



Triangle Durham WWTP
Durham County
5926 NC Hwy 55E
Durham, NC. 27713

Alfa Laval Inc.
Chesapeake Service Center
3944 Holland Blvd
Chesapeake, Va. 23323
Tel: +1 757-487-0437
Fax: +1 757-487-5375
www.alfalaval.com

Subject: Repair of ALDEC G2-70 ROTATING ASSEMBLY; GEARBOX S/N 5023638
Alfa Laval reference: RC81286
Customer Reference: 19-160

Mr. Phillips:

Following is our formal estimate to repair your Aldec G2-70 Rotating Assembly and Gearbox. This estimate was based on current OEM standards and specifications. The details are listed below. The cost of this repair is \$56,673.31 plus freight.

If you have any questions regarding this estimate or our repair procedures call me direct at 757-485-7502.

Regards,

Tom Fogarty
Chesapeake Service Center
757-485-7502
tom.fogarty@alfalaval.com

REPAIR SUMMARY

ALDEC G2-70 ROTATING ASSEMBLY; GEARBOX S/N 5023638

A/L ref.: RC812286

Your ref.: 19-160

BASIC REPAIR

1. Prepare quotation for recommended repairs.
2. Replace all bearings, seals, o-rings, gaskets, spacers, damaged hardware, spacers, shims and lubricants with genuine Alfa Laval OEM replacement components.
3. Assemble and prepare the conveyor for balancing.
4. Assemble and prepare the bowl assembly for balancing.
5. Assemble and prepare the gearbox assembly for testing.
6. Computer balance the conveyor and bowl assemblies to OEM specifications.
7. Assemble rotating assembly for testing.
8. Test rotating assembly on Sharples Repair Test Stand to OEM Quality Control Specifications for two hours.
9. Final inspection and prepare for shipment.
10. Palletize for shipment.

REQUIRED:

CONVEYOR:

Normal wear noted.

Acceptable to use as is. Balance conveyor per OEM specification



PROTECTION TUBE:

End of tube is bent from contact.

Replace with new..



SPLINE HUB:

Normal wear noted.

Use as is.

WEAR BUSHING

Rear wear bushing worn.

Replace with new.

BOWL ASSEMBLY

REAR HUB:

Normal wear noted. All critical diameters are within OEM specification.
Deburr and polish at assembly. Acceptable to use as is.



PULLEY:

Worn. Critical pilot diameter worn over size and out of specification.
Replace with new.



FRONT HUB:

Two diameters have light contact damage.

Machine to skim cut the Adapter pilot diameter and the face to clean up.

**FRONT GUTTER FLANGE:**

Contact damage and corroded exterior. (Cast Iron)

Replace with upgraded stainless steel design per Engineering.

**GEARBOX ADAPTER:**

All critical dimensions are within specification.

Acceptable to use as is.

BOWL SHELL:

All critical diameters are within OEM specification.

Acceptable to use as is.

BOWL SHELL TAPERED SECTION:

All critical dimensions are within specification. Light wear noted.

Use as is.

WEAR INSERTS:

Normal wear noted. Good condition

Acceptable to use as is.

FRONT BEARING HOUSING

All critical diameters are within OEM specification.
Acceptable to use as is.

REAR BEARING HOUSING:

All critical diameters are within OEM specification.
Acceptable to use as is.

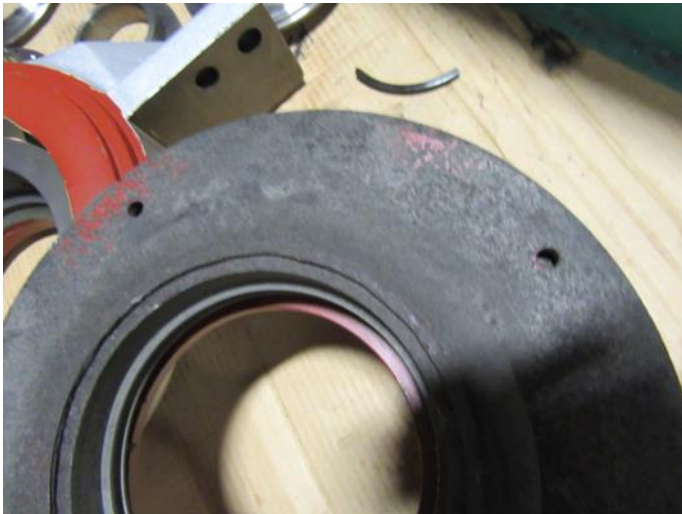
PILLOW BLOCK COVERS:

Front Cover:

Acceptable to use as is.

