

Solution to yarn breakage

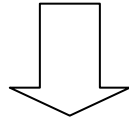
Sewing consultation format

Company	A	Person in charge		date	
Division	...			Required due date	年 月 日
Fabrics name	...	Fabrics No.	...	Material	100% cotton
Item	women coat				
<p>problem</p> <p>The yarn breakage would be found only after washing.</p> <p>(The place of yarn breakage: lockstitch and eyelet buttonhole)</p> <p>For lockstitch and eyelet buttonhole, what kind of needle will be suitable for No.30 sewing thread.</p> <p>[Machine condition]</p> <p>Machine type lockstitch machine eyelet buttonhole</p> <p>Presser foot standard</p> <p>Throat plate for three feed dog (1 . 6 mm)</p> <p>Feed dog standard</p> <p>Thread Filament No.50 No.30</p> <p>Machine speed 2000rpm/min</p> <p>Needle lockstitch No.14 eyelet buttonhole No.14</p> <p>Material of fabric twill 100% cotton</p>					

Testing flow

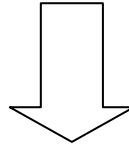
The place of yarn breakage

- sleeve
- eyelet buttonhole
- stitch



Required test condition

- 3 layers
- machine speed : 2000rpm/m
- machine type : lockstitch



Check by microscope for fabric condition to.

- S point type
- KN type
- KN type (small size)

Enlarged pictures of sewing with different needle types



DB × 1 No.14
Yarn is cut



DB × 1 S No.14
Yarn breakage can be reduced to 50-60%.



DB × 1 KN No.14
Yarn breakage can be reduced to 30-40%



DB × 1 KN No.10
Yarn breakage can be reduced to 4-5%

Result

- Lockstitch : DB × 1 KN No.10 to be suggested to use (slim point + J ball)
Please check DBX9ST No.10,11 or as small size as possible for #30 sewing thread.
(DBX1 with 3-5 size bigger needle's eye and J ball point.)

- Eyelet buttonhole: Singer 1413 - 06 No.14
Organ Needle DOX% S No.14

As you can see from pictures,ball point that needles are the best for high consistency fabric. In addition, slim point needles are necessary to reduce resistance.

【Machine condition for testing】

Machine : Juki DDL-5570N

Presser foot : standard

Feed dog : standard

Throat plate : for 3 feed dog (1.6mm)

Pressure of presser foot: 3kg Presser spring for thin fabrics(27mm) · standard(37mm)

This is our original laboratory data,so that it not be guarantied data.