

Vulcanized Splicing Procedures

**Goldline & Goldline HP
Solid Woven Conveyor Belt**

Using 'A-B' Urethane Bonded Finger Joints

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Scope

These instructions refer to the materials and techniques involved in finger splicing solid woven PVC impregnated conveyor belt and must be strictly adhered to. Fenner Dunlop cannot be held responsible for any modification or shortcut in the operation of this procedure.

The procedure employs urethane paste as the bonding medium and is suitable for all belt types up to and including 15,000 lb/in (2500 kN/m).¹

¹ **Note:** All recommendations for the use of any product or products described herein and all other data or information set forth in this document, whether concerning such products or otherwise, are furnished without any guarantee, warranty, representation or inducement of any kind, whether express or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, and Fenner Dunlop expressly disclaims liability under any theory including, without limitation, contract or negligence, misrepresentation or breach of any obligation relating to the recommendation, data or information set forth herein. Readers and customers are encouraged to conduct their own tests. Before using any product, read its label and all related instructions.

1. Health and Safety

The following instructions and procedures shall be observed at all times during the preparation and manufacture of Fenner Dunlop Polyurethane spliced joints in Fire Resistant Solid Woven Conveyor Belting.

- 1.1 All equipment used in the splicing of solid woven conveyor belt must comply with site regulations relating to the use of electrical equipment.
- 1.2 Only the materials listed in 3.1 are to be used.
- 1.3 The substances used in the Polyurethane splicing paste Part A and Part B are classified as harmful and, therefore, need to be used strictly in accordance with the procedures given below to minimize a hazard to health. The operator must also comply with all on-site Health & Safety requirements.

Air monitoring has shown that during proper use the process emits vapor only during the spreading operation.

In addition to the details supplied on the MSDS, ensure:

- a) The work area is adequately ventilated.
- b) Full protective clothing, including overalls, suitable to PVC or Rubber, gloves and eye protection is worn at all times during the mixing and application of the splicing paste.
- c) Direct skin or eye contact and ingestion are avoided.

Contact with the eyes may produce a strong irritant effect. Chronic or excess exposure to Part B can cause liver damage.

- d) Accidental spillages are cleaned immediately. The application of any absorbent dry powder such as sepiolite sand will facilitate removal of the spillage.
- e) Empty and/or unused tins are not left underground and are disposed of in an approved method.

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1.4 First Aid procedures to be followed in treating persons affected by the mishandling of polyurethane paste are as follows:

a) Eye Contact

Give prolonged irrigation with water to the affected eye and get medical attention.

b) Ingestion

If any of the splicing paste enters the mouth, rinse thoroughly with water. If swallowed drink plenty of water and get medical attention.

c) Skin Contact

Wash the affected area with soap and water. If irritation persists after washing obtain medical attention.

d) Inhalation

The process emits vapors at a low concentration during the spreading operation only. In the unlikely event that a person should experience any respiratory irritation they should be removed into fresh air. If the symptoms persist obtain medical attention.

1.5 Make sure the conveyor belt is properly tagged out, de-energized and secured prior to initiating any work on the system.

2. Tools and Equipment

- 2.1 A press capable of curing the entire splice area in one cure and can be heated up to 110°F +/- 10°F (95°C +/- 5°C) and held there at curing temperature. The press must have a method of measuring platen temperatures.

The press must be capable of holding an even pressure over the whole splice area of a minimum of 40 lb/in² (0.27 MPa).

Recommended Press Platen sizes (Total Vulcanizing Area)

In all cases minimum platen width is calculated by adding 4” (100mm) to the belts’ width, i.e., 36” (900mm) wide belt needs a minimum platen width of 40” (1000mm).

The minimum platen length is shown on the following table:

Table 1

Belt Type	Platen Length
4000 lb/in.	36"
6000 lb/in.	40"
8000 lb/in.	48"
10000 lb/in.	48"
12000 lb/in.	54"
15000 lb/in.	60"

