

HI-TECH

## AH-1G Cobra 'Over Vietnam with M-35 Gun System'

EN

Soon after its engagement in the Vietnam War the US Air Force started to use helicopters as offensive weapons platforms. Even during 1962-63 period field modified UH-1A helicopters supported the troops' landing with machineguns, cannons and rockets. The success of such equipped helicopters showed the need of a new, single purpose attack machine of the smallest possible dimensions, equipped with effective firepower and high damage resistance. Bell Company started to develop of specified helicopter on their expenses since the US Army had immense interest in such machine. The first project based on type Bell 47 was not successful. Its main downfall was a weak piston engine. The new project designated D-262 grew into the late appearance designated as model 209. The model 209 took over some of the structural solutions from UH-1C helicopter (undercarriage skis, main rotor, tail boom, etc.) but featured new fuselage that housed cockpit for crew of two and stub wings for carrying external armament. When in 1965 the US Army issued a specification calling for new attack helicopter, Bell model 209 was a clear winner. The very next year the US Army ordered, initially two pre-production machines and then 110 production helicopters under army designation AH-1G Cobra. Additional orders followed the original one. To speed up the Cobra deployment into Vietnam a NETT (New Equipment Training Team) training centre was founded in Vung Tau in South Vietnam. The first unit that flew the new machines in combat was the 334th platoon based at Bien Hoa. Other units were rapidly equipped with Cobras. The knowledge and pilots' requirements during the fights in Vietnam were incorporated into the production of the helicopters. The first helicopters featured the tail rotor on the left side, later relocated to the right side, strengthened undercarriage skis were adopted, the original nose mounted TAT-102 turret with Minigun was replaced by M-28 turret equipped with Minigun and grenade launcher (most often). The stub wings were capable of carrying variety of weapons; from various rocket blocks, Minigun pods to M-35 pod (Vulcan cannon with ammunition boxes). All depended on the mission purpose and pilot's preferences. As a reaction to the heat seeking missiles used by the Vietnamese Army and the Viet Cong starting in 1972 the helicopters were equipped with exhaust gas deflectors. Cobras indisputable prove to be effective in Vietnam. They were used not only by US Army helicopter units but also by the US Marines that were also satisfied with AH-1G but for the shipboard and over sea operations which required a helicopter with two engines. This requirement led to the development of twin-engined version AH-1J. AH-1Gs were exported only to Spain and Israel. Cobras were used by the Spanish Navy. Israeli Cobras faced troubles with hot and dusty environment. Israel needed tank buster helicopters and therefore subsequent orders were placed for the anti-tank version AH-1Q/S. Plenty of the US AH-1Gs were modified to this version, including the machines withdrawn from Vietnam. The conception of AH-1G Cobra became a standard for attack helicopters. Subsequent versions of this helicopter are still in use not only in the USA but also in many other armies.

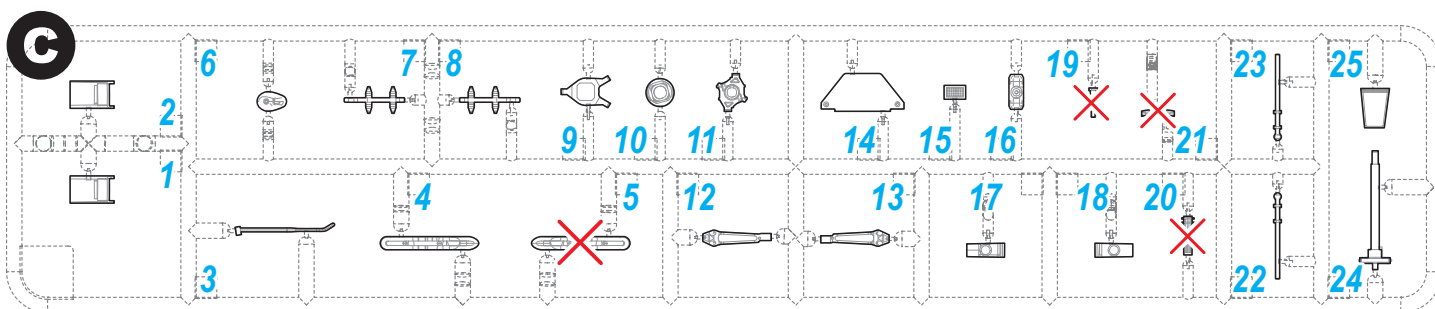
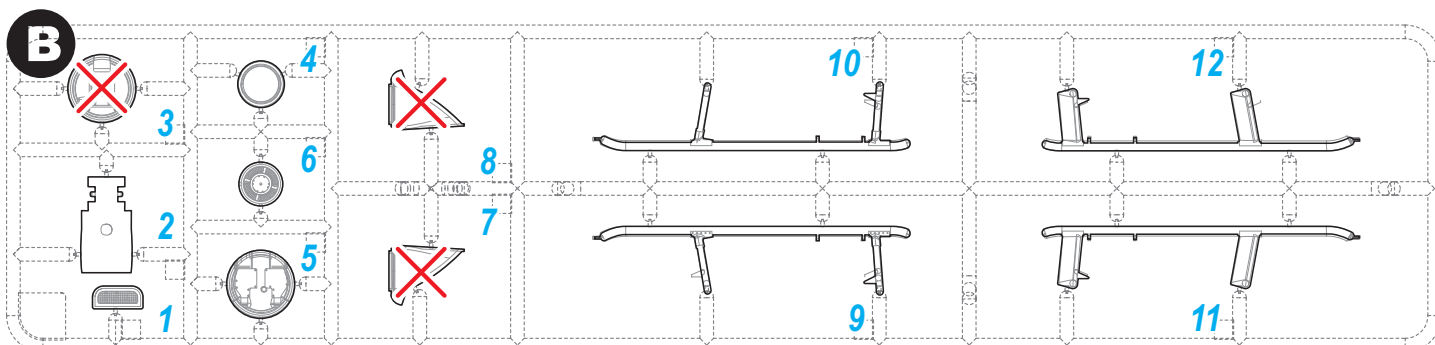
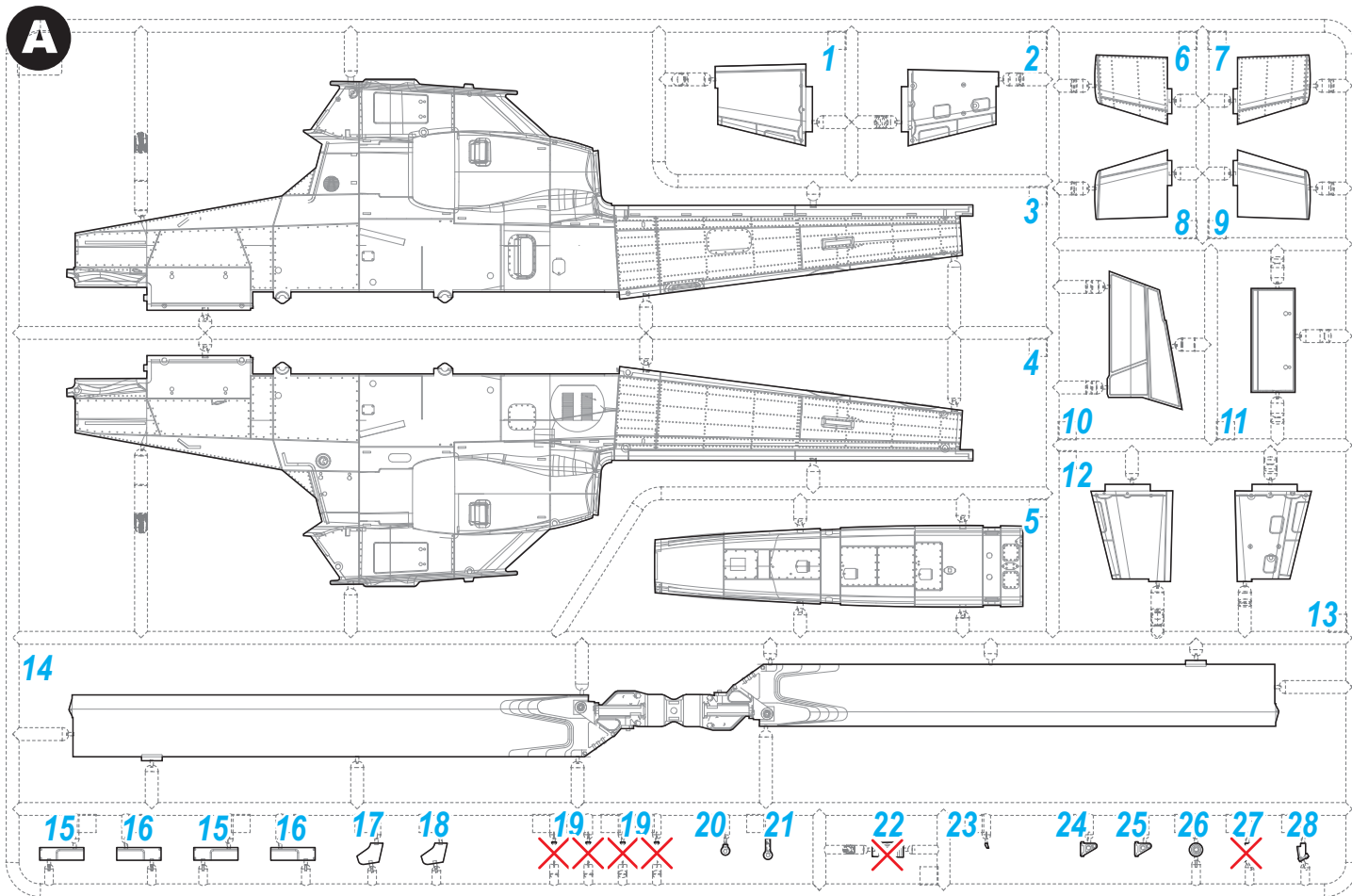
TTD: main rotor diameter: 13.4 m, fuselage length: 13.5 m, tail rotor diameter: 2.6 m, Max. speed: 276 km/h, service ceiling: 3,871 m, Range: 580 km.

CZ

Americké letectvo začalo záhy po zapojení se do války ve Vietnamu používat vrtulníky jako nosiče ofenzivní výzbroje. Již v letech 1962-63 podporovaly vrtulníkové výsadky palbou z kulometů, kanonů či raketometů v polních podmínkách vyzbrojené vrtulníky UH-1A. Úspěšné použití takto vyzbrojených vrtulníků ukázalo potřebu nového jednoúčelového útočného stroje s účinnou výzbrojí, co nejmenšími rozměry a velkou odolností proti poškození. Protože americká armáda měla o takový stroj enormní zájem, firma Bell zahájila vývoj takového stroje ve své režii. První projekt na základě typu Bell 47 nebyl úspěšný. Handicapoval ho zejména slabý pístový motor. Nový projekt firmy, označený D-262 postupně vyvrátil do podoby označené model 209. Model 209 přebíral část konstrukčních řešení z vrtulníku UH-1C (ližiny podvozku, rotor, nosník ocasního rotoru apod.), měl však nový trup s kabinou pro dva členy osádky a s pylony pro podvěšenou výzbroj. Když armáda USA vypsal v roce 1965 soutěž na nový bitevní vrtulník, Bell model 209 ji s přehledem vyhrál. Hned v následujícím roce armáda objednala nejprve dva předseriové a pak stodeset seriových vrtulníků s armádním označením AH-1G Cobra. Další objednávky následovaly. Pro co nejrychlejší nasazení Cober ve Vietnamu vzniklo přeškolená středisko NETT (New Equipment Training Team) v jihovietnamském Vung Tau. První jednotkou nasazenou do boje na nových strojích byla 334. rota operující z Bien Hoa. Urychleně byly vyzbrojovány další jednotky. V průběhu bojů ve Vietnamu byly postupně zapracovány na vyráběných vrtulnicích poznatky a požadavky letců. První vrtulníky měly vyrovnávací rotor vlevo, pozdější vpravo, byly montovány zesílené ližiny podvozku, příďovou věž TAT-102 s jedním rotačním kulometem Minigun nahradila věž M-28 s Minigunem a granátometem (nejčastěji). Na závěsníky byla zavěšována pestrá výzbroj od různých raketových bloků, přes pouzdra s kulometry Minigun až po komplet M-35 (kanon Vulcan s nábojovými schránkami). Záleželo na úkolu, který měl vrtulník plnit a také na tom, jakou výzbroj pilot preferoval. V roce 1972 se na vrtulnicích objevily deflektory výtokových plynů jako reakce na tepelně naváděné střely ve výzbroji komunistické vietnamské armády a Vietkongu. Ve Vietnamu se Cobry nesporně osvědčily. Používaly je nejen vrtulníkové jednotky armády, ale i jednotky US MARINES. US MARINES bylo také s AH-1G spokojeno, ale pro provoz nad mořem a lodích požadovalo dva motory, což vedlo k vývoji dvoumotorových verzí, první z nich byla AH-1J. AH-1G Cobra byly exportovány jen do Španělska a Izraele. Ve Španělsku je používalo námořnictvo, v Izraeli měly AH-1G problémy s prašným a horkým podnebím. Izrael potřeboval vrtulníky pro boj s tanky a proto další objednávky byly směřovány na protitankové verze AH-1Q/S. Na tyto verze bylo také přestavěno mnoho amerických AH-1G, včetně strojů stažených z Vietnamu. Koncepce AH-1G Cobra se stal etalonem pro bitevní vrtulník. Další verze tohoto vrtulníku létají dodnes jak v USA, tak ve výzbroji mnoho jiných armád.

TTD: průměr hl. rotoru: 13,4 m, délka trupu: 13,5 m, průměr vyrovnávacího rotoru: 2,6 m, max. rychlost: 276 km/h, dostup: 3871 m, dolet: 580 km.

# Parts List 1



## Barvy GUNZE/ GUNZE Colour No.

<b>A</b> Black/ černá	H12/C33	<b>G</b> Gunmetal / dělovina	H28/C78	<b>L</b> Red / červená	H/C3
<b>B</b> Dk. Gull Gray / tm. racčí šedá	H/C317	<b>H</b> Dk. Brass / tmavá mosaz	MC219	<b>M</b> Zinc Chromate / zelená zákl.	C351
<b>C</b> Olive Green / olivově zelená	H52/C12	<b>I</b> Burnt Metal / opálený kov	H76/C61	<b>N</b> White / bílá	H/C1
<b>D</b> Light Green / světle zelená	H26/C66	<b>J</b> Tire Black / barva pneu	H77/C137	<b>O</b> Clear Red / červená čirá	H90/C47
<b>E</b> Aluminium / hliník	H/C8	<b>K</b> Lt. Gray / světle šedá	H21/C69	<b>P</b> Clear Blue / modrá čirá	H93/C50
<b>F</b> Steel / ocelová	H18/C28				

