AP 109E-0103-5F
January 1988

BAROSTATIC TIME RELEASE UNITS TYPES 5, 6, 7, 9, 17, 19, 20 AND 22

BAY MAINTENANCE SCHEDULE

BY COMMAND OF THE DEFENCE COUNCIL

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AP 100B-01 Order 0561 (RAF)

BAROSTATIC TIME-RELEASE UNITS
TYPES 5, 6, 7, 9, 17, 19, 20 and 22

CONTENTS

INTRODUCTION

1 The barostatic time-release units (BTRU) covered in this publication are basically similar in construction and operation, they differ in that the shackle release plungers vary in length. Modification ESA 75 (Type 22, Mk 2) introduces a shackle release plunger which incorporates a short length of increased diameter and a correspondingly larger aperture at the top of the body casing. Table 1 lists the differences in time-delay, shows those units which have an adjustable delay and those which have no g-controller switch fitted but which have a compensating increase in the time delay. The method of adjusting the time-delay when necessary will be found in para 13.

TABLE 1 TYPES OF UNIT

Type and Mark (1)	Delay in seconds (2)	Remarks (3)
5, 6, 9 Mk 1 and 7 Mk 2	1.25	-
17, Mk 1	2.25	Adjustable time-delay No g-controller
19, Mk 1	2.25	Adjustable time-delay No g-controller
20, Mk 1	2.25	Adjustable time-delay No g-controller
22, Mk 1	2.00	Adjustable time-delay No g-controller
22, Mk 2	2.00	Adjustable time-delay No g-controller

NOTE...
Permissible service tolerance on all units during time testing + 0.25 sec., - 0.15 sec

2 The unit is fitted to the starboard side of the seat structure to provide the automatic release of the drogue assembly from the scissor shackle and to free the combined harness thus releasing the occupant from the seat. The time-delay mechanism is incorporated to ensure that, before the occupant is freed from the seat, the speed of the seat and occupant has been sufficiently reduced to permit the parachute to be deployed without any danger of it bursting. For high-speed-aircraft, the time-delay mechanism is prevented from operating by a g-controller switch until the drogues have retarded the seat and occupant sufficiently for safe separation. A barostat is fitted to the unit to avoid a long parachute descent through a rarified atmosphere. When an ejection is made at any altitude above 10,000 ft the barostat will prevent the mechanism from functioning until this height is reached.

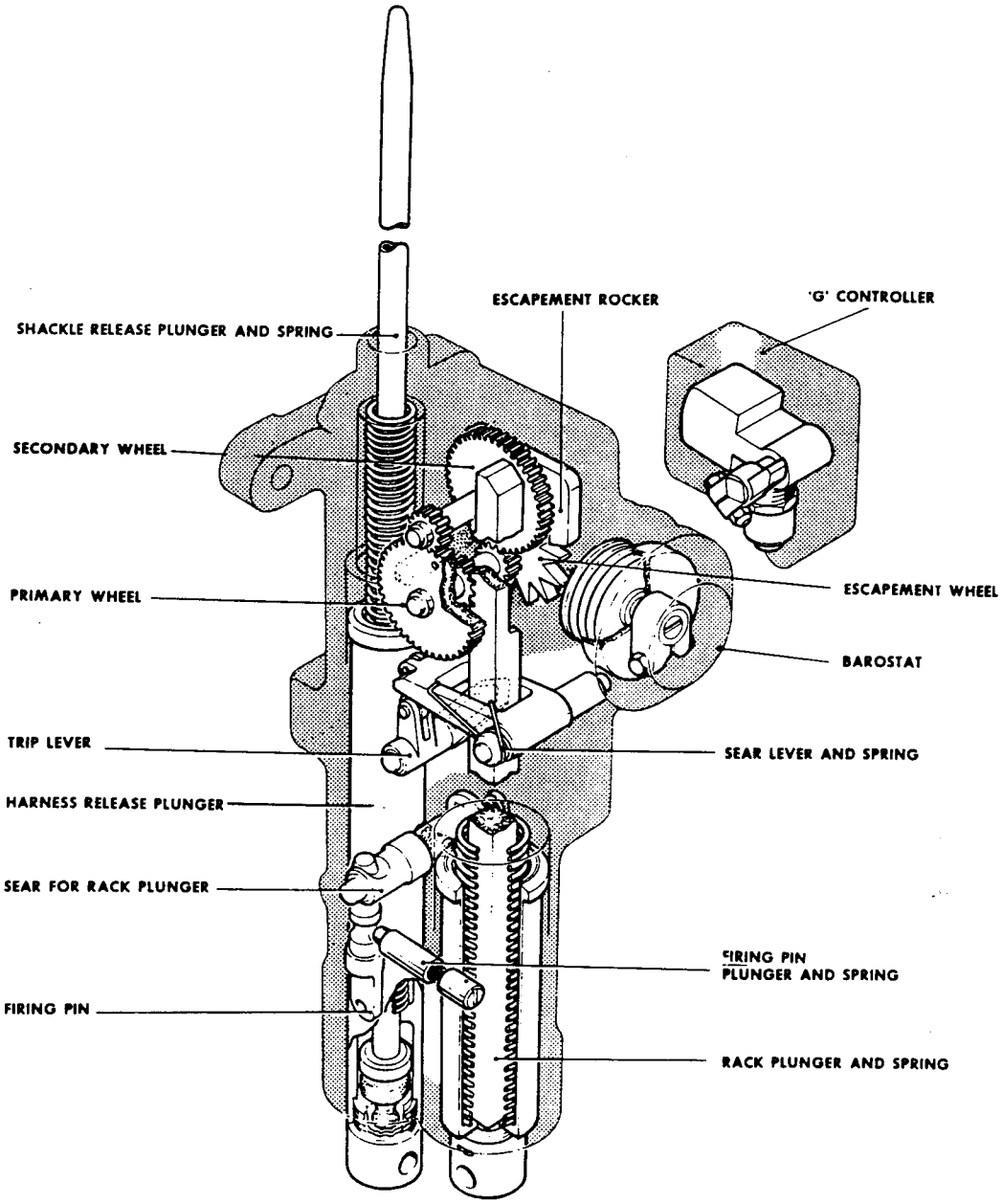

Fig 1 Details of unit

DESCRIPTION (fig 1)

3 The unit consists essentially of two spring-loaded plunger assemblies, i.e., the harness release plunger which actuates the release of the scissor shackle and the combined harness, and the rack plunger assembly which is in engagement with a train of gears regulated by an escapement mechanism. The latter in turn, is controlled by the barostat and g-controller switch, depending on the height and speed of the aircraft at the time of ejection.

4 The mechanism is retained in the cocked condition by a small arm projecting from the sear and which engages with a machined slot in the spring housing of the rack plunger, the sear is prevented from rotating by the firing pin. A trip rod, to withdraw the firing pin, is connected to a bracket on the guide rail or aircraft bulkhead.

5 The g-controller switch (not fitted to Types 17, 19, 20, 22 Mk 1 and 22 Mk 2), consists of a casing within which a small weight is free to rotate about an integral pivot pin but is restrained in one direction by an encased spring. Clamped to an extension of the pivot pin is an arm with a shaped end which engages the escapement wheel of the time-delay mechanism on the application of a 'g' load.

6 When the drogues have developed the seat and occupant assume a near horizontal attitude and the drogues commence to retard the forward speed of the seat. The deceleration force acts upon the weight within the switch which moves forward in the line of flight. In so doing the arm engages the escapement wheel and prevents the time-delay mechanism from operating. As soon as the speed drops to a safe level, the switch spring takes control and forces the weight back into its original position, so removing the restraint from the gear train and allowing it to function.

7 The barostat consists of a bellows contained within a casing which is screwed into the time-release unit body. Attached to the innermost capsule of the bellows is a stop-pin, positioned adjacent to the escapement wheel. At altitudes below 10 000 ft the stop-pin is clear of the escapement but, if ejection takes place above that height the bellows expand and the stop-pin is brought into engagement with the escapement wheel to prevent the unit from operating.

OPERATION

8 As the seat ascends the guide rail, the trip rod withdraws the firing pin from the sear. The sear rotates and allows the rack plunger, under the action of its compressed spring, to descend and actuate the gear train, providing ejection has taken place below 10 000 ft. After the appropriate time-delay the rack overruns the primary wheel, the sear lever frees the trip lever and permits the harness plunger to descend under the action of the main spring. When the harness release plunger descends, it frees the scissor shackle and strikes the harness release lever attached to the starboard side of the seat structure to operate the harness release linkage.

