

N437BL Bristell NG-5

NORMAL PROCEDURES

N437BL Bristell NG-5

NORMAL PROCEDURES (CONT'D)

PREFLIGHT (CABIN)

AROWS documents .. ON BOARD
Control stick lock REMOVE
Flight controlsFREE & CORRECT
Parking brake SET
Ignitions (Lanes A,B) OFF
Backup EFIS ON
Backup Battery ON
GPS Database CHECK
Hobbs/Tach RECORD
Inspections CURRENT
Fuel Remaining Check & Set L / R
Circuit breakers IN
Fuel Pumps CHECK
Backup EFIS OFF
Backup Battery OFF
Master switch ON
Flaps 30°
External lights CHECK
Master switch OFF
Canopy CHECK/CLEAN

PREFLIGHT (EXTERIOR)

Left flap, aileron, wing CHECK
Left wing locker LOCKED
Strobe/Nav Light CHECK
Fuel vent CHECK
Tie-down REMOVE
Landing Light CHECK
Fuel sump DRAIN
Fuel quantity CHECK
Fuel filler cap SECURE
Chocks REMOVE
Left main tire 26psi CHECK
Left air inlet CLEAR
Engine Cowling Check Condition
Remove the top engine cowling to inspect the muffler for cracks, and check the coolant level

Oil Open Dipstick
Cold Engine Burp
Oil & Coolant Check Levels
Never add more than ¼ qt. at a time

Engine Mount & Exhaust INSPECT
Propeller & spinner CHECK
Induction air inlet CHECK
Nose wheel chocks REMOVE
Nose wheel tire 20psi CHECK
Right air inlet CHECK
Chocks REMOVE
Right main tire 26psi CHECK
Fuel sump DRAIN
Fuel quantity CHECK
Fuel filler cap SECURE
Landing Light CHECK

Tie-down REMOVE
Pitot tube CHECK
Fuel vent CHECK
Strobe/Nav Light CHECK
Right flap, aileron, wing CHECK
Right wing locker LOCKED
Right side of fuselage CHECK
Antennae SECURE
Right Static Port CHECK
Empennage CHECK
Tail tie-down REMOVE
Rudder Gust Lock REMOVE
Left Static Port CHECK
Left side of fuselage CHECK
General inspectionWALK AROUND

BEFORE ENGINE START

Crew & passengers BRIEF
Rudder Pedals Adjust
Safety Harness Adjust & Lock
Fuel selector LOWEST TANK
Parking brake SET
Circuit breakers IN
Electrical Equipment OFF
Avionics switch OFF
Canopy AS DESIRED

STARTING ENGINE

Strobe Lights ON
Master switch ON
EFIS ON
G3X . Confirm Set & Engine Page
Main Fuel Pump ON
Ignition (Lane A,B) ON
Start Power Switch ON (15s Max)
Warning Lamps should illuminate then Extinguish after about 3 sec.
Fuel Pressure Approx. 42 PSI
Throttle 3/4" OPEN
Propeller area CLEAR
Start Button ENGAGE

AFTER ENGINE START

Throttle ...2,500 RPM / 2,000 RPM
Start Power Switch OFF
Oil pressure CHECK
Engine Instruments CHECK
Amps Check For Charge
Lights As Required
Avionics Switch ON
Flaps RETRACT
GTN 750 Check:
Database Date CHECK
LCDI, LFLG, VCDI, VFLG . CHECK
To/From, RMI, OBS, DTK . CHECK
ATIS/Clearance RECORD

Flight instruments SET/CHECK

TAXIING

Parking brake RELEASE/TEST
Flight instruments CHECK

ENGINE RUNUP

Parking brake SET
Check area CLEAR
Canopy AS DESIRED
Engine Instruments No Red X
Fuel selector FULLEST TANK
Set Fuel Timer 30 Minutes
Elevator Trim Neutral
Aileron Trim Neutral
Max. Power ... Check Static RPMs
Engine Instruments Within Limits
Throttle 4,000 RPM
Lane A Off RPM Drop < 180
Check Lane A Light Comes ... ON
GPH; Oil PSI; EGT & CLNT Red X'd
Lane A ON
Lane A Light OFF
Lane B Off RPM Drop < 180
Check Lane B Light Comes ... ON
GPH; Oil PSI & Oil °F Red X'd
Lane B ON
Lane Lights off / Red X's OFF
Throttle Idle ~3sec
Throttle 2,000 RPM
Aux Fuel Pump ON
Main Fuel Pump OFF ~5sec
Fuel pressure Within Limits
Main Fuel Pump ON
Aux Fuel Pump OFF
Amps Increase load / CHECK

