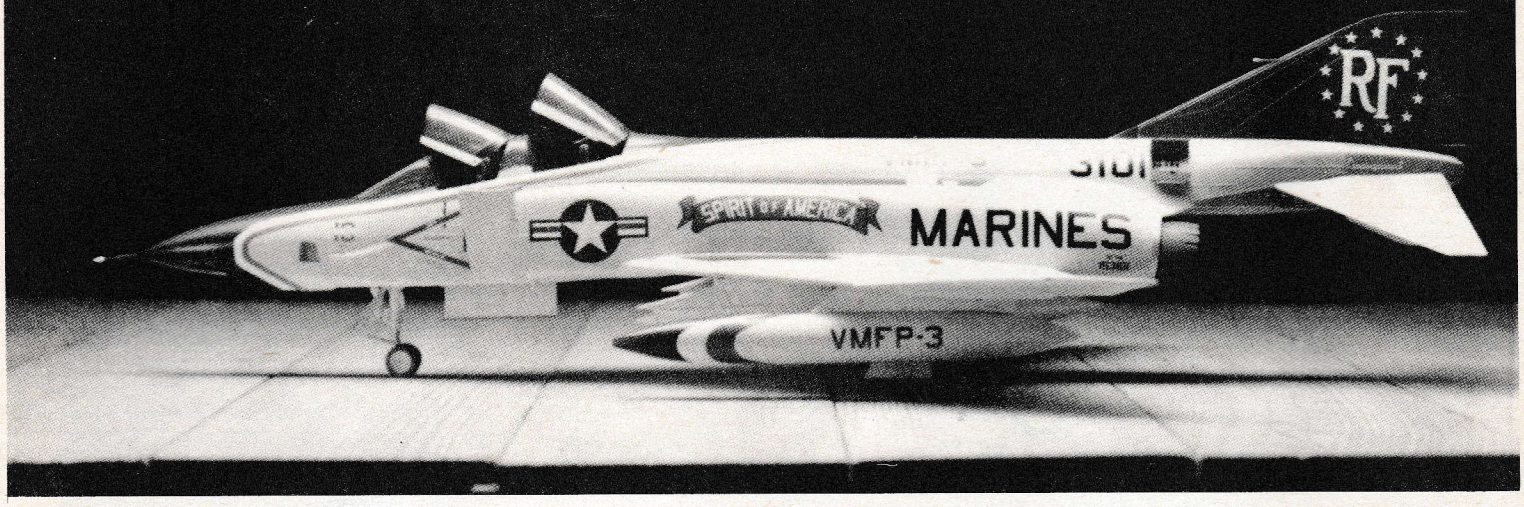
RF-4 PHANTOM II

SPIRIT OF AMERICA

No. 585

TESTORS



HISTORY

More *F-4 Phantom II's* have been produced than any other modern warplane. Over 5000 *Phantoms* have rolled out of the factory since the flight of the first prototype in 1958. The *F-4 Phantom* in its different variants has been in production for over 20 years, a rather remarkable life span for a modern combat aircraft.

The one word which most readily describes the *Phantom* is adaptability. The *F-4* has appeared in many guises, and seems to perform each function admirably. Our kit depicts the photo-reconnaissance version. The *Phantom* has also served as a fighter-interceptor, bomber and attack plane.

The *F-4 Phantom II* is one of the very few modern aircraft which can truly be considered as a legend in its own time.

SPECIFICATIONS

Power	Two General Electric J79-GE-15 turbo jets
Weight	29,000 pounds (empty)
Span	38′4 7/8″
Length	62′11 3/4″
Height	16′5½″
Max. Speed	Mach 2.2
Service Ceiling	70,000′
Combat Radius	900 Miles

Reference Sources

F-4 Phantom "In Action",
Phantom II (A Pictorial History) (Squadron/ Signal Publications)
Janes All The Worlds Aircraft 1958 through 1980 (McGraw-Hill)

Before you begin construction of your RF-4 study pages 9 and 10. Your model can be constructed as a special Bicentennial Marine RF-4 from the 1976 time period or a U.S. Air Force RF-4 of the pre-Vietnam camouflage era - 1964. Basic colors are the same with difference being in the decal markings. Both types of markings are historically significant.

BEFORE STARTING

1. Study the illustrations and sequence of assembly before beginning.
2. Decide how much detail you wish to add to your model and whether or not you intend to modify or "convert" the basic model in any way. Study carefully all available reference material before beginning to ensure an authentic model.
3. Due to the amount of parts in this kit, do not detach the parts from the runners (sprue) until you need them. This helps avoid confusion and lost parts.
4. When cementing the parts together, check the way in which one part fits together with another. This ensures a neat job.
5. Always remember, when working with plastic model cement and paint, make sure your work is well-ventilated. The fumes from plastic modeling products can be harmful if inhaled.

PREPARATION OF PARTS

1. Never tear parts off the runners (sprue). Use a Testor Hobby Knife, nail clippers, or small wire cutters.
2. It is possible some parts may require a little attention with a file or sandpaper to ensure a proper fit and neat appearance. Hobby files and Testor Hobby Sandpaper appropriate for model-building are available in most good hobby shops.
3. If you desire, you may fill any seams (where parts go together) or imperfections with Testor Contour Putty for Plastic Models which is also available at good hobby shops.

PAINTING

You can obtain an excellent finish on your model using Testor enamels. Parts of the model are painted individually, and then the entire model is oversprayed when you have finished construction.

First of all, be sure your brushes are soft, clean and flexible. (Keep them that way by cleaning them thoroughly with Testor Paint thinner.) Never use inexpensive brushes! A selection of Testor Shed-Proof Brushes will serve you well.

Wash plastic parts before detaching them from the sprue. Warm water and liquid detergent remove the oils left from the manufacturing process. Let the parts dry and avoid excessive handling. Immediately before painting, wipe the parts with a "tac rag" (available at automotive centers) to remove dust and lint.

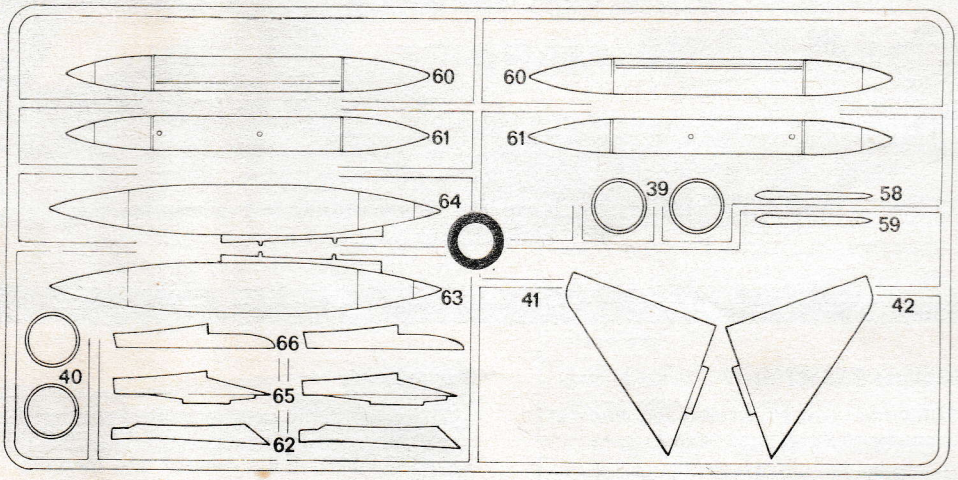
Most parts are best painted while still attached to the sprue or they may be detached and held with tweezers or "magic" type transparent tape. Paint in one direction only. If your paint is the correct consistency, brush strokes will disappear as the color dries. If the paint seems too thick, thin it with Testor Paint Thinner. Wheels may be detached from the sprue and fit onto toothpicks or matchsticks for painting. Then just hold the paintbrush against the edge of the wheel and rotate the wheel to obtain a neat clean finish.

