Cessna T 310 R, II turbocharged

For X-Plane 11.52

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This aircraft is a full object model created using Blender 2.65 and 2.49.
http://www.blender.org
Blender to X-Plane scripts are available at:

- http://marginal.org.uk/x-planescenery/tools.html - Blender 2.49
- https://github.com/der-On/XPlane2Blender/wiki - Blender 2.65+

Credits

Bob439 - http://forums.x-plane.org/index.php?/profile/330471-bob-439/ for his amazing support, technical information and photos (so many photos).
-Vette - http://forums.x-plane.org/index.php?/profile/462180-vette/ for his excellent photos and support.
Danklaue - http://forums.x-plane.org/index.php?showuser=3424 for his awesome video tutorials: http://forums.x-plane.org/index.php?/forums/topic/37536-planemaker-tutorial-1-intro-research-prep/
Jonathan Harris and "der-On" for their work developing the Blender scripts.
vFlyteAir Simulations – texture and explanation of modeling a Hobbs Meter: http://forums.x-plane.org/index.php?/files/file/17858-hobbs-meter-3d-animated/
XPFR – Pilot collection: http://forums.x-plane.org/index.php?/files/file/6187-pilot-collection-11/
Afnavarro - Textures 3D propellers XP-10.50+ 1.0.0: http://forums.x-plane.org/index.php?/files/file/34960-textures-3d-propellers-xp-1050/

Modifications

Modifications including paint designs are welcome however an email or PM (X-Plane.org) is appropriate with credit given if shared.

Installation:

Copy the entire aircraft folder into the aircraft folder in your X-Plane Aircraft folder → General Aviation folder

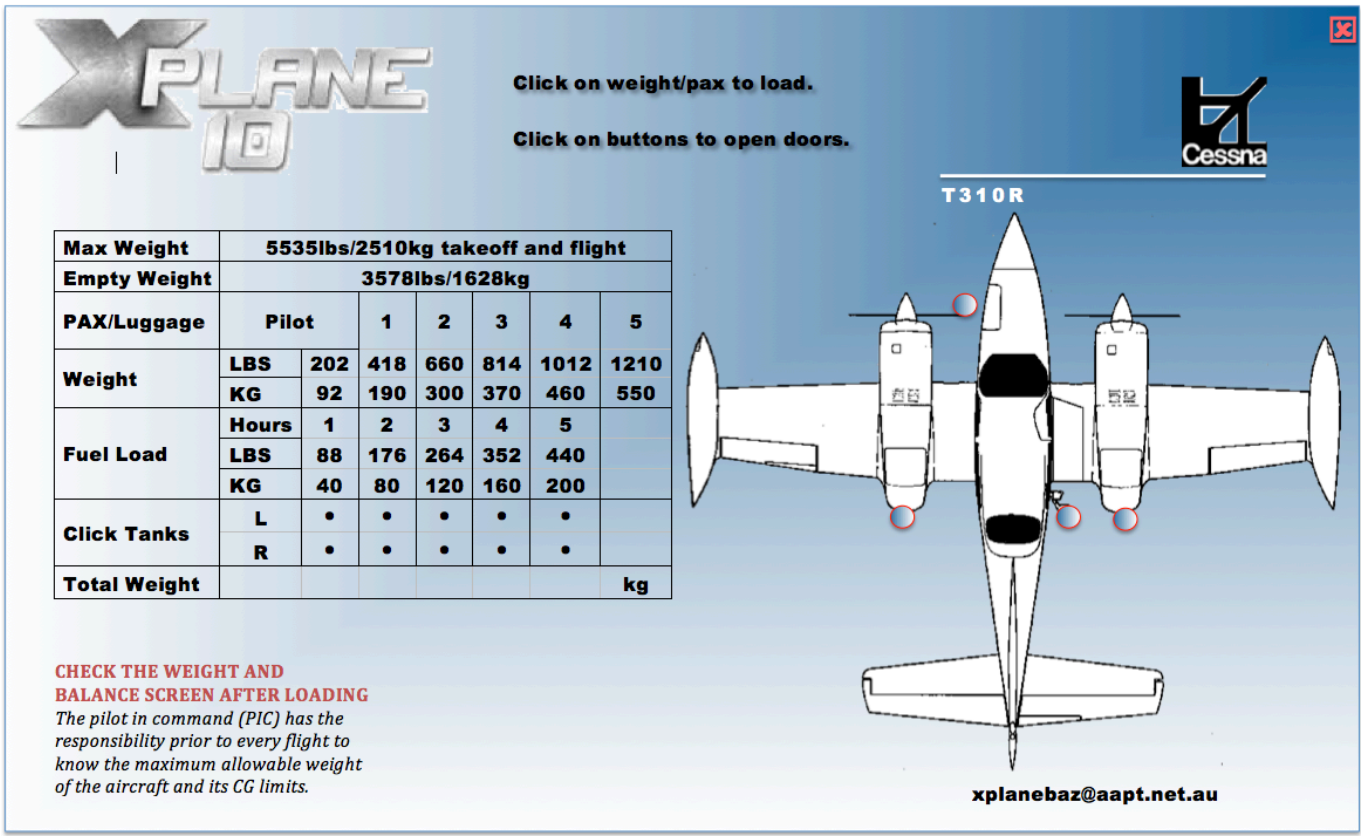
What's New?

