

PPF FIELD MANUAL

Shop checklists, defects, and quoting

The bench companion to the PPF video library

This book does not enroll you in the course. The course does not require this book.

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Methods drawn from working-shop PPF practice

tvpwestgate.com

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How to use this book

This is a field manual. Keep it on the bench. It is not the seventy-eight-lesson video course written out, and it is not a certificate.

Read a chapter. Then put film on the practice rig. Do not read all of it first. The skill lives in your hands.

The video library at tvpwestgate.com shows motion: tension, heat, squeegee angle, bumper recesses. Start with the free setup lessons on the site. Prices, tiers, and refund rules for the course live on the site at the time you buy. They are not printed here because they change.

THE BULLETIN-WINS RULE

Every film maker publishes a current technical data sheet, installation bulletin, and safety data sheet for that exact product. Those documents control. If this book and a current maker document disagree, follow the maker. Formulations change after a book is printed. This book cannot update itself on a shelf.

What this book is

An educational shop manual for paint protection film. It teaches tools, prep, fundamentals, panel order, defects, finish, and how to quote without promising income.

It is not a license, a manufacturer certification, a warranty of skill, or a promise that any technique will work on any car. You do the work. You own the result.

What stays in the videos

One-piece bumper speed, windshield optics, color-PPF seams, plotter settings, dealer accounts, manufacturer encyclopedias, and the capstone demonstration live in the video library and the long course PDF. If a chapter here and a moving picture disagree, believe the picture for hands and the current bulletin for chemistry.

Read this first

Safety

PPF work uses sharp blades, heat guns, steamers, solvents, and electrical tools. Read the SDS for every chemical before you open it. Wear the PPE the SDS requires. Work ventilated. Cut away from your body. Snap blades into a puncture-resistant sharps box, never into a trash can. Keep the heat gun moving. Never work under a vehicle supported only by a jack.

- If you are tired, rushed, impaired, or unsure, stop. Most shop injuries happen in exactly those conditions.
- Flammable solvents and a heat gun do not share a bench.
- A pressure washer is a tool, not a toy. Maker numbers govern angle, distance, and temperature on filmed cars. A shallow stream into an edge lifts film.
- Sensors, cameras, and radar are safety equipment. No film over a sensor without a verified procedure for that car and that film.
- No installation is worth an injury. When in doubt, stop and consult a qualified professional.

Liability, in plain language

You perform every install yourself, on vehicles you choose, under conditions you control. Damage to paint, trim, glass, sensors, or electronics is yours. If you work on other people's cars, carry liability insurance and use written work agreements. This book does not provide insurance, contracts, or legal advice.

To the maximum extent permitted by law, the author's total liability arising from this book is limited to what you paid for it. The book is provided as-is, without warranty of any kind, express or implied, including merchantability and fitness for a particular purpose. The author is not liable for indirect, incidental, special, consequential, or punitive damages, including personal injury, vehicle damage, loss of business, or cost of corrective work.

Work on customer cars is a business decision. This book does not promise jobs, apprenticeships, clients, or income. Anyone who promises you income from PPF is selling something else.

Manufacturer product disclaimer

Film chemistry, mix ratios, temperature windows, warranty terms, and approved accessories change. Always pull the current bulletin, TDS, and SDS for the exact SKU on the roll in your hand. Course practice standards in this book are labeled as course standards. They are starting points for practice film. They are not a substitute for the maker's sheet on a paid car.

1. The product and the money

What PPF is

Paint protection film is a clear, tough polyurethane sheet applied to paint. It is a sacrificial layer. It takes rock chips, bug acids, and road rash so factory paint does not. Severe impacts can still reach the paint. It is not a force field.

Quality film has three working layers. The topcoat is the skin the customer sees: gloss, clarity, light-scratch self-heal with heat. The TPU base is the muscle: most of the thickness, the impact absorber you stretch over curves. The adhesive is what you fight: pressure-sensitive, grabbed by tack, delayed by slip, set by the squeegee. The stack ships on a liner. Peel as you go. Exposed adhesive touches only slip solution and prepared paint.

