

ICE AND RAIN PROTECTION - GENERAL

1. Scope

A. This chapter provides information on systems that detect, remove, or prevent ice formation on critical surfaces.

2. Tools, Equipment, and Materials

NOTE: Equivalent substitutes may be used for the following items:

NAME	NUMBER	MANUFACTURER	USE
Adhesive	Scotch Grip EC-1300L Cement	3M 3M Center St. Paul, MN 55101-0000	To bond deice boot to wing
Adhesive	EC-776 Fuel Resistant	3M	To provide barrier coat in fuel bay
Methyl-n-Propyl Ketone		Commercially Available	To clean deice boot and mating surface
Cleaning Solvent	A-A-59281	Commercially Available	To clean metal surface of deice boots
Cleaning Solvent	Technical Toluol FSN A-A-59107	Commercially Available	To remove deice boots.
Isopropyl Alcohol	TT-1-735	Commercially Available	To clean outer surface of deice boots and components of pneumatic flow control valve when disassembled
Silicone Fluid	Dow Corning 200, 100cs	Dow Corning Corp. 3901 S. Saginaw Rd. P. O. Box 997 Midland, MI 48686	To lubricate components of pneumatic flow valve when disconnected
ScotchBrite	7440, Heavy Duty	3M	To remove paint/finish for deice boot or TKS panel installation
ScotchBrite	7445, Very Fine	3M	To remove paint/finish for deice boot installation, or polish TKS porous panel
ScotchBrite	7448, Ultra Fine	3M	To remove paint/finish for deice boot installation, or polish TKS porous panel
Filter/Regulator/Lubricator Assembly		Norgren 5400 S. Delaware St. Littleton, CO 81120	To winterize pneumatic deice system
Paint and Lacquer Remover	TT-R-248	Commercially Available	To remove paint prior to installing deice boot
Wash Primer	WMS 30-1	Commercially Available	To remove paint prior to installing deice boot
Coating	78-U-1003 Black Enamel with U-1001 Catalyst	Sterling Lacquer 3150 Brannon Ave. St. Louis, MO 63139	To dress edge of deice boot
Coating	ShineMaster Prep	BF Goodrich 1555 Corporate Woods Pky. P. O. Box 1277 Union Town, OH 44685	To prepare deice boot surface

Coating	ShineMaster	BFGoodrich	To coat deice boots
Jet Glo Enamel Polyurethane	571-510	Sherwin-Williams 630 E. 13th Andover, KS 67002	To dress edge of deice boot (alternate)
Acry Glo Enamel Polyurethane	571-010	Sherwin-Williams	To dress edge of deice boot (alternate).
Rubber Roller	2 inch wide, 2 inch diameter, Rubber	Everhard Products, Inc. 1016 9th St. SW Canton, OH 44707	To install deice boots
Roller	0.25 inch wide, 2 inch diameter, Metal Sticher	Everhard Products, Inc.	To install deice boots
Masking Tape	One Inch	Commercially Available	To mask off boot area
Carpenter's Chalk Line		Commercially Available	To mark centerline of wing and boot
Universal Repair Kit	74-451-AA	Cessna Aircraft Company Cessna Parts Distribution Department 701, CPD 2 5800 East Pawnee Road Wichita, KS 67218-5590	To repair deice boots
Pin Hole Repair Kit	74-451-AE	Cessna Aircraft Company	To repair deice boots
Multimeter	Model 260 or equivalent	Simpson Electric Co. 853 Dundee Ave. Elgin, IL 60120	To check voltage and continuity in electrical circuits
Measuring Tape		Commercially Available	
Sharp Knives		Commercially Available	
Cleaning cloths (Lint-free)		Commercially Available	Cleaning
Cleaning cloths (Lint-free)		Commercially Available	Cleaning
Rymple cloth	301 purified	International Paper Veratec Division 100 Elm Street Walpole, MA 02081	Cleaning
Adhesive	EA9309	Dexter Corp. Hysol Division 2850 Willow Pass Road Pittsburg, CA 94565	To bond pneumatic flow control valve pushrod
Clenching Tool (3/16 Inch)	T300-112A	A S and T Aerospace Systems & Technologies Inc. 2734 Arnold Court Salina, KS 67401	To repair and replace TKS tubing
Clenching Tool (5/16 Inch)	T300-120A	A S and T Aerospace Systems & Technologies Inc.	To repair and replace TKS tubing
Clenching Tool (1/2 Inch)	T300-144A	A S and T Aerospace Systems & Technologies Inc.	To repair and replace TKS tubing
TKS System Test Cart	09301-01	A S and T Aerospace Systems & Technologies Inc.	To do the TKS porous panel purge and test procedures

