



AVIATION INTERNATIONAL

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Xzilon3 Application Instructions

GENERAL PRACTICES:

- Review Xzilon3[®] DVD (available in X3500 kits.)
- Apply only in a well ventilated area.
- The aircraft surface temperature should be between 45 and 90 degrees F during application.
- Avoid application of Xzilon when the humidity is above 90% whenever possible.
- The aircraft surface should not show signs of visible moisture (rain, condensation or the like.)
- If Xzilon is applied in direct sunlight, the working time of material will decrease. The technician will need to apply to a smaller area for workability.
- Keep the Xzilon container sealed when not in use. The product will attract moisture and harm the formulation effectively defeating the molecular adhesion properties.
- The shelf life of unopened Xzilon is 18 months.
- The shelf life of an open bottle of Xzilon with the cap securely on the bottle and stored properly is 2 months.
- If Xzilon pours in a cloudy or milky consistency, do not use it. Discard the remaining contents.
- Keep all material from being exposed to floor and shop contamination.
- Sontara wipes (included in X3500 kits) may be used in place of cotton applicators to apply Xzilon.

Application hint: When opening the can of Xzilon, do not remove metal plug! Removing the plug could cause damage to the screw top resulting in difficulty in closing and resealing the can after the first use. The best method is to puncture the metal plug with an awl or small screw driver. This will allow small amounts of Xzilon to be dispensed.

Industry:

- AMS 1650B
- Boeing D6-17487 Rev. N
- Douglas CSD #1 Type V materials

Airframe Manufacturers:

- Boeing 737-SL-71-053A (all 737 NG Airplanes)
- Boeing BMS 10-72 Paint Adhesion testing April 2005
- Boeing NTO (747 Airplanes)
- Boeing/Goodrich Aerostructures Group Eng. Type CFM56-7 Lipskins
- Bombardier BD-700
- Bombardier SHORTS 71-11-01
- Bombardier BAPS 139-059
- Gulfstream GAMPS 4001 Rev. C 2007
- Rolls-Royce TV 11807R
- Rolls-Royce WW/20219/1/28 Oct. 08

* These items are available from Granitize Aviation or a Granitize Aviation Distributor

BARE METAL SURFACES

NOTE: See General Practices on Page 1

Materials Needed:

- X3500-18* Aircraft Britework Protection Kit which includes:
 - X20/18, Xzilon AECI - formulation for Bright Work applications (1 US Pint)
 - H-32 Cotton Cloths (4 ea.)
 - AC1213WWA, DuPont Sontara Window Wipes, (one pkg.)
 - Heavy Duty Gloves (2pair)
 - Instructional DVD (1 Ea.)
- XMPCR-G* Metal Polish Residue Cleaner is recommended
- 100 % Isopropyl Alcohol* (also available locally.)

We recommend the use of p/n AC1213WWA wipes or a soft cotton applicator for the cleaning process of the bare metals and the application of Xzilon.

Polish Bare Metals before applying Xzilon

IT IS VERY IMPORTANT FOR PROPER APPLICATION THAT ALL SURFACES MUST BE CLEAN OF ALL POLISHING RESIDUE BEFORE APPLYING XZILON!

Xzilon should be applied right after completing polishing and cleaning the brightwork. No visible moisture should be allowed to contact the aircraft!

- Polish all metals per manufacturer's maintenance manual prior to applying the Xzilon.
 - Note: Granitize Aviation metal polishes (XMP products) are recommended..
 - Ask for brochure #00-835 or catalog #00-836.
- When the brightwork has been polished to the desired finish, the polishing residue must be removed entirely. Failure to remove all of the polishing residue will harm the application and reduce the effectiveness of Xzilon.
- Use XMPCR followed by 100% Isopropyl Alcohol and H-32 Cotton diapers, for this process.
- **Remove all polishing residue using XMPCR followed by 100% Isopropyl Alcohol.**
 - Saturate a diaper with XMPCR or isopropyl alcohol and repeat the process so that the last cleaning shows no black polish residue on the cloth.
 - Finish with 100% isopropyl alcohol
 - Make sure to change out the diaper when soiled.

