

CHAP 2 AIRFRAME SP 102A AL 9 SHEET 1 OF 9	SERVICING PROCEDURE F53	BAC F53 & T55 (SA) 5A3A Section 1 2nd Edition
Canopy Emergency Jettison System - Functional Checks	AFSC 43151 42252 42272 43171	TIME EST
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.		
SPECIAL TOOLS AND EQUIPMENT Test adapter (EB2-88-4809). Test rig (26DK/95331). Multi purpose servicing hoist (4GC/4232366). Canopy sling (26DK/95263). Jib No.3 (4GC/4232396). Tyre inflation rig (4G/1050542). Spring balance (1A/1043782).		ASSOCIATED PROCEDURES SP1A (W) 5A (AF) 6A (AF) 2A (W) 132A (AF) 603 (AF)
<u>42252</u>		
1. PREPARATION		
1.1 Canopy.	Remove (SP 5A (AF)).	
1.2 Ejection seat.	Remove (SP 1A (W)).	
1.3 Breech firing unit cartridges (Canopy and seat).	Remove.	
<u>43151</u>		
2. PREPARATION		
2.1 Ground air charging/ release connexion (Access panel 63P (left)).	Remove blank.	
2.2 Services system hydraulic pressure.	Release pressure by operating brake lever.	
2.3 Hydraulic test trolley.	(i) Prime. (ii) Bleed.	
2.4 No.1 services ground test connexions (Access panel 45P (left)).	Connect hydraulic test trolley.	
2.5 Hydraulic services reservoir.	Replenish (SP 603 (AF)).	
		Continued Overleaf
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2. PREPARATION (Contd)

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|-----|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 2.6 | Tyre inflation rig (4G/1050542). | (i) Connect to ground air charging/release connexion.
(ii) Set rig to deliver a pressure of between 16 and 18 lbf/in ² . |
| 2.7 | External d.c. power supply. | (i) Connect.
(ii) Set to ON. |

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3. PREPARATION

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| 3.1 | Canopy. | (i) Raise, using multi purpose servicing hoist and No.3 jib (4GC/4232366 and 4GC/4232396).
(ii) Position on aircraft.
(iii) Refit at rear hinges and jack attachment only.
(iv) Ensure disconnected cables and pipelines do not foul when canopy is operated. |
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4. TESTING

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|-----|-------------------------------------------|-------------------------------------------------------------|
| 4.1 | Test rig (26DK/95331). | Ensure air bottle charged to 600 lbf/in ² . |
| 4.2 | Primary breech striker mechanism. | Remove from jettison firing unit. |
| 4.3 | Test rig adapter (Part no EB2-88-4809). | Fit to jettison firing unit. |
| 4.4 | Test rig flexible pipe. | Fit to adapter (EB2-88-4809). |
| 4.5 | Canopy selector toggle switch (internal). | Set to CLOSE. |
| 4.6 | Canopy. | (i) Close, using servicing trolley hand pump.
(ii) Lock. |

