

SOCATA TB20 Trinidad Checklist

PREFLIGHT INSPECTIONS	
<i>Cabin</i>	
1. Pilot door.....	Open
2. Control lock.....	Remove
3. Magneto selector.....	Off
4. Landing gear lever.....	Down
5. Mixture.....	Idle Cut-Off
6. Main switch.....	On
7. Flaps.....	Landing
8. Pitch trim.....	Take-Off
9. Fire extinguisher(if installed).....	Check
10. Main switch.....	Off
11. Fuel selector.....	Open (Left)
<i>Left Wing</i>	
12. Flap and aileron.....	Check
13. Wing tip, lights and landing lights.....	Check
14. Wing.....	Check
15. Pitot/pitot heat.....	Check
16. Tie-down.....	Remove
17. Stall warning device.....	Check
18. Fuel tank.....	Check
19. Fuel tank cap.....	Check
20. Fuel tank draining.....	Check
21. Fuel tank drain.....	Closed
<i>Left Main Landing Gear</i>	
22. Chocks.....	Remove
23. Tire.....	Check
24. Shock absorber.....	Check
25. Door.....	Check play and cleanliness
26. Microswitches.....	Clean
27. Landing gear well.....	Unobstructed
<i>Forward Fuselage</i>	
28. Windshield and window panels.....	Clean
29. Engine cowling attachment.....	Check
30. Oil.....	Check Level
31. Propeller.....	Check
32. Propeller cone.....	Check
33. Air intakes.....	Clean
34. Oil pump breather.....	Unobstructed
35. Exhaust pipe.....	Check
36. Fuel filter draining.....	Check
37. Fuel filter drain.....	Closed
<i>Nose landing gear</i>	
38. Tow Bar.....	Remove
39. Tire.....	Check
40. Shock absorber.....	Check
41. Door.....	Check attachments & cleanliness
42. Microswitches.....	Clean
43. Landing gear well.....	Unobstructed
<i>Right Main Landing Gear</i>	
44. Chocks.....	Remove
45. Tire.....	Check
46. Shock absorber.....	Check
47. Door.....	Check attachments and cleanliness
48. Microswitches.....	Clean
49. Landing gear well.....	Unobstructed
<i>Right Wing</i>	
50. Fuel tank draining.....	Check
51. Fuel tank drain.....	Closed

52. Fuel tank.....	Check Level
53. Fuel tank cap.....	Check
54. Tie-down.....	Remove
55. Wing.....	Check
56. Wing tip and lights.....	Check
57. Flap and aileron.....	Check
<i>Right Rear Fuselage</i>	
58. R.H door lock.....	Unlocked
59. Static port.....	Check
60. Window panels.....	Clean
<i>Stabilizers</i>	
61. Fin.....	Check
62. Rudder.....	Check
63. Stabilator and stabilator tab.....	Check
64. Tail cone and nav. light.....	Check
<i>Left Rear Fuselage</i>	
65. Static port.....	Check
66. Baggage compartment door.....	Secure
67. Window panels.....	Clean
ELECTRICAL SYSTEMS	
<i>Cabin</i>	
1. "ALTr FLD" switch-breaker.....	Off
2. Fuel pump.....	Off
3. Main switch.....	On
4. V/A switch.....	V
5. Landing Gear Lights.....	Tested
6. Advisory panel.....	Check
7. Fuel gages.....	Check
8. Flaps.....	Retract
9. Instrument lights.....	On
10. Navigation lights.....	On
11. Anti-collision lights (if installed).....	On
12. Strobe lights (if installed).....	On
13. Recognition lights (if installed) (Post).....	On
14. Pitot heating (if installed).....	On
15. Landing and taxi lights.....	On
<i>Left Wing</i>	
16. Navigation light.....	Check
17. Anti-collision light (if installed).....	Check
18. Recognition light (if installed).....	Check
19. Landing and taxi lights.....	Check
20. Pitot Heat.....	Check
21. Stall warning device.....	Check
<i>Right Wing</i>	
22. Navigation light.....	Check
23. Anti-collision light (if installed).....	Check
24. Recognition light (if installed).....	Check
<i>Empennage</i>	
25. Navigation light Pre-MOD.151.....	Check
26. Strobe light (if installed).....	Check
27. Anti-collision light (if installed).....	Check
<i>Cabin</i>	
28. Navigation lights.....	Off
29. Strobe lights (if installed).....	Off
30. Anti-collision lights (if installed).....	Off
31. Recognition lights (if installed).....	Off
32. Pitot heating (if installed).....	Off
33. Landing and taxi lights.....	Off
34. Instrument lights.....	Off
35. Main switch.....	Off

