

APPENDIX 2

INSPECTION SCHEDULE

INTRODUCTION

This schedule has been compiled by de Havilland Aircraft of Canada as a guide to assist the operator in the inspection of the DHC-2 Beaver aircraft.

The schedule comprises five main parts: Part 1, Preflight Inspection; Part 2, Daily Inspection; Part 3, Periodic Inspection; Part 4, Special Inspection Requirements; Part 5, Replacement Schedule. Each part is divided into groups according to the manner in which work is generally accomplished, but no attempt has been made to sequence the order of the inspection items. The schedule also includes inspection of some special order equipment which should be disregarded if not applicable.

The majority of inspection items are prefixed with the word "Inspect" or "Check". The word Inspect indicates that the component should only be given a visual inspection and that no tools, other than visual aids (flashlight, mirror etc.) are necessary. The word Check indicates that manual means (with the aid of tools if necessary) should be used.

Part 3 contains an additional column "INSP - DUE" which gives the inspection frequency of the item e.g. 4th indicates that the item should be inspected every fourth periodic inspection. No number indicates that the item should be inspected at each periodic inspection.

The recommended inspection periods are as follows:

PREFLIGHT	Before each flight.
DAILY	Within 24 hours preceding the flight.
PERIODIC	Every 100 flying hours.
SPECIAL	As stated in Part 4.
REPLACEMENT	As stated in Part 5.

The following is a recommended cycle of periodic inspections so arranged that the power unit is due for replacement at the completion of the cycle.

FLYING HOURS	PERIODIC INSPECTION DUE
100	Non-numbered items.
200	2nd plus non-numbered items.
300	Non-numbered items.

Introduction (Cont'd.)

FLYING HOURS

PERIODIC INSPECTION DUE

400	4th plus 2nd plus non-numbered items.
500	Non-numbered items.
600	2nd plus non-numbered items.
700	Non-numbered items.
800	8th plus 4th plus 2nd plus non-numbered items.

After each 800 flying hour inspection has been accomplished, the aircraft will have been completely serviced and may start upon a succeeding 800 flying hour cycle.

Due to the extreme variations in operating conditions, type of service and climate, the operator may at his own discretion, increase the inspection frequency of particular items. Additional items of inspection may be included should these be considered necessary to maintain serviceability. The contractor would appreciate any recommendations on the inclusion or deletion of inspection items so that revisions may be considered.

All inspections must be made by qualified ground personnel and on completion each inspection must be recorded in the Aircraft Log Book and other relevant documents.

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PART 1

PREFLIGHT INSPECTION

ELECTRICAL POWER OFF

ITEM NO.

PREPARATION

1. Landplane - wheels chocked fore and aft.
2. Floatplane - securely moored or on beaching gear.
3. Aircraft covers and shields removed.

AIRFRAME

1. Inspect the wings, tail unit and flying controls for freedom from ice, snow, rags, tools, control locks etc.
2. Check the tires for correct inflation.
3. Inspect the floats for damage and leakage.
4. Inspect the skis for damage.
5. Inspect the brake lines for leaks.
6. Check the main hydraulic reservoir filler cap for security.
7. Check that loose equipment and cargo is properly loaded and stowed.
8. Inspect the hand fire extinguisher for damage, seal intact and security of mounting.
9. Inspect the windshield for cleanliness and damage.
10. Inspect all cowlings, panels and doors for security.

POWER PLANT

1. Inspect the propeller hub for leaks and blades for damage.
2. Inspect the aircraft externally for fuel and oil leaks.
3. Check the fuel tanks for quantity and the filler caps for security.
4. Check the oil tank for quantity and the filler cap for security.

PART 2

DAILY INSPECTION

ELECTRICAL POWER OFF

ITEM NO.

PREPARATION

1. Landplane - wheels chocked fore and aft.
2. Floatplane - securely moored or on beaching gear.
3. Maintenance stands provided.
4. External power source provided.
5. Aircraft covers and shields removed.
6. Remove or open all necessary cowlings, panels and doors; reinstall on completion of inspection and inspect for security.

AIRFRAME

1. Inspect the aircraft for cleanliness.
2. Inspect the wings, fuselage, tail unit and all flying control surfaces for damage.
3. Inspect the engine cowlings, scoops, fairings, panels and doors for damage and security.
4. Inspect the windshield, cockpit and cabin windows for cleanliness and damage.
5. Check the main hydraulic reservoir for specified level and inspect for leaks.
6. Inspect the main landing gear struts for damage and security.
7. Inspect the wheels and brake units for damage and corrosion.
8. Inspect the brake lines and connections for leaks.
9. Inspect the tires for cuts, deterioration, oil and grease and creep marks for alignment.
10. Check the tires for correct pressure.
11. Inspect the tail strut for damage, security, leaks and serviceability.
12. Check the rudder, elevator and ailerons for free and correct directional movement.

ITEM NO.

