T.O. 1B-26B-6

TECHNICAL MANUAL

INSPECTION REQUIREMENTS

USAF MODEL

B-26

AIRCRAFT

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INTRODUCTION

This manual contains complete requirements for scheduled maintenance inspections, test flight inspections, and scheduled replacement of accessories and components applicable to the aircraft to which the manual pertains. This manual does not contain instructions for repair, adjustment, or other means of rectifying defective conditions; nor does it contain detailed instructions for trouble shooting to find causes for malfunctioning. The inspection requirements in the manual are stated in such a manner as to establish what equipment is to be inspected, when it is to be inspected, and what conditions are to be sought. Applicable portions of the appropriate maintenance manual should be consulted to obtain maintenance instructions that are beyond the scope of this manual.

The inspections prescribed by this manual will be accomplished at specified periods of Air Force organizational or Navy Class D maintenance activities, with assistance provided by Air Force field maintenance or Navy Class C activities when required, and by Department of Army activities as authorized by Army directives. Compliance with the provisions of this manual is required to assure that latent defects are discovered and corrected before malfunctioning or serious trouble results.

This manual is divided into six sections. Sections I, II, and IV comprise the basic inspection requirements for Preflight, Postflight, and Periodic Inspections. Section V contains inspection requirements that supplement the requirements of one of the above sections at specific periods or upon occurrence of specific conditions. Section VI contains requirements for replacing specific accessories or components at prescribed periods. Section VII contains test flight inspection requirements. In order to arrange inspection and replacement requirements as nearly as possible according to the manner in which work will be divided and assigned, the requirements in each section of the manual are divided into groups under "system" headings. A system title indicates either a functional system or a group of related components.

Requirements shown in Sections I, II, and IV are only basic requirements of the inspection. It may be necessary to obtain additional requirements from Section V or Section VI to complete the inspection; for example, if the 4th periodic is to be accomplished, any requirements that fall due at every 2d or 4th periodic inspection are to be included with the basic requirements of the periodic inspection. Discrepancies appearing on "Aircraft Flight Report and Maintenance Record" become a part of the requirements of appropriate postflight or periodic inspection in order that the number of delayed discrepancies may be held to an absolute minimum.

No attempt is made to sequence the order of performance of inspection requirements. The inspection methods employed, the availability of specialists at specific times, and the facilities utilized are too variable to establish standardized sequencing.

The inspection intervals designated for accomplishment of inspection requirements are the maximums, and are prepared from factual operating data for the primary use of the aircraft by type designation and will be revised as experience dictates. These inspection intervals should never be exceeded. Due to local

conditions (types of missions, special utilization, geographical locations, etc.), commands, local commanders, and their maintenance officers, who not only have the prerogative but are expected to exercise it, should increase the frequency or scope of inspection as required.

The times in man-minutes for accomplishment of inspection requirements reflect only the time required for inspection, plus normal maintenance and adjustment, and are to be utilized by maintenance officers for planning and scheduling. Those factors (personnel and equipment shortages, lack of parts, unpredictable maintenance, unscheduled replacements, adverse working conditions, and qualifications of personnel) which will directly affect the length of time for a scheduled maintenance inspection are not reflected, because they cannot be accurately predicted for any particular inspection.

This manual pertains to all of a model or certain series of aircraft and may, therefore, contain inspection requirements applicable to specific equipment that is not installed on individual aircraft. When this situation is encountered, those requirements that are not applicable should be disregarded.

Additional information relative to recording of inspections and the use of this manual may be obtained by consulting applicable technical directives.

Changes to this manual will be published when necessary to add, delete, revise, or change frequency of requirements. Such revisions will be based on factual data accumulated as a result of maintenance experienced with the aircraft concerned. Data will be gathered by field studies, from Unsatisfactory Reports or reports on unsatisfactory or defective material, and from other communications pertaining to the handbook and its requirements. Recommendations proposing changes to this manual should be submitted to the Maintenance Engineering Services Division of the AMA or AF depot having prime engineering responsibility for the aircraft, to the Bureau of Aeronautics, or to the Transportation Corps, Army Aviation Field Service Office.

SECTION I

PREFLIGHT INSPECTION

This inspection will be accomplished prior to the first flight of the day. The inspection consists of checking the aircraft for flight preparedness by performing visual examination and operational tests to discover defects and maladjustments that, if not corrected, could cause accidents or aborted missions. Requirements preceded by an asterisk are applicable only when use of the equipment concerned is contemplated. Requirements preceded by a double asterisk will be accomplished prior to each flight when more than one flight is made in the same day. Additional information pertaining to the application of the preflight inspection and exceptions thereto are contained in applicable technical directives.

ELECTRICAL POWER OFF

PREPARATION

		MAN-MINS
1.	AFTO Form 781 checked. (Applicable entries made after completion of inspection.)	05
2.	Fire extinguisher provided.	05
3.	Wheel chocks in proper position.	05
4.	Necessary maintenance stands and/or ladders provided.	10
5.	Pitot tube cover, airplane covers, wheel and dust excluders removed.	01
6.	All electrical switches for "OFF" position.	02
7.	Aircraft tiedowns released (if aircraft is to be flown).	05
8.	Landing gear and bomb door ground safety locks installed.	03
9.	Wing flaps down; cowl flaps open; oil cooler doors open.	02
10.	Aircraft wings and flight control surfaces for absence of frost, snow and ice.	03
11.	Flight controls unlocked; locked after completion of inspection.	01
12.	Necessary cowling removed; reinstalled after completion of inspection.	20
13.	Auxiliary power source provided.	10

AIRFRAME (System No. 3)

		MAN-MINS
1.	Plexiglas and windshields for cracks and cleanliness (inside and outside).	20
** 2.	Wings, fuselage, empennage and control surfaces, including flaps, for obvious damage.	35
3.	Safety belts and shoulder harnesses for bent or damaged parts; fabric and leather for cleanliness, cuts or fraying; latching parts for freedom of operation and positive locking; date of weight test; security of attachment.	05
4.	Entrance doors for freedom of operation and proper latching. If canopy release handle safety wire has been broken, check release pins for positive engagement before safetying.	03
5.	Fixed static ground wire for good contact with ground.	01
6.	Flight control hinge points for absence of frost, snow and ice.	09
7.	All emergency exits for positive engagement of locks.	05
8.	Disposal containers for availability.	02
9.	Check lists and ash trays available.	01
10.	Aircraft technical publications available.	02
11.	Flight controls for free movement and control surfaces for correct direction of movement with respect to cockpit controls.	03
12.	Surface control locks for ease of operation and positive locking. (Any difficulty encountered in locking will necessitate inspection of rudder horn hinge support clevis for cracks, distortion and/or binding.)	01
13.	Trim tabs for free movement and proper direction of movement with respect to cockpit controls.	03
14.	First aid kits for availability.	02
15.	Engine controls for full travel, unrestricted movement and spring-back.	03
16.	Engine control friction locks for proper operation by assuring that controls move freely with lock in "OFF" position; friction increases as lock is moved toward the "ON" position and controls are held tightly before limit of movement of lock control is reached.	01
17.	Hand axe for availability in stowage bracket.	02
**18.	All loose equipment properly stowed and secured.	04
**19.	Aircraft and engine scoops, fairings, panels and doors for obvious damage and security.	22
20.	Engine cowl, cowl flaps and filters for obvious damage and security.	06
21.	Bomb bay doors for obvious damage, security and alignment.	02

LANDING GEAR (System No. 4)

		MAN-MINS
** 1.	Landing gear and doors for obvious damage.	09
** 2.	Landing gear shock struts for leakage and specified inflation.	03
3.	Wheels for obvious damage.	03
** 4.	Tires for damage, blisters, grease or oil and specified inflation.	03
5.	Brakes for sponginess and operation of parking brake.	01
** 6.	Nose gear upper and lower torque arms for cracks; pay particular attention to area on lower torque arm at inside radius on left side of arm.	03
** 7.	Nose wheel snubber for leakage, obvious damage and proper functioning. (Actuate upper torque arm through full travel range with torque arms disconnected.)	03
** 8.	Remove two nose gear torque arm attaching bolts and inspect for evidence of binding, bending, scoring or possible shearing.	05
9.	Polished surfaces of shock struts and hydraulic pistons cleaned with cloth moistened in hydraulic fluid.	09
10.	Landing gear emergency release handles in stowed position.	01
11.	Landing gear down locks for positive engagement.	03
**12.	Main landing gear torque arms (reworked beyond 3/4 inch limits) for cracks in reworked areas. (Use strong magnifying glass.)	04

HYDRAULIC PNEUMATIC (System No. 5)

** 1.	Hydraulic reservoirs for specified fluid level; filler cap for security.	02
2.	Hydraulic accumulators for specified air pressure.	01
3.	Emergency hydraulic selector valve set on "SYSTEM".	01
4.	Hydraulic lines for obvious damage and evidence of leakage.	22
5.	Emergency air brake system for specified pressure.	01

UTILITY (System No. 6)

		MAN-MINS
1.	Anti-icing tank for specified servicing; filler caps for security; tank and lines for evidence of leakage and security.	01
** 2.	Fire extinguisher cylinders or containers for evidence of premature discharge (discharge indicator discs missing or ruptured).	01
3.	Life raft door and release handle for obvious damage.	01
** 4.	Portable CO_2 fire extinguishers for accessibility and security.	02
** 5.	Portable A-20 fire extinguisher for dents, broken indicator glass, pressure within specified limits, seal intact and security of mounting.	02
** 6.	Oxygen system and components for the following:	05
	a. System and portable cylinders for specified pressure (400-425 psi).	
	b. Regulator emergency valve safety wire intact.	
	c. Flow indicators for operation.	

FUEL (System No. 8)

** 1.	Fuel tanks for proper servicing; filler cap seals for deterioration; filler caps for security.	08
2.	Droppable fuel tanks for obvious damage, security and evidence of leakage.	04
** 3.	Fuel drain cocks and sumps for water and foreign matter.	09
4.	Fuel vent outlets for obstructions.	02
5.	Fuel booster pumps for evidence of leakage.	04
** 6.	Underside of wing and main wheel wells for evidence of fuel leakage.	02

OIL (System No. 9)

** 1.	Exterior of aircraft for evidence of oil leakage.	02
2.	Oil cooler cores for obstructions.	04
** 3.	Oil tanks for proper servicing; dip sticks and filler caps for security.	04

PROPELLERS (System No. 12)

		MAN-MINS
** 1.	Propeller blades and anti-icer boots for obvious damage.	06
** 2.	Propellers and visible components for evidence of leakage.	06

ELECTRICAL (System No. 14)

1.	Navigation light lenses for obvious damage.	04
2.	Evacuation system (bells, etc.) for operation.	02
** 3.	Circuit breaker panel for tripped breakers; fuse panels for blown fuses.	02

INSTRUMENTS (System No. 15)

** 1.	Pitot tube for obstructions and security.	03
** 2.	Static vent for obstructions.	01
3.	Instrument cover glasses for cleanliness.	02
4.	Compass correction cards available.	01
5.	Rate of climb indicator for zero setting. (Tap lightly to insure that pointer is properly set.)	01
6.	Autopilot secondary clutch engaged.	01
7.	Pitot static system for moisture (drain plugs removed).	03

ARMAMENT (System No. 17)

		MAN-MINS
* 1.	Tow target winch installation for the following:	37
	a. Emergency tools available and stowed in specified location.	
	b. Windlass bearings, gear housings and level winding cam for adequate lubricant.	
	c. Level wind assembly cleaned; guide rollers lubricated with engine oil; level winding guide for free travel along the full length of the cam by assuring that friction control is appropriately adjusted and rollers do not stick or bind.	
	d. Tow reel manually for binding or dragging of brake.	
	e. Release assembly for positive disengagement; swivel for unrestricted rotation.	
	f. Brake for proper operation by assuring that cable drums cannot be turned when the control lever is in the full "ON" position.	
	g. Targets and release messengers for usable condition.	
	h. Messenger leader threaded on cable.	
	i. Guide tube for straightness and security.	
	j. Tachometer drive and roller guide mount for security.	
	k. Hydraulic reservoir for specified fluid level.	
	l. Aft compartment for stowage of extra targets; messengers for security.	
	m. Reel selector valve for proper operation.	
	n. Throttle lever for free travel and positive response.	
* 2.	Tow Reel Equipment (Type A-1 Installation).	20
	a. Emergency tools available and stowed in specified location.	
	b. Tow reel operated manually for binding or dragging of brake.	
	c. Release assembly for positive disengagement; swivel for unrestricted rotation.	
	d. Brake for proper operation by assuring that cable drums cannot be turned when the control lever is in "OFF" position.	
	e. Targets and release messengers for usable condition.	
	f. Messenger leader threaded on cable.	
	g. Guide tubing for straightness and rigidity.	
	h. Tachometer drive and sheave assembly for security.	
	i. Toggle switch for proper operation (to energize solenoid and engage clutch).	
3.	Q-2A Launching Equipment (GB-26 only) for the following:	15
	a. Visual inspection of fairings, sway braces, and pads for cracks, corrosion, chafing, adjustment and general condition.	
	b. Visual inspection of the S-3/MB-3 bomb rack for positioning, general condition and installation of explosive bolt and squib circuitry.	