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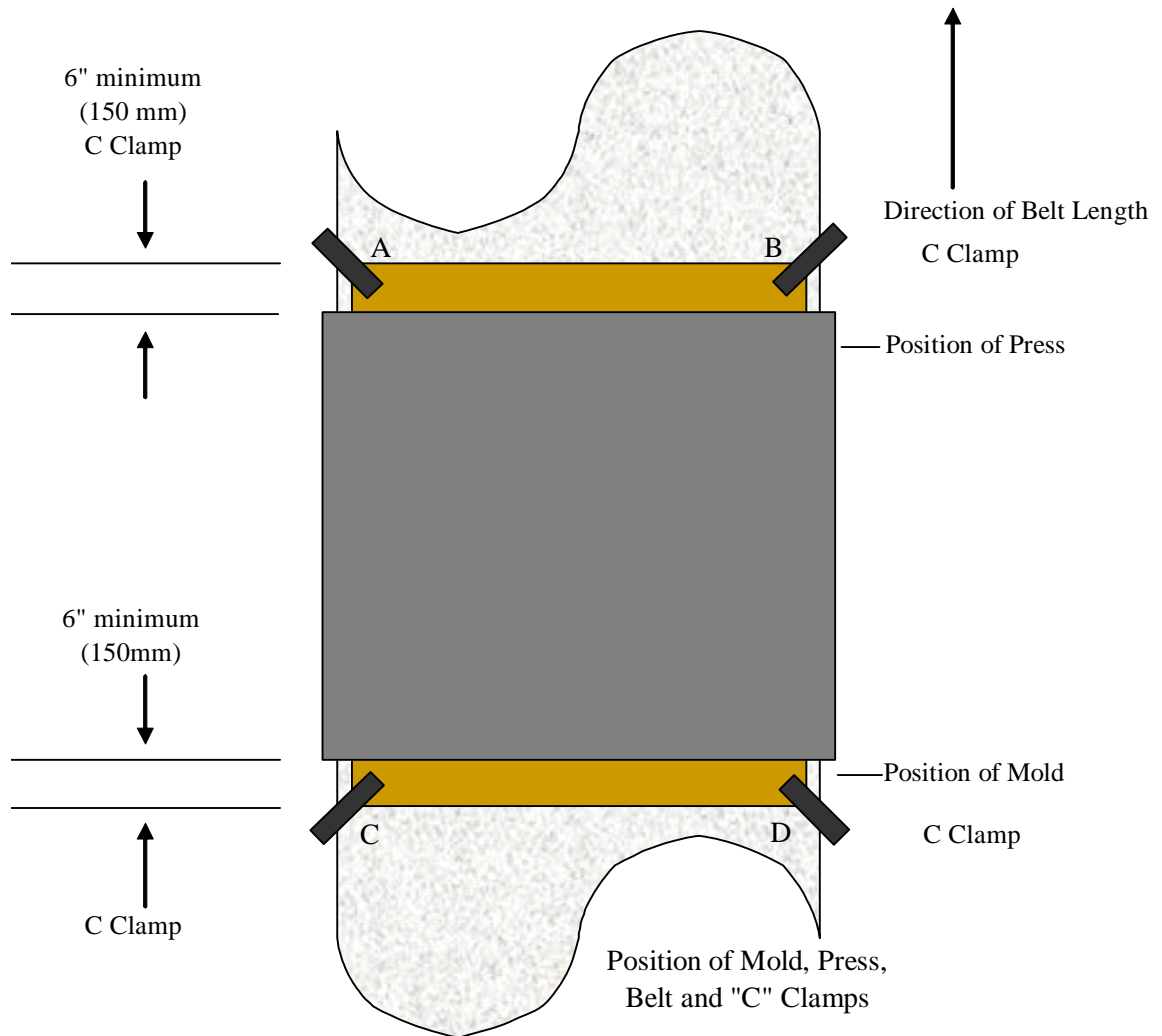
It should be reiterated that the above dimensions are the minimum possible for any belt type or width. Longer platens are always beneficial to the joint by allowing longer finger lengths to be accommodated.

- 2.2 A steel mold Type A or B (see below) to suit belt width and extending a minimum of 6” (150mm) beyond each end of the press. The mold must be the same width as the platen with a permissible tolerance of +0 and -1” (+0mm and -25mm).

A 1/8” (3.0mm) thick steel mold top plate.

4 ‘C’ clamps with a minimum throat length of 6” (150mm)

See Diagram 5.



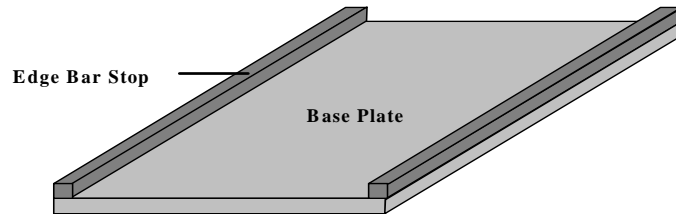
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[Diagram 5](#)

Mold Type 'A' (Diagrams 6 & 7)

2.2.1 Type A mold comprises a 1/8" (3.0mm) steel mold base plate with fixed edge bar stops. The mold, together with edge bars, which are not fixed to the base

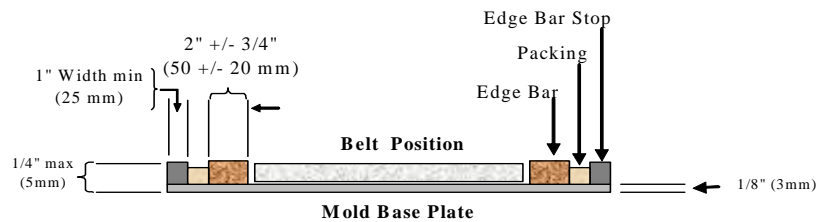
plate, is not more than 1/4" (6.0mm) thick and not less than 1" (25mm) wide. (See "Selection of Mold Edge Bars" below ².)



