

## OEM vs. non-OEM collision parts.

The Original Equipment Manufacturer (OEM) who built your car or truck also makes replacement hoods, fenders, door panels, and other collision parts to help meet your needs for quality collision repairs. A number of non-OEM manufacturers have attempted to copy OEM parts, and these imitations are currently being offered to collision repair facilities as "replacements" for the originals. There are even organizations that "certify" these parts.

To see how they compare, General Motors ran tests on non-OEM "certified" fenders and hoods for a typical midsize car (Pontiac Grand Am). At the same time, they tested the corresponding replacement fenders and hoods made by General Motors. The tests show that the non-OEM parts don't measure up in the materials used, their assembly, or fit.

### Poor quality collision parts can let you down in:

- Appearance
- Safety
- Resale value
- Proper operation and performance of your vehicle
- Your vehicle warranty

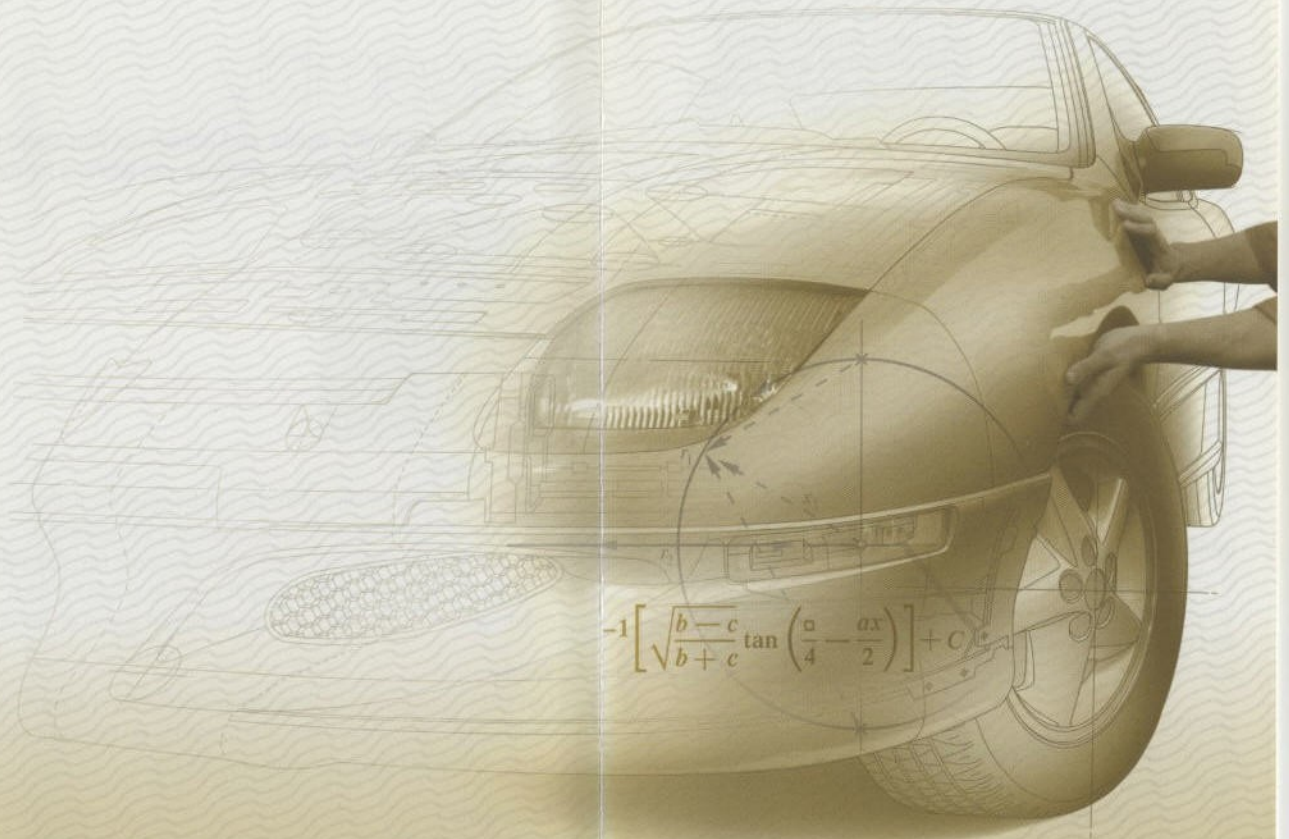
Please turn the page to see the full story. And be sure to ask for Original Equipment Manufacturer collision replacement parts for your vehicle.

### It's your vehicle. It's your choice.

Your vehicle's appearance and performance are important to you. And it's your right to have your vehicle restored to pre-accident condition. You can trust replacement parts from your vehicle's Original Equipment Manufacturer (OEM) to help get the job done.

