

## X-15A-2

**GB** Development of the X-15 began in 1954, in a joint research program sponsored by the National Advisory Committee for Aeronautics (forerunner of NASA), the U.S. Air Force, U.S. Navy, and private industry. North American was selected as the prime contractor after winning the competition, in which Douglas, Republic and Bell also took part. The X-15 was designed as a high speed research aircraft to provide information on thermal heating, high speed control and stability, and atmospheric re-entry. Much of the work carried out by the X-15 team contributed to the successes of the US space programme and, ultimately, the Shuttle re-entry vehicles.

After its first flight on 8<sup>th</sup> June 1959, the X-15 became the first winged aircraft to reach speeds of Mach 4, 5, and 6 (four, five, and six times the speed of sound). The X-15 was made of stainless steel and titanium and, as it flew at such high speeds, the X-15 to withstand extreme temperatures of about 1,200 degrees F. To combat such heat, the X-15 was skinned with an "armoured skin" of high-strength nickel alloy, named Inconel X. Three aircraft were ordered, the second being rebuilt as the X-15A-2 following a crash in 1962 and this aircraft is on view today at the USAF's Museum at Wright-Patterson AFB, Ohio. This aircraft was capable of greater speeds due to increased fuel capacity and achieved the speed record of Mach 6.72, which still stands today.

Launching the X-15 was an unusual operation. The aircraft was fitted to a pylon under the starboard wing of a B-52 Stratofortress and released at a height of 45,000ft (13,725m) and a speed of 500mph (804.5km/h). A conventional take-off was impossible, as the X-15 was not fitted with a normal undercarriage. The USAF and NACA developed a special 485 mile (780km) long test corridor stretching from Wendover Air Force Base, Utah, to Edwards Air Force Base, California. The B-52 launched the X-15 near Wendover, it then flew down the corridor to Edwards, monitored by tracking stations at Ely and Beatty in Nevada, and at Edwards. The corridor lay along a series of flat dry lakes where the X-15 could make an emergency landing if necessary. The X-15 would complete its research mission and then, followed by a Lockheed F-104 chase aircraft, would land on the hard clay of Rogers (formerly Muroc) Dry Lake. Just before landing, the lower half of the bottom tail section was jettisoned, and two landing skids were deployed. The nose was supported on a conventional two-wheel landing gear. X-15 pilots wore specially-developed full-pressure "space suits" in case of depressurisation at the extreme altitudes at which the aircraft flew. In fact, a number of X-15 pilots were awarded Astronaut "Wings" as they technically flew at the upper edges of the earth's atmosphere.

The X-15 flew faster and higher than any other aircraft. A peak altitude of 67.08 miles (354,200ft/107,970m) was reached by the X-15, and the X-15A-2 attained a speed of Mach 6.72 (4,534 mph/7,295km/h)

### Technical Specifications:

Span 22 ft (6.7 m), length 52 ft, 5 in (15.98 m),

Powerplant: One Reaction Motors (Thiokol) XLR99-RM-2 throttleable liquid fuel (liquid hydrogen, anhydrous ammonia) rocket. 57,000 lb (25,855 kg) thrust.

Maximum Achieved Speed: Mach 6.72 (4,534mph/7,295km/h)

Maximum Achieved Altitude: 67.08 miles (354,200ft/107,970m)

**Having just completed an out of box build of this kit, I made a few notes on needed corrections and recommendations on making the build a little easier as well as noted some spots that needed a little extra attention. All notes are done in red to make them easier to see. I have not yet seen the later releases of this kit so I have no idea if any of these items have been fixed on the later releases. This kit is a pretty straightforward build and makes a very impressive display once it is completed.**



Možnost volby  
Optional  
Nach belieben  
Option



Rozdělít  
Cut with knife  
Mit Messer schneiden  
Couper au couteau



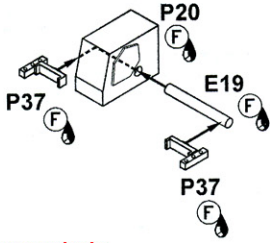
Lepidlo na kov  
Glue for metal  
Metallkleber  
Colle a metal



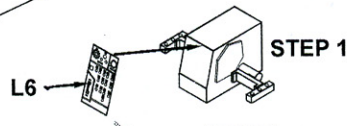
Ohnout  
Bend  
Biegen  
Courber



1

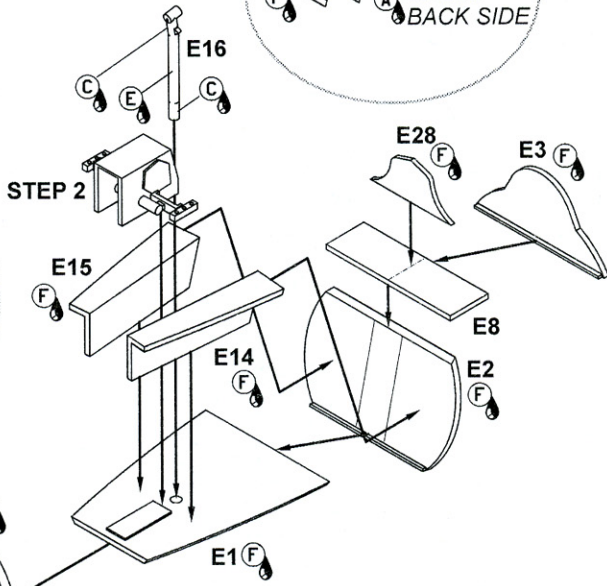
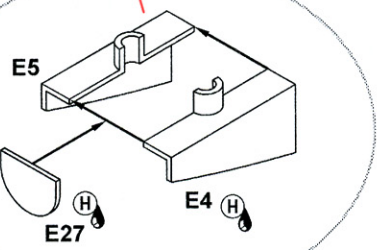


2



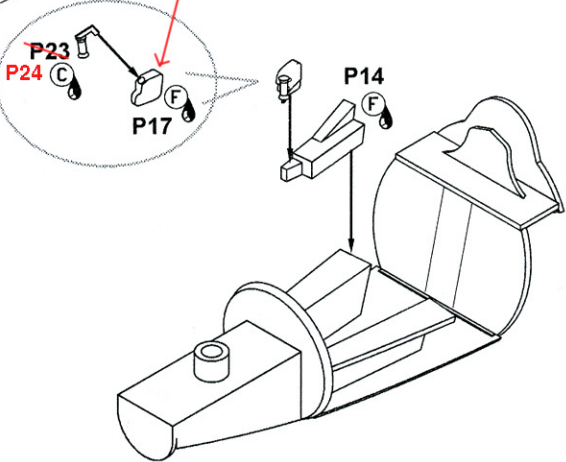
Move nose gear hole  
aft 3/16". Double check  
fit of strut before installing  
gear well in fuselage.

