

Messerschmitt Bf109K-4 TWEAKS LIST

TYPE: Messerschmitt Bf109-K4

SCALE: 1/32

COMPANY: Hasegawa

KIT NUMBER: ST20 (original release)

MOLD CREATION DATE:

2001 for G-6 sprues

2004 for specific K-4 sprues (C & D sprues & Erla Haube canopy part))

TWEAKS LIST VERSION 1.0 (publication date: September 2005)

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The following list is intended to help modelers in improving scale accuracy of an airplane model replica. In no way is it intended to support or be offensive towards a scale model company. As such, it is only the result of a progressive process and is in no way intended to be absolute or even comprehensive. Hence, it is intended to focus on commonly admitted discrepancies and will probably not cover some errors. It is up to the modeler to decide whether correcting the listed issues is worth the time and money he will have to invest in the quest for accuracy process.

No aftermarket correction or detail set is mentioned in this document as the availability of such items may be very variable. Hence, refer to other LSP sections to find relevant information. Moreover, aftermarket sets do not necessarily correct all listed issues. Please refer accordingly to relevant documentation.

1. NOTICEABLE FUSELAGE ISSUES (from front to rear)

- When you mate front and rear fuselage parts, there is a more or less half a millimeter step to sand at the top and bottom of the seam. To avoid this, trim a little bit the upper and lower edges of the bulkhead in the front fuselage parts (intended to receive the plug molded on the rear parts). This will noticeably improve the fit between each rear and front parts.
- Spinner is noticeably misshaped as Hasegawa probably copied a wrongly shaped new one on a restored airframe. The spinner base plate diameter should be 23mm long. Correct spinner tapered profile as well as the three propeller blade openings that should taper (cropped teardrop shape). Add a slight indentation where the front portion of the spinner is attached to the rear portion. Enlarge blast tube and drill a 1,5mm diameter hole. Add raised data plates on spinner and backing plates. A simpler option: replace the spinner with a correct aftermarket one.
- Profile of supplied VDM9-12159A propeller blades is acceptable. However, there is no hub detail on the blade root. Note that kit still has VDM9-12087A type propeller blades from the G-6 kit. Take care to choose the correct ones as the latter were never used on K4 planes.
- Thin or replace exhausts cover plates because they are way too thick (parts A14&15).
- Hollow-out engine exhausts or replace them with aftermarket ones.
- There is no panel line between the top cowl and the cowl sides (part C17 and fuselage): fill and sand smooth the seam.
- Weld seam details are missing on the supercharger intake. Possibly grind a little bit inside of intake parts to help in seeing detail of blades molded in the fuselage side. Note that parts should show no seam with the fuselage as part of the intake has been molded with the fuselage.
- Hollow-out MG 131 nose barrel parts.

