

The Diamond Cutter's Corner

by Glenn Lovelady

This will be my first column on the fascinating subject of diamonds and the diamond business. I'm thrilled to write for the NPA magazine because it has proven to be an excellent informational source for the pawn business, and I enjoy writing about the properties and mysteries of diamonds. After 25 years in the business I still get a kick out of the unique beauty of diamonds. I hope this column helps the pawnbrokers understand the important characteristics in determining value and liquidity. I plan on expanding on one component of diamond in each column so if read carefully and remembered it will have a direct impact on the success of your diamond jewelry sales, loans and buys.

Diamond Identification: This is probably the most important issue for a pawnbroker or secondhand dealer. When taking anything in we have to identify it for authenticity, whether it is Snap-on tools or diamonds. In today's pawnshop environment we're dealing with a jungle of well made counterfeits, imitations, deception and dishonesty regardless of the items being pawned.

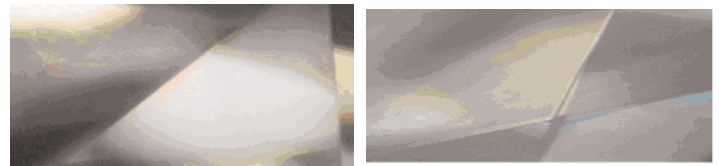
Diamond testers are a good backup but I would never recommend an electronic device for the primary method of authenticating diamond. As I'm sure most of you are aware, electronic devices are not 100% dependable. With age, or sometimes poor assembly, a tester might let you down. Best case scenario in a malfunctioning tester is a loan or payment on a small imitation mistaken for a diamond. Worst case scenario is a serious financial loss.

In the spirit of being competitive and making a reasonable profit at the same time, knowledge of the product you're buying and selling is critical. When dealing with melee (small diamond sizes under 0.18 carat each) a diamond tester might be more acceptable if the small loans or buys are minimal. The real question is where to draw the line when evaluating the stone in question. Should I spend a few extra minutes to determine authenticity, weight estimation, color, clarity and cut (proportions) or should I lowball the offer and hope for the best? The obvious advantage of investing the additional minutes is again competitiveness. If your offer is \$300 lower than your competitor's, a city block away, than the more knowledgeable pawnshop will make the loan (unless of course the less informed pawnbroker

lends too much for it).

Authenticity in diamond is a simple process if the buyer puts a little effort into learning its properties.

#1 Since diamond is the hardest substance on the planet the **facet edges** will be far more sharp than the leading imitations — **cubic zirconia and synthetic moissanite**. View the following photos for a clear understanding of how simple determining authenticity can really be. Note: There are many diamond imitations but these two are the most common and most convincing.



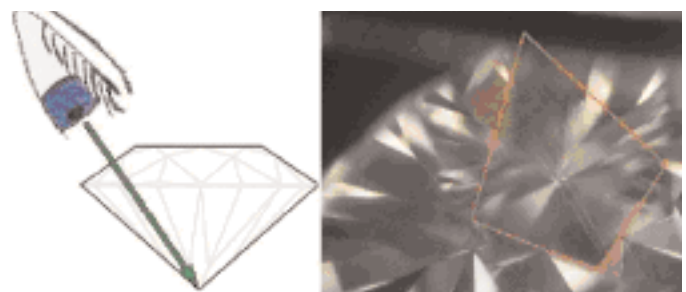
As shown under magnification, the facet edges are very sharp (l). The exception might be poor cutting due to polishing direction or an unkept wheel by the cutter, leaving abraded facet edges. The facet edges of cubic zirconia (r) under magnification are very rounded due to its inferior hardness.

As shown under magnification the facet edges are very sharp. The exception might be poor cutting due to polishing direction or a dry, dull wheel used by the cutter, leaving abraded facet edges.

The facet edges of this cubic zirconia under magnification are very rounded due to its inferior hardness.