3

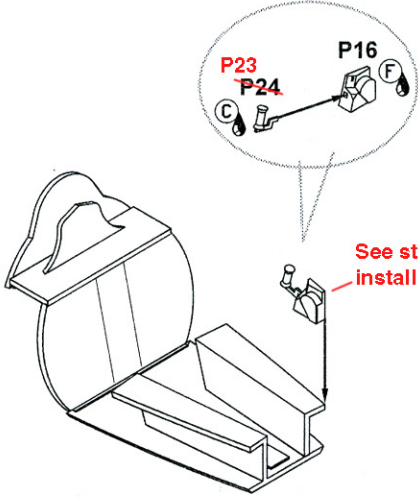


4

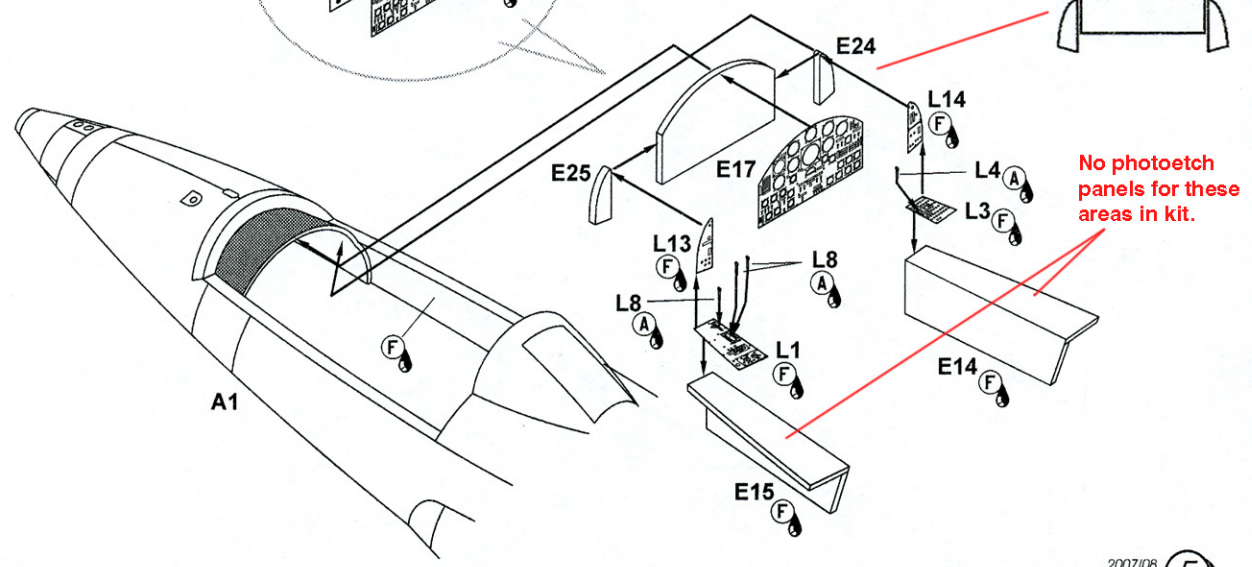
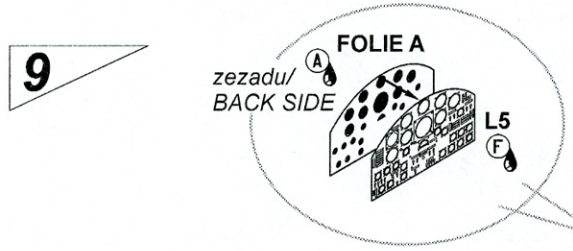
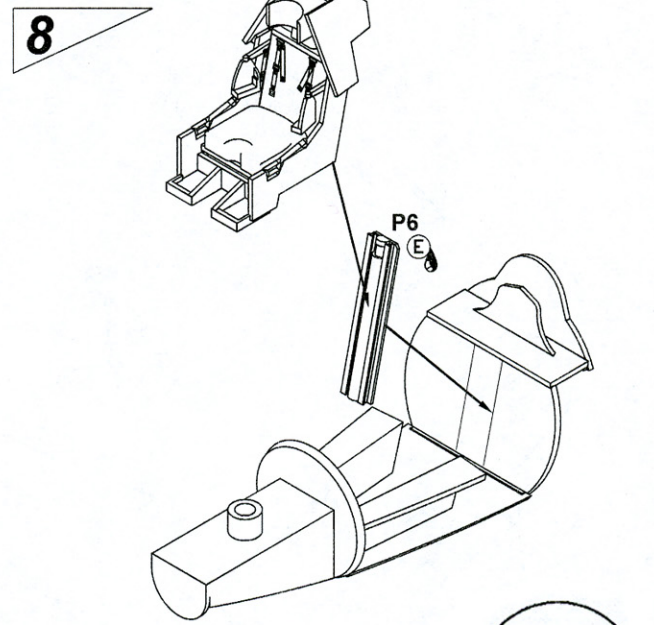
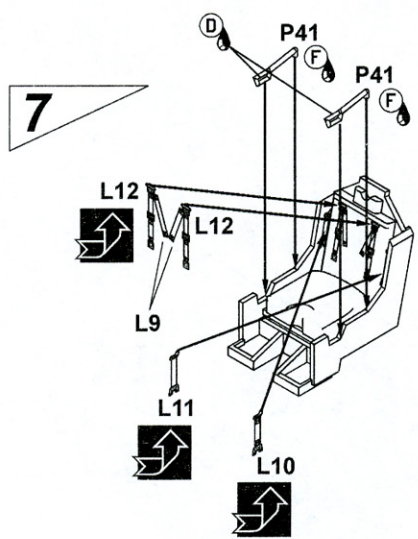
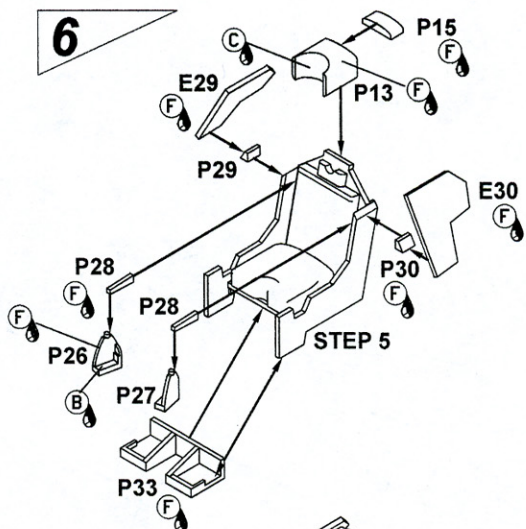
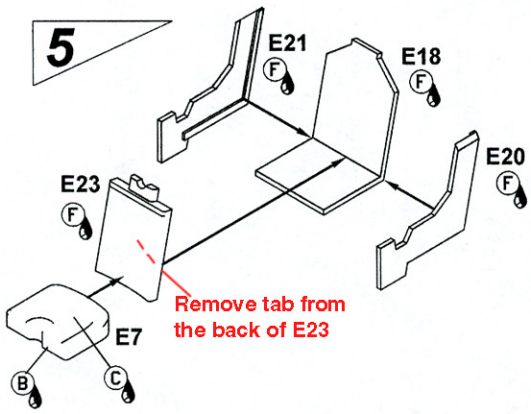
Rotate this assembly  
180° before installing.