13. Check the trim tabs for free and correct directional movement, and leave in neutral position.
14. Check the wing flaps for correct operation.
15. Inspect the relief tube and hose for correct stowage.
16. Inspect the seats for security and check the cockpit seats for adjustment.
17. Inspect the safety belts and harnesses for cleanliness, cuts, fraying, and security of attachments; check for positive locking.
18. Check the brakes for effectiveness and the parking brake for correct operation.

LANDING GEAR (FLOATPLANE)

1. Inspect the support struts and spreader bars for damage, distortion, corrosion and security.
2. Check the bracing wires for tautness and inspect for corrosion and security.
3. Check the floats for leaks by applying a bilge pump to all stand pipes. Inspect for corrosion.
4. Check the water rudders for correct operation, corrosion and security.
5. Inspect the rudder control cables, pulleys and attachments for wear, fraying, corrosion and security.
6. Inspect the paddles for security of stowage.
7. Inspect the canoe canvas covering for tears and deterioration.
8. Inspect the canoe attachment fittings and straps for security.
9. Inspect the strut steps for cracks, corrosion and security.
10. Inspect the canoe for security of attachment to carrying gear.

LANDING GEAR (AMPHIBIOUS FLOATPLANE)

In addition to the Landing Gear (Floatplane) checks, carry out the following:

1. Inspect the nose wheel hydraulic shock struts for leaks and check for serviceability.

ITEM NO.

2. Inspect the main wheel forks for damage, security and corrosion.
3. Inspect the brake units for damage and corrosion.
4. Inspect the hydraulic lines, actuating jacks, and connections for leaks.
5. Inspect the retracting mechanisms for damage, security, corrosion and obstructions.
6. Inspect the electrical connections for security.
7. Check the brakes for operation.
8. Check the hydraulic reservoir for specified level.
9. Check motor pump assembly (if fitted) for leaks and security.

LANDING GEAR (SKIPLANE)

1. Inspect the attachments and fittings for damage and security.
2. Inspect the skis for wear, damage, security and trim.
3. Inspect the springs for fractures, and the shackles for corrosion and security.
4. Inspect the trim cables for corrosion, fraying and security.

LANDING GEAR (WHEEL - SKIPLANE)

1. Inspect the main ski trim unit for damage and security and rubbers for deterioration.
2. Inspect the tail ski for damage and security.
3. Check the main ski actuators for specified extension.
4. Inspect the check cables for fraying and security of attachment.
5. Inspect the hydraulic lines and connections for leaks.
6. Check the wheel-ski hydraulic reservoir for specified level.
7. Check the tail ski for freedom about the axle, by rocking the ski.
8. Check motor pump assembly (if fitted) for leaks and security.

ITEM NO.

POWER PLANT

1. Inspect the cowlings for cracks and damaged or missing fasteners.
2. Inspect the engine for obvious damage and leaks.
3. Inspect the engine controls for security.
4. Inspect the exhaust brackets and flange bolts for security.
5. Inspect the exhaust stacks and muffers for cracks and evidence of leaks and security.
6. Inspect the carburettor hot and cold air intakes duct openings for obstructions.
7. Inspect the carburettor air filter for obstructions.
8. Inspect the oil cooler for leaks and obstructions.
9. Check the engine winter shutters for freedom of operation and control locked in the desired position.
10. Check the drain box by draining.
11. Inspect the oil tank, lines, hoses and connections for leaks, chafing and security.
12. Check the fuel tanks for water, ensure drain tap is properly closed after check.
13. Inspect the fuel vents for any obstructions.
14. Inspect accessible fuel lines, hoses and connections for leaks, chafing and security.
15. Check the fuel filter for water and other foreign matter by turning on the drain valve lever.
16. Check the fuel selector valve for freedom of operation.
17. Check the wobble pump for operation and security.
18. Inspect the emergency fuel and oil shut-off control handle for correct lockwiring in the "OPEN" position.
19. Check the engine controls (throttle, mixture and propeller) for full and free movement, spring back and operation of friction dampers.
20. Inspect the propeller governor for external leaks.

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ITEM NO.

UTILITY SYSTEMS

1. Check cabin heat control for freedom of operation.
2. Inspect cabin ventilating duct openings for obstructions.

ELECTRICAL

1. Inspect the battery area for evidence of electrolyte spillage.
2. Inspect the battery jumpers for security of attachment.
3. Inspect the circuit breaker panel for circuit breakers in the tripped position.

INSTRUMENTS

1. Inspect the pitot head and static port openings for obstructions.
2. Inspect the instrument cover glasses for cleanliness and cracks and the limit markings for adhesion.
3. Inspect the rate of climb indicator for zero setting.
4. Inspect the magnetic compass for discolouration of fluid and air bubbles.
5. Inspect the compass correction cards for legibility.

ELECTRICAL POWER ON

POWER PLANT

1. Inspect the fuel quantity gauges for correct reading against known tank quantities.
2. Check the fuel booster pump for specified pressure. (Mixture control in "IDLE CUT-OFF").
3. Inspect all accessible fuel system components, lines, hoses, and connections for leaks. (Mixture control in "IDLE CUT-OFF" and booster pump "ON".)

ITEM NO.

