



## Rag Rat Resins

1:72 or 1:48 multi-media kit of the



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# Cessna 310 D

History, Notes and  
Assembly Instructions

## History

The 310 first flew on January 3, 1953 with deliveries starting in late 1954. The early models had all fuel stored in wing tip tanks. The only external difference between the A and B models was that the A had a retractable single step while the B had two steps.

Cessna traditionally add a letter after the model number and a sweptback fin and rudder were introduced with the 310D.

The USAF operated unswept fin versions as the U-3A and the swept fin versions were operated as the U-3B. The U-3B was based on the Cessna 310F and had an extra cabin window.

Acknowledgement: *Our thanks to Michael McMurtrey for providing much of the source data used to produce this model.*

### Resin Parts

|  |       |
|--|-------|
| Cabin bulkhead (1:48 kit only) . . . . . | 1 off |
| Engine . . . . .                         | 2 off |
| Fin . . . . .                            | 1 off |
| Fuselage - left. . . . .                 | 1 off |
| Fuselage - right . . . . .               | 1 off |
| Horizontal stabilizer - left . . . . .   | 1 off |
| Horizontal stabilizer - right . . . . .  | 1 off |
| Nacelle exhaust . . . . .                | 2 off |
| Nose cone. . . . .                       | 1 off |
| Seat - rear bench. . . . .               | 1 off |
| Wing - left . . . . .                    | 1 off |
| Wing - right . . . . .                   | 1 off |
| Wing tip tank - left. . . . .            | 1 off |
| Wing tip tank - right. . . . .           | 1 off |

### Miscellaneous Items

|                                |                   |
|--------------------------------|-------------------|
| Cockpit transparency . . . . . | 1 off in 1:72 kit |
| Cockpit transparency . . . . . | 2 off in 1:48 kit |
| Decal sheet . . . . .          | 1 off             |
| Instructions. . . . .          | 1 set             |

### Metal Parts

|   |       |
|---|-------|
| Control yoke . . . . .                  | 2 off |
| Main landing gear leg . . . . .         | 2 off |
| Main landing gear side brace . . . . .  | 2 off |
| Main wheel . . . . .                    | 2 off |
| Nose landing gear . . . . .             | 1 off |
| Nose landing gear door - front. . . . . | 1 off |
| Nose landing gear door - left . . . . . | 1 off |
| Nose landing gear door - right. . . . . | 1 off |
| Pedestal - control . . . . .            | 1 off |
| Propeller. . . . .                      | 2 off |
| Seat - pilot . . . . .                  | 2 off |
| Step - A model (single step). . . . .   | 1 off |
| Step - B model (double step) . . . . .  | 1 off |
| Tail bumper . . . . .                   | 1 off |

## Introduction

This Rug Rat Resins kit is cast in urethane resin using one- and two-piece moulds. Because of the limitations of the moulding techniques, there may be a few small air bubbles in the components, but these can be filled using any of the proprietary fillers (Green Stuff, Milliput, etc.).

**WARNING - THE DUST FROM URETHANE RESIN IS TOXIC. WEAR A MASK, OR SAND IT WET.**

**WARNING - OBEY ALL MANUFACTURERS SAFETY INSTRUCTIONS WHEN YOU USE GLUE, PAINT, OR OTHER MATERIALS.**

Resin parts can be shaped with a scalpel fitted with a stout blade, or a modelling knife, and can be cut with a razor saw. It is glued using superglue (cyanoacrylate) or 5 minute epoxy. Resin is a relatively brittle material and rough treatment of thin components will lead to breakage. Resin can be filed, sanded, wet-and-dried, and polished, just like polystyrene, but remember that the dust is an irritant (similar to sawdust).

## Introduction (continued)

Wear a mask, or sand it wet. Green stuff and similar fillers that rely on evaporation are only suitable for 'skimming' and minor filling operations that need to be sanded with a minimum of delay. An alternative is automotive two-pack filler or Milliput.

Before starting assembly, wash the resin parts in a good benign solvent such as isopropanol or warm soapy water. This will remove the mould release agent from the parts. Do not use hot water because the parts may soften and distort. You can use this to advantage however if you have a warped component, or want to adjust or 'tweak' something. Heat the component with hot water or a fan heater and gently adjust it. When it cools it will keep its modified shape. If you are unhappy with any of the parts, send them back to us for free replacement.