COCKING THE UNIT

9 To cock the unit proceed as follows:

9.1 Insert the firing pin into the unit and push fully home until the pin shoulder butts up against the unit body.

9.2 Position the appropriate cocking tool on the unit (fig 2).

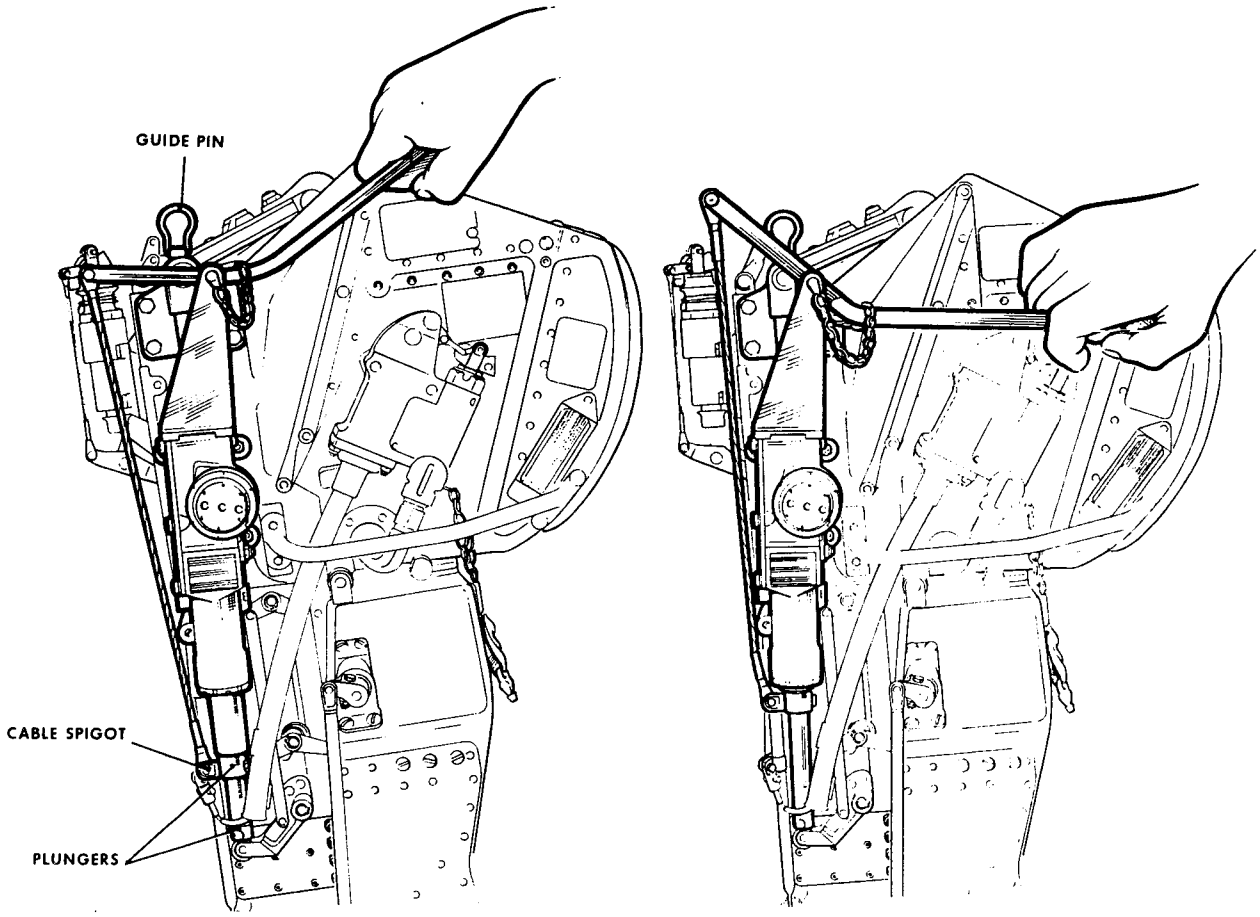

Fig 2 Re-setting the time-release mechanism

9.3 Ensure that the drogue shackle is correctly held by the scissor shackle and that the scissor shackle is locked by the scissor shackle retaining plunger.

9.4 Lock scissor shackle retaining plunger using guide pin attached to cocking tool (fig 2).

9.5 Place cocking tool cable spigot into hole in end cap of rack plunger. Press down on cocking tool handle and cock rack plunger, ensure plunger is correctly cocked by checking overrun on plunger, an approximate measurement of 0.25 in should be obtainable (fig 3).

9.6 Repeat item 9.5 for the harness release plunger, an approximate measurement of 0.5 in should be obtainable (fig 4).

Note...

The overrun check on both plungers ensures that the mechanism is free and has not jammed during cocking.

9.7 Ensure that the drogue shackle is secured by the scissor shackle and that the scissor shackle is locked by the scissor shackle retaining plunger which, in its turn, is secured by the shackle release plunger.

9.8 Remove the cocking tool.

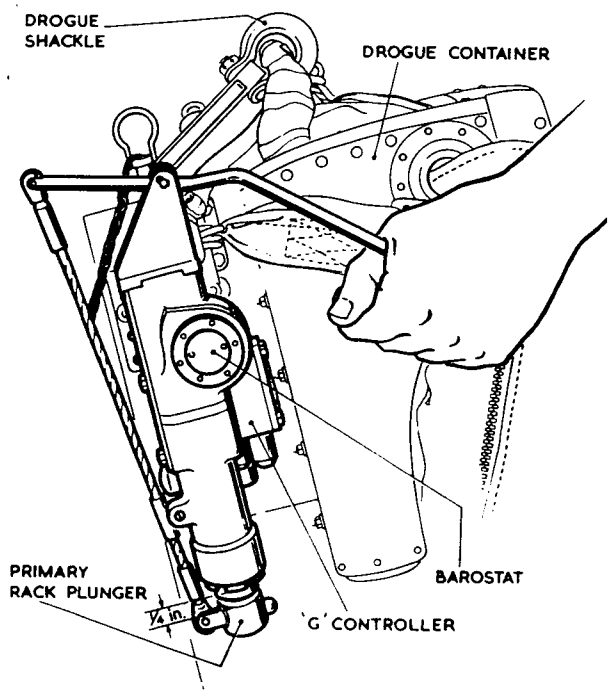

Fig 3 Checking the gears in overrun (1)

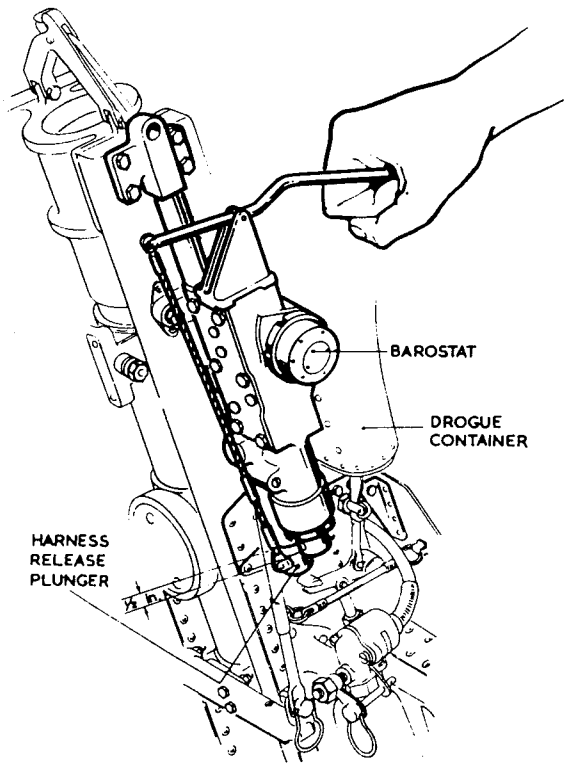

Fig 4 Checking the gears in overrun (2)

TABLE 2 SPECIAL TOOLS AND EQUIPMENT

Description (1)	Part No (2)	Reference No (3)	Remarks (4)
Spanner, end cap	-	27L/4527725	Removing rack plunger end cap
Jig, assembly	-	27L/4540069	Dismantling and assembling the unit assembly
Spanner, buffer assembly	-	27L/4527724	Removing the harness release plunger buffer assembly
Tester g-controller switch	-	27L/1031936	Testing the g-controller switch
Tool positioning sear lever	-	27L/4540070	
Wrench, torque	-	1C/7085	
Test fixture, rated spring	-	27L/2837	

TABLE 3 MATERIALS

Nomenclature (1)	UK Joint services Designation (2)	NATO Code No (3)	Specification (4)
NOTE... Details of lubricants to be used and their correct application will be found in AP 109A-0100-6, Leaflet A4			
Cleaning agents			
Trichloroethane			TS 367 Type 1 or 2
▶ Miscellaneous			
Lockwire, chromium nickel 0.5mm	30A/6363056		DTD 189A ◀

TESTING THE BAROSTATIC TIME-RELEASE UNIT

10 Carry out a timing test as detailed in AP 109T-0101-12 and an altitude test as detailed in AP 109T-0109-1.

▶ 5000 METRE BAROSTAT

11 This barostat was introduced for use under certain operational requirements. BTRU's fitted with 5000m barostat capsules shall be tested as detailed in AP 109T-0109-1.

TIMING THE UNIT

12 The timing tests to be carried out prior to dismantling the unit are detailed in AP 109T-0101-12, Chap 3.

ADJUSTING THE TIME-DELAY, TYPES 17, 19, 20, 22, Mk 1 and 22, Mk 2

13 If at any time during time-testing, the mechanism fails to operate within the limits laid down, moving one of the shims above or below the bottom face of the rack plunger will alter the time-delay; to increase the delay place the shim above the end cap. To adjust the delay proceed as follows:

CAUTION...
Restrain harness release plunger when operating unit. Plunger releases with sufficient force to cause damage to unit and injury to personnel.

13.1 Hold the unit firmly, withdraw the firing pin and allow the mechanism to run out restraining the harness release plunger using the cocking tool.

13.2 Remove the split pin from the special nut at the end of the rack plunger remove the nut, shim washer(s) and special spring washer.

13.3 Break the locking wire securing the rack plunger end cap, compress the spring and remove the end cap using the spanner carefully allowing the spring to reassert itself. Remove the rack plunger spring and shim washer(s).

13.4 Fig 5 shows the nominal setting of the time-release unit with the shim washers in position. To adjust the timing proceed as follows:

13.4.1 If test shows time-delay below low limit, remove a shim from B and add to A or

13.4.2 if time-delay is above top limit, take shim from A and add to B. The shim washer at B must be placed between the special nut and the spring washer.

NOTE...
No more than the maximum number of two shims are permitted for units with delay of less than 2s. Four shims for units with a delay of 2s or above are permitted to be used when adjusting the time-delay, no more than three of which may be positioned at either A or B. If the use of these shims fails to bring the mechanism within the prescribed limits then the unit must be renewed.

