

# CURTISS C-46

**BACKGROUND:** The Curtiss C-46 Commando was the outgrowth of a civilian transport design, first flown during 1940. Military production versions served as both troop transports and cargo craft in World War Two, and continued active military service as late as the 1960s, with units of the United States and foreign countries. Also, many war-surplus C-46s were employed by airlines in different parts of the world.

A partial list of Commando users would include: The U.S. Army, U.S. Air Force, U.S. Navy, U.S. Marines, Chinese Air Force, Republic of Korea Air Force, Japanese Self-Defence Force, Flying Tiger Line, Braniff, All-American Airways, and many more.

## SPECIFICATIONS:

Wing span: 108 feet

Top speed: 265 m.p.h.

Gross weight: 50,000 pounds

Range: 1,200 miles

**IMPORTANT: READ BEFORE STARTING ASSEMBLY:** This kit should be approached with patience and care. Check the fit of each part BEFORE applying cement. You may select a particular aircraft documented in this kit, or you may wish to model some other specific Commando. (See list of published references.) A choice should be made at the outset of construction, since configuration differences may be involved.

**NOTE:** Commandos were produced with a bewildering array of minor and not-so-minor variations. Field modifications resulted in additional differences between individual examples. Variations may be found in wing tips, tailplanes, cowlings, cargo doors, windows, fuselage external stiffeners, instrument panels, and especially, antennae, which almost defy precise cataloging. Careful study of drawings and photographs is recommended to dedicated modelers.

**GENERAL INFORMATION:** Before assembly, clean all parts in lukewarm water and liquid detergent, so that paints may adhere properly. Liquid-type styrene cement is preferred, and may best be applied with a fine-pointed brush. Avoid using excess cement, which may damage the plastic's surface.

Small parts may be painted while still attached to their "trees." Carefully detach parts, using a sharp modeling knife. Separate only as needed to reduce risk of loss. Remove any "flash" which may be present, and using a sanding block, dress all mating surfaces until they match perfectly. A suitable sanding block can be made from No. 400 sandpaper, contact-cemented to a scrap of wood. When cementing components onto already painted surfaces, first scrape off the mounting area paint, to permit good adhesion.

**CONSTRUCTION:** Study the chosen configuration carefully.

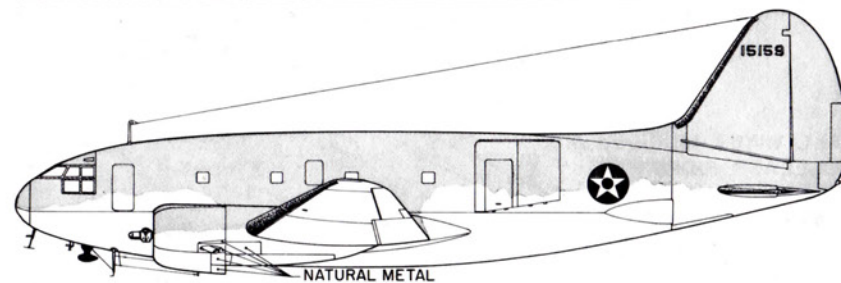
Paint the fuselage interior, bulkhead (part No. 1), and floors (No. 2 & No. 3) natural aluminum. Cement side windows and nose light in position, and mask their outsides to protect from paint. Paint the instrument console (No. 4) flat black, and add the instrument decal. Paint control columns (No. 5, two required) and seats (No. 6, two required) flat black. Cement parts No. 1, No. 5, and No. 6 to their main floor positions. Cement main floor assembly into starboard fuselage side. Trim corners of Instrument console (No. 4) for perfect fit, and install. Cement aft floor (No. 3) in place, using tiny fuselage protrusions to achieve the correct angle.

If model is to be constructed with the landing gear down, carefully cut out the tailwheel doors from the fuselage halves, and save parts for later installation. Next, cement tailwheel mount (No. 7) in position. For model with roof blister, cut opening in fuselage. Install windshield halves, and pre-assemble fuselage to check before applying cement. When satisfactory, apply cement to mating surfaces, and place together. Rubber bands and masking tape are useful for holding parts in firm contact while drying.