ELECTRICAL POWER ON

PREPARATION

	MAN-MINS
1. Electrical system energized. (Auxiliary power source provided.)	02

AIRFRAME (System No. 3)

1. Wing flaps for operation and correct indication.	03
2. Bomb bay doors for specified manual, emergency and salvo operation; indicator lights for proper operation.	05

LANDING GEAR (System No. 4)

1. Landing gear position lights or indicators for correct indications.	01

UTILITY (System No. 6)

1. Thermocouple type fire detector system for operation. (Actuate test switch.)	01
2. Fluid anti-icing systems for operation by assuring specified discharge of fluid.	03
3. Windshield wipers for operation.	01

POWER PLANT (System No. 7)

1. Cowl flaps for response to cockpit controls.	02

FUEL (System No. 8)

		MAN-MINS
** 1.	Fuel quantity gages for readings comparable with known contents in tanks.	02
2.	Each fuel selector valve and fuel booster pump for operation by assuring that no pressure is indicated with pump "ON" and valve "OFF" and that specified pressure is indicated when valves are operated in the specified sequence with pumps "ON".	03
3.	Fuel cross-feed and selector valves for operation by performing audible check. (Mechanic stationed in vicinity of valve listens for operation of motor when switch is "ON".)	03
4.	Fuel system components, lines, hoses and connections in engine nacelles for leakage, chafing and security. (Check with pressure "ON".)	10

OIL (System No. 9)

1.	Oil cooler doors for response to cockpit controls.	03

ELECTRICAL (System No. 14)

1.	All instrument lights for illumination.	02
2.	Cockpit lights for illumination.	01
3.	All compartment lights for illumination.	02
4.	Navigation and formation lights for illumination.	04
5.	Landing lights for proper extension, illumination and retraction. (Make test as brief as possible.)	03
6.	Inverters for voltage and frequency within specified limits.	01

INSTRUMENTS (System No. 15)

		MAN-MINS
1.	Pitot head heating elements for operation by noting temperature rise.	03
2.	Autopilot for operation by observing that flight controls respond to movement of pilot's control knobs.	05
3.	Autopilot secondary clutch for operation by operating autopilot from the stabilizer position and observing response of flight controls to movement of bombardier's turn knob.	01
4.	Autopilot for operation by observing that flight controls respond to movement of remote control knobs.	05
5.	Autopilot release switch (disengage button) for operation.	01
6.	Instrument indicating pointers for indications consistent with existing temperature, pressure, direction or altitude.	02

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SECTION II

POSTFLIGHT INSPECTION

This inspection is, basically, a combination of requirements for checking equipment that requires daily or frequent verification of satisfactory functioning, plus requirements that prescribe searching for defects that become apparent after the aircraft is flown. It is intended that evidence of chafing, leaks, and similar conditions be discovered and corrected during the postflight inspection to preclude progression of a relatively minor problem to a state that would require major maintenance to remedy the deficiency. The postflight inspection is, therefore, an important function that should be performed with care. Requirements preceded by an asterisk are applicable when the equipment concerned has been used.

This inspection will normally be accomplished after the last flight of the day's operation or more frequently if local conditions warrant. However, since accomplishment intervals will vary based on aircraft utilization, applicable aircraft inspection systems directives should be consulted for additional information on hourly and calendar intervals of accomplishment.

ENGINE OPERATION

OPERATION

	MAN-MINS
1. Perform the following in accordance with applicable directives if engine operation is not accomplished by flight crew following flight:	30
a. Pre-engine start.	
b. Engine start.	
c. Engine warm-up.	
d. Postflight check.	
e. Pre-shutdown check.	
f. Stopping engines.	
g. After engine shutdown.	

ELECTRICAL POWER OFF

PREPARATION

	MAN-MINS
1. Aircraft (fuselage exterior, wings, wheel wells and empennage) cleaned.	20

PREPARATION (Cont)

		MAN-MINS
2.	AFTO Form 781 checked.	05
3.	Fire extinguisher provided.	05
4.	Wheel chocks in proper position.	05
5.	Landing gear and bomb door ground safety locks properly installed.	03
6.	Necessary maintenance stands and ladders provided.	10
7.	Necessary cowling and applicable inspection panels, doors, etc. removed or opened.	20
8.	Wing flaps down; cowl flaps and oil cooler doors open.	01
9.	Flight controls unlocked; locked after completion of inspection.	01
10.	All electrical switches "OFF".	01
11.	Moor airplane if necessary.	10

AIRFRAME (System No. 3)

1.	Windshields, canopies and windows for security, cracks, crazing, leaks and cleanliness.	20
2.	Wings, fuselage, stabilizers and flight control surfaces for damage and security.	35
3.	Static ground wire for security and good contact with ground.	01
4.	Aircraft and engine cowl, scoops, fairing, panels and doors for damage and security.	32
5.	Escape hatches and access doors for damage and security.	35
6.	Relief containers, horns and urinals cleaned with disinfectant-deodorant solution; interior and exterior areas adjacent to relief tubes and urinals neutralized and cleaned (if used during flight).	20
7.	Life raft compartment door latch pins for positive engagement by visual check through windows in door.	01
8.	Interior of fuselage for damage, corrosion and cleanliness; curtains for torn fabric.	20
9.	First aid kits for:	05
	a. Broken seals.	
	b. Completeness of contents in side compartment.	
	c. Kits bear serviceable tag AF Form 50B (AF aircraft only).	
10.	Pilot and crew seats for ease of adjustment and positive locking in all positions.	04
11.	Pilot and crew seats for breaks, cracks, cleanliness and security.	05

AIRFRAME (System No. 3) (Cont)

		MAN-MINS
12.	Bomb bay doors for damage, distortion, cracks or misalignment.	05

LANDING GEAR (System No. 4)

1.	Landing gear doors and operating mechanism for damage, evidence of improper adjustment and security.	15
2.	Landing gear for damage and absence of mud, grass and ice.	15
3.	Landing gear shock struts for leakage and specified inflation.	03
4.	Polished surfaces of shock struts and hydraulic pistons cleaned with cloth moistened in hydraulic fluid.	15
5.	Tires for damage (cuts, blisters, grease or oil), specified inflation and alignment of slippage marks.	15
6.	Wheels for damage and evidence of overheating adjacent to brakes.	09
7.	Exposed brake lines for chafing, leakage and security. (Check for leakage with parking brakes in "ON" position.)	04
8.	Brake metering valves and lines for evidence of leakage.	04
9.	Landing gear emergency release handles in stowed position.	01
10.	Landing gear down locks for positive engagement.	06
11.	Nose gear upper and lower torque arms for cracks; pay particular attention to area on lower torque arm at inside radius on left side of arm.	05

HYDRAULIC PNEUMATIC (System No. 5)

1.	Hydraulic reservoir for specified fluid level, leakage and security; filler cap for security.	10
2.	Accessible pumps, valves, lines, hoses and connections for leakage; lines and hoses for chafing.	36
3.	Filter handles rotated one complete revolution.	02
4.	Hydraulic accumulators for specified air pressure.	01
5.	Polished surfaces of hydraulic cylinders cleaned with cloth moistened in hydraulic fluid.	20

UTILITY (System No. 6)

		MAN-MINS
1.	Anti-icing fluid tanks for specified fluid level; filler caps for security.	10
2.	Fire extinguisher cylinders for evidence of premature discharge (discharged indicator discs missing or ruptured).	01
3.	Portable CO_2 fire extinguishers for evidence of discharge, proper safetying (seal wire taut and lead seal affixed) and security.	05
4.	Portable A-20 fire extinguisher for dents, broken indicator glass, pressure within specified limits, seal intact and security of mounting; mounting bracket for security.	05
5.	Oxygen system and components for the following:	20
	a. System and portable cylinders for specified servicing (400-425 psi).	
	b. All system gages for agreement, within 35 psi, with servicing unit pressure gage.	
	c. Portable unit regulator for leakage of the diaphragm and air inlet check valve.	
	d. System regulators:	
	(1) Demand valve, air metering system, demand diaphragm and mask-to-regulator tubing for leakage.	
	(2) Flow indicators for operation.	
	(3) Mask-to-regulator hose for holes, kinks, cuts and flat spots; outlet elbow and clamps for security.	
	(4) Emergency valve for specified safetying.	

POWER PLANT (System No. 7)

1.	Ring cowl for cracks, defective or missing fasteners and security.	20
2.	Exposed areas of engines, with accessory section access doors or cowling removed; visually for damage and excessive leakage.	10

FUEL (System No. 8)

1.	Fuel tanks serviced; filler cap seals for deterioration; filler caps for security.	30
2.	Fuel vent, anti-syphon and drain lines for obstructions; lines for chafing.	05

FUEL (System No. 8) (Cont)

		MAN-MINS
3.	Droppable fuel tank sway braces for security, distortion and cracks.	10
4.	Droppable fuel tanks for security and damage.	10
5.	Check interior of bomb bay for evidence of fuel leakage.	05
6.	Exterior of aircraft for evidence of fuel leakage.	10
7.	Fuel tank sumps and strainers for water.	10

OIL (System No. 9)

1.	Oil tanks serviced to specified level; filler caps and dip sticks for security.	20
2.	Tanks and accessible drains, lines, hoses, connections and other components for leakage.	10
3.	Oil cooler cores for leakage, damage and clogging.	20
4.	Oil cooler doors, hinges and linkage for damage.	10
5.	Exterior of aircraft for evidence of oil leakage.	10

SUPERCHARGER, AIR INDUCTION, EXHAUST (System No. 11)

1.	All exhaust system clamps for required tightness and evidence of leakage; nuts for specified safetying.	20
2.	Exhaust stacks for cracks, evidence of burning and security.	20
3.	Ram-air intake and oil cooler intake ducts for pulled or loose rivets, obstructions and damge.	10

PROPELLERS (System No. 12)

		MAN-MINS
1.	Propellers and visible components for external evidence of leakage.	10
2.	Propeller hubs for cracks; blades for cracks and nicks or dents.	06
3.	Propeller governor feathering bosses (not reinforced) for cracking and evidence of leakage.	02
4.	Mechanical controls at governors for security and specified safetying.	06
5.	Slinger rings and discharge nozzles for obstructions and security.	04
6.	Anti-icing boots for cuts, blisters and looseness.	06

ELECTRICAL (System No. 14)

1.	Spare lamps and fuses available in holders and/or clips.	10
2.	Navigation light lens for obvious damage.	06
3.	Battery areas for evidence of leakage or overflow of electrolyte.	10
4.	Accessible electrical connections for security; wiring for evidence of chafing.	35

INSTRUMENTS (System No. 15)

1.	Pitot cover installed.	01
2.	Static vent for obstructions.	03
3.	Compass correction cards available.	01
4.	Instrument indicating pointers for indications consistent with existing temperature, pressure, direction, altitude, etc.; cover glasses for cracks and looseness; range and limit markings intact.	02

RADIO AND RADAR (System No. 16)

		MAN-MINS
1.	Externally mounted radio compass loop for damaged loop housing and security.	05
2.	Mast type antennas for security, damaged insulation and nicked or cracked metal covering.	10
3.	Fixed wire antennas for cracked insulators, broken tension units, loose connections and security.	05
4.	Dipole antennas for damage or bent elements and security.	10
5.	Flush mounted antennas for security; covers for cracks and security.	05
6.	Radio and radar antenna radomes for cracks, nicks and security; drain holes for obstruction.	30
7.	Static dischargers for sufficient wick.	20
8.	Desiccators for serviceability (proper color).	10
9.	Spare fuse holders for specified number of serviceable fuses.	20
10.	Antenna lead-ins damaged insulators, proper spacing from surrounding objects and security of connections.	15
11.	Plugs for proper insertion into jacks and receptacles.	20
12.	Junction boxes and covers for damage.	20
13.	Headset and microphone cordage and plugs for obvious damage and proper stowage.	10
14.	Flexible conduit for crushed walls, breaks and loose fittings.	10
15.	Flexible shafts for broken or crushed casing.	10
16.	Wire recorder for properly loaded and installed magazine.	10
17.	RT-178/ARC-27 for proper pressurization.	01

ARMAMENT (System No. 17)

*1.	Tow Reel Equipment (MK VIII Installation).	43
	a. External equipment for visible damage.	
	b. Footage indicator and flexible cable for visible damage.	
	c. Reel for cracks, warpage, security of drive motor, security of mounting to airframe and evidence of oil leakage.	
	d. Shock tube for security and shock action.	
	e. Cable for visible damage (first 100 feet).	

ARMAMENT (System No. 17) (Cont)

MAN-MINS

f. Reel for smooth operation.

g. Hydraulic lines and couplings for evidence of leakage; Vickers pump for security in engine nacelles.

*2. Tow Reel Equipment (Type A-1 Installation). 39

a. Toggle switch for proper operation.

b. Segment switch assembly for the following:

(1) Return of cam arm.

(2) Contact bars and shoe for cleanliness.

(3) Mounting screws and nuts for security.

c. Control box for the following:

(1) Wire terminals for security of connections.

(2) Bus bars for security.

(3) Mounting bolts and nuts for security.

(4) Main and spare fuse for correct rating.

d. Motor assembly for the following:

(1) Oil for proper level.

(2) Evidence of oil leaks.

(3) Bolts and nuts for security and safetying.

(4) Alignment of motor to reel unit.

e. Shock tube for proper shock action.

f. Cable for visible damage (first 100 feet).

g. Reel for smooth operation.

3. Q-2A Launching Equipment (GB-26 only) for the following: 15

a. Squibs removed, fairings removed and all accessible fittings and welds inspected for cracks or evidence of failure.

b. Visual inspection of fairings, sway braces, and pads; S-3/MB-3 bomb rack for cracks, corrosion, chafing and general condition.

