Tire Repairs

TECH Tire Repairs®

Repair Manual RM-12

Centech Section Repair Of A Radial Earthmover Tire With Sidewall Damage

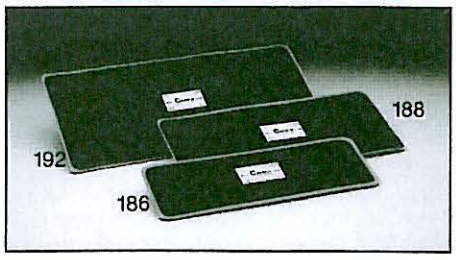
CENTECH®
Radial
Repairs

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

Crown, shoulder or sidewall injuries in passenger, truck, agricultural and earthmover tires can now be repaired with Centech center over injury radial repairs. A 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.

Cat. No.	Description	Box Qty.	Dimensions (Inches)	Dimensions (mm)
186	CT-46	5	5 1/2 x 16	140 x 400
188	CT-50	5	7 1/2 x 17 3/8	190 x 435
190	CT-52	3	10 x 17 5/8	250 x 440
192	CT-56	3	10 x 20 1/2	250 x 515
194	CT-60	3	10 1/8 x 25 1/8	255 x 625



1 Inspect the tire on the inside and outside to determine the repairability and/or retreadability of the tire. The tire should be properly supported for safety and the inspection area should have good lighting inside and outside of the tire.

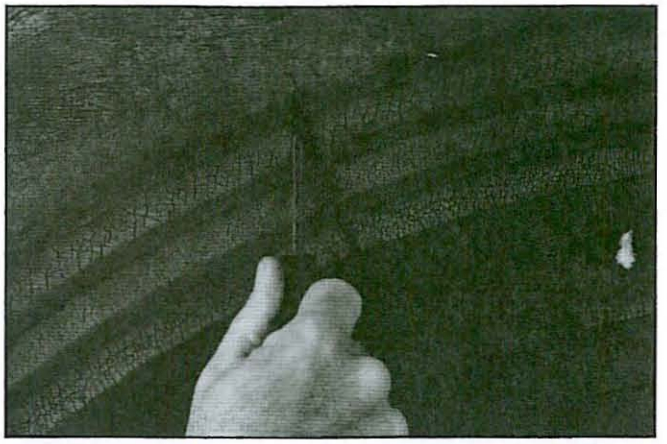
Note: The tire should be rejected if any of the following conditions or injuries are present:

- Tire shows signs of run flat or under-inflation
- Casing separations are beyond repairable limits
- Bead wires are visible, deformed or broken
- Sidewall or tread cracking to the cable body is visible
- Weather checking is present which exposes the cables
- Severe sidewall scuffing is present which exposes the cord
- If there are multiple injuries that are directly in-line with same radial cord or cables

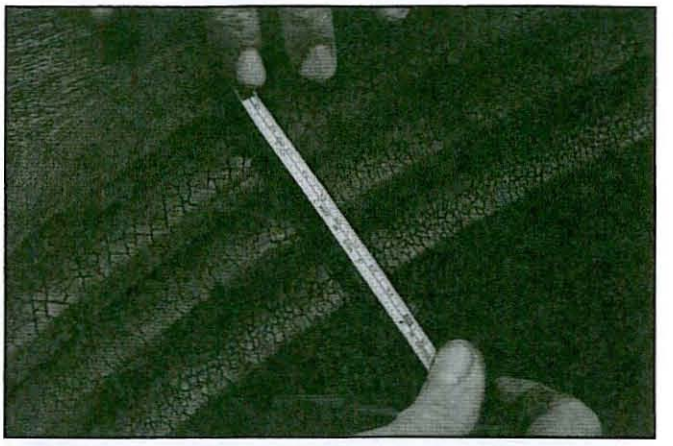
REPAIR OF A RADIAL EARTHMOVER TIRE WITH SIDEWALL DAMAGE

The following steps demonstrate the proper repair procedures to follow in a sidewall section repair of a radial earthmover tire. This repair is what is recommended when the curing system being used is a spotter. However, the procedure for removing the damage from the tire is the same for any curing process. f the curing system being used is a section mold or a chamber, the application of the repair unit is done differently.

- In section mold and chamber cures, the repair unit is applied *before* curing
- In spotter repair, the repair unit is applied *after* the skive area has been filled and cured

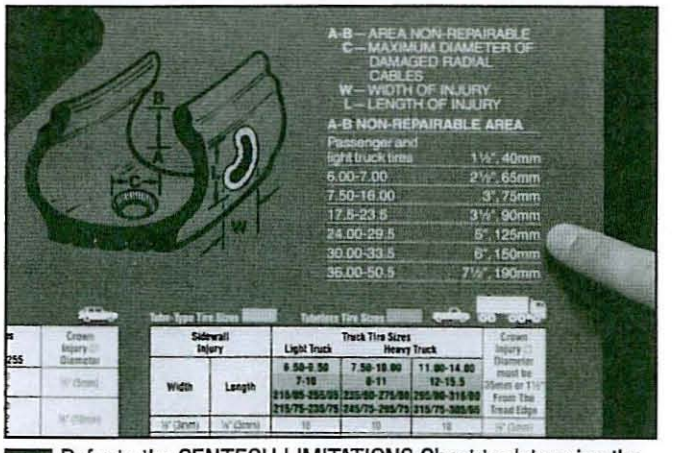


2 To determine the extent of the damage and to check for possible ply separation, probe the injury using a blunt point probe or awl.



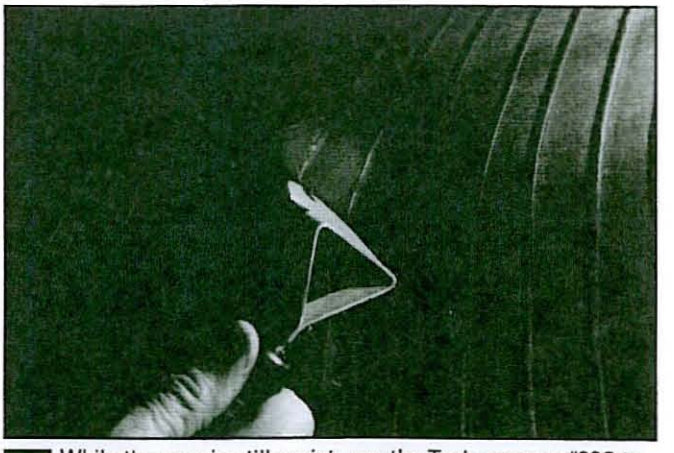
3 During the inspection process, measure the size of the injury. Then refer to the CENTECH RADIAL REPAIR Chart to determine if the injury is repairable. If there is any hidden damage or separation, add that dimension to the total measurement.

4 Measure the distance between the toe of the bead and the end of the injury on the inside of the tire. The injury must not extend into the A-B non-repairable area of the tire.

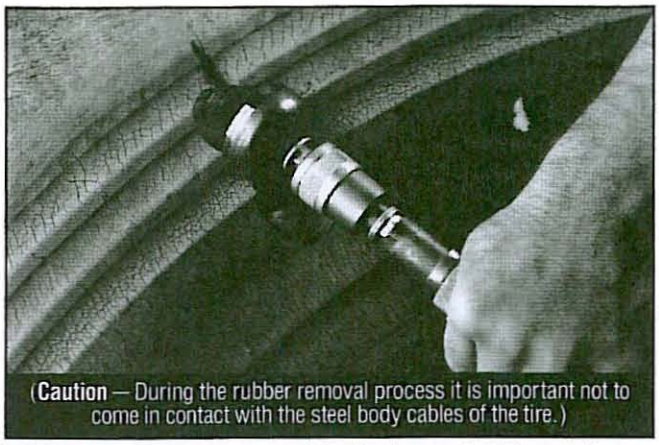


5 Refer to the CENTECH LIMITATIONS Chart to determine the non-repairable area of the tire you are repairing.

6 When determined repairable, preclean the inner liner by applying Tech Rub-O-Matic Aerosol #704A to a 2″ to 3″ (50mm to 75mm) area surrounding the injury.

