

RESCUE BOAT DAVIT SYSTEM TEST

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WHAT IS THE 10% OVERLOAD TEST?

The 10% overload test demonstrates that the launching system can safely launch a fully loaded boat with a 10% margin for overloading. **MSM VOL II P.2.a(3) (page B1-88)**

The rescue boat's condition "B" weight is the base weight for the davit weight test.

What is weight condition "A" and weight condition "B"?

Rescue boats have two weights stamped on their approval plates:

The condition "A" weight is the empty boat without equipment and fuel.

The condition "B" weight is condition "A" plus the weight of all equipment, fuel, and the number of persons for which the boat is approved. The current standard weight used to compute the "B" weight is 181.5 lbs. (82.5 kg) per occupant for rescue boats on cargo ships. For rescue boat's installed before July 1, 2010, use the weights marked A and B on the rescue boat's permanent placard, which would be based on 165 lbs. per occupant for all rescue boats. **MSM Vol II P.1.e(1), (2) (page B1-80)**

WHEN A DAVIT WEIGHT TEST IS REQUIRED

Initial inspection for certification
MSM Vol II P.2 (page B1-83)

Whenever the rescue boat is overhauled
46 CFR 199.190(i)(5)

Whenever new lifesaving equipment is installed on any vessel
MSM Vol II P.2 (page B1-83)

At least once every five years
46 CFR 199.190(i)(5)
SOLAS 14 III/20.11.1.2

Who is authorized to conduct the weight test?

The inspector should be satisfied that other inspections and repairs are carried out by competent persons. In some cases, a manufacturer's representative may be the only available choice.
MSM Vol II P.1.c(1) B1-79

The Coast Guard considers a service provider authorized by the Administration if a classification society that is an Authorized Classification Society (ACS) under 46 CFR § 8.420 has verified the service provider is capable of servicing lifesaving equipment. **(NVIC 03-19)**

Whenever any item of lifesaving equipment is structurally repaired, altered, or undergoes any other major repair which could affect its performance
MSM Vol II P.2 (page B1-83)

*There may be a degree of subjectivity involved with determining when repairs and alterations could affect the davit performance. Resources to assist with the determination may include the associated equipment OEMs. When in doubt, always consult the OCMI.



What type of test weight will be used?

Methods for test weight include water bags or steel weights.

How is the test weight certified?

There is little guidance for how the test weights are certified. The attending MI must ensure the test weight accuracy and the means to approve the test weight.



This document is an interpretation and paraphrasing of CG policy and regulations. Refer to the CFR and MSM for the direct language.



MI PREP WORK

Confirm the approval of the rescue boat.

Check approval records in MISLE. The contents of the approval certificate and its status (approved, expired, former may use, or former may not use) may also be found at <http://cgmix.uscg.mil>

Using the approval records or information found on the approval plates, calculate the 10% overload of the condition "B" weight of the rescue boat.

This is a training opportunity for others at the unit; if possible, coordinate with the MITO to maximize participation.

Prepare and route COI with renewed davit test dates.

DAVIT WEIGHT TEST

PROCEDURE

1. The boat must be in its embarkation position. Tricing pendants, if any, must be disconnected. The boat should be held alongside the ship during loading by means of the installed frapping, and/or bousing gear.
2. Load the boat so that its total weight is 110 percent of the condition "B" weight is shown on its data plate. **Hold the boat in position for at least 10 minutes** and check for deformation, especially at davit and winch foundations and other load-bearing members.
3. Lower the boat using the normal lowering procedure, using the on-deck winch control position.
4. Determine lowering speed by timing the boat as it drops through a measured distance marked on the side of the vessel or on the falls, or by any other reliable means. The speed measurement should be taken only after the winch has accelerated to full governed speed.
5. After the boat passes through the measured distance, stop lowering by releasing the winch brake control. Then alternately release and apply the brake so the boat stops at approximately 2 m (6 ft)
6. Stop lowering just as the boat reaches the water. The keel of the boat should be at or in the water, but there should still be tension on the falls. Release the boat from the falls using the on-load release mechanism control.

ACCEPTANCE CRITERIA

There must be no deformation of or damage to the launching appliance or its connections to the vessel.

The winch brake must be a deadman type, always applied unless the operator holds the control handle or mechanism in the position to lower the boat. If the operator releases the brake handle/mechanism, the handle/mechanism returns to the stop position, thus applying the brake and stopping the boat. No additional force is permitted.

The action of releasing the winch brake control must bring the boat to a stop within 1 m (39 in). No additional force on the winch brake control is permitted. The brake action must be smooth and positive.

Each winch drum must be arranged so the fall wire winds onto the drum in a level wrap.

For launching appliances arranged for control from within the boat, the untended control wire must feed out properly with the boat. The winch brake operation must not be affected by the mass of the fully extended control wire.

The release mechanism must open all hooks simultaneously and release the boat into the water.

The limit switches must disconnect the winch power source 0.3 m (12 in) or more before the davit reaches its fully stowed position.

Exposed Wet Brake Test MSM VOL II P.2.a(4) (page B1-90)

Conduct this test if any winch brake surface is exposed to the weather.

Thoroughly wash down the exposed brake surfaces with water. Repeat the 10 percent overload test described in P.2.a.(3) while the brake surfaces are still wet.

Acceptance criteria. The brake must stop the winch when the brake surface is wet, but the 1 m stopping distance requirement does not apply.