ELECTRICAL POWER ON

PREPARATION

	MAN-MINS
1. Electrical system energized. (Auxiliary power source provided.)	05

FUEL (System No. 8)

1. All fuel system components, lines, hoses and connections in engine nacelle area and accessible components, hoses and connections in aircraft system for evidence of leakage and security (fuel pressure "ON").	20
2. Fuel quantity gages for readings comparable with known contents in tanks.	02

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SECTION III

This section is not being used at the present time due to the conversion to the periodic inspection which is a single inspection concept. However, utilization of this section may be reestablished at a later date. The requirements for the periodic inspection are contained in Section IV.

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SECTION IV

PERIODIC INSPECTION

The periodic inspection is a thorough and searching inspection of the entire aircraft. The inspection includes requirements that are also applicable to the preflight and postflight inspections. The thoroughness of the check and special tools or test equipment, if required, are indicated in the statement of the requirement.

The periodic inspection will be accomplished at the expiration of 100 flying hours after the preceding periodic inspection or at the calendar intervals specified in applicable aircraft inspection system directives.

ELECTRICAL POWER OFF

PREPARATION

		MAN-MINS
1.	AFTO Form 781 checked for discrepancies. (Applicable entries made after completion of inspection.)	01
2.	Fire extinguisher provided.	02
3.	Wheel chocks in position.	01
4.	Landing gear ground safety locks and bomb door safety locks installed.	03
5.	Maintenance stands and ladders provided.	05
6.	Static ground wire attached.	01
7.	Aircraft and engine inspection doors, cowling, panels plates fairings shrouds and baffles removed or opened.	45
8.	All electrical switches in "OFF" position.	01
9.	Flight controls unlocked; locked after completion of inspection.	01
10.	Wing flaps down; cowl flaps and oil cooler doors open.	03
11.	Necessary test equipment provided.	10
12.	Oxygen system and portable cylinders for specified servicing (400-425 psi).	10
13.	All system gages for agreement, within 35 psi, with servicing unit pressure gage.	03

AIRFRAME (System No. 3)

		MAN-MINS
1.	Aircraft (cockpit, compartments, fuselage exterior, wings, wheel wells and empennage) cleaned.	110
2.	Windshields, windows, for cracks, crazing, leaks, security and cleanliness.	05
3.	Windshield wiper blades for security; rubber for cuts and deterioration.	02
4.	Aircraft and engine cowl, scoops, fairing, panels and doors for cracks, corrosion, distortion; associated latches, hinges and fasteners for cracks, wear and specified adjustments.	15
5.	Wings, fuselage, and empennage for loose or missing rivets, bolts, screws or nuts, skin punctures, cracks, buckled or wrinkled skin, dents, abrasions and corrosion.	25
6.	Wing skin panels (Part No. 5192569-16 and -17) for cracks at nacelle Sta 156 along wing Sta 84; nacelle stiffeners for cracks (Sta 186 to 241).	20
7.	Wing spar cap assemblies for evidence of cracks across face of cap between Sta 28 and 35.	30
8.	Fuselage, wing and fixed and movable surface drain holes for obstructions.	17
9.	Wing horizontal vertical stabilizer attaching bolts visually for looseness; attachment fittings for cracks and corrosion.	15
10.	Aileron web and attachment fittings for cracks, loose bolts and rivets (particularly at Sta 405).	10
11.	Flight control surfaces (including trim tabs and flaps) for evidence of internal damage, corrosion, deteriorated and torn fabric, skin wrinkles, loose rivets and excessive play; attaching brackets for cracks, loose or missing bolts, pins, etc and specified safetying.	20
12.	Aileron, elevator, and rudder gap seals for deterioration.	05
13.	Rudder and elevator horn hinge support clevises for cracks, security, distortion and binding; flight control support assembly and rods, Sta 474, for cracks or damage.	10
14.	Entrance ladders and/or steps for ease of operation, wear, cracks, corrosion and distortion; associated latches and hinges for cracks, wear and specified adjustment.	05
15.	All emergency escapes (hatches, panels doors) released; controls and locking mechanism inspected for positive release, freedom of operation, wear corrosion and secure engagements; seals for deterioration.	20
16.	Cockpit enclosure doors for proper latching (with aid of assist strap and inside operating handle) by observing that external handle is flush in recess.	05
17.	Window and door seals for cuts, deterioration and security.	10
18.	Life raft compartment door latches for security. (Latch or latch indicators for correct position.)	05
19.	Life raft release mechanism for effective operation; release mechanism for specified adjustment and evidence of corrosion which may cause malfunctions.	05
20.	Exterior areas adjacent to relief tube outlet neutralized, cleaned and protected with acid resistant lacquer (Federal Specification TT-L-54). (Respray as required.) Interior area neutralized and cleaned.	10
21.	Wing flap actuators for damage, evidence of overheating and security; electrical connections for tightness.	05
22.	Flap operating shaft, fuselage section, for evidence of wear or chafing and specified clearance from flap motor filter bracket.	05

AIRFRAME (System No. 3) (Cont) MAN-MINS

23. Flight controls for free movement and correct direction of movement with respect to cockpit controls. 05

24. Pilot's, co-pilot's and crew members' seats for ease of adjustment and positive locking in all positions. 02

25. Pilot's, co-pilot's and crew members' seats for breaks or cracks which could foul parachutes or clothing; cleanliness and security. 03

26. Safety belts and shoulder harness for bent, damaged or corroded metal parts; fabric and leather for cleanliness, cuts or fraying; latching parts for freedom of operation and positive locking; belts and harnesses for date of last weight test and security of attachment. 10

27. Engine controls for full travel, unrestricted movement and proper spring-back. 05

28. Engine control friction lock for proper operation by assuring that controls move freely with lock in "OFF" position; friction increases as lock is moved toward the "ON" position and controls are held tightly before limit is reached. 05

29. First Aid Kits for the following: 05

a. Identification markings legible.

b. Broken seals.

c. Completeness of contents in side compartments.

d. Kits bear serviceable tag, AF Form 50B (AF aircraft only).

30. Check lists and ash trays available and ash trays cleaned. 02

31. Hand axe available and securely stowed at specified location; mounting bracket for security. 02

32. All loose equipment stowed and secure to prevent fouling or jamming of controls. 05

33. Curtains for tears and cleanliness. 02

34. Aircraft Technical Publications file current, complete and covered with suitable binders. 05

35. Disposal containers for availability. 02

36. Relief containers emptied; relief horn cleaned with disinfectant-deodorant solution, tubing for deterioration and security. 02

37. Static ground wire for security, proper length and good contact with the ground. 02

38. Windshield wiper actuator for damage, evidence of overheating and security; electrical connections for tightness. 02

39. All stencils, decals, insignia and color coding for legibility. 08

40. Bomb bay doors, hinges and supporting structure for cracks, corrosion, distortion, adjustment and security; locking mechanism for cracks, corrosion and wear. 05

41. Engine controls, bell cranks, torque tubes, ball and socket joints, connecting rods, cables, pulleys, turnbuckles, guides, fairleads and links for wear, cracks and alignment; hinges and brackets for cracks, corrosion and security. 85

42. Cables for specified tension, corrosion and fraying, especially those portions of cables which contact pulleys. (Aircraft having undated PAMCO pulleys installed.) 40

43. Rudder and brake assemblies, torque tube and supports for cracks and excessive wear. 10

44. Ballast installation for security, specified type of material and method of attachment. 03

AIRFRAME (System No. 3) (Cont)	MAN-MINS
45. Pylon-to-wing attach bolts for cracks or elongation of threads (GB-26 only).	06
46. Pylon-to-wing attach fittings for corrosion and cracks (GB-26 only).	06
47. Pylon-to-wing seal for deterioration and improper fit (GB-26 only).	06
48. Pylon fittings for cracks, wear, corrosion, binding, loose or missing nuts, bolts, screws and rivets (GB-26 only).	06
49. Attaching swaybrace adjusting pads and adjusting bolts for wear, corrosion, cracks, thread damage and elongation (GB-26 only).	06

LANDING GEAR (System No. 4)

1. Nose gear installation for the following:	60
a. Nose gear upper and lower torque arms for cracks. (Pay particular attention to area on lower torque arm at inside radius on left side of arm.)	
b. Remove two nose gear torque arm attaching bolts and inspect for evidence of binding, bending, scoring or possible shearing.	
c. Cross beam assembly and side brace attachment legs for cracks.	
d. Cross beam outboard fittings for cracks.	
e. Clevis bolts removed, upper and lower ends of lower retracting link, cleaned and inspected for evidence of shearing.	
f. Lower collar to retaining nut for specified clearance.	
g. Forks for cracks (especially in welds).	
h. Snubber for leakage, proper functioning and specified fluid.	
i. Rotating mechanism for distortion and wear (especially at machined end of rotating arm).	
j. Rotating arm and link assemblies for cracks using ZYGLO method.	
k. Upper retracting shaft and upper retracting link for cracks and wear.	
2. Tires for uneven tread wear, cuts, blisters, grease or oil, specified inflation and alignment of slippage marks.	15
3. Landing gear doors for distortion, cracks, corrosion, dents and abrasions.	15
4. Polished surfaces of shock struts and hydraulic pistons cleaned with cloth moistened in hydraulic fluid; inspect for scratches and leakage.	15
5. Landing gear down lock mechanism for positive engagement.	15
6. Wheels for damage and evidence of overheating adjacent to brakes; dust covers for cracks, corrosion and security.	15

LANDING GEAR (System No. 4) (Cont)

		MAN-MINS
7.	Accesible brake lines for chafing, leakage at connections and security of anchorage clamps; lines, hoses, connections and components for leakage with parking brakes in "ON" position.	10
8.	Landing gear components (shock struts, strut braces, torque links, limit switches, safety switches, attaching fittings) for security, cracks, distortion and corrosion; shock struts for leakage, specified fluid level and inflation.	30
9.	Each main landing gear outboard trunnion, inboard trunnion, shelf assemblies and web angles for sheared bolts, rivets and broken or cracked brackets.	20
10.	Brakes for effectiveness.	10
11.	Retracting mechanism including doors visually for evidence of improper synchronization, adjustment and security.	15
12.	Landing gear emergency release handles stowed.	01
13.	Fillister head screws (2) (Part No. AN 502-10-22) in the latch release shaft bearing assy (Part No. 1150578) in each main landing gear for tightness.	10
14.	Main gear latches for proper engagement by assuring that tolerances between latch caps and lower links are within specified limits.	10

HYDRAULIC PNEUMATIC (System No. 5)

1.	Accessible pumps and valves for leakage, security and proper safetying; lines, hoses and connections for leakage, chafing and security; lines and hoses for dents and scratches.	20
2.	Hydraulic filter elements cleaned (main and emergency).	30
3.	Hydraulic reservoirs for specified fluid level, leakage and security.	05
4.	Hydraulic accumulators for specified air pressure, external and internal leakage and security.	05
5.	Hydraulic hand pump for operation and leakage by operating at least one of the hydraulically actuated units; pump and handle for security.	05

UTILITY (System No. 6)

1.	Fire extinguisher for the following:	35
	a. Fire extinguisher cylinders or containers for evidence of premature discharge (indicator discs missing or ruptured) and security; mounting brackets for cracks and security.	

UTILITY (System No. 6) (Cont), MAN-MINS

b. Accessible fire detector units for freedom from foreign matter (dirt or oil) and security; mounting brackets for cracks and security; wire terminals and connections at detectors for security; wiring in engine section for frayed or damaged insulation.

c. Thermocouple type fire detector circuits for specified resistance and open or grounded condition (Ohmmeter).

d. Portable CO_2 fire extinguishers for evidence of discharge; proper safetying (seal wire taut and lead seal affixed) and security; mounting brackets for cracks and security.

e. Portable A-20 fire extinguisher for dents, broken indicator glass; operating mechanism for cleanliness, pressure within specified limits, seal intact and security of mounting; mounting brackets for cracks and security.

2. Oxygen System and components for the following: 40

a. Components, lines and connections for cleanliness and freedom from oil or grease.

b. Portable and system cylinders for security; mounting brackets and cradles for freedom from cracks and corrosion.

c. Recharger hose for deterioration.

d. Portable unit regulators for leakage of the diaphragm and air inlet check valve.

e. System regulators.

(1) Demand valve, air metering system, demand diaphragm for leakage.

(2) Emergency valve for specified safetying.

f. Flow indicators for operation.

g. Mask-to-regulator hose for holes, kinks, cuts and flat spots; outlet elbow and clamps for security.

