

INJECT-a-CURE
Turf Solution Injection Systems

by SDI

**Owner's Set Up and
Operations Manual**



IC300-6E2M and IC600-6E2M

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The *Inject-a-Cure*

Set-Up & Operations Manual

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General Overview

The "**Inject-a-Cure**" Solution Injection System is designed to allow a variety of soil amendments to be thoroughly blended and then injected directly into irrigation water. It works great in all types of irrigation systems including flood, sprinklers, micro-sprinklers, drip and sub-surface tape. A high pressure diaphragm pump is standard on all models for flexibility in injection pressure adjustment.

Its' simplicity, durability and virtually maintenance-free design makes this unit unique among other injection systems. With its thicker agitation bar and patented super strength bearings, the "**Inject-a-Cure**" system is the only injector of its kind that does not require frequent grease and maintenance.

In normal use, the heavy-duty fiberglass main tank is first filled with water. The fresh water source can either be an existing pressurized irrigation line, or with an optional fill pump, water may be pumped from a ditch, pond or other similar source. With the machine running, solution gypsum is then added to the water. Gypsum and other amendments may be conveniently added by 50 pound bag, or 1-ton bag.

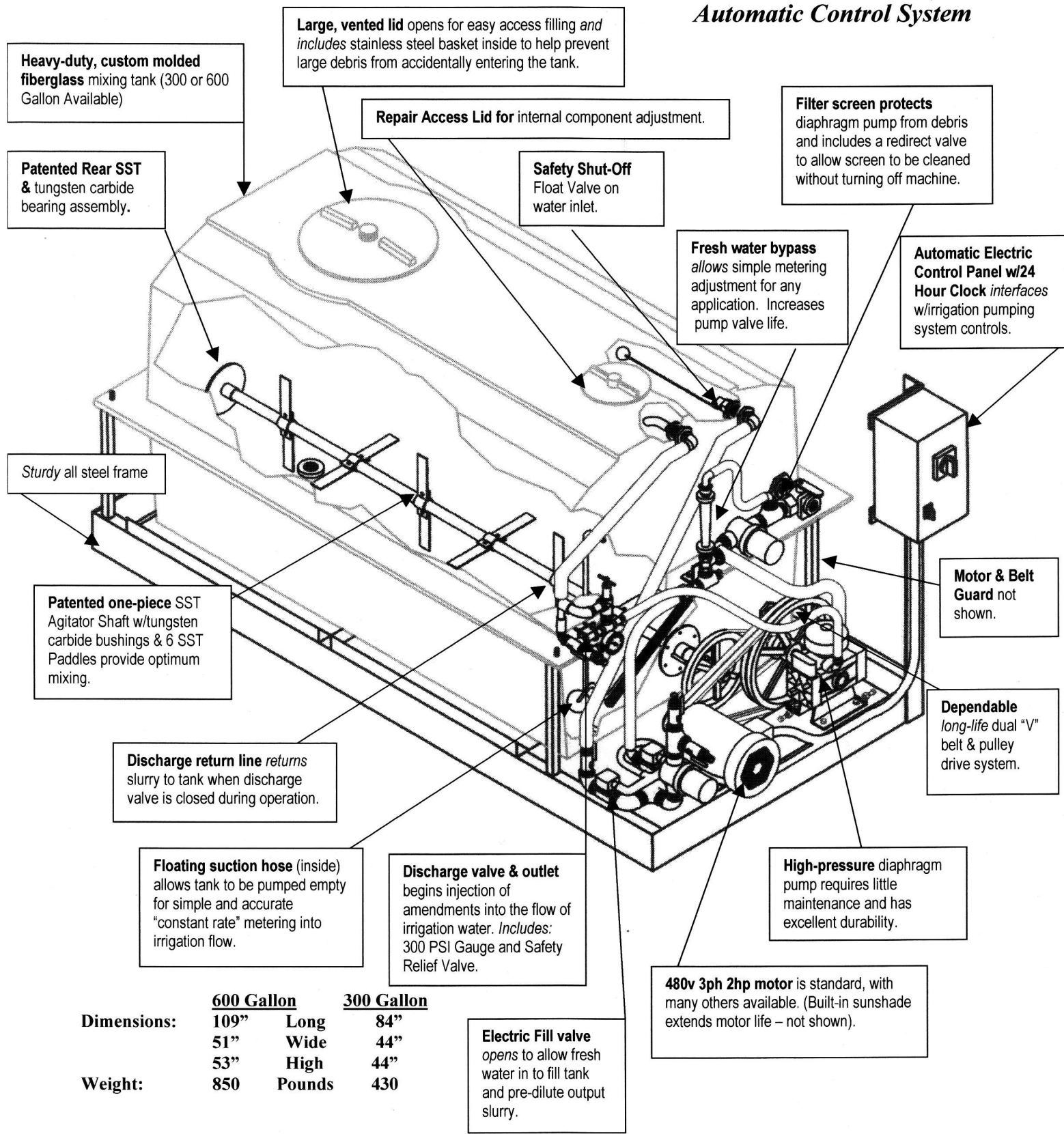
The stainless steel agitation blades near the bottom of the tank mix the solution thoroughly to form a uniform slurry. The high-pressure diaphragm pump injects the mixture into the irrigation flow at a predetermined rate throughout the irrigation set.

Another unique feature of the "**Inject-a-Cure**" injection system is its ability to inject a solution either on a declining curve basis, or at a fixed or flat rate, without additional equipment. Each 600 gallon model is already equipped with a ball float valve and a floating suction intake. Controlled irrigation users can simply leave the fresh water intake valve open maintaining a constant fluid level in the tank.

Flood users or anyone desiring a constant rate of application, may shut the fill valve! The slurry will then be output at a constant rate without dilution throughout the irrigation set as the level in the main tank is drawn down. Install a simple timer and the machine will automatically refill itself and be ready for the next use.