In addition to the resin parts, the kit also contains cast metal parts and vacuum-formed transparencies.

## Assembly

### 1 Preparation

#### A Drill holes in these parts

For 1:48 scale models drill 1.8mm diameter holes as follows::

- Two holes in the in the instrument panel for the control yokes.
- A hole in the front of each engine for the propeller shaft.
- A hole in the underside of the fuselage for the step.
- A hole in the top of the cabin transparency for the antenna.

For 1:72 scale models drill 1.8mm diameter holes as follows::

- Two holes in the in the instrument panel for the control yokes.
- A hole in the front of each engine for the propeller shaft.
- A hole in the underside of the fuselage for the step.
- A hole in the top of the cabin transparency for the antenna.

C Rub the mating faces of the fuselage halves of a flat surface down until they are a good fit.

D Remove the feed blocks from the nose of each fuselage half, from each wing root, the fin and from the tailplanes. Remove any flash from the locating tabs.

### 2 Fuselage assembly

#### A Cabin parts preparation.

1 Attach the control yokes to the instrument panel.

2 Add any additional detail which may be required, for example seat belts (not supplied)

3 For a 1:48 model ONLY, Add the cabin bulkhead to one fuselage half and make sure that the entire assembly is a good fit when the two fuselage halves are together.

4 Paint the cabin parts as required.

B Make sure that the mating faces of the two fuselage halves are a good fit, then align and bond them together.





C When the adhesive has set, fill the joint, sand it smooth, then re-scribe any panel lines if necessary.

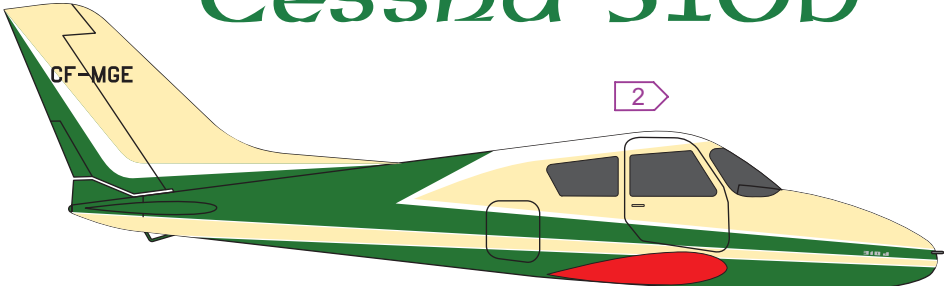
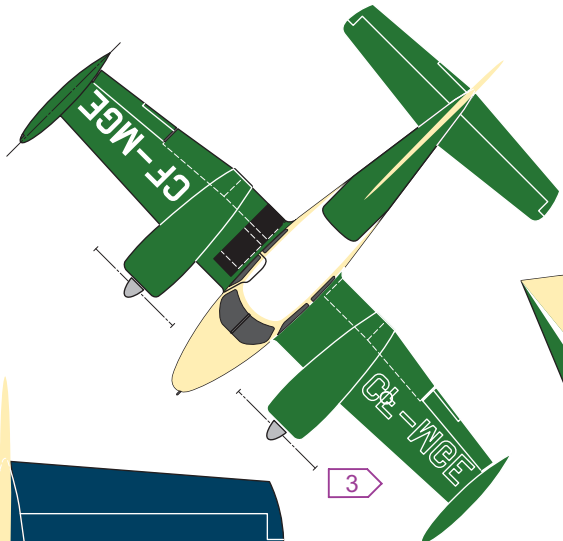
D Attach the cabin parts.

