TECH Tire Repairs

Repair Manual RM-10

Centech Crown Section Repair Manual

CENTECH®

Radial Repairs

CENTECH is the most advanced radial tire repair system ever developed.

Crown, shoulder or sidewall injuries in passenger, truck, agricultural and earthmover tires can be repaired successfully with Centech center over injury radial repairs. Special compounding and design allow the repair unit to flex and resist heat, assuring a permanent repair.

CENTECH repair units last the life of the tire, saving thousands of dollars per year in new tire purchases.

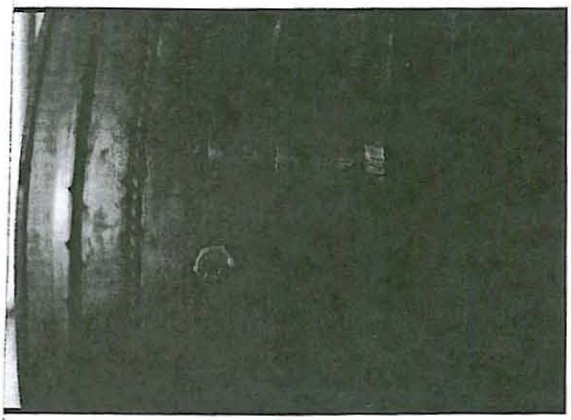
SECTION REPAIR OF A RADIAL TRUCK TIRE WITH A CROWN INJURY

The following is the repair procedure for damage to the crown area in a steel constructed radial truck tire. The procedures shown are for both spotter cure and through the retread process or section mold. When the section is cured with a spotter, the skive fill rubber is applied chemically. When curing through the retread process or with a section mold the repair is cured with the skive fill rubber.

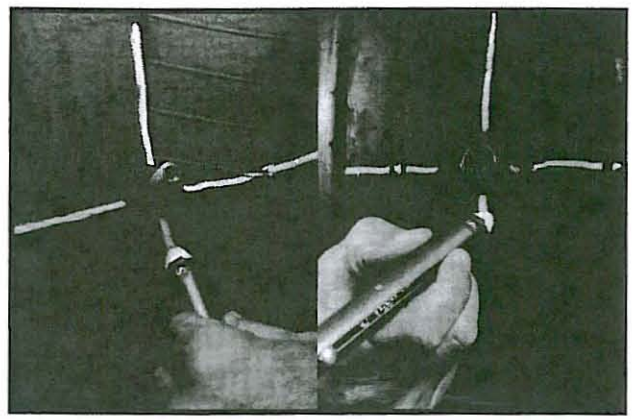
CENTECH low temperature repair units can be used chemically or in heat cure systems such as section molds or through the retread process.

TRUCK

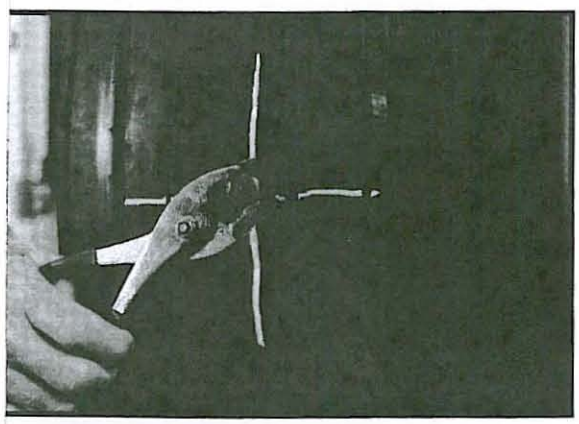
Cat. No.	Description	Box Qty.	Dimensions (Inches)	Dimension (mm)
170	CT-20	10	3 X 5	75 X 125
172	CT-22	10	3 X 6 1/2	75 X 165
174	CT-24	10	3 X 8 1/2	75 X 215
176	CT-26	10	3 X 10	75 X 250
177	CT-33	10	4 X 5	100 X 125
178	CT-35	10	5 X 6	125 X 150
179	CT-37	05	5 X 6 3/4	125 X 170
180	CT-40	10	4 X 8	100 X 200
182	CT-42	05	5 X 10	125 X 250
184	CT-44	05	5 X 13	125 X 325



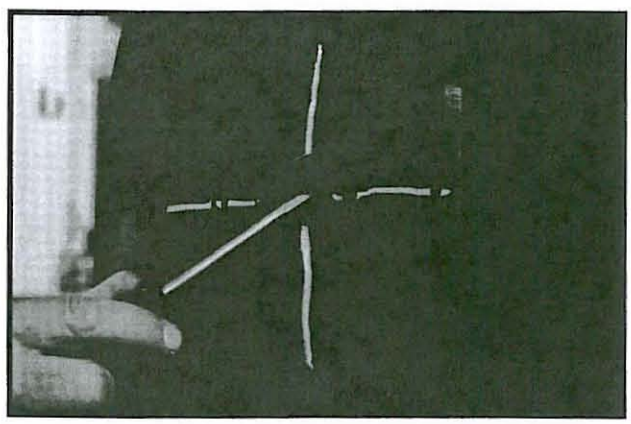
The first step to assure a permanent tire repair is a thorough inspection. Reject the tire if it shows signs of run flat or under-inflation, casing separations beyond repairable limits, bead wires that are exposed, deformed or broken, sidewall or tread ng that is deeper than 3/32" (2.5mm), and weather checking that is than 3/32" (2.5mm) or begins to form continuous lines.



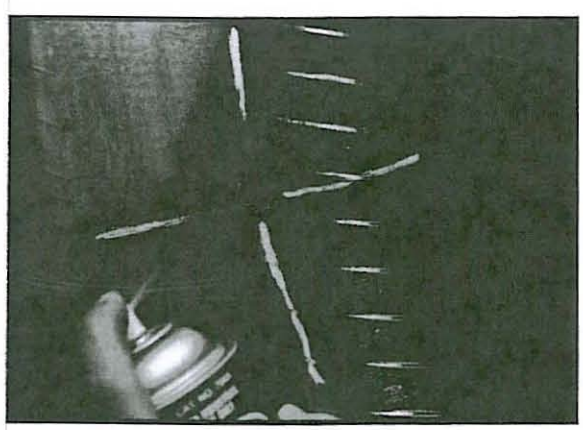
2 During the inspection process locate and mark all injuries using long index lines at right angles to the injury. This will aid in centering the curing equipment and the repair unit. Mark all injuries both inside and outside of the tire.



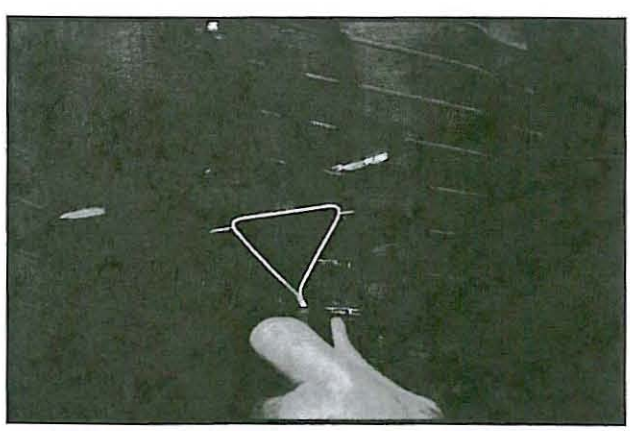
Any injuring objects, such as nails and bolts, must be removed.



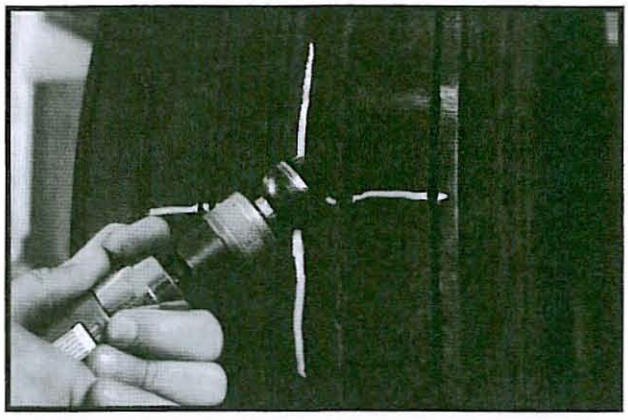
4 Check for possible ply separation and extent of damage using a Tech blunt probe inside the tire. Be sure to check for separation outside the tire as well.



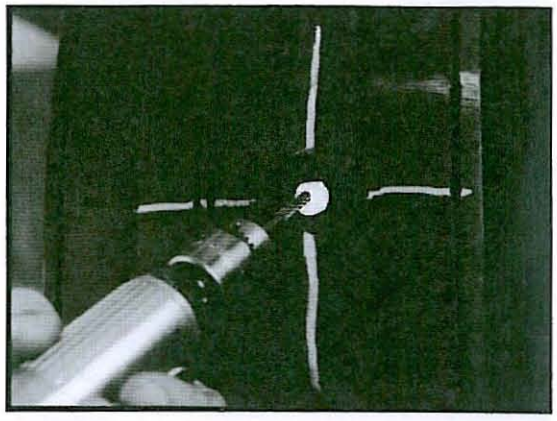
Pre-clean a large area of the inner liner around the injury by applying #704A Rub-O-Matic to the inner liner.



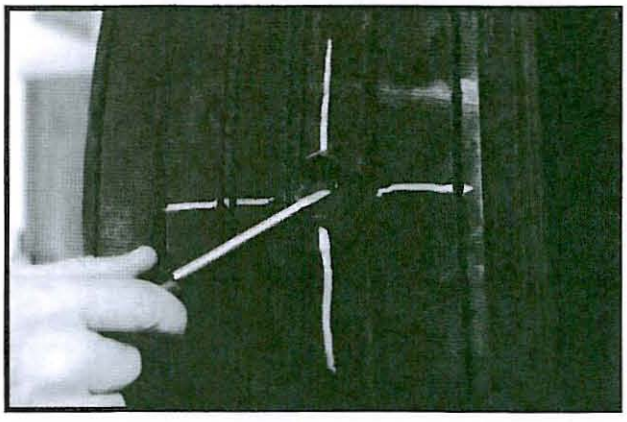
6 While the area is still moist, use a Tech #933 scraper to remove contamination from the inner liner. This process should be repeated 2 or 3 times to assure that all contamination has been removed.



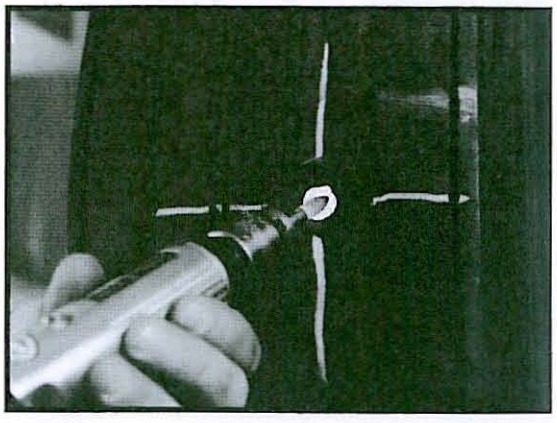
7 Using a rotary gouge on the Tech Low RPM Air Buffer (max. 5,000 r.p.m.), remove the surface rubber around the injury at a 45° angle to just above the steel belts. Tungsten Carbide Rasps can also be used to effectively remove surface rubber. ALWAYS WEAR EYE PROTECTION.



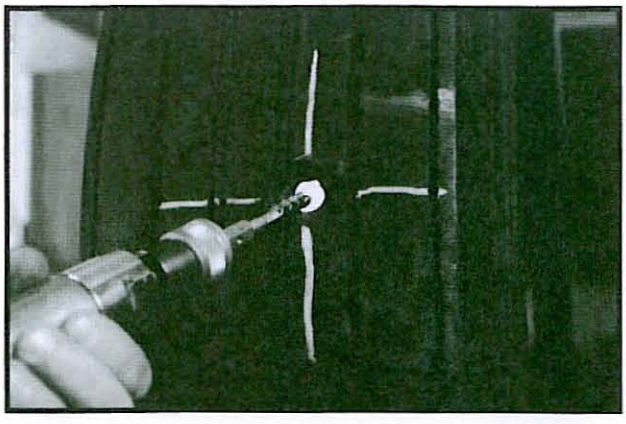
8 Using the proper size carbide burr, for this repair a #28 a Tech #S1039 High RPM Air Buffer (min. 20,000 r.p.m skive the damage area of the belts at a 90° angle. Steel must be cut back to good solid rubber.