SunTek-style stack numbers, for feel only: cap sheet about 2 mil, topcoat about 0.5 mil, urethane about 6 mil, adhesive about 1.5 mil, liner about 3.5 mil. Eight mils total — about two sheets of paper between a rock and a paint job. A mil is one thousandth of an inch. Your roll's sheet is the real stack.

Why it is still a trade

Cheap film and cheap installs exist. The professional tier persists for three reasons.

1. Prep. Film locks in whatever is underneath. Wash marring, iron dust, and polish oil become permanent under a clear sheet.
2. Edges. Anyone can cover the middle of a hood. Wrapped, tucked, or sealed edges decide whether the job lasts years or months.
3. Warranty handling. Something will go wrong. A documented walkaround and a calm re-do keep the customer. The film is maybe a third of the job.

Four buyers

- New-car owners. The first chip hurts. "Just bought it" converts.
- Luxury and sports cars. Soft paint, expensive repaints. Film is insurance on an asset.
- Lease return. Film on strike zones can cost less than excess wear charges.
- Resale. Unchipped factory paint is worth more than a visible repaint.

Thirty-second pitch, no jargon: “This film takes the beating your paint would take — chips, scratches, bug stains. Light scratches in it heal with heat. When you sell the car, the original paint is still underneath.”

Packages and ranges — orientation, never quotes

Partial front: leading hood, front fenders, bumper — the strike zone. Full front: complete hood, fenders, bumper, often lights and mirrors — the core product of the trade. Full body: every painted panel.

Package	What it covers	Orientation range (US, 2025–26 research)
Partial front	Leading hood, front fenders, bumper strike zone	\$700–\$1,500
Full front	Full hood, fenders, bumper; often lights and mirrors	\$1,400–\$3,500; common band \$1,800–\$3,000
Full body	Every painted panel	\$5,000–\$9,000 and up
Pro TPU roll	Material cost only, not the job	Often \$1,000–\$1,500

Your market is three shops you can drive to, not a forum. Five things move a quote: vehicle size, film brand, edge standard (wrap vs face-cut), paint condition and correction, local market. Bake a re-do reserve into every quote. This manual uses 15 percent as a planning number, not a law. Re-dos are a cost of the trade, not a character flaw.

2. Film you will actually buy

TPU versus TPH

TPU is thermoplastic polyurethane — the material premium shops install. TPH is a market label, not a single chemistry. Judge the named product’s data sheet: self-heal spec, UV and yellowing warranty, stretch spec. Do not judge the letters on the box.

IRON RULE

Practice on designated practice TPU. Customer cars get quality TPU sold for that purpose. Nothing you charge money for gets practice film. Nothing you charge money for gets unbranded mystery TPH sold as “the same thing.” Yellowing shows up months later. The customer remembers your name, not the forty dollars you saved.

Thickness and finish

Thicker is not automatically better. Thickness is a trade: more impact absorption, harder stretch on tight curves. Match thickness to the panel and the maker's line.

Gloss hides less than people think under raking light. Matte and satin show squeegee trails, heat distortion, and contamination that gloss forgives. Color PPF is a different product family — alignment, edge color, and failure modes change. Learn gloss clear first.

How to choose a brand

Four filters, in order.

4. Current bulletin and SDS you can actually get.
5. Pattern library and cut path you can run (pre-cut kits, plotter, or bulk).
6. Support when a roll or a warranty claim goes wrong.
7. Price after those three, not before.

XPEL, 3M, SunTek, STEK, and Avery Dennison are the US names you will hear. None of them endorses this book. “Chinese film” is not one thing. Demand aliphatic TPU in writing and a named warranty administrator, or walk.

Buy practice film and paid-job film as two piles. Mixing them is how beginners film a customer car with training stock.

