PILOTS OPERATING HANDBOOK

Aircraft Make & Model:
Jay M Bannister Zodiac CH 601XL

Aircraft Registration No. N2630J

Registered as :
Experimental - Amateur Built (E-AB)

Qualifies as Light Sport Aircraft (LSA)

Aircraft Serial No. 6-6262

Powerplant: William Wynne prepared 2700cc Corvair

Propeller: Warp Drive, two blade, ground adjustable

Date of First Flight:

Date of Weight & Balance Report: 05/30/08

Current Owner: Jay M. Bannister
3753 Pallos Verdas Drive
Dallas, TX 75229

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Insert 3-view drawing

GENERAL

ENGINE: A William Wynne prepared 270cc Corvair of approximately 100 HP. It is a six cylinder, opposed, air cooled engine with a single spark plug per cylinder. It is equipped with a distributor that has one set of breaker points and an electronic ignition module. The carburetor is a Marvel-Schebler MA3-SPA.

PROPELLER: Warp Drive, two carbon fiber, ground adjustable blades, total length of 66". Pitch is set to xxxxx

FUEL: Total capacity - 30 gal., total useable - 26 gal. The engine is configured to use 100LL or 89 octane automotive fuel. It is important to avoid the use of fuel containing ethanol.

OIL: Rotella 15 W 40, Full at 6 qts, Low at 4 qts.

Operating temperatures:

Low Limit - 150 deg.F
Normal - 180 deg.F
High Limit - 240 deg.F

Operating Pressures:

Low Limit - 50 psi
Normal - 38 psi
High Limit - 42 psi

MAXIMUM WEIGHT: 1,320 lbs.

EMPTY STANDARD AIRPLANE WEIGHT:
844 lbs.

BAGGAGE: The baggage compartment is designed for maximum 40 lbs.

SPECIFIC LOADINGS

Wing Loading - 9.85 lbs per sq ft
Power Loading - 13 lbs per hp

LIMITATIONS

NOTE: AEROBATIC MANEUVERS ARE PROHIBITED

AIRSPEED LIMITATIONS

V_A	Maneuvering Speed	103 mph
V_C	Design Cruise Speed	124 mph
V_{FE}	Max Flap Extended	80 mph
V_{NE}	Never Exceed Speed	160 mph
V_{SI}	Stall Speed (No Flaps)	51 mph
V_{SO}	Stall, Flaps Extended	44 mph

AIR SPEED INDICATOR MARKINGS:

Red Line = V_{NE}
Yellow Arc = V_C to V_{NE}
Green Arc = V_{SI} to V_C
White Arc = V_{SO} to V_{FE}

MANEUVER LIMITS

SERVICE CEILING: 12,000 feet density altitude at gross weight.

FUEL CONSUMPTION: Xxxx.

RANGE: Xxxx

ENDURANCE: Xxxx.

BEST GLIDE SPEED: Xxxx.

BEST ANGLE OF CLIMB: Xxxx.

BEST RATE OF CLIMB: Xxxx.

TAKE-OFF DISTANCE:

LANDING DISTANCE:

CG LIMITS:

FORWARD: 300mm Aft of wing leading edge
AFT: 450mm Aft of wing leading edge

(20% to 30% of MAC) MAC = 1500mm

EMERGENCY PROCEDURES

EMERGENCY CHECKLISTS

ENGINE FIRE DURING START

Starter..... Crank engine
Mixture ..... Idle cut-off PULL
Throttle ..... Open PUSH
Fuel Pumps ..... Off
Fuel Selector ..... Off
Abandon if fire continues

ENGINE POWER LOSS DURING TAKE-OFF

If insufficient runway remains

- Maintain safe airspeed
- Make shallow turns to avoid obstructions
- Flaps as situation requires

ENGINE POWER LOSS IN FLIGHT

Trim for best glide Xx mph
Locate suitable landing area
Fuel Selector ..... Fullest tank
Fuel Pump ..... Pump #2
Coil ..... Coil B
Mixture ..... Rich
Carb Heat ..... On

POWER OFF LANDING
When committed to landing:
Ignition ..... Off
Master ..... Off
Fuel Selector ..... Off
Mixture ..... Idle cut-off
Seat Belts ..... Tighten
Canopy ..... Release

FIRE IN FLIGHT
ELECTRICAL FIRE:
Master Switch ..... Off
Vents ..... Open
Cabin Heat ..... Off
Land as soon as practicable

ENGINE FIRE:
Fuel Selector..... Off
Throttle ..... Closed
Mixture ..... Idle cut-off
Fuel Pumps..... Off
Cabin Heat ..... Off
Prepare for power off landing

LOSS OF OIL PRESSURE
Land at nearest airport & investigate
the problem
Prepare for power off landing

HIGH OIL TEMPERATURE
Land at nearest airport & investigate
the problem
Prepare for power off landing

ALTERNATOR FAILURE
Verify failure
Reduce electrical load as much as possible
Circuit Breakers .. Check
Cycle Alternator Switch.
If no output, land as soon as practicable

CARBURETOR ICING
Carb Heat ..... On
Mixture ..... Max smoothness

NORMAL PROCEDURES CHECKLIST

PRE-FLIGHT WALK-AROUND

Left Wing
- Check Flap & Aileron
- Check rear spar bolt
- Shake Wing
- Check Lighting
- Check Pitot & Static
- Check fuel
- Sump Fuel Tank

