SNELL helmet approval — background and testing criteria

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Photos by Casey Cordeiro & SNELL Memorial Foundation

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hoa Nelly! What a summer it has been and I hope everyone had a great time heading out to their favorite ride spots. With the winter months fast-approaching, I just want to throw out the little reminder that these “Sand Safety” columns were put together in order to give you a behind-the-scenes look at many important aspects of our sand industry. We’ve covered several different areas of safety in this column and we look forward to keeping you up to date and well-informed as we move forward.

For this installment, we want to better inform everyone about the safety standards regarding helmets. Whether you realize it or not, the helmet that you just bought from your favorite off-road shop has been through rigorous testing to ensure it is safe for you to wear. Some helmets have undergone more testing than others, hence the different classifications between DOT and SNELL approval ratings (there are other ratings, as well, based on where you are in the world). Since DOT is the substandard of the SNELL ratings, we are going to focus on SNELL regulations and what goes into their testing standards, as well as their exact approval ratings.

Before we go into the testing specifics, you might want to know a little background behind the SNELL Memorial Foundation. It all began in 1957 when the tragic death of Pete “William” Snell occurred. In his memory, a man by the name of Dr. Snively took it into his hands to make sure that any helmet sold in the auto industry is “up to snuff” to protect not only racers, but the general public, too. Since its inception in the late 1950s, the SNELL Memorial Foundation has continually updated their standards with more criteria and more elaborate testing procedures with each new certification.

Now that you know a little about the history behind the organization, let’s dive deeper into the actual specifics of the mandates, and then head into the testing procedures themselves.

The SNELL standards are not updated yearly, but rather they are a set of protocol that are continually improved when the techniques used to test helmets from the previous standard are improved or updated to be more rigorous and effective. For instance, the previous, and still used today, SNELL standard was code named “M2005.” Most of you reading this should have an M2005 approved helmet lying somewhere around the house. If you’ve done any type of sanctioned race, then you undoubtedly have one of these approved helmets. But, did you know that the standards were just updated? If you didn’t, now you do and the new standard happens to be designated “M2010.” If you’re thinking, “Crap, do I need to go out and buy a new M2010 approved helmet now?” you should understand that the M2005 standards are not obsolete, yet. M2005 standards are still good until the middle of next year, as the SNELL testing for the M2005 designation is still ongoing until that time. But, you should be aware that when you do purchase a new helmet, you can begin looking for the newer M2010 designation. Once the M2005 designation is no longer published, you are going to want the M2010 standards if you plan on doing any sanctioned racing events.

So what’s the difference between the M2005 and M2010 designs? Like we mentioned before, the basic differences revolve around more strict standards for protection, as well as more involved testing procedures. Keep in mind that the Foundation does not set criteria for what the helmets should be constructed from (for instance, carbon fiber or fiberglass). No matter what kind of material a manufacturer decides to use, the testing procedures remain consistent across the board.

Testing helmets to see if they match up to the SNELL standards is a rigorous process, as evidenced by the pictures you see in this article. There isn’t just one way to test the helmets. The foundation uses several different techniques, all of which are more rigorous than any other tests in the industry. This is the reason you always want to buy a SNELL–approved helmet, so you know you have the utmost in protection.

Every aspect of the helmet comes into play when testing. From individual head circumference, materials used, peripheral vision allotment, to the special conditioning used to test the helmets. This conditioning includes cold weather, hot weather, and wet
The SNELL Memorial Foundation uses many tests in order to certify a helmet with a SNELL M2010 designation. The photos you see here were taken inside the testing facility and show some of the tests and the aspects involved. The SNELL test stand, above, measures a helmet's ability to withstand impact forces.

In addition to the specific conditions, the Foundation uses static tests — where the helmet is not in motion at time of impact — but they also use dynamic tests as well — where the helmet is in motion — to make sure the rider will be protected in the event any unforeseen accident occurs. Let’s face it, this only makes sense because of the nature of off-roading. Have you crashed harder while sitting on your bike not moving, or while driving along at 50+ miles per hour with the throttle pinned? I think I know the answer to that question — unless of course you are the elusive Super Sandman.

After all of the consistent tests are applied to the helmets with the proper conditioning, the helmets and their respective manufacturers are either awarded the SNELL seal of approval, or they are told to get some more R&D time logged before the seal can be stamped on their product. Either way, it takes a lot of time to get all of this done, which is all in an effort to give you more choices — and better choices at that — when you get to your local motorcycle shop.

As we’ve depicted in the photos, there is a specific spot where all SNELL approved helmets have their seal of approval. If you carefully pull up your soft lining on the inside of your helmet, you will find a rectangular sticker with the SNELL name on it. In the background of that sticker, you will find the designation that signifies which SNELL approval you have — which should be either M2010 or M2005, or possibly even a past standard that the Foundation released. Carefully look at what you own and see if it matches up with your own safety standards that you have set forth for you and your family. If you want to continually upgrade, there’s nothing wrong with that! Be on the lookout for the new M2010 SNELL approval designations that are making their way on all of the major helmets. You will know you are holding the best of the best when you see that sticker on your own personal brain bucket.

I hope this gives everyone a better idea of what to be looking out for the next time you are in the market for a new helmet. And let us know what you find out there, or if you have any questions. You never know, we may have to run a helmet buyer’s guide in Sand Sports very soon.

Until then, have a safe time duning and we’ll see you in the sand jungle!

The SNELL Foundation uses several penetration tests, impact resistant tests, and also strength tests to proclaim each helmet as SNELL certified. They are also developing new equipment to insure steady & accurate testing for the future.