chapter 20

Custom Painting and Body Designs

After studying this chapter, you will be able to:

- Describe wet and dry methods of applying overlays.
- List the supplies, tools, and equipment needed for custom painting and designs.
- Describe how to produce various custom paint finishes.
- Describe how to install decals and adhesive pinstripes.
- Describe several ways to produce custom body designs.

Custom Painting

The term ***custom painting*** is used to describe refinishing and/or decorating a vehicle in a personalized manner. Custom painting may involve landscapes, animals, geometric designs (stripes, flames, etc.), names, numbers, or unusual paint colors and patterns. See Figure 20-1.

This type of work requires considerable experience and skill. There are a number of commercially available designs and patterns that may assist the technician. Always lay out full-size patterns on paper first. This will provide a chance to see how the design will fit and look on the vehicle. Although this is considerable work, it saves time in the long run. Removing a design is expensive!

Tools and Equipment

Customized effects are obtained using spray guns, striping tools, brushes, masking tape, and other equipment.

In custom painting, the conventional spray gun is used primarily for spraying large areas with undercoats, color coats, and clearcoats. A ***touch-up gun*** is similar to a conventional spray gun in operation, but is lighter and has a smaller capacity, Figure 20-2. It is designed for general touch-up work and for small detail work.

An ***air brush*** is used for fine detailing, fish scaling, and similar work. It does not have a spray pattern control. The fluid volume control and air pressure determine material flow in the air brush. The small physical size allows great flexibility of movement. See Figure 20-3.

Figure 20-1 This vehicle has been given a custom paint job.

Figure 20-2 A touch-up gun is commonly used for spot repairs. Note the size of the paint container. (The Eastwood Co.)

Figure 20-3 An air brush is used for fine detail work. This tool does not have a spray pattern control. (The Eastwood Co.)

A ***striping tool*** or ***roller gun*** consists of a small container for paint and a brass applicator wheel. See Figure 20-4. Gravity forces paint from the container to the wheel as the tool is pulled along the surface.

Striping brushes and other small brushes are used to apply pinstripes and other designs by hand. Sable or camel's hair dagger brushes are commonly used for striping. See Figure 20-5.

Materials

Regular and special masking tapes, accent tapes, decals, metallic flakes, custom colors, markers, and other materials are needed for custom work. In Figure 20-6, masking tape is used to help create a custom design.

Specialty Finishes

While almost any type of paint can be used for custom painting, acrylic lacquers are popular for design work. They may be worked rapidly in successive coats. These materials can be applied with a conventional spray gun, touch-up gun, air brush, or an aerosol can. Each method has advantages, depending largely on the design and area to be covered.

Polychromatic finishes are used extensively for custom work. Three- and four-part paint systems are sometimes used. *Candy-apple, pearlescent,* and *metal flake paints* are generally considered specialty finishes.

Candy-apple finishes are three-part paint systems. They begin with a metallic basecoat (generally silver or gold). Several transparent color coats are applied over the basecoat, and are followed by a clearcoat. Acrylics or polyurethanes are used for this process.

Pearlescent finishes are three-part systems. They usually begin with a color basecoat. A clear topcoat containing pearlescent powders (fine Mylar metallics) is then applied. This topcoat is covered by a clearcoat.

Figure 20-4 This striping tool is used when painting pinstripes. (The Eastwood Co.)

Figure 20-5 A typical brush used for applying painted pinstripes. (The Eastwood Co.)

Metal flake finishes utilize various sizes, shapes, and colors of metal or Mylar flakes. A basecoat is applied and is followed by a clear topcoat containing the metal or Mylar flakes. A clearcoat is then applied to provide protection and give depth to the finish.

It is advisable to paint a test panel before actually spraying pearlescent or metal flake finishes onto a vehicle. It is impossible to know what effects will result unless the finish is seen on a surface. Air pressure, distance to the surface, amount of metallics, thinning, and other variables will change the visual appearance of the custom finish.

Custom Techniques

Custom painting starts with a careful preparation of the surface. The surface should be cleaned, sanded, and cleaned again to remove any traces of silicone or other debris.