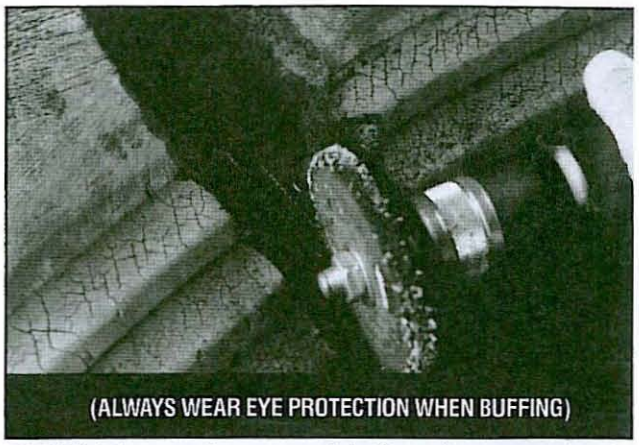


7 While the area is still moist, use the Tech scraper #933 to remove contaminating substances. Also, clean contaminating substances from the outside of the tire if present. Repeat this process 2 or 3 times to assure that all of the contaminates have been removed.



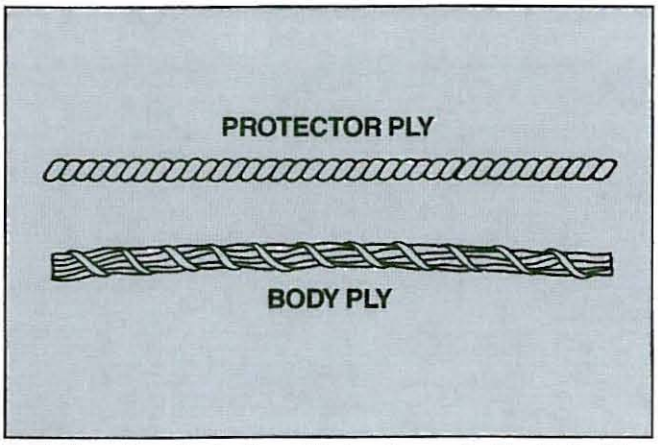
(**Caution** — During the rubber removal process it is important not to come in contact with the steel body cables of the tire.)

8 Using a Tech low r.p.m. air buffer (max. 5,000 r.p.m.) or a flexible shaft buffer, and using a #S-2040, #S-2042, or #S-2043 rotary gouge, remove the outer rubber around the perimeter of the injury.

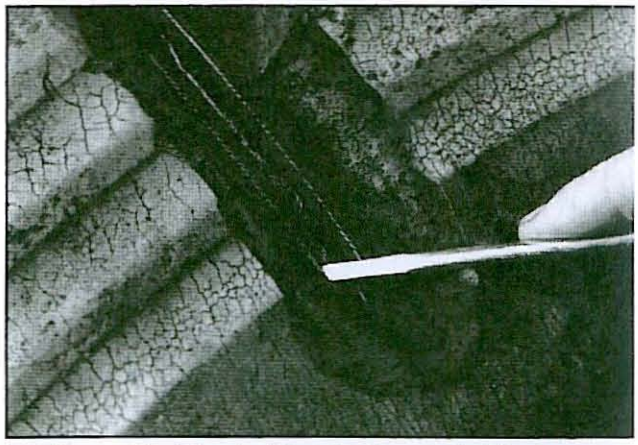


(ALWAYS WEAR EYE PROTECTION WHEN BUFFING)

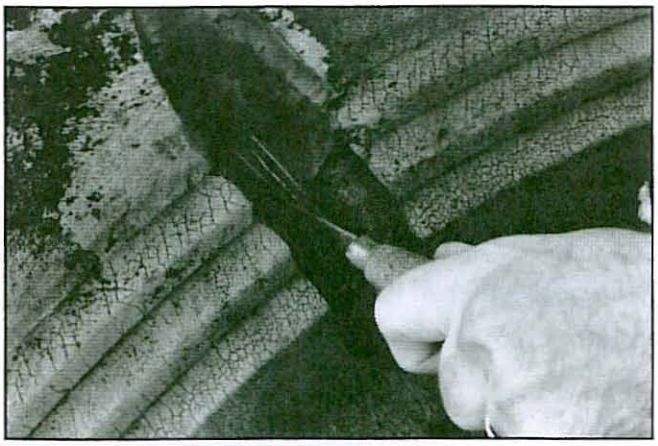
9 With the same low r.p.m. air buffer and an encapsulated brush #S-891 or #S-898, buff away the remaining rubbe and expose only the steel cables believed to be damaged th full length of the injury. An encapsulated brush helps to pre vent any further damage to the body cables or fret wires.



10 Above is an illustration of the two types of cables that will be encountered. The protector ply is made up of twisted strands which are more flexible than body plies. Body plies are stiffer and are wrapped with a fret wire around each wire.

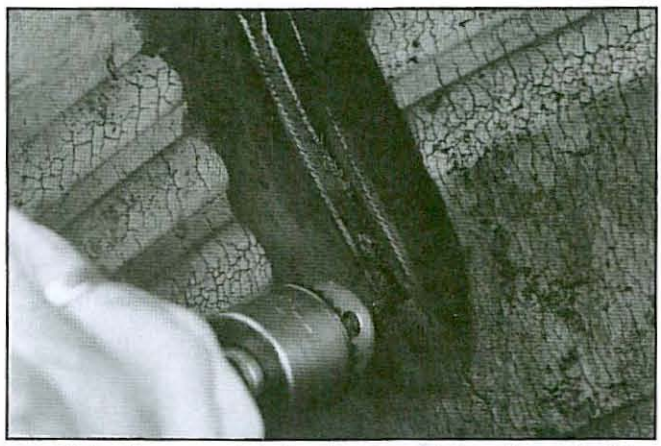


11 Inspect the injury to determine the extent of the damage. Note that this tire has a sidewall protector ply which makes it difficult to determine the damage to the body ply. If you cannot determine damage to the body ply, it will be neces- sary to first remove the protector ply.



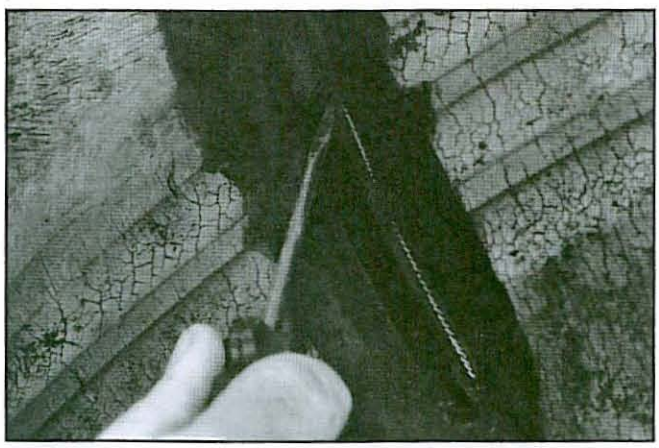
12 On this tire it was determined that the body ply was dam- aged. Therefore a Tech skiving knife #940 or #941 is used to separate the damaged cable or cables. Cut at a 90 degree angle and as close to the damaged cables as possible to leave as much good rubber as possible surrounding the remaining cables.

13 With a high r.p.m. air tool (min. 20,000 r.p.m.) such as a Tech #S-1034 or #S-1039, and the Tech Mini-Carbide Router #283 or a #280 Mini-Carbide Burr, precisely cut c one end of the cable or cables to be removed at a 90 degre angle or perpendicular to good solid rubber.

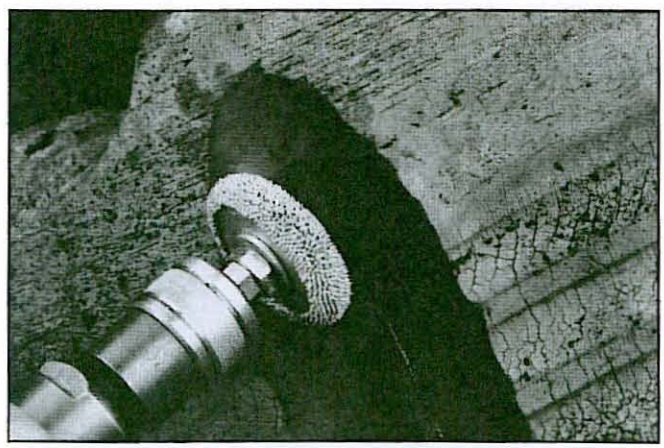


14 Using the same air tool and router, cut the other end of the cable or cables back into good solid rubber at a 90 degree or perpendicular angle.

