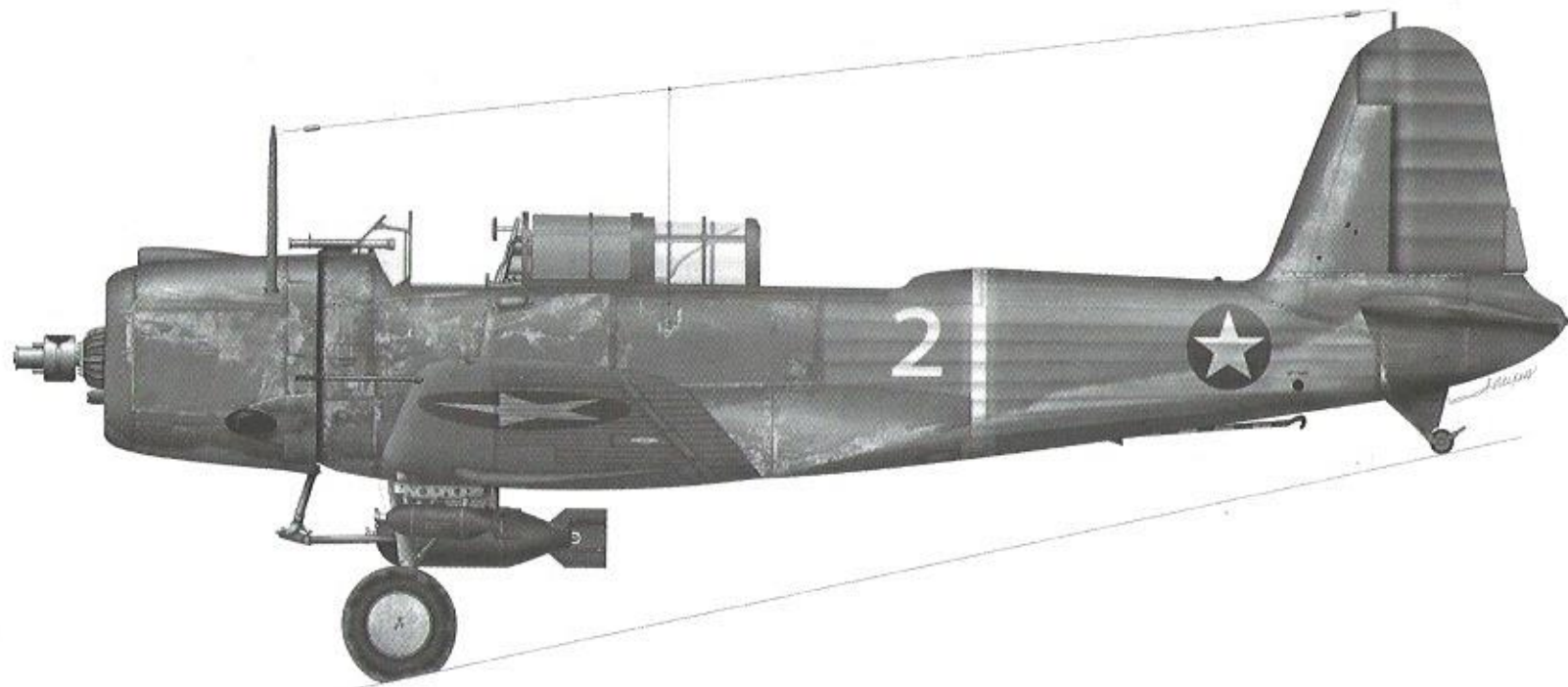


480202

SB2U-3 VINDICATOR



480202

SB2U-3 VINDICATOR

Marine Vindicators at Midway

June 5, 1942: At 6:30, a Midway-based PBY reported, "Sighted 2 battleships bearing 256 degrees, distance 125 miles, course 268 degrees, speed 15." Two minutes later the PBY added, "Ships damaged, streaming oil." Marine Aircraft Group 22 sent up two flights from VMSB-241, six Dauntlesses under Captain Marshall A. Tyler and six Vindicators led by Captain Richard E. Fleming, to attack the two ships.

The ships turned out to be the heavy cruisers Mikuma and Mogami, which had been damaged in a collision the night before. The Marine pilots spotted the oil slick left by the damaged cruisers forty-five minutes later, and followed it to the Mogami and Mikuma. Tyler led his six Dauntlesses into an attack on Mogami amid heavy anti-aircraft fire. The Marines dropped their bombs, scoring a few near-misses.

At 8:40, minutes after Tyler's attack, Fleming led his Vindicators out of the sun from 4000 feet, through heavy flak from the Japanese ships, against the Mikuma. As Fleming dove, his airplane was hit forward and smoke began pouring out of his engine. In spite of being hit, he pressed his attack home without faltering, retaining the lead in his division, and dropped his bomb. Captain Leon M. Williamson, a pilot in Fleming's flight, saw Fleming's engine smoking, but acknowledged that Fleming kept his plane steady during the dive, and released his bomb. At the moment of his pull-out, his plane burst into flames and crashed into the afterdeck of the Mikuma. The crash started a fire that was sucked into the cruiser's starboard engine room air intakes, suffocating the engineers. At the cost of his life, Captain Fleming insured that VMSB-241's final attack on the Japanese fleet achieved its utmost.

This was the last Marine Corps action in the Battle of Midway.

Just as the aircrews of MAG 22 fought valiantly under adverse conditions, so, also did the employees of Accurate Miniatures, Inc. soldier on in 1999 and 2000 to initiate, design and develop the SB2U Vindicator series. To Clark Macomber, Larry Fuller, Mark Mendes, Rodney Timms, and Natasha Yushkevich, this kit is dedicated to you.

Bill Johnson and Bill Hardman of the National Museum of Naval Aviation provided us valuable access to the sole surviving SB2U located at their facility in Pensacola, Florida. Thank you.

Collins-Habovick, LLC, also extends thanks to Todd Amick, Dave Pepper, Steven Murphy, Tim Treadway, Richard Maxon, Wayne Davidson and Scott Denson who were instrumental in helping us with quality control.