ELECTRICAL

1. Check the landing light for operation.
2. Check the navigation lights for operation in "STEADY" and "FLASH" positions.
3. Check the instrument lights and intensity control rheostats for operation.
4. Check the cockpit and cabin lights for operation.
5. Check the anchor lights for operation.
6. Check the battery voltage on the voltmeter.
7. Check rotating anti-collision light for operation.

INSTRUMENTS

1. Check the pitot heater for operation.

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PART 3

PERIODIC INSPECTION

ELECTRICAL POWER OFF

INSP. DUE	ITEM NO.	PREPARATION
	1.	Landplane - wheels chocked fore and aft.
	2.	Floatplane - secure on beaching gear.
	3.	Maintenance stands provided.
	4.	Aircraft covers and shields removed.
	5.	Engine cowlings, access panels, strut fairings at landing gear attachments and fuselage panels under cockpit floor removed; reinstall on completion of inspection and inspect for security.
	6.	Battery disconnected and aircraft grounded.
	7.	External power source provided.

AIRFRAME

1. Inspect the aircraft for cleanliness.
2. Inspect stencils and insignias for legibility.
3. Inspect drain holes for obstructions.
4. Inspect the aircraft fairings, panels, doors and engine cowls for cracks, corrosion and distortion, check hinges, latches and fasteners for serviceability.
5. Inspect the wings, fuselage and tail unit for loose or missing rivets, skin for buckles, wrinkles, abrasions, dents or cracks.
6. Inspect the wing front and rear attachment pins and wing struts upper and lower bolts for security; attachment fittings for cracks, corrosion and security.
7. Inspect all flying control surfaces for cracks, wrinkles and abrasions; hinges and attachment fittings for cracks, corrosion and security.
8. Inspect the horizontal stabilizer attaching bolts for security.

Periodic
Power Off
Airframe

NSP. DUE ITEM NO.

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| | 9. | Inspect the mass balance weights (ailerons, elevator and rudder) for security. | |
| | 10. | Inspect the elevator torque tube for distortion, and evidence of heavy contact with adjustable stops on front frame, bearings for wear and excessive play. | |
| 4th | 11. | Check the rudder and trim tab cables for the correct tension. | |
| 4th | 12. | Check the rudder and trim tab for correct range of travel. | |
| 4th | 13. | Check the elevators and trim tab cables for correct tension. | |
| 4th | 14. | Check the elevators and trim tabs for correct range of travel. | |
| 4th | 15. | Check the aileron cables for correct tension. | |
| 4th | 16. | Check the aileron cables for correct range of travel. | |
| 4th | 17. | Check the flaps for correct range of travel. | |
| | 18. | Check the wing flap position indicator for correct flap angle. | |
| | 19. | Inspect all pulleys, pulley brackets, guides and fairleads for cracks, wear, alignment and security. | |
| | 20. | Inspect push rods and linkage for wear and security. | |
| 4th | 21. | Inspect all rod end bearings, bellcrank bearings, control pulley bearings and cable fittings for wear, misalignment and corrosion. | 8th |
| | 22. | Inspect accessible control cables for corrosion and fraying; turn-buckles and attachment points for security. | 8th |
| 4th | 23. | Inspect all control cables throughout their entire length for corrosion and fraying. | 8th |
| | 24. | Inspect engine control brackets for cracks, corrosion and security. | |
| | 25. | Check pilot's and co-pilot's seats for ease of adjustment and security. | LAND |
| | 26. | Inspect cabin seats for damage and security. | |
| | 27. | Inspect safety belts and shoulder harnesses for security of attachment, damaged and corroded metal parts; fabric and leather for cleanliness, cuts and fraying. Check latching mechanism for freedom of operation and positive locking. | |
| | 28. | Inspect cabin floors for security. | |
| 4th | 29. | Inspect the control column torque tube for distortion and check bearing for wear and excessive play. | |
| | 30. | Inspect first aid kits for legible identification markings and broken | |

INSP. DUE ITEM NO.

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31. Check all doors for security in closed position.
 32. Inspect windshield, cockpit and cabin windows for cleanliness, cracks, crazing, leaks and security.
 33. Inspect the relief tube for cleanliness, deterioration and security.
 34. Check the main hydraulic reservoir for correct level and inspect for leaks and security.
 35. Inspect the wing flap components and lines for security and chafing and check for leaks while under pressure.
 36. Inspect hand fire extinguishers for dents, operating mechanism for cleanliness, pressure within specified limits, seal intact and mounting brackets for cracks and security.
 37. Inspect the cabin heating and ventilating ducts for dents, loose connections and security.
 38. Check the cockpit and cabin heat and ventilator outlets for operation and inspect the opening for freedom from obstructions.
 - 8th 39. Check the symmetry of the aircraft.
 - 8th 40. Inspect the aircraft skin for buckling, rippling and check for oil canning.
 - 8th 41. Inspect the aircraft for corrosion and paint for flaking or blistering.
 - 8th 42. Inspect the aircraft for damaged, missing or loose rivets.