15 Final steel preparation is achieved using an Aluminum Oxide Stone #S-872 on a high r.p.m. air tool (20,000 r.p.m.). Lightly dress both cut ends of the steel cable or cables at a 90 degree angle with the Aluminum Oxide Stone.



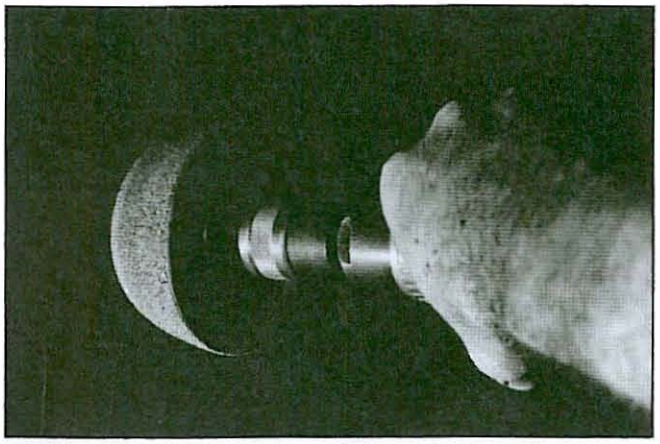
16 Next, use a blunt-point probe such as a Tech #918 Duck Bill Awl, and inspect the injury to assure that all of the damage has been removed.



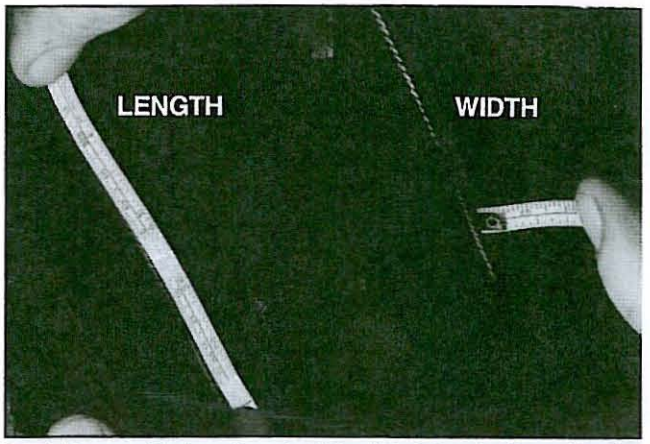
17 Use a low r.p.m. buffer and a RUBBERHOG roundfaced rasp to buff a 45 degree angle to the exterior skive and to achieve an RMA #3 buffed texture. Avoid making contact with the steel body cables. This would cause further damage to the cables.

18 Using the same rasp or an inner liner wheel on a low r.p.m. buffer, buff a perimeter approximately 1" to 1½" (25mm to 40mm) around the exterior of the skive on the outside of the tire.

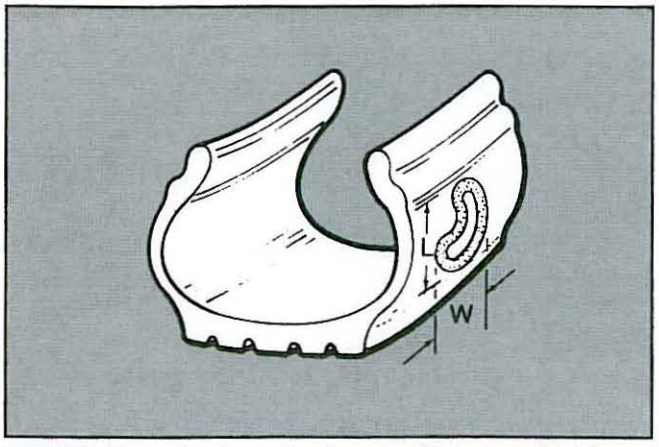
19 It is now necessary to use a low r.p.m. buffer and a skive brush #896 to texturize the ends of the injury and the knife cut edges. Avoid using a high r.p.m. tool for this procedure as excess scorching and lack of texture will result.



20 In preparation to receive a platform of filler rubber, mechanically buff the inner liner to 2" to 2 1/2" (50mm to 65mm) around the injury using medium or fine grit buffing wheel on a Tech low r.p.m. air buffer.

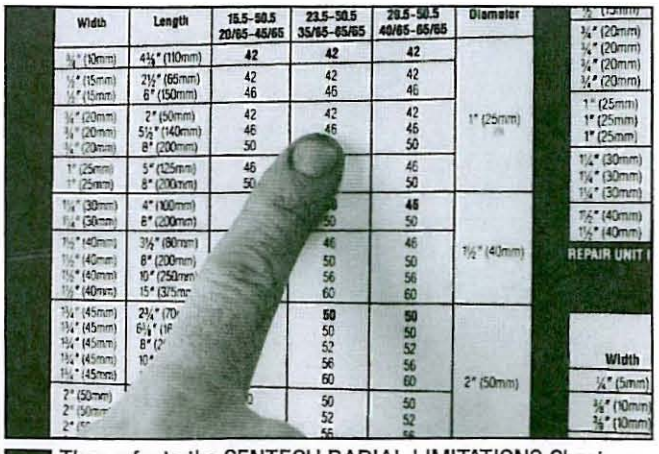


21 Measure the length and width of the injury to determine the correct CENTECH Repair Unit for the injury.



22 This illustration shows how to correctly measure the injury. The length of the injury is measured in the bead to bead direction. The width is measured in the running direction of the tire and is the most critical measurement because it represents the number of cables damaged.

23 Next, refer to the sidewall of the tire and locate the cross section of the tire.

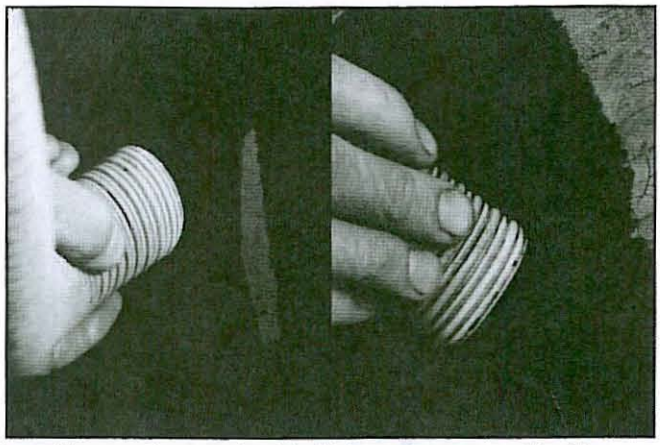


Width	Length	15.5-50.5 20/65-45/65	23.5-50.5 35/65-65/65	29.5-50.5 40/65-65/65	Diameter
⅜" (10mm)	4⅓" (110mm)	42	42	42	
½" (15mm)	2½" (65mm)	42	42	42	
½" (15mm)	6" (150mm)	46	46	46	
¾" (20mm)	2" (50mm)	42	42	42	
¾" (20mm)	5½" (140mm)	46	46	46	1" (25mm)
¾" (20mm)	8" (200mm)	50		50	
1" (25mm)	5" (125mm)	46		46	
1" (25mm)	8" (200mm)	50		50	
1¼" (30mm)	4" (100mm)			46	
1¼" (30mm)	8" (200mm)			50	
1½" (40mm)	3½" (80mm)		46	46	1½" (40mm)
1½" (40mm)	8" (200mm)		50	50	
1½" (40mm)	10" (250mm		56	56	
1½" (40mm)	15" (375m		60	60	
1¾" (45mm)	2¾" (70		50	50	
1¾" (45mm)	6½" (1F		50	50	
1¾" (45mm)	8" (2		52	52	
1¾" (45mm)	10"		56	56	
1¾" (45mm)			60	60	2" (50mm)
2" (50mm)			50	50	
2" (50mm			52	52	
2" (5			56		

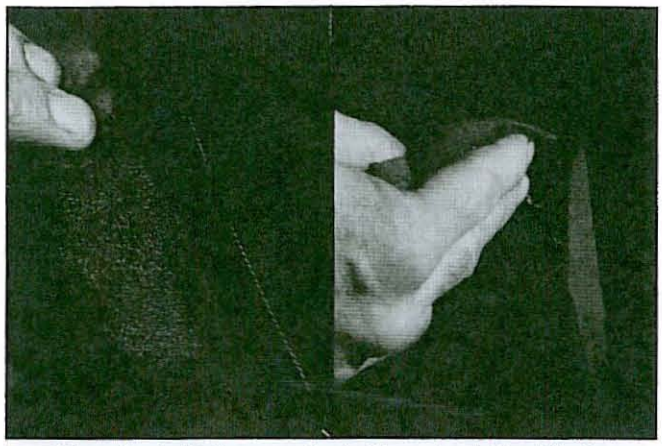
REPAIR UNIT
¾" (20mm)
¾" (20mm)
¾" (20mm)
¾" (20mm)
1" (25mm)
1" (25mm)
1" (25mm)
1¼" (30mm)
1¼" (30mm)
1¼" (30mm)
1½" (40mm)
1½" (40mm)
Width
¼" (5mm)
⅜" (10mm)
⅜" (10mm)

24 Then refer to the CENTECH RADIAL LIMITATIONS Chart on radial earthmover tires and determine the correct size repair unit for the size of tire that you are repairing. Then make note of the size of repair unit.