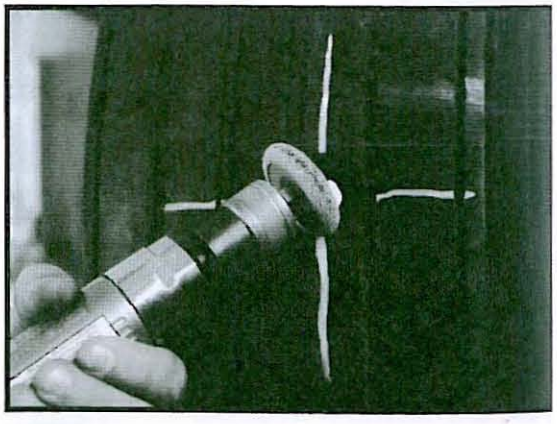
9 Using a blunt point probe, check to make sure all separation has been removed.



10 Using the Tech Aluminum Oxide Stone #S872 on the Hi RPM #S1039 Air Buffer, dress any frayed steel cables d good solid rubber being careful not to scorch the rubbe

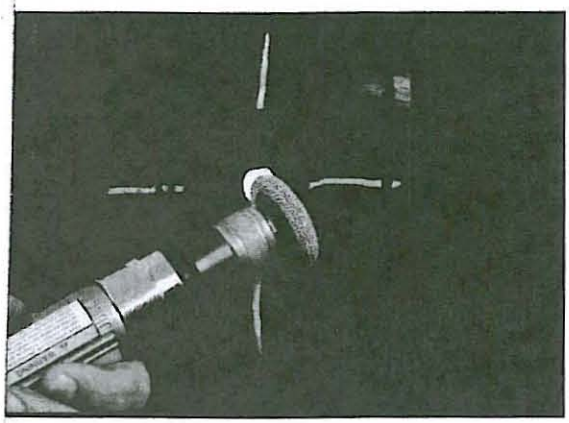


11 Attach the #S896 Skive Brush to the Low RPM Air Buffer and lightly buff the 90° angled skive area to ensure good surface preparation.

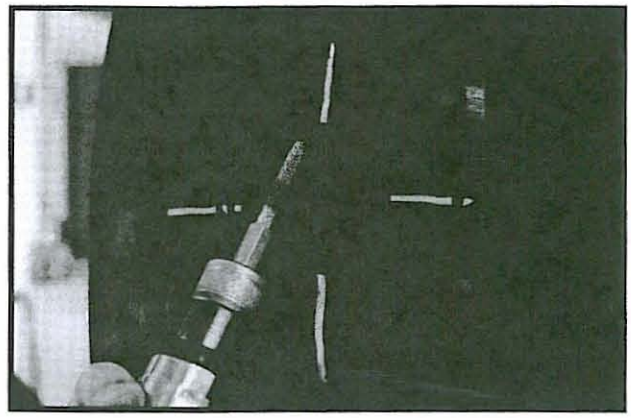


12 Next, with the appropriate size coarse grit round faced a Low R.P.M. Air Buffer, remove any excess rubber and rubber from the 45° area of the skive. If necessary, foll with the medium rasp or equivalent to prepare the 45° the skive to an RMA #3 buffed texture.

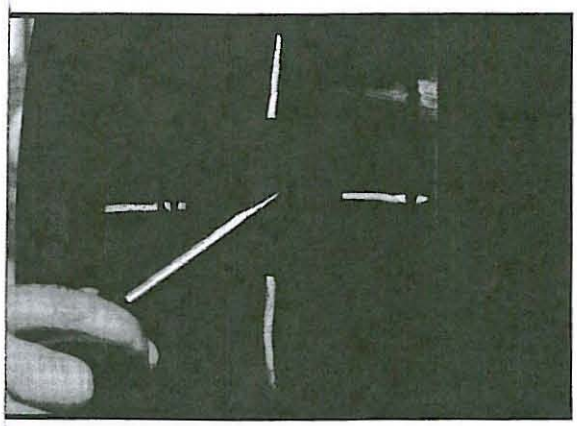
WARNING: Always wear eye protection when grinding or buffing!



Continuing with the same rasp or inner liner wheel, overbuff around the exterior of the skive by at least 1"or 25mm.

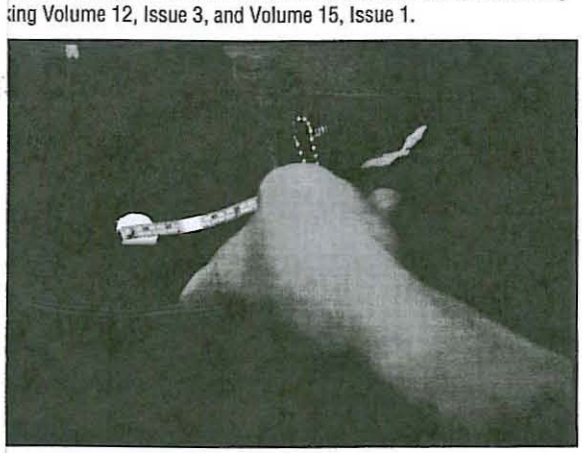


14 Use a pencil rasp on a low rpm buffer to texturize the tread grooves leading into the skive area. This process insures good adhesion of the fill rubber to the tire.

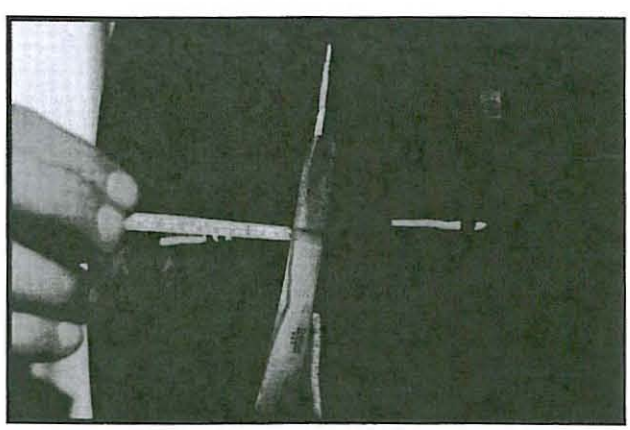


Inspect the injury with a blunt point probe to assure there is no remaining damage or separation.
NOTE: Splits between cables or loose cables must be removed. Body cable removal should be done by skiving from inside of e. If removing cables from the inside of the tire, refer to Technically iding Volume 12, Issue 3, and Volume 15, Issue 1.

16 Buff around the perimeter of the skive on the inner liner of the tire using a medium grit rasp on a Low R.P.M. Air Buffer.

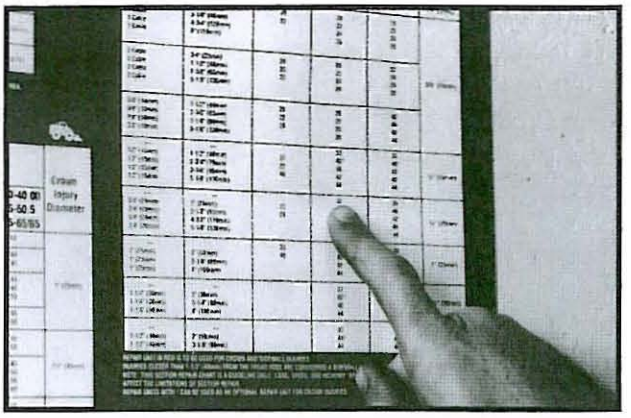


For repair unit selection, measure the longest diameter of the injury, in this case 3/4" (20mm). Write the measurement on the tire or a note pad for future reference.



18 Measure the total depth of the skive for future cure time reference, here, 1 inch or 25 mm. Also, write this measurement on the tire or note pad.

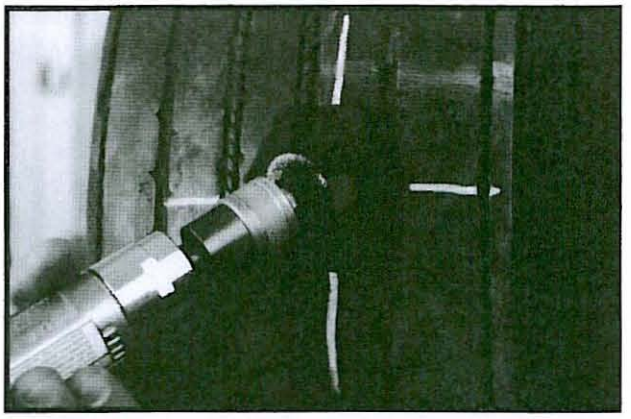
WARNING: Always wear eye protection when grinding or buffing!



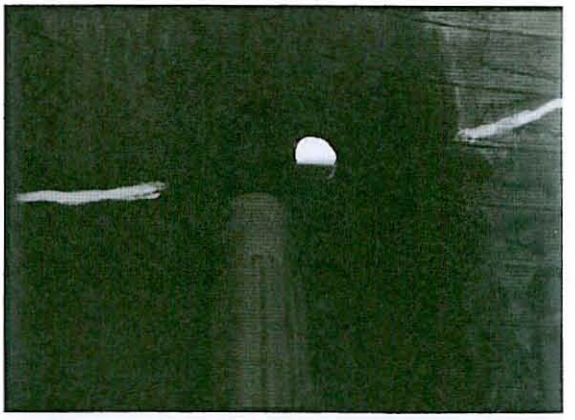
19 Now refer to the Centech radial repair chart to determine the proper size repair unit. The tire size is 285/75 R 24.5, with a crown injury that is 3/4"(20mm). Refer to the radial repair crown section area of the chart. The red number indicates that the proper Centech repair unit for this crown injury is the CT33.

For chamber or section mold cure procedur refer to steps #58 through #85 for repair ur installation, filling and curing.

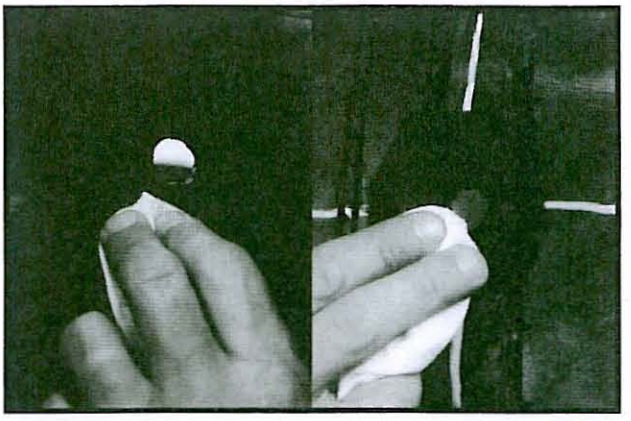
20



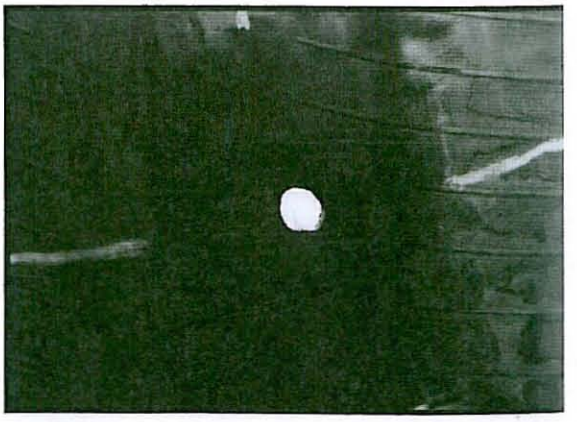
21 Clean the complete skived area and buffed perimeter on the inner liner with a soft wire brush mounted on a low rpm air buffer. The rotation of the brush makes it necessary to buff from the right side of the prepared surface to the left.



