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Sikorsky UH-60L BLACK HAWK

#2192/FA189

KIT #200413

1/35th Scale

UH-60L 블랙호크

The powerful UH-60L Black Hawk is the current production model of the U.S. Army's rugged air assault and utility transport helicopter. More than 1,600 UH-60s have been delivered to the U.S. Army so far, and more than 400 Black Hawks serve the armed forces of countries from Australia to Turkey. Production deliveries of the UH-60 to the U.S. Army began in October 1978. The Black Hawk first went into combat in Operation Urgent Fury, the invasion of Grenada in October 1983. In the fierce battle to stabilize the Caribbean island, the heavy-duty control components, redundant control runs, and self-sealing fuel tanks of the Black Hawk proved their value. One UH-60 with a wounded pilot kept flying with 45 bullet holes in the airframe, two in the main rotor, and one in the tail rotor. The Army UH-60L emerged in October 1989 with more powerful General Electric T700-GE-701C engines and other drivetrain and control improvements introduced on the Navy SH-60 Sea Hawk. The UH-60L can reposition a 105-mm howitzer, its crew of six, and up to 30 rounds of ammunition in a single lift. The U.S. Army had more than 1,000 Black Hawks in service by 1990 when UH-60s were rushed to Operation Desert Shield in Middle East. When Desert Shield became Desert Storm, Black Hawks hauled troops, equipment, and supplies throughout the theater of war. They carried Special Operations Forces deep into Iraq, evacuated the wounded and the captured, deployed artillery, and rescued aircrew. Black Hawks took troops of the 101st Air Assault division deep into Iraq to outflank the entrenched enemy. In Desert Storm operations from January to March 1991, U.S. Army UH-60s sustained mission capable rates better than 85%. Only one of five Black Hawks lost during the war is known to have been shot down. Beginning in 1983, all production Black Hawks incorporated hardpoints for the External Stores Support System (ESSS). The non-lifting "wing" carries four 230-gallon or two 450-gallon fuel tanks for greater range. A quarter century after its first flight, Sikorsky's Black Hawk is a key element of American military power and ready to grow with tomorrow's airmobility needs.



Specifications

Rotor Span.....53.7 feet (16.4m)
 Height.....16.8 feet (5.1m)
 Maximum Weight.....20,250 lbs (9185.4Kg)
 Armament.....Two 7.62 mm M60D machine guns

Performance

Maximum Speed.....182 mph(292.9km/h)
 Range.....373 miles (600.3Km)

Length.....64.8 feet (19.8m)
 Empty Weight.....10,649 lbs (4830.4Kg)
 Power Plant.....Two 1940 shp T700-GE-701C turboshaft engines

Service Ceiling19,300 feet (5882.6m)
 Crew.....Three

We wish to thank the following individuals for their help in making this kit so accurate: Mr. S.H. Kim Academy Plastic Model Company, Ltd., Korea; Mr. Sherman Collings, Cobra Company, U.S.A., Mr. Frank Colucci, U.S.A.; LTC James P. Coates 78th Avn. Bn.; and Maj Steven Boylan 9th TSC.



現在合衆国陸軍で1,600機以上が就役しているUH-60ブラック・ホークは、最新の航空強襲、戦術多用途輸送ヘリコプターである。更に400機以上のUH-60ブラック・ホークが韓国陸軍(UH-60P)、日本の陸海空各自衛隊(UH-60JA, UH-60J, SH-60J)等数カ国の軍隊で導入されている。合衆国陸軍には1978年10月に納入開始し、初めての実戦参加は1983年カリブ海の諸島を安定させる目的のグレナダ侵襲で、Urgent Fury(急な怒り)と名付けられた作戦中、あるUH-60は胴体に45発、メイン・ローターに2発、テール・ローターに1発を被弾し更に負傷したパイロットとともに飛行を続け、予備操縦装置を含む堅固な操縦装置、自動防漏燃料タンクは、その真価を実証した。1989年、合衆国陸軍に就役したUH-60Lはより強力なゼネラル・エレクトリック T700-GE-701Cエンジンを搭載し、操縦系等もSH-60からの経験も取り入れ更に改良が加えられ、1度の空輸で、105mm榴弾砲と、その6名の乗員及び30発の砲弾を含む作戦行動の、再展開を可能とした。1989年11月、再びパナマで行われたJust Cause(真実なる理由)作戦では11席の2.1m/secのハードランディングに耐えられる衝撃吸収トループシートを取り外すことにより、1度で25名もの兵員を輸送した。53機中25機のUH-60が損害を被ったが、その日の内に24機が作戦行動に復帰した。1990年の南西アジアにおける Desert Shield(砂漠の盾)作戦までに、合衆国陸軍は1,000機以上のUH-60を就役させていた。砂漠の盾が Desert Storm(砂漠の嵐)作戦に変わった時、UH-60は全戦域で作戦輸送、兵站、補給、の多くを担った。UH-60はイラク領奥深く特殊作戦部隊を侵入させ、負傷兵や捕虜を後送し、火炮を展開、撃墜された搭乗員を救出した。UH-60は新環境に立てこもるイラク軍の側面を衝くため、イラク領奥深く、伝統に輝く第101航空急襲師団(スクリーミング イーグルス)を運り込んだ。1991年1月から3月に至る砂漠の嵐作戦期間中、UH-60は85%以上の任務達成率を維持した。戦争期間中失われたUH-60は5機のみで、撃墜されたのは僅かに1機である。1985年以降生産されているUH-60ブラック・ホークは、230ガロン増槽タンク4本又は、450ガロン増槽タンク2本を装備できるExternal Store Support System(ESSS機外搭載支援システム)が運用可能となり航続距離が拡大された。シコルスキー UH-60 ブラック・ホークは初飛行以来、四半世紀に渡り合衆国軍力の1つの重要な要素であり、空中機動が増強する将来の需要にも対応できる準備が整っている。

