

MiG-21bis

eduard

1/72 Scale Plastic Model Kit

ProfiPACK
edition



item No. 70146

MiG-21 was the worldwide most-produced supersonic fighter and served with more than fifty Air Forces over four continents. Its continuous development lasted for nearly three decades as design bureau of Mikoyan and Gurevitch tried follow the needs of many different users.

The MiG-21 was one of many aircraft of the Mikoyan-Gurevich design bureau which were integrated not only into the Soviet Air Force (VVS - Voenno-vozhдушnye sily), but also into the Air Forces of all members of the Warsaw Pact and also of many allied client states. Its predecessors included such notable types as the MiG-15, MiG-17 and the supersonic MiG-19.

The roots of MiG-21 project reach back to the first half of the fifties. In 1954, the preliminary design study Ye-1 came to its end and was quickly replaced by the heavily reworked Ye-2 prototype. Both had a swept wing and the first MiG design to feature the delta wing was the Ye-4 prototype, which took to the air for the first time on June 16, 1955. It was also demonstrated a year later at the Moscow airfield Tushino.

The new aircraft with the MiG-21 designation was the first successful Soviet design integrating fighter and interceptor characteristics. It was also quite light Mach 2 aircraft, although the long-lasting development was adding weight gradually. The design featured sleek fuselage with the front air intake and shock cone. This feature later limited future development due to the very small space available for the radar.

Cold War warrior

The first of the new line to enter production was the MiG-21F, which together with the MiG-21P and MiG-21F-13 represented the first generation of this line. These versions were in production through the end of the fifties and at the beginning of the sixties. Subsequent versions included the PF, FL, PFM and R with production of these peaking at the end of the sixties. The production of third generation started in 1968 and included the most advanced versions of MiG-21 like the M, SM, MF, SMT or bis among others. Simultaneously, two-seat training versions were also produced and designated as MiG-21U, UM and US.

Production of the MiG-21 ended in 1985. The new aircraft came off Soviet production lines in Moscow, Gorky and Tbilisi, the MiG-21F-13 was also built under the license in Czechoslovakia and the MiG-21FL, M and bis were built in India by Hindustan Aeronautics Ltd. The Soviet Union produced 10,645 examples of all versions, 194 were built in Czechoslovakia and 657 in India. That counts 11,496 aircraft produced. NATO assigned it the reporting name "Fishbed", while the Soviet pilots called it "Balalaika" due to the shape resembling it with the popular Russian musical instrument.

Aces from Asia, Middle East or Africa

Outside of the Soviet Union, the type flew with a long list of nations on four continents (Europe, Asia, Africa and South America) and participated in many conflicts and wars. The most remarkable combat use includes the Vietnam war, the Indo-Pakistan wars, the Cuban participation in Angola

and in the Arab world's attempts to eliminate Israel. It is no wonder there were many pilots achieving their ace status flying one or more variants of MiG-21.

Thanks to the high volume of use and intensive combat actions, the Vietnamese pilots are topping the list of aces of MiG-21 with Nguyen Van Coc with 9 kills as the most successful among them followed by three eight-victory aces Mai Van Cuong, Nguyen Hong Nhi and Pham Thanh Ngan. From the other nations the Syrian pilots Bassam Hamshun and Majid Zugbi both achieved seven kills flying MiG-21MF, while Adeb Al-Jarf had the same score with MiG-21FL. Egyptian pilots Ali Vajai, Sami Marei and Sami Marei scored five times.

In the interceptor role the MiG-21 served with the Soviet Union and other nations of the Warsaw Pact into the eighties when it began to be replaced by the MiG-23 in seventies and MiG-29 in eighties.

This kit: MiG-21bis

The MiG-21bis was designated "Izdelye 75" in factory documentation. As opposed to the MF and SMT versions, it was intended to be a fighter with ground attack capability as only the secondary role. It was powered by a Tumansky R-25-300 engine which was more powerful than unit used with MiG-21SM and it also offered better economy. The maximum thrust rose from 6,490 kp of the R-13-300 to 9,900 kp of the R-25-300. Because of the change of the engine, the diameter of the frontal air inlet had to be enlarged from 870 mm to 900 mm. The regulation cone was taken over from SM version, but the radar inside was changed from the RP-22SM unit to the RP-22M (Jay Bird) one. It was capable to follow the air targets even when they were detected against the ground surface background. The bigger No.7 fuel tank was installed (600 l instead of 510 l) in the fuselage and the change necessitated bigger, more spacious fuselage ridge. But it was not as massive as with the MiG-21SMT version, where the huge 900 l tank affected the general performance of the aircraft negatively. The solution adopted with MiG-21bis was a compromise between the endurance and the performance.

The MiG-21bis was armed with a twin barreled GS-23-2L 23 mm cannon with 200 rounds of ammo. Hardpoints could be loaded with R-13M, R-55, R-60 and R-60M missiles, UB-16-57 or UB32A rocket pods, S-24 unguided rockets, bombs up to 500 kg caliber and ZB-360 napalm bombs.

The aircraft was delivered to nations of the former Warsaw Pact and the Third World either as the model "Izdelye 75A" with the Lazur ground control intercept system, or as the "Izdelye 75B" with the Polyot OI ILS (Instrument Landing System). The former carried the NATO code "Fishbed N", and the latter "Fishbed K". Both versions served as "Izdelye 75" with Soviet air force and airspace defense units.

ATTENTION



UPOZORNĚNÍ



ACHTUNG



ATTENTION



注意



Carefully read instruction sheet before assembling. When you use glue or paint, do not use near open flame and use in well ventilated room. Keep out of reach of small children. Children must not be allowed to suck any part, or pull vinyl bag over the head.



Před započetím stavby si pečlivě prostudujte stavební návod. Při používání barev a lepidel pracujte v dobře větrané místnosti. Lepidla ani barvy nepoužívejte v blízkosti otevřeného ohně. Model není určen malým dětem, mohlo by dojít k požití drobných dílů.

INSTRUCTION SIGNS

* INSTR. SYMBOLY

* INSTRUKTION SINNBILDEN

* SYMBOLES * 記号の説明

OPTIONAL
VOLBABEND
OHNOUTSAND
BROUSITOPEN HOLE
VYVRTAT OTVORSYMETRICAL ASSEMBLY
SYMETRICKÁ MONTÁŽREMOVE
ODŘÍZNOUTREVERSE SIDE
OTOČITAPPLY EDUARD MASK
AND PAINT
POUŽÍT EDUARD MASK
NABARVIT**PLEASE, CHECK THE LATEST VERSION OF THE INSTRUCTIONS ON www.eduard.com**

PARTS



DÍLY



TEILE



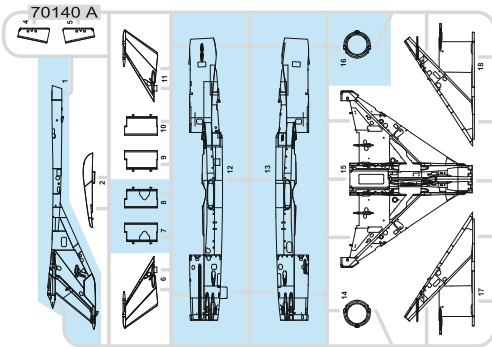
PIÈCES



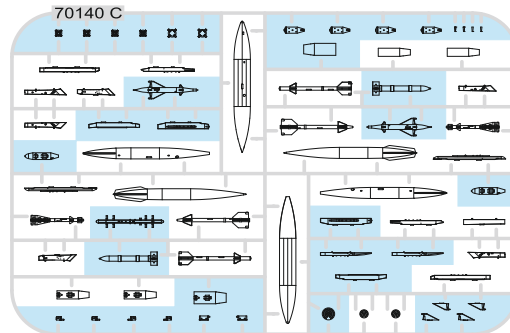
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PLASTIC PARTS

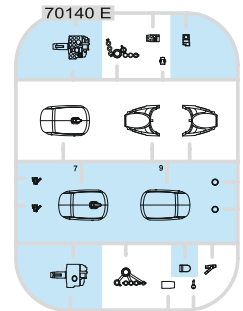
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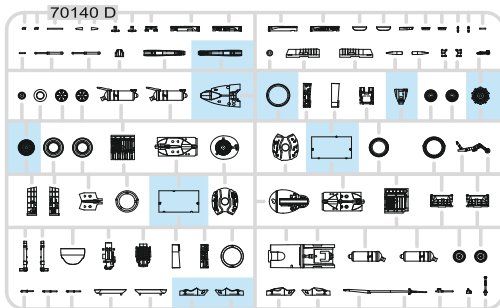
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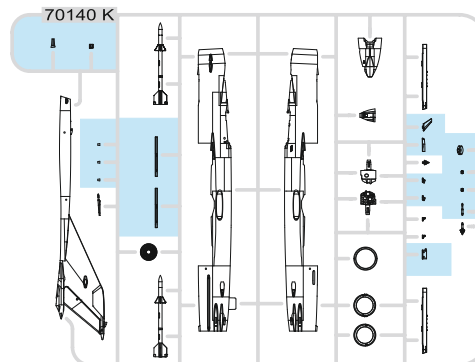
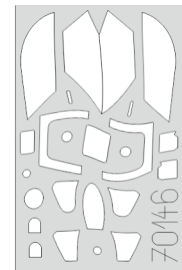
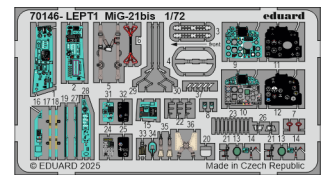
E>



D>



K>

PE - PHOTO ETCHED
DETAIL PARTSeduard
MASK

-Parts not for use. -Teile werden nicht verwendet. -Pièces à ne pas utiliser. -Tyto díly nepoužívejte při stavbě. - 使用しない部品

COLOURS



BARVY



FARBEN



PEINTURE

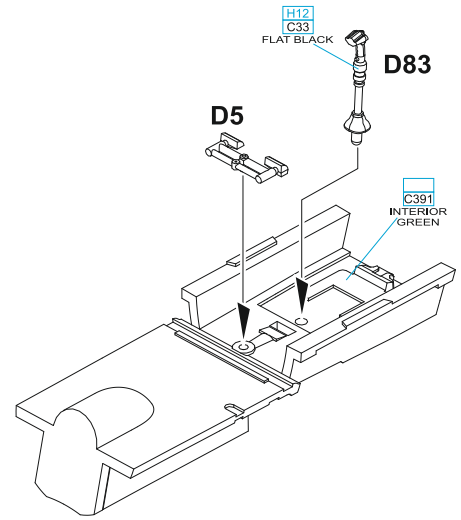
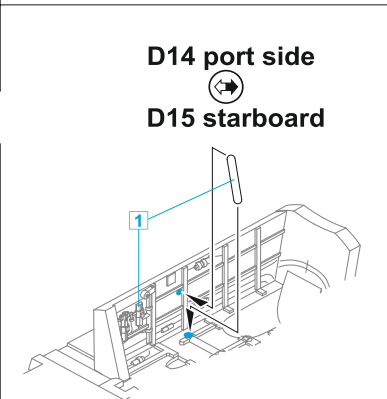
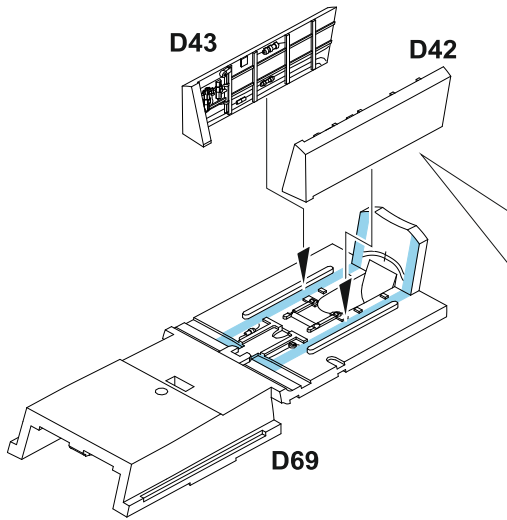


色

GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
H1	C1	WHITE
H3	C3	RED
H4	C4	YELLOW
H5	C5	BLUE
H12	C33	FLAT BLACK
H28	C66	BRIGHT GREEN
H27	C44	TAN
H51	C11	LIGHT GULL GRAY
H53	C13	NEUTRAL GRAY
H61	C35	IJA GRAY
H67	C115	RLM65 LIGHT BLUE
H76	C61	BURNT IRON
H77	C137	TIRE BLACK
H81	C55	KHAKI
H82	C31	DARK GRAY
H84	C42	MAHOGANY
H90	C47	CLEAR RED
H94	C138	CLEAR GREEN

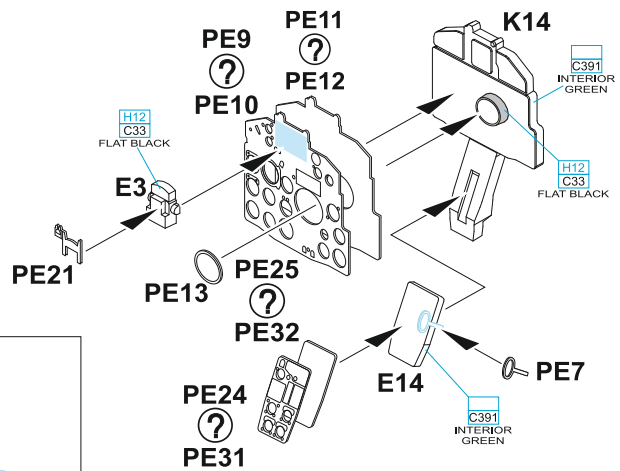
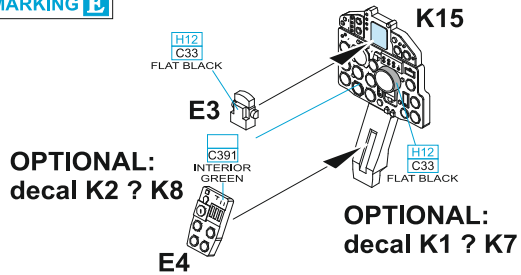
GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
H305	C305	GRAY
H308	C308	GRAY
H309	C309	GREEN
H310	C310	BROWN
H311	C311	GRAY
H323	C322	LIGHT BLUE
H332	C332	LIGHT AIRCRAFT GRAY
H418	C118	RLM78 LIGHT BLUE
	C74	AIR SUPERIORITY BLUE
	C131	RED BROWN
	C136	RUSSIAN GREEN
	C391	INTERIOR GREEN
	C511	GREEN
Mr.COLOR SUPER METALLIC		
SM201		SUPER FINE SILVER
SM204		SUPER STAINLESS
SM206		SUPER CHROME SILVER
SM212		ALUMINIUM

- 1** = H51
C11
GRAY - MARKINGS **A, C, D, F**
H67
C115
RLM65
LIGHT BLUE - MARKINGS **B, E**

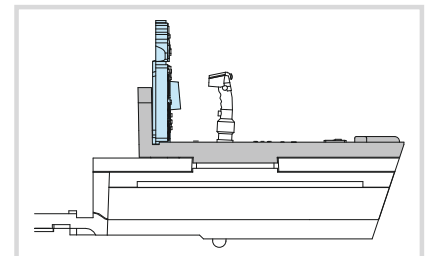
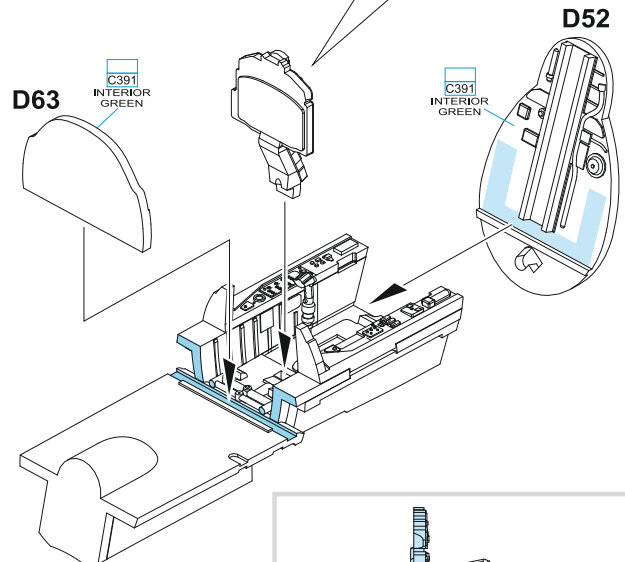
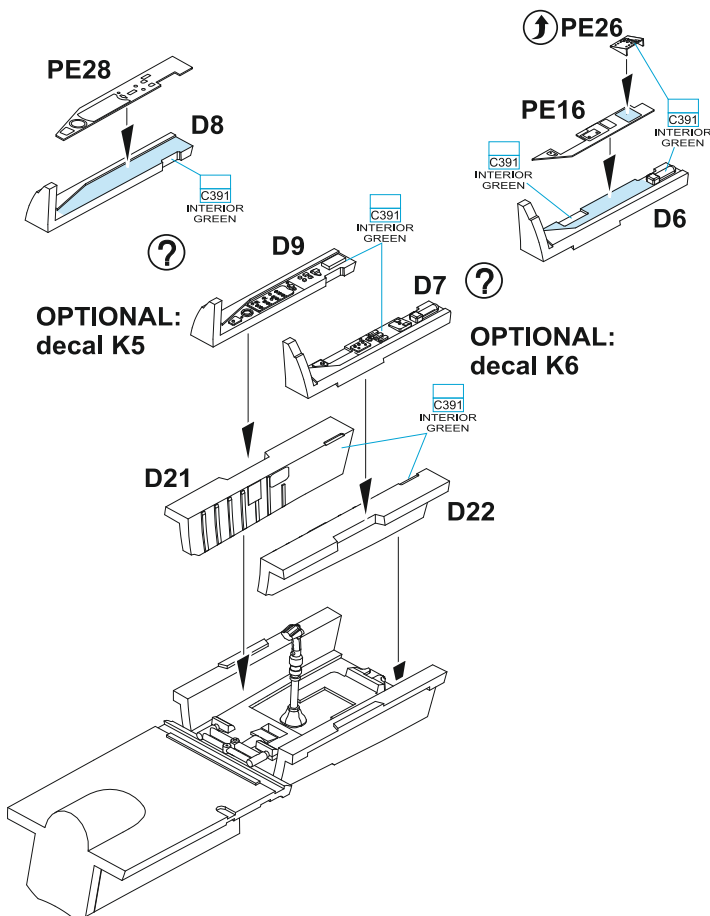