* These items are available from Granitize Aviation or a Granitize Aviation Distributor

Applying the Xzilon to Brightwork (Bare Metal) Surfaces

NOTE: WHEN THE TEMPERATURE EXCEEDS 90°F, APPLY XZILON TO A SMALLER AREA THAN YOU WOULD AT LOWER TEMPERATURES.

1. Apply an amount of Xzilon to a soft cotton applicator to wet the entire applicator
2. NOTE: The initial application of the Xzilon will remove some small amounts of polishing residue the alcohol was not able to remove. This is normal.
3. For an area of 2 to 3 sq ft (1/4 sq m) apply a thin film of Xzilon in a sweeping motion (not circular).
4. NOTE: The first coat of Xzilon will clean off any polishing residues that were not removed by cleaning with Isopropyl Alcohol. This is normal and you should proceed with the application step #3.
Do not allow the Xzilon to dry!
5. Wipe the treated area with the H-32 cotton diaper immediately following Step #2 until all “wet” film is buffed off and no longer visible. Rotate the H-32 cloth out as necessary when absorbency decreases.
6. Repeat steps #1, #2 and #3 until all subject areas are treated. Process is complete when three coats are applied (four coats if using X20-15).
7. Allow 20 to 35 minutes between coats.
8. **When application of Xzilon is complete: allow one-half hour cure time for Xzilon before returning the aircraft to service.** Note the aircraft log book for all processes completed. Discard used wipes and launder H-32 towels using 8 oz. of XE3 Zero V.O.C. Degreaser per large wash load and store towels in a clean location.

After application of the Xzilon, the aircraft is placed on its normal phase hour or calendar cleaning cycle. Ninety days for re-polish and reapplication is recommended. Re-apply anytime the metal is polished.

NOTE: Operators may choose to apply one to two coats monthly if polish is holding to satisfaction. Clean surface with Granitize Aviation XG-5 Hard Surface Cleaner and follow application steps #1 - #4 above.

To detect the presence of the Xzilon on Bare Metal Surfaces:

Use 6” of common ¾” or 1” wide masking tape. Fold one end back to make a tab at the end. Firmly press the tape on a subject treated area and suspected untreated area. Pull the tape back slowly at a 90 degree angle to the surface. Noticeable ease in resistance will take place on a treated compared to the untreated surface.

NOTE 1:

Bright Work Application: Service difficulty will occur if metals are not thoroughly cleaned to remove all residual polish and oxidation. The result of not performing this step before Xzilon is applied can result in small mineral spots or streaks showing up after moisture has been allowed to contact the surface. Aircraft flown close to salt-water environments may also experience this. If this occurs, all bare metals will need to go through a complete re-polish to be restored.

NOTE 2:

Post-Flight Bright Work Cleaning: XC-11 Spray & Shine Cleaner is the recommended cleaner for post-flight wipe down of Xzilon treated Bright Work.

* These items are available from Granitize Aviation or a Granitize Aviation Distributor

PAINTED SURFACES

NOTE: See General Practices on Page 1

PERSONAL SAFETY HAZARD: Work with proper Safety Harnesses and Equipment as required - Xzilon treated surfaces (such as top wing surfaces) can be very slippery to work on and can create a Personal Safety Hazard if not treated with caution. Review shop safety procedures with Safety Manager if there are any questions.

Materials Needed for Xzilon application:

- X3500-15* Aircraft exterior Protection Kit which includes:
 - X20-15 Xzilon AECI formulation for painted surfaces
 - H-32 cotton cloths & applicators
 - AC1213WWA DuPont Sontara Window Wipes
 - Heavy Duty Gloves
 - Instructional DVD
 - Note: these items may be ordered separately
- X-20/15*, Xzilon formulation for painted surfaces (1 US Pint.)
- Or X20-WO* Xzilon One-Step formulation (wipe on – leave on) may be substituted for the X-20/15.
- NOTE: One pint of Xzilon covers about 1,600 Sq ft.