- Forward lower cowl is a little bit too angular near the first panel line behind the oil tank housing. Curve should be gentler than on the kit area. Sand it to smooth the angle. Re-engage the panel lines under the nose (front chin bulges area).
- F0987 underbelly oil cooler housing is not correctly shaped but this is far less noticeable than on the G-6 kit. Correcting this asks for a time-consuming job for a less than obvious result. Simply add the missing rod in front of the intake mesh.
- Rear edge of C17 part cowling has a small protruding lip whereas actual airframe asymmetric cowling has none. Hasegawa misidentified the seal joint between the cowling and sectional bulkhead. Engrave a seam line for the cowling against the front of the lip and then sand the lip to depict the rubber seal around the rear of the cowling.
- By default airframes had an air scoop under the windscreen on the port side. Check if the plane you want to depict had this scoop and if this was the case, open the aperture with the edge of a new scalpel blade. And on the other windscreen side (starboard side) deepen the flare pistol hole if it was present.
- Upper fuselage has a squared, flattened profile behind the canopy whereas the cross section should be rounded. Just mate the rear half fuselage of a G4/6/14 kit with the similar part for the kit and look at the cross section profile difference. It is recommended to try attenuating the problem. Hence, sand the left and right “edges” of this area to restore a little bit the profile of frame 1.
- Drill the MG131 cartridges ejection holes in the belly and possibly add plastic card-made boxes to add depth to the chutes.
- K-4s used the Rheinmettal Borsig Mk108 30 mm gun as standard nose gun rather than the MG151 of the previous marks. Accordingly, there was no more spent ammo bin in the belly area, the gun fume belly vents were deleted and an ejector chute offset to the right was added. Unfortunately, Hasegawa kept the G6-like belly panel with the breech exhaust gas vents. Fill in the vents, cut out the Mk108 ejection slot and possibly add a plastic card-made box to add depth to the chute.
- K4 DB605D engine did not use the same supercharger than DB605A and DB605AS engines. Unfortunately, the kit has none of the DB605D belly features and this requires different modifications. The kit belly includes the two oil breather outlets only correct for the planes with an A/AS engine so sand the corresponding protruding disks near the wing roots. As DB605D required the move of the oil breather line exits and the addition of an overpressure valve vent beneath the compressor, such details have to be added. Drill one 1.5mm hole 1mm to the right of the location of the sanded port oil breather outlet and another one right in front of the starboard MG131 ejection slot (between the hole and edge of the Hasegawa part A20). Blank the two holes with plasticard from inside the belly and add a 1.3mm diameter tube inside them. Note that these new oil breather outlets are not flush with the belly. Create the overpressure valve port by using a filing a round groove in the front edge of the belly part (at the level of the starboard corner of the same part A20), blank it from inside and add plastic discs to simulate the valve.
- Replace DF FuG 16ZY loop antenna with the correct flat cross-section.
- Add and drill the fuel fill ventilation outlet hole under the fuselage section 3. This should protrude from the belly.
- Add FuG25 IFF antenna under the same section 3.
- Correct trim tabs elevators as they were always offset on the ground.
- Add antenna between the point behind the rear portion of the canopy and the tail mast (do not forget to add insulators). Note that some K4s had a short mast behind the canopy.
- Remove the two control runs bumps above and below the horizontal/vertical stabilizer joint as the K-4 did not have them anymore.

- Do not forget to leave a seam on the top and bottom and rear fuselage sections.

2. NOTICEABLE WING/WEAPONS ISSUES

- Lower wing parts have details for gun and rockets (on the outboard panel just after the edge of wheel bay). The elliptical hatch and four small holes were used for rockets whereas the rounded hatch was present on Kanonenboot planes equipped with MG151/20 gun gondolas. Some had seemingly no hatch. Leave the correct details according to the airframe you choose.
- There is a panel line on the top of the wing (outboard of the wing root) that does not continue to the bottom half of the wing.
- There is a riveted strip at the wing root that runs along the underside of the aircraft but does not continue to the top side. It should continue back to the vertical line on the wing root fairing.
- Kit has steps in the leading edges of the wing into which the slats retract. On real airframe, these steps are no thicker than the wing's aluminum covering. There are two solutions to fix this. The most accurate but also most complicated option asks for carefully cutting a thin piece of sheet styrene to fit into the slat well, with the sheet stock's thickness chosen to leave a very small step; cementing the filling piece into the slat well, being careful to keep the new step height constant; and then filing down the leading edge of the filling piece where it disappears under the slat. Second option is simpler: since the real aircraft's step is so small, an adequate and much easier fix would be simply to fill the step with putty and then file it to shape. Add one big bolt head (e.g. Grandt line) under the end of each arm of the opened leading edge slat. Reduce the thickness of the upper and lower rear edges of the slats by scraping those edges with a No. 11 knife blade. True nitpickers may also want to accurize slat sides as they are no flat as the kit part edges.
- Thin, replace or rebuild radiator flaps and add the missing activating levers. If you want to use them as such, fill the ejector pin holes in them.
- The wing radiators are well done with inserts providing the radiator faces for both the front and rear. However, Front face part is not correctly located: they are ten or eleven millimeters far too backwards. Move accordingly the parts to the front. Add the flap actuating arm.
- Thin the edges of the long upper wing fairings. It is also recommended to glue them on the upper wings before mating wing halves. Note that on some airframes the join was far from being seamless.
- Most K4s had a flettner tab on each wing aileron. Kit has none.
- Drill the four elliptical holes in the landing gear leg well. Add missing oleo actuator behind them.
- Drop tank has too many weld seams. Fill the forward segment line and add the tank hanging strap. Possibly replace with aftermarket parts.
- Thin ETC rack part and drill recessed holes as the actual part is made of an embossed iron sheet. Correct drop tank anti-sway brace legs and add fuel connectors. Possibly replace the rack with aftermarket parts.