LANDING GEAR (LANDPLANE)

1. Inspect the main landing gear assembly and attachment fittings for cracks, corrosion, distortion and security.
2. Inspect the structure adjacent to the main attachment fittings for buckling or damage.
3. Inspect all strut assembly bolts for security.
4. Inspect the strut steps for cracks and security.
5. Inspect the accessible brake lines, hoses and connections for leaks with parking brake ON, lines and hoses for chafing and security.

NSP. DUE ITEM NO.

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| | 6. | Inspect the wheels and brake units for cracks, corrosion and security. |
| 2nd | 7. | Inspect the main wheels (main wheels removed) for cleanliness, corrosion, cracks and distortion; bearings and bearing surfaces for wear and damage, relubricate bearings, felt grease retainers for cleanliness (replace if saturated with lubricant) brake discs and pucks for cracks, excessive or uneven wear, drive keys for cracks, excessive wear and security; brake cylinders for leaks and security. |
| 4th | 8. | Check the main landing gear for proper track. |
| | 9. | Inspect the main and tailwheel tires for cuts, deterioration, presence of oil, grease and creep marks for alignment. |

NOTE

Reverse tires for increased wear life.

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| | 10. | Check the tires for correct inflation. |
| | 11. | Inspect the tailwheel shock strut assembly and surrounding area of fuselage structure for cracks, corrosion, distortion and security. |
| 2nd | 12. | Inspect the tailwheel (tailwheel removed) for cleanliness, corrosion, cracks and distortion; bearings and bearing surfaces for wear and damage, felt grease retainers for cleanliness (replace if saturated with lubricant). |
| | 13. | Inspect the tailwheel shock strut for fluid leaks; check for correct inflation, and clean the polished surfaces. |
| 4th | 14. | Check the tailwheel shock strut for specified servicing. |
| | 15. | Check the brakes for effectiveness and parking brake for operation. |
| 4th | 16. | Check the brake pedals and mechanical linkage for proper adjustment and lost motion, inspect for wear and security. |

LANDING GEAR (FLOATPLANE)

1. Inspect exterior and interior of floats for corrosion and check for leaks by applying the bilge pump to stand pipe of each compartment.
2. Inspect vent holes for obstructions.
3. Inspect the floats for cracks, scratches, dents, oil canning and loose rivets, nose bumpers for cuts and wear, handhole covers for distortion and security.

urity,	INSP. DUE	ITEM NO.	
cor- wear li- or ive		4.	Inspect the support struts and spreader bars for cracks, dents, distortion, corrosion and fractures in welding; check the bolts for correct torque values and inspect for corrosion and security.
		5.	Check the bracing wires for tautness and inspect for corrosion and security of locknuts; inspect the fibre separators for wear and security.
nce	4th	6.	Check the rigging of the floats by ensuring that distances are equal between wires. Tension of wires must be sufficient to prevent slackness.
		7.	Inspect the water rudders for cracks, dents, distortion, corrosion and security, supporting structure for cracks, springs for fracture, corrosion and security.
f		8.	Check the water rudders for correct steering operation, correct retraction and full travel, inspect for security in the retracted position.
n,		9.	Inspect the water rudder retraction and steering cables for fraying, corrosion and security of attachments; inspect the cables from air rudder quadrant to water rudder for fraying, corrosion, tautness and security; pulleys and fairleads for cracks, wear and security; check pilot's operating handle for binding and lubricate all moving parts and cable guide tube.
		10.	Inspect the strut and float attachments and bolts for fractures, corrosion and security.
		11.	Inspect the strut steps for cracks, wear, corrosion and security.
nt		12.	Inspect the paddles for security of installation.

LANDING GEAR (AMPHIBIOUS FLOATPLANE)

1. Inspect the landing gear struts for damage and security.
2. Inspect the landing gear and wheels (with aircraft hoisted, jacked or trestled clear of ground) for damage and security, and the adjacent structure for buckling or distortion. Check retraction of wheels.
3. Inspect the nose wheel shock struts for oil leaks, and the exposed surface of the inner cylinders for scoring.
4. Inspect the main wheel shock struts for serviceability.
5. Inspect the main and nose wheel actuating jacks for leaks, and the exposed surface of piston rod for scoring.

Periodic
Power Off
Airframe

INSP. DUE ITEM NO.

6. Inspect the sequence valves for leaks.
7. Inspect wheel axles for damage, scoring or flat spots.
8. Inspect the tires for wear, cuts, bruises, oil and grease, and creep marks for alignment.
9. Check the tires for correct inflation.
10. Inspect the main wheel shock strut boots for tears and excessive wear.
11. Check the nose wheel shock struts for correct servicing.
12. Inspect the wheels and brake units for damage and corrosion.
13. Inspect the brake lines and connections for damage, chafing and leaks.
14. Inspect nose wheel actuating cables for wear and fraying.
15. Inspect the front struts for corrosion and security of leg fairings; check torque value of bolts.
16. Inspect the float and fuselage attachment fittings, strut and tie-rod connections for security.
17. Check rudders for retraction, steering, full travel, sticking, rough or uneven action and lost motion. Check cables for tautness (not tight).
18. Inspect the float interior for damage, dents and loose rivets. Check for seepage between compartments and external leaks by flushing out each compartment, one at a time with fresh water.
19. Check the brakes for effectiveness.
20. Inspect the brake linings for wear.
21. Check the nosewheel shock struts for correct air pressure.
22. Inspect all bare steel surfaces for specified anti-corrosive treatment.
23. Inspect all the electrical terminals for specified anti-corrosive treatment.
24. Inspect the floats and struts for corrosion.
25. Check the rigging of the floats by ensuring that distances between wires are equal and that the wires are tensioned to prevent slackness.

