De-ice and Anti-ice Quick Reference

DE-ICE vs. ANTI - ICE

De-icing refers to the removal of ice, snow, frost and slush.
Anti-icing refers to the process of protecting against the accumulation of such contaminants.

DE-ICING AND ANTI-ICING MAY BE ACCOMPLISHED USING A ONE STEP OR TWO STEP PROCESS

1. *Step one* includes the application of de-icing fluid with a mixture of water and glycol heated to at least 140º F at the nozzle. In this step, we make certain the aircraft is free of frozen contaminants. (Depending upon weather conditions, the application of anti-ice isn't always needed after this step.)

2. During the *second step,* the de-icing application is followed by the application of anti-icing fluid.

APPLICATION

Wings and Tail
Spray from the tip of the wing inboard from the highest point of camber to the lowest (or from the wing tip to wing root). Spray from the wing leading edge to the trailing edge.

Vertical Surfaces
Start at the top and work down

Fuselage
Spray along the top centerline and then outboard. Let fluid cascade down. The upper fuselage must be anti-iced to prevent ice from breaking apart and being ingested into rear-mounted engines.

Landing Gear and Wheel Bays
Keep fluid to a minimum. Never spray directly on hot wheels or brakes.

Engines
Deposits of snow should be removed by hand. Frozen deposits on the lower surface of the intake or blades can be removed by hot air.

CAUTION

When de-icing, remove heavy snow accumulation with brooms, snow squeegees or a heated hangar (preferred). Start from the tail if snow accumulation is significant.

Always conduct a walk around to identify the areas to be sprayed or avoided prior to de-icing AND anti-icing.

Never spray glycol on an aircraft while it is being refueled.

Never spray into or directly at:

- pitot tubes
- engines
- APU inlets
- ports
- exhausts
- outlets
- landing gear
- control surface cavities
- aircraft windows
- cockpit windows
- antennas
- static wicks
- vortex generators
- angle of attack sensors

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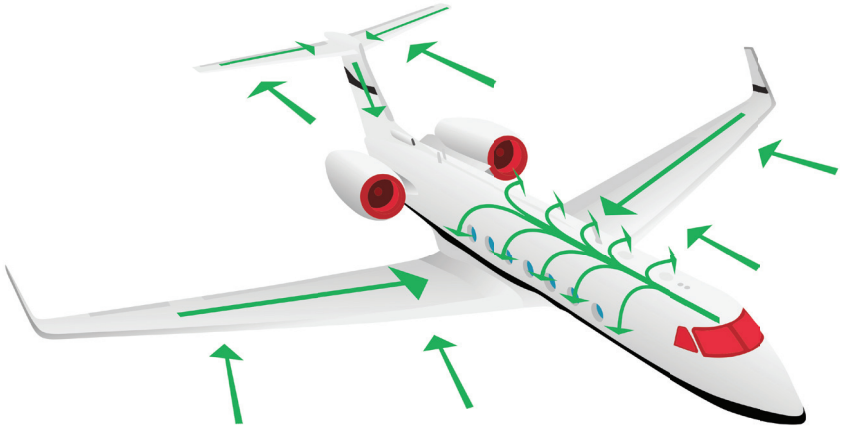
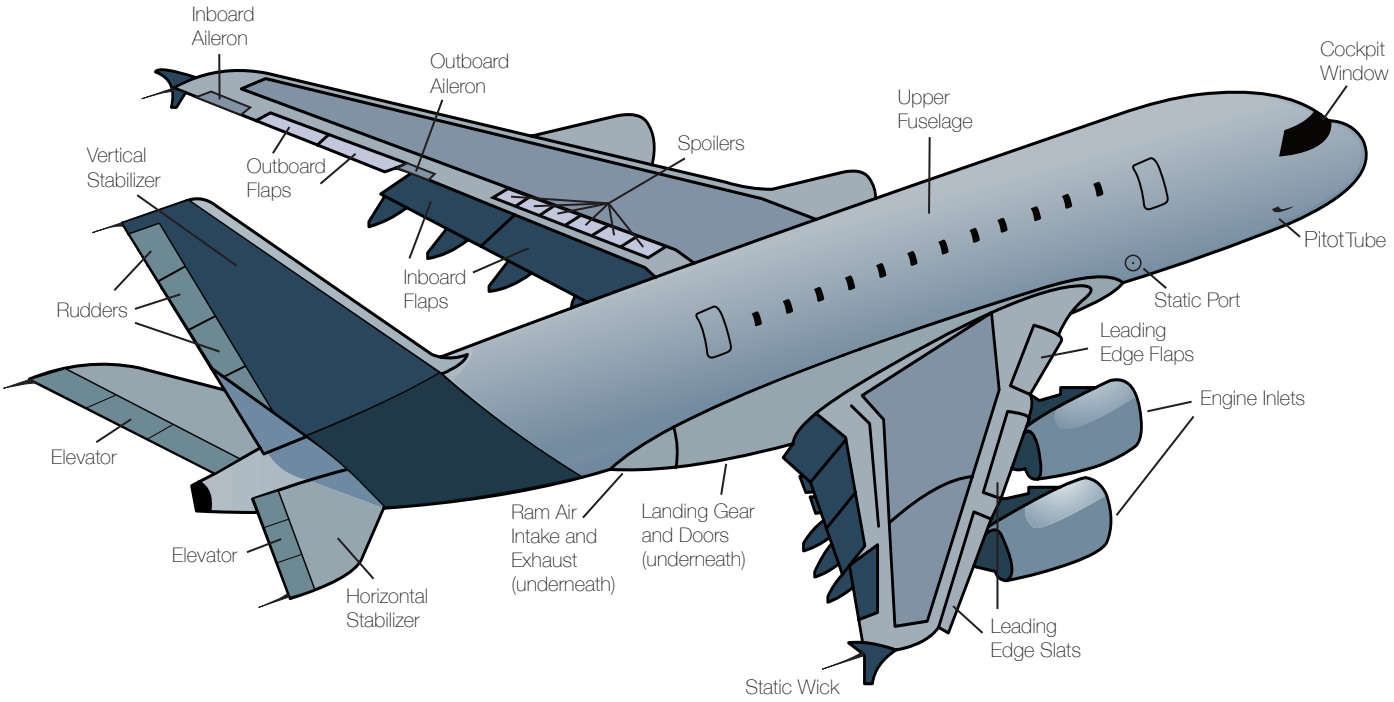
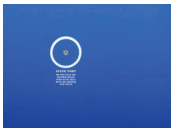
FLUID APPLICATION FLOW



CRITICAL AIRCRAFT SURFACES



Pitot Tube	Landing Gear	Engine Inlets	Fuel Tank Vent	Static Port