

## **4. Technical DPV Diver**

### **4.1 Introduction**

The purpose of the TDI Technical Diver Propulsion Vehicle (DPV) course is to familiarize divers with the skills, knowledge, planning, organization, procedures, techniques, problems, and hazards of using DPVS. Upon completing the TDI Technical Diver Propulsion Vehicle course, the student should be able to: demonstrate comprehension of the practical knowledge necessary for technical DPV diving, properly plan and safely conduct technical DPV dives, and implement techniques and procedures to manage and minimize technical DPV diving hazards.

### **4.2 Qualifications of Graduates**

Upon successful completion of this course, graduates may engage in technical DPV diving activities without direct supervision so long as the following limits are adhered to:

1. Safety and decompression stops as appropriate or necessary
2. Planned dives do not exceed diver's current certification level

### **4.3 Who May Teach**

An active TDI Technical DPV Instructor.

### **4.4 Student to Instructor Ratio**

#### **Academic**

1. Unlimited, so long as adequate facility, supplies and time are provided to insure comprehensive and complete training of subject matter.

#### **Confined Water (swimming pool-like conditions)**

1. NA

#### **Open Water (ocean, lake, quarry, spring, river or estuary)**

1. A maximum of 3 students per instructor; it is the instructor's discretion to reduce this number as conditions dictate.

## 4.5 Student Prerequisites

1. Minimum age 18, 15 with parental consent
2. Certified as an SDI Open Water Scuba Diver or equivalent
3. Provide proof of at least 25 logged dives

## 4.6 Course Structure and Duration

### Open Water Execution

1. Students must complete 2 DPV dives with a minimum accumulated bottom time of 60 minutes.
2. Dives must not exceed 40 metres / 130 feet

### Course Structure

1. TDI allows instructors to structure courses according to the number of students participating and their skill level

### Duration

1. The minimum number of classroom and briefing hours is 4

## 4.7 Administrative Requirements

### Administrative Tasks:

1. Collect the course fees from all the students
2. Ensure that the students have the required equipment
3. Communicate the schedule to the students
4. Have the students complete the:
  - a. *TDI Liability Release and Express Assumption of Risk Form*
  - b. *TDI Medical Statement Form*

### Upon successful completion of the course the instructor must:

1. Issue the appropriate TDI certification by submitting the TDI Diver Registration Form to TDI Headquarters or registering the students online through member's area of the TDI website

## 4.8 Required Equipment

The following material is required:

1. NA

The following equipment is required for each student:

1. Cylinder(s), volume appropriate for planned dive, student gas consumption
2. First and second stage regulator(s) with alternate air source;
3. Submersible pressure gauge
4. Buoyancy compensator device (BCD) with power inflator
5. Exposure suit adequate for diving environment
6. Mask and fins
7. Cutting device
8. Computer, watch or bottom timer and depth gauge
9. Slate or wet notes with a pencil
10. Whistle or other signaling device
11. DPV adequately configured for the environment
12. Reel with a minimum of 7.5 metres / 25 feet of line
13. Lift bag or surface marker buoy with adequate lift and size for the dive environment
14. Compass

## 4.9 Required Subject Areas

The following topics must be covered during this course:

1. Motivations for DPV diving
2. Advantages of DPV use
3. Equipment considerations
  - a. DPV options
  - b. DPV components
  - c. Rated burn time
  - d. Care and Maintenance
  - e. DPV rigging
4. Problem solving procedures
  - a. DPV malfunction or failure
  - b. Towing
  - c. Gas sharing with DPVs
  - d. Entanglement
  - e. Collision avoidance
  - f. Team separation

5. Environmental considerations
  - a. Appropriate vs. inappropriate dive locations
  - b. Suitable environmental conditions
  - c. Low impact DPV use
6. DPV diving techniques
  - a. Buoyancy and trim with DPV
  - b. Instigating directional and depth changes
  - c. DPV “parking”
  - d. DPV courtesy and etiquette
7. Dive planning and gas management
  - a. Turn time, turn distance, and turn pressure
  - b. Gas mix(es) and NDLs or decompression obligations

## 4.10 Required Skill Performance and Graduation Requirements

**The student must perform the following S-drill and skills during all dives:**

1. Demonstrate adequate pre-dive planning
2. Equipment check and equipment matching
3. Bubble check
4. Demonstrate specialized propulsion techniques in varying types of flow
5. Demonstrate proper buoyancy control
6. Demonstrate proper body posture
7. Demonstrate proper stress analysis (detection and management)

**The student must perform the following in-water skills:**

1. Proper use of DPV
2. Gas sharing ascent with DPVs clipped off.
3. Ascent with a disabled DPV
4. Tow a team member and his disabled DPV

**In order to complete this course, students must:**

1. Perform all dive requirements safely and efficiently
2. Demonstrate mature, sound judgment concerning dive planning and execution
3. Maintain an appropriate level of awareness and respect for the dive environment
4. Log all dives

**4.11 To qualify to teach the TDI Technical DPV Diver Course an Instructor must:**

1. Be an active TDI Instructor
2. Provide proof of 25 logged DPV technical dives \*

**\* Technical Dive; Any dive involving decompression, additional cylinders, overhead environments such as wrecks, caves or mines.**