

PNEUMATIC TOOLS

Some pneumatic tools can be used under water and these tools provide its own advantages and disadvantages when compared with the use of a hand tool. Using a pneumatic tool requires specific procedures and safety considerations to be addressed in the dive plan.

General Considerations:

- An air source other than that being used for breathing by the diver should be utilized to operate the pneumatic tool.
- Drills often have special maintenance procedures that is needed to minimize corrosion. Check with the owner/manufacturer to ensure that you care for the drill properly.
 - Some manufactures may recommend that after using the tool underwater that oil be poured into the air inlet of the tool until it completely fills the motor section and the tool should then be submerged in an oil bath to displace any water trapped in the tool. All petroleum preservatives must be removed from the tool prior to use to avoid polluting the surrounding water.

Pneumatic Drill

- An air source **other than that being used for breathing by the diver** should be utilized to operate the pneumatic drill
- **Monitor both the drill and diver air consumption/supply often.** Diver air consumption may be faster than usual, especially if much physical exertion is needed to drill holes. It is often possible to determine when the tank used for the drill is low because drill speed slows and the drill provides less power. Nonetheless, the diver should proceed cautiously when drilling either for the first time or in a new area in order to determine how many holes can be drilled on a tank. Running a tank dry will damage the tank as well as the drill.
- A "keeper" should be used to attach the tank to the drill in order to ease tension on the regulator hose.
- The drill may be heavy when attached to a full tank. The driver carrying the drill should concentrate on being neutrally buoyant on the surface so that he/she can make a controlled descent and use a lift bag for the drill if needed.
- Be certain to have an extra bit when drilling. Occasionally the bit will become stuck in the rock and it is necessary to disengage the drill and put a new bit in the drill in order to remove the first bit from the rock.
- Rock varies considerably around the channel. The number of holes drilled on one tank can vary from 5 (Coal Oil Point) to 20 (Carpentaria). Certain types of rock are so fractious (e.g. IV reef) that it is nearly impossible to drill holes and another technique might be needed to fasten objects to the reef.