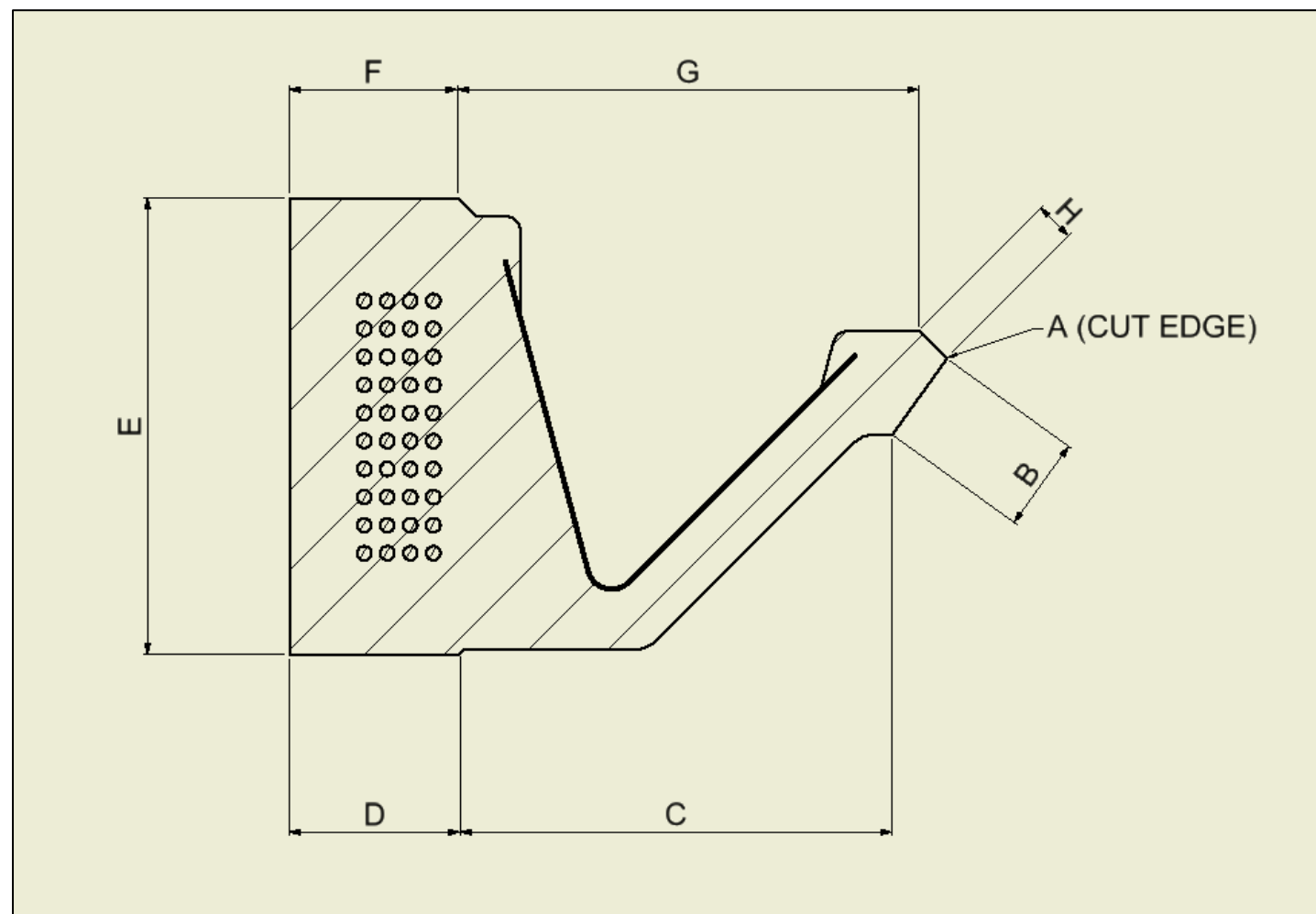


SIP10 – JAMES WALKER INSPECTION STANDARD X- GEN WITH FINGERSPRING: DONOR & ENDLESS

QUALITY STANDARD

Please use this standard for inspecting an X-Gen Fingerspring Seal.

The diagram shows a general view of the seal and its main features.



