

Mazda 46G Machine Gray Repair

Solventborne Basecoat **Full Panel Repair** Process

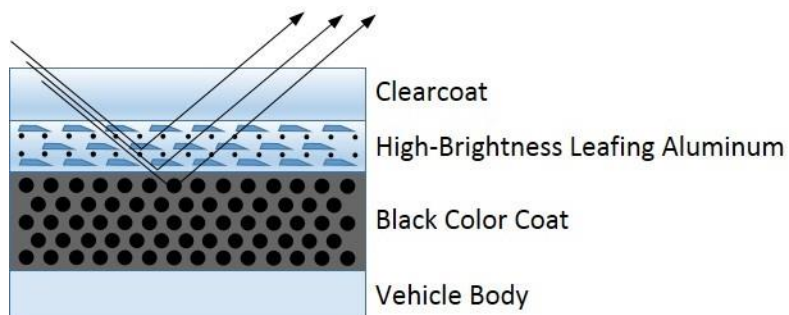
TCB103 Technical Bulletin
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This specific full panel / new panel repair process is necessary to meet appearance, performance, and VOC regulatory requirements. You should contact your PPG representative for full documentation on the approved products, systems and processes. This repair process can be used with any PPG solventborne system.

DESCRIPTION:

- Mazda's 46G is a special effect gray metallic color which gives the paint a "sculpted from solid steel" appearance.
- The OEM process utilizes an exotic tri-coat system made up of a black color coat followed by high brightness leafing aluminum, then overcoated by a clear coat layer. See the following illustration:



- The repair outlined in this document is intended to replicate the OEM finish as closely as possible utilizing products similar to those at the factory.

PREPARATION OF SUBSTRATE:

- Any damaged body work on the vehicle should be repaired using a PPG and Mazda approved repair process for the substrate being refinished (Aluminum, Steel, Plastic etc).

PREPARATION OF THE COLOR CHECK PANEL:

- Prior to applying any color on the vehicle, a color check panel must be produced utilizing the same application methods as would be employed in the actual refinish repair. This color check panel is required on every car being repaired due to variation of color from one area of the car to the next and from car to car. Multiple color check panels should be created to determine the best application technique to achieve correct color alignment to the vehicle.
- The G7 color check panel (PPG Part #ARMC464G7) should be prepared as follows:
- Mix and apply 2 coats of clearcoat to the entire color check panel. Two coats are required so that enough film build is present to allow for sanding. The use of a PPG premium clearcoat is recommended.
- Once the clearcoat has fully dried, remove any orange peel or texture with P1200 dry.
- Further refine the surface with P1000 Trizact wet to minimize any final scratches or pigtailed.

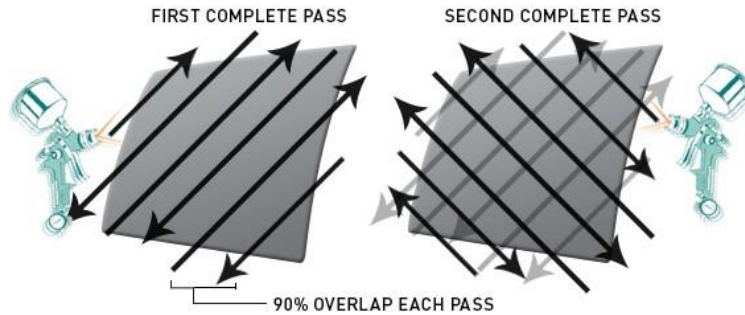
Sandable Clearcoat Note:

Sanding of this clearcoat layer is mandatory because the leafing aluminum requires a smooth surface for proper orientation.

- Using PAINTMANAGER® program software for mixing and managing the paint operation, mix the Mazda 46G basecoat color formulated with leafing aluminum, according to the brand being sprayed.
 - DELTRON® NXT basecoat Brand Code 944846
- Reduce the basecoat 1:1 with reducer. Best results are found using one grade of reducer slower than current conditions suggest. Use of a slower evaporating reducer provides best results.

Spray Gun Notes:

- **Best results are achieved by using small fluid tip setup (1.0, 1.1, 1.2).**
- **Best results are achieved by restricting spraygun fluid amount.**
 - **Completely close spraygun fluid knob, then open 1 to 1 ½ turns.**
 - **Reduce spraygun pressure to achieve thin wet coats.**
- Apply 2 to 3 thin wet coats of the mixed and reduced 46G basecoat to the color check panel allowing appropriate flash times between coats until hiding is achieved. Apply this basecoat layer using an X-Pattern crosscoat technique (see below) at 90% overlap to help evenly align the leafing aluminum. This is the same application technique to be used on the vehicle. The X-Pattern crosscoat technique must be used with every coat.



