
Quill Patch Application Guidelines



Quill Patch - Application Guidelines



Do a thorough Internal and External Inspection of Tire. This is to ensure the size of the injury and whether the tire can be repaired. Use proper lighting for inspection.



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Remove the foreign material from the injury using a probe and using an inspection tool, determine the size and angle of the injury.

The size and the angle of the injury is very important to select and do the appropriate repair.

If the angle of injury is more than 25°, then ONLY a '2 Piece Repair' is to be done.



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Use Kwik Klean or any tire pre-buff cleaner or rubber solvents to clean the tire.

While the area is still moist, use a tire scrapper to remove all traces of dirt and silicone tire mold lubricant from the inner-liner area.

This is to be repeated 2 or 3 times to completely remove all traces of mold lubricant for the inner surface of the tire.

If traces of silicone tire mold lubricant is not completely removed, then the repair may fail.



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Use a Low Speed Drill Max 1200 RPM and an appropriate size carbide cutter to prepare the injury.

Drill the injury both from inside and outside. Repeat this for about 3 to 4 times to clear the injury thoroughly.



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Using a relevant template or the Quill as reference, outline the area with a marker.

The marked area should be ¼” or 6 mm wider all around, than the Quill patch size.



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Buff the inner liner with a white Corundum Grinding Wheel or a Cup Rasp of 36 Grit.

Ensure that the bladder impressions are totally buffed off.

The projected plug should be evenly buffed to the level with the buffed inner tire surface.

The buffed texture should be of RMA1 / BT1 (see reference)



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RMA1 / BT1



RMA2 / BT2

RMA1/BT1 : Smooth, velvet- like texture appropriate for inside tire surfaces repairs.

RMA2/BT2 : Smooth, velvet- like texture appropriate for inside tire heat cure repairs and retreading.



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After rasping the area, clean the buffed area thoroughly with a nylon brush or vacuum to remove the dust completely. Do not use compressed air to clean the buffing dust as this may contaminate the rasped area.



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Slightly apply a thin coat of the Fast Dry Cement or CVF in the injury channel using a Spiral Cementing Tool.



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Apply a Single Coat of Fast Dry Cement or CVF in a stippling motion and allow it to dry.

Normal drying time is around 3 to 5 mins or as per the ambient temperature and humidity.



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Remove the Poly film from the base of the Quill, without touching the cushioned surface and place the film as shown in the figure.



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Insert the metal end of the Quill into the injury channel.



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**Start by firmly pushing the end of the quill into the injury channel
The poly film can be removed once the quill is in position.**



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-Grab the metal quill firmly from outside using a pliers and pull the metal quill until the metal cover comes off.

-DO NOT HOLD THE METAL QUILL AT THE TIP WITH THE PLIERS WHILE PULLING IT.



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Once the metal cover comes off grab the rubber stem and pull it uniformly till you get a slight dimple on the dome of the patch.



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**Stitch the patch from the center to either sides vigorously using a serrated hand Stitcher. This is to ensure that there are no air trapped in between the patch and Tire.
Repeat this again in the opposite direction.**



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Cut off the excess Stem on the Outside of the Tire (Leaving around 3mm above the tire surface)



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Apply a coat of Repair Sealer around the patch and entire exposed buffed area.

This will improve the integrity to the inner liner of the tire.



Important Points to be Observed while Repairing Tire :

1. It is important to inspect the tire, both internal and external to determine if the tire can be repaired.
2. Check for run flat or weathering cracks of the Tire. It is not recommended to repair tires with run flat or weathering cracks.
3. See that the repairable injury is **only on the tread area**.
4. Avoid inverting and excessive spreading of the beads in the Radial Tires while inspecting.
5. **If the angle of injury is more than 25°, only a 2 piece repair to be done.**
6. Use only the proper size of carbide cutter to prepare the injuries.
7. While rasping the injury be careful not to buff too deep and expose the tire cords.
8. Mark area to be buffed. The marked area should be larger by ¼" or 6 mm all around the patch.



Important Points to be Observed while Repairing Tire :

- 9. Do not use compressed air to clean the buffed area. Preferably use a vacuum cleaner to clean the buffed area.**
- 10. Use a stippling motion to coat the cement. Do not use compressed air or hair dryer to dry the cement.**
- 11. While drying keep the injury of the tire at 12 o'clock position to avoid any contamination to the repair area.**
- 12. When the patch is applied ensure that the bead is in the normal position (not spread).**
- 13. Ensure that only the bottom of the metal is gripped with the pliers while pulling the quill.**
- 14. Remount the tire and check for leaks before the Tire is put into use.**



THANK YOU



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