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INSP. DUE ITEM NO.

LANDING GEAR (SKIPLANE)

1. Inspect the ski surfaces for loose rivets, damage, dents and cracks.
2. Inspect shackles for damage, corrosion and security.
3. Inspect the spring leaves for fractures.
4. Inspect mountings for damage and security.
5. Inspect trim cables for fraying and security.

LANDING GEAR (WHEEL-SKIPLANE)

1. Inspect ski attachments, fittings, pins and bolts for cracks, wear, corrosion and security.
2. Inspect main ski pedestals and attachments for wear, damage and corrosion.
3. Inspect ski shoes, runners and fairings for cracks, distortion, corrosion and security.
4. Inspect main ski trim unit for damage, binding and security; check the plates and rubbers for correct tension and inspect for deterioration.
5. Check air chamber of each main ski actuator for correct pressure.
6. Inspect checking cables for cuts, abrasions, fraying and loosening of binding at thimbles; end fittings for correct attachment and security.
7. Check skis for correct trim and angle; main skis for correct extension and retraction and pump gauge for correct position indication.
8. Check ski handpump and handle for freedom of operation; inspect for cleanliness, damage and security.
9. Inspect ski hydraulic reservoir for damage, corrosion and security, overflow and vent line outlet for obstructions; check for correct fluid level, inspect the filler cap gasket for wear and distortion and filler cap and chain for damage and security.
10. Inspect hydraulic motor pump for damage, security and leaks at connections.
11. Inspect hydraulic lines, hose and connections on complete system for abrasions, dents, leaks and security.

NSP. DUE ITEM NO.

POWER PLANT

1. Inspect the cowling for cracks and damaged or missing fasteners.
2. Inspect the cowling supports for cracks, abrasions and security.
3. Inspect the engine mounts for cracks, corrosion and security of attaching bolts.
4. Inspect the engine vibration isolators for breaks in the bonding between rubber and metal parts; metal parts for wear, cracks and security.
5. Inspect the firewall for cracks and structural damage.
6. Inspect the cylinders for cracked or broken fins, hold down nuts for security, deflectors for cracks, chafing and security.
7. Inspect the cylinder heads and rocker box housings for cracks.
8. Inspect the push rod housings for dents and cracks, and packing nuts for leaks.
9. Inspect the engine for fuel and oil leaks, loose or missing nuts, bolts, studs and clamps, broken lockwiring.
10. Check the carburettor fuel filter for cleanliness and damage.
11. Inspect the carburettor for leaks.
12. Check the sump plugs for metal particles.
13. Check the pressure oil filter for cleanliness and damage.
14. Inspect the crankcase breather line for chafing and security.
15. Inspect the carburettor hot and cold air intake ducts and accessory air cooling ducts for cracks, foreign matter in openings and security.
16. Check the carburettor heat control for full free movement.
17. Check the carburettor air filter for free movement and cleanliness.
18. Inspect the exhaust collector ring for cracks and security (outer half of hot air muff removed) accessible portion of heater muff for cracks, tail pipe for cracks and security.
19. Check the engine winter shutter for free operation.
20. Check the engine controls (throttle, mixture and propeller) for lost motion and full, free travel with corresponding travel at engine and control quadrant; friction locks for proper operation.

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INSP. DUE ITEM NO.

FUEL SYSTEM

1. Check the fuel tanks for quantity.
2. Check the fuel tank filler caps for security and gaskets for wear and deterioration.
3. Check the fuel tank filters for cleanliness and damage.
4. Inspect the fuel tank drain cocks for damage, leaks and positive shut-off.
5. Check the fuel line filter for cleanliness and damage.
6. Inspect the fuel selector valve for leaks and security of mounting; control cables for fraying and corrosion; check the linkage for freedom of operation and the control cables for tautness.
7. Inspect the priming pump, lines and connections for leaks, damage and security.
8. Check the emergency fuel and oil shut-off control for operation, reset in the OPEN position and lockwire.
9. Inspect the fuel tank vents for obstructions.
10. Inspect the exterior of the aircraft for fuel leaks.
11. Check the booster pump for leaks and security.
12. Check the wobble pump for leaks and operation.

OIL SYSTEM

1. Inspect the oil tank system components, lines, hoses and connections for leaks, chafing and security, metal lines for dents and scratches, and hoses for cuts, cracks and deterioration.
2. Inspect the oil cooler for leaks and security, and the air passages for cleanliness.
3. Inspect the oil cooler regulating valve for leaks and security.
4. Drain and flush the oil system, refill with specified oil, and check filler cap for security.

