

TOP SYSTEMS GROUP INC. QUALITY ASSURANCE DEPARTMENT

FURNITURE DEFECT CLASSIFICATION & INSPECTION CRITERIA

Furniture products only - applicable to solid wood, engineered wood, RTA, casegoods, dining, occasional, bedroom, seating and mixed wood/metal furniture

Purpose
Provides a common furniture defect reference for inspection, sample review, production inspection and shipment inspection.

Severity principle
Critical / Major / Minor classification is not automatic for every occurrence. Consider safety risk, structural integrity, function, size, location, visibility and deviation from approved specification.

1. MATERIALS / ACCESSORIES

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
1.1. Deviate from contract and specification.	X			Compare approved specification, BOM, sample or drawing.

2. DIMENSIONS & GEOMETRY

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
2.1. Overall dimensions outside approved specification.				Measure L x W x H against approved specification.
2.2. Component dimensions outside approved specification.				Measure component against approved drawing / specification.
2.3. Out-of-square / diagonal mismatch.				Check diagonals or use a square; verify fit and appearance.
2.4. Uneven or inconsistent gaps.				Visual and feeler measurement where required; compare approved sample.
2.5. Misalignment of drawer, door, panel or hardware.				Visual alignment check and functional operation.
2.6. Uneven leg height / product wobbling.				Place product on a level surface and check stability.

3. WOOD / PANEL / STRUCTURAL

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
3.1. Joint opening or loose joint.				Visual check and gentle functional / manual movement check.
3.2. Warped, bowed, twisted or distorted panel.				Visual check against flat surface / straightedge where applicable.
3.3. Delamination / layer separation.				Visual and manual check of panel edges and surfaces.
3.4. Veneer lifting, blistering or separation.				Visual and manual check, especially edges and joints.
3.5. Edge band peeling / lifting / serrated edge.				Visual and adhesion check along exposed edges.
3.6. Exposed substrate or unfinished visible area.				Visual check against approved finish reference.
3.7. Insufficient glue / adhesive or visible glue failure.				Visual check of joints and approved construction.
3.8. Missing / incorrect internal or concealed structural component.				Verify against manufacturing drawing / approved sample before closure.

4. WORKMANSHIP

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
4.1. Sharp edge, corners - risk of injury	X			Run visual / hand safety check on accessible edges and corners.
4.2. Big pin holes, scratches, dents, chipping, bubbles	X			Visual check; assess size, location and visibility.
4.3. Small scratches, dents, chipping, bubbles			X	Visual check; assess size, location and visibility.
4.4. Rough edge, small pin hole		X		Visual and hand-feel check.
4.5. Loose parts - not repairable	X			Check part security and whether normal repair is possible.
4.6. Loose parts - repairable		X		Check part security; verify repair restores intended condition.

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4.7. Shape, design deviates from approval sample	X			Compare directly with approved sample / drawing.
4.8. Heavy bending	X			Visual check and measurement against approved condition.
4.9. Slight bending			X	Visual check and measurement against approved condition.
4.10. Cracks, split, warped - visible	X			Visual check of all visible surfaces and edges.
4.11. Cracks, split, warped - not visible		X		Inspect concealed areas before closure where practical.
4.12. Wrong wood grain direction		X		Compare with approved sample / drawing / grain direction requirement.
4.13. Measurement deviations (over +/- 3%)	X			Measure against approved specification.
4.14. Veneers open joint or glue line - visible	X			Visual check on exposed veneer joints.
4.15. Veneers open joint or glue line - not visible		X		Inspect concealed areas before closure where practical.
4.16. Others				Describe defect clearly and classify according to severity principle.

