

REPAIR INSTRUCTION

Repair of ELLE™ Onshore

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1. General Information

1.1 Change Description

The table below describes changes compared to the previous revision of the document.

Section	Description
Ver. 1.0	New document
Ver 1.1	Section 2.2 Tools Adding Rubber Disc Section 3.1.3 Step 6 Adding new picture and text. (Grinder tool)
Ver 1.2	Section 2.2 Tool list "Rubber wheel" added Section 3.1.3 step 6 Text adjustment "Keep the rubber ..." Section 3.1.3 step 10 Text measure tolerance added. Section 3.1.3 step 16 new text + picture added

1.2 Safety

1.2.1 PPE (Personal Protective Equipment)

Wear PPE as defined in the table below.

	For all tasks Wear foot protection.
	For all tasks Wear eye protection.
	For all tasks Wear protective gloves.
	For tasks where sufficient venting is not possible Wear respiratory protection. ■ Recommended filter type: A2, P2.

1.3 Icons and Notes

The table below defines the meaning of icons that appear in this document.

Icon	Definition
	Caution or Warning Details about risk of personal injury.
	Note Details about risk of property damage.
	Reference to additional documentation.



Details about time constraints.



Information about repetition.

1.4 Required Documentation

The table below lists other required documentation.

Safety Data Sheet	■ 3M™ Wind Tape Adhesion Promoter W9910-1 ■ IPA Sprit 99,9% Polytech
Technical Data Sheet	■ LE-D043-1.2-en_ELLE_ON_TDS ■ 3M™ Wind Tape Adhesion Promoter W9910-1
Installation Instruction	■ LE-I038-Application_of_ELLE_ON

1.5 Abbreviations

The table below defines the abbreviations used in this document.

Abbreviation	Full Form
IPA	Isopropanol Alcohol
PPE	Personal Protective Equipment
SDS	Safety Data Sheet
TDS	Technical Data Sheet
WTG	Wind Turbine Generator

2. Preparation

2.1 Environmental Conditions

The table below defines the temperature and humidity requirements during repair.



Refer to Technical Data Sheets for storage and transportation requirements.

Property	Value	Unit
Surface temperature:	10 ... 35	°C
	50 ... 95	°F
Relative humidity	0 ... 100	%

2.2 Tools and Consumables

Tools	
Item	Type
Application Roller	Special Polytech tool
Application scraper	Plastic spatula with felt
Rubber disc	Dynabrade 92296 Eraser Disc
Rubber wheel	Special Polytech tool
Safety knife	-
Sander	-
Measuring tape	-
Permanent marker	Carbon-free
Scissor	-
Spray bottle	-
Consumables	
Item	Type
Adhesion promoter	3M™ Wind Tape Adhesion Promoter W9910-1
Application solution	Mixture of 95% (minimum) isopropanol and demineralized water. Mixing ratio: 75% water / 25% isopropanol.
Cleaning agent	Isopropanol 95% (minimum)
Cloths	Lint-free
Masking tape	-
Sanding disc	Grit 220 to 240
Sandpaper	Grit 220 to 240

3. Repair

3.1 Repair of Cut-out

3.1.1 Cutting repair patch

Step 1

Identify damage and determine the size of repair patch. Minimum length of repair patch: 100 mm



Step 2

Cut the desired size patch.



End

3.1.2 Making the overlap pieces

Step 1

Apply a piece of 50 mm masking tape straight across the *ELLE™ Onshore* material.



