## Little GIANT.

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#### 2E-NDVR



#### SERVICE INSTRUCTIONS



CAUTION: Before servicing the pump, disconnect it from electrical service by unplugging the power cord, removing the fuse, or turning off the disconnect box.

- If your pump fails to operate properly, remove it from water and try it at another electrical outlet to make sure that power is getting to unit.
- 2. If the pump does not start:
  - a) Disconnect it from electrical service and remove the screen from the pump.
  - b) Remove the 3 screws (item #5) in Figure 2. DO NOT remove any other screws.
  - c) Remove the volute.
  - d) Lightly clean any corrosion or debris which may have clogged the impeller. Use a brush and penetrating oil and lightly scrape to remove encrusted material.
  - e) Turn the impeller by hand to make sure that it turns freely.
  - f) Plug the unit in to see if the impeller will turn.
- 3. If the pump operates properly, replace the parts in reverse order and test the unit in water. The unit should operate properly when connected to correct voltage.
- If the pump still does not operate properly, call your dealer or service person.

DO NOT open the sealed portion of the unit or remove screws other than those indicated above. DO NOT cut the electric cord off short when removing the unit from the application. Disconnect the pump from its regular connections. Failure to follow these quidelines may void the warranty.

### **(III)** INTRODUCTION

This instruction sheet provides you with the information required to safely own and operate your Little Giant pump. Retain these instructions for future reference.

The Little Giant pump you have purchased is of the highest quality workmanship and material, and has been engineered to give you long and reliable service. Little Giant pumps are carefully tested, inspected, and packaged to ensure safe delivery and operation. Please examine your pump carefully to ensure that no damage occurred during shipment. If damage has occurred, please contact the place of purchase. They will assist you in replacement or repair, if required.

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR SERVICE YOUR LITTLE GIANT PUMP. KNOW THE PUMP'S APPLICATION, LIMITATIONS, AND POTENTIAL HAZARDS. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

#### **SAFETY GUIDELINES**



During installation, follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

For maximum safety, this pump should be connected to a three-prong grounded outlet equipped with a ground fault circuit interrupter (GFCI) device.

Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, or kerosene. Pump should only be used with liquids compatible with pump component materials.

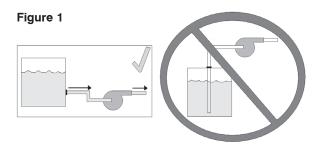
Do not handle a pump or pump motor with wet hands or when standing on a wet or damp surface, or in water. Do not stand in water while changing fuses or insert your finger into the fuse socket. Failure to follow this warning can result in fatal electrical shock.

#### **PUMP CONSTRUCTION**

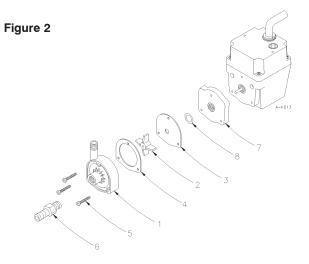
The Little Giant 2E-NDVR is designed for in-line use. The pump consists of an aluminum diecast housing, aluminum seal plate, nylon impeller and volute, stainless steel backplate, and Fluoroelastomer (FKM) gasket. The pump uses a two-seal design. The seals are double lip radial design type. One is mounted in the aluminum pump housing, the other is in the aluminum seal plate. The exposed motor shaft is stainless steel. The discharge is threaded (1/4" MNPT), the intake is also threaded (3/8" FNPT). An adapter is included for the intake for 1/2" ID tubing.

The pump is designed for weak acids, mild chemicals, cleaning solvents, antifreeze, and potable fluids compatible with pump materials.

The 2E-NDVR can be used submerged when pumping water or machine oils and should only be used in-line (not submerged) when pumping weak acids. This pump is not self priming; it must be installed so that the pump head (volute) is flooded when the pump is started. That is, the inlet of the pump must be below the level of the surface of the liquid being pumped (Figure 1).







REPLACEMENT PARTS			
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	102334	Volute, 3/8" NPT	1
2	102437	Impeller assembly	1
3	102507	Backplate	1
4	102601	Gasket, front	1
5	901409	Screw #8-32 x 15/8"	3
6	941005	Adaptor, 3/8" MNPT x 1/2" O.D.	1
7	102512	Plate, seal	1
8	924005	Seal, O-ring	1

NOTE: Parts list applies to products shown. Other models are available, however, parts may vary. For other models, contact parts depot, factory or distributor for replacement parts. Be sure to give the six digit product number and model number when requesting parts.

#### LIMITED WARRANTY

# THIS WARRANTY SETS FORTH THE COMPANY'S SOLE OBLIGATION AND PURCHASER'S EXCLUSIVE REMEDY FOR DEFECTIVE PRODUCT.

Franklin Electric Company, Inc. and its subsidiaries (hereafter "the Company") warrants that the products accompanied by this warranty are free from defects in materials or workmanship of the Company that exist at the time of sale by the Company and which occur or exist within the applicable warranty period. Any distributor, sub-distributor, recipient, end-user and/or consumer agrees that by accepting the receipt of the products, the distributor, sub-distributor, recipient, end user and/or consumer expressly agrees to be bound by the terms of the warranty set forth herein.

#### I. Applicable Warranty Period

The products accompanied by this warranty shall be covered by this Limited Warranty for a period of 12 months from the date of original purchase by the consumer. In the absence of suitable proof of purchase date, the warranty period of this product will begin to run on the product's date of manufacture.