諸元

ローター直径.....16.4m (53.7フィート)
 全高.....5.1m (16.8フィート)
 最大離昇重量.....9185.4Kg(20,250 ポンド)
 武装.....7.62mm 50口径M60 機関銃 X2

性能

最大速度.....292.9km/h(182 mph)
 航続距離.....600.3Km (373 マイル)

全長.....19.8m(64.8フィート)
 自重.....4830.4Kg(10,649 ポンド)
 エンジン.....T700-GE-701C ターボシャフト 推力1940shp 2基

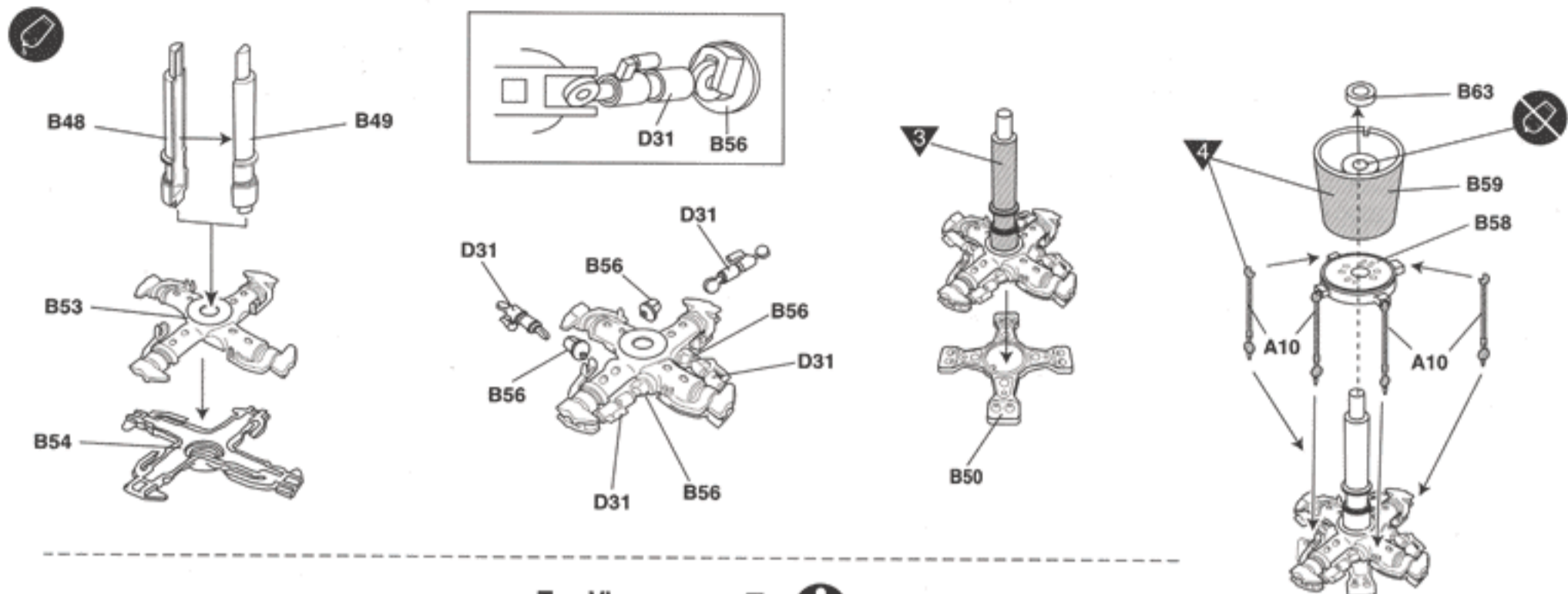
巡航高度5882.6m(19,300 フィート)
 乗員.....3名

강력한 힘을 지닌 UH-60 블랙호크는 현재 미 육군에서 약 1,600여대 이상의 기체가 공중감시 및 수송전력의 핵심으로 활동중인 최선에 헬리콥터로, 미국 이외에도 호주, 터키, 일본, 한국 등 세계 여러 국가에서 400여대 이상이 주력 군용 헬기로 채택되어 널리 운용되고 있다. 1978년 10월부터 미 육군에 배치 개시된 블랙호크가 첫 실전에 투입된 것은 1983년 10월에 감행된 미국의 그레나다 침공 당시의 일이다. 작전명 '어젯트 퓨리(Urgent Fury: 긴급한 분노)'로 불린 이 전투를 통해, 블랙호크는 그 우수한 성능을 실제로 입증해 보이게 되는데, 예비 계통을 포함한 주요 조종장치의 견고함과 신뢰성, 피탄시에 자동으로 연료누출을 막아 주는 구조로 만들어진 연료탱크 등은 군 내부에서도 높은 평가를 얻었다. 특히 어떤 블랙호크의 경우, 메인 로터에 2발, 테일 로터에 1발, 그리고 동체엔 무려 45발의 총탄을 맞고서도 부상당한 파일럿과 함께 비행을 계속하여 기지로 귀환하는 뛰어난 생존성을 보여주며 주위를 놀라게 하기도 했다. 1989년 10월부터 미 육군에 배치 개시된 UH-60L형은 중전보다 출력이 강화된 신형의 제너럴 일렉트릭 T700-GE-701C 엔진을 새로 탑재한 것을 비롯하여, 해군용 모델인 SH-60 세호크의 개발경험을 살려 조종계통에도 개량이 가해졌다. 그 결과, UH-60L형 모델은 105mm 곡사포 1문과 6명의 조종인원 및 30발의 포탄을 단 한차례의 공수작업으로 운반하여 재배치시킬 수 있을 만큼 성능이 크게 향상되었다. 