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ADMIRALTY FLEET ORDER

GUNS, 2-PDR., MARKS II*, II*C AND VIII AND THEIR MOUNTINGS, SINGLE AND MULTIPLE

ADMIRALTY, S.W.1,

6th May, 1943.

The following Order having been approved by My Lords Commissioners of the Admiralty is hereby promulgated for information and guidance and necessary action.

By Command of their Lordships,

H. V. Markham

To all Commanders-in-Chief, Flag Officers, Senior Naval Officers, Captains and Commanding Officers of H.M. Ships and Vessels, Superintendents or Officers in Charge of H.M. Naval Establishments, and Admiralty Overseers concerned.

NOTE:—The scale of distribution is shown in the Admiralty Fleet Order Volume, 1941, Instructions, paragraph 10.

Head of "P" Branch

2101.—Guns, 2-pdr., Marks II* and II*C and VIII and their Mountings,
Single and Multiple

(D.N.O. (W.O.) 25/43.—6.5.1943.)

I.—GENERAL.

The following order embodies all A.F.Os. affecting the above guns and mountings, except the orders as regards modifications listed in Parts II, paragraph 7, VI, paragraph 4, VII, paragraph 6, and X, paragraph 5, of this order, in force on May 1st, 1943.

2. General orders as regards maintenance, lubrication, cold weather precautions, the use of muzzle covers, etc., will be found in A.F.Os. 1024-1025/43, to which special attention is drawn, since their contents are not repeated in this order.

3. The remainder of this order is divided into the following parts :—

- PART II.—MARK VIII GUNS.
- PART III.—MULTIPLE MOUNTINGS.
- PART IV.—MARK VIII* SINGLE MOUNTINGS.
- PART V.—MARK II* AND II*C EQUIPMENTS.
- PART VI.—MARKS XV AND XVI MOUNTINGS.
- PART VII.—LOW TEMPERATURE PRECAUTIONS AND BARREL HEATERS.
- PART VIII.—READY USE LOCKERS.
- PART IX.—MISCELLANEOUS.
- PART X.—CANCELLATION OF PREVIOUS ORDERS.

4. Reports were called for in the orders embodied herein as follows :—

- Part III —paragraphs 5, 9 and 10.
- Part V —paragraph 1.
- Part VI —paragraph 2.
- Part VIII—paragraph 2.

5. The only C.A.F.Os. affecting the above guns and mountings which are in force on May 1st, 1943, apart from orders dealing with control and director gear, are as follows :—

Modification and classification of Mark VIII guns	C.A.F.O. 2760/38
Flame Guards	C.A.F.O. 390/41
Fitting of Barrel Heaters	{ C.A.F.O. 1333/41, Part I C.A.F.O. 1732/42
Multiple Mountings, Sights	C.A.F.O. 883/41
Multiple Mountings, Barrel Dispersion	{ C.A.F.O. 1081/41 C.A.F.O. 273/42
Multiple Mountings, Installation	C.A.F.O. 1937/42

II.—MARK VIII GUNS.

1. (a) An instance has occurred in which damage was caused to a Q.F., 2-pdr., Mark VIII Gun, due to the lock being incorrectly assembled.

(b) Particular care must be taken when re-assembling the lock, that the extractor actuating levers are below and NOT above and behind the horns of the extractor.

(c) Should the lock be assembled with the extractor actuating levers above and behind the extractor horns the following will occur :—

- (i) The lock cannot be withdrawn fully to the rear if incorrectly assembled in its forward position.
- (ii) The lock cannot be run fully forward if incorrectly assembled in its rear position.

In both cases it will not be possible to load the gun.

(d) Care must also be taken not to load the gun with the front cover off, as the extractor may jump above its correct position and allow the extractor actuating levers to jump on top of the extractor horns, it is then possible to run the lock back sufficiently to allow the front cover to be replaced. On running the lock forward the extractor will be pushed down by the front cover to its correct position for the striker to go forward through the firing hole in the extractor; therefore the gun may be fired and the lock will travel a short distance to the rear and then jam.

In order to clear this jam it is necessary to remove the axis pin connecting the crank to the connecting rod, to allow the lock to be withdrawn fully to the rear.

2. Several cases have been reported of stoppages occurring due to separation of the round in the feed block. In order that the gun may be brought into action again as soon as possible the following action should be taken :—

- (i) Put the gun safety lever to safe.
- (ii) Take the weight of the run out with the recoiling tool provided.
- (iii) Remove rear and front covers.
- (iv) Lift the feed slide from the feed box.
- (v) Remove the rounds and links from the feed box.
- (vi) Run the gun out by easing off the recoiling tool.
- (vii) Withdraw the lock to the rear and remove any loose cordite, making sure the bore is clear.
- (viii) Run the lock forward and replace the feed slide.
- (ix) Assemble front and rear covers.
- (xi) Reload the gun.

3. When O.Q.F., 2-pdr., Mark VIII, L.V., guns are converted to H.V., the following information is to be entered in the Memorandum of Inspection :—

By Armament Depots and Inspecting Officers :—

On conversion the classification of the gun which is to be shown on the front page of the Memorandum of Inspection immediately after the registered number of the gun is to be deleted and the following notation added—"Converted to e.g. A.H.V." followed by the date of conversion and initialled.

4. (a) As a result of experience under war conditions it has been found that the assessment of one H.V. charge for Q.F., 2-pdr., Mark VIII and XIV guns as equal to two equivalent full charges is inaccurate.

(b) Each H.V. charge is to be assessed on Memoranda of Inspection and Forms S.1404 as $1\frac{1}{2}$ E.F.C.

(c) Rounds entered in the Memoranda of Inspection are to be amended forthwith to shew each H.V. charge as $1\frac{1}{2}$ E.F.C. in lieu of 2 E.F.C. and amendment is to be made to the last page of Appendix "B" or to the table at the foot of page 10 in the Memoranda of Inspection as follows :—

"Q.F., 2 pdr., H.V. guns
1 H.V. charge = $1\frac{1}{2}$ E.F.C."

quoting this order as authority. The columns in the "Record of Rounds Fired" are to be amended as follows :—

Proof	Full H.V.	Full L.V.	Reduced.
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(d) Barrels of Q.F., 2-pdr., Mark VIII H.V. and L.V. and Q.F., 2-pdr., Mark XIV guns are to be exchanged when, or shortly before the P.R.L. is 900 E.F.C., i.e. they should be sentenced for exchange when on inspection the P.R.L. is below 1,200 E.F.C. (900 as above plus an inspection series).

