

Restricted

Air Force Headquarters

LINCOLN ORDER NO. 143

Technical Order

Application: See paragraph 3

Classification: 2

RESCUE MARKINGS : INTRODUCTION

Introduction

This order supersedes and cancels Lincoln Order No. 77.

2. This order introduces the rescue markings to be used on Lincoln aircraft so that access hatches and break-in equipment can be readily found in the event of a crash. Reference is also to be made to Aircraft Engineering Instructions - General, Part 2, Section 1, Instruction No. 11.

General

3. This modification is applicable to aircraft A73-1 to A73-38, inclusive, and is to be incorporated by units holding these aircraft during the major servicing inspection after receipt of parts.

4. Aircraft A73-39 and subsequent will be modified by the manufacturer before delivery. The approved equivalent modification is Lincoln (Aust.) Modification L.347.

5. The work will take approximately 40 man-hours.

Supply

6. The following parts will be required to complete one modification set:-

Item No.	Ident.	Part No.	Nomenclature	No. off per a/c.	Stores Class.
1	-	1/Z0122	Door and holster assembly	1	
2	-	2/Z0123	Plate skin reinforcing	1	
3	-	3/Z0123	Packing piece	1	
4	-	4/Z0123	Packing piece	1	
5	-	5/Z0123	Strap retaining	1	
6	-	6/Z0123	Spring retaining	1	
7	-	7/Z0123	Tube	1	
8	-	8/Z0123	Angle	1	
9	H128F/15099	2S3-4	Rivet	11	C
10	H128F/30313	2B4-6	Rivet	15	C
11	-	2A/Z1352	Bracket	2	
12	W21F/1	27N/1	Axe, fireman's	1	A
13	-	2/Z5110	Bracket	2	
14	-	3/Z5110	Block spacing	8	
15	-	3/Z3739	Packing piece	2	
16	-	8/Z3739	Clip glove	1	
17	H28C/9571	AS1885-11C	Bolt 2 B.A.	8	
18	H28C/8516	AS470-C	Washer packing 2 B.A.	8	C
19	H28/5316	A16Y-CP	Nut	8	C
20	H128F/30267	2S4-4	Rivet	8	C
21	H128F/30268	2S4-5	Rivet	5	C
22	-	30A/SS350C	Rivet bifurcated	8	C
23	T27H/2026	27H/2026	Luminous "D"	1	A
24	L2/15		Glove asbestos	2	A
25	H128F/30260	2B3-5	Rivet	35	C

Item	Ident. No.	Part No.	Nomenclature	No. off per a/c.	Stores Class.
26	K4/350		Enamel air drying: Signal red	As req.	
27	K4/281		White	As req.	
28	K4/282		Golden yellow	As req.	
29	K4/277		Black	As req.	
30			Fabric serrated	As req.	

7. Items Nos. 1 to 25, inclusive, will be supplied to the Master Modification Section by the Government Aircraft Factory. Items Nos. 26 to 29, inclusive, are to be drawn as required from the unit store. Items Nos. 1 to 8, 11, 13 to 16, and 22 will not be allotted identification numbers.

8. Items Nos. 1 to 25, inclusive, are to be made up into complete modification sets by the Master Modification Section and issued to units in accordance with the number of aircraft requiring modification.

Salvage

9. The following parts are rendered redundant by the incorporation of this modification and are to be disposed of in accordance with current authorized procedure:-

Item No.	Ident. No.	Part No.	Nomenclature	No. off per a/c.	Stores Class.
31	-	2/Z2813	Bracket	1	-
32	-	2/Z2496	Bracket	1	-
33	-	3/Z2496	Bracket	1	-
34	H28/10001	AS1884-1B	Bolts	4	C
35	H28/5850	2/SS3782	Nut	4	C
36	H28/8515	AS470-B	Washers	4	C

Method of Incorporation

Refer to R.A.A.F. Drawing No. A.10926 (Sheets 1 to 14, inclusive) attached.

10. Remove fireman's axe (Part No. 27N-1) from bracket and handle pocket on the starboard side of the fuselage between Formers 27 and 28. Retain the axe.

11. Remove bracket (Part No. 2/Z2813) from Stringer 13 by unscrewing bolts (Part No. AS1884-1B), nuts (Part No. 2/SS3782) and washers (Part No. AS470-B) as shown on Sheet 1 of Drawing.

12. Remove handle pocket (Part No. 6/Z1352) from Stringer 15 by drilling out the rivets holding it to the stringer. Retain the pocket.