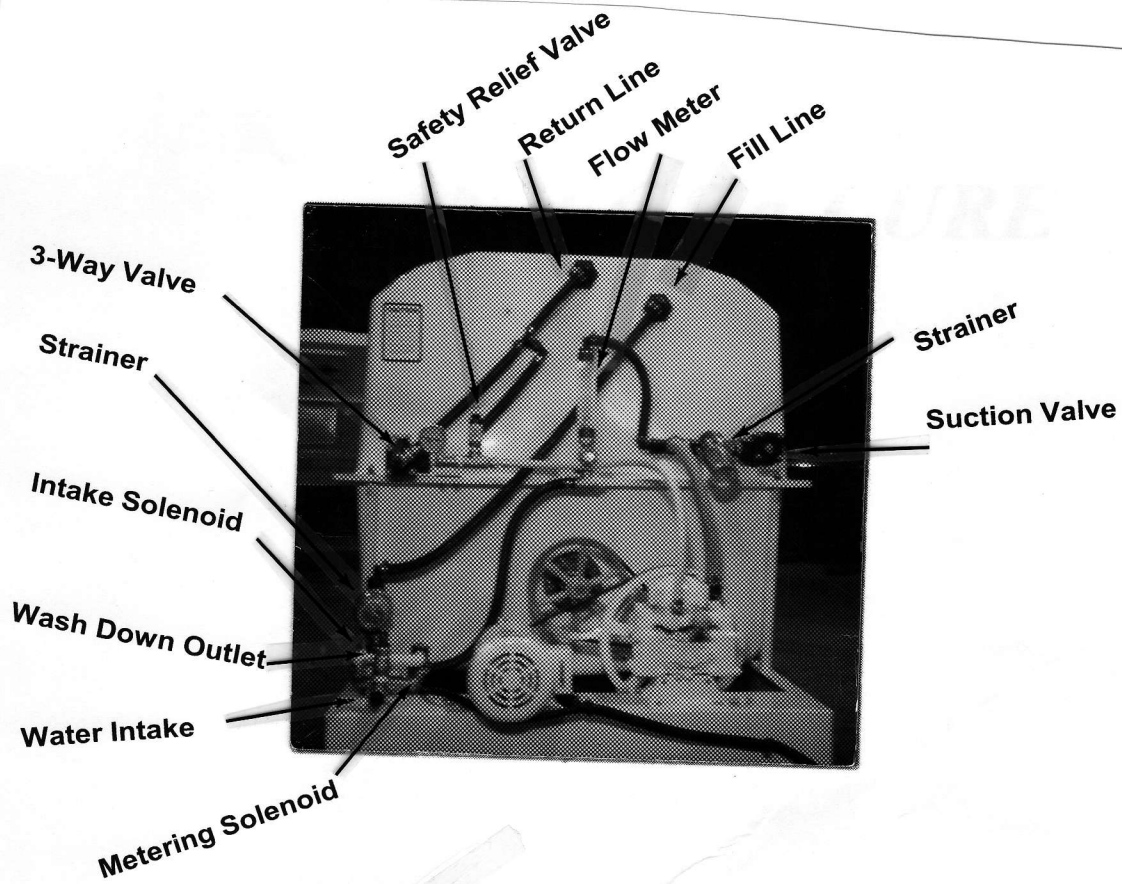
Inject-a-Cure Equipment *Features:*

Turf Model IC300-6E2M-TURF And Model IC600-6E2M-TURF *Automatic Control System*

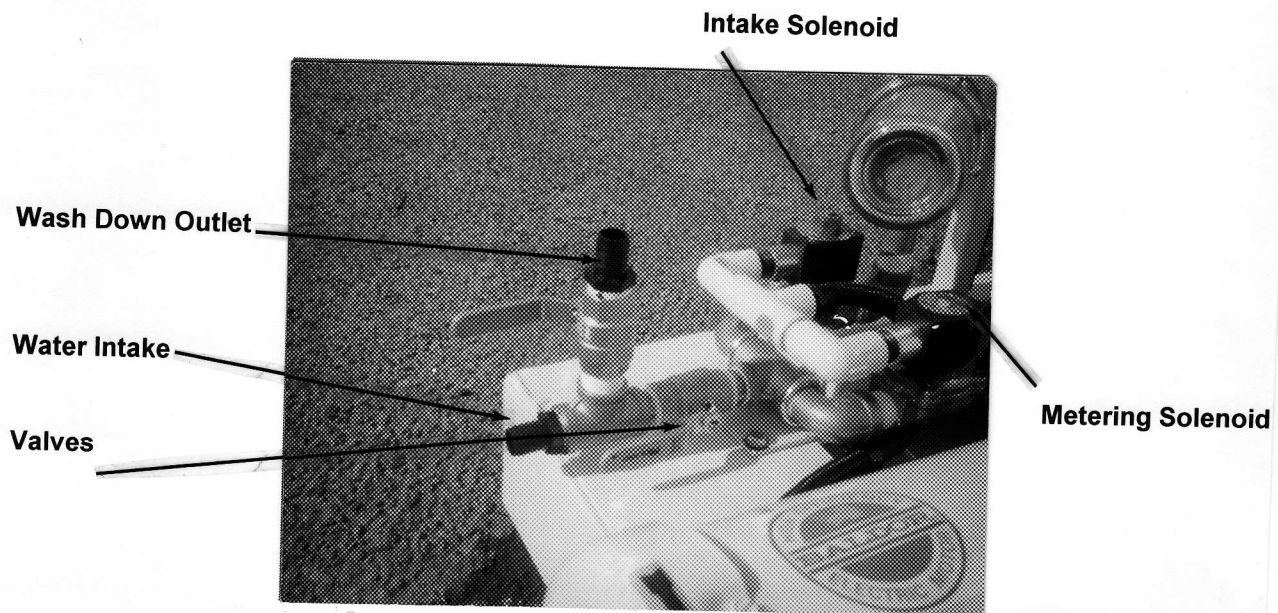


	<u>600 Gallon</u>		<u>300 Gallon</u>	
Dimensions:	109"	Long	84"	
	51"	Wide	44"	
	53"	High	44"	
Weight:	850	Pounds	430	

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Detail of Lower Left



Pre-Installation

IMPORTANT SAFETY INFORMATION

Please read carefully before operating pump.

- Use of a pressure relief device on the discharge side of the pump is included and required to prevent damage from pressure build-up if the discharge is closed or blocked while the power source is still running.
- **Warning: DO NOT pump corrosive or hazardous chemicals or flammable/explosive fluids. DO NOT use in explosive atmospheres.** The pump should be used only with liquids compatible with the pump component materials. **DO NOT** pump any amendments/chemicals not shown on the Approved Amendments Chart enclosed. **PERSONAL INJURY OR PROPERTY DAMAGE MAY RESULT AND THE WARRANTY WILL BE VOID.** If you have any questions about using the pump, please call.
- Do not operate pump above set rpm. If a sheave must be replaced for any reason, be certain the replacement is the same diameter as the original factory sheave.
- Do not pump at pressures higher than 200 psi, (150 psi maximum continuous).
- Operate the pump between a temperature range of 45 to 140 F.
- Make certain the power source conforms to the requirements of your equipment and that the motor is wired to turn in the proper direction (note arrow on belt guard).
- Never operate the pump and motor without the belt guard mounted in place.
- Always disconnect all power before repairing or servicing the pump.
- Release all pressure within the system before servicing any component.
- Drain all liquids from the system before servicing.
- Secure the discharge lines before starting the pump. An unsecured discharge line may whip, causing personal injury and/or property damage.
- Check hoses for weak or worn condition before each use. Make certain that all connections are tight and secure.
- Periodically inspect the pump and the system components. Perform routine maintenance as required.
- When wiring an electrically driven pump, follow all electrical and safety codes, as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
- **WARNING: Because of risk of electrical shock, all wiring should be done by a qualified electrician.**
- **WARNING: 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 operate a gasoline engine in an enclosed area. Be sure the area is well ventilated.
- Use only pipe, hose and fittings rated for maximum rated pressure of pump or pressure at which pressure relief valve is set at. **DO NOT USE USED PIPE OR HOSE!**
- Do not use this system for pumping anything intended for human or animal consumption.

Installing the Inject-a-Cure Injection System:

1. Select a Location

- a) Locate the injector on a smooth hard surface. Keep in mind you will need to tap into a pressurized line to fill the solution tank.
- b) If your irrigation system has a main filter, the tap for the solution injection port should be located before the filter.
- c) You will also need to allow convenient access to the machine for filling and maintenance.

2. Pre-Operation Set-Up:

- a) Check the ball float located on the inside of the main tank at the fresh water inlet fitting. Adjust the ball arm by bending it so that it does not come in contact with the top of the tank when in the fully closed (up) position.
- b) If your model has a lower level float near the bottom, make certain the fitting is tight and that the ball float moves freely in a vertical plane.
- c) Insert the stainless steel filter basket into top hatch opening.

3. Fresh Water Supply:

- a) Locate or install a 3/4" NPT fitting at the pressurized fresh water source. To minimize air getting into the unit, the water supply fitting should be located at 3 or 9 O'Clock and down stream of any filters. Also, install a water pressure regulator set at 20-50 psi. Install a shut-off valve (not included), and attach a 3/4" hose barb.
Note: You *must* install a valve to shut off the water supply *to* the injection system for maintenance and safety. A shut off valve is also required in order to use the pump-down capability of the Inject-a-Cure unit.

- b) Attach a length of hose from the hose barb to the fresh water inlet located on front of the main tank, down at the bottom near the vertical sight glass. Be sure to use hose rated for the highest pressure in your irrigation system and attach each end with two hose clamps.
- c) If filtered water is not already available, splice a debris screen into the filter hose near the fresh water inlet fitting.

4. Solution Injection Hook Up:

- a) Locate or install a 1/2" NPT fitting (not included) into the irrigation system at a point *after* any main filters. For best results, solution should be injected at about a 45 degree angle, pointing in the direction of the flow of water, and at least 2 feet down-stream of the inlet water supply to solution unit.
- b) Attach a 1/2" hose barb and one end of the high-pressure hose (included) to the injection tap.
- c) Attach the other end of the 1/2" hose to the discharge outlet located on the front of the Inject-a-Cure unit.

5. Electrical Connection

- a) The electric motor that drives the pump and agitation bar is pre-wired to a mag-starter in a weather tight control box to turn the unit on and off.
Ensure the supply voltage is correct for the motor, (i.e., 110, 240/480 volt, single or 3 phase). A breaker must be in place to automatically disconnect the power at the source in case of accidental contact or downed lines.
- b) Electrical Requirements - continued on Page 7:

Inject-a-Cure Electrical Requirements:

6. Final Equipment Check:

Electricity - Check rotation of motor

<u>Phase</u>	<u>HP</u>	<u>Volts</u>	<u>Amps</u> Max. Draw	<u>KVA trans-</u> former Minimum	<u>Fuses</u>
Single Phase Motor	1.5	110 (Low Voltage)	17.2	3.0	30amp
	1.5	220 (High Voltage)	8.6	3.0	15 amp

To change the motor rotation to clock-wise, check motor plate to see which wires need to be switched.