1 Attach the instrument panel (complete with control yokes) to the front of the cabin area.

2 Attach the pedestal to the cabin floor.

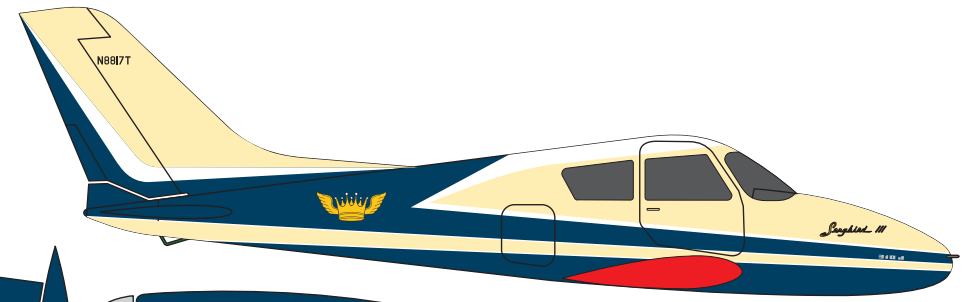
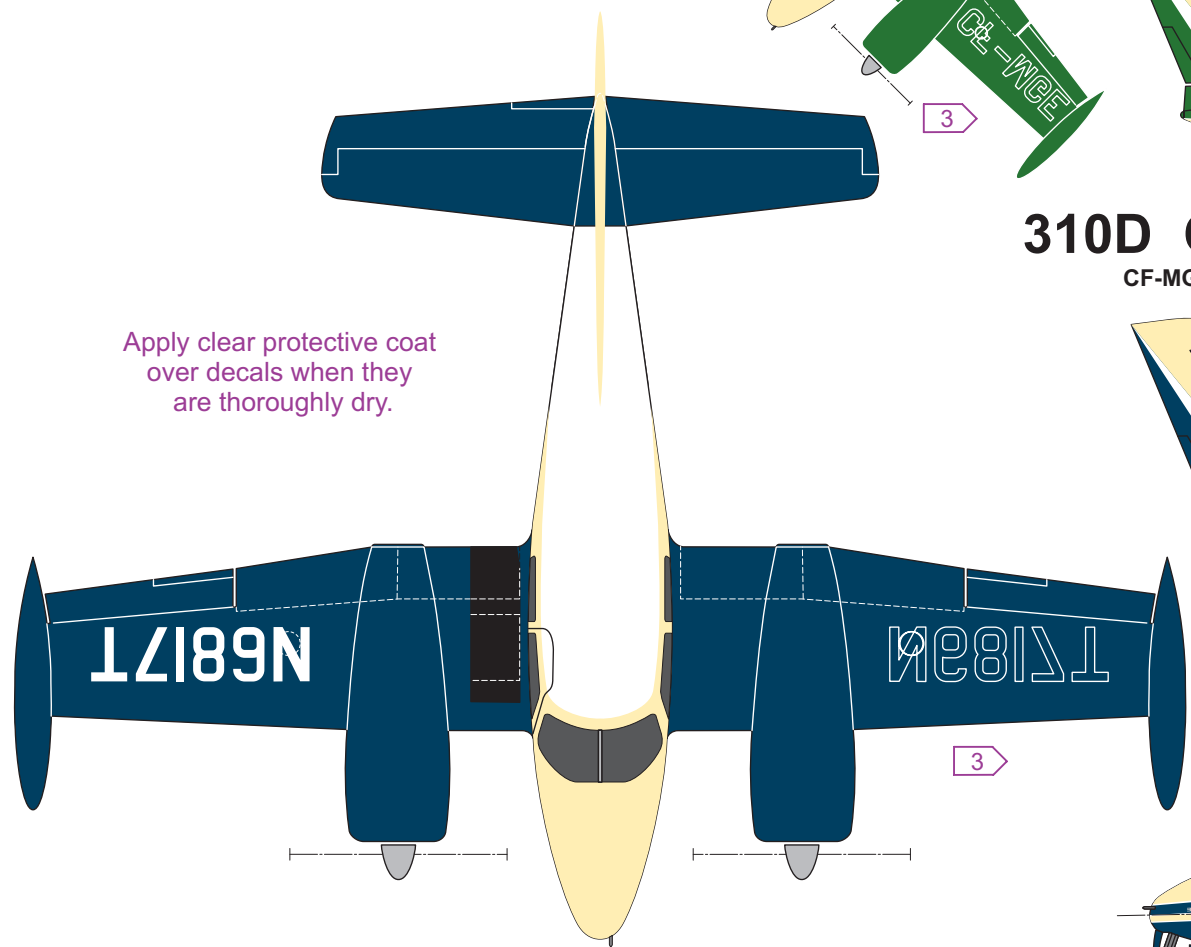
# Rug Rat Resins Cessna 310D

