



OASIS SERIES 2000 WASTEWATER TREATMENT SYSTEM

OWNERS MANUAL

**IMPORTANT: ALL WORK MUST CONFORM TO LOCAL BUILDING, ELECTRICAL
AND PLUMBING CODES**

PLEASE READ

We urge you to fully read this Manual. The contents are important to your safety and the operation of the Oasis Series 2000 Wastewater Treatment System.

Keep this Manual with other important household manuals for future reference.

If you have questions regarding the safety and operation of your Series 2000 Sewerage Treatment System, contact your local authorised Service Technician.

- Do not attempt to service components of the system yourself, call your accredited Service Technician.
- Only authorised Service personnel are to remove covers on the Treatment System.

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SECTION 1

ABOUT OASIS CLEARWATER ENVIRONMENTAL SYSTEMS

Oasis Clearwater Systems is a New Zealand company which commenced business in 1991, manufacturing the first purpose designed and built home sewage treatment plants in New Zealand.

Oasis Clearwater Systems has a national group of authorised distributors who market, install and service the range of Oasis Clearwater products throughout New Zealand. They are all privately owned and operated qualified drainlayers/plumbers SME (small-medium businesses) in your local area. They are issued with Certificates of Competency by Oasis Clearwater verifying their successful training in the installation and maintenance of Oasis Clearwater equipment.

As leaders in our industry Oasis Clearwater has an ongoing commitment to the industry. Certification of its products are approved by all Council Authorities and comply with all relevant Australasian Standards.

Oasis Clearwater Systems also has a commitment to continually developing the best products by way of its research and development activities.

Most importantly, Oasis Clearwater Systems has a continuing commitment to its clients, the end user of its products. This is further honoured by only appointing the best trades people as its authorised distributors, providing spare parts backup and training.

Please refer to our website for additional information: www.oasisclearwater.co.nz

SECTION 2

HOW THE OASIS SERIES 2000 WORKS

ENGINEERED TO PERFECTION!

Why this Technology is so effective

- The system comprises a pre-treatment chamber feeding to a secondary treatment chamber. Liquid flows into the aeration chamber, where with the use of our exclusive fine air diffuser assembly, thousands of tiny air bubbles provide oxygen for the aerobic digestion and mix the contents of the aeration chamber
- Waste water is introduced to the clarification chamber by hydraulic dispersement where settled sludge material is transferred back to the pre-treatment chamber to further enhance treatment. Further biological and mechanical filtration occurs by the use of the revolutionary ZABEL A300 high performance filter, prior to final pump or discharge chamber.

The system is complete with a high quality audio-visual alarm for system malfunction.

SECTION 3

INTRODUCING PRODUCTS INTO THE SYSTEM

Introducing harmful products into the system may reduce the efficiency of the system or stop the treatment process by destroying the biomass. These products that reduce the efficiency or stop the treatment process can be grouped into two groups, prohibited substances and limited-use substances. While the wastewater treatment system will process most waste produced by the average household, the following information will maximise the system's efficiency and reduce the time period between primary chamber pump-outs.

NOTICE: Introducing harmful or damaging chemicals into your Oasis Series 2000 System may void the Warranty.

A. Prohibited Substances:

Prohibited substances are those substances which when present in even small amounts will prevent the system from providing wastewater treatment. Substances that will not dissolve may clog and possibly damage the aeration unit. **DO NOT** introduce the following prohibited substances into your Oasis 2000 System:

- Plastic or rubber products, petroleum products, such as motor oil, paint, paint thinner, petrol and solvents
- Non-biodegradable products, such as sanitary napkins, condoms and disposable napkins
- Toxic substances such as pesticides, strong disinfectants and strong caustic drain cleaners
- Large amounts of paper products, such as paper towels and synthetic fibre-reinforced products advertised as having "wet strength"
- Animal fats, such as bacon grease or lard (normal cleaning of pots and pans is acceptable).

Chemicals

The following chemicals are prohibited substances and **should not be** poured into the Treatment System:

Herbicides Pesticides Paint Thinner Motor Oil

Have you read the "Essential Guidelines"?

(enclosed with your system information)

B. Limited-Use Substances:

Limited-Use substances in large concentration will reduce or stop the treatment process. The same substances in smaller concentrations will have no harmful effect on the treatment process. You may use the following substances without harming your Oasis Series 2000 Treatment System if you use the substance according to the manufacturer's directions, use the substances SPARINGLY, and do not introduce concentrated doses into the system.