5. FINISHING

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
5.1. Heavy color deviation within one piece / set on visible parts	X			Compare with approved finish sample / colour reference under consistent lighting.
5.2. Slight deviation within one piece / set on visible parts			X	Compare with approved finish sample / colour reference.
5.3. Finger paint, glue or water mark on surface		X		Visual check under appropriate lighting.
5.4. Poor finishing - color, lacquering, tears	X	X	X	Assess severity by size, visibility and effect on appearance.
5.5. Uneven sanding, sanding marks	X	X		Visual and hand-feel check.
5.6. Plating defects & rust	X	X		Visual and surface condition check.
5.7. Paint peel off	X			Visual check and adhesion condition.
5.8. Dirt mark	X	X	X	Assess size, visibility and ease of removal.
5.9. Poor filler and repair	X	X		Check repair quality, visibility and finish matching.
5.10. Fungus, mildew, strong smell	X	X		Visual / odor check; investigate material and storage condition.

6. ASSEMBLY & FUNCTION

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
6.1. Product cannot be assembled according to approved assembly instruction.				Perform assembly test and compare with approved instruction.
6.2. Missing / incorrect pre-drilled hole.				Verify hole location, size, depth and function against drawing.
6.3. Drawer does not open or close smoothly.				Open / close repeatedly; check runner alignment and obstruction.
6.4. Drawer front, door or panel is misaligned after assembly.				Visual alignment and gap check.
6.5. Hardware cannot be tightened / secured properly.				Assembly check using specified hardware and tool.
6.6. Door / drawer gap is excessive or inconsistent.				Measure / compare with approved sample where required.
6.7. Product function does not meet approved requirement.				Perform intended-use functional check.
6.8. Product becomes loose after normal assembly / operation.				Repeat assembly / operation and verify joint security.
6.9. Leveler / glide does not function correctly.				Adjust and verify stability / operation.

7. SAFETY & STABILITY

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
7.1. Tip-over risk / product unstable.				Stability check; verify anti-tip / restraint provisions where applicable.
7.2. Anti-tip device / restraint missing or incorrect.				Verify kit, hardware, pre-hole and installation requirement.

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7.3. Sharp protruding hardware.				Visual and hand safety check.
7.4. Unsafe pinch point / trapping point created by product construction.				Functional movement and accessible-gap check.
7.5. Broken / cracked glass or unsafe glass condition.				Visual and edge check; compare approved glass specification.
7.6. Structural failure or loss of serviceability during intended use.				Conduct applicable functional / load / stability test.

8. OTHERS

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
8.1. Missing parts	X			Verify complete part list / BOM.
8.2. Missing hardware (screws, bolts, nuts / tools not function)	X	X		Check hardware quantity, type, fit and function.
8.3. Missing / wrong assembly instruction		X		Compare with approved instruction.
8.4. Missing / wrong label / sticker		X		Compare with approved label / artwork / specification.
8.5. Printing mistake on label, tag, sticker, assembly instruction			X	Compare against approved artwork / instruction.
8.6. Wrong assortment		X		Verify product assortment and shipment requirement.
8.7. Wrong shipping mark or description	X			Compare carton mark against approved shipping information.
8.8. Others				Describe defect clearly and classify according to severity principle.

9. WELDING & POLISHING

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
9.1. Missing weld	X			Visual inspection of all specified weld points.
9.2. Sharp point or edge	X			Visual and hand safety check.
9.3. Poor welding		X		Visual inspection of weld quality and continuity.
9.4. Uneven after polishing - invisible			X	Surface visual / hand-feel check where relevant.

10. POWDER COATING

Defect / Condition	Critical	Major	Minor	Recommended furniture inspection approach
10.1. Inconsistent finish with approval sample		X		Compare finish, texture and appearance with approved sample.
10.2. Missing powder coating at joint or corner		X		Inspect joints, corners and concealed coating areas.
10.3. Rust in tube, corner or joint		X		Visual inspection of exposed and accessible metal areas.
10.4. Rough, sands etc.			X	Visual and hand-feel inspection of coated surface.

Furniture Inspection Notes

- Use the approved drawing, BOM, product specification, approval sample and customer requirements as the primary reference for acceptance.
- A defect can move between Critical, Major or Minor depending on safety risk, structural effect, function, location, visibility, size and customer requirement.
- For defects marked with more than one severity in the original TSG list, retain the original flexibility and classify the actual occurrence during inspection.
- For the newly added furniture-specific categories, the severity columns are intentionally left open so TSG can calibrate them against customer requirements and actual inspection experience.