3M Science. Applied to Life.™

Maximize your shop's **refinish hours** from the start.



Spending the **time upfront** can help **save time in the end.**

Let's talk about scratches.

Sanding imperfections that could lead to **visible** repairs. No, thank you.



Deep inline scratches while sanding filler.

Blocking with a coarse grade abrasive can leave deep scratches on a surface that resemble semi-straight lines put in from each pass. Identifying these scratches on a panel cannot only help visually show us what the scratch profile looks like, but it can also tell us that we still have some work to do.



An inconsistent scratch profile during blend panel prep.

While it may be difficult to see these inconsistent scratches with the naked eye, following sanding best practices and using the correct tools can help bring these issues to light before it's too late. Any visible bumps or shiny edges left, will need to be removed for an even, flat finish.



Unwanted pigtails during surface prep.

Pigtails are fortunately fairly easy to identify. Unwanted swirl-like marks or scratches that resemble "pigtails" may appear on surfaces and should prompt technicians to course correct before spraying.

Take the time to prevent rework and defects caused by these imperfections that may appear during the sanding process or after the repair is complete. When every minute matters, getting the job done right the first time is key.

Spoiler alert: There are no shortcuts in refinishing.



How these imperfections are **caused:**



How these imperfections can be **avoided:**

Smooth surfaces, sharper results.

Quality paint jobs start with quality body and prep work.

Every sand scratch matters.

The gritty details behind better paint jobs.

80 and 180 grit scratches should be non-existent.

At the start of the sanding process, the use of coarse grade abrasives are required (typically 80 grade, working upwards through the grades) to sand down and feather out filler and glaze. As a result, deep inline scratches are left on the panel.

- Apply guide coat before each sanding step or grit change to easily identify and remove scratches along the way

⚠ IMPERFECTION INSPECTION POINT:
Before applying primer, some tech sheets require prepping with no coarser than 320, sometimes even 400. You should not move onto the primer step without removing these coarse grade scratches.

Adapting your process for today's ultrafine metallics.

Basecoat metallics are finer than they've ever been, requiring a finer and very consistent scratch profile. Technicians today are having to sand finer than they ever have before. Too deep of a scratch, improper removal of paint build up, or even inadequate removal of dust on the panel could all impact the quality of the job.

- Strive for a uniform, flat finish with even scratches
- Hand sand with a flexible abrasive and apply light pressure around curves, body lines, and arches
- Double check paint company recommendations for exact abrasive grade before DA sanding (typically 800-1000 or finer)

The risks of "covering up" vs. avoiding all together.

Pigtails may start to appear on a surface during the sanding process as result of a variety of factors. Sandpaper loading, incorrect grit selection, and inconsistent sanding techniques (uneven pressure or sanding pattern) are some of the main reasons why imperfections may result.

- Do not use abrasive past the life of the disc, avoid loading or clogging
- Dust extraction solutions can help remove dust and contaminants that contribute to loading
- Use the correct grit sequence before transitioning to finer grades too quickly

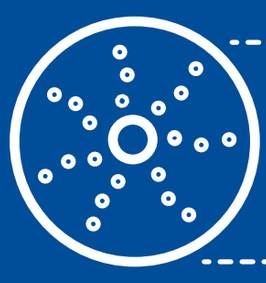
Failure to address or avoid these types of sand scratches, could lead to possible rework or a complete repaint of the panel.

Why you should care about the abrasives you use.

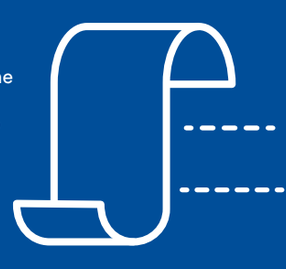
Sometimes, it isn't as simple as "scratchy-side down". Whether it's the process or the tools you use, there's more to consider than you may think.

Smooth your way to success by choosing the right abrasive for the job.

