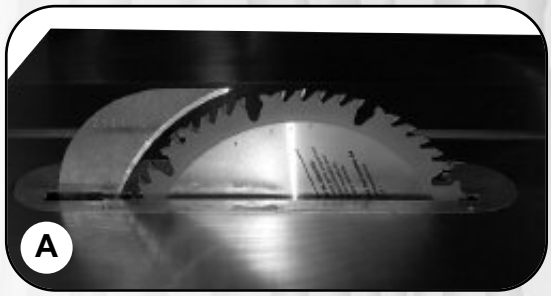
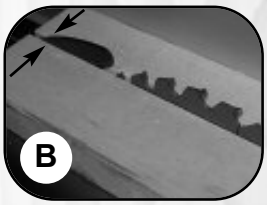
A WORD ABOUT RIVING KNIVES

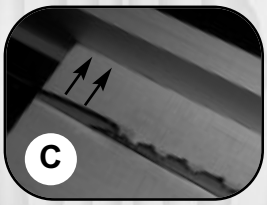
There has been a lot of talk recently within the industry, including in various trade publications and magazines regarding regulations that require the gradual phasing in by tool manufacturers of the riving knife on new table saws. Whether considering the purchase of a new saw or wondering about an upgrade or replacement of an existing one, the information below is intended to help demystify the subject of riving knives, and to provide general information to help you in your decision making process.

WHAT IS A RIVING KNIFE?

The riving knife is basically another type of kickback prevention device on a table saw. Generally it is a curved fin-shaped thin strip of metal or hard plastic (slightly thinner than the thickness of the saw blade) that sits above the table and behind the blade (**A**), to help prevent a workpiece, as it is pushed through the cut, from closing back and "pinching" (**B**) or from drifting away from the rip fence (**C**) and catching the rear portion of the blade. A riving knife is considered a newer design for North American saws, but it has proven effective and has been in use on saws in Europe for many years now.

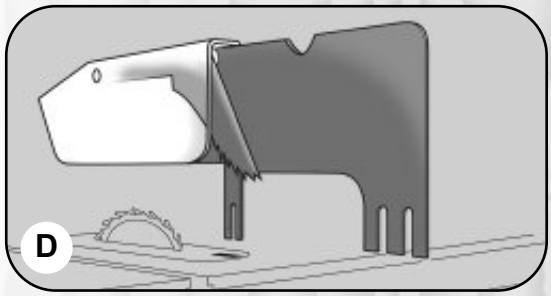






MY SAW MANUAL MAKES REFERENCE TO A "SPLITTER" OR "SPREADER" ISN'T THAT THE SAME THING?

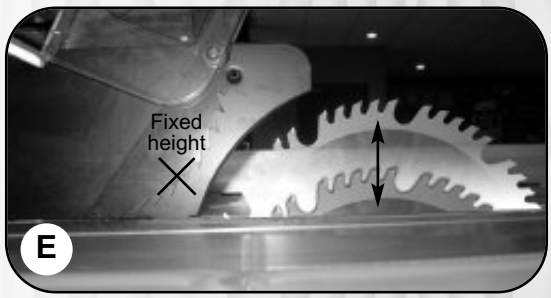
Traditional North American saw design has included what we commonly call a "splitter". A splitter performs a similar function to a riving knife in that it too is a thin piece of metal or plastic that sits above the table and behind the blade to help prevent the workpiece from pinching or catching the blade. Most splitters supplied on saws for the North American market also come as part of an assembly that includes a blade guard (**D**) to help prevent the user from accidentally making contact with the blade and often also include spring-loaded anti-kickback pawls, which are designed to catch and prevent a workpiece that has begun to kickback from being violently launched by the force of the blade towards the front of the saw.



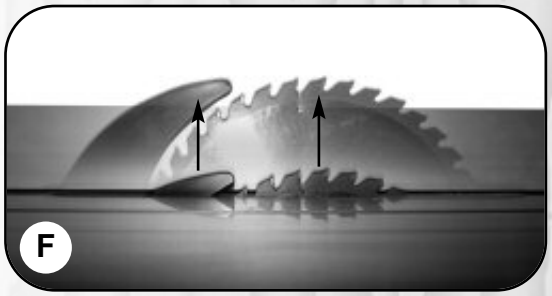
SO WHAT'S THE DIFFERENCE BETWEEN A SPLITTER AND A RIVING KNIFE?

A splitter is generally secured to the saw separate from the blade raising mechanism. Most stock splitters supplied by table saw manufacturers will tilt with the blade, but because it is attached to the saw separate from the blade height adjustment mechanism, a splitter does not raise or lower with the blade – it stays at a fixed height at all times. This means that when the blade is lowered the distance between the splitter and the back of the blade increases (**E**).

Generally speaking, more space between the splitter and the back of the blade will slightly increase the possibility that the workpiece could pinch or catch on the back end of the blade and then be thrown towards the front of the saw.

