

Restoration Quality

Quality Is In The Details



Some points about the various minor aspects of a restoration project that determine the perceivable quality and long-term durability of your project are described below (not included is the quality of the components or products used):

- When replacing body sheet metal be very cautious about avoiding built-in rust traps, and always clean around drainage and ventilation holes, and even create new ones in hidden areas of known rust prone locations. For example, avoid whenever possible welding patches over cut-out rust spots. By doing so, you will be creating a sheet metal sandwich where moisture will collect between the layers of metal, and the pressure exerted by oxidation will cause in time a bulge and paint failure. Always try to insert new metal which is trimmed to fit the hole exactly, then seam-weld it in. Then quickly clean, prep and paint both surfaces.
- Metal finish the fresh metal surface adequately to minimize the amount of lead or plastic filler required to attain the perfect surface. Generally, no more than 1/16 inch of filler thickness is desirable or acceptable, except in original spot welded seam locations, for example where the roof was originally attached to rear quarter panels.
- Paint over-spray is to be avoided at all cost. It is extremely time consuming and sometimes impossible to properly clean up over-sprayed surfaces without complete removal of components. Few excellent automobile painters respect this aspect of restoration. Their focus is on the repair and paint application on the car body. Collision repair tasks do not demand a high level of attention to these details. Consequently various parts of a chassis, gas tank, exhaust system, wire harness, connectors, clips and electrical components, brake and fuel lines, engine, radiator, seals, and latches are often covered by primer and color overspray. A lot of careful project planning is required to minimize the labor and masking material required to apply paint materials only where they are intended to be applied.
- Body surface preparation has to be free of minute surface imperfections and waves. When finished with high gloss paint, no waves or hints of filler should show in the reflection of the shiny new surface. Such waves can be caused by the metal base, or by improper sanding of the primer and filler. The outline of panel imperfections can sometimes be seen due to differential shrinkage. Therefore it is important to allow plenty of time for primers and fillers to cure fully before guide coat application and final blocking. Even though chemically cured products and baking accelerate product cure and reduce shrinkage, the variation in thickness of primer and filler on repaired and fabricated panels can reveal themselves, sometimes not until several weeks after a glossy surface is applied and buffed. It is still best to allow up to several weeks to assure the surface has stabilized in terms of shrinkage before final blocking and color or base/clear coat is applied.

Restoration Quality

(Continued)



- Body panel gaps around the doors, trunk, and hood, have to be uniform. Door alignment has to be perfect, as if the door had been cut into a perfect side of a new car. Sometimes doors will not fit perfectly, then it is up to good judgment to finesse the door at the hinges into the best possible compromise, by hiding any misalignment away from the eye, such as the bottom, above a rocker trim piece or a running board. When you are dealing with a body-on-frame car, there is another option, which is altering the thickness of the anti-chafe or anti-squeak packing between the body and chassis at the various body attachment points, thereby altering the longitudinal and sometimes the transverse alignment of the front relative to the rear of the body.
- Rubber glass seals and rub strips on door glass, the sealing of vent windows, and bright trim around the glass, sometimes present difficult challenges. Also, the fit and hardness of reproduction rubber weather seals around doors and the trunk can present problems that you can't anticipate and requires considerable patience, resourcefulness, and finesse before a satisfactory seal and closure is achieved. It must be remembered that the assemblers at the factory had lots of practice and developed many tricks, tools and procedures to achieve an acceptable fit, seal and finish, and their parts were the best available and checked for quality.
- Chassis and drive-train components have to be properly painted. Most of the time the level of finish applied to these components on show cars far exceeds the quality standards of the OEM (original equipment manufacturer). The engine has to be painted the proper shade of whatever color is original. Usually the OEM painted the engine fully assembled. This means that the exposed edges of all gaskets were also painted. This also applies to the rear axle. Most steel case transmissions were painted with the engine attached. Aluminum case transmissions were sometimes painted, mostly not.
- Most radiators were painted semi-gloss black. This dull color transfers heat better than high gloss black or bare metal. You should make certain that the top and bottom tanks of the radiator are dent-free, and straighten the cooling fins, and blow out all debris. If yours has dents, it should be taken to a radiator shop for pressure and flow testing, repair, then disassembly. If the tanks are dented, ask to have them removed, repair the dents, then return them for re-assembly, and cleaning, but not painting. Paint the radiator yourself or have it painted by a body shop. Remove or fill dents in the firewall caused by previous engine removal, and fill non-original holes in the firewall that may have been added to mount accessories or run an extra wire. Also remove all dents from valve covers, air-cleaner housing, exhaust system, gas tank and lower body panels and chassis parts; the latter dents are typically caused by less than careful use of a floor jack or hoist arm pads.
- Remove all "play" by rebuilding or replacing parts caused by wear in door hinges, pedals, handbrake mechanism, control rods, linkages, steering column and box, and suspension joints.
- Disassemble, clean, lubricate, and re-plate if necessary seat adjustment slider rails.