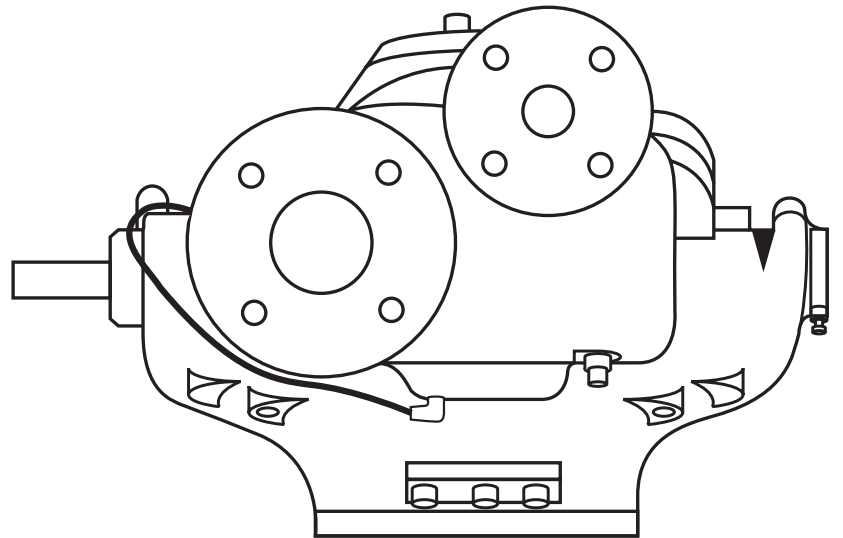




AURORA[®]



430B SERIES **TWO STAGE - DIAGONALLY HORIZONTAL SPLIT CASE PUMP**

REPAIR PARTS INDEX

NOTE! Read and understand the pump and motor instructions before attempting to install, disassemble or repair the pump.

**430 SERIES
MODEL 431B**

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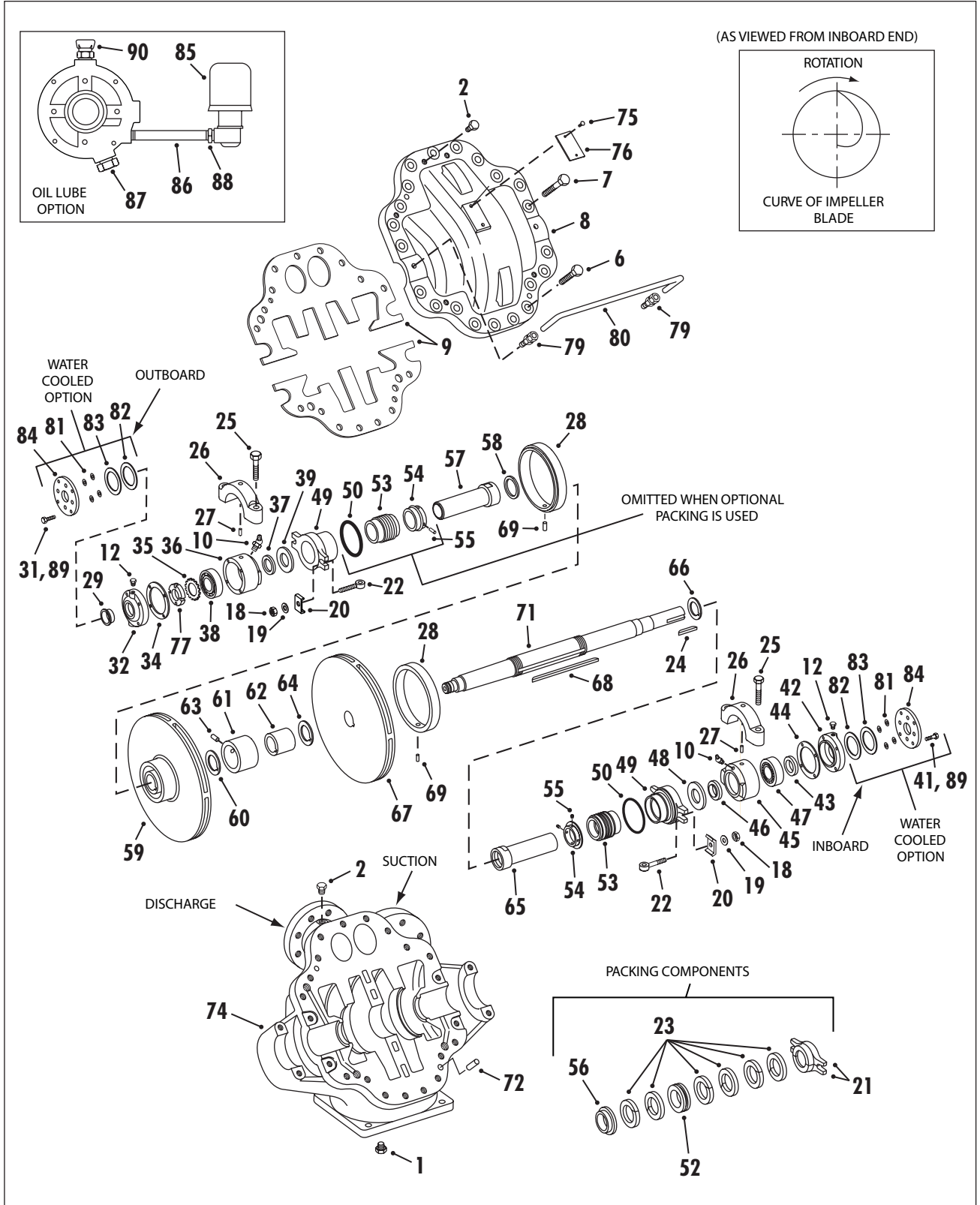
430B SERIES