BEFORE TAKEOFF

Safety Harness Adjust & Lock
Elevator Trim Neutral
Aileron Trim Neutra
Flaps SET
Flight controlsFREE & CORRECT
Engine gauges CHECK
Flight instruments CHECK
Avionics / Transponder SET
Circuit breakers IN
Autopilot CHECK then OFF
Takeoff briefing GIVEN

HOLDING SHORT / LINEUP

Trims NEUTRAL
Flaps SET
Autopilot OFF
Takeoff Time NOTED
Landing light ON
Aux. pump ON
Transponder VERIFY CODE
Canopy CLOSED

TAKEOFF

Throttle FULL POWER
Do not maintain power above 5,500 RPM for more than 5 min
RPMs & Instruments CHECK
Nose Wheel Rotate at 30 KIAS
Lift-Off 40 KIAS
Flaps Retract.. > 65 KIAS & 150 ft

AFTER TAKEOFF / CLIMB

Flaps UP
Throttle < 5,500 RPM
Cruise climb 75 KIAS
Engine instruments CHECK
Fuel Pumps On if Switching Tanks & Check Fuel Flow Immediately After

CRUISE CHECK

Power SET
Aux. Pump OFF
Engine instruments CHECK
Landing light OFF

PRE-MANEUVER CHECK

Altitude CHECK
Landing light ON
Aux. Pump ON
Fuel selector PROPER TANK
Safety Harness Adjust & Lock
Cockpit area SECURED
Clearing turns EXECUTE

POST-MANEUVER CHECK

Landing light OFF
Aux. Pump OFF

DESCENT

Power > 3,000 RPM

APPROACH & LANDING

ATIS RECORD
Approach briefing GIVEN
Landing light ON
Aux. Pump ON
Fuel selector PROPER TANK

Safety Harness Adjust & Lock
Autopilot OFF

AFTER LANDING

Flaps RETRACT
Throttle 2,000 RPM
Aux. Pump OFF
Landing light OFF
Trims NEUTRAL

ENGINE SHUTDOWN

Throttle IDLE
Engine Instruments Within Limits
Avionics master/radios OFF
Flaps 30°
Ignitions Lane A, Then Lane B OFF
Main Pump OFF
Hobbs/Tach RECORD
Master switch OFF
EFIS OFF
All Electrical Switches OFF

PARKING

Control lock INSTALLED
Canopy Secured & Locked
Master switch OFF
Tie-downs/chocks SECURE
Fuel ORDERED
Cabin cover INSTALLED
Post Flight WALK AROUND

FUEL MEASURING CHART

Fuel Remaining Dipstick on
Outboard Side

0.5 in 6 gal
1.0 in 7 gal
1.5 in 8 gal
2.0 in 9 gal
3.0 in 10 gal
3.5 in 11 gal
4.0 in 12 gal
4.75 in 13 gal
5.00 in 14 gal
5.75 in 15 gal

Airspeeds (KIAS)	V _{BEST GLIDE} 65	V _{R,SH,FLD} 30	V _A 96	V _{NE} 157	Usable Fuel: Full tanks: 2 x 15.7 gal = 31.4 gal Max crosswind: 16 kts Max headwind: 40 kts	Max. gross weight: 1,320 lbs Max. aft baggage weight: 33 lbs Max. wing locker baggage weight 2 x 22 lbs = 44 lb
	V _{S0} 37	V _X 60	V _{FE} 75	V _{I,APP} 65		
	V _{S1} 44	V _Y 72	V _{NO} 129	V _{F,APP NORM} 60		
	V _{R,NORM} 40	V _{ENROUTE CLIMB} 75		V _{F,APP SH.FIELD} 55		

N437BL Bristell NG-5 EMERGENCY PROCEDURES

N437BL Bristell NG-5 EMERGENCY PROCEDURES (CONT'D)

ENGINE FIRE DURING

ENGINE START

Starter..... CONTINUE
 Fuel Selector..... Off
 Throttle..... FULL OPEN
 Ignitions (Lane A, B) ... BOTH OFF
 Master Switch..... Off
 Airplane..... EVACUATE
 Fire..... EXTINGUISH

ENGINE FIRE AFTER

ENGINE START

Airspeed..... 65 KIAS if During T/O
 Cabin Heater CLOSE
 Fuel Selector..... OFF
 Throttle..... FULL OPEN
 Ignitions (Lane A, B) ... BOTH OFF
 Land & Stop If Airborne
 Airplane..... EVACUATE
 Fire..... EXTINGUISH

ENGINE FAILURE DURING

TAKEOFF RUN

Throttle..... IDLE
 Brakes APPLY
 Ignition (Lane A, B) OFF

ENGINE FAILURE AFTER

TAKEOFF

Fuel Selector..... Switch Tanks
 Airspeed..... 65 KIAS
 Landing Site..... SELECT
 Flaps..... AS NEEDED
 Fuel Selector..... OFF
 Ignition (Lane A, B) OFF
 Safety Harness TIGHTEN
 Master Switch..... OFF

