Aircraft In Miniature Limited

TRANSPORT WINGS

1:72 Multi-Media Kit of the

747-100/200

The world's first wide-body airliner

History, Notes and Instructions

Introduction

TRANSPORT WINGS kits are model kits of large aircraft - the experienced modellers can now own 1:72 models of many of the world's largest airliners and their military transport variants. Because of their size, they are moulded in very heavy (2 mm) plastic, and are supplied with all parts pre-cut. Additional cutting and sanding is required, and the parts are assembled with polystyrene cement, as with any other plastic kit. Resin or metal parts should be attached with super glue (cyanoacrylate) or 5-minute epoxy as the builder prefers.

History

The series 100 was the first version of the famous 747 airliner. Various modifications resulted in the series 200, which was visually the same, except for more windows on the upper deck.

The 747SP (Special Performance) was a revised layout with shorter fuselage. The special performance was the exceptionally long range of the aircraft.

The later series 300 had a stretched upper deck, with larger upper deck doors.

The series 400 had the stretched upper deck of the -300, together with modified wing root leading edges (for reduced drag), and winglets.

There are various military versions of the aircraft, including the E-4B Airborne Command Post, VC-25 'Air Force One' and the YAL-1 Airborne Laser

The latest development in the history of this aircraft is the 747-8, with a new wing, and engines based on those used on the 787.

The 747-300, 747-400, E-4B and VC-25 are all available as Transport Wings kits.

General Characteristics (-200)

Primary Function:	Long range airliner
Builder:	Boeing Aerospace Co.
Power Plants:	Four Pratt & Whitney JT9D turbofan engines (this model)
Length:	231 feet, 4 inches (70.5 metres)
Wingspan:	195 feet, 8 inches (59.7 metres)
Height:	63 feet, 5 inches (19.3 metres)
Maximum Takeoff Weight:	710,000 pounds (162, 500 kilograms)
Ceiling:	Above 30,000 feet (9,091 metres)

PARTS LIST

Vacformed Part

Fuselage-keel ..... 1 off
Fuselage-left ..... 1 off
Fuselage-right ..... 1 off
Nacelle left half (numbered 1 to 4) ..... 4 off
Nacelle right half (numbered 1 to 4) ..... 4 off
Tailplane - top ..... 1 off
Tailplane - bottom left ..... 1 off
Tailplane - bottom right ..... 1 off
Wing - top left ..... 1 off
Wing - top right ..... 1 off
Wing - bottom ..... 1 off
Wing - bottom - right outer ..... 1 off

Resin Parts

Intake ..... 4 off
Jetpipe ..... 4 off
Resin flap tracks (numbered 1 to 8) ..... 8 off

Other Items

2mm polystyrene sheet (for landing gear bays structure) ..... 1 sheet
Pan Am decals ..... 1 sheet
Window decals ..... 1 sheet
Instructions ..... 1 set

Cast Metal Parts

Nose wheel ..... 2 off
Nose leg(100/200) ..... 1 of
Nose leg (non100/200) ..... 1 off
Lower tripod brace ..... 2 off
Main wheel ..... 18 off
Body gear leg ..... 2 off
Drag Strut Trunnion ..... 2 off
Side brace ..... 2 off
Cross Brace ..... 2 off
Cylinder - long ..... 2 off
Cylinder - short ..... 2 off
Wing gear leg ..... 2 off

NOTE: The cast metal set supplied is common to all our 747 based kits.For this kit uses the longer nose leg marked '100' and the two smaller wheels. Do not use the longer nose leg marked '300' or the two extra main wheels.