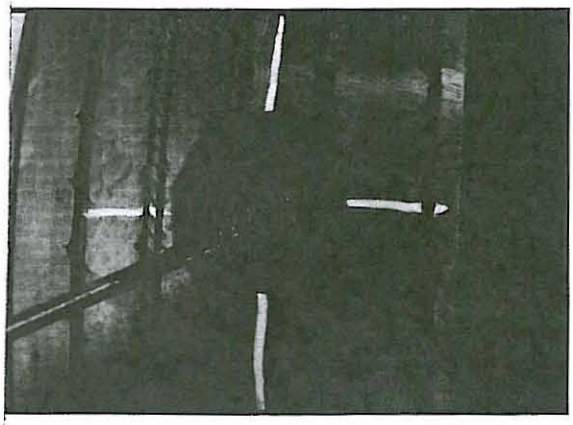
22 Vacuum all buffing debris from the inside and outside o tire. Do not touch the buffed surfaces with the vacuum l



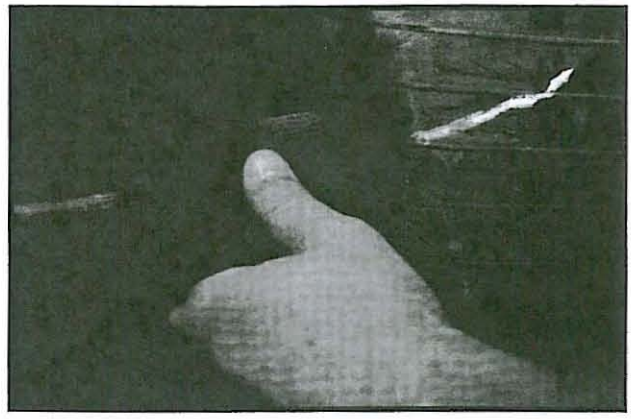
23 An optional cleaning method is to use Rub-O-Matic #704 and a clean lint-free cloth. Clean both the inside and the outside of the tire. Allow three to five minutes for the Rub-O-Matic to completely dry. If the weather is humid, additional drying time is necessary.



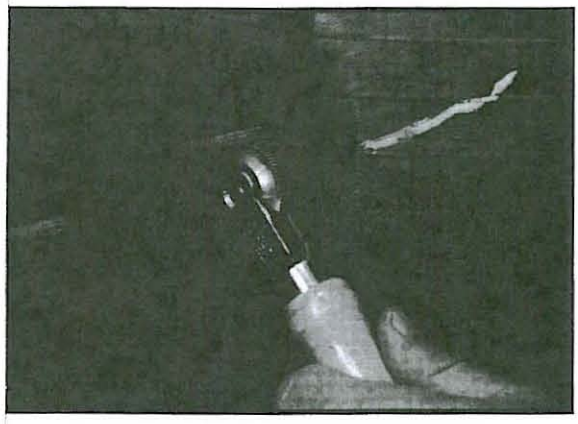
24 Cement the buffed area of the inner liner with Temvulc B Vulcanizing Cement #1082.



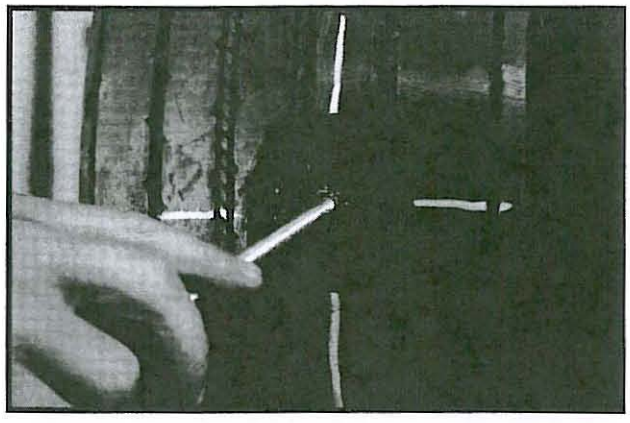
5 Cement the skive area with Temvulc. Allow approximately fifteen minutes drying time. Allow for additional drying time if the weather is humid.
The skive area of a radial steel constructed tire should never be vented as moisture could be absorbed by the vent strings allowing steel cables to rust.



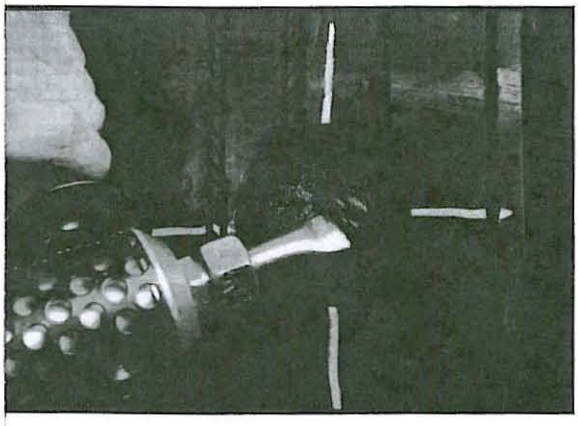
26 Center and apply a piece of Vul-gum approximately 1" (25mm) larger than the skive opening on the inner liner of the tire.



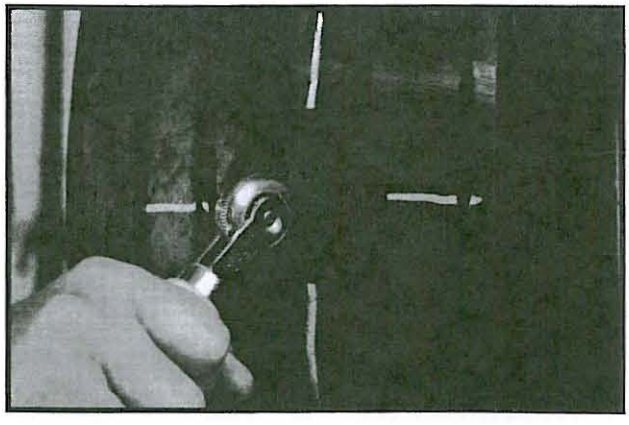
7 Then stitch the Vul-gum to the liner with a #936 Stitcher.



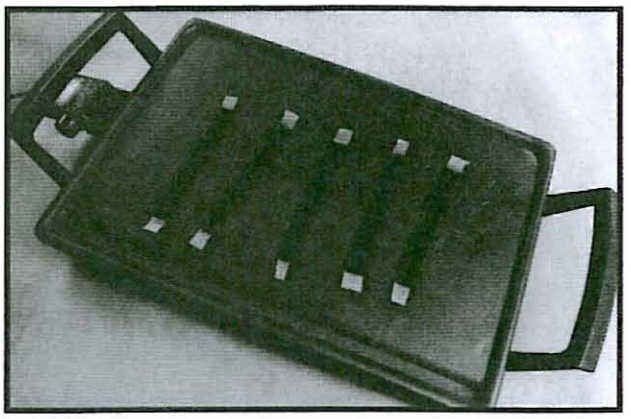
28 Use a pre-heated #S182 Extruder Gun with Tech rope rubber to begin filling the injury. Use a blunt packing tool to firmly press the rope rubber into the skive cavity as compactly as possible to assure that no air is trapped.



9 Using the extruder apply another layer of rope rubber.



30 Then stitch the rope rubber to assure that no air has been trapped. Fill the skive to approximately 1/8" or 3mm above the tire's surface to maintain pressure during the curing process.

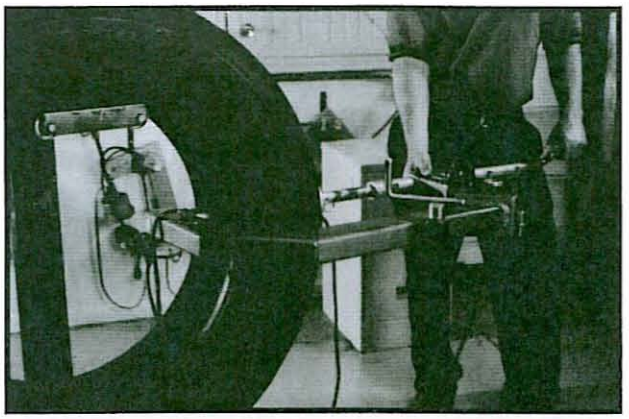


31 If using Vul-gum to fill the injury, cut enough strips of Vul-gum to fill the skive. Pre-heat the Vul-gum to approximately 120° to 130°F or 49° to 55°C on a warming tray or other warming device where temperature can be controlled.
Care should be taken not to overheat since scorching of the Vul-gum can occur.

EXAMPLE

Platform	=1/8" 3mm
Section Depth	=1" 25mm
Overbuild	=1/8" 3mm
Total Rope Rubber	=1 1/4" 31mm
1 1/4	=10/8"
10 x 6	=60 minutes

33 If using #FRR38 rope rubber for filling the skive, the cure rate is 6 minutes of cure time for every 1/8" or 3mm when cured at 300°F or 149°C. Here we see 10/8"or 31mm equals 60 minutes of cure time. If a cold spotter is used, add an additional twenty minutes to the cure time to allow for spotter warm-up.

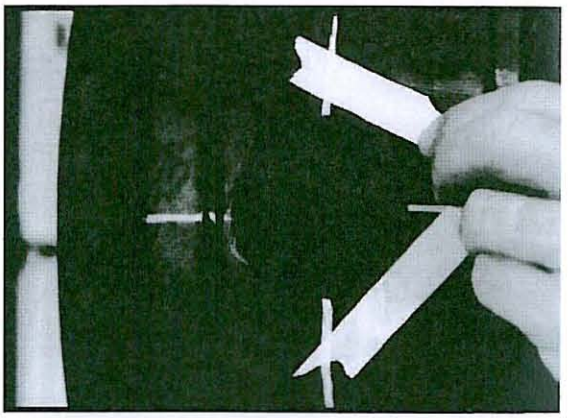


35 The next step in the repair process is to use the spotter to vulcanize the fill rubber. Select the proper size and shaped contour plates. It is important to mark the cure time on the exterior of the tire. Position the spotter's heating units directly over the skive area using the index lines placed at right angles.

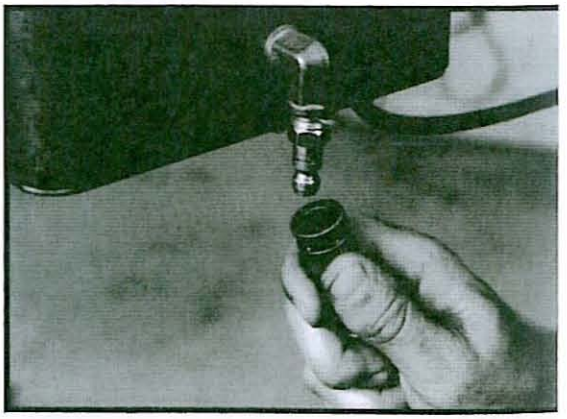
EXAMPLE

Platform	=1/8" 3mm
Section Depth	=1" 25mm
Overbuild	=1/8" 3mm
Total Vul-Gum	=1/8" 3mm
1 1/4	=10/8"
10 x 10	=100 minutes

32 The previous measurement from the skive depth plus the build of rubber and platform thickness will determine the proper curing time. Above shows the total dimension for t repair is 1 1/4" or 31mm. For every 1/8" or 3mm of thickn Vul-gum requires 10 minutes of cure time when cured at 300°F or 14 Celsius. Here we see 10/8" or 31mm equals 100 minutes of cure tim

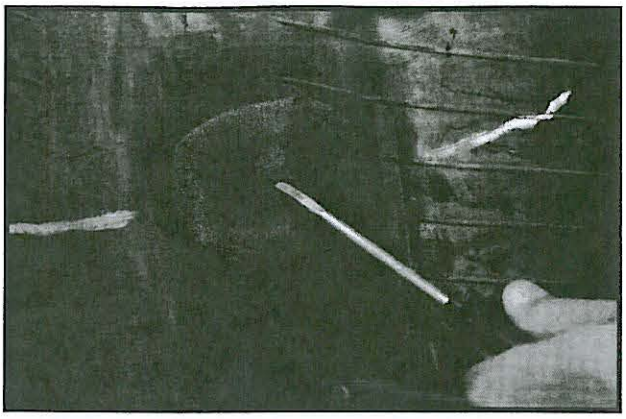


34 Using materials such as pieces of regrooved rubber, dan tread grooves to prevent the flow of fill rubber into the tr grooves. Apply masking tape to hold the rubber in place this process is not followed, the Rope Rubber or Vul-gu flow away from the skive leaving a cured, concave rubbe with porosity.