3. Toolkit and buying waves

Wave 1 — before you practice

Item	What matters	What to avoid
Squeegees	Multi-hardness TPU set (soft lay-down, medium firm-down, firm edges) plus a felt-edge burnisher	One cheap hard card for every job
Knife	OLFA-style 9 mm stainless holder, 30-degree snap blades, 2–5 mm of blade showing	Dollar-store utility knives; dull blades “to be safe”
Sharps box	Puncture-resistant. Every snapped segment, same day	Trash can, coffee cup, “I’ll snap it later”
Bottles	Two continuous-mist bottles. Label SLIP and TACK. Shop convention: blue tape slip, red tape tack	One unlabeled bottle you “just remember”
Practice TPU	Verify the listing. Store upright, cool, tight-wound	Cheap “TPU” that is vinyl; film stored hot or crushed

Water and soap	Neutral baby shampoo and distilled or deionized water	Unfiltered tap in slip, tack, or wipe; dish soap
Rig and PPE	Nitrile gloves, sawhorses, junk hood with intact clearcoat, heat gun, IR thermometer, 5 mL syringes	Practicing on a daily driver first; no thermometer

On paint, knifeless tape is the plan. The blade is the backup. Course rule of thumb: 2–5 mm of blade showing. Fresh edge every panel.

Wave 2 — before prep on real paint

Knifeless tape, clay kit, iron remover, bulk IPA, dedicated wipe towels, two wash buckets with grit guards, pH-neutral wax-free soap, masking tape, inspection light, mini squeegees, adhesive remover, and non-ammonia glass cleaner.

Wave 3 — paid cars only

DA polisher, pads, compound, paint thickness gauge, steamer, plotter, pattern software. A plotter before job volume is a coat rack. A polisher before you understand clearcoat is a burn-through.

Plan a few hundred dollars before you have destroyed your first roll. That destruction is tuition.

Practice mixes — course standards, bulletin wins

Name the product line every time you mix. Do not average two maker numbers. Do not carry a course practice mix onto a paid SKU whose bulletin prints a different recipe.

Liquid	Course practice standard	Maker notes that override
Slip	2 mL baby shampoo per 32 oz distilled water (about 0.4 mL in a 6.8 oz bottle). Mix fresh daily.	Sits inside 3M published range for some Pro Series lines; other 3M lines print different milliliters. 3M says do not store overnight.
Tack	15% IPA / 85% distilled water.	Avery historical lock-down was often 25% IPA; current Avery lines differ. Never IPA tack on STEK. STEK says IPA tack can melt adhesive. Their path is their primer, edges only, per their sheet.
Panel wipe	Course default 15% IPA.	3M Vehicle Prep guide has published 70% IPA / 30% water

		for the wipe itself. On 3M film, 3M current wipe recipe governs.
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4. Bay, light, and a hundred hours

Four non-negotiables

- Dust. Damp-mop. Never hose the floor into a mist. Close the door. No fan across the panel. GFCI on heat and lights. Cords off the floor.
- Light. Harsher than the daylight the customer will use. Overhead shop light hides silvering and contamination. A raking LED bar finds them.
- Staging table. Flat, wiped, dedicated. Not the trunk of another car.
- Temperature. Film and adhesive fight you when cold. Put a wall thermometer in the bay and look at it.

Published windows vary by maker. 3M has published roughly 60–85 F with an optimum band in the 70s. STEK has published roughly 68–77 F and told installers to cool the car above about 86 F. SunTek Reaction has published about 18–24 C ambient. Avery and XPEL public windows vary. Read the sheet in your hand.

The rig

Junk hood on sawhorses. Practice film. Squeegees. Two bottles. Run the same bay routine you will run on a paid car. Practice that skips dust control trains you to accept dust.

Hundred-hour plan

Do not advance until the current phase is boring. Boredom means the skill is landing.

Phase	Work	Exit gate
1. Squeegee	About 45-degree face, pressure as a dial, 50% overlap, center-out, no mid-stroke lift. One hundred counted strokes, then hundreds more.	You can put down a dry, even field without thinking about the stroke.
2. Stretch and heat	Pull to the stop signals. Silver practice film on purpose. Learn the envelope on cheap film.	You stop before silvering more often than after.
3. Full practice panels	Prep, lay, squeegee, post-heat edges, inspect. Time yourself.	A timed hood that would survive raking light.
4. First real piece	Door cup on a car you own or a wreck you can ruin. Small, visible, low consequence.	You can explain every defect in the photo without lying to yourself.

