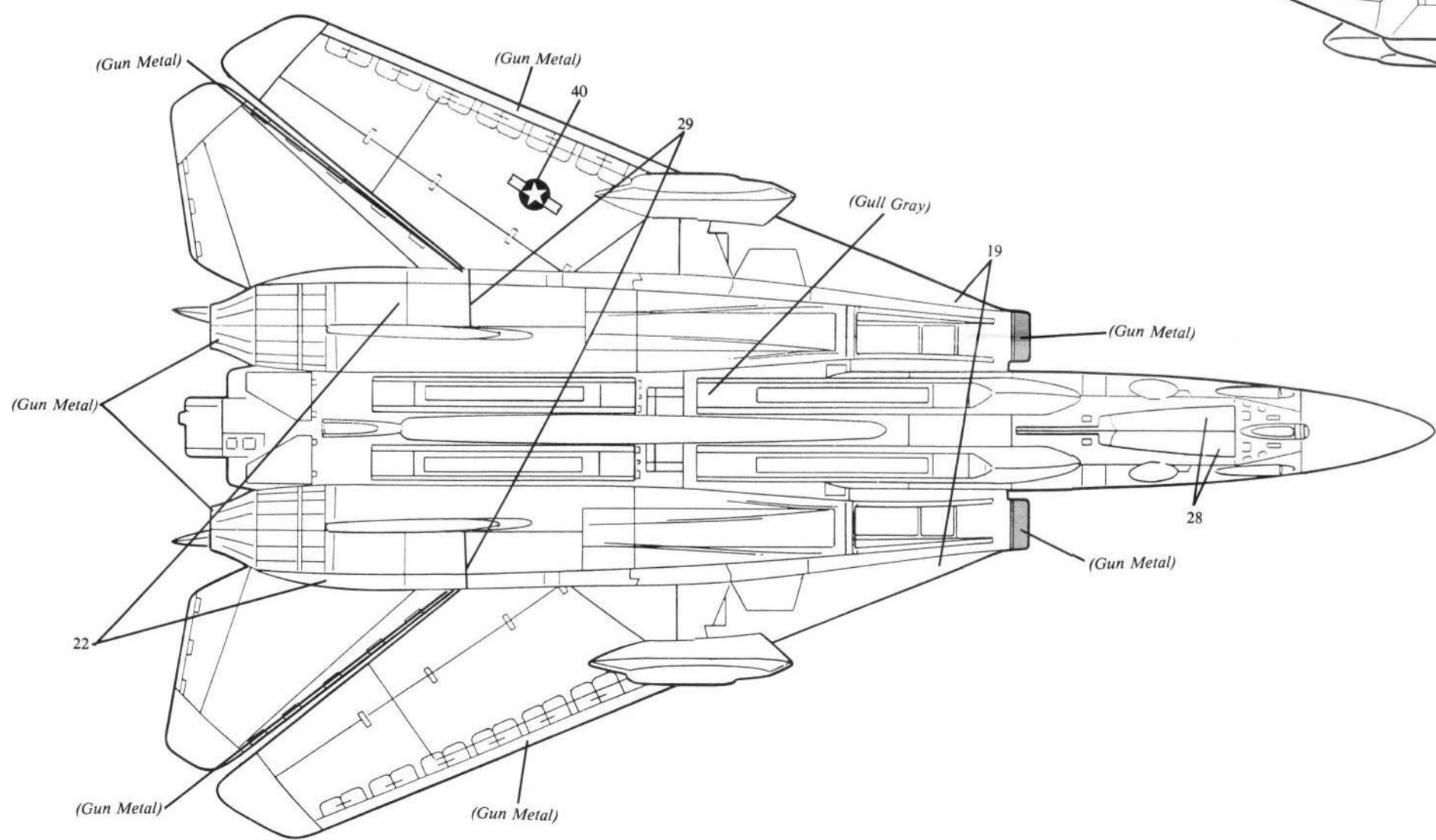
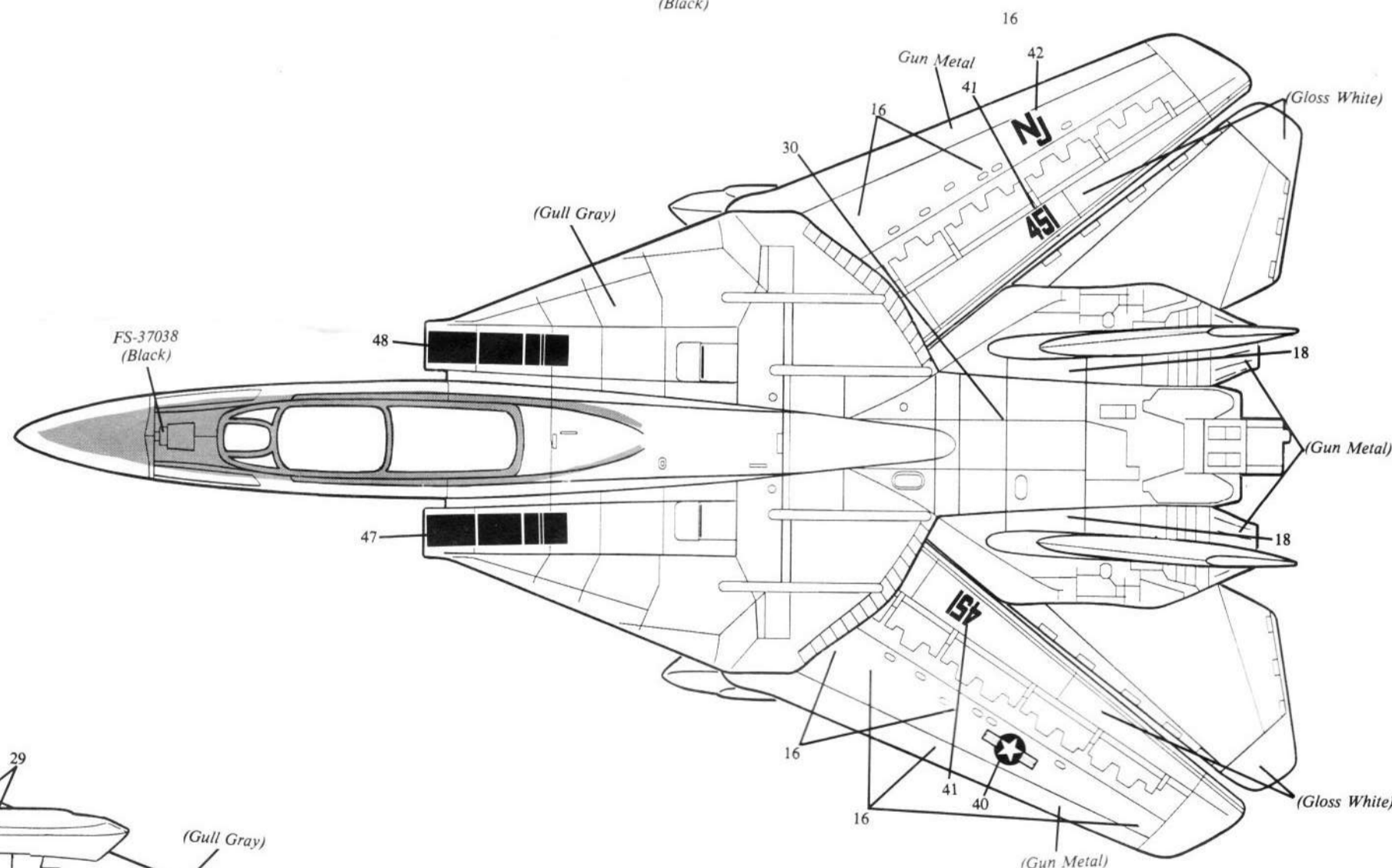