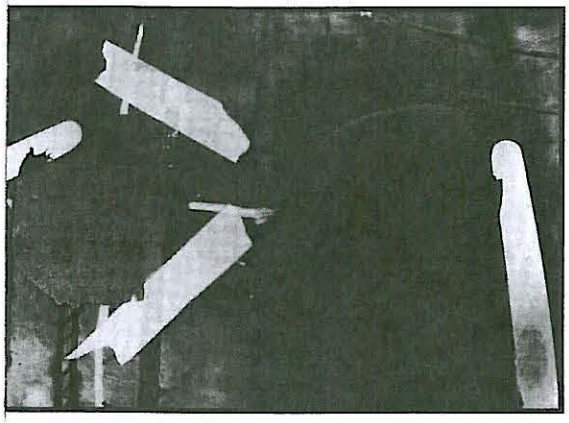


36 Check to make sure the heating units are plugged in and connect the airline to 30 to 35 psi.
When using a manual spotter it is necessary to retighter spotter after 10 minutes of curing.

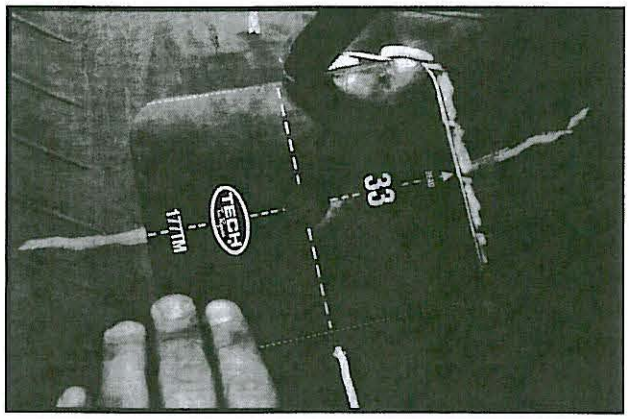
7 After the allotted cure time, remove the spotter by releasing the air pressure and loosening the hand wheel.



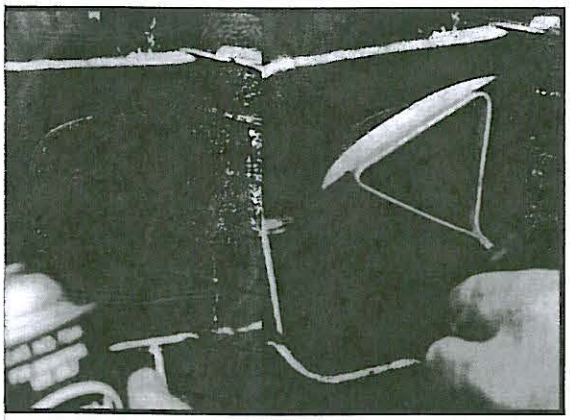
38 Inspect the repair both outside and inside for the proper vulcanization. Allow the tire to cool to room temperature before buffing the repair area.



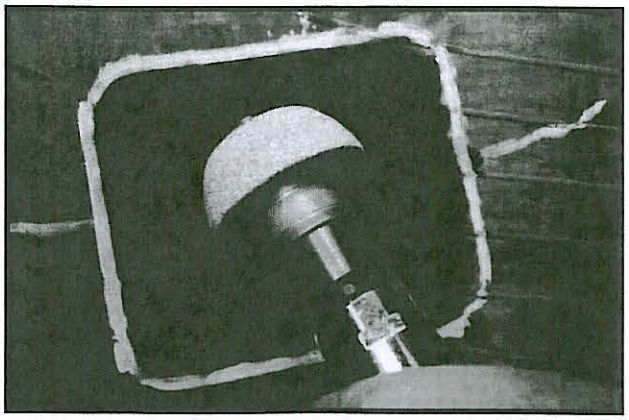
9 Cut-away any excess flash from the exterior and the interior repair area using a #942 Flex Knife.



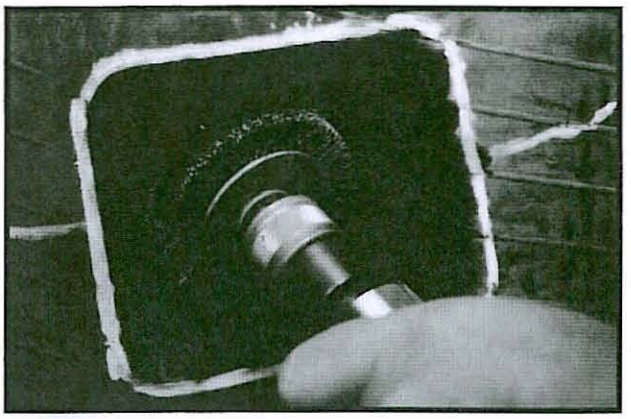
40 Place the predetermined Centech repair template directly over the cured plug and mark a perimeter around the template. This will mark the proper size area for buffing.



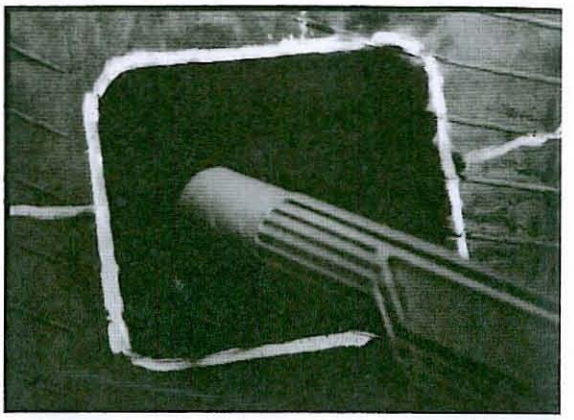
1 Pre-clean the area with Rub-O-Matic #704A Aerosol and #933 scraper. This process prevents contamination of the buffing wheel with lubricants. A clean lint-free cloth and Rub-O-Matic #704 can also be used.



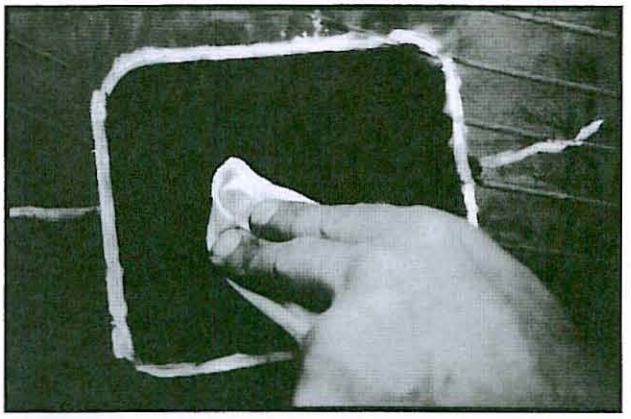
42 Now use a Low RPM Air Buffer and inner liner buffing wheel to buff within the marked area and to texture the surface. When completed, an even, RMA #1 or RMA #2 buffed texture should be obtained.



43 Clean the repair area with a Low RPM Air Buffer and a soft wire brush. Due to the rotation of the buffer it is necessary to move the brush from the right side of the buffed surface to the left side. This will push all buffing dust to the edge of the repair area. To assure a thoroughly clean surface, repeat this process.

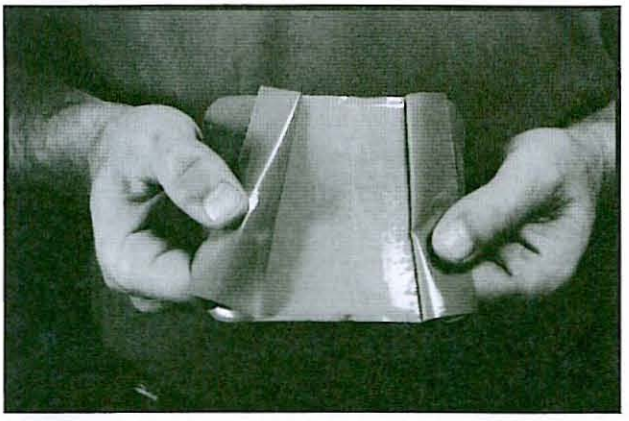


44 The area should then be vacuumed. Avoid touching the b surface with the vacuum, this could lead to contaminatio **NOT** use an air hose to clean the area. Air hoses contain oil and water that will contaminate the repair area.

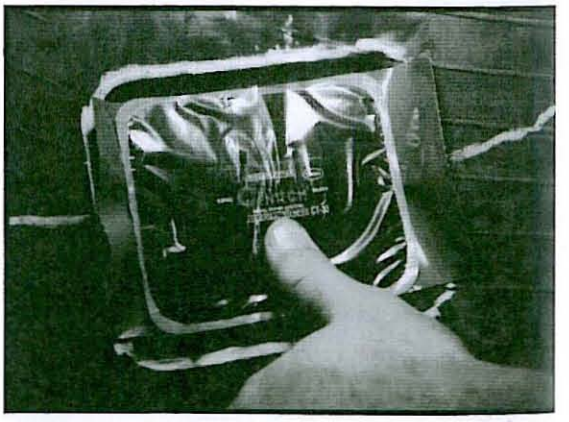


45 An optional cleaning method is the use of #704 Rub-O-Matic and a clean, lint-free cloth. When finished, allow the area to dry completely, normally 3 to 5 minutes. If the weather is humid, additional drying time is necessary.

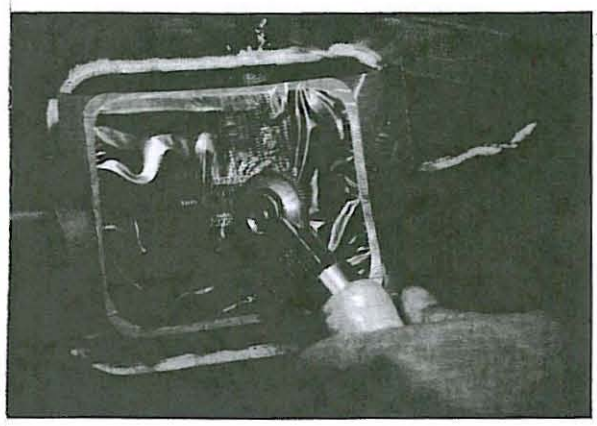
46 Apply a thin even coat of #760 Chemical Vulcanizing Flui the buffed area. To avoid contamination, do not go beyo cleaned, buffed area. Allow three to five minutes for the vulcanizing fluid to dry, more time is required if humid. Note: the back of the repair can also be cemented to increase adhesion minimum of five minutes drying when cementing the back of the repai



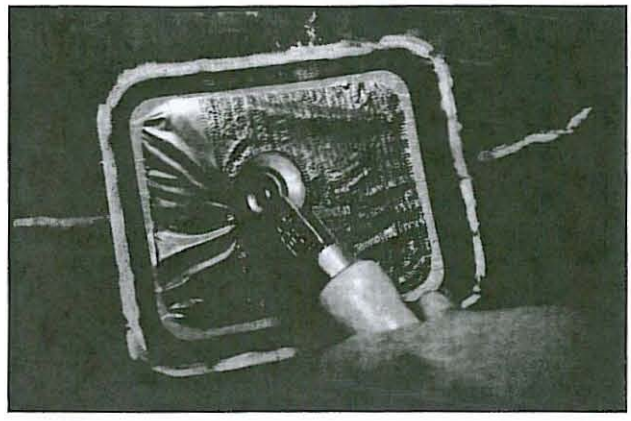
47 Break the perforation of the blue poly backing on the repair unit. Peel the blue poly approximately half way back. To avoid contamination, be careful not to touch the gray cushion gum.



