

SOVIET SUPERSONIC FIGHTER 1:48 SCALE PLASTIC KIT



intro

The MiG-21 was one of a long list of Mikoyan-Gurevich products to be integrated into the armed forces of the Soviet Union, the Warsaw Pact, and allied client states. Its predecessors included such notable types as the MiG-15, MiG-17 and the supersonic MiG-19. The roots of this project reach back to the first half of the fifties. In 1954, the Ye-1 project came to an end, and was quickly picked up by the Ye-2. Both had a swept wing. The first machine to feature the delta wing was the Ye-4, which first took to the air on June 16th, 1955. It was also demonstrated a year later at the Moscow airfield Tushino. The first of the new line to enter production was the MiG-21F, which together with the MiG-21P and F-13 represented the first generation of the MiG-21, and was in production through the end of the fifties and the beginning of the sixties. Subsequent versions included the PF, FL, PFM, R, etc, the production of which peaked at the end of the sixties. The third generation started production in 1968, which included such versions as M, SM, MF, SMT, BIS among others. Simultaneously, two-seat training versions were also produced designated MiG-21U, UM and US. Production of the MiG-21 ended in 1985, and was put into service with some fifty nations. Over the course of the cold war, the opponents of the MiG-21 included the likes of the Northrop F-5 Freedom Fighter and the Dassault Mirage III. NATO assigned it the reporting name 'Fishbed'. It became the most produced supersonic fighter in terms of quantity. The new machines came off Soviet production lines in Moscow, Gorky and Tbilisi. The MiG-21F-13 was also built under license in Czechoslovakia and the MiG-21FL, M and BIS 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. Outside of the Soviet Union, the type flew with a long list of nations on all continents with the exception of Australia. The MiG-21 participated in combat in Vietnam, the Indo-Pakistan wars, the Cuban participation in Angola and in the Arab world's attempt to eliminate Israel. Thanks to the high volume of use, the highest number of aces produced on the type was in Vietnam. The top of the ladder is occupied by Nguyen Van Coc with nine kills. The type serving as a fighter-bomber served with the Soviet Union and other nations of the Warsaw Pact into the eighties, when it began to be displaced by the MiG-29 Fulcrum.

This kit is specific to the building of a model of the MiG-21BIS. In factory documentation, it is identified as 'Izdelye 75'. As opposed to the MF and SMT versions, it was optimized as a fighter, and not intended for ground attack as its primary role. It was powered by a Tumanskiy R-25-300, and armed with a twin barreled GS-23-2L 23mm cannon with 200 rounds. Hardpoints could still be loaded with R-13M, R-55, R-60 and R-60M missiles, UB-16-57 or UB-32A rocket pods, S-24 unguided rockets, bombs up to 500kg in size, 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 VVS and PVO units.

úvodem

MiG-21 byl další konstrukcí kanceláře Mikojan-Gurjevič, která se zařadila do výzbroje Sovětského svazu, zemí Varšavské smlouvy a dalších ozbrojených sil. Jeho předchůdci byly tak významné typy jako MiG-15, MiG-17 či nadzvukový MiG-19. Kořeny vývoje letounu sahají do první poloviny 50. let minulého století. V roce 1954 byl dokončen projekt Je-1, velmi rychle nahrazený druhým prototypem Je-2. Oba měly šípové křídlo. Prvním strojem s delta křídlem byl prototyp Je-4, který se do vzduchu dostal poprvé 16. června 1955. Představil se také na letecké přehlídce, která se konala o rok později na moskevském letišti Tušino. Jako první se do sériové výroby dostala verze MiG-21F, která společně s MiG-21P a MiG-21F-13 reprezentovala první generaci tohoto typu, vyráběnou na přelomu 50. a 60. let minulého století. Následovaly další, pokročilejší verze – PF, FL, PFM, R atd., jejichž produkce vyvrcholila v druhé polovině 60. let. Od roku 1968 probíhala výroba třetí generace, která zahrnovala například verze M, SM, MF, SMT, BIS a další. Souběžně se stavěly také dvoumístné cvičné jednadvacítky MiG-21U, UM a US. Výroba MiGů-21 skončila v roce 1985 a do výzbroje je zařadilo okolo 50 zemí světa. MiG-21 měl během studené války své protějšky v typech Northrop F-5 Freedom Fighter či Dassault Mirage III. Vojska NATO dalo typu kódové označení Fishbed. Stal se v největších počtech vyráběným nadzvukovým letounem. Nové stroje v Sovětském svazu sjížděly z továrních linek v Moskvě, Gorkém a Tbilisi. V licenci se stavěla verze MiG-21F-13 v Československu a MiG-21FL, M a BIS v Indii u Hindustan Aeronautics Ltd. V Sovětském svazu vzniklo 10 645 exemplářů všech verzí, v Československu 194 kusů a v Indii 657 strojů. Kromě ozbrojených sil Sovětského svazu létal s řadě zemí, s výjimkou Austrálie na všech kontinentech. Zúčastnil se řady válečných konfliktů, včetně války ve Vietnamu, indicko-pákistánských potyček, kubánského tažení v Angole či arabské snahy o zničení Izraele. Díky největšímu zapojení do bojových akcí se největší počet stíhacích es zrodil ve Vietnamu. Na čele žebříčku stojí Nguyen Van Coc s devíti sestřely. V roli přepadového stíhacího letounu sloužily MiGy-21 v Sovětském svazu a dalších zemích Varšavské smlouvy až do 80. let, kdy jej jako plnohodnotná náhrada začaly z prvoliniové služby vytlačovat nové MiGy-29 Fulcrum.

Z této stavebnice si můžete postavit MiG-21BIS. V tovární dokumentaci tato verze figuruje pod označením Izdělje 75. Na rozdíl od verzí MF či SMT se jednalo o stíhací letoun, který nebyl primárně určen k útokům na pozemní cíle. Poháněl jej motor Tumanskiy R-25-300. Výzbroj tvořil dvouhlavňový kanon GŠ-23-2L ráže 23 mm se zásobou 200 ran. Podvěsnou výzbroj tvořily rakety R-13M, R-55, R-60 R-60M, popř. raketové bloky UB-16-57 a UB-32A, protizemní neřízené rakety S-24, pumy do 500 kg a zápalné nádrže ZB-360. Do zemí bývalé Varšavské smlouvy a zemí třetího světa byly dodávány buď jako Izdělje 75A se systémem pozemního navádění na cíl Lazur, nebo jako Izdělje 75B se systémem blízké navigace Poljot OI. V kódu NATO nesly stroje se systémem Lazur M označení Fishbed N, stroje se systémem Poljot OI pak označení Fishbed K. Obě varianty sloužily jako Izdělje 75 také u jednotek sovětské PVO, resp. VVS.

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 započítím 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.



lire soigneusement la fiche d'instructions avant d'assembler. Ne pas utiliser de colle ou de peinture à proximité d'une flamme nue, et aérer la pièce de temps en temps. Garder hors de portée des enfants en bas âge. Ne pas laisser les enfants mettre en bouche ou sucer les pièces, ou passer un sachet vinyl sur la tête.



Von dem Zusammensetzen die Bauanleitung gut durchlesen. Kleber und Farbe nicht nahe von offenem Feuer verwenden und das Fenster von Zeit zu Zeit Belüftung öffnen. Bausatz von kleinen Kindern fernhalten. Verhüten Sie, daß Kinder irgendwelche Bauteile in den Mund nehmen oder Plastiktüten über den Kopf ziehen.



組み立てる前に必ず説明書をお読み下さい。接着剤や塗料をご使用の際は、窓を開けて十分な換気をおこない、火のそばでは使用しないで下さい。小さな子供の手の届かない所に必ず保管して下さい。部品や破片を噛んだり、なめたり、飲んだりすると大変危険です。又、部品を取り出した後のビニール袋は、小さな子供が頭から被ったりすると窒息する恐れがありますので、破り捨てて下さい。

INSTRUCTION SIGNS * INSTR. SYMBOLY * INSTRUKTION SINNBILDEN * SYMBOLES * 記号の説明



OPTIONAL
VOLBA
FACULTATIF
NACH BELIEBEN
選択する



BEND
OHNOUT
PLIER SIL VOUS PLAIT
BITTE BIEGEN
折る



OPEN HOLE
VYVRTAT OTVOR
FAIRE UN TROU
OFFNEN
穴を開ける



SYMETRICAL ASSEMBLY
SYMETRICKÁ MONTÁŽ
MONTAGE SYMÉTRIQUE
SYMMETRISCHE AUFBAU
左右均等に組み立てる



NOTCH
ZÁŘEZ
L INCISION
DER EINSCHNITT
切る



REMOVE
ODŘÍZNOUT
RETIRER
ENTFERNEN
移す



APPLY EDUARD MASK
AND PAINT
POUŽIT EDUARD MASK
NABARVIT

PARTS



DÍLY



TEILE

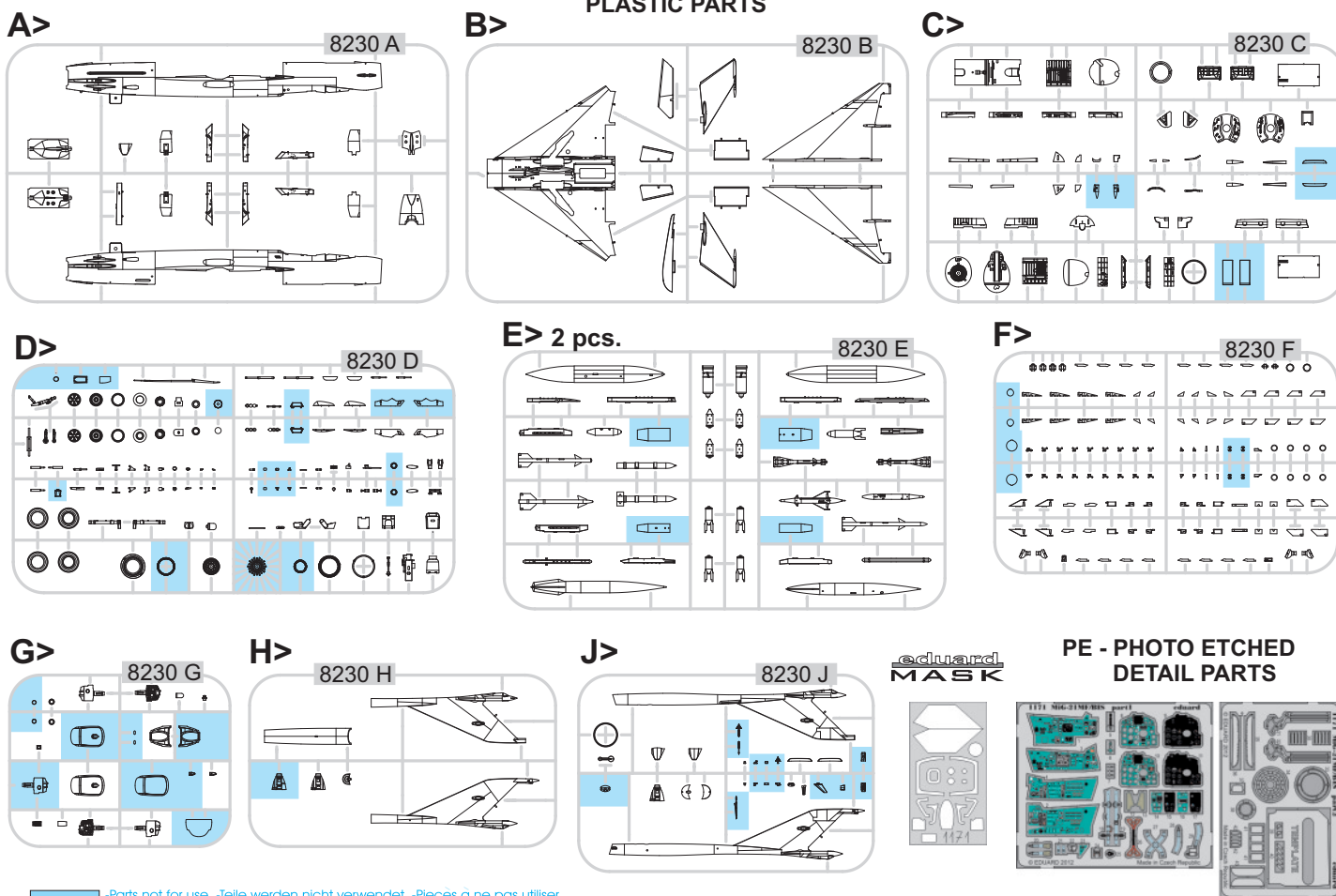


PIÈCES



部品

PLASTIC PARTS



COLOURS



BARVY



FARBEN



PEINTURE



色

GSI Creos (GUNZE)		
AQUEOUS	Mr.COLOR	
H 1	C1	WHITE
H 3	C3	RED
H 4	C4	YELLOW
H 5	C5	BLUE
H 6	C6	GREEN
H 11	C62	FLAT WHITE
H 12	C33	FLAT BLACK
H 26	C66	BRIGHT GREEN
H 44	C51	FLESH
H 47	C41	RED BROWN
H 51	C11	LIGHT GRAY

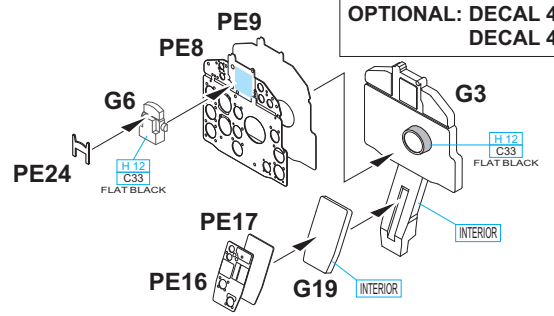
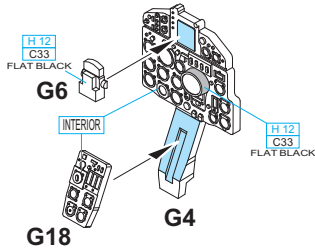
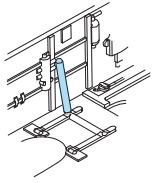
AQUEOUS	Mr.COLOR	
H 53	C13	NEUTRAL GRAY
H 58	C27	INTERIOR GREEN
H 70	C60	GRAY
H 77	C137	TIRE BLACK
H 90	C47	CLEAR RED
H 94		CLEAR GREEN
H 304	C304	OLIVE DRAB
H 309	C309	GREEN
H 312	C312	GREEN
H 332	C332	LIGHT GRAY
H 337	C337	GRAYISH BLUE