Version 1.1	Minor adjustments, removed clist.txt from XP11 version
Version 1.2	Calibrated Fuel Flow gauge, fixed clist.txt in XP11 version
Version 1.3	Calibrated Oil Temp and minor tuning in XP10 version
Version 2.0	Converted to XP11.52

Important

Key Features

Loading and Doors Interactive Screen



- Toggle this screen from the Doors/Loading switch on the panel (front left) and it will appear/disappear.

Loading

- Click the number of passengers you would like to accompany you in the PAX/Luggage row.
- Click the Left (L) and Right (R) fuel loads you would like to have on the Click Tanks •'s
- The total weight will be shown at the bottom. It is your responsibility to ensure your aircraft is within weight and balance limits throughout all stages of flight.

Doors

- Click the "buttons" to open and close doors around the aircraft.
- The co-pilot side door requires you to click on the handle to operate.

Important – When I get into an aircraft the external door is open. In keeping with real world logic, the main passenger door is open when you enter this aircraft. (Otherwise how can you enter the aircraft?)

- You need to close the door and switch the Doors/Loading panel off prior to takeoff as you might in the real the world.

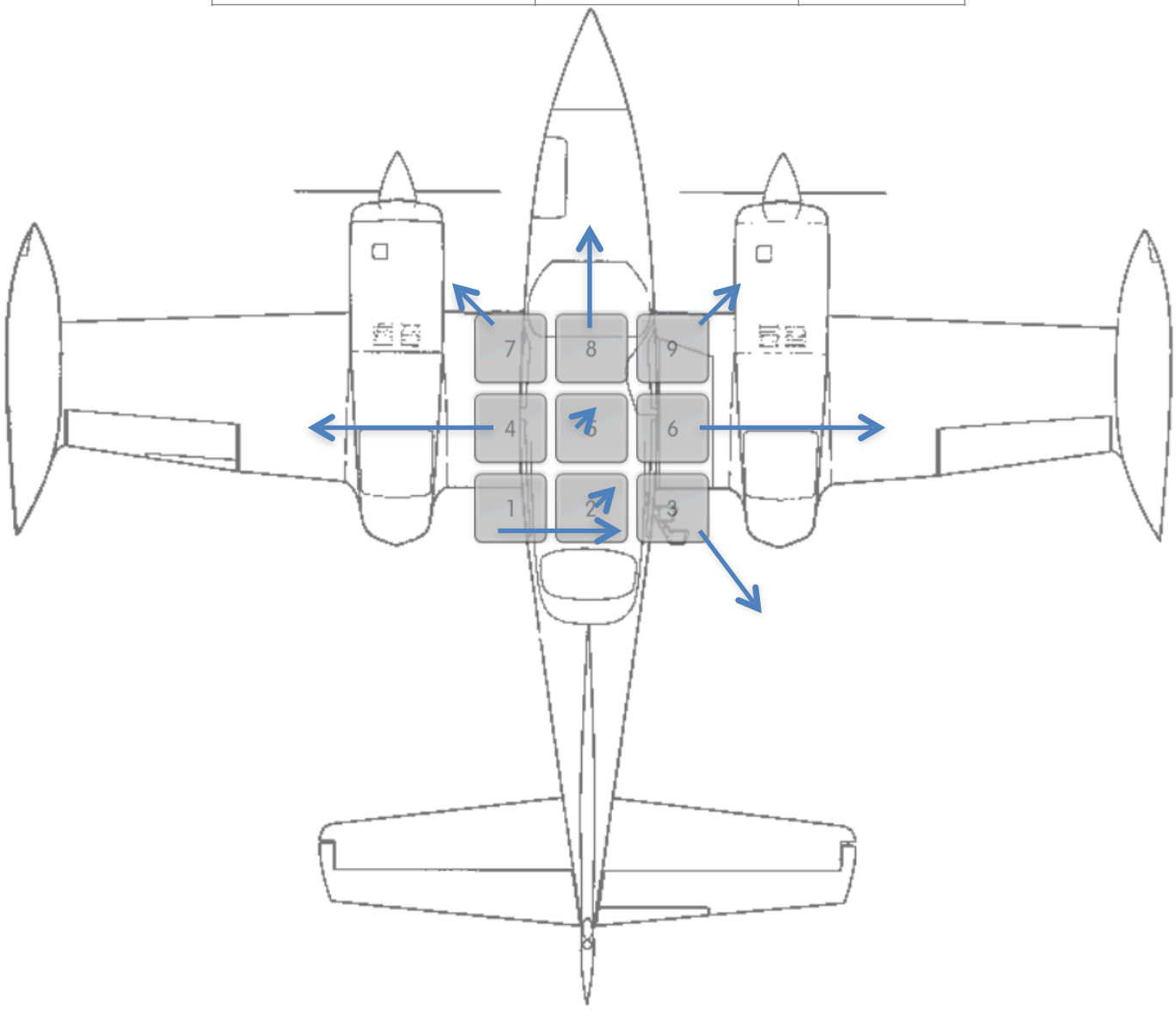
Loading

- Check the luggage lockers as you load various weights.

View Positions

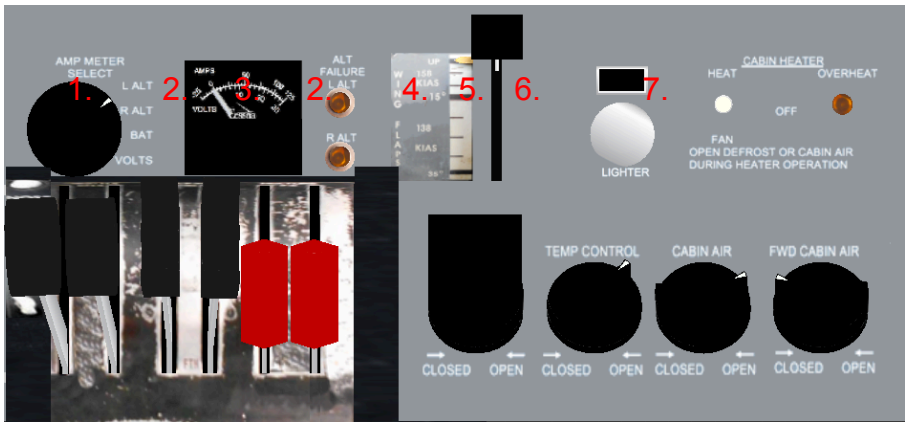
- Nine view positions have been set on the extended number pad of the keyboard. The following diagram depicts this however you can change these if it doesn't sort your needs.

7: Left forward avionics panel	8: Forward	9: Right panel
4: Left	5: Overhead	6: Right
1: Rear pax seat	2: Lower panel	3: Right rear



Panel Layout

1. Door Loading Panel Switch	2. Yoke Appear Switch	3. Gear Switch	4. Yaw Damper	5. AP Nav Select Switch	6. AMP Meter Select Switch (Only 2 positions: ALT	7. Flap Handle	8. Wing Walkway light Switch	9. Outside air temp gauge	10. Hobbs meter



1. Aux Fuel Pump Switches	2. Left/Right Engine Star Switches	3. Engine Primer Swit (Toggle Left and Right)	4. Left Alternator Switch	5. Battery Master Swit	6. Right Alternator Switch	7. Engine Magneto Switches	8. Throttle Quadrant	9. Windscre Defrost Kno

Avionics Panel

Yoke Hiding

Click on the logo in the center of the pilot side yoke to hide it providing better views of the lower front panel switches.

Click the “YOKE” label where the yoke was and it will reappear.