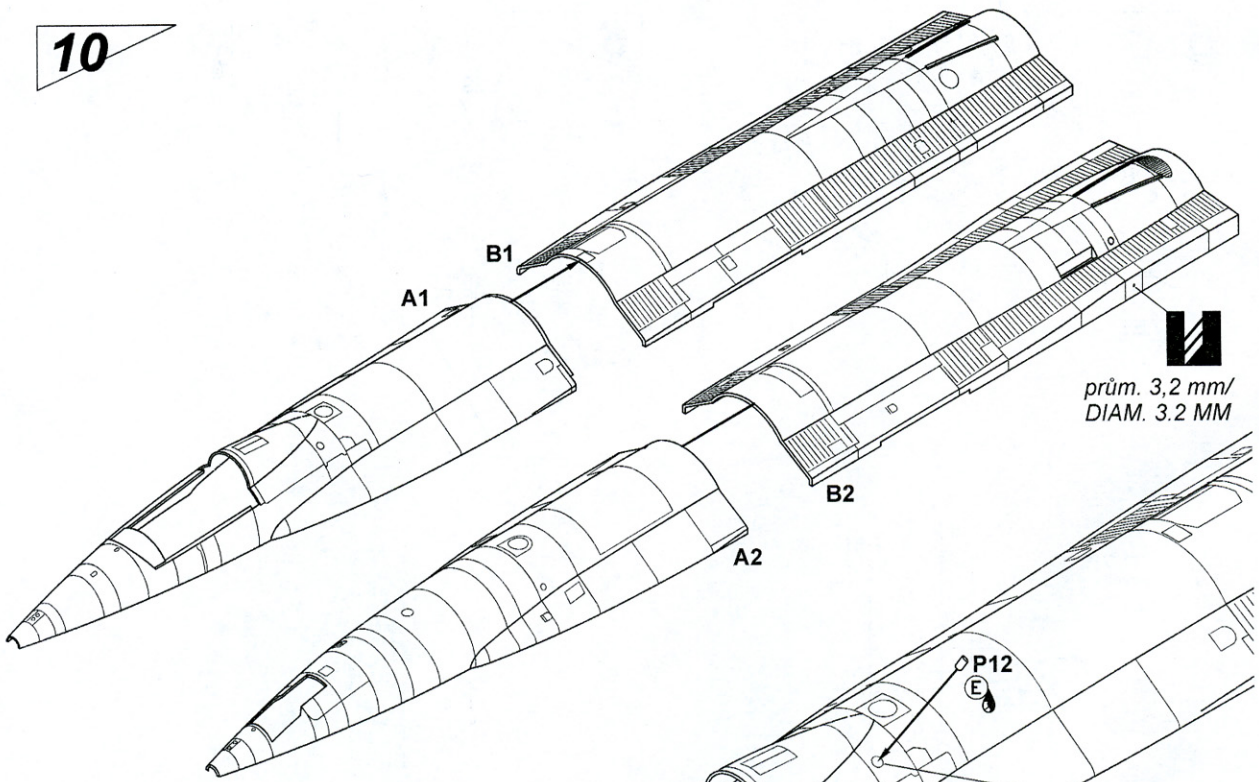
STEP 3



See step 9 before  
installing this assembly



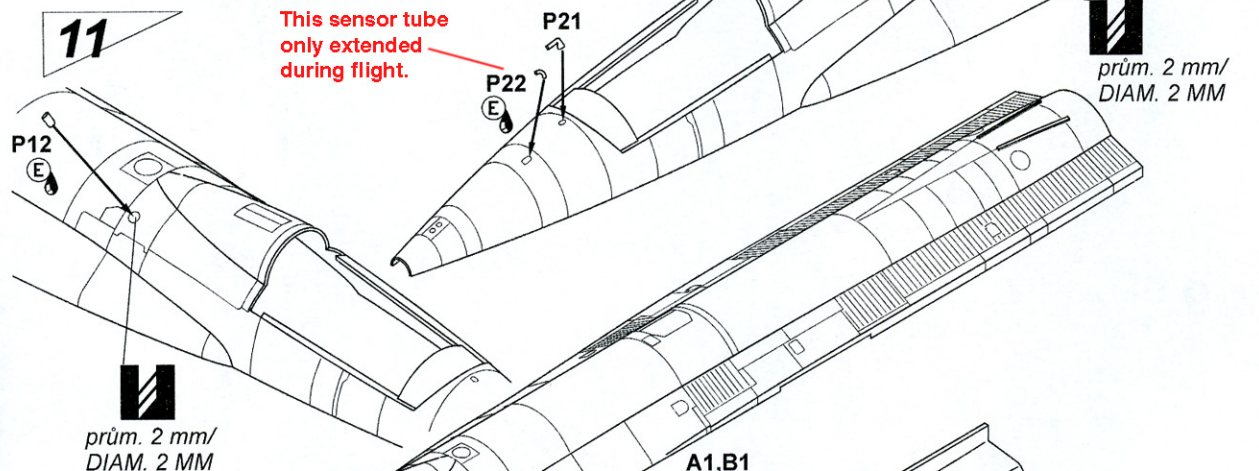
# 10



prům. 3,2 mm/  
DIAM. 3.2 MM

# 11

This sensor tube  
only extended  
during flight.