<u>Phase</u>	<u>HP</u>	<u>Volts</u>	<u>Amps</u> Max. Draw	<u>KVA trans-</u> former Minimum	<u>Fuses</u>
Three Phase Motor	2.0	220 (Low Voltage)	6.5	N/A	10amp
	2.0	480 (High Voltage)	3.2	N/A	6amp

To change the motor rotation, change any two of the three incoming power lines.

Voltage: Observe the voltage number on the electricity meter.

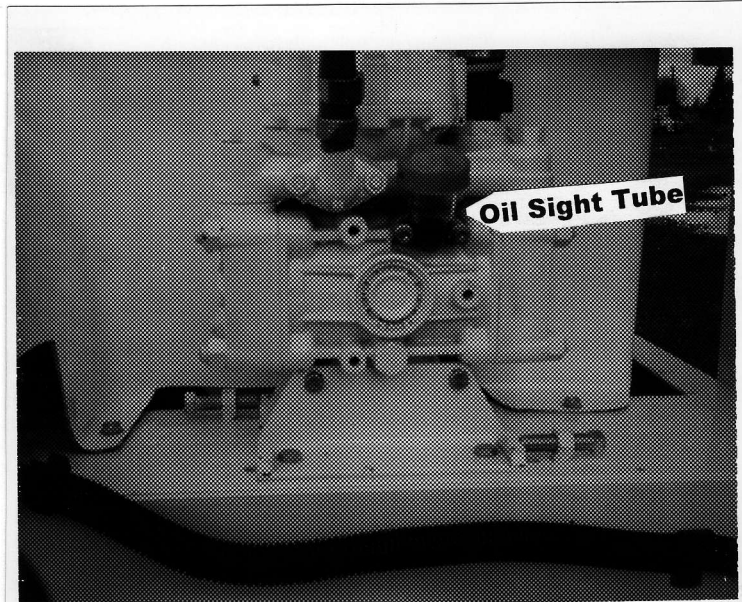
Flexible cord should not be any longer than 25 feet for either single or three phase.

Follow all state and local electrical safety codes, as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

WARNING: Because of risk of electrical shock, all wiring should be done by a qualified electrician!

DO NOT handle pump or pump motor with wet hands or when standing on a wet or damp surface or when standing in water.

- Take time to check over all fittings, clamps and connections to make sure all are secure. Check that the belt is tight and the belt guard is mounted securely in place.
- Double check to make sure all ball floats are mounted and adjusted correctly inside the tank.
- Be certain the oil is visible half way up the clear sight tube on the diaphragm Pump. (Fill with 30W non-detergent motor oil as necessary).



Oil Sight Tube. Oil should be visible approximately half way up the clear fill tube.

Daily Operation:

1. Fill the Main Tank with Water.

a) With irrigation system pressurized, open the fresh water fill valve "A" to begin filling the holding tank with water. As the tank nears full, the internal ball float will automatically shut off the flow of incoming water.



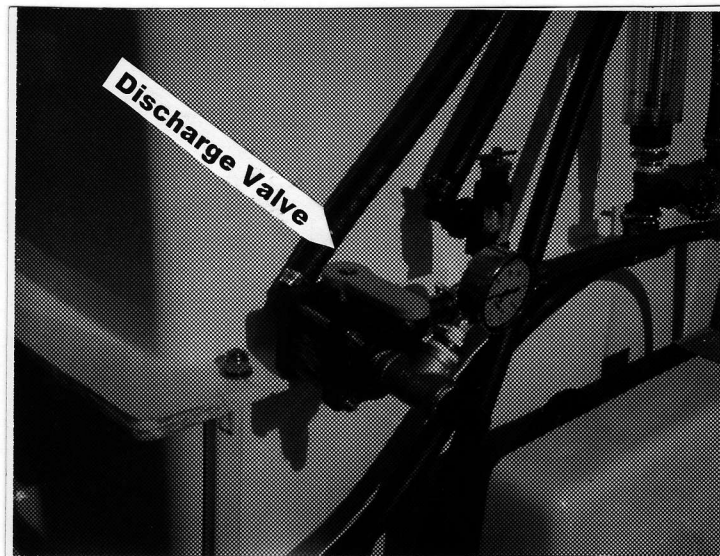
Fresh Water Valve in Open Position:

b) For constant rate output, close the fill valve once the tank is full. This will allow the tank to empty, injecting a consistent, non-diluted solution.

Turn the System On:

a) Check that the redirect valve located adjacent to the pump inlet debris screen is in the **closed** position, to draw liquid from the tank. (The handle should be turned to point at the debris screen). If left open, the pump will only draw air and no injection will take place.

b) The discharge outlet valve "D" should be turned to the **closed** position. (Handle should be at 90 degree angle to the discharge flow). This allows the pump to start up under no-load conditions to increase motor or engine life.



Discharge Valve in Closed Position.

- c) Place selector valve into INJECT position
- d) Place "meter bypass" valve as to turn water through the ELECTRONIC METER
- e) Adjust "Electronic Meter" with needle valve to desired g.p.m.
- f) Once adjusted, place "meter bypass" valve into the position so the water runs through the PLASTIC INLINE FLOW METER
- g) Load machine
- h) ALWAYS adjust meter **before loading** the equipment!

Loading:

- a) Place selector valve into BYPASS position
- b) Turn panel to HAND position and turn equipment "on"
- c) Once finished loading, turn machine "off" and switch panel to AUTO
- d) Place selector valve into INJECT position

Daily Maintenance:

- a) Check pump FILTER for trash

Monthly Maintenance:

- a) Check all three FILTERS. There are two different mesh sizes (pump filter-20 mesh, electronic meter filter-40 mesh and incoming water filter-20 mesh)
- b) Check oil in pump (30 wt. non-detergent)

Inject-a-Cure Calibration Chart

"Inject-a-Cure" 600 Gallon floating suction assembly.

Loading Capacity: 4500#

Clean Out: 90 Minutes/24 Hours

Set Time

Water Meter Flow

(Hours)

(G.P.M.)

2	1.03
3	2.48
4	3.21
5	3.65
6	3.94
7	4.15
8	4.31
9	4.43
10	4.53
11	4.60
12	4.67
13	4.73
14	4.78
15	4.82
16	4.85
17	4.89
18	4.91
19	4.94
20	4.96
21	4.98
22	5.00
23	5.02
24	5.04

Gypsum Treatment Rate: 2.0 meq/1

<u>Gallons</u>	<u>Pounds</u>	<u>Bags</u>
100,000	150	3
150,000	200	4
200,000	300	6
250,000	350	7
300,000	450	9
350,000	500	10
400,000	550	11
450,000	650	13
500,000	700	14
550,000	800	16
600,000	850	17
650,000	950	19
700,000	1000	20
750,000	1050	21
800,000	1150	23
850,000	1200	24
900,000	1300	26
950,000	1350	27
1,000,000	1450	29

Gypsum Treatment Rate: 3.0 meq/1

<u>Gallons</u>	<u>Pounds</u>	<u>Bags</u>
100,000	200	4
150,000	300	6
200,000	450	9
250,000	550	11
300,000	650	13
350,000	750	15
400,000	850	17
450,000	950	19
500,000	1100	22
550,000	1200	24
600,000	1300	26
650,000	1400	28
700,000	1500	30
750,000	1600	32
800,000	1750	35
850,000	1850	37
900,000	1950	39
950,000	2050	41
1,000,000	2150	43

Gypsum Treatment Rate: 2.5 meq/1

<u>Gallons</u>	<u>Pounds</u>	<u>Bags</u>
100,000	200	4
150,000	250	5
200,000	350	7
250,000	450	9
300,000	550	11
350,000	650	13
400,000	700	14
450,000	800	16
500,000	900	18
550,000	1000	20
600,000	1050	21
650,000	1150	23
700,000	1250	25
750,000	1350	27
800,000	1450	29
850,000	1550	31
900,000	1600	32
950,000	1700	34
1,000,000	1800	36

Gypsum Treatment Rate: 3.5 meq/1

<u>Gallons</u>	<u>Pounds</u>	<u>Bags</u>
100,000	300	6
150,000	400	8
200,000	500	10
250,000	650	13
300,000	750	15
350,000	900	18
400,000	1000	20
450,000	1150	23
500,000	1250	25
550,000	1400	28
600,000	1500	30
650,000	1650	33
700,000	1750	35
750,000	1900	38
800,000	2000	40
850,000	2150	43
900,000	2250	45
950,000	2400	48
1,000,000	2500	50

Gypsum Treatment Rate: 4.0 meq/1

<u>Gallons</u>	<u>Pounds</u>	<u>Bags</u>
100,000	300	6
150,000	450	9
200,000	550	11
250,000	700	14
300,000	850	17
350,000	1000	20
400,000	1150	23
450,000	1300	26
500,000	1450	29
550,000	1600	32
600,000	1750	35
650,000	1850	37
700,000	2000	40
750,000	2150	43
800,000	2300	46
850,000	2450	49
900,000	2600	52
950,000	2750	55
1,000,000	2900	58

Gypsum Treatment Rate: 5.0 meq/1

<u>Gallons</u>	<u>Pounds</u>	<u>Bags</u>
100,000	350	7
150,000	550	11
200,000	700	14
250,000	900	18
300,000	1100	22
350,000	1250	25
400,000	1450	29
450,000	1600	32
500,000	1800	36
550,000	2000	40
600,000	2150	43
650,000	2350	47
700,000	2500	50
750,000	2700	54
800,000	2900	58
850,000	3050	61
900,000	3250	65
950,000	3400	68
1,000,000	3600	72

Compatible Amendments

Application Chart:

****The following dry materials are compatible with the "Inject-a-Cure" Solution Injection System.**

Always put gypsum into mixing tank first.