Rear Cover is heavily corroded.(cast iron)

Replace with upgraded stainless steel design per Engineering.

**GREASE DEFLECTORS:**

All critical diameters are within OEM specification. Normal wear noted.
Acceptable to use as is.

SPLINE SHAFT:

All critical diameters are within OEM specification.
Acceptable to use as is.

GEARBOX:

Good condition.

Replace all bearings, seals & oring's and oil and required fasteners with new.



REPLACEMENT PARTS LIST

	Item no	Name	Qty	Net prc
1	6121079702	CIRCLIP	1	\$68.07
2	22158112	SCREW	2	\$2.60
3	6123392980	PROTECTING TUBE	1	\$1,640.98
4	6123349202	WEAR BUSHING	1	\$1,070.17
5	6120610601	ADJUSTING WASHER	1	\$51.31
6	6120610602	ADJUSTING WASHER	1	\$62.61
7	6120979830	MAJOR SERVICE KIT	1	\$1,725.95
8	52703401	BUSHING	1	\$104.30
9	6119408267	SCREW	4	\$11.40
10	6119408264	SCREW	2	\$16.14
11	6123975701	SCREEN	1	\$3,817.53
12	22158117	SCREW	3	\$3.21
13	22340637	O-RING	1	\$2.94
14	6124202334	MAJOR SERVICE KIT	1	\$1,349.03
15	6119501162	BALL BEARING	1	\$736.95
16	6123169001	SCREEN	1	\$5,690.16
17	6120737101	DISTANCE RING	1	\$579.76
18	6120367136	LUBRICANTS	1	\$226.16
19	6120367162	GREASE	1	\$18.96
20	6120367158	GREASE 0,4 KG	4	\$94.36
21	6120367150	GREASE 0,4KG	4	\$127.56
22	6123704280	MAGNETIC PLUG	2	\$118.74
23	6123863102	BALANCING SCREW	6	\$30.36
24	6119447042	RING	1	\$2.75
25	22364236	SNAP RING	1	\$1.52
26	22364245	SNAP RING	1	\$5.54
27	22364120	SNAP RING	1	\$1.81

28	6119405942	SCREW	24	\$25.20
29	6119405940	SCREW	16	\$16.80
30	6119445040	RING	2	\$2.56
31	22170612	SCREW	8	\$8.64
32	6119405959	SCREW	4	\$4.28
33	6124583501	MOUNTING BUSHING	1	\$17.85
34	6119407507	SCREW	6	\$6.30
35	6119405964	SCREW	18	\$18.90
36	6119405985	SCREW	12	\$12.60
37	6119406022	SCREW	12	\$18.00
38	6123968131	REPAIR KIT 8KNM DD GEARBOX	1	\$2,891.07
39	6120367110	MERETA 320 GEAR OIL 4 L	2	\$282.66

PRICE BREAKOUT

PARTS		\$20,865.73
LABOR	263 HOURS @ \$125/HR	\$32,875.00
OUTSIDE SERVICES	Cleaning, blasting, plating, painting, coatings	\$ 2,932.58
TOTAL		\$56,673.31

AUTHORIZATION TO REPAIR

Triangle Durham WWTP
G2-70 ROTATING ASSEMBLY; GEARBOX S/N 5023638
A/L ref.: RC812286
Your ref.: 19-160

The total charge for parts, labor and expenses associated with this repair is: \$56,673.31 plus freight

Validity: 30
Payment Terms: NET 30 DAYS
Warranty: 90 Days
Terms and conditions attached.

Please execute the work authorization below and fax it to the number shown below. The equipment not approved for repair is subject to a service charge to cover the cost of disassembly, cleaning, inspection, quoting and repackaging. On occasion, more extensive damage is revealed during the course of the repair, in which case you will be contacted and advised of the possible impact to delivery and pricing.

WORK AUTHORIZATION:

Signing below is an authorization to proceed with the work described in the accompanying quotation.

Authorized Signature: _____

Date: _____

Purchase order or Work order #: _____

-> Email or Fax to the attention of Tom Fogarty at tom.fogarty@alfalaval.com
+1 757-487-5375

TERMS AND CONDITIONS OF SALE

These Terms and Conditions Apply to All Quotations, Orders, and Contracts for Alfa Laval Inc. Products (hereafter "Equipment"). As used in these Terms and Conditions of Sale, the word "Equipment" includes all hardware, parts, components, software and options.