AQUEOUS	Mr.COLOR	
H 338	C338	LIGHT GRAY
	C19	SANDY BROWN
	C34	SKY BLUE
	C80	COBALT BLUE
	C129	DAK GREEN
Mr.METAL COLOR		
MC213		STAINLESS STEEL
MC214		DARK IRON
MC218		ALUMINIUM
Mr.COLOR SUPER METALLIC		
SM06		CHROME SILVER

INTERIOR COLOUR BARVA INTERIÉRU

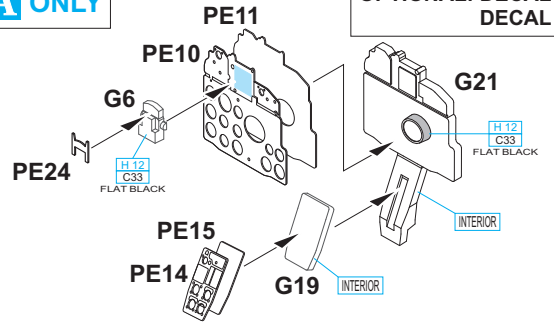
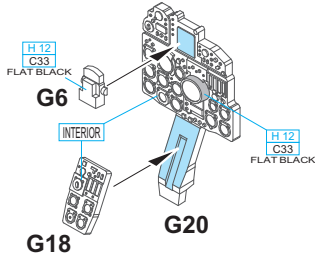
INTERIOR

60% **C34** SKY BLUE + 20% **C66** BRIGHT GREEN + 20% **C60** COBAL T BLUE

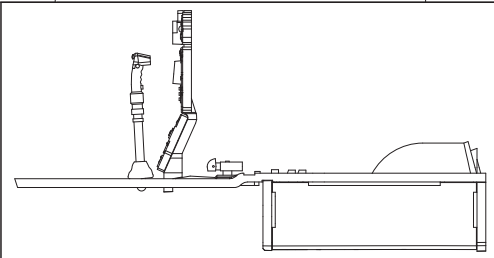
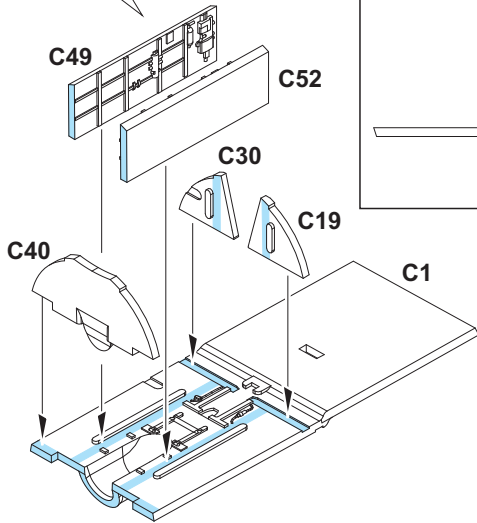


OPTIONAL: DECAL 40
DECAL 41

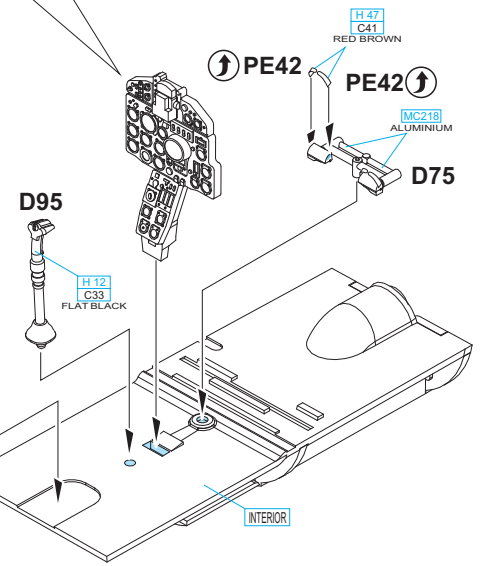
MARKING A ONLY



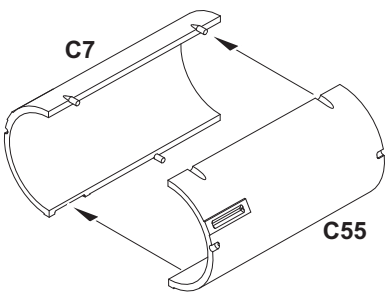
OPTIONAL: DECAL 34
DECAL 35



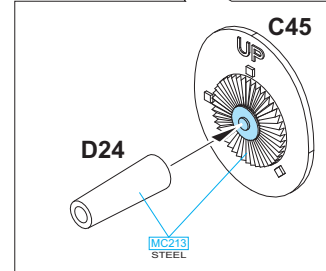
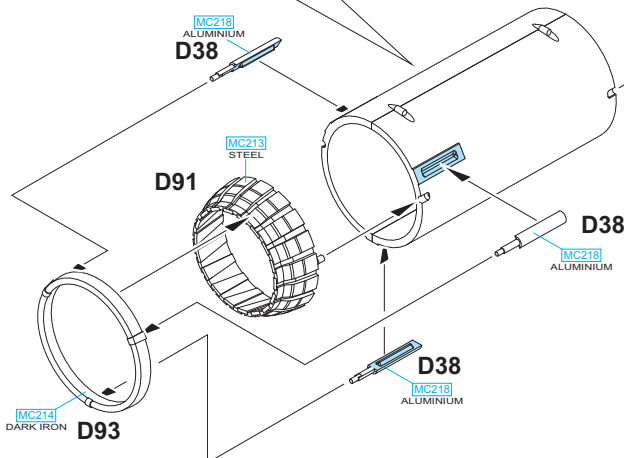
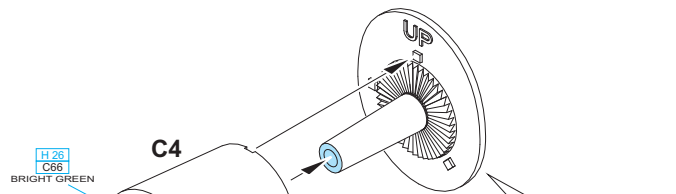
A



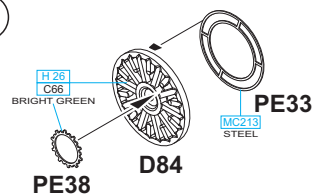
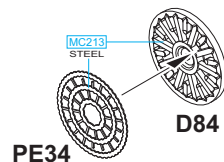
D20 - OPEN CANOPY ONLY

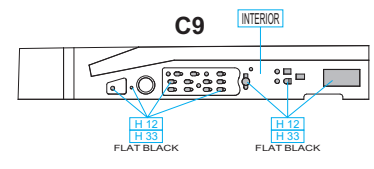
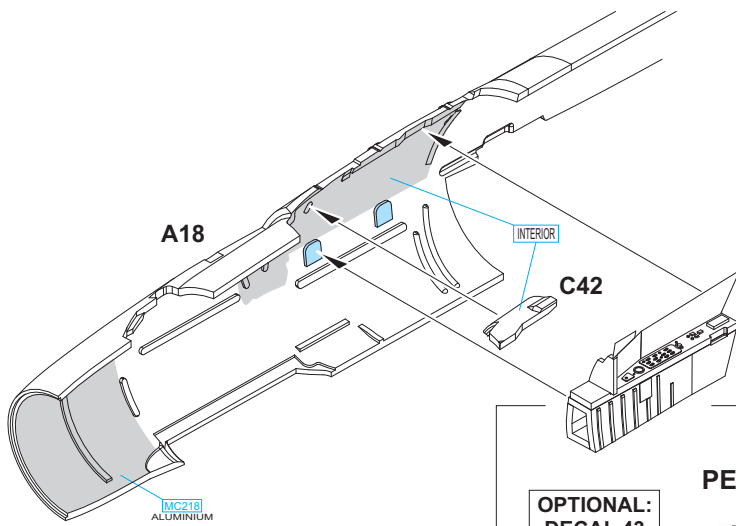


B



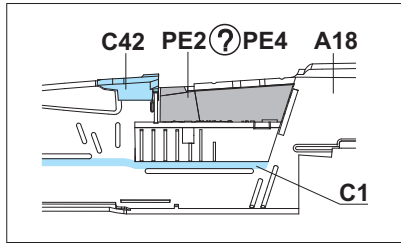
MARKING A ONLY



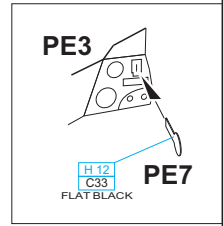
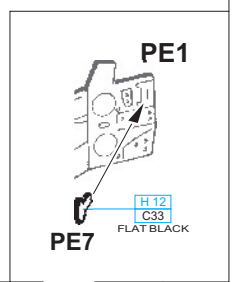
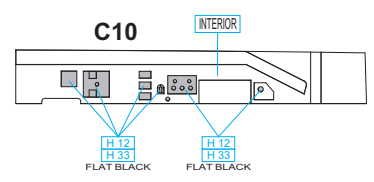
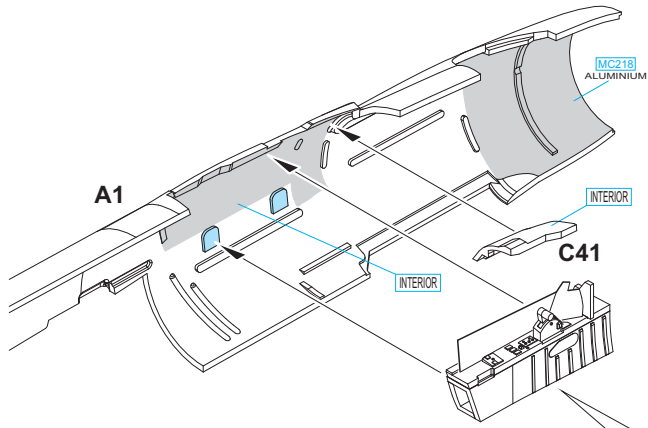
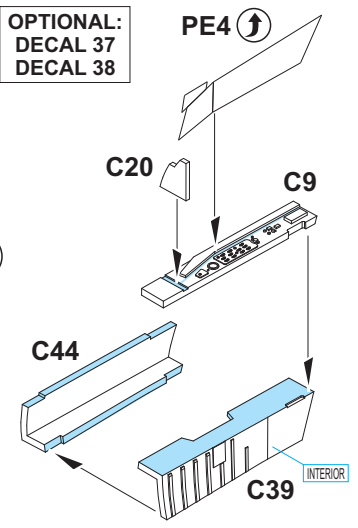
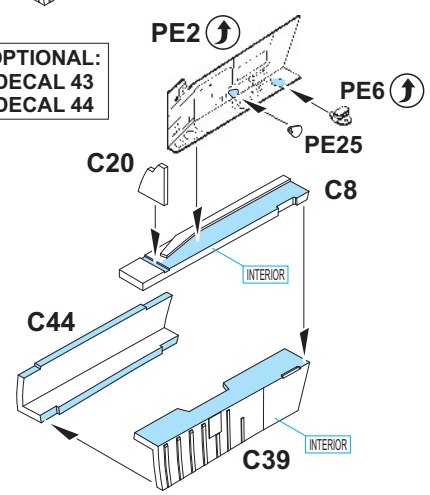


MARKING A ONLY

OPTIONAL:
DECAL 37
DECAL 38



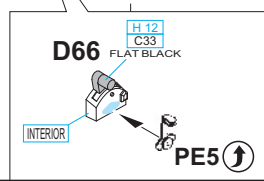
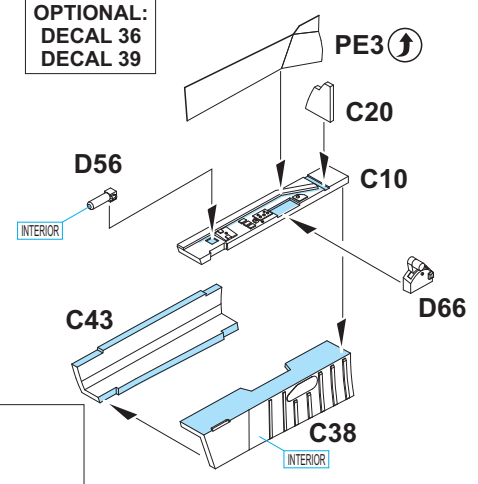
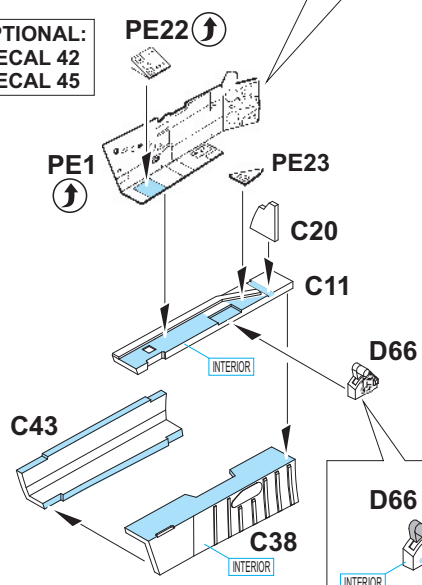
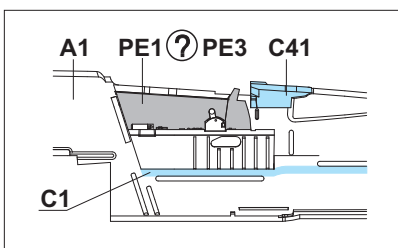
OPTIONAL:
DECAL 43
DECAL 44

