

U.S.A.F. PHANTOM F-4E



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For many years it has been an accepted fact that shipboard aircraft, particularly fighters, have to be somewhat inferior to their land-based counterparts because of the extra weight they must carry in wing folding equipment, low speed landing devices, extra strengthening, etc. This "accepted fact" received a severe shaking when the U.S.A.F. ordered its first McDonnell-Douglas F-4 Phantom II's in 1962. By doing so the Air Force tacitly acknowledged the unique superiority of this shipboard fighter design, a design so well executed that uses for the airplane far beyond the original specifications were found. The Air Force didn't just go out and order the Phantom without carefully weighing their requirements against the capabilities of the aircraft, and inter-service rivalry certainly made the evaluation even more difficult. But nothing else in the entire world at that time even approached the Phantom's all-around performance, so the choice was almost a foregone conclusion.

From the very earliest stages of its career the F-4 broke one record after another: 1,600 mph over a 16 km straightaway, 902 mph at low altitude over three km, L.A. to New York - 2 hr 28 min (869 mph average), altitude record of 98,557 ft in 6 min 12 seconds and a host of other marks, some of which still stand. These records are all the more remarkable when one considers that they were set by standard military fighters which, in order to preserve secrecy, weren't pushed to the limit.

The first U.S.A.F. Phantoms were standard F-4B's redesignated as F-110's. Soon, versions designed specifically to meet Air Force requirements began rolling from the production lines. Major differences in the F-4C, the Air Force's first "Air Force" Phantom, included dual controls, revised landing gear, refueling equipment, and different avionics. Then came the F-4D with improved Air-Ground Weapons Systems. These versions served exceptionally well in Vietnam as did the RF-4C, an unarmed photo-reconnaissance version of the F-4C. But fighter pilots are traditionally aggressive and after many air-to-air combats with MiG-17's and MiG-21's a shortcoming became apparent. Its missiles were not always effective at close range. What the F-4 needed was a gun for the close-in dogfight

type combat that was becoming more common. This brought about the introduction of the F-4E, the most potent of the Phantoms for aerial dogfighting. With its 20 mm M-61A1 Vulcan cannon, exceptional fire control radar, more powerful GE J-79-17 engines, radar guided Sparrows and heat-seeking Sidewinder missiles, it became the ultimate vehicle in which to hunt the MiG. The ground attack capabilities remained much the same and F-4E's often carried ordnance along with the bombers they were protecting.

Development continues on the F-4E: the very latest now have both the fixed and retractable combat slats to increase maneuverability and existing aircraft have been modified to this standard.

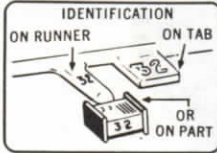
It would appear that this inspired design, which has already served with great distinction since its service debut in 1961, is destined to serve well into the future.

SPECIFICATIONS McDONNELL-DOUGLAS F-4E PHANTOM II

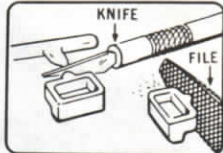
SPAN:	38' 4 ⁷ / ₈ "
LENGTH:	62' 11 ³ / ₄ "
HEIGHT:	16' 5 ¹ / ₂ "
WEIGHT:	29,000 lbs empty 59,000 lbs maximum T.O.
RATE OF CLIMB:	28,000 fpm
SERVICE CEILING:	70,000 ft
RANGE (MILES):	900 combat 2,300 ferry
MAXIMUM SPEED:	Mach 2.4 at 46,000 ft
POWER:	Two J-79GE-17 of 17,900 lbs thrust with afterburner
ARMAMENT:	One 20 mm M-61A1 Vulcan cannon (one hundred rounds per second), four Sparrow III radar guided missiles, two or four Sidewinder heat-seeking missiles. Some 16,000 lbs of underwing stores in many different combinations can also be carried.
CREW:	A pilot and a Weapons Systems operator (both have full flying controls and instruments)

GET YOUR TOOLS READY:

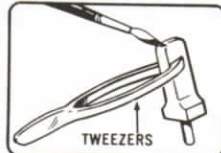
BEFORE YOU BEGIN



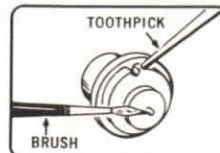
REMOVE PART WHEN CALLED FOR



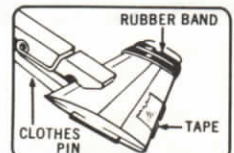
TO REMOVE AND TRIM PARTS



TO HOLD PARTS



TO APPLY CEMENT



TO HOLD PARTS AFTER CEMENTING

HELPFUL MODELING HINTS

1. Fit parts together before cementing.
2. Trim away excess plastic.
3. Use cement sparingly; too much will damage your model.

4. Suggested painting colors are indicated by . Paint small parts before detaching from runner.
5. **TO OBTAIN A GOOD BOND, REMOVE PAINT WHERE PARTS ARE TO BE CEMENTED.**

IF YOU WISH TO STOP AT ANY POINT DURING THE CONSTRUCTION OF YOUR MODEL, DO SO AT THE END OF AN ASSEMBLY STEP.

1 COCKPIT ASSEMBLY

LIGHT OLIVE GREEN
ME 3/30

MATT OLIVE GREEN
ME 3/30

MATT EARTH BROWN
ME 5/29

MATT BLACK
ME 6/33

MATT SEA GREY
ME 2/27

MATT WHITE
ME 10/34

SILVER
GE 8/11

MATT FLESH
ME 7/61

MATT METALLIC GREY = MIX (5) PARTS GE 8/11 TO (1) PART ME 2/27

MATT MEDIUM GREY = MIX (1) PART ME 2/27 TO (2) PARTS ME 10/34

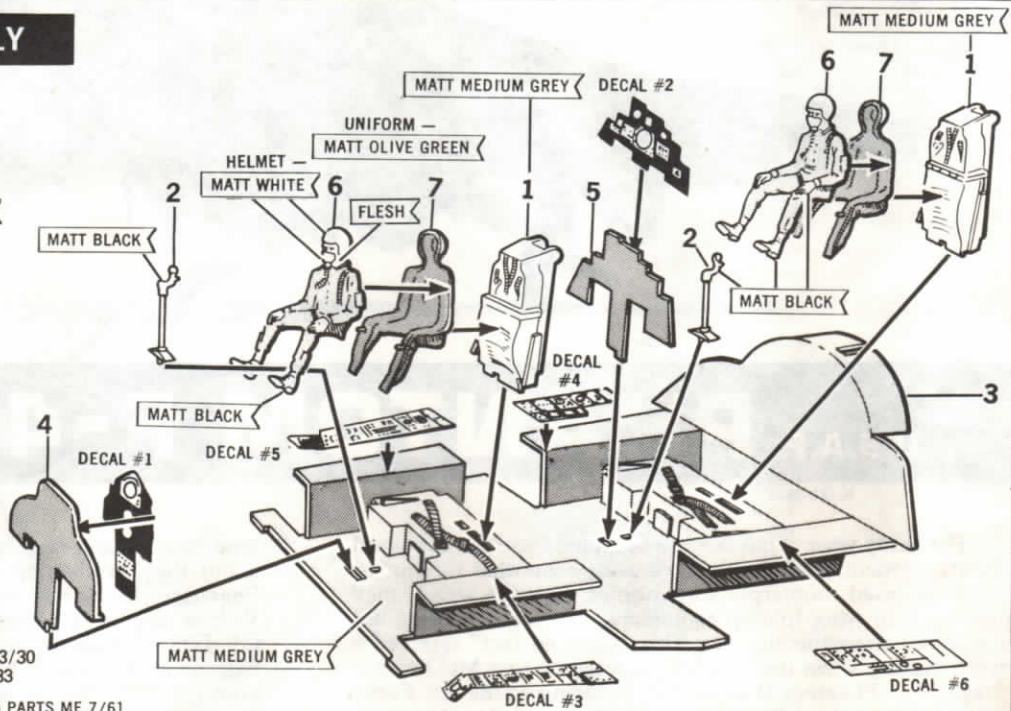
MATT LIGHT CAMOUFLAGE GREY = MIX (1) PART ME 2/27 TO (20) PARTS ME 10/34

MATT DARK OLIVE GREEN = MIX (5) PARTS ME 3/30 TO (1) PART ME 6/33

MATT LIGHT TAN = MIX (1) PART ME 5/29 TO (2) PARTS ME 7/61

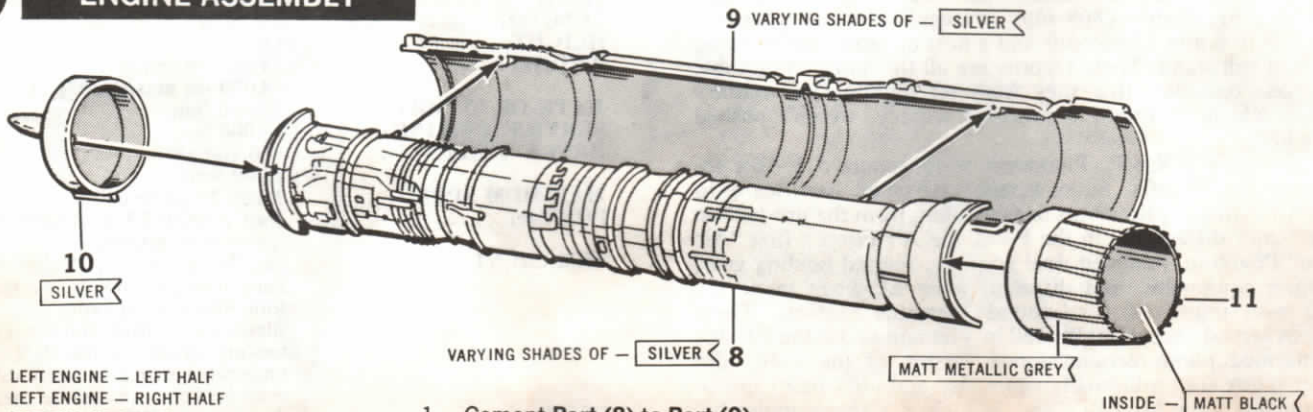
NOTE: FOR VARYING SHADES OF FLAT METALLIC GREY, VARY THE DIFFERENT COLOUR AMOUNTS AND ADD WHITE AS NEEDED

- | | |
|----------------------------|--------------------------------------|
| 1 SEAT BACK (2 Parts) | 5 RADAR OPERATOR'S INSTRUMENT PANEL |
| 2 CONTROL COLUMN (2 Parts) | 6 CREW FIGURE - FRONT HALF (2 Parts) |
| 3 COCKPIT FLOOR | 7 CREW FIGURE - BACK HALF (2 Parts) |
| 4 PILOT'S INSTRUMENT PANEL | |



1. Cement two Parts (1) and two Parts (2) to Part (3).
2. Apply DECALS to Parts (3), (4) and (5).
3. Cement (4) and (5) to Part (3).
4. Cement TWO Parts (6) to TWO Parts (7).
5. Cement CREW FIGURES to SEATS.

