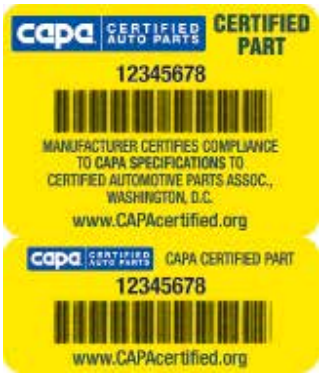
CAPA testing is **no cakewalk**.

*If it isn't **CAPA Certified**, it isn't a genuine replacement part.*

Here's over 50 reasons why.



In the CAPA Test Labs we greet every part submitted for testing with a critical eye and a battery of tests that determine whether the part earns CAPA Certification. Each part we test has to perform the same or better than the car company brand part it intends to replace on every test. It's all about true comparability. Period.

But before we even look at a part, each of the manufacturers making those parts must pass our rigorous factory inspection program which includes:

- **Quality Manual and Process Audits**
- **Detailed Facility Audits**
- **Quality Seminars on Compliance with CAPA**

What follows is a list of the battery of tests a part *must* pass to demonstrate comparability.

For starters, there are our **MATERIAL COMPOSITION** tests. There's no way insurers, shops or consumers can actually know if any part is made of the right stuff. Here's how we find out.

1. **Optical Emission Spectroscopy and Inductively Coupled Plasma for Metals**
2. **Infrared Spectroscopy for Plastic and Foam**
3. **Filler Separation Analysis Test or Thermogravimetric Analysis for Plastic and Foam**
4. **Differential Scanning Calorimetry Test for Plastic and Foam**

We also check the consistency of a part's **DIMENSIONS** to make certain it's truly comparable to the car company brand part, by examining:

5. **Thickness**
6. **Placement and Size of holes, fasteners and strikers**
7. **Gaps and Flushness (measured on a special checking fixture with adjoining parts)**

You expect **WELD INTEGRITY** in a part like a hood; we demand it in all parts. We run each part through a special set of tests to verify its comparability to the car company brand part which include:

8. **Trained Engineers Conduct a Detailed Visual Inspection of Weld Quality**
9. **The Location and Number of the Welds are Compared to the Car Company Brand Service Part**
10. **Resistance (spot) Weld Peel Strength is Tested**
11. **Cross-sectioning of Welds for Comparative Arc Weld Sizes**

Our testing regimen for the **MATERIAL MECHANICAL PROPERTIES** is exhaustive because each and every part has to perform just like the comparable car company brand part—or better—when subjected to:

12. **Tensile and Yield Strength for Metals and Plastics**
13. **Rockwell Hardness Test for Metals**
14. **Micro-hardness Test for Metal Fasteners and Strikers**
15. **Retention Testing for Metal Fasteners and Strikers**
16. **Torque Test on Fasteners on Lamps**
17. **Flexural Strength and Modulus Tests on Plastics and Foam**

18. **Shore Hardness on Plastics**
19. **Izod or Gardner Impact Tests on Plastics**
20. **Heat Aged Tensile Test on Plastics**
21. **Compression Tests on Foam**
22. **Compression Test After Heat Aging on Foam**

(And we're not even halfway through.)

We test for **ADHESIVE INTEGRITY** by checking:

23. The Location and Quantity of the Adhesive
24. The Strength of the Adhesive

We test **COATINGS**, too. Each part undergoes what amounts to systematic torture, pure and simple by subjecting it to all of the following tests:

25. Coating Adhesive Tests
26. Corrosion Resistance (Salt Spray, Cyclic Corrosion, Copper Acetic Acid Salt Spray)
27. Humidity Resistance
28. Coating Cure
29. Brittleness
30. Metallic Coating Thickness
31. Thermal Properties
32. Chemical Resistance
33. Wax Resistance
34. High Pressure Spray Resistance
35. UV-Fade Resistance

PLASTIC AND FOAM parts not exempt. We subject them to thermal testing to evaluate:

36. Coefficient of Linear Thermal Expansion on Plastic
37. Heat Deflection Temperature on Plastic
38. Full Part Dimensional Stability on Plastic and Foam

If you don't mind loud noises you'd like our **FULL PART STRESS TEST** for **BUMPER PARTS**, which involves, basically, smashing them into hard surfaces to make sure they are as safe as the car company brand part:

39. Dynamic Impact test (Sled and Pole Tests)

Then there's our unique **VEHICLE TEST FIT**. It's where we mount parts on an actual undamaged vehicle—to verify that the parts fit a real world vehicle as well or better than the part they intend to replace. We developed this test to be sure body shops don't have to be test fit guinea pigs. During the VTF we check:

40. Fit: All Gaps Even and Uniform. Flushness: Smooth Contours, Mating Components and Body Lines.
41. Function: Latching Securely, Aiming, Adjustability
42. Appearance: Free of Defects, Dips, Runs and Ripples
43. Mounting Points and Brackets: Does Everything Fit Well?

Lastly, to be CAPA Certified a part must comply with the requirements of all **FEDERAL SAFETY REGULATIONS**. For example, automotive lamps must pass the following tests:

44. Photometric Performance
45. Abrasion Resistance
46. Chemical Resistance
47. Salt Spray Protection
48. Dust Resistance
49. Internal Heat Dissipation
50. Thermal Properties
51. Air Flow Properties
52. Vibration
53. Hood Latch Test
54. Moisture/Water Spray Resistance

Even **TRAILER HITCHES** don't get a free ride at the CAPA Labs. They're subjected to the tests and requirements of SAE J684 (VESC-5) and they'd better pass if they want to be CAPA Certified.

It's no easy task to pass these tests—and only those parts that do can be considered genuine CAPA Certified parts.

capa CERTIFIED AUTO PARTS

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Want more information?

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