	Photograph it.	
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Rough planning bands, not promises: bumper 3–5 hours while learning; hood 3–4; mirror pair 1.5–2; full front 12–18; full car 20–40. Pros run faster. Wrapped edges run slower. Log every hour honestly. Rounding up cheats you on the first paid hood.

5. Prep — the film locks in what you leave

Wash

One job: remove loose dirt without adding a mark. Under film, wash marring is permanent.

Two buckets, grit guards, mitt rinsed on the grid after every panel. Separate wheel tools. Brake dust never shares the paint mitt. pH-neutral car soap. No wax, no silicone, no dish soap.

If you pre-rinse with a pressure washer, use maker numbers. 3M has published: 40-degree fan minimum, tip guard, no more than 80 bar, water no more than 140 F, nozzle at least 30 cm and square to the panel, never a shallow stream into an edge. On filmed cars that shallow stream lifts edges. Your maker sheet wins.

Order: shade when you can, pre-rinse, wheels first, body top-down, lower third last, rinse before soap dries, dry with clean microfiber in straight pulls. A mitt that hits the ground is laundry, not a five-second rule.

Decon

Wash misses bonded contamination: iron (brake and rail dust) and tar or sap. Order: tar spot-treatment, iron remover, then clay. Chemicals first so clay is not a sanding block.

Iron remover: gloves, shade, cool panels, dwell per the label (often 2–5 minutes), never let it dry, rinse until the water runs clean. Keep it off bare polished metals the label excludes.

Clay: heavy lubricant, light pressure, straight lines, fold to a fresh face. Dropped clay is trash. Exit gate is the baggie test — plastic bag over your hand, glide. If it is not glass on every panel the film will cover, you are not done.

Correction — only what you should spend

Polishing removes clearcoat. Clearcoat does not grow back. Measure thickness before the machine. Document existing damage first.

Fingernail test: if it catches, the scratch is through the clear and polishing will not bring it back. Calls: light correction, medium after a failed light test spot, or decline. Decline is a professional skill. Use a dual-action polisher while you are learning. Rotary in learning hands burns through.

Test spot: lightest combination on a small area, inspect, step up only if needed. Stop when the budget is gone or the defect is unfixable.

Panel wipe and the last look

Film failure is rarely a film problem. It is usually residue: wax, polish oil, silicone, fingerprints. Two towels, straight lines, edges and recesses included. No bare hands on a wiped panel. Re-wipe anything a fingerprint touched.

Final inspection is a gate. Raking light, every panel the film will cover. Contamination goes back to decon. Streaks go back to the wipe. Undocumented damage goes to photos and a conversation. Photograph the clean panels.

FIVE CONDITIONS BEFORE FILM

Clean. Decontaminated. Corrected to the agreed call. Wiped. Inspected. All five. Skip one and the film will testify later.

6. The five fundamentals

Slip

Slip keeps adhesive from grabbing while you position. Water quality matters more than the soap brand. Distilled or deionized. Mix fresh. Keep the panel wet until you commit, then squeegee the water out. Puddles and dry islands both cause defects.

Every install starts with a flooded panel. The habit you build on the rig is the habit you will run on a customer hood.

Tack

Tack is the opposite bottle. Mist, flash, lay, squeegee. It belongs on edges and lock-down zones, not flooded across a panel you still need to slide.

Lifting an edge: tack the paint and the adhesive face, reset, heat-set. Never IPA tack on STEK.

Squeegee

Mantra: angle, pressure, overlap, direction, no mid-stroke lift.

- Angle. About 45 degrees of face to the panel. Too upright skips. Too flat smears.
- Pressure. A dial, not a switch. Soft face to lay. Firmer face to dry.
- Overlap. Fifty percent. Bare lanes are future adhesive lines.
- Direction. Center-out so water has an exit.
- No mid-stroke lift. A lift leaves a line. Finish the stroke, then reset.

Slower than you think. Count strokes on the rig until the motion is boring.