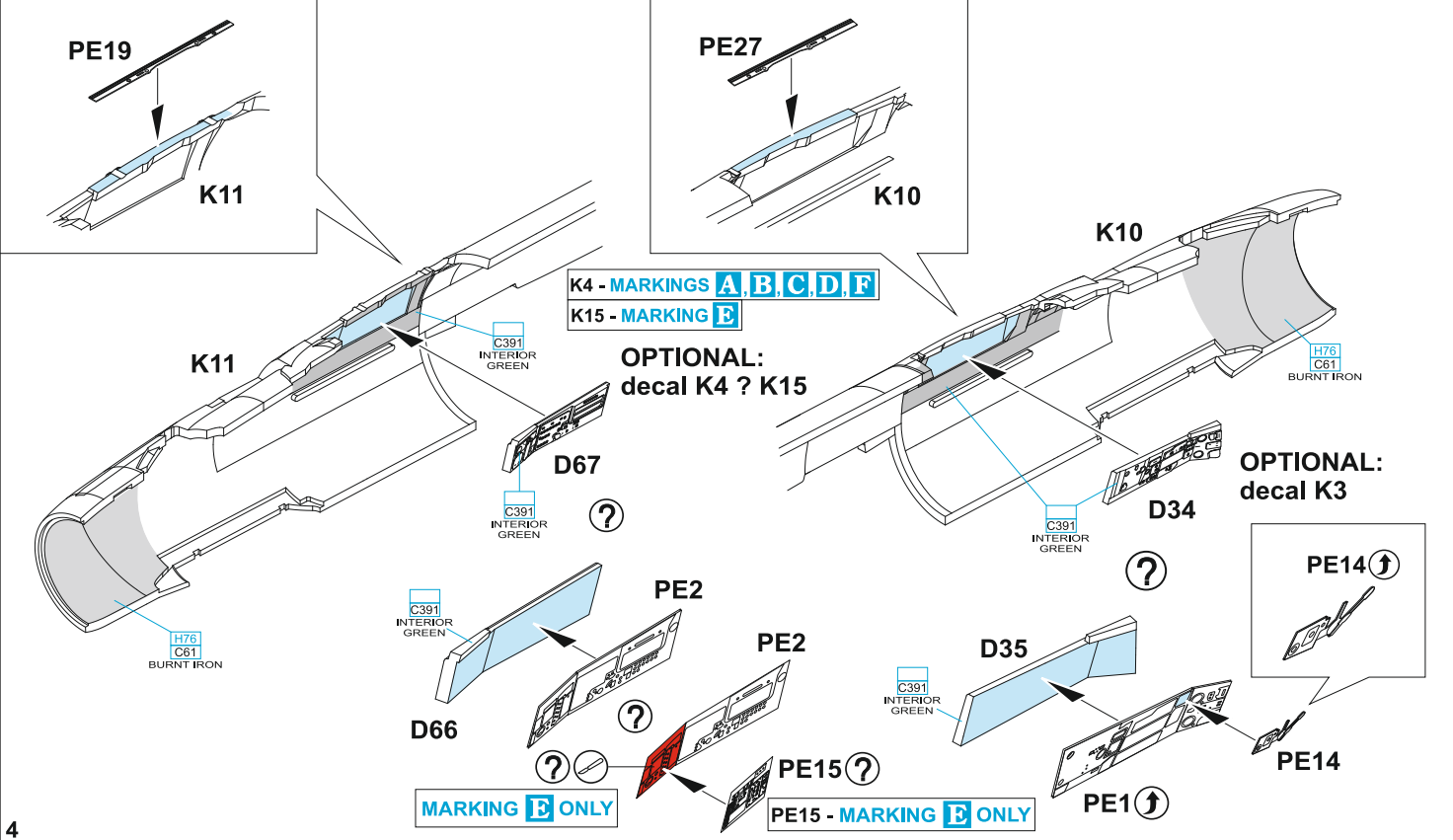
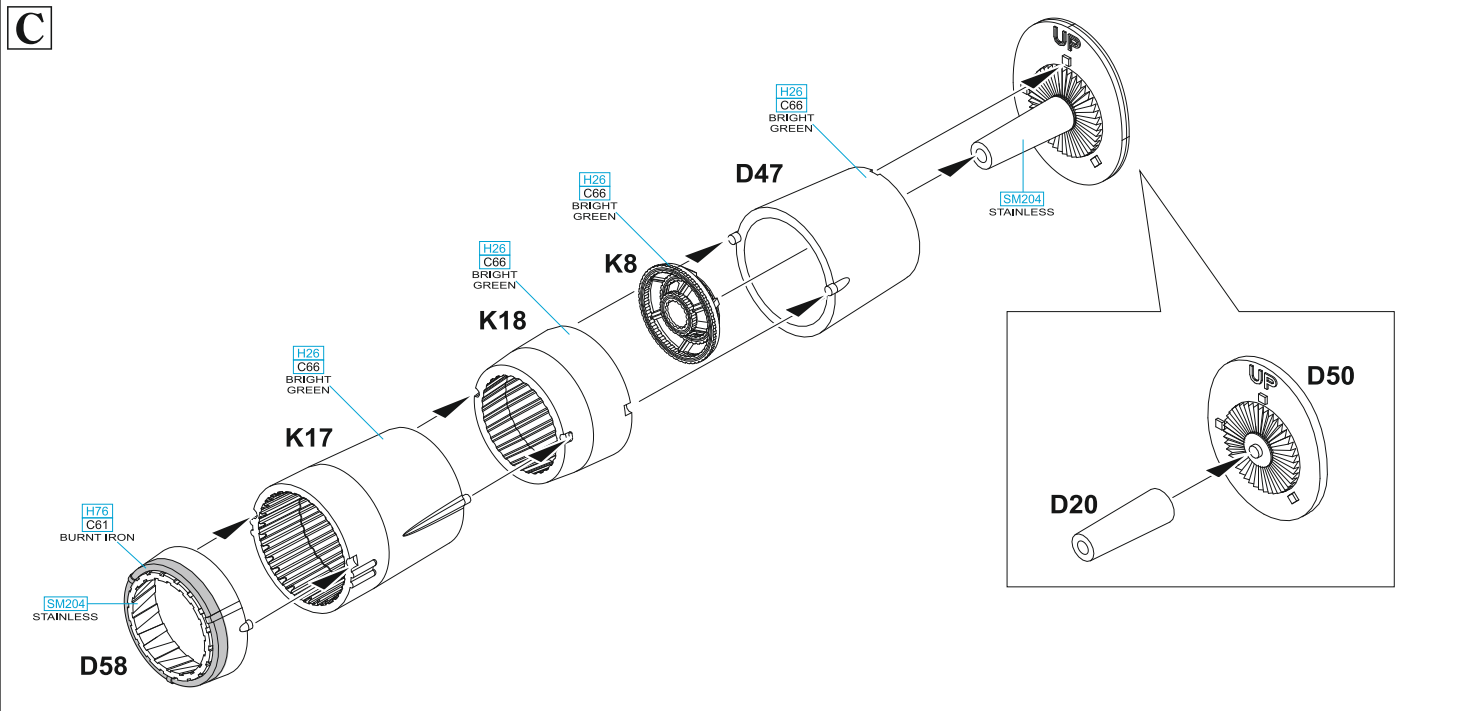
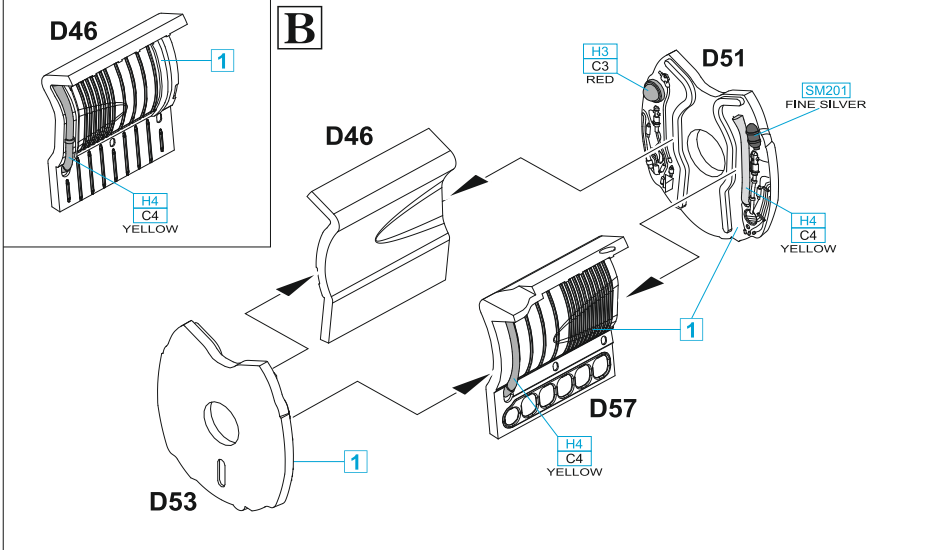
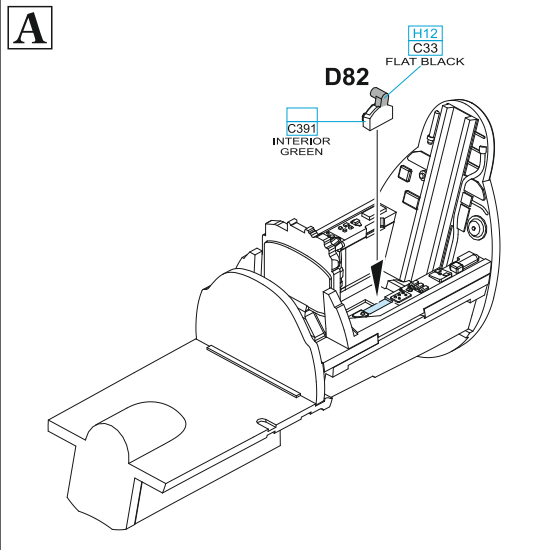
- PE9, PE11 - MARKINGS **A, B, C, D, F**
 PE10, PE12 - MARKING **E**

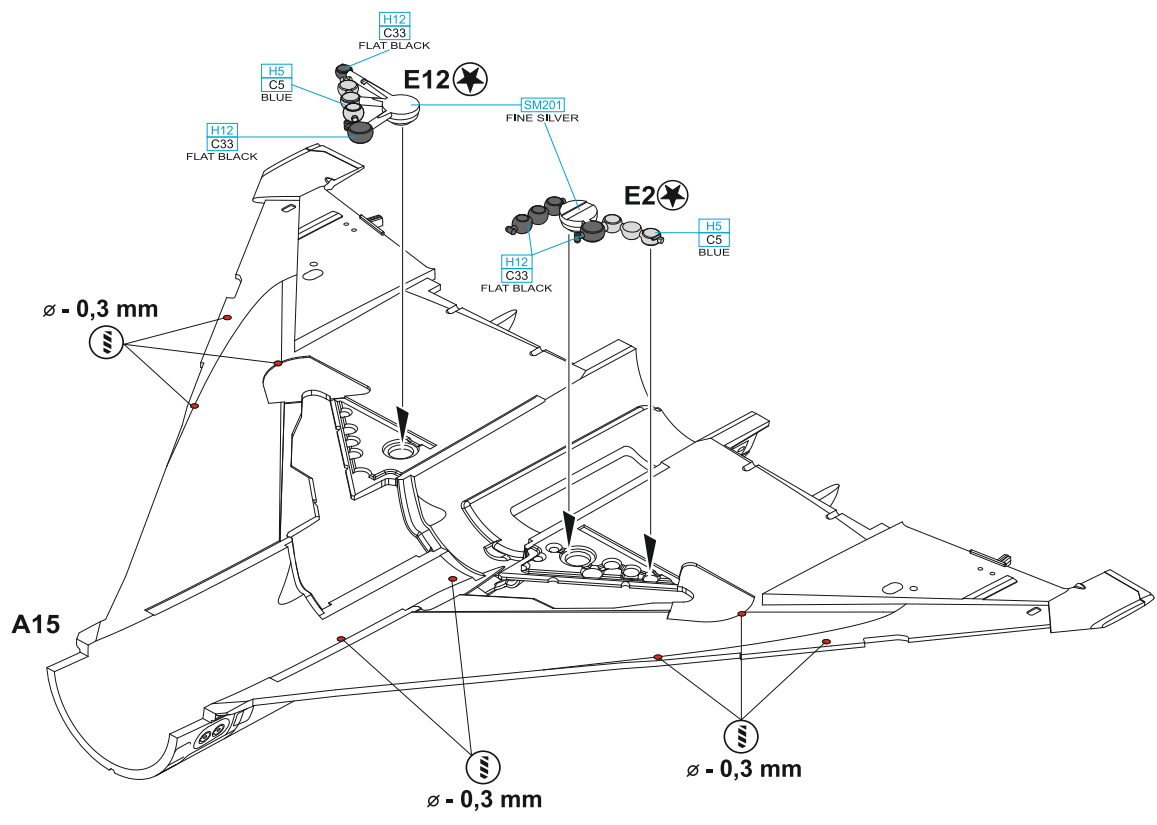
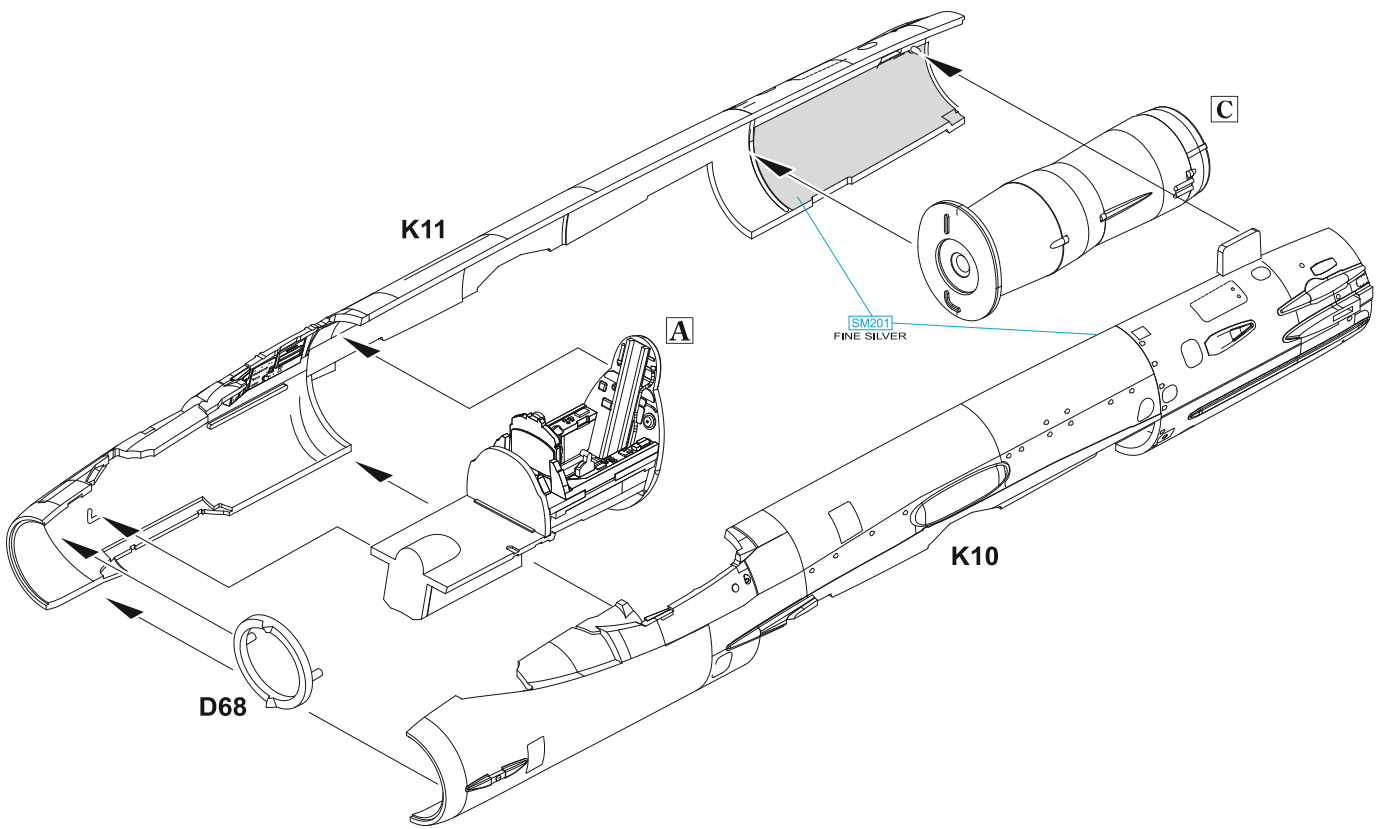
- K1, K2 - MARKINGS **A, B, C, D, F**
 K7, K8 - MARKING **E**