Let the paint dry completely before handling. When the parts are dry, assemble the model, following the directions closely. Remember cement will not stick to painted surfaces. Using your Testor Hobby Knife, carefully remove paint from all surfaces to be cemented. After you have asembled your model you may touch up areas where cement has marred the finish.

Remove this page from the instruction sheet by cutting along indicated line. Use the drawings of the complete sprue as a part-locating reference when building the model.

Tweezers will be useful in assembling the many small parts in this kit. The type used by postage stamp collectors is recommended.

Liquid cement, Testor #3502, is recommended for construction since it can produce the neatest, quickest, and strongest glue joints. Apply small amounts of cement, using the tip of a 00 brush, to the surfaces to be joined while holding the parts in place. Do **not** use large amounts of cement.



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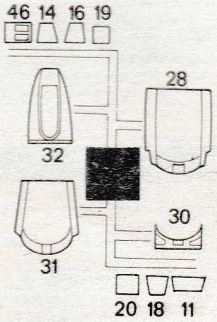

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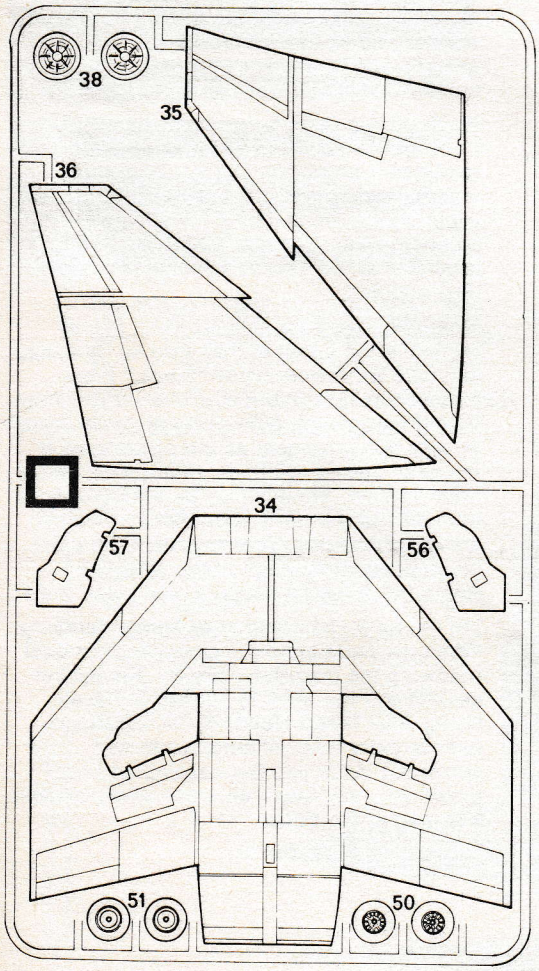

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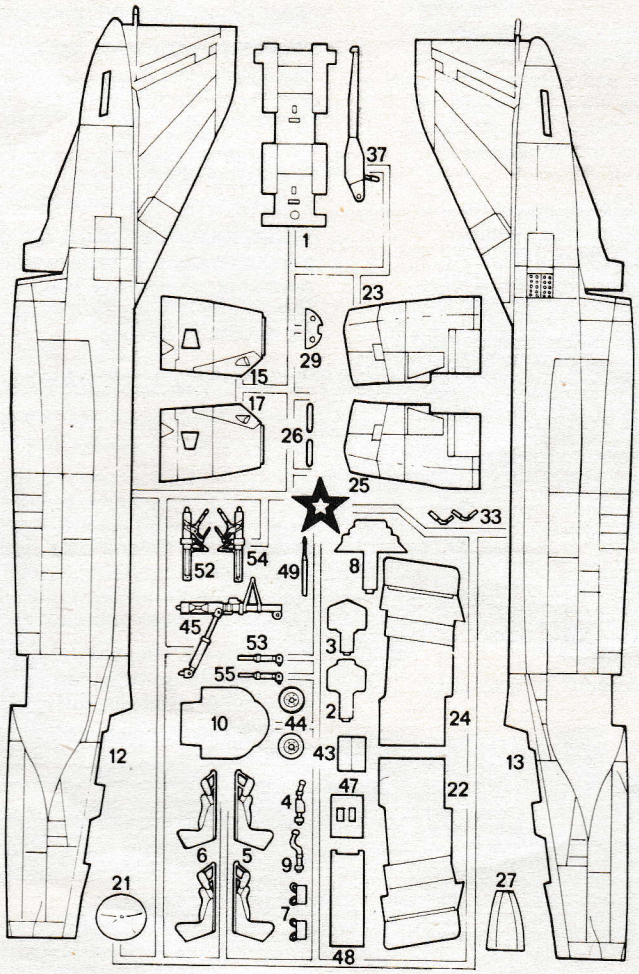


Parts from this section are identified with this symbol: ☆

Cut and remove this sheet.

NOTE: Before beginning, parts ☆**2** and ○**39** should be discarded to avoid confusion.

1 PARTS 1, 3-10

Preliminary Painting

☆**1** sides and top of consoles only; ☆**3**, ☆**4**, ☆**8**, ☆**9**, ☆**10**:
"Light Gray" (mix 1 part #1163 **Flat Battle Gray** and 3 parts #1168 **Flat White**)

☆**1** floor boards only:
"Dark Gray" (mix 3 parts #1163 **Flat Battle Gray** and 1 part #1149 **Flat Black**)

☆**4**, ☆**9** hand grips only; ☆**5**, ☆**6**, ☆**7**:
#1149 **Flat Black**

☆**7** pull rings only:
#1168 **Flat White** with #1150 **Flat Red** stripes (see photos on box)

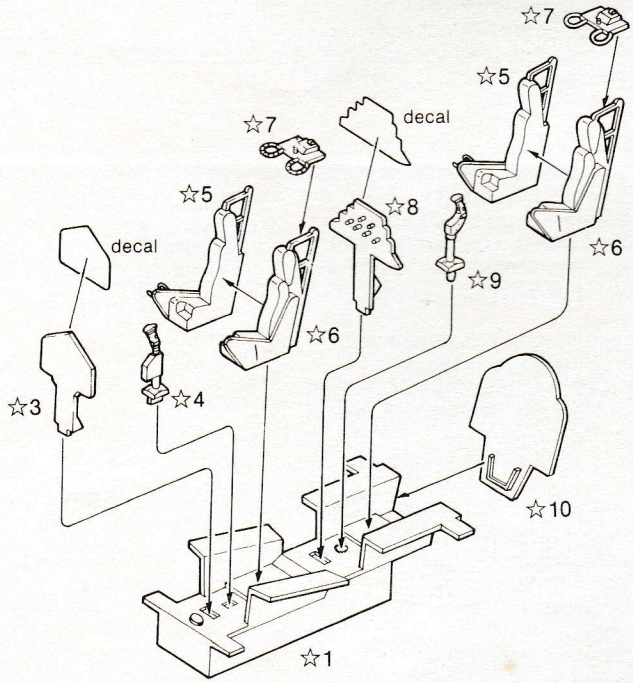
☆**5**, ☆**6** cushions only:
#1171 **Flat Beret Green**

Assembly

☐1. Apply instrument panel decal to instrument panel ☆**3**. Notice that the shape of the decal corresponds to the shape of the part. Cement instrument panel into forward notch in floor of crew module ☆**1**.

☐2. Cement ejector seat halves ☆**5** and ☆**6** together, making two sets. Now glue one head protector shield ☆**7** to the top of each seat, set aside to dry. Cement pilot's control column ☆**4** into slot in front cockpit and rear control column ☆**9** into hole in rear cockpit.