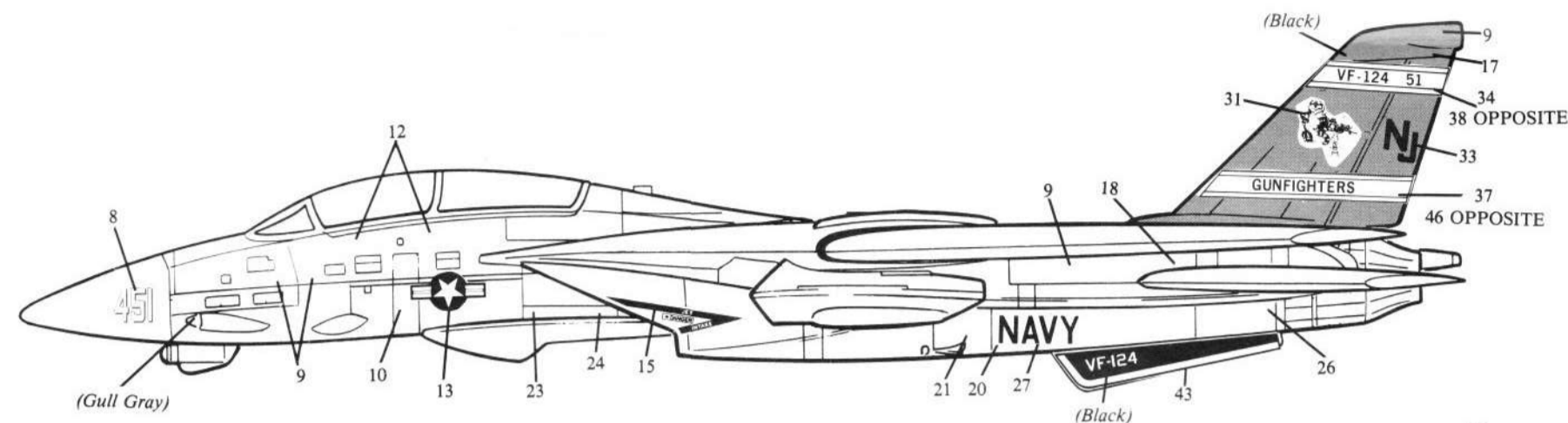
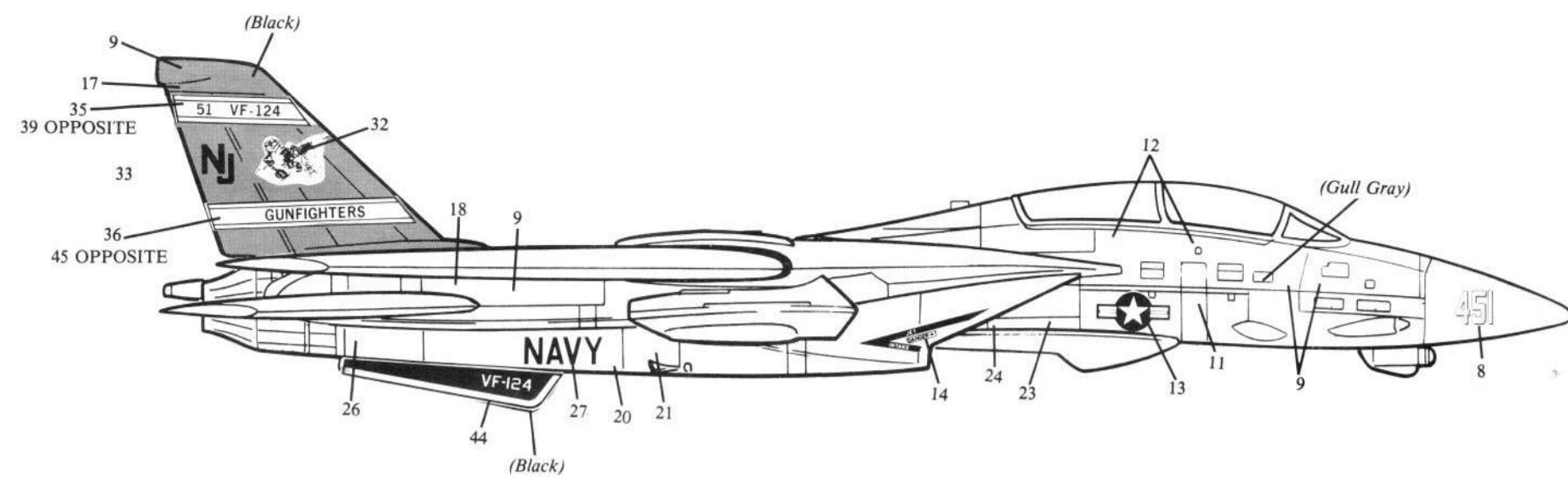


