

BOMBARDIER

Toronto (de Havilland)

PROPRIETARY INFORMATION

PPS 38.05

PRODUCTION PROCESS STANDARD

STITCHING OF FIREBLOCKING MATERIAL

- Issue 3
- This standard supersedes PPS 38.05, Issue 2.
 - Vertical lines in the left hand margin indicate changes over the previous issue.

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Quality

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1 SCOPE

- 1.1 This Production Process Standard (PPS) specifies the procedure and requirements for the stitching of fireblocking material.
 - 1.1.1 This PPS complements the engineering drawings that specify its use as an authorized instruction. The procedure specified in this PPS must be followed to ensure compliance with all applicable specifications. In general, if this PPS conflicts with the engineering drawing, follow the engineering drawing. The requirements specified in this PPS are necessary to fulfil the engineering design and reliability objectives.
 - 1.1.2 Refer to [PPS 13.26](#) for the subcontractor provisions applicable to this PPS.
 - 1.1.3 Procedure or requirements specified in a Bombardier BAPS, MPS, LES or P. Spec. **do not** supersede the procedure or requirements specified in this PPS. Similarly, the procedure and requirements specified in this PPS are not applicable when use of a BAPS, MPS, LES or P. Spec. is specified.

2 HAZARDOUS MATERIALS

- 2.1 Before receipt at Bombardier Toronto (de Havilland), all materials must be approved and assigned Material Safety Data Sheet (MSDS) numbers by the Bombardier Toronto (de Havilland) Environment, Health and Safety Department. Refer to the manufacturer's MSDS for specific safety data on any of the materials specified in this PPS. If the MSDS is not available, contact the Bombardier Toronto (de Havilland) Environment, Health and Safety Department.

3 REFERENCES

- 3.1 Federal Standard 751 (FED-STD-751) - Stitches, Seams, and Stitching.
- 3.2 [PPS 13.26](#) - General Subcontractor Provisions.

4 MATERIALS AND EQUIPMENT

4.1 Materials

- 4.1.1 Thread and fireblocking material as specified on the engineering drawing.

4.2 Equipment

- 4.2.1 Suitable sewing machine.

5 PROCEDURE

5.1 General

- 5.1.1 The purpose of fireblocking material is to delay the spread of fire to the foam cushion of seats.
- 5.1.2 Stitch the fireblocking cover for seat cushions in the sequence specified in [Flow Chart 1](#).
- 5.1.3 At the start and end of each run, **lock** the stitches by back stitching for a distance of 1/2" - 3/4".
- 5.1.4 All stitching of fireblocking material, or stitching of fastening tapes or labels to fireblocking material, must use stitch type 301 according to Federal Standard 751 with 8 - 10 stitches per inch (see [Figure 1](#)).

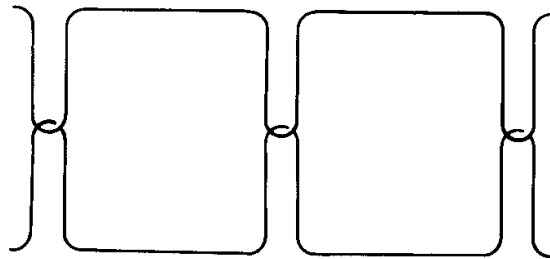


FIGURE 1 - STITCH TYPE 301

5.2 Stitching of Fastening Tapes and Labels

- 5.2.1 Stitch fastening tapes and labels to the fireblocking material as follows:
 - Step 1. Position the fastening tape or label on the fireblocking material according to the engineering drawing (see [Figure 2](#)).
 - Step 2. Stitch, using a suitable sewing machine, the fastening tape or label to the fireblocking material using stitch type 301 according to Federal Standard 751 with 8 - 10 stitches per inch. At the start and end of each run, **lock** the stitches by back stitching for a distance of 1/2" - 3/4".

