

**PRODUCTION FACILITY PAINTED TEST PANEL PREPARATION METHOD FOR
QUICK KNIFE ADHESION TEST (FLTM BU 154-01)****APPLICATION**

This procedure is used to prepare painted panels through the production paint facility process for Direct Glazing (Urethane adhesive to Painted Metal substrate) performance evaluation of Primerless and non-Primerless systems via Quick Knife Adhesion Test.

REQUIRED EQUIPMENT/MATERIALS

- Electrocoated steel 4 in. x 12 in. (101 mm x 304 mm) panels, with one long edge taped for film build measurement purposes (two strips of ½ in. or 12 mm tape, leaving 3 in. x 12 in. or 75 mm x 304 mm of testable area)
- Production Paint facility and materials
- Supporting documents:
 - FLTM BU 154-01
 - AVP-T118-001

TEST PROCEDURE**Test Panel Preparation Procedure:**

1. Fixture test panel to production unit prior to topcoat spray booths. Panel should be in windshield opening, adjacent to windshield flange and attached using spring clips or other appropriate method. See Figure 1 for panel placement options on typical vehicle.
Note: Test panel location shall be based on plant facility capability of applying topcoat film builds representative of those on production flanges and once established, shall not be changed unless approved by Paint Engineering.
2. Allow test panel to travel through standard production paint process, i.e. topcoat spray booths and ovens, on the production unit.
3. Remove test panel from production unit after exiting last oven, taking care not to touch or contaminate the painted face of panels.
4. The test panels should be exposed to the same environmental conditions (temperature and humidity) that the vehicles are exposed to prior to the glass cell.
5. If evaluating tutone or repair adhesion performance, repeat steps 1 – 5 with the same panel on another production unit of the same color.

Test Panel Labeling and Handling:

1. Painted Test panels must be labeled with the following information:
 - a. Date of preparation
 - b. Spray booth/oven identification with oven temperature & humidity
 - c. Basecoat Color, M-code, and topcoat technology.
 - d. Any special processing, e.g. Repair panel, Fresh Setup, non-production adhesive etc
 - e. Location of panels during adhesive cure (indoor or outdoor) and ambient temperature & relative humidity.

Date	Action	Revisions	Rev 01
2015 07 02	Revised	See Summary of Revisions	T. Weingarz / J. Crist, NA
2007 01 23	Activated		I. Non-M. Mehandru



2. Evaluation of adhesion performance on fresh paint, i.e. "Fresh Setup": apply direct glazing adhesive per FLTM BU 154-01 within 4 - 6 hours of oven exit. Prior to adhesive application, the test panels should be exposed to the same environmental conditions (temperature and humidity) that the vehicles are exposed to prior to the glass cell.
3. After adhesive application, apply a piece of plastic film (1-2 Mils) to the top of the bead and compress to approximately 5 mm. Expose the samples to the 2 condition listed below, using Quick Knife (FLTM BU 154-01) testing for evaluation.
 - i. In-plant environment (temp & humidity)
Initial evaluation at 3 days; then at 7, 14, 21 days etc. until link up has occurred.
 - ii. Outside plant environment
 1. Place samples outside in a covered location that allows exposure to ambient temperature and humidity but is protected from external elements (dirt, precipitation, sun load, etc.), see Note 1.
 2. Initial evaluation at 3 days; then at 7, 14, 21 days etc. until link up has occurred.

Record results as described in report section below.

Note 1: The enclosure must be constructed so it allows ventilation and protects from external elements (dirt, precipitation, sun load, etc.). The inside environment of the enclosure must be representative of the ambient temperature and humidity outdoors. This enclosure must also be constructed in a manner that allows conditioning of at least (8) 4x12" panels.

REPORT

1. Panel label information
2. Average topcoat film build, clearcoat film build preferred, on panel
3. Most recent topcoat oven curves (Time, Humidity, & Temperature) to panel preparation timeframe
4. Record daily plant and outside plant Temperature/Humidity during exposure listed in paragraph 3 above.
5. Quick Knife results per FLTM BU 154-01

KEY WORDS

Glass Bonding
Quick Knife

SUMMARY OF REVISIONS

2015 07 02

- Test Panel Label section
 - Added line #1e
 - Updated wording on line #2
 - Line #3 reworded and added In-plant & Exterior Environmental Testing
 - Removed Line #4
- Report Section
 - Added Temperature and Humidity Reporting

