

# Troubleshooter



# TROUBLESHOOTER

## How to use GB Reflective no-sew skin in manufacturing

### ● PROBLEM

Depending on the structure and design of the shoe, overheating is often required.

### ● CAUSE

1. Almost all no-sewing conditions are usually set according to the shoe structure and design. Strong, sharp, round, and deep shapes can have a significant impact on reflectivity.
2. Refer to standard working conditions of reflective type sewing material as follows.

#### **-Actual condition**



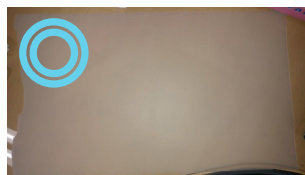
Working condition is dependent upon substrates, machine's property or a shoe structure.

Don't use the kind of release paper or hot-melt carrier as below picture on reflective surface. Silicon pad must be used on reflective surface.

#### **-Why Release paper cannot be used?**

Since the release paper is thin and hard, it can't increase the pressure of the paper seal evenly, so the reflective surface may be damaged as shown in the figure.: The glass beads sink under the PU layer

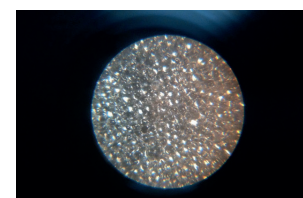
Surface defects using release paper.



Silicon Pad



Result by Silicon Pad



Result by Release Paper



Release Paper

# TROUBLESHOOTER

## Modify the material selection according to the shoe structure

### ● PROBLEM

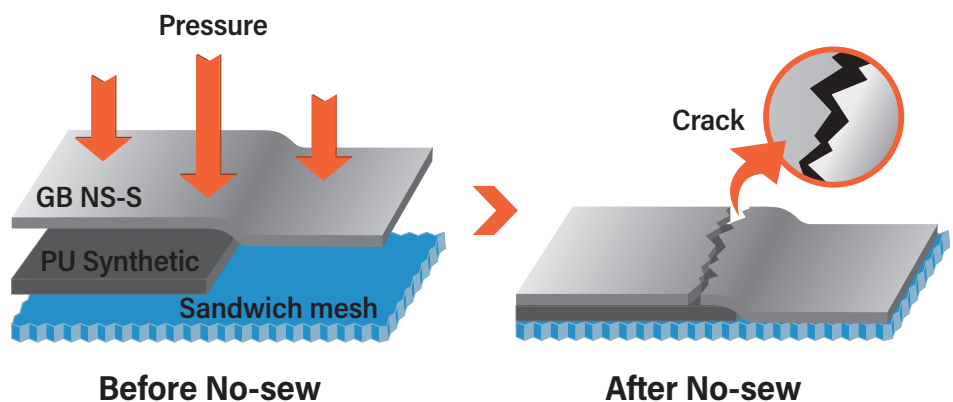
After no-sewing, the reflective surface is broken and torn.

### ● CAUSE

The no-sew base material is made up of two very thick layers, which can't withstand the thickness of a 0.1mm reflective film.

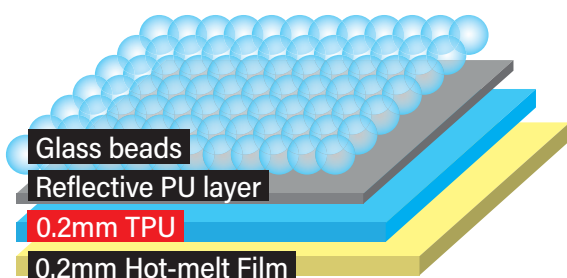
### ● EXAMPLE

For GB NS-S, the hot melt melts and only the reflective film (0.1mm) remains after no-sewing. Reflective film (0.1mm) can't withstand the synthetic PU (1.2mm) if the applied part is the edge of the PU composite backer.



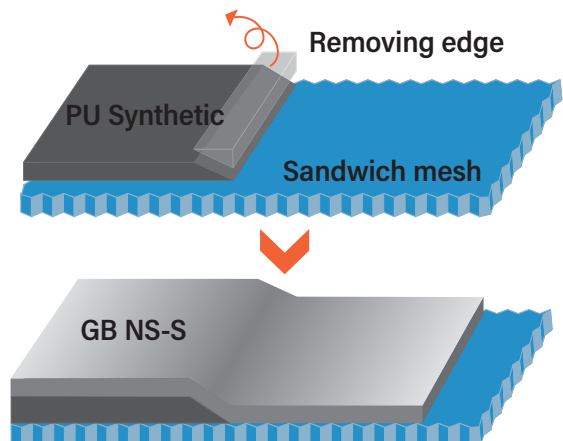
### SOLUTION 1

In this case, we strongly recommend using NS-SV2 which has 0.2mm TPU in the middle layer instead of NS-S.



