

Wet Wash System

PROCEDURES

800-727-JETS (5387)



To demonstrate the procedures of washing an aircraft, we have chosen a Canadair Challenger 601. When cleaning an aircraft, whether it's a Cessna 152 or a Boeing 747, the basic procedures will not change. Aircraft surfaces will become soiled by carbon, oil, grease, bugs, hydraulics, de-icing fluids, dust, and what comes up off dirty runways. The following outlined procedures will guide you through the necessary steps to safely and thoroughly clean an aircraft exterior.

Set Up: Products required to wet wash an aircraft are; **Safety Wash, Hydrasolve, Ultra Magnum** and **Plexi Clear**. Washing accessories will consist of a wash brush, squeegee, parts brush, wheel brush, two half gallon pump up sprayers or trigger spray bottles, water hose, rinsing nozzle, fluorescent orange tape, several towels, and a sturdy ladder.

Step 1, Preparing Aircraft: Cover pitot tubes and static ports with fluorescent orange tape. This will prevent water from entering and damaging the avionics. The photo on the left shows a static port being taped before washing. After washing, it is critical that tape be removed from pitot and static for instruments to function correctly during flight. Check to see that doors and pilot windows are closed. Also check and secure avionics and baggage compartment doors. You will need to clear the area around the aircraft of cars, tool boxes, or any thing else on the hangar floor that could or would be damaged by water.



Step 2, Diluting Soaps: Prepare **Safety Wash** by diluting it with water at a ratio of ten parts water to one part **Safety Wash**. **Safety Wash** can be applied to aircraft by using a pump up sprayer, or a bucket & brush. **Ultra Magnum** is best applied by using a pump up sprayer or a trigger sprayer **Ultra Magnum** should be diluted 10 to 1 for normal degreasing of aircraft. For heavy degreasing applications we recommend using a 50% to 100% dilution of **Ultra Magnum**. **Ultra Magnum** will not damage an aircraft when used full strength.





Note: See photo (above-right) for recommended type of hose end when rinsing. It will flow a wide gentle path of water that is very effective at removing soap from aircraft surfaces. Most hose sprayers spray water at too great of a velocity, which results in the water hitting and bouncing off, leaving behind soap residue. Use plastic, it's safer for the aircraft.

Step 3. Washing Belly: The first section of the aircraft to wash is the belly. Cleaning the belly might require lying on hangar floor. Doing the belly first will prevent you from getting wet. Bellies will be soiled with hydraulic fluids, oil, carbon, and what the gears splash up off the runway. Using **Ultra Magnum**, spray belly of aircraft. Agitate belly using wash brush as shown in above photo. This will loosen and suspend any belly grime and assure a clean belly after rinsing. Rinse belly thoroughly before moving to next step.



Step 4. Washing Gears: Gears will be soiled from carbon, break dust, oil, hydraulics, bugs, and runway grime. Using **Ultra Magnum**, spray down the gear and agitate with parts brush as shown in photo to help the **Ultra Magnum** loosen and suspend any gear grime. This will help assure a clean gear after rinsing. Rinse gear thoroughly before moving on.





Step 5. Washing Flaps: Flaps will be soiled with bugs, bugs, and more bugs. Spray the flaps down with a liberal amount of **Ultra Magnum**. If flaps have a heavy accumulation of bugs, you should apply **Ultra Magnum** to the flaps during step 4. This will allow the bugs time to soften and loosen up, requiring less effort on your part when agitating with wash brush. Rinse thoroughly before moving on.



Step 6. Washing Bottom of Wing: Wing bottoms can be soiled from fuel leaks, leaky hydraulic actuators, bugs, carbon, oil, and runway grime, depending on the type of aircraft you are cleaning. Use **Safety Wash** unless one of the above problems requires the use of **Ultra Magnum**. Use a wash brush as shown in the above photo to help loosen and suspend soils from surface of aircraft, assuring a clean wing bottom after rinsing.