Never combine Phosphate based products with Calcium.

600 GALLON UNIT

Solution Grade Gypsum, alone: 3,000 lbs. (1,360 Kgs) Max.**

<u>Description</u>	<u>Mixed With Gypsum</u>		<u>Without Gypsum</u>	
	<u>Lbs.</u>	<u>Kgs</u>	<u>Lbs.</u>	<u>Kgs</u>
Ammonium Nitrate	1000	454	3600	1636
Ammonium Sulfate	400	182	2000	910
Calcium Nitrate	400	182	4000	1820
Humic Acid	35 gal		35 gal	
Milled Limestone***	— <i>Do Not Mix</i> —		400	182
Magnesium Sulfate	100	46	100	46
Potassium Sulfate (Potash)	— <i>Do Not Mix</i> —		1200	546
Potassium Nitrate	400	182	1200	546
Zinc Sulfate	100	46	100	46
10-62-0	— **Do Not Mix —		2400	1092

***Caution:** The above amendments are compatible with the construction of the "Inject-a-Cure" injection machine only when purchased in a form appropriate for direct injection. Therefore, always be sure to confirm with the amendment supplier, that what you are buying is suitable for injection directly into irrigation water. Failure to do so may cause improper operation and/or damage to the injection machine, which is not covered by the manufacturers' warranty. Use of a sub-standard quality of solution grade gypsum can reduce the maximum by as much as 25%. **Limestone must be ground to at least 325 mesh minus. Consult your supplier for details.

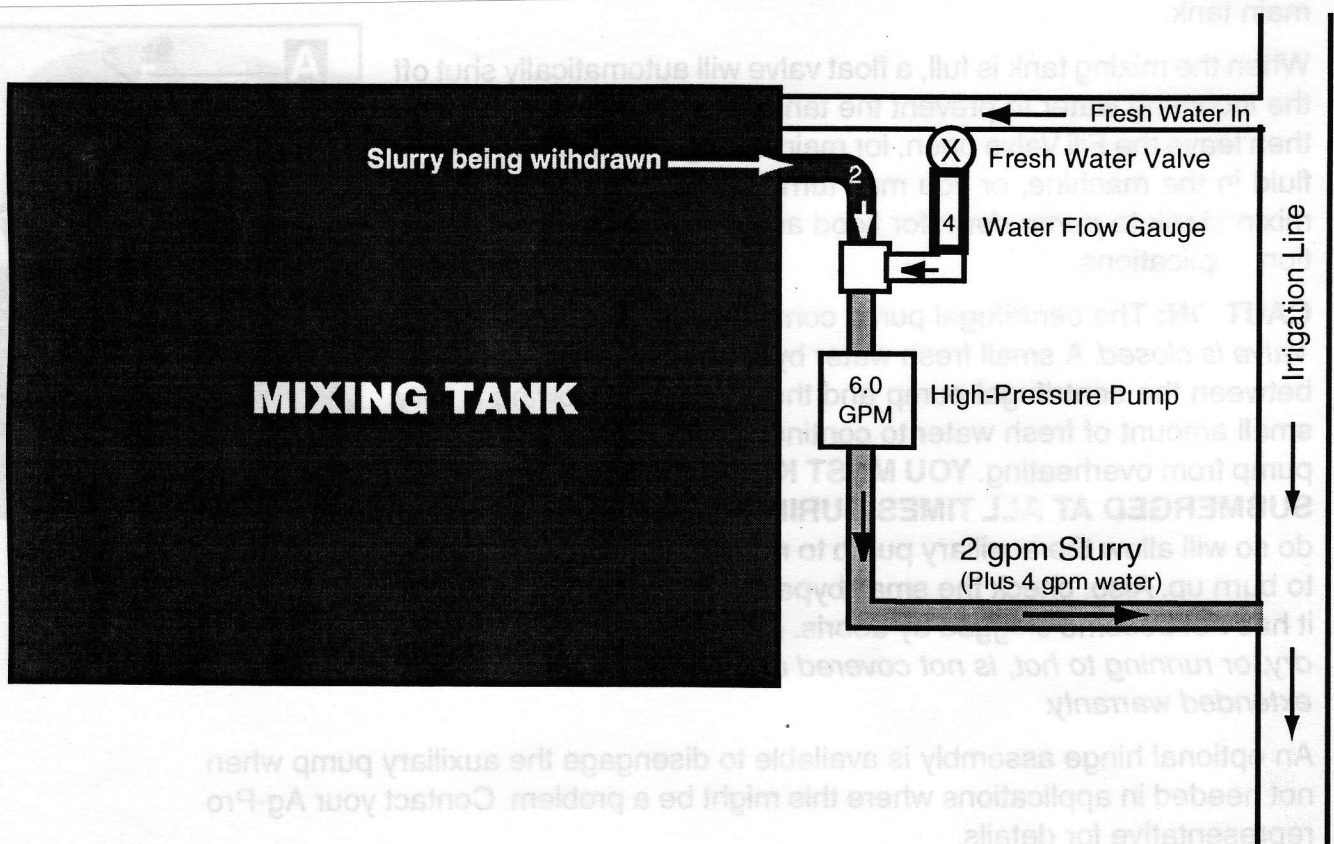
Fresh Water Bypass Operation

The high-pressure pump will first draw from the fresh water line. The amount of slurry injected is determined simply by setting the fresh water flow to the pumps maximum capacity, then reducing the fresh water gpm by the amount of slurry desired. The pump will then automatically withdraw the difference from the Mixing Tank.

Maximum Pump Capacity - Fresh Water Flow = Net Amount of gypsum slurry injected.

Example: Desired slurry output is determined to be 2 gpm. Maximum pump capacity is 6 gpm.

1. With the machine running, the fresh water valve is opened until the pump's maximum gpm rate is achieved (6 gpm in this example).
2. Since the desired slurry output is 2 gpm, slowly close the fresh water valve until the fresh water flow meter reads 2 gpm less (6-2=4 gpm in this example).
3. With the fresh water restricted to only 4 gpm, the positive displacement pump will automatically make up the difference by withdrawing 2 gpm from the Mixing Tank.



MAIN ADVANTAGES: Able to put more gypsum in mixing tank, less wear and tear on pump, eliminates pressure relief valve and makes adjusting desired output much simpler.

Trouble Shooting Guide:

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
The pump does not draw fluid.	Pump is drawing air. One or more pump valves are not seating properly. Suction line is plugged or collapsed. Clogged debris filter.	Turn redirect valve handle 90° Remove valve(s) and check for debris. Examine suction hose for blockage. Clean debris filter.
The liquid flow is erratic.	The charge in the pulsation dampener is incorrect. One or more pump valves are not seating properly.	Check pressure in pulsation dampener (20-40% working pressure). Remove valve(s) and check for debris. Check and clean valve seats.
Output drops and the pump is noisy.	Oil level is too low.	Add 30W motor oil to bring level half way up sight glass.
Oil comes out the discharge port or oil is a milky color.	One or more diaphragms split.	Replace diaphragm(s). (Refer to Maintenance section.)
Pump seems to operate in reverse.	Electric motor wired backwards.	Have a certified electrician check and repair wiring.
Agitation shaft bearing leaking.	Packing gland loose. Worn out packing material.	Tighten packing nut on front. Replace with 1/4" Teflon packing.
Irrigation filters plugging or requiring frequent flushing.	Injecting too thick of slurry. Poor quality gypsum. Fresh water is contaminated.	Increase fresh water bypass gpm Install a screen on the incoming fresh water line.