### SYMBOLS

**?** OPTIONAL  
MOŽNOST VOLBY  
NACH BELIEBEN  
OPTION

**🔑** INSTANT CYANOACRYLATE GLUE  
POUŽIT KYANOAKRYLÁTOVÉ LEPIDLO  
ZYANOAKRYLÁTKLEBER  
ADHESIF CYANOACRYLAT

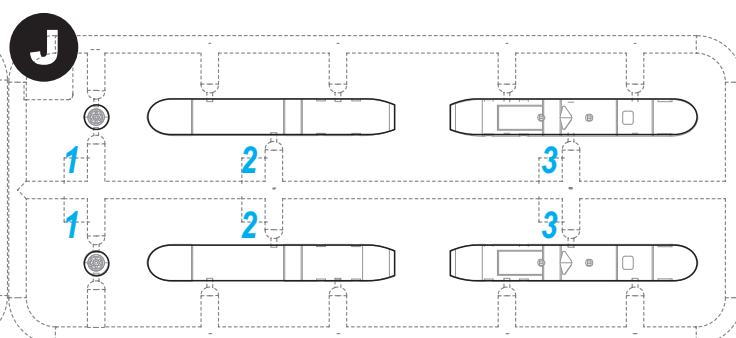
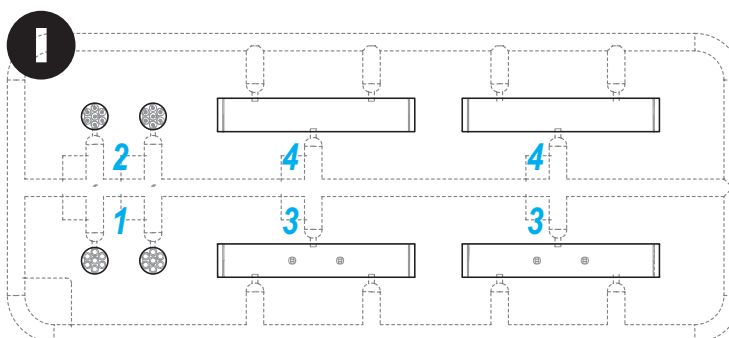
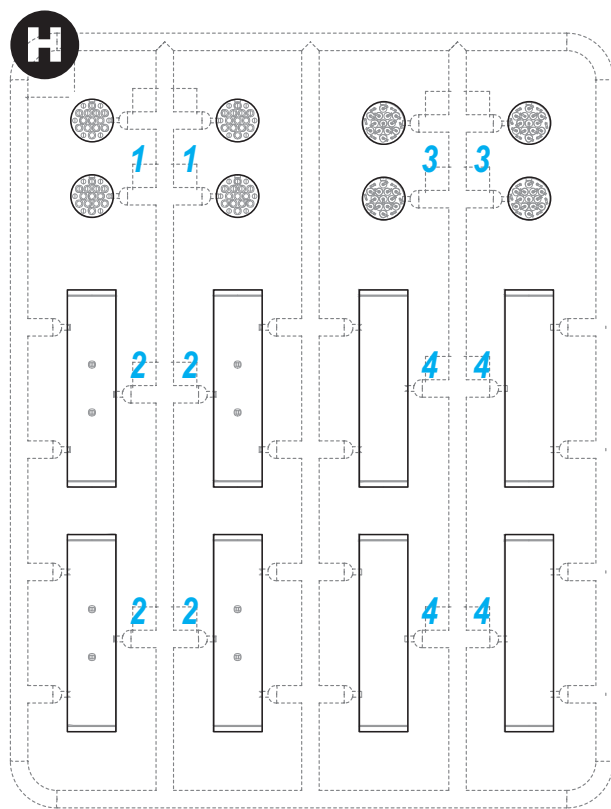
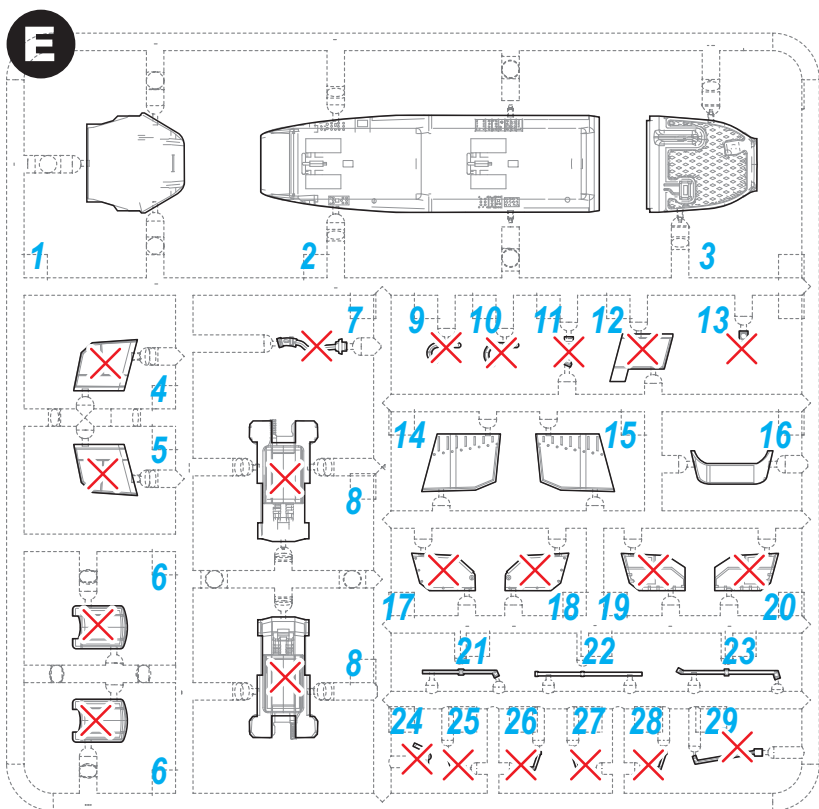
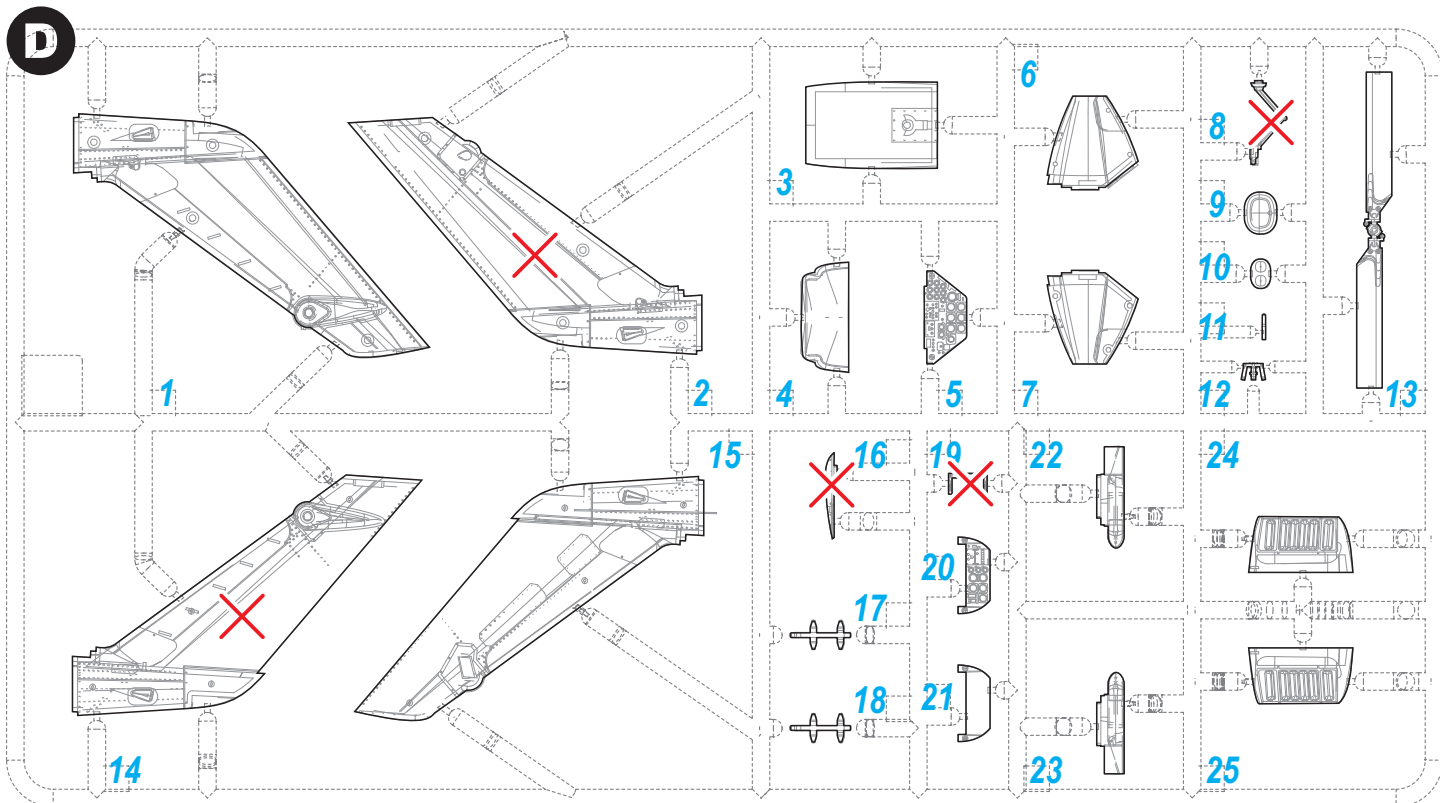
**↪** BEND  
OHNOUT  
BIEGEN  
COURBER


**👉** SCRATCH BUILD  
ZHOTOVIT NOVÉ  
FERTIGSTELLEN  
ACHEVER

**✂** CUT OFF/DRILL  
ŘEZAT/VRTAT  
ENTFERNEN  
DETACHER

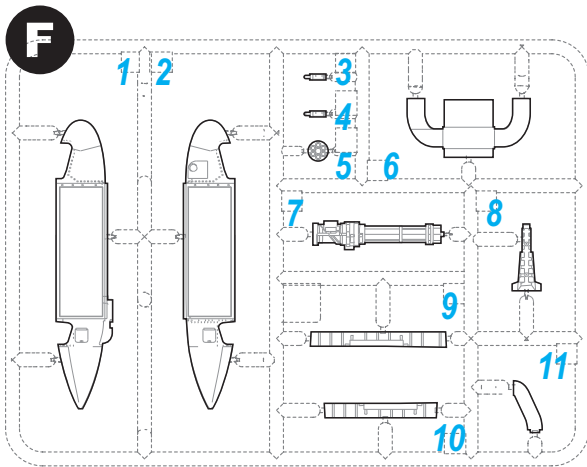
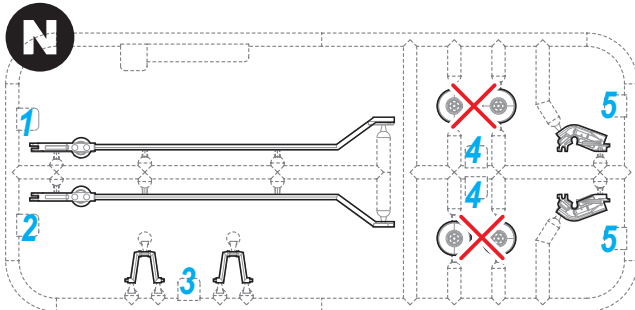
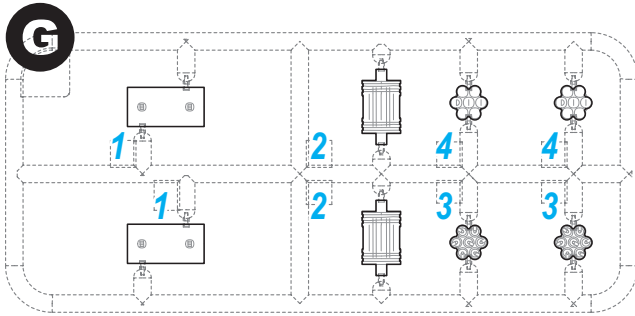
**GSI** **A** COLOUR  
NATRÍT  
FARBEN  
PEINDRE  
colours code

## Parts List 2

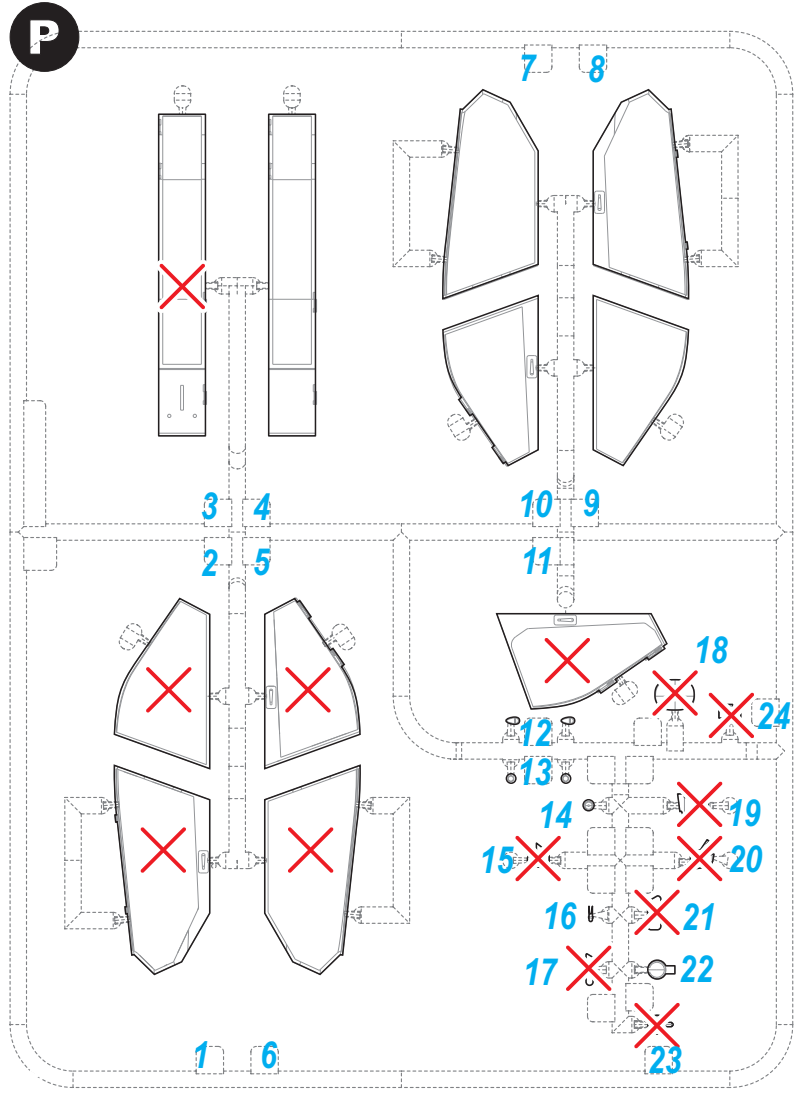


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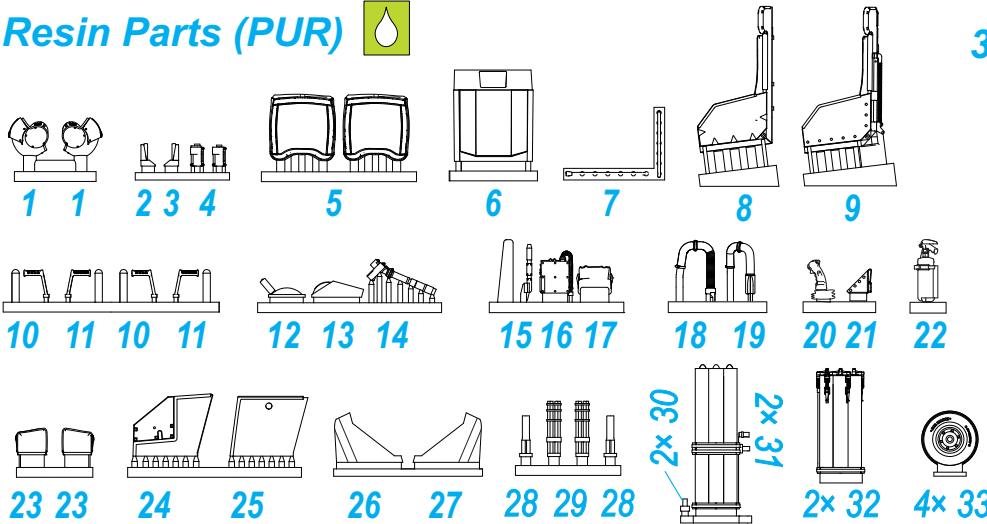
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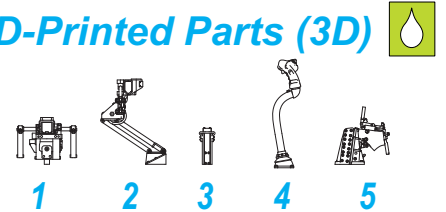
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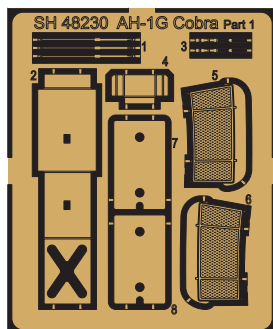
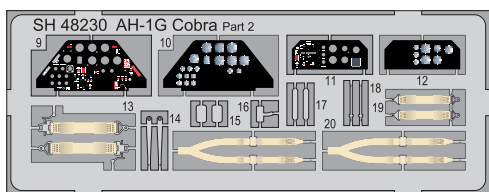
### Resin Parts (PUR)



### 3D-Printed Parts (3D)



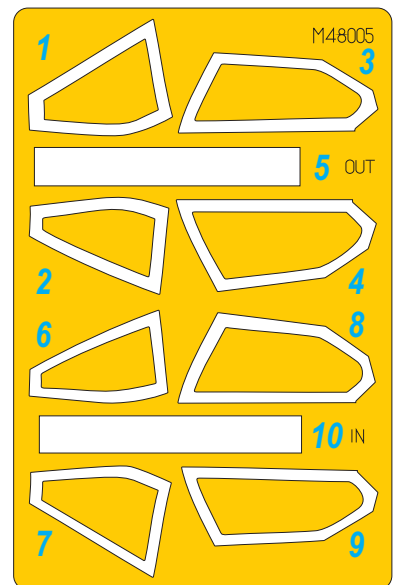
### Photo-Etched Parts (PE)



### Film

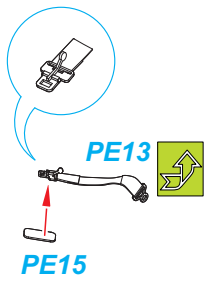


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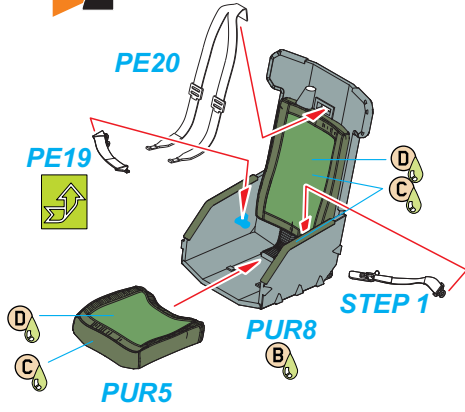


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Tento díl nepoužít

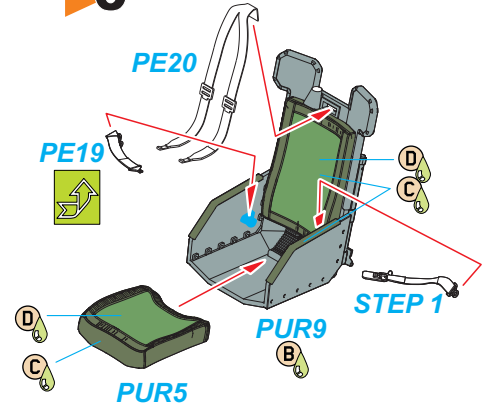
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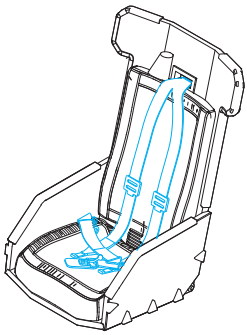
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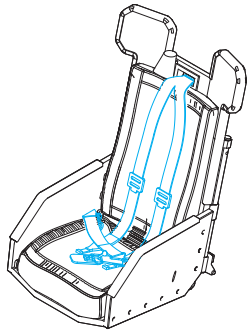
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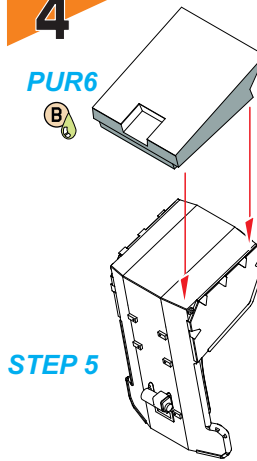
final assembly  
STEP 2