MODEL 431B

PIECE NUMBERS

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DATED **NOVEMBER 1999**

SUPERSEDES 430P PAGE 3
DATED APRIL 1996



430B SERIES P.S. #2
MODELS 431B
1-1/2 x 3 x 9 – 2 x 4 x 9
PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL		
				B.F.	A.B.	A.I.
1	PLUG	5	600-0004	028	028	028
2	PLUG	5	600-0002	087	087	087
6	CAPSCREW	17	168-0566	082	082	082
7	CAPSCREW	4	168-0494	082	082	082
8	UPPER CASING		INCLUDED WITH NO. 74			
9	GASKET	1	364-1339	598	598	598
10	GREASE FITTING	2	508-0015	651	651	651
12	PLUG	2	600-0001	087	087	087
12A	PLUG+	6	600-0003	087	087	087
18	NUT	4	544-0109			080
19	WASHER	4	908-0112			080
20	CLAMP	4	204-0120			360
21	GLAND	2	372-0225	010	010	010
22	SWING BOLT	4	100-2011			360
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0014	644	644	
23	PACKING SET (6 RINGS)	2	564-3031	806	806	806
24	KEY	1	472-0247	087	087	087
25	CAPSCREW	4	168-0496	082	082	082
26	BEARING CAP		INCLUDED WITH NO. 74			
27	PIN	2	592-0361	360	360	360
28	CASE RING 1-1/2x3x9	2	676-1007	208	208	010
	2x4x9	2	676-1015	208	208	010
29	PROTECTOR	1	624-0080	087	087	087
31	CAPSCREW (STD)	4	168-0015	082	082	082
	WATER COOL (OPT)+	4	168-0025	082	082	082
32	CARTRIDGE CAP STANDARD	1	164-0531	010	010	010
	OIL LUBE**	1	164-0579	010	010	010
	WATER COOLED+	1	164-0580	010	010	010
34	GASKET	1	364-1309	614	614	614
35	LOCK WASHER	1	908-0406	080	080	080
36	CARTRIDGE	1	176-0065	010	010	010
37	GREASE SEAL	1	712-6324	653	653	653
	OIL SEAL**	1	712-0053	653	653	653
38	BEARING	1	068-0454	647	647	647
39	SLINGER SEAL	1	764-1017	478	478	478
	SLINGER, PACKED (OPT)	1	764-0002	208	208	208
41	CAPSCREW (STD)	4	168-0015	082	082	082
	WATER COOL (OPT)+	4	168-0025	082	082	082

