



**INSTALLATION
OPERATION
AND
MAINTENANCE
OF THE
GULF STREAM® FOUNTAINS**

2008

This manual is designed for your use in the installation, operation and maintenance of your Gulf Stream fountain, please do not dispose of this manual.

The following information is provided to alert persons to potential personal injury hazards inherent with products.

! DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

! WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

! CAUTION: Indicates a potentially hazardous situation which, may result in minor or moderate injury.



'THE WATER'S EDGE'

SAFETY DATA INFORMATION SHEET

- ! DANGER:** RISK OF ELECTRIC SHOCK. DO NOT INSTALL THIS EQUIPMENT IN SWIMMING AREAS. THIS EQUIPMENT HAS NOT BEEN INVESTIGATED FOR USE IN SWIMMING AREAS.
- ! WARNING:** DISCONNECT AND LOCK OUT ELECTRICAL POWER BEFORE ANY SERVICE IS PERFORMED ON THIS DEVICE.
- ! WARNING:** THE CONTROL PANEL AND UNIT MUST BE GROUNDED. FAILURE TO CONNECT TO A PROPER GROUND COULD RESULT IN PERSONAL INJURY OR DEATH.
- ! WARNING:** BEFORE ATTEMPTING TO INSTALL, SERVICE OR MAINTAIN THE UNIT AND/OR FLOTATION IN ANY BODY OF WATER A COAST GUARD APPROVED PERSONAL FLOTATION DEVICE (PFD, TYPE III OR HIGHER) MUST BE WORN.
- ! WARNING:** THE FLOTATION PROVIDED FOR THIS EQUIPMENT, HAS NOT BEEN INVESTIGATED PERSONAL FLOTATION DEVICE.
- ! WARNING:** ATTEMPTING TO INSTALL OR SERVICE EQUIPMENT FROM AN UNSTABLE WORK PLATFORM COULD RESULT IN DEATH OR INJURY.
- ! WARNING:** POSSIBLE CUTTING HAZARD. ROTATING PROPELLER COULD RESULT IN SERIOUS INJURY. TURN OFF POWER AND LOCK OUT BEFORE INSTALLATION OR SERVICING.
- ! NOTICE:** DO NOT OPERATE THIS EQUIPMENT OUT OF THE WATER. (EXCEPTION:) IT IS PERMISSABLE TO BUMP RUN 3-PHASE EQUIPMENT OUT OF THE WATER TO VERIFY COUNTER CLOCKWISE MOTOR ROTATION WITH A RAPID ON/OFF OPERATION.
- ! CAUTION:** INSTALLATION OR SERVICE WORK MUST BE PERFORMED FROM A STABLE WORK PLATFORM TO AVOID THE POSSIBILITY OF CAPSIZING.



INSTALLATION AND OPERATION INSTRUCTIONS FOR GULF STREAM SHALLOW POOL FOUNTAINS

! WARNING: DO NOT INSTALL OR USE THIS DEVICE IN SWIMMING AREAS

INSTALLATION OF GULFSTREAM UNIT

STEP 1 Inspect the unit for any shipping damage before and after the carton is opened and report to Air-O-Lator Corporation any discrepancies.

STEP 2 Place the Gulf Stream unit in the desired location and attach the nozzle riser and flow-adjusting valve to the pump.

STEP 3 Check that all pump fasteners are secure (tighten no more than 30 to 35 inch pounds).

NOTE: For multiple nozzle use and any use requiring additional pipe it will be necessary to seek the advice of a local irrigation-piping specialist that has access to the Gulf Stream performance data.

It will also be necessary to have the desired nozzle performance chart to properly size the pump- to pipe- to nozzle or multi-nozzle applications and to take into account any fittings thus allowing for friction loss.

ELECTRICAL CONNECTIONS

! DANGER: ELECTRIC SHOCK HAZARD. DISCONNECT ELECTRICAL POWER BEFORE SERVICING PANEL OR MACHINE.