25 When using a spotter or a section mold, it is necessary to calculate a curing time. In order to do this, you need to know the thickness of the rubber to be cured. Measure the section depth at the thickest part of the skive. Make a note of the thickness for future reference.



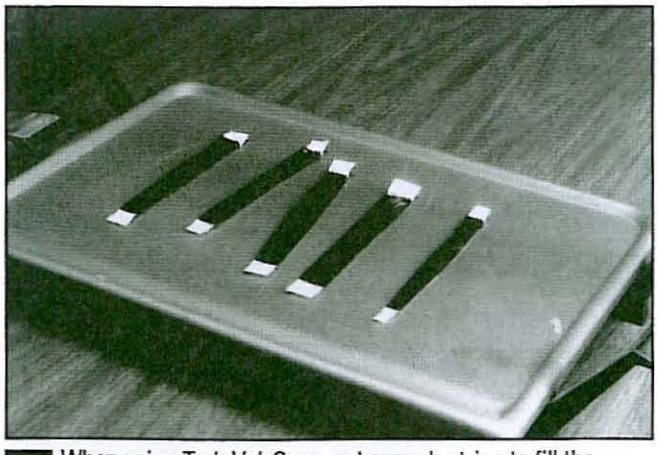
26 Vacuum the completed buffed area to remove all buffing debris from the inside and outside of the tire.



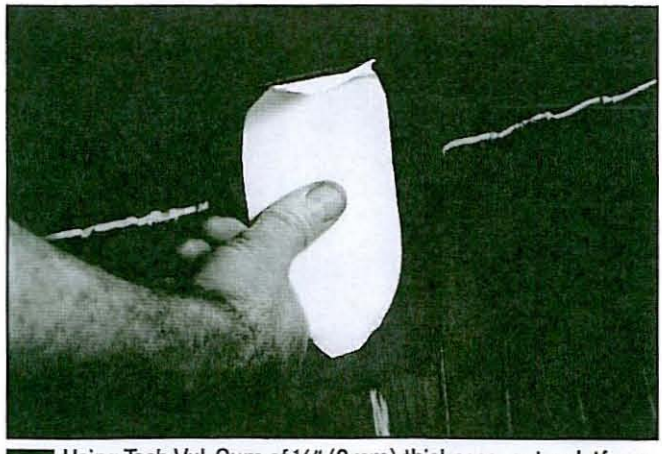
27 Clean the buffed area on the inside and outside of the tire using Tech RUB-O-MATIC #704 and a clean lint free cloth and allow to dry completely. Normal drying time is 3 to 5 minutes. Allow additional drying time in humid conditions.

28 Apply an even coat of Vulcanizing Fluid to the entire skive area, inside and out using either Tech Tem Vulc #1082 or Tech Chemical Vulcanizing Fluid #760 and allow to dry thoroughly.*

29 Draw crayon index lines at right angles from the skive on the inside of the tire to aid in centering the spotter and the repair unit.



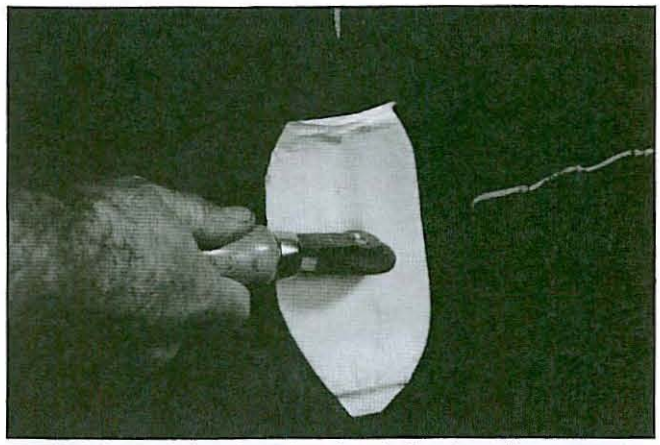
30 When using Tech Vul-Gum, cut enough strips to fill the skive. Preheat to approximately 120 degrees F to 130 degrees F (49 degrees C to 55 degrees C).



31 Using Tech Vul-Gum of ⅛" (3mm) thickness, cut a platform of Vul-Gum 1" (25mm) larger than the skive opening for placement in the inner liner of the tire. Center the platform over the skive opening and press the platform into place.

*A. Tech Tem Vulc #1082 — When applying Tem Vulc black Vulcanizing Fluid, allow approximately 15 to 20 minutes drying time. Allow additional drying time in humid climates.

*B. Tech Chemical Vulcanizing Fluid #760 — Allow Tech Chemical Vulcanizing Fluid to dry approximately 3 to 5 minutes. Allow for additional drying time in humid climates.

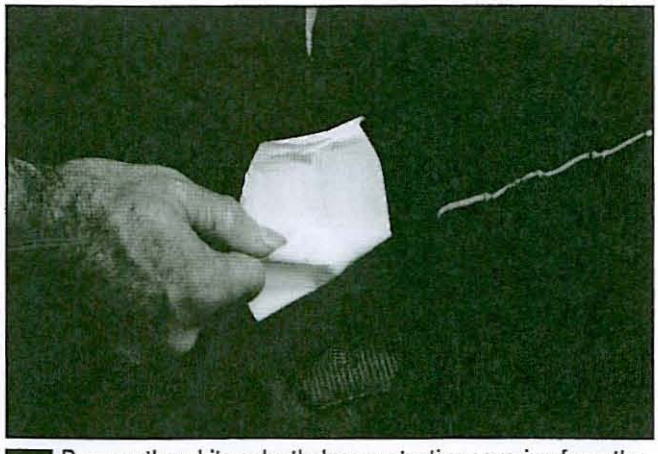


32 Stitch the platform into place by stitching from the center out. Leave the white poly backing on until the filling process is completed. This will add support to the platform and protect it from contamination.

33 Using a clean blunt object such as the Tech packing tool #985, press the Vul-Gum strips into the skive as compactly as possible. **NOTE:** NEVER VENT A RADIAL TIRE AS THIS PROCESS CAN ALLOW MOISTURE INTO THE CASING WHICH WILL RUST STEEL CABLES.

34 Once filled to a point that a stitcher can be used, finish filling the skive using a Tech stitcher.

35 The skive should be filled to a height that is ⅛" to ¼" (6mm to 9mm) above the tire's surface. The highest point should be in the middle of the skive fill and tapered to the tire. If the skive is in the shoulder of the tire, extra over-building may be required to achieve proper pressure with the spotter.



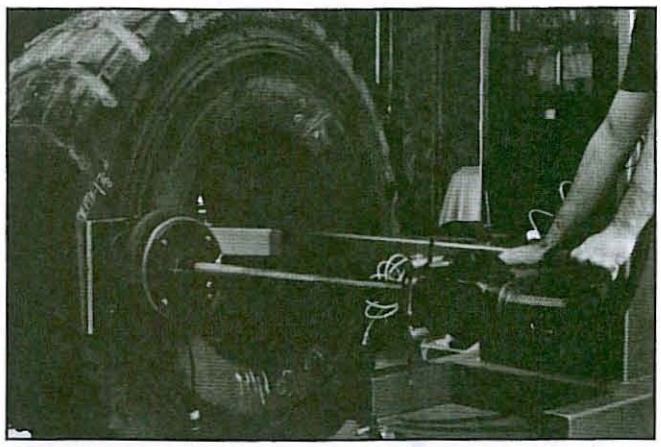
36 Remove the white polyethylene protective covering from the Vul-Gum.