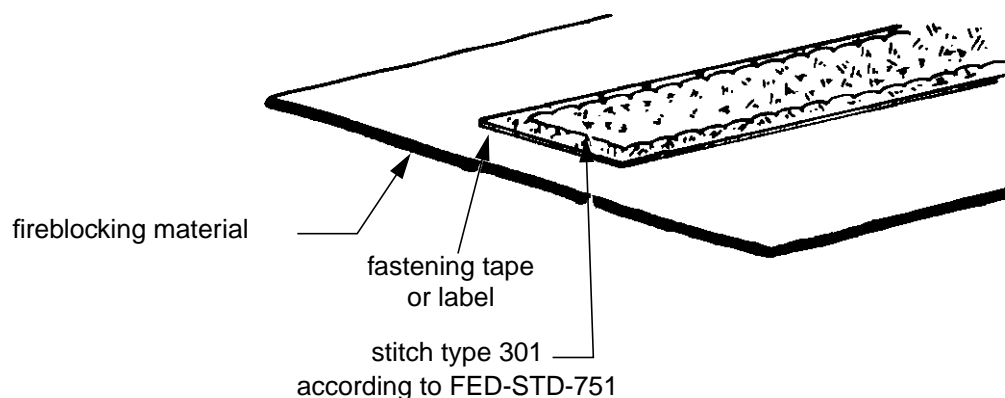


FIGURE 2 - STITCHING OF FASTENING TAPES OR LABELS

5.3 Forming of Pouch

5.3.1 Form the pouch as follows:

- Step 1. Stitch, using a suitable sewing machine, the applicable pieces of fireblocking material together such that a pouch is formed into which the seat cushion may be inserted.
- The seams of the pouch must be seam type SSa-1, according to Federal Standard 751. This seam is formed by placing the two edges together, with the backing sides of the fireblocking material facing each other, and stitching the two pieces together with one row of stitches (see [Figure 3-A](#)).
 - Use stitch type 301 according to Federal Standard 751 with 8 - 10 stitches per inch to close the seams of the pouch. At the start and end of each run, **lock** the stitches by back stitching for a distance of 1/2" - 3/4".
- Step 2. Turn the completed pouch inside out such that the backing side of the fireblocking material faces outwards and the seams appear according to [Figure 3-B](#).
- Step 3. Insert the cushion into pouch.