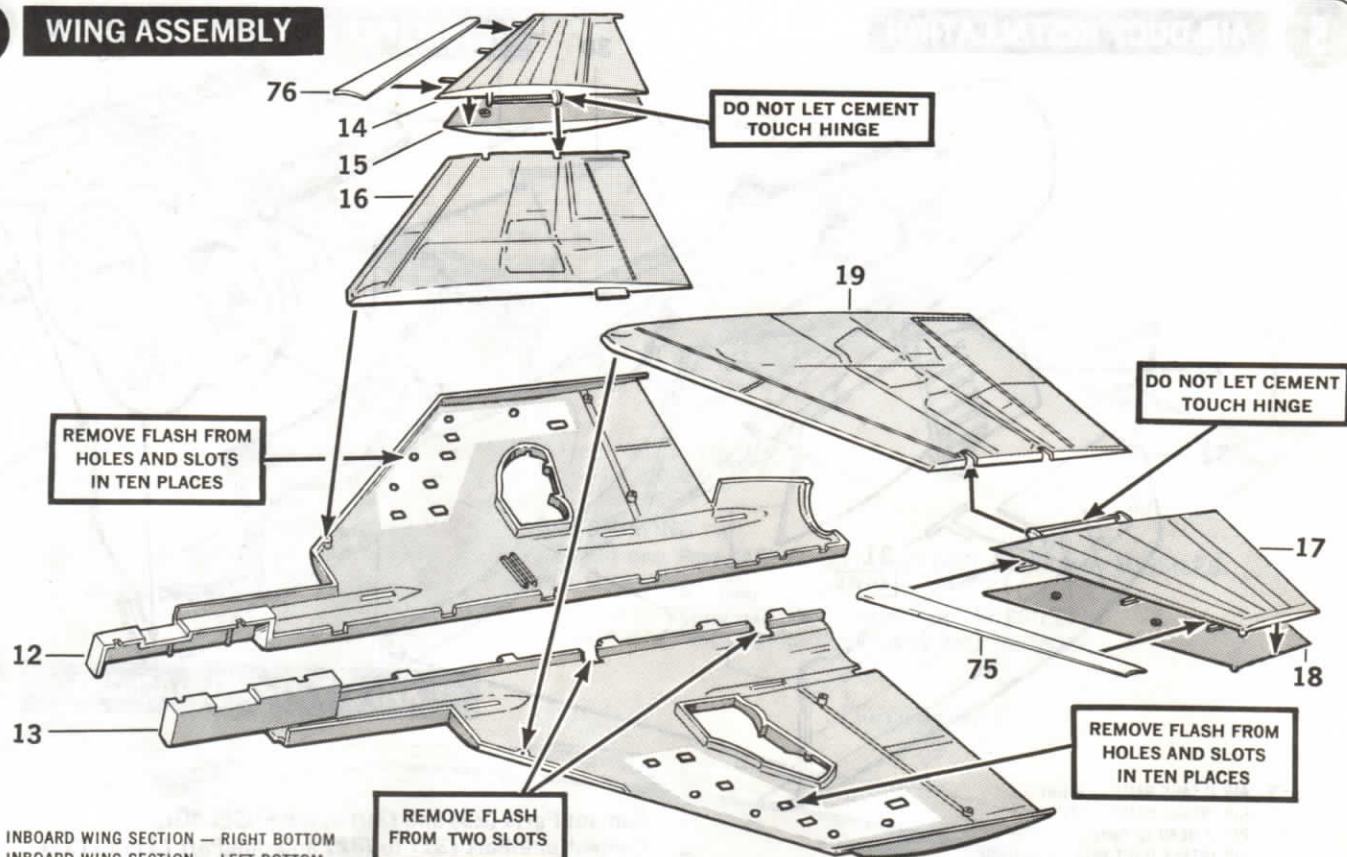
2 ENGINE ASSEMBLY



- | |
|----------------------------|
| 8 LEFT ENGINE - LEFT HALF |
| 9 LEFT ENGINE - RIGHT HALF |
| 10 LEFT ENGINE INTAKE |
| 11 ENGINE EXHAUST CONE |

1. Cement Part (8) to Part (9).
2. Cement Parts (10) and (11) to Parts (8) and (9).

3 WING ASSEMBLY

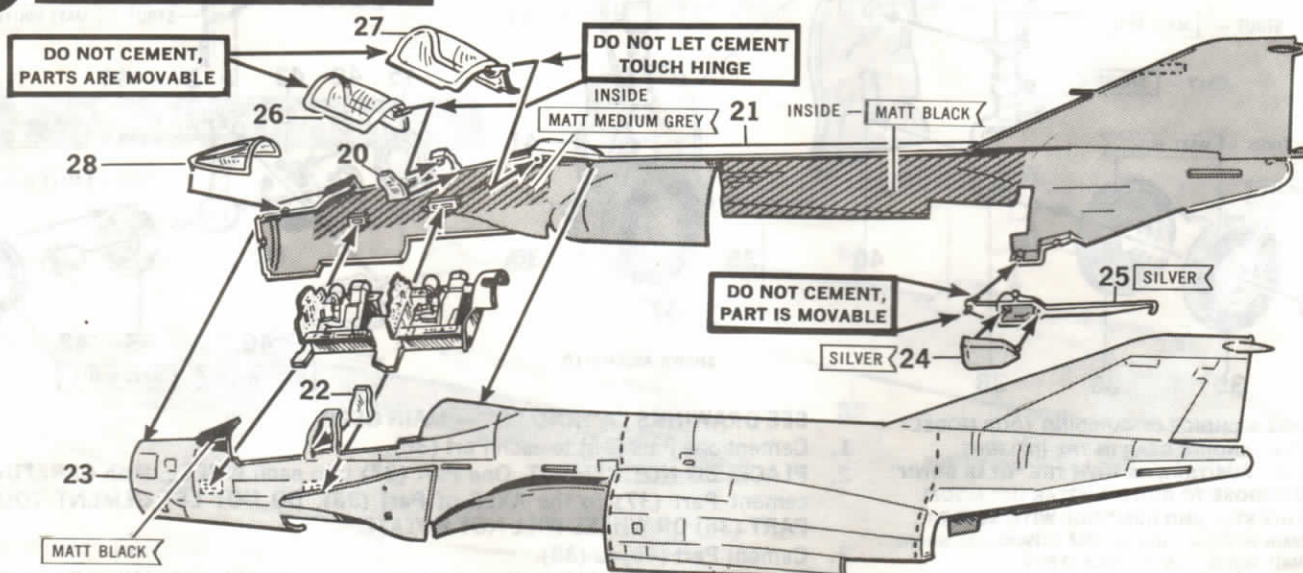


- 12 INBOARD WING SECTION — RIGHT BOTTOM
- 13 INBOARD WING SECTION — LEFT BOTTOM
- 14 OUTBOARD WING SECTION — RIGHT TOP
- 15 OUTBOARD WING SECTION — RIGHT BOTTOM
- 16 INBOARD WING SECTION — RIGHT TOP
- 17 OUTBOARD WING SECTION — LEFT TOP
- 18 OUTBOARD WING SECTION — LEFT BOTTOM
- 19 INBOARD WING SECTION — LEFT TOP
- 75 OUTBOARD WING SLAT — LEFT
- 76 OUTBOARD WING SLAT — RIGHT

REMOVE FLASH FROM TWO SLOTS

1. OPEN HOLES in Parts (12) and (13) for UNDERWING STORES.
2. Cement Part (12) to (13) and (14) to (15). Cement (76) to (14).
3. PLACE, DO NOT CEMENT, the HINGES on RIGHT OUTER WING into the NOTCHES in Part (16), then cement (16) to (12). DO NOT LET CEMENT TOUCH HINGES OR WING WILL NOT FOLD INTO STOWED POSITION.
4. Cement (17) to (18) and then (75) to (17). Assemble LEFT OUTER WING and Part (19) to (13) in the same way as RIGHT WING.