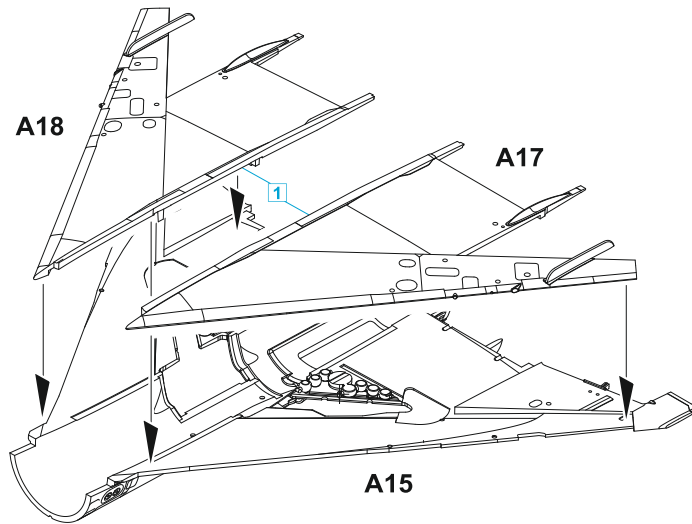


- PE31, PE32 - MARKINGS **A B**
C, D, F
 PE24, PE25 - MARKING **E**

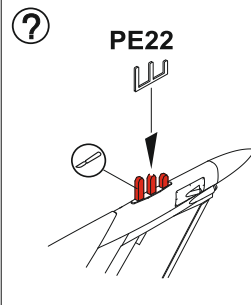






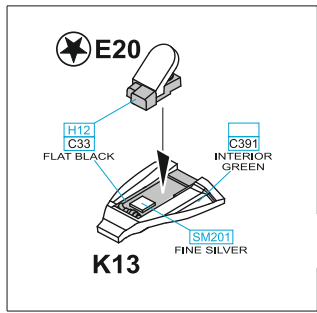


PE22 - MARKINGS A, B, C, D, F ONLY



K2

PE20 ↗



MARKING E ONLY

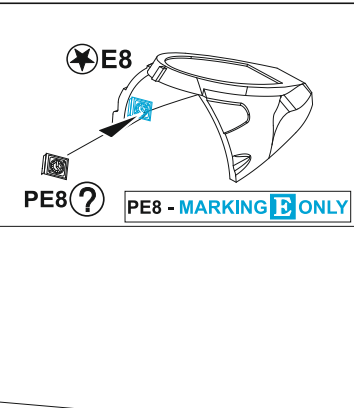
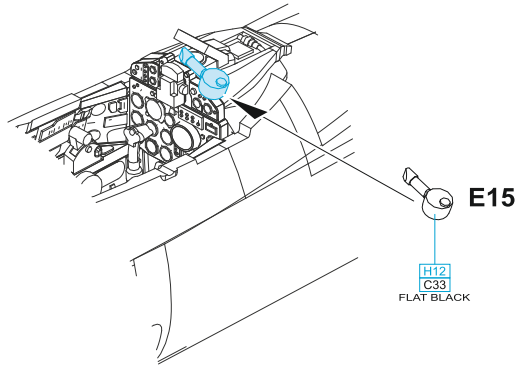
? K24 ↗

H76 C61 BURNT IRON

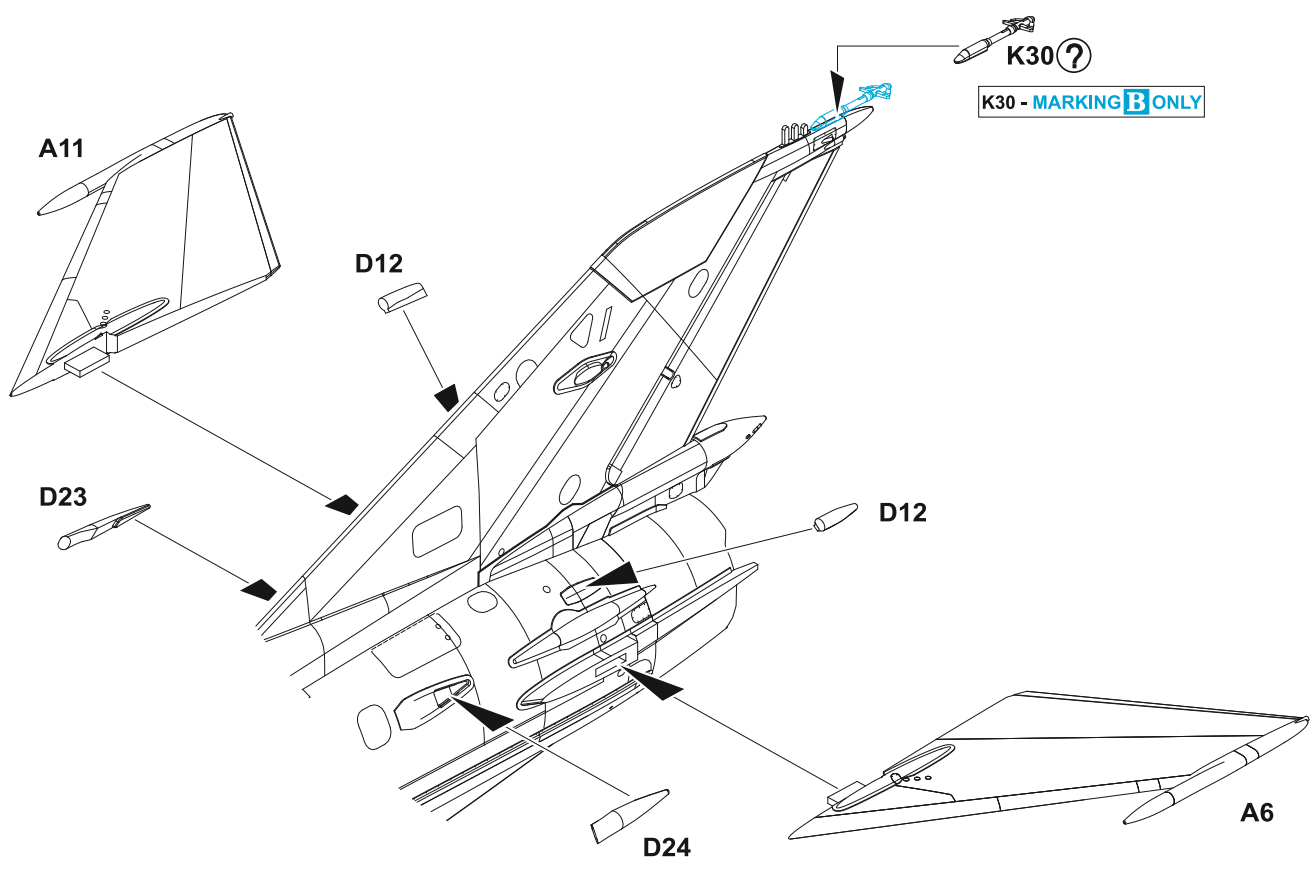
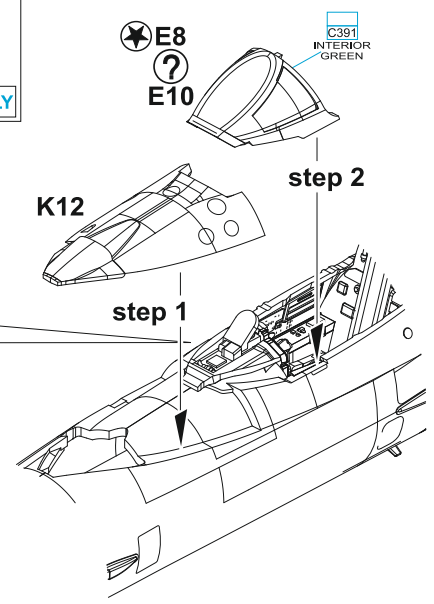
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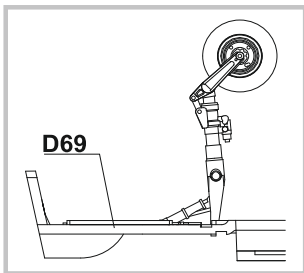
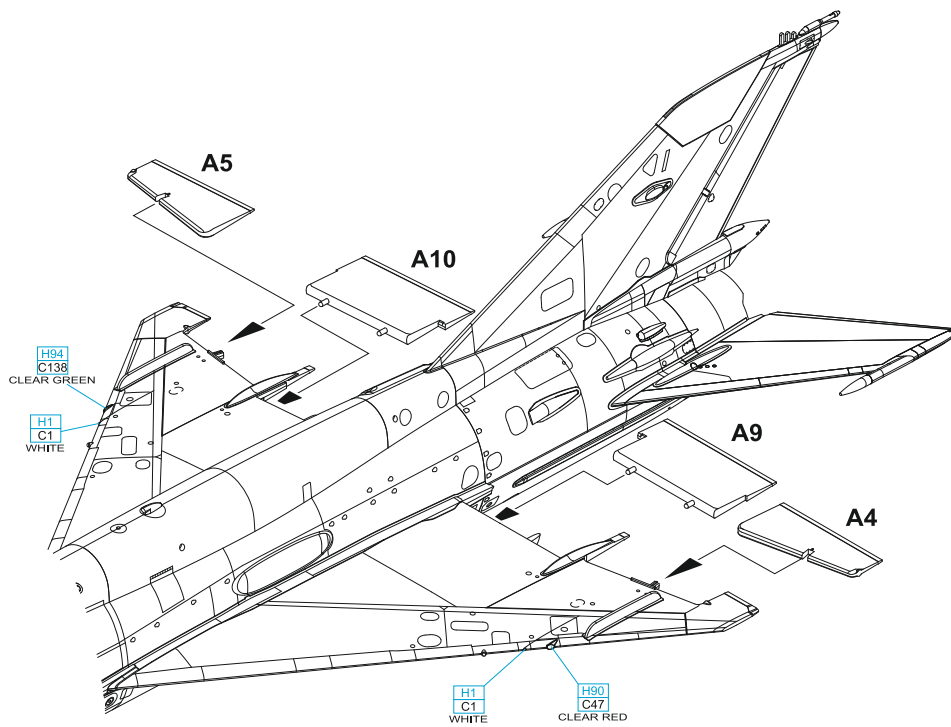
B

K16



E10 - MARKINGS A, B, C
E8 - MARKINGS D, E, F

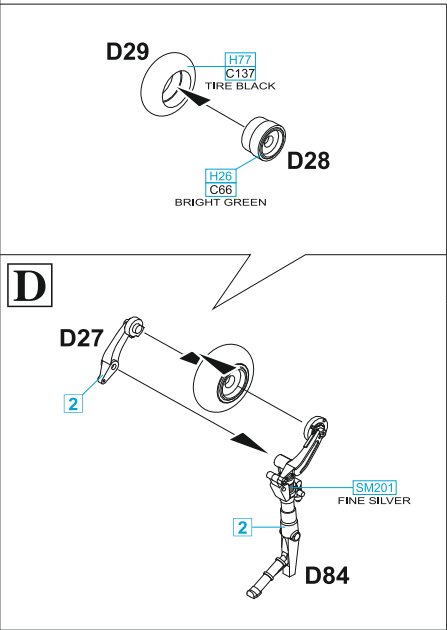




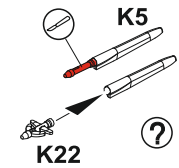
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- H67 - MARKINGS **B, E**
- C115 RLM65 LIGHT BLUE
- H51 C11 GRAY

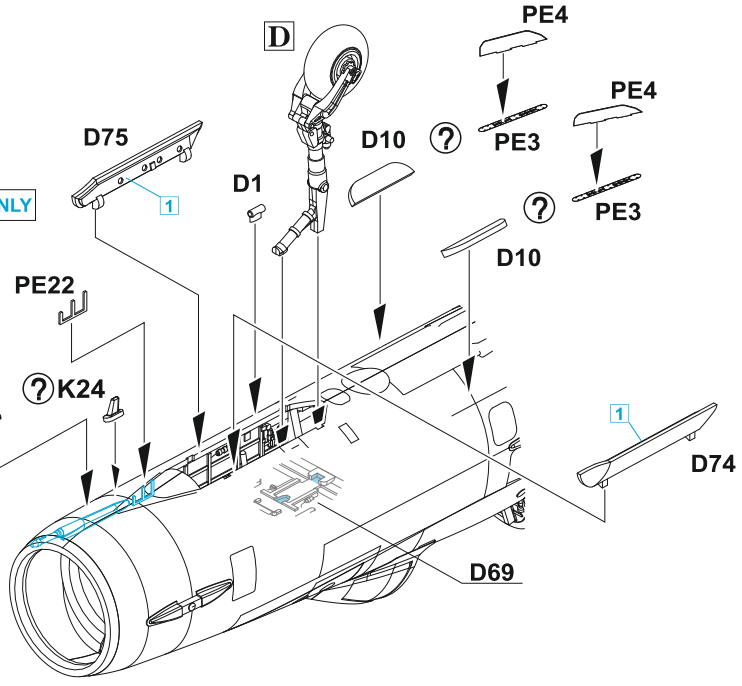
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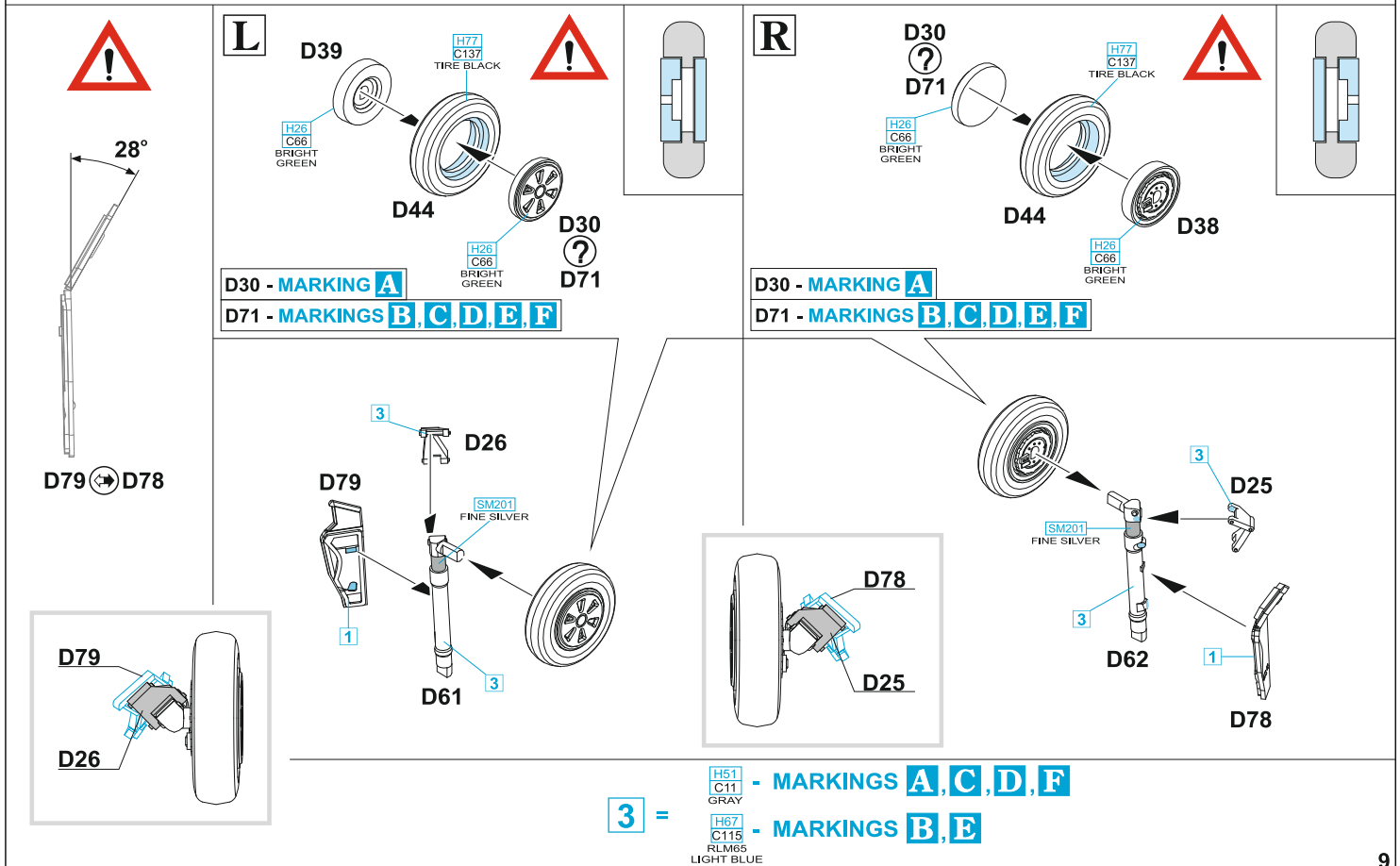
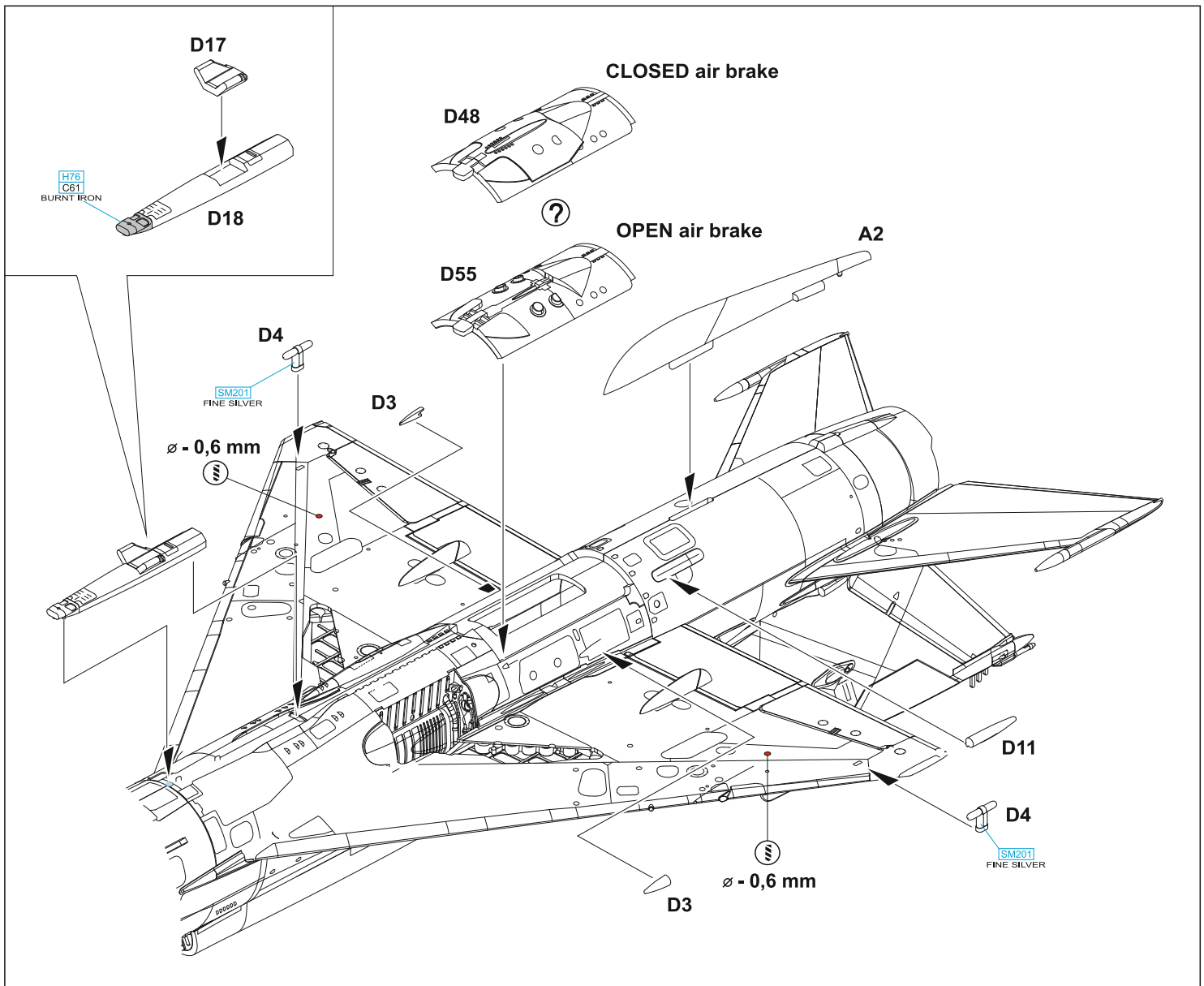


