*Modeling the first*

# Ace Sabre


## Converting Fujimi's F-86F to an F-86A

*By Paul Boyer  Photos by Jim Forbes*

Just mention the Korean War to an aircraft enthusiast and visions come to mind of F-86 Sabres tangling with those dreaded MiG-15s. Certainly, the F-86 Sabre has been well served to the modeling community, but almost every kit available is of the late F-86F with its improved wing and tail surfaces. In 1/72 scale, only the old toy-like Matchbox kit represents the early F-86A.

So, how do you build an accurate early Sabre? The 1/72 scale Fujimi kit I built started life as an F-86F-30 with the "6-3" wing. Here's a list of the changes I had to make:

- Reshape the rear fuselage to eliminate the tailplane actuator fairings
- Backdate the wing to the early narrow-chord style with leading-edge slats
- Reshape the windscreen to the correct armored "V" shape

Sounds straightforward, eh? There are probably several ways to go about each change, but here's what I did.

**Rear fuselage.** In 1/72 scale, the actuator fairings were easily removed with a grinding bit on a motor tool and careful sanding. I was worried that the removal process would cut through the thin plastic, so I reinforced the fairing area from inside each fuselage half with gap-filling super glue set with accelerator, 1. As it turned out, I never broke through the plastic, but it is likely that you will if you are building a larger-scale kit. Photo 2 shows a fuselage half with the fairing removed and one unmodified.

**Despite having no individual aircraft markings save the serial number, Jabara's ace F-86A is still a striking fighter jet.**

Next I sanded the rear fuselage smooth and rescribed the panel detail. Since I planned to apply a natural metal finish, the surface had to be flawless.

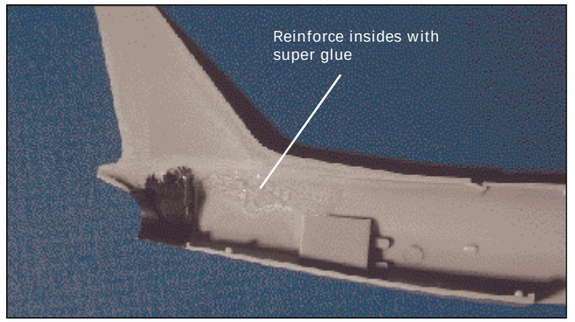
**Swapping wings.** For this conversion I used the out-of-production Puget Sound Scale Models resin slatted wing designed for the Hasegawa F-86D Sabre Dog – the same wing was used on the A and E Sabres. (See sources for a substitute.) Since it was designed to fit a different kit, I had to make some modifications. The lower fuselage section of the resin wing was deeper than the Fujimi kit. I had to combine the bottom fuselage section of the Fujimi wing set with the resin wings. Some quick action with a razor saw produced all the parts I needed, 3.

Since there were no longer any tabs and slots in the assembly, the wing/fuselage joint was potentially fragile. I merged the pieces with gap-filling super glue – this provided strength and filled the wing/fuselage seams. Remember, sand super glue right after it sets. As it cures, it hardens, making it harder than plastic and more difficult to sand.

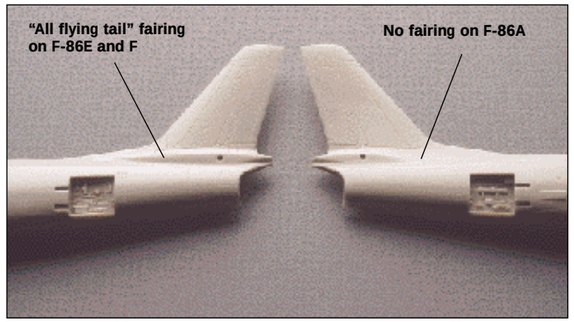
I attached the new wings so that the landing gear bays lined up with those in the fuselage section. The position of the trailing edges of the wings should be the same as on the original. Since the new wing was narrower in chord than the kit wing, a stub of wing root at the leading edge remained on each side of the fuselage, 4. I carefully filed and sanded the stubs away.

Make sure the wings align properly. From the front, Sabre wings have about three degrees of dihedral, and without tabs or slots, the alignment is tricky. I used just a drop or two of gap-filling super glue near the trailing edge, then eyeballed each wing from the side, front, top, and bottom. Once a wing was in the correct position, I applied more super glue along the seam by transferring small amounts with a toothpick. Then I set the glue with accelerator and immediately sanded the seams smooth.

