

# REBREATHING DIVER STANDARDS & PROCEDURES MANUAL

FOR RECREATIONAL, TEK LITE, TECHNICAL AND OVERHEAD



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IAND, Inc. dba IANTD wishes to thank all of the members of the BOA both past and present for their contribution to these standards. While some leaders in the diving world have decided to receive the honor of Emeritus BOA member, their contributions are noted fully and their assistance in development of these standards and to diving are very much appreciated and respected

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SCUBA diving, including the use of compressed air and any gas mixture underwater, is an activity that has inherent risks. An individual may experience injury that can result in disability or death. Variations in individual physiology and medical fitness can lead to serious injury or death even with adherence to accepted standards of performance, specified oxygen limits, and the correct use of dive tables and computers. All persons who wish to engage in scuba diving must receive instruction from a certified instructor and complete nationally recognized requirements in order to be certified as a scuba diver. The use of alternative breathing mixtures, such as combinations of Oxygen, Nitrogen, Helium and/or Neon, requires additional instruction beyond that offered in traditional recreational SCUBA diving courses.

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## **IANTD General Statement of Objectives**

IANTD's mission is to explore the opportunities and challenges of Recreational Diving, which includes all forms of Sport Diving, Nitrox, Advanced and Technical diving, in order to foster openness and individual responsibility, and to provide a standard of care for instruction in the diving community. IANTD and its members strive to be honest, ethical and fair in all our venues. We also believe that there are universal principles that are more absolute. We try to live by them. We envision our mission activities in the following areas:

### **Public Awareness and Advocacy**

IANTD is working to promote openness in the diving community; to share procedures, techniques and operational methods with divers seeking to expand their diving experiences. In the interest of safer diving we encourage freedom with discipline allowing for development of new methods and procedures but recognizing the need for an accepted safety envelope. IANTD will stay informed on diving developments and include them in its diving activities.

### **Safer Diver Program**

IANTD believes individual diver responsibilities are developed through rigorous skill refinement and experience in the water. Vigorous instruction with a strong student / Instructor relationship, enhancing a transfer of the diving responsibility to the student, is the essence of our teaching philosophy.

### **Program Development and Refinement**

IANTD has developed Programs to increase diving knowledge and skill levels. We will continue refining these Programs, based on reports from Instructors in the field, to improve and strengthen their value to our membership. We will continue to develop a set of core values that apply to sport and technical diving. IANTD Standards and Procedures have been developed and have evolved to allow worldwide recognition of skill and knowledge at each qualification level addressed by IANTD.

### **Fostering Community**

Much of the work IANTD has done has been directed at fostering a sense of community in the diving world. The diving community, by virtue of its size, needs internal cooperation to prosper and grow; anything less is counter-productive.

## IANTD Training Philosophy

IANTD believes it is better to be cautious and demanding in training than to have even one accident.

IANTD is dedicated to producing knowledgeable and skillful divers. Both are key for developing competent, confident and relaxed divers, who can fully enjoy the exhilarating experiences of sport and technical diving.

- ▶ KNOWLEDGE and UNDERSTANDING are, beyond a doubt, the keys to power in any endeavor one undertakes. In diving, the combination of knowledge and understanding provides greater diving safety
- ▶ IANTD designs all Program materials to instill in-depth knowledge to the student and practitioner of sport and technical diving endeavors. This knowledge develops greater confidence and understanding of both the enjoyment and risk aspects of safe diving.
- ▶ To ensure a sound knowledge base, IANTD is demanding on the subject material presented in its Programs.
- ▶ SKILLS and STRESS MANAGEMENT are important in performance of safe dives and in the ability to survive during stressful events.
- ▶ IANTD Programs are designed to develop superb water skills and relaxed and comfortable divers. To achieve this, techniques are taught and drills are incorporated that enable divers to realize their full potential. The confidence developed in this type of training will reward students by allowing them to become self-confident and self-reliant divers.
- ▶ Equipment familiarity exercises, such as simulation of a gas failure with valve shutdowns to practice regulator switches, are included to allow divers to become confident and capable in reaching and manipulating the valves and in performing regulator switches. To the amazement of many students, this is often difficult on the first few attempts. Indeed, equipment adjustments are often needed to enhance the performance of this skill. This is a skill that may save a diver's life someday, and one in which all divers need to be confident with. This type of confidence is developed by demonstration and practice.
- ▶ Stress management exercises are placed into our Programs to simulate realistic diving emergencies. The purpose of these exercises is to train divers in response awareness, and to develop in their minds a memory of having experienced a similar event before. One example of such a drill is to swim to a buddy over a prescribed distance without breathing, and then commence gas sharing followed by a timed swim. To some, this appears as a fitness or harassment drill. In fact, it is a confidence builder and a mind conditioning exercise. It provides a rehearsed response to an emergency to develop mental stamina instead of an on-site challenge. The distance involved is similar to what one would likely encounter when swimming to a companion diver, while communicating the problem and the need to initiate gas sharing. The timed swim is designed to instill a reaction of maintaining a normal swim pace to enable gas consumption to remain at a normal rate.
- ▶ IANTD believes confidence and efficiency are developed by spending time in the water. All Programs specify required minimum minutes of bottom time to be accomplished within a certain number of dives. IANTD is the first to incorporate this into diver training.
- ▶ IANTD believes basic survival skills must be practiced to enable one to better cope with stressful events
- ▶ IANTD recognizes that many skills in its Programs are redundant. Provisions are allotted to credit diver training amongst Programs.
- ▶ IANTD values experience and its Standards have provisions for credit of equivalent experience towards a given level of qualification. At the same time, we all realize that experience is not always compatible with knowledge and skill performance. To provide a marriage of experience, knowledge and skill performance, divers must demonstrate the required skills and knowledge appropriate to the level they are being credited for, prior to qualification at a higher level of diving.
- ▶ IANTD believes that our Instructors do set the example. To this end, the Instructor must always be present in the water providing direct or indirect supervision of the dive; demonstrating overall good diving skills while providing an extra element of safety in the water. At the same time, the Instructor must take care that the student does not depend upon them. They must ensure confidence is being developed. Teaching Assistants may be responsible for any needed indirect supervision and control provided that the Instructor is present on the dive.
- ▶ IANTD requires the Instructor in charge to be present in the water and provide direct or indirect supervision if a teaching assistant is to provide direct supervision of students on their first dive to a new and greater depth, and to discourage students from exceeding the prescribed limits of the Training Program they are participating in.
- ▶ IANTD believes diving is a risk taking activity and that divers must be aware and accept of those risks.

- ▶ The more advanced the diving styles, the more polished the skill level of divers must be to provide safety. In addition, standard minimum skills and theory assure each Instructor that divers coming into our Programs from another IANTD Instructor are ready to advance their diving education.
- ▶ IANTD requires a standard student text and/or other equivalent text(s) (if submitted and approved in writing by the BOD) to ensure that the theoretical knowledge exists to make the given level of diving safe. In cave diving, the NSS/CDS and NACD texts are considered equivalent and, in fact, are recommended as supplements to the IANTD Cave Diving Manual and Student Workbook.
- ▶ Upon Program completion, IANTD requires students pass a written exam as a means to measure their knowledge level. If a student cannot take a written exam, tests may be administered orally or by any means that conveys knowledge of the information.
- ▶ IANTD has leadership / supervisory ratings to allow for “Instructor Assistants” in preparation of advancement towards instructorship.
- ▶ IANTD believes that being confident, competent and knowledgeable, through responsible training, enables one to survive the seemingly unsurvivable situation

### **IANTD Standards Development Procedures**

The IANTD Standards and Procedures are promulgated for the guidance of IANTD Professionals i.e. Divemasters, Supervisors, Assistant Instructors, Instructors, Teaching Assistants and Instructor Trainers. These Standards are reviewed when necessary updated based on recommendations by the Board of Advisors (BOA), Licensee Directors and the Board of Directors (BOD).

Instructors wishing to provide recommendations on Standards may do so by addressing a letter to the chairperson of the BOA, which will be forwarded to all BOA members for their consideration. The suggestions are further reviewed by the Licensees and then forwarded to the BOD for final approval and implementation. The BOD reserve the right of final authority on Standards and Procedures, with all revisions approved by the BOD.

### **IANTD Non-Student Divers on Training Dives**

The following is an explanation of the policy regarding Non-Student Divers on Training Dives:

First and foremost a prudent dive instructor does not allow his attention to be diverted from his students during any training dive, therefore so called “tag along” divers or “Non-Student Divers” accompanying student divers on training dives is generally discouraged.

However, there are times when it is acceptable and even encouraged as enhancing the diver’s overall education (e.g., when a certified future dive partner is paired with a student in training so they may learn each other’s dive abilities and characteristics, but this must be under the direct supervision of the dive leader throughout the entire dive).

The dive instructor shall be responsible for verifying the following conditions are met prior to allowing any Non-Student Divers on Training Dives:

1. Inclusion of a certified Non-Student Diver on any training dive shall count toward the student to instructor ratios and under no circumstances shall the maximum allowable student to instructor ratio be exceeded.
2. The certified Non-Student Diver joining a training dive shall be certified and competent at the level of the training dive being conducted.
3. Inclusion of a certified Non-Student Diver on any training dive shall require approval of the instructor and each student diver and the certified Non-Student diver shall be included in dive planning, including contingency plans, prior to participating in the training dive.
4. The certified Non-Student Diver shall complete, sign and date an appropriate liability and the dive instructor shall supervise the Non-Student Diver as he would any other student diver during the training dive.

In summary, Non-student divers are allowed on training as long as the aforementioned conditions have been met and the dive leader is then responsible for that non-student diver as if he/she were a student.

## IANTD Professionalism

- ▶ All Instructors and Divemasters must have IANTD insurance or Provide proof of insurance listing IANTD as an Additional Insured by another accepted insurance program. Instructors teaching a class shall treat all persons diving under the instructor's and Divemaster's/Dive Supervisor's direct supervision or escort as students. Specified student to instructor ratios will be maintained so as to include students and other divers who are under the instructors' supervision.
- ▶ All IANTD Instructors and Divemasters involved in Diver Training Programs and Dive Leadership Programs/Qualifications are not employees or agents of IANTD, however, they are considered to represent the professional values of IANTD at all times,.

## IANTD Ethics Standard for Electronic and Written Public Media

In recent years it has become commonplace for IANTD instructors to utilize email, Internet websites, and particularly social media sites to communicate with students, customers, potential students as well as peers and others within the dive industry. IANTD members should make every effort to ensure that their public communications whether it be via the internet, social media, or publications always be of a positive nature. Examples of such communications would be announcing events or classes, and posts, comments or articles that enhance the public image of diving. Negative communications that are accusatory or critical of others are unprofessional and shall be avoided. Publically posting such negative communications to email, social media and/or internet websites may be considered a violation of this IANTD ethical standard.

Some examples of unacceptable conduct on email, social media, internet websites or any other public media include but are not limited to:

- ▶ Publicly criticizing other professionals, diving agencies, manufacturers or individual divers.
- ▶ Publicly criticizing a rescue or attempted rescue.
- ▶ Publicly releasing information regarding body recovery or other law enforcement operations without the permission of appropriate law enforcement and/or the families of the deceased.
- ▶ Publicizing any complaint regarding training agencies, regarding manufacturers, or between instructors outside proper channels.

IANTD considers violation of this standard to be serious unprofessional conduct. Punishment will be appropriate to the severity of the violation up to and including expulsion from the organization.

## Administrative Requirements

This requirements applies to ALL training levels (Diver & Professional)

### Professional/Facility & IANTD

▶ **NOTE: All training forms and documents are to remain in the instructor's possession for a minimum of seven (7) years. Upon request for QA reasons or legal needs, the instructor will provide IANTD HQ or the local IANTD Licensee a copy of these forms for a specified student(s).**

1. For every program and prior to any In-Water activity the instructor must ensure:
  - a. The program schedule is presented;
  - b. The students have and record the appropriate prerequisites as listed for each program;
  - c. To fill out the Administrative forms:
    - I. **Medical Exam - Diver Programs:**
      - i. The candidate shall complete the medical history/statement form, *without conditions or restrictions*, required by IANTD prior to engaging in any water activities.
        - ▶ *It is required that applicants with out-of-the-ordinary medical histories be approved, without conditions or restrictions, as medically fit for diving by a licensed medical practitioner prior to engaging in water activities. In no event shall medical approval be accepted, wherein the medical practitioner signing the approval is the participating candidate.*



II. **Medical Exam - Any Leader or Professional Programs:**

- i. The candidate shall have, within the past year, a medical examination and approval for diving, without conditions or restrictions, by a licensed medical practitioner prior to engaging in water activities.
  - ▶ *In no event shall medical approval be accepted, wherein the medical practitioner signing the approval is the participating candidate.*

III. IANTD Complete Liability Release and Contract Not to Sue Form.

- ▶ *On combined Programs, a IANTD Complete Liability Release and Contract Not to Sue Form must be signed by the student for each course taught.*

2. In order to complete the instructor trainer registration the ITT must:
  - a. Submit to IANTD Headquarters or to the appropriate Licensee Office:
    - I. IANTD Professional Membership and Renewal Form
    - II. IANTD Professional Member Registration Form
    - III. Any other required paperwork by IANTD Headquarters.

## Professional/Facility & Customer

▶ **NOTE: All training forms and documents are to remain in the instructor's possession for a minimum of seven (7) years. Upon request for QA reasons or legal needs, the instructor will provide IANTD HQ or the local IANTD Licensee a copy of these forms for a specified student(s).**

1. The instructor/Diving Training Facility will provide to every student a clear and transparent written information covering the following aspects:
  - a. Limitations of eventual qualification (e.g. what types of dives the student will be qualified to do)
  - b. Scope of training course (e.g. how long the course will take, how many dives, which skills will need to be mastered to successfully complete the course)
  - c. Course procedures (e.g. dates, where they have to be when, where equipment is stored...)
  - d. Means and methods for assessment and criteria for successful completion (e.g. required written exams, minimum number of dives, practical skills like gas analysis...)
  - e. Conditions regarding the responsibilities of each party related to commencement, delivery and termination of the course; (e.g. what happens if the instructor or student get sick and cannot complete the course, what if the weather is bad...)
  - f. The consequences for the service provider and the client if either party should choose to cancel the service; (e.g. cancellation policy)
  - g. Prerequisites and any qualification requirements in order to obtain the course (e.g. medical certification, diver qualifications);
  - h. Equipment requirements (e.g. what equipment is included or not in the course price...)
  - i. Costs (e.g. specifically what is included and what is not included, equipment, certification card, materials, pool and boat fees....)
  - j. Insurance requirements (e.g. mandatory diving accident insurance, liability insurance....)
  - k. Environmental considerations including recommendations to divers for minimizing their impact on it (e.g. collecting artifacts or underwater creatures policy....)
  - l. Diving-related legislation and legal requirements relevant to the specific kind of course
  - m. A signed copy of page 2 (two) of the IANTD Watermanship Form shall be given to the student.



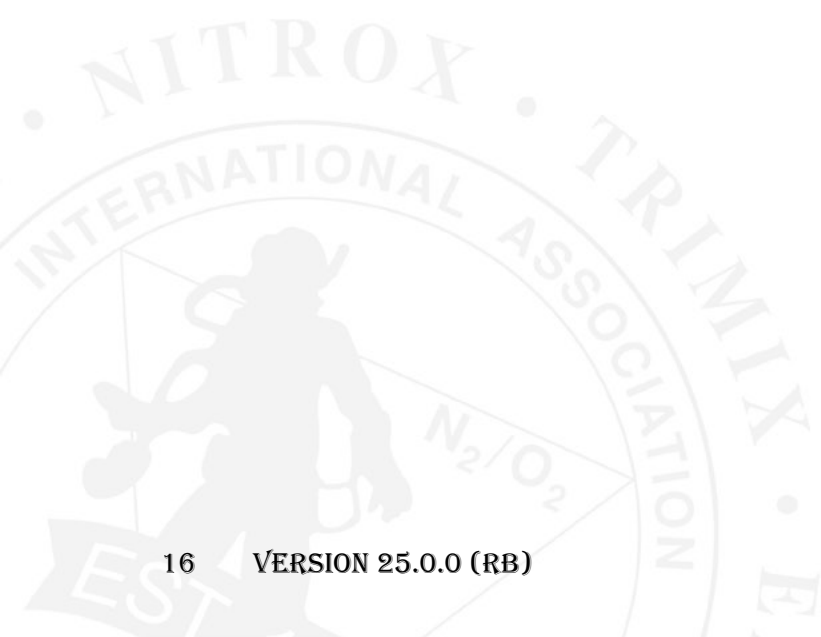
## International Qualifications (Cross-Border Policies)

### A. Professionals (Instructors & Instructor Trainers)

1. Professionals shall be a member with the Licensee assigned to the territory in which he lives.
  - a. All annual membership dues shall be paid to the Licensee territory in which the professional lives.
2. Professionals may teach in any place domestically or internationally.
3. Professionals that want to teach outside the territories that are assigned to the licensee he holds his membership with, must:
  - a. Contact IANTD HQ and HQ will contact the proper licensee requesting to extend his membership.
    - NOTE: There is no extra cost to extend memberships to other licensees.
  - b. IANTD HQ with the assistance of the licensee will provide a list of legal procedures to meet to teach under the territory.
  - c. The professional will:
    - I. Provide to HQ proof of meeting all the legal requirements to teach under the required territory.
    - II. Provide proof of a payment method within the specific licensee.
  - d. Once IANTD HQ verifies that the legal requirements are met, the extension of the membership will be granted.
4. Professionals Teaching Divers:
  - a. All certifications and fees shall be paid and issued to the specific licensee.
5. Instructor Trainers teaching Instructors:
  - a. All new instructors must be approved by IANTD HQ & the Licensee.
  - b. All ratings and fees shall be paid and issued to the specific licensee.

### B. Special Notes

1. NOTE: It is the responsibility of the professional or the facility where the professional will be teaching to be knowledgeable of all the legal documentation that allows one to teach and work in the specific country when traveling to another country (or when bringing in out of the country professional).
2. NOTE: IANTD advises you that if you do not have all the legal work documentation to work in the specific Country, you may or may not be violating the Country's Immigration Laws and that it is the sole responsibility of the professional or Facility. IANTD does not provide any guidance in terms of individual work requirements of countries and is in no way responsible for the professional's or Facility's violation of a Region's laws.



## IANTD Quality Assurance Program

The objective of the IANTD Quality Assurance Program is to establish a minimum level of quality provided by each Member/Instructor of the IANTD system. Much of the work IANTD has done has been directed at fostering a sense of community in the diving world. The diving community, by virtue of its size, needs internal cooperation to prosper and grow; anything less is counterproductive. IANTD is working to promote openness in the diving community; to share procedures, techniques and operational methods with divers seeking to expand their diving experiences. In the interest of safer diving we encourage freedom with discipline allowing for development of new methods and procedures but recognizing the need for an accepted safety envelope. IANTD will stay informed on diving developments and include them in its diving activities.

Without a Quality Assurance Program, IANTD cannot assure the uncompromised credibility of their programs. To achieve this, IANTD monitors and enforces IANTD standards and procedures with fair, honest and ethical intentions in all venues to ensure that all students who participated in any IANTD course are pleased with the service and training experience that they recently received.

**Students are automatically sent a Quality Assurance survey and are asked to complete them by IANTD World Headquarters when the student is certified. All information received is completely confidential and all comments (both positive and negative) will be acted upon.**

If you suspect a quality Assurance issue with another IANTD Instructor, the first step is to professionally approach the person and inquire as to the issue you perceive. There may be circumstances that you may not be aware of, that permit the instructor to conduct their program in the manner witnessed. If the instructor cannot be approached or after a professional discussion, there still appears to be a quality assurance issue. Make a written report to your IANTD Office of any IANTD Standards violations that you personally witnessed. Do not submit false reports or make reports of items that you have not personally witnessed. If the seriousness of the situation justifies immediate action, be assured that IANTD will take the steps necessary including temporarily changing teaching status to non-teaching pending further investigation. The Quality Assurance Form is publicly available on the [www.IANTD.com](http://www.IANTD.com) website and can be submitted to IANTD by anyone who has personal knowledge or a personal concern about the actions of any IANTD member. The Quality Assurance Process involves a protocol that strictly adheres to a system that includes;

- Due Process - consistent internationally and made available to every Member inaugurated into the system.
- Equal and Fair Opportunity - for each member and Licensee to present their issues and protect their interests.
- Standards and Procedures - are made available to each and every member of the IANTD family and are clearly explained. This process also involves a presentation of IANTD's Training Philosophy.
- Confidentiality - maintained through all matters and stages within a Quality Assurance Inquest. IANTD will hold students, Instructors, Instructor Trainers, other Members and divers names in confidence.

### Membership Statuses

#### Active Teaching Status

- Annual dues paid
- Accounts paid
- Proof of liability insurance where required

#### Non-Teaching Status

- Annual dues paid
- Professional Liability Insurance not on file
- Active QA Investigation
- Cannot teach IANTD Programs
- After 2 years must complete an Instructor update or complete IDP

#### In-Active Teaching Status

- Annual dues not paid
- Account balance older than 60 days
- Failed to meet requirements for active status
- Cannot teach IANTD Programs
- After 2 years must complete an Instructor update or complete IDP

### **Emeritus**

- Professional members who have retired from active instruction
- Unable to actively participate or conduct training or supervising responsibilities

### **Quality Assurance Designations**

#### **Probation**

- Failed to meet active teaching status
- Minor Standards violation or another minor QA item
- Account balance older than 60 days
- Can teach and will be informed in writing

#### **Suspension**

- Failed to meet active teaching status
- Serious Standards violation or another serious QA item
- Account balance older than 120 days
- Cannot teach and will be informed in writing

#### **Expulsion**

- No longer a member of IANTD, cannot teach and will be informed in writing

### **Quality Assurance Process**

A QA investigation begins when written documentation is provided to IANTD that suggests that a Member/Instructor is in either direct violation of IANTD Standards or compromising the reputation or level of minimum quality required by IANTD. Based upon the documentation received, IANTD or the Licensee may place that Member/Instructor on Non-Teaching Status, depending on the suspected seriousness of the QA concern, pending further investigation.

1. Once further Information and documentation has been gathered, the Quality Assurance Director shall assign a QA Case number and contact the Instructor/member advising them of the complaint and the reporting requirements.
2. The Instructor/member must reply in writing via overnight shipping, fax or email within 48 hours of receiving notification from the Quality Assurance Director (QAD). The instructor should respond in a simple, factual and objective manner. This response may be all that is needed to solve a misunderstanding or baseless accusation.
  - NOTE: A failure to respond to an inquest regarding Quality Assurance within 48 hours, will result in an IMMEDIATE Non-teaching Status of a Member or Instructor.
3. If, in the opinion of the Quality Assurance Director and the Training Director (TD), based upon the evaluation of the evidence and the documentation gathered the QAD and the TD can:
  - a. Agree that a full Quality Assurance is not needed, then they may issue disciplinary action up to and including probation.
  - b. Agree that a full Quality Assurance is needed, then the QAD will appoint a 3-member (minimum) Quality Assurance Board who will then analyze facts of the allegation.
    - I. Establishing Quality Assurance Board – The QAD will select a minimum of three IANTD members to participate on the QA Board. The members of the Quality Assurance Board will sign a non-disclosure agreement with IANTD prior to releasing information to them to ensure confidentiality. To afford potential conflicts of interest, attempts will be made to select members of the QA Board who do not know the member in question. However, due to the circumstances of issue in question that may not always be possible. Therefore, IANTD QA Board members will ensure that their professionalism will temper any personal knowledge from impacting their decision-making process. The identity of the members shall remain confidential and all communication with the member under a QA investigation will be made by and through the QAD.

4. The QAD will send a summary of the allegations along with any documentation of the complaint, witness statements and other evidence with a clear explanation of which digressions the instructor/Member is accused.
5. If after 15 days, an adequate written response has not been returned by the Instructor/member to the QAD that Member/Instructor will be placed on NON-TEACHING STATUS STATUS.
6. Once the recommended course of action has been finalized, the Quality Assurance Director (QAD) will prepare a letter to the Instructor/member detailing the results of the QA investigation and any remedial steps, if any, that need to be completed. The results of the Quality Assurance Board will recommend either Probation, Suspension or Expulsion.
7. The member/Instructor put on any status recommended by the Quality Assurance Board has fifteen (15) days to make a one-time appeal of these findings to the IANTD BOD. The findings of the BOD will be final.

## Process When A Diving Fatality Occurs During Training

Primary concern is to care for the victim. Activated local emergency management services and it is recommended that you treat the victim as if it was a close family member. An emergency action plan should be in place for EVERY dive site you visit. The emergency action plan should include use and location of oxygen and first aid kits, chains of command in the event of an accident, points of egress, local emergency phone numbers, phone number for Divers Alert Network, who does what and when and evacuation routes. Staff responsibilities should be designated prior to any diving activity. Should an accident occur, every person in the diving party must know his or her role so potential rescues can be conducted efficiently.

Once the victim has been cared for, the Instructor should:

- Secure the victim's equipment – in a serious accident, local authorities may take custody of the equipment
- Gather all relevant information, using the IANTD accident/incident report form
- Be sympathetic to victim's family and friends
- Do not speculate about the facts of the incident
- Make no comments regarding anyone's potential liability
- Take photographs of everything
- Within 24 hours, Fax or email the completed accident / incident report to your local IANTD regional office
- Include a copy of any applicable liability release and other training documentation
- Download of personal dive computer (PDC), dive logbook or written dive profile(s)

In the event of an accident, equipment becomes important evidence. If equipment is removed from the injured diver, it should not be disassembled. List ALL the equipment used by the injured diver in writing. Be sure to list the condition of the equipment used by the diver without being judgmental of brand, configuration and placement. Write it as you see it. When surrendering the written document to the authorities, request a receipt and retain a copy if possible.

Submerged equipment must remain submerged until someone is instructed to bring it to the surface by the authorities. It remains evidence while submerged. Where it lies and it's condition may be important information in determining the cause of the accident. Prior to surfacing, the position of the valves should be noted and the valves should be shut to prohibit gas from venting from the cylinders. It may also be wise to obtain information from other individuals that were present at the scene of the incident but who did not directly participate or who do not have any type of direct relationship with the party or parties involved. Collecting this information may provide additional details about the incident without any additional personal bias.

Use of the IANTD Incident Form is mandatory and a copy of this form is available on the IANTD website. Should an accident occur, critical information can be documented accurately. The form should be filled out clearly and in its entirety. Write a detailed report of the occurrences leading to, during and after the accident. Include your name and contact information so you can be reached for further questioning in regard to the accident from medical personnel. In a court of law, it will be recognized that the dive leader was prepared and thorough. An accurate account of the accident will only help the dive leader in a court of law, assuming standards were followed, and the dive leader was acting responsibly.

Copies of the Incident report form must immediately be sent to both the professionals insurance carrier and to IANTD Headquarters. The sooner IANTD is advised of the accident, the better IANTD can help protect the dive leader. Be sure to keep a copy yourself and file it where it will not be lost or destroyed.

## INTERNATIONAL ASSOCIATION OF NITROX & TECHNICAL DIVERS

The instructor must contact IANTD immediately and send an Incident Report within 24 hours of the incident. This must be followed up by a more comprehensive report, which includes the following:

- Obtaining all information pertinent to the accident
- Statements from individuals with direct knowledge of the incident.
- Other Students in the class
- Other divers on the dive
- Determinations by the ME (Medical Examiner), if available
- Reports from the recovery team
- Reports from the diving vessel
- Review of the training program conducted to the date of the accident
- Statements from other sources who are aware of the diving instructor and his practices
- Statements from others who are familiar with the capabilities of the accident. These include people who have dived with or observed the instructor and student during training.

Once all this information is compiled, the data is sent to a QA Board. Once all this information is compiled, the data shall be sent to IANTD World HQ and the IANTD Licensee in that region. The Instructor will immediately be placed on Non-Teaching Status pending completion of the Quality Assurance Process.

### **Events following an investigation:**

If it is found that the instructor is not at fault in the accident in any way the Non-teaching status will be removed, and the instructor will be returned to normal teaching status. If the QAB determines that the events are questionable, but not directly controllable or preventable by the instructor, then the instructor will be placed on probation and IANTD will spell out specific procedures to be followed in order to be reinstated to normal teaching status. If the QAB finds that the instructor did not act responsibly, the instructor may be suspended with the ability to request an appeal to the QAB.

A suspended instructor may or may not be given a provision for reinstatement following two (2) years of suspension. IANTD will inform the Instructor in writing of the results of any Quality Assurance process/finding.

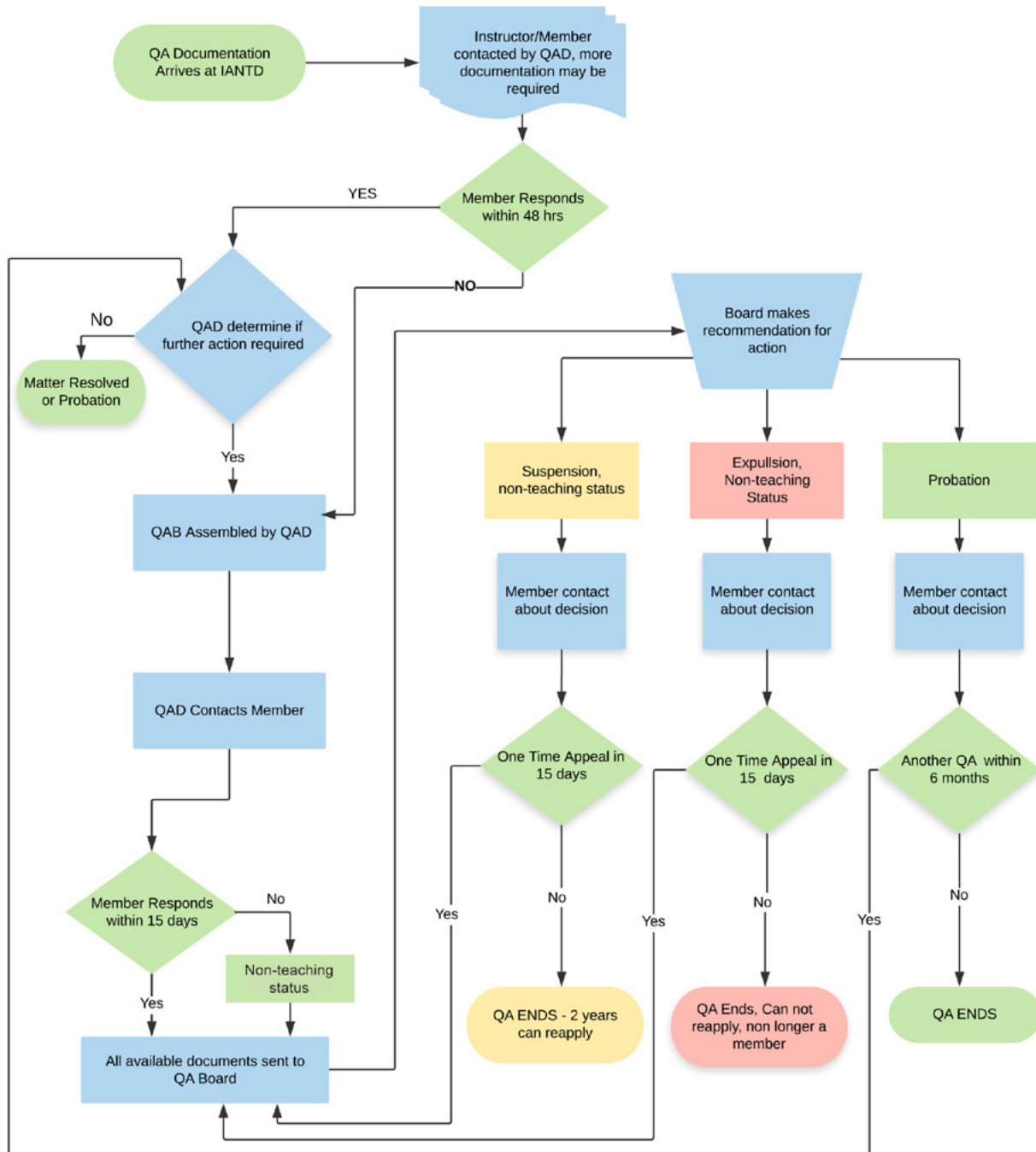
### **Quality Assurance Forms**

- Incident Report - Available at IANTD HQ ProPage
- QA Complaint Form - Available at IANTD HQ ProPage
- QA APPLICATION FOR APPEAL AGAINST IANTD DISCIPLINARY ACTIONS - AVAILABLE AT IANTD HQ PROPAGE



## Quality Assurance Flow Chart

## IANTD QA Process Flow Chart





## Definitions and Terms used by IANTD

**AIDP** – Assistant Instructor Development Program

**AIEC** – Assistant Instructor Evaluation Crossover

**Appropriate Diver Support** - First aid equipment including but not limited to a first aid kit suitable for the planned diving activities, an emergency oxygen unit with a capacity of delivering pure oxygen for at least 20 minutes and a communication system suitable for alerting emergency services.

**Boom Scenario** - A boom scenario on a rebreather is to simulate either an internal gas free flow (such as oxygen or diluent going into system) or an external gas free flow (such as gas leaks). In this situation the correct course of action is to immediately close both cylinder valves. Then the diver is to determine the failing source by checking both pressure gauges and the severity of the loss. At the same time as the diver checks the pressure gauges they also need to check their PO<sub>2</sub> and take corrective action if needed.

**Bottom Mix** – The gas mixture(s) in the cylinder(s) intended to be used during performance of the bottom time phase of the dive.

**Briefing** – Short pre-dive discussion between Instructor and students including but not limited to procedures to be followed (team assignments, entry, descent, ascent, surfacing, exit, time/depth limits, problem/ emergency situations), site/environmental considerations, communication, pre-dive equipment preparation, drills to be practiced (in case of training), and post dive procedures.

**Cave Dive** – Dives into a cavern/cave beyond where a light from an exit point can be seen.

**CCR** – Closed Circuit Rebreather

**Commercial Diving** – A form of diving, excluding instruction, where the diver works for hire and his/her employment depends on a willingness to dive.

**Confined Water** – Any body of water with limited current, which meets the appropriate IANTD visibility requirements, that is calm and has shallow water access such as swimming pools, lakes, springs, sinks, quarries, bays, and beaches that are protected from open seas and rough water. Training sessions must be limited in confined water experiences to no deeper than 20 fsw (6 msw) for sport diver level courses and 40 fsw (12 msw) for technical diver level courses.

**Confined Water Session** – An instructional session that takes place in confined water. The confined water sessions will include an introduction, demonstration and student performance of watermanship, skills and techniques to be developed during the course. When teaching courses that combine two (2) or more levels of training the confined water skills for the courses may be combined into one (1) session.

**Completed Dive** - A dive is not successfully complete until all divers have safely exit the water, out of their equipment and no other dives are planned for the day.

**Debriefing** - Short post dive discussion between instructor and students including but not limited to comments on the dive and further directions. Remember we have a mandatory water skills for (an intense debrief ing) the instructor is and has been REQUIRED to fill out each dive so it is already there in much more detail than this and if we discover that the instructor is not doing this then they will be brought up on Quality Assurance charges.

**Decompression Mix** – The gas mixture(s) in the cylinder(s) used during the ascent (decompression phase of the dive.

**Direct Supervision** – Supervision by the instructor of the class or group of students from a distance allowing a direct intervention on behalf of the student.

**Diver's Physical** – An approved diving physical statement. This is required prior to involvement in the first water session of a given course or combination of courses.

**Divemaster / Supervisor** – An individual who is qualified by IANTD to supervise or assist specific diver training courses such as a Divemaster and Dive Supervisor from a lesser level but who is qualified as a diver at the level of the training program. Teaching Assistants may be utilized in all courses to provide indirect supervision or even direct supervision when under the direction of an Instructor in the water who meets the definition of direct supervision. Divemaster and Supervisors may also escort certified divers.

**DSMB** – Delayed Surface Marker Buoy.

**Emergency plan** – A written piece of information including but not limited to procedures for casualty recovery, resuscitation and evacuation, use of emergency oxygen supply, information about the nearest medical resources and information about the nearest hyperbaric recompression chamber.

**END** – Equivalent Narcotic Depth.



**Escorting** – Supervision of an individual student or group of students by someone other than the instructor. (Qualified teaching assistants may escort students during surface excursions and exits, ascents and descents and may attend to remaining students while the instructor conducts a skill with other students or if no skills are being performed by the student.)

**IDE** – Instructor Development Evaluation

**IDP** – Instructor Development Program

**IEC** – Instructor Evaluation Crossover

**Indirect Supervision** – Supervision by a qualified teaching assistant during segments of a dive where skills are not practiced. An Instructor must be present at the site and in control of the activities. The Instructor must approve all diving activities, approve the dive plan, perform dive preparations and equipment configuration, observe entries, exits and debriefings, and be prepared to quickly enter the water if necessary. The Instructor must be able to respond to classroom activities and be on-site. The Instructor must be able to take control of any program at any time if necessary.

**Instructor** – An individual who is qualified by IANTD to teach complete or a part of specific diver training courses, upon completion of a formal instructor development or crossover and evaluation course, such as an Assistant Instructor (limits apply to this level), or Instructor.

**Instructor Trainer** – An individual who is qualified by IANTD to teach specific instructor training courses, upon completion of a formal instructor trainer development and evaluation course.

**In-Water Training** - A combination of confined water and open water dives.

**IPSDPD** - International Public Safety Diving Program Director

**IT** – Instructor Trainer

**ITD** - International Training Director

**ITEC** – Instructor Trainer Evaluation Crossover

**ITDP** – Instructor Trainer Development Program

**Licensed Medical Practitioner** - A physician, medical practitioner, medical doctor, licensed nurse practitioner or a physicians assistant.

## **Memberships:**

a. **Active - Non-Teaching Status** – An active non teaching status is a dive professional/Leader who for some cause is not in teaching status (elected to take a break in active teaching or has not sent proof of insurance or on administrative hold or some other reason). The Active - Non-Teaching Status Instructor has paid his/her annual membership dues. This IANTD Professional member is entitled to all professional communications and privileges. This individual may not actively teach or supervise or be involved in any training, escorting and guiding of dives. To switch to active status the Active - Non Teaching Professional needs to provide proof of insurance and other proficient needs that may be deemed necessary such as understanding of updates in standards etc. The active non-teaching status can only be held for two years without attending a knowledge and performance review.

b. **Active - Teaching Status** – an IANTD professional is an instructor or dive leader (divemaster or Dive Supervisor) may teach IANTD program or supervise or guide dives up to their qualification level. This Professional has paid professional membership dues for the current year to the license he is affiliated with or HQ and has signed and agreed to the terms of the instructor contract. The dive professional may only provide professional services up to his/her qualification level.

c. **Emeritus** - This status is provided in recognition of outstanding service to IANTD by professional members, who have retired from active professional status in one or more areas. These include active teaching status, licensee, BOA member, and any other professional member of IANTD. The Emeritus status will be specified as Instructor Emeritus, or listed in BOA or License Emeritus. Individuals with emeritus status may represent themselves as such but are unable to actively participate in any type of training and or supervising.

d. **In-Active Teaching Status** - An IANTD Professional Leader who has not renewed their annual membership status. This individual may not advertise or represent themselves as an IANTD professional. An IANTD professional on inactive status may renew by paying membership, presenting proof of insurance and meeting the requirement of renewal eligibility. An inactive Professional may only remain in inactive status for a maximum of two years. Post two years in inactive status to become active the Professional must complete an Instructor update or complete IDP as determined at that time by IANTD HQ or an IANTD license

**Open Water (OW)** – Any body of water, excluding swimming pools and diving pools of any kind, that is 15 fsw (4.5 msw) or deeper for sport diving courses, or at least 40 fsw (12 msw) deep for technical diving courses.

**Overhead Environment** – Any dive site that has a physical ceiling, such as wrecks and caverns, from which a quick and direct escape to the surface cannot be safely made.

**Overseeing** – The overall control, intermittent supervision, evaluation, and direction of instruction, student skill performance and diving activities by an instructor of a class or group of students. The instructor must be present at the training site and on the training dives, and be prepared to render appropriate in-water assistance in aid of a student.

**Pre-Dive Check** - A check including but not limited to gas availability and suitability for the dive and equipment operating condition. It is sometimes conducted by the dive buddy in the water or just before entering.

**Prerequisites** - Prerequisites define what has to be completed prior to entering an IANTD diver or leadership course. Prerequisites must be completed prior to the start of a course of leadership program. Under no circumstance may the prerequisites be completed while enrolled in a program.

**pSCR** – Passive Semi-Closed Circuit Rebreather

**QAD** - Quality Assurance Director

**RCCR** – Recreational Closed Circuit Rebreather

**Recreational Diving** – All forms of diving intended for recreational purposes or instruction of recreational divers, in which the diver has the option to dive. This includes both the most popular form of recreational diving, sport diving; as well as technical diving, which is an advanced form of recreational diving.

**R02CCR** - Recreational Oxygen Closed Circuit Rebreather

**RSCR** – Recreational Semi-Closed Circuit Rebreather

**SCR** – Semi-Closed Circuit Rebreather

**SCUBA** – Any diving apparatus that is a Self-Contained Underwater Breathing Apparatus.

**Software Generated Tables** **Software Generated Tables** – Decompression profiles produced by various dive planning software. These may be used in conjunction with the required IANTD Dive Tables or a Dive Computer. In training the student must always have IANTD Dive Tables in their possession when performing dives as primary or backup schedules.

**Sport Diving** – The most common form of recreational diving. Sport diving is performed using either air or Nitrox mixtures up to 40% oxygen on dives no deeper than 132 fsw (40 msw). Sport divers at the level of Advanced EANx or Advanced Recreational Trimix, which is defined as an entry level technical course may not engage in dives deeper than 140 fsw (42 msw) for Advanced EANx and no deeper than 150 fsw (45 msw) for Advanced Recreational Trimix.

**Supervision** – Having direct control over an individual student or group of students, with an ability to directly intervene if needed.

**TD** - Training Director

**Technical Diving** – An advanced form of recreational diving utilizing skills, techniques, equipment and knowledge beyond the requirements of sport diving. Technical diving includes, but is not limited to, dives deeper than 132 fsw (40 msw), dives into overhead environments beyond a visible exit point, dives using mixed gas (in addition to sport diving EANx mixtures), and dives requiring staged decompression.

**Training Dives** – An excursion by a student diver into open water or overhead environments while fully equipped for the planned activity. Each dive must include at least one (1) entry and one (1) exit and underwater activity breathing from SCUBA for a minimum of 20 minutes to a depth of at least 20 fsw (6 msw) for sport diving courses, or 40 fsw (12 msw) for technical level courses.

**Travel Mix** – The gas mixture(s) in the cylinders used to provide an advantageous or safer breathing mixture while descending or traveling to or in some cases from a deeper phase of the dive.

**Virtual Overhead Environment** – Any dive from which a direct ascent to the surface would violate required decompression obligations.

**Waiver** – An IAND, Inc. dba IANTD Liability Waiver. A waiver is needed for each specific course or, if a series of courses are taught concurrently, one (1) waiver may list each Program in the training curriculum. If there is an interruption in the training program of more than 90 days, a new waiver shall be completed.

**Wreck Penetration** – Excursions inside of a wreck beyond where light from an exit point can be seen.



# IANTD RECREATIONAL REBREATHING DIVER PROGRAMS



## IANTD Rebreather Diver Programs - General Standards

► **NOTE:** Unless indicated as specifically for Rebreather Diver Programs, the following general statements apply to all IANTD Rebreather Diver Qualification Programs.

► **NOTE:** Unless indicated as specifically for Rebreather Diver Programs, the instructor may use any other CCR or SCR they are diver qualified on in addition to being an Instructor on the one being taught in the class.

### A. Purpose

1. For Recreational CCR or SCR:
  - a. These Programs are designed to provide quality instruction of IANTD RCCR or RSCR Diving qualification levels.
2. For Tek Lite CCR or SCR:
  - a. These Programs are designed to provide quality instruction of IANTD Tek Lite Rebreather Diving qualification levels.

### B. Prerequisites

1. As listed on each IANTD Specific Program.
  - **NOTE:** Divers coming into IANTD Programs from other CCR or SCR Diver training agencies or equivalent must demonstrate proof of equivalent skill and theory training or do a crossover course.
  - All prerequisites must be met and documented by logbook, or verification by witnesses or notarized statement or other proof of diving experience.
  - For all rebreather levels the minimum age is 18 years old.

### C. Texts / Media

1. All IANTD courses require Student Kits to certify divers.
  - a. Each student MUST have a full set of these reference materials during and following the completion of the class.
  - b. The specific kit is titled "IANTD diver program name" followed by the words "Student Kit".
  - c. Students may use a student kit that contains any combination of Printed or digital materials including the course specific eLearning.
2. Rebreather divers at all course levels must have the IANTD CCR Diver "S" Drill chart C-3401.
3. Instructors must have the IANTD Waterproof Skills Sheets on all Confined and Open Water dives.
4. Rebreather divers at all course levels must have the Unit Specific Manual provided by the manufacturer.

### D. Program Content

1. Must include all course material as presented in the approved workbook or text for the Program and Student Kit where noted.
2. Complete a written exam with a minimum score of 80%.
  - If, a specific course exam is not available, the instructor shall conduct a knowledge review or quiz.
3. Skills listed in the Water Skills Development section of the Program enrolled in, must be completed prior to qualification. These skills may be performed as specified in the specific course standard or in a combination of OW and confined water, for basic skills and stress management development.
  - **NOTE:** These skills reflect the minimums that a student must perform.
  - **NOTE:** Instructors MUST complete watermanship evaluations contained in the forward portion of these standards and procedures.
4. Rebreathers with the ability to upload and / or down load software the student must be taught to do so.



## E. Equipment Requirements

1. A Rebreather approved by IANTD.
2. Rebreathers may only be used within their manufacturer's stated limits.
3. Student must own or have unlimited access to unit on which training is being held.
  - ▶ *NOTE: The instructor should notify the student that if the student does not take possession of, or have access to a rebreather within three (3) months of completion of training it is recommended the student take a refresher course for their own benefit.*
  - ▶ *NOTE: This review should include review of operations of that rebreather along with a confined water and as many OW dives as is necessary for the instructor to feel the student is proficient at the survival skills.*
4. A quick release weight ballast system (if appropriate).
5. All independent breathable gas sources must feature a submersible pressure gauge.
6. All OnBoard, oxygen and diluent, gas sources must feature a submersible pressure gauge.
7. Buoyancy control device (BCD), including a cylinder support system.
8. Mask and fins
9. Snorkel (Except for Overhead Environment, PSD Programs and where currents presents a hazard to the diver).
10. To control the dive the Instructor shall choose between:
  - a. IANTD Submersible tables with timer and depth gauge/bottom timer **OR**;
  - b. Dive computer and a timer or depth gauge/bottom timer with a dive plan based on IANTD Tables/Decompression Software written in a wetnote as backup **OR**;
  - c. Two dive computers.
11. Appropriate exposure suit for the environment in which the diver is being trained.
12. Slate and pencil, required to ALL courses with the exception of the Supervised Diver course.
13. All students will be taught the concept of gas matching.
14. All bailout and OnBoard cylinders, other than air, must be labeled with IANTD stickers or other stickers such as may be required by local laws and regulations.
  - ▶ *NOTE: At a minimum, the labels must clearly identify and be visible, to ALL team members, the MOD and oxygen content of the mixture.*
  - ▶ *NOTE: It is recommended that IANTD labels be used to meet this requirement, in addition to those required by law.*
  - ▶ *NOTE: Cylinders and regulators used with gases containing oxygen concentrations greater than 40% must be O2 service rated (Example: partial pressure blending requires oxygen service rated cylinders).*
  - ▶ *NOTE: Equipment used during this Program must be appropriate for the environment and in good working order*
15. Cutting tool or device.
16. Surface alert device (whistle, diver alert, etc.) (not required in the Supervised Diver or OW Diver course).
  - ▶ *NOTE: Equipment is to be configured in a neat low drag manner.*
17. When appropriate, the use of a surface support station with dive flag is also encouraged.

### **For Deep Diver Program and beyond, the following are required**

18. A DSMB or Lift Bag of at least 50-lb. (22.5-kg) lift capacity or a SMDB and a line reel for deployment.
19. A Rebreather, with the use of an appropriately rigged bailout/decompression cylinder
20. Bolt snap hooks / scissors clips used for attaching equipment to the diver are recommended.
21. One or more separate cylinder(s) sufficient for decompression must be carried by the diver accordingly with the rebreather level of training.

## F. Program Limits

► *NOTE: Instructors training rebreather divers must meet manufacturer's requirements in addition to all IANTD Standards.*

1. Except if specified differently in the Specific Program Limits:
  - a. All in-water training dives shall be conducted in environments that will allow at all times a direct vertical access to the surface, with an instructor directly supervising, teaching and evaluating the students.
  - b. All in-water training shall be completed during daylight hours or under conditions that simulate daylight conditions.
2. IANTD Programs require the student to complete a specified amount of bottom time prior to becoming qualified at a given level. Specific total bottom time or total in water times requirements are given in each individual Program.
3. The maximum classroom Student to Instructor ratio is 20 to 1, and maximum in-water ratios are specified in each program.
4. Confined Water and Open Water Instructor Ratio:
  - a. The Instructor Ratio may be decreased according to instructor's discretion taking into consideration environmental conditions or other relevant factors, so as to allow adequate class control and supervision, or local legislation. Physical contact with every student shall be always possible.
5. There shall be no more than three (3) in-water sessions per day.
6. No more than two (2) decompression dives shall be conducted on a given day.
7. Once a course begins, and If the course is not finished or a break in the training occurs, any additional dives conducted during that period are considered non-training dives and must not exceed the limits of the divers current certification level.
8. In addition to all the prerequisites, a CCR or pSCR Normoxic Trimix Diver or CCR or pSCR Trimix Diver or CCR or pSCR Expedition Trimix Diver Class can only be taught in Cave if the Instructor is certified as a CCR or pSCR Cave Instructor and the diver is certified as a CCR or pSCR Cave Diver.
9. In order to teach an Open Circuit Program while using the rebreather, the Instructor must hold an equivalent Rebreather Supervisor Level or higher.
  - a. i.e. To teach an Advanced EANx Diver Open Circuit Program while the instructor is using the rebreather, the instructor must be a CCR or SCR Advanced EANx Supervisor or higher.
10. Each team must plan and carry stages or adequate bailout gas or bailout rebreathers to get at least 1½ divers to the surface on Rebreather Dives.
11. Diluents must not exceed 1.1 ata of PO<sub>2</sub> at max depth of dive.
12. Regardless of the divers OW qualification, a rebreather program or crossover cannot be completed in an CCR Cave/Tek CCR Cave environment. Or exceed the limits of the rebreather diver previous certification level. It must be performed in an open water environment.
 

► *NOTE: A Rebreather Crossover class can only be taught in Cave if the Instructor is certified as a Rebreather Cave Instructor and the diver is certified as a Rebreather Cave Diver.*
13. Open water dives may be conducted in cavern/limited mine environments under the following conditions:
  - a. The student is able to remain in the daylight zone where there is no need for the use of a dive light;
  - b. The student is never further than a distance of 132 ft./40 m. (sum of horizontal and vertical distance) from a point where the diver is able to breathe above the surface of the water.
14. A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.
15. On any rebreather program, each day shall be started with a new scrubber material.
16. For any dive below 160 fsw/48 msw the use of a new scrubber material is mandatory.

## G. Water Skills

► **During training, in particular when simulating emergency situations, the instructor shall ensure that the student's breathing gas is monitored by both the instructor and the student and maintained within life-support limits.**

1. Prior to all dives a "briefing" must be conducted. Following all dives, a "debriefing" must be conducted.
2. Confined water sessions are to be completed prior to open water dives being performed (or overhead environment dives, as applicable). The confined water sessions will include an introduction, demonstration and student performance of watermanship, skills and techniques to be developed during the course. When teaching a combination of courses, all the skills may be practiced in a single confined water session.
3. Training sessions must be limited in confined water experiences to no deeper than 20 fsw (6 msw) for sport diver level courses and 40 fsw (12 msw) for technical diver level courses provided decompression stops are not required.
4. All the watermanship skills must be practiced until the student is proficient in each skill.
5. The training requirements here in are IANTD minimums.
6. Practice of rebreather diving equipment configuration including redundancy and streamlining.
7. Dives may be accomplished in overhead environments if the diver is already qualified or if taking this Program in conjunction with an overhead course.

**For Overhead Program the following are required**

8. A land drill must be performed before any diving sessions to practice proper program techniques.
9. This confined water session may be in OW in-depths up to 60 feet (18 msw) provided decompression stops are not required.

## H. Special Notes for Rebreather Additional Specialized Programs:

- Who may teach?
  - RCCR or RSCR Open Water Instructor or higher who is also specifically rated to the specialty to be taught.
  - RCCR or RSCR Open Water Instructor must be also certified as a Diver on the rebreather to be used by the student.
- 1. All the specialized programs listed in the Sport Diver Open Circuit Standards can be taught while diving a rebreather.
- 2. Review all the emergencies procedures taught in the RCCR or Recreational SCR Diver Program.
- 3. Use the appropriate Rebreather gas management drill for out of air rebreather diver.
- 4. Rebreather divers at all course levels must have the IANTD CCR Diver "S" Drill chart C-3401.
- 5. AIL rebreather levels the minimum age is 18 years old.

## I. Special Notes

- **CAUTION: On any black-out drills on a CCR the student must be able to see and control his/her PO2 at all times**
- **CAUTION: If a black mask is used, the HUD must be visible for the diver at all times.**
- **CAUTION: In any emergency situation no lines shall be removed from the overhead environment (Cave, Wreck, Mine etc...) until all team members are accounted for. Emergency situations like but not limited to Gas Sharing, Bump & Go, Touch Contact, Lost Diver and many others.**
- **CAUTION: A continuous guideline that allows for a safe exit at the entrance will be in place at all times during training in any overhead environment.**
- **Divers must demonstrate the ability to demonstrate while maintain good TRIM during all emergency skills taught in the diver course.**
- **Depth increases in training programs shall not progress at depths greater than 33 fsw (10 msw) deeper than the previous depth in the course or the students deepest previous depth experience.**



- ▶ *On any occasion a student requires assistance, the instructor and any Divemaster or dive supervisor will make every reasonable effort to assist or rescue the student. The instructor will be expected to continue an assist or rescue attempt until it is either successful or it becomes apparent that to continue will result in unreasonably endangering the rescuers life or endanger other students or members of the dive team.*
- ▶ *When diving offshore, during training the DSMB or Lift Bag is to be used as a backup decompression or ascent platform and not as the primary platform, except in circumstances defined by the environment being dived in such as strong currents, boat traffic, or other conditions that would make the use of a float ball and ascent line impractical or dangerous. On drift dives, it is recommended that an ascent line attached to a float be used to provide stability for students during ascent. Only in situations where the circumstances of the environment or the dive make a fixed or drift ascent line buoyed to the surface or attached to a boat a less safe option will DSMB or Lift Bag deployments be used as the primary ascent platform for dives deeper than 100 fsw (30 msw).*
- ▶ *To be eligible for any IANTD training qualification, a minimum watermanship skill performance average must be 80% out of 100%. With additional dives, the student may graduate from the course with at least 80% on two consecutive dives. This may require several additional dives be added to the course.*

## J. Qualification Requirements

1. All diver performance requirements must be met prior to certification, as reflected on the student watermanship evaluation form.
2. Upon completion of all listed classroom sessions, watermanship skills and dives to the Instructor's satisfaction, an appropriate IANTD Diver qualification card will be issued.
3. Students with unsafe attitudes, or who demonstrate bad dive habits, must not be qualified. Training is purchased upon enrollment. Qualification is earned through the student's performance and knowledge demonstrated throughout the Program.
4. It is required that all training dives be logged and it is recommended that dives be in the IANTD Rebreather Diving Logbook or any dive log system.
5. The Program enrolled for must be completed within six months from the starting date, unless otherwise specified in the Standard.

## K. Qualification Renewal

1. The IANTD Diver Qualification Card does not have an expiration date, unless otherwise indicated.
2. For all Professionals proof of insurance with IANTD listed as Additional Insured and IANTD Membership is required annually.

