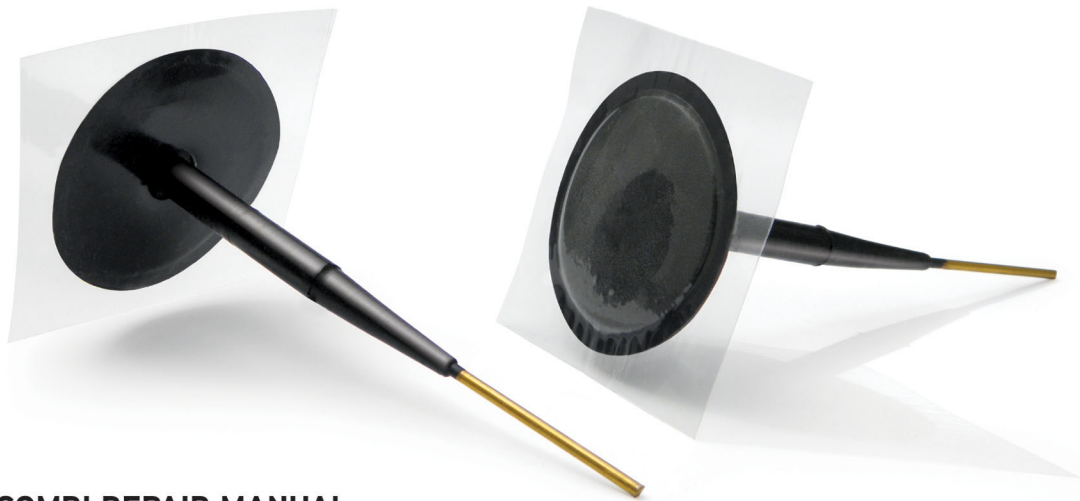


**NEW  
PRODUCT**

## TG-COMBI

**One-piece Combination Repair Unit. Combined plug/patch repair unit for punctures on the tread area of radial and bias tyres.**



### TG-COMBI REPAIR MANUAL

**1 Locate and mark** the injury on the outside of the tyre. Remove the tyre from the wheel. Inspect for non-repairable conditions and repair limits. Mark the injury from the inside. Remove puncturing object. Probe the injury for belt separation. Measure the size of the injury and determine the angle of penetration.

**2 Select the appropriate** TG-COMBI repair unit. Centre the repair unit over the injury and draw a circle 12 mm (1/2") around the outside edge. Apply TG SURFACE CLEANER to the innerliner inside the marked area. Scrape the surface. Repeat process 2 to 3 times.

**3 Using a low speed drill** and the appropriate carbide cutter, ream the injury. Following the angle of penetration, drill 3 times from the inside of the tyre and 3 times from the outside of the tyre. Remove any additional damage.

**4 Buff within the marked area** evenly with a slow speed buffer. Buff to a velvety texture RMA #1 or RMA #2. Remove buffing dust with a vacuum. Clean the buffed area with TG SURFACE CLEANER. Scrape surface.

**5 Dip the spiral insert tool** into TG SPECIAL CEMENT and insert into injury from the inside of the tyre to lubricate the channel. Repeat process 2 to 3 times.

**6 Apply a thin even coat** of TG SPECIAL CEMENT to the buffed area on the innerliner. Allow to dry completely.

**Remove metal foil** of TG-COMBI repair unit. While the cement is still wet in the channel, insert the pilot stem through the injury from the inside. Using pliers, grasp stem behind the wire and pull until the patch is seated firmly against the innerliner and slightly dimples.

**Stitch the patch** vigorously from the centre working outwardly. Remove the clear foil from the patch.

**Apply TG SEL** to the edges of the patch and the over buffed surface.

**Proceed to cut stem off.** Remount the tyre on the wheel and inflate to the recommended pressure. Check for air leaks and perform final visual inspection.