Mold Type A

Mold Base Plate and Fixed Edge Bar Stops

[Diagram 6](#)



Mold Type A

Mold Base Plate, Edge Bars, Stops, Packing & Belt

[Diagram 7](#)

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² **Selection of Molded Edge Bars**

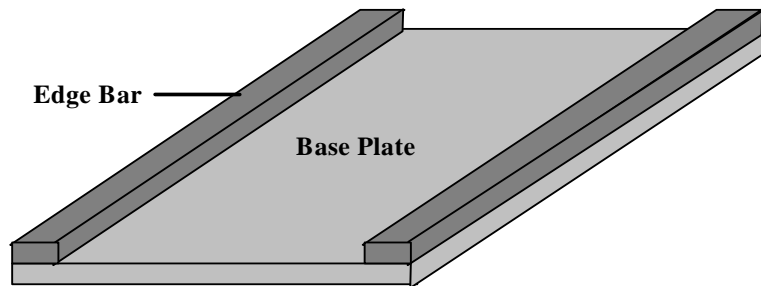
The molded edge bars should be 0.025"–0.060" (0.5mm-1.5mm) less than the belt thickness, have a width of 2" +/-0.75" (50mm +/- 20mm) and a length not less than that of the mold plate. The edge bars should be straight and true.

Notes

- A. The mean thickness is determined by measuring the thickness (before removing covers from the fingers) at eight equidistant points across the width of the belt, excluding any obvious imperfections in the belt surface. Thicknesses should be measured to the nearest 0.010" (0.25mm).
- B. Where the thickness of the belts to be joined differs, the edge bar is to be determined on the basis of the thinner of the two belts.
- C. For the splicing of belts where difference in thickness is greater than 0.080" (2mm), advice should be sought from the Splice Department.

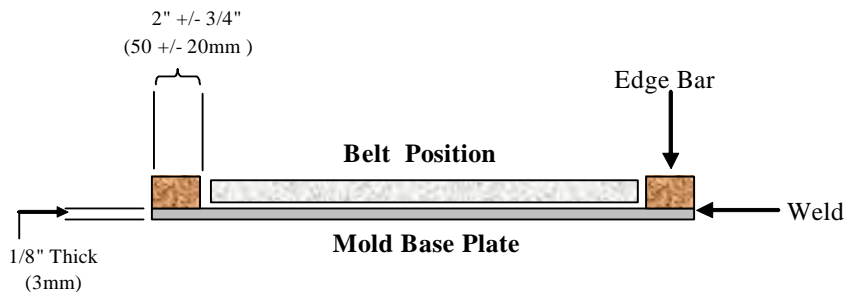
2.2.2 **Mold Type 'B' (Diagrams 8 & 9)**

Type B mold comprises a 1/8" (3.0mm) steel mold base plate without edge bar stops but with edge bars welded to the base plate. (See "Selection of Mold Edge Bars".) It is necessary to use this type of mold when the nominal belt width is less than 6" (150mm) narrower than the platen width, e.g., when a 42" belt is to be spliced on a 46" (1150mm) wide press.



Mold Type B
 Mold Base Plate and Welded Edge Bar

[Diagram 8](#)



Mold Type B
 Mold Base Plate, Edge Bars & Belt

[Diagram 9](#)

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In these circumstances the Type A mold cannot be used, since there is insufficient space between the mold base plate stops and the edges of the belt in which to insert the edge bars.

The edge bars of a Type B mold base plate must be fixed at a distance apart which is equal to the nominal width of the belt to be spliced, less 1%. This type of plate is suitable for splicing all actual belt widths that might be encountered about a particular nominal width.

A belt to be spliced using mold Type B and having a width in excess of this fixed distance will have to undergo edge trimming to attain a compatible belt width.

- 2.3 Suitable belt clamps, pull lifts and chain slings for belt handling and to take the tension in the belt away from the area to be spliced.
- 2.4 Suitable level working surface on which to prepare the belt ends for splicing and protection from environment, if outside.
- 2.5 A straight edge, soft, light colored pencil and tape (or ruler) for measuring and marking out the splice fingers.
- 2.6 Utility knife and spare blades for cutting out the fingers.
- 2.7 Jack plane, cover removal tools, surform and powered radial wire brush (4" dia. x 0.625" wide, 36 gauge steel wire, speed range 800-1400 rpm) for removing PVC/rubber covers from the belts surface.
- 2.8 PVC or rubber gloves and goggles.
- 2.9 Metal scrapers 3"-6" wide (75mm-150mm) to handle and spread polyurethane paste.
- 2.10 Micrometer, or suitable instrument, for measurement of belt thickness.
- 2.11 Absorbent dry powder such as sepiolite sand to facilitate removal of any spillage.
- 2.12 Air circulating oven, capable of maintaining a temperature between 85° and 120°F for melting Part 1 of the urethane paste.
- 2.13 Powered stirrer or flat blade spatula for mixing the urethane paste.
- 2.14 Thermocouples and temperature recording device.

