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28,3,04

PRE, THRU & POST FLIGHT

INSPECTION
WORK CARDS

FOR

PT-6 AIRCRAFT

INSTRUMENT

69/18

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বাংলাদেশ বিমান বিভাগ
মতিউর রহমান

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AMENDMENT RECORD SHEET

Art No	Amendment Incorporated	Signature & Date

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PRE FLIGHT, THRU FLIGHT, POST FLIGHT
AND SPECIAL INSPECTIONS WORK CARDS

BAF SERIES

PT-6 AIRCRAFT

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INSTRUCTION

1. It is the responsibility of all personnel to report any unserviceability of item assembly and make necessary entry in AFTO Form 781A.
2. A visual inspection includes checking for all types of wear, damage, corrosion, security, chaffing, in fact for the complete well-being of the particular item in addition to cleanliness.
3. A Functional Check is where the operation of the item or service in question is required to determine its serviceability.
4. Suggestion affecting changes are to be forwarded to ACAS (M) Air HQ, Dhaka.

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INTRODUCTION

1. The Pre-Flight Inspection will be accomplished prior to the first flight of the day. The inspection consists of checking the aircraft for flight preparedness by performing visual examination and to find that no defect or mal-adjustment exists that could cause accident or aborted missions.
2. It is the responsibility of all personnel to report about any unserviceable item or assembly and make necessary entry in AFTO Form-781A.
3. A Functional check is where the operation of the item or service in question is required to determine its serviceability.

SECTION I- Pre-Flight.

To be accomplished prior to the first flight of the day.

SECTION II- Between Flight

To be accomplished after each flight when another flight is anticipated during the day.

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SECTION III— Post-Flight.

To be accomplished after the last flight of the day.

SECTION IV— Special Inspection.

4. Suggestion affecting changes are to be forwarded to ACAS (M) Air HQ, Dhaka.

Note – If for some particular reason the “Inspection after the last flight of the day” has not been carried out, it is imperative that it be performed before the first flight of the following day.

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SECTION-I

PRE-FLIGHT INSPECTION

WORK CARDS

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INTRODUCTION

1. The Pre-Flight Inspection will be accomplished prior to the first flight of the day. The inspection consists of checking the aircraft for flight preparedness by performing visual examination and operational checks of certain components to ensure no defect or mal-adjustment exists that could cause accident or aborted mission.

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PRE - FLIGHT INSPECTION

PREPARATION

1. AFTO Form 781 for reported discrepancies.
2. Pitot head cover removed.
3. Removed necessary covers if any, panels, doors etc.

A. EXTERIOR OF AIRCRAFT

1. Pitot static port opening for obstruction, boom and head for damage and security.
2. Pitot static holes for opening.

B. FRONT AND REAR COCKPIT

1. Inspect Front Cockpit :
 - (a). Instrument panel for looseness, damage and cleanliness.
 - (b). Various instrument glass for crack, damage, and cleanliness.
 - (c). Check the adjusting knob of instrument pannel for tightness.
 - (d). Both the windows of the instrument panel for damage, lock and security.

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- (e). Accessible lines, pipe lines, components, electrical wirings for damage, chaffing, leaking and security.
 - (f). Aircraft clock winds for correct timing.
 - (g). Altimeter pointer for "ZERO" setting.
 - (h). Error correction card of the Gyro-magnetic Compass, altimeter, and pitot static tube for fixation.
 - (j). Fuel quantity gauge pick-up window cover for fixation.
 - (k). VVI for zero setting, tap tightly. (Ensure the pointer is properly set).
2. Inspect Rear Cockpit :
- (a). Repeat same as 'B' 1 (a) to 1 (k).

C. FRONT AND REAR COCKPIT

1. Power on Check

- (a). Turn and slip indicator for operation. (The pointer should move freely while shaking the Inst Panel).
 - (b). A/H for operation. (Ensure that the correction time is not less than and exceeding 1.5 min).
- Note :** Casing knob must be pressed before put 'ON' the switch of A/H.

