



NATIONAL TRANSPORTATION SAFETY BOARD

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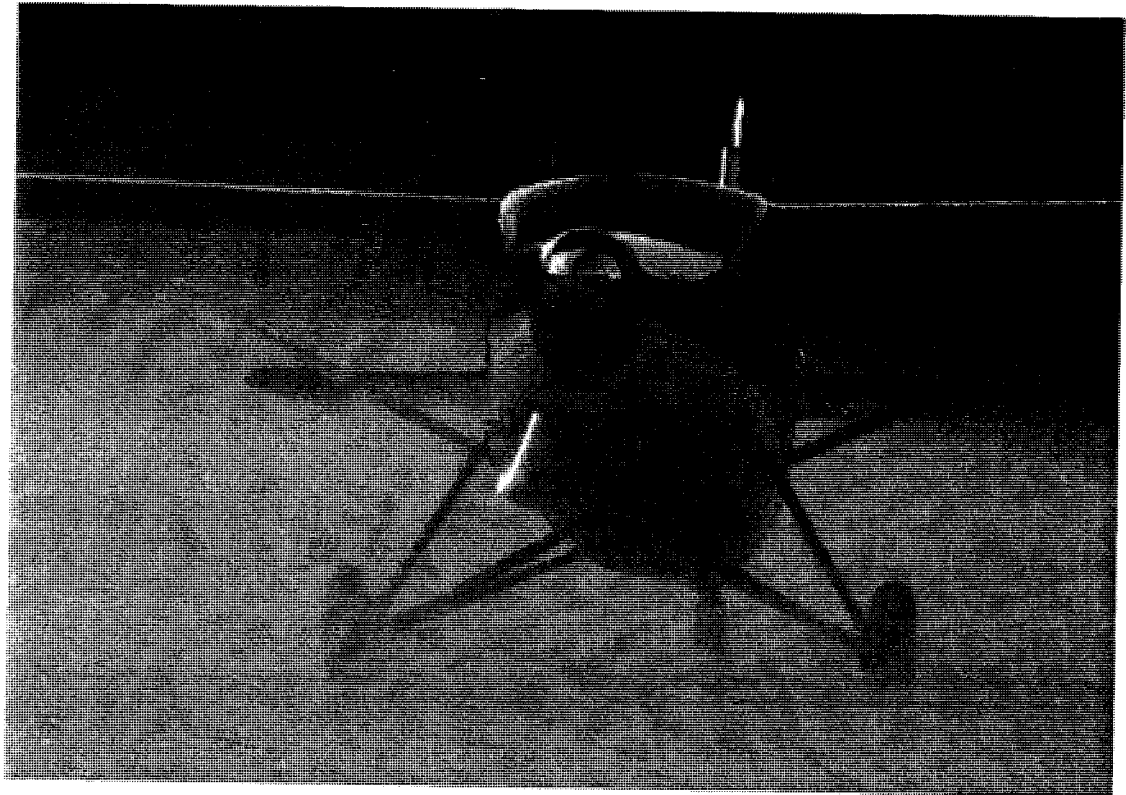
AIRWORTHINESS

Group Chairman's Factual Report

DCA13MA121

**Attachment 3 – Rediske Approved Airplane Inspection Program
(30 pages)**

REDISKE AIR, Inc.



APPROVED AIRCRAFT INSPECTION

PROGRAM: DHC-3T

DOM COPY

REDISKE AIR, Inc.
DHC-3T APPROVED AIRCRAFT INSPECTION PROGRAM

Section: List of Effective Page

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Approved	
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Date	Signature

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INTRODUCTION

1. As allowed in FAR Part 91.409(d), Rediske Air, Inc (RAI) has selected to inspect it's VIKING DeHavilland DHC-3T aircraft per an Approved Aircraft Inspection Program (AAIP)
2. The RAI DHC-3T AAIP is divided into four (4) separate phases. One phase is accomplished every 50 hours of flight time.
3. Additional Special Inspections which are required at other intervals are found in the Airworthiness Limitations Section of the DHC-3 Maintenance Manual, Honeywell TPE-331-10 Maintenance Manual, Texas Turbine Conversions Maintenance Manual and Hartzel Propeller Manual 139.
4. The four 50 hour phases are detailed as follows:

PHASE 1

- a. A safety inspection of flight controls, wheels and brakes, engine intake and exhaust systems, fuel system and electrical.
- b. Engine servicing and inspection.
- c. All 50 hour inspection items.

PHASE 2

- a. A safety inspection of flight controls, wheels and brakes, engine intake and exhaust systems, fuel system and electrical system.
- b. Engine servicing and inspection.
- c. All 100 hour inspection items.

PHASE 3

- a. A safety inspection of flight controls, wheels and brakes, engine intake and exhaust systems, fuel system, and electrical system .

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- b. Engine servicing, and inspection.
- c. All 150 hour inspection items.