# DECAL PLACEMENT



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# FORCE ONE

GRUMMAN  
**F-14A TOMCAT**  
 1/72 Scale Model Kit

Stock No. 8698  
 Form No. 099-8698



## F-14 History

The F-14 was born out of a failure of another aircraft to fill the U.S. Navy's need for a fleet defense aircraft. The Pentagon had felt that a common aircraft, the F-111, could fill the needs of both the Air Force and Navy by making adaptations to a basic airframe. When the F-111B was first flown for the Navy in 1965, it proved beyond any doubt that this commonality concept would not work in the real world. The F-111B was too heavy, not maneuverable as needed, and its angle of attack at landing speeds had the nose up too high for the pilot to see the aircraft carrier when landing. As the Navy had suspected during design studies, the F-111 was just out of place on an aircraft carrier. Consequently, the Navy advanced money to Grumman for design studies of an advanced fighter even though research on improving the F-111B was still going on. In May 1968, the U.S. Congress refused to advance anymore research money on the F-111B program. The Navy had by this time two design studies ready from Grumman which they presented to the Congress in the form of a comparison study between the F-111B and the VFX (1 and 11). This study, named "Navy Fighter Study 11" convinced the Congress that specialization, not commonality, was the way to go.

In July of 1968 the Navy issued bids to five U.S. aircraft manufacturers for an advanced defense fighter. McDonnell Douglas and Grumman submitted the most promising proposals and after intense studies, Grumman was chosen as the winner of the design competition in January of 1969. They received the contract the following month to build the new VFX. Grumman had learned many lessons in aircraft design over the years and they applied these to the new plane, renamed the **F-14** from the VFX. They also incorporated all the very latest technology in developing the F-14 into an air superiority aircraft. Grumman had decided on a swing-wing design from the very start; however, a new twist was added in that a computer would decide when to move the wing, based on speed, altitude, attitude and other inputs. There is a manual override for special situations. Grumman pioneered electron-beam weld

ing in the construction of the many titanium parts used in the aircraft, more than twice as much as used in the F-4 Phantom. They did borrow the avionics first developed for the F-111B, this is the AWG-9 pulsed phase radar and the high-technology computer used to run it. This radar is the key to making the F-14 the superior aircraft that it is. This system can "see" over 188 miles, track up to 24 targets, and simultaneously hit six targets controlling individual AIM-54 missiles. The F-14 Tomcat is specifically designed to fight in three separate modes. For close up engagements it has a 20mm cannon, Sparrow and Sidewinder missiles. Standard interceptions call for the 4 AIM-54 Phoenix missiles which can hit a target over 100 miles away plus the other missiles it carries. For maximum engagement the Tomcat carries six of the long range Phoenix missiles only. Another carry over from the F-111B project were hightech engines, the TF30. Although producing respectable horsepower, the TF30 engines have not been as reliable as they could. Consequently in 1984, the GEFI 10 engine was chosen as the standard Tomcat engine which greatly improved its performance envelope.

The first F-14 flew on the 20th of December 1970 and went into operational service in mid-September of 1974 with VF-1 and VF-2 aboard the aircraft carrier Enterprise. It has since gone through several upgrades. The F-14A Plus has the new GE-110 engines and in 1988 the F-14D entered service with completely new avionics and a new AMRAAM missile replacing the AAM-Sparrow.

The F-14 is considered one of the top air-superiority fighters in the world and compares favorably with the F-15 Eagle and the Soviet Foxbat and new Fulcrum. It is one of the fastest aircraft at low altitude at Mach 1.2, at altitude it travels at over Mach 2.34. Because of its swing-wing geometry it is extremely maneuverable, outperforming many other aircraft. The F-14 saw combat in the gulf of Sidra in 1981, where they took out two Soviet Sukhoi Su-22 Aircraft of the Libyan Air Force. This more than proved the F-14 Tomcat is a force to be reckoned with.

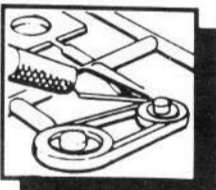
**IMPORTANT:** Before you begin to assemble your model kit, study the instructions carefully. This will help you to familiarize yourself with the part locations as you proceed. Prior to cementing parts together, be sure to "TEST FIT" them in order to assure proper alignment and also to check for excess "FLASH" that may occur along parting lines. Use a sharp hobby knife or file to remove flash if necessary.

If you wish to paint your model, various sub-assemblies and components should be painted before any parts are attached. During assembly, you may note that the recommended color is stated after the part name.

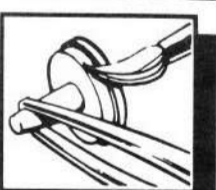
This model kit is molded from the finest high-impact styrene plastic. Use only paints and cements which are specifically formulated for styrene. Read all labels and warnings carefully.

Because the cement will only adhere to bare plastic it is necessary to remove any paint from the area to which the cement is to be applied.

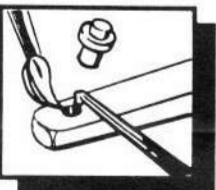
**HOBBY KNIFE**  
 Use a sharp hobby knife to remove parts from the trees. Some parts may appear to have an extra "tab" on them, these should be removed.



**TWEEZERS**  
 Tweezers are handy for holding very small parts during assembly or painting.



**CEMENT**  
 We recommend the use of liquid polystyrene cement. Apply with a fine brush or toothpick. Use cement sparingly or a sloppy job will result.



