A.A.P. 721:73, Vol. 4, Pt. 3, Issue 1, March, 1954.

Card Numbe

LINCOLN AIRCRAFT

with

ROLLS ROYCE MERLIN ENGINE

AIRCRAFT PLANNED SERVICING SCHEDULE

MINOR SERVICING

A.A.P. 721:73, Vol. 4, Pt. 3, Issue 1, March, 1954.

Card Numbe

AMENDMENT CERTIFICATE

to

LINCOLN AIRCRAFT

Aircraft Planned Servicing Schedule

Minor Servicing

CERTIFIED that the Amendments promulgated in the und mentioned AMENDMENT LISTS have been made in t publication:—

Amendment List		*Amendments made by*	*Dat*
No.	*Date*		
1	7-10-54	[illegible] W.OFF	17-1-

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Aircraft Planned Servicing **Schedule**

LINCOLN AIRCRAFT

Minor Servicing

PUBLICATIONS FOR REFERENCE

Airframe

A.A.P.[illegible] — Australian Lincoln Mk. 30 — Descripti
Manual.

Engines

A.P.1590e, s & u — Merlin 85 Aero Engines.

Instruments

A.P.1275a, Vol. 1 — Instrument Manual (General I
struments).

A.P.1275B, Vol. 1 — Instrument Manual (General I
struments).

A.P.1275D, Vol. 1 — Bomb Sights.

A.P.[illegible], Vol. 1 — Automatic Pilot Mk. 3.

Electrical

A.P.1095 Vols. 1 & 2 — Electrical Equipment Manual.

A.P.[illegible]a and b, Vols. 1 and 2 — Lincoln B1 and LL.

A.P.1464b — Bomb Carriers.

A.P.1664, Vols. 1 and 2.

Radio

A.P.1196, Vol. 1 — Maintenance Instructions S.C.R. 57

U.S.A.A.F. TO — Maintenance Instructions for Re
R.L. 42B.

AN-08-10189 — (AN-APN-1).

AN-16-30-APN-4-3 (AN-APN-4).

(continued)

A.P.1641F — Hispano 20 mm. Guns, Vols 1-6.
A.P.1641L — .50 Browning M.G., Vols. 1-6.
A.P.1641H — Signal Dischargers, Signal Pistol, Vol. 1-6.
A.P.1664A — Bomb Carriers, Vols. 1-6.
A.P.1730B, Gun Sights, Vols. 1-6.
A.P.2710A — Gyro Gun Sights, Mk. 2C, Vols. 1-6.
A.P.2768*E* — Bristol Turret B17, Vols. 1-6.
A.P.2796H — Boulton Paul Turret Type F, Vols. 1-6.
A.P.2796J — Boulton Paul Turret Type D, Vols. 1-6.
Provisional Armament Instructions.
Provisional Armament Orders.
Lincoln Service Instructions.
Armament Special Instructions.
Temporary Armament Servicing Memoranda.
Repair Maintenance General Instructions.

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APPROVED FUEL, OILS AND GREASES

Nomenclature	*Abbreviation*
Fuel:—	
Aviation Gasolene 100/130 Grade	Avgas; 100/130 A.(
Lubricating Oils	
Aero Engine Oil, Grade B/O (100 Seconds) (For accessory Gear Boxes)	Oil, OM/270.
Aero Engine Oil, Grade C.O. (120 Seconds)	Oil, OM-370
Hydraulic Oil	
Fluid Hydraulic, Aircraft (Mineral Base)	Oil, OM-15
Greases	
Grease, High Melting Point	Grease, XG (Aust) 270.
Grease, G.S. graphited	Grease, XG 280.
Grease, Low temperature, Anti-Freeze	Grease, XG (Aust) 290.

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Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

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NOTES FOR OFFICER/N.C.O. SUPERVISIN

1. Minor servicing provides the opportunity for:—
   (a) Cleaning the aircraft,
   (b) Lubricating the aircraft,
   (c) Counteracting corrosion and deterioration,
   (d) Correcting faults, that, if allowed to continue, would resu in long periods of unserviceability, and
   (e) Carrying out progressive checks on all aircraft equipment.

2. It is impossible to catalogue all operations that are required be carried out during minor servicing. It is, therefore, t responsibility of the OOfficer/N.C.O. in charge of the servici to ensure that all necessary work is carried out, and that t aircraft is fully serviceable. The following schedule is t "minimum" amount of work that is required to be done duri minor servicing.

3. Equipment removed to an ancillary section is to be serviced such section personnel as the Officer/N.C.O in charge of t section directs and not necessarily by the member detailed the servicing team.

4. *Team Size*. . . The team size for which this schedule is design is as follows:—

Trade	*Men*	*Trade*	*M*
Airframe	6	Electrical	2
Engine	8	Armament	2
Instruments	2	Radio	2

(continued)

5. Prior to the aircraft being moved to the hangar ffor servicing, it is to be ground run to normal temperatures, and the N.C.O's. of the various trades given an opportunity of checking instruments, gauges, &c. The engine men will then drain and flush the engine oil systems as necessary.

6. A N.C.O. Airframe or Engine will normally be in charge of an aircraft servicing team, with N.C.O's of the remaining trades available for supervision and checks on their equipment as required.

7. Item numbers proceeded by an asterisk are to be serviced at every second minor servicing.

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Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

AIRFRAME MAN "A"

Item No.	*Servicing Detail*

1. Contact Airframe N.C.O. before commencing servicing, for an rectification or special servicing instructions.

Cockpit

2. Aileron, Elevator and Rudder Controls — Inspect the operatio and ensure that full and free movement is obtained.

3. Trim Tab Controls — Inspect the operation and ensure th full and free movement is obtained. Reset the tab to the neutr position.

4. Aileron Chain and Sprockets — Clean, inspect for security an lubricate. (XG (Aust) 290).

5. Control Column — Inspect the wheel bearings for security an lubricate.

6. Trim Tab Controls — Clean chains, sprockets and pulley bea ings, inspect for security and lubricate.

7. Apply the parking brakek, operate the rudder pedals and ensu that equal and sufficient pressure is applied to each brake.

   Note.—With tse parking brake "ON" and the rudder peda in neutral, the brake pressure gauge must indica 145 lb./p.s.i., in each wheel brake. This pressu should be maintained for no less than 10 minutes.

8. Parking Brake Control — Examine the cable to the relay val for fraying, corrosion and security.

(continued)

em No.	Servicing Detail
.	Rudder and Elevator Trim Cables — Examine cables above and below cockpit floor, for corrosion and fraying.
ose	
.	Brake Relay Valve and Differential Control Rod — Inspect for damage and security. Lubricate joints as necessary.
.	Operating Cable and Conduit — Inspect for damage and fraying.
.	Inspect the air-container, valves, filters, and pipe-lines for damage.
.	Drain the system air filter.
.	Rudder Push-Pull Control Rod — Inspect attachments for security. Clean and lubricate the bearings, ensure that they are not excessively worn.
.	Rudder Pedals — Examine for damage.
.	Inspect bearings and gears on the rudder pedal cross-shaft for wear and lubricate.
.	Elevator Push-Pull Control Rod — Inspect attachments for security. Clean and lubricate the bearings. Ensure that they are not excessively worn.
.	Elevator Cross-Shaft — Inspect bearings for wear and lubricate
.	Inspect the elevator chain and quadrant coupling the cross-shaft to autopliot servo momtor for cleanliness, corrosion and security. Lubricate as necessary.
ntre and Rear Fuselage	
.	Rudder and Elevator — Examine push-pull control rods, bearings and couplings for wear, damage and security and lubricate.
.	Attachment of the control rod to the elevator torque — Examine for wear, damage and security and lubricate.
	Rudder Control Levers, Shackle Connections and Bearings — Examine for wear, damage and security and lubricate.
	Rudder Control Operating Lever and Bearings — Examine for wear, damage and security and lubricate.

(continued)

Item No.	*Servicing Detail*

24. Rudder and Elevator Trim Cables — Examine for corrosi and fraying, particularly where they pass through fairleads a pulleys.