** USE WITH OIL LUBRICATED BEARING OPTION ONLY

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL		
				B.F.	A.B.	A.I.
42	CARTRIDGE CAP STANDARD	1	164-0531	010	010	010
	OIL LUBE**	1	164-0579	010	010	010
	WATER COOLED+	1	164-0580	010	010	010
43	GREASE SEAL	1	712-0231	653	653	653
	OIL SEAL**	1	712-0016	653	653	653
44	GASKET	1	364-1309	614	614	614
45	CARTRIDGE	1	176-0065	010	010	010
46	GREASE SEAL	1	712-6324	653	653	653
	OIL SEAL**	1	712-0053	653	653	653
47	BEARING	1	068-1907	647	647	647
48	SLINGER, SEAL	1	764-1017	478	478	478
	SLINGER, PACKED (OPT)	1	764-0002	208	208	208
49	GLAND	2	372-0287	010	208	010
50	O-RING	2	364-0420	474	474	474
52	LANTERN RING	2	676-1698	512	512	512
53	SEAL, STD	2	712-0910	753	753	753
54	COLLAR	2	224-0174	208	208	010
55	SETSCREW	4	724-0081	104	104	104
56	BUSHING	2	136-1411	208	208	010
	SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)					
57	SLEEVE (SEALS)	1	756-0642	644	644	623
	SLEEVE (PACKING)	1	756-0642	644	644	646
58	O-RING	1	364-0368	474	474	474
59	IMPELLER 1-1/2x3x9	1	443-2088	225	010	010
	2x4x9	1	443-2090	225	010	010
60	O-RING	1	364-0368	474	474	474
61	BUSHING	1	136-1320	226	226	010
	SLEEVE WITH "O" RINGS PC. NO. 60 AND 64 (NOTE 2)					
62	SLEEVE	1	756-0632	644	644	642
63	PIN	1	592-0361	107	107	107
64	O-RING	1	364-0368	474	474	474
	SLEEVE WITH "O" RING PC. NO. 66 (NOTE 1)					
65	SLEEVE (SEALS)	1	756-0642	644	644	623
	SLEEVE (PACKING)	1	756-0642	644	644	646
66	O-RING	1	364-0368	474	474	474

+ USE WITH WATER COOLED BEARING CAP OPTION ONLY
 (REFER PC. NO. 91)

**430B SERIES P.S. #2
MODEL 431B
1-1/2 x 3 x 9 - 2 x 4 x 9
PARTS LIST**

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DATED APRIL 1996

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL		
				B.F.	A.B.	A.I.
67	IMPELLER 1-1/2x3x9 2x4x9	1	443-2089	225	010	010
		1	443-2091	225	010	010
68	KEY	1	472-0415	107	107	107
69	PIN	2	592-0361	107	107	107
71	SHAFT	1	728-7287	063	063	063
72	PIN	2	592-0375	360	360	360
74	CASING ASSEMBLY 1-1/2x3x9 2x4x9	1	179-0296	010	010	010
		1	179-0302	010	010	010
75	DRIVE SCREW	2	708-0013	365	365	365
76	NAMEPLATE	1	532-0045	114	114	114
77	LOCKNUT	1	544-0706	080	080	080
79	COMP. FITTING	2	868-3359	190	190	087
80	TUBING (INCHES)	20	872-0124	175	175	087
81	O-RING-BOLT +	8	364-0309	457	457	457
82	O-RING-ID +	2	364-0329	457	457	457
83	O-RING-OD +	2	364-0344	457	457	457
84	COVER PLATE+	2	260-0742	087	087	087
85	OILER**	2	552-0027	652	652	652
86	NIPPLE**	2	600-1162	387	387	387
87	PLUG**	2	600-0001	387	387	387
88	RED BUSHING**	2	600-0901	387	387	387
89	CAPSCREW+ WATER COOLED (OPT)	8	168-0011	082	082	082
90	BREATHER	2	864-0051	656	656	656
91	WATER COOLED CARTRIDGE CAP KIT, INCLUDES PC. NO. 12A, 29, 31, 32, 34, 81, 82, 83, 84 & 89	2	476-0745	644	644	644