## TYPE CHART:

**NOTE:** It is difficult to establish exact details and coloration on the subject aircraft, owing to the many variables involved. In addition to field modifications, allowances must be made for the effects of time, wear, weather, and human memories. The following is presented as a general guide, and is as complete as our information will permit. It is well to bear in mind that even a few additional months of service might radically alter the appearance of these aircraft.

In location references, "Port" refers to the left side and "Starboard" to the right side, as viewed from the cockpit facing forward.



### I. U.S.A.A.F. 15159, circa 1942

**CONFIGURATION:** Stiffeners on lower vertical fin sides, but none on rear of fuselage (may be filed off model fuselage moldings).

No gun ports in fuselage windows. 3-blade propellers. Antennae as indicated.

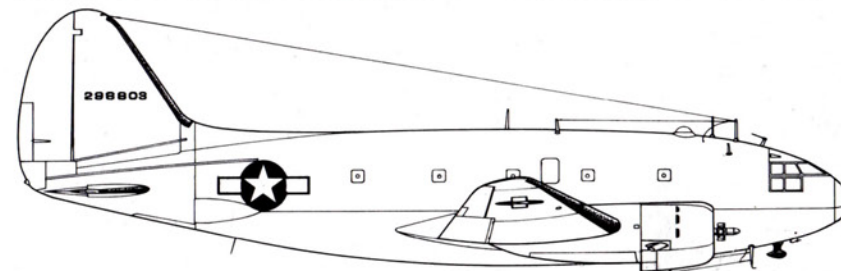
**COLORS:** (Federal Standard 595)

Upper surfaces: Olive drab 34087

Lower surfaces: Neutral grey 36118

Note: The dividing line between colors was "soft" rather than distinct, appearing to have been sprayed without masking. Cowl flaps and panels behind exhaust stacks: natural metal.

Propeller hubs and domes: natural metal. Propeller blades: flat black, yellow tips. Decals as indicated. Note: no black wing walks. De-icer boots: black



### II. U.S.A.A.F. 296803, circa 1944 (see also box cover painting)

**CONFIGURATION:** Note absence of starboard rear door and stiffeners (may be filed off model fuselage moldings).

4-blade propellers. Fuselage windows with gun ports. Antennae as indicated.

**COLORS:** Overall: natural metal

Propeller hubs and domes: natural metal

Propeller blades: flat black, yellow tips

Decals as indicated. Wing walks: black. De-icer boots: black



Mask the windshield areas.

**ENGINES AND COWLINGS:** Paint engine parts (No. 8 & No. 9, two each) as follows: Crankcases: dark grey. Magnets (protrusions on fronts of No. 8): black. Cylinders: natural metal. Pushrod tubes: black. Paint appropriate propeller hubs (H-1, 3-blade or H-2, 4-blade) and insert their shafts into engine fronts (No. 8). Carefully cement propeller retainers (No. 10) onto rear of each prop shaft. Tweezers may be helpful. **CAUTION:** Excess cement will prevent prop rotation. Cement engine rear parts (No. 10) onto front sections. Assemble cowlings, composed of parts No. 11, No. 12, and No. 13 (two each), and install engines.

**LANDING GEAR:** (If model will be displayed in flight position, this section may be ignored.) For a wheels down version, the doors will need to be removed from the bottom of the nacelles, located in lower wing section. Carefully cut along door lines molded on part. These doors may be discarded, and the inner opening edges sanded smooth. Next, the main landing gear mounts, (No. 14) may be cemented into the lower nacelles.

**WINGS:** Paint the backs of the landing lights silver, and install them in the wing lower outboard panels. They should be masked for protection from paint. Check wing components for proper fit, apply cement, and join parts, using rubber bands and masking tape to secure during drying.