## Additional Information

- ▶ A highlighted section or **bolded** is made to draw your attention to those words.
- ▶ **In regard to maintaining competency on Rebreathers** Instructors must dive a minimum of 40 hours on CCR or SCR per year out of which 12 hours must be on the (any) Rebreather they provide initial instruction on.
- ▶ **Unlimited access definition on Rebreathers.** By instructors and Dive Supervisors Must own or have unlimited access to the CCR or SCR they are teaching. Ownership may be by Instructor or spouse or a company owned unit or by either or both. Unlimited Access must be certified annually with renewal by the Instructor.
- ▶ **On ALL REBREATHERS, to do instructor or IT programs on a specific unit, the candidate must be approved by the license of territory, IANTD HQ and the manufacture.**

# IANTD Rebreather Student Watermanship Evaluation Form



## REBREATHING STUDENT WATERMANSHIP EVALUATION FORM FOR INDIVIDUAL DIVES (Version 20.1.0)

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Course Title: \_\_\_\_\_ Met Prerequisites? \_\_\_\_\_

Rebreather used during class: \_\_\_\_\_

Started Date: \_\_\_\_\_ Ended Date: \_\_\_\_\_ Instructor Name: \_\_\_\_\_

*Note! To be eligible for any IANTD training qualification, a minimum watermanship skill performance average must be 80% out of 100%. With additional dives, the student may graduate from the course with at least 80% on the last two consecutive dives. This may require several additional dives be added to the course.*

1. Pre-Dive	Dive#	1	2	3	4	5	6	7	8	9	10
Parts Inspection & Assembling											
Pre-Dive Essential Dive Preparation Verification (C-3401)											
Pre-Breathe											
Average Score											

2. PO2 Control & Monitoring	Dive#	1	2	3	4	5	6	7	8	9	10
During Descent											
At Depth											
During DECO, if applicable											
Manual Override											
Average Score											

3. Buoyancy Control	Dive#	1	2	3	4	5	6	7	8	9	10
At Depth											
During Ascent											
During Drills											
At Safety or required decompression stops											
Average Score											

4. Propulsion Skills	Dive#	1	2	3	4	5	6	7	8	9	10
Overall propulsion technique and efficiency											
Body posture for low drag and silt avoidance											
Pulling technique, if applicable											
Average Score											

5. Equipment Familiarity	Dive#	1	2	3	4	5	6	7	8	9	10
Comfort with equipment and configuration											
Knowledgeable in location & operation of all equipment											
Ability to efficiently switch gases											
Ability to manage equipment in water											
Average Score											



## REBREATHER STUDENT WATERMANSHIP EVALUATION FORM FOR INDIVIDUAL DIVES

(Version 20.1.0)

6. Rebreather Ability	Dive#	1	2	3	4	5	6	7	8	9	10
Basic Rebreather Skills (i.e.: BO Efficiency, DIL & O2 Flush, Minimum Loop ...)											
Physiological EMS (i.e.: 3Hs, Caustic ...)											
Physical/Mechanical EMS (i.e.: Sensor failure, Electronics, Boom ...)											
Survival Management (i.e.: Mask off, Lights off, Gas related issues ...)											
<b>Average Score</b>											

7. Awareness	Dive#	1	2	3	4	5	6	7	8	9	10
Aware of buddy or Instructor location											
Physical presence awareness (orientation on dive)											
Responsive to signals											
Capable of self-rescue (includes performance of emergency responses)											
Capable of buddy rescue (includes being accessible to buddy)											
Awareness of & responsive to changes in equipment status during the dive and drills											
Ability to focus on dive objectives											
Overall alertness											
<b>Average Score</b>											

8. Acknowledge of Grades & Records	1	2	3	4	5	6	7	8	9	10
Dive Date										
Dive Time										
Diver Initials										
Instructor Initials										



(Version 20.1.0)

Items 1-3 below are to be completed by the Instructor and reviewed with the student following the last dive of the course.

- NOTE!** To be eligible for any IANTD training qualification, a minimum watermanship skill performance average must be 80% out of 100%. With additional dives, the student may graduate from the course with at least 80% on the last two consecutive dives. This may require several additional dives be added to the course.

**Comments:**

If the participant is under the age of 18, then the parent or guardian must sign this agreement and agree to be legally bound by it and furthermore be legally responsible for the minor participant, including being responsible for all damage, injury or death which may occur as a result of the minor's participation in diving activities. The parent or guardian hereby agrees to be fully responsible to the released parties for any damage, injury or death caused by the minor, including actions brought by the minor, for any damages whatsoever.

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## Recreational CCR or Recreational SCR Rebreather Experience

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Recreational CCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- For SCR: A Recreational SCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

### A. Purpose

1. This experience program is designed to introduce the diver to the basic concepts of Rebreathers, and to provide a practical confined water and optional OW exposure for swimming with a Rebreather.
  - *NOTE: It is not a Qualification Program.*

### B. Prerequisites

1. Age requirement:
  - a. Must be a minimum of 18 years of age without guardian approval.

### C. Program Content

1. Complete materials from selected text or handouts at Instructor's discretion.

### D. Equipment & Text Requirements

1. No Student Kit is requested for this experience program.
2. Approved Rebreather listed on the IANTD Webpage.

### E. Program Limits

1. Instructor Ratio:
  - a. There may be no more than 4 students to 1 Instructor for pool and confined water training.
  - b. There may be no more than 2 students to 1 Instructor for Open Water dives.
2. All dives must be conducted in depths no deeper than 33 fsw (10 msw).

### F. Water Skills Development

1. Swim unit in confined water.
  - *If conducting the optional Open Water Rebreather Experience Dive, the following skills shall be mastered in confined water prior to the Open Water Rebreather Experience Dive.*
2. Swim unit and practice buoyancy control one (1) optional open water dive.
3. Demonstrate ability to maintain buoyancy with Rebreather and to perform basic skills with unit perform basic drills as explained by Instructor:
  - a. Flush.
  - b. Remove and Replace DSV/BOV.
  - c. Bailout.
  - d. Monitor PO<sub>2</sub>
  - e. Monitor system.

## Recreational CCR or Recreational SCR Explore Rebreather Diving

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Recreational CCR (RCCR) Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- For SCR: A Recreational SCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
  - **NOTE: The Rebreather Instructor conducting the Explore Rebreather Diving must be a Rebreather Instructor for the ALL specific unit in use during the dive.**

### A. Purpose

1. This Program is designed to introduce the diver to the basic concepts of Rebreather diving, and to provide a practical confined water or OW exposure practicing various skills.
  - **NOTE: It is not a Qualification Program.**

### B. Prerequisites

1. Age requirement:
  - a. Must be a minimum of 18 years of age.
2. Certification requirement:
  - a. Open Water Diver or higher.

### C. Program Content

1. Complete materials from selected text or handouts at Instructor's discretion.

### D. Equipment & Text Requirements

1. No Student Kit is requested for this experience program.
2. Approved Rebreather listed on the IANTD Webpage.
  - **NOTE: Recommended eCCR, mCCR, pSCR, SCR or 3 operationally systems.**

### E. Program Limits

1. Instructor Ratio:
  - a. There may be no more than 4 students to 1 Instructor for pool and confined water training.
  - b. There may be no more than 2 students to 1 Instructor for Open Water dives.
    - **NOTE: This ratio may be increased by two (2) students with assisting IANTD Rebreather Supervisor.**
2. All dives must be conducted in depths no deeper than 50 fsw (15 msw).

### F. Water Skills Development

1. Swim unit in confined water.
2. Swim unit and practice buoyancy control.
3. Demonstrate ability to maintain buoyancy with Rebreather
4. Perform basic skills and drills with the unit as explained by Instructor.

### G. Qualification Requirements

1. Up to Five rebreathers may be presented.
  - a. Those who complete 3 operationally different Rebreathers will be given a Explorer Rebreather Diver card acknowledging they complete the explore Rebreather diving program.
    - **NOTE: This is not a qualification card but an acknowledgement one.**

## Recreational CCR Diver

▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- ▶ A Recreational CCR (RCCR) Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This Program is designed to train Recreational divers in the safer use and technology of basic CCR diving to independently plan and conduct dives with no decompression, using up to a 1.2 PO<sub>2</sub> and to depths up to 100 fsw (30 msw) on the specific unit on which they received the training.
- ▶ *Note: Additional units require further unit-specific training.*

### B. Prerequisites

1. Certification Requirement:
  - a. IANTD Open Water Diver or equivalent.
  - b. IANTD EANx Diver or equivalent.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Must provide proof of 20 open-water dives with at least 15 hours underwater using open-circuit scuba.
    - ▶ *NOTE: Instructors training rebreather divers must meet manufacturer's requirements in addition to all IANTD Standards.*

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. Plan dives and demonstrate ability to act as a responsible diver.
3. This program must include:
  - a. Academic Classes that includes the following subjects:
    - I. Rebreather basics
    - II. Function of rebreather components.
    - III. Breathing performance using a rebreather.
    - IV. Rebreather assembly and checks.
    - V. Gas supply duration.
    - VI. CO<sub>2</sub> absorbent duration.
    - VII. Rebreather pre-water entry checks.
    - VIII. Dive conduct.
    - IX. No-decompression dives.
    - X. Identifying and reacting to potential issues.
    - XI. Hypercapnia, hypoxia, hyperoxia.
    - XII. Buddy system.
    - XIII. Rebreather maintenance.
    - XIV. Maintaining knowledge and skills.
  - b. Confined water session(s) and Open Water Dives.
4. Students must pass the specific IANTD Open Water Diver final exam with a minimum score of 80%.
  - ▶ *NOTE: The Recreational CCR Diver must also complete the EANx Diver final exam with a minimum score of 80%.*



## D. Equipment & Text Requirements

1. IANTD Recreational CCR specific Diver Student Kit.
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. On all training dives the instructor and students shall use the same rebreather units.
4. Must carry a minimum of 30 cubic feet (4 L) cylinder for open-circuit bailout system.
  - a. The open-circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
5. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as RCCR Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader
2. The Program must include:
  - a. A minimum of eight (8) in-water sessions with a minimum of 420 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.
    - I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
      - i. Up to two (2) 60 min. confined water sessions may be credited toward the total number of in-water sessions
        - a. The maximum confined water time is 120 min. that can be divided in two (2) sessions.
    - II. The course must contain a minimum of six (6) the Open Water sessions with at least 300 minutes.
      - i. If only one (1) confined water session is completed the course must include at least 7 open water dives.
3. All dives must be completed within the IANTD oxygen CNS% limits with air or EANx.
4. Two open-water dives shall be made to a depth of at least 78 fsw/24 msw.
5. No dives may be conducted to depths greater than 100 fsw (30 msw).
6. The set point of the RCCR must not exceed 1.2 PO<sub>2</sub> for all dives within the class.
7. Bailout gas mixture to be used must contain between Air to EAN40 that will not exceed 1.6 PO<sub>2</sub> at maximum depth of dive.

## F. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Plan time and depth for the dive, taking into account the limitations of gas supply and scrubber endurance based on the rebreather manufacturer's specifications, the environment, no-decompression limits, oxygen exposure, previous dives and other factors that may apply.
4. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
5. Establish proper weighting and weight placement (trim) with the rebreather.
6. Enter the water using a technique appropriate for the environment.
7. Demonstrate proper operation of mouthpiece closure mechanism.
8. Switch/Ensure a low set point/PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.

9. Perform bubble check and display check (All members of the team).
  - ▶ *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ▶ *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
10. Check oxygen sensors are not current-limited (linearity check) if not initiated automatically by the unit.
11. Dive buddy monitoring and awareness throughout the dive.
12. At the planned dive depth or Set Point/PO<sub>2</sub> change depth, Switch/Ensure for the planned Set Point/PO<sub>2</sub>.
13. During a controlled descent with a buddy to the planned depth ensure gas addition is made.
14. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia
  - e. At least two [2] OC ascents from approximately 60 fsw (18 msw).
15. Develop and demonstrate buoyancy control by:
  - a. Performing precision hovering maintaining same depth plus minus 3 fsw (1 msw) below or above for at least 90 seconds with minimum use of fins or sculling;
  - b. Adjust buoyancy and trim throughout the dive.
  - c. Performing a 30 fsw (9 msw) ascent rate maintaining buddy contact.
  - d. Demonstrate ability to manage depth changes.
16. Proper operation of computer controlling and secondary equipment.
  - a. If set-point changes are initiated automatically, confirming the set-point changes.
17. PO<sub>2</sub> monitoring to be done no more frequently that once a minute and no less often than once every four (4) minutes.
18. Demonstrate proper habits for retaining loop integrity including:
  - a. Removing water from the breathing hoses.
  - b. Maintaining optimum breathing loop volume.
19. Monitoring of the CO<sub>2</sub> absorbent duration according to the manufacturer guidelines.
20. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
21. Demonstrate correct procedure for manual addition of oxygen (where appropriate).
22. Demonstrate correct procedure for manual addition of diluent (where appropriate).
23. Demonstrate correct procedure for diluent flush (where appropriate).
24. Deploy a SMB and reel, inflate the SMB and send it up on the line
25. Demonstrate ability to perform a safety stop for at least 3 min at 15 fsw (5 msw).
26. At the surface in open water, establishing positive buoyancy with the buoyancy compensation device (BCD), then closing the rebreather mouthpiece before removal.
27. While unsupported at the surface in open water, demonstrating oral inflation of the BCD
28. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
29. Bailout scenarios:
  - a. Responding to a simulated rebreather emergency by performing a bailout ascent to the surface at a controlled rate accompanied by a buddy.
  - b. At the signal of a simulated emergency, breathe from an open-circuit bailout gas provided by a buddy and repeat as both donor and receiver.
  - c. At the signal of a simulated emergency, bailout to an open-circuit source, then return to the breathing loop after the exercise following proper procedures.
30. At a depth no greater than 30 fsw (9 msw) perform a simulated rescue to the surface of a non-responsive rebreather diver.
31. Remove and replace an off board bailout cylinder while underwater.

32. Remove an offboard bailout cylinder at the surface.
33. On the last two (2) dives, present the following scenarios.

► *NOTE: The student write down the suspected problem.*

► ***NOTE: The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.***

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative
2 cells read high but low cell checks with diluent PO <sub>2</sub>	Suspect two (2) high cells are in error
2 cells read high and check with diluent PO <sub>2</sub>	Suspect cell off is wrong

34. Exit the water using a technique appropriate for the environment.
35. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.
36. Post dive briefing.

## Recreational Oxygen CCR Diver

▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- ▶ A Recreational Oxygen CCR (RO2CCR) Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This Program is designed to train Recreational divers in the safer use and technology of basic Oxygen CCR diving with no decompression, up to 1.6 PO<sub>2</sub> and to depths up to 20 fsw (6 msw).
  - ▶ *Note: Additional units require further unit-specific training.*

### B. Prerequisites

1. Certification Requirement:
  - a. IANTD Open Water Diver or equivalent.
  - b. IANTD EANx Diver or equivalent.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Must provide proof of 20 open-water dives with at least 15 hours underwater using open-circuit scuba.
    - ▶ *NOTE: Instructors training rebreather divers must meet manufacturer's requirements in addition to all IANTD Standards.*

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. Plan dives and demonstrate ability to act as a responsible diver.
3. This program must include:
  - a. Academic Classes
  - b. Confined Water Session(s)
  - c. Open Water Dive Sessions
4. Students must pass the specific IANTD Recreational O<sub>2</sub> CCR Diver final exam with a minimum score of 80%.

### D. Equipment & Text Requirements

1. IANTD Recreational O<sub>2</sub> CCR specific Diver Student Kit.
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. Only rebreathers specifically manufactured as Oxygen Rebreathers can be used for the RO2CCR Program.
4. On all training dives the instructor and students shall use the same rebreather units.
5. Each diver needs to carry personal OC bailout with a minimum duration of 5 minutes at maximum depth.
  - a. The open-circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
  - ▶ *NOTE: Units equipped with a second stage bailout regulator (BOV) may only use the onboard oxygen supply as bailout gas as a transition to offboard bailout.*
6. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - ▶ *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as RCCR Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader
2. The Program must include:
  - a. A minimum of four (5) in-water sessions with a minimum of 260 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.
    - I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
    - II. The course must contain a minimum of four (4) the Open Water sessions with at least 200 minutes.
3. All dives must be completed within the IANTD oxygen CNS% limits.
4. During training no dives may be conducted to depths greater than 16 fsw (5 msw).
5. Each day shall be started with a new scrubber material.
6. Bailout gas mixture to be used must contain between Air to EAN40 that will not exceed 1.6 PO<sub>2</sub> at maximum depth of dive.
  - *NOTE: At all times the mixture must be calculated to provide a safe PO<sub>2</sub> at the depth being trained at.*
  - *NOTE: Units equipped with a second stage bailout regulator (BOV) may only use the onboard oxygen supply as bailout gas as a transition to offboard bailout.*

## F. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
4. Establish proper weighting and weight placement (trim) with the rebreather.
5. Enter the water using a technique appropriate for the environment.
6. Demonstrate proper operation of mouthpiece closure mechanism.
7. Demonstrate proper operation of gas addition device (both automatic and manual).
8. If PO<sub>2</sub> monitoring device is available, make sure PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
9. In water leak and buddy leak check.
  - ► *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ► *NOTE: Where practical this may be accomplished between just below the surface to 16 fsw (5 msw) deep.*
10. During descent ensure gas addition is made.
11. Proper monitoring of gas gauges, dive computer (depth, time and CNS%).
12. If PO<sub>2</sub> monitoring device is available, PO<sub>2</sub> gauge monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes.
13. Adjust buoyancy and trim during descent and on the bottom.
14. Adjust buoyancy and trim during ascent.
15. Demonstrate proper habits for maintaining loop integrity.
16. Demonstrate proper habits for the use of secondary equipment.
17. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
18. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
19. Demonstrate buoyancy control ability by remaining at a single depth without rising or sinking more than 1 meter/3 feet and with minimum use of fins or sculling.
20. Demonstrate correct procedure for manual addition of oxygen.

21. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Flooded loop;
  - c. Hypercapnia
  - d. At least two [2] OC ascents from approximately 16 fsw (5 msw).
22. Deploy a SMB and reel, inflate the SMB and send it up on the line.
23. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
24. At least once per dive perform complex (multi-part) scenarios such as Hypoxia or Hypercapnia drill for donor while gas sharing by handing bailout cylinder or other bailout mechanism to an out of gas diver ascend.
25. Remove and replace an off board bailout cylinder while underwater (if applicable).
26. Out of air, gas sharing from OC Regulator (either from onboard or dedicated bailout)
  - *NOTE: donor remains on O2CCR*
27. Remove and replace an off board bailout cylinder while underwater (if applicable).
28. Remove an offboard bailout cylinder at the surface (if applicable).
29. On the last two (2) dives, present the following scenarios.
  - *NOTE: The student write down the suspected problem.*
  - ***NOTE: The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.***

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative
2 cells read high but low cell checks with diluent PO2	Suspect two (2) high cells are in error
2 cells read high and check with diluent PO2	Suspect cell off is wrong

30. Exit the water using a technique appropriate for the environment.
31. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.
32. Optional Skill: Remove and replace rebreather at a depth less than 16 fsw (5 msw)
33. Optional Skill: Remove and replace rebreather at surface.
34. Post dive briefing.



## Recreational SCR Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach the course?

- A Recreational SCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This Program is designed to train competent divers in the safer use and technology of basic SCR diving with no decompression, with mixtures between EAN 32 and EAN 40, and depths up to 70 fsw (21 msw).
  - *NOTE: This course may be used as an entry-level course to SCUBA diving if combined with the Open Water program in which case Open Circuit dives will be substituted with SCR dives.*
2. The diver can dive to a maximum depth of 100 fsw (30 msw) if previously qualified as an Open Circuit Deep Diver.

### B. Prerequisites

1. Certification Requirement:
  - a. IANTD Open Water Diver or equivalent.
  - b. IANTD EANx Diver or equivalent.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Must provide proof of 20 open-water dives with at least 15 hours underwater using open-circuit scuba.
    - *NOTE: Instructors training rebreather divers must meet manufacturer's requirements in addition to all IANTD Standards.*

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. Plan dives and demonstrate ability to act as a responsible diver.
3. This program must include:
  - a. Academic Classes that includes the following subjects:
    - I. Rebreather basics
    - II. Function of rebreather components.
    - III. Breathing performance using a rebreather.
    - IV. Rebreather assembly and checks.
    - V. Gas supply duration.
    - VI. CO2 absorbent duration.
    - VII. Rebreather pre-water entry checks.
    - VIII. Dive conduct.
    - IX. No-decompression dives.
    - X. Identifying and reacting to potential issues.
    - XI. Hypercapnia, hypoxia, hyperoxia.
    - XII. Buddy system.
    - XIII. Rebreather maintenance.
    - XIV. Maintaining knowledge and skills.
  - b. Confined water session(s) and Open Water Dives.
4. Students must pass the specific Recreational SCR test with a minimum score of 80%.

## D. Equipment & Text Requirements

1. IANTD Recreational SCR specific Diver Student Kit.
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. On all training dives the instructor and students shall use the same rebreather units.
4. Must carry a minimum of 30 cubic feet (4 L) cylinder for open-circuit bailout system.
  - a. The open-circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
5. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - a. *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as RCCR Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader.
2. The Program must include:
  - a. A minimum of five (5) in-water sessions with a minimum of 300 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.
    - I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
      - i. Up to two (2) 60 min. confined water sessions may be credited toward the total number of in-water sessions
        - a. The maximum confined water time is 120 min. that can be divided in two (2) sessions.
    - II. The course must contain a minimum of four (4) the Open Water sessions with at least 20 minutes.
      - i. If only one (1) confined water session is completed the course must include at least 5 open water dives.
3. All dives must be completed within the IANTD oxygen CNS% limits with air or EANx.
4. Two open-water dives shall be made to a depth of at least 78 fsw/24 msw.
5. No dives may be conducted to depths greater than 100 fsw (30 msw).
6. The following requirements for breathing gases shall apply:
  - a. The maximum planned breathing loop PO<sub>2</sub> shall be 1,4 bar;
  - b. The inspired PO<sub>2</sub> of the open-circuit bailout gas shall not exceed 1,6 bar;
  - c. If any supply gas is breathed directly by the diver, it shall have a maximum PO<sub>2</sub> of 1,6 bar at the maximum depth of the dive.

## F. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Plan time and depth for the dive, taking into account the limitations of gas supply and scrubber endurance based on the rebreather manufacturer's specifications, the environment, no-decompression limits, oxygen exposure, previous dives and other factors that may apply.
4. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
5. Establish proper weighting and weight placement (trim) with the rebreather.
6. Enter the water using a technique appropriate for the environment.

7. Demonstrate proper operation of mouthpiece closure mechanism.
8. Ensure the PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
9. Perform bubble check and display check (All members of the team).
  - ▶ *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ▶ *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
10. Dive buddy monitoring and awareness throughout the dive.
11. At the planned dive depth ensure for the planned PO<sub>2</sub>.
12. During a controlled descent with a buddy to the planned depth ensure gas addition is made.
13. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia
  - e. At least two [2] OC ascents from approximately 60 fsw (18 msw).
14. Develop and demonstrate buoyancy control by:
  - a. Performing precision hovering maintaining same depth plus minus 3 fsw (1 msw) below or above for at least 90 seconds with minimum use of fins or sculling;
  - b. Adjust buoyancy and trim throughout the dive.
  - c. Performing a 30 fsw (9 msw) ascent rate maintaining buddy contact.
  - d. Demonstrate ability to manage depth changes.
15. Proper operation of computer controlling and secondary equipment.
  - a. If set-point changes are initiated automatically, confirming the set-point changes.
16. PO<sub>2</sub> monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes.
17. Demonstrate proper habits for retaining loop integrity including:
  - a. Removing water from the breathing hoses.
  - b. Maintaining optimum breathing loop volume.
18. Monitoring of the CO<sub>2</sub> absorbent duration according to the manufacturer guidelines.
19. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
20. Demonstrate correct procedure for manual addition of gas supply (where appropriate).
21. Demonstrate correct procedure for unit flush during ascent or where appropriate.
22. Deploy a SMB and reel, inflate the SMB and send it up on the line
23. Demonstrate ability to perform a safety stop for at least 3 min at 15 fsw (5 msw).
24. At the surface in open water, establishing positive buoyancy with the buoyancy compensation device (BCD), then closing the rebreather mouthpiece before removal.
25. While unsupported at the surface in open water, demonstrating oral inflation of the BCD
26. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
27. Bailout scenarios:
  - a. Responding to a simulated rebreather emergency by performing a bailout ascent to the surface at a controlled rate accompanied by a buddy.
  - b. At the signal of a simulated emergency, breathe from an open-circuit bailout gas provided by a buddy and repeat as both donor and receiver.
  - c. At the signal of a simulated emergency, bailout to an open-circuit source, then return to the breathing loop after the exercise following proper procedures.
28. At a depth no greater than 30 fsw (9 msw) perform a simulated rescue to the surface of a non-responsive rebreather diver.

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29. Remove and replace an off board bailout cylinder while underwater.
30. Remove an offboard bailout cylinder at the surface.
31. On the last two (2) dives, present the following scenarios.

► **NOTE:** The student write down the suspected problem.

► **NOTE:** The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative

32. Exit the water using a technique appropriate for the environment.
33. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.
34. Post dive briefing.

## RCCR or RSCR Rescue Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Recreational CCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- For SCR: A Recreational SCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop proficiency in self-rescue and buddy-rescue.

### B. Prerequisites

1. Certifications requirements:
  - a. Must provide proof of a minimum of 10 RCCR or 10 RSCR logged dives
  - b. IANTD Diving First Aid or equivalent.
  - c. IANTD Oxygen Administrator or equivalent
  - d. IANTD CPR or equivalent
    - *NOTE: The Diving First Aid, CPR and Oxygen Administrator Programs may be taken concurrently with the Rescue Diver Course.*
    - *NOTE: AED certification is recommended.*
2. Age requirement:
  - a. Must be a minimum of 18 years of age.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
  - All content from the Specific IANTD Student Kit and IANTD Specific Course presentation must be completed by the student
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Confined water session(s).
  - c. Open Water Dives.
4. Students must pass the specific IANTD Rescue Diver test with a minimum score of 80%.

### D. Equipment & Text Requirements

1. IANTD Rescue Diver Student Kit.
2. The IANTD Diver & The IANTD Professional must Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.
3. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.



## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
    - *NOTE: This ratio may be increased by two (2) when a Rebreather qualified Dive Supervisor is used at which time the ratio may be increased to 6 students.*
2. The Program must include:
  - a. A minimum of 120 minutes of OW bottom time.
  - b. A minimum of four (4) rebreather dives
    - *NOTE: Even if the time requirements are exceeded, a minimum of four (4) SCUBA dives must be made.*
3. No training dives may be conducted to depths greater than 60 fsw (18 msw).
4. No ESA may be conducted from depths greater than 30 fsw (9 msw).
5. No unresponsive or unconscious diver drills may be conducted from depths greater than 30 fsw (9 msw).

## F. Water Skills Development

- *NOTE: On search patterns and other group proficiency skills, the entire group may participate to increase the learning ability.*
- *NOTE: All rescue skills must be under the direct supervision of the instructor. However, Divemasters may direct the skills, provided the instructor is in a position to intervene in a reasonable time fashion, if needed.*
- *NOTE: When performing rescue skills, no more than one (1) team per Divemaster may be active at the same time, and all participants must be within a distance that the instructor may maintain indirect supervision ability.*
- **CAUTION: Must be extra cautious to vent gas from counterlungs during ascent and prevent gas addition to the loop on ascent of a victim or when rescuing a rebreather diver.**

### Missing Diver Skills (Required)

1. Determine last sighting of missing diver, and then conduct a straightline search to last know location, followed by search patterns (circle, grid, etc.).

### Buddy Assist Skills (Required)

2. Emergency Options Drill:
  - a. Instructor allows divers to become separated by a short distance (e.g.: as divers are swimming, stop one diver without the other's knowledge and allow the unstopped diver to continue for about three (3) kick cycles). Then have the stopped diver swim (without breathing, and slowly exhaling) to the unstopped diver and communicate a need for gas, followed by gas sharing on alternate second stage or on a Rebreather with adequate bailout, perform the appropriate Rebreather gas management drill for out of air diver.
  - b. Then repeat the same drill, except that this time you will instruct the buddies do a gas sharing ascent.
  - c. At a depth no greater than 20 fsw (6 msw), separate buddy pair(s) from each other by a distance slightly greater than water depth, and inform one of the divers that he or she is out of gas. Allow this diver to choose the safer way to deal with the problem. If the diver decides that the surface is closer and more realistic, and performs an ESA, terminate the drill and get the divers together again.
  - d. Repeat the previous step at a depth greater than 20 fsw (6 msw), with the two (2) divers separated by 20 feet (6 meters). Appropriate Rebreather Gas Management Drill for out of air diver should become a more appropriate option as the depth increases.
3. Assist an exhausted diver underwater.
4. Assist a disoriented diver.
5. Demonstrate ability to use counterlungs for buoyancy control and surface buoyancy.
6. Assist a tired buddy on surface, using fin pushes and diver tows.

## **Diver and Buddy Rescue skills (Required)**

7. Use of extensions, surface floats, ring buoys, etc. from boat or dock.
8. In-water use of extensions and buoys.
9. Blocks and parries from panicky diver.
10. Cross equipment/chest carry and control carry.
11. Swimming rescue of struggling victim.
12. Rescue of an injured or unconscious diver from bottom.
13. Rescue breathing and “dosie-doe”, and other carries enabling ease of mouth to mouth rescue breathing.
14. Equipment removal and transporting diver to a stable platform and/or beach. (Practice methods of ditching equipment, techniques for getting victim out of water.).
15. Simulate CPR and EMS activation.

## **Required Skills Final Check**

16. Locate a missing diver who is unconscious and coordinate a complete rescue.

## **Personal Rescue Skills (Optional).**

17. Simulate having fallen from a boat in shirt, pants and shoes. Once in water, remove shoes, then remove pants and inflate them as a surface float. Remain afloat for 10 minutes. Trap air bubble in back of shirt to give additional buoyancy.
18. Perform drown proofing (remain motionless in the water while holding arms and legs, arch back to get a breath of air and float until next breath is needed) for 3 minutes.
19. Perform hand signals to get rescue.
20. Surface dive to 20 fsw (6 msw) or swim laterally for 20 feet (6 meters) and recover a 10 pound weight.
21. Remain afloat for 10 minutes by any means.
22. Surface dive to 20 fsw (6 msw) or swim laterally for 20 feet (6 meters) and simulate an ESA. Be sure to exhale continuously as if on SCUBA, and to have a good body flare as the surface is approached.
23. Perform one (1) ESA from 10 fsw (3 msw), one (1) ESA from 20 fsw (6 msw) and one (1) ESA from 30 fsw (9 msw). Concentrate on slow ascents, controlled continuous exhalation and good body flare. Repeat several times.
24. Swim without a mask or with a flooded mask for 3 minutes.
25. Swim with a flooding second stage on bailout (leaking exhaust valve) for 2 minutes.
26. Simulate a wide open free flow and use bailout regulator for 2 minutes.
27. Simulate a blown O-ring between the bailout cylinder and regulator, and have student turn valve on as they inhale and off as they exhale for two (2) minutes.
28. Simulate a ripped rebreather loop. While off the loop, the student must maintain upright posture and remain afloat with the loop empty and the rebreather not adding gas.
29. Use counterlungs to remain afloat at the surface.

## RCCR or RSCR Recreational Trimix Diver

▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- ▶ For CCR: A RCCR Trimix Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- ▶ For SCR: A RSCR Trimix Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course
- ▶ **NOTE: A RCR or RSCR Open Water Instructor who is also a CCR or SCR Advanced Recreational Trimix Diver may teach the course provided they are an instructor on the specific Rebreather being used in the course.**

### A. Purpose

1. The purpose of this Program is designed to provide RCCR or Recreational SCR Divers with a breathing medium for extending their dives to Sport Diving Depths by using ENDs no greater than 100 fsw (30 msw) depth ranges.
2. The program qualifies divers to do no-stop required dives using Recreational Trimix Gas mixtures to a depth of 132 fsw (40 msw).

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified as:
  - b. For CCR: Must be a qualified as IANTD RCCR Deep Diver or equivalent.
  - c. For SCR: Must be a qualified as IANTD RSCR Deep Diver or equivalent..
    - ▶ **NOTE: The RCCR or RSCR Deep Diver course can be made in conjunction with the RCCR or RSCR Recreational Trimix Diver course.**
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Must provide proof of a minimum of 15 logged dives.

### C. Program Content

- ▶ **NOTE: The IANTD Recreational Trimix Diver qualification may be taught as a single program or combined with a variety of the IANTD Diver Programs or Specialty Diver Programs**
- ▶ **NOTE: The use of Recreational Trimix mixtures are required in this course.**
- 1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook.
- 2. This program must include:
  - a. Academic Classes.
  - b. Confined water session(s);
    - ▶ If Open Water Dives are chosen to be made.
  - c. Open Water Dives (OPTIONAL)
- 3. Students must pass the specific IANTD Recreational Trimix Diver test with a minimum score of 80%.
- 4. Program covers all Recreational Trimix gas mixes from 28% to a maximum of 40% oxygen, and Helium concentrations yielding an END no greater than 100 fsw (30 msw) emphasizing the use of 32/15
- 5. A maximum PO<sub>2</sub> of 1.3 can be used.

## D. Equipment Requirements

1. IANTD Recreational Trimix Diver Student Kit.
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. If OW divers are chosen to be made, there may be no more than four (4) students per Instructor.
    - *NOTE: This ratio may be increased by two (2) for each assisting IANTD Rebreather Supervisor, up to a maximum of 6 students with one (1) IANTD Rebreather Supervisor per class session.*
2. The Program must include:

### **Open water dives are OPTIONAL, so if OW dives are chosen to be made:**

- a. A minimum of 60 minutes of Open Water bottom time.
- b. A minimum of two (2) rebreather dives
  - *NOTE: The two (2) dives must be done using recreational trimix mixtures*
  - *NOTE: The two dives must be done to depth between 90 fsw (27 msw) and 132 fsw (40 msw)*
  - *NOTE: Even if the time requirements are exceeded, a minimum of two (2) SCUBA dives must be made.*
  - *NOTE: The bottom time on each dive shall not be less than 20 minutes.*
3. No dives may be conducted to depths greater of 132 fsw (40 msw)
4. No dives may be conducted with an END greater than 100 fsw (30 msw).
5. Appropriate safety decompression stops must be performed.
6. Safety stops will be at 30 fsw (9 msw) - 20 fsw (6 msw) and 15 fsw (4.5 msw) each stop will be a minimum of 1 minute.
7. No dives having a mandatory Decompression Stop may be made (unless the course is combined with one requiring stops).
8. No Rebreather dives may be made with a PO2 greater than 1.3 ata.

## F. Water Skills Development

### **Open water dives are OPTIONAL, so if OW dives are choose to be made:**

- *NOTE: The diver may elect to dive the "mix" on tables or computers.*
1. Demonstrate:
    - a. Ability to plan Recreational Trimix dives,
    - b. Good buoyancy control;
    - c. Proficiency in body posture underwater for a streamlined swimming posture and avoidance of silt.
  2. Configure dive equipment for the most streamlined and efficient method and demonstrate proficiency in its management.
  3. Perform gas sharing drill on the bailout second stage while having the out of gas diver swim 40 feet (12m) to the donor without breathing.
  4. Perform one (1) gas sharing drill on ascent.

## **RCCR or RSCR Recreational Mixed Gas or Deep Diver**

- ▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**
- ▶ **IF NO DIVES WITH HELIUM ARE MADE A DEEP DIVER LEVEL SHALL BE ASSIGN.**

### **Who may teach this course?**

- ▶ FOR RECREATIONAL MIXED GAS CCR or SCR DIVER
  - ▶ For CCR: A Recreational CCR Instructor or higher who is also a RCCR Recreational Trimix Diver or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
  - ▶ For SCR: A Recreational SCR Instructor or higher who is also a RSCR Recreational Trimix Diver or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course
- ▶ FOR RECREATIONAL CCR or SCR DEEP DIVER
  - ▶ For CCR: A Recreational CCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
  - ▶ For SCR: A Recreational SCR Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

## **A. Purpose**

1. For Recreational Mixed Gas Rebreather Diver:
  - a. The purpose of this Program is designed to qualify Recreational Divers to do no-stop rebreather dives using Recreational mixed gas diluent to a depth of 132 fsw (40 msw) with a breathing medium using END's no greater than 100 fsw (30 msw).
2. For Recreational Rebreather Deep Diver:
  - a. The purpose of this Program is designed to qualify Recreational Divers to do no-stop rebreather dives using air as diluent to a depth of 132 fsw (40 msw).

## **B. Prerequisites**

- ▶ *NOTE: This course may be used as the entry level of diving or as a RCCR course for experienced recreational divers who desire to remain within recreational dive depths.*
  - ▶ *If used as the entry level, two (2) certifications shall be issued:*
    - ▶ *One (1) as unit specific;*
    - ▶ *One (1) as Recreational Mixed Gas Rebreather or Deep Diver RCCR or RSCR*
- 1. Certification requirements:
  - a. For Recreational Deep Diver or Mixed Gas Diver, must be certified as an:
    - I. For CCR: Must be a qualified as IANTD RCCR Advanced Open Water Diver or equivalent.
    - II. For SCR: Must be a qualified as IANTD RSCR Advanced Open Water Diver or equivalent.
- 2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
- 3. Dive Experience:
  - a. Must provide proof of a minimum of 30 logged dives.



## C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. Plan dives, including appropriate gas mixture and set point selection, together with a demonstrated ability to act as a responsible diver.
3. This program must include:
  - a. Academic Classes, Confined water session(s) and Open Water Dives.
4. Program covers all Recreational diving with Air and EANx.
  - *Note: For Recreational Mixed Gas Rebreather Diver, the program shall include recreational diving with Trimix.*
5. Students must pass the specific IANTD Diver Exam with a minimum score of 80%.
  - a. For Recreational Mixed Gas Rebreather Diver - Recreational Mixed Gas Rebreather Diver Exam
  - b. For Recreational Deep Diver Rebreather - Recreational Deep Diver Rebreather Exam
  - **NOTE:** The Diver's knowledge can be evaluated with an instructor provided quiz and/or oral evaluation if no course specific exam is available.

## D. Equipment & Text Requirements

1. For Recreational Mixed Gas Rebreather Diver
  - a. IANTD Recreational Mixed Gas Rebreather Diver Student kit.
2. For Recreational Deep Diver Rebreather
  - a. IANTD Recreational Rebreather Deep Diver Student kit.
3. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.
  - *NOTE: on all Dives the bailout volume must be sufficient to be able to ascend from the maximum depth of the dive including a safety stop.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
    - *Note: This ratio may be increased by two (2) when a Rebreather qualified Dive Supervisor is used at which time the ratio may be increased to 6 students.*
2. The Program must include:
  - a. Complete a minimum of 500 minutes in water training using the specific Rebreather on which they are being trained:
  - b. One (1) Confined Water Training Session
  - c. Six (6) Open Water Dives
  - d. One (1) dive must be conducted to a depth between 90 fsw (27 msw) and 132 fsw (40 msw).
  - e. Recreational Mixed Gas Rebreather shall use recreational trimix as diluent;
  - f. Recreational Rebreather Deep Diver shall use air or EANx as diluent.
    - *NOTE: If qualified as Recreational CCR diver, the total in-water training time is decreased to 240 minutes training in a combination of one (1) Confined Water a minimum of three (3) Open Water dives.*
    - *NOTE: If qualified as Recreational Rebreather Deep Diver, the academics for the Recreational Trimix must be completed. Two (2) skills review dives with a total in-water training time of 120 minutes in a combination of one (1) Confined Water and one (1) Open Water dive. One of the dives using Recreational Trimix as diluent must be conducted to a depth between 90 fsw (27 msw) and 132 fsw (40 msw).*
3. All dives must be completed within the IANTD oxygen CNS% limits.
4. No dives may be conducted to depths greater than 132 fsw (40 msw).
5. The set point of the rebreather must not exceed 1.3 PO<sub>2</sub> for all dives within the class.

6. Bailout and Diluent gas mixture to be used must contain a minimum PO<sub>2</sub> of 0.21 at the surface and oxygen no greater than 40%
7. Bailout gases used must not exceed 1.6 PO<sub>2</sub> at maximum depth of dive.
8. Dives with required decompression stops may not be performed in this program
9. When helium is used during the training dives, the mixture will provide an END no greater than 100 fsw (30 msw).
  - ▶ *NOTE: When helium is used, both the bailout and diluent gas must be used with an END no greater than 100 fsw (30 msw) at the maximum depth of the dive. and the helium content is not to exceed 35%.*
  - ▶ *NOTE: The instructor may use a Rebreather or Open Circuit during training sessions however it is recommended that the instructor use a rebreather at all times to better demonstrate skills and monitor the student.*

## F. Water Skills Development

1. Demonstrate Proper assembly and operation of CCR and secondary equipment.
2. Demonstrate ability to plan Recreational Trimix dives,
3. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
4. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
5. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
6. Establish proper weighting and weight placement (trim) with the rebreather.
7. Enter the water using a technique appropriate for the environment.
8. Demonstrate proper operation of mouthpiece closure mechanism.
9. Switch/Ensure a low set point/PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
10. In water leak and buddy leak check.
  - ▶ *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ▶ *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
11. At the planned dive depth or Set Point/PO<sub>2</sub> change depth, Switch/Ensure for the planned Set Point/PO<sub>2</sub>.
12. During descend and ensure gas addition is made.
13. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia;
  - e. Cell problems
  - f. Loss of diluent
  - g. Loss of oxygen
  - h. Other rebreather warnings/alarms as appropriate
  - i. At least two [2] OC ascents from approximately 60 fsw (18 msw).
14. Adjust buoyancy and trim on the bottom during ascent and at safety stops.
15. Proper operation of computer controlling and secondary equipment.
16. PO<sub>2</sub> gauge monitoring to be done no more frequently that once a minute and no less often than once every four (4) minutes.
17. Remove and replace an off board bailout cylinder while underwater.
18. Demonstrate proper habits for retaining loop integrity.
19. Demonstrate buoyancy control ability by remaining at a single depth without rising or sinking more than 1 metre/3 feet and with minimum use of fins or sculling.
20. Demonstrate correct procedure for manual addition of oxygen (where appropriate).
21. Demonstrate correct procedure for manual addition of diluent (where appropriate).
22. Demonstrate correct procedure for diluent flush (where appropriate).

23. On two (2) or more dives perform the following skills:
  - a. Remove, replace and clear mask with a rebreather while maintaining neutral buoyancy.
  - b. Manually maintain loop PO<sub>2</sub> at set point.
  - c. Deploy a SMB and reel inflate the SMB and send it up on the line
24. Safety Stop practice.
25. Perform one (1) gas sharing drill on ascent.
26. Perform a gas sharing drill on the alternate second stage while having the out of gas diver swim 40 feet (12m) horizontally to the donor without breathing.
27. On the last two (2) dives, present the following scenarios.

► *NOTE: The student write down the suspected problem.*

► **NOTE: The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.**

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative
2 cells read high but low cell checks with diluent PO <sub>2</sub>	Suspect two (2) high cells are in error
2 cells read high and check with diluent PO <sub>2</sub>	Suspect cell off is wrong

28. Two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency and respond to the emergency appropriately.
29. Once per dive perform complex (multi-part) scenarios (an example could be a Hyperoxia drill while performing an out of gas ascent).
30. Rescue of a rebreather diver.
31. Remove an offboard bailout cylinder at the surface.
32. Post dive briefing after each dive.

## RCCR or RSCR Elite Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### A. Purpose

1. This certification has been designed to provide divers with the highest recognition in the recreational rebreather level before entering the professional diving circle in teaching or in technical diving.

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified in:
    - I. For CCR:
      - i. Must be a qualified as IANTD RCCR Advanced Open Water Diver or equivalent.
      - ii. Must be a qualified as IANTD RCCR Rescue Diver or equivalent
    - II. For SCR:
      - i. Must be a qualified as IANTD RSCR Advanced Open Water Diver or equivalent.
      - ii. Must be a qualified as IANTD RSCR Rescue Diver or equivalent
    - III. Must have 5 IANTD certifications between IANTD Specialized Programs, Tek Lite Programs and Overhead & Technical Programs.
      - *NOTE: Only IANTD Specialized programs other than Diver First Aid, CPR, Oxygen Administrator or AED are valid for the application.*
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Proof of a minimum of 50 logged dives

### C. Program Content

1. N/A

### D. Equipment Requirements

1. N/A

### E. Program Limits

1. Only IANTD Specialized Programs, Tek Lite Programs and Overhead & Technical Programs are accepted for this application.

### F. Water Skills Development

1. There is no water skills required.

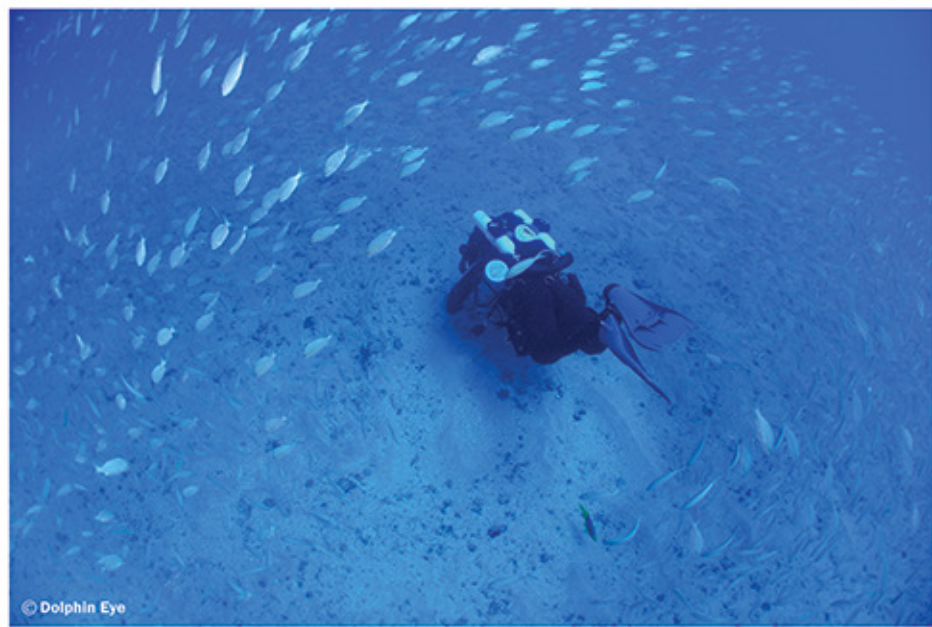
### G. Application Procedure

1. Fill & submit the Elite Diver Application Form to an IANTD Instructor, HQ or local licensee.





# IANTD TEK LITE & TEK REBREATHER DIVER PROGRAMS





**CCR Advanced EANx Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach the course?**

- CCR Advanced EANx Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

**A. Purpose**

1. This Program is designed to train Recreational divers in the safer use and technology of basic CCR diving to independently plan and conduct dives with mandatory decompression using up to a 1.2 PO<sub>2</sub> and to depths up to 132 fsw (40 msw) on the specific unit on which they received the training.
- *Note: Additional units require further unit-specific training.*

**B. Prerequisites**

1. Option 1 - Certifications requirements:
  - a. Must be qualified in IANTD Recreational CCR Diver or equivalent or higher.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Have logged 20 open water dives with at least 20 hours underwater using a rebreather.

**OR**

4. Option 2 - Certifications requirements:
  - a. Must be qualified in IANTD Deep DECO Diver or equivalent or higher.
  - b. Must be qualified in IANTD EANx Diver or equivalent.
5. Age requirement:
  - a. Must be a minimum of 18 years of age.
6. Dive experience:
  - a. Have logged 30 open water dives with at least 25 hours underwater using open circuit scuba and have logged at least five dives to a minimum depth of 100 fsw/30 msw.
7. Crossover Prerequisites & Dive Requirements
  - a. To qualify from one Closed Circuit Rebreather to another Closed Circuit Rebreather, a diver must:
  - b. Have 12 CCR dives of which one (1) must have been within 45 days of the program on the new CCR
  - c. Must complete a minimum of 200 minutes training in a combination of Confined Water and Open Water environments with at least two (2) Open Water dives.
  - d. To qualify from a Semi-Closed Circuit Rebreather to a Closed Circuit Rebreather, a diver with 20 or more SCR dives must:
  - e. Complete a minimum of 400 minutes in water training using the specific Rebreather on which they are being trained.
    - i. One (1) Confined Water Training Session
    - ii. Five (5) Open Water Dives

► *NOTE: Divers with less than 20 SCR hours must complete the entire course.*

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
 

► *IANTD recommends the use of both, Course Specific Presentation and workbook*
2. All the water skills must be practiced until the student is proficient in each skill.
3. Students must complete the text with the units on which they wish to be qualified.
4. Students must pass the specific CCR test with a minimum score of 80%.
 

► *NOTE: On CCR with the ability to upload and / or download software the student must be taught to do so.*

5. This program must include:
  - a. Academic Classes that includes the following subjects:
    - I. Rebreather basics
    - II. Function of rebreather components.
    - III. Breathing performance using a rebreather.
    - IV. Rebreather assembly and checks.
    - V. Gas supply duration.
    - VI. CO<sub>2</sub> absorbent duration.
    - VII. Rebreather pre-water entry checks.
    - VIII. Dive conduct.
    - IX. Decompression dives.
    - X. Identifying and reacting to potential issues.
    - XI. Hypercapnia, hypoxia, hyperoxia.
    - XII. Buddy system.
    - XIII. Rebreather maintenance.
    - XIV. Maintaining knowledge and skills.
  - b. Confined Water Session
    - *NOTE: In lieu of confined water the instructor may opt to do a skills development dive to a depth no greater than 40 fsw (12 msw) provided required decompressions stops are not required.*
  - c. Open Water Diving Sessions

## D. Equipment & Text Requirements

1. IANTD CCR Diver Student Kit
  - a. IANTD CCR Advanced EANx STK.
    - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. Bailout cylinder(s).
  - a. The open circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety and decompression stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
    - *NOTE: Rebreather may use long hose on bailout at the instructors discretion.*
4. Access to an appropriate gas analyser(s).
5. On all training dives the instructor and students shall use the same rebreather units.
6. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as CCR Advanced EANx Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader

2. The Program must include:
  - a. A minimum of eight (8) in-water sessions with a minimum of 480 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.
    - I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
      - i. Up to two (2) 60 min. confined water sessions may be credited toward the total number of in-water sessions.
        - a. The maximum confined water time is 120 min. that can be divided in two (2) sessions.
    - II. The course must contain a minimum of six (6) the Open Water sessions with at least 360 minutes.
      - i. If only one (1) confined water session is completed the course must include at least 7 open water dives.
  - b. Two (2) dives must be deeper than 90 fsw (27 msw).
3. Carry one (1) bailout on all dives.
  - *NOTE: Even if a BOV is used as an onboard bailout, the student must carry an off board bailout cylinder adequate to safely ascend from the maximum depth of the dive, including any decompression stop time.*
4. Perform two (2) rebreather dives requiring mandatory decompression stops for a maximum of 10 minutes.
5. No dives may be conducted to depths greater than 132 fsw (40 msw) as part of the CCR Advanced EANx course.
6. All dives must be completed within the IANTD oxygen CNS% limits.
7. On all open-water dives exceeding a depth of 33fsw/10msw where there is no planned decompression stop, a safety stop shall be made.
8. All appropriate safety or required decompression stops must be performed.
9. In addition to the bailout cylinder, ONLY one (1) decompression cylinder may be carried or used on any dive.
  - a. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
  - b. The oxygen partial pressure of the OC decompression gas may not exceed 1.6 ATA at any dive.
10. The set point of the CCR must not exceed 1.3 ATA, except for failed open solenoid drills.
11. At safety or required deco stops the set point may be increased to 1.4 ATA.
12. Check oxygen sensors are not current-limited (linearity check) if not initiated automatically by the unit.

## F. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Plan time and depth for the dive, taking into account the limitations of gas supply and scrubber endurance based on the rebreather manufacturer's specifications, the environment, no-decompression limits, oxygen exposure, previous dives and other factors that may apply.
4. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
5. Establish proper weighting and weight placement (trim) with the rebreather.
6. Enter the water using a technique appropriate for the environment.
7. Demonstrate proper operation of mouthpiece closure mechanism.
8. Ensure the PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
9. Perform bubble check and display check (All members of the team).
  - *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
10. Dive buddy monitoring and awareness throughout the dive.
11. At the planned dive depth ensure for the planned PO<sub>2</sub>.
12. During a controlled descent with a buddy to the planned depth ensure gas addition is made.

13. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia
  - e. Oxygen sensor malfunctions;
  - f. Rebreather electronic malfunctions;
  - g. Loss of diluent;
  - h. Loss of oxygen;
  - i. Loss of any other supply gas;
  - j. Flooded breathing loop;
  - k. Loss of buoyancy;
  - l. Other rebreather warnings or alarms as appropriate.
  - m. At least two [2] OC ascents from approximately 60 fsw (18 msw).
14. Perform BOOM Scenario where diver:
  - a. Suddenly sees massive bubbles
  - b. Checks and corrects OR performs safe procedure
15. Become proficient in these propulsion techniques:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks.
16. Hyperoxia due to Solenoid stuck in open position. (Reset to a high PO<sub>2</sub> set point maintain at a value less than this by valve manipulation).
  - a. Simulate manual gas control with valve shutdowns.
  - b. On one (1) dive do this for at least 10 minutes.
17. Dive the unit in full manual mode for one (1) dive.
18. Develop and demonstrate buoyancy control by:
  - a. Performing precision hovering maintaining same depth plus minus 3 fsw (1 msw) below or above for at least 90 seconds with minimum use of fins or sculling;
  - b. Adjust buoyancy and trim throughout the dive.
  - c. Performing a 30 fsw (9 msw) ascent rate maintaining buddy contact.
  - d. Demonstrate ability to manage depth changes.
19. Proper operation of computer controlling and secondary equipment.
  - a. If set-point changes are initiated automatically, confirming the set-point changes.
20. PO<sub>2</sub> monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes.
21. Demonstrate proper habits for retaining loop integrity including:
  - a. Removing water from the breathing hoses.
  - b. Maintaining optimum breathing loop volume.
22. Monitoring of the CO<sub>2</sub> absorbent duration according to the manufacturer guidelines.
23. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
24. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
25. Demonstrate correct procedure for manual addition of gas supply (where appropriate).
26. Demonstrate correct procedure for unit flush during ascent or where appropriate.
27. Deploy DSMB or Lift Bag, and repeat at least three (3) times during the Program.
28. Demonstrate ability to perform a safety stop for at least 3 min at 15 fsw (5 msw).

29. Demonstrate ability to perform simulated decompression stops at a minimum of two stop depths for a total time of at least 6 min;
30. At the surface in open water, establishing positive buoyancy with the buoyancy compensation device (BCD), then closing the rebreather mouthpiece before removal.
31. While unsupported at the surface in open water, demonstrating oral inflation of the BCD
32. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
33. Bailout scenarios:
  - a. Responding to a simulated rebreather emergency by performing a bailout ascent to the surface at a controlled rate accompanied by a buddy.
  - b. At the signal of a simulated emergency, breathe from an open-circuit bailout gas provided by a buddy and repeat as both donor and receiver.
  - c. At the signal of a simulated emergency, bailout to an open-circuit source, then return to the breathing loop after the exercise following proper procedures.
34. Practice removing and replacing a stage cylinder, both at rest and while swimming.
35. Perform gas sharing on bailout:
  - a. Switching cylinders
  - b. Via long hose (39 inch (1 meter) or longer to a maximum of 7 feet (2 meters))
36. Emphasis is to be made that once a bailout has been done the student should not go back on the unit if they are unsure of the cause of the problem or how to correct it.
37. At a depth no greater than 30 fsw (9 msw) perform a simulated rescue to the surface of a non-responsive rebreather diver.
38. Remove and replace an off board bailout cylinder while underwater.
39. Remove an offboard bailout cylinder at the surface.
40. On the last two (2) dives, present the following scenarios.

► *NOTE: The student write down the suspected problem.*

► **NOTE: The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.**

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative

41. **Optional Skill:** Remove and replace rebreather at a depth greater than 20 fsw (6 msw)
42. **Optional Skill:** Remove and replace rebreather at surface.
43. Exit the water using a technique appropriate for the environment.
44. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.
45. Post dive briefing.

## SCR Advanced EANx Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach the course?

- A SCR Advanced EANx instructor or higher may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This Program is designed to train competent divers in the safer use and technology of PSCR for dives requiring decompression.
2. It is also especially useful to train divers who wish to dive up to 132 fsw (40 msw) if using EANx.

### B. Prerequisites

1. Option 1 - Certifications requirements:
  - a. Must be qualified in IANTD Recreational CCR Diver or equivalent or higher.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Have logged 20 open water dives with at least 20 hours underwater using a rebreather.