Check Left Wheel & Tire
Check Spinner
Check Prop
Check Oil Level
Sump Gascolator
Check Right Wheel & Tire

Right Wing
- Check Fuel
- Sump Fuel Tank
- Check rear spar bolt
- Shake Wing
- Check Flap & Aileron

Enpennage
- Check Horizontal Stabilizer
- Check Elevator
- Check Rudder
- Check rudder pivot bolts

BEFORE ENGINE START

Master Switch	Off
Avionics Master	Off
Fuel Pump	No. 2
Coil	No. A
Autopilot	Off
Lights	Off
Check Circuit Breakers	
Alternate Bus	Off
Fan	Off
Transponder	Standby
Parking Brake	On
Cabin Heat	Off (Pull)
Carb Heat	Off (Push)
Mixture	Full Rich (Push)
Throttle	Cracked
Master Switch	On Bat/Alt

START ENGINE

Check Oil Press.	Lo Op Light Off
Set RPM	1,000
Avionics Master	On
ELT	On
Intercom	On
GPS	On
Transciever	On
Transponder	Stand by
Autopilot	Off
Fuel Pump	No. 1
Flaps	Up
Trim	Neutral

Monitor ATIS
Set Altimeter
Set Radio Frequencies
Nav Lights On
Call Ground Control
Transponder Set Squawk code

TAXI
Parking Brake Off
Taxi to Active

RUN UP

Parking Brake	On
RPM	1500
Fuel	Check fuel pumps
Coils	Check Coils
Carb Heat	Check
Fuel	On fullest tank
Trim	Neutral
Check Controls	Free & correct
Check canopy	Latched
Check seat belts	Fastened
Strobe Lights	On
Transponder	On

Note Time

Call Tower or CTIF

INITIAL DESCENT

Check ATIS

Altimeter	Set to current pressure
Fuel Selector	Fullest tank

PRE-LANDING

Mixture	Rich
Carb Heat	On

AIRSPEEDS FOR SAFE OPERATIONS

All speeds are in miles per hour, indicated

Best Rate of Climb Speed XX
Best Angle of Climb Speed XX
Turbulent Air Operating Speed XX
Maximum Flap Speed XX
Final Approach Speed
(Flaps 20 degrees).....XX
Max. Demonstrated Crosswind
Velocity.....XX

Insert W&B sheet

AIRPLANE & SYSTEMS DESCRIPTIONS

CONSTRUCTION: All metal construction, stressed skin, single curvature metal skins riveted to stiffeners.

AIRFRAME: Construction is of 6061-T6 aluminum sheet metal riveted to aluminum angles with Avex rivets. This high strength aluminum alloy construction provides long life and low maintenance costs thanks to its durability and corrosion resistance characteristics.

WINGS: The wing has a high lift airfoil with Hoerner sing tips to maximize the aircraft's effective wingspan. The wings are fitted with half-length ailerons and flaps.

CONTROLS: The airplane is fitted with removable dual control columns. The classic rudder pedals, connected to a large-diameter steerable nose wheel strut for ease of ground handling, are equ9ipped with toe-brake pedals on the pilot side for effective ground steering, The full vertical tail is all-moving to provide maximum crosswind capabilities. The trim control on the elevator is electrically operated from thr rocker switch on the center console.

ENGINE CONTROLS

THROTTLE: Single push-pull type with adjustable friction clamp is located at the bottom center of the instrument panel.

CARB HEAT: Single push-pull type located to the left of the throttle. With the carb heat pulled out (on) the intake air passes through the filter in the carb air intake stream.

MIXTURE: Single push-pull type located to the right of the throttle. Fully pushed in gives the carburetor a full rich mixture; pulled out, is full lean.

FUEL PUMP SWITCH: Switches between dual fuel pumps. It is located on the center console. Either pump will send fuel to the carburetor; only the #1 pump is connected to the low oil indicator light circuit and to the Hobbs Hourmeter.

COIL SWITCH: Switches between ignition coils. Coil A is connected to the electronic ignition module in the distributor. Coil B is connected to the breaker points in the distributor. Either one will distribute power to the spark plugs.

MASTER SWITCH: At the BAT position, the battery is connected. In the BAT/ALT position, the alternator circuit is activated.

IGNITION KEY: Located on the left side of the instrument panel. Turning the key to the right past the detent activates the starter.

FUEL SYSTEM

FUEL TANKS: There are two 15 gallon welded aluminum fuel tanks located in the leading edge of each wing. They have vents that exit the bottom surface of the wing. The filler caps are key locked. The float-type fuel sender is located at the inboard face of the tanks. The fuel outlets have finger screens that are accessible by removing an access panel on the bottom of the wing. Each tank has a drain located on the bottom of the wing. There is a gascolator drain located on the right bottom engine side of the firewall. The fuel tank selector valve is located on the center console.

FUEL MANAGEMENT: It is suggested to use the right fuel tank for the first thirty minutes of flight and then alternate between the tanks at thirty minute intervals.

FUEL: The engine is configured to use 100LL or 89 octane automotive fuel. It is important to avoid the use of fuel containing ethanol.

SERVICE AND MAINTENANCE