

# TKS Ice Protection for the Trinidad



## Unsurpassed Performance

No other ice protection system can provide the same level of protection as TKS.

## Complete Airframe Protection

Complete protection for the wings, tail surfaces, propeller, and windshield.

## Ease of Operation

Just turn the System "ON" when icing is encountered and "OFF" when leaving icing conditions.

## Up to 3.3 Hours of Ice Protection

A full tank of ice protection fluid provides up to 3½ hours of continuous ice protection.

## Low Maintenance

As the system is used, it flushes out any accumulation of debris on the panels. Glycol, the main ingredient in the ice protection fluid, has cleaning properties and will not harm the paint finish of the aircraft.

## No Reduction in Aircraft Performance

There is virtually no loss in aircraft performance as a result of installing the TKS system.

## Light Weight

The TKS system weighs 41 lbs. without fluid (lighter than a boot system) and 112 lbs. with a full tank of fluid.

## System Specifications

<b>Panel Construction:</b>	Laser Drilled Titanium
<b>Tank Capacity:</b>	7.8 US Gallons
<b>Endurance:</b>	3.3 Hours in NORMAL Mode
<b>System Weight Without Fluid:</b>	40.6 pounds
<b>System Weight With Fluid:</b>	112.4 pounds
<b>Power Consumption:</b>	2.8 @ 14 Volts/ 1.5 @ 28 Volts during normal operation

*"Anyone flying turbocharged airplanes or wintertime IFR must have this system. The TKS system gives your airplane year-round capability. The TKS system works far better than boots. It eliminates the runback problem, eliminates stress on vacuum systems and provides added protection if you encounter in-flight hail. Icing can kill you so don't Play Russian Roulette with your life or your loved one's lives."*

Alden Buerge, CFI & ATP  
TKS-equipped F33A owner



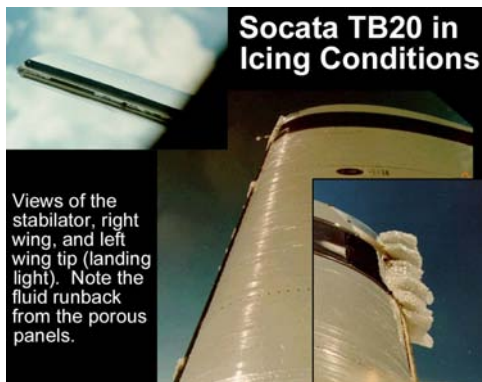
**Ice Protection Systems** are a product of **CAV Aerospace Inc.**

## Trinidad TKS Ice Protection System



The TKS ice protection system is available for the Trinidad TB20 and TB21 this winter!

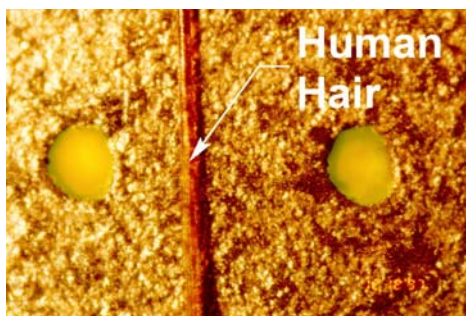
The effectiveness of the TKS ice protection concept has been documented by NASA through their extensive test in the icing research tunnel at the Lewis Research Center



and through over 26 years of service on the BAe-125 series of business jets as standard equipment. The system has also been proving itself in service on the Beech Bonanza since 1987.

The TKS system offers you more time to make crucial decisions if you encounter icing conditions. Even with TKS ice protection, you should always take immediate steps to find non-icing conditions should you encounter ice.

### Here's How it Works

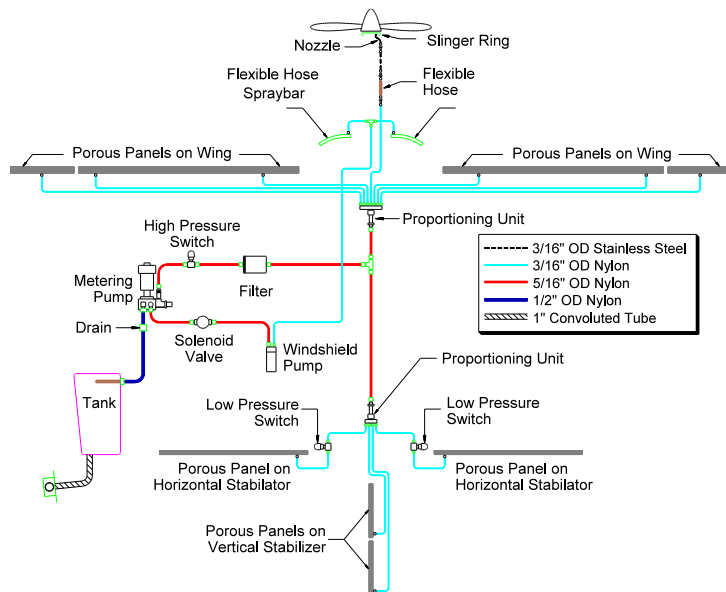


Laser Drilled Titanium panels are installed on the leading edges of the wings, and horizontal and vertical stabilizers. A slinger ring is installed on the propeller and a spray bar is positioned on the windshield for protection. A glycol based fluid is exuded through the panels and flows over these surfaces keeping the aircraft virtually ice free.

The glycol based fluid is metered from a tank by a small electrically driven pump through a micro-filter to proportioning units. The proportioning units contain calibrated capillary tubes which apportion fluid to the individual panels and the propeller slinger ring. The windshield is protected with an on-demand pump and spray

bar. A significant advantage for the pilot is the simple operation of the system. Just turn the system **ON** when icing is encountered and **OFF** when leaving icing conditions.

Only one choice exists for the pilot while operating the ice protection system: **NORMAL** or **MAXIMUM** mode. In the **NORMAL** mode, a protective film of glycol prevents the formation of ice. In the **MAXIMUM** mode, the glycol chemically breaks the ice bond. A significant feature of both modes is the elimination of run back ice.



Trinidad System Fluid Schematic

The weight added to an aircraft as a result of the TKS ice protection installation is minimal. The TKS system weighs approximately 41 lb without fluid (lighter than a rubber boot system) and approximately 112 lb with a full tank of fluid.

The attractive TKS system requires a minimum of upkeep. As the system is used, it flushes out any accumulation of debris on the panels. Glycol, the main ingredient of the ice protection fluid, has cleaning properties and will not harm the paint finish on the aircraft.

There is virtually no loss in aircraft performance as a result of installing the TKS system, yet significant ice protection capabilities are added. Up to 3.3 hours of continuous ice protection is possible with a full tank of ice protection fluid.

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