



ROC Air Force F-5F & RF-5E Chung-Cheng Tigergazer

中華民國空軍 F-5F 中正號戰鬥教練機 與 RF-5E 虎瞰式戰術偵察機

為了滿足盟國國防的需要，1970年諾斯洛普公司的F-5E贏得美國空軍提出的「國際戰鬥機」計畫。1973年第一架量產的F-5E交付美國空軍，為訂購F-5E的國家種子飛行員展開訓練。1974年起中華民國空軍與諾斯洛普公司合作，取得自行裝配生產F-5E與雙座型F-5F的授權。至1986年為止共生產了308架F-5E/F，佔全球使用數量的1/4，生產期間在電子系統與氣動力上還陸續地進行了改良。1996年又將7架較新的F-5E委由新加坡科技宇航公司改裝成RF-5E，取代RF-104G所負責的偵察任務。

1990年代在F-CK-1、F-16 A/B Block 20、幻象2000-5等次一世的戰鬥機陸續進入中華民國空軍服役之後，F-5E/F僅保留在臺灣東部的空軍基地，全面退居二線支援的角色。1981年起位於臺東基地的四十六中隊(假想敵中隊)開始以F-5E/F替換F-5A/B，模擬米格二十一的性能與其它戰鬥部隊進行對抗訓練。但隨著F-5E/F的性能逐漸不能負擔假想敵的功能，在2005年四十六中隊解除了模擬假想敵的任務，轉為一般戰術訓練的工作。解除假想敵任務的F-5E/F經過特許，仍然保留了其中八架原本的特殊塗裝。而負擔偵察照相任務的RF-5E，也在同年由原本的桃園基地被改編進入花蓮基地的第十二中隊。

中華民國空軍自2011年起，包含仍在服役的四十六架F-5E/F與RF-5E在內，在主要作戰飛機上均降低了國徽、裝備序號及單位標幟的色彩彩度，以達到更佳的隱蔽效果，而這批F-5系列戰鬥機預計將在2026年前除役完畢。

In 1970, the Northrop Corporation with its F-5E Tiger II, won the contract for the IFA project (International Fighter Aircraft), which was proposed by the USAF in order to satisfy the needs of allied nations. The first production F-5E was delivered to the USAF in 1973 and the transitional pilot training commenced for those nations which procured the F-5Es. In the following year AIDC of the Republic of China, Taiwan, started building F-5E's and two-seater F-5F's under license. By 1986, a total of 308 F-5E and F-5F airframes were produced. This figure marked a quarter of the global production of such aircraft. Within the period of the AIDC production, many refinements were implemented to the avionics and aerodynamics of the airframe. In 1996, seven low time airframes were taken to ST Engineering in Singapore to be modified into RF-5E in order to replace the aging RF-104G then in the ROCAF reconnaissance service.

During the 1990's, newer generations of fighters such as F-CK-1, F-16A/B BLOCK 20, and Mirage 2000-5 gradually entered ROCAF service. The fleet of F-5E/F were subsequently allocated to the eastern part of Taiwan and served in the secondary support role. Beginning in 1981, the 46th Fighter Squadron (The Aggressor) received the new F-5E/Fs to replace their aging fleet of F-5A/Bs and thus to continue the role as the "foe" when simulating the MiG_21 in air combat training. However as time passes, the performance of the F-5E/F can no longer keep up with the newer generation of opponent fighters it is to simulate. By 2005, the 46th squadron ended the F-5E/F's sorties as a simulated enemy aircraft and became a basic tactical trainer unit. Subsequently, most airframes were repainted in the new low visibility scheme with the exception of 8 airframes which remained in their original "MiG" livery. The same year saw the transfer of RF-5Es from their base in Taoyuan (same base where the Black Cat Squadron operated U-2s from 1961 to 1974) to a new home on the eastern part of the island; Chiashan Air Force Base in Hualian, Taiwan. There, they will continue their reconnaissance service with the 12th Tactical Reconnaissance Squadron.

As of 2011, the remaining 46 F-5E/Fs and RF-5Es were painted with the toned down serial numbers, unit markings, and the R.O.C. sun-burst roundel to improve low visibility. All F-5s are to be decommissioned in ROCAF service by 2026.

Text edited by

John D. Miller, Ph.D.,

Owner Model Paint Solutions.com

連合国の防空の需要を満たすため、ノースロップ社のF-5Eは、1970年にアメリカ空軍の掲げた「国際戦闘機」(IFA)プロジェクトの契約を獲得しました。1973年、最初に量産されたF-5Eはアメリカ空軍に納入され、F-5Eを注文した各国のためのシードパイロットの訓練が開始されました。1974年以来、中華民国空軍はノースロップ社と協力し、F-5Eと複座式であるF-5Fのライセンス生産を開始しました。1986年までに、合計308機のF-5E/Fが生産され、世界での使用量の1/4を占めました。生産期間中、電子システムなどに継続的な改良が加えられました。1996年に、7機の新しいF-5EがSTエアロスペースによってRF-5Eに換装し、RF-104Gが実行していた偵察任務に取って代わりました。

F-CK-1、F-16 A/Bブロック20、ミラージュ2000-5、その他の次世代戦闘機が1990年代に中華民国空軍に配備された後、F-5E/Fは台湾東部の空軍基地に拠点を移し、二次支援の役割に徹しました。台東基地の第46飛行隊(仮想敵飛行隊)は1981年から、F-5A/BをF-5E/Fに置き換え、MiG-21の性能と似ていたため、他の戦闘部隊との対決訓練に使用されました。しかし、F-5E/Fの性能が次第に仮想敵の機能に耐えられなくなったため、第46飛行隊は、2005年に仮想敵シミュレートを取りやめ、一般的な戦術訓練に切り替えました。仮想敵の任務を取りやめたF-5E/Fは特別許可により、8機のみオリジナルな塗装が残されていました。偵察と撮影の任務を担当したRF-5Eも、同じ年に元の桃園基地から花蓮基地の第12飛行隊に改編されました。

2011年以来、中華民国空軍は、未だ現役の46機のF-5E/FとRF-5Eが使用されました。空軍のエムブレム、機体記号、部隊標識の色彩を下げることで理想な隠蔽効果を得られました。これらのF-5シリーズ戦闘機は2026年までに退役する予定です。

Illustration: 圖示說明



Method For Applying Decals:

1. Clean model surface with wet cloth.
2. Cut out of decal sheet and dip them in warm water for 15 seconds.
3. Place it on proper position on model.
4. Slide off base paper leaving decals on model with wet finger tip.
5. Move decals to exact position, push out excess water under decal with soft cotton cloth.
6. When decals get dry then complete.

水貼紙使用說明:

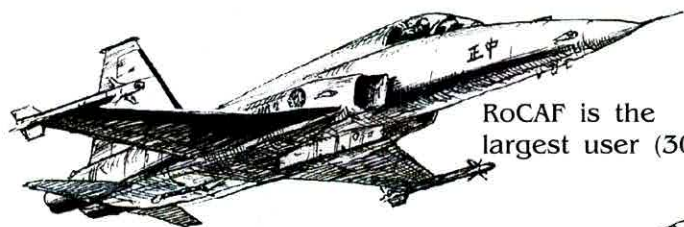
1. 將模型表面擦乾淨。
2. 將貼紙剪下泡入溫水中浸泡約15秒。
3. 將泡濕之貼紙取出置於欲貼處旁。
4. 用指尖輕推貼紙表面使其滑出底紙。
5. 將貼紙調整至適當位置並輕輕擦拭水分。
6. 待其自然乾燥後即完成。

Color list: 塗料表

Color	Brand	GSI Creos			Humbrol	AV Vallejo	Lifecolor
		Hobby Color	Mr.Color	Mr.Color Spray			
Aircraft gray	飛機灰	H57	C73		147	70906	UA41
Aluminum	鋁		MC218		27001-6	71062	
Brown FS30117	褐				186	71293	UA306
Brown FS30219	褐	H310	C310		119	71125	UA15
Burnt iron	燒鐵	H76	C61		53	77721	LC26
Clear blue	透明藍	H93	C50	S50		70844	
Clear red	透明紅	H90	C47	S47	1321	70934	
Dark sea gray	深海灰	H75	C25		27		UA93
Flat black	消光黑	H12	C33	S33	33	70950	LC02
Flat white	消光白	H11	C62	S62	34	70919	LC01
Gray FS36118	灰	H305	C305		125		UA22
Gray FS36320	灰	H307	C307		128	71120	UA27
Gray FS36375	淺幽灰	H308	C308		127	70990	UA26
Gray FS36622	灰	H311	C311		28		UA21
Green FS34079	綠	H309	C309		195		UA52
Green FS34102	綠	H303	C303		117	71289	UA02
Orange	橘	H14	C59		18	70956	LC55
Semi gloss black	半光黑		C92	S92	85	70855	
Silver	銀	H8	C8	S8	11	70997	LC74
Steel	黑鐵	H18	C28	S28	53	77712	LC76
Tire black	輪胎黑	H77	C137		85	70950	LC02

F-5 Fighter Family

F-5E is an excellent lightweight supersonic fighter. More than 3800 have been produced from 60s to 80s and saw services in more than 20 countries.



RoCAF is the largest user (308).

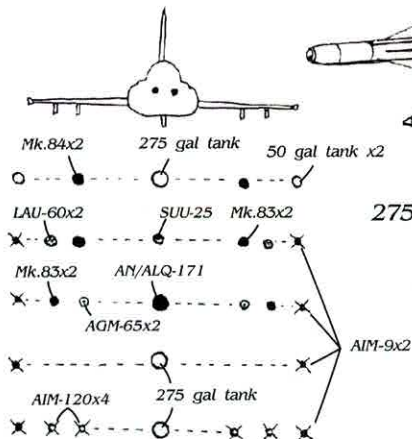
20mm M39A2 cannons x 2



AGM-65A Maverick air-to-ground tactical missile

907kg Mk.84 bomb

AIM-9 Sidewinder air-to-air missile



275 US gallons oil tank

150 US gallons oil tank

LAU-3/A 68mm Rocket

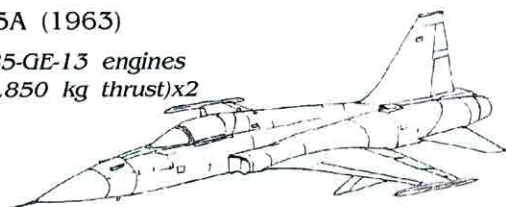
454kg Mk.83 bomb

CBU-24 Cluster Bomb

500lb bomb

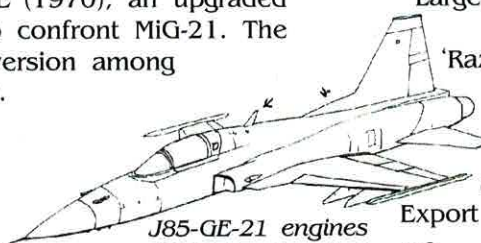
F-5A (1963)

J85-GE-13 engines (1,850 kg thrust)x2



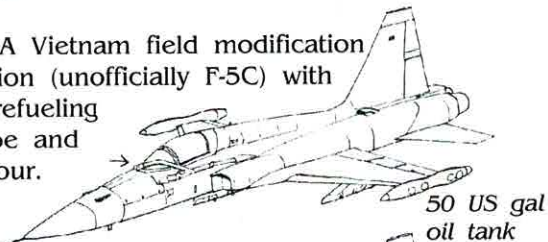
F-5E (1970), an upgraded version to confront MiG-21. The ultimate version among F-5 family.

Large antenna and 'Razor Back' tail fin can be seen on so called Export version'.



J85-GE-21 engines (2268 kg thrust)x2

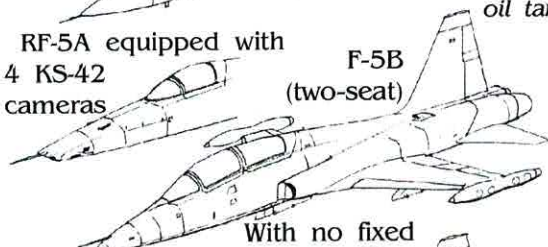
F-5A Vietnam field modification version (unofficially F-5C) with air refueling probe and armour.



50 US gal oil tank

RF-5A equipped with 4 KS-42 cameras

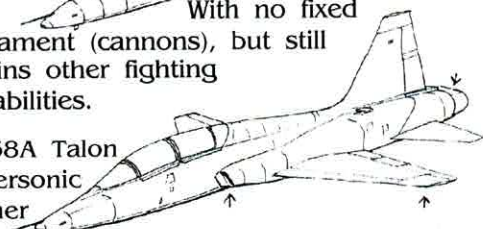
F-5B (two-seat)



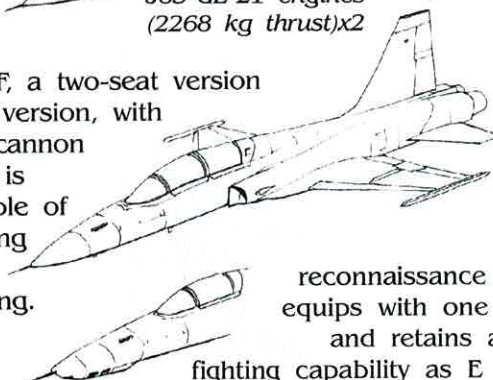
With no fixed armament (cannons), but still retains other fighting capabilities.

T-38A Talon supersonic trainer

J85-GE-13 engines (1,756 kg thrust)x2



F-5F, a two-seat version of E version, with one cannon only, is capable of fighting and training.



RF-5E reconnaissance aircraft, equips with one cannon and retains all other fighting capability as E version.

KS-87D1 oblique frame camera

F-20 (1982) is a greatly improved overall performance light fighter in order to extend F-5 series. Surpassing by F-16, the F-20 project was cancelled.



Equipped with one GE-F404F-GE-F1-GE turbofan engine (4,810 kg thrust)x1

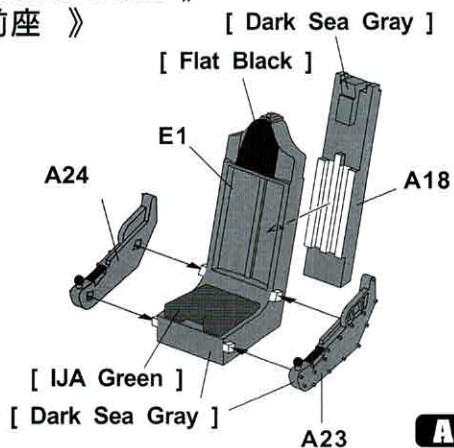
Shin. ueda
上田 信

F5F TIGER II

1

《 Front seat 》

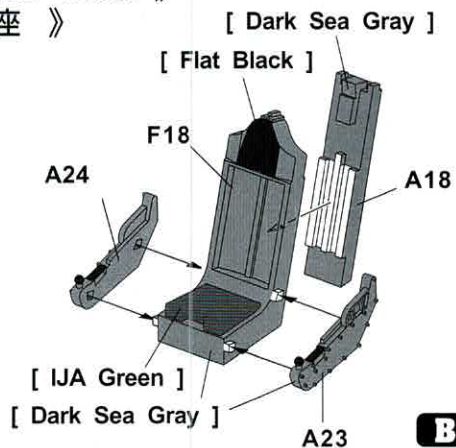
《 前座 》



A

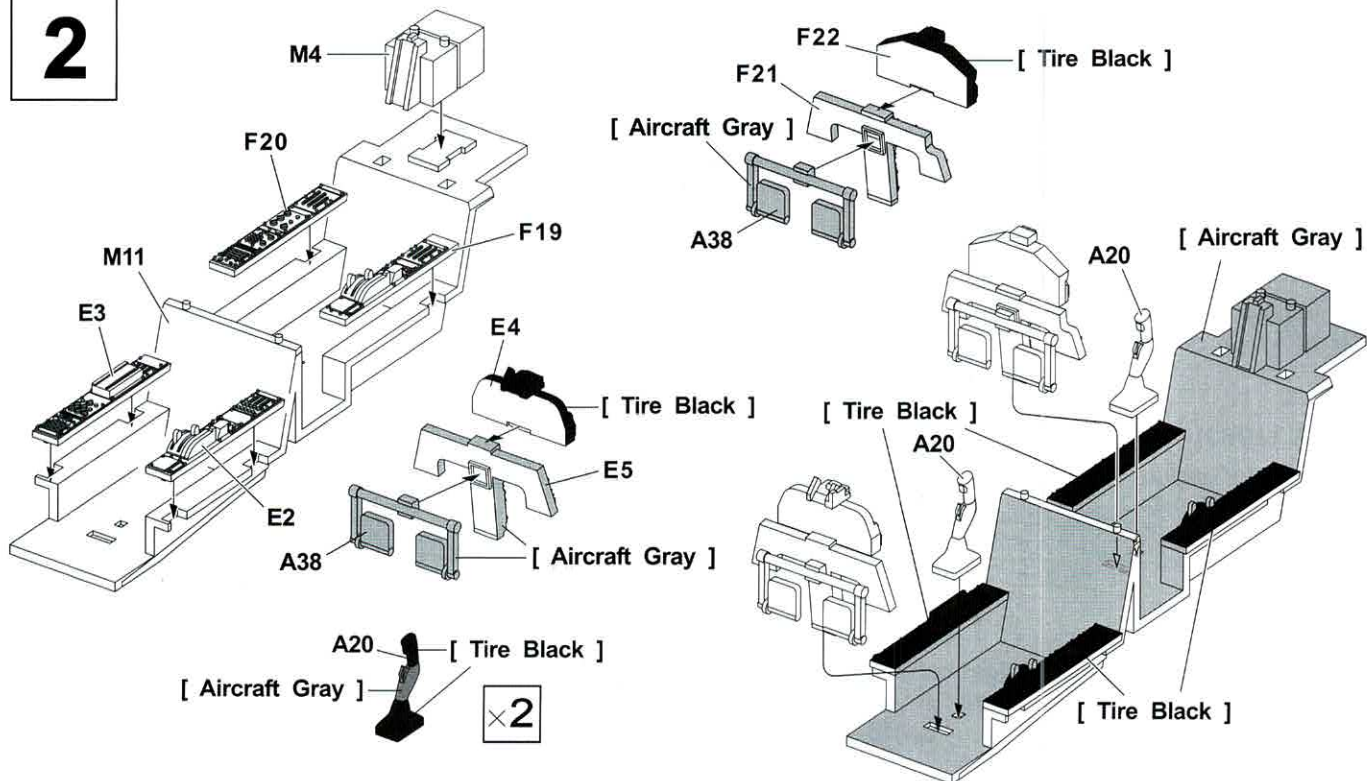
《 Rear seat 》

《 後座 》

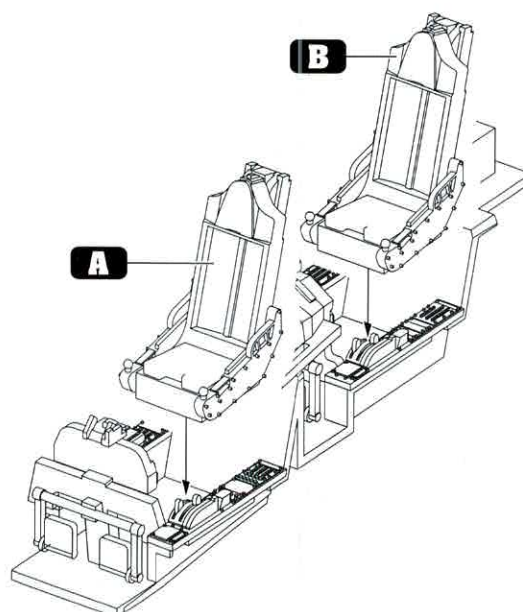
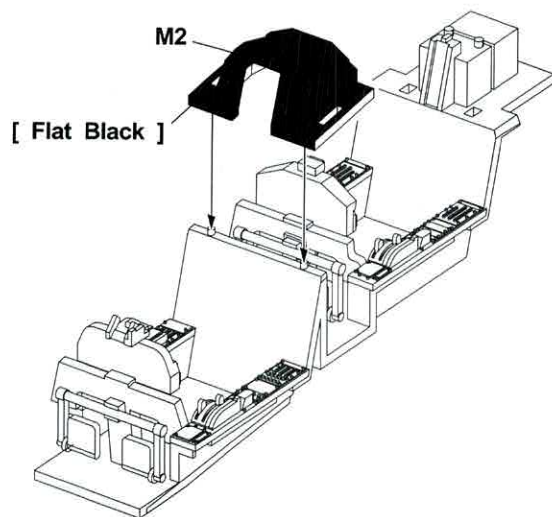