! WARNING: ROTATING PROPELLER COULD RESULT IN SERIOUS INJURY, TURN OFF POWER BEFORE SERVICING MACHINE.

! WARNING: THE CONTROL PANEL AND UNIT MUST BE GROUNDED. FAILURE TO CONNECT TO A PROPER GROUND COULD RESULT IN PERSONAL INJURY OR DEATH.

ALL GULF STREAM UNITS OPERATE ONLY ON 230-VOLT SINGLE PHASE POWER. FRANKLIN ELECTRIC PERMITS 208-VOLT SINGLE PHASE OPERATION USING 230-VOLT MOTORS IF THE VOLTAGE DOES NOT FALL BELOW 207-VOLTS WHILE THE UNIT IS IN OPERATION.



E.L.C.I./G.F.C.I. INFORMATION

Equipment Leakage Current Interrupter/Ground Fault Circuit Interrupter is provided on single-phase equipment manufactured for use in the United States. E.L.C.I./G.F.C.I. protection is required per NEC. Canadian Electric Codes require E.L.C.I./G.F.C.I. protection at the service entrance.

If the ground fault interrupter trips, the cause may be difficult to discover. It is human nature to immediately suspect the equipment, when in fact outside influences should be suspect. To assist you in determining the best method of finding the faults, please contact the factory at 1-800-821-3177, 8:30 a.m. – 4:30 p.m. Central Time.

INSTALLATION OF CONTROLS

- STEP 1 Install a standard 2-pole circuit breaker in your circuit breaker panel to a 230-volt single-phase circuit. Do not use a ground fault circuit breaker with the Gulf Stream ground fault in operation at the same time. Nuisance tripping may be a result.
- STEP 2 Mount the control panel to a suitable surface and attach the motor lead to the terminal strip located inside the control panel. The yellow wire attaches to YEL term, the black tracer wire to the BLK term, the red tracer wire to the RED term and the green tracer to the ground GND. **FAILURE TO CONNECT THE UNIT TO A PROPER GROUND COULD RESULT IN PERSONAL INJURY OR DEATH.**
- STEP 3 Gulf Stream requires 3-wire 230-volt service. Connect the power supply to the control panel from your power supply circuit breaker. The system must be properly grounded.
- STEP 4 The factory-attached Gulf Stream motor leads are of one-piece construction and may be longer than needed and may be cut to the desired length. Be careful to not cut too short.
- STEP 5 Check to see that the time clock is in the “off” position. Verify that no one is in contact with the fountain or the water and activate your circuit breaker.
- STEP 6 Reset the control panel ground fault circuit interrupter.
- STEP 7 Set the time clock to your local time and then adjust the on/off trippers as desired.
- STEP 8 Check and record the voltage and after turning the Gulf Stream on check and record amperage draw. If the amperage draw is in excess of the maximum shown on the motor **CONTACT THE FACTORY** before further or continued operation.



OPERATION

Each Gulf Stream unit is tested under operating conditions at the factory just before packaging and shipment to verify operational characteristics at specific voltages. The amperage and performance characteristics are listed on the envelope containing this manual.

VERIFICATION VOLTAGE

Verify that the voltage and phase provided is correct with that of the equipment.

!CAUTION: DO NOT OPERATE THE FOUNTAIN OUT OF THE WATER.

VERIFICATION OF AMPERAGE AND PERFORMANCE CHARACTERISTICS

It is strongly recommended to check and compare the amperage and performance characteristics with the information that is provided on the envelope containing this manual.

REFERENCE OF OPERATION AND MAINTENANCE MANUALS

Save this manual for future reference by that of the owner or service facility. A logical location would be to place this manual into the control panel.

Startup Voltage

Startup Amperage

Startup Height

Startup Width (If applicable)

Startup Date

NOZZLE INSTALLATION AND REMOVAL

If the spray pattern changes from the original configuration, inspect for and remove any foreign matter that may be present within the pump and nozzle areas. The primary location to look for these obstructions or foreign materials would be within the nozzle.