Laws regarding use of non-OEM parts vary from state to state. Be sure to check with your state's insurance regulatory department for specific information covering your situation.

# Your vehicle is an original. It pays to keep it that way.



For more detailed information regarding parts testing results, please visit [Goodwrench.com/collision](http://Goodwrench.com/collision).

Why all automotive collision parts are not the same.



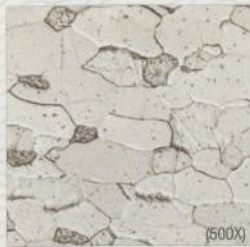
## Imitation parts compared against original parts.

# materials

The GM parts are made with stronger, harder, more corrosion-resistant steel. Imitations may put you at risk.



GM steel: Alloying elements create a fine matrix of hard carbide particles dispersed throughout the steel grain structure, providing greater strength and dent resistance.



Non-OEM steel: Unalloyed steel has a soft ferrite grain structure typical of merchant grade steel, which may result in less strength and dent resistance.

### Strength

The GM hood tested was made from bake-hardened steel grades. Chemical analysis showed the non-OEM hoods were made from lower-grade steel. The tests show the GM hood was 40% stronger and 80% harder than the non-OEM hoods. **And there was this telling fact:** Forming or stamping typically increases part strength 15-25%. The formed non-OEM parts were not as strong as the GM steel in its unformed state.

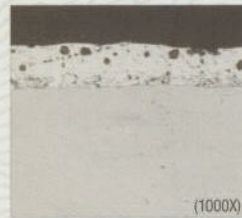
### Dent resistance

In a standard SAE (Society of Automotive Engineers) Static Dent Test, the non-OEM part exhibited, on average, only 42% of the dent resistance of a GM hood. In one location, the score was only 13%.

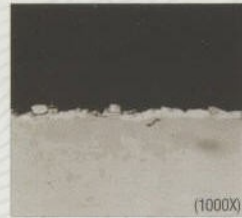
### Coating

The primer on sheet metal parts is your barrier of protection against the elements. The non-OEM hoods tested had only half the thickness of electrocoat primer (ELPO) on the outer surface and one quarter of the thickness on the inner surface, compared to the Grand Am hood. One non-OEM hood had 24% less zinc-galvanized coating on the outside and 32% less on the inside, failing to meet

the GM galvanizing requirement. These skimpy ELPO and galvanized thicknesses resulted in observable coating cracks and discontinuities that may expose bare metal to the risk of corrosion.



The zinc coating at the surface of the steel sheet on the GM hood outer panel reinforcement sample is up to four times the thickness of the non-OEM part. It is also more consistent and unbroken across the surface.



The zinc coating at the surface of the steel sheet on the non-OEM hood outer panel reinforcement sample is less than one-quarter the thickness of the OEM part. The surface coating is inconsistent and shows tiny cracks throughout.

# assembly

GM uses components, welds, and adhesives that stand up to real-world use. Imitations can leave you wishing for more.



### Components

A good idea of the quality difference can be observed in the components shown above. The hood primary latch striker is instrumental in keeping your hood closed securely. The aftermarket hood used a different, smaller weld nut (left) to attach the latch striker rather than the larger, GM-specified part shown on the right.

### Welds

Non-OEM hood assemblies revealed insufficient weld integrity when compared to GM specifications. The incidence of discrepant welds on the non-OEM hood assemblies was 23.7%.

### Adhesives

Hoods consist of the exterior sheet metal and an inner assembly. For proper hood assembly, operation, and appearance, in addition to welds, GM specifications call for a precise amount of adhesive

between these parts, as well as a bead of sealer running the entire perimeter. The non-OEM hood tested had 29.6% less adhesive contact, and no sealer was applied between the parts at the perimeter hem.

# fit

OEM parts can restore a vehicle's original look and help retain resale value. Imitations can leave you looking through the gaps.



GM Fender

The GM part was flush to the contour of the checking fixture.



Non-OEM Fender

The non-OEM part was not flush and had excessive gaps.



GM Hood



Non-OEM Hood

The GM parts were made with the same tools and dies as the parts on the original vehicle. And Original Equipment Manufacturers use checking fixtures to evaluate the fit and dimensions of their parts. On GM-certified checking fixtures for fenders and hoods, probe checks found the non-GM products average 33.9% out-of-specification. But you don't need a probe to check this one out. You can see the discrepancy for yourself.

### Don't make a collision worse.

The bottom line is that the tests showed that despite their "certification," the non-OEM hoods and fenders were of inferior quality; they'd never make it onto a GM assembly line. Don't let them make it onto your car or truck.

Your vehicle was a major purchase; it doesn't make sense to sacrifice its value and performance with sub-standard replacement parts. Be sure to ask for Original Equipment Manufacturer (OEM) replacement collision parts for your car or truck.