Safety Instructions

- To avoid electrical shock hazard, disconnect the machine from the electrical power supply before doing any kind of service.
- Read Operating Manual before putting machine in operation.
- Carefully observe all safety cautions and warnings.
- All electrical service equipment should be installed by a qualified electrician.
- The Automatic Tank Refill Control Panel contains high voltage electrical equipment and should only be accessed by certified electricians or qualified TurfPartner personnel.
- The machine must be grounded. Make sure all green ground wires are properly attached.
- Do not use an extension cord.
- Do not operate the machine unless the pulley guard is in place.
- All hoses and power cord should be carefully located to minimize any hazard to the machine operator.
- Machine must be completely stopped before servicing.
- Keep all parts of the body and clothing away from driven parts.
- Keep all others away from machine while in operation.
- Load machine with solution grade gypsum only.

Maintenance:

You have selected the most user-friendly, maintenance free injection system available for gypsum and other powdered amendments. Care in selecting and using only true high-grade solution gypsum (and other compatible amendments) will help keep your injector running smoothly with minimal attention.

Your **Inject-a-Cure** unit was designed with common, brand name components wherever possible to reduce replacement costs and insure parts availability when maintenance is necessary.

*For parts pricing or orders, call your local **SDI Dealer or Distributor.***

The following outlines the steps necessary to service and maintain your Inject-a-Cure injection system to keep it running at its peak performance.

Before each Start-Up:

- a) Check that the oil is visible half way up the clear sight tube on the diaphragm pump. (Fill with 30W non-detergent motor oil as necessary).
- b) Turn the redirect valve to close off the fluid in the main tank and clean the debris filter located on the front of the machine, and any other debris screens that may be installed. Remember to turn the valve back on before starting the machine.
- c) Check that the internal ball float valve(s) are adjusted and working properly.

d) Take time to check over all fittings, clamps and connections to make sure all are secure and not leaking. Check that the belt is tight and the belt guard is in place.

e) If agitation shaft front bearing is leaking, simply tighten the adjusting nuts until the leak stops. **DO NOT** overtighten the adjusting nuts. Only about 1/4 to 1/2 turn on each of the adjusting nuts should be required to stop any leak.

Overtightening will lead to rapid wear of the packing material and possibly the shaft itself! Occasional small adjustments are required to maintain the integrity of the seal. **DO NOT** attempt to avoid the regular interval by overtightening on the packing nuts. If one or more turns of the adjusting nuts do not stop the leak, replace the packing material.

Every 500 Hours:

a) Change the oil every 500 hours or three months, whichever comes first. To drain the oil, follow these procedures:

D30 Pump: Remove the drain plug and oil sight glass covers, and rotate shaft until the oil stops flowing out. Install the drain plug.

Slowly pour new oil into sight tube while turning the pump shaft. (Turning the pump shaft purges all the air out of the crank-case). Always change oil when replacing diaphragms.

SAFETY NOTE: *The bypass return outlet on the discharge valve and pressure relief valve **must be** connected directly to the main tank without any restrictions or valves.*

Annually or As Needed:

Replace Packing Material

The packing gland is located on the front of the machine where the main agitator shaft extends out of the mixing tank. Once or twice a year (or whenever excessive leaking occurs that routine tightening of adjustment nuts will not stop), the packing material in the packing gland must be replaced as follows:

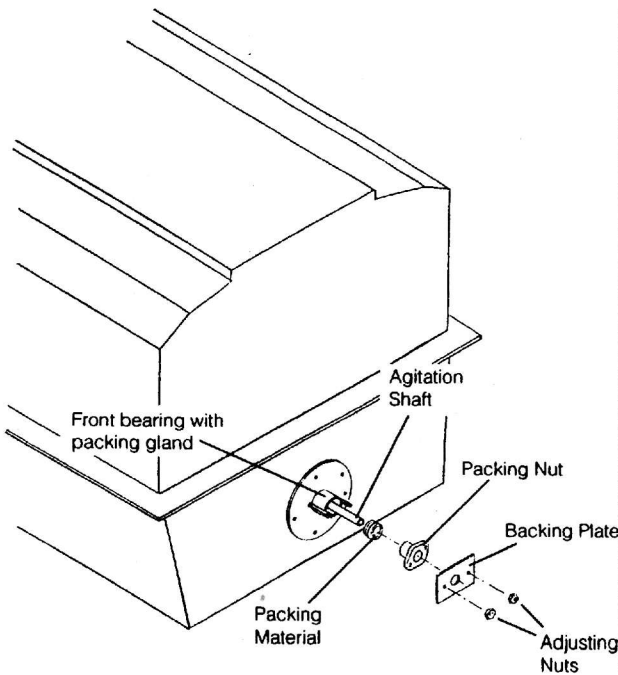
- a) Turn off injector and secure against accidental start-up.
- b) Remove fiberglass belt guard. Loosen both adjusting nuts and slide the backing plate and packing nut out away from the packing gland.
- c) Dig out and discard any remaining pieces of the old packing material.

- d) Wind new packing material around the shaft; use a screwdriver to push the packing material firmly down into the packing gland. Continue this process until the packing gland is full; cut the packing rope off.
- e) Slide the packing nut and backing plate back towards the packing gland; tighten the adjusting nuts down hand tight.
- f) Replace the belt guard and start the injection machine. If the packing is leaking, turn off the machine and tighten the adjustment nuts approximately 1/4 turn each. Continue this procedure until the leaking stops. **Do not overtighten!**

Valve Replacement:

Occasionally, debris can build up and cause improper seating of the valves and/or damage to the o-rings, causing the pump to pulsate. To check for damage, follow these steps:

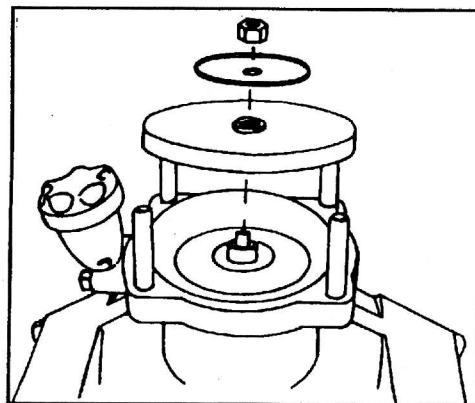
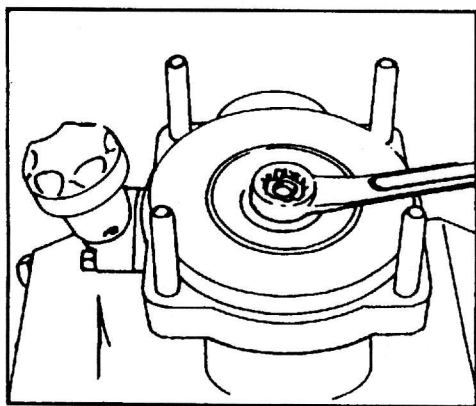
Remove the pump manifolds (heads). With the manifolds removed, valves can easily be removed and inspected for debris and wear. Replace valves, o-rings and manifolds as necessary.



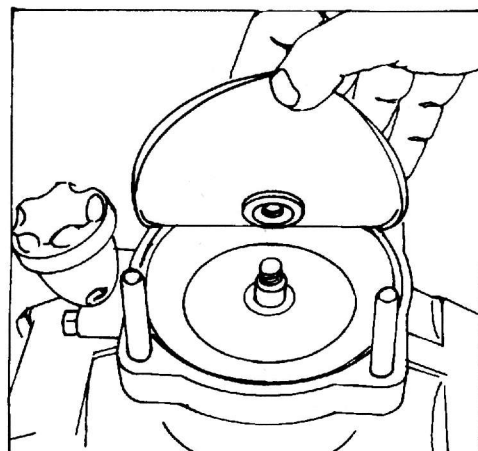
Diaphragm Replacement:

If pump oil becomes milky or it comes out the discharge outlet, one or more of the diaphragms have ruptured. The diaphragm material does age and should also be replaced annually or more often, under heavy use. To change the diaphragms:

1. Drain the oil as instructed previously.
2. Remove the pump manifolds and valves.
3. Remove the pump head retaining nuts and heads.
4. Turn the crankshaft to bring the diaphragm to the top of its stroke. Remove the retaining nut, retaining washer and the diaphragm.



