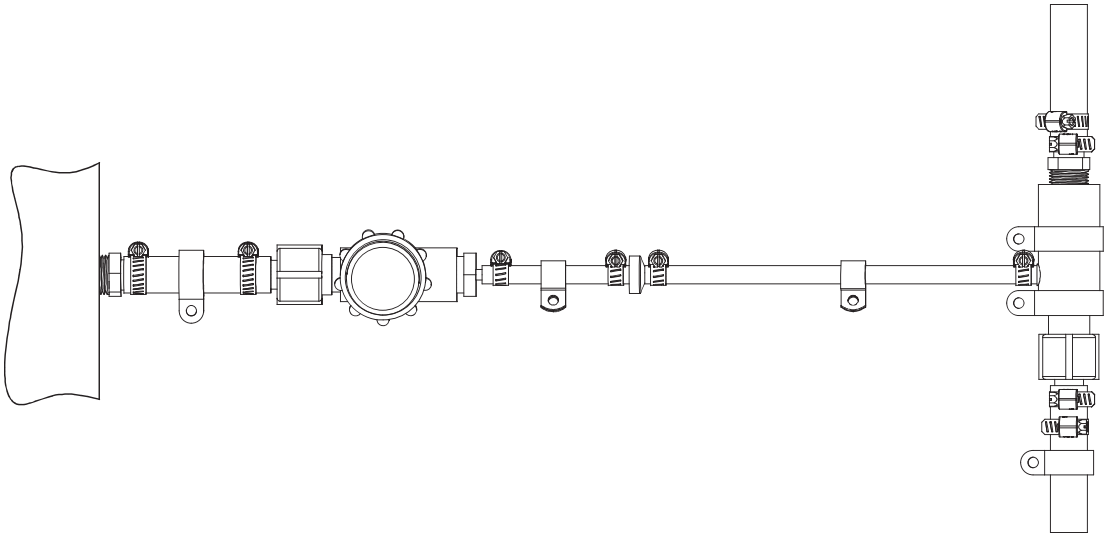
DOMETIC

Condensate Remover
Installation & Maintenance Manual

FOR MODEL CR330



Dometic Corporation
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SAFETY

This safety alert symbol appears with most safety statements. It means attention, become alert, your safety is involved! Please read and abide by the message that follows the safety alert symbol.

DANGER
Indicates a hazardous situation which, if not avoided, *will* result in death or serious injury.

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

CAUTION
Indicates a hazardous situation which, if not avoided, *could* result in minor or moderate injury.

NOTICE
Indicates a situation which can cause damage to the equipment, personal property and/or the environment, or cause the equipment to operate improperly.

NOTE: Used to point out helpful suggestions that will result in improved installation, reliability or operation.

WARNINGS AND NOTICES

WARNING

- **The seacock or ball valve in the air conditioner's supply water line must be closed when installing the CR330. Failure to close the seacock or ball valve may result in the flooding or sinking of the boat.**
- **A check valve (supplied) MUST be installed in the condensate line as described in the instructions. A failure of the check valve may result in the flooding or sinking of the boat. Verify proper operation of the check valve monthly. (See page 2.)**

CAUTION
Certain components will run at fairly high temperatures. Exercise care in working around operating equipment. Do not touch operating machinery without the aid of qualified personnel.

Overuse of sealer will cause the CR330 (see Figure 1, #12, on page 4) to become clogged and inoperative, and may result in flooding. (See page 2.)

NOTICE
The largest unit that the CR330 should be used with is a 16,000 BTU air conditioner at 4.0 GPM (15.1 LPM).

Use the CR330 only on a single pump to a single air conditioning unit installation. Do not use the CR330 on single pump to multiple unit installation. Doing so will cause water restriction to the unit and HPF faults or overheating.

The flow rate, measured at the air conditioner, must be at least 1.0 GPM (3.8 LPM) but no more than 4.0 GPM (15.1 LPM). Flow rates less than 1.0 GPM (3.8 LPM) may result in improper removal of the condensate. Flow rates greater than 4.0 GPM (15.1 LPM) may result in a restriction of water flow to the air conditioner. Always refer to the air conditioner's Owner's manual or Product Data Sheet to determine the correct water flow for proper operation of the air conditioner. (See page 2.)

Failure to clean the filter/strainer may cause the condensate to overflow the condensate drain pan, causing damage to or flooding of the boat. (See page 5.)