### BUILDING TIPS FOR THE ADVANCED MODELER

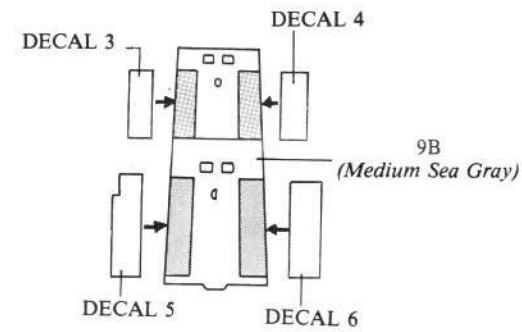
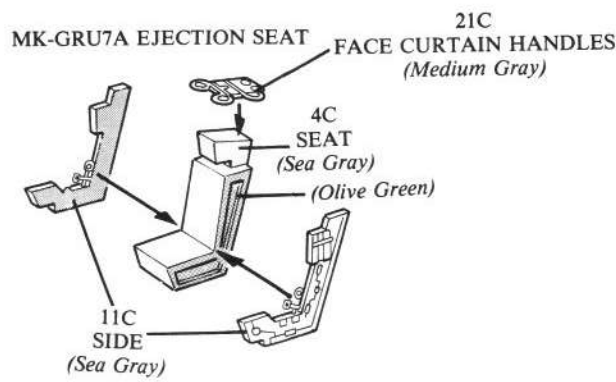
For the best possible finish, your kit should be painted, even if it is molded in color. Paint should be applied evenly, in several thin coats rather than one heavy coat. The first coat should not completely cover the surface. Each layer should be allowed to thoroughly dry before the next coat is applied. Also, each coat should be "wet sanded" using No. 1200 wet or dry sandpaper which is slightly damp; except for the final coat. Be careful not to remove any detail while sanding.

Parting lines and glue joints should be sanded or filed prior to painting and because paint has a tendency to draw away from sharp edges all sharp corners should be filed. Use filler putty designed for plastic to fill small gaps that may occur between parts, and to blend contours. This should be done only after the first or "primer" coat of paint is applied.

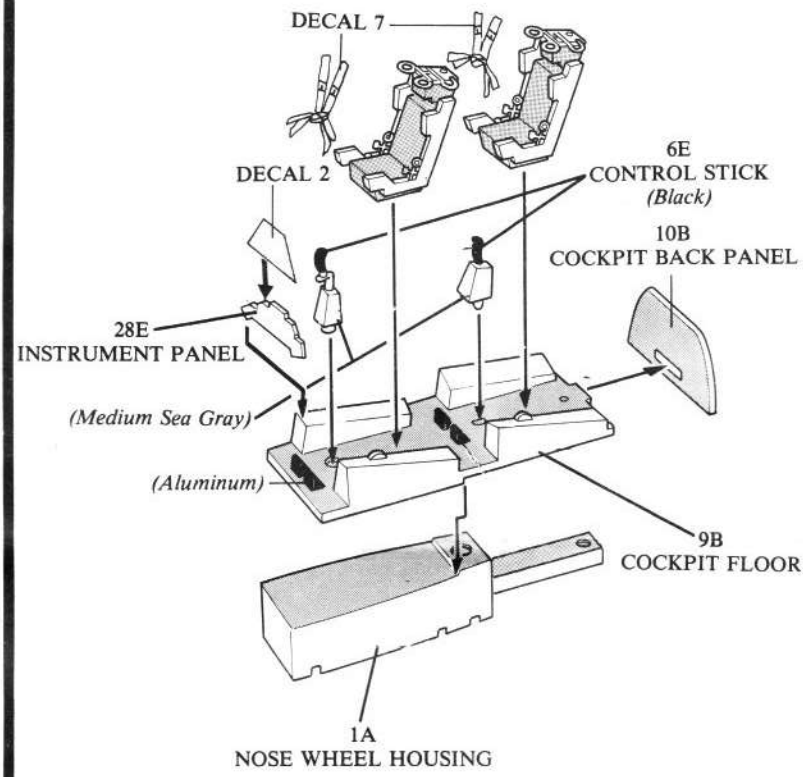
It is important to keep your hands clean when you are working with your model and always wash the parts before painting. This will remove any mold release agent that may have been used during manufacture, body oil from your hands, sanding residue, and dust, which is naturally attracted to plastic by static electricity. Use a mild solution of dishwashing detergent and water. Use a tack rag to dry the parts. **DO NOT** use paper towels or tissues, since they will leave lint on the part.