**WHEELS/TIRES:** Choose between the all-plastic wheels/tires (No. 17 & No. 18), and the flexible tire type. Hubs for these are numbered (No. 15 & No. 16). Either type may be cemented and clamped while drying. If flexible tires are chosen, their gloss may be removed with steel wool for realism. They may be carefully stretched over the completed hubs into position. Place selected wheels onto their main leg axles (No. 19, one right, one left), with the spoked wheel sides facing outboard.

Carefully mushroom axle ends to retain wheels, using a tiny soldering iron or heated metal rod. **CAUTION:** Don't overdo this or wheels will not rotate.

**FINAL ASSEMBLY:** When the various subassemblies are completed, check each for proper fit to its mating part. Some slight trimming or sanding may be required for optimum results. Cement wings to fuselage, using tape strips to hold parts in alignment.

**IMPORTANT:** A rubber band stretched over the fuselage top and under each wing panel will hold the correct dihedral angle and assure tight wing-to-fuselage joints. Allow plenty of drying time before removing. Apply cement to horizontal tail parts, insert tabs into fuselage openings, and align carefully, sighting from rear of model.

Fit the main landing gear legs, which point slightly forward, into their nacelle mounts. Cement parts No. 20 (one per leg) and No. 21 (two per leg) in position, and adjust strut alignment before the cement dries.

Add remaining details, including tailwheel (No. 24), tailwheel doors, main landing gear doors (No. 25 & No. 26, two each), and exhaust stacks (No. 27, four each). Select and paint appropriate propeller blades, and cement into hubs, with all blades at the same pitch angle. Finally, pitot tubes and antennae, fabricated from scrap plastic and wire, may be installed, if desired, to suit your subject aircraft.

Antennae wires may be simulated with nylon monofilament or stretched plastic sprue.

**PAINTING:** All seams should be smoothed and finished prior to painting. Some builders prefer to assemble model, mask off any surfaces not to be painted, then spray the entire assembly. Alternatively, components may be painted before assembly, except for those which may require seam filling or smoothing. Each method has advantages and disadvantages, but either can be made to work effectively. Use only paints approved for styrene plastic, as other types may damage the model's surface. Spray painting is recommended, but good results can be achieved using high quality brushes. Regardless of technique, patience and care are the key to obtaining a superior finish.

After painting, the decals may be applied. A final clear spray coating will seal them securely, and give a uniform appearance to all surfaces (clear parts such as windows should be masked during this operation).

### III. CHINESE AIR FORCE C-46289, circa 1946-47 (see drawing on box side panel)

#### CONFIGURATION:

4-blade propellers      Gun ports in windows      Antennae as shown

**COLORS:** Overall: Olive drab. Note: It is possible that some of these aircraft featured dark grey lower surfaces, with a sharp dividing line at the fuselage "figure 8" crease line, but evidence is inconclusive. Note too, that some examples had the rudder stripes with the blue stripe topmost and white stripe on the bottom (opposite our specimen).

Panels behind exhaust stacks: natural metal      De-icer boots: black  
Propeller hubs and domes: natural metal      Propeller blades: flat black, yellow tips  
Decals as shown. Note: Tail numbers, shown black on drawing for clarity, are actually white.

### IV. FLYING TIGER LINE N67981, circa 1950s (see drawing on box side panel)

#### CONFIGURATION:

Shortened wing tips: Kit wings may be altered by cutting, filling, and sanding to the shape indicated on the drawing.      3-blade propellers

Alternate horizontal tailplane assembly: May be fabricated from sheet styrene if desired (not furnished). Drawing shows differences from furnished configuration.

Vertical tailplane: Note extra tab, shown in side view drawing, which may be scribed into kit rudder sides.      Two windows, with plugged gun ports, each side of fuselage. Remaining windows blanked out.      Antennae as indicated.