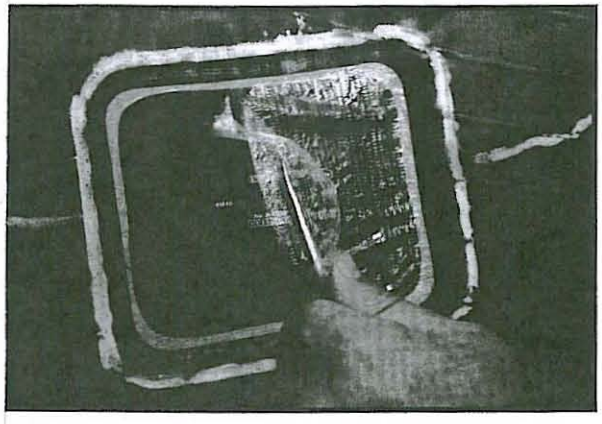
48 Make sure the beads of the tire are in a relaxed position, before the repair unit is installed. Center the repair unit directly over the injury on the prepared area. Align the Centech repair unit with the bead arrows pointing towar beads of the tire. Make sure the center of the repair touc tire first, thumb down the center.



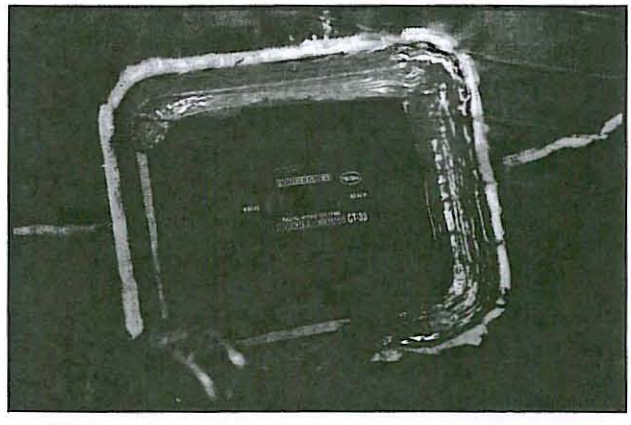
49 Stitch the repair unit from the center outward. Apply firm pressure to the stitcher to assure maximum adhesion.



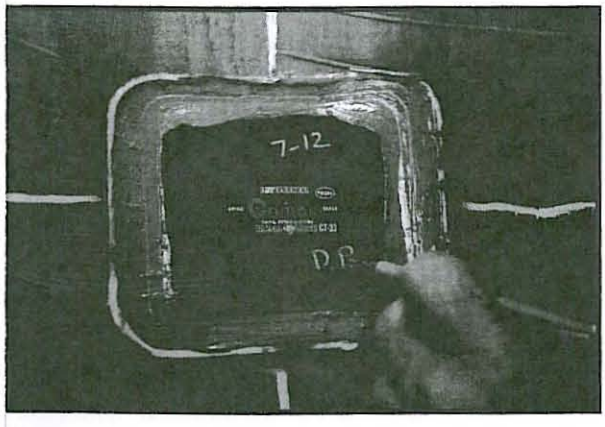
50 Remove the remainder of the blue poly, then thumb, and stitch from the center out.



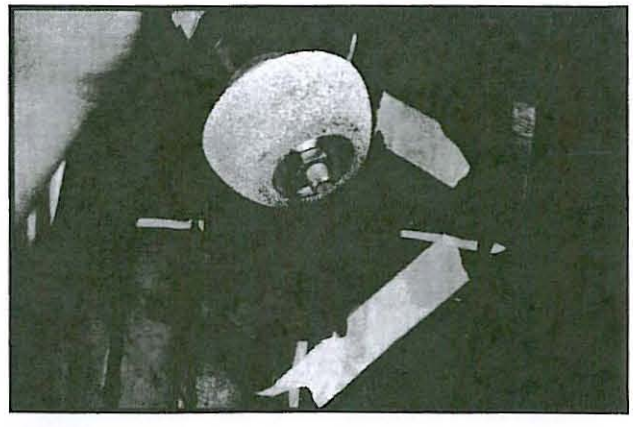
51 Remove the clear poly from the top of the Centech repair unit.



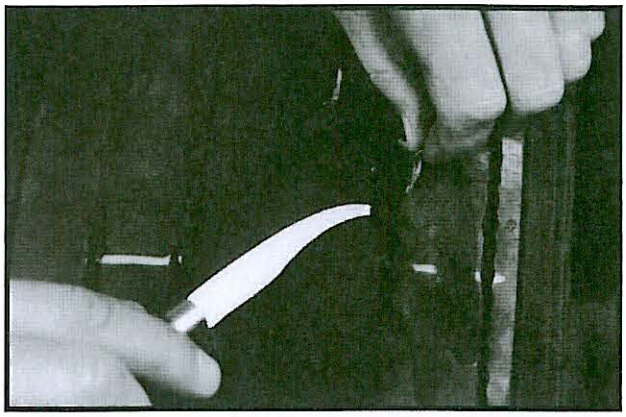
52 When repairing a tubeless tire, as in this case, apply #738 Security Coat around the edge of the repair unit to ensure good air retention of the over-buffed area.
NOTE: When repairing tube type tires apply Tire Talc to the edges of the repair to prevent it from sticking to the tube.



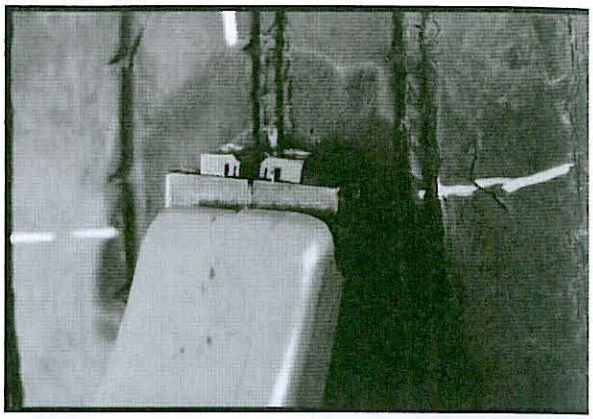
53 Mark the date and initial the repair unit to assure that proper records are kept on all tires.



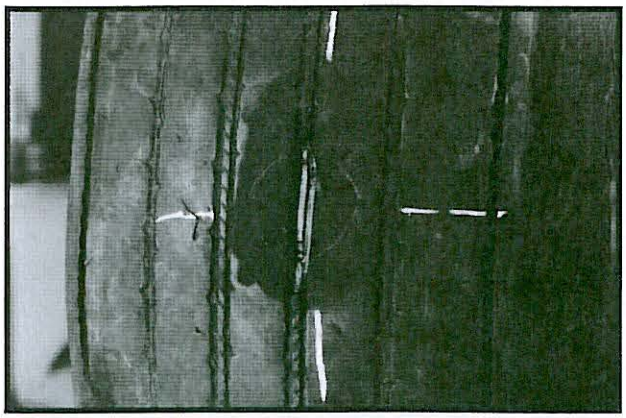
54 Buff down the skive with the Low RPM Air Buffer and buffing wheel, making sure the wheel is turning away from the center of the skive. This prevents the buffing wheel from raising the edge of the skive.



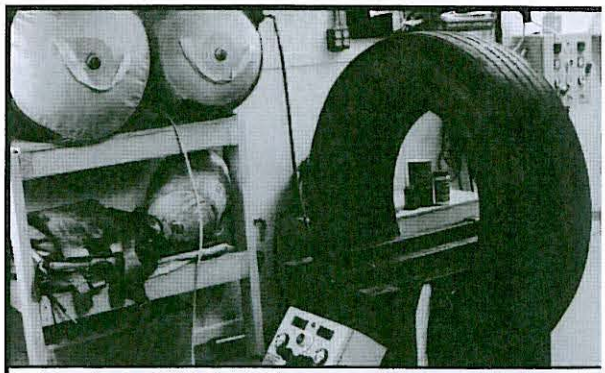
55 Using a knife or awl, remove the damming material from the tread grooves.



56 If the skive falls within a tread groove, first mark the regroo lines, then use a Tech regroover to groove in the original tre design. The regrooving materials should be retained for futi damming of tread grooves.

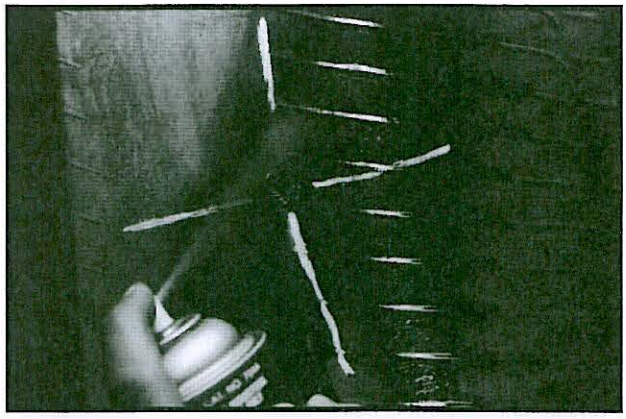


57 The Centech section repair is now complete and the tire can return to service. If all the procedures have been followed correctly, the repair will last the life of the tire even though the casing may receive several retreads.

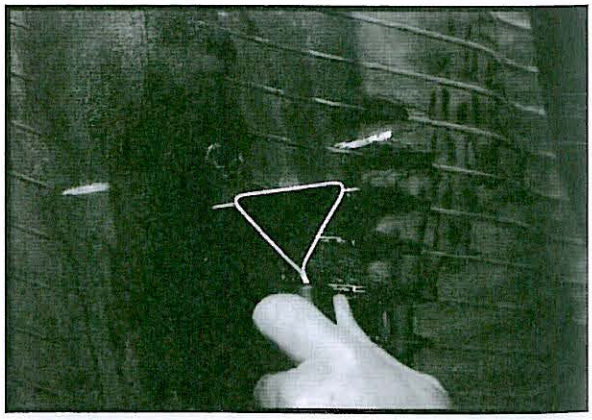


MOLD OR CHAMBER CURE

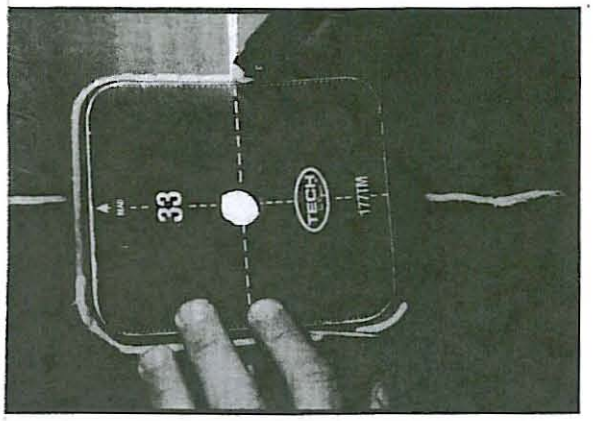
58 The following instructions are for retread shops and tire rep shops that are curing with section molds.



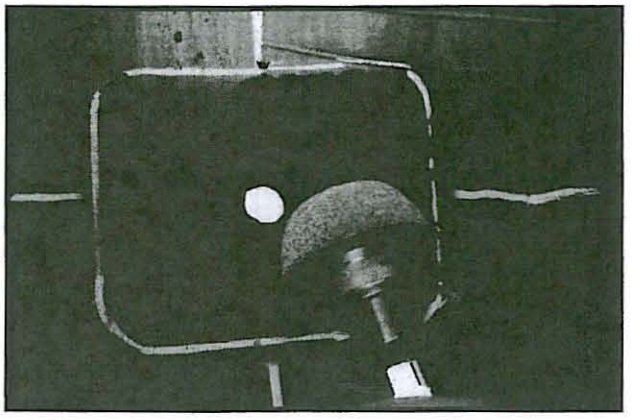
59 The area to receive the repair unit on the inner liner must be pre-cleaned. Clean an area larger than the selected repair unit by spraying the area, applying Rub-O-Matic.