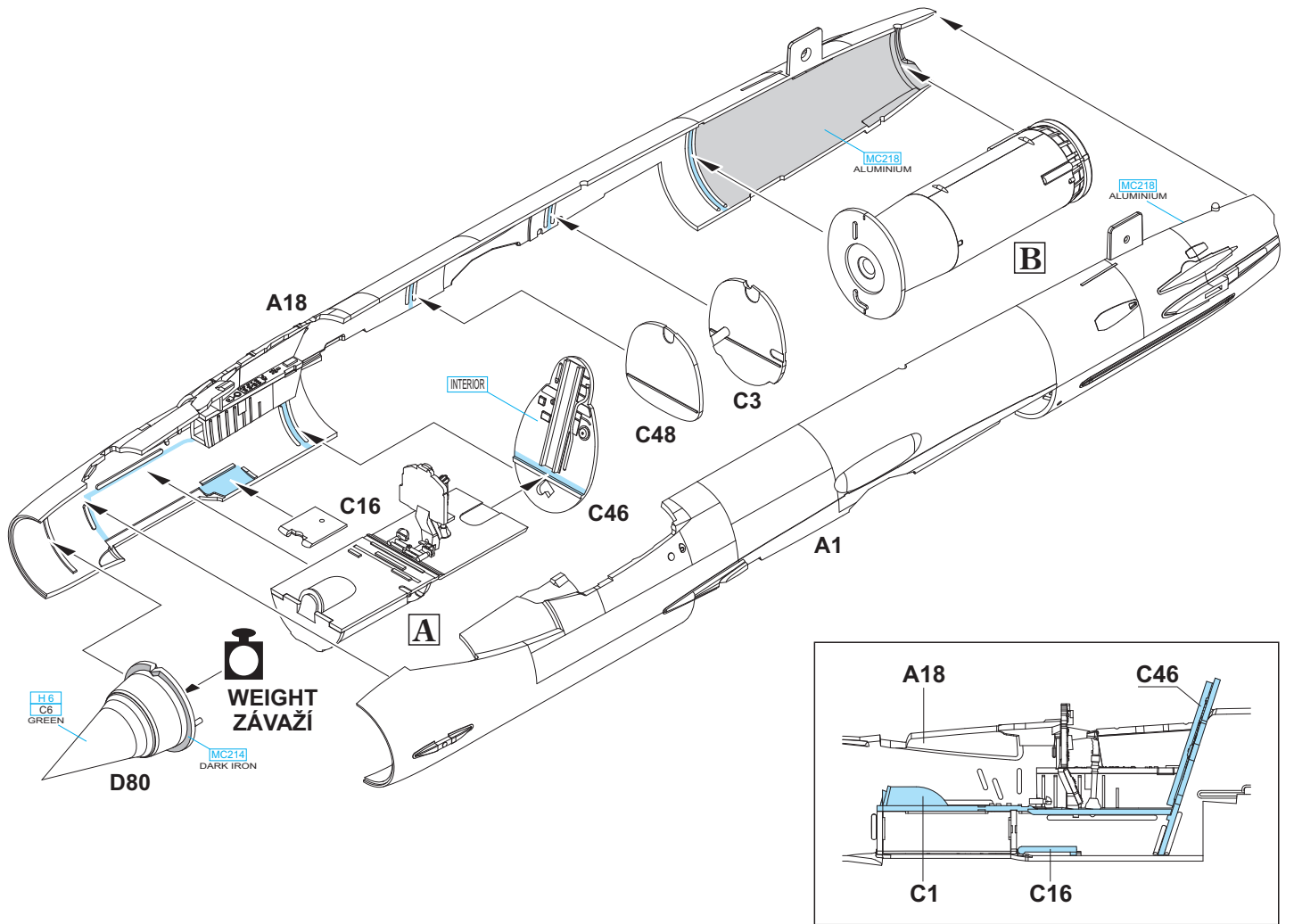


OPTIONAL:
DECAL 42
DECAL 45

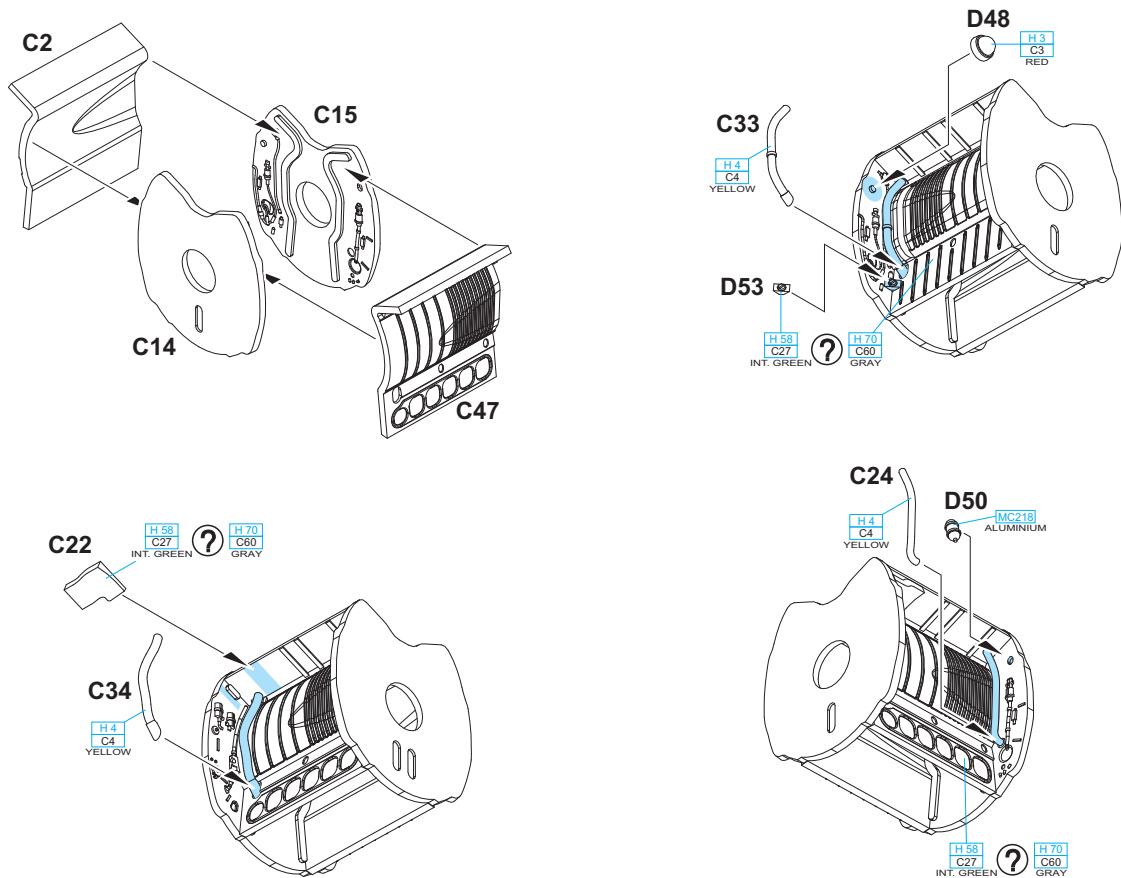
MARKING A ONLY

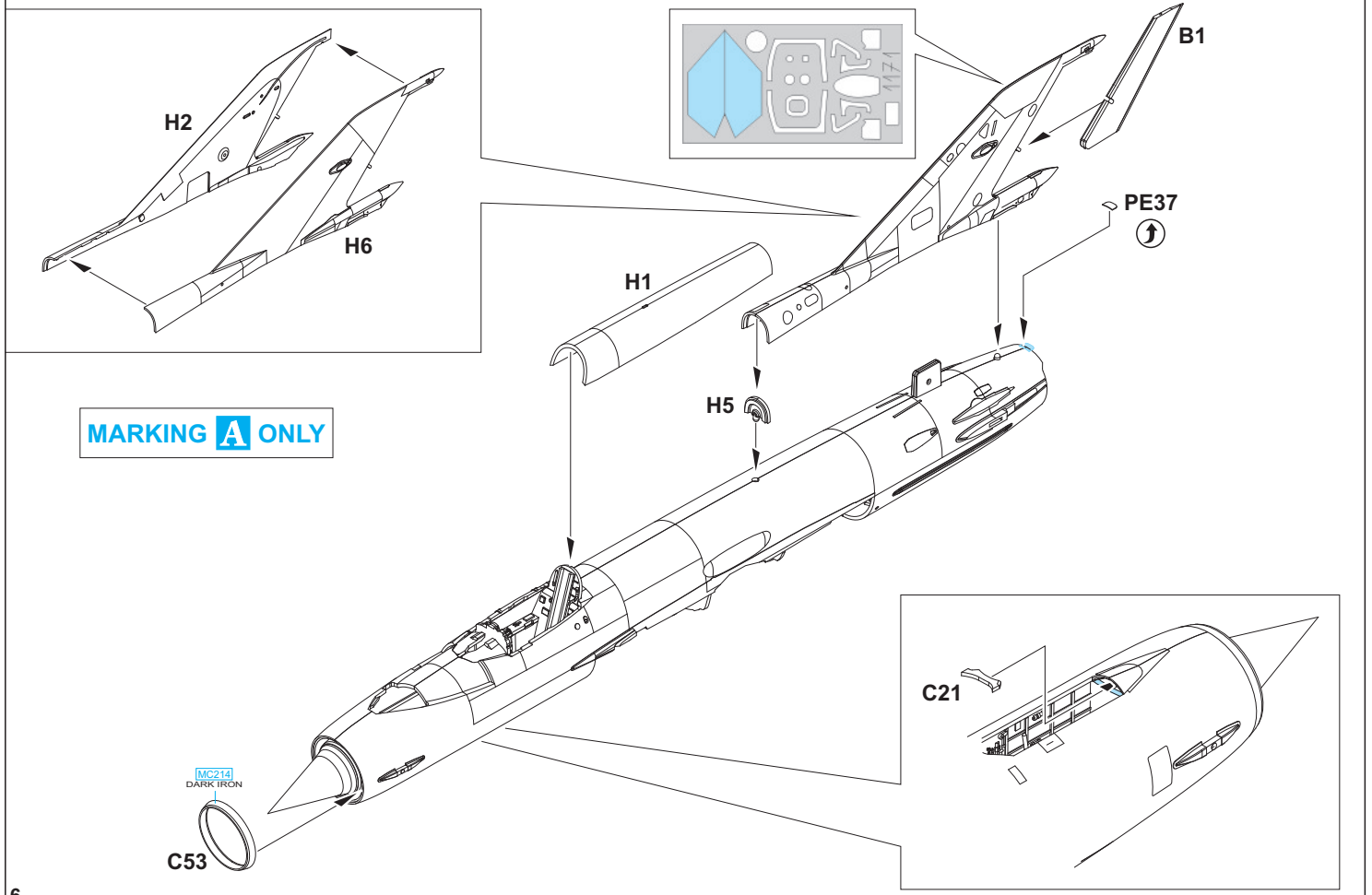
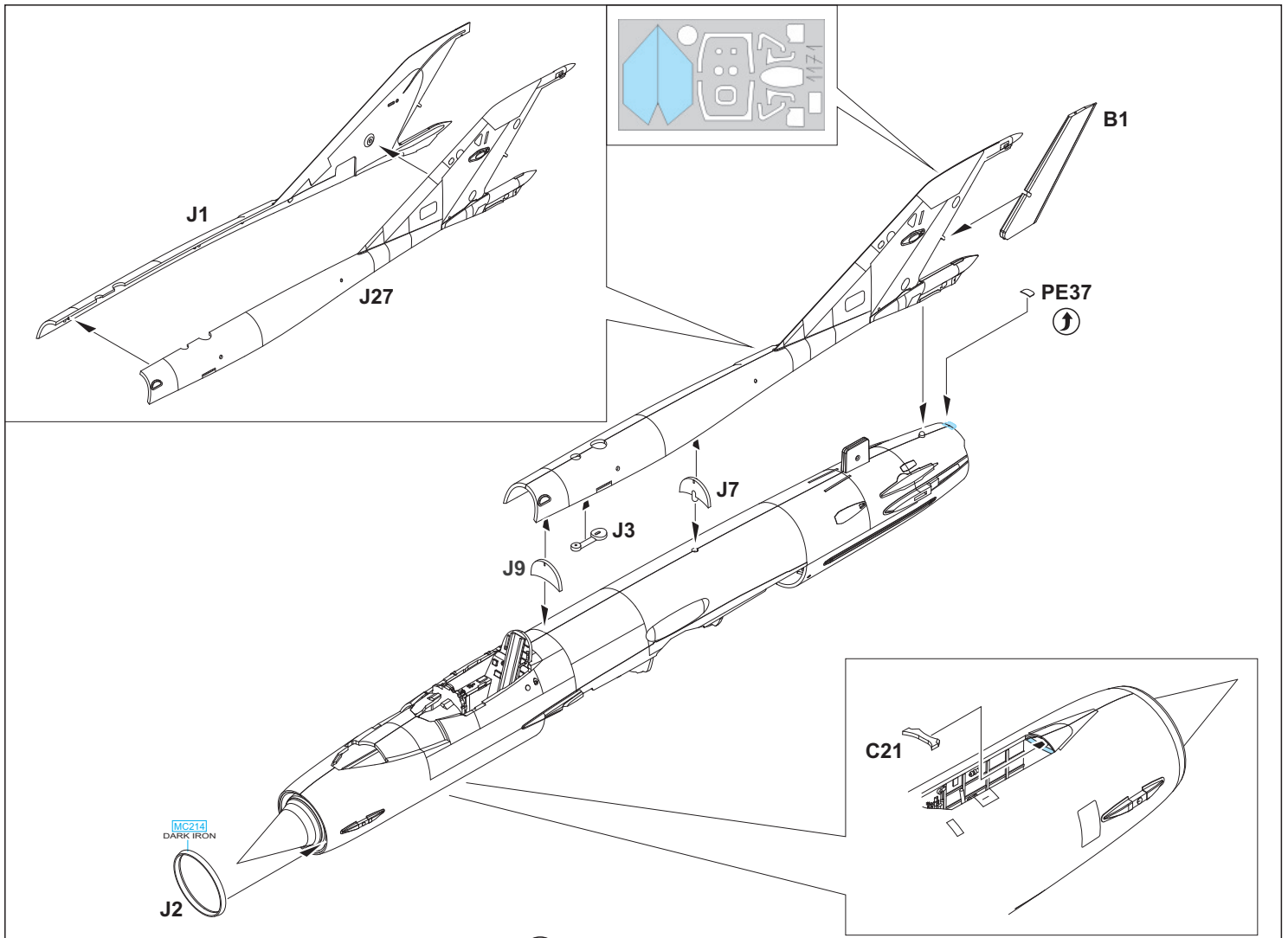
OPTIONAL:
DECAL 36
DECAL 39