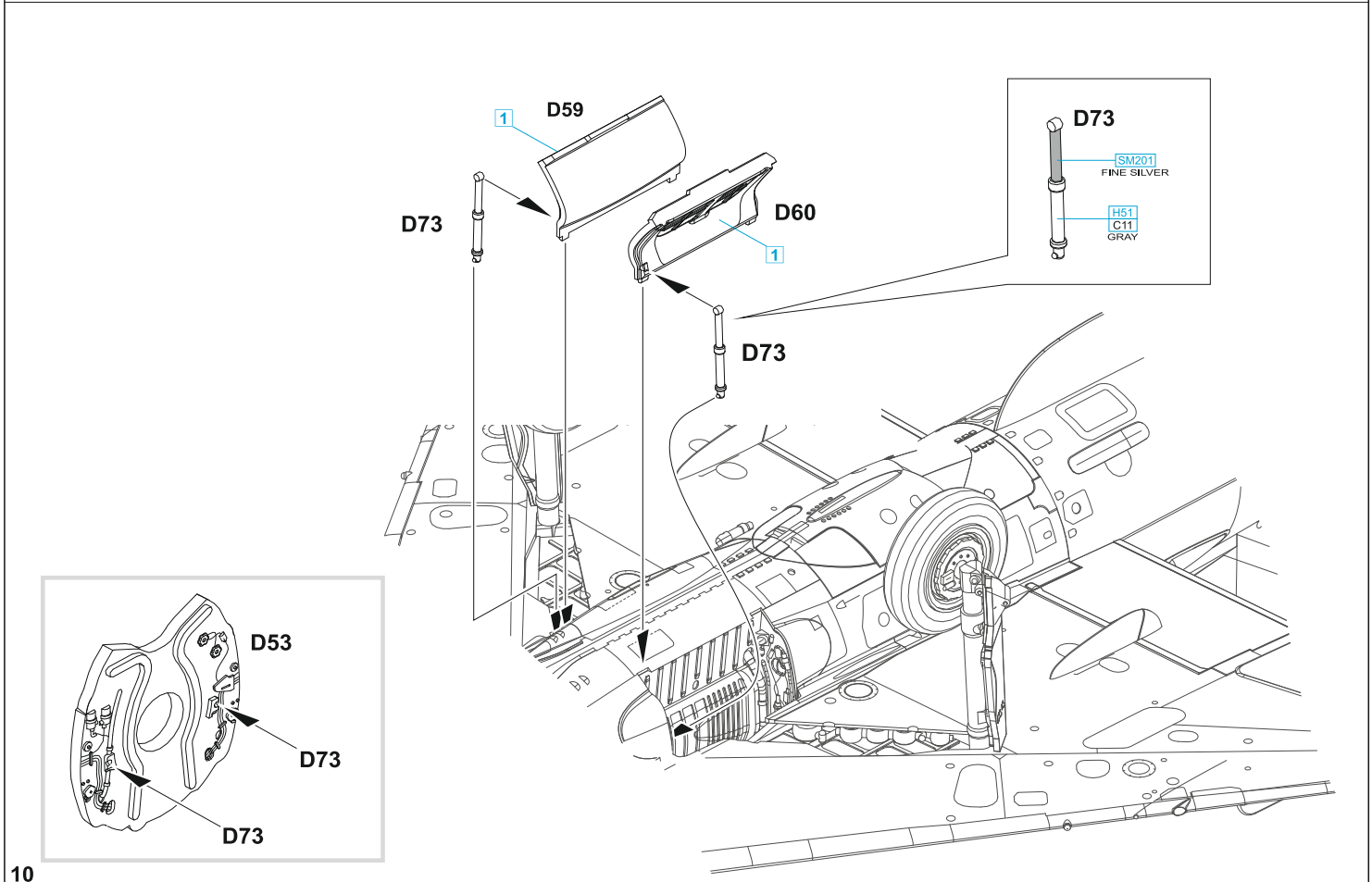
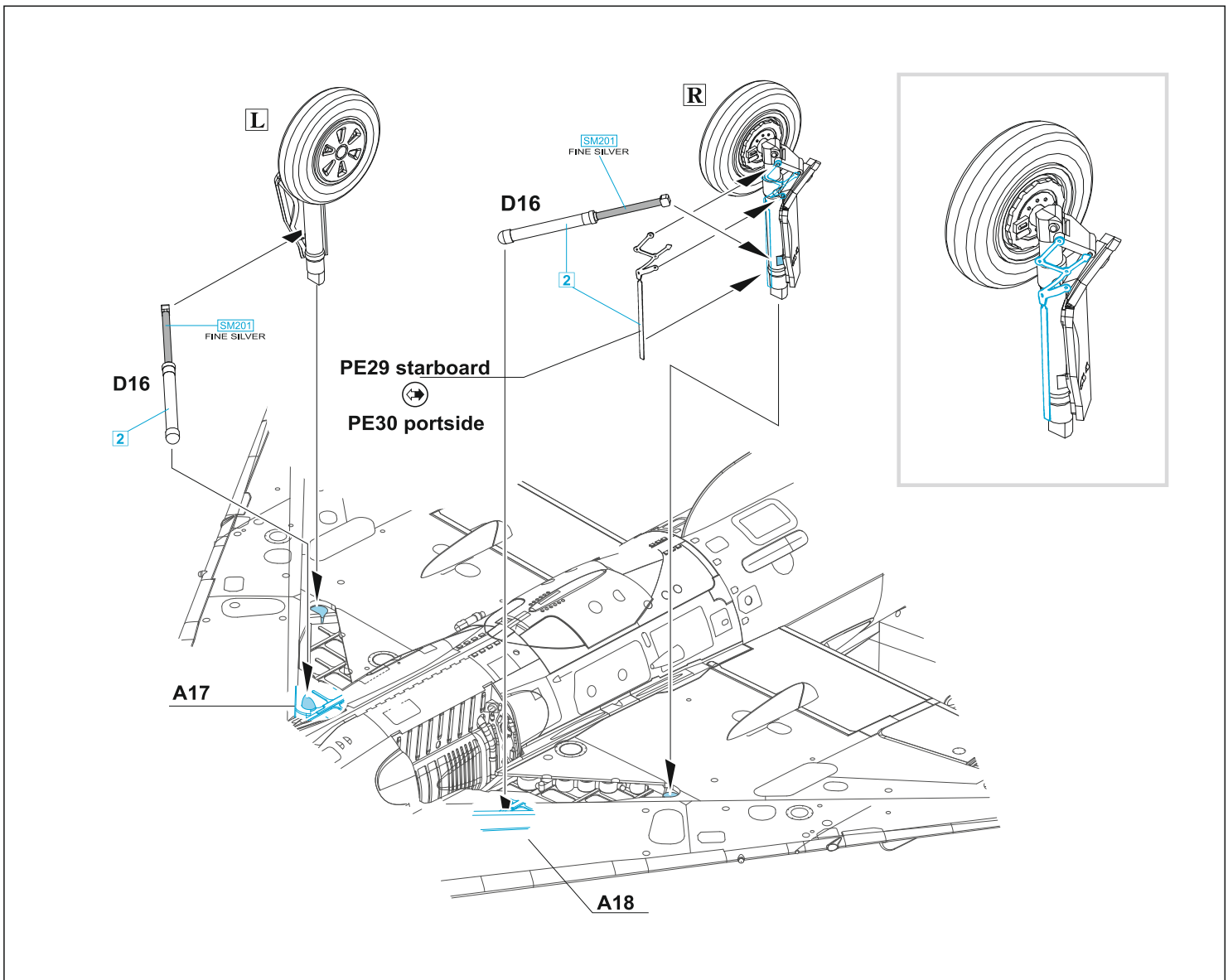
K5 + K22 - MARKING **E** ONLY



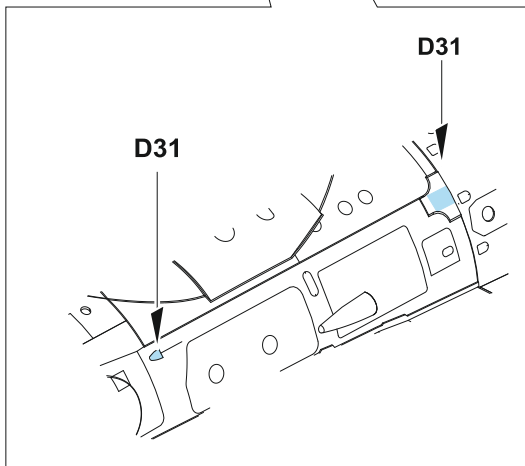
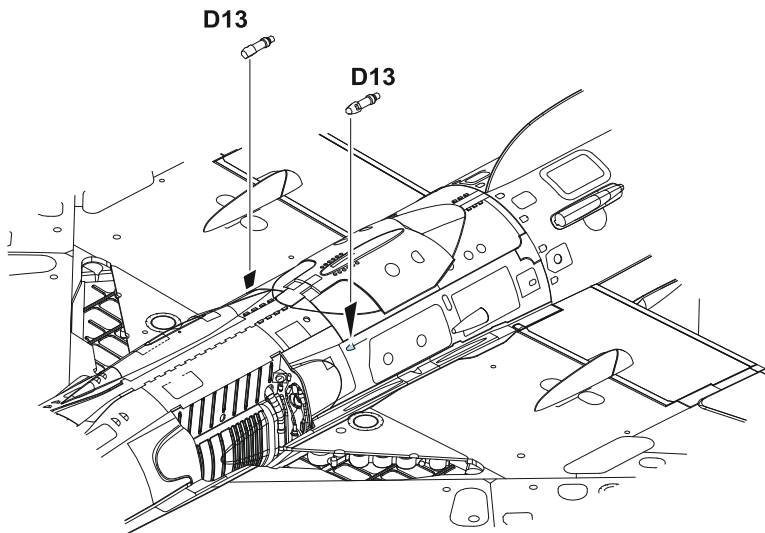
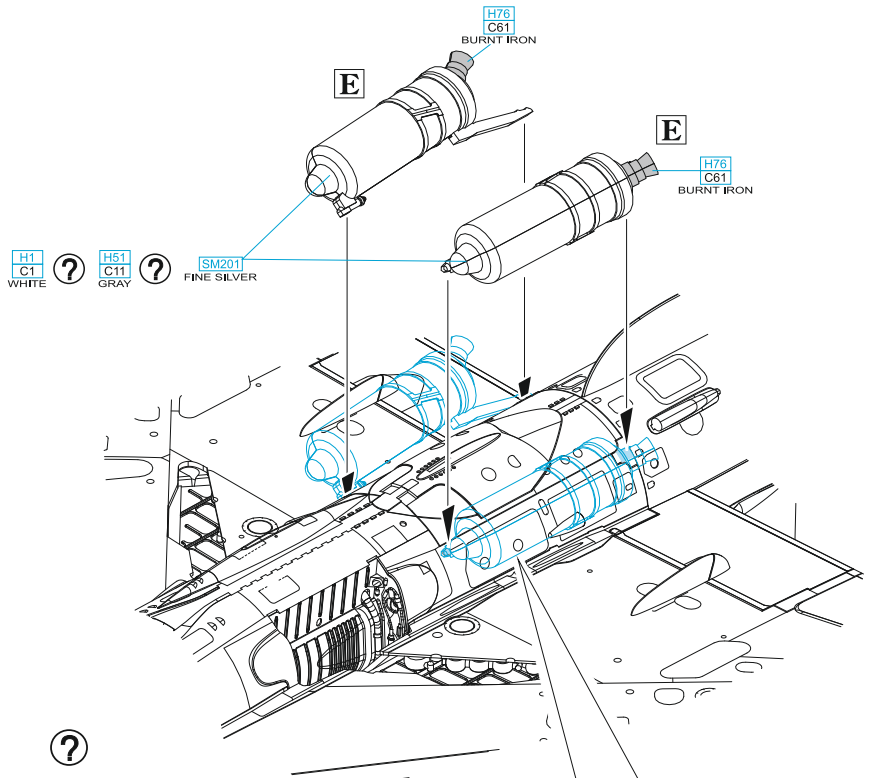
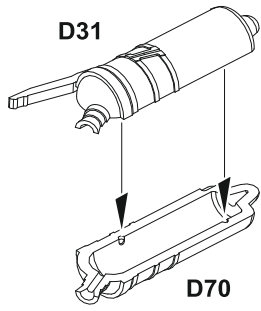
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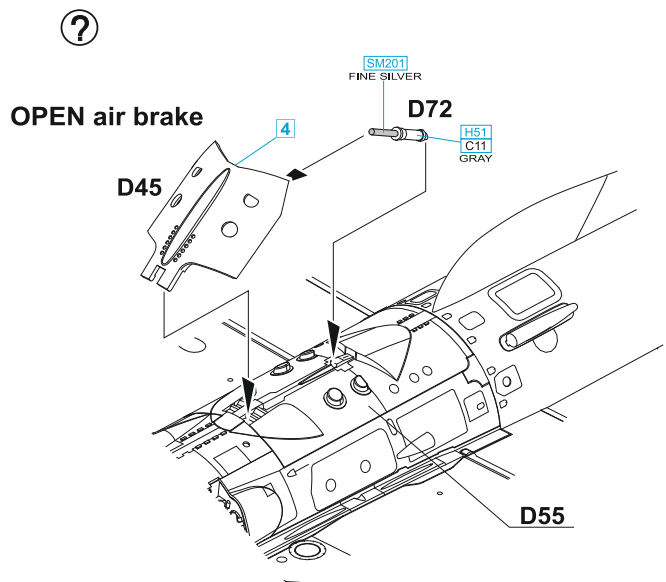
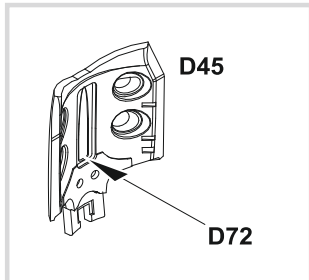


