

3.3 Advanced Sidemount Diving

Unless otherwise noted, all requirements listed under *2.1 Standards Applying to all NSS-CDS Training Programs* apply to the course.

3.3.1 Purpose

This course is entitled advanced sidemount since sidemount is used in all levels of overhead environment training. This course covers the use of stage cylinders, how to ride a DPV in sidemount configuration, how to deal with restrictions advanced gas management techniques and smaller areas where real sidemount techniques are required under the direct supervision of a qualified Advanced Sidemount Diving Specialty Instructor.

3.3.2 Course Duration

At least two days.

3.3.3 Prerequisites

NSS-CDS Cave Diver level of training or equivalent. Cave DPV Pilot Sidemount experience

3.3.4 Knowledge Development

- A. Analysis of the limitations of back-mounted cylinder configurations.
- B. Sidemount cylinders as an alternative considering such factors as steep climbs, the need to lower equipment, limited gas fills, remote sites, long walks to the site and rough terrain.
- C. Equipment setup including outfitting of cylinders with rings and snaps as required, regulators and hoses, lights, use of reels and buoyancy compensator.
- D. Physical aspects including tunnel size, visibility, line traps, restrictions and independent team members.
- E. Gas management including low visibility and balancing reserve in cylinders.
- F. Dive team relations.
- G. Conservation including small cave passage and damage avoidance, avoiding unusual formations and route selection.

3.3.5 Land/Open Water Drills or Practice

None required. A sidemount familiarization dive may be performed in open water or the cavern zone at the discretion of the instructor.

3.3.6 Cave Dives and Skills

At least three sidemount cave dives will be made.

3.3.7 Equipment Requirements

All equipment listed in the Cave Diver course with the following additions:

- A. Suitably rigged sidemount harness and buoyancy compensator or jacket BC rigged for sidemount.
- B. Two single cylinders with regulators suitably rigged for sidemount diving.
- C. A variety of snaps, clips, rings and any optional special mounting plates or devices as required.
- D. Note a 5 foot/1.5 m intermediate-pressure hose is not required.

3.3.8 Limits of Training

- A. Penetration limited to one-third or less of twin diving cylinders and one-third or less of stage cylinders.
- B. Minimum starting gas volume of 3,100 L/110 ft³.
- C. Depths not to exceed 40 m/130 ft.
- D. No training will be conducted in those sites in which visibility is expected to drop below 3 m/10 ft.

Note: The nature of sidemount diving could expose the student(s) to situations in which low visibility may be encountered. Therefore, visibility during training shall never be allowed to deteriorate beyond the point in which the student(s) can clearly see and identify the instructor or the instructor can clearly see and identify the student(s). Should visibility deteriorate, the dive shall end at once.

3.3.9 Student Ratios and Instructor Requirements

- A. Maximum student-to-instructor ratio of 2:1 with at least 6 m/20 ft of visibility and 1:1 with visibility of less than 6 m/20 ft but more than 3 m/10 ft.
- B. To conduct this level of training an NSS-CDS instructor shall be an Active Status Cave Diver Instructor for at least one year and meet the following criteria:
 - 1. The instructor shall have completed teaching at least four complete Cave Diver courses.
 - 2. The instructor shall have logged at least 50 non-training related sidemount dives.
 - 3. Have at least 200 logged cave dives.
 - 4. Co-taught at least one Sidemount Diving Specialty course with an NSS-CDS Sidemount Diving Specialty Instructor.

5. The instructor shall have sidemount experience with more than one type or size of sidemount cylinders.
 6. Approval of Training Chairman based on approved Standards and Procedures requirements.
- C. Please refer to Section 4 of NSS-CDS Standards and Procedures for general procedures and requirements regarding NSS-CDS Specialty Instructor ratings.