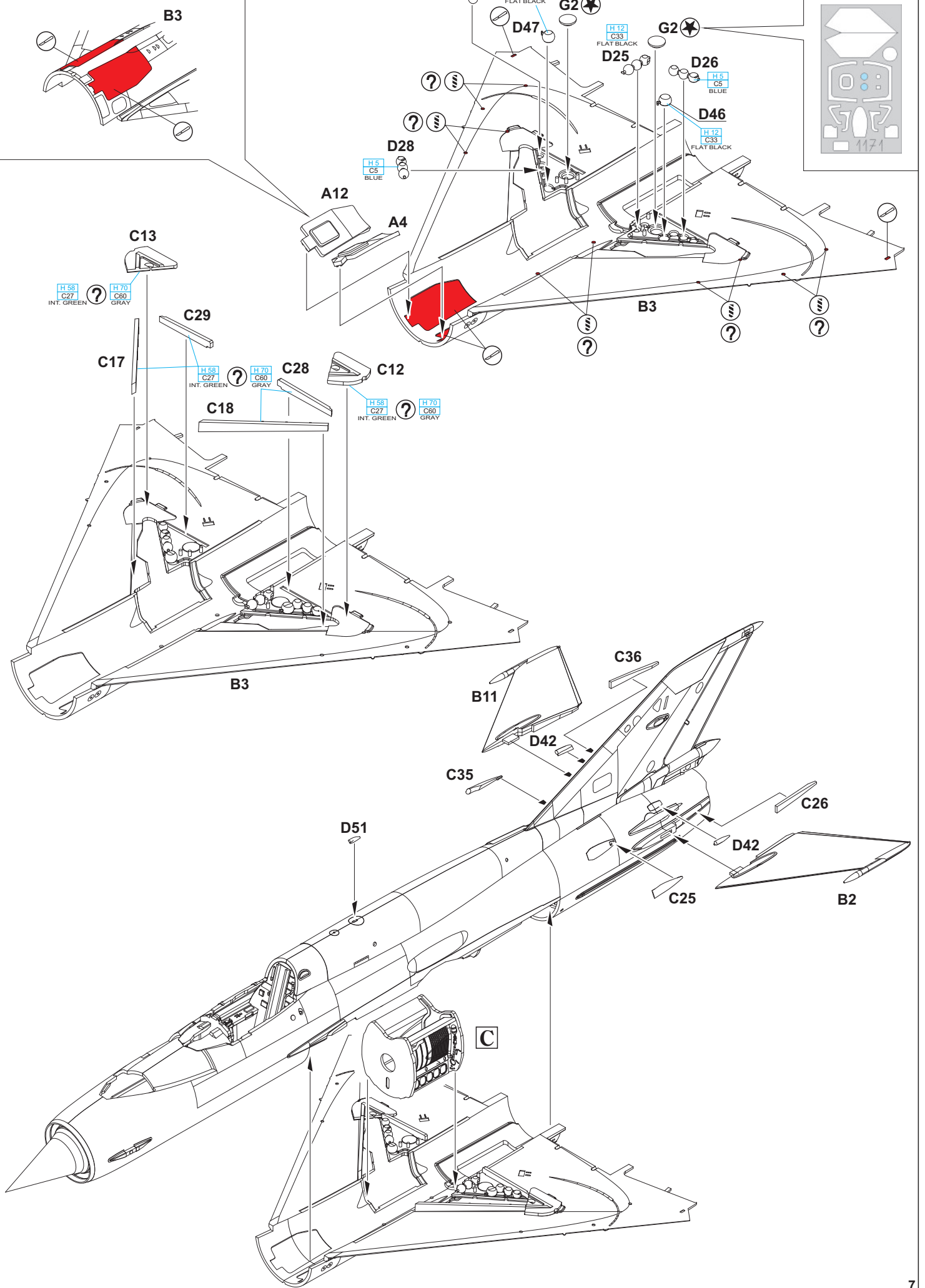
C





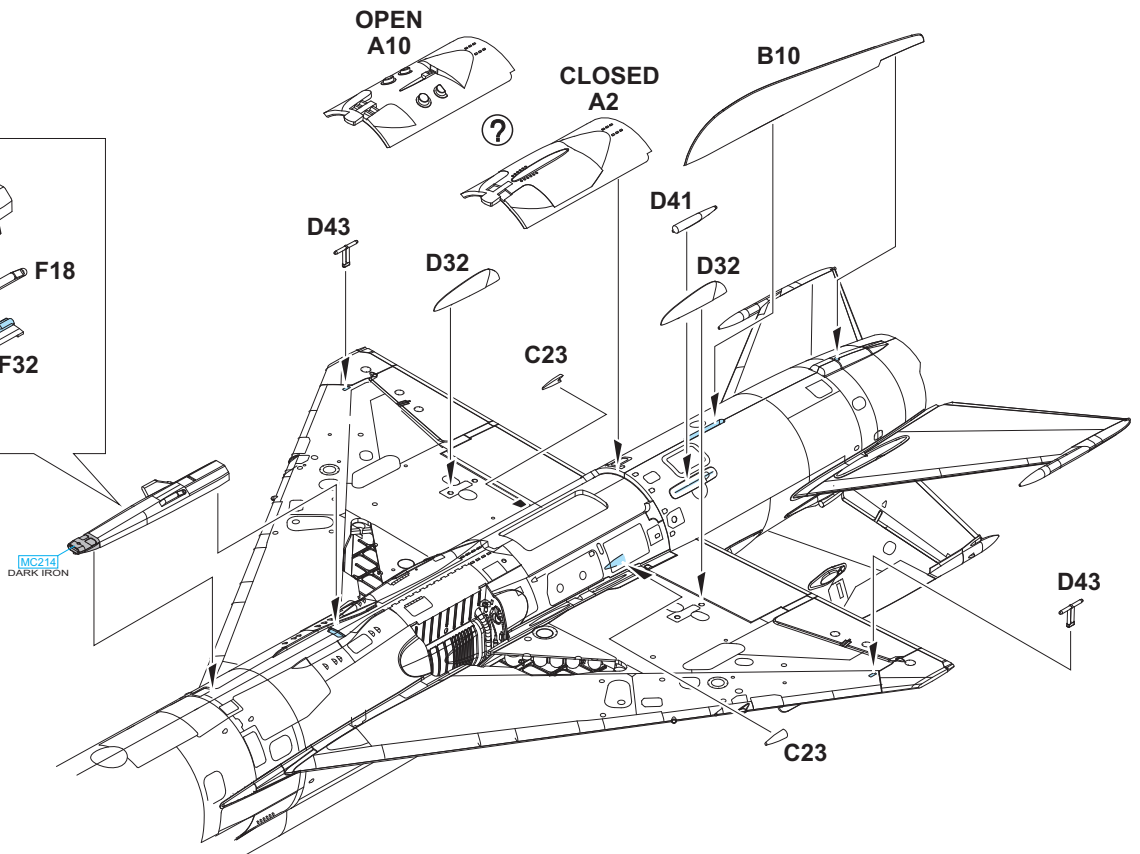
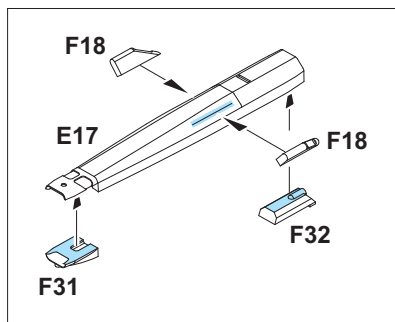
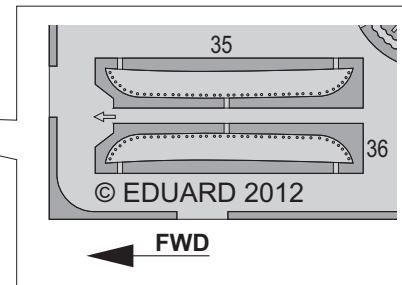
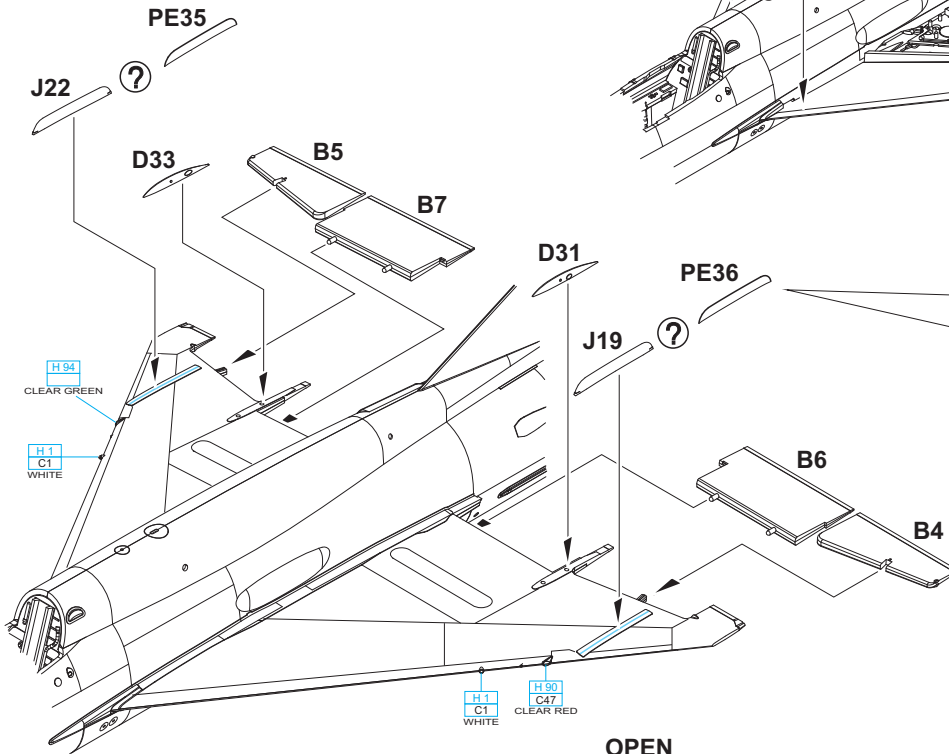
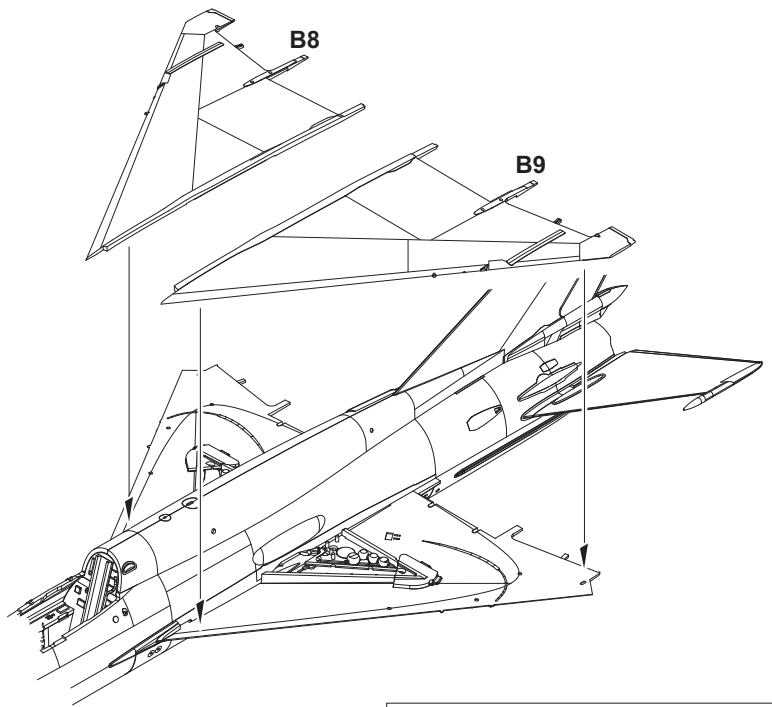
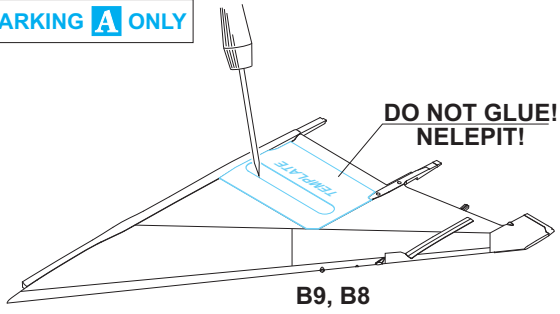
FOR OPEN AIR BRAKES ONLY
JEN PRO OTEVŘENÉ ŠTÍTY

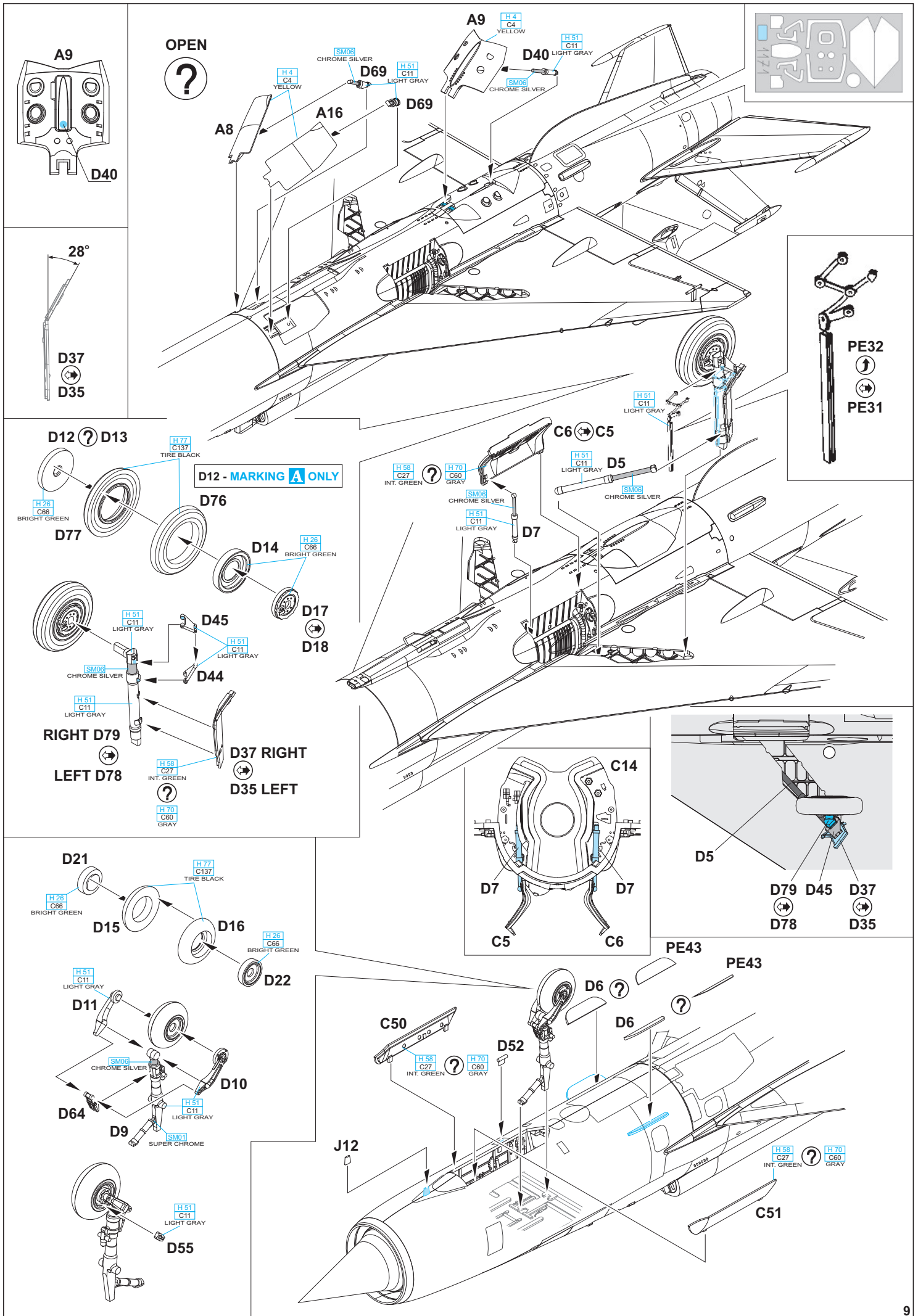
APPLY MASK OUTSIDE WHEN PAINTING
MASKU POUŽIJTE Z VNĚJŠKU PŘI BARVENÍ



SCRIBE THE PANEL OR APPLY DECAL 84
 DORYJTE PANEL NEBO POUŽIJTE OBTISK 84

MARKING **A** ONLY





OPEN

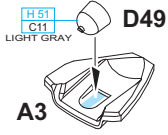
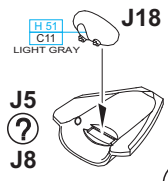
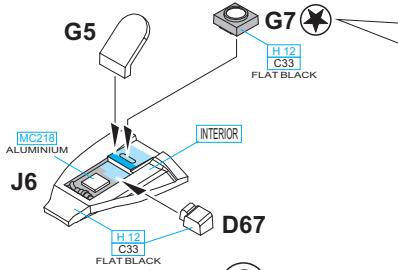