**OR**

4. Option 2 - Certifications requirements:
    - a. Must be qualified in IANTD Deep DECO Diver or equivalent or higher.
    - b. Must be qualified in IANTD EANx Diver or equivalent.
  5. Age requirement:
    - a. Must be a minimum of 18 years of age.
  6. Dive experience:
    - a. Have logged 30 open water dives with at least 25 hours underwater using open circuit scuba and have logged at least five dives to a minimum depth of 100 fsw/30 msw.
  7. Crossover Prerequisites & Dive Requirements
    - a. To qualify from one Closed Circuit Rebreather to another Closed Circuit Rebreather, a diver must:
    - b. Have 12 CCR dives of which one (1) must have been within 45 days of the program on the new CCR
    - c. Must complete a minimum of 200 minutes training in a combination of Confined Water and Open Water environments with at least two (2) Open Water dives.
    - d. To qualify from a Semi-Closed Circuit Rebreather to a Closed Circuit Rebreather, a diver with 20 or more SCR dives must:
    - e. Complete a minimum of 400 minutes in water training using the specific Rebreather on which they are being trained.
      - i. One (1) Confined Water Training Session
      - ii. Five (5) Open Water Dives
- *NOTE: Divers with less than 20 SCR hours must complete the entire course.*

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - *IANTD recommends the use of both, Course Specific Presentation and workbook*
2. All the water skills must be practiced until the student is proficient in each skill.
3. Students must complete the text with the units on which they wish to be qualified.
4. Students must pass the specific CCR test with a minimum score of 80%.
  - *NOTE: On CCR with the ability to upload and / or down load software the student must be taught to do so.*



5. This program must include:
  - a. Academic Classes that includes the following subjects:
    - I. Rebreather basics
    - II. Function of rebreather components.
    - III. Breathing performance using a rebreather.
    - IV. Rebreather assembly and checks.
    - V. Gas supply duration.
    - VI. CO<sub>2</sub> absorbent duration.
    - VII. Rebreather pre-water entry checks.
    - VIII. Dive conduct.
    - IX. Decompression dives.
    - X. Identifying and reacting to potential issues.
    - XI. Hypercapnia, hypoxia, hyperoxia.
    - XII. Buddy system.
    - XIII. Rebreather maintenance.
    - XIV. Maintaining knowledge and skills.
  - b. Confined Water Session
    - *NOTE: In lieu of confined water the instructor may opt to do a skills development dive to a depth no greater than 40 fsw (12 msw) provided required decompressions stops are not required.*
  - c. Open Water Diving Sessions

## D. Equipment & Text Requirements

1. IANTD CCR Diver Student Kit
  - a. IANTD CCR Advanced EANx STK.
    - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. Bailout cylinder(s).
  - a. The open-circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety and decompression stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
    - *NOTE: Rebreather may use long hose on bailout at the instructors discretion.*
4. Access to an appropriate gas analyser(s).
5. On all training dives the instructor and students shall use the same rebreather units.
6. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*
  -

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as CCR Advanced EANx Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader
2. The Program must include:
  - a. A minimum of eight (8) in-water sessions with a minimum of 480 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.

- I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
  - i. Up to two (2) 60 min. confined water sessions may be credited toward the total number of in-water sessions.
    - a. The maximum confined water time is 120 min. that can be divided in two (2) sessions.
  - II. The course must contain a minimum of six (6) the Open Water sessions with at least 360 minutes.
    - i. If only one (1) confined water session is completed the course must include at least 7 open water dives.
      - b. Two (2) dives must be deeper than 90 fsw (27 msw).
3. Carry one (1) bailout on all dives.
  - *NOTE: Even if a BOV is used as an onboard bailout, the student must carry an off board bailout cylinder adequate to safely ascend from the maximum depth of the dive, including any decompression stop time.*
4. Perform two (2) rebreather dives requiring mandatory decompression stops for a maximum of 10 minutes.
5. No dives may be conducted to depths greater than 132 fsw (40 msw) as part of the CCR Advanced EANx course.
6. All dives must be completed within the IANTD oxygen CNS% limits.
7. On all open-water dives exceeding a depth of 33fsw/10msw where there is no planned decompression stop, a safety stop shall be made.
8. All appropriate safety or required decompression stops must be performed.
9. In addition to the bailout cylinder, ONLY one (1) decompression cylinder may be carried or used on any dive.
  - a. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
  - b. The oxygen partial pressure of the OC decompression gas may not exceed 1.6 ATA at any dive.
10. The oxygen partial pressure of the bottom mix may not exceed 1.4 ATA at the MOD of the dive.

## F. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Plan time and depth for the dive, taking into account the limitations of gas supply and scrubber endurance based on the rebreather manufacturer's specifications, the environment, no-decompression limits, oxygen exposure, previous dives and other factors that may apply.
4. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
5. Establish proper weighting and weight placement (trim) with the rebreather.
6. Enter the water using a technique appropriate for the environment.
7. Demonstrate proper operation of mouthpiece closure mechanism.
8. Ensure the PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
9. Perform bubble check and display check (All members of the team).
  - *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
10. Dive buddy monitoring and awareness throughout the dive.
11. At the planned dive depth ensure for the planned PO<sub>2</sub>.
12. During a controlled descent with a buddy to the planned depth ensure gas addition is made.
13. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia
  - e. Rebreather electronic malfunctions;

- f. Loss of gas supply.
  - g. Loss of any other supply gas;
  - h. Flooded breathing loop;
  - i. Loss of buoyancy;
  - j. Other rebreather warnings or alarms as appropriate.
  - k. At least two [2] OC ascents from approximately 60 fsw (18 msw).
14. Become proficient in these propulsion techniques:
    - a. Modified flutter
    - b. Modified frog
    - c. Modified dolphin
    - d. Standard shuffle kicks.
  15. Hyperoxia due to Solenoid stuck in open position.
    - a. Simulate manual gas control with valve shutdowns.
    - b. On one (1) dive do this for at least 10 minutes.
  16. Develop and demonstrate buoyancy control by:
    - a. Performing precision hovering maintaining same depth plus minus 3 fsw (1 msw) below or above for at least 90 seconds with minimum use of fins or sculling;
    - b. Adjust buoyancy and trim throughout the dive.
    - c. Performing a 30 fsw (9 msw) ascent rate maintaining buddy contact.
    - d. Demonstrate ability to manage depth changes.
  17. Proper operation of computer controlling.
  18. PO2 monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes.
  19. Demonstrate proper habits for retaining loop integrity including:
    - a. Removing water from the breathing hoses.
    - b. Maintaining optimum breathing loop volume.
  20. Monitoring of the CO2 absorbent duration according to the manufacturer guidelines.
  21. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
  22. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
  23. Demonstrate correct procedure for manual addition of gas supply (where appropriate).
  24. Demonstrate correct procedure for unit flush during ascent or where appropriate.
  25. Deploy DSMB or Lift Bag, and repeat at least three (3) times during the Program.
  26. Demonstrate ability to perform a safety stop for at least 3 min at 15 fsw (5 msw).
  27. Demonstrate ability to perform simulated decompression stops at a minimum of two stop depths for a total time of at least 6 min;
  28. At the surface in open water, establishing positive buoyancy with the buoyancy compensation device (BCD), then closing the rebreather mouthpiece before removal.
  29. While unsupported at the surface in open water, demonstrating oral inflation of the BCD
  30. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
  31. Bailout scenarios:
    - a. Responding to a simulated rebreather emergency by performing a bailout ascent to the surface at a controlled rate accompanied by a buddy.
    - b. At the signal of a simulated emergency, breathe from an open-circuit bailout gas provided by a buddy and repeat as both donor and receiver.
    - c. At the signal of a simulated emergency, bailout to an open-circuit source, then return to the breathing loop after the exercise following proper procedures.
  32. Practice removing and replacing a stage cylinder, both at rest and while swimming.
  33. Perform gas sharing on bailout:

- a. Switching cylinders
- b. Via long hose (39 inch (1 meter) or longer to a maximum of 7 feet (2 meters))
34. Emphasis is to be made that once a bailout has been done the student should not go back on the unit if they are unsure of the cause of the problem or how to correct it.
35. At a depth no greater than 30 fsw (9 msw) perform a simulated rescue to the surface of a non-responsive rebreather diver.
36. Remove and replace an off board bailout cylinder while underwater.
37. Remove an offboard bailout cylinder at the surface.
38. On the last two (2) dives, present the following scenarios.

► **NOTE:** The student write down the suspected problem.

► **NOTE:** The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative

39. **Optional Skill:** Remove and replace rebreather at a depth greater than 20 fsw (6 msw)
40. **Optional Skill:** Remove and replace rebreather at surface.
41. Exit the water using a technique appropriate for the environment.
42. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.
43. Post dive briefing.

**CCR Adv. Recreational Trimix Diver & Adv. Recreational Trimix Plus Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach the course?**

- CCR Adv. Recreational Trimix instructor or higher may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

**A. Purpose**

1. This Program is designed to train Recreational divers in the safer use of trimix mixtures and technology of basic CCR diving to independently plan and conduct dives with mandatory decompression using up to a 1.2 PO<sub>2</sub> and to depths up to 150 fsw (45 msw) on the specific unit on which they received the training.
- *Note: Additional units require further unit-specific training.*

**B. Prerequisites**

1. Option 1 - Certifications requirements:
  - a. Must be qualified in IANTD Recreational CCR Diver or equivalent or higher.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Have logged 20 open water dives with at least 20 hours underwater using a rebreather.

**OR**

4. Option 2 - Certifications requirements:
  - a. Must be qualified in IANTD Deep DECO Diver or equivalent or higher.
  - b. Must be qualified in IANTD EANx Diver or equivalent.
5. Age requirement:
  - a. Must be a minimum of 18 years of age.
6. Dive experience:
  - a. Have logged 30 open water dives with at least 25 hours underwater using open circuit scuba and have logged at least five dives to a minimum depth of 100 fsw/30 msw.
7. Crossover Prerequisites & Dive Requirements
  - a. To qualify from one Closed Circuit Rebreather to another Closed Circuit Rebreather, a diver must:
  - b. Have 12 CCR dives of which one (1) must have been within 45 days of the program on the new CCR
  - c. Must complete a minimum of 200 minutes training in a combination of Confined Water and Open Water environments with at least two (2) Open Water dives.
  - d. To qualify from a Semi-Closed Circuit Rebreather to a Closed Circuit Rebreather, a diver with 20 or more SCR dives must:
  - e. Complete a minimum of 400 minutes in water training using the specific Rebreather on which they are being trained.
    - i. One (1) Confined Water Training Session
    - ii. Five (5) Open Water Dives

► *NOTE: Divers with less than 20 SCR hours must complete the entire course.*

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
 

► *IANTD recommends the use of both, Course Specific Presentation and workbook*
2. All the water skills must be practiced until the student is proficient in each skill.
3. Students must complete the text with the units on which they wish to be qualified.
4. Students must pass the specific CCR test with a minimum score of 80%.
 

► *NOTE: On CCR with the ability to upload and / or down load software the student must be taught to do so.*

5. This program must include:
  - a. Academic Classes that includes the following subjects:
    - I. Rebreather basics
    - II. Function of rebreather components.
    - III. Breathing performance using a rebreather.
    - IV. Rebreather assembly and checks.
    - V. Gas supply duration.
    - VI. CO<sub>2</sub> absorbent duration.
    - VII. Rebreather pre-water entry checks.
    - VIII. Dive conduct.
    - IX. Decompression dives.
    - X. Identifying and reacting to potential issues.
    - XI. Hypercapnia, hypoxia, hyperoxia.
    - XII. Buddy system.
    - XIII. Rebreather maintenance.
    - XIV. Maintaining knowledge and skills.
  - b. Confined Water Session
    - *NOTE: In lieu of confined water the instructor may opt to do a skills development dive to a depth no greater than 40 fsw (12 msw) provided required decompressions stops are not required.*
  - c. Open Water Diving Sessions

## D. Equipment & Text Requirements

1. IANTD CCR Diver Student Kit
  - a. IANTD CCR Advanced EANx STK.
    - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. Bailout cylinder(s).
  - a. The open-circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety and decompression stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
    - *NOTE: Rebreather may use long hose on bailout at the instructors discretion.*
4. Access to an appropriate gas analyser(s).
5. On all training dives the instructor and students shall use the same rebreather units.
6. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as CCR Advanced EANx Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader



2. The Program must include:
  - a. A minimum of eight (8) in-water sessions with a minimum of 480 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.
    - I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
      - i. Up to two (2) 60 min. confined water sessions may be credited toward the total number of in-water sessions.
        - a. The maximum confined water time is 120 min. that can be divided in two (2) sessions.
    - II. The course must contain a minimum of six (6) the Open Water sessions with at least 360 minutes.
      - i. If only one (1) confined water session is completed the course must include at least 7 open water dives.
  - b. Two (2) dives must be deeper than 114 fsw (35 msw).
3. Carry one (1) bailout on all dives.
  - *NOTE: Even if a BOV is used as an onboard bailout, the student must carry an off board bailout cylinder adequate to safely ascend from the maximum depth of the dive, including any decompression stop time.*
4. Perform two (2) rebreather dives requiring mandatory decompression stops for a maximum of 10 minutes.
5. No dives may be conducted to depths greater than 150 fsw (45 msw) as part of the CCR Advanced Recreational Trimix course.
6. A trimix breathing mixture using a trimix supply gas with a minimum of 20 % oxygen and a maximum of 35 % helium.
7. Both the bailout and diluent gas must be used with an END no greater than 100 fsw (30 msw) at the maximum depth of the dive. and the helium content is not to exceed 35%.
8. The density of the breathing gas should not be greater than 6,3 g/l.
  - *The ideal density is less than 5,2 g/l in the loop.*
9. All dives must be completed within the IANTD oxygen CNS% limits.
10. On all open-water dives exceeding a depth of 33fsw/10msw where there is no planned decompression stop, a safety stop shall be made.
11. All appropriate safety or required decompression stops must be performed.
12. In addition to the bailout cylinder, ONLY one (1) decompression cylinder may be carried or used on any dive.
  - a. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
  - b. The oxygen partial pressure of the OC decompression gas may not exceed 1.6 ATA at any dive.
13. The set point of the CCR must not exceed 1.3 ATA, except for failed open solenoid drills.
14. At safety or required deco stops the set point may be increased to 1.4 ATA.
15. Check oxygen sensors are not current-limited (linearity check) if not initiated automatically by the unit.

## F. Extra Limits For CCR Advanced Recreational Trimix Plus

1. For CCR Advanced Recreational Trimix Plus Diver Program, no dives may be conducted to depths greater than 170 fsw (51 msw)
2. Two (2) extra dives with a total run time of 60 minutes.
  - a. At least 1 dive must be between 132 fsw (40 msw) and 150 fsw (45 msw)
  - b. At least 1 dive must be between 140 fsw (42 msw) and 170 fsw (51 msw)
3. CCR Advanced Recreational Trimix to CCR Advanced Recreational Trimix Plus crossover:
  - a. Follow item F. 2. requirements.

## G. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Plan time and depth for the dive, taking into account the limitations of gas supply and scrubber endurance based on the rebreather manufacturer's specifications, the environment, no-decompression limits, oxygen exposure, previous dives and other factors that may apply.
4. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
5. Establish proper weighting and weight placement (trim) with the rebreather.
6. Enter the water using a technique appropriate for the environment.
7. Demonstrate proper operation of mouthpiece closure mechanism.
8. Ensure the PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
9. Perform bubble check and display check (All members of the team).
  - ▶ *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ▶ *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
10. Dive buddy monitoring and awareness throughout the dive.
11. At the planned dive depth ensure for the planned PO<sub>2</sub>.
12. During a controlled descent with a buddy to the planned depth ensure gas addition is made.
13. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia
  - e. Oxygen sensor malfunctions;
  - f. Rebreather electronic malfunctions;
  - g. Loss of diluent;
  - h. Loss of oxygen;
  - i. Loss of any other supply gas;
  - j. Flooded breathing loop;
  - k. Loss of buoyancy;
  - l. Other rebreather warnings or alarms as appropriate.
  - m. At least two [2] OC ascents from approximately 60 fsw (18 msw).
14. Perform BOOM Scenario where diver:
  - a. Suddenly sees massive bubbles
  - b. Checks and corrects OR performs safe procedure
15. Become proficient in these propulsion techniques:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks.
16. Hyperoxia due to Solenoid stuck in open position. (Reset to a high PO<sub>2</sub> set point maintain at a value less than this by valve manipulation).
  - a. Simulate manual gas control with valve shutdowns.
  - b. On one (1) dive do this for at least 10 minutes.
17. Dive the unit in full manual mode for one (1) dive.

18. Develop and demonstrate buoyancy control by:
  - a. Performing precision hovering maintaining same depth plus minus 3 fsw (1 msw) below or above for at least 90 seconds with minimum use of fins or sculling;
  - b. Adjust buoyancy and trim throughout the dive.
  - c. Performing a 30 fsw (9 msw) ascent rate maintaining buddy contact.
  - d. Demonstrate ability to manage depth changes.
19. Proper operation of computer controlling and secondary equipment.
  - a. If set-point changes are initiated automatically, confirming the set-point changes.
20. PO<sub>2</sub> monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes.
21. Demonstrate proper habits for retaining loop integrity including:
  - a. Removing water from the breathing hoses.
  - b. Maintaining optimum breathing loop volume.
22. Monitoring of the CO<sub>2</sub> absorbent duration according to the manufacturer guidelines.
23. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
24. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
25. Demonstrate correct procedure for manual addition of gas supply (where appropriate).
26. Demonstrate correct procedure for unit flush during ascent or where appropriate.
27. Deploy DSMB or Lift Bag, and repeat at least three (3) times during the Program.
28. Demonstrate ability to perform a safety stop for at least 3 min at 15 fsw (5 msw).
29. Demonstrate ability to perform simulated decompression stops at a minimum of two stop depths for a total time of at least 6 min;
30. At the surface in open water, establishing positive buoyancy with the buoyancy compensation device (BCD), then closing the rebreather mouthpiece before removal.
31. While unsupported at the surface in open water, demonstrating oral inflation of the BCD
32. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
33. Bailout scenarios:
  - a. Responding to a simulated rebreather emergency by performing a bailout ascent to the surface at a controlled rate accompanied by a buddy.
  - b. At the signal of a simulated emergency, breathe from an open-circuit bailout gas provided by a buddy and repeat as both donor and receiver.
  - c. At the signal of a simulated emergency, bailout to an open-circuit source, then return to the breathing loop after the exercise following proper procedures.
34. Practice removing and replacing a stage cylinder, both at rest and while swimming.
35. Perform gas sharing on bailout:
  - a. Switching cylinders
  - b. Via long hose (39 inch (1 meter) or longer to a maximum of 7 feet (2 meters))
36. Emphasis is to be made that once a bailout has been done the student should not go back on the unit if they are unsure of the cause of the problem or how to correct it.
37. At a depth no greater than 30 fsw (9 msw) perform a simulated rescue to the surface of a non-responsive rebreather diver.
38. Remove and replace an off board bailout cylinder while underwater.
39. Remove an offboard bailout cylinder at the surface.

40. On the last two (2) dives, present the following scenarios.

► **NOTE:** The student write down the suspected problem.

► **NOTE:** The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative

41. **Optional Skill:** Remove and replace rebreather at a depth greater than 20 fsw (6 msw)

42. **Optional Skill:** Remove and replace rebreather at surface.

43. Exit the water using a technique appropriate for the environment.

44. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.

45. Post dive briefing.

**SCR Adv. Recreational Trimix Diver & Adv. Recreational Trimix Plus Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach the course?**

- A SCR Adv. Recreational Trimix instructor may teach the course provided they are an instructor on the specific Rebreather being taught in the course.

**A. Purpose**

1. This Program is designed to train competent divers in the safer use and technology of PSCR for dives requiring decompression.
2. It is also especially useful to train divers who wish to dive up to 150 fsw (45 msw) as part of the Advanced Recreational Trimix course in which case the END will not exceed 100 fsw (30 msw) when using Trimix.

**B. Prerequisites**

1. Option 1 - Certifications requirements:
  - a. Must be qualified in IANTD Recreational CCR Diver or equivalent or higher.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Have logged 20 open water dives with at least 20 hours underwater using a rebreather.

**OR**

4. Option 2 - Certifications requirements:
  - a. Must be qualified in IANTD Deep DECO Diver or equivalent or higher.
  - b. Must be qualified in IANTD EANx Diver or equivalent.
5. Age requirement:
  - a. Must be a minimum of 18 years of age.
6. Dive experience:
  - a. Have logged 30 open water dives with at least 25 hours underwater using open circuit scuba and have logged at least five dives to a minimum depth of 100 fsw/30 msw.
7. Crossover Prerequisites & Dive Requirements
  - a. To qualify from one Closed Circuit Rebreather to another Closed Circuit Rebreather, a diver must:
  - b. Have 12 CCR dives of which one (1) must have been within 45 days of the program on the new CCR
  - c. Must complete a minimum of 200 minutes training in a combination of Confined Water and Open Water environments with at least two (2) Open Water dives.
  - d. To qualify from a Semi-Closed Circuit Rebreather to a Closed Circuit Rebreather, a diver with 20 or more SCR dives must:
  - e. Complete a minimum of 400 minutes in water training using the specific Rebreather on which they are being trained.
    - i. One (1) Confined Water Training Session
    - ii. Five (5) Open Water Dives

► *NOTE: Divers with less than 20 SCR hours must complete the entire course.*

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
 

► *IANTD recommends the use of both, Course Specific Presentation and workbook*
2. All the water skills must be practiced until the student is proficient in each skill.
3. Students must complete the text with the units on which they wish to be qualified.
4. Students must pass the specific CCR test with a minimum score of 80%.
 

► *NOTE: On CCR with the ability to upload and / or download software the student must be taught to do so.*

5. This program must include:
  - a. Academic Classes that includes the following subjects:
    - I. Rebreather basics
    - II. Function of rebreather components.
    - III. Breathing performance using a rebreather.
    - IV. Rebreather assembly and checks.
    - V. Gas supply duration.
    - VI. CO<sub>2</sub> absorbent duration.
    - VII. Rebreather pre-water entry checks.
    - VIII. Dive conduct.
    - IX. Decompression dives.
    - X. Identifying and reacting to potential issues.
    - XI. Hypercapnia, hypoxia, hyperoxia.
    - XII. Buddy system.
    - XIII. Rebreather maintenance.
    - XIV. Maintaining knowledge and skills.
  - b. Confined Water Session
    - *NOTE: In lieu of confined water the instructor may opt to do a skills development dive to a depth no greater than 40 fsw (12 msw) provided required decompressions stops are not required.*
  - c. Open Water Diving Sessions

## D. Equipment & Text Requirements

1. IANTD CCR Diver Student Kit
  - a. IANTD CCR Advanced EANx STK.
    - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
2. The manufacturer's user manual (including updates) specific for the rebreather type, rebreather unit and rebreather model of the rebreather and associated electronics being used during training.
3. Bailout cylinder(s).
  - a. The open-circuit bailout system which is suitable for a safe return to the surface from the planned maximum depth, including all safety and decompression stops in the event of an emergency.
  - b. The gas required for bailout shall be calculated with a minimum respiratory minute volume (RMV) of 1.8 cu.ft./min. (50 l/min).
    - *NOTE: Rebreather may use long hose on bailout at the instructors discretion.*
4. Access to an appropriate gas analyser(s).
5. On all training dives the instructor and students shall use the same rebreather units.
6. Instructors and students shall have a system of logging all the training dives with the following minimum information: depth, dive time, date of dive and gases used.
  - *If applicable, a manufacturer's record of training to be completed by the instructor and the student.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor. This ratio may be increased by one (1) when:
    - i. One (1) of the students is already a qualified as CCR Advanced EANx Diver making a crossover from another rebreather type or rebreather unit or a refresher; or
    - ii. The instructor is accompanied by a qualified rebreather dive leader.



2. The Program must include:
  - a. A minimum of eight (8) in-water sessions with a minimum of 480 minutes training in a combination of Confined Water and Open Water environments using the specific Rebreather on which they are being trained.
    - I. Students shall complete a minimum of one (1) confined water session of at least 60 min.
      - i. Up to two (2) 60 min. confined water sessions may be credited toward the total number of in-water sessions.
        - a. The maximum confined water time is 120 min. that can be divided in two (2) sessions.
    - II. The course must contain a minimum of six (6) the Open Water sessions with at least 360 minutes.
      - i. If only one (1) confined water session is completed the course must include at least 7 open water dives.
  - b. Two (2) dives must be deeper than 90 fsw (27 msw).
3. Carry one (1) bailout on all dives.
  - *NOTE: Even if a BOV is used as an onboard bailout, the student must carry an off board bailout cylinder adequate to safely ascend from the maximum depth of the dive, including any decompression stop time.*
4. Perform two (2) rebreather dives requiring mandatory decompression stops for a maximum of 10 minutes.
5. No dives may be conducted to depths greater than 150 fsw (45 msw) as part of the SCR Advanced Recreational Trimix course.
6. A trimix breathing mixture using a trimix supply gas with a minimum of 20 % oxygen and a maximum of 35 % helium.
7. Both the bailout and diluent gas must be used with an END no greater than 100 fsw (30 msw) at the maximum depth of the dive. and the helium content is not to exceed 35%.
8. The density of the breathing gas should not be greater than 6,3 g/l.
  - *The ideal density is less than 5,2 g/l in the loop.*
9. All dives must be completed within the IANTD oxygen CNS% limits.
10. On all open-water dives exceeding a depth of 33fsw/10msw where there is no planned decompression stop, a safety stop shall be made.
11. All appropriate safety or required decompression stops must be performed.
12. In addition to the bailout cylinder, ONLY one (1) decompression cylinder may be carried or used on any dive.
  - a. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
  - b. The oxygen partial pressure of the OC decompression gas may not exceed 1.6 ATA at any dive.
13. The oxygen partial pressure of the bottom mix may not exceed 1.4 ATA at the MOD of the dive.

## F. Extra Limits For SCR Advanced Recreational Trimix Plus

1. For SCR Advanced Recreational Trimix Plus Diver Program, no dives may be conducted to depths greater than 170 fsw (51 msw)
2. Two (2) extra dives with a total run time of 60 minutes.
  - a. At least 1 dive must be between 132 fsw (40 msw) and 150 fsw (45 msw)
  - b. At least 1 dive must be between 140 fsw (42 msw) and 170 fsw (51 msw)
3. SCR Advanced Recreational Trimix to SCR Advanced Recreational Trimix Plus crossover:
  - a. Follow item F. 2. requirements.

## G. Water Skills Development

1. Assemble the rebreather in accordance with manufacturer guidelines, using a checklist (manual or digital).
2. Perform a complete rebreather pre-dive checks in accordance with manufacturer recommendations, using a checklist (manual or digital) including a pre-breathe.
3. Plan time and depth for the dive, taking into account the limitations of gas supply and scrubber endurance based on the rebreather manufacturer's specifications, the environment, no-decompression limits, oxygen exposure, previous dives and other factors that may apply.
4. Don and adjust the rebreather for proper fit, including breathing hose, mouthpiece and counterlung placement.
5. Establish proper weighting and weight placement (trim) with the rebreather.

6. Enter the water using a technique appropriate for the environment.
7. Demonstrate proper operation of mouthpiece closure mechanism.
8. Ensure the PO<sub>2</sub> is adequate for the descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
9. Perform bubble check and display check (All members of the team).
  - ▶ *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ▶ *NOTE: Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
10. Dive buddy monitoring and awareness throughout the dive.
11. At the planned dive depth ensure for the planned PO<sub>2</sub>.
12. During a controlled descent with a buddy to the planned depth ensure gas addition is made.
13. Open Circuit bailout practice for:
  - a. Hyperoxia;
  - b. Hypoxia;
  - c. Flooded loop;
  - d. Hypercapnia
  - e. Rebreather electronic malfunctions;
  - f. Loss of gas supply.
  - g. Loss of any other supply gas;
  - h. Flooded breathing loop;
  - i. Loss of buoyancy;
  - j. Other rebreather warnings or alarms as appropriate.
  - k. At least two [2] OC ascents from approximately 60 fsw (18 msw).
14. Become proficient in these propulsion techniques:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks.
15. Hyperoxia due to Solenoid stuck in open position.
  - a. Simulate manual gas control with valve shutdowns.
  - b. On one (1) dive do this for at least 10 minutes.
16. Develop and demonstrate buoyancy control by:
  - a. Performing precision hovering maintaining same depth plus minus 3 fsw (1 msw) below or above for at least 90 seconds with minimum use of fins or sculling;
  - b. Adjust buoyancy and trim throughout the dive.
  - c. Performing a 30 fsw (9 msw) ascent rate maintaining buddy contact.
  - d. Demonstrate ability to manage depth changes.
17. Proper operation of computer controlling.
18. PO<sub>2</sub> monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes.
19. Demonstrate proper habits for retaining loop integrity including:
  - a. Removing water from the breathing hoses.
  - b. Maintaining optimum breathing loop volume.
20. Monitoring of the CO<sub>2</sub> absorbent duration according to the manufacturer guidelines.
21. Demonstrate clearing mask with a rebreather while maintaining neutral buoyancy.
22. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
23. Demonstrate correct procedure for manual addition of gas supply (where appropriate).
24. Demonstrate correct procedure for unit flush during ascent or where appropriate.

25. Deploy DSMB or Lift Bag, and repeat at least three (3) times during the Program.
26. Demonstrate ability to perform a safety stop for at least 3 min at 15 fsw (5 msw).
27. Demonstrate ability to perform simulated decompression stops at a minimum of two stop depths for a total time of at least 6 min;
28. At the surface in open water, establishing positive buoyancy with the buoyancy compensation device (BCD), then closing the rebreather mouthpiece before removal.
29. While unsupported at the surface in open water, demonstrating oral inflation of the BCD
30. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
31. Bailout scenarios:
  - a. Responding to a simulated rebreather emergency by performing a bailout ascent to the surface at a controlled rate accompanied by a buddy.
  - b. At the signal of a simulated emergency, breathe from an open-circuit bailout gas provided by a buddy and repeat as both donor and receiver.
  - c. At the signal of a simulated emergency, bailout to an open-circuit source, then return to the breathing loop after the exercise following proper procedures.
32. Practice removing and replacing a stage cylinder, both at rest and while swimming.
33. Perform gas sharing on bailout:
  - a. Switching cylinders
  - b. Via long hose (39 inch (1 meter) or longer to a maximum of 7 feet (2 meters))
34. Emphasis is to be made that once a bailout has been done the student should not go back on the unit if they are unsure of the cause of the problem or how to correct it.
35. At a depth no greater than 30 fsw (9 msw) perform a simulated rescue to the surface of a non-responsive rebreather diver.
36. Remove and replace an off board bailout cylinder while underwater.
37. Remove an offboard bailout cylinder at the surface.
38. On the last two (2) dives, present the following scenarios.

► *NOTE: The student write down the suspected problem.*

► ***NOTE: The intension of this scenarios are to make the diver think, but the instructor shall emphasizes that at this level, bailout is mandatory for all the scenarios below.***

Inhalation counterlung inflating rapidly	Suspect second stage free flow
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (cannot hear bellows)	Suspect inner bellows not working/ upper CL valve Inoperative

39. **Optional Skill:** Remove and replace rebreather at a depth greater than 20 fsw (6 msw)
40. **Optional Skill:** Remove and replace rebreather at surface.
41. Exit the water using a technique appropriate for the environment.
42. Demonstrate post-dive care and disassembly of the rebreather, in accordance with the manufacturer's guidelines.
43. Post dive briefing.

## Dual CCR Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26)**

### Who may teach the course?

► A Dual CCR Instructor or higher may teach the course provided they are an instructor on all the specific Rebreather units used by the students during the course.

### A. Purpose

1. This program is designed to train competent divers in the safer use and technology of two (2) or more CCRs as bailout or redundant rebreather systems for dives requiring decompression.

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified in IANTD CCR Advanced EANx Diver or equivalent on every rebreather and configuration used during the program.
    - NOTE: If the student is using rebreather units from the same manufacturer, but with a different configuration (backmount/chestmount/sidemount), the student will need to have specific certifications for each configuration used.
  - b. The initial training on any rebreather unit used during this program CANNOT be combined with the Dual CCR Program.
2. Age requirement:
  - a. Must be a minimum of 21 years of age.
3. Dive experience:
  - a. Must provide proof of a minimum of 75 logged rebreather dives and 75 hours on EACH specific rebreather unit AND model used during this course.
    - NOTE: If the student uses two (2) or more rebreathers from the same manufacturer, but in a different configuration (backmount/chestmount/sidemount) OR different model (eCCR/mCCR/hCCR), the student will still need a minimum of 75 logged rebreather dives and 75 hours on EACH different configuration and/or model separately.

### C. Program Content

1. Academics
  - a. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
    - IANTD recommends the use of both, Course Specific Presentation and workbook.
  - b. Complete a written exam specific to Dual CCR Diving with a minimum score of 80%.
2. Confined Water Session(s).
3. Open Water Dive Sessions.

### D. Equipment & Text Requirements

1. IANTD Dual CCR Diver Student Kit
  - a. Fulfill all Equipment Requirements for each rebreather unit separately as specified in the IANTD Rebreather Diver Programs - General Standards
    - NOTE: Secondary rebreather units with mass flow must be equipped with an O2 shutoff.
2. Open Circuit Bailout cylinder(s).
  - NOTE: Each diver needs to carry a personal OC bailout capacity (Hypercapnia hit and/or sanity breaths at depth) – minimum 5 minutes at maximum depth.
  - NOTE: Long hose may be used on bailout cylinders at the instructor's discretion.
  - NOTE: When using hypoxic OC bailout mixes, it is strongly recommended to carry as well an OC bailout deco mix/high oxygen mix for shallow water sanity breath use.
3. All gas connections of the rebreathers must be compatible between all units used.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor.
    - NOTE: This ratio may be increased by one (1) with an assisting IANTD Dual CCR Supervisor, up to a maximum of three (3) students.
2. The Program must include:
  - a. Complete a minimum of 400 minutes in water training
    - NOTE: All dives and dive time MUST be performed using at least one (1) specific primary Rebreather unit and one (1) secondary rebreather unit during the whole dive. It is not allowed to share secondary CCR units between students and/or instructors/supervisors.
  - b. Complete a minimum of 120 minutes of confined water training to a maximum depth of 40 fsw (12 msw).
  - c. Six (6) Open Water Dives
    - NOTE: In any case, it is not allowed to perform mandatory decompression stops during the two (2) first open water training dives.
      - I. Four (4) dives must be deeper than 50 fsw (15 msw)
      - II. Two (2) dives must be deeper than 100 fsw (30 msw)
3. Carry additional OC bailout on all dives
  - NOTE: If a BOV is used as an onboard bailout, it is required to add a regulator to share gas with other divers. Long hose may be used on OC bailout gas at the instructor's discretion.
4. No dives may be conducted to depths greater than the depth for which the students are qualified on each specific rebreather unit.
  - **NOTE: CCR Normoxic, CCR Trimix or CCR Expedition Trimix courses CANNOT be combined with this program.**
5. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
6. All dives must be completed within the IANTD oxygen CNS% limits.
7. No dives will be planned or intentionally executed to depths greater than 132 fsw (40 msw) during the Dual CCR Diver Program.
8. Diluent mixes in primary and secondary rebreathers must be the same.
9. All appropriate safety or required decompression stops must be performed.
10. The set point of the CCRs must not exceed 1.3 ATA, except for failed open solenoid drills.
11. At safety or required deco stops the set point may be increased to 1.4 ATA.
12. At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.
13. Each day shall be started with a new scrubber material, in both the primary and secondary CCRs.

## F. Water Skills Development

1. A review and demonstration of the CCR Diver skills on all units must be performed while diving with primary and secondary CCRs together.
2. Pre-dive checks including Pre-dive Breathe on all units.
3. Dual CCR S-DRILL for primary and secondary rebreathers.
  - a. In-water leak and buddy leak check on all units.
    - If conditions prohibit this after entry this then immediately upon arrival at a stable depth.
    - Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.
  - b. Breathe from primary CCR, check both PO<sub>2</sub> and Diluent MAV . Establish breathable loop.
  - c. Switch to OC Bailout system for sanity breaths.
  - d. Breathe from secondary CCR, check both PO<sub>2</sub> and Diluent MAV . Establish breathable loop..
  - e. Switch back to primary CCR.
  - f. Put secondary CCRs in stand-by mode. Confirm that ADVs are OPEN. and the OPV setting is done.
4. Practice of keeping secondary rebreather unit inactive during the different phases of the dive (however while maintaining integrity) while breathing from active primary rebreather unit.



5. Switch/Ensure a low set point/PO2 is adequate for the descent and monitor the PO2 to ensure it remains within the planned PO2 range on active primary CCR unit.
6. Ensure diluent gas addition is made to maintain volume of the unit during descent, and avoid flooding of the unit.
7. At the planned dive depth or Set Point/PO2 change depth, Switch/Ensure for the planned Set Point/PO2 on active primary CCR unit.
8. Descend and ensure gas addition is made on all units.
9. Check-breathe secondary units while ensuring breathable PO2 at arrival at depth and at dive waypoints.
10. At every switch between rebreather units, perform a diluent flush on the unit switched to.
11. Perform at least two (2) complete exit/ascent dive while using the secondary rebreather unit as primary unit.
12. Perform at least two (2) CCR bailout ascents while using a secondary rebreather unit, while simulating hypercapnia and using OC sanity breaths at depth before switching to the secondary rebreather.
13. Practical use of dive computers and how to keep track of decompression obligations when switching between CCR units.
14. In confined water, perform at least two (2) back-and-forth switches between each of the rebreather units.
15. In confined water, perform a blindfolded operation of each rebreather unit (reaching and operation of all MAVs, ADVs, OPVs, flow stops, gas valves, handsets and computers). Ensure that the student is not mixing up controls of the different units.
  - ▶ Student needs to be able to see HUD at all times to ensure a breathable loop.
16. Use of OC sanity breaths for management of hypercapnia.
17. PO2 gauge monitoring to be done no more frequently than once a minute and no less often than once every four (4) minutes on active primary CCR unit.
18. Simulate free flows into counterlung and solenoid failures on primary and secondary rebreathers.
19. Buoyancy and trim on the bottom during ascent and at safety or required stops.
20. Optimum Loop Volume.
21. Emphasis is to be made that once a bailout onto a secondary CCR has been done, the student should not go back on the primary unit if they are unsure of the cause of the problem or how to correct it.
22. Simulate manual gas control with valve shutdowns on all units.
23. Deploy DSMB or Lift Bag, and repeat at least two (2) times during the Program.
24. **Confined Water Skill:** Remove and replace secondary CCR under water.
25. **Confined Water Skill:** Breathe from a removed and hand-held secondary CCR under water.
  - ▶ NOTE: It is recommended to do this in all positions (unit below/above/in front/beside the diver) to note changes in breathing comfort.
26. **Confined Water Skill:** Remove and replace secondary CCR at surface.
27. **Confined Water Skill:** Remove water from the secondary CCR unit.
28. Emergency scenarios:
  - a. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
    - ▶ NOTE: The student is to perform appropriate actions and write down the suspected problem.
    - ▶ NOTE: At least once per dive perform complex (multi-part) scenarios such as Hypoxia or Hyperoxia Drill.
29. Post dive debriefing.

**RCCR or RSCR Essentials Diver**

- ▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**
- ▶ **IN ORDER TO PROPERLY DEMONSTRATE THE ESSENTIAL SKILLS, THE INSTRUCTOR SHALL USE THE SAME EQUIPMENT SYSTEM AS THE STUDENT - OPEN CIRCUIT, REBREATHING, OR SIDEMOUNT.**

**Who may teach this course?**

- ▶ For CCR: A Recreational CCR Essentials Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- ▶ For SCR: A Recreational SCR Essentials Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

**A. Purpose**

1. This mid-level Specialty Continuing Education Diver Program is designed to enable the certified diver to extend proficiency in the water and to review and put in practice the Essentials learned in any IANTD diver classes.
  2. This systematic learning and professional training is designed to enhance the student's personal and team underwater skills;
  3. Development of buoyancy, trim, balance and propulsion
  4. Refine and expand fundamental diving skills
  5. Equipment Streamlining and configuration
  6. Diving safety, situational awareness and accident prevention
  7. Enhanced Dive planning and gas management
  8. Decompression overview and minimum decompression procedures
  9. This program is designed for divers who wish to increase their skill competency by further developing their diving skills to be safer, more comfortable and more efficient in the water while expanding the divers basic diving skills to take more advanced recreational and/or technical diving programs.
- ▶ *NOTE: This course does not provide a deeper diving qualification to the diver*

**B. Prerequisites**

1. Certification requirements:
  - a. For CCR: Must be a qualified as IANTD Recreational CCR Diver or equivalent.
  - b. For SCR: Must be a qualified as IANTD Recreational SCR Diver or equivalent.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Land Drills:
    - I. Line deployment.
    - II. Practice of Rebreather diving equipment configuration, including redundancy, and streamlining.
  - c. Confined water session(s).
  - d. Open Water Dives (Optional)

4. Students must pass the specific IANTD Specific test with a minimum score of 80%.
  - **NOTE:** Cylinders must be labeled with IANTD stickers or other stickers such as may be required by local laws and regulations. At a minimum, the labels must clearly identify the MOD and oxygen content of the mixture. It is recommended that IANTD labels be used to meet this requirement, in addition to those required by law.

## D. Equipment & Text Requirements

1. IANTD Essentials Diver Student Kit
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
2. Equipment System: In order to properly demonstrate the Essentials skills, the instructor shall use the same equipment system as the student - Rebreather
  - I. In addition, it is recommended:
  - II. Rebreather may use long hose on bailout at the instructors discretion.
  - III. DSMB or Lift Bag
  - IV. Reel/Spool with at least 100 ft (30 m) guideline.
  - V. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
    - *NOTE: This ratio may be increased by two (2) for each assisting IANTD Rebreather Supervisor, up to a maximum of 6 students with one (1) IANTD Rebreather Supervisor per class session.*
2. The Program must include:
  - a. A minimum of 120 minutes of dive time developing water skills.
  - b. The program must include one (1) confined water session.
    - *NOTE: This program may be taught completely in confined water.*
    - *NOTE: It is recommended that following the confined water session, up to four (4) openwater dives be completed as part of the course.*
3. No dives may be conducted to depths greater than diver deepest certification level.
4. Appropriate safety decompression stops must be performed.

## F. Water Skills Development

1. Be aware of your buddy's position in the water and in relation to the team to ensure effective communication during the entire dive;
2. Reflect safety awareness in diving preparation, underwater activity, after diving activity.
3. Teamwork.

### Surface Skills:

- *NOTE: Surface skills must be practice on all Essentials Levels.*
4. Practice any time during the day, the following exercises described on the Essentials Manual:
    - a. O1 - Visualization of the Internal Organs;
    - b. C1 - Count Up to 21;
    - c. B1 - 31 Breathing Cycles.
    - *NOTE: Before the end of the class the above practices must be mastered.*
  5. Visualization of the activity.
  6. Warm-up/Stretching.
  7. Rebreather diving equipment configuration adjustments (streamlined for safety).
  8. Proper diving plan, gas management, gas analyzing and correct cylinder labeling.
  9. Check list.

10. At the surface:
  - a. Valves opening and closing;
  - b. Out of air long hose deployment.
  - c. Fin Kick
11. Concentration, relaxation, elimination of CO<sub>2</sub>, depending on the water temperature, immerse the face at the surface or use cold water in the mask to practice/simulate Bradycardia breathing

**In-Water Skills.**

- ▶ *NOTE: During the whole dive, show good communication with buddy ( hand signal, body touch, light signal)*
  - ▶ *NOTE: During ALL skills practice, the diver shall maintain neutral buoyancy, proper trim and body posture.*
12. Do the safety check at a constant depth with a change less than 3 ft (1 m) up or down:
    - a. Check Bailout
    - b. Recheck all gas gauges & valves
    - c. Recheck manual addition valves
    - d. BCD working
    - e. Check ADV, if applicable
    - f. Bubble Check
    - g. Check handset(s) & HUD
    - h. Confirm Safe PO<sub>2</sub>
  13. Trim, buoyancy control and breathing techniques.
    - a. Configure proper weight;
    - b. Demonstrate proper trim and body posture through out the dive while under water;
    - c. Breathing techniques for the efficient removal of CO<sub>2</sub> and gas management;
    - d. Keep proper distance and position in the team to ensure effective communication.
  14. Propulsion techniques:
    - a. Frog Kick, Modified frog kick, Flutter kick, Modified flutter kick
    - b. Backward kick for at least 15 feet (4.5 m), Helicopter kick
    - c. Shuffle kick.
  15. Swim 20 minutes breathing from the bailout cylinder: two (2) different swimming techniques and calculation of air consumption.
  16. While swimming: maintain neutral buoyancy and demonstrate opening and closing valves.
  17. Swim without mask for 5 minutes.
  18. Out of air exercise
    - a. With bailout regulator in mouth
    - b. Student determines their limit
    - c. Reaches for buddy's bailout regulator
    - d. Swims along a reference point such as a line or a pool wall.
  19. Complete a line circuit, by following a continuous line without mask
  20. Complete an out of air line circuit without a mask, by following a continuous line (student determines his limit).
  21. Reel practice.
    - a. Deploy a DSMB or Lift Bag at a constant depth with a depth change of less than 3 ft (1 m) up or down.
    - b. Practice any other reel practice assigned by the IANTD Instructor.
      - ▶ *For Cavern and Wreck Divers - Practice running the reel and line awareness.*
      - ▶ Divers perform all skills on the rebreather and bailouts to their personal bailout cylinders.
      - ▶ Practice all Recreational Rebreather skills while swimming with minimum of change in posture and buoyancy.

## CCR or SCR Tek Lite Essentials Diver

- ▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**
- ▶ **IN ORDER TO PROPERLY DEMONSTRATE THE ESSENTIAL SKILLS, THE INSTRUCTOR SHALL USE THE SAME EQUIPMENT SYSTEM AS THE STUDENT - OPEN CIRCUIT, REBREATHING, OR SIDEMOUNT.**

### Who may teach this course?

- ▶ For CCR: A CCR Tek Lite Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- ▶ For SCR: A CCR Tek Lite Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

### A. Purpose

1. This mid-level Specialty Continuing Education Diver Program is designed to enable the certified diver to extend proficiency in the water and to review and put in practice the Essentials learned in any IANTD diver classes.
  2. This systematic learning and professional training is designed to enhance the student's personal and team underwater skills;
  3. Development of buoyancy, trim, balance and propulsion
  4. Refine and expand fundamental diving skills
  5. Equipment Streamlining and configuration
  6. Diving safety, situational awareness and accident prevention
  7. Enhanced Dive planning and gas management
  8. Decompression overview and minimum decompression procedures
  9. This program is designed for divers who wish to increase their skill competency by further developing their diving skills to be safer, more comfortable and more efficient in the water while expanding the divers basic diving skills to take more advanced recreational and/or technical diving programs.
- ▶ *NOTE: This course does not provide a deeper diving qualification to the diver*

### B. Prerequisites

1. Certification requirements:
  - a. For CCR, Must be a qualified as IANTD CCR Advanced EANx Diver or equivalent or higher.
  - b. For SCR: Must be a qualified as IANTD SCR Advanced EANx Diver or equivalent or higher.

▶ **NOTE: If not previously qualified as RCCR or RSCR Essentials Diver, the course shall include all the skills from the RCCR or RSCR Essentials Diver Program.**
2. Age requirement:
  - a. Must be a minimum of 18 years of age.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Land Drills:
    - I. Line deployment.
    - II. Practice of Rebreather diving equipment configuration, including redundancy, and streamlining.
  - c. Confined water session(s).
  - d. Open Water Dives (Optional)

4. Students must pass the specific IANTD Specific test with a minimum score of 80%.
  - **NOTE:** Cylinders must be labeled with IANTD stickers or other stickers such as may be required by local laws and regulations. At a minimum, the labels must clearly identify the MOD and oxygen content of the mixture. It is recommended that IANTD labels be used to meet this requirement, in addition to those required by law.

## D. Equipment & Text Requirements

1. IANTD Essentials Diver Student Kit
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
2. Equipment System: In order to properly demonstrate the Essentials skills, the instructor shall use the same equipment system as the student - Rebreather
  - I. In addition, it is recommended:
  - II. Rebreather may use long hose on bailout at the instructors discretion.
  - III. DSMB or Lift Bag
  - IV. Reel/Spool with at least 100 ft (30 m) guideline.
  - V. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
    - **NOTE:** This ratio may be increased by two (2) for each assisting IANTD Rebreather Supervisor, up to a maximum of 6 students with one (1) IANTD Rebreather Supervisor per class session.
2. The Program must include:
  - a. Tek Lite Essentials Diver
    - I. A minimum of 120 minutes of dive time developing water skills.
      - **NOTE: If not previously qualified as RCCR or RSCR Essentials Diver, the course shall include a minimum of 240 minutes of dive time developing water skills.**
    - II. The program must include one (1) confined water session.
      - **NOTE:** This program may be taught completely in confined water.
      - **NOTE:** It is recommended that following the confined water session, up to four (4) openwater dives be completed as part of the course.
3. No dives may be conducted to depths greater than diver deepest certification level.
4. Appropriate safety decompression stops must be performed.

## F. Water Skills Development

1. Be aware of your buddy's position in the water and in relation to the team to ensure effective communication during the entire dive;
2. Reflect safety awareness in diving preparation, underwater activity, after diving activity.
3. Teamwork.

### Surface Skills:

- **NOTE:** Surface skills, as listed on Essentials Diver, must be practice on all Essentials Levels.
4. Practice any time during the day, the following exercises described on the Essentials Manual:
    - a. O2 - Look & See
    - b. B2 - Push in the Area of the Lower Dan-Tian
    - c. C2 - Light Stream of Air
    - **NOTE:** Before the end of the class practices O2, B2 and C2 must be mastered



### In-Water Skills.

► *NOTE: During ALL skills practice, the diver shall maintain neutral buoyancy, proper trim and body posture.*

5. Hovering at a constant depth for at least 1 minute with a depth change of less than 1.5 ft (0.5 m) up or down.
6. Hovering at a constant depth and complete 5 basic skills keeping a depth change less than 1.5 ft (0.5 m) up or down:
  - a. DSV/BOV remove and replace.
  - b. Switch between *switch between loop and bailout*.
  - c. Adjusted S-Drill;
  - d. Mask clearing:
    - I. Partial flood;
    - II. Fully flooded
  - e. Mask removal and replace.
7. While hovering at a constant depth, use a reel/spool to deploy SMB, and make a controlled ascent while negatively buoyant.
8. While hovering at a constant depth perform OnBoard cylinders valve shut down drill.
9. Slowly ascent and do the safety stop (1 meter/min ascent speed).
10. Ascent without mask and do a 3 minute safety stop at 20 fsw (6msw) depth change less than 1.5 ft (0.5 m) up or down.
11. Swim and ascent under the condition of sharing gas *via bailout second stage regulator*.
12. Deploy a DSMB or Lift Bag at a constant depth with a change less than 1.5 ft (0.5 m) up or down in less than 2 minutes.
13. Two divers swimming side by side (Diver donating gas with mask and Diver receiving gas without mask):
  - a. Swim 50 feet (15 meters) without mask and simulating an out of gas condition:
  - b. Start sharing gas via bailout cylinder and ascend with guidance of buddy.

## CCR or SCR Tek Essentials Diver

- ▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**
- ▶ **IN ORDER TO PROPERLY DEMONSTRATE THE ESSENTIAL SKILLS, THE INSTRUCTOR SHALL USE THE SAME EQUIPMENT SYSTEM AS THE STUDENT - OPEN CIRCUIT, REBREATHING, OR SIDEMOUNT.**

### Who may teach this course?

- ▶ For CCR: A Tek CCR Essentials Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- ▶ For SCR: A Tek SCR Essentials Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

## A. Purpose

1. This mid-level Specialty Continuing Education Diver Program is designed to enable the certified diver to extend proficiency in the water and to review and put in practice the Essentials learned in any IANTD diver classes.
  2. This systematic learning and professional training is designed to enhance the student's personal and team underwater skills;
  3. Development of buoyancy, trim, balance and propulsion
  4. Refine and expand fundamental diving skills
  5. Equipment Streamlining and configuration
  6. Diving safety, situational awareness and accident prevention
  7. Enhanced Dive planning and gas management
  8. Decompression overview and minimum decompression procedures
  9. This program is designed for divers who wish to increase their skill competency by further developing their diving skills to be safer, more comfortable and more efficient in the water while expanding the divers basic diving skills to take more advanced recreational and/or technical diving programs.
- ▶ *NOTE: This course does not provide a deeper diving qualification to the diver*

## B. Prerequisites

1. Certification requirements:
  - a. For CCR, Must be a qualified as IANTD CCR Advanced EANx Diver or equivalent or higher.
  - b. For SCR: Must be a qualified as IANTD SCR Advanced EANx Diver or equivalent or higher.
  - c. Must be qualified in Tek Lite CCR or SCR Essentials Diver

▶ **NOTE: If not previously qualified as Tek Lite CCR or SCR Essentials Diver, the course shall also include all the skills from the Tek Lite CCR or SCR Essentials Diver Programs.**

▶ **NOTE: If not previously qualified as RCCR or RSCR Essentials Diver, the course shall also include all the skills from the RCCR or RSCR Essentials Diver and Tek Lite CCR or SCR Essentials Diver Programs.**
2. Age requirement:
  - a. Must be a minimum of 18 years of age.

## C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.

3. This program must include:
  - a. Academic Classes.
  - b. Land Drills:
    - I. Line deployment.
    - II. Practice of Rebreather diving equipment configuration, including redundancy, and streamlining.
  - c. Confined water session(s).
  - d. Open Water Dives (Optional)
4. Students must pass the specific IANTD Specific test with a minimum score of 80%.
  - **NOTE:** Cylinders must be labeled with IANTD stickers or other stickers such as may be required by local laws and regulations. At a minimum, the labels must clearly identify the MOD and oxygen content of the mixture. It is recommended that IANTD labels be used to meet this requirement, in addition to those required by law.

## D. Equipment & Text Requirements

1. IANTD Essentials Diver Student Kit
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
2. Equipment System: In order to properly demonstrate the Essentials skills, the instructor shall use the same equipment system as the student - Rebreather
  - I. In addition, it is recommended:
  - II. Rebreather may use long hose on bailout at the instructors discretion.
  - III. DSMB or Lift Bag
  - IV. Reel/Spool with at least 100 ft (30 m) guideline.
  - V. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
    - **NOTE:** This ratio may be increased by two (2) for each assisting IANTD Rebreather Supervisor, up to a maximum of 6 students with one (1) IANTD Rebreather Supervisor per class session.
2. The Program must include:
  - a. A minimum of 120 minutes of dive time developing water skills.
    - **NOTE: If not previously qualified as Tek Lite CCR or SCR Essentials Diver, the course shall include a minimum of 240 minutes of dive time developing water skills.**
    - **NOTE: If not previously qualified as RCCR or RSCR Essentials Diver, the course shall include a minimum of 360 minutes of dive time developing water skills.**
  - b. The program must include one (1) confined water session.
    - **NOTE:** This program may be taught completely in confined water.
    - **NOTE:** It is recommended that following the confined water session, up to four (4) openwater dives be completed as part of the course.
3. No dives may be conducted to depths greater than diver deepest certification level.
4. Appropriate safety decompression stops must be performed.

## F. Water Skills Development

1. Be aware of your buddy's position in the water and in relation to the team to ensure effective communication during the entire dive;
2. Reflect safety awareness in diving preparation, underwater activity, after diving activity.
3. Teamwork.

**Surface Skills:**

► *NOTE: Surface skills, as listed on Recreational Essentials Diver and Tek Lite Essentials Diver, must be practice on all Essentials Levels.*

4. Practice any time during the day, the following exercises described on the Essentials Manual:
  - a. O3 - Film of the Mental;
  - b. B3 - Breathe in a Part of the Body
  - c. C3 - Sequence

► *NOTE: Before the end of the class practices O3, B3 and C3 must be mastered*

**In-Water Skills.**

► *NOTE: During ALL skills practice, the diver shall maintain neutral buoyancy, proper trim and body posture.*

5. Do the safety check at a constant depth with a depth change of less than 1.5 ft (0.5 m) up or down, before diving:
  - a. Check Bailout
  - b. Recheck all gas gauges & valves
  - c. Recheck manual addition valves
  - d. BCD working
  - e. Check ADV, if applicable
  - f. Bubble Check
  - g. Check handset(s) & HUD
  - h. Confirm Safe PO2
6. Maintain neutral buoyancy during simulated equipment problems with a depth change of less than 1.5 ft (0.5 m) up or down.
  - a. Mask lost;
  - b. Fin lost;
  - c. BCD inflate failure;
  - d. Valve drills.
7. Hover at a constant depth with the following orientations:
  - a. Horizontal
  - b. Vertical

► *NOTE: Vertical orientation only with backmount rebreathers.*
8. Demonstrate the following situational abilities:
  - a. General awareness
  - b. Handle stress
  - c. Problem solving
  - d. Teamwork:
9. Deploy a DSMB or Lift Bag at a constant depth with a depth change of less than 1.5 ft (0.5 m) up or down in less than 1 minute.