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3. Materials ³

The materials required are:

PVC Splice Materials & Kits		
Part Number	Description	Dimension / Unit
8503-0907	Open Mesh Fabric - White (200 and greater)	.025 x 22" x 10'
8503-0911	A & B Urethane 4lb Kit - w/ open mesh & release	4 Lb Kit - Complete
8503-0912	A & B Urethane 6lb Kit - w/ open mesh & release	6 Lb Kit - Complete
8503-0913	A & B Urethane 4lb Kit - w/o open mesh & release	4 Lb Kit - Liq Only
8503-0914	A & B Urethane 6lb Kit - w/o open mesh & release	6 Lb Kit - Liq Only
8503-0600	Double Release Paper	62" x 100'

3.1 Open mesh fabric – White.

3.2 Urethane bonding paste, supplied in three separate containers:

Part A Fenner Dunlop No. 5549, 2-1/2 liter can containing the pre-polymer with additives. A liquid at temperatures above 85°F (30°C) or a waxy solid below 85°F (30°C).

Part B Fenner Dunlop No. 5504, 500 ml can containing the curative, a cream colored liquid.

Part C Pigment additive.

3.3 The bonding paste, Part A, has the air displaced from the container with dry nitrogen and the container lid must not be disturbed until the parts are due to be mixed together. The Part A, ingredient should be stored at room temperature or below.

3.4 Silicone treated paper for lining the press.

³ These materials must be kept dry at all times.

4.0 Procedures for Cutting to Correct Belt Width

(Ensuring the Belt Edges are Parallel and Constructing Datum Lines)

4.1 Cutting to Width and Ensuring the Belt Edges are Parallel

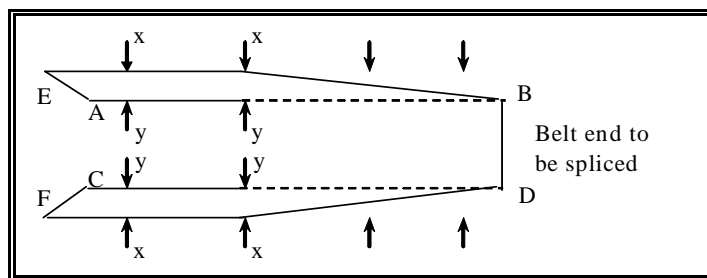
The method to be used is one of three, given below, under 4.1.1, 4.1.2 and 4.1.3. The method used depends on the condition of the belt edges (i.e., sound or unsound) and on the type of mold plate to be used (i.e., Type A or B).

4.1.1 Belt with Sound Edges Mold Type A

4.1.1.1 Trimming the belt will **not** be necessary **unless** one belt end is wider than the other belt end to be joined. If one end is wider, cut the wider belt to the same width as the narrower belt, cutting off equal amounts from both sides of the belt. However, it can be advantageous to make the joint slightly narrower than the parent belt to reduce the risk of edge damage.

4.1.1.2 Construct the datum line as detailed in paragraph 4.2.

4.1.2 Belt with Unsound Edges Mold Type A



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[Diagram 1](#)

4.1.2.1 Refer to Diagram 1 above and proceed as follows:

4.1.2.2 Measure the belt width at regular intervals of 12" (300mm) working back from the end to be spliced until the belt width is constant at consecutive intervals – xx.

- 4.1.2.3 Measure towards the center of the belt (xy) a distance sufficient to allow the most worn edge to be removed from the splice area. Make sure the distance is sufficient to reduce the belt width to that of the other belt end. Project a line, AB, forward to the splice area.
- 4.1.2.4 Repeat the procedure at the other edge of the belt ensuring that the distance (xy) at each side of the belt is equal. Draw in line CD.
- 4.1.2.5 Use lines AB and CD to trim the belt edges parallel at the splice area.
- 4.1.2.6 To avoid “steps” in the belt edges at A and C, trim small amounts off at both edges back up the belt along AE and CF, if needed, to achieve a tapered edge.
- 4.1.2.7 Construct the datum lines as detailed in paragraph 4.2.