D12 - MARKING A ONLY

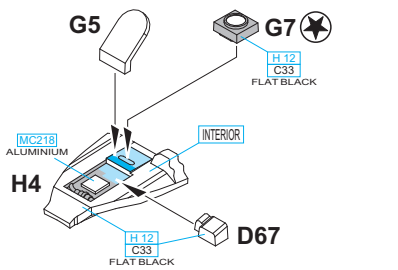
PE43

PE43

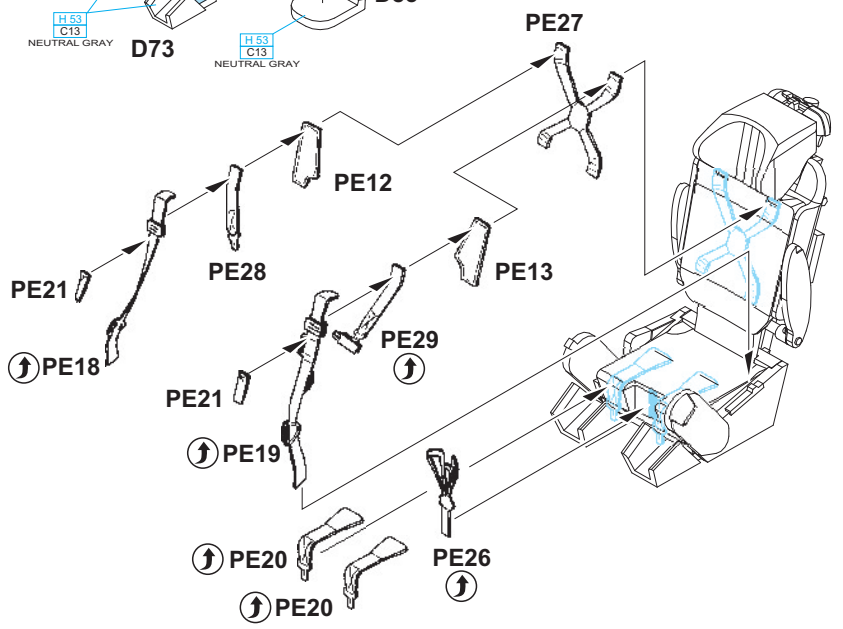
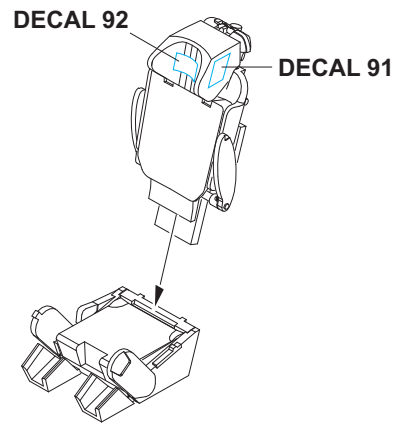
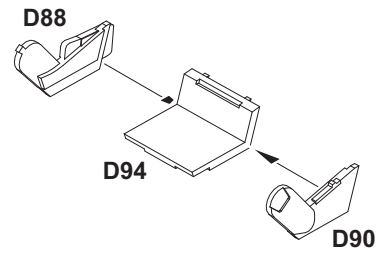
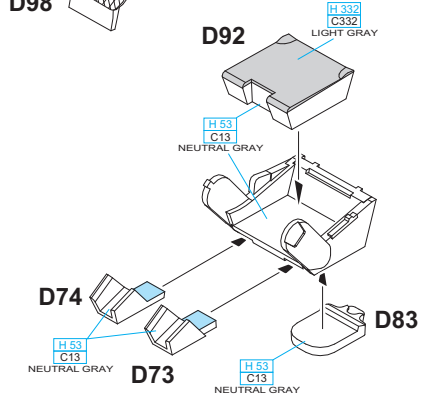
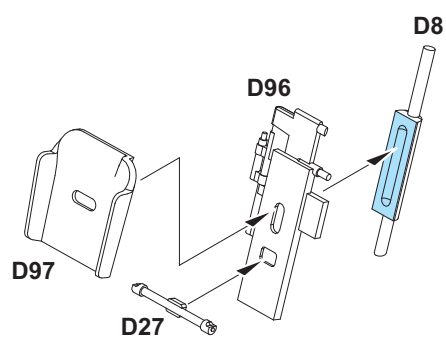
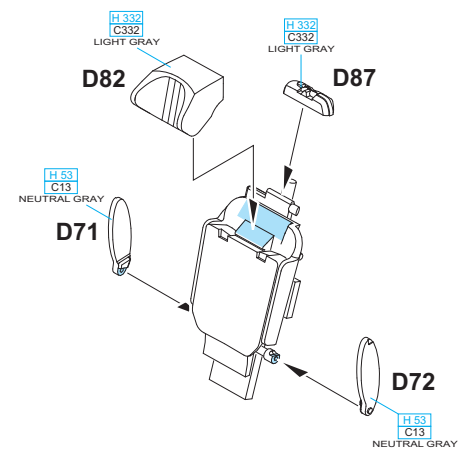
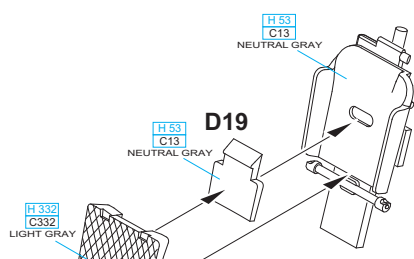
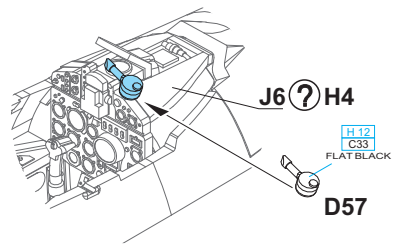
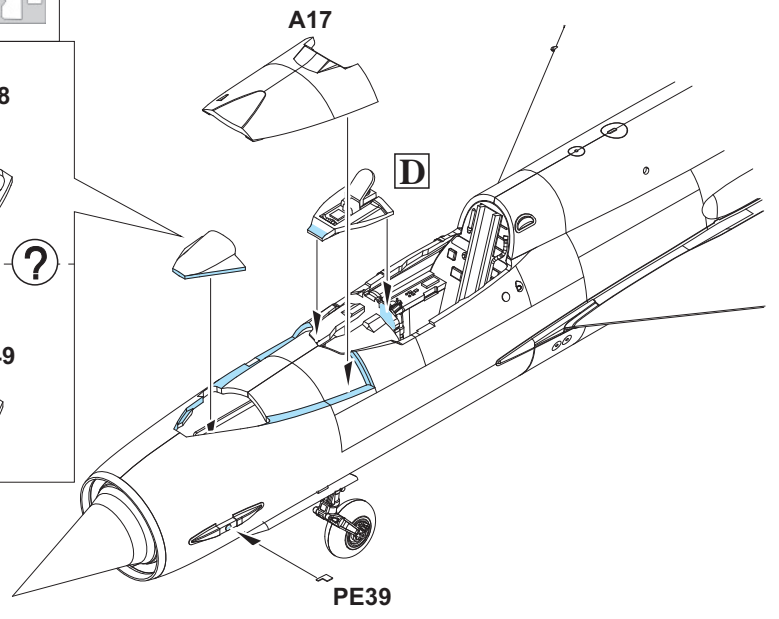
D



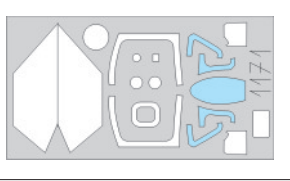
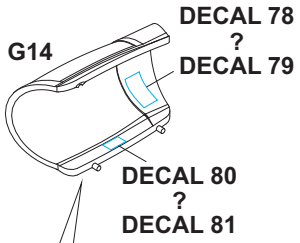
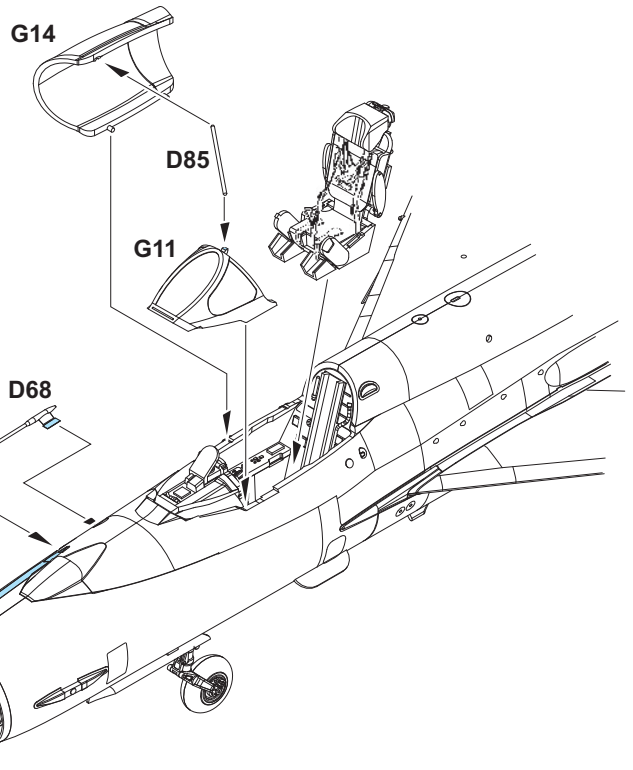
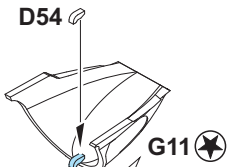
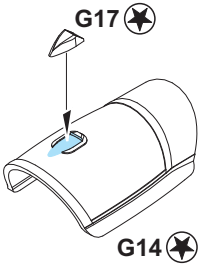
MARKING **A** ONLY



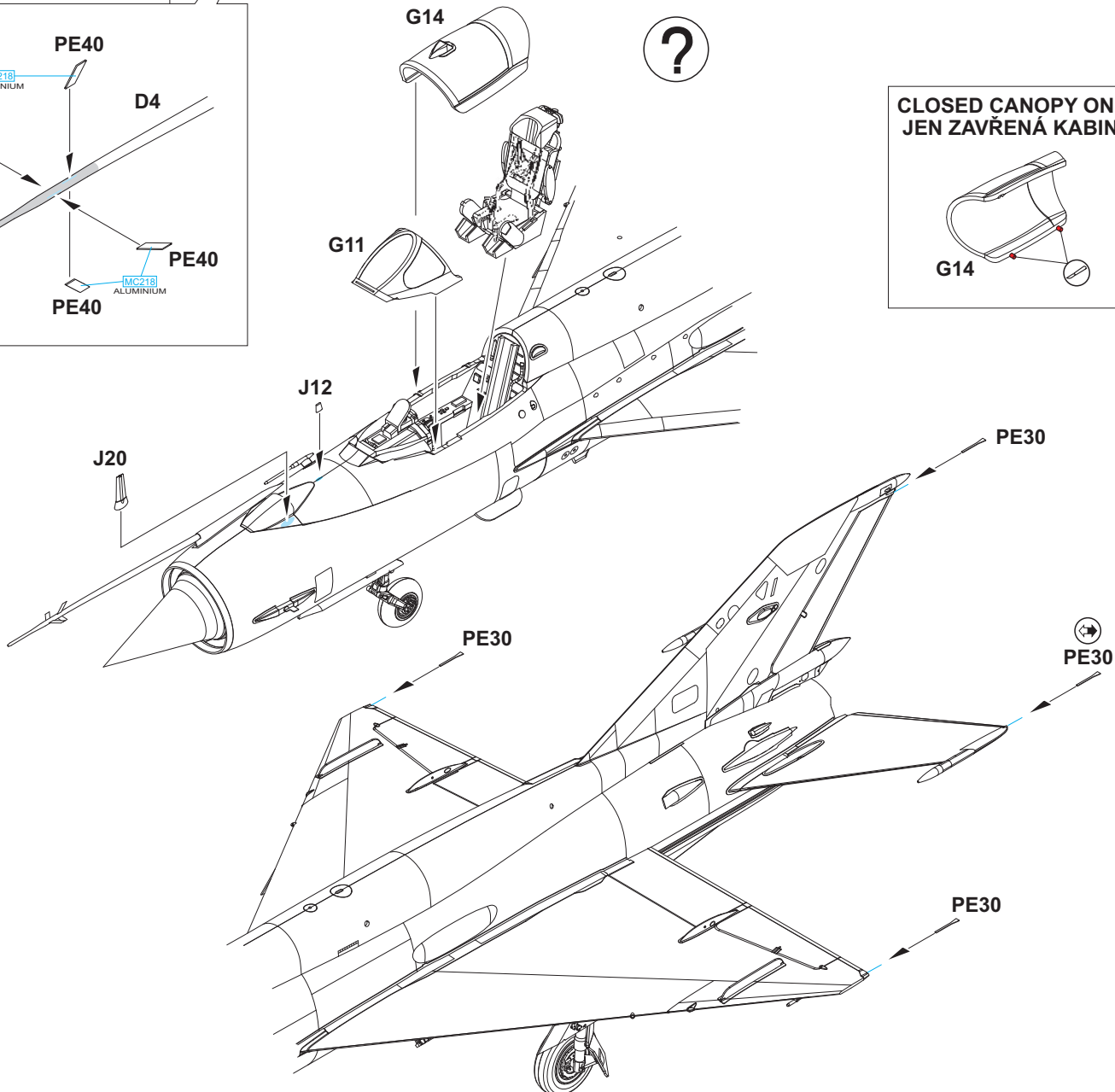
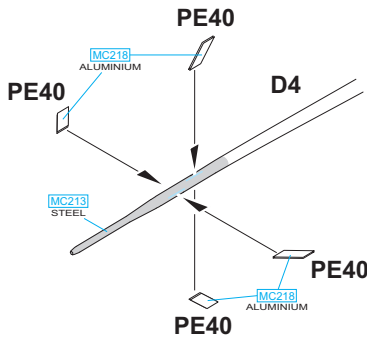
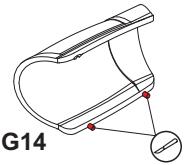
MARKING **A** ONLY