** USE WITH OIL LUBRICATED BEARING OPTION ONLY

NOTE 1) MATERIAL CODE 644 - SLEEVE 208, "O" RING 457
646 - SLEEVE 108, "O" RING 457
623 - SLEEVE 104, "O" RING 457

NOTE 2) MATERIAL CODE 644 - SEP SLEEVE 215, "O" RING 457
642 - SEP SLEEVE 010, "O" RING 457

+ USE WITH WATER COOLED BEARING CAP OPTION ONLY

430B SERIES P.S. #3A
MODELS 431B
1-1/2 x 3 x 11 – 2 x 4 x 11
PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL		
				B.F.	A.B.	A.I.
1	PLUG 1-1/2x3x11	4	600-0004	028	028	028
		1	600-0006	028	028	028
	2x4x11	4	600-0004	028	028	028
		1	600-0007	028	028	028
	2	PLUG	10	600-0002	087	087
6	CAPSCREW	22	168-0568	082	082	082
7	CAPSCREW	6	168-0566	082	082	082
8	UPPER CASING		INCLUDED WITH NO. 74			
9	GASKET	1	364-2122	598	598	598
10	GREASE FITTING	2	508-0001	651	651	651
12	PLUG	2	600-0001	087	087	087
12A	PLUG+	6	600-0003	087	087	087
18	NUT	4	544-0109			080
19	WASHER	4	908-0112			080
20	CLAMP	4	204-0120			360
21	GLAND	2	372-0226	010	010	010
22	SWING BOLT	4	100-2017			360
22A	SWING BOLT ASSY. (18, 19, 20, 22)	4	099-0017	644	644	
23	PACKING SET (6 RINGS)	2	564-3032	806	806	806
24	KEY	1	472-0323	087	087	087
25	CAPSCREW	4	168-0496	082	082	082
26	BEARING CAP		INCLUDED WITH NO. 74			
27	PIN	2	592-0361	360	360	360
28	CASE RING	2	676-2109	208	208	010
29	PROTECTOR	1	624-0081	087	087	087
31	CAPSCREW (STD)	4	168-0260	082	082	082
	WATER COOL (OPT)+	4	168-0280	082	082	082
32	CARTRIDGE CAP					
	STANDARD	1	164-0581	010	010	010
	OIL LUBE**	1	164-0581	010	010	010
	WATER COOLED+	1	164-0582	010	010	010
	GASKET	1	364-2123	614	614	614
34	LOCK WASHER	1	908-0406	080	080	080
36	CARTRIDGE	1	176-0077	010	010	010

** USE WITH OIL LUBRICATED BEARING OPTION ONLY

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL		
				B.F.	A.B.	A.I.
37	GREASE SEAL	1	712-6326	653	653	653
	OIL SEAL**	1	712-0017	653	653	653
38	BEARING (BACK TO BACK)	2	068-0021	647	647	647
39	SLINGER SEAL	1	764-1020	478	478	478
	SLINGER, PACKED (OPT)	1	764-1042	208	208	208
41	CAPSCREW (STD)	4	168-0260	082	082	082
	WATER COOL (OPT)+	4	168-0280	082	082	082
42	CARTRIDGE CAP					
	STANDARD & OIL LUBE	1	164-0581	010	010	010
43	WATER COOLED+	1	164-0582	010	010	010
	GREASE SEAL	1	712-6334	653	653	653
44	OIL SEAL**	1	712-6471	653	653	653
	GASKET	1	364-2123	614	614	614
45	CARTRIDGE	1	176-0077	010	010	010
46	GREASE SEAL	1	712-6326	653	653	653
	OIL SEAL**	1	712-0017	653	653	653
47	BEARING	1	068-0158	647	647	647
48	SLINGER, SEAL	1	764-1020	478	478	478
	SLINGER, PACKED (OPT)	1	764-1042	208	208	208
49	GLAND	2	372-0362	010	208	010
50	O-RING	2	364-0423	474	474	474
	LANTERN RING	2	676-1699	512	512	512
53	SEAL, STD	2	712-0412	753	753	753
54	COLLAR	2	224-0017	208	208	010
	SETSCREW	4	724-0081	104	104	104
56	BUSHING	2	136-1412	208	208	010
SLEEVE WITH "O" RING PC. NO. 58 (NOTE 1)						
57	SLEEVE (SEALS)	1	756-0643	644	644	623
	SLEEVE (PACKING)	1	756-0643	644	644	646
58	O-RING	1	364-0372	474	474	474
59	IMPELLER					
	1-1/2X3X11	1	443-2881	225	010	010
	2X4X11	1	443-2883	225	010	010
60	O-RING	1	364-0372	474	474	474
61	BUSHING	1	136-1321	226	226	010
SLEEVE WITH "O" RINGS PC. NO. 60 AND 64 (NOTE 2)						
62	SLEEVE	1	756-0633	644	644	642
63	PIN	1	592-0361	107	107	107

