



## **Recommend Cutting Oils for Barranca Slab Saw**

Never run a diamond blade dry as this can immediately damage your blade. Use one of the oils/coolants recommended below. Coolant should be kept clean and below 100° F. Sludge should be removed periodically and replaced with fresh coolant so that your cuts will be clean and your blades will not be damaged.

### **Shell Diala AX**

Electrical transformer cooling oil. A highly refined petroleum product available at oil distributors that carry Shell products. Purchased mostly by the electrical utility companies for transformers and usually available in 5 gallon drums (one gallon jugs are not available). Has a slight odor but is excellent for slab sawing. Excellent lubricating properties for blades and saw parts. Flushes sludge from rock easily, degreases easily, and sludge settles in saw tank well.

### **Chevron Texaco Bright-Cut**

A chlorine-free cutting oil with reduced sulfur and fat content. Light in color and low in odor.

### **Hyvolt II**

Electrical transformer cooling oil. A highly refined petroleum product, available from some non-Shell oil distributors, typically only in 55 gallon drums. Same properties and performance as Shell Diala AX.

### **Chevron Superla #5**

Food grade mineral oil. Non-hazardous lubricating oil for bakeries, breweries and food processing machinery. Good lubricating properties, degreases and settles sludge well. Can go rancid over time (1 year or less).

### **AVATEC 80**

Food grade mineral oil, excellent for slab sawing in all our slab saws.

### **Texaco ALMAG**

Pure petroleum based machining cutting oil. Good for slab sawing but very strong odor. Often the cheapest priced oil available but odor is tough to eliminate.

### **Roc Cut**

Roc Cut from Diamond Pacific is a new synthetic water soluble cutting additive with rust inhibitors. Mix 30 to 1 (water to Roc Cut).

### **Roc-Oil**

Roc-Oil from Diamond Pacific is a oil coolant for heavy duty cutting. Provides excellent blade protection and will not cause rust to your blade or saw.

### **Stellar Lubricant**

Orange scented mineral oil for use in Lapidary Saws and equipment. This oil is non-toxic, environmentally conscious and has excellent heat dispersion properties. Flash Point 305°F.

### **Smokey's EZ Cut**

Synthetic water based cutting agent (mix ratio: 3 ounces per gallon)

### **Water**

Water is not recommended as a cutting fluid as it is a coolant only and does not promote good cutting performance. Water can shorten blade life and often frequent blade sharpening may be required. However, it can be used if a water soluble synthetic agent/additive such as Smokey's EZ Cut or Diamond Pacific Roc Cut is used to extend blade life and promote improved sawing. Even with additives, frequent blade sharpening may be required. These additives have rust inhibiting properties but oxidation can still result over time as mist and heat can cover the blade arbor threaded shaft and jam nut with water during and after sawing. For this reason, if water with or without an additive is used as a cutting fluid, the user is advised to use water displacing WD-40 sprayed on the blade core and shaft/nut after every cutting session to inhibit rust formation.

***Under NO circumstances should any of the following fluids be used in any Lapidary Saw:***

**Automotive Antifreeze Coolant**

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Ethylene glycol based automotive antifreeze and its vapors are hazardous and toxic. Propylene glycol based antifreeze is non-toxic but has practically no lubricating properties; it functions as a coolant only and its use will lead to rapid blade wear and dulling.

**Automatic Transmission Fluid**

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Does not have adequate lubricating properties for lapidary saws; vapors are considered hazardous and toxic.

**CNC Machining fluids**

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Water soluble synthetic coolants (i.e. Valenite or Cimtool) are often mixed in a 20:1 blend with water. Fluid vapors are considered hazardous. These fluids do not have adequate lubricating or rust inhibiting properties for the cast iron and steel parts in lapidary slab and trim saws.

**Diesel, Heating Oil and Kerosene**

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Very flammable with a low flash points. At least 3 of our commercial cutting customers in Arizona and Pacific Northwest have burned down their shops using these fluids. Can be very tough to degrease the residue and aroma out of the cut slabs. These fluids are cheap, but very hazardous to use. Diesel is a benzene compound which is carcinogenic. All these fluids can cause severe skin rashes and other ailments.