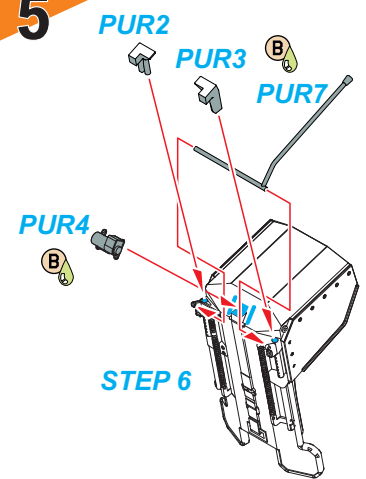
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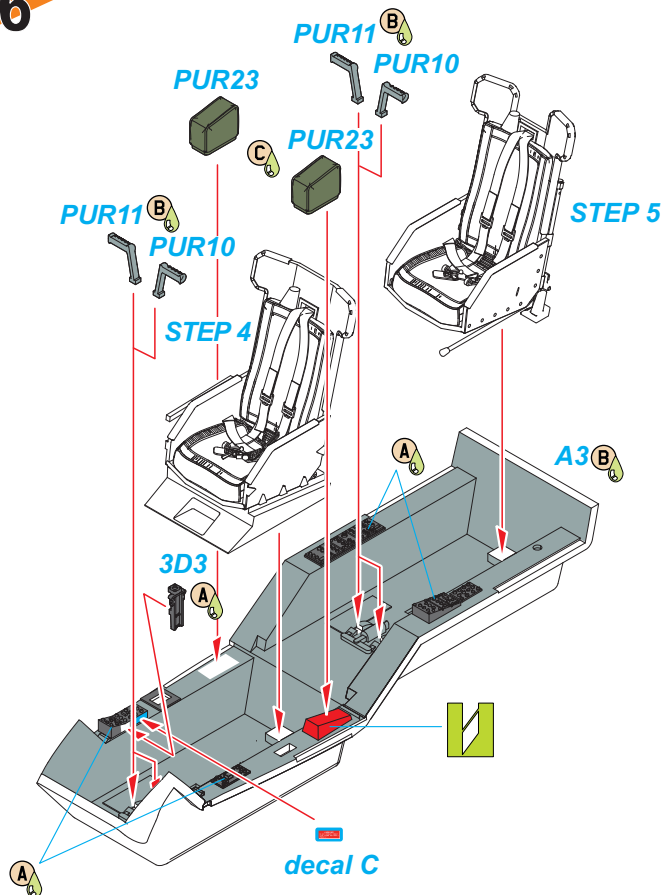
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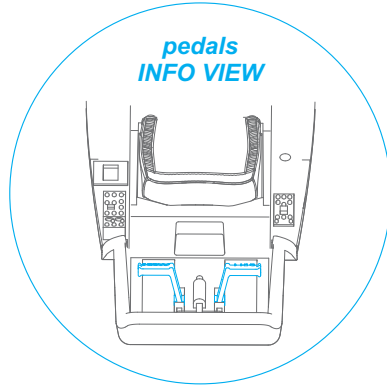
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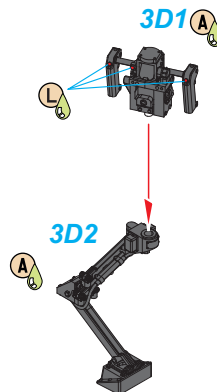
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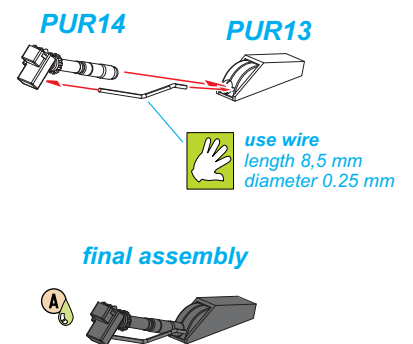
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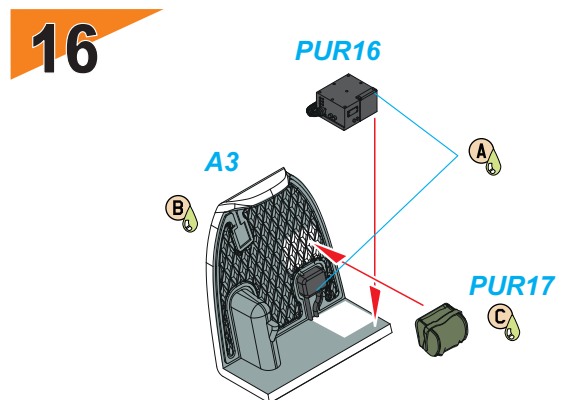
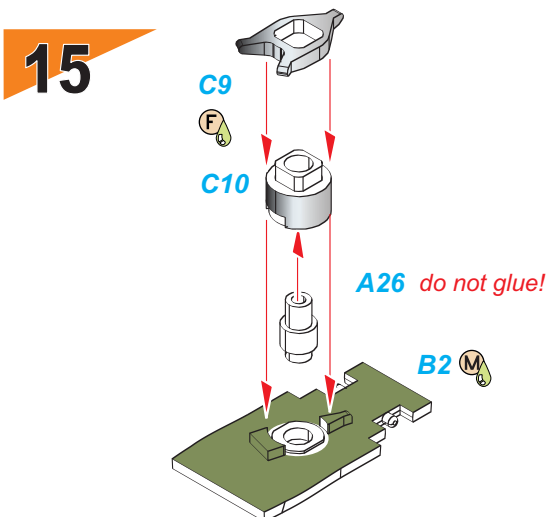
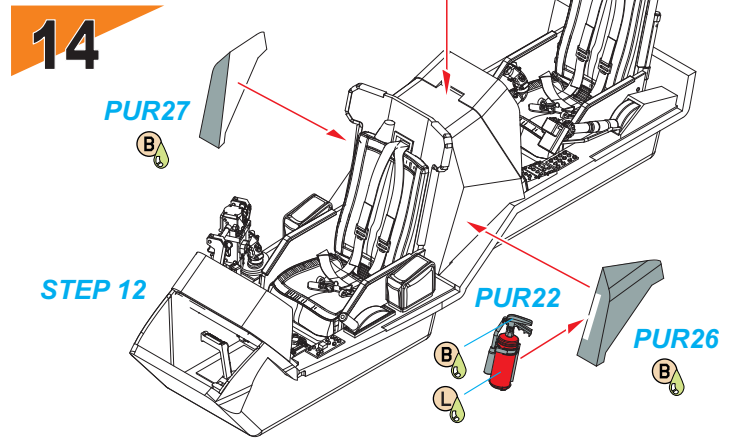
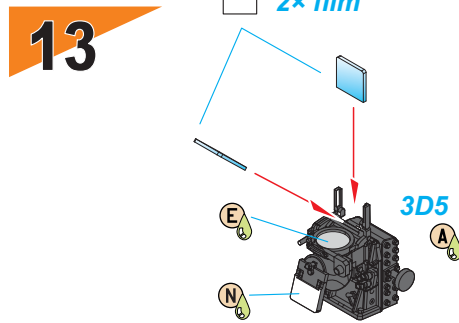
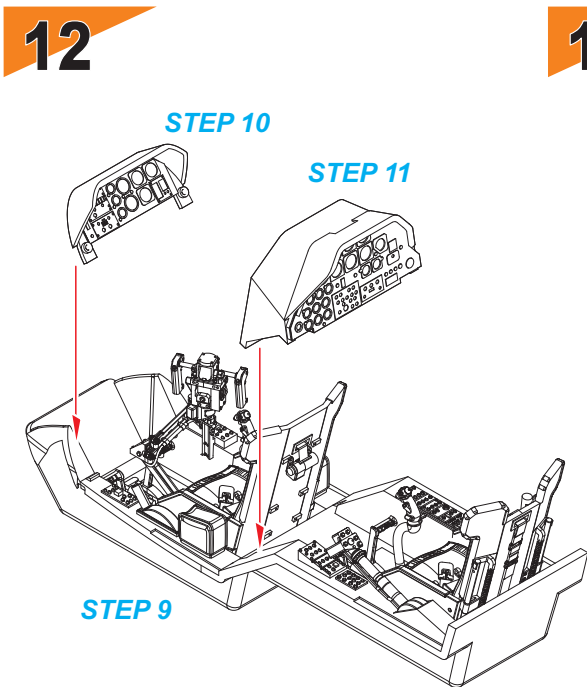
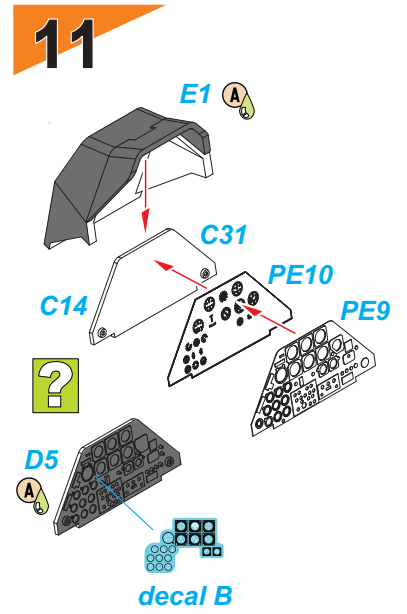
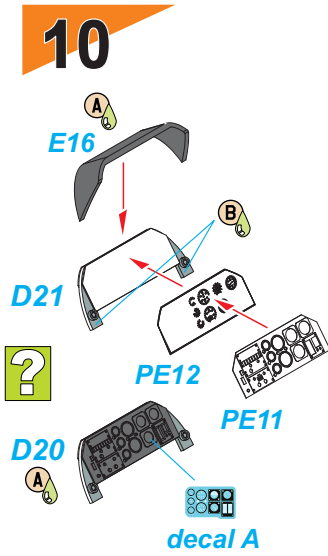
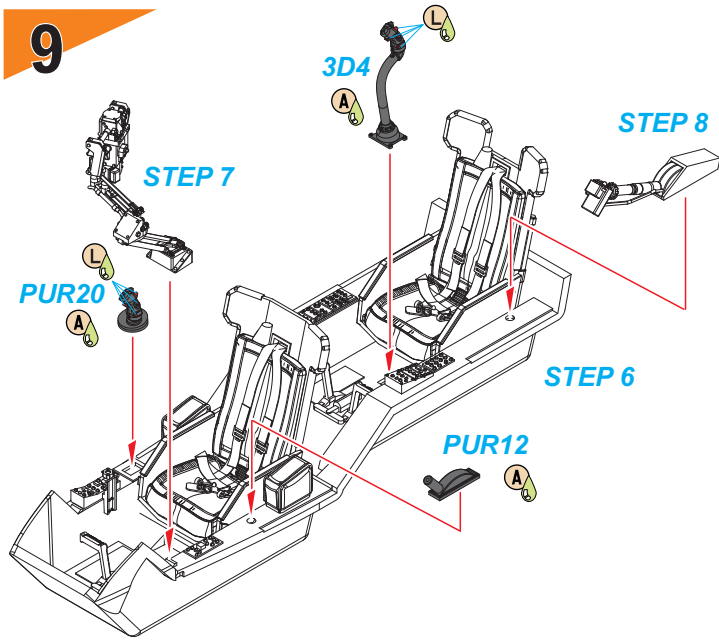


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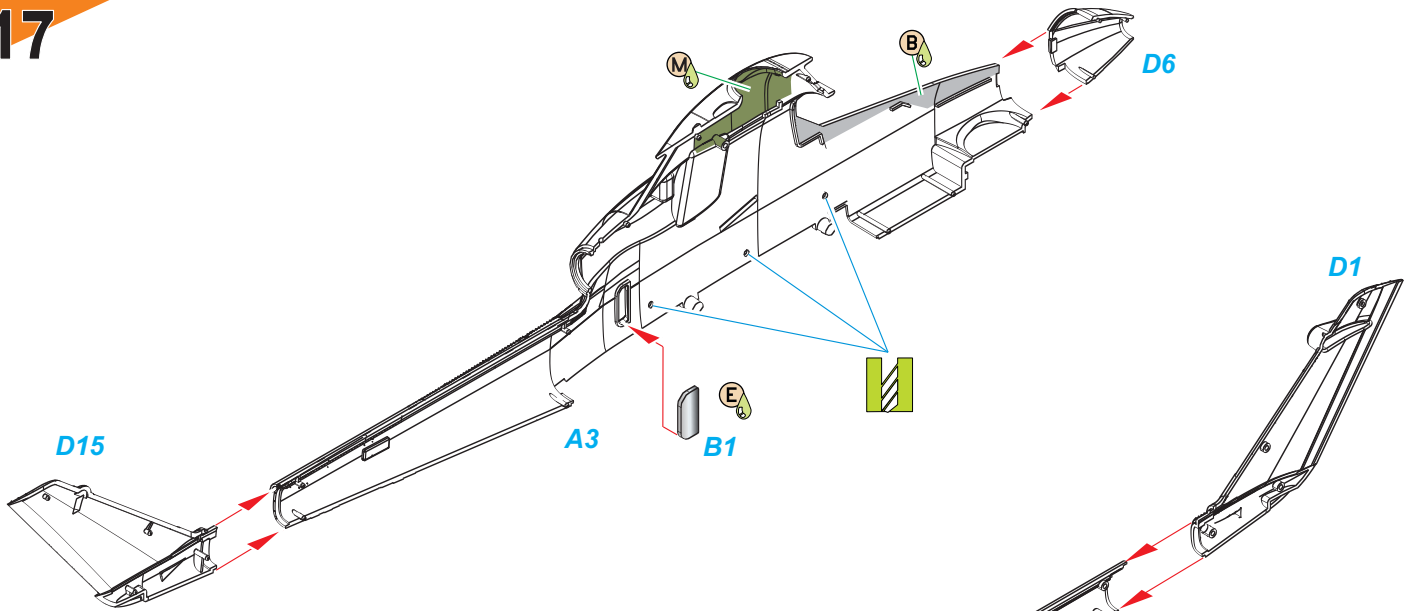


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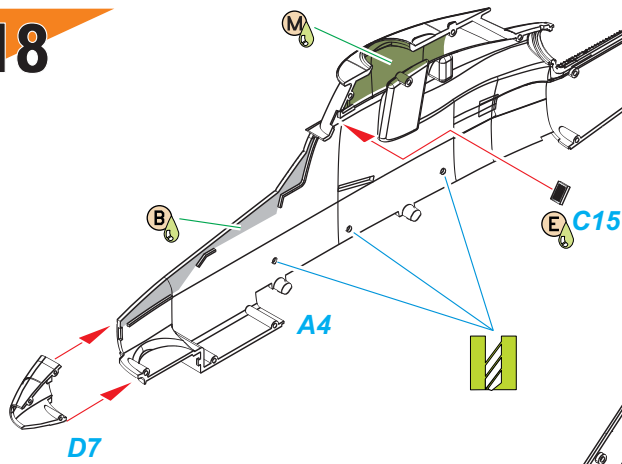




