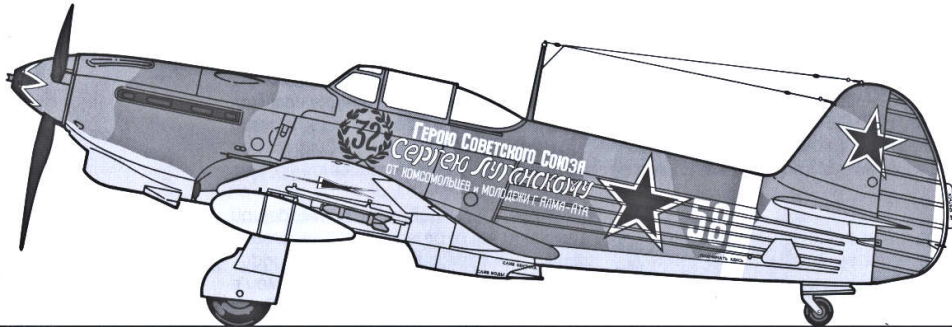


3425-0200

YAKOVLEV

# Yak-1b



# Yak-1b

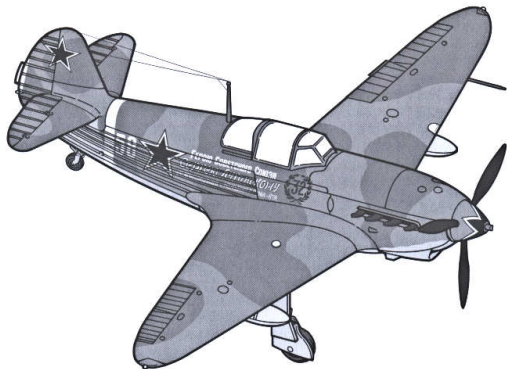
## INSTRUCTIONS

As the early Yaks progressed through the ongoing changes that all production aircraft experience, one of the most obvious needs was for better outward vision. This led to the introduction of the "bubble top" canopy, a change which also brought about a new model designation - the series 1b. This aircraft has previously been referred to as a 1m, but factory records indicate that a more proper designation would be 1b. Other improvements were incorporated as well. These included things like a new aft fuselage, revised tail surfaces, armament, various scoops and interior items and most importantly, a significant reduction in weight. The new airplane weighed in at 5,900 lbs, a savings of almost 500 lbs compared to the previous airplane. This reduction, coupled with a boost in horsepower, made a good plane even better.

This kit represents an aircraft flying with the 152 Destroyer Unit. The airplane carried colorful slogans and markings that many Soviet aircraft displayed throughout the Great Patriotic War. It should be noted that the wings on these aircraft were constructed almost entirely of wood and therefore had very little surface detail. Of particular note is the very thick armor glass that was located directly behind the pilot. This afforded pilot protection and visibility. The 1200 horsepower Klimov V-12 M-105 PF engine gave a top speed and rate of climb that had been unknown in Soviet aircraft at that point. Without the Yak series, the Great Patriotic War might have had a far different outcome.

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About the only thing that can be stated with confidence about this plane is that it was grey; anything beyond that gets rather cloudy. We do know that the Soviet authorities issued very detailed instructions concerning the finish of the VVS aircraft. Accurate Miniatures has copies of these documents complete with the color numbers, names and applications. All that is missing are the actual samples of the colors. There are two top colors. We feel that medium grey blue FS 26187 and dark grey FS 26118 come close to matching the Soviet colors introduced during 1943. As for the underside color, evidence seems to suggest a shade of underside blue close to FS 25190. Our recommendations are based on our best "read" of the information and photos that we have studied. After close examination of surviving examples of WWII aircraft, we do feel confident in calling for a color very close to RLM 02 or FS 24226 for the interior surfaces. These areas have been untouched and protected from light and weather since the day they were painted.