3. Fluid anti-icing system for leakage. 02

4. Anti-icing filter removed and cleaned. 30

5. Anti-icing pump motor for security and evidence of seal leakage. 02

6. Anti-icing hand pump for security and evidence of leakage. 02

7. Anti-icing fluid tank serviced; filler cap secured. 05

POWER PLANT (System No. 7)

1. Ring cowl for cracks, defective or missing fasteners and security. 20

2. Cowl flaps for cracks, distortion and security; linkage, hinges and bearings for cracks, wear and security. 10

3. Cowl flap actuators for damage, evidence of overheating, and security; electrical connections for tightness. 10

POWER PLANT (System No. 7) (Cont) MAN-MINS

4.	Air deflectors and baffles for cracks, security and evidence of rubbing against cylinder fins.	40
5.	Dynafocal mounts for security, proper safetying and deterioration of rubber core assemblies.	20
6.	Engine for evidence of fuel and oil leakage; loose or missing nuts, bolts, studs and clamps; proper safetying where required.	60
7.	Lower cylinder drain lines for cracks or loose connections and security.	20
8.	Starter motors for security and cracked or broken mounting flanges; electrical connections for tightness.	10
9.	Push rod housings for dents and cracks; gland type packing nuts for leakage.	40
10.	Intake pipe packing nuts for evidence of leakage.	40
11.	Carburetor screens for cleanliness and damage (bends, loose or broken segments, etc).	30
12.	Sump plugs inspected for metal particles.	10
13.	Oil screen for metal particles, cleanliness and damage; main oil check valve and seat assembly for tightness in rear case.	20
14.	Primer lines for kinks, nicks and security.	20
15.	Engine breather tube for obstructions and traps due to improper routing.	02
16.	Engine mounts for cracks, corrosion and evidence of loose attaching bolts.	20
17.	Air seals for cracks, holes and security.	10
18.	Vacuum relief valve screens cleaned.	20
19.	Cylinder for damaged fins and safetying of hold-down nuts.	40
20.	Supercharger drain valves for cleanliness and freedom of operation.	60

FUEL (System No. 8)

1.	Fuel tanks serviced; filler cap seal for deterioration; filler caps and cover plates secured.	15
2.	Fuel vent and drain lines for obstructions and evidence of chafing; fuel strainers for damaged screens and cleanliness.	25
3.	Vapor return lines drained.	10
4.	Exterior of aircraft and interior of bomb bay for evidence of fuel leakage.	25
5.	Booster pumps for leakage and security; seal drains for obstructions.	15
6.	Fuel booster pump electrical connections including bonding jumpers, if installed, for security.	15

FUEL (System No. 8) (Cont)

		MAN-MINS
7.	Fuel selector and cross-feed valves for freedom of operation; linkage for evidence of wear and security.	10
8.	Fuel quantity transmitters for internal corrosion; proper safetying of cover and connector plug.	30
9.	Fuel pressure transmitters for security.	04
10.	Fuel pressure transmitters and lines serviced with specified fluid (A-1 and AN5765 types only).	20
11.	Bomb bay tank for deterioration and security; jettisonable wing tanks for damage and security.	10

OIL (System No. 9)

1.	Oil tanks for proper servicing; filler caps, dipsticks and cover plates secured.	10
2.	Tanks and accessible lines (pressure, feed, frain, return, vent and overflow), hoses and connections for leakage and security; lines for scratches and dets beyond permissible limits.	10
3.	Overflow and vent lines for obstructions.	10
4.	Oil cooler for leakage, damage and security; cores for obstructions; oil temperature regulator valves and floating control thermostats for leaks.	20
5.	Oil cooler doors, hinges and linkage for cracks, wear and distortion.	10
6.	Oil cooler door actuators for damage, evidence of overheating and security; electrical connections for tightness.	10
7.	Oil pressure transmitters for security.	04
8.	Oil pressure transmitters and lines serviced with specified fluid (A-1 and AN5765 types only).	20
9.	Oil tank sumps drained.	10

IGNITION (System No. 10)

1.	Flexible conduits connecting all components of system for burning and chafing; security of connections at all components and deterioration of rubber covering or fraying of metal braided covering.	20
2.	Induction vibrators for cleanliness and security.	10

IGNITION (System No. 10) (Cont) MAN-MINS

3. Ignition harness manifold for damage and security; leads for proper anchorage and damage. 10
4. Magnetos and distributors for damage and security. 06

SUPERCHARGER, AIR INDUCTION, EXHAUST (System No. 11)

1. Exhaust system for the following: 40
   a. Exhaust port studs for loose or missing nuts.
   b. Clamps for required tightness, alignment and evidence of leakage; nuts for specified safetying.
   c. Exhaust pipe coupling inserts for looseness and evidence of leakage.
   d. Exhaust support brackets for cracks and security.
   e. Stacks and flanges for cracks, evidence of burning and security.
2. Air ducts (intakes, scoops and elbows) for security, cracks, loose or missing clamps, bolts, rivets or screws and foreign material in openings; flexible connections for cracks and deterioration. 10
3. Carburetor air filters cleaned and lubricated. 30
4. Carburetor air filter door actuators for damage, evidence of overheating and security; electrical connections for tightness. 10

PROPELLERS (System No. 12)

1. Propeller hubs for cracks, corrosion and leakage; blades for corrosion, nicks or dents. 10
2. Blade markings for legibility. 06
3. Governors for security and leakage. 04
4. Propeller governor feathering bosses (not reinforced) for cracking and evidence of leakage. 04
5. Governor control cables adjacent to exhaust stacks for damage due to heat or corrosion. 04
6. Mechanical controls for binding and lost motion (specified springback at stops). 04
7. Accessible control cables for corrosion and fraying. 10
8. Accessible mechanical controls throughout propeller system for security and specified safetying. 10

PROPELLERS (System No. 12) (Cont)

		MAN-MINS
9.	Anti-icing slinger rings for security and lines for damage which may result in restricted flow.	04
10.	De-icing boots for cuts, blisters, looseness and deterioration.	04

ELECTRICAL (System No. 14)

1.	Batteries for proper servicing evidence of leakage and overflow of electrolyte.	10
2.	Overvoltage control, starter and battery relays for security; security of electrical connection; installation externally for presence of foreign matter.	10
3.	Spare lamps and fuses available in holders and/or clips.	07
4.	All "MOMENTARY ON" toggle type switches for assurance that they do not stick in the "ON" position (all systems utilizing this type switch).	10
5.	Reverse current relays (externally only) and electrical connections for security; foreign matter or dirt in the relay area.	10
6.	Voltage regulators for security, security of electrical connections and cleanliness; shock mounts for deterioration.	05
7.	Inverters for cleanliness, damage, evidence of overheating, and security; electrical connections for tightness.	10
8.	Generator for damage and security; electrical connections for tightness.	04
9.	Generator blast tubes for deterioration, cleanliness and security.	10
10.	Navigation, landing, cockpit and/or cabin lights for broken lens, bulbs and corrosion.	12
11.	Vibration isolators for sagging, specified clearance; rivets or screws for looseness; shock absorbing material for deterioration and separation of rubber to metal bond.	09
12.	Evacuation system (bells, etc.) for operation.	01
13.	Fuse clips and holders for cracks, corroded or burned contact surfaces, and sufficient tension to hold fuses firmly in place.	10

INSTRUMENTS (System No. 15)

1.	Pitot and static port openings for obstructions; drain holes probed to remove foreign matter; dust covers reinstalled.	05
2.	Pitot static systems for moisture (remove drain plugs).	10

INSTRUMENTS (System No. 15) (Cont)	MAN-MINS
3. Driftmeter exposed optical surfaces cleaned.	05
4. Compass correction cards available.	01
5. Instrument indicating pointers for indications consistent with existing temperature, pressure, direction and altitude; cover glasses for cracks and looseness; range and limit markings intact.	05
6. All pressure indicating instruments and corresponding connections at the instrument panels for evidence of leakage.	05
7. Directional gyro and artificial horizon caging mechanisms for positive uncaging and caging.	01
8. Autopilot servo units, terminal blocks, solenoids and condensers for security.	10
9. Four operating shaft bushings of C-1 autopilot servo motors lubricated with one to two drops of bombsight oil (Specification No. 3582 or equivalent).	10
10. Instruments for specified limit and range markings. (Consult latest Flight Manual to assure that limit and range markings are correct.)	05
11. Vibration isolators for sagging, specified clearance; rivets or screws for looseness; shock absorbing material for deterioration and separation of rubber to metal bond.	10
12. Altimeter for readings within specified tolerance; pointers for smooth movement and evidence of friction. (Tester MB-1, 7CAD-807695 or equivalent).	08
13. Thermocouple for security.	05
14. Tachometer generator for security	05
15. Oil and carburetor temperature bulbs for security.	05

RADIO AND RADAR (System No. 16)	
1. Fixed wire antennas for cracked insulators, broken tension units and corona shields, punctured or frayed polyethylene covering, loose connections and security.	05
2. Metal covered mast type antennas for security, nicked or cracked metal covering and proper bonding.	05
3. Wood covered mast type antennas for security, evidence of cracking or splitting and secure ground connections.	05
4. Dipole type antennas for bent elements, cracked insulators and security.	05
5. Externally mounted radio compass loop for damaged loop housing, security and legible stencil.	05
6. Radome for the following:	05
a. Cuts, breaks, soft spots, erosion and cleanliness.	
b. Drain holes for obstructions.	

RADIO AND RADAR (System No. 16) (Cont)	MAN-MINS
c. Waterproof seal for deterioration and proper installation.	
7. Static dischargers for the following:	10
a. Clean unfrayed wicks.	
b. Approximately one inch of wick extends from the plastic sheath.	
c. Parallel alignment with line of flight.	
d. Mechanical security.	
8. All communication, navigation, radio and radar components for damage, corrosion and security.	20
9. Headset microphone cordage and plugs for damage, excessive wear and corrosion.	10
10. Controls and switches for ease of operation, freedom from sticking and knobs secure on shafts.	10
11. Headset and microphones for damage; condition of neckbands and ear cushions.	04
12. All electrical and coaxial connectors secure.	05
13. VHF frequency cards available and frequency listing correct.	02
14. Flexible shafts for broken or crushed casings; conduit for breaks and loose fittings; adapters for freedom of operation.	10
15. Indicator lamps and dimming covers for security.	02
16. Desiccators for serviceability (proper color).	02
17. Scope visors available and in satisfactory condition.	04
18. Spare fuse holders for specified number of serviceable fuses.	04
19. Plugs for proper insertion into jacks and receptacles.	04
20. Junction boxes and covers for damage.	10
21. Vibration isolators for sagging, specified clearance; rivets or screws for looseness; shock absorbing material for deterioration and separation of rubber to metal bond.	10
22. RT-178/ARC-27 for proper pressurization.	02

ARMAMENT (System No. 17)	
1. Vibration isolators for sagging, specified clearance; rivets or screws for looseness; shock absorbing material for deterioration and separation of rubber to metal bond.	05
2. Tow reel equipment (MK VIII Installation).	08
a. Vickers pump for the following:	

ARMAMENT (System No. 17) (Cont)		MAN-MINS
	(1) Hydraulic leaks.	
	(2) Security of fittings.	
	(3) Nuts and bolts for security and safetying.	
b.	Hydraulic lines for leaks, cracks and chafing.	10
c.	Reservoir assembly for security, leaks, cracks, safety wiring of nuts and bolts; specified level of hydraulic fluid.	10
d.	Reservoir air line for security.	05
e.	Air and hydraulic pressure gages for leaks, cracks, chafing and security.	05
f.	Tow reel assembly and speed control valve for leaks, cracks, chafing and security of unit to airframe.	30
g.	Drive assembly motor for security.	01
h.	Drive assembly housing for oil leakage.	01
i.	Main drive side of tow reel for specified oil level and drain plug for security.	02
j.	Level wind side of tow reel for cleanliness of lubricant.	15
k.	Level wind follower for security of nuts, screws and lock washers.	05
l.	Level wind cam for lubricant.	01
m.	Level wind cam for evidence of bronze chips or flakes.	01
n.	Level wind rollers for freedom of movement and damage to rollers.	01
o.	Level wind cam shoe for adjustment.	01
p.	Level wind guide pulley for freedom of movement.	02
q.	Level wind guide pulley swivel bearing retainers for cracks, breaks and lubrication.	03
r.	Tachometer, cable counter and drive cable for security and smooth operation.	05
s.	Clutch for sufficient tension when engaged.	01
t.	Clutch for freedom of drag when disengaged.	01
u.	Brake for proper operation by assuring that cable drums cannot be turned when the control lever is in the full "ON" position.	02
v.	Brake nuts and fastenings for security.	05
w.	Tow reel rotated manually for freedom of binding or dragging brake.	02
x.	Brake linings for excessive wear.	02
y.	Brake band (metal) for cracks.	02
z.	Shock tube for security and shock action.	01
aa.	Guide in end of shock tube for security, safety wiring and freedom of rotation.	01
ab.	Electrical wiring and connections for security and chafing.	02

ARMAMENT (System No. 17) (Cont) MAN-MINS

ac. Rotate reel so cam follower completes two full travels (one in each direction of rotation) along the cam and reverse at both ends in both directions for smooth and free operation and alignment and sequence of cable with cam follower. 15

3. Tow Reel Equipment (Type A-1 Installation).

a. Raybestos clutch discs for excessive wear. 10

b. Toggle switch for operation. 02

c. Segment switch assembly for the following: 05

(1) Return of cam arm.

(2) Contact bars and shoe for cleanliness.

(3) Mounting screws and nuts for security.

d. Control box for the following: 05

(1) Wire terminals for security of connections.

(2) Bus bars for security.

(3) Mounting bolts and nuts for security.

(4) Main and spare fuse for correct rating.

e. Motor assembly for the following: 05

(1) Oil for proper level.

(2) Evidence of oil leaks.

(3) Bolts and nuts for security and safetying.