Gulf Stream units are provided with removable nozzles. Gulf Stream provides this convenience for ease of cleaning and exchange/replacement.



The Skyward, Diana, North Star, Solace and Nova are held into the water plenum (Item #27) by two 10-24 & ½ inch machine screws.

The Galaxy nozzle is held in place by two 10-24 x 1 inch machine screws. It is necessary to center the Galaxy nozzle in the water plenum. This is achieved by using two nylon spacers on the 1 inch nozzle screw, thus centering the nozzle in the plenum. Do not misplace the screws or spacers necessary for centering and holding within the plenum.

All of the Gulf Stream unit nozzles use an o-ring to prevent leakage, replace if damaged.

The volume of the Gulf Stream is adjustable by opening or closing the valve adjacent to the pump. On multi-nozzle applications and after the proper size piping has been determined and installed, additional gate valves must be placed just before each nozzle to be able to adjust the height or diameter as desired. Note: On nozzles with sprays of multiple shapes involving height and diameter, the valve adjustment will affect both height and diameter.

MAINTENANCE

Prior to performing any service, always turn the power off. Be certain that the power will not come back on.

The Gulf Stream is virtually maintenance free. Keeping the pool free of debris, trash, algae etc., will go a long way in assisting in the longevity of the Gulf Stream. We recommend that you remove the unit from the water periodically to visually inspect and clean any debris and build up on the motor and pump assembly and inspect the impeller for wear.

Check and tighten the pump fasteners no more than 50 inch pounds of torque in a random pattern. Caution: Over tightening the fasteners on the Gulf Stream unit can possibly cause damage. **DO NOT OVER TIGHTEN THE FASTENERS.**

The motor is a sealed water cooled and lubricated motor and should not be taken apart. There are no serviceable parts in the motor and further service should be addressed to the factory, Air-O-Lator Corporation, 8100-04 Paseo, Kansas City, MO 64131, USA, 816-363-4242. **IF THE MOTOR IS TAMPERED WITH ANY WARRANTY ON THE MOTOR WILL BE VOID.**

STORAGE

Prevent the Gulf Stream unit from freezing and avoid exposure to temperatures over 120°F.

It is recommended that the fountain equipment be removed in freezing conditions. If the unit is left in the water, during freezing conditions, do not allow the unit to freeze in place. Damage to equipment could result.



DEBRIS MANAGEMENT INFORMATION

The factory has included on Gulf Stream fountains a pump chamber to minimize the chance of debris fouling the impeller area and yet maintain a maximum flow of water past the motor.

The pump chamber is **only** to be considered a best-placed effort to minimize any fouling and is **not** a guarantee that foreign material will not come in contact with the moving components.

The pump chamber is **NOT** to be considered a safety device.

In certain situations it may be desired to add additional debris barriers to a fountain.

Material that should be considered for after market debris barriers are plastic or non-corrosive metal mesh materials. The material should be installed around the unit periphery.

After all this has been said it is important to realize that if a pump chamber **truly** is effective that the shroud will have to be cleaned just as a nozzle would in the first place. Otherwise theoretically the unit could suffer from a lack of performance or worse.

THE CHOICE IS YOURS.



TROUBLE SHOOTING PROCEDURE

Due to the extremely simple design of the Gulf Stream® fountain and minimal maintenance required there is consequently a limited amount of trouble shooting to be sought. A volt ohmmeter is required to complete these checks.

! DANGER: Electric shock hazard. Disconnect and lockout the electrical power before servicing.

If the aerator does not start:

- (1) Check for the correct voltage by using a voltmeter and verify that the voltage is within 10% of the nameplate rating. If the voltage is incorrect contact a licensed electrician or your power company.
- (2) If the correct is present check for the correct size of fuses, loose connections or a tripped circuit breaker. Replace the fuses with the correct size and rating or reset the circuit breaker. If the problem persists contact your electrician.
- (3) In the case of single-phase equipment check for loose connections or overload breakers of which there are two (located on the bottom of the control box) that may have tripped and push to reset.
- (4) Inspect the power cord and motor lead with an ohmmeter check for continuity. Check for cuts causing short circuits. Replace as necessary with a new motor lead or power cable. Use the correct gauge and type for the power cable that being SOW or SEOW.