Bio-degradable laundry powders

Laundry Bleach

Detergents with Bleach

Household cleaners containing sodium bactericides such as:

- Pine oil (disinfectant used in general purpose liquid cleaners)
- N-alkyl dichlorobenzyl ammonium chloride (disinfectant used in detergents and spray cleaners)
- Sodium hydroxide (chemical used in drain openers and cleaners)

- Sodium dichlor-s-triazinetrione (powdered bleach used in scouring powders and automatic dishwasher detergents)
- Ortho-phenylphenol (bactericide used in tub and toilet bowl cleaners)

Waste Food

Some food waste, whether or not it is run through a waste grinder will not be treated by the system, but will remain in solid form and fall to the bottom of the septic tank. Therefore, you should consider not using a waste grinder system, or disposing of these food items through the Oasis Series 2000 Wastewater Treatment System:

- Animal Bones
- Melon Rinds
- Corn Cobs
- Pips and Seeds
- Eggshells
- Any other non-edible food waste

C. Acceptable Substances:

Substances that are considered to be typical domestic wastewater are human waste, bath and dish water and edible food waste.

The following substances may be used regularly without harming your Oasis Series 2000 Wastewater Treatment System:

- Laundry detergents without bleach
- Dishwashing detergents without bleach
- Toilet Paper

Household cleaners containing sodium bicarbonate, sodium carbonate and sodium borate.

SECTION 4

SYSTEM MAINTENANCE AND MONITORING

The Oasis Series 2000 Wastewater Treatment System operates automatically and continuously. The maintenance procedures for the user of the system include keeping the vents and the blower housing clear of debris. The homeowner should monitor the status of the system, substances introduced into the system, and the frequency of required pump-out as determined by the service provider. If the instructions in this manual are carefully followed, the Oasis Series 2000 Wastewater Treatment System will provide years of service.

For the homeowner, operational procedures for the Oasis Series 2000 Wastewater Treatment System are minimal. Normal operation of the unit requires continuous operation of the blower and regular discharge of wastewater to the unit. Rubbish must not be allowed to block the blower intake. If the blower should fail, follow the procedure give under ALARM WARNING.

Your Oasis Series 2000 Wastewater Treatment System can be furnished with a service policy, which includes 2 inspection/service calls per annum to ensure proper operation of the system. During these service calls, the authorised service person will check the blower for proper operation and perform preventative maintenance including lubrication, cleaning of the blower intake, and inspection of the control panel light. The service provider will also measure the solids level in the septic tank and recommend pump-out when necessary.

PRIMARY CHAMBER

Periodically, waste will need to be removed from the primary chamber using normal pump-out procedures. Only persons experienced in wastewater treatment or service are authorised to remove the chamber cover.

ALARM WARNING

The System is equipped with a red system status light on the control panel and an audio alarm. Should the red light flash and the alarm activate, check the breaker to ensure it has not tripped. If the breaker has tripped, attempt to reset it. If the breaker fails to remain reset, call your Service Technician. The alarm may be shut off by pushing the OFF button. Pushing the OFF button will not reactivate the unit, only silence the alarm.

BLOWER STOPPAGE OR ELECTRICAL POWER OUTAGE

The Oasis Series 2000 Wastewater Treatment System requires a constant supply of oxygen and food for the biomass. Should the blower stop, air flow through the aeration pipe will stop, cutting off the supply of oxygen to the biomass. A prolonged absence of oxygen will seriously affect the condition of the biomass.

When the blower is operating, it will emit a humming sound. If the blower is not operating, first determine whether an electrical power outage has occurred in your community.

If your house is without electricity, call the electric company. If the electricity is off more than 48 hours, call your Service Technician as well for treatment system advice. If your house has electricity but the blower is not operating, follow the procedures given under ALARM WIRING.

FLOODING

Flood water may cover the septic unit, the blower housing, or both, if the System is installed in a low-lying area.

DANGER:

Electrical equipment located in flooded areas presents an electrical hazard. Should the unit become flooded, call your Service Technician. Stay out of flooded area.

EVALUATION OF SYSTEM PERFORMANCE

The Oasis Series 2000 Wastewater Treatment System operates automatically and continuously. There are no operating procedures for the user of the System to perform. However, as with any home appliance or equipment, simple periodic checks should and can be made to aid in the prevention of costly repair problems. Generally, the wastewater treatment system unit can be checked by sight and smell. The Oasis Series 2000 Wastewater Treatment System is generally odour-free. If smells are evident please check system usage, chemicals, etc. If smells persist, please call your service technician.

VISUAL EVALUATION

Wastewater backup is characterised by wastewater flowing back into the house or slow movement of wastewater in the drains. This may indicate a problem with your wastewater treatment system unit. Identify where the backup is occurring within your home's plumbing system. If no material is blocking the drain, contact your Service Technician.

