6-WAY ALARM SYSTEM

AQUALARM™

PROTECTS
YOUR CRAFT
FROM
FIRE * FLOODING
WHILE MOORED

... FROM
FIRE * FLOODING * ENGINE OVERHEATING
LOW OIL PRESSURE
WHILE UNDERWAY

INSTRUCTIONS

FULL 6 MONTH WARRANTY
Your new Aqualarm is fully warranted for a period of 6 months from the date of delivery, provided that proof of purchase is shown. Seller will repair or replace product without charge to Buyer if Buyer has correctly installed product as per accompanying installation instructions and the defect, malfunction or failure was not caused by damage (not resulting from defect or malfunction) or unreasonable use including failure to provide reasonable and necessary maintenance. Buyer must mail or ship prepaid or present product to Aqualarm, Inc., 544 W. 182nd Street, Gardena, CA 90248. Product will be repaired or replaced and mailed or shipped to Buyer within 30 days of receipt by Seller.

Any controversy or claim relating to this product shall be settled by arbitration in Los Angeles, CA, in accordance with the Rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator may be entered in any court having jurisdiction thereof. NO WARRANTY IS INCLUDED AGAINST ANY EXPENSE FOR REMOVAL, REINSTALLATION OR OTHER CONSEQUENTIAL DAMAGES ARISING FROM ANY DEFECT IN THIS PRODUCT.

This warranty gives you specific legal rights and other rights which may vary from state to state.

AQUALARM, Inc.
544 W. 182 ST. / Gardena, Cal. 90248

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NO. 204 REMOTE FIRE DETECTOR / As many of these units may be installed as the owner deems necessary. Must be located near to FIRE DANGER as possible . . . Stove, Batteries, Engine Room and Berths, etc. Mount above fire hazard on ceilings or on Engine Compartment below deck. Set unit for 135°F. at 100°F.

NO. 206 COOLING WATER FLOW DETECTOR / Operation: The sensing vane is at right angles to Detector body when no water is flowing and the hermatically sealed magnetic switch energizes alarm bell circuit. The vane is opened when engine is running and 5 gals. or more of water per minute is flowing through Detector. For use on smaller engines with 3/4" inlet water lines an adjustable baffle constrains the flow to create enough velocity to deflect the sensing vane. On larger engines using 1 to 1 1/2" inlet lines the baffle is partly or fully open.

Installation: Cut seawater hose between strainer and pump; remove enough to make space for the Detector; use reducers between 1 1/2" pipe threaded inlet and outlet of Detector if seawater line is smaller than 1 1/2". Detector may be in any position between horizontal or vertical. NOTE: When installing, flow arrow on Detector cap should be pointing downstream. Can also be inserted between pump and engine block or heat exchanger, . . . in seawater line where it exits from manifold before going into wet exhaust line or overboard on dry exhaust systems. Connect 2 wires from Detector to terminals A & C on the Aqualarm or to a 12-volt alarm buzzer not drawing more than 1 amp. A single pole, single throw switch must be so alarm will not sound when engine is stopped. No current is drawn except when alarm is ringing.

Adjustment: None needed on engines with 3/4" sea-water lines. On engines with larger lines, known baffle adjustment lock-nut on side of Detector body and rotate black baffle shaft from vertical position to horizontal; tighten lock-nut only to a snug tightness (do not overtighten); start engine and run for 1 minute at higher than idle speed to open flow-sensing vane, then reduce throttle to idle. If alarm sounds at Ki+ speed, stop engine; adjust baffle to close it partially (near vertical position); start engine; run 1 minute at higher than idle speed; then reduce throttle to idle; if alarm rings, repeat the closing of baffle until alarm does not sound when idling. Do not adjust when engine is running.

To clean: Close sea-cock, remove 8 screws on top of Detector and lift sensing vane/switch assembly from body.