## MODEL PAINT REFERENCE CHART\*

	FEDERAL STANDARD	MODEL MASTER	HUMBROL	GUNZE SANGYO AQUEOUS	GUNZE SANGYO MR. COLOR	AERO-MASTER	FLOQUIL CLASSIC MILITARY
ALUMINUM	17178	1781	11	8	218	-	303121
BURNT METAL	-	1415	-	76	61	-	-
MEDIUM GREY BLUE	26187	2057	106	-	-	9071	303149
DARK GREY	26118	1723	125	32	305	9050	303333
UNDERSIDE BLUE	25190	-	89	323	323	-	303090
BLACK	27038	1749	33	12	33	9001	303010
FLAT WHITE	37875	1768	34	11	62	9002	303011
INTERIOR GREY-GREEN	24226	2071	92	70	60	9020	303359

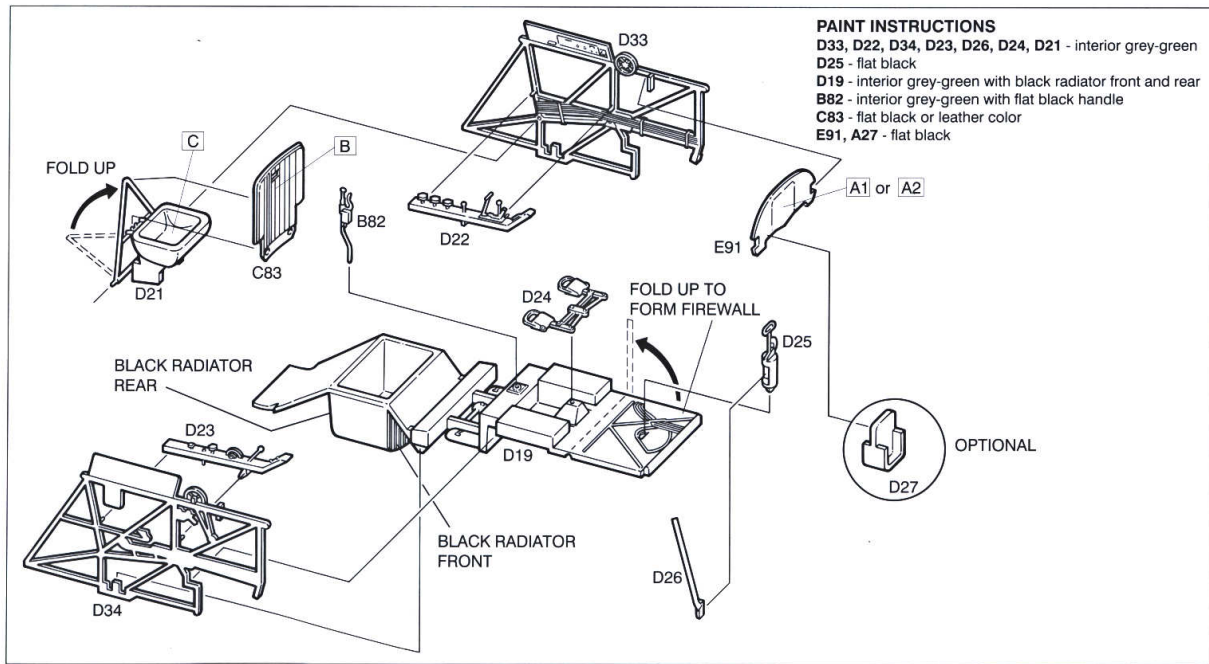
\*This chart is provided only as an aid to the modeler and is the closest match possible from each paint manufacturer at the time of printing.

While we at Accurate Miniatures do not profess to be "experts" on these colors, we have done our best to provide the builder with as much information on the subject as is currently possible. We have also kept an eye on the availability of pre-mixed model paints. As experts in this area dig deeper into the maze of Soviet colors, we're sure the knowledge will improve. In the meantime, use your judgment.

**IMPORTANT**

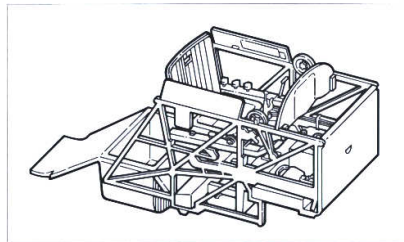
We know; everyone says follow the instructions and we all dutifully march off to our own drummer, leaving the instructions behind. Well this time we really mean it. We've built a lot of these kits and we've found the little surprises that always seem to crop up. You, the lucky modeler can now benefit from our experience! It's as simple as following this sheet. This kit will go together easily and slightly unconventionally. Follow along now and enjoy the process.