+ USE WITH WATER COOLED BEARING CAP OPTION ONLY
 (REFER PC. NO. 91)

**430B SERIES P.S. #3A
MODEL 431B
1-1/2 x 3 x 11 - 2 x 4 x 11
PARTS LIST**

SECTION 430P PAGE 7
DATED NOVEMBER 1999
SUPERSEDES 430P PAGE 7
DATED APRIL 1996

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL		
				B.F.	A.B.	A.I.
64	O-RING	1	364-0372	474	474	474
	SLEEVE WITH "O" RING PC. NO. 66 (NOTE 1)					
65	SLEEVE (SEALS)	1	756-0643	644	644	623
	SLEEVE (PACKING)	1	756-0643	644	644	646
66	O-RING	1	364-0372	474	474	474
67	IMPELLER					
	1-1/2x3x11	1	443-2882	225	010	010
	2x4x11	1	443-2884	225	010	010
68	KEY	1	472-0302	107	107	107
69	PIN	2	592-0361	107	107	107
71	SHAFT	1	728-7291	063	063	063
72	PIN	2	592-0375	360	360	360
74	CASING ASSEMBLY					
	1-1/2x3x11	1	179-2471	010	010	010
	2x4x11	1	179-2468	010	010	010
75	DRIVE SCREW	2	708-0013	365	365	365
76	NAMEPLATE	1	532-0045	114	114	114
77	LOCKNUT	1	544-0706	080	080	080
79	COMP. FITTING	2	868-3359	190	190	087
80	TUBING (INCHES)	20	872-0124	175	175	087
81	NOT REQUIRED					
82	O-RING-ID +	2	364-0337	457	457	457
83	O-RING-OD +	2	364-0553	457	457	457
84	COVER PLATE+	2	260-0743	087	087	087
85	OILER**	2	552-0029	652	652	652
86	NIPPLE**	2	600-1212	387	387	387
89	CAPSCREW+	4	168-0011	082	082	082
	WATER COOLED (OPT)					
90	BREATHER	2	864-0051	656	656	656
91	WATER COOLED CARTRIDGE CAP KIT, INCLUDES PC. NO. 12A, 29, 31, 32, 34, 82, 83, 84 & 89	2	476-0749	644	644	644

