

ANALYZED

49

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Unless

# CF-105 SERVICE DATA

Classification cancelled / changed to UNCLASSIFIED

By authority of AVRS

Date 27 Sept 66

Signature [Signature]

Unit / Rank / Appointment AVRS  
RADOME DE-ICING SYSTEM

FILE IN VAULT

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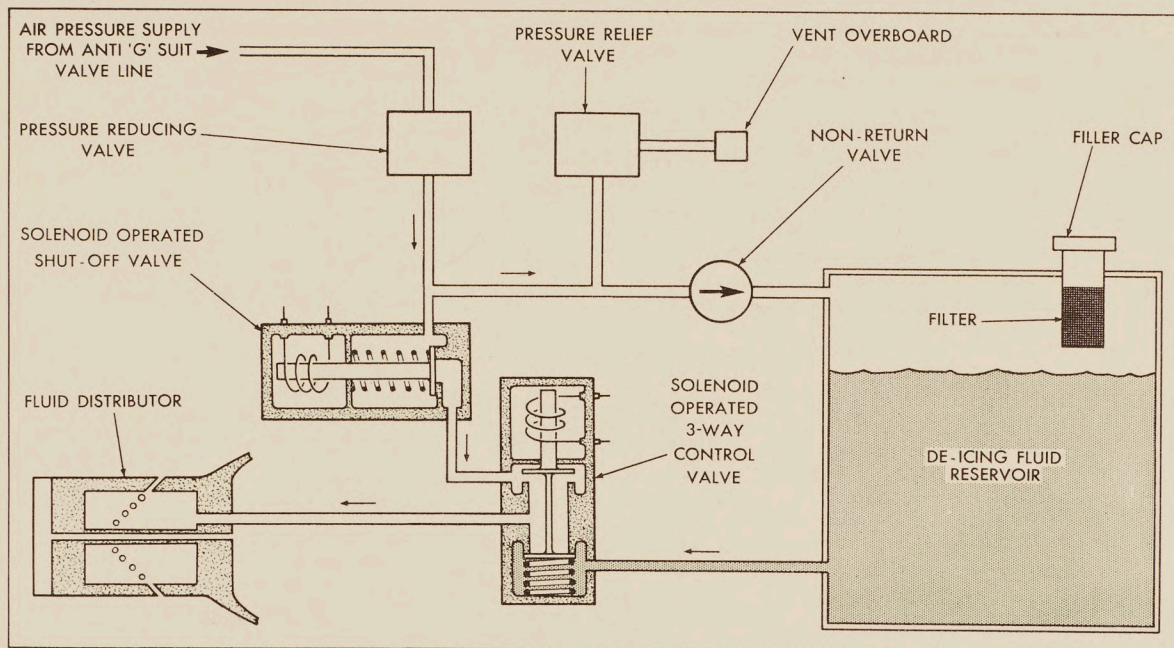
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NRC - CISTI  
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BRANCH

MAY 24 1995

ANNEXE  
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CNRC - ICIST

CF-105 SERVICE DATA



7M1-2901-1

FIG. 1 RADOME DE-ICING SYSTEM - SCHEMATIC

7M1-3413-2-2

**CF-105 SERVICE DATA**  
SYSTEM DATA SHEET

SYSTEM	SUB-SYSTEM	AIRCRAFT EFFTY	REF. NO.
DE-ICING	RADOME DE-ICING	25201	20-1
<p>DESCRIPTION</p> <p>General.</p> <p>1. A de-icing system, using an alcohol based fluid is provided for the radome. The system is electrically operated and is entirely automatic.</p> <p style="padding-left: 20px;">Pressure Reducing Valve.</p> <p>2. Air taken from the anti-g suit valve line in the L.P. Air System at 18-90 psi is reduced to 10-12 psi by a pressure reducing valve. From the pressure reducing valve the air is supplied to a fluid reservoir and to a shut-off valve.</p> <p style="padding-left: 20px;">Pressure Relief Valve.</p> <p>3. A pressure relief valve is fitted downstream of the pressure reducing valve and relieves pressure in excess of 14 psi.</p> <p style="padding-left: 20px;">Non-return Valve.</p> <p>4. A non-return valve is fitted in the air supply line to the reservoir to prevent de-icing fluid from backing up into the low pressure air system.</p> <p style="padding-left: 20px;">Reservoir.</p> <p>5. The de-icing fluid reservoir has a capacity of 2.75 Imp.gallons (3.3 U.S.). A gauze filter in the filler adaptor removes impurities from the fluid when filling, and also gives an indication of the correct filling level. The gauze filter element can be removed for cleaning. The fluid from the reservoir is led to a 3-way control valve.</p> <p style="padding-left: 20px;">3-Way Control Valve.</p> <p>6. The 3-way control valve is solenoid operated and controls the flow of fluid and air to a fluid distributor.</p> <p style="padding-left: 20px;">Fluid Distributor.</p> <p>7. The fluid distributor distributes the fluid evenly over the radome.</p> <p style="padding-left: 20px;">Shut-off Valve.</p> <p>8. The shut-off valve, fitted in the air line between the pressure reducing valve and the 3-way control valve is solenoid operated and shuts off the air supply when the solenoid is de-energized.</p>			
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Operation.

