



DETERMINATION OF FLEX FOLD OF TEXTILE TRIM MATERIALS

Application

This procedure is used to determine the durability of sewn and dielectrically bonded seams of trim assemblies and also of individual trim materials.

Equipment Required

Ford Flex Fold Tester Model CF15F or equivalent device

Must be provided with flat bar clamps which allow a maximum 300 mm width of test specimens to be accommodated. In addition, for each clamp, a weight of 13.6 kg-force is required.

Source: Custom Scientific Instruments
Division of Atlas Electric Devices
13 Wing Drive
Cedar Knolls, New Jersey 07927
Telephone (201) 538-8500
Fax (201) 984-6793

or

Schap Specialty Machine, Inc.
17309 Taft Street
Spring Lake, MI 49456
Telephone (616) 846-6530
www.schapmachine.com

Sewing Machine

Capable of producing a lock stitched seam as described under Procedure, Para. 2.

Singer 211 U566

or

Juki lock stitch industrial type

Source: Singer Sewing Machine Co. Ltd.
415 Bonhill Street
London E.C.2

Source: M.J. Foley Company
16580 Eastland
Roseville, MI 48066
Phone (810) 779-5050
Fax (810) 776-1278

Date	Action	Revisions	Rev 03
2013 12 03	Revised	Editorial - Removed Atlas, added Schap Specialty Machine under source.	L. Schmalz, NA
2007 09 25	Revised	Revised Ford Flex Fold Tester Page 1, Tread Page 2, Procedure 2, 3, & 4 Page 3,	M. Dumitrescu
1995 08 23			



Needle

Type 180/24 (1.8 mm dia, set R (round point)) – unless otherwise specified in the Engineering Material Specification.

Source: Singer Sewing Machine Co. Ltd. or M.J. Foley Company
See Above

or

Eurosew Ltd.
7 Stafford Place
Moulton Park Ind. Estate
Northampton
Northamptonshire
NN3 1NN

or

Ferd. Schmetz GmbH
512 Herzogenrath, Merkensteinerstrasse 53
Germany

or

Approved alternative

Thread

WSD-M15H51-D/E/B2 respectively or equivalent, for top and bottom, unless otherwise specified in the Engineering Material Specification.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5% relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

Method "A" for Sewn Trim Assemblies

1. Using the material to be tested, prepare the test assembly in line with the design released for production.
2. Cut 4 warp or wales specimens each 250 x 300 mm in size with the longer dimension parallel to the weft or courses direction, and 4 weft or courses specimens with the longer dimension parallel to the warp or wales direction.
3. Sew 2 pairs of warp or wales specimens and 2 pairs of weft or courses specimens with the sewn seams parallel to the longer dimension (as shown in drawing). Tie the loose ends of the stitching threads at either end. The ends of the stitching threads may also be secured by sewing an adjacent piece of fabric or sealing the thread ends with adhesive.
4. Bring the flexing arm of the tester into a mid-point position, and clamp the test specimen assembly in with the 300 mm side parallel to the clamps.
5. Adjust the tester for a stroke length of 89 mm.
6. Apply the 13.6 kg-force weights to the 300 mm test specimen width.