ENGINE FAILURE IN FLIGHT

Airspeed..... 65 KIAS
 Landing Site..... SELECT
 Both Pumps..... ON
 Fuel Selector..... Switch Tanks
 Throttle..... IDLE
 Back Up Battery (If EMS Failure) ON
 EMS Main Switch..... AUTO
 Ignition (Lane A, B) BOTH ON
 Start Power Switch ON
 Starter ON if Prop not windmilling
 Start Power Switch OFF After
 15sec

POWER OFF LANDING

Airspeed..... 65 KIAS
 Trim ADJUST
 Safety Harness TIGHTEN
 Flaps..... AS NEEDED
 Radio/Squawk 7700/ Alert ATC or
 121.5

Fuel Selector..... OFF
 Ignition (Lane A, B) OFF
 Master Switch..... OFF
 Approach..... Avoid Steep Turns

PRECAUTIONARY LANDING WITH ENGINE POWER

Landing Site..... SELECT
 Radio/Squawk 7700/ Alert ATC or
 121.5
 Landing Site.....
 Low Fly Over/Inspect
 Circle Pattern..... PERFORM
 Flaps..... FULL (On Final)
 Airspeed..... 65 KIAS (On Final)
 Touchdown At Very Beginning of
 Site
After Stopping the Airplane
 All Switches..... OFF
 Fuel Selector..... OFF
 Airplane LOCK

LOW / HIGH OIL PRESSURE

Throttle..... MIN NECESSARY
 Precautionary Landing EXECUTE

VIBRATIONS

Throttle..... REDUCE Vibrations
 Precautionary Landing EXECUTE

ENGINE FIRE IN FLIGHT

Cabin Heater & Air Vents.. CLOSE
 Fuel Selector..... OFF
 Throttle..... FULL OPEN
 Ignitions (Lane A, B) .. BOTH OFF
 Master Switch..... OFF
 Landing Site..... SELECT
 Flaps..... RETRACT
 Airspeed..... 129 KIAS or as
 Necessary
 Steep Spiral Dive... Max 60° Bank
 Emergency Landing..... EXECUTE
 Airplane EVACUATE
 Fire..... EXTINGUISH

WING FIRE

Landing Light OFF
 Navigation Lights..... OFF
 Strobe Light Switch OFF
 Perform a side slip to keep the
 flames away from the fuel tank and
 cabin, and land as soon as
 possible

FIRE IN THE COCKPIT

Master Switch..... OFF
 Cabin Heater CLOSED
 Fire Extinguisher (if available) USE
 All Switches except Ignitions OFF

If Fire Has Not Been Extinguished

Rapid Descent EXECUTE
 Panel Power ON
 Radio/Squawk 7700/ Alert ATC or
 121.5
 Emergency Landing..... EXECUTE
If Fire Has Been Extinguished
 Cabin Vents..... OPEN
 Circuit Breakers - Check Faulty
 Circuit
 Faulty circuit should not be reset
 Master Switch ON
 Avionics Switch / EFIS..... ON
 Land ASAP

AUTOPILOT MALFUNCTION

AP Stop Switch..... PUSH

FLAPS MALFUNCTION

Flap Selector Knob.. AS DESIRED
 Flap Circuit Breaker CHECK/RESET
 Electrical Load..... REDUCE
 Back Up Battery..... ON

EMS PWR SUPPLY FAILURE

If the EMS power supplies (Alt A)
 fails then the ECU automatically
 switches one-time over to the 2nd
 EMS power supply (Alt B)
Note: No charging of battery!
 While Alt B runs, no power drop is
 recognizable. Failure of Both EMS
 power supplies (Alt A/B) result in
 engine stoppage
 Back Up Battery..... ON
 Land ASAP

DITCHING

Radio Mayday on 121.5
 Transponder 7700
 Heavy Objects..... SECURE
 Safety Harness TIGHTEN
 Flaps..... AS NECESSARY
 Power..... 300 ft/min descent
 Approach
 High Wnd/Heavy Seas..... Into the
 Wind
 Calm Wnd/Heavy Swells.. Parallel
 the Swells
 Touchdown ... LVL Attitude @ 300
 ft/min
 Face Cushion at touchdown
 Airplane Evacuate

LANDING WITH FLAT TIRE

Damaged Wheel.....
 Keep Airborne As Long As
 Possible
 Directional Control MAINTAIN

RECOVERY FROM

UNINTENTIONAL SPIN

Warning: Intentional spins are
 prohibited!
 Throttle IDLE
 Ailerons NEUTRAL
 Rudder Full Opposite Of Spin
 & Neutralize When Rotation Stops
 Pitch..... Neutral / Push Forward
 Recover From Dive