## CCR or SCR Tek Open Water DPV Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Tek CCR OW DPV Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For SCR: A Tek SCR OW DPV Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- **NOTE: CCR or SCR Advanced EANx Instructor or higher who is also an Open Water DIVER PROPULSION VEHICLE Instructor may also teach this program.**

### A. Purpose

1. This Program is designed to provide training in the use of Diver Propulsion Vehicles (DIVER PROPULSION VEHICLE's) in CCR or SCR Open Water Diving.
2. The purpose of this course is to expose divers to conservation concerns and ethical responsibilities that present themselves during DIVER PROPULSION VEHICLE use either for touring, or exploration.

### B. Prerequisites

1. Certifications requirements:
  - a. For CCR: Must be a qualified as IANTD CCR Advanced EANx Diver or higher or equivalent.
  - b. For SCR: Must be a qualified as IANTD SCR Advanced EANx Diver or higher or equivalent.
- **NOTE: RCCR or Recreational SCR Divers may not take this program**
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Proof of a minimum of 25 dives 10 of which were on the rebreather to be used

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes, including but not limited to:
    - I. Motives and risks for DIVER PROPULSION VEHICLE diving;
    - II. Equipment configuration and streamlining techniques for DIVER PROPULSION VEHICLE diving,
    - III. Procedures and techniques for DIVER PROPULSION VEHICLE diving
    - IV. Task loading
    - V. Dive / gas planning needs for DIVER PROPULSION VEHICLE diving
    - VI. Gas sharing and towing techniques
    - VII. Conservation considerations for DIVER PROPULSION VEHICLE handling, minimizing specific environment impact
    - VIII. Considerations for the increased range of travel / penetration and safe charging
    - IX. Transport and maintenance procedures for DIVER PROPULSION VEHICLE's.
  - b. Confined water session(s).
  - c. Open Water Dives.
4. Students must pass the specific IANTD Specific test with a minimum score of 80%.

## D. Equipment Text Requirements

1. IANTD DIVER PROPULSION VEHICLE Diver Student Kit (TBA).
  - ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards Bailout cylinder(s).*
  - ▶ *NOTE: Rebreather may use long hose on bailout up to instructors discretion*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor.
2. The Program must include:
  - a. A minimum of 160 minutes of Open Water bottom time.
  - b. A minimum of four (4) DIVER PROPULSION VEHICLE dives.
    - ▶ *NOTE: Two (2) Decompression Open Water dives must have either a real or a simulate decompression stop for a minimum of 10 minutes decompression stop.*
    - ▶ *NOTE: Even if the time requirements are exceeded, a minimum of four (4) SCUBA dives must be made.*
    - ▶ *NOTE: The bottom time on each dive shall not be less than 20 minutes.*
    - ▶ *NOTE: No crediting of dives is allowed. Instructors are encouraged to exceed these minimums.*
3. No dives may be conducted to depths greater than the previous diver certification level.
4. Gas management rules:
  - a. Rule of Thirds
5. Oxygen partial pressure may not exceed the diver's training level:
  - a. For Advanced EANx or Advanced Recreational Trimix - Bailout oxygen partial pressure may not exceed 1.5 ata at any time;
  - b. For Technical Diver or higher - Bailout Oxygen partial pressure 1.4 ATA during the working portion of the dives and 1.6 ata during decompression portion of the dives.
6. All dives must be planned using the best gas in consideration of PO<sub>2</sub>, END and Decompression requirements.
7. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
8. All appropriate safety or required decompression stops must be performed.
  - ▶ ***NOTE: SCR or CCR the limits in the SCR or CCR Advanced EANx program must be adhered to.***
  - ▶ ***NOTE: The Open Water DIVER PROPULSION VEHICLE course does not qualify the diver to use DIVER PROPULSION VEHICLE's in overhead environments such as cave.***

## F. Water Skills Development

1. Demonstrate proficiency in the following propulsion techniques while maintaining the control of the DIVER PROPULSION VEHICLE:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks.
2. Perform at least two (2) gas sharing drills of Instructor's choice.
3. While using DIVER PROPULSION VEHICLE's perform at least three (3) towing methods.
  - ▶ *NOTE: At least two (2) of which are while sharing gas.*
4. Demonstrate the ability to safely drop and recover DIVER PROPULSION VEHICLE at least one (1) dive.
5. Demonstrate perfection of buoyancy and trim while using a DIVER PROPULSION VEHICLE.
6. On at least one (1) occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or a real out of gas situation.
7. Simulate a failure of all DIVER PROPULSION VEHICLE's in team and swim the units to exit point.



8. Take time data for the following scenarios for the distance of 150 feet or 50 meters:
  - a. Diver swimming pace without DIVER PROPULSION VEHICLE
  - b. Diver swimming pace with DIVER PROPULSION VEHICLE in cruise speed
  - c. Diver swimming pace with DIVER PROPULSION VEHICLE above cruise speed
  - d. Diver swimming pace towing the DIVER PROPULSION VEHICLE
  - e. Diver swimming pace with DIVER PROPULSION VEHICLE towing the diver only
  - f. Diver swimming pace with DIVER PROPULSION VEHICLE towing the diver and his/her DIVER PROPULSION VEHICLE.
9. Drop and recover decompression cylinders on at least two (2) of the dives or till achieve proficiency.



**CCR or SCR Self-Sufficient Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach this course?**

- For CCR: A CCR Advanced EANx Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- For SCR: A SCR Advanced EANx Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program have been designed to provide qualified divers with “self-supported - self-sufficient” training.

**B. Prerequisite**

1. Certifications requirements:
  - a. For CCR: Must be a qualified as IANTD RCCR Deep Diver or equivalent or higher.
  - b. For SCR: Must be a qualified as IANTD RSCR Deep Diver or equivalent or higher.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Proof of a minimum of 25 dives 15 of which were on the rebreather to be used

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Confined water session(s).
  - c. Open Water Dives.
4. Students must pass the specific IANTD Specific test with a minimum score of 80%.

**D. Equipment & Text Requirements**

► **The equipment configuration must be “self-sufficient - self-supported”.**

1. IANTD “Self-Supported - Self-Sufficient” Diver Student Kit
2. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.
  - NOTE: Rebreather may use long hose on bailout at the instructors discretion.
3. A sufficient quantity of gas will be carried by the diver to allow completion of the no-stop dive time requirements incorporating the correct gas management rule for this course which is the 1/3 rule.
4. Three dive lights, only, for overhead environments or night dives
5. All equipment should be streamlined and always accessible by the diver him or herself.
6. A DSMB or Lift Bag of at least 50-lb. (22.5-kg) lift capacity or SMBD and a line reel for deployment.
7. A backup line reel.
8. A backup cutting tool is recommended
9. Depth gauge, plus bottom timer device or a dive computer is required.
10. A backup dive computer or bottom timer/depth gauge is mandatory.
11. A primary BCD.

## E. Program Limits

1. Student to Instructor Ratio:
  - *NOTE: Student to Instructor ratios permitted are based on entering the water with visibility of 25 feet (8 meters) or more.*
    - a. There may be no more than four (4) students per Instructor.
2. The Program must include:
  - a. A minimum of 90 minutes of dive time developing water skills.
  - b. A minimum of four (4) dives.
    - *NOTE: All open water dives shall be conducted in environments that will allow at all times a direct vertical access to the surface*
    - *NOTE: The instructor will be present throughout the dive. The instructor will interfere and end the dive if in any case personal safety is in danger.*
3. No training dives are made in an overhead environment, unless the student is already overhead certified
4. No dives may be conducted to depths greater than 132 fsw (40 msw).
5. In "self-supported - self-sufficient" dives the gas management rule is set on 1/3 rule.
6. Maximum ascent rate is 30 feet (9 meters) per minute and in each dive ends with a safety stop.
7. The Diver is certified to dive "self-supported - self-sufficient" non-decompression dives.

## F. Waterskills Development

1. The Self-Sufficient Diver shows and perform an "S" drill before each dive.
2. The diver shows individual awareness about his or her gas consumption for the planned dive.
3. Calculate RMV from gas consumed during a 10 minute swim (based on change in bailout cylinder pressure).
4. The diver shows different propulsion techniques:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks
5. Perfect buoyancy control throughout the whole dive.
6. Boom Scenario with valve shutdowns for both diluent and oxygen.
  - *NOTE: The entire drill must be completed in less than 2 minutes.*
  - *NOTE: Upon completion of skill, verify both diluent and oxygen cylinders are turned back on.*
7. While hovering, deploy "self-supported - self-sufficient" DSMB or Lift Bag with a line reel in less than 2 minutes.
8. Do an ascent, at the correct rate, with the reel line and perform "self-supported - self-sufficient" at least two (2) safety stop at different depths.
9. Perform all Navigation dives with compass and have the diver return "self-sufficient - self-supported" to the point of entry.
10. Simulate a failure of primary regulator.
11. Perform a valve shut down:
  - a. OnBoard cylinders
  - b. Bailout cylinder(s)
12. Ascend and perform safety stops breathing from the bailout cylinder

## CCR or SCR In-Water Recompression Supervisor

▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- ▶ For CCR: A CCR IWR Instructor may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- ▶ For SCR: A SCR IWR Instructor may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- ▶ **NOTE: CCR or SCR Advanced EANx Instructor or higher who is also an IWR Instructor may also teach this program.**

### A. Purpose

1. This Program is designed to train competent divers in the safer use and technology of basic of in- water recompression (IWR) at depths up to 30 fsw (9.1 msw), using pure Oxygen as a breathing gas.

### B. Prerequisites

1. Certifications requirements:
  - ▶ **NOTE: Prerequisites may be taken in conjunction with the IWR Supervisor class.**
    - a. Must be qualified in:
      - ▶ **NOTE: May be taken in conjunction with the IWR Diver class.**
    - b. For CCR:
      - I. IANTD CCR Advanced EANx Diver or higher or equivalent.
      - II. IANTD RCCR Rescue Diver or equivalent
    - c. For SCCR:
      - I. IANTD SCR Advanced EANx Diver or higher or equivalent.
      - II. IANTD RSCR Rescue Diver or equivalent
    - d. IANTD Diver First Aid or equivalent
    - e. IANTD Oxygen Administrator or equivalent
  - 2. Age requirement:
    - a. Must be a minimum of 21 years of age without guardian approval
  - 3. Dive experience:
    - a. Proof of a minimum of 50 logged dives on the rebreather to be used

### C. Program Content

1. All lectures completed with IANTD Course - having viewed and understood all unit specific slides pertaining to the theory in the IANTD IWR class.
2. Students must complete the text with the units on which they wish to be qualified.
3. Students must pass:
  - a. The specific IWR test with a minimum score of 80%.
  - b. 10 verbal scenarios to the satisfaction of the instructor.
  - c. Students shall be exposed to at least 15 scenarios in any position.
4. This Program must include:
  - a. Academic Class Session
  - b. Confined Water Session
  - c. Open Water Diving Sessions
5. For IWR Supervisor, this program must include 2 OW dives with a minimum of 60 minutes of in-water training time on recompression rig or on the specific rebreather for which the diver is being trained.

## D. Equipment & Text Requirements

1. IANTD IWR Diver Student Kit.
  - a. If this program is combined with other IANTD programs:
    - I. IANTD Diver Student Manual and Student Kit must be also acquired.
      - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards Bailout cylinder(s).*
      - *NOTE: Rebreather may use long hose on bailout up to instructors discretion*
2. Full face mask fitted to rebreather mouthpiece retaining device.
3. Recompression rig adequate to ensure no increase or decrease in depth.
4. A means of direct monitoring of the managed diver shall be in place
  - *This can be via electronic means or with the use of a tender and hand signals.*
5. Surface O<sub>2</sub> administration equipment.
6. In-water rehydration / cylinder etc.

## E. Program Limits

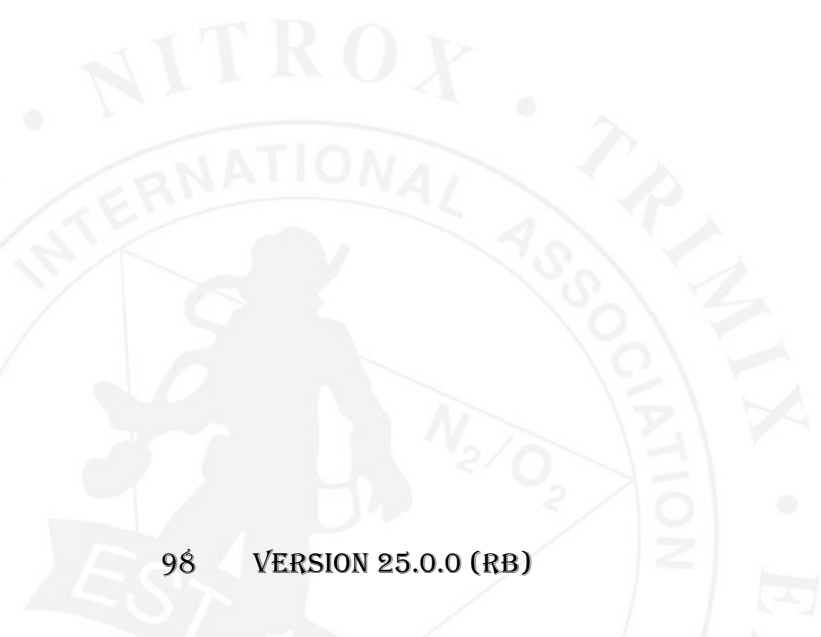
1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor.
    - *NOTE: If a qualified Rebreather Dive Supervisor (Rebreather Instructor or higher) is present, in which case the ratio may be increased to three (3) students per instructor.*
2. The Program must include:
  - a. A minimum of 60 minutes of in-water training time on recompression rig as bottom time:
    - *NOTE: The bottom time on each dive shall not be less than 20 minutes.*
  - b. A minimum of two (2) IWR dives with rebreather
    - *NOTE: Even if the time requirements are exceeded, a minimum of two (2) IWR dives must be made.*
3. The diver can descend to a maximum depth of 30 fsw (9.1 msw) and must be directly supervised by a Technical instructor or rebreather instructor (at minimum).
4. At the maximum depth the PO<sub>2</sub>, under any circumstance the PO<sub>2</sub> may not exceed 1.9 atm.
5. The instructor shall use Rebreather during training sessions.

## F. Water Skills Development

1. Pre-dive checks including a pre-breathe.
2. Ensure safe mix for descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range
3. In water leak and buddy leak check
  - *NOTE: If conditions prohibit this after entry this then immediately upon arrival at a stable depth. Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
4. Inspect recompression rig to ensure it will not allow student to descend below required depth and keep student at proper depth.
5. Diver should drink 8 oz. of water/isotonic drink underwater.
6. Student shall demonstrate gas management skills.
7. Student shall swap at least one primary gas source (Oxygen cylinder) during the class.
8. All students will function in the roll of:
  - a. In water tender
  - b. Diver
  - c. Surface supervisor
  - d. Note taker.

## G. Qualification requirements

1. The IWR Supervisor CCR or SCR Diver c-card will be issue:
  - a. Upon completion of the lectures
  - b. Passing the verbal exam
  - c. Upon satisfactory completion of the dives
2. Re-qualification is required to maintain this qualification by, annually:
  - a. Demonstrate performance of an in water recompression diver standard dive
  - b. Demonstrate performance of neurological assessment / Scenario.
    - *NOTE: These scenarios or dives must be certified by an IWR Instructor.*





## CCR or pSCR Normoxic Trimix Diver & Normoxic Trimix Plus Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A CCR Normoxic Trimix Instructor or higher may teach the course provided they are a CCR Advanced EANx Instructor or CCR ART Instructor on the specific Rebreather being taught in the course.
- For pSCR: A pSCR Normoxic Trimix Instructor or higher may teach the course provided they are a pSCR Advanced EANx Instructor or pSCR ART Instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This Program is further designed to train divers in the safer use of Rebreathers for dives using normoxic helium based gas mixtures.
  - *NOTE: The knowledge and skills taught in this program are designed to qualify divers to perform Normoxic Trimix Dives up to 200 fsw (60 msw) or Normoxic Trimix Plus dives up to 233 fsw (70 msw).*

### B. Prerequisites

1. Certifications requirements:
  - a. For CCR: Must be a qualified as IANTD CCR Advanced EANx Diver or higher or equivalent.
  - b. For pSCR: Must be a qualified as IANTD pSCR Advanced EANx Diver or higher or equivalent.
    - *NOTE: RCCR or Recreational SCR Divers may not do this program*
2. Age requirement:
  - a. Must be a minimum 18 years of age.
3. Dive experience:
  - a. Must provide proof of a minimum of 100 logged dives of which at least 25 rebreather dives and 50 hours on the unit with at least 50% of them logged on the same CCR to be used in the course.
    - i. At least 30 dives were deeper than 90 fsw (27 msw).
    - *NOTE: If the student is also certified as Trimix Diver (Open Circuit) and have the 100 hours on the unit specific, once the CCR Normoxic Trimix program is finished and the certification issued, the Instructor can continue to the CCR Trimix program.*

### C. Program Content

1. Academics
  - a. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
    - IANTD recommends the use of both, Course Specific Presentation and workbook.
  - b. Complete a written exam specific to Normoxic Trimix Diving written exam specific to either OC, CCR, or SCR with a minimum score of 80%.
2. Confined Water Session(s)
3. Open Water Dive Sessions

### D. Equipment & Text Requirements

1. IANTD Normoxic Trimix Diver Student Kit for OC, SCR or CCR
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
2. Rebreather may use long hose on bailout at the instructors discretion.

## E. Program Limits

1. Student to Instructor Ratio (Open Water Dives):
  - a. There may be no more than three (3) students per Instructor.
    - *NOTE: If the course is conducted in conjunction with a CCR Cave or CCR Wreck Programs, the limits for those Programs will prevail*
    - *NOTE: A Rebreather Normoxic Trimix Supervisor or higher may supervise Rebreather Normoxic Trimix Divers.*
2. The Program must include:
  - a. A minimum of 360 minutes training.
    - i. One (1) Confined Water Session
    - ii. Five (5) Open Water Dives using Air, EANx or Trimix.
  - b. If using a SCR dives must be conducted using an on board mixture containing not more than 1.4 PO<sub>2</sub>.
  - c. If using a CCR, dives must be conducted using an on board diluent mixture containing no more than 1.12 ATA PO<sub>2</sub> at the maximum depth, minimum oxygen content of 16% (± 1%) and may not have an END greater than 130 fsw (39 msw).
  - d. Computer controlled oxygen partial pressure may not exceed 1.3 during the working portion of the dives,
  - e. Computer controlled oxygen partial pressure may not exceed 1.4 ATA during the decompression portion of the dives.
    - *NOTE: At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.*
  - f. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
    - i. Bailout PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 130 fsw (39 msw).
      - *NOTE: Trimix BO must be conducted using a mixture containing at least 16% oxygen (± 1%).*
      - *NOTE This allows for bailout gas as needed plus a minimum one (1) and a maximum of two (2) stage carried or staged for decompression.*
3. Three (3) dives must be deeper must be deeper than 132 fsw (40 msw) and at least one (1) dive must be between 180 fsw (54 msw) to 200 fsw (60msw).
4. For CCR or pSCR Normoxic Trimix Diver Program, no dives may be conducted to depths greater than 200 fsw (60 msw).
5. Equivalent Narcosis Depth (END) may not exceed 130 fsw (39 msw).
6. Surface oxygen must be available for use in the event of Decompression Illness (DCI).
7. All dives must be performed as a single dive team.
8. All appropriate safety or required decompression stops must be performed.

## F. Extra Limits For CCR or pSCR Normoxic Trimix Plus:

1. For Rebreather Normoxic Trimix Plus Diver Program, no dives may be conducted to depths greater than 233 fsw (70 msw)
2. Oxygen partial pressure may not exceed:
  - a. For CCR, dives must be conducted using an on board diluent mixture containing no more than 1.12 ATA PO<sub>2</sub> at the maximum depth and may not have an END greater than 130 fsw (39 msw);
  - b. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
    - i. Bailout PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 130 fsw (39 msw).
      - *NOTE: Trimix BO must be conducted using a mixture containing at least 16% oxygen (± 1%)*
3. Decompression gases:
  - a. The use of 2 DECO gases are mandatory for all dives
  - b. During the class student must demonstrate proficiency in using 2 DECO gases
4. At least one (1) dive must be done be between 210 fsw (63 msw) and 233 fsw(70 msw) with a total run time of 55 minutes or more.

5. Normoxic Trimix to Normoxic Trimix Plus crossover:
  - a. One (1) Confined Water Session
  - b. Two (2) Open Water Dives and 110 minutes of run time

## G. Water Skills Development

1. A review and demonstration of the CCR Diver skills must be completed
2. Full manual operation must be performed on at least one (1) dive.
3. Simulate free flows into counterlung and solenoid failures.
4. Simulate flow valves malfunctioning on mCCR, simulate manual gas control CCR or gas switching (SRC) with valve shutdowns.
5. Become proficient in the following propulsion techniques:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks.
6. Deploy DSMB or Lift Bag in less than 1½ minutes, and repeat at least three (3) times during the Program for a total of 4 deployments.
7. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
8. Have diver remove and replace a decompression cylinder at rest and while swimming.
9. Have divers simulate bailout when they have reached 50% of bailout gas switch cylinders
  - *NOTE: Repeat this drill until there is a minimum of change in swim pace and body posture*
10. Simulated out of gas situation:
  - a. Two (2) divers, swim side by side simulating out of gas but rather than OC long hose, divers exchange stage cylinders
  - b. Divers should remain a rest for three (3) breaths, then swim at an average pace for at least 10 minutes while breathing from the stage cylinder
    - *NOTE: This drill should be done with the diver breathing from the bailout cylinder.*
    - *NOTE: In addition, at the instructor's discretion, this skill may be done using a long hose on the bailout cylinder.*
11. Confined Water Drill
  - a. Divers using a quick release on their harness or backpack:
    - I. Swim the system while the instructor disconnects the quick release to simulate a failure.
      - *NOTE: The student is to swim the system demonstrating control of buoyancy and body positioning with the quick disconnected for sufficient duration to satisfy the instructor that the student is capable of managing.*
  - b. Demonstrate an ability to respond to a single bladder BCD failure by the two (2) methods listed below:
    - ***NOTE: If at any time the student starts to overexert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.***
  - I. Deflate BCD and swim while maintaining buoyancy control duration at instructor discretion.
    - *NOTE: This skill must be done in a maximum of 2 minutes*
  - II. Deflate BCD, ascend to the surface, and remain afloat duration at instructor discretion.
    - *NOTE: This skill must be done in a maximum of 2 minutes*
- c. Lose of Buoyancy:
  - I. Have a student lose buoyancy by deflation of the BCD and then attempt to utilize a DSMB or Lift Bag or other secondary buoyant device as a BCD.
    - *NOTE: Liftbag/SMB should have some way to dump air to avoid an uncontrolled ascent*
    - *NOTE: This skill is to demonstrate how effective these devices are and to reinforce that even if not suitable for a redundant BCD they still provide an option for self-rescue in an emergency situation.*

12. Simulated out of gas situation:
  - a. Have two (2) divers, approximately 60 feet (18 meters) apart;
  - b. While simulating an out of gas situation without breathing, exhaling slowly with lights off.
  - c. Locate each other (using side of pool, rail on wreck, guide line, etc. for orientation) and begin gas sharing via bailout cylinder long hose;
  - d. After taking three (3) breaths at rest, continue swimming while sharing gas for at least three (3) minutes;
    - *NOTE: This drill may be accomplished by having one (1) student swim 30 feet (9 meters) to donor, and repeat for other diver.*
13. Simulated out of gas situation:
  - a. While two (2) divers are swimming side by side;
  - b. The Instructor signals one (1) to remain stationary while the other continues swimming for at least three (3) more kicks;
  - c. The stationary diver then simulates an out of gas situation by swimming (without breathing, and exhaling slowly) to the other diver and commences gas sharing via bailout long hose for at least two (2) minutes;
    - *NOTE: The instructor may substitute this skill by starting the drill at some time when the students are apart from each other by a comparable distance as would be achieved by three (3) kicks.*
14. Decompression cylinder Remove and Recover:
  - a. Following a means of reference (pool wall, guide line, ship railing, etc.) with lights off.
  - b. Remove decompression cylinder and swim a distance of at least 15 feet (4.5 meters).
  - c. Reverse direction, return to decompression cylinder and replace it on correct side.
15. Open and close ALL cylinder valves at least once on all dives.
16. Divers must if the rebreather is configured to allow it plug their bailout cylinders into the counterlungs on both inhalation and exhalation sides.
17. Divers should if the rebreather is compatible, plug their bailout stages into buddies units and allow buddy to get gas from them.
  - *NOTE: Bailout plugins must be compatible which may require a second low pressure inflator hose on Bailout ONLY!*
18. Bailout from a depth greater than 160 fsw (48 msw) and ascend to 20 fsw (6 msw) and check how much gas was used and time post dive use this value to determine bailout needs at depth.
  - *NOTE: It is allowed to ascend to the surface at the instructor discretion.*
19. At least two (2) times on each dive, Instructor is to signal to student(s) that they have an emergency.
20. SCR mode of diving. (Recommended – minimum 10 minutes)
  - a. At the instructor discretion, the SCR Mode can be performed during an ascent following the direction below:
    - I. The diver must have the appropriate bailout/deco gases to plug to the Diluent Manual Additional Valve;
    - II. The bailout/deco gas PO<sub>2</sub> must not be higher than 1.4ata;
      - **NOTE: bailout/deco gas PO<sub>2</sub> must not be lower than 1.0ata during the procedure;**
    - III. The diver must be able to check the PO<sub>2</sub> at all times.
      - *NOTE: On one (1) dive the diluent or the deco cylinder may be used for this drill.*
21. Out of gas, gas sharing from OC bailout (donor remains on CCR).
  - a. Bailout cylinder may be handed off
  - b. Divers simulate a bailout situation and that the diver has used 50% of their bailout gas
  - c. Switch bailout cylinder with the buddy diver and at the Instructor's discretion switch back.
22. if equipped with long hose, REPEAT the out of gas, gas sharing from OC bailout (donor remains on CCR).
  - a. Donating gas via long hose.
  - b. Divers simulate a bailout situation and that the diver has used 50% of their bailout gas
  - c. Switch bailout cylinder via long hose with the buddy diver and at the Instructor's discretion switch back

23. Simulate the rescue of a diver.

- a. Tow the diver on the surface for a distance of at least 40 feet (12 meters) while simulating mouth to mouth resuscitation.
- b. Go through EMS procedures.

► *NOTE: Equipment removal is optional*

24. **Confined Water Skill:**

- a. **Optional:** Remove and replace rebreather at a depth greater than 20 fsw (6 msw)
- b. **Optional:** Remove and replace rebreather at surface.



## CCR or pSCR Trimix Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A CCR Trimix Instructor or higher may teach the course provided they are a CCR Advanced EANx Instructor or CCR ART Instructor on the specific Rebreather being taught in the course.
- For pSCR: A pSCR Trimix Instructor or higher may teach the course provided they are a pSCR Advanced EANx Instructor or pSCR ART Instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This Program is designed for those individuals already involved in deep diving activities, but is not intended to be used as an enticement to divers who are content to remain in Sport or EANx diving limits.
  2. Trimix affords a safer means for deep water exploration for divers who dive deep or perform with a clear head at depth. The IANTD Trimix Diver Program requires the diver to be self-sufficient/reliant.
- *NOTE: The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 333 fsw (100 msw).*

### B. Prerequisites

1. Certifications requirements:
  - a. For CCR: Must be a qualified as IANTD CCR Normoxic Trimix Diver or higher or equivalent.
  - b. For pSCR: Must be a qualified as IANTD pSCR Normoxic Trimix Diver or higher or equivalent.
    - *NOTE: If the student is also certified as Trimix Diver (Open Circuit) and has 100 hours on the specific unit, once the CCR Normoxic Trimix program is finished and the certification issued, the Instructor can continue to the CCR Trimix program.*
    - *NOTE: Must be taking the Normoxic Rebreather Diver and Rebreather Trimix Diver course on an approved Rebreather for mixed gas diving, with all dives other than confined water made on Trimix or Heliox.*
    - *NOTE: RCCR or Recreational SCR Divers shall not do this program*
2. Age requirement:
  - a. Must be minimum 18 years of age.
3. Dive experience:
  - a. Must provide proof of a minimum of 200 logged dives with at least 100 hours on the rebreather to be used.
    - At least 25 dives were to depths between 132 fsw (40 msw) and 200 fsw (60 msw).
    - *NOTE: If already certified as Rebreather Normoxic Trimix Diver on another recognized unit by IANTD, 25 rebreather dives and 50 hours must be on the unit specific for the class.*

### C. Program Content

1. Academic Session
  - a. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
    - IANTD recommends the use of both, Course Specific Presentation and workbook
    - *NOTE: If the Rebreather Trimix Program is combined with the Rebreather Normoxic Trimix Program, all divers must completed the Academic, Confined Water and Water Skills from the Normoxic Trimix Rebreather Program and Rebreather Trimix Program.*
2. Confined Water Session
3. Open Water Session



## D. Equipment & Text Requirements

1. IANTD Trimix Diver Student Kit for OC, SCR or CCR
2. IANTD Exploration and Mixed Gas Diving Encyclopedia - The Tao of Survival Underwater.
  - ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
3. Rebreather may use long hose on bailout at the instructors discretion

## E. Program Limits

1. Student to Instructor Ratio (Open Water Dives):
  - a. There may be no more than three (3) students per Instructor.
    - ▶ *NOTE: The ratio for deeper dives may be increased to 4 students with an assisting IANTD Rebreather Normoxic Instructor or who is also a qualified IANTD Rebreather Trimix Diver or a Rebreather Trimix Supervisor.*
    - ▶ *NOTE: No more than 3 students per Instructor on dives conducted to depths greater than 233 fsw (72 msw)*
    - ▶ *NOTE: A Rebreather Supervisor may supervise OC, but an OC Supervisor may not supervise Rebreather Divers*
    - ▶ *NOTE: Rebreather classes must have Rebreather Supervisors qualified to the equivalent level of OC to supervise and add to instructor ratios.*
    - ▶ *NOTE: If the course is conducted in conjunction with a Cave or Wreck Programs, the limits for those Programs will prevail.*
2. The Program must include:
  - a. A minimum of 360 minutes of training
    - I. One (1) Confined Water Session
    - II. Five (5) Open Water Dives:
      - i. These dives may be on air, EANx, Trimix or Heliox provided the depths are acceptable for the gas used.
        - ▶ *NOTE: If using CCR, one (1) set point switch must be practiced during ascent during all four (4) dives.*
        - ▶ *NOTE: If using a CCR, dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO<sub>2</sub> at the maximum depth and may not have an END greater than 130 fsw (39 msw).*
        - ▶ *NOTE: if using a CCR, the inspired oxygen partial pressure may not exceed 1.3 PO<sub>2</sub> on a dive or 1.4 PO<sub>2</sub> on decompression.*
        - ▶ *NOTE: If using SCR, two (2) gas switches must be practiced during ascent during all four (4) dives.*
        - ▶ *NOTE: If using a SCR dives must be conducted using an on board mixture containing not more than 1.4 PO<sub>2</sub> and may not have an END greater than 130 fsw (39 msw)..*
        - ▶ *NOTE: If using a SCR, no dives made me made with a PO<sub>2</sub> greater than 1.6 for decompression and 1.4 for bottom mix.*
  - b. Computer controlled oxygen partial pressure may not exceed 1.3 during the working portion of the dives,
  - c. Computer controlled oxygen partial pressure may not exceed 1.4 ATA during the decompression portion of the dives.
    - ▶ *NOTE: At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.*
  - d. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
  - e. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 130 fsw (39 msw).
3. All dives other than the skill development dive, if used rather than confined water, must be conducted to depths between 132 fsw (40 msw) and 333 fsw (100 msw).
4. All depths must be worked up to incrementally with no increase greater than 40 fsw (12 msw) from one dive to the next.
5. One dive must be to at least 240 fsw (72 msw) or deeper.
6. Divers may not do dives on air deeper than 132 fsw (40 msw)
7. Equivalent Narcosis Depth (END) may not exceed 130 fsw (39 msw).

8. Surface oxygen must be available for use in the event of Decompression Illness (DCI).
9. All dives must be performed as a single dive team.
10. All appropriate safety or required decompression stops must be performed.
11. Adequate decompression gases and stages must be carried to complete decompression.
12. All dives must be completed within the IANTD Oxygen CNS% Limits.
13. No dive made be made deeper than 333 fsw (100 msw).

## F. Water Skills Development

1. Boom Scenario with valve shutdowns for both diluent and oxygen.
  - ▶ *NOTE: The entire drill must be completed in less than 1 minute.*
  - ▶ *NOTE: Upon completion of skill, verify both diluent and oxygen cylinders are turned back on.*
2. While swimming, demonstrate efficient switch to bailout cylinder regulator.
3. Remove and replace decompression cylinder at rest.
4. Remove and Recovery of decompression cylinder while swimming:
  - a. Follow a means of reference (pool wall, guide line, ship railing, etc.) with lights out
  - b. Remove decompression cylinder
  - c. Swim a distance of at least 15 feet (4.6 meters) reverse direction
  - d. Return to decompression cylinder and replace it on correct side, identifying cylinder by feel.
5. Deploy and use a DSMB or Lift Bag or up line at least once in Open Water.
6. A review and demonstration of the CCR Diver skills must be completed.
7. Perform Leak Test.
8. At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.
9. Perform Loss Of Gas Drill.
10. Perform bailout procedures (SCR, OC and Buddy OC).
11. Out of Gas Scenario:
  - a. Swim 60 feet (18 meters) without breathing and exhaling slowly and then perform bailout procedure.
12. Simulate the rescue of a diver.
  - a. Tow the diver on the surface for a distance of at least 40 feet (12 meters) while simulating mouth to mouth resuscitation.
  - b. Go through EMS procedures
    - ▶ *NOTE: Equipment removal is optional*
  - c. Repeat until proficient.
13. Bailout from a depth greater than 200 fsw (60 msw) and ascend to 20 fsw (6 msw) and check how much gas was used and time post dive use this value to determine bailout needs at depth.
  - ▶ *NOTE: It is allowed to ascend to the surface at the instructor discretion.*
14. SCR mode of diving. (Recommended – minimum 10 minutes)
  - a. At the instructor discretion, the SCR Mode can be performed during an ascent following the direction below:
    - I. The diver must have the appropriate bailout/deco gases to plug to the Diluent Manual Additional Valve;
    - II. The bailout/deco gas PO<sub>2</sub> must not be higher than 1.4ata;
      - ▶ **NOTE: bailout/deco gas PO<sub>2</sub> must not be lower than 1.0ata during the procedure;**
    - III. The diver must be able to check the PO<sub>2</sub> at all times.
15. Exchange of stage cylinders or long hose to a dive buddy who has used 50% of their bailout gas.
16. Demonstrate proficiency in all skills on the IANTD CCR diver skills tables C-3400 1&2 as well as all skills in the CCR Normoxic Trimix Diver course.
17. React to simulation of oxygen by pass due to faulty manual addition valves or switching assemblies.
18. **Confined Water Skill:**
  - a. **(RB) Optional:** Remove and replace rebreather at a depth greater than 20 fsw (6 msw)
  - b. **(RB) Optional:** Remove and replace rebreather at surface.

## CCR or pSCR Expedition Trimix Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A CCR Expedition Trimix Instructor or higher may teach the course provided they are a CCR Advanced EANx Instructor or CCR ART Instructor on the specific Rebreather being taught in the course.
- For pSCR: A pSCR Expedition Trimix Instructor or higher may teach the course provided they are a pSCR Advanced EANx Instructor or pSCR ART Instructor on the specific Rebreather being taught in the course.

### A. Purpose

1. This program is designed to train Rebreather Divers already involved in deep diving activities to more safely conduct exploration dives requiring extended decompression profiles and helium based gas mixture.
  - *This program is not intended to be used as an enticement to divers who are content to remain in normal Trimix diving limits.*
  - *Trimix affords a safer means for deep water exploration for divers who dive deep or perform with a clear head at depth.*
  - *The IANTD Trimix Diver Program requires the diver to be self-sufficient/reliant.*
  - *NOTE: The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 400 fsw (120 msw).*

### B. Prerequisites

1. Certifications requirements:
  - a. For CCR: Must be a qualified as IANTD CCR Trimix Diver or higher or equivalent.
  - b. For pSCR: Must be a qualified as IANTD pSCR Trimix Diver or higher or equivalent.
2. Age requirement:
  - a. Must be minimum 21 years of age.
3. Dive experience:
  - a. Must provide proof of at least 300 dives of which at least 200 were Rebreather Dives and 300 hours on the rebreather to be used.

### C. Program Content

1. Academic Session
  - a. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
    - IANTD recommends the use of both, Course Specific Presentation and workbook
  - b. Complete a written exam specific to Expedition Trimix with a minimum score of 80%.
2. Confined Water Session
  - *NOTE: This program must include a confined water (CW) session or lieu of CW a skill development dive to depths no greater than 100 fsw (30 msw) prior to open water deeper course dives.*

### D. Equipment & Text Requirements

1. IANTD Expedition Trimix Diver Student Kit for OC, SCR or CCR
2. IANTD Exploration and Mixed Gas Diving Encyclopedia - The Tao of Survival Underwater.
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
3. Rebreather may use long hose on bailout at the instructors discretion

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than 2 students per Instructor on any dives.
    - *NOTE: On dives below 333 fsw (100 msw) Trimix divers acting as safety divers may do so without instructor supervision provided they remain within their qualification level limits and are not doing any new skills other than being a safety diver, peculiar to this course unless supervised by an Expedition Trimix Supervisor or the Instructor.*
2. All dives, other than skill development dives or confined water must be conducted to depths between 200 fsw (60 msw) and 400 fsw (120 msw).
3. In lieu of confined water dive, a skill development dive to depths no greater than 100 fsw (30 msw) prior to open water deeper course dives.
4. The Program must include:
  - a. A minimum of 350 minutes of run time in open water diving
  - b. Four (4) Dives:
    - I. At least one (1) dive working on new skills must be made at depths between 200 to 250 fsw (60 msw to 75 msw)
    - II. A minimum of three (3) dives must be completed between 300 fsw (90 msw) and 400 fsw (120 msw)
    - III. One dive must be to at 400 fsw (120 msw).
    - IV. SCR Bottom mix cannot exceed a PO<sub>2</sub> of 1.4 ATA and deco of 1.6 ATA.
    - V. (CCR ) Must not exceed a PO<sub>2</sub> of 1.3 ATA on the dive and deco of 1.4 ATA.
    - VI. CCR If using a CCR dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO<sub>2</sub> at the maximum depth and may not have an END greater than 130 fsw (39 msw).
5. All dives must be completed within the IANTD oxygen CNS% limits.
6. All appropriate safety or required decompression stops must be performed.
7. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
8. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 130 fsw (39 msw).

## F. Water Skills Development

1. A confined water session must be completed before conducting dives below 132 fsw (40 msw).
2. Practice use of 3 or more bailout/decompression cylinders.
3. Swim 75 feet (25 meters) without breathing, while exhaling slowly, and then perform gas sharing procedure.
4. Practice switching diver to diver, and handling of, bailout cylinders.
5. Remove and replace decompression cylinders both at rest and while swimming.
6. Deploy and use a DSMB or Lift Bag while hovering in mid-water at least once in Open Water.
7. While swimming, demonstrate efficient switch between multiple stage cylinder regulators (OC bailout or CCR gas block) or between bailout rebreather systems.
8. Perform bailout deeper than 333 fsw (100 msw):
  - a. Diver must bailout and ascend vertically at least 165 fsw (50 msw)
    - *NOTE: If in cave, swim horizontally at least 165 fsw (50 msw)*
9. Practice switching of bailout stages between buddies while maintaining a normal swim pace.
10. Perform all procedures on the IANTD CCR diver skill sheets.
11. Check oxygen sensors are not current-limited (linearity check) if not initiated automatically by the unit.
12. SCR mode of diving. (Recommended – minimum 10 minutes)
  - a. At the instructor discretion, the SCR Mode can be performed during an ascent following the direction below:
    - I. The diver must have the appropriate bailout/deco gases to plug to the Diluent Manual Additional Valve;
    - II. The bailout/deco gas PO<sub>2</sub> must not be higher than 1.4ata;
      - **NOTE: bailout/deco gas PO<sub>2</sub> must not be lower than 1.0ata during the procedure;**
    - III. The diver must be able to check the PO<sub>2</sub> at all times.

## CCR or SCR Elite Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26)**

### A. Purpose

1. This certification has been designed to provide cave divers with the highest recognition in the CR/SCR Diver level before entering the professional diving circle in teaching.

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified in:
    - I. For CCR:
      - i. Must be a qualified IANTD CCR Advanced EANx Diver or higher or equivalent.
    - II. For SCR:
      - i. Must be a qualified IANTD SCR Advanced EANx Diver or higher or equivalent.
    - III. Must have 2 of the 3 following certifications:
      - i. IANTD Decompression Specialist
      - ii. IANTD Tek Lite CCR or SCR Essentials Diver or higher
      - iii. IANTD Tek OW DPV Diver
2. Age requirement:
  - a. Must be a minimum of 18 years of age without guardian approval.
3. Dive experience:
  - a. Proof of a minimum of 75 non-training logged CCR or SCR dives

### C. Program Content

1. N/A

### D. Equipment Requirements

1. N/A

### E. Program Limits

1. N/A

### F. Water Skills Development

1. There is no water skills required.

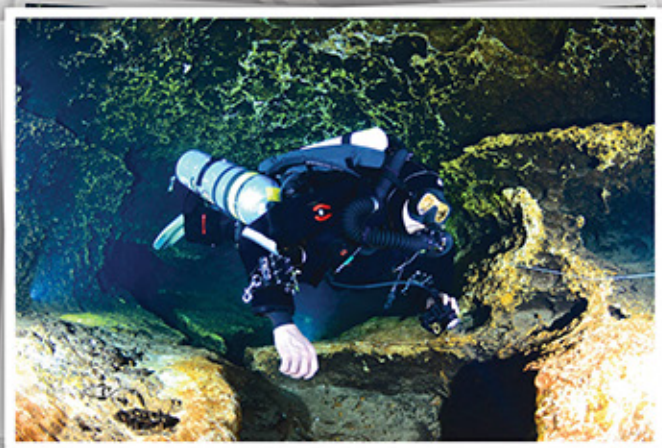
### G. Application Procedure

1. Fill & submit the Elite Technical Diver Application Form to an IANTD Instructor, HQ or local licensee.





# IANTD OVERHEAD REBREATHER DIVER PROGRAMS





## RCCR or RSCR Cavern and Limited Mine Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For Cavern:
  - For CCR: A Recreational CCR Cavern Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
  - For RSCR: A Recreational SCR Cavern Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For Limited Mine:
  - For CCR: A Recreational CCR Limited Mine Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
  - For RSCR: A Recreational SCR Limited Mine Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop wreck and cavern diving skills within the limits of light penetration and to insure that divers are aware of self-responsibility and capable of risk management in overhead environments.

### B. Prerequisites

1. Certifications requirements:
  - a. For RCCR Cavern or RCCR Limited Mine, Must be a qualified as:
    - I. IANTD Recreational CCR Diver or equivalent.
    - II. IANTD Recreational SCR Diver or equivalent.
  - *NOTE: Fully qualified CCR or full SCR divers may not take this program*
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Proof of a minimum of 20 dives 25 hours on the rebreather to be used.
    - For Crossover from Cavern or Limited Mine (Open Circuit) to Rebreather Cavern or Limited Mine:
      - Proof of a minimum of 10 dives 15 hours on the rebreather to be used.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Land Drills:
    - I. Use of guide lines
    - II. Practice running the line and making tie wraps
    - III. Following guide lines with and without vision.
    - IV. Simulation of silt-outs.
  - c. Confined water session(s).
  - d. Open Water Dives.
4. Students must pass the specific IANTD Specific test with a minimum score of 80%.

## D. Equipment & Text Requirements

1. IANTD Cavern Diver Student Kit (TBA)
  - a. If this program is combined with other IANTD programs:
    - I. IANTD Diver Student Manual and Student Kit or equivalent text(s) approved in writing by the Board of Directors (written approval will be issued by IANTD World Headquarters) must be also acquired.
- ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
2. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.
3. A 39 inch hose or longer to a maximum of 7 feet hose is to be attached to the bailout second stage.
4. Primary reel and/or safety reel.
5. Two lights:
  - a. One (1) Primary
  - b. One (1) Backup

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
2. The Program must include:
  - a. A minimum of 100 minutes of OW bottom time.
    - I. ALL dives must be completed in the overhead environment
  - b. A minimum of four (4) Rebreather dives
    - ▶ *NOTE: Even if the time requirements are exceeded, a minimum of four (4) Rebreather dives must be made.*
    - ▶ *NOTE: The bottom time on each dive shall not be less than 20 minutes.*
3. Unobstructed exit / surface light must always be visible.
4. No dives may be conducted to depths greater than diver's previous certification level.
5. The Rule of Thirds must be applied, for the Scrubber, Oxygen and Diluent, from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
6. Rebreather Diver must stay within bailout penetration of a 30 cubic foot (4 L) cylinder.
7. All appropriate safety or required decompression stops must be performed.

## F. Water Skills Development

1. Become proficient in the following propulsion techniques:
  - a. Modified flutter
  - b. Modified frog,
  - c. Modified dolphin
  - d. Standard shuffle kick.
2. Demonstrate buoyancy control by combining with following skills.
  - a. A timed ascent at a rate of 20 ft. (6 m) per minute.
  - b. Hover at constant depth for 3 minutes.
3. Practice of rebreather diving equipment configuration including redundancy and streamlining.
4. Proper, onboard and offboard, cylinders labeling with IANTD sticker,
5. Swim a distance of 75 feet (23 meters) without a mask.
6. Swim in a simulated out of air situation:
  - a. Without breathing and exhaling slowly swim a distance of at least 40 feet (12 meters), and commence gas using the appropriate rebreather gas management drill for out of air diver.
  - b. While gas sharing, continue to swim for a distance of at least 2 minutes while maintaining a swim rate of approximately 60 feet (18 meters) per minute.

7. Determine SAC rate and RMV.
8. Close and open, onboard and offboard, cylinder valves on all dives.
9. Remove and replace cylinder and rebreather at surface on at least one (1) dive.
10. Practice use of reel and line.
11. In the overhead environment practice:
  - a. Running the line
  - b. Making tie wraps.
12. With lights off, follow a guideline in the overhead environment.
13. Share breathing gas via bailout cylinder regulator while following the guideline, both with eyes open and with lights off.
14. Perform an "S" drill prior to commencement of all dives.



## RCCR or RSCR Introductory Cave or Mine Diver

▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- ▶ For Introductory Cave:
  - ▶ For CCR: A Recreational CCR Introductory Cave Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
  - ▶ For RSCR: A Recreational SCR Introductory Cave Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For Introductory Mine:
  - ▶ For CCR: A Recreational CCR Introductory Mine Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
  - ▶ For RSCR: A Recreational SCR Introductory Mine Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to provide an introduction to the cave diving environment for Sport Divers.

### B. Prerequisites

1. Certifications requirements:
  - a. For RCCR Introductory Cave, Must be a qualified as:
    - I. IANTD RCCR Cavern Diver or equivalent.
    - II. IANTD RSCR Cavern Diver or equivalent.
  - b. For RCCR Introductory Mine Diver, Must be a qualified as:
    - I. IANTD RCCR Limited Mine Diver or equivalent.
    - II. IANTD RSCR Limited Mine Diver or equivalent.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Proof of a minimum of 40 logged rebreather dives and 40 hours on the rebreather to be used.
    - ▶ For Crossover from Introductory Cave or Mine (Open Circuit) to Rebreather Introductory Cave or Mine:
      - ▶ Proof of a minimum of 20 logged rebreather dives and 30 hours on the rebreather to be used.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Land Drills:
    - I. Use of guide lines
    - II. Practice running the line and making tie wraps
    - III. Following guide lines with and without vision.
    - IV. Perform lost line procedure
    - V. Perform lost diver procedure.

- c. Confined water session(s).
- d. Open Water Dives.
4. Students must pass the specific IANTD Specific test with a minimum score of 80%.

## D. Equipment & Text Requirements

1. IANTD Cave Diver Student Kit
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
2. Bailout cylinder(s)
  - A 5 foot (1.5 meter) to 7 foot (2 meter) long hose must be attached to one (1) of the bailout second stages.
3. All students must be taught the concept of bailout gas matching.
4. Reels:
  - a. One (1) primary reel
  - b. One (1) safety reel.
5. Lights:
  - a. One (1) primary light
  - b. Two (2) secondary lights
6. Cave Markers:
  - a. Three (3) line arrows
  - b. Three (3) Non directional markers
7. Dive slate or note pad.
8. Cutting tool is required
  - *NOTE: A backup cutting tool is recommended*

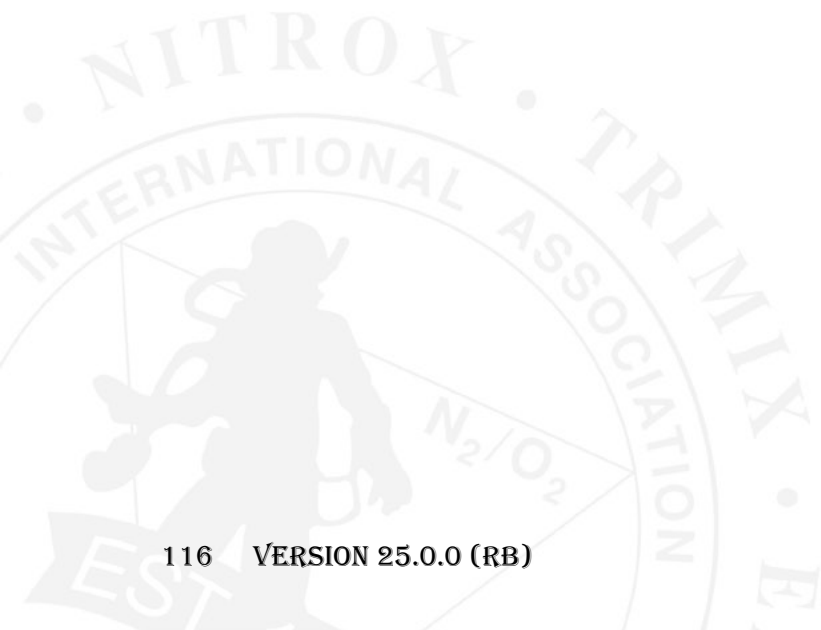
## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor inside the cave/mine with starting visibility of 30 feet (9 meters) OR
  - b. There may be no more than two (2) students per Instructor inside the cave/mine with starting visibility of 20 feet (6 meters).
2. The Program must include:
  - a. A minimum of 160 minutes of bottom time must be completed in caves/mines within:
    - *NOTE: There may be no crediting of previous dive time for this Program.*
  - b. A minimum of Four (4) rebreather dives, if previously qualified as a Rebreather Cavern Diver/Rebreather Limited Mine Diver.
    - *NOTE: Even if the time requirements are exceeded, a minimum of four (4) rebreather dives must be made.*
  - c. Six (6) rebreather dives, if doing the Rebreather Introductory Cave Diver/Rebreather Introductory Mine Diver as entry level overhead diving program.
    - *NOTE: Even if the time requirements are exceeded, a minimum of six (6) rebreather dives must be made.*
3. No dives may be conducted to depths greater than 132 fsw (40 msw).
4. Must stay within bailout penetration of a 30 cubic foot (4 L) cylinder
5. The Rule of Thirds must be applied, for the Scrubber, Oxygen and Diluent, from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
6. All appropriate safety or required decompression stops must be performed.
7. No jumps from one (1) line to another may be made in this program.

8. Equipment limits:
  - a. The Introductory Cave Diver/Introductory Mine Diver who is trained in a Rebreather may be qualified ONLY to use Rebreather

## F. Water Skills Development

1. Perform an "S" drill prior to commencement of all dives.
2. Simulated out of air situation:
  - *NOTE: Both divers must maintain contact with the line*
  - a. Swim with lights out, for stress management, and then switch to their bailout cylinder.
  - b. After resting for three (3) breaths, divers should swim following the guideline to its source, while continuing to breathe from their bailout cylinders.
3. Follow the guideline with lights off for at least 40 feet (12 meters)
  - *Confined water skill*
4. Follow the guideline with mask off for at least 40 feet (12 meters)
  - *Confined water skill*
5. Simulate a primary light failure on exiting the cave/mine.
6. Share gas along line for a reasonable distance while on a cave dive/mine dive.
7. Rebreather divers will do bailout and follow line.
8. On one dive exit the cave/mine from a penetration in which one half of the bailout gas will be used.
9. Practice bailout regulator shutdowns while swimming without a noticeable change in swim pace.
10. Practice use of reels and lines.
11. Emergency Exit Drill:
  - a. On a cave/mine dive, with lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using Touch Contact for a reasonable distance.
  - *NOTE: Repeat this drill but use Bump and Go technique instead of Touch Contact.*
12. Emergency Exit Drill:
  - a. Bailout and maintain contact with line while keeping lights off.
13. Demonstrate proficiency in propulsion techniques taught in the Overhead Environment Program.





## CCR or SCR Tek Lite Cave or Tek Lite Mine Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For Tek Lite Cave:
  - For CCR: A Tek Lite CCR Cave Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For SCR: A Tek Lite SCR Cave Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For Tek Lite Mine:
  - For CCR: A Tek Lite CCR Mine Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For SCR: A Tek Lite SCR Mine Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to train Advanced EANx Divers or higher to use their knowledge to safely cave or mine dive while navigating the main tunnel.