Extra A.D.F. "bullet" (see exploded view drawing)

**COLORS:** Overall: Natural metal. From fuselage side-stripes upward: white. Vertical tail: white. Note: photos show this specific Commando both with and without the fin-mounted block de-icer boot. Thus, a model would be correct in either form. Remainder of de-icer boots: black

Propeller blades, hubs, and domes: natural metal  
Decals as indicated. Note: decal side stripes are furnished without window openings to permit conversion to other Flying Tiger Line aircraft, some of which had different window arrangements. Individual aircraft varied considerably in execution of markings, in spite of concise parameters set forth in company directives. The location of the "FLYING TIGER LINE" lettering above the fuselage stripes differed, as did the style of the "Tiger Shark" emblems. Some machines featured an American flag on each side of the fin, and some were photographed without wing and tail stripes.

The side decals require special care in handling because of their unusual length. The nose portions should be applied cautiously, and some trimming may be required for best fit around the compound curves. If necessary, touch up with paint.

#### PUBLISHED REFERENCES:

1. AVIATION, August 1943
2. MODEL ART (Japan), May 1972
3. AIRPOWER, May 1973
4. U.S. MILITARY AIRCRAFT SINCE 1913, by F. G. Swanborough (Putnam, England)

Grateful acknowledgement is extended to the following individuals and organizations, for research assistance and use of valuable photographs and drawings: Gordon S. Williams, the Boeing Company; Warren Shipp; Russ Barrera, Russ-Craft Model Museum; Phil Coleman, Bruce Reynolds, Ed Leiser, San Diego Aerospace Museum; Ron Duly, Duly Aviation Co.; Susan K. Tanigawa, The Flying Tiger Line, Inc.; Louis S. Casey, National Air and Space Museum, Smithsonian Institution; Charles G. Worman, Air Force Museum; and Robert Parks.

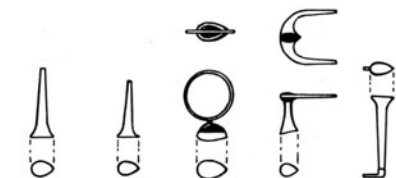


# CURTISS C-46

ONE EXTRA CABIN WINDOW IS FURNISHED IN CASE OF NEED.

FOR A MODEL WITH WHEELS DOWN, CAREFULLY REMOVE TAILWHEEL DOORS USING A SHARP KNIFE, AND CEMENT THEM IN THE DOWN POSITION. THE MAIN LANDING GEAR DOORS, AFTER REMOVAL, ARE DISCARDED AND REPLACED BY DIFFERENT PARTS.

ADD TAB LINES FOR FLYING TIGER MODEL



SOME OF THE VARIETY OF MASTS AND ANTENNAE EMPLOYED ON C-46 AIRCRAFT. CONSULT ILLUSTRATIONS FOR SPECIFIC ARRANGEMENTS.

NOT FURNISHED. FABRICATE FROM SCRAP PLASTIC AND WIRE.

INSTALL WINDSHIELD HALVES IN FUSELAGE SIDES BEFORE ASSEMBLY

PAINT TOP OF CABIN AND WINDOW FRAMES TO MATCH AIRCRAFT FUSELAGE.