PHASE 4

- a. A safety inspection of flight controls, wheels and brakes, engine intake and exhaust systems, fuel system and electrical inspection.
 - b. Engine servicing and inspection.
 - c. All 200 hour items.
5. Accomplishment of these four phases at specified points will assure compliance with the hourly time requirements. Additional SPECIAL INSPECTION requirements will be accomplished at intervals coinciding with PHASES 1 through 4.
 6. All 200, 400, 600 and 800 hour and special inspections will be tracked and recorded on individual forms that are found in the aircraft maintenance logbook and these inspections shall be performed as they come due. NOTE: The 400 hour and 800 hour checklists are part of the phase inspection checklists and are checked off as they come due.
 7. As prescribed in FAR 91.409(d)(4), the frequency and detail of the AAIP shall provide for the complete inspection of the aircraft within each 12 calendar months.
 8. All Airworthiness Directives shall be accomplished at the Phase Inspection prior to their time due in order not to overfly an AD if the inspection interval exceeds 50 hours as is allowed in the program, (i.e. If the second phase was accomplished 10 hours early, an AD with a 100 hour interval would be due 10 hours before the fourth phase inspection.) ADs having a 50 hour interval shall be closely monitored so that they are accomplished on time.
 9. If the airplane is approaching the end of the 12 calendar month period, but the complete cycle of four phases has not been accomplished, it will be necessary to complete the remaining phase(s) regardless of aircraft hours before the end of the 12 calendar month period.

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10. The AAIP is used in lieu of the conventional 100 hour/annual inspection program. Annual inspections are not required as long as the inspections requirements of the AAIP are complied with.

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MANUALS AND FORMS REQUIRED

1. OPERATIONS MANUAL

The purpose of the manual is to provide the necessary information for establishing and conducting this AAIP.

2. NOTIFICATION FORM

This form is submitted to the Anchorage FSDO when requesting approval of the AAIP.

3. PHASE SCHEDULES

As an aid in performing the inspections, the Phase Schedules are to be used as checklists by the mechanic. These Phase Schedules detail the inspection items for each phase and a place is provided for the mechanic and /or inspector to initial as each item is performed.

4. RECURRING INSPECTION FORM

This form is used to track and record compliance with calendar and special inspection items. Each item will have its own form and is easily tracked by a simple review at the beginning of each Phase Inspection. Examples: Fire Extinguisher annual reweigh; Hartzell Propeller 400 hour lubrication I/A/W Hartzell Manual 139.

5. RECURRING AD COMPLIANCE FORM

This form is used to track and record compliance with all recurring Airworthiness Directives. Each AD is entered on an individual form and is tracked by a simple review by the mechanic prior to each Phase Inspection.

6. AAIP INSPECTION RECORD

All inspections are recorded as they are complied with. The form provides the maintenance and operations staffs with a permanent, up-to-date, record and status of current aircraft inspections while the aircraft is on the AAIP.

7. INSPECTION DISCREPANCY FORM

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This form is used to record discrepancies found during the course of an inspection. Each item is to be corrected and the correction recorded in the appropriate space on the form. The mechanic performing the work and the inspector (if available) will verify each item corrected by entering his signature and certificate number in the sign-off block. Every item on the form is to be corrected and signed off prior to releasing an aircraft to service. The Discrepancy form will remain with the completed Phase Checklist and shall remain a permanent part of the aircraft records.

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QUALIFYING AN AIRCRAFT FOR THE AAIP

A complete aircraft annual/800 hour inspection, plus any special and calendar items of inspections due at the time, must be accomplished prior to placing the aircraft on the AAIP.

The first Phase 1 inspection will be due at 50 hours time in service after the annual/800 hour inspection. The first Phase 2 Inspection will be due at 100 hours time in service. The first Phase 3 inspection will be due at 150 hours time in service. The first Phase 4 inspection will be due at 200 hours time in service.

STARTING THE APPROVED AIRCRAFT INSPECTION PROGRAM

1. Obtain approval for use of the AAIP from the FAA Anchorage Flight Standards District Office.
2. Provide the FAA the name of the A&P/IA who will supervise or perform the AAIP.
3. Provide the FAA a copy of this manual including copies of the Phase Inspection Checklists.
4. Make an entry in the Aircraft Maintenance Records stating that the aircraft has been placed on the AAIP noting the date and the aircraft total time.

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USE OF THE PHASE SCHEDULES

1. **Phase Schedules:** Each Phase Schedule has been prepared as a work form, or checklist, for use in the shop. Each Phase is color-coded for ease of identification.

PHASE 1 – BLUE

PHASE 2 - Yellow

Phase 3 – Green

Phase 4 – Pink

2. **Inspection Items:** The phases are broken up into four 50 hour intervals.

Phase 1 Safety inspection and 50 hour items

Phase 2 Safety inspection and 100 hour items

Phase 3 Safety inspection and 150 hour items

Phase 4 Safety inspection and 200 hour items

The DHC-3T checklists have spaces for four complete inspection intervals. **All four intervals must be completed within a twelve month period in order to meet the equivalent requirements of the DeHavilland (Viking Aircraft) 800 hour/annual inspection.** If the four inspection intervals have not been completed by the end of that twelve month period, the remaining inspections items must be performed prior to placing the aircraft back in service. The twelve month cycle begins when the first phase 1 inspection is completed.