### B. Prerequisites

1. Certification Requirements:
  - a. For Tek CCR Lite Cave, Must be a qualified as:
    - I. IANTD RCCR Cavern Diver or equivalent.
    - II. IANTD RSCR Cavern Diver or equivalent.
  - b. For Tek Lite SCR Mine Diver, Must be a qualified as:
    - I. IANTD RCCR Limited Mine Diver or equivalent.
    - II. IANTD RSCR Limited Mine Diver or equivalent.
    - *NOTE: The Rebreather Cavern Diver/Rebreather Limited Mine Diver program can be done in conjunction with the Tek Lite CCR or SCR Cave Diver/Tek Lite CCR or SCR Mine Diver program.*
  - c. Must be qualified as IANTD CCR or SCR Advanced EANx Diver or higher or equivalent.
    - *NOTE: The CCR or SCR Advanced EANx Diver or CCR or SCR ART Diver program can NOT be done in conjunction with the Tek Lite Cave Diver/Tek Lite Mine Diver Program.*
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Rebreather must have 40 logged rebreather dives and 40 hours of dive time on the Rebreather.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
  - *NOTE: SCR and PSCR Divers already qualified as an IANTD ADVANCED EANX DIVER OR HIGHER need only complete the cave or mine portion of the Program to be qualified as Tek Lite Cave Diver/Tek Lite Mine Diver.*

3. Land drills:
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps.
  - d. Equipment & Text Requirements

## D. Equipment & Text Requirements

1. IANTD Rebreather Tek Lite Cave Diver Student Kit, for Rebreather Tek Lite Cave Level
2. IANTD "S" drill chart C-3401.
  - ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
3. All students must be taught the concept of gas matching
4. Bailout cylinder(s).
  - ▶ *Bailout stages must be configured to ensure easy hand off to an out of gas diver.*
  - ▶ *NOTE: Rebreather may use long hose on bailout at the instructors discretion.*
5. All students must be taught the concept of gas matching. And on SCR, PSCR and CCR the correct bailout management.
6. Rebreather must be equipped with adequate bailout, including out of air emergency.
7. General Equipment list:
  - a. A primary and backup dive planning/monitoring device such as bottom timer or computer or decompression capable rebreather controller. IANTD dive tables must be carried on all dives as a form of backup.
  - b. Reels:
    - I. One (1) primary reel
    - II. One (1) safety reel
  - c. Lights:
    - I. One (1) primary light
    - II. Two (2) secondary lights
  - d. Guideline Markers:
    - I. Three (3) line arrows
    - II. Three (3) Non directional markers
8. Dive slate or note pad.
9. A cutting tool is required.
  - ▶ *NOTE: A backup cutting tool is recommended.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor inside the cave or mine OR.
  - b. There may be no more than two (2) students per Instructor on cave/mine dives conducted to depths greater than 132 fsw (40 msw).
2. The Program must include:
  - ▶ *NOTE: There may be no crediting of previous dive time for this Program.*
3. *Decompression gases and dive gases maybe used up to the divers qualification level.*
4. A minimum of 400 minutes of in cave/mine bottom time must be completed in caves or mines.
  - a. Eight (08) rebreather cave or mine dives, if previously quailed as a Rebreather Cavern Diver/Rebreather Limited Mine Diver.
    - ▶ *NOTE: Even if the time and skill requirements are met within fewer than eight (8) dives, the minimum of eight (8) dives must be made.*

- b. If already qualified as Rebreather Introductory Cave Diver/Introductory Mine Diver:
- c. A minimum of 300 minutes of in cave/mine bottom time must be completed in caves or mines.
- d. Six (6) rebreather cave or mine dives
  - ▶ *NOTE: Even if the time and skill requirements are met within fewer than six (6) dives, the minimum six (6) dives must be made.*
5. In most cases, no dives may be conducted to depths greater than 132 fsw (40 msw).
  - ▶ *NOTE: When conditions warrant it, (such as areas without access to caves/mines suitable for training at depths of 132 fsw (40 msw) or more shallow) Tek Lite Cave Diver/Tek Lite Mine Diver Programs may be conducted to a maximum depth of 150 fsw (45 msw), provided the students are qualified as Advanced Recreational Trimix Diver or 132 fsw (40 msw) provided the students are qualified as Advanced EANx Diver.*
6. Gas management rules:
  - a. Must stay within the bailout exit capacity to bring the diver safely to Open Water, Rule of Thirds from Oxygen, Diluent or Scrubber, whatever happen first.
  - b. Each team must plan and carry stages or adequate bailout gas or bailout rebreathers to get at least 1½ divers to the surface on Rebreather Dives.
  - c. CCR Oxygen partial pressure may not exceed 1.3 ATA during the working portion of the dives
  - d. CCR Oxygen partial pressure may not exceed 1.4 ATA during the decompression portion of the dives.
    - ▶ *NOTE: At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.*
  - e. Bailout gas is limited to 80 ft<sup>3</sup> (2,265 liters).
    - ▶ *NOTE: Diver can choose to divide the amount of bailout gas into two (2) cylinders.*
7. Decompression Gas mixtures:
  - a. Tek Lite Cave Divers/Tek Lite Mine Divers may breathe any EAN mixture from a minimum of 50% oxygen to a maximum of 100% oxygen during decompression and can be used to accelerate decompression schedules accordingly.
    - ▶ *NOTE: The breathing PO<sub>2</sub> must not be greater than 1.5 ata.*
8. The Decompression Mix cylinder:
  - a. 1 (one) decompression cylinder must be used in at least four (4) dives.
    - ▶ *NOTE: Even if the diver has a higher qualification level, the limit of one (1) decompression cylinder must be respected*
  - b. Must be dropped on at least four (4) dives at the depths where the PO<sub>2</sub> is not greater than 1.5 ata on all dives.
9. A minimum of four (4) dives must have either a real or a simulate decompression stop for:
  - a. A minimum of 10 minutes decompression stop.
10. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
11. All appropriate safety or required decompression stops must be performed.
12. Tek Lite Rebreather Cave Diver/Tek Lite Rebreather Mine Divers navigation must remain ONLY within the main line/cave main conduct
13. No complex navigations can be made, that includes:
  - a. Jumps, Gaps, Circuits or Traverses

## F. Water Skills Development

1. Swim with equipment to be used in Program until comfortable with it.
2. Leak check each team member's equipment.
3. Breathe underwater from the CCR and the bailout stage(s) / all regulators to ensure proper functioning.
4. Perform light checks.
5. Perform valve shutdowns combined with switches to bailout cylinder, including handing off bailout cylinders at least once each day as part of the "S" drills.
6. Buddies should check that all valves are back in proper position at end of drill.
7. On a first dive with a new partner, perform a gas sharing drill by handing off stages.

8. Confined or Open Water:
  - a. Swim 60 feet (18 meters) while simulating an out of gas situation,
  - b. Switch to bailout cylinder, remain at rest for three (3) breaths,
  - c. Swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute (static water swim rate).
9. Confined or Open Water:
  - a. Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet.
  - b. Upon meeting switch to the bailout stage
  - c. Complete the line circuit performing the bump and go technique.

► *NOTE: Repeat above with diver handing off bailout cylinder*
10. All CCR emergency skills must be preformed in cave/mine in addition to confined water.
11. Out of Gas Scenario:
 

► *NOTE: Exercise is to commence with Instructor at some point randomly selecting the out of gas diver.*
12. During a cave dive/mine dive, at a point after turning the dive, perform a gas bailout drill exiting the cave/mine for a reasonable distance / time;
  - a. The out of gas diver must then go to his bailout stage cylinder;
  - b. At some point have the buddies exchange bailout cylinders simulating that the diver who had bailed out had used 50% of the bailout stage cylinder.

► *NOTE: This drill is to be repeated on different dives until all students have performed the drill.*
13. Emergencie Exit Drill:
  - a. On a cave dive/mine dive, with eyes closed or lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.

► *NOTE: Repeat this drill but use bump and go technique instead of buddy contact.*
14. Emergencie Exit Drill:
  - a. On a cave dive/mine dive, with eyes closed or lights off simulate blacked out condition maintaining contact with buddy and dive line using touch communications.
  - b. At some point the Instructor will choose one (1) of the divers to simulate a loop failure.
  - c. The diver with the failed loop must communicate the problem to a buddy via touch contact, and switch to his/her bailout cylinder.

► *NOTE: This skill must be performed for a reasonable distance.*

► *NOTE: Repeat this skill until all students have been the diver with the loop failure.*

► *NOTE: Repeat this drill but use bump and go technique instead of touch contact.*
15. On at least three (3) dives, the student must simulate a solenoid or orifice or addition failure and, take corrective action.
16. Loop Failure Drill:
  - a. On at least three (3) occasions, a loop failure drill must be completed.
  - b. On at least one (1) drill the diver must remain on the bailout stage cylinder for a minimum of 10 minutes.

► *NOTE: The student is to note the bailout gas used and distance covered and at the end of the dive and compute:*

  - *How far under the same conditions could the diver have traveled on the bailout cylinder.*
  - *How much total gas it would take to bailout to the exit point of the cave/mine.*
  - *How much oxygen and or other gas would be needed to complete the decompression.*
17. Perform a SCR bailout for at least five (5) minutes while on a cave dive/mine dive.
18. Repeat all drills and skills from the CCR Skills tables while on cave dives/mine dive.

19. Develop proficiency in a variety of propulsion techniques including:
  - a. Cave frog kick
  - b. Modified flutter kick
  - c. Shuffle kick
  - d. Pull and glide technique.
20. Demonstrate proficiency in use of reels and lines
21. On a cave dive, exit cave or mine with eyes closed or lights off maintaining contact with buddy and dive line using touch communications.
  - *NOTE: On a later dive repeat using bump and go technique rather than touch contact.*
22. Perform lost diver drills.
23. Perform lost line drills.
24. Demonstrate on all cave/mine dives the ability to drop and recover the decompression cylinder.



**CCR or pSCR Cave Diver & Tek Cave Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach this course?**

- For CCR: A CCR Cave Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For SCR: A pSCR Cave Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program is designed to train divers in safe CCR or pSCR cave diving

**B. Prerequisites**

1. If entering through modular route:
  - a. For CCR Cave, Must be a qualified as:
    - I. IANTD RCCR Introductory Cave Diver or equivalent.
  - b. For pSCR Cave Diver, Must be a qualified as:
    - I. IANTD pSCR Introductory Cave Diver or equivalent.
  - c. Must be qualified as IANTD CCR or SCR Advanced EANx Diver or higher or equivalent.
    - *NOTE: The CCR or SCR Advanced EANx Diver or CCR or SCR ART Diver program can NOT be done in conjunction with the CCR or pSCR Cave Diver Program.*
  - d. Must proof of a minimum of 50 logged rebreather dives.
2. If not qualified as RCCR/RCCR Introductory Cave Diver:
  - a. Must be qualified as IANTD CCR or SCR Advanced EANx Diver or higher or equivalent.
    - *NOTE: The CCR or SCR Advanced EANx Diver or CCR or SCR ART Diver program can NOT be done in conjunction with the CCR or pSCR Cave Diver Program.*
  - b. Must have proof of 100 rebreather dives.
3. If it is an OC Cave Diver to Rebreather Cave Diver Crossover:
  - I. Must be qualified as CCR or SCR Advanced EANx Diver or higher or equivalent on the unit to be used
  - II. Must have 25 rebreather dives with 50 hours of dive time on the Rebreather.
4. Age Requirements
  - a. Must be a minimum of 18 years of age.

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. Land drills:
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps.

**D. Equipment & Text Requirements**

1. IANTD CCR Cave Diver Student Kit.
2. Rebreather may use long hose on bailout at the instructors discretion



3. General Equipment list:
  - a. A decompression cylinder containing oxygen or an EAN mixture with at least 50% oxygen, and appropriately labeled.
  - b. Each gas source must have its own dedicated submersible pressure gauge.
  - c. Reels:
    - I. One primary reel
    - II. One (1) safety reel
    - III. At least one (1) gap reel or spool.
  - d. Lights:
    - I. One (1) primary light
    - II. Two (2) secondary lights
  - e. Cave Markers:
    - I. Three (3) line arrows
    - II. Three (3) Non directional markers
  - f. Dive slate or note pad.
  - g. A cutting tool is required
    - *NOTE: A backup cutting tool is recommended.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor inside the cave
  - b. There may be no more than two (2) students per Instructor on cave dives conducted to depths greater than 132 fsw (40 msw).
2. The Program must include:
  - a. If already NOT qualified as Rebreather Introductory to Cave Diver:
    - I. A minimum of 600 minutes of cave bottom time
    - II. Ten (10) rebreather cave dives, if previously qualified as a Rebreather Cavern Diver
  - b. If already qualified as Rebreather Introductory to Cave Diver:
    - I. A minimum of 360 minutes of cave bottom time
    - II. Six (6) rebreather cave dives, if already qualified as Rebreather Introductory Cave Diver.
  - c. Crossover, OC Cave to Rebreather Cave, program must include:
    - I. A minimum of 200 minutes of cave bottom time;
    - II. Two (2) rebreather cave dives.
      - *NOTE: This Program must include a confined water session.*
      - *NOTE: All CCR cave specific skills must be completed.*
  - d. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
  - e. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).
3. No dives may be conducted to depths greater than 132 fsw (40 msw).
4. Gas management rules:
  - a. Must stay within the bailout exit capacity to bring the diver safely to Open Water
  - b. Rule of Thirds for Oxygen, Diluent or Scrubber, whichever occurs first.
5. All appropriate safety or required decompression stops must be performed.

6. In most cases, no dives may be conducted to depths greater than 132 fsw (40 msw).
  - *NOTE: When conditions warrant it, (such as areas without access to caves suitable for training at depths of 132 fsw (40 msw) or shallower) Cave Diver Programs may be conducted to a maximum depth of 150 fsw (45 msw), provided the students are qualified as Advanced Recreational Trimix Diver or Technical Diver.*
  - *NOTE: When appropriate conditions are available (i.e., depths between 132 fsw (40 msw) and 200 fsw (60 msw), the Cave Diver and Normoxic Trimix Diver Program may be taught as a combined course, provided all of the Cave Diver qualifications are completed first and then followed by the Normoxic Trimix Diver qualifications.*
7. Provided there are no alternative locations, that allow the cave program to be taught in depths shallower than 132 fsw (40 msw)
  - a. Qualified Normoxic Trimix Divers and Rebreather Normoxic Trimix Divers may be trained in caves at depths between 100 fsw (30 msw) and 200 fsw (60 msw) provided there are no alternative locations, which allow the cave program to be taught in depths shallower than 132 fsw (40 msw).
  - b. Qualified Trimix Divers and Rebreather Trimix Divers may be trained in caves on Trimix at depths between 132 fsw (40 msw) and 300 fsw / 91 msw provided there are no alternative locations, that allow the cave program to be taught in depths shallower than 132 fsw (40 msw).
8. Environmental conditions allowing, a minimum of three (3) different caves must be included in a CCR or pSCR Cave Program.
  - *In event of flooding and other special circumstances, the three-cave requirement may be waived if approved by IAND, Inc. dba IANTD World Headquarters or the local Licensee of the Region the Program is conducted in.*
9. CCR Oxygen partial pressure may not exceed 1.3 ATA during the working portion of the dives
10. CCR Oxygen partial pressure may not exceed 1.4 ATA during the decompression portion of the dives.
  - At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.
11. CCR dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO<sub>2</sub> at the maximum depth.
12. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
13. All appropriate safety or required decompression stops must be performed.

## F. Water Skills Development

1. Swim with equipment to be used in Program until comfortable with it.
2. Perform a pre-dive "S" (safety) drill prior to starting dive.
3. Check all equipment for proper function.
4. Check equipment of each dive buddy.
5. Ascertain each team member is familiar with use and location of dive system components.
6. Rebreather:
7. Perform an in-water "S" (safety) drill. Use IANTD CCR "S" Drill Chart C-3401.
  - a. Leak check each team member's equipment.
  - b. Breathe underwater from the CCR and the bailout stage(s) / all regulators to ensure proper functioning.
  - c. Perform light checks.
  - d. Perform valve shutdowns combined with switches to bailout cylinder, including handing off bailout cylinders at least once each day as part of the "S" drills.
  - e. Buddies should check that all valves are back in proper position at end of drill.
  - f. On a first dive with a new partner, perform a gas sharing drill by handing off stages.
8. Confined or OW:
  - a. Swim 60 feet (18 meters) while simulating an out of gas situation,
  - b. Switch to bailout cylinder, remain at rest for three (3) breaths,
  - c. Swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute (static water swim rate).

9. Confined or OW:
  - a. Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet.
  - b. Upon meeting switch to the bailout stage
  - c. Complete the line circuit performing the bump and go technique.
    - ▶ *NOTE: Repeat above with diver handing off bailout cylinder*
10. Perform all skills other than direct ascents from the CCR Normoxic Trimix Diver water skills program
  - ▶ *NOTE: All CCR emergency skills must be performed in cave in addition to confined water.*
11. Out of Gas Scenario:
  - ▶ *NOTE: Exercise is to commence with Instructor at some point randomly selecting the out of gas diver.*
  - a. During a cave dive, at a point after turning the dive, perform a gas bailout drill exiting the cave for a reasonable distance / time;
  - b. The out of gas diver must then go to his bailout stage cylinder;
  - c. At some point have the buddies exchange bailout cylinders simulating that the diver who had bailed out had used 50% of the bailout stage cylinder.
    - ▶ *NOTE: This drill is to be repeated on different dives until all students have performed the drill.*
12. Emergency Exit Drill:
  - a. On a cave dive, with lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.
  - b. At some point the Instructor will choose one (1) of the divers to simulate a loop failure.
  - c. The diver with the failed loop must communicate the problem to a buddy via touch contact, and switch to his/her bailout cylinder.
    - ▶ *NOTE: This skill must be performed for a reasonable distance.*
    - ▶ *NOTE: Repeat this skill until all students have been the diver with the loop failure.*
    - ▶ *NOTE: Repeat this drill but use bump and go technique instead of touch contact.*
13. On at least three (3) dives, the student must simulate a solenoid or orifice or addition failure and, take corrective action.
14. Loop Failure Drill:
  - a. On at least three (3) occasions, a loop failure drill must be completed
  - b. On at least one (1) drill the diver must remain on the bailout stage cylinder for a minimum of 10 minutes.
    - ▶ *NOTE: The student is to note the bailout gas used and distance covered and at the end of the dive compute:*
      - ▶ How far under the same conditions could the diver have traveled on the bailout cylinder.
      - ▶ How much total gas it would take to bailout to the exit point of the cave.
      - ▶ How much oxygen and or other gas would be needed to complete the decompression
15. Perform a SCR bailout for at least five (5) minutes while on a cave dive.
16. Repeat all drills and skills from the CCR Skills tables while on cave dives.
17. Develop proficiency in a variety of propulsion techniques including:
  - a. Cave frog kick
  - b. Modified flutter kick
  - c. Shuffle kick
  - d. Pull and glide technique.
18. Demonstrate proficiency in use of reels and lines
19. Emergency Exit Drill:
  - a. On a cave dive, with lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.
    - ▶ *NOTE: Repeat this drill but use bump and go technique instead of buddy contact.*

20. Perform lost diver drills.
21. Perform lost line drills.
22. Demonstrate either on a cave dive or confined water the ability to drop and recover the decompression cylinder.
23. Navigation drills:
  - a. Conduct a traverse
  - b. Conduct a gap
  - c. Conduct a circuit dive.

► *NOTE: If conditions do not allow this possibility then it is to be simulated.*
24. It is recommended that the student attempt to exit the cave with lights off without the use of a line.

► ***NOTE: Instructor must prevent the student from getting into a silt-out away from the line or any other adverse situation during this drill.***



## CCR or pSCR Mine Diver & Tek Mine Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A CCR Mine Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For SCR: A pSCR Mine Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to train divers in safely mine diving

### B. Prerequisites

1. If entering through modular route:
  - a. For CCR Mine, Must be a qualified as:
    - I. IANTD RCCR Introductory Mine Diver or equivalent.
  - b. For SCR Mine Diver, Must be a qualified as:
    - I. IANTD RSCR Introductory Mine Diver or equivalent.
  - c. Must be qualified as IANTD CCR or SCR Advanced EANx Diver or higher or equivalent.
    - *NOTE: The CCR or SCR Advanced EANx Diver or CCR or SCR ART Diver program can NOT be done in conjunction with the CCR Mine Diver/pSCR Mine Diver Program.*
  - d. Must proof of a minimum of 50 logged rebreather dives.
2. If not qualified as RCCR/RCCR Introductory Mine Diver:
  - a. Must be qualified as IANTD CCR or SCR Advanced EANx Diver or higher or equivalent.
    - *NOTE: The CCR or SCR Advanced EANx Diver or CCR or SCR ART Diver program can NOT be done in conjunction with the CCR or pSCR Mine Diver Program.*
  - b. Must have proof of 100 rebreather dives.
3. If it is an OC Mine Diver to Rebreather Mine Diver Crossover:
  - a. Must be qualified as CCR or SCR Advanced EANx Diver or higher or equivalent on the unit to be used.
  - b. Must have 25 rebreather dives with 50 hours of dive time on the Rebreather.
4. Age Requirements
  - a. Must be a minimum of 18 years of age.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. Land drills:
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps.

### D. Equipment & Text Requirements

1. IANTD CCR Cave Diver Student Kit, for CCR Cave Level
2. Rebreather may use long hose on bailout at the instructors discretion
3. Rebreather divers at all course levels must have the IANTD CCR Diver "S" Drill chart C-3401.

4. General Equipment list:
  - a. Each gas source must have its own dedicated submersible pressure gauge.
  - b. Reels:
    - I. One primary reel
    - II. One (1) safety reel
    - III. At least one (1) gap reel or spool.
  - c. Lights:
    - I. One (1) primary light
    - II. Two (2) secondary lights
  - d. Cave Markers:
    - I. Three (3) line arrows
    - II. Three (3) Non directional markers
  - e. Dive slate or note pad.
  - f. A cutting tool is required
    - *NOTE: A backup cutting tool is recommended.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor inside the mine
    - I. There may be no more than two (2) students per Instructor on mine dives conducted to depths greater than 132 fsw (40 msw).
2. The Program must include:
  - a. If already NOT qualified as Rebreather Introductory to Cave Diver:
    - I. A minimum of 600 minutes of mine bottom time
    - II. Ten (10) rebreather mine dives, if previously qualified as a Rebreather Cavern Diver
  - b. If already qualified as Rebreather Introductory to Cave Diver:
    - I. A minimum of 360 minutes of mine bottom time
    - II. Six (6) rebreather mine dives, if already qualified as Rebreather Introductory Cave Diver.
  - c. Crossover, OC Mine to Rebreather Mine, program must include:
    - I. A minimum of 200 minutes of mine bottom time;
    - II. Two (2) rebreather mine dives.
      - *NOTE: This Program must include a confined water session.*
      - *NOTE: All CCR cave specific skills must be completed.*
3. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
4. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).
5. No dives may be conducted to depths greater than 132 fsw (40 msw).
6. Gas management rules:
  - a. Must stay within the bailout exit capacity to bring the diver safely to Open Water
  - b. Rule of Thirds from Oxygen, Diluent or Scrubber, whatever happen first.
7. All appropriate safety or required decompression stops must be performed.



8. In most cases, no dives may be conducted to depths greater than 132 fsw (40 msw).
  - *NOTE: When conditions warrant it, (such as areas without access to caves suitable for training at depths of 132 fsw (40 msw) or shallower) Mine Diver Programs may be conducted to a maximum depth of 150 fsw (45 msw), provided the students are qualified as Advanced Recreational Trimix Diver.*
  - *NOTE: When appropriate conditions are available (i.e., depths between 132 fsw (40 msw) and 200 fsw (60 msw), the Mine Diver and Normoxic Trimix Diver Program may be taught as a combined course, provided all of the Mine Diver qualifications are completed first and then followed by the Normoxic Trimix Diver qualifications.*
9. Provided there are no alternative locations, that allow the cave program to be taught in depths shallower than 132 fsw (40 msw)
  - a. Qualified Normoxic Trimix Divers and Rebreather Normoxic Trimix Divers may be trained in mines at depths between 100 fsw (30 msw) and 200 fsw (60 msw) provided there are no alternative locations, which allow the mine program to be taught in depths shallower than 132 fsw (40 msw).
  - b. Qualified Trimix Divers and Rebreather Trimix Divers may be trained in mines on Trimix at depths between 132 fsw (40 msw) and 300 fsw / 91 msw provided there are no alternative locations, that allow the mine program to be taught in depths shallower than 132 fsw (40 msw).
10. CCR Oxygen partial pressure may not exceed 1.3 ATA during the working portion of the dives
11. CCR Oxygen partial pressure may not exceed 1.4 ATA during the decompression portion of the dives.
  - At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.
12. CCR dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO<sub>2</sub> at the maximum depth.
13. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
14. All appropriate safety or required decompression stops must be performed.

## F. Water Skills Development

1. Swim with equipment to be used in Program until comfortable with it.
2. Perform a pre-dive "S" (safety) drill prior to starting dive.
3. Check all equipment for proper function.
4. Check equipment of each dive buddy.
5. Ascertain each team member is familiar with use and location of dive system components.
6. Rebreather:
7. Perform an in-water "S" (safety) drill. Use IANTD CCR "S" Drill Chart C-3401.
  - a. Leak check each team member's equipment.
  - b. Breathe underwater from the CCR and the bailout stage(s) / all regulators to ensure proper functioning.
  - c. Perform light checks.
  - d. Perform valve shutdowns combined with switches to bailout cylinder, including handing off bailout cylinders at least once each day as part of the "S" drills.
  - e. Buddies should check that all valves are back in proper position at end of drill.
  - f. On a first dive with a new partner, perform a gas sharing drill by handing off stages.
8. Confined or OW:
  - a. Swim 60 feet (18 meters) while simulating an out of gas situation,
  - b. Switch to bailout cylinder, remain at rest for three (3) breaths,
  - c. Swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute (static water swim rate).
9. Confined or OW:
  - a. Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet.
  - b. Upon meeting switch to the bailout stage
  - c. Complete the line circuit performing the bump and go technique.
    - *NOTE: Repeat above with diver handing off bailout cylinder*

10. Perform all skills other than direct ascents from the CCR Normoxic Trimix Diver water skills program
  - ▶ *NOTE: All CCR emergency skills must be performed in cave in addition to confined water.*
11. Out of Gas Scenario:
  - ▶ *NOTE: Exercise is to commence with Instructor at some point randomly selecting the out of gas diver.*
  - a. During a mine dive, at a point after turning the dive, perform a gas bailout drill exiting the mine for a reasonable distance / time;
  - b. The out of gas diver must then go to his bailout stage cylinder;
  - c. At some point have the buddies exchange bailout cylinders simulating that the diver who had bailed out had used 50% of the bailout cylinder.
    - ▶ *NOTE: This drill is to be repeated on different dives until all students have performed the drill.*
12. Emergencie Exit Drill:
  - a. On a mine dive, with lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.
  - b. At some point the Instructor will choose one (1) of the divers to simulate a loop failure.
  - c. The diver with the failed loop must communicate the problem to a buddy via touch contact, and switch to his/her bailout cylinder.
    - ▶ *NOTE: This skill must be performed for a reasonable distance.*
    - ▶ *NOTE: Repeat this skill until all students have been the diver with the loop failure.*
    - ▶ *NOTE: Repeat this drill but use bump and go technique instead of touch contact.*
13. On at least three (3) dives, the student must simulate a solenoid or orifice or addition failure and, take corrective action.
14. Loop Failure Drill:
  - a. On at least three (3) occasions, a loop failure drill must be completed
  - b. On at least one (1) drill the diver must remain on the bailout stage cylinder for a minimum of 10 minutes.
    - ▶ *NOTE: The student is to note the bailout gas used and distance covered and at the end of the dive compute:*
      - ▶ How far under the same conditions could the diver have traveled on the bailout cylinder.
      - ▶ How much total gas it would take to bailout to the exit point of the cave.
      - ▶ How much oxygen and or other gas would be needed to complete the decompression
15. Perform a SCR bailout for at least five (5) minutes while on a mine dive.
16. Repeat all drills and skills from the CCR Skills tables while on mine dives.
17. Develop proficiency in a variety of propulsion techniques including:
  - a. Cave frog kick
  - b. Modified flutter kick
  - c. Shuffle kick
  - d. Pull and glide technique.
18. Demonstrate proficiency in use of reels and lines
19. Emergencie Exit Drill:
  - a. On a mine dive, with lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.
    - ▶ *NOTE: Repeat this drill but use bump and go technique instead of buddy contact*
20. Perform lost diver drills.
21. Perform lost line drills.
22. Demonstrate either on a mine dive or confined water the ability to drop and recover the decompression cylinder.

23. Navigation drills:

- a. Conduct a traverse
- b. Conduct a gap
- c. Conduct a circuit dive.

► *NOTE: If conditions do not allow this possibility then it is to be simulated.*

24. It is recommended that the student attempt to exit the mine with lights off without the use of a line.

► ***NOTE: Instructor must prevent the student from getting into a silt-out away from the line or any other adverse situation during this drill.***



**CCR or pSCR Adv. Cave or Mine - DPV Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach this course?**

- For Adv, Cave - DPV:
  - For CCR: A CCR Adv. Cave - DPV Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Cave - DPV Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For Adv, Mine - DPV:
  - For CCR: A CCR Adv. Mine - DPV Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Mine - DPV Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program is designed to provide advanced training in cave or mine diving skills to the experienced, certified, responsible cave diver who wishes to conduct dives that warrant Diver Propulsion Vehicle use and techniques.
2. Expose cave or mine divers to conservation concerns and ethical responsibilities that present themselves during Diver Propulsion Vehicle uses either for extended penetration, touring, or exploration.

**B. Prerequisites**

1. Certifications requirements:
  - a. For Adv. Cave - DPV, Must be a qualified as:
    - I. For CCR: IANTD CCR Cave Diver or equivalent.
    - II. For pSCR: IANTD pSCR Cave Diver or equivalent
  - b. For Adv. Mine - DPV, Must be a qualified as:
    - I. For CCR: IANTD CCR Mine Diver or equivalent
    - II. For pSCR: IANTD pSCR Mine Diver or equivalent.
2. Age requirement:
  - a. Must be minimum or 18 years of age.
3. Dive experience:
  - a. For Cave:
    - I. Must proof of a minimum of 50 logged Rebreather Cave Dives and 50 Cave Diving hours on the rebreather to be used.
  - b. For Mine:
    - I. Must proof of a minimum of 50 logged Rebreather Mine Dives and 50 Mine Diving hours on the rebreather to be used.

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All Lecture and theory material must be completed including but not limited to:
  - a. Motives risks for Diver Propulsion Vehicle diving.
  - b. Equipment configuration and streamlining techniques for Diver Propulsion Vehicle diving.

- c. Procedures and techniques for Diver Propulsion Vehicle diving along with reasons for Diver Propulsion Vehicle use in the cave environment.
- d. Task loading and dive / gas planning needs for Diver Propulsion Vehicle diving.
- e. Gas sharing and towing techniques.
- f. Conservation considerations for Diver Propulsion Vehicle handling, minimizing cave or mine impact, considerations for the increased range of penetration.
- g. Safe charging, transport, and maintenance procedures for Diver Propulsion Vehicles

## D. Equipment & Text Requirements

1. INTD CCR Cave Diver Student Kit, for CCR Cave Level.
  - *Fulfill all Equipment Requirements as specified in the INTD Rebreather Diver Programs - General Standards*
2. Rebreather may use long hose on bailout at the instructors discretion
3. General Equipment list:
  - a. All Equipment Requirements listed in the INTD CCR or pSCR Cave Diver Program.
  - b. Suitable DIVER PROPULSION VEHICLE for dives planned
  - c. Specialty equipment as specified in the INTD CCR or pSCR Cave Diver Specialty Student Workbook.

## E. Program Limits

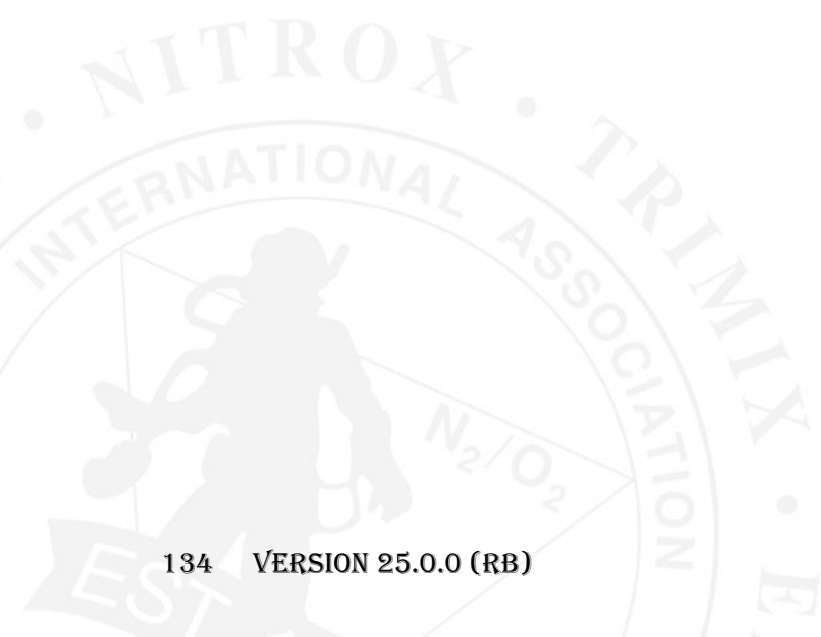
1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor inside the cave or mine.
2. This program must include:
  - a. A minimum of 240 minutes of in rebreather cave Diver Propulsion Vehicle bottom time.
  - b. Four (4) rebreather advanced cave Diver Propulsion Vehicle dives
3. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
4. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).
5. No dives may be conducted to depths greater than the qualification of the student.
6. CCR dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO<sub>2</sub> at the maximum depth.
7. All dives must be planned using the best gas in consideration of PO<sub>2</sub> and decompression requirements.
8. All dives must be completed within both the INTD oxygen CNS% and OTU limits.
9. All appropriate safety or required decompression stops must be performed.

## F. Water Skills Development

1. Divers on CCR complete the INTD "S" drill chart C-3401 prior to all water sessions. Others complete "S" drill procedures.
2. While towing the Diver Propulsion Vehicle, demonstrate proficiency in the following propulsion techniques:
  - a. Modified flutter
  - b. Modified frog
  - c. Modified dolphin
  - d. Standard shuffle kicks
3. Demonstrate the ability to safely and without contact to the cave or mine drop and recover Diver Propulsion Vehicles on all dives
  - *NOTE: Exception when performing circuits or traverses*
4. Demonstrate perfection of buoyancy and trim while diving using a Diver Propulsion Vehicle.
5. On at least one (1) occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or real out of gas situation.

## INTERNATIONAL ASSOCIATION OF NITROX & TECHNICAL DIVERS

6. Take time data for the following scenarios for the distance of 100 feet or 50 meters:
  - a. Diver swimming pace without Diver Propulsion Vehicle
  - b. Diver swimming pace with Diver Propulsion Vehicle in cruise speed
  - c. Diver swimming pace with Diver Propulsion Vehicle above cruise speed
  - d. Diver swimming pace towing the Diver Propulsion Vehicle
  - e. Diver swimming pace with Diver Propulsion Vehicle towing the diver only
  - f. Diver swimming pace with Diver Propulsion Vehicle towing the diver and his/her Diver Propulsion Vehicle.
7. Practice of ALL Emergency Scenarios
8. Bailout scenario:
  - a. Diver go to bailout;
  - b. Simulate 50% usage and switch bailout between the team





## CCR or pSCR Adv. Cave or Mine - Sidemount Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For Adv, Cave - Sidemount:
  - For CCR: A CCR Adv. Cave - Sidemount Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Cave - Sidemount Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For Adv, Mine - Sidemount:
  - For CCR: A CCR Adv. Mine - Sidemount Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Mine - Sidemount Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to train Advanced Mine Rebreather Sidemount Divers or higher to use his/her knowledge to safely mine dive and navigate in the mine.

### B. Prerequisites

1. Certifications requirements:
  - a. For CCR Adv. Cave - Sidemount, Must be a qualified as:
    - I. IANTD CCR Cave Diver or equivalent.
  - b. For pSCR Adv. Mine - Sidemount, Must be a qualified as:
    - I. IANTD pSCR Mine Diver or equivalent.
2. Age requirement:
  - a. Must be minimum 18 years of age.
3. Dive experience:
  - a. Rebreather Cave/Mine Diver
    - I. Must have a minimum of 100 cave/mine dives or 100 hours in mine in which at least 50 dives or 50 hours must have been on CCR.
  - b. Sidemount Diver:
    - i. Must have 50 Sidemount dives or 50 hours of Sidemount diving experience or 100 hours sidemount diving in which at least 25 dives or 25 hours sidemount were cave/mine dives.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
  - a. All students must be taught the concept of gas management / matching where applicable
2. Land Drills
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps / lost lines

## D. Equipment & Text Requirements

1. Rebreather may use long hose on bailout at the instructors discretion
2. General Equipment list:
  - a. Decompression stage cylinder(s), if used, must be appropriately labeled.
  - b. Decompression stage cylinder(s) may be used if needed or as training exercise , and may be dropped (staged) if applicable.
  - c. All cylinders must be labeled with gas being used and MOD.
  - d. Each gas source must have its own dedicated submersible pressure gauge.
  - e. A primary and backup dive planning/monitoring device such as bottom timer or computer or decompression capable rebreather controller.
    - ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
  - f. Reels:
  - g. One primary reel per dive team
  - h. One (1) or more safety reel
  - i. One (1) or more gap reels
  - j. Lights:
  - k. One (1) primary light
  - l. Two (2) or more secondary lights
  - m. Cave Markers:
  - n. Three (3) line arrows
  - o. Three (3) Non directional markers
  - p. Dive slate or note pad.
  - q. Two cutting tools are required

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor inside the mine.
2. This program must include:
  - a. A minimum of 500 minutes of in advanced mine rebreather sidemount bottom time must be completed in mines
  - b. Eight (08) advanced mine rebreather sidemount dives.
3. In most cases, no dives may be conducted to depths greater than 132 fsw (40 msw).
  - ▶ NOTE: When conditions warrant it, (such as areas without access to mines suitable for training at depths of 132 fsw (40 msw) or shallower) Advanced Mine Rebreather Sidemount Diver Programs may be conducted to:
    - ▶ A maximum depth of 150 fsw (45 msw), provided the students are qualified as Adv. Recreational Trimix Diver OR
    - ▶ A maximum depth of 140 fsw (42 msw) provided the students are qualified as Adv.EANx Diver.
4. CCR Oxygen partial pressure may not exceed 1.3 ATA during the working portion of the dives
5. CCR Oxygen partial pressure may not exceed 1.4 ATA during the decompression portion of the dives.
  - a. At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.
6. CCR dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO2 at the maximum depth.

7. Bailout gas is must be a minimum of 80 CuFt (2,265 liters)
  - a. The exact amount of bailout will depend o the distance/depth/duration of the dive
    - ▶ *NOTE: Diver can choose to divide the amount of bailout gas into two (2) or more cylinders.*
      - ▶ *Note! If a single cylinder is used as the diluents source and for bailout a dual outlet valve is required It is recommended that a dedicated diluents souce and bailout gas be used.*
      - ▶ *NOTE: On CCR it is recommended (not required) that a dedicated to the rebreather:*
        - ▶ *Oxygen cylinder of 13 cubic feet (2 L) or larger be carried.*
        - ▶ *Diluent cylinder of 13 cubic feet (2L) or larger be carried*
8. Dedicated Diluent PO<sub>2</sub> must be no higher than 1.1 ata at the maximum depth
9. Decompression Gas mixtures:
  - a. Any EAN mixture from a minimum of 50% oxygen to a maximum of 100% oxygen during decompression and can be use to accelerate decompression schedules accordingly.
  - b. *NOTE: The breathing PO<sub>2</sub> must not be greater than 1.5 ata*
10. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
11. All appropriate safety or required decompression stops must be performed.
12. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
13. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).

## F. Water Skills Development

1. Swim with equipment to be used in Program until comfortable with it.
2. Perform an in-water “S” (safety) drill.
3. Leak check each team member’s equipment.
4. Breathe underwater from the CCR and the bailout stage(s) / all regulators to ensure proper functioning.
5. Perform light checks.
6. Perform valve shutdowns combined with switches to bailout cylinder, including handing off bailout cylinders at least once each day as part of the “S” drills.
7. Buddies should check that all valves are back in proper position at end of drill.
8. On a first dive with a new partner, perform a gas sharing drill by handing off stages.
9. Confined or OW:
  - a. Swim 60 feet (18 meters) while simulating an out of gas situation,
  - b. Switch to bailout cylinder, remain at rest for three (3) breaths,
  - c. Swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute.
  - d. Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet.
  - e. Upon meeting switch to the bailout stage
  - f. Complete the line circuit performing the bump and go technique
    - ▶ *NOTE: Repeat above with diver handing off bailout cylinder*
  - g. All CCR emergency skills must be preformed in cave in addition to confined water.
  - h. Lost Line drill
  - i. Lost diver drill
10. In mine drills
  - ▶ *NOTE: Exercise is to commence with Instructor at some point randomly selecting the out of gas diver.*
  - a. During a mine dive, at a point after turning the dive, perform a gas bailout drill exiting the mine from the maximum penetration point;
  - b. At some point have the buddies exchange bailout cylinders simulating that the diver who had bailed out had used 50% of the bailout stage cylinder. Or use long hose.
  - ▶ *NOTE: This drill is to be repeated on different dives until all students have performed the drill.*

11. Emergency Exit Drill:
  - a. On a mine dive, with eyes closed or lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.
  - b. At some point the Instructor will choose one (1) of the divers to simulate a loop failure.
  - c. The diver with the failed loop must communicate the problem to a buddy via touch contact, and switch to his/her bailout cylinder.
    - ▶ *NOTE: This skill must be performed for a reasonable distance.*
    - ▶ *NOTE: Repeat this skill until all students have been the diver with the loop failure.*
    - ▶ *NOTE: Repeat this drill but use bump and go technique instead of touch contact.*
12. On at least one(1) dives, the student must simulate a solenoid or orifice or addition failure and, take corrective action.
13. Loop Failure Drill:
  - a. On at least two (2) occasions, a loop failure drill must be completed
  - b. On at least one (1) drill the diver must do bailout from the maximum point of penetration.
    - ▶ *NOTE: The student is to note the bailout gas used and distance covered and at the end of the dive compute: How much total gas did it take to bailout to the exit point of the cave.*
14. Perform a SCR bailout from the maximum point of penetration while on a cave dive.
15. Repeat all drills and skills from the CCR Skills tables while on cave dives.
16. Develop proficiency in a variety of propulsion techniques including
  - a. Cave frog kick
  - b. Modified flutter kick
  - c. Shuffle kick
  - d. Pull and glide technique.
  - e. Specialized Sidemount techniques such as:
  - f. Sidemount CCR pushed through restricted area
  - g. Bailout cylinders pushed through restriction area
  - h. Both pushed through restricted area
17. Demonstrate proficiency in use of reels and lines
18. On a mine dive, exit mine with eyes closed or lights off maintaining contact with buddy and dive line using touch communications.
  - ▶ *NOTE: On a later dive repeat using bump and go technique rather than touch contact*
19. Perform lost diver drills.
20. Perform lost line drills.
21. Demonstrate on all mine dives the ability to drop and recover the decompression cylinder

## CCR or pSCR Adv. Cave or Mine - Survey Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For Adv, Cave - Survey:
  - For CCR: A CCR Adv. Cave - Survey Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Cave - Survey Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For Adv, Mine - Survey:
  - For CCR: A CCR Adv. Mine - Survey Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Mine - Survey Instructor or higher may teach the course provided they are an diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to provide advanced training in cave or mine diving skills to the experienced, certified, responsible cave or mine divers who wishes to conduct dives while surveying an underwater cave or mine.
2. Expose cave or mine divers to conservation concerns and ethical responsibilities presented during collection of survey data.

### B. Prerequisites

1. Certifications requirements:
  - a. For Adv. Cave - Survey, Must be a qualified as:
    - I. For CCR: IANTD CCR Cave Diver or equivalent.
    - II. For pSCR: IANTD pSCR Cave Diver or equivalent
  - b. For Adv. Mine - Survey, Must be a qualified as:
    - I. For CCR: IANTD CCR Mine Diver or equivalent
    - II. For pSCR: IANTD pSCR Mine Diver or equivalent.
- *NOTE: RCCR or Recreational SCR Divers may not do this program*
2. Age requirement:
  - a. Must be minimum 18 years of age.
3. Dive experience:
  - a. For Cave:
    - I. Must proof of a minimum of 25 logged Rebreather Cave Dives and 35 Cave Diving hours on the rebreather to be used.
  - b. For Mine:
    - I. Must proof of a minimum of 25 logged Rebreather Mine Dives and 35 Mine Diving hours on the rebreather to be used.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All Lecture and theory material must be completed including but not limited to:
  - a. Motives and risks involved in survey diving.
  - b. Equipment configuration, additional equipment necessary, and streamlining techniques for survey diving.

- c. Procedures and techniques for collecting survey data for cartography of different grades of maps.
  - d. Task loading and dive / gas planning needs for survey diving.
  - e. Gas sharing and additional communication techniques during survey data collection.
  - f. Conservation considerations for collecting survey data and minimizing environment impact.
  - g. Reasons for collecting data in the environment.
  - h. Introduction to techniques used to convert collected survey data into accurate map of different grades.
3. Land drills:
- a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps
  - d. Practice proper techniques in survey.
  - e. Proper measures and drawing notes

## D. Equipment & Text Requirements

1. IANTD CCR Cave Diver Student Kit, for CCR Cave Level.
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards*
2. *Rebreather may use long hose on bailout at the instructors discretion*
3. General Equipment list:
  - a. All Equipment Requirements listed in the IANTD CCR or pSCR Cave Diver Program.
  - b. Suitable survey slate and equipment needed to record data.
  - c. Specialty equipment as specified in the IANTD CCR or pSCR Cave Diver Specialty Student Workbook.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor inside the cave or mine
2. This program must include:
  - a. A minimum of 240 minutes of in rebreather cave or mine survey bottom time
  - b. Four (4) rebreather advanced cave or mine survey dives
3. Each team must carry stages or adequate bailout gas or bailout rebreathers to get a minimum of 1½ divers to the surface on Rebreather Dives.
4. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).
5. No dives may be conducted to depths greater than the qualification of the student.
6. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives
7. Decompression gases and dive gases maybe used up to the diver's qualification level.
  - a. Oxygen partial pressure may not exceed 1.61 ATA during the decompression portion of the dives.
8. CCR dives must be conducted using an on board diluent mixture containing not more than 1.1 ATA PO<sub>2</sub> at the maximum depth.
9. All dives must be planned using the best gas in consideration of PO<sub>2</sub> and decompression requirements.
10. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
11. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
12. All appropriate safety or required decompression stops must be performed.



## F. Environment

1. For Adv. Cave:
  - a. Training must be done in Cave Environment;
2. For Adv. Mine:
  - a. Training must be done in Mine Environment

## G. Water Skills Development

1. Demonstrate proficiency in the following propulsion techniques: modified flutter, modified frog, modified dolphin, and standard shuffle kicks when appropriate during a survey dive.
2. Demonstrate the ability to safely and without contact to the cave or mine collect survey data and stay in full communication with team.
3. Demonstrate perfection of buoyancy, trim and environmental awareness while collecting survey data.
4. On at least one (1) occasion, exit the cave during a simulated zero visibility situation while avoiding entanglement or loss of the guideline and maintain team using:
  - a. Touch Contact OR
  - b. Bump & Go.
5. Practice of ALL Emergency Scenarios
6. Bailout scenario:
  - a. Diver go to bailout;
  - b. Simulate 50% usage and switch bailout between the team



## CCR or pSCR Elite Tek Cave Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26)**

### A. Purpose

1. This certification has been designed to provide cave divers with the highest recognition in the cave level before entering the professional diving circle in teaching.

### B. Prerequisites

1. Certifications requirements:
  - a. Must be certified as:
    - I. IANTD CCR or pSCR Cave Diver or equivalent.
    - II. Must have the 3 out of the 4 following certifications
      - i. IANTD CCR or pSCR Adv. Cave - Sidemount Diver
      - ii. IANTD CCR or pSCR Adv. Cave - DPV Diver
      - iii. IANTD CCR or pSCR Adv. Cave - Survey Diver
      - iv. IANTD Tek CCR or SCR Essentials Diver
2. Age requirement:
  - a. Must be a minimum of 18 years of age without guardian approval.
3. Dive experience:
  - a. Proof of a minimum of 75 non-training logged cave dives

### C. Program Content

1. N/A

### D. Equipment Requirements

1. N/A

### E. Program Limits

1. N/A

### F. Water Skills Development

1. There is no water skills required.

### G. Application Procedure

1. Fill & submit the Elite Technical Cave Diver Application Form to an IANTD Instructor, HQ or local licensee.



## CCR or pSCR Elite Tek Mine Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26)**

### A. Purpose

1. This certification has been designed to provide cave divers with the highest recognition in the cave level before entering the professional diving circle in teaching.

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified in:
    - I. IANTD CCR or pSCR Mine Diver or equivalent.
    - II. Must have 3 of the 4 following certifications:
      - i. IANTD CCR or pSCR Adv. Mine - Sidemount Diver.
      - ii. IANTD CCR or pSCR Adv. Mine - DPV Diver
      - iii. IANTD CCR or pSCR Adv. Mine - Survey Diver
      - iv. IANTD Tek CCR or SCR Essentials Diver
2. Age requirement:
  - a. Must be a minimum of 18 years of age without guardian approval.
3. Dive experience:
  - a. Proof of a minimum of 75 non-training logged cave dives

### C. Program Content

1. N/A

### D. Equipment Requirements

1. N/A

### E. Program Limits

1. N/A

### F. Water Skills Development

1. There is no water skills required.

### G. Application Procedure

1. Fill & submit the Elite Technical Cave Diver Application Form to an IANTD Instructor, HQ or local licensee.



## RCCR or RSCR Wreck Diver

▶ **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- ▶ For CCR: A Recreational RCCR Wreck Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For SCR: A Recreational RSCR Wreck Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop wreck and cavern diving skills within the limits of light penetration and to insure that divers are aware of self-responsibility and capable of risk management in overhead environments.

### B. Prerequisites

1. Certifications requirements:
  - a. For CCR: Must be a qualified as IANTD Recreational CCR Diver or equivalent.
  - b. For SCR: Must be a qualified as IANTD Recreational SCR Diver or equivalent
    - ▶ *NOTE: Fully qualified CCR or full SCR divers may not take this program*
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Proof of a minimum of 20 dives 25 hours on the rebreather to be used.
    - ▶ For Crossover from Wreck Diver (Open Circuit) to RCCR or RSCR Wreck Diver:
      - ▶ Proof of a minimum of 10 dives 15 hours on the rebreather to be used.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - ▶ IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. This program must include:
  - a. Academic Classes.
  - b. Land Drills:
    - I. Use of guide lines
    - II. Practice running the line and making tie wraps
    - III. Following guide lines with and without vision.
    - IV. Simulation of silt-outs.
  - c. Confined water session(s).
  - d. Open Water Dives.
4. Students must pass the specific IANTD Specific test with a minimum score of 80%.

### D. Equipment & Text Requirements

1. IANTD Wreck Diver Student Kit (TBA)
  - a. If this program is combined with other IANTD programs:
    - I. IANTD Diver Student Manual and Student Kit or equivalent text(s) approved in writing by the Board of Directors (written approval will be issued by IANTD World Headquarters) must be also acquired.
  - ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*

2. Must carry a minimum of 30 cubic feet (4 L) cylinder for bailout.
3. A 39 inch hose or longer to a maximum of 7 feet hose is to be attached to the bailout second stage.
4. Primary reel and/or safety reel.
5. Two lights:
  - a. One (1) Primary
  - b. One (1) Backup

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
2. The Program must include:
  - a. A minimum of 100 minutes of OW bottom time.
    - I. ALL dives must be completed in the overhead environment
  - b. A minimum of four (4) Rebreather dives
    - *NOTE: Even if the time requirements are exceeded, a minimum of four (4) Rebreather dives must be made.*
    - *NOTE: The bottom time on each dive shall not be less than 20 minutes.*
3. Unobstructed exit / surface light must always be visible.
4. No dives may be conducted to depths greater than diver's previous certification level.
5. The Rule of Thirds must be applied for the Scrubber, Oxygen and Diluent, from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
6. Rebreather Diver must stay within bailout penetration of a 30 cubic foot (4 L) cylinder.
7. All appropriate safety or required decompression stops must be performed.

## F. Water Skills Development

1. Become proficient in the following propulsion techniques:
  - a. Modified flutter
  - b. Modified frog,
  - c. Modified dolphin
  - d. Standard shuffle kick.
2. Demonstrate buoyancy control by combining with following skills.
  - a. A timed ascent at a rate of 20 ft. (6 m) per minute.
  - b. Hover at constant depth for 3 minutes.
3. Practice of rebreather diving equipment configuration including redundancy and streamlining.
4. Proper, onboard and offboard, cylinders labeling with IANTD sticker,
5. Swim a distance of 75 feet (23 meters) without a mask.
6. Swim in a simulated out of air situation:
  - a. Without breathing and exhaling slowly swim a distance of at least 40 feet (12 meters), and commence gas using the appropriate rebreather gas management drill for out of air diver.
  - b. While gas sharing continue to swim for a distance of at least 2 minutes while maintaining a swim rate of approximately 60 feet (18 meters) per minute.
7. Determine SAC rate and RMV.
8. Close and open, onboard and offboard, cylinder valves on all dives.
9. Remove and replace cylinder and rebreather at surface on at least one (1) dive.
10. Practice use of reel and line.
11. In the overhead environment practice:
  - a. Running the line
  - b. Making tie wraps.

12. With lights off, follow a guideline in the overhead environment.
13. Share breathing gas via bailout cylinder regulator while following the guideline, both with eyes open and with lights off.
14. Deploy a DSMB or Lift Bag in less than two (2) minutes.
15. Perform an “S” drill prior to commencement of all dives.





## CCR or SCR Tek Lite Wreck Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Tek CCR Wreck Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A Tek pSCR Wreck Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to train wreck divers in wreck penetration diving and the utilization of EANx for wreck exploration and the use of EANx and oxygen for decompression.

### B. Prerequisites

1. Certification Requirements
  - a. Option 1:
    - I. For CCR, must be certified in:
      - i. IANTD RCCR Wreck Diver or IANTD RCCR Cavern Diver or higher or equivalent
      - ii. IANTD RCCR Deep Diver or higher or equivalent
      - iii. Must proof a minimum of 40 logged rebreather dives with qualification as IANTD RCCR Wreck or RCCR Cavern Diver.
    - II. For SCR, must be certified in:
      - i. IANTD RSCR Wreck Diver or IANTD RSCR Cavern Diver or higher or equivalent
      - ii. IANTD RSCR Deep Diver or higher or equivalent
      - iii. Must proof a minimum of 40 logged rebreather dives with qualification as IANTD RSCR Wreck or RSCR Cavern Diver.
  - b. Option 2:
    - I. For CCR, must be certified in:
      - i. IANTD CCR Advanced EANx Diver or higher or equivalent
      - ii. Must proof of a minimum of 70 logged rebreather dives.
    - II. For SCR, must be certified in:
      - i. IANTD SCR Advanced EANx Diver or higher or equivalent
      - ii. Must proof of a minimum of 70 logged rebreather dives.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook.
  - *If not qualified as CCR or SCR Advanced EANx or higher, the CCR or SCR Advanced EANx and or CCR or pSCR Advanced Recreational Trimix Diver Program must be done in conjunction with the Tek Lite CCR or pSCR Wreck Diver Program.*
2. All students must be taught the concept of gas matching.
3. All wreck lectures must be completed and a score of 80% on the written exam.
4. Land Drills:
  - a. Basic use of safety lines and reels
  - b. Simulation of wire entanglement must be practiced.

## D. Equipment & Text Requirements

1. IANTD Tek Lite Wreck Diver Student Kit.
2. Rebreather Texts:
  - a. IANTD Rebreather Wreck Diver Student Kit
3. *Rebreather may use long hose on bailout at the instructors discretion*
4. A primary and backup dive planning/monitoring device such as bottom timer or computer
5. IANTD Dive Tables must be carried on all dives as a primary decompression reference or as a form of backup.
6. Two reels:
  - a. One (1) for penetration
  - b. One (1) for decompression / DSMB or Lift Bag deployment.
7. A DSMB or Lift Bag of at least 50-lb (22.5-kg) lift capacity for a decompression marker.
8. Two lights:
  - a. One (1) primary light
  - b. One (1) backup safety light.
9. A backup cutting tool is recommended.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor inside the wreck
2. This program must include:
  - a. A minimum of 240 minutes of rebreather wreck run time
  - b. Six (6) Tek CCR or pSCR Wreck dives
  - c. No dives may be conducted to depths greater than divers previously qualification.
3. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
4. The set point of the CCR must not exceed 1.3 ATA, except for failed open solenoid drills.
5. At safety or required deco stops the set point may be increased to 1.4 ATA.
  - *NOTE: At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.*
6. Diluent PO<sub>2</sub> shall be not greater than 1.1. ATA at the maximum depth
7. Decompression Gas mixtures:
  - a. One (1) stage decompression cylinder containing oxygen PO<sub>2</sub> no greater than 1.5 atm and appropriately labeled.
8. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
9. The Rule of Thirds must be applied from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
10. All appropriate safety or required decompression stops must be performed.
11. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).

## F. Water Skills Development

1. Divers on CCR complete the IANTD "S" drill
2. Pre-dive checks including Pre-dive Breathe.
3. Switch to low set point for descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
4. Switch to planned set point once the diver is at the planned dive depth or set point change depth.
5. In water leak and buddy leak check.
  - *If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - *Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
6. Descend and insure gas addition is made.

7. Confined or OW:
  - a. Swim 60 feet (18 meters) while simulating an out of gas situation
  - b. Switch to bailout cylinder, remain at rest for three (3) breaths
  - c. Swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute.
8. Confined or OW:
  - a. Two divers 50 feet (15 meters) apart must swim along a line circuit with not taking a breath, while slowly exhaling until they meet.
  - b. Upon meeting switch to the bailout stage
  - c. Swim using touch contact technique until the line circuit is completed.
9. Develop proficiency in a variety of propulsion techniques including:
  - a. Cave frog kick
  - b. Modified flutter kick
  - c. Shuffle kick
  - d. Pull and glide technique.
10. Demonstrate proficiency in use of reels and lines.
11. Out of Gas Scenario - During a wreck dive, at a point after turning the dive, perform a gas sharing drill exiting the wreck for a reasonable distance / time.
  - a. Exercise is to commence with Instructor at some point randomly selecting the out of gas diver, who must then switch to bailout cylinder

► This drill is to be repeated on different dives until all students have been practice exit the wreck breathing from the bailout.
12. On a wreck dive, exit wreck with lights of maintaining contact with buddy and dive line using touch communications.
 

► Repeat using bump and go technique.
13. Perform lost diver drills.
14. Demonstrate either on a wreck dive or in confined water the ability to drop and recover a decompression stage cylinder.
 

► **NOTE: NEVER do this drill dropping bailout cylinders.**
15. On at least three (3) dives, the student must simulate a solenoid failure and, take corrective action.
16. Loop Failure Drill:
  - a. On at least three (3) occasions, a loop failure drill must be completed
  - b. On at least one (1) drill the diver must remain on the bailout stage cylinder for a minimum of 5 minutes.
 