### SOLUTION 2

Skive the area where PU and synthetic leather are overlapping.



# TROUBLESHOOTER

## Select the appropriate material depending on the base material

### ● PROBLEM

Textile pattern comes up on reflective surface and glass beads peel off.

### ● CAUSE

Reflective film is too thin to withstand dynamic patterns of textiles such as Jacquard.

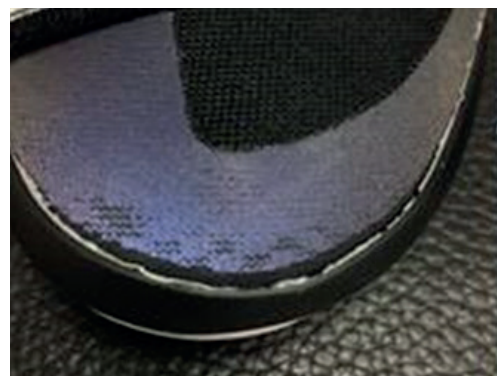
### ● EXAMPLE

In case of NS-S, the hot melf film is soaked into the textile and only 0.1mm of reflective film remains. If the sandwich or jacquard mesh with a large hole is used with the NS-S, the reflective layer is broken or cracked.

## SOLUTION

If the fabric with rough pattern is the base, using NS-SV2 is strongly recommended instead of NS-S or NS-F.

NS-SV2 has TPU in the middle layer to cover the rough pattern of the fabric.



# TROUBLESHOOTER

## Weakness of abrasion after the heating process

### ● PROBLEM

After the process of applying heat and pressure, such as No-sew or molding process, the reflective surface can easily scratch or peel off.

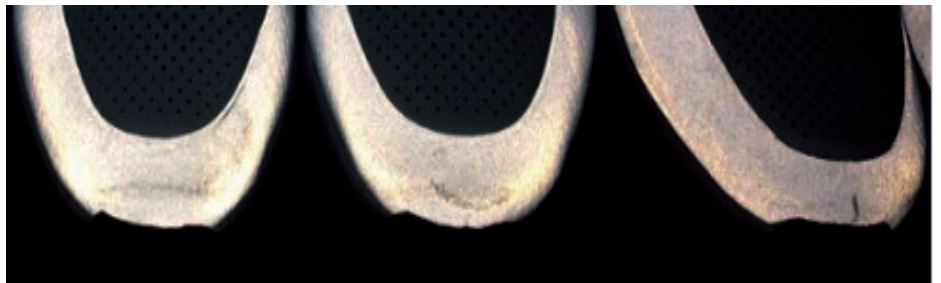
### ● CAUSE

When the reflective surface is already affected by heat, pressure, or both, reflective surface may scratch or peel off during toe lasting, heel lasting, or outsole attachment.

This is because the surface of GB material consists of glass beads.

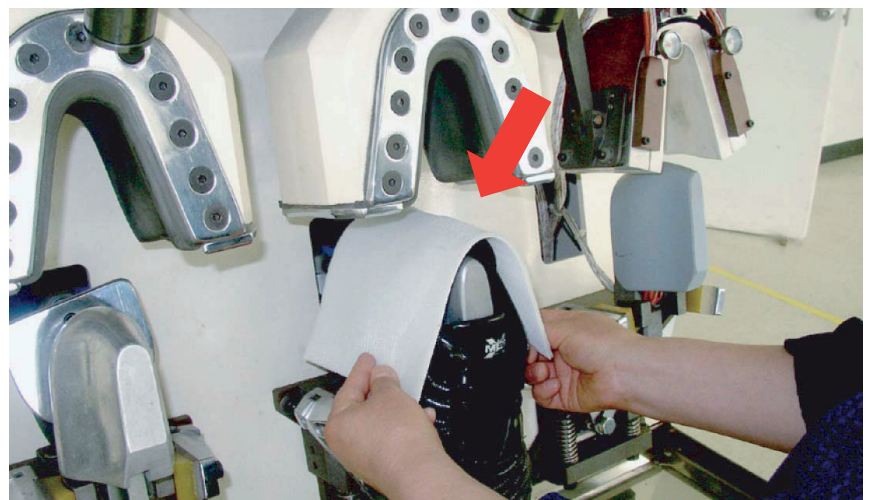
### ● EXAMPLE #1

To check the bonding strength of inside the vamp, the worker turn the upper inside-out. This process may cause wrinkles or peel-offs.