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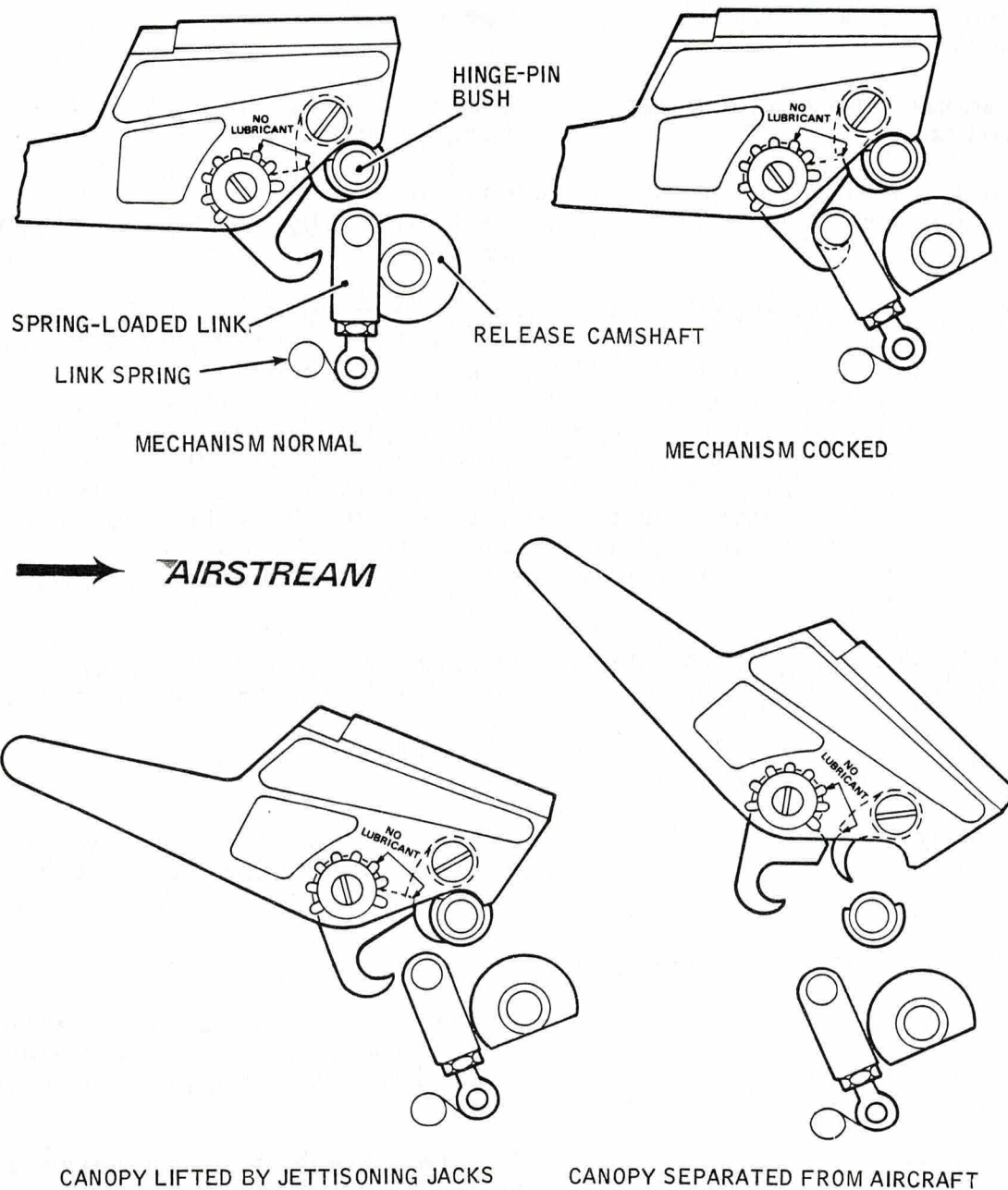
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<div style="font-size: 1.2em; font-weight: bold; margin-bottom: 10px;"> <u>43151/42252</u> </div> <div style="margin-bottom: 20px;"> <p>4. TESTING (Contd)</p> <p>4.7 Canopy shoot bolts. Ensure indicating locked.</p> <p>4.8 Test rig air bottle cock. Operate.</p> <p>4.9 Canopy hooks and shoot bolts. Ensure withdrawn by rotation of torque shaft.</p> <p>4.10 Jack end-fitting release mechanism. Ensure sleeve is raised not more than 0.3in by operation of push rod.</p> <p>NOTE: In Sub-item 4.11 if camshaft damper lever fails to fully enter damper unit manually (i.e. not using a tool) rotate camshaft to achieve this condition. If mechanism fails to operate correctly, release pressure from firing unit by unscrewing adapter and resetting hinge release camshaft and links to normal, (See Fig.1), by manually rotating shaft (Access panels 22P (left) and 22S (right)) until aft sides of links bear on flats of cams before opening canopy to investigate. Following any adjustment or rectification recommence test.</p> <p>4.11 Links (Access panels 22P (left) and 22S (right)). Ensure cocked by rotation of hinge release camshaft (See Fig.1).</p> <p>NOTE: Sub-items 4.12 and 4.13 must be carried out simultaneously.</p> <p>4.12 Canopy. Raise, using sling and multi purpose servicing hoist and jib No. 3.</p> <p>4.13 Canopy jack end-fitting. Ensure released.</p> <p>4.14 Canopy. Raise approximately 1 ft using multi purpose servicing hoist (measured from top of windscreen arch.</p> <p>4.15 Hinges. Ensure released by applying light upward force on hinge arms.</p> <p>4.16 Canopy. (i) Remove from fuselage and lower to ground. (ii) Remove hinge bolts and bushes.</p> </div>		
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CANOPY JETTISON MECHANISM