4 FUSELAGE ASSEMBLY

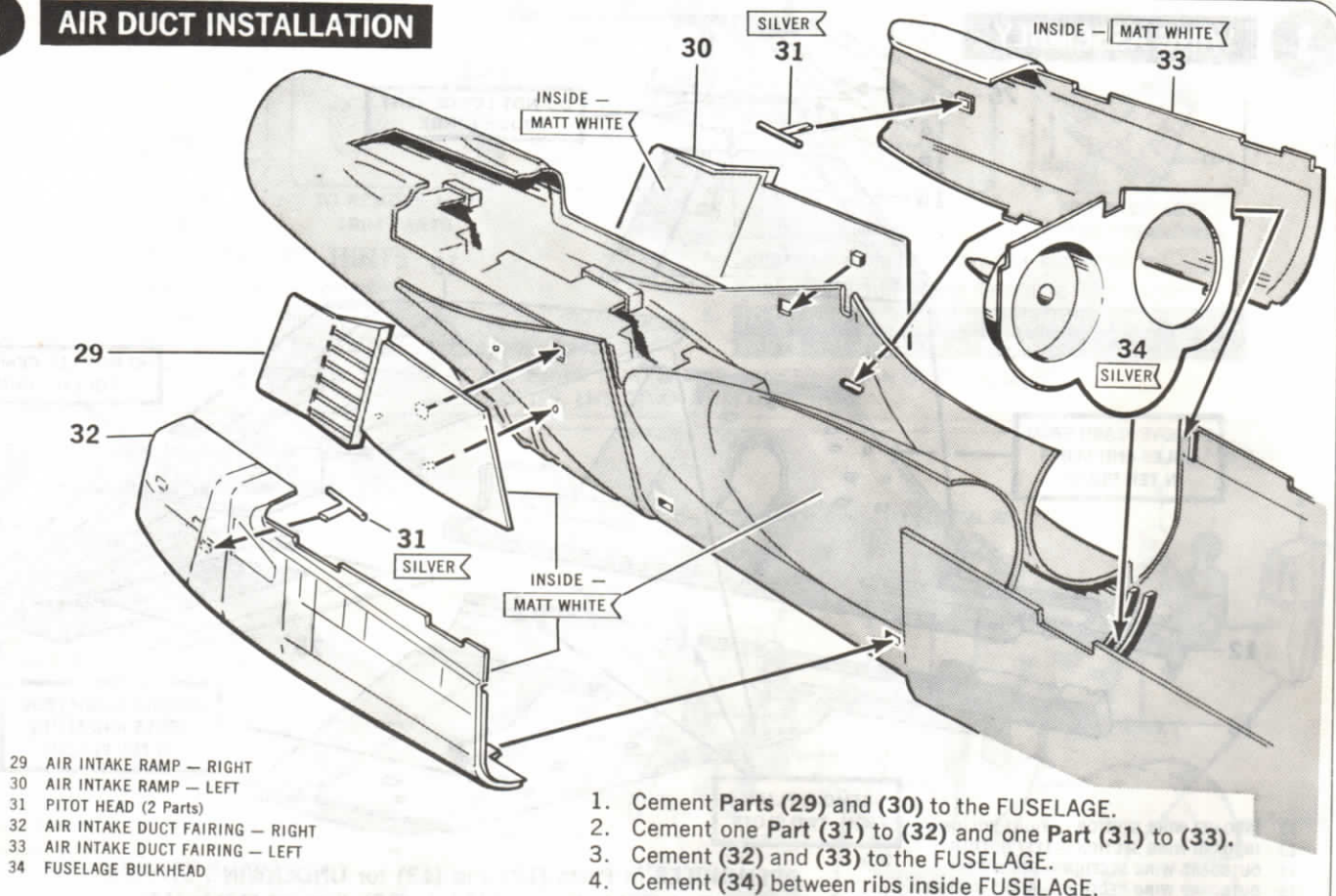


- 20 RIGHT WINDOW (CLEAR)
- 21 FUSELAGE — RIGHT HALF
- 22 LEFT WINDOW (CLEAR)
- 23 FUSELAGE — LEFT HALF
- 24 ARRESTING HOOK — LEFT HALF
- 25 ARRESTING HOOK — RIGHT HALF
- 26 PILOT'S CANOPY (CLEAR)
- 27 RADAR OPERATOR'S CANOPY (CLEAR)
- 28 WINDSHIELD (CLEAR)

1. Cement Part (20) and the COCKPIT ASSEMBLY from Step 1 into Part (21). Cement (22) into (23).
2. Cement (24) to (25).
3. PLACE, DO NOT CEMENT, Parts (25), (26) and (27) in PLACE in Part (21) then CAREFULLY cement (23) to (21). DO NOT LET CEMENT TOUCH HINGE PINS OR PARTS WILL NOT MOVE.
4. Cement (28) to the FUSELAGE only.

5

AIR DUCT INSTALLATION

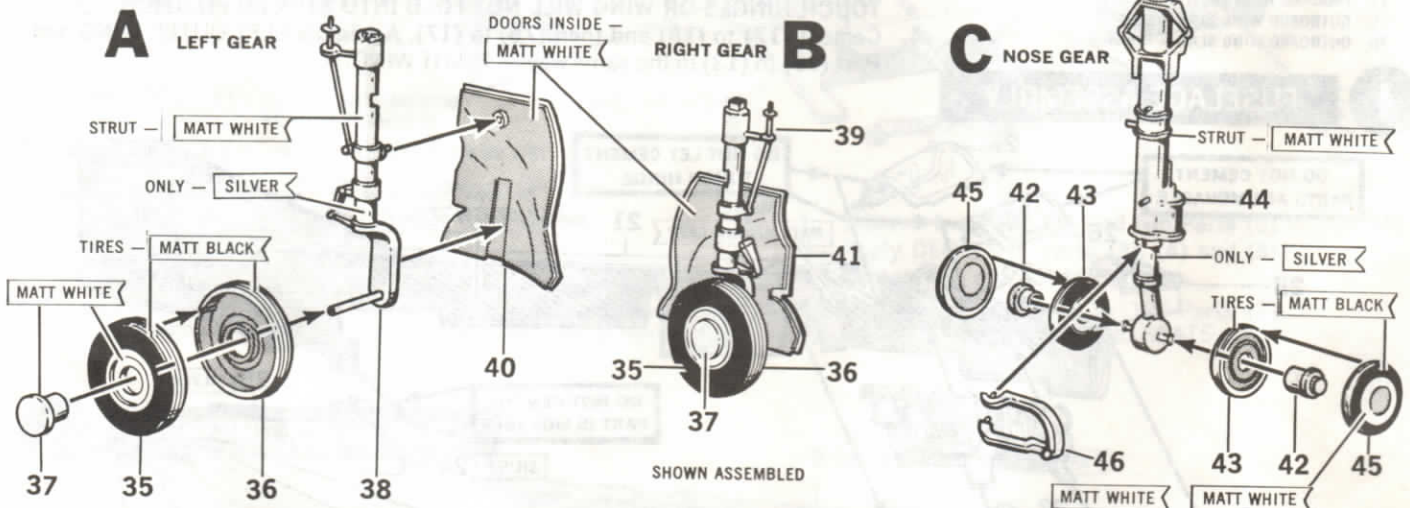


- 29 AIR INTAKE RAMP — RIGHT
 30 AIR INTAKE RAMP — LEFT
 31 PITOT HEAD (2 Parts)
 32 AIR INTAKE DUCT FAIRING — RIGHT
 33 AIR INTAKE DUCT FAIRING — LEFT
 34 FUSELAGE BULKHEAD

1. Cement Parts (29) and (30) to the FUSELAGE.
2. Cement one Part (31) to (32) and one Part (31) to (33).
3. Cement (32) and (33) to the FUSELAGE.
4. Cement (34) between ribs inside FUSELAGE.

6

LANDING GEAR ASSEMBLY



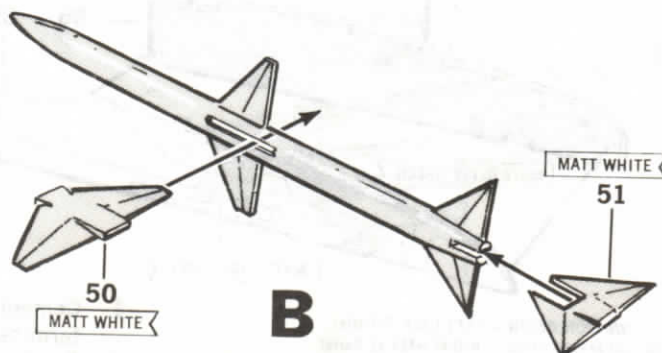
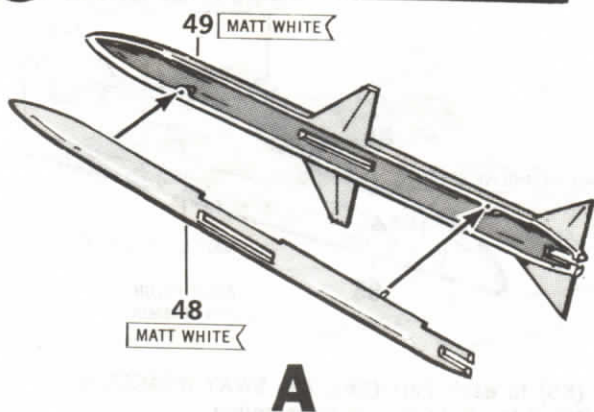
YOU HAVE A CHOICE OF BUILDING YOUR MODEL WITH THE LANDING GEAR IN THE INFLIGHT "GEAR UP" POSITION, OR WITH THE "GEAR DOWN" IF YOU CHOOSE TO BUILD A "GEAR UP" MODEL OMIT THIS STEP AND CONTINUE WITH STEP 7.

- 35 MAIN WHEEL — OUTSIDE HALF (2 Parts)
 36 MAIN WHEEL — INSIDE HALF (2 Parts)
 37 MAIN WHEEL RETAINER (2 Parts)
 38 LEFT MAIN GEAR STRUT
 39 RIGHT MAIN GEAR STRUT
 40 LEFT MAIN GEAR STRUT DOOR — CENTER
 41 RIGHT MAIN GEAR STRUT DOOR — CENTER
 42 NOSE WHEEL RETAINER (2 Parts)
 43 NOSE WHEEL — INSIDE HALF (2 Parts)
 44 NOSE GEAR STRUT
 45 NOSE WHEEL — OUTSIDE HALF (2 Parts)
 46 NOSE GEAR YOKE

SEE DRAWINGS "A" AND "B" — MAIN GEAR

1. Cement one Part (35) to each Part (36).
2. PLACE, DO NOT CEMENT, One Part (37) into each WHEEL, then CAREFULLY cement Part (37) to the AXLE of Part (38). DO NOT LET CEMENT TOUCH PART (36) OR WHEEL WILL NOT ROTATE.
3. Cement Part (40) to (38).
4. Assemble RIGHT GEAR in the same way, using WHEEL ASSEMBLY Parts (35), (36) and (37), and Parts (39) and (41). SEE DRAWING "C" NOSE GEAR
5. PLACE, DO NOT CEMENT, one Part (42) into each Part (43), then CAREFULLY cement one Part (45) to each Part (43).
6. Cement WHEEL RETAINERS (42) onto AXLES of Part (44). DO NOT LET CEMENT TOUCH WHEELS.
7. Cement Part (46) to Part (44).