Before installing the CR330, turn the circuit breaker off to the air conditioner and to the water pump, if the pump has a separate breaker. If the pump turns on while the seacock or ball valve is closed, damage to the pump may occur. (See page 2.)

Water must flow in the proper direction through the filter strainer. On the side of the strainer is an arrow that indicates the correct direction. Make sure the water flow is aligned with the arrow. (See page 3.)

OVERVIEW

The Dometic CR330 removes the condensate water produced during the cooling cycle of your reverse cycle air conditioner and discharges the condensate into the air conditioner's outlet water line. The condensate is pumped overboard any time the air conditioner's circulation pump is working and sufficient condensate is in the condensate pan of your unit. By operating on the Venturi effect, a separate condensate pump is not required.

A water filter/strainer, a reducer and a check valve are also provided and must be installed with the CR330. The filter prevents debris from entering the CR330 and obstructing the water flow. The check valve allows the condensate to flow in only one direction.

WARNING

- **The seacock or ball valve in the air conditioner's supply water line must be closed when installing the CR330. Failure to close the seacock or ball valve may result in the flooding or sinking of the boat.**
- **A check valve (supplied) MUST be installed in the condensate line as described in the instructions. A failure of the check valve may result in the flooding or sinking of the boat. Verify proper operation of the check valve monthly.**

NOTICE

The flow rate, measured at the air conditioner, must be at least 1.0 GPM (3.8 LPM) but no more than 4.0 GPM (15.1 LPM). Flow rates less than 1.0 GPM (3.8 LPM) may result in improper removal of the condensate. Flow rates greater than 4.0 GPM (15.1 LPM) may result in a restriction of water flow to the air conditioner. Always refer to the air conditioner's Owner's manual or Product Data Sheet to determine the correct water flow for proper operation of the air conditioner.

INSTALLATION

NOTICE

Before installing the CR330, turn the circuit breaker off to the air conditioner and to the water pump, if the pump has a separate breaker. If the pump turns on while the seacock or ball valve is closed, damage to the pump may occur.

The CR330 is installed into the outlet water line of the air conditioner. The discharge water flows through the CR330 to the overboard thru hull fitting. Condensate from the drain pan is pulled into the CR330 and is pulled overboard by the discharge water from the air conditioner. See Figure 1, page 4.

Included in the installation materials are 1/4" clear tubing and 5/8" clear tubing. Various lengths of this tubing must be cut to connect the components. To optimize the safety and performance of the system, be sure to follow the recommendations for the lengths of tubing. See Figure 1, page 4.

INSTALLING THE CR330

Locate the outlet (discharge) water line on your air conditioner. Follow the water line, looking for a suitable place to install the CR330.

NOTE:

- **The CR330 must be secured to a bulkhead to prevent movement while the boat is underway.**
- **The CR330 does not have to be level, but the minimizing of bends in the tubing will improve the performance of the CR330.**
- **The filter/strainer must be checked and cleaned regularly. Put the filter/strainer in an easily accessible place.**
- **Use pipe dope to seal all threaded connections.**

CAUTION

Overuse of sealer will cause the CR330 (see Figure 1, #12, on page 4) to become clogged and inoperative, and may result in flooding.

1. Cut the water outlet line between the air conditioner and the thru hull fitting where the CR330 is to be installed.

2. The discharge water from the unit MUST flow through the CR330 in the proper direction. See Figure 1, page 4.
   a. Screw the 5/8" barb x 1/2" MPT fitting into the inlet, the end with the FEMALE threads of the CR330, as shown in Figure 1. Slip the 5/8" discharge water line from the unit over the barbs and secure the water line with two 5/8" stainless steel hose clamps. To prevent the CR330 from moving while underway, secure the water line with two hold-down clamps. If the CR330 moves, the lines may loosen and leak, causing the boat to flood.
   b. Screw the 1/2" x 1/2" coupling onto the end of the CR330 with the MALE threads. Screw the 5/8" barb x 1/2" FPT fitting into the coupling. Use pipe dope to seal all threaded connections. Slip the 5/8" water line from the thru hull over the barbs and secure the water line with two 5/8" stainless steel hose clamps. To prevent the CR330 from moving while underway, secure the water line with two hold-down clamps. If the CR330 moves, the lines may loosen and leak, causing the boat to flood.

NOTE: Double-clamp all 5/8" seawater hose connections with two stainless steel clamps, reversing the clamps.

CONDENSATE LINE ASSEMBLY

Refer to Figure 1, page 4.