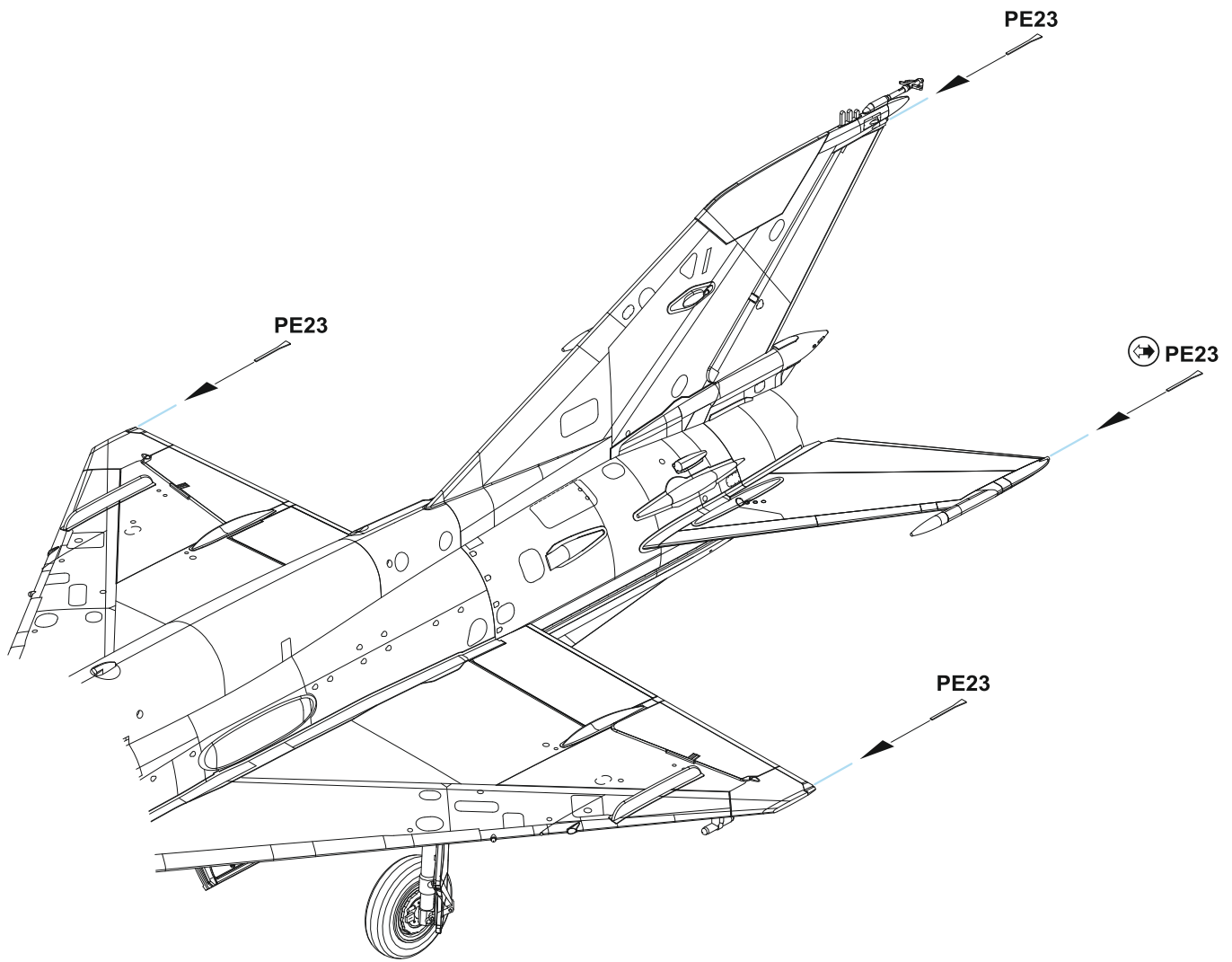


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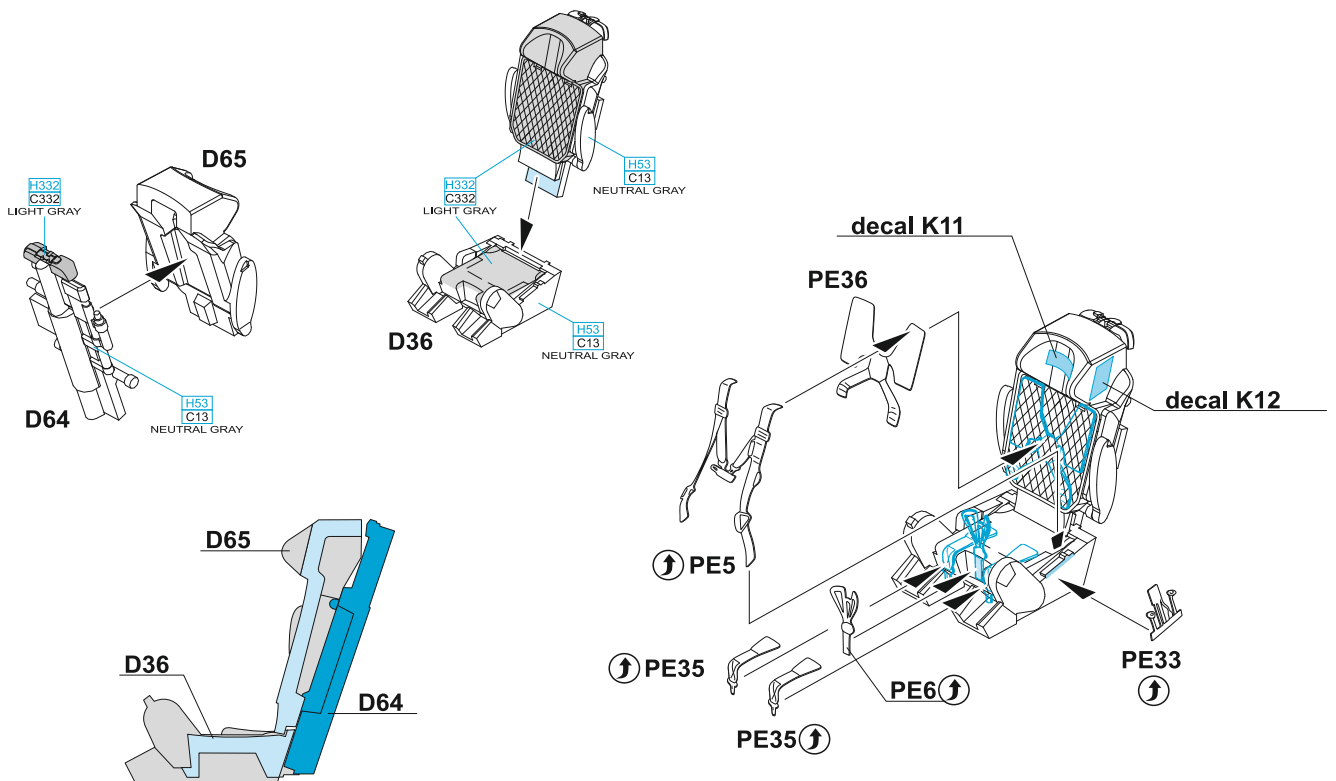


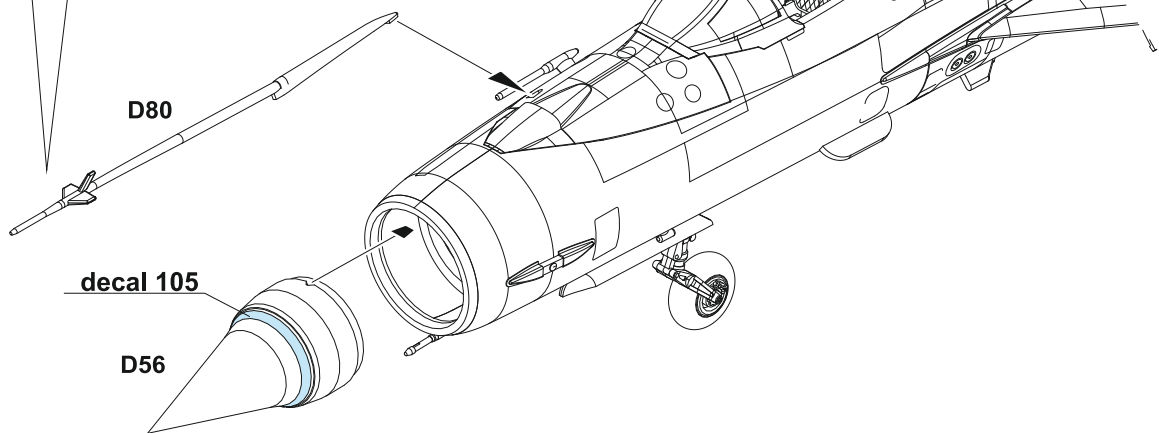
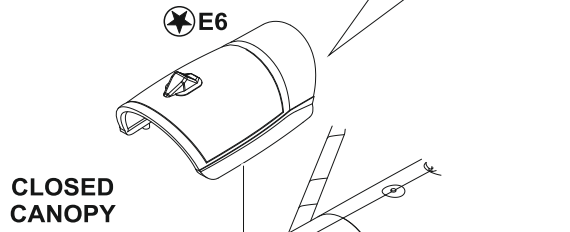
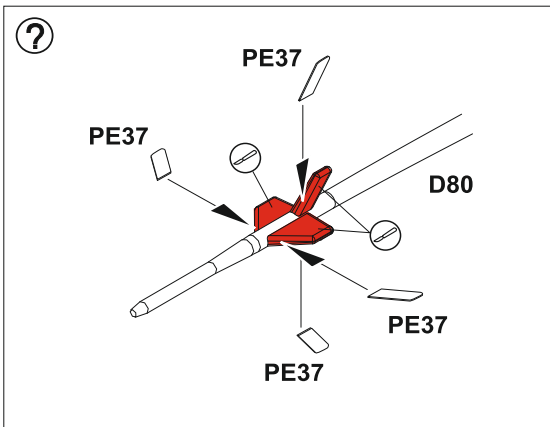
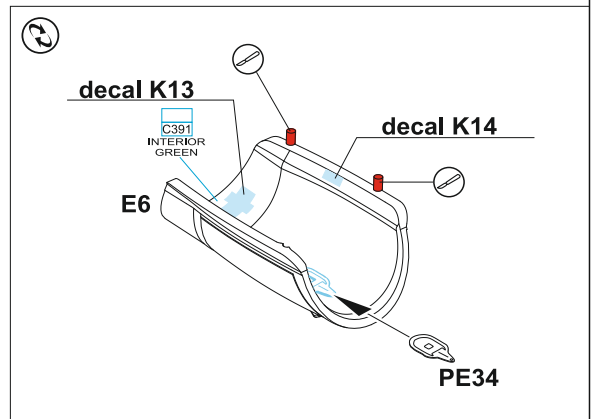
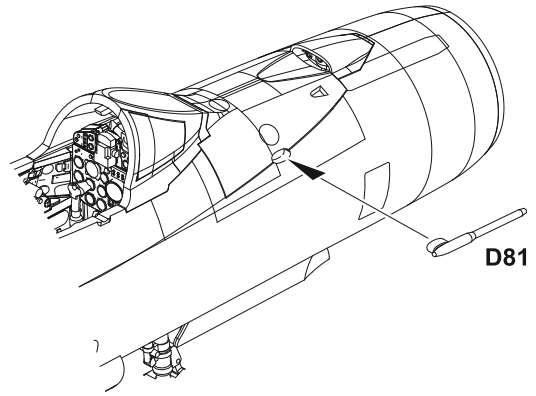
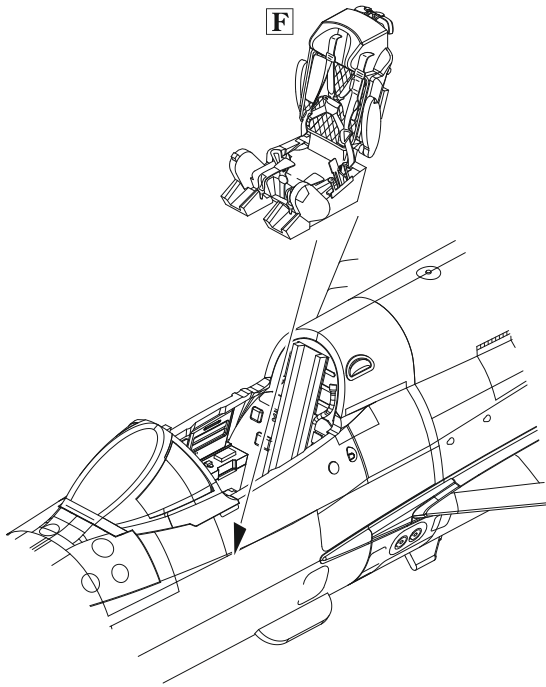
4 = **H51 C11 GRAY** - MARKINGS **A, C, D, F**
H67 C115 RLM65 LIGHT BLUE - MARKINGS **B, E**

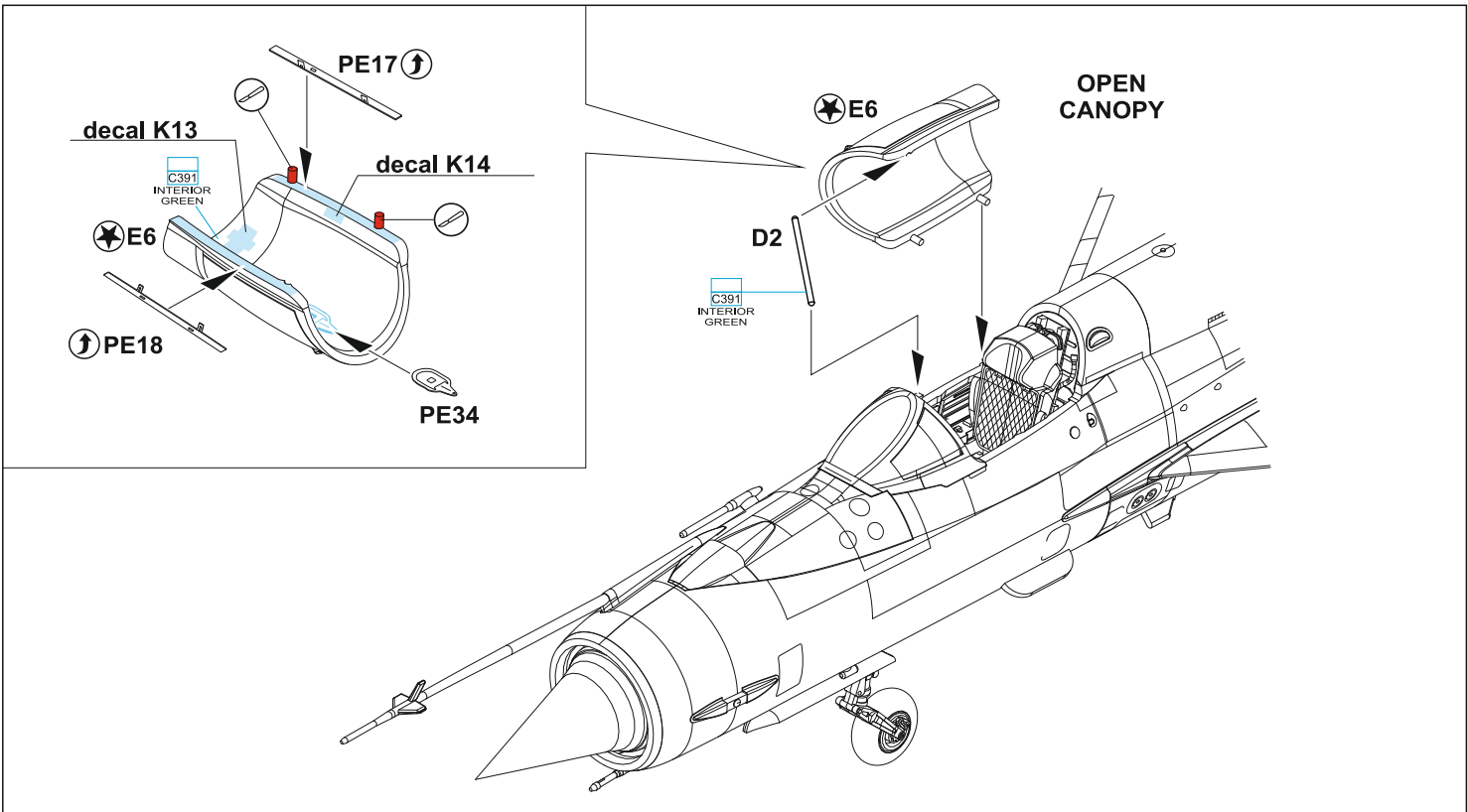




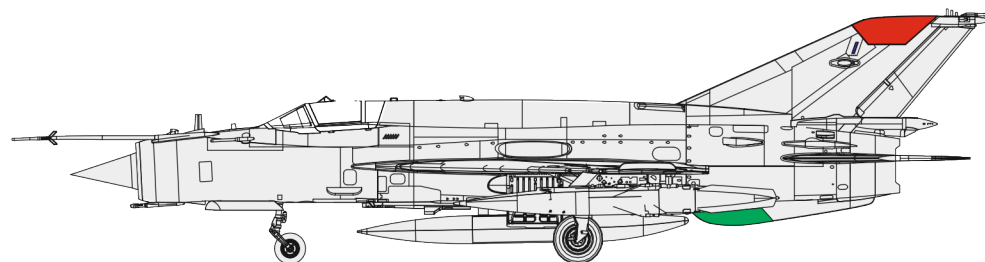
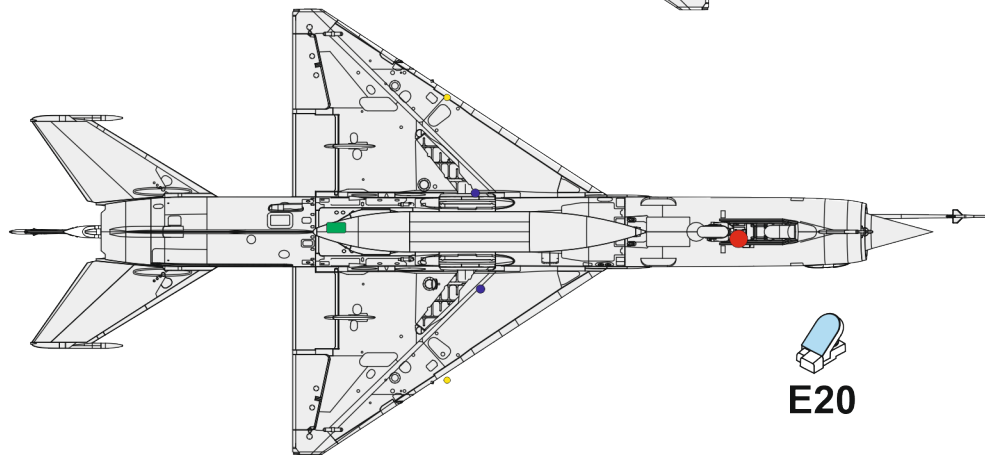
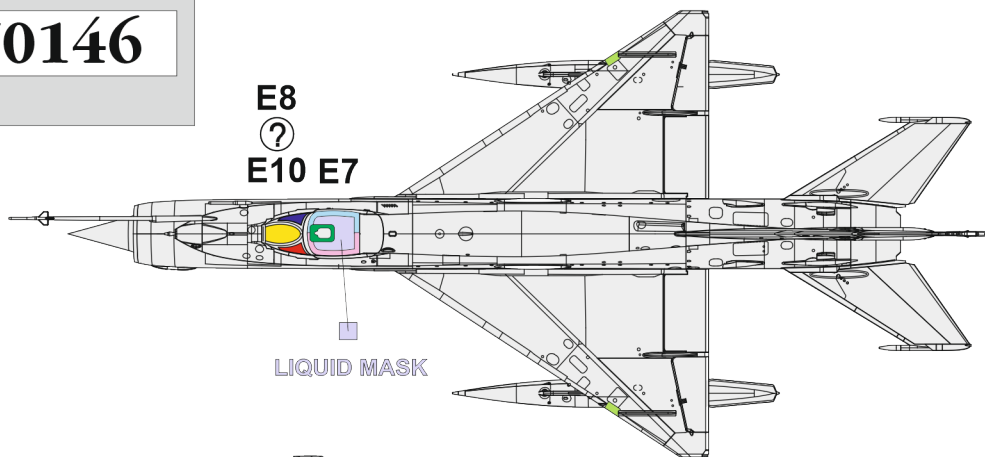
F



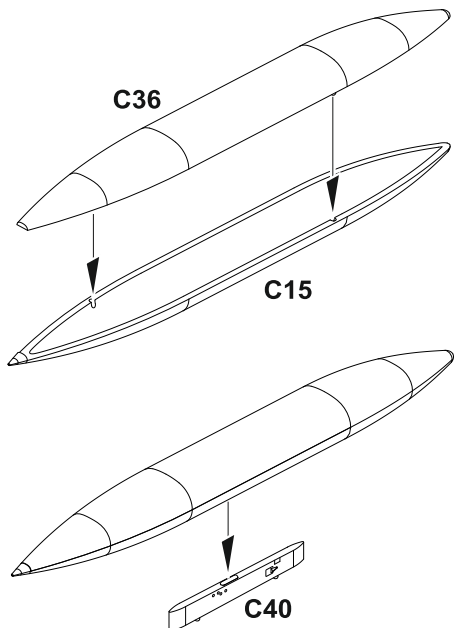




eduard
MASK
70146

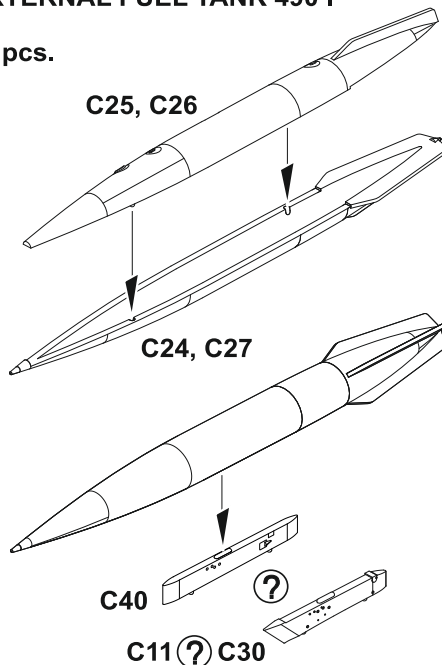


EXTERNAL FUEL TANK 800 I

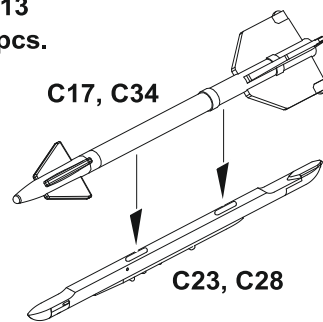


EXTERNAL FUEL TANK 490 I

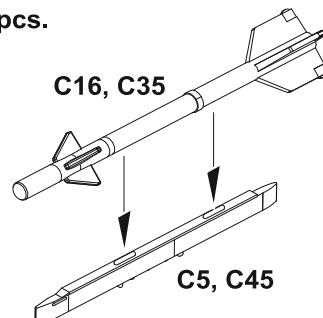
2 pcs.



