1	Measure 2	Measure 3	

### Assembly

113. QC Check All Parts for Cleanliness Prior to Assembly

114. Photograph All Major Components prior to assembly























	Final Insulation Resistance Test		
	Assembled Shaft Endplay		
	Assembled Shaft Runout		
	Test Run Voltage		
,	Volts	Volts	Volts
	Test Run Amperage		
	Amps	Amps	Amps
120	Drive End Vibration Boodings Inches	Day Casand	
	Drive End Vibration Readings - Inches		A:-1
	Horizontal	Vertical	Axial
121.	Opposite Drive End Vibration Reading	s - Inches Per Second	
	Horizontal	Vertical	Axial
'	Tionzoniai	vertical	/ Mai
122.	Ambient Temperature - Fahrenheit		
123.	Drive End Bearing Temps - Fahrenhei	t	
	5 Minutes	10 Minutes	15 Minutes
124.	Drive End Bearing Temps - Fahrenhei	t 20-30 Minutes	
	20 Minutes	25 Minutes	30 Minutes
	Drive End Bearing Temps - Fahrenhei		
;	35 Minutes	40 Minutes	45 Minutes
106	Drive End Boaring Towns - February	t FO CO Minutos	
	Drive End Bearing Temps - Fahrenhei		CO Minutes
	50 Minutes	55 Minutes	60 Minutes
127.	Opposite Drive End Bearing Temps - I	Fahrenheit	
	5 Minutes	10 Minutes	15 Minutes
	o minuco	10 Militatos	10 Milliaco
128.	Opposite Drive End Bearing Temps - I	Fahrenheit 20-30 Minutes	
	20 Minutes	25 Minutes	30 Minutes
129.	Opposite Drive End Bearing Temps - I	Fahrenheit 35-45 Minutes	
;	35 Minutes	40 Minutes	45 Minutes

130. Opposite Drive End Beari	ng Temps - Fahrenheit 50-60 Minutes	
50 Minutes	55 Minutes	60 Minutes
131. Stator Temperatures- Fah	nrenheit	
5 Minutes	10 Minutes	15 Minutes
<ol><li>Stator Temperatures- Fal</li></ol>	renheit 20-30 Minutes	
20 Minutes	25 Minutes	30 Minutes
133. Stator Temperatures- Fah	renheit 35-45 Minutes	
35 Minutes	40 Minutes	45 Minutes
134. Stator Temperatures- Fah	renheit 50-60 Minutes	
50 Minutes	55 Minutes	60 Minutes
135. Document Final Condition	with Pictures after paint	
136. Final Pics and QC Reviev	V	Trevor Hall
_		
// .	$\neg$	
	1851	

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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.
- 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. <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.