13.5 Re-assemble the time-release unit ensuring that the special nut is screwed up hand tight only and backed off until the drilled holes are in line. Insert a new 1/16 in. split pin through the drilled holes to secure. ◀

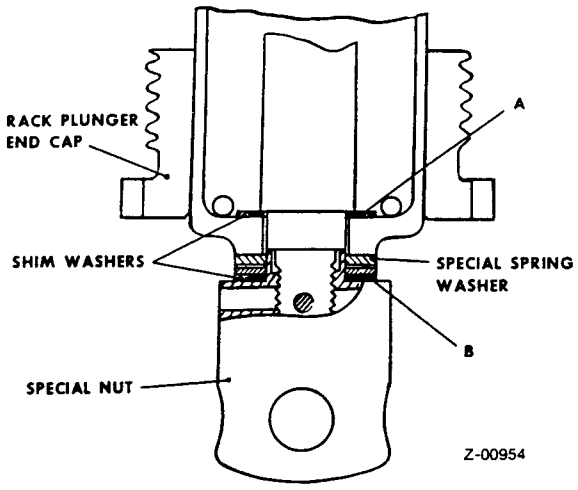

Fig 5 Adjusting the timing

13.6 Time test the mechanism as detailed in para 12.

▶ 13.7 On satisfactory completion of the tests, wirelock the rack plunger end cap to the unit body. ◀

DISMANTLING THE UNIT (fig 6)

14

14.1 Remove the three 2 BA stiffnuts securing the g-controller switch; remove the switch from the unit.

14.2 Remove the locking wire and remove the barostat.

14.3 Place the unit in the assembly jig, fit the cocking tool, withdraw the firing pin and allow the mechanism to run-out restraining the harness release plunger.

14.4 Break the locking wire, remove the cover plate securing bolts; remove the cover plate.

14.5 Remove the primary and secondary wheels.

14.6 Remove the cone-end plunger and spring.

14.7 Remove the rocker and escapement wheel.

14.8 Remove the sear lever return spring.

14.9 Partially compress rack spring and remove trip lever assembly.

▶ 14.10 Take pressure of rack spring and remove end cap using the spanner. Carefully allow spring to reassert itself and remove rack plunger, rack and spring. Remove split pin from special nut, remove nut, shim washers and special spring washer. Note position of shims if fitted to ensure correct repositioning on reassembly.

14.11 Remove the sear lever.

14.12 Break the locking wire on the harness release plunger buffer assembly, compress the spring and remove buffer assembly with the special spanner; carefully allow the spring to extend, and remove the harness release plunger assembly.

14.13 Remove and discard the split pin securing the shock absorber block; unscrew and remove the shock absorber block from the harness release plunger.

14.14 Support the end cap of the buffer assembly in a suitable jig and unscrew the buffer housing, using the special spanner.

14.15 Remove the inner and two outer rings from the housing (fig 8) and examine for damage, remove the brass sleeve from the housing and examine the rim for damage, renew as necessary.

14.16 Remove and discard the split pin from the sear rack plunger cover plate; remove the cover plate complete with centering pin. Remove the sear rack plunger.

14.17 Remove and discard the split pin from the spring retaining plug and remove the plug, spring and ball-end plunger.

14.18 Remove and discard the split pin from the pin connecting the firing pin to the trip rod. Remove the clevis pin and separate the firing pin and trip rod.

DISMANTLING THE G-CONTROLLER SWITCH

15

NOTE...

Paragraphs 15 to 17 are not applicable to the Types 17, 19, 20, 22 Mk 1 and 22, Mk 2 release units.

15.1 Break the locking wire and remove the blanking-off plug.

15.2 Remove the four 4BA special bolts and remove the cover plate.

15.3 Using a suitable spanner, remove the plunger housing. Remove the outer plunger spring and inner plunger.

15.4 Remove the 4 BA stiffnut and bolt; remove the restrictor pawl. (Note the position of the pawl before removal).

15.5 Remove the operating lever assembly complete with the special washer. ◀

ASSEMBLING THE G-CONTROLLER SWITCH

16

▶ WARNING...
OIL OM12. REFER TO WARNING IN PRELIMINARY MATERIAL. ◀

16.1 During assembly lightly lubricate all components using oil OM-12. Proceed as follows:

16.2 Fit the operating lever assembly complete with special washer.

16.3 Retaining the operating lever assembly, invert the housing and position the restrictor pawl over the square end of the operating lever shaft in the position indicated in fig 7. Secure with the 4BA bolt and stiffnut.

16.4 Place the outer plunger in the plunger housing, position the inner plunger over the spring and screw the plunger housing and assembly into the switch body; tighten using a suitable spanner.

16.5 Check the operating lever for freedom of movement by depressing the lever two or three times to compress the spring and plungers.

16.6 Position the cover plate and secure using four 4BA special bolts.

16.7 Replace the blanking-off plug.

16.8 Using feeler gauges, check between the casing body and the inner face of the restrictor pawl (fig 7), to ensure that there is an end float of between 0.005 and 0.025 in. (this is essential to avoid possible friction between the two faces).

1 Guide tube
2 Guard tube
3 Barostat assembly
4 Escapement rocker
5 Escapement wheel
6 Secondary wheel and pinion
7 Primary wheel and pinion
8 Sear lever
9 Cover plate
10 Bolt and washer (6)
11 Spring, sear lever
12 Trip lever
13 Plug
14 Spring
15 Ball-end plunger
16 Shims (nominally 2)
17 Rack plunger
18 Firing pin
19 Rack plunger end cap
20 Double spring washer
21 Shims (nominally 2)
22 Split pin
23 Special nut
24 Spring, rack plunger
25 Rack
26 Spring, harness release plunger
27 Shackle release plunger
28 Shock absorber block
29 End cap
30 Outer ring
31 Inner ring
32 Outer ring
33 Sleeve
34 Buffer housing
35 Buffer housing assembly
36 Split pin
37 Harness release plunger
38 Case assembly
39 Cone-end plunger
40 Spring, cone-end plunger
41 Sear spindle
42 Cover plate and centering spring
43 Split pin
44 Blanking-off plate
45 Nut (3)
46 Shackle release plunger (Type 22, Mk 2. Mod ESA75)
47 Shock absorber block (Type 22, Mk 2. Mod ESA75)

Key to fig 6

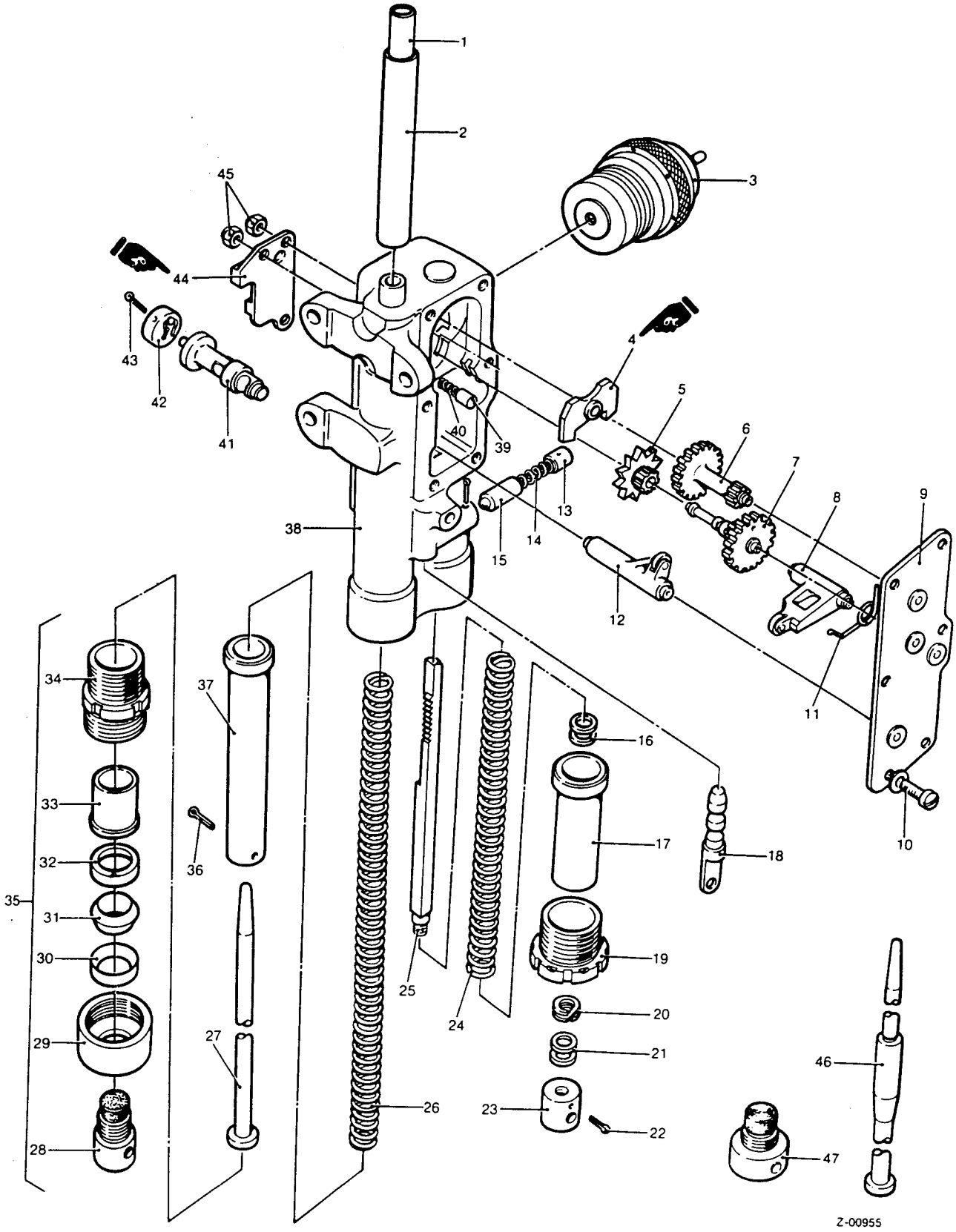

Fig 6 Barostatic time-release unit (exploded view)
(Amended illustration)

