PENTAIR

AURORA®

1070 SERIES
INLINE CIRCULATING PUMPS
INSTRUCTION, INSTALLATION, MAINTENANCE AND REPAIR MANUAL

NOTE! To the installer: Please make sure you provide this manual to the owner of the equipment or to the responsible party who maintains the system.

Part # A-03-334 | © 2015 Pentair Ltd. | 07/06/15

CAUTION

Always disconnect power supply from motor before servicing.

CALIFORNIA PROPOSITION 65 WARNING:

⚠WARNING This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

INSTALLATION:

For convenience, Aurora Circulators generally are installed in vertical pipelines, but may be changed easily on the job for horizontal pipelines or for opposite flow directions. To make the change, remove the body capscrews, taking care body gasket is kept in position, and rotate body to desired direction at 90˚ or 180˚ from the original position.

With arrow on body pointing in direction of flow, insert body capscrews and tighten evenly. [On Models 325-357 and 1A–2A, a gap between bearing bracket and pump body (volute) is normal. Do no overtighten body capscrews!] Turn pump shaft manually at coupler to make sure shaft turns freely and impeller does not rub in body. Always install with motor shaft in a horizontal position with pump oil cups or oil well cover on top.

Models 325-346 are shipped for down-discharge. All other models are shipped for up-discharge as pumps of this size usually are installed to pump upward on hydronic systems, so the point of zero pressure change – namely, the compression tank connection – can be made easily to the system on the suction side of the circulator.

The pump should be installed in a position to permit proper lubrication and servicing. Motor and bearing bracket are to be kept free of insulation. Pump and motor unit are designed to be supported by the *inline piping only*. *Do not* support in any other manner. A height of approximately 4 feet above floor is recommended. When placing pump between flanges, tighten flange bolts evenly and do not tighten excessively.

Gate valves should be installed on discharge and suction side of pump to facilitate service. On larger pump sizes, a check valve should be located on discharge side of pump between pump body and gate valve to prevent damage due to water hammer.

SYSTEM CLEANLINESS:

Before starting the pump, the system must be thoroughly cleaned, flushed and drained, then replenished with clean liquid. Welding slag and other foreign materials, “stopleak” and cleaning compounds, excessive or improper water treatment – all are detrimental to the pump internals. Guarantee will be void if any of these conditions is allowed to exist.

STARTING UP:

The pump must be fully primed on start-up. Fill system piping and pump body with liquid and vent complete system, turning pump by hand to dislodge air from body. Make sure fittings and drain valves are airtight, then add any additional fill required.

Check motor electrics against available supply, then start pump making sure rotation is correct. When viewed from motor end, rotation is counterclockwise on Models 325-346. On all other models, rotation is clockwise. If pressure does not develop, stop pump, recheck, vent and fill. Never attempt to fill system when pump is running.

LUBRICATION:

CAUTION

Stop motor before lubricating. Do not over-oil or spill on resilient motor rings. Do not force oil into cups, and stop if cup fills before addition of specified amount.

PUMP LUBRICATION:

Immediately after pump is installed and before running, slowly add the oil (SAE 30 non-detergent regular, supplied with pump) to pump oil cup, located on top of bearing bracket:

Models 325–357 and 1A–2A	1/4 oz.
Models 369, 363–368 and 1-1/2B–3B	2 oz.

At the start of each following heating season, lubricate with SAE 30 oil. For Models 325–357 and 1A–2A, add approximately 1/4 oz. (Lubricate every 6 months for high temperature or constant operation.) On Models 369, 363–368 and 1-1/2B–3B, be sure oil is visible at the top and center of window on side of bracket and maintain this level at all times.

MOTOR LUBRICATION:

CAUTION

Stop motor before lubricating. Do not over-oil or spill on resilient motor rings.

This motor has been lubricated properly at the factory. At the start of each following heating season, however, on motors with oil cups, add 15 drops SAE 30 non-detergent oil to each motor cup.

If motor is fitted with grease fittings, follow the motor manufacturer’s recommended procedure. Motors without oil cups or grease fittings are custom-greased for several years operation and require little or no attention.

SEAL REPLACEMENT:

Remove pump bracket from body. Remove the impeller, damaged seal assembly, ceramic insert and rubber cup. Clean the recess in bearing bracket coverplate and install a new retainer cup and ceramic. Check the condition of the shaft sleeve. If scored, replace the shaft assembly. Otherwise, clean shaft extension and polish sleeve with fine crocus cloth, using a rotating motion, if required.

Press against coupler end of shaft to take up play while pressing new seal firmly against the stationary face. A slight amount of clean vaseline may be put on shaft sleeve to assist installation. Press down firmly and evenly, using 2 screwdrivers and pushing against the 4 ears of driving band (the metal ring around rubber bellows), or around top outer edge of driving band on Models 325–357 and 1A–2A.

Do not use spring washer on Models 325, 332 & 335 current style circulators, where recess to locate spring is provided on impeller hub.

Continue pressing against coupler end of shaft, remount impeller and reassemble the seal bearing assembly into body. If necessary, install a new body gasket and clean gasket surface of both volute and bracket.

CAUTION

Before operating pump, carefully check:

1. Is the pump primed?
2. Is rotation correct?
3. Is pump properly lubricated?
4. Does the power supply agree with data on motor nameplate?
5. Is overload protection provided?
6. Is the system clean?

For domestic water systems use bronze body pumps.

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.

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