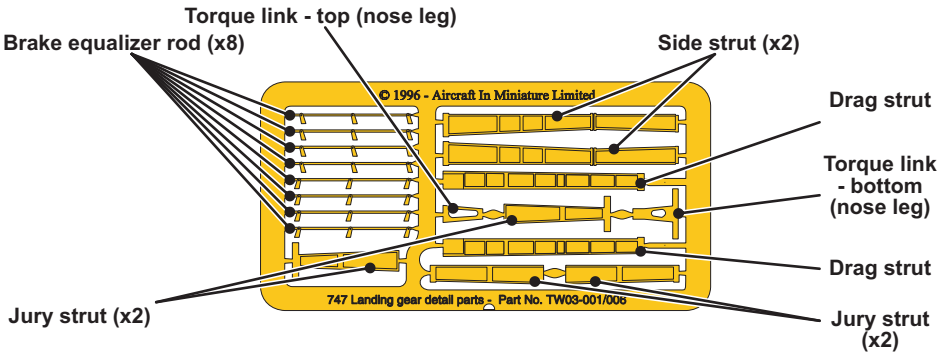
Etched Metal Parts

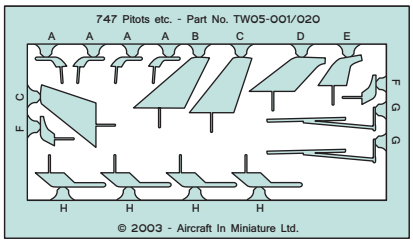
Brass Fret - Part No. TW03-001/006

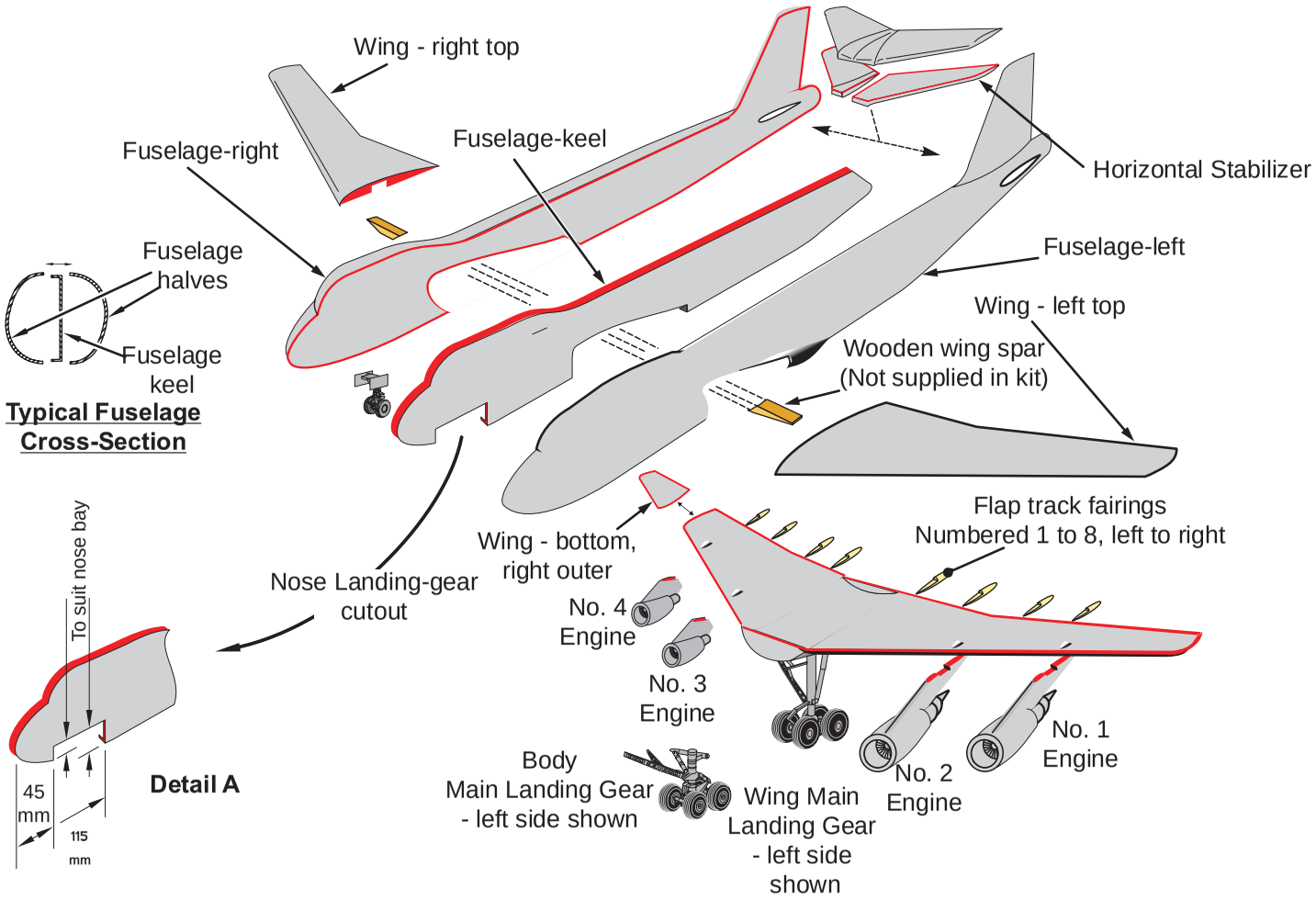
Brake equalizer rod (K) ..... 8 offf
Drag strut (**C & F**) ..... 1 Left & 1 Right
Jury strut (**G & J**) ..... 1 Left & 1 Right
Jury strut (**D & L**) ..... 1 Left & 1 Righ
Side strut (**A & B**) ..... 1 Left & 1 Right
Torque link, nose leg - bottom (**E**) ..... 1 off
Torque link, nose leg - top (**H**) ..... 1 off

Nickel Silver Fret - Part No. TW05-001/020

Pitot probe (small) (**A**) ..... 4 off
Antenna (**B**) ..... 1 off
Antenna (**C**) ..... 2 off
Drain mast (**D**) ..... 1 off
Drain mast (**E**) ..... 1 off
Drain mast (**F**) ..... 2 off
Windshield wipers (**G**) ..... 2 off
Antenna (**H**) ..... 4 off