Periodic
Power Off
Power Plant
Utility Systems

INST. DUE ITEM NO.

INSP.

IGNITION SYSTEM

1. Inspect the ignition harness for loose connections, chafing, deterioration of rubber or plastic covering, and cracked brackets; conduits and spark plug leads for evidence of overheating.
2. Inspect the magnetos, ventilation plugs and magneto ground connections for security, drain holes for obstructions.
3. Inspect the boost coil and external electrical connections for security.

PROPELLER

1. Inspect the hub and cylinder for oil leaks.
2. Inspect the propeller for cleanliness.
3. Inspect the propeller blades for cracks, nicks, dents and corrosion; blade tips for correct markings.
4. Inspect the exposed surface of the piston for scoring.
5. Check the clearance between the counterweight brackets and the bronze thrust washer.
6. Check the track of the blades.
7. Check the piston for tightness.
8. Inspect the governor for leaks and security.

2nd

2nd

UTILITY SYSTEMS

1. Check the actuating flap in the heater unit and control cable for free movement. Inspect control cable for wear, corrosion and spring for tension and corrosion.
2. Inspect hoses for security and ducts for freedom from obstructions.
3. Inspect the air inlet and outlet for freedom from obstructions. Check the outlet shutter valve for free movement.

2nd

INSP. DUE ITEM NO.

ELECTRICAL

1. Remove battery for capacity check.
2. Inspect the battery area for evidence of electrolyte leakage or over-flow; terminals for pitting and corrosion.
3. Check momentary toggle switches for sticking in the "ON" position.
4. Inspect the reverse current relay externally for cleanliness and security; electrical connections for security.
5. Inspect the voltage regulator for cleanliness and security; electrical connections for security; shock mounts for deterioration.
6. Inspect the generator for security, cracked or broken mounting flange and end housing; electrical connections for security.
7. Inspect the starter motor for cracked or broken mounting flange and security; electrical connections for security.
8. Inspect the tachometer generator for security.
9. Inspect the external power receptacle for cleanliness and contacts for cleanliness.
10. Inspect all relays for security of mounting and connections and serviceability of wires.
11. Inspect the navigation, landing, cockpit and cabin lights for broken lenses, corrosion and security.
12. Inspect the anchor light for broken lens, corrosion and security.
13. Check the starter brushes for specified minimum length, even wear and freedom of movement in brush holders; inspect the commutator for evidence of excessive arcing.
14. Check the generator brushes for specified minimum length, even wear and freedom of movement in brush holders; inspect the commutator for evidence of excessive arcing, dirt, oil, grease or metal particles.
15. Inspect all electrical systems for the following:
 - a. Wiring for deterioration, chafing, fraying, evidence of overheating and security of clipping.
 - b. Connector plugs for corrosion, cracks, evidence of overheating and security.
 - c. Wire shielding for fraying, crimping and corrosion.
 - d. Junction boxes for cracks, cleanliness and corrosion.

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Periodic
Power Off
Electrical
Instruments
Power On
Power Plant

INSP. DUE ITEM NO.

e. Bonding for damage, corrosion and security.

16. Check the booster pump motor for worn or binding brushes.

INSTRUMENTS

1. Check the pitot static system for leaks and accumulation of moisture.
2. Inspect the instrument lines for deterioration, chafing and security of connections.
3. Inspect all instrument electrical connections for security.
4. Inspect the thermocouple lead connections for security.
5. Inspect the instruments for broken or deranged pointers, cracked or broken glass, broken bezels, correctly positioned operating limit markings and security.
6. Check the gyro and artificial horizon caging mechanism for operation.
7. Inspect the temperature bulbs for security and check the connector plugs for tightness.
8. Check the outside air temperature gauge against a master thermometer.
9. Inspect all instrument wiring for deterioration, chafing, fraying, overheating and proper support. Shielding for fraying, corrosion and damage. Terminal strips, connections and bonding for damage, corrosion and security.

2nd

ELECTRICAL POWER ON

POWER PLANT

FUEL SYSTEM

1. Check the fuel quantity in tanks.
2. Inspect the fuel system components, lines, hoses and connections for leaks, chafing and security; lines for dents and scratches; hoses for cuts, cracks and deterioration. (Mixture control in "IDLE CUT-OFF")

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and booster pump or wobble pump "ON").

3. Inspect for specified fuel pressure (mixture control in "IDLE CUT-OFF" and booster pump "ON").
4. Inspect the fuel pressure warning system for specified calibration.

OIL SYSTEM

1. Check the oil dilution system for proper operation by disconnecting the line on the discharge side of the valve and with the mixture control in "IDLE CUT-OFF", and booster pump or wobble pump "ON". Inspect for leaks when oil dilution valve is "OFF" and full flow when valve is "ON".