B

2

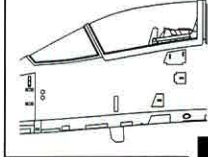
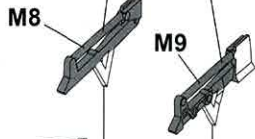


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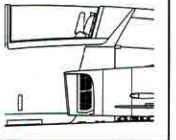
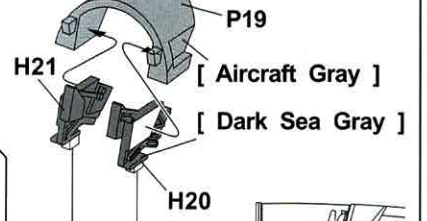


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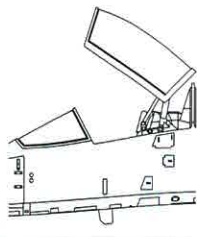
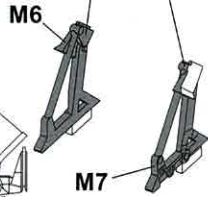
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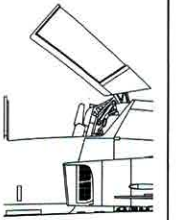
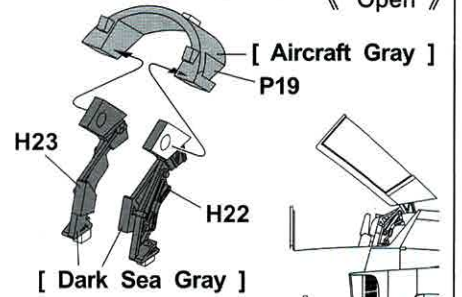
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[Dark Sea Gray]

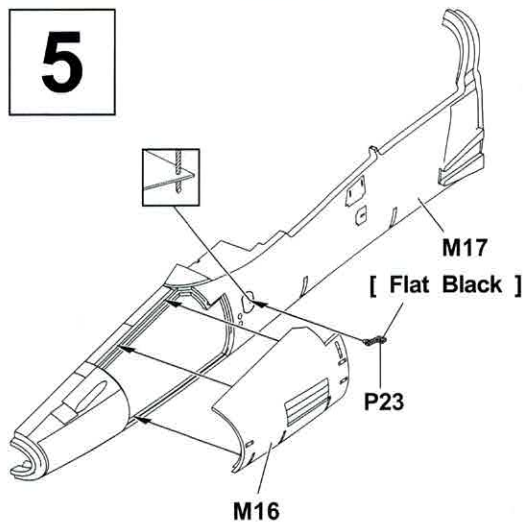


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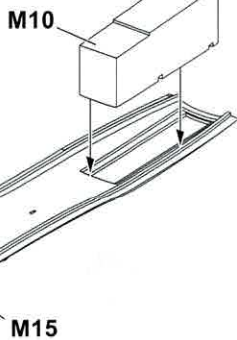
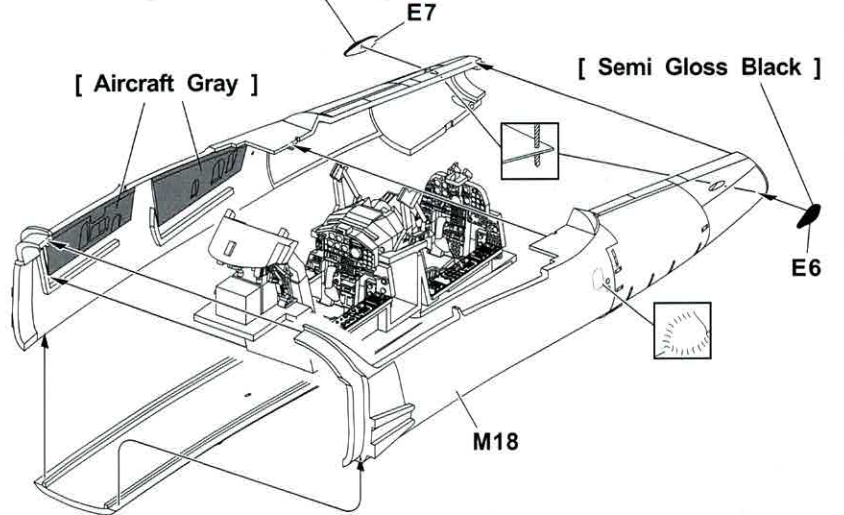
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[Semi Gloss Black]



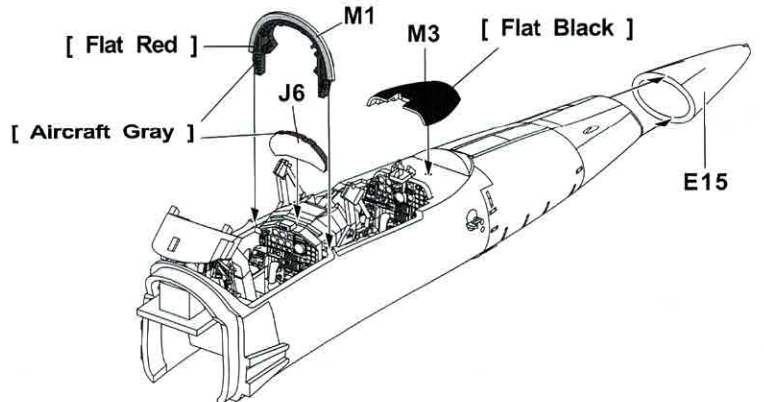
[Aircraft Gray]

[Semi Gloss Black]

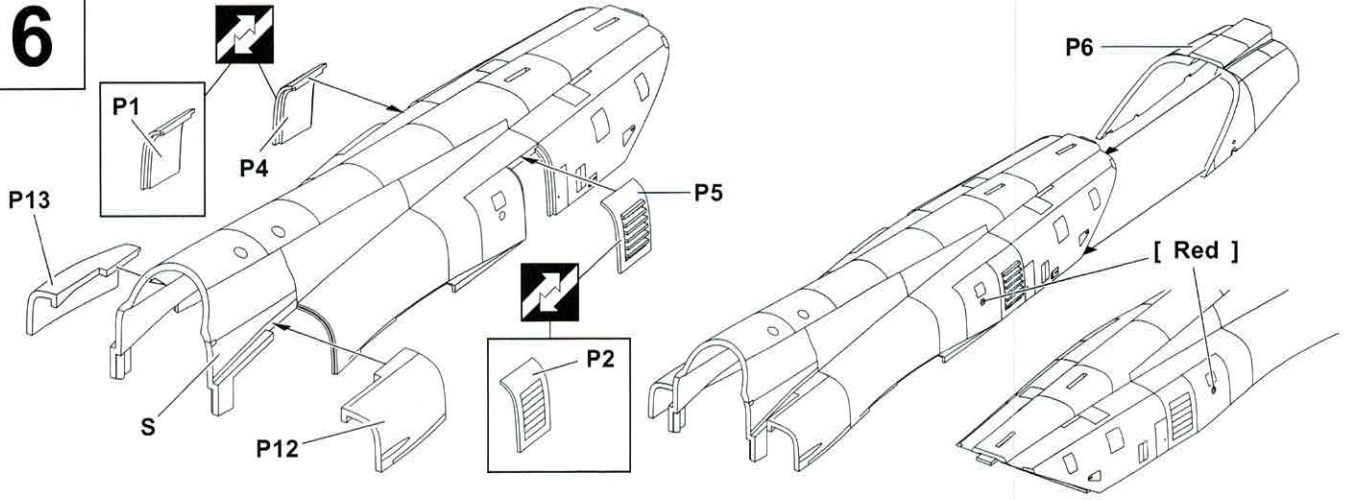


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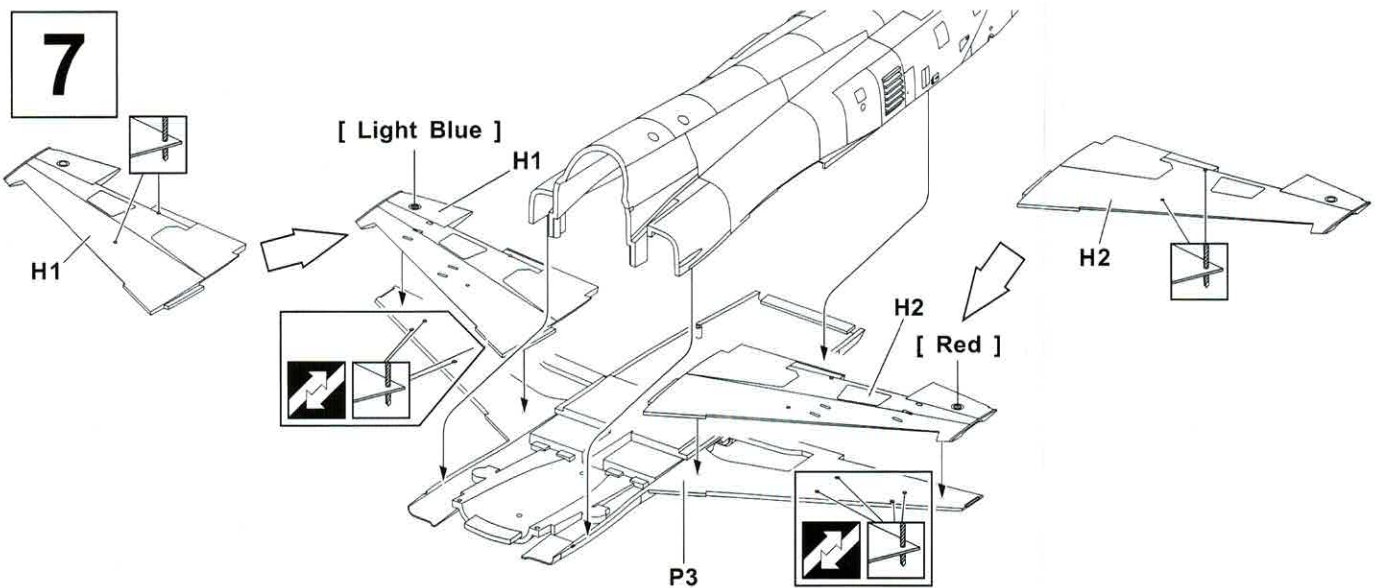
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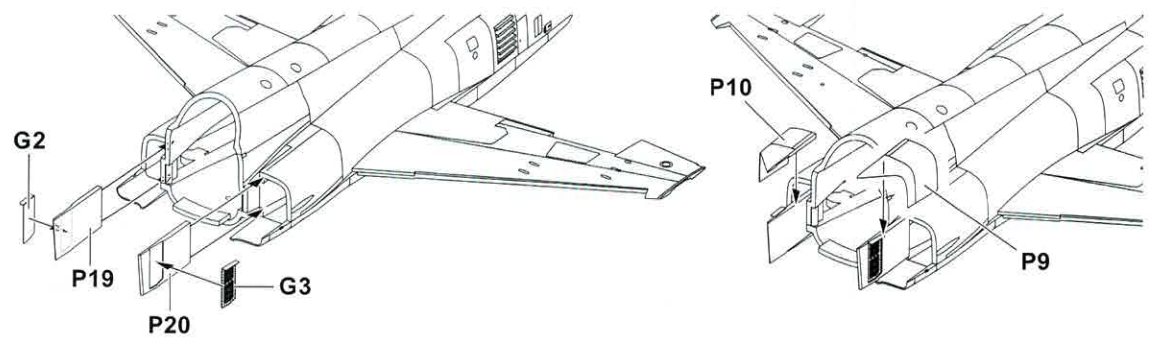
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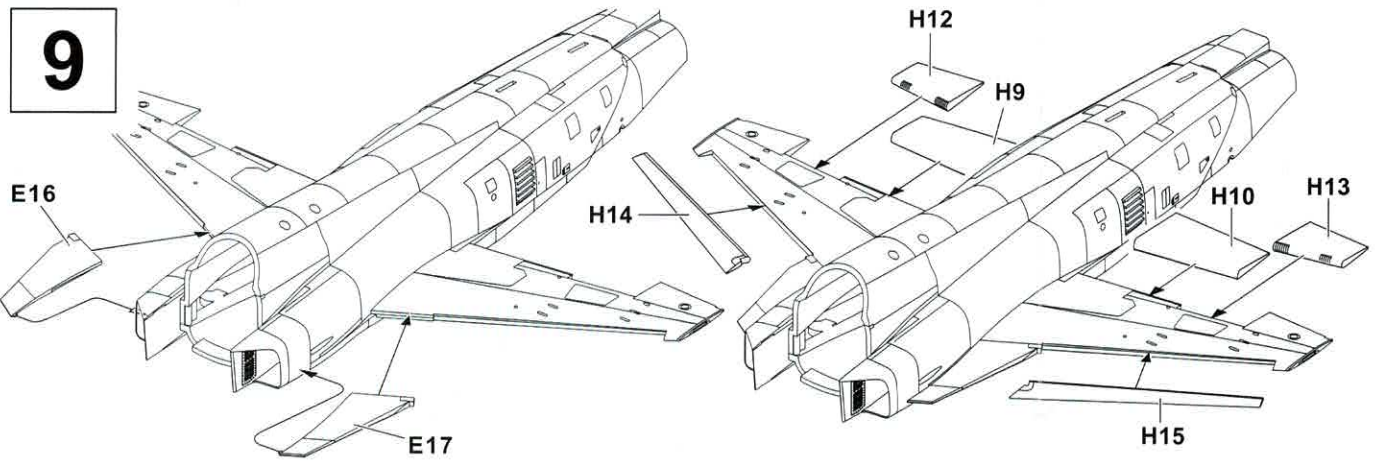
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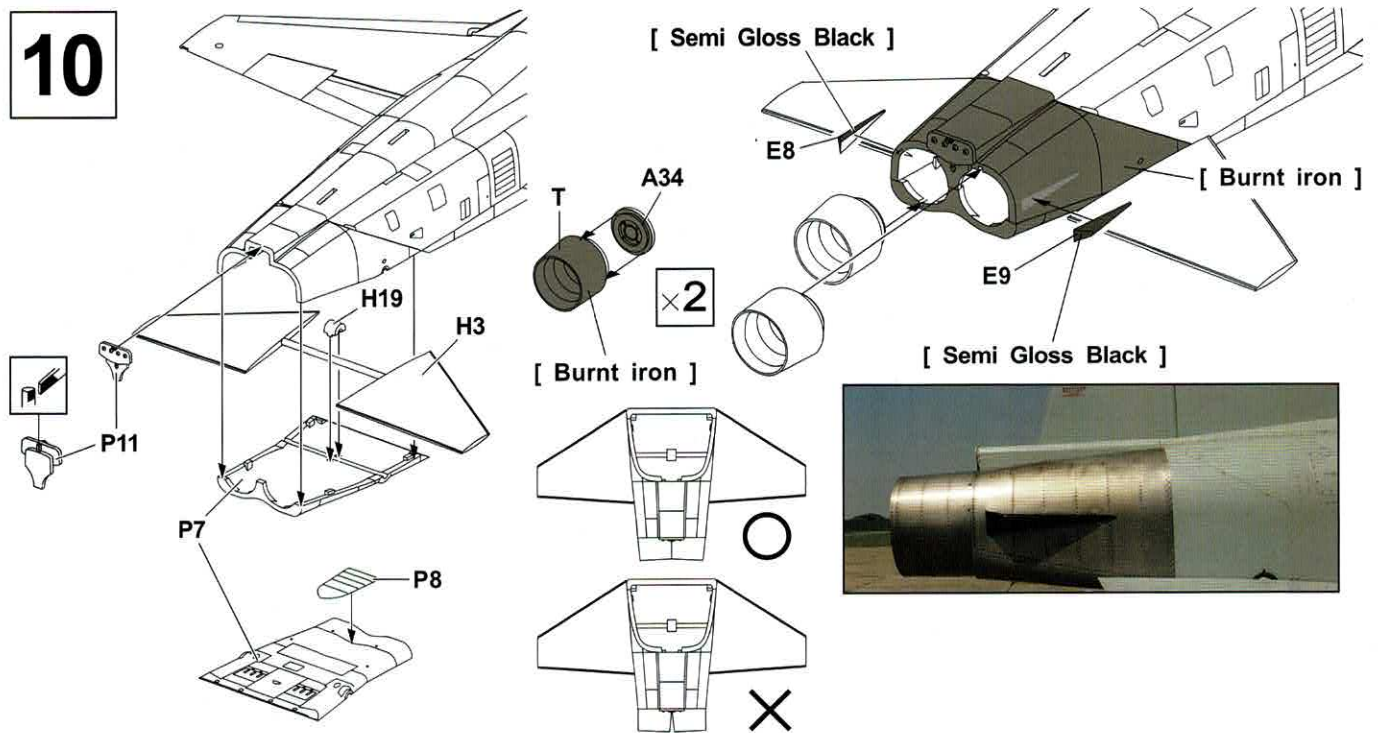
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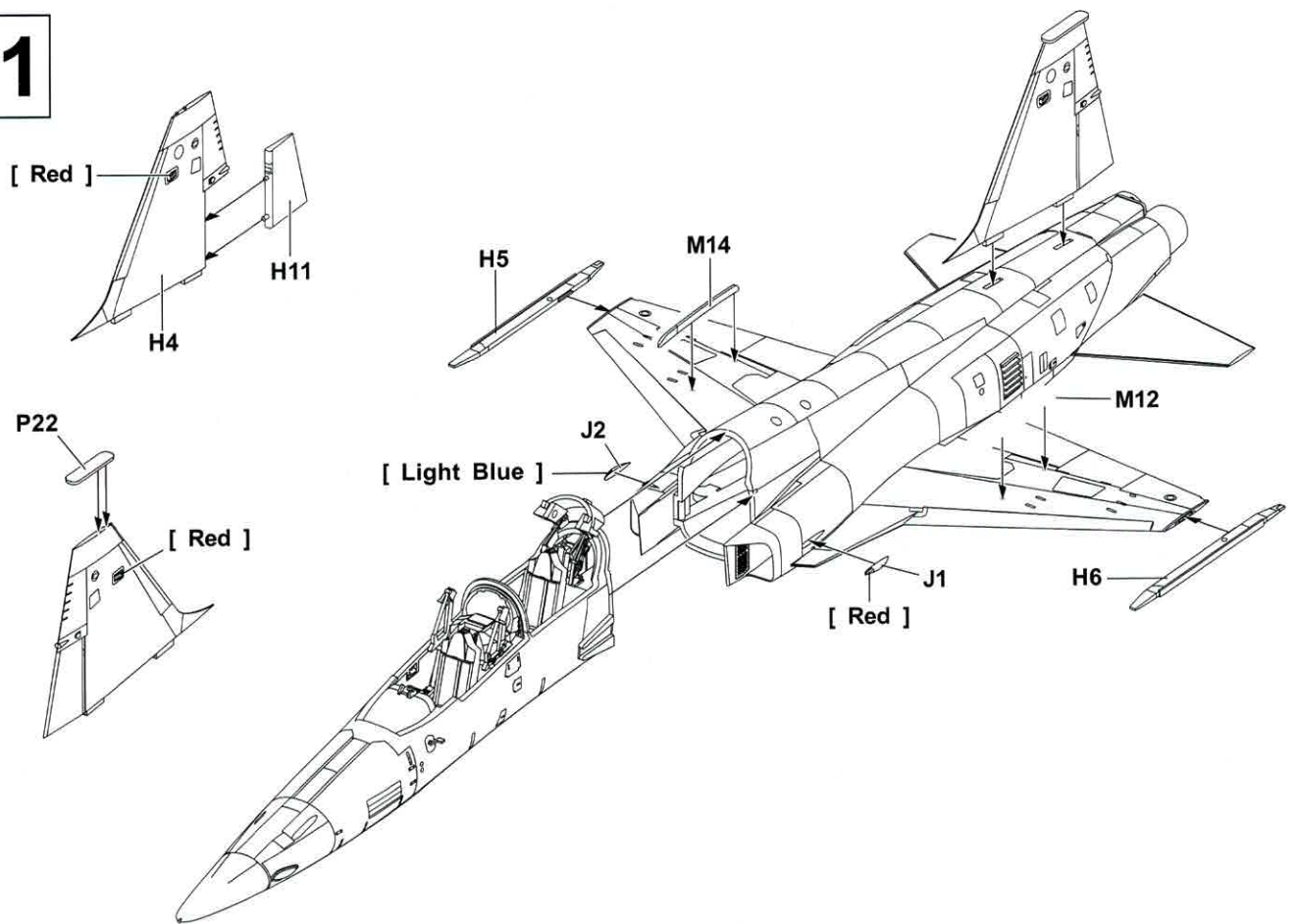
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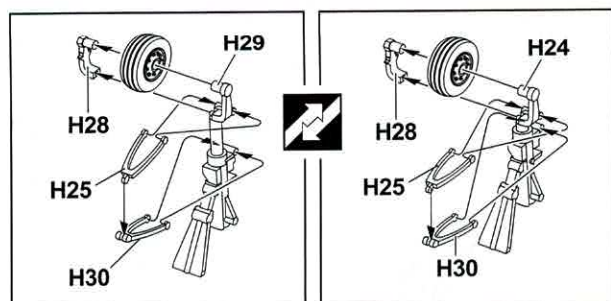
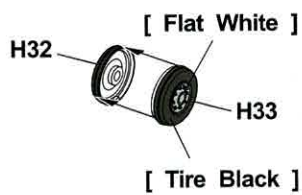