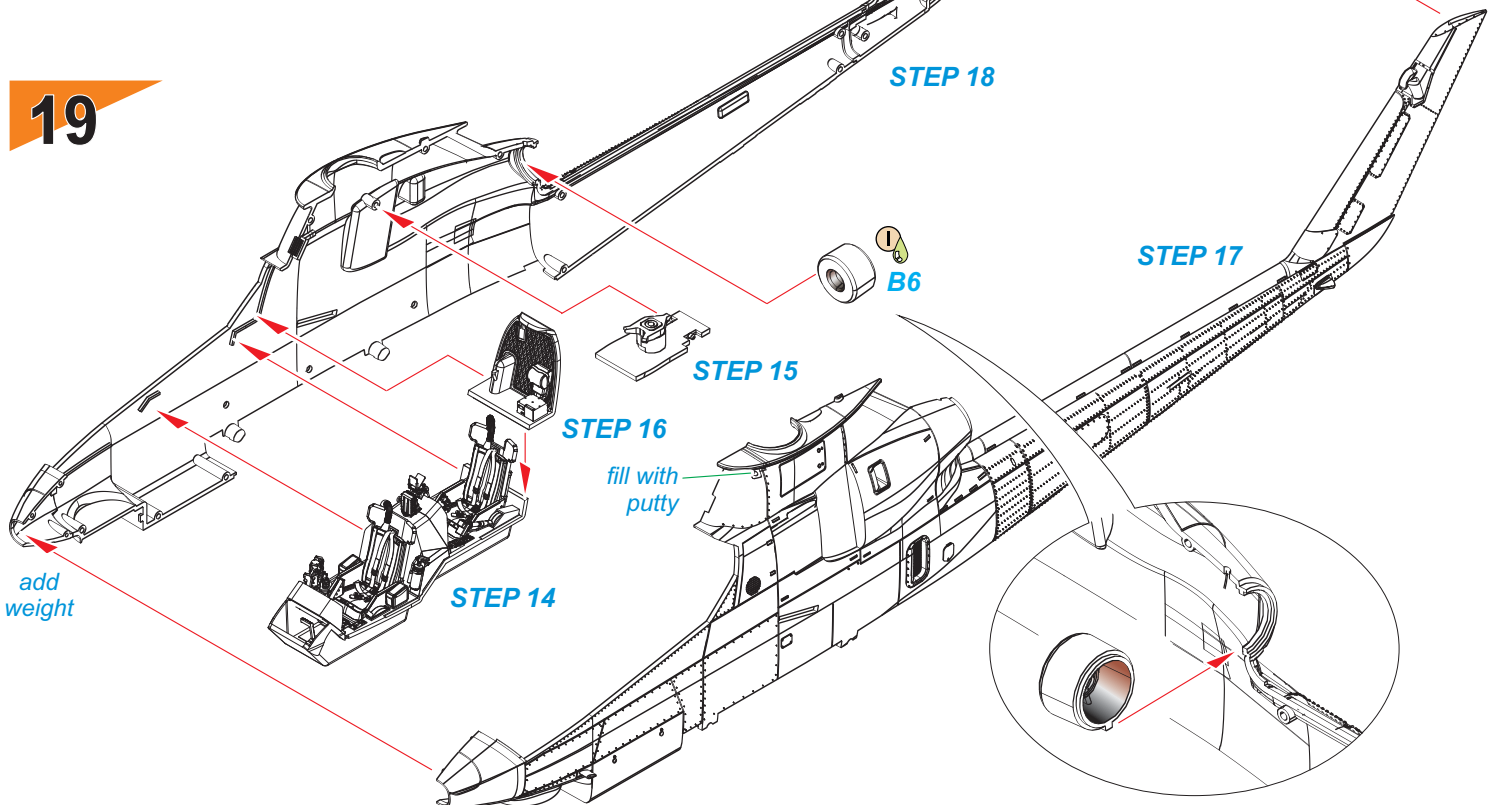
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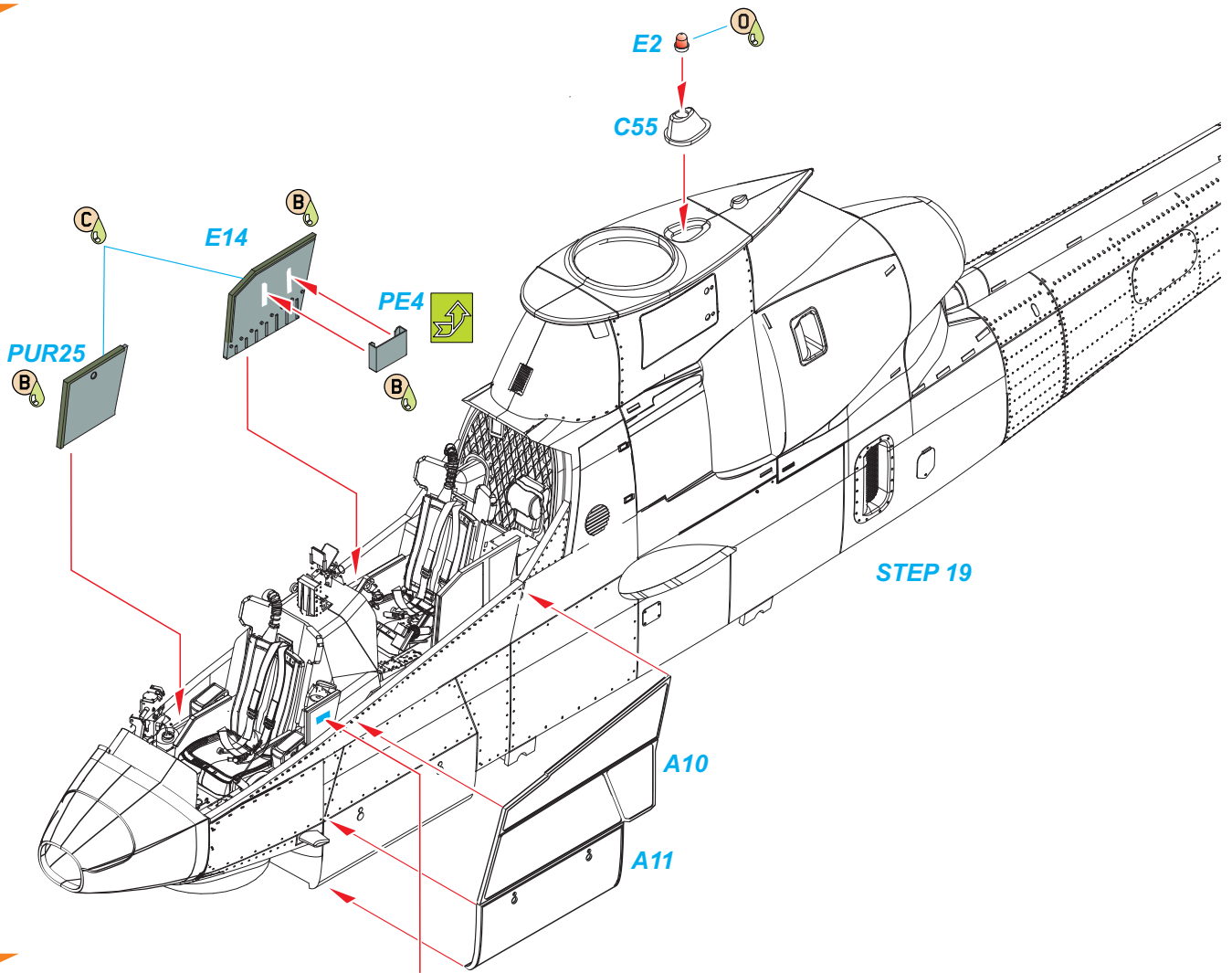
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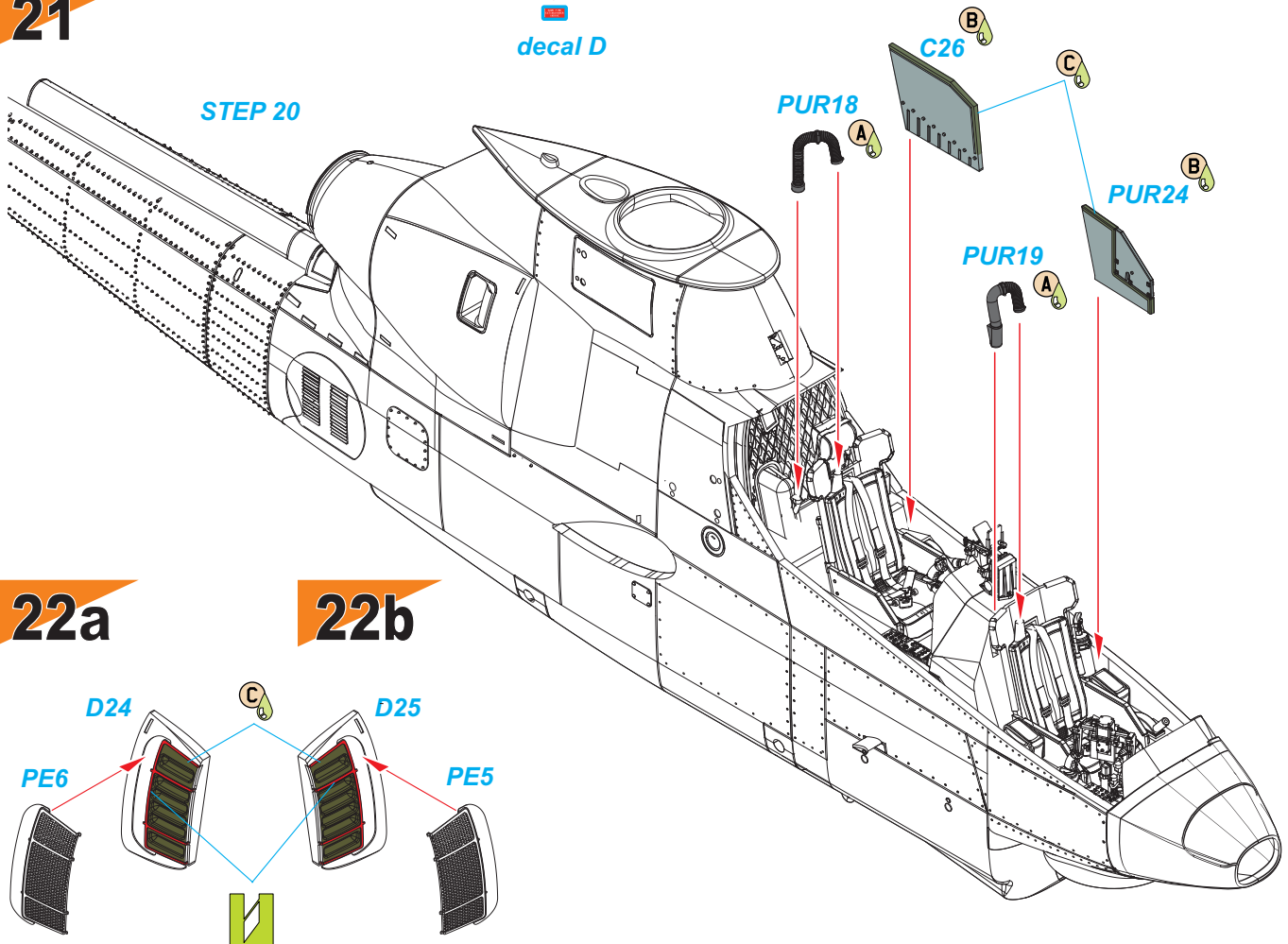


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STEP 19

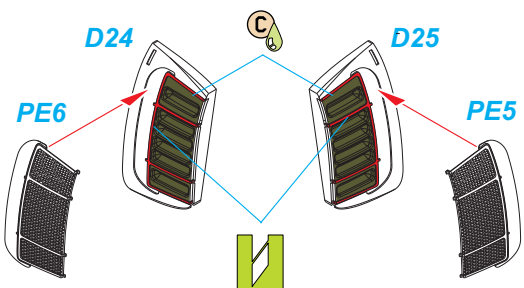
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STEP 20

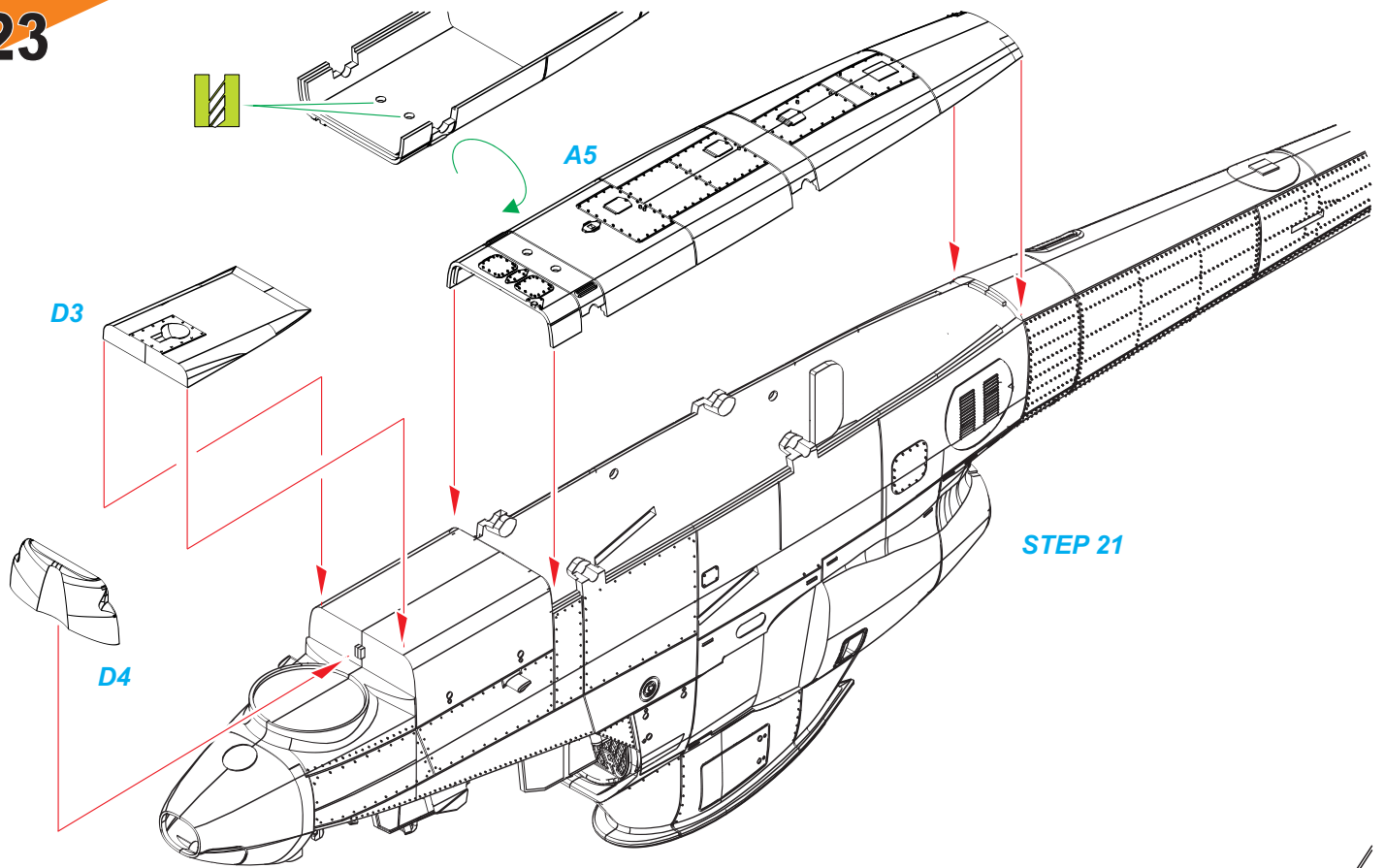
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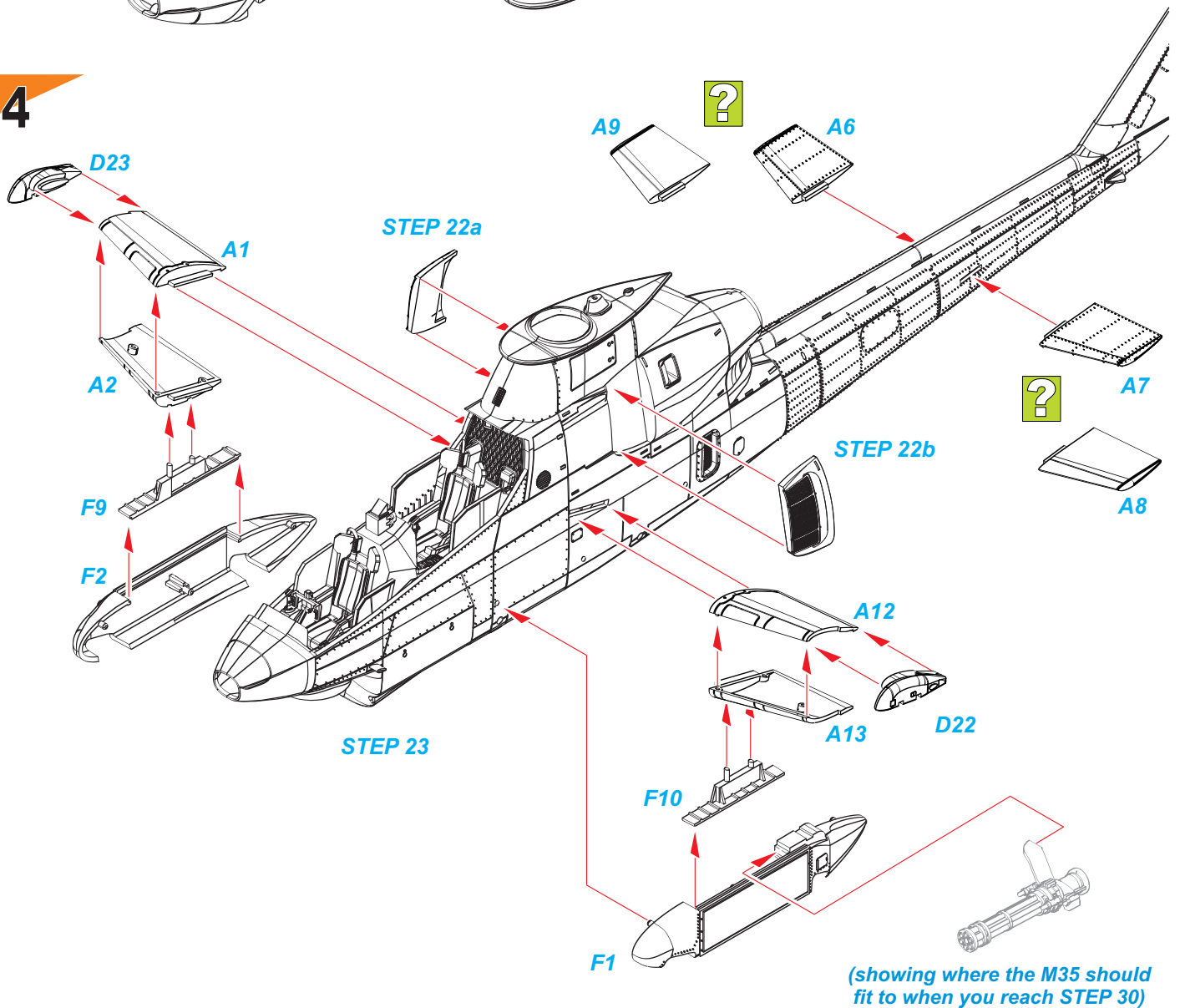




