



1) The wireworm is constructed of 1/4-inch steel rods, which conform closely to the inside of the original fender.



2) The wireworm is placed back into the fender after the inside of the fender has been waxed and the Bondo (or plastic filler) is applied to the steel rods.



3) The flexible shape pattern is used not only as a tool to attain the proper surface area (shape) of a panel but also as a pattern for cutting the sheetmetal blanks. The sheetmetal is cut a minimum of 1 inch larger than the pattern on all sides.



4) The flat sheetmetal has been cut 1 inch larger than the flexible shape pattern.



5) Wheeling the panel at heavy pressure puts shape into it very quickly.



6) This is the front half of the fender after a few minutes of wheeling at high pressure in the English wheel.



7) The rear half of the fender was rough-shaped by hammering the metal over a leather beater bag. This is basic grunt work done by Ferguson's 14-year-old son, Ryan.



8) After a few minutes of hammering, the panel needs to be run through the English wheel for planishing. Heavy pressure in the wheel will remove lumpy hammer marks.

The other tool mentioned above is the flexible shape pattern, made by using two types of readily available tape—transfer tape (used in the vinyl sign industry) and fiberglass-reinforced strapping tape (used for securing boxes for shipping). In order to produce a very accurate flexible shape pattern, the exterior of the original panel needs to be as close to perfect as possible (as with the panel being used for making the buck). The transfer tape is first applied to the outer surface of the panel, and the strapping tape is applied over the transfer tape. The transfer tape is positioned either horizontally or vertically, depending on the panel. The strapping tape is applied at approximately 45 degrees in one direction, followed by a second layer at 45 degrees in the opposite direction—creating an X pattern. This will capture the surface area or shape of the panel.

The shape pattern then can be removed from the panel using Plaster of Paris, talcum powder or similar materials used to kill back the adhesive properties. Also, a flexible shape pattern (from a right-side fender) can simply be flipped inside out for use as a pattern to shape the left-side fender. Ferguson uses the flexible shape pattern almost exclusively throughout the shaping process. And since it captures the surface area (the desired shape), it's easier to determine what the panel may need as it is being shaped. Panel areas where the pattern fits too tightly will be shrunk, and where it fits too loosely, it will be stretched. Once the shape pattern fits the new panel like a glove, it then becomes a simple matter of placing the panel in the proper arrangement (form) for fitting to the buck. It's almost a sure bet the panel will fit the buck perfectly on the first try. It's amazing how accurate this process is.

The flexible shape pattern is also a useful tool for laying out the blanks. By flattening the flexible shape patterns onto the sheetmetal, it's easy to see what shape the blank needs to be cut into for the desired panel. As a general rule, cut the sheetmetal material 1 inch larger than the flexible shape pattern, as this will assure you have plenty of material to work with and trim later. The shape pattern will reveal immediately where the majority of the stretching and shrinking will need to take