FIGURE 1

Continued

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4.	TESTING (Contd)	
4.16	Canopy. (Contd)	(iii) Fit bushes to canopy hinge release mechanism. (See Fig.2).
5.	RESETTING	
5.1	Hinge arm bush mechanism (left and right), (See Fig.2).	(i) Place hinge bush in profile of hinge arm. (ii) Rotate free pivoted hook to engage outer diameter of bush (iii) Hold hook in this position.
5.2	Eccentrically mounted catch.	(i) Rotate to engage flat on bush retaining hook. (ii) Attach spring balance (1A/1043782). (iii) With a straight pull dislodge catch and permit free movement of bush retaining hook. (iv) Ensure spring balance reading is between 50 and 90 lbs.
NOTE: Sub-items 5.3 to 5.5 are applicable only if reading obtained at sub-item 5.2 operation (iv) is incorrect.		
5.3	Eccentrically mounted catch bush.	Withdraw countersunk bolt until locking tab is clear of locking recess.
5.4	Eccentric bush.	(i) Rotate to move catch pivot point forward. (ii) Rotate to increase or decrease pressure on catch and hook until loading is correct. (iii) Tighten countersunk bolt until locking tab on eccentric bush is fully engaged with one of the radial recesses in hinge arm.
NOTE: Repeat items 5.1 to 5.4 until correct reading on spring balance is achieved.		
5.5	Countersunk bolt.	Relock by centre popping.

Continued Overleaf

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6. ASSEMBLY CHECK

- 6.1 Inspect eccentrically mounted catch. Ensure correctly assembled and locked.

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7. RESETTING

- 7.1 Jack end-fitting. (i) Remove from canopy.
(ii) Insert into jack housing.
(iii) Engage spring claws by striking smartly with hand.
- 7.2 Canopy selector toggle switch (internal). Set to close.
- 7.3 Canopy jack. Retract fully using servicing trolley hand pump.
- 7.4 Hinge release camshaft. Manually reset to normal (See Fig.1).
- 7.5 Internal jettison handle. Ensure not operated.
- 7.6 External jettison handle. Ensure not operated.
- 7.7 Test rig and adapter. Remove.
- 7.8 Breech striker mechanism. Refit.

NOTE: Cartridges must not be fitted at this stage.

8. TESTING

- 8.1 Canopy jettison cables. Test (SP 132A (AF)).

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9. COMPLETION

- 9.1 Ejection seat. Refit (SP2 (W)).

