

Nano-Clear[®]

BEST PRACTICES REPORT



UPS – United Kingdom Feltham, Middlesex

Customer:

United Parcel Service

Project Objectives:

Reduce washing cycles to save money
lessen the environmental impact.

Protect UPS paint/decals extending
their service life. Eliminate one
repainting cycle – reduce maintenance
costs.

Reduce time out-of-service for package
cars, tractors and other assets that
need repair and painting.

Applicator:

UPS London Hub
West 1
Ocean Boulevard
Stanford-Le-Hope SS17 9FD
United Kingdom

Nano-Clear Formulation:

NCIF-300

Application System:

Spray

Testing Duration:

3 Years and now complete



Please contact us for more information: <http://www.nanocoatings.com>

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WHY NCIF-300:

- One component, clear, aliphatic (will not yellow or oxidize), polyurethane/polyurea hybrid containing a UV absorber (protects underlying paint and decals from oxidizing/fading). Use as received.
- High cross-link density = very “tough” physical properties (abrasion, scratch, impact and chemical resistance).
- The cured coating has very low surface energy which allows dirt and contaminants to release off the surface with rain. Reduced washing.
- Formulated to be applied to new and oxidized paint. NCIF-300 enhances faded color and blends scratches/abrasions.
- Blends new and old paint eliminating significant refinishing work because a complete vehicle repaint is not necessary when repairing only a section of the vehicle.
- No unusual prep or application procedures...NCIF-300 is very forgiving.

PILOT TEST TRIALS:

- Testing on various P-80 vehicles and heavy tractors (Class 8) for 2.5+ years and is ongoing.
- Applied NCIF-300 over new and 2-year-old oxidized paint.
- Various preparation methods were tested – nothing (new paint), light sanding (oxidized paint), wash/no sanding (oxidized paint).
- Confirmed paint/decal compatibility. NCIF-300 enhanced the color of both the paint and decals.
- The coated in-service trucks and tractors travel around the London region.

PILOT TEST RESULTS:

- Vast reduction in tree line scratches on the sides of the vehicle.
- Reduction in fine scratches caused by the car wash.
- Heavy soiling is noticeably reduced.
- Early performance results of the NCIF-300 indicate the test package cars and tractors could eliminate one repainting cycle in their lifecycle.
- Review of NCIF-300 after the test vehicles have been in the field clearly shows significantly better protective physical properties than UPS paint alone.



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ADVANTAGES OF NCIF-300: Working directly with Nanovere as Manufacture

Activity (Averages for a P80 package car)	Paint	NCIF-300 Over Coating	Advantage
Preparation of P80	25 hours x \$60 / hr. = \$1,500	12 hours x \$60 / hr. = \$720	NCIF-300. \$780 saved. Asset back into service making money 13 hours sooner.
Material usage and cost	6 liters. \$542	6 liters. \$283	NCIF-300. \$259 saved.
Application of material	4 hours x \$60 / hr. = \$240	4 hours x \$60 / hr. = \$240	Same.
Decal cost	\$500	None, unless damaged.	NCIF-300.
Application of decals	3 hours x \$60 / hr. = \$180	None, unless damaged.	NCIF-300.
Total P80 unit cost	\$2,962	\$1,243 w/o decals. \$1,743 w/ decals.	NCIF-300. Savings between \$1,219 - \$1,719
Service life	Repaint every 4 years.	8 years minimum.	4 additional years of service. Eliminate one repainting cycle.
Cost – lifecycle of 10 years	\$2,962 x 2 cycles = \$5,924	\$1,243 w/o decals. \$1,743 w/ decals.	NCIF-300. Savings using NCIF-300 = \$4,181 – \$4,681



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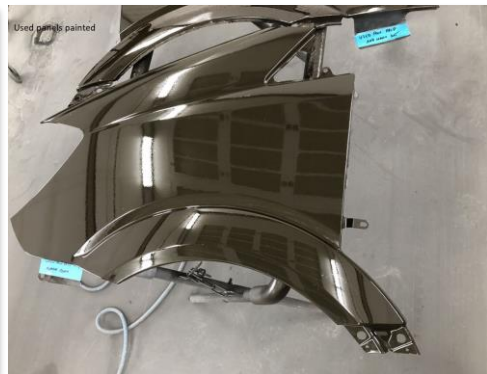
NCIF-300 makes a remarkable difference in paint protection and reduced maintenance time!



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