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E-10 & E-14 Spa Circulation Pump Instruction Manual Installation, Operation and Warranty

E-10 circulation pumps E10-NSHNDNN2W-05

E-14 circulation pumps E14-NSTNDNN2W-01

Resellers - Please ensure that the pump owner receives a copy of this document

Warning

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capacities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure they do not play with the appliance.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Unpacking

When unpacking the unit, inspect carefully for any damage that may have occurred in transit. Check for loose, damaged or missing parts. Any problem - contact the supplier purchased through immediately. Do not attempt to repair or modify in any way or warranty may be void.

Understanding pump operation

These pumps are magnetically driven with floating rotor assemblies. The rotor has a concave carbon bearing surface that seats over a fixed ceramic dome on the motor can. This joint is water lubricated. The electronics in the motor can vary the rotation speed from time to time and have a slight delay on motor start up. These are normal characteristics of the pump.

Installation

The pump must be installed:

in a clean, dry, weather and moisture protected location with adequate air ventilation.

with the power cord run in such a manner that water cannot run down it into the pump or spa controller. In a manner that it cannot be submerged / flooded. This pump is not submersible.

Either horizontally or vertically with the wet end uppermost – it must not be installed on an angle with the wet end facing downward from horizontal,

Protect cords from sharp objects, hot surfaces; avoid kinking or coiling of the cord. Replace damaged cords immediately.

Locate pump as close as possible to the fluid source thus making the suction line as short and direct as possible, using tubing on the suction that cannot collapse, such as a reinforced type.

Support the tubing independently of the pump. Use clamps to secure and seal the tube to the pump.

These pumps are liquid lubricated. How they are mounted, and water condition/quality are important.

Thoroughly clean and flush the system before installing the pump
Plumbing valves, fittings, etc. should be positioned to avoid leakage onto the pump.
Ensure plumbing is designed and installed in such a way that the pump will fill with water when the plumbing system fills, to avoid air locking and dry running.
If replacing an older Laing SM9xx series circulation pump, ensure that any inline strainer is removed prior to installing an E-10. The increased flow of this pump through a restriction in the suction (such as a strainer) can result in pump starvation and dry running damage.

Mounting

For installation purposes, the arrows on the side of the pump housing indicate the direction of water flow through the pump. Ensure the pump and piping is adequately supported. Do not mount the motor above the wet end. Correct orientation of the pump includes mounting horizontally or vertically with suction facing upward only. The pump can roll on its foot (E-10) to allow different angles of discharge alignment. Do not position with discharge port lower than inlet / suction port. This helps prevent air locking.

Ensure the pump mounting is secured to a solid base with pan head self tapping screws.

Operation

Completely fill the spa before operating the pump. Do not start the pump until the spa has been filled. Make sure isolation valves are fully open and the pump is flooded with water.
Purge air from the plumbing system prior to operating the pump. This can be achieved by loosening the plumbing connection at the pump to allow any air present, to escape.

These 2 steps are very important. The pump can never be allowed to run dry as this can severely damage the pump and will void warranty.

Operate the pump. Ensure water is pumping through the plumbing system. Turn off immediately if no water is flowing within 30 seconds. Once running correctly, recheck after 5 minutes to ensure continued proper operation.

This procedure may be necessary every time the spa is drained and refilled.

It may be necessary to open a discharge valve, port or fixture to ensure all air is purged. The pump should be running quietly. If gurgling is heard, it may mean that air is still in the system. Turning the pump on and off several times will generally clear remaining air. If gurgling noises persist, recheck and purge the system (note that ozone injection can make a gurgling sound at the injector and not be a pump issue).

Dry run protection. Pump motors are fitted with dry run protection to preserve the MOTOR. If a dry run condition occurs, the motor will stop and restart numerous times in the attempt to purge air. This does not guarantee protection of the wetend / rotor bearing as dry running will cause failure NOT covered by warranty. This dry run motor protection prevents motor failure provided it's addressed when noise is audible from the pump. If left unchecked it can result in seizure and windings or electronic failure. A failed rotor only, due to dry running or chemical / water condition damage, can be ordered from spatex and replaced rather than a complete pump. If the windings or electronics are damaged, a replacement pump is required, not covered by warranty.

*Dry running is a term referring to operation of the pump with insufficient water flow or a lack of water present, resulting in overheating.

Trouble Shooting

Motor will not start or run:

Improper electrical connection, blown fuse or circuit breaker, loose or broken wiring, foreign object stuck

in impeller, motor failure, dry run motor protection has operated.

Pump will not prime:

leak, kink or obstruction in suction line, pump is worn, dirty / blocked filter

Little or no discharge:

Air in pump, suction blockage, head too high, blockage in pump, pump not running, dirty / blocked filter

Noisy operation:

Air in pump housing / dry running, worn rotor bearing, debris in pump. TURN OFF IMMEDIATELY when noise is detected and contact the supplier. This may prevent terminal failure of the pump.

Electrical requirements for this pump:

220-240v, 50/60Hz

Water temperature range 10c-60c

Maximum operating head pressure for E-10 & E-14 pumps - 2 bar.

Warranty

spatex warrants E-10 & E-14 (hereafter stated as the 'pump') shall be free from defects in materials & workmanship for a period of 18 months from date of supply to OEM/wholesaler/resellers or 12 months from date of purchase to the end user, whichever period ends first.