Zone A: Sealing edge - **HIGHLY CRITICAL**

Zone B: Outer running face – **HIGHLY CRITICAL**

Zone C: Non-critical

Zone D: Static sealing face - **CRITICAL**

Zone E: Static sealing face - **CRITICAL**

Zone F: Static sealing face - **CRITICAL**

Zone G: Non-critical

Zone H: Inner running faces - **HIGHLY CRITICAL**

VISUAL INSPECTION OF ENTIRE SEAL

Rings to be checked under good lighting (minimum 1000 lux) to ensure no defects are present. Complete a tactile check of the seal with your fingers to detect smaller defects.

Common defects inherent to the manufacturing process can but not limited to:

- Flow marks
- Non-fill
- Tearing
- Nicks or cuts
- Scorching
- Backrind
- Inclusions
- Splits
- Air trapping
- Cracks in the rubber

If defects can be lightly cleaned or dressed using fine emery paper and scotchbrite they are acceptable. If the defect cannot be cleaned or dressed it is a reject.

The sealing face must be left clean and smooth after dressing and must retain the full lip profile.

Donor Seals:

Mark the affected part of the seal clearly with silver pen and pass to the joining table. The joining operator will determine if the seal can be used as a donor.

DEFECT EXAMPLES



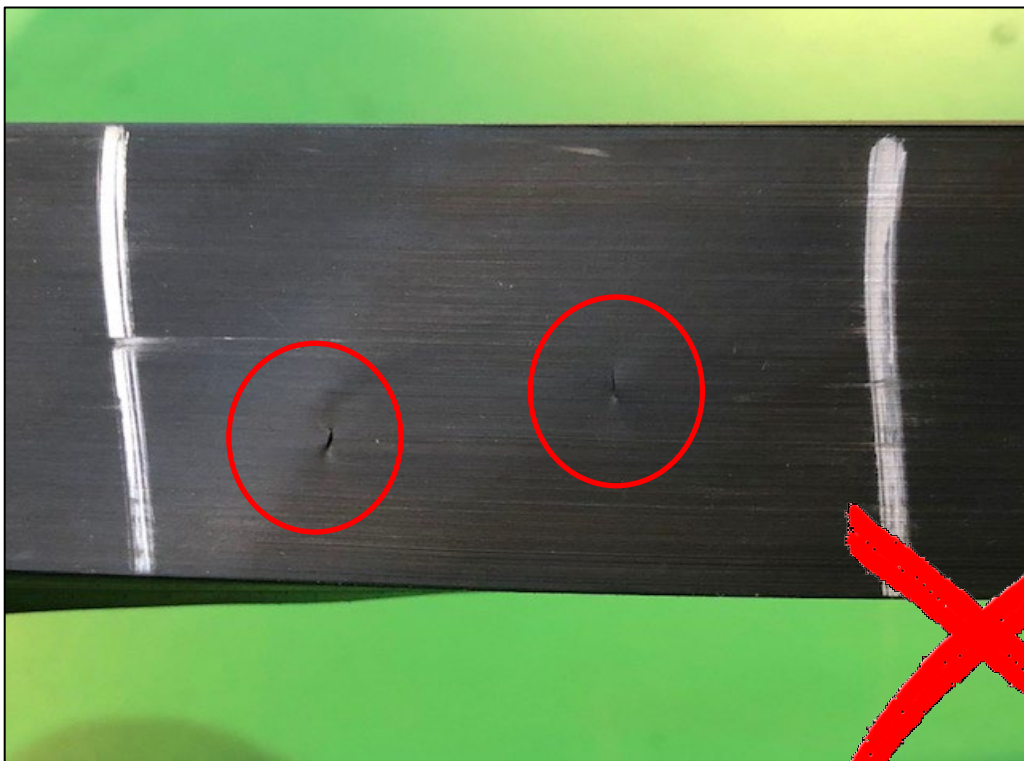
Non-Fill



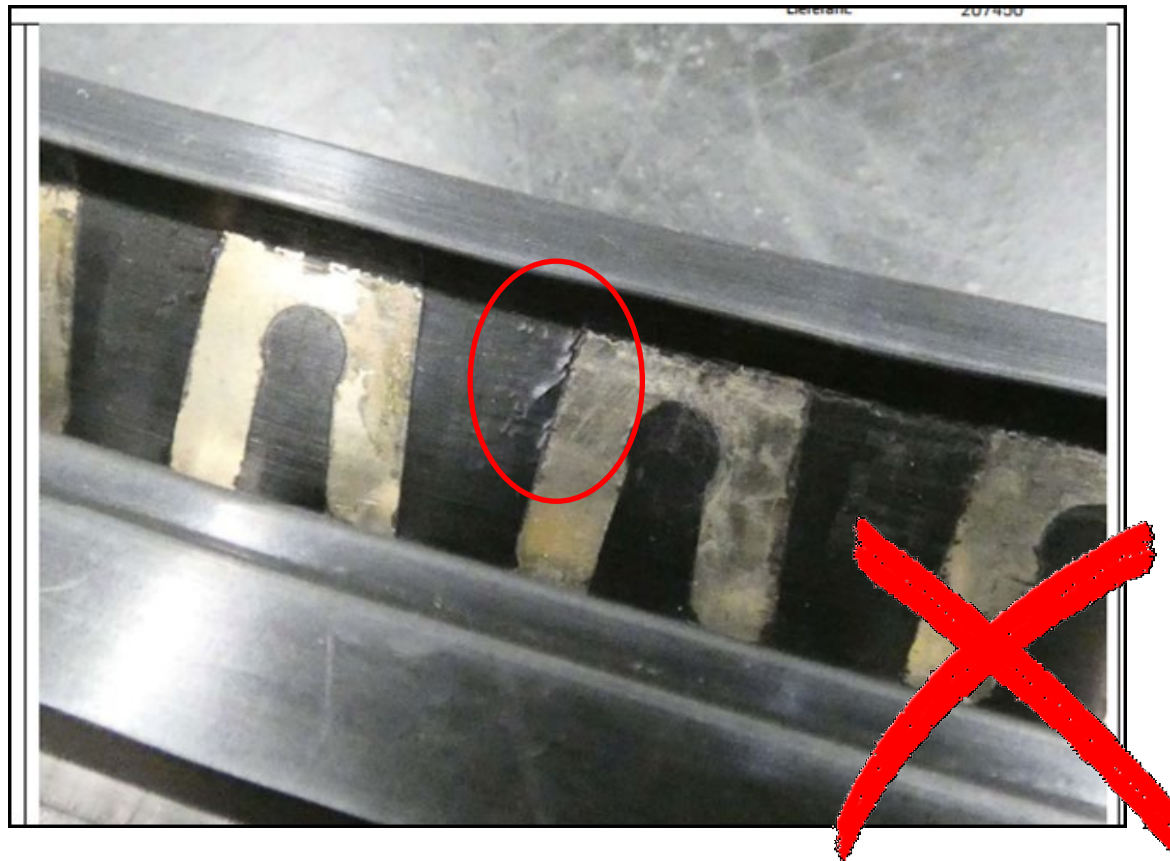
Air Trap, split



Backrind



Air Trap, split

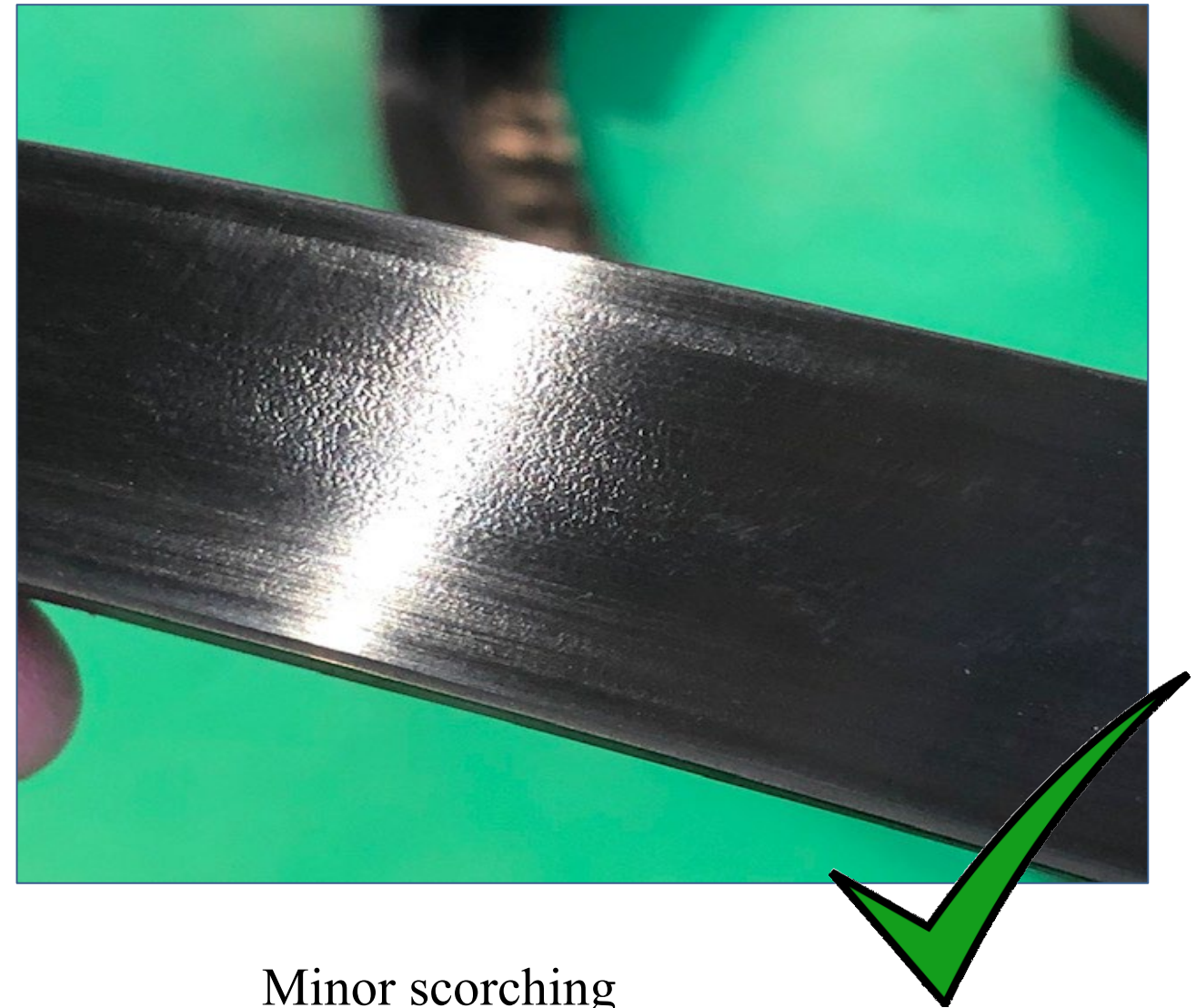


If insufficient mould release is applied during the mould process, the seal may stick to the cavity. This can cause the rubber to crack or split.

If the seal sticks to the top cavity and the press opens when unattended, the rest of the seal can drop down causing excessive bending. This can result in cracks or splits in the rubber.



Major scorching



Minor scorching

Minor scorching is acceptable and is defined as scorching that doesn't affect the smoothness of the surface finish.

Major scorching causes irregularities in the surface smoothness and is a defect. This is more evident in the tactile check.



Bulge in seal



Indent in seal



Bulge in back

Visually inspect the seal for uniformity. Bulges or indents on the seal may indicate air trapping under the surface.

DO NOT bend the seal back against its normal curvature during inspection.

Mark any defect areas with silver pen.