(4) Alignment of motor to reel unit.

f. Shock tube for security and shock action. 02

g. Cable for visible damage (first 100 feet). 10

h. With tow reel power on and toggle switch energized, windlass must operate in low speed with brake handle lifted to low speed bar of segment switch and operate in high speed with brake handle lifted to high speed bar of segment switch. Windlass must stop when brake handle is lowered to bottom bar of segment switch. 05

i. Windlass bearings, gear housings and level wind cam for specified lubrication. 03

ELECTRICAL POWER ON

PREPARATION

1. Electrical system energized. (Auxiliary power source provided.) 02

2. Necessary test equipment provided. 10

PREPARATION (Cont)	MAN-MINS
3. Bomb bay door safety locks removed.	02

AIRFRAME (System No. 3)

1. Wing flaps for operation and correct position indication.	05
2. Bomb bay doors for specified manual, emergency and salvo operation; indicator lights for proper indication.	03

LANDING GEAR (System No. 4)

1. Landing gear position indicator and/or lights for correct indication.	01

UTILITY (System No. 6)

1. Thermocouple type fire detector system for operation. (Actuate test switch.)	01

POWER PLANT (System No. 7)

1. Cowl flaps for specified range of travel; indicators for synchronization with flaps in "OPEN" and "CLOSED" positions.	04
2. Carburetors for leakage with fuel pressure "ON".	10
3. Carburetor vapor eliminators for operation.	20

FUEL (System No. 8)

		MAN-MINS
1.	All fuel system components, lines, hoses, connections in engine nacelles and accessible components, lines and connections in aircraft system for leakage, chafing and security; metal lines for dents or scratches; hoses for cuts, cracks and deterioration (fuel pressure "ON").	20
2.	Each fuel selector valve and fuel booster pump for operation by assuring that no pressure is indicated with pump "ON" and valve "OFF" and that specified pressure is indicated when valves are operated in the specified sequence with pumps "ON".	06
3.	Priming system for operation by disconnecting line on discharge side of valve and observing for leakage when priming valve is "OFF" and unrestricted fuel flow in "ON" position.	05
4.	Fuel quantity gages for readings comparable with known contents in tanks.	04
5.	Drop tank release mechanisms for operation.	10

OIL (System No. 9)

1.	Oil cooler doors for response to cockpit controls (manual and automatic); doors for specified range of travel.	04
2.	Oil dilution systems for proper operation by disconnecting lines on discharge side of valves and observing for leakage when oil dilution valve is "OFF" and unrestricted fuel flow in "ON" position.	10

SUPERCHARGER, AIR INDUCTION, EXHAUST (System No. 11)

1.	Air induction doors and/or valves (ram-air, filtered air) for freedom of movement, specified range of travel and synchronization with pilot's or crew's indicators and/or controls.	10

PROPELLERS (System No. 12)

		MAN-MINS
1.	Feather propeller through one complete cycle. (Perform this check at the "POWER ON PHASE". Do not perform during engine operation.)	10
2.	Anti-icing system for operation by assuring specified discharge of fluid.	05

ELECTRICAL (System No. 14)

1.	All instrument lights for illumination.	02
2.	Cockpit lights for illumination.	02
3.	Crew and/or passenger warning signals (lights, bells, etc) for operation.	02
4.	All compartment lights for illumination.	02
5.	Navigation and formation lights for illumination. (Make tests as brief as possible.)	02
6.	Landing lights for proper extension, illumination and retraction. (Make test as brief as possible.)	04
7.	Inverters for voltage and frequency within specified limits.	05
8.	Circuit breaker panel for tripped circuit breakers; fuse panels for blown fuses.	02

INSTRUMENTS (System No. 15)

1.	Pitot head heating elements for operation by noting temperature rise.	05
2.	Fluxgate compass pilot light (on caging switch box) for illumination during caging operation.	05
3.	Fluxgate compass amplifier lamp for illumination.	05
4.	Autopilot for operation by observing that flight controls respond to movement of pilot's control knobs.	05
5.	Autopilot secondary clutch for operation by operating autopilot from the stabilizer position and observing response of flight controls to movement of bombardier's turn knob.	05
6.	Autopilot for operation by observing that flight controls respond to movement of remote control knobs.	05
7.	Autopilot release switch (disengage button) for operation.	05

RADIO AND RADAR (System No. 16)

MAN-MINS

Note

No transmission will be made on emergency (distress) frequency channels except for emergency purposes. For testing, demonstration or drill purposes, radio equipment will be operated into a non-radiating dummy load instead of an antenna. Emergency (distress) frequencies are 500 kc, 8364 kc, 121.5 mc and 243.0 mc.

1. Command radio (VHF-UHF) for operation by establishing radio contact and checking transmitter for adequate power, accuracy of frequency, modulation and clarity of side tone; receiver for sensitivity, adequate volume and clarity of tone. Thru-line wattmeter check of antenna system. 07

2. Range receiver for adequate sensitivity over entire range, and presence of RF signal on CW position; antenna alignment for maximum signal and filter for proper filtering action. 05

3. Interphone system for operation by assuring clarity of tone on all audio positions, microphone operation on all positions and range filter operation for proper filtering action in all positions. 05

4. Intercall signal lights for operation. 01

5. Radio compass for operation by assuring proper response of indicator when loop is rotated by L-R switch; correct operation of receiver and indicator an loop, antenna and compass positions; functioning of CW circuit; proper dial lighting, dial calibration and ease of rotation of tuning control. 05

6. Liaison radio receiver for operation by assuring sensitivity, clarity of tone, CW switch and CW tone control response, dial calibration, band selector operation, ease of rotation of dial tuning control and proper functioning of crystal filter switch and circuit. 05

7. Liaison radio transmitter for operation by assuring adequate power output and antenna loading, frequency and channel selector accuracy, modulation and clarity of side tone. 05

8. Instrument landing system for the following (using authorized test equipment): 10

   a. ILS control box for operation.

   b. Localizer receiver operation checked for correct vertical deflection.

   c. Proper localizer receiver audio signal on all positions.

   d. Glide path receiver operation checked for correct horizontal deflection.

9. AN/ANQ-1A Wire Recorder for the following: 15

   a. Properly loaded and installed MX-303A Magazine.

   b. Correctly operating "MOTOR" and "WARN" lights.

   c. Operation of RD-15A/ANQ-1A with control box in "RECORD" position.

   d. Correct interconnection of operator with interphone system.

   e. Check for sidetone on "MIC" position.

10. Radio altimeter (APN-1) for operation of altitude limit switch, power switch, range control and correct illumination of limit lights. 15

RADIO AND RADAR (System No. 16) (Cont)	MAN-MINS
11. Radar altimeter for correct antenna radiation as directed by the applicable aircraft maintenance handbook (using authorized test equipment):	15
a. Circle and pulse display on indicator screen for proper size and brilliance.	
b. "RFC GAIN" and "CIRCLE SIZE" adjusted.	
12. Shoran radar for the following (using authorized test equipment):	15
a. Transmitter tuning accomplished.	
b. Receiver tuning accomplished.	
c. Presetting adjustments accomplished.	
d. Complete ground check accomplished.	
e. Zero check accomplished (may be performed before or during flight, depending on conditions).	
13. Loran radar receiver for operation by assuring correct indicator pattern focus, intensity and positioning.	15
14. Using authorized portable test equipment perform a complete functional test of Identification Friend or Foe (IFF) equipment, assuring proper calibration and adjustment.	15
15. Homing Adapter for the following (using authorized test equipment):	05
a. Correct operation of antenna relay.	
b. Correct operation of modulator keying unit with switch in "HOMING" position. (Motor sound should be of uniform pitch and intensity.)	
c. Operational check of equipment.	
16. IFF for response to mechanical and electrical controls and switches; control panel lights for illumination; dial and lock devices for positive locking and set; blower for response to any master switch setting other than "OFF"; transponder for response to IR signals in all modes of operation.	05
17. Marker Beacon for sensitivity, output, visual and aural identification of signal.	05
18. AN/ARA-26 Keyer for the following:	10
a. Illumination of PRESS TO TEST light; light shield operation.	
b. UHF Transmitter tunes to correct frequency when keyer is on.	
c. Transmission of distress signal (as designated).	

ENGINE OPERATION

PREPARATION

1. Portable fire extinguishers provided.	02

PREPARATION (Cont) MAN-MINS

2. Rotate propeller through 6 blades prior to engine start. 01

3. Electrical system energized (auxiliary power source provided). 02

OPERATION

1. Perform the following in accordance with applicable directives: 30

   a. PRE-ENGINE START.

   b. ENGINE START.

   c. ENGINE WARM-UP.

   d. COMPLETE COCKPIT CHECK.

   e. PRE-SHUTDOWN CHECK.

   f. STOPPING ENGINES.

   g. AFTER ENGINE SHUTDOWN.

2. Perform the following additional operational checks during engine operation: 15

   a. Engine for operation on all sources of air.

   b. Drain manifold pressure gage lines.

   c. Engine instruments for correct response to engine power application and freedom from excessive oscillation or fluctuation.

   d. Engine-driven hydraulic pumps for specified pressure output.

   e. Hydraulic pump drain lines for excessive leakage.

   f. Availability of fuel from all sources by checking engine operation in each fuel tank selector position.

   g. Generators and voltage regulators for output; reverse current relays for cut-in and cut-out.

   h. Supercharger (blower) clutch for operation by assuring that a decided increase in manifold pressure is obtained when the controls are shifted to "HIGH" position and that proper manifold pressure is indicated when the controls are returned to "LOW" position.

   i. Supercharger (blower) controls for mechanical synchronization and specified take-off RPM.

   j. Carburetor heat system for operation by observing carburetor air temperature variation when controls ar actuated.

   k. Fluxgate compass indicators for response to transmitter through 360 degrees.

OPERATION (Cont) MAN-MINS

3. Accomplish the following separate checks independent of all other checks performed during ENGINE OPERATION. 15

   a. Each overvoltage protection system for proper operation by assuring that the field control relays disconnect the generators from the main electrical distribution systems at the specified voltage. (Check with voltmeter of known accuracy with a 50-volt or more scale.)

   b. Voltage regulators for correct bus voltages and paralleling. (Check bus voltage with voltmeter of known accuracy.)

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SECTION V

SPECIAL INSPECTION REQUIREMENTS

This section contains inspection requirements that supplement the basic requirements of preflight, thruflight, postflight, and periodic inspections. When one of the requirements becomes due, it is to be added to the basic requirements of the inspection to be performed. Requirements that fall due at the expiration of an interval of calendar time will be added to the requirements of the postflight or periodic inspection (whichever is most appropriate) that will be accomplished nearest to the time when the special requirement is due.

Accomplish At	System and Item	MAN-MINS
	AIRFRAME (System No. 3)	
Prior to transfer, immediately upon assignment of aircraft and every 6 months.	1. Inventory equipment installed in aircraft.	As required
After installation, removal or relocation of equipment or modification of aircraft which results in a change in basic weight and balance and every 24 months (one representative aircraft of each series and block every 12 months).	2. Weigh aircraft and accomplish necessary entries in Handbook of Weight and Balance Data.	As required
Whenever available information indicates exposure to radioactivity.	3. Survey for level of radiation contamination intensity and decontaminate as required.	As required
Prior to installation, when the surfaces have not been inspected within an 18 month period; every 18 months or sooner if periodic inspection indicates failure on surface installed on aircraft.	4. Flight control fabric covered surfaces Mullen Test as specified in applicable directives.	As required
Whenever aircraft control surfaces have been subjected to buffeting by high winds.	5. Rudder horn hinge support clevis for cracks, security, distortion and binding.	As required
Every engine change.	6. Anti-friction bearings, commonly known as rod end bearings, control pulley bearings, track rollers, guide bearings, hinge bearings, cable end fittings and bell crank bearings in the engine area for roughness, evidence of wear, corrosion, misalignment, damaged seals, security, contamination, deterioration or lack of lubricant.	As required
Every 60 days.	7. Life rafts inflated and time checked for leaks and deterioration; accessories for corrosion, deterioration, proper installation and completeness; CO_2 bottle weight tested.	As required
Every 6 months.	8. Life raft for proper inflation using installed CO_2 bottle; time checked for leaks and deterioration; accessories for corrosion, deterioration, proper installation and completeness.	As required

Accomplish At		System and Item	MAN-MINS
		AIRFRAME (System No. 3) (Cont)	
Every 6 months.	9.	First Aid Kits removed for inspection of condition and completeness of contents.	As required
After cleaning or repair and every 12 months.	10.	All safety belts and shoulder harnesses weight test.	As required
Every 2nd periodic.	11.	Flight controls (ailerons, elevators, rudder, trim tabs and flaps) for the following conditions:	20
		a. Specified range of travel.	
		b. Mechanism, including bearings, screws, torque tubes, universal joints and connecting rods for cracks, wear or binding.	
		c. Pulleys, guides and fairleads for cracks, wear and proper alignment.	
		d. Cables for specified tension, corrosion and fraying beyond specified limits.	
		e. Accessible cables for cleanliness (particularly at pulleys), fairleads and cable guides.	
		f. Turnbuckles and turnbuckle terminals for cracks.	
		g. Hinges and attachment fittings for cracks, wear and security.	
		h. Flap deflector supports for cracks at fillet radii (using the dye penetrant method).	
Every 2nd periodic.	12.	Aircraft and engine controls, bell cranks, torque tubes, ball and socket joints, connecting rods, cables, pulleys, turnbuckles, guides, fairleads and links for evidence of wear, cracks, alignment and safetying; hinges and brackets for cracks, corrosion and security.	20
Every 2nd periodic.	13.	Engine controls for specified control cable tension.	10
Every 2nd periodic.	14.	Flight test accomplished to complete inspection.	As required
Every 6th periodic.	15.	Anti-friction bearings, commonly known as rod end bearings, bell crank bearings, control pulley bearings, hinge bearings and cable end fittings for roughness, evidence of wear, corrosion, misalignment, damaged seals, security, contamination, deterioration or lack of lubricant.	20