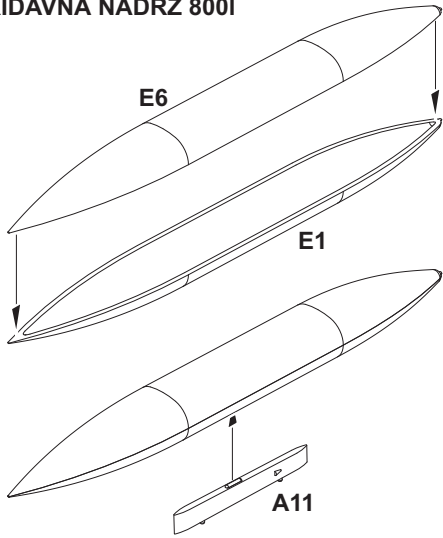
OPEN CANOPY ONLY
JEN OTEVŘENÁ KABINA



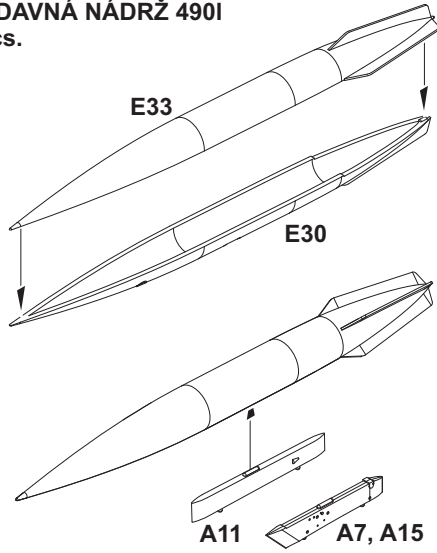
CLOSED CANOPY ONLY
JEN ZAVŘENÁ KABINA



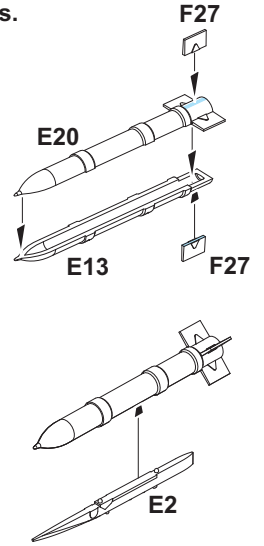
EXTERNAL FUEL TANK 800I
PRÍDAVNÁ NÁDRŽ 800I



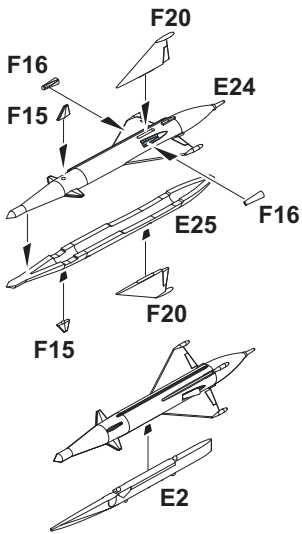
EXTERNAL FUEL TANK 490I
PRÍDAVNÁ NÁDRŽ 490I
2 pcs.



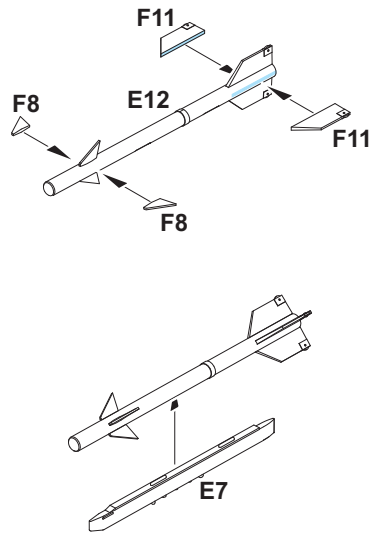
S-24
2 pcs.



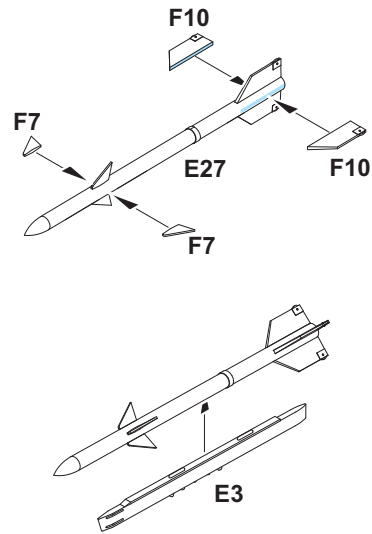
RS-2US ?
2 pcs.



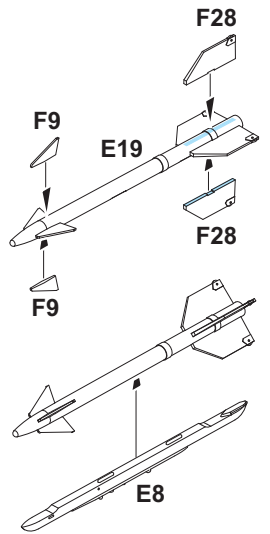
R-3S
2 pcs.



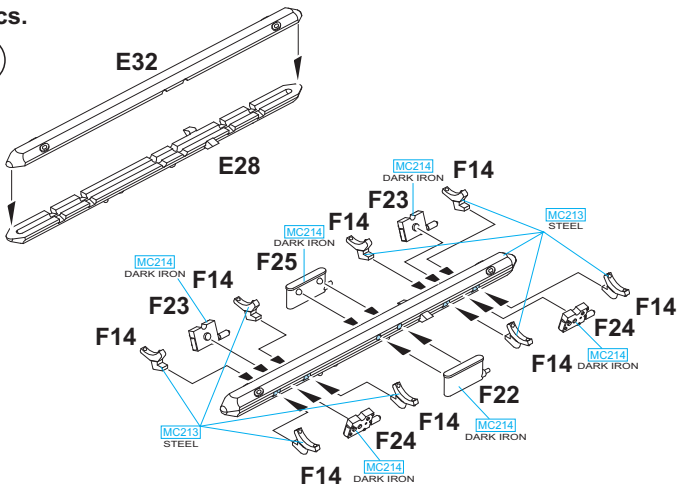
R-3R ?
2 pcs.



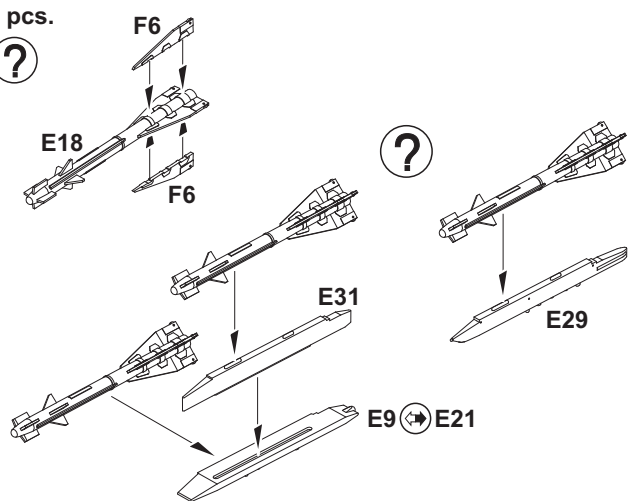
R-13 ?
2 pcs.



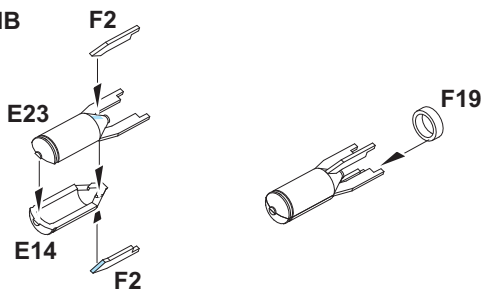
MBD FOR 4x FAB 100
2 pcs.



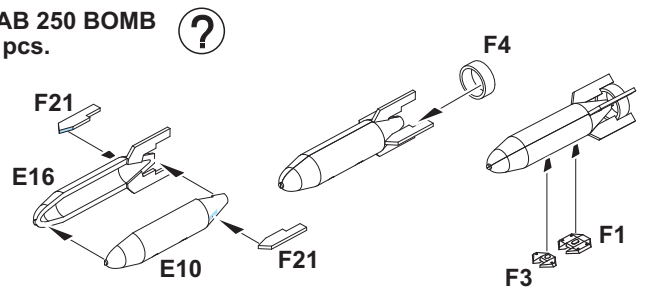
R-60
2 pcs.



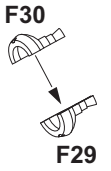
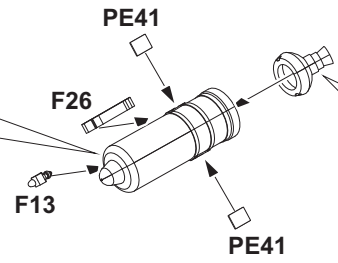
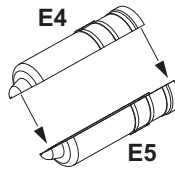
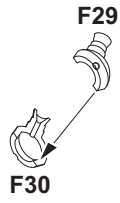
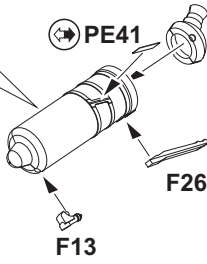
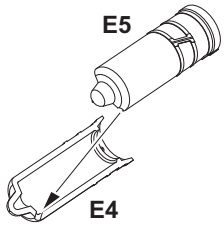
FAB 100 BOMB
8 pcs.



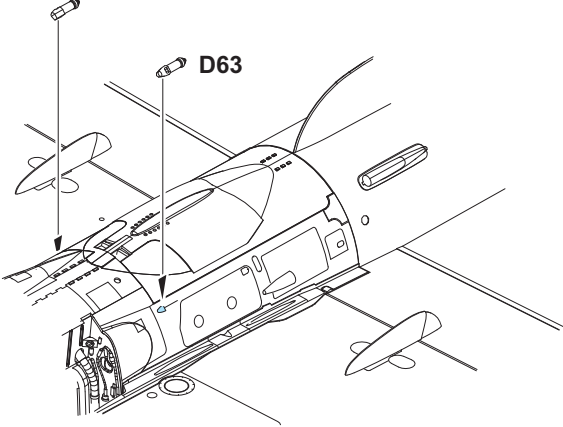
FAB 250 BOMB ?
2 pcs.



SPRD



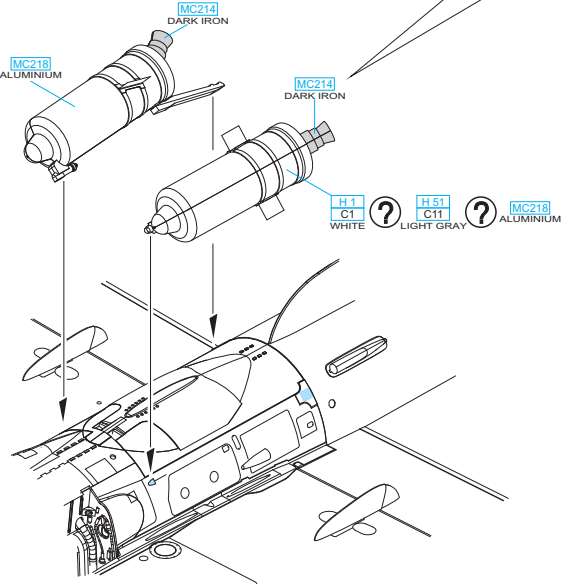
D63



D63



H 1 ? H 51 ?
C1 WHITE C11 LIGHT GRAY



MC214 DARK IRON

MC214 DARK IRON

H 1 ? H 51 ?
C1 WHITE C11 LIGHT GRAY MC218 ALUMINIUM

A7 EXTERNAL FUEL TANK PYLON ZÁVĚSNÍK PŘ. NÁDRŽE

A5 WEAPON PYLONS ZÁVĚSNÍKY VÝZBROJE

WEAPON PYLONS ZÁVĚSNÍKY VÝZBROJE

A14

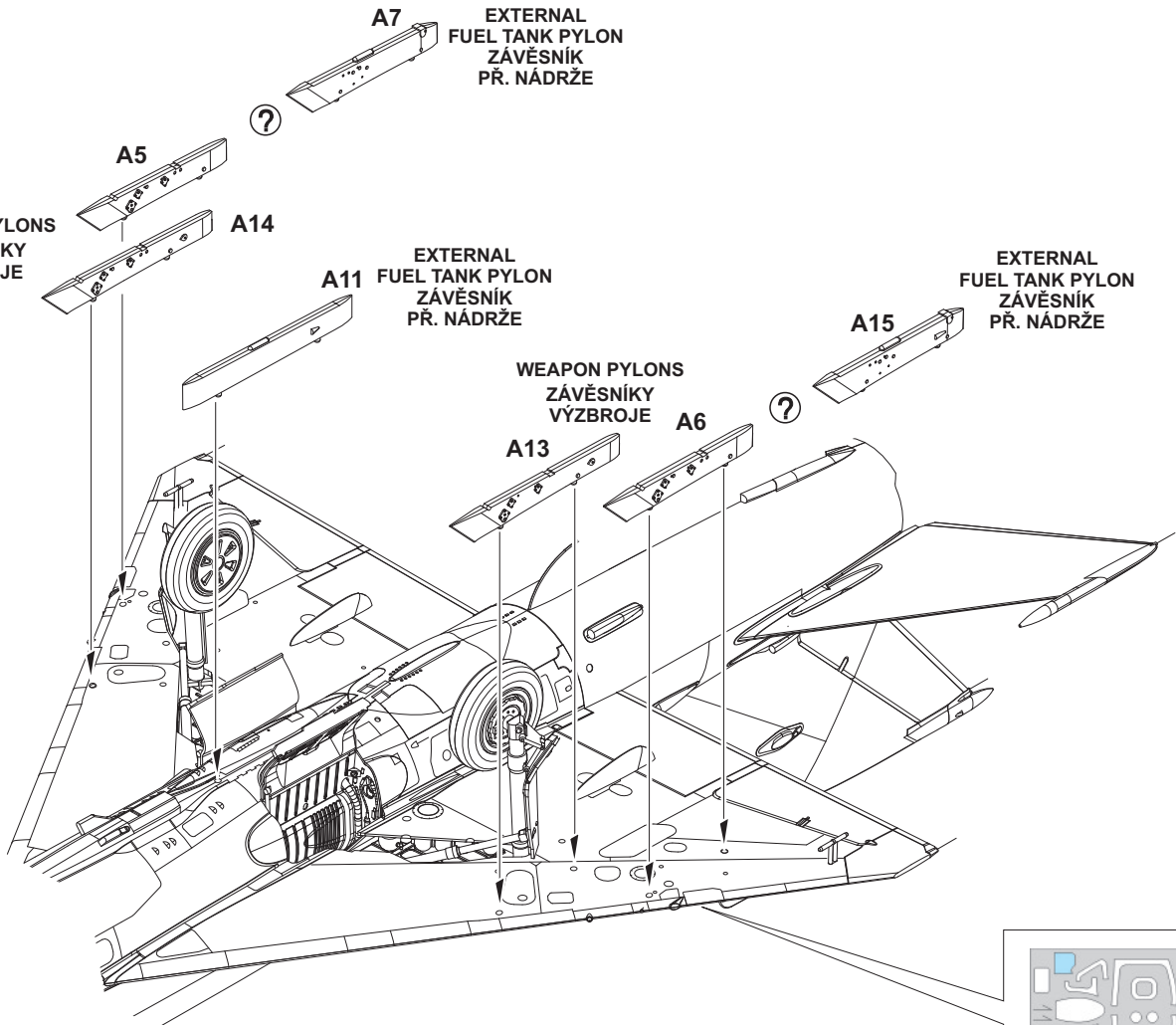
A11 EXTERNAL FUEL TANK PYLON ZÁVĚSNÍK PŘ. NÁDRŽE