7 SPARROW MISSILE ASSEMBLY

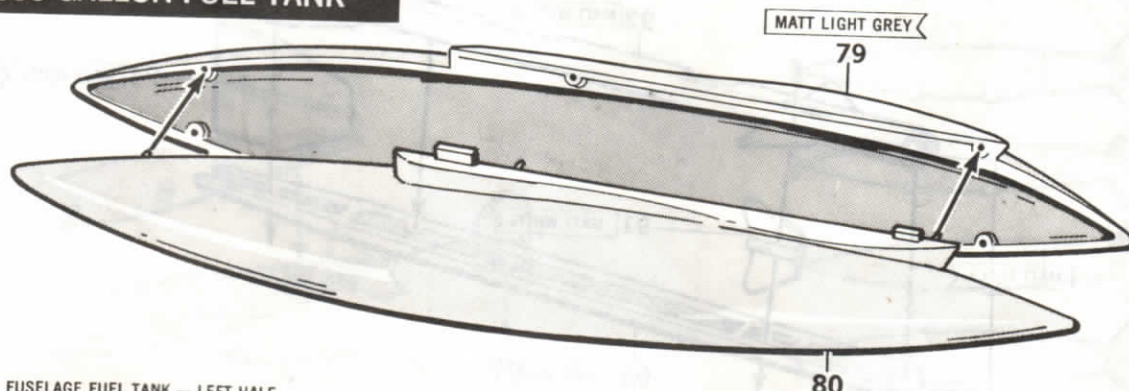


- 48 MISSILE BODY — LEFT HALF (4 Parts)
- 49 MISSILE BODY — RIGHT HALF (4 Parts)
- 50 MISSILE CENTER FIN (4 Parts)
- 51 MISSILE TAIL FIN (4 Parts)

SEE DRAWING "A"

1. Cement one Part (48) to each Part (49). Make four MISSILES.
- SEE DRAWING "B"
2. Center and cement one Part (50) in each MISSILE.
 3. Cement one Part (51) to the rear of each MISSILE.

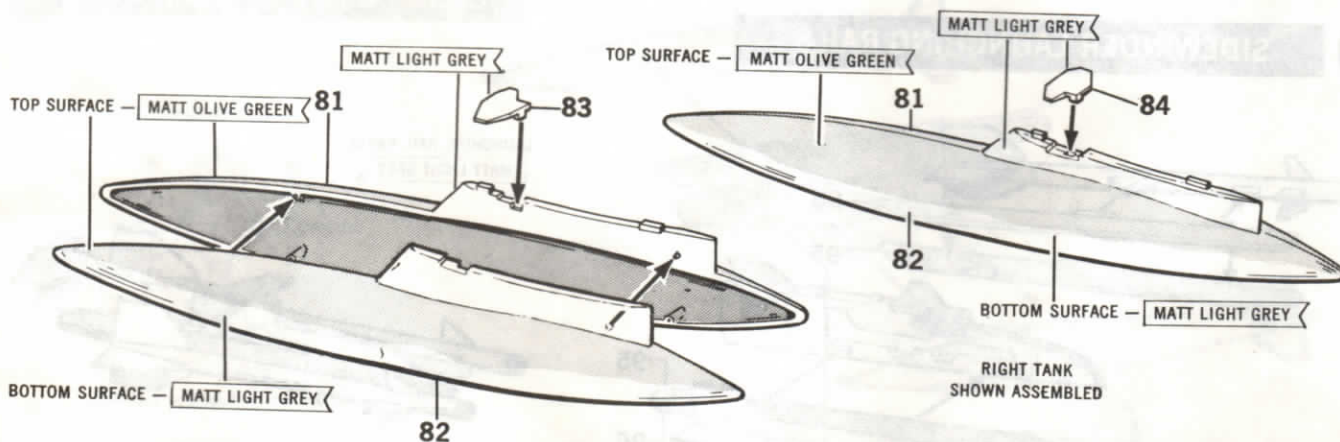
8 600 GALLON FUEL TANK



- 79 FUSELAGE FUEL TANK — LEFT HALF
- 80 FUSELAGE FUEL TANK — RIGHT HALF

1. Cement (79) to (80).

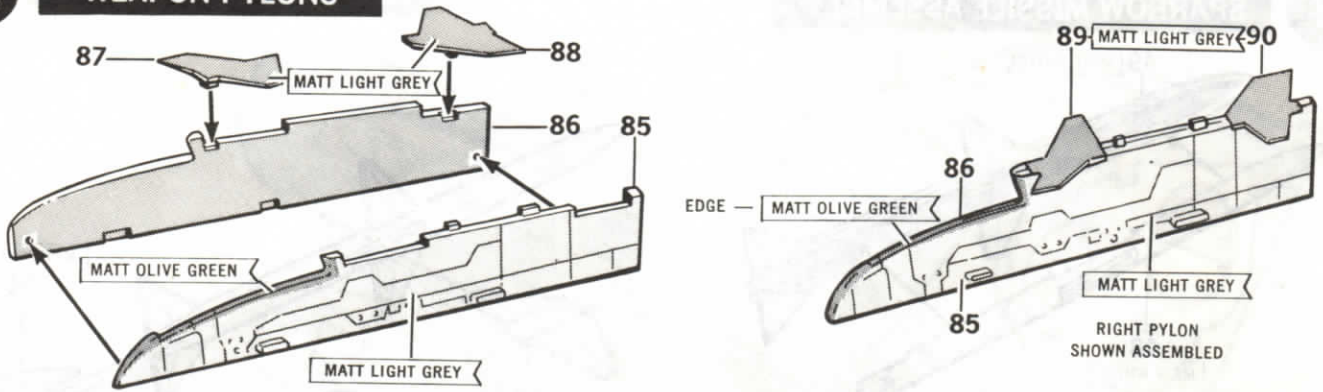
9 370 GALLON FUEL TANKS



- 81 OUTERWING FUEL TANK — RIGHT HALF (2 Parts)
- 82 OUTERWING FUEL TANK — LEFT HALF (2 Parts)
- 83 LEFT TANK SWAY BRACE
- 84 RIGHT TANK SWAY BRACE

1. Cement one Part (81) to each Part (82).
2. The SWAY BRACES determine whether a TANK ASSEMBLY is to be used on RIGHT or LEFT WING. Cement (83) to one TANK for LEFT WING and (84) to other TANK for RIGHT WING installation.

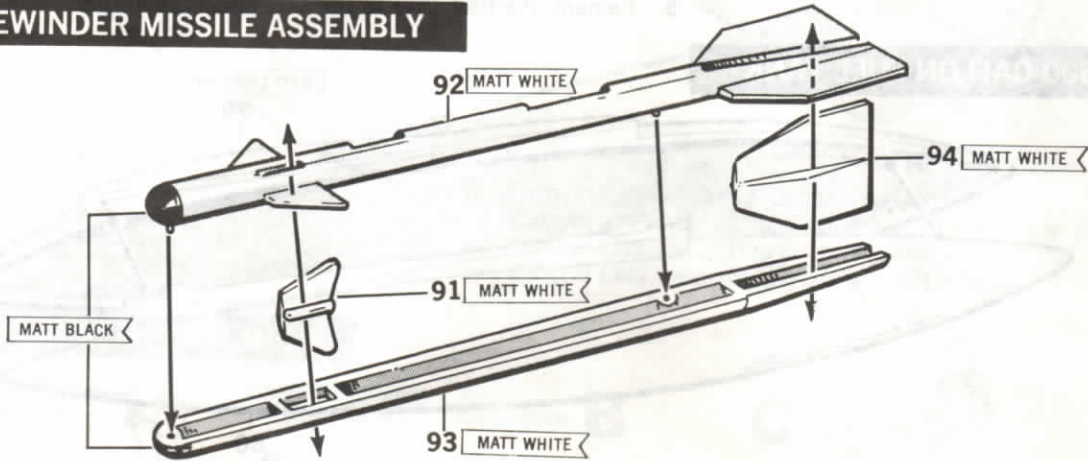
10 WEAPON PYLONS



- 85 WEAPON PYLON — LEFT HALF (2 Parts)
- 86 WEAPON PYLON — RIGHT HALF (2 Parts)
- 87 LEFT PYLON FORWARD SWAY BRACE
- 88 LEFT PYLON REAR SWAY BRACE
- 89 RIGHT PYLON FORWARD SWAY BRACE
- 90 RIGHT PYLON REAR SWAY BRACE

1. Cement one Part (85) to each Part (86). The SWAY BRACES determine to which WING the PYLON is to be installed.
2. For the LEFT PYLON, cement (87) and (88) to one ASSEMBLY.
3. For the RIGHT PYLON, Cement (89) and (90) to the other ASSEMBLY.

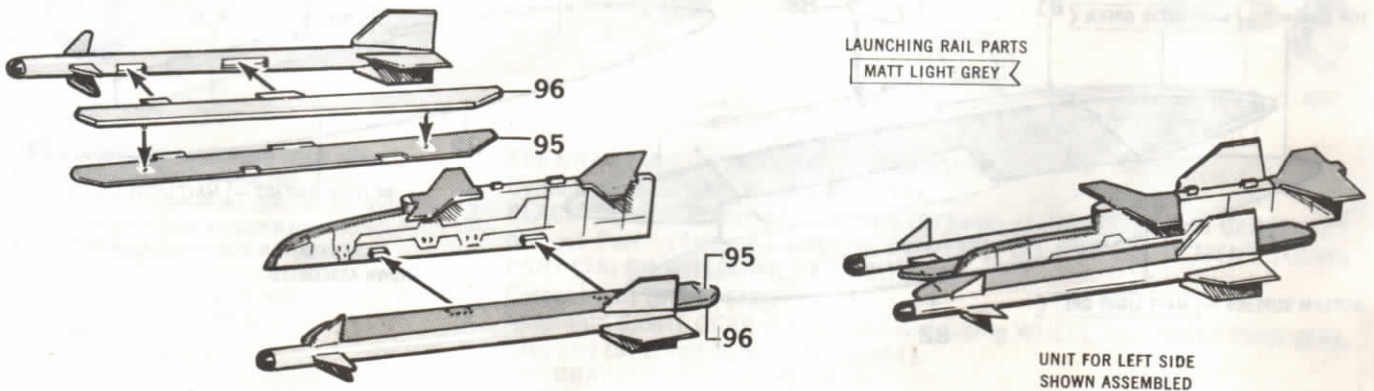
11 SIDEWINDER MISSILE ASSEMBLY



- 91 SIDEWINDER FORWARD FIN (4 Parts)
- 92 SIDEWINDER HALF WITH FINS (4 Parts)
- 93 SIDEWINDER HALF WITHOUT FINS (4 Parts)
- 94 SIDEWINDER REAR FIN (4 Parts)

1. Place one (91) in FORWARD SLOT in (92). Locate (93) over (91) and cement (92) and (93) together. Slide one (94) into SLOT at REAR of MISSILE and cement in position.
2. Assemble remaining three MISSILES in the same way.

