Kratos Custom Material Cosmetic Surface Conditions

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KRATOS

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1. Overview

This work instruction defines and establishes surface finish acceptance and rejection criteria for inspections of material being delivered by an approved supplier or subcontractor.

2. Key Players – Authority and Responsibility

Function	Authority and Responsibility
Quality Control Inspector	Inspector vendor material in accordance with the guidelines below.
Engineering Services Manager	Defines requirements for surface conditions and tolerances on applicable drawings.
Purchasing	Ensures any applicable instructions are conveyed on the purchase order.

3. Guidance and Requirements

3.1 Guidelines

Parts received from vendors should be inspected prior to receipt to ensure they meet or exceed the standards.

3.2 Procedure for Identifying Surface Cosmetic Issues

All parts fall into one of the following three categories:

- Class A: A critical cosmetic surface, usually front exterior that is normally viewed by the final customer. These surfaces are usually painted, silkscreened and /or plated but may also be anodized with a special grain identified. Normally grained in a uniform direction with no scratches, scuffs, dents, burrs, attached debris, punch marks, brake lines, marred coatings, or other visible imperfections, to include fingerprints and bleed out.
- Class B: A semi-critical cosmetic surface, usually top/bottom/sides/rear exterior that is adjacent to Class A and is viewed by the final customer but not as easily seen. These surfaces may be painted, but are usually plated with a grained finish. Normally grained in a uniform direction, preferably with no scratches, scuffs, dents, burrs, attached debris, punch marks, brake marks (parts with silk screen surface shall not have break marks through silkscreened data), marred coatings, or other visible imperfections, to include fingerprints and bleed out. If minor imperfections do exist, there must be fewer than two and be light enough that they are difficult to see (i.e., scratches less than 1” in length and shallow – fingernail does not catch on it).

- Class C: A non-cosmetic surface, usually not seen by the final customer. Light scratches or scuffs are acceptable, but no dents, gouges, burrs, or attached debris. Some plating imperfections are acceptable as long as plating coverage meets industry standards.

Where feasible, class designation will be noted on the drawing. If it is not noted, these descriptions may be used to indicate cosmetic requirements. Any questions or concerns should be addressed to Kratos prior to delivering parts.

The following figures depict examples of failures.

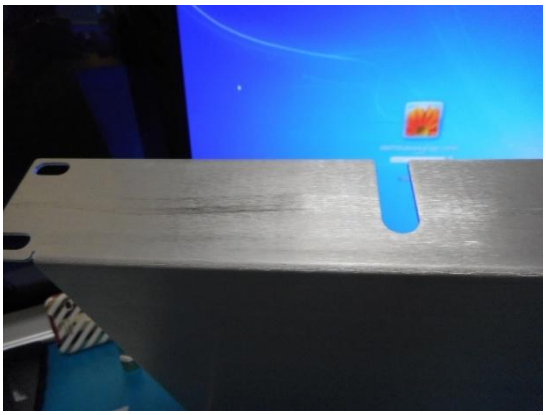


Figure 1. Scuff Mark



Figure 2. Brake Line



Figure 3. Plating Defect

4. Inspection Conditions

- **Lighting:** White, cool fluorescent office lighting with uniform intensity (500 lumens at inspection level).
- **Viewing Angle:** When inspecting product surfaces, orient the item so that it is facing the Inspector and is perpendicular to their line of sight. Repeat this process for all surfaces: top, back, bottom, front, sides, and interior surfaces.
- **Magnification:** Magnification should not be used when inspecting for cosmetic imperfections.
- **Viewing Distance:** When inspecting for cosmetic imperfections, the item shall be oriented in such a manner that is directly facing the Observer. The viewing distance should be approximately 24" from the object.
- **Viewing Time:** When inspecting for cosmetic imperfections, the item shall be viewed for 5 – 10 seconds per surface.