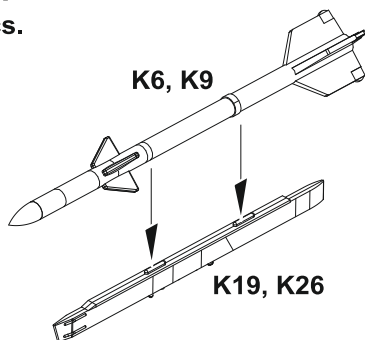
R-13
2 pcs.



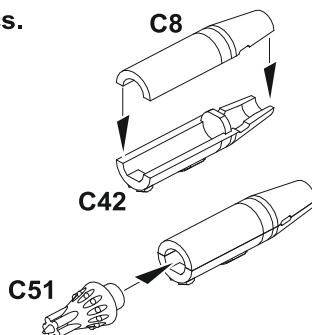
R-3S
2 pcs.



R-3R
2 pcs.

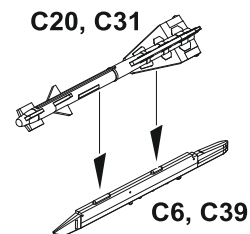


UB-16
2 pcs.

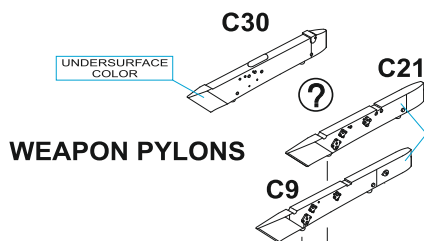


? MARKING C ONLY

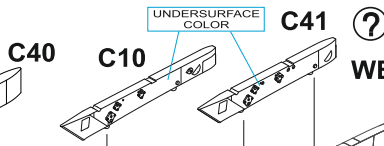
R-60
2 pcs.



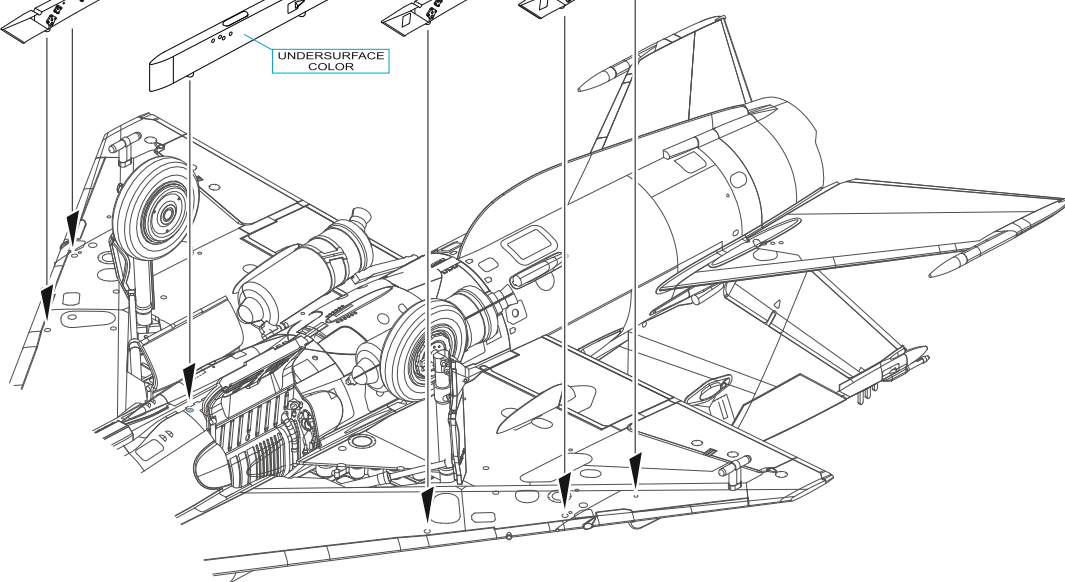
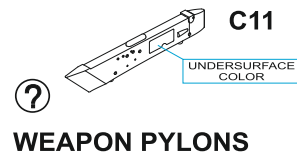
EXTERNAL FUEL TANK PYLONS

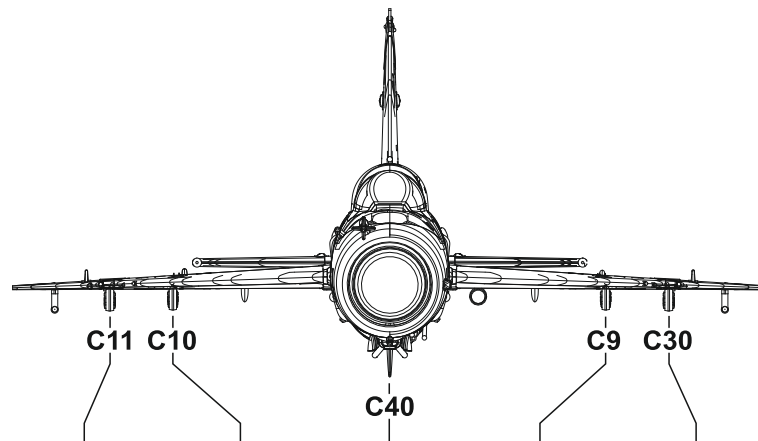


EXTERNAL FUEL TANK PYLONS



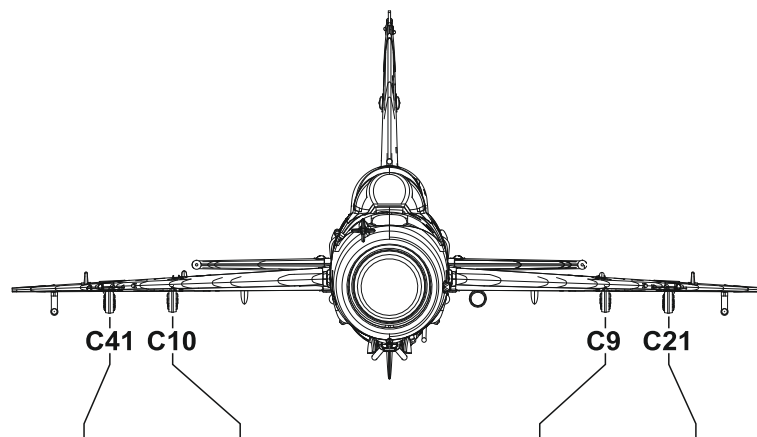
EXTERNAL FUEL TANK PYLONS





EXTERNAL FUEL TANK 800 I	○			
EXTERNAL FUEL TANK 490 I	⊗			
EXTERNAL FUEL TANK 490 I	⊗			⊗
EXTERNAL FUEL TANK 490 I 2x UB-16	⊗	⊗	⊗	⊗

TYPICAL ARMAMENT FOR QUICK REACTION ALERT DUTY

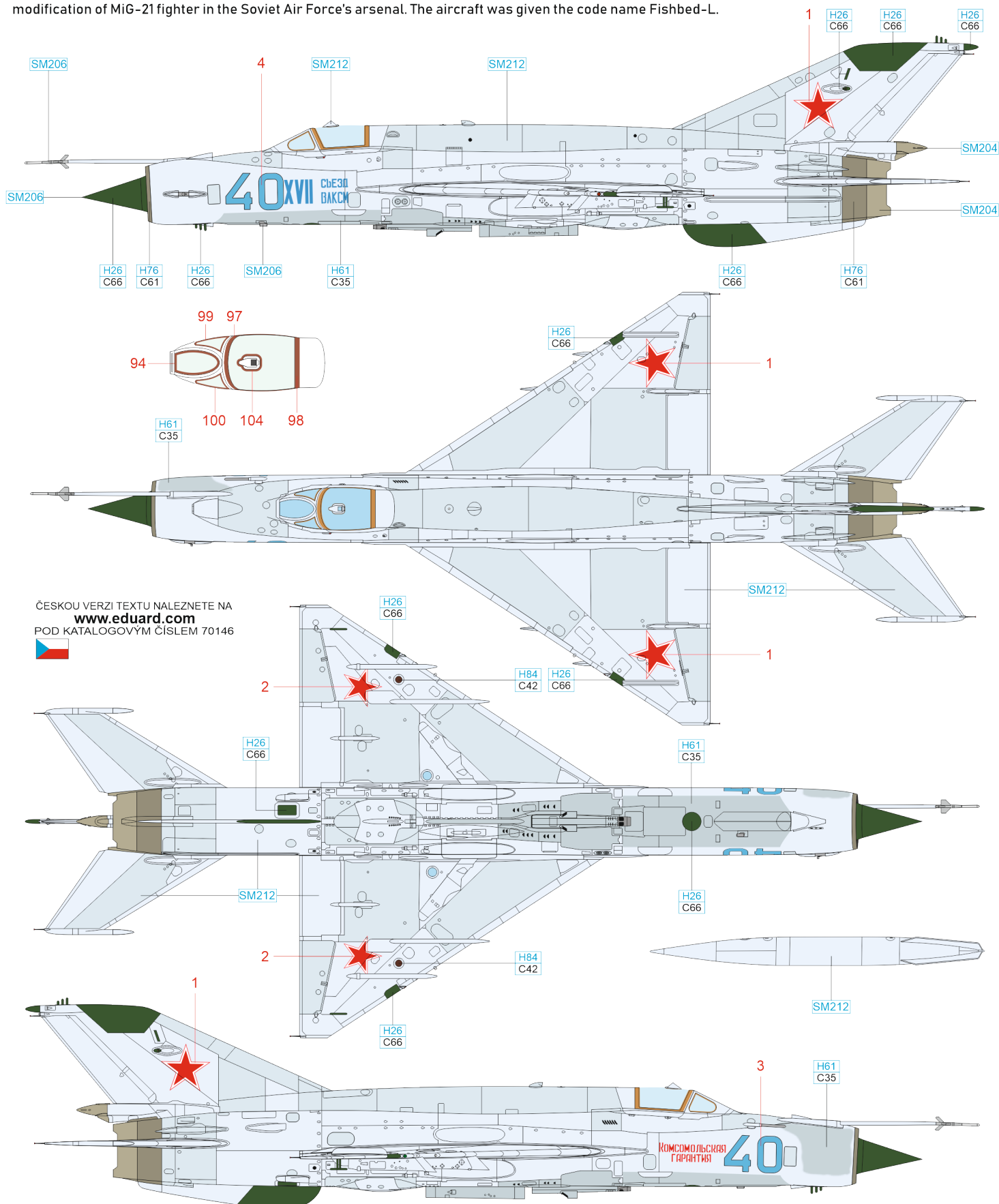


2x R-3R	C5	K26	K19	C45
2x R-3S	⊗	⊗	⊗	⊗
2x R-R3	C23	K26	K19	C28
2x R-13	⊗	⊗	⊗	⊗
2x R-60	C6	FOR POLISH AIR FORCE ONLY		C39
4x UB-16	⊗	⊗	⊗	⊗

TO CHOOSE WEAPON AND EXTERNAL FUEL TANK OPTION PLEASE FOLLOW YOUR REFERENCE.

A MiG-21bis, 234 IAP, Soviet VVS, Kubinka Air Base, Soviet Union, 1974

This aircraft rolled off the production line at Plant 21 in Gorky in 1974 as the first production Bis and was handed over to the 234 IAP on the 56th anniversary of the founding of the Komsomol organization. At the unit, it received the fuselage number blue 40 with distinctive inscriptions on the left side – XVII Komsomol Congress and on the right side Komsomol Guarantee, which means that Komsomol members guarantee the equality of the number of takeoffs and landings of this aircraft, as well as the trouble-free operation of the on-board systems. Color photographs of this aircraft were taken in August 1974 at Rissala Airport near the city of Kuopio during a visit by a Soviet Air Force delegation to Finland. Major E. M. Avedikov, commander of the 234 Guards Regiment, performed aerobatics on the blue 40 aircraft on this occasion. It was during this visit that Western observers first learned of the new modification of MiG-21 fighter in the Soviet Air Force's arsenal. The aircraft was given the code name Fishbed-L.



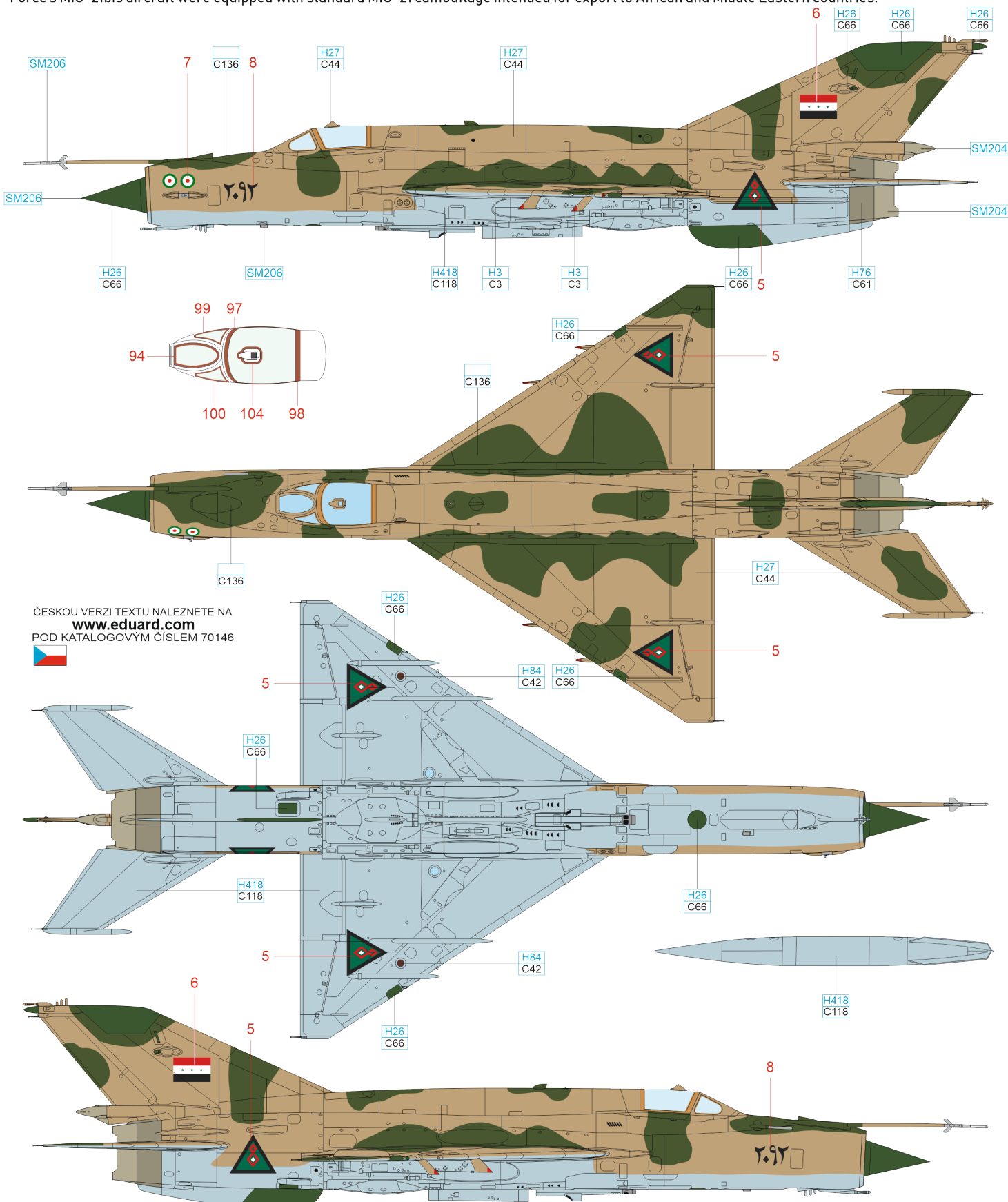
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GRAY	H61 C35	MAHOGANY	H84 C42	BRIGHT GREEN	H26 C66	DARK IRON	H76 C61	STEEL	SM204	SUPER CHROME SILVER 2	SM206	ALUMINIUM	SM212
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B MiG-21bis, 2nd Lieutenant Adnan Saeed al-Fadhli, No. 11 Squadron, Iraqi Air Force, Tammuz Air Base, Iraq, 1980-1984

The aircraft with serial number 2092 was most likely delivered in 1979 or 1980 to No. 11 Squadron IrAF, with which Lieutenant Adnān participated in combat operations mainly in the Baghdad area in September and October 1980, where his unit achieved a significant number of kills of Iranian F-4 and F-5 aircraft. It is assumed that the two kill marks on 2092 fuselage represent downed F-5Es. Lieutenant Adnān was sent to the USSR in early 1984 for retraining on MiG-25 aircraft, then was transferred to No. 87 Squadron and in 1986 to No. 96 Squadron, where he served as deputy commander and then commander of No. 96 Squadron in the following years. On January 17, 1987, Adnān participated in an operation that led to the destruction of an Iranian F-14A Tomcat. After 2004, he returned to active duty and served as deputy commander of the Iraqi 6 Infantry Division (for air coordination). He died in 2020. The Iraqi Air Force's MiG-21bis aircraft were equipped with standard MiG-21 camouflage intended for export to African and Middle Eastern countries.