Accomplish At	System and Item	MAN-MINS
	AIRFRAME (System No. 3) (Cont)	
Every 12th periodic.	16. Engine and flight control cables which are not accessible throughout their entire length removed and inspected for fraying beyond permissible limits and corrosion.	As required
Every 12th periodic or every 36 months, whichever comes first.	17. Wing attaching pins for wear and cracks attaching fittings for corrosion and cracks; bushings for wear and cracks (dye penetrant).	As required
Every 12th periodic or every 36 months, whichever comes first.	18. Horizontal stabilizer attaching bolts for cracks and elongation at threads; attaching fittings for corrosion and cracks.	As required
Every 12th periodic or every 36 months, whichever comes first.	19. Vertical stabilizer attaching bolts for cracks and elongation at threads (Magnaflux); attaching fittings for corrosion and cracks (ZYGLO). (Dye check method may be used in lieu of Magnaflux or ZYGLO).	As required
Prior to release to a cold weather area, or when regular or frequent flights that include landings are made into a cold weather area.	20. Protective covers for availability and serviceability (cockpit, wings, empennage, engine and pitot tube).	As required
Prior to release to a cold weather area for periods of 30 or more cumulative days; when regular or frequent flights that include landings are made into a cold weather area.	21. External color markings for condition (to permit visible location of aircraft in case of crash landing or ice or snow covered terrain).	As required
Prior to release to a cold weather area, or when regular or frequent flights that include landings are made into a cold weather area.	22. "Instructions for Arctic Operation" for availability in aircraft G file.	As required
Whenever any cable is removed or replaced.	23. All undated PAMCO pulleys within the length of the cable system affected replaced.	As required
Every 12th periodic or every 36 months, whichever comes first.	24. Flight controls (with ailerons, elevators, rudder trim tabs and flaps removed) inspected for the following:	As required
	a. Mechanisms, including bearings, jack screws, torque tubes, universal joints, connecting rods, chains, hinges and attach fittings for cracks, wear, corrosion, binding, loose or missing nuts, bolts, screws and rivets; and proper lubrication.	
	b. Pulleys, sectors, bellcranks and guides, fairleads, turnbuckles, turnbuckle terminals for corrosion, cracks, wear, alignment and proper lubrication.	
	c. Rudder and elevator gap seals for condition.	

Accomplish At	System and Item	MAN-MINS
	AIRFRAME (System No. 3) (Cont)	
Every 12th periodic or every 36 months, whichever occurs first.	25. Nacelle structure, engine mount and firewall for cracks, breaks, dents, loose or missing nuts, bolts and rivets.	As required
Every 12th periodic or every 36 months, whichever occurs first.	26. Control column, rudder pedals and torque tubes removed and inspected for wear, cracks, corrosion, loose or missing bolts and bushings and elongated bolt holes.	As required
Every 12th periodic or every 36 months, whichever occurs first.	27. Cabin and compartment soundproofing insulation for cleanliness, deterioration, broken or missing fasteners; area beneath insulation for cleanliness, corrosion and damage.	As required
Every 15 carries or every 100 hours, whichever occurs first. (GB-26 type aircraft only.)	28. Q-2 Launch Rack, attaching swaybrace adjusting pads and adjusting bolts for wear, thread damage, elongation, corrosion and cracks. (Magnetic particle method.)	120
Pre-launch Inspection. (GB-26 type aircraft only.)	29. Check for outdated squibs. Visual check of Q-2 launch racks, attaching swaybrace, adjusting pods and adjusting bolts for wear, thread damage, elongation, corrosion and cracks.	As required
Every 4th periodic.	30. Pylon-to-wing attach bolts for cracks magnetic particle method or elongation of threads. (GB-26 only)	60
Every 4th periodic.	31. Pylon-to-wing attach fittings for corrosion and cracks. Dye penetrant method. (GB-26 only.)	60
	LANDING GEAR (System No. 4)	
Whenever any landing gear component is adjusted, repaired, replaced or disturbed and every 2nd periodic.	1. Landing gear for operation by performing the following: a. Normal operation for the following: (1) No evidence of binding during extension and retraction cycle. (2) Nose gear door actuator control linkage for proper adjustment by assuring that gear is fully retracted before doors start to close and that doors are fully open before gear starts to extend.	85

Accomplish At	System and Item	MAN-MINS
	LANDING GEAR (System No. 4) (Cont)	

(3) Nose strut rotating linkage for adjustment by assuring that nose wheel positions properly.

(4) Main landing gear retracts and doors close simultaneously.

(5) Position lights and/or indicator for indication corresponding to position of gear.

(6) Nose and main gear door linkage for proper adjustment by assuring that doors are flush.

(7) Nose gear up-latch for proper engagement by assuring that release bar is specified distance from up-latch hook.

(8) Nose gear down-latch for proper engagement by assuring that stop bolt is specified distance from adjustment bolt.

(9) Main gear latches for proper engagement by assuring that tolerances between latch caps and lower links are within specified limits.

(10) Landing gear control lever safety switch for operation by assuring that control lever cannot be moved to "UP" position when left main gear strut is compressed to specified distance.

(11) Warning light for operation by assuring that light comes on when any throttle is set to less than one-fourth closed position.

b. Emergency operation for the following:

(1) Each individual gear can be released from the "UP" position.

(2) Release mechanism operates freely; no evidence of binding or misalignment.

(3) Each gear can be latched in down position with use of hydraulic hand pump, and the shuttle valves function properly.

(4) Emergency hydraulic selector handle for engagement in selected position.

Accomplish At	System and Item	MAN-MINS
	LANDING GEAR (System No. 4) (Cont)	
Whenever circumstances which could result in possible landing gear damage are reported.	2. Tires removed, wheels inspected for cracks or distortion; landing gear components and area of attachment thoroughly inspected for cracks and distortion. Landing gear retraction for normal operation.	As required
Every 2nd periodic and whenever circumstances which could result in possible landing gear damage are retpored.	3. Upper nose gear retracting shaft and upper retracting link removed and inspected for distortion and wear; retracting link bushing for cracks and wear; upper retracting link inspected for cracks (using ZYGLO or Dye penetrant method).	60
Every tire change.	4. All Bendix wheels, Part No. 145340M1, having Serial No. 6A1426 and below, for cracks, especially in the lock ring groove (using ZYGLO or Dye penetrant) method).	As required
Every 2nd periodic, or whenever aircraft has been washed or whenever wheels have been removed.	5. Nose and main wheels removed and inspected for cleanliness, corrosion, cracks and distortion; bearings and bearing surfaces for wear and damage; bearings relubricated; felt grease retainers for deterioration, cleanliness and specified oil treatment.	90
Every 2nd periodic.	6. Braking surfaces (discs, rotors, stators, segments) for excessive wear, warpage, cracks, corrosion and cleanliness; damaged parts, specified clearance and hydraulic leaks; dust covers or fairings for corrosion, damage and security.	60
Every 2nd periodic.	7. Main landing gear latch lug assembly removed, disassembled and cleaned; rollers and spacers inspected for corrosion; bolts for wear and cracks (magnaflux); flexible bushings for evidence of swelling and deterioration.	120
Every 2nd periodic.	8. Landing gear selector valve control cables for specified tension, corrosion, fraying beyond permissible limits and misalignment; fairleads and bell cranks for wear and security.	15
Every 2nd periodic.	9. Brake emergency air bottles for specified air pressure and security; lines for security of anchorage clamps.	05
Every 2nd periodic.	10. Brake pedals and mechanical linkage for specified adjustment, evidence of wear and security.	05
Every 2nd periodic.	11. Brake emergency system for proper operation.	10
Every 2nd periodic.	12. Landing gear emergency release cables for fraying beyond permissible limits; fairleads and bell cranks for wear and security.	15

Accomplish At	System and Item	MAN-MINS
	LANDING GEAR (System No. 4) (Cont)	
Every 2nd periodic.	13. Main gear actuating cylinder attaching bolt removed and inspected for evidence of shearing, bending or excessive wear.	40
Every 2nd periodic.	14. Landing gear shock struts for specified fluid level.	15
Every 2nd periodic.	15. Nose gear fork assembly inspected for cracks (using the fluorescent pentrant method or its equivalent).	120
Every 2nd periodic.	16. Main landing gear magnetic particle inspected as follows: a. Axle for cracks in area between outer edge of inboard bearing land and brake flange. b. Chrome portion of inner cylinder for cracks, particularly at area 11-3/8 inches above center line of axle. c. Torque arms for cracks, mainly at base of apex connecting lugs. d. Inner cross tube flange assemblies and attaching bolts.	240
Every 50 hours.	17. Main landing gear torque arms (rework beyond 3/4 inch limits) for cracks in reworked areas. (Use magnetic particle method).	As required
Prior to further flight when a landing is made with total gross weight over 30,000 pounds.	18. Wheels removed, brakes and brake cavities for excessive wear and overheating.	As required
Every 2nd periodic.	19. Nose gear cross beam outboard fittings for cracks (using the dye penetrant method); attaching bolts (AN10-26A) for cracks (using the Magnaflux method).	30
Every 2nd periodic.	20. Rotating arm and link assemblies for cracks (using ZYGLO method).	30
Every 36 months.	21. Landing gear position indicator switches (AN3023-10 and AN3022-11) externally for signs of corrosion on lower section terminal tabs.	As required

Accomplish At	System and Item	MAN-MINS
	HYDRAULIC PNEUMATIC (System No. 5)	
Prior to release to a cold weather area for periods of 30 or more cumulative days; when regular or frequent flights that include landings are made into a cold weather area and after initial arrival into a cold weather area.	1. Hydraulic system for leakage connections, fittings and packing glands, for tightness; gaskets and packing for condition.	As required
Every 12th periodic or every 36 months, whichever occurs first.	2. Hydraulic reservoirs and filters removed and inspected for cleanliness, leaks and damage. New elements installed in line filters.	As required
Every 12th periodic or every 36 months, whichever occurs first.	3. All hydraulic and pneumatic hose assemblies inspected for date of manufacture. Replace all hose assemblies whose age exceeds four years.	As required
	UTILITY (System No. 6)	
After fire.	1. All valves, lines, fittings and connections in area of flame for damage.	As required
Each time fire detector thermocouple terminals are disconnected and every engine change.	2. Thermocouple type fire detector circuit for specified resistance (ohmmeter) and correct polarity (milliameter or millivoltmeter); fire detector system for operation. (Actuate test switch).	As required
Every time fire detectors or wiring circuit connectors are disconnected from the relay panel.	3. Determine that the detectors and wiring circuit connectors are replaced in the correct relay panel receptacle by energizing the circuit actuating the "push to test" switch until all lights come on and assuring that the warning light goes out when a thermocouple on any one of the engines is temporarily grounded.	As required
1st periodic after recharged cylinders are installed.	4. Engine fire extinguishers CO_2 cylinders removed for weight check.	As required
Every 6 months.	5. Portable CO_2 fire extinguishers removed for weight check.	As required
Every 6 months.	6. Fire extinguisher system (CO_2 only) for effective operation by discharging CO_2 to a predetermined area and observing for unrestricted discharge. (Alternate areas of discharge on succeeding discharge tests).	As required

Accomplish At	System and Item	MAN-MINS
	UTILITY (System No. 6) (Cont)	
Every 6th periodic and after each engine fire.	7. Fire extinguisher discharge tubing and perforations for obstructions. (Attach air hose to check for unrestricted air flow).	40
Every 2nd periodic or 3 months, whichever occurs first.	8. Oxygen system and components for the following:	15
	a. Oxygen lines for evidence of chafing, security and specified clearance between oxygen lines, electrical wires and control cables.	
	b. Filler line check valves for proper seating.	
	c. Perform the "24 HOUR GAGE DROP" leak test on each demand system.	
	d. Perform leak test on portable unit.	
	e. System regulator emergency valve for operation.	
	f. Female part of oxygen mask-to-regulator connector tested with "GO, NO-GO" gage.	
Every 2nd periodic.	9. Accessible fire extinguisher lines for dents, scratches, bends beyond permissible limits and security; discharge outlets (particularly perforations) for cleanliness and freedom from obstructions.	
Every 2nd periodic.	10. Engine oil and hydraulic oil shutoff controls for operation ("OPEN" and "CLOSE" positions).	
Prior to release to a cold weather area, or when regular or frequent flights that include landings are made into a cold weather area.	11. Heating, ventilation and defrosting systems for installation and operation.	
Every 12th periodic or every 36 months, whichever occurs first.	12. The following items removed, cleaned and inspected for wear, cracks and corrosion:	
	a. Anti-icing pump.	
	b. Anti-icing fluid filters.	

