

**DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD**

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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 5-77

Subj: Inspection of Hydraulic Starting Systems for Lifeboats and Survival Capsules

1. Purpose. This Circular provides guidance for the maintenance and inspection of lifeboat and survival capsule hydraulic starting systems to ensure that these systems do not leak.
2. Background. Over the past several years accumulated equipment failure reports, reports from inspectors, observations by other personnel, and reports from lifeboat and survival capsule manufacturers indicate that leaks in engine starting hydraulic systems often result in loss of accumulator pressure.
3. Discussion. Good safety practices require that lifesaving equipment be properly maintained and ready for immediate use. Regulations for inspected vessels also require that lifeboat motors be operated for at least 5 minutes, once a week (see 46 CFR § 33.01-15, § 33.25-20, § 78.17-60, § 97.15-45, and § 196.15-45). Certain motor lifeboats and survival capsules are equipped with hydraulic starting systems. These systems store power in pressurized accumulators. Occasionally, a system leak occurs which allows an accumulator to lose pressure and renders it ineffective for immediate use. If the leak is external and allows oil to be lost from the hydraulic system, pumping may not restore system pressure so that starting the engine will not be possible.
4. Action.
 - a. Masters or persons in charge should routinely examine lifeboat and survival capsule hydraulic systems such as at the weekly fire and boat drill, to ensure that they do not contain leaks that allow accumulators to discharge. This can be done by making sure that each accumulator is at full pressure at the conclusion of the engine test, and does not lose pressure between tests. A short term check of the system can be made by bringing the accumulators up to full pressure. After several hours, there should be no noticeable loss of pressure on the pressure gage. An interval of at least 4 hours is suggested; however, a 24 hour interval is better.
 - b. Coast Guard inspectors will check the condition of the motor lifeboat and survival capsule, engine starting hydraulic system during the course of their regular inspections.


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