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# Gable End Scribe Line Cleanliness Inspection & Standardization

## 1.0 Objective & Quality Standard

The objective of this procedure is to ensure that all scribe lines on gable ends of assembled cabinets are free from debris, adhesive residue, pencil marks, and any foreign material that could compromise the visual appearance or interfere with scribe fit during installation. A clean scribe line is defined as having no visible contamination within 2mm of the scribe line edge, with no residue greater than 0.5mm in height or width. The acceptable tolerance for scribe line cleanliness is a maximum of one minor imperfection (e.g., a single pencil dot or dust speck) per 300mm of scribe line length, provided it does not exceed 0.3mm in any dimension.

## 2.0 Required Tools & Gauges

- Clean lint-free microfiber cloth (white, to avoid dye transfer)
- Isopropyl alcohol (70% concentration) in a spray bottle
- Soft-bristle brush (e.g., 1-inch nylon brush)
- Magnifying glass or illuminated magnifier (10x minimum)
- Digital caliper (0-150mm range, 0.01mm resolution)
- Set of metric feeler gauges (0.05mm to 1.0mm)
- White LED inspection light (minimum 1000 lux)
- Red tag for defect identification
- ShopDocs QA module on tablet or mobile device

## 3.0 Safety & Material Handling

- Wear clean, powder-free nitrile gloves to prevent oil transfer from hands to cabinet surfaces.
- Use safety glasses when inspecting under bright LED light to avoid eye strain.
- Handle gable ends with care to avoid scratching or denting the surface; use padded supports if necessary.
- Ensure the work area is well-ventilated when using isopropyl alcohol.
- Keep all cleaning materials away from electrical components or open flames.

## 4.0 Step-by-Step Procedure

1. Position the assembled cabinet on a clean, level inspection table with the gable end facing upward and fully accessible.
2. Turn on the white LED inspection light and hold it at a 45-degree angle to the scribe line to maximize visibility of surface imperfections.
3. Visually scan the entire scribe line from one end to the other, looking for any debris, adhesive residue, pencil marks, or foreign material. Use the magnifying glass for detailed inspection of any suspect areas.

4. If any visible contamination is found, measure the distance from the scribe line edge using the digital caliper. Record the measurement if it exceeds 2mm from the scribe line edge.
5. For any residue or protrusion, use the feeler gauge set to measure the height or width of the imperfection. Insert the appropriate gauge blade gently against the residue; if the gauge catches or lifts the residue, it exceeds the 0.5mm tolerance.
6. If the imperfection is within tolerance (single dot <0.3mm, no residue >0.5mm, and no contamination within 2mm of scribe line), proceed to clean the area. Spray a small amount of isopropyl alcohol onto the microfiber cloth (not directly onto the cabinet) and gently wipe the scribe line area to remove the imperfection.
7. If the imperfection is out of tolerance (e.g., adhesive blob >0.5mm, pencil mark extending >2mm from scribe line, or multiple imperfections within 300mm), do not attempt to clean. Instead, flag the unit for rework by attaching a red tag to the gable end with the defect description and location noted.
8. For out-of-tolerance defects, use the soft-bristle brush to gently dislodge any loose debris, then attempt cleaning with isopropyl alcohol and a fresh microfiber cloth. If the defect persists after cleaning, the unit must be sent to the rework station for scribe line refinishing.
9. After cleaning or rework, re-inspect the scribe line using the same lighting and magnification conditions to confirm it meets the cleanliness standard.
10. Record the inspection results in the ShopDocs QA module, including any defects found, measurements taken, and corrective actions performed. If the unit passed without defects, mark it as 'Passed' in the system.
11. If the unit was red-tagged, log the defect details in the ShopDocs QA module for root cause analysis, including the defect type, location, and operator who performed the inspection.
12. Return the inspected cabinet to the designated 'Passed' or 'Rework' area as appropriate, ensuring it is properly labeled and segregated to prevent mix-ups.

## 5.0 Verification & Defect Reporting

1. After completing the inspection, verify that the scribe line meets the cleanliness standard by performing a final visual check under the LED light at a 45-degree angle. Confirm no visible contamination remains within 2mm of the scribe line edge and that any residue is below 0.5mm in height/width.
2. If the scribe line passes inspection, mark the unit as 'Approved' in the ShopDocs QA module and move it to the approved inventory area.
3. If the scribe line fails inspection (out-of-tolerance defect), attach a red tag to the gable end with the following information: defect type (e.g., adhesive residue, pencil mark), location (e.g., 'top left corner of scribe line'), measurement (e.g., '2.5mm from scribe line edge'), and date.
4. For out-of-tolerance defects that cannot be cleaned, send the unit to the rework station. The rework operator must document the rework process in the ShopDocs QA module, including the method used (e.g., sanding, solvent cleaning) and the final inspection result.
5. All red-tagged defects must be logged in the ShopDocs QA module within 24 hours for root cause analysis. The QA manager will review defect trends weekly and initiate corrective actions if the defect rate exceeds 2% of inspected units.
6. If a defect is found to be a recurring issue (e.g., adhesive residue from a specific glue station), the QA manager will issue a non-conformance report and schedule a 5S event to address the root cause.

**Regulatory Disclaimer:** This document is a generic quality assurance template. The end-user assumes all liability for validating all dimensional tolerances, testing procedures, and engineering specifications against actual production requirements before deployment.