4.1.3 Belt with Sound or Unsound Edges Mold Type B



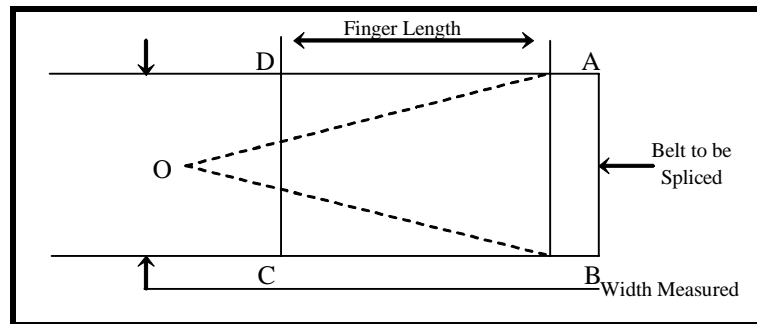
[Diagram 2](#)

Refer to Diagram 2 and proceed as follows:

- 4.1.3.1 Measure the belt width at regular intervals of 12” (300mm) working back from the end to be spliced until the belt width is constant at consecutive intervals – xx.
- 4.1.3.2 Measure and record the width of the belt (W1).

- 4.1.3.3 Note the distance between the welded edge bars of the mold plate (W2).
- 4.1.3.4 Measure towards the center of the belt x'y' a distance equal to $(W1 - W2) / 2$ in preparation for reducing the belt width to suit the width of the mold plate. Draw in the line A'B'.
- 4.1.3.5 Repeat the procedure at other edge of belt ensuring that the distance x'y' at each side of the belt is equal, draw in the line C'D'⁴.
- 4.1.3.6 Cut along the lines A'B' and C'D', ensuring that the belt will be at the required width and has parallel edges at the splice area.
- 4.1.3.7 To avoid 'steps' in the belt edges at A' and C', trim additional small amounts off at both edges up the belt along A'E' and C'F' to achieve a tapered edge.
- 4.1.3.8 Construct the datum lines as detailed in paragraph 4.2.

4.2 Constructing Datum Lines



[Diagram 3](#)

- 4.1.1 Refer to Diagram 3 and proceed as follows:
- 4.2.2 Measure the width of the belt a convenient distance back from the belt end [finger length plus 3" (75mm)], halve the width and mark the mid-point O.

⁴ If, after drawing in lines A'B' and C'D' there are worn belt edges along these lines, then Mold Type B cannot be used. In this case, the worn edges would have to be cut out and the belt becomes too narrow for Mold Type B. In this eventuality, Mold Type A would have to be used and procedures followed from 4.1.2.

With center O, mark the belt edge at the position where the end of the first finger is to be located as A.

Using the same measurement and center O, mark the opposite belt edge as B. Join A and B.

- 4.2.3 Measure back from A, along the belt edge a distance equal to the finger length and mark the position as D.

Measure back from B, along the belt edge, a distance equal to the finger length and mark the position as C. Join C and D.

- 4.2.4 CD is the datum for the base line of the finger and AB the datum line for the tips of the fingers.

5.0 Marking and Cutting Belt End

Current finger dimensions for belt types up to 15000 lb./in. (2500 kN/m) are shown below.

Table 2

Belt Type		Finger Dimensions
Up To	4000 lb/in.	24" x 2"
	5000 lb/in.	28" x 2"
	6000 lb/in.	28" x 2"
	8000 lb/in.	36" x 2"
	10000 lb/in.	36" x 2"
	12000 lb/in.	42" x 2"
	15000 lb/in.	48" x 2"

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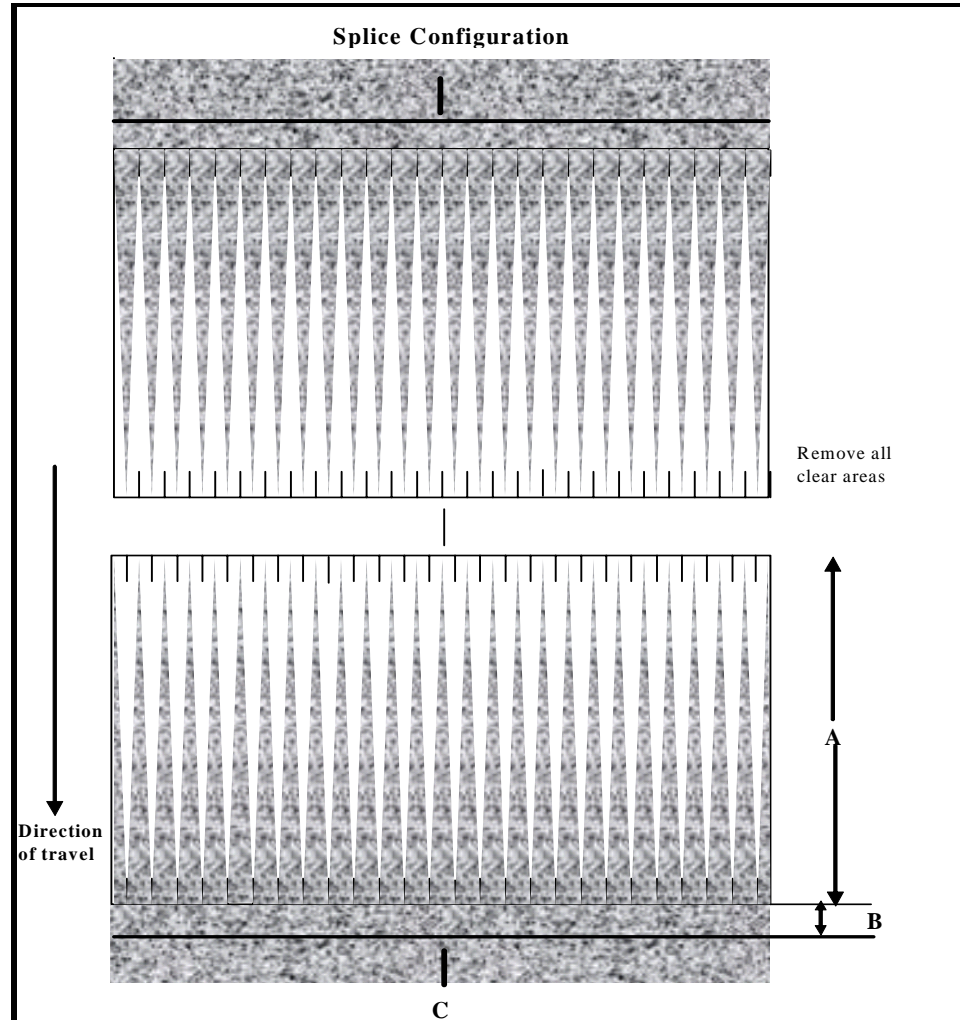
The above figures are minimum lengths. If longer presses are available, it is sometimes advisable to utilize the increased length by making a longer joint. (Consult Fenner Dunlop for recommendations.)