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BEFORE STARTING ENGINE	
1. Preflight inspection.....	Complete
2. Doors.....	Closed/Latched
3. Main switch.....	Off
4. Parking brake.....	Set
5. Seats/belts.....	Secure
6. Flight controls.....	Free/Correct
7. Pitch/rudder trim.....	Check
8. Fuel selector.....	Select
9. Circuit breakers (side panel).....	Check
10. Magneto selector.....	Off
11. Emergency gear control.....	In
12. "Radio master" switch (if installed).....	Off
13. Landing gear lever.....	Down
14. "Alternate Air".....	In
15. Alternate static source (if installed).....	In
ENGINE STARTING	
1. Main switch.....	On
2. Parking brake light "PARK".....	On
3. Anti-collision lights (if installed).....	On
4. Propeller.....	Full forward
<i>Normal Procedure</i>	
1. Throttle.....	¼" Open
2. Mixture.....	Idle cut-off
3. Fuel pump.....	On
4. Mixture.....	Full rich
<i>When fuel flow is displayed</i>	
5. Mixture.....	Idle Cut-Off
<i>Hot Start Procedure</i>	
1. Throttle.....	¼ "open
2. Mixture.....	Idle Cut-Off
3. Fuel pump.....	Off
4. Mixture.....	Full rich 1 sec. then cut-off
<i>Flooded Procedure</i>	
<i>Follow hot start procedure but leave throttle closed</i>	
1. Area.....	Clear
2. Magneto/start selector.....	Start
<i>When the engine starts:</i>	
3. Magneto selector.....	Both
4. Mixture.....	Rich
5. Engine.....	1000 to 1200 RPM
6. Oil pressure.....	Check
<i>If no oil pressure indication after 30 sec., shutdown engine.</i>	
7. Fuel pump.....	Off

AFTER STARTING ENGINE	
1. "ALTr FLD" switch-breaker.....	OFF
2. "ALTr" warning light.....	On
3. Voltmeter.....	Yellow Selector
4. or (Post-MOD.182).....	> 24
5. "ALTr FLD" switch-breaker.....	ON
6. "ALTr" warning light.....	Off
7. Voltmeter.....	Green
8. or (Post-MOD.182).....	Btw. 26 & 29
9. Turn-and-bank indicator (if installed).....	On
10. Vacuum gage (if installed).....	Check
11. Advisory panel test.....	Check
12. "Radio master" switch (if installed).....	On
13. All radios and nav aids.....	On
14. Fuel selector.....	Lowest Tank
15. Flaps.....	Retract
TAXIING	
1. Parking brake.....	Release
2. Brakes.....	Check
3. Flight instruments.....	Check
4. Taxi light.....	As Needed
Avoid exceeding 1200 RPM as long as the oil temperature indicator pointer is within yellow sector.	
ENGINE RUN-UP	
1. Parking brake.....	Set
2. Engine control friction.....	Adjust
3. Oil temperature.....	Green
4. Oil pressure.....	Green
5. Mixture.....	Rich
6. "Alternate Air".....	In
7. Fuel selector.....	Switch
<i>Propeller Check</i>	
8. Propeller.....	Forward
9. Throttle.....	2000 RPM
10. Propeller.....	Cycle twice (max. 500 RPM drop)
11. Propeller.....	Forward
<i>Magneto Check</i>	
12. Throttle.....	2000 RPM
13. Magneto.....	Check Each
14. Max. Drop 175 RPM. Max. Diff. 50 RPM.	
15. "ALTERNATE AIR" CHECK:	
16. "Alternate Air".....	Pull
17. Manifold pressure.....	Maintained
18. "Alternate Air".....	Push
<i>Autopilot Check</i>	
1. Autopilot.....	Test, then engage
2. Heading mode.....	Test
3. Nav mode.....	Test
4. Altitude hold.....	Test
<i>MAXIMUM POWER CHECK (or when releasing brakes before take-off):</i>	
5. Full throttle.....	2575 RPM