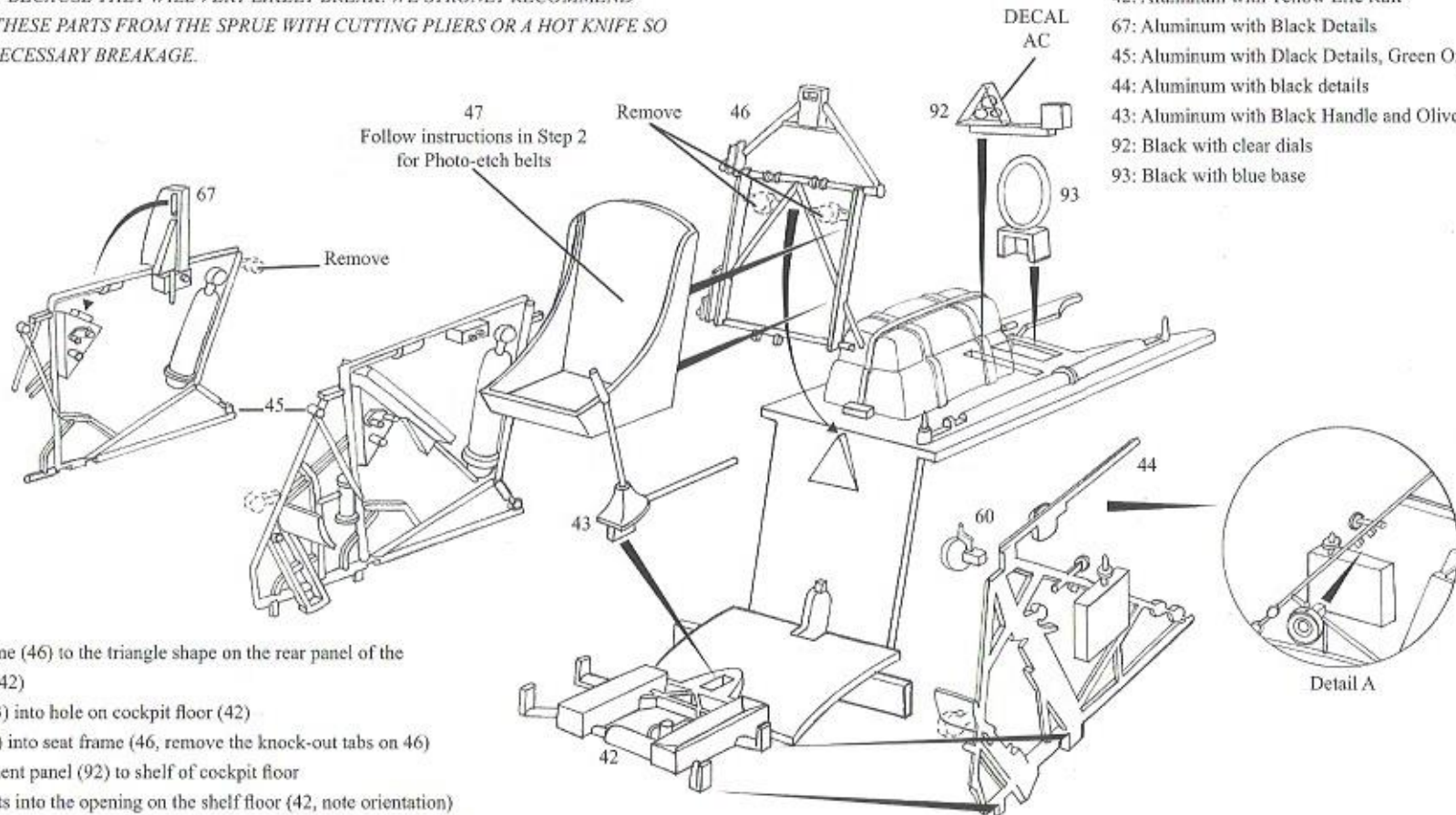
In order to help you paint your model correctly, we have provided a list of color recommendations. These colors are cross-referenced to the Federal Standard (FS) numbers wherever possible. Many model paint companies match their products to this system, and you may choose to match your favorite paint to these numbers. Your local hobby retailer may also be of assistance in helping you select the proper paint for this kit.

Model Paint Reference Chart*							
FS/Color	Model Master Enamel	Floquil Poly S Acrylics	Tamiya Acrylics	Gunze Sangyo Acrylics	Vallejo Model Air	Revell Germany	Modelflex Acrylics
FS 17038 Flat Black	1749	10	XF1	H33	073	32108	16-119
FS 37875 Flat White	1768	11	XF2	H62	001	32105	16-120
Non-Specular Blue Gray	2055	505088	N/A	H42	005	32179	N/A
Non-Specular Light Gray	1730	N/A	XF14	H338	051	32176	N/A
FS 34087 Olive Drab	1711	500052	XF62	H034	043	32146	16-96
Wood	1735	500828	N/A	N/A	077	32382	N/A
Aluminum	1781	01995	XF56	H8	062	32199	16-32
Gun Metal	1795	501992	XF10	H28	072	32191	N/A
Burnt Metal	1415	N/A	N/A	H81	N/A	N/A	N/A
Copper	1151	N/A	XF6	N/A	088	32193	N/A

*This chart is provided only as a reference to the modeler, and is the closest match possible to paint manufacturer at the time of printing. Commonly used modeling colors will be necessary to finish small details.

Step 1: Pilot's Cockpit Assembly

THE COCKPIT IS COMPOSED OF A LOT OF FRAGILE PARTS. DO NOT LAY THE SPRUES FLAT TO CUT THESE PARTS OFF BECAUSE THEY WILL VERY LIKELY BREAK. WE STRONGLY RECOMMEND THAT YOU SEPERATE THESE PARTS FROM THE SPRUE WITH CUTTING PLIERS OR A HOT KNIFE SO AS TO AVOID ANY UNNECESSARY BREAKAGE.