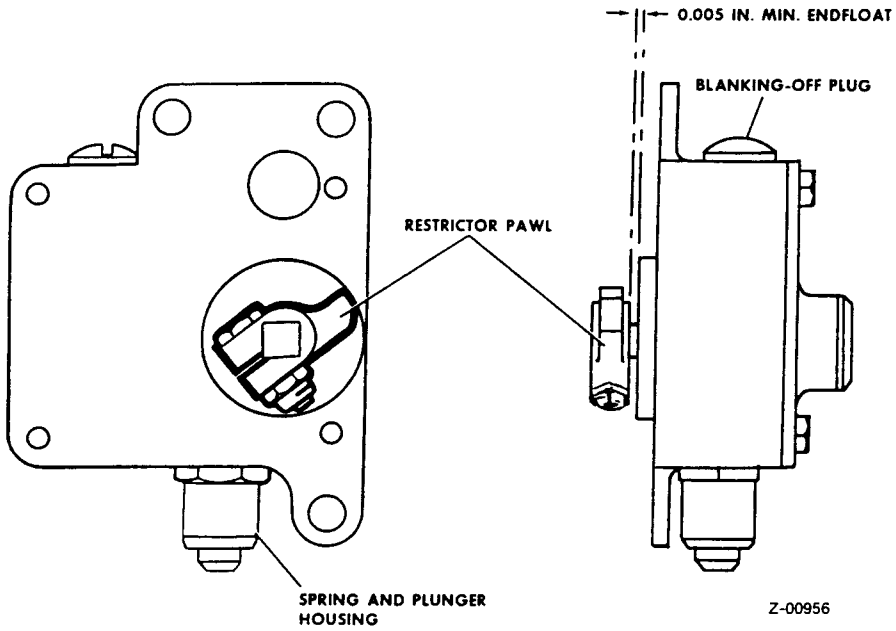

Fig 7 Assembling the g-controller switch

FITTING AND TESTING THE G-CONTROLLER SWITCH

17

17.1 Remove the blanking-off plug.

17.2 Position the switch on the anchor bolts and secure with the three 2 BA stiffnuts; tighten to a torque load of 25 to 28 lbf in.

17.3 Ensure that both the test instrument and the switch body are clean and free from grease; screw the test instrument into the body hand tight only.

17.4 Cock the release unit without inserting the sear; when the movement of the gear train ceases to operate, fully depress the instrument plunger to prevent the gear train functioning.

17.5 Holding the release unit horizontal (this is essential for the correct g-loading), slowly release the plunger, simultaneously watching for the appearance of the engraved g marks. The gear train should commence to function after the 4 1/2 g mark has appeared above the top face of the securing nut but before the 3 g mark becomes visible.

19.6 Repeat operations 17.4 and 17.5 twice more. ◀

17.7 Remove the test instrument, fit the blanking-off plug and wirelock the plug and operating lever plunger housing to the heads of the cover plate securing bolts.

ASSEMBLING THE UNIT

18

▶ WARNINGS...
(1) GREASE XG 293. REFER TO WARNING IN PRELIMINARY MATERIAL.

(2) OIL OM 12. REFER TO WARNING IN PRELIMINARY MATERIAL. ◀

18.1 During assembly, the components of the buffer assembly are to be lightly coated with grease. The harness release plunger is to be lubricated with grease from the collar downwards for a distance of half the overall length. All other component parts and bearing points are to be lightly lubricatedusing oil. Proceed as follows:

WARNINGS...
▶ (1) IT IS OF THE GREATEST IMPORTANCE TO OBSERVE STRICT CLEANLINESS OF ALL COMPONENTS DURING REASSEMBLY.

(2) GREASE XG 293 REFER TO WARNING IN PRELIMINARY MATERIAL. ◀

18.1A Apply grease and re-assemble sleeve, outer ring, inner ring, outer ring to buffer housing. Screw on end cap (fig 8). Using the appropriate clamp and spanner tighten housing into end cap. When tightened the inner ring must be free to rotate within the housing. Failure of the inner ring to rotate indicates incorrect assembly.

NOTE...
If a new sear spindle cover plate and spring is being fitted carry out the check detailed in para 18.1B. If the original cover plate and spring is to be fitted proceed with the assembling detailed in para 18.2.

18.1B Refer to fig 7 and place a suitable packing piece under the legs of the sear spindle centring spring to maintain the anchored portion of the spring parallel with the face of the cover plate. Measure the distance from the face of the packing piece to the end of the spring. The minimum dimension shall be 0.10 in. (2.54 mm). The dimension may be increased to ensure that the legs of the spring do not protrude beyond the outer edge of the cover plate.

18.2 Assemble the sear spindle to the cover plate assembly by crossing the legs of the centring spring and inserting the pivot of the sear spindle between the crossed over legs of the spring (fig 9, view A). Rotate the cover plate and spring about the spring pivot until the pivot of the sear spindle can be inserted in the hole in the cover plate. Ensure that the outer ends of the spring legs contact the sear spindle shoulder (fig 9, view B). Holding the cover plate stationary, rotate the sear spindle approximately 45 degrees to the left and the right ensuring that the sear spindle returns freely to its original position each time. Ensure that the outer ends of the spring legs contact the sear spindle shoulder. Insert the assembly into the case so that the centring spring rivet is uppermost, and secure the assembly by passing a new split pin through the case and cover. Check for correct assembly by inserting a finger in the rack plunger aperture of the case, rotating the spindle and ensuring that it returns to its original position under the action of the spring.

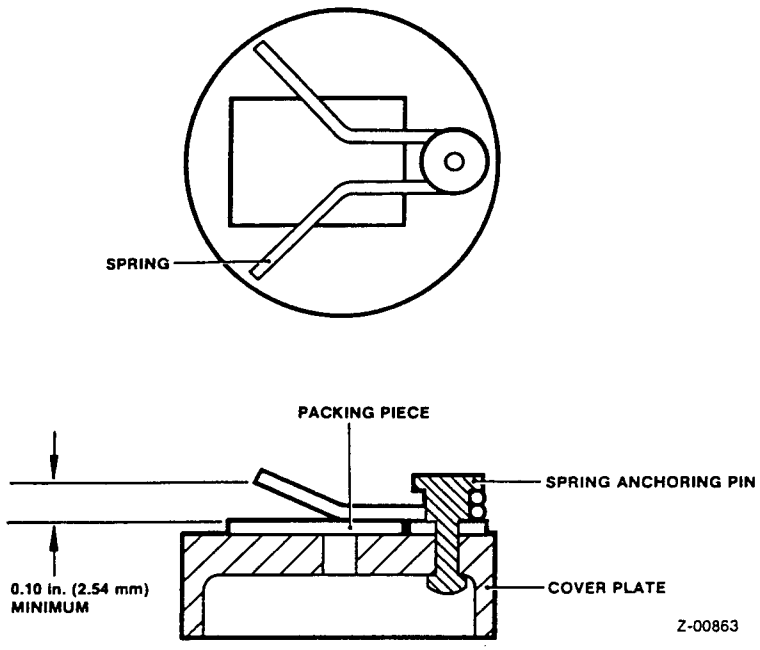

Fig 7 Checking the sear spindle centring spring

18.3 Place unit on assembly jig.

18.4 Refit the ball-end plunger, spring and spring retaining plug, align holes and fit new split pin.

18.5 Fit sear lever, long shank down, ensuring roller is positioned in slot of body.

18.6 Replace shims (if fitted), over threads at lower end of rack and insert rack into plunger. On Type 5 Mk 1 units ensure that the teeth on the rack align with the cutaway in the plunger. Pass end cap over rack plunger, assemble spring washer, remaining shim(s) and special nut to rack. Tighten special nut hand tight only, back off until holes align and fit new plit pin. Fit spring over rack and insert complete assembly into case ensuring rack passes through sear lever assembly and rack teeth face inwards towards the harness release plunger housing (fig 10). Tighten end cap using the spanner and wirelock cap to case.

18.7 Partially depress rack plunger and assembly trip lever with trip arm positioned beneath and engaging cut-away of rack, and roller arm uppermost, (fig 10).

