Inspection of Truss Quality and Safety

- This list of criteria can only be used with Total Solutions Group manufactured trusses due to our compliance with prEN 17115 and previously BS 7905-2. These inspection criteria should never be used on trusses not complying with these standards.
- Truss components should be inspected before use.
- They must be marked as defective and taken out of use if any of the following are found:

General

- Bent or deformed without load applied (visual check)
- Welds are incomplete or shows signs of cracking.
- Wear on welds and welded areas.
- Repairs by welding or heat treatment without any written repair warranty from the manufacturer.

Main members

- Reduction of the total cross-sectional surface area by more than 15%; or any local area reduction transverse to the tube axis of more than 15% (stress raiser).
- Localised bending of one or more of the main tubes viewed from the end of a section.
- Damaged, partly missing or broken tubes.
- Cracks or holes in the main tubes.
- Lasting deformation through dents, lateral compression etc. that results in a change of diameter by more than 10%. e.g. Lite Beam tube dia = 48mm; 44mm minimum and 52mm maximum.

Lattice members

- Reduction of the total cross-sectional surface area by more than 15% or any local area reduction transverse to the tube axis of more than 15% (stress raiser).
- Localised bending of one or more of the lattice tubes.
- Damaged, missing, or broken lattice tubes.
- Cracks or holes in the lattice tubes. Note: it is common to see a small 2mm dia. hole in the center or end of the diagonal to let welding gases escape, which is part of the manufacturing process.
- Lasting deformation through dents, lateral compression etc. that results in a change of diameter by more than 10%.

Connectors and connecting elements

- Deformation or elongation of the connection (fitting) fixing holes (rivets, roll pins, gusset plates) in the fittings or the main tubes by more than 10% e.g. Lite Beam 6.25mm + 0.63mm = 6.88mm max. Mini Beam, GS Truss, Maxi Beam, Folding Truss 10mm + 1mm = 11mm.
- Lateral deformation and / or wear to truss pin holes by more than 10%. Longitudinal deformation and / or wear of truss pin holes by more than 10%.
- Bending or deformation of any fitting part by more than 10 degrees from the axis of the main tubes.
- Reduction of the fittings (male or female) cross-sectional surface by more than 10%.
- Damaged or parts of the fitting missing.
- Damaged or missing roll pins or fixing rivets.
- Fixing rivet should completely fill holes and have close contact with the riveted surfaces
- Diameter reduction of the truss pins or fixing bolt by more than 10%.
- No Damage to the threads on fixing bolts
- Clear (galvanic) corrosion on rivets or roll pins in the fitting fixings.

Attention

Neglecting any of the above factors for discarding of the truss components may result in property damage or injury of people. When any of the above is noticed on a truss component, this should be clearly marked as damaged and must not be used under any circumstance until repaired by an authorized agent of Total Solutions Group.