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Tractor Painting Tips

Keeping your tractor or equipment well kept & free from rust & corrosion will extend the life of your investment & help retain its value for a longer period of time. It can be difficult, in many cases, to determine the best products and preparation to best fit your needs.

The following tips will hopefully aid you in selecting the "system" to best fit your individual needs.

What to consider when planning your paint job

- TIME
- COST
- USE
- EXPECTATIONS
- SAFETY
- SUPPLIES & EQUIPMENT NEEDS

TIME

The more time spent on your project the better the results.

Not every situation is the same and the painting "system" you choose can vary greatly depending on how much you are willing and able to invest in your project.

If your tractor or equipment is very rusty it will naturally take much more time to prepare, fill, prime and finish than for a surface with minimal rust & wear.

COST

The cost of paint most often is the least costly part of the paint job in comparison to preparing and applying the paint.

The cost of your basic coatings the average person can work with vs. the high-end automotive finishes best applied by a professional painter, can range widely in price. Later in the presentation we will discuss this in more detail.

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USE of your tractor and equipment

Determine the use of your tractor or equipment and keep this in mind when choosing your coating system. Many times if you have limited outdoor exposure or wear you can save a fair amount of money on the type of coating you buy.

Performance EXPECTATIONS

Determine the importance of durability, gloss retention, ease of application and dry time needs when choosing your coating system. There can be trade-offs you will need to consider.

SAFETY

Your personal safety is a top priority.

Generally, the more basic coatings are not only easier to apply but are much safer. Adding hardeners or using more exotic coatings, like Acrylics or 2 component systems, use more hazardous chemicals and the use of an approved chemical respirators is a must. A NIOSH-approved charcoal respirator is highly recommended.

Also use extra caution in regard to the environment you are painting in. It is very important to have proper ventilation and eliminate open pilot lights and spark sources.

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SUPPLIES needed to complete the job

- Sand Paper (coarse to very fine) or sand blaster
- Cleaner/ degreaser
- Paint - primer and finish coats
- Paint thinner and clean-up solvent as recommended for the coating system you choose
- Spray gun
- Compressor
- Masking tape (best quality you can buy)
- Masking paper or plastic

Pick your coating system

As noted previously, each coating system has its advantages and disadvantages. Standard enamels (alkyd or synthetic) are usually cheaper and easier for the do-ityourself person to use. Adding a hardener to these coatings can improve the performance closer to that of the higher priced coatings.

The higher-tech Acrylic, Acrylic-lacquers, and twocomponent products are much more expensive, harder to apply and require much better preparation to perform properly. In most cases these coatings are best painted with by a professional.

General coating performance guide

	Alkyd Enamel (Synthetic Enamels)	Industrial dry Alkyd En. (Synthetic Enamels)	Acrylic Enamel	Polyurethane Enamel 2 - Component Only
Gloss (all considered high-gloss)	85-90+ @ 60 deg	85-90+ @ 60 deg	90+ @ 60 deg	90+ @ 60 deg
Viscosity (thickness, higher is thicker)	80 ku	60-70 ku	60-70 ku	68-70 ku
Ave. Dry To Touch @ 70 deg. F	2- 4 hrs.	1/2 hr. to 1 hr	1/2 hr.	1/2 hr.
Ave. Dry Through (re-coat)	8 + hrs	3 hrs.	1-2 hrs	8+ hrs
Recommended Solvent (spray)	VM &P Naphtha/ mineral spirits	Xylene	Xylene	Do not thin
Recommended Solvent (Brush)	Mineral Spirits	Spray preferred	Spray preferred	Spray preferred
Recommended Application	Spray/ brush/ roll	Spray preferred	Spray only	Spray only
Flash Point	102 deg. F (Combustible)	90 deg. F (flammable)	90 deg. F (flammable)	90 deg. F (flammable)
Hardener (Catalyst) available	Yes	Yes	Yes	Must use Catalyst
Gloss Retention	Good	Good	Very good	Excellent
Leveling or "flow"	Excellent	Good	Fair	Fair
Performance Direct to metal (No Primer)	Excellent	Good	not recommended	not recommended
Speed to re-coat @ proper mil thickness	8+ hrs	3 hrs	1-2 hrs	8 hrs and <5 days
Dry time temperature sensitivity	slows dry substantially	Slows moderately	Slows moderately	Slows substantially
Cost	$20- 40	$20- 40	$30- 80	$100- 200+

Starting the job

Thoroughly wash surfaces with a detergent solution to remove all grease and residue. Heavy areas of oil and grease may need to be removed with a chemical degreaser, followed by a detergent wash. This step will reduce the chance of cross contamination as you proceed with your work. Avoid just wiping with solvent as this can just dissolve contaminates and spread them around on all the surfaces.