We take great pride in providing the finest model kits available, giving strong attention to detail and craftsmanship. Should you have any difficulty with assembly or missing parts, please call.  
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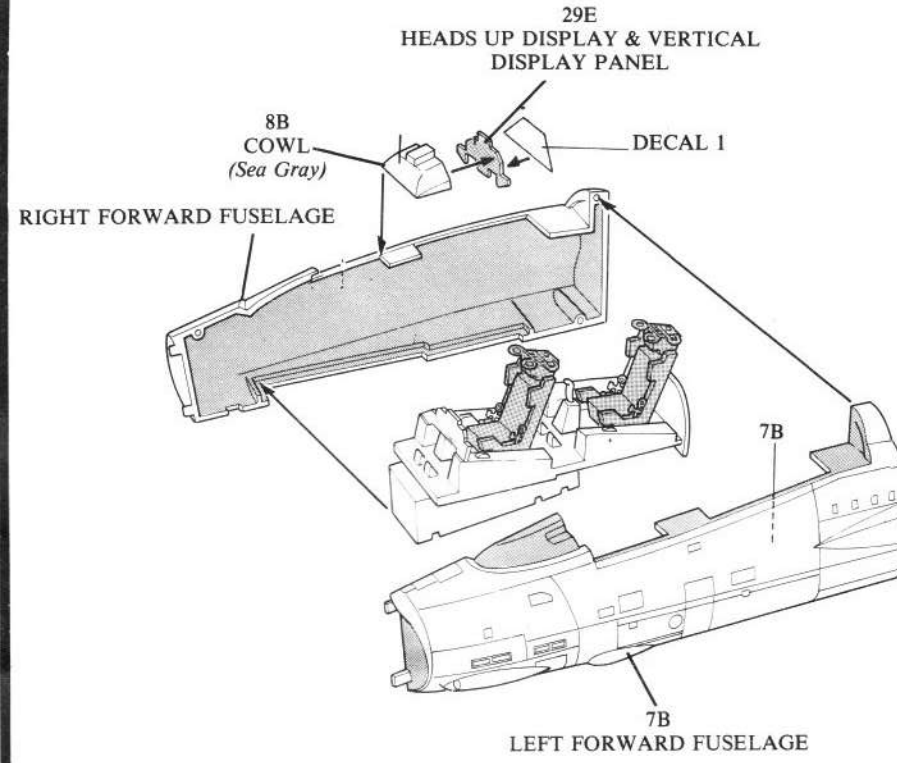
