Welcome to another edition of the “Speed Shop Scholar.” This month we are going to take an in depth look at one of the most important, yet sometimes most overlooked aspects of any racing program. Safety!

At times, we as racers get consumed in all the things that make us fast. The tires, the setup, the engine. Not even the absolute best of equipment will pull you through if the driver is on the sidelines due to an injury.

We will take a good look at all the personal safety equipment that every racer is required to wear, as well as some optional devices that further enhance the safety of the driver.

First, let’s take a look at the most obvious, and the single most critical component, the helmet. The head is probably the most vulnerable part of the racer’s body during an accident. The helmet is designed to spread an impact over the entire helmet and to prevent penetration from outside objects. All racers are required to wear a full-face helmet during all on track events.

Helmets are available in many shapes, sizes, and colors. The differences in construction are not quite as obvious. The construction and the materials determine the quality of a helmet. Less expensive models are usually a fiberglass shell. Intermediate models are usually a mix of fiberglass, kevlar, and carbon fiber. The highest price ones are usually a carbon fiber construction. The more expensive models usually have a nomex liner as well. The more exotic materials also offer the benefit of a lesser weight. Fiberglass is the heaviest, while carbon fiber is the lightest.

All helmets that are considered safe for racing must be certified as meeting the protection requirements set forth by the Snell Foundation. The Snell Foundation is an independent, non-profit organization dedicated to the research, testing, education, and development of helmet safety standards.

2013 karting guidelines state a minimum rating of SA2005, M2005, or K2005. The SA designation is for Special Application, primarily auto sports. The M designation is for Motorcycle use, and the K designation is the standard for Kart racing. DOT certified helmets are NOT safe or legal for kart racing, and will offer very little in the way of protection. Certifications are updated every five years. The 2005 certifications will be good through the 2015 season, as most karting sanctioning bodies allow certifications to be good for ten years.

Snell certification, carbon fiber, whatever. Not one bit of this will make any difference if the helmet is not prop-
erly fitted and securely strapped. Don’t just get by, take the necessary steps to protect yourself or your young driver.

The next piece in the racer’s wardrobe is the neck brace. Neck braces are pretty basic. The intent is to provide a support for the helmet and limit the range of movement of the head. Most are nylon or cloth covering a foam padding inside. Some of the newer, more popular neck braces have a support wedge that provides additional support.

Regulations require a jacket made of an abrasion resistant material and full length pants. This is in place to minimize abrasions in an accident. Full length suits are perfectly acceptable, though not very common today. Most racers use a karting jacket and wear blue jeans. Sweatpants and similar items are not allowed. Choose a style and fit that does not limit the movements of the driver, nor have loose ends that can get caught up in the clutch or chain.

Many of the popular karting jackets today have a heat shield sewn on the drivers right sleeve. This offers a bit of extra protection from the engine as well as greatly increases the life of the jacket. Think about the level of protection offered when making an apparel decision. Road rash is not a pretty sight.

Gloves. Another item that has many available choices. From gardening gloves to triple layer nomex, they are all out there. Just like the rest of the racer’s clothing, the gloves are there to protect your hands. Movement of the fingers and the feel of the steering wheel in the driver’s hands are very important factors to consider when making a style decision. I prefer to strike a balance between the thickest and the best feel of the wheel in my hands. Anyone that works with their hands will appreciate the added protection.

Racing shoes are an item of personal preference. Some drivers love them, others can take them or leave them. The benefits are a light weight shoe that offers a great feel of the pedals. From a safety aspect, as long as you are wearing shoes, sneakers, boots, or racing shoes, you are keeping your feet protected.

A handful of years ago, chest protectors in karting became mandatory for drivers participating in a 12 year old division or younger. Studies have shown that on the younger drivers, heavy impact with the steering wheel could frac-ture the driver’s sternum, also known as the breastbone. The lack of complete bone development of young drivers necessitated the requirement.

Most protectors are basically a plate of heavy duty polycarbonate, hooked onto the driver with a couple of straps. Other devices go even further, offering protection for the chest, ribs, back, and shoulders. When making a choice, consider the mobility, or in some cases, the lack of mobility of the driver. Choose the level of protection you are comfortable with. Chest protectors are not limited to just the juniors, sizes are also available for adults.

Another type of safety component that has gained a bit of traction in the karting market recently is a helmet support. These supports replace the traditional neck brace with a system that limits the lateral movement of the driver’s head without restricting the ability of the driver to swivel their head from side to side. This style of support is similar in concept to the “Hans” system required by Nascar. They use a cradle that the driver slips onto their shoulders, held into place with a pair of straps. Another pair of straps attach the helmet to the cradle. The result is a system that does a better job of supporting the driver’s head in the event of incident. If this interests you, I suggest talking to others that use similar items, learn their likes and dislikes. This style of support is uncomfortable for some racers. Time spent on research is always a great idea.

Bottom line, put some time into the decisions you make regarding your, or your driver’s safety gear. If you spend less time picking out a helmet than your last set of tires, may God be with you, you will probably need Him soon. Sometimes you have to look beyond the fancy designs and the low price. I am certainly not advocating spending your inheritance on your racing gear, but if your wardrobe costs less than the body on your kart, maybe your priorities are a bit askew. Be smart, be fast, and most of all, be safe! See you next month!