EXTERNAL - CLEANING/PAINTING

1. General

A. The airplane should be washed frequently in order to maintain its appearance and minimize corrosion. The painted area of the airplane should be polished at periodic intervals to remove chalking paint and restore its gloss.

B. Water/detergent cleaning is the preferred method to clean the exterior surface of the airplane.

2. Precautions

A. Read and adhere to all manufacturers instructions, warnings and cautions on the cleaning/solvent compounds used.

NOTE: Do not use silicone based car wax.

B. Do not park or store airplane where it might be subjected to direct contact with fluid or vapors from methanol, denatured alcohol, gasoline, benzene, xylene, methyl n-propyl ketone, acetone, carbon tetrachloride, lacquer thinners, commercial or household window cleaning sprays, paint strippers or other types of solvents.

C. Do not leave sun visors up against windshield when not in use. The reflected heat from these items causes elevated temperatures on the windshield. If solar screens are installed on the inside of the airplane, make sure they are the silver appearing, reflective type.

D. Do not use a power drill motor or other powered device to clean, polish, or wax surfaces.

E. Cover static ports prior to wash.

WARNING: Ensure static ports are uncovered after wash. Failure to do so could result in erroneous airspeed and altitude indications.

3. Preventive Maintenance

A. Keep all surfaces of windshields and windows clean.

B. If desired, wax acrylic surfaces.

C. Carefully cover all surfaces during any painting, powerplant cleaning or other procedure that calls for use of any type of solvent or chemical. Table 701 lists approved coatings for use in protecting surfaces from solvent attack.

Table 701. Approved Protective Coatings

NAME	NUMBER	MANUFACTURER	USE
Spray	MIL-C-6799, Type 1, Class II	Available Commercially	To protect surfaces from solvents.
Masking Paper	WPL-3	Champion Intl. Corp. Forest Product Division 7785 Bay Meadows Way Jacksonville, FL 32256	To protect surfaces from solvents.
Poly-Spot stick	SXN	Champion Intl. Corp.	To protect surfaces from solvents.
Protex 40		Mask Off Company 345 Marie Avenue Monrovia, CA	To protect surfaces from solvents.

4. Approved Windshield/Window Products

CAUTION: Do not use gasoline, alcohol, benzene, acetone, carbon tetrachloride, fire extinguisher fluid, deicer fluid, lacquer thinner or glass window cleaning spray. These solvents will soften and craze the plastic.

A. Table 702 lists Cessna approved materials required for cleaning and polishing windshield and windows used on the airplane.

Table 702. Approved Windshield and Window Cleaners/Polishers

NAME	NUMBER	MANUFACTURER	USE
Mild soap or detergent (hand dishwashing type without abrasives)		Commercially Available	To clean windshields and windows.

Aliphatic Naphtha Type II	Federal Specification TT-N-95	Commercially Available	To remove deposits which cannot be removed with mild soap solution on acrylic windshields and windows.
Turtle Wax (paste)		Commercially Available	For waxing acrylic windshields and windows.
Great Reflections Paste Wax		DuPont 1251 Brandywine Blvd. Wilmington, DE 19898	For waxing acrylic windshields and windows.
Slip-Stream Wax (Paste)		Classic Chemical Grand Prairie, TX 75050	For waxing acrylic windshields and windows.
Permatex Plastic Cleaner No. 403D	Federal Specification P-P-560	Permatex Company, Inc. Kansas City, KS 66115	To clean windshields and windows.
REPCON (Refer to Note)	Federal Specification MIL-W-006882	UNELKO Corp. scottsdale, AZ 85260	Rain shedding on acrylic windshields.
Soft cloth (cotton flannel or cotton terry cloth)		Commercially Available	For applying and removing wax and polish.

NOTE: REPCON is the only windshield rain repellent approved by Cessna Aircraft Company for use on Cessna Model 208 series airplanes.

5. Approved Exterior Airplane Wash/Rinse Products

A. Washing removes contamination from the exterior airplane surfaces to prevent corrosion from runway deicing fluids, salts, oily fluids, foreign material, and surface dirt.

B. Exterior washing is a necessary part of a Corrosion Prevent and Control Program (CPCP). Refer to Chapter 51, Corrosion Prevention and Control Program - Description and Operation.

Table 703. Approved Exterior Airplane Wash/Rinse Products

Product Name	Number	Manufacturer/Web Address	Use
Eco 2000	ZI-400 or ZI-400HD	Eco 2000 www.eci2000.com.au/zi400air.s	To wash the exterior of the airplane (general purpose cleaning).
ZI-400 or ZI-400HD	ZI-400 or ZI-400HD	ZI-Chemicals https://zichemicals.com/aircraft.htm	To was the exterior of the airplane (general purpose cleaning).

6. Cleaning Windshield and Windows

CAUTION: Windshields and windows are easily damaged by improper handling and cleaning techniques.

CAUTION: Do not use any of the following for cleaning windshields and windows: methanol, denatured alcohol, gasoline, benzene, xylene, methyl n-propyl ketone, acetone, carbontetrachloride, lacquer thinners, commercial or household window cleaning sprays.

A. Refer to Table 702 for approved cleaning materials.

B. Place airplane inside hanger or in shaded area and allow to cool from heat of suns direct rays.

C. Using clean (preferably running) water, flood surface. Use bare hands with no jewelry to feel and dislodge any dirt or abrasive materials.