(e) Barrels will be exchanged only in Naval Armament Depots. If circumstances preclude this being done during the ship's stay in port, guns should be exchanged complete.

(f) Flag Officers may authorise the exchange of barrels with remaining lives not exceeding the E.F.Cs. in the ammunition outfit—

- (i) where the future employment of the ship may result in barrels becoming exchangeable at an early date, in circumstances where exchange would be either impossible or temporarily detrimental to fighting efficiency, and
- (ii) when there is a favourable opportunity for exchange, e.g. a refit.

(g) It has also become apparent that the average full life of the barrel is 7,200 E.F.C. for Q.F., 2-pdr., Mark VIII H.V. and L.V., and Q.F., 2-pdr., Mark XIV

guns on the basis of the new assessment mentioned above. A provisional up-to-date average mean wear curve is being issued to Inspecting Officers to supersede the existing wear curve for 2-pdr., Mark VIII gun barrels. Individual barrels may depart somewhat widely from this curve in the later stages of life, depending on the rate of fire, length of continuous bursts of fire, etc. It can be assumed, however, that the curve for any barrel will be approximately parallel to the average mean wear curve.

5. The correct positions for assembling the release handles of the crank locking latches of Q.F., 2-pdr., Mark VIII guns are as follows:—

8-Gun Equipments:—

Guns, Nos. 1, 2, 3 and 4, on right-hand side of top cover.

Guns, Nos. 5, 6, 7 and 8, on left-hand side of top cover.

4-Gun Equipments:—

Guns, Nos. 2 and 3, on right-hand side of top cover.

Guns, Nos. 1 and 4, on left-hand side of top cover.

Single (Marks VIII and XVI) Equipments:—*

On left-hand side of top cover.

R.N. Armament Depots are to ensure that guns are issued with handles correctly positioned to suit the type of mounting for which they are required. The handles of guns already mounted should be repositioned if necessary in accordance with paragraph 1 as opportunity offers.

6. Barrel springs, for Q.F., 2-pdr., Mark VIII guns, manufactured in future will be parkerised (black rustproof finish) instead of nickel plated.

7. Modifications to Mark VIII guns have been ordered in the following A.F.Os.—

	1061/41	4119/42
	*5267/41	4275/42
* Amended	4871/42	5281/42
by	6144/42	5654/42
	892/42	361/43
	4384/42	812/43
	2245/42	1683/43

III.—MULTIPLE MOUNTINGS.

1. It is proposed to fit a blast box to the layer's side of all 2-pdr., Mark V and VI, mountings and to fit a shield giving limited protection from splinters and weather to all 2-pdr., Mark VII, mountings.

The fitting of these blast protection boxes and shields is not possible in certain ships due to top weight considerations. As a preliminary measure and pending the completion and trials of satisfactory designs of the gear, Commanding Officers of ships concerned should forward their proposals for landing compensating weight, in accordance with the attached table, to their Administrative authorities for collation and submission to the Admiralty.

Ship	Moment about L.W.L. in Ft. Tons
"Berwick"	102
"Cornwall"	102
"Cumberland"	102
"Suffolk"	102
"Kent"	82
"Australia"	82
"Curacoa"	30
"Carlisle"	30
"Coventry"	30
"Tribal" destroyers	22.5
"J," "K," "L," and "N" destroyers	22.5
"Hunts," 1st and 2nd groups ...	20
"Hunts," 3rd and 4th groups ...	22
"O" destroyers	22

Note.—The above order was issued in October, 1941.

2. (a) Instances have occurred where 2-pdr., Mark VII, mountings with "controlled" guns have fired unexpectedly when the firing clutch lever was put to "electric", all other safety arrangements being to "fire".

(b) It should be noted that the operation of the firing clutch lever either—

(i) clutches the cam operating shaft to the hand-firing mechanism, or

(ii) nearly clutches the cam operating shaft to the electric firing motor, which will be already running. The final movement to clutch up, in this case, is given by pressing the trigger which operates a solenoid.

(c) If the firing clutch lever mechanism is out of adjustment it is possible that the operation of moving the lever to "electric" (case 2b) will actually complete the clutching process and cause the guns to fire.

(d) To ensure that this does not occur, a regular test of the mechanism is to be carried out with gun safety levers and interrupters to "safe". If with the firing motor running, the firing cams rotate when the firing clutch lever is put to "electric" the clutch requires adjustment.

(e) Care must be taken to ensure that, after adjustment, the solenoid will operate the firing mechanism when the trigger is pressed, and also that the hand-firing mechanism is still correct.

(f) The cause of this defect is probably due to difficulty in clutching in to "hand". Unless the dogs of the clutch are in line it will not engage automatically, and forcing will merely strain the mechanism. The attention of No. 1's of mountings should be drawn to the necessity for care in this operation.

3. When balance weights are fitted to 2-pdr., Mark VI, mountings, in accordance with C.A.F.O. 1333/41, Part I, the clearance between the balance weights and the fixed cross bar at maximum depression is small. Men should be warned not to put their hands on the balance weights, as they will be crushed when the gun is depressed.

4. To facilitate the removal of lamps in loading indicator boxes on 2-pdr., Marks V, VI and VII, mountings, the boxes should be modified in accordance with A.F.O. Diagram 77/42 (G.R. 5908).

The work is to be carried out by ship's staff.

5. (a) Safety firing gear, operating through all angles of training and elevation, and 710° training stops are available for supply on demand from the Gun Mounting Stores at Portsmouth, Parkhead and Coventry, for all 2-pdr., Mark VII and VII*, mountings in service.

(b) The following guidance drawings for fitting of the gear are available for supply on demand from the Manager, Engineering Department, H.M. Dockyards, Portsmouth and Chatham, Devonport, Rosyth, Alexandria, Durban, Bombay:—

43784 G.B. Typical cam rail, showing method of marking off the cam profile, and the modification to the cone structure around the base.

41234 G.B. Showing modification to the foot pedal bracket.

44130 G.B. Instructions for fitting safety firing gear to mountings.

44024 G.B. Arrangement of 710° training stop with fitting instructions.

44250 G.B. Showing details of the rear exit chute extension.

(c) The Commanding Officers of ships concerned should enter an item, Classification "A," in the current list of As. and As., to cover the work involved, which is to be carried out at the first opportunity by dockyards and repair establishments. After completion, a report quoting the registered number of the mounting and a sketch or table showing the arcs of fire on all bearings, should be forwarded to the Admiralty by ships' officers. In order to obtain maximum depression on outboard bearings, all existing depression stops should be removed and guard-rail stanchions hinged down and zarebas reduced as considered necessary.