TRIMMING QUALITY

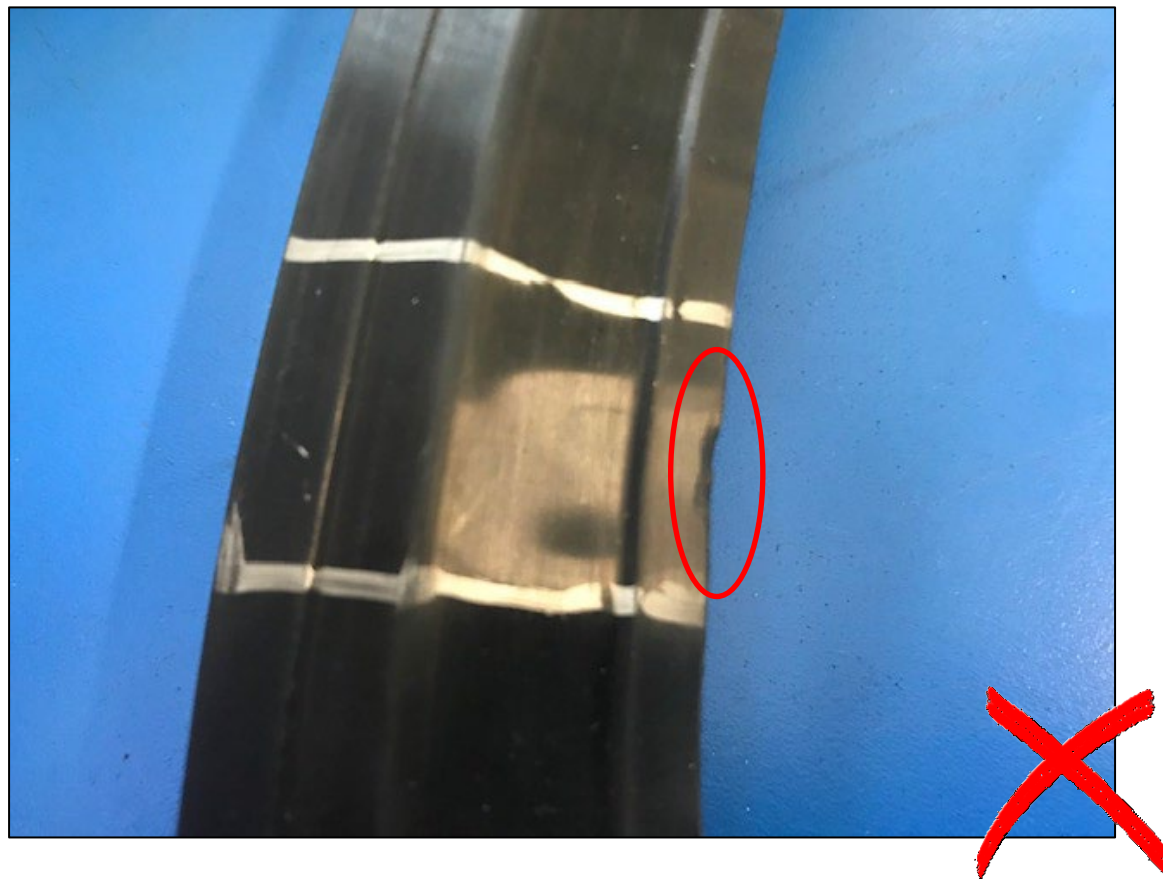
There is a minimal lip chamfer on these seals so trimming must be accurate. A back chamfer after trimming is acceptable as per drawing.

Check around the entire seal for poor trimming.

Edges should be cleanly cut and regular.

In some cases trimming can be improved by dressing with light emery paper.

IF POOR TRIM CANNOT BE REMOVED WITH EMERY CLEARLY MARK THE AFFECTED AREA AND THE JOINING OPERATOR WILL DETERMINE IF SEAL CAN BE USED AS A DONOR.