Tension

Healthy tension looks even, not shiny-thin at the high point. Anchor a flat zone before you stretch a curve. Plan two or three small pulls, not one hero pull. Relief cuts exist because some recesses demand more film than a sheet can give. Shame about relief cuts is amateur theology.

THREE STOP SIGNALS
The pull gets suddenly hard. The surface goes cloudy (adhesive markings / silvering). The film wants to wrinkle instead of move. Any one of these ends the pull. Pride does not get a vote.

Silvering is usually the adhesive stressed past its limit, not the TPU breaking. Severe marks: peel and replace. On some 3M Protection Wrap guidance, mild adhesive markings have a published lift-and-heat repair in a stated temperature band — only on that product, only as printed. Do not import that repair onto a film whose maker publishes none. Milky slip under fresh film is moisture. It is not silvering.

Heat

Keep the gun moving. Never park it. Heat does two jobs in order: help the film conform, then lock edges after the water is out. Matte gets extra respect; distortion shows. Use the IR thermometer. If you do not have the maker temperature band, stop and get it.

7. Edges, stretch budget, and cuts

Three edge finishes

Finish	What it is	When it wins
Wrap	Film goes around the panel edge.	Best durability when there is clearance and a clean backside.
Tuck	Film disappears into a gap.	When wrap clearance is gone but a gap will hide and hold an edge.
Seal	Face-cut and tacked.	When wrap or tuck is impossible. Honest, visible, must be clean and post-heated.

Corners need relief and patience. Pick per edge. Do not use one finish as a personality.

Stretch budget

Film stretches because TPU is a thermoplastic elastomer. Heat and pull rearrange the chain. Past the envelope you thin the stack, mark the adhesive, or lock in a dart. The budget is smaller on mirrors, light housings, and tight bumper recesses than on a hood field.

Two-piece is not defeat. Two clean pieces beat one forced piece every time the customer will see the high point.

Blade and knifeless

Knifeless tape is how you cut openings and edges without gambling the clearcoat. The blade is for film in the air, film on the table, and film you can back with a cutting surface. Depth control is a career skill. You are trimming wet film a hair above paint. Fresh 30-degree tips cut with less pressure. Less pressure is less paint risk.

8. Panel order

A default full-front order

Dirtiest and largest first while you are fresh: bumper, hood, fenders, then mirrors and lights, door edges last. Cover finished panels if the car sits overnight. Dust on uncovered film becomes tomorrow's complaint.

Door cup — first real piece

Small, compound curve, visible. Setup: wiped paint, labeled bottles, fresh blade, light charged. Wet, position, anchor the flat, work the cup with short strokes, finish the edge with tack and heat, walk the light. If it silvers, that panel is practice. Do not wait to see if it settles on a piece the customer will touch every day.

Hood

The first large panel because the challenge is size, not shape. Center line first. Work halves. Keep the film wet until a zone is committed. Overlap strokes. Edges last. Do not chase a corner before the field is stable.

Fender

The body line runs the lesson. Decide badge-off or work-around before film. Relief cuts belong where the arch gathers film. Sight the arch from more than one angle before you cut.

Bumper — plan, then lock

Part one is strategy and laydown. Study the bumper. Mark recesses, sensors, fog openings, lower lip. Center, work outward, flats before deep curves, park problems.

Part two is recesses, openings, lip, tuck-versus-wrap per edge, post-heat, lockdown inspection. Knifeless tape for openings. The lower lip is dirty and abused. It goes last and gets a real edge strategy, not a hope.

BUMPER DECISION TREE

Re-lift and re-anchor. Relief cut. Never force. Forcing stretch past stop signals writes the redo.

Mirrors, lights, door edges, rockers

Mirrors: decide one piece or two before you cut. Stretch budget is small. Every edge must seal.

Lights: small and curved. Fog lights live in grit. No film over a sensor or camera without a verified procedure.

Door-edge strips are cheap insurance and a common add-on. Contamination on that thin face is the usual failure.

Rockers are the blast zone. Work in arm's-length sections. The lower third needs two passes. Be honest with the customer: rockers take damage even under film.