25. Rudder and Elevator Trim Cables — Inspect the tension of t cables.

Tail Unit—Starboard

26. Elevator Trim Cables — Inspect cables between elevator ro and fuselage for fraying and corrosion.

27. Elevator Trim Jack — Inspect for security, cleanliness a lubricate.

28. Chain and Sprocket — Inspect for security, cleanliness a lubricate.

29. Operating Rods, Adjustable and Servo — Inspect for securit and lubricate.

30. Trim Tab Hinges — Inspect for security and lubricate.

31. Rudder Operating Lever to the Rudder — Inspect for securi of attachment and lubricate the bearings as necessary.

32. Rudder Operating Rod to the Lever — Inspect for securi of attachment and lubricate the bearings as necessary.

33. Rudder Trim-Jack, Sprocket and Chain — Inspect for corrosio cleanliness, security and lubricate the bearings.

34. Rudder Trim Tab, Operating Rod and Universal Coupling - Inspect for corrosion, security and lubricate the bearings.

35. Rudder Trim Tab Hinges — Inspect for corrosion, security a lubricate the bearings.

36. Rudder Bell Crank and Control Rods — Inspect for corrosio security and lubricate the bearings.

(continued)

m No.	*Servicing Detail*

il Unit—Port

Elevator Trim Cables — Inspect cables between the elevator root end and fuselage for fraying and corrosion.

Elevator Trim Jack — Inspect for security, cleanliness and lubricate.

Chain and Sprocket — Inspect for security, cleanliness and lubricate.

Operating Rods, Adjustable and Servo — Inspect for security, and lubricate.

Trim Tab Hinges — Inspect for security and lubricate.

Rudder Operating Lever to the Rudder — Inspect for security of attachment and lubricate the bearings as necessary.

Rudder Operating Rod to the Lever — Inspect for security of attachment and lubricate the bearings as necessary

Rudder Trim Jack, Sprocket and Chain — Inspect for corrosion, cleanliness, security and lubricate the bearings.

Rudder Trim Tab, Operating Rod and Universal Couplings — Inspect for corrosion, security and lubricate bearings.

Rudder Trim Tab Hinges — Inspect for corrosion, security and lubricate the bearings.

Rudder Bell Crank and Control Rods — Inspect for corrosion, security and lubricate the bearings.

neral

Clean the bomb aimer's windows, cockpit perspex and astrodome.

Clean the remainder of the aircraft as detailed by the N.C.O. in charge of servicing.

Form E/E. 317 — Sign certificate on front, and hand to Trade N.C.O.

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Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

AIRFRAME MAN "B"

Item No.	*Servicing Detail*

1. Contact Airframe N.C.O. before commencing servicing, for a rectification or special servicing instructions.

Port Mainplane

2. Aileron Control — Inspect for damage, corrosion and securi and lubricate the bearings.

3. Control Rod Couplings to Torque Shaft — Inspect for damag corrosion and security and lubricate the bearings.

4. Aileron Torque Shaft — Inspect the damage, corrosion a security and lubricate the bearings.

Port Aileron

5. Aileron and Trim Tab — Inspect for damage, distortion, loo rivets and condition of surface finish. Ensure that all dra holes are clear.

6. Aileron Hinge Brackets — Inspect for security.

7. Trim Tab Hinges and Operating Rods — Inspect for securit and lubricate.

8. Joint between the Inner and Outer Ailerons — Inspect f security, and signs of movement between the ailerons and the connecting torque tube.

9. Aileron Operating Crank Bearing and Rod Couplings — Inspe for signs of slackness or wear.

10. Trim Cables — Inspect for signs of fraying and corrosion an lubricate the trim-jack.

(continued)

tem No.	Servicing Detail

tarboard Aileron

1. Aileron and Trim Tab — Inspect for damage, distortion, loose rivets and condition of surface finish. Ensure that all drain holes are clear.

2. Aileron Hinge Brackets — Inspect for security.

3. Trim Tab Hinges and Operating Rods — Inspect for security, and lubricate.

4. Joint between the Inner and Outer Ailerons — Inspect for security, and also signs of movement between the ailerons and their connecting torque tube.

5. Aileron Operating Crank Bearing and Rod Couplings — Inspect for signs of slackness or wear.

6. Trim Cables — Inspect for signs of fraying and corrosion and lubricate the trim-jack.

tarboard Mainplane

7. Aileron Control — Inspect for damage, corrosion and security and lubricate the bearings.

8. Control Rod Couplings to Torque Shaft — Inspect for damage, corrosion and security and lubricate the bearings.

9. Aileron Torque Shaft — Inspect for damage, corrosion and security and lubricate the bearings.

entre Fuselage

0. Aileron Control Bell Crank (aft of rear spar) — Inspect for wear, security and lubricate.

1. Aileron Control Rods — Inspect for wear, security and lubricate

2. Aileron Chains — Inspect for wear, security and lubricate.

3. Aileron Cabes — Inspect for corrosion and fraying.

4. Aieron Trim Cabes — Inspect for corrosion where they pass through the fuselage aft of the flap jack.

(continued)

Card Number

Item No.	*Servicing Detail*

Nose

25. Aileron Longitudinal Control Shaft — Inspect for corrosion a security. Clean and lubricate.

26. Chains and Sprockets connecting Lay Shaft to Autopilot Servo Inspect for corrosion and security. Clean and lubricate.

27. Aileron Cables from the Control Column — Inspect for dama and corrosion.

28. Aileron and Sprockets — Inspect for damage and corrosi Clean and lubricate.

Nav. and W/T. Compartment

29. Aileron Chains — Inspect for corrosion and security. Cle and lubricate.

30. Aileron Tie Rods — Inspect for corrosion and security. Cle and lubricate.

31. Aileron Trim Cables — Inspect for corrosion and fraying.

Cockpit.

32. Aileron and Aileron Trim Cables — Inspect cables above a below the pilot's floor for corrosion and fraying.

33. Trim Tab Indicators — Check that all indicators are readi neutral.

34. Centralise control column and rudder bar whilst the cont surfaces are checked for alignment by N.C.O. i/c. servicing.

Bomb Bay

35. Aileron Trim Cables — Inspect cables on the starboard sk for corrosion and fraying, especially around pulleys.

Tail Unit (Port)

36. Tailplane — Inspect for security of attachment and ensure that t attachment bolts are tight and secure.

37. Tailplane Attachment Fittings — Inspect for signs of crack damage, distortion and corrosion.

(continued)

m No.	Servicing Detail

ilplane and Fin

(a) Inspect internally for cracks, distortion, loose rivets and condition of surface finish, also security of fabric strips.

(b) Inspect externally for security of attachment fillets.

(c) Inspect the fin for security of attachment, ensure that there is no play at the attachment fittings and that the atachment bolts are tight and secure.

(d) Inspect the attachment fittings for cracks, damage, distortion and corrosion.

vators and Trim Tabs

(a) Elevator and Trim Tabs — Inspect for cracks, damage, corrosion, distortion, loose rivets and the condition of surface finish.

(b)) Ensure that the drainage holes are clear.

(c) Inspect the hinges and attachments fittings for wear and damage and security.

Rudder and Trim Tabs — Inspect for cracks, corrosion, damage, distortion, loose rivets and the condition of the surface finish.

Rudder Mass Balance Weights — Inspect for security of attachment. Ensure that all screws are tight.

Rudder and Trim Tab Hinges — Inspect hinges and attachment brackets for wear, damage and security.

l Unit Starboard

Tailplane — Inspect for security of attachment and ensure that the attachment bolts are tight and secure.

Tailplane Attachment Fittings — Inspect for signs of cracks, damage, distortion and corrosion.

(a) Tailplane and Fin — Inspect externally for cracks, distortion, loose rivets and condition of surface finish, and security of fabric strips.

(continued)

Item No.	*Servicing Detail*

(b) Inspect externally for security of attachment fillets.

(c) Inspect the fin for security of attachment, ensure that th is no play at the attachment fittings and that the attachm bolts are tight and secure.

(d) Inspect the attachment fittings for cracks, damage, distort and corrosion.

46. Elevator and Trim Tabs — Inspect for cracks, damage, corrosi distortion, loose rivets and the condition of surface finish.

47. Elevator and Trim Tabs — Ensure that the drainage holes clear.

48. Elevator and Trim Tabs — Inspect the hinges and attachm fittings for wear, damage and security.

49. Rudder and Trim Tabs — Inspect for cracks, corrosion, dama distortion, loose rivets and the condition of surface finish.