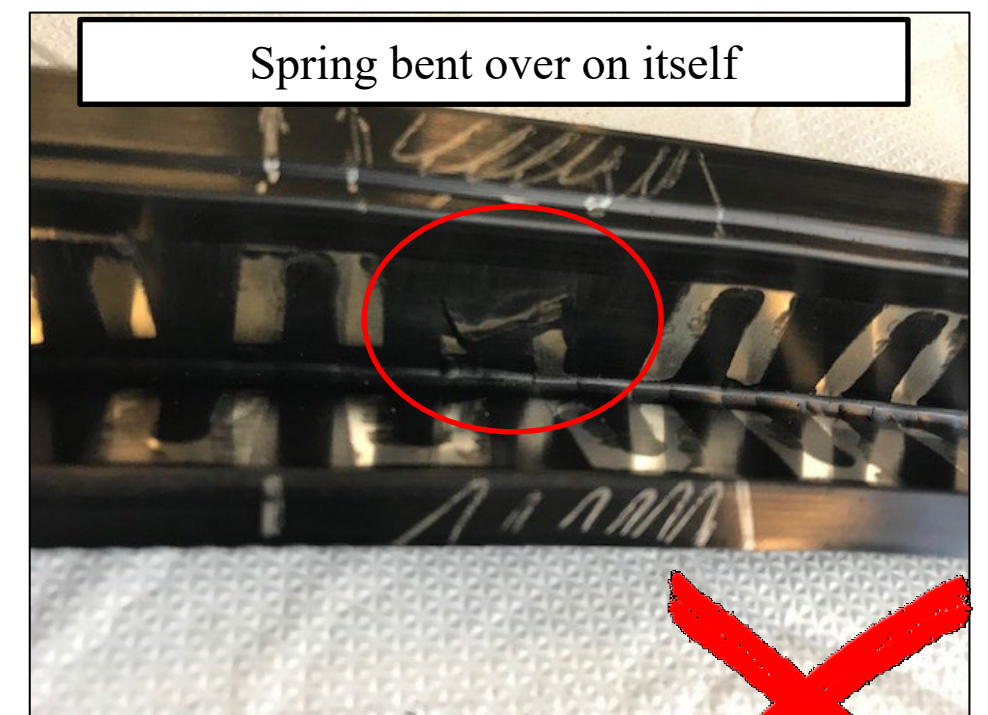
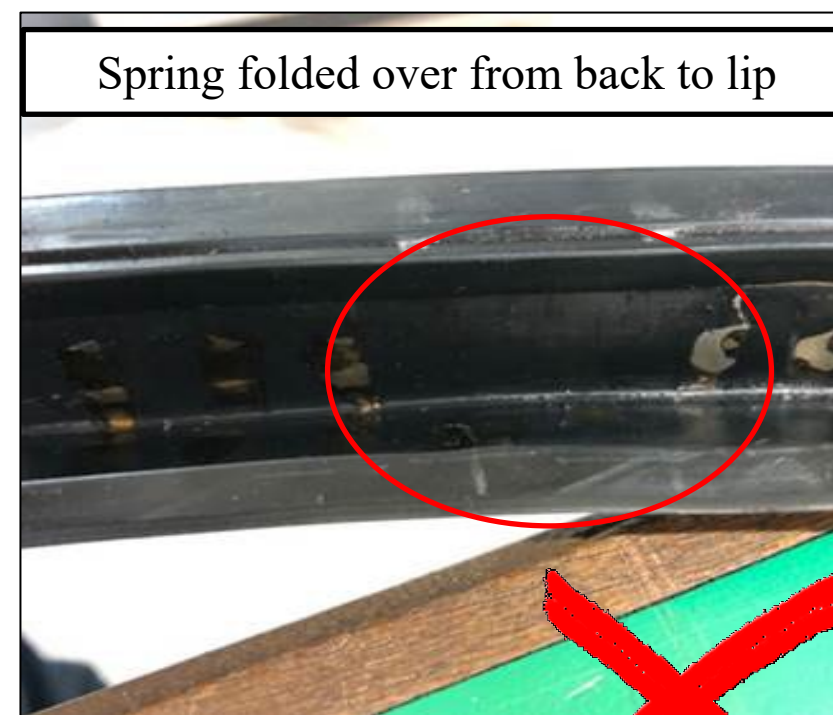
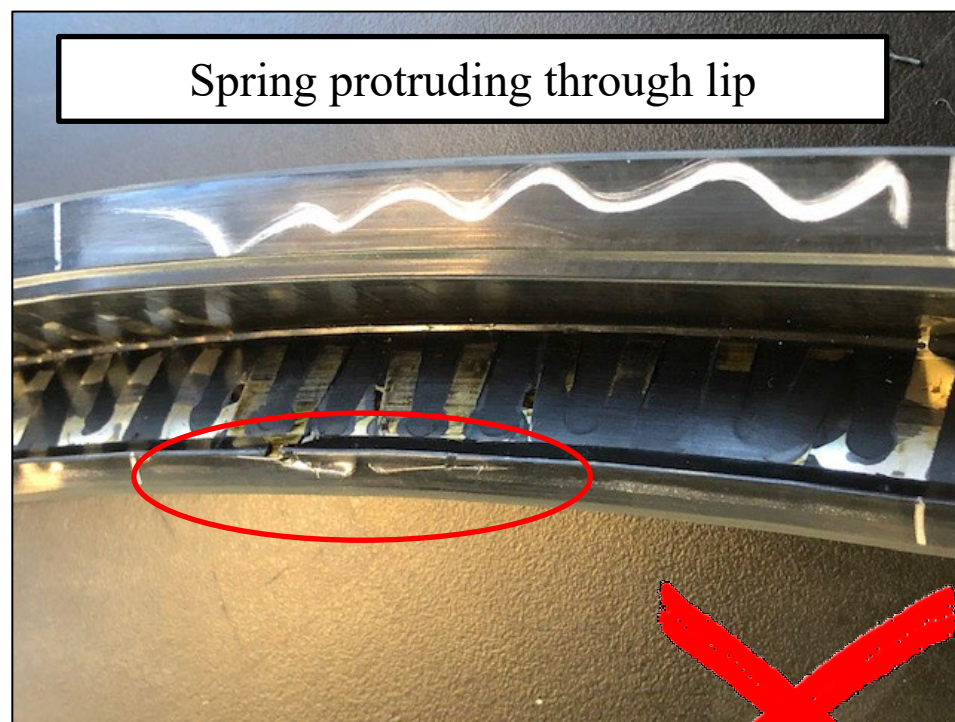
Spring Quality