Accomplish At	System and Item	MAN-MINS
	POWER PLANT (System No. 7)	
Overspeed not in excess of limits specified in applicable directives.	1. Cylinders for cracked or broken heads or barrels; oil screen and sump oil for metal particles.	As required
At the 10th hour of engine operation after inspection of engine due to overspeed.	2. Sump plugs and all removable screens removed; oil drained from sumps and thoroughly inspected for metal particles.	As required
After ground run and after first flight following cylinder change.	3. Cylinder and adjacent areas for the following: a. Damage, leakage, safetying where required; loose or missing nuts, bolts, studs and clamps. b. Manifold and oil lines for leakage, visible defects and security. c. Oil screen and sump oil for metal particles.	As required
After first flight following cylinder change.	4. Cylinder hold-down nuts and/or cap screws for proper safetying; manifolds, fuel and oil lines and accessories for leakage, visible defects and security; sump plugs and oil screen for metal particles.	As required
Periodic nearest to 1/2 engine overhaul time.	5. Valves for specified clearance; valve mechanism for cracks, loose or worn bearings, inadequate lubrication, leaking and worn valve guides, broken springs, excessive oil sludge or other damage; rocker box covers for warpage. (Use surface plate or plate glass.)	As required
After ground run following engine change.	6. Engine for the following: a. Accessible areas for damage, leakage, safetying where required; loose or missing bolts, nuts, studs and clamps. b. Manifolds, fuel and oil lines and accessories for leakage, visible defects and security. c. Oil screen and sump oil for metal particles.	As required
After 1st dilution series when 50 hour engine time has elapsed since last dilution series.	7. Engine oil screens or filter cleaned and reinstalled.	As required
Every 200 hours.	8. Cylinders for specified compression values.	As required
At engine change.	9. Dynafocal engine mounts disassembled and metal parts given a visual inspection for cracks, corrosion and worn or elongated mounting holes. Rubber cores checked visually for deterioration,	As required

Accomplish At	System and Item	MAN-MINS
	POWER PLANT (System No. 7) (Cont)	
	bonding separation or cracking and dimensionally in accordance with applicable technical order.	
At engine change due to sudden stoppage or internal failure when excessive vibration is encountered.	10. Dynafocal engine mounts disassembled and all metal parts magnaflux and zyglo inspected as applicable. Rubber core checked visually for deterioration, bonding separation or cracking and dimensionally in accordance with applicable technical order.	As required
At engine installation.	11. Pre-oiling and initial start as specified in applicable directives.	As required
Every 2nd periodic.	12. Vacuum pump oil separators cleaned; screens in bottom fitting for obstructions.	30
Overspeed or overboost in excess of limits specified in applicable directives.	13. Engine replaced.	As required
After overboost of engine within specified limits.	14. Engine for the following:	As required
	a. Cylinders for cracked or broken heads and barrels; oil screen and sump oil for metal particles.	
	b. Cylinders for specified compression; spark plugs replaced; intake pipes, gaskets and seals for leaks.	
	FUEL (System No. 8)	
Aircraft being removed from storage.	1. Engine-driven fuel pump body to relief valve housing assembly bolts for proper torque.	As required
Prior to installation.	2. Hose clamps for security of welding or riveting; adjusting screw for damaged threads; band for extreme hardness, distortion, kinks and evidence of improper strength; hose fitting head for sharp edges.	As required
Prior to 1st and 2nd flights after installation.	3. Hose clamps for proper positioning, leaks and tightness.	As required
Postflight until "cold flow" ceases.	4. All accessible hose connections (new hose) for positioning and tightness of clamps.	As required
When aircraft are removed from extended or permanent storage.	5. Fuel cell bolts retorqued and interior of cells inspected.	As required
Prior to each installation.	6. Droppable tank release mechanism for proper operation (manually and/or electrically).	As required

Accomplish At	System and Item	MAN-MINS
	FUEL (System No. 8) (Cont)	
Whenever any component which would affect calibration is replaced and at every 6th periodic.	7. Fuel quantity system for correct calibration with tanks empty and tanks full.	As required
Every 2nd periodic.	8. Fuel lines for obstructions, evidence of chafing and security; metal lines for dents and scratches beyond permissible limits; hoses for cuts, cracks and deterioration.	20
Every 6th periodic.	9. Bomb bay fuel tank straps for cuts, fraying, deterioration and weight tested.	10
Every 6th periodic.	10. Low-level warning light for operation at specified fuel level.	05
Fifteen minutes after each servicing and thirty minutes after removal from heated shelter.	11. Fuel tank sumps and strainers for water.	As required
Prior to release to a cold weather area for periods of 30 or more cumulative days; when regular or frequent flights that include landings are made into a cold weather area and after initial arrival into a cold weather area.	12. Fuel system for leakage; connections for tightness.	As required
Every 12th periodic or every 36 months, whichever occurs first.	13. Fuel cell inspection plates removed, interior inspected for foreign matter and deterioration, exterior for damage and indications of leaks. (Remove long range and droppable tanks for inspection.) Tanks to be leak tested.	As required
Every 12th periodic or every 36 months, whichever occurs first.	14. All fuel lines for chafing, leaks, damage and deterioration.	As required
Every 12th periodic or every 36 months, whichever occurs first.	15. Fuel primer and oil dilution solenoid valves removed and inspected for condition and operation.	As required
	OIL (System No. 9)	
One hour after last flight, in areas where ground temperatures are at or below freezing.	1. Drain oil tank sumps.	As required
At engine change or oil change.	2. Oil system decontaminated in accordance with applicable directives.	As required

Accomplish At	System and Item	MAN-MINS
	OIL (System No. 9) (Cont)	
Prior to installation.	3. Hose clamps for security of welding or riveting; adjusting screw for damaged threads; band for extreme hardness, distortion, kinks and evidence of improper strength; hose fitting head for sharp edges.	As required
Prior to 1st and 2nd flights.	4. Hose clamps for proper positioning, leaks and tightness.	As required
Postflight until "cold flow" ceases.	5. All accessible hose connections (new hose) for positioning and tightness of clamp.	As required
Every 2nd periodic.	6. Oil changed.	30
Every 2nd periodic.	7. Entire oil system for leakage; tubing for dents, cracks, evidence of chafing and security; flexible connections for cracks or cuts and tightness of hose clamps.	10
Prior to release to a cold weather area for periods of 30 or more cumulative days; when regular or frequent flights that include landings are made into a cold weather area and after initial arrival into a cold weather area.	8. Oil system for leakage; connections for tightness.	As required
Prior to release to a cold weather area, or when regular or frequent flights that include landings are made into a cold weather area.	9. Oil dilution system for proper operation.	As required
Every 25 hours or 7 days in areas where ground temperatures are above freezing.	10. Oil tank sumps drained.	As required
Every 12th periodic or every 36 months, whichever occurs first.	11. Oil floating control unit and "Y" drain valves removed, cleaned and inspected for operation and condition.	As required
	IGNITION (System No. 10)	
Whenever any spark plug terminals are disconnected.	1. Pertinent terminals for cleanliness, insulators for cracks and spring contacts for freedom to insure proper electrical contact.	As required
Every 200 hours or whenever magneto is installed.	2. Magnetos:	As required
	a. Magnetos for correct timing with engine; breaker points for synchronization.	

Accomplish At	System and Item	MAN-MINS
	IGNITION (System No. 10) (Cont)	
	b. Security.	
	c. Distributor and breaker sections for cleanliness.	
	d. Distributor bowl for cracks and traces of carbon.	
	e. Rotor for cracks; rotor contacts for excessive burning and pitting.	
	f. Carbon brushes for breaks or cracks.	
	g. Breaker points for excessive pitting and carbon deposits.	
	h. Cam followers for excessive wear; felts for adequate lubrication.	
Every 2nd periodic.	3. Induction vibrators:	20
	a. Security of mounting.	
	b. Cleanliness.	
	c. Condition of cover gasket.	
	d. Condition of points.	
	e. Security of terminals.	
Every 2nd periodic.	4. Ignition harness joints and magnetos for Gel (insulating compound) leakage, (clean leakage with lintless cloth); ball and socket joints for tightness.	20
Every 2nd periodic.	5. Ignition harness assemblies for security; brackets for cracks; conduits for proper anchorage and damage due to chafing and overheating.	10
Every 12th periodic.	6. Ignition switch disassembled, inspected and bench checked in accordance with applicable directives.	120
	SUPERCHARGER, AIR INDUCTION, EXHAUST (System No. 11)	
Every postflight when dusty atmospheric conditions exist, otherwise every 25 hours.	1. Carburetor air filters for contamination and proper lubrication.	As required

Accomplish At	System and Item	MAN-MINS
	SUPERCHARGER, AIR INDUCTION, EXHAUST (System No. 11)	
Every 2nd periodic.	2. Carburetor air door for cracks, distortion, and security; control assembly for obvious damage and security.	20
Every 2nd periodic.	3. Flexible connections for cracks and deterioration.	10
	PROPELLERS (System No. 12)	
As often as necessary to adequately protect the propeller.	1. Clean and coat hub and blades with light coat of clean engine oil. When operating conditions are especially severe a light coat of corrosion preventive compound (Specification No. MIL-C-11796A(1)) may be applied.	As required
Prior to each installation or reinstallation.	2. Propeller shaft and thrust nut cleaned with approved solvent, inspected for corrosion, galling or pitting, and treated with corrosion preventive compound.	As required
At each installation.	3. Run engine for approximately 15 minutes and retorque retaining nut.	As required
Every engine change as a result of internal engine failure.	4. Propeller partially disassembled by removing the stops and cam assembly from the dome and the spring housing and spring from the distrubtor valve; thoroughly clean the hub, distributor valve, and dome interior; thoroughly inspect all parts of foreign particles.	As required
Every engine change or after each propeller or feathering pump installation or reinstallation.	5. Propeller feathered in accordance with applicable directives.	As required
Every governor change.	6. Retorque attaching nuts after 15 minutes engine operation.	As required
Engine change resulting from overspeed in excess of limits specified in applicable directives.	7. Propeller and governor completely disassembled; all steel parts magnetically inspected; all other parts thoroughly inspected.	As required
Every 2nd periodic.	8. Dome assembly internal components thoroughly cleaned.	80
Every 2nd periodic.	9. Propeller retaining nut and distributor valve assembly for specified torque.	10

Accomplish At	System and Item	MAN-MINS
	PROPELLERS (System No. 12) (Cont)	
Every 2nd periodic.	10. Propeller blades for excessive radial movement.	80
Every 2nd periodic.	11. Anti-icing pump motor for security and evidence of seal leakage; brushes for specified length.	As required
Prior to release to a cold weather area.	12. Propeller anti-icing system for the following:	As required
	a. Complete installation.	
	b. Tank for proper service (isopropyl alcohol, Specification MIL-F-5566).	
	c. Fluid feed shoes for proper installation and serviceability.	
	d. Application of anti-icing compound No. 431, on propeller blades, in accordance with applicable directives.	
	e. System for proper operation.	
	ELECTRICAL (System No. 14)	
Every 7 days.	1. Batteries and installation for the following:	As required
	a. All cells for proper electrolyte level.	
	b. Electrolyte for specific gravity.	
	c. Battery leads, connectors and vicinity of battery for corrosion.	
	d. Connectors for tightness.	
	e. Drains and vents for freedom from obstructions.	
	f. Batteries, containers and covers for security.	
	g. Battery sump jar pads for adequate saturation with sodium bicarbonate and water.	
Every 4 months.	2. Battery removed for capacity check.	As required.

Accomplish At	System and Item	MAN-MINS
	ELECTRICAL (System No. 14) (Cont)	
Prior to installation of retractable landing lamp assemblies	3. Assemblies sprayed with cold spray plastic protective stripping compound.	As required
Every 2nd periodic.	4. Inverter brushes for wear beyond permissible limits; commutators and slip rings for proper film and evidence of excessive arcing; governors for worn, loose, burned or damaged components.	30
Every 2nd periodic.	5. Generator brushes for wear beyond specified minimum length, even wear and freedom of movement in brush holders; insulation on brush leads for deterioration or evidence of chafing; commutators for evidence of arcing and presence of oil or metal particles.	30
Every 2nd periodic.	6. Starter motor brushes for wear beyond specified minimum length; commutators for proper film and evidence of excessive arcing.	30
Every 2nd periodic.	7. Electrical system from the generating source to each electrical component (excluding radio, instrument, armament and photographic wiring from main power buses to operating units) for the following:	120
	a. Wiring for deterioration, chafing, fraying, specified support and evidence of overheating.	
	b. Connector plug exteriors for corrosion, cracks, evidence of overheating and security.	
	c. Wire shielding for fraying, crimping, corrosion and damage.	
	d. Junction boxes for cracks, cleanliness and security; drain holes for obstructions.	
	e. Plastic tubing for damage, security and adequate drainage provisions.	
	f. Terminal strips, connections, bonding jumpers and ground connections for damage, corrosion and security.	
Every 2nd periodic.	8. Pilot's overhead switch panel wiring for evidence of chafing on the pilot's enclosure door latching mechanism.	10
Prior to release to a cold weather area, or when regular or frequent flights that include landings are made into a cold weather area.	9. Batteries for proper service and specific gravity.	As required

Accomplish At	System and Item	MAN-MINS
	INSTRUMENTS (System No. 15)	
Every 2nd periodic, or three months, whichever comes first, or any time that equipment replacement, relocation or modification might cause compass deviation.	1. Compass indicator for correct reading on all cardinal headings (recompensate if necessary).	60
After washing aircraft.	2. Pitot static system for moisture (drain plugs removed).	As required
Every 2nd periodic.	3. Central air filter element cleaned.	10
Every 2nd periodic.	4. All autopilot components for corrosion and security.	30
Every 2nd periodic.	5. Autopilot secondary clutch for specified tension.	30
Every 2nd periodic.	6. C-1 autopilot servo motors lubricated with two drops of light bombsight oil between flange of limit cam-shaft and the limit cam-shaft bushing.	10
Every 2nd periodic.	7. Fluxgate compass transmitter caging mechanism for operation by determining that plunger assumes specified position when gyro is caged and uncaged.	10
Every 2nd periodic.	8. Fluxgate compass master indicator for unrestricted operation by observing that indicator returns to null position within specified time utilizing field tester; repeater indicators for smooth operation and consistency, within specified limits, with master indicator.	20
Every 2nd periodic.	9. Instrument systems for the following (from each electrical component to, but not including, junction boxes containing main power buses):	120
	a. Wiring for deterioration, chafing, fraying, specified support and evidence of overheating.	
	b. Connector plug exteriors for corrosion, cracks, for evidence of overheating and security.	
	c. Wire shielding for fraying; crimping, corrosion and damage.	
	d. Junction boxes for cracks, cleanliness and security; drain holes for obstructions.	
	e. Plastic tubing for damage, security and adequate drainage provisions.	
	f. Terminal strips, connections, bonding jumpers and ground connections for damage, corrosion and security.	