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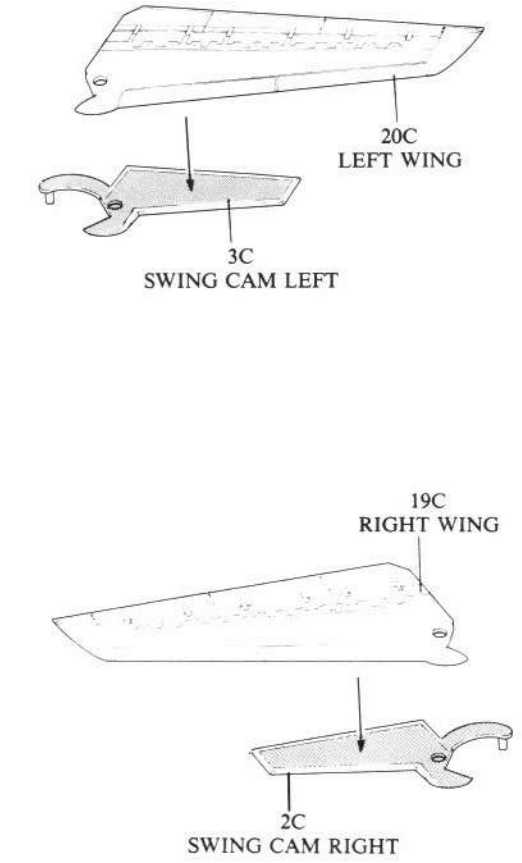
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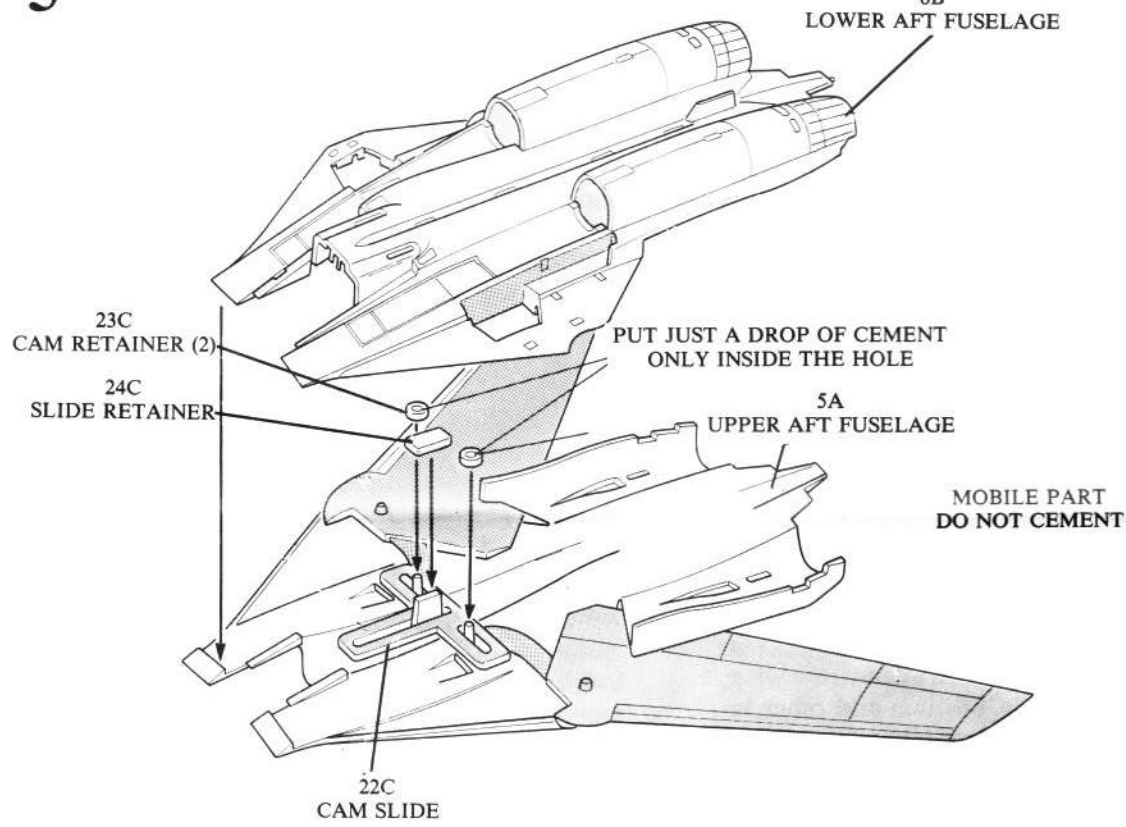
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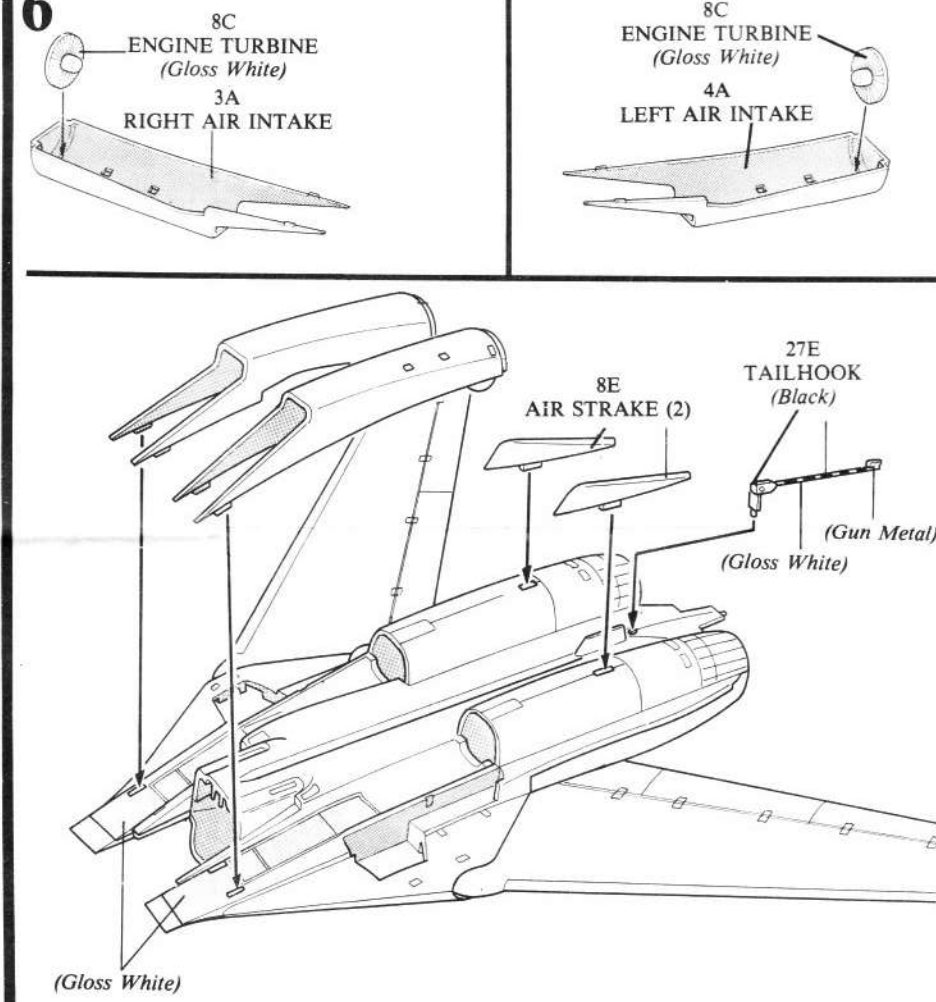