또한, 1985년 이후 생산된 모든 블랙호크 시리즈는 230갤런 용량의 보조 연료탱크 4개, 또는 450갤런 짜리 보조 연료탱크 2개를 장비할 수 있는 '외부 탑재지원 시스템(ESSS: External Store Support System)'을 필요에 따라 장착할 수 있게 되면서 항속거리가 크게 연장되었으며, 그 결과 운용상의 유연성도 크게 향상되었다. 1990년 당시 미 육군에선 약 1,000여대 이상의 블랙호크가 운용 중이었고, 이라크의 쿠웨이트 침공으로 인해 '사막의 방패' 작전이 실시되게 되자 상당수의 블랙호크가 중동지역으로 급파, 전개되었다. '사막의 방패' 작전에서 '사막의 폭풍' 작전으로 상황이 급변하면서 UH-60은 전 전투지역에 걸쳐 병력, 장비, 보급물자의 수송을 담당하게 되었는데, 이라크 영토 내로 특수부대를 깊숙이 침투시키는 임무를 비롯하여, 부상병 및 포로의 수송, 화포의 전개배치, 추락한 조종사의 구출 등 실로 다양한 임무가 블랙호크에 의해 소화되었다. 또한 제101공수사단(스크리밍 이글즈)의 병력을 이라크 영내로 수송하여, 참호 깊숙이 숨어있던 이라크 군의 측면에 타격을 입히는 작전에서도 큰 활약을 펼쳤다. 1991년 1월부터 3월에 걸친 '사막의 폭풍' 작전 기간 중, 미 육군의 UH-60시리즈는 85%이상의 높은 임무 달성률을 줄곧 유지하였으며, 전쟁 기간 중 손실된 총 5대의 기체 중, 격추에 의해 잃어버린 것은 불과 1대 뿐이었다. 시코르스키 UH-60 블랙호크는 첫 비행으로부터 사반세기가 경과한 현재까지도, 미국을 비롯한 많은 국가의 군사전력에서 여전히 핵심적인 요소를 차지하고 있으며, 가까운 장래에 있을 공중기동력 증강요구에도 충분히 대비할 수 있는 잠재력을 갖춘 기종이라 할 수 있다.

(주요 제원) 로터직경.....16.4m(53.7피트)
 높이.....5.1m(16.8피트)
 최대이륙중량.....9185.4kg(20,250파운드)
 (성능) 최대속도.....시속 292.9km(시속 182마일)
 항속거리.....600.3km(373마일)

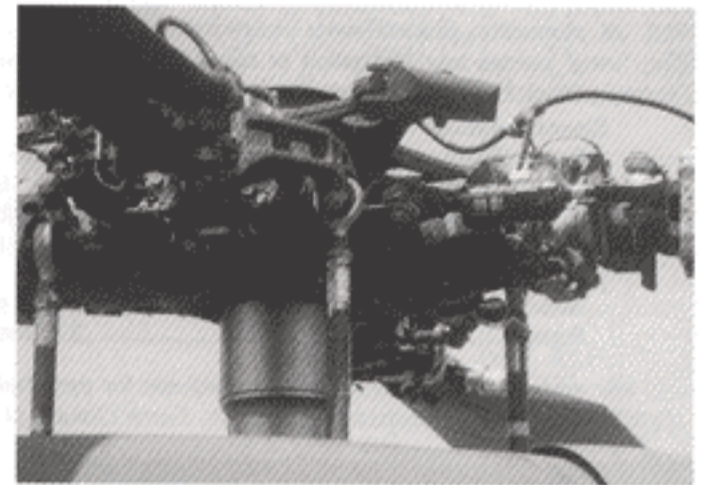
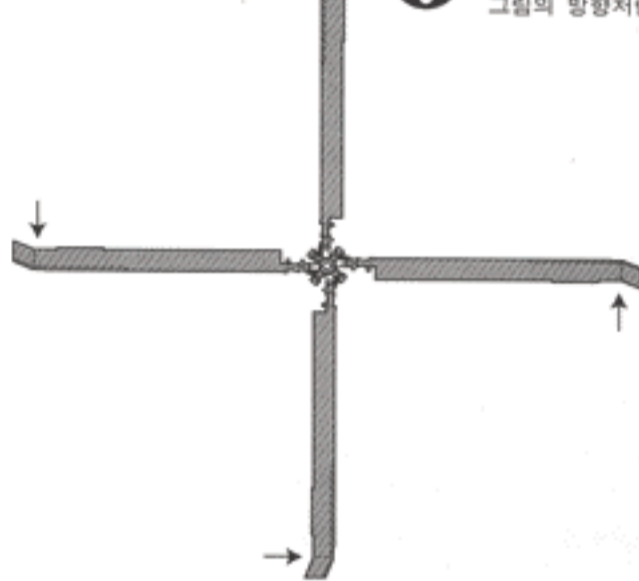
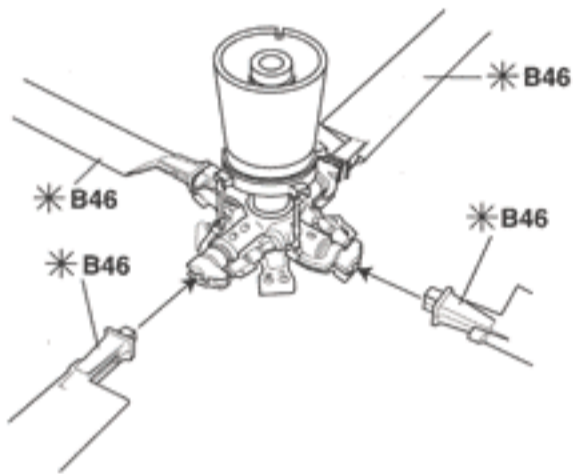
길이.....19.8m(64.8피트)
 기체중량.....4830.4kg(10,649파운드)
 엔진.....T700-GE-701C 터보샤프트 엔진(출력: 1,940 샤프트마력) x2
 순항고도.....5882.6m(19,300피트)
 승무원.....3명