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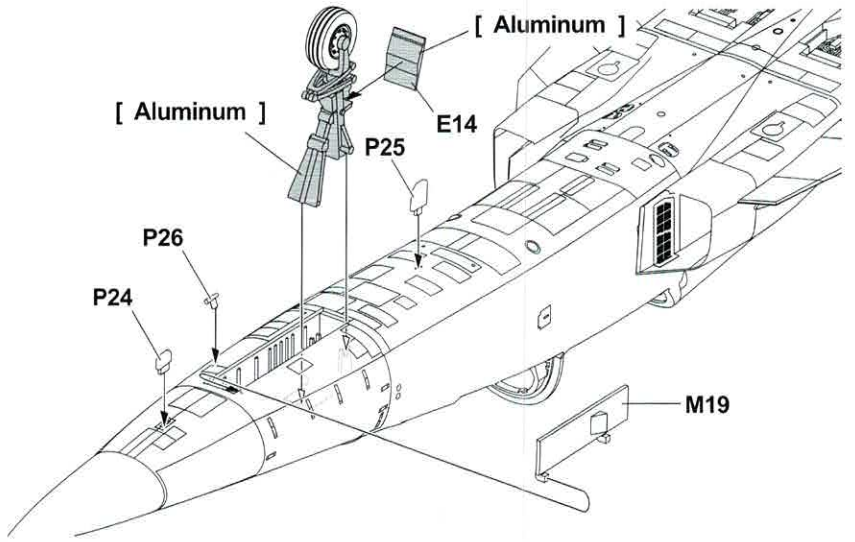
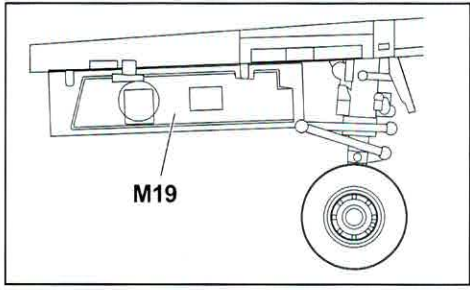


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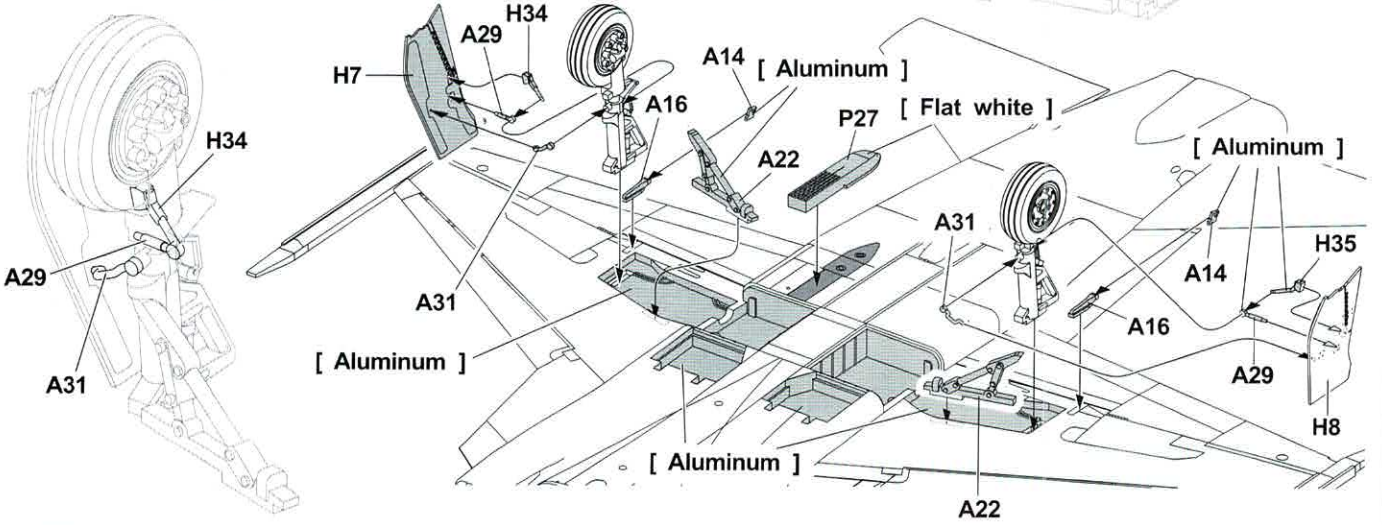
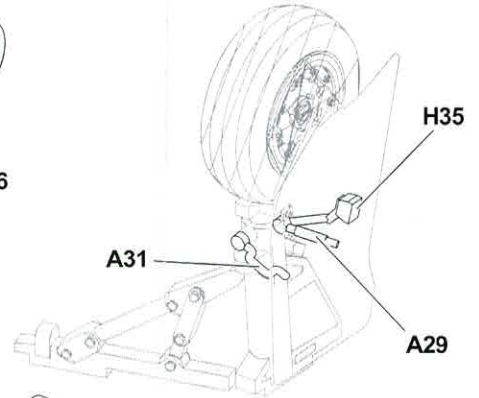
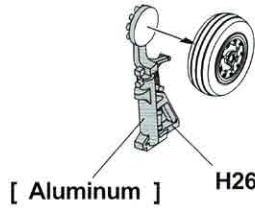
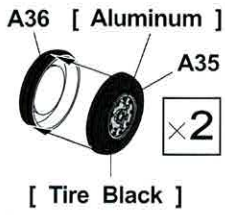
《 forward landing gear 》
《 前起落架 》



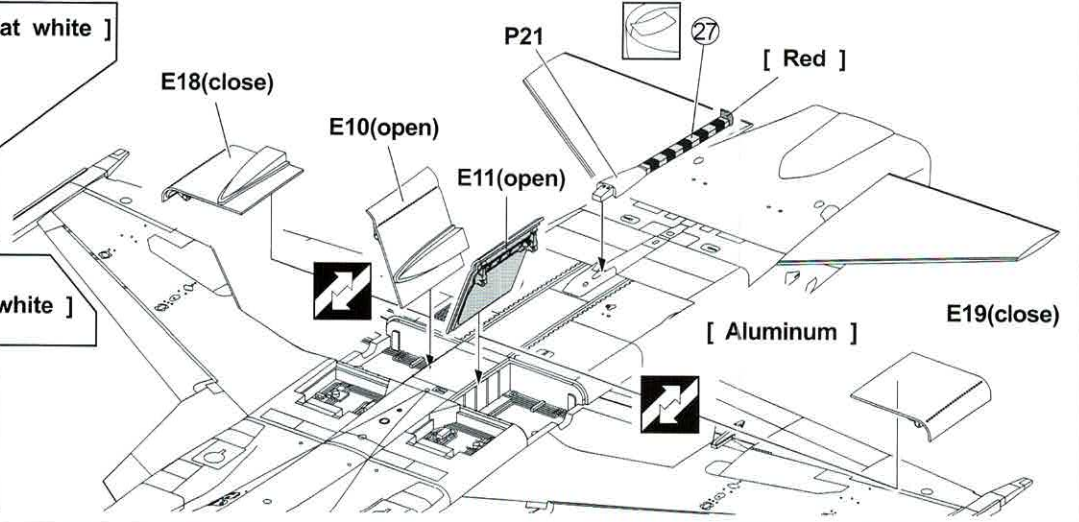
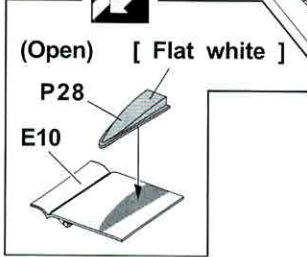
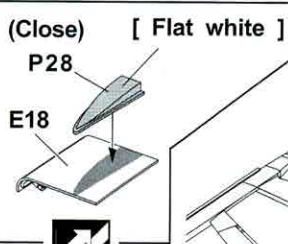
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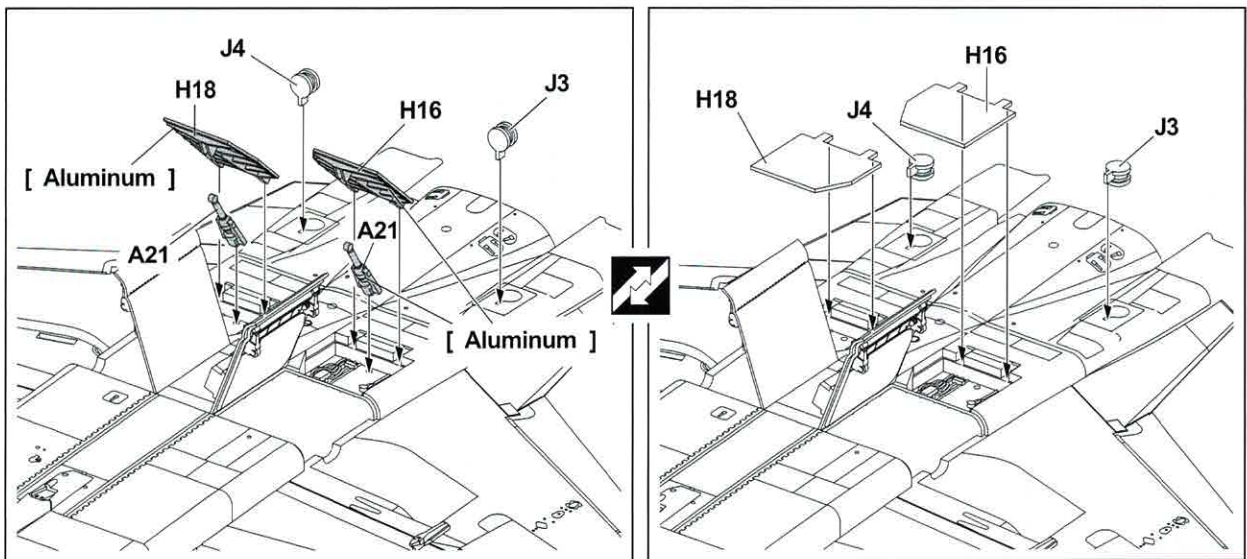
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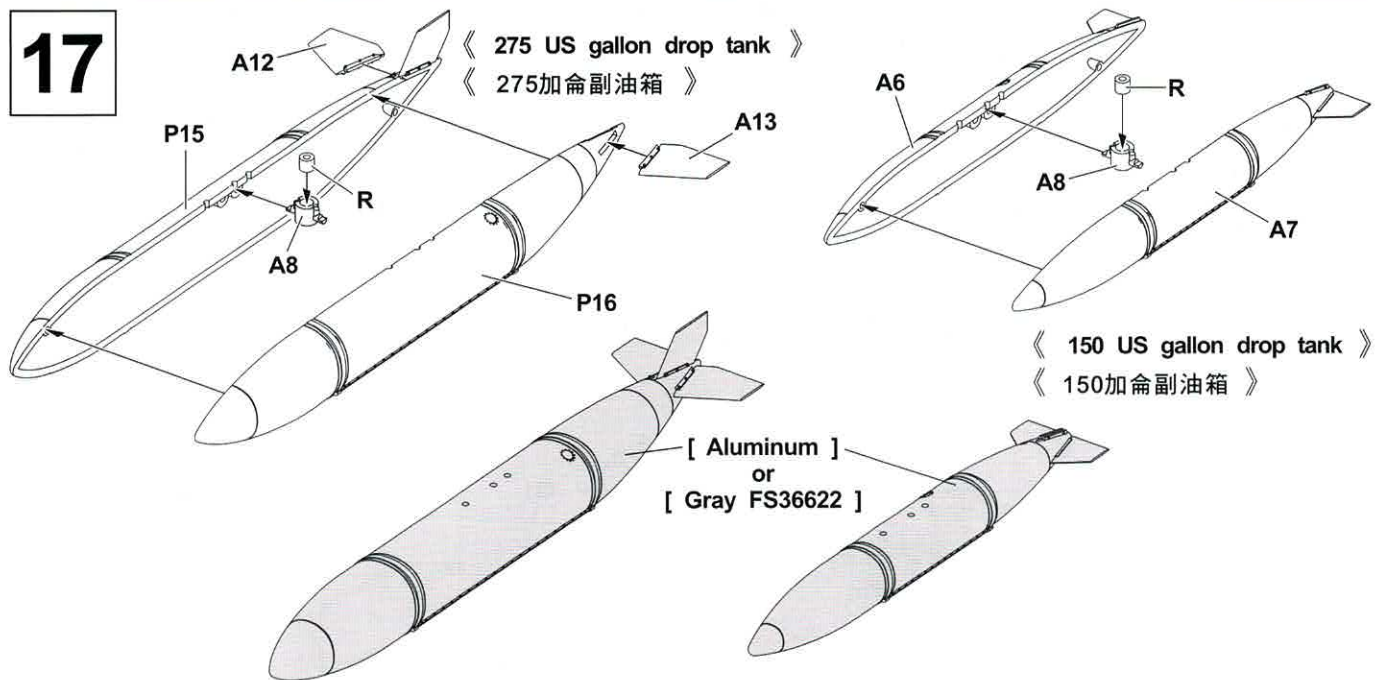
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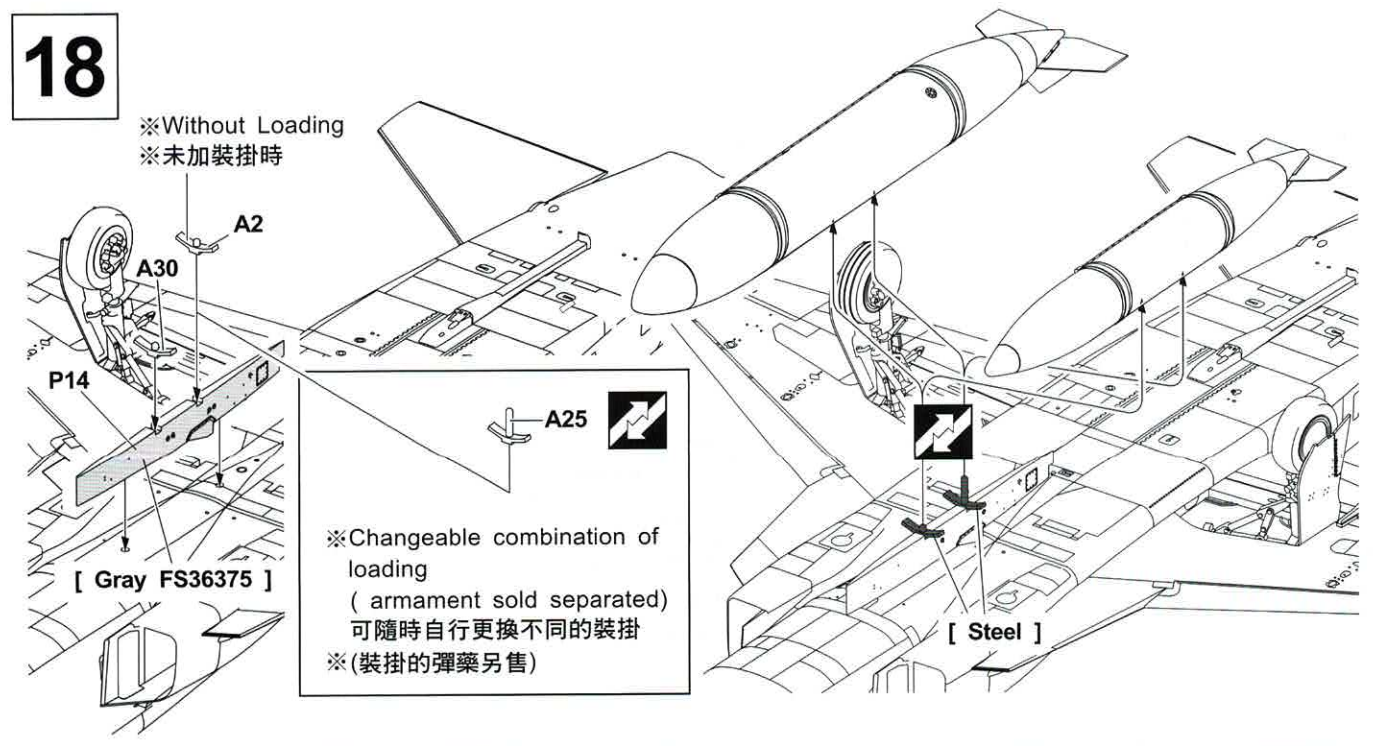
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18