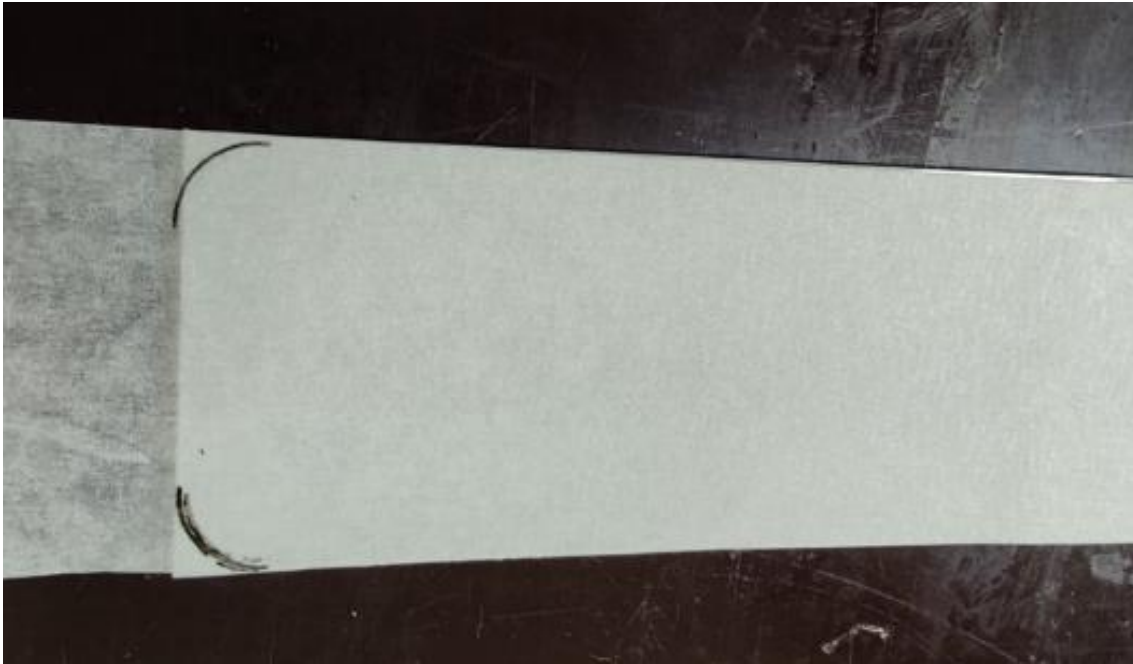
Step 2

Cut along the edges of the masking tape.

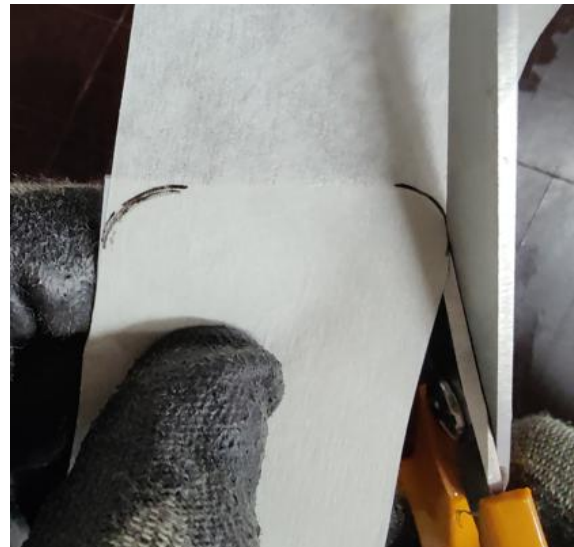


Step 3

Draw a 10 mm radius in each corner.

**Step 4**

Cut the corners.



Step 5

Remove the masking tape.

**Step 6**

Repeat the steps for making 2 overlap pieces.

End

3.1.3 Application of Repair Patch

Step 1

Place the repair patch on top of the damaged area and secure it with a piece of masking tape.

- Do not remove the liner material on the backside of the repair patch.



Step 2

Apply a piece of masking tape on the *ELLE™ Onshore* closely along the edge of each side of the repair patch.

**Step 3**

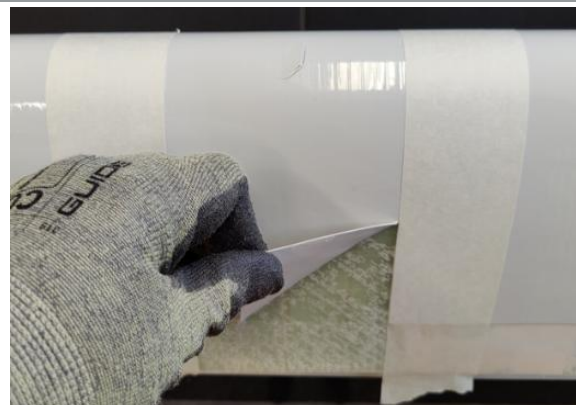
Remove and put aside the repair patch.

**Step 4**

Cut the *ELLE™ Onshore* along both masking tape sides towards the defect.

**Step 5**

Remove the damaged *ELLE™ Onshore* material.



Step 6

Remove the residual tape on the blade surface with a rubber wheel. Can alternatively be removed with suitable grit sandpaper and IPA alcohol.

For larger repairs it is recommended to use an angle grinder with a rubber disc to remove the residual tape on the blade, but we still recommend using a rubber wheel for removal of residual tape close to the remaining *ELLE™ Onshore* on the blade.

**Note:**

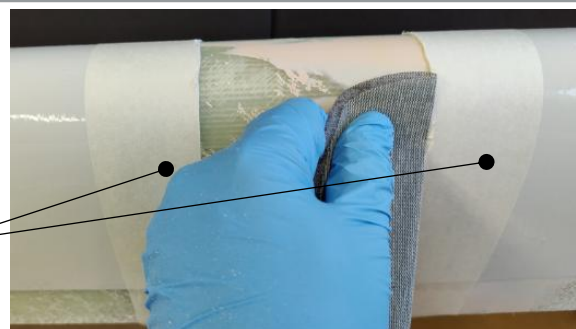
Keep the rubber wheel or disc in motion while using it to avoid heating up the substrate to a level where it will cause damage.