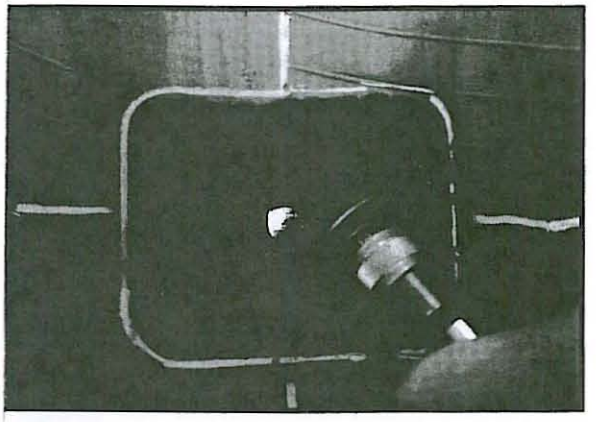
60 While the area is still moist, use the #933 Scraper to remo contamination. This process may need to be repeated 2 or times to remove all contaminants.



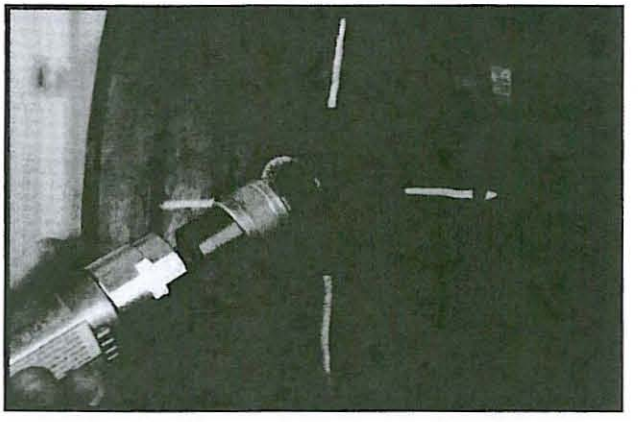
1 Using the index lines, center the appropriate repair template over the injury, Mark around the template with a marking crayon, this serves as a guide for mechanical buffing. If using a repair unit instead, mark an area ½" (15mm) beyond the edge of the repair unit.



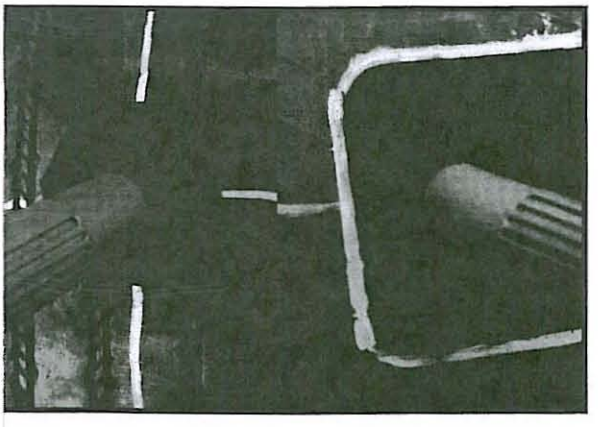
62 Use a Low RPM Air Buffer and buffing wheel to buff within the marked area to texturize the surface. When completed, an even, RMA #1 or RMA #2 buffed texture should be obtained.



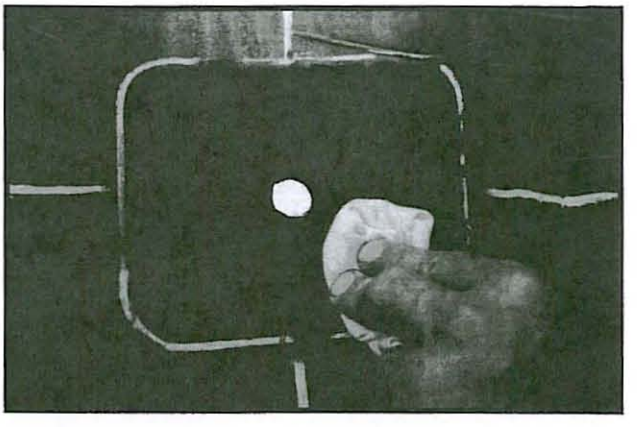
3 Clean the repair area with a Low RPM Air Buffer and a soft wire brush. Due to the rotation of the buffer it is necessary to move the brush from the right side of the buffed surface to the left side. This will push all buffing dust to the edge of the repair area. To assure a thoroughly clean surface, repeat this process.



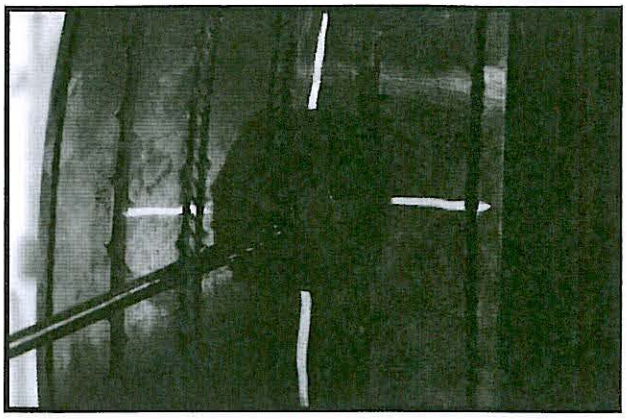
64 Use the same soft wire brush or a smaller brush depending on the diameter of the skive to remove buffing dust from the skive area.



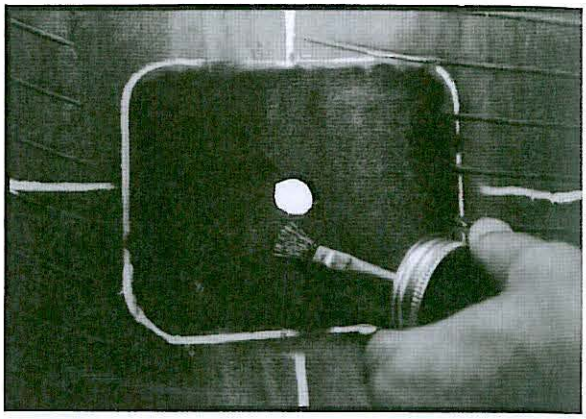
5 The area should then be vacuumed. Do not touch the buffed surface with the vacuum, as this could lead to contamination. **DO NOT** use an air hose to clean the area. Air hoses contain both oil and water that will contaminate the repair area.



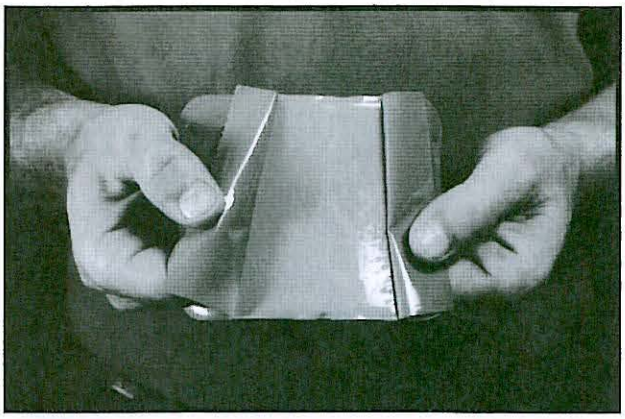
66 An optional cleaning method is the use of #704 Rub-O-Matic and a clean lint-free cloth. When finished, allow the area to dry completely for 3 to 5 minutes. If the weather is humid, additional drying time is necessary.



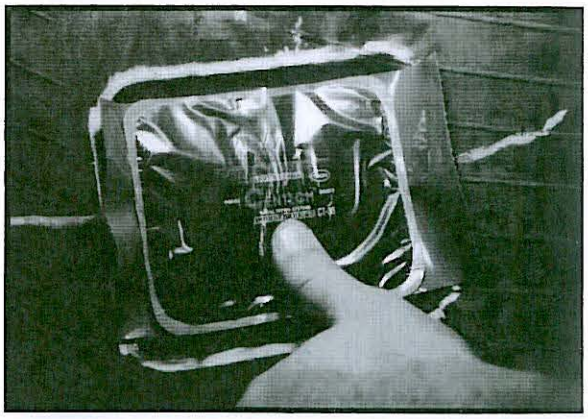
67 Cement the complete skive area with #1082 Temvulc Black Vulcanizing Cement, and allow fifteen minutes drying time. Allow for additional drying time if the weather is humid.



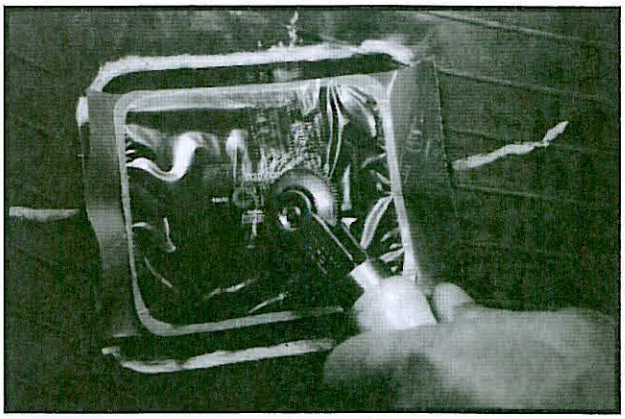
68 Cement the cleaned area using Chemical Vulcanizing Fluid. Always cement from the center out, do not go beyond the cleaned, buffed area. Allow 3 to 5 minutes for the vulcanizi fluid to dry, more time is required if humid.



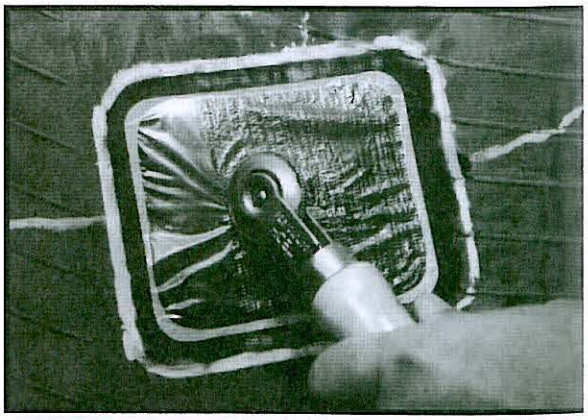
69 Now break the perforation of the blue poly backing on the repair unit. Peel the blue poly approximately half way back. To avoid contamination, be careful not to touch the gray cushion gum.



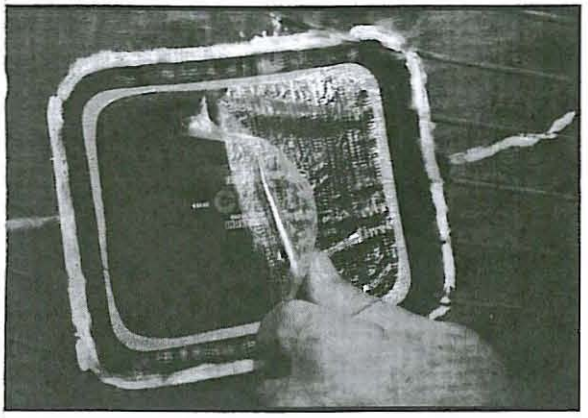
70 Make sure the beads of the tire are in a relaxed position, be the repair unit is installed. Center the repair unit directly ov the injury on the prepared area, aligning the Centech repair unit bead arrows with the beads of the tire. Place the cente the repair down first, thumb down the center.



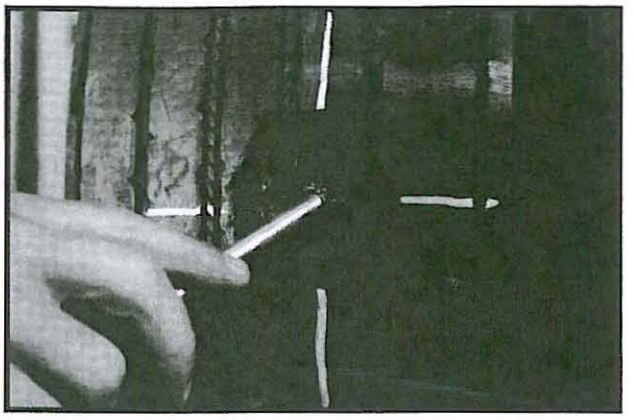
71 Stitch the repair unit from the center outward exerting firm pressure on the stitcher to maximize adhesion.



