

GR-QUA-0200-01

DWFritz Cosmetic Requirements

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1 Objective

The objective of this procedure is to define the expectations for the accepted appearance of custom parts and products purchased by DWFritz.

2 Scope

This Procedure applies to all businesses, sites, and functions operating under the DWFritz Quality Management System.

3 Responsibilities

Note: When a title of a position is listed in this Guideline/Reference, it relates to that position or its equivalence.

The following roles and responsibilities are noted:

Role	Responsibility
Buyer	Creates and sends purchase orders, primary communication with supplier.
CM	Initiates conversations on cosmetic defects with supply base so that they are aware of DWFritz's ongoing improvement efforts.
ME	Mechanical Engineer is responsible to determine cosmetic requirements and provide appropriate documentation to ensure clear communication to the supplier
PM	Project Manager is the final decision make on whether a defect is acceptable. The PM is responsible to coordinate/communicate with Engineering on this decision.
Quality	Inspects parts at DWFritz and leads discussion to determine pass or reject of parts according to this document.
Supplier	Provides parts and/or services according to Purchase Order, drawings and/or other written directions from DWFritz.

Role	Responsibility
SQE	Supplier Quality Engineer is the primary point of contact for quality issue communication between DWFritz and Supplier.

4 Reference Documents

Document ID	Title
NA	NA

5 Definition of Terms

This section presents definitions of terms used in this document.

Term	Definition
Consistent	Appearance is the same over the surface of the part without a discernable difference.
Holidays	A discontinuity in coating, when a part of the surface remains uncoated. A defect such as an area of insufficient coating film thickness. A pinhole within the coating. A crack within the coating.
Nick, pit, depression	A small area where material or coating is removed and provides an inconsistent surface that is not a scratch.
Scratch	Any long depression that removes small amounts of surface material and can be felt with fingernail or ID card.
Uniform	Presenting an unvaried appearance of surface, pattern, or color. Uniform pattern or graining would have a consistent appearance. Appearance due to machining generally falls under this category unless.

6 Guideline/Reference Overview

Refer to this document prior to shipping or when receiving parts to ensure cosmetic appearance of parts meet the expectations in this document, the drawing and/or other documented DWFritz guidelines.

7 Guideline/Reference

7.1 General Notes

- 7.1.1 If there is a conflict between drawing, specification, or written direction from DWFritz and this document, the drawing, specification, or written direction takes precedence. However, if there is not a call out on the drawing, then this document takes priority.
- 7.1.2 All parts to be completely coated with no missing areas, or holidays but without overspray. Color, texture, tint, and shade should be consistent across the part and within the same batch of parts.
- 7.1.3 Parts need to be clean and free of grease, oil, contaminates, foreign material or other chemicals. This includes surface areas as well as holes, crevasses, or channels. Exception is for materials that need grease, oil or other chemicals to protect the material from corrosion.
- 7.1.4 Part marking to be clear, legible, and uniform. Smudged, smeared, uneven, misaligned, or mis-centered marking will be rejected. Suppliers to use supplier code provided by DWFritz.
- 7.1.5 All parts are classified as "Grade B" category unless otherwise noted in the drawing, specification, or written documentation from DWFritz.
- 7.1.6 All inspections will be under direct uniform lighting at arm's length for at least 10 seconds per side. Inspections to follow general industry standard(s). If no industry standard is available, reference this document or DWF specification and inspect with unaided eye.
- 7.1.7 Any defect that affects form, fit, or function will be rejected.
- 7.1.8 Suppliers to package parts to protect them from damage during shipping.
- 7.1.9 Part marking is not allowed on any grade "A" surface. If there is confusion, contact DWFritz immediately.

7.2 Painted and Powder Coat Parts

Painted and Powder Coat Parts	Grade A	Grade B	Grade C
Paint	Consistent color and texture.	Consistent color and texture. Touch up accepted.	Color and texture can vary slightly. Touch up accepted.
Scratch	None	Three or fewer per side, less than 75mm in length, width less than 2mm. Cannot expose bare metal.	Seven or fewer scratches per side, less than 150mm in length, width less than 4mm. Cannot expose bare metal.
Nick, pit, depression	1 per side less than 2mm diameter. Cannot expose bare metal.	Three or fewer per part. Smaller than 2mm in any direction. Cannot expose bare metal.	Six or fewer per part. Smaller than 4mm in any direction. Cannot expose bare metal.
Machining or other pattern	Not visible.	Not visible.	Can be visible.
Additional Notes	Note: Please refer to general notes prior to reviewing this section.		