► NOTE: The student is to note the bailout gas used and distance covered and at the end of the dive compute:

    - How far under the same conditions could the diver have traveled on the bailout cylinder.
    - How much total gas it would take to bailout to the exit point of the wreck.
    - How much oxygen and or other gas would be needed to complete the decompression
17. Repeat all drills and skills from the CCR Skills Tables C-3400 1&2 while on wreck dives
18. Practice of ALL Emergency Scenarios
19. Bailout scenario:
  - a. Diver go to bailout;
  - b. Simulate 50% usage and switch bailout between the team

**CCR or pSCR Tek Wreck Diver**

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

**Who may teach this course?**

- For CCR: A Tek CCR Wreck Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A Tek pSCR Wreck Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program is designed to train divers in extended wreck penetration diving and the technical utilization of EANx for wreck exploration and the use of EANx and oxygen for decompression.

**B. Prerequisites**

1. Certification Requirements
  - a. For CCR: Must be a qualified as IANTD CCR Adv. EANx Diver or higher or equivalent.
  - b. For SCR: Must be a qualified as IANTD pSCR Adv. EANx Diver or higher or equivalent
  - c. CCR or pSCR Adv. EANx Diver or higher
  - d. Must have proof of 100 rebreather dives.
  - e. If it is an OC Technical Wreck Diver to Rebreather Wreck Diver Crossover:
    - i. Must be qualified as CCR or SCR Advanced EANx Diver or higher on the unit to be used
    - ii. Must have 25 rebreather dives with 50 hours of dive time on the Rebreather.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
  - *NOTE: This course may be taught in conjunction with a Rebreather Normoxic Trimix Diver or Rebreather Trimix Diver*
2. All wreck lectures must be completed and a score of 80% on the written exam
3. All students must be taught the concept of gas matching.
4. Land Drills:
  - a. Basic use of safety lines and reels
  - b. Simulation of wire entanglement will be practiced.

**D. Equipment & Text Requirements**

1. Rebreather Texts:
  - a. IANTD Rebreather Wreck Diver Student Kit
2. *Rebreather may use long hose on bailout at the instructors discretion*
3. A primary and backup dive planning/monitoring device such as bottom timer or computer
4. IANTD Dive Tables must be carried on all dives as a primary decompression reference or as a form of backup.
5. Two reels:
  - a. One (1) for penetration
  - b. One (1) for decompression / DSMB or Lift Bag deployment.
6. A DSMB or Lift Bag of at least 50-lb (22.5-kg) lift capacity for a decompression marker.

7. Two lights:
  - a. One (1) primary light
  - b. One (1) backup safety light.
8. A backup cutting tool is recommended.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than three (3) students per Instructor inside the wreck
2. This program must include:
  - a. A minimum of 240 minutes of rebreather wreck run time
  - b. Six (6) Tek CCR or pSCR Wreck dives
  - c. If already qualified as IANTD Tek Lite CCR or pSCR Wreck or equivalent, this program must include:
    - I. A minimum of 120 minutes of rebreather wreck run time
    - II. Three (3) Tek CCR or pSCR Wreck dives
3. Depth limits:
  - a. No dives may be conducted to depths greater than divers previously qualification.
4. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
5. The set point of the CCR must not exceed 1.3 ATA, except for failed open solenoid drills.
6. At safety or required deco stops the set point may be increased to 1.4 ATA.
  - ▶ *NOTE: At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.*
7. Diluent PO<sub>2</sub> shall be not greater than 1.1. ATA at the maximum depth
8. Decompression Gas mixtures:
  - a. In addition to the bailout cylinder(s), a maximum of two (2) stage decompression cylinders, appropriately labeled, may be carried
    - ▶ *NOTE: A minimum of one (1) must be used in all dives*
    - ▶ *NOTE: The oxygen partial pressure of the decompression gas may not exceed 1.6 ATA at the MOD of the deco, and appropriately labeled*
9. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
10. The Rule of Thirds must be applied from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
11. All appropriate safety or required decompression stops must be performed.
12. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).

## F. Water Skills Development

1. Divers on CCR complete the IANTD "S" drill
2. Pre-dive checks including Pre-dive Breathe.
3. Switch to low set point for descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range.
4. Switch to planned set point once the diver is at the planned dive depth or set point change depth.
5. In water leak and buddy leak check.
  - ▶ *If conditions prohibit this after entry this then immediately upon arrival at a stable depth.*
  - ▶ *Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.*
6. Descend and insure gas addition is made.
7. Confined or OW:
  - a. Swim 60 feet (18 meters) while simulating an out of gas situation
  - b. Switch to bailout cylinder, remain at rest for three (3) breaths
  - c. Swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute.

8. Confined or OW:
  - a. Two divers 50 feet (15 meters) apart must swim along a line circuit with not taking a breath, while slowly exhaling until they meet.
  - b. Upon meeting switch to the bailout stage
  - c. Swim using touch contact technique until the line circuit is completed.
9. Develop proficiency in a variety of propulsion techniques including:
  - a. Cave frog kick
  - b. Modified flutter kick
  - c. Shuffle kick
  - d. Pull and glide technique.
10. Demonstrate proficiency in use of reels and lines.
11. Out of Gas Scenario - During a wreck dive, at a point after turning the dive, perform a gas sharing drill exiting the wreck for a reasonable distance / time.
  - a. Exercise is to commence with Instructor at some point randomly selecting the out of gas diver, who must then switch to bailout cylinder
  - ▶ This drill is to be repeated on different dives until all students have been practice exit the wreck breathing from the bailout.
12. On a wreck dive, exit wreck with lights of maintaining contact with buddy and dive line using touch communications.
  - ▶ Repeat using bump and go technique.
13. Perform lost diver drills.
14. Demonstrate either on a wreck dive or in confined water the ability to drop and recover a decompression stage cylinder.
  - ▶ **NOTE: NEVER do this drill dropping bailout cylinders.**
15. On at least three (3) dives, the student must simulate a solenoid failure and, take corrective action.
16. Loop Failure Drill:
  - a. On at least three (3) occasions, a loop failure drill must be completed
  - b. On at least one (1) drill the diver must remain on the bailout stage cylinder for a minimum of 10 minutes.
    - ▶ NOTE: The student is to note the bailout gas used and distance covered and at the end of the dive compute:
      - ▶ How far under the same conditions could the diver have traveled on the bailout cylinder.
      - ▶ How much total gas it would take to bailout to the exit point of the wreck.
      - ▶ How much oxygen and or other gas would be needed to complete the decompression
17. Perform a SCR bailout for at least five (5) minutes while on a wreck dive.
18. Repeat all drills and skills from the CCR Skills Tables C-3400 1&2 while on wreck dives
19. Practice of ALL Emergency Scenarios
20. Bailout scenario:
  - a. Diver go to bailout;
  - b. Simulate 50% usage and switch bailout between the team



## RCCR or CCR & RSCR or pSCR Wreck Survey Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Tek CCR Wreck Survey Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A A Tek pSCR Wreck Survey Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to provide advanced training in wreck diving skills to the experienced, certified, responsible rebreather wreck divers who wishes to conduct dives while surveying on a wreck.
2. Expose rebreather wreck divers to conservation concerns and ethical responsibilities presented during collection of survey data.

### B. Prerequisites

1. Certifications requirements:
  - a. For divers who wish to not penetrate a wreck
    - I. For CCR: IANTD RCCR Wreck Diver or higher or equivalent.
    - II. For SCR: IANTD RSCR Wreck Diver or higher or equivalent.
  - b. For divers who wish to Survey the inside a wreck:
    - I. For CCR: IANTD Tek CCR Wreck Diver or higher or equivalent.
    - II. For SCR: IANTD Tek pSCR Wreck Diver or higher or equivalent.
2. Age requirement:
  - a. Must be minimum 18 years of age.
3. Dive experience:
  - a. Must proof of a minimum of 25 logged Wreck Dives.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All Lecture and theory material must be completed including but not limited to:
  - a. Motives and risks involved in wreck survey diving.
  - b. Equipment configuration, additional equipment necessary, and streamlining techniques for survey diving.
  - c. Procedures and techniques for collecting survey data for cartography of different grades of maps.
  - d. Task loading and dive / gas planning needs for survey diving.
  - e. Gas sharing and additional communication techniques during survey data collection.
  - f. Conservation considerations for collecting survey data and minimizing environment impact.
  - g. Reasons for collecting data in the environment.
  - h. Introduction to techniques used to convert collected survey data into accurate map of different grades.
  - i. Responses to emergency situations while surveying a wreck.
3. Land drills:
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps
  - d. Practice proper techniques in survey.
  - e. Proper methods to measuring and draw features and taking notes

## D. Equipment & Text Requirements

1. IANTD Wreck Diver Student Kit OR IANTD Technical Wreck Diver Student Kit.
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
2. General Equipment list:
  - a. All Equipment Requirements listed in the IANTD RCCR or RSCR Wreck Diver Program.
  - b. For divers who wish to Survey the inside a wreck:
    - I. All Equipment listed in the IANTD Rebreather Wreck Diver Program
    - II. A primary and back line reel
    - III. A primary and 2 back up lights
  - c. Suitable survey slate and equipment needed to record data.
  - d. Any Specialty equipment as specified in the IANTD Wreck Diver Specialty Student Workbook.

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor Wreck Surveying inside a wreck
  - b. There may be no more than four (4) students per Instructor Wreck Surveying outside a wreck.
2. This program must include:
  - a. A minimum of 240 minutes of in cave or mine survey bottom time
  - b. Four (4) Wreck survey dives
3. No dives may be conducted to depths greater than the qualification of the student.
4. The oxygen partial pressure of the bailout gas may not exceed 1.6 ATA at the MOD of the dive.
5. The set point of the CCR must not exceed 1.3 ATA, except for failed open solenoid drills.
6. At safety or required deco stops the set point may be increased to 1.4 ATA.
  - *NOTE: At 20 fsw (6 msw) a flush to 1.6 may be used to check cell performance.*
7. Diluent PO<sub>2</sub> shall be not greater than 1.1. ATA at the maximum depth
8. Decompression Gas mixtures:
  - a. In addition to the bailout cylinder(s), a maximum of two (2) stage decompression cylinders, appropriately labeled, may be carried
    - *NOTE: A minimum of one (1) must be used in all dives*
    - *NOTE: The oxygen partial pressure of the decompression gas may not exceed 1.6 ATA at the MOD of the deco, and appropriately labeled*
9. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
10. The Rule of Thirds must be applied from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
11. All appropriate safety or required decompression stops must be performed.
12. Bailout cylinder PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).

## F. Environment

- a. All training must be done in a Wreck Environment

## G. Water Skills Development

1. Demonstrate proficiency in the following propulsion techniques: modified flutter, modified frog, and standard shuffle kicks when appropriate during a survey dive.
2. Demonstrate the ability to safely and without contacting the wreck collect survey data and stay in full communication with team.
3. Demonstrate neutral buoyancy, trim and environmental awareness while collecting survey data.
4. Demonstrate the ability to navigate the wreck using natural navigation and the use of a line reel

5. On at least one (1) occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or real out of gas situation.
6. On at least one (1) occasion, during a simulated zero visibility situation while avoiding entanglement or loss of the guideline and maintain team using:
  - a. Touch Contact OR Bump & Go.
7. On each dive respond appropriately to a maximum of two (2) emergency scenarios
8. On two (2) dives, deploy a DSMB or Lift Bag in under two (2) minutes and make a controlled ascent while conducting any appropriate safety or required decompressions stops.
9. Prepare a drawing from Survey data collected from each dive and then prepare a overall drawing that includes all the data collected from all the course dives.
10. Practice of ALL Emergency Scenarios
11. Bailout scenario:
  - a. Diver go to bailout;
  - b. Simulate 50% usage and switch bailout between the team



## CCR or SCR Elite Tek Wreck Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26)**

### A. Purpose

1. This certification has been designed to provide CCR or SCR Wreck divers with the highest recognition in the Rebreather Wreck Diver level before entering the professional diving circle in teaching.

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified in:
  - b. Must be qualified in:
    - I. IANTD CCR or pSCR Tek Wreck Diver or equivalent.
    - II. Must have 3 out of the 4 following certifications:
      - i. IANTD Decompression Specialist
      - ii. IANTD Tek OW DPV Diver
      - iii. IANTD Rebreather Wreck Survey (RCCR or RSCR or CCR or pSCR)
      - iv. IANTD Tek CCR or SCR Essentials Diver
2. Age requirement:
  - a. Must be a minimum of 18 years of age without guardian approval.
3. Dive experience:
  - a. Proof of a minimum of 75 non-training logged Technical dives

### C. Program Content

1. N/A

### D. Equipment Requirements

1. N/A

### E. Program Limits

1. N/A

### F. Water Skills Development

1. There is no water skills required.

### G. Application Procedure

1. Fill & submit the Elite Technical Diver Application Form to an IANTD Instructor, HQ or local licensee.

## RCCR or RSCR Ice Diver

► **BE SURE TO CHECK THE IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS (Pg 26).**

### Who may teach this course?

- For CCR: A Recreational RCCR Ice Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.
- For SCR: A Recreational RSCR Ice Instructor or higher may teach the course provided they are an instructor on the specific Rebreather being used in the course.

### A. Purpose

1. This program is designed to train competent divers in safe ice diving techniques, preparation for, and overall awareness of the ice environment

### B. Prerequisites

1. Certifications requirements:
  - a. Must be qualified in:
    - I. For CCR: IANTD Recreational CCR Diver or equivalent.
    - II. For SCR: IANTD Recreational SCR Diver or equivalent.
    - III. IANTD Dry Suit Diver
      - NOTE: Diver's who has equivalent experience on the use of Dry Suit shall demonstrate, in confine water, all water skills listed on the Dry Suit Diver Program to satisfy the instructor that the student is competent and proficient in the use of a dry suit.
      - NOTE: In the case above, after successfully complete the Ice Diver Specialty dives, the diver shall also be certified as a Dry Suit Diver.
      - NOTE: Dry Suit use is recommended but not mandatory.
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Proof of a minimum of 25 logged dives, where minimum of 10 dives was in the water 50F/10C or colder.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. Academic Session(s) must include:
  - a. General ice terminology, development and features
  - b. Safe ice weight loads and ice mobility
  - c. Ancillary equipment and equipment safety (e.g. saws, augers, etc.)
  - d. Ice access holes for ingress and egress (cutting, size requirements and safety)
  - e. Line and reel usage, line tendering and signals
  - f. Navigation (both above and below the ice)
  - g. Gas management (min. rule of thirds with emphasis on turn pressures)
  - h. Rescue skills, emergency plans and procedures
  - i. Effects of extreme cold on the body
  - j. Effects of extreme cold on equipment and equipment configurations.

4. Confined Water Session(s)
5. Open Water Sessions
  - a. The specialty must have stress management as part of the curriculum.

## D. Equipment & Text Requirements

- ▶ *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*
  - ▶ *NOTE: Diver must be certified in Full Face Mask (FFM) if FFM mask is used or the FFM specialty course may be taught concurrently but the combined total of all dives must be completed prior to certification.*
  - ▶ *NOTE: Extra care must be taken if divers participate in this course wearing a wetsuit due the risks from exposure.*
1. Safety rope minimum of 132' (40 meters) or one line reel with a minimum of 132' (40 meters) of line.
  2. A second line reel with a minimum of 50' (15 meters) of line.
  3. Primary AND backup lights.
  4. A compass.
  5. A bottom-deployable DSMB or Lift Bag.
  6. Adequate exposure protection.
  7. Must carry a minimum of 40 cubic feet (5.6 L) cylinder for bailout.
    - ▶ *NOTE: Rebreather may use long hose on bailout up to instructors discretion.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than two (2) students per Instructor.
2. The Program must include:
  - a. A minimum of 60 minutes of Ice Diving bottom time.
  - b. Three (3) Ice Dives.
    - ▶ *NOTE: If the skill and bottom time requirements are completed earlier, the Program may be completed within two (2) Ice Dives.*
3. No dives may be conducted to depths greater than diver previous certification level.
4. Linear limit from the entrance is 132 ft /40m
5. Gas management rules:
  - a. Must stay within the bailout exit capacity to bring the diver safely to Open Water
    - i. Rule of Thirds from Oxygen, Diluent or Scrubber, whatever happens first.
6. Surface support shall always be present on site.
7. Dives should be conducted during daylight hours whenever possible.

## F. Water Skills Development

1. Identify and evaluate if the ice is safe to accept the weight of all divers and equipment.
2. Identify potentially unsafe ice conditions both pre and post dive.
3. Access point selection for water ingress/egress.
4. Demonstrate how to move around on and behave on the ice.
5. Keeping organized on the ice surface.
6. Care and preparation of equipment.
7. Identify and mitigate the effects of cold water diving and exposure to the diver.
8. Identification and creation of surface aids to navigation.
9. Demonstrate/describe how to navigate back to shore in limited visibility (e.g., snow, fog, etc.)



10. Demonstrate the safe and appropriate use of equipment for ice diving including the following:
  - a. Ice screws and saws or augers
  - b. Picks, pry bars, shovels, rakes or tongs
  - c. Ancillary equipment that may be used (e.g., sleds, snowmobiles, ATVs, etc)
11. The buddy system.
12. Surface support procedures:
  - a. Duties and responsibilities
  - b. Hole cutting and maintenance techniques (e.g., required size and shape, keeping the hole clear, preventing cut ice from occluding the hole)
  - c. Attachment points at the hole and on the diver (if tethered)
  - d. Lines and line tending
  - e. Communications and signals
  - f. Safety divers
  - g. Broken line and lost diver procedures
13. Ingress and egress techniques.
14. Demonstrate the ability to perform simple underwater navigation based on surface aids, natural and compass navigation using dead reckoning.
15. Mask clearing (partial flood only).
16. Disconnect and reconnect low pressure quick disconnects on buoyancy compensator and dry suit.
17. Perform valve shutdowns:
  - a. Change regulators and shut the primary-regulator valve off and reopen valve
  - b. Repeat as if the secondary (backup) regulator had malfunctioned.

► *Note: Repeat until skill (both valve openings shutdowns) is completed in less than two (2) minutes.*
18. Demonstrate proficiency in the use of reels and lines.
19. Simulate broken line & lost diver procedures underwater using line reels (self-rescue).
20. On the surface, positively buoyant, at the end of the last dive of the day, simulate a wide open free flow and use the regulator face down in the water for 30 seconds.
21. Perform an ascent using the bailout and establish positive buoyancy on the surface
22. Review all the emergencies procedures taught in the Rebreather Open Water Program
23. Review all the emergencies procedures taught in the CCR or SCR Diver Program.



# IANTD LEADERSHIP & INSTRUCTOR REBREATHER PROGRAMS



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## IANTD Rebreather Leadership & Instructor Programs - General Standards

► **NOTE:** Unless indicated as specifically for Rebreather Leadership & Instructor Programs, the following general statements apply to all IANTD Rebreather Leadership & Instructor Qualification Programs.

► **NOTE:** The instructor may use any other CCR or SCR they are diver qualified on in addition to being an Instructor on the one being taught in the class.

### A. Purpose

1. These Programs are designed to develop qualified IANTD Rebreather Divemasters, Dive Supervisors and Instructors.

### B. Prerequisites

1. Refer to prerequisites contained in each IANTD Leadership or Instructor Program.
2. Must be a minimum of 18 years of age.
3. Must show proof of prior qualification in:
  - a. IANTD Oxygen Provider or equivalent;
  - b. IANTD CPR or equivalent;
  - c. IANTD Diving First Aid or equivalent
    - **NOTE:** These qualifications can be complete in conjunction with the IDP or IEC.
    - **NOTE:** In order to teach, this skill set must be renewed every two (2) years by practice and update from HQ.
    - **NOTE:** The IANTD Oxygen Administrator, CPR, AED & Diving First Aid may only be issued if the instructor attends a crossover course for this material.
    - **NOTE:** In order to teach the IANTD Oxygen Administrator, CPR, AED & Diving First Aid the Instructor must attend each Instructor IDP or IEC.
  - d. IANTD RCCR or RSCR Rescue Diver or equivalent
  - e. IANTD RCCR or RSCR Divemaster or equivalent
  - f. Proof of Current Medical Examination or physical fitness results.

### C. Administrative Requirements - Leadership, Instructor/Facility & IANTD

► **NOTE:** All training forms and documents are to remain in the instructor's possession for a minimum of seven (7) years. Upon request for QA reasons or legal needs, the instructor will provide IANTD HQ or the local IANTD Licensee a copy of these forms for a specified student(s).

1. For every program and prior to any In-Water activity the instructor must ensure:
  - a. The program schedule is presented;
  - b. The students have and record the appropriate prerequisites as listed for each program;
  - c. The student fill out the Administrative forms:
    - I. Medical Exam
      - i. The candidate shall have, within the past year, a medical examination and approval for diving, without conditions or restrictions, by a licensed medical practitioner prior to engaging in water activities. In no event shall medical approval be accepted, wherein the medical practitioner signing the approval is the participating candidate.
2. IANTD Complete Liability Release and Contract Not to Sue Form.
3. In order to complete the Leader Registration or instructor the Instructor or IT must:
  - a. Submit to IANTD Headquarters or to the appropriate Licensee Office:
    - I. IANTD LEADER/Instructor Membership and Renewal Form
    - II. IANTD Specific Leadership Final Exam
    - III. Any other required paperwork by IANTD Headquarters.

## D. Teaching Prerequisites

1. Provide proof of insurance listing IANTD as an Additional Insured
2. Become an IANTD Member or remit annual appropriated member fees.

## E. Text / Media

1. All IANTD courses require Student Kits to certify Divers and/or Instructors.
2. Each student MUST have a full set of these reference materials during and following the completion of the class.
3. The specific kit is titled "Instructor or Diver program name" followed by the words "Instructor or Student Kit".
4. IANTD "S" drill chart C-3401. Use of additional IANTD Tables is recommended but optional.
5. IANTD Power Point Slides for any/all IANTD Instructor Programs being taught.

## F. Program Content

1. Same as IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS

## G. Equipment & Text Requirements

1. Same as IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS

## H. Program Limits

1. Same as IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS

## I. Water Skills

1. Same as IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS

## J. Special Notes for Open Circuit & Rebreather

1. Same as IANTD REBREATHING DIVER PROGRAM - GENERAL STANDARDS

## K. Qualification Requirements

1. Upon completion of all listed academic and water skills / dives to the Instructor Trainer's satisfaction, a wall certificate and appropriate IANTD Instructor qualification card will be issued.
2. It is required that all training dives be logged and it is recommended that dives be in the IANTD Rebreather Diving Logbook or any dive log system.
  - *Instructor candidates with unsafe attitudes, or demonstrating inappropriate dive habits, must not be qualified. Training is purchased upon enrollment; Qualification is earned through the candidate's performance and knowledge demonstrated.*

## L. Qualification Renewal

1. Upon qualification candidates should stay abreast of new technologies and / or practices in sport and technical diving.
2. For all professionals, defined as Dive masters, Supervisors, Instructors and Instructor Trainers, proof of insurance is required.
3. Remain as an active IANTD Member and remit annual renewal fees.
4. Medical Exam
  - a. The candidate shall have, within the past year, a medical examination and approval for diving, without conditions or restrictions, by a licensed medical practitioner prior to engaging in water activities. In no event shall medical approval be accepted, wherein the medical practitioner signing the approval is the participating candidate.
  - *NOTE: ALL IANTD Instructors who are qualified as Rebreather Dive Supervisors (or higher) may teach Sport Diver courses up to the level of their rebreather qualification ratings while using the rebreather on which they are supervisor level (or higher) qualified.*



► *NOTE: In order to teach a specific Rebreather Diver course, the Instructor must be an IANTD Rebreather Instructor on the unit for which the student diver wishes to be certified.*

► **CAUTION: Rebreathers may only be used within their manufacturer's stated limits**

## M. Instructor Evaluation Crossover

1. Have an instructor certification of a comparable level from a recognized training organization and obtain HQ approval
2. Meet all the pre-requisites as outlined the standards above
3. Have an IANTD Sport Diving Instructor Kit.
4. Complete review of the IANTD Standards & Procedures
5. Complete review of the IDP Presentation
6. Complete the following written exam:
  - a. Specific Instructor Exam
  - b. Standard & Procedures Exam
7. Demonstrate proficiency teaching and demonstrating the skills and techniques required in the applicable diver program over the course of 2 dives or more as need to adequately demonstrate Instructor proficiency.

► *Note dives for crossover evaluation do not need to be to the same depths as the dive program but should be to sufficient depths to permit the IT to ensure the crossover candidate processes the proficiency to teach this program.*

► **For RCCR and RSCR Open Water Instructor Crossovers:**

► **NOTE: If the instructor candidate is not an IANTD RCCR Open Water Instructor for the rebreather to be used, a crossover to the specific unit shall also be completed by an IANTD RCCR IT or higher for the specific unit.**

► **NOTE: If the instructor candidate is not an IANTD RSCR Open Water Instructor for the rebreather to be used, a crossover to the specific unit shall also be completed by an IANTD RSCR IT or higher for the specific unit.**

► **For CCR and SCR Instructor Crossovers:**

► **NOTE: If the instructor candidate is not an IANTD CCR Advanced EANx Instructor for the rebreather to be used, a crossover to the specific unit shall also be completed by an IANTD CCR Advanced EANx IT or CCR ART IT for the specific unit.**

► **NOTE: If the instructor candidate is not an IANTD SCR Advanced EANx Instructor for the rebreather to be used, a crossover to the specific unit shall also be completed by an IANTD SCR Advanced EANx IT or CCR ART IT for the specific unit.**

## N. Inactive Instructor

1. If an instructor is inactive for two (2) years, the instructor must complete the following reinstatement procedure
  - a. Attend an instructor reinstatement program with an Instructor Trainer assigned by HQ or corresponding IANTD Licensee for the area.
  - b. Complete standards review.
  - c. Instructor must pass the specific IANTD Standards Test with a minimum score of 100% with remediation by the Instructor Trainer.
  - d. Complete lectures as assigned by the Instructor Trainer to verify in-depth knowledge and currency in theory and classroom for Rebreather.
  - e. Perform instructor skills at demonstration quality at the instructor's highest level for Rebreather.
  - f. Co-teach as assigned by the Instructor Trainer, part of:
    - I. Academic portion at instructor's highest level of certification for Rebreather.
    - II. Confined Water portion at instructor's highest level of certification for Rebreather.
    - III. In Water portion at instructor's highest level of certification for Rebreather.

**IANTD Sport Diving Instructor Watermanship Form****SPORT DIVING INSTRUCTOR WATERMANSHIP**

(Version 18.2.0)

Instructor Candidate Name: \_\_\_\_\_

Course Title: \_\_\_\_\_

If Rebreather, write which one was used during class: \_\_\_\_\_

Started Date: \_\_\_\_\_ Ended Date: \_\_\_\_\_ IT Name: \_\_\_\_\_ IT #: \_\_\_\_\_

**Mandatory watermanship evaluations for all Instructor Candidates (80 points passing)**

**NOTE: SPORT DIVING INSTRUCTOR PROGRAMS MUST INCLUDE THE FOLLOWING WATER SKILLS AND PHYSICAL FITNESS EVALUATIONS. THESE EVALUATIONS MUST ALL BE DONE AT ONE SESSION. REPEAT THESE EVALUATIONS AT EACH INSTRUCTOR LEVEL, IF IT HAS BEEN MORE THAN THREE (3) MONTHS SINCE THE LAST EVALUATION.**

**1) Skill One (20 points) – Subscore: \_\_\_\_\_**

- a) Swim for a distance of 1,200 feet (370 meters) swim without the use of mask, fins, or snorkel, or of other swimming aids. Subtract four minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in 12 minutes or less, the score would be 20 points)

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
8 minutes or less	20	11:01 to 11:20	17	12:46 to 13:00	14	14:16 to 14:30	10
8:01 to 8:40	19.5	11:21 to 11:40	16.5	13:01 to 13:15	13.5	14:31 to 14:45	9
8:41 to 9:20	19	11:41 to 12:00	16	13:16 to 13:30	13	14:46 to 15:00	8
10:01 to 10:20	18.5	12:01 to 12:15	15.5	13:31 to 13:45	12.5	15:01 to 15:15	6
10:21 to 10:40	18	12:16 to 12:30	15	13:46 to 14:00	12	15:16 to 15:30	4
10:41 to 11:00	17.5	12:31 to 12:45	14.5	14:01 to 14:15	11	15:31 to 16:00	2

**2) Skill Two (20 points) – Subscore: \_\_\_\_\_**

- a) Swim 1,800 feet (550 meters) using mask, snorkel and fins (swim with fins only; handicapped divers may use both hands and feet).

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
15 minutes or less	20	16:41 to 17:00	17	18:41 to 19:00	12	20:21 to 20:30	05
15:00 to 15:20	19.5	17:01 to 17:20	16.5	19:01 to 19:20	11	20:31 to 20:40	04
15:21 to 15:40	19	17:21 to 17:40	16	19:21 to 19:40	10	20:41 to 20:50	03
15:41 to 16:00	18.5	17:41 to 18:00	15	19:41 to 20:00	08	20:51 to 21:00	02
16:01 to 16:20	18	18:01 to 18:20	14	20:01 to 20:10	07	Over 21 Minutes	00
16:21 to 16:40	17.5	18:21 to 18:40	13	20:11 to 20:20	06		

**3) Skill Three (20 points) – Subscore: \_\_\_\_\_**

- a) Swim while wearing SCUBA gear on the surface, breathing through a snorkel, for a distance of 800 feet (240 meters). Subtract 3 minutes from actual time to score handicapped candidates or candidates using a rebreather (e.g., if performed in 11 minutes or less, the score would be 20 points).

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
8 minutes or less	20	9:31 to 9:45	17	10:31 to 10:40	12	11:21 to 11:30	05
8:01 to 8:20	19.5	9:46 to 10:00	16	10:41 to 10:50	11	11:31 to 11:40	04
8:21 to 8:40	19	10:01 to 10:10	15	10:51 to 11:00	10	11:41 to 11:50	02
8:41 to 9:00	18.5	10:11 to 10:20	14	11:01 to 11:10	08	11:51 to 12:00	01
9:01 to 9:15	18	10:21 to 10:30	13	11:11 to 11:20	06	over 12 minutes	00
9:16 to 9:30	17.5						





## SPORT DIVING INSTRUCTOR WATERMANSHIP

(Version 18.2.0)

### 4) Skill Four (20) — Subscore: \_\_\_\_\_

- a) Swim while wearing SCUBA gear for a distance of 1,800 feet (550 meters). Subtract 3 (three) minute from actual time for divers using double tanks/rebreather (e.g., if performed in 17 minutes or less, the score would be 20 points). NOTE: Rebreather candidates should perform this skill breathing from offboard bailout.

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
16 minutes or less	20	18:31 to 19:00	17	21:30 to 22:00	14	23:11 to 23:20	08
16:01 to 16:30	19.5	19:01 to 19:30	16.5	22:01 to 22:15	13	23:21 to 23:30	06
16:31 to 17:00	19	19:31 to 20:00	16	22:16 to 22:30	12	23:31 to 23:40	04
17:01 to 17:30	18.5	20:01 to 20:30	15.5	22:31 to 22:45	11	23:41 to 23:50	02
17:31 to 18:00	18	20:31 to 21:00	15	22:46 to 23:00	10	23:51 to 24:00	01
18:01 to 18:30	17.5	21:01 to 21:30	14.5	23:01 to 23:10	09	over 24 minutes	00

### 5) Skill Five (20) — Subscore: \_\_\_\_\_

- a) Swim for a distance of 50 feet (15 meters), without breathing, and commence gas sharing via alternate second-stage regulator with another diver. While continuing to share gas, swim a distance of 1,200 feet (360 meters). Time for scoring begins when both divers begin swimming while sharing gas. Subtract 5 points for each failed attempt by the diver to complete the 50 foot swim. Rebreather candidates will gas share using offboard bailout. Subtract 3 minutes from actual time to score handicapped candidates or divers using a rebreather.

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
10:00 or under	20	11:41 to 12:00	17	13:16 to 13:30	14	15:21 to 15:30	06
10:01 to 10:20	19.5	12:01 to 12:15	16.5	13:31 to 13:45	13	15:31 to 15:40	04
10:21 to 10:40	19	12:16 to 12:30	16	13:46 to 15:00	12	15:41 to 15:50	02
10:41 to 11:00	18.5	12:31 to 12:45	15.5	15:01 to 15:10	10	15:51 to 16:00	01
11:01 to 11:20	18	12:46 to 13:00	15	15:11 to 15:20	08	over 16 minutes	00
11:21 to 11:40	17.5	13:01 to 13:15	14.5				

### 6) Survival swim/float without the use of mask, fins, or snorkel, or of other swimming aid for 10 Minutes \_\_\_\_\_ (Pass or Fail)

### 7) Instructor Watermanship Skills Conclusion:

ACKNOWLEDGE OF GRADE	TOTAL SCORE	DATE	SIGNATURE or PIN#
Instructor Candidate			
Instructor Trainer Signature			

**IANTD Technical Instructor Watermanship Form****TECHNICAL INSTRUCTOR WATERMANSHIP**

(Version 18.2.0)

Instructor Candidate Name: \_\_\_\_\_

Course Title: \_\_\_\_\_

If Rebreather, write which one was used during class: \_\_\_\_\_

Started Date: \_\_\_\_\_ Ended Date: \_\_\_\_\_ IT Name: \_\_\_\_\_ IT #: \_\_\_\_\_

**Mandatory watermanship evaluations for all Instructor Candidates (80 points passing)**

**NOTE: ALL INSTRUCTOR PROGRAMS MUST INCLUDE THE FOLLOWING WATER SKILLS AND PHYSICAL FITNESS EVALUATIONS. THESE EVALUATIONS MUST ALL BE DONE AT ONE TIME, WITH NO MORE THAN 5 MINUTES REST PERIOD BETWEEN SKILLS. REPEAT THESE EVALUATIONS AT EACH INSTRUCTOR LEVEL, IF IT HAS BEEN MORE THAN THREE (3) MONTHS SINCE THE LAST EVALUATION.**

**1) Skill One (20 points) – Subscore: \_\_\_\_\_**

- a) Swim for a distance of 3,000 feet (900 meters) while wearing SCUBA gear configured as double cylinders with one stage cylinder.). Subtract 3 minutes from actual time to score candidates using a rebreather.

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
25:30 or less	20	29:01 to 29:20	14	31:41 to 32:00	09	32:41 to 32:50	04
25:31 to 26:00	19	29:21 to 29:40	13	32:01 to 32:10	08	32:51 to 33:00	03
27:01 to 27:30	18	29:41 to 30:00	12	32:11 to 32:20	07	33:01 to 33:30	02
27:31 to 28:00	17	30:01 to 30:20	11	32:21 to 32:30	06	33:31 to 34:00	01
28:01 to 28:30	16	30:21 to 31:40	10	32:31 to 32:40	05	over 34 minutes	00
28:31 to 29:00	15						

**2) Skill Two (20 points) – Subscore: \_\_\_\_\_**

- a) Swim for a distance of 2,400 feet (720 meters) wearing mask, snorkel, and fins.)

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
17:30 or less	20	20:01 to 20:20	14	21:41 to 22:05	09	23:21 to 23:30	04
17:31 to 18:00	19	20:21 to 20:40	13	22:06 to 22:30	08	23:31 to 23:40	03
18:01 to 18:30	18	20:41 to 21:00	12	22:31 to 22:45	07	23:41 to 23:50	02
18:31 to 19:00	17	21:01 to 21:20	11	23:00 to 23:10	06	23:51 to 24:00	01
18:01 to 19:30	16	21:21 to 21:40	10	23:11 to 23:20	05	over 24 minutes	00
19:31 to 20:00	15						

**3) Skill Three (20 points) – Subscore: \_\_\_\_\_**

- a) Swim for a distance of 60 feet (18 meters), without breathing, and commence gas sharing via long-hose second-stage regulator with another diver. While continuing to share gas, swim a distance of 800 feet (240 meters). Time for scoring begins when both divers begin swimming while sharing gas. Subtract 5 points for each failed attempt by the diver to complete the 60-foot swim. Rebreather candidates will gas share using offboard bailout. Subtract 3 minutes from actual time to score handicapped candidates or divers using a rebreather.

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
8 minutes or less	20	09:31 to 9:40	14	10:21 to 10:30	06
08:01 to 8:15	19.5	09:41 to 9:50	13	10:31 to 10:40	04
08:16 to 8:30	19	09:51 to 10:00	12	10:41 to 10:50	02
08:31 to 8:45	18.5	10:01 to 10:10	10	10:51 to 11:00	01
08:46 to 9:00	18	10:11 to 10:20	08	over 11 minutes	00
09:01 to 9:10	17				





## TECHNICAL INSTRUCTOR WATERMANSHIP

(Version 18.2.0)

### 4) Skill Four (5) – Subscore: \_\_\_\_\_

- a) Switch from primary regulator to secondary regulator, then switch back to primary regulator and turn valve for secondary regulator back on. Rebreather candidates will turn the DSV/BOV off, then switch to offboard bailout, take 3 breaths, switch back to the DSV/BOV and turn the DSV/BOV on.

TIME (MM:SS)	POINTS
45 seconds or less	5
0:46 to 1:15	4
1:16 to 1:45	3
1:46 to 2:00	2
2:01 to 2:15	1
over 2:15	0

### 5) Skill Five (5) – Subscore: \_\_\_\_\_

- a) Deploy lift bag.

TIME (MM:SS)	POINTS
45 seconds or under	5
0:46 to 1:15	4
1:16 to 1:45	3
1:46 to 2:00	2
2:01 to 2:15	1
over 2:15	0

### 6) Skill Five (5) – Subscore: \_\_\_\_\_

- a) Tow a diver for a distance of 200 feet (60 meters) on the surface while simulating rescue breathing, then simulate actions for activation of the EMS procedure and remove victim's equipment. Fifteen points are for overall procedure and technique, scored per IT evaluation. Five additional points are to be directed at removal of the victim's equipment scored as follows. Subtract 1 minute from actual time to score divers using a rebreather

TIME (MM:SS)	POINTS
3 minutes or less	5
3:01 to 3:30	4
3:31 to 4:00	3
4:01 to 4:30	2
4:31 to 5:00	1
over 5 minutes	0

### 7) Instructor Watermanship Skills Conclusion:

ACKNOWLEDGE OF GRADE	TOTAL SCORE	DATE	SIGNATURE or PIN#
Instructor Candidate			
Instructor Trainer Signature			

**IANTD Trimix Instructor Watermanship Form****TRIMIX INSTRUCTOR WATERMANSHIP**

(Version 20.1.0)

Instructor Candidate Name: \_\_\_\_\_

Course Title: \_\_\_\_\_

If Rebreather, write which one was used during class: \_\_\_\_\_

Started Date: \_\_\_\_\_ Ended Date: \_\_\_\_\_ IT Name: \_\_\_\_\_ IT #: \_\_\_\_\_

Mandatory watermanship evaluations for all Instructor Candidates (68 points passing)

*NOTE: ALL INSTRUCTOR PROGRAMS MUST INCLUDE THE FOLLOWING WATER SKILLS AND PHYSICAL FITNESS EVALUATIONS. THESE EVALUATIONS MUST ALL BE DONE AT ONE TIME, WITH NO MORE THAN 5 MINUTES REST PERIOD BETWEEN SKILLS. REPEAT THESE EVALUATIONS AT EACH INSTRUCTOR LEVEL, IF IT HAS BEEN MORE THAN THREE (3) MONTHS SINCE THE LAST EVALUATION.*

**1) Skill One (25 points) – Subscore:** \_\_\_\_\_

- a) Swim for a distance of 60 feet (18 meters), without breathing, and commence gas sharing via long-hose second-stage regulator with another diver. While continuing to share gas, swim a distance of 800 feet (240 meters). Time for scoring begins when both divers begin swimming while sharing gas. Subtract 5 points for each failed attempt by the diver to complete the 60-foot swim. Subtract 3 minutes from actual time to score candidates using a rebreather

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
8 minutes or less	25	09:31 to 9:40	19	10:21 to 10:30	11
08:01 to 8:15	24	09:41 to 9:50	18	10:31 to 10:40	08
08:16 to 8:30	23	09:51 to 10:00	17	10:41 to 10:50	04
08:31 to 8:45	22	10:01 to 10:10	15	10:51 to 11:00	01
08:46 to 9:00	21	10:11 to 10:20	13	over 11 minutes	00
09:01 to 9:10	20				

**2) Skill Two (20 points) – Subscore:** \_\_\_\_\_

- a) Swim for a distance of 2,000 feet (600 meters) while wearing SCUBA gear configured as double cylinders with two (2) stage cylinders. Subtract 3 minutes from actual time to score candidates using a rebreather.

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
19:30 or less	20	22:01 to 22:10	14	22:51 to 23:00	09	23:21 to 23:25	04
19:31 to 20:00	19	22:11 to 22:20	13	23:01 to 23:05	08	23:26 to 23:30	03
20:01 to 20:30	18	22:21 to 22:30	12	23:06 to 23:10	07	23:31 to 23:40	02
20:31 to 21:00	17	22:31 to 22:40	11	23:11 to 23:15	06	23:41 to 24:00	01
21:01 to 21:30	16	22:41 to 22:50	10	23:16 to 23:20	05	over 24 minutes	00
21:31 to 22:00	15						

**3) Skill Three (10 points) – Subscore:** \_\_\_\_\_

- a) Swim for a distance of 50 feet (15 meters), drop one stage cylinder, swim an additional 50 feet (15 meters), and drop the second stage cylinder, all with a minimum of change in swim pace. Swim 50 feet (15 meters) and recover the cylinders in reverse order, while maintaining the swim rate. Rebreather divers will drop DECO cylinders. Rebreather divers shall always have the bailout cylinder with them.

PERFORMANCE	POINTS
Skill complete in less than 3 minutes with good technique and no slowing of swim pace.	10
Candidate slows pace during drop or retrieval of stages, or technique is sloppy, completed in less than 3 minutes.	9
Candidate stops during either the drop, or skill is completed in less than 3 ½ minutes.	6
Candidate stops during both the drop, and skill completed in less than 4 minutes.	4
Skill completed in more than 4 minutes, but less than 5 minutes.	2
Skill completion in more than 5 minutes.	1
Skill complete in less than 3 minutes with good technique and no slowing of swim pace.	0





## TRIMIX INSTRUCTOR WATERMANSHIP

(Version 20.1.0)

### 4) Skill Four (10) — Subscore: \_\_\_\_\_

- a) For the first phase of this skill, tow a diver for a distance of 200 feet (60 meters) on the surface in full gear consisting of double cylinders and two (2) stage cylinders, simulating rescue breathing, then simulate actions for activation of the EMS procedure. Ten points are given for perfect technique and use of EMS procedures, and points are subtracted at the IT's discretion from the possible 10 for this portion of the rescue based on subjective evaluation of technique and understanding of the EMS procedures. For the second phase of this skill, remove the victim's equipment and prepare for exiting the water. Score according to timetable below. For the third phase of this skill, simulate CPR on the surface. Five points are given for perfect technique, and points are subtracted at the IT's discretion from the possible 10 for this portion of the rescue based on subjective evaluation of technique. Subtract 1 minute from actual time to score divers using a rebreather.

TIME (MM:SS)	POINTS	TIME (MM:SS)	POINTS
3 minutes or less	5	4:31 to 4:45	4
3:01 to 3:30	4	4:46 to 5:00	2
3:31 to 4:00	3	over 5 minutes	0
4:01 to 4:30	2		

### 5) Skill Five (10) — Subscore: \_\_\_\_\_

- a) With eyes closed, swim a distance of 50 feet (15 meters) along a line or other reference device. Remove stage cylinders and swim an additional 50 feet (15 meters). Return to stage cylinders (IT should move cylinders around, but they will remain in the same area). By feel, cylinders will be retrieved and connected in the appropriate location. Swim an additional 50 feet (15 meters) and switch to lowest EANx mixture, then swim an additional 50 feet (15 meters) and switch to highest EANx or oxygen mixture. Rebreather divers shall always be able to monitor their PO<sub>2</sub> during the whole drill. Rebreather divers will drop DECO cylinders. Rebreather divers shall always have the bailout cylinder with them.
- i) Score 10 points if performed correctly.
- (1) Deduct 1 point for any loss of buoyancy control.
  - (2) Deduct 2 points if the cylinders are not stored in the proper place.
  - (3) Deduct 10 points if the candidate switches to the wrong gas mixture.

### 6) Skill Five (10) — Subscore: \_\_\_\_\_

- a) Remove double cylinders and both stage cylinders, then replace doubles and both stages.
- i) Score 10 points if performed correctly. Rebreather divers shall remove all decompression cylinders but always have the bailout cylinder with them. Remove the rebreather is optional.
- (1) Deduct 1 point for each entanglement.
  - (2) Deduct 2 points for loss of buoyancy control.
  - (3) Deduct 2 points if skill takes more than 3 minutes to complete.

### 7) Instructor Watermanship Skills Conclusion:

ACKNOWLEDGE OF GRADE	TOTAL SCORE	DATE	SIGNATURE
Instructor Candidate			
Instructor Trainer Signature			

**RCCR or RSCR Divemaster**

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

**Who may teach this course?**

- For CCR: A RCCR Open Water Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A RSCR Open Water Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program is designed to provide responsible training for those persons wishing to supervise IANTD divers.
2. These include IANTD RCCR or Recreational SCR Diver, IANTD RCCR or RSCR Advanced Open Water Diver and RCCR or RSCR Rescue Diver.

**B. Prerequisites**

1. Certifications requirements:
  - *NOTE: If an equivalent certification is accepted for CPR and Oxygen Provider, it must be current within the last two (2) years.*
  - *NOTE Qualification in two (2) optional IANTD Specialty Programs is recommended.*
    - a. For CCR, Must be a qualified as:
      - I. IANTD RCCR Advanced Open Water Diver or equivalent.
      - II. IANTD RCCR Rescue Diver or equivalent.
    - b. For SCR, Must be a qualified as:
      - I. IANTD RSCR Advanced Open Water Diver or equivalent.
      - II. IANTD RSCR Rescue Diver or equivalent.
  - *First Aid, CPR and Oxygen Administrator may be conducted in conjunction with the program but training hours do not count to the minimum required.*
  - *As long as the other prerequisites are fulfilled, the RCCR or RSCR Rescue Diver Program may be taught during the Divemaster Program and may be counted toward the 40 total training hours.*
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Must proof of a minimum of 60 logged dives and 40 hours on the rebreather to be used.
    - Dive experience must include dives in a variety of environments including but not limited to Night Dive/Limited Visibility, Navigation, Marine Ecology, Deep Dive or any other ADDITIONAL SPECIALIZED PROGRAM.

**C. Program Content**

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
  - All content from the Specific IANTD Student Kit and IANTD Specific Course presentation must be completed by the student
2. All the water skills must be practiced until the student is proficient in each skill.
3. Must complete the academic sessions utilizing the IANTD Divemaster Manual
4. Must review the IANTD Standards and Procedures
5. Complete knowledge reviews
6. Pass the IANTD Divemaster exam with a minimum score of 80%.
7. Complete an Emergency Assistance Plan and Risk Analysis for a scenario to be assigned by the Instructor.



8. Students must be able to demonstrate all RCCR or Recreational SCR Diver, RCCR or RSCR Advanced Open Water Diver and RCCR or RSCR Rescue Diver practical skills in a manner showing the highest level of mastery and competence.
9. The IANTD Divemaster candidate must assist in at least:
  - a. One (1) complete RCCR or Recreational SCR Diver Program;
  - b. One (1) complete RCCR or RSCR Advanced Open Water Diver Program;
  - c. One (1) complete RCCR or RSCR Rescue Diver Program.
10. Students must be able to demonstrate competence in all RCCR or RSCR skills, and ability to cope with the most demanding operational factors of the region. Influencing factors may include the following:
  - a. Depth range exceeding 70 fsw (21 msw).
  - b. Underwater visibility.
  - c. Size and experience of the diving group supervised.
  - d. Equipment used.
  - e. Current.
  - f. Surface conditions.
  - g. Water temperature.

► *NOTE: Students must be able to demonstrate mastery of the techniques involved in planning and executing dives at the depth ranges typical for recreational scuba diving in the local environment no greater than 100 fsw (30 msw)*

## D. Equipment & Text Requirements

1. IANTD Divemaster Student Kit.
2. Fulfill all Equipment Requirements as specified in the program being supervised.
3. Bailout cylinder(s).
  - *NOTE: Rebreather may use long hose on bailout up to instructors discretion.*
  - *NOTE: All students must be taught the concept of gas matching and on SCR, PSCR and CCR the correct bailout management.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
    - *NOTE: This ratio may be increased by two (2) for each assisting IANTD Rebreather Supervisor, up to a maximum of 6 students with one (1) IANTD Rebreather Supervisor per class session.*
2. IANTD RCCR or RSCR Divemasters may supervise, escort and assist in all IANTD RCCR or Recreational SCR Diver Programs but cannot conduct RCCR or RSCR training exercises unless under the direction of a qualified IANTD RCCR or RSCR Open Water Instructor or higher
3. IANTD RCCR or RSCR Divemasters are qualified to plan and execute emergency procedures appropriate for the diving activity and environment.
4. Upon completion of the program, RCCR or RSCR Divemasters may conduct any specialized scuba diving activities for which they have received appropriate training.
  - *NOTE: If diving in conditions significantly different from those previously experienced the RCCR or RSCR Divemaster shall require an appropriate orientation.*
5. RCCR or RSCR Divemasters may teach Snorkel Skin Diver.
6. RCCR or RSCR Divemasters who complete Item 2 under Water Skills Development may teach the IANTD OW Free Diver course.
7. No dives may be conducted to depths greater than 100 fsw (30 msw).
8. A minimum of 40 hours of training shall be conducted under direct supervision of an IANTD Instructor.
9. All appropriate safety or required decompression stops must be performed.

## F. Water Skills Development

1. To be allowed to teach the Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive.
2. Out of Air Scenario:
  - a. Swim in a simulated out of air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters)
  - b. Start gas sharing gas via bailout cylinder
  - c. While gas sharing, continue to swim for at least 10 minutes while maintaining a swim rate of approximately 50 feet (15 meters) per minute.
3. Demonstrate recognition of emergency situations.
4. Demonstrate basic underwater search skills.
5. Demonstrate a rescue of a diver from a depth no greater than 20 fsw (6 msw) to the surface, including:
  - a. Removal of equipment
  - b. Tow for a distance of approximately 100 feet (30 meters) while simulating rescue breaths and remove casualty from the water.
  - c. Manage emergency situation including coordination with emergency services.
6. Demonstrate proficiency in underwater navigation, using both instruments and natural navigation safely leading other divers.
7. Demonstrate proficiency of water skills taught in RCCR or Recreational SCR Diver, RCCR or RSCR Advanced Open Water Diver and RCCR or RSCR Rescue Diver Programs.
8. Assist in water skills teaching as described in Program Content section.
9. Complete Watermanship Drills number 3 & 4 as found in the RCCR or RSCR Advanced EANx Instructor Watermanship Evaluation. (32 points is minimal passing)
10. Dive planning, preparation and conduct. General group control and schedule application:
  - a. Site selection taking into account team members capabilities and environmental factors.
  - b. Emergency plan and equipment preparation.
  - c. Decompression calculation and relevant factors.
  - d. Descend and ascend aids.
  - e. Dive limits (general).
  - f. Use of buoys and flags.
  - g. Conduct a minimum of 5 (five) Dive Briefings/Debriefings.
  - h. Kitting up and pre-dive checks.
  - i. Entry and descend control.
  - j. Monitoring of dive plan and environmental conditions.
  - k. Awareness of diver's stress levels.
  - l. Identification of underwater hazards.
  - m. Appropriate reaction to problems and emergencies.
  - n. Ascend and exit control.
  - o. Debriefing and other post dive procedures.
  - p. Consideration of off gassing phase (avoid potential danger – altitude, physical activities, etc.)
  - q. Post dive care of equipment.
  - r. Proper documentation of the dive.

## G. Qualification Renewal

1. Assist in a minimum of two (2) IANTD Programs annually.
2. Log a minimum of 12 non-Divemastering dives annually.
3. Maintain current liability insurance and IANTD membership.

## RCCR or RSCR Cavern Divemaster

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A RCCR Cavern Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A RSCR Cavern Instructor or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to extend the diver's knowledge to safely guide professional cavern tours of non-cavern certified divers (maximum 4 divers) in the overhead environment.
2. Focus of this program is on safety, conservation, professionalism and preservation.

### B. Prerequisites

1. Certifications requirements:
  - *NOTE: If an equivalent certification is accepted for CPR and Oxygen Provider, it must be current within the last two (2) years.*
  - *NOTE Qualification in two (2) optional IANTD Specialty Programs is recommended.*
    - a. For RCCR Cavern Divemaster, Must be a qualified as:
      - I. IANTD CCR Cave Diver or equivalent.
      - II. IANTD RCCR Divemaster or equivalent.
    - b. For RSCR Cavern Divemaster, Must be a qualified as:
      - I. IANTD CCR Cave Diver or equivalent.
      - II. IANTD RSCR Divemaster or equivalent.
2. Age requirement:
  - a. Must be a minimum of 18 years of age without guardian approval
3. Dive experience:
  - a. Must proof of a minimum of 60 logged dives and 50 hours on the rebreather to be used.
    - *NOTE: A minimum of 30 logged dives of the 60 were rebreather cavern dives.*
4. Complete the academic development sessions, RCCR or RSCR cavern skills, emergency skills, and IANTD Cavern Divemaster written exam with a minimum score of 80%.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. Assistance Requirements:
  - a. Must assist in one (1) complete Rebreather Cavern Diver Program or more at instructor discretion.
    - *NOTE: If not an IANTD Divemaster, the candidate must go thru the following power point presentations:*
      - IANTD RCCR or Recreational SCR Diver
      - IANTD RCCR or RSCR Advanced Open Water Diver
      - IANTD RCCR or RSCR Deep Diver
      - IANTD RCCR or RSCR Rescue Diver
4. A review and demonstration of the following skills during open water and cavern dives:
  - a. General Briefing
  - b. Pre-dive procedures.
  - c. Equipment Checks.

- d. Simulated RCCR or RSCR Cavern Experience
- e. Running reel in cavern zone (if line exists, line must be run next to it).
- 5. Each RCCR or RSCR Cavern Divemaster candidate will be evaluated on his or her ability to perform various aspects of a simulated Cavern Experience. These are to include:
  - a. General Briefing.
  - b. Site briefing.
  - c. Pre-dive procedures.
  - d. Simulated Cavern Experience.
  - e. Participant control.
  - f. Emergency procedures.

## **D. Equipment Requirements**

- 1. IANTD Divemaster Student Kit and all IANTD Student Kits up to current level of qualification.
- 2. All cave diving gear as required in the Rebreather Cave Diver Program.

## **E. Program Limits**

- 1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
- 2. Same limits as stated at the Rebreather Cavern Diver Program
- 3. No dives may be conducted to depths greater than 132 fsw (40 msw).
- 4. All appropriate safety stops must be performed.
- 5. All dives are to be planned for no required decompression stop.

## **F. Water Skills Development**

- 1. Proper Equipment configuration.
- 2. Safe entry and exit.
- 3. Pre-dive safety checks.
- 4. Buoyancy and Trim.
- 5. Propulsion Techniques.
- 6. Hovering.
- 7. Equipment Manipulation.
- 8. Gas / Valve shut downs on each dive.
- 9. Air sharing techniques.
- 10. Use of reels / guidelines.
- 11. Open water stress circuit including but not limited to:
  - a. No mask swimming.
  - b. Zero visibility line following.
  - c. Gas sharing.
  - d. Touch contact
  - e. Bump & Go.
- 12. Rescue Scenarios (open water):
  - a. Underwater swim with an unconscious diver.
  - b. Surfacing with unconscious diver.

## CCR or SCR Advanced EANx or Adv. Recreational Trimix Supervisor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For Adv. EANx Supervisor:
  - For CCR: A CCR Advanced EANx Instructor or higher may teach the course provided they are a Instructor on the specific Rebreather being used in the course.
  - For SCR: A SCR Advanced EANx Instructor or higher may teach the course provided they are a Instructor on the specific Rebreather being used in the course.
- For Adv. ART Supervisor:
  - For CCR: A CCR ART Instructor or higher may teach the course provided they are a Instructor on the specific Rebreather being used in the course.
  - For SCR: A SCR ART Instructor or higher may teach the course provided they are a Instructor on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to provide responsible training for those persons wishing to supervise IANTD divers.
2. These include IANTD RCCR or Recreational SCR Diver, IANTD RCCR or RSCR Advanced Open Water Diver and RCCR or RSCR Rescue Diver.