COCKPIT WINDSHIELD

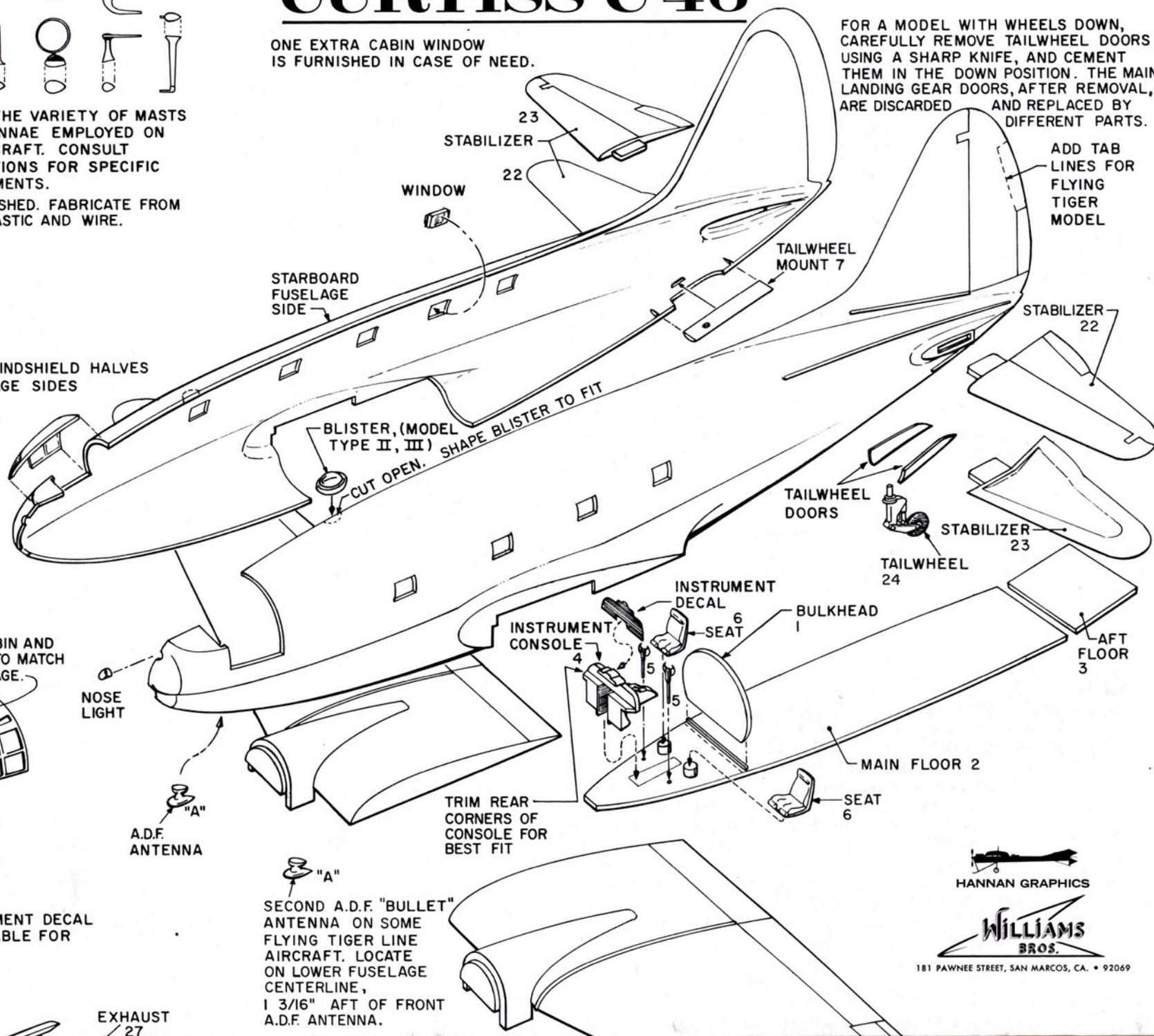
NOSE LIGHT

A.D.F. ANTENNA



SECOND A.D.F. "BULLET" ANTENNA ON SOME FLYING TIGER LINE AIRCRAFT. LOCATE ON LOWER FUSELAGE CENTERLINE, 1 3/16" AFT OF FRONT A.D.F. ANTENNA.