1. ACCEPTANCE: Our sale to you is limited to and expressly made conditional on your assent to the terms and conditions of sale herein and, if applicable, on the attendant quotation, both of which form a part of this order and which supersede and reject all prior agreements, representations, discussions or negotiations, whether written or oral, with respect hereto and any conflicting terms and conditions of yours, or any statement therein, whether or not signed by you. We will furnish only the quantities and Equipment specifically listed on the face hereof or the pages attached hereto. We assume no responsibility for terms or conditions of, or for furnishing other equipment or material shown in, any plans and/or specifications for a project to which the Equipment quoted or ordered herein pertain or refer.

2. PRICES: Unless otherwise specified in writing, all quoted prices are firm for thirty (30) days from the date of offer. Stenographic, clerical and mathematical errors are subject to correction.

3. DELIVERY: Dates for the furnishing of services and/or delivery or shipment of Equipment are approximate only and are subject to change. Quoted lead times are figured from the date of receipt of complete technical data and approved drawings as such may be necessary. We shall not be liable, directly or indirectly, for any delay in or failure to deliver caused by carriers or delays from labor difficulties, shortages, strikes or stoppages of any sort, failure or delay in obtaining materials from ordinary sources, fires, floods, storms, accidents, or other acts of God or force majeure, by any statute, regulation, administrative order or decree or order or judgment of a court of law or other causes beyond our reasonable control. Unless otherwise specifically agreed in writing by us, in no event shall we be liable for any damages or penalties whatsoever, or however designated, resulting from our failure to perform or delay in performing due to any of the causes specified in this paragraph 3.

4. SHIPMENT, RISK OF LOSS, TAXES: Prices are in U.S. Dollars, F.O.B. Alfa Laval shipping point, unless otherwise noted. Duty, brokerage fees, insurance, packing and handling as applicable are not included unless otherwise noted. Our prices do not include federal, state, municipal or other government excise, sales, use, occupational, processing, transportation or like taxes now in force or enacted in the future. You shall pay any taxes we may be required to collect or pay now or at any time in the future (including interest and penalties imposed by any governmental authority), or any taxes you may be required to pay, that are imposed upon the sale, delivery or support of Equipment purchased or licensed as a part of this order, or you shall provide us with a tax exemption certificate acceptable to the appropriate taxing authorities.

5. CREDIT AND PAYMENT: Unless otherwise noted on the face hereof payment for Equipment shall be (30) days net. Pro rata payments shall become due with partial shipments. Any discount period which may be granted by us begins on the invoice date and all payments are due 30 days after the invoice date. All payments shall be made without deduction, deferment, set-off, lien or counterclaim of any nature. All amounts due not paid within 30 days after the date such amounts are due and payable shall bear interest at the lesser of 1.5 percent per month or the maximum rate of interest allowed by law. We reserve the right at any time to suspend credit or to change credit terms provided herein, when, in our sole opinion, your financial condition so warrants. Failure to pay invoices when such invoices are due and payable, at our election, shall make all subsequent invoices immediately due and payable irrespective of terms, and we may withhold all subsequent deliveries until the full account is settled. We shall not, in such event, be liable for delay of performance or nonperformance of contract in whole or in part subsequent to such event.

6. CANCELLATIONS AND CHANGES: Orders which have been accepted by us are not subject to cancellation or changes in specification except upon prior written agreement by us and upon terms that will indemnify us against all losses resulting from or arising out of such cancellation or change in specifications. In the absence of such indemnification, we shall be entitled to recover all damages and costs of whatever nature permitted by the Uniform Commercial Code.

7. DEFERRED SHIPMENT: If shipment is deferred at your request, payment of the contract price shall become due when you are notified that the Equipment is ready for shipment. If you fail to make payment or furnish

shipping instructions we may either extend the time for so doing or cancel the contract. In case of deferred shipment at your request, storage and other reasonable expenses attributable to such delay shall be payable by you.

8. EQUIPMENT WARRANTY AND REMEDY:

(a) For new Equipment only, we warrant to you that the Equipment that is the subject of this sale is Sale Terms and Conditions Page 1 Rev 032204

free from defects in design (provided that we have design responsibility), material and workmanship. The duration of this warranty is twelve (12) months from delivery to you (the "Warranty Period"). If you discover within the Warranty Period a defect in design, material or workmanship, you must promptly notify us in writing. Within a reasonable time after such notification, we will correct any such defect with either new or used replacement parts, at our option. Such repair, including both parts and labor, is at our expense.

(b) For repairs, parts and service provided by us, we warrant to you that the repairs parts and service we provide to you will be free from defects in material and workmanship. The duration of this warranty is ninety (90) days from as applicable (i) the date the machine which required the repairs, parts or service is returned to you by us, (ii) the date of your receipt of the part, or (iii) the date of repair, if performed at your facility. If during this ninety day period you discover a defect in the repairs, parts or service you must promptly notify us in writing.

