

INTRODUCTION

1. This Topic 5F is the Bay Servicing Schedule for Ejection Seats Type 4BSC and 4BSB Series. It details the servicing operations to be carried out at the annual bay servicing for the operational Ejection Seat and the 6 month and annual bay servicing for Flight Simulator Ejection Seat. ◀
2. The Type 4BSC Mk 2 Ejection Seat (MBEU 27531) is fitted to the Lightning F3 and F6 aircraft. The Type 4BSB Mk 2 Ejection Seat (MBEU 27530) is fitted to the Lightning T5 aircraft.
3. Glossary. The servicing operations detailed in all parts of this schedule have the meaning given in the Concise Oxford Dictionary except for the following:
 - a. Inspect. Review the work carried out by tradesmen to ensure it has been performed satisfactorily.
 - b. Check. Make a comparison of a measurement of time, pressure, temperature, resistance dimension or other quantity with a known figure for that measurement.
 - c. Test. Ascertain, by using the appropriate test equipment that an item or system functions correctly.
 - d. Examine. Carry out a survey of the condition of an item. For example, the condition of an item can be impaired by one or more of the following:
 - (1) Insecurity of attachment.
 - (2) Cracks, fractures or crazing.
 - (3) Delamination.
 - (4) Corrosion, contamination or deterioration.
 - (5) Distortion.
 - (6) Loose or missing rivets.
 - (7) Chafing, fraying, scoring or wear.
 - (8) Faulty or broken locking devices.
 - (9) Loose clips or packing on, obstruction of, or leaks from pipelines.
 - (10) External damage.
 - (11) Overheating or leaking of fluids, possibly indicated by discolouration.
 - e. Examine as far as possible. This operation has the same meaning as 'Examine', but is used only where access to an item is restricted and the examination is to be limited to the area which is accessible.
 - f. Operate. Ensure an item or system functions correctly, as far as can be ascertained without the use of test equipment or reference to measurements.
 - g. Replenish. Refill a tank, bottle, or other container to a predetermined level, pressure or quantity, and where necessary:
 - (1) Remove caps, or covers from filler orifices and/or drains.
 - (2) Clear orifices.
 - (3) Fill container as directed in item operation.
 - (4) Ensure drains are free from obstruction.
 - (5) Ensure gaskets and caps or covers are free from damage.
 - (6) Refit caps or covers.
 - (7) Fit locking devices as necessary.

- h. Fit. Correctly attach one item to another.
- j. Refit. Fit an item which has been previously removed.
- k. Replace. Remove an item and fit new or serviced item.
- l. Disconnect. Uncouple or detach cables, pipelines, or controls.
- m. Reconnect. Reverse of sub-para 1.
- n. Verify. Ascertain that the conditions are correct. No remedial action is to be taken but the appropriate authority is to be informed.
- p. NB: A mandatory instruction.
- q. Note: An advisory instruction.

4. Responsibilities of Personnel for Additional Servicing. The instructions contained in all parts of this schedule do not absolve personnel from responsibility for acting upon circumstances which may come to their notice indicating the need for additional servicing.

5. Amendments. New or amended matter will be indicated by triangles (► ◀) to show the extent of the amendment.

6. Amendment procedure is detailed in AP100B-01 Order 0575.

P.F.6A.

BAY SERVICING SCHEDULE
EJECTION SEATS TYPE 4BSC AND 4BSB SERIES

AP109B-0127-5F

LETHAL WARNINGS

1. AIRCRAFT ASSISTED ESCAPE SYSTEMS AND THEIR ASSOCIATED JETTISON MECHANISMS ARE A POTENTIAL SOURCE OF DANGER, AND INADVERTENT OPERATION CAN CAUSE SERIOUS AND POSSIBLE FATAL INJURIES. SAFETY DEVICES ARE PROVIDED IN THE FORM OF SAFETY PINS, LEVERS AND SWITCHES.
2. ON ENTERING THE COCKPIT/CABIN IT IS THE RESPONSIBILITY OF THE INDIVIDUAL TO ASCERTAIN THAT THE POSITION OF THE SAFETY DEVICES SATISFIES THE REQUIREMENTS, WHICH ARE THE MINIMUM STANDARD PERMISSIBLE, OF PARAGRAPH 3.
3. INSTRUCTIONS FOR THE CORRECT POSITIONING OF THE ASSISTED ESCAPE SYSTEM SAFETY DEVICES IN EACH AIRCRAFT TYPE AND MARK ARE DETAILED IN THE SAFETY AND SERVICING NOTES AND AIRCREW MANUAL RELATED TO THAT AIRCRAFT.