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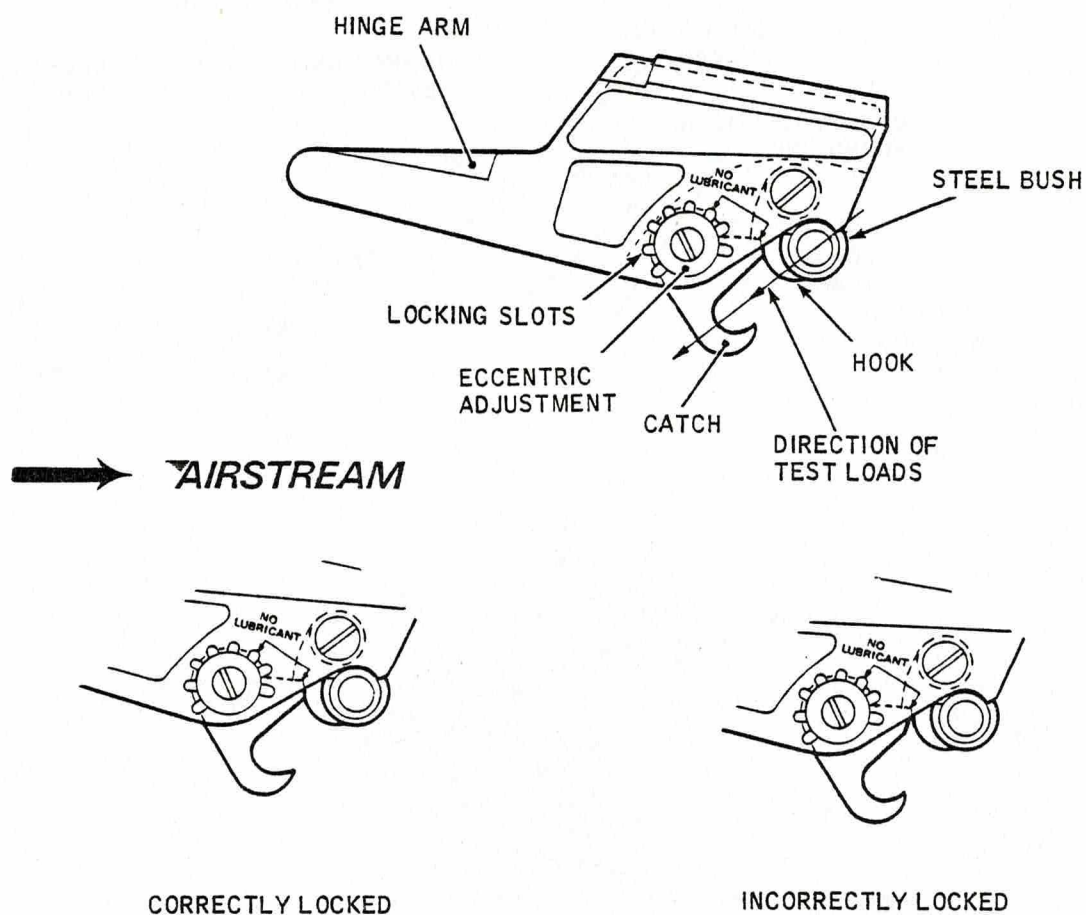
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CANOPY MECHANISM - LOCKING