-  White - FS17875
-  Bamboo - (matched to PPG 24483 - "Harvest Wheat")
-  Leaf Green - ????
-  Shadow Blue (matched to PPG 438 - 1928 Ford "Niagara Blue")

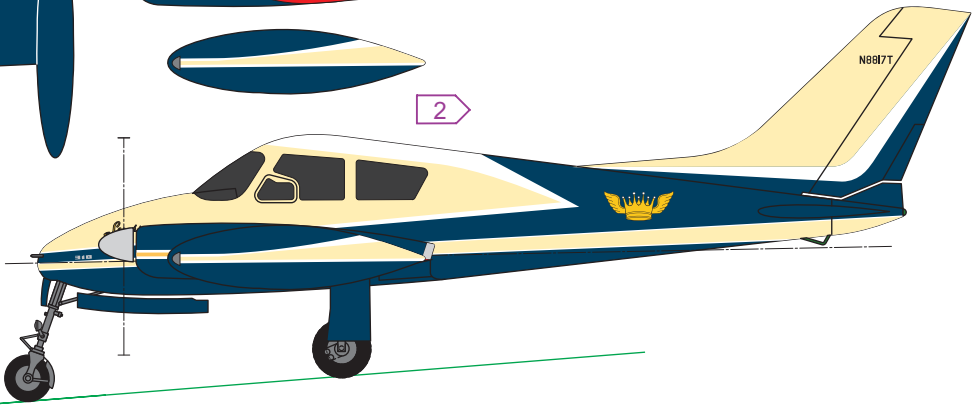


**310D Canadian aircraft**   
CF-MGE - Leaf Green/Bamboo/White

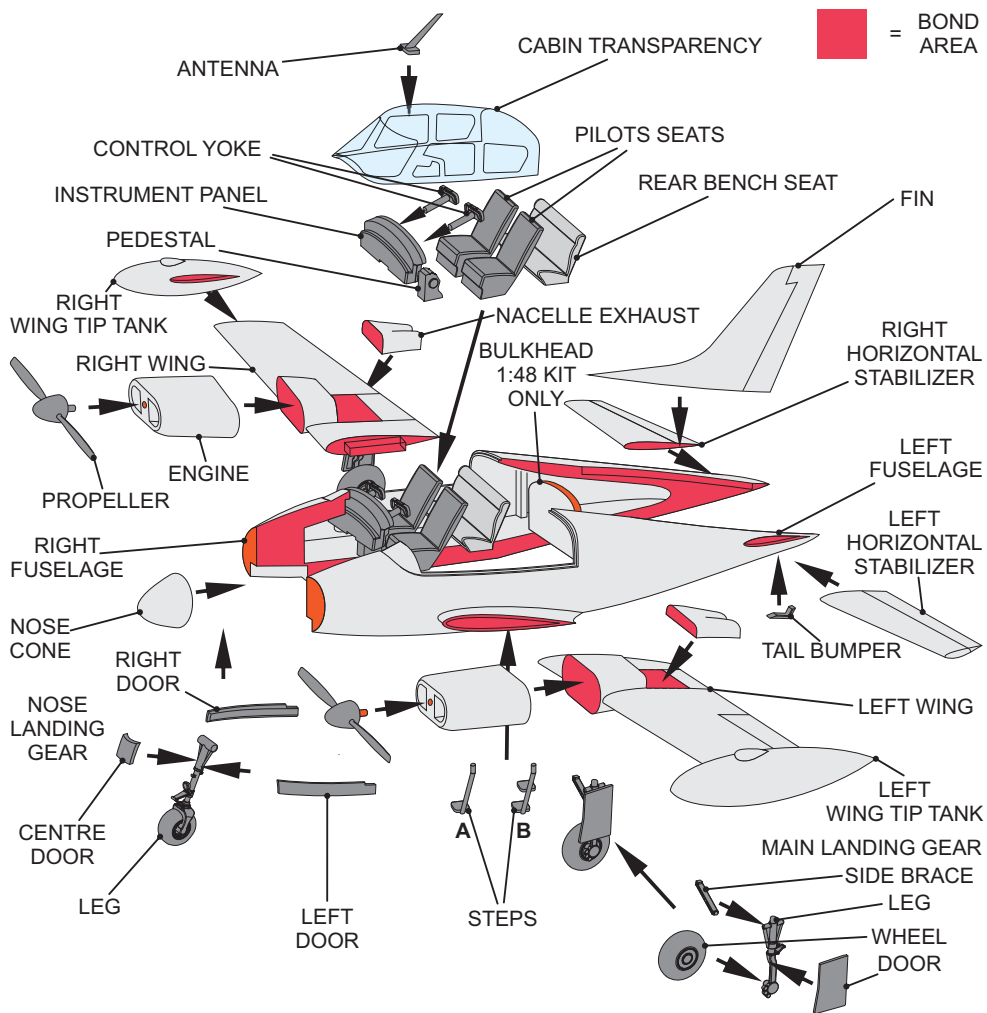
Apply clear protective coat  
over decals when they  
are thoroughly dry.