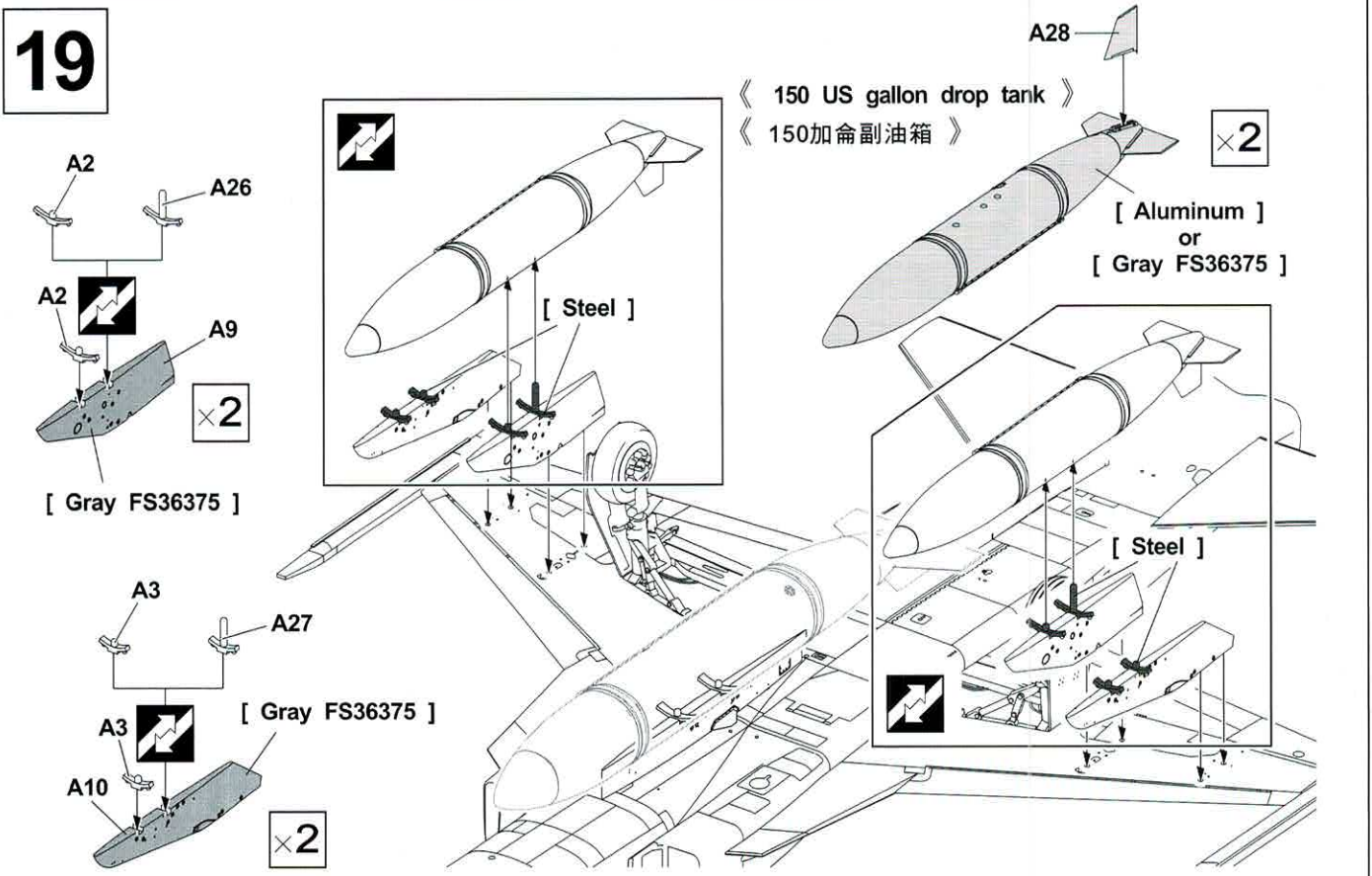
※Without Loading
※未加裝掛時

[Gray FS36375]

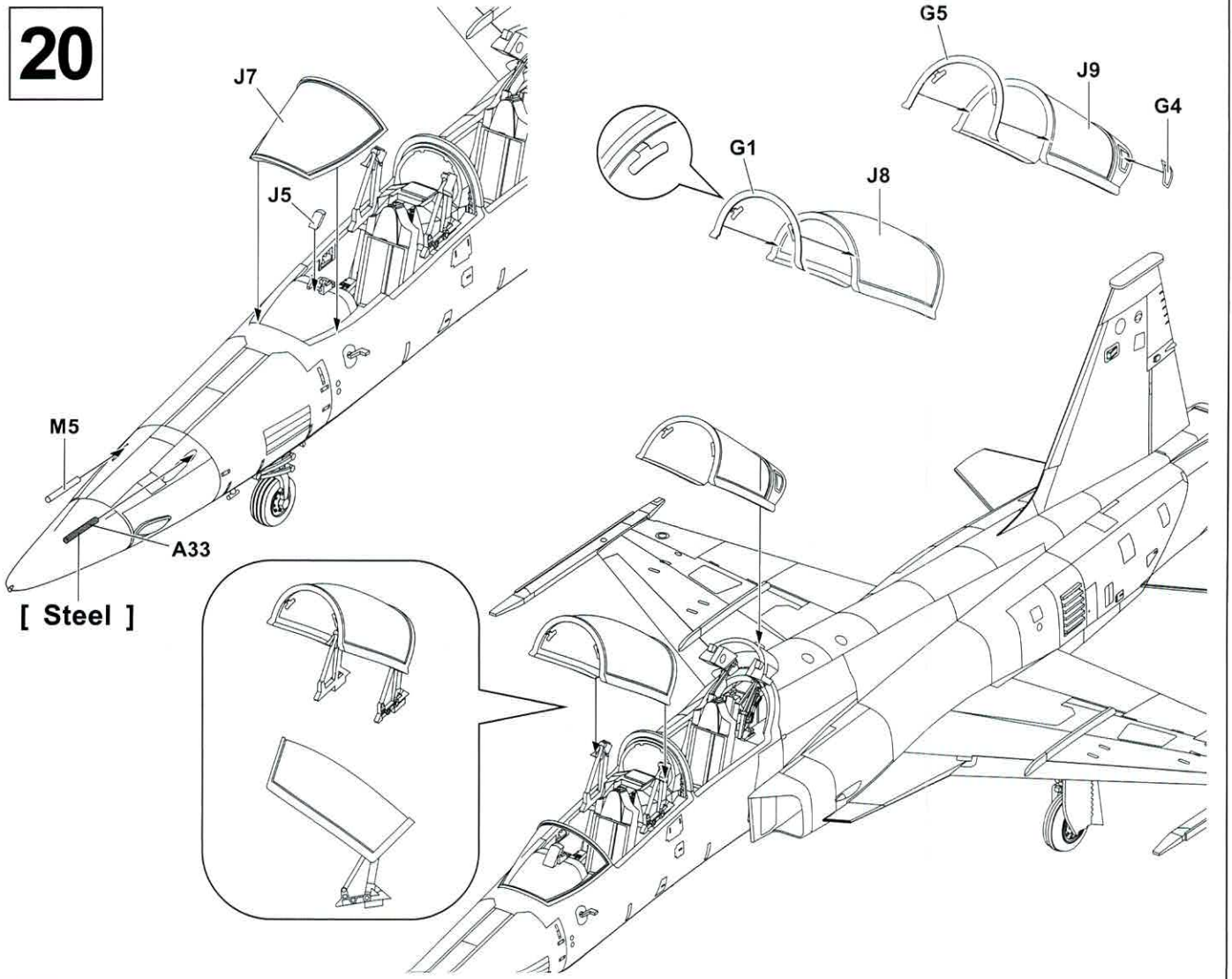
※Changeable combination of loading
(armament sold separated)
可隨時自行更換不同的裝掛
※(裝掛的彈藥另售)

[Steel]

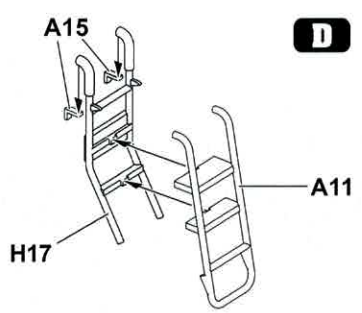
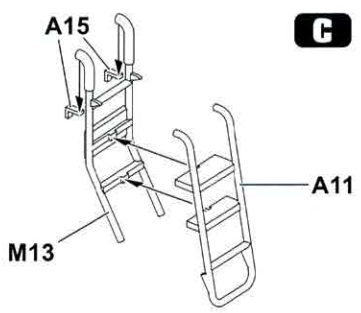
19



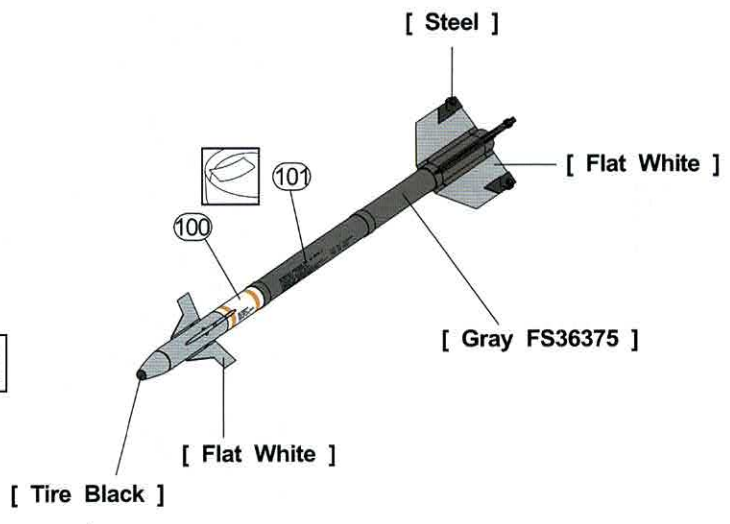
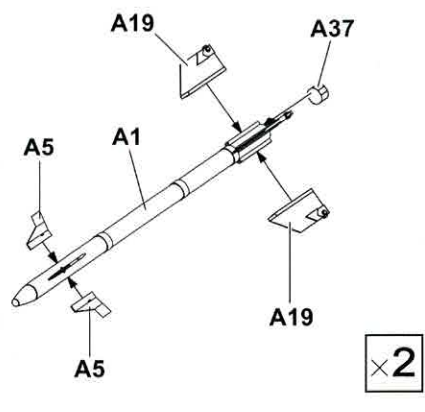
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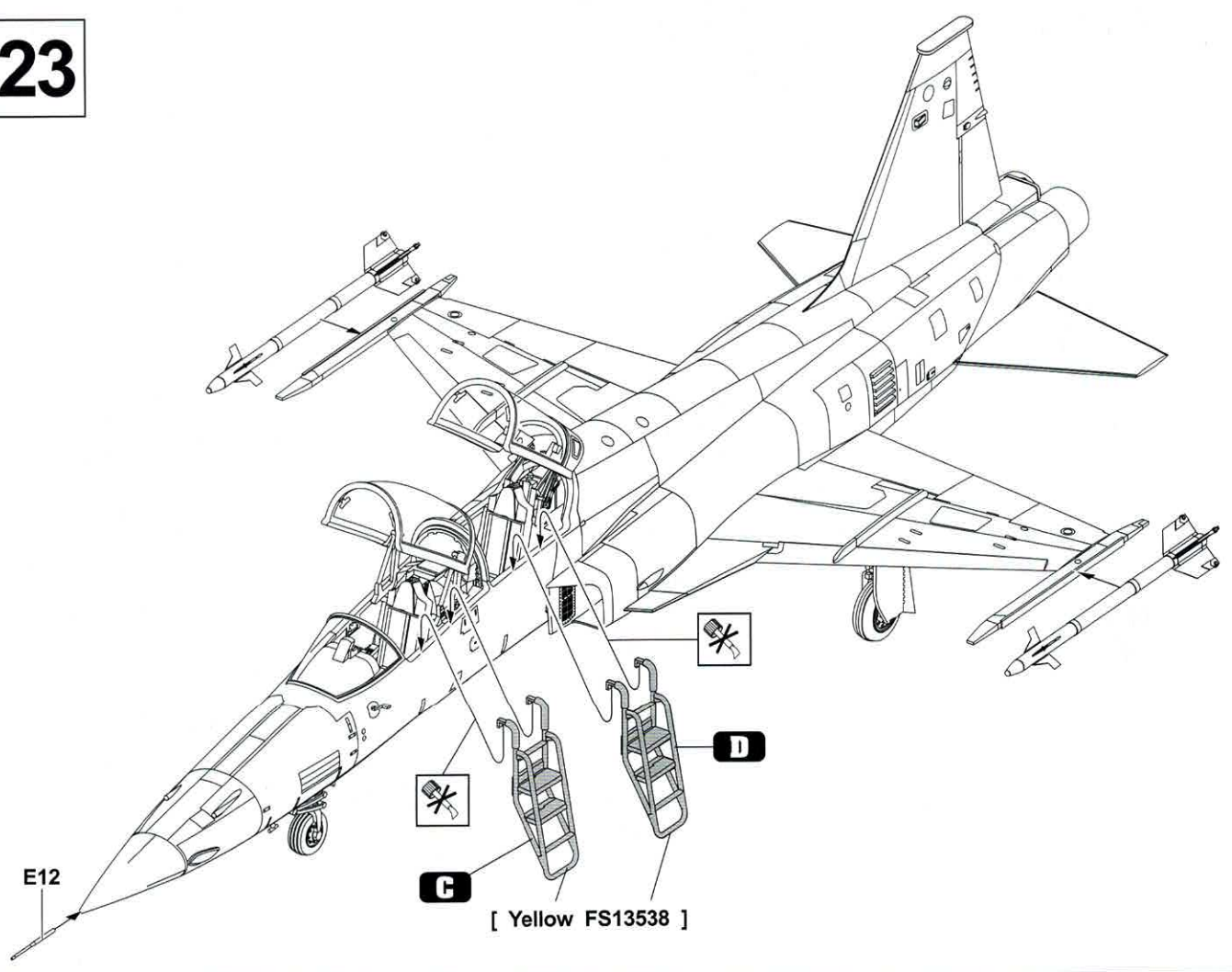
21



22



23



第七飛行訓練聯隊。

A

7th Flight Training Wing.



Body Color: Brown FS30117 + Brown FS30219 1:1 Green FS34102

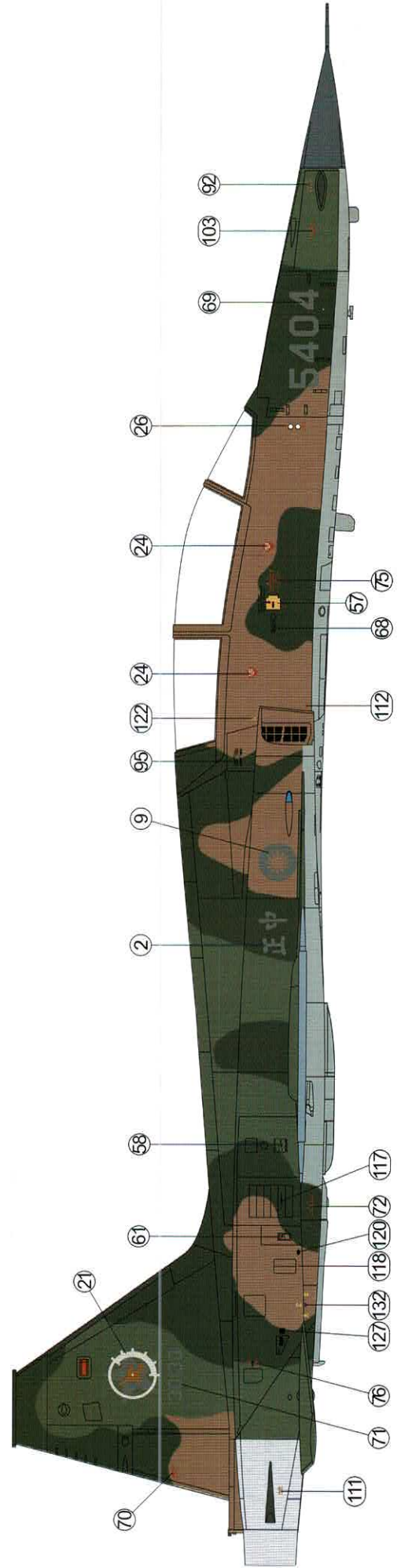
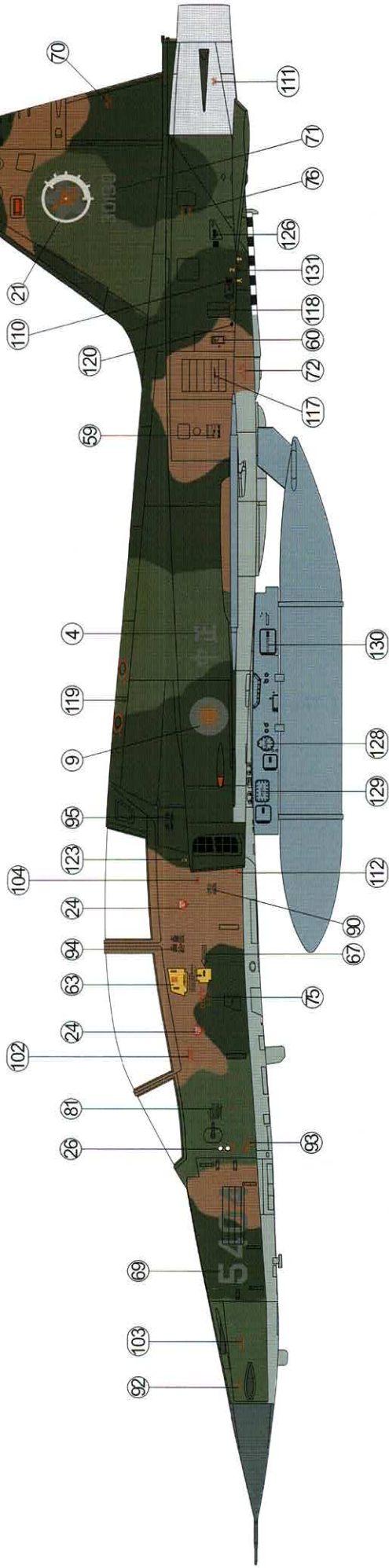
Gray FS36622 Flat black