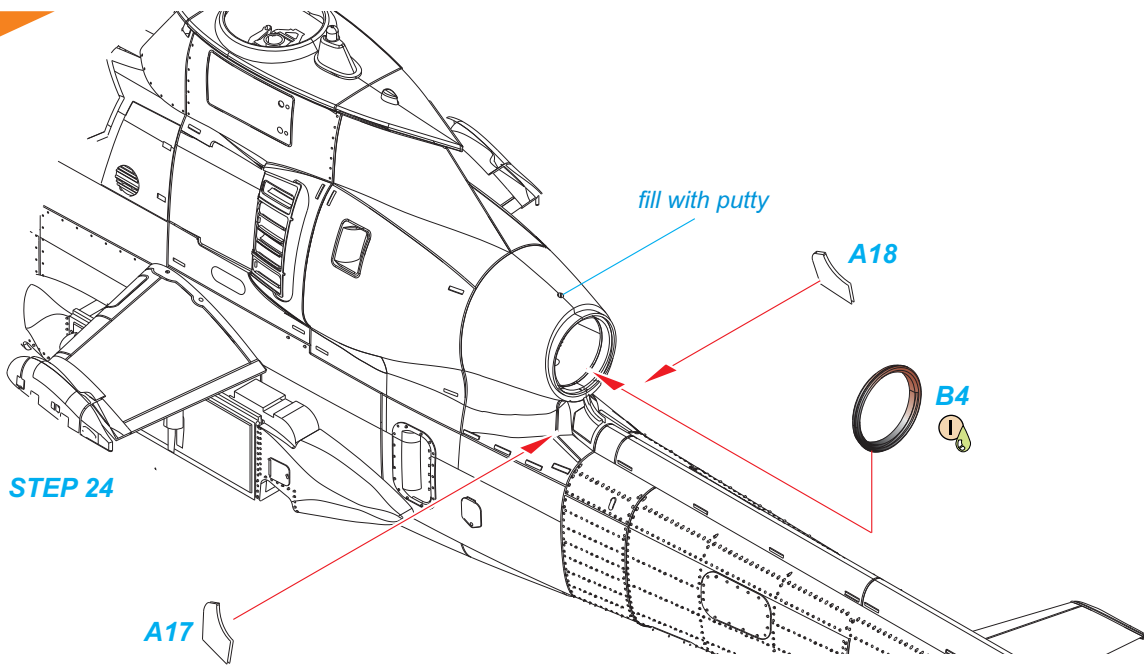
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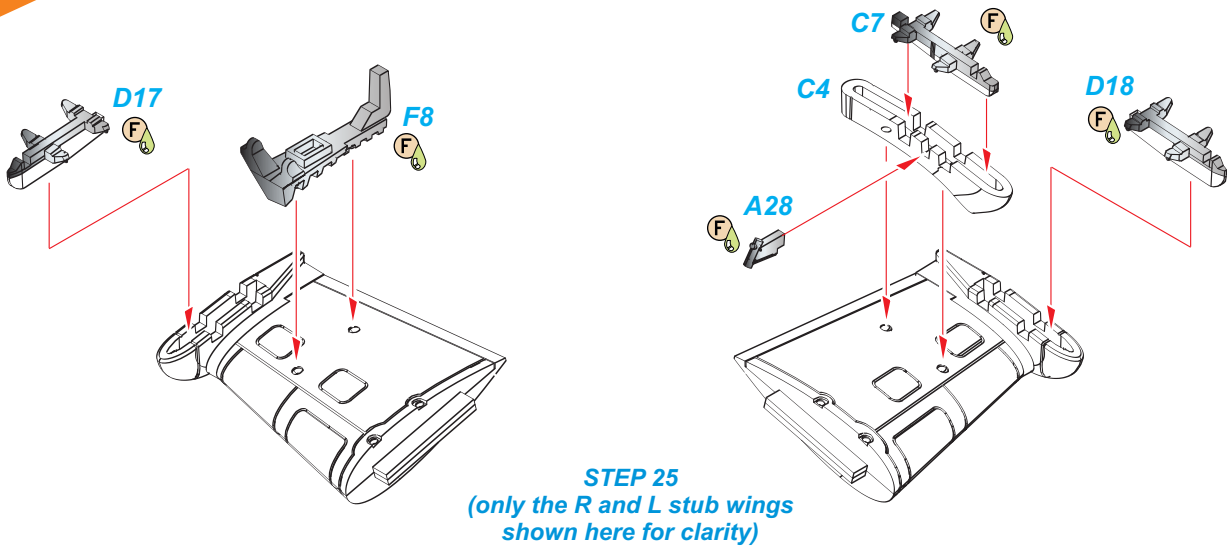
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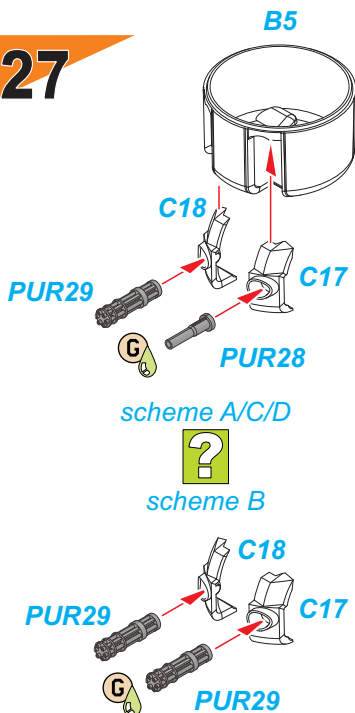
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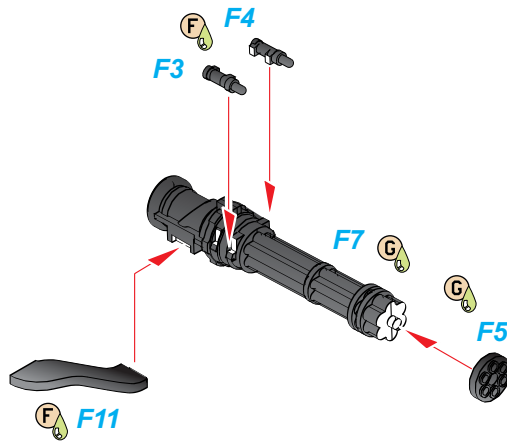
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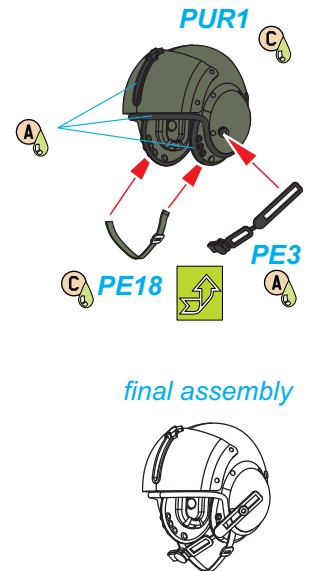
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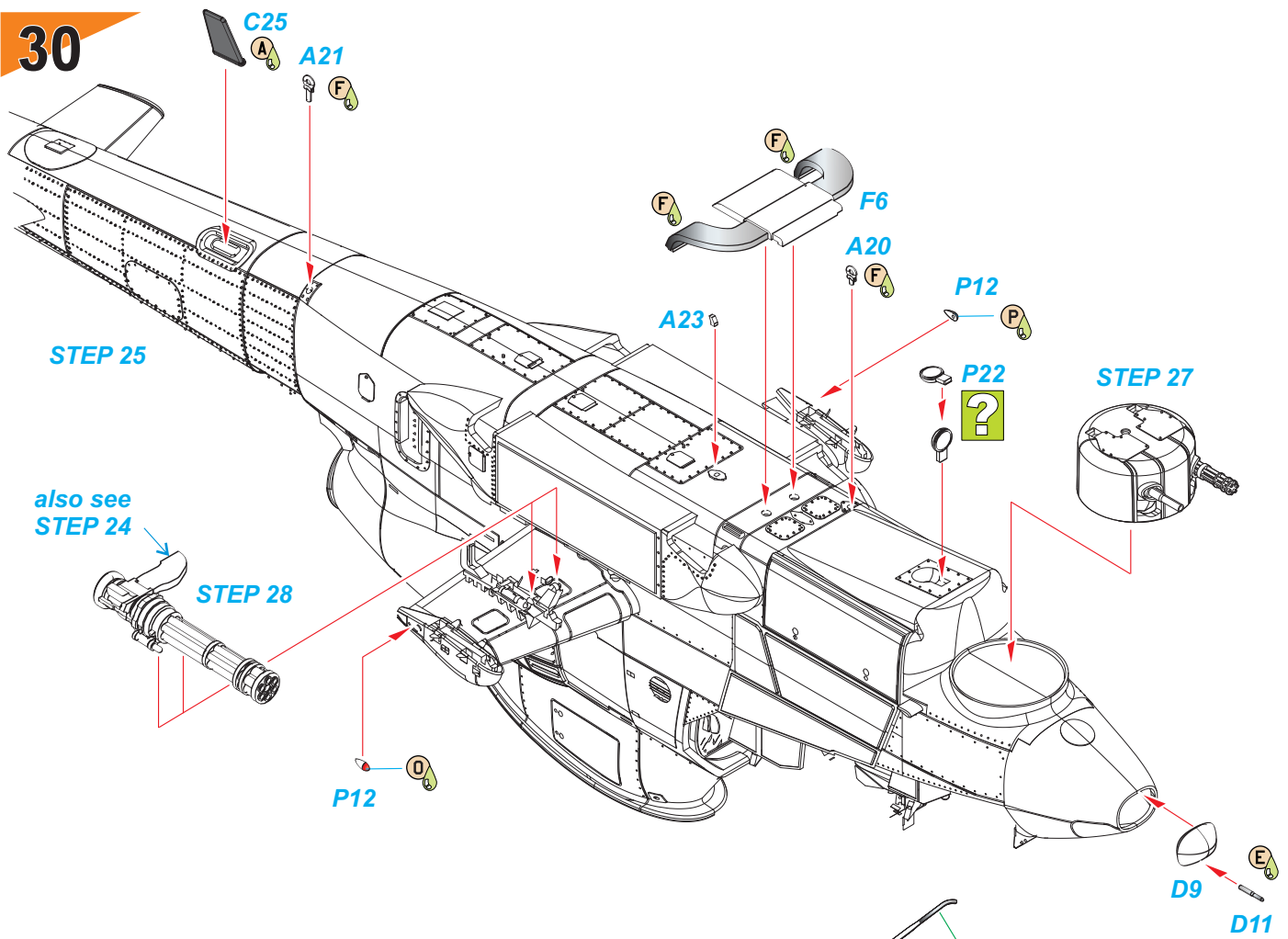
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29 2x

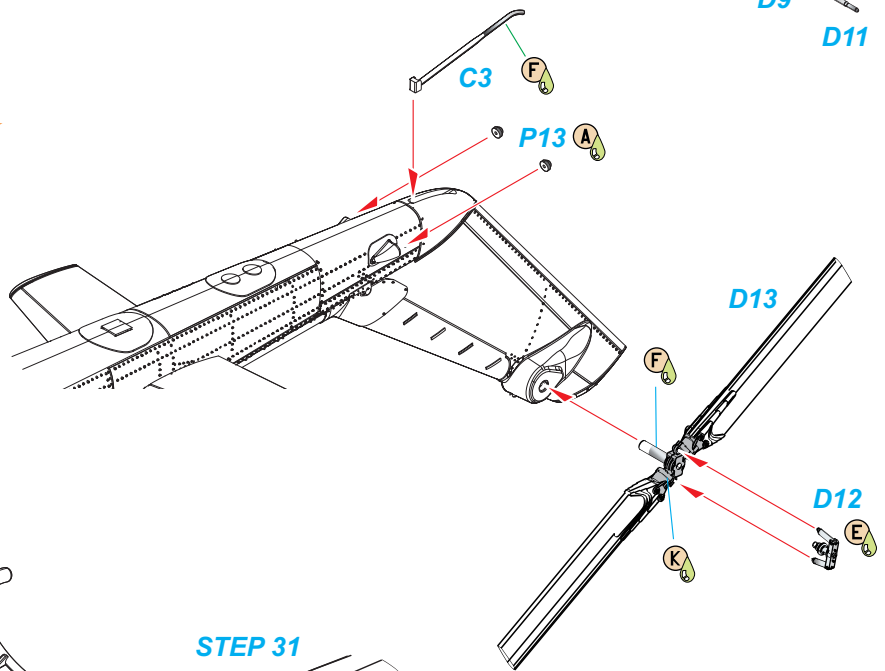


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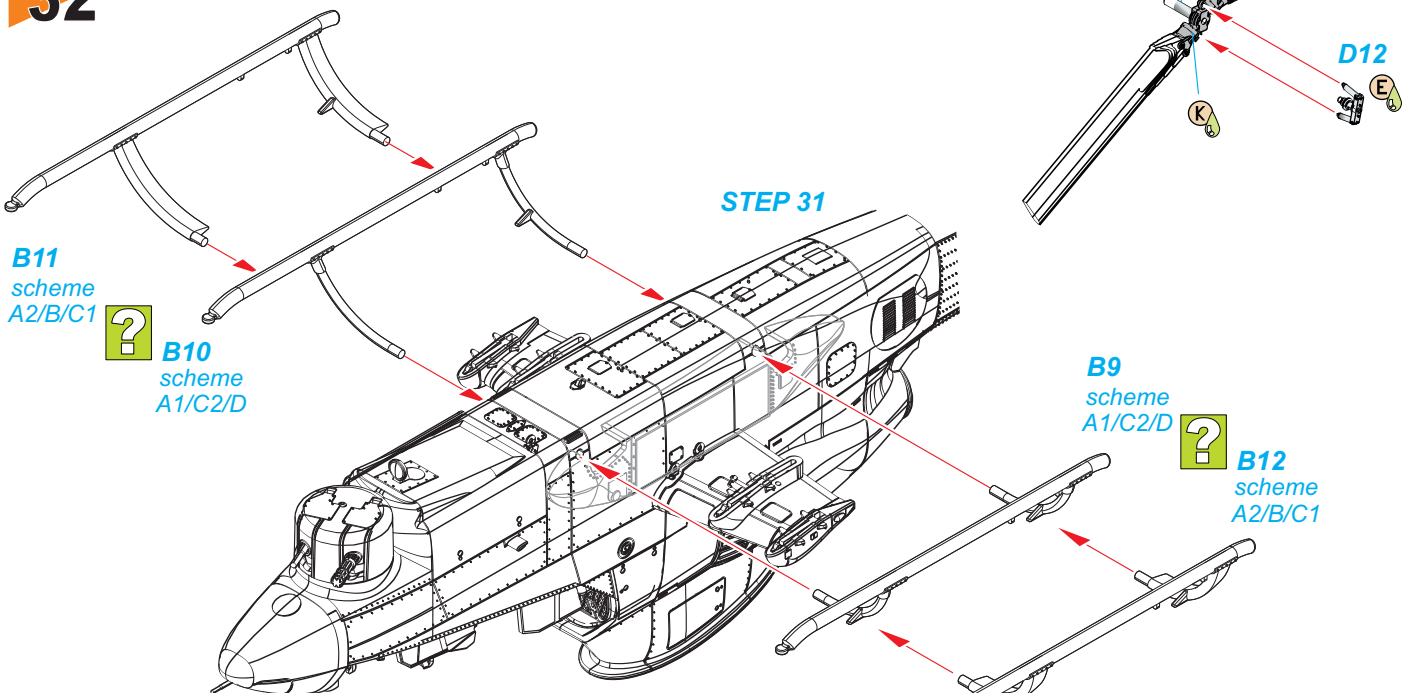
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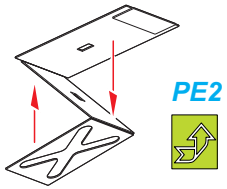


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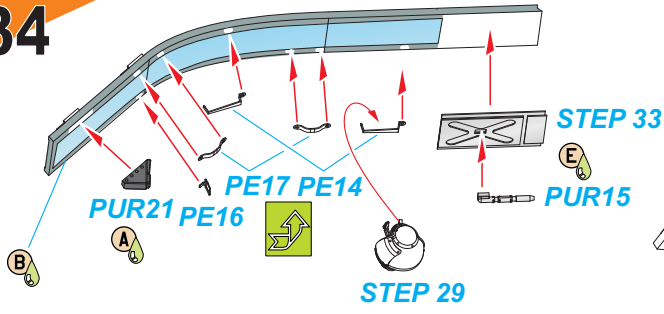
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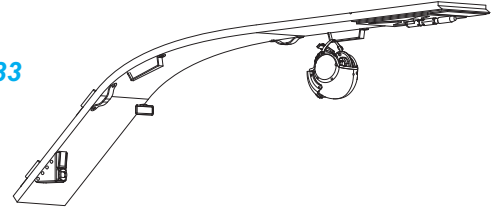
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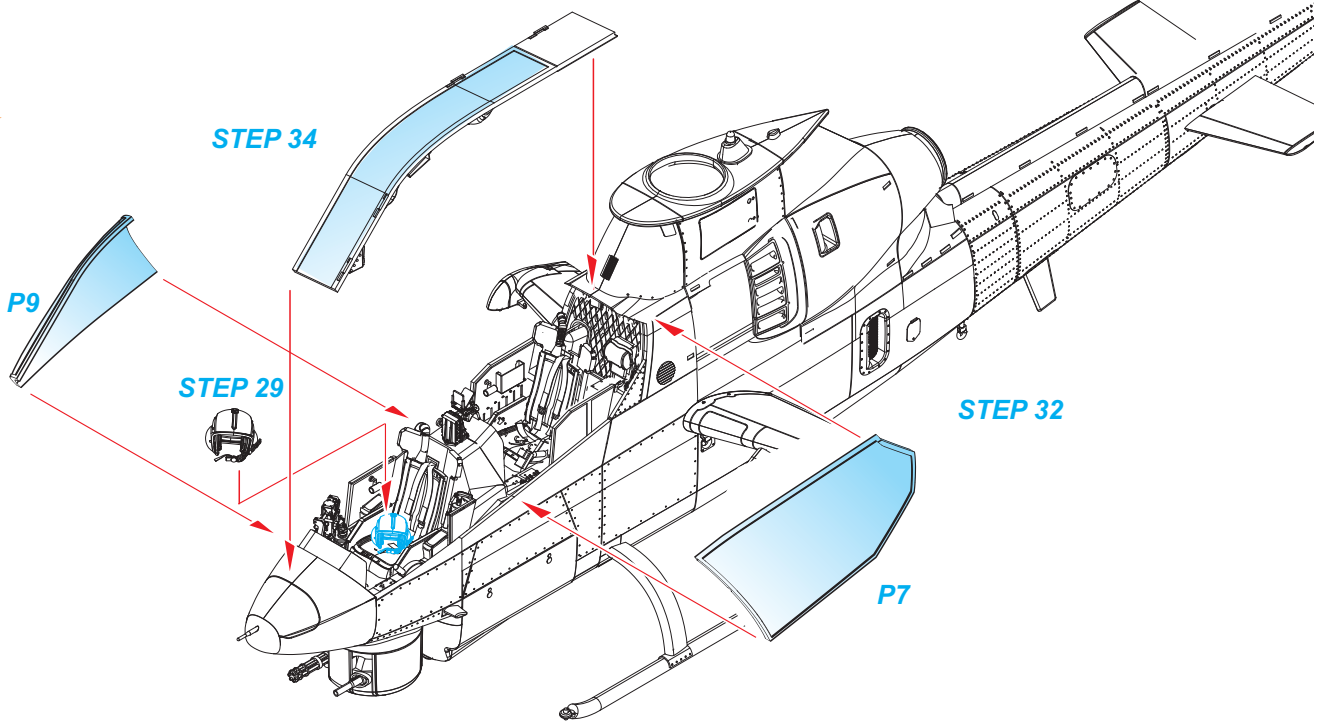
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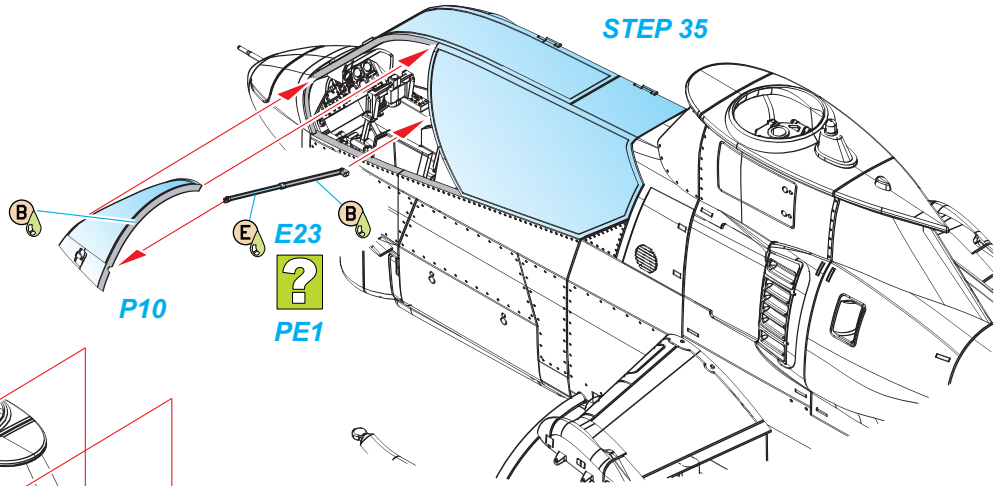
final assembly