Small panels and the rest of the car

A-pillars, roof strips, rear bumper, and remaining panels use the same method as the front: wet, anchor, stretch to stop signals, pick an edge finish, post-heat, inspect. The module closer in the video library is ten lessons and one method. This book will not invent a second method for the back of the car.

9. Defect bible

Diagnose by layer. Dull topcoat that will not self-heal is often film quality. Clouding from a hard pull is usually adhesive. Specks sealed under film are contamination you should have caught in prep or liner discipline.

Defect	What you see	Usual cause	First move
Silvering	Frosty or cloudy mark after stretch	Stop signal ignored	Severe: redo. Mild: only a repair the maker printed for that line.
Stretch marks	Permanent thinning or distortion	Past the envelope	If it remains after a maker-legal attempt, replace the panel.
Fingers	Raised dart of excess film on a curve	Too much film in too small a radius	Heat and work it while willing. Returning

			finger: more relief, less pull, or two-piece.
Contamination	Hair, dust, mitt fuzz under film	Open bay, liner slop, unwiped table	Peel while you still can. Many sealed particles are permanent.
Adhesive lines	Ridge where a stroke lifted or a wet edge dried	Mid-stroke lift, dry island, rushed firm-down	Re-wet and re-stroke if the film will still move. Cured lines are often a redo.
Air bubble	Raised pocket that does not fade	Missed squeegee path	Work it out now or lift and reset. Not a 48-hour item.
Moisture bubble	Small, often many, under fresh film	Slip left behind	Many clear over a day or two. Tell the customer at handoff.
Edge lift	Edge standing, dirty, or peeling	Residue, stretch at the edge, skipped post-heat, later wash abuse	Four-step edge fix if the film will still move. Otherwise redo.

The forty-eight-hour rule

The 48-hour idea applies to small moisture only. It never applies to air pockets or dirt. Tell the customer at handoff what they might see in the first two days so a normal cure does not become a panic call. The handoff is part of the install.

Four-step edge fix

8. Clean. Residue on the edge is why it let go.
9. Tack the paint and the adhesive face.
10. Reset the edge without stretching it thinner.
11. Heat-set and cool down before you declare it held.

Verdict boundary: if the edge stands again after a correct four-step, the film in that zone is spent. Peel it.

Fix or redo in sixty seconds

Three ground rules. One: the customer sees daylight, not your hopes. Two: a saved panel that looks saved only in the bay is a callback. Three: panic-polishing a bad panel wastes the hour you need for the good one.

Five questions, in order.

12. Can you lift without destroying the piece?
13. Is the defect in a zone that will still look right after a reset?

14. Will the customer see it in daylight and raking light?
 15. Do you have film, time, and a calm hand for a clean replacement?
 16. If the honest answer to a reset is no, will you peel it now?
- Log the reason. The log is how you stop repeating the same silver.

10. Finish and handoff

Post-heat

After the water is out, heat relaxes residual tension so the TPU does not pull back from a curve. Long edges. Keep the gun moving. Treat the last half-inch like it matters, because it does. Then tack where the bulletin wants edges locked. Cool-down before you declare victory.

Ten-minute quality inspection

- Raking light, more than one direction.
- Field, edges, recesses, lights, mirrors.
- Fingertip check on edges.
- Anything cloudy, lifted, or contaminated is marked now, not at delivery.

Customer handoff

Walk the car together. Show what was filmed. Invite questions. Hands-off window: follow the film maker (some 3M guidance has a short no-touch period). Aftercare: no automatic wash and no pressure wand into edges for the period the maker prints. Give it in writing. Photograph the finished car.

Aftercare in one card

- Hands off for the maker stated window.
- No automatic wash and no pressure wand into edges for the maker stated period.
- Hand wash, pH-neutral soap, after the window.
- Light scratches in quality topcoat often self-heal with warm sun or gentle heat. Deep cuts do not.
- Call us, do not pick at a lifting edge.

Maintenance plans are the closest thing this trade has to recurring revenue. They are also how you see a lifting edge before the customer sees it on a Saturday. Price the plan as inspection plus a wash standard you can keep. Do not sell a plan you will resent.