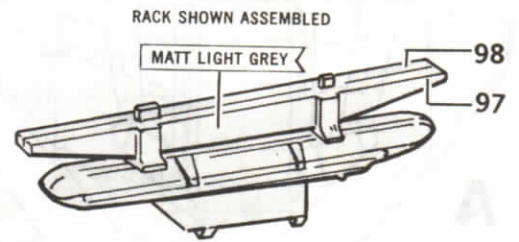
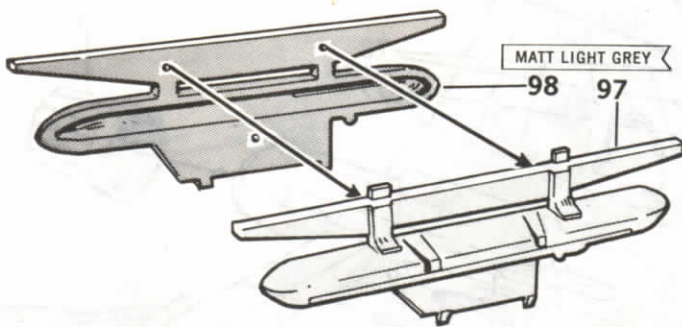
12 SIDEWINDER LAUNCHING RAILS



- 95 LAUNCHING RAIL — TOP HALF (4 Parts)
- 96 LAUNCHING RAIL — BOTTOM HALF (4 Parts)

1. Cement one Part (95) to each Part (96).
2. Cement LAUNCHING RAILS to WEAPON PYLONS.
3. Cement a SIDEWINDER MISSILE to each LAUNCHING RAIL.

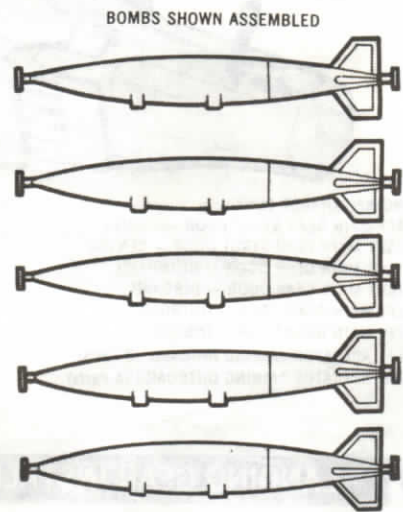
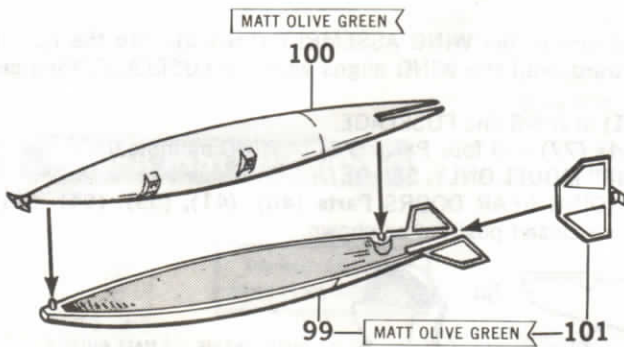
13 UAR/C3 T.E.R. BOMB RACKS



- 97 TRIPLE EJECTOR RACK — LEFT HALF (2 Parts)
- 98 TRIPLE EJECTOR RACK — RIGHT HALF (2 Parts)

1. Cement one Part (97) to each Part (98).

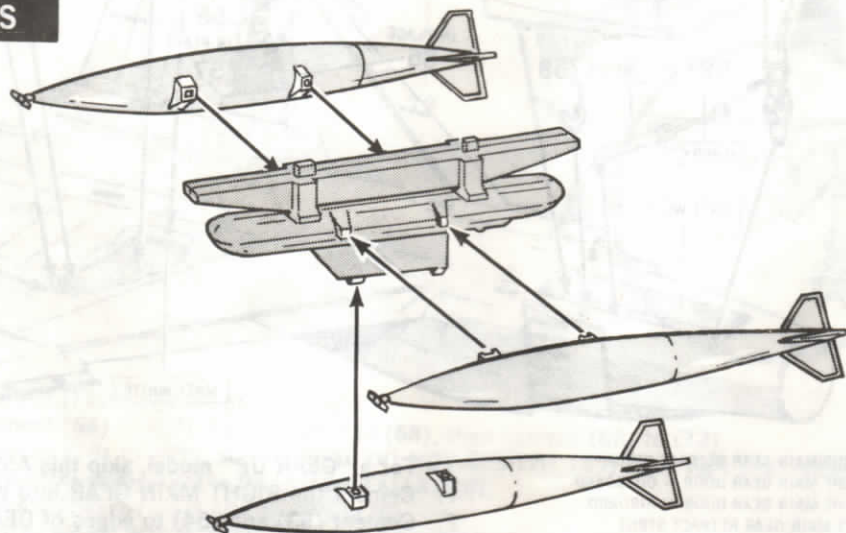
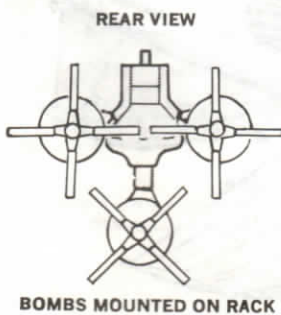
14 500 LB. MK 82 BOMBS



- 99 MARK 82 BOMB HALF WITH FINS (6 Parts)
- 100 MARK 82 BOMB HALF WITHOUT FINS (6 Parts)
- 101 MARK 82 BOMB TAIL FINS (6 Parts)