ELECTRICAL

1. Check the landing light for operation.
2. Check the navigation lights for operation in "STEADY" and "FLASH" positions.
3. Check the instrument lights and intensity control rheostats for operation.
4. Check the cockpit and cabin lights for operation.
5. Check the anchor light for operation.
6. Check battery voltage on voltmeter.

INSTRUMENTS

1. Check the pitot head heating element for operation.

ENGINE OPERATION

The following checks should be performed during an engine ground run:

1. IDLE SPEED CHECK

a. Check that engine idles at 500 ± 50 r.p.m.

2. IGNITION SWITCH CHECK.
 - a. Set throttle at 600 r.p.m.
 - b. Momentarily turn ignition switch "OFF".
 - c. Engine should stop firing.
3. PROPELLER PITCH CHANGE CHECK.
 - a. Set throttle at 1600 r.p.m. with propeller in full increase r.p.m. position.
 - b. Move propeller lever to full decrease r.p.m. position.
 - c. The r.p.m. should drop smoothly and rapidly to approximately 1000 r.p.m.
4. IDLING MIXTURE CONTROL CHECK (MANUAL).
 - a. Set throttle at 450-500 r.p.m.
 - b. Pull mixture control lever back to "FULL LEAN" position.
 - c. The r.p.m. should momentarily rise approximately 20 r.p.m. before the normal drop.
5. IGNITION CHECK.
 - a. Set throttle to 1750 r.p.m.
 - b. Turn ignition switch to "L" and then to "R".
 - c. Drop in either position should not exceed 100 r.p.m.
 - d. If drop does exceed 100 r.p.m., set throttle at 2200 r.p.m. and recheck.

NOTE

Return ignition switch to "BOTH" between "L" and "R" checks to allow the engine to regain normal r.p.m.

6. POWER CHECK.
 - a. Open throttle until manifold pressure is equal to airfield pressure and check that tachometer reading is within 2100 ± 20 r.p.m. range.
 - b. Check that fuel pressure gauge registers 3-5 p.s.i.
 - c. Check that oil temperature gauge registers 40°C and that oil pressure gauge registers 75-85 p.s.i.

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- d. Pull propeller control lever slowly back to halfway, then return to increase r.p.m., tachometer r.p.m. should remain steady, indicating that the propeller governor is functioning correctly.

7. CARBURETTOR HEAT CHECK.

- a. Move carburettor heat control to the "HOT" position, then return to the "COLD" position.
- b. Check for increase and decrease of carburettor mixture temperature.

8. GENERATOR OUTPUT CHECK.

- a. Check that generator cuts in at approximately 1400 r.p.m.
- b. Check voltmeter and ammeter readings; voltage should not exceed 28.5 volts.

PART 4

SPECIAL INSPECTIONS

AIRFRAME

INSPECTION DUE	ITEM NO.	
After cleaning or repair of safety belts and harnesses, and every 12 months.	1.	Weight test safety belts and harnesses.
After salt water landing.	2.	Thoroughly clean exterior of aircraft with fresh water.
After any circumstance which might result in damage to the landing gear.	3.	Remove the tires from the wheels. Inspect the tires for damage and the wheels for cracks and distortion. Inspect the landing gear components and attachments for cracks, distortion and security.
After heavy one wheel landing.	4.	Inspect windshield frames, with particular attention to area at base of windshield centre post, for loose or sheared rivets or other damage.

POWER PLANT

Overspeed in excess of specified limits.	1.	(a)	Change the engine.
		(b)	Completely dismantle propeller and governor and magnetically inspect all steel parts; visually inspect all other parts for cracks and distortion.
Overspeed not in excess of specified limits.	2.	(a)	Inspect the engine for cracked or broken cylinder heads and barrels.
		(b)	Remove the sump plugs and oil filter and check for metal particles; drain the oil from the sump and check for metal particles.
10 flying hours after engine inspection due to overspeed.	3.		Remove the sump plugs and oil filter and check for metal particles; drain oil from the sump and check for metal particles.
At engine change.	4.	(a)	Check the vibration isolator core assembly for specified dimensions.
		(b)	Drain, flush and refill the oil system.
		(c)	Carburettor heater intake duct for security and flap valve for full travel.

Special
Power Plant

INSPECTION DUE

ITEM NO.

		Inspect the air ducts for cleanliness and damage.
	(d)	Flight test.
After ground run following an engine change or cylinder change.	5.	(a) Check the cylinder hold down nuts for correct safetying.
	(b)	Check the manifolds and oil lines for leaks and security.
	(c)	Remove the sump plugs and oil filters and check for metal particles.
Prior to first and second flights following an engine change.	6.	Check the fuel and oil hose clamps for proper positioning, leaks and tightness.
After an engine change and the flight test following.	7.	Inspect all fuel system components, lines, hoses and connections for chafing and security; metal lines for dents and scratches; hose for cuts, cracks and deterioration; check for leaks (mixture control at "IDLE CUT-OFF" and booster pump "ON" or wobble pump operated).
After a fuel system component is replaced.	8.	(a) Check fuel flow.
	(b)	Check lines, hoses and connections adjacent to new component for chafing and leaks (mixture control IDLE CUT-OFF booster pump "ON" or wobble pump operated).
After a fuel quantity transmitter is replaced.	9.	Check the lines, hoses and connections adjacent to the new component for chafing and leaks. Conduct a calibration test by adjusting transmitter at empty position and filling tank in 5 gallon increments. Indicator should be correct within 1 gallon throughout range.
After first oil dilution, if 50 flying hours have elapsed since last dilution series.	10.	Check the oil filter for cleanliness; drain the oil from the sump and drain off any sludge from the oil drain cock.
Within 1 hour after last flight when ground temperature is below freezing.	11.	Drain any water from oil tank sump.
Every 7 days when ground temperature is above freezing.	12.	Drain any water from oil tank sump.
Every daily inspection, or as conditions demand, when operating in dusty areas.	13.	Remove and clean carburettor air filter.