3. **Verification/Initialing:** A place is provided on the right side of the form for the mechanic and/or inspector to verify and initial each item as it is accomplished.
4. **Items That Are Not Applicable:** Some items may not be applicable for a particular interval. The mechanic shall place the letters "N/A" in the Initial Block for such items.
5. **Instructions for Continued Airworthiness (ICA):** Items installed under Supplemental Type Certificates and Field Approvals are incorporated into the phase inspections and will be inspected in accordance with the ICA for that particular item. The Phase Schedule will be amended as STC or Field Approved items are added or removed.

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- 6. Additional Equipment.** Items not covered under the manufacturer's inspection program, such as survival kits, flashlights, first aid kits and PFDs are incorporated into the phase inspections. See number 5 above.
- 7. Calendar Items, Ads, Service Bulletins and special inspections:** Items outside the scope of the four phases are tracked on individual inspection forms and are reviewed for compliance times prior to each phase inspection. Ads may never be overflown. It is Rediske Air policy to comply with any AD having less than 60 hours remaining before the next phase inspection.
- 8. Post inspection items.** As part of the Phase Inspection, an operational check of the engine, avionics, and instruments shall be conducted to assure proper operation.
- 9. Certification and approval for return to service.**
 - A.** The mechanic or inspector performing the maintenance shall make an entry in the aircraft, engine and propeller logs noting the date, aircraft total time, Hobbs meter or tachometer time and phase number, and will approve the aircraft for return to service attesting to by his signature and certificate number. **NOTE: All inspections are to be tracked using aircraft total time only.**
 - B.** When approving the aircraft for return to service, the AAIP Inspection Record shall be also be signed and dated. This action will insure a complete history of each inspection performed and provides a quick reference for the tracking of phase inspections.

CONDUCTING THE PHASE INSPECTIONS:

The following are recommendations for conducting the Phase Inspections. **NOTE: Inspection intervals may be exceeded by up to 10 hours if necessary, or performed early at any time prior to the regular interval as provided below.**

- A.** Perform the phase inspections as they become due using the Phase Inspection checklists.
 - 1.** In the event of late compliance of any Phase Inspection scheduled, the next Phase Inspection retains a due point from the time the late Phase inspection was originally scheduled. **NOTE: Any Phase may be exceeded by up to 10 hours if necessary, including Phase 4. As stated in FAR 91.409(d)(2)(ii), the 10 hour grace period can only be used for "en-route" flight time.**

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EXAMPLE:

<u>PHASE</u>	<u>PHASE SCHEDULED</u>	<u>PHASE ACCOMPLISHED</u>
1	50 hours	50 hours
2	100 hours	100 hours
3	150 hours	159 hours***
4	DUE AT 200 hours	

***Phase 3 was performed 9 hours late (within the 10 hour grace period). The next phase inspection retains a due point 50 hours from the time the last phase was originally scheduled. In this example, Phase 4 is due at 200 hours.

2. In the event of early compliance of any scheduled phase inspection that occurs 10 hours or less ahead of schedule, the next phase inspection due point remains where originally scheduled.

EXAMPLE:

<u>PHASE</u>	<u>PHASE SCHEDULED</u>	<u>PHASE ACCOMPLISHED</u>
1	50 hours	50 hours
2	100 hours	100 hours
3	150 hours	145 hours***
4	DUE AT 200 hours	

*** Because Phase 3 was performed 5 hours early, (within the 10 hour grace period) Phase 4 will retain the DUE POINT originally scheduled.

3. In the event of early compliance of any scheduled phase inspection, that occurs more than 10 hours ahead of schedule, the next phase inspection due point must be re-scheduled to establish a new due point from the time of early accomplishment.

EXAMPLE:

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<u>PHASE</u>	<u>PHASE SCHEDULED</u>	<u>PHASE ACCOMPLISHED</u>
1	50 hours	50 hours
2	100 hours	100 hours
3	150 hours	135 hours***
4	DUE AT 185 HOURS	

*** Because Phase 3 was performed 15 hours early (more than 10 hours early), the next Phase 4 inspection must be rescheduled to have a due point 50 hours after Phase 3 was actually performed. In this example Phase 4 was rescheduled to be due at 185 hours.

B. Prior to starting a Phase Inspection, a check is to be made of the AAIP Inspection Record for the following:

1. Phase records to see which phase is due.
2. Airworthiness Directive compliance sheets for items that are due.
3. Recurring Inspection Forms for items that are due, including 500 hour, 1000 hour, calendar, and special inspections.

NOTE: It is important to review the airworthiness section of the aircraft maintenance manual for any special items that are due and record them on a Recurring Inspection Form

C. The intent of the AAIP Phase Inspection Schedules is to provide inspection personnel with a checklist of the items requiring inspection. Therefore when conducting a Phase Inspection, inspection personnel shall have available the following additional information:

1. Applicable Maintenance Manuals and Parts Catalogues since these are utilized for obtaining the technical information necessary for accomplishing the inspection items and servicing the aircraft.
2. Manufacturer's mandatory and recommended Service Bulletins and FAA Airworthiness Directives since a compliance check of these items is to be a part of each phase inspection.

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D. Inspection discrepancies found as a result of the phase inspection are to be recorded on the DISCREPANCY FORM and corrected before the aircraft is approved for return to service.

E. Although the AAIP Inspection Record provides a permanent record of the inspections accomplished under the AAIP, the original aircraft, engine and propeller logbooks/records are to be maintained in accordance with the FARs relative to inspection, maintenance, repairs and alterations.