7.3 Textured Paint and Powder Coated Parts

Textured Paint and Powder Coated Parts	Grade A	Grade B	Grade C
Texture	Consistent color and texture.	Consistent color and texture. Touch up accepted.	Color and texture can vary slightly. Touch up accepted.
Scratch	None.	Three or fewer per side, less than 75mm in length, width less than 2mm. Cannot expose bare metal.	Seven or fewer scratches per side, less than 150mm in length, width less than 4mm. Cannot expose bare metal.
Nick, pit, depression	1 per side less than 2mm diameter. Cannot expose bare metal.	Three or fewer per part. Smaller than 2mm in any direction. Cannot expose bare metal.	Six or fewer per part. Smaller than 4mm in any direction. Cannot expose bare metal.
Machining or other pattern	Not visible.	Not visible.	Can be visible.
Additional Notes	<p>A. Thickness should be between 3.5mils and 5.5mils thick unless otherwise noted in DWFritz communication, powder coater specifications or drawings.</p> <p>B. No missing area, black, or different colored voids, specks, particles etc.</p> <p>C. Texture needs to be consistent in size.</p> <p>Note: Please refer to general notes prior to reviewing this section.</p>		

7.4 Anodized Parts

Anodized Parts	Grade A	Grade B	Grade C
Color and texture	Uniform and consistent.	Uniform and consistent.	Can be blotchy.
Scratch	None.	Three or fewer per side, less than 75mm in length, width less than 2mm. Cannot expose bare metal.	No more than 8 scratches per side, less than 150mm in length, width less than 4mm. Cannot expose bare metal.
Nick, pit, depression	None.	Three or fewer per part. Smaller than 2mm in any direction. Cannot expose bare metal.	Six or fewer per part. Smaller than 4mm in any direction. Cannot expose bare metal.
Machining or other pattern	Not visible under anodization.	Visible under anodization, but must be uniform.	Visible under anodization.
Additional Notes	Note: Please refer to general notes prior to reviewing this section.		

7.5 Polish or other finished Parts

Polish or other finished Parts	Grade A	Grade B	Grade C
Polish or pattern	Consistent and uniform.	Consistent and uniform.	Can vary.
Scratch	None.	Three or fewer per side, less than 75mm in length, width less than 2mm. Cannot expose bare metal.	Seven or fewer scratches per side, less than 150mm in length, width less than 4mm. Cannot expose bare metal.
Nick, pit, depression	None.	Three or fewer per part. Smaller than 2mm in any direction. Cannot expose bare metal.	Six or fewer per part. Smaller than 4mm in any direction. Cannot expose bare metal.
Machining or other pattern	Not visible.	Limited.	Unlimited.
Additional Notes	Note: Please refer to general notes prior to reviewing this section.		