5.1 Marking Out

- 5.1.1 For finger lengths of 28" (700mm), the datum line CD will have been drawn across the belt at 28" (700mm) from the squared end (see diagram in Part 4.2) to indicate the position of the bases of the fingers. Draw a further line at 30" (750mm). The 30" (750mm) mark indicates the extent to which the belt cover is removed. The markings for belts up to and including Type 15000 (2500k) are shown in Diagram 4 and Table 1.
- 5.1.2 Mark the centerline of the belt ends perpendicular to the lines already drawn and the squared belt ends. These lines are used to lay the joint correctly and ensure that the joint is square and should be drawn at least 12" (300mm) beyond the parallel lines.
- 5.1.3 Start with the belt that will be on the leading part of the joint when running. It will be obvious, from studying Diagram 4, that one end of the belt will be divided into 'half' fingers at the edges of the belt. THESE HALF FINGERS MUST BE MARKED AND CUT ON THE LEADING PART OF THE JOINT IN ORDER TO PREVENT EDGE DAMAGE. From the measured belt width, calculate the number of fingers necessary to give an edge finger of not less than 1" (25mm) in width ⁵.

⁵ Dependent on the belt width the centerline from 5.1.3 will either fall between two fingers or divide the central finger.

The fingers are marked off 2" (50mm) wide across the 28" (700mm) line commencing either 1" (25mm) or 2" (50mm) from each side of the centerline, i.e., for even number of 'whole' fingers commence 1" (25mm) from this line.



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[Diagram 4](#)

The tips of the fingers are marked on the belt end at points in between the previous markings, again working outwards from the centerline.

- 5.1.4 The other (trailing) part of the joint is then marked out so that the fingers will mate with the first part. This part of the joint will have 'whole' fingers, but the

other two may be wider than 2" (50mm) to accommodate the actual belt width. This is illustrated in Diagram 4.

5.1 Cutting

Using a utility knife and a straight edge, cut from point to point as marked in 5.1 giving 28" (700mm) long fingers. Care should be taken to ensure that the cut is perpendicular to the belt surface.

A useful check on correct marking and cutting is that the tip of a finger on either the leading or trailing side of the joint, should always coincide exactly with the center line of the joint.

6.0 Belt Preparation

Table 3

	Belt Type						
Dimension	4000	5000	6000	8000	10000	12000	15000
A	24"	28"	28"	30"	30"	42"	48"
A + B	26"	30"	30"	38"	38"	44"	50"
C	2"	2"	2"	2"	2"	2"	2"

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After marking and cutting the fingers as above, proceed as follows.

6.1 New Belt

For all belting where the covers are intact, remove the cover from both surfaces of the fingers to a line ⁶ 2"-3" (50mm-75mm) beyond the base of the fingers until the knuckles of the weave are just visible. Two techniques of cover removal are available as follows:

1. Standard PVC up to .04" (1mm). (See paragraph 6.1.1.)
2. Thick PVC/Nitrile (see paragraph 6.1.2).

6.1.1 The top layer of PVC is removed with a jackplane. This is achieved, by laying the splice fingers on a flat surface. The operator draws the plane towards himself over one finger at a time assisted by a second operator pushing the plane from the base end of the fingers.