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- (c). Check directional indicators. (Difference between the C/pit 2° and allowable difference between DI and stand by compass 5°)

Followings are to be checked

- (d). CHT gauge for operation (Ops range 120°C- 230°C and allow diff between the C/pit 30°C).

Note : At eng off condition normally. Pointers shows day temp $\pm 20^{\circ}\text{C}$ in front C/pit and $\pm 10^{\circ}\text{C}$ in the rear C/Pit).

(e). Tripple gauge

- i. **Oil Temp Gauge for Operation.** 30°C to 75°C. For the short period temp may raise upto 75°C to 85°C. Allow diff between the C/Pit 4°C.

ii. **Oil Press Indicator.**

Ops rang : 4 to 7 Kg/Cm².

Allow fluctuation error : 01 Kg/Cm².

At idle rpm : Press not less than 1.5 Kg/Cm².

Allow diff between the C/pit : 0.6 Kg/Cm².

iii. **Fuel press Indicator**

Ops range : 0.2 to 0.5 Kg/Cm².

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Allow fluctuation : 0.1 Kg/Cm^2 .
At idle rpm : Press not less than 0.15 Kg/Cm^2 .
Allow diff between the C/Pit : 0.04 Kg/Cm^2 .

(f). Tachometer Indicator

Ops range : $0 \text{ to } 2350 \pm 1\%$
Idle rpm : $500 \pm 50 \text{ rpm}$
Batt charging rpm : $1000 \pm 50 \text{ rpm}$
Allow diff between the C/out : 35 rpm
Allow pointer fluctuation : 40 rpm

(g). Boost press Gauge

Ops range : $300 \text{ to } 820 \text{ mm Hg}$
Allow diff between the C/pit : 10 mm Hg

Note : At eng off condition, normally the pointer shows air field press $\pm 10 \text{ mm Hg}$.

(h). Air Inlet Temp Gauge

Ops range : $0 - 75^\circ\text{C}$

(j). Fuel quantity Gauge

Check the reading with aval quantity of fuel in the tank.

2. Rear Cockpit:

- (a). Power on check (repeat as per 'C' I(a) to I(j)).

FINAL OPERATION

1. All removed panels re-installed.
2. Pitot cover re-installed.
3. Make required Pre-Flight entries in AFTO Form-781.
4. On completion of pre flt insp make sure no foreign object or tools are left in the cockpit. Close the canopy, use canopy cover during summer.

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SECTION-II

AFTER FLIGHT & THRU FLIGHT INSPECTION

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INTRODUCTION

1. Thru Flight Inspection will be accomplished after each flight when another flight is anticipated during the day. The inspection consists of checking the aircraft to determine if it is suitable for another flight by performing visual examination and operational checks of certain components to assure that no defects exist which would be detrimental to further flight.

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THRU-FLIGHT INSPECTION

PREPARATION

1. AFTO Form 781 for reported discrepancies.
3. Remove necessary panels and doors.

EXTERIOR OF THE AIRCRAFT

1. Pitot static port opening for obstruction, boom and heat for damage and security.

FRONT AND REAR COCKPIT

1. Instrument panel for looseness, damage and cleanliness.
2. All instrument glass for crack, damage and cleanliness.
3. Accessible lines, pipe lines, components and electrical wirings for damage, chaffing, leaking and security.
4. Aircraft clock for proper timing.
5. Altimeter pointer 'Zero' setting.
6. Error correction card of the Gyro magnetic compass, altimeter and pitot static tube for fixation.
7. VVI for zero setting tap tightly. (Ensure the pointer is properly set).

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FINAL OPERATION

1. All removed panels re-installed.
2. Make required thru flt entries in AFTO Form 781.

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SECTION-III

POST FLIGHT INSPECTION

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INTRODUCTION

1. The Post-Flight Inspection will be accomplished after the last flight of the day. This inspection consists of checking the aircraft to determine if it is suitable for another flight by performing visual examination of certain components areas or systems to ensure that no defect exists which would be detrimental to further flight.