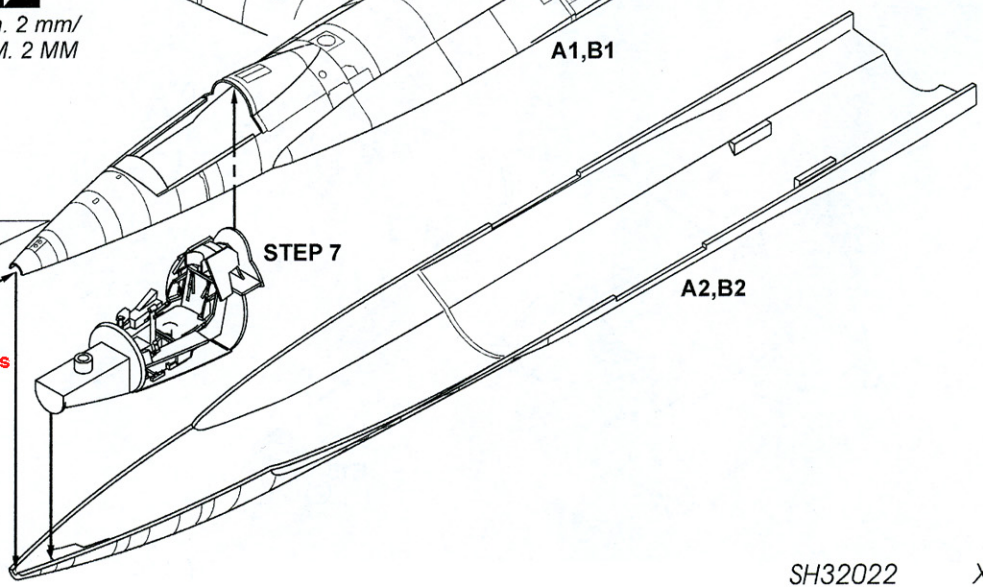


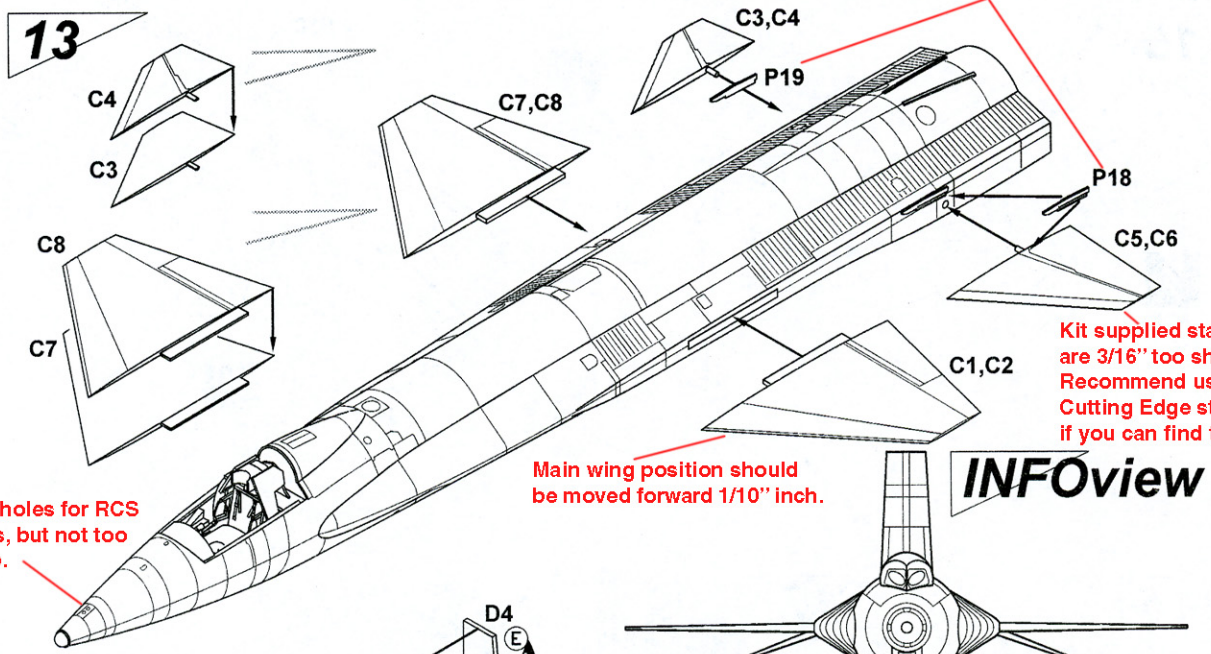
prům. 2 mm/  
DIAM. 2 MM

prům. 2 mm/  
DIAM. 2 MM

# 12

Drill sensor ports  
in Q-ball if  
desired



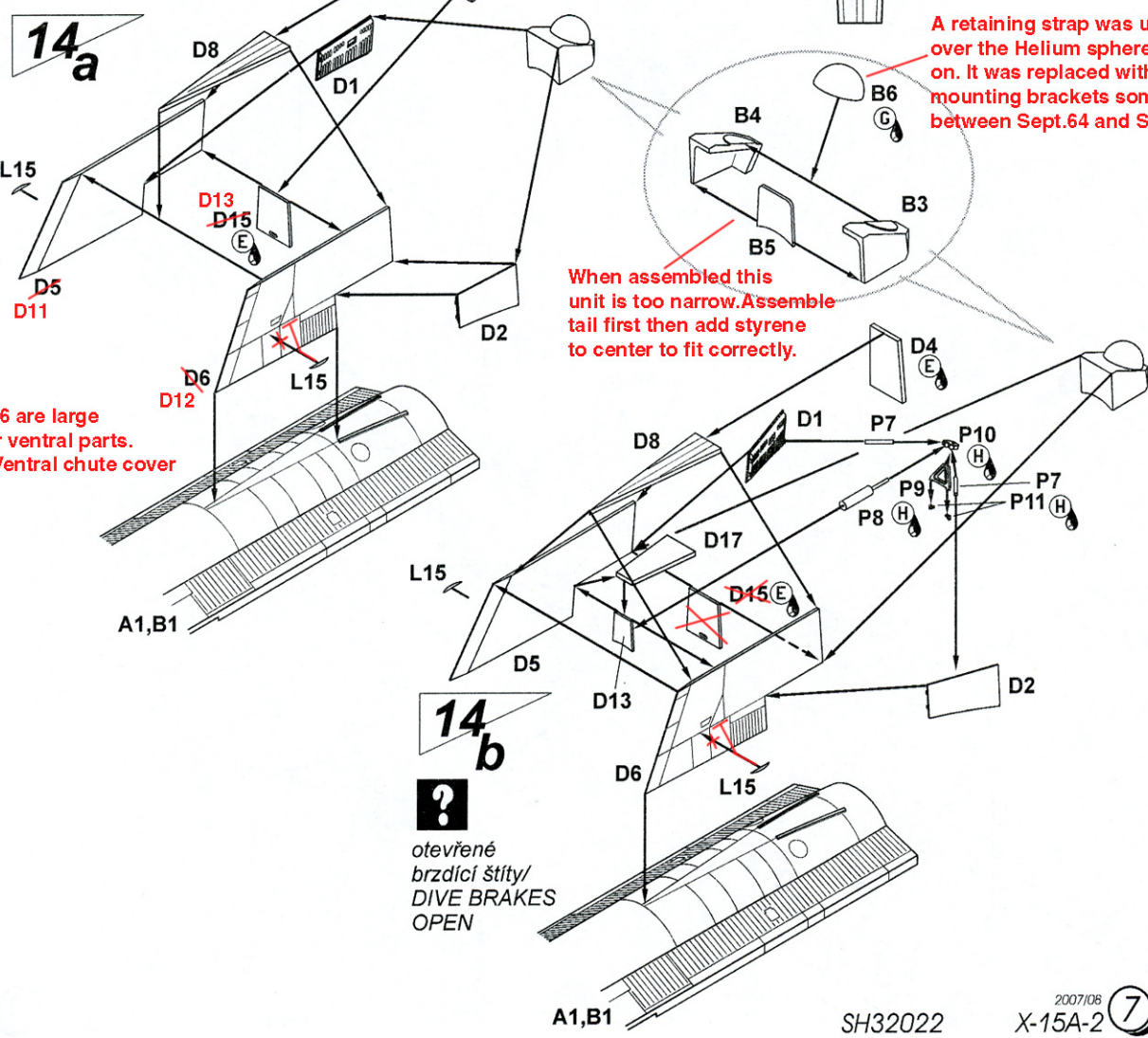


Kit supplied stabs are 3/16" too short. Recommend using Cutting Edge stabs if you can find them.

# INFOview

Drill holes for RCS ports, but not too deep.

Main wing position should be moved forward 1/10" inch.



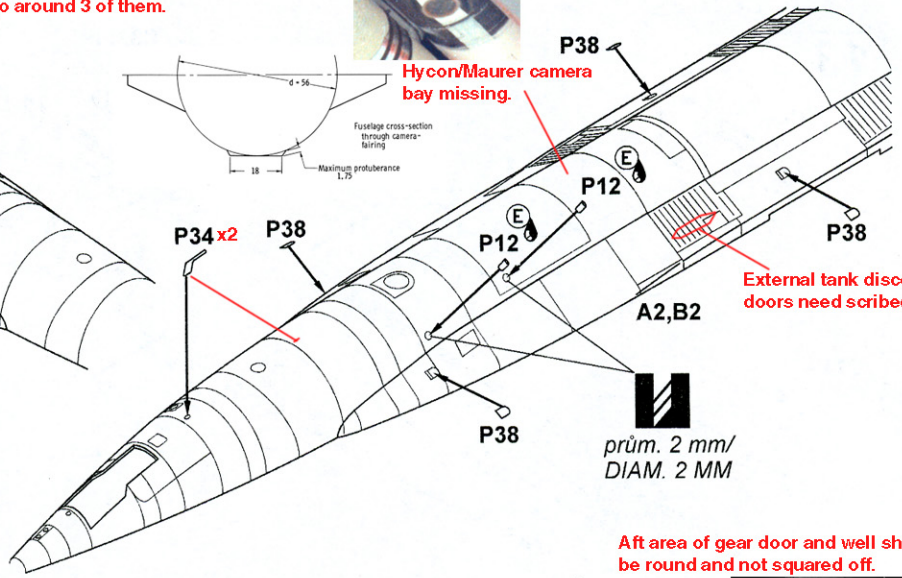
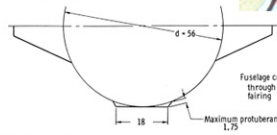
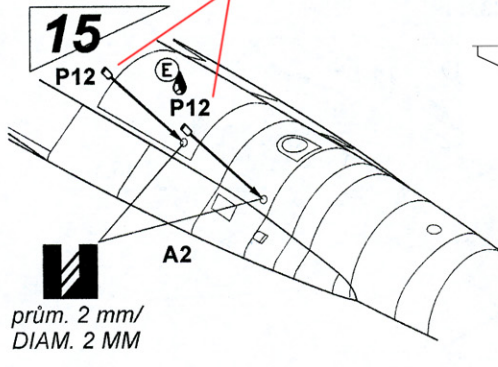
A retaining strap was used over the Helium sphere early on. It was replaced with mounting brackets sometime between Sept.64 and Sept.65.

When assembled this unit is too narrow. Assemble tail first then add styrene to center to fit correctly.

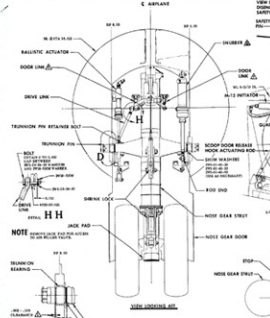
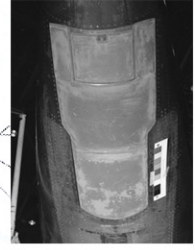
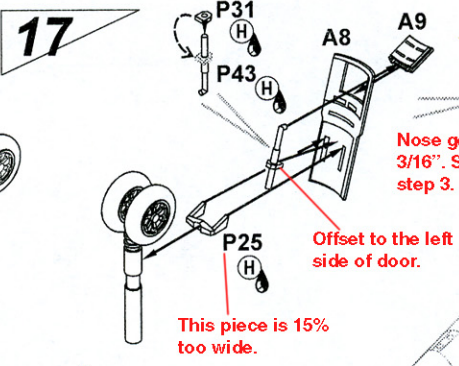
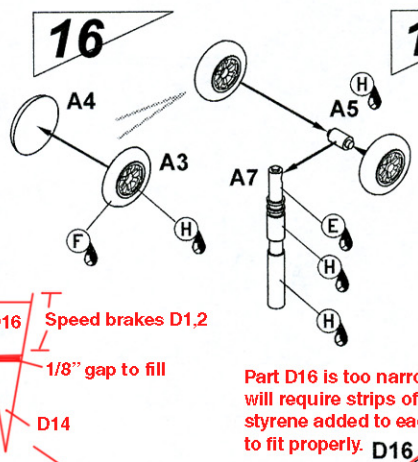
D5, D6 are large lower ventral parts. D15 Ventral chute cover

**?**  
otevřené  
brzdící štíty/  
DIVE BRAKES  
OPEN

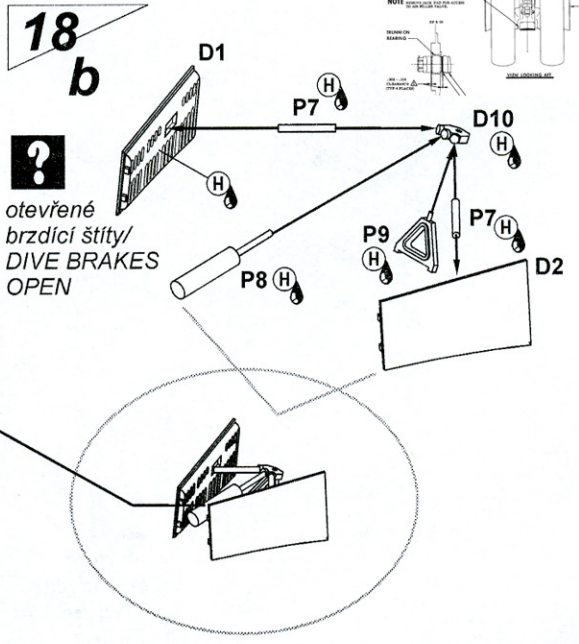
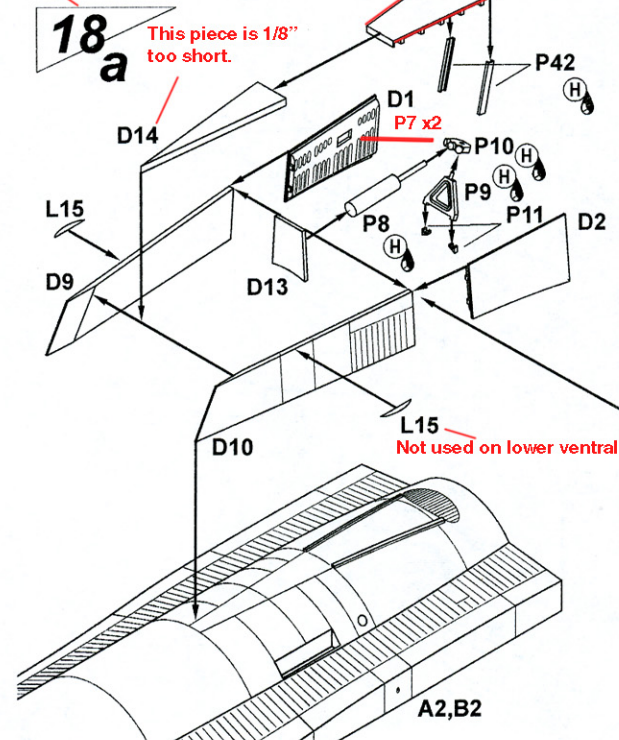
Recommend installing 4 (P12) vent tubes after paint and decals since there are white circle decals that go around 3 of them.