VARIATIONS TO THE AAIP

A. Variation to normal scheduling.

1. Phase Inspections may not be divided and accomplished over a period of days. Once the inspection has begun, it must be completed prior to returning the aircraft to flight status.
2. As stated in section 10 above entitled, "Conducting the Phase Inspections," in the event of early compliance of any phase inspection that occurs 10 hours or less ahead of schedule, the next phase due point will remain where originally set. In the event of early compliance of any phase inspection that occurs more than 10 hours ahead of schedule, the next phase due point will be rescheduled to establish a new due point from the time of early accomplishment.

B. AMENDING THE PHASE INSPECTION SCHEDULE

1. Changes in environment conditions, such as volcanic ash for example, may necessitate changes in the inspection frequency of certain components or systems.
2. In the event that the inspector determines that a more frequent inspection interval for any particular system or component is required due to excess wear or from maintenance issues arising on a too frequent basis, RAI may make changes to the phase schedule in order to maintain a high level of safety and reliability.
3. Changes resulting in items being inspected more often may be changed by requesting approval of the change from the FAA and amending the Phase Schedule upon obtaining that approval.

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4. Changes resulting in items being inspected on a less frequent basis than in the Phase Inspection Schedule will also require approval from the FAA prior to increasing the phase interval for that particular item.

12. CANCELLING THE RAI AAIP

If the AAIP is cancelled or discontinued, Rediske Air Inc must notify the FAA FSDO in writing of the discontinuance. After the discontinuance, the first Annual inspection under FAR 91.409 (A) is due within 12 calendar months after the last Phase 4 inspection. The 100 hour inspection is due 100 hours after the last Phase 4 inspection.

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PHASE 1 INSPECTION CHECKLIST				
Reg: N93PC	Model: DHC-3T	Date:		
Hobbs:	AC TT:	Inspector:		
50 Hour Safety Inspection				
Item:	1st	2nd	3rd	4th
1 Inspect AC for cleanliness				
2 Inspect doors, panels, fairings, and cowlings for cracks, corrosion, and distortion; check latches, fasteners and hinges for wear and serviceability.				
3 Check all doors for security in closed position.				
4 Inspect mass balance weights (aileron, elevator and rudder) for security				
5 Inspect accessible control cables for corrosion and fraying, turnbuckles and attachment points for security. Detailed visual inspection of cable terminals for signs of corrosion pits or cracks.				
6 Check pilot and copilot seats for ease of adjustment and security				
7 Inspect cabin seats for damage and security				
8 Inspect seat belts and shoulder harnesses for security of attachment, damaged and corroded metal parts; webbing for cleanliness, cuts and fraying. Check latching mechanism for freedom and positive latching.				
9 Inspect windshield, cockpit and cabin windows for cleanliness, cracks, crazing, leaks and security.				
10 Inspect fuselage skin adjacent to rudder stop pads for cracks or distortion.				
11 Check main hydraulic reservoir for quantity and inspect for leakage and security				
12 Inspect main and tail tires for cuts, deterioration, presence of oil, grease, and creep marks for alignment				
13 Check tires for specified inflation.				
14 Inspect tail shock strut for fluid leakage, check for proper extension and wipe strut piston clean				
15 Check electrical components and relays in the power distribution box for cleanliness, security, signs of overheating, terminals for security. Check box for cracks, deformation and signs of over- heated components				
16 Check all current limiters for signs of heat or blown limiter				
17 Inspect all cockpit and cabin lights for broken lenses, corrosion, security and operation				

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18 Check Navigation lights for operation				
19 Check landing light for operation. Do not leave on for more than 10 seconds				
20 Check stall warning light for illumination and operation (push to test); raise vane to actuate warning				
21 Test pitot and stall warning elements for operation.				
22 Check operation of all annunciator lights.				
23 Check propeller blades for security and damage. Dress any nicks as required. Repaint tips and back of blades as required				
PHASE 1 Inspection				
Item	1st	2nd	3rd	4th
1 AD search completed.				
2 Engine cowlings, access panels, strut fairings, hell-hole access cover removed as required				
3 Battery disconnected and AC grounded if electric work is to be performed or if major components are to be removed.				
4 Logbooks researched				
5 Maintenance manuals, documents, ICAs, AD texts present and current				
6 Inspect all exterior and interior placards for legibility and security				
7 Inspect drain holes for obstructions				
8 Inspect wings, fuselage and tail unit for loose and missing rivets; skins for buckles, wrinkles, corrosion, abrasions dents and cracks.				
9 Inspect bottom rudder bracket for cracks and distortion particularly the area adjacent to the limit stops and pivot bolt. Check the bushing in the bracket for tightness by moving the rudder to one side and removing the pivot bolt				
10 Check wing flap hydraulic components for security and leakage under pressure				
11 Inspect cabin floor for buckling.				
12 Check control column torque tube for distortion, bearing wear and excessive play. Check lock plunger for excessive play and positive lock. See Ad listing for recurring inspection				
13 Inspect portable fire extinguishers for condition and security; check gauge for proper indication				
14 Reweigh fire extinguisher and inspect per NFPA 10				
15 Check the symmetry of the aircraft.				
16 Check aircraft skins for buckling, ripping and oil canning.				