18.8 Assemble spring to sear lever and ensure its correct operation. ◀

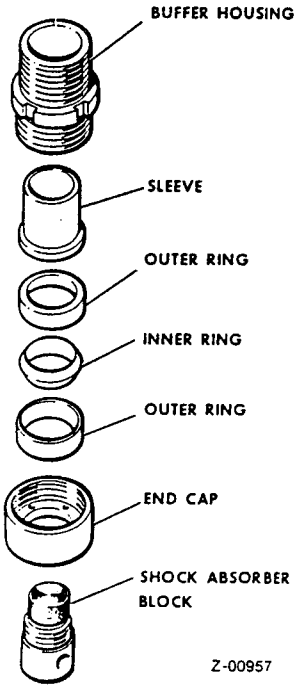

Fig 8 Buffer housing assembly

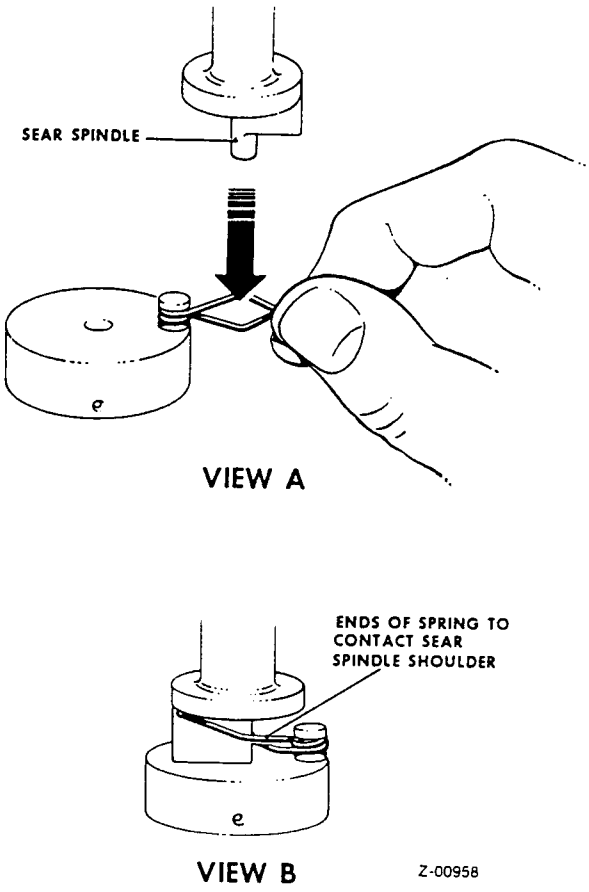

Fig 9 Assembly of sear spindle to cover

18.9 Assemble cone-end plunger and spring into case (fig 10).

18.10 Ensure escapement wheel is free on shaft of primary pinion. Position escapement wheel and rocker in case, rocker boss facing downwards and escapement wheel pinion uppermost (fig 10). Fit secondary pinion and wheel; spindle at larger gear end passes through escapement rocker into bearing and wheel engages pinion of escapement wheel (fig 11). Fit primary pinion and wheel; spindle at small end passes through escapement wheel into bearing, cone-end plunger engages in indent of larger gear and wheel engages secondary pinion (fig 11).

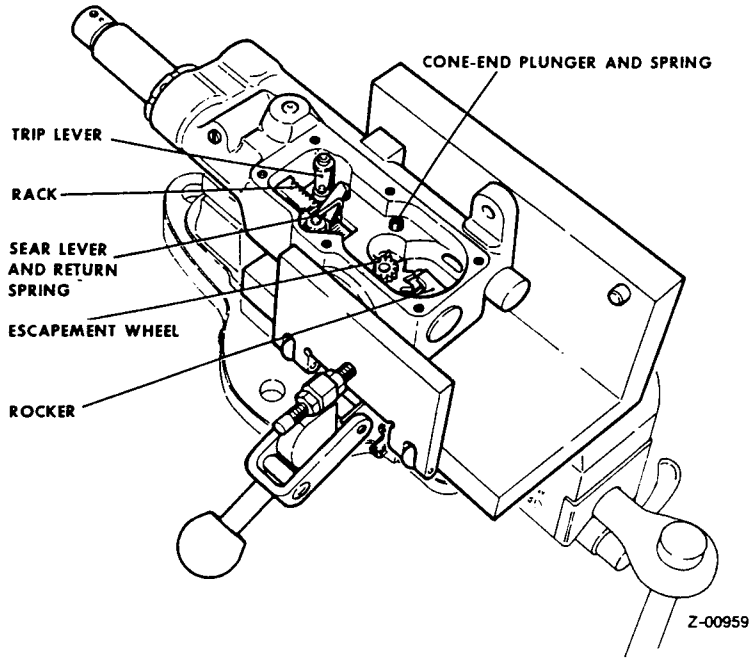

Fig 10 Assembling the unit (1)

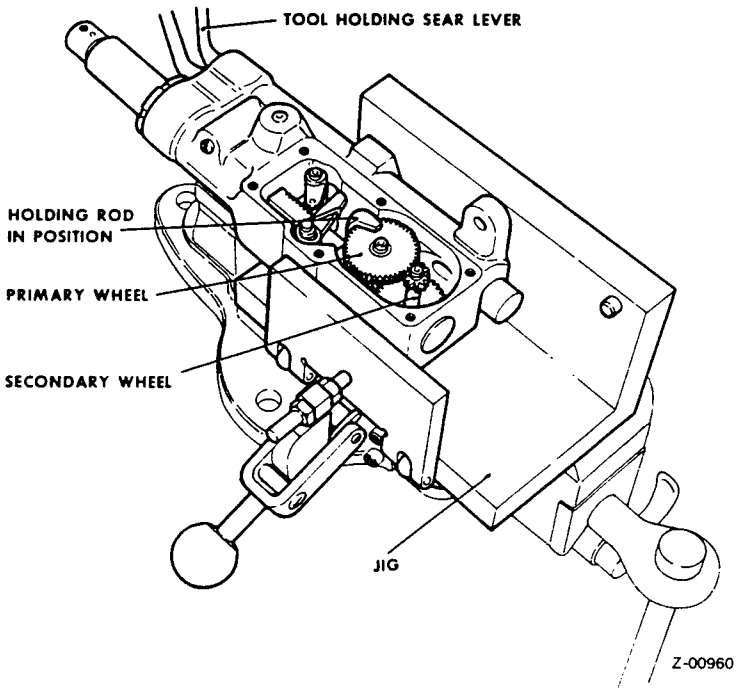

Fig 11 Assembling the unit (2)

18.11 Locate primary pinion in correct position with all teeth in mesh and hold by pushing downwards on primary pinion; then raise vertical plunger of assembly jig to its full extent and turn plunger 90 degrees to engage its lip over top face of primary pinion (fig 11). Locate sear lever in correct position by rotating sear lever against spring; compress handles of the sear lever positioning tool and insert tool into harness release plunger apeture locating end of tool beneath roller of sear lever so that when handles of tool are released, sear lever is held in correct position (fig 11). Refit cover plate ensuring that all spindles are correctly located in their respective bushes; secure cover plate with bolts and washers. Torque load bolts to 25 lbf in. Remove the tool and retract plunger of assembly jig. Push in rack plunger several times ▶ to check smooth running of gear train. Wirelock cover bolts in pairs wiring across lower two bolts and vertically on other bolts. ◀

18.12 Slide buffer housing assembly over harness release plunger; insert shackle release plunger through bottom of harness release plunger followed by shock absorber block. Tighten shock absorber block and secure with split pin. If holes do not align tighten using clamp blocks.

18.13 Pass main spring over shackle release plunger and into bore of harness release plunger. Insert this assembly into its aperture in case. Compress harness release plunger spring until buffer housing can ▶ be screwed into case. Tighten using the spanner, buffer assembly and wirelock. ◀

18.14 Refit barostat assembly hand tight only but ensure that barostat ▶ assembly is fully home in case and wirelock. Remove unit from assembly jig. ◀

18.15 Replace g-controller (or blanking plate if no g-controller is fitted) ensuring that it is offered parallel to the BTRU body and is correctly positioned against the body before fitting securing nuts. To prevent damage to the rivets of the stud plate assemblies no force is to be used during this operation. Secure with three 2 BA stiffnuts torque loading to 25 to 28 lbf in.

NOTE...

Refit guard tube and guide tube immediately prior to fitting time-release unit to ejection seat.

18.16 Attach firing pin to trip rod using clevis pin and split pin.

CAUTION...

When inserting firing pin into its aperture, orientate firing pin assembly so that small end (end with split pin hole) of top shackle pin is pointing outboard and small end of bottom shackle is pointing aft (fig 12). This is necessary to ensure that shackle pins will not foul case and that firing pin can be fully inserted. A semi-cocked condition can result if firing pin is not fully seated, or if shackle pins are installed in incorrect positions. A semi-cocked condition may case inadvertent firing of time-release unit.

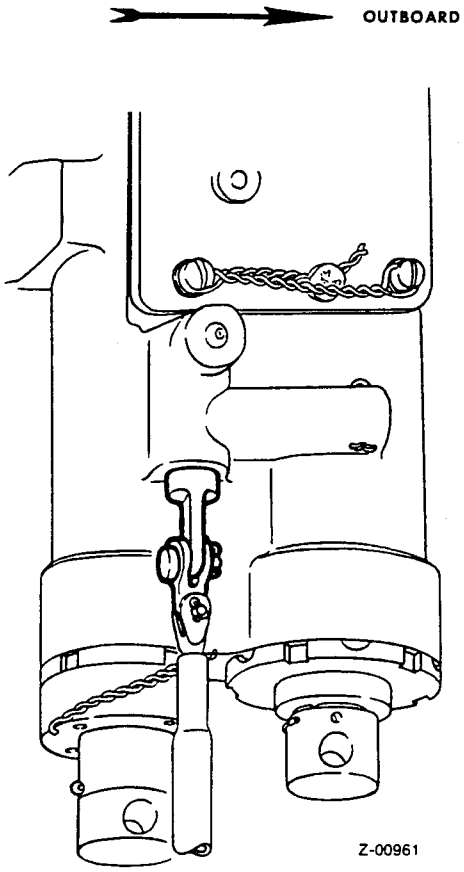

Fig 12 Orientation of trip rod

18.17 Insert firing pin fully into its aperture in the case.

18.18 Refit unit in jig and using cocking tool, cock rack plunger and harness release plunger.

NOTE...
The rack plunger should have approximately 0.25 in. upward travel beyond point at which it is normally held by the catch and the harness release plunger 0.5 in. approximately. Ensure that shackle release plunger is pushed downwards to its full extent after cocking time-release unit.

▶ 18.19 With the time-release unit in the cocked condition and the shackle release plunger pushed down as far as it will go, check for correct assembly of the shackle release plunger and harness release plunger by measuring the distance from the centre line of the top mounting holes in the case, to the top of the shackle release plunger (fig 13): correct dimension should be listed in Table 4.

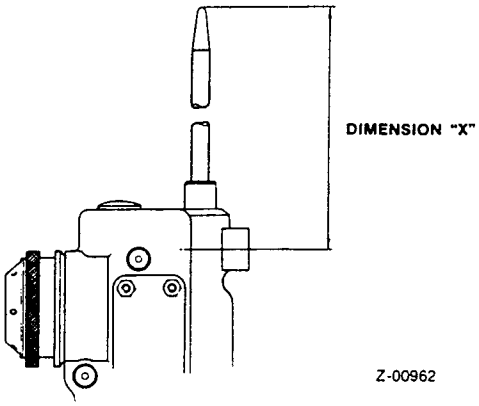

Fig 13 Correct assembly of shackle release plunger

TABLE 4 INDICATOR TABLE FOR CHECKING CORRECT DIMENSION OF SHACKLE RELEASE PLUNGER, REFER TO FIG 13.