(d) The above statement that all existing depression stops should be removed refers to the 0° depression stop fitted in destroyers and to any other improvised stop, and not to the 10° depression buffer stop, which must be retained.

(e) The extension to the rear exit chute and cam rail blanks will not be supplied with the gear and should be manufactured locally. The lengths of cables referred to on drawing No. 44024 G.B. should be attained where possible without renewing the cables, but any subsequent renewals required due to core failures, etc., should be in accordance with the drawing.

(f) To preserve balance after fitting the gear the lead weight bolted to the right hand side of the main balance weight on the motor platform (84 lb. approx.), should be removed and returned, together with the other redundant items, to the nearest dockyard and brought to produce.

(g) It is of great importance that the gear should be kept well lubricated and tested regularly. The correct functioning of the gear can be tested by putting the interruptors to "SAFE", turning the firing handle, and observing that the inclined shaft operating the firing cams ceases to rotate when the mounting is trained on a dangerous bearing. Periodical tests of this nature should be included in the ship's organisation.

To avoid training into a dangerous bearing when guns are loaded, the gear should be tested by depressing the guns with a distance piece inserted between the cam and the roller of the safety firing gear.

Note.—(i) Mountings fitted with remote power control are still to be restricted to 360° training.

(ii) Mountings on turret roof are to have the gear fitted, but a cam rail should not be provided.

6. It has been reported that the base length of the sights for 2-pdr., Mark V, VI and VII, mountings may be incorrect, due to misinterpretation of drawing No. 38840 G.B. supplied by Messrs. Vickers Armstrongs, Barrow, with H.V. sight conversion parts.

Ships concerned should check the base lengths at the first opportunity and correct, if necessary, the correct length for H.V. being 18.7 in. from the forward side of the back-sight holder to the centre line of the foresight, as shown on C.A.F.O. Diagram 166/41 issued with C.A.F.O. 883/41, but this dimension is to be modified as in paragraph 7 following.

7. (a) To take full advantage of H.V. multiple 2-pdr. equipments, certain modifications are required to the sight.

(b) The Eyeshooting Pocket Book, B.R. 254, Chapter V, gives instructions regarding the extra allowances for range to be made in eyeshooting. The only weapon on which any consideration has to be given to range is the multiple 2-pdr. where, owing to the greater maximum effective range of the weapon:—

(i) The range has to be set to "FAR" or "NEAR" to allow for tangent elevation (paragraph 77).

(ii) An allowance for range has to be made, at ranges over 1,000 yards, in the amount of aim-off taken (paragraph 85).

(c) To simplify the task of the aimer at these mountings:—

(i) The range drum should be kept set to the "FAR" setting (1,300 yards) at all times except for surface firing, when the range drum should be used in the normal manner.

(ii) The sight bars on the mountings should be shortened so that the distance from the front face of the backsight to the centre line of the foresight is 16.3 inches instead of 18.7 inches, and the aperture in the backsight opened up to 1 inch diameter. The sight will then give the correct aim off at a range of 1,500 yards.

(d) The effect of these modifications will be to counteract the marked tendency to miss low and astern in eyeshooting, caused by:—

(i) Insufficient allowance for the fact that aim off at short ranges is generally increasing.

(ii) Not allowing for the effect of range upon the amount of aim-off at longer ranges. With the sights modified this allowance need not be made.

(iii) Range not being set to "FAR" when engaging targets at longer ranges.

(e) The above modifications apply only to multiple H.V. equipments. Any equipments which are still L.V. should be converted to H.V. at the earliest opportunity in accordance with the following instructions:—

(i) Provided that H.V. ammunition outfit is immediately available, sight conversion parts should be demanded from the Gun Mounting Overseer, Barrow, if time permits. Otherwise sights should be modified by ships' staffs or establishments as follows:—

Replace or modify existing sight bars in accordance with C.A.F.O. 883/41 and diagram, except that the sight base length of 18.7 inches shown on the diagram should now be 16.3 inches as stated in paragraph (c) (ii) above.

Mark "FAR" position on existing L.V. range drum at 915 yards; This corresponds to 1,300 yards for H.V.

(ii) Modification to guns:—

Replace present Mark I buffer liners by Mark III liners. If Mark III liners are not available with the local Officer of Armament Supply Department, requirements should be notified to the Admiralty (D.A.S. Branch A).

In emergency L.V. ammunition can be used in H.V. guns, but this may cause less reliable functioning, and use of cartwheel sights becomes complicated.

(iii) H.V. range drums to replace modified L.V. drums should be demanded from the Gun Mounting Overseer, Barrow.

(iv) In mountings fitted with range limiting stops arranged for L.V. positions the slot in sight rack should be modified to give a 1,300 yards H.V. range position by sweating in liner brass as necessary.

(f) In ships where the mountings are fitted with blast protection boxes, the slot in the top front plate should be modified to clear the shortened sight bar with maximum range on the sight and maximum depression on the guns.

(g) Commanding Officers of ships concerned should include an item, Classification A, in their current lists of Alterations and Additions to cover the work involved, which is to be carried out by Ships' Staffs assisted as necessary by Dockyards and Repair Establishments.

8. (a) A separate fresh water tank for the supply of cooling water to 2-pdr. "M" equipments is not required and, where an advantage in topweight results, such tanks may be surrendered as topweight compensation provided that supply from a general purpose fresh water tank which fulfils the following requirements can be utilised instead:—

(i) The tank selected is to have a capacity of at least 50 gallons for a maximum of eight barrels, and is to be such that its normal output can be shut off in action without prejudice to other services.

(ii) A minimum head of 5 ft. is required.

(iii) A lead is to be taken from the selected tank to the gun platform, or as near to it as practicable, and is to terminate in a 1½-in. S.D.V. and hose connection.

(b) Commanding Officers of ships concerned should include an item, Classification "B", in their next list of A. and A., to cover the work involved.

(c) The new arrangements should also apply to ships under construction wherever practicable. Where necessary, gravity tanks should be repositioned provided work is not too far advanced and that no delay in completion is involved.

9. (a) With reference to paragraph 8, the supply of cooling water to the barrels of the multi-barrelled pom-pom in vessels in which the separate cooling tank has been landed or not fitted, is to be provided by means of a No. 2 Admiralty flexible metallic hose with standard 2-piece connections led from the No. 2 Admiralty standard 2-piece coupling on the mounting to a similar coupling on the end of a 1½-in. diameter branch pipe taken from the nearest convenient point on the fresh water or washing water main.