☐3. Apply instrument panel decal to rear instrument panel ☆**8** matching the decal with the shape of the part. Glue one ejector seat assembly into the front cockpit as shown in drawing. Cement rear instrument panel ☆**8** into slot behind pilot's seat. Glue remaining ejector seat into place in rear cockpit, then cement rear bulkhead ☆**10** to rear of cockpit module.



2 PARTS 11-21

Preliminary Painting

☆**12**, ☆**13** inside walls of cockpit area:
"Light Gray" (mix 1 part #1163 **Flat Battle Gray** and 3 parts #1168 **Flat White**)

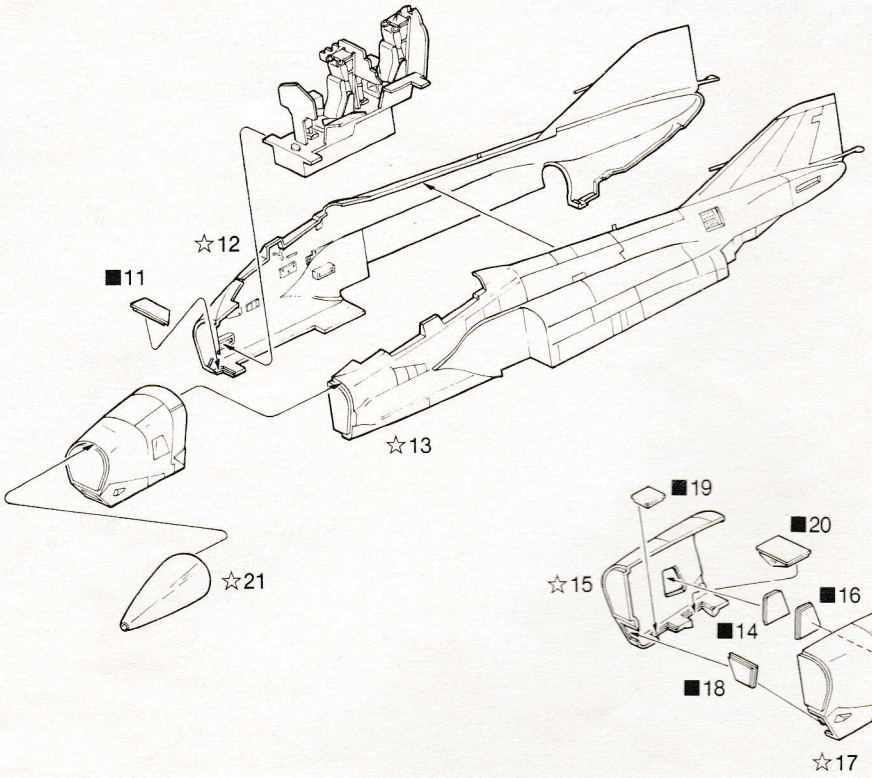
NOTE: Clear parts are best glued in with white glue, which gives a neater appearance than conventional model cement.

Assembly

☐1. Glue camera window ■**11** into notch in fuselage half ☆**12** and then cement cockpit assembly into locating lugs inside ☆**12**. Now cement fuselage halves ☆**12** and ☆**13** together, making sure that ■**11** and cockpit module line up properly inside fuselage.

☐2. Glue camera window ■**14** into hole inside camera bay half ☆**15**. Glue window ■**16** into camera bay half ☆**17**. Glue camera windows ■**18**, ■**19**, ■**20** into ☆**15** at positions shown in drawing. Now cement camera bay halves ☆**15** and ☆**17** together, making sure that all windows fit flush with the underside of camera bay.

☐3. Cement finished camera bay to front of fuselage. Cement nose cone ☆**21** to front of camera bay.



3 PARTS 22-33

Preliminary Painting

☆**27**, ☆**29**, ☆**33**
#1149 **Flat Black**
☆**22**, ☆**23**, ☆**24**, ☆**25** interior of intakes:
#1168 **Flat White**
■**28**, ■**30**, ■**31**, ■**32** canopy frames only: overall body color (differs depending on which version you choose to build; see drawings on pages 9 and 10, refer to box photos for positioning).

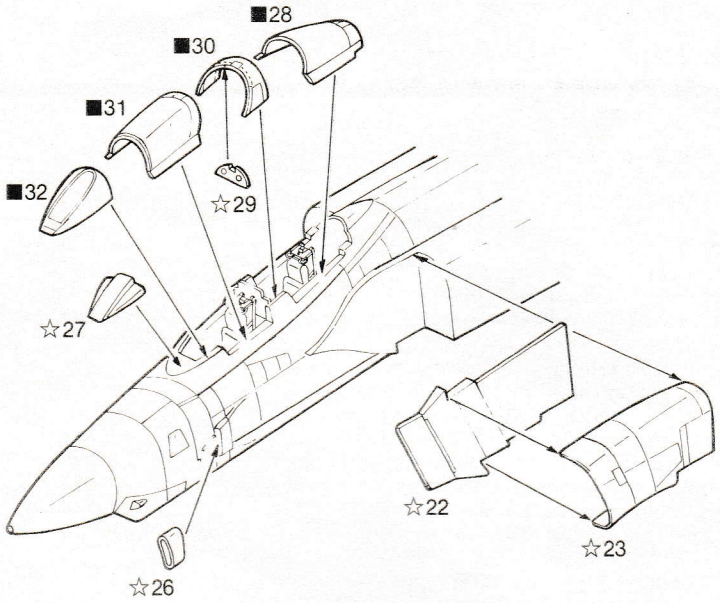
Assembly

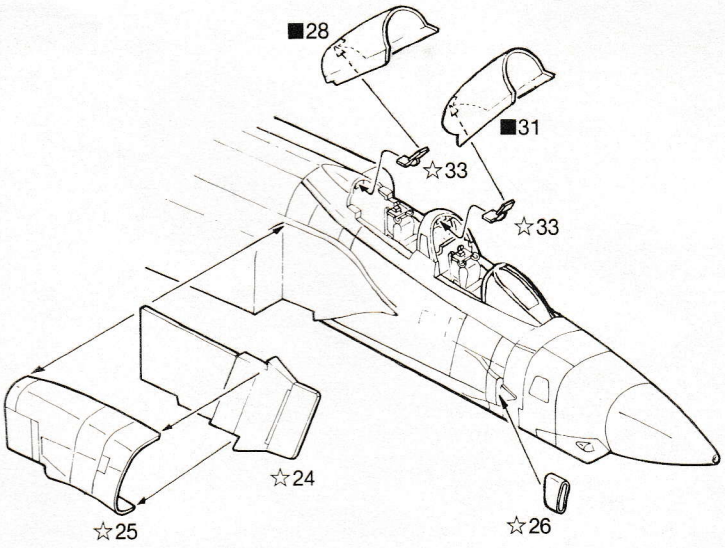
☐1. Cement left scoop ☆**23** to intake baffle ☆**22**, then cement to left side of fuselage. Cement right scoop ☆**25** to right baffle ☆**24**, then cement to right side of fuselage. Cement one inlet ☆**26** to each side of fuselage, as shown in drawings.

☐2. Cement instrument panel fairing ☆**27** into place on forward fuselage. Glue bulkhead ☆**29** into underside of turnover pylon ■**30**. Now glue ■**30** onto fuselage in position shown.

☐3. Select either open canopy or closed canopy.
For closed canopy: Glue windscreen ■**32** in place as shown. Glue front canopy ■**31** in place on front cockpit, and rear canopy ■**28** onto rear cockpit.

☐4. **For open canopy:** Glue one hinge ☆**33** into position at rear of each canopy ■**28** and ■**31**, and allow to dry. Cement windscreen ■**32** into place on forward fuselage. After hinges have hardened glue the hinge on forward canopy ■**31** into the underside of turnover pylon ■**30**. Cement the hinge on rear canopy ■**28** into place under fuselage top deck, as shown.