**Step 7**

Remove the accumulated tape material with a chisel.

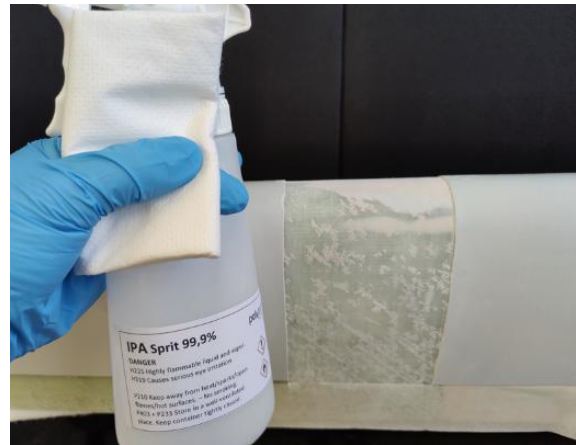
**Step 8**

1. Apply masking tape a few mm from the edge lengthwise along the *ELLE™ Onshore* on both sides and sand the area with 220 to 240 grit sandpaper.
2. Remove the masking tape when task 1 is finished.



Step 9

Clean the area with isopropanol.

**Step 10**

Apply a piece of masking tape across the *ELLE™ Onshore* on each side of the cut-out, 25 +3/-0 mm. from the edge.

**Step 11**

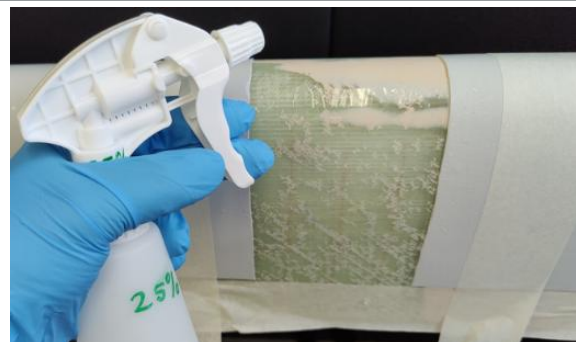
Wipe the area with 3M™ W9910 promoter.



Wait at least 10 minutes but not longer than 120 minutes for the 3M™ W9910 promoter to dry before continuing.

**Step 12**

Spray a mixture of 75% demineralized water and 25% isopropanol on the affected area.



Step 13

Remove the center-liner and apply the repair patch centered to the remaining *ELLE™ Onshore*.

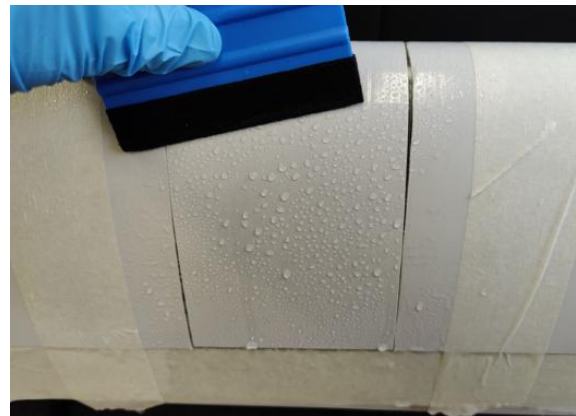
Remove the air and water entrapments using the plastic spatula with felt or the application roller.

**Step 14**

Spray a mixture of 75% demineralized water and 25% isopropanol on the affected area.

**Step 15**

Remove the side-liners and scrape out water and air from underneath the repair patch with the plastic spatula with felt.

**Step 16**

Dry off the remaining application solution and wipe the patch repair area with 3M™ W9910 promoter.



Wait at least 10 minutes but no longer than 120 minutes for the 3M™ W9910 promoter to dry before continuing.



Step 17

Spray a mixture of 75% demineralized water and 25% isopropanol on the affected area.

**Step 18**

Apply the 2 overlap pieces along the masking tape without covering it. Scrape out water and air from underneath the overlap pieces with the plastic spatula with felt.

**Step 19**

Remove the masking tape.



Step 20

After completed application, wait at least 1 hour before putting the wind turbine into operation.

End

4. Technical Support

E-mail

support@polytech.com

Answers will be sent within one working day.

Phone

+45 88 444 500

Available 8:00-17:00 CET.

Please include the following information in your support request:

- Product name.
- Product type.
- Serial number.
- Description of the problem, including detailed, high-resolution pictures.