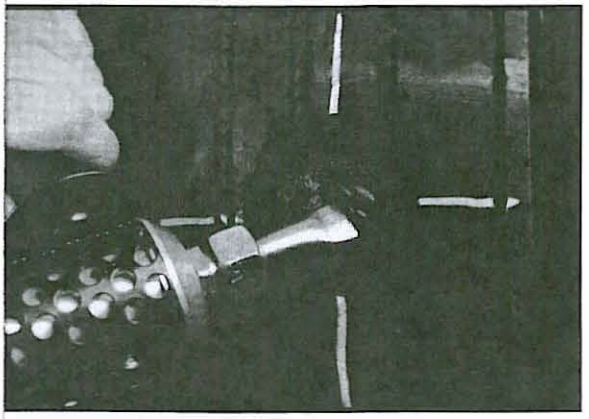
72 Remove the remainder of the blue poly, then thumb, and st from the center out.



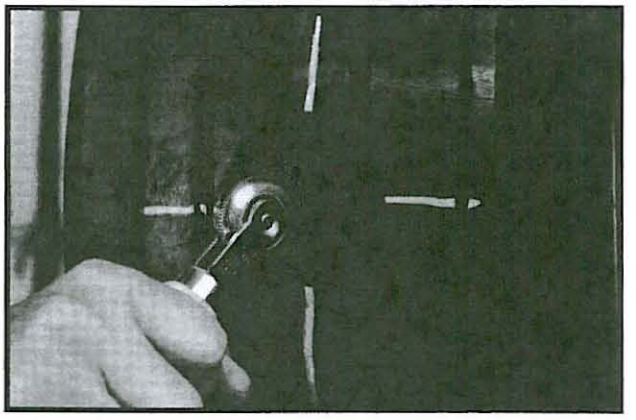
3 Next, remove the clear poly from the Centech repair unit. If the repair unit is to be cured in a rimless retread chamber, apply #738 Security Coat before curing. If curing in a section mold or a retread system that has a curing tube or inner envelope, apply #738 Security Coat after cure.



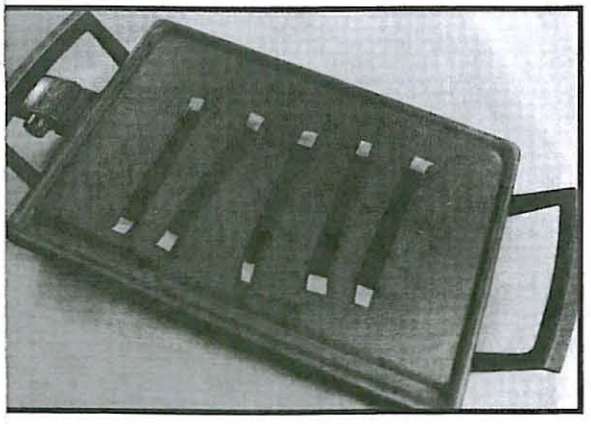
74 Use a preheated #S182 Extruder Gun with Tech rope rubber to begin filling the injury. Use a blunt packing tool to press the rope rubber into the skive cavity as compactly as possible to assure that no air is trapped. The skive of a radial steel constructed tire should never be vented as moisture could be absorbed by the vent strings allowing steel cables to rust.



5 Use the S182 extruder gun to apply another layer of rope rubber. Use a stitcher at this point to assure that no air has been trapped.



76 Fill the skive to approximately 1/8"or 3mm above the tire's surface to maintain pressure during the curing process.



7 If using Vul-gum to fill the injury, cut enough strips of Vul-gum to fill the skive. Preheat the Vul-gum to approximately 120° to 130°F or 49° to 55°C on a warming tray or any warming device.
Care should be taken not to overheat since scorching of the Vul-gum can occur.

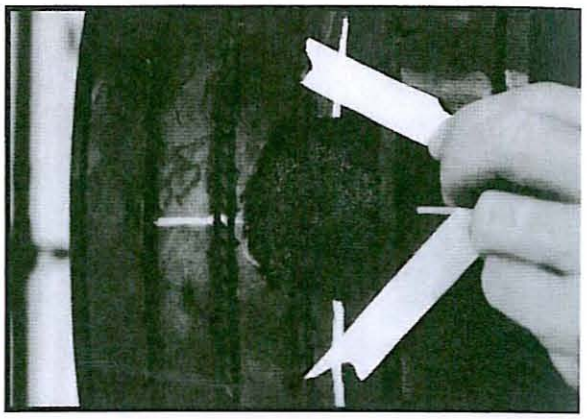
EXAMPLE

Platform	=1/4" 6mm
Section Depth	=1" 25mm
Overbuild	=1/8" 3mm
	=1 3/8"
1 3/8"	=11/8"
10 x 11	=110 minutes

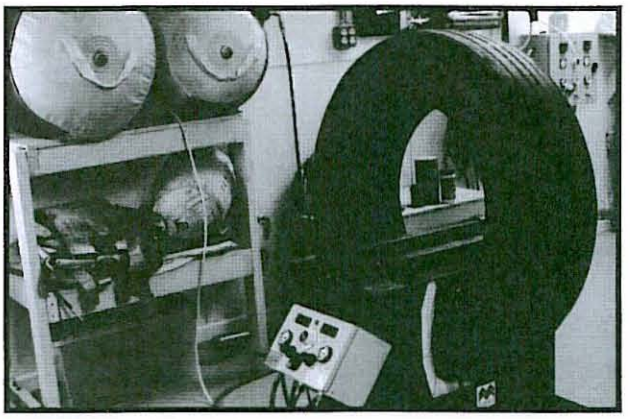
78 For every 1/8" or 3mm thickness, Vul-gum requires 10 minutes of cure time when cured at 300°F or 149° Celsius. In this example 1 3/8"or 34mm equals 110 minutes of cure time.

Platform	=1/4" 6mm
Skive Depth	=1" 25mm
Overbuild	=1/8" 3mm
	=1 3/8" 34mm
1 3/8	=11/8"
11 x 6	=66 minutes

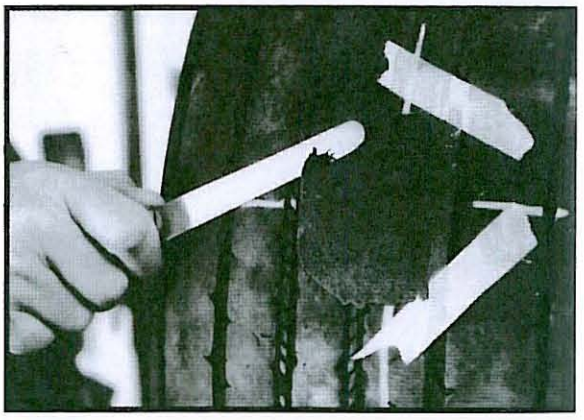
79 If using #FRR38 rope rubber for filling, the cure rate is 6 minutes of cure time for every 1/8" or 3mm when cured at 300°F or 149°C. Here we see 1 3/8" or 34mm equals 66 minutes of cure time.



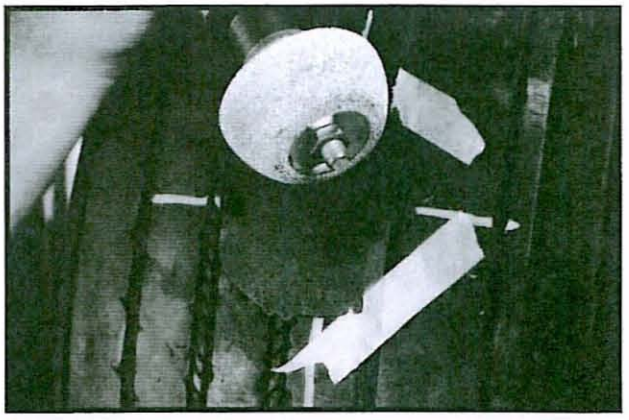
80 If curing in a section mold, dam the tread grooves to prever flow of Vul-gum into the tread grooves. Apply masking tape hold the rubber in place. If this process is not followed, the Rubber or Vul-gum may flow away from the skive leaving a concave rubber plug with porosity. If this occurs, it may be necessary to rework the entire repair.



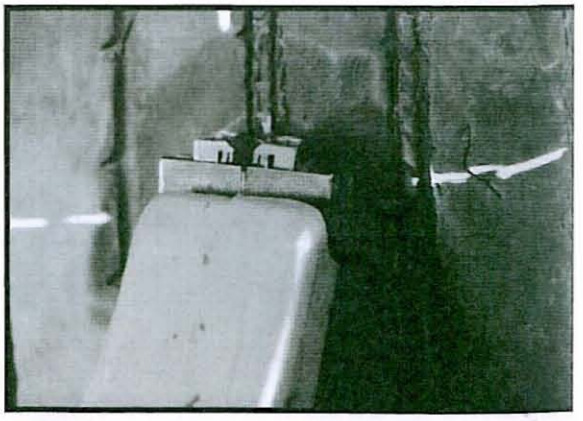
81 The tire is now ready for curing. If using a section mold, follow the mold manufacturer's operating instructions.



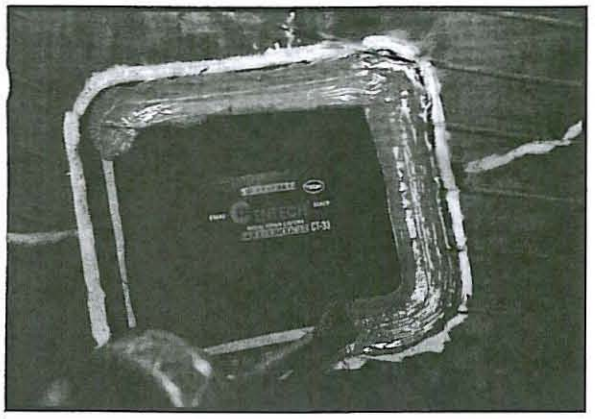
82 Inspect the cured fill rubber and repair unit for proper vulcanization. Allow the tire to cool to room temperature before finishing the repair. Cut away any overflow of rubb



83 Dress down the skive with the Low RPM Air Buffer and Rubber Hog buffing wheel, making sure the wheel is turning away from the center of the skive. This prevents the buffing wheel from attacking the edge of the skive.

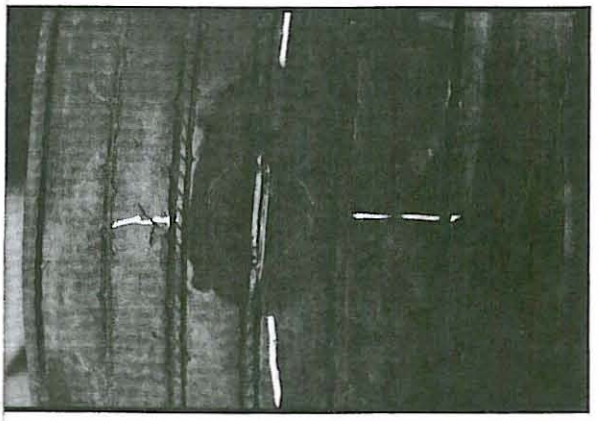


84 If the skive area falls within a tread groove, mark the regroove lines. Use a Tech regoover to groove in the orig tread design. This particular tread design requires a blad change to continue.

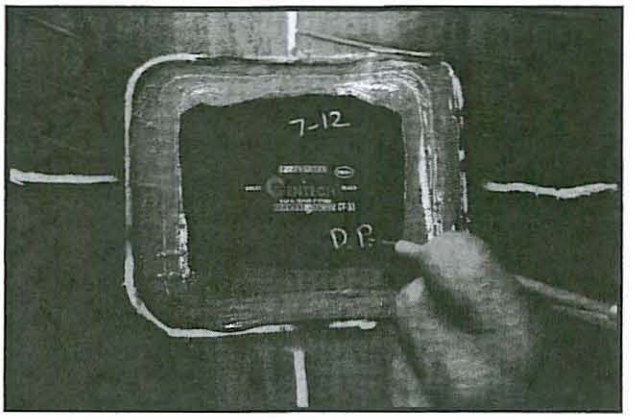


5 When repairing a tubeless tire, as in this case, apply #738 Security Coat around the edge of the repair unit to ensure good air retention of the over-buffed area. Security Coat will dry to a black coloring.

e radial tire is of tube type construction, apply Tech Tire Talc #706 to prevent gray cushion gum edge of the repair unit from vulcanizing to the tube.



