



Brake Rotor Coating

1 Scope

1.1 Material Description. The material of this specification is intended for spray or dip/spin painting applications.

1.2 Symbols. Not applicable.

1.3 Applicability. Brake rotors.

1.4 Remarks. This specification defines the paint performance requirements for brake rotors.

The brake rotor coating is identified by the specification number, GMW16284, coating location on the rotor and pre-conditioning temperature.

- **Type A** coating location requires paint on the outside wall of the hat and edge of the brake rotor.
- **Type B** coating location includes the locations required in Type A and the wheel mounting surface.
- **Type C** coating location requires the locations in Types A and B along with the braking surfaces.

Pre-conditioning requires one of the four time/temperature schedules identified as: No pre-conditioning, +200 °C, +300 °C, and +400 °C.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ASTM D336	ISO 2808	ISO 15184
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2.2 GM Standards/Specifications.

GMW3059	GMW14700	GMW14872	GMW15357
GMW3286	GMW14729	GMW14925	
GMW14448	GMW14829	GMW15282	

3 Requirements

3.1 Requirements on Test Specimens. Rotor shall be positioned vertically to represent vehicle position during corrosion testing, with the balance cut, if applicable, positioned at the 12 o'clock position. Post-test evaluation shall be conducted on the required painted surfaces from 9 o'clock to 3 o'clock position on the test rotor.

3.2 General.

3.2.1 Coatings shall be free of Chrome VI.

3.2.2 Chrome VI used as an adhesion promoter is not allowed.

3.2.3 Post-treatment, if performed, shall be Chrome VI free.

3.2.4 Rotors shall be free of processing fluids, rust preventatives and machining debris prior to coating.

3.3 Coating Thickness and Appearance.

3.3.1 The applicator will utilize approved paints as identified in the approved source list. Each approved paint material will be identified according to required thickness and tolerance. Approved source lists will be maintained according to "Section 6 Approved Sources", of this standard.

3.3.2 Coating thickness shall be measured per ISO 2808. The average thickness shall be determined by a minimum of four (4) evenly spaced readings around the circumference on all specified coated surfaces. Coating thickness to be evaluated on machined surfaces, as-cast surfaces are excluded. Coated areas that cannot be

measured directly can be measured on an adjacent surface. The coating thickness shall be documented per Appendix A, Table A1.

3.3.3 Coating Defects. Drips and runs are permissible if they are $< 1 \text{ cm}^2$ and $\leq 10 \text{ cm}^2$ total surface area on either braking surface. Drips on the wheel mounting surface are not permissible if they affect the torque tension requirements of the wheel mount attachment. The wheel bearing mount surface and wheel bearing hub/pilot shall be free of paint.

3.3.4 The coating locations on the rotor shall be specified as Type A, B, or C. The application locations and thickness requirements are shown in Figure 1 through Figure 3. If no coating type is specified, Type C shall apply.

Figure 1: Type A Coating Application

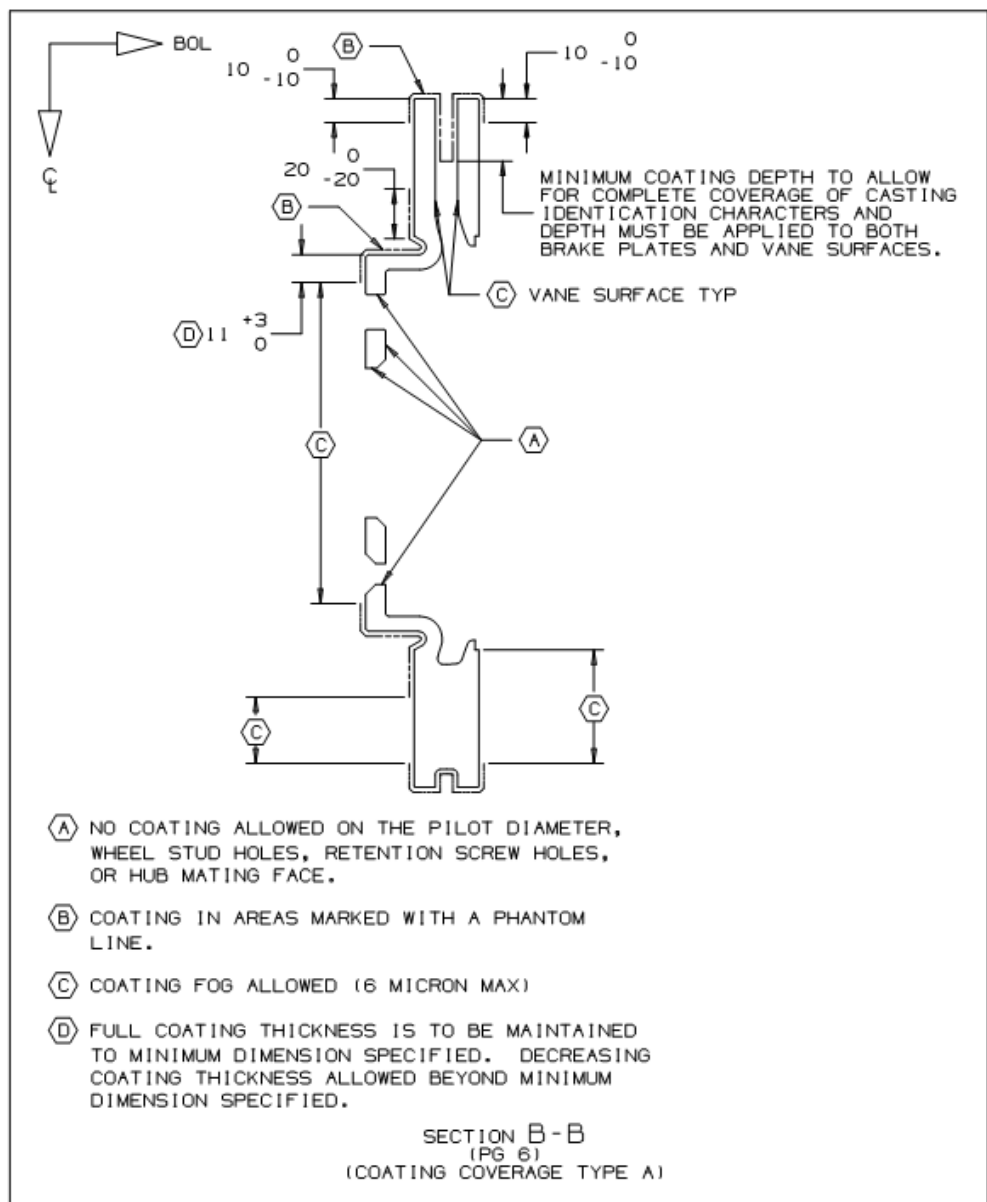


Figure 2: Type B Coating Application