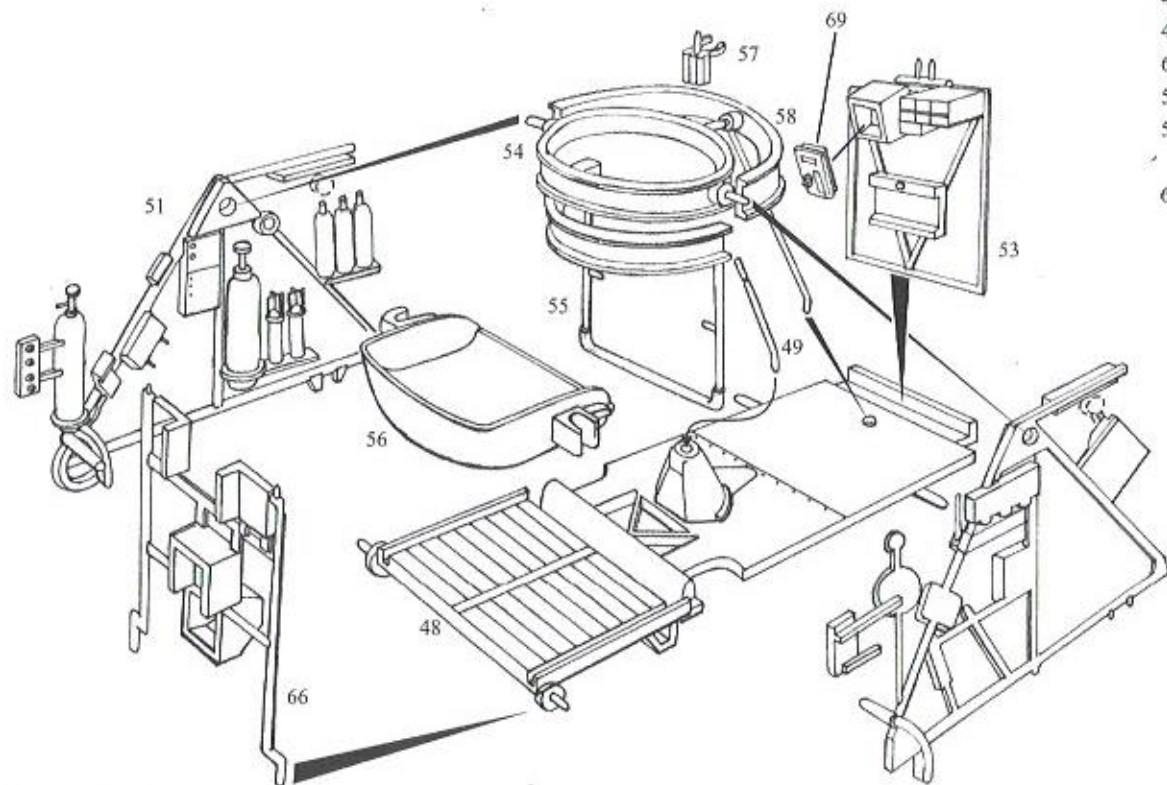


Painting Instructions:

- 46, 47, 60: Aluminum
- 42: Aluminum with Yellow Life Raft
- 67: Aluminum with Black Details
- 45: Aluminum with Black Details, Green Oxygen Bottle
- 44: Aluminum with black details
- 43: Aluminum with Black Handle and Olive Drab Boot
- 92: Black with clear dials
- 93: Black with blue base

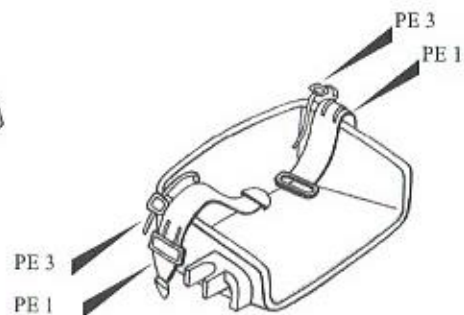
- 1-1. Cement the seat frame (46) to the triangle shape on the rear panel of the cockpit floor (42)
- 1-2. Cement the stick (43) into hole on cockpit floor (42)
- 1-3. Cement the seat (47) into seat frame (46, remove the knock-out tabs on 46)
- 1-4. Cement rear instrument panel (92) to shelf of cockpit floor
- 1-5. RDF antenna (93) fits into the opening on the shelf floor (42, note orientation)
- 1-6. Cement the switch panel (67) to right forward console (45, remove the knock-out tabs on 45)
- 1-7. Cement the right forward (45) console onto the cockpit floor
- 1-8. Cement the trim wheel (60) onto the left forward console (44, remove the knock-out tabs on 45)
(see detail A)
- 1-9. Cement the left forward console (44) onto cockpit floor

Step 2: Radio/Gunner Cockpit Assembly



Painting Instructions:

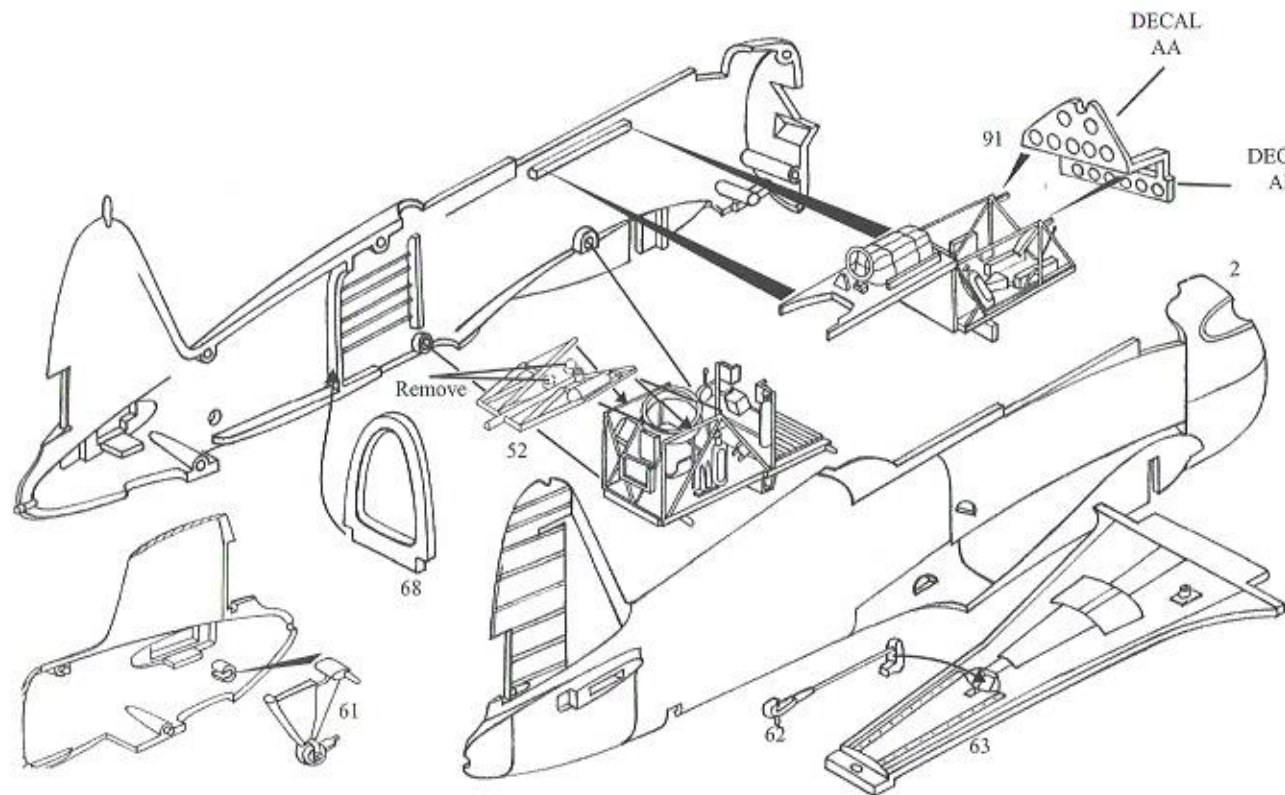
- 48: 50, 52, 56, 57, 58; Aluminum
- 49: Aluminum with Black Handle
- 66: Aluminum Frame with Black Radios
- 53: Aluminum with Black Radios
- 51: Aluminum, including Oxygen Bottle,
Wood Colored Flares, Aluminum Details on Flares
- 69: Black with silver details