Materials needed for surface preparation:

- Clay bar method
 - XC11* Spray and Shine and
 - XC12* Clay Bar - paint quality and level of paint oxidation determines which clay to use
 - XC12-LT* is a dark blue color for light duty.
 - XC12-MD* is a light blue for medium duty.
 - XH-111* Clay Bar Holder if you are using a rotary polishing motor
- For metal polish method:
 - XMP-S* Granitize Aviation Superfine metal polish
- XG-5* Hard Surface Cleaner
- H-56* spare Synthetic Cloth

* These items are available from Granitize Aviation or a Granitize Aviation Distributor

Required Surface Preparation:

In order to insure a satisfactory application of Xzilon, the surface must be pre-cleaned using the Granitize Aviation materials above. (Surface must be free of Grease, Hydraulic fluid and Jet Fuel, etc.) A zone chart may be useful in tracking completed sections if working on larger aircraft.

Prepare surface by using your preferred preparation method.

Clay Bar:

1. Xzilon XC12 clay bar with XC11 Spray and Shine by mist spraying a 3' x 3' area.
2. Take the Granitize Aviation XC12 Clay Bar and rub lightly, in a circular motion, over the wetted area until the surface becomes very smooth revealing low surface tension and hydraulic smoothness. The XH-111 Clay Bar Holder may be used if a rotary polishing motor is used. Reshape the bar during this operation every 10 minutes if performing this operation by hand. Reshape bar every 3-5 minutes if using a polishing motor. Reshaping the Clay Bar keeps the grit media on the surface of the bar.
3. Repeat steps # 1 and # 2 until all subject surface area has been prepared.
4. Wipe surface with XG5 Hard Surface Cleaner and H-56 micro fiber Cloth.

Metal Polish:

1. Use XMP-S Metal polish
2. Apply a small amount of metal polish to the paint and use a high speed buffer to lightly remove surface oxidation and bring out the richness of the paint.
3. Repeat steps # 1 and # 2 until all subject surface area has been prepared.
4. Wipe surface with XG5 Hard Surface Cleaner and H-56 micro fiber Cloth.

Applying the Xzilon to painted surfaces.

1. Apply an amount of Xzilon to a soft cotton applicator to wet the entire applicator.
2. Working on an area of 2 to 3 sq ft (1/4 sq m), apply a thin film of Xzilon in a sweeping motion.
Do not allow the Xzilon to dry!
3. When using X20-15: Wipe the treated area with a clean diaper removing all "wet" film immediately following step # 2. You will feel the surface tension decrease as each coat is applied. When the diaper becomes lightly saturated with the Xzilon, rotate cloth surfaces to a clean unused area. Change the diaper often as it becomes saturated.
When using X20-WO: Follow step # 2 until visible film has disappeared. No wiping after the application of Xzilon is required.
4. Repeat steps # 1, # 2 and # 3 until all subject areas are treated.
When using X20-15, treat surface area with three coats of Xzilon.
When using X20-WO, treat surface area with two coats of Xzilon.
5. Allow 20 to 35 minutes between coats.
6. When application of Xzilon is complete: allow one-half hour cure time for Xzilon before returning the aircraft to service; note the aircraft log book for all processes completed. Discard used wipes and launder H-56 towels using 2 oz. of XE3* Zero V.O.C. Degreaser per large wash load and store towels in a clean location.
7. Recommended re-application of Xzilon to Painted Surfaces is 400 - 500 flight hours, or one calendar year, whichever occurs first.