The length of flexible hose is to be kept as short as practicable.

(b) In vessels required to serve under Arctic conditions the branch from the fore and aft main is to be heated throughout its length by steam pipes enclosed in the lagging. In very cold conditions the flexible hose should be kept drained and empty until required to top up, and a stop cock should be fitted where the branch joins the supply line.

(c) In "Hunt" class destroyers the 50-gallon fresh water gravity tank forward is to be raised in height to give an adequate head of water, i.e., 5-ft. minimum above filling connection on mounting.

(d) This work should be carried out in new construction vessels, subject to no delay in completion.

(e) For ships in commission, Commanding Officers concerned are to include an item, Classification "A", in their next list of As. and As. to cover the work involved.

(f) Ships concerned are to forward a report, through Administrative Authorities, as to the suitability of these arrangements after experience of extreme cold weather conditions.

10. (a) Automatic change-over switches are to be fitted in place of hand-operated switches in the supplies to Mark V, Mark VI and Mark VII power-operated and remote power-controlled 2-pdr. mountings, and in some cases to reposition the switches.

(b) Commanding Officers of ships concerned are to insert an item, Classification "A", in their lists of As. and As. to cover the work involved.

(c) In view of the diversity of power supply arrangements fitted to these mountings, and in order that detailed instructions for the execution of the item may be prepared in advance for issue to refitting authorities as occasion arises, Commanding Officers of capital ships prior to "King George V" class, aircraft carriers prior to "Illustrious" class and cruisers prior to "Fiji" and "Dido" classes, are to report full details of present power supply arrangements to these mountings.

IV.—MARK VIII* SINGLE MOUNTINGS

1.—(a) It has been reported that the tool depressing extractor fouls the rear centre bolt head securing the support plate of the counter balance weight to the rear ammunition box support.

(b) The support plate is secured at the rear by one countersunk bolt and two hexagonal headed bolts.

(c) These two hexagonal headed bolts should be replaced by countersunk bolts, the holes being countersunk on the underside of the support plate. The countersunk bolt heads should be flush with the plate after fitting. The work should be carried out by ship's staff.

Note.—The above order was issued in December, 1941.

2. (a) Body support belts for the layer and trainer of 2-pdr., Mark VIII* mountings have been found to give moral assurance as well as safety in cases where these mountings are situated in the eyes of a ship for anti-E-boat purposes, and may also prove advantageous in other cases.

(b) A.F.O. Diagram 45/42 (G.R. 5904) shows a typical arrangement which has proved satisfactory on trial, and is to be manufactured and fitted by ships' staffs as required.

(c) In this instance the belt was made of webbing with spring hooks at each end, as used on searchlight manipulators.

(d) All future 2-pdr., Mark VIII* mountings will be supplied by the manufacturers with the necessary ring bolts already fitted.

3. (a) Reports have been received of the failure of the firing gear on the 2-pdr., Mark VIII* mountings to return to "safe" on release of the trigger, in circumstances such as very cold weather or prolonged exposure at sea without the opportunity of regular and adequate lubrication.

(b) At present the firing mechanism relies for its return to "safe" on the spring returning firing rod on the gun. In order to make this operation positive, a return link should be manufactured and fitted in accordance with A.F.O. diagram 54/42 (G.R. 5907), so that the firing lever will positively pull the rod and link assembly "off" without reliance on a return spring. The securing bolt of the spring returning the firing handle should be raised 1.3-in. to overcome the additional loading set up by the fitting of the return link.

(c) The work should be carried out by ship's staff assisted as necessary by dockyards or repair establishments.

4. To prevent water entering the elevating gear box of 2-pdr., Mark VIII*, mountings, a water excluding cover should be fitted to the lower end of the elevating shaft in accordance with A.F.O. Diagram 101/42.

The work is to be carried out by ships' staffs, assisted as necessary by dockyard and repair establishments.

5. Instances have arisen where the oil passage from the single lubricator to the elevating pinion shaft has become choked. To avoid this failure an additional lubricator should be fitted on the elevating worm gear box.

A plugged boss on the box as shown on A.F.O. Diagram 231/42 (G.R.6074), when drilled out, will take an A.P.4986 lubricator, which is included in the spare sets for this mounting.

The work should be carried out by ships' staffs.

6. Depression control gear for fitting to 2-pdr. Mark VIII* mountings, on which any existing depression control arrangements, where fitted, are not considered adequate, is available for supply on demand from the Gun Mounting Stores at Coventry, Parkhead, and the M.E.D., H.M. Dockyard, Portsmouth.

This gear, shown on A.F.O. Diagram 262/42 (G.R. 6042), will be supplied complete with the exception of the deck cam rail and supports which should be supplied and profiled locally to suit the requirements of individual mountings.

Ships concerned should include an item Classification "A" in their current list of As. and As. to cover the work which should be carried out by dockyards or repair establishments at the first opportunity.

V.—SIGHTS FOR MARK VIII* SINGLE MOUNTINGS

1. In September, 1941, the following order was issued as regards the conversion of Mark VIII* sights:—

(i) 300-knot sights and conversion parts for all 2-pdr., Mark VIII*, mountings in service, are available for supply on demand from Admiralty Gun Mounting Stores at Parkhead and Coventry, and from Portsmouth Yard.

(ii) The sights and fittings are identical to those being supplied for 0.5-in., Marks I to III, mountings, in accordance with C.A.F.O. 937/41, and should be demanded as such, stating that they are for 2-pdr., Mark VIII*, mountings. The register number of each mounting should be stated.

(iii) The Commanding Officers of the ships concerned should include an item, Classification A*, in their current list of As. and As. to cover the work. The conversion is to be carried out in accordance with C.A.F.O. Diagram 399/41 (1-3) (G.R.S. 5805, 5806, 5820).

(iv) Depot ships and repair establishments should forward demands on the most convenient depot for supply, in anticipation of requirements.

(v) Two additional foresights per mounting, complete with supporting stays, should be demanded as spare, concurrently with demands for the conversion sets.

(vi) The following additional work of modifying existing sight parts should also be carried out:—

(a) Cross wires in back sight should be secured to the rear face of the aperture.

(b) Enlarging this aperture to 0.875 in. dia. necessitates cutting away the screw thread securing eye-piece to its bracket, which should now be resecured by means of countersunk screws.

(c) Fitting a quadrant stop to prevent the adjusting lever being put to the "FAR" position. The word "FAR" is to be deleted and the word "NORMAL" is to be substituted for the existing wording "Near and D/B".