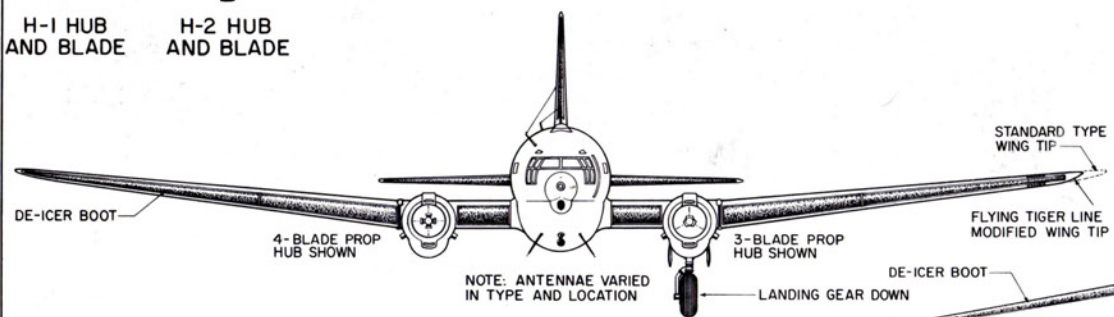
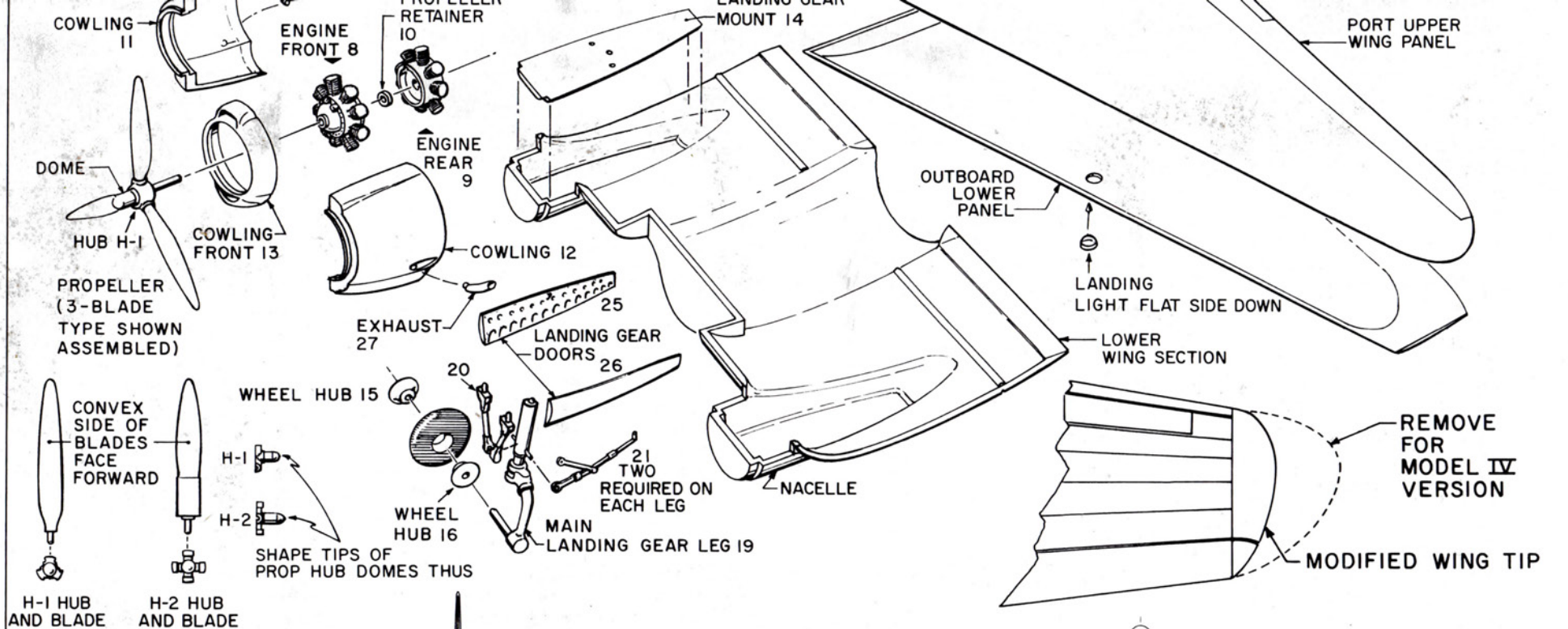
EXHAUST  
27