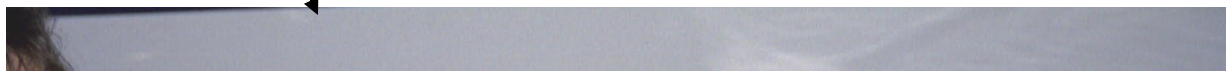




Step 7. Wash Top of Wing/Leading Edge: Wing tops will become soiled mostly from settling dust. Rinse off top of wings to remove top layer of dust. Using **Safety Wash**, spray down top of wings. Using a wash brush, agitate the top of wings, rinse thoroughly. Leading edges will have heavy accumulations of bugs during the bug season. Cautions should be taken when cleaning bugs from polished aluminum edges. Reason being is that any soaps strong enough to dissolve bugs will dull out the polished aluminum leaving behind dull, clouded edges. **Safety Wash** is recommended during the wet wash process or you can come back when drying the aircraft, and clean the leading edges using a clean towel and a can of Plexi-Clear.



Note: Using Plexi-Clear and a towel to help clean and dry polished leading edges before they have a chance to dry and spot.





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Step 8, Washing Fuselage: The nose and rear of the fuselage will become soiled with dust, carbon, oil, and bugs depending on where the engines are placed on an aircraft. Use **Safety Wash** unless one of the above problems requires the use of **Ultra Magnum**. Divide the fuselage into four equal sections. Split the fuselage down the middle. Starting on the right or left side, wash the fuselage from the tip of the nose to the middle of the wing. Moving to the back of the wing, start washing the fuselage where you left off, to the rear of the fuselage. Repeat the same procedures on opposite side of aircraft.



Above photos show steps taken when washing fuselage.

Step 9, Washing Engine Cowlings: Cowlings will become soiled from oil, carbon, dust, and bugs. Use **Safety Wash** unless one of the above problems requires the use of **Ultra Magnum**. Apply proper soap for job. Agitate with wash brush to loosen and suspend any soils from surface of cowlings and rinse thoroughly.



Step 10. Washing Tail: The Tail of the aircraft will become soiled by carbon and bugs. Use **Safety Wash** unless one of the above problems requires the use of **Ultra Magnum**. Apply proper soap for job. Agitate with wash brush to loosen and suspend any soils from surface of tail and rinse thoroughly. As you can see by using a 10 foot ladder and a 12 foot extension pole it is possible to wash the vertical and horizontal tail surfaces on this Challenger 601. When available use a scissor lift. It makes the job safer and faster.



Step 11. Drying Aircraft: By using our aircraft squeegee, you will be able to dry most corporate aircraft top and bottom in 10 to 15 minutes using only 2 to 4 towels. A neoprene squeegee blade is safe for all aircraft surfaces. To remove any water left behind, use a towel wrapped around squeegee as shown in photo. When drying polished aluminum leading edges, use a can of **Plexi-Clear** and a clean towel to remove any water spots. This will make the drying process go faster with less effort. **Safety Wash** has rinsing agents that will sheet water off surfaces leaving a spot free finish on the aircraft.





Step 12. Cleaning Plexiglass: The front windscreen will become soiled by dust and bugs. Spray the windscreen with a liberal amount of **Plexi-Clear**, using micro fiber towels to clean the wind screen of all bugs and dust. Turn the towel over to a dry section and polish the wind screen to a clear finish. Never use the wash brush during this process or at any time when cleaning the plexi glass. This will damage the plexiglass by scratching the surface. Plexiglass is a very soft plastic and will scratch very easily. Caution must be taken when cleaning plexiglass. Never use shop rags when cleaning plexiglass because they may contain metal shavings



Step 13. Squeegee Hangar Floor: It will only take a few more minutes to remove the water off the hangar floor by using a hangar floor squeegee. By doing this, it allows the mechanics and pilots to go back to work on and around the aircraft in a clean, safe environment. If you are providing an aircraft detailing service, squeegeeing the floor will not be an option. It lets your customers know you provide a responsible service that leaves their facility looking as good if not better than when you arrived.