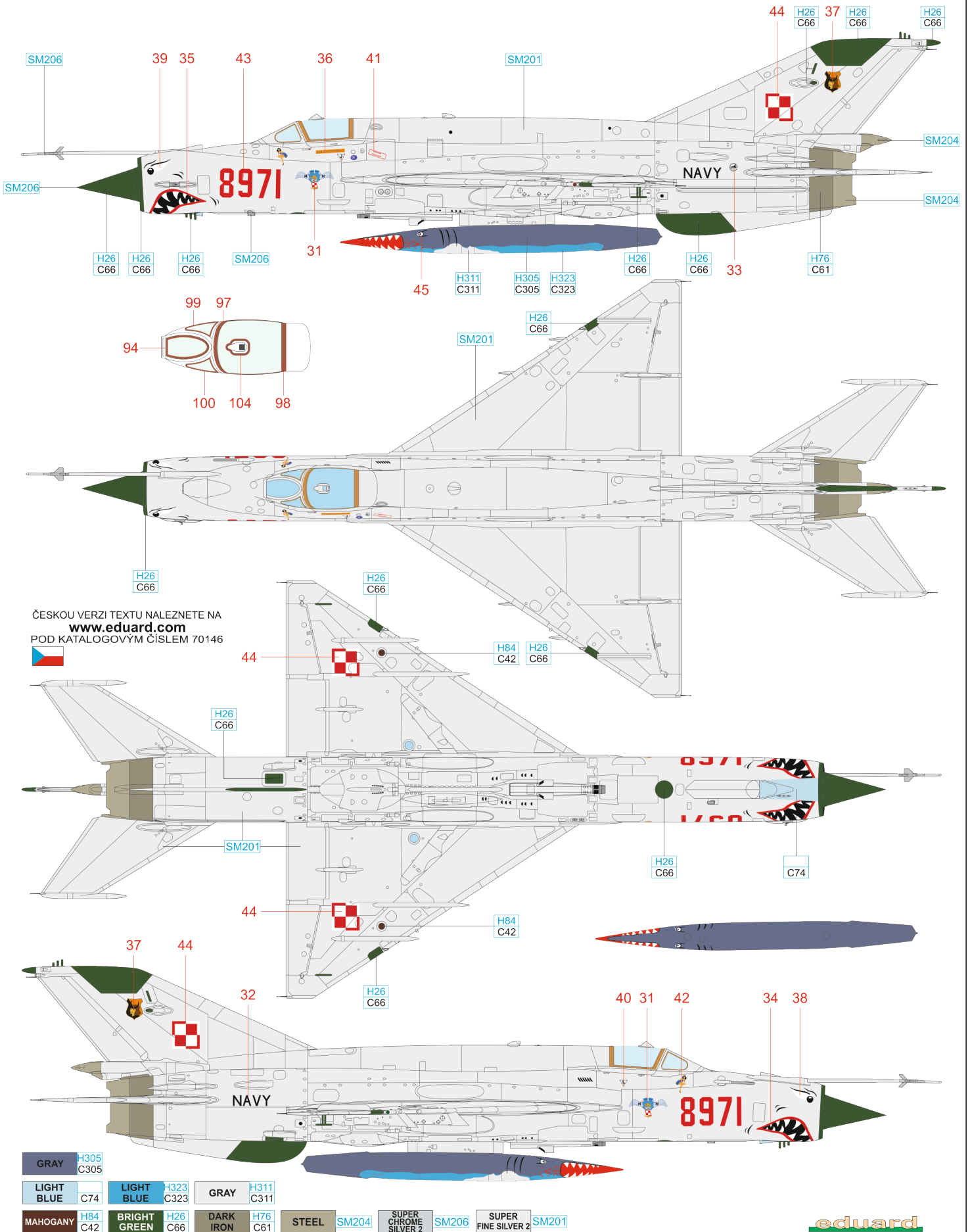
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MAHOGANY	H84 C42	LIGHT BLUE	H418 C118	TAN	H27 C44	GREEN	C136
RED	H3 C3	BRIGHT GREEN	H26 C66	DARK IRON	H76 C61	STEEL	SM204
						SUPER CHROME SILVER 2	SM206

C MiG-21bis, 1 Pucki DLMW, Lotnictwo Marynarki Wojennej, Gdynia-Babie Doły, Poland, 2003

This aircraft, serial number 75088971, arrived in Poland on March 26, 1980. It was operated by the 1 Pucki Dywizjon Lotniczy of the Polish Navy. The emblem on the vertical tail fin shows it belongs to the 2nd Squadron. The appearance of this aircraft changed over time; in 2003 it flew with a shark mouth. Between 1980 and 1981, Poland received 72 MiG-21bis aircraft.



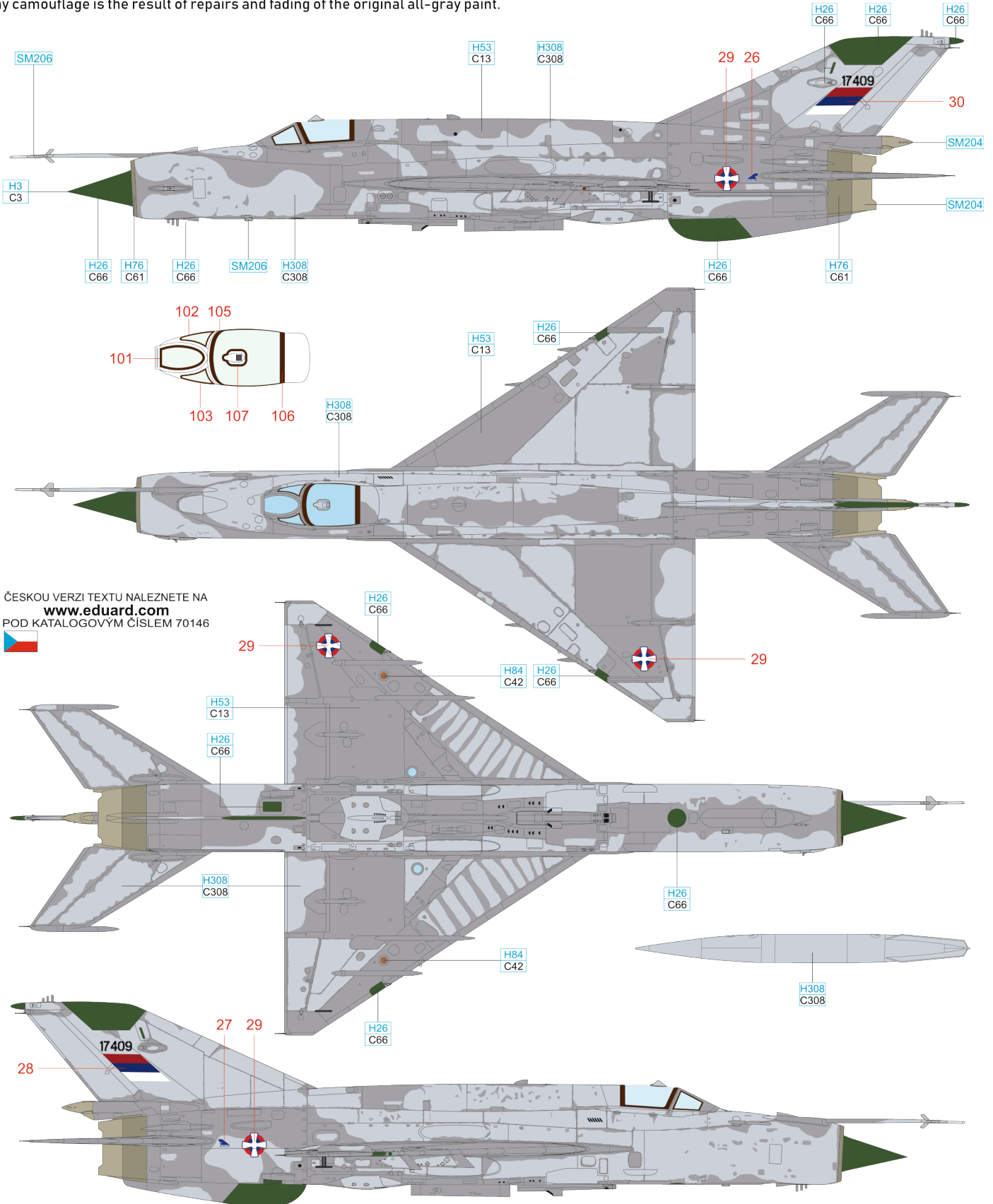
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GRAY	H305 C305	LIGHT BLUE	H323 C323	GRAY	H311 C311
LIGHT BLUE	C74	BRIGHT GREEN	H26 C66	DARK IRON	H76 C61
MAHOGANY	H84 C42	STEEL	SM204	SUPER CHROME SILVER 2	SM206
				SUPER FINE SILVER 2	SM201

D MiG-21bis, 204 vb, 101.lae, Serbian Air Force, Batajnica Air Base, Serbia, 2015

Following the Balkan conflicts of the 1990s, the Federation of Serbia and Montenegro was formed in February 2003 from the remnants of the Republic of Yugoslavia. Based on a referendum held on May 21, 2006, Montenegro declared its independence on June 3 of the same year. The armed forces agreed to split their assets according to territorial claims. The air force units in Serbia became part of the Serbian army and had 82 aircraft and 89 helicopters at their disposal. Meanwhile, in Montenegro, the 172 Air Base at Golubovci Air Base near Podgorica, with a mixed fleet of 41 aircraft and helicopters, became part of the Montenegrin Army. The air force and air defense were reorganized and retrained according to NATO standards by 2010. In March 2005, the first NATO-style wing was formed in Podgorica, Montenegro, as the 172 abr. On November 15, 2006, 204 av was officially created in Batajnica, replacing the 204 lap. It currently has three squadrons: 101 lae, 138 lae, and 252 lae (101 lae adopted the insignia of 127 lae). 101 lae operates MiG-29, MiG-21bis, and a pair of MiG-21UM training aircraft. The MiG-21bis with fuselage number 17409 was one of the last MiG-21s to fly with the Serbian Air Force. Its two-tone gray camouflage is the result of repairs and fading of the original all-gray paint.



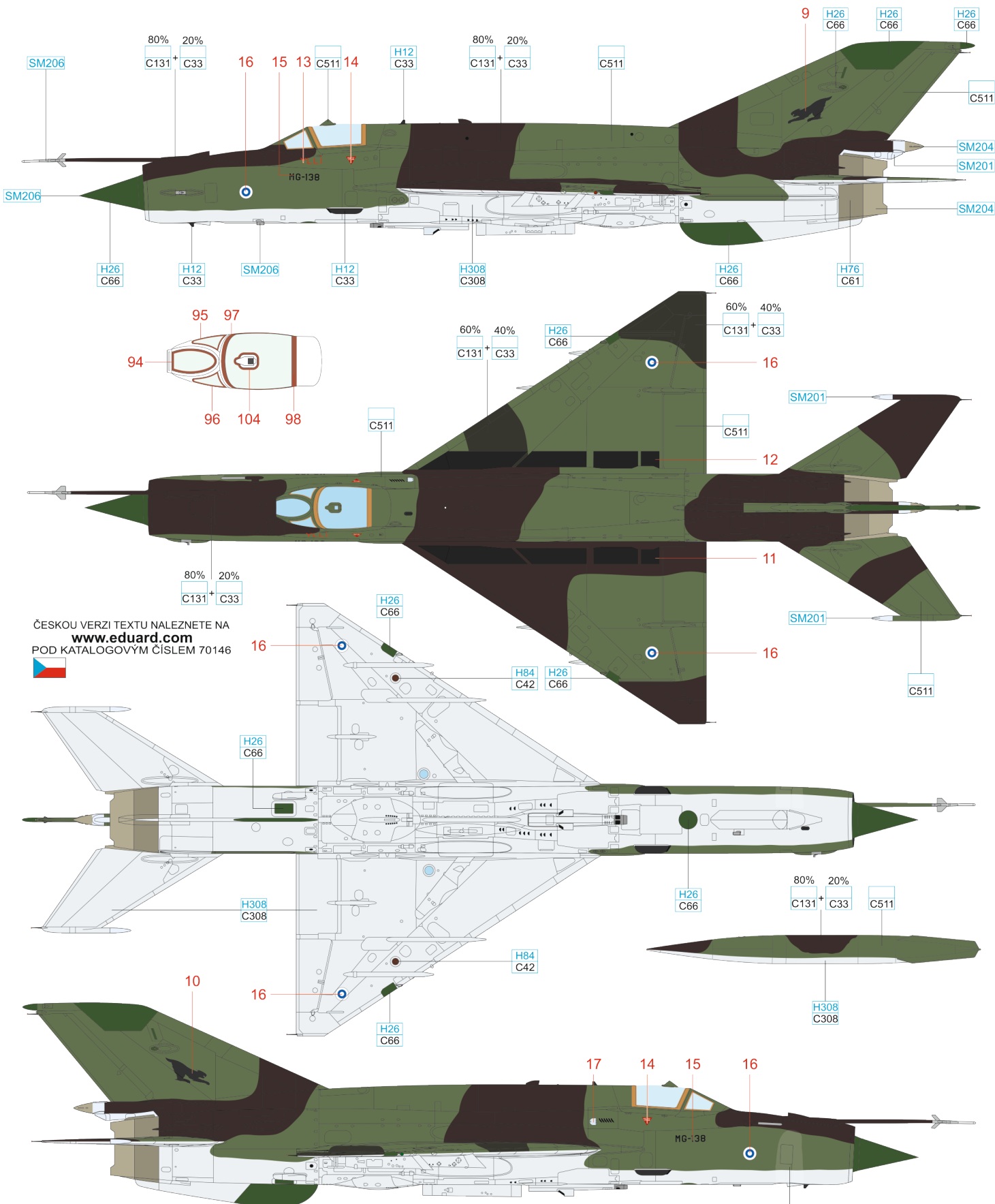
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NEUTRAL GRAY	H53 C13	GRAY	H308 C308	RED	H3 C3
MAHOGANY	H84 C42	BRIGHT GREEN	H26 C66	DARK IRON	H76 C61
		STEEL	SM204	SUPER CHROME SILVER 2	SM206

E MiG-21BIS, c/n 75084608, HävLLv 31, Kuopio airbase, Finland, 1998

The Finnish Air Force acquired a total of 26 MiG-21bis aircraft between 1978 and 1986. These aircraft served in fighter and reconnaissance role between 1978 and 1998. The last flight of a MiG-21 in the service of the Finnish Air Force was made by Yrjö "Ylli" Rantamäki on March 7, 1998. He flew aircraft coded MG-138. Just for this flight the word YLLI was created from orange reflective tape below the canopy. The aircraft is now part of the exhibition at the Finnish Aviation Museum in Tikkakoski.



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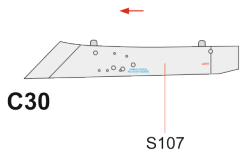


WEATHERING COLORS

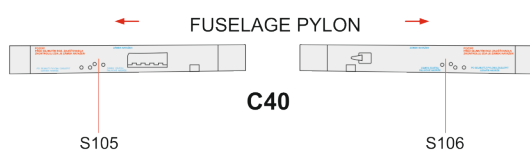
GRAY	H308 C308	BLACK	H12 C33	RED BROWN	C131	GREEN	C511
MAHOGANY	H84 C42	BRIGHT GREEN	H26 C66	DARK IRON	H76 C61	STEEL	SM204
						SUPER CHROME SILVER 2	SM206
						SUPER FINE SILVER	SM201

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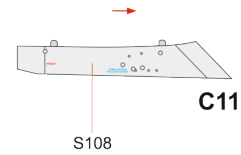
LEFT OUTSIDE UNDERWING TANK PYLON