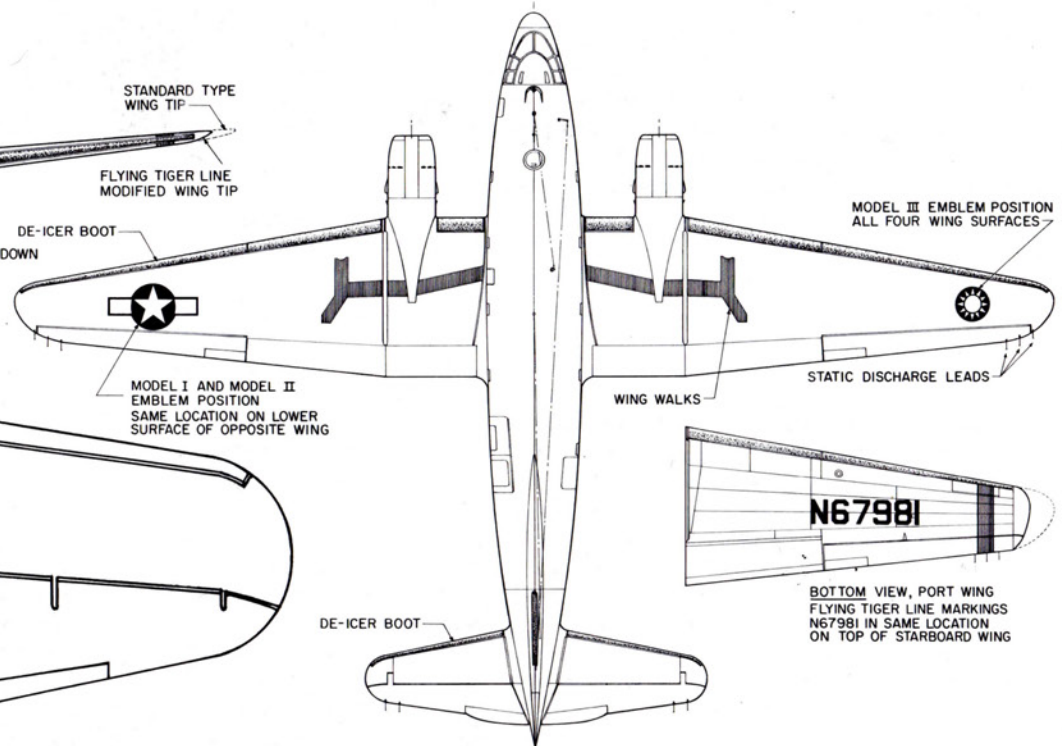
HANNAN GRAPHICS

**WILLIAMS**  
BROS.

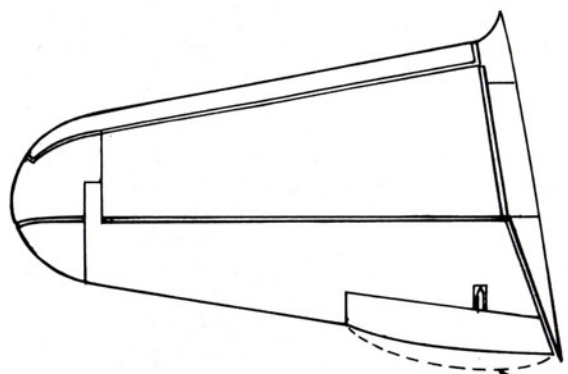
181 PAWNEE STREET, SAN MARCOS, CA. • 92069



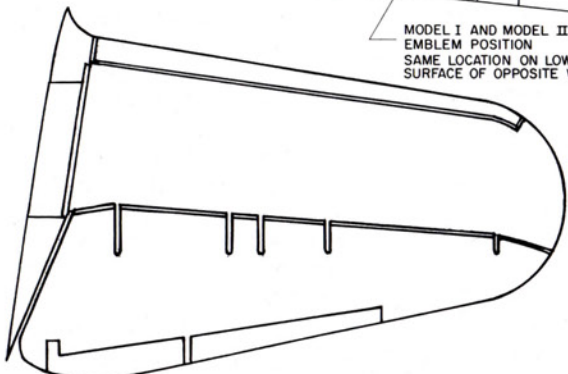
**COMPOSITE FRONT VIEW**



**COMPOSITE TOP VIEW**



**NOTE: SOME COMMANDOS FEATURED ALTERNATE TRIM TAB**



**MODEL IV MODIFIED STABILIZER**