Green FS34079

Green FS34102

Flat black

Flat black





Body Color:



Brown FS30117 + Brown FS30219 1:1



Green FS34102



Gray FS36118



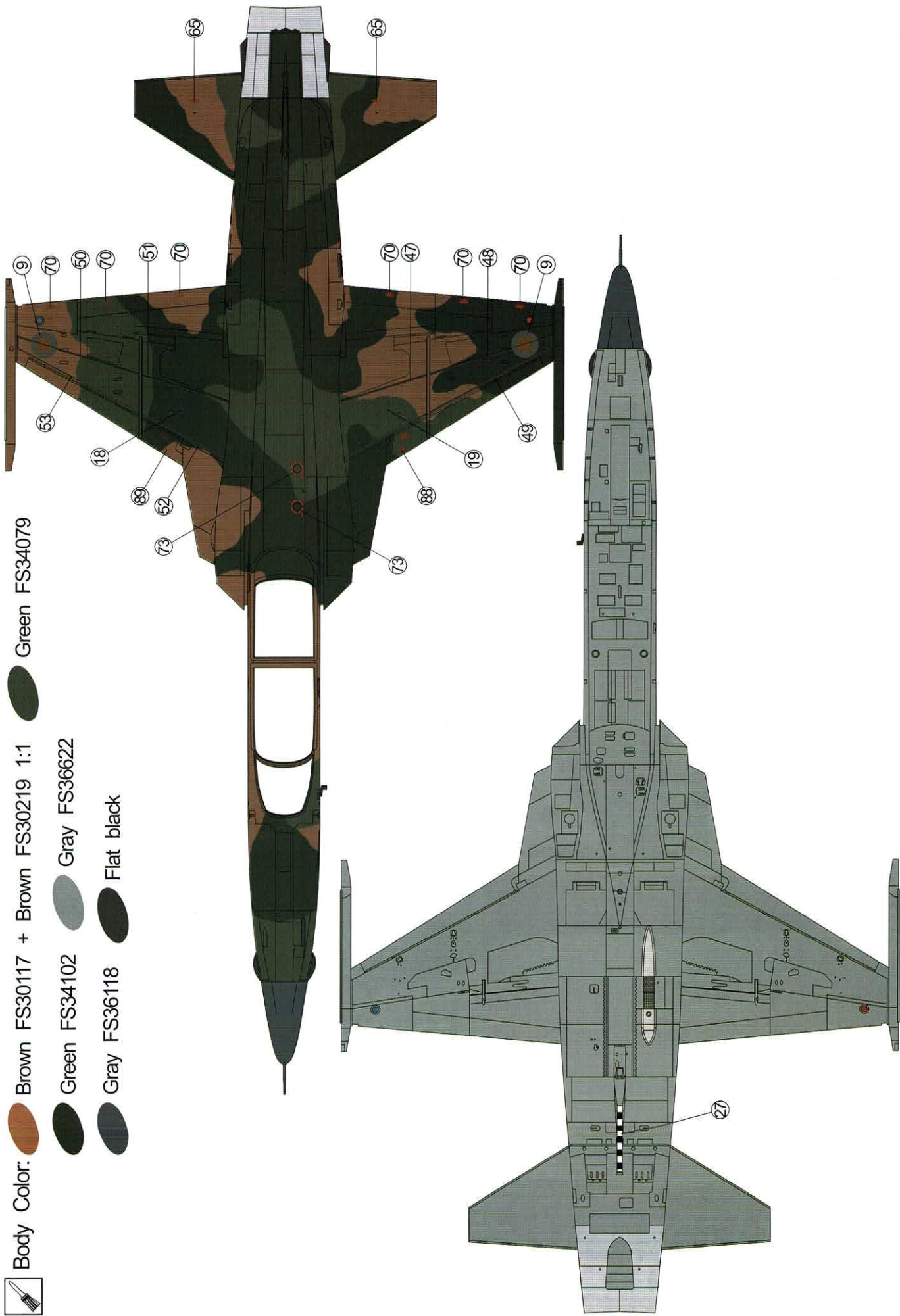
Green FS34079



Gray FS36622



Flat black



B 第七飛行訓練聯隊。
7th Flight Training Wing.

Body Color:  Gray FS36375  Gray FS36320  Gray FS36118
 Flat black



C

第七飛行訓練聯隊。
7th Flight Training Wing.



Body Color: Gray FS36375



Gray FS36320



Gray FS36118



Flat black



D

第五戰術混合聯隊。

5th Tactical Composite Wing.



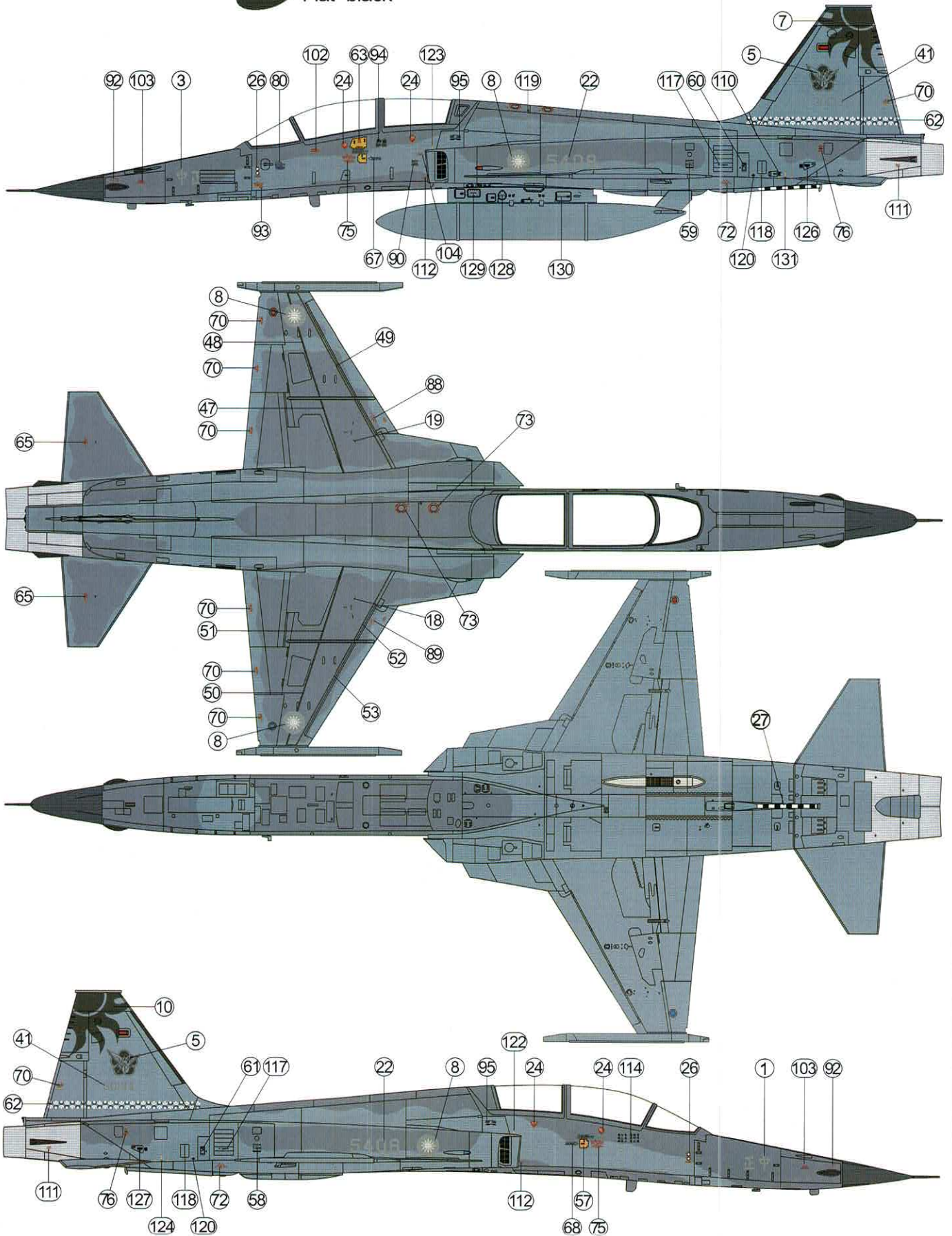
Body Color:

Gray FS36375

Gray FS36320

Gray FS36118

Flat black



E

第七飛行訓練聯隊。
7th Flight Training Wing.