NO USE FOR AN EXTENDED PERIOD

The Oasis Series 2000 Wastewater Treatment System will function normally even if wastewater does not enter the system for 5 days. The power to the system should be left on during short periods when there is no wastewater flow to the system. If the system will not be used for several months or longer, you should contact your Service Technician so the system can be checked for proper operation and serviced if necessary. A slight odour may be detected for a few days while the system returns to normal operation.

SECTION 5

TROUBLESHOOTING

PROCESS FAILURE

Process failure from oxygen starvation of the biomass:

If the biomass is starved of oxygen, the typical odours associated with anaerobic bacterial treatment will be noticed. This is caused by insufficient air flow into the biological zone. A blockage in the air line or blower is the most probable cause.

- a) The inlet screens have been located on each end of the blower housing. If one screen becomes blocked by debris, the opposite screen should still be sufficient. The suggested routine preventative maintenance calls for brushing off the screen as needed. The configuration of the inlet screens and the required maintenance will protect the unit from oxygen starvation due to insufficient air flow.
- b) The blower is equipped with an inlet air filter. If this filter becomes blocked with debris, it could cause oxygen starvation of the biomass. The blower inlet filter should be checked every 6 months and replaced as needed.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
The air indicator light on the control panel is flashing.	The air intake is blocked.	Clean intake screens on blower housing. Check air filter on blower for blockage.
	The air discharge line or vent line is blocked.	Check discharge line and vent line visually or with drain cleaning equipment for obstructions.
	The discharge line is open.	Check discharge line for breaks or leaks.
	The system is flooded.	Determine cause of flooding (eg line obstruction, lateral field pump failure, high flows, etc) and correct
	The blower has failed.	Determine if blower failure was caused by an obstructed intake or discharge line.
		Investigate overheating (i.e. internal thermal overload protection), short-circuiting, or other electrical failure (i.e. bearing failure) and correct.

		Check to see whether circuit protection device for blower has tripped.
The water alarm is on.	An alarm condition has occurred. See troubleshooting items under flashing alarm indicator.	Push mute button to silence alarm.
	Pump failure	Check levels in all chambers. Check pump is functioning. Check that the pump float is not jammed and is free of walls and any other obstructions which may affect functioning.
	Filter blocked	Dismantle pump filter and clean
	There is an obstruction in the discharge line from the system.	Check the effluent piping and lateral field piping visually or with drain cleaning equipment for an obstruction and correct.
	The flow rate to the system is too high.	Check the maximum flow rate to the system to see that it is within normal limits.
Wastewater is backing up into the home sewer piping	There is an obstruction in the home sewer piping.	Check the piping lead to the system visually or with drain cleaning equipment for an obstruction and correct.
	The tank requires cleaning and/or a pumpout is required.	Check the sludge depth in both chambers of the tank to see if it is below required levels. If the depth is too great, have the tank pumped out and, if necessary, cleaned.
There is an unpleasant odour emanating from the unit.	The blower and air piping are not operating correctly.	Check the blower, vents and air piping for proper operation.
	The system is overloaded.	Check the maximum flow rate to the unit to see that it is within normal limits.
		Check the quality and contents of the flow into the unit for any abnormal or prohibited substances.
	The power cable to the blower has been damaged or is not connected properly.	Have a certified electrician check the wiring to the blower.

	The original cause for alarm has been corrected, but the flashing circuit for the indicator light has not been reset by technician	Reset flash circuit.
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SECTION 6

SERVICE PROCEDURE

COMMISSIONING AND SERVICING PROCEDURE

Prior to arriving on site to service or commission a newly installed System, check that the electrician has completed the wiring in accordance with wiring diagram supplied, and power is connected to the house.

Confirm with owner that sufficient water is available in the Tank to allow a proper setting for aeration and sludge return.

1. Remove all lids to allow access to all chambers as well as lid to Blower Housing box.
2. Check that the 3 pin plugs for both Irrigation pump and diaphragm blower (air pump) are in and switched ON.
3. Turn the PVC ball valve supplying air to the sludge return to OFF, then slowly adjust the sludge return pipe to an acceptable flow.
4. Test the high water alarm float by manually lifting the float, and check that the audio-visual alarm installed in the house is working.
5. Test the air alarm by switching the blower off, or disconnecting the clear tubing at join, and check the audio-visual alarm in the house.
6. If insufficient water in the irrigation chamber, lift pump float to confirm working.
7. Double check the audio-visual alarm and make sure the Mute button is in the ON position.
8. Irrigation field inspection and dripline line flushing.