Wing - right top
Fuselage-right
Fuselage-keel
Horizontal Stabilizer
Fuselage halves
Fuselage-left
Fuselage keel
Wing - left top
Wooden wing spar
(Not supplied in kit)
Typical Fuselage Cross-Section
Flap track fairings
Numbered 1 to 8, left to right
Wing - bottom, right outer
Nose Landing-gear cutout
No. 4 Engine
No. 3 Engine
No. 1 Engine
No. 2 Engine
To suit nose bay
45 mm
115 mm
Detail A
Body Main Landing Gear - left side shown
Wing Main Landing Gear - left side shown

1 GENERAL

WARNINGS 1 - THIS KIT CONTAINS SMALL AND/OR SHARP PARTS. KEEP THE CONTENTS OF THE KIT AWAY FROM CHILDREN.

2 - THIS KIT CAN CONTAIN PRECUT PARTS WITH SHARP EDGES OR CORNERS. BE CAREFUL WHEN YOU HANDLE THESE PARTS BECAUSE THEY CAN CAUSE CUTS OR OTHER INJURIES.

3 - USE ALL SOLVENTS, PAINTS, FILLERS AND OTHER MATERIAL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION. OBEY ALL SAFETY WARNINGS.

A A keel is provided to give structural strength to the fuselage - it is important that you use it because of the size of the model.

B All parts must be cut and/or sanded down to the correct profile. There is an engraved 'joint line' on most parts.

C Cut out the slots for the tailplane in both fuselage halves.

D Cut out the nose main landing-gear doors from the fuselage, and the main landing-gear doors from the wing/fuselage lower surfaces . Keep all these parts in a safe place until you need them.

2 PREPARATION

A Carefully remove any flash or casting seams from all the metal parts.

B Make the three sets of landing gear bay components from the 2 mm plastic sheet supplied, using the template supplied .

3 FUSELAGE AND HORIZONTAL STABILIZER SUB-ASSEMBLIES.

A. HORIZONTAL STABILIZER

(1) Sand the tail plane parts to the correct shape.

(2) Cement the top and bottom halves of the tailplane together.

(3) When the tailplane is dry, file and sand the Leading and trailing edges to shape.

B. FUSELAGE ASSEMBLY

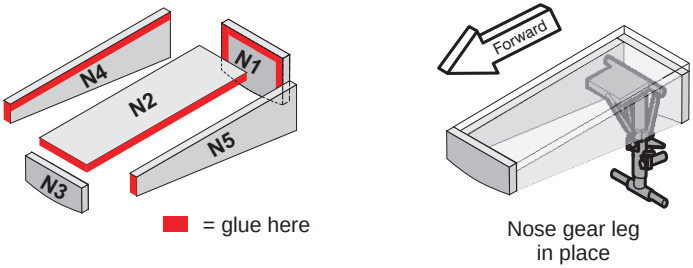
(1) Mark the position of the nose landing-gear bay on the keel (see Figure 4), and cut it out.

(2) Make the nose landing-gear bay.

(a) Use the templates enclosed to make the components of the nose landing gear bay from the 2 mm plastic sheet supplied.

(b) Glue the five components together with each side at 90 degrees to the adjacent side (see Figure A below).

(3) Attach the nose leg (marked 100) to the upper face of the nose landing gear bay structure, with the pins in the holes in the side panels. Do not attach the detail parts yet.



A **Nose Landing Gear Bay Structure**

(4) Put half the depth of the keel into one fuselage half and cement it in place with liquid polystyrene cement.

(5) File the visible part of the keel to match the curvature of the second fuselage half.

(6) Cement the nose landing-gear bay structure to the fuselage half and keel.

(7) Put the tailplane in place in the two fuselage halves.

(8) Clip the second fuselage half on to the keel. Flood the joint with liquid polystyrene cement, hold the two halves together with adhesive tape, and leave the assembly until is thoroughly dry.

4 WING SUB-ASSEMBLY

NOTE - We recommend that you put a wooden spar (not provided) into each wing to prevent them drooping with age. This is very important with this model because of the weight of the four resin engines.

A Sand the wing parts to their correct shape and make sure they fit together correctly.

B Prepare a wooden spar for each wing. Assemble the top and bottom of the wings with the spars in place, WITHOUT ANY CEMENT to make sure that they fit correctly.

C Cut the main landing gear doors out from the wing lower surface (see Figure C), and keep them.

D Make the main landing-gear bays (Two handed sub-assemblies)

(1) Make the components of the two main landing-gear bays from the 2 mm plastic sheet supplied.

(2) Glue the components together with each side at 90 degrees to the adjacent side for each bay. (see Figure B below).

