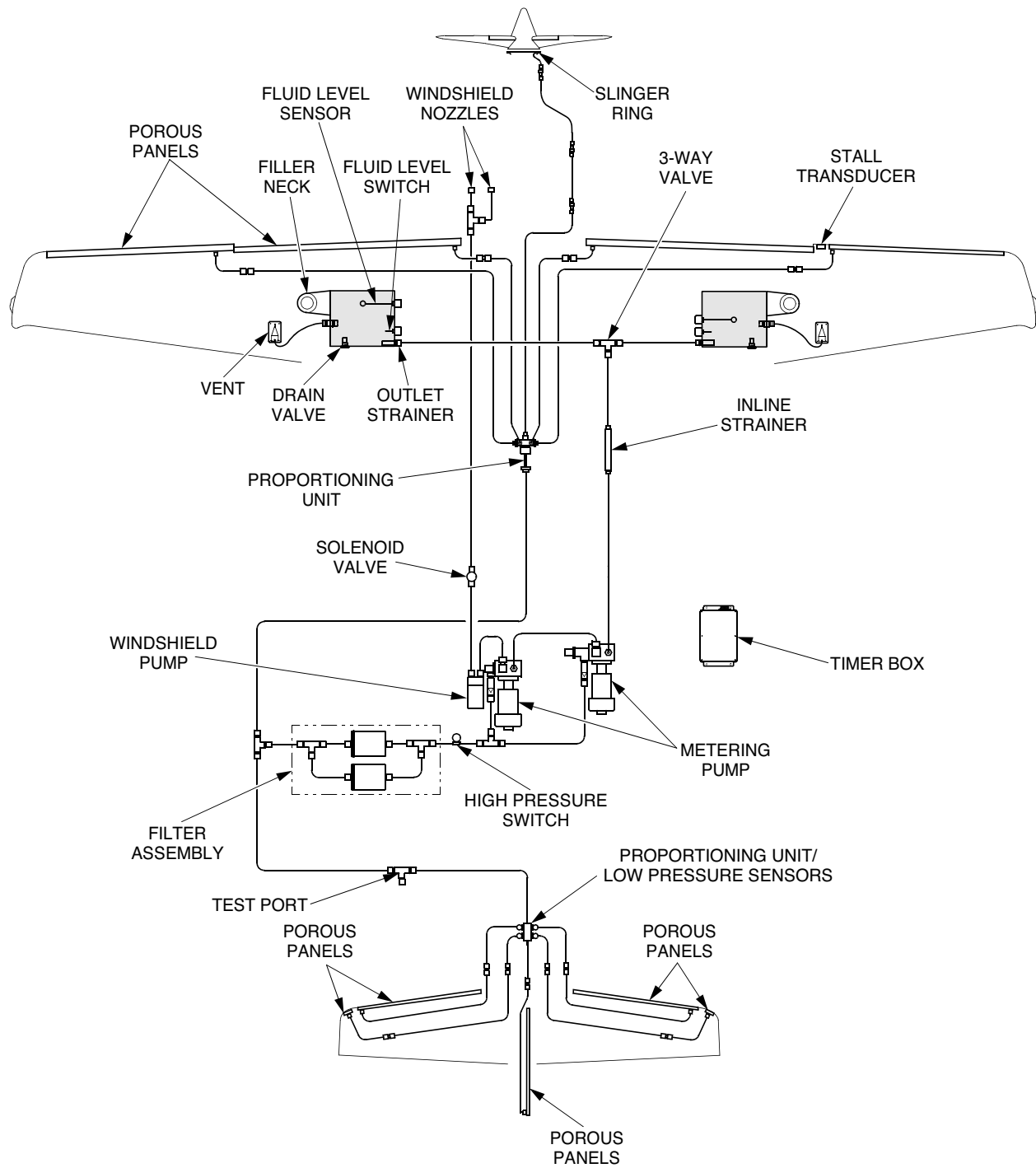




GUIDE TO **FIKI**



Flight Into Known Icing

Inflight icing is a unique and dynamic hazard, constantly changing with altitude and location. Adding yet another variable, each individual airplane can be affected differently by the same general area of inflight icing - all based on the airplane's specific design and the airspeed at the time ice was encountered.

WHAT ARE "KNOWN ICING CONDITIONS"?

1. Any flight conditions where you'd **expect the possibility of ice forming or adhering to the aircraft** based on all available preflight information. Although there are many factors that influence the potential for inflight icing, it's often best to remain cautious when assessing reported and forecast icing conditions. Inflight icing isn't unique to flights through instrument meteorological conditions (IMC), you can experience inflight icing even when flying in visual meteorological conditions (VMC).
2. The **presence of precipitation and/or (IMC) along your route of flight is your cue**, your trigger, for taking a more careful and deliberate look at the inflight risk of bumping into icing conditions.