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17 Check aircraft for corrosion; paint for flaking and blistering				
18 Inspect aircraft for damaged or missing rivets				
19 Ski-plane: Inspect tail landing gear internal support structure between stations 427.0 and 444.0 for distortion and cracking. Pay particular attention to bottom of angles and lower webs of side member C3FS6-105, -106				
AIRCRAFT EQUIPPED WITH MODIFIED STRUT SLEEVES				
1 Inspect wing strut sleeves for indication of movement, damage, fretting and corrosion				
2 Remove wing strut sleeves and inspect wing strut for any indication of corrosion damage or abrasion caused by sleeve movement. Re-install strut sleeve per AOG AIR SUPPORT Inc. Drawing # AOG-03-002-				
TAIL SECTION				
ITEM	1st	2nd	3rd	4th
1 Check the rudder and trim tab for specified clearances and range of travel.				
2 Check the elevators and trim tab cables for correct tension. Detailed visual inspection of cable terminals for signs of corrosion pits or cracks.				
3 Check elevator for specified clearance and range of travel				
4 Check elevator servo tab for specified clearance and range of travel				
5 Check stabilizer trim cables for correct tension. Detailed inspection of cable terminals for signs of corrosion pits or cracks.				
6 Check the stabilizer for specified range of travel				
7 Inspect the cabin heating and ventilating ducts for dents, loose connections and security				
8 Check cockpit, cabin heat and ventilator outlets for operation and obstructions				
9 Check pitot-static system for leaks and accumulation of moisture				
10 Inspect the instrument lines for deterioration, chaffing and security of connections				
11 Inspect all instrument electrical connections for security.				
12 Inspect ITT/EGT thermocouple leads for security and chaffing.				
13 Inspect instrument pointers for correct indication in the static position, check for cracked glass or broken bezels, correct markings and range limits.				
14 Check gyros and horizon caging mechanisms - if installed				
15 Check OAT gauge against a master thermometer				
16 Check all instrument wiring for deterioration, chafing, fraying,				

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overheating and for proper bundle support				
17 Check any shielding for fraying; check terminal strips, connections and bonding for damage, corrosion and security.				
18 Check momentary toggle switches for sticking in the on position				
19 Verify fuel quantity gauges against known quantity in tanks.				
20 Inspect fuel system components, lines. Hoses, and connection for leakage, chafing and security; lines for dents and scratches; hoses for cuts, cracks and deterioration. (Fuel boost pump on.)				
21 Inspect fuel system components, lines. Hoses, and connection for leakage, chafing and security; lines for dents and scratches; hoses for cuts, cracks and deterioration. (Fuel boost pump on.)				
22 Check instrument lights for illumination and control rheostat for operation				
23 Check cockpit, cabin and rear compartment lights for operation				

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PHASE 2 INSPECTION CHECKLIST				
Reg: N93PC	Model: DHC-3T	Date:		
Hobbs:	AC TT:	Inspector:		
50 Hour Safety Inspection				
Item:	1st	2nd	3rd	4th
1 Inspect AC for cleanliness				
2 Inspect doors, panels, fairings, and cowlings for cracks, corrosion, and distortion; check latches, fasteners and hinges for wear and serviceability. Check cabin doors for proper closing.				
3 Inspect all flying control surfaces for cracks, wrinkles and abrasions; hinges and attachment fittings for cracks, corrosion and security				
4 Inspect mass balance weights (aileron, elevator and rudder) for security				
5 Inspect accessible control cables for corrosion and fraying, turnbuckles and attachment points for security. Detailed visual inspection of cable terminals for signs of corrosion pits or cracks.				
6 Check pilot and copilot seats for ease of adjustment and security				
Inspect cabin seats for damage and security				
7 Inspect seat belts and shoulder harnesses for security of attachment, damaged and corroded metal parts; webbing for cleanliness, cuts and fraying. Check latching mechanism for freedom and positive latching.				
8 Inspect windshield, cockpit and cabin windows for cleanliness, cracks, crazing, leaks and security.				
9 Inspect fuselage skin adjacent to rudder stop pads for cracks or distortion.				
10 Check main hydraulic reservoir for quantity and inspect for leakage and security				
11 Inspect main and tail tires for cuts, deterioration, presence of oil, grease, and creep marks for alignment				
12 Check tires for specified inflation.				
13 Inspect tail shock strut for fluid leakage, check for proper extension and wipe strut piston clean				
14 Check electrical components and relays in the power distribution box for cleanliness, security, signs of overheating, terminals for security. Check box for cracks, deformation and signs of over- heated components				
15 Check all current limiters for signs of heat or blown limiter				
16 Inspect all cockpit and cabin lights for broken lenses, corrosion,				

