

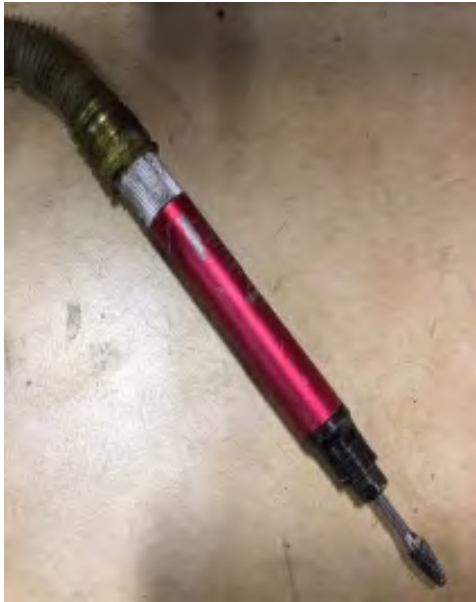


Volvo Chassis - Model VN - Crack At Corner Of The Hood Air Intake; Repair Procedure



> Internal Content

Tools



Compact Pneumatic Rotary Tool



Pneumatic Sander



High Pressure Blow Nozzle



Pneumatic Spray Gun

Live UI

Supplies



West System® 105 Epoxy Resin West System® 205 Fast Hardener



Fiberglass Cloth - Cut into 4"x4" squares

Method Prerequisites – Procedure Steps

1. Crack Location – Detection

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2. Surface Preparation – Composite digging-grooving

3. Door opening method – Access to B-Side Fender
4. Fiber Glass Patch Preparation
5. Resin Preparation – Patch Impregnation
6. Repairing the back side of the crack damaged area
7. Repairing the A face-cosmetic of the crack damaged area
8. Drying – Polymerization (Leister blowing)
9. Sanding – P240 / P320 / P400 (Cosmetic Face)
10. Cleaning (Blowing – IPA Wiping)
11. Puttying of the cosmetic A face (Product Prep + Application of putty)
12. Sanding – P240 (if needed) P320 / P400 (Cosmetic A Face)
13. Cleaning PRTP Prep (Blowing – IPA Wiping - Deionization)
14. Primering – PRTP
15. Curing (oven sequence)

Crack Location (Air Intake Area)



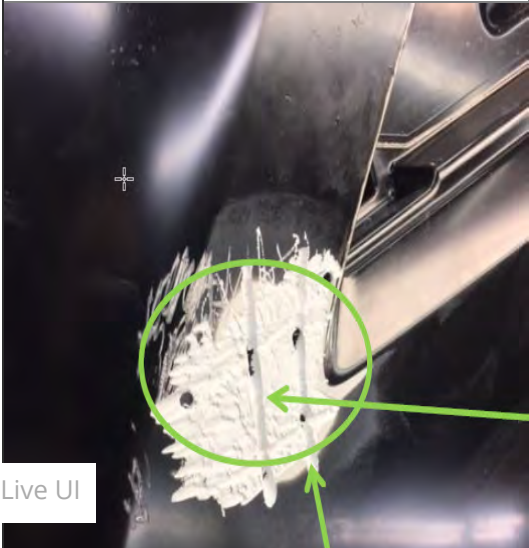
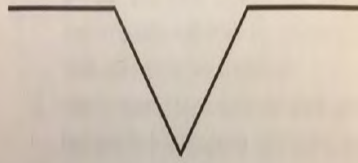

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A. Use a sand paper to remove all surface coating from the affected area

2. Prepare the surface for patching

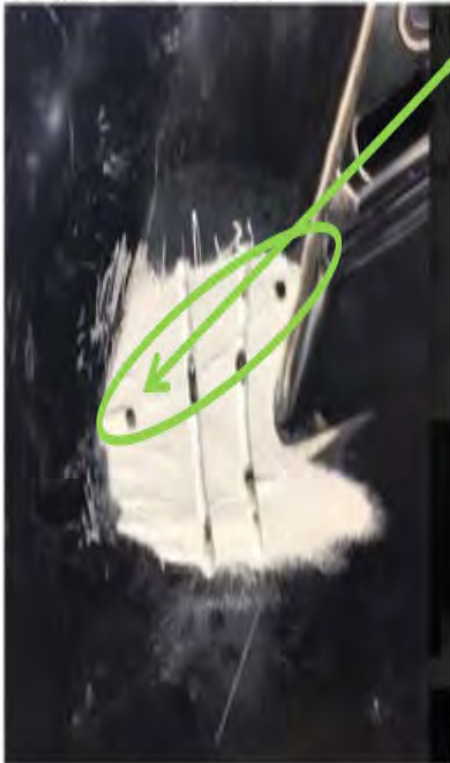
Removed the damaged material and open up the cracks, use a medium grit sandpaper to sand slightly into the surrounding area. This will give you the ability to feather your repair into the undamaged surface. After you've finished sanding the surface, wipe down the surface with acetone one final time to remove dust and anything else that may disrupt adhesion.