D. Using a mild soap or detergent (such as dishwashing liquid) in water, wash surface. Again use only bare hands to provide rubbing force. (A clean cloth may be used to transfer soap solution to surface, but extreme care must be exercised to prevent scratching surface.)

E. On acrylic windshields and windows only, if soils that cannot be removed by a mild detergent remain, Type II aliphatic

naphtha applied with a soft clean cloth may be used as a cleaning solvent. Be sure to frequently refold cloth to avoid redepositing soil and/or scratching windshield with any abrasive particles.

F. Rinse surface thoroughly with clean fresh water and dry with a clean cloth.

7. Waxing and Polishing Windshield and Windows

NOTE: When applying and removing wax and polish, use a clean soft cloth.

A. Refer to Table 702 for approved polishing materials.

B. Hand polishing wax should be applied to acrylic surfaces. (The wax has an index of refraction nearly the same as transparent acrylic and tends to mask any scratches on windshield surface).

C. Acrylic surfaces may be polished using a polish meeting Federal Specification P- P-560 applied per manufacturers instructions.

8. Windshield Rain Repellent

A. Refer to Chapter 56, Windshields and Windows - Maintenance Practices.

9. Aluminum Surfaces

A. Aluminum surfaces require a minimum of care, but should never be neglected. The airplane may be washed with clean water to remove dirt and may be washed with non-alkaline grease solvents to remove oil and/or grease. Household type detergent soap powders are effective cleaners, but should be used cautiously, since some of them are strongly alkaline. Many good aluminum cleaners, polishes and waxes are available from commercial suppliers of airplane products.

10. Painted External Surfaces

A. Approximately ten days are required for new paint to cure completely. In most cases, the curing period will have been completed prior to delivery of the airplane. If polishing or buffing is required within the ten day curing period, the work should be performed by people experienced in handling uncured paint. Cessna dealers can perform this work.

B. Generally, the painted surfaces can be kept bright by washing with water and mild soap, followed by a rinse with water and drying with cloths or a chamois. Harsh or abrasive soaps or detergents which could cause corrosion or scratches should never be used. Remove stubborn oil and grease with a cloth moistened with Stoddard solvent.

C. To seal any minor surface chips or scratches and protect against corrosion, the airplane should be waxed regularly with a good automotive wax applied in accordance with the manufacturers instructions. If the airplane is operated in a seacoast area or other salt water environment, it must be washed and waxed more frequently to assure adequate protection. Special care should be taken to seal around rivet heads and skin laps, which are the areas susceptible to corrosion. A heavier coating of wax on the leading edges of the wings and tail and on the cowl nose cap and propeller spinner will help reduce the abrasion encountered in these areas. Reapplication of wax will generally be necessary after cleaning with soap solutions or after chemical deicing operations.

11. Engine Compressor Wash

A. The compressor section of the engine requires a desalination wash routinely. Operating environment determines washing frequency. Refer to Chapter 71, Compressor/Turbine Blade Wash - Maintenance Practices.

12. Engine Compartment

A. A wash down of engine and accessories should be performed routinely to remove oil, grease, salt corrosion, and other residue. Periodic cleaning can be an aid to discovering defects during inspection.

B. Precautions should be taken when working with cleaning agents, such as, wearing of rubber gloves, an apron or coveralls and a face shield or goggles. Use the least toxic of available cleaning agents that will satisfactorily accomplish the work. These cleaning agents include; (1) Stoddard Solvent (Specification P-D-680 type II), (2) a water alkaline detergent cleaner (MIL-C-25769) mixed, 1 part cleaner, 2 to 3 parts water and 8 to 12 parts Stoddard solvent or (3) a solvent base emulsion cleaner (MIL-C-4361) mixed 1 part cleaner and 3 parts Stoddard solvent.

CAUTION: Cover propeller to prevent contact with alkaline detergent during wash.

CAUTION: Do not use gasoline or other highly flammable substances for wash down.

CAUTION: Do not attempt to wash an engine which is still hot or running. Allow the engine to cool before cleaning.

C. Perform all cleaning operations in well ventilated work areas and ensure that adequate firefighting and safety equipment is available. Do not smoke or expose a flame, within 100 feet of the cleaning area. Compressed air, used for cleaning agent, application or drying, should be regulated to the lowest practical pressure. Use of a stiff bristle brush rather than a steel brush is recommended if cleaning agents do not remove excess grease and grime during spraying.

13. Propeller

A. Clean propeller regularly with water and a mild detergent to remove grass and bug stains.

CAUTION: Alkaline detergents not to be used on propellers.

14. Wheels

A. The wheels should be washed periodically and examined for condition, chipped paint and cracks or dents. Sand smooth, prime and repaint minor defects; however, cracked wheel halves should be replaced.

15. Deice Boots

A. Wing, wing strut, stabilizer, propeller boots, and cargo pod boot (if installed) should be washed and serviced routinely. Keep boots clean and free from oil, grease and other solvents which cause rubber to swell and deteriorate. For cleaning and servicing procedures of the deice boots, refer to Deicing - Servicing.

16. TKS Panels

A. To keep a good appearance of the TKS panels and help make sure TKS system operates correctly, refer to TKS Anti-Ice System - Servicing.