White or black China markers or colored Sharpie permanent markers work well for outlining designs on the car finish. China Markers are easy to erase with a soft cloth. Isopropyl alcohol will remove Sharpie marks.

Masking is the most important part of custom painting. A variety of widths are needed. When outlining sharp curves or other intricate designs, a 1/8 in. (3 mm) tape is used. One frequently used custom painting technique is called ***endless line,*** Figure 20-7. After the surface has been prepared in the usual manner, 1/8 tape is applied in the desired design. Several coats of acrylic lacquer are then sprayed on the surface. Each coat must be allowed to dry thoroughly. The tape is then removed, and the surface is carefully wet sanded. Finally, a clearcoat is applied to level and protect the surface.

Painted ***pinstripes*** may be applied with ***technical pens, roller guns,*** or ***pinstriping brushes.*** These tools are also useful in making irregularly shaped or curved stripes. A strip of masking tape is sometimes used to assist in drawing straight lines. A special masking tape can be used for painting pinstripes. When this pre-cut tape has been placed on the surface, a clear film is peeled off to leave evenly spaced pieces of masking tape.

Plastic pinstripes (accent stripes) are adhesive backed tapes. These stripes come in a variety of colors, widths, and designs. They are applied in the same manner as overlays and decals described later. No wetting solutions are needed. See Figure 20-8.

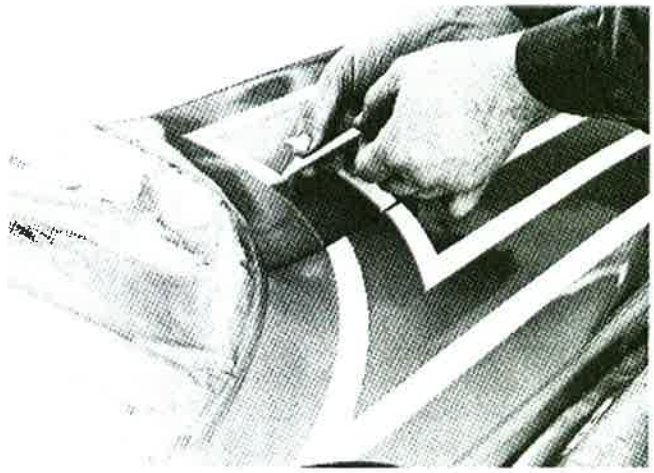

Figure 20-6 Using masking tape to produce a special design.

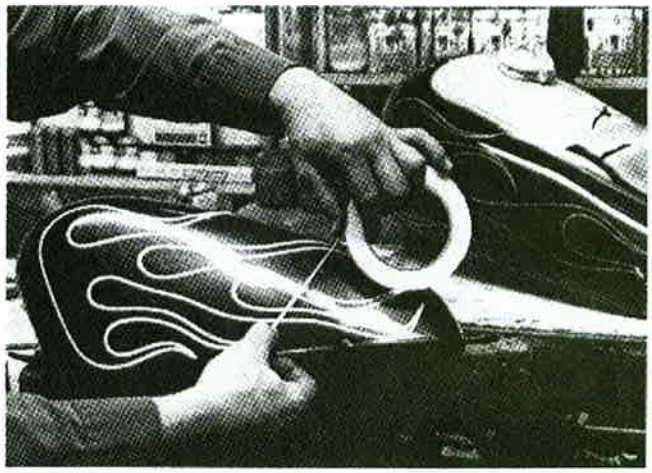

Figure 20-7 Applying endless line tape as a means of customizing.

Figure 20-8 Plastic pinstripes being applied to this vehicle. (Spartan International)

Flame designs are also popular, Figure 20-9. The flame-like design is produced using ***stencils*** and paint. Stencils are impervious materials (paper, cardboard, tape, plastic, frisket, etc.) in which designs have been cut. See Figure 20-10. Paint only strikes the surface through the openings in the stencil. Make certain that the stencil material is held securely against the surface if a sharp design is desired.