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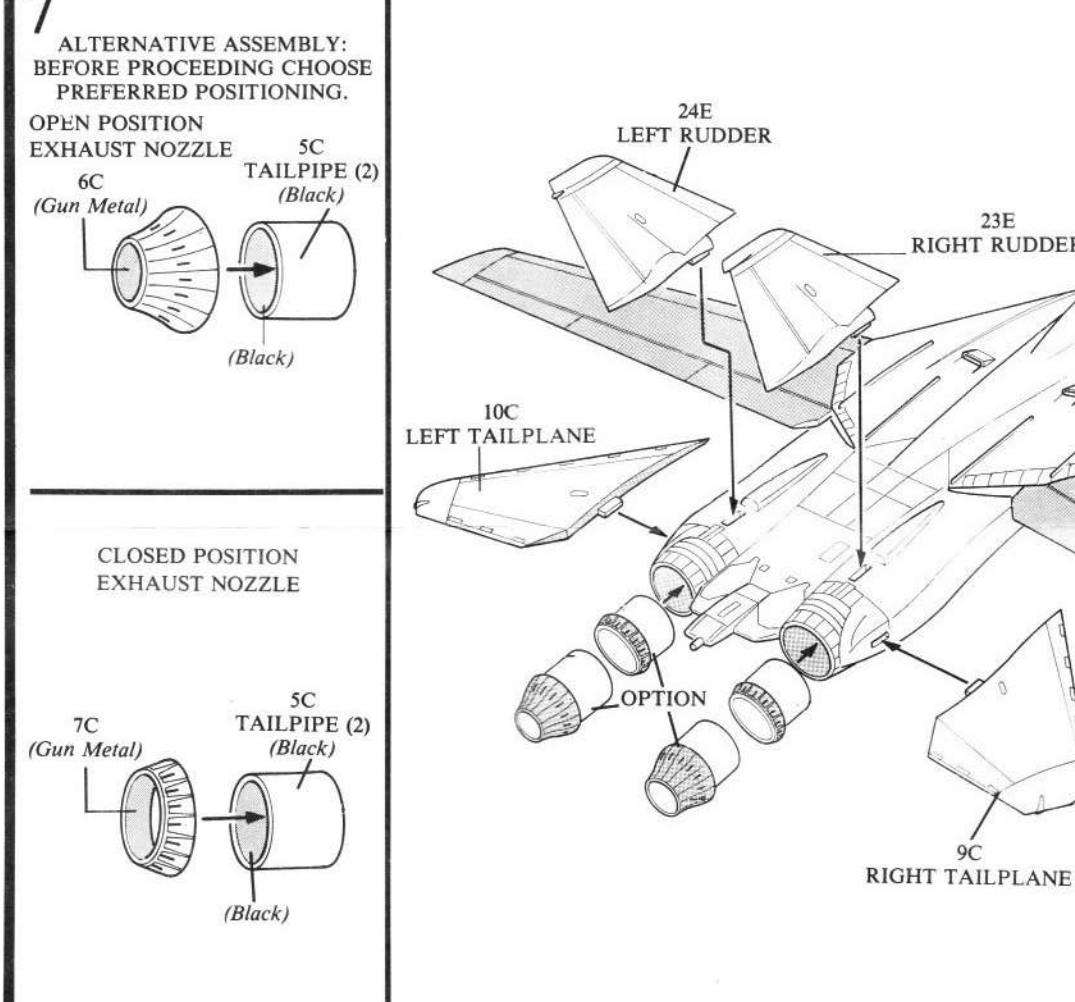
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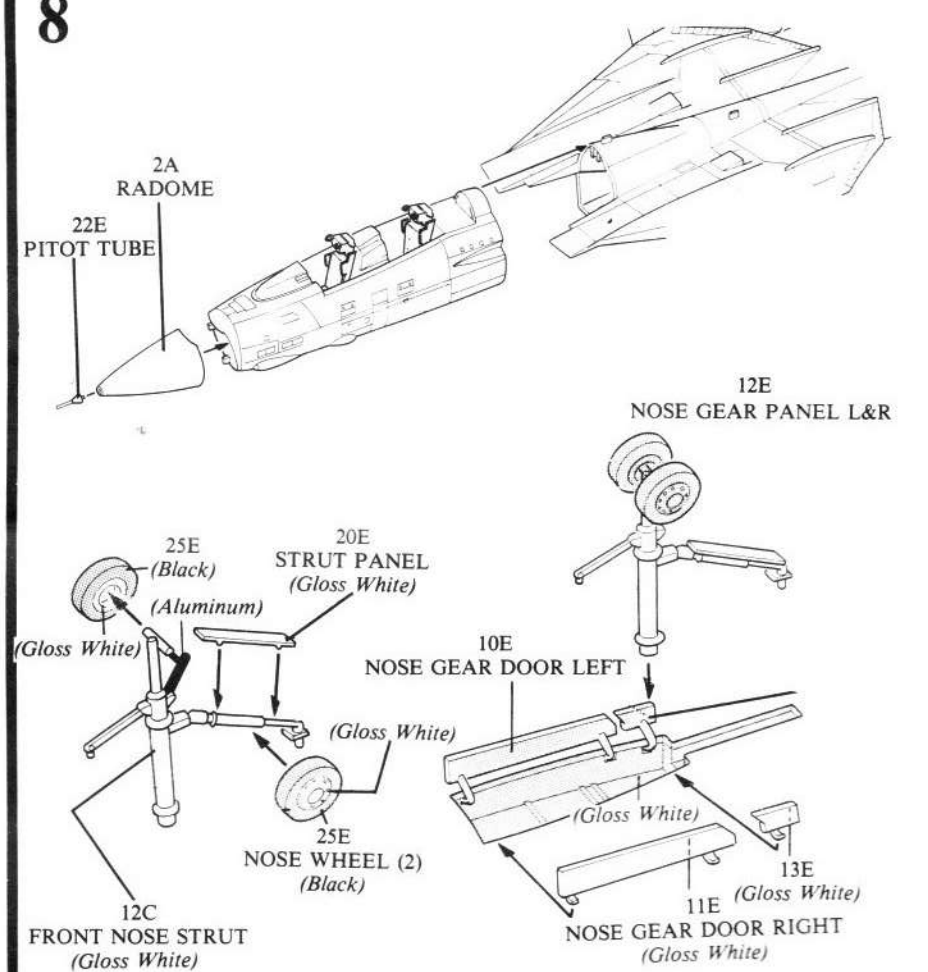
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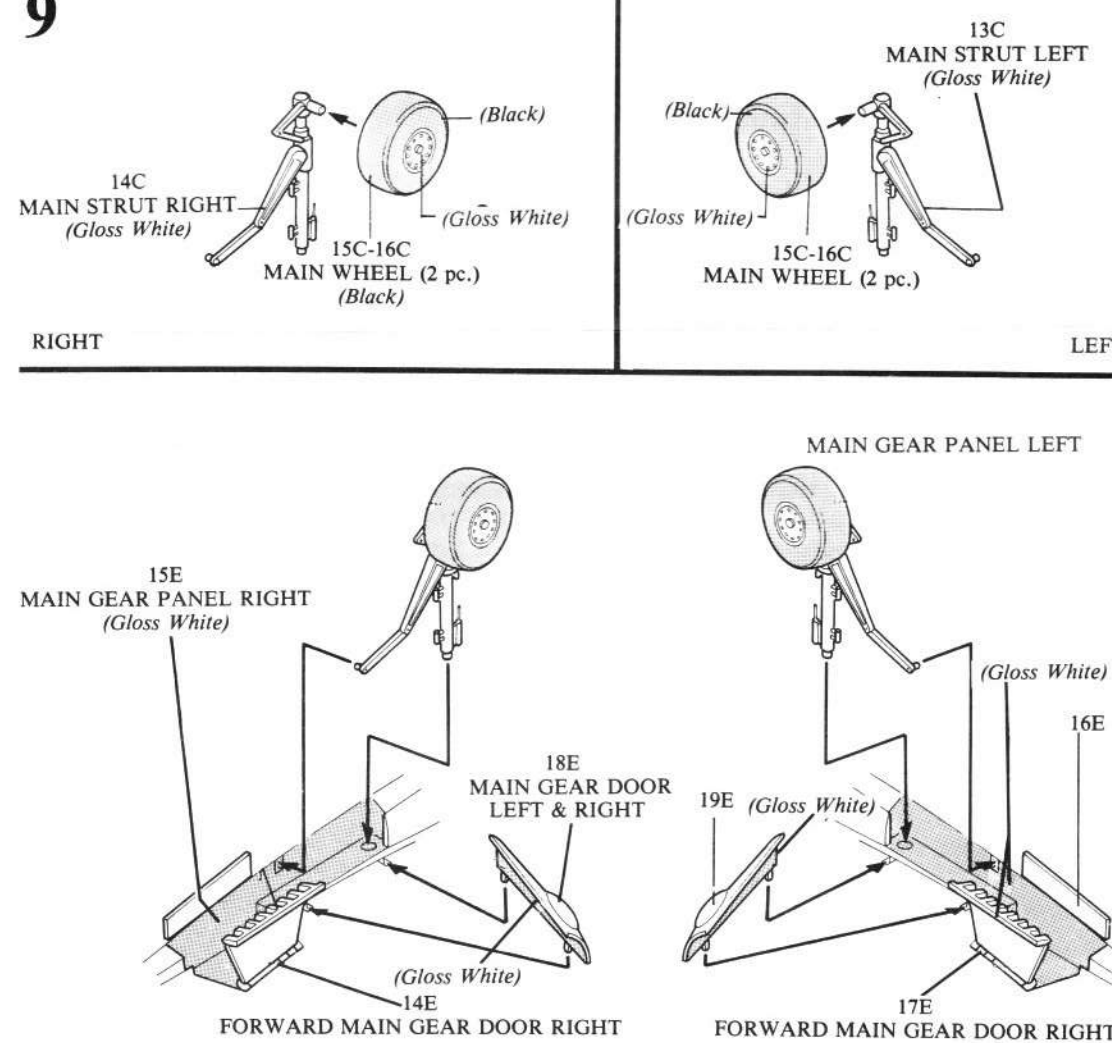