Remove all decals and stickers. A heat gun and scraper usually work well for this.

Step 2: sandblast/sand

Sandblast or sand all rusty areas, pitted, rough or chipped paint. Removal of all existing paint is not necessary but is ideal if using higher-end paint that needs better preparation to adhere or uses a strong solvent that may wrinkle old finishes. Use extra caution when sandblasting as the blasting media can cause damage to unprotected parts and filter into tanks, seals or other moving parts causing excessive wear or damage. Any remaining paint needs the gloss removed so your next coat of paint will adhere.

Caution: Flash rust can occur on any exposed bare metal in as little as a few hours depending on humidity.

Step 3: straighten/fill and level

If your tractor is older it most likely has seen its fair share of wear and tear over the years and has a few dents and bruises. To get the best looking job take the time to straighten sheet metal and fill the dents with body filler.
Sand and level any of these areas after filling to insure a uniform finish. Take care to finish with very fine grit sand paper to avoid scratches caused by coarse sandpaper. Allow the filler to thoroughly cure and prime these areas. A flat spot can appear in the areas a body filler is used when applying a gloss finish coat if not properly prepared and primed.

Step 4: tape & protect

Use a top quality tape to mask off any handles, lights, gauges or other areas not removed that you don't want painted.
Masking paper, plastic or even newspapers can be used to cover larger areas not in need of paint or that will need a different color. When masking, a wider tape makes the job easier. Take care to properly tape overlaps as overspray has a way of finding its way through almost any opening.

Step 5: prime

Always make sure to pick the appropriate primer as recommended for the finish coat being used. Primers designed for use with standard enamel finish coats may not be compatible with acrylics or two component paints. Many enamel primers do not require sanding prior to the next coat, but can be done to remove imperfections once dry. Most primers designed for automotive finishes must be sanded so the finish coat adheres.

Always follow label recommendations for best results.

Step 6: double check your priming

Insure you have a proper mil thickness of primer. Applying to thin of a coat may not give you proper protection and may not adhere as well. When applying multiple coats of primer, or finish coat, always allow enough cure time so the following coats do not inhibit the cure of the previous coats. This is more critical with standard alkyd/synthetic paints than with acrylic, lacquer or two component paints.

Feel the surface of the primer prior to painting your next coat. If you feel imperfections, a light sanding with very fine sand paper or steel wool is suggested. This removes imperfections from dust, lint or other residue. Painting in a clean environment will help limit the amount of this type of contamination.

Applying your finish coat

Keep in mind, cool surface and air temperatures can slow cure time and make the coating more difficult to apply. Temperatures must be kept warm for the duration of the cure time noted in the instructions.

Allow enough dry time between coats, especially with standard enamels. They are normally slower dry than automotive or industrial products and require longer dry-torecoat times. Slower dry time is good for the leveling of your paint film, it eliminates "dusting" seen with faster dry products. If a slower dry coating is too thick or re-coated too soon, the film may remain soft underneath for a period of time.

- Hardener is available for standard enamels. In many cases it will double the gloss retention of the enamel & will increase durability.
- Hardener can also be used in acrylics to enhance the durability and gloss retention, but may slow the dry.
- Two component products always use a hardener (catalyst).
- When using hardeners or two component products, use caution, as they have more health hazards than conventional enamels, as previously noted.

Finish the job

Remove tape and allow coating to thoroughly dry before taping for another color or area. Tape applied to a uncured coating can leave marks or pull the film off.

Apply decals and any other stickers (available through most farm stores or mail-order)

Allow ample time before exposing to weather or washing. Un-cured paint can also be sensitive to water and detergent, and much like an automotive coating, need to be allowed to dry for a few weeks prior to any heavy use or cleaning. Slower dry products, depending on temperatures, may take a bit longer to reach their "full hardness".