(3) Cement the two main landing-gear bay structures onto the lower wing section.

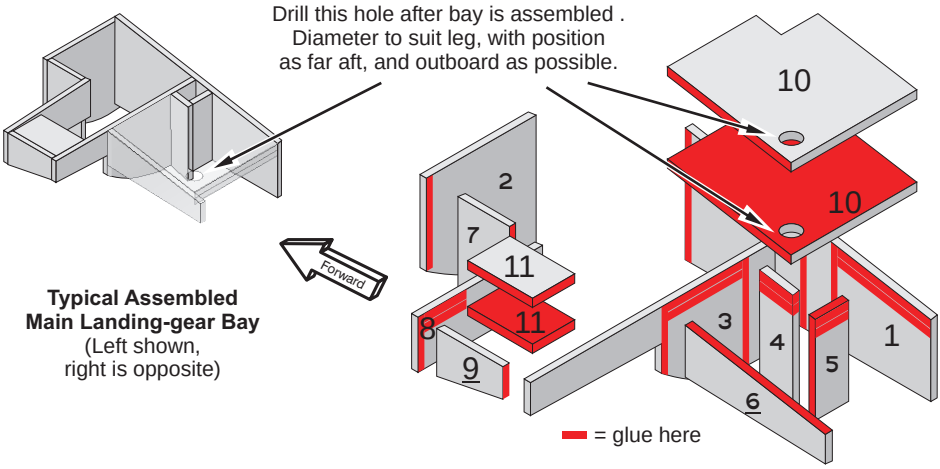
E Cement the wing spars in place.

F Cement the top and bottom halves of the wings together.

G Cement the right wingtip in place, fill all joints and leave the filler to dry.

H When the wing structure is dry, file the leading and trailing edges to shape.

I Cement the flap tracks in the positions marked on the bottom of the wing.



B **Main Landing Gear Bay Structure**

5 ENGINE ASSEMBLY

CAUTION - Make sure that you match the correct engine halves together.

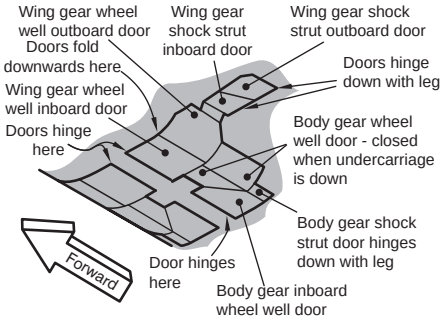
NOTE - Each engine half has identification 'pips' on the engine nacelle (1, 2, 3 or 4 pips as applicable). These are sanded off after assembly.

A Sand the two halves of each engine to their correct shape and make sure they fit together correctly.

B Cement the two halves of each engine together.

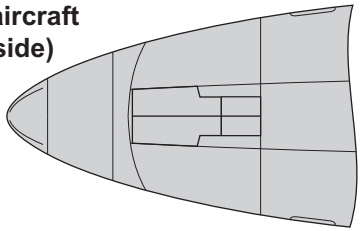
C Cut off the front and back of each vacformed engine assembly, then attach the resin intakes and jet pipes.

D When the cement is dry, fill and sand all joints on each engine. Also sand off the identification pips from the nacelles.