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Re-application on Painted Surfaces

1. Pre-clean aircraft using Granitize Aviation XG5 Hard Surface Cleaner and H-56 Synthetic Cloth.
2. Apply an amount of Xzilon to a soft cotton applicator to wet the entire applicator.
3. Working an area of 2 to 3 sq ft (1/4 sq m), apply a thin film of Xzilon in a sweeping motion to a thin liquid film.
Do not allow the Xzilon to dry!
4. When using X20-15: Wipe the treated area with a clean diaper removing all “wet” film immediately following Step # 3. When the diaper become slightly saturated with the Xzilon, rotate cloth surfaces to a clean unused area. Change the diaper often as it becomes saturated.
NOTE: When using X20-WO: Follow step # 3 until visible film has disappeared. No wiping after the application of Xzilon is required.
5. Repeat steps # 1 thru # 4 until all subject areas are treated with two coats of either X20-15 or X20-WO.
6. Allow 20 to 35 minutes between coats.
7. When application of Xzilon is complete: allow 12 hour cure time for Xzilon before returning the aircraft to service; note the aircraft log book for all processes completed. Discard used wipes and launder H-56 towels using 2 oz. of XE3 Zero V.O.C. Degreaser per large wash load and store towels in a clean location.

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* These items are available from Granitize Aviation or a Granitize Aviation Distributor



Xzilon Approvals and Aircraft Maintenance Manuals (AMMs)

Xzilon has been tested to Industry standards by SMI and meets these industry standards. In addition, several airframe manufacturers have tested and approved the use of Xzilon on their aircraft with NTO (No Technical Objection) notices or inclusion in work procedures or Aircraft maintenance Manuals.

<p><u>Industry:</u></p> <ul style="list-style-type: none">• AMS 1650B• Boeing D6-17487 Rev. N• Douglas CSD #1 Type V materials
<p><u>Airframe Manufacturers:</u></p> <ul style="list-style-type: none">• Boeing 737-SL-71-053A (all 737 NG Airplanes)• Boeing BMS 10-72 Paint Adhesion testing April 2005• Boeing NTO (747 Airplanes)• Boeing/Goodrich Aerostructures Group Eng. Type CFM56-7 Lipskins• Bombardier BD-700• Bombardier SHORTS 71-11-01• Bombardier BAPS 139-059• Embraer MEP 10-102• Gulfstream GAMPS 4001 Rev. C 2007• Rolls-Royce TV 11807R• Rolls-Royce WW/20219/1/28 Oct. 08

We are continually working with airplane and helicopter manufacturers for their formal approval of Xzilon on their aircraft. Please contact Granitize Aviation for ongoing status of approvals at other airframe manufacturers.



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This document is written to help Detailers & Operators prepare brightwork (including leading edges and engine inlet lipskins) for the application of Xzilon corrosion protection.

Polish & clean:

1. Polish the brightwork with the Granitize XMP system. Begin with a middle grade polish and move to a weaker or stronger grade as necessary. (Note: You do not need to proceed through every grade in sequence.) Finish with the "S" grade.
2. After polishing with the "S" grade, a thorough and complete cleaning of all metals with 100% isopropyl alcohol. For faster results, use Granitize XMPCR (metal polish residue cleaner) and finishing with 100% Isopropyl Alcohol.
3. This cleaning can be done with cotton diapers or DuPont Sontara wipes (p/n AC1213WW.) This must be repeated until no black residue is removed.
4. When the first coat of Xzilon is applied a very slight amount of polish residue will be encountered. This is normal!

Xzilon application:

Apply three to four coats of Xzilon in accordance with the attached instructions for brightwork.

Post Flight Care

1. After flight we suggest a light spray of Granitize XC11 on the metals. Use the Granitize H-56 microfiber Cloth to remove all impact materials. If the cloth becomes soiled, change out as to not put cleaning contamination back into solution and back on the metals.
2. Repeat until lipskin is clean.

Ongoing care & maintenance

1. To enhance the longevity of the polished metals we suggest reapply the Xzilon monthly if the Brightwork is holding to the desired level.
2. Clean metals with Granitize Aviation XG-5 Hard Surface Cleaner.
3. Re-apply one or two coats of Xzilon and observe if this cuts re-polish interval cycles and holds Brightwork and Corrosion protection to an acceptable level.

Maintenance Note:

If personnel wearing coveralls are in frequent contact with the lower areas of the Engine Inlet Lip Skins or the leading edges during maintenance, a reapplication of the Xzilon should be performed to insure proper protection in the area (s) contacted.



