

United States Coast Guard
Assistant Commandant for Marine Safety, Security and Stewardship
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Technical Advisory - Oil Content Monitors

The United States Coast Guard has been informed by various sources that a particular model Oil Content Monitor (OCM) has a unique vulnerability which facilitates convenient tricking. DECKMA model OMD-2005 utilizes a handle operated ball valve which when rotated allows a metal extension attached to the valve handle plate to come into contact with a magnetic micro-switch. This action in turn causes the unit's internal processor to interpret the position of the handle as indicating that the Oily Water Separator (OWS) discharge sample is being sensed by the monitor. By placing a magnet near the micro-switch or by using items such as a binder clip, this interlocking function is disabled and the valve may be repositioned to allow clean water to flow continuously to the OCM. OMD-2005 units delivered after January 2005 have been fitted with a cover plate which makes this intervention slightly more difficult. Owners of units that do not have this cover plate are encouraged to obtain one by contacting their equipment's technical representatives.

It is important to note that this particular manufactured meter is not the only unit that can be tricked. Units manufactured by other companies may also have similar vulnerabilities. Port and Flag State inspection personnel, auditors, class representatives, and owner /operator technical personnel should always be alert when examining this equipment. USCG inspection and investigation processes have revealed many methods used to disable OCM functionalities. Within the OCM cabinetry simple jumpers, swapped wires, disconnected wires, the addition of internal switches, etc., have been discovered. Externally, the use of flushing water during operations, additional clean water connections to the discharge sample line, additional powering capabilities to the three-way valves or discharge control valves, mechanical overrides limiting the action of electro-pneumatic operated control valves, the use of screwdrivers to over-ride interlocks and switches, etc., have been noted at one time or another.

The USCG strongly recommends that personnel associated with the maintenance, operation, inspection, and testing of OWS and OCM equipment be alert for the types of improper modifications and deliberate manipulations stated above.

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