FREEZING
TEMPERATURES

+

SUFFICIENT
MOISTURE



REPORTED

OR

FORECASTED

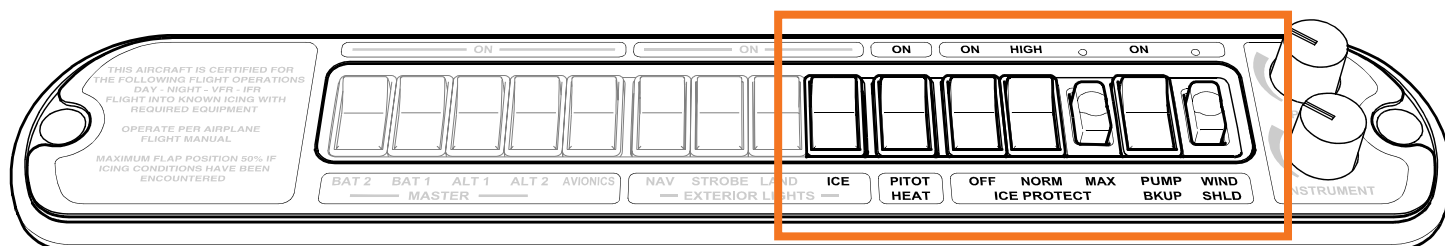
ARE YOU FIKI EQUIPPED?

- ✓ **Check for TKS Anti-Ice System POH Supplement (Chapter 8)**
"Approved for Flight into Known Icing (FIKI)"
- ✓ **Placard on the Bolster Panel**
- ✓ **Two TKS Fluid Tanks**
- ✓ **Porous Panel on the Vertical Stabilizer**
- ✓ **Windshield Spray Nozzles**
- ✓ **Bolster Panel Switches**

THIS AIRCRAFT IS CERTIFIED FOR THE FOLLOWING FLIGHT OPERATIONS
DAY - NIGHT - VFR - IFR
FLIGHT INTO KNOWN ICING WITH
REQUIRED EQUIPMENT

OPERATE PER AIRPLANE
FLIGHT MANUAL

MAXIMUM FLAP POSITION 50% IF
ICING CONDITIONS HAVE BEEN
ENCOUNTERED



◉ **Minimum Dispatch Quantity = 5 gallons**

◉ **Preflight Inspection Complete**

◉ **Pilot Qualification and Training**

Pilot-in-command must successfully complete the Cirrus Icing Awareness Course within 24 months before flight into Forecast or Known Icing Conditions.

Duration (w/5 gallons)

Norm	90 minutes
High	45 minutes
Max	22.5 minutes

▶ **46 LBS**

(TKS Fluid = 9.2 pounds/gallon)

Duration (FULL)

Norm	150 minutes
High	75 minutes
Max	37.5 minutes

▶ **78 LBS**



EARLY AND OFTEN

When inflight icing conditions are anticipated, the best tactic is to use your TKS anti-ice system EARLY and OFTEN. Turn the system ON a few minutes prior to entering icing conditions to get the protective fluid flowing over the critical surfaces.

COCKPIT CUES

- Pilot Reports (PIREPs)
- OAT + Visible Moisture
- PITOT HEAT REQD CAS Message
- XM ICNG Overlay
- XM FRZ LVL Overlay
- XM Infrared (IR) Satellite Overlay
- XM Cloud Top Overlay
- XM NEXRAD Overlay

PIREP CONSIDERATIONS...

When was the PIREP made?

Icing conditions can change rapidly.