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POST FLIGHT INSPECTION

PREPARATION

1. AFTO Form 781 for reported discrepancies.
2. External power source available.
3. Fire extinguisher available.
4. Pitot head cover removed.
5. Necessary doors and panels removed.

A. VISUAL INSPECTION

1. Inspect the following :
 - (a). Compass pick up window cover for security.
 - (b). Fuel quantity pick up window for security.
 - (c). Guide tube of manifold pressure gague for security.
 - (d). Fuel pressure gauge and oil pressure gauge for defect and security.
 - (e). Tachometer pick-up and its flexible drive for :
 - i. Index for proper position and cleanliness
 - ii. Bracket for crack and looseness.
 - iii. Flexible drive shaft for damage, oil leak and security.

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- (f). Thermocouple for:
 - i. Clearance between thermocouple and cooling fin of the cylinder.
 - ii. Compensating wire for security.
 - iii. Asbestos card for looseness.
- (g). Pitot static tube and extension tube for crack, deformation and security.
- (h). Pitot head opening, static holes and drain holes for blockage and cleanliness.
- (j). Converter for security, converter plug for tightness and bracket for crack, loose fitting.
- (k). Correction card of gyro-magnetic compass, altimeter and air speed indicator for availability & validity.
- (l). All instruments for:
 - i. Defects, cleanliness, security and formation of moisture inside the glass.
 - ii. Pointer for deformation and floure scents on pointer for flaking off.

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- (m). Navigation clock for:
 - i. Flying time mechanism for correct functioning.

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- ii. Colour mark for correct indication.
 - iii. Flight time minute hand for permissible tolerance (Max. half sub-division).
 - iv. Clock for clear sound.
 - v. Press button spring for serviceability.
 - vi. Timing mechanism for normal operation after pressing button thrice.
- (n). Magnetic compass for :
- i. Compass for security, installation and cleanliness.
 - ii. Mark line for cleanliness and free from distortion
 - iii. Compass liquid for discolouration, sediment and seepage.
 - iv. Index for agreement with the azimuth of the ac parking line on the ground.
 - v. Illuminating knob for security.
 - vi. Compass for indicating the heading of the ac.
- (p). Rate of climb indicator pointer to read 'ZERO'.
- (q). Cylinder head temperature indicator to indicate the temperature of the day.
- (r). Altimeter, air speed indicator and Tachometer for proper position.

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POWER ON CHECK

- I. Put external power ON and check the following :
 - (a). Gyro Magnetic compass indicator for agreement with the heading of the aircraft.
 - (b). Artificial Horizon and turn and slip Indicator for operation.
 - (c). Oil and Fuel pressure pointer of engine unit gauge for reading 'ZERO' and oil temperature pointer to read day temperature. (Max permissible pointer deflection from 'ZERO').
 - i. Oil pressure $\pm 1\text{Kg/cm}^2$.
 - ii. Fuel pressure $\pm 0.04 \text{ Kg/cm}^2$.
 - (d). Inlet temperature gauge and fuel quantity gage pointer reading 'ZERO'.

NOTE : Check front and rear cockpit instrument equally.

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FINAL OPERATION

1. All previously removed panels are installed.
2. All switches 'OFF'.
3. External power source removed.
4. Pitot head cover 'ON'.
5. Check the adjusting knob of instrument pannel for tightness.
6. Necessary entries in AFTO Form 781 for completion.

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SECTION-IV

WEEKLY MAINTENANCE INSPECTION

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WEEKLY MAINTENANCE INSPECTION

1. Visual Check

- (a). **Compass Transmitter.** Check fixing and plug connection of transmitter for security, ensure cables are free from chaffing.
- (b). **Fuel Qty Transmitters.** Check fixing plug connection for security. There should be no evidence of fuel seepage at the joint of transmitter and fuel tank.
- (c). **Transmitters of Fuel and Oil Pressure.** Check fixing Plug connection for security. There should be no evidence of seepage at the joint of fuel pressure and oil pressure transmitter pipes.
- (d). **Back Side of Inst Panels in front and rear cockpit.** The support of absorber pad of the panel should remain secured.
- (e). **Check serviceability of gyro magnetic compass system.**