(c) All warranty service is subject to our prior examination and approval and will be performed by us at your facility or at service centers designated by us. All transportation to and from the designated service center will be at our expense. If we are unable to repair the Equipment to conform to the warranty after a reasonable number of attempts, we will provide, at our option, one of the following: (i) a replacement for such Equipment, or (ii) full refund of the purchase price. These remedies are your exclusive remedies for breach of warranty. Unless otherwise agreed in writing by us, our warranty extends only to you and is not assignable to or assumable by any subsequent purchaser, in whole or in part, and any such attempted transfer shall render all warranties provided hereunder null and void and of no further force or effect.

(d) We will use all reasonable efforts to obtain for you any manufacturer's guarantees or warranties for any sub-assemblies included in the Equipment. To the extent such warranties are assignable, we hereby assign to you all warranties that are granted to us by our suppliers of any sub-assemblies contained in the Equipment.

(e) The warranties set forth above are inapplicable to and exclude (i) any product, components or parts not manufactured by us or covered by the warranty of another manufacturer, (ii) damage caused by accident or the negligence of you or any third party, normal wear and tear, erosion, corrosion or by disasters such as fire, flood, wind and lightning, (iii) damage caused by your failure to follow all installation and operation instructions or manuals or to provide normal maintenance, (iv) damage caused by unauthorized or improper installation of attachments, repairs or modifications, (v) damage caused by a product or component part which we did not design, manufacture, supply or repair, or (vi) any other abuse or misuse by you or any third party.

9. LIMITATION OF LIABILITY: In no event shall we be liable, and you hereby waive any claims against us and release us from liability to you, for any indirect, special, punitive, incidental, or consequential damages whatsoever based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Excluded damages include, but are not limited to, loss of profits, loss of savings or revenue, loss of use of the Equipment or any associated equipment, cost of capital, cost of any substitute Equipment, facilities or services, downtime, the claims of third parties including customers, and injury to property. This limitation does not apply to claims for personal injury. Some states do not allow limits on warranties, or on remedies for breach in certain transactions. In such states, certain of the limitations in this paragraph and in subparagraph 8(c) may not apply.

10. OWNERSHIP: All drawings, designs and specifications supplied by us have been prepared or assembled by us and are solely our property. Such drawings, designs and specifications have been furnished in order to provide full documentation and on the condition that they shall not be reproduced or copied in any manner whatsoever, in whole or in part, except for your internal use as necessary, and upon the further condition that, as our sole property, they shall not be used, in whole or in part, for furnishing information to others or for any purpose not specifically authorized in a writing signed by one of our corporate officers. These ownership provisions shall not be superseded by any printed form used in connection with or arising out of a sale induced by a proposal or otherwise.

11. PATENT INFRINGEMENT

(a) We warrant that the Equipment in the condition sold to you is free of the rightful claim of infringement of any apparatus claims of any third-party U.S. patent issued as of the date of our acknowledgment and acceptance of your order, and we will defend, indemnify and hold you harmless from such claims; provided, however, we make no express or implied warranties of non-infringement and undertake no indemnification in respect of third-party rights where the alleged patent infringement is based upon or related to (i) any method, process or product claims in third-party U.S. patents; (ii) any combination of the Equipment with other equipment not supplied by us; or (iii) any modifications of the Equipment made by you and not approved by us.

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(b) You shall notify us within 30 days of your receipt of notice of an alleged third-party patent infringement claim that would entitle you to patent infringement indemnification pursuant to paragraph 11(a), and we shall thereupon assume defense of the claim at our expense. We shall have the sole right to settle or otherwise compromise such a third-party claim, including but not limited to the right to either (i) modify the Equipment to avoid infringement if you are agreeable to the modification, (ii) repurchase the Equipment from you at a price equal to the then-current fair market value of the Equipment, or (iii) secure rights by assignment or license to permit continued use of the Equipment.

(c) If a third party charges us with patent infringement relating to Equipment sold by us to you, we shall have the right to either (i) modify the Equipment to avoid infringement if you are agreeable to the modification, (ii) repurchase the Equipment from you at a price equal to the then-current fair market value of the Equipment, or (iii) secure rights by assignment or license to permit continued use of the Equipment. If a third party charges us with patent infringement on the bases set forth in paragraph 11(a)(i), (ii) or (iii), you shall hold us harmless for all expenses and awards of damage assessed against us, and we shall also have the right to modify or repurchase the Equipment or to secure rights for continued use by way of assignment or license as set forth in this paragraph.

