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

Internal Content

Related links and attachments

No links or attachments available

Tools

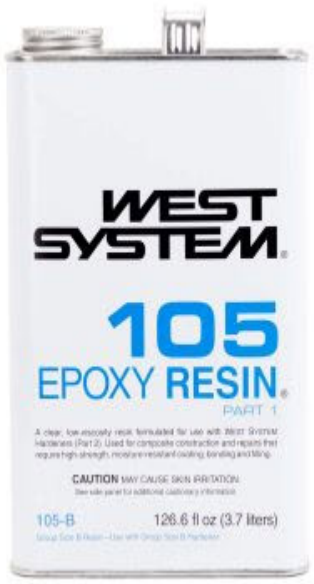
Compact Pneumatic Rotary Tool

Pneumatic Sander

High Pressure Blow Nozzle

Pneumatic Spray Gun

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

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. Curring (oven sequence)

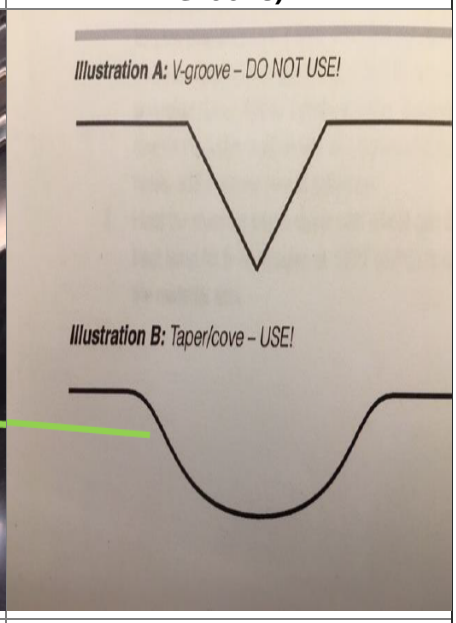
Crack Location (Air Intake Area)

1. Determine the location and path of the crack

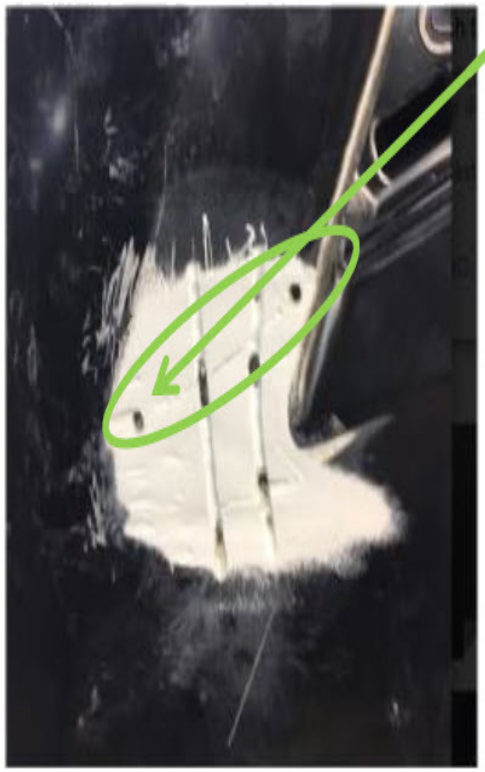
A. Use a sand paper to remove all surface coating from the affected area

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

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

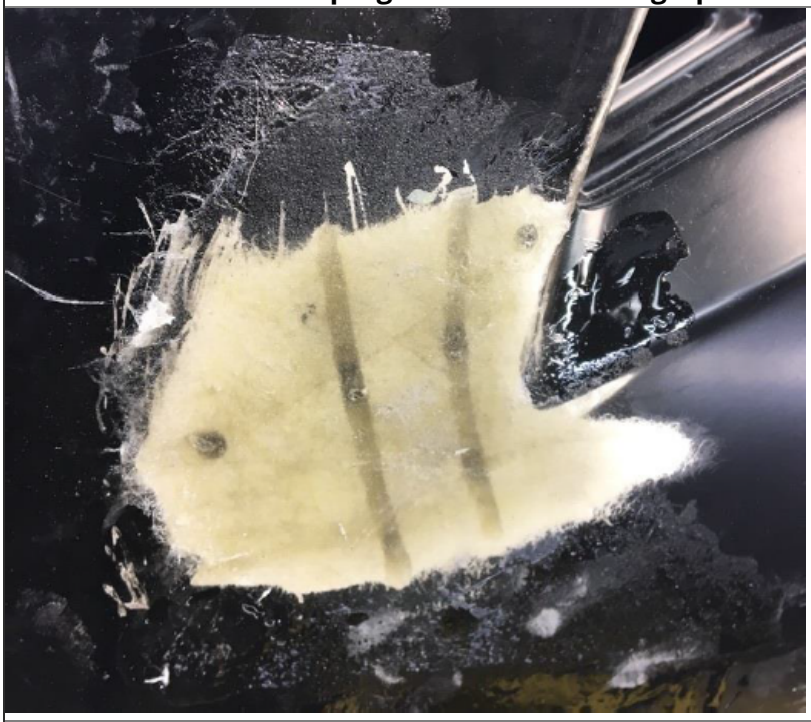
Resin Preparation – Patch Impregnation

Epoxy Resin + Hardener (1/5 ratio)	GF Patch 4”x4” 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)
	

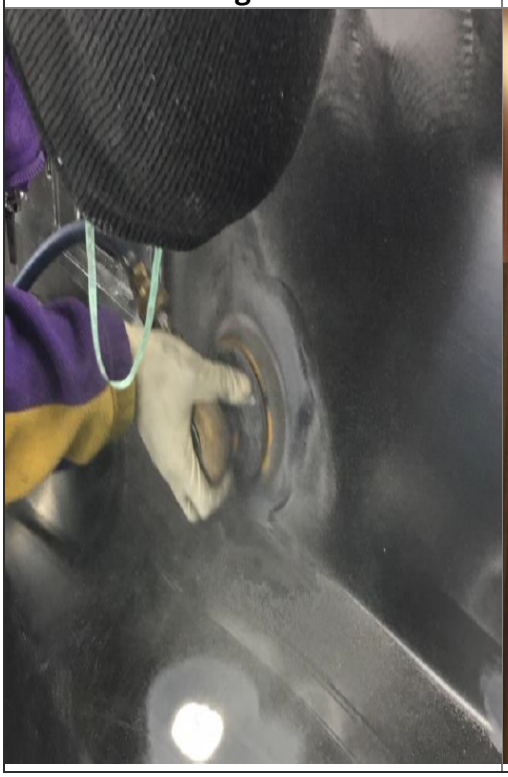
Repairing the A Face-cosmetic of the crack damaged area

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

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 subtract and the right Leister (heat gun) heating power

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

Sanding Method	Type of sand paper
	

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