### B. Prerequisites

1. Certifications requirements:
  - *NOTE: If an equivalent certification is accepted for CPR and Oxygen Provider, it must be current within the last two (2) years.*
  - *NOTE: Qualification in two (2) optional IANTD Specialty Programs is recommended.*
    - a. For CCR Advanced EANx or CCR ART Supervisor, Must be a qualified as:
      - I. IANTD CCR Advanced EANx Diver or equivalent.
      - II. IANTD RCCR Rescue Diver or equivalent.
    - b. For SCR Advanced EANx or SCR ART Supervisor, Must be a qualified as:
      - I. IANTD SCR ART Diver or equivalent.
      - II. IANTD RSCR Rescue Diver or equivalent.
  - *First Aid, CPR and Oxygen Administrator may be conduct in conjunction with the program but training hours do not count to the minimum required.*
  - *As long as the other prerequisites are fulfilled, the RCCR or RSCR Rescue Diver Program may be taught during the Divemaster Program and may be counted toward the 40 total training hours.*
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive experience:
  - a. Must proof of a minimum of 60 logged dives and 50 hours on the rebreather to be used.

### C. Program Content

1. Use of the Course Specific Presentation is optional with the use of the Course Specific Student Workbook or IANTD eLearning which must be completed prior to any in-water training.
  - IANTD recommends the use of both, Course Specific Presentation and workbook
2. All the water skills must be practiced until the student is proficient in each skill.
3. Must complete the academic sessions utilizing the IANTD Divemaster Manual
4. Must review the IANTD Standards and Procedures
5. Complete knowledge reviews
6. Pass the IANTD Divemaster exam with a minimum score of 80%.

7. Complete an Emergency Assistance Plan and Risk Analysis for a scenario to be assigned by the Instructor.
8. Students must be able to demonstrate all RCCR or Recreational SCR Diver, RCCR or RSCR Advanced Open Water Diver and RCCR or RSCR Rescue Diver practical skills in a manner showing the highest level of mastery and competence.
9. The IANTD Divemaster candidate must assist in at least:
  - a. One (1) complete Recreational Rebreather Diver Program;
  - b. One (1) complete Recreational Rebreather Advanced Open Water Diver Program;
  - c. One (1) complete Recreational Rebreather Rescue Diver Program.
  - d. One (1) complete Recreational Deep Diver Program;
  - e. One (1) complete Rebreather Diver Program.
10. Students must be able to demonstrate competence in all RCCR or RSCR skills, and ability to cope with the most demanding operational factors of the region. Influencing factors may include the following:
  - a. Depth range exceeding 70 fsw (21 msw).
  - b. Underwater visibility.
  - c. Size and experience of the diving group supervised.
  - d. Equipment used.
  - e. Current.
  - f. Surface conditions.
  - g. Water temperature.

► *NOTE: Students must be able to demonstrate mastery of the techniques involved in planning and executing dives at the depth ranges typical for recreational scuba diving in the local environment no greater than 100 fsw (30 msw)*

## D. Equipment & Text Requirements

1. IANTD Divemaster Student Kit.
2. Fulfill all Equipment Requirements as specified in the program being supervised.
3. Bailout cylinder(s).
 

► *NOTE: Rebreather may use long hose on bailout up to instructors discretion*

► *NOTE: All students must be taught the concept of gas matching and on SCR, PSCR and CCR the correct bailout management.*

## E. Program Limits

1. Student to Instructor Ratio:
  - a. There may be no more than four (4) students per Instructor.
 

► *NOTE: This ratio may be increased by two (2) for each assisting IANTD Rebreather Supervisor, up to a maximum of six (6) students with one (1) IANTD Rebreather Supervisor per class session.*
2. IANTD RCCR or RSCR Divemasters may supervise, escort and assist in all IANTD RCCR or Recreational SCR Diver Programs but cannot conduct RCCR or RSCR training exercises unless under the direction of a qualified IANTD RCCR or RSCR Open Water Instructor or higher
3. IANTD Divemasters are qualified to plan and execute emergency procedures appropriate for the diving activity and environment.
4. Upon completion of the program, Divemasters may conduct any specialized scuba diving activities for which they have received appropriate training.
 

► *NOTE: If diving in conditions significantly different from those previously experienced the Divemaster shall require an appropriate orientation.*
5. Divemasters may teach Snorkel Skin Diver.
6. Divemasters who complete Item 2 under Water Skills Development may teach the IANTD OW Free Diver course.
7. No dives may be conducted to depths greater than diver previously certification level.
8. A minimum of 40 hours of training shall be conduct under direct supervision of an IANTD RCCR or RSCR Open Water Instructor.
9. All appropriate safety or required decompression stops must be performed.



## F. Water Skills Development

1. To be allowed to teach the Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive.
2. Out of Air Scenario:
  - a. Swim in a simulated out of air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters)
  - b. Start gas sharing via bailout cylinder
  - c. While gas sharing, continue to swim for at least 10 minutes while maintaining a swim rate of approximately 50 feet (15 meters) per minute.
3. Demonstrate recognition of emergency situations.
4. Demonstrate basic underwater search skills.
5. Demonstrate a rescue of a diver from a depth no greater than 20 fsw (6 msw) to the surface, including:
  - a. Removal of equipment
  - b. Tow for a distance of approximately 100 feet (30 meters) while simulating rescue breaths and remove casualty from the water.
  - c. Manage emergency situation including coordination with emergency services.
6. Demonstrate proficiency in underwater navigation, using both instruments and natural navigation safely leading other divers.
7. Demonstrate proficiency of water skills taught in RCCR or RSCR Open Water, RCCR or RSCR Advanced Open Water Diver and RCCR or RSCR Rescue Diver Programs.
8. Assist in water skills teaching as described in Program Content section.
9. Complete Watermanship Drills number 3 & 4 as found in the Advanced EANx Instructor Watermanship Evaluation. (32 points is minimal passing)
10. Dive planning, preparation and conduct. General group control and schedule application
  - a. Site selection taking into account team members capabilities and environmental factors.
  - b. Emergency plan and equipment preparation.
  - c. Decompression calculation and relevant factors.
  - d. Descend and ascend aids.
  - e. Dive limits (general).
  - f. Use of buoys and flags.
  - g. Dive briefing.
  - h. Kitting up and pre-dive checks.
  - i. Entry and descend control.
  - j. Monitoring of dive plan and environmental conditions.
  - k. Awareness of diver's stress levels.
  - l. Identification of underwater hazards.
  - m. Appropriate reaction to problems and emergencies.
  - n. Ascend and exit control.
  - o. Debriefing and other post dive procedures.
  - p. Consideration of off gassing phase (avoid potential danger – altitude, physical activities, etc.)
  - q. Post dive care of equipment.
  - r. Proper documentation of the dive

## G. Qualification Renewal

1. Assist in a minimum of two (2) IANTD Programs annually.
2. Log a minimum of 12 non-Divemastering dives annually.
3. Maintain current liability insurance and IANTD membership.

## CCR or pSCR Diver Supervisor Levels

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### A. Purpose

1. This Program is designed to provide recognition of leadership qualifications of competent divers.
2. Prepare CCR or pSCR Diver Supervisors to supervise divers training at the the level they are Supervisors for.

### B. Who may Teach & Prerequisites

1. For All Levels:
  - a. Certification Requirements:
    - I. Must be qualified in IANTD CCR or SCR Advanced EANx Supervisor or CCR or SCR ART Supervisor or equivalent.
      - ▶ *NOTE: If an equivalent certification is accepted, First Aid Diver, CPR and Oxygen Provider must be current within the last two (2) years.*
  - b. Age requirement:
    - I. Must be minimum of 18 years of age.
2. For CCR or pSCR Normoxic Trimix Supervisor:
  - a. **Who may teach this course?**
    - ▶ For CCR Normoxic Trimix Supervisor, a CCR Normoxic Trimix Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
    - ▶ For pSCR Normoxic Trimix Supervisor, a pSCR Normoxic Trimix Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
  - b. Must be qualified in IANTD CCR or pSCR Normoxic Trimix Diver
  - c. Must provide proof of a minimum of 80 rebreather logged dives, of which at least 50 were deeper than 132 fsw (40 msw) and at least 10 were to a depth of at least 190 fsw (57 msw).
3. For CCR or pSCR Trimix Supervisor:
  - a. **Who may teach this course?**
    - ▶ For CCR Trimix Supervisor, a CCR Trimix Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
    - ▶ For pSCR Trimix Supervisor, a pSCR Trimix Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
  - b. Must be qualified in IANTD CCR or pSCR Trimix diver
  - c. Must provide proof of a minimum of 200 rebreather logged dives, of which at least 50 were Trimix dives deeper than 200 fsw (60 msw) and at least 10 were to a depth of at least 240 fsw (80 msw).
4. For CCR or pSCR Expedition Trimix Supervisor:
  - a. **Who may teach this course?**
    - ▶ For CCR Expedition Trimix Supervisor, a CCR Expedition Trimix Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
    - ▶ For pSCR Expedition Trimix Supervisor, a pSCR Expedition Trimix Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
  - b. Must be qualified in IANTD CCR or pSCR Expedition Trimix diver
  - c. Must provide proof of a minimum of 300 rebreather logged dives, of which at least 100 were Trimix dives deeper than 240 fsw (80 msw) and at least 20 were to a depth of at least 300 fsw (90 msw).

5. For CCR or pSCR Tek Wreck Supervisor:
  - a. **Who may teach this course?**
    - ▶ For Tek CCR Wreck Supervisor, a Tek CCR wreck Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
    - ▶ For Tek pSCR Wreck Supervisor, a Tek pSCR wreck Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
  - b. Must be qualified in IANTD Tek CCR or pSCR Wreck diver
  - c. Must provide proof of a minimum of 80 logged rebreather wrecks dives.
6. For CCR or pSCR Cave Supervisor:
  - a. **Who may teach this course?**
    - ▶ For CCR Cave Supervisor, a CCR Cave Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
    - ▶ For pSCR Cave Supervisor, a pSCR Cave Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
  - b. Must be qualified in IANTD CCR or pSCR Cave Diver
  - c. Must provide proof of a minimum of 80 logged rebreather cave dives.
7. For CCR or pSCR Mine Supervisor:
  - a. **Who may teach this course?**
    - ▶ For CCR Mine Supervisor, a CCR Mine Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
    - ▶ For pSCR Mine Supervisor, a pSCR Mine Instructor or higher may teach the course provided they are an Instructor on the specific Rebreather being used in the course.
  - b. Must be qualified in IANTD CCR or pSCR Mine Diver
  - c. Must provide proof of a minimum of 80 logged rebreather mine dives.

### C. Program

1. Must assist in at least two (2) complete courses in direct supervision of divers (under guidance of an Instructor) at the level applied for and give at least two (2) lectures
2. This Program must include a minimum of two (2) evaluation dives at each level of qualification being qualified, in addition to the in-water time specified above.

### D. Equipment Requirements

1. All IANTD Student Kits up to current level of qualification.
2. Fulfill all Equipment Requirements as specified in the IANTD Rebreather Leadership & Instructor Programs - General Standards

### E. Program Limits

1. CCR or SCR Supervisors must be diver qualified at level they supervise the candidate must obtain CCR or SCR training appropriate for the environment and depth range to be supervised.
2. Same as for the applicable IANTD Rebreather Diver Program, Rebreather Cave Diver Program and Rebreather Wreck Diver Program.

### F. Water Skills Development

1. Assist on all dives of a course in each level being qualified for (IANTD CCR or pSCR Trimix Diver, CCR or pSCR Wreck Diver, CCR or pSCR Cave Diver, or CCR or SCR Diver Programs).
2. Demonstrate all skills taught in the applicable IANTD Program(s) at Demonstration quality.
3. Demonstrate overall water skills and supervision abilities to the satisfaction of the Instructor

## RCCR or RSCR Assistant Instructor Development Program

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- ▶ For CCR: A RCCR Assistant Course Director or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For SCR: A RSCR Assistant Course Director or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to train qualified IANTD Divemasters, to teach a part of the IANTD Open Water Diving Program, and conduct relevant assessment.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR Must be qualified in:
    - I. IANTD RCCR Divemaster or higher or equivalent.
    - II. IANTD RCCR Deep Diver or higher or equivalent
  - b. For SCR Must be qualified in:
    - I. IANTD RSCR Divemaster or higher or equivalent.
    - II. IANTD RSCR Deep Diver or higher or equivalent
  - c. IANTD CPR or equivalent
  - d. IANTD First Aid or equivalent
  - e. IANTD Oxygen Administrator or equivalent
    - ▶ *NOTE: First Aid, CPR and Oxygen Administrator may be conducted in conjunction with the program but training hours do not count to the minimum required.*
2. Age requirement:
  - a. Must be a minimum of 18 years of age
3. Dive Experience:
  - a. Must provide proof of a minimum of 80 logged dives, of which at least 15 were RCCR or RSCR Divemastering dives.
    - I. Dive experience must include dives in a variety of environments including but not limited to Night Dive/Limited Visibility, Navigation, Marine Ecology, Deep Dive or any other ADDITIONAL SPECIALIZED PROGRAM.
  - b. Must have assisted in at least:
    - I. One (1) complete RCCR or Recreational SCR Diver program;
    - II. One (1) complete RCCR or RSCR Advanced Open Water Diver program;
    - III. One (1) complete RCCR or RSCR Deep Diver program;
    - IV. One (1) complete RCCR or RSCR Rescue Diver program

### C. Program Content

1. A 5 day Program directing the Assistant Instructor candidates in the methods and techniques of training and assessing IANTD RCCR or Recreational SCR Divers.
2. Complete review of the Standards and Procedures (S & P) by the IT
3. Presentation level proficiency in the practical skills, and the ability to teach and evaluate on them effectively, according to RCCR or RSCR Course Director discretion must be demonstrated by all candidates.
4. All lecture topics in the IANTD Open Water Program IT Power Point slides must be studied by the candidates and discussed in class.

5. A selection of slides chosen by the RCCR or RSCR Course Director shall be presented by the candidates, following the processes of lecture preparation, planning and delivery. A minimum of one (1) academic, one (1) confined water and one (1) open water presentation shall be successfully completed by the candidate.
  - *NOTE: Proficiency level in lecturing skills according to RCCR or RSCR Course Director discretion must be demonstrated by all candidates.*
  - *NOTE: Candidates shall not be given information in advance, on the precise topic to be assessed.*
6. All candidates must demonstrate the ability to control and supervise a diving group in an effective manner, according to RCCR or RSCR Course Director discretion.
  - *NOTE: Teaching experience must be acquired by assisting (in both theory and practice) in a series of actual or simulated training sessions under the direct supervision and assessment of the RCCR or RSCR Course Director.*

## D. Equipment Requirements

1. IANTD Sport Diving Instructor Kit.
2. Equipment Requirements listed in the IANTD RCCR or Recreational SCR Diver Program the RCCR or RSCR Assistant Instructor plans to assist are mandatory.
3. Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.

## E. Program Limits

1. Student to RCCR or RSCR Course Director Ratio:
  - a. There may be no more than 6 candidates per RCCR or RSCR Course Director.
    - *NOTE: This ratio may be increased by two (2) candidates for each IANTD RCCR or RSCR Assistant Course Director, up to a maximum of 10 candidates with two (2) IANTD RCCR or RSCR Assistant Course Director per class session.*
2. The AIDP is staffed by at least one (1) RCCR or RSCR Course Director plus any RCCR or RSCR Elite Instructor, depending on number of participants.
3. These individuals may teach and assess:
  - a. The theoretical part of all RCCR or RSCR Diving Program courses;
  - b. The complete Snorkeling course;
  - c. The complete Free Diver course providing that they perform Skill Number 2 described in Watermanship Skills Development of this course.
  - d. These individuals may attend and be certified in specialized instructor programs that does not require in-water training as part of the program. After being certified, these individuals can conduct the corresponding specialized programs.
  - e. These individuals may also teach and assess:
    - I. All academic portion of RCCR or RSCR Diving Programs under the indirect supervision of a RCCR or RSCR Open Water Instructor or higher.
      - *The RCCR or RSCR Open Water Instructor (or higher) shall personally assesses all knowledge of the corresponding program.*
    - II. All confined water skills of any level of RCCR or RSCR Diving Program under the direct supervision and authorization of an IANTD RCCR or RSCR Open Water Instructor (or higher).
    - III. Under direct supervision of the RCCR or RSCR Open Water Instructor (or higher), these individuals can conduct the RCCR or Recreational SCR Diver course surface skill evaluations.
4. No dives may be conducted to depths greater than 132 fsw (40 msw).
5. A minimum of 70 hours of training shall be conducted under direct supervision of an IANTD RCCR or RSCR Course Director.
6. All appropriate safety stops must be performed.

## F. Water Skills Development

- NOTE: To be allowed to teach the OW Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive
1. Complete Watermanship Evaluation
  2. Confined water practical skills from the following programs must be explained and practiced:
    - a. IANTD RCCR or RSCR program;
    - b. IANTD RCCR or RSCR Advanced Open Water Diver program;
    - c. IANTD RCCR or RSCR Deep Diver program;
    - d. IANTD RCCR or RSCR Rescue Diver program.
  3. Demonstrate an open water rescue of a diver from a depth no greater than 20 fsw (6 msw), including:
    - a. Recognition of emergency situations.
    - b. Controlled casualty recovery from depth.
    - c. Effective emergency surface actions.
    - d. Removal of equipment.
    - e. Surface tow for a distance of about 100 feet (30 meters) while simulating rescue breaths.
    - f. Casualty recovery from water.
    - g. Simulation of full application of emergency plan including coordination with local emergency services.
  4. Deploy a DSMB or Lift Bag in less than 1½ minute.
  5. Demonstrate proficiency in illustrating and teaching any IANTD RCCR or RSCR Program confined water practical skills as per assignments given by Assistant Course Director.
  6. Demonstrate practical lesson planning, preparation and conduct for confined water skills. Procedure must include:
    - a. Preparation/Planning.
    - b. Briefing.
    - c. Skill demonstration.
    - d. Student practice and group supervision and control.
    - e. Problem recognition and solving.
    - f. Student evaluation.
    - g. Debriefing.

## G. Qualification Records

1. Upon successful completion of the course the RCCR or RSCR Assistant Course Director shall request the RCCR or RSCR AI certification by submitting the appropriate IANTD registration form and other required paperwork to IANTD Headquarters or to the IANTD Licensee Office responsible for the territory.

## H. Qualification Renewal

1. Assist in a minimum of two (2) IANTD Programs annually.
2. Log a minimum of 12 non-teaching and non-Divemastering dives annually.
3. Maintain current liability insurance and IANTD membership.



## I. After Certified

1. After certified, the RCCR or RSCR Assistant Instructor will be able to assist in:
  - a. IANTD RCCR or RSCR program;
  - b. IANTD RCCR or RSCR Advanced Open Water Diver program;
  - c. IANTD RCCR or RSCR Deep Diver program;
  - d. IANTD RCCR or RSCR Rescue Diver program.
  - e. IANTD RCCR or RSCR Divemaster program
  - ▶ *These individuals may attend and be certified in specialized instructor programs that does not require in-water training as part of the program. After being certified, these individuals can conduct the corresponding specialized programs*
  - ▶ *NOTE: If diving in conditions significantly different from those previously experienced the Assistant Instructor shall require an appropriate orientation.*

## J. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## RCCR Open Water Instructor Development Program

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

1. Recreational Closed Circuit Rebreather Instructor Trainer on the specific unit to be taught may teach this course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Recreational Closed Circuit Rebreather Instructors (RCCR Open Water Instructor).

### B. Prerequisites

▶ **NOTE: Every candidate must be approved by manufacturer as an instructor candidate**

1. Certification Requirements:
  - a. Must be qualified in IANTD Open Water EANx Instructor or higher
  - b. Must be qualified in IANTD Recreational CCR Diver or higher or equivalent
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must provide proof of a minimum of 150 logged dives, including at least 50 hours on the CCR on which they want to be qualified as an CCR Instructor.
    - ▶ **NOTE:** An IANTD RCCR Open Water Instructor doing an IANTD Instructor Crossover from one (1) RCCR to another RCCR must log a minimum of 30 dives and 40 hours on the RCCR prior to attending the IEC.
    - ▶ **NOTE:** A CCR Advanced EANx Instructor doing an IANTD Instructor Crossover to another RCCR at RCCR Open Water Instructor level must log 5 dives and 10 hours on the RCCR prior to attending the IEC
    - ▶ **NOTE:** A RCCR Open Water Instructor who is not a CCR Advanced EANx Instructor who wishes to update to CCR Advanced EANx Instructor must complete a CCR Advanced EANx Diver course and must be Advanced EANx instructor and once having met the remaining prerequisites for CCR Advanced EANx Instructor, attend the IEC

### C. Program Content

1. Complete an IDP.

### D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD RCCR Rebreather specific Diver Program are mandatory.
2. Must own or have unlimited access to a the RCCR they will be teaching on
  - ▶ **NOTE:** Must have adequate bailout gas
3. IANTD RCCR Rebreather specific Diver Student Kit.
4. Must own or have unlimited access to a CCR.

### E. Program Limits

1. Same as for the IANTD Recreational CCR Diver Program.

### F. Qualification Renewal

1. Same as for the IANTD OW Instructor Program, plus at least two Recreational CCR Diver Programs must be on the specific RCCR on which one is an instructor on.

## G. Water Skills Development

► **NOTE:** A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.

1. Demonstrate all skills in IANTD Recreational CCR Diver Program.
2. Must assist in at least one (1) complete RCCR Program as part of the IEC.
3. Complete the Instructor Fitness Evaluation while using the RCCR.
4. Complete all Water skills listed under the Recreational CCR Diver Program.

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## RSCR Open Water Instructor Development Program

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

1. Recreational Semi-Closed Circuit Rebreather Instructor Trainer on the specific unit to be taught may teach this course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Recreational Semi-Closed Circuit Rebreather Instructors (SCR Instructor).

### B. Prerequisites

► **NOTE: Every candidate must be approved by manufacturer as an instructor candidate**

1. Certification Requirements:
  - a. Must be qualified in IANTD Open Water EANx Instructor or higher
  - b. Must be qualified in IANTD Recreational SCR Diver or higher or equivalent
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must provide proof of a minimum of 110 logged dives, including at least 50 hours on the RSCR on which they want to be qualified as a RSCR Open Water Instructor.
    - **NOTE:** An IANTD RSCR Open Water Instructor doing an IANTD Instructor Crossover from one (1) RSCR to another RSCR must log a minimum of 30 dives and 40 hours on the RSCR prior to attending the IEC.
    - **NOTE:** A SCR Advanced EANx Instructor doing an IANTD Instructor Crossover to another RSCR at RSCR Open Water Instructor level must log 5 dives and 10 hours on the RSCR prior to attending the IEC
    - **NOTE:** A RSCR Open Water Instructor who is not a SCR Advanced EANx Instructor who wishes to update to SCR Advanced EANx Instructor must complete a SCR Advanced EANx Diver course and must be Advanced EANx instructor and once having a met the remaining prerequisites for SCR Advanced EANx Instructor, attend the IEC

### C. Program Content

1. Complete an IEC evaluation.

### D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD SCR Rebreather specific Diver Program are mandatory.
2. IANTD SCR Rebreather specific Diver Student Kit.
3. Must own or have unlimited access to a SCR.

### E. Program Limits

1. Same as for the IANTD Recreational SCR Diver Program.

### F. Qualification Renewal

1. Same as for the IANTD Open Water Instructor Program, plus at least Recreational SCR Diver Program must be on the specific SCR on which one is an instructor on.

## G. Water Skills Development

► **NOTE: A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.**

1. Must assist in at least one (1) complete SCR Program, on the unit they will be teaching, as part of the IEC.
2. Demonstrate all skills in IANTD Recreational SCR Diver Program.
3. Complete the Instructor Fitness Evaluation while using the SCR.
4. Complete all Water skills listed under the Recreational SCR Diver Program.

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## RCCR or RSCR Elite Open Water Instructor Application Process

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### How to apply?

1. Send an IANTD Elite RCCR or Recreational SCR Diver Instructor application to IANTD HQ or IANTD Lincsee.

### A. Purpose

1. Recognize an IANTD supporter and outstanding professional who dedicated himself to keep learning and evolving in his professional career.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be qualified in:
    - I. IANTD RCCR or RSCR Open Water Instructor or higher.
    - II. IANTD Recreational CCR or SCR Essential Instructor;
    - III. IANTD Elite RCCR or Recreational SCR Diver
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must have completed 200 logged dives.
  - b. Must proof a minimum of 15 IANTD Sport Diver Programs issued.
    - *NOTE: Must include at least 2 IANTD RCCR or RSCR Adv. Open Water Divers, 2 IANTD RCCR or RSCR Deep Diver and 2 IANTD RCCR or RSCR Rescue Divers.*
  - c. Must proof a minimum of 10 IANTD ADDITIONAL SPECIALIZED PROGRAM issued.
    - *NOTE: IANTD Specialized programs other than Diver First Aid, CPR, Oxygen Administrator or AED.*



## CCR Advanced EANx Instructor Development Program

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

1. CCR Adv. EANx Instructor Trainer on the specific unit to be taught may teach this course.

### A. Purpose

1. This Program is designed to develop qualified IANTD CCR Advanced EANx Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be a qualified as IANTD Advanced EANx Instructor or higher, or take the IDP with the CCR IDP.
  - b. Must be a qualified as CCR Advanced EANx Diver or higher.
2. Age Requirement:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must provide proof of a minimum of 150 logged dives, which at least 100 CCR dives including 100 hours on the CCR on which they are becoming an instructor.
    - *NOTE: An IANTD CCR Advanced EANx Instructor doing an IANTD Instructor Crossover from one (1) CCR to another CCR must log a minimum of 30 dives and 40 hours on the CCR prior to attending the IEC.*

### C. Program Content

1. The Candidate must demonstrate proficiency in the use of IANTD Academic tools such as: standards, slides and/or student workbook (if available), demonstrate and grade confined water skills, evaluate, remediate and grade open water skills.
2. Course must include the evaluation of the candidate presentation of no less than 2 confined water skills and four (4) openwater skills.
3. The Candidate must pass the written theory exam with a minimum score of 80%.
4. The Candidate must assist in at least one (1) complete CCR Advanced EANx Program prior to or in conjunction with the IDP.
  - *Note: It is recommended that the CCR Advanced EANx program be an actual Diver program. However, the course may be simulated by the completion of the evaluations of at the minimum of the following: One Academic session; One Confined water session and 2 open water dives independently teaching the items from the Diver program and that demonstrates the Instructor proficiency in teaching the course materials per IANTD standards.*
5. Course to be completed in no less than 4 dives
6. IANTD CCR Advanced EANx Instructor crossover from one (1) CCR to another CCR.
  - a. IANTD CCR Instructor crossing to a different CCR will only be expected to demonstrate and lecture on the electrical and or mechanical differences.
  - b. The candidate will demonstrate teaching proficiency in evaluating water skills in a confined water session and on two (2) dives
7. CCR Advanced EANx Instructor, from other agencies, crossing over to IANTD from one (1) CCR to another CCR.
  - a. Instructors crossing over from another Agency to IANTD will demonstrate knowledge of IANTD Standards & Procedures and the use of applicable IANTD teaching materials.
  - b. The candidate will complete one (1) confined water session and a minimum of two (2) open water dives demonstrating the ability to teach CCR skills per IANTD Standards.

## D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD CCR specific Diver Program are mandatory.
2. Must own an oxygen analyzer
3. IANTD CCR specific Diver Student Kit.
4. IANTD "S" drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
5. Must own or have unlimited access to the CCR to become an instructor on.

## E. Program Limits

1. Same as for the IANTD CCR Advanced EANx Diver Program.

## F. Qualification Renewal

1. Must complete requirements for Advanced EANx Instructor renewal plus teach at least one (1) qualification program on the specific CCR on which they are an instructor.

## G. Water Skills Development

► **NOTE: A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.**

1. Demonstrate all skills in IANTD CCR Advanced EANx Diver Program
2. Assist in at least one (1) complete IANTD Advanced EANx Diver Program.
3. Complete the Instructor Fitness Evaluation while using the CCR.
4. Simulate a complete rescue of a CCR diver bring a simulated unconscious diver from as depth of 20 ft or less to the surface, establishing positive buoyancy of the diver and towing the diver a min of 100 ft to further assistance.

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## SCR Advanced EANx Instructor Development Program

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

1. SCR Advanced EANx Instructor Trainer on the specific unit to be taught may teach this course.

### A. Purpose

1. This Program is designed to develop qualified IANTD SCR Advanced EANx Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be a qualified as IANTD Advanced EANx Instructor or higher, or take the IDP with the SCR IDP.
  - b. Must be a qualified as IANTD SCR Advanced EANx Diver or higher or equivalent.
2. Age Requirement:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must provide proof of a minimum of 150 logged dives, which at least 100 SCR dives including 100 hours on the SCR on which they are becoming an instructor.
    - *NOTE: An IANTD SCR Advanced EANx Instructor doing an IANTD Instructor Crossover from one (1) SCR to another SCR must log a minimum of 35 dives and 40 hours on the SCR prior to attending the IEC.*

### C. Program Content

1. The Candidate must demonstrate proficiency in the use of IANTD Academic tools such as: standards, slides and/or student workbook (if available), demonstrate and grade confined water skills, evaluate, remediate and grade open water skills.
2. Course must include the evaluation of the candidate presentation of no less than 2 confined water skills and four (4) openwater skills.
3. The Candidate must pass the written theory exam with a minimum score of 80%.
4. The Candidate must assist in at least one (1) complete SCR Program prior to or in conjunction with the IDP.
  - *Note: It is recommended that the SCR Advanced EANx program be an actual Diver program. However, the course may be simulated by the completion of the evaluations of at the minimum of the following: One Academic session; One Confined water session and 2 open water dives independently teaching the items from the Diver program and that demonstrates the Instructor proficiency in teaching the course materials per IANTD standards.*
5. Course to be completed in no less than 4 dives
6. IANTD Instructor crossover from one (1) SCR to another SCR.
  - a. IANTD SCR Advanced EANx Instructor crossing to a different SCR will only be expected to demonstrate and lecture on the electrical and or mechanical differences.
  - b. The candidate will demonstrate teaching proficiency in evaluating water skills in a confined water session and on two (2) dives
7. Instructor, from other agencies, crossing over to IANTD from one (1) SCR to an other SCR.
  - a. Instructors crossing over from another Agency to IANTD will demonstrate knowledge of IANTD Standards & Procedures and the use of applicable IANTD teaching materials.
  - b. The candidate will complete one (1) confined water session and a minimum of two (2) open water dives demonstrating the ability to teach SCR skills per IANTD Standards.

## D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD SCR Diver Program are mandatory.
2. Must own an oxygen analyzer
3. IANTD SCR Diver Student Kit.
4. IANTD "S" drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
5. Must own or have unlimited access to the SCR to become an instructor on.

## E. Program Limits

1. Same as for the IANTD SCR Advanced EANx Diver Program.

## F. Qualification Renewal

1. Must complete requirements for Advanced EANx Instructor renewal plus teach at least one (1) program on the specific SCR on which they are an instructor.

## G. Water Skills Development

► **NOTE: A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.**

1. Demonstrate all the skills in IANTD SCR Advanced EANx Diver Program at Instructor level demonstration quality
2. Complete the Instructor Fitness Evaluation while using the SCR
3. Deploy a DSMB or Lift Bag in less than 1 minute.
4. Simulate a complete rescue of a SCR diver bring a simulated unconscious diver from as depth of 20 ft or less to the surface, establishing positive buoyancy of the diver and towing the diver a min of 100 ft to further assistance.

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## CCR Advanced Recreational Trimix Instructor Development Program

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

1. CCR Advanced Recreational Trimix Instructor Trainer on the specific unit to be taught may teach this course.

### A. Purpose

1. This Program is designed to develop qualified IANTD CCR Advanced Recreational Trimix Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be a qualified as IANTD Advanced Recreational Trimix Instructor, or take the IDP with the CCR IDP.
  - b. Must be a qualified as CCR Advanced Recreational Trimix Diver or higher.
2. Age Requirement:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must provide proof of a minimum of 150 logged dives, which at least 100 CCR dives including 100 hours on the CCR on which they are becoming an instructor.
    - *NOTE: An IANTD CCR Advanced Recreational Trimix Instructor doing an IANTD Instructor Crossover from one (1) CCR to another CCR must log a minimum of 30 dives and 40 hours on the CCR prior to attending the IEC.*

### C. Program Content

1. The Candidate must demonstrate proficiency in the use of IANTD Academic tools such as: standards, slides and/or student workbook (if available), demonstrate and grade confined water skills, evaluate, remediate and grade open water skills.
2. Course must include the evaluation of the candidate presentation of no less than 2 confined water skills and four (4) openwater skills.
3. The Candidate must pass the written theory exam with a minimum score of 80%.
4. The Candidate must assist in at least one (1) complete CCR Advanced Recreational Trimix Program prior to or in conjunction with the IDP.
  - *Note: It is recommended that the CCR Advanced Recreational Trimix program be an actual Diver program. However, the course may be simulated by the completion of the evaluations of at the minimum of the following: One Academic session; One Confined water session and 2 open water dives independently teaching the items from the Diver program and that demonstrates the Instructor proficiency in teaching the course materials per IANTD standards.*
5. Course to be completed in no less than 4 dives
6. IANTD CCR Advanced Recreational Trimix Instructor crossover from one (1) CCR to another CCR.
  - a. IANTD CCR Instructor crossing to a different CCR will only be expected to demonstrate and lecture on the electrical and or mechanical differences.
  - b. The candidate will demonstrate teaching proficiency in evaluating water skills in a confined water session and on two (2) dives
7. CCR Advanced Recreational Trimix Instructor, from other agencies, crossing over to IANTD from one (1) CCR to another CCR.
  - a. Instructors crossing over from another Agency to IANTD will demonstrate knowledge of IANTD Standards & Procedures and the use of applicable IANTD teaching materials.
  - b. The candidate will complete one (1) confined water session and a minimum of two (2) open water dives demonstrating the ability to teach CCR skills per IANTD Standards.

## D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD CCR specific Diver Program are mandatory.
2. Must own an oxygen analyzer
3. IANTD CCR specific Diver Student Kit.
4. IANTD "S" drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
5. Must own or have unlimited access to the CCR to become an instructor on.

## E. Program Limits

1. Same as for the IANTD CCR Advanced Recreational Trimix Diver Program.

## F. Qualification Renewal

1. Must complete requirements for Advanced EANx Instructor renewal plus teach at least one (1) qualification program on the specific CCR on which they are an instructor.

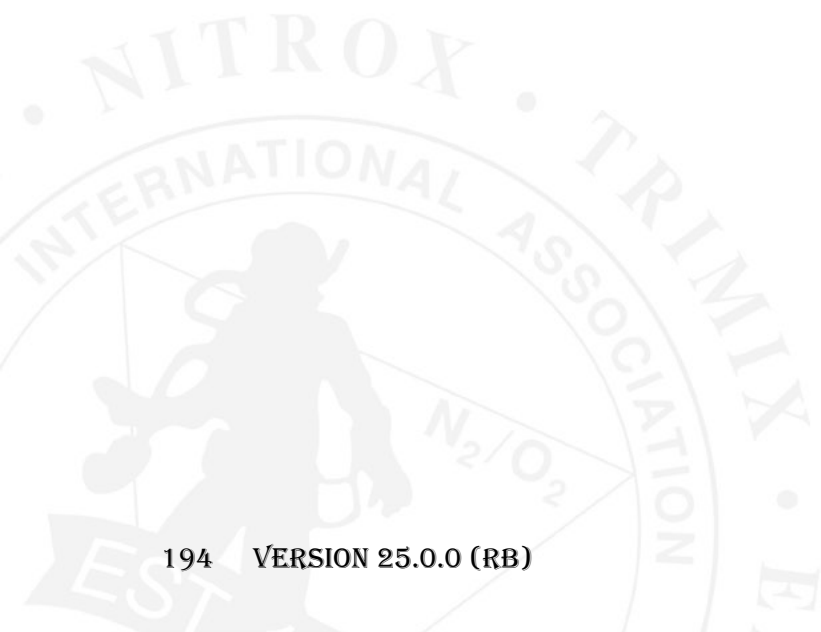
## G. Water Skills Development

► **NOTE: A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.**

1. Demonstrate all skills in IANTD CCR Advanced Recreational Trimix Diver Program
2. Assist in at least one (1) complete IANTD Advanced EANx Diver Program.
3. Complete the Instructor Fitness Evaluation while using the CCR.
4. Simulate a complete rescue of a CCR diver bring a simulated unconscious diver from as depth of 20 ft or less to the surface, establishing positive buoyancy of the diver and towing the diver a min of 100 ft to further assistance.

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164





## SCR Advanced Recreational Trimix Instructor Development Program

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

1. SCR Advanced Recreational Trimix Instructor Trainer on the specific unit to be taught may teach this course.

### A. Purpose

1. This Program is designed to develop qualified IANTD SCR Advanced Recreational Trimix Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be a qualified as IANTD Advanced Recreational Trimix Instructor or higher, or take the IDP with the SCR Advanced Recreational Trimix IDP.
  - b. Must be a qualified as IANTD SCR Advanced Recreational Trimix Diver or higher or equivalent.
2. Age Requirement:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must provide proof of a minimum of 150 logged dives, which at least 100 SCR dives including 100 hours on the SCR on which they are becoming an instructor.
    - *NOTE: An IANTD SCR Advanced Recreational Trimix Instructor doing an IANTD Instructor Crossover from one (1) SCR to another SCR must log a minimum of 35 dives and 40 hours on the SCR prior to attending the IEC.*

### C. Program Content

1. The Candidate must demonstrate proficiency in the use of IANTD Academic tools such as: standards, slides and/or student workbook (if available), demonstrate and grade confined water skills, evaluate, remediate and grade open water skills.
2. Course must include the evaluation of the candidate presentation of no less than 2 confined water skills and four (4) openwater skills.
3. The Candidate must pass the written theory exam with a minimum score of 80%.
4. The Candidate must assist in at least one (1) complete SCR Program prior to or in conjunction with the IDP.
  - *Note: It is recommended that the SCR Advanced Recreational Trimix program be an actual Diver program. However, the course may be simulated by the completion of the evaluations of at the minimum of the following: One Academic session; One Confined water session and 2 open water dives independently teaching the items from the Diver program and that demonstrates the Instructor proficiency in teaching the course materials per IANTD standards.*
5. Course to be completed in no less than 4 dives
6. IANTD Instructor crossover from one (1) SCR to another SCR.
  - a. IANTD SCR Advanced Recreational Trimix Instructor crossing to a different SCR will only be expected to demonstrate and lecture on the electrical and or mechanical differences.
  - b. The candidate will demonstrate teaching proficiency in evaluating water skills in a confined water session and on two (2) dives
7. Instructor, from other agencies, crossing over to IANTD from one (1) SCR to an other SCR.
  - a. Instructors crossing over from another Agency to IANTD will demonstrate knowledge of IANTD Standards & Procedures and the use of applicable IANTD teaching materials.
  - b. The candidate will complete one (1) confined water session and a minimum of two (2) open water dives demonstrating the ability to teach SCR skills per IANTD Standards.

## D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD SCR Diver Program are mandatory.
2. Must own an oxygen analyzer
3. IANTD SCR Diver Student Kit.
4. IANTD "S" drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
5. Must own or have unlimited access to the SCR to become an instructor on.

## E. Program Limits

1. Same as for the IANTD SCR Advanced Recreational Trimix Diver Program.

## F. Qualification Renewal

1. Must complete requirements for Advanced Recreational Trimix Instructor renewal plus teach at least one (1) program on the specific SCR on which they are an instructor.

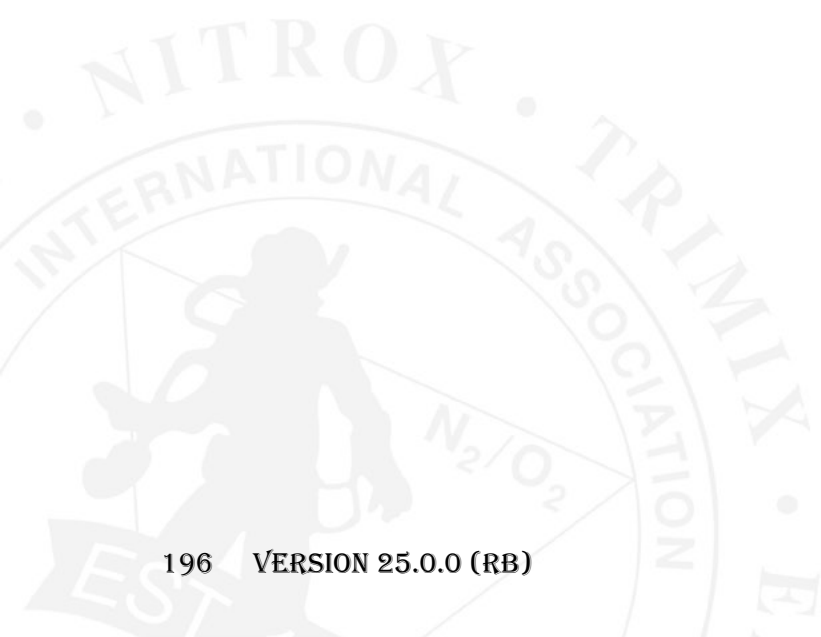
## G. Water Skills Development

► **NOTE: A diver crossover from one rebreather to another rebreather must include the skills and proficiency of the diver's highest previous rebreather qualification.**

1. Demonstrate all the skills in IANTD SCR Advanced Recreational Trimix Diver Program at Instructor level demonstration quality
2. Complete the Instructor Fitness Evaluation while using the SCR
3. Deploy a DSMB or Lift Bag in less than 1 minute.
4. Simulate a complete rescue of a SCR diver bring a simulated unconscious diver from as depth of 20 ft or less to the surface, establishing positive buoyancy of the diver and towing the diver a min of 100 ft to further assistance.

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## CCR or pSCR Normoxic Trimix Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A CCR Normoxic Trimix IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A pSCR Normoxic Trimix IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Rebreather Normoxic Trimix Instructors

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR: Must be qualified in:
    - I. An IANTD CCR Advanced EANx Instructor or higher in Active Teaching Status
    - II. An IANTD CCR Trimix Diver
  - b. For pSCR: Must be qualified in:
    - I. An IANTD pSCR Advanced EANx Instructor or higher in Active Teaching Status
    - II. An IANTD pSCR Trimix Diver
2. Age Requirements:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must have a minimum of two (2) years of teaching experience
  - b. Must have taught a minimum of three (3) IANTD Rebreather Diver Programs which two (2) must be Rebreather Advanced EANx divers or Higher
  - c. Must provide proof of a minimum of 350 logged dives, of which at least 100 were deeper than 132 fsw (40 msw) and at least 25 were Rebreather Normoxic Trimix or Rebreather Trimix dives.

### C. Program Content

1. A 3 day Program directing the Instructor candidate to the methods and techniques of training IANTD Rebreather Normoxic Trimix Diver, plus assists as described at Preresite - Dive Experience.
2. The candidate must demonstrate good leadership potential during this course and give at least two (2) complete lectures in the Program.
3. The candidate must demonstrate good leadership potential during the IDP and give at least two (2) complete lectures in the Program.
  - NOTE: Non Rebreather Normoxic Trimix Supervisors must assist two (2) courses which one (1) is in conjunction with the IDP.
  - NOTE: Rebreather Normoxic Trimix Supervisors must assist in one (1) course, which can be in conjunction with the IDP

### D. Equipment Requirements

1. IANTD Rebreather Normoxic Trimix Diver Student Kit.
2. All Equipment Requirements listed in the IANTD Rebreather Normoxic Trimix Diver Program are mandatory.
3. Must own or have unlimited access to an Oxygen Analyzer.
  - NOTE: Own or have unlimited access to a Helium Analyzer is strongly recommended.

## **E. Program Limits**

1. Student and Instructor Trainer Ratio
  - a. There may be no more than four (4) candidates per Instructor Trainer.
2. No dives may be conducted to depths greater than 200 fsw (60 msw)
3. Same as for the IANTD Rebreather Normoxic Trimix Diver Program

## **F. Qualification Renewal**

1. Teach a minimum of four (4) IANTD Programs including one (1) IANTD Rebreather Normoxic Trimix Diver Program annually
2. Remain as an active IANTD member, pay annual Instructor renewal fees, publish or assist in an IANTD Instructor IDP.
3. Log at least 20 non-teaching Rebreather Normoxic Trimix, Rebreather Cave or Rebreather Wreck dives using EANx or oxygen decompression annually.
4. Provide proof of insurance listing IANTD as an Additional Insured.

## **G. Water Skills Development**

1. Supervise three (3) dives in a Rebreather Normoxic Trimix Diver Program under the direction of a Rebreather Normoxic Trimix Instructor.
2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Rebreather Normoxic Trimix Diver Program.

## **H. Physical Evaluation**

1. Complete the Trimix Instructor Watermanship - Page 168



## CCR or pSCR Trimix Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A CCR Trimix IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A pSCR Trimix IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Rebreather Instructors in an extended decompression diving environment using helium based gas mixtures.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR: Must be qualified in:
    - I. An IANTD CCR Normoxic Trimix Instructor or higher in Active Teaching Status for a minimum of one (1) year
  - b. For pSCR: Must be qualified in:
    - I. An IANTD pSCR Normoxic Trimix Instructor or higher in Active Teaching Status for a minimum of one (1) year
2. Age Requirements:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must have a minimum of two (2) years of teaching experience
  - b. Must have taught 6 Rebreather Diver programs of which 3 must have been Normoxic Trimix Rebreather Diver.
    - *NOTE: Equivalent programs with any qualification agency, may be counted*
4. Must provide proof of a minimum of 400 logged dives, of which 100 were on Trimix and at least 50 were Trimix dives

### C. Program Content

1. Review all academic portions of the IANTD Rebreather Trimix Diver Student Kit.
2. Review all appropriate IANTD slides.
3. Must assist Rebreather Trimix Diver Programs as described in the prerequisite - Dive experience bullet.
4. Give assigned lectures and demonstrate a practical teaching skills to the IT's satisfaction.
5. Supervise all course dives on the Rebreather, and in the presence of the IT.
  - *NOTE: Any skills are at the discretion of the IT to be taken from the Trimix Rebreather Diver course.*
  - **NOTE: They may not teach OC Trimix Divers unless OC Trimix Instructor qualified.**
6. The candidate must demonstrate good leadership potential during the IDP and give at least two (2) complete lectures in the Program.
  - *NOTE: Non Rebreather Trimix Supervisors must assist two (2) courses which one (1) is in conjunction with the IDP.*
  - *NOTE: Rebreather Trimix Supervisors must assist in one (1) course, which can be in conjunction with the IDP*

## D. Equipment Requirements

1. IANTD Rebreather Trimix Diver Student Kit.
  - a. (RB) IANTD “S” drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
2. All Equipment Requirements listed in the IANTD Rebreather Trimix Diver Program are mandatory.
3. Must own or have unlimited access to a Rebreather.
4. Must own or have unlimited access to an Oxygen Analyzer.

► *NOTE: Own or have unlimited access to a Helium Analyzer is strongly recommended.*

## E. Program Limits

1. Student and Instructor Trainer Ratio
  - a. There may be no more than three (3) candidates per Instructor Trainer.
2. Same as for the IANTD Rebreather Trimix Rebreather Diver Program.

## F. Qualification Renewal

1. Same as for the IANTD Trimix Instructor Program except at least one (1) Rebreather Trimix Diver course must be taught.

## G. Water Skills Development

1. A confined water session demonstrating all skills must be completed to the Instructor Trainer’s satisfaction prior to conducting any open water dives.
2. Demonstrate skills during open water sessions to the satisfaction of the IT.
3. Demonstrate class control to the IT’s satisfaction.

## H. Physical Evaluation

1. Complete the Trimix Instructor Watermanship - Page 168





## CCR or pSCR Expedition Trimix Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A CCR Expedition Trimix IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A pSCR Expedition Trimix IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to provide Instructor expertise for teaching Expedition level Trimix Divers on CCR.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR: Must be qualified in:
    - I. An IANTD CCR Expedition Trimix Diver OR
    - II. An IANTD CCR Trimix Instructor in Active Teaching Status for a minimum of two (2) year
  - b. For SCR: Must be qualified in:
    - I. An IANTD pSCR Expedition Trimix Diver OR
    - II. An IANTD pSCR Trimix Instructor in Active Teaching Status for a minimum of two (2) year
2. Age Requirements:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must have a minimum of three (3) years of teaching experience
  - b. Must have taught a minimum of 6 IANTD Rebreather Trimix Diver Programs.
    - *NOTE: Equivalent programs with any qualification agency, may be counted*
  - c. Must provide proof of a minimum of 800 logged dives, of which at least 200 were Trimix dives deeper than 200 fsw (60 msw), and at least 50 were CCR Trimix dives deeper than 240 fsw (72 msw).

### C. Program Content

1. A 5 day Program consisting of instructor procedures, watermanship evaluations, and must assist with a complete Rebreather Expedition Trimix Diver Program either prior to or as a part of the IDP.
2. This IDP is dedicated to directing the Instructor candidate to the methods and techniques of training IANTD Rebreather Expedition Trimix Divers.
3. The candidate must demonstrate good leadership potential during the IDP and give at least two (2) complete lectures in the Program.
  - *NOTE: Non Rebreather Expedition Trimix Supervisors must assist two (2) courses which one (1) is in conjunction with the IDP.*
  - *NOTE: Rebreather Expedition Trimix Supervisors must assist in one (1) course, which can be in conjunction with the IDP*

### D. Equipment Requirements

1. All Equipment Requirements listed in the Rebreather Expedition Trimix Diver Program.
2. Must own or have unlimited access to a Rebreather.
3. Must own or have unlimited access to an Oxygen Analyzer.
  - *NOTE: Own or have unlimited access to a Helium Analyzer is strongly recommended*

## **E. Program Limits**

1. Student and Instructor Trainer Ratio
  - a. There may be no more than two (2) candidates per Instructor Trainer on dives deeper than 333 fsw (100 msw).
2. During the IDP on dives shallower than 333 fsw (100 msw) the Expedition Trimix Instructor Candidates must perform skills with an Rebreather Expedition Trimix instructor Trainer or Rebreather Expedition Trimix Instructor who is on the IDP staff.
3. No dives may be conducted to depths greater than 400 fsw (120 msw).

## **F. Qualification Renewal**

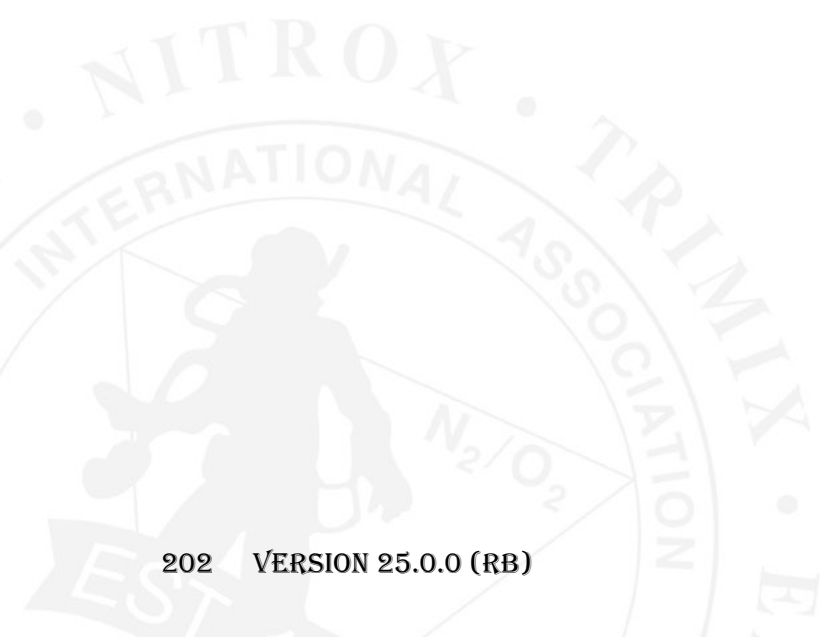
1. Teach or co-teach a minimum of three (3) IANTD Rebreather Trimix Diver Programs annually, including one (1) IANTD Rebreather Expedition Trimix Diver Program.
2. Remain as an active IANTD member and pay annual Instructor renewal fees.
3. Log at least three (3) non-teaching Rebreather Expedition Trimix or Heliox dives annually.
4. Provide proof of insurance listing IANTD as an Additional Insured.

## **G. Water Skills Development**

1. Supervise at least three (3) Rebreather Expedition Trimix dives.
2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Rebreather Expedition Trimix Diver Program, as assigned by the Instructor Trainer

## **H. Physical Evaluation**

1. Complete the Trimix Instructor Watermanship - Page 168



## Tek CCR or SCR Elite Diver Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### How to apply?

1. Send an IANTD Elite CCR or SCR Diver Instructor application to IANTD HQ or IANTD Lincensee.

### A. Purpose

1. Recognize an IANTD supporter and outstanding professional who dedicated himself to keep learning and evolving in his professional career.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be qualified in:
    - I. IANTD CCR or SCR Advanced EANx Diver Instructor or higher or equivalent.
    - II. IANTD Elite Tek CCR or SCR Diver
    - III. Tek Lite CCR Essential Instructor
    - IV. Must have 2 of the 3 following instructor certifications:
      - i. Decompression Specialist Instructor
      - ii. Tek OW DPV Instructor
      - iii. CCR or SCR Self-Sufficient Instructor
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must have completed 200 logged dives.
  - b. Must have issued a minimum 25 IANTD CCR or SCR diver certifications.
    - *NOTE: Certifications issued must include at least 2 each of the following IANTD Programs - CCR or SCR Adv. EANx Diver or Higher, Tek OW DPV Diver, CCR or SCR Self Sufficient Diver and Decompression Specialist.*

**RCCR or RSCR Cavern Instructor**

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

**Who may teach this course?**

- For CCR: A RCCR Cavern IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A RSCR Cavern IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program is designed to develop qualified IANTD RCCR or RSCR Cavern Diver Instructors.

**B. Prerequisites**

1. Certification Requirements:
  - a. For CCR: Must be qualified in:
    - I. An IANTD RCCR Open Water Instructor or higher in Active Teaching Status
    - II. An IANTD CCR Cave Diver
  - b. For pSCR: Must be qualified in:
    - I. An IANTD RSCR Cavern Instructor or higher in Active Teaching Status
    - II. An IANTD pSCR Cave Diver
  - c. IANTD CPR or equivalent
  - d. IANTD First Aid or equivalent
  - e. IANTD Oxygen Administrator or equivalent
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must proof a minimum of 150 logged dives which 50 were cavern dives.
  - b. Must proof a minimum of 25 Recreational Diver Certifications Levels

**C. Program Content**

1. A 2 day Program directing the Instructor candidate to the methods and techniques of training IANTD RCCR or RSCR Cavern Divers.
  - *NACD, NSS/CDS and CDAA Cavern Instructors who are also IANTD Open Water EANx Instructors may cross over by completing a 1 day Program acquainting them with IANTD Standards and Procedures.*
2. The IDP is to be staffed by one (1) RCCR or RSCR Cavern IT
3. The candidate must assist in one (1) additional RCCR or RSCR Cavern Diver Program, either prior to or during the IDP.

**D. Equipment Requirements**

1. All Equipment Requirements listed in the IANTD CCR or pSCR Cave Diver Program are mandatory.
2. Candidates will use appropriate equipment for diving into an overhead environment.

**E. Program Limits**

- *Both the Instructor and students must remain in sight of ambient light.*
1. Same as for the IANTD RCCR or RSCR Cavern Diver Program.

**F. Qualification Renewal**

1. Teach a minimum of two (2) IANTD Programs annually including at least one (1) IANTD RCCR or RSCR Cavern Diver Program
2. Log a minimum of 12 non-teaching cavern dives annually.

## G. Water Skills Development

1. Out of Air Scenario:
  - a. Without breathing, and exhaling slowly, swim in a simulated out of air situation for a distance of at least 60 feet (18 meters)
  - b. Commence gas sharing via bailout cylinder
  - c. While gas sharing, continue to swim for a distance of at least 350 feet (105 meters) while maintaining a swim rate of approximately 50 feet (17 meters) per minute.
2. Underwater, tow another diver for a distance of at least 200 feet (60 meters).
3. Simulate a complete rescue:
  - a. Activate EMS
  - b. Remove diver from water with assistance
  - c. Simulate CPR.
4. Demonstrate proper reel techniques.
5. Supervise at least two (2) Wreck dives with IT or staff person simulating a student.
6. It is recommended that the candidate attempt to find way out of a wreck with eyes closed and no line.
  - **NOTE: Up to instructor discretion, depending of the environment safety (Silt conditions, cables, other hazards)**

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## **RCCR or RSCR Introductory Cave or Introductory Mine Instructor**

- ▶ **CHECK ITEM I. TO UNDERSTAND HOW TO UPGRADE TO TEK LITE CAVE OR TEK LITE MINE INSTRUCTOR.**
- ▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### **Who may teach this course?**

- ▶ For Introductory Cave:
  - ▶ For CCR: A RCCR Introductory Cave IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
  - ▶ For SCR: A RSCR Introductory Cave IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For Introductory Mine:
  - ▶ For CCR: A RCCR Introductory Mine IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
  - ▶ For SCR: A RSCR Introductory Mine IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### **A. Purpose**

1. This Program is designed to provide quality training to divers advancing into introductory cave diving.
2. In addition, it serves as a mechanism to further develop overhead teaching experience for Instructors, enabling them to evolve to more competent Cave Instructors.