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BEFORE TAKE-OFF

1. Seats/belts Check
2. Doors Latched
3. Controls Free/Correct
4. Pitch trim Takeoff
5. Flaps Takeoff
6. Magneto selector Both
7. "Alternate Air" As Required
8. Propeller Forward
9. Mixture Rich
10. Fuel selector Fullest Tank
11. Fuel pump On
12. Oil temperature Green
13. Oil pressure Green
14. Voltmeter Green
15. or (Post MOD.182) Btw. 26 & 29
16. Altimeter Set
17. Heading indicator (if installed) Set
18. Horizontal attitude gyro (if installed) Set
19. Parking brake Release
20. Cabin blower (if installed) Off
21. Landing lights As Required
22. Navigation lights As Required
23. Pitot heating (if installed) As Required
24. Transponder (if installed) As Required

TAKE-OFF

1. Lined up on runway Check D.G.
2. Smoothly apply full power
3. Engine parameters Check
4. Airspeeds See Section 5

Standard Airspeeds

5. Rotation 68 KIAS
6. Initial climb 75 KIAS

When Airborne

8. Brakes Apply
9. Landing gear Retract

At 300ft.

10. Flaps Retract

AT 1000 ft.

11. Fuel pump Off
12. External lights As Required

CLIMB

1. Mixture Rich
2. Throttle Full Power
3. Propeller Forward (2575 RPM)
4. Optimum climb speed 95 KIAS

CRUISE

1. Power Set
2. Pitch trim Set
3. Mixture Set
4. Fuel Selector As Needed

DESCENT

1. Seats, seat belts, shoulder harnesses Set

Power setting as required for descent.
Every 1500 ft, apply engine power to prevent excess engine cooling and spark plugs fouling.
Avoid too long descents with manifold pressure lower than 14 in. Hg.

APPROACH - LANDING

Final

1. Airspeed 86-92 KIAS
2. Flaps Take-Off below 129 KIAS
3. Landing gear Down
4. Fuel pump On
5. Mixture Rich
6. Propeller Forward
7. Brakes Checked **
8. Seats/belts Secure
9. Landing lights On

Short Final

10. Flaps Landing below 103 KIAS
11. Airspeed See Section 5.
12. Standard airspeeds 73 KIAS

GO-AROUND

1. Smoothly apply full power
2. Airspeed 76-81 KIAS

When climb rate is positive

3. Landing gear Up
4. Flaps Take-Off
5. Airspeed 90 KIAS
6. Flaps Retract
7. Climb 95 KIAS

AFTER LANDING

1. Fuel pump Off
2. Flaps Retract
3. Landing light Off
4. Taxi light As Needed
5. Trim Take-Off
6. Radio equipment As Needed
7. Pitot heat (if installed) Off
8. "Alternate Air" In

SHUT -DOWN/SECURING AIRPLANE

1. Parking brake Set
2. Turn and bank indicator (if installed) Off
3. Anti-collision lights (if installed) Off
4. Taxi light Off
5. Lights Off
6. "Radio master" switch (if installed) Off
7. Throttle Reduce
8. Magnetos (once a day) Off then Both
9. Throttle 1200 RPM
10. Mixture Idle Cut-Off

After Engine Stops

11. Magneto selector Off
12. "ALTr FLD" switch-breaker Off
13. Main switch Off
14. Fuel selector Off
15. Pitot/Static ports Cover
16. Control lock Apply
17. Chocks/tie-downs As needed

AIRSPEEDS FOR SAFE OPERATIONS

- Engine failure after take-off 70-76 KIAS
- Maneuvering speed 129 KIAS
- Best glide speed 92 KIAS
- Precautionary landing w/ power ... 70-76 KIAS
- Best rate of climb 95/73 KIAS
- Best angle of climb 81/67 KIAS

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ENGINE FAILURE DURING TAKE-OFF RUN

1. Throttle Reduce
2. Brakes Apply
3. Mixture Idle Cut-Off
4. Magneto selector Off
5. Main switch Off
6. Fuel selector Off