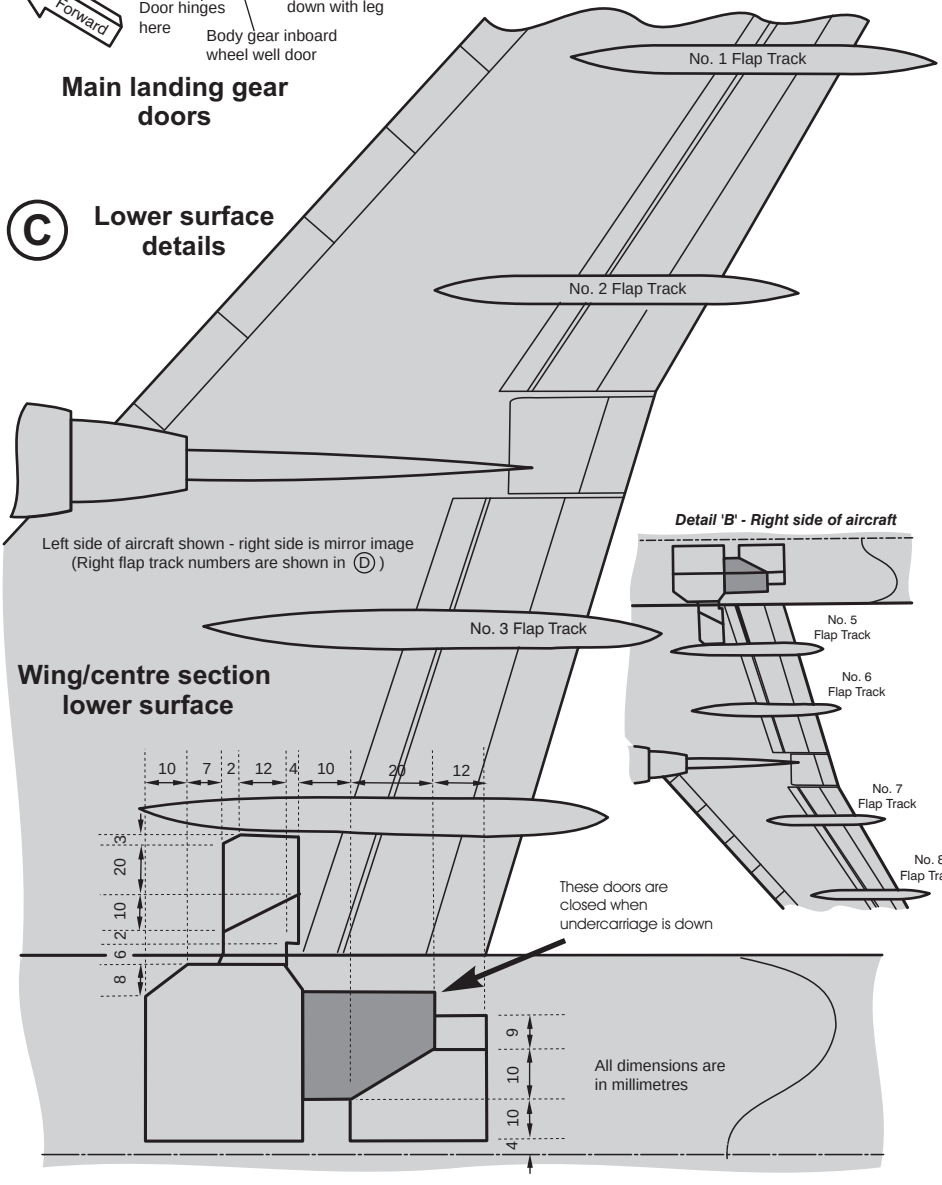


Main landing gear doors

Nose of aircraft (underside)



C Lower surface details



Detail 'B' - Right side of aircraft

6 FUSELAGE/WING ASSEMBLY

A Prepare the components.

(1) Mount the fuselage on blocks on a baseboard or workbench and cut blocks of wood to go below the wingtips and centre wing, to hold the wing in the correct position.

(2) Put the fuselage on to the wing and align the two sub-assemblies, then mark the position of the fuselage sides on the top of the wing.

(3) Cut some strips of 2 mm plastic sheet 5 mm x 20 mm, to make reinforcing blocks for the fuselage sides.

B. Assembly.

(1) Glue the reinforcing blocks (made in step 6 A (3)) to the top of each wing, and before the glue has set, put the fuselage on to the wing. Make sure the blocks touch the inside of each of the fuselage sides, then leave the glue to dry completely.

(2) Put the fuselage on the wing, and use the blocks from step 5 B (1) to make sure the sub-assemblies are correctly aligned.

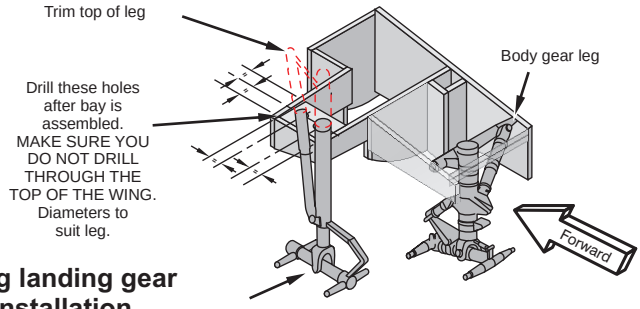
(3) With the wing and fuselage aligned, flood the joints with liquid polystyrene cement, then leave the assembly to dry thoroughly.

7 LANDING GEAR INSTALLATION

A Attach the nose and body gear legs to the landing gear bays with epoxy cement (Refer to Figure 5). Make sure that all three legs are vertical.

B Let the aircraft rest on these three legs until the epoxy cement has cured.

C Put the aircraft on a flat surface, then trim the top of each wing gear leg. Remove as much as necessary of the area shown in red on the leg in Figure D.



D **Wing landing gear installation**

D Attach the landing gear parts.

Note - We recommend that you study any available photographs of actual aircraft, to achieve the maximum realism of the landing gear. If available, the Internet is an excellent source of research material.

(1) Attach these parts to the nose landing gear with epoxy cement (see Figure E):

- The lower tripod brace (cast metal)
- The upper and lower torque links (brass)
- Two nose wheels (cast metal)

(2) Attach these parts to the left body landing gear with epoxy cement (see to Figure F):

(a) Attach the cross brace (cast metal) to the front of the body gear, and the side brace (cast metal) from the leg to the cross brace.