Step#1- Main Rotor Assembly 메인로터의 조립



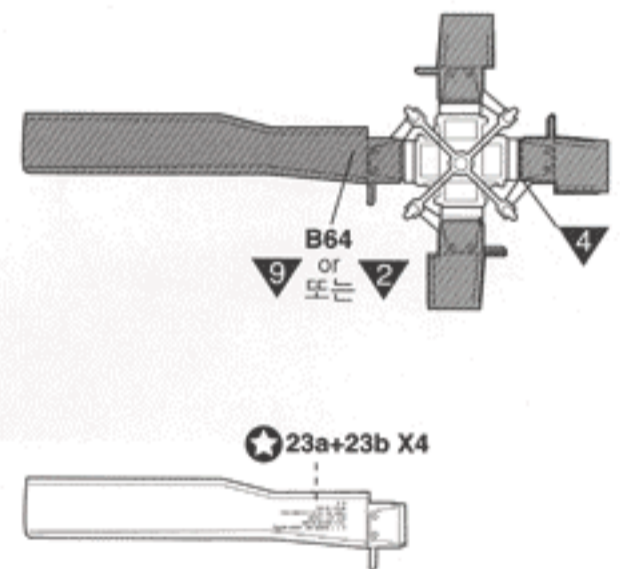
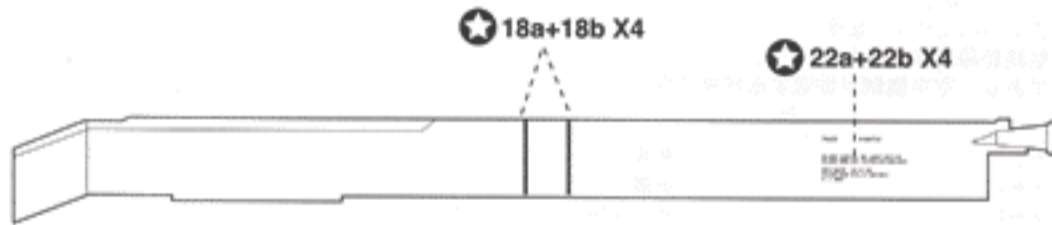
<Top View 상면도>

! *Note rotor rotation direction. 그림의 방향처럼 조립한다.

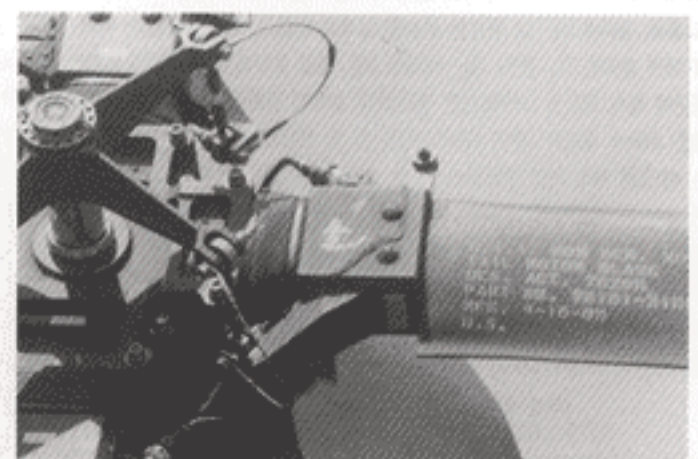
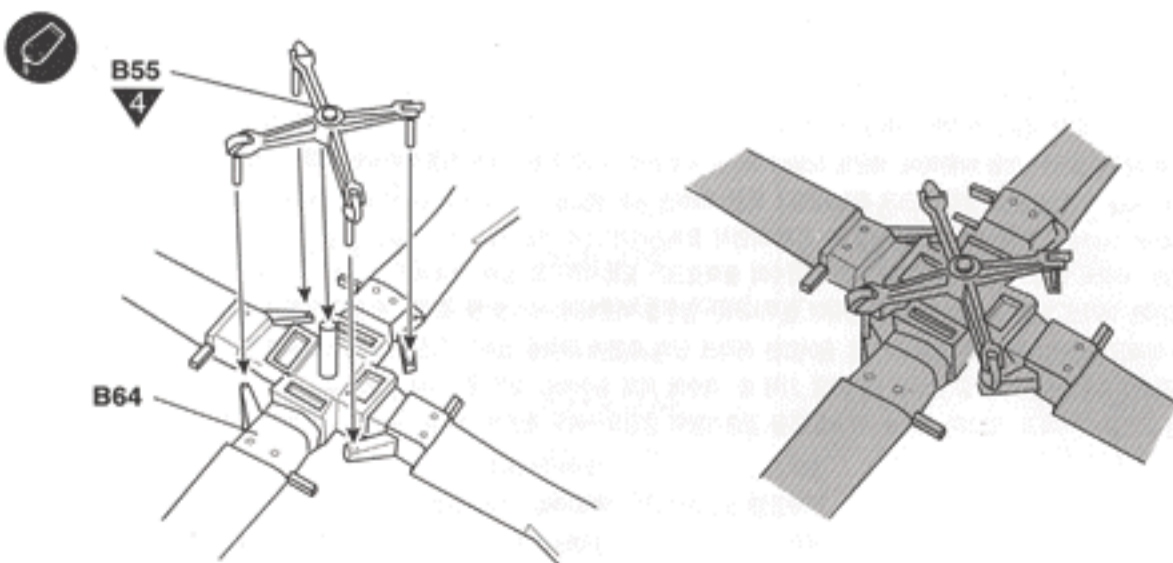