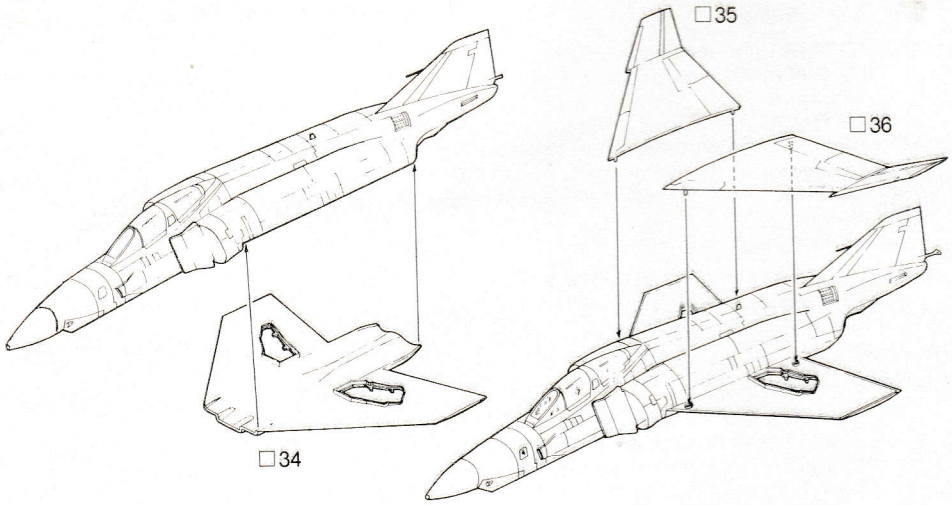
4 PARTS 34-36

Preliminary Painting

□**34**, □**35**, □**36** interior of wheel wells:
#1168 **Flat White**

Assembly

□1. Glue lower wing □**34** to underside of fuselage. Cement right upper wing □**35** to lower wing, then glue left upper wing □**36** onto left lower wing.



5 PARTS 37, 38, 40-43

Preliminary Painting

☆**37**, ○**40**:
#1180 **Steel**

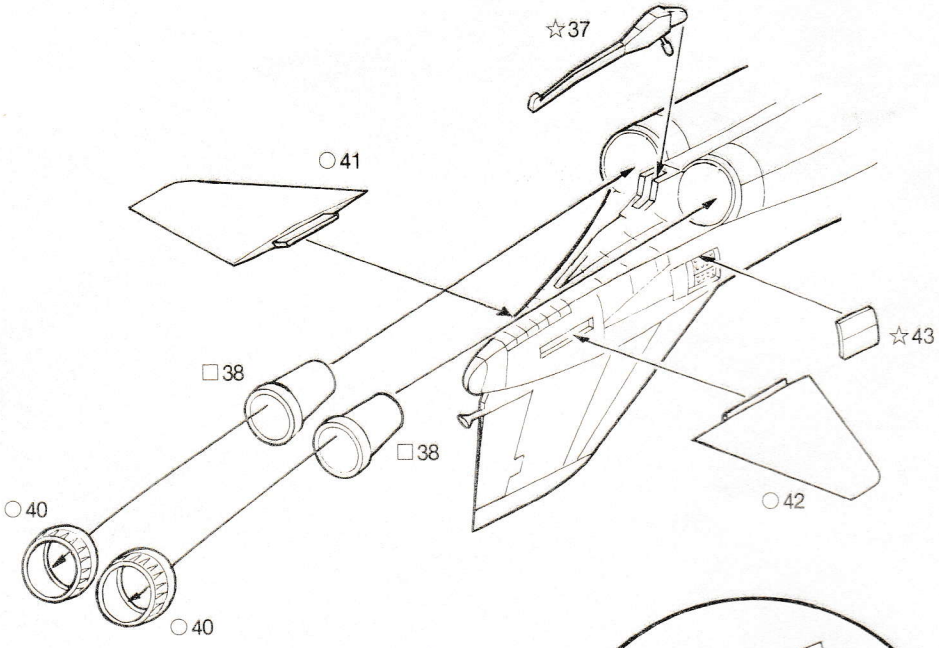
□**38**:
#1149 **Flat Black**

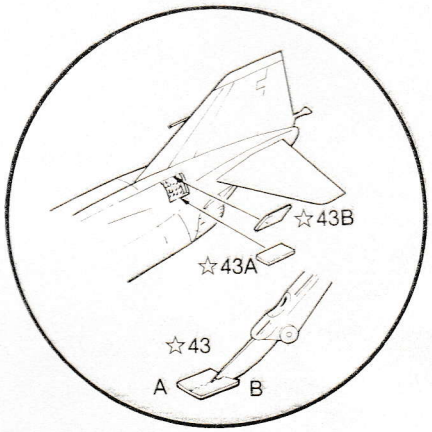
☆**43** inside doors and interior of photo flash ejector chute:
#1150 **Flat Red**

Assembly

□1. Cement arrestor hook ☆**37** to underside of fuselage. Glue turbine housings □**38** onto rear of fuselage, then cement tail cones ○**40** in place as shown.

□2. Cement right stabilizer ○**41** onto right side of fuselage and left stabilizer ○**42** onto the left. The photo flash ejector chute doors ☆**43** can be built in the open or closed positions. For closed position, cement ☆**43** in place. For open position, cut ☆**43** in half as shown and cement ☆**43A** into lower position of ejector chute and ☆**43B** to upper position.





6 PARTS 44-49

Preliminary Painting

☆**45**, ☆**44** hubs only; ■**46** back side only; ☆**47**, ☆**48** inside only; interior of wheel well (☆**1**):
#1168 **Flat White**

☆**45** shaded portions on drawing; ☆**49** pitot tip only:
#1146 **Silver**

☆**44** tires only:
#1149 **Flat Black**

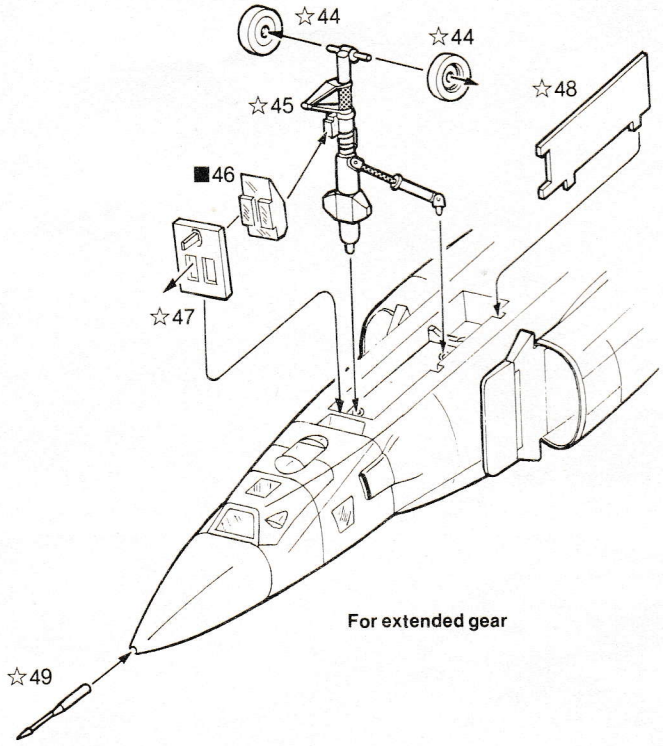
NOTE: This model can be built with the landing gear in either extended or retracted position. Before proceeding, decide which option you prefer.