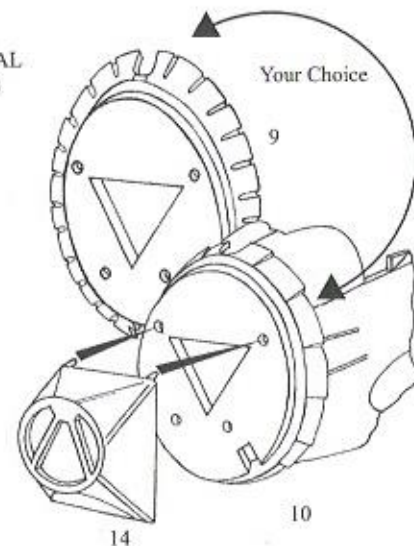
- 2-1. Cement the stick (49) into the hole in floor (48)
- 2-2. Cement the forward radios (66) to notches just forward of the control stick
- 2-3. Cement the switch panel (69) to the gunner's rear armor plate (53)
- 2-4. Cement the gunner's armor plate (53) to ledge on rear of floor. Center on the notch
- 2-5. Cement the right rear console frame (51) on the right side of the floor (48). Align the notches on the frame with the pin on the floor.
- 2-6. Cement the left rear console frame (50) on the right side of the floor (48). Align the notches on the frame with the pin on the floor.

- 2-7. Cement gunner's seat (56) into the seat support (55). The seat goes just below the pins. Review the illustration for placement of the photo-etch lap belt.
- 2-8. Cement gun ring (54) on to the seat support (55). The pin on the ring goes rearward.
- 2-9. Cement the gun mount (57) onto the gun ring
- 2-10. The gun ring assembly pins snap into either side of the rear cockpit, and into the hole at the rear of the cockpit floor.

Step 3: Fuselage



Painting Instructions:
Fuselage interiors: Aluminum
14, 68; Aluminum
9, 10 (Your choice); Exterior color



3-1 Cement the instrument panel (91) to the forward cockpit assembly

**NOTE: Add the decal BEFORE completing step 3-2*

3-2. Cement the forward cockpit assembly into the left fuselage half (1)

3-3: Cement the rear frame (52) to the top of the complete rear cockpit assembly (remove the knock-out tabs)

3-4. Install the rear cockpit, cementing the tabs on the forward radios to the underside of the forward cockpit.

**Locator pins on the rear cockpit floor will insert into corresponding holes in the fuselage halves*

3-4. The rear bulkhead (68) aligns to the rear of the raised ribs in the fuselage. This part was added to

add a little structural rigidity to the kit.

3-5. Cement the tail wheel (61) into the hole in the rear of the fuselage

3-6. Cement the right fuselage half (2) to the left fuselage half (1)

3-7. Install the arresting hook (62) into the fuselage bottom (63) and hook into place

3-8. Cement the fuselage bottom into the fuselage

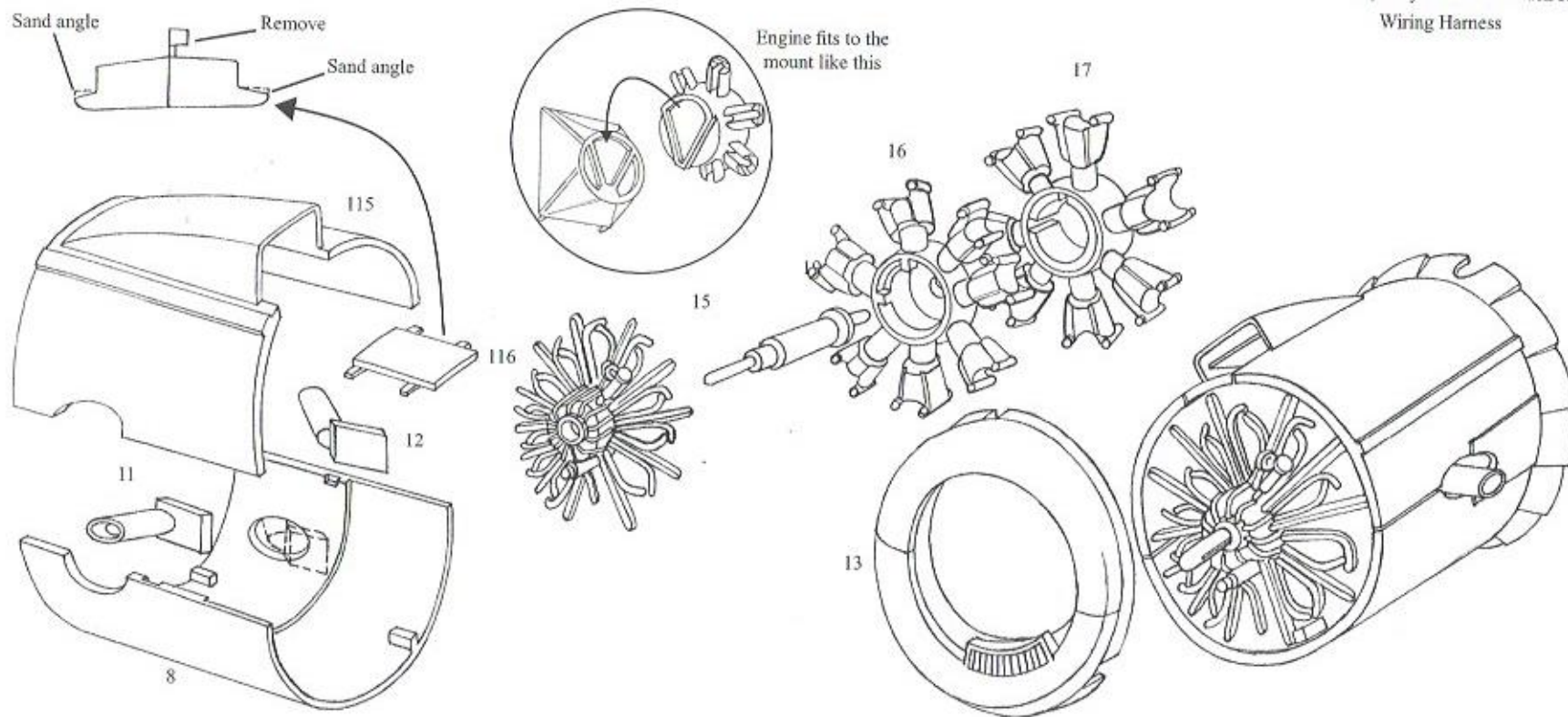
This kit has optional cowl flaps representing opened (9) or closed (10)

3-9. Cement cowl flaps (9 or 10) to assembled fuselage

3-10. Cement engine mount (14) to cowl ring

Step 4: Engine/Cowl assembly

THE ENGINE HAS BEEN DESIGNED TO PERCISE SCALE, AND FITS INTO THE COWL WITH VERY LITTLE ROOM TO SPARE. CARE WILL NEEDED TO REMOVE ANY EXCESS PLASTIC FROM THE CYLINDERS AND CRANKCASE WIRING HARNESS TO FACILITATE A PROPER FIT.