Blank Olive with MN4856 Nut (3/16-Inch Tube)	P075	A S and T Aerospace Systems & Technologies Inc.	To cap the TKS tubing during tests
Nylon Ball with MN4855 Nut (5/16-Inch Tube)	03-151-07	A S and T Aerospace Systems & Technologies Inc.	To cap the TKS tubing during tests
Nylon Ball with MN6201 Nut (1/2-Inch Tube)	03-151-10	A S and T Aerospace Systems & Technologies Inc.	To cap the TKS tubing during tests
3/16 Straight Connector (aluminum)	MN6070	Commercially Available	To repair TKS tubing and for use with tubing/pressure gage assemblies for testing the TKS system.
5/16 Straight Connector (aluminum)	MN4852	Commercially Available	
1/2 Straight Connector (aluminum)	Mn6213	Commercially Available	
Sleeve	ZN101-20	Commercially Available	To do TKS System Pressure Test and Functional Check
Sealing Ring	S2800-942	Commercially Available	To do TKS System Pressure Test and Functional Check
Test Harness with Breakout Box	P2697006	Cessna Aircraft Company	To do a test of the TKS system
Low-Adhesive Plastic Tape	PC 628	Shurtape Technologies	To install the TKS porous panels
Velcro Straps		Commercially Available	To install the TKS porous panels
Sealant	Pro-Seal 870, (U544066S)	Cessna Aircraft Company	To install TKS porous panels to the leading edges
Sealant	A-1664-31, Chem Seal CS 3204 B2 Sealing Compound or Equivalent	McCauley Propeller Systems PO Box 7704 Wichita, KS 67277-7704	To Fay seal the propeller feed tube mounting plate
Plastic Sheeting		Commercially Available	To catch deice fluid from the TKS panel purge procedure, or when you test of the TKS system
Plastic Guttering		Commercially Available	To catch deice fluid from the TKS panel purge procedure, or when you test of the TKS system
Aluminum Tape		Commercially Available	To attach guttering and tubes to catch deice fluid from the TKS panel purge procedure, or when you test of the TKS system
Plastic Tubes		Commercially Available	To catch deice fluid from the TKS panel purge procedure, or when you test of the TKS system
5/16 Tee		Commercially Available	To use for TKS pessure tests.

5/16 Nylon Tubing Part
Number H610025

1/2 inch to 5/16 inch
Union

Commercially Available

To do a check of the TKS fluid
tank for contaminates.

Digital Pressure Gage (0
to 100 psi)

Commercially Available

To do pressure test of the TKS
system.

Borescope

Commercially Available

To do a check of the TKS fluid
tank for contaminates.

Graduated Beaker
(500ml)

Commercially Available

To do a check of TKS propeller
fluid flow.

Non-contact Thermometer

Commercially Available

To use in a check of TKS fluid
flow.

Digital Thermal Recorder

Commercially Available

to use in a check of TKS port
pressure.

3. Definition

- A. This chapter is divided into sections and subsections to assist maintenance personnel in locating specific systems and information. For locating specific information within the chapter, refer to Contents, located at the beginning of the chapter.
- (1) The section on airfoils provides information on the surface deice system (pneumatic boots) used on the airplane.
 - (2) The section on windshield anti-ice provides information on those components used to keep ice from the windshields.
 - (3) The section on propeller anti-ice provides information on those components used to keep ice from the propeller.
 - (4) There are also sections for the TKS anti-ice system.