If the aerator runs but the overloads trip:

- (5) Check for the correct voltage at the incoming line terminals. The voltage must be within 10% of the nameplate voltage. Contact the power company to correct the voltage.
- (6) Overloads are heat sensitive and can trip if a control box is exposed to an excessive amount of ambient heat. Shade or move the control box away from the heat source.
- (7) A possible condition although remote is that a control box has defective components or is defective. Possible causes are lightning or power surges. Repair or replace the defective components or the entire control box as required.
- (8) Check the power cable and motor lead for cuts or breaks using an ohmmeter. Never attempt to tape or splice a cable or motor lead.
- (9) The motor may be defective. There is nothing to repair in the motor. If found to be defective; replace the motor if required.



**INSULATION & WINDING
RESISTANCE VALUES**

CONDITION OF MOTOR AND LEADS	OHM VALUE	MEGOHM VALUE
A used motor which can be reinstalled.	10,000,000 (or more)	10.0
MOTOR IN WATER. Ohm readings are for drop cable plus motor.		
A motor in the water in reasonably good condition	500,000-2,000,000	0.5-2.0
A motor which may have been damaged by lightning or with damaged leads. Do not pull aerator for this reason.	20,000-500,000	0.02-0.5
A motor which definitely has been damaged or with a damaged cable. The aerator should be pulled and repairs made to the cable or the motor replaced. The motor will not fail for this reason alone, but it will probably not operate for long.	10,000-20,000	0.01-0.02
A motor which has failed or with completely destroyed cable insulation. The aerator must be pulled and the cable repaired or the motor replaced.	less than 10,000	0.0-0.1

Insulation resistance does not vary with rating. Motors of all HP, voltage, and phase rating have the same value of insulation resistance.



Franklin Electric Submersible Motor Specifications (60 Hz)

Motor				Maximum		Line to Line	S.F.	Circuit Breaker	Fuse
Model Number	H.P.	Volts	S. F.	S.F.Amps	Watts	Resistance	PowerFactor %	Amp Size Standard	Amp Size Time Delay
214508	1	230	1.40	Y 9.8 B 9.8 R 0	1500	2.2-2.7 Main 10.1-12.3 Start	74.0%	30	20
224301	2	230	1.50	Y 13.2 B 11.9 R 2.6	1700	1.6-2.3 Main 10.1-12.3 Start	93.0%	30	20
224302	3	230	1.15	Y 17.0 B 14.5 R 4.5	2200	.9-1.5 Main 3.0-4.9 Start	98.0%	45	30

Cable Selection Guide

Single Phase, Three Wire with ground cable, 60 Hz
 (Maximum length in feet – Service entrance to fountain)

Motor Rating		Copper Wire Size		
HP	Volts	12	10	8
1	230	400	600	950
2	230	250	350	600
3	230	150	300	450



FONT' N-AIRE "GULF STREAM"

CERTIFICATE OF LIMITED WARRANTY

2008

1. Your Legal Rights Under This Warranty

This warranty is the only express warranty that Air-O-Lator makes for your Air-O-Lator product. This warranty gives you specific legal rights.

This warranty is only for products sold for use in the USA.

THERE ARE NOT WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

This warranty will be governed by the laws of the State of Missouri, USA.

2. What's Covered

2.1 Basic Warranty

Air-O-Lator warrants to the original purchaser that the equipment delivered by it will be of the kind and quality described in the order and will be free of defects in **workmanship, material or factory preparation** when operated under normal use and services.