FIGURE 2

Continued Overleaf

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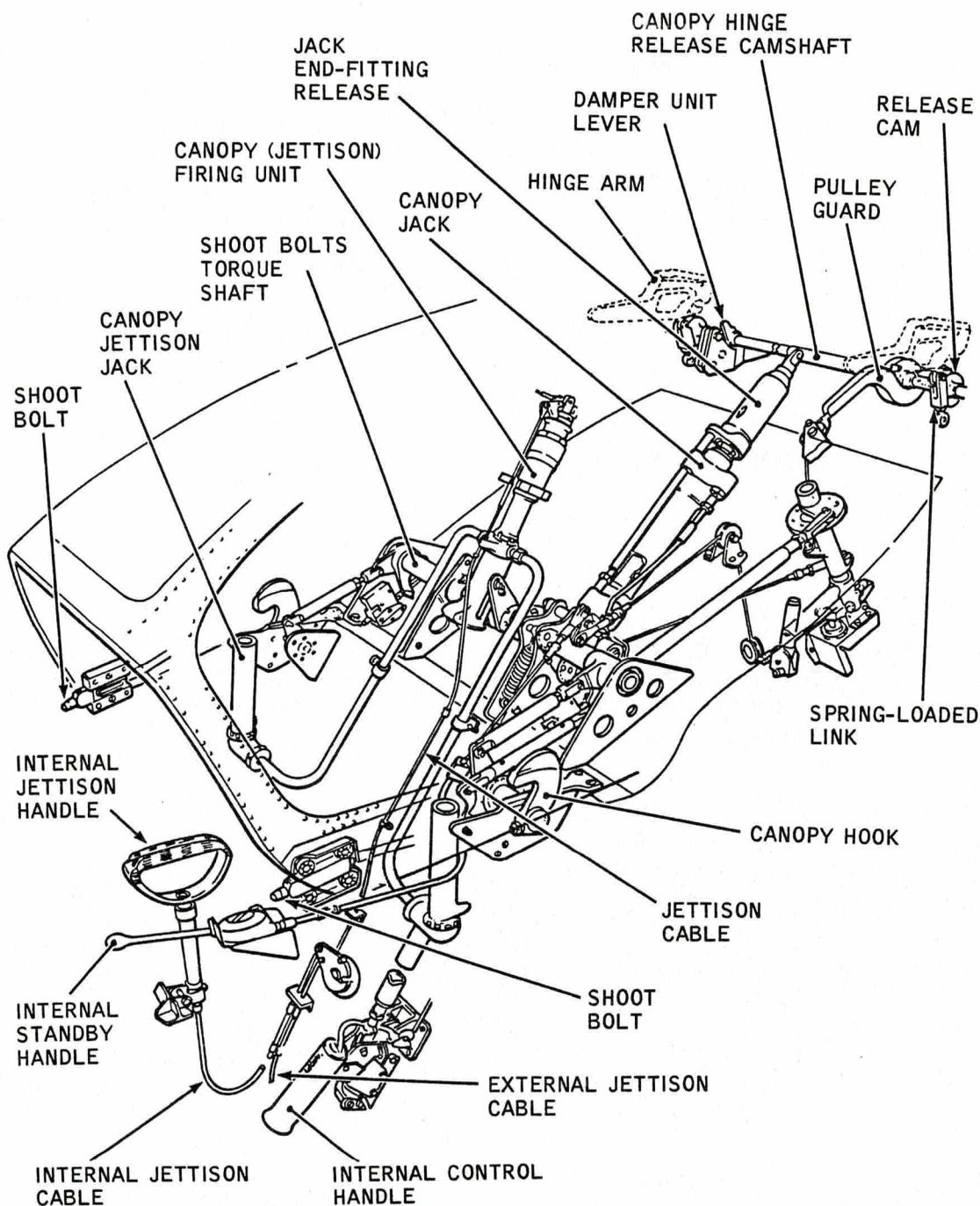
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CANOPY MECHANISM - GENERAL ARRANGEMENT

FIGURE 3

Continued

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9. COMPLETION (Contd)

9.2 Canopy.

- (i) Refit (SP 6A (AF)).
- (ii) Close partially using servicing trolley hand pump.
- (iii) Apply an upward force at forward face and ensure jack end-fitting does not disengage.
- (iv) Open, using servicing trolley hand pump.

9.3 Services system.

Pressurize to 3000 lbf/in².

9.4 Canopy.

Close.

9.5 Jack housing.

Check clearance between upper end of push rod and jack housing is between 0.002in and 0.003in.

9.6 Canopy.

Open.

9.7 Services system hydraulic pressure.

Release pressure by operating brake lever.

9.8 External d.c. power supply.

- (i) Set to OFF.
- (ii) Disconnect.

9.9 Hydraulic test trolley.

Remove.

9.10 Hydraulic pump quick release connexions (Services system access panel 45P (left)).

- (i) Reconnect to aircraft.
- (ii) Wirelock.

9.11 Hydraulic reservoirs.

Replenish (SP 603 (AF)).

9.12 Tyre inflation rig (4G/1050542).

- (i) Disconnect at ground air charging/release connexions (access panel 63P (left)).
- (ii) Refit blank and wirelock.

9.13 Access panels.

Refit.

NOTE: All wirelocking to be of 22 SWG stainless steel locking wire.

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