



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

August 11, 2014

AIRWORTHINESS

Group Chairman's Factual Report

DCA13MA121

**Attachment 4 – N93PC Aircraft Inspection Record
(29 pages)**

NOTE: ADD 22,536.5 TO HOBBS FOR A/C TOTAL TIME
N93PC

[illegible]

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

Section: 6

Revision: Original

Date: 2/11/2011

PHASE 2 INSPECTION CHECKLIST				
Reg: N93PC	Model: DHC-3T	Date: 6/13/2013		
Hobbs: 295.3	AC TT: 22831:0	Inspector: David Eric		
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	
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: 6/13/2013

Hobbs: 225.3

AC TT: 22631.0

Inspector: Dale & Eric

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	1st			
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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Item	1 st	2 nd	3 rd	4 th
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				
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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PHASE 4 INSPECTION CHECKLIST

Reg: N93PC <i>93</i>	Model: DHC-3T <i>93</i>	Date: <i>6/13/2013</i>
Hobbs: <i>295.5</i>	AC TT: <i>22831.0</i>	Inspector: <i>Dale or Eric</i>

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
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.		N/A	—	
15 Inspect ski shoes, runners and fairing for cracks, distortion, corrosion and security.		N/A	—	
16 Check main ski trim units for damage, binding, security and proper length; inspect the plates and rubbers for corrosion and deterioration		N/A	—	
17 Check ski actuator air chambers for specific pressure.		N/A	—	
18 Inspect cables for cuts, abrasions, fraying and loosening of binding at thimbles; end fittings for correct attachment and security.		N/A	—	
19 Check skis for correct trim and angle; main skis for correct extension, retraction and pump gauge for correct position indication		N/A	—	
20 Check ski pump and handle for freedom of operation; inspect for cleanliness, damage and security		N/A	—	
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		N/A	—	
22 Inspect hydraulic lines, hoses and connections for abrasions, dents, leaks and security.		N/A	—	
23 Inspect motor-driven hydraulic pump for leaks, cable for wear and security		N/A	—	
INSTRUCTIONS 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				

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AIRCRAFT INSPECTION DISCREPANCY LIST

AIRCRAFT N 93PC Serial No: 280 Hobbs/Tach: 295.3 ACTT: 22831.8 ^{2/3/4} Phase/Insp Landings/Cycles:

Item	Discrepancy	Corrective Action	Date	Inspector
①	PILOT O/B SEATBELT INSTALLED BACKWARDS	① REMOVED & RE-INSTALLED CORRECTLY	5/16	
2	PITOT HEAT INOP	② DEFECTIVE PITOT HEAD Installed New AN816-2 & Open Valve Tested	6/13/2013	
3	SCUPPER LINE MISSING ON ROMEC BOOST PUMP	③ Tube installed	6/19/2013	
4	SCREWS MISSING FROM WHEEL BRAKE BLEED PORTS	④ INSTALLED NEW MS27039 10-32 SCREWS	5/29	
5	HEATER VALVE OPEN LIGHT INOP	⑤ REPLACE BL327 BULB OPS CHECK NORMAL	5/29	
6	THREADS STRIPPED ON MAIN AXLE LOCK BOLT	R/H ⑥ REPLACED WITH NEW AN3-6A BOLT AN960-10 WASHER AN363-10/MT	5/29	
7	CABIN DOOR STEP IS RIGGED INCORRECTLY	⑦ REPLACED CABLES & ADJUSTED TO FIT	5/28	
⑧	AVIONICS SHELF PANEL HAS DELAMINATING VELCRO	⑧ RE-GLUED VELCRO STRIPS WITH 1300L ADHESIVE	5/29	
⑨	DISCONNECTED PITOT/STATIC LEAK DUE	⑨ Bleed Down Check Performed	6/13/2013	

AIRCRAFT INSPECTION DISCREPANCY LIST

Revision A Dated Aug 30, 2010

AIRCRAFT N 93PC Serial No: 280 (Hobbs) Tach: 295.3 AC TT: 22831.8 Phase/Insp 2-3-4 Landings/Cycles:

[illegible]

Recurring Airworthiness Directive Compliance Sheet

AD 83-04-05 Subject CONTROL COLUMN LOWER WELD

Frequency 100 HRS Effective Date MAR 1, 1983

[illegible]

Frequency 12 MDS Effective Date FEB 3, 1993

[illegible]

AD 2005-14-12 Subject PROPELLER MOUNTING BOLTS

Frequency AT EACH INSTALLATION Effective Date 7-29-2005

[illegible]

AD 2011-18-11

Subject Elevator Control Tab Play

Frequency 100 Hours TIS

Effective Date Oct. 3 2011

[illegible]

Recurring Airworthiness Directive Compliance Sheet

AD 86-16-12

Subject ELEVATOR CONTROLS

Frequency WIND BUSTS WORKS Effective Date AUG 15, 1986

Effective Date AUG 15, 1986

[illegible]

NEEDS

[illegible]

Recurring Inspection Compliance Sheet
Frequency 100 HR Subject ELT INSPECTION - FAR 91.207D

Frequency 100 HR Subject ELT INSPECTION - FAR 91.207D

[illegible]

Recurring Inspection Compliance Sheet
Frequency 150Hr Subject SOAP Engine

Frequency 150 Hz

Subject SOAP Engine

[illegible]

Frequency 12MOS Subject ELT PERIODIC MSP

[illegible]

Recurring Inspection Compliance Sheet
Frequency 12 mos Subject GARMIN G600 SYS. 12 MOS/MSR

Frequency

12 MOS

Subject

GARMIN G600 SVS. 12 MOS/NSP

[illegible]

Frequency

12 MOS

Subject

GARMIN 400W 12mo /NSP

[illegible]

Frequency 24 MOS Subject ATC TRANSPONDER CHECK FAR 91.413

Frequency

24 MOS

Subject

ATC TRANSPONDER CHECK FAD 91.413

[illegible]

Recurring Inspection Compliance Sheet

Frequency 24 MOJ Subject STATIC SYSTEM FAR 91.411

[illegible]

Recurring Inspection Compliance Sheet

Frequency 3YRS Subject EMERG. BATTERY REPLACEMENT

[illegible]