(d) The new sights should be lined up to the dimensions shown in C.A.F.O. Diagram 399/41 (2-3) (G.R. 5806, 5820), which allows for a fixed T.E. of 20 minutes on trainer's sight.

(vii) It should be noted that when these conversion parts are fitted the sight is no longer adjustable to suit L.V. guns. On certain sights the clip—item 11 of C.A.F.O. Diagram 399/41 (2) (Drawing 5806)—will not require bushing.

(viii) A report should be forwarded to the Admiralty as soon as the conversion has been carried out.

(ix) Arrangements are being made to fit 300-knot sights to all future production mountings before delivery.

2. (a) For identification of the different designs of 300-knot sighting gear and foresights fitted on 2-pdr., Mark VIII* mountings, it should be noted that:—

(i) A.F.O. Diagrams 322/42 (1-2) (G.R. 5987 and G.R. 6086) are applicable to 2-pdr., Mark VIII* mountings manufactured in Canada, the Reg. Nos. of which are prefixed by "CAN". The sight testing board for these sights is shown in A.F.O. Diagram 322/42 (3) (G.R. 5988).

(ii) The arrangement of the 300-knot sighting gear and sight testing board for 2-pdr., Mark VIII mountings manufactured in the United Kingdom was issued in C.A.F.O. 1900/41. (Diagram 399/41 (1 and 3).) *see para. 1 above.*

(b) To enable ships' stocks of component Canadian foresights and spares to be replaced by the standard 300-knot foresights shown in C.A.F.O. Diagram 399/41, Sheet 2, adaptor plates are being supplied with each Canadian mounting for fitting to the existing foresight brackets as shown in the diagrams referred to in paragraph (a) (i) above.

(c) A modification will have to be made to the supporting stays of Canadian foresights when the standard 300-knot United Kingdom foresight is finally fitted.

(d) When the 300-knot United Kingdom foresights and adaptor plates are fitted to Canadian mountings, they should continue to be sight tested in accordance with A.F.O. Diagram 322/42 (3) (G.R. 5988).

(e) When the replacement of the Canadian 300-knot sight is necessary (vide paragraph (b) above) the work should be carried out by ships' staffs.

3. When 300-knot sights are fitted to 2-pdr., Mark VIII* mountings the binocular bracket, referred to in Part X para 1 of this order should be extended by 2 inches and the aperture in the shield increased, as shown in A.F.O. Diagram 138/42 (G.R. 6002).

The work should be carried out by ships' staffs assisted, as necessary, by repair establishments.

4. To provide increased field of view for the trainer in 2-pdr. Mark VIII* mountings, the aperture in the trainer's shield should be enlarged in accordance with A.F.O. Diagram 153/42 (G.R. 6004). This increased aperture also provides for clearance when the binocular sight attachment is adapted for use with 300-knot sights.

The work should be carried out by ship's staff, assisted as necessary, by repair establishments.

VI.—MARK II* AND II*C EQUIPMENT

1.—(a) It has been reported that the existing type of safety latch is not sufficiently positive to prevent the gun being fixed by the foot pedal.

(b) It has therefore been decided to remove the existing safety gear for hand firing lever and to provide a definite stop as shown on A.F.O. Diagram 314/41 (G.R. 5787).

(c) Only the catch of the original safety gear should be removed on fitting the modified safety stop. The existing spring and plunger should be retained to assist in returning the hand-firing lever to "safe".

(d) It should be noted that the plate lever shown in A.F.O. Diagram 314/41 is made from one strip of $\frac{1}{8}$ -in. steel plate, its forward end being shaped to follow the contour of the hand-firing lever. To obviate any possibility of "springing" and to ensure that the toe of the hand-firing lever cannot enter the loop of the plate lever, a suitable piece of steel plating should be welded, or otherwise suitably secured, over the top of the loop.

(e) Ships and dockyards should arrange to fit this gear as opportunity offers.

2.—(a) Three hundred-knot sights and conversion parts for all 2-pdr., Mark II*C mountings in service are available for supply on demand from the Gun Mounting Store at Parkhead, Coventry, and Manager, Engineering Department, Portsmouth.

The Commanding Officers of any ships not so fitted should include an item Classification A,* in their current lists of As. and As. to cover the work, which should be carried out by ships' staffs, assisted where necessary by depot ships and repair establishments, in accordance with C.A.F.O. Diagrams 34/42 (1-3).

(b) Depot ships and repair establishments should forward demands on the most convenient depot for supply, in anticipation of requirements.

(c) Two additional foresights per mounting complete with supporting stays, should be demanded as spare concurrently with demands for the conversion sets.

(d) The following additional work of modifying existing sight parts should also be carried out:—

(i) The layer's rearsight and setting block should be modified in accordance with C.A.F.O. Diagram 34/42 (3).

(ii) The words "FAR" and "NEAR" should be removed from the bracket supporting the rearsight.

(iii) The new sights should be lined up to the dimensions shown in C.A.F.O. Diagram 34/42 (3), which allows for a fixed T.E. of 30 minutes on the trainer's sight.

(e) On the completion of the conversion a report quoting the Reg. No. of the mounting should be forwarded to the Admiralty.

3. (a) Protective shields for 2-pdr., Mark II*C Mountings are now available for supply on demand from the Gun Mounting Overseers at Parkhead and Coventry and from the Manager, Engineering Department, Portsmouth.

(b) Commanding Officers of ships concerned should include an item Classification "A" in their current lists of As. and As. to cover the work of fitting the shields, which should be carried out by depot ships or repair establishments at the first opportunity.

(c) The shields should be fitted in accordance with A.F.O. Diagram 310/42 as amended by A.F.O. 6397/42.

(d) Depot ships and repair establishments should forward demands on the most convenient depot for supply, in anticipation of requirements.

(e) A few 2-pdr., Mark II*C Mountings in service are fitted with training receivers in accordance with Chatham Drawings S.E.E.D. 22620 and M.E.D. 17045, sheets 1 and 2, and, to avoid modification to the shield, the receivers should be re-positioned so as to be supported by the shield, as shown on Portsmouth M.E.D. Drawing G. 1692, copies of which should be obtained from Portsmouth Yard.

(f) It should be noted that the shields are not suitable for 2-pdr., Mark II Mountings, which should be converted to 2-pdr., Mark II*C Mountings before the shields are fitted.

4. Modifications to Mark II* and II*C guns have been ordered in the following A.F.Os. :— 554/41, 755/41, 455/42, 1010/42

VII.—MARK XV AND MARK XVI MOUNTINGS

1 (a) Sight tests of the Mark XV mounting are to be carried out in accordance with A.F.O. Diagram 60/42 (G.R. 5961).