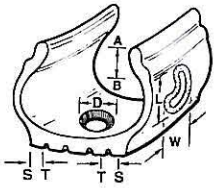
7 The Centech section repair is now complete and the tire can return to service. If all the procedures have been followed correctly, the repair will last the life of the tire even though the tire may receive several retreads.



86 Date and initial the repair unit for proper recordkeeping.

CENTECH®

Radial repair Chart



A-B – AREA NON-REPAIRABLE
D – MAXIMUM DIAMETER OF DAMAGED RADIAL CABLES
W – WIDTH OF INJURY
L – LENGTH OF INJURY
H-C – SHOULDER AREA 1 1/2" OR 40MM
C-C – CROWN AREA

A-B NON-REPAIRABLE AREA

Passenger and light truck tires	1½", 40mm
6.50-7.00	2½", 65mm
7.50-16.00	3", 75mm
17.5-23.5	3½", 90mm
24.00-29.5	5", 125mm
30.00-33.5	6", 150mm
36.00	7½", 190mm
37.00-55/80	10", 250mm

Sidewall Injury Width	Sidewall Injury Length	Passenger Tire Sizes 125-175	Passenger Tire Sizes 185-255	Crown Injury Ø Diameter
1/4" (6mm)	1/2" (15mm)	10	10	1/4" (6mm)
1/4" (6mm)	2" (50mm)	12	12	
3/8" (10mm)	3/8" (10mm)	10	10	3/8" (10mm)
3/8" (10mm)	1 1/2" (40mm)	12	12	
3/8" (10mm)	2" (50mm)	14	14	
1/2" (15mm)	1 1/2" (40mm)	12	12	1/2" (15mm)
1/2" (15mm)	2" (50mm)	14	14	
3/4" (20mm)	3/4" (20mm)	12	12	3/4" (20mm)
3/4" (20mm)	1 1/2" (40mm)	12	14	
3/4" (20mm)	2" (50mm)	14	14	
1" (25mm)	1 1/2" (40mm)	14	14	1" (25mm)
1" (25mm)	2" (50mm)	14	22	

REPAIR UNIT IN RED IS TO BE USED FOR CROWN INJURIES. TO MAINTAIN THEIR SPEED RATING. PASSENGER TIRES CARRYING A SPEED RATING OF H, V, OR Z SHOULD ONLY BE PREPARED IN THE TREAD AREA, WITH A MAXIMUM LIMITATION OF 1/4" (6MM).

Sidewall Injury Width	Sidewall Injury Length	Earthmover Tire Sizes 14.00-16.00 15.5-20.5 20/65-30/65	Earthmover Tire Sizes 18.00-21.00 23.5-26.5 35/65	Earthmover Tire Sizes 24.00-40.00 29.5-55/80 40/65-65/65	Crown Injury Ø Diameter
3/8" (10mm)	4 3/8" (110mm)	42	42	44	1" (25mm)
1/2" (15mm)	2 1/2" (65mm)	42	42	44	
1/2" (15mm)	6" (150mm)	46	46	46	
3/4" (20mm)	2" (50mm)	42	42	44	
3/4" (20mm)	5 1/2" (140mm)	46	46	46	
3/4" (20mm)	8" (200mm)	50	50	50	
1" (25mm)	5" (125mm)	46	46	46	
1" (25mm)	8" (200mm)	50	50	50	
1 1/4" (32mm)	4" (100mm)	[45] 46*	[45] 46*	[45] 46*	1 1/2" (40mm)
1 1/4" (32mm)	10" (250mm)	50	50	50	
1 1/2" (40mm)	3 1/2" (90mm)	46	46	46	
1 1/2" (40mm)	10" (250mm)	50	50	50	
1 1/2" (40mm)	14" (350mm)	56	56	56	
1 1/2" (40mm)	16" (400mm)		60	60	
1 3/4" (45mm)	6 1/2" (165mm)	50	50	50	2" (50mm)
1 3/4" (45mm)	10" (250mm)	52	52	52	
1 3/4" (45mm)	14" (350mm)		56	56	
1 3/4" (45mm)	16" (400mm)		60	60	
2" (50mm)	7" (175mm)	[55] 50*	[55] 50*	[55] 50*	2 3/4" (70mm)
2" (50mm)	10" (250mm)	52	52	52	
2" (50mm)	14" (350mm)		56	56	
2" (50mm)	16" (400mm)		60	60	
2" (50mm)	19" (475mm)			60	
2 3/4" (70mm)	8" (200mm)	[65] 52*	[65] 52*	[65] 52*	3 1/2" (90mm)
2 3/4" (70mm)	10" (250mm)		56	56	
2 3/4" (70mm)	13 1/2" (340mm)			60	
3 1/4" (80mm)	7" (175mm)	[65] 52	[65] 52	[70] 52	
3 1/4" (80mm)	8" (200mm)		52	56	
3 1/4" (80mm)	10" (250mm)		56	72	
3 1/4" (80mm)	12 1/2" (315mm)			60	
4" (100mm)	5 1/2" (140mm)	52	52	52	
4" (100mm)	7 1/2" (190mm)		56	56	
4" (100mm)	10 1/2" (265mm)			60	
4 3/8" (110mm)	5" (125mm)	52	52	52	
4 3/8" (110mm)	7" (175mm)		56*	72	
4 3/8" (110mm)	10" (250mm)			60*	
4 3/4" (120mm)	4 1/2" (115mm)	52	52	56	
4 3/4" (120mm)	6" (150mm)		56	72	
4 3/4" (120mm)	9" (225mm)			60	
5" (125mm)	4" 100mm)		70	70	5" (125mm)
5" (125mm)	5" (125mm)		72	72	
6" (150mm)	3 1/2" (90mm)		70	70	
6" (150mm)	4 1/2" (115mm)			72	

*REPAIR UNIT IN RED TO BE USED FOR CROWN AND SIDEWALL INJURIES. REPAIR UNITS APPEARING IN BOXES ARE FOR CROWN INJURIES ONLY. NOTE: THIS SECTION REPAIR CHART IS A GUIDELINE ONLY. LOAD, SPEED, AND APPLICATION OF THE TIRE CAN AFFECT LIMITATIONS OF SECTION REPAIRS. REPAIR UNITS WITH * CAN BE USED AS AN OPTIONAL REPAIR UNIT FOR CROWN INJURIES

Neumáticos Con Cámara — Neumáticos Sin Cámara

Sidewall Injury Width	Sidewall Injury Length	Truck Tire Sizes Light Truck 6.50-12.50 7-10 215/85-255/85 215/75-265/75	Truck Tire Sizes Heavy Truck 7.50-10.00 8-11 235/80-275/80 245/75-295/75	Truck Tire Sizes Heavy Truck 11.00-14.00 12-16.5 295/80/315/80 315/75-425/65	Crown Injury Ø Diameter
1/8" (3mm)	1/8" (3mm)	10	10	10	1/8" (3mm
1/4" (6mm)	1/4" (6mm)	12	12	12	1/4" (6mm
1 Cable	1 1/2" (40mm)	20	20	20	3/8" (10mm
1 Cable	3 1/8" (80mm)	22	22	22	
1 Cable	4 3/4" (120mm)		24	24	
1 Cable	6" (150mm)		26	26	
2 Cable	3/4" (20mm)	20	20	22	
2 Cable	1 1/2" (40mm)	20	22	24	
2 Cable	2 3/8" (60mm)	22	24	26	
2 Cable	5 1/8" (130mm)		26	26	
3/8" (10mm)	1 1/2" (40mm)	20	26	40	
3/8" (10mm)	2 3/8" (60mm)	22	26	40	
3/8" (10mm)	3 1/8" (80mm)	26	26	42	
3/8" (10mm)	5 1/8" (130mm)		26	44	
1/2" (15mm)	1 1/2" (40mm)	22	[33] 40*	[33] 40*	1/2" (15mm
1/2" (15mm)	2 3/4" (70mm)	22	40	42	
1/2" (15mm)	3 3/4" (95mm)	40	42	42	
1/2" (15mm)	5 1/8" (130mm)		44	44	
3/4" (20mm)	1" (25mm)	22	[33] 40	[35] 40	3/4" (20mm
3/4" (20mm)	2 1/2" (65mm)	24	40*	42*	
3/4" (20mm)	4 3/8" (110mm)		42	44	
3/4" (20mm)	5 1/8" (130mm)		44	44	
1" (25mm)	2" (50mm)	[33] 40*	[35] 42*	[35] 44*	1" (25mm
1" (25mm)	3 1/8" (80mm)		42	44	
1" (25mm)	4" (100mm)		44	44	
1 1/4" (32mm)	2" (50mm)		[37] 42*	[37] 44*	1 1/4" (32mm
1 1/4" (32mm)	3 1/8" (80mm)		44	44	
1 1/4" (32mm)	4" (100mm)		44	46	
1 1/2" (40mm)	2" (50mm)		[37] 44*	[37] 44*	1 1/2" (40mm
1 1/2" (40mm)	3 1/8" (80mm)		44	46	

*REPAIR UNIT IN RED TO BE USED FOR CROWN AND SIDEWALL INJURIES UNLESS BOXED. INJURIES WITHIN THE S-T AREA AR CONSIDERED SIDEWALL INJURIES. REPAIR UNITS APPEARING IN BOXES ARE FOR CROWN INJURIES ONLY OR INJURIES WITI THE T-T AREA ONLY. SEE SCHEMATIC ABOVE. REPAIR UNITS WITH * CAN BE USED AS AN OPTIONAL REPAIR UNIT FOR CROWI INJURIES. NOTE: THIS SECTION CHART IS A GUIDELINE ONLY. LOAD, SPEED AND HIGHWAY APPLICATION CAN AFFECT THE LIMITATIONS OF SECTION REPAIRS.

Sidewall Injury Width	Sidewall Injury Length	Truck Tire Sizes 8-11 8.3-12.4	Truck Tire Sizes 12-15 13.6-30.5 440/65-800/65	Crown Injury Ø Diameter
1/4" (6mm)	1/4" (6mm)	12	12	3/8" (10mm
3/8" (10mm)	3/8" (10mm)	12	12	
3/8" (10mm)	1 1/2" (40mm)	20	20	
3/4" (20mm)	3/4" (20mm)	20	20	3/4" (20mm
3/4" (20mm)	3" (75mm)	22	80	
1 1/2" (40mm)	4" (100mm)	80	82	1 1/2" (40mm
2" (50mm)	3 1/4" (80mm)	80	82	2 3/4" (70mm
2 1/2" (65mm)	3" (75mm)	80	82	
2 1/2" (65mm)	4" (100mm)		82	
2 3/4" (70mm)	2 3/4" (70mm)	80	82	
3 1/4" (80mm)	3 1/4" (80mm)		82	3 1/2" (90mm
3 1/4" (80mm)	5 1/4" (130mm)		84	
3 1/2" (90mm)	4 1/2" (115mm)		84	
4" (100mm)	4" (100mm)		84	
4" (100mm)	6 1/2" (165mm)		86	5 1/4" (130mm
5 1/4" (130mm)	5 1/4" (130mm)		86	

REPAIR UNIT IN RED TO BE USED FOR CROWN INJURIES. NOTE: THIS SECTION REPAIR CHART IS A GUIDELINE ONLY. LOAD, SPEED, AND APPLICATION OF THE TIRE CAN AFFECT LIMITATIONS OF SECTION REPAIRS.

Notes

If you have any questions regarding this repair process, call Tech's repair hotline 1-800-433-TECH or 1-800-336-TECH.

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