

TCI Powder Innovation For Jeep 75th Anniversary:

Rugged Jeep Bumper Sports Super Durable Coating



Customer Opportunity

The Jeep brand achieved an important milestone this year: its 75th anniversary. To commemorate this landmark, the Jeep marketing team rolled out Anniversary Special Edition models of several vehicles. Exclusive details included distinct vehicle colors and trim packages on the 2016 Jeep® Wrangler Unlimited fleet. The specialized bronze-colored trim package along with off-road bumpers are painted and protected with TCI Powder Coatings.

Challenge

Flex-N-Gate, a leading manufacturer of large stamped metal and welded components, is a Tier 1 supplier for the automotive industry and provides the bumper used on the Rubicon Jeep that Chrysler wanted to paint bronze for the anniversary edition in conjunction with Powder Cote II, a leading powder coating finisher that applies the bumper coating.

Until now, this durable steel Flex-N-Gate bumper designed to withstand the impact of a jeep dropping from a rock during off-roading sported a textured black TCI Powder Coating. TCI Coatings recommended use of a powder coating to hide imperfections in the galvanized metal and to fill in the impact lines designed into the bumper to withstand the impact forces during off-roading. TCI's durable powder provides a smooth finish for a great-looking bumper that is also tough enough to withstand maximum impact.

With the 75th anniversary planning underway, Chrysler wanted a smooth semi-gloss bronze finish for its bumpers to match the rest of the trim package for special edition Jeep vehicles, which included the bronze wheel trim, bumpers, tow hitch, componentry and pin-stripping.

Contact TCI Powder for more information: 800-533-9067



Results

Feedback from Chrysler and its customers has been so strong, according to Spencer, that a new trim package and bumper color will launch for 2017 Jeep models.

Chrysler's styling team was very pleased with how well the new color matched the flat smooth standard, and they approved it for use on bumper for the 75th Anniversary Edition Rubicon said Spencer. In fact, they were so pleased that they expanded the use of the new approved color to the tow hitch in the trim package. The textured, Smoke Bronze metallic bumper also captured the attention of the broader Chrysler styling team and was ultimately extended as an option for the higher-end Jeep Sahara and Wrangler anniversary edition models.

Solution

TCI Coatings initially formulated the bronze finish color Chrysler was looking for in the bumper coating and in partnership with Flex-N-Gate and Powder Cote II, presented color panels to the Chrysler styling team. Feedback was very positive, but TCI Coating's Paul Spencer and Flex-N-Gate shared some application concerns. The smooth coating would not provide the same hiding capabilities for metal defects and impact lines as the current textured black coating used on Jeep bumpers. The time to assess another solution was in this early phase before production began.

TCI Coatings and Flex-N-Gate recommended that Chrysler consider a textured metallic coating for the bumpers. This coating would deliver the rugged look and beauty that customers had become accustomed to with the textured black finish, while still providing robust performance characteristics and hiding coverage.

The Chrysler design team said they would take it under review if TCI Coatings wanted to come back with a recommended color.

Work began in the TCI Coatings lab. A team of chemists began formulation of a textured Smoke Bronze metallic coating that would match the rest of the componentry. Matching between a smooth, solid finish coating and textured metallic coating is complex. The mica flakes used in a metallic coating along with the textured finish create a multi-dimensional effect on the coating. When viewed from different angles, the color looks different, so the color needs to match from various viewing angles. Formulating this match is a combination of science and art. Five experienced color experts in the TCI lab served as part of the development team.

When the first color samples of the textured Smoke Bronze metallic powder coating were presented, the Chrysler styling team immediately liked it and asked TCI to continue fine-tuning the color to have a slightly less red hue. Several rounds of color formulation adjustments and reviews were done over a period of months and as the project progressed, the TCI and Flex-N-Gate team moved from showing samples of flat color panels to painted bumpers. This allowed the Chrysler team to complete more detailed studies of how the coating would work with the other bronze trim componentry.

Automotive: The TCI Powder Coatings Difference

The Chrysler textured Smoke Bronze metallic coating used in this project is part of TCI's 9000 powder coating series. The resin system used in the coating is an innovative TGIC polyester with a low gloss metallic finish. The TCI 9000 series products have the broadest formulating range in color and gloss with a wide variety of commercial uses including automotive, agricultural, lawn and garden, and heavy machinery applications.

TCI Powder Coatings provide excellent performance for a wide range of applications in the automotive industry, including under hood car components, engine parts, wheels, and exterior trim. TCI offers coatings with the highest quality and performance, held to the strict quality standards in a variety of colors and finishes, including a wheel powder coating and chrome powder coat in shades that give a metallic or chrome appearance.

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