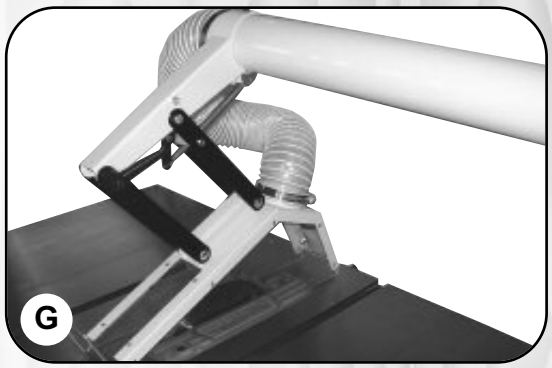


A riving knife however is designed into the blades' height adjustment mechanism and not only will it tilt with the blade but it also raises or lowers as the blade is raised or lowered, thus keeping it at the exact same distance, usually somewhere between 1/4" – 3/8" from the back of the blade at all times (**F**). Because of this, a riving knife is generally considered to be a more effective means of helping to prevent kickback caused by the workpiece pinching or catching on the back of blade.



Like a "splitter/blade guard assembly", a riving knife can also be part of an assembly that includes a blade guard and anti-kickback pawls. This type of an assembly is commonly referred to as I "riving style" guard assembly.

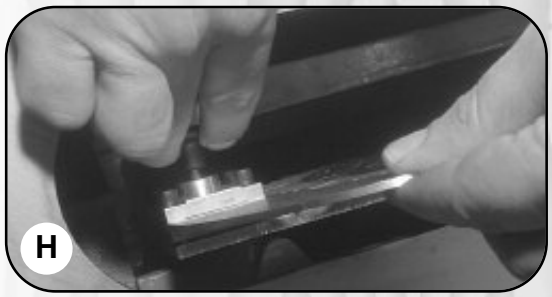
A "true riving knife" or "European style riving knife" are the terms used to reference a stand-alone curved fin-shaped design of knife that at its highest point, still sits slightly lower than the top of the blade. This design offers the user the added convenience of not having to be removed for non-through cuts such as grooves, or shoulder or cheek cuts for tenons.



It is important to note however, that though generally considered more effective at preventing kickback, because there is no blade guard, a true riving knife offers no protection to the user against accidental contact with the blade. Therefore a stand alone or independently mounted blade guard / cover should always be used with a riving knife (**G**).

ARE THERE ANY OTHER ADVANTAGES OR BENEFITS TO HAVING A RIVING KNIFE ON MY SAW?

Most riving knife designs also include some form of a quick install/quick remove mechanism, allowing the user to remove the knife quickly and easily and re-install it just as quickly without having to realign it to the blade each time it is installed (**H**).



CAN I ADD A RIVING KNIFE TO MY EXISTING SAW OR IS ONE AVAILABLE AS AN OPTIONAL ADD-ON ACCESSORY?

With very few exceptions, if your saw was not originally designed and built with a riving knife, you most probably will not be able to add one. Because of the complexity of the redesign required to most saws, a riving knife is not just an add-on that one can purchase and somehow clip on to an existing non-riving knife saw. As an example, we do offer a retrofit kit for our older model 650 and 350 Canadian made General MFG cabinet saws, but the installation of this kit requires a lengthy "repair/rebuild" involving switching out some of the major interior components in the saw. For the moment we have no plans to offer similar rebuild kits for our other saws, and in some cases it will simply not be possible to do so.

WHAT ARE THE NEW REGULATIONS REGARDING RIVING KNIVES AND HOW DO THEY AFFECT THE AVERAGE USER?

The current regulations directly affect saw manufacturers only. As of January 1st, 2008 all new models of saws introduced or not previously available in North America must include a riving knife and/or riving style guard assembly. For existing models of saws that have been available from before 2008, manufacturers have until 2014 to phase these saws out of production or redesign them to incorporate a riving knife into their design.

SO HOW DO THESE NEW REGULATIONS AFFECT PEOPLE WHO ACTUALLY USE TABLE SAWS? WILL I HAVE TO SCRAP OR REPLACE MY OLD SAW?

Firstly, home users are not directly affected by these new regulations and no one who uses a table saw for home/hobbyist use will be forced by any regulatory agency to take a saw out of commission if it does not have a riving knife.

Professional users however may be affected to varying degrees depending on the regulations in force in their respective jurisdictions. Wood shop employers should check with their local authorities as the rules regarding tool specifications, as related to safety in the workplace, can vary from place to place.

Keep in mind that saws with traditional splitters are not suddenly unsafe and need to be retrofitted - this is either not easy or in most cases, simply not possible. Nor do older saws suddenly need to be relegated to the scrapheap and totally replaced. If you practice proper techniques and safety procedures, ones exposure to risk of injury from kickback is not any higher than it was before saws with riving knives were introduced. Choosing to replace an existing saw for a newer model with riving knife can prove very expensive and this is a personal choice that only you can make. However, if you were already shopping for a new saw, then the riving knife may be a feature worth adding to your "must haves" list as you shop around and consider your options.