## STEP 1 - COCKPIT ASSEMBLY



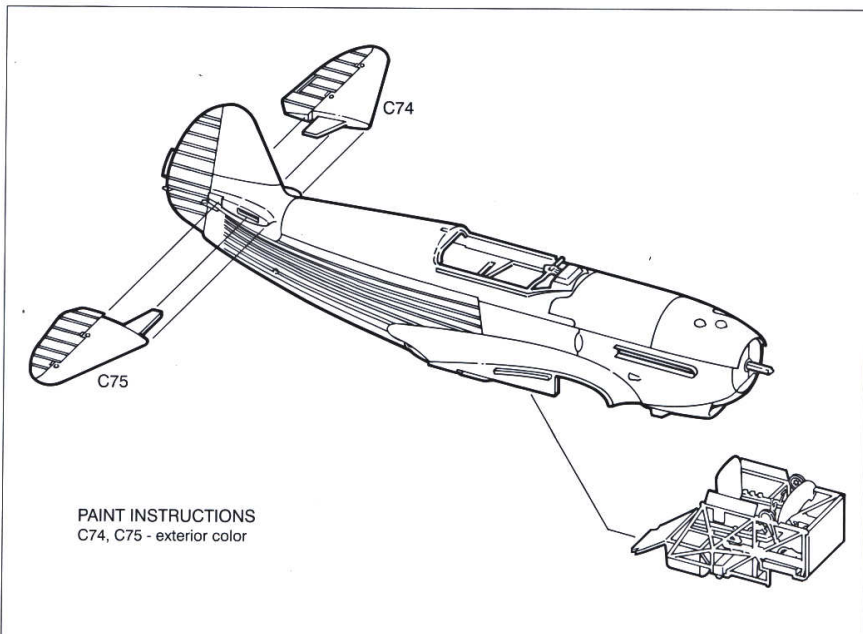
- As with most sub-assemblies, these parts will benefit from being painted before assembly. Glue the left control console (D22) to the left fuselage truss assembly (D33). Repeat this operation for the right side using the right fuselage truss (D34) and right control console (D23). The control consoles rest on top of the small locating pins on the fuselage trusses.
- Glue the cannon shell case chute (D26) to the ShVAK cannon charger (D25).
- Glue the cannon assembly to the locator on the front of the cockpit floor (D19).
- Glue the rudder pedals (D24) to the forward most locator on the cockpit floor.
- Now glue the control column B82) to the rear most locator on the cockpit floor.
- Carefully fold up the front of the cockpit floor, thus forming the firewall.
- Glue the left fuselage truss assembly to the left side of the floor/firewall.
- The lap belt decal (C) may be added to the pilot's seat (D21) bottom at this time. This decal represents the Sutton type harness that was common to Soviet aircraft in this time period. If the modeler chooses to find alternatives to this decal type of seat belt, we won't be insulted. The seat belt decals may also be applied to foil, paper or other materials to give it more "depth" if desired.
- The seat back frame portion of the pilot's seat (D21) is now folded upright and glued against the seat bottom.
- Carefully locate and glue the armored seat back (C83) to the seat frame. Let this have plenty of drying time.
- The shoulder harness decal (B) is now added. The top of the belt passes through the slot in the seat back and drapes onto the seat.

- After allowing the seat assembly to dry, attach it to the left fuselage truss assembly by gluing the pin on the left side of the seat frame into the hole on the inside of the truss assembly. The seat assembly should now be rotated forward until it rests on the floor.
- Before the left side glue is dry, carefully locate and glue the previously assembled right fuselage truss assembly to the right side of the cockpit floor and the firewall, trapping the pilot's seat assembly in place.
- The instrument panel (E91) front should now be painted flat black with the exclusion of the dial faces. Two different methods have been used to print the decal instrument dials. One decal (A1) has been printed "face down" with the dials facing the glue surface, while the other decal (A2) has the dials "face up". Select one of these decals to be applied to the back of the panel. If you elect to use the "face up" decal, it should be turned over on the wet decal sheet to pick up glue and then applied. Make sure that the dials line up in the clear areas, and allow to dry thoroughly.
- If you are constructing an aircraft with a radio, the radio panel (D27) should be glued to the back right bottom edge of the instrument panel as indicated. Make sure the dials face forward. The kit that is represented on the box and decal sheet carried this radio.
- After the instrument panel assembly has thoroughly dried, it should be glued to the rear of the tab locators on the top rails of the left and right fuselage trusses as indicated.