5. Turn the crankshaft to bring the piston to the bottom of its stroke and seat the new diaphragm into the sleeve groove. Install the retaining washer and tighten the retaining nut .



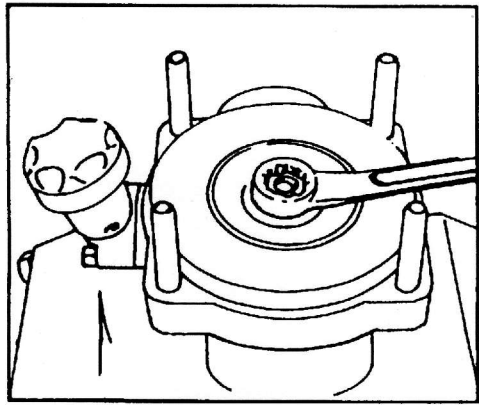
6. Clean any excess oil from the area and install the heads, valves and manifolds.

Pulsation Diaphragm Replacement:

1. Replace the pulsation dampener diaphragm by first bleeding the air from the dampener. Remove the cover retaining bolts from the dampener cover and replace the diaphragm. Reassemble the cover and bolts in place and charge the dampener to 20% of operating pressure with a minimum of 10 psi.

Winter Storage or Freezing Conditions:

1. Drain water from main tank.
2. Open all valves.
3. Flush pump with a 50/50 mixture of water and antifreeze while rotating crankshaft.



Refill crankcase with 30W motor oil. Rotate shaft to distribute oil and fill to proper level.

INJECT-a-CURE by SDI

Item Number	Part Number	Description	Qty
	IC600-6E2M-Turf	600 Gallon Inject-a-Cure	
	IC300-6E2M-Turf	300 Gallon Inject-a-Cure	
1	15-056	Vent Assembly, 16" Lid	1
2	16-203	Basket Strainer	1
3	15-046	Lid Assembly, 8"	1
4	15-601WH	Tank, 600 Gallon White	1
4	15-307WH	Tank, 300 Gallon White	1
5	60-503	5" Float Ball	2
6	60-504	Float Stem	1
7	60-502	Float Valve	1
8	52-276	Elbow 1" x 45°, SxS	1
9	53-204A	Nipple 1 x 4", PVC	1
10	16-115	Tank Fitting 3/4", Nylon	2
11	52-112	Elbow Adapter 3/4 MPT x 3/4" HB	3
12	52-120	Elbow Adapter 1 MPT x 1" HB	3
13	57-115	Strainer Body	2
14	16-949	Heavy Duty Packing, Per Inch	24"
15	51-601SS	Close Nipple 1", SS	3
16	60-325-3PP	3-Way Ball Valve	1
17	53-826	1" Tee, Poly	1
18	57-116	Gasket Strainer	2
19	57-119	Strainer Screen, 20 Mesh	1
20	57-117	Clear Bowl, Strainer	1
21	16-116	Tank Fitting 1", Nylon	1
22	21-931	Suction Hose 1", Per Foot	Specify
23	79-011	Flowmeter	1
24	52-117	Elbow Adapter 3/4 FPT x 3/4" HB	1
25	60-203	Gate Valve 3/4"	1
26	50-580SS	Pipe Plug 3/4", SS	1
27	11-146	Relief Valve Bracket	2
28	47-103	U-Bolt 1/4 x 1-1/4 x 2-1/4"	2
29	60-324	Ball Valve 3/4"	4
30	53-134	Adapter 3/4 MPT x 3/4" HB	4
31	51-501SS	Close Nipple 3/4", SS	10
32	16-277	Packing Nut 1-3/16" Nylon, 600 Gallon	1
32	16-275	Packing Nut 1" Nylon, 300 Gallon	1
33	11-350	Packing Gland 1-3/16"	1
34	11-105	Packing Nut Plate	1
35	67-421	Belt #5L420, 600 Gallon	1
35	67-419	Belt #5L410, 300 Gallon	1
36	66-136	Pulley 3.60 OD by 1" Bore	1