50. Rudder Mass Balance Weights — Inspect for security attachment. Ensure that all screws are tight.

51. Rudder and Trim Tab Hinges — Inspect hinges and attachm brackets for wear, damage and security.

52. Clean the aircraft as detailed by the N.C.O. i/c. servicing.

53. Form E/E. 317 — Sign the certificate on front, and hand Trade N.C.O.

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Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

AIRFRAME MAN "C"

Item No.	*Servicing Detail*
1.	Contact Airframe N.C.O. before commencing servicing, any rectification or special servicing instructions.
	Nose
2.	Windscreen de-icing tank — Inspect for distortion, leaks a security.
3.	Replenish to level indicated on dipstick.
4.	Bomb aimer's de-icing pump and metering valve — Inspect leaks and security.
5.	Operate, ensuring a free flow of fluid.
6.	Lubricate the pump spindle.
7.	De-icing pipe lines — Inspect for damage, leaks and security
8.	Bomb aimer's seat and harness — Inspect for security and corr operation of the adjusting mechanism. Lubricate as necessa
9.	Entrance Hatch — Inspect for security and locking catches correct operation. Clean and lubricate operating levers and pi
10.	Nose Heater Duct — Inspect for damage and security.
11.	Window chute — Inspect for damage and security.
12.	Parachute stowage and rubber cords — Inspect for damage a security.
13.	Inspect the rubber expansion bag of the sandwich windscreen drier system for deterioration.

(continued)

m No.	Servicing Detail
.	Formers, Frames and Skin — Inspect for cracks, corrosion, distortion and loose rivets.
ckpit, Nav. and W/T Stations	
.	Operate the pilot's windscreen de-icing pump and metering valve ensuring an adequate flow of fluid.
.	Inspect for leaks and lubricate the spindle.
.	Operate the sliding windows and clear vision panels ensuring correct operation.
.	Inspect for cracks and broken catches.
.	Clean and lubricate runners and catches.
.	Cabin heating ducts — Inspect for damage and security.
.	Parachute stowage and rubber cords — Inspect for damage and security.
.	Upper escape hatch and sealing tsrips — Inspect for damage and security.
.	Escape hatch operating lever — Inspect for damage and security. Lubricate as necessary.
.	Formers, Frames and Skin — Inspect for cracks, corrosion, distortion and loose rivets.
.	Floor — Inspect for damage especially around the bomb winch fitings.
5.	Pilot seat 7. Second Pilot seat 8. Navigator's seat and table 9. Wireless Operator's seat — Inspect the seats, adjusting mechanisms, safety straps, forward release mechanisms, and armour plate where fitted, on the following, for security, fraying, deterioration and correct operation as applicable and lubricate.
entre Fuselage	
0.	Inspect for damage and security and lubricate as necessary:—

(continued)

Item No.	*Servicing Detail*

(a) Compartment doors,
(b) Upper escape hatch and sealing strips,
(c) Fuselage heating ducts,
(d) Rear fuselage heating control,
(e) Dinghy release conduit,
(f) Parachute stowage and rubber cords, and
(g) Check the crash axe for availability and security of stowa

31. Inspect for cracks, corrosion, distortion, loose rivets and security:
(a) Floors adjacent to bomb winch fittings,
(b) Steps fore and aft of front spar, and
(c) Frames, formers and skin.

32. Inspect webs for cracks, front and main spar adjacent to low bolts, port and starboard side of fuselage.

Rear Fuselage

33. Inspect for damage and security:—
(a) H2S compartment and blister,
(b) Fuselage heating ducts,
(c) Dinghy release cable and conduit,
(d) Parachute stowage and rubber cords,
(e) First aid kit, and
(f) Crash axes and stowage.

Tail Spar

34. Inspect the tailplane spar:—
(a) Front and rear for corrosion, distortion and loose rivets.
(b) Top and bottom, front and rear bolts joining tailplane halv for security of attachment.

(continued)

m No.	*Servicing Detail*

ar Fuselage

Inspect the floors, frames, formers and skin for cracks, corrosion, distortion, loose rivets and security.

Inspect:—

(a) Rear entrance door for distortion and security,

(b) Rubber sealing strips for deterioration,

(c) Door for correct operation and locking. Lubricate the locks and hinges as necessary, and

(d) Ensure that the dinghy remote release cable is disconnected from the operating head. Lubricate the cable as necessary and check for correct operation.

ose-Internal

Bomb aimer's windows — Inspect the windows and transparent panels for cracks, deep scratches and deterioration of sealing rubbers. Clean the windows and panels.

ckpit Internal

Transparent panels and astrodome — Inspect for cracks, deep scratches and deterioration of rubber sealing strips. Clean the panels and astrodome.

Clean the aircraft as detailed by the N.C.O. i/c. servicing.

Form E/E. 317 — Sign the certificate on front and hand to trade N.C.O.

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Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

AIRFRAME MAN "D"

Item No.	*Servicing Detail*
1.	Contact Airframe N.C.O. before commencing servicing, for a rectification or special servicing instructions.
	Centre Fuselage
2.	Flap jack — Inspect for fluid leaks.
3.	Jack Rams — Inspect for scoring. Clean and lubricate required.
4.	Ball Sockets — —Inspect ball sockets at end of flap operati tubes for security.
5.	Pipe Lines and Connections — Inspect for leaks, damage, den corrosion, chafing and security.
	Cockpit, Nav. and W/T Stations
6.	Hydraulic Accumulator — Exhaust the pressure in the accum lator by operating the flaps. Leave the flap selector in t "DOWN" position.
7.	Inspect the undercarriage, flap and bomb door selectors and pi lines for signs of leakage and damage and for security.
	Centre Fuselage Hydraulics
8.	Hydraulic Accumulator — Check that the air pressure is 2 lb. p.s.i. and recharge as necessary.
9.	Inspect for leaks, damage and security:—
	(a) Hydraulic Reservoir — Replenish fluid as required.
	(b) Hand Pump — Lubricate linkage .

(continued)

(c) Automatic cut-out.
(d) Distributor block.
(e) Hydraulic accumulator.
(f) Emergency air bottles, pipe-lines and connections.
(g) Hydraulic pipe-lines.

Hydraulic Filter — Clean and examine for damage. Ensure that the filter is correctly assembled and that the jointing washer is serviceable.

Lower the flaps by means of the hand pump.

nb Bay

Bomb Door Hydraulic Jacks and Pipe Lines — Examine for leaks, damage and security.

Jack Rams for Scores — Clean and lubricate rams and end pivots.

Flexible pipe lines for chafing and security of unions.

Hydraulic Fuel Jettison Valve — Inspect for leaks, damage and security.

Hydraulic and Pneumatic Pipe Lines — Inspect for leaks, damage and security.

rboard Flap

Flap — Inspect the flap and inner nacelle fairing boot for damage, distortion, cracks, loose rivets and screws.

With flap lowered, inspect carefully for signs of corrosion, particularly at trailing edges and on the flap ribs. If any is found, treatment is to be carried out as laid down in A.E.I.G., Part 2, Section 1, Instruction No. 4.

Flap Hinges — Inspect for wear and security, and lubricate.

Flap Operating Rod — Clean and lubricate rod bearing and coupling. Check the coupling for security.

Flap Operating Links — Inspect for play and security and lubricate the pivots.

(continued)

Item No.	*Servicing Detail*

22. Flap Position Indicator Linkage — Inspect and lubricate.

23. Aileron Trim Cables — Inspect the cables which pass above flaps for fraying and corrosion. (If any defect is found inf Man "B").

Port Flap

24. Flap — Inspect the flap and inner nacelle fairing boot damage, distortion, cracks, loose rivets and screws.

25. With flaps lowered, inspect carefully for signs of corros particularly at trailing edges and on the flap ribs. If any found treatment is to be carried out as laid down in A.E.I Part 2, Section 1, Instruction No. 4.

26. Flap Hinges — Inspect for wear and security and lubricate.

27. Flap Operating Rod — Clean and lubricate rod bearing coupling. Check the coupling for security.

28. Flap Operating Links — Inspect for play and security lubricate the pivots.

29. Flap Position Indicator Linkage — —Inspect and lubricate.

30. Aileron Trim Cables — Inspect the cables which pass above flaps for fraying and corrosion.

Bomb Bay

31. Inspect the interior for damage, corrosion, cracks and distort Ensure that the main bomb support beams are not damage.