EXAMPLE

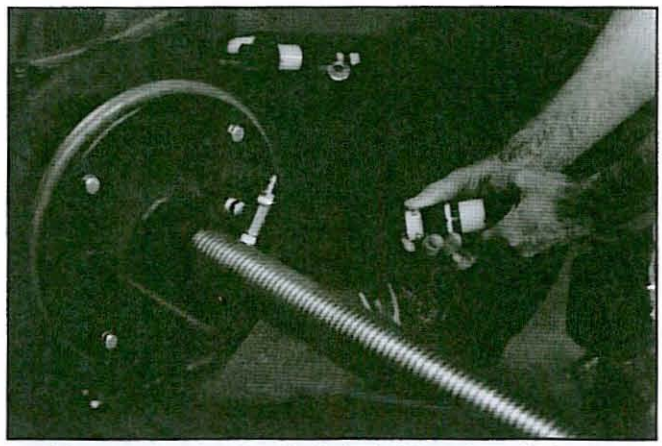
Platform	=	⅛" or 3mm
Depth	=	1¾" or 45mm
Overbuild	=	¼" or 6mm
Total		1⅞" or 54mm

17 x 10 = 170 minutes
Vul-Gum Cure Rate
Every ⅛" (3mm) = 10 minutes at 300 degrees F (149°C)

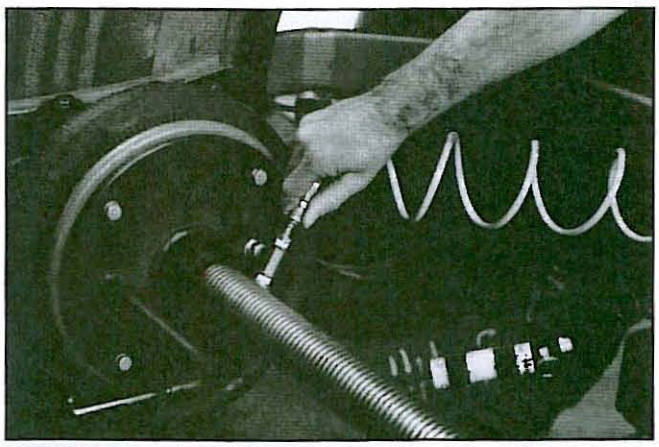
37 When using a spotter, it will be necessary to calculate a cure rate so as not to under-cure or over-cure the rubber. When using Tech Vul-Gum, the cure rate is 10 minutes for every ⅛" or 3mm at 300 degrees F (149 degrees C). To calculate the cure time, you need to add the total thickness of the platform, the section depth, and the over build as we have done in the example shown here.



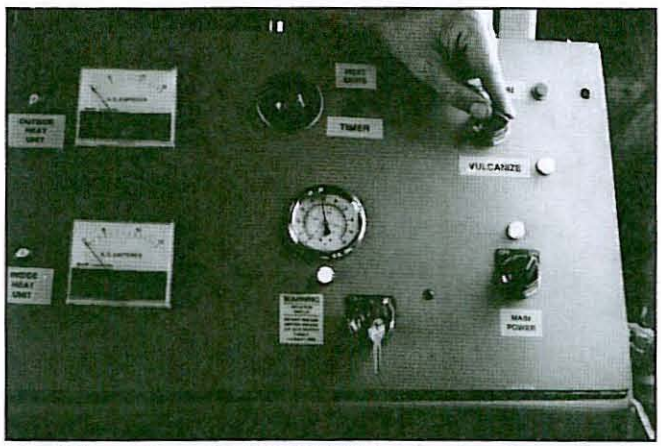
38 Place the spotter on the tire, making sure the heating elements are directly positioned over the center of the skive. Use the previously placed index lines to aid in centering the spotter. Also be sure that the contour plates are adjusted to the contour of the tire.



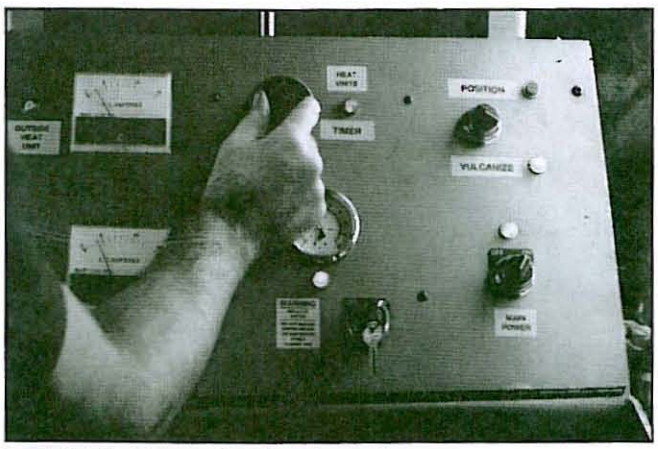
39 Connect the electric to both the inside and outside heating elements.



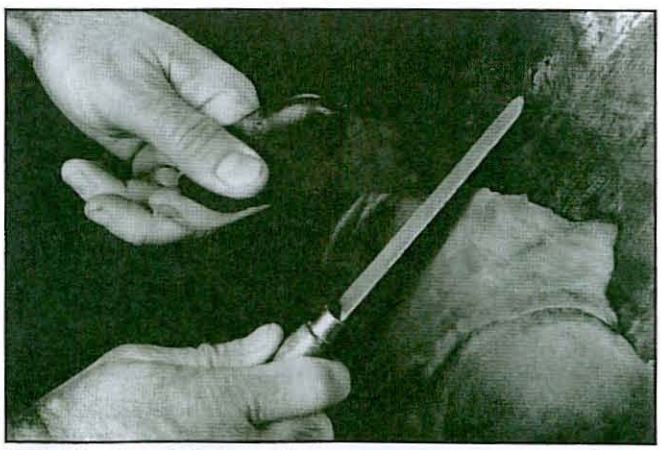
40 Make sure the air line is connected to the outside air bag. It is easier to assemble the spotter if the air line is attached before placing on the tire. The air bag should have 10 to 15 p.s.i. in it during this process.



41 When using a #S-1027 OTR Vulcanizer, turn the position/ vulcanize switch to vulcanize.



42 Set the timer to the allotted cure time.

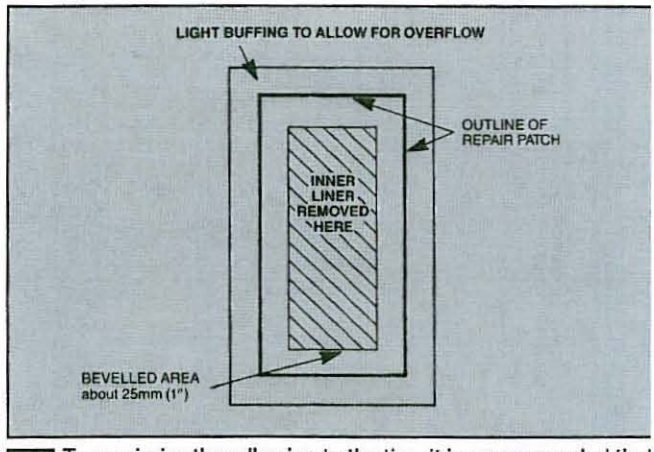


43 After the allotted cure time, remove the spotter and allow the tire to cool down. Then cut away any excess flash from the interior and exterior of the tire using a Tech flex knife #942.

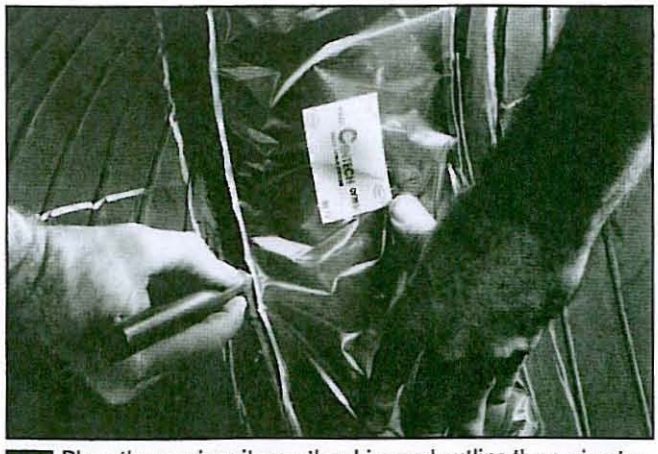
44 Center the predetermined CENTECH Repair Unit over the skive and mark a perimeter approximately 1" (25mm) from the edge of the repair completely around the repair unit. This serves as a guide for cleaning and buffing.