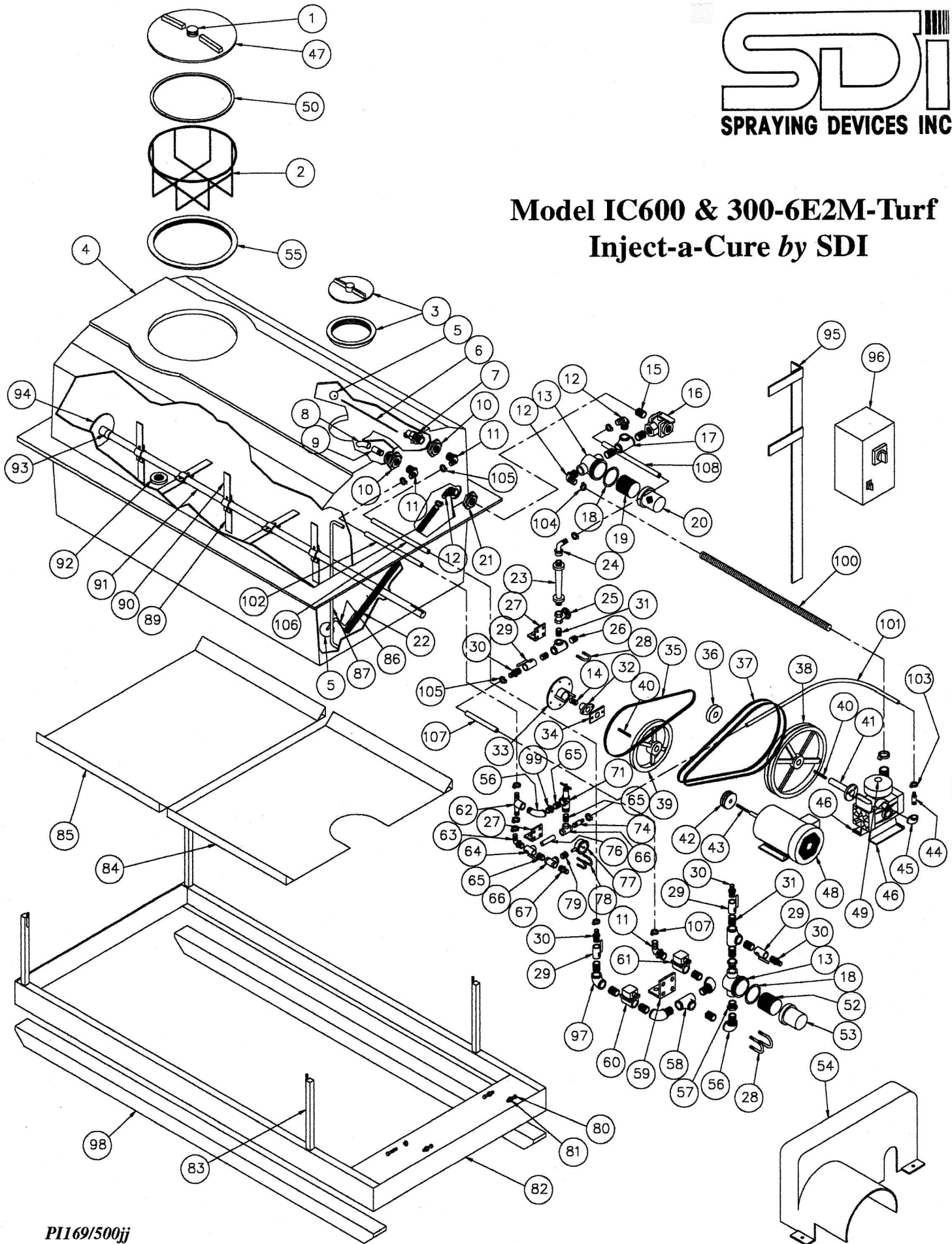
INJECT-a-CURE by SDI

Item Number	Part Number	Description	Qty
37	67-600	Belt 3VX600	2
38	66-214	Pulley 2 GR 3 V 14" x 1" Bore	1
39	66-111	Pulley 9.75 OD x 1" Bore	1
40	46-905	Key Stock 1/4 x 3" Lg	2
41	63-310	Pump Shaft	1
42	66-229	Pulley 2.65 OD x 7/8" Bore	1
43	46-904	Key Stock 3/16 x 1-1/3" Lg	1
44	55-090SS	Adapter 1/2 MPT x 1/2" HB, SS	1
45	50-411SS	Elbow 1/2", SS	1
46	11-251	D30 Pump Mount	2
47	15-053	Lid Only, 16", Threaded	1
48	20-096	Motor 2 HP, 3PH, 1750 RPM	1
49	9910-D30	Hypro D30 Pump	1
50	15-055	C-Gasket, Threaded Lid	1
52	57-118	Strainer Screen, 40 Mesh	1
53	57-117S	Solid Bowl Strainer	1
54	15-615	Belt Guard	1
55	15-054	Rim, Threaded 16" Lid	1
56	50-510SS	Street Elbow 3/4", SS	4
57	50-663SS	Bushing 1 x 3/4", SS	2
58	50-520SS	Tee 3/4", SS	2
59	11-340	Solenoid Bracket	1
60	56-030	Solenoid, Open	1
61	56-029	Solenoid, Close	1
62	53-824	Tee 3/4 FPT x 3/4 x 3/4" HB	1
63	52-116	Elbow Adapter 1/2 MPT x 3/4' HB	1
64	60-323-3SS	3-Way Ball Valve 1/2"	1
65	51-401SS	Close Nipple 1/2", SS	3
66	50-420SS	Tee 1/2", SS	2
67	53-094	Adapter 1/2 MPT x 1/2" HB	1
71	64-803	Relief Valve	1
74	55-090SS	Adapter 1/2 MPT x 1/2" HB, SS	1
76	51-404SS	Pipe Nipple 1/2 x 4", sS	1
77	27-300	Pressure Gauge 0-300 PSI	1
78	47-102	U-Bolt 1/4 x 1 x 1/3/4"	2
79	50-460SS	Bushing 1/2 x 1/4", SS	1
80	45-230	Adjusting Bolt 1/2 x 2"	4
81	11-636	Adjusting Nut 1/2"	4
82	10-601	Frame, 600 Gallon	1
82	10-320	Frame, 300 Gallon	1

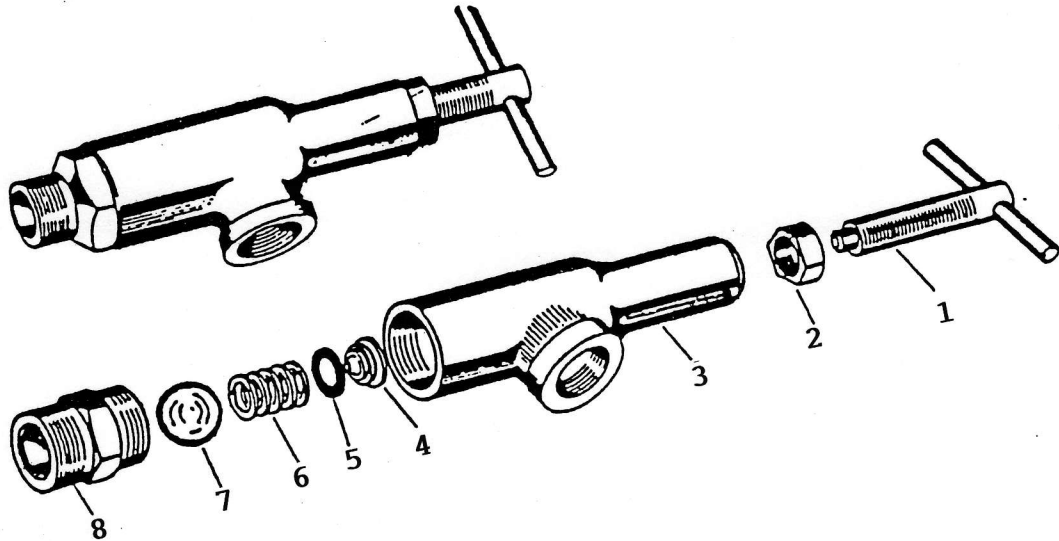
INJECT-a-CURE by SDI

Item Number	Part Number	Description	Qty
83	10-501	Hold Down Straps, 600 Gallon	4
83	10-304	Hold Down Straps, 300 Gallon	4
84	10-652	Front Saddle, 600 Gallon Only	1
85	10-653	Rear Saddle, 600 Gallon Only	1
86	11-659	Suction Float Bracket	1
87	11-035	Float Guide, 600 Gallon	1
87	11-034	Float Guide, 300 Gallon	1
89	16-266	Left Agitator Paddle 1-3/16", 600 Gallon	6
89	16-298	Left Agitator Paddle, 1", 300 Gallon	3
90	16-267	Right Agitator Paddle 1-3/16", 600 Gallon	6
90	16-299	Right Agitator Paddle 1", 300 Gallon	3
91	16-671	Agitator Shaft 1-1/4 x 86", SS, 600 Gallon	1
91	16-353	Agitator Shaft, SS, 300 Gallon	2
92	16-119	Tank Fitting 1-1/4", Poly	1
93	16-285	Shaft Collar 1-1/4", SS, 600 Gallon	2
93	16-283	Shaft Collar 1", SS, 300 Gallon	2
94	11-351	Rear Bearing 1"	1
95	11-914	Electric Panel Bracket	1
96	79-100	Electrical Box IC600/300	1
97	50-511SS	Elbow 3/4", SS	1
98	75-928	Runner 4 x 4"	2
99	53-817	Bushing 3/4 x 1/2" Poly	1
100	21-931	Suction Hose, 1" ID, 600 & 300 Gal/Per Foot	1'10"
101	81-500	Hose 1/2" ID, 800 PSI, 600 Gal/Per Foot, 600 Gallon	2'9"
101	81-500	Hose 1/2" ID, 800 PSI, Per Foot, 300 Gallon	2'3"
102	21-930	Hose 3/4" ID, 200 PSI, 600 & 300 Gal/Per Foot	2'
103	24-203	Clamp Bandit JS203	2
104	24-116	Hose Clamp, #16	2
105	24-112	Hose Clamp, #12	10
106	21-930	Hose 3/4" ID, 200 PSI, 600 Gal/Per Foot	3'9"
106	21-930	Hose 3/4" ID, 200 PSI, 300 Gal/Per Foot	3'6"
107	21-930	Hose 3/4" ID, 200 PSI, 600 & 300 Gal/Per Foot	2'2"
108	21-930	Hose 3/4" ID, 200 PSI, 600 & 300 Gal/Per Foot	1'6"

Model IC600 & 300-6E2M-Turf Inject-a-Cure by SDI



PI169/500jj



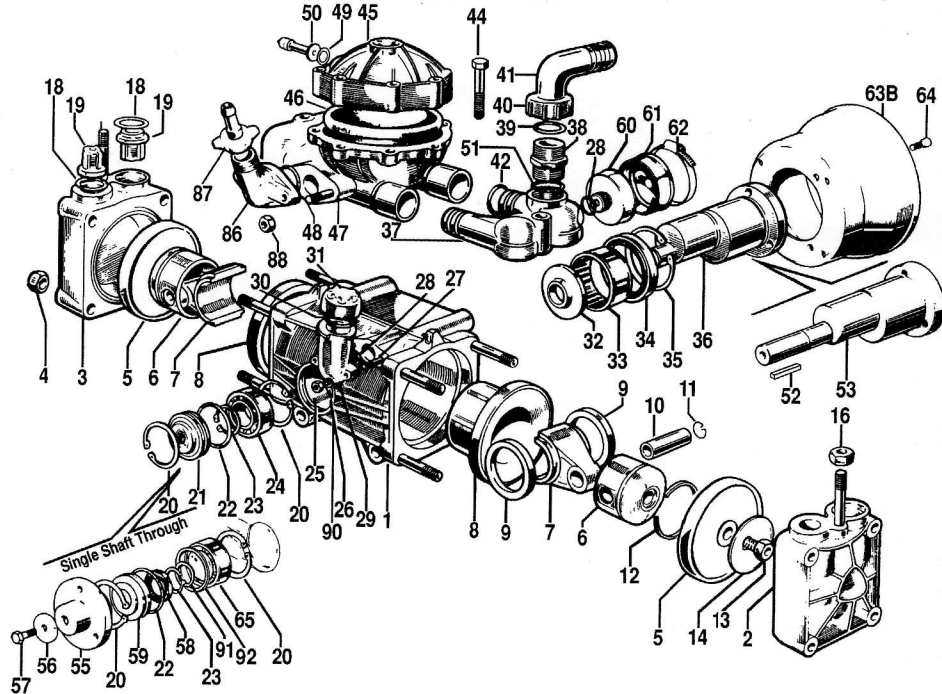
<u>Item No.</u>	<u>Part No.</u>	<u>Description</u>
1	64-861	Adjusting Screw
2	64-862	Locknut
3	64-866	Body, 1/2"
4	64-864	Spring Retainer
5	64-865	Gasket
6	64-860	Spring
7	64-850	Ball
8	64-867	Adapter with Seat, 1/2"