(b) Sight tests of the Mark XVI mounting are to be carried out in accordance with A.F.O. Diagram 274/42 (1-2) (G.R. 5960 and G.R. 6116).

2. (a) Depression control rails for 2-pdr., Marks XV and XVI mountings fitted in "C" Type Fairmile M.G.B., "D" Type Fairmile M.G.B. and M.T.B., S.G.B., and 71-ft. 6-in. M.G.B. are fitted by shipbuilders.

(b) It is necessary to protect the gun water jacket at its point of contact with the depression control rail, and the protection is to consist of thick rubber strips, retained in position by an encircling band of Ferodo.

(c) The protecting pad is to be removed at frequent intervals for examination of the external surface of the water jacket, which should be kept thoroughly free from rust, and lightly greased.

(d) Commanding Officers of boats in which the work outlined in paragraph (b) has not already been carried out are to treat the fitting of such protection as a defect item, to be carried out at the first opportunity.

3. To enable the roller path of the 2-pdr., Mark XV, mountings to be horizontal at running trim, it has been approved to fit an adaptor ring on the deck under the mounting.

D.C.F.M. is to include an item, Classification "A", when forwarding the next list of As. and As. for the coastal craft concerned.

The ring should be demanded from the British Power Boat Co. through D.C.F.M.

4. In "D" Type M.G.Bs. 605, 606, 607, 609, 610, 612 and 616 at present fitted with 2-pdr., Mark XV mounting the existing depression control rail has been found unsuitable. An improved design of rail can be obtained on application to The Fairmile Marine Co., through the D.C.F.M.; the work involved is to be carried out by Base Staffs.

5. (a) Reports have been received of corrosion of the elevating ram spindles on these mountings. Such corrosion, if permitted to continue, will eventually result in damage to the hydraulic seals in the ram cylinder glands.

(b) Modification to the material surface of new manufacture ram spindles is in hand, in order to prevent corrosion taking place, but it can be arrested, if not

altogether prevented, on existing mountings, by observance of the following procedure :—

- (i) When the mounting is not in use, and the canvas cover is not in place, the guns are to be set as near as possible at maximum depression.
- (ii) Before the mounting is finally secured, with canvas cover in position, the ram spindles are to be carefully wiped off and the exposed surfaces coated with a grease suited to the climatic conditions.
- (c) Should a mounting be in use for look-out purposes, when it would normally only be operated in training, the guns are to be elevated and depressed through the full range at frequent intervals, in order to clear deposits of moisture which are likely to accumulate on the ram spindles.

6. Modifications to guns fitted in these mountings have been ordered in the following A.F.Os. :—

4276/41, 6145/42, 6277/42

VIII.—LOW TEMPERATURE PRECAUTIONS AND BARREL HEATERS

1. (a) In December, 1940, it was approved to provide electric heaters for fitting by ship's staff to O.Q.F., 2-pdr., Mark VIII, gun barrel water jackets in ships for use in cold weather in order to maintain the guns and mechanisms free of ice as far as possible.

Detailed instructions were given in C.A.F.O. 1333/41, Part I.

(b) The heat applied by these heaters should be regulated to maintain the liquid at 180° F. to 190° F. in an air temperature of zero ° F. and a wind of 2-3 knots. When the heaters are in action as far as possible barrel casings should be filled with water not admixed with glycerine.

(c) To prevent excessive chamber pressures which would otherwise be caused due to the heat, the following procedure is to be carried out when the electrical heaters are in use with guns kept loaded ready for immediate action :—

(i) Low velocity O.Q.F., 2-pdr., Mark VIII, guns. The first round of the belt is to be L.V. practice ammunition which will be loaded into the chamber. Ammunition for this purpose is to be taken from that supplied for ordinary practice firings.

(ii) High velocity O.Q.F., 2-pdr., Mark VIII, guns. Special reduced charge practice ammunition will be supplied as it becomes available in accordance with a priority programme to be issued by the Admiralty, on the basis of one full box of 30 rounds per barrel. The first round of the belt is to be removed and replaced with a round of special ammunition which will be loaded into the chamber.

(d) The special reduced charge H.V. practice rounds will consist of H.E., H.V., I.T. shell weighted H.E.S. and plugged for practice with a charge of 1,760 grains of H.S.C.T. 134-055, in lieu of the normal 1,860 grains. These rounds will be stencilled "H.V. reduced".

(e) All guns loaded as above are once every five days to be unloaded and the rounds so recovered returned to the nearest N.A. depot if opportunity immediately offers, alternatively they may be jettisoned. The rounds replaced must be as stated above if the heaters are in use.

2. (a) The provisions of C.A.F.O. 1333/41 have now been extended to 2-pdr., Mark II and II*C equipments.

(b) Suitable gun barrel heaters for these mountings have been assigned the following pattern numbers under Subhead F2B. of the Authorised List of Naval Stores :—

Heater, 2-pdr., Mark II*C., 2 kW., 220 v., Pattern No. 19564.

Heater, 2-pdr., Mark II*C., 2 kW., 110 v., Pattern No. 19565.

(c) Purchase of 100 No. pattern 19564 and 500 No. pattern 19565 has been arranged for delivery to the Central Depots as under :—

Pattern 19564—60 No. to Stroud.

40 No. to Mossley.

Pattern 19565—300 No. to Stroud.

200 No. to Mossley.

(d) The Commanding Officers of ships concerned should include an item Classification "A*" in their current lists of As. and As. to cover the work, which should be carried out by ships' staffs, assisted where necessary by depot ships and repair establishments.

(e) The heaters should be demanded by ships concerned from their storing yards on the basis of one heater per barrel; spares should also be carried at the rate of one-quarter of the number of heaters fitted, not less than one spare heater being carried.

(f) The wiring should be carried out in accordance with C.A.F.O. Diagrams 264/41 (1) and (2), promulgated with C.A.F.O. 1333/41.

(g) To compensate for the barrel heaters, balance weights to instructional print N.O.D. 2108/84 will be fitted to the breech ends of the guns by Armament Depots at the first opportunity. Intermediate Demands for Balance Weights should be forwarded to D.A.S. (Branch A) as required.

(h) The canvas cover shown in A.F.O. Diagram No. 305/42 should be made and fitted to the ammunition box by ships' staffs.

(i) A report should be rendered when the barrel heaters have been fitted.