A. What's Covered at No Cost to You

The Basic Warranty covers the cost of all parts needed to repair any defective item on your Air-O-Lator product – that is, **defective in material, workmanship, or factory preparation**. Warranty repairs or adjustments – including all parts and labor connected with them – will be made at Air-O-Lator Corporation or an AUTHORIZED repair facility.

B. Products Covered

All **FONT' N- AIRE GULF STREAM** fountains using Franklin Electric 4" motors.

C. When It Begins

The Basic Warranty begins on either of the following dates, whichever is earlier:

- The date you **take delivery** of the Air-O-Lator product or
- The date when the product was first put into service – up to **36 months** from the date of manufacture.

D. When It Ends

The Basic Warranty lasts for **36 months** for the Font'N-Aire "GULF STREAM"

E. Exceptions

Exceptions to the **36 month** warranty are: equipment used in severe environments, which are **not** warranted i.e., wastewater applications or where high concentrations of corrosive or abrasive material are present.

F. Registration and Operation Requirements

The Basic Warranty covers your Air-O-Lator product only if:

- It was built for sale in the U.S.
- It's registered in the U.S.
- It's used in the U.S. and
- It's operated and maintained in the manner described in your Owner's Manual.

3. What's Not Covered

3.1 Modifications Not Covered

A. Some Modifications Don't Void this Warranty but Aren't Covered

Certain changes that you might make to your product do not, by themselves, void this warranty. Examples of some of these changes are:

- Installing non-Air-O-Lator supplied parts, components, or equipment (such as a non-Air-O-Lator supplied Franklin Electric motor, stainless steel fasteners, or fountain nozzles).

But this warranty does not cover any part that Air-O-Lator did not supply. Nor does this warranty cover the cost of any repairs or adjustments that might be caused or needed because of the installation or use of non-Air-O-Lator parts, components, equipment, or materials.

Examples of the types of alterations not covered are:

- Installing accessories – except for genuine Air-O-Lator accessories approved for installation – such as lighting, propeller guards, rock covers, or motors.
- Labor to install or remove any Air-O-Lator product.

B. Modifications That Will Void Your Warranty

Disconnecting, tampering with, or altering the electric control panels will void your warranty, unless you or your repairing technician follows Air-O-Lator's requirements for repairing or replacing the controls.

Removing and operating Air-O-Lator equipment without Air-O-Lator approved electrical controls will also void this warranty. Using any electric cable, connectors or splices not provided or authorized by Air-O-Lator will also void this warranty.

3.2 Environmental Factors Not Covered

This warranty does not cover damage caused by environmental factors such as, chemicals, and salt. Nor does your warranty cover damage caused **by windstorms, hailstorms, tornadoes, lightning, power surges, brownouts, floods, earthquakes debris and animals.**

3.3 Maintenance Costs Not Covered

This warranty does not cover the cost of repairing damage caused by poor or improper maintenance. This warranty does not cover the costs of your equipment's normal or scheduled maintenance I.e. annual propeller/impeller replacement, cleaning etc.

3.4 Incidental and Consequential Damages Not Covered

This warranty does not cover any incidental or consequential damages connected with Air-O-Lator products' failure, either while under warranty or afterward. Examples of such damages include:

- Lost time, Inconvenience; The loss of the use of equipment; The loss of personal or commercial property; The loss of revenue; and Delay

3.5 Certain Kinds of Corrosion Not Covered

This warranty does not cover the following:

- Corrosion caused by accident, damage, abuse, or alteration;
- Surface corrosion caused by such things as, sand, salt, stones and barnacles.
- Corrosion caused by the extensive or abnormal exposure of caustic materials like chemicals, acids, and fertilizers.

3.6 Freight:

Warranty shipping charges are to be **pre-paid by the owner**.
Warranty shipping charges are the **responsibility of the owner**.

4. How To Get Warranty Service

4.1 Where to Take Your Air-O-Lator Product

Air-O-Lator authorizes you to return your Air-O-Lator products to the factory **upon notification**.