Once the flame design is painted on the surface, the stencil can be removed. An air brush can provide further color blending of the flame edge. Several customizing stencil designs are shown in Figure 20-11. In some cases, a ***spray mask*** can be applied to a surface. Once the mask dries, the design may be carefully cut (razor or X-Acto knife) through the mask film. The cut portion of the film is removed, and the paint is applied over the masked area.

Frisket paper or other adhesive-backed (shelf paper, tape) materials are often used as stencils. The protective backing paper is removed, and the paper or plastic is applied to the surface. The design is then cut through the material as described in the section on spray masks. In some cases, the frisket material can be cut before it is applied to the surface. This technique in not practical on designs with many "islands," such as letters.

Figure 20-9 This vehicle has a custom flame design.

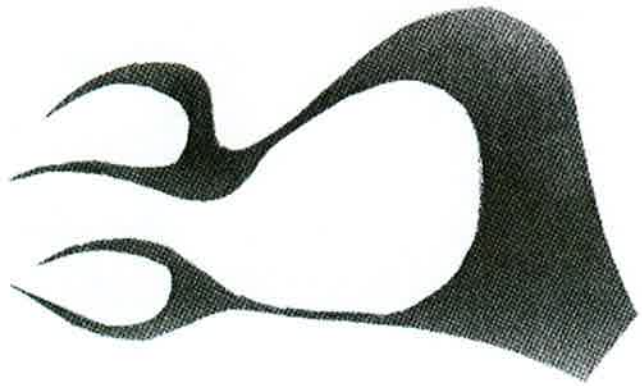

Figure 20-10 A special stencil is cut to form a flame.

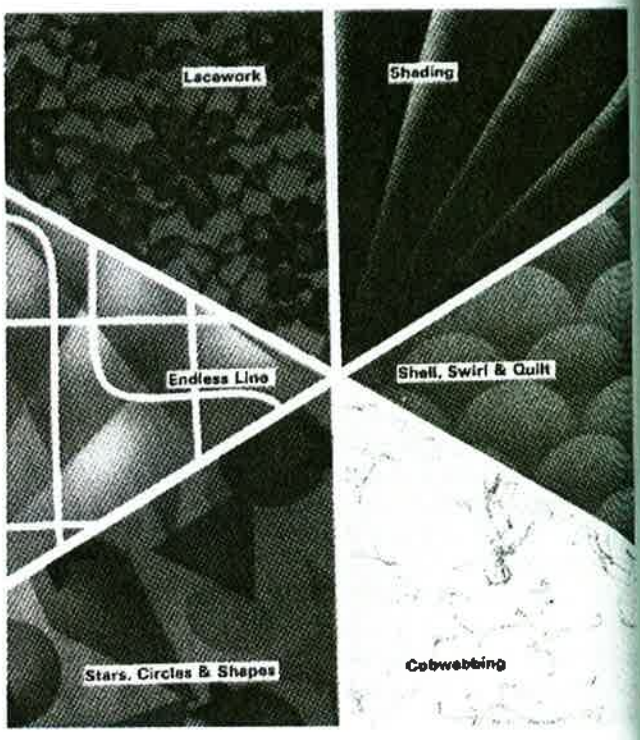

Figure 20-11 Some popular forms of customizing stencils.

Lace painting is a stencil technique in which various fabric lace designs are carefully stretched over the surface to be painted. Paint is then sprayed through the lace openings. After drying, the surface is wet sanded and a clearcoat is applied.

Spider webbing is an unusual custom painting technique. It is produced by forcing acrylic lacquer from the spray gun in the form of a fibrous thread. A base color coat is applied and followed by the spider web layer (fibrous thread). This layer is wet sanded, and a clearcoat is applied.

Shading is one of the most popular custom painting techniques. Shading is also known as ***card masking***. Careful masking is very important when shading, since most of the material being sprayed will fall on the masking, not on the work area. A number of card shapes (squares, rounds, etc.) are arranged in the form of a fan, Figure 20-12. The outer edges may be even or staggered. The fan is held a few inches from the work surface, and the color is applied in a light fog around the edge of the masked surface. Most of the color will fall on the masked surface, and the overspray will create the shading effect. This step should be followed by wet sanding and the application of a clearcoat. Special templates can be used to produce shell, swirl, and quilt designs.