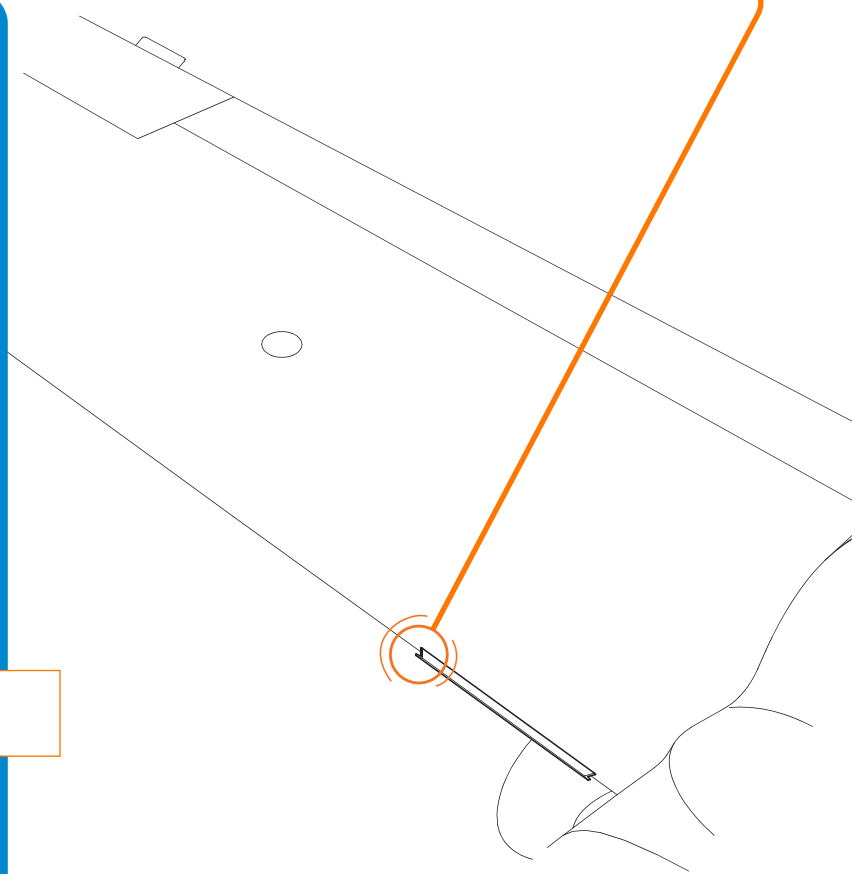
What type of aircraft made the report?

Accumulation rate varies greatly from one aircraft type to another.

No PIREP, no ice?

Maybe it wasn't reported, or perhaps nobody has flown through the area recently.

