

# **SUNSOUL REPAIR MANUAL**

## **Tube & Valve Repair Methods**

USED FOR VARIOUS TYPES OF TUBES FROM BICYCLE TO OTR TIRES

# Tire Inspection & Pre-Cleaning

When repairing inner tubes, always check the entire tube for damage, including the valve for possible leaks. Often, inner tubes will have more than one area with a leak. Severe chafing of the tube against the rim, age cracks, and other damage often render the tube non-repairable. After all injuries have been located, and repair ability has been verified, the repair process should be commenced.

If the injury is a puncture wound (round in shape and small in size), select the proper size SUNSOUL Tube Patch. Install the tube patch in accordance with the instructions included in the repair package.

If the injury is a cut or split-type wound, the ends of the injury should first be button-holed to prevent the continued growth of the wound. This is accomplished by cutting the ends of the split out, creating a rounded end to the split. This can be done with scissors or a hole punch.

Proper sizing of tube repairs is a Tube Patch that will completely cover the injury with at least a 1/2" (12mm) overlap onto the tube in all directions around the injury. Tube Patches should always be centered over the injured area to provide maximum overlap onto the tube in all directions.

## EXAMPLES

1. A puncture injury that is approximately 1/16 inch (1.6mm) in diameter would require the installation of at least a SUNSOUL ST-35 Tube Patch. Larger sizes could be used, as well.
2. A split injury that is 1-3/4 inches (45mm) in length, with button-holed ends at 1/4 inch (6mm) diameter across the ends would require at least a SUNSOUL ST-4680 Tube Patch.



# SUNSOUL 2-WAY Tube Patch-ST



## • Features

- SUNSOUL Tube Repair Patches are designed for use on tubes only.
- Sun soul tube patch made out of a durable,flexible rubber compound capable of repairing injuries on any type of tube.
- Sun soul 2-Way repair are permanent,safe and the repair is twice as strong as the tube itself.
- Sun soul black cushion gum allows the repair to be vulcanized hot or cold.

| SUNSOUL code | Remarks               | Size    | pcs/box    | box/ctn |
|--------------|-----------------------|---------|------------|---------|
| ST-35        | Round type,Black edge | 35mm    | 250pcs/box | 48      |
| ST-43        | Round type,Black edge | 43mm    | 120pcs/box | 48      |
| ST-57        | Round type,Black edge | 57mm    | 80pcs/box  | 48      |
| ST-79        | Round type,Black edge | 79mm    | 40pcs/box  | 48      |
| ST-3757      | Oval type,Black edge  | 37*57mm | 120pcs/box | 48      |
| ST-4680      | Oval type,Black edge  | 46*80mm | 80pcs/box  | 48      |

## SUNSOUL Tube Valve Patch



| TRA No.     | Erto No. | Ref.Length(mm) | A(mm) | Core Housing | Lock Nut       |
|-------------|----------|----------------|-------|--------------|----------------|
| TR13-cold   | /        | /              | 56    | /            | VC8            |
| TR15-cold   | /        | /              | 56    | /            | VC8            |
| TR218A-cold | V4.01.1  | /              | 75    | TRCH3        | LN10 or Ln10EQ |