SERVICING PROCEDURE

1. Ensure correct NAME & ADDRESS is on Service Report.
2. Identify yourself to home owner.
3. Visually inspect the treatment plant including landscaping lines and drippers.
4. Remove all Fibreglass/concrete/poly lids.
5. Turn field isolator to "OFF" position.
6. Remove gauze filter from air pump and clean. Reposition gauze and re-attach Blower lid.
7. If any floating contents on top of clarifier and biomass, skim off surface.
8. Remove and clean filters as necessary (effluent and irrigation).
9. Collect a sample from inside the pump well and carry out tests for:
 - a) Clarity (average 70 – 100% reading)
 - b) pH 7.0 – 7.6 reading
10. Replace all covers accurately and make sure the field isolator is switched ON (**IMPORTANT**).
11. Fill in Service Report Sheet accurately
 - Leave ONE copy with home owner
 - One Copy to be sent to relevant Council
 - One copy to OASIS CLEARWATER
 - Retain one copy.

If the pH is not stable, ADD acid or alkaline.

If the dissolved oxygen level is far too HIGH, provide artificial food by way of ACTIZME or dog biscuits to the aeration chamber (if D.O. Meter used) and, if there are major problems contact your Distributor.

SECTION 7

OPERATING INSTRUCTIONS FOR CONTROLLER

1. Introduction

The Oasis Clearwater Control Panel has a number of features that are explained in this section.

The basic purpose of the Control Panel is to activate and control the functioning of the Treatment Plant's air pump and to register an alarm when it detects a fault in the system.



2. General

Your Oasis Clearwater system is designed to operate automatically and its operation will usually be event free. The Control Panel provides visual and audible indicators of both normal operating conditions and fault conditions. The illustration on the previous page provides description markers that correspond with the following description of their operation.

- A. **POWER OFF/ON.** Once your Oasis Clearwater system has been commissioned, this switch must remain ON at all times.* If it is turned OFF no treatment will take place and no alarms will function.
- B. **DISPLAY.** This is a 9 digit display that describes normal and abnormal conditions by using a numerical code 1-9. See later in this document to understand their meaning.
- C. **MUTE ALARM.** This is a "soft touch" key that when pressed, silences the audible alarm for a period of 24 hours.
- D. **CIRCUIT BREAKER.** This is a resettable electrical overload that protects your air pump in the event of an excess draw of current. When "tripped" or "open" the square button will protrude from the face of the Control Panel. An audible alarm consisting of 5 consecutive 'beeps' will sound, the Strobe Light (E) will flash 5 times consecutively and the number 2 will be displayed on the Display (B).
- E. **STROBE LIGHT.** This is a high intensity red light, mounted on the top of the Control Panel, that flashes in unison with the audible alarm to make you aware of a fault condition.

3. Normal Operation at Start-up

Every time that power is switched on to your Oasis Clearwater System Control Panel, the display (B) will count down from 9 to 1. The audible alarm will sound in unison with the numeric

progression. This is a TEST MODE, at the completion of which, the display will show a 0 rotating to indicate that the system has tested out correctly. Unless a visual or audible alarm occurs, this is the normal operating display.

4. Low Occupancy Mode

This function should NOT be accessed by the Home Owner. If it is required, it will be activated by your Service Agent. Incorrect use of this mode may result in poorly treated water being discharged into the environment possibly causing degradation of your land and becoming a health hazard to you, your family, friends and neighbours.

5. Alarm Recognition and Rectification

Visual Alarms – Strobe Light (E) and Display (B)

All faults are indicated by the numbers appearing in the display (B) and by the corresponding number of flashes of the strobe light (E). If two faults occur simultaneously, then two numbers will be displayed in sequence, the strobe will mimic these numbers and after a short interval, the display and alarm will repeat the sequence.

Audible Alarm and how to Silence It

The audible alarm mimics the number of flashes of the strobe light and the visual display. To silence the audible alarm, press the Soft Touch Mute Alarm key (C) briefly once. This will silence the alarm for 24 hours, the Display (B) will now flash showing the fault code and indicating that the alarm has been muted. Should another fault occur while the alarm is muted, a new alarm will sound. If the faults are not rectified, the alarm will sound again at the expiration of 24 hours as a reminder that the plant is not operating correctly. The visual alarms cannot be turned off until all faults are rectified.