Assembly

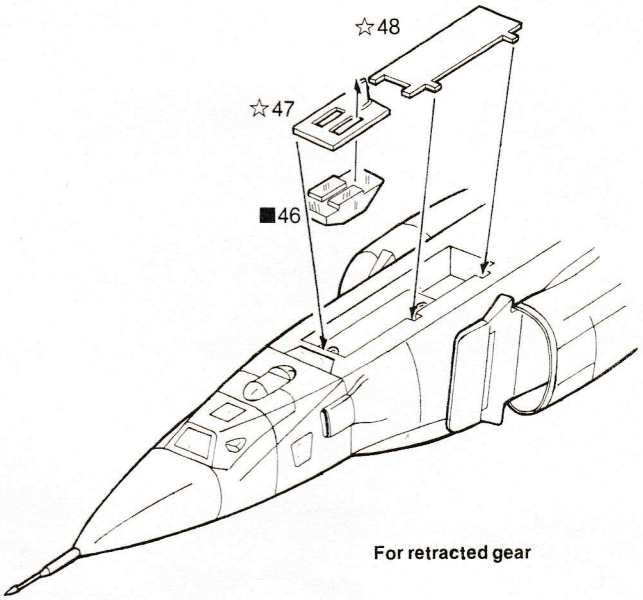
☐1. **For extended landing gear:** Glue one nose wheel ☆**44** to each axle on nose gear strut ☆**45**. Cement ☆**45** into front wheel-well.

☐2. Glue landing light housing ■**46** onto inside of nose gear door ☆**47**, then cement ☆**47** into position as shown. Cement main nose gear door ☆**48** into notches at side of wheel well. Glue pitot tube ☆**49** into hole in nose cone.

☐3. **For retracted gear:** Glue landing light housing ■**46** into backside of nose gear door ☆**47**. Cement nose gear doors ☆**47** and ☆**48** in closed position as shown. Cement pitot tube ☆**49** into hole in nose cone.



For extended gear



For retracted gear

7 PARTS 50-59

Preliminary Painting

☆**52**, ☆**53**, ☆**54**, ☆**55**; □**50**, □**51** wheel hubs only; □**56**, □**57** insides only: #1168 **Flat White**

☆**52**, ☆**54** shaded portion on drawings: #1146 **Silver**

Assembly

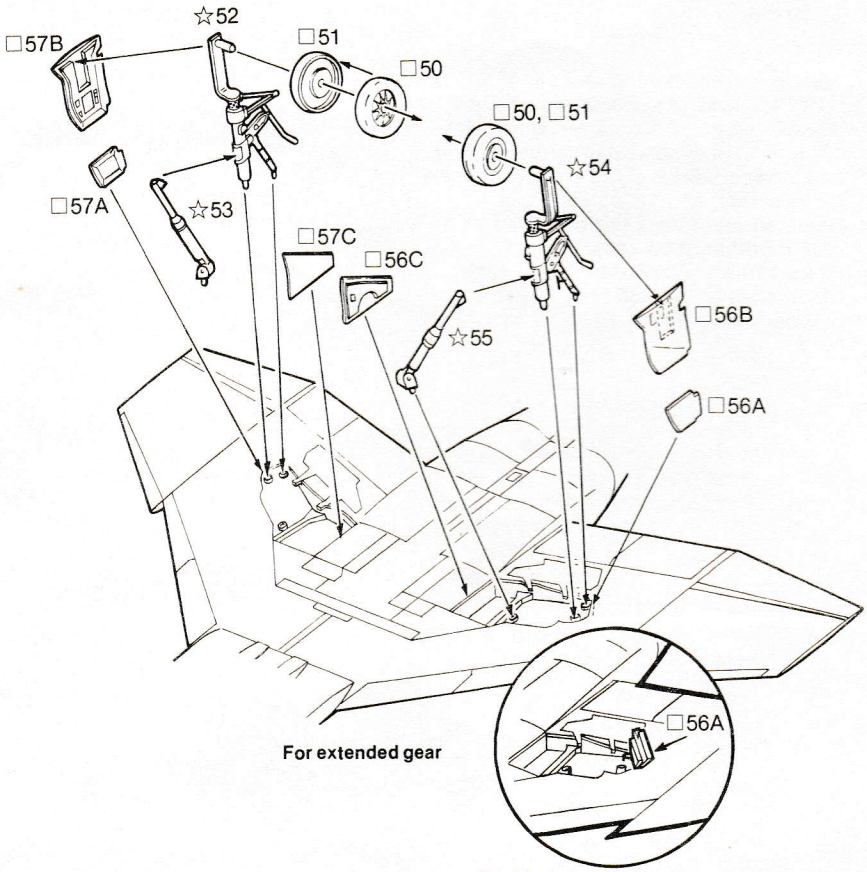
□1. **For extended landing gear:** Cement wheel halves □**50** and □**51** together, making two sets. Cement one wheel assembly to each main landing gear strut ☆**52** and ☆**54**. Glue landing gear strut ☆**52** into left wheel well and right strut ☆**54** into right wheel well.

□2. Glue left actuator ☆**53** into hole in left wheel well and notch on left landing gear strut ☆**52**. Cement right actuator ☆**55** into right wheel well and strut ☆**54**. Cut main gear doors □**56** and □**57** into three pieces, as shown in drawing.

□3. Cement door □**56A** onto underside of wing at an angle so that it is parallel with the outer edge of the wheel well. (See inset.) Repeat procedure with door □**57A** under left wing. Glue door □**56B** to landing gear strut ☆**54**. Cement door □**57B** to left strut ☆**52**.

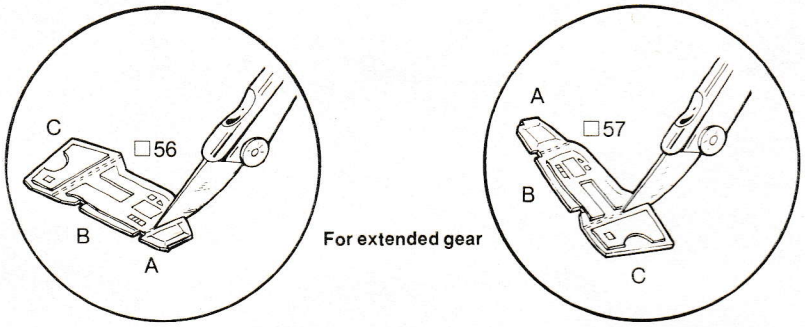
□4. Cement door □**56C** to edge of right wheel well. Glue door □**57C** to edge of left wheel well. Cement wing hinge fairing ○**58** to underside of left wing and hinge fairing ○**59** under right wing.

□5. **For retracted landing gear:** Glue right main gear door □**56** into right wheel well. Cement door □**57** into left wheel well. Cement wing hinge fairing ○**58** under left wing and hinge fairing ○**59** under right wing.