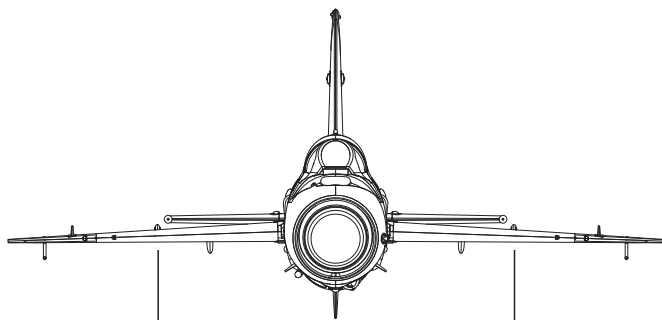
A15 EXTERNAL FUEL TANK PYLON ZÁVĚSNÍK PŘ. NÁDRŽE

WEAPON PYLONS ZÁVĚSNÍKY VÝZBROJE

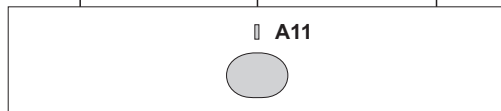
A13

A6

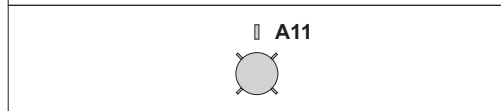




EXTERNAL
FUEL
TANK 800I



EXTERNAL
FUEL
TANK 490I

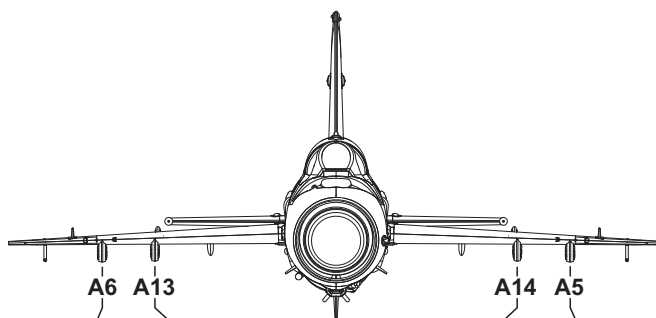


EXTERNAL
FUEL
TANK 490I



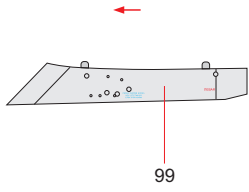
TO CHOOSE WEAPON AND EXTERNAL
FUEL TANK OPTION PLEASE
FOLLOW YOUR REFERENCE.

PRO VOLBU VÝZBROJE A PŘÍDAVNÝCH
NÁDRŽÍ SE DRŽTE DOKUMENTACE
KONKRÉTNÍHO STROJE.



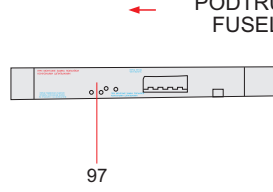
R-60	E29	E29	E29	E29
R-60	E21, E31	E21, E31	E9, E31	E9, E31
S-24	E2	E2	E2	E2
RS-2US	E2	E2	E2	E2
R-3S	E7	E7	E7	E7
R-13	E8	E8	E8	E8
R-3R	E3			E3
MBD				
FAB 100 BOMB				
FAB 250 BOMB	F1, F3		F1, F3	
UB-16	F1, F17		F1, F17	

LEVÝ VNĚJŠÍ PALIVOVÝ PYLON
LEFT OUTSIDE
UNDERWING TANK PYLON

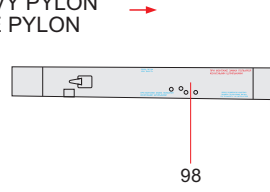


99

PODTRUPOVÝ PYLON
FUSELAGE PYLON

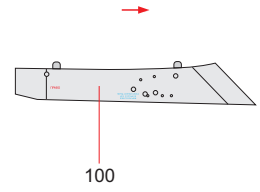


97



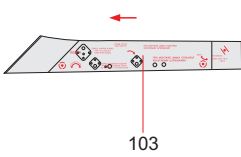
98

PRÁVÝ VNĚJŠÍ PALIVOVÝ PYLON
RIGHT OUTSIDE
UNDERWING TANK PYLON

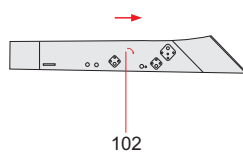


100

LEVÝ VNĚJŠÍ PYLON
LEFT OUTSIDE PYLON

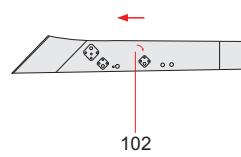


103

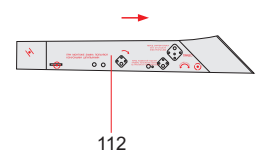


102

PRÁVÝ VNĚJŠÍ PYLON
RIGHT OUTSIDE PYLON

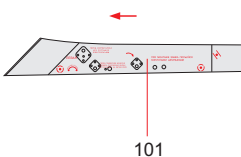


102

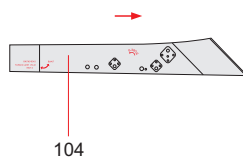


112

LEVÝ VNITŘNÍ PYLON
LEFT INSIDE PYLON

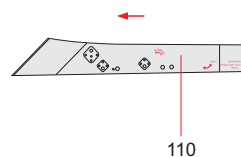


101

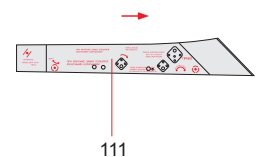


104

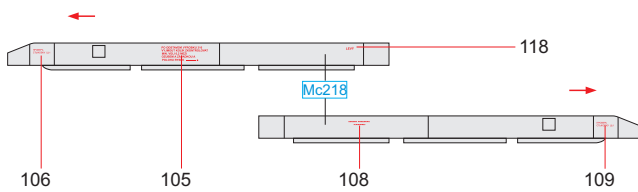
PRÁVÝ VNITŘNÍ PYLON
RIGHT INSIDE PYLON



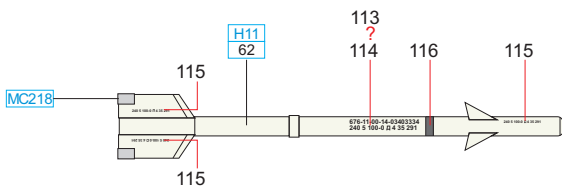
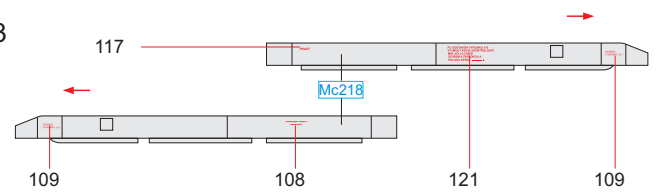
110



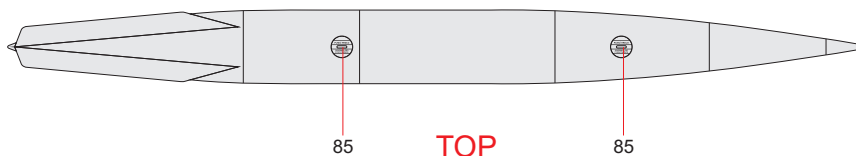
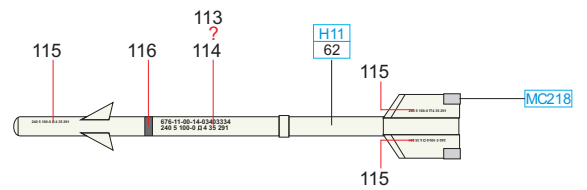
111



APU-13



R-3S

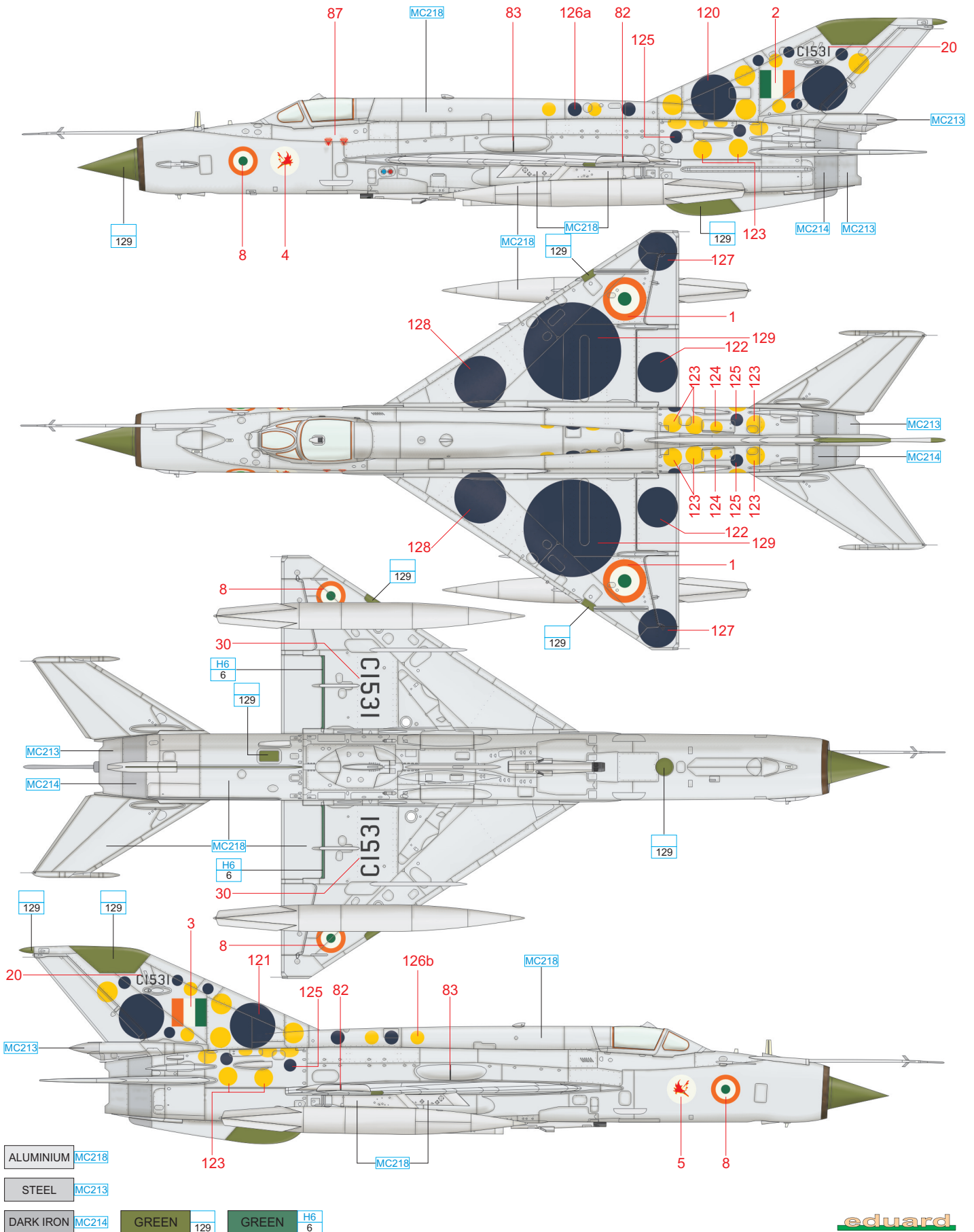


TOP

A MiG-21MF, C1531, No. 101 Squadron „Falcons“, Sirsa AB, early 90's

Indian MiG-21s are well known for their colorful markings. These were used as quick recognition mechanisms during air combat training exercises. No.101 Squadron obtained its first MiG-21s in 1971, when they replaced the Su-7. From 1981, the squadron has been based at Sirsa Air Force Station, northeast of New Delhi.