(d) Our total, cumulative liability under paragraphs 11(a), (b) and/or (c) is limited to 100% of the price paid to us by you for the Equipment.

12. SAFETY AND HEALTH STANDARDS: The Equipment described herein (or on the specifications provided herewith) complies with applicable safety and health standards issued pursuant to the Occupational Safety and Health Act of 1970 (the Act) and in effect on this date as such standards are interpreted and understood by us. These standards may be amended and/or their meaning may be clarified prior to shipment or performance, and if such change or clarification requires changes in the Equipment described herein, we shall make the necessary changes available to you. You shall pay for any and all such changes at our prices therefor in effect at time of shipment or performance, as the case may be. Because actual compliance by employers with the Act is beyond our control, we cannot and do not represent that the use of the Equipment described herein, nor the location, installation or maintenance thereof, will comply with the Act or regulations and standards issued pursuant thereto. We make no representation of compliance with safety and health standards contained in any statute, regulations or ordinance of any state or political subdivision thereof applicable to the Equipment described herein unless you have notified us of the existence and contents of such standards and we have agreed in writing to the incorporation of such standards in the specifications relating to such Equipment. Nothing in this provision shall operate to modify or affect in any manner whatsoever our disclaimer of any liability for consequential damages contained elsewhere in these terms and conditions of sale.

13. INSPECTION: Upon prior written notice, you may make reasonable inspections of Equipment at our facility. We reserve the right to determine the reasonableness of the request and to select an appropriate time and location for such inspection. You agree to execute appropriate confidentiality provisions upon our request prior to visiting our facility. All costs of inspection shall be solely determined by us and shall be payable by you. No inspection or expediting by you at the facilities of our suppliers is authorized.

14. SOFTWARE PROVISIONS: If software is provided hereunder, you are granted a nonexclusive, royalty free license only for your use of the software provided with our Equipment. Under this license you may: (i) use our software in machine readable object code only and only with the Equipment provided; (ii) copy our software into any machine readable object code form for back up purposes in support of your use of our software on the Equipment provided; and (iii) create one additional copy of the software for archival purposes only. This license may not be assigned, sublicensed or otherwise transferred by you without our prior written consent. You hereby recognize and acknowledge that the software provided to you hereunder comprises valuable trade secret and/or copyright property of Alfa Laval [or its licensor] and you covenant that you will take adequate precautions against access to the software by, or disclosure of the software to, anyone not authorized hereunder to use or have access to the software.

15. TIME LIMIT FOR BRINGING SUIT: Any action you file against us, whether for breach of contract, including but not limited to breach of warranty, or for negligence or strict tort, must be commenced within 90 days following the expiration of the Warranty Period.

16. MODIFICATION OF TERMS: The terms and conditions of sale set forth herein are an integral part of our proposal and/or confirmation of order. These terms shall not be deemed altered or modified by printed or other "standard" terms in a purchase order, acceptance or similar document. Our confirmation or acknowledgment of any order is with the express understanding that all printed or other "standard" language on any such documents submitted by you will be entirely disregarded to the extent that it varies from the terms and conditions of this proposal/order which Sale Terms and Conditions Page 3 Rev 032204 Sale Terms and Conditions Page 4 Rev 032204

may be modified only by typed or handwritten language in the body of your order, acceptance or similar document, together with a written acknowledgment and acceptance of such modification by us.

17. LIMITATION ON WARRANTIES: THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING AN IMPLIED WARRANTY OF MERCHANTABILITY, AN IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND AN IMPLIED WARRANTY OF NONINFRINGEMENT. WE HEREBY EXPRESSLY EXCLUDE FROM THIS CONTRACT THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND THE IMPLIED WARRANTY OF NONINFRINGEMENT. OUR WARRANTIES AND LIABILITIES HEREUNDER ARE LIMITED AS STATED HEREIN.

18. APPLICABLE LAW: Any controversy or claim arising out of the contract or the breach thereof shall be finally decided with binding effect on both parties by the courts of Virginia and in accordance with the laws of the Commonwealth of Virginia, without giving effect to the provisions thereof relating to conflict of laws.

THE EQUIPMENT AND PARTS DESCRIBED IN THESE TERMS AND CONDITIONS OF SALE MAY CAUSE INJURY IF NOT OPERATED PROPERLY AND FOR THIS REASON ALL OPERATORS SHOULD BECOME THOROUGHLY FAMILIAR WITH THE OPERATING INSTRUCTIONS BEFORE OPERATING THE EQUIPMENT.