

**PREFLIGHT**

**COCKPIT SAFETY CHECK**

**Magnetos .....OFF, KEY OUT**  
**Mixture .....CUTOFF**  
**Throttle .....CLOSED**

Hobbs & Tach .....RECORD  
 Documents (AROW) .....CHECK  
 Flight controls .....RELEASE  
 Parking brake .....AS REQUIRED  
 Avionics/Radios ..... OFF  
 ELT .....ARM  
 Electrical switches .....OFF  
 Master switch ..... ON  
 Fuel gauges .....CHECK  
 Alternator Warning Light .....ON  
 Pitot heat .....ON, CHECK, OFF  
*(Only if required)*

Exterior lights ..... ON, CHECK, OFF  
 Stall horn ..... CHECK  
 Master switch ..... OFF  
 Altimeter ..... FIELD ELEVATION  
 Magnetic compass .....CHECK  
 Pitot & static drains .....DRAIN  
 Alternate Static source .....NORMAL/OFF  
 Flight controls .....CHECK  
 Flaps .....EXTEND  
 Fire extinguisher (If installed) .....CHECK  
 Baggage ..... SECURE  
 Windows ..... CHECK

**LEFT FUSELAGE**

General condition .....CHECK  
 Static Port .....CHECK  
 Antennas .....CHECK

**EMPENNAGE**

Stabilator & Elevator .....CHECK & CLEAR  
 Rudder .....CHECK & CLEAR  
 Antennas .....CHECK  
 Tie down .....REMOVE

**RIGHT FUSELAGE**

General condition ..... CHECK  
 Antennas .....CHECK

**RIGHT WING**

General condition ..... CHECK & CLEAR  
 Flap .....CHECK  
 Aileron ..... CHECK  
 Wingtip .....CHECK  
 Inboard & Outboard Flow Strips .....CHECK  
 Tie down/chock .....REMOVE  
 Fuel tank vent ..... CHECK  
 Fuel tank sump ..... DRAIN & NO DRIPS  
 Fuel tank & quantity .....CHECK  
 Fuel cap & Vent .....CHECK  
 Main gear & Brakes .....CHECK

**NOSE**

General condition & leaks .....CHECK  
 Fresh air inlet .....CHECK  
 Right engine compartment .....CHECK  
 Oil (max 5, min 4) ..... CHECK  
 RT Cowling Latches X2 .....SECURE  
 Propeller & spinner .....CHECK  
 Alternator belt .....CHECK  
 Air inlets..... CHECK  
 Nose gear .....CHECK  
 Chock.....REMOVE  
 Left engine compartment .....CHECK  
 Hydraulic Brake Fluid .....CHECK  
 Fresh air inlet .....CHECK  
 Left cowling Latches X2.....SECURE  
 Fuel strainer) .....DRAIN & NO DRIPS  
 X2 (Switch Tanks  
 Tow Bar or Chocks .....REMOVED

**LEFT WING**

Tow Bar or Chocks .....REMOVED  
 General condition .....CHECK & CLEAR  
 Fresh air inlet .....CHECK  
 Main gear & Brakes .....CHECK  
 Fuel tank vent .....CHECK  
 Fuel tank sump.....DRAIN & NO DRIPS  
 Fuel tank & quantity .....CHECK  
 Fuel cap & vent ..... CHECK  
 Tie down/chock .....REMOVE  
 Inboard & Outboard Flow Strips .....CHECK  
 Pitot Tube 3 Holes .....CHECK  
 Wingtip .....CHECK  
 Aileron .....CHECK  
 Flap .....CHECK

**BEFORE ENGINE START**

Tail Lock .....IN COCKPIT  
 Baggage ..... SECURE  
 Flaps.....RETRACT  
 Passenger briefing .....COMPLETE  
 Seats & seat belts .....SECURE  
 Fuel selector ..... LOWEST or EITHER TANK  
 Circuit breakers .....CHECK  
 Anti Collision Lights ..... ON  
 Carb heat ..... OFF  
 Brakes ..... SET & HOLD  
 Doors .....CLOSED & LATCHED  
 (Upper & Lower Latches)

**ENGINE START**

Prime..... 2-4 STROKES HOT, 2-5 COLD  
**On Last Stroke Leave Primer Out**  
 Master ..... ON  
 Fuel pump .....ON CK PRESSURE  
 Mixture ..... RICH