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Central Throttle Pedestal

Autopilot Heading Engage

Autopilot Attitude Hol

Autopilot Bank Angl

Autopilot Off/On

Autopilot Nav Engage

Alternate Air Select (In – Off, Out – On)

Autopilot Altitude Engage

Rudder Trin

Cowl Flaps – Left (Pull to Close

Cowl Flaps – Right (Pull to Close)

Aileron Trim

Fuel Selectors (not fully functional

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Autopilot Operation

Heading Mode

Attitude Up/Down

Bank Angle Select

On/Off

NAV Mode

Altitude Hold

NAV1/NAV2 Source select switch (Below the GPS panels)

There are three main buttons to operate the Autopilot:

1. On/Off
2. NAV Mode
3. Altitude Hold
4. Heading Mode

In addition there are two adjustable “control wheels”:

1. Attitude Up/Down
2. Bank Angle Left/Right

Using Autopilot during Climb and Descent phases

1. Establish attitude and Heading
2. Select either **Heading Mode** after setting Heading Bug on RMI or NAV Mode after setting NAV1, 2 or GPS

Using Autopilot during Cruise phase

1. Establish cruise altitude and select **Altitude Hold**
2. Select either **Heading Mode** after setting Heading Bug on RMI or NAV Mode after setting NAV1, 2 or GPS

Changing Altitude during Cruise phase

1. Click and hold on the UP or DOWN side the Attitude Control Wheel

Checklist for CessnaT310R XP10

01 PREFLIGHT

Maintenance Status	CHECK
Hobbs Meter	CHECK
Parking Brake	SET
Circuit Breakers	IN
Landing Gear Switch	DOWN
Left Fuel Selector	MAIN
Right Fuel Selector	MAIN
Elevator trim	NEUTRAL
Rudder trim	NEUTRAL
Aileron trim	NEUTRAL
Battery Switch	ON
Fuel Gauges	CHECK quantity and operation
Wing Flaps	DOWN 35deg
Pitot, Stall and Vent Heat Switches	ON 20 seconds, then OFF
Walk around	CHECK
Windshields and Windows	Check for cracks and condition
Baggage doors	SECURE
Battery Switch	OFF

02 BEFORE ENGINE STARTING

Seat, seat belts	ADJUST AND SECURE
Brakes	TEST AND SET
Landing gear switch	DOWN
All Switches	OFF
Battery	ON
Alternators	ON
Lighting Rheostats	As req'd
Altimeter	SET
Landing Gear Position Indicator Lights	All green ON
Throttles	OPEN one inch
Propellers	FULL FORWARD
Mixture	FULL RICH
Fuel Selectors	MAIN TANKS
Alternate Air Controls	IN
Anti-Collision Lights	ON

03 ENGINE STARTING - LEFT

Propeller	CLEAR
Magneto Switches	ON
Engine	START
Primer switch - Left Engine	ON
Primer switch - Left Engine	OFF
Auxiliary Fuel Pump	ON
Throttle	800 - 1000RPM
Oil Pressure	CHECK

04 ENGINE STARTING - RIGHT

Propeller	CLEAR
Magneto Switches	ON
Engine	START
Primer switch - right engine	ON
Primer switch - right engine	OFF
Auxiliary Fuel Pump	ON
Throttle	800 - 1000RPM
Oil Pressure	CHECK

05 BEFORE TAXIING

Wing Flaps	UP
Avionics Master Switch	ON
Avionics	SET
Transponder	MODE STDBY
Lights	As req'd
Cabin Temperature	As req'd

06 TAXIING

Throttles	as req'd

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Brakes	CHECK
Rate Gyros	CHECK

07 ENGINE RUN-UP

Bakes	SET
Left Throttle	1700RPM
Alternators	CHECK
Vacuum system	CHECK
Magnetos	CHECK-150RPM max drop with max difference of 50RPM
Left Propeller	CHECK - feathering to 1200RPM and high RPM
Engine instruments	CHECK - green arc
Right Throttle	1700RPM
Alternators	CHECK
Vacuum system	CHECK
Magnetos	CHECK-150RPM max drop with max difference of 50RPM
Right Propeller	CHECK - feathering to 1200RPM and high RPM
Engine instruments	CHECK - green arc
Throttles	1000RPM

08 BEFORE TAKEOFF

Flight controls	free and correct
Trim tab	SET
Cowl flaps	locked full open
Alternate air controls	IN
Fuel selector	RECHECK
Wing flaps	UP
Cabin door and window	CLOSED and LOCKED
Fuel quantity	CHECK
Flight instruments and avionics	SET
Transponder	MODE C
Lights	as req'd
Auxiliary fuel pumps	ON
Brakes	RELEASED

09 TAKEOFF

Power	FULL THROTTLE AND 2700RPM
Mixture	LEAN for field elevations
Air minimum control speed	80 KIAS
Elevator control	raise nosewheel at 83 KIAS
Lift-off	92 KIAS

10 MAXIMUM PERFORMANCE TAKEOFF

Wing flaps	DOWN 15deg
Brakes	SET
Power	FULL THROTTLE
Mixtures	LEAN for field elevation
Brakes	RELEASED
Power	CHECK 2700RPM
Elevator control	RAISE nosewheel at 70 KIAS
Air minimum control speed	80 KIAS
Lift-off	82 KIAS. Hold speed until obstacles are cleared