Painting Instructions:

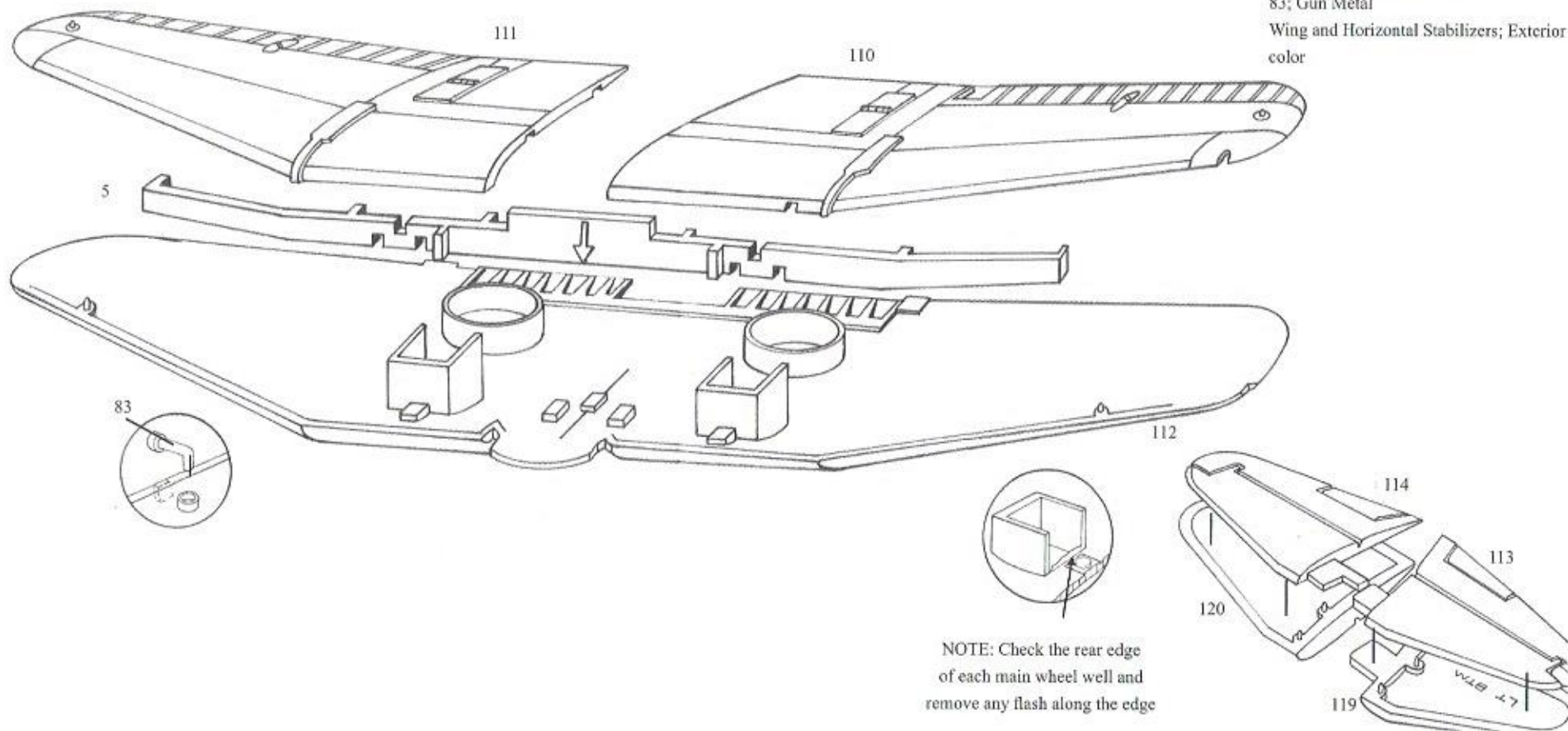
8, 9 or 10, 13, 115, 116; Exterior Color
11, 12; Rust; Burnt Metal
16,17; Aluminum
15; Gray with Black Push Rods and Copper
Wiring Harness

- 4-1. Cement air duct (116) to cowling top (115). Sand the top surface of the mounting tabs so that 116 fits flush to 115
- 4-2. Cement cowling top (115) to cowling bottom (8)
- 4-3. Install exhaust pipes (11&12) into the openings of the cowl halves (115, 8)
- 4-4. Cement the complete cowl to the cowl flap (See step three)

- 4-5. Cement forward cylinder bank (16) to rear cylinder bank (17)
- 4-6. Slide propeller shaft (19) through hole on crankcase (15) DO NOT GLUE
- 4-7. Cement crank case to forward cylinder bank
- 4-8. Slide the engine assembly into the cowl assembly, locating to the engine mounts.
- 4-9. Cement cowl ring (13) to cowl assembly.

Step 5: Wings/Horizontal Stabilizers

Painting Instructions:
 5, Main Wing Interior; Matte White
 83; Gun Metal
 Wing and Horizontal Stabilizers; Exterior color



NOTE: Check the rear edge of each main wheel well and remove any flash along the edge

- 5-1. Cement the wing spar (5) to lower wing half (112). Ribs on the spar go aft. Align the arrow on the spar to the engraved line. *It is critical that the spar be aligned properly and fit flush on the wing bottom; otherwise the landing gear might not align properly.
- 5-2. Locate the gun barrels (83) into the hole in the lower upper wing halves.
- 5-3. Cement left wing upper half (110) to the lower wing half (112)