1. Cement one Part (99) to each Part (100).
2. Cement one Part (101) to each assembled BOMB.

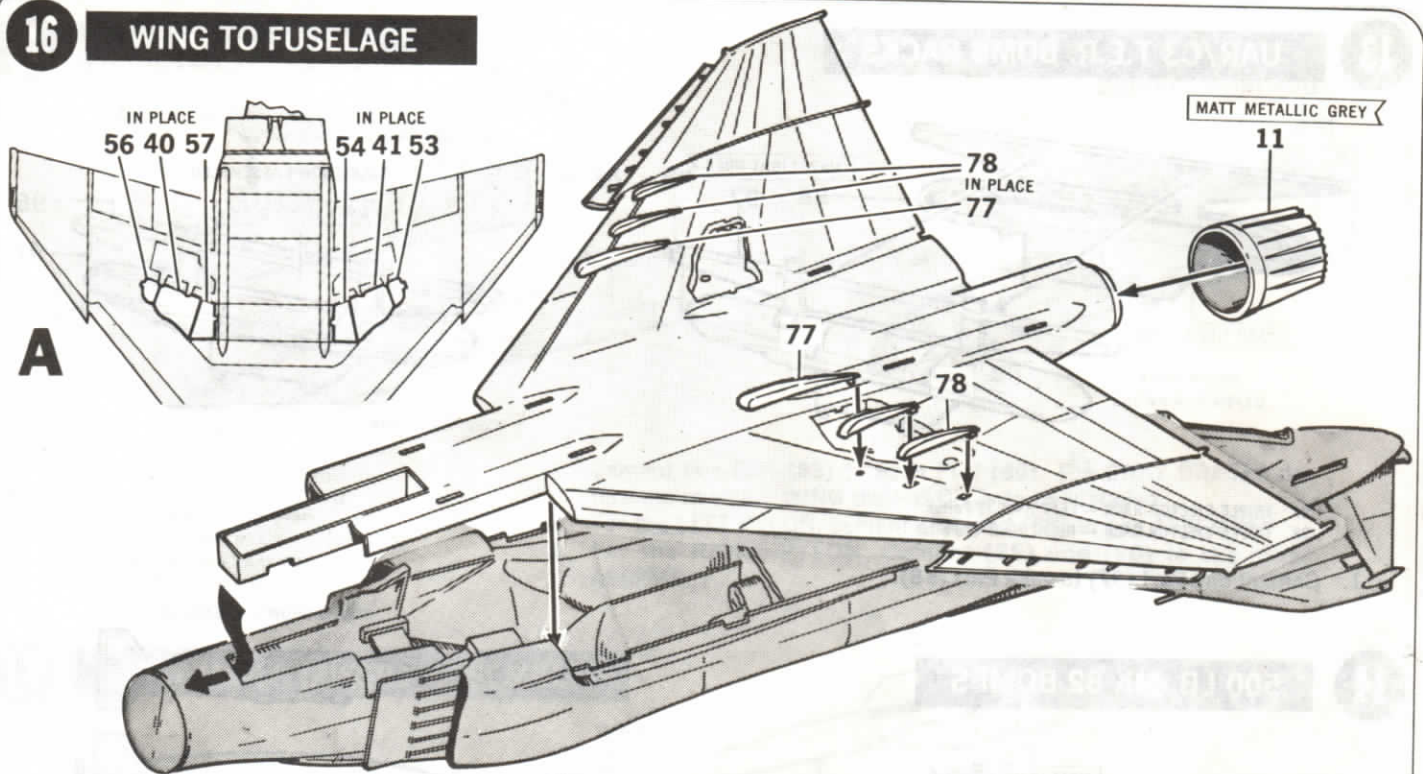
15 BOMBS TO BOMB RACKS



1. Cement three BOMBS to each BOMB RACK. Be sure BOMB FINS align as indicated in small drawing.

16

WING TO FUSELAGE

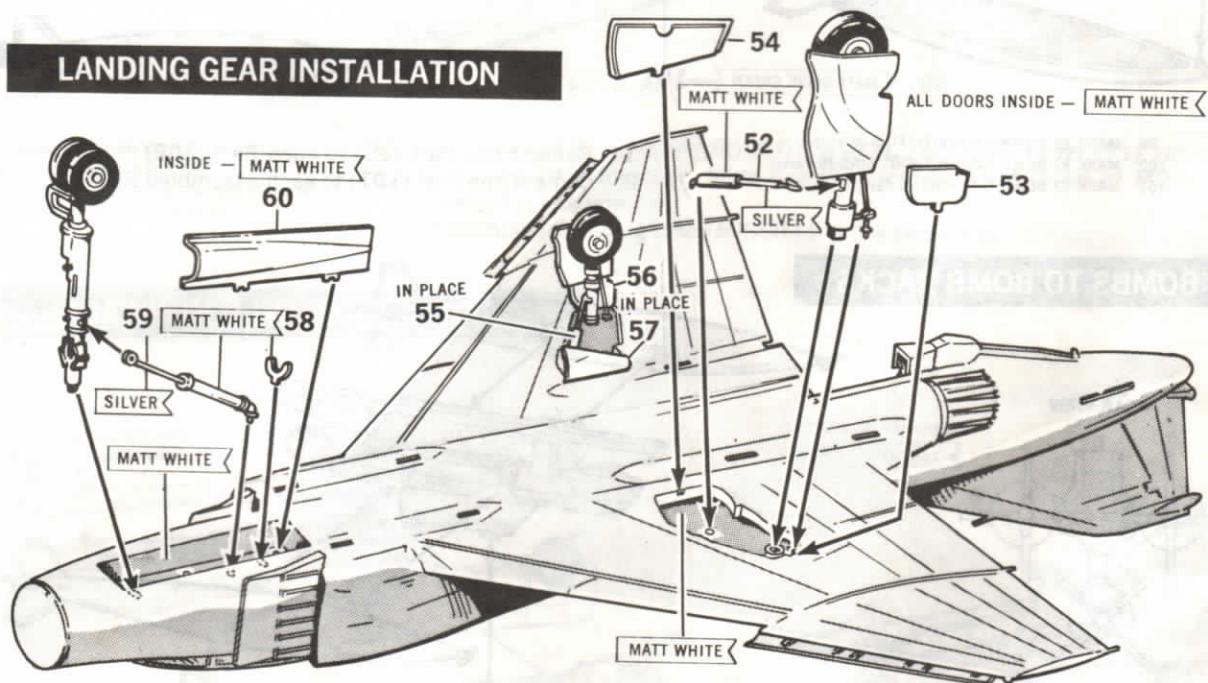


- 11 ENGINE EXHAUST CONE
- 40 LEFT MAIN GEAR STRUT DOOR — CENTER
- 41 RIGHT MAIN GEAR STRUT DOOR — CENTER
- 53 RIGHT MAIN GEAR DOOR — OUTBOARD
- 54 RIGHT MAIN GEAR DOOR — INBOARD
- 56 LEFT MAIN GEAR DOOR — OUTBOARD
- 57 LEFT MAIN GEAR DOOR — INBOARD
- 77 SLAT ACTUATOR FAIRING INBOARD (2 Parts)
- 78 SLAT ACTUATOR FAIRING OUTBOARD (4 Parts)

1. Slip the forward end of the WING ASSEMBLY (Step 3), into the FUSELAGE and slide it forward until the WING aligns with the FUSELAGE, then cement Parts together.
2. Cement Part (11) to WING and FUSELAGE.
3. Cement two Parts (77) and four Parts (78) to WING as indicated.
FOR A "GEAR UP" MODEL ONLY, SEE DETAIL "A"
4. Cement six LANDING GEAR DOORS Parts (40), (41), (53), (54), (56) and (57) to WING in a closed position as shown.

17

LANDING GEAR INSTALLATION

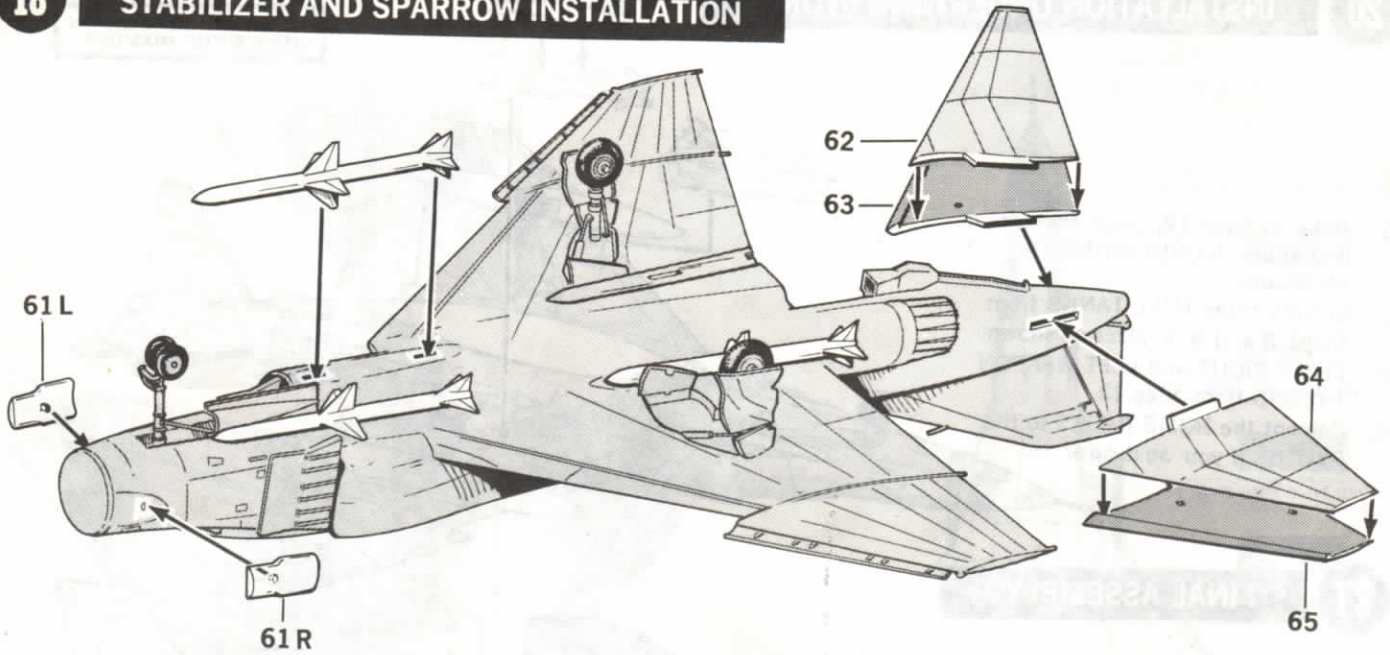


- 52 RIGHT MAIN GEAR RETRACT STRUT
- 53 RIGHT MAIN GEAR DOOR — OUTBOARD
- 54 RIGHT MAIN GEAR DOOR — INBOARD
- 55 LEFT MAIN GEAR RETRACT STRUT
- 56 LEFT MAIN GEAR DOOR — OUTBOARD
- 57 LEFT MAIN GEAR DOOR — INBOARD
- 58 NOSE GEAR RETRACT LOCK
- 59 NOSE GEAR RETRACT STRUT
- 60 NOSE GEAR DOOR — REAR HALF

For a "GEAR UP" model, skip this ASSEMBLY step and go on to Step 19.

1. Cement the RIGHT MAIN GEAR into WING. Cement (52) to GEAR and WING.
2. Cement (53) and (54) to edges of GEAR OPENING in a vertical position.
3. Cement LEFT GEAR and Parts (55), (56) and (57) in place on LEFT WING.
4. Cement (58) and NOSE GEAR into WHEEL WELL.
5. Cement (59) to NOSE GEAR and WHEEL WELL LOCATOR.
6. Cement (60) to edge of WHEEL WELL in a vertical position.