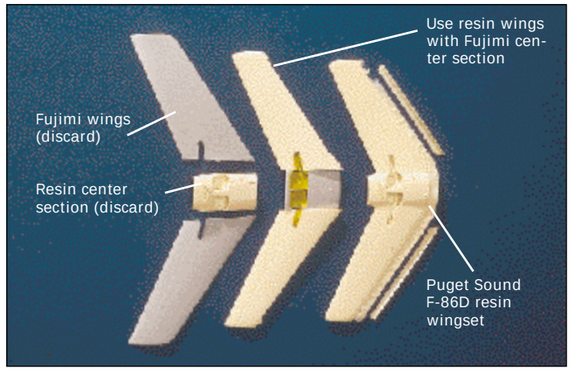
The leading-edge slat tracks molded onto the resin wing were not cast well, so I cut them off and replaced them with styrene strip. The slats were molded separately. On real Sabres, leading-edge slats are deployed (extended) when the aircraft is at rest or at low airspeeds. Aerodynamic forces (increased speed or "Gs") retract these slats automatically. Some photos show parked Sabres with the slats retract-



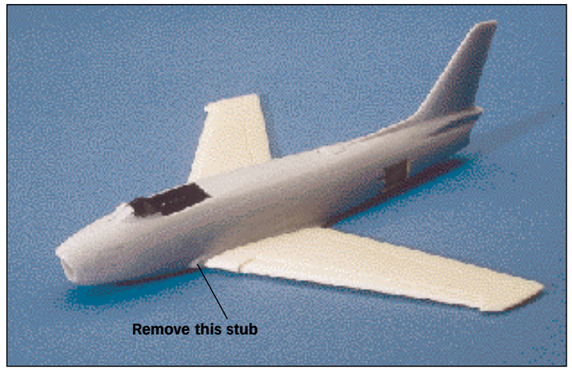

**1 Paul used gap-filling super glue to reinforce the inside of the rear fuselage in case the grinding bit in the motor tool should break through the plastic.**




**2 The all-flying tail fairing is a noticeable feature of late Sabres. The unmodified Fujimi F-86F fuselage is on the left, while Paul's modified F-86A fuselage is on the right.**




**3 Paul used an out-of-production resin slatted wing for this conversion. The center group is the new modified wing.**




**4 The new wing is attached to the fuselage. Note the small leading-edge stub that must be removed.**

### REFERENCES

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**Warbird Tech, North American F-86 SabreJet Day Fighters**
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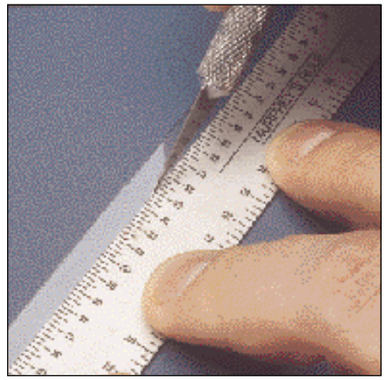
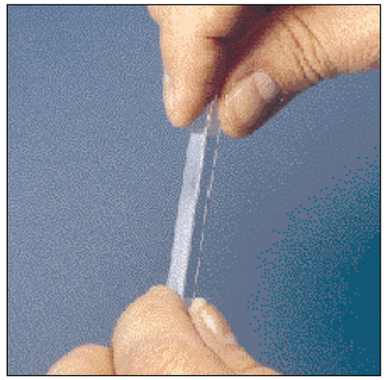
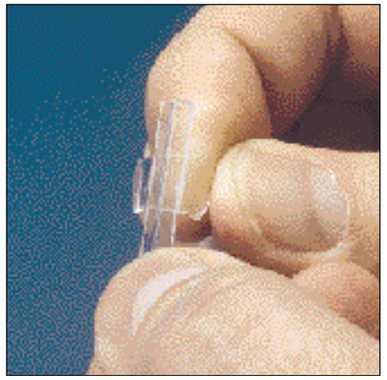
Larry Davis, Squadron/Signal Publications, Carrollton, Texas, 2000



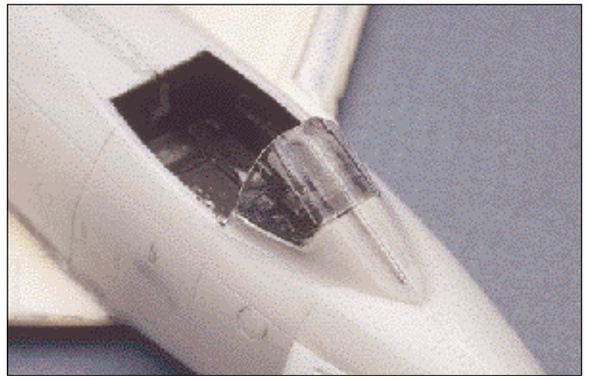
**5 Paul scored clear PETG plastic for the new windscreen.**