32. Bomb Doors — Inspect for damage, corrosion, distortion cracks.

33. Door Hinges and Brackets — Inspect for excessive wear, dam and security. Lubricate the hinges.

34. Bomb Doors — Ensure the doors operate satisfactorily "line up" correctly when closed.

(continued)

n No.	Servicing Detail

ernal Fuselage

Fuselage — Inspect for cracks, corrosion, loose rivets and condition of surface finish. Particular attention is to be paid to the under surface in the vicinity of the tail wheel shock absorber box beam.

H2S Blister — Inspect for cracks and damage.

Ensure that all fabric sealing strips are secure.

Clean the aircraft as detailed by the N.C.O. i/c of servicing.

Self Centreing Mechanism — Check for correct operation and refill in accordance with Lincoln Instruction No. 2.

Tail Wheel Tyre — Check the air pressure in type to 68-72 lb. p.s.i. and adjust the pressure in the tail oleo strut as necessary, 725-775 lb. p.s.i.

Tail Wheel Fork — Inspect for cracks, corrosion and damage.

Form E/E. 317 — Sign the certificate on the front and hand to trade N.C.O.

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Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

AIRFRAME MAN "E"

Servicing Notes

1. Supervised by Airframe N.C.O., and assisted by Airframe M "F", fit jacking pads (Part No. O/U551) to the inboard jacki points on the main spar, position the lifting jacks, and raise t aircraft clear of the ground.

   Note.—Under no circumstances must any other type of jacki pad, or any other method of jacking be used.

2. Additional Servicing —Wheel and Tyre Check. When a landing wheel and tyre check is due this servicing is to carried out by Airframe Men "E" and "F" in accordance wi Additional Servicing Schedule in Part 2 of this Schedule.

Item No.	*Servicing Detail*

Port Nacelle

1. (a) Oleo Legs:—Inspect for leaks.

   (b) Undercarriage Retracting Mechanism and Interior Nacelle:—Clean thoroughly paying particular attention the retracting mechanism and jack rams.

   (c) Compression Members and Bracing Struts:—Examine f excessive bowing, corrosion and damage. Check securi

   (d) Top and Bottom Radius Rod Attachments and Knuck Joints:—Examine for excessive wear.

   (e) Jack Attachments to Radius Rods:—Examine for excess wear and damage.

   (f) "Up" and "Down" Locks:—Examine for damage, che security.

(continued)

(g) Radius Rod Top Attachment Fittings to Mainplane:—Examine for cracks and damage. Check security.

(h) Swivelling Collars on Oleo Legs:—Check for freedom of rotation.

(a) Wheel Compartment Doors:—Examine for distortion, cracks, corrosion and damage.

(b) Wheel Compartment Door Hinges and Operating Links:—Examine for damage and check security of attachment.

(c) Wheel Compartment:—Examine for corrosion and damage. Ensure that all fittings, pipe lines and components are undamaged and are securely attached.

(a) Undercarriage Jacks:—Examine for leaks and scoring of the rams.

(b) Hydraulic Pipe Lines:—Examine all lines as far as possible for leaks and damage. Check for correct attachment.

(c) Air Pipe Lines and Connections:—Examine as far as possible for leaks and damage.

(d) Oil and Water Trap:—Drain under pressure and recharge the system.

Note.—Maximum pressure is 450 p.s.i.

Lubricate

(a) Oleo leg top attachments.

(b) Radius rod top and bottom attachments.

(c) Jack ram attachments to the radius rods.

(d) Compartment door operating rod swivels, joints and fork bolt on the oleo leg and the attachment at the doors.

(a) Oleo Legs:—Check air pressure and adjust as necessary.
Note.—Correct pressure is 1200-1250 p.s.i. with full extension.

(b) Valve Caps:—Test for air leaks.

Clips Attached to Lower Ends of Oleo Legs:—Examine for indentations due to movement of the axle and struts.
Note.—If indented, the clip must be turned to present a new face to the axle renew the clip if necessary.

(continued)

Item No.	*Servicing Detail*

7. *Wheel and Tyre* (Port)

(a) Examine the wheel for damage and security.

(b) Examine the tyre for signs of creep, cuts, bulges and oth damage.

(c) Check the tyre pressure by means of a gauge and adjust necessary. The tyre pressure should be:—

A.U.W. lbs.	*Pressure*
70,000	55 lb. p.s.
75,000	60 lb p.s.

(d) Inspect the brake pipe lines for damage and security. E sure that flexible lines are not chafing.

(e) Examine visually the axle for signs of distortion and crac in the region between the main attachment pins and extrer ends of the axle.

Retraction Test (in conjunction with Airframe Man "E")

8. Supervised by Trade N.C.O. and in conjunction with electric man carry out retraction test ensuring that:—

(a) The locking catches engage and disengage in both the "UI and "DOWN" positions.

(b) With the undercarriage retracted, that the clearance betwe the locking catches and the top of the catch tubes is 0.1 inches.

(c) The undercarriage compartment doors open and close sat factorily.

(d) The visual and audible warning devices function satisfa torily.

9. As directed by Trade N.C.O., lower the aircraft and remo the jacks from the immediate vicinity of the aircraft.

(continued)

em No.	Servicing Detail

ort Mainplane — Port Leading Edge

. (a) Open the port leading edge.

(b) Check the screws for freedom to rotate and lubricate them as necessary.

(c) Leading Edge:—Examine for damage and security of hinges. Lubricate the hinges.

(d) All Exposed Pipe Lines:—Inspect for damage, leakage and security.

(e) "Flexatex" Fuel Hose:—Inspect hose if fitted, in the leading edge, for shrinkage.

(f) All Accessible Hose Clips:—Check for tightness.

ainplane Surface

. (a) Inspect Mainplane Surface externally for cracks, wrinkling of panels, condition of finish and loose rivets. Particular attention is to be paid to the screws attaching the skin to the top and bottom of the rear spar.

(b) Inspect the top and bottom of the mainplane surface for corrosion, particularly at the trailing edge and in the path of the engine exhaust gases. Clean off the surfaces.

(c) Lower Surface of Mainplane:—Inspect for signs of fuel leakage.

(d) No. 1 Tank Cover Plate:—Closely examine for loose securing screws.

(e) Sub-Frames:—Inspect for cracks, corrosion, bowing and other damage.

2. Assisted by Airframe Man "F" charge the air container to 450 lb. p.s.i.

3. Assist Airframe Man "F" inflate the emergency bottles to 1200 lb. p.s.i.

4. Close the port leading edge and lock securely.

5. Clean the aircraft as detailed by the N.C.O. i/c. of servicing.

6. *Form E/E. 317* — Sign the certificate on front and hand to Trade N.C.O.

Card Number

Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

AIRFRAME MAN "F"

Servicing Notes

1. Supervised by Airframe N.C.O., and assisted by Airframe Ma "E", fit jacking pads (Part No. O/U551) to the inboard jacki points on the main spar, position the lifting jacks, and raise t aircraft clear of the ground.

   Note.—Under no circumstances must any other type of jacki pad, or any other method of jacking be used.

2. Additional Servicing — Wheel and Tyre Check. When a landing wheel and tyre check is due this servicing is to be carri out by Airframe Men "E" and "F" in accordance with A ditional Servicing Schedule in Part 2 of this Schedule.

Item No.	*Servicing Detail*

Starboard Nacelle

1. (a) Oleo Legs:—Inspect for leaks.

   (b) Undercarriage Retracting Mechanism and Interior Nacelle:—Clean thoroughly paying particular attention the retracting mechanism and jack rams.

   (c) Compression Members and Bracing Struts:—Examine f excessive bowing, corrosion and damage. Check securi

   (d) Top and Bottom Radius Rod Attachments and Knuck Joints:—Examine for excessive wear.

   (e) Jack Attachments to Radius Rods.—Examine for excessi wear and damage.

   (f) "Up" and "Down" Locks:—Examine for damage, che security.

(continued)

tem No.	Servicing Detail

(g) Radius Rod Attachment Fittings to Mainplane:—Examine for cracks and damage. Check security.