13. Remove fireman's axe (Part No. 27N-1) from bracket and handle pocket on the starboard side of the fuselage between Formers 11 and 12. Retain the axe.

14. Remove brackets (Part Nos. 2/Z2496 and 3/Z2496) from fuselage skin above and below Stringer 6 by drilling out rivets. Then drill out rivets holding bracket (Part No. 2/Z1352) to brackets (Part Nos. 2/Z2496 and 3/Z2496) as shown on Sheet 2 of Drawing. Retain bracket (2/Z1352) with strap (Part No. 4/Z1352) attached.

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15. Remove handle pocket (Part No. 6/Z1352) from Stringer 8 by drilling out the rivets holding it to the stringer. Retain the pocket.
16. Rework both pockets (Part No. 6/Z1352) to pockets (Part No. 2/Z3739) by cutting off the top portion of the pockets as shown in Sketch "A" on Sheet 1 of Drawing. Then drill four (4) holes as shown using a No. 30 (0.1285 inch diameter) drill.
17. Rivet pockets (Part No. 2/Z3739) to packing pieces (Item No. 15) and brackets (Item No. 13) with 4 off bifurcated rivets (Item No. 33) for each pocket.
18. Remove strap (Part No. 4/Z1352) packing piece (Part No. 5/Z1352) and bolts, nuts and washers from bracket (Part No. 2/Z2813) and assemble the strap and packing piece to 1 off bracket (Item No. 11) as shown on Sheet 1 of Drawing using the same bolts, nuts and washers.
19. Mark off position of holes for attaching bracket (Item No. 11) and 1 off pocket assembly (Part No. 2/Z3739) to fuselage skin on the starboard side between bomb aimer's window support rail (Part No. 1/D4416) and the floor forward of Former K. See Sheet 2 of Drawing.
20. Drill four (4) holes for the pocket assembly (Part No. 2/Z3739) using a No. 30 drill and then rivet pocket to skin using four (4) off rivets (Item No. 20).
21. Drill four (4) holes for the bracket (Item No. 11) using a No. 11 drill and then attach bracket to skin using 4 off each spacing blocks (Item No. 14), bolts (Item No. 17), washers (Item No. 18) and nuts (Item No. 19).
22. Fit 1 off fireman's axe (Part No. 27N/1) into pocket and strap to bracket.
23. Mark off position of holes for attaching bracket (Part No. 2/Z1352) retained above and 1 off pocket assembly (Part No. 2/Z3739) to fuselage skin between Stringers 6 and 7 on the Starboard side between Formers 4 and 5 as shown on Sheet 3 of Drawing.
24. Drill 4 holes for the pocket assembly (Part No. 2/Z3739) using a No. 30 drill and then rivet pocket to skin using 4 off rivets (Item No. 20).
25. Drill 4 holes for the bracket (Part No. 2/Z1352) using a No. 11 drill and then attach bracket to skin using 4 off each spacing blocks (Item No. 14), bolts (Item No. 17), washers (Item No. 18) and rivets (Item No. 19).
26. Fit 1 off fireman's axe (Part No. 27N/1) into pocket and strap to bracket.
27. Position glove clip (Item No. 16) to Stringer 8 as shown on Sheet 3 of Drawing. Drill 5 holes using a No. 30 drill and then rivet clip to stringer using 5 off rivets (Item No. 21). Fit asbestos gloves (Item No. 24) into glove clip.
28. Mark out cut-out for new door on fuselage skin between Stringers 15 and 16 between Formers 28 and 29 on the starboard side of the aircraft as shown on Sheet 4 of Drawing.