(b) Attach a drag strut trunnion (a small, semi-circular piece of cast metal) to the flat on the drag strut (brass).

(c) Attach the drag strut trunnion to the leg, and the other end of the drag strut to the side of the landing gear bay.

(d) Put a jury strut (brass) from the etched line in the centre of the drag strut, to the side of the landing gear bay.

(e) Put a long cylinder (cast metal) and a short cylinder (cast metal) between the drag strut and the jury strut.

(f) Fit a main wheel (cast metal) on to each of the four axles of the body gear truck.

(g) Put two brake equalizer rods (brass) under the truck of the body gear.

(3) Do steps 7 D (2) (a) thru 7 D (2) (g) again to attach the parts to the right body landing gear.

(4) Attach these parts to the left wing landing gear with epoxy cement (see Figure G):

(a) Attach the side strut (brass) from the side of the wing gear leg to the landing gear bay.

(b) Put a jury strut (brass) from the etched line in the centre of the drag strut, to the side of the wing gear leg.

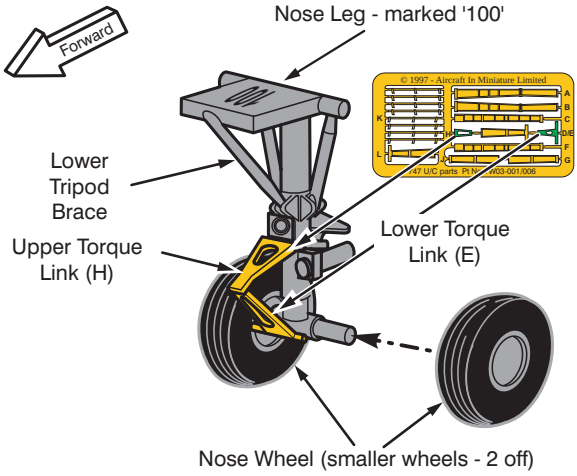
(c) Attach a retraction actuator (cast metal) above the jury strut, between the jury strut and the side strut.

(e) Attach a downlock actuator cylinder (cast metal) below the jury strut, between the jury strut and the side strut.

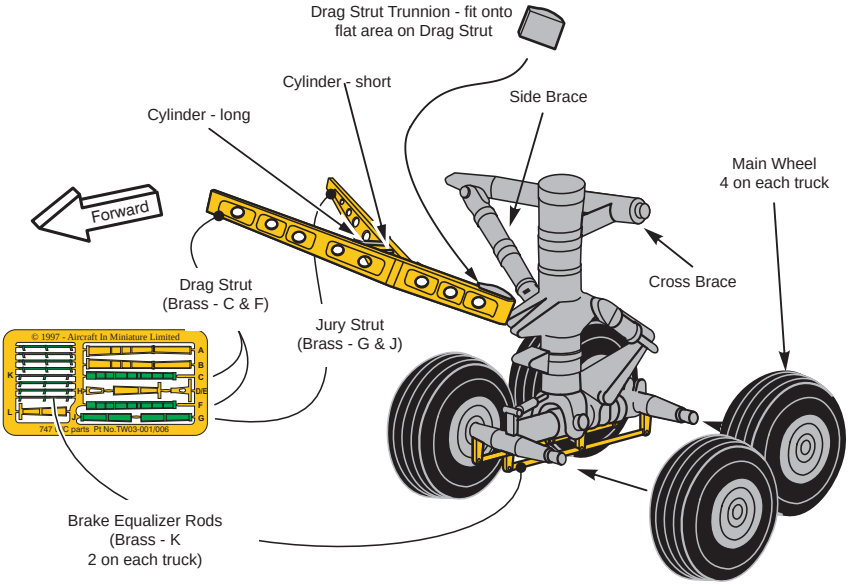
(f) Fit a main wheel (cast metal) on to each of the four axles of the body gear truck.

(g) Put two brake equalizer rods (brass) under the truck of the body gear.