Throttle ..... ¼" COLD, ½" HOT  
 Propeller area ..... CLEAR  
 Starter ..... ENGAGE  
 Primer.....  
**ADVANCE SLOWLY AS ENGINE STARTS**  
 Primer ..... LOCKED  
 Throttle...800 RPM (No Higher Than 1000)  
 Oil pressure.....CHECK  
 Fuel pump ..... OFF  
 Mixture ..... LEAN

**BEFORE TAXI**

Avionics .....ON  
 Radio(s) & Intercom .....SET  
 Transponder (1200 VFR) ..... ALT  
 ATIS .....CHECK  
 Flight instruments ..... SET  
 Lights .....AS APPROPRIATE  
 Navigation & Transponder .....SET  
 Radio .....CLNC, GROUND/CTAF

**TAXI**

Parking Brake .....RELEASE  
 Brakes .....CHECK  
 Flight instruments .....CHECK

**ENGINE RUNUP**

Brakes ..... SET & HOLD  
 Oil Temp .....IN THE GREEN  
 Fuel selector ..... OTHER TANK  
 Mixture (below 5000') .....RICH  
 Throttle..... 1800 RPM  
 Mags (drop 175,diff 50).....CHECK  
 Vacuum (5.0+.1") .....CHECK  
 Engine gauges .....CHECK  
 Load meter CHARGING LTS & PITOT .....ON/OFF  
 Carb heat (drop/NO RISE) .....ON  
 Throttle (min 500 RPM) ..... IDLE  
 Carb heat ..... OFF  
 Throttle .....1000 RPM

**BEFORE TAKEOFF**

Primer .....LOCKED  
 Fuel pump .....ON  
 Pitot heat ..... AS REQUIRED  
 Flight instruments .....CHECK  
 Static Source .....NORMAL  
 Trim .....TAKEOFF  
 Flaps .....NORMAL 0°, SHORT/SOFT 21°  
 Seats & seat belts ..... UPRIGHT & SECURE  
 Doors (Upper & Lower Latches)  
 ..... CLOSED & LATCHED  
 Takeoff briefing .....COMPLETE  
 Radio .....TOWER/CTAF  
 #2 Radio (If installed ..... MONITOR 121.5  
**Primer .....LOCKED**  
 Lights WHEN CLRD FOR TAKEOFF ... AS APPROPRIATE

**FREQUENCIES**

**HANSCOM - KBED**

ATIS .....124.6  
 GROUND .....121.7  
 TOWER .....118.5  
 BOS APP .....124.4  
 Signature (or 781-274-0010).....130.8

**PRACTICE AREA - ALL .....123.5**

**NORWOOD - KOWD**

ATIS .....119.95  
 GROUND .....121.8  
 TOWER .....126.0  
 BOS APP.....124.1

**EMERGENCY (GUARD)..... 121.5**

**NASHUA - KASH**

ATIS .....125.1  
 GROUND .....121.8  
 TOWER .....133.2  
 BOS APP .....124.9

# PA38-112 PIPER TOMAHAWK CHECKLIST

# EAST COAST AERO CLUB

## TAKEOFF

Mixture (below 5000') ..... RICH  
 Throttle ..... FULL  
 Power ..... 2200-2350 RPM=STATIC  
 Engine gauges ..... CHECK  
 Airspeed ..... CHECK  
 Rotate (0°/21°) ..... 53/53 KIAS

## CLIMB

Flaps RETRACT AT SAFE SPEED ..... (60 KIAS)  
 Airspeed (cruise climb) .....70 KIAS/500' MIN  
 Fuel pump .....OFF  
 Fuel & Oil pressure ..... CHECK

## CRUISE

Power .....AS REQUIRED  
 Mixture.....LEAN AS REQUIRED

## FUEL TANK SWITCH

Fuel pump ..... ON  
 Fuel selector .....DESIRED TANK  
 Fuel pressure .....CHECK  
 Fuel pump .....OFF

## DESCENT

Power .....AS REQUIRED  
 Mixture.....RICHEN AS REQUIRED  
 Fuel selector .....FULLEST TANK  
 ATIS .....OBTAIN  
 Altimeters .....SET  
 Carb heat ..... AS REQUIRED  
 Seats & seat belts.....UPRIGHT & SECURE