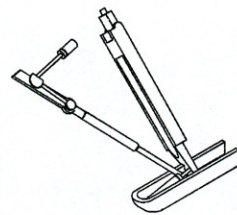
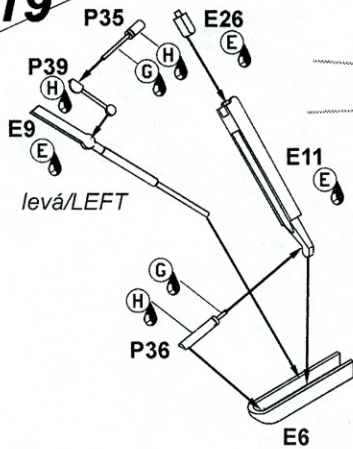
Aft area of gear door and well should be round and not squared off.



Part D16 is too narrow and will require strips of .030 styrene added to each side to fit properly.



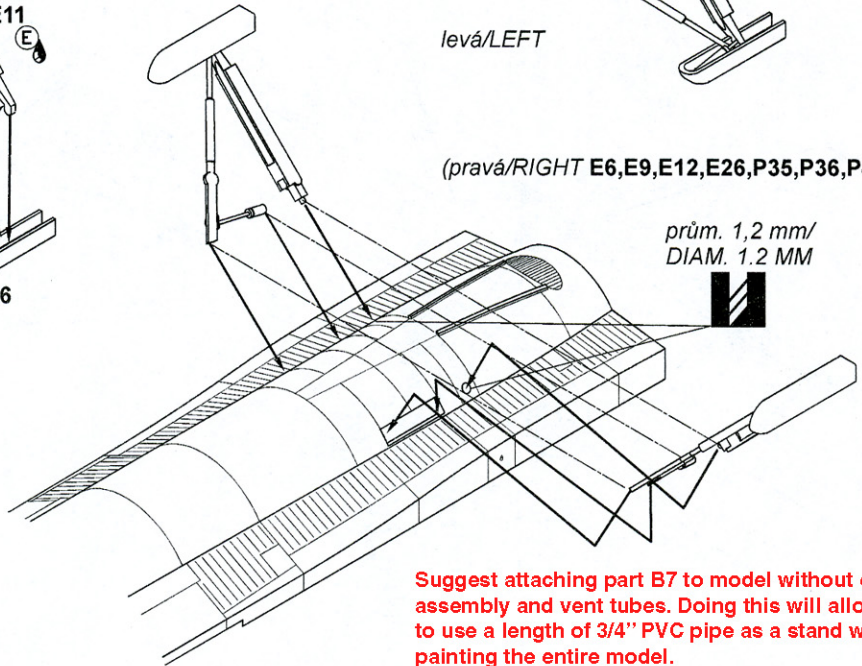
19



levá/LEFT

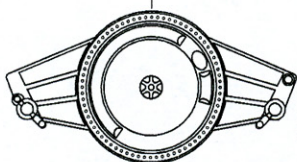
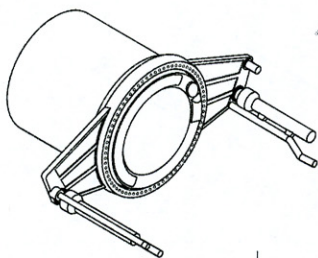
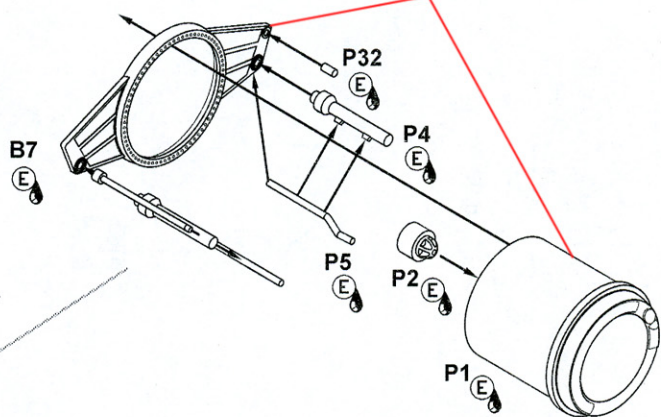
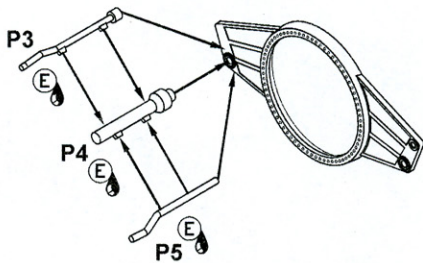
(pravá/RIGHT E6,E9,E12,E26,P35,P36,P40)

prům. 1,2 mm/  
DIAM. 1.2 MM



Suggest attaching part B7 to model without engine assembly and vent tubes. Doing this will allow you to use a length of 3/4" PVC pipe as a stand while painting the entire model.