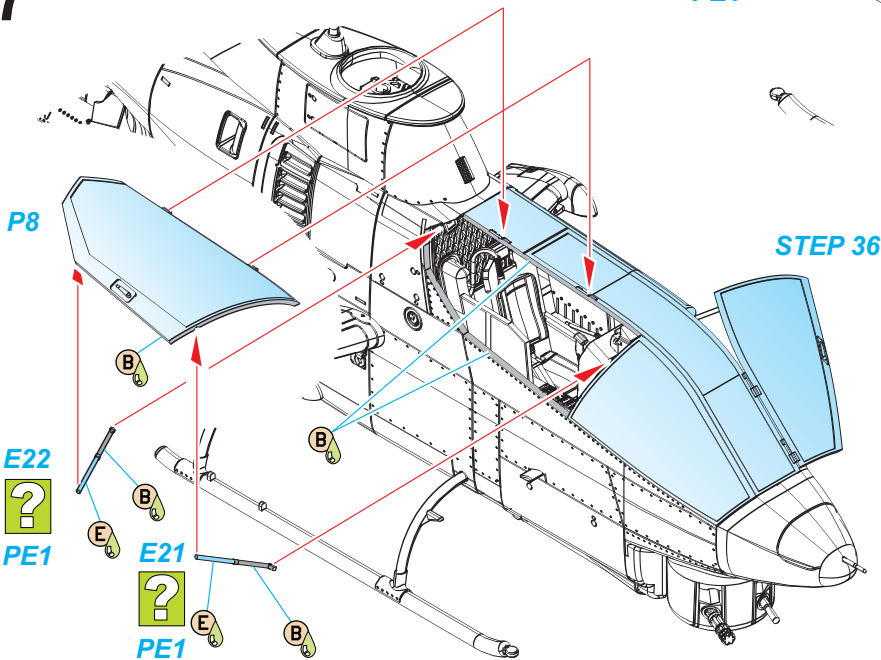
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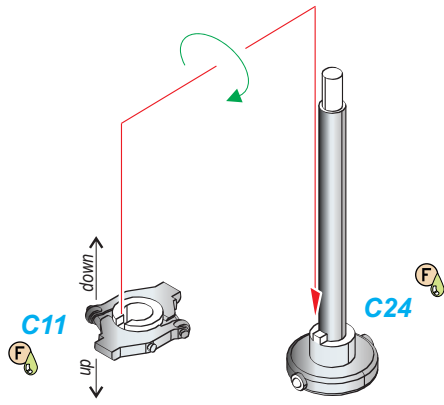
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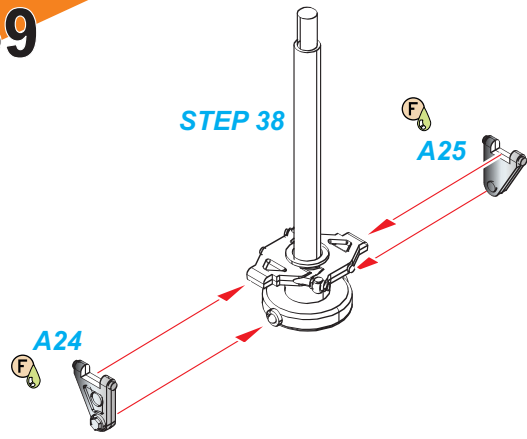
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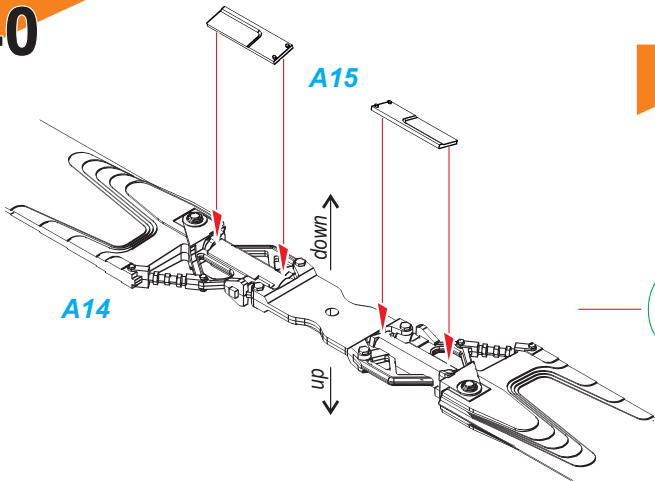
38



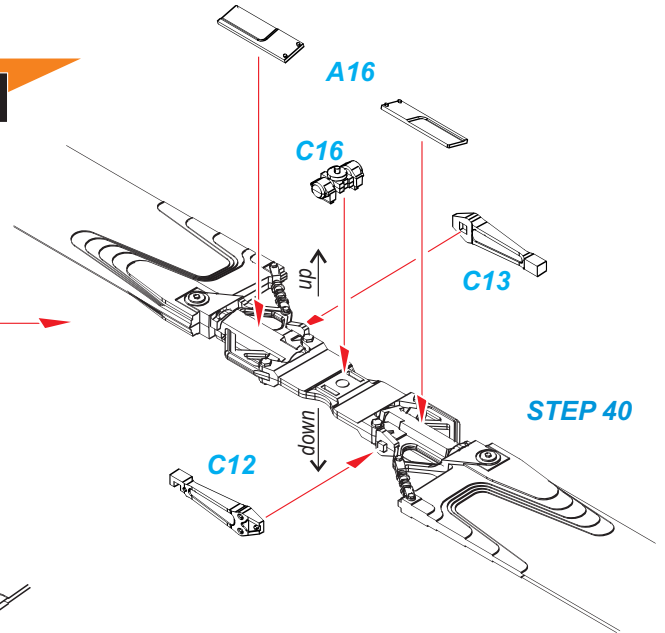
39



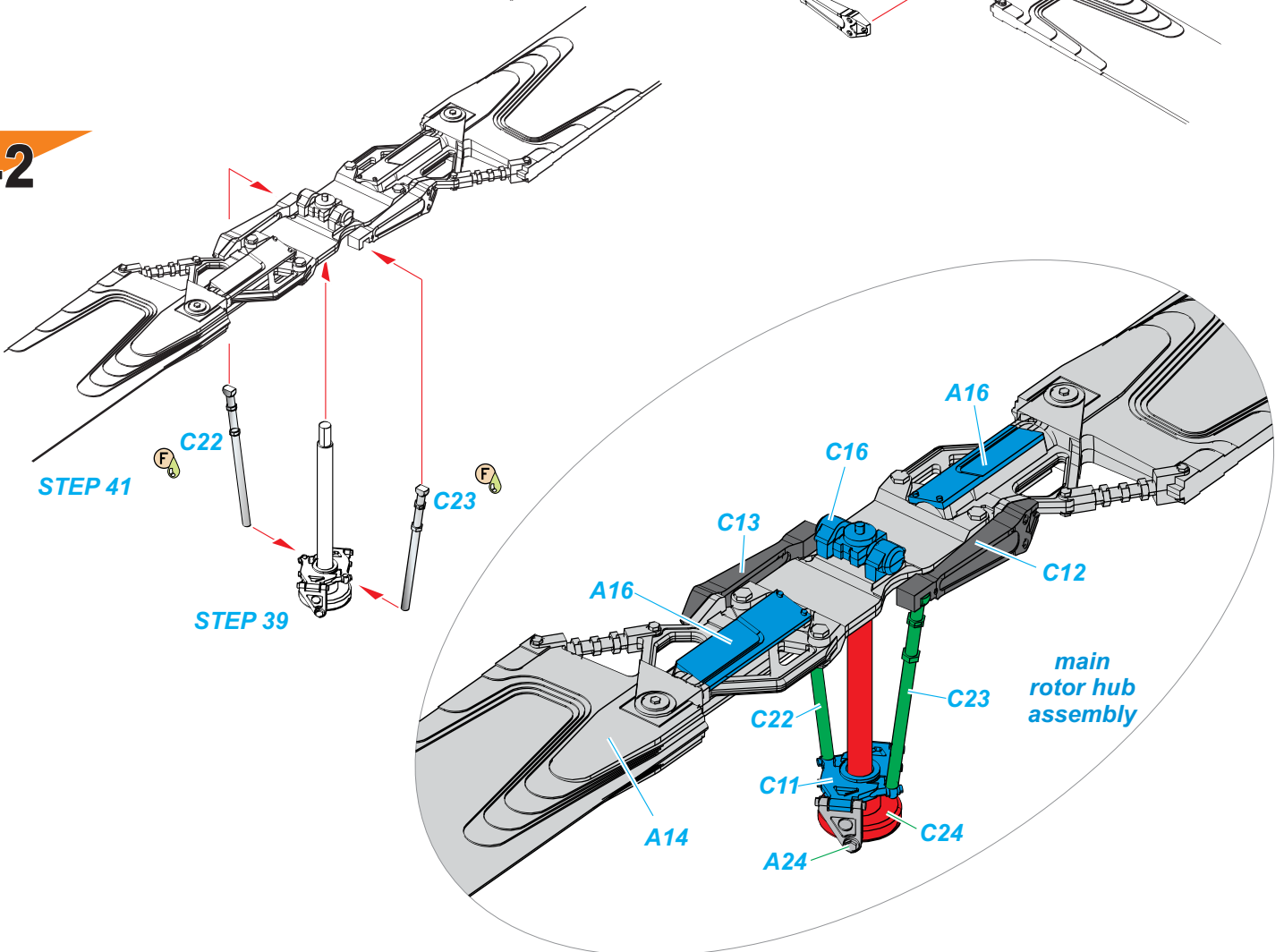
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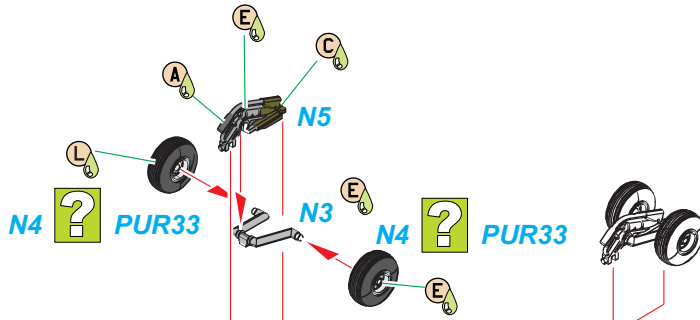
41



42

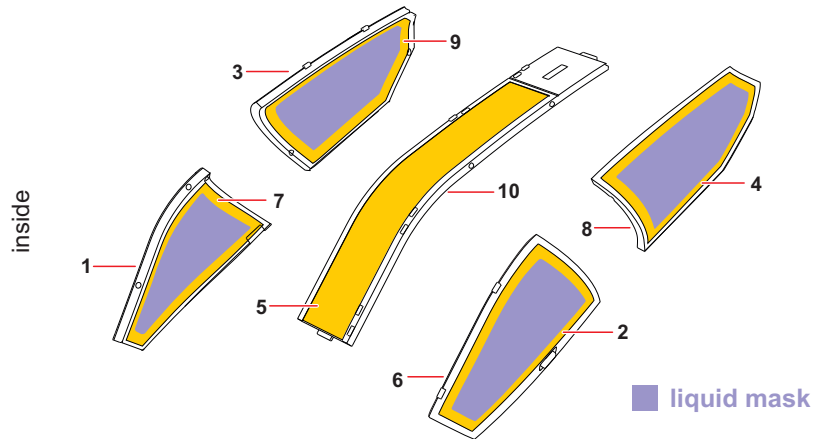
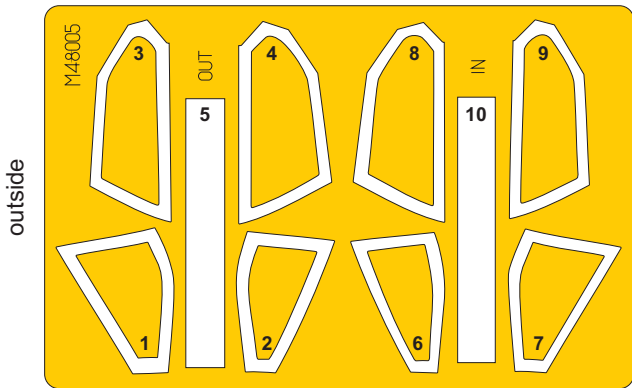
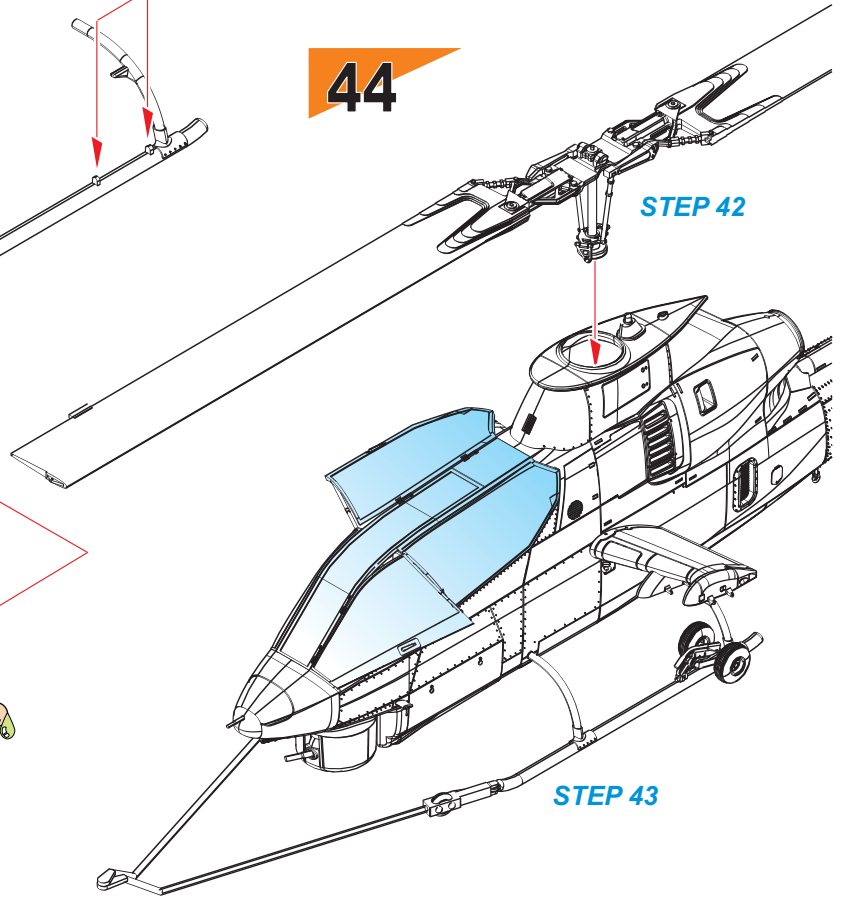
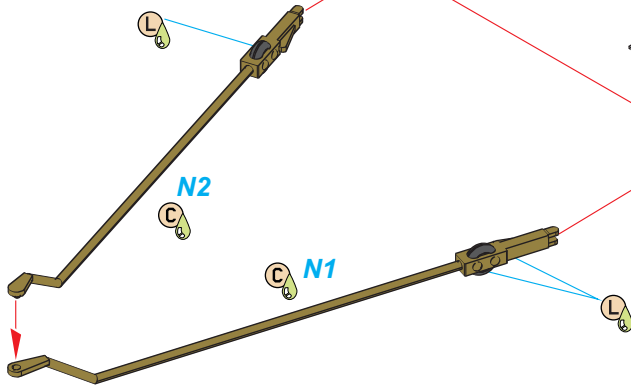