6.1.2 Removal of the PVC covers can also be achieved by the use of a sharp knife or a cover removal tool. This is essentially a flat bladed instrument that cuts away the cover in one piece. This is a two-man operation.

6.1.3 For all belts the remaining PVC must be completely removed to expose the textile carcass over the entire splice area using the powered brush. The direction of rotation of the brush must be kept parallel with the longitudinal (warp) direction of the belt in order to avoid cutting across the strength members. The belt surface should have a light nap finish after brushing.

⁶ **DO NOT** under any circumstances score across this line with a knife to facilitate clean removal of the flap of covers. This flap should always be cut off horizontally to avoid damage to the belt carcass. This technique is particularly suitable when using the cover remove tool (crt). See 6.1.2.

The brush must be changed after every splice.

- 6.1.4 Lift the fingers individually and roughen the finger edges along their entire length.
- 6.1.5 On completion of finger preparation remove all loose material from the splice area.
- 6.1.6 Where the belt is obviously wet, dry the prepared fingers by placing both ends of the belt in the press with the platens held about 1" (25mm) apart for a period of 1 ½ - 2 hours at a temperature of 200°F +/- 10°F (95°C +/- 5°C).

6.2 **Worn Belt**

Where the textile is visible or has been exposed, the advice of the belt manufacturer must be obtained.

7.0 Splicing Procedure ⁷

Table 4

Weight Needed for Belt Width and Size (Mixed Compounds) A.B. Kits						
Type		3500	4000	5000	6000	8000
Belt Width (in)	8	4	4	4	6	6
	16	4	6	8	10	10
	24	6	6	10	12	12
	30	6	8	10	12	14
	36	8	8	12	14	16
	42	10	12	14	16	18
	48	12	12	14	18	18
	60	16	16	18	20	22
Finger Length		24"	24"	28"	28"	36"

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- 7.1 Prepare compound in sufficient quantity by using values of A + B taken from Table 2.
- 7.2 Wherever possible the splice should be made up on a level surface to prevent the polyurethane paste flowing away from the splice area during the building process.
- 7.3 Prepare the fingers as instructed in Sections 5.0 and 6.0.
- 7.4 Locate the mold and edge bars on the bottom of the press, which must be at 85°F (30°C) or less and cover with release paper. The thickness of the edge bars is selected as in Section 2.0 and related notes.

Place the edge bar against the edge of the belt. Adjust any distance between the edge bars and the retaining stops with packing bars to prevent the edge bars from slipping. Any packing bars used must be of uniform width and no thicker than the edge bar.

- 7.5 Mark out on the release paper or on the edge bars the boundaries of the prepared areas of the splice, plus an amount to allow for sufficient ‘pull-out’ to ensure the correct finger gap in the final splice. The amount of ‘pull-out’ is critical to ensure a good

⁷ Throughout the splicing procedure wear protective clothing and following the advice in Section 1.

glue-line and can vary slightly from splice to splice depending on the exact manner of cutting and roughing of the fingers. The approximate ‘pull-out’ for 28” (700mm) wide belt is 2” (50mm). The ideal ‘pull-out’ is best estimated as detailed paragraph 7.5.1.

7.5.1 Clamp the ends of to the mold plate using the “C” clamps allowing for the approximate ‘pull-out’ shown in Table 5. Lay the prepared belt ends together and observe the appearance.

If the fingers are tight and any lifting or distortion of the splice area is apparent, then the glue-line will be too small and further ‘pull-out’ is required.

If the fingers are slack and gaps between the fingers are visible, then the glue-line will be two wide and less ‘pull-out’ is required.

7.5.2 The approximate ‘pull-out’ for each belt type is shown in Table 5.

Table 5

Belt Type	Pull Out
Up To 8000	2"
10000	2-1/2"
12000	3"
15000	3"

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7.6 Locate the belt fingers on the mold ensuring the boundaries of the prepared splice are lined up with the marks as defined in 7.5. Ensure the splice is square by measuring the two edges from the base line of each set of fingers. If the measurements are of equal length, then the splice is square.

Clamp each end of the belt in the mold to ensure lateral movement between the fingers, which is essential to allow adequate penetration of the polyurethane paste. If this movement is not apparent, unclamp, adjust accordingly and re-clamp.

Mark on the belt surface two reference lines AB and CD (see Diagram 5) across the belt directly above the two ends of the mold base plate. Pull back the fingers ensuring that the marks are visible and hold the fingers in this position either manually or by tying them back while the bottom surface of the splice is built.

