



WINTER READY CHECK LIST

Your TKS system is the most reliable ice protection system on the market. To ensure it continues to provide you with the highest level of protection, here is our TKS checklist to keep you flying throughout the winter months:

RUN YOUR TKS SYSTEM REGULARLY
Running your system every 30 days keeps the moving parts lubricated and the lines and panels relatively charged, as well as enabling you to identify any potential issues in advance.

CLEAN YOUR TKS PANELS
To clean the panels, use warm water, mild soap and a lint free cloth, or a green scouring pad for dirtier jobs. When panels are extremely dirty, turn the system on and clean as the fluid comes out, as this will help to dislodge any debris caught in the panel holes. Refer to your AFM for further cleaning instructions.

To prevent damage, always clean the panels with a chordwise motion and only use the following solvents:

- Water with soap/detergent
- Approved TKS Ice Protection System fluid
- Aviation gasoline
- Isopropyl alcohol
- Ethyl alcohol
- Industrial methylated spirit

CHECK DE-ICING FLUID FILTER
The de-icing fluid filter element should be changed at 1200 hours or two-year intervals (consult your AFM to determine specific interval changes as required for your aircraft). However, the filter element may require changing at more frequent intervals, depending on service conditions and fluid handling equipment when operating in localities where there is an excessive amount of sand and dust.

FLUID QUANTITY
All TKS equipped aircraft have a tank minimum fluid quantity requirement before take-off and if the system is to be considered operational. This fluid level is aircraft dependent; therefore consult your AFM supplement to determine the minimum despatch volume. For maximum head pressure to pump inlet, ensure tank is full and that all system components are filled with TKS fluid. If necessary, operate pump(s) until all air is dispelled from components and pipelines. Always be certain you have a sufficient quantity of TKS Ice Protection fluid in the tank to complete the intended flight.

PRIME YOUR TKS PANELS
The TKS Ice Protection System needs to be primed prior to any flight when you might encounter ice and should be primed every 30 days to prevent becoming air locked.

Turn the system on and let it run until the panels are completely wet. Once operating pressure reaches the normal operating range, ensure the low-pressure annunciation light (if equipped) extinguish; depending on the system this can take up to 15 minutes. If the panels do not wet out, you may need to have them purged due to being air locked.

PRIME YOUR TKS PUMPS
Priming of the TKS metering pumps after system maintenance or if the fluid tank has been emptied prevents air from being introduced into the system. This can be accomplished through operation of the self-priming windshield pump(s) if available.

TKS Ice Protection Systems, for certain aircraft, have a windshield pump which is typically activated via a button on the control panel (please reference AFM for details), and can be used to pull fluid through the main pump upon start up, priming them in the process.

If this is not the case or a windshield system is not equipped:

- Ensure tank is full of TKS fluid for maximum head pressure to pump inlet.
- For aircraft with a windshield pump, disconnect the fitting at the metering pump that supplies fluid to the windshield pump(s).
- Reconnect supply line and bleed air from the pump body by operating the windshield pump.
- Remove the air bleed screw from the filter housing or main body of filter element, and switch on the airframe/propeller pump.
- Allow the pump to run on "De-Ice" until clear air free fluid is emitted from the filter bleed.
- Switch off the pump and replace the bleed screw.



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To ensure faultless operation, your pumps should be overhauled or replaced as per Section 8 of your Flight Manual Supplement.

Please keep up to date with our Service Bulletins, which provide a recommendation of 5 years or 2000 flight hours of service after replacement or overhaul.



PRE-FLIGHT PROCEDURE

A full pre-flight inspection of the system ensures that if any ice is encountered in your flight, the system is ready to operate immediately to clear it.

A full pre-flight consists of running the pump while you do your normal aircraft pre-flight and upon completion, you should have evidence of fluid on all panels. This means the self-contained reservoir in each panel is filled and you should have instantaneous protection.

It is very important to follow the TKS Ice Protection System pre-flight procedures outlined in your Flight Manual which includes (but is not limited to):

- Pre-Flight Inspection

1. Battery switch ON
2. DE-ICE or MAX mode ON
3. Airframe Inspection (ensure wings, tail, propeller, and windshield are free of ice):
 - o Fluid Tank – Check quantity,
Check Cap Secure
 - o Porous Panels – Check condition and security,
Check evidence of fluid from all panels and propeller
4. If available switch to Pump 2 while DE-ICE or MAX mode and confirm panels and propeller are flowing.
5. All Switches OFF

- Before Starting Engine

1. Fluid Quantity Indicator: Check quantity (see limitations weight and balance)
2. System operation Lights: Check operation
3. Windshield DE-ICE Pump(s), if available: Check operation
4. Verify high and/or low pressure switch annunciation per AFM.
5. Pilot/Stall Heat: Check operation
6. All Switches OFF



For more information please visit cav-systems.com or email TKS@cav-systems.com