

In-Plant WTCA QC – Inspection Summary Sheet

Please refer to the manual for further explanation of any topics discussed below!



Getting Started

- Select a truss to inspect. (Please remember to inspect floor trusses if they are produced.)
- Print off all design software information. (Joint QC Details–print on vellum paper, shop drawing, and joint blowups.)
- Determine which inspection method you will use. (Look at the Cq factor on the QC detail.)
- Gather inspection forms (Preliminary, PPM or TCM), design software information, and inspection tools. (tape measure, marker, depth gauge)
- Locate truss, determine front and back side of truss, and begin inspection.
- Preliminary Inspections are required on every truss (front & back). In cases where no critical joints are found preliminary inspections can still be done.

Preliminary Inspection (Dimensions, lumber and all NON-CRITICAL joints)

- Fill out all header information on Preliminary Inspection form (please be accurate as this information will allow you to track individual crew performance.)
- This forms states exactly what is required and is self explanatory, please follow it carefully.
- Lumber information (grade, species, and size) only needs to be documented if you answer “no” (documentation of an error) or are not sure of a lumber substitution. If you know that the lumber has been properly substituted please circle “yes” and continue on with the inspection. [Refer to p. 15 in manual]
- A detailed visual scan must be performed on all **non-critical** joints (*questions 3-6*). **DO NOT inspect critical joints in the preliminary inspection.** [Refer to p. 14]
- If critical joints are recorded in the preliminary inspection they will be double counted (PPM/TCM and Prelim.) causing your reports to be inaccurate.
- Missing plates are a plate size problem. • Lack of teeth caused by lumber defect is an embedment problem. • Placement is backed up by a tooth count.

Critical Joint Inspection – Plate Placement Method (PPM) and Tooth Count Method (TCM)

- Please work through every column on the inspection form. The spaces provided are there for a reason, to help you collect **all** necessary information.
 - Circle front or back, enter joint number and type (roof trusses have heel joints but they are called exterior joints on a floor truss). [Refer to p.17]
 - Enter specified and actual plate size and gage. **NOTE:** For plates to be properly upsized they must be equal to or larger in both length and width (not square inches). Plate gage is very similar; anytime a plate is switched from a standard gage to a High Strength plate (or vise versa) it will fail because of different tooth configurations. Re-analyzing these joints with the actual plates is the only way they will be accepted.
 - Oversized Plates: Either print new joint QC detail with actual plate size or find the best placement within the larger plate. [Refer to p.18 or 26]
 - Check Placement: Is the midpoint of the actual plate inside the polygon – yes or no? How far is actual midpoint from specified midpoint regardless of yes or no answer?
 - **PPM:** If you are outside the PPM polygon you must rerun the plate in design or check the TCM polygon and also verify you have enough teeth in each member.
TCM: If actual midpoint is outside polygon the joint must be repaired or reanalyzed. Please note there is no option to count teeth. [Refer to p. 17 or 25]
 - Check Rotation: **You are allowed 10° rotation for each joint.** You will have situations when a detail shows less than 10° allowed. For example; a splice joint with a 3x6 plate would hang over the top or bottom of the chord if rotated very much. These details assume perfect placement but there may be more room if placement isn't perfect.
 - Check Tooth Embedment: **PPM:** Embedment is checked around the perimeter of the plate, 1/32” is allowed, a tooth count is required when the gap is more than 1/32”.
TCM: Embedment is checked with depth gauge during tooth count. [Refer to p. 19 **PPM** or p. 29 **TCM**]
 - Check Member to Member Gaps: This gap is **checked at the edge** of the plate, you are allowed less than or equal to a 1/8” (1/16” on floor truss chord splices). [p. 19]
 - Complete member naming: Please remember to include 2 front side and 2 back side identically named members for each joint. [Refer to p. 20]
 - Check Lumber Quality: **PPM:** Your joint detail will provide a circle representing an allowable amount of defect for each member. Locate any lumber defects or rolled teeth in each members plated area; if this area more than fills up the circle please circle “yes” and you will be required to count teeth for that joint.
TCM: You will check lumber quality when counting teeth by subtracting out defective and rolled teeth. [Refer to p. 21 **PPM** or p. 28 **TCM**]
- Please complete the whole inspection before making repairs. We want to collect as much information as possible so that we get an accurate representation of what is happening.
 - **Never change data from your original inspection** – once you have repaired the truss you will add your specific remedy to the comment and initial the inspection making it OK!
 - If you know that a joint must be repaired (missing or undersized plate, outside polygon, excessive rotation, or excessive member gap) member information is not required!
 - All out of conformance inspections must have a comment containing a specific cause and specific remedy statement. Could anyone read your comments and understand them?
 - Make sure data entry is complete. We ask that you provide actual visual estimates: distance from specified midpoint, degree of rotation, and % defect circle filled (PPM).
 - Data entry tips: 1=p=PPM 2=t=TCM, t=today’s date, n=now or current time, 1=r=roof 2=f=floor, 1=y=yes, 0=n=no, 1=f=front 2=b=back, set plate gage default to “20” in options.
 - Navigating database: Use software integration if design software is ready [Refer to p.64]. Use averages button to check inspections per crew [Refer to p.67]. To delete inspections go to upper left to “Inspection” and “Delete” [Refer to p.68]. To copy joints or members select record to copy, press Ctrl+C, select free record, press Ctrl+V to paste [Refer to p.68].