ENGINE FAILURE AFTER TAKE-OFF

1. Airspeed 70-76 KIAS
2. Mixture Rich
3. Fuel selector Switch Tanks
4. Fuel pump On

If the engine does not start:

5. Mixture Idle Cut-Off
6. Fuel Selector Off
7. Fuel Pump Off
8. Landing gear As Needed
9. Land Straight Ahead
10. Magneto selector Off
11. Main Switch Off

ENGINE FAILURE IN FLIGHT

1. Glide speed 92 KIAS
2. Mixture Rich
3. Fuel gages Check
4. Magneto selector Both
5. Fuel Pump On

If icing conditions are unintentionally encountered:

6. Alternate Air Pull
7. Mixture Idle Cut-Off
8. Throttle ½ Open
9. Starter Engage (if prop stopped)
10. When engine runs Slowly Enrich

LOW OIL PRESSURE

1. Oil warning light Illuminated
2. Pressure indicator In Red Low Sector
3. Throttle Reduce As Far As Possible
4. Oil Temp Checked
5. If oil temp. in red Reduce Throttle
Prepare for a forced landing ASAP.

LOW FUEL FLOW

1. Fuel pump Operating
2. Fuel gages Check
3. Fuel selector Switch Tanks

ENGINE VIBRATION

1. Mixture Set
If vibration persists
2. RPM Set For Minimum Vibration
Land ASAP

PROPELLER GOVERNOR FAILURE

1. Oil Pressure Check
2. Oil Temp Check
3. Throttle As Required
4. Airspeed Reduce
5. RPM Max 2575

EMERGENCY LANDING W/O POWER

1. Glide speed 92 KIAS
2. Radio Transmit Mayday
3. Seats/belts Secure
4. Landing gear As Needed
5. Mixture Idle Cut-Off
6. Fuel Selector Off
7. Magneto selector Off
8. Flaps As Required

When landing is secured

9. Flaps As Needed
10. Approach speed 70-76 KIAS
11. Main switch Off

PRECAUTIONARY LANDING WITH POWER

12. Flaps Landing
13. Approach speed 70-76 KIAS
14. Radio Advise
15. Seats/belts Secure
16. Field Over fly
17. Main Switch Off
18. Touchdown Flare & Keep Nose High
19. Landing gear As Needed
20. Mixture Idle Cut-Off
21. Fuel selector Off
22. Magneto selector Off
23. Brakes As Required

ELECTRICAL FIRE IN FLIGHT

If fire is in Engine Compartment

1. Main Switch Off
2. Cabin air cooling & defogging Fire Cut-Off
3. Land as soon as possible

If fire is in the Cabin

4. Main switch Off
5. "ALTr FLD" switch-breaker Off
6. All electrical switches Off
7. Cabin air cooling & defogging Fire-Cut-Off
8. Fire extinguisher Activate

If fire is out and electricity is necessary

9. Main switch On
10. Circuit breakers Check for fault
11. Radio/electric switches On One at a Time
12. Cabin air cooling Open

CABIN FIRE

1. Main switch Off
2. Cabin air & defogging Fire Cut-Off
3. Fire extinguisher Activate
After discharging extinguisher, after fire is out, partially open cabin air for ventilation

WING FIRE

1. Navigation and landing lights Off
2. Anti-collision lights Off
3. Pitot heat Off

Land as ASAP

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DITCHING

1. Radio..... Mayday
2. Landing gear Up
3. Flaps Landing
4. Seat belts Secure
5. Airspeed.....70-76 KIAS
6. Flight path Parallel to swells
Before Touchdown
7. Main switchOff
8. MixtureIdle Cut-Off
9. Fuel selector.....Off
10. Magneto selector.....Off
11. Touch down..... Keep nose high

EMERGENCY DESCENT

1. ThrottleIdle as Required
2. Airspeed 129 KIAS
3. Landing gear Down
4. Descent at V_{LE}..... 139 KIAS
After a prolonged descent with reduced power, apply power with caution due to low cylinder head temperature.

ICING

1. Cabin Temperature Full Hot
2. Pitot heating On
3. Demisting Open
4. "Alternate Air" Fully Pulled
5. Engine Increase Power
6. RPM.....Periodically Change to Reduce Icing

Turn back or change altitude to obtain best outside air conditions.