45 Pre-clean within the marked area by applying Tech Rub-O-Matic Aerosol #704-A.

46 While the area is still moist, remove contaminating substances using a Tech scraper #933.



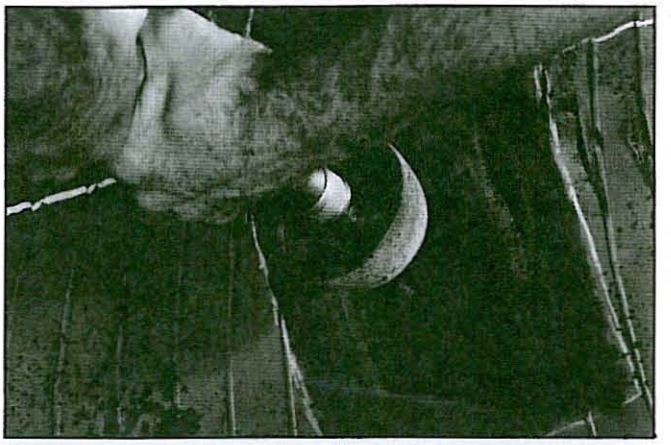
47 To maximize the adhesion to the tire, it is recommended that the inner liner under the repair unit be removed. Above is a diagram of how to outline the repair area for inner liner removal.



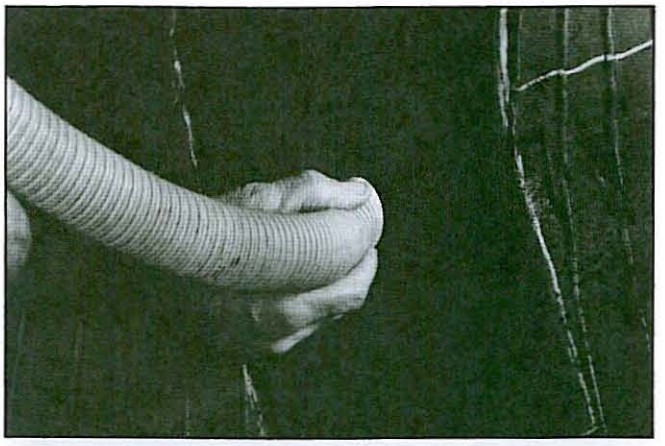
48 Place the repair unit over the skive and outline the perimeter of the repair unit.

49 Remove the repair unit and trace a smaller rectangle approximately 1" (25mm) inside the outline of the repair unit.

50 Using a rough grit inner liner wheel #RH-122 on a low r.p.m. tool, remove the inner liner within the smallest rectangle. Buff only until the calendering rubber beneath the inner liner is lightly exposed.



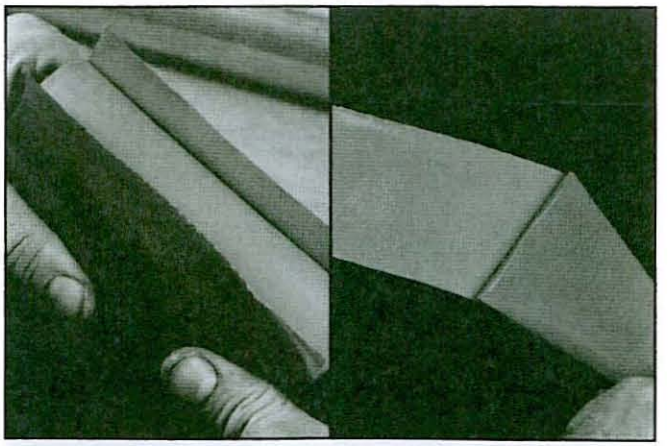
51 Switch to a medium or fine grit inner liner wheel on a low r.p.m. buffer and buff the calendering rubber to an even velvet texture (RMA #2). Also, from this area, the inner liner is beveled downwards from the original repair unit outline. The surface of the inner liner beyond the repair unit is then lightly buffed.



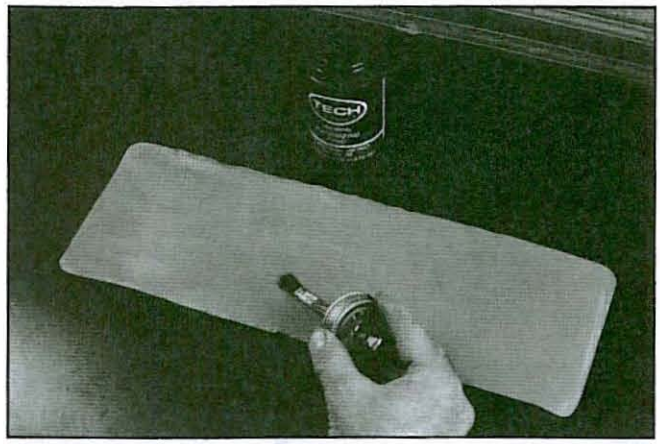
52 Vacuum the complete area to remove all buffing debris from the tire. Do not use an air line to remove buffing dust. An air line contains oil and water which are contaminates.

53 Clean the buffed area of the innerliner using RUB-O-MATIC #704 and a clean, lint free coth and allow to dry for 3 to 5 minutes. Another cleaning method is to use a soft wire brush on a low r.p.m. buffer and then vacuum.

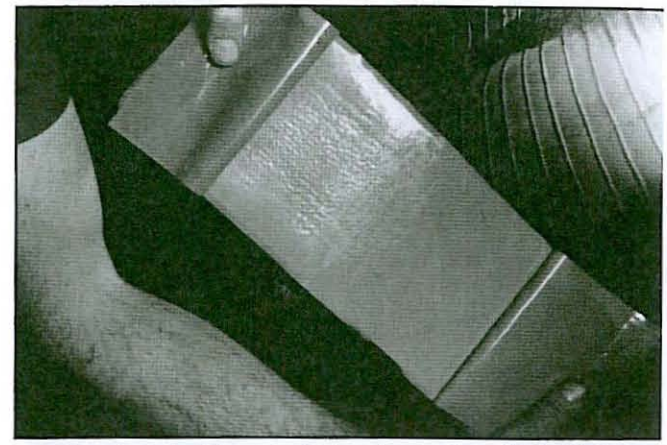
54 Apply a coat of Tech Chemical Vulcanizing Fluid #760 to the prepared area of the inner liner, starting from the center and cementing outward. Allow 3 to 5 minutes drying time.



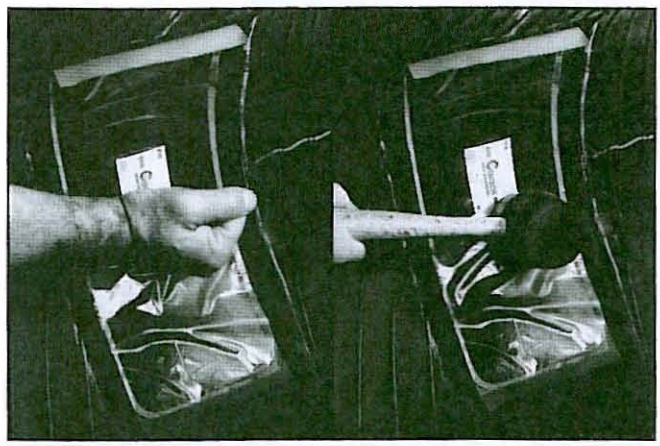
55 Break the perforation of the blue poly backing and remove. **CAUTION:** AVOID TOUCHING THE GRAY CUSHION GUM OF THE REPAIR UNIT AS THIS COULD LEAD TO CONTAMINATION OF THE REPAIR.



56 To maximize the adhesion of the repair unit to the tire, apply a thin even coat of Chemical Vulcanizing Fluid to the back of the repair unit and allow to dry completely. Drying time is 3 to 5 minutes, extend the drying time in cold and/or humid climates.