**6 The oversize strip is easy to bend once it has been scored.**



**7 Once cut to size, the new V-shaped strip is glued to the kit windscreen.**



**8 The new V-shaped windscreen before finishing.**

**9 Gap-filling super glue, careful sanding, and an overcoat of Future floor polish finishes the new windscreen.**

**10 Here's the model right after painting, but before decaling. Paul used strips of black decal sheet for the I.D. stripes.**

**11 Note the smoothly faired aft fuselage section typical of A-model Sabres.**

## Sabre variants

The changes made to the Sabre during its production run were incremental, and all were done to enhance the jet's already stellar performance. Improvements were made to increase the thrust of the J47 jet engine and improved gunsights, but the real advances came with the "all-flying" tailplanes first seen on the F-86E. These had hinged elevators as usual, but the entire horizontal stabilizer moved as well to increase maneuverability. The rear fuselage of the Sabre was reshaped slightly to cover the actuators for the new tailplanes. This produced a pronounced fairing ahead of the tailplanes. During the F-86E production run, the windscreen was redesigned with a flat armored front panel.

During the production run of the F-86F-25 and F-30, designers came up with a new wing to improve high-speed maneuverability. It replaced the original wing leading-edge slats with an extension that increased wing chord. This extension was six inches wide at the wing root, tapering to three inches wide at the wing tip, so it also increased the wing-sweep angle. This was called the "6-3 wing" or "hard" wing, and featured a small fence on the upper surface of the leading edge. Modification "6-3 kits" were also produced, rushed to Korea, and installed on earlier F-86Fs and some Es.

The F-86F-40, made for the Japanese Self Defense Force, had a further improvement to the wing. This kept the increased chord of the 6-3 wing, but also reinstituted the leading-edge slats to improve low-speed handling. The F-40 wing also featured extended wing tips (one foot each), and this wing was also retrofitted to earlier USAF Sabres after the Korean War.

The improved and enlarged F-86H Sabre also went through wing changes during its production. Photos show most of them fitted with the F-40 wing, but some were built with the 6-3 "hard" leading edge with the small fence.

F-86D Dog Sabres had the early narrow-chord slatted wing, but the improved F-86L carried the F-40 wing.

*– Paul Boyer*

ed, but these were probably pinned in place for photographic or maintenance purposes. So if you want to model a slatted Sabre on the ground, you should deploy the slats.

Windscreen. The A model Sabres and many of the early E models had a V-shaped armored windscreen. The Fujimi kit comes with the later flat armored windscreen. I thought about carving a master for the new windscreen and vacuum- or stretch-forming copies, but I decided to do something that's a lot simpler and almost as good. I used the kit windscreen as a basis and added a clear plastic V plate to the front. After it was glued, sanded, polished, and the frames painted, you can barely tell that it is a composite.

First I cut a piece of .020" PETG clear sheet (available in plastic supply stores) into a 3"-long, ⅜"-wide strip. Next, I scored a groove down the center of the strip with a sharp blade, 5. I scored the line twice, once with the blade angled slightly to one side, the next with the blade angled to the other side. This produced a V-shaped groove about halfway through the plastic and allowed the plastic to be folded easily, 6. The strip was much wider than needed on the windscreen, but the extra width made it easier to fold. It was also much longer than I needed, allowing me to cut it to the right shape later. The fold ended up being about a 120-degree angle.

With the score folded, the next job was to cut down the width of the strip. I measured the width of the kit's flat windscreen panel, divided that measurement by two, then used that figure for the width on either side of the fold. A couple of passes with a sharp blade cut the excess away from each side. Now the V-shaped strip was as wide as the flat panel, 7.

The strip was next placed onto a sheet of 400-grit sandpaper with the V fold pointing up. With gentle sanding, the edges were beveled so it would fit snug to the flat windscreen.

The next step was to glue the new windscreen on top of the old. Plastic cement would frost the kit canopy and would have little effect on the PETG strip, so I decided to use gap-filling super glue. This can also frost clear plastic, but a coat of Future floor polish on the clear plastic reduces this risk. Wait for the Future to cure – about 48 hours – before continuing.

I first glued the kit windscreen to the assembled fuselage, then sanded the small rectangular protrusion from the front of the kit's windscreen pedestal. I next sanded one end of the V-shaped strip so that it would fit flush on the nose at the bottom of the pedestal, then cut the other end a little longer than was needed to reach the top of the windscreen. With the strip carefully positioned, I placed a small drop of gap-filling super glue on each edge, allowing it to flow along the seam. An application of accelerator set the strip in place. Now I had to sand down the top end and bridge the small opening at the top with sheet styrene, 8.

Now the windscreen has the right shape, but the seams were still visible – so I sanded carefully using fine, extra-fine, and polishing sticks to smooth out the seams. Next I gave it a dose of Novus 2 plastic polish, all the while being careful not to apply too much pressure and break the fragile plastic. Finally, I brushed on another coat of Future and placed the fuselage aside for another 48 hours, 9.