(h) Swivelling Collars on Oleo Legs:—Check for freedom of rotation.

2. (a) Wheel Compartment Doors:—Examine for distortion, cracks, corrosion and damage.

(b) Wheel Compartment Door Hinges and Operating Links:—Examine for damage and check security of attachment.

(c) Wheel Compartment:—Examine for corrosion and damage. Ensure that all fittings, pipe lines and components are undamaged and are securely attached.

3. (a) Undercarriage Jacks:—Examine for leaks and scoring of the rams.

(b) Hydraulic Pipe Lines:—Examine all lines as far as possible for leaks and damage. Check for correct attachment.

(c) Air Pipe Lines and Connections — Examine as far as possible for leaks and damage.

(d) Oil and Water Trap:—Drain under pressure and recharge the system.

Note.—Maximum pressure is 450 p.s.i.

4. *Lubricate*

(a) Oleo leg top attachments.

(b) Radius rod top and bottom attachments.

(c) Jack ram attachments to the radius rods.

(d) Compartment door operating rod swivels, joints and fork bolt on the oleo leg and the attachment at the doors.

5. (a) Oleo Legs:—Check air pressure and adjust as necessary.

Note.—Correct pressure is 1200-1250 p.s.i. with full extension.

(b) Valve Caps:—Test for air leaks.

6. Clips Attached to Lower Ends of Oleo Legs:—Examine for indentations due to movement of the axle and struts.

Note.—If indented, the clip must be turned to present a new face to the axle; renew the clip if necessary.

(continued)

Item No.	*Servicing Detail*

Wheel and Tyre (Starboard)

7. (a) Examine the wheel for damage and security.

   (b) Examine the tyre for signs of creep, cuts, bulges and oth damage.

   (c) Check the tyre pressure by means of a gauge and adjust necessary. The tyre pressure should be:—

A.U.W. lb.	*Pressure*
70,000	55 lb. p.s.i.
75,000	60 lb. p.s.i.

   (d) Inspect the brake pipe lines for damage and security. E sure that flexible lines are not chafing.

   (e) Examine visually the axle for signs of distortion and crac in the region between the main attachment pins and extrer ends of the axle.

8. *Retraction Test* (in conjunction with Airframe Man "F") Supervised by Trade N.C.O. and in conjunction with electri man carry out retraction test ensuring that:—

   (a) The locking catches engage and disengage in both t "UP" and "DOWN" positions.

   (b) With the undercarriage retracted, that the clearance betwe the locking catches and the top of the catch tubes is 0.1 inches.

   (c) The undercarriage compartment doors open and close sat factorily.

   (d) The visual and audible warning devices function satisf torily.

9. As directed by Trade N.C.O., lower the aircraft and remove t jacks from the immediate vicinity of the aircraft.

(continued)

n No.	Servicing Detail

rboard Mainplane — Starboard Leading Edge

(a) Dinghy:—Assist safety equipment worker to remove for servicing.

(b) Open the starboard leading edge.

(c) Check the screws for freedom to rotate and lubricate them as necessary.

(d) Leading Edge:—Examine for damage and security of hinges. Lubricate the hinges.

(e) All Exposed Pipe Lines:—Inspect for damage, leakage and security.

(f) "Flexatex" Fuel Hose:—Inspect hose if fitted, in the leading edge, for shrinkage.

(g) All Accessible Hose Clips:—Check for tightness.

inplane Surface

(a) Inspect Mainplane Surface externally for cracks, wrinkling of panels, condition of finish and loose rivets. Particular attention is to be paid to the screws attaching the skin to the top and bottom of the rear spar.

(b) Inspect the top and bottom of the mainplane surface for corrosion, particularly at the trailing edge and in the path of the engine exhaust gases. Clean off the surfaces.

(c) Lower Surface of Mainplane:—Inspect for signs of fuel leakage.

(d) No. 1 Tank Cover Plate:—Closely examine for loose securing screws.

(e) Sub-Frames:—Inspect for cracks, corrosion, bowing and other damage.

Assist Airframe Man "E" charge the air container to 450 lb. p.s.i.

Assisted by Airframe Man "E" inflate the emergency bottles to 1200 lb. p.s.i.

Close the starboard leading edge and lock securely.

(continued)

Item No.	*Servicing Detail*

15. *Dinghy*:—Assist safety equipment worker to replace dinghy.
16. Clean the aircraft as detailed by the N.C.O. i/c. of servicin
17. *Form E/E. 317* — Sign the certificate on front and hand Trade N.C.O.

Card Number 1

Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

ARMAMENT N.C.O.

Preparation of Aircraft for Inspection

Item No.	*Servicing Detail*

Safety Precautions

1. Whenever guns are to be worked on and it is known or it possible that live ammumnition is in the breech, or when bomb is to be removed or unloaded, a SAFETY MAN is to b posted in a commanding position with orders to prevent a persons or vehicles from approaching the aircraft, or passing i front of the guns, until the aircraft is reported cleared.
   (a) Ensure that all armament switches are set to "OFF" o "SAFE".
   (b) Ensure that all ammunition, pyrotechnics and explosiv stores have been removed.
   (c) Check that the signal pistol is unloaded.

Before Inspection

2. During engine run, carry out a functional test of all turre and gun firing mechanisms, and inspect hydraulic componen (F and D) turrets for leaks.

3. Supervise the preparation for servicing by ensuring that eac man is familiar with his duties, and that the equipment available for the work.

During Servicing

4. Supervise the work of all armament tradesmen to ensure a hig standard of workmanship, and that the items checked ar serviceable.

(continued)

Arrange assistance as required by armament tradesmen and progress work of other trades to ensure that no delays are occasioned by default of armament personnel.

Carry out a functional test of all turrets during final engine ground run; ensuring that the following adjustments are correctly made:—

(a) Setting of mechanical limit stops, "D" and "F" turrets,

(b) Setting of electrical limit switches "B17" turret.

(c) Setting of gun fire interrupter to give correct bullet clearances.

(d) Setting of gun travel interrupter.

(a) Ensure that all items on Servicing Record Cards (E/E. 317) have been carried out, and are signed by the personnel concerned. Deliver the completed E/E. 317's to the N.C.O. i/c. Servicing.

(b) Ensure that details of repairs and replacements have been entered and signed for in the current Form E/E. 77.

Card Number

Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

ARMAMENT MAN "A"

Safety Precautions

Whenever guns are to be worked on and it is known or it possible that live ammunition is in the breech, or when a bom is to be removed or unloaded, a SAFETY MAN is to be poste in a commanding position with orders to prevent all persons vehicles from approaching the aircraft, or passing in front of th guns, until the aircraft is reported cleared.

(a) Ensure that all armament switches are set to "OFF" "SAFE".

(b) Ensure that all ammunition, pyrotechnics and explosiv stores have been removed.

(c) Check that the signal pistol is unloaded.

Item No.	*Servicing Detail*

1. Contact Armament N.C.O. before commencing servicing, fo any rectification or special servicing instructions.

Front Turret

2. Assist Man "B" to:—

   (a) Remove detachable doors from cupola, and

   (b) Remove guns and ammunition boxes for servicing in Arma ment Section.

Rear Turret

3. Assisted by Man "B" remove guns for servicing in Armamen Section.

(continued)

em No.	Servicing Detail

id Upper Turret

(a) Inspect the cupola transparent panels for cracks and other damage.

(b) Remove the cupola jettison panel.

(c) Assisted by Man "B" remove the 20 m.m. guns for servicing in the Armament Section.

mb Gear

Assist Man "B" to remove the following for Servicing in the Armament Section:—

(a) All bomb carriers,

(b) Type "F" E.M. release unit, and

(c) 4,000 lb. bomb crutches.

vigator's Compartment

(a) Remove the signal pistol for servicing in the Armament Section.

(b) Clean and inspect the signal pistol mounting for damage and security.

(c) Clean and inspect the signal cartridge and pistol stowages for damage and security.

id Upper Turret

(a) Clean the turret thoroughly.

(b) Inspect all turret members and components for damage, corrosion and security.

Clean and examine the gun mounting slides and cradles for the following:—

(a) Damage and security, and excessive wear,

(b) Recoil mechanism for damage and excessive wear,

(c) Bridges pieces and side links for damage, and

(d) Inspect the disengaging and hand operating mechanisms and components for damage and security. Ensure that the disengaging gears operate correctly to engage the hand winding

(continued)

Item No.	*Servicing Detail*

gears and when released, the clutches engage the pow units correctly.