### **B. Prerequisites**

1. Certification Requirements:
  - a. For CCR: Must be qualified in:
    - I. An IANTD RCCR Cavern Instructor/Limited Mine Instructor in Active Teaching Status or equivalent.
    - II. An IANTD CCR Cave Diver/Limited Mine Diver or equivalent.
  - b. For pSCR: Must be qualified in:
    - I. An IANTD RSCR Cavern Instructor/Limited Mine Instructor or higher in Active Teaching Status
    - II. An IANTD pSCR Cave Diver/pSCR Mine Diver or equivalent.
  - a. IANTD Rebreather Cave/Mine Supervisor or must be recommended by an IANTD Rebreather Cave/Mine Instructor, after having assisted in a minimum of at least one (1) or more Rebreather Introductory Cave/Mine Diver Programs until the Instructor is confident the student is capable of attending an IDP.
    - ▶ *NOTE: If recommended, the candidate must be an IANTD Recreational Rebreather Instructor and a certified Rebreather Cave/Mine Diver*
  - c. Additional Certifications Requirements:
    - i. IANTD CPR or equivalent
    - ii. IANTD First Aid or equivalent
    - iii. IANTD Oxygen Administrator or equivalent
2. Age requirement:
  - a. Must be a minimum of 21 years of age.
3. Dive Experience:
  - a. Must proof a minimum of 200 logged dives which 75 were cave dives and 50 were CCR or pSCR Cave dives
  - b. Must has taught a minimum of 3 RCCR or RSCR Cavern/Limited Mine Diver Programs.

### **C. Program Content**

1. Program duration is a minimum of two (2) days provided the required teaching assist in cave course has already been completed.
  - ▶ *NOTE: Rebreather Cave Supervisors must assist in one (1) Rebreather Introductory to Cave program with a different Rebreather Cave Instructor.*



- ▶ *NOTE: Non Rebreather Cave Supervisors must assist two (2) Rebreather Introductory to Cave program with a different Rebreather Cave Instructor which one (1) can be in conjunction with the IDP.*
- 2. This Program may be conducted by any IANTD Rebreather Cave Instructor Trainer or higher provided at least one for Rebreather Introductory Cave Instructor or higher is on staff who can evaluate a minimum of one (1) water session and one (1) lecture session each.
  - ▶ *NOTE: If 2 different IANTD Rebreather Cave Instructors have previously evaluated the candidate, the IDP may be conducted by only one (1) Rebreather Cave IT.*
  - ▶ *NOTE: If the candidate is already a Rebreather Cave Supervisor, the IDP may be conducted by only one (1) Rebreather Cave IT.*
- 3. Standards and Procedures and business practices must be included in the lecture portion of the IDP.
- 4. The Candidate must present during the participation in the entire course:
  - a. A minimum of three (3) lecture topics
  - b. One (1) in-water teaching session
  - c. One (1) present complete land line drill session
  - d. Each candidate must supervise at least one (1) of the land line drills in cave.
  - e. The candidate must complete a minimum of two (2) evaluation dives plus the skills as defined in the Water Skills Development section of this Program.

## D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD CCR or pSCR Cave Diver Program are mandatory.
- 2. Full CCR or SCR Cave Diving Equipment will be used throughout the IDP and at all times when teaching CCR or SCR Introductory Cave Programs.

## E. Program Limits

- 1. Same as for the IANTD Introductory Cave Program CCR or SCR
  - ▶ *NOTE: Except the two (2) evaluation dives may be performed as full cave dives.*

## F. Qualification Renewal

- 1. Teach annually:
  - a. A minimum of one (1) IANTD Rebreather Introductory Cave Diver Program.
  - b. One (1) IANTD Rebreather Cavern Diver Program
  - c. Meet the teaching requirements for IANTD Rebreather Instructor CCR or SCR in Active Teaching Status.

## G. Water Skills Development

- 1. Out of Gas Scenario in confined water:
  - a. Without a mask and with one (1) buddy 50 feet (15 meters) away;
  - b. Follow a line until buddies meet;
  - c. Make touch contact and follow the line as a pair;
  - d. At the ITs signal, one (1) diver will simulate gas failure and communicate to the buddy a need to share gas.
  - e. Gas sharing will continue until circuit is complete.
  - f. At some time during this circuit while gas sharing, a line entanglement exercise will be performed.
- 2. Out of Gas Scenario on a cave dive:
  - a. At the ITs signal, simulate an out of gas situation and share gas for a distance of at least 200 feet (60 meters);
  - b. Then continue for another 100 feet (30 meters) blacked out along the line.
    - ▶ *NOTE: Rebreather candidate will do this on bailout and switch cylinders with partner when the IT specifies.*

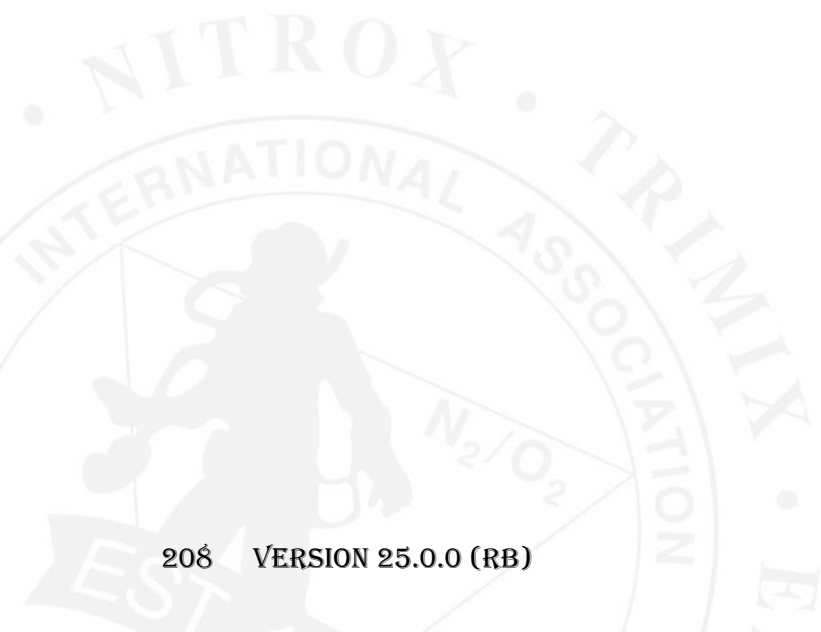
3. Valve Drill:
  - a. Respond to gas shutdowns by the IT switching to bailout cylinder and then turning both oxygen and diluent gases back on.
    - *NOTE: Upon completion return to the breathing loop.*
4. Simulate accident management procedures as assigned by the IT.
5. Demonstrate teaching proficiency of skills taught in the RCCR or RSCR Introductory Cave Program.
6. Assist in RCCR or RSCR Introductory to Cave Program(s) as described in the program content above

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164

## I. Tek Lite Cave or Tek Lite Mine Instructor CCR or SCR UPGRADE

1. A RCCR or RSCR Introductory Cave Instructor who taught and certified at least 6 RCCR or RSCR Introductory Cave Divers can apply to upgrade to Tek Lite Cave Instructor CCR or SCR
2. A RCCR or RSCR Introductory Mine Instructor who taught and certified at least 6 Introductory Mine Divers can apply to upgrade to Tek Lite Mine Instructor CCR or SCR



## CCR or pSCR Cave Diver Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A CCR Cave IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A pSCR Cave IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop competent Instructors for teaching the safe usage of Rebreather while cave diving.

### B. Prerequisites

1. Option A:
  - a. Certification Requirements:
    - I. For CCR: Must be qualified in:
      - i. An IANTD CCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD CCR Cave Diver or equivalent.
    - II. For pSCR: Must be qualified in:
      - i. An IANTD pSCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD pSCR Cave Diver or equivalent.
  - b. Age Requirements:
    - I. Must be a minimum of 21 years of age
  - c. Dive Experience:
    - I. Must have taught a minimum of three (3) IANTD CCR Advanced EANx Diver or CCR ART Diver programs or equivalent
    - II. Must provide proof of a minimum of 200 logged dives and 150 cave dives where 50 must have been on rebreather
    - III. Must have worked with and been evaluated by two (2) different CCR or pSCR Cave Instructor in at least two (2) cave courses
      - *NOTE: CCR or pSCR Cave Supervisors must assist in two (2) course*
        - *NOTE: One of the assistances must be someone other than who originally certified the candidate as a CCR or pSCR Cave Supervisor.*
      - *NOTE: Non CCR or pSCR Cave Supervisors must assist three (3) courses which one (1) is in conjunction with the IDP.*

**OR**

2. Option B:
  - a. Certification Requirements:
    - I. For CCR: Must be qualified in:
      - i. An IANTD Technical Cave Instructor (OC) and an IANTD CCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD CCR Cave Diver or equivalent.
    - II. For pSCR: Must be qualified in:
      - i. An IANTD Technical Cave Instructor (OC) and an IANTD pSCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD pSCR Cave Diver or equivalent.

- b. Age Requirements:
  - I. Must be a minimum of 21 years of age
- c. Dive Experience:
  - I. Must have taught a minimum of three (3) IANTD Introductory Cave Diver Programs.
  - II. Must provide proof of a minimum of 20 Rebreather Cave logged dives and complete a crossover evaluation by a Rebreather Cave IT.

### C. Program Content

1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD Rebreather Cave Divers provided the required teaching assist in technical cave course has already been completed.
2. Once approved by IANTD HQ, other agencies Rebreather Cave Instructors already may crossover by attending a four (4) day Program with an IANTD Rebreather Cave IT acquainting them with IANTD Standards and Procedures, teaching materials and methods observing them in an in-water teaching situation on an actual cave dive(s).
3. This Program may be conducted by any IANTD Rebreather Cave Instructor Trainer or higher provided at least one Rebreather Cave Instructor or higher who can evaluate a minimum of one (1) water session and one (1) lecture session each is on staff.
  - ▶ *NOTE: If two (2) different IANTD Rebreather Cave Instructors have previously evaluated the candidate, the IDP may be conducted by only one (1) Rebreather Cave IT.*
  - ▶ *NOTE: If the candidate is a Rebreather Cave Supervisor and has assisted in two (2) or more Rebreather Cave Diver Programs post his/her Rebreather Cave Supervisor qualification the IDP may be conducted by only one (1) Rebreather Cave IT.*
    - ▶ *NOTE: One of the assistances must be someone other than who originally certified the candidate as a Rebreather Cave Supervisor.*

### D. Equipment Requirements

1. IANTD Rebreather Cave Diver Student Kit.
2. All Equipment Requirements listed in the IANTD Rebreather Cave Diver Program are mandatory.
3. Must own or have unlimited access to an Oxygen analyzer

### E. Program Limits

1. Same as for the IANTD Rebreather Cave Diver Program.

### F. Qualification Requirements

1. Completion of the IANTD Rebreather Cave IDP and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Rebreather Cave Instructor.
2. IANTD Rebreather Cave Instructors may find it beneficial to teach a modular system in cave diving (Rebreather Cavern, Rebreather Introductory Cave, Rebreather Tek Lite Cave Diver and Rebreather Cave).

### G. Qualification Renewal

1. Teach a minimum of two (2) IANTD Rebreather Diver Programs annually, or co-teach a minimum of three (3) IANTD Rebreather Diver Programs, including at least one (1) IANTD Rebreather Cave Diver Program.
2. Remain as an active IANTD Member and remit annual Instructor renewal fees.
3. Log at least 25 Overhead Environment dives annually, with a minimum of 20 non-teaching rebreather cave dives.
4. Provide proof of insurance listing IANTD as an Additional Insured.

### H. Water Skills Development

1. Perform at least two (2) evaluation dives with the IT acting as a student.
2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Rebreather Cave Diver Programs, as assigned by the Instructor Trainer.

## I. Physical Evaluation

1. Complete the Technical Instructor Watermanship - Page 166



## CCR or pSCR Mine Diver Instructor

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- ▶ For CCR: A CCR Mine IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For SCR: A pSCR Mine IT or higher may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop competent Instructors for teaching the safe usage of Rebreather while mine diving.

### B. Prerequisites

1. Option A:
  - a. Certification Requirements:
    - I. For CCR: Must be qualified in:
      - i. An IANTD CCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD CCR Mine Diver or equivalent.
    - II. For pSCR: Must be qualified in:
      - i. An IANTD pSCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD pSCR Mine Diver or equivalent.
  - b. Age Requirements:
    - I. Must be a minimum of 21 years of age
  - c. Dive Experience:
    - I. Must have taught a minimum of three (3) IANTD CCR Advanced EANx Diver or CCR ART Diver programs or equivalent
    - II. Must provide proof of a minimum of 200 logged dives and 150 cave dives where 50 must have been on rebreather
    - III. Must have worked with and been evaluated by two (2) different CCR or pSCR Mine Instructor in at least two (2) cave courses
      - ▶ *NOTE: CCR or pSCR Mine Supervisors must assist in two (2) course*
        - ▶ *NOTE: One of the assistances must be someone other than who originally certified the candidate as a CCR or pSCR Mine Supervisor.*
      - ▶ *NOTE: Non CCR or pSCR Mine Supervisors must assist three (3) courses which one (1) is in conjunction with the IDP.*

**OR**

2. Option B:
  - a. Certification Requirements:
    - I. For CCR: Must be qualified in:
      - i. An IANTD Technical Mine Instructor (OC) and an IANTD CCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD CCR Mine Diver or equivalent.
    - II. For pSCR: Must be qualified in:
      - i. An IANTD Technical Cave Instructor (OC) and an IANTD pSCR Advanced EANx Instructor or higher Instructor for the unit to be used and be in Active Teaching Status or equivalent.
      - ii. An IANTD pSCR Mine Diver or equivalent.



- b. Age Requirements:
  - I. Must be a minimum of 21 years of age
- c. Dive Experience:
  - I. Must have taught a minimum of three (3) INTD Rebreather Introductory Mine Diver Programs.
  - II. Must provide proof of a minimum of 20 Rebreather Mine or Rebreather Mine logged dives and complete a crossover evaluation by a Rebreather Mine IT.

### C. Program Content

1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training INTD Rebreather Mine Divers provided the required teaching assist in rebreather cave or rebreather mine program has already been completed.
2. Once approved by INTD HQ, other agencies Rebreather Mine Instructors already may crossover by attending a four (4) day Program with an INTD Rebreather Cave IT acquainting them with INTD Standards and Procedures, teaching materials and methods observing them in an in-water teaching situation on an actual mine dive(s).
3. This Program may be conducted by any INTD Rebreather Cave Instructor Trainer or higher provided at least one Rebreather Cave Instructor or Rebreather Mine Instructor or higher who can evaluate a minimum of one (1) water session and one (1) lecture session each is on staff.
  - ▶ *NOTE: If two (2) different INTD Rebreather Cave Instructors or Rebreather Mine Instructors have previously evaluated the candidate, the IDP may be conducted by only one (1) Rebreather Cave IT.*
  - ▶ *NOTE: If the candidate is a Rebreather Cave Supervisor or Rebreather Mine Supervisor and has assisted in two (2) or more Rebreather Cave Diver or Rebreather Mine Diver Programs post his/her Rebreather Cave Supervisor or rebreather Mine Supervisor qualification the IDP may be conducted by only one (1) Rebreather Cave IT.*
  - ▶ *NOTE: One of the assistances must be someone other than who originally certified the candidate as a Rebreather Cave Supervisor or Rebreather Mine Supervisor.*

### D. Equipment Requirements

1. INTD Rebreather Cave Diver Student Kit.
2. All Equipment Requirements listed in the INTD Rebreather Mine Diver Program are mandatory.
3. Must own or have unlimited access to an Oxygen analyzer

### E. Program Limits

1. Same as for the INTD Rebreather Mine Diver Program.

### F. Qualification Requirements

1. Completion of the INTD Rebreather Mine Instructor IDP and demonstration of a safe and responsible attitude allows the candidate to become qualified as an INTD Rebreather Mine Instructor.

### G. Qualification Renewal

1. Teach a minimum of two (2) INTD Rebreather Diver Programs annually, or co-teach a minimum of three (3) INTD Rebreather Diver Programs, including at least one (1) INTD Rebreather Mine Diver Program.
2. Remain as an active INTD Member and remit annual Instructor renewal fees.
3. Log at least 25 Overhead Environment dives annually, with a minimum of 20 non-teaching rebreather cave dives or rebreather mine dives.
4. Provide proof of insurance listing INTD as an Additional Insured.

### H. Water Skills Development

1. Perform at least two (2) evaluation dives with the IT acting as a student.
2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Rebreather Mine Diver Programs, as assigned by the Instructor Trainer.

## I. Physical Evaluation

1. Complete the Technical Instructor Watermanship - Page 166



## CCR or pSCR Adv. Cave or Mine - DPV Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For Adv, Cave - DPV:
  - For CCR: A CCR Adv. Cave - DPV IT may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Cave - DPV IT may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For Adv, Mine - DPV:
  - For CCR: A CCR Adv. Mine - DPV IT may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Mine - DPV IT may teach the course provided they are an diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Cave or Mine Diver Propulsion Vehicle Instructors.

### B. Prerequisites

1. For Cave:
  - a. For CCR, must certified in:
    - I. An IANTD CCR Cave Instructor.
    - II. An IANTD CCR Adv. Cave - DPV Diver.
  - b. For SCR, must certified in:
    - I. An IANTD pSCR Cave Instructor.
    - II. An IANTD pSCR Adv. Cave - DPV Diver.
2. For Mine:
  - a. For CCR, must certified in:
    - I. An IANTD CCR Mine Instructor.
    - II. An IANTD CCR Adv. Mine - DPV Diver.
  - b. For SCR, must certified in:
    - I. An IANTD pSCR Mine Instructor.
    - II. An IANTD pSCR Adv. Mine - DPV Diver.
3. Age Requirements:
  - a. Must be a minimum of 21 years of age.
4. Dive Experience:
  - a. For Cave:
    - i. Have a Minimum of 200 logged rebreather cave dives of which 100 were rebreather Advanced Cave Diver Propulsion Vehicle non-training dives.
    - ii. Must have taught have taught a minimum of five (5) Rebreather Cave Diver courses.
  - b. For Mine:
    - i. Have a Minimum of 200 logged rebreather mine dives of which 100 were rebreather Advanced Mine Diver Propulsion Vehicle non-training dives.
    - ii. Must have taught have taught a minimum of five (5) Rebreather Mine Diver courses.

### C. Program Content

1. A comprehensive program directing the Instructor candidate to the methods and techniques of training IANTD Advanced Cave or Mine Diver Propulsion Vehicle Divers.
  - *NOTE: This is an average of three (3) days of evaluation.*
2. The IDP will be directed by an Advanced Cave or Mine Diver Propulsion Vehicle instructor trainer.

### D. Equipment Requirements

1. Must own or have unlimited access to a Diver Propulsion Vehicle suitable for the environment and the dives being conducted.
2. All Equipment requirements as listed in Advanced Cave Diver Propulsion Vehicle Diver Standards.

### E. Program Limits

1. Student and Instructor Trainer IT Ratio:
  - a. There may be no more than two (2) Diver Propulsion Vehicle Instructor Candidates per Instructor Trainer.
2. No dives may be conducted deeper than candidate qualification level.
3. All dives must be skills practice dives.
4. Bottom times and any mandatory decompression requirements must be within the candidates' current level of training.
5. Same as for the IANTD Advanced Cave/Mine DPV Diver Program.

### F. Qualification Renewal

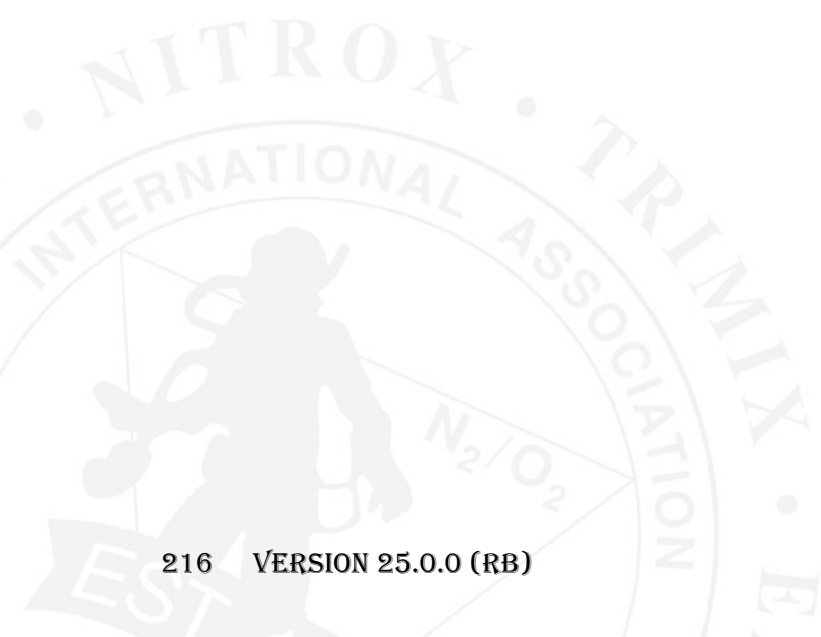
1. Teach a minimum of two (2) IANTD Rebreather Diver Propulsion Vehicle Diver programs which one (1) must be Rebreather Advanced Cave or Mine Diver Propulsion Vehicle Diver.

### G. Water Skills Development

1. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Rebreather Advanced Cave or Mine Diver Propulsion Vehicle Diver Program.
  - a. Assist in at least two (2) complete Advanced Cave or Mine Diver Propulsion Vehicle Diver Program, which one (1) can be realized during or following the IDP.

### H. Physical Evaluation

1. Complete the Technical Instructor Watermanship - Page 166



## CCR or pSCR Adv. Cave or Mine - Survey Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For Adv, Cave - Survey:
  - For CCR: A CCR Adv. Cave - Survey IT may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Cave - Survey IT may teach the course provided they are an diver on the specific Rebreather being used in the course.
- For Adv, Mine - DPV:
  - For CCR: A CCR Adv. Mine - Survey IT may teach the course provided they are an diver on the specific Rebreather being used in the course.
  - For pSCR: A pSCR Adv. Mine - Survey IT may teach the course provided they are an diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Cave or Mine Survey Instructors.

### B. Prerequisites

1. For Cave:
  - a. For CCR, must certified in:
    - I. An IANTD CCR Cave Instructor.
    - II. An IANTD CCR Adv. Cave - Survey Diver.
  - b. For SCR, must certified in:
    - I. An IANTD pSCR Cave Instructor.
    - II. An IANTD pSCR Adv. Cave - Survey Diver.
2. For Mine:
  - a. For CCR, must certified in:
    - I. An IANTD CCR Mine Instructor.
    - II. An IANTD CCR Adv. Mine - Survey Diver.
  - b. For SCR, must certified in:
    - I. An IANTD pSCR Mine Instructor.
    - II. An IANTD pSCR Adv. Mine - Survey Diver.
3. Age Requirements:
  - a. Must be a minimum of 21 years of age.
4. Dive Experience:
  - a. For Cave:
    - I. Have a Minimum of 200 logged rebreather cave dives of which 100 were rebreather Advanced Cave Survey non-training dives.
    - II. Must have taught have taught a minimum of five (5) Rebreather Cave Diver courses.
  - b. For Mine:
    - I. Have a Minimum of 200 logged rebreather mine dives of which 100 were rebreather Advanced Mine Survey non-training dives.
    - II. Must have taught have taught a minimum of five (5) Rebreather Mine Diver courses.

### C. Program Content

1. A comprehensive program directing the Instructor candidate to the methods and techniques of training IANTD Advanced Cave or Mine Survey Divers.
  - ▶ *NOTE: This is an average of three (3) days of evaluation.*
2. The IDP will be directed by an Advanced Cave or Mine Survey instructor trainer.

### D. Equipment Requirements

1. All Equipment requirements as listed in Advanced Cave or Mine Survey Diver Standards.
2. Must own or have unlimited access to the rebrether to be used.

### E. Program Limits

1. Student and Instructor Trainer IT Ratio:
  - a. There may be no more than two (2) Advanced Cave or Mine Survey Instructor Candidates per Instructor Trainer.
2. No dives may be conducted deeper than candidate qualification level.
3. All dives must be skills practice dives.
4. Bottom times and any mandatory decompression requirements must be within the candidates' current level of training.
5. Same as for the IANTD Advanced Cave or Mine Survey Program.
6. Same as for the IANTD Advanced Mine Rebreather Survey Diver Program

### F. Qualification Renewal

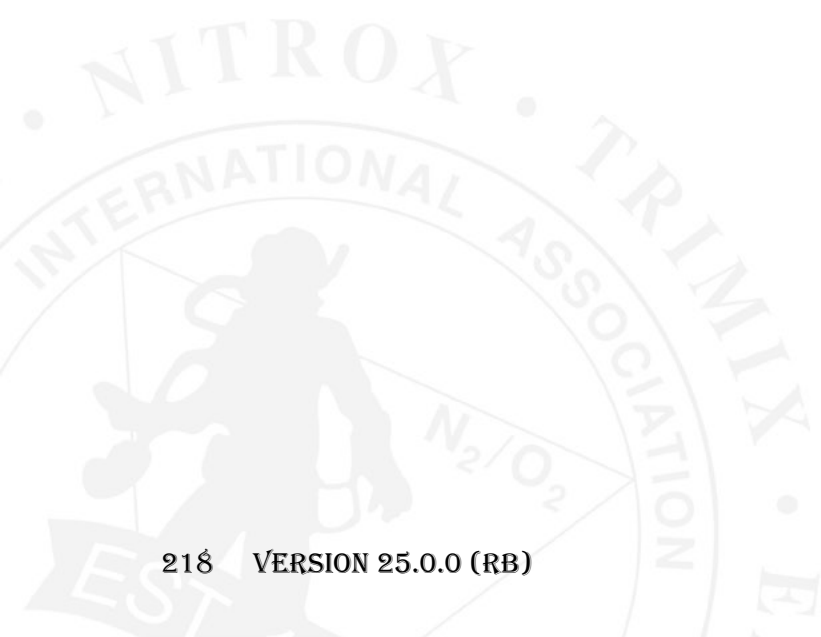
1. Teach a minimum of two (2) IANTD Rebreather CCR Cave or Mine Diver programs which one (1) must be Advanced Rebreather Cave or Mine Survey Diver.

### G. Water Skills Development

1. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Rebreather Advanced Cave or Mine Diver Survey Program.
  - a. Assist in at least two (2) complete Advanced Cave or Mine Rebreather Survey Program, which one (1) can be realized during or following the IDP.

### H. Physical Evaluation

1. Complete the Technical Instructor Watermanship - Page 166





## CCR or pSCR Elite Cave Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### How to apply?

1. Send an IANTD Elite CCR or pSCR Cave Instructor application to IANTD HQ or IANTD Lincensee.

### A. Purpose

1. Recognize an IANTD supporter and outstanding professional who dedicated himself to keep learning and evolving in his professional career.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be qualified in:
    - I. IANTD CCR or pSCR Cave Instructor or equivalent.
    - II. IANTD Elite CCR or pSCR Cave Diver
    - III. Tek CCR or SCR Essential Instructor
    - IV. Must have the following instructor certifications:
      - i. Adv. Cave - CCR or pSCR Sidemount Instructor
      - ii. Adv. Cave - DPV Instructor
      - iii. Adv. Cave - Survey Instructor
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must have completed 200 logged dives.
  - b. Must have issued a minimum 25 IANTD Cave diver certifications.
    - *NOTE: Certifications issued must include at least 2 of each IANTD Adv. Cave - Programs.*

## CCR or pSCR Elite Mine Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### How to apply?

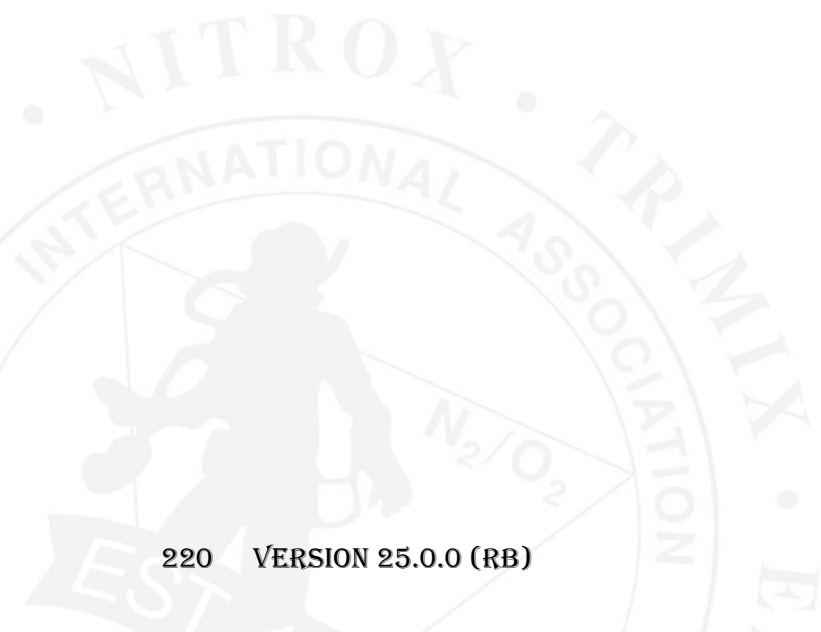
1. Send an IANTD Elite CCR or pSCR Mine Instructor application to IANTD HQ or IANTD Lincseese.

### A. Purpose

1. Recognize an IANTD supporter and outstanding professional who dedicated himself to keep learning and evolving in his professional career.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be qualified in:
    - I. IANTD CCR or pSCR Mine Instructor or equivalent.
    - II. IANTD Elite CCR or pSCR Mine Diver
    - III. Tek CCR or SCR Essential Instructor
    - IV. Must have 3 of the 4 following instructor certifications:
      - i. Adv. Mine - CCR or pSCR Sidemount Instructor
      - ii. Adv. Mine - DPV Instructor
      - iii. Adv. Mine - Survey Instructor
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must have completed 200 logged dives.
  - b. Must proof a minimum of 25 IANTD Mine programs issued.
    - *NOTE: Must include at least 2 of each IANTD Adv. Mine - Programs.*



## RCCR or RSCR Wreck Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A Recreational RCCR Wreck IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A Recreational RSCR Wreck IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD RCCR or RSCR Wreck Diver Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. IANTD RCCR Open Water Instructor in Active Teaching Status for the rebreather to be used.
    - II. IANTD RCCR Wreck Diver
  - b. For SCR, must be qualified in:
    - I. IANTD RSCR Open Water Instructor in Active Teaching Status for the rebreather to be used.
    - II. IANTD RSCR Wreck Diver
  - c. IANTD CPR or equivalent
  - d. IANTD First Aid or equivalent
  - e. IANTD Oxygen Administrator or equivalent
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must proof a minimum of 150 logged dives which 50 were wreck penetration dives.
  - b. Must proof a minimum of 25 Recreational Diver Certifications Levels

### C. Program Content

1. A 2 day Program directing the Instructor candidate to the methods and techniques of training IANTD RCCR or RSCR Wreck Divers.
2. The IDP is to be staffed by one (1) RCCR or RSCR Wreck IT.
3. The candidate must assist in one (1) additional RCCR or RSCR Wreck Diver Program, either prior to or during the IDP.

### D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD RCCR or RSCR Wreck Diver Program are mandatory.
2. Candidates will use appropriate equipment for diving into an overhead environment.

### E. Program Limits

1. Both the Instructor and students must remain in sight of ambient light.
2. Same as for the IANTD RCCR or RSCR Wreck Diver Program.

### F. Qualification Renewal

1. Teach a minimum of two (2) IANTD Programs annually including at least one (1) IANTD RCCR or RSCR Wreck Diver Program
2. Log a minimum of 12 non-teaching cavern or wreck dives annually.

## G. Water Skills Development

1. Out of Air Scenario:
  - a. Without breathing, and exhaling slowly, swim in a simulated out of air situation for a distance of at least 60 feet (18 meters)
  - b. Commence gas sharing via bailout cylinder
  - c. While gas sharing, continue to swim for a distance of at least 350 feet (105 meters) while maintaining a swim rate of approximately 50 feet (17 meters) per minute.
2. Underwater, tow another diver for a distance of at least 200 feet (60 meters).
3. Simulate a complete rescue:
  - a. Activate EMS
  - b. Remove diver from water with assistance
  - c. Simulate CPR.
4. Deploy a DSMB or Lift Bag in less than 1 minute.
5. Demonstrate proper reel techniques.
6. Supervise at least two (2) RCCR or RSCR Wreck dives with IT or staff person simulating a student.
7. It is recommended that the candidate attempt to find way out of a wreck with lights out and no line.

► **NOTE: Up to instructor discretion, depending of the environment safety (Siltng conditions, cables, other harzords)**

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



## CCR or pSCR Tek Wreck Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A Tek CCR Wreck IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A Tek pSCR Wreck IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD Rebreather Wreck Instructors

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD Tek CCR Wreck Diver or equivalent
    - II. An IANTD CCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
  - b. For SCR, must be qualified in:
    - I. An IANTD Tek pSCR Wreck Diver or equivalent
    - II. An IANTD pSCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
2. Age Requirements:
  - a. Must be a minimum of 21 years of age
3. Dive Experience:
  - a. Must have taught a minimum of 3 IANTD RCCR or RSCR Wreck Diver programs or equivalent
  - b. Must have taught a minimum of 3 IANTD CCR or SCR Advanced EANx Diver programs or equivalent
  - c. Must provide proof of a minimum of 350 logged dives, of which at least 150 were technical dives. A minimum of 100 of these dives must have been a combination of rebreather cave and rebreather wreck penetration, at least 50 of which were wreck penetration dives.

### C. Program Content

1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD Tek CCR or pSCR Wreck Divers.
2. The candidate must demonstrate good leadership potential during the IDP and give at least two (2) complete lectures in the Program.
  - NOTE: Non Rebreather Wreck Supervisors must assist two (2) courses which one (1) is in conjunction with the IDP.
  - NOTE: Rebreather Wreck Supervisors must assist in one (1) course, which can be in conjunction with the IDP
3. Complete lecture and in water teaching assignments as assigned by the IT.

### D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD Tek CCR or pSCR Wreck Diver Program are mandatory.
2. Must own or have unlimited access to an Oxygen Analyzer.

## **E. Program Limits**

1. Student and Instructor Trainer Ratio
  - a. There may be no more than 3 candidates per Instructor Trainer.
2. No dives may be conducted to depths greater than 170 fsw (51 msw).
3. Same as for the IANTD Rebreather Wreck Diver Program

## **F. Qualification Renewal**

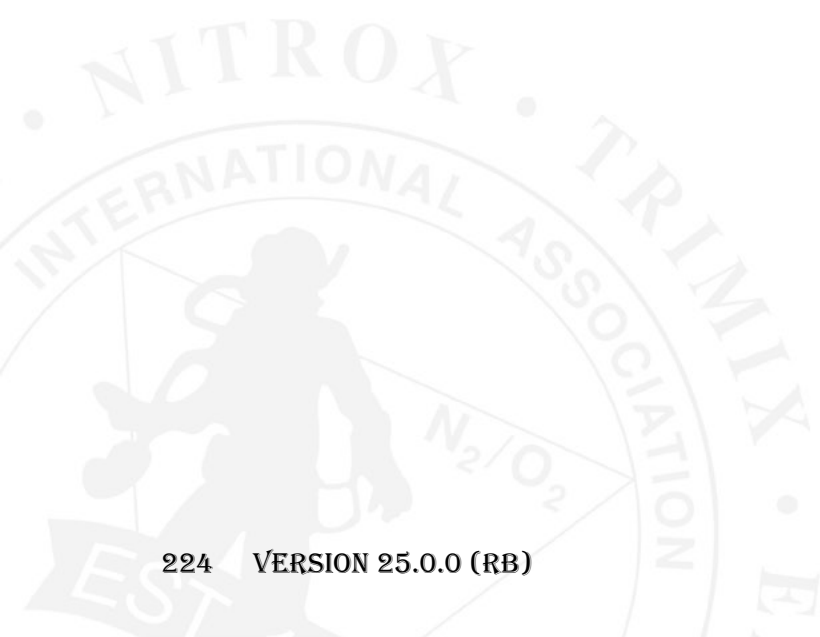
1. Teach a minimum of two (2) IANTD CCR or SCR Advanced EANx Diver Programs or higher annually, or co-teach a minimum of 3 IANTD Rebreather Diver Programs, including at least one (1) IANTD Rebreather Wreck Diver Program.
2. Remain as an active IANTD member and pay annual Instructor renewal fees.
3. Log at least 25 Overhead Environment dives annually, with a minimum of 12 non-teaching Rebreather Wreck Penetration dives.
4. Provide proof of insurance listing IANTD as an Additional Insured.

## **G. Water Skills Development**

1. Demonstrate proficiency teaching and demonstrating the skills and techniques required in the Rebreather Wreck Diver Program, as assigned by the Instructor Trainer.

## **H. Physical Evaluation**

1. Complete the Technical Instructor Watermanship - Page 166





## CCR or pSCR Wreck Survey Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- For CCR: A Tek CCR Wreck Survey IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A Tek pSCR Wreck Survey IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD CCR or pSCR Wreck Survey Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD CCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD Tek CCR Wreck Instructor or equivalent in Active Teaching Status
    - III. An IANTD Tek CCR Wreck Survey.
  - b. For SCR, must be qualified in:
    - I. An IANTD pSCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD Tek pSCR Wreck Instructor or equivalent in Active Teaching Status
    - III. An IANTD Tek pSCR Wreck Survey.
2. Age Requirements:
  - a. Must be a minimum of 21 years of age.
3. Dive Experience:
  - a. Have a Minimum of 200 logged wreck dives of which 100 were wreck Survey non-training dives.
  - b. Must have taught a minimum of ten (10) Wreck Diver courses of which at least three (3) were CCR or SCR Wreck Divers.

### C. Program Content

1. A comprehensive program directing the Instructor candidate to the methods and techniques of training IANTD Wreck Survey Divers.
2. Program will take a minimum of 24 instructional hours.

### D. Equipment Requirements

1. All Equipment requirements as listed in CCR or pSCR Wreck Survey Diver Standards.

### E. Program Limits

1. Student and Instructor Trainer IT Ratio:
  - a. There may be no more than two (2) CCR or pSCR Wreck Survey Instructor Candidates per Instructor Trainer.
2. No dives may be conducted deeper than candidate qualification level.
3. All dives must be skills practice dives.
4. Bottom times and any mandatory decompression requirements must be within the candidate's current level of training.
5. Same as for the IANTD CCR or pSCR Wreck Survey Program.

## **F. Qualification Renewal**

1. Teach a minimum of two (2) IANTD CCR or pSCR Wreck Diver programs of which one (1) must be Wreck Survey Diver per year.

## **G. Water Skills Development**

1. Demonstrate proficiency teaching and demonstrating the skills and techniques required in the CCR or pSCR Wreck Survey Program.
2. Assist in at least two (2) complete CCR or pSCR Wreck Survey Programs, one (1) of which can be during the IDP.

## **H. Physical Evaluation**

1. Complete the Technical Instructor Watermanship - Page 166



## CCR or pSCR Elite Tek Wreck Instructor

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### How to apply?

1. Send an IANTD Elite Technical Wreck Diver Instructor application to IANTD HQ or IANTD Lincsee.

### A. Purpose

1. Recognize an IANTD supporter and outstanding professional who dedicated himself to keep learning and evolving in his professional career.

### B. Prerequisites

1. Certification Requirements:
  - a. Must be qualified in:
    - I. IANTD CCR or pSCR Tek Wreck Diver Instructor or equivalent.
    - II. IANTD Elite CCR or pSCR Tek Wreck Diver
    - III. Tek CCR or SCR Essential Instructor
    - IV. Must have the following instructor certifications:
      - i. Decompression Specialist Instructor
      - ii. Tek OW DPV Instructor
      - iii. CCR or pSCR Wreck Survey Instructor
2. Age requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Must have completed 200 logged dives.
  - b. Must have issued a minimum 25 IANTD CCR or SCR diver certifications.
    - *NOTE: Certifications issued must include at least 2 each of the following IANTD Programs - CCR or pSCR Wreck Diver, Tek OW DPV Diver and CCR or pSCR Wreck Survey.*

## RCCR or RSCR Ice Diver Instructor

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- ▶ For CCR: A CCR Ice Diver IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For SCR: A SCR Ice Diver IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD RCCR or RSCR Ice Diver Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD CCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD CCR Ice Diver Diver.
  - b. For SCR, must be qualified in:
    - I. An IANTD SCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD SCR Ice Diver.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience:
  - a. Proof of a minimum of 150 logged dives and at least 25 dives Recreational Rebreather Ice Dives

### C. Program Content

1. A 2 day Program directing the Instructor candidate to the methods and techniques of training IANTD RCCR or RSCR Ice Divers.
2. Ice Instructors from recognized agencies who are also IANTD Open Water EANx Instructors may cross over by completing a 1 day Program acquainting them with IANTD Standards and Procedures.
3. The IDP is to be staffed by one (1) Ice IT
4. The candidate must assist in one (1) additional Ice Diver Program, either prior to or during the IDP.
5. The specialty must have stress management as part of the curriculum.

### D. Equipment & Text Requirements

1. All Equipment Requirements listed in the IANTD Ice Diver Program are mandatory.
2. Manufacture user manual and other teaching materials as available
3. IANTD "S" drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
  - ▶ NOTE: Rebreather divers at all course levels must have the IANTD CCR Diver "S" Drill chart C-3401.
  - ▶ Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.
4. IANTD Diver Student Kit

### E. Program Limits

1. This Program may be taught in Ice environments
2. Same as for the IANTD Ice Diver Program.

## F. Qualification Renewal

1. Teach a minimum of two (2) IANTD Programs annually including at least one (1) IANTD RCCR or RSCR Ice Diver Program
2. Log a minimum of 10 non-teaching Ice dives annually

## G. Water Skills Development

1. Demonstrate all the skills in IANTD Ice Diver Program at Instructor level demonstration quality.
2. All rebreather emergencies scenarios must be practice
3. Additionally, candidate should perform:
  - a. Underwater, tow another diver for a distance of at least 140 feet (40 meters).
  - b. Demonstrate proper reel techniques.
  - c. Simulate a complete rescue:
    - I. Activate EMS
    - II. Remove diver from water with assistance
    - III. Simulate CPR
  - d. Supervise at least two (2) Ice dives with IT or staff person simulating a student.
  - e. It is recommended that the candidate attempt to find way out of the water when simulate broken line.

► **NOTE: Up to instructor discretion, depending of the environment safety (frozen regulator, entanglement, current other hazards).**

## H. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164



**CCR or SCR Kirby Morgan M-48 MOD-1 Instructor**

► **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

**Who may teach this course?**

- For CCR: A CCR Kirby Morgan M-48 MOD-1 IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- For SCR: A SCR Kirby Morgan M-48 MOD-1 IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

**A. Purpose**

1. This Program is designed to train qualified instructors in the necessary procedures, knowledge and skills to safely dive with a full face mask and the Kirby-Morgan M-48 Mod 1 Mask.

**B. Prerequisites**

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD CCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD CCR Kirby Morgan M-48 MOD-1 Diver.
  - b. For SCR, must be qualified in:
    - I. An IANTD SCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD SCR Kirby Morgan M-48 MOD-1 Diver.
- NOTE: RCCR or RSCR Open Water Instructor may not take this program
2. Age Requirement:
  - a. Must be a minimum of 18 years of age
3. Dive Experience:
  - a. Proof of a minimum of 200 logged dives which at least 125 dives on the rebreather to be used in the class and at least 50 were using the Kirby-Morgan M-48 MOD-1.

**C. Program Content**

1. The Candidate must demonstrate proficiency in the use of IANTD Academic tools such as: standards, slides and/or student workbook (if available), demonstrate and grade confined water skills, evaluate, remediate and grade open water skills.
2. Course must include the evaluation of the candidate presentation of no less than 2 confined water skills and four (4) openwater skills.
3. The Candidate must pass a written theory exam with a minimum score of 80%.
4. Course to be completed in no less than 2 dives.
5. The specialty must have stress management as part of the curriculum.

**D. Equipment & Text Requirements**

1. All Equipment Requirements listed in the IANTD Diver Program are mandatory.
2. IANTD Diver Student Kit
3. Manufacture user manual and other teaching materials as available
4. IANTD "S" drill chart C-3401 and Rebreather Skills Sheets C-3400 1&2.
  - NOTE: Rebreather divers at all course levels must have the IANTD CCR Diver "S" Drill chart C-3401.
  - Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.



### **E. Program Limits**

1. Same as for the IANTD Kirby-Morgan M-48 Mod 1 Diver Program.

### **F. Qualification Renewal**

1. Must complete requirements for Open water Instructor renewal plus teach at least one (1) Diver program.

### **G. Water Skills Development**

1. Demonstrate all the skills in IANTD Diver Program at Instructor level demonstration quality
2. Demonstrate a Rescue of a diver from a depth of no deeper than 20 ft to the surface; establish positive buoyancy; and tow the diver a distance of a min of 100 ft to assistance while maintaining an open airway.

### **H. Physical Evaluation**

1. Complete the Sport Diving Instructor Watermanship - Page 164



## RCCR or RSCR Recreational Trimix Instructor

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- ▶ For CCR: A RCCR IT may teach the course provided they are a diver on the specific Rebreather being used in the course and RCCR Recreational Trimix Instructor.
- ▶ For SCR: A RSCR IT may teach the course provided they are a diver on the specific Rebreather being used in the course and RSCR Recreational Trimix Instructor.

### A. Purpose

1. This Program is designed to train qualified IANTD RCCR or RSCR Open Water Instructors as IANTD RCCR or RSCR Recreational Trimix Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD RCCR Open Water Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD RCCR Recreational Trimix Diver or higher or equivalent.
  - b. For SCR, must be qualified in:
    - I. An IANTD SCR Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD RSCR Recreational Trimix Diver or higher or equivalent.
2. Age requirement:
  - a. Must be a minimum of 18 years of age
3. Dive Experience:
  - a. Must provide proof of a minimum of 20 dives between EANx and RCCR or RSCR Recreational Trimix.
    - ▶ NOTE: If the program is combined with the RCCR or RSCR Open Water Instructor, must provide proof of a minimum of 100 logged dives, of which at least 15 were RCCR or RSCR Deep Diver and 20 were a mix of EANx and Recreational Trimix mixtures dives between 90 fsw (27 msw) and 132 fsw (40 msw) and at least 6 months of diving experience.
    - ▶ NOTE: Dive experience must include dives in a variety of environments including but not limited to Night Dive/Limited Visibility, Navigation, Marine Ecology, Deep Dive or any other ADDITIONAL SPECIALIZED PROGRAM.

### C. Program Content

▶ *NOTE: The IANTD RCCR or RSCR Recreational Trimix Instructor qualification may be taught as a single program or combined with a RCCR or RSCR Open Water Instructor*

1. Use of the Course Specific Presentation.
2. This program must include:
  - a. Academic Classes.
  - b. Land Drill:
    - I. Analyze at least 2 different Recreational Trimix mixes.
      - i. Each of the 2 mixes shall have a final oxygen (O<sub>2</sub>) content within  $\pm 1\%$  of the target amount
      - ii. Each of the 2 mixes shall have a final helium (He) content within  $\pm 3\%$  of the target amount
  - c. Confined water session(s);
    - ▶ Only if the program is combined with RCCR or RSCR Open Water Instructor program.
  - d. Open Water Dives;
    - ▶ Only if the program is combined with RCCR or RSCR Open Water Instructor program.

3. Students must pass the specific IANTD Recreational Trimix Instructor test with a minimum score of 80%.
4. Program covers all Recreational Trimix gas mixes from 28% to a maximum of 40% oxygen, and Helium concentrations yielding an END no greater than 100 fsw (30 msw) emphasizing the use of 32/15.

## D. Equipment Requirements

1. IANTD Recreational Trimix Diver Student Kit.
2. Must own or have unlimited access to a Helium Analyzer
  - *Fulfill all Equipment Requirements as specified in the IANTD Rebreather Diver Programs - General Standards.*

## E. Program Limits

1. Same as RCCR or RSCR Open Water Instructor program, if the program is combined with Open Water EANx Instructor.
2. No dives may be conducted with an END greater than 100 fsw (30 msw).
3. Appropriate safety decompression stops must be performed.
4. Safety stops will be at 30 fsw (9 msw) - 20 fsw (6 msw) and 15 fsw (4.5 msw) each stop will be a minimum of 1 minute.

## F. Water Skills Development

1. Same as RCCR or RSCR Open Water Instructor program, if the program is combined with RCCR or RSCR Open Water Instructor.

## G. Qualification Renewal

1. Teach a minimum of two (2) IANTD RCCR or RSCR Recreational Trimix Diver Programs annually, or co-teach three (3) IANTD RCCR or RSCR Recreational Trimix Diver Programs.
2. Fulfill all Qualification Renewal requirements stated under IANTD RCCR or RSCR Sport Diving Instructor Programs.

## H. After Certified

1. After certified, the RCCR or RSCR Open Water Instructor will be able to teach the following IANTD programs:
  - a. IANTD RCCR or RSCR program;
  - b. IANTD RCCR or RSCR Advanced Open Water Diver program;
  - c. IANTD RCCR or RSCR Deep Diver program;
  - d. IANTD RCCR or RSCR Rescue Diver program;
    - *NOTE: If the IANTD Instructor is not an IANTD Instructor for IANTD CPR, IANTD Diving First Aid and IANTD Oxygen Administrator, the diver must be already certified for this levels by another IANTD Instructor or have equivalent qualifications with this levels.*
  - e. IANTD RCCR or RSCR Divemaster program;
  - f. IANTD RCCR or RSCR Recreational Trimix Diver program
    - *NOTE: If diving in conditions significantly different from those previously experienced the Assistant Instructor shall require an appropriate orientation.*

## I. Physical Evaluation

1. Complete the Sport Diving Instructor Watermanship - Page 164

## CCR or SCR Open Water DPV Instructor

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- ▶ For CCR: A RCCR Open Water DPV IT or CCR Adv. Cave - DPV IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For SCR: A RSCR Open Water DPV IT or pSCR Adv. Cave - DPV IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified IANTD OW DPV Instructors.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD RCCR Open Water Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD RCCR Open Water DPV Diver or higher or equivalent.
  - b. For SCR, must be qualified in:
    - I. An IANTD RSCR Open Water Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD RSCR Open Water DPV Diver or higher or equivalent.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age.
3. Dive Experience
  - a. Must provide proof of a minimum of 150 logged dives, including at least 40 dives using DPVs.

### C. Program Content

1. Complete an IDP or IEC.

### D. Equipment Requirements

1. Must own or have unlimited access to a DPV suitable for the dives being conducted.
2. All Equipment requirements as listed in the IANTD Open Water DPV Diver program.

### E. Program Limits

1. Student to Instructor Trainer Ratio:
  - a. There may be no more than two (2) candidates per Instructor Trainer.
2. No dives may be conducted to depths greater than the qualification level of the instructor or student in the course.
3. All appropriate safety must be performed.
  - ▶ *NOTE: Bottom times and any mandatory decompression requirements must be within the candidates' current level of training.*
  - ▶ *NOTE: Limits from the Open Water DPV diver also apply to the Open Water DPV Instructor program*
4. Complete 100 minutes of bottom time using a DPV for evaluation.

### F. Qualification Renewal

1. Teach a minimum of three (3) IANTD RCCR or Recreational SCR Diver Programs annually which (2) two must be OPW DPV Program and 1 must be the highest level.

### G. Water Skills Development

1. Demonstrate all skills in IANTD Open Water DPV Diver program to demonstration quality

## H. Physical Evaluation

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## CCR or SCR Tek Open Water DPV Instructor

▶ **BE SURE TO CHECK IANTD REBREATHING LEADERSHIP & INSTRUCTOR PROGRAMS GENERAL STANDARDS (Pg 161).**

### Who may teach this course?

- ▶ For CCR: A CCR Open Water DPV IT or CCR Adv. Cave - DPV IT may teach the course provided they are a diver on the specific Rebreather being used in the course.
- ▶ For SCR: A SCR Open Water DPV IT or pSCR Adv. Cave - DPV IT may teach the course provided they are a diver on the specific Rebreather being used in the course.

### A. Purpose

1. This Program is designed to develop qualified instructors in the necessary procedures, knowledge and skills to safely provide training in the use of Diver Propulsion Vehicles (DIVER PROPULSION VEHICLE's) in CCR or SCR Open Water Diving.
2. The purpose of this course is to expose divers to conservation concerns and ethical responsibilities that present themselves during DIVER PROPULSION VEHICLE use either for touring, or exploration.

### B. Prerequisites

1. Certification Requirements:
  - a. For CCR, must be qualified in:
    - I. An IANTD CCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD CCR Open Water DPV Diver.
  - b. For SCR, must be qualified in:
    - I. An IANTD SCR Advanced EANx Instructor or higher in Active Teaching Status for the rebreather to be used.
    - II. An IANTD SCR Open Water DPV Diver.
2. Age Requirement:
  - a. Must be a minimum of 18 years of age
3. Dive Experience:
  - a. Proof of a minimum of 200 logged dives which at least 125 dives on the rebreather to be used in the class and at least 50 were DPV Dives.

### C. Program Content

1. The Candidate must demonstrate proficiency in the use of IANTD Academic tools such as: standards, slides and/or student workbook (if available), demonstrate, evaluate, remediate and grade open water skills.
2. Course must include the evaluation of the candidate presentation of no less than 2 confined water skills and four (4) openwater skills.
3. The Candidate must pass a written theory exam with a minimum score of 80%.
4. Course to be completed in no less than 2 dives over the course of 2 days
5. The specialty must have stress management as part of the curriculum.

### D. Equipment Requirements

1. All Equipment Requirements listed in the IANTD Tek OW DPV Diver Program are mandatory.
2. IANTD Diver Student Kit
3. Must own or have unlimited access to a DPV suitable for the environment and the dives being conducted.

### E. Program Limits

1. Student and Instructor Trainer IT Ratio:
  - a. There may be no more than two (2) Instructor Candidates per Instructor Trainer.



2. No dives may be conducted deeper than candidate qualification level
3. All dives must be skills practice dives.
4. Bottom times and any mandatory decompression requirements must be within the candidates' current level of training.
5. Same as for the IANTD Same as for the IANTD Tek OW DPV Diver Program.

## **F. Qualification Renewal**

1. Teach a minimum of two (2) IANTD DPV Diver programs which one (1) must be Tek OW DPV Diver.

## **G. Water Skills Development**

1. Demonstrate all the skills in IANTD Diver Program at Instructor level demonstration quality
2. Demonstrate how to manage DPV emergencies which should include a Scooter that has a loss of battery power and a Scooter that will not shut off.

## **H. Physical Evaluation**

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## Instructor Trainer Upgrade Policy

► **If not an IANTD IT, in order to upgrade to any other IT Rating, the Open Water EANx ITDP must be successfully completed.**

► **Refer to the IANTD Sport Diving Standards (OC) - Open Water EANx Instructor Trainer Development Program**

1. An IT who successfully completes the ITDP is eligible to upgrade to other IT levels without attending another ITDP by:
  - a. IANTD HQ or local IANTD Licensee approval;
  - b. Providing documentation of actively teaching IANTD programs;
  - c. No active Quality Assurance Complaint.
  - d. Achieving the minimum number of IANTD student certifications, dives and hours per level as described below:

IT RATING:	Number of diver certifications issued at that level	Number of dives or hours at that level
Open Water EANx IT	200	200
Advanced EANx or Advanced Recreational Trimix IT	10	25
Technical Diver IT	10	25
Normoxic Trimix IT	10	75
Trimix IT	15	100
REBREATHER IT RATINGS		
Recreational Rebreather IT (SCR - pSCR - CCR)	10	100 hrs
Rebreather IT (SCR - pSCR - CCR)	15	200 hrs
Rebreather Normoxic Trimix Diving IT (pSCR - CCR)	10	250 hrs
Rebreather Trimix Diving IT (pSCR - CCR)	10	300 hrs
OVERHEAD IT RATINGS		
Technical Mine IT	15	100
Technical Cave Diver IT	15	100
Technical Wreck Diving IT	15	100
Rebreather Cave Diver IT (pSCR - CCR)	10	300 hrs
Rebreather Wreck Diving IT (pSCR - CCR)	10	300 hrs
NOTE		
<i>Once the IT achieves the upgrade requirements listed above for the specific IT Rating, an IT can continue their education with an ITT or apply to IANTD for approval of the specific IT rating .</i>		
<i>IT Ratings not specified in this matrix require 10 diver certifications to have been issued at that level before applying to IANTD for approval of the specific IT rating.</i>		



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