7.6 Other Parts

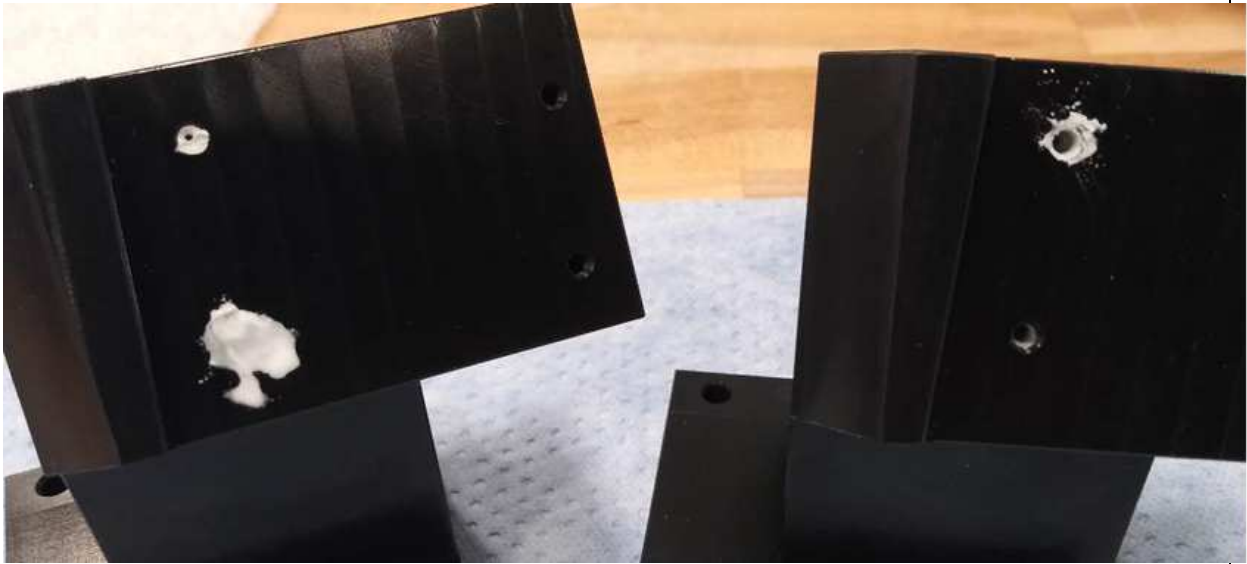
Other Parts	Grade A	Grade B	Grade C
Other callout	None.	Consistent and uniform.	Can vary.
Scratch	None.	Three or fewer per side, less than 75mm in length, width less than 2mm. Cannot expose bare metal.	Seven or fewer scratches per side, less than 150mm in length, width less than 4mm. Cannot expose bare metal.
Nick, pit, depression	None.	Three or fewer per part. Smaller than 2mm in any direction. Cannot expose bare metal.	Six or fewer per part. Smaller than 4mm in any direction. Cannot expose bare metal.
Machining or other pattern	Not visible.	Limited.	Unlimited.
Additional Notes	Note: Please refer to general notes prior to reviewing this section.		

7.7 Examples

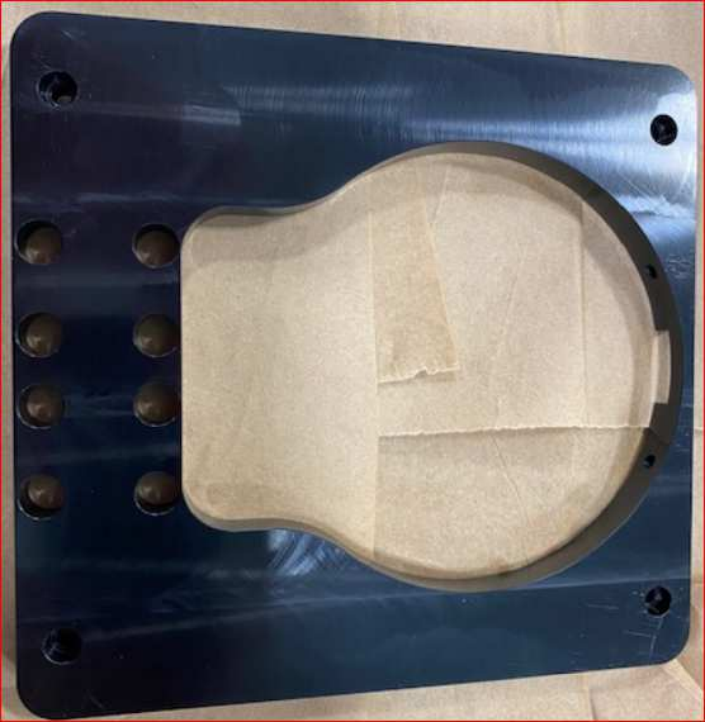
Fail all grades due to length and nick, pit depressions.



Rejected for not meeting note 7.1.3.



Example of passing grade B parts with uniform machine marks visible under anodization.



8 Document Change Record

Date	Author	Revision	Change Reference
5/7/2020	John Hawkins	0	DCR#00617