Type and Mark	Part No	Dimension X	
5 Mk 1	MBEU 9827	3.825"	+ .062" - .000"
6 Mk 1	MBEU 11438	6.9"	+ .062" - .000"
7 Mk 2	MBEU 28857	8.030"	+ .062" - .000"
9 Mk 1	MBEU 25053	6.842"	+ .062" - .000"
17 Mk 1	MBEU 41200	6.143"	+ .062" - .000"
19 Mk 1	MBEU 36167	6.9"	+ .062" - .000"

◀

TABLE 4 (Continued)

Type and Mark	Part No	Dimension X	
20 Mk 1	MBEU 37462	6.143"	+ .062" - .000"
22 Mk 1	MBEU 42921	6.143"	+ .062" - .000"
22 Mk 2	MBEU 44255	6.134"	+ .062" - .000"

TESTING

19 Carry out delay timing check as detailed in AP 109T-0101-12, Chap 3 and the altitude test as detailed in AP 109T-0109-1, Chap 2.

TRIP ROD - VITAL AREA PAINT SCHEME

20 The trip rod lower telescopic half is to be painted as follows:

20.1 Identify and thoroughly clean the trip rod lower telescopic half.

20.2 Paint the lower telescopic half using paint, yellow (33B/2204876), 3 pint size or (33B/2204859) 15 litre size.

20.3 Paint finish is to be renewed during subsequent bay servicing.

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Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5

1. Preparation

1.1 Introduction.)
1.2 Lethal Warnings.) Read.
1.3 Safety Precautions.)
1.4 Maintenance Notes)

NB Item 2 is to be carried out by NCO IC Maintenance.

2. Documentation

2.1 MOD Form 731. Ensure complete.

2.2 MOD Form 735A.)
2.3 MOD Form 749.)
2.4 MOD Form 753.)

(i) Enter details from MOD Form 731.
(ii) Check for outstanding modifications, SIs and STIs.

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			Man Hrs 1	Inits & TDM 2		Man Hrs 4	Inits & TDM 5
3.	Barostatic Time Release Unit (BTRU)						
NB	Sub-items 3.1 to 3.3 are to be carried out simultaneously with Sub-item 3.4.						
3.1	BTRU.	Carry out timing test (AP109T-0101-12).					
3.2	Firing pin.	Remove.					
3.3	BTRU mechanism.	Ensure functions.					
3.4	Maintenance check.	Inspect work carried out at Sub-items 3.1 to 3.3 inclusive.					
4.	G-Controller Switch						
NB	Sub-items 4.1 to 4.37 inclusive are applicable only to BTRU types 5, 6, 7 and 9.						
4.1	Securing nuts. (3 off).	(i) Remove. (ii) Examine					
4.2	G-Controller switch assembly.	Remove.					

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Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5

4. G-Controller Switch (Contd)

4.3	Blanking plug.	(i)	Remove.
4.4	Cover plate bolt. (4 off).	(ii)	Examine.
4.5	Cover plate.		
4.6	Plunger housing.		
4.7	Outer plunger.	(i)	Remove.
4.8	Plunger spring.	(ii)	Examine.
4.9	Inner plunger.	(iii)	Lubricate lightly.

4.10 Maintenance check. — Inspect work carried out at Sub-items 4.1 to 4.9 inclusive.

NB Sub-items 4.11 and 4.12 are to be carried out simultaneously.

4.11 Plunger spring. — Carry out rated spring test. (AP 109T-0106-1).

4.12 Maintenance check. — Inspect work carried out at Sub-item 4.11.

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BAROSTATIC TIME RELEASE UNITS
TYPES 5, 6, 7, 9, 17, 19, 20 AND 22

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			Man Hrs 1	Inits & TDM 2		Man Hrs 4	Inits & TDM 5
4.	G-Controller Switch (Contd)						
4.13	Restrictor pawl securing bolt nut.	(i) Remove. (ii) Examine.					
4.14	Restrictor pawl securing bolt.						
4.15	Restrictor pawl.	(i) Remove.					
4.16	Operating lever.	(ii) Examine.					
4.17	Special washer.	(iii) Lubricate.					
4.18	G-controller housing.	Examine.					
4.19	Maintenance check.	Inspect work carried out at Sub-items 4.13 to 4.18 inclusive.					
4.20	Special washer.						
4.21	Operating lever.						
4.22	Restrictor pawl.						
4.23	Restrictor pawl securing bolt.						
4.24	Restrictor pawl securing bolt nut.	Refit.					
4.25	Outer plunger.						
4.26	Plunger spring.						
4.27	Inner plunger.						
4.28	Plunger housing.						

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			Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
4.	G-Controller Switch (Contd)						
4.29	Maintenance check	Inspect work carried out at Sub-items 4.20 to 4.28 inclusive.					
NB	Sub-items 4.30 and 4.31 are to be carried out simultaneously.						
4.30	Operating lever.	Ensure free to rotate under spring pressure.					
4.31	Maintenance check.	Inspect work carried out at Sub-item 4.30.					
4.32	Cover plate.	Refit.					
4.33	Cover plate securing bolt (4 off).						
4.34	Blanking plug.						
4.35	Maintenance check	Inspect work carried out at Sub-items 4.32 to 4.34 inclusive.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
4.	G-Controller Switch (Contd)						
NB	Sub-items 4.36 and 4.37 are to be carried out simultaneously.						
4.36	Restrictor pawl.	Check gap between inner face of restrictor pawl and G-controller housing 0.0127 to 0.0635 mm (0.005 to 0.025 in.)					
4.37	Maintenance check.	Inspect work carried out at Sub-item 4.36.					
NB	Sub-items 4.38 to 4.40 inclusive are applicable only to BTRU types 17, 19, 20 and 22.						
4.38	Cover plate securing nut. (3 off).	(i) Remove					
4.39	Cover plate.	(ii) Examine					
4.40	Maintenance Check.	Inspect work carried out at Sub-items 4.38 and 4.39.					
5.	Trip Rod Assembly						
5.1	Trip rod assembly.						
5.2	Fork end shackle.	Examine					
5.3	Firing pin.						

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			Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
5.	Trip Rod Assembly (Contd)						
5.4	Trip rod vital area.	Ensure painted yellow. (AP 109E-0103-1).					
5.5	Maintenance check.	Inspect work carried out at Sub-items 5.1 to 5.4 inclusive.					
5.6	Spring balance.	Fit to trip rod assembly.					
NB	Sub-items 5.7 and 5.9 are to be carried out simultaneously.						
5.7	Trip rod assembly.	Extend using spring balance.					
5.8	Spring balance.	Check reading 0.9 to 3.18 kg. (2 to 7 lb).					
5.9	Maintenance check.	Inspect work carried out at Sub-items 5.7 and 5.8					
5.10	Spring balance.	Remove.					
5.11	Trip rod assembly.	Retract fully.					

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			Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
6.	Barostat Capsule						
6.1	Barostat capsule.	(i) Remove. (ii) Examine.					
6.2	Maintenance check.	Inspect work carried out at Sub-item 6.1.					
7.	Time Delay Mechanism						
7.1 7.2 7.3	Cover plate securing bolt (6 off). Cover plate securing bolt washer. (6 off) Cover plate.	(i) Remove. (ii) Examine					
7.4	Cover plate bearing. (4 off).	(i) Examine. (ii) Lubricate lightly					

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			Man Hrs 1	Inits & TDM 2		Man Hrs 4	Inits & TDM 5
7.	Time Delay Mechanism (Contd)						
Note:	Sub-items 7.5 to 7.12 inclusive are likely to show signs of wear. This wear is acceptable provided the time delay unit performs satisfactorily during function/timing tests.						
7.5	Primary wheel and pinion.	)					
7.6	Secondary wheel and pinion.	)					
7.7	Cone end plunger.	)	(i) Remove.				
7.8	Plunger spring.	)	(ii) Examine.				
7.9	Escapement rocker.	)	(iii) Lubricate lightly.				
7.10	Escapement wheel.	)					
7.11	Sear lever return spring.	)					
7.12	Trip lever assembly.	)					
7.13	Maintenance check.		Inspect work carried out at Sub-items 7.1 to 7.12 inclusive.				
8.	Rack Assembly						
8.1	Special nut split pin.		(i) Remove. (ii) Discard.				
8.2	Rack end cap.		(i) Remove. (ii) Examine.				
8.3	Maintenance check.		Inspect work carried out at Sub-item 8.2.				
8.4	Rack plunger assembly.		Remove.				

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
8.	Rack Assembly (Contd)						
NB	Sub-items 8.5 and 8.6 are to be carried out simultaneously.						
8.5	Rack spring.	(i) Remove. (ii) Examine. (iii) Carry out rated spring test. (AP 109T-0106-1). (iv) Lubricate lightly.					
8.6	Maintenance check.	Inspect work carried out at Sub-item 8.5.					
8.7	Special nut.	(i) Remove. (ii) Examine.					
NB	Sub-items 8.8 and 8.9 are applicable only to BTRU types 17, 19, 20 and 22.						
8.8	Shim washer.	(i) Note shims fitted. (ii) Remove. (iii) Examine.					
8.9	Special spring washer.	(i) Remove. (ii) Examine.					
8.10	Rack.	(i) Remove. (ii) Examine. (iii) Lubricate lightly.					

