

No. 500

Automotive paintwork - polishing out dust nibs

A

Description

When painting vehicles, contaminants (dust particles) can compromise the visual appearance of the finished paintwork. Exactly how much this happens and in what way depends on a number of different factors, such as insufficient cleaning of the existing surface before painting, lint from clothing, the spray booth not being clean enough, and the air supplied to the gun. These dust particles create defects on the surface, which result in customer complaints later on.

Important:

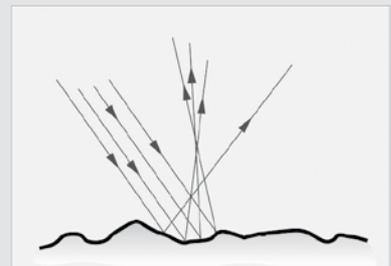
Dust nibs produce small bulges in the surface. Light is reflected diffusely from these areas (see Fig. 500/01), causing the dust nib to appear much bigger than it actually is.

Previously a dust nib meant that a car painter had to sand the entire body panel and paint it again, a procedure which was very time-consuming and expensive.

With the Festool sanding and polishing system, a car painter can remove the problematic dust particles by localised spot sanding, followed by polishing.

Both pneumatic and electric sanders can be used for the necessary sanding work.

In this example, the sanding work is demonstrated using the ETS 125 EQ and the polishing work using the ROTEX RO 150 FEQ.



500/01

B

Tools/accessories



500/02



500/03



500/04

Name	Order No.
Sanding, electric	
Eccentric sander ETS 125 EQ-Plus 240V (see Fig. 500/02)	571617
Sanding discs STF D125/0 P3000 T12/100	492365
Sanding discs STF D125/0 S4000 PL2/15	492377
Spot sander RH-SK D 36/1 (see Fig. 500/03)	493069
Sanding star SK D36/0 3000 T12/100	495063
Sanding, compressed air	
Compressed air eccentric sander LEX 2 125/3	691128
Sanding discs STF D125/0 P3000 T12/100	492365
Sanding discs STF D125/0 S4000 PL2/15	492377
Polishing	
Gear-driven eccentric sander RO 150 FEQ-Plus 240V (see Fig. 500/04)	571592
FastFix backing pad PT-STF D150 FX-RO150	493914
Rotary polisher RAP 150.03 E 240V	570750
Foam polishing pad PS-STF-D150X30-M-OCS/5	493853
Foam polishing pad PS-STF-D150X30-SF-OCS/5	493888
Polish MPA 8000/1	493816
Finish cleaner MPA-F	493066
Microfibre cloth MPA-Microfibre/2	493068



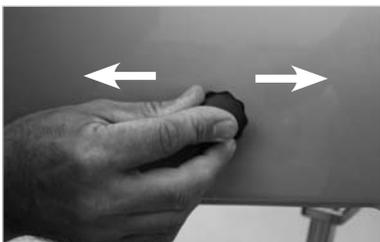
500/05



500/06



500/07



500/08



500/09



500/10

Sanding

- Place sanding disc STF D125/0 P3000 TI2 on the sanding pad of the ETS 125 EQ.
- Set the speed of the tool to level 1-3.
- Carefully sand out the dust particles. (See Fig. 500/05)
- Wipe down the surface with the green polishing cloth (see Fig. 500/06). This leaves a small, dull sanded area. The refraction of the light is still disturbed by the sanded surface and it will appear dull to the eye.

Alternative to the ETS 125 EQ for relatively small dust particles:

- Carry out the procedure described above by hand, using the spot sander and its sanding star (see Fig. 500/07).
- Coat the sanding star with MPA-F
- Keep your sanding motions linear in this case, because otherwise microscopic sanding marks could become visible after the polishing step, especially with dark paint colours (see Fig. 500/08).

Polishing

For alternative polishers to the ROTEX, see the table at the end of this document.

- Set to coarse sanding on the head of the ROTEX (see Fig. 500/09).
- For greater flexibility you can remove the ROTEX's extraction channel.
- Place foam polishing pad PS-STF-D150X30-M-OCS on the backing pad and apply dots of fine sanding polish MPA 8000. (Shake the polish well before use.) (See Fig. 500/10)
- To distribute the polish, set the speed on the tool to level 1. Then increase the tool speed to level 4-6. Polish the sanded surface with the tool flat against the surface.
- Wipe off dry polish residue with the grey microfibre cloth.

With darker paintwork, a further polish is advisable to prevent swirl marks and to achieve ideal shine.

For a second polish, proceed as follows:

- Set to coarse sanding on the head of the ROTEX (see Fig. 500/09).
- For greater flexibility you can remove the ROTEX's extraction channel.
- Place foam polishing pad PS-STF-D150X30-SF-OCS on the backing pad and apply dots of fine sanding polish MPA 11000. (Shake the polish well before use.) (See Fig. 500/10)
- To distribute the polish, set the speed on the tool to level 1. Then increase the tool speed to level 4-6.
- Polish the sanded surface with the tool flat against the surface.
- Wipe off dry polish residue with the grey polishing cloth.

Notes

The ROTEX rotary motion ensures intensive polishing and prevents the polish from flying off the pad. Its low speed in comparison to an angle polisher means that the paint barely heats up, preventing swirl marks. To prevent the polish flying off the pad when the tool is switched on, it is important to start the tool only when it is lying on the surface being polished.

- Polishing is very fine sanding.
- Due to the heat sensitivity of the paint, we recommend you do not carry out polishing work in blazing sunlight. This will also minimise polish residue and streaking.
- Polishing should be done in a dust-protected area (to prevent scratches). In professional automotive paint shops, this is achieved by having a separate, dedicated area for finishing.

D

Overview of polishers



RO 150 FEQ 503/16



RO 125 FEQ 503/17



RAP 80 E 503/18



RAP 150 E 503/19



POLLUX 180 E 503/20

Area of application	Recommendation	Backing pad Ø max.	Weight
All-purpose (sanding + polishing)	Can be used without risk (even by less-experienced users)	150 mm	2.3 kg

All-purpose (sanding + polishing)	Can be used without risk (even by less-experienced users)	125 mm	1.9 kg
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Small surface areas (spot polishing)	For professionals, for everyday use	80 mm	1.6 kg
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All-purpose	For professionals, for everyday use	150 mm	2.7 kg
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Ideal on medium to large surface areas	For professionals, for everyday use	180 mm	3.6 kg
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