ICE INDICATOR TAB



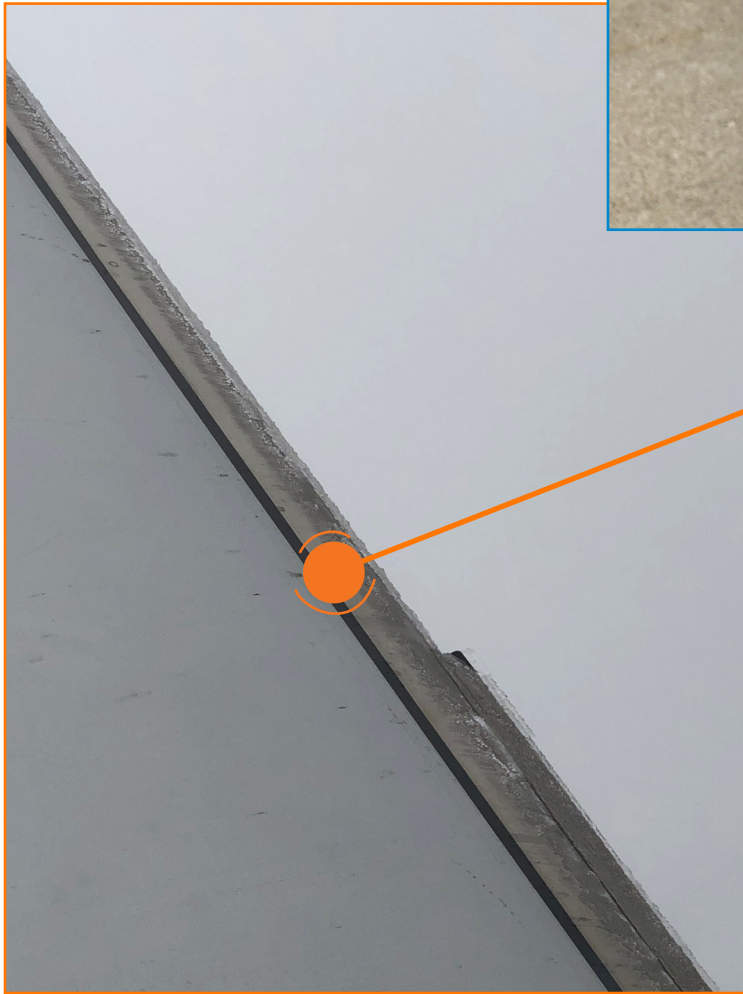
CLEAR

Glossy, clear, or translucent
Slow freezing



MIXED

Characteristics of both CLEAR
and RIME ice



RIME

Rough, opaque ice
Instantaneously freezes trapping air



TKS

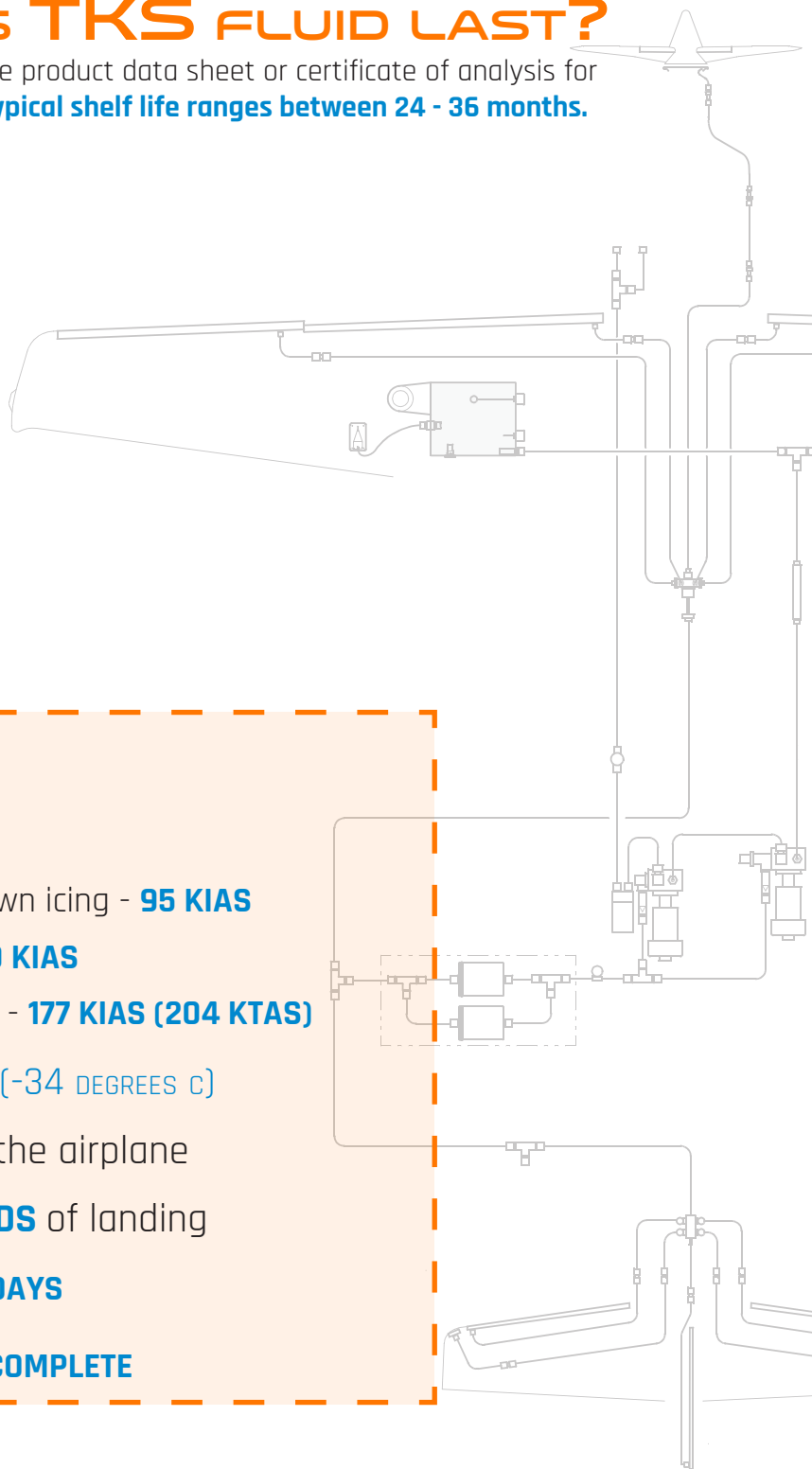
How LONG DOES TKS FLUID LAST?

Each manufacturer is different so check the product data sheet or certificate of analysis for the specific TKS fluid you've purchased. **Typical shelf life ranges between 24 - 36 months.**

▶ VENT - CLEAR OF OBSTRUCTIONS



Each TKS fluid tank is vented through a NACA-style duct on the bottom of the wing, just outboard of the tank.



A FEW... LIMITATIONS

AIRSPEEDS:

- Minimum airspeed for flight into known icing - **95 KIAS**
- Minimum airspeed while holding - **120 KIAS**
- Maximum airspeed in icing conditions - **177 KIAS (204 KTAS)**

MINIMUM TEMPERATURE: -30 DEGREES F (-34 DEGREES C)

FLAPS: 50% when in ice, or w/ ice on the airplane

WIND SHLD: Don't Use w/in **30 SECONDS** of landing

- ▶ Fully **wet-out** the TKS system every **30 DAYS**
- ▶ **24-month** PIC Icing Awareness Course **COMPLETE**

▶ HOW TO CLEAN

- Warm water
- Mild soap
- Lint-free cloth
- Green scouring pad for tough spots (always cleaning "up-and-down" w/the metal grain - never side-to-side)
- Operating the system while cleaning helps to push-out stubborn debris



CIRRUS
AIRCRAFT