Body Color: Brown FS30117 + Brown FS30219 1:1 Green FS34079



Green FS34102



Gray FS36622



Gray FS36118

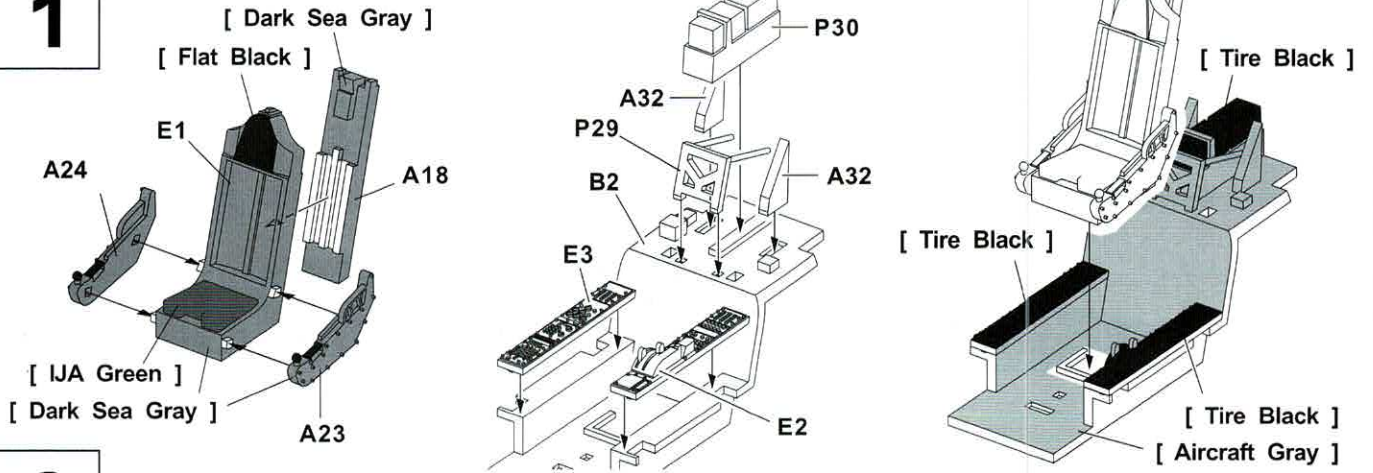


Flat black

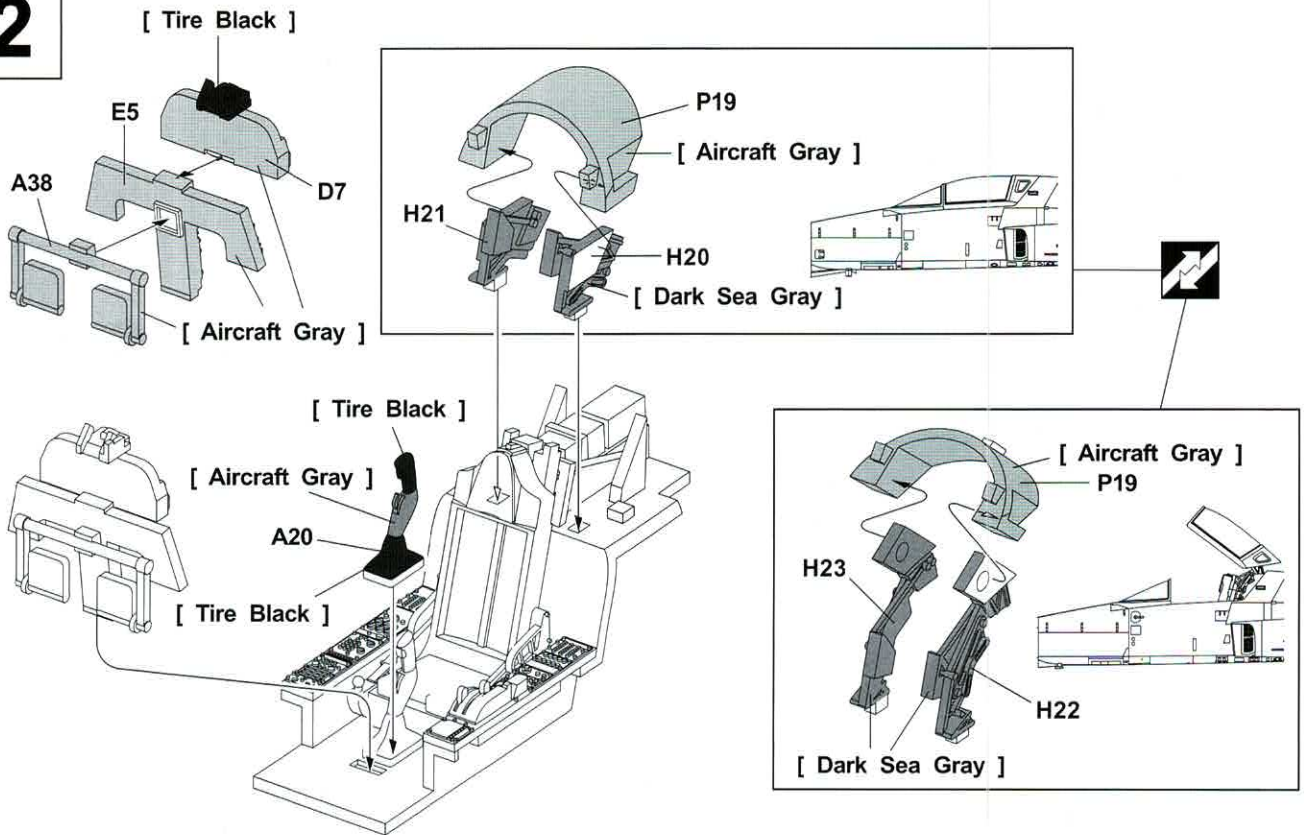


RF5E TIGEREYE

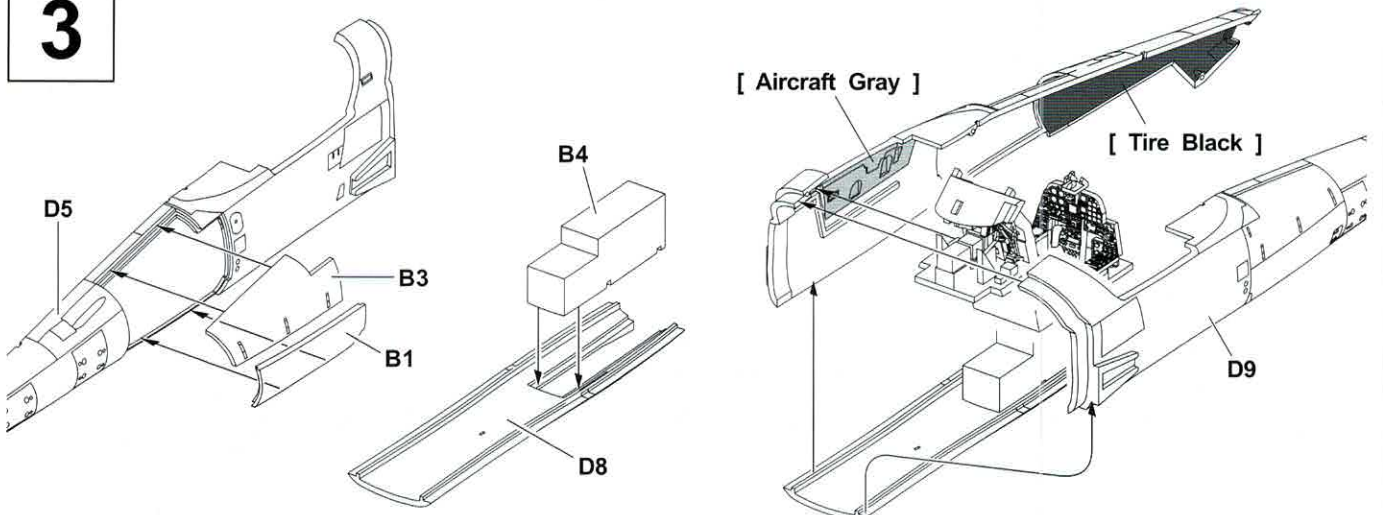
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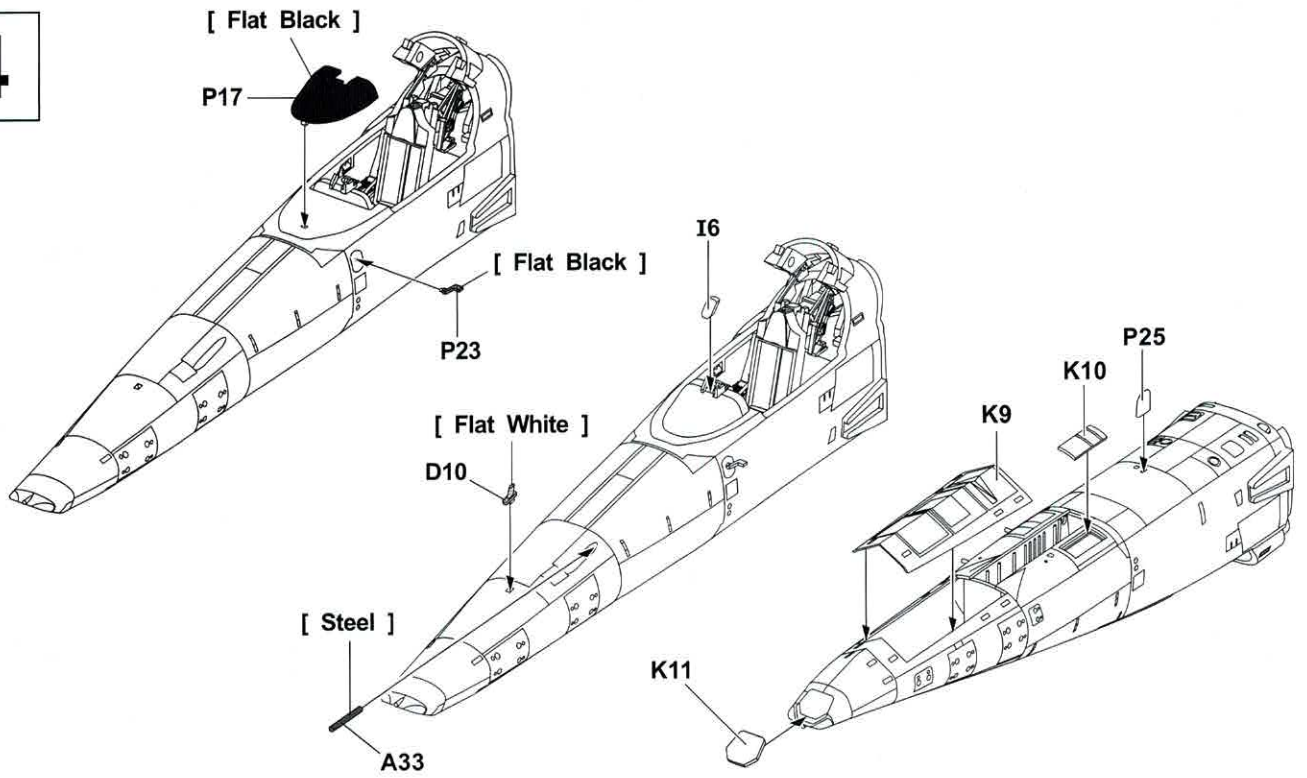
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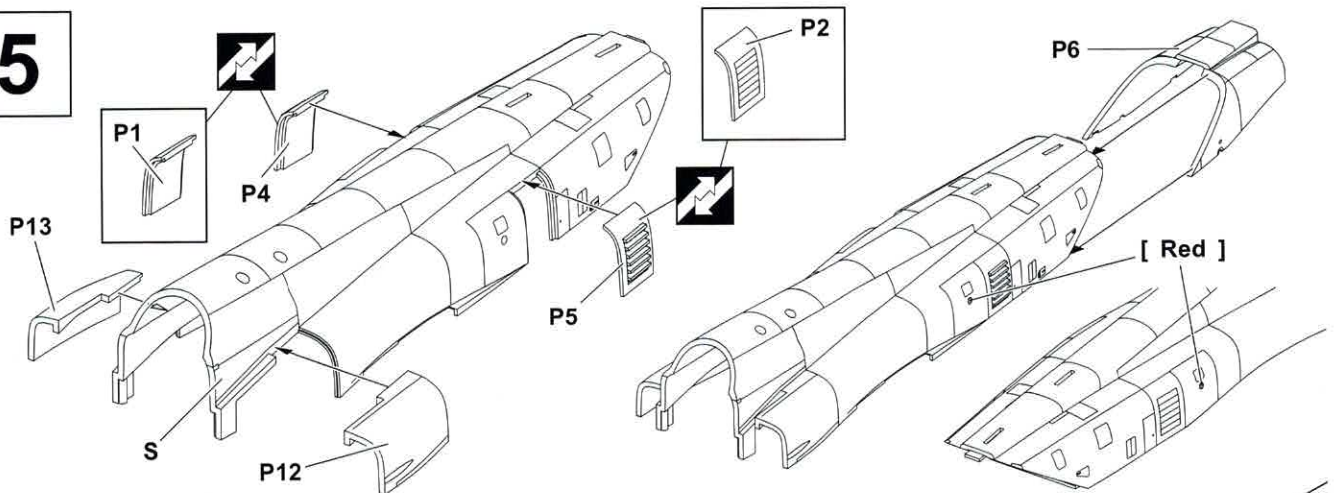
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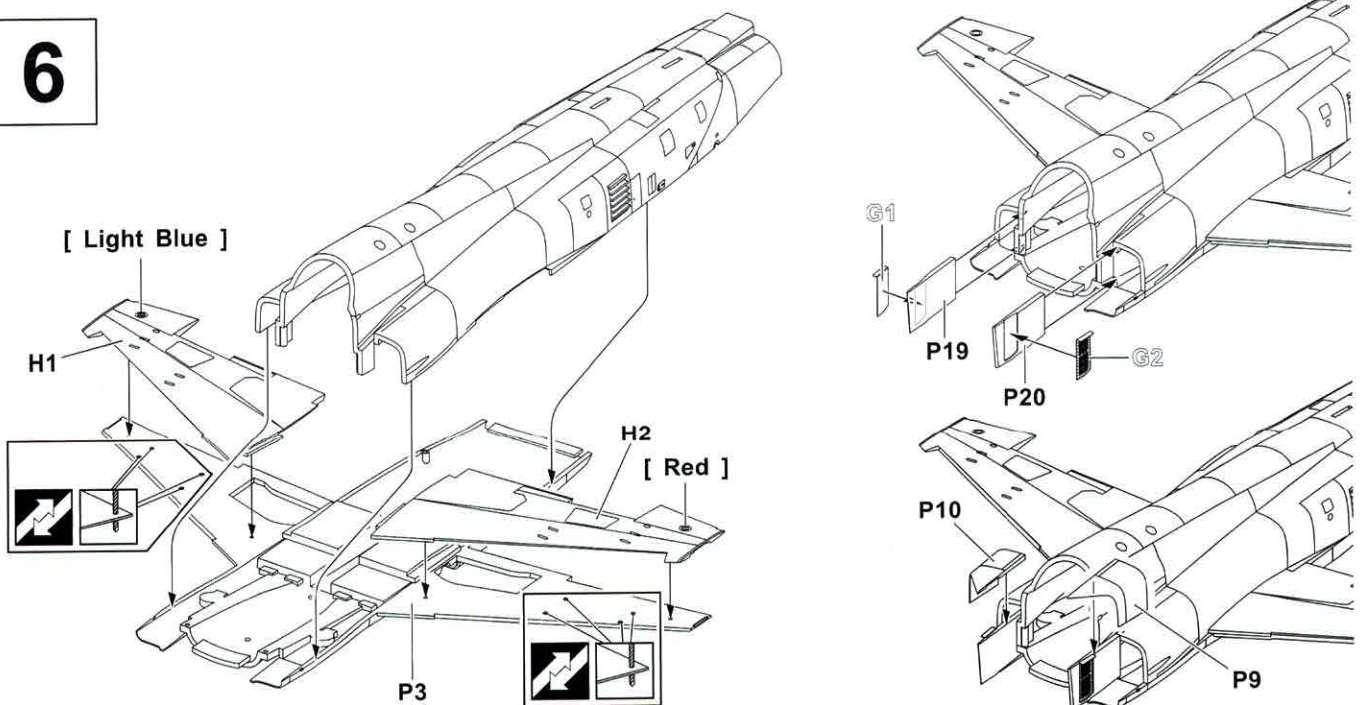
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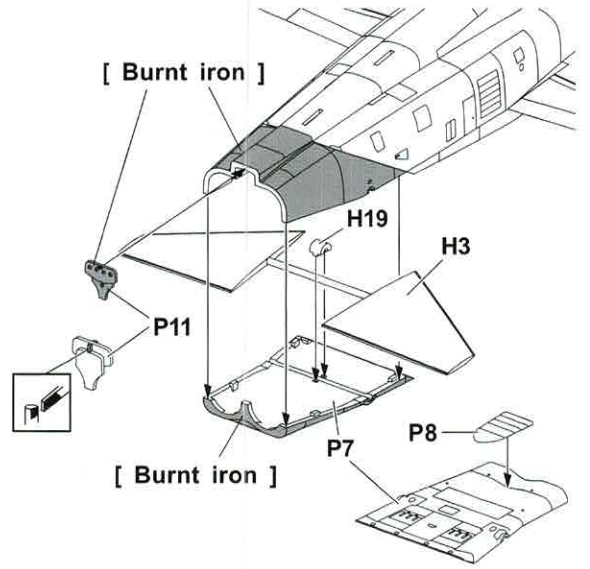
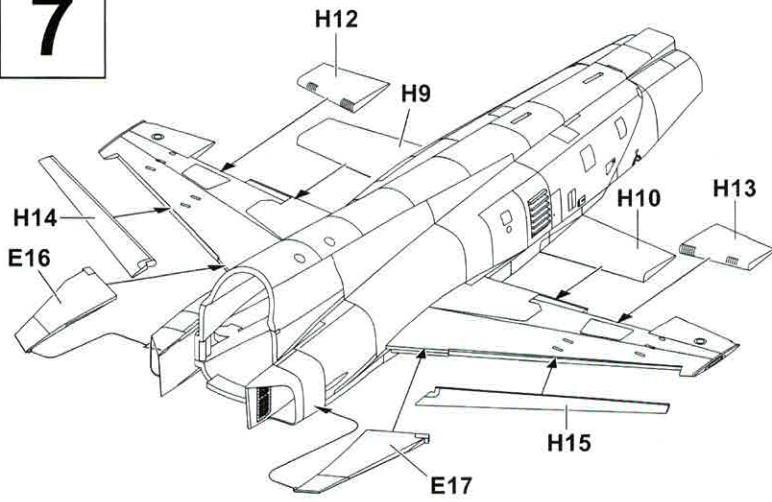
5



6

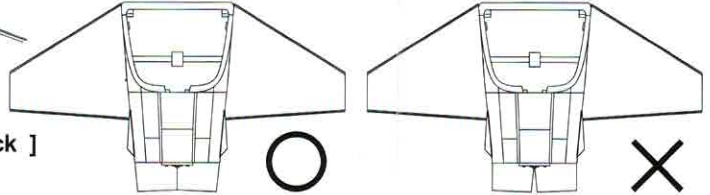
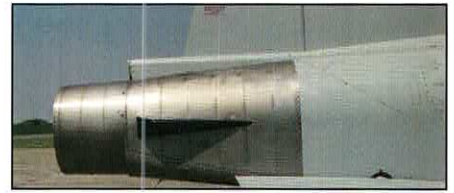
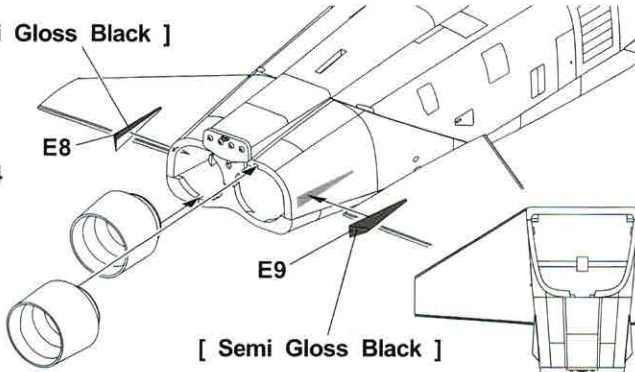
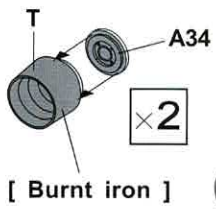


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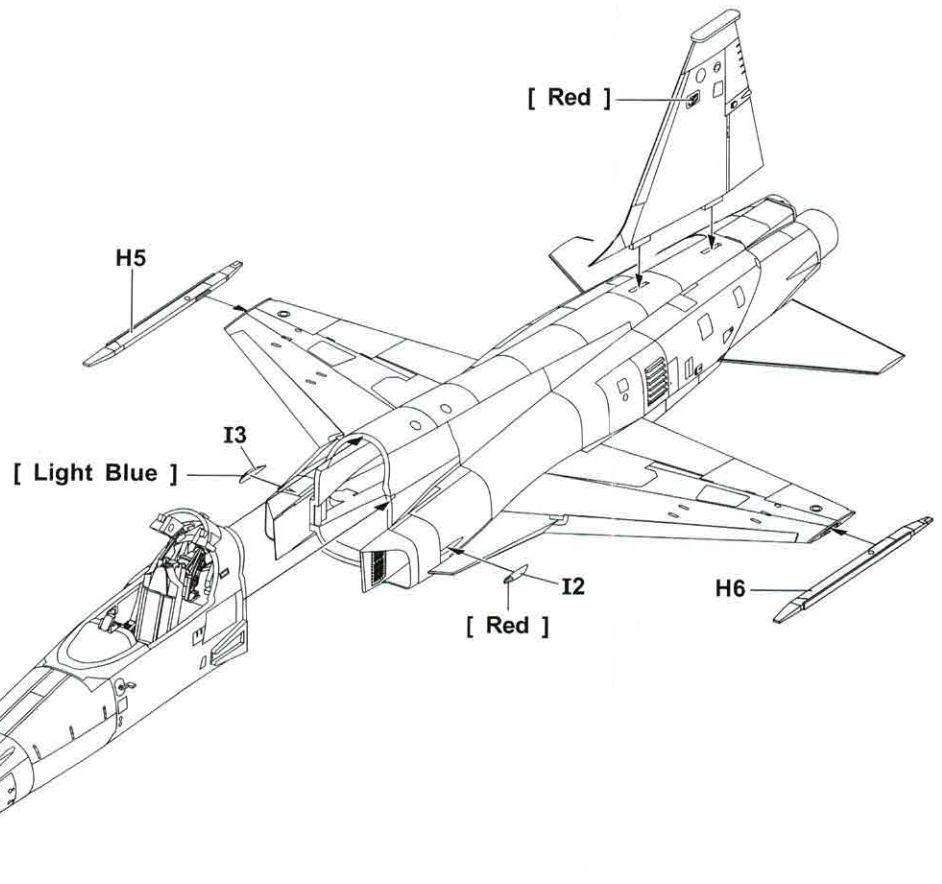
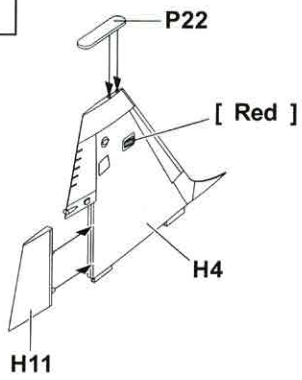
8

[Semi Gloss Black]

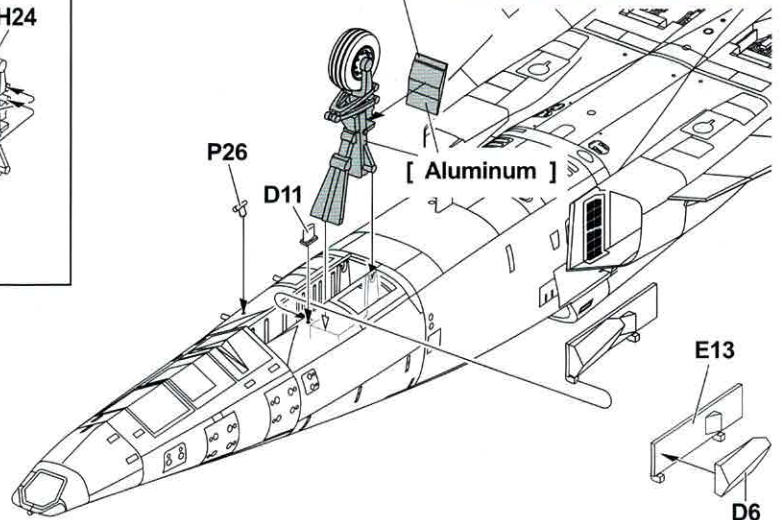
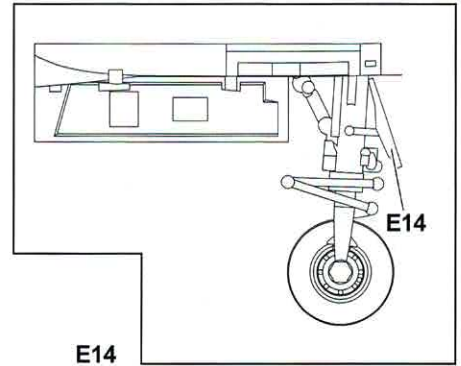
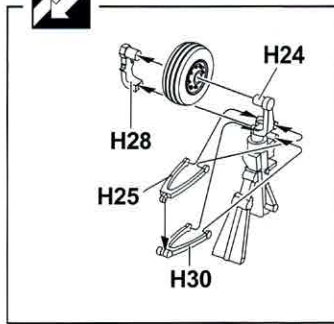
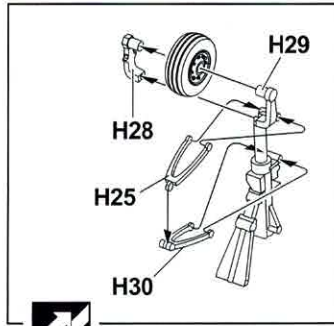
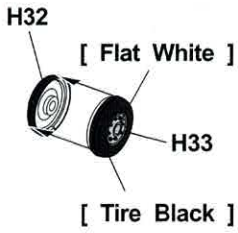