The gap between springs must be no more than 25mm. No overlap of springs is allowed.

No folding of spring allowed from lip to back or vice versa. The spring must not be folded over on itself at any point.

Reject the seal if the spring protrudes through the lip.

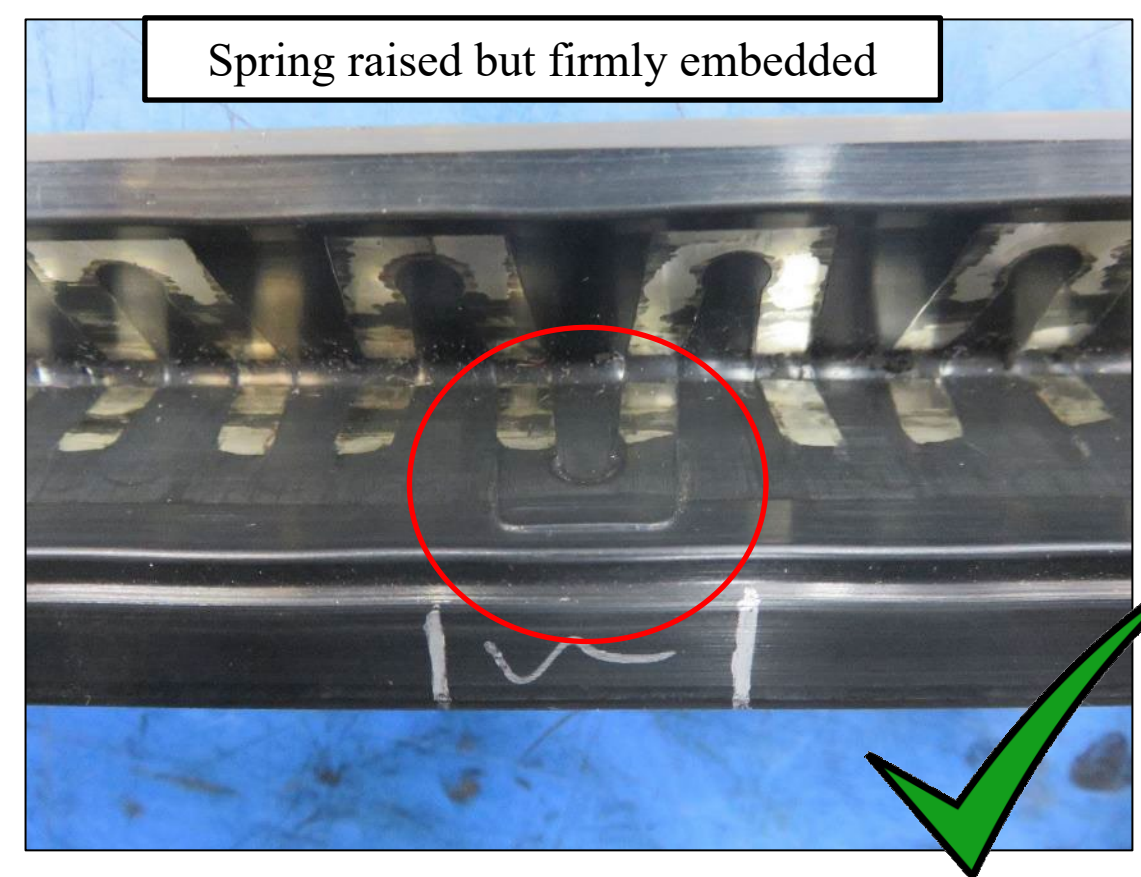
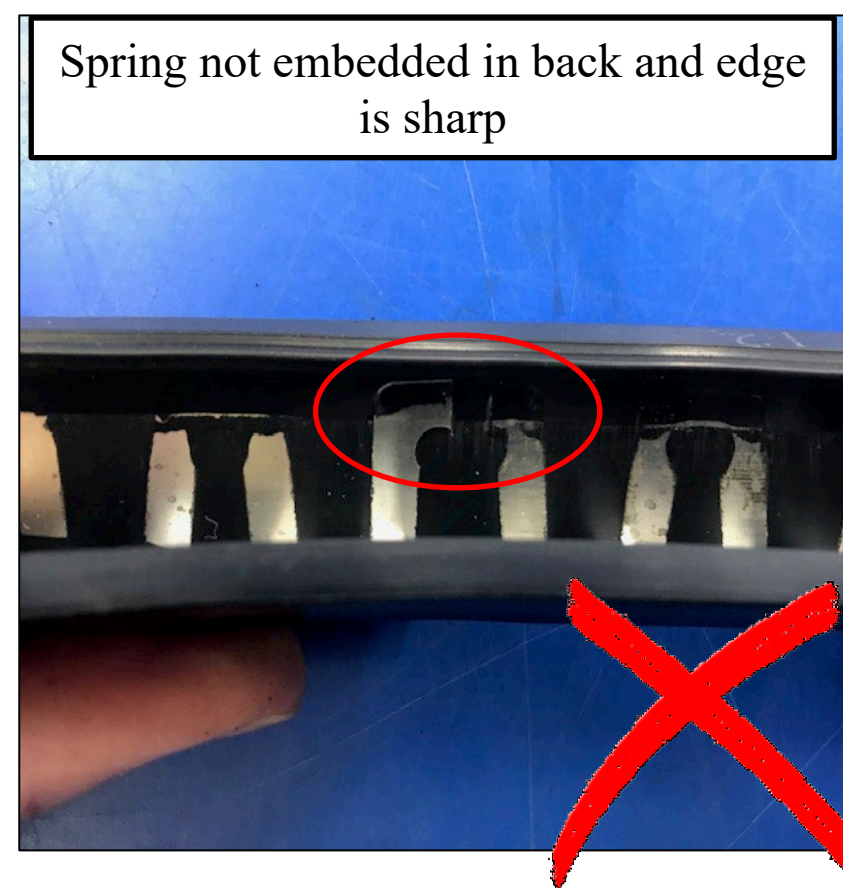
Discolouration or rubber bonded to the face of the spring is acceptable.



A bulge on the outside of the lip may indicate an issue with the spring and should be investigated and rejected if spring appears damaged or deformed.

The spring fingers on each seal should be embedded firmly in the lip and back material during moulding. Inspect the spring for any sharp edges.

Some sections of the spring may feel slightly raised but as long as there are no sharp edges and the spring is held firmly in place this is ok.



MEASURING O/D, SECTION AND DEPTH FOR INSPECTION REPORT

The below dimensions to be checked using the following methods:
Seal to be flat on the inspection bench, top of seal up.

Check dimensions **at 8 points** around the circumference of the seal.

Outside Diameter – *Circumference diameter tape*

Verify that the measurements recorded are all within tolerance and record on Form F150a.

Section – *Vernier*

Verify that the measurements are all within tolerance and record on Form F150a.

Depth - *Vernier*

Verify that the measurements are all within tolerance and record on Form F150a.