#### II. Instructions Applicable to this Limited Warranty

- Consumers wishing to submit a warranty claim must return the products accompanied by this warranty to the point of purchase for warranty consideration.
- Upon discovery of a defect, any personal injury, property damage or any other type of resulting damage, if applicable, shall be reasonably mitigated to the extent possible.
- At its discretion, the Company may inspect products either at its facilities, or in the field, and after determination of a warranty claim, will, at its option, repair or replace defective parts. Repaired or replaced parts will be returned freight prepaid by the Company.
- 4. This warranty policy does not cover any labor or shipping charges. The Company shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or for any tools, supplies, or equipment needed to install, repair, or remove any product.

#### III. Limitations Applicable to this Limited Warranty

#### THIS WARRANTY DOES NOT APPLY TO ANY OF THE FOLLOWING:

- Brushes, impeller or cam on models with brush-type motors and/ or flex-vane impellers.
- Any product that is not installed, applied, maintained and used in accordance with the Company's published instructions, applicable codes, applicable ordinances and/or with generally accepted industry standards.
- 3. Any product that has been subject to misuse, misapplication, neglect, alteration, accident, abuse, tampering, acts of God (including lightning), acts of terrorism, acts of war, fire, improper storage or installation, improper use, improper maintenance or repair, damage or casualty, or to an excess of the recommended maximums as set forth in the product instructions.
- Any product that is operated with any accessory, equipment, component, or part not specifically approved by the Company.
- Use of replacement parts not sold by the Company, the unauthorized addition of non-Company products to other Company products, and the unauthorized alteration of Company products.
- Products damaged by normal wear and tear, normal maintenance services and the parts used in connection with such service, or any other conditions beyond the control of the Company.
- Any product that has been used for purposes other than those for which it was designed and manufactured.
- 8. Any use of the product where installation instructions and/or instructions for use were not followed.

- 9. Products connected to voltage other than indicated on nameplate.
- 10. Products where the pump was exposed to any of the following: sand, gravel, cement, grease, plaster, mud, tar, hydrocarbons, hydrocarbon derivatives (oil, gasoline, solvents, etc.) or other abrasive or corrosive substances.
- 11. Products in which the pump has been used to pump or circulate anything other than fresh water at room temperature.
- 12. Products in which the pump was allowed to operate dry (fluid supply cut off).
- 13. Products in which the sealed motor housing has been opened or the product has been otherwise dismantled by customer.
- 14. Products in which the cord has been cut to a length of less than three feet.

The Company reserves the right at any time, and from time to time, to make changes in the design and/or improvements upon its product without thereby imposing any obligation upon itself to make corresponding changes or improvements in or upon its products already manufactured and/or previously sold. The Company further reserves the right to substitute parts or components of substantially equal quality in any warranty service required by operation of this Limited Warranty.

This written Limited Warranty is the entire warranty authorized and offered by the Company. There are no warranties or representations beyond those expressed in this document.

THIS WARRANTY AND REMEDY IS IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY SPECIFICALLY DISCLAIMED AND EXPRESSLY EXCLUDED. CORRECTION OF NON-CONFORMITIES, IN THE MANNER AND FOR THE PERIOD OF TIME AS SET FORTH ABOVE, SHALL CONSTITUTE FULFILLMENT OF ALL LIABILITY OF THE COMPANY TO THE PURCHASER WHETHER BASED ON CONTRACT, NEGLIGENCE, OR OTHERWISE.

THE COMPANY SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES SUCH AS, BUT NOT LIMITED TO:

DAMAGE TO OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF USE OF EQUIPMENT, FACILITIES OR SERVICE, LOSS OF PROFIT OR SALES, COST OF PURCHASES OR REPLACEMENT GOODS, CLAIMS OF CUSTOMERS OF THE PURCHASER, FAILURE TO WARN AND/OR INSTRUCT, LOSS OF OTHER PRODUCTS, OR COSTS OF ENVIRONMENTAL REMEDIATION, OR DIMINUTION IN PROPERTY VALUE. THE REMEDIES OF THE PURCHASER SET FORTH HEREIN ARE EXCLUSIVE, AND THE LIABILITY OF THE COMPANY SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE PRODUCTS UPON WHICH SUCH LIABILITY IS BASED. DAMAGES AS SET FORTH IN THIS PARAGRAPH SHALL BE REASONABLY MITIGATED TO THE EXTENT POSSIBLE. THIS PARAGRAPH SHALL ALSO APPLY TO ALL DAMAGES RESULTING FROM CONDITIONS SET FORTH IN SECTION III ABOVE AND (1) DEFECTS IN PRODUCT PROTOTYPES OR REPLACEMENT PART PROTOTYPES THAT HAVE NOT BEEN PUT INTO PRODUCTION, CIRCULATED AND SOLD BY THE COMPANY, AND/OR (2) DEFECTS THAT WERE NOT FOUND AT THE TIME OF SALE DUE TO SCIENTIFIC AND TECHNOLOGICAL REASONS.

This Limited Warranty gives you specific legal rights. You may have other rights, which vary according to the applicable laws and regulations. Where any term of this warranty is prohibited by such laws, it shall be null and void, but the remainder of this warranty shall remain in full force and effect.

**DISCLAIMER:** Any oral statements about the product made by the seller, the Company, the representatives or any other parties, do not constitute warranties, shall not be relied upon by the user, and are not part of the contract for sale. Seller's and the Company's only obligation, and buyer's only remedy, shall be the replacement and/or repair by the Company of the product as described above. Before using, the user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith.

For technical assistance, please contact . . . . . . . . . . . . 800.701.7894

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