

Soft Close Hinge Sensitivity Adjustment

1.0 Objective & Quality Standard

The objective of this procedure is to standardize the adjustment of soft close hinge sensitivity to ensure consistent closing force across all cabinet doors. Proper adjustment prevents door slam, incomplete closure, or excessive resistance during operation.

Acceptable Quality Standard: The door must close smoothly from a 45-degree open position without slamming, and must fully latch without requiring additional push. The closing time from 45 degrees to fully closed must be between 2.5 and 4.5 seconds. Any deviation outside this range requires adjustment.

2.0 Required Tools & Gauges

- Soft close hinge adjustment tool (supplied by hinge manufacturer)
- Digital stopwatch or timer (0.1 second resolution)
- Torque screwdriver (set to 0.5 Nm for hinge screws)
- Feeler gauge set (0.5mm to 1.0mm for gap verification)
- Non-marring pry bar (for hinge removal if needed)
- Calibrated angle gauge (45-degree reference)

3.0 Safety & Material Handling

- Wear clean, lint-free gloves to prevent oil transfer onto cabinet surfaces.
- Use a non-marring mat under the door during adjustment to prevent scratches.
- Ensure the cabinet is stable and level before performing adjustments.
- Do not force the hinge mechanism; use only the specified adjustment tool.
- Keep fingers clear of hinge pivot points during adjustment to avoid pinch injuries.

4.0 Step-by-Step Procedure

1. Verify the cabinet is level and the door is properly aligned on the hinge cups. Use a feeler gauge to check that the gap between door and frame is consistent (0.5mm to 1.0mm tolerance).
2. Open the door to a 45-degree angle using the calibrated angle gauge as reference. Hold the door steady at this position.
3. Release the door and allow it to close under its own weight. Observe the closing motion. The door should decelerate smoothly without slamming or stopping prematurely.
4. Using the digital stopwatch, measure the closing time from the 45-degree position to fully closed. Record the time. Repeat three times and calculate the average.
5. If the average closing time is less than 2.5 seconds (door slams), increase the damping force by turning the adjustment screw clockwise in 1/4 turn increments using the hinge adjustment tool.

6. If the average closing time is greater than 4.5 seconds (door closes too slowly or stops short), decrease the damping force by turning the adjustment screw counterclockwise in 1/4 turn increments.
7. After each adjustment, repeat steps 2 through 4 to verify the closing time falls within the acceptable range. Continue adjusting until the time is between 2.5 and 4.5 seconds.
8. Once the correct sensitivity is achieved, tighten the hinge mounting screws to 0.5 Nm using the torque screwdriver. Do not overtighten.
9. Perform a final functional test: open the door fully and release from 90 degrees. The door must close fully without slamming and without requiring manual assistance.
10. Inspect the door gap again with the feeler gauge to ensure no shift occurred during adjustment. If the gap is out of tolerance, realign the hinge and repeat the sensitivity adjustment.
11. Document the final closing time and adjustment screw position (number of turns from fully closed) on the QA checklist in ShopDocs.
12. If the hinge cannot be adjusted to meet the standard after 3 full turns in either direction, replace the hinge mechanism and repeat the procedure.

5.0 Verification & Defect Reporting

1. Verify the final closing time is recorded and within the 2.5 to 4.5 second range. If not, the unit must be flagged for rework.
2. If the door fails to close fully or slams after adjustment, red-tag the unit with a description of the defect and place it in the rework area.
3. For hinges that cannot be adjusted to specification, remove the hinge, inspect for damage, and replace with a new unit. Log the defective hinge in the ShopDocs QA module for supplier quality tracking.
4. If more than 5% of hinges in a batch require replacement, escalate to the production supervisor for root cause analysis and potential process adjustment.
5. All out-of-tolerance adjustments must be documented in the ShopDocs QA module with the operator ID, date, and final adjustment setting for traceability.

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.