3. (a) Instances have been reported where the electric heaters fitted on the barrels of 2-pdr. pom-poms have rotated, due to vibration, and consequently blocked the cartridge ejector tube.

To avoid this, future supplies of heaters will be fitted with an extension bracket to engage with the eyebolt on the waterjacket provided for the cork securing chain.

(b) For ships already fitted with heaters, Patterns 19557, 19558, 19559 and 19560, separate brackets are being made available in Naval Stores for clamping to the heaters by means of the clip and bolt already provided on the heaters for securing them to the gun barrels.

Brackets of slightly different design are also being made available for fitting to heaters having steel cases as originally supplied, and for which pattern numbers were not allocated.

(c) The methods of securing the brackets are shown on C.A.F.O. Diagram No. 93/42 (1-2).

(d) Supplies of the brackets should be demanded for each pattern or type of heater fitted, quoting this order as authority.

Demands should indicate clearly the pattern No. or the loading (only in the absence of pattern No.) of the heaters for which the brackets are required.

(e) First purchase of the brackets has been arranged from Messrs. General Electric Co., Ltd., under contract C.P. 27717/42 for delivery as under :—

	For Patterns 19557/8.	For Patterns 19559/60.	For 1.2 Kw.	For 2.0 Kw.
Glasgow	300	450	50	50
Newcastle	300	450	50	50
Rosyth	400	600	50	50
Chatham	100	150	20	20
Portsmouth	100	150	20	20
Devonport	100	150	20	20
Mossley	220	300	30	30
Stroud	100	100	36	36

(f) Where heaters are already fitted to 2-pdr. Mark VIII outer guns of 8-gun equipments, and to upper guns of 4-gun equipments, the chain securing drain plug is to be lengthened by the addition of three "S" hooks, which should be made up with suitable brass wire by ships' or base maintenance staffs.

Guns concerned already mounted but not fitted with barrel heaters, and outer guns in store not so fitted, should be similarly modified by Ships', R.N. Armament depots, or Officers-in-Charge of Armament Supply staffs.

(g) Guns from future manufacture will be modified before delivery.

Inner guns of 8-gun equipments, lower guns of 4-gun equipments and guns on single mountings will not be affected by this modification to the chain.

4.—(a) Attention is drawn to the serious consequences which may result through incorrect fitting of gun barrel heaters on 2-pdr. armament.

(b) An instance of this has been reported, where due to the heaters being fitted in an inverted position on the barrel, the ejected cartridge case fouled the heater casing and caused jamming.

(c) Arrangements have been made for all future supplies of these heaters to be clearly marked "Top—muzzle end", in the appropriate position.

(d) All heaters in service are to be similarly marked by painting or stencilling. Stamping is not to be employed, as it would probably result in damage to the heater casing.

(e) The top half of the heater is easily distinguishable, as it has no plug connection. The rear of the bottom half is cut away to clear the ejector tube.

5. (a) Reports indicate that the present system of wiring for the barrel heater connections of Marks V, VI and VII mountings is not entirely satisfactory, particularly under Arctic conditions. It has therefore been decided that the leads are to be taken through the centre pivot gland plates as permanent connections to the heaters, to permit the mountings to be operated without disconnecting any cables, and ensuring watertight connections under all conditions.

(b) The modifications should be made in accordance with A.F.O. Diagram 74/43 (1-6) (G.R.6106, G.R.6192, G.R.6193, D.E.E.10452, D.E.E.10453 and D.E.E.10459), amended as in paragraph (f) below and are briefly as follows:—

(i) The manufacture and fitting of a gland plate, as shown on A.F.O. Diagram 74/43 (3) (G.R.6193) to take the additional cables, except on 2-pdr. R.P.10 and R.P.50, Mark VI, and 2-pdr. R.P.50, Mark VII mountings where sufficient spare glands are available. In the case of the 110-volt, Mark V mounting in H.M.S. "Adventure" the No. 4 gland rendered redundant by the removal of the loading lights should be used in addition to the 3 in number provided on the additional gland plate.

(ii) The gland arrangements in the A.P. 6965B section boxes and A.P. 5137B distribution boxes will require to be modified in accordance with A.F.O. Diagram 74/43 (6) (D.E.E.10459), to take flexible cables. To enable this to be done, the distribution boxes, A.P. 5137B, will be supplied undrilled for the outgoing cable glands. These section and distribution boxes will be issued to ships concerned on demand.

(iii) When connecting the leads from the section and distribution boxes to the heaters, on Marks V and VI mountings, the four leads to the 2 kW. heaters should be taken from the section box and the four leads to the 1.2kW. heaters from the distribution box. Sufficient slack cable should be left to enable the guns to be depressed to 10° D.

(iv) For 2-pdr., Mark VII mountings, two of the leads from the section box should be led through the flexible conduit, the remaining two leads being lashed to the outside of the conduit at the rear, sufficient space being left between each lashing to allow the cable to buckle as the cradle is elevated.

(v) The section and distribution boxes should be fitted approximately in the positions shown, but arranged to clear any local fittings.

(vi) The supply to the mountings should be arranged where possible from the same connections as were used to supply the Niphan boxes on the fixed structure, and led through a cable changing box to the centre pivot. This supply is to be kept entirely separate from the power circuits to the mountings, i.e. it is not to pass through the automatic or hand change-over switches. The redundant Niphan boxes and plugs should be returned to store.

(vii) On Marks V and VI mountings the left-hand side of the forward exit chute will require to be slotted to clear the heater socket connection at depression. After slotting, the side of the chute should be stiffened as necessary by means of a small doubling plate.

(c) Commanding officers of ships concerned should include an item, classification A, in their lists of As. and As. to cover the work involved, which should be progressed as and when opportunity offers by ship's staff, depôt ship or base staff, and completed by dockyard or repair authority at the first opportunity. The necessary stores to progress the work should be demanded, quoting this A.F.O. as the authority.

(d) In "King George V" class battleships and H.M.S. "Indomitable", where mountings are arranged with cables through the centre pivot to Niphan boxes on the cradles, the above modifications are not required unless experience under Arctic conditions shows that the present arrangements are unsatisfactory.

(e) All future mountings will be arranged with permanent leads to the heaters during manufacture.

(f) A.F.O. Diagram 74/43(3) does not make it clear that the additional gland plate should be secured to the redundant voice pipe connection in the centre pivot. The heading of A.F.O. Diagram 74/43(3) should therefore be amended to read:—

Two-pdr. Mountings, Marks V, VI and VII

Arrangement of gland plate over voice pipe connection, for barrel heater cables.

