

Chapter 4 BOMBING EQUIPMENT

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**Introduction**

1. Practice bomb carriers may be carried on both the inboard and (*Post Mod. 1223*) outboard pylons. The practice bomb carriers are provided with their own release mechanisms and auto selectors which permit the bombs to be released individually. A description of the electrical installation and the operation of the release mechanisms is contained in Sect. 5, Chap. 1.

**DESCRIPTION**

**Controls**

2. Before releasing the bombs the pylon selector switch must be set according to the pylon to be used—INBOARD or OUTBOARD—the BOMB/R.P. switch set for bombing and the fuzing selector switch set to FUZE. The bombs are released by depressing the push switch on the top of either the instructor's or the pupil's control column handgrip.

3. When necessary, the stores on the pylons may be jettisoned by using switches on the top port instrument panel. A flap above the switches, when pulled down, operates the two switches together, thus making provision for

the simultaneous jettisoning of stores from both inboard and outboard pylons. The fuzing switch, also located on the top port instrument panel, must be set to DEFUZE before the bombs can be jettisoned. The stores on the outboard pylons only may be jettisoned by operating the outboard pylon stores jettison switch without selecting DEFUZE on the fuzing selector switch. When the jettison switch is used, the practice bombs, if fitted, are jettisoned complete with their carriers.

**Pylon and bomb attachment**

4. The pylons which are described and illustrated in Sect. 3 Chap. 2 are bolted to the wings and are, therefore, not capable of being jettisoned. They can, however, be removed and cover plates are provided to seal the holes in the wings which are left exposed when removal is effected.

5. The inboard pylons contain an ejector release unit and the outboard pylons contain an E.M. release unit, by which the practice carrier is attached to the pylon. These units are provided with a crutching device with which the practice carrier is finally tightened up against the sole plate of the pylon during loading. The

units are electrically operated to jettison the practice carriers, in an emergency, during flight. The outboard pylons are also fitted with a mechanical jettison and reset mechanism, provided for operation of the E.M. release unit during servicing and is operated by a pair of press buttons, the port button being for jettison and the starboard for reset. The jettison and re-set mechanisms are illustrated in Sect. 2 Chap. 2. For details of the release units and practice carrier reference should be made to A.P.1664A.

**SERVICING**

**Armament safety break**

6. An armament safety plug, located in the port stub wing, is accessible via a small hinged door fitted in a panel under the wing, just forward of the main spar pin joint. The door is provided with a toggle fastener to facilitate access. The plug, attached to a bracket by a nylon cord on which is fitted a bag and a red warning pennant, must be removed before stores are fitted and should only be put back immediately prior to take-off. When the plug is removed, place the plug in the stowage bag and allow the bag and pennant to hang below the

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door. On replacing the armament safety plug, stow the pennant and when fitting the plug ensure that the red paint mark on the body of the plug is aligned with a similar mark on the body of the socket. If this precaution is not observed damage will be caused to the plug.

**Note . . .**

*The pennant must not be removed from the stowage bag.*

### Fitting and removal of practice carriers

7. The procedure for fitting and removing practice carriers on the inboard pylons is described in Sect. 2, Chap. 2. The procedure for fitting the practice carriers on the outboard pylons is as follows:—

- (1) Remove the armament safety break in the port wing, remove the pylon rear door and disconnect the pylon safety break.
- (2) Position the practice carrier under the pylon and lubricate the front and rear locating spigots with anti-seize compound ZX-28.
- (3) Remove the Chekaleke plugs from the port and starboard sides of the pylon and check that the gap between the top of the release housing and the bottom of the plungers does not exceed 0.10 in. (Sect. 2, Chap. 2, fig. 5).

**Note . . .**

*To avoid damage to the jettison and reset mechanism it is essential that only a tool similar to that illustrated in Sect. 2, Chap. 2, fig. 6 is used to operate the jettison and reset buttons. After operation, an inspection must be made to ensure that the buttons have returned to their normal position, which is 0.10 in. below the skin level of the pylon.*

- (4) If the electro-mechanical release is not open, press the jettison button on the

port side of the pylon and then reset by pressing the reset button on the starboard side of the pylon. *(Should the electro-mechanical release be already open, only the reset button need be used).*