Simple Sabre. The early Sabres were overall natural metal, with a few panels noticeably darker and some painted fiberglass. Early A models had fiberglass intakes that were either painted or left in a natural brown color. The aircraft I chose to model, the one flown by Capt. James Jabara on his "ace" mission (see p. 44) was a late F-86A-5 with an aluminum intake with its small dark gray cover of the radar-ranging gunsight at the top.

After masking the V-shaped windscreen and covering the cockpit, I airbrushed the model with SnJ Spray Metal. Most of these combat Sabres were pretty weathered, so I didn't polish the finish. I tinted more SnJ with a little Testor gloss black to paint some of the wing and fuselage panel, then added still more black for the gun panel and exhaust area.

## SOURCES

After my project was finished, the following resin conversion sets for 1/48 and 1/72 scale Sabres were announced by **Cutting Edge Models,** Meteor Productions, P.O. Box 3956, Merrifield, VA 22116, ✆703-971-0500 www.meteorprod.com

- F-86A set, CEC48196 and CEC72014
- F-86E (early) set (V windscreen and new wing leading edge with separate dropped slats), CEC48197 and CEC72015
- F-86E (late) set (new wing leading edge with separate dropped slats), CEC48198 and CEC72016

## Capt. James Jabara's Sabre

On May 20, 1951, Capt. James Jabara achieved "first jet ace" status by gaining his fifth and sixth MiG-15 kills. By this time, Jim's original unit, the 334th Fighter Interceptor Squadron, had rotated back to Japan, but Jim remained behind to fly the remainder of his 125 missions and try to achieve his fifth victory.

On the day of the historical mission, Jabara was unable to drop his right wing tank. Pilots experiencing this malfunction were supposed to return to base, but the fight was already on, so Jabara engaged with the stubborn tank hanging on the wing. Jabara proceeded to shoot down two MiG-15 jets and safely returned to base.

There has been much misinformation about Jabara's "ace" Sabre. When Jabara landed on K-13 (Suwon Air Base) there were no regular public relations photographers to record the event, but General Electric technical representatives Irv Clark and Leo Fournier were there; they took several photos, one of which appears above right. This right-side view shows the still-hung drop tank.

Here's where the confusion begins. The next day, May 21, the 5th Air Force gathered all the photographers together to re-enact the landing. However, Jim's "ace" Sabre (49-1319) was not available, having been taken to maintenance to remove the hung drop tank and to have other repairs. So the 5th Air Force staged the event with Jabara being hoisted on fellow pilots' shoulders and being carried away from a different Sabre (49-1210). If this weren't confusing enough, the entire scene was re-enacted again in the afternoon, this time using Sabre 49-1318!

**Pilots and ground crew mill about Jabara's Sabre after his "ace" mission. Jabara is not in the picture. Photo via Larry Davis.**

After this mission, Jabara was hustled back to Japan so that his "jet ace" status could be used for publicity purposes. Jabara eventually returned to combat, flying later-model Sabres and ending the war with 15 MiG kills, only one behind Joseph McConnell. Jabara was killed in an automobile accident in 1966. *– Larry Davis*


**Early Sabres had automatic leading-edge slats on narrow-chord wings. The horizontal stabilizers were conventional (not "all-flying" as in later models).**


**Paul mounted a helmet on top of the windscreen. He cut the head off of a pilot figure and hollowed it out with a dental bit in a motor tool.**

The first combat Sabres had black and white I.D. stripes on the fuselage and wingtips, and a narrow black stripe up the vertical tail. Jabara's ace Sabre had no special markings – no nose art, no kill marks, not even crew names on the canopy. After allowing the metallic finish to cure, I masked and airbrushed a wide white area on the fuselage and wingtips, 10 and 11 (page 43). When that was dry, I added black decal stripes cut to approximately eight scale inches wide.

I went through my Sabre decal collection and cut the proper digits out for the FU-319 "buzz number" on the rear fuselage. I created the tail markings on computer and laser-printed them onto clear decal sheet. Insignias and USAF for the wings came from Sabre sheets as well.

The main gear struts from the Fujimi kit weren't an exact fit for the new wing, but with a little filing and a drop of super glue, the struts were firmly attached. Since I wanted this model in the "at rest" pose, I opened the wheel covers (which open as hydraulic pressure bleeds off after engine shutdown). The interiors of the wells were painted yellow zinc chromate, but the inside of the doors were aluminum. I left the speed brakes closed.

I hope you have learned some helpful kitbashing techniques. At least you've learned you don't have to settle for yet another F-86F! FSM