Digging the SMC Surface and Grooving	Grooving shape (Taper/Cove Groove)
	<p data-bbox="716 1520 976 1549"><i>Illustration A: V-groove - DO NOT USE!</i></p>  <p data-bbox="716 1787 932 1816"><i>Illustration B: Taper/cove - USE!</i></p> 

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Crack has to be in the center of the crossed grooves created	Create a Taper/Cove groove, not a V-groove

Door opening method – Access to B-Side Fender



Drill holes at both ends of the crack to prevent it from spreading and allow the resin to combine with the inner portion of the patch.

Use orbital sander to develop a depression in A surface of affected area of approximately 2mm.



- Cross Section shows:
- Base substrate in blue
 - Grinded surface in yellow
 - Drilled holes through termination points of crack

Cutting the Fender reinforcement on 3 faces to create a visit window (4"x5") to access to B side fender	Access to the B side Fender by the window – Access to proceed to the repair on B side



Fiber Glass Patch Preparation 4"x4"



GF Patch 4" X 4" type cannot be changed

Resin Preparation – Patch Impregnation



Repairing the back side of the crack damaged area

Impregnated Patch Setting up (2 Patches impregnated and superposed)	Impregnated Patch Location (2 Patches impregnated and superposed)



Repairing the A Face-cosmetic of the crack damaged area

Impregnated Patch Setting Up



After 2 minutes apply a paper tape on the wet patch to avoid sags and get a smooth surface

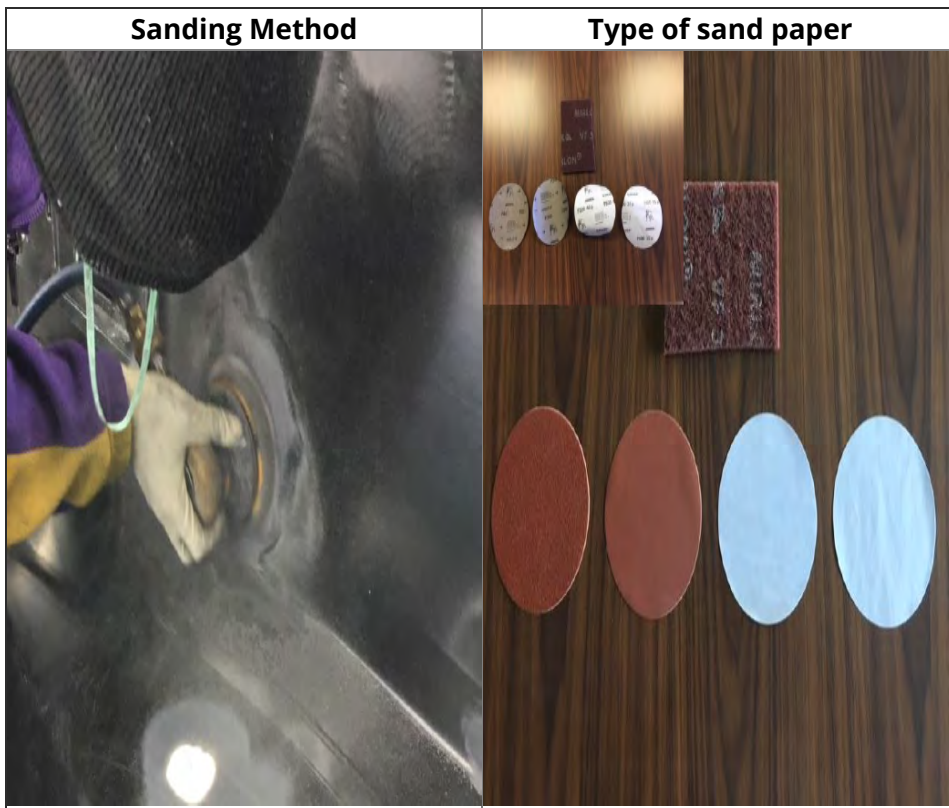
Drying - Polymerization

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Leister (heat gun) need to be swept over the patch during 3 minutes (more if not cured) and with respect of the right distance to the substrate and the right Leister (heat gun) heating power



Sanding of resin patch - P80 / P240 / P320 (Cosmetic Face)





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