** USE WITH OIL LUBRICATED BEARING OPTION ONLY

+ USE WITH WATER COOLED BEARING CAP OPTION ONLY

NOTE 1) MATERIAL CODE 644 - SLEEVE 208, "O" RING 457
646 - SLEEVE 108, "O" RING 457
623 - SLEEVE 104, "O" RING 457

NOTE 2) MATERIAL CODE 644 - SEP SLEEVE 215, "O" RING 457
642 - SFP SI FFVF 010 "O" RING 457

WARRANTY

Seller warrants equipment (and its component parts) of its own manufacture against defects in materials and workmanship under normal use and service for one (1) year from the date of installation or start-up, or for eighteen (18) months after the date of shipment, whichever occurs first. Seller does not warrant accessories or components that are not manufactured by Seller; however, to the extent possible, Seller agrees to assign to Buyer its rights under the original manufacturer's warranty, without recourse to Seller. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the serial number, the type of equipment, and the date of purchase) within thirty (30) days of the discovery of such defect during the warranty period. No claim made more than 30 days after the expiration of the warranty period shall be valid. Guarantees of performance and warranties are based on the use of original equipment manufactured (OEM) replacement parts. Seller assumes no responsibility or liability if alterations, non-authorized design modifications and/or non-OEM replacement parts are incorporated. If requested by Seller, any equipment (or its component parts) must be promptly returned to Seller prior to any attempted repair, or sent to an authorized service station designated by Seller, and Buyer shall prepay all shipping expenses. Seller shall not be liable for any loss or damage to goods in transit, nor will any warranty claim be valid unless the returned goods are received intact and undamaged as a result of shipment. Repaired or replaced material returned to customer will be shipped F.O.B., Seller's factory. Seller will not give Buyer credit for parts or equipment returned to Seller, and will not accept delivery of any such parts or equipment, unless Buyer has obtained Seller's approval in writing. The warranty extends to repaired or replaced parts of Seller's manufacture for ninety (90) days or for the remainder of the original warranty period applicable to the equipment or parts being repaired or replaced, whichever is greater. This warranty applies to the repaired or replaced part and is not extended to the product or any other component of the product being repaired. Repair parts of its own manufacture sold after the original warranty period are warranted for a period of one (1) year from shipment against defects in materials and workmanship under normal use and service. This warranty applies to the replacement part only and is not extended to the product or any other component of the product being repaired. Seller may substitute new equipment or improve part(s) of any equipment judged defective without further liability. All repairs or services performed by Seller, which are not covered by this warranty, will be charged in accordance with Seller's standard prices then in effect.

THIS WARRANTY IS THE SOLE WARRANTY OF SELLER AND SELLER HEREBY EXPRESSLY DISCLAIMS AND BUYER WAIVES ALL OTHER WARRANTIES EXPRESSED, IMPLIED IN LAW OR IMPLIED IN FACT, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Seller's sole obligation under this warranty shall be, at its option, to repair or replace any equipment (or its component parts) which has a defect covered by this warranty, or to refund the purchase price of such equipment or part. Under the terms of this warranty, Seller shall not be liable for (a) consequential, collateral, special or liquidated losses or damages; (b) equipment conditions caused by normal wear and tear, abnormal conditions of use, accident, neglect, or misuse of said equipment; (c) the expense of, and loss or damage caused by, repairs or alterations made by anyone other than the Seller; (d) damage caused by abrasive materials, chemicals, scale deposits, corrosion, lightning, improper voltage, mishandling, or other similar conditions; (e) any loss, damage, or expense relating to or resulting from installation, removal or reinstallation of equipment; (f) any labor costs or charges incurred in repairing or replacing defective equipment or parts, including the cost of reinstalling parts that are repaired or replaced by Seller; (g) any expense of shipment of equipment or repaired or replacement parts; or (h) any other loss, damage or expense of any nature.

The above warranty shall not apply to any equipment which may be separately covered by any alternate or special warranties.

PERFORMANCE: In the absence of Certified Pump Performance Tests, equipment performance is not warranted or guaranteed. Performance curves and other information submitted to Buyer are approximate and no warranty or guarantee shall be deemed to arise as a result of such submittal. All testing shall be done in accordance with Seller's standard policy under Hydraulic Institute procedures.

LIABILITY LIMITATIONS: Under no circumstances shall the Seller have any liability under the Order or otherwise for liquidated damages or for collateral, consequential or special damages or for loss of profits, or for actual losses or for loss of production or progress of construction, regardless of the cause of such damages or losses. In any event, Seller's aggregate total liability under the Order or otherwise shall not exceed the contract price.

ACTS OF GOD: Seller shall in no event be liable for delays in delivery of the equipment or other failures to perform caused by fires, acts of God, strikes, labor difficulties, acts of governmental or military authorities, delays in transportation or procuring materials, or causes of any kind beyond Seller's control.

COMPLIANCE WITH LAW: Seller agrees to comply with all United States laws and regulations applicable to the manufacturing of the subject equipment. Such compliance shall include: The Fair Labor Standards Acts of 1938, as amended; Equal Employment Opportunity clauses of Executive Order 11246, as amended; Occupational Safety and Health Act of 1970 and the standards promulgated thereunder, if applicable. Since compliance with the various Federal, State, and Local laws and regulations concerning occupational health and safety, pollution or local codes are affected by the use, installation and operation of the equipment and other matters over which Seller has no control, Seller assumes no responsibility for compliance with those laws and regulations, whether by way of indemnity, warranty, or otherwise. It is incumbent upon the Buyer to specify equipment which complies with local codes and ordinances.



AURORA®

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