SAFETY PRECAUTIONS

1. Ejection Seats. When it is necessary for ejection seat bay servicing personnel to enter a cockpit or cabin to service any part of the assisted escape system, they are to read Safety and Servicing Notes applicable to the Lightning aircraft.
2. Cartridge Operated Components. Before the ejection seat, or any cartridge operated component is taken into the servicing bay it is to be disarmed in the designated area or building.
3. Oxygen System Contamination. The oxygen system together with all tools and equipment used during its servicing are to be kept free from contamination by grease or oil. Whenever painting, doping or sealing operations are being carried out in the vicinity of low pressure oxygen hoses, the hoses are to be removed and the regulator outlets temporarily sealed until the work area has been adequately ventilated and the paint, dope or sealing compound has dried.
4. Electrical Connections. Disconnection or reconnection of electrically operated components or assemblies to facilitate other servicing is to be carried out only by the specialist tradesmen responsible for the component or assembly. All electrical circuits affected by disconnection of plugs and sockets are to be functionally checked after plugs and sockets have been reconnected.
5. Trichloroethane (Inhibisol). Trichloroethane (33D/2201949) or (33D/2203782) also known as Inhibisol, has a strong degreasing action on the skin. The following health precautions are to be observed:
 - a. All unnecessary exposure to the vapour is to be avoided.
 - b. The work area is to be well ventilated. Suitable respirators are to be worn if Trichloroethane (Inhibisol) is used in an enclosed space.
 - c. Smoking, eating and drinking in the work area is prohibited.
 - d. Care is to be taken to prevent splashing when handling the fluid. If necessary, goggles or eye shields are to be worn. If any of the liquid does enter the eyes, they are to be washed out immediately with clean running water and the Station Medical Centre informed.
 - e. Rubber gloves are to be worn, and any portion of the skin liable to come into contact with the fluid is to be protected by a barrier cream. If the skin is splashed the affected parts are to be thoroughly washed with soap and clean water as soon as possible.
6. Anti-Corrosive and Protective Treatments. Anti-corrosive and protective treatments are to be applied in accordance with AP109A-0100-6 Leaflet A1.
7. Trichlorotrifluoroethane. Smoking is prohibited in all areas where Trichlorotrifluoroethane is in use or stored.

SERVICING NOTES

1. Timed Components.

a. Servicing of all timed components is to be carried out by an Aircraft Technician Weapons.

b. Timed components are not to be dismantled until the initial timing tests have been carried out.

2. Torque Loading. A predetermined torque load is applied to nuts, bolts, set screws, unions etc to provide optimum security and prevent overstressing. Failure to apply correct load may result in an inadequate clamping load or damage to threads. Either condition may not be obvious but may cause failure in service. Only approved torque wrenches and extension pieces are to be used. The setting of a wrench (and where extension pieces are used, the complete assembly) is to be checked immediately before use. The applied load will be incorrect if the wrench is handled improperly.

3. Torque Load Checking. When a check of torque loading is required, nuts are to be loosened 1/4 turn and retightened to the specified torque loading individually; not more than one nut is to be loose at any time.

4. Defective Items. Items which require repair are to be noted and the NCO IC Servicing is to be informed.

5. Stiffnuts (Self locking nuts). Stiffnuts may be used on this equipment and although supplied under a single stores reference number, may be of three different types; Aerotight, Philidas and Oddie. The Oddie nut is not approved for use on this equipment and is not to be fitted. (AP1464B Vol 1, Pt 2, Sect 6, Chap 5 details the difference between stiffnut types).

6. Servicing Checks. Servicing checks detailed in this schedule are to be carried out in accordance with instructions contained in AP100B-01 Order 5635.

7. Cleanliness of Servicing Areas and Components. All areas in which servicing is carried out are to be clean. All components are to be cleaned before examination or lubrication. Lubrication is to be adequate but not excessive and all excess oil or grease is to be removed.

8. Avdel Pins. Over a period of time an adverse build-up of tolerances may prevent the pin locking devices of certain types of ball-lock pins from operating correctly. Pins are to be inspected after fitment and if necessary selective fitting of pins is to be carried out to achieve the correct locking.

9. Lubrication. Details of lubrication for ejection seats and associated components are contained in AP 109A-0100-6 Leaflet A4.

BAY SERVICING SCHEDULE
EJECTION SEATS TYPE 4BSC AND 4BSB SERIES

AP109B-0127-5F

SPECIAL TOOLS AND EQUIPMENT

Reference	Nomenclature	Qty
27L 1046823	Cocking Tool	1
27L 4541068	PEC Top Limit Gauge	1
27L 4541067	PEC Bottom Limit Gauge	1
27L 1508551	Special Screwdriver 8.32 UNC	1
1B 9005691	Electric Soldering Iron 220/240V 25W	1

SPARES

Refer to AP109B-0127-3A

MATERIALS

		As required
33H 2202110	Duralac Jointing Compound	" "
33H 2248425	Loctite 221	" "
32B 7002498	Parachute Thread No.8	" "
32B 1250522	Linen Thread No.18	" "
32B 1250524	Linen Thread No.35	" "
30A 9437135	Stainless Steel Lockwire	
	0.711 mm (22 SWG)	" "
33D 2201949	Trichloroethane	" "
33D 2204018	Trichlorotrifluoroethane	" "

ASSOCIATED AIR PUBLICATIONS

AP109B-0127-1
AP109C-0104-13A5F
AP109E-0103-13A5F
AP109D-0203-13A5F
AP109C-0206-13A5F
AP113E-0178-1
AP109G-0101-1
AP109G-0701-15F