11. Quoting without lying

Walkaround first

The most expensive sentence in this trade is “I didn’t see that scratch.” Photograph every chip, swirl set, dent, aftermarket part, and existing film. Customer initials the condition notes. Exclusions are the most important part of the quote. A dispute needs a gap. Do not give it one.

Special cases: aftermarket bumpers and lights may not match OEM geometry. Existing film is either a removal line-item or an exclusion. The job folder is also your portfolio. Shoot the before, the during, and the after.

Turning hours into a number

A quote is arithmetic. Every number traces to timed hands, monthly bills, the roll on the shelf, or the reserve fund. If it traces to none of those, it is a wish.

- 17. Package and vehicle.
- 18. Your timed hours plus a realistic pace, not a YouTube pace.
- 19. Film and consumables.
- 20. Overhead share (rent, insurance, blades, failed panels).
- 21. Re-do reserve. This manual uses 15 percent as a planning number.

Then look at the three local shops. If your number is half of theirs, you missed a line. If it is double, be ready to explain edges and film.

Five hard conversations

Conversation	Move
The cheaper quote	Lead with prep, edges, and who answers the phone in year three — not with insults.
The scratch you will not polish out	Fingernail test, photos, decline. Offer film over documented damage or send them to paint.
The mid-job discovery	Stop. Written change order. Do not just add it and argue at pickup.
The edge that lifted	Own the workmanship or walk the warranty paperwork. Do not improvise blame.
The day-two pressure wash	Aftercare card, photos, then a fair repair price if it is abuse, a free reset if it is you.

Deposits, balances, change orders

Deposits hold the calendar. Balances due before the car leaves unless you have a written dealer term. Getting paid is a procedure, not a mood.

A mid-job change order is a second quote, short and written: what you found, what it costs, what happens if they decline. Do not keep cutting while the number is in the air.

Warranty claims are a job step, not a favor. Photograph, pull the maker claim path, do not invent coverage. Re-do calendar economics: every free panel you eat came out of the reserve you should have quoted. If you skipped the reserve, you are paying tuition again.

12. When to stop and use the videos

This book will not teach you a one-piece bumper at speed, windshield optics, color-PPF seams, plotter settings, dealer accounts, or a capstone grade. Those live in the video library and the long course PDF.

Free setup lessons and the paid library: tvpwestgate.com

If a chapter here and a moving picture disagree, believe the picture for hands and the current bulletin for chemistry.

Bench cards

Before film touches paint

- Bay mopped, door closed, thermometer checked.
- Bottles labeled. Slip mixed today. Tack mixed to this film sheet.
- Wash, tar, iron, clay, baggie test glass.
- Correction call documented or declined.
- Wipe. No bare hands. Raking-light gate passed. Photos taken.

During the panel

- Liner off a section at a time.
- Wet, position, anchor, then stretch.
- Stop signals beat pride.
- Park recesses. Do not invent a hero pull.
- Walk the light before you call it done.

Before the customer takes the keys

- Post-heat and edge lockdown.
- Ten-minute inspect.
- Aftercare in writing.

- Finished photos in the job folder.
- Balance collected. Warranty path named.

Redo pocket card

- Lift without destroying?
- Zone still look right after a reset?
- Visible in daylight?
- Film, time, and a calm hand for a clean replacement?
- If no — peel it now. Log the reason.

About this edition

This field manual was condensed from the longer PPF Manual review draft (15 September 2026) so a working copy could live on a bench and on Amazon without reprinting the full seventy-eight-lesson course.

Three passes produced this file. Pass one cut quizzes, brand encyclopedias, advanced chapters, and course commercial terms. Pass two turned remaining craft into checklists, tables, and stop-signals. Pass three locked the legal front, the bulletin-wins rule, and the split between this book and the video library.

Technical claims remain subject to current manufacturer documents. Imprint name, ISBN, and course commercial terms are set at publication, not in this working copy.

Author of record: Yung Chang. Shop methods referenced throughout the companion course belong with the working installers who taught them, including the TVP Auto tradition taught alongside the video library. Align that credit line before KDP goes live.