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			Man Hrs 1	Inits & TDM 2		Man Hrs 4	Inits & TDM 5
8.	Rack Assembly (Contd)						
8.11	Rack shim washer.	(i) Note shims fitted. (ii) Remove. (iii) Examine.					
8.12	Rack plunger.	(i) Examine. (ii) Lubricate lightly.					
8.13	Sear lever.	(i) Remove. (ii) Examine. (iii) Lubricate lightly.					
8.14	Maintenance check.	Inspect work carried out at Sub-items 8.7 to 8.13 inclusive.					
8.15	Rack end cap.	Refit to rack plunger.					
8.16	Rack shim washer.	Refit shims noted at Sub-item 8.11 to rack.					
8.17	Maintenance check.	Inspect work carried out at Sub-items 8.15 and 8.16.					
8.18	Rack.	Refit to rack plunger.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
8.	Rack Assembly (Contd)						
NB	Sub-items 8.19 and 8.20 are applicable only to BTRU types 17, 19, 20 and 22.						
8.19	Special spring washer.	Refit.					
8.20	Shim washer.	Refit shims noted at Sub-item 8.8.					
8.21	Special nut.	(i) Refit. (ii) Lock with split pin.					
8.22	Rack spring.	Refit to rack.					
8.23	Maintenance check.	Inspect work carried out at Sub-items 8.18 to 8.22 inclusive.					
9.	Harness Release Plunger Assembly						
9.1	Buffer block split pin.	(i) Remove. (ii) Discard.					
9.2	Buffer assembly.	)					
9.3	Harness release plunger assembly.	) Remove.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
9.	Harness Release Plunger Assembly (Contd)						
NB	Sub-items 9.4 and 9.5 are to be carried out simultaneously.						
9.4	Harness release plunger spring.	(i) Remove. (ii) Examine. (iii) Check free length 320 mm (12.63 in.) minimum. (iv) Lubricate lightly.					
9.5	Maintenance check.	Inspect work carried out at Sub-item 9.4.					
9.6 9.7	Buffer block.) Shackle release plunger.)	(i) Remove. (ii) Examine. (iii) Lubricate lightly.					
9.8	Harness release plunger.	(i) Examine. (ii) Lubricate from the collar downward a distance of half the overall length.					
9.9	Maintenance check.	Inspect work carried out at Sub-items 9.6 to 9.8 inclusive.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
9.	Harness Release Plunger Assembly (Contd)						
9.10 9.11 9.12 9.13	Buffer end cap. Outer ring. (2 off). Inner ring. Sleeve.	(i) Remove. (ii) Examine. (iii) Lubricate lightly.					
9.14	Buffer housing.	(i) Examine. (ii) Lubricate lightly.					
9.15	Maintenance check.	Inspect work carried out at Sub-items 9.10 to 9.14 inclusive.					
9.16 9.17 9.18 9.19	Sleeve. Outer ring. Inner ring. Outer ring.	Refit to buffer housing.					
9.20	Maintenance check.	Inspect work carried out at Sub-items 9.16 to 9.19 inclusive.					
9.21	Buffer end cap.	Refit.					
9.22	Inner ring.	Ensure free to rotate.					
9.23	Maintenance check.	Inspect work carried out at Sub-items 9.21 to 9.22 inclusive.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
9.	Harness Release Plunger Assembly (Contd)						
9.24	Buffer assembly.	Fit to harness release plunger.					
9.25	Shackle release plunger.	Refit.					
9.26	Buffer block.	(i) Refit. (ii) Lock with split pin.					
9.27	Harness release plunger spring.	Refit to shackle release plunger.					
9.28	Maintenance check.	Inspect work carried out at Sub-items 9.24 to 9.27 inclusive.					
10.	Sear Spindle Assembly						
10.1	Cover plate split pin.	(i) Remove. (ii) Discard.					
10.2 10.3 10.4	Cover plate. Spring. Sear spindle.	(i) Remove. (ii) Examine. (iii) Lubricate lightly.					
10.5	Maintenance check.	Inspect work carried out at Sub-items 10.2 to 10.4 inclusive.					

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			Man Hrs 1	Inits & TDM 2		Man Hrs 4	Inits & TDM 5
11.	Ball End Plunger Assembly						
11.1	Plug split pin.	(i) Remove. (ii) Discard.					
11.2	Plug.	) (i) Remove.					
11.3	Spring.	) (ii) Examine.					
11.4	Ball end plunger.	) (iii) Lubricate lightly.					
11.5	Maintenance check.	Inspect work carried out at Sub-items 11.1 to 11.4 inclusive.					
12.	Body Assembly						
12.1	Guide tube. (2 off).	) Examine.					
12.2	Body assembly.	)					
12.3	Spindle bearing. (4 off).	(i) Look for elongation. (ii) Lubricate lightly.					
12.4	Barostat housing threads.	) (i) Examine.					
12.5	Buffer assembly housing threads.	) (ii) Lubricate lightly.					
12.6	Rack end cap housing threads.	)					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
15.	Ball End Plunger Assembly						
15.1 15.2	Ball end plunger. Spring.	) Refit.)					
15.3	Plug.	(i) Refit. (ii) Lock with split pin.					
15.4	Maintenance check.	Inspect work carried out at Sub-items 15.1 to 15.3 inclusive.					
16.	Rack Assembly						
16.1	Sear lever.	Refit. (Long shank downwards).					
NB	During Sub-item 16.2 ensure rack passes through sear lever and rack teeth face toward harness release plunger housing.						
16.2	Rack assembly.	Refit.					
16.3	Rack end cap.	Lock with wire.					
16.4	Maintenance check.	Inspect work carried out at Sub-items 16.1 to 16.3 inclusive.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
12.	Body Assembly (Contd)						
12.7	Stud plate G-controller switch. (2 off).	(i) Examine. (ii) Ensure secure. (iii) Look for damage to stud securing welds.					
12.8	Maintenance check.	Inspect work carried out at Sub-items 12.1 to 12.7 inclusive.					
13.	Sear Spindle Assembly						
NB	Sub-items 13.1 to 13.3 are to be carried out simultaneously with Sub-item 13.4.						
13.1	Spring.	Refit.					
13.2	Sear spindle.	(i) Refit. (ii) Ensure retained by spring.					
13.3	Cover plate.	(i) Refit. (ii) Lock with split pin.					
13.4	Maintenance check.	Inspect work carried out at Sub-items 13.1 to 13.3 inclusive.					
14.	BTRU						
14.1	BTRU.	Fit to assembly jig.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
17.	Time Delay Mechanism						
17.1	Trip lever assembly.	)					
17.2	Sear lever return spring.	)					
17.3	Plunger spring.	)					
17.4	Cone end plunger.	) Refit.					
17.5	Escapement wheel.	)					
17.6	Escapement rocker.	)					
17.7	Secondary wheel and pinion.	)					
17.8	Primary wheel and pinion.	)					
17.9	Cone end plunger.	Ensure engaged in indent of primary wheel.					
17.10	Maintenance check.	Inspect work carried out at Sub-items 17.1 to 17.9 inclusive.					
17.11	Cover plate.	)					
17.12	Cover plate securing bolt washer. (6 off).	) Refit.					
17.13	Cover plate securing bolt. (6 off).	(i) Refit. (ii) Torque load 2.824 Nm. (25 lbfin.). (iii) Lock with wire in pairs.					
17.14	Maintenance check.	Inspect work carried out at Sub-items 17.11 to 17.13 inclusive.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
18.	Harness Release Plunger Assembly						
18.1	Harness release plunger assembly.	Refit.					
18.2	Buffer assembly.	Lock with wire.					
18.3	Maintenance check.	Inspect work carried out at Sub-items 18.1 and 18.2.					
19.	BTRU						
19.1	BTRU.	Remove from assembly jig.					
20.	Barostat Capsule						
20.1	Barostat capsule.	(i) Refit. (Hand tight only). (ii) Lock with wire.					
20.2	Maintenance check.	Inspect work carried out at Sub-item 20.1.					

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			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
21.	G-Controller Switch						
NB	Sub-items 21.1 to 21.17 inclusive are applicable only to BTRU types 5, 6, 7 and 9.						
21.1	G-controller switch.	Refit.					
21.2	Securing nuts. (3 off).	(i) Refit. (ii) Torque load 2.824 to 3.163 Nm. (25 to 28 lbfin.).					
21.3	Maintenance check.	Inspect work carried out at Sub-items 21.1 and 21.2.					
21.4	Blanking plug.	Remove.					
21.5	Tester g-controller switch.	Fit.					
21.6	Time delay mechanism.	Cock.					
21.7	Tester g-controller switch plunger.	Depress fully.					

Continued

BAROSTATIC TIME RELEASE UNITS
TYPES 5, 6, 7, 9, 17, 19, 20 AND 22

MAINTENANCE RECORD — RAF Form 2988B (Revised Sep 86)

Aircraft/Equipment:

Ser No: | Date:

SAFETY AND MAINTENANCE NOTES ARE TO BE COMPLIED WITH THROUGHOUT THE WORK DETAILED ON THIS CARD

			Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
21.	G-Controller Switch (Contd)						
NB1	During Sub-items 21.8 to 21.12 the BTRU is to be horizontal.						
NB2	Sub-items 21.8 to 21.11 are to be carried out simultaneously.						
21.8	Tester g-controller switch plunger.	Release slowly.					
21.9	Time delay mechanism.	Ensure functions.					
21.10	Tester g-controller switch plunger.	Check reading 4.5 to 3 g.					
21.11	Maintenance check.	Inspect work carried out at Sub-items 21.8 to 21.10 inclusive.					
21.12	G-controller switch test.	Repeat Sub-items 21.6 to 21.11 twice.					
21.13	Tester g-controller switch.	Remove.					
21.14	Blanking plug.	(i) Refit. (ii) Lock with wire.					