SECTION 8

ALARM CODES

ALARM	MEANING	ACTION
Code 1	The irrigation fuse has opened	Call your Service Agent
Code 2	The ABS fuse has opened	Call your Service Agent
Code 3	The water level is high	See below*
Code 4	The circuit breaker has tripped	Reset the breaker
Code 5	No air flow	Call your Service Agent

A high water level may be self correcting. It can be caused by the washing machine discharging at the same time as the bath is being emptied and the dishwasher is pumping out. If you think this may have occurred, then wait for 15 minutes until the surge flow has stopped and see if the alarm stops. If it does not then check the following:

- a) Is there a filter in the outlet line before the sprays or drippers? Is it blocked?
- b) Is the irrigation line kinked or broken?
- c) Has the irrigation pump failed?

If you can rectify any of these problems yourself, then you will save the call out cost of your Service Provider. However, they are experts in this field and will assist you whenever you need their help. Call them whenever you need their assistance or you are in doubt about what you need to do. They will happily assist you over the phone.

SECTION 9

WHO TO CONTACT FOR HELP

Before you call for help and to avoid unnecessary call out fees, check these items before you call for assistance:

1. Is the power turned ON at the plant?
2. Are there lights ON in the panel face?
3. Has a Safety Switch, not related to the plant, tripped in your switchboard?
4. Has the outlet hose become kinked, preventing the plant pumping out?
5. Is the outlet dripper filter blocked?

If you have an issue, you can try to reset the system with the following sequence:

- a) Turn the system OFF using the control panel ON/OFF switch on the front of the panel. This will reset the programme.
- b) Turn the system "ON" using the ON/OFF switch.
- c) If the system starts and operates correctly, observe the system over the next few days for another ALARM event and discuss it with your Service Agent.
- d) **If the system goes back into the ALARM mode, call your Service Agent. Limit your water usage until the fault is rectified.**

For Assistance or for your closest Service Agent call Head Office on:

03 344 0262
0800 48 48 49

(if no answer please leave your name and number on the answerphone)

SECTION 10

LIMITED WARRANTY

Oasis Clearwater Systems warrants each Oasis Series 2000 Aerobic Wastewater Treatment System to be free from defects in material and workmanship for a period of two (2) years from the date of sale to the ultimate consumer when properly registered with Oasis Clearwater Systems. Oasis Clearwater System's sole obligation under this warranty is as follows: Oasis Clearwater Systems shall fulfil this warranty by repairing or exchanging any component part, ex factory, that shows evidence of defects, provided said component part has been paid for, warrantee has notified Oasis Clearwater Systems of the defect complained of and the component is returned through an authorised Distributor, transportation prepaid. There is no informal dispute settlement available under this LIMITED WARRANTY.

No warranty is made as to the field performance of any system. This LIMITED WARRANTY applies only to the parts manufactured by Oasis Clearwater Systems and does not include any portion of the plumbing, drainage or installation of the systems, and does not include any travel or labour. Accessories supplied by Oasis Clearwater Systems, but manufactured by others, are warranted only to the extent of and by the terms and conditions of the original manufacturer's warranty. In no event shall Oasis Clearwater Systems be responsible for delay or damages or any kind of character resulting from, or caused directly or indirectly by, defective components or materials manufactured by others.

Recommendations for special applications will be based on the best available expertise of Oasis Clearwater Systems and published industry information. Such recommendations do not constitute a warranty of satisfactory performance.

This LIMITED WARRANTY extends to the ultimate consumer of the product. As herein, "ultimate consumer" is defined as the purchaser who first has the plant installed, or in the case of a system designed for non-permanent installation, the purchaser who first uses the system. It is the purchaser's or any sub-vendee's obligation to make known to any other consumer, the terms and conditions of this warranty. This warranty is a LIMITED WARRANTY and no claim of any nature shall be made against Oasis Clearwater Systems unless and until the ultimate consumer, or his legal representative, notifies Oasis Clearwater Systems in writing of the defect complained of and delivers the product and/or defective part(s), freight prepaid, to Oasis Clearwater Systems or an authorised service agent.

Oasis Clearwater Systems reserves the right to revise, change or modify the construction and design of the Oasis Series 2000 Aerobic Treatment System, or any component part or parts thereof, without incurring any obligation to make such changes or modifications in equipment previously sold. Oasis Clearwater Systems also reserves the right, in making replacements of component parts under this warranty, to furnish a component part which, in its judgement is equivalent to the part replaced.

SERVICING

Your system must be serviced by Oasis Clearwater Environmental Systems or an authorised agent. If the system is not serviced at 6 monthly intervals all warranties will be voided.

WATER INGRESS

All wastewater treatment systems are designed to treat **controlled domestic (human) wastewater inflows ONLY**. If the flows exceed design parameters due to wet weather (stormwater ingress, etc) or uncontrolled inflows (failed cisterns, automatic urinals, etc) all target design parameters and warranty will be voided.