7.7 Mix the polyurethane bonding paste, Parts A and B, as described in **Section 8 “Polyurethane Bonding Paste – Mixing Procedure.”**

- 7.8 Place the silicone paper over the entire splice area then cover the splice area with a thin even layer of bonding paste using a metal spreader.
- 7.8.1 If non-woven fabric is to be used, cut to size and lay on top of the silicone paper. Spread the polyurethane over the entire area and then turn the fabric over and recover with paste. Then proceed as follows:
- 7.9 Lay the first piece of open mesh fabric ⁸ on the polyurethane paste. Ensure there are no folds or creases and that the fabric is completely coated with paste so that subsequent placement of the fingers gives adequate contact with the polyurethane paste.
- 7.10 Lay the second piece of open mesh fabric on top of the first and cover with another thin layer of bonding paste.
- 7.11 Carefully place the fingers in their final positions and then apply light pressure with the hands to ensure that the lower surfaces are completely coated.
- 7.12 Cover the top of the splice with a thin layer of polyurethane paste and with a scraper ensure that all the exposed cut finger edges are thoroughly coated. If necessary, this can be achieved by lifting the individual fingers and working the paste onto the cut finger edges. Ensure all surfaces are thoroughly coated with polyurethane paste.
- 7.13 Fold the open mesh fabric across the top of the splice ensuring a 2" – 4" (50mm – 100mm) overlap is obtained. This should be in a slightly bias configuration to avoid a line of double fabric in line with the finger gap.
- 7.14 Cover the open mesh fabric with more polyurethane paste.
- 7.15 Fold over the second piece of open mesh fabric making sure the overlap does not coincide with that of the first and cover with polyurethane paste.
- 7.15.1 If the non-woven, felt-like fabric is being used this should be placed over the splice area and covered with polyurethane paste. Turn the fabric over and recover with paste.

⁸ The open mesh white fabric has high stretch in one direction and should be placed longitudinally on the belt (i.e.- as it comes off the roll = direction of belt travel).

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7.16 Leave the splice stand for 5 minutes to allow any trapped air to be released. Fold the silicone paper over the top of the splice. Apply light hand pressure to the paper moving outwards from the center of the splice longitudinally to remove any air pockets trapped beneath the silicone paper.

7.17 Remove the 'C' clamps. ⁹

At this stage check that each of the two ends of the top mold plate lie directly above the two reference lines AB and CD marked on the belt surface in 7.6. ¹⁰

7.18 Place the top platen of the press and the pressure system into position on the top mold plate.

7.19 Heat the press to 150°F - 175°F (70°C - 80°C) and apply a pressure of 40 lb.in⁻² (0.27MPa). ¹¹

7.20 Increase the temperature to 230°F +/- 10°F (110°C +/-5°C) and hold for 2 hours before switching off the power supply. As previously mentioned it is imperative that accurate monitoring of this vulcanizing temperature is carried out. This is best achieved by inserting thermocouples into the joint surface (on top of silicone paper).

7.21 The press is to remain closed and under pressure until the temperature of the platens has dropped below 150°F (70°C). Force cooling can be used.

7.22 Open the press. Remove the splice from the mold and trim the 'flash' from the edges of the splice. An absence of flash indicates insufficient polyurethane paste has been used and the splice may not give satisfactory service. Cool the splice to 85°F (30°C) or less before the belt is put into service. Dousing with cold water is acceptable.

⁹ While these clamps are being removed, take care not to stand on the belt or subject the belt to any stress that may cause the two belt ends to draw apart. Cover the splice with the top mold plate. Clamp the top mold plate to the mold using the four 'C' clamps, one at each corner.

¹⁰ If the lines are outside the ends of the top mold plate, this indicates that the two belt ends have drawn apart and that the fingers are slack. In this eventuality the splice is UNACCEPTABLE and the splice should be REMADE commencing at stage 7.6 of the procedure.

Drawing apart of the belt ends as described above, should not occur if all stages of the procedure are correctly followed, particularly the instruction in the Footnote in 7.1.7 above.

¹¹ This is the pressure that is applied on one square inch of splice and is not the hydraulic pressure. On a Wagener press, pressure should be calculated for the particular press in use taking into account ram diameters (area) and hydraulic pressure where necessary.

8.0 Polyurethane Bonding Splice – Mixing Procedure

It is necessary to mix parts A and B of the polyurethane bonding paste prior to commencing the splice as follows:

- a) If solid, Part A will require melting at to 85° - 120°F (30° - 50°C) for at least 4 hours.
- b) Before adding Part B to Part A, shake the contents of Part B for about 2 minutes.
- c) Before adding Part B to Part A, examine Part A to ensure that it is still warm and mobile. If it has cooled and become very viscous, mix with a powered stirrer for sufficient time to produce a uniform mobile paste or rest the tin on a heated platen. Mix by hand using a 2" wide spatula, or other suitable instrument to ensure even heat distribution throughout the paste. The paste must not be overheated during this process to 85° - 120°F (30° - 50°C).
- d) Immediately before splice building commences, add Part B to Part A. Thoroughly mix the two components with the 2" spatula until the mixture is lump free and of uniform color. Excessive air entrapment should be avoided.
- e) On completion of mixing, replace the lid on the container until the paste is required. Allow the paste to stand for at least 5 minutes to allow excess air to escape.