INSPECTION DUE

ITEM NO.

Every propeller change.

14.

(a) Retorque retaining nut after 15 minutes engine operation.

(b) Flight test.

Every governor change.

15.

(a) Retorque retaining nuts after 15 minutes engine operation.

(b) Flight test.

At 10 flying hours after delivery of aircraft.

16.

Check, tighten all accessory hold down nuts, clips, clamps and connections.

Every 50 hours of flying.

17.

Remove exhaust heat exchanger tube from the exhaust tail pipe assembly. Inspect thoroughly both internally and externally for deterioration, cracks or porosity. Pressure test under water to 10 p. s. i.

Every C of A.

18.

Remove exhaust heat exchanger tube from the exhaust tail pipe assembly. Inspect thoroughly both internally and externally for deterioration, cracks or porosity. Pressure test under water to 50 p. s. i.

ELECTRICAL

Every 7 days.

1.

Check the battery cells for proper electrolyte level and specific gravity. Inspect leads and connectors for corrosion and check the connectors for tightness. Inspect the drain for obstructions, and the battery, container and cover for security.

INSTRUMENTS

After any equipment changes which might cause compass deviation.

1.

Conduct a compass swing and replace correction cards.

After a water landing and after washing aircraft.

2.

Check pitot static system for moisture.

Every 24 hours in dusty conditions.

3.

Check pitot static ports for accumulation of dust.

PART 5

RECOMMENDED OVERHAUL OR REPLACEMENT SCHEDULE

This replacement schedule has been compiled to assist the operator in planning the periodic replacement of certain items of equipment by new or overhauled items. The flying hours suggested for replacement are based on ideal conditions and will vary according to the conditions under which each aircraft operates.

ITEM	AIRFRAME	RECOMMENDED OVERHAUL OR REPLACEMENT
Flap Actuating Jack		1400 Hours
Ratchet Valve		1400 Hours
Horizontal Stabilizer to Fuselage Attachment Bolts		1000 Hours
Landing Gear Compression and Rebound Rubbers		1000 Hours or 24 Months
Brake Master Cylinders		1200 Hours
Wing Struts C2W469A/70A	}	In accordance with Engineering Bulletin #15
Wing Struts C2W545A/46A		
POWER PLANT		
Engine		800 Hours
Spark Plugs		200 Hours (Nominal)
Propeller		800 Hours
Propeller (with modified counterweight shafts)		800 Hours
Governor		800 Hours
Tachometer Generator		2000 Hours or 36 Months

ITEM

ELECTRICAL

RECOMMENDED
OVERHAUL OR
REPLACEMENT

Voltage Regulator	800 Hours
Generator	800 Hours
Reverse Current Relay	1000 Hours
Starter	800 Hours
Starter Solenoid	1000 Hours
Flasher	1000 Hours
Booster Pump	800 Hours

INSTRUMENTS

Turn & Bank Indicator (Electrical)	1200 Hours or 36 Months
Turn & Bank Indicator (Air Driven)	1200 Hours or 24 Months
Artificial Horizon Indicator	1000 Hours or 24 Months
Altimeter	2000 Hours
Airspeed Indicator	2000 Hours
Rate of Climb Indicator	2000 Hours
Directional Gyro	1000 Hours or 24 Months
Fuel Contents Transmitter (TJ13)	1600 Hours or 36 Months
Fuel Contents Indicator	2000 Hours or 36 Months
Vacuum Gauge	2000 Hours
Clock	1600 Hours
Cylinder Head Temperature Gauge	1200 Hours
Engine Gauge Unit	2000 Hours
Manifold Pressure Gauge	2000 Hours
Tachometer	2000 Hours or 36 Months
Carburetor Mixture Temperature Gauge	2000 Hours
Voltammeter	1600 Hours
Magnetic Compass	36 Months

ITEM**RECOMMENDED
OVERHAUL OR
REPLACEMENT****INSTRUMENTS**

Course Selector	2000 Hours
Cross Pointer Indicator	1200 Hours or 36 Months
Wheel/Ski Position Indicator	2000 Hours
Amphibious Float Wheel Position Indicator	2000 Hours

ENGINE FIRE PROTECTION

Cartridge Unit	5 years after date of manufacture or 2 years after removal from its sealed package
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