Accomplish At	System and Item	MAN-MINS
	INSTRUMENTS (System No. 15) (Cont)	
Every 6th periodic.	10. Check autopilot servo over power setting (75 to 100% of normal operating pressure).	10
Every 6th periodic.	11. Pitot and static system disconnected at instruments and lines cleared with dry, high pressure air; system for leaks and damge; airspeed indicator for accuracy within specified tolerances at major graduations.	20

RADIO AND RADAR (System No. 16)

Note

No transmission will be made on emergency distress frequency channels except for emergency purposes. For testing, demonstration or drill purposes, radio equipment will be operated into a non-radiating dummy load instead of an antenna. Emergency distress frequencies are 500 kc per sec, 8364 kc per sec, 121.5 mc per sec and 243.0 mc per sec.

Initial installation or reinstallation.	1. Bonding on VHF antenna mast is within specified resistance limits.	As required
Every 2nd periodic.	2. Homing adapter coaxial antenna leads for proper resistance.	10
Every 2nd periodic.	3. Fuse clips and holders for cracks, corroded or burned contact surfaces and sufficient tension to hold fuses firmly in place and make good contact.	05
Every 2nd periodic.	4. AN/ANQ-1A Wire Recorder for the following: a. Make test recordings. (Play them back on ground reproducer and determine if they are satisfactory.)	15
Every 2nd periodic.	5. Radio and Radar systems for the following (from each electrical component to, but not including, junction boxes containing main power buses): a. Wiring for deterioration, chafing, fraying, specified support and evidence of overheating. b. Connector plug exteriors for corrosion, cracks evidence of overheating and security.	120

Accomplish At		System and Item	MAN-MINS
		RADIO AND RADAR (System No. 16) (Cont)	
		c. Wire shielding for fraying, crimping, corrosion and damage.	
		d. Junction boxes for cracks, cleanliness and security; drain holes for obstructions.	
		e. Plastic tubing for damage, security and adequate drainage provisions.	
		f. Terminal strips, connections, bonding jumpers and ground connections for damage, corrosion and security.	
Every 6th periodic.	6.	Radio and radar squelch and sensitivity controls adjusted for optimum operation (engines and electrically operated accessories operating).	20
Every 6th periodic.	7.	Dipole and mast type antennas (other than VHF) removed and inspected for damaged insulation, nicked or cracked metal covering and corrosion, bonding within specified resistance limits after reinstallation of antenna.	10
Prior to release to a cold weather area for periods of 30 or more cumulative days; when regular or frequent flights that include landings are made into a cold weather area.	8.	Communication equipment for proper lubrication.	As required
Wenever a unit or a system is replaced or reinstalled.	9.	Complete performance check of unit or system in accordance with applicable directives.	As required
Every 500 hours.	10.	Group "B" components removed and bench checked in accordance with applicable directives	As required
Periodic nearest every 400 hours of unit operation.	11.	Dynamotors and blower motors, armatures and commutators for cleanliness; brushes for proper lengths; bearings for proper lubrication.	As required
		ARMAMENT (System No. 17)	
After each 50 hours of operation time of unit.	1.	Tow target winch motor for dirt or damage; loose connections and worn and binding brushes.	As required

Accomplish At	System and Item	MAN-MINS
	ARMAMENT (System No. 17) (Cont)	
After each 100 hours of operating time.	2. Tow target winch motor disassembled, cleaned, inspected and bench checked in accordance with applicable directives.	As required
Every 20 carries and/or every periodic.	3. Q-2A Launching Equipment (GB-26 only) for the following:	120
	WARNING Explosives should be handled by qualified armament personnel only.	
	a. Wing fitting attachment bolts, sway brace pads and bolts and S-3/MB-3 bomb rack attachment bolts for cracks (magnaflux) (T.O. 33B2-1-1).	
	b. All welds and attachment points for cracks (dye penetrant method) (T.O. 33B1-2-1-2).	
	c. Visually inspect all members for cracks, corrosion, and general condition.	
	d. Perform operational check of release mechanism.	

Accomplish At	System and Item	MAN-MINS
	ARMAMENT (System No. 17) (Cont)	
After each 100 hours of operating time.	2. Tow target winch motor disassembled, cleaned, inspected and bench checked in accordance with applicable directives.	As required
Every 20 carries and/or every periodic.	3. Q-2A Launching Equipment (GB-26 only) for the following: WARNING Explosives should be handled by qualified armament personnel only. a. Wing fitting attachment bolts, sway brace pads and bolts and S-3/MB-3 bomb rack attachment bolts for cracks (magnaflux) (T.O. 33B2-1-1). b. All welds and attachment points for cracks (dye penetrant method) (T.O. 33B1-2-1-2). c. Visually inspect all members for cracks, corrosion, and general condition. d. Perform operational check of release mechanism.	120

SECTION VI

REPLACEMENT SCHEDULE

This section lists units of operating equipment that are to be replaced at the periods specified. Replacement means removal of the equipment and installation of a serviceable item in its place. Replacement of equipment will be indicated in flying hours or calendar time and will be accomplished at the periodic inspection nearest the time when the replacement is due. Applicable technical directives should be consulted for information pertaining to authorized extensions of the specified periods.

Replacement Interval	System and Item	MAN-MINS
	AIRFRAME (System No. 3)	
Every 1000 hours.	1. Wing flap motor.	As required
	LANDING GEAR (System No. 4)	
Every 1200 hours.	1. Power brake valve.	As required
Every 1000 hours.	2. Emergency brake valve.	As required
	HYDRAULIC PNEUMATIC (System No. 5)	
Every 1000 hours or three years from date of installation, whichever occurs first.	1. Hose assembly, hydraulic pump pressure line.	As required
Every 1100 hours.	2. Hydraulic pumps (engine-driven).	As required

Replacement Interval	System and Item	MAN-MINS
	UTILITY (System No. 6)	
Every 12 months.	1. All diluter demand oxygen regulators.	As required
Every 24 months.	2. All oxygen hoses (except mask-to-regulator tubing).	As required
Every 1100 hours.	3. Vacuum pump (engine-driven).	As required
Every 24 months.	4. Type A-20 portable fire extinguishers.	As required
	POWER PLANT (System No. 7)	
Expiration of maximum permissible operating time.	1. Engines.	As required
Every 1000 hours.	2. Cowl flap motor.	As required
	FUEL (System No. 8)	
Every 1100 hours.	1. Fuel pumps (engine-driven)	As required
	IGNITION (System No. 10)	
Every 200 hours.	1. Spark plugs.	As required

Replacement Interval	System and Item	MAN-MINS
	PROPELLERS (System No. 12)	
Every 1500 hours.	1. Propellers.	As required
Every 1000 hours.	2. Propeller governors.	As required
Every 1500 hours.	3. Feathering pumps.	As required
	ELECTRICAL (System No. 14)	
Every 600 hours.	1. Generators.	As required
Every 1200 hours.	2. Inverters.	As required
Every 1200 hours.	3. Voltage regulators.	As required

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SECTION VII

TEST FLIGHT INSPECTION REQUIREMENTS

This section lists all conditions under which test flights are required and complete inspection requirements for accomplishment of prescribed test flights. Inspection requirements in this section are established to assure a thorough inspection of the aircraft before flight, during flight, and upon completion of the test flight. When a test flight is performed for purposes of determining that specific equipment or systems are in proper operating condition, requirements not related to such equipment or systems should be disregarded. This section is divided into four separate parts. Part I contains all conditions and circumstances under which test flights are required. Part II contains inspection requirements to be accomplished prior to a test flight. Part III contains inspection requirements to be accomplished during a test flight. Part IV contains only direct post-test-flight inspection requirements to be accomplished upon completion of a test flight. Items of part IV to be accomplished by the air crew upon completion of the test flight are listed first and appropriately identified followed by ground crew and special post-test-flight requirements.

PART I

CONDITIONS REQUIRING ACCOMPLISHMENT OF TEST FLIGHT

The conditions requiring accomplishment of a test flight are listed below. Under circumstances other than those listed, the need for an aircraft to be test flown following maintenance or repair work is an engineering decision to be exercised by commanders, through their maintenance officer.

1. To complete each 2nd Periodic Inspection.
2. To complete the Periodic Inspection on aircraft removed from extended storage.
3. When a new or newly overhauled engine is installed (minimum duration one hour).
4. When a propeller or propeller governor is replaced or removed and reinstalled.
5. When movable flight surfaces have been replaced, or removed for major repairs and reinstalled.
6. When flight control cables or rods have been rerouted, rerigged, or flight control mechanism has been readjusted.
7. When fixed flight surfaces have been replaced or removed and reinstalled.
8. When major structural modifications and/or repairs are accomplished.
9. When adjustments or changes are made requiring flight to accomplish operational checks and calibration of accessories and/or auxiliary equipment.

PART II

PRIOR TO TEST FLIGHT REQUIREMENTS

A. Ground Crew Responsibilities.

Complete preflight inspection performed in accordance with Section I of this manual. Only double asterisk items need be accomplished if test flight is not the first of the day.

B. Flight Crew Responsiblities.

Complete preflight requirements performed in accordance with applicable-1 flight manual including the following:

1. Exterior inspection.
2. Interior inspection.
3. Before starting engines.
4. Starting engines.
5. Engine warm-up and ground operation.
6. Taxiing.

PART III

IN-FLIGHT REQUIREMENTS

A. The following requirements to be accomplished by the pilot.

1. Take-off and climb:
   a. Maximum engine rpm.
   b. Maximum manifold pressure.
   c. Fuel pressure.
   d. Oil pressure.
   e. Oil temperature.
   f. Cylinder head temperature.
   g. Cowl flap operation.
   h. Suction.
2. Cruise:
   a. Fuel pressure.

b. Oil pressure.

c. Oil temperature.

d. Cylinder head temperature.

e. Trim.

f. Fuel-air mixture (8000 ft).

g. Flight characteristics.

h. Propeller feathering.

i. Gear operation (Single engine operation).

j. Hydraulic pump (Single engine operation).

k. Warning horn and silencers (Single engine operation).

l. Throttle and propeller synchronization.

m. Windshield wipers.

n. Flight instruments.

0. Compass and cards.

p. Cockpit lights.

q. Generators.

r. Final approach fuel pressure check.

s. Radios:

Note

No transmission will be made on emergency distress frequency channels except for emergency purposes. For testing, demonstration or drill purposes, radio equipment will be operated into a non-radiating dummy load instead of an antenna. Emergency distress frequencies are 500 kc per sec, 8364 kc per sec, 121.5 mc per sec and 243.0 mc per sec.

(1) Microphones, headsets and cordage.

(2) Interphone.

(3) Command set.

(4) Radio compass.

(5) I.L.A.S. set and indicator.

(6) Marker beacon light and audio.

B. The following requirements to be accomplished by navigator and/or pilot:

1. In-flight:

a. Navigation instruments operation.

b. Compass swing (as required).

c. Air speed calibration (as required).

d. Radar altimeter SCR-718.

e. AN/APN-9 Loran.

f. C-1 Autopilot operation using PDI:

(1) Sensitivity.

(2) Rate coordinator.

(3) Elevator ration.

(4) Coordinator turn control.

g. Operation of bomb doors.

h. Bomb door lights.

i. Bomb door controls.

j. Heating, defrosting and ventilation.

2. Before landing:

a. Indicating and warning lights.

3. Landing:

a. Bomb bay doors.

b. Instruments.

c. Indicating and warning lights.

C. The following requirements to be accomplished by Gunner or designated crew member.

1. In-flight:

a. Circuit breakers.

b. Oxygen equipment:

(1) Control.

(2) Operation.

(3) Flow indicator.

(4) Pressure gage.

c. Interphone operation.

d. Indicating and warning lights.

e. Radar equipment:

(1) Pressurization controls.

(2) Pressurization gage.

(3) Indicating and warning lights.

(4) AN/APQ-13 navigation-bombing radar.

(5) AN/APN-3 Shoran.

f. Radio:

(1) Transmitter T-47A/ART-13.

(2) Liaison dynamotor.

(3) Liaison receiver.

2. Before landing:

a. Indicating and warning lights.

b. Radar equipment "OFF".

PART IV

POST TEST FLIGHT REQUIREMENTS

A. The following requirements will be accomplished by the pilot after landing:

1. Engine postflight operational check accomplished in accordance with applicable -1 flight manual.
2. Engine shut-down in accordance with applicable -1 flight manual.
3. Aircraft checked for fuel, oil and hydraulic leaks.
4. Brakes and struts.
5. Discrepancies noted during test flight entered on test flight worksheets.

B. The following requirements will be accomplished by ground crew as special post test flight requirements:

Accomplish At	System and Item
Flight test following engine change.	1. Cylinder hold-down nuts and/or cap screws for proper safetying. Manifolds and/or lines for evidence of leakage and insecurity; sump plug and oil screen removed and inspected for metal particles.

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