*•Painting Guide/색칠가이드

*•Decal placement/전사지위처



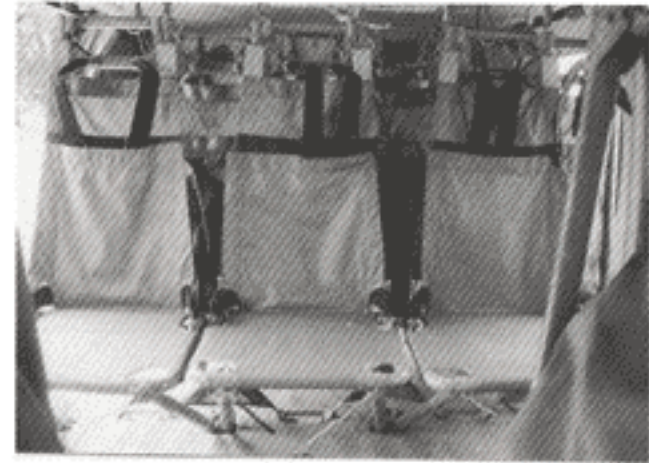
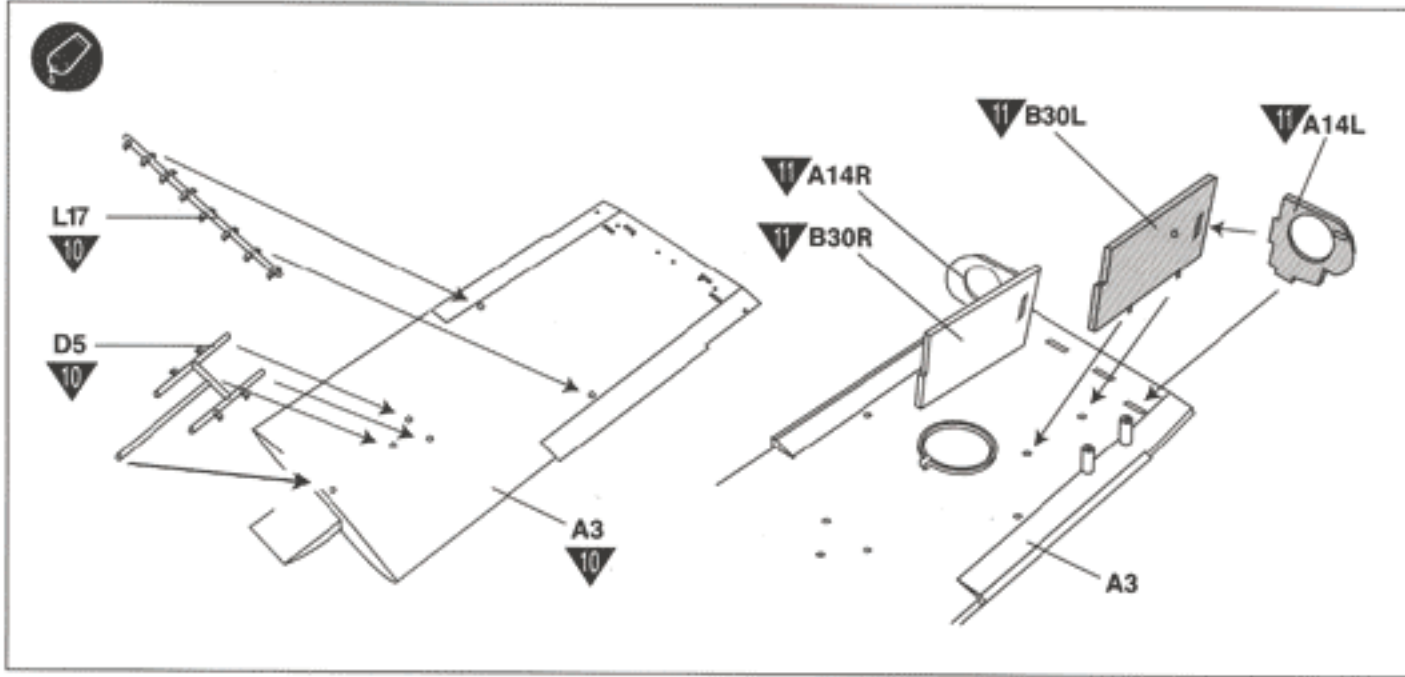
Step#2- Tail Rotor Assembly 테일로터의 조립



