

# Welcome Aboard

DEEP SUBMERGENCE RESCUE VEHICLE ONE



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The Deep Submergence Rescue Vehicle (DSRV) is a bold approach to rescuing the crew of a disabled submarine on the ocean floor. The DSRV is designed to mate with such an immobilized submarine and transfer up to 20 rescuees per trip to either a mother submarine or surface support ship.

Deep Submergence Rescue Vehicle ONE was accepted by the Navy on 6 August 1971 and was placed "in service, special" until completion of extensive technical and operational evaluations to determine its operating and handling characteristics.

During its short history, DSRV-1 conducted the world's first submerged personnel transfer between two submersibles (DSRV-1 and USS HAWKBILL (SSN 666). 45 angle mates have also been conducted.

The vehicle is actively engaged in this evaluation at the present time.

# DSRV Profile

Upon notification that a submarine is disabled, the DSRV and its support equipment will be loaded aboard three C-141 aircraft and flown to a port nearest the disaster scene.

At that port, the DSRV will be loaded aboard a "mother" submarine or a surface Submarine Rescue Ship (ASR), whichever is more readily available.

When carried aboard a mother submarine, DSRV rides "piggyback" on its afterhatch. The mother submarine then proceeds to the disabled submarine and becomes an underwater base to which the DSRV transfers personnel from the disabled submarine. The mother submarine will be able to launch and recover the DSRV while submerged and, if necessary, while under ice.

DSRV must hover over a disabled submarine, mate with its escape hatch, and evacuate all personnel. An Integrated Control And Display (ICAD) system will enable the DSRV operator and co-operator to correlate information from sonars, closed circuit television, and advanced navigation devices, in order to perform this intricate rescue mission.

Propulsion and control of the DSRV are achieved by a conventional stern propeller in a movable control shroud, and horizontal and vertical ducted thrusters located forward and aft. This system permits the DSRV to maneuver and hover under adverse conditions of current and enables the submersible to mate with a disabled submarine lying at angles to 45 degrees from the horizontal and the vertical.

The DSRV outer hull is made of fiberglass. Within this outer hull are three interconnected spheres which form the manned pressure capsule. Each sphere is 7½ feet in diameter and is constructed of HY-140 steel. The forward sphere contains the vehicle's control equipment and is manned by the operator and co-operator. The center and after spheres accommodate 20 passengers and a third crewman.

Attached to the underside of the center sphere is a hemispherical "skirt" which seals over the disabled submarine's hatch. During rescue, this skirt is pumped dry to enable personnel to transfer between the DSRV and the submarine.