20

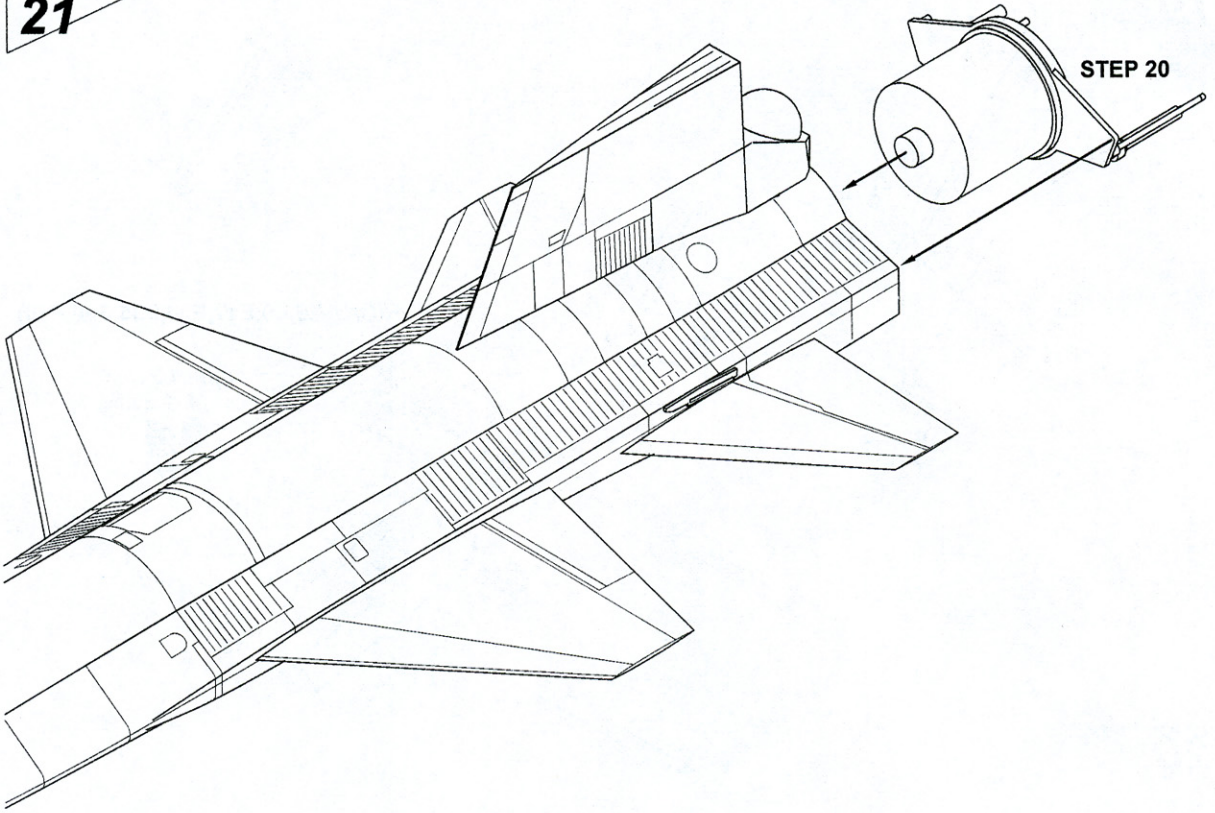


INFOview

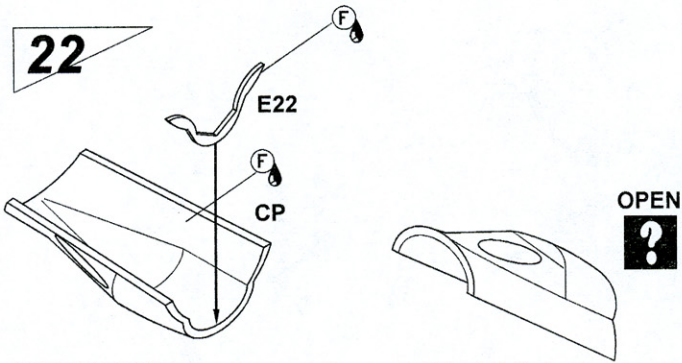


Barvy GUNZE/ GUNZE Colour No.		
A	Bílá/ WHITE	H1/C1
B	Červená/ RED	H3/C3
C	Černá/ BLACK	H12/C33
D	Žlutá/ YELLOW	H4/C4
E	Tmavý kov/ DARK IRON	MC214
F	Modrošedá/ BLUEGREY	H42/C72
G	Chrom/ CHROM SILVER	MC211
H	Hliník/ ALUMINIUM	MC218
F	Černá pneu./ TIRE BLACK	H77/C137

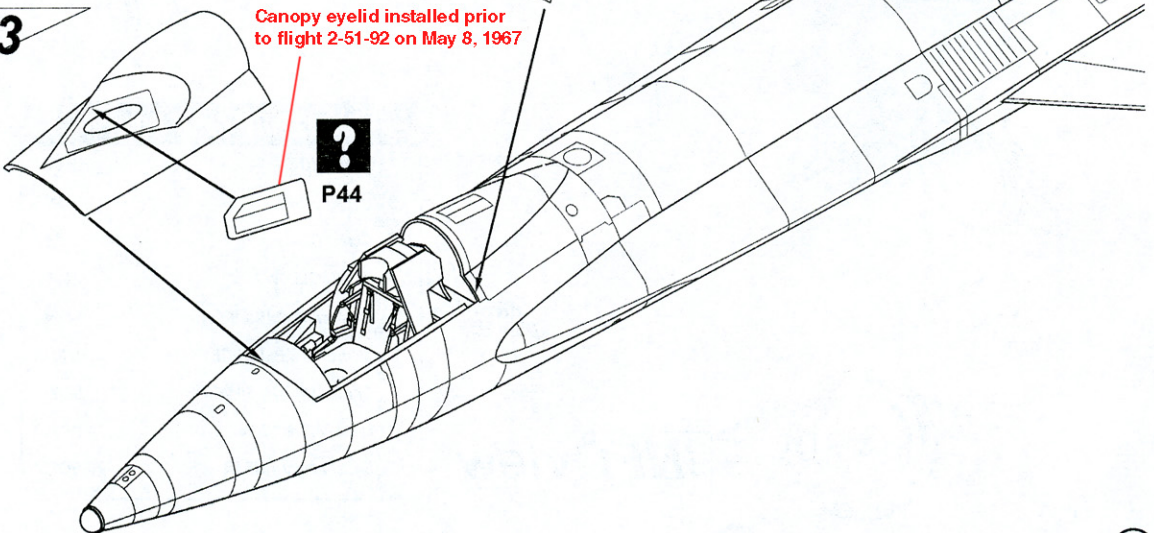
21



22



23



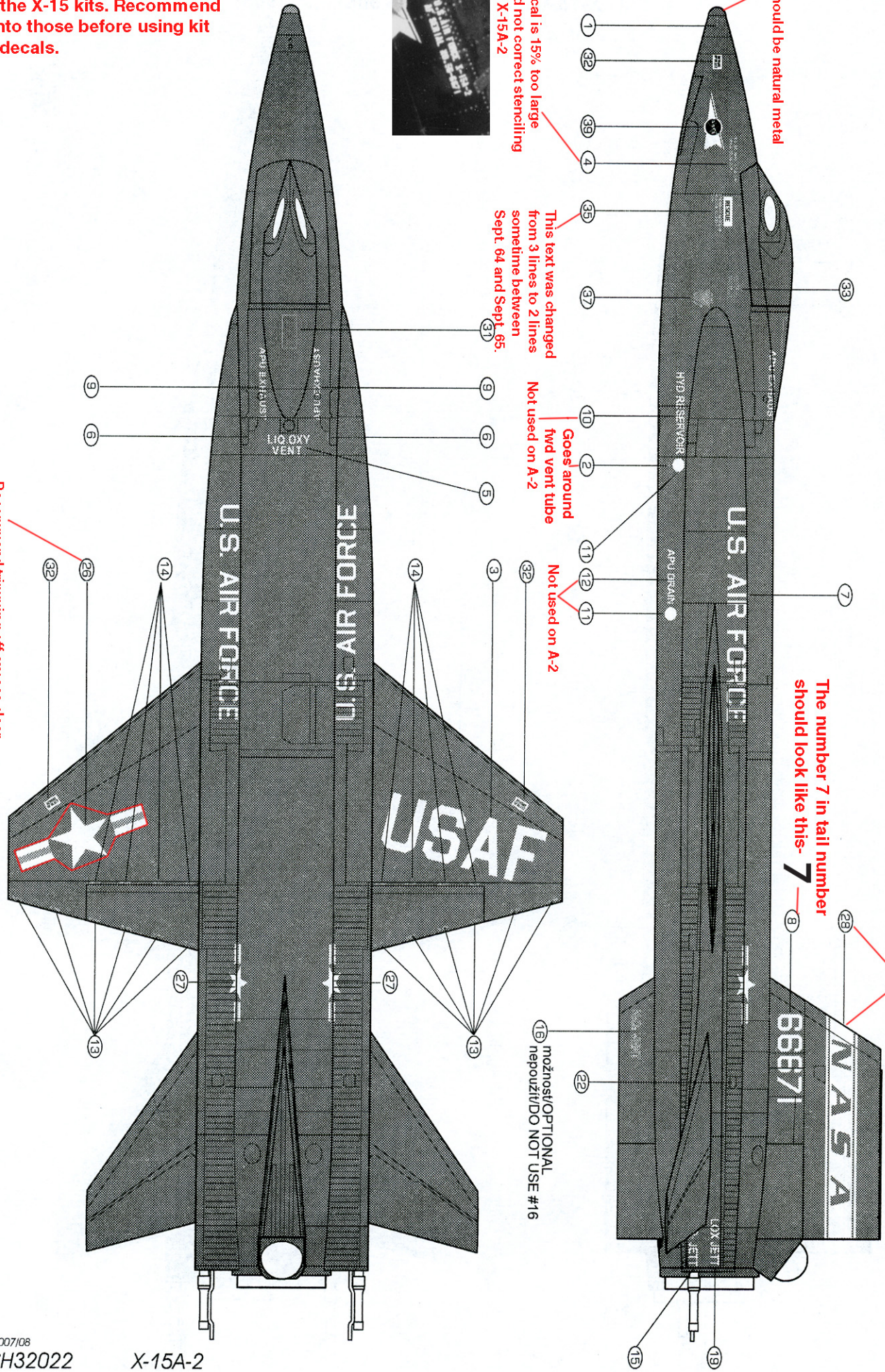
Canopy eyelid installed prior to flight 2-51-92 on May 8, 1967

?

P44



Spacemodelsystems.com has stated that they will be producing aftermarket decals for the X-15 kits. Recommend looking into those before using kit supplied decals.



Q-ball should be natural metal

Decal is 15% too large and not correct stenciling for X-15A-2

This text was changed from 3 lines to 2 lines sometime between Sept. 64 and Sept. 65.