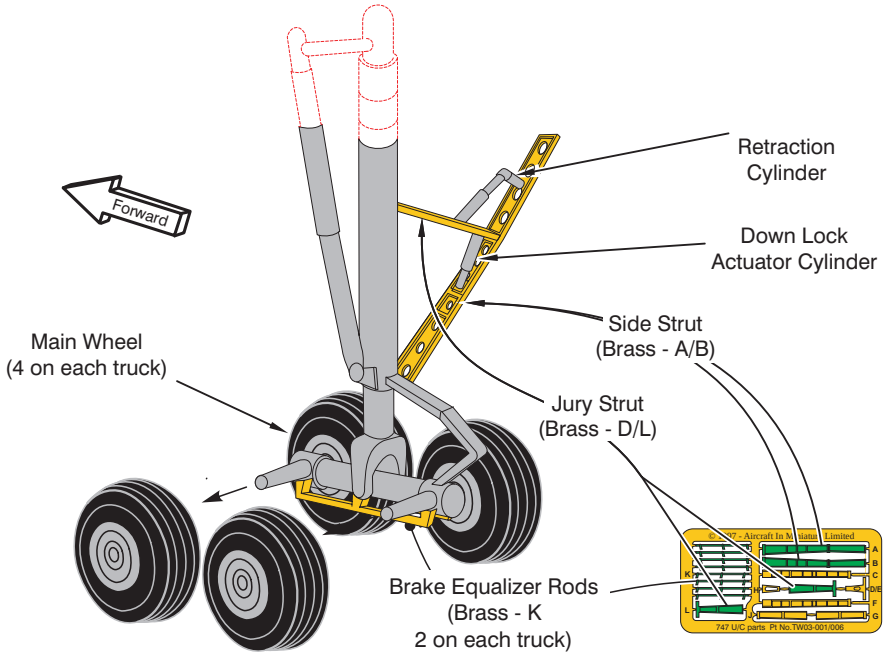
(5) Do steps 7 D (4) (a) thru 7 D (4) (g) again to attach the parts to the right body landing gear.



E **Nose landing gear detail parts installation**



F **Body landing gear detail parts installation**



G **Wing landing gear detail parts installation**

D. Attach all the landing gear doors.

8 DETAIL PARTS

A Drill a 0.017 inch (0.4 mm) diameter hole for each of the detail parts (see Figure H).

B Attach each part with epoxy cement.

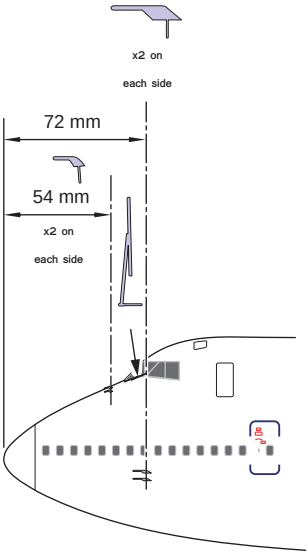
9 PAINTING AND FINISHING

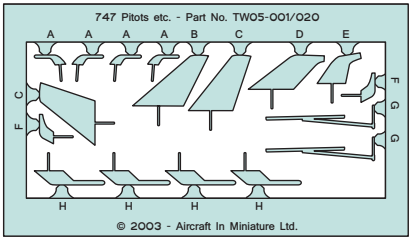
A. Fill all joints and sand them smooth.

B. Add any scribed detail which you require and then polish the surface.

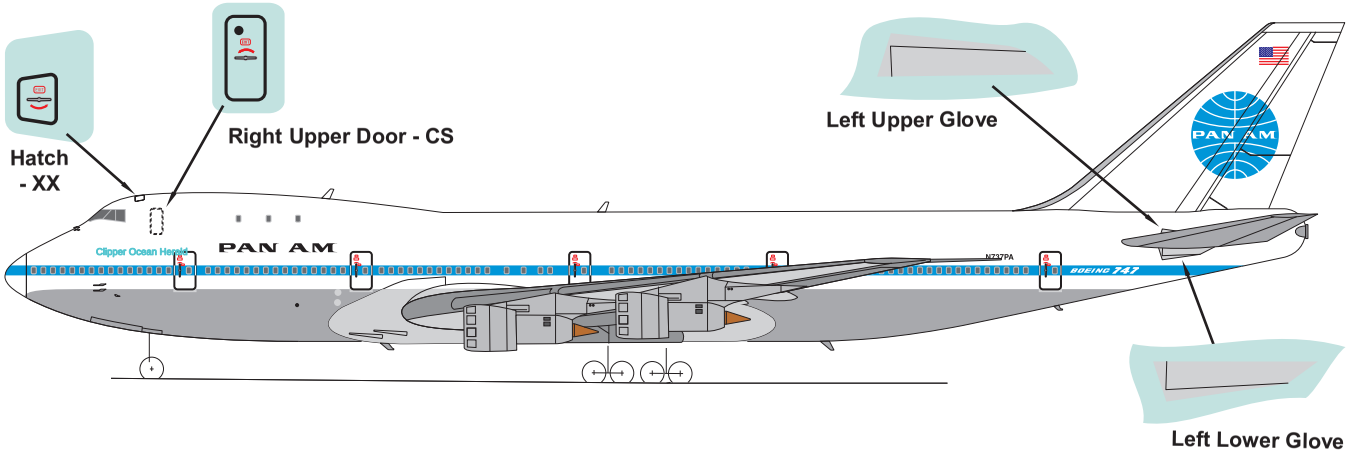
C. Wash the model in mild detergent to degrease it, then allow it to dry throughly.