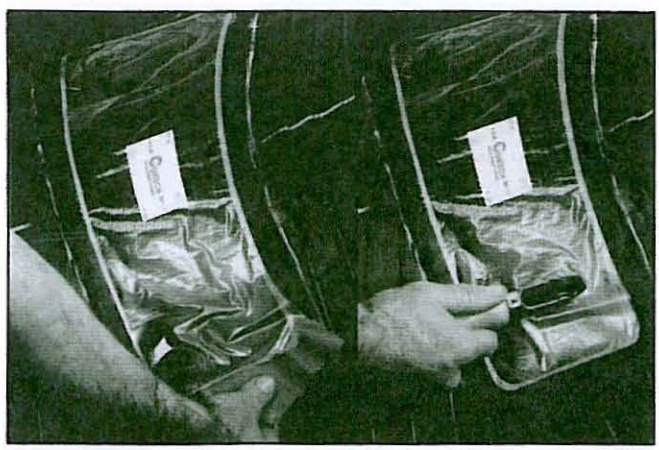


57 Reattach the blue polyethylene leaving the middle third of the repair unit exposed for application into the tire. Reattaching the blue poly prevents contamination of the gray cushion gum.

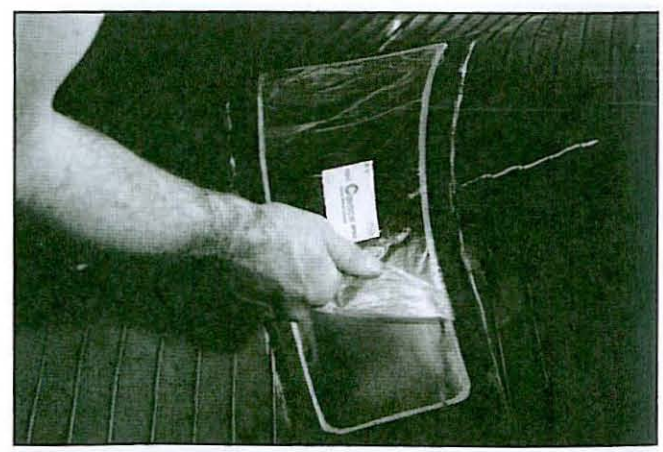


58 With the bead arrow aligned with either bead of the tire, center the repair unit over the injury using the previously placed index lines. Press down the center of the repair. Be sure the tire is in a relaxed position. Also the use of a mallet or an air hammer can aid in full surface contact of the repair unit to the inner liner.

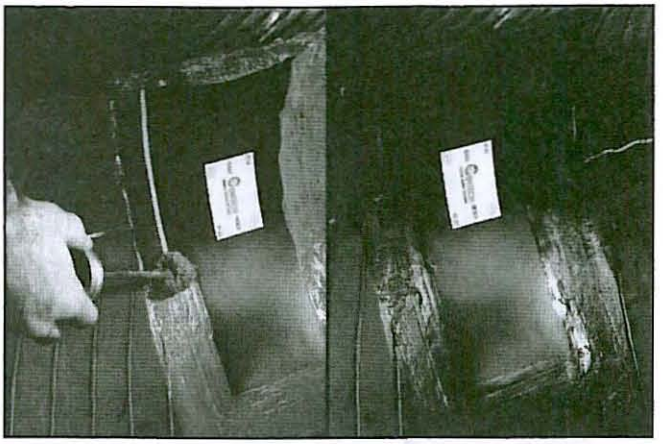
59 Stitch the repair unit into place from the center outward. Exert firm pressure on the stitcher during this process to promote increased adhesion.



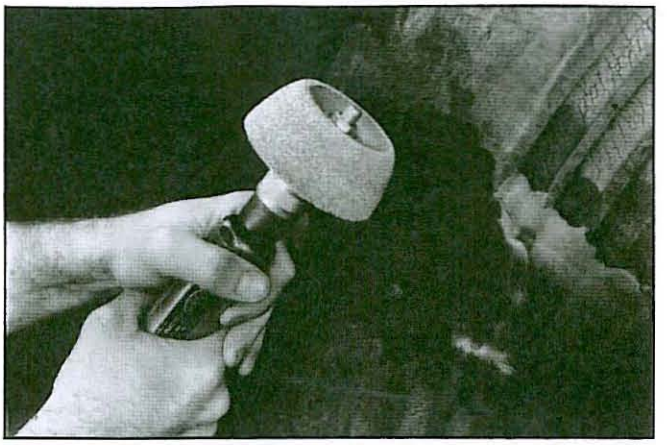
60 Remove the blue poly backing and finish stitching the repair unit into place.



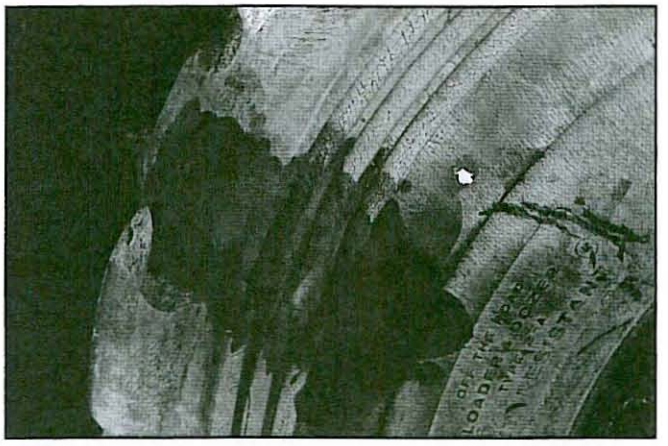
61 Remove the clear poly protective covering.



62 When the tire is of tubeless construction, apply Tech Security Coat #738 to the outer edge of the repair unit and to the overbuffed area. This assures good air retention. Security Coat dries to a black color. (If the tire is tube type, apply Tech Tire Talc #706 to the gray cushion gum).



63 Dress the outer skive back to the original contour of the tire and the original perimeter of the skive. Use a low r.p.m. tool and a fine gritted buffing wheel for cosmetic appearance. For best results, be sure that the buffing wheel is turning out away from the center of the skive.



64 The tire is now ready to be returned to service. If all of the repair procedures have been performed properly, the repair will last the lifetime of the tire even if the tire is retreaded.

NOTE: Use the following as a skive fill trouble shooting guide:

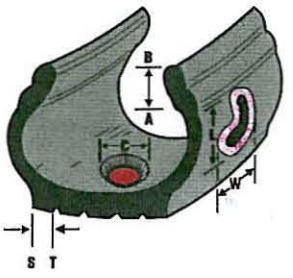
A. Porosity (Tiny air bubbles, pits or gummy)
   1. Lack of pressure
   2. Lack of heat
   3. Not enough cure time

B. Large Air Pockets
   1. Skive was improperly filled (trapped air)

C. Poor Bond to the Skive Area of Cured Rubber
   1. Wet cement
   2. No cement
   3. Contaminated surface
   4. Uncured rubber was defective

ENTECH®

RADIAL REPAIR CHART



A-B - AREA NON-REPAIRABLE
C - MAXIMUM DIAMETER OF DAMAGED RADIAL CABLES
W - WIDTH OF INJURY
L - LENGTH
S-T - TREAD EDGE LIMIT 1½" OR 40mm

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
36.00-50.5	7½", 190mm

Sidewall Injury		Passenger Tire Size		Crown Injury Diameter
Width	Length	125-175	185-255	
1/4" (5mm) 1/4" (5mm)	1/2" (15mm) 2" (50mm)	10 12	10 12	1/4" (5mm)
3/8" (10mm) 3/8" (10mm) 3/8" (10mm)	3/8" (10mm) 1½" (40mm) 2" (50mm)	10 12 14	10 12 14	3/8" (10mm)
1/2" (15mm) 1/2" (15mm)	1½" (40mm) 2" (50mm)	12 14	12 14	1/2" (15mm)
3/4" (20mm) 3/4" (20mm) 3/4" (20mm)	3/4" (20mm) 1½" (40mm) 2" (50mm)	12 12 14	12 12 14	3/4" (20mm)
1" (25mm) 1" (25mm)	1½" (40mm) 2" (50mm)	14 14	14 22	1" (25mm)

REPAIR UNIT IN RED IS TO BE USED FOR CROWN AND SIDEWALL INJURIES.
PASSENGER TIRES CARRYING A SPEED RATING OF H, THROUGH Z SHOULD ONLY BE REPAIRED IN THE TREAD AREA, WITH A MAXIMUM LIMITATIONS OF ¼" (5mm).
NOTE: THIS SECTION REPAIR CHART IS A GUIDELINE ONLY. LOAD, SPEED, AND APPLICATION OF THE TIRE CAN AFFECT THE LIMITATIONS OF SECTION REPAIRS.