Continued

MAINTENANCE RECORD — RAF Form 2988B (Revised Sep 86)

Aircraft/Equipment:

Ser No: | Date:

SAFETY AND MAINTENANCE NOTES ARE TO BE COMPLIED WITH THROUGHOUT THE WORK DETAILED ON THIS CARD

		Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
		Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
21.	G-Controller Switch (Contd)					
21.15	Plunger housing.)					
21.16	Cover plate securing bolt. (4 off).) Lock with wire.					
21.17	Maintenance check. Inspect work carried out at Sub-items 21.14 to 21.16 inclusive.					
NB	Sub-items 21.18 to 21.20 inclusive are applicable only to BTRU types 17, 19, 20 and 22.					
21.18	Cover plate. Refit.					
21.19	Cover plate securing nut. (3 off). (i) Refit (ii) Torque load 2.824 to 3.163 Nm (25 to 28 lbf in.).					
21.20	Maintenance check. Inspect work carried out at Sub-items 21.18 and 21.19.					

Continued

MAINTENANCE RECORD — RAF Form 2988B (Revised Sep 86)

Aircraft/Equipment:

Ser No: | Date:

SAFETY AND MAINTENANCE NOTES ARE TO BE COMPLIED WITH THROUGHOUT THE WORK DETAILED ON THIS CARD

			Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
22.	Barostat						
NB	Sub-items 22.1 and 22.2 are to be carried out simultaneously.						
22.1	BTRU.	Carry out altitude test. (AP 109T-0109-1).					
22.2	Maintenance check.	Inspect work carried out at Sub-item 22.1.					
23.	BTRU						
NB	Sub-items 23.1 and 23.2 are to be carried out simultaneously.						
23.1	BTRU.	Carry out timing test. (AP 109T-0101-12).					
23.2	Maintenance check.	Inspect work carried out at Sub-item 23.1.					
23.3	Firing pin.	Refit.					
23.4	Rack plunger.)	Cock.					
23.5	Harness release plunger)						

MAINTENANCE RECORD — RAF Form 2988B (Revised Sep 86)

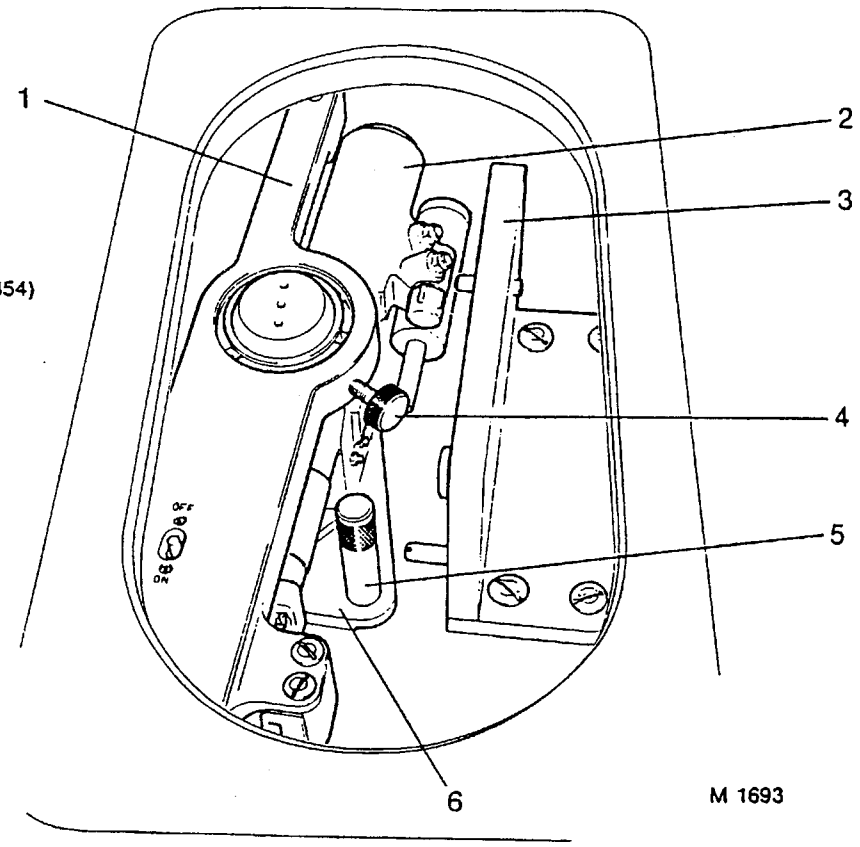
Aircraft/Equipment:

Ser No: | Date:

SAFETY AND MAINTENANCE NOTES ARE TO BE COMPLIED WITH THROUGHOUT THE WORK DETAILED ON THIS CARD

			Tradesman		Brief Details of Suspected Fault and MOD F720 ORN/ F707A SNOW When Applicable	Supervisor	
			Man Hrs 1	Inits & TDM 2	3	Man Hrs 4	Inits & TDM 5
NB	Sub-items 23.6 and 23.7 are to be carried out simultaneously.						
23.6	Shackle release plunger.	Check protrusion. (AP 109E-0103-1).					
23.7	Maintenance check.	Inspect work carried out at Sub-items 23.6.					
24.	Documentation						
24.1	MOD Form 731.	Attach.					
24.2	MOD Form 735A.	) Enter any change of part or serial numbers,					
24.3	MOD Form 749.	) details of modifications embodied, SIs and					
24.4	MOD Form 753.	) STIs complied with.					
24.5	Maintenance check certificate.	Complete					

Continued



1 Indicator assembly
2 Lightweight BTRU
3 Angle bracket (MBEU 57354)
4 Adjusting screw
5 Long locating peg
6 Base plate (MBEU 57353)

Figure. 6 BTRU installed on turntable

TABLE3 BAROSTAT TOLERANCES

10 000ft	10 000 to 13 000ft	20 000ft
11 500ft	11 500 to 14 500ft	22 000ft
13 000ft	11 500 to 14 500ft	22 000ft
5 000m	16 400 to 19 400ft (5 000 to 5 900m)	26 000ft (8 000m)
6 000m	18 040 to 21 320ft (5 500 to 6 500m)	28 000ft (8 500m)

Testing the unit

17 Prepare the test equipment and install the BTRU as detailed in para 16.

17.1 Switch the vacuum switch to ON. Allow the vacuum pump to run until the test altitude (Table 3) is recorded and switch off the vacuum switch. When the vacuum switch is turned to OFF, the altimeter will fluctuate for a few seconds and then hold steady.

17.2 Switch the turn-table switch to ON, turn the speed control to MIN and then to 50-75 rev/min.

+187 SOLD

1·790

1·787.

1·780.

+118

1·805

1·795

1·785.

TABLE 2 RATED SPRINGS TEST DATA (Continued)

Item (1)	Component (2)	Spring (3)	Weight (4)	Low Limit (5)	High Limit (6)
10	Time-Release Units Parachute Deployment Units and Command Delay Breech Units fitted to ejection seats and associated command delay system. Type 8LC, 10A, 10B, 10H, 12H and 12A-1/-2.	Main (MBEU 60391) (Ref 27L/6118880)	20 lb	2.46 in.	3.01 in.
11	Barostatic 'G' Controller (Pre Mod ESA 70)	Plunger (MBEU 64159) (Ref 27L/6176219)	1 lb	1.00 in.	1.078 in.
12	Barostatic 'G' Controller (Post Mod ESA 70, Pre Mod TR 22 or Tornado Mod 0243)	Plunger (MBEU 70403) (Ref 27L/7621511)	1 lb	0.747 in.	0.777 in.
13	Barostatic 'G' Controller (Post Mod TR 22 or Tornado Mod 0243)	Plunger (MBEU 74686) (Ref 27L/7682695)	1 lb	0.668 in.	0.689 in.
14	Barostatic 'G' Controller (Post Mod ESA 88 or Post Mod ESA 94 or Tornado Mod 0243)	Plunger (MBEU 99670) (Ref 27L/5476025)	1 lb	0.668 in.	0.689 in.

TABLE 2 RATED SPRINGS TEST DATA

Item (1)	Component (2)	Spring (3)	Weight (4)	Low Limit (5)	High Limit (6)
1	Time-release units	Rack plunger (MBEU 22110) (Ref 27L/1029436)	20 lb	4.65 in.	5.35 in.
2	Time-release units	'G' switch (MBEU 23183) (Ref 27L/1029440)	2 lb	0.92 in.	1.03 in.

TABLE 2. RATED SPRINGS TEST DATA (Continued)

Item (1)	Component (2)	Spring (3)	Weight (4)	Low Limit (5)	High Limit (6)
3	Drogue guns	Cone-end plunger (MBEU 22291) (Ref 27L/1029439)	2 1/2 lb	0.33 in.	0.44 in.
4	Drogue guns	Firing pin (MBEU 22260) (Ref 27L/1029437)	16 lb	2.19 in.	2.82 in.
5	Breech time-delayed ejection gun firing unit and Type 27 and 29 drogue guns	Main (MBEU 22237) (Ref 27L/4540303)	20 lb	2.20 in.	2.57 in.
6	Harness release mechanism. Ejection seats in the pre-inertia lock state	Reaction Pawl (MBEU 24224) (Ref 27L/1056424)	0.75 lb	0.85 in.	0.96 in.
7	Harness release mechanism. Ejection seats Type 6MSB	Reaction Pawl (MBEU 27900) (Ref 27L/7167675)	0.5 lb	1.01 in.	1.12 in.
8	Harness release mechanism. Ejection seats with inertia lock	Reaction Pawl (MBEU 25773) (Ref 27L/4540517) To be carried out at 4th line only	1.0 lb	0.87 in.	0.96 in.
9	Canopy jettison & time-delay units fitted to the following aircraft: Canberra (except Mk T4 and B(I) 8) Hunter (except Mk T7, T8A, B and C and GA11) Victor Vulcan	Rack plunger (MBCJ 1746) (Ref 27L/4541263)	20 lb	5.52 in.	6.01 in.

PHOTOCOPY
INFORMATION ONLY