**310D "Songbird III"**  
N6817T - Shadow Blue/Bamboo/White



- 3 Attach the two pilots seats to the cabin floor.
  - 4 Attach the rear bench seas to the cabin floor.
  - E Cut one of the two canopies out of the vacuum-formed sheet. Trim the canopy as necessary, then attach it with epoxy cement.
  - F Fill and sand the canopy/fuselage joint as necessary. Take care not to sand the window areas of the canopy.
  - G Make sure the mating faces are flat and true, then attach the nose cone to the fuselage.
- 3 Wing assembly
    - A Remove the feed stubs from each wing root and remove any flash from the locating tabs.
    - B Make sure that each wing is a good fit to the fuselage and attach it. Support the wings with the correct dihedral angle until the adhesive has set.
    - C Attach an engine to the front of each nacelle.
    - D Attach an exhaust to the rear of each nacelle.
    - E Attach a wing-tip fuel tank to each wing tip.
    - F Fill and sand all joints, then re-scribe panel lines as necessary.
  - 4 Empennage assembly.
    - A Make sure that each part is a good fit to the fuselage and attach it. Support each part at the correct angle until the adhesive has set.  
Note: The horizontal stabilizers have no dihedral, so are horizontal, while the fin is vertical.
  - 5 Final assembly and painting
    - A Attach the landing gear.
      - 1 Main landing gear and doors.
        - a Attach a main landing gear leg in the hole in the landing gear bay of each wing.
        - b Attach one end of a side brace to each leg and the other end in the recess of the landing gear bay.
        - c Attach a main wheel to each leg.
        - d Attach a door to the wing, adjacent to each leg.
      - 2 Nose landing gear leg and doors.
        - a Attach the nose landing gear leg in the landing gear bay of the fuselage.
        - b Attach one end of the drag brace to the leg and the other end in the recess of the landing gear bay.
        - c Attach the centre door to the top of the nose leg, on the forward side. The door must be symmetrical with the leg.
        - d Attach the left and right doors to the fuselage, adjacent to each side of the leg.
    - B Paint the model
      - 1 Apply the paint masks to the transparency.
      - 2 Paint the model as shown in the general arrangement drawing and the painting notes on the back page of these instructions.
      - 3 When the paint is completely dry, remove the paint masks.
      - 4 Apply the transfers/decals as shown in the general arrangement drawing.



NOTE: WHERE THERE MULTIPLE PARTS OCCUR, THEY ARE ONLY NAMED ONCE

**C** Attach the final detail parts.

- 1 Remove all the paint from the bond areas and from all locating holes.
- 2 Attach a propeller to each engine.
- 3 Attach the antenna to the cabin roof

D Painting notes - *to be used with the drawing on the centre pages of these instructions.*

### NOTES

1

THE RIGHT SIDE OF THE AIRCRAFT IS SHOWN - THE LEFT SIDE IS A MIRROR IMAGE (EXCEPT FOR THE WINDOWS AND DOORS).

THE CARRIER FILM COVERS THE ENTIRE SHEET OF THE ALPS AND LASER-PRINTED DECALS - TRIM EACH DECAL TO REMOVE AS MUCH OF CARRIER FILM AS POSSIBLE BEFORE THE DECAL IS APPLIED

2

APPLY THE WINDOW MASKS TO THE TRANSPARENCY.  
REMOVE EACH WINDOW MASK WHEN THE PAINT HAS DRIED

3

THE LARGE REGISTRATIONS ARE BELOW THE LEFT WING AND ABOVE THE RIGHT WING.

MATCH THE PAINTS TO THE DECAL SHEET.

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