If icing continues, plan a landing at the nearest airport. With rapid buildup, select a suitable off-airport landing site.

Ice on or near the leading edges will increase stall speed.

LANDING GEAR MALFUNCTIONS LANDING GEAR FAILS TO RETRACT

1. Landing gear lever Up
2. "LDG GEAR" circuit breakerCheck
3. Emergency landing gear controlIn
4. Landing gear lever Up
5. "LDG GEAR" circuit breakerCheck
6. Emergency landing gear controlIn

If landing gear fails to retract:

7. Landing **gear** lever.....Down
8. Landing gear lights..... Check Green

Continue flight with gear down to destination or appropriate alternate airfield.

9. Maximum airspeed..... 139 KIAS

RED LIGHT REMAINS ON

1. "LDG GEAR" circuit breaker Open
2. Landing gear lever Down
3. "LDG GEAR" circuit breaker Close
4. Landing gear lightsGreen On Red Off

Continue flight with gear down to destination or appropriate alternate airfield.

5. Maximum airspeed 139 KIAS

A GREEN LIGHT REMAINS ON, RED LIGHT OFF

1. Flaps Takeoff
2. Best airspeed 85 KIAS
3. Maximum airspeed 97 KIAS
4. "LDG GEAR" circuit breaker Open
5. Landing gear lever Down
6. Emergency Landing Gear Control..... Pull
7. Landing gear lightsCheck Green On

Continue flight with gear down to destination or appropriate alternate airfield.

8. Maximum airspeed 139 KIAS

As a precaution, proceed as described in procedure LANDING WITH A LANDING GEAR NOT LOCKED

LANDING GEAR FAILS TO EXTEND (ONE OR SEVERAL GREEN GEAR DOWN LIGHTS FAIL TO ILLUMINATE)

1. Main switch On
2. Landing gear lever Down
3. "LDG GEAR" circuit breaker Closed
4. Landing gear lights ... Illuminate During Test
5. Flaps Take-Off
6. Maximum Airspeed..... 97 KIAS

The landing gear should extend and lock normally.

If it does not happen:

7. Landing gear lever UP
8. "LDG GEAR" circuit breaker Open
9. Landing gear lever Down
10. Emergency landing gear control Pulled
11. Gear down (green) lights On
12. Gear in transit (red) light Off

If all electrical power has been lost, the landing gear must be extended using the above procedures. The gear position indicator lights will not illuminate.

Normal Landing.

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ONE OR SEVERAL LANDING GEAR (GREEN) LIGHTS FAIL TO ILLUMINATE DURING TEST FROM PREVIOUS PROCEDURE

Yaw/slip airplane to help lock gear down.

1. Gear in transit (red) light.....Off
2. Gear in transit (red) light..... On for Test

The affected indicator green light could be burned out.

3. Landing gear position.....Check with Tower

Perform precautionary landing.

LANDING WITH LANDING GEAR NOT LOCKED

1. Landing gear position..... Check With Tower

LANDING GEAR APPEARS DOWN AND LOCKED

1. "LDG GEAR" circuit breaker Closed
2. Landing gear leverDown
3. Emergency gear controlPushed

Perform precautionary Landing

LANDING GEAR UP OR PARTIALLY EXTENDED

Nose Gear Not Locked:

1. FlapsLanding
2. Airspeed 65-70 KIAS
3. Seat belts Secure

Short Final

4. Main switch..... Off
5. Mixture Idle Cut Off
6. Fuel selector..... Off
7. Magneto selector..... Off

After Main Gear Touchdown

8. Nose gear.....Keep Nose High
9. Brake..Smoothly after nose touches ground

Main Gear Not Locked:

Note: *If only one main gear extends, minimum airplane damage will result if a gear-up landing is made.*

Retract landing gear

1. Emergency gear control..... Pushed
2. "LDG GEAR" circuit breaker Closed
3. Landing gear lever Up

Land on grass if possible:

4. FlapsLanding
5. Airspeed 65-70 KIAS
6. Seat belts Secure

Before touchdown:

7. Main switch..... Off
8. Mixture Idle Cut Off
9. Fuel selector..... Off
10. Magneto selector..... Off