






SOP Reference #: LF0004_Lam_Roll

Operation/Task:	Digital Laminating – Roll to Roll			Equipment:	Graphic Finishing Laminator
Owner:	Digital Manager	Date Created:	3/11/26	Department:	Digital Studio
		Revision History:	See last page		


ALERTS (see below): Critical Step  Quality Check  Tip  Team Safety 

Purpose: This SOP/work instruction describes the process of Laminating Rolls off the large format printer

Step #	Alerts	Step Description - “What to Do”	“How to Do it”	“Why to Do it”
1		Safety	<ul style="list-style-type: none"> • Keep hands, hair, and loose clothing away from rollers. • Do not bypass safety guards or emergency stop functions. • Ensure work area is clean and free of obstructions. • Know location of Emergency Stop before operation. 	Safety First

2	<input checked="" type="checkbox"/>	Roll to Roll Setup	<p>Load Print Roll (Bottom Supply)</p> <ul style="list-style-type: none"> • Mount printed media on bottom unwind shaft • Ensure print feeds face up (image facing laminate) • Center the roll precisely • Apply light brake tension <p>Load Laminate Roll (Top Supply)</p> <ul style="list-style-type: none"> • Mount laminate roll on top shaft • Confirm adhesive side faces down toward print • Center the roll • Set slightly higher tension than the print roll <p>Attach Take-Up Core</p> <ul style="list-style-type: none"> • Install empty core on take-up shaft • Tape leader media to core evenly across width • If laminate has a release liner, Slit and separate release liner from adhesive film and tape to the garbage take up rod 	Print film and laminate need to be facing the correct direction and must be on the correct rods to continue
---	-------------------------------------	--------------------	---	---

3	◆	Webbing Procedure	<ol style="list-style-type: none"> 1. Pull laminate under idler bar and over top roller 2. Bring laminate down to meet the print at the nip point 3. Feed both laminate and print into rollers using a leader board 4. Pull combined material through to the back 5. Attach laminated web securely to take-up core <p>Ensure both materials are:</p> <ul style="list-style-type: none"> • Square to rollers • Evenly tensioned • Free of wrinkles before starting 	Ensuring a straight, aligned laminate roll and print roll during initial setup will help prevent skews during laminating process.
---	---	-------------------	--	---

4		Laminating Operations	<p>Start-Up</p> <ol style="list-style-type: none"> 1. Engage rollers at low speed 2. Observe first 2–3 feet carefully 3. Check for: <ul style="list-style-type: none"> ○ Wrinkles ○ Silvering ○ Skewing <p>Production Run</p> <ul style="list-style-type: none"> • Increase speed once stable • Monitor continuously: <ul style="list-style-type: none"> ○ Edge alignment ○ Tension consistency ○ Surface quality • Make small adjustments only: <ul style="list-style-type: none"> ○ Adjust top tension if laminate wrinkles ○ Adjust bottom tension if print wanders ○ Adjust take-up tension to keep tight, even roll <p>Roll Tracking</p> <ul style="list-style-type: none"> • If material begins to walk left/right: <ul style="list-style-type: none"> ○ Slightly adjust supply roll alignment ○ Reduce tension and re-center ○ Never force alignment by hand near rollers 	Correct Operation and careful monitoring will prevent problems and ultimately re-prints and re-laminations
---	---	-----------------------	---	--

5	◆	Completion Process	<p>End-of-Run Procedure</p> <ol style="list-style-type: none"> 1. Slow machine before end of roll 2. Stop rollers 3. Cut laminated web cleanly. NEVER cut material against rubber pinch roller. 4. Tape down loose edges on finished roll 5. Remove finished roll from take-up shaft <p>Shutdown</p> <ul style="list-style-type: none"> • Release roller pressure • Turn machine OFF • Clean adhesive residue from rollers if needed 	<p>Correctly removing finished product from laminator is important to ensure product or machine is not damaged in the process. DO NOT EVER CUT FILM AGAINST RUBBER PINCH ROLLERS!</p>

Notes: 😊

- Maintain **balanced tension** between laminate and print
- Keep **web alignment straight at all times**
- Use **low pressure first, then increase gradually**
- Avoid stopping mid-run whenever possible

Common Roll-to-Roll Issues & Fixes

Issue	Cause	Solution
Wrinkles in laminate	Too much top tension	Reduce top brake
Wrinkles in print	Too much bottom tension	Reduce bottom brake
Silvering	Low pressure or speed too fast	Increase pressure / slow down
Skewing / walking	Uneven alignment or tension	Re-center rolls, rebalance tension
Loose take-up roll	Low take-up tension	Increase slightly
Tunneling	Uneven pressure	Re-adjust roller gap evenly

12. Best Practices

- Always use a **leader board (SLED)** to start runs
- Keep rollers **clean and adhesive-free**
- Store laminate and prints in same environment (temp/humidity)
- Run a **test strip before full production**
- Avoid stopping mid-lamination unless necessary

14. Operator Skill Tips (What Experienced Operators Do)

- “Listen” to the machine—tension issues often show early
- Make **micro-adjustments**, not big changes

- Watch the **edges**, not just the center
- Dial in settings on first 3–5 feet, then lock it in

Definitions:

Revision History	Description of Changes	Requested by	Date
Rev 1	First posting to intranet	Digital Manager	3/2026

CI035 4/20