9. Clean and examine the following for wear:—
   (a) Elevation driving gears,
   (b) Elevation worm and nuts,
   (c) Rotation driving gears, and
   (d) G.F.I. gears.

10. (a) Inspect the ammunition boxes and ducts for damage a security.
    (b) Ensure that the hinge flats inside the boxes are undamag and operate correctly.

11. Check the seat adjustment for freedom of movement and locki devices for correct operation.

12. Inspect the link ejection chutes and spring loaded shutters the cartridge case hopper for damage and security.

13. (a) Inspect the "Empties" containers for damage and securi
    (b) Check the mouth plate, mouth plate slide, and release cat for serviceability.

14. Inspect the armoured plate for security and ensure that t latches of the hinged sections lock positively.

15. Inspect pipe lines of the pneumatic cocking system for securi damage, chafing, and deterioration.

16. Release the air from the air cylinder and remove the cylinder.

17. Drain any accumulated moisture from the cylinder and repla it in the turret.

18. (a) Check the feed assister sprockets and rollers for freedo of rotation and the motor switch lever for freedom of o eration.

(continued)

(b) Ensure that the spring of the non-return pivot is serviceable and functions correctly.

Inspect the ammunition rounds counter star wheels and flexible drives, for damage, security and correct functioning.

Manually pass a belt of dummy rounds through the ammunition ducts and feed assisters and ensure that the passage is unrestricted.

Using a belt of dummy rounds, test the feed assister for correct power operation.

On the G.G.S. carry out the following:—

Note:—

(a) Any adjustment to the lens is to be done by an instrument tradesman.

(b) The bolt holding the sight to the bracket and the nut at the left hand end of the bracket should be tightened carefully to avoid damage to the sight.

(c) Inspect the G.G.S., controls, and pedals for damage and security.

(d) Check the operation of the sun screen and ensure that the lenses are clean and tight.

(e) Do not over-tighten the reflector and sun screen fixing screws.

(f) Inspect the control cables for fraying, kinking, corrosion and correct functioning on pulleys.

(g) Move the sight to the extremities of its travel on the anti-vibration slide and ensure that the play in the bearings is not excessive.

Carry out a functional test as follows:—

(a) Turn the selector dimmer to "Gyro Night" and switch on the sight.

(b) Check that the graticule erects within 10 seconds and does not vibrate.

(c) With the right pedal depressed turn the selector dimmer to

(continued)

Item No.	*Servicing Detail*

"Gyro Day" and check that the moving graticule dro slightly when the dimmer is turned.

(d) Ensure that the moving graticule only is visible.

(e) Ensure that the diamends of the moving graticule mo towards the central bead when range is increased or span d creased and away from the central bead when range is i creased or span decreased and away from the central bea when the operations are reversed.

(f) Check the functioning of th eover-ride spring on the sig by setting the maximum span of 120 feet and noting th the graticule does not increase when the range setting decreased below approximately 280 yards. Reset span to feet.

(g) Turn the selector dimmer to "Fixed" and "Gyro" ar check that both graticules are visible.

(h) Ensure that the brilliance of the graticules vary as th selector dimmer is turned. Reset to maximum brilliance.

(j) Turn the selector dimmer to "Fixed" and ensure that th fixed graticule only is visible with the masking level in th raised position.

(k) Lower the masking lever, check that the cross only visible and that the fixed graticule ring is obscured f all eye positions. Switch off sight.

24. Check the functioning of the range control as follows:—

(a) Press the left pedal down to its stop and check that th range control and range pulley both register 800 yards.

(b) Press the right pedal down to its stop and check that th range control and range pulley both register 200 yards.

(c) The permissible tolerance for sub-paragraphs 24 (a) an 24 (b) is 5% of range shown.

(d) Set the range control at 400 yards and check that the sig range pulley also registers 400 yards.

(continued)

(e) Adjustment to range control cable should be made on the bottom adjuster behind the armour plate and to the range pulley cable on the top adjuster in the range support bracket.

ed Assister Motors

. (a) Inspect the micro switches for security of mounting and check for correct operation.

(b) Inspect the relay contacts for pitting and burning.

un Fire Interrupter

. (a) Clean the drum and examine the edges of the image for pitting and burning.

(b) Test the reversing switches for continuity.

(c) Ensure that the spring-loaded contacts are clean and bear correctly.

. Inspect for security of mounting and serviceability:—

(a) Elevation and depression limit switches.

(b) Rotation and elevation over-ride.

(c) Reversing switches.

3. Examine the contacts of the following components for pitting and burning:—

(a) Inter-locking relay.

(b) Power circuit breaker.

9. Inspect the radio interference suppressor for:—

(a) Condensers for wax seepage.

(b) Coils for security.

(c) Cable connections for cleanliness and security.

0. Remove brush covers, inspect brushes and commutators of the following:—

(a) Motor generator.

(b) Elevation motor.

(c) Rotation motor.

(continued)

Item No.	*Servicing Detail*

Note.—If unserviceable in any way, refer to Electri Section.

31. Inspect the voltage regulators for security of mounting a connections. Do not alter the adjustment.

32. Inspect the circuit breaker for the following:—
    (a) Security of mounting,
    (b) Cables and connections clean and secure, and
    (c) Contacts for pitting and burning.
    Note.—If unserviceable in any way, refer to Electrical Secti

33. Lubricate the following:—
    (a) Elevation worm,
    (b) Elevation driving gears and universal joints,
    (c) Rotation driving gears and bearings,
    (d) G.F.I. gear train and gear train bearings,
    (e) G.T.I. telescopic link and operating face of cam,
    (f) Outrigger bearings,
    (g) Seat adjusting mechanism,
    (l) Feed assister tension roller,
    (j) Gun slides and recoil mechanism,
    (k) G.G.S. anti-vibration slides and pulley bearings,
    Note.—Do not lubricate the sight head range pulley bearin
    (l) Elevation driving gear bearings,
    (m) G.F.I. sliding drum shaft,
    (n) G.T.I. pivots and rollers,
    (o) Feed assister top sprockets, rollers and tension and rol telescopic tube,
    (p) Dis-engaging handle locking slides,
    (q) Hand operating shaft universal joints,

(continued)

(r) Dis-engaging lever pivots, and

(s) G.G.S. cables.

4. Check the turret bolts for tightness and renew shake-proof washers where found loose.

Rear Turret

5. (a) Inspect the ammunition box quick release fasteners and hinged sides for damage, security and correct operation.

(b) Inspect the ammunition boxes and support brackets for damage, corrosion and security.

(c) Inspect the ammunition ducts for damage and corrosion.

(d) Inspect the duct support brackets and belt access flaps for fractures, damage and security . Ensure that the duct joints are correctly aligned.

(e) Using a short belt of dummy rounds, carry out a gauge check of the tracks.

6. Inspect the auxiliary feed assisters for damage, corrosion and security and check the following adjustments:—

(a) Electric motor cut-out micro switch position,

(b) Electric motor spring tension,

(c) Ensure that the motor pivots freely,

(d) Check the sprocket over-run.

(e) Inspect the micro switches for security of mounting,

(f) Carry out functional test of relay switches,

(g) Check motor for correct functioning, and

(h) Carry out functional tests of auxiliary feed assister using a belt of dummy rounds.

7. Examine the following for cleanliness and good contact. If pitted or burnt, refer to Electrical tradesman:—

(a) Slip rings and brushes,

(b) Armature relay and switches, and

(c) Examine the electric motor for signs of overheating.

(continued)

Item No.	*Servicing Detail*

38. Inspect the radio interference suppressor for:—
    (a) Condensers for wax seepage,
    (b) Security of coils, and
    (c) Cleanliness and security of cable connections.

Bomb Gear (Navigator's Area)

39. (a) Clean and inspect the bomb carrier housings for damag
    (b) Check the operation of the carrier stabilising mechanisn securing hook, trip pawl and safety catch.
    (c) Grease all bomb carrier housings.