- (5) Remove the access panel (*complete with locking tube*) from the wing top skin and place a crutching spanner (*Ref. 26FX/95426*) over the hanger bolt and ensuring that the annular groove on the spanner is flush with the wing skin, unscrew the special nut and lower the hanger bolt to which is attached the E.M. Release Unit.
- (6) Raise the practice carrier sufficiently to allow the forward type 'R' socket on the practice carrier to be connected to the type 'R' plug on the port side of the release housing. Ensure that the practice carrier rear electrical cable and socket is securely stowed in the carrier.
- (7) Raise the practice carrier further until the suspension lug is engaged by the electro-mechanical release and check that the release is fully cocked by means of the cocking test socket and test set (*Sect. 5, Chap. 1*).
- (8) By means of the crutching spanner, raise the carrier until the fore and aft spigots on the carrier are engaged in the sole plate. Care must be taken not to trap the electrical cables between the carrier and the sole plate of the pylon.
- (9) Apply the final crutching load by using a torque wrench (*Ref. 1L/171*) set to 20 ± 2 lb. ft., attached to the adapter on the crutching spanner and again check

through the sighting holes in the pylon that the gap between the top of the release housing and the bottom of the plungers does not exceed 0.10 in. Replace the Chekaleke plugs.

- (10) Re-check that the release unit is fully cocked by means of the cocking test plug and test set. If stores are not to be immediately loaded on the carrier, refit the pylon servicing break and close the rear door.
- (11) Remove the torque wrench and crutching spanner and replace the access panel (*complete with locking tube*) in the wing.
- (12) Immediately before flight, replace the armament safety break.

8. To remove a practice carrier from an outboard pylon, support the carrier and press the jettison button on the port side of the pylon.

### Loading the practice carriers

9. The carriers should be loaded with bombs in accordance with A.P.110G, Series.

### Testing and arming ejector release units—inboard pylons

10. The procedure for testing and arming the ejector release units in the inboard pylons is described in AP101B-1304, 5 and 6-1B, Sect. 5, Chap. 1, Group G.1.

### Testing release units—outboard pylon

11. The procedure for testing the release units in the outboard pylons is described in AP101B-1304, 5 & 6-1B, Sect. 5, Chap. 1, Group G.1.

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Appendix 1

BOMBING EQUIPMENT

OUTBOARD PYLON POST MOD 1368

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**Introduction**

1. Practice bombs either 28 lb or 4 lb may be carried on the post Mod. 1368 outboard pylon and Mod. 1366 introduces a modified bomb/R.P. panel.

**Controls**

2. Before releasing the bombs the pylon selector switch must be set to OUTBOARD pylon, the BOMB/RP switch set to BOMBS and the fuzing selector switch set to FUZE. The bombs are released by depressing the push switch on top of either control column hand-grip.

3. When necessary the stores may be jettisoned by using the OUTBOARD STORES jettison switch on the bomb/RP panel. A flap above the switch and the INBOARD STORES jettison switch, when pulled down, operates the two switches together, thus making provision for the simultaneous jettisoning of stores from both the inboard and outboard pylons. The fuzing switch, also located on the bomb/RP panel, must be set to DEFUZE before the bombs can be jettisoned. The stores on the outboard pylons, however, may be jettisoned by operating the OUTBOARD STORES jettison switch without selecting DEFUZE on the fuzing selector switch. When the jettison switch is used, the practice bombs, if fitted, are jettisoned complete with their carriers.

**Pylon and bomb attachment**

4. The pylons which are described and illustrated in Sect. 3, Chap. 2 are bolted to the wings and are, therefore, not capable of being jettisoned. They can, however, be removed and cover plate are provided to seal the holes in the wings which are left exposed when removal is effected.

5. Post Mod. 1368 pylons contain an ejector release unit by which the practice carrier is attached to the pylon. These units are provided with a crutching device with which the practice carrier is finally tightened up against the pylon sole plate during loading. The units are electrically operated to jettison the practice carriers, in an emergency, during flight. For details of the release unit and practice carrier reference should be made to A.P.1664A.

**Fitting and removal of practice carrier**

6. The procedure for fitting and removing practice carriers is described in Sect. 2, Chap. 2.

**Loading the practice carriers**

7. The carriers should be loaded with bombs in accordance with A.P.1664A, Vol. 1, Book 1.

**Testing and arming ejector release units**

8. The procedure for testing and arming ejector release units is described in AP101B-1304, 5 and 6-1B, Sect. 5, Chap. 1.



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