FUSELAGE PYLON



RIGHT OUTSIDE UNDERWING TANK PYLON



LEFT OUTSIDE PYLON



RIGHT OUTSIDE PYLON



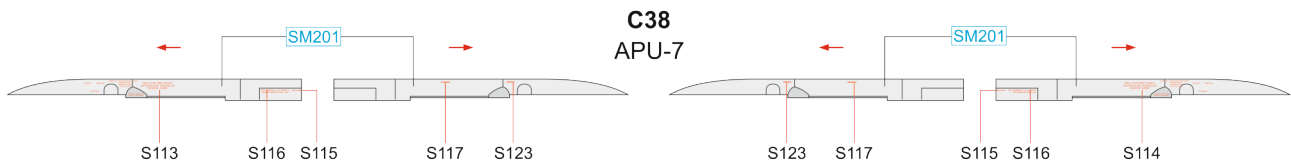
LEFT INSIDE PYLON



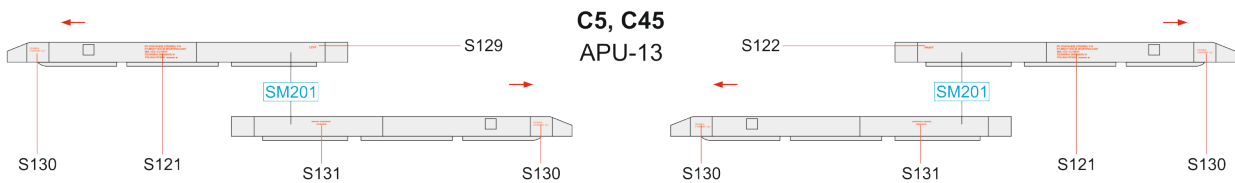
RIGHT INSIDE PYLON



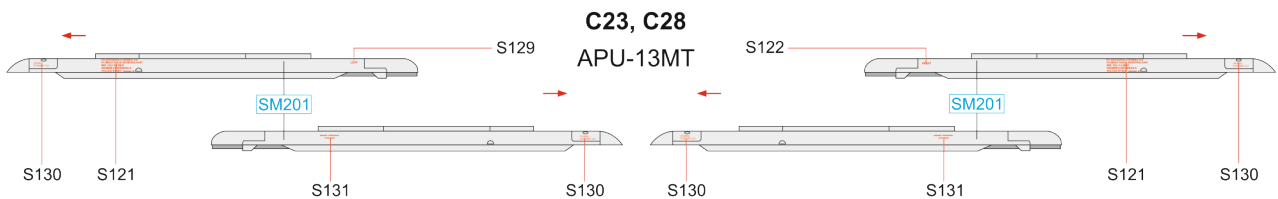
C38
APU-7



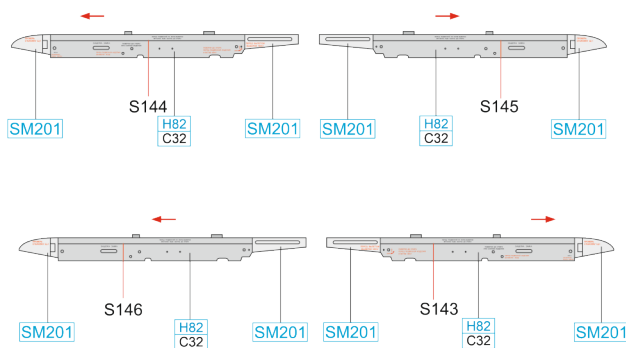
C5, C45
APU-13



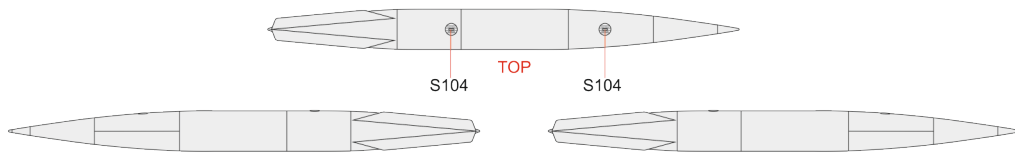
C23, C28
APU-13MT



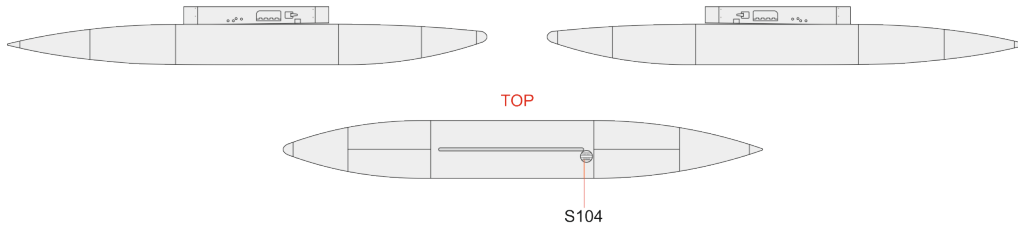
C6, C39
APU FOR R-60



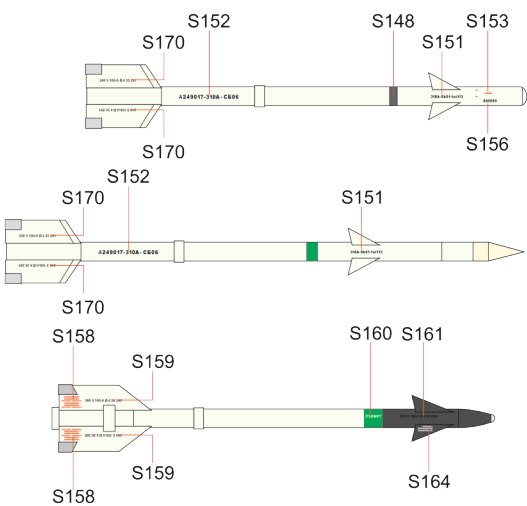
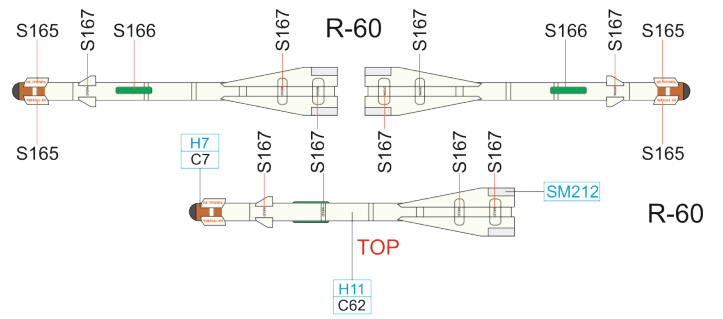
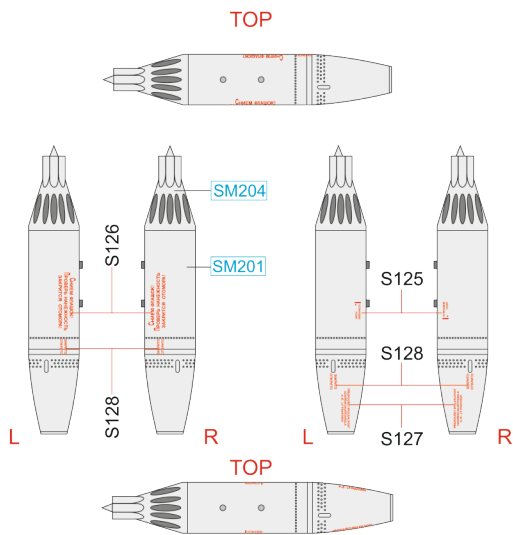
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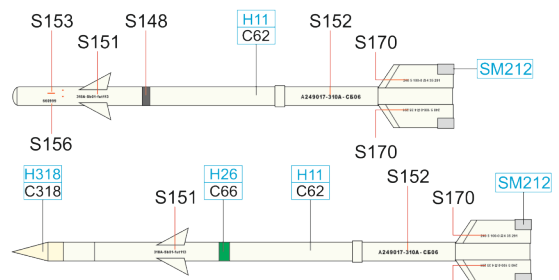
PTB-800



UB-16

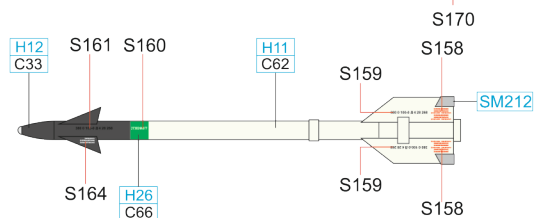


R-3S

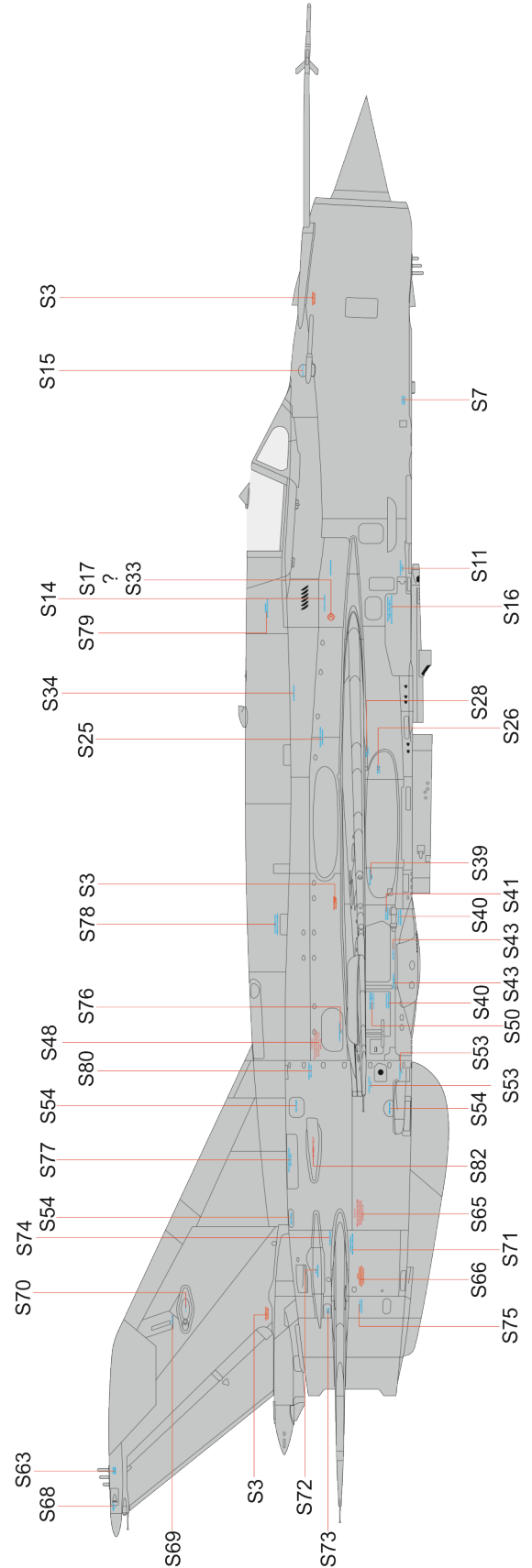
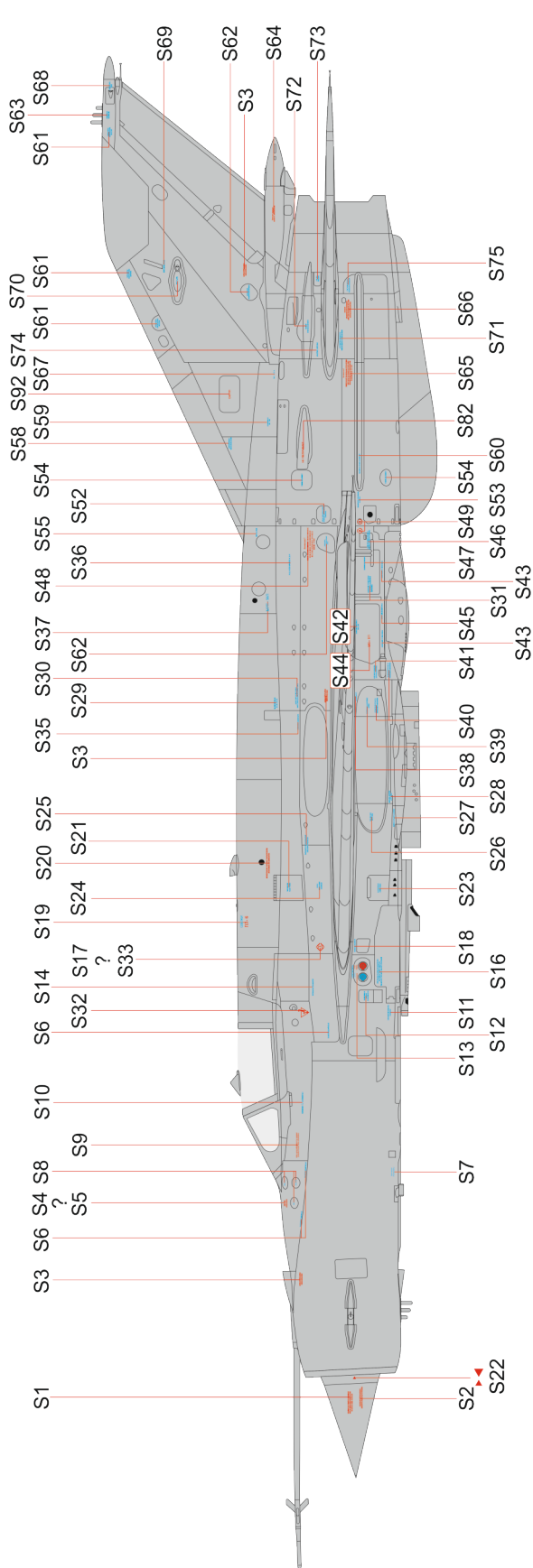


R-3R

R-13



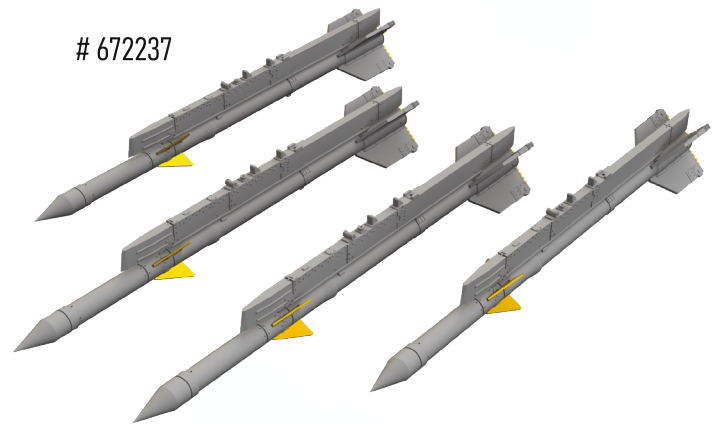
- BLUE STENCILS - MARKINGS **A**
- RED STENCILS - MARKINGS **A, B, C, D, E**
- BLACK STENCILS - MARKINGS **B, C, D, E**
- WITHOUT STENCILS - MARKINGS **F**



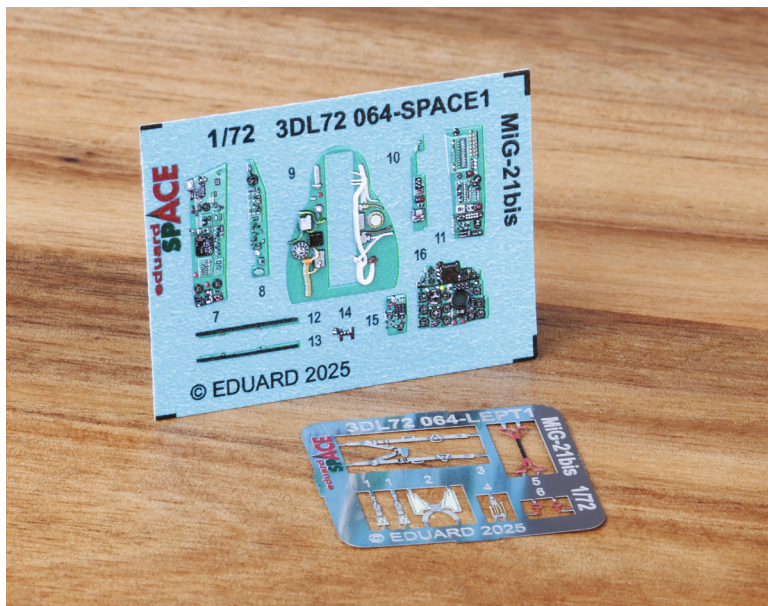
- 72744 MiG-21bis upgrade set (PE-Set)
- 672104 R-3S / AA-2 Atoll-A (Brassin)
- 672149 R-60 / AA-8 Aphid (Brassin)
- 672187 R-13M missiles for MiG-21 (Brassin)
- 672218 MiG-21 F.O.D. (Brassin)
- 672237 R-3R missiles for MiG-21 (Brassin)
- 672240 R-3R missiles w/ pylons for MiG-21 (Brassin)
- 672381 MiG-21 wheel bays PRINT (Brassin)
- 672414 MiG-21bis exhaust nozzle PRINT (Brassin)
- 672415 MiG-21bis cockpit PRINT (Brassin)
- 672417 MiG-21 seat PRINT (Brassin)
- 672418 MiG-21 seat w/ integral belts PRINT (Brassin)
- 3DL72064 MiG-21bis SPACE (3D Decal Set)
- D72055 MiG-21bis stencils (Decal Set)



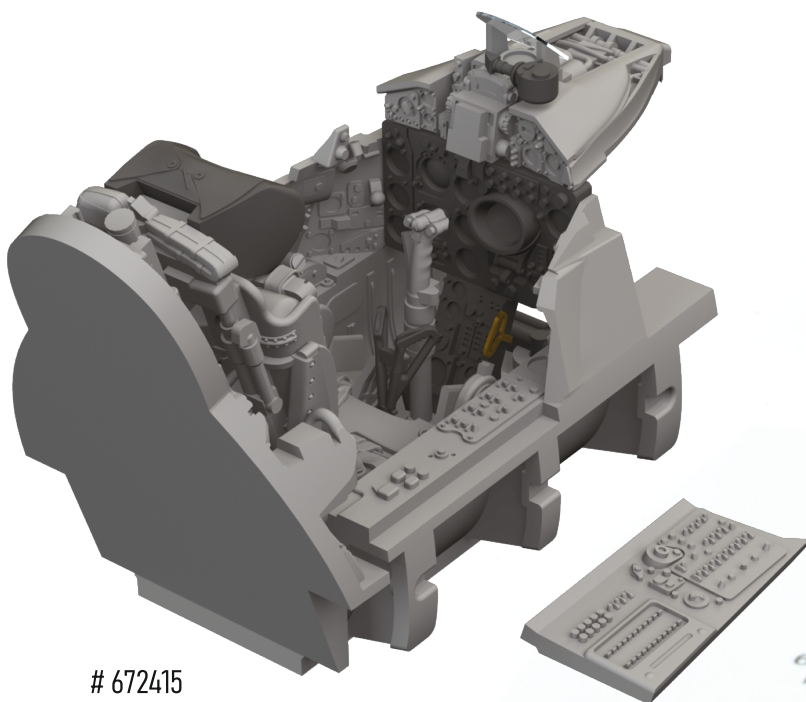
672414



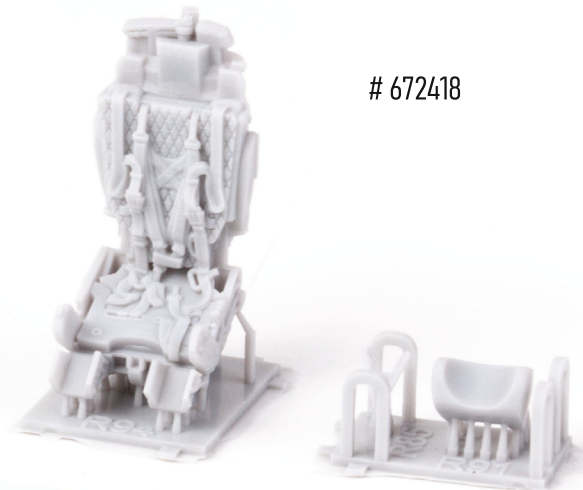
672237



3DL72064



672415



672418