Goes around fwd around tube Not used on A-2

Not used on A-2

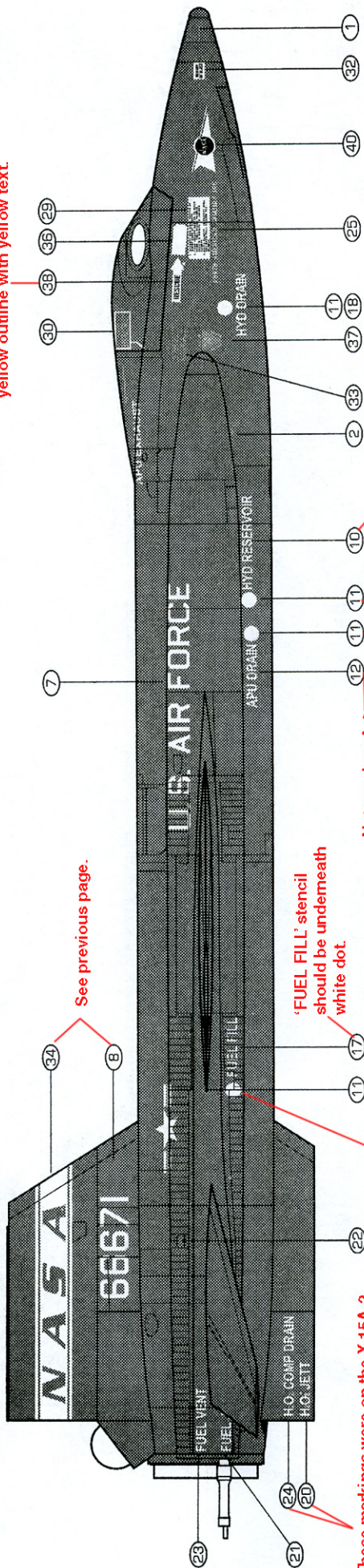
The number 7 in tail number should look like this- 7

NASA text is incorrect stencil and yellow band decal is 1/8" too short

Recommend trimming off excess clear area around all national insignia as the large decals are very thin and have a tendency to fold underneath themselves.

X-15A-2, 56-6671, November 2, 1965

Rescue arrow should be yellow outline with yellow text.



See previous page.

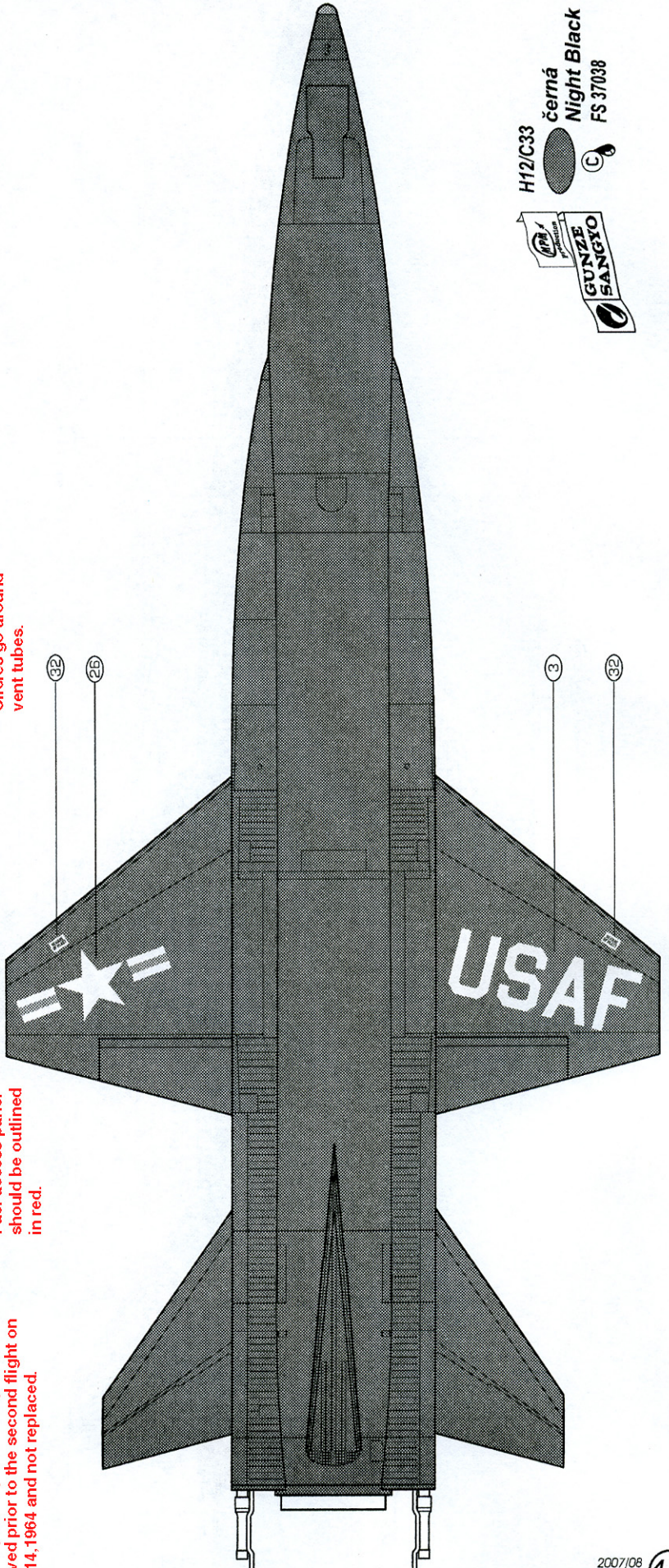
'FUEL FILL' stencil should be underneath white dot.

Not used on A-2

Circles go around vent tubes.

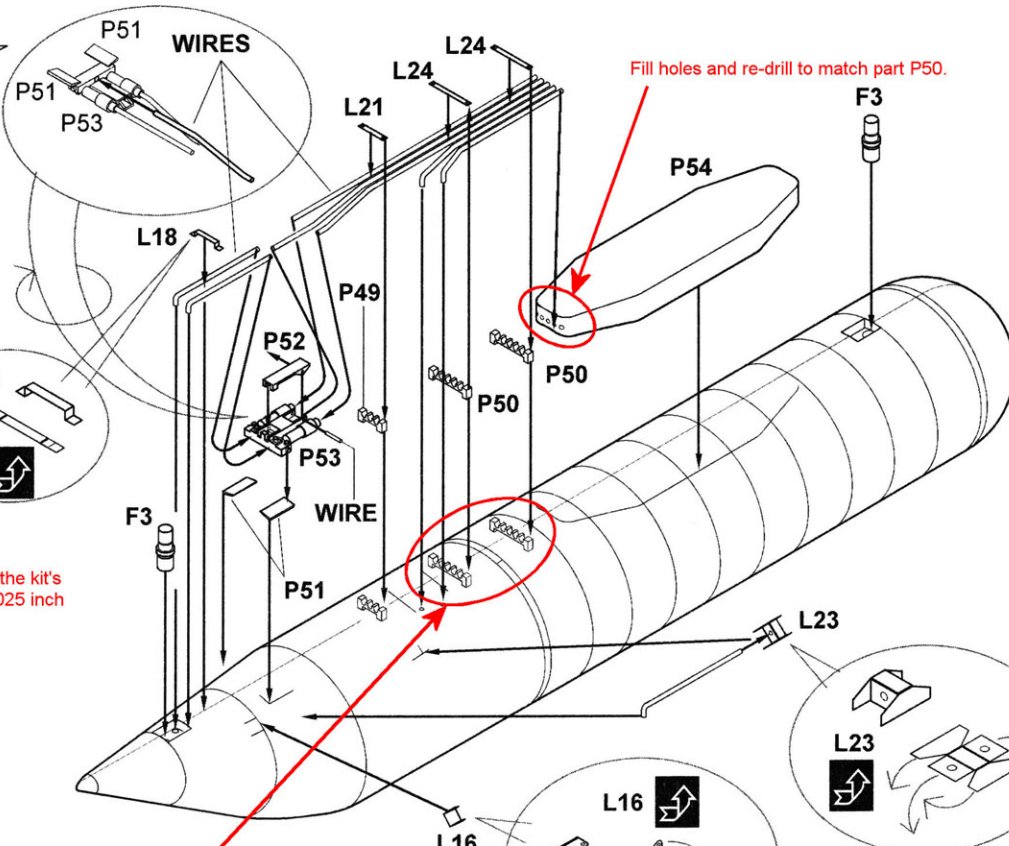
Fuel access panel should be outlined in red.

These markings were on the X-15A-2 for a very short period. They were removed prior to the second flight on Aug. 14, 1964 and not replaced.