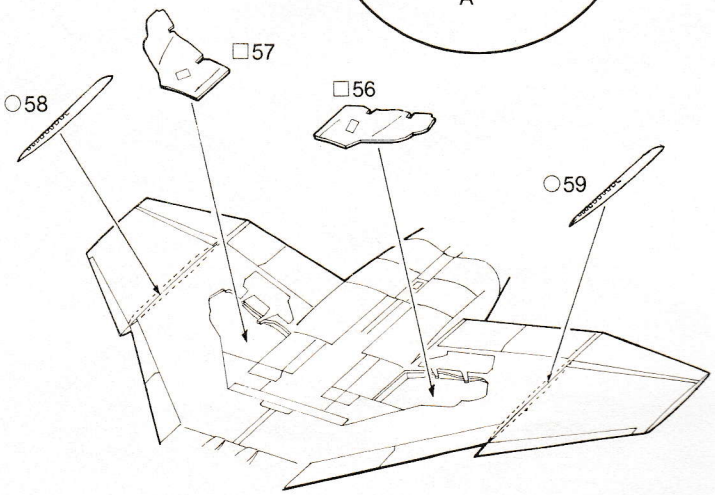


For extended gear

Position of upper undercarriage door, similar for □57A



For extended gear



For retracted gear

8 PARTS 60-65

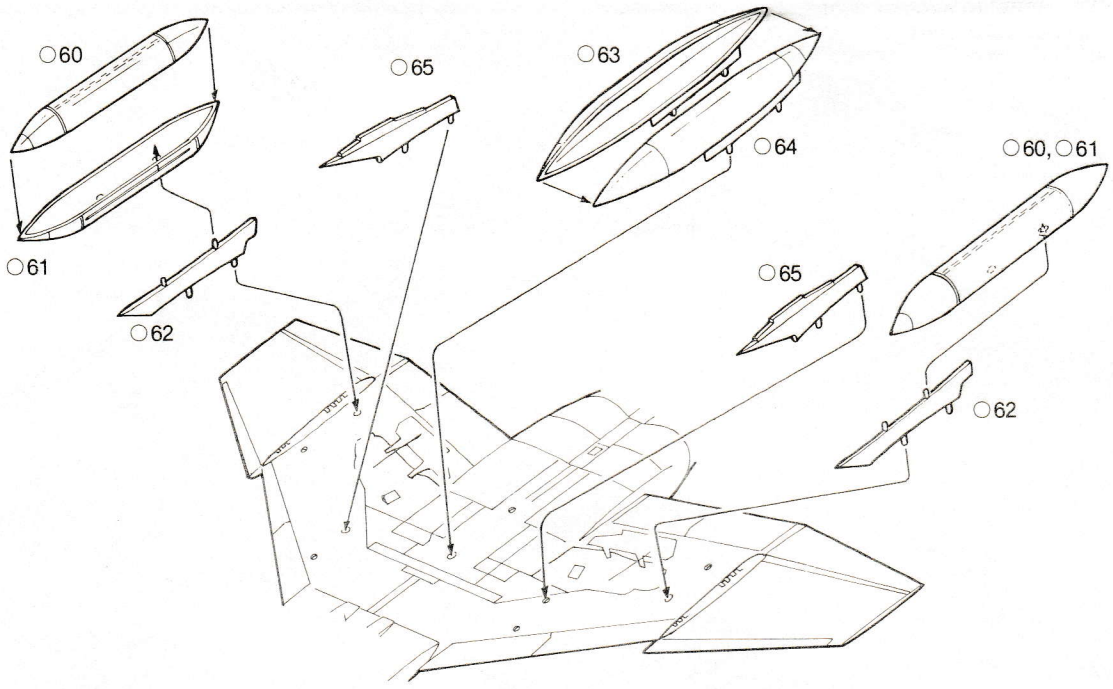
Preliminary Painting

○**62**, ○**65**:
#1168 **Flat White**

Assembly

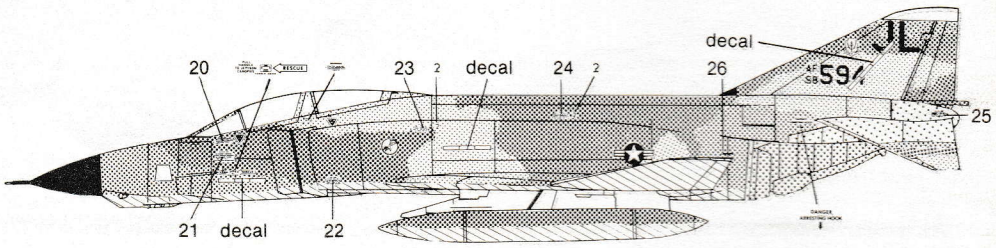
☐1. Cement outboard wing racks ○**62** to outboard stations under both wings. Cement inboard wing racks ○**65** to inboard stations of both wings. Glue outboard wing tank halves ○**60** and ○**61** together, making two sets, and set aside to dry.

☐2. Glue centerline tank halves ○**63** and ○**64** together, then cement into indicated holes. Cement outboard tank assemblies parts ○**60** and ○**61** to each outboard wing rack ○**62**.

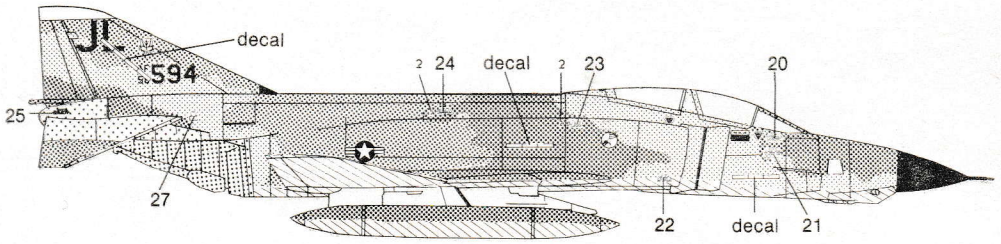


PAINTING

1. **"Dark Olive"** FS 34079 (mix 3 parts #1165 **Flat Army Olive** and 2 parts #1149 **Flat Black**)
2. **"Olive Green"** FS 34102 (mix 5 parts #1165 **Flat Army Olive** and 1 part #1171 **Flat Beret Green**)
3. **"Brown"** FS 30219 (mix 4 parts #1166 **Flat Military Brown** and 1 part #1163 **Flat Battle Gray**)
4. **"Light Gray"** FS 36622 (mix 10 parts #1168 **Flat White** and 1 part #1163 **Flat Battle Gray**)
5. #1149 **Flat Black**
6. #1168 **Flat White**
7. #1180 **Steel**
8. #1181 **Aluminum**
9. #1150 **Red**
10. #1124 **Green**

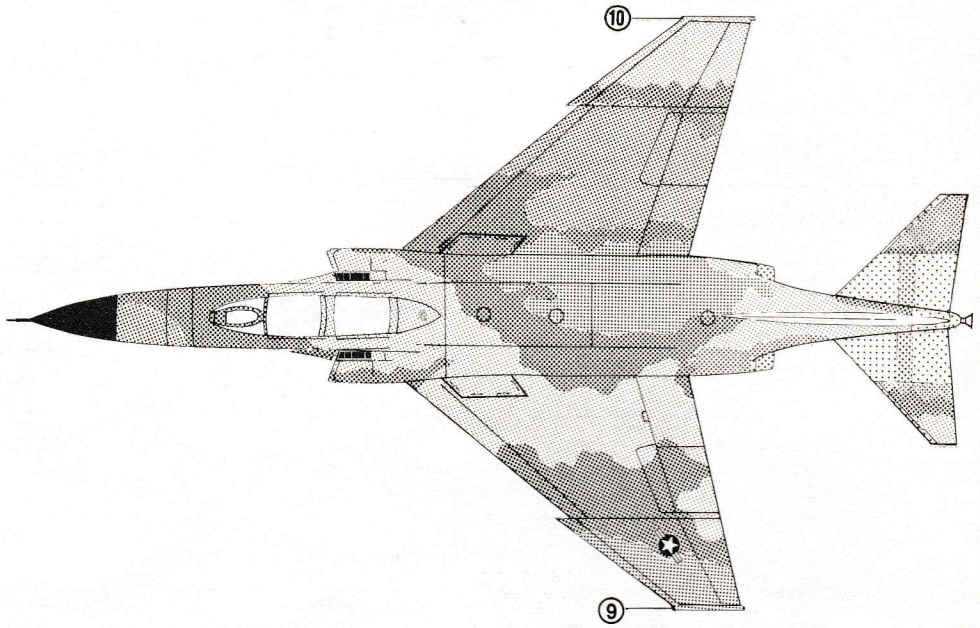


The numbers on the drawings correspond to the appropriate marking on the decal sheet, numbers in circles refer to painting instructions.