9. The system is controlled electrically and details of the electrical components are described under Electrical System - De-Icing. The following is a brief description of the operation.

10. Icing conditions are detected by an ice detector located forward of the nose wheel well. The detector feeds signals to a de-icing intervalometer. The intervalometer controls the shut-off valve and the 3-way control valve to give a timed period of fluid flow to the distributor followed by a timed period of air pressure to force the fluid from the distributor to the surface of the radome. This sequence is maintained for the duration of icing conditions.

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## CF-105 SERVICE DATA

### COMPONENT DATA SHEET

SYSTEM DE-ICING	SUB-SYSTEM RADOME DE-ICING	COMPONENT Valve - 3 Way Control	REF. NO. 20-1-1
AVRO PART NO. 7-2052-14	MANUFACTURER Eckel Valve Co.	MAN'FR'S PART NO.	AIRCRAFT EFFECTIVITY 25201
OVERHAUL LIFE:    KNOWN-		ESTIMATED-	
FUNCTION  Control of air and fluid to radome distributor.			
LOCATION  Radar nose, Stn. 70.0 to 74.0			
ACCESS  Through radome de-icing equipment access door at Stn. 68.5 - 78.95			MEN X MINUTES
REPLACEMENT PROCEDURE  Place in position. Insert two attachment bolts. Connect three pipe connections. Connect one electrical connection			MEN X MINUTES

INSPECTION		MEN X MINUTES	
Check for cleanliness, security of attachment and connections.			
FUNCTIONAL CHECKS		MEN X MINUTES	
GROUND HANDLING AND GROUND TEST EQUIPMENT			
Electrical ground power unit. Compressed air unit. Cockpit access stand. B4 access stand.			
SPECIAL TOOLS TO REMOVE OR SERVICE			
REMARKS			
ISSUE	1		
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## CF-105 SERVICE DATA

### COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
DE-ICING	RADOME DE-ICING	Valve - Pressure Reducing	20-1-2
AVRO PART NO. 7-0120-8 7-2000-11	MANUFACTURER Surface Combustion Corp.	MAN'FR'S PART NO. 27034	AIRCRAFT EFFECTIVITY 25201-25205
OVERHAUL LIFE:    KNOWN-		ESTIMATED-    500 hours	
<p>FUNCTION</p> <p style="text-align: center;">To reduce pressure of air supplied from the low pressure air system to 10-12 psi before delivering it to the de-icing fluid tank and shut-off valve.</p>			
<p>LOCATION</p> <p style="text-align: center;">Radar nose, station 80 - top.</p>			
<p>ACCESS</p> <p style="text-align: center;">Through radome de-icing equipment panel at station 78.95 - 84.25 - top of radar nose.</p>			MEN X MINUTES
<p>REPLACEMENT PROCEDURE</p> <p style="text-align: center;">Place in position. Insert two mounting bolts. Connect three pipe lines.</p>			MEN X MINUTES

<p>INSPECTION</p> <p style="text-align: center;">Check valve for security.</p>		<p>MEN X MINUTES</p>	
<p>FUNCTIONAL CHECKS</p>		<p>MEN X MINUTES</p>	
<p>GROUND HANDLING AND GROUND TEST EQUIPMENT</p> <p style="text-align: center;">Compressed air unit. Electrical ground power unit. Cockpit access stand. B5 access stand.</p>			
<p>SPECIAL TOOLS TO REMOVE OR SERVICE</p>			
<p>REMARKS</p>			
<p>ISSUE</p>	<p>1</p>		
<p>DATE</p>	<p>17 Dec. 56</p>		

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