Sidewall Injury		Earthmover Tire Sizes			Crown Injury Diameter
Width	Length	14.00-16.00 15.5-20.5 20/65-30/65	18.00-21.00 23.5-26.5 35/65-65/65	24.00-40.00 29.5-50.5 40/65-65/65	
3/8" (10mm)	4-3/8" (110mm)	42	42	44	1" (25mm)
1/2" (15mm) 1/2" (15mm)	2½" (65mm) 6" (150mm)	42 46	42 46	44 46	
3/4" (20mm) 3/4" (20mm) 3/4" (20mm)	2" (50mm) 5½" (140mm) 8" (200mm)	42 46 50	42 46 50	44 46 50	
1" (25mm) 1" (25mm)	5" (125mm) 8" (125mm)	46 50	46 50	46 50	
1-1/4" (30mm) 1-1/4" (30mm)	4" (100mm) 10" (250mm)	46 50	46 50	46 50	1½" (40mm)
1-1/2" (40mm) 1-1/2" (40mm) 1-1/2" (40mm) 1-1/2" (40mm)	3½" (90mm) 18" (250mm) 14" (350mm) 18" (480mm)	46 50 56	46 50 56 60	46 50 56 60	
1-3/4" (45mm) 1-3/4" (45mm) 1-3/4" (45mm) 1-3/4" (45mm)	7½" (190mm) 10" (250mm) 14" (350mm) 18" (480mm)	50 52	50 52 56 60	50 52 56 60	2" (50mm)
2" (50mm) 2" (50mm) 2" (50mm) 2" (50mm) 2" (50mm)	7" (175mm) 10" (250mm) 14" (350mm) 18" (400mm) 19" (475mm)	50 52	50 52 56 60	50 52 56 60 60	
2-3/4" (70mm) 2-3/4" (70mm) 2-3/4" (70mm)	8" (200mm) 10" (250mm) 13½" (340mm)	52	52 56	52 56 60	2¾" (70mm)
3-1/4" (80mm) 3-1/4" (80mm) 3-1/4" (80mm) 3-1/4" (80mm)	7" (175mm) 8" (200mm) 10" (250mm) 12½" (315m)	70 52	70 52 52 56*	70 52 52 56 60*	3½" (90mm)
4" (100mm) 4" (100mm) 4" (100mm)	5½" (140mm) 7½" (190mm) 10½" (265mm)	52	52 56	52 56 60	
4-3/8" (110mm) 4-3/8" (110mm) 4-3/8" (110mm)	5" (125mm) 7" (175mm) 10" (250mm)	52	52 56	52 56 60	
4-3/4" (120mm) 4-3/4" (120mm) 4-3/4" (120mm)	4½" (115mm) 6" (150mm) 9" (225mm)	52	52 56	52 56 60	
5" (125mm) 5" (125mm)	4" (100mm) 5" (125mm)		70 72	70 72	5" (125mm)
6" (150mm) 6" (150mm)	3-1/2" (90mm) 4-1/2" (115mm)		70	70 72	

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

Tube-Type Tire Sizes Tubeless Tire Sizes

Sidewall Injury		Truck Tire Sizes Light Truck / Heavy Truck			Crown Injury Diameter must be 40mm or 1½" from the Tread Edge
Width	Length	6.50-12.50 7-12 215/85-255/85 215/75-285/75	7.50-10.00 9-11 235/80-275-85 245/75-285-75	11.00-14.00 12-16.5 295/80-315/80 315/75-425/65	
1/8" (3mm)	1/8" (3mm)	18	18	18	1/8" (3mm)
1/4" (5mm)	1/4" (5mm)	12	12	12	1/4" (6mm)
1 Cable 1 Cable 1 Cable 1 Cable	1½" (40mm) 3-1/8" (80mm) 4-3/4" (120mm) 6" (150mm)	20 22	20 22 24 26	20 22 24 26	3/8" (10mm)
2 Cable 2 Cable 2 Cable 2 Cable	3/4" (20mm) 1-1/2" (40mm) 2-3/8" (60mm) 5-1/8" (130mm)	20 20 22	20 22 24 26	22 24 26 26	
3/8" (10mm) 3/8" (10mm) 3/8" (10mm) 3/8" (10mm)	1-1/2" (40mm) 2-3/8" (60mm) 3-1/8" (80mm) 5-1/8" (130mm)	20 22 26	26 26 26 26	40 40 42 44	
— 1/2" (15mm) 1/2" (15mm) 1/2" (15mm) 1/2" (15mm)	— 1-1/2" (40mm) 2-3/4" (70mm) 3-3/4" (95mm) 5-1/8" (130mm)	— 22 22 40	33 40* 40 42 44	33 40* 42 42 44	½" (15mm)
— 3/4" (20mm) 3/4" (20mm) 3/4" (20mm) 3/4" (20mm)	— 1" (25mm) 2-1/2" (65mm) 4-3/8" (110mm) 5-1/8" (130mm)	— 22 24	33 40 40* 42 44	35 40 42* 44 44	¾" (20mm)
— 1" (25mm) 1" (25mm) 1" (25mm)	— 2" (50mm) 3-1/8" (80mm) 4" (100mm)	— 22 42	35 42* 42 44	35 44* 44 44	1" (25mm)
— 1-1/4" (30mm) 1-1/4" (30mm) 1-1/4" (30mm)	— 2" (50mm) 3-1/8" (80mm) 4" (100mm)		37 42* 42 44	37 44* 44 46	1¼" (30mm)
— 1-1/2" (40mm) 1-1/2" (40mm)	— 2" (50mm) 3-1/8" (80mm)		37 44* 44	37 44* 46	1½" (40mm)

REPAIR UNIT IN RED IS TO BE USED FOR CROWN AND SIDEWALL INJURIES.
INJURIES CLOSER THAN 1-1/2" (40mm) FROM THE TREAD EDGE ARE CONSIDERED A SIDEWALL INJURY.
NOTE: THIS SECTION REPAIR CHART IS A GUIDELINE ONLY. LOAD, SPEED, AND HIGHWAY APPLICATION OF THE TIRE CAN AFFECT THE LIMITATIONS OF SECTION REPAIR.
REPAIR UNITS WITH * CAN BE USED AS AN OPTIONAL REPAIR UNIT FOR CROWN INJURIES.

Sidewall Injury		Tractor Tire Size		Crown Injury Diameter
Width	Length	8-11 8.3-12.4	12-15 13.6-30.5	
1/4" (5mm)	1/4" (5mm)	12	12	3/8" (10mm)
3/8" (10mm) 3/8" (10mm)	3/8" (10mm) 1-1/2" (40mm)	12 20	12 20	
3/4" (20mm) 3/4" (20mm)	3/4" (20mm) 3" (75mm)	20 22	20 80	3/4" (20mm)
1-1/2" (40mm)	4" (100mm)	80	82	1½" (40mm)
2" (50mm)	3-1/4" (80mm)	80	82	2½" (70mm)
2-1/2" (65mm) 2-1/2" (65mm)	3" (75mm) 4" (100mm)	80	82 82	
2-3/4" (70mm)	2-3/4" (70mm)	80	82	
3-1/4" (80mm) 3-1/4" (80mm) 3-1/2" (90mm)	3-1/4" (80mm) 5-1/4" (130mm) 4-1/2" (115mm)		82 84 84	3½" (90mm)
4" (100mm)	4" (100mm)		84	
4" (100mm)	6-1/2" (165mm)		86	5½" (130mm)
5-1/4" (130mm)	5-1/4" (130mm)		86	

REPAIR UNIT IN RED IS TO BE USED FOR CROWN AND SIDEWALL INJURIES.
INJURIES CLOSER THAN 1-½" (40mm) FROM THE TREAD EDGE ARE CONSIDERED A SIDEWALL INJURY.
NOTE: THIS SECTION REPAR 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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