1. Install the 5/8" hose barb x 5/8" fitting into the inlet side of the filter/strain. Install the 1/2" MPT x 1/4" barb fitting into the discharge end of the filter/strain. Use pipe dope to seal each threaded connection.
2. Cut a 12" (30.5 cm) piece of 5/8" tubing. Connect one end of the clear 5/8" tubing to the condensate fitting on the drain pan of the air conditioner. Secure this connection with a 5/8" screw-type stainless steel hose clamp. Install hold-down clamps to prevent the line from moving.

NOTICE

Water must flow in the proper direction through the filter strainer. On the side of the strainer is an arrow that indicates the correct direction. Make sure the water flow is aligned with the arrow.

3. Connect the other end of this 5/8" tubing to the inlet side of the filter/strainer. Secure this connection with a 5/8" stainless steel screw-type hose clamp.
4. Cut a 2-1/2" (6 cm) piece 1/4" clear tubing and connect it to the 1/4" end to the filter strainer. Secure with a 1/4" stainless steel screw-type clamp. Connect the other end of the 1/4" tubing to the check valve and secure with 1/4" stainless steel screw-type hose clamp. Install hold-down clamps to prevent the line from moving.

NOTE: The check valve allows water to flow in one direction – from the condensate drain pan into the CR330. To determine the proper orientation of the check valve, blow into one end of the check valve. If air passes freely through the valve, this is the correct direction for the water flow.

5. Cut a 7 ft (210 cm) piece of the 1/4" tubing. Connect one end to the check valve and the other end to the CR330. Secure both connections with 1/4" stainless steel screw-type hose clamps.

SYSTEM TEST

1. Open the seacock or ball valve.
2. Turn the circuit breaker for the air conditioner to the on position. If the water pump has a separate breaker, turn this breaker on.
3. Lower the temperature set point of the air conditioner so that it is below room temperature and the air conditioner begins operation and cool air is being produced.
4. With the air conditioner running, pour 2-3 cups (1/2 liter) of clean water into the condensate drain pan of the air conditioner. The condensate water should begin to immediately flow from the drain pan through the clear hose and into the CR330.
5. Check all connections to make sure that they are tight and secure.
6. Make sure all lines and tubing are free of kinks.