Step#3

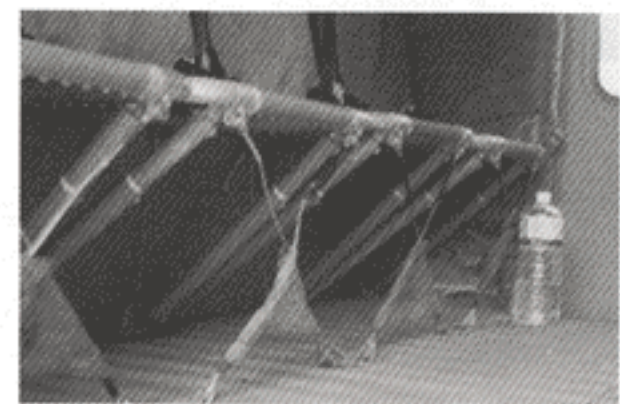
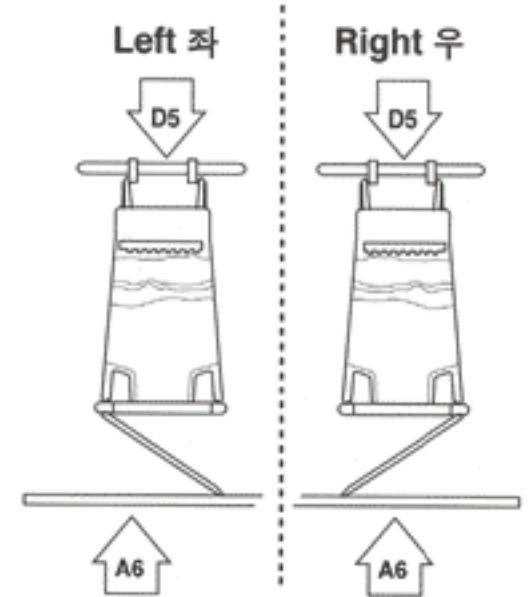
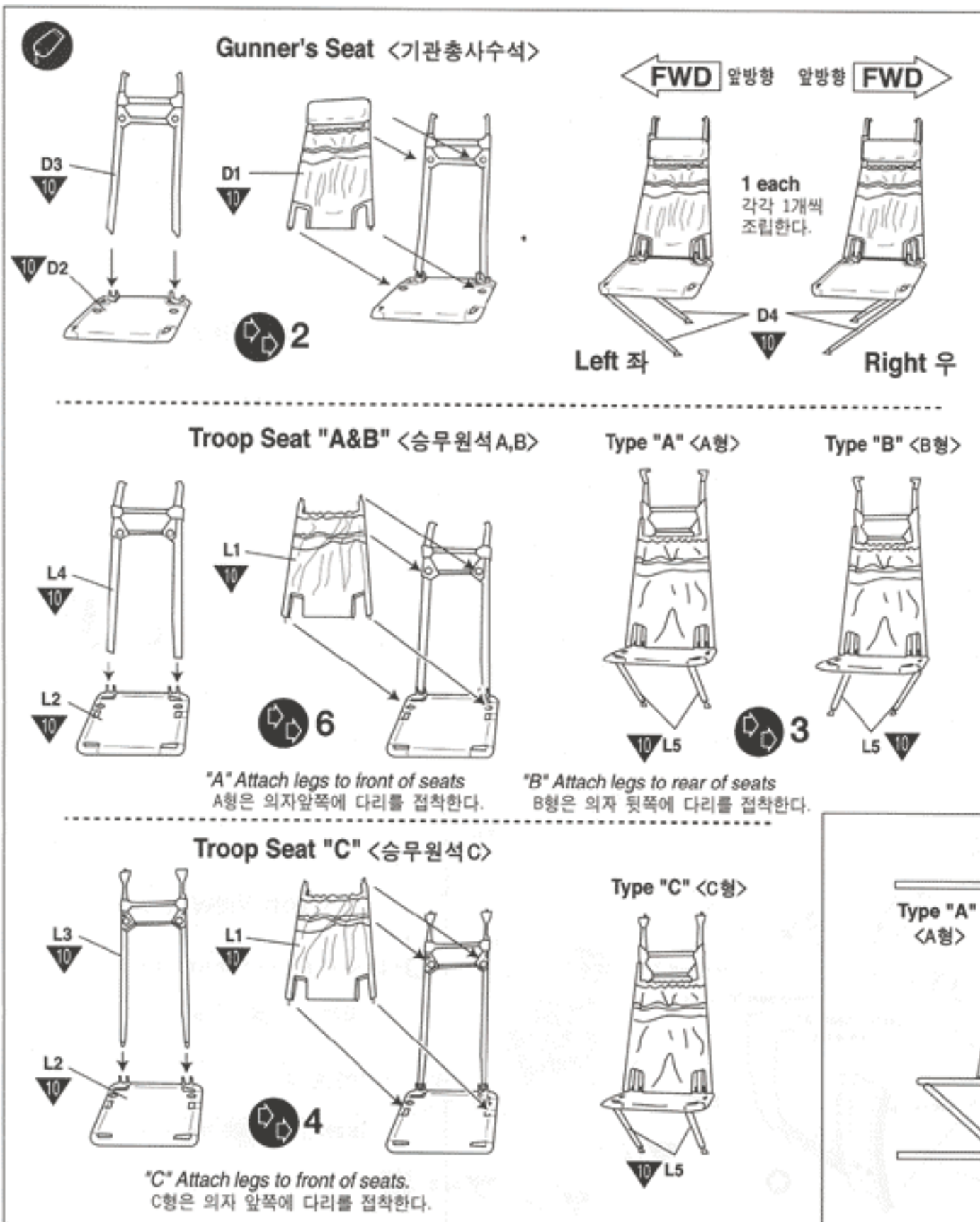
Engine Compartment/Ceiling/Turnbuckle Assembly