### SOLUTION

If this process cannot be eliminated, the need for attention to these factors needs to be registered on PFC or SOP.



Backpart Molding

# TROUBLESHOOTER

## Weakness of abrasion after the heating process

### ● EXAMPLE #2

During toe lasting, the surface gets damaged very easily.

### SOLUTION

Due to high pressure and heat during no-sew process, the reflective surface is already affected and may get damaged more easily.

To protect the reflective surface during toe lasting process, we suggest that you cover the surface with something soft such as silicon pads.



### ● EXAMPLE #3

When attaching outsoles, the workers use a wooden stick for convenience.

### SOLUTION

If not careful, the wooden stick will cause damage on the reflective surface. Most worker are not aware of properties of reflective material and they need to be told to be careful to prevent scratches.

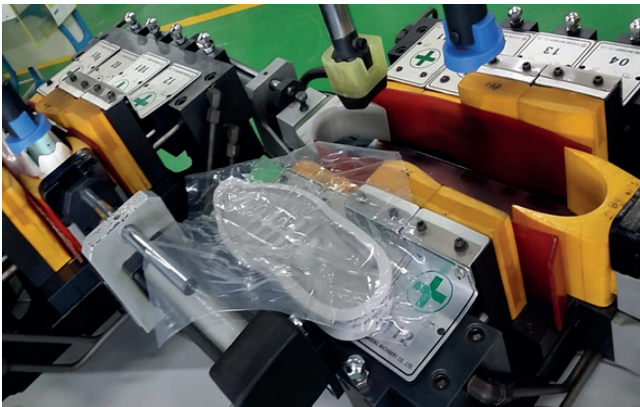


# TROUBLESHOOTER

## Weakness of abrasion after the heating process

### ● EXAMPLE #4

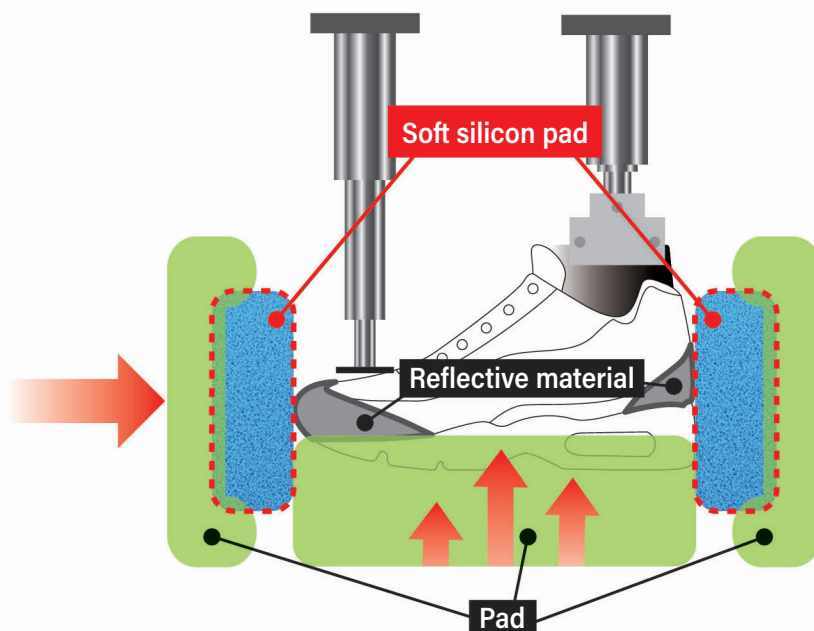
During deep-wall press, reflective material can be damaged due to high pressure. (Especially the tip or mudguard)



### SOLUTION

In order to protect the reflective surface, the workers should cover shoes with soft silicon pad or vinyl.

Also, if possible, shoes need to be processed in size groups to minimize the friction.



for more information, visit here  
<http://www.gblight.com/attention/>





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