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security and operation				
17 Check Navigation lights for operation				
18 Check landing light for operation. Do not leave on for more than 10 seconds				
19 Check stall warning light for illumination and operation (push to test); raise vane to actuate warning				
20 Test pitot and stall warning elements for operation.				
21 Check operation of all annunciator lights.				
22 Check blades for security and damage. Dress any nicks as required. Repaint tips and back of blades as required				
PHASE 2 Inspection				
Item	1st	2nd	3rd	4th
1 AD search complied with				
2 Inspect wing front and rear attachment pins and wing strut upper and lower bolts for security; attachment fittings for cracks, corrosion and security.				
3 Inspect the tailplane attaching bolts for security				
4 Inspect the tailplane actuator fork attachment for security and surrounding structure for damage or wear				
5 Inspect elevator torque tube for distortion and evidence of heavy contact with fiber block stops; bearing for wear, excessive play and corrosion				
6 Check rudder and trim tab cables for correct tension.				
7 Detailed visual inspection of cable terminals for signs of corrosion pits and cracks.				
8 Check aileron cables for correct tension. Detailed inspection of cable terminals for signs of corrosion pits or cracks				
9 Check ailerons for specified range of travel				
10 Check the inboard nose flaps for specified clearance and range of travel				
11 Check the inboard trailing flaps for specified clearance and range of travel				
12 Check the outboard nose flaps for specified clearance and range of travel				
13 Check the elevator trim tab for specified clearance and range of travel				
14 Check wing flap position indicator for specified flap angles of the inboard nose flaps				

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ITEM	1 st	2 nd	3 rd	4 th
15 Inspect all pulleys, pulley brackets, guides and fairleads for cracks, wear alignment and security				
16 Inspect push rods and linkage for wear, damage and security				
17 Inspect all rod end bearings, bellcrank bearings, control pulley bearings and cable fittings for wear, misalignment and corrosion.				
18 Detailed visual inspection of cable terminals for signs of corrosion pits or cracks				
19 Inspect all control cables throughout their entire length for corrosion and fraying. Detailed visual inspection of cable terminals for signs of corrosion pits and cracks				

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PHASE 3 INSPECTION CHECKLIST				
Reg: N93PC	Model: DHC-3T	Date:		
Hobbs:	AC TT:	Inspector:		
50 Hour Safety Inspection				
Item:	1st	2nd	3rd	4th
1 Check for ADs due this inspection.				
2 Inspect AC for cleanliness				
3 Inspect doors, panels, fairings, and cowlings for cracks, corrosion, and distortion; check latches, fasteners and hinges for wear and serviceability. Check doors for proper closing.				
4 Inspect all flying control surfaces for cracks, wrinkles and abrasions; hinges and attachment fittings for cracks, corrosion and security				
5 Inspect mass balance weights (aileron, elevator and rudder) for security				
6 Inspect accessible control cables for corrosion and fraying, turnbuckles and attachment points for security. Detailed visual inspection of cable terminals for signs of corrosion pits or cracks.				
7 Check pilot and copilot seats for ease of adjustment and security				
8 Inspect cabin seats for damage and security				
9 Inspect seat belts and shoulder harnesses for security of attachment, damaged and corroded metal parts; webbing for cleanliness, cuts and fraying. Check latching mechanism for freedom and positive latching.				
10 Inspect windshield, cockpit and cabin windows for cleanliness, cracks, crazing, leaks and security.				
11 Inspect fuselage skin adjacent to rudder stop pads for cracks or distortion.				
12 Check main hydraulic reservoir for quantity and inspect for leakage and security				
13 Inspect main and tail tires for cuts, deterioration, presence of oil, grease, and creep marks for alignment				
14 Check tires for specified inflation.				
15 Inspect tail shock strut for fluid leakage, check for proper extension and wipe strut piston clean				
16 Check electrical components and relays in the power distribution box for cleanliness, security, signs of overheating, terminals for security. Check box for cracks, deformation and signs of over- heated components				
17 Check all current limiters for signs of heat or blown limiter				

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Item	1 st	2 nd	3 rd	4 th
18 Inspect all cockpit and cabin lights for broken lenses, corrosion, security and operation				
19 Check Navigation lights for operation				
20 Check landing light for operation. Do not leave on for more than 10 seconds				
21 Check stall warning light for illumination and operation (push to test); raise vane to actuate warning				
22 Test pitot and stall warning elements for operation.				
23 Check operation of all annunciator lights.				
24 Check blades for security and damage. Dress any nicks as required. Repaint tips and back of blades as required				
PHASE 3 Inspection				
Item	1 st	2 nd	3 rd	4 th
1 Inspect engine control brackets for cracks, corrosion and security.				
2 Fuel Filter (if installed) Pre-SB 73-0110 Remove, clean and inspect for damage or separated screen. Post SB 73-0110 Remove and re- place with new element. Refer to 73-21-03 Maintenance practices				
3 Air inlet and exhaust pipe – Check for oil leakage from compressor and turbine air-oil seals.				
4 Oil-filter Remove, inspect and replace filter element. Ref: 79-20-02				
5 Input gearbox drain – Check to insure drain is open. Use air to check drain port passage as damage could result if hard articles are used to check passages.				
6 Compensating resistor – Test temperature compensating value. Ref: Paragraph 2.D1				
7 First stage compressor impeller – Inspect for FOD. Ref: 72-30-01				
8 Fuel Control / Fuel pump integrity inspection. Pre-SB 73-0131 Ref: Paragraph 2.F				
9 Starter-Generator Drive Splines – Inspect and lubricate. Ref: 72-00-00 Servicing				
10 Plumbing lines and connections – Check for security, leaks, cracks, cuts and rubbing				
11 Emergency Shutdown Systems – Operate airframe emergency feather/fuel shutoff systems to determine if engine feathering valve and fuel shutoff valve have actuated. Ref: paragraph 2.E				
12 Over-speed governor – Operational check. Ref: Adjustment / Test				
13 Electrical wiring and Connection – Check for security and damage				