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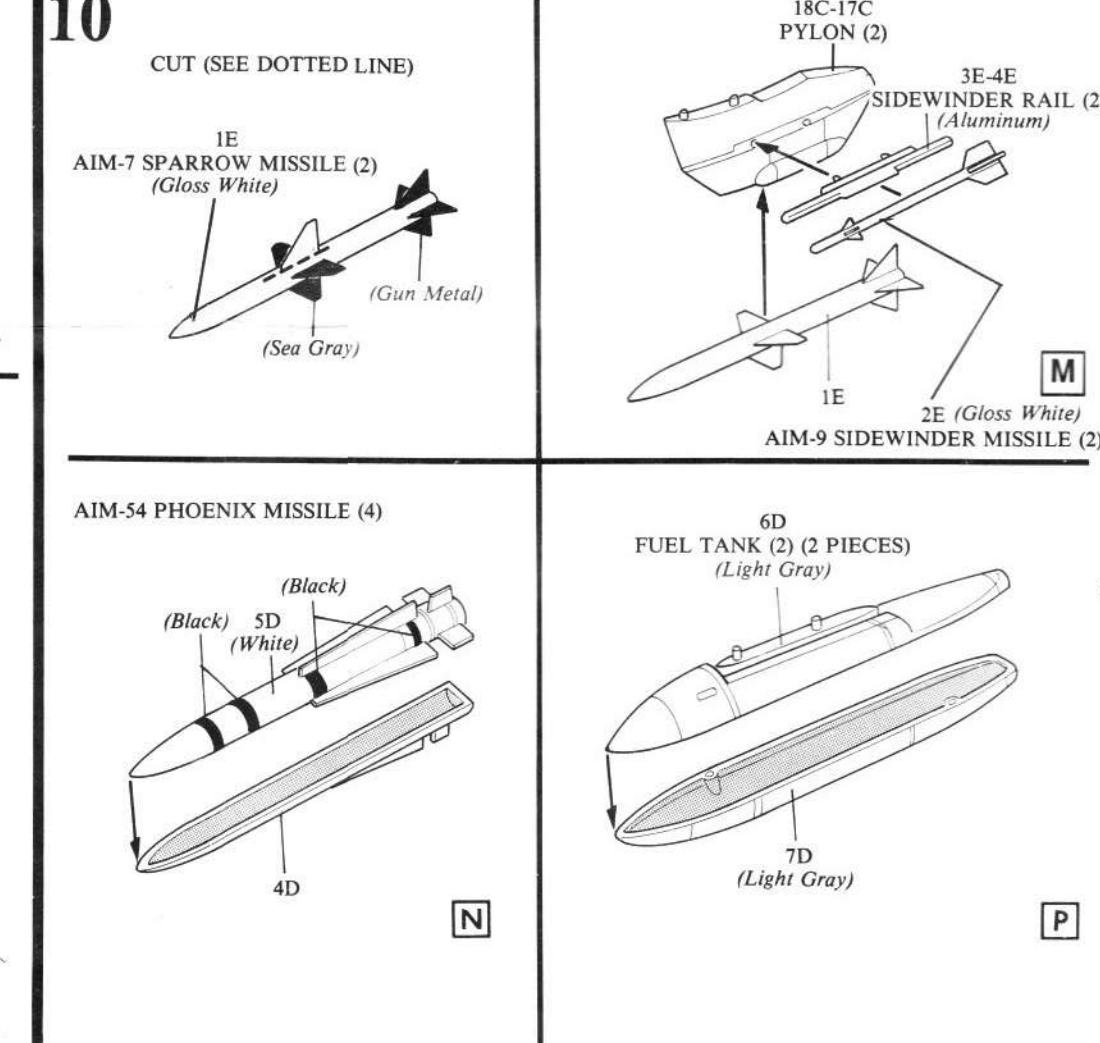
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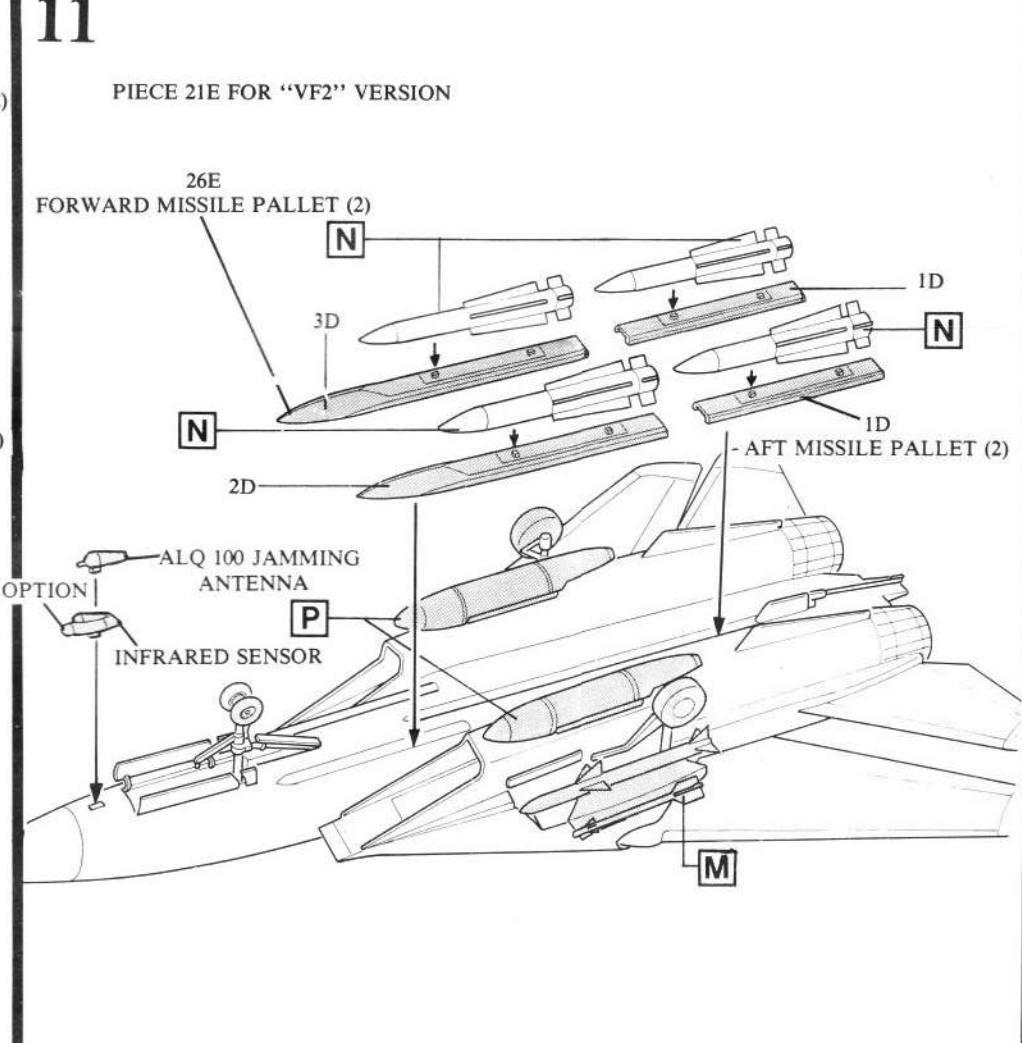
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