Consider whether your abrasive offers:



- **Speed** to get the job done faster
- A **consistent cut** for the even scratch profile needed for blend prep
- **Longer life** to defer loading
- **Dust extraction** capabilities



- **Conformability** for curves, body lines, and arches
- **Control** over pressure and speed

Cut through
the complexity
of today's vehicle repairs.

Choose high-quality abrasives and tools that can help drive productivity throughout your process.



Proper body work and prep are the foundation of a quality paint job.

Take the time to **prevent rework and defects** caused by **these imperfections** that may appear during the body repair or sanding process, or even after the repair is complete. When every minute matters, getting the job done right the first time is key.

Body Repair



▸ Metal warping during body work.

Avoid sanding metal too long, which could lead to weakened metal. Unwanted jagged edges and burrs could also appear without a clean, precise cut.

Get the job done with:
3M™ Cubitron™ 3 Cut-Off Wheels
3M™ Cut-Off Wheel Tool



▸ Structure damage caused by weld removal process.

Using a file belt instead of a drill can help with faster removal of welds, limiting the chance of any additional damage to the substrate or inner structure of the vehicle.

Get the job done with:
3M™ Cubitron™ II File Belts
3M™ File Belt Tool

Speed, performance, and consistency are all factors that you strive for in your shop process and in your abrasives. Consider the **use of dust extraction** to help boost productivity by helping to **reduce rework and cleanup time**. With the right tools, processes, and resources, you can get vehicles to the finish line faster.

Paint Preparation



▸ Deep inline scratches while sanding filler.

Identify and remove scratches as you work upwards through the grades. Be sure to remove all coarse-grade scratches before spraying primer.

Get the job done with:
3M™ Cubitron™ II Abrasives (80+ to 320+)
3M™ Blue Abrasives (80 to 320)
3M™ Clean Sanding System (dust extraction)
3M™ Dust Extraction Flexible Sanding Blocks
3M™ Dry Guide Coat



▸ An inconsistent scratch profile during blend panel prep.

Use a combination of hand sanding and DA sanding to achieve a uniform finish with even scratches, especially when spraying complex metallic colours.

Get the job done with:
3M™ Cubitron™ II Abrasives (800+ to 1000+)
3M™ Clean Sanding System (dust extraction)



▸ Unwanted pigtails during surface prep.

It is important not to use an abrasive past the life of the disc to avoid clogging or loading. Failure to keep the surface clean can introduce dirt and other contaminants.

Get the job done with:
3M™ Cubitron™ II Abrasives (320+ to 1000+)
3M™ Blue Abrasives (320 to 800)
3M™ Clean Sanding System (dust extraction)

REMINDER: You cannot fix improper body work with paint. Quality paint jobs start from the beginning.

Mishaps happen along the way and that's okay.

When defects appear after paint—vand they often do, it is **a visual indication that the vehicle has been repaired.** Many times, remediation or paint correction is necessary, aimed to match the texture originally applied at the factory.

Paint Finishing



▸ Matching factory orange peel after paint.

Sanding with 1500 or 2000 grit abrasives with an optional interface pad, can help flatten some of that unwanted texture. Keep a close eye on the vehicle's adjacent panels to ensure you are matching the texture originally put in from the factory.

Get the job done with:
3M™ Purple Finishing Film (1200 to 2000)
3M™ Trizact Abrasives (3000 to 8000)
3M™ Random Orbital Sander
3M™ Perfect-It™ EX system



▸ Removing dirt nibs in paint.

Knock down the nibs seen on the panel with a 1500 or 2000 grit abrasive on a small or tilted DA sander. Blend the surface to avoid having any flatter spots where the defect existed that could stand out later on.

Get the job done with:
3M™ Purple Finishing Film (1200 to 2000)
3M™ Trizact Abrasives (3000 to 8000)
3M™ Random Orbital Sander
3M™ Perfect-It™ EX system

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