



Plastic Repair, Cracks and Holes

Standard Operating Procedure

Important note on process safety
Always wear Personal Protective Equipment

- Comfort Particle Mask P3
- Hearing Protection
- Comfort Goggles
- Reusable Overall
- Safety Gloves

1 Cleaning of the surface		<ul style="list-style-type: none"> ▶ Degrease the surface using 3M™ VHB Surface Cleaner to remove any oil or grease on surface. ▶ Degreasing the surface helps to provide optimal bonding of the adhesive. 	<p>3M™ VHB Surface Cleaner 3M™ Professional Panel Wipes</p>
2 Relief / relaxation drilling		<ul style="list-style-type: none"> ▶ Drill a hole of 4 - 6 mm in diameter at the base of the tear in order to release stress and prevent extension of the crack and damage. 	
3 Chamfer crack edges		<ul style="list-style-type: none"> ▶ Chamfer the tear using 3M™ Scotch-Brite™ Roloc™ Disc as angles should be "flat" to improve effectiveness of the adhesive and increase the bond strength. <p>Note: This step is important to avoid future "collapse" of the repair adhesive which can lead to crack edges becoming visible!</p>	<p>3M™ Pistol Grip Disc Sander 3M™ Scotch-Brite™ Roloc™ Disc</p>
4 Pre-sanding of the repair area		<ul style="list-style-type: none"> ▶ Prepare the area around the tear with 3M™ Cubitron™ II Abrasives 220+. <p>Note: Plastic is a very soft substrate! Pay special attention as using excessively coarse abrasives can badly damage the surface and plastic fibres.</p>	<p>3M™ Cubitron™ II Hookit™ Abrasive Discs 737U Festool Automotive Systems LEX 3 150/5 Festool Automotive Systems ETS EC 150/5 EQ</p>
5 Fine sanding of the surface & feather edges		<ul style="list-style-type: none"> ▶ 3M™ Hookit™ Cubitron™ II Abrasive Discs 240+. ▶ Refine previous sanding scratches to reduce the possibility of solvents from the plastic filler penetrating into the OEM paint layers. It is advisable to work with a soft interface pad when sanding curved areas. 	<p>3M™ Cubitron™ II Hookit™ Abrasive Discs 737U Festool Automotive Systems Interface-Pad</p>
6 Cleaning of the surface		<ul style="list-style-type: none"> ▶ For the outside, use cleaner and panel wipes to clean the substrate. ▶ For the inside use cleaner on a 3M™ Scotch-Brite® grey, to properly remove all contamination from the surface and to prepare the area for good bonding properties. 	<p>3M™ VHB Surface Cleaner 3M™ Professional Panel Wipes 3M™ Scotch-Brite® grey, handpads</p>
7 Repair of the damaged area from the inside		<ul style="list-style-type: none"> ▶ Apply adhesion promoter with 3M™ Flexible Plastic Patch Adhesion Promotor Wipe. Allow 10 minutes to dry. ▶ Cut the 3M™ Flexible Plastic Patch to the appropriate size of the repair area. 	<p>3M™ Flexible Plastic Patch 3M™ Flexible Plastic Patch Adhesion Promotor Wipe</p>
8 Application of the 3M™ Flexible Plastic Patch		<ul style="list-style-type: none"> ▶ When applying, always keep pressure applied in one direction. <p>Note: For better adhesion, trim round the corners and edges of the plastic patch.</p>	
9 Repair of the damaged area from the outside		<ul style="list-style-type: none"> ▶ Apply 3M™ Polyolefin Adhesion Promoter on the repair area and allow 10 - 15 minutes to dry. <p>Attention: Do not use an adhesion promoter on ABS-type plastics.</p>	<p>3M™ Polyolefin Adhesion Promoter</p>
10 Application of Plastic Filler		<ul style="list-style-type: none"> ▶ Once rear side is cured, apply 3M™ Flexible Parts Repair Material to front side of repair area. ▶ When using a new cartridge, squeeze out a small amount of material until both components are equally extruded before attaching the mixing nozzle. Then attach the mixing nozzle and discard the first 2 - 4 cm of extruded material, to remove any improperly mixed material. <p>Note: Always use plastic fillers on plastic parts! As conventional body fillers do not have suitable properties, they may crack later on, or will lead to delamination.</p>	<p>3M™ Flexible Parts Repair Material 3M™ EZ Sand Flexible Parts Repair 3M™ Manual Gun for 2 part cartridges, 50 ml 3M™ Manual Applicator for 200 ml Duopack Cartridge</p>
11 Sanding of the Plastic Filler		<ul style="list-style-type: none"> ▶ 3M™ Cubitron™ II 220+ - 240+. ▶ Apply a further layer of Plastic Filler/Repair Material if necessary. Repeat the steps in order to apply 3M™ Polyolefin Adhesion Promoter first, followed by additional layer of 3M™ Flexible Parts Repair Material once the promoter is cured. ▶ For final fine sanding of the Plastic Filler and feather edges use a 3M™ Cubitron™ II 320+. 	<p>3M™ Cubitron™ II Hookit™ Abrasive Discs 737U Festool Automotive Systems ETS EC 150/5 EQ Festool Automotive Systems LEX 3 150/5 Festool Automotive Systems Interface-Pad</p>
12 Fine sanding of the surrounding surface		<ul style="list-style-type: none"> ▶ Level / degloss adjacent areas with 3M™ Flexible Abrasive Foam Discs P800 - P1000. ▶ Please do observe the recommendations of your paint manufacturer when selecting and applying the recommended fillers and procedures for plastic parts. 	<p>3M™ Flexible Abrasive P800 - P1000</p>

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