Bombing Panel

40. (a) Inspect all items on bombing panel for serviceability an security.
    (b) Ensure that fuses and spare fuses are serviceable and c correct value.
    (c) Check distributor for serviceable operation. If faulty refe to electrical tradesman.
    (d) Examine the jettison bars for pitting and burning. Retur bars to "SAFE" position.

Bomb Releases

41. (a) Assisted by Man "B", cock all release units, place maste switch "ON", set 16 point selector switch box to "SINGLE and "SALVO" and carry out functional test of all releas units.
    (b) Ensure that all release units operate. Re-cock units.
    (c) Repeat above test with 16 points selector switch box set t "DISTRIBUTOR".
    (e) Set selector switch box to "SAFE".
    (f) Move jettison bars to "FIRE". Ensure that all release unit operate.
    (g) Return jettison bars to "SAFE".

(continued)

(h) Depress type "H" jettison switch whilst electrical tradesman checks continuity of circuit.

ıg Units

(a) Assisted by Man "B", carry out functional test of all nose and tail fusing units.

(b) Return fusing switches to "SAFE".

(c) Place Master Switch "OFF".

Upper Turret

With the assistance of Man "B" carry out the following operations:—

(a) Install the guns in their mountings .

(b) With the recoil buffer assemblies removed, check each gun for "Free Float". Rectify high spots as necessary.

(c) Complete the installation of the guns and connect the flexible cocking pipe to the cocking unit and firing cable sockets to the solenoid plugs.

Note.—When fitting flexible cocking pipes, ensure that the pipes cannot be damaged by the mounting cradles during recoil.

(d) Fit B.F.M's and check the rack operating lever and roller clearance.

Turret (Exterior)

Assist Man "B" to replace the guns.

ıt Turret

Assist Man "B" to replace the guns and ammunition boxes.

ıb Gear

(a) Assisted by Man "B" replace the bomb carriers

(b) Replace E.M. Type "F" release unit.

Upper Turret

(a) Charge the air cylinder to 450 lb. p.s.i.

(b) Ensure that the dis-engaging gear handles are "IN" and

(continued)

Item No.	*Servicing Detail*

power units positively engaged before power operating the turre

(c) Check the gun cocking system for correct operation and f air leaks by leaving the cocking levers "ON" for tw minutes and noting any undue drop in pressure. Mo cocking lever to "OFF" position after test.

(d) Power operate the turret and test through all ranges movement in normal and high speed operation. During th test, check the electric gun firing mechanism for corre operation.

(e) Ensure that the spring loaded shutters of the cartridge ca hoppers function correctly when the guns are elevated an depressed.

48. (a) Check the G.F.I. mechanism for correct adjustment.

(b) Test the G.T.I. for correct adjustment. Ensure that th guns are automatically elevated when the turret is rotate from the beam position with the guns depressed.

(c) Repeat the test with the high speed button depressed an check the operation of the over-ride spring.

(d) Check the operation of the elevation and depression mech anical limit stops by manually elevating and depressing th guns, until the relevant worm nut comes in contact wit the nuts on the worm.

(e) Ensure that where the levation and depression limit switch operate, there is a minimum clearance of 3/16 inch bewtee the surface of the worm nut and th surface of the relevan worm stop nut.

(g) Ensure that motor generator does not overheat.

(h) Ensure that the manual operating handles and adapters ar securely stowed and all switches are left in the "OFF position.

49. Clean the transparent panels.

(continued)

em No.	*Servicing Detail*
.	Assist Man "B" to carry out functioning tests of Twin-cell launching chute.
.	Servicing Record Cards E/E. 317 — Sign certificate for completing Minor Servicing.

Card Number 26

Aircraft Planned Servicing Schedule

LINCOLN AIRCRAFT

Minor Servicing

ARMAMENT MAN "B"

Safety Precautions

Whenever guns are to be worked on and it is known, or it is possible, that live ammunition is in the breech, or when a bomb is to be removed or unloaded, a SAFETY MAN is to be posted in a commanding position with orders to prevent all persons or vehicles from approaching the aircraft, or passing in front of the guns until the aircraft is reported cleared.

(a) Ensure that all armament switches are set to "OFF" or "SAFE".

(b) Ensure that all ammunition, pyrotechnics and explosive stores have been removed.

(c) Check that the signal pistol is unloaded.

Item No.	*Servicing Detail*

Front Turrets

1. Assisted by Man "A":—

   (a) Remove the detachable doors from the cupola.

   (b) Remove the guns and ammunition boxes for servicing in the Armament Section.

Rear Turret

2. Assisted by Man "A" remove the guns for servicing in the Armament Section.

Mid Upper Turret

3. Assist Man "A" to remove the 20 mm. guns for servicing in the Armament Section.

(continued)

mb Gear

Assisted by Man "A" remove the following for servicing in the Armament Section:—

(a) All bomb carriers,

(b) Type "F" E.M. release E.M. releaes unit ,and

(c) 4,000 lb. bomb crutches.

ır Turret

(a) Remove the inspection panels,

(b) Thoroughly clean the turret, and

(c) Inspect all turret members and components generally for damage, corrosion, leaks and security.

Inspect the turrets as follows:—

(a) Transparent panels for cracks and other damage.

(b) Gun mountings and chassis for damage and security.

(c) Test the operation of the ejection aperture seals and check for correct adjustments.

(d) The safety belt and anchorages for damage and security.

(e) The seat and seat adjusting mechanism for damage, security and correct functioning.

(f) The turret doors for correct functioning. Ensure that the slides and plungers are undamaged, and that the axe is securely stowed and is not fouling the door lock.

Inspect the turret as follows:—

(a) Operate the control handle of the elevation drive to "Disengaged" position and test the manual operation of the gun cradles in elevation and depression. Ensure that the gun slot shutters operate correctly and check that the loading springs operate correctly when re-engaging the clutch.

(b) Set the lever of the disengaging gear to "Free' and test the hand rotation mechanism for freedom of movement.

(c) Inspect all bowden cables for fraying, corrosion and correct adjustment.

(continued)

Item No.	*Servicing Detail*

(d) Check the tightness of bolts securing the turret to the a frame.

(e) Inspect the gun sight mounting linkage and link pivots f damage and security.

(f) Inspect the control handles and linkages for damage, secur and freedom of movement.

Note.—When checking the freedom of movement, set t disengaging lever to "Free" and start the mot The control handle is not to be moved unless t motor is running.

(g) Inspect the feed assisters for damage and security. Ensu that the return springs are serviceable, correctly locat and secure.

(h) Using a short belt of dummy rounds, carry out a functior test of the feed assisters.

8. On the G.G.S. carry out the following:—

Note.—Any adjustment to the lens must be done by an instr ment tradesman.

(a) The bolt holding the sight to the bracket and the butt the left-hand end of the bracket is to be tightened carefu to avoid damage to the sight.

(b) Inspect the G.G.S. controls and pedals for damage a security.

(c) Check the operation of the sun screen and ensure that t lens are clean and tight.

(d) Do not overtighten the reflector and sun screen fixing screv

(e) Inspect the control cables for fraying, kinking, corrosion a correct functioning on pulleys.

(f) Move sight to extremities of its travel on the anti-vibrtai slide and ensure that the play in the bearings is not excessi

9. Carry out a functional test as follows:—

(a) Turn the selector dimmer to "Gyro Night" and switch the sight.

(continued)

(b) Check that the graticule erects within 10 seconds and does not vibrate.

(c) With the sight pedal depressed, turn the selector dimmer to "Gyro Day" and check that the moving graticule drops slightly when the dimmer is turned.

(d) Ensure that the moving graticule only is visible.

(e) Ensure that the diamonds of the moving graticule move towards the central head when range is increased or span decreased, and away from the central head when the operations are reversed.

(f) Check the functioning of the over-riding spring on the sight by setting maximum span o f120 feet and noting that the graticule does not increase when the range setting is decreased below approximately 280 yards. Reset span to 35 feet.

(g) Turn the selector dimmer to "Fixed" and "Gyro" and check that both graticules are visible.

(h) Ensure that the brilliance of the graticules vary as the selector dimmer is turned. Reset to maximum brilliance.

(j) Turn the selector dimmer to "Fixed" and ensure that the fixed graticule only is visible with the masking lever in the raised position.

(k) Lower the masking lever, check that the cross only is visible and that the fixed graticule ring is obscured for all eye positions. Switch off sight.