11 AFTER TAKEOFF

Taxi Light	Off
Brakes	Apply momentarily
Landing gear	RETRACT. Check red light off
Wing flaps	UP
Climb speed	107 KIAS
Auxiliary fuel pumps	OFF

12 CRUISE CLIMB

Power	2500RPM and 24.5 inches Hg
Airspeed	115 - 130 KIAS
Mixtures	adjust to climb fuel flow
Cowl flaps	OPEN or as required
Auxiliary fuel pumps	ON above 12,000 feet
Propellers	SYNCHRONIZED

13 MAXIMUM CLIMB

Power	2700RPM AND FULL THROTTLE
Airspeed	107 KIAS @ SL; 99 KIAS @ 10K
Mixtures	ADJUST to climb fuel flow
Cowl flaps	OPEN or as required
Auxiliary fuel pumps	ON above 12,000 feet

14 CRUISE

Cruise power	2100 - 2500 RPM and 15.0 to 24.5 inches Hg
Mixtures	LEAN
Cowl flaps	OPEN or as required
Propellers	SYNCHRONIZED
Trim Tabs	ADJUST

15 DESCENT

Power	as req'd, engine temps in GREEN
Cowl flaps	as req'd
Mixtures	ADJUST, grad enrich on descent
Altimeter	SET

16 BEFORE LANDING

Fuel selectors	LEFT MAIN/RIGHT MAIN
Auxiliary fuel pumps	ON
Alternate air controls	CHECK in
Mixtures	as req'd for altitude
Propellers	FULL FORWARD
Wing flaps	DOWN 15° below 158 KIAS
Landing gear	DOWN below 138 KIAS
Landing gear Lights	Down lights ON; Unlock Light Off
Taxi Light	ON
Wing flaps	DOWN 35° below 138 KIAS
Minimum Multi-Engine App speed	93 KIAS
Air Minimum Control Speed	80KIAS

17 BALKED LANDING

Increase engine speed	2700 RPM
Throttle	FULL
Mixture	as req'd
Transition speed	85 KIAS
Landing gear	RETRACT (IFR go-around)
Reduce wing flap setting	15deg
Climb trim	CHECK
Cowl flaps	OPEN
Wing flaps	UP when obstacles cleared

18 AFTER LANDING

Auxiliary fuel pumps	LOW during landing roll
Cowl flaps	OPEN
Wing flaps	UP
Transponder	MODE STDBY

19 SHUT DOWN

Auxiliary fuel pumps	OFF
Transponder	OFF
Avionics master switch	OFF
All switches except battery, alt and mags	OFF
Throttles	IDLE
Mixtures	IDLE CUT-OFF
Magneto switches	OFF
Battery and alternators	OFF
Parking brake	SET

IMPORTANT SPEEDS

Vne	223 Kias
Vno	181 Kias
Va	148 Kias
Vfe	158 Kias with 15° Flaps
	139 Kias with 35° Flaps
Vle	138 Kias
Vmca	81 Kias
Vy	92 Kias
Vyse	106 Kias
Vxse	97 Kias
Vs	79 Kias
Vso	72 Kias

PILOT'S OPERATING HANDBOOK/ ENGINE FAILURE DURING FLIGHT
OWNER'S MANUAL SUPPLEMENT CESSNA 3OO AND 4OO SERIES

AMPLIFIED EMERGENCY PROCEDURES

ENGINE INOPERATIVE PROCEDURES

ENGINE FAILURE DURING FIGHT (Speed Above Air Minimum Control Speed)

WARNING
Level flight may not be possible for certain combinations of weight, temperature, and attitude. In any event, do not attempt an engine inoperative go-around after wing flaps have been extended beyond 15°.

ENGINE FAILURE DURING FIGHT (Speed Below Air Minimum Control Speed)

WARNING
Level flight may not be possible for certain combinations of weight, temperature, and attitude. In any event, do not attempt an engine inoperative go-around after wing flaps have been extended beyond 15°.

ENGINE INOPERATIVE GO-AROUND

WARNING
Level flight may not be possible for certain combinations of weight, temperature, and attitude. In any event, do not attempt an engine inoperative go-around after wing flaps have been extended beyond 15°.

Emergency Exit Window

1. Emergency Release Handle Plastic Cover – PULL OFF
2. Emergency Release Handle – PULL DOWN
3. Emergency Exit Window – PUSH OUT at bottom of window with sustained force