#### WHILE PERFORMING THE REPAIR:

- ▶ **DO NOT use** compressed air to clean bonding surfaces.
- ▶ **DO NOT touch** the cushion gum on the repair unit. Contamination of the cushion gum can result in repair failure.
- ▶ **DO NOT dilute** chemicals.
- ▶ **DO NOT mix** vulcanising chemicals.
- ▶ **DO NOT expose** flammable chemicals to sources of ignition.
- ▶ **DO NOT pull on** the stem while cutting it off.

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**DO NOT repair the tyre if:**

- ▶ The injury is beyond repair limits.
- ▶ Tread depth is less than 1,6 mm (2/32”).
- ▶ There are signs indicating the tyre has run flat, with damage due to significant under inflation and/or over loading.
- ▶ Tyre cord and/or steel belt are exposed.
- ▶ There is evidence of liner separation or flex breaks.
- ▶ There are punctures or damage in the shoulder or sidewall areas.
- ▶ There are signs of bead damage.
- ▶ Axial distance between repairs is less than 12 mm (6”).
- ▶ The wheel/rim is bent, corroded or cracked.

**Always:**

- ▶ Wear appropriate eye goggles or face shields and ear protection when dismounting, repairing, mounting and inflating the tyre.
- ▶ Remove the tyre from the wheel for inspection and repair.
- ▶ Use the proper size carbide cutter according to injury size and repair unit to be used.
- ▶ Fill the injury channel with a rubber stem when installing a repair unit to seal the innerliner.
- ▶ Check repairs already carried out in the tyre for potential failures or defects.

**Note:**  
 Always refer to local, state or national standards since the repair limits and guidelines described by us are based on international standards. Injuries larger than the limits described or injuries with exposed fabric or wire should be referred to a full-service repair facility and be considered for a section repair. Please contact tyre manufacturer for further advice on repair limits, warranty and service description.

**Repair limits:**

- ▶ Repairable area is limited to 80% of the tread width (fig. 1).
- ▶ Injury angle must not exceed 20°. If so, use a 2-piece repair method (fig. 2).
- ▶ Maximum allowable injury size:  
 6 mm (1/4”) for passenger tyres.  
 10 mm (3/8”) for medium and heavy truck tyres.

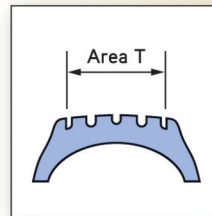


Fig. 1

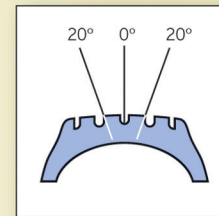






Fig. 2

**REPAIRABLE AREA (T)  
 DEFINED AS % OF NOMINAL SECTION WIDTH OF TYRE.**

	Nominal section width (mm)	
Passenger car	< 155	60 %
	150 - 200	65 %
	> 200	70 %
Commercial vehicle	< 225	60 %
	225 - 305	65 %
	> 305	70 %

REF. NO.	DESCRIPTION	PATCH / STEM DIAMETER	CONTENT
EC 0025	TG-COMBI 3	45 mm / 3 mm	20
EC 0030	TG-COMBI 7	45 mm / 7 mm	40
EC 0035	TG-COMBI 10	45 mm / 10 mm	20

Max. injury Ø		3 mm (1/8")	6 mm (1/4")	10 mm (3/8")	Maximum repairs (*)
Carbide cutter		CC TG-COMBI 3	CC TG-COMBI 7	CC TG-COMBI 10	
Repair unit		<b>TG-COMBI 3</b>	<b>TG-COMBI 7</b>	<b>TG-COMBI 10</b>	
	Speed rating	Up to J	●	●	2
		J-V	●		1
		V			
	Speed rating	Up to -V	●	●	3
		Up to ZR	●		
	Speed rating	Up to -V	●	●	3
		Up to ZR	●		
			●	●	3

(\*) Maximum allowable number of repairs with plug/patch combination repair units per tyre.