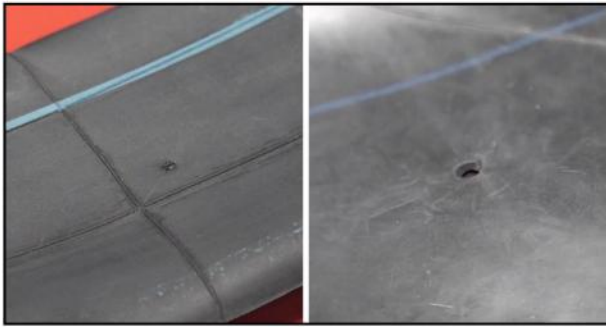


# List of 2-WAY Tube Patch Repair Materials

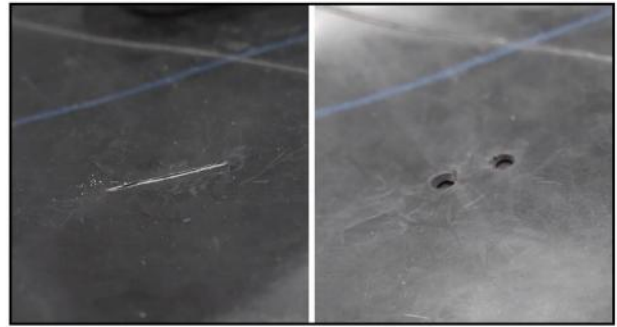


| Number | Product Name                       | Model         |
|--------|------------------------------------|---------------|
| 1      | Tire Nail Removal                  | NT-240        |
| 2      | Inner Liner Scraper                | ABT-14B       |
| 3      | Wood Handle Stitcher               | T-15-4        |
| 4      | Steel Wire Brush                   | SWR-001       |
| 5      | Injury Checking Tool               | TRT08A        |
| 6      | Straight Handle Stickle Back Probe | TRT04-1B      |
| 7      | T-Handle Knurled Probe             | TRT10-2F      |
| 8      | Tire Crayon                        | TC-12Y/TC-12W |
| 9      | 2-WAY Tube Patch                   | ST-43 Series  |
| 10     | Gloves                             | SSNPG-02      |
| 11     | Rubber Cement                      | PRO-250       |
| 12     | Inner Liner Sealer                 | ILS-500       |
| 13     | Liquid Tire Buff and Cleaner       | LRC-946       |
| 14     | Safety Glasses                     | SG-01         |
| 15     | Spray Rubber Buff Cleaner          | SRC-450       |
| 16     | Air Vacuum                         | FVG-300P      |
| 17     | Wire Brushes                       | SSS-1083      |
| 18     | Buffing Wheel                      | SSCB-1054     |
| 19     | Air Buffer                         | AT-7033       |

# Tube Inspection



- 1-1** Inspect the tube and locate the injury. If the injury is a puncture wound (round in shape and small in size), select the ST-35 round series 2-WAY Tube Patch.



- 1-2** Inspect the tube and locate the injury. If the injury is a cut or split type, the ends of the injury must be button holed (rounded) in order to prevent injury growth. Select the ST-3757/4680 oval 2-WAY Tube Patch.



- 2** Pre-clean inner liner with Pre-Buff rubber cleaner. Use lint-free cloth to remove contaminants.



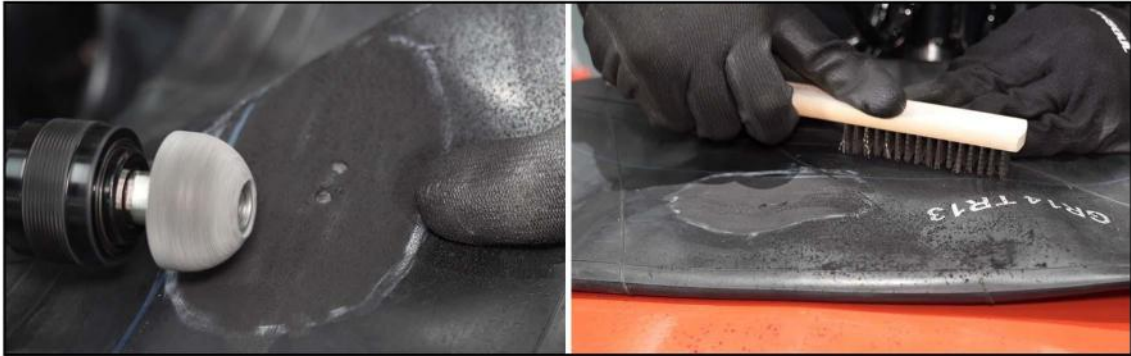
- 3** Mark the area according to the size of the patch by Tire Crayon. The marked area should be larger than the patch, at least 3mm.



## SUNSOUL TIP:

**Prepare the injured area** if it is a cut or slit must be buttonholed in the same line and closed to the injury in order to prevent injury growth.

# Buffing & Cement Application



- 4** Lightly buff the repair area using a low-speed buffer (max.2500 RPM) with a buffing rasp,18 to 36 grit. Use a steel wire brush to remove buffing dust and debris from the buffed area.