! Note nozzle the direction of.
請注意方向

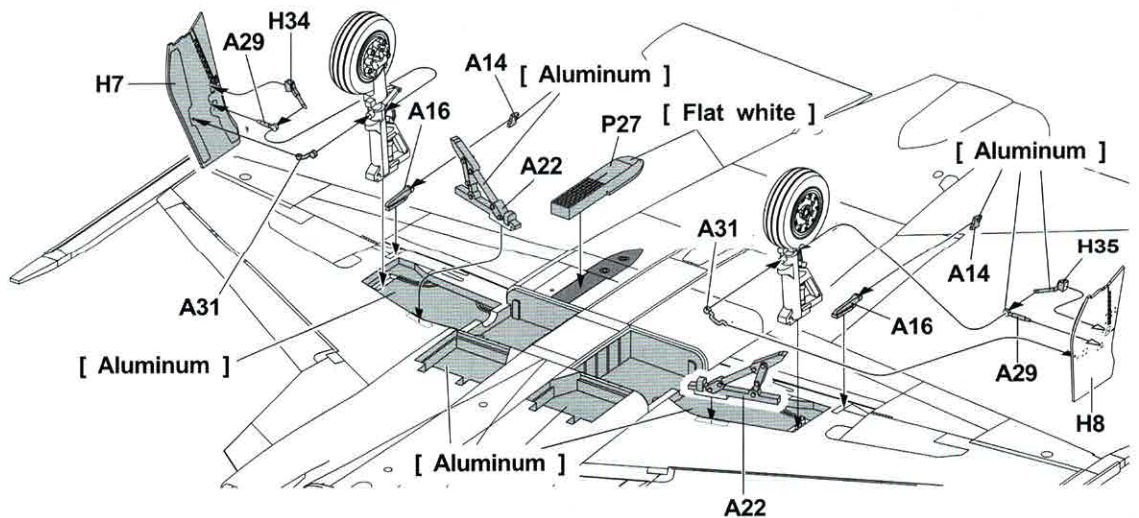
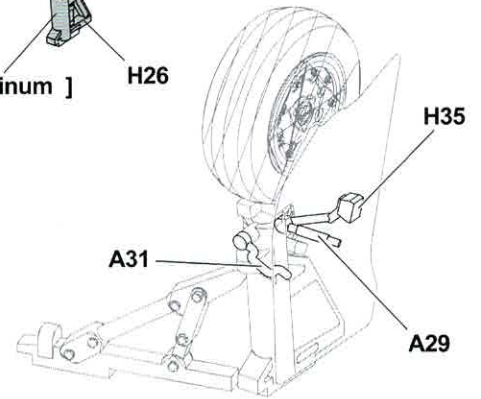
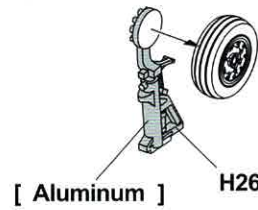
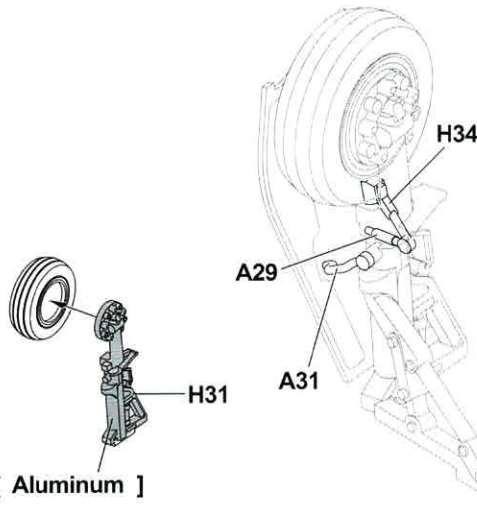
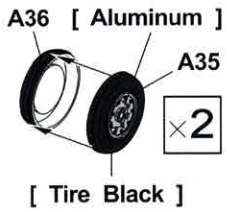
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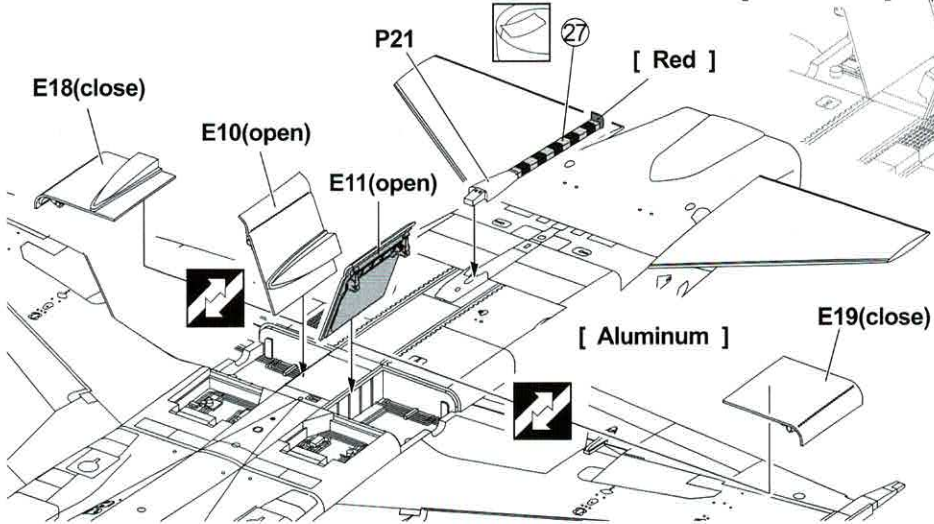
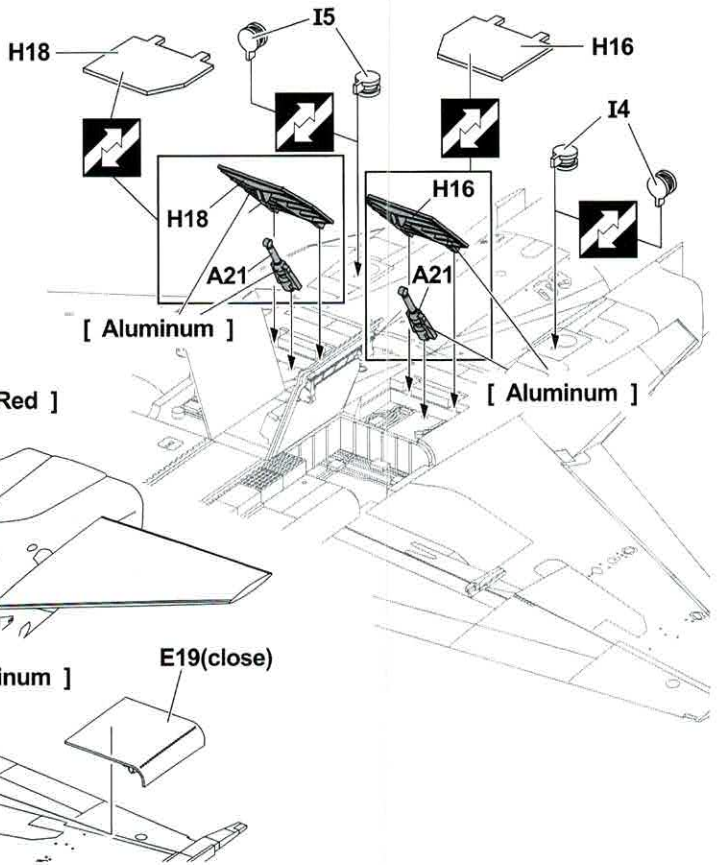
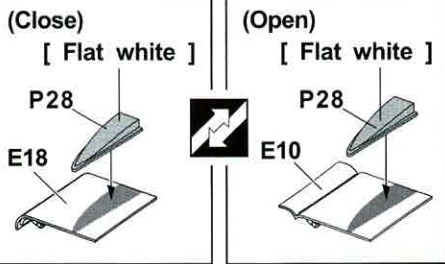
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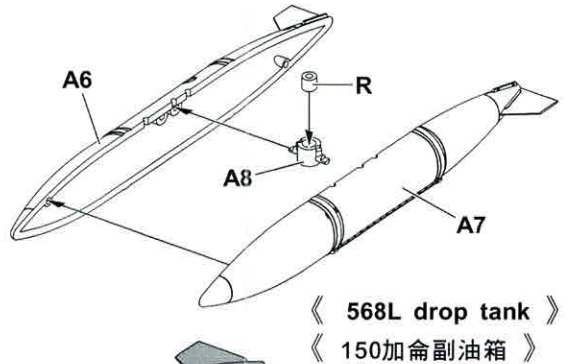
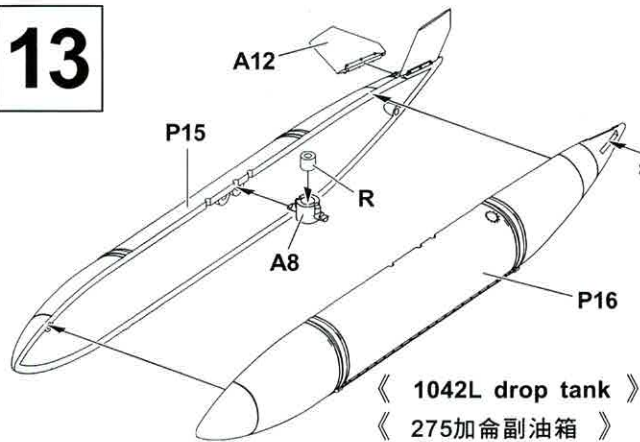
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12

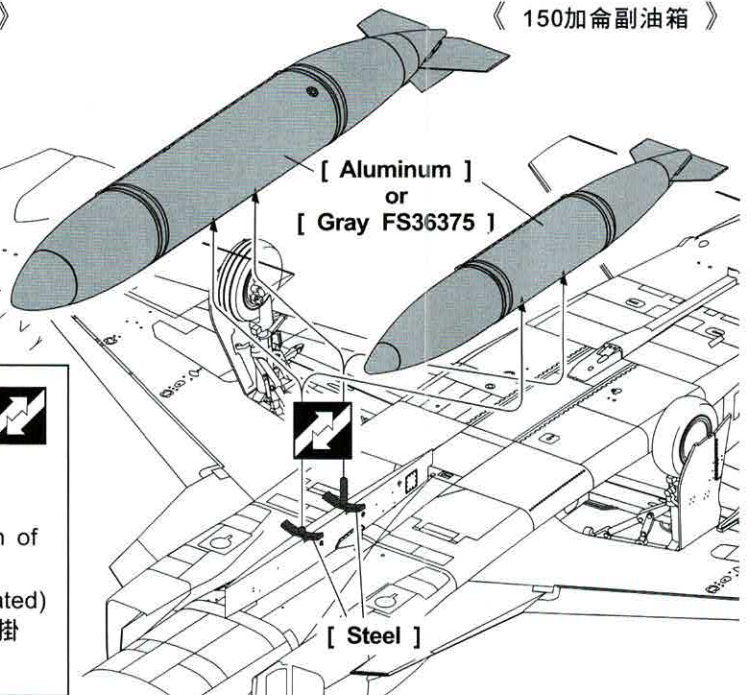
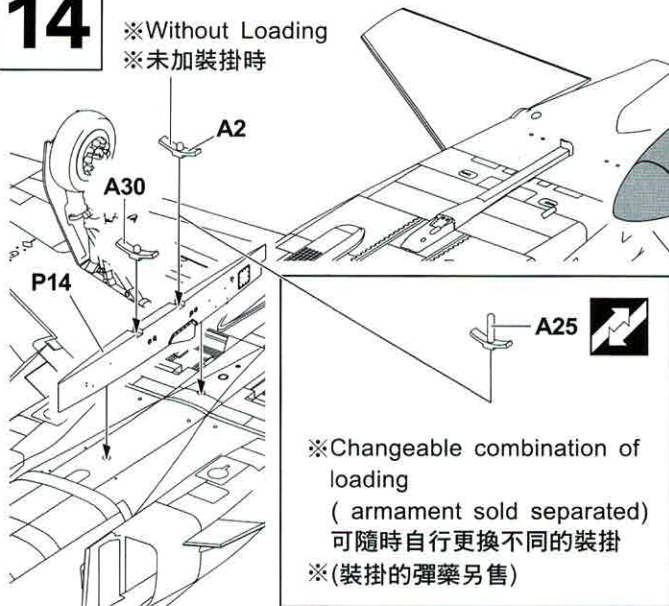


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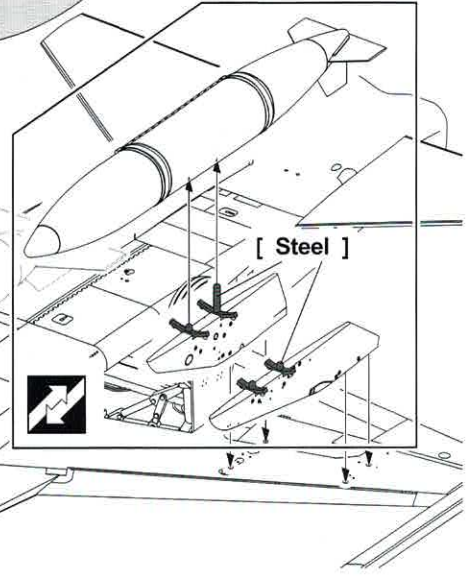
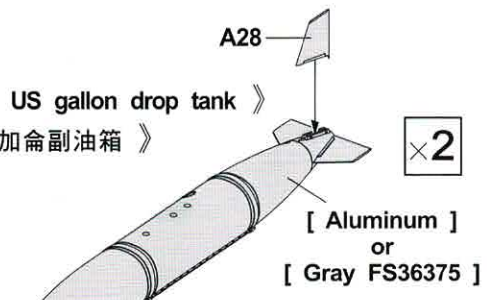
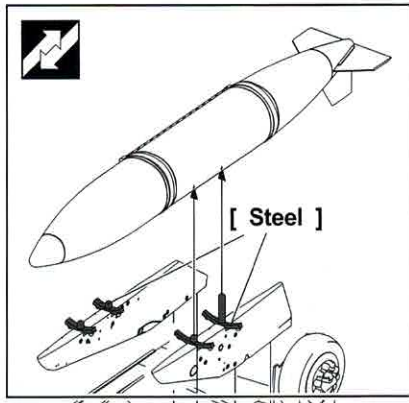
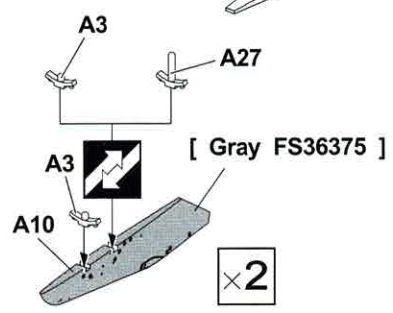
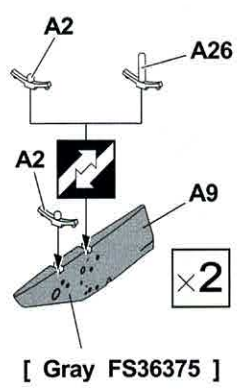


14

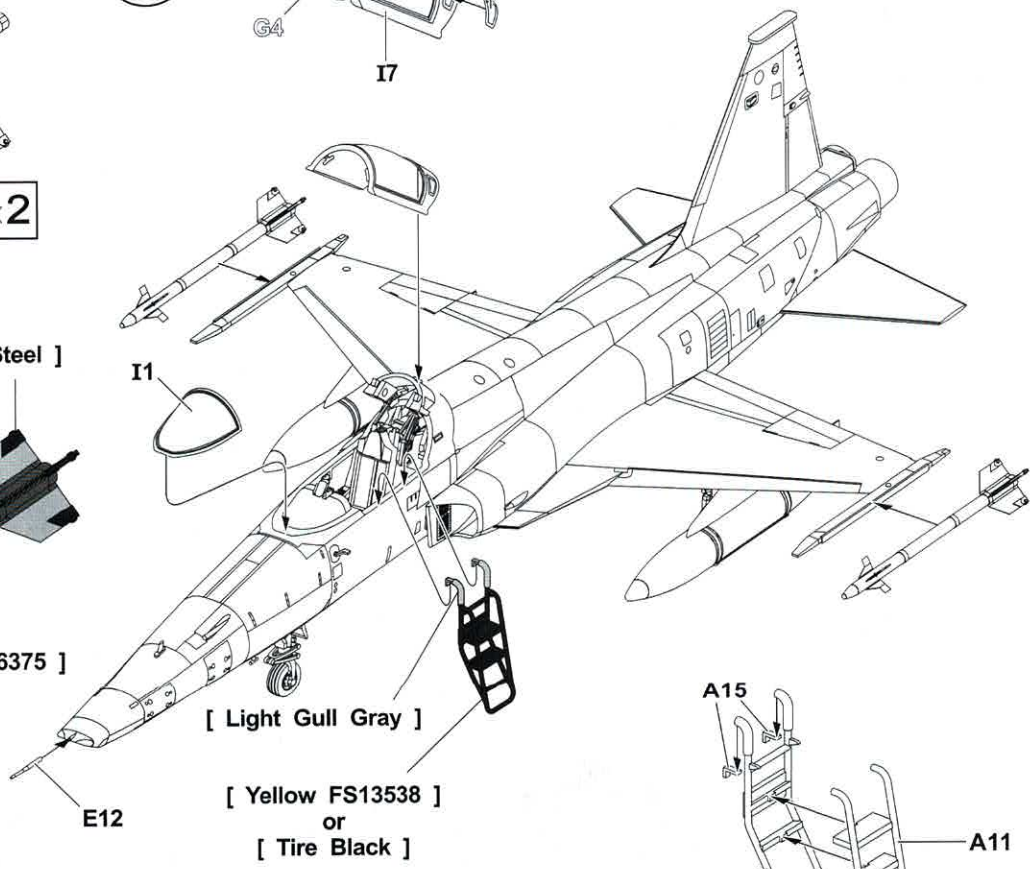
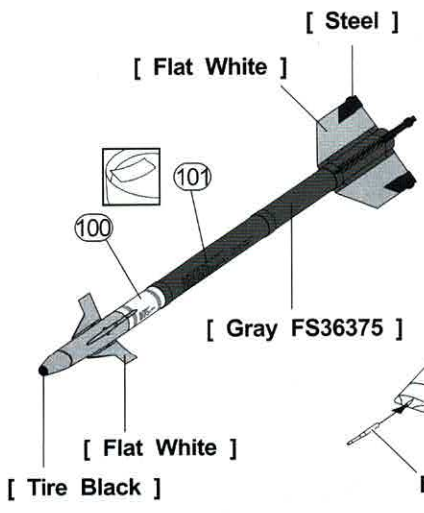
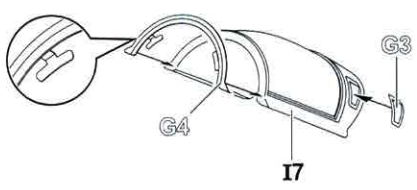
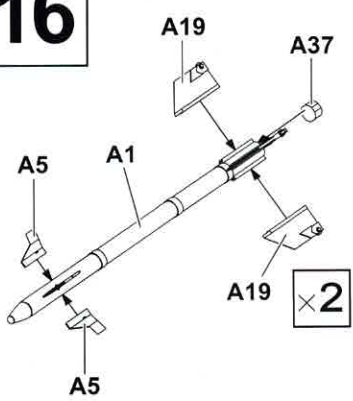
※Without Loading
※未加裝掛時



15



16



A

第五戰術混合聯隊。

5th Tactical Composite Wing.