43

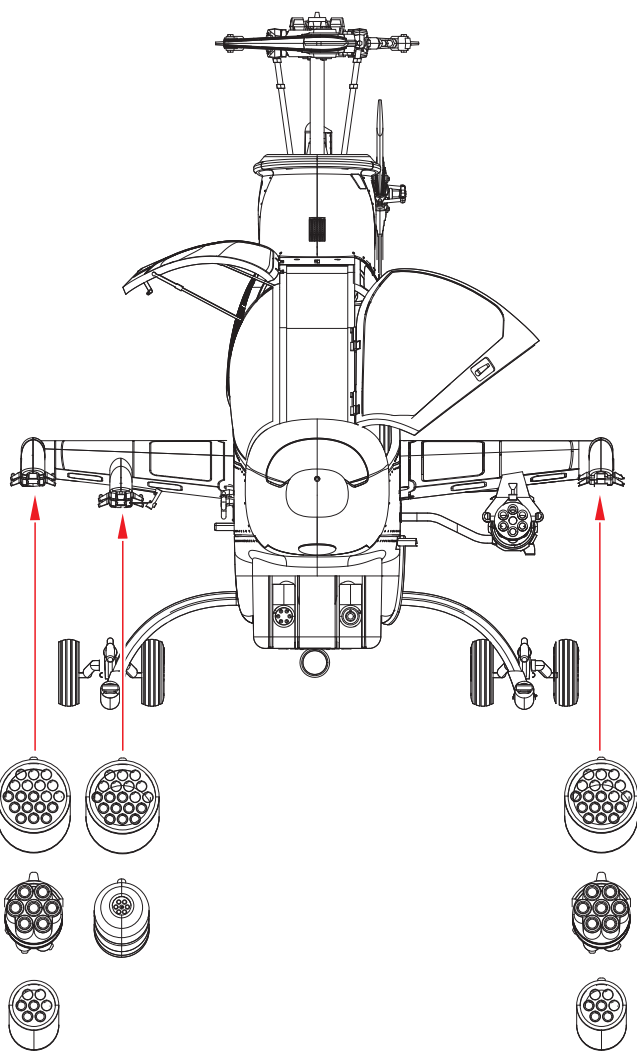
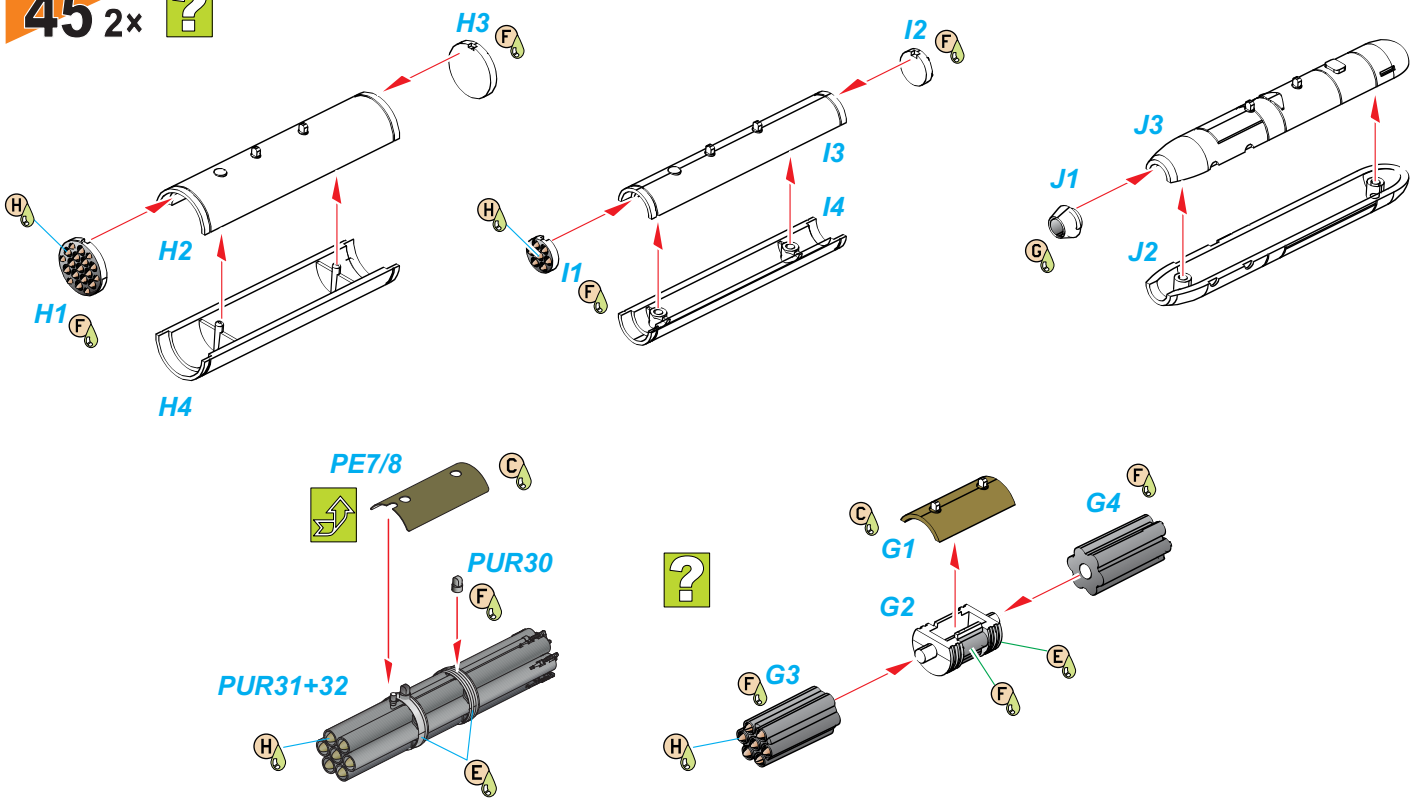


STEP 37  
(only skids  
shown for  
clarity)

44



45 2x ?



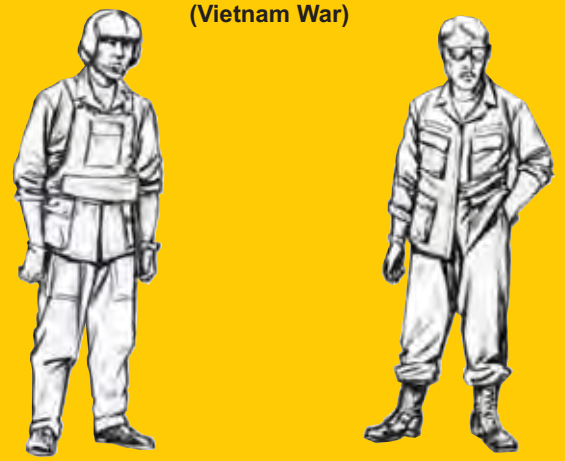
# CMK SET & FIGURES



1/48 4454  
**M35 Armament Subsystem**  
 Upgrade Set for AH-1G Cobra  
 for Special Hobby and ICM kits



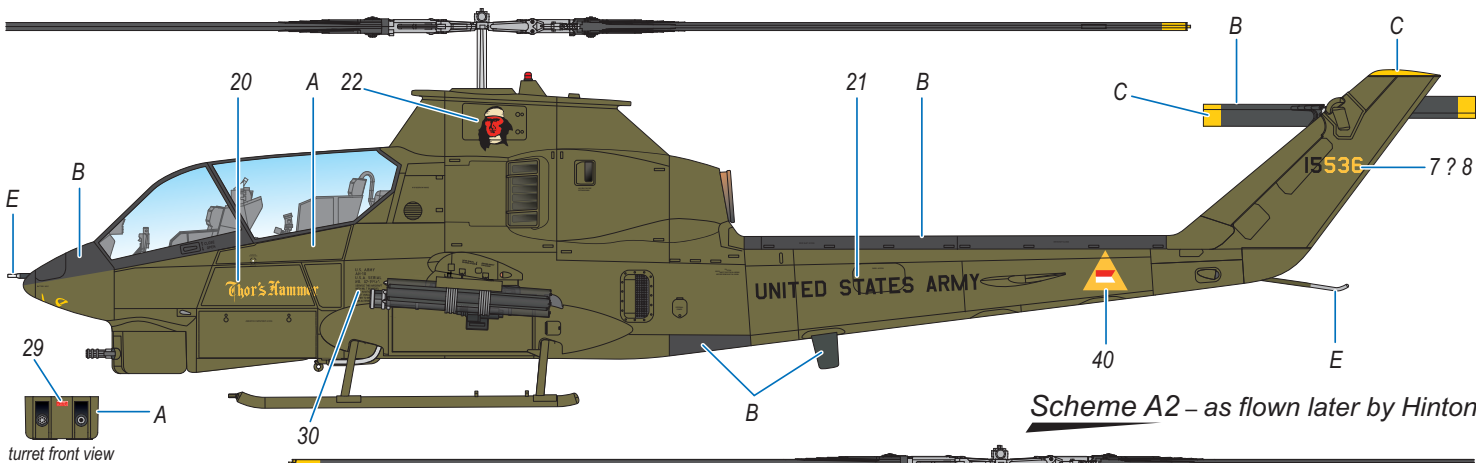
1/48 F48280  
**US Army AH-1 Pilot and Gunner**  
 (Vietnam War)



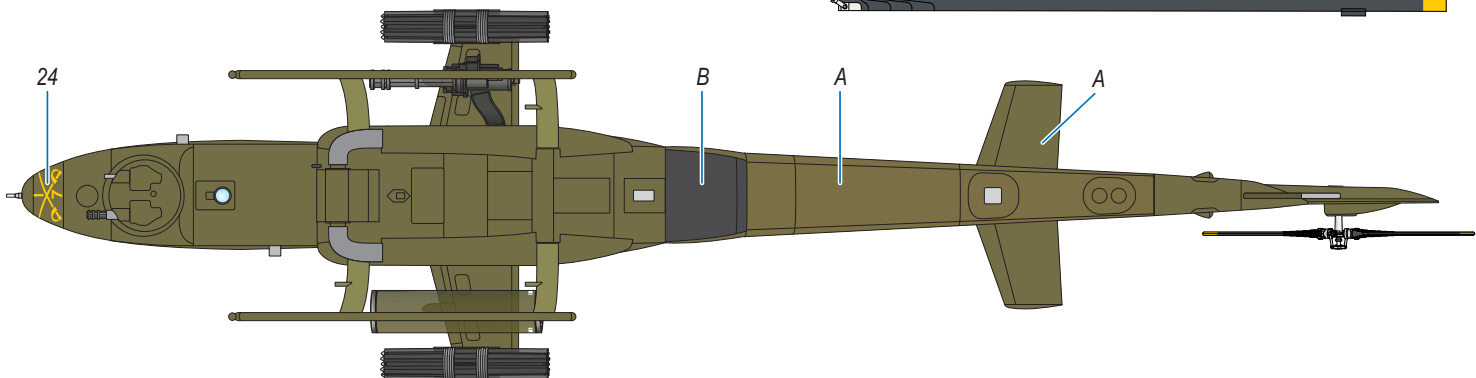
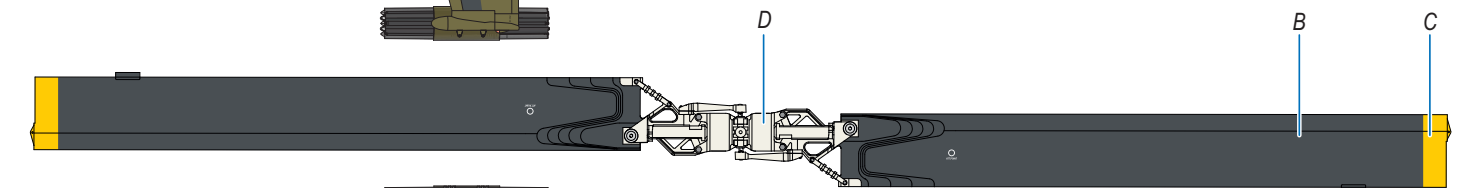
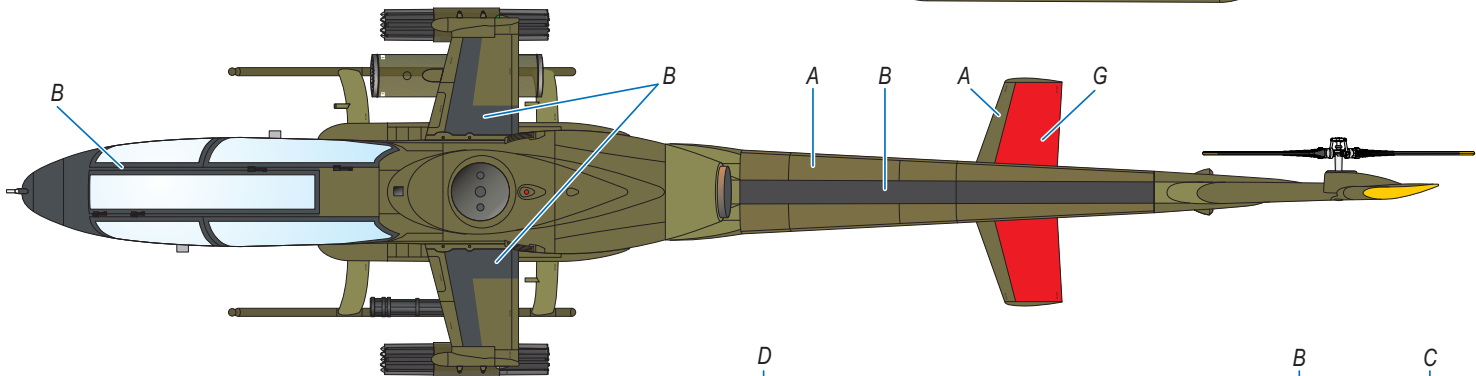
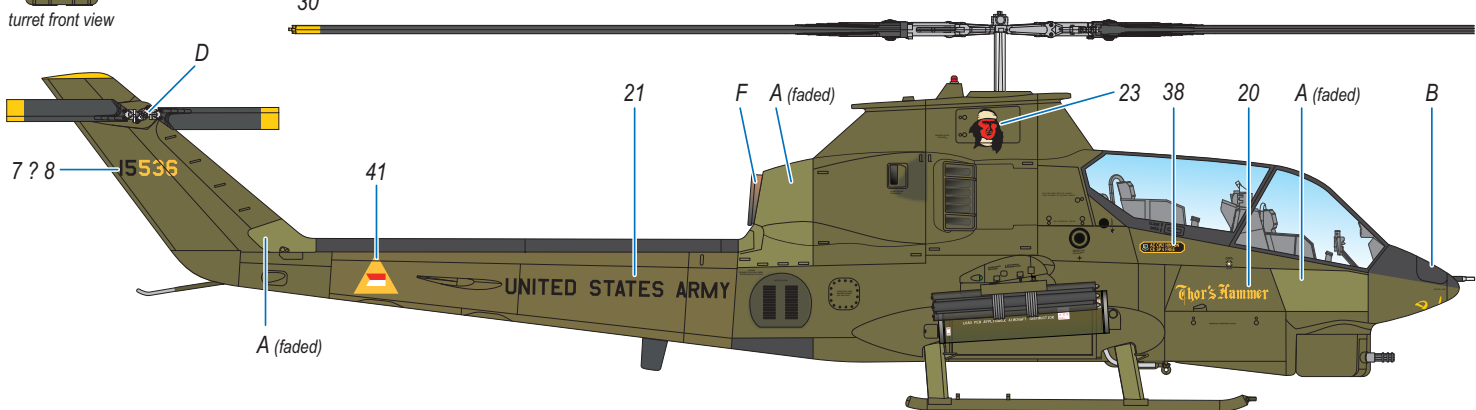
AH-1G, s/n 67-15536, Thor's Hammer, first flown by a crew of John Cattilini AC and Bruce Bottger CP/Gunner, later by CW2 Melton Lee Hinton of A-Troop, 7th Squadron, 1st Cavalry, Tra Vinh, Vietnam, 1971. Survived Vietnam from August 1968 to February 1972.

AH-1G sér. č.: 67-15536, Thor's Hammer, se strojem nejdříve létala osádka ve složení John Cattilini AC a Bruce Bottger CP/Gunner, později pak CW2 Melton Lee Hinton, A-Troop, 7th Squadron, 1st Cavalry, Tra Vinh, Vietnam, 1971. Stroj přežil nasazení ve Vietnamu mezi srpnem 1968 a únorem 1972.

**Scheme A1** – as flown by Cattilini and Bottger (Cattilini is credited as the originator of this ship's name and artwork)



**Scheme A2** – as flown later by Hinton



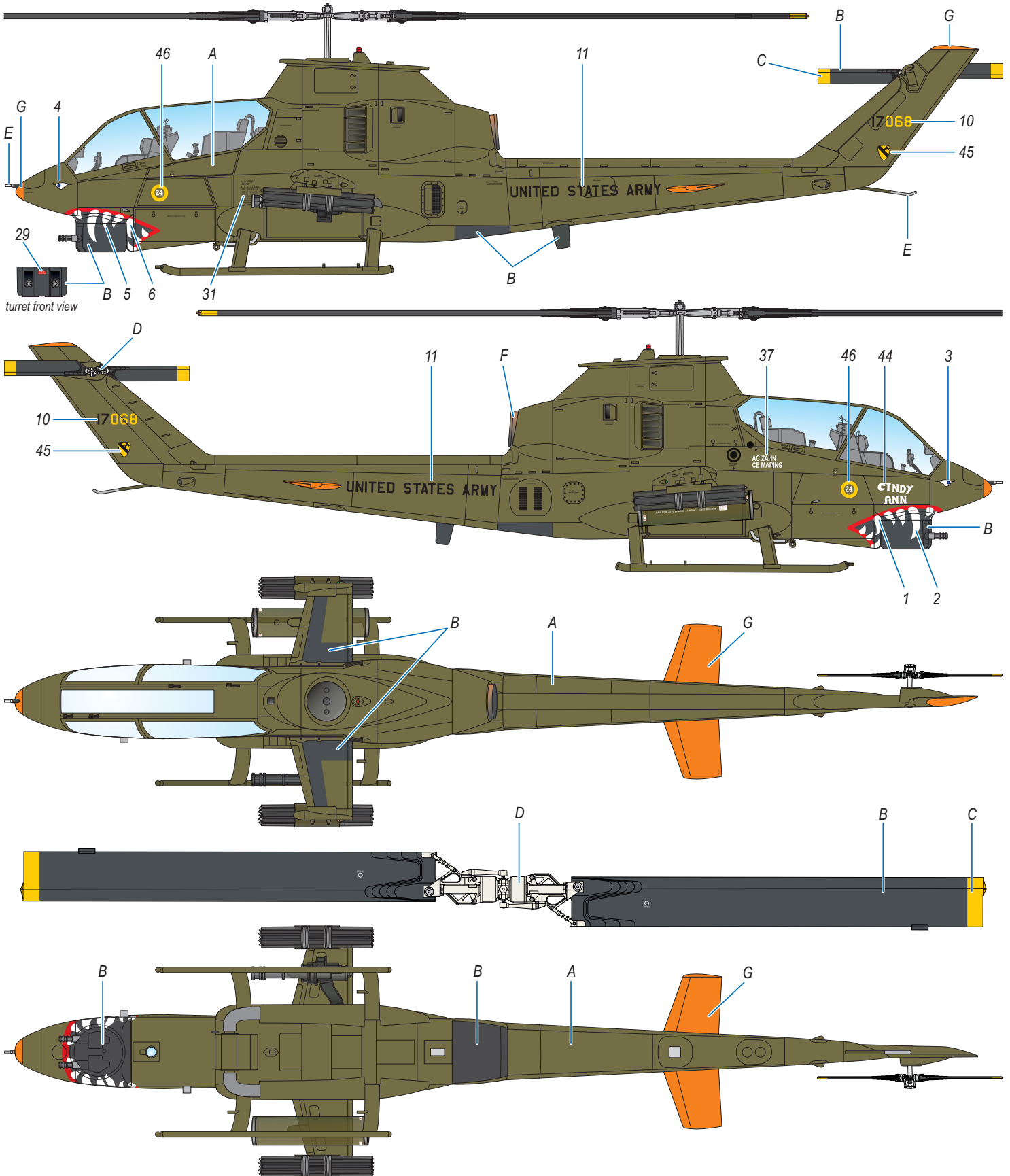
- |                                      |                                    |                                  |   |                                    |  |                                 |
|--------------------------------------|------------------------------------|----------------------------------|---|------------------------------------|--|---------------------------------|
| <b>A</b> Olive<br>Olivová<br>H52/C12 | <b>B</b> Black<br>Černá<br>H12/C33 | <b>C</b> Yellow<br>Žlutá<br>H/C4 | <b>D</b> Light Gray<br>Světle šedá<br>H21/C69 | <b>E</b> NMF<br>Barva kovu<br>H/C8 | <b>F</b> Burnt Metal<br>Opálený kov<br>H76/C61 | <b>G</b> Red<br>Červená<br>H/C3 |
|--------------------------------------|------------------------------------|----------------------------------|---|------------------------------------|--|---------------------------------|



AH-1G, s/n 68-17068, Cindy Ann, flown by CW2 Randy Zahn and SP4 Marshall Maring of C Troop, 1st Squadron, 9th Cavalry, Phuoc Vinh, Vietnam, August 1970.