## APPROACH & LANDING

Downwind .....80 KTS  
 Fuel pump ..... ON  
 Mixture (below 5000') .....RICH  
 Carb heat ..... AS REQUIRED  
 Flaps (<89 KIAS) ..... AS REQUIRED  
 Landing (0°) ..... 70 KIAS  
 Landing (34°) ..... 67 KIAS

## AFTER LANDING

Radio ..... GROUND/CTAF  
 RPM .....1000  
 Pitot Heat .....OFF  
 Flaps ..... RETRACT  
 Fuel pump .....OFF  
 Carb heat .....OFF  
 Mixture.....LEAN  
 Lights..... AS APPROPRIATE  
 Transponder ..... 1200

## SHUTDOWN

Call for fuel ..... AS REQUIRED  
 Avionics .....OFF  
 Throttle ..... IDLE  
 Mixture ..... CUTOFF

## WHEN PROP STOPS

Mixture ..... CUTOFF  
 Magnetos .....OFF, KEY OUT  
 Electrical switches .....OFF  
 Master ..... OFF  
 Hobbs & tach ..... RECORD  
 Flight controls .....SECURE  
 Tie downs .....SECURE  
 Cover ..... ON

- END OF NORMAL PROCEDURES -

## SPEEDS

Vg (0°) ..... 70 KIAS  
*glide distance approx 1 NM per 550'*  
 Va (1670/1227 lbs) ..... 103/90 KIAS  
 Vfe ..... 89 KIAS  
 Vy (0°) ..... 70 KIAS  
 Vx (0°) ..... 61 KIAS  
 Vx (21°) ..... 61 KIAS  
 Vs0 Full Flaps ..... 47 KIAS

## AIRPLANE SPECS

Usable fuel tabs/full.....20g/30g  
 Taxi fuel ..... 1.0g  
 Climb fuel ..... 8.0 GPH  
 Crosswind .....17 KTS

## EMERGENCY PROCEDURES

**NOTE: NOT ALL EMERGENCY PROCEDURES ARE HERE**  
**Check POH for additional procedures**

## ENGINE FIRE DURING START

Starter .....CONTINUE CRANKING  
 Mixture .....CUTOFF  
 Throttle ..... OPEN  
 Fuel pump ..... OFF  
 Fuel selector ..... OFF  
 Fire Extinguisher .....ACTIVATE

## ENGINE POWER LOSS IN FLIGHT

Fuel selector .....SWITCH-TANK WITH FUEL  
 Fuel pump ..... ON  
 Mixture .....RICH

Carb heat .....ON  
 Primer .....LOCKED  
 Magnetos ..... L then R then back to BOTH  
 Throttle & Mixture .....TRY DIFFERENT .....SETTINGS  
 Engine gauges ..... CHECK

## POWER OFF LANDING

Trim for best glide .....70 KIAS  
 Landing area .....IDENTIFY  
 Radio .....MAYDAY  
 ELT .....ON  
 Transponder .....7700  
 Final approach (Full Flaps) .....67 KIAS  
 Magnetos .....OFF  
 Master switch ..... OFF  
 Fuel selector ..... OFF  
 Mixture .....CUTOFF  
 Seatbelts .....SECURE  
 Door .....UNLATCH

## ENGINE ROUGHNESS

Carb heat .....ON  
 If still rough after ONE MINUTE:  
 Carb heat .....OFF  
 Mixture .....ADJUST TO SMOOTHTEST  
 Fuel pump ..... ON  
 Fuel selector .....SWITCH TANKS  
 Engine gauges ..... CHECK  
 Magnetos .....CHECK SMOOTHTEST  
 Mixture ..... RICH  
 Land .....AS SOON AS PRACTICAL

## ENGINE FIRE IN FLIGHT

Fuel selector .....OFF  
 Throttle ..... CLOSED  
 Mixture .....CUTOFF  
 Fuel pump ..... OFF  
 Cabin Heat ..... OFF  
 Speed ..... INCREASE TO EXTINGUISH  
 Land..... IMMEDIATELY

## LOSS OF FUEL PRESSURE

Fuel pump .....ON  
 Fuel selector ..... CHECK ON FULL TANK

## ELECTRICAL (CABIN) FIRE

Master switch ..... OFF  
 Alternator switch .....OFF  
 Vents ..... OPEN  
 Heater & defroster ..... OFF  
 Fire extinguisher (If installed) .....AS NECSRY  
 Land ..... AS SOON AS PRACTICAL

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