Body Color:



Gray FS36375



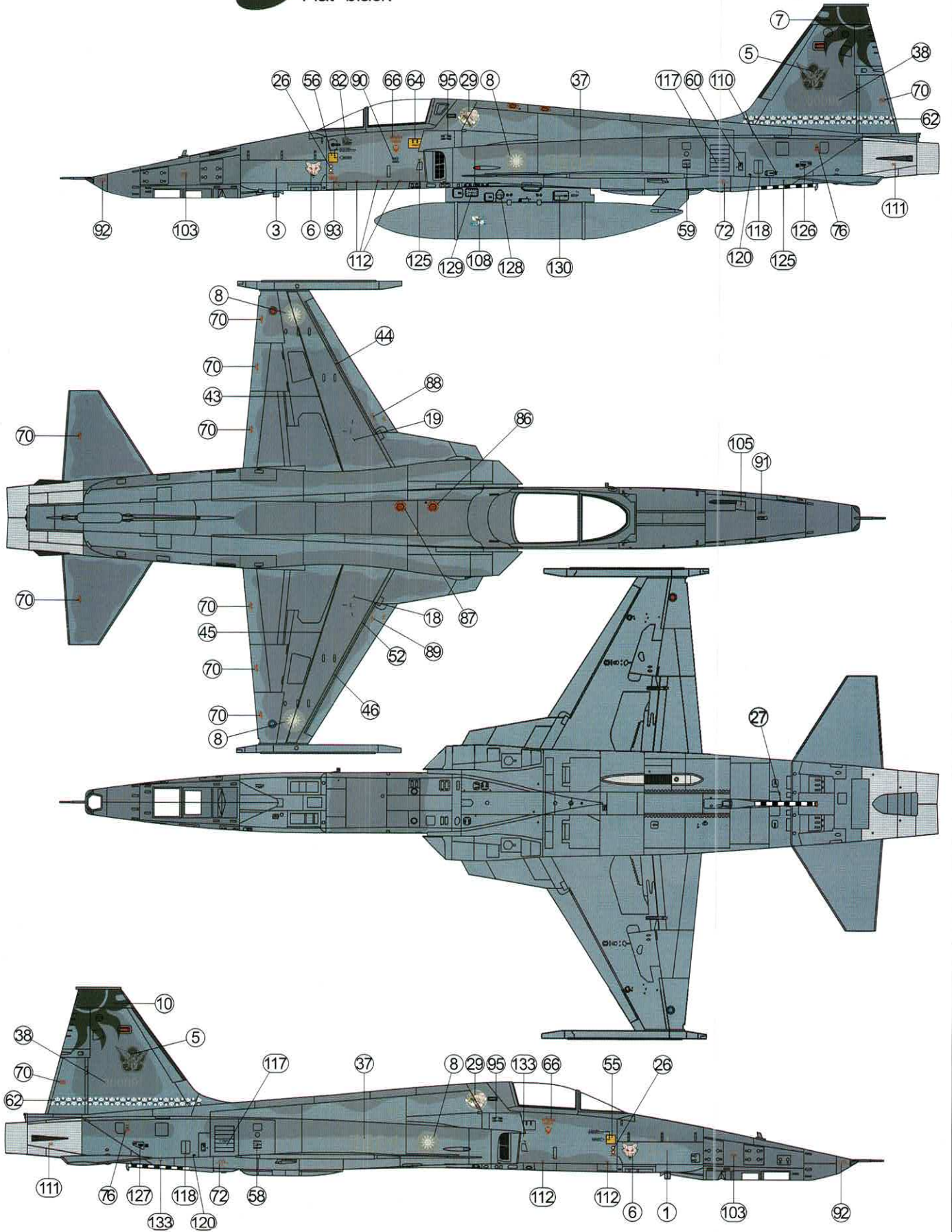
Gray FS36320







Gray FS36118

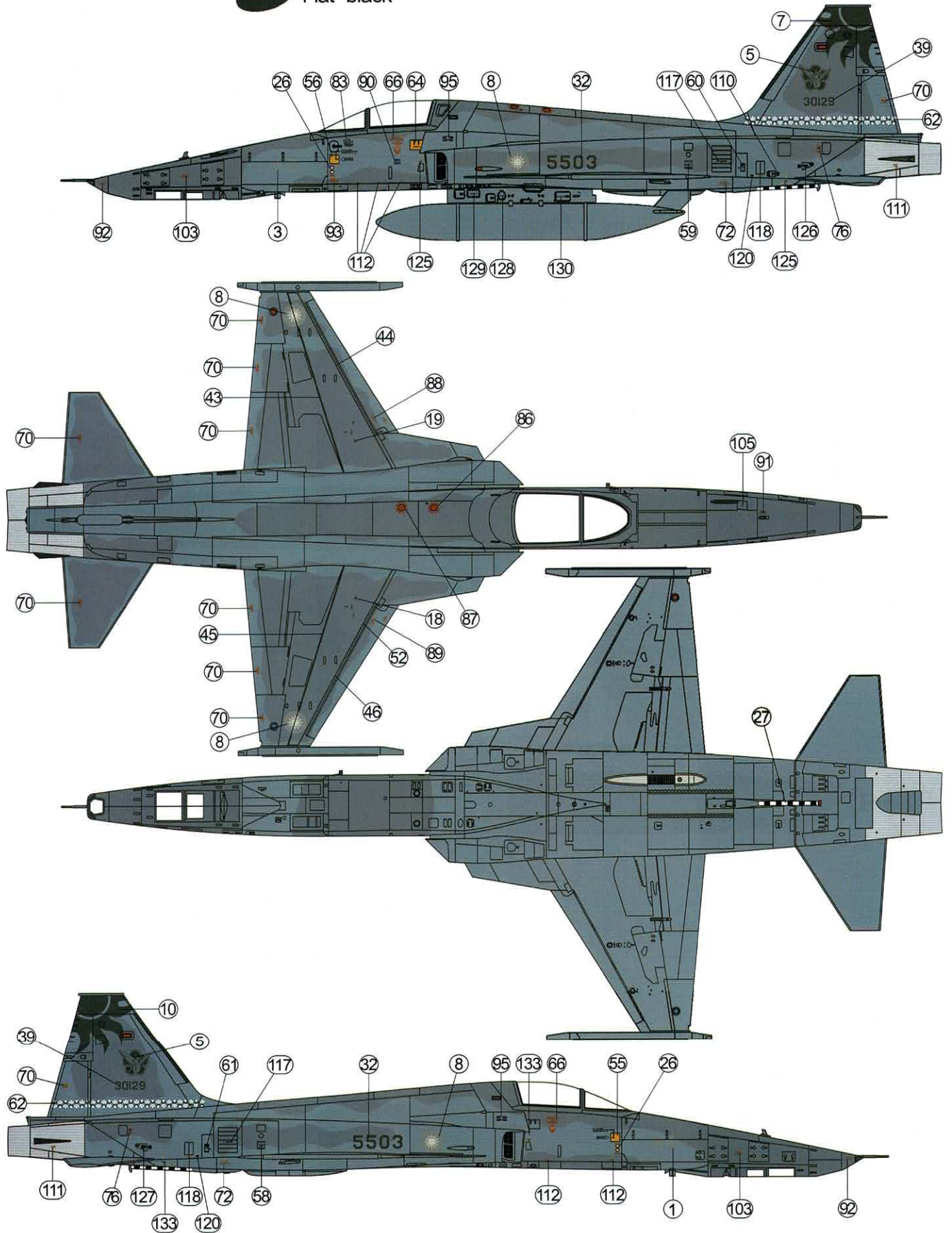


Flat black



B 第五戰術混合聯隊。
5th Tactical Composite Wing.

Body Color:  Gray FS36375  Gray FS36320  Gray FS36118
 Flat black



C

第五戰術混合聯隊。

5th Tactical Composite Wing.



Body Color:



Gray FS36375



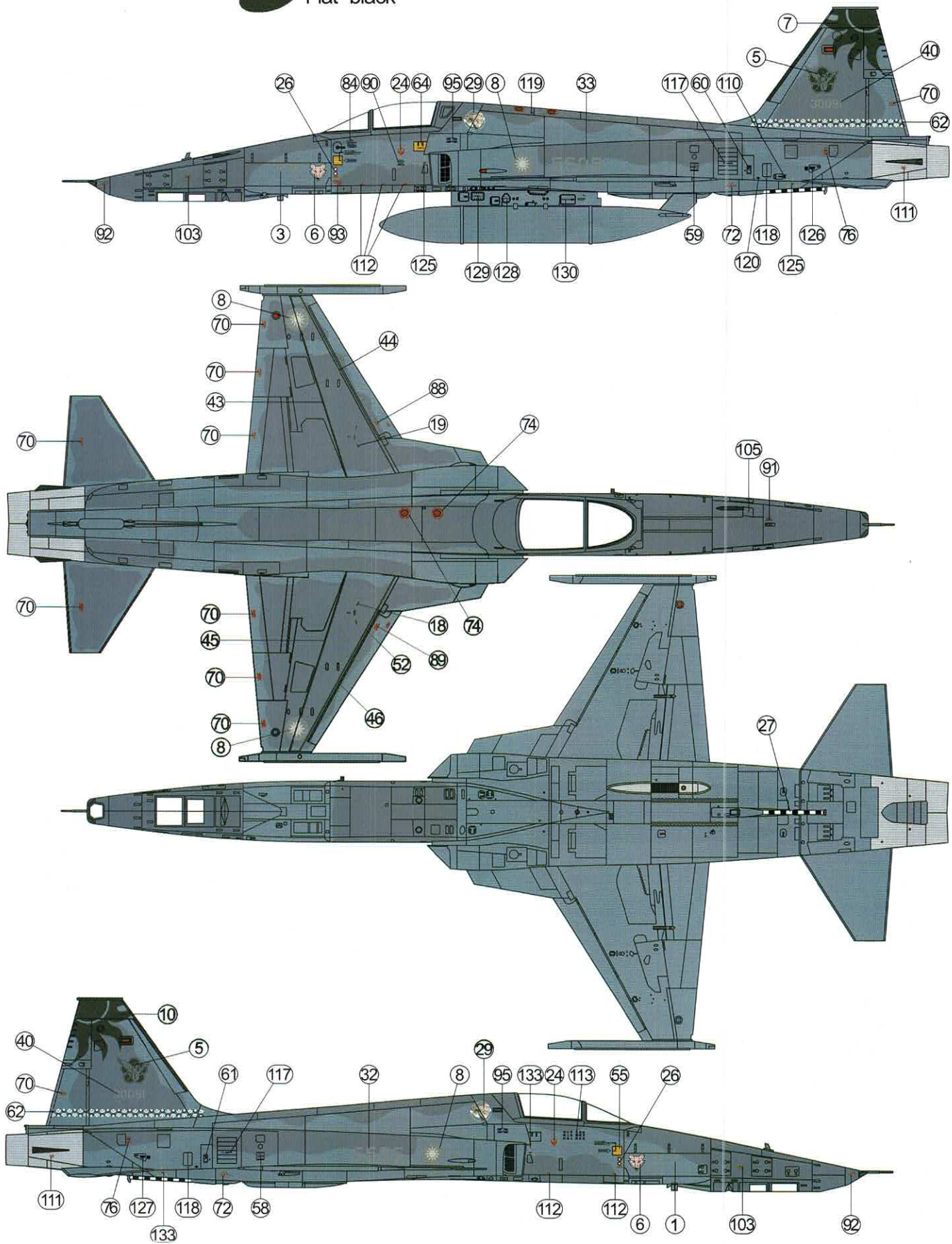
Gray FS36320



Gray FS36118



Flat black



D

第五戰術混合聯隊。

5th Tactical Composite Wing.



Body Color:



Gray FS36375



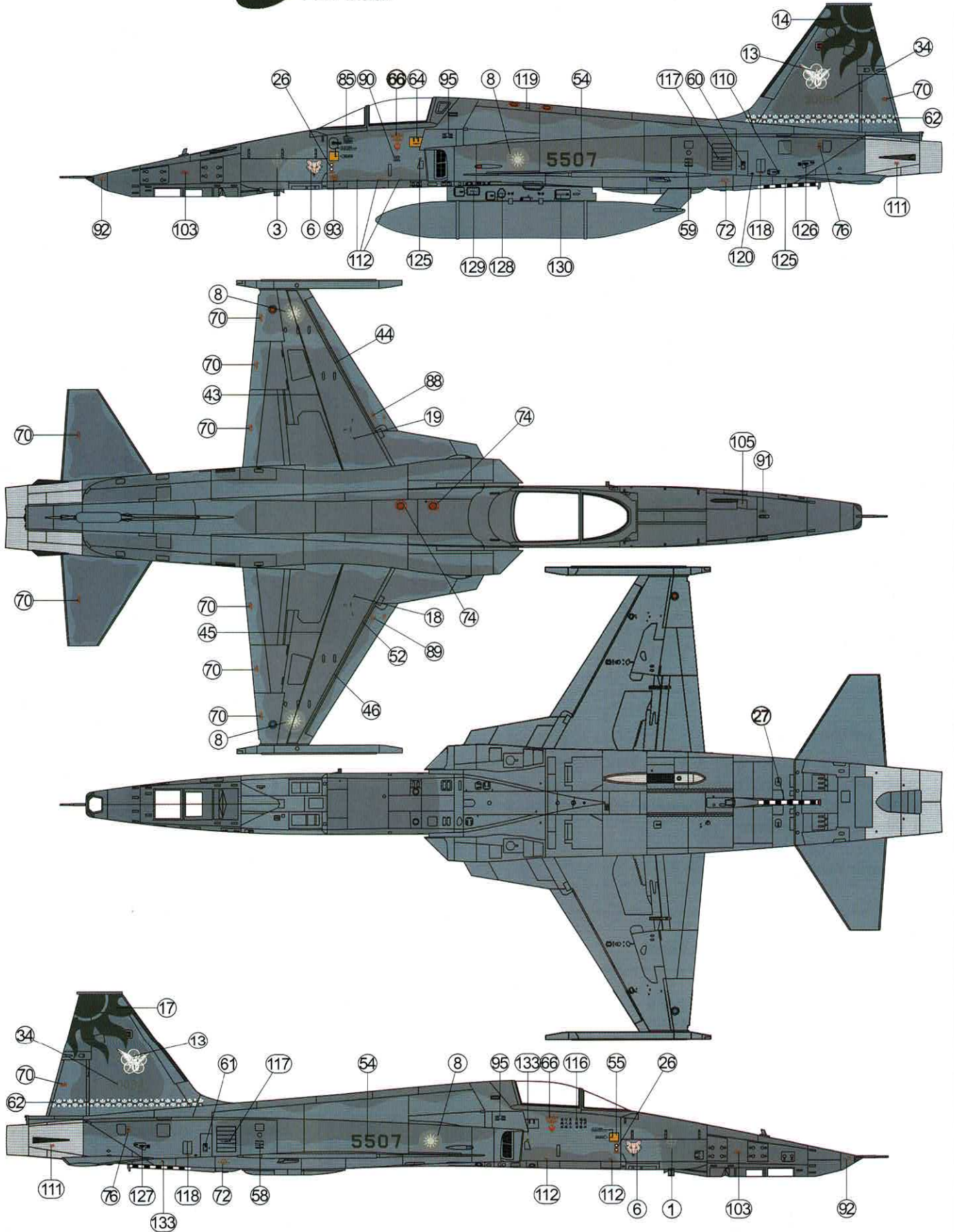
Gray FS36320



Gray FS36118

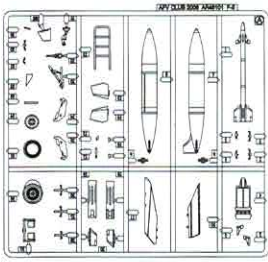


Flat black

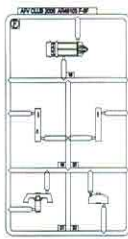


PARTS LIST 零件表

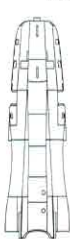
A X4 AR 48101



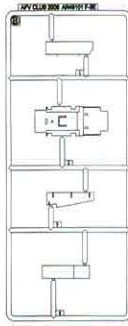
F X1 AR 48103



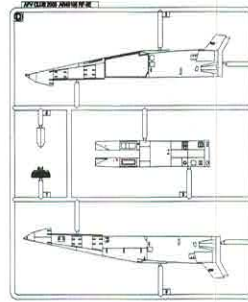
S X2 AR 48101



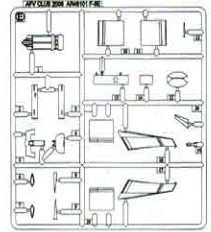
B X1 AR 48101



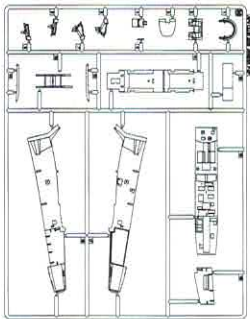
D X1 AR 48105



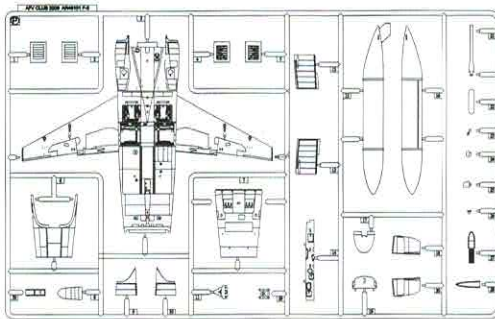
E X2 AR 48101



M X1 AR 48103



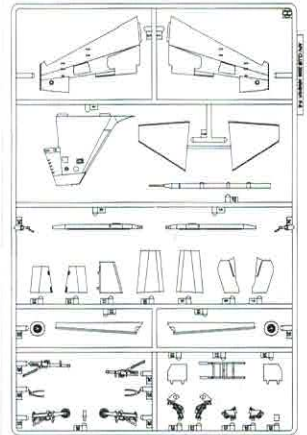
P X2 AR 48101



K X1 AR 48105



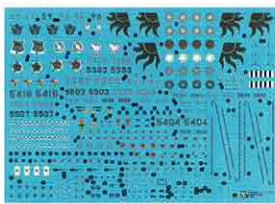
H X2 AR 48101



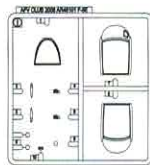
G X1 AR 48105



Z X1 AR 48S11



I X1 AR 48101



J X1 AR 48103



G X1 AR 48106



R X2 AR 48106



T X2 AR 48101



Instructions:

If for some reason, you are not fully satisfied or have questions concerning our product; Please use the form provide, and send it to our nearest representative or mail it directly to our office.

We will deal with that A.S.A.P.

限臺灣地區使用 For Taiwanese use only!

AR 48S11 Parts Replacement Form		
<input type="checkbox"/> AR 48101-A	<input type="checkbox"/> AR 48106-G	<input type="checkbox"/> AR 48101-P
<input type="checkbox"/> AR 48101-B	<input type="checkbox"/> AR 48101-H	<input type="checkbox"/> AR 48106-R
<input type="checkbox"/> AR 48105-D	<input type="checkbox"/> AR 48101-I	<input type="checkbox"/> AR 48101-S
<input type="checkbox"/> AR 48101-E	<input type="checkbox"/> AR 48103-J	<input type="checkbox"/> AR 48101-T
<input type="checkbox"/> AR 48103-F	<input type="checkbox"/> AR 48105-K	<input type="checkbox"/> AR 48S11-Z
<input type="checkbox"/> AR 48105-G	<input type="checkbox"/> AR 48103-M	
Reason for replacement: <input type="checkbox"/> Missing		
<input type="checkbox"/> Broken		
Signature: _____		

總代理戰鷹企業客服部收本公司將儘速為您處理。
請將本表與該部品相同金額之郵政匯票一同寄至。

AR 48S11 零件補充申請表		申請人 姓名 地址 電話
<input type="checkbox"/> AR 48101-A	NT\$ 800	
<input type="checkbox"/> AR 48101-B	NT\$ 200	
<input type="checkbox"/> AR 48105-D	NT\$ 250	
<input type="checkbox"/> AR 48101-E	NT\$ 600	
<input type="checkbox"/> AR 48103-F	NT\$ 150	
<input type="checkbox"/> AR 48105-G	NT\$ 200	
<input type="checkbox"/> AR 48106-G	NT\$ 200	
<input type="checkbox"/> AR 48101-H	NT\$ 800	
<input type="checkbox"/> AR 48101-I	NT\$ 160	
<input type="checkbox"/> AR 48103-J	NT\$ 200	
<input type="checkbox"/> AR 48105-K	NT\$ 160	
<input type="checkbox"/> AR 48103-M	NT\$ 350	
<input type="checkbox"/> AR 48101-P	NT\$ 800	
<input type="checkbox"/> AR 48106-R	NT\$ 300	
<input type="checkbox"/> AR 48101-S	NT\$ 300	
<input type="checkbox"/> AR 48101-T	NT\$ 200	
<input type="checkbox"/> AR 48S11-Z	NT\$ 450	
+郵寄費		NT\$ 80
(請填)總計NT\$		_____
零件補充原因:(請於 <input type="checkbox"/> 打√)		
原包裝即 <input type="checkbox"/> 遺失或 <input type="checkbox"/> 毀損,		
製作途中 <input type="checkbox"/> 遺失或 <input type="checkbox"/> 毀損,		
其他原因 _____		