AH-1G sér. č.: 68-17068, Cindy Ann, ve které létali CW2 Randy Zahn a SP4 Marshall Maring z C Troop, 1st Squadron, 9th Cavalry v Phuoc Vinh, Vietnam, srpen 1970.

**Scheme B**



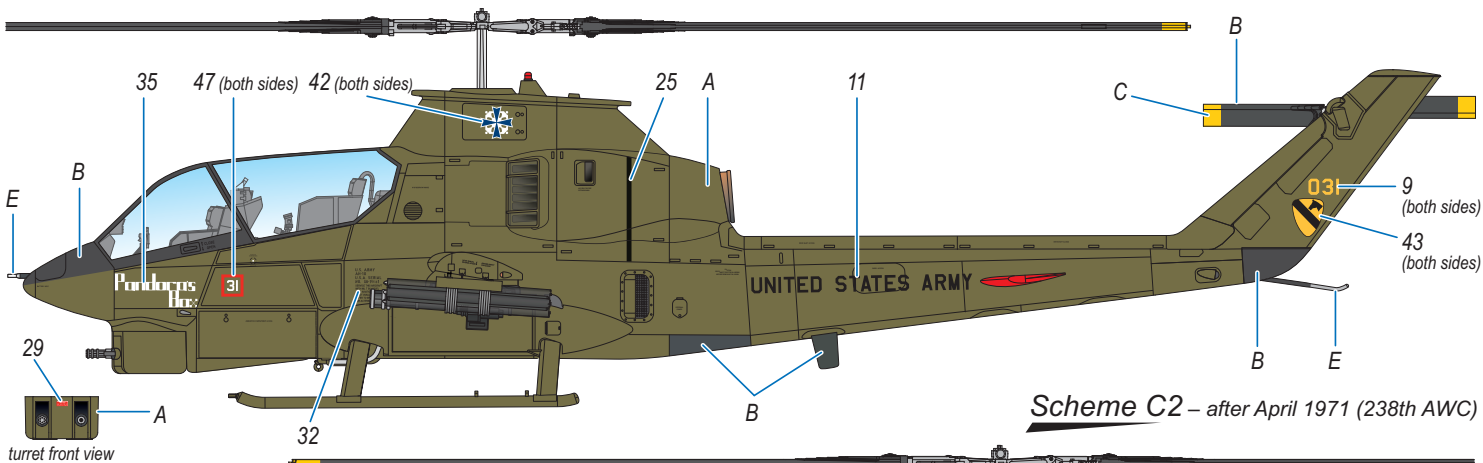
- |                                      |                                    |                                  |   |                                    |  |  |
|--------------------------------------|------------------------------------|----------------------------------|---|------------------------------------|--|--|
| <b>A</b> Olive<br>Olivová<br>H52/C12 | <b>B</b> Black<br>Černá<br>H12/C33 | <b>C</b> Yellow<br>Žlutá<br>H/C4 | <b>D</b> Light Gray<br>Světle šedá<br>H21/C69 | <b>E</b> NMF<br>Barva kovu<br>H/C8 | <b>F</b> Burnt Metal<br>Opálený kov<br>H76/C61 | <b>G</b> Orange<br>Oranžová<br>H14/C59 |
|--------------------------------------|------------------------------------|----------------------------------|---|------------------------------------|--|--|



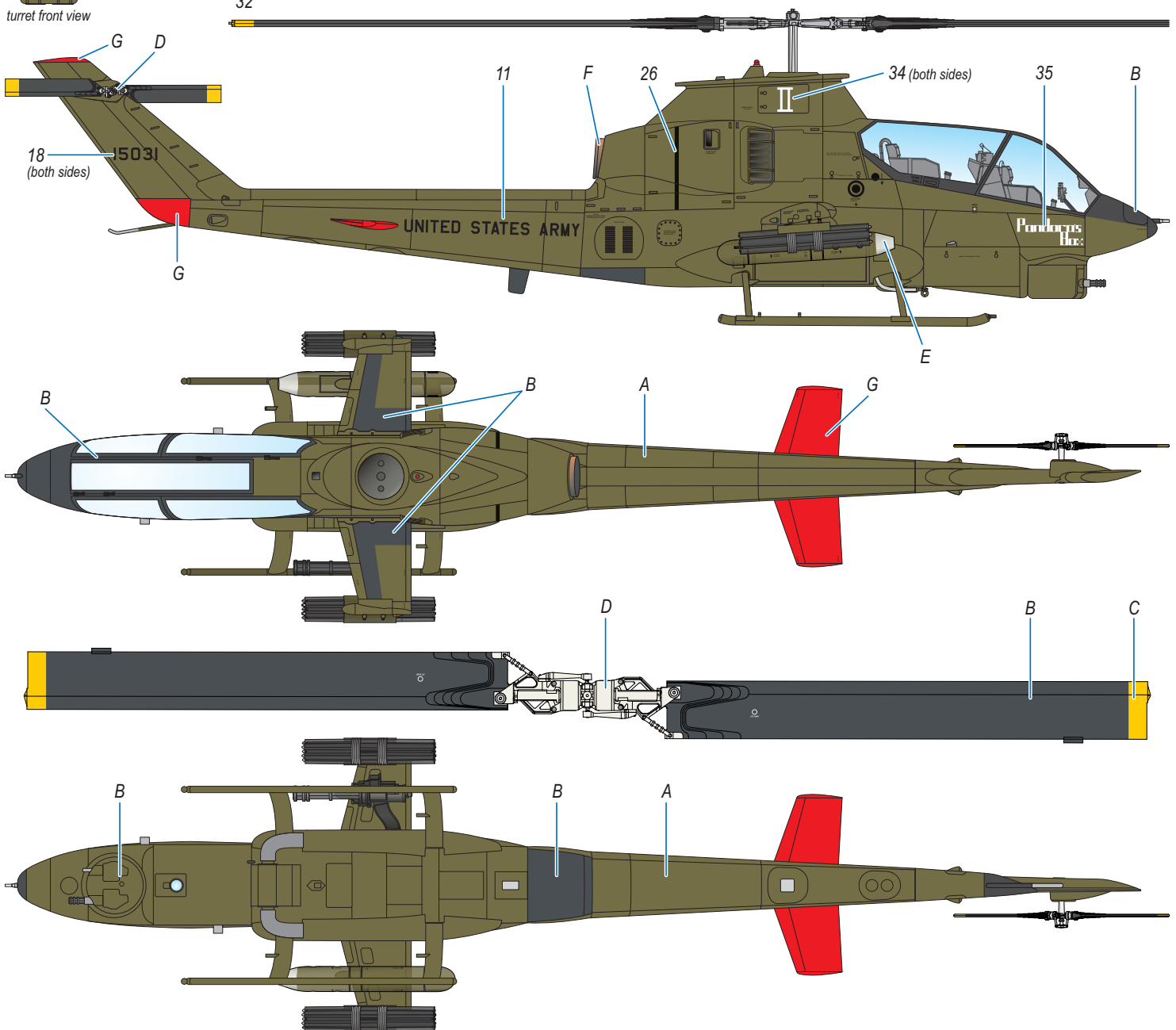
AH-1G, s/n 68-15031, Pandora's Box flown by CW2 Wayne Richardson, 2/20 ARA – Aerial Rocket Artillery, Vietnam, until April 1971. Later transferred to the 238th AWC – Aerial Weapons Company and flown by CW2 Gene Kennedy in Summer 1971.

AH-1G sér. č.: 68-15031 Pandora's Box CW2 Wayne Richardsona z 2/20 ARA (Aerial Rocket Artillery), Vietnam. V období po dubnu 1971 byla přearazena k 238. AWC (Aerial Weapons Company) a v létě 1971 s ní létal CW2 Gene Kennedy.

**Scheme C1** – before April 1971 (2/20 ARA)



**Scheme C2** – after April 1971 (238th AWC)



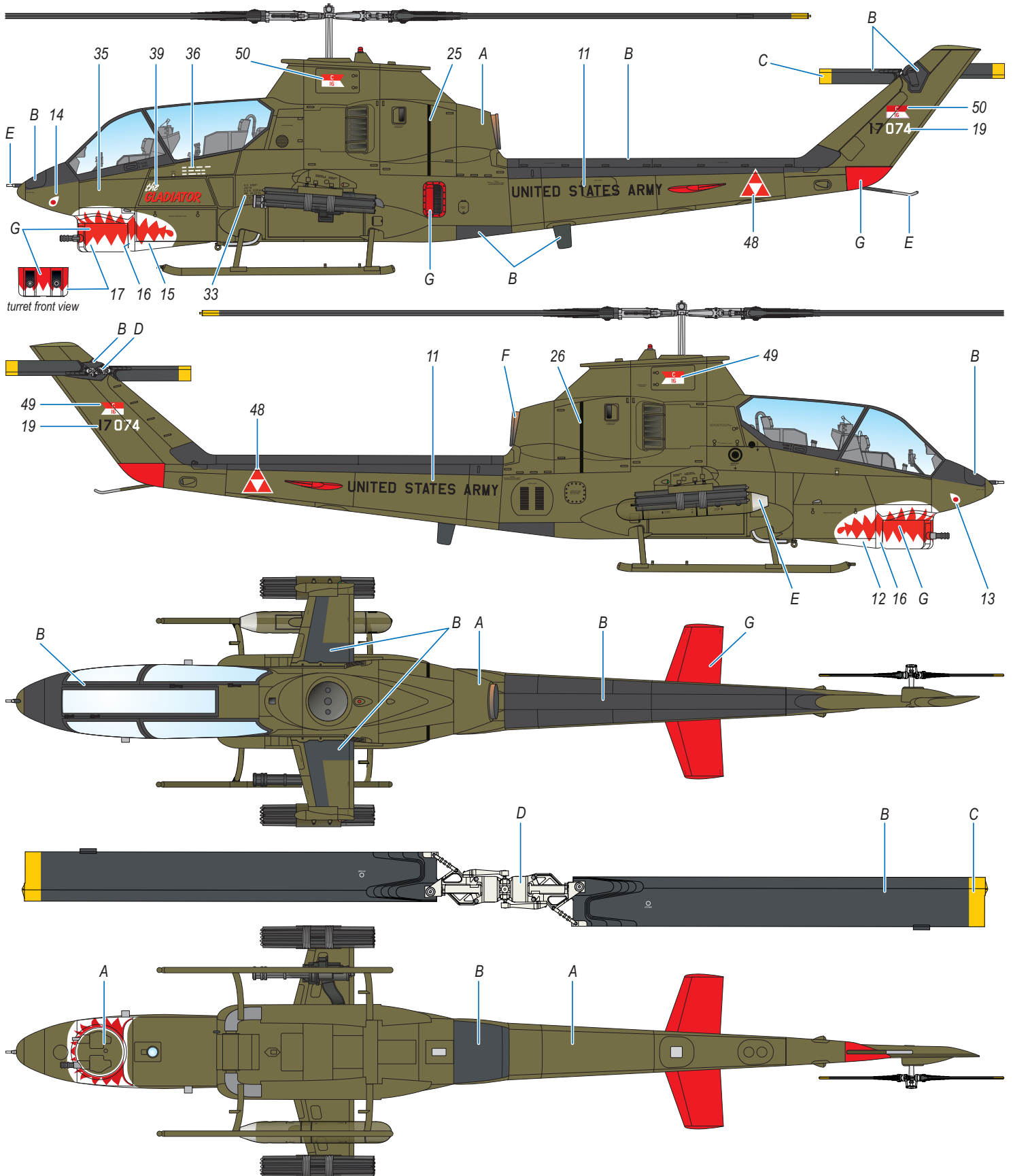
- |                                      |                                    |                                  |   |                                    |  |                                 |
|--------------------------------------|------------------------------------|----------------------------------|---|------------------------------------|--|---------------------------------|
| <b>A</b> Olive<br>Olivová<br>H52/C12 | <b>B</b> Black<br>Černá<br>H12/C33 | <b>C</b> Yellow<br>Žlutá<br>H/C4 | <b>D</b> Light Gray<br>Světle šedá<br>H21/C69 | <b>E</b> NMF<br>Barva kovu<br>H/C8 | <b>F</b> Burnt Metal<br>Opálený kov<br>H76/C61 | <b>G</b> Red<br>Červená<br>H/C3 |
|--------------------------------------|------------------------------------|----------------------------------|---|------------------------------------|--|---------------------------------|



AH-1G, s/n 68-17074, the Gladiator, C/16 Cav, flown by WO1 Dan Shaver, Can Tho, January 1972.

AH-1G sér. č.: 68-17074, the Gladiator ve které létal WO1 Dan Shaver z C/16 Cav v Can Tho, leden 1972.

**Scheme D**

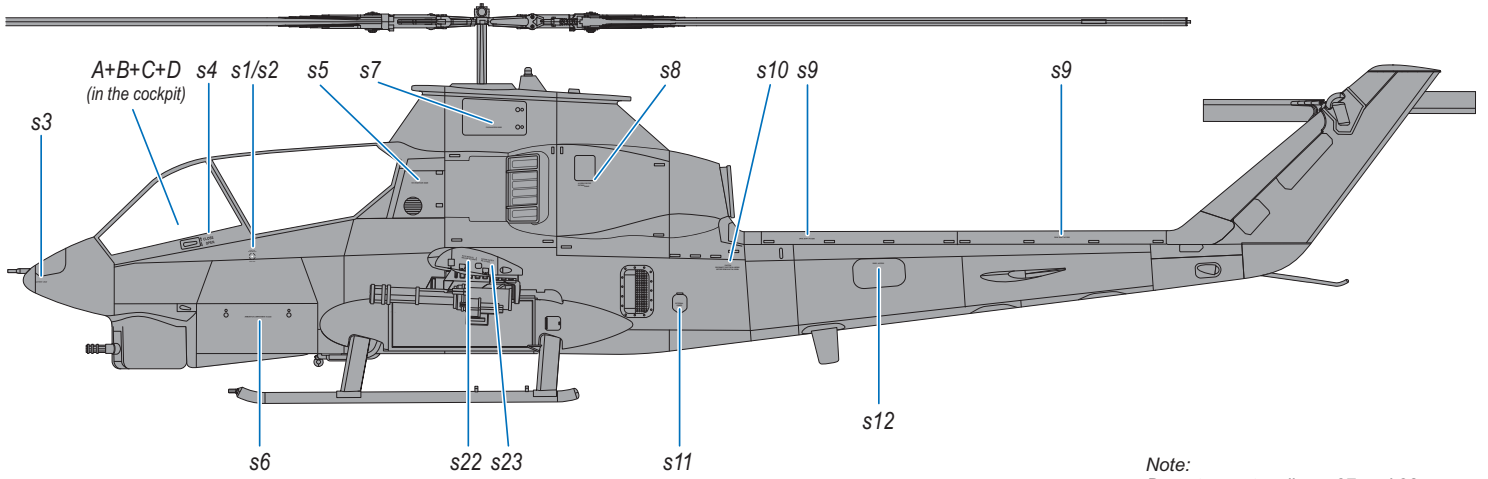


- |                                      |                                    |                                  |   |                                   |  |                                 |
|--------------------------------------|------------------------------------|----------------------------------|---|-----------------------------------|--|---------------------------------|
| <b>A</b> Olive<br>Olivová<br>H52/C12 | <b>B</b> Black<br>Černá<br>H12/C33 | <b>C</b> Yellow<br>Žlutá<br>H/C4 | <b>D</b> Light Gray<br>Světle šedá<br>H21/C69 | <b>E</b> NMF<br>Barva kov<br>H/C8 | <b>F</b> Burnt Metal<br>Opálený kov<br>H76/C61 | <b>G</b> Red<br>Červená<br>H/C3 |
|--------------------------------------|------------------------------------|----------------------------------|---|-----------------------------------|--|---------------------------------|



# Universal Stencil Placement Scheme

(Some stencils may have not been used on your chosen machine, always check marking schemes)



Note:  
Do not use stencils no.27 and 28.