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29. Position angle (Item No. 8) to Stringer 16 and drill 11 holes through angle into stringer using a No. 40 drill as shown on Sheet 5 of Drawing. Rivet up using 11 off rivets (Item No. 9).
30. Attach tube (Item No. 7) and retaining strap (Item No. 5) to door and holster assembly (Item No. 1) as shown on sheet 5 of Drawing. Flare out the ends of the tube.
31. Fasten skin reinforcing plate (Item No. 2) to door on door and holster assembly (Item No. 1) using Oddie fasteners. Then position the plate and assembly at the cut-out in the fuselage skin placing 1 off each packing (Items Nos. 3 and 4) between the skin and plate locating the lower portion of the hinge between the skin and angle (Item No. 8). Mark position of rivet holes.
32. Using a No. 30 drill, drill out holes marked and then rivet plate (Item No. 2) and packing pieces (Items Nos. 3 and 4) to skin, hinge and stringer using 35 off rivets (Item No. 25) and 15 off rivets (Item No. 10).
33. Fit fireman's axe (Item No. 12) into holster on assembly (Item No. 1) and then fit retaining spring (Item No. 6) to strap (Item No. 5) and to stud on holster.
34. Paint in red the letter "L" and a bar beside each Oddie fastener on the outside of the door as shown on Sheet 5 of Drawing.
35. On the external surface of the nose section of the Fuselage on both port and starboard side, stencil in red between Formers J and K "BREAK INTO NOSE FOR EMERGENCY RESCUE" and an arrow as shown on Sheet 8 of Drawing.
36. On the starboard side only, paint in red a fire extinguisher silhouette, arrow and the words "FIRE EXTINGUISHER HERE". Between Formers G and H as shown on Sheet 8 of Drawing.
37. On the starboard side only, paint in red an axe silhouette, arrow and the words "AXE STOWED HERE" forward of Former K as shown on Sheet 8 of Drawing.
38. Mark the escape hatch (Part No. 1/D4519) so that it conforms to the markings shown on Sheet 9 of Drawing.
39. Mark the astrodome (Part No. 10/D2207) so that it conforms to the markings shown on Sheet 9 of Drawing.
40. On the port side of the front centre section, paint in red, arrows, silhouettes, bars and words as shown on Sheet 10 of Drawing.
41. On the starboard side of the front centre section, paint in red, arrows, bars and words as shown on Sheet 10 of Drawing.
42. Paint the handles yellow on the inside of the pilots' sliding windows.
43. On the port and starboard sides of the fuselage below the astrodome paint the markings in red as shown on Sheet 10 of Drawing.

44. On the port and starboard sides of the fuselage centre section aft of the astrodome, paint in red arrow and the words "EMERGENCY ROOF EXIT" below the escape hatch as shown on Sheet 11 of Drawing.
45. Mark escape hatch (Part No. 2/D6164) as shown on Sheet 11 of Drawing.
46. Between Formers 14 and 17 and Stringers 2 and 8 on the starboard side of the rear centre section, mark the fuselage skin as shown on Sheet 11 of Drawing.
47. On the port side of the fuselage, stencil in red below the mid-upper turret the words "EMERGENCY BREAK THROUGH TURRET ABOVE".
48. On the top of the fuselage, forward of the mid-upper turret, paint arrow and words as shown on Sheet 11 of Drawing and then paint broken band around turret as shown.
49. On the starboard side of the rear centre section between Formers 22B and 22D, mark aircraft as shown on Sheet 12 of Drawing.
50. In the rear fuselage near Former 34, attach 1 off luminous "D" (Item No. 23) to the skin forward of the dinghy release handle as shown on Sheet 12 of Drawing and then stencil the words "DINGHY RELEASE" in white on a black background on the fuselage adjacent to the dinghy release cable.
51. Mark access door (Part No. 01/D4621) and fuselage skin aft of it on the starboard side of the aircraft as shown on Sheet 12 of Drawing.
52. On inside of access door (Part No. 01/D4621) paint markings as shown on Sheet 13 of Drawing.
53. On port side of the aircraft on the outside fuselage between Formers 31 and 33 (directly opposite starboard access door) paint markings as shown on Sheet 13 of Drawing.
54. On top centre of rear section of the fuselage forward of the tail turret, paint markings as shown on Sheet 13 of Drawing.
55. Paint exterior of tail turret (Part No. D8000D) as shown on Sheet 14 of Drawing.
56. Inside the aircraft, paint doors and handles to conform to the markings shown on sheet 14 of Drawing.

Drawings

57. Drawing No. A.10926 (Sheets 1 to 14 inclusive) is attached.

Effect on Weight and Balance

58. Amendments to weight sheet summaries will be consolidated and issued by Air Force Head-Quarters.
59. The effect of the incorporation of this modification on the weight and balance of the aircraft is as follows:-

Fixed Equipment

Item	Weight (lb.) ⁺ ₋	Arm (in.) ⁺ ₋	Moment (Min.) ⁺ ₋
<u>REMOVED</u>			
Fireman's axe and stowage:-			
centre section	-5.3	+ 95.9	- 508
rear fuselage	-5.2	+ 441.4	-2,295
<u>INSTALLED</u>			
Fireman's axe and stowage:-			
beneath astrodome	+6.8	- 16.8	- 114
nose compartment	+5.3	-207.0	-1,097
rear fuselage	+6.7	+453.4	+3,038

References: Files R.A.A.F. 9/59/104 and 150/4/8109.

Category : "B"

Attachments: Drawing No. A.10926 (Sheets 1 to 14 inclusive).

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