3. NOTICEABLE COCKPIT ISSUES

- The kit instructions give two options regarding front instrument part: either paint engraved details or sand them off and then apply the decal on a flattened surface. However, another option will give better result if you use kit part. Cut the nice decal in parts before applying it on engraved instruments. Take care not using G part M27 as it is still included on the sprues.

- Kit has a correct REVI 16B gunsight but it is very basic. It needs at least the missing glasses and possibly other details as the part is very visible in the cockpit.
- Add cockpit UV lights on the windscreen frame.
- Add oxygen hose, missing wires and details on the cockpit sides and on the right side of the floor (throttle, oxygen system, etc.). A lot of boxes and details are more particularly missing on the starboard side under part D7 that is by the way very simplified.
- Kit pedals are correctly shaped but far too thick. Sand them and drill holes or replace them with photoetched ones and add their leather straps.
- Add seat belts and their attachment points.
- Detail area behind the upper belts fixture points.
- Some K4s had a defrosting device added in the cockpit. It was a hot duct piping fixed behind the canopy armor. Check your references.
- Note that K4s had a nose Mk108 30mm gun rather than the MG 151/20. This means that the gun breech cover in the cockpit has to be replaced by the more rounded one used for the Mk108. There are references stating than some Kurfurst used retrofitted MG151 guns. Nevertheless, up to now, there is no known picture depicting the way it was set-up and this does not say if the standard MG151 breech cover was used (kit part A12). Most modelers will probably choose to scratchbuild an Mk108 gun breech cover or buy an aftermarket cockpit.

4. NOTICEABLE CANOPY ISSUES

- Add the two missing handholds on the top of the internal side of the windscreen part.
- Add purple/red-brown paint on the small engraved disk in the front armored glass of windscreen. This was the silicate dehumidifier capsule.
- Kit has the frontal armoured glass insert but the prominent de-icing spray bar is missing on the windshield.
- As for the fuselage, rear cross section of Erla Haube canopy part is too squared. There is no way to solve this except using an aftermarket canopy or scratchbuilding a new one. Fortunately, if the canopy is opened, the discrepancy becomes far from being obvious. Smooth a little bit the edges of Erla Haube canopy part
- Add canopy release lever as well as retainer spring lock (with spring-shaped copper wire)

5. NOTICEABLE LANDING GEAR ISSUES

- Add flexible brake hose on each main landing gear leg (between the wheel and the leg) and possibly replace existing molded section.
- Main landing gear doors are too thick. Sand or rebuilt them. Moreover, kit part actually depicts two different parts on the actual airframe. Upper section needs adding the mounting and guide rod.
- The kit has the specific Kurfurst outer doors. Such doors were very often removed in the field. However, whatever may be the configuration of the plane to depict, add missing details such as the door retract mechanism and the main wheel operated bumper that were present on all planes.
- Dress up the side of the main landing gear wells (holes, canvas dust cover, radiator hydraulic line, etc.). Note that bottom area of main wheel wells is not correct: it should be deeper.

- Tail wheel doors are molded opened but are far too thick. Sand them down to a more realistic thickness or modify the area to close them or simply discard them and use the shorter tail wheel. Check your references. Note that short tail wheel is a little bit undersized. Moreover, its yoke vertical portion should be located under the fuselage bulkhead. Correct the position and at least separate the wheel from its yoke or engrave the seam to simulate different parts or replace it with aftermarket parts.