SH32022

**The following pages were added in November 2008 and were created by Peter Johnson during his build of the follow-on kit with the external tanks.**



Fill holes and re-drill to match part P50.

Suggest replacing the kit's coiled wire with 0.025 inch brass rod.

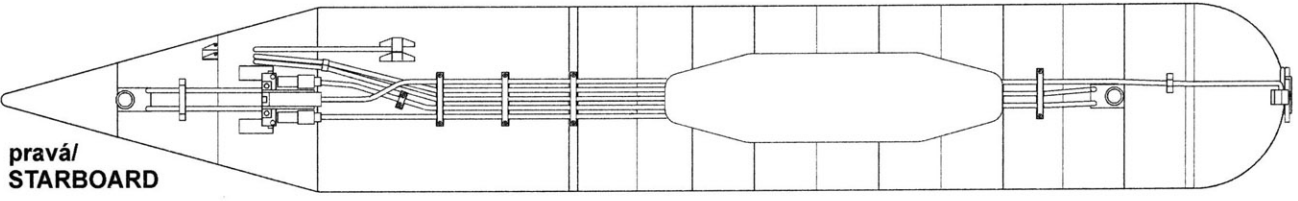
The notch spacing on parts P50 is not perfectly even. Make sure the parts are aligned the same side forward so the piping ends up parallel.

All tubing and brackets are painted aluminum on AFM aircraft. To make painting easier, mount all resin, then paint tank before adding piping and PE.

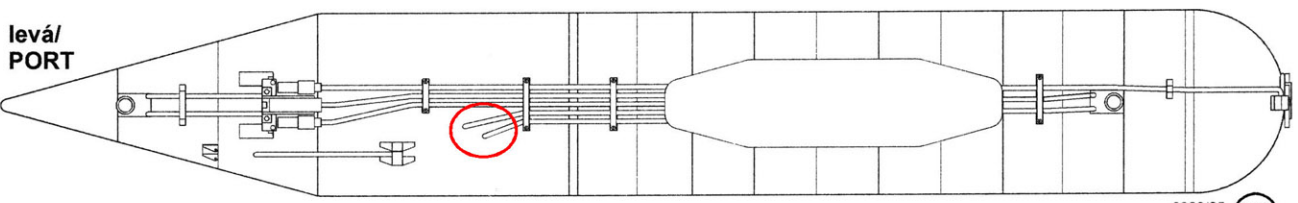
levá/  
PORT

INFOview

Enlarge tank drawings 1.15x for 1/32 scale.



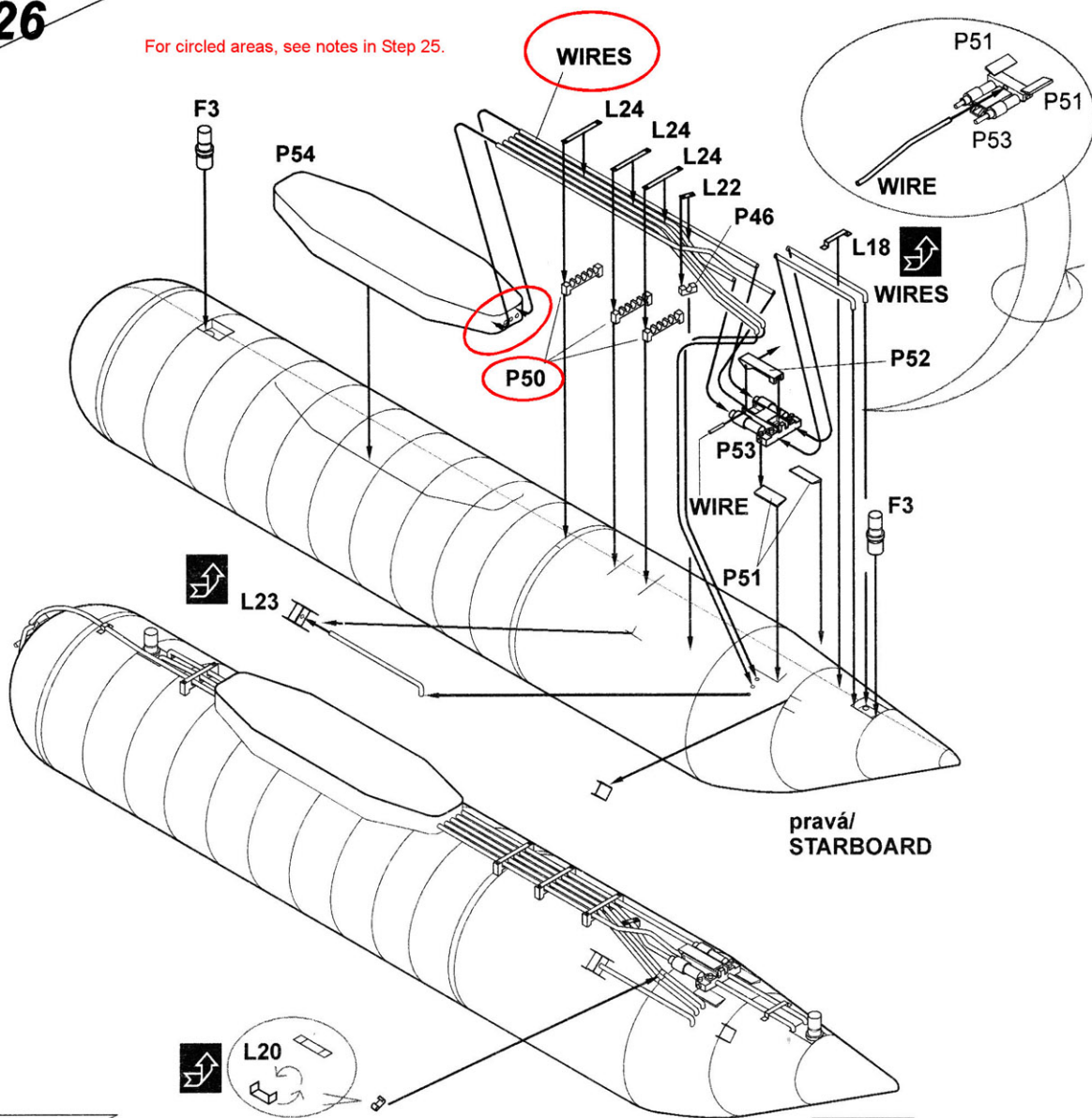
pravá/  
STARBOARD



levá/  
PORT

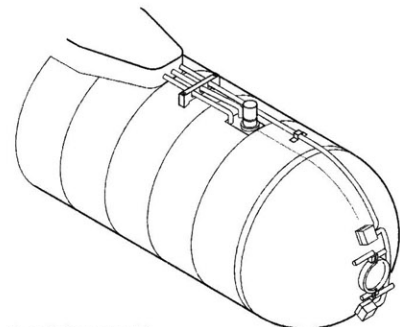
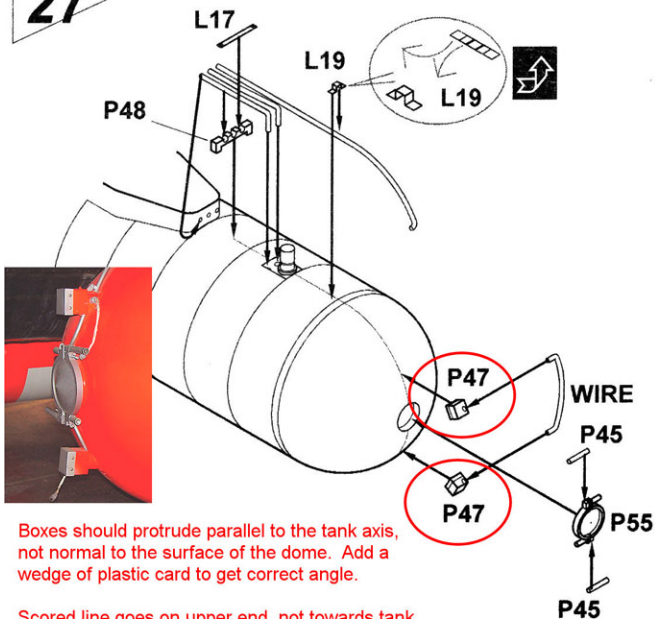
Dimples on tank are incorrectly located. Move to match drawing.

For circled areas, see notes in Step 25.



pravá/  
STARBOARD

**INFOview**



levá i pravá/  
PORT AND STARBOARD

Boxes should protrude parallel to the tank axis, not normal to the surface of the dome. Add a wedge of plastic card to get correct angle.

Scored line goes on upper end, not towards tank.

Photos show that P55 is rotated at a random angle, which differed on each flight and tank.