0. Checking the functioning of the range control as follows:—

(a) Press the left pedal down to its stop and check that the range control and range pulley both register 800 yards.

(b) Press the right pedal down to its stop and check that the range control and range pulley both register 200 yards.

Note.—The permissible range tolerance for sub-paragraphs 10 (a) and 10 (b) is 5% of range shown.

(c) Set the range control at 400 yards and check that the sight range pulley also register 400 yards.

Note.—Adjustments to the range control cable should be made on the over-ride spring housing and to the range pulley cable on the jockey pulley.

(continued)

Item No.	*Servicing Detail*

11. Test the following for correct functioning:—
    (a) Call lights,
    (b) Turret lights, and
    (c) Heated clothing sockets.

12. Ammunition Feed Assister:—
    (a) Inspect micro switches for security of mounting.
    (b) Inspect cables and connections for cleanliness and securi
    (c) Carry out functional test of relay switches.
    (d) Carry out functional test of feed assister.

13. Check for serviceability and security of mounting:—
    (a) "Fire and Sage" switches,
    (b) Circuit breaking switch,
    (c) Gun firing button,
    (d) Carry out functional test of gun firing relays, and
    (e) Inspect the turret wiring for security of cleating, chafi and serviceability.

14. Lubricate the following:—
    (a) gun mountings and slides,
    (b) gun slot shutter slides,
    (c) generator control linkage ball joints,
    (d) G.G.S. anti-vibration slides and pulley bearings,
    (e) do not lubricate pulley bearings on the sighting head,
    (f) sight linkage pivots and bearings,
    (g) gun chassis pivots,
    (h) gun release lever linkage pivots,
    (j) ejection aperture seal linkage pivots,
    (k) sparingly, the felts of the gun slot aperture seals,

(continued)

(l) generator contact linkage plain bearings,

(m) seat adjusting mechanism plunger and pivots,

(n) disengaging gear pivots,

(o) control linkage pivot bearings,

(p) turret control bearing in servo feed platform,

(q) G.G.S. cables, and

(r) Bowden cable nipple ends.

ont Turrets

. (a) Clean the turret thoroughly.

(b) Inspect all turret members and components generally fo damage and security. Ensure that the front and rear mount ings are free to swivel.

(c) Inspect the gun mountings and attachments for damage and security. Ensure that the front and rear mountings are free to swivel.

(d) Check the release mechanism of the mounting. Ensure that there is no stiffness on the movement of the locking slides.

(e) Inspect the bowden cables of the disengaging gear for fraying, security and correct adjustment.

(f) Set the azimuth locking lever to "Unlock" and the disengaging gear lever to "Free". Check the rotation mechanism for freedom of operation and the manual elevation and depression of the gun cradles . Ensure that the azimuth lock functions correctly.

(g) Inspect the control handle and linkage and the sight linkage for damage, security and freedom of movement. When checking the freedom of movement, set the disengaging lever to "free" and start the motor

Note.—The control handle must not be moved unless the motor is running.

5. Carry out the following on the reflector sight:—

(a) Check the operation of the dimmer switch and sight.

(b) Inspect the sight for damage and security.

(continued)

Item No.	*Servicing Detail*

(c) Inspect for signs of discolouration of the lamp bulb. R place if discoloured.

(d) Inspect the spare bulbs for serviceability and the stowag for damage and security.

17. Lubricate the following:—

(a) gun mounting and slides,

(b) generator control linkage ball joints,

(c) sight linkage pivots and bearings,

(d) gun chassis pivots,

(e) gun release lever linkage pivots,

(f) sparingly, the felts on the gun slot aperture seals ,

(g) generator control linkage plain bearings, and

(h) bowden cables nipple ends.

18. Check the turret bolts attaching the turret to the airframe fo tightness.

19. Inspect all wiring, feed cables and connections, for security c cleating, cleanliness, chafing and deterioration.

20. Carry out functioning tests of the gun firing relay and armatu relay.

21. Examine the electric motor for signs of overheating.

22. Ensure that all fuses and spare fuses are serviceable and of corre value.

23. Inspect the radio interference suppressor for the following:—

(a) Condensers for wax seepage,

(b) Coils for security, and

(c) Connections for cleanliness and security.

(continued)

em No.	Servicing Detail

omb Gear (Centre Fuselage)

4. (a) Clean and inspect the bomb carrier housings for damage.
   (b) Check the operation of the carrier stabilising mechanism, securing hook, trip pawl and safety catch.
   (c) Grease all bomb carrier housings.

Mid Upper Turret

5. Assist Man "A" to carry out the following operations:—
   (a) Install the guns in mountings.
   (b) Check for free float.
   (c) Complete the installation of the guns.
   (d) Fit the B.F.M. and check the rack operating lever and roller clearance.

Rear Turret

6. (a) Assisted by Man "A" replace the guns in the turret, and ensure that they are securely locked in position.
   (b) Lock the release lever to the gun chassis with locking wire.

Front Turret

7. Assisted by Man "A", replace the guns in the turret and ensure that they are correctly locked in position.

8. Replace the ammunition boxes and ensure that the retaining catches and ammunition rollers operate correctly.

Bomb Gear

9. Assist Man "A" as required, to replace the bomb carriers, and carry out functional tests.

Navigator's Compartment

10. Replace the serviced signal pistol in its stowage.

Front Turret

11. Check the fluid level in the sump of the hydraulic generator and replenish as necessary. Clean the generator filter.

(continued)

Item No.	*Servicing Detail*

32. Power operate the turret and bleed the hydraulic system.

33. Power operate the turret and carry out the following operations:
    (a) Centralise the controls and check them for correct adju ment in the "Neutral position".
    ()b Ensure that the turret movement correspond to the cont movement and that speed in opposite directions is t same for equal control movement.
    (c) Test the turret throughout all its movements and ensu that each pressure relief valve operates correctly. Clean t relief valves as necessary.
    (d) Conduct a complete functional test of the gun firing cont system.
    (e) Ensure that the handle of the hand rotation mechanism a all turret tools are securely stowed.
    (f) Replace the detachable cupola doors securely.

Rear Turret

34. Check the fluid level in the sump of the hydraulic generat and replenish as necessary. Clean the generator filler filter.

35. Power operate the turret and bleed the hydraulic systm.

36. Power operate the turret and carry out the following operations:
    (a) Centralise the controls and check for correct adjustment neutral position.
    (b) Ensure that the turret movement corresponds to the cont movement and that the speed in opposite directions is t same for equal control movement.
    (c) Test the turret throughout all its movements and ensure th each relief valve operates correctly. Clean the relief valv as necessary.
    (d) Conduct a complete functional test of the gun firing cont system. Ensure that the auxiliary feed assisters operate wh the gun firing button is pressed.

(continued)

(e) Ensure that the lever of the disengaging gear is in the "ENGAGED" position. Operate the disengaging gear remote control switch and check that the turret can be freely rotated from within the fuselage.

(f) Move the external lever of the azimuth disengaging gear to "FREE". Check that the turret moves freely when rotated manually. Return lever to "ENGAGED" and ensure that turret locks in azimuth.

(g) Ensure that all turret tools are securely stowed.

(h) Replace all inspection panels.

7. Clean the transparent panels.

...in-Cell Launching Chute

8. (a) Inspect the chute and its components for corrosion and damage. Remedy as necessary.

(b) Inspect the components of the chute for security of attachment to the chute and ensure that the chute is correctly secured in the aircraft.

(c) Lubricate the cover and door axis pins with oil, lubricating anti-freezing, Type "A".

(d) Wipe the chute cover catch, door springs, foot pedal assembly and lanyard with a clean rag moistened with oil, lubricating anti-freezing, Type "A".

(e) Wipe the electro magnetic unit, and remainder of the chute with a clean dry rag.

9. Assisted by Man "A" carry out functioning test as follows:—

(a) Ensure that all bomb selector switches are in the "OFF" position. Place master switch "ON".

(b) Open the bomb bay doors fully and see that the electric motor functions and lowers the deflector correctly.

(c) Ensure that the bomb carriers are not loaded.

(d) Cock the E.M. units on both cells by hand after operating the crank lever. Operate the test levers to check for correct cocking.

Note.—(i) To check the [illegible] at the rear cell, with

(Continued)