- 5** Apply Rubber Cement PRO-250 to the buffed surface.Allow to dry 1-3minutes.Allow additional drying time in cold or humid conditions.



Pls always choose sunsoul rubber cement PRO-250 series



## SUNSOUL TIP:

- Do not use a compressed air line to clean the buffed area, as contamination from moisture and oil will occur.
- When cleaning the tire, care should be taken to not let anything touch the buffed surface.
- Always use SUNSOUL #SWR-001 wire brush to remove buffing dust and debris which should be applied before use air vacuum.
- Do not use any outside heat sources or open flame to shorten the drying time of vulcanizing fluid. This will adversely affect the vulcanizing fluid and potentially lead to premature repair failure.



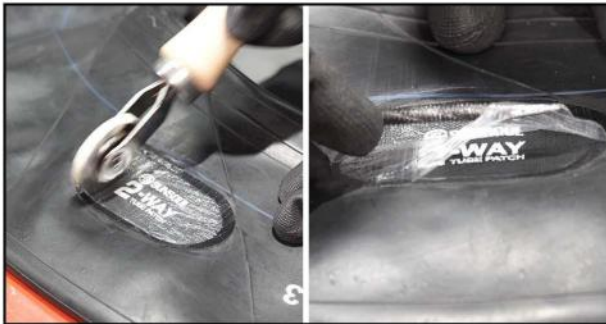
# Roller Compaction & Sealing



- 6** Remove the protective red poly from the back of the patch, exposing only the middle portion of the patch. Center the patch over the injury. Press down the center with your thumb.



- 7** Stitch patch down from the center out. Remove the poly film from the under cap.



- 8** Continue stitching toward the edges of the patch till press completely. Remove clear poly from the repair.



- 9** Apply white powder to the patch. Avoid adhesion between the tire tread and inner liner. Inflate the tube and to check initial adhesion.



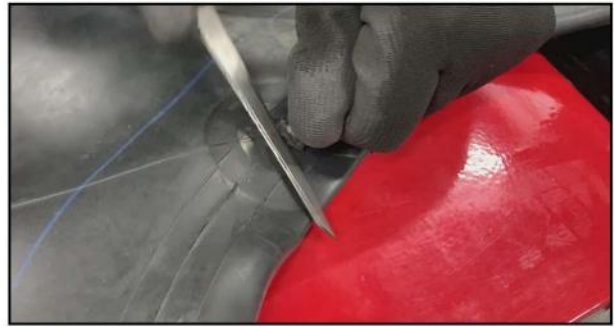
## SUNSOUL TIP:

**White powder** are designed to avoid adhesion between the tire tread and inner liner.  
**Warranty** of 2-WAY Tube Patch is 30 months and storage in room temperature 15-26°C.

# Tube Valve Inspection & Position



- 1** Inspect the tube and locate the injury.



- 2** Cut away the old valve stem.



- 3** Prepare the area to receive the appropriate SUNSOUL tube repair unit according to the Tube Repair section of this manual.



- 4** Move at least 1/4 of the way around the tube and punch out a new hole for the replacement valve.



## **SUNSOUL TIP:**

Pls use sunsoul professional Skiving Knife #RTK50-1 to cut away the valve stem.  
After remove off the old valve and need repair unit according to the Tube Repair section.  
Locate and drill a new hole at another location at the same latitude.



# Tube Valve Pre-Cleaning



- 5** Pre-clean a large area on the tube using Pre-Buff Cleaner SRC-450 or LRC-946 and a clean, lint-free cloth.



- 6** Mark a perimeter approximately 1/2" (13mm) larger than the replacement valve as a guide for buffing. If necessary, also draw a guide line on the tube in the same direction as the original valve stem for proper alignment of the stem through the rim opening.



## **SUNSOUL TIP:**

**SUNSOUL Tire Valve Patches** are slightly larger than the prepared injury, resulting in a compression fit with excellent adhesion. Placing a small amount of vulcanizing fluid on the stem just before inserting it into the tire injury provides lubrication for easier installation.