WARNING: Fluid temperature not to exceed 180°F.
NO. 210 COOLING WATER FLOW DETECTOR — Operation: the sensing vane is at right angles to Detector body when no water is flowing and the hydromechanically sealed magnetic switch energizes the alarm bell circuit. The vane is opened when engine is running and 5 gals. or more of water per minute is flowing through the Detector. For use on smaller engines with \( \frac{3}{4} \)" inlet water lines an adjustable baffle contrivices the flow to create enough velocity to reflect the sensitivity vane. On larger horses using \( \frac{3}{4} \)" inlet lines the zaffiro is partly or fully open. Installation: Cut seawater hose between strainer and pump, remove enough to make space for the Detector; use reducers between \( \frac{3}{4} \)" pipe threaded inlet and outlet of Detector if sea-water line is smaller that \( \frac{3}{4} \)". Detector may be in any position between horizontal or vertical. NOTE: When installing, flow arrow on Detector cap must be pointing downstream. Can also be inserted between pump and engine block or heat exchanger, or in sea-water line where it exits from the manifold before going into the waste exhaust line. Connect 2 wires from Detector to terminals A & C on the AQUALARM or to a 12V alarm buzzer not drawing more than 1 amp. A single pole, single throw switch must be installed so the alarm will not sound when the engine is stopped. No current is drawn except when alarm is ringing.

ADJUSTMENT: None needed on engines with \( \frac{3}{4} \)" sea-water lines. On engines with larger lines: loosen baffle adjustment lock-nut on side of Detector body and rotate black baffle shaft from vertical position to horizontal; tighten lock-nut to a snug tightness (do not overtighten) start engine and run for a few seconds at higher than idle speed to open flow-sensing vane, then reduce throttle to idle. If alarm sounds at idle speed stop engine, adjust baffle to close \( \frac{3}{4} \)" partially (nearer to vertical position) start engine, run a few seconds at higher than idle speed, then reduce throttle to idle, if alarm rings, repeat the nosing of baffle until alarm does not sound when idling.

Do not adjust when engine is running.

To Clean: Remove rings by clockwise rotation. To remove rust or water, clean with sandpaper, wash with water and dry thoroughly. To remove scale or rust, use a wire brush.

NO. 312 ENGINE OVERHEAT DETECTOR / This unit is mounted on the engine block and is actuated by a bimetallic device. The bimetallic device is typically a strip of metal that expands and contracts with changes in temperature. When the temperature of the engine exceeds a predetermined limit, the bimetallic device changes shape, which in turn activates a switch or trips a relay, causing the alarm to sound. The alarm system is designed to alert the operator to potential engine overheating, allowing for timely action to prevent engine damage. The alarm system is typically tested regularly to ensure its reliability and effectiveness. The alarm system is an integral part of the engine's safety features, ensuring the engine operates within its safe temperature range to prevent overheating and potential damage.
INSTALLATION AND
TROUBLE-SHOOTING GUIDE FOR AQUALARM STANDARD SYSTEM

INSTALLATION

Remove the bell dome and inspect the unit. It should be mounted with the
two double three terminal strips up (12 o'clock position). In this position,
the lefthand strip is the power inlet strip, and designated 1, 2 and 3 from
the left. Terminal #1 is the input for 12 volts + from your boat battery.
#2 is available for 12 volts + from an optional dry cell battery. This is not
necessary, but is provided for those who wish to disconnect the main batteries
completely, yet still have bilge flooding protection. (Note: The alarm system
draws zero power while monitoring. It only draws power when ringing). Termi-
nal #3 is the negative or ground terminal. It must be connected to battery
negative. The other terminal strip, on the right, is arbitrarily assigned let-
ters A, B and C, from left to right. Terminal A is the 12 volt output to the
detector switches, terminal B is unused, and terminal C is the return from the
detectors. Run a pair of 16 gauge wires to each detector and connect to A & C.
(no polarity).

As an initial test, take a short length of wire or the points of a long
nosed pliers and short across A to C. (This simulates a detector alarm). This
should cause the bell to buzz loudly and the light to light. If it does not,
switch the black selector switch in the center of the bell to the other position
and try again. If it still does not buzz, use a voltmeter or test light across
terminals 1 and 3 or 2 and 3 to see if you have 12 volt power. If you do, re-
move the fuse and inspect it. The bell uses a 3 amp 3AG automotive fuse. Re-
place the fuse if it is bad and try again. If the light lights, but the bell
does not buzz, the bell points may be out of adjustment. These points are near
the center post, on the back of the bell clapper drive. You may inspect their
action by pulling out on the brass plunger rod (which strikes the bell dome to
ring) and looking to see if these points open when the rod is pulled to the
limit of its travel. There should be a gap of about 1/32" when the plunger is
fully extended.

If jumping between A and C produces a strong buzzing action, you may assume
the bell is okay.