## STEP 3 - COCKPIT INSTALLATION



- The previously assembled cockpit tub is now installed into the fuselage from the bottom. Use no glue at this time. When the cockpit assembly is properly in place, the seat back should rest against the rear edge of the fuselage cockpit opening. The wing spar which is installed in Step 4 will precisely locate the cockpit assembly. After the wing assembly is glued to the fuselage in Step 4, the cockpit assembly will be glued into place.
- Glue the left horizontal stabilizer (C74) to the left fuselage half.
- Glue the right horizontal stabilizer (C75) to the right fuselage half.

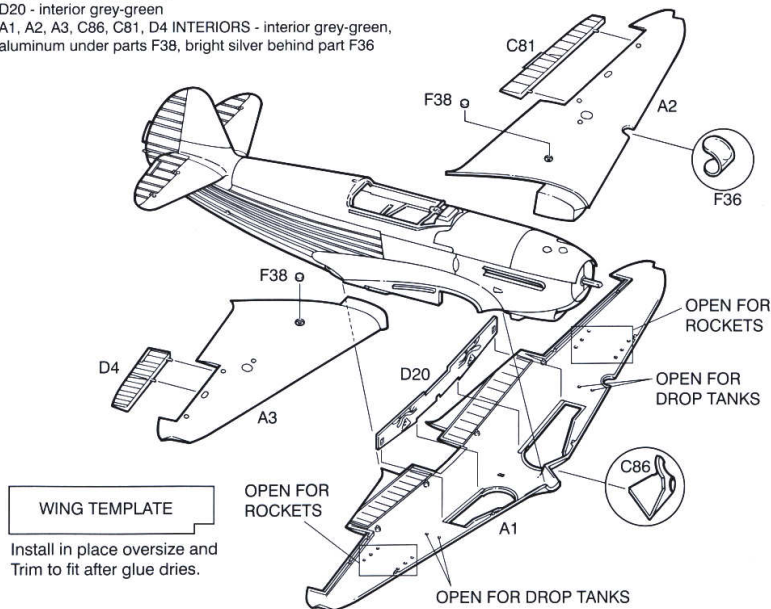
## STEP 4 - WING ASSEMBLY

### PAINT INSTRUCTIONS

D20 - interior grey-green

A1, A2, A3, C86, C81, D4 INTERIORS - interior grey-green,

aluminum under parts F38, bright silver behind part F36



Modelers who are comfortable with their skills may elect to cut and drop the flaps. They may be cut off and reattached in the lowered position after the wings have been installed. The maximum deflection angle for the flaps was approximately 45°. Use the illustrated template to cut two pieces of thin card stock (one per side) to block off the forward side of the wing openings.

- If you plan to have your model carry the drop tanks and/or rockets, you will need to open the flashed over holes in the wing bottom (A1) at this time. Now glue the main spar (D20) to the top of the wing bottom (A1), positioning it into the slots at the rear edge of the landing gear openings as shown. Make sure the spar is kept vertical to the wing and hold it in place until the glue sets.
- Glue the spar/wing assembly to the bottom of the fuselage. The wings on the Yak were constructed of wood and therefore had a very smooth surface. Access to the internal components was gained through metal panels on the wing bottom.
- Glue the left wing top (A2) to the wing bottom and the fuselage.
- Glue the right wing top (A3) to the wing bottom and the fuselage.
- Carefully glue the carburetor air intake (C86) to the left wing root.
- Glue the left aileron (C81) to the left wing.
- Glue the right aileron (D4) to the right wing.
- Glue the clear landing light cover (F36) to the opening in the left wing. We recommend the use of white glue or a similar non-crazing adhesive for the installation of this part.
- Finally, carefully white glue the clear fuel gauge lenses (F38) into the openings in the wing tops. These gauges could be read from the cockpit and added a basic efficiency to an already simple airplane.