#2 The most effective method for determining the identification of **synthetic moissanite** is viewing its double refraction. Since diamond is singly refractive, it would be difficult to confuse the two. To hide or perhaps to make the moissanite more convincing the doubly refractive direction is always placed away from the face-up position. Very important: To view the doubling effect you must look through the crown

See Diamond Corner page 53



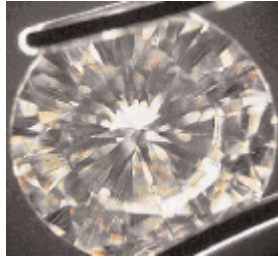
This is the only viewing direction the double refraction will be visible in moissanite.



Diamond Corner from page 30

bezel facet at the culet. Depending on the size of the moissanite will determine the amount of doubling you will detect. The doubling in moissanites under 0.33 carat will be less obvious. See the following illustration for the viewing direction.

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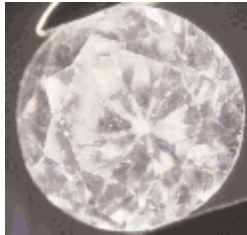


#3 Obvious micro-tubes

occur in some moissanites but not all. They run parallel to the pavilion (bottom) facets all the way around. When present, they are quite obvious.

Again, they do not occur in all moissanites, so do not use this as a primary method of identification.

The micro-tubes in this moissanite are obvious but do not always occur.



#4 Cubic zirconia is a hugely successful diamond imitation primarily due to its very low value and its high refractive index giving it plenty of fire (dispersion). At first glance it is convincing, but if somewhat familiar with diamonds you will see a remarkable difference in the overall appearance. Under magnification the suspicions are easily confirmed by the rounded facet edges (pictured previously) and if mounted in a ring scratches and perhaps nicks and chips will be visible. If chipped, you will note a conchoidal fracture unlike diamond's uneven fracture. Conchoidal fractures are smooth and shell-like by nature.

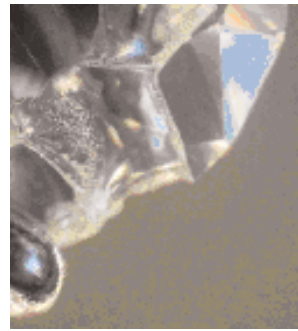
Look at the obvious scratches and nicks on this cubic zirconia due to its softness. This kind of damage would unlikely occur in a pendant or earrings. This most likely was worn on a hand.

This cubic zirconia fractured like glass does—conchoidal. Notice the smooth concave look.

There is an obvious contrast of this uneven fracture on this diamond traveling all the way through its culet.

Cleavage fractures are also common in diamond with a smooth texture versus an uneven step-like

pattern (as pictured previously) but not similar to a



The cubic zirconia fractured like glass does -- conchoidal. Notice the smooth concave look.

shell-like or concave appearance like cubic zirconia's concordat fracture.



There is an obvious contrast of this uneven fracture on this diamond traveling all the way through its culet.

The basic concept in authenticating any valuable is learning the details. I hope this column will be a helpful step in mastering the mysterious and beautiful gem—diamond.

Diamond Trivia Teaser

Previous Teaser: Describe the difference between hardness and toughness where diamond is concerned. I'll be looking for two key words in this description.

Answer: Unfortunately there were no correct responses. Hardness is resistance to scratching and toughness is resistance to chipping.

New Trivia Teaser: Why are the facet edges of diamond sharper than that of other gemstones?

Submit answers via email after 12:00 noon pacific time, October 1, 2005 to diamonds@gemgate.com Answers received before this date and time will be disqualified. The first person submitting the correct answer will be announced in the next issue in this column.

Glenn Lovelady graduated from the American School of Diamond Cutting in 1980 and has been active in buying and selling diamonds since then. He is also the author of the self-instructional course Mastering Diamonds. Please feel free to call or email with comments, input or to subscribe to the free "Lovelady Diamond Cash Offer Guide". If you have any questions we would enjoy hearing from you. (800) 854-0014 diamonds@gemgate.com or www.gemgate.com Passwords are readily available for the dealer resources page on the website.