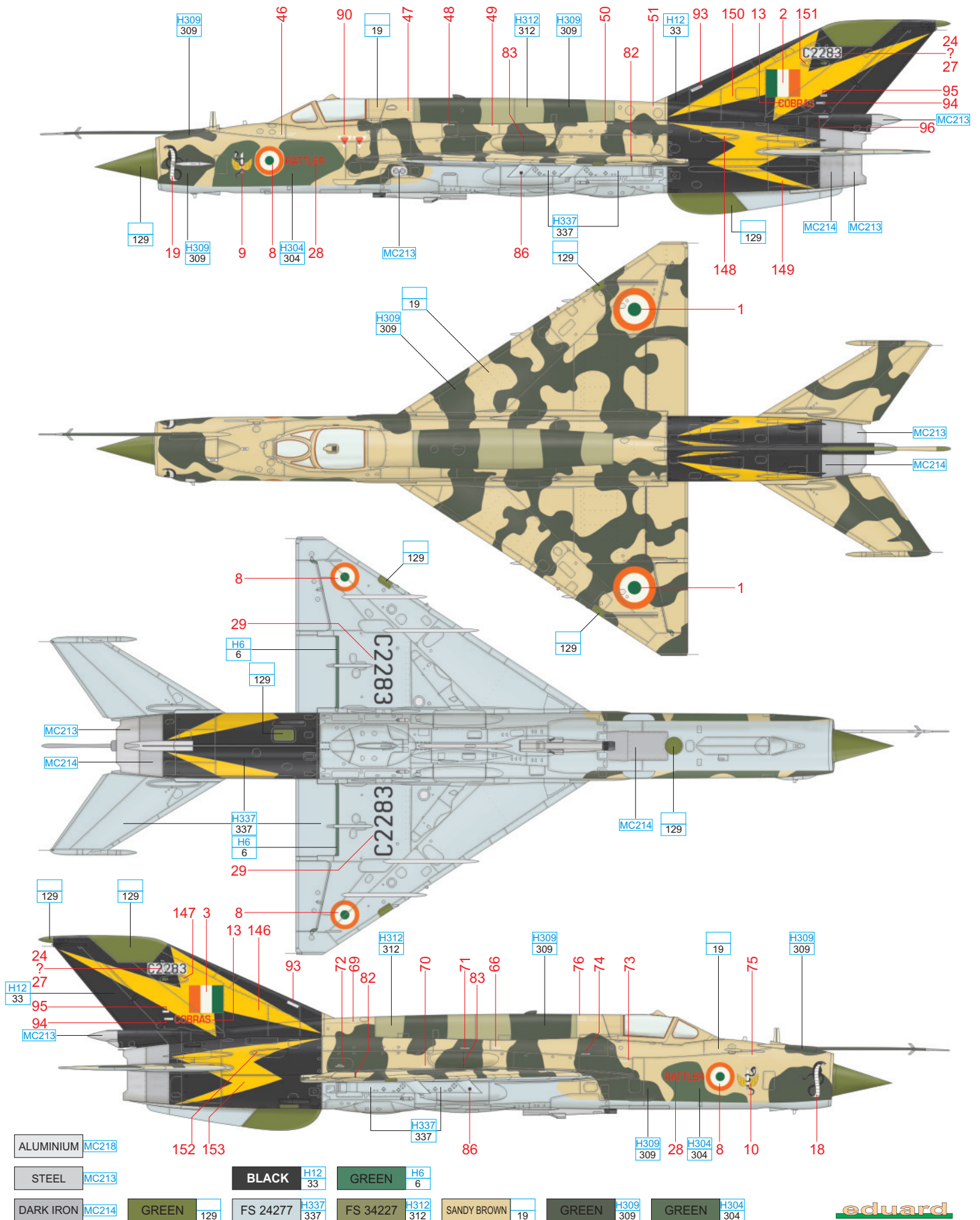
Indické MiGy-21 jsou známé svým pestrým markingem. Sloužil pro rychlou identifikaci konkrétního stroje během cvičných soubojů. No. 101 Squadron dostala první MiGy-21 v roce 1974, kdy nahradily Suchoje Su-7. Od roku 1981 do současnosti je jejím domovem základna Sirsa severovýchodně od Dillí.



B MiG-21BIS, C2283 RATTLER, No. 3 Squadron „Cobras“, Pathankot AB, India, early 90's

C2283 displays a unique combination of camouflage scheme and colorful ID markings. The unit personnel named their aircraft after snakes, among which 'Rattler', 'Mamba' and 'Cobra' are known. The dorsal section of the fuselage was taken from another MiG-21BIS, probably from a 'Mamba'. No.3 Squadron used the MiG-21BIS from July, 1980 to 2002, when it was re-equipped with the modernized MiG-21 'Bison'.

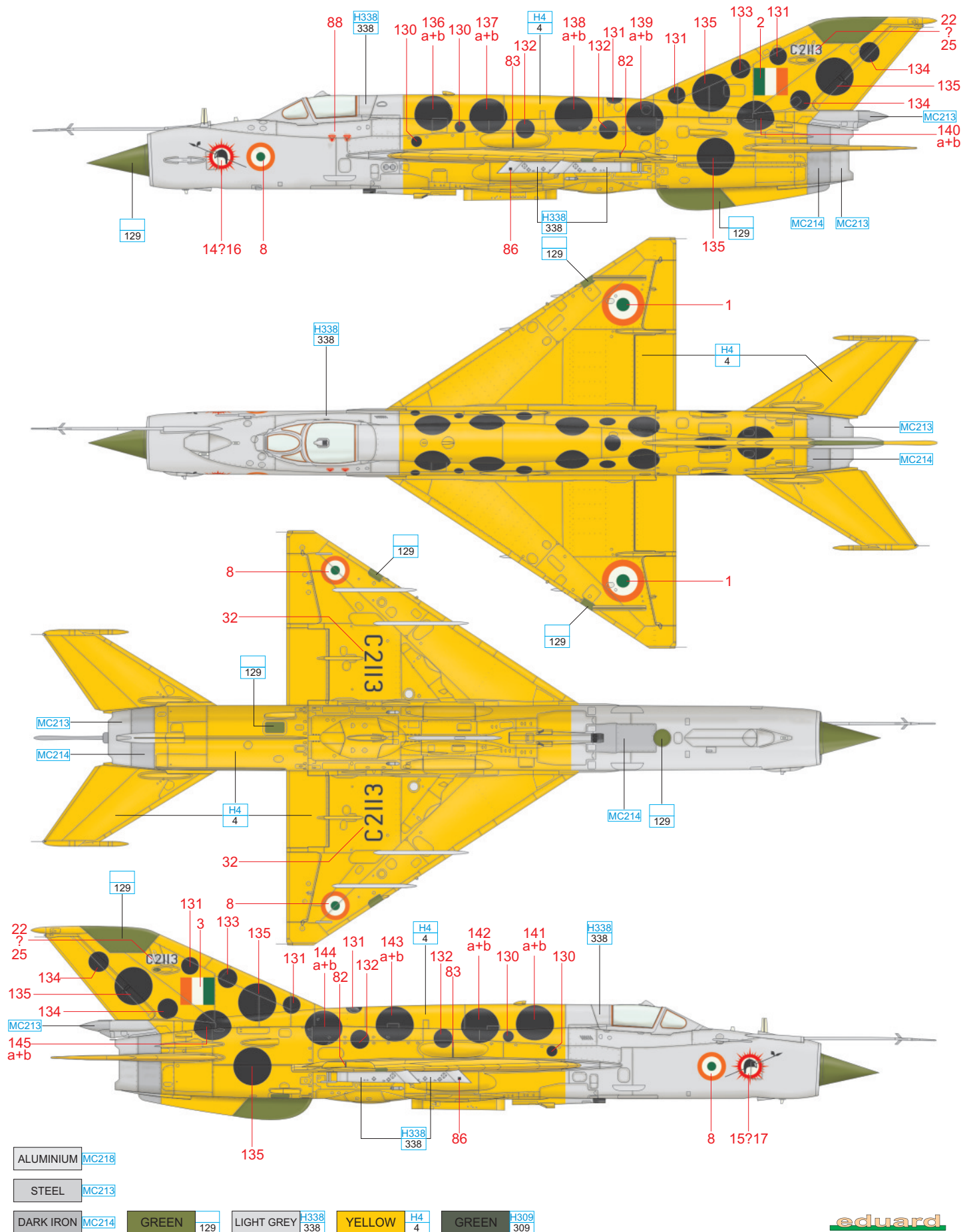
Zajímavou kombinací kamuflážního schématu a výrazných identifikačních doplňků nabízí tento letoun No. 3 Squadrony. Personál této jednotky pojmenovával své letouny hadí tematikou – kromě RATTLERa jsou známy COBRA či MAMBA. Letoun má kryt hřbetu trupu z jiného stroje, pravděpodobně z MAMBY. S MiGy-21BIS létala tato jednotka od července 1980 do roku 2002, kdy je vyměnila za modernizované MiGy-21 Bison.



C MiG-21 BIS, C2113, No. 15 Squadron „The Flying Lances“, Jodhpur AB, 90's

This aircraft is another fine example of the colorful markings that appeared on Indian MiG-21s for ACM training. C2113 was photographed over the sea along Gujarat state. No. 15 Squadron was one of six that flew the MiG-21BIS in the Indian Air Force.

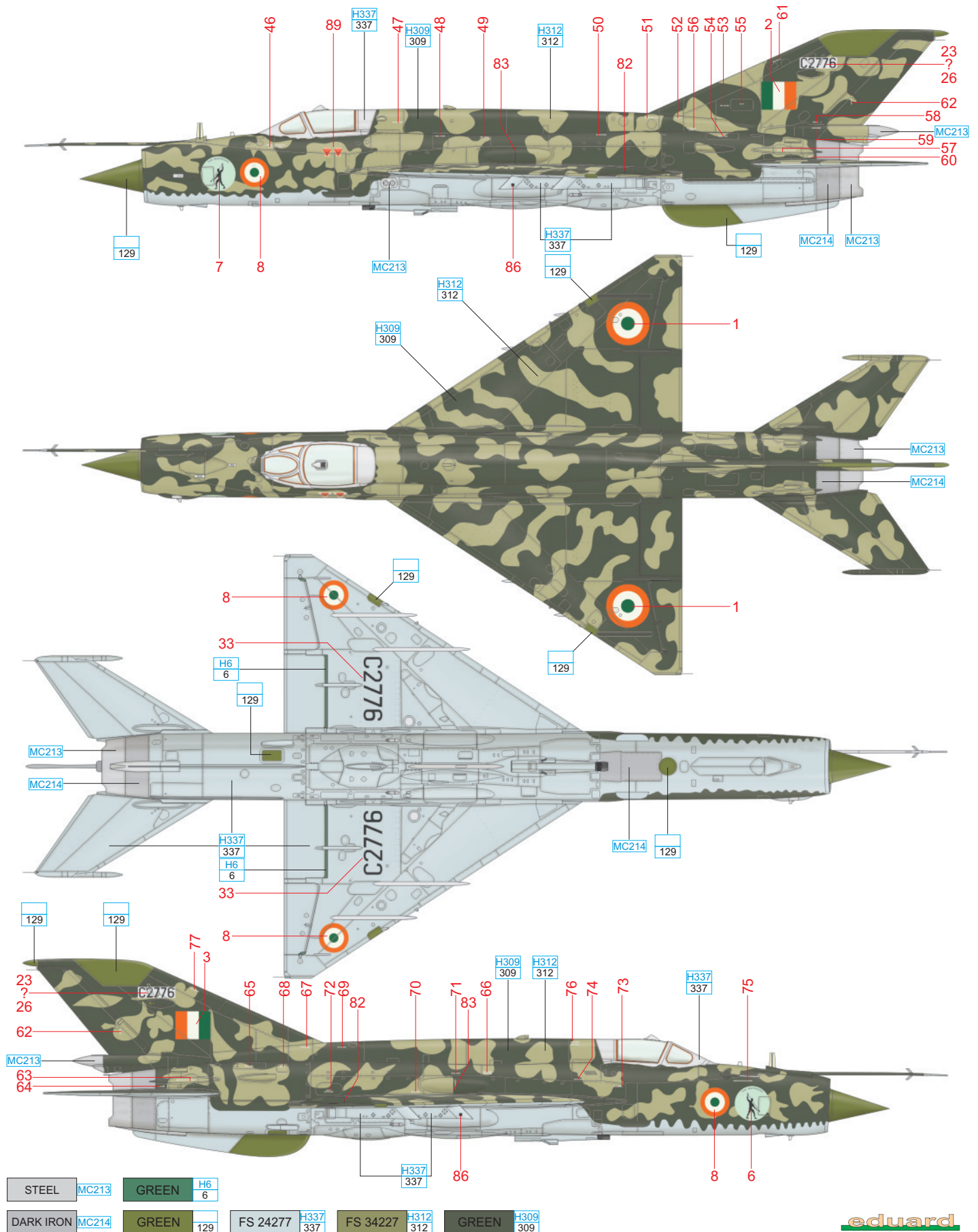
Další z pestrých markingů, které se na indických jednadvacítkách objevily v souvislosti s výcvikem vzdušného boje, nesl tento BIS. V této podobě byl zachycen v letu nad pobřežím svazového státu Gujarat. No. 15 Squadron byla jednou ze šesti, které s verzí BIS v Indii létaly.



D MiG-21BIS, C2776, No. 26 Squadron „The Warriors“, Adampur AB, early 90's

No.26 Squadron took an active part in combat on the Indo-Pakistani border at the end of 1971. At that time, however, they were equipped with the Sukhoi Su-7. Most Indian MiG-21BIS aircraft were painted in an overall light grey, with only a few being camouflaged with more colors. This particular aircraft was also photographed without the unit badge as well. The camouflage was sprayed over the original light grey surface, which is still visible around the aircraft code on the tail and on the canopy frame.

Většina indických BISů létala kamuflovaná světlešedou barvou na všech plochách. Pouze menší část dostala kamuflážní nátěr jinými barvami. Tento stroj byl vyfotografován ve dvou podobách – se znakem squadrony na přídě a bez něj. Nepravidelná pole kamuflážních barev byla nastříkána na šedý povrch. Původní šedý nátěr je viditelný v okolí kódového označení letounu na kýlové ploše a na překrytu kabiny. No. 26 Squadron se aktivně zapojila do boji na indicko-pákistánské hranice na konci roku 1971. V té době však byla ještě vyzbrojena Suchoji Su-7.



E MiG-21BIS, C2316, No. 24 Squadron „Hawks“, 90's

The next camouflage scheme employed is illustrated on this aircraft of No.24 Squadron. The colors indicate that the role of the aircraft was that of ground attack and close air support. No.24 Squadron has recently converted to the Su-30. In 1971, this unit took part in the Indo-Pakistan War, flying Folland Gnats. It was also in this war that the IAF used helicopters for the first time to airlift troops, and No.24 Squadron was the first squadron to be employed in cover operations for those airlifts.

Další z možností kamufláže indických MiGů-21 ukazuje tento letoun z No.24 Squadron. Použité barvy napovídají, že letoun byl používán k podpoře pozemních sil. No. 24 Squadron v současné době operuje s moderními Suchoji Su-30MKI. V roce 1971 se zúčastnila války s Pákistánem. V té době létala s Follandy Gnat a měla tu čest krýt první indický výsadek pěchoty provedený pomocí vrtulníků.