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14 Magnetic Drain Plug Chip Detector – Remove and inspect. For two-piece unit, remove knurled plug and perform visual inspection. Ref: 79-30-01				
15 Controls linkage assembly – Check for security of locking features. Check for proper alignment of control rod, arms and levers for obvious damage. Check bolts and screws securing levers and arms to serrated shaft. Lubricate rod end bearings if binding is noted. Ref: 76-10-01.				
16 Igniter Plugs – Remove, clean and inspect. Re: 74-20-01				
17 Plenum Drain Valves – Check operation of plenum drain valves without removing from engine as follows: Drain valves should be open when engine is not operating. Open position may be ensured if air passes freely through valve when slight air pressure is applied at the drain tubes				
18 Torque Limiter Filter – remove and clean. Ref: 73-22-01				
19 Flow-Divider Filter – Remove filter, clean and inspect. Ref: 73-10-07				
20 Fuel Manifold and Nozzle Assembly - functional Check/Dynamic Pressure Flow Test .Ref: 72-00-00 Adjustment/Test				
21 Tachometer Generator Drive – Pre-SB-0486 Inspect and Lubricate. Ref: 72-00-00 Servicing				
22 Maximum Fuel Flow – Ground Check and flight check Ref 72-00-00 Adjustment/test Steps 2.0.(2) and (3).				
23 Engine Oil – (Type I only) Change				
24 Plenum Drain Valves – Remove and test for closing and opening Ref: 72-00-05				
25 Engine Oil, (Type II only) Change	900 hours – see maint tracking			
26 Magnesium Housing Corrosion Inspection – Nose Case, Intermediate Housing and Gear Assembly, Accessory drive House. Ref: Table 601 for details.				
27 Check GCU set at 26.5 VDC +/- .5 V.				
TEXAS TURBINE CONVERSION – ICA				
1 Engine mount – inspect for overall condition, welds and attach points for cracks and wear.				
2 Engine mounting plates and rubber isolators for damage and deterioration and delamination.				
3 Firewall attach bolts and engine u-tube bolts for damage and security. Bolts				
4 Inspect upper and lower firewall attach points on both sides of				

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firewall for overall integrity				
5 Engine control rods – inspect rod end weld seams for for general condition; rod end bearing for wear – max axial play .062”				
6 Check engine rigging per Honeywell MM and Section 2.0.				
7 Oil Cooler Assembly – check for cracks, leaks, contamination and general condition				
8 All fluid lines for evidence of leaks and wear. Check security of all fluid connections. Inspect for unusual wear on lines and on fire sleeves.				
9 Inspect bleed air vacuum line for damage, security and overall condition.				
10 Replace airframe fuel filter. Test “Fuel filter” bypass light on annunciator panel by pressing red button on fuel filter canister with power applied.				
11 Check starter-generator brushes every 100 hours and verify that engine grounding is free from corrosion. Good grounding will promote brush life.				
12 Inspect the bleed air heater unit, inlet and outlet ducts and wiring for security, distortion, leaks and signs of thermal damage.				
13 Check bleed-air heater operation per TTC-MMS-1 Page 6-4, paragraph				
ELECTRICAL				
1 Remove battery cover for capacitance check if required				
2 Check battery box for electrolyte leakage or overflow. Check terminals for corrosion. Neutralize and clean any acid leaks				
3 Check condition of vents and drains. Replace if necessary				
4 Check battery quick-disconnects with go-no-go gauge for wear or distortion. Battery hold down bolts for security				
5 Check GCU for security, cleanliness, and good electrical connection.				
6 Check external power receptacle for cleanliness, connection and serviceability of wires and cables				
7 Check all relays in airframe for security of mounting and connections				
8 Inspect all electrical systems for the following: (a.) wiring for deterioration, chafing, fraying, evidence of overheating and security. (b.) Connector plugs for corrosion, cracks, evidence of overheating and security. (c.) Wire shielding for fraying, crimping and corrosion. (d.) Junction box for cracks, cleanliness and corrosion. (e.) Bonding for damage, corrosion and security				

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PROPELLER				
1. Inspect for oil leakage at hub. (Spinner removed)				
2. Inspect spinner and spinner backing plate for damage, cracks and corrosion				
3. Inspect propeller mounting bolts for security.				
4. Grease propeller per Hartzell Manual 139. Do not mix greases				
5. Inspect propeller governor for security, evidence of oil leakage, and security of controls				
6. Check blade track				

