TROUBLE SHOOTING
Clear Lacquer Finishing Problems *(Nitrocellulose Lacquers)*

All information following assumes:
A properly matched spray gun needle, nozzle, and spray cap in good working order.
Compressor in good working order and drained once or twice daily and pressure regulator controls, and moisture trap installed in the air line as close to the spray gun as possible (within 10 to 25 feet of the gun).

ORANGEPEEL:
Surface looks like the peel of an orange, or a miniature topographic map.

Cause:
The film does not level out completely because the lacquer dries before it can flow together.

Corrections:
* Add Star (TM) FLASH-OFF CONTROL SOLVENT as needed to your lacquer.
(Use retarder as a last resort, it will slow your entire finishing and drying schedule.)
* Use a matched and proper thinner for your lacquer.
Thin not more than 25% unless specified by the manufacturer.
* Spray at 8 - 12 inches from the surface.
* Use as little air pressure as will allow a proper coat of material to be applied.

OVERSPRAY:
Roughness or sometimes white looking fuzz stuck in the finish surface.

Cause:
* Too much air pressure or bounce-back from spraying too close to the surface;
or spraying into blind corners and cubby holes, as in bookshelves or desks.
* Excessive air flow pre-dries the atomized lacquer before it can reach the surface
(such as when spraying outdoors on a windy day).

Corrections:
* Add Star (TM) FLASH-OFF CONTROL SOLVENT to your lacquer.
* Spray at 8 -12 inches from surface.
* Use as little air pressure as will allow a proper coat of material to be applied.
* Spray in an environment free from gusts or excessive air flow.

FISH-EYES, or CRATERING:
Usually round depressions in lacquer, sometimes clear to the wood or substrate,that look like moon craters.

Cause:
* Contamination in the finish or substrate from silicone and oils.
* In refinishing; -- usually from inappropriate wood care products.

Corrections:
* Clean surfaces thoroughly with naphtha (only a partial help) .
* After paint and finish removal or stripping clean surface thoroughly with lacquer thinner or naphtha (only a partial help) .
* Add Star (TM) SIL-FLO, as directed on container, to lacquer and sanding sealer.
* **Maintain wood surfaces with silicone & oil free maintenance products**.
(Unless it says it is silicone free, you can bet it has silicone in it.)
* Keep silicones away from all wood & all woodworking tools and machinery.

PIN HOLES:
Tiny holes that look like somebody took a pin and put holes in the film of lacquer.

Cause:
* Moisture in the lacquer when being sprayed.

Corrections:
* Bleed traps on air lines, bleed compressor tank completely, and make sure air lines are free of moisture on a **Daily** basis.
* Install a moisture trap and a moisture filter as close to the spray gun as possible.

GRAININESS:
The film looks as if someone threw sand into the lacquer film.

Cause:
* To much air pressure can cause entrapment of air bubbles in the lacquer film.

Corrections:
* Reduce air pressure; and increase fluid pressure; and reduce film build up.

BLISTERS:
A raised bubble on surface of lacquer.

Cause:
Too heavy of a film build-up of lacquer at one time.

Corrections:
* Cut back fluid and air pressure.
* thin down the lacquer (usually not more than 25% unless specifically recommended by the manufacturer).
* Spray lighter coats.

BUBBLING:
Surface looks as if the lacquer boiled and remained grainy.

Cause:
Lacquer and surface to be sprayed is too hot.

Corrections:
* Spray lighter coats;
* thin down lacquer;
* use less air and fluid pressure.

Note: When it is over 100 deg.F, it is best to stop and do something else.

BLUSHING:
Film looks whitish, cloudy, or milky.

Causes:
* Moisture trapped in the surface of the lacquer from the spray equipment or atmosphere.

Corrections:
* Add BLUSH RETARDER to sanding sealer and lacquer as needed
(follow retarder label directions) .
* Close doors, - heat rooms, - heat objects being sprayed.
* Use air assist hot spray airless for clear lacquers in summer and winter.

Summer:
* Air pressure to pump should be 40 lbs. air assist should be 20-30 lbs.
* To much air pressure to pump and air assist can cause tiny bubbles
or gassing along the grain.
Winter:
* The same as summer except increase pump pressure to 45 lbs.,
air assist should remain the same.

BLOOMING:
Film looks bluish, or iridescent.

Causes:
Undried oil based finishing materials, and/or incompletely cured oil based stains trapped under the surface of the lacquer.

Corrections:
* Always allow sufficient drying time
(**for thorough deep drying, not just surface dry or "dry to the touch")** of oil based finishing products prior to topcoating with lacquer.
* Extend Dry Times of oil based products in cold or humid conditions.
* Add Star (TM) BLENCO REDUCER to oil based finishing materials such as oil based stains and pastewood fillers to control drying and accelerate cure times under cool and humid conditions.

SAGGING, & RUNS:
Runs and drips of lacquer that collect by gravity in thick ridges.

Causes:
* Over thinning;
* Cheap and/or mismatched lacquer thinner;
* Cold surface and material;
* Too much material applied per coat or coats applied in rapid succession;
* Worn or damaged spray gun cap, nozzle, and/or needle.

Corrections:
Remedy or fix any or all of the conditions above in "causes" for sags & runs.

POOR ADHESION & New Lacquer Cracking off of corners.
First coat flakes off with fingernail and edges or corners chip off easily with minor impact, or bumps. --- Finish lacks durability and rubs, chips, or flakes off easily.

Causes:
* Dry spray; from too much air flow as in too much fan speed in a booth or outdoor spraying
* Dusty surface or other surface contamination, poorly cleaned or prepared just prior to spraying.
* Too much atomization air or too little material leaving the gun.
* Spray gun too far away from surface.

Corrections:
Remedy or fix any or all of the conditions above in "causes" of Poor Adhesion.