Relief Valve #64-803

HYPRO D30 DIAPHRAGM PUMP

Repair and Maintenance Kits Available

- ▲ **O-Ring Parts Kit No. 9910-KIT1916** consists of these o-rings: Ref. 18 (4 ea), Ref. 22 (1 ea), Ref.28 (1 ea), Ref.30 (1 ea) Ref.39 (1 ea), Ref.4 (4 ea), Ref. 49 (1 ea), Ref. 51 (1 ea), Ref. 89 (1 ea)
- **Diaphragm Parts Kit No. 9910-KIT2110** consists of: Ref.5 (2 ea), Diaphragm (Buna-N), Ref. 18 (4 ea) O-Rings, Ref. 46 (1 ea), Accumulator Diaphragm
- **Diaphragm Parts Kit No. 9910-KIT1724** consists of: Ref.5 (2 ea) Diaphragm (Desmopan), Ref. 18 (4 ea) O-Rings, Ref. 46 (1 ea) Accumulator Dia.
- **Valve Parts Kit No. 9910-KIT1917** consists of Ref.18 (4 ea) O-Rings, Ref. 19 (4 ea) Valves.



Ref. No.	Part Number	Description	Qty. Req'd.
1	9910-620011	Pump Body	1
2	9910-620101	Head Assembly (Right Hand)(DX)	1
3	9910-620102	Head Assembly (Left Hand)(SX)	1
4	9910-320130	Nut (12MA)	8
■5	9910-620085	Diaphragm, Desmopan (std.)	2
●5	9910-620080	Diaphragm, Buna-N (opt.)	2
5	9910-62008T	Diaphragm, Teflon (opt.)	2
6	9910-620120	Piston	2
7	9910-620140	Connecting Rod	2
8	9910-620110	Piston Sleeve	2
9	9910-580130	Retainer Ring	2
10	9910-380300	Connecting Rod Pin	2
11	9910-380080	Retainer Ring	4
12	9910-160230	Piston Ring	2
13	9910-580360	Retaining Bolt	2
14	9910-1040180	Retaining Washer	2
16	9910-180150	Nut (10MA)	2
●■▲18	9910-620030	O-Ring	4
□19	9910-1409050	Check Valve Assembly	4
20	9910-11120	Retainer Ring	1
21	9910-620026	Oil Sealing Cap	1
▲22	9910-620210	O-Ring	1
23	9910-620291	Retaining Ring	1
24	9910-620190	Ball Bearing	1
25	9910-390440	Nut	2
26	9910-550331	Washer	2
27	9910-550330	Stud	1
▲28	9910-180101	O-Ring	1
29	9910-550030	Oil Sight Glass	1
▲30	9910-550040	O-Ring	1
31	9910-550056	Cap for Oil Sight Glass	1
32	9910-620160	Spacer Washer	1
33	9910-550060	Roller Bearings	1
34	9910-620130	Seal	1
35	9910-620330	Retainer Ring	1
36	9910-620170	Crankshaft	1
37	9910-620150	Suction Attachment	1
38	9910-550340	Threaded Adapter	1
▲39	9910-550350	O-Ring	1
40	9910-550242	Barb Nut	1
41	9910-550370	Hose Barb	1
▲42	9910-390060	O-Ring	4
44	9910-621780	Bolt (8MAx40)	8
45	9910-620230	Accumulator Head	1
45B	2270-0004	Washer	2
●■46	9910-550190	Accumulator Diaphragm	1

Ref. No.	Part Number	Description	Qty. Req'd.
46	9910-55019T	Accumulator Diaphragm, Teflon (opt.)	1
47	9910-629209	Accumulator Manifold	1
48	9910-30211	Studs	2
▲49	9910-650542	O-Ring	1
50	9910-180020	Air Valve	1
▲51	9910-390290	O-Ring	1
52	9910-620680	Key (AP-A Model)	1
53	9910-620172	Crankshaft 20 mm ThruShaft (AP-A Model)	1
53	9910-620174	Crankshaft, 3/4" solid (AP-A Model)	1
55	9910-620661	Retainer (AP-A Model)	1
56	9910-620670	Washer (AP-A Model)	1
57	9910-180370	Bolt (AP-A Model)	1
58	9910-620630	Seal (AP-A Model)	1
59	9910-620021	Spacer (AP-A Model)	1
60	9910-650660	Dampener Body	1
61	9910-650670	Dampener Diaphragm	1
62	9910-650690	Clamp	1
63A	2840-0028	Steel Safety Shield	1
63B	9910-1500350	Durable Plastic Shield (Optional)	1
64	9910-820670	Bolt (10MAx16)	4
65	9910-620190	Ball Bearing (AP-A Model)	1
66	9910-620240	Male 6-Spline 1-3/8" PTO Shaft	1
67	9910-620470	Bolt (10MAx20)	3
68	9910-200231	Lock Washer	4
69	9910-621600	1" Solid Shaft	1
70	9910-500160	Collar	1
71	9910-620270	Female 6-Spline 1-3/8" PTO Coupler	1
72	9910-320130	Nut	1
73	9910-320131	Washer	1
74	9910-500171	Lock Retaining Washer	1
75	9910-320170	Bolt (12MAx75)	1
76	9910-620340	Bolt (12MAx20)	4
77	9910-620570	Torque Bracket	1
78	9910-620650	Torsion Spring	1
79	9910-320640	Chain (450 MM)	1
80	9910-320641	Chain (320 MM)	1
81	9910-320650	"S" Hook	3
82	9910-380200	Base	2
83	9910-380210	Bolt (8MAx75)	2
84	9910-380241	Lock Washer	2
85	9910-380240	Nut	2
86	9910-450145	Discharge Flange Housing (90°)	1
87	9910-110130	Hose Barb and Nut (1/2" barb)	4
88	9910-390270	Nut	2
89	9910-0009	Name Plate (not shown)	1
90	9910-130171	Plug, Drain	1
91	9910-620930	Bearing Spacer (Small)	1
92	9910-620940	Bearing Spacer (Large)	1

Inject-a-Cure ***Limited Warranty***

This ***Inject-a-Cure*** brand solution injection system is warranted by the original manufacturer to be free from defects in material and workmanship under normal use and service for a period of: **One (1) year** on fiberglass tank, steel frame, fittings, agitation shaft and bearings, mixing blades and general assembly; **One (1) year** on pumps and electric motors.

Wear Warranty: This ***Inject-a-Cure*** solution injection system also carries a warranty against excessive wear on the agitator bearings, packing bearing and shaft for **Three (3) years** from date of purchase. This does not include the packing material which is a normal wear item. Excessive wear is defined as wear that prohibits the agitation assembly from functioning properly. Contact the factory for specifics.

This warranty covers only the original retail purchaser (not purchased for resale) of the injector. Warranty period begins on the date of purchase (invoice date), or the date of delivery, whichever is sooner.

All warranties, expressed and implied, are provided by the original equipment manufacturer of each of the major components, and by Spraying Devices, Inc.

What is not covered under this warranty:

- A) Normal wear and tear. Failures resulting from the use of abrasive amendments and/or normal operating wear and tear is not covered under this warranty; *excluding* wear warranty as specified above.
- B) This warranty does not cover belts, hoses, pump valves and diaphragms, ball valves, orifices, tires, wheel bearings, oil, lubricants, filters and all other normal maintenance items.
- C) Any failure that results from an accident, abuse, neglect or failure to operate the system in accordance with normal operating procedures as described in the Owner's Manual.
- D) Any failure that results from introducing non-compatible amendments, chemicals or other substances into the tank, OR introducing compatible amendments and chemicals, (including solution gypsum), in a form or in an amount that exceeds the limitations set forth in the "Compatible Amendments" section of the Owner's Manual.

Limitations of this warranty: Any incidental, indirect, or consequential loss, damage or expense that may result from any defect, failure or malfunction or any of the components comprising the injection system are not covered under this warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from date of original purchase. Some states do not allow limitations or exclusions on incidental and consequential loss, or implied warranties, so this paragraph may not apply to you.

Manufacturer's sole liability under this warranty is limited to the repair or replacement, at manufacturer's option, of covered products or components which have failed during the term of their respective warranty period upon return freight prepaid to place of manufacture.

Who to contact: Hypro pump warranty information (800) 468-3428. For all other warranty repair work, including the fiberglass tank and general materials and workmanship, contact your local SDI Dealer.