You may contact: **Air-O-Lator Corporation: 8100-04 Paseo, Kansas City, MO 64131, 1-800-821-3177.**

<http://airolator.com>

CUSTOMER REGISTRATION COPY

Owner Name _____ Model _____
Date Purchased _____ Serial No. _____
Owner Address _____ Dealer Name _____
City _____ Address _____
State _____ Zip _____ City _____ State _____ Zip Code _____

NOTE: This information should be retained for your file.

**AIR-O-LATOR CORPORATION, 8100-04 PASEO, KANSAS CITY, MO 64131
1-800-821-3177 <http://airolator.com>**



8100-04 Paseo, Kansas City, Missouri 64131
800-821-3177

MAIL IN FORM

WARRANTY REGISTRATION

Font' N-Aire

Aquarian

Ice-Away

Ready _____

Residential _____

Platinum _____

Commercial _____

Gulf Stream _____

Aquaculture _____

Quantum _____

Purchase Date Mo. _____ Day _____ Year _____

Model No. _____

Serial No. _____

Owner Name _____

Dealer Name _____

Owner Address _____

Dealer Address _____

City _____

City _____

State _____ ZIP Code _____

State _____ ZIP Code _____



THE WATER'S EDGE™

AIR-O-LATOR CORPORATION REPAIR RETURN FORM

To avoid delays in the repair of equipment in question, it is best to call the factory at 1-800-821-3177 to determine what portion or portions of the equipment in question should be returned. The fountain or aerator unit itself (that portion that sets down into the hole in the floatation) is to be returned completely assembled. **DO NOT DISASSEMBLE ANY PORTION WITHOUT PRIOR AUTHORIZATION!**

Shipping costs to and from the factory are the responsibility of the shipper as is the packaging. Air-O-Lator encourages the use of the original shipping container that is UPS approved for this equipment to minimize the possibility of shipping damage. Additional charges will apply if original packaging is not retained.

If the original packaging is not retained and used by the customer, Air-O-Lator will supply replacement packaging (at a nominal charge) upon return of the equipment to the shipper (call for current pricing).

Upon the inspection of returned equipment, whether in warranty or not, contact by Air-O-Lator to proceed with repair will be made to the owner or agent with an explanation of the repairs and charges if any. **NO REPAIRS WILL BE MADE UNLESS AUTHORIZED BY THE OWNER OR AGENT.** If Air-O-Lator is unable to contact the owner/agent within 30 days after receipt of the equipment for repair, a "signature required" notice will be forwarded to the owner or agent stating that disposal of the equipment will be made 30 days from the date of the notice.