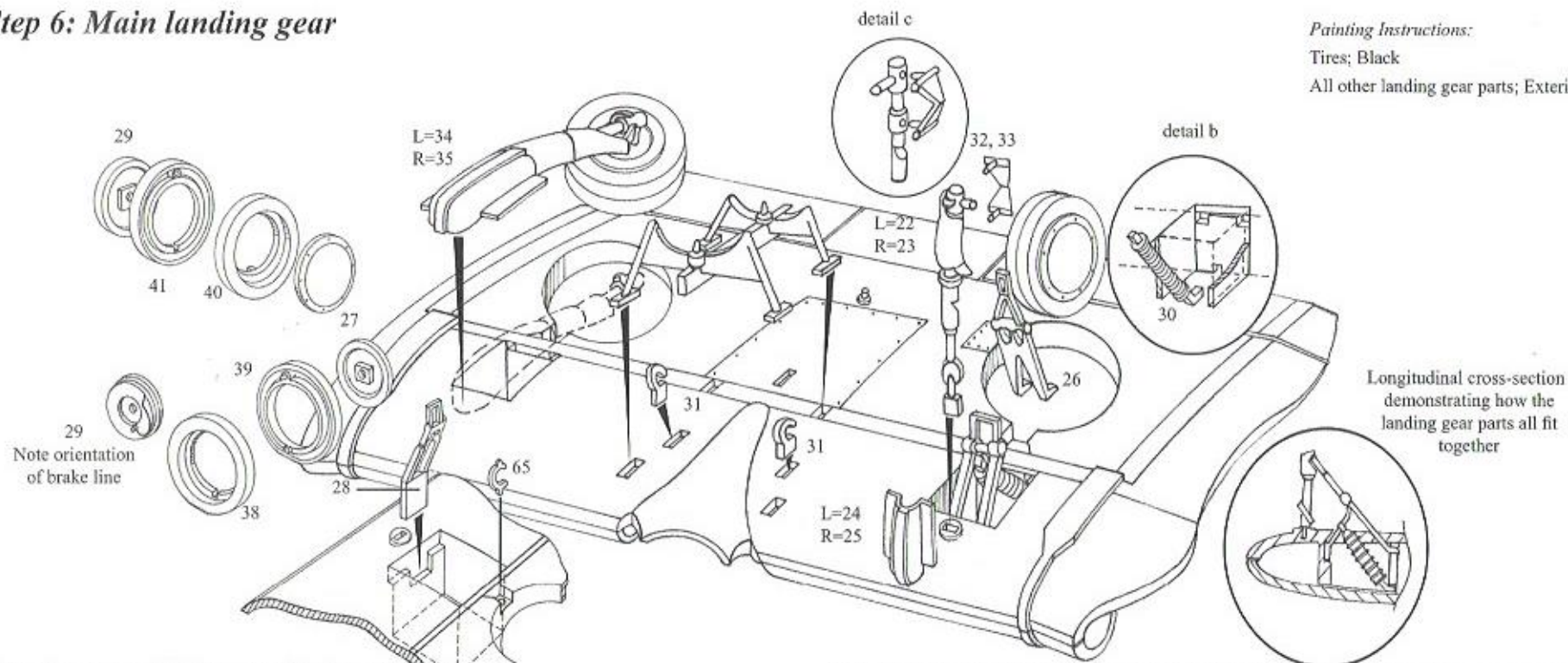
- 5-4. Cement right upper wing half (111) to the lower wing half
- 5-5. Cement the wing to the fuselage
- 5-6a. Cement the upper half of right horizontal stabilizer (114) to lower half of right horizontal stabilizer (120)
- 5-6b. Cement upper half of left horizontal stabilizer (113) to lower half of left horizontal stabilizer (119)
- 5-7. Cement stabilizers into the fuselage

Step 6: Main landing gear

Painting Instructions:

Tires; Black

All other landing gear parts; Exterior color



Optional parts are included for retracted landing gear.

Optional parts are included for weighted or unweighted tires.

6-1. Cement tire halves together (38, 39 or 40, 41)

6-2. Cement the hub cap (27) to the tire

6-3. Cement the inner wheel (29) to the tire

For Wheels-up option:

6-4. Locate wheel/tire assembly into landing gear bay

6-5. Cement retracted landing gear mechanism (L=35, R=34) into the respective holes on the wing bottom

For wheels down option: Make sure to check your alignment after each part is installed so you don't run into trouble later.

6-6. Insert the spring (30) into the notch at the back of the landing gear bay (see detail b)

6-7. Locate the actuators (28) into the front of the landing gear bay so that the upper cross member sits over the notched pin on the spring.

6-8. Insert the A frames (26) into the notches in the rear of the bay, leaning it forward onto the actuator.

6-9. Cement the oilo scissors (32,33) to the main landing gear strut (see detail c)

6-10. Locate main landing gear strut (22=L, 23=R) into hole in front of the mechanism housing

6-11. Locate the strut cover (24=L, 25=R) over the main strut

6-12. Locate wheel/tire assemblies onto the main strut assembly

6-13. Cement the catapult tie-down hooks (31) to the locators in the center of the wing bottom

6-14. Cement central bomb brace and rack (70) to the locators on the lower wing half

6-15. Locate landing gear up-locks (65) to the holes just forward of the wheel well. The hooks should face rearward.

Step 7: Ordnance

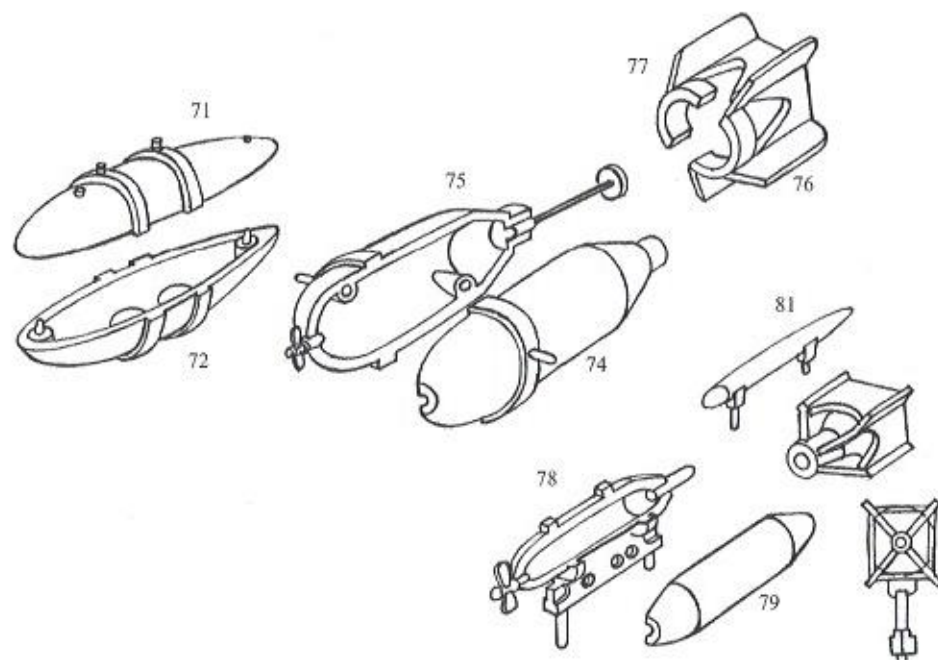
Painting Instructions:

All Ordnance; Olive Drab

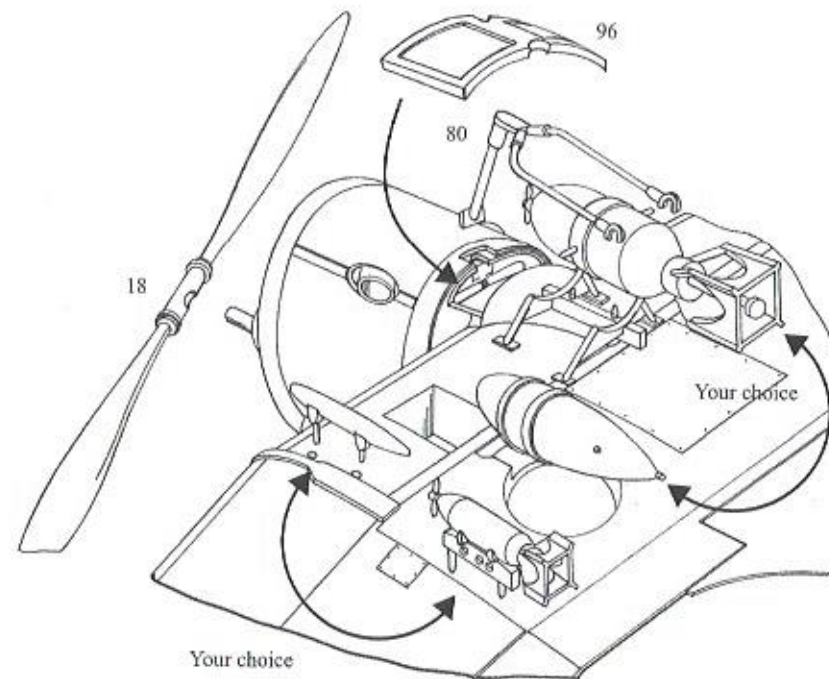
18; Aluminum

71, 72; Exterior color

78; Bomb rack is exterior color



- 7-1. Cement drop tank top (71) to drop tank bottom (72)
- 7-2. Cement left 1000 lb. bomb half (74) to right 1000 lb. bomb half (75)
- 7-3. Cement left 1000 lb. bomb fin (76) to right 1000 lb. bomb fin (77)
- 7-4. Cement bomb fin assembly to bomb assembly
- 7-5. Cement 100 lb bomb half with rack (78) to 100 lb bomb half (79)



- 7-6. Cement 100 lb bomb fin (80) to the bomb assembly

This kit comes with optional practice bomb dispensers.

- 7-7. Cement practice bomb dispensers (81) or 100 lb bombs (your choice) to the locators on the lower wing half
- 7-8. Cement the bomb displacement gear (82) to the inside of the fuselage, just aft of the cowl
- 7-9. Cement the lower window (96) into the assembled fuselage
- 7-10. Cement the 1000 lb bomb or the drop tank (your choice) to the bomb brace and rack (optional)
- 7-11. Slide the propeller (18) onto the propeller shaft

Step 8: Details

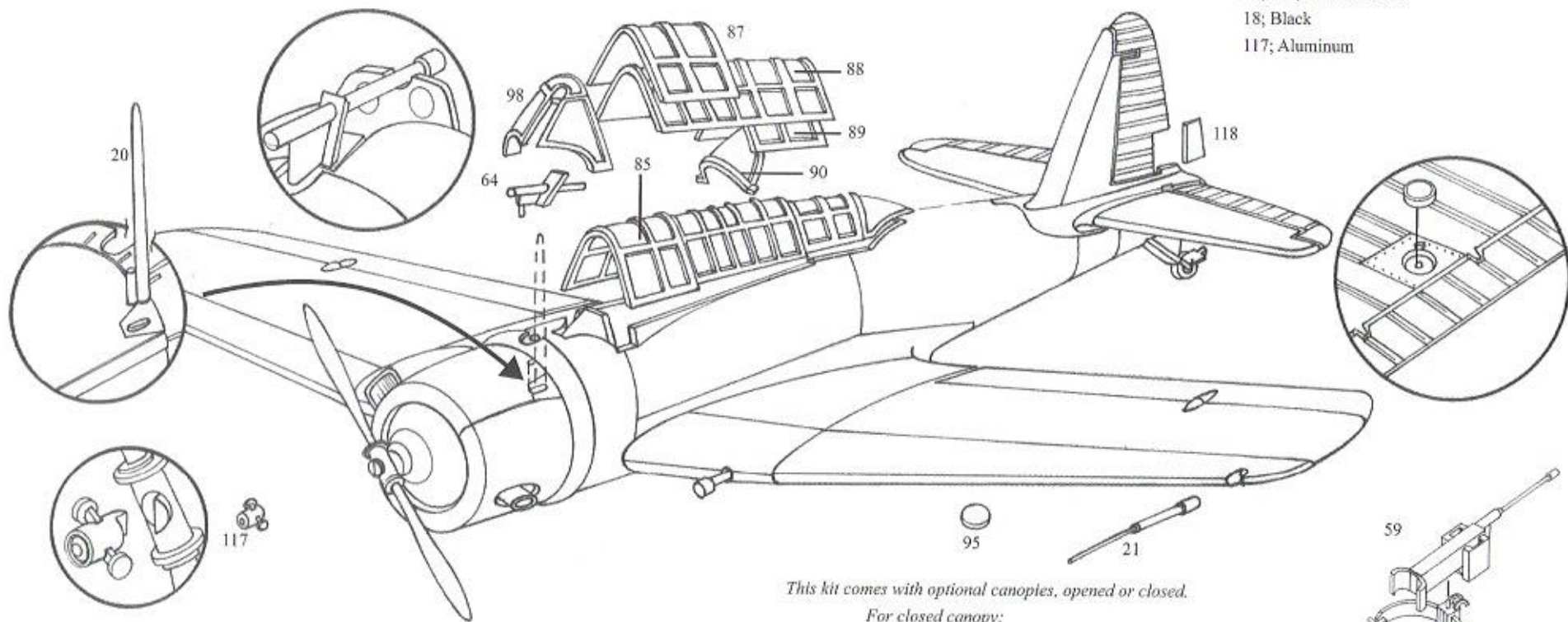
Painting Instructions:

70, 80 81; Matte White

20, 118; Exterior Color

18; Black

117; Aluminum



8-1. Cement trim tab (118) to rudder

8-2. Cement the antenna mast (20) to the cowl assembly

8-3. Tack the propeller hub (117) to the tip of the propeller shaft

8-4. Cement the telescopic sight (64) to the fuselage (see detail)

Use white glue as cement for the clear parts as it does not fog the plastic

8-5. Cement landing light (95) to the wing bottom (see detail)

8-6. Cement the windshield (98) to the fuselage

This kit comes with optional canopies, opened or closed.