AVIATION INTERNATIONAL

This document is written to help Detailers & Operators prepare painted surfaces for the application of Xzilon

Polish & clean:

Polish the paint with your preferred method of either metal polish or clay bar

1. Clay bar

Polish the surface with a Grana-Clay bar (XC12-MD) and a lubricant

- a. Use either hand application or with a high speed buffer and a special pad to hold the clay bar.
- b. In either case, remold the bar every few minutes to exchange the surface with the interior portion to keep the bar active.
- c. A lubricant for the clay bar can be a soapy water solution like XS3 which residue can be wiped off with a wet towel after polishing
- d. Another lubricant is XC11 which should be cleaned off after polishing with XG5 on a cloth.

2. Metal polish

- a. Polish paint with a high speed buffer and Granitize XMP-S superfine polish. Use a foam buffing pad at operated at 1,000 – 1,200 rpm.
- b. Apply a small amount of metal polish to the painted surface.
- c. Work the buffer to polish without overheating the paint.

Xzilon application:

Apply two to three coats of Xzilon in accordance with the attached instructions for painted surfaces.

Post Flight Care

Generally, no specific post flight care is needed. However, if your aircraft causes exhaust stains, wipe down with XG5 or NS-019 and a microfiber towel

Ongoing care & maintenance

1. Routinely wipe down with C-11 and a microfiber towel.
2. Or clean with Granitize Aviation XG-5 Hard Surface Cleaner.



This document is written to assist Helicopter personnel for upkeep cleaning to the tail boom section.

The entire aircraft should be polished and treated with Xzilon by preparing the painted surface.

- Preparation can be done with XC12-MD clay bar and XC-11 Spray & Shine cleaner and then cleaned with XG5-G hard surface cleaner. After the paint is cleaned & polished, apply the Xzilon in accordance with published instructions.
- As an alternate method (which some detailers prefer) polish the painted surface with superfine metal polish (XMP-S) and follow with the application of Xzilon

For ongoing maintenance of the tail boom section:

- 1) Daily: After the last flight of the day, clean the tail boom section from Station X* to Y* by using Granitize NS-019 "No Streak Foaming Cleaner" or Granitize XG-5 "Hard Surface Cleaner". Spray and let soak on affected areas for a few minutes to allow the cleaners to soften the exhaust residue then remove all carbon and engine oil residue using a XH-56 synthetic cloth. As cloth become soiled, exchange out for new or freshly laundered unit.

* Experience will tell you the area you will need to clean after each flight.

- 2) Weekly: Apply two fresh coats of Xzilon P/N X20-15 to the tail boom from Station X to Y using the following method:
 1. Pre-clean aircraft using Granitize Aviation XG- 5 Hard Surface Cleaner and H-56 Synthetic Cloth.
 2. Apply a liberal amount of Xzilon to a soft cotton cloth or a DuPont Sontara Wipe AC1213WWA.
 3. Working an area of 2 to 3 sq ft (1/4 sq m) apply a thin film of Xzilon in a sweeping motion to a thin liquid film. **Do not allow the Xzilon® to dry!**
 4. When using X20-15, wipe the treated area with a clean diaper removing all "wet" film immediately following Step # 3. You will feel the surface tension decrease as each coat is applied. When the diaper becomes lightly saturated with the Xzilon, rotate cloth surfaces to a clean unused area. Change the diaper often as it becomes saturated.

NOTE: When using X20-WO: Follow step # 3 until visible film has disappeared. No wiping after the application of Xzilon is required.

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5. Repeat steps #1 thru #4 until all subject areas are treated with two coats of either X20-15 or X20-WO.

6. Allow 20 to 35 minutes between coats.

7. When application of Xzilon is complete: allow 1 hour of cure time for Xzilon before returning the aircraft to service; note the aircraft log book for all processes completed.

Discard used wipes and launder H-56 towels using 2 oz. of XE3-G Zero V.O.C. Degreaser per large wash load and store towels in a clean location.

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