All pump warranty claims are subject to pump return to spatex for inspection to determine CAUSE OF FAILURE before any warranty repair or replacement can be approved. All claims should be directed to the place of purchase in the first instance.

If the pump is found to be defective with a manufacturing fault within the warranty period, the pump will be repaired or replaced, or in the case of wholesale or OEM customers a credit will be issued.

This warranty is void if the pump is altered or modified in any way by any person other than spatex, (including cord replacement / alteration) or if the product is not installed and used in accordance with these instructions, or if the pump has been subjected to misuse, abuse, or neglect, including CORROSION OR WEAR CAUSED BY CHEMICAL ACTION or dry running. The pump is for use in fresh water applications in the spa / pool industry only. Use of this pump with any other medium or for any other application will void warranty. This warranty is void if the pump label / identifying marks have been altered, defaced, or removed. spatex liability under this warranty shall be limited to the repair and /or replacement at spatex discretion, of any pump, or part thereof without charge including freight. Freight of the pump under claim is the responsibility of the sender and the current amount of freight charged for outbound freight will be credited to the customer in compensation once a warranty claim is approved. It is expressly understood & agreed that spatex shall not be liable or responsible for any costs incurred for labour, services, transportation, or any other charges that may arise in connection with the removal of the pump and/or installation consequential (including but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) resulting from the use or the inability to use the pump, and the user agrees that no other remedy shall be available to it. The maximum liability under this warranty shall not exceed the spatex contract price of the pump. In order to receive warranty consideration, the pump must be returned prepaid to spatex from the person/business that made the original purchase, together with proof of purchase, reason for return, and description of installation & operating conditions (photos may be requested).

For warranty to be considered, all pumps returned to spatex must comply with the following: (1) must have been originally sourced / purchased & fully paid for, through spatex;(2) must have prior spatex authorisation and shipped with an Returned Goods Authority (RGA) number provided by spatex; (3) must be sent prepaid;(4) be returned as supplied, with original cord still attached, and; (5) must be accompanied by warranty claim supporting documentation. (6) Must have the serial number label intact and legible. No

pump will be accepted by spatex until the above requirements are satisfied. spatex's liability under this warranty shall be in lieu of all warranties of fitness and in lieu of all warranties of merchantability. Before using, the user shall determine the suitability of the pump for its intended use, and the user assumes all risk and liability whatsoever in connection therewith. No-one is authorised to make any warranty of representation other than as described above, and buyer and/or user may not rely on any other warranty or representation.

spatex will not cover any pump that was not purchased through spatex under this warranty. E-10 & E-14 pumps sourced through alternate suppliers such as imported spa manufacturers, must have warranty processed through their respective suppliers. Such pumps carry no Australian Approval unless covered under that manufacturers 'complete spa approval'.

Pumps returned for warranty claims that have warranty rejected are subject to freight & administration charges for return to the customer.

All pumps or components repaired / replaced under warranty are surrendered to spatex.

Common pump failure causes that are NOT warrantable:

Dry running - operating the pump without sufficient water or flow will cause the bearing surfaces to overheat resulting in irreparable damage to the carbon seal on the rear of the rotor and possible motor can damage. This is NOT warranted. Chemical overdosing or imbalance, in fresh & salt applications (poor water quality) - the abrasive nature of water chemistry in these situations results in the irreparable corrosion / wear of the bearing surfaces and motor can - This is NOT warranted. Physical damage and rodent damage to pump / cords is NOT warranted. Nor is submersion or any other non manufacturing defect.

Water entry to the motor - pumps are to be protected from water entry from flood, rain, or penetration in any way, including

cable gland.

Alterations including power cord replacement not carried out by spatex that results in failure of the pump. Generally wet end failure is due to incorrect chemical care, dry running, use or installation and NOT warranted.

Motor / electronics manufacturing defects resulting in pump failure ARE warranted where no wet end damage is evident.

Warranty covers manufacturing defects and generally applies to motor failure only:

Wet end damage will result in motor failure not covered by warranty.

Wet end damage - There are really only 5 ways the rotor will hit the motor casing and scrape

1. Debris caught behind the rotor – not common and difficult to occur.
2. Pump mounted with wetend dipping downward from horizontal – throws the rotor off balance. Must be installed with wet end horizontal through to vertical with wetend uppermost.
3. Chemical corrosion of the carbon surface in the rotor
4. Physical abrasion of the carbon surface from high TDS, salt, etc
5. Dry running / flow starvation causing overheating and cooking of the carbon surface

If its picked up early – ie the pump is stopped when noise id detected, a replacement rotor is often all that's required to resolve.

If left unfixed, it starts to overheat and cook the windings or electronics as it struggles to rotate with the magnetic field. At that point the pump requires replacement.

None of these issues are a manufacturing defect and therefore not warrantable causes of failure.

For warranty, we look for a clean wet end without physical damage. If its clean and the motor hasn't had water dripping on it/flooded, or run over by a truck, its warranted.

In the event of a wet end only failure, NOT covered by warranty, spatex at its discretion may supply repair components at nominal cost and will assess labour & freight charges for assessment and/or repair at