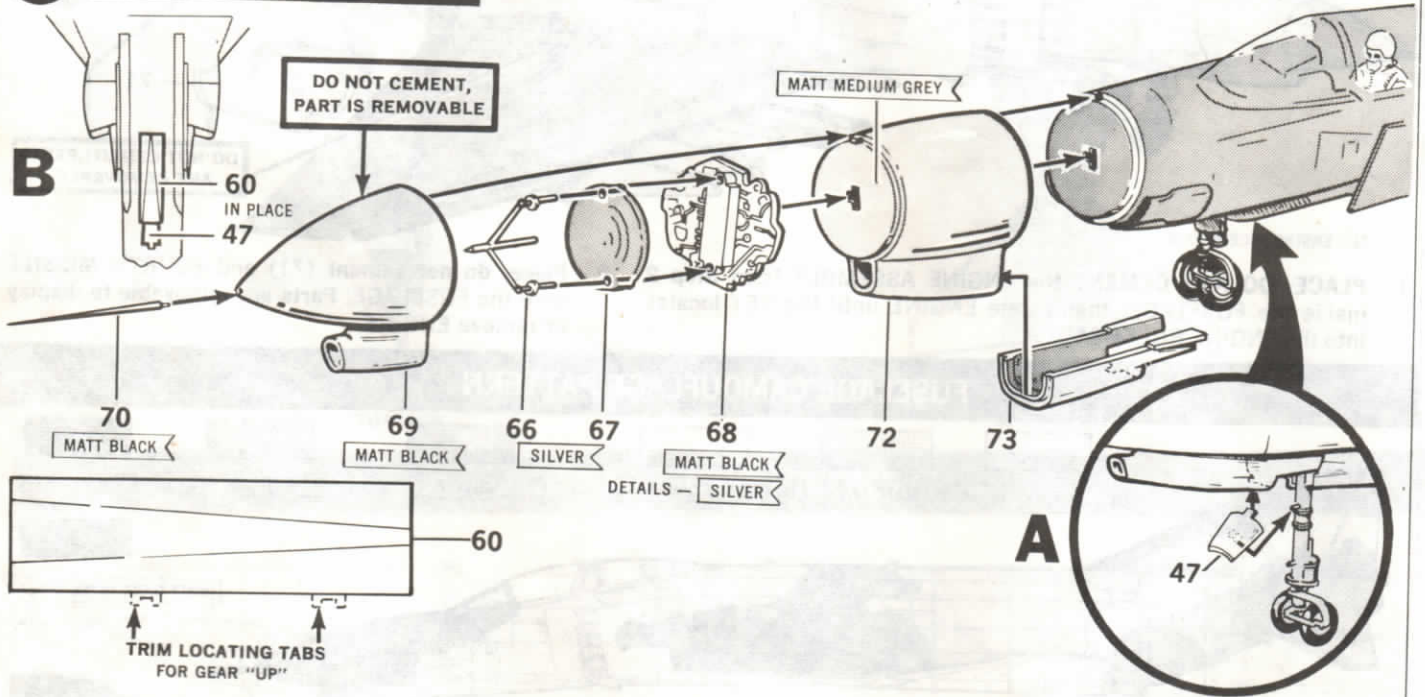
18 STABILIZER AND SPARROW INSTALLATION



- 61R RIGHT AIR DUCT FAIRING
- 61L LEFT AIR DUCT FAIRING
- 62 LEFT STABILIZER — BOTTOM
- 63 LEFT STABILIZER — TOP
- 64 RIGHT STABILIZER — BOTTOM
- 65 RIGHT STABILIZER — TOP

1. Cement (61L) and (61R) to the FUSELAGE.
2. Cement (62) to (63) and (64) to (65). Cement STABILIZERS to FUSELAGE.
3. After FUSELAGE painting has been completed, cement only three SPARROW MISSILES into position as shown. FOURTH MISSILE IS PLACED NOT CEMENTED, into position and is removed when ENGINE is displayed.

19 RADAR INSTALLATION



- 47 NOSE GEAR DOOR — FRONT HALF
- 60 NOSE GEAR DOOR — REAR HALF
- 66 RADAR ANTENNA
- 67 RADAR DISH
- 68 RADAR UNIT
- 69 RADOME
- 70 PITOT TUBE
- 72 NOSE EXTENSION
- 73 GUN POD FAIRING

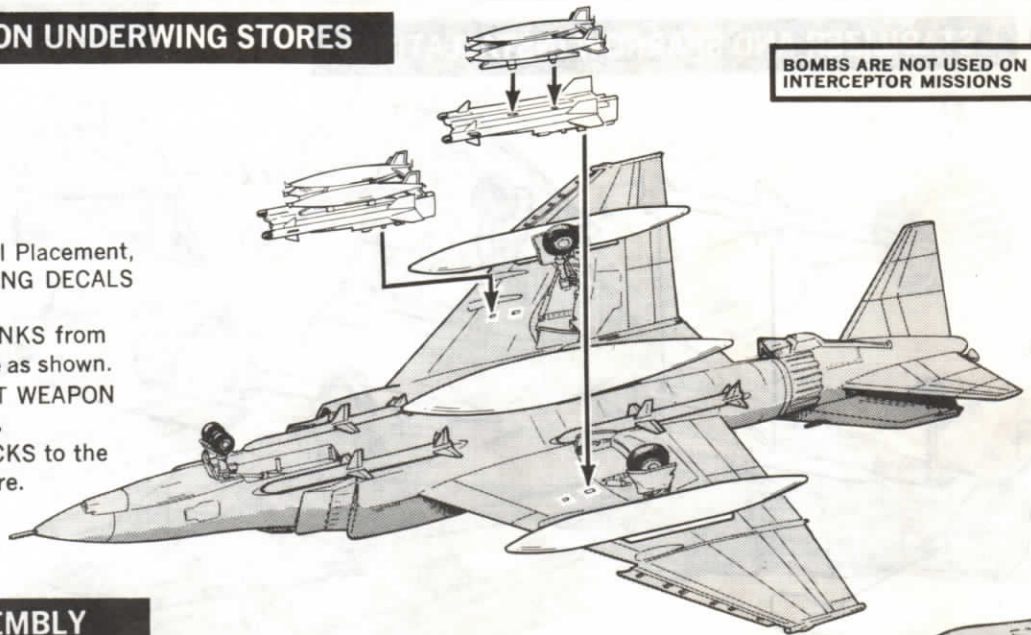
1. Cement (72) to FRONT of FUSELAGE.
2. Cement (66) to (67). Cement (67) to (68), then cement (68) to (72).
3. Cement (70) to (69), then PRESS, DO NOT CEMENT (69) onto Part (72). (69) is removable to display the RADAR INSTALLATION.
4. Cement (73) to FUSELAGE and Part (72).
FOR A "GEAR DOWN" MODEL — SEE DRAWING "A"
5. Cement (47) to NOSE GEAR and REAR EDGE of Part (73).
FOR A "GEAR UP" MODEL
6. Trim LOCATING TABS from Part (60) as indicated, then cement (47) and (60) in a closed position as shown in Detail "B".

20

INSTALLATION UNDERWING STORES

BOMBS ARE NOT USED ON INTERCEPTOR MISSIONS

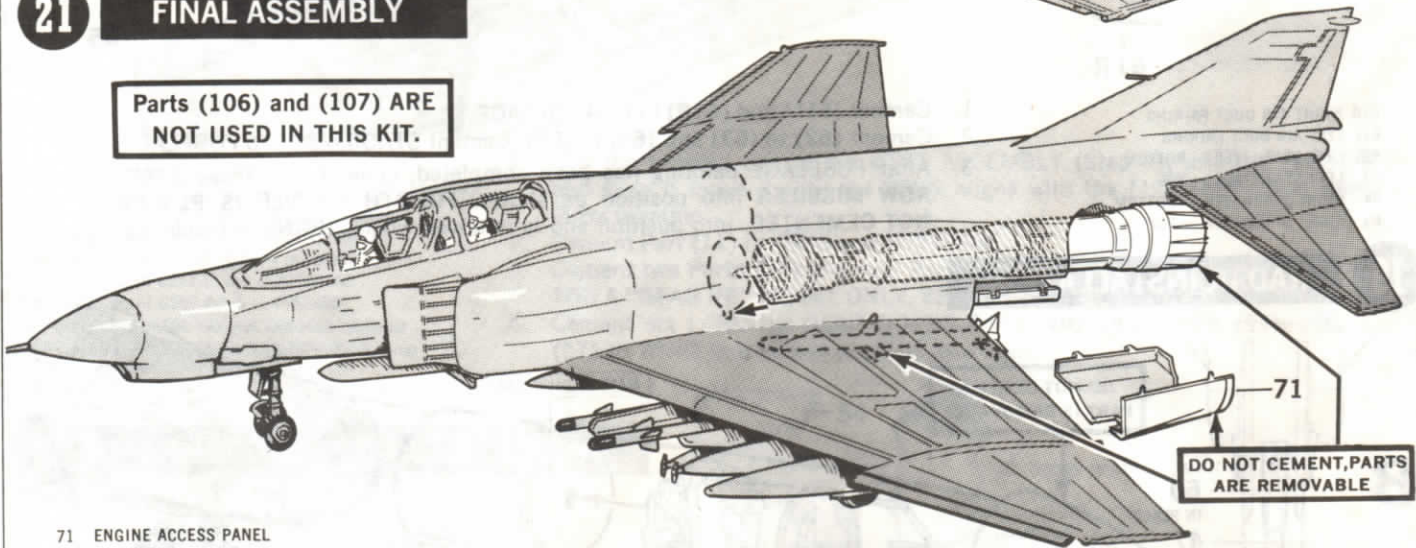
1. Refer to **Page 12**, Decal Placement, and apply all **UNDERWING DECALS** as shown.
2. Cement three **FUEL TANKS** from **Steps 8** and **9** in place as shown.
3. Install **RIGHT** and **LEFT WEAPON PYLONS** from **Step 12**.
4. Cement the **BOMB RACKS** to the **PYLONS** if you so desire.



21

FINAL ASSEMBLY

Parts (106) and (107) ARE NOT USED IN THIS KIT.