For closed canopy:

8-7. Cement closed canopy (85) to fuselage

For open canopy:

8-8. Cement hood (90) to the locator on the shelf

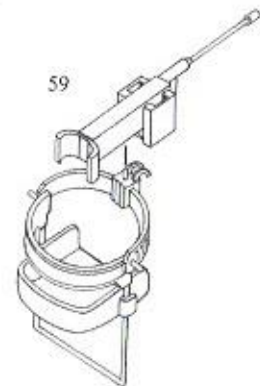
8-9. Cement rear sliding section (89) to the shelf as shown

8-10. Cement canopy (88) to the fuselage

8-11. Place front sliding section (87) on canopy

8-12. Cement the gun (59) to the locator pin on the gun mount (see detail).

To display the gun in the stowed position, locate the gun to the pinhole on the upper frame.

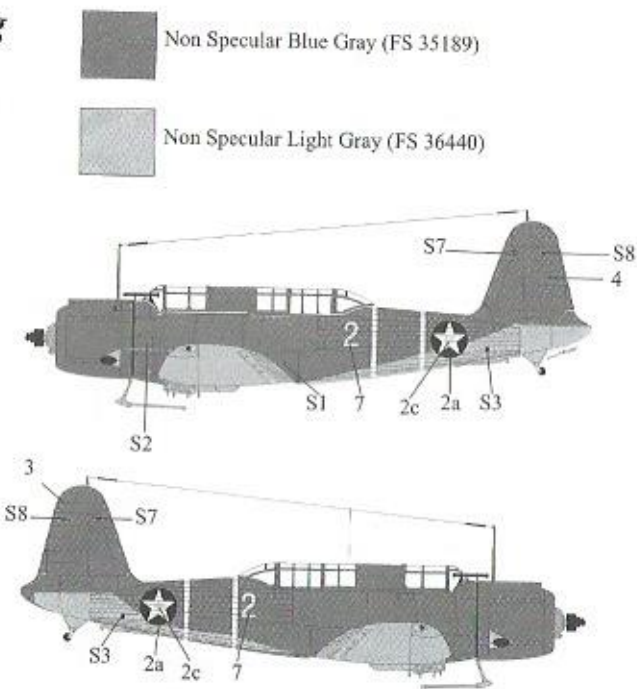


Step 9: Painting and Finishing

Since no photos of "White 2" are known to exist, color and markings are an educated guess, based upon the information currently available.

Based upon the few existing photos of Vindicators taken at Midway, along with John Ford's film "Why we Fight," it has been determined that the upper surfaces of the planes were blue-gray, with light gray undersurfaces. The upper surfaces carried a light gray mottling that varied from plane to plane. There is no evidence indicating the mottling covered the upper surfaces of the wings or horizontal stabilizers, but chances are better than average that the mottling only affected the metal surfaces of the planes..

The red-and-white rudder markings, along with the red "meatballs" in the center of the star insignia were hastily painted over just days before the battle. The side numbers were non-standard numbers, most likely hand-painted with no stencil. As for the white bands, the vertical and horizontal stripes were 4-inch medical tape that was used to hold the fabric to the fuselage. These SB2U-3s were due for overhaul prior to being flown to Midway from MCAS Ewa. This overhaul would have included new fabric for the aft fuselage. To counteract the effects of heat, sunlight, salt



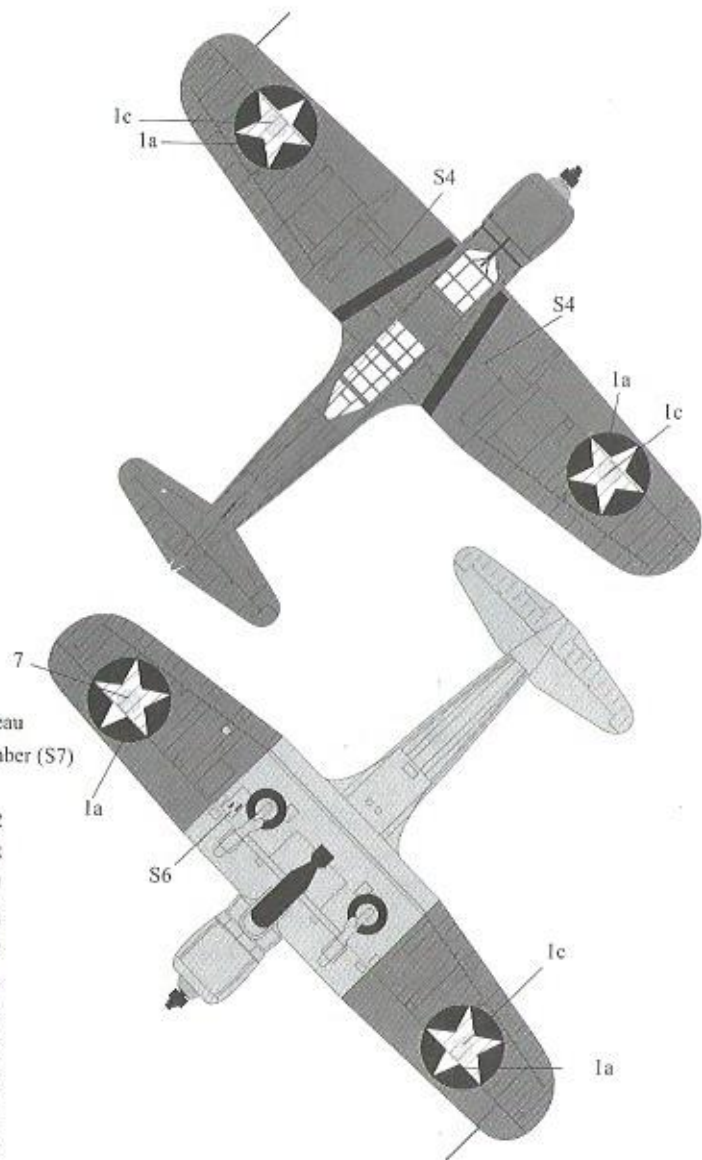
air, and to hold the decaying fabric to the fuselage structure, medical tape, was wrapped around the fuselage and also along the fuselage longerons to keep it in place, and was then doped over. This was necessary because there were no facilities or fabric available on Midway Island to properly replace the old fabric. As such, each SB2U-3 attached to VMSB-241 could have had slightly different stripes, depending on the condition of the aft fuselage fabric.

Side
Number (7)

- 1
- 2
- 3
- 4
- 10
- 9
- 6
- 7
- 8
- 11
- 12

Bureau
Number (S7)

- 2072
- 2088
- 2067
- 2053
- 2057
- 2064
- 2045
- 2094
- 2083
- 2071
- 2059





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