엔진수납부/내부천장/좌석고정대의 조립

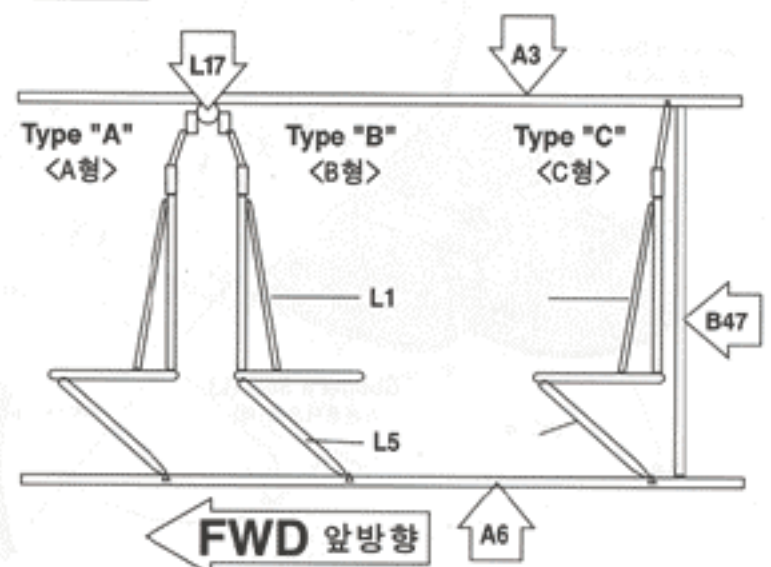


Step#4- Cabin Seat Assembly

승무원실 좌석의 조립



<Side View 옆모습>



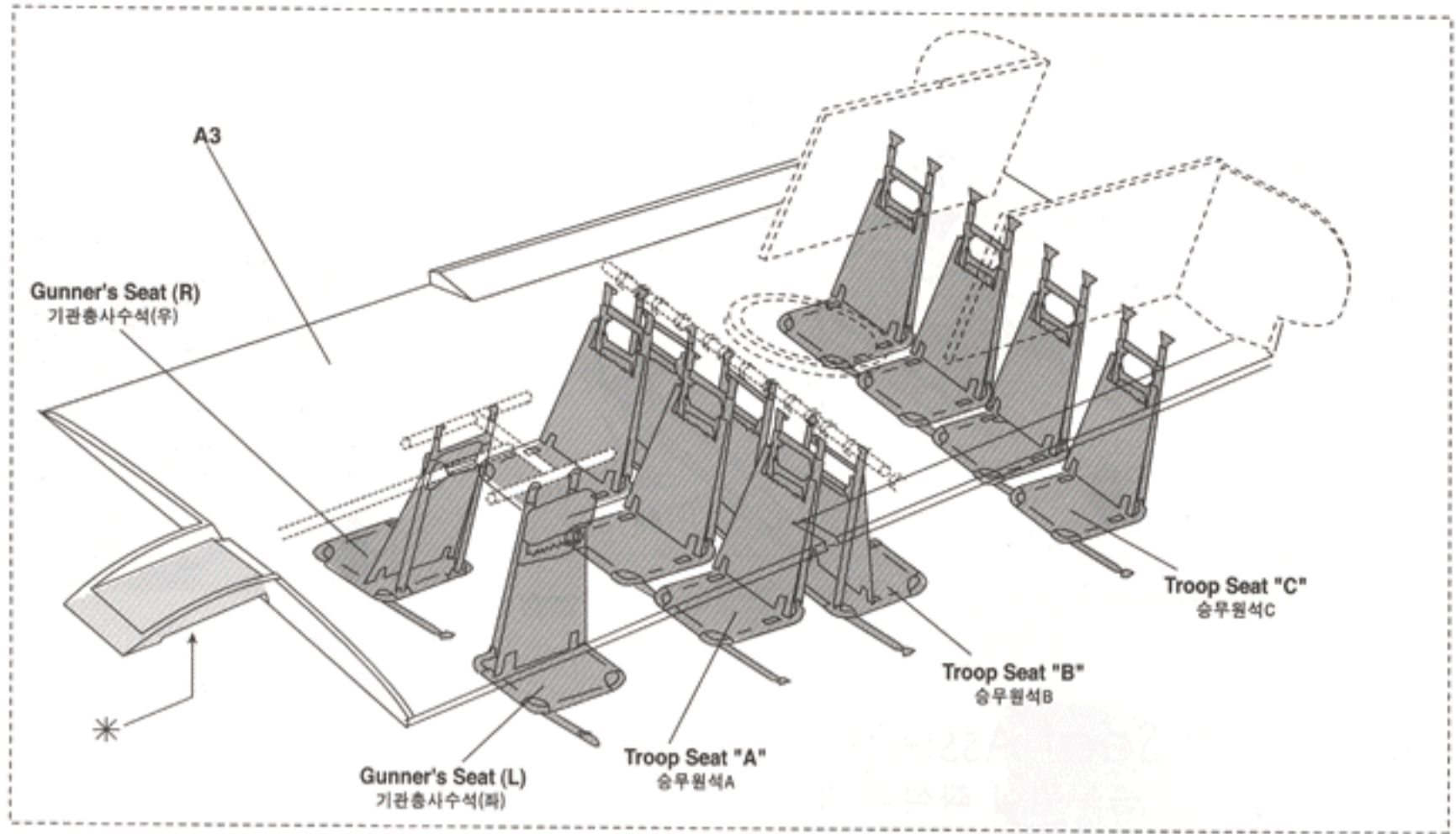
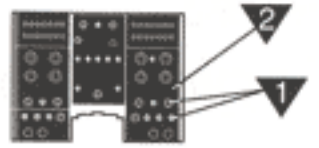
Seat Arrangement <좌석배치>

Dotted lines are Part D5 and L17 Turnbuckles.
 점선으로 표시된 부분은 좌석고정대(D5,L17)를 나타냄.