APPLYING DECALS

1. After carefully masking canopy and other clear areas, spray entire model with Testor Glosscote #1261. Decals adhere best to a smooth surface and the shinier the finish, the smoother it is. Allow the Glosscote to dry thoroughly before going further.
2. Select the decals you plan to use, and cut each of them out from the decal sheet with small scissors or Testor Hobby Knife.
3. Working with only one decal at a time, dip the decal in clear water for no more than five seconds, then remove it from the water and place on a dry paper towel for about one minute.
4. When the decal slides easily on the backing paper, slide it to the edge of the paper and onto the surface of the model with a soft paintbrush or tweezers. Remember: the decals are very thin and can be easily ripped if care is not taken. Work slowly and patiently.
5. Once the decal is in the desired position, apply a small amount of Testor Decal Set #8804. This will help the decal to conform to any irregularities in the surface of the model (rivets, curves, etc.). Allow the decal to dry undisturbed. Should you find the decal has moved or should you desire to purposely move it, apply a little Decal Set to a soft brush and push the decal slowly into the desired position.
6. When the decals are completely dry (usually overnight), apply a coat of Testor Dullcote #1260 to the entire model. This will give it an authentic, dull finish and protect the surface of the model. Then carefully remove masking from canopy and other clear areas.



RF-4C 363rd TRW, 33 TRT USAF 1970

PAINTING

1. **"Gull Gray"** (mix 5 parts #1168 **Flat White** and 1 part #1163 **Flat Battle Gray**)

2. #1149 **Flat Black**

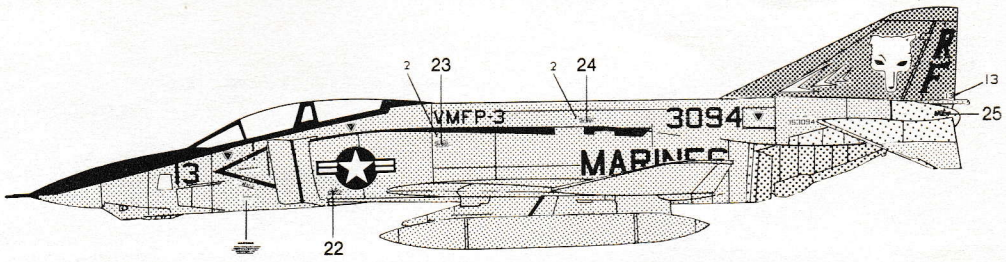
3. #1180 **Steel**

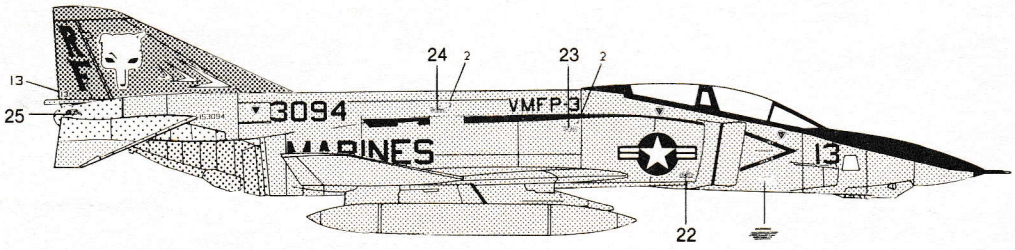
4. #1181 **Aluminum**

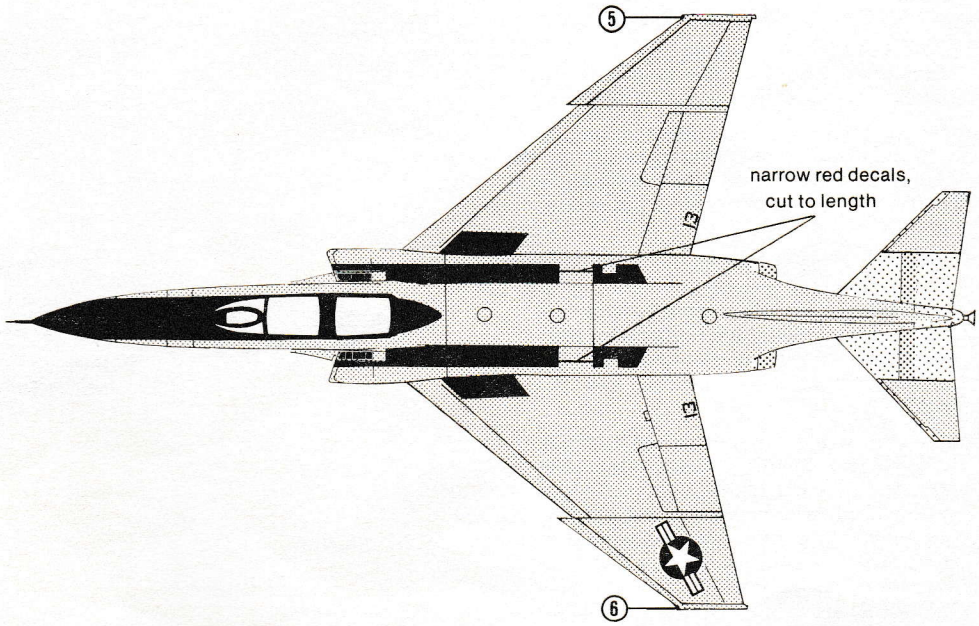
5. #1124 **Green**

6. #1150 **Red**

The numbers on the drawings correspond to the appropriate marking on the decal sheet, numbers in circles refer to painting instructions.







RF-4B VMFP-3 U.S. Marines Feb. 1980

WEATHERING HINTS

Nearly all military aircraft show some signs of wear. The process by which the modeler imparts this look to the model is referred to as weathering. Many times the weathering, that is, the representing on the model of soot, oil stains, or chipped paint, etc., can really make a model stand out and give it amazing authenticity.

After you have painted your model the proper colors, you can add the decals. If you first paint your model with Testor Glosscote, the decal carrier film will seem to disappear. Apply one or two coats of Glosscote for a smooth, glossy finish. Then, after the paint dries, apply the decals. This gives them a "painted on" look. If you want your model to have a matte finish, wait 24 hours for the decals to dry. Then spray on one or two coats of Testor Dullcote. After this dries, you can begin weathering.

Always try to be logical in applying weathering techniques. For instance, you wouldn't want to put exhaust stains on a model and then apply a bright clean decal to the sooty area. Airplanes are normally well cared for, so they don't usually appear very battered. However, soot stains do tend to collect behind exhaust stacks and sometimes oil leaks onto the outside of the plane. Paint chips sometimes appear on leading edges or where crew members or maintenance men walk across the plane. However, try to remember that any well kept plane would only show minimum amounts of wear.