D. Paint the model, then apply the decals.



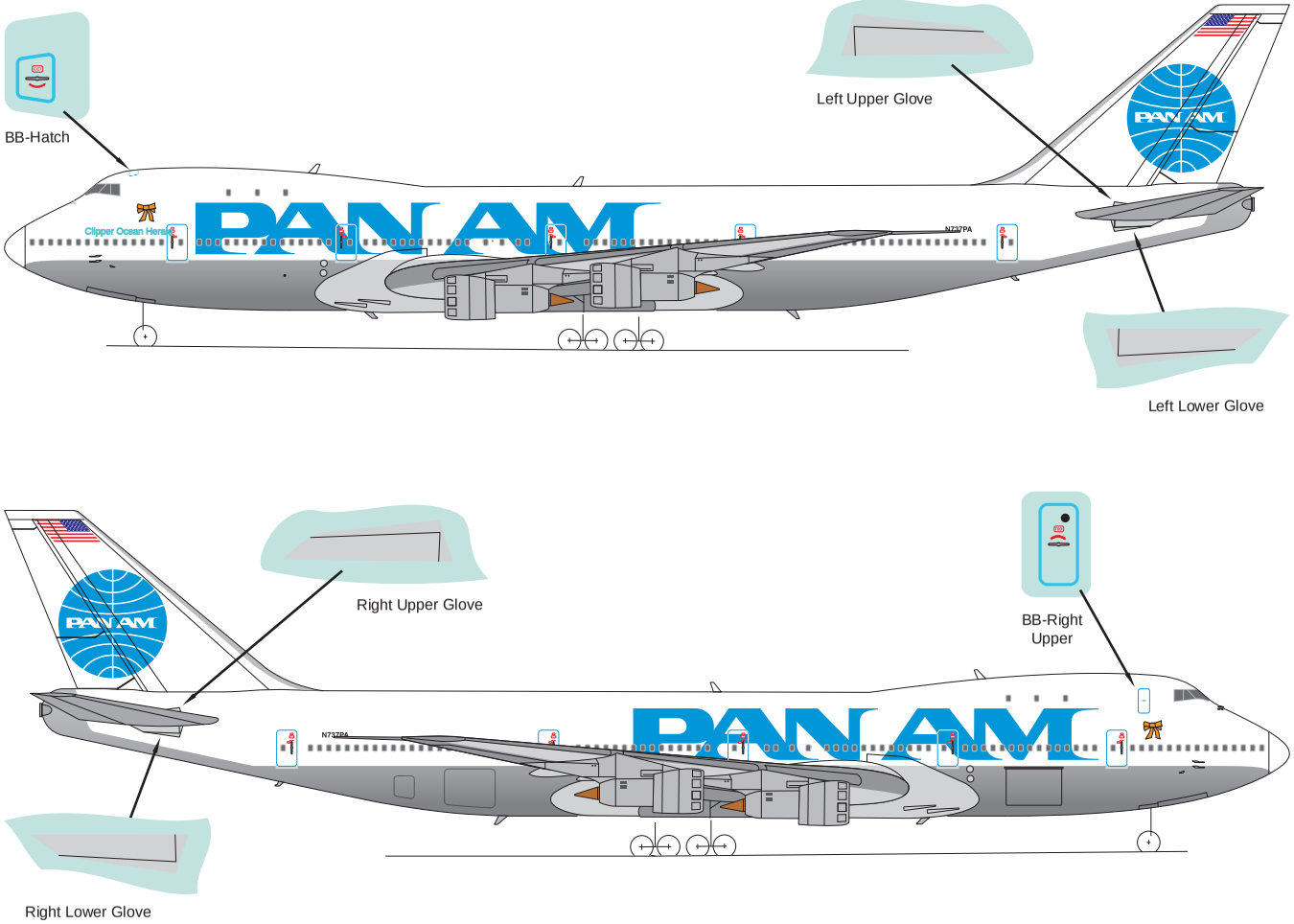


H Pitot probes and windscreen wiper positions



COLOUR KEY

- Dark Grey - FS26173 - Xtracolor X130 - See note 1
- Light Grey - FS16473 - Xtracolor X138
- Polished Aluminium - Xtracolor X504
- Pan Am Blue - FS26173 - Xtracolor X130
- Exhaust - Xtracolor X504


BB-Hatch
Left Upper Glove
Left Lower Glove
Right Upper Glove
BB-Right Upper
Right Lower Glove
PAN AM
Clipper Ocean Herald
N737PA

NOTES

The manufacturers reserve the right to alter parts; add to, or delete parts without prior notification in the interests of quality control, production, or product improvement.

This kit is manufactured in the United Kingdom by

Aircraft In Miniature Limited

19, Watling Street, Nuneaton, Warwickshire, CV11 6JJ, England

Telephone +44 (0) 24 76375737
Email: info@aim72.co.uk - Web site: www.aim72.co.uk