# Buffing & Cement Application



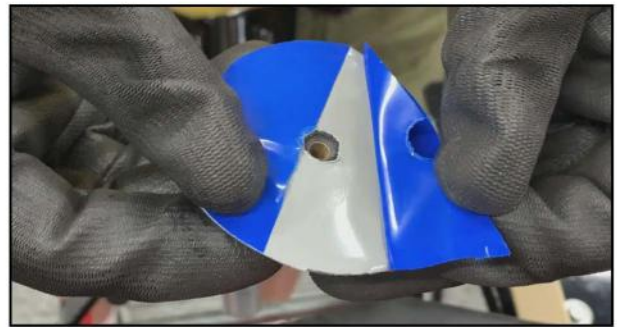
- 7** Using a fine grit buffing wheel on a low speed buffer (2500 RPM Max.), lightly buff staying with in the marked area. A hand buffer or wire brush may also be used if a pneumatic buffer is unavailable.



- 8** Use a wire brush or clean lint-free cloth to remove loose debris from the buffed surface.



- 9** Apply sunsoul PRO-250 rubber cement. Allow 1-3 minutes to dry. Additional drying time may be necessary in cold or humid conditions.



- 10** Fold back the replacement valve and peel back the blue poly backing, exposing the center portion of the cushion gum. Leave the blue cushion gum partially on the repair unit in order to handle the repair without contaminating the gray cushion gum.



- 11** Use a blunt object to align the valve opening with the hole in the tube. Be sure that the guide lines on the tube and the replacement spud are aligned.



Pls always choose sunsoul rubber cement PRO-250 series



## SUNSOUL TIP:

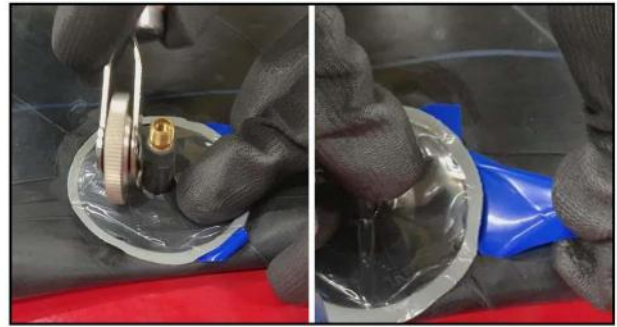
- Do not use a compressed air line to clean the buffed area, as contamination from moisture and oil will occur.
- When cleaning the tire, care should be taken to not let anything touch the buffed surface.
- Always use SUNSOUL #SWR-001 wire brush to remove buffing dust and debris which should be applied before use air vacuum.
- Do not use any outside heat sources or open flame to shorten the drying time of vulcanizing fluid. This will adversely affect the vulcanizing fluid and potentially lead to premature repair failure.



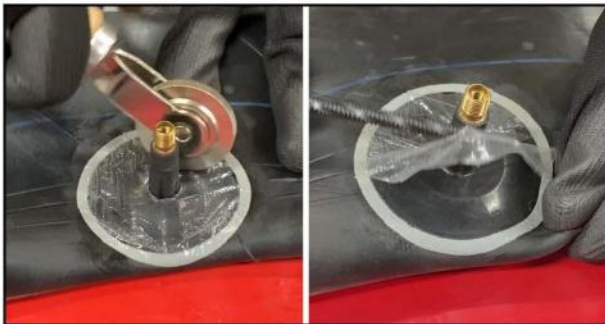
# Roller Compaction & Sealing



**12** Press the unit into place.



**13** Stitch thoroughly from the center out. Remove the remaining blue poly.



**14** Continue stitching out to the edges. Remove the clear protective poly from the unit.



**15** Apply White powder to the replacement valve. This will prevent the gray cushion gum from adhering to the tire. The tube is now ready to be returned to service.



## **SUNSOUL TIP:**

**White powder** are designed to avoid adhesion between the tire tread and inner liner.

**Warranty** of Tire Valve Patches is 30 months and storage in room temperature 15-26°C.





**Focus on Tire Repair, Tire Retreading and Car workshop 20+ Years**

Sunsoul export our products to more than 60+ countries

Our complete line of Tube Patch  
all have a specific advantage.  
Watch this quick video to learn more!



Snap for video



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