IX.—READY USE LOCKERS

(a) The following table showing the ready-use locker stowage normally to be provided for the 2-pdr. equipments mentioned is promulgated for information and guidance.

Equipments.	Mark of Mounting.	Ships with R.U. Magazines.	Ships without R.U. Magazines.	Standard Drawings.	
				Drawing Number.	To be obtained from
Eight barrels.	Marks V and VI.	One 80-belt locker.	Two 80-belt lockers.	P.O. M.C.D. 017509.	Admiral Superintendent, Portsmouth.
Four barrels.	Mark VII.	One 40-belt locker.	Two 40 or one 80-belt lockers.	P.O. M.C.D. 017508.	Admiral Superintendent, Portsmouth.
Single barrel.	Marks H.A.II*C, VIII*, XV, XVI.	One 10-belt locker.	One 20 or two 10-belt lockers.	P.O. M.C.D. 017667.	Director of Naval Construction, Admiralty.

Note.—Lockers are suitable for either L.V. or H.V. ammunition. For 80 or 40 belt lockers packing strips are provided for securing to the portable battens when stowing the shorter round (L.V. ammunition). In the case of the 20 and 10 belt lockers additional portable wood linings are supplied for this purpose, these linings being $\frac{1}{4}$ -in. in thickness, secured to the existing wood lining or divisional batten, the internal stowage width being thereby reduced to 11 $\frac{1}{2}$ in.

(b) Lockers for multiple equipments are to be fitted on the gun deck and suitably positioned relative to loading ramps. For single mountings they should be fitted in the vicinity of the gun as most convenient.

(c) It may occur in isolated cases that the R.U. magazine when on the gun deck is so situated that the provision of R.U. lockers is unnecessary.

(d) For Coastal Force craft a special light locker containing 10 belts is provided. (Drawing D.N.C. 28A/1346.)

X.—MISCELLANEOUS AND ORDERS AFFECTING MORE THAN ONE MARK OF GUN OR MOUNTING

(a) Where Mark VII, VIII and II*C equipments are liable to be used for anti-E boat purposes special brackets have been designed for mounting binoculars to enable crews to pick up and hold in sight E boats and other small surface targets, and to observe the fall of shot, in low visibility and at night.

(b) Drawings of these attachments are available at H.M. Dockyards, Chatham, Gibraltar, Malta and Alexandria. Commanding Officers of the ships concerned should include an item, classification "A", in their current lists of As. and As. to cover the work, the manufacture of which should be carried out by dockyards or repair establishments.

(c) The attachments are designed to take Patterns 1900, 1900A and 1948 binoculars. Particular attention should be given to the lining up of the binoculars at the desired tangent elevation to the bore by means of suitable washers under the securing bolts.

2. (a) Reports have been continually received of unsatisfactory performance of 2-pdr., Mark II*C and Mark VIII* mountings due to high elevating and training efforts under firing conditions. In almost every case this has been traced to uneven teak pads where fitted, or to inadequate deck stiffening under the mountings.

(b) For all future mountings steel deck rings with adequate stiffening are to be fitted, and in ships where excessive efforts are reported, the supports are to be critically examined for strength and teak pads replaced by steel rings where necessary.

(c) A.F.O. Diagram 219/42 shows an arrangement of gun platform which has proved satisfactory for raised mountings in corvettes, and should be worked to as closely as practicable for the fitting and improvement of sided or raised gun platforms generally. Where mountings are fitted on light deck or superstructure plating adequate between-deck supports are to be fitted wherever practicable. In all cases a doubling plate of at least 15 lb. M.S. is to be fitted where the existing deck plating is less than 15 lb.

3. There is a possibility that the 2-pdr., Mark II*C or Mark VIII* mountings fitted in M.G.Bs. are being distorted by the teak pad base.

To obviate the possibility of distortion of the mountings by the pads, arrangements are to be made to fit a 20-lb. mild steel deck plate on top of the deck pad, the deck plate to be 3 ft. 1 in. in diameter.

Commanding Officers of boats concerned are to insert an item, Classification "A", in their lists of As. and As. to cover the work of fitting the steel plate on the deck pad.

The steel plate should be demanded from A.S. Chatham through the D.C.F.M.

4. Supplies of Boxes for stowing spare parts and implements for Q.F., 2-pdr., Mark VIII guns are now available for distribution.

Demands should be forwarded to the nearest R.N. Armament Depot or Officer-in-Charge of Armament Supply for quantities required to complete to authorised allowance.

5. Modifications to accessories used with 2-pdr. equipments have been ordered in the following A.F.Os. :—

2246/42, 3239/42, 3955/42, 4733/42, 5905/42.

XI.—CANCELLATION OF PREVIOUS ORDERS

The following Orders, embodied in the different parts of this Order, are cancelled :—

II.—A.F.O. 1536/42

A.F.O. 3381/42

A.F.O. 5153/41

A.F.O. 3510/42

A.F.O. 4383/42

A.F.O. 6399/42

III.—A.F.O. 4507/41

A.F.O. 5647/41

A.F.O. 890/42

A.F.O. 1533/42

A.F.O. 2377/42

A.F.O. 4626/42

A.F.O. 2756/42

A.F.O. 6025/42

A.F.O. 2501/42

A.F.O. 6139/42

A.F.O. 5397/42

IV.—*A.F.O. 5264/41

A.F.O. 1130/42

A.F.O. 1131/42

A.F.O. 1912/42

A.F.O. 4380/42

A.F.O. 4869/42

V.—*C.A.F.O. 1900/41

C.A.F.O. 467/42

A.F.O. 5894/42

A.F.O. 2621/42

A.F.O. 2879/42

VI.—*A.F.O. 3485/41

A.F.O. 1378/42

C.A.F.O. 701/42

A.F.O. 5770/42

VII.—A.F.O. 1379/42

A.F.O. 4996/42

A.F.O. 4995/42

A.F.O. 5398/42

A.F.O. 5893/42

A.F.O. 1064/43

VIII.—C.A.F.O. 2279/40

C.A.F.O. 1385/42

A.F.O. 5652/42

A.F.O. 3003/42

A.F.O. 1203/43

A.F.O. 1692/43

IX.—*A.F.O. 4277/41

A.F.O. 2151/42

A.F.O. 2152/42

X.—*A.F.O. 5646/41

A.F.O. 4117/42

A.F.O. 4379/42

A.F.O. 137/42

* Not in Annual Volume.

The following orders, embodied elsewhere, are also cancelled :—

C.A.F.Os. 1035/40, 274/42, and A.F.O. 6146/42.