## STEP 5 - LANDING GEAR

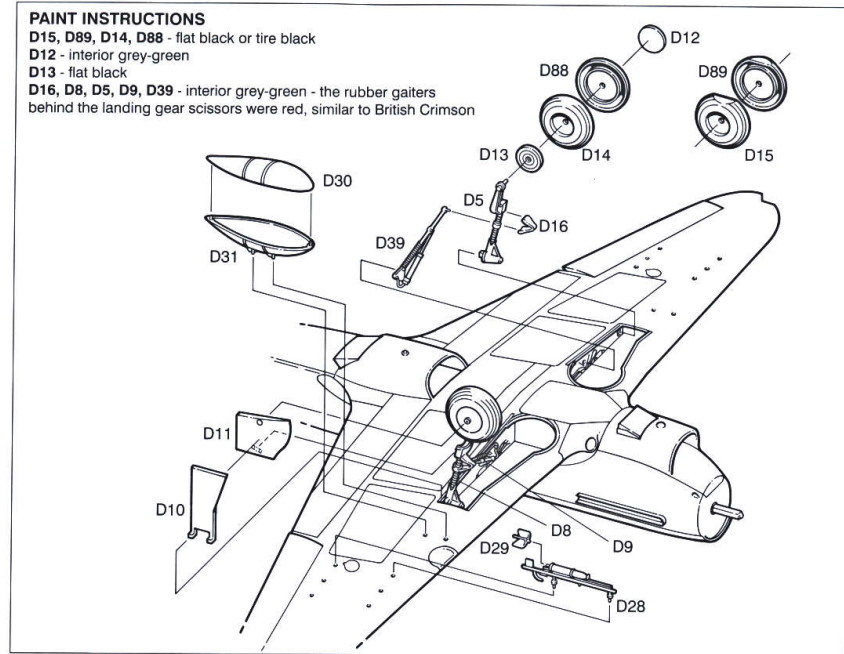
### PAINT INSTRUCTIONS

D15, D89, D14, D88 - flat black or tire black

D12 - interior grey-green

D13 - flat black

D16, D8, D5, D9, D39 - interior grey-green - the rubber gaiters behind the landing gear scissors were red, similar to British Crimson



- Decide whether you wish to use the weighted (left half, D15 and right half, D89) or the unweighted (left half, D14 and right half, D88) tires. Glue the set you have chosen together.
- Glue the outer main wheels (D12) to the tires.
- Glue the inner main wheels (D13) to the tires.

We recommend that the main tire/wheel assemblies be glued to the landing gear struts after the tail wheel has been added in Step 6. This is especially important if you are using the weighted tires, as the model will change its "sit" after the tail wheel is added.

- Carefully glue a landing gear scissor (D16) to the left landing gear strut (D8). Repeat this operation with a landing gear scissor to the right landing gear strut (D5).
- Carefully glue the left landing gear strut (D8) to the locator in the main spar. While this part is drying, glue the left landing gear arm (D9) to the left landing gear strut and to the locator on the main spar. Check alignment. Repeat this assembly for the right landing gear components using the right landing gear arm (D39).
- Double check to be sure that all of the landing gear components are lined up. Look from the front and the side. Compare against the box insert and instruction sheet. As a good final check, look down at the model from above to see if the gear projects forward at the same angle.

Parts D10, D11, D28, D29, D30 and D31 will be installed in Step 6, but are shown here to clarify their locations.

## STEP 6 - FINAL DETAILS

### PAINT INSTRUCTIONS

F37 - flat black except for glass reflector portion

E90, E92, E94 - framing to match exterior color

D17 - interior grey-green with flat black or tire black tire

D11, D98, D10, D57 INTERIORS - interior grey-green

B84 - burnt metal

C78 - flat black blades with aluminum hub

B79, B80 INTERIORS - interior grey-green

EXTERIORS - exterior color

D28, D29 - rockets were frequently left unpainted with dark red warheads - launch rails were either unpainted steel or painted to match the underside color