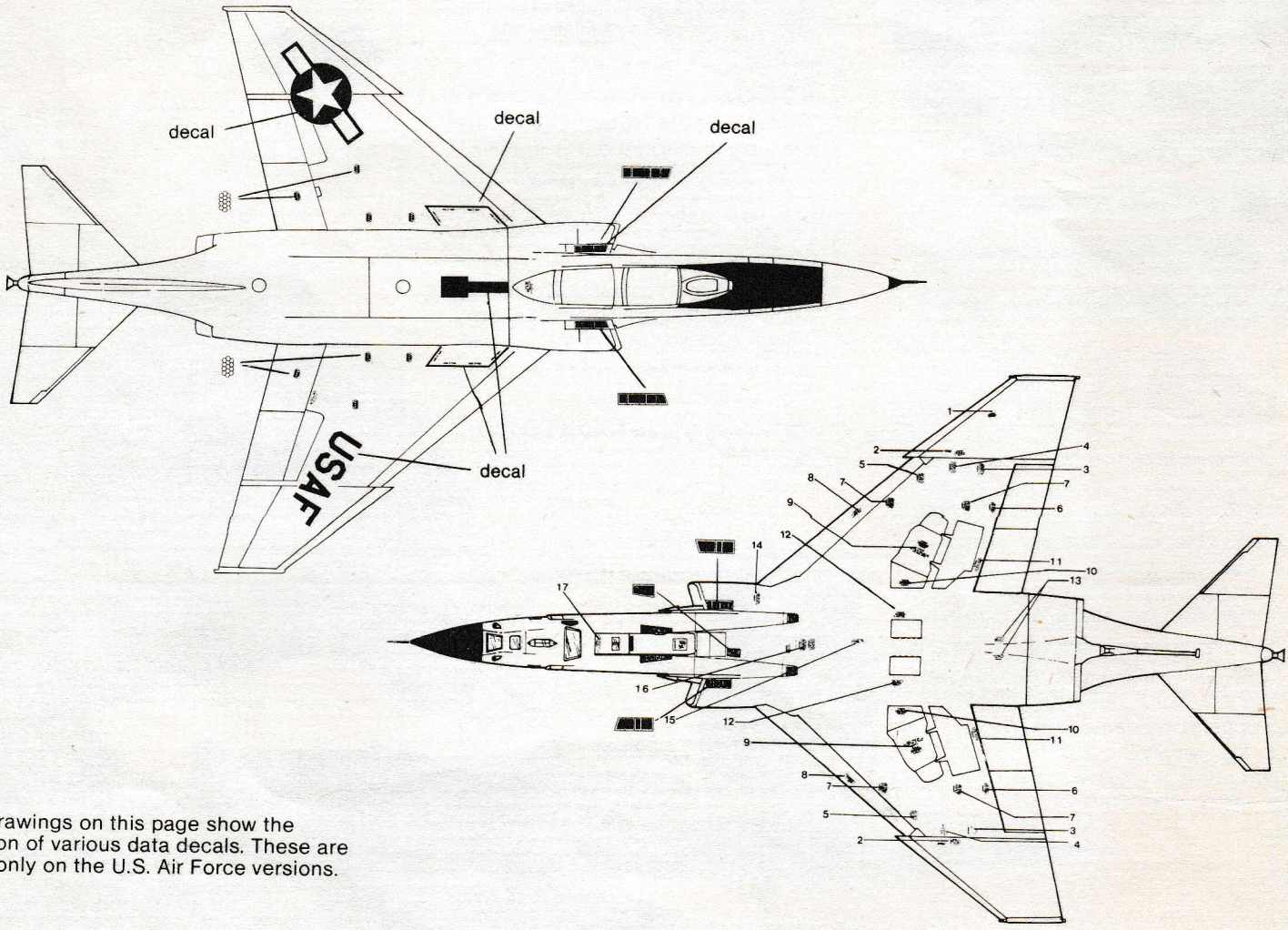
There are two methods of showing exhaust stains. The first is with an airbrush. This is a rather expensive item and requires practice to get the right effect. The second method is by using soft artist pastels or charcoal in shades of gray or black. Begin by grinding this material into a fine powder. Apply the powder to the model by rubbing it on with an old paint brush. Apply the color thicker and blacker near the exhaust outlet, and feather it out as it gets further away from the outlet. You should practice this on an old model or on a scrap of paper before trying it on your model. This technique is not very permanent, so it is a good idea to give your model a coat or two of Testor Dullcote to avoid rubbing off the stains.

Oil stains should be done very subtley. Oil really has very little color, so it only leaves light stains. Tint a small amount of thinner lightly with black paint. Add a small drop to the area you want to appear oily. Now with a strong breath, blow the "oil" back along the plane. Keep in mind the direction in which the plane flies, making sure you are blowing the "oil" from front to back. It is very easy to overdo this, so remember, one or two places are usually enough.

Paint chips are the simplest technique, but like the others, are easily overdone. An average military plane wouldn't have very many chips. They usually appear on the cutting edges of the propeller blades, the leading edges of wings and flying surfaces, and any areas where crew members or mechanics walk across the plane (i.e., wing roots). Use #1181 Testor Aluminum for paint chips, applying with a fine pointed brush. With a very little amount of paint on the brush, apply the chips in small dots, the smaller the better. Large amoeba shaped chips look too obtrusive. Be wary of fabric covered control surfaces though; they don't chip.

Experienced modelers do several things to aid them in their hobby. One of the most helpful is attending meetings of their local International Plastic Modeling Society chapter. Here they see and discuss modeling techniques. Your local hobby shop will help you locate your local I.P.M.S. group. Serious modelers also collect books and photographs to use as reference when they finish their models. Again, your local hobby shop can help. Last, but certainly not least, your own observation will prove helpful. Visit museums. Look at buildings and vehicles around you. Notice how rust streaks a metal roof. See the oil and dirt on a piece of road grading equipment. Study railroad boxcars and locomotives to see what the weather has done to them. Your own observation can be the best aid of all.

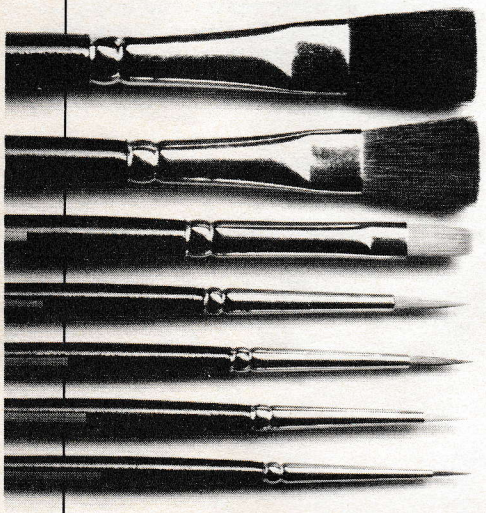
Remember: try not to overdo weathering — and *keep practicing*. Be patient, it takes time to discover and master all the tricks of this fascinating hobby.



The drawings on this page show the location of various data decals. These are used only on the U.S. Air Force versions.

PAINT BRUSH SELECTION MADE SIMPLE.

To a professional model builder, brush selection is one of the most critical aspects of painting and finishing. After contacting serious hobbyists, IPMS members, and professional model builders, we confirmed there are different brushes for different uses. The Model Master line of professional brushes makes the proper selection simple.



We determined, for example, that when selecting a brush, it is important to remember that the point of the brush determines its usefulness for detailing. A thick, round brush with a tip that comes to a point is perfect for detail work. It will lay down precise lines and dots and carry enough paint to get the job done. Thin brushes do not consistently retain their fine tip and paint dries too quickly on the brush. For these reasons, there are no #0000 or smaller-sized brushes in the Model Master line.

Model Master brushes are manufactured to exacting standards. Each type and size has been designed for performing specific techniques.

1/2" Black Sable Flat is for broad area color applications and washes. Because its bristles are fairly stiff, it is good for subtle drybrush effects on larger models.

3/8" Camel Hair Flat is for large areas and applying gloss finishes.

1/4" Golden Synthetic Chisel should be chosen for detail drybrush effects and painting medium sized areas (such as secondary patterns on 1/72 scale aircraft).

#2 Golden Synthetic Round and **#2 Red Sable Round** are ideal for painting individual parts, small assemblies and figures. They can also be used for pinpoint washes. The natural bristles of the Red Sable are preferred by artists.

#0 Golden Synthetic Round is perfect for applying liquid cement. It is also recommended for shading and blending of uniforms of figures 1/35 scale and larger.

#3/0 Red Sable Round should be used for precise small-scale work such as facial features, car chrome moulding strips and aircraft cockpit details.

Look for the Model Master professional brush display at your local hobby shop.

The Testor Corporation is committed to providing the serious hobbyist with the finest quality model finishing products.

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