

## Chapter 3

# Diving With The EXO Full-Face Mask

### 3.1 Introduction

This section deals with the different functions and adjustments that are possible after entry into the water. Some divers may be satisfied with the fit and function of the mask as it is set up topside, or it may be easily adjusted in the water if necessary.

### 3.2 Water Entry

Many methods of entry into the water are possible using the EXO-26 or EXO-BR, but a few important points should be noted. When using the stride entry, the bottom holes in the exhaust whisker should be covered to prevent any turbulent water from flowing past the exhaust valve.

The demand regulator adjustment also serves another important function, in the unlikely event the mask should develop a continuous water leak, the diver can back out on the demand regulator adjustment knob until the regulator develops a free-flow of gas. The free-flow of gas will displace any incoming water. The diver then can abort the dive with both hands free.

If you roll into the water backwards, turn your head to one side before entering to prevent water from washing past the face seal to the interior of the mask. In the event water does enter the mask, keep the regulator positioned low and simply press the purge button to remove the water.



### WARNING

**Do not dive this mask in water containing concentrations of petroleum based chemicals. This can cause the mask frame to fail, causing the mask to flood, leading to drowning.**



*The regulator adjustment should always be set for the maximum ease of breathing.*

### 3.3 Regulator Adjustment

The regulator adjustment knob should always be adjusted for minimum breathing resistance. Prior to entering the water, adjust the regulator adjustment knob out until a slight free flow develops and then adjust it in until the free-flow disappears. If diving with scuba gear no further adjustment should be needed.

If you're diving with surface-supplied gear, the adjustment knob allows the diver to make adjustments for variations in supply pressures. During the course of the dive the diver should periodically turn the adjustment knob out (counter clockwise) until the regulator develops a slight free-flow, then turn the knob in (clockwise) until the regulator free-flow just stops. This will ensure the diver is always taking advantage of the best performance for the available delivery pressure. The regulator adjustment knob can also be used to compensate when working in various positions and diving in currents.

The most noticeable difference in breathing resistance can be found in a face up position. Resistance increases with the regulator diaphragm in this position.

If the regulator adjustment knob is adjusted all the way in and breathing resistance is high, it is sometimes possible for small amounts of water to get past some areas of the face seal when the mask is not fitted properly. Any leakage which does occur usually enters in the temple area.

Backing out on the adjustment knob will decrease the spring bias tension on the roller lever, allowing the diaphragm to move the roller lever with less inhalation effort. This will help prevent water from being drawn in around the face seal. If leakage still persists, a face cushion kit is recommended.

Fine tuning the regulator should be common practice if you maintain a certain position for any length of time and then change positions. If you are working in a face down position and the regulator adjustment knob is adjusted too far out, the regulator may free-flow. The adjustment knob should be turned in to stop any excess air flow.

### 3.4 Spider Adjustment

The mask can be repositioned while in the water, by loosening, repositioning and retightening the spider legs. The large tabs on each buckle provide this easy adjustment. It should also be noted that the buckle travel is limited to allow easy release.

The top leg of the spider can be loosened once in water. It is possible for the top leg to be too tight which will cause the mask to be pulled up too far on the face. The main purpose for the top leg of the spider is to provide on deck support of the mask. Some divers may prefer the support of the top leg while in the water, too.



*The mask is easily adjusted underwater.*



#### **CAUTION**

**Proper hood fit and spider adjustments are needed for the mask to fit comfortably and function correctly.**

### 3.5 Purging the Mask

If the mask is removed and then replaced underwater, it must be cleared of water (purged). This is done by simply holding the mask firmly on the face, keeping the regulator in a low position, and depressing the purge button. A momentary slight overpressure will be felt, followed by complete removal of all water from the interior of the mask. A mask completely filled with water should take no more than 3 seconds to completely purge.

In the unlikely event the mask should develop a continuous leak, the diver should maintain a face forward and

slightly down position, and slowly turn out (counterclockwise) on the demand regulator adjustment knob until a steady free-flow of gas develops. The free-flowing gas will displace the water and keep the mask cavity clear.

The diver should then immediately notify topside (if equipped with communications) and abort the dive.



*Using the purge button to clear a flooded mask.*

### **! WARNING**

In the unlikely event the mask should fill with water, depressing the purge button should clear the mask. In the event of a continuing flood, the adjustment knob should be turned out to cause a regulator free-flow. The diver should then immediately assume a face down position in the water to prevent the mask from flooding again. At this point the diver should exit the water immediately.

## 3.6 Procedures to Follow for Loss of Breathing Gas

### SCUBA

When diving scuba with a full-face mask it is essential that the scuba regulator is equipped with an accurate submersible pressure gauge. If the gas supply is exhausted, there are no provisions for buddy breathing with the mask on the face.

If the regulator starts breathing hard or quits breathing, check the air supply. If the gauge indicates air pressure in the cylinder, back out on the demand regulator adjustment knob until a free-flow is established and abort the dive. If there is no air in the cylinder, immediately abort the dive.

### Surface-Supplied Mode

If surface-supply gas is interrupted or fails, the diver should immediately open the emergency valve on the manifold assembly. If gas is still not restored, the diver should back out on the demand regulator adjustment knob (counterclockwise) to establish a steady flow, notify topside, and abort the dive.

Regardless of the cause, whenever a supply of gas fails even if it is restored the diver should abort the dive and the problem should be thoroughly investigate as to the cause of the failure. Diving should only proceed after all problems are rectified.

### **! WARNING**

If using scuba, use of a steady flow will rapidly deplete the scuba cylinder. Adjust the free-flow so that the flow of gas needed to keep the water out is minimal. Continuous leakage of water into the mask is not normal. Do not continue a dive if continuous water leakage is present.

### **! DANGER**

Rapid ascent is dangerous. It can lead to air embolism or decompression sickness. Air/gas embolism can cause immediate loss of consciousness and/or death. Even on a no decompression dive, a rapid ascent may cause decompression sickness. A diver must only make a rapid ascent when he is in immediate danger of death by drowning, asphyxiation, or some other cause.

**! DANGER**

Ditching the mask underwater must be avoided. If the diver ditches the mask underwater he will not be able to see.

In many instances, if you are diving in the surface-supplied mode, even if the air supply is interrupted, topside will be able to get it back on line quickly. Do not ditch the mask underwater unless you are completely out of breathing gas and it is impossible to return to the surface due to entanglement of your equipment or similar circumstances.