Figure 1: Condensate Remover Kit

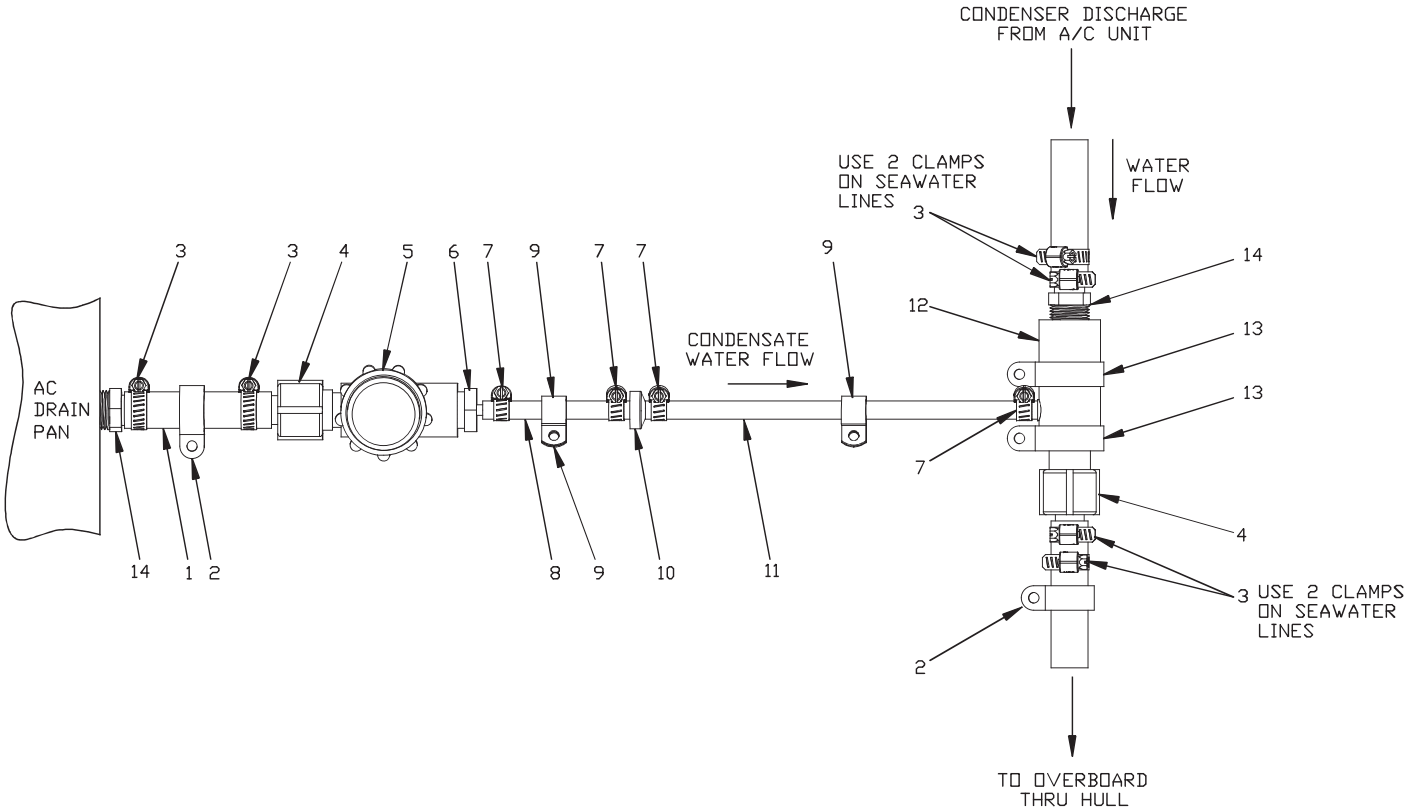

Table 1: Condensate Remover Kit – Diagram Legend

1	1 ft (30.5 cm) of 5/8" ID clear tubing	**8**	2-1/2" (6 cm) of 1/4" clear tubing
2	Hold-down clamp for 5/8" tubing	**9**	1/4" hold-down clamp
3	5/8" stainless steel screw-type hose clamp	**10**	Check valve
4	1/2" FPT x 5/8" hose barb adapter	**11**	Maximum 7 ft (213 cm) of 1/4" clear tubing
5	Filter/strainer	**12**	CR330
6	1/2" MPT x 1/4" hose barb	**13**	Hold-down strap for CR330
7	1/4" stainless steel screw-type hose clamp	**14**	1/2" MPT fitting x 1/2" hose barb

NOTE: Total length from A/C unit to CR330 must not exceed 10 ft (3 m).

MAINTENANCE OF THE CR330

Even though the CR330 condensate removal system has no moving parts, regular maintenance and inspection of the system is essential for proper operation. The most important task is to check the filter/strainer and to make sure it is clean and not obstructed.

NOTICE

Failure to clean the filter/strainer may cause the condensate to overflow the condensate drain pan, causing damage to or flooding of the boat.

The condensate pan must be kept clean of mold and debris that could clog the filter/strainer. Inspect the drain pan regularly to make sure it is clean.

If the condensate is not being removed from condensate pan and there are no kinks or obstructions in the lines or tubing, the filter/strainer should be cleaned.

To clean the strainer:

1. Unscrew the plastic bulb on the strainer.
2. Take out the wire mesh strainer.
3. Spray off the wire mesh with water or using a wire brush, gently remover debris form the screen.
4. Reassemble the components.

To clean the CR330:

Should the CR330 become clogged, it can be cleaned with pressurized water. Alternately, a small probe, e.g., a paper clip, can be used to remove obstructions from the orifice.

REPLACEMENT PARTS LIST

Refer to Figure 1, page 4.

NUMBER ON DRAWING	PART NUMBER	DESCRIPTION
1	337458	5/8" ID clear tubing
2	336311	Hold-down clamp for 5/8" tubing
3	333552	Stainless steel screw-type hose clamp for 5/8" tubing #8
4	335080	5/8" barb x 1/2" FPT coupling
5	337411	Strainer/filter with 1/2" FPT connections
6	337412	1/4" barb x 1/2" MPT adapter
7	337459	Stainless steel screw-type hose clamp for 1/4" tubing 7/32" - 5/8"
8, 11	337413	1/4" ID clear tubing (#8 = 2-1/2") (#11 = 7ft)
9	4150110	Hold-down strap for 1/4" tubing
10	337414	1/4" x 1/4" check valve
12	337415	CR330 condensate remover
13	337457	Hold-down strap for the CR330
14	335120	1/2" barb x 1/2" MPT fitting

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