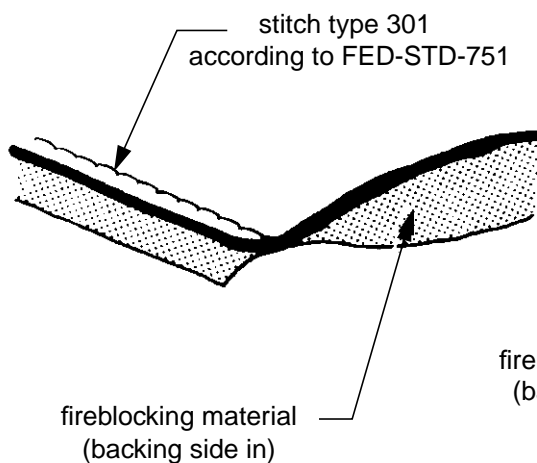


FIG. 3-A

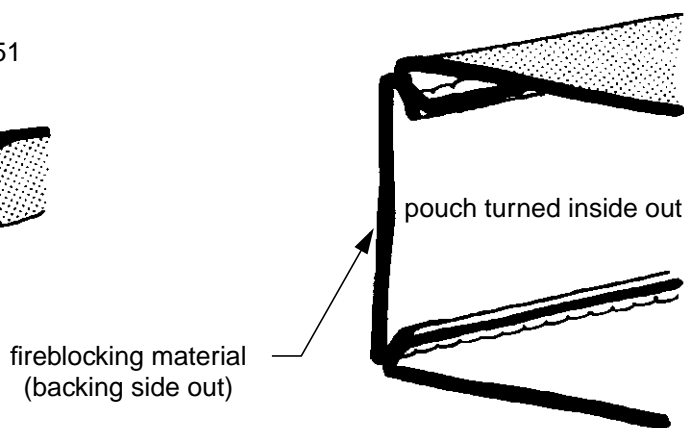


FIG. 3-B

FIGURE 3 - STITCHING OF POUCH

5.4 Stitching of Final Closing Seam

5.4.1 After insertion of the seat cushion, stitch the final seam as follows:

- The closing seam must be SSc-1, according to Federal Standard 751. Form the closing seam by turning the edge of both pieces of fireblocking material to the inside and stitch, using a suitable sewing machine, to close with one row of stitches (see [Figure 4](#)).
- The closing stitch must be stitch type 301 according to Federal Standard 751 with 8 - 10 stitches per inch. At the start and end of each run, **lock** the stitches by back stitching for a distance of 1/2" - 3/4".

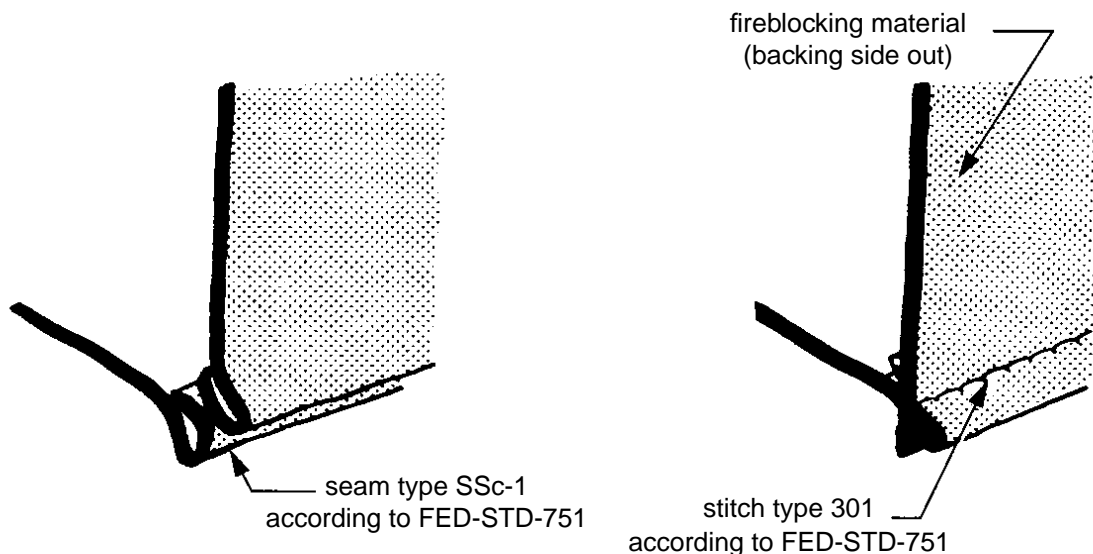


FIGURE 4 - CLOSING SEAM

6 REQUIREMENTS

- 6.1 The fireblocking material must cover the cushion, backing side out.
- 6.2 Fireblocking material must be stitched using stitch type 301 with 8 - 10 stitches per inch.
- 6.3 At the start and end of each run, the stitches must be **locked** by back stitching for a distance of 1/2" - 3/4".
- 6.4 Seam types must be as specified herein.

7 SAFETY PRECAUTIONS

- 7.1 *Cut thread used to stitch fireblocking material using a suitable pair of scissors or knife. Do not attempt to break by hand.*

8 PERSONNEL REQUIREMENTS

- 8.1 Personnel responsible for the stitching of fireblocking material must have a basic understanding of the procedure and requirements as specified herein and must have exhibited their familiarity to their supervisor.

FLOW CHART 1 - SEQUENCE FOR STITCHING FIREBLOCKING COVERS FOR SEAT CUSHIONS