6. OTHER NOTICEABLE ISSUES & MISCELLANEOUS REMARKS

- Except middle fuselage cross section issue, general kit dimensions are nearly perfect. Overall fit is excellent.
- All panel lines and prominent rivets are recessed (more particularly on the belly). They are raised on specific locations such as wing roots. However, there are no rivets where they were flushed (on the upper wings and the rear fuselage). Engine area has very well done door fasteners. Fabric surfaces are smooth with tape strips topped with delicate stitching detail.
- Optional landing gear parts are included. Kit has two different styles of main and tail wheels, two styles of wheel well covers for the upper wings. Check you references. Other included parts such as other propeller blades or front instrument part are not for use.
- Kit has MG151/20 gun gondolas parts but they are only showed in the instructions as “not for use” ones. As explained in G-6 list, they are 3mm too short and some details may be improved. By the way, such guns were seemingly not or very rarely used on K4s.
- A strong "H" shaped wing spar part ensures perfect dihedral and a good fit at the wing root.
- The flaps and the slats parts may be positioned (even if on the ground actual flaps were generally retracted).
- Erla Haube canopy part is not intended to be glued closed.
- Possibly separate underwing forward radiator flaps.
- Possibly separate oil cooler intake rear flap.
- To ease assembly of the separate tail parts with fuselage sides, do not comply with Hasegawa directions and glue each tail side with each fuselage side.
- Possibly remove and reposition control surfaces.
- Note that even if this is far from being very noticeable, angle of main wheels is not totally correct. To possibly solve this, shorten a little bit the wheel axle and set the angle to a more correct position.
- Pilot figure is seated a little bit too low. If you use it, bring it up to a higher position (with a plasticard spacer)
- Up to now, kit has only been released as reference ST20 with two very similar red tulip JG 52 Stab schemes.

The list of references about the Messerschmitt 109 is an endless one. The list author focused on sources that are more oriented towards plane components rather than plane colors. Many excellent books have been printed about the later topic but this is out of the limited scope of such a list. As such, sources dedicated to Luftwaffe paints and camo, 109s colors or 109s used by Germany allies have not be used here.

Accordingly, the following sources were used to build this list:

Modelling essentials:

- Janda & Poruba, *Messerschmitt Bf 109K*, JaPo publication, 1997.
- Poruba & Mol, *Messerschmitt Bf 109K*, Camouflage & Markings, JaPo publication, 2000.
- Prien & Rodeike, *Messerschmitt Bf 109 F, G, & K Series*, Schiffer, 1993.
- ---, *Messerschmitt Bf 109 G/K Augsburg Eagle*, Model Art Special Issue series N°290, Model Art, 1987.

Other used references:

- Beaman, *Messerschmitt Bf 109 in Action Part 2*, Aircraft in Action series, N° 57, Squadron Signal Publications, 1983.
- Donald, *Messerschmitt Bf 109 – Supermarine Spitfire – Supermarine Seafire*, Air Combat Legends Vol.1, Airtime Publishing, 2005.
- Green, *Augsburg's Last Eagles: Colors, Markings and Variants*, Eagle Files series N° 3; Eagle Editions, 2000.
- Hitchcock, *Messerschmitt 'O-Nine' Gallery*, Monogram Aviation Publications, 1973.
- Janda & Poruba, *Messerschmitt Bf 109s of JG52 in Deutsch Brod*, JaPo publication, 2004.
- Mermet, *Les Messerschmitt Bf 109 G-1 a K-4 - Moteurs et Aménagements*, Self-published, no date.
- Merrick, *German Aircraft Interiors 1935-1945: Vol. 1*, German Aircraft Interiors series, No. 1, Monogram Aviation Publications, 1996.
- Michulec, *Messerschmitt Me 109 pt. 3*, Aircraft Monograph series, N°18; AJ Press, 2002.
- ---, *Messerschmitt Bf 109 / Focke Wulf Fw 190*, Maru Mechanic series N° 50, Maru, 1985.
- ---, *Messerschmitt Bf109*, Military Aircraft Special issue, Delta Publishing, 2001.
- Buffie's Best Cd-ROM, Me-109 G-10, Restorations Illustrated Vol.1.
- some magazines articles (more particularly from Replic & Tamiya magazines)
- some web pages (more particularly LSP, Hyperscale & 109 Lair)
- MDC K4 aftermarket cockpit instruction sheet (for the belly corrections)