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PHASE 4 INSPECTION CHECKLIST				
Reg: N93PC	Model: DHC-3T	Date:		
Hobbs:	AC TT:	Inspector:		
50 Hour Safety Inspection				
Item:	1st	2nd	3rd	4th
1 Inspect AC for cleanliness				
2 Inspect doors, panels, fairings, and cowlings for cracks, corrosion, and distortion; check latches, fasteners and hinges for wear and serviceability. Check all doors for proper closing.				
3 Check all doors for security in closed position.				
4 Inspect all flying control surfaces for cracks, wrinkles and abrasions; hinges and attachment fittings for cracks, corrosion and security				
5 Inspect mass balance weights (aileron, elevator and rudder) for security				
6 Inspect accessible control cables for corrosion and fraying, turnbuckles and attachment points for security. Detailed visual inspection of cable terminals for signs of corrosion pits or cracks.				
7 Check pilot and copilot seats for ease of adjustment and security				
8 Inspect cabin seats for damage and security				
9 Inspect seat belts and shoulder harnesses for security of attachment, damaged and corroded metal parts; webbing for cleanliness, cuts and fraying. Check latching mechanism for freedom and positive latching.				
10 Inspect windshield, cockpit and cabin windows for cleanliness, cracks, crazing, leaks and security.				
11 Inspect fuselage skin adjacent to rudder stop pads for cracks or distortion.				
12 Check main hydraulic reservoir for quantity and inspect for leakage and security				
13 Inspect main and tail tires for cuts, deterioration, presence of oil, grease, and creep marks for alignment				
14 Check tires for specified inflation.				
15 Inspect tail shock strut for fluid leakage, check for proper extension and wipe strut piston clean				
16 Check electrical components and relays in the power distribution box for cleanliness, security, signs of overheating, terminals for security. Check box for cracks, deformation and signs of over- heated components				

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17 Check all current limiters for signs of heat or blown limiter				
18 Inspect all cockpit and cabin lights for broken lenses, corrosion, security and operation				
19 Check Navigation lights for operation				
20 Check landing light for operation. Do not leave on for more than 10 seconds				
21 Check stall warning light for illumination and operation (push to test); raise vane to actuate warning				
22 Test pitot and stall warning elements for operation.				
23 Check operation of all annunciator lights.				
24 Check blades for security and damage. Dress any nicks as required. Repaint tips and back of blades as required				
PHASE 4 Inspection				
Item	1st	2nd	3rd	4th
1 Inspect the landing gear axle struts, compression struts, drag struts, leg assemblies and attachment fittings for cracks, corrosion, distortion and security. Inspect fuselage drag strut fitting for loose stud bolts.				
2 Inspect the structure adjacent to the main attachment fitting for buckling and distortion				
3 Inspect all strut assembly bolts for security.				
4 Inspect the strut steps for cracks and security.				
5 Inspect accessible brake lines, hose connections for leakage with parking brake on; lines and hoses for chafing and security.				
6 Inspect the wheels and brake units for cracks, corrosion and security				
7 Remove and inspect main wheels for cleanliness, corrosion, cracks and distortion; bearings and races for wear and damage; felt grease retainers for cleanliness (replace if saturated with lubricant); disc for excessive wear. Repack bearings with Amzoil waterproof grease. NOTE: Reverse tires for increased wear.				
8 Check main gear shock strut for specified length				
9 Inspect tail shock strut assy and surrounding area of fuselage structure for cracks, corrosion, distortion and security.				
10 Remove and inspect tail wheel assy for cleanliness, cracks, distortion and corrosion; bearings and races for wear; felt retainers for cleanliness (replace if saturated with lubricant.) Repack wheel bearings with Amzoil waterproof grease				
11 Check the tailwheel shock strut for proper servicing.				

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12 Check brakes for effectiveness and parking brake for operation				
13 Check brake pedal and mechanical linkage for proper adjustment and lost motion; check for wear and security				
14 Inspect main ski pedestals and attachments for wear, damage and corrosion.				
15 Inspect ski shoes, runners and fairing for cracks, distortion, corrosion and security.				
16 Check main ski trim units for damage, binding, security and proper length; inspect the plates and rubbers for corrosion and deterioration				
17 Check ski actuator air chambers for specific pressure.				
18 Inspect cables for cuts, abrasions, fraying and loosening of binding at thimbles; end fittings for correct attachment and security.				
19 Check skis for correct trim and angle; main skis for correct extension, retraction and pump gauge for correct position indication				
20 Check ski pump and handle for freedom of operation; inspect for cleanliness, damage and security				
21 Inspect ski hydraulic reservoir for damage, corrosion and security, overflow and vent line outlet for obstructions; check for specified fluid level, inspect the filler cap gasket for wear and distortion and filler cap chain for damage and security				
22 Inspect hydraulic lines, hoses and connections for abrasions, dents, leaks and security.				
23 Inspect motor-driven hydraulic pump for leaks, cable for wear and security				
INSRUCTIONS FOR CONTINUED AIRWORTHINESS				
1 Ameri-King AK-451 ELT Per Doc. IM-451 Re NC-4.1c or later				
2 Garmin 400W GPs/WAAS/Nav/Com per doc. 190-00356-65				
3 Garmin G600 PFD/MFD per doc. 190-00601-00 Rev E or later				
4 Teledyne-Gill Batteries per doc. 1549 Rev L or later				
5 Precise Flight Pulselite System per Doc 000PMAN0002				
6 Amerex Fire Extinguisher per Owner's Manual for Hand Portable Water & Water-Mist Wet Chemical (Class K)... HALON 1211				
7 Fire Extinguisher re-weigh				