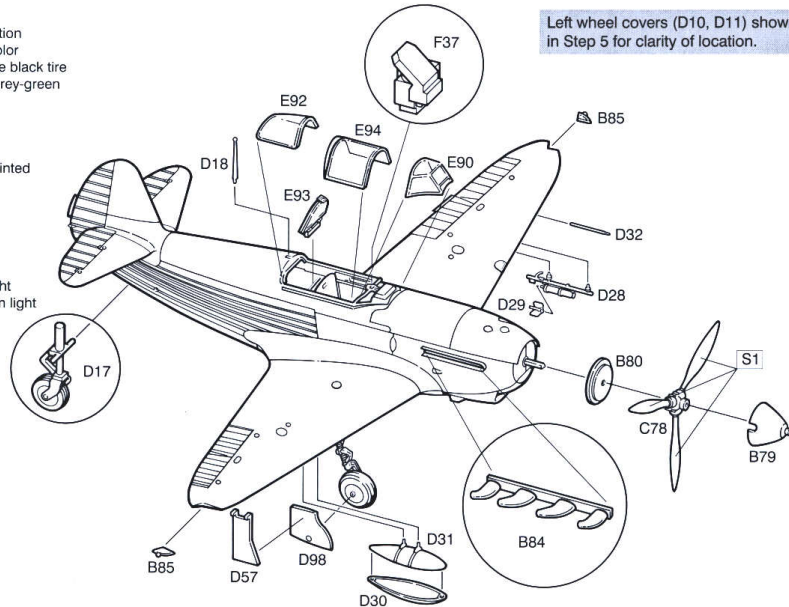
D30, D31 - aluminum or underside color

D18 - exterior color

D32 - exterior color with aluminum tip

B85 - LEFT SIDE - exterior color with red light

RIGHT SIDE - exterior color with green light



This step allows the builder the greatest amount of assembly variation. We have left the fragile parts until this last step to help prevent accidental breakage. We recommend that you duplicate the following sequence, since we've already broken enough pieces to speak from experience.

- Glue the gun sight (F37) to the locator on top of the tubular structure at the forward edge of the cockpit opening.
  - Remember that white glue suggestion? White glue the windshield (E90) to the top of the fuselage.
  - White glue the armor glass (E93) into the slot behind the seat inside the cockpit opening. This glass should lean slightly forward as shown.
  - White glue the rear canopy (E92) to the top of the fuselage.
  - The pilot's canopy (E94) may be added now or later, open or closed.
  - The navigation lights (B85) are now carefully glued to both wing tips.
  - The tail wheel (D17) is now glued up into the opening in the fuselage. The locators have been deliberately left open toward the rear to allow the builder to install this piece after painting the model. Slide the wheel forward until it locates firmly in place. After the tail wheel has dried thoroughly, add the main wheels from Step 5 to the landing gear struts and check for alignment.
  - Glue the left lower wheel cover (D11) to the small round locator on the left outer wheel and to the small locating tab on the left landing gear strut (illustrated in Step 5). Glue the right lower wheel cover (D98) to the locator on the right outer wheel and the locating tab on the right landing gear strut.
  - Glue the left upper landing gear cover (D10) into the outer edge of the left wheel well opening in the bottom of the wing (illustrated in Step 5). Locate the bottom of the cover against the top of the lower wheel cover as shown. Glue the right upper landing gear cover (D57) into the outer edge of the right wheel well opening in the bottom of the right wing. Locate the bottom of the cover against the top of the right lower wheel cover as shown. It may be necessary to trim the inside surfaces of the locating tabs on the top edge of the upper landing gear covers to allow a better fit against the landing gear leg.
  - The exhaust pipes (B84) have been molded on oversize sprues to make finishing easier. You may elect to drill out the openings and weather them before installation. After they are finished to your satisfaction, carefully remove them from the tree and glue them into the fuselage openings and up against the stops which you installed in Step 2. You did install the stops, didn't you? Align and center them as they dry. Do this step for each side.
  - Before installation of the propeller (C78), it should be painted and stenciled with decals (S1). The propeller should be trapped between the propeller spinner (B79) and the propeller backing plate (B80). Carefully glue the spinner and backing plate together. When this assembly is good and dry, carefully slide it onto the propeller shaft. Yes, the propeller on this plane turned "backward".
  - Glue the RS-82 rocket fins (D29) to the rocket body/rail (D28). Make six sets.
  - Glue the rocket assemblies to the locators on the bottom of the wings. The early Yak fighters carried these rather uncontrolled, semi-accurate rockets as a primary weapon.
  - If you have elected to build your kit with the drop tanks in place, glue the top drop tank half (D31) to the bottom drop tank half (D30). Make two sets and glue the assembled drop tanks to the previously opened holes in the wing bottoms (see Step 4). These tanks were often carried to increase the flying range of the aircraft.
  - If your model is to be equipped with a radio, glue the radio antenna (D18) into the previously opened hole in the fuselage top (see Step 2).
  - Finally, glue the pitot tube (D32) into the opening in the leading edge of the left wing.
- Your Yak is now assembled and ready for display. If you enjoyed the assembly of this kit, please let us know. We welcome any comments which might lead to improvements in future releases.

Accurate Miniatures would like to thank the following persons and organizations for their help in the production of this kit:

Natasha Yushkevich	Yakovlev Design Bureau	Yefim Gordon	Nickolas Polikarpov
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## STEP 7 - DECAL PLACEMENT AND FINISHING