Name _____

Address _____

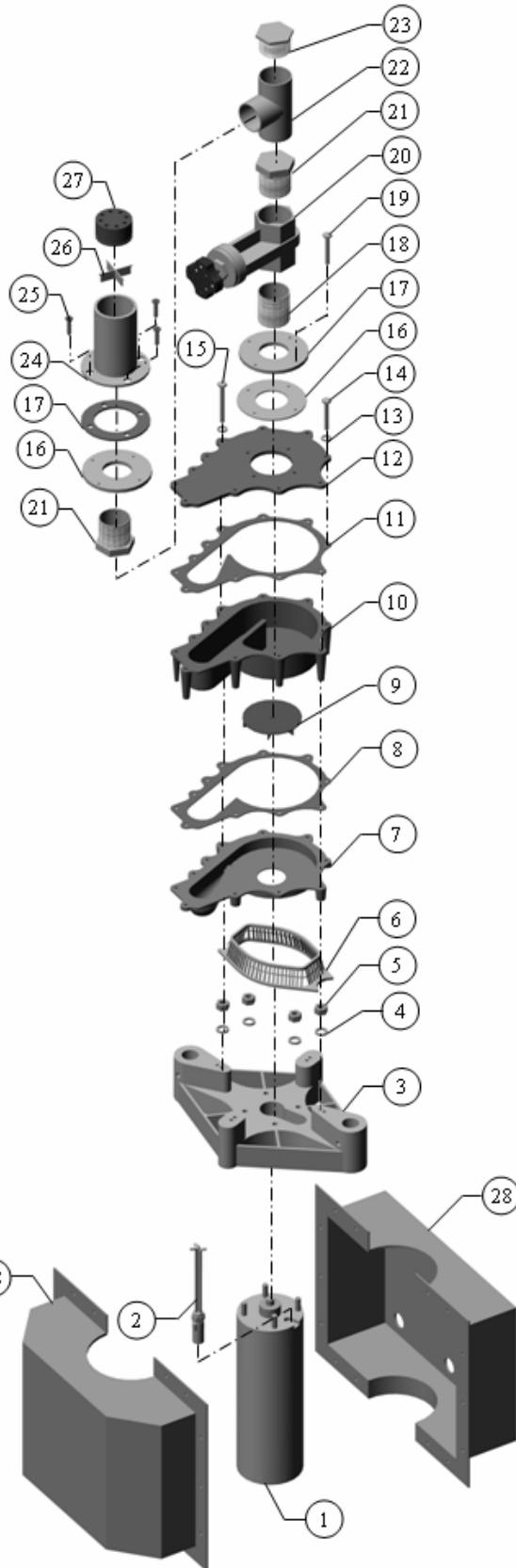
Phone _____ FAX _____ E-Mail _____

E-mail _____ Equipment Serial # _____

Comments: _____

GULF STREAM PARTS LIST

ITEM	PART DESCRIPTION	QTY	PART NUMBER
1	MOTOR, FRANKLIN	1	SEE LISTING
2	WIRE ASSEMBLY, 12/4, 50'	1	90WA5012GS
3	MOUNT, MOTOR, FNA	1	04MMFAIM
4	WASHER, FLAT, 5/16"	4	18079025
5	NUT, LOCK, 5/16-24"	4	18078500
6	SHROUD, IMPELLER	1	70PGFNACP
7	HOUSING, PUMP	1	64PH-PIMG
8	GASKET, HOUSING, PUMP	1	64PHG2
9	IMPELLER	1	SEE LISTING
10	RETURN, PUMP	1	64PR-PIMG
11	GASKET, RETURN, PUMP	1	64PRG2
12	LID, PUMP	1	64PRL-PIMG
13	WASHER, FLAT, 1/4"	11	18079020
14	SCREW, LOCK, 1/4-20 X 2-3/4"	7	18101025275LL
15	SCREW, LOCK, 1/4-20 X 3-3/4"	4	18101025375LL
16	GASKET, NOZZLE	2	64GFN
17	ADAPTOR, FLANGE	2	76FPVC2.5
18	NIPPLE, 2-1/2", PVC	1	76NP212
19	SCREW, 1/4-20 X 1-1/4", HHCS	4	18001290
20	VALVE, GATE, 2-1/2"	1	75GV21/2
21	ADAPTOR, MALE, 2-1/2", PVC	2	76MTAP212
22	TEE, 2-1/2", PVC	1	76TP212
23	CAP, 2-1/2", PVC	1	76CP212
24	PLENUM, WATER	1	64WCP
25	SCREW, 1/4-20 X 1", HHCS	4	18001230
26	STRAIGHTENER, FLOW	1	64FSCP
27	NOZZLE ASSEMBLY	1	SEE LISTING
28	PUMP MOUNTING CHAMBER ASSEMBLY	1	90GSPMC



ITEM 1, MOTOR, FRANKLIN	PART NUMBER
1-HP, 230-VOLT, 1-PH,	4921450812
2-HP, 230-VOLT, 1-PH, S.F.	492243018402
3-HP, 230-VOLT, 1-PH, S.F.	492243028402

ITEM, 27 NOZZLE ASSEMBLY	PART NUMBER
NOVA	90NA-NOV
SKYWARD	90NA-SKY
NORTHSTAR	90NA-NOR
SOLACE	90NA-SOL
GALAXY	90NA-GAL
DIANA	90NA-DIA