1 coat consists of two complete passes

- Allow a minimum of 20 minutes flash time at 70°F before the final clearcoat is applied.
- Mix and apply clearcoat to the entire color check panel. The use of a PPG premium clearcoat is recommended.
 - Apply the first coat of clear as a light (tack) coat. Avoid overwetting as movement of the leafing aluminum basecoat may occur resulting in blotchiness. Allow this coat to flash 5 minutes.
 - Apply 2 additional coats of clear using normal clearcoat application methods and proper flash time between coats for the clearcoat selected.

CHECK THE COLOR:

- Use the completed color check panels to evaluate the color on the car.
- If the color achieved on the color check panel is acceptable / blendable to the car proceed to the section "FULL PANEL or MULTIPLE PANEL REPAIR PROCESS".
 - If tinting of the color is necessary, tint utilizing toners within the original formula, prepare additional color check panels and re-check. Continue in this fashion until an acceptable / blendable match is achieved.

FULL PANEL or MULTIPLE PANEL REPAIR PROCESS

REPAIR AREA PREP:

- If using urethane G7 / SG07 sealer, sand the repair area with P400-P600.
- If using basecoat G7 /SG07, sand repair area with P600-P800.

BLEND PANEL PREP:

CAUTION- Be careful not to sand through the OE finish

- Sand blend panel(s) with P1200-P1500 dry and P1500 dry on edges by hand.
- Refine the blend area with P1000 Trizact wet to minimize any deep scratches or pigtails

SEALER APPLICATION:

- Mix and apply G7 / SG07 sealer to the repair area. Blend out as needed to eliminate any hard edge of sealer color.

SANDABLE CLEARCOAT APPLICATION:

- Mix and apply 2 coats of clearcoat to the panel being repaired or replaced and adjacent blend panels edge-to-edge.
- Two coats are required so that enough film build is present to allow for sanding. The use of a PPG premium clearcoat is recommended.
- Once the clearcoat has fully dried, remove any orange peel or texture with P1200 –P1500 dry.
- Further refine the surface with P1000 Trizact wet to minimize any final scratches or pigtailed.

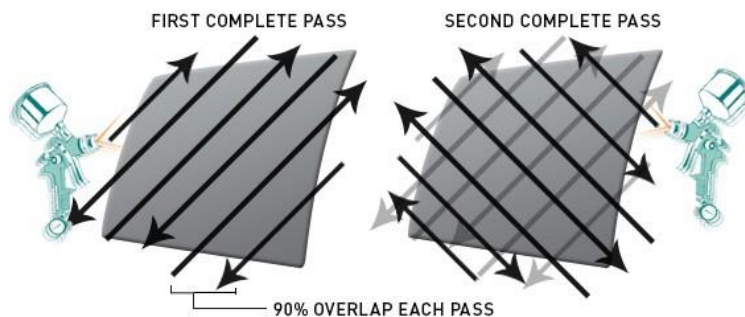
WET-BED APPLICATION:

- Mix and apply *Deltron* NXT sprayed as a wet-bed over the entire area to be refinished and allow to flash. See the appropriate product data sheets for precise mixing and application instructions.
- Allow wet-bed to flash before applying 46G basecoat color

BASECOAT 46G COLOR APPLICATION:

Spray Gun Notes:

- **Best results are achieved by using small fluid tip setup (1.0, 1.1, 1.2).**
- **Best results are achieved by restricting spraygun fluid amount.**
 - **Completely close spraygun fluid knob, then open 1 to 1 ½ turns.**
 - **Reduce spraygun pressure to achieve thin wet coats.**
- Apply 2 to 3 thin wet coats of the mixed and reduced 46G basecoat to the repair area allowing appropriate flash times between coats until hiding is achieved. Apply this basecoat layer using an X-Pattern crosscoat technique (see below) at 90% overlap to help evenly align the leafing aluminum. The X-Pattern crosscoat technique must be used with every coat.



1 coat consists of two complete passes

- Allow a minimum of 20 minutes flash time at 70°F before the final clearcoat is applied.
- Ensure the 46G basecoat has flashed completely and check for uniform coverage with a color inspection light.
- After flash, tack area thoroughly with a PPG ONECHOICE® tack rag (part #SX2070) to remove any overspray or dust that may have settled on the repair area.

FINAL CLEARCOAT APPLICATION:

- Mix and apply clearcoat completely to all repaired panels, edge to edge. The use of a PPG premium clearcoat is recommended.
 - Apply the first coat of clear as a light (tack) coat. Avoid overwetting as movement of the leafing aluminum basecoat may occur, resulting in blotchiness. Allow to flash for 5 minutes
 - Apply 2 additional coats of clear using normal clearcoat application methods and proper flash time between coats for the clearcoat selected.



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