* •Painting Guide/색칠가이드

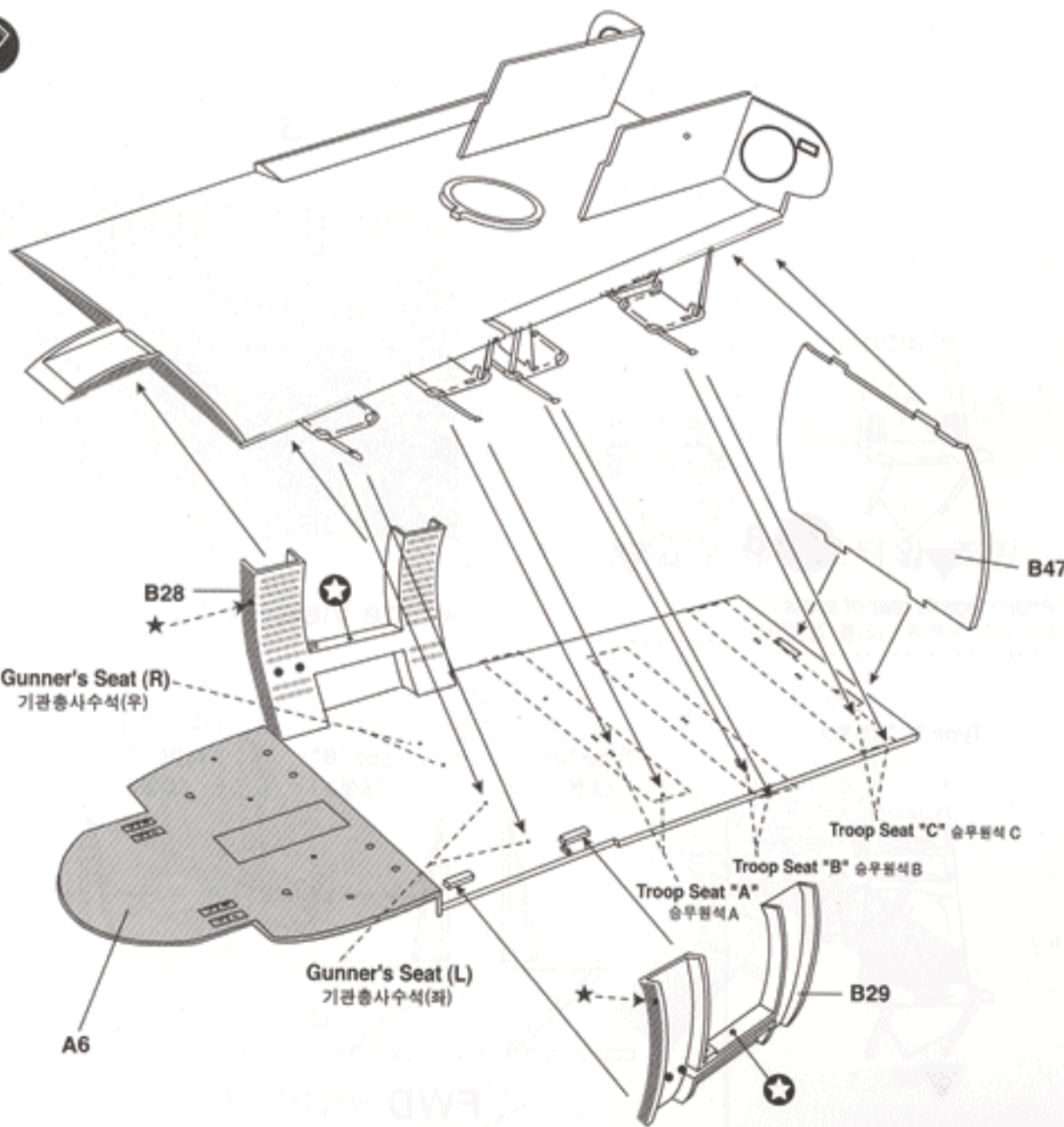
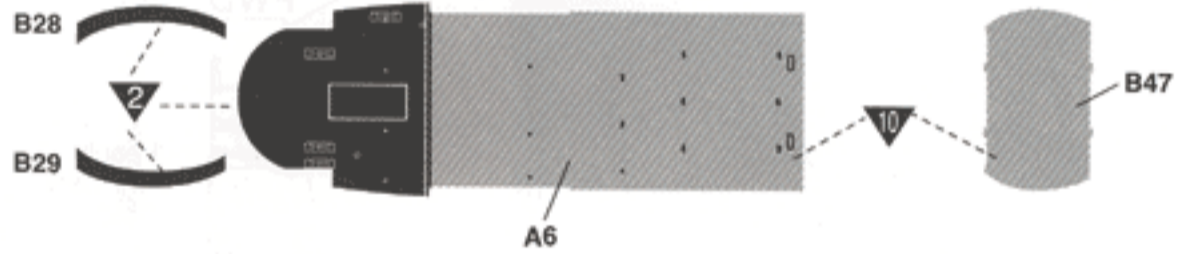
Overhead consoles 상면계기판(A3)

Flat Black FS 37038/ White FS 17925 details
 기본색: 무광검정색/계기류: 유광흰색



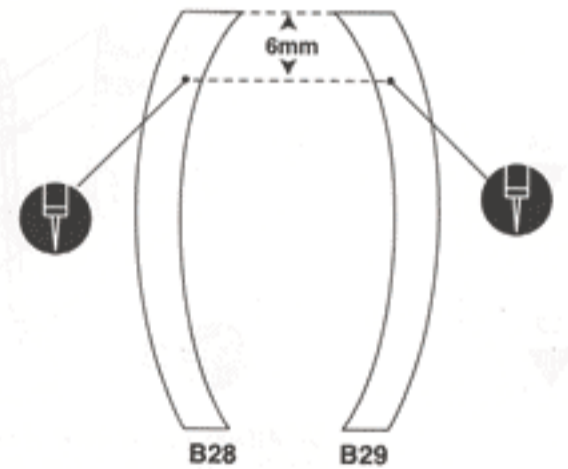
•Painting Guide/색칠가이드

Step#5 Cabin Assembly 승무원실의 조립