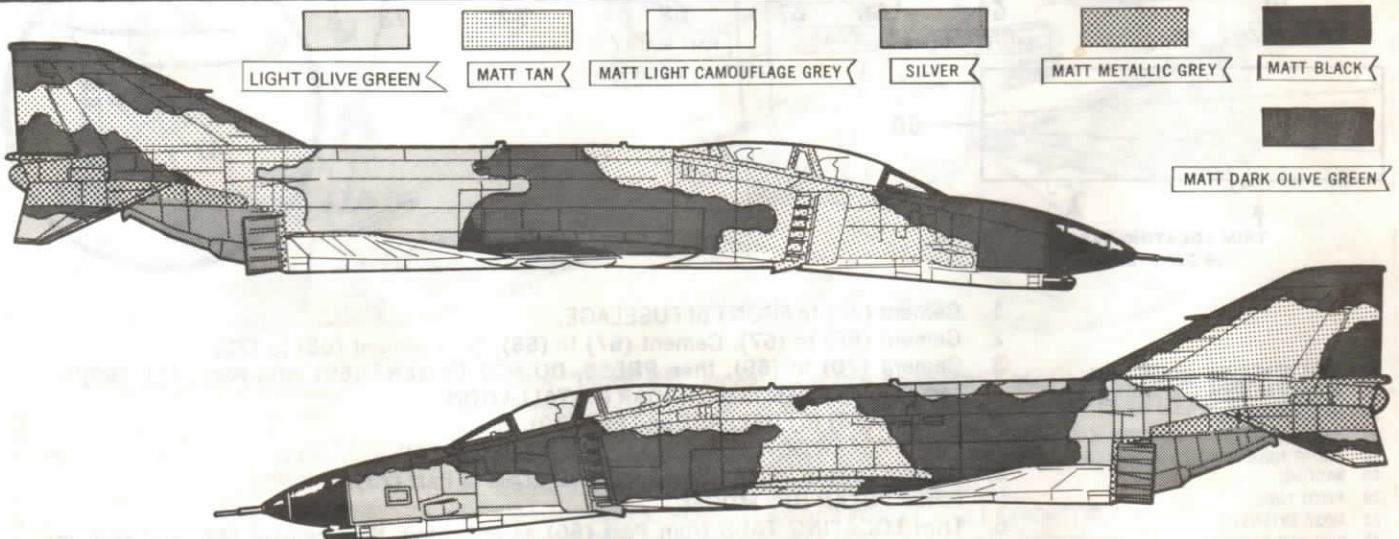


71 ENGINE ACCESS PANEL

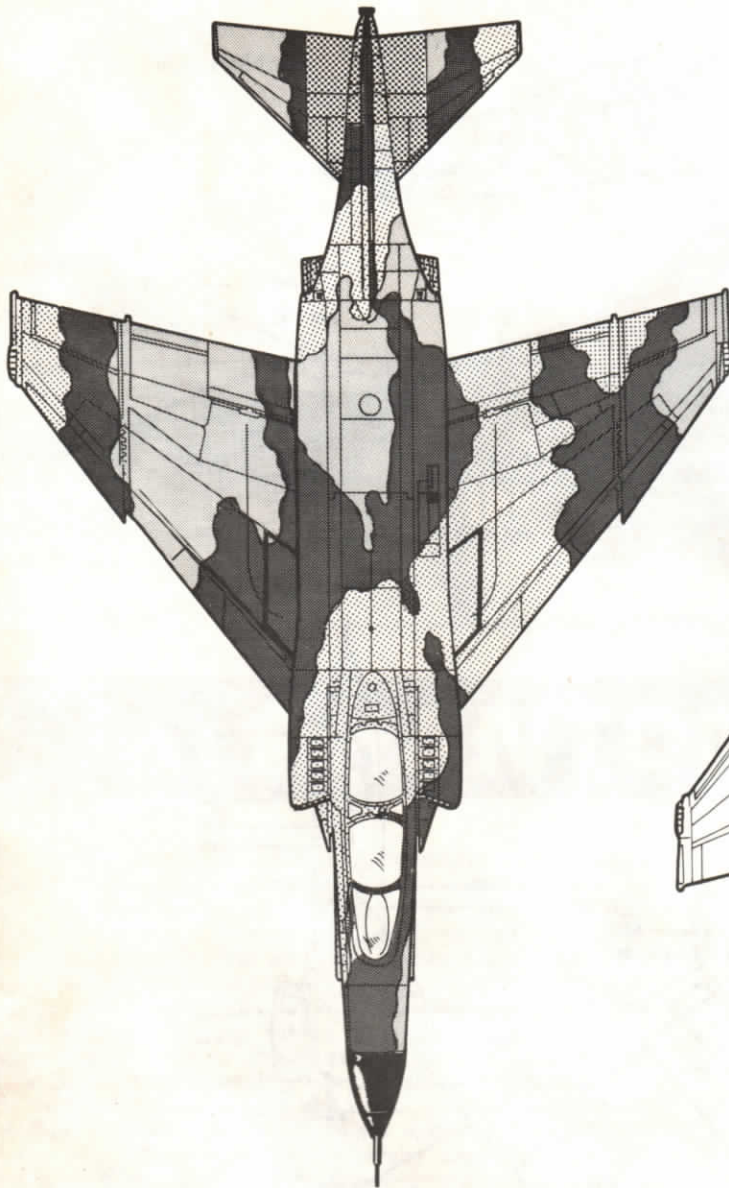
DO NOT CEMENT, PARTS ARE REMOVABLE

1. **PLACE, DO NOT CEMENT** the **ENGINE ASSEMBLY** from **Step 2** inside the **FUSELAGE**, then rotate **ENGINE** until the **KEY** locates into the **ENGINE BULKHEAD**.
2. Place, do not cement (71) and **FOURTH MISSILE** onto the **FUSELAGE**. Parts are removable to display or remove **ENGINE**.

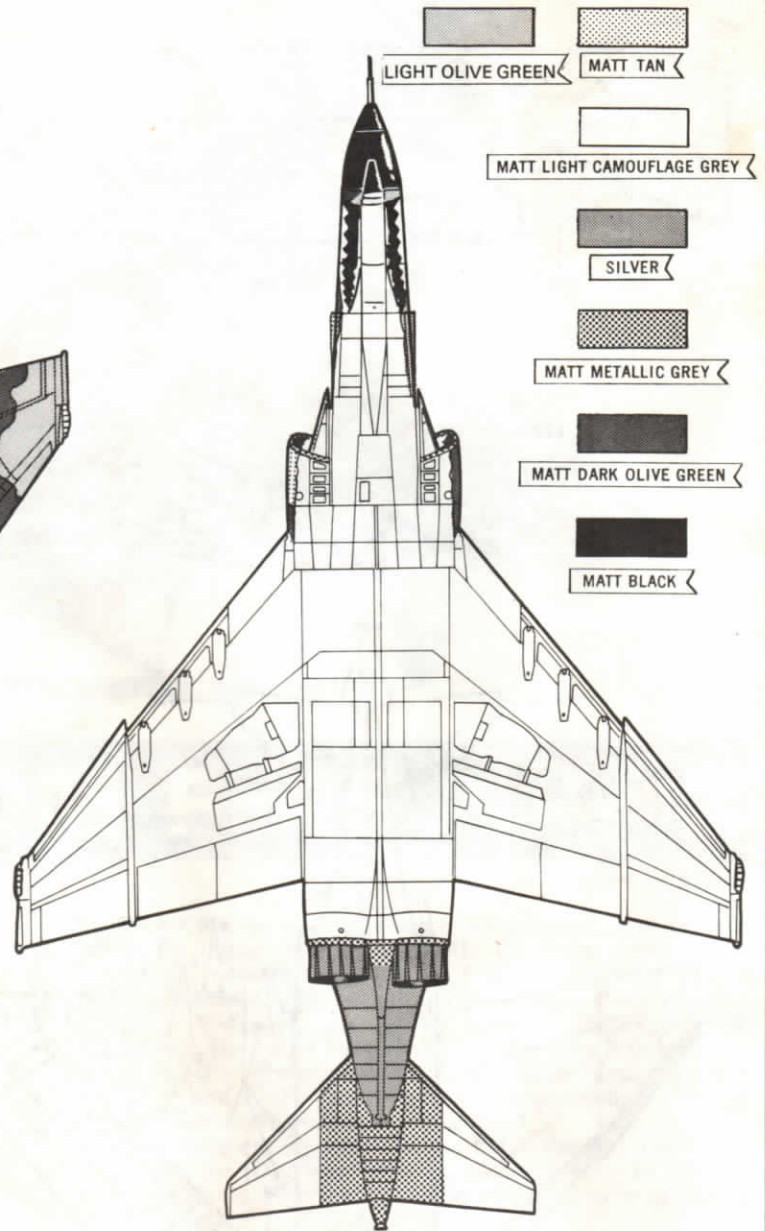
FUSELAGE CAMOUFLAGE PATTERN



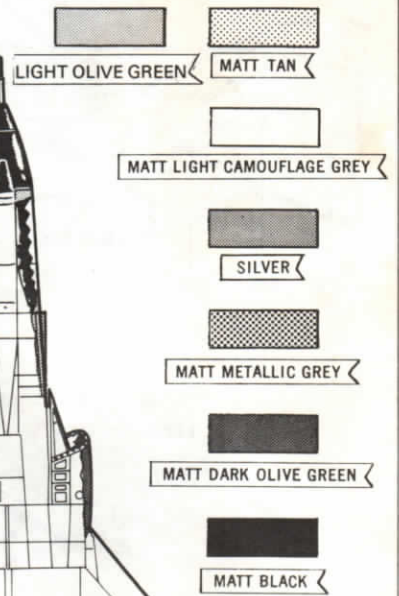
CAMOUFLAGE PATTERN UPPER AND LOWER SURFACES



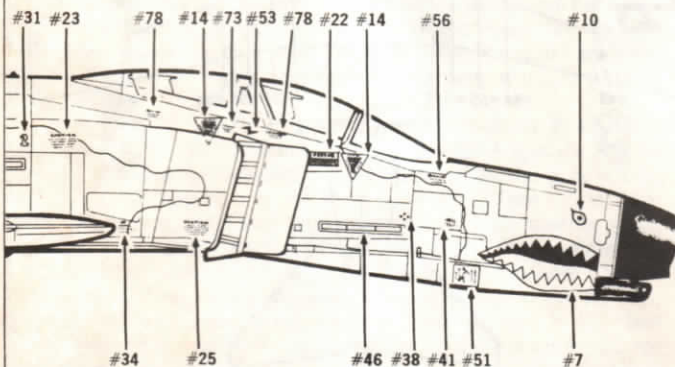
TOP VIEW



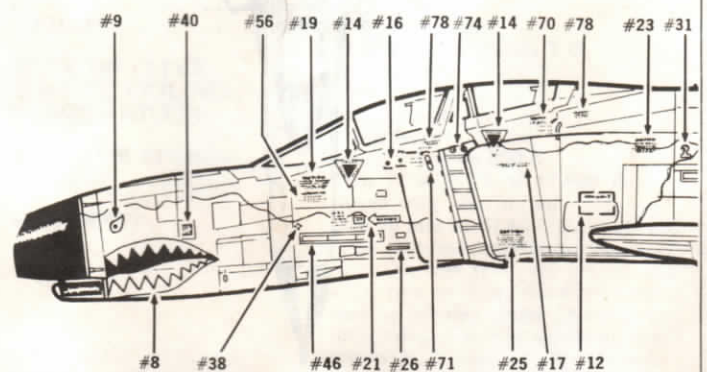
BOTTOM VIEW



NOSE SECTION DECALS



RIGHT SIDE VIEW



LEFT SIDE VIEW

DECAL PLACEMENT

