



## Equipment O<sub>2</sub> Service Technician Instructor Program

- ▶ Welcome and Course Overview
- ▶ The TDI Instructor
- ▶ Dive Leader Risk Management
- ▶ Methods of Instruction
- ▶ Business Side of Diving
- ▶ Teaching the TDI Equipment O<sub>2</sub> Service Technician Diver Program

The TDI Equipment O<sub>2</sub> Service Technician Instructor Program can be taught in conjunction with the TDI Non-Diving Specialty Instructor program or as a standalone specialty instructor upgrade course after the instructor candidate has completed a sport level open water scuba instructor course.

### Objectives

The object of this program is to:

- Introduce the candidate to the TDI Instructor Guide and Student materials
- Demonstrate how to use the TDI Equipment O<sub>2</sub> Service Technician Instructor materials to train a new user
- Teach the instructor “How to Conduct” the TDI Equipment O<sub>2</sub> Service Technician User program
- Demonstrate how to register and certify a new TDI Equipment O<sub>2</sub> Service Technician User

## **Prerequisites for TDI Equipment O2 Service Technician Instructor Program**

See the current TDI Equipment O2 Service Technician Instructor standards for the prerequisites and requirements for this program.

## **Materials Required**

Teaching any program with outdated materials is just asking for problems. The trainer must confirm that their materials are current and each instructor has the current materials with which to teach the program.

## **Instructor Trainer**

- TDI O2 Equipment Service Manual
- TDI O2 Equipment Service Knowledge Quest
- TDI O2 Equipment Service Instructor Guide
- TDI Instructor Trainer Manual

## **Instructor Candidate**

- TDI O2 Equipment Service Manual
- TDI O2 Equipment Service Knowledge Quest
- TDI O2 Equipment Service Instructor Guide

Note: Prior to beginning the program the instructor candidate should review all instructor and diver materials and complete all knowledge quests and final exams so they are completely familiar with the subject matter and the support materials to teach the TDI Equipment O2 Service Technician diver program.



## **The topics to be covered are:**

- Welcome and Course Orientation
- The TDI Instructor\*
- Dive Leader Risk Management\*
- Methods of Instruction\*
- Business Side of Diving\*
- Courses a TDI O2 Equipment Service Tech Instructor Can Teach

\*Core Topics: These core topics will be found in Part One of this manual; IT Information

# **Welcome and Course Overview**

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## **Paperwork**

- Instructor Registration Form
- Personal Information
- Liability Release
- Medical Statement

## **Let's Get to Know Each Other**

## **Professional Staff**



## Participants

- Your name?
- What type of technical diving experience do you have?
- Which technical diving activities interest you the most?
- Why are you interested in becoming a technical instructor?

## About This Program

### Course Objective

- Develop the appropriate knowledge and skills that are expected of every dive professional

### Structure and Schedule

- Independent Study
- Classroom Presentations

### Required Equipment

- Items you'll need for this course

### Any Questions?

# The TDI Instructor

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Refer to Instructor Trainer Manual Part 1 Instructor Training Process  
Chapter 2-The SDI/TDI/ERDI Instructor



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# Dive Leader Risk Management

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Refer to Instructor Trainer Manual Part 1 Instructor Training Process  
Chapter 3-Dive Leader Risk Management

## Methods of Instruction

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Refer to Instructor Trainer Manual Part 1 Instructor Training Process  
Chapter 4-Methods of Instruction

## Business Side of Diving

Refer to Instructor Trainer Manual Part 1 Instructor Training Process  
Chapter 5-Business of Diving

### Teaching the TDI Equipment O2 Service Technician Diver Program

- Program overview
  - Classroom requirements
    - Students are required to become familiar with: use of oxygen cleaning chemicals, various forms of inspection techniques, O2 cleaning and labeling of cylinders. The appropriate training aids should be available for students to use. An Instructor candidate must be able to demonstrate instructor level knowledge on all topics and skills in the current TDI Equipment O2 Service Technician standards.



- Materials
  - Review all diver materials to make sure the instructor candidate is familiar with all diver materials and how they are supported by the instructor materials.
    - Diver Materials
      - Printed
- Required paperwork
  - Discuss in detail how the instructor should complete the required paperwork
  - The instructor candidate must be familiar with all forms and be able to answer any question a diver may have regarding the completion of those forms
    - Diver Training Folder
    - Waiver
    - Medical Questionnaire
- Complete a thorough review of the appropriate TDI Instructor manual including:
  - How to conduct:
    - Academic sessions
      - Cover helpful hints on how to teach more involved subjects

### **List of tips on how to teach various aspects of this program include:**

Responsibility of the equipment O2 service tech – O2 service techs have a serious responsibility as they will be cleaning equipment that will be exposed to high levels of oxygen and equipment that diver's lives depend on. This point must be made very clear: they must never get complacent



in their duty. They should also always use the proper tools, chemicals and parts when performing these tasks.

Oxygen handling – oxygen when handled properly is a pretty safe gas but when introduced to the wrong materials or high temperatures it becomes a fire accelerant. Teaching users how to properly clean and inspect equipment so it is compatible with 100 percent oxygen is vital to their success and safety.

Equipment servicing – this course does not get into manufacturer specifications of equipment, which is why a manufacturer’s certification is required. What the course does cover is the proper cleaning and lubricants that need to be used and how to inspect to ensure that the cleaning was complete and no trace elements were left.

Mixing techniques – there is a separate course for gas blending so this section is really just so the user understands the procedures for how oxygen and other gases are introduced to valves, manifolds and cylinders. Some options for gas production are pre-mix, continuous blend and membrane, which may not introduce oxygen levels above 40 percent but it is still very good information to know.

Oxygen analysis – equipment O2 service techs may be at times asked to assist a diver in analyzing their cylinder(s) and logging the fill so they can pick up their cylinders. Teaching service techs to do this can be an invaluable skill.

Reading tables

EAD

EAN

Verifying cylinder content



## **List of academic topics for candidate to present:**

Manufacturer's certifications

Chemicals used in O2 cleaning

Tools used in O2 cleaning

Proper inspection and storage after O2 cleaning

## **Scheduling Options for this program**

Courses can be scheduled with a one to one ratio, as a group or scheduled in conjunction with other TDI courses. Each of these will require different time commitments and scheduling logistics. It is not often that there will be a group of equipment O2 service tech candidates but it should be explained that a O2 service tech course can be taught in conjunction with other TDI courses, such as: nitrox gas blender, advanced gas blender and VIP.

## **Overview**

The TDI Equipment O2 Service Tech program requires practical elements such as O2 cleaning of cylinders, valves, manifolds and regulators so it will require both a classroom and a service area to be available.

## **Classroom**

You will need several different cylinders, regulators, valves, manifolds for the candidate(s) to use. Candidates are required to perform and pass an academic presentation.

## **Knowledge Quest Review Questions if applicable**

No instructor level Knowledge Quest is available for this program, although the candidate should complete the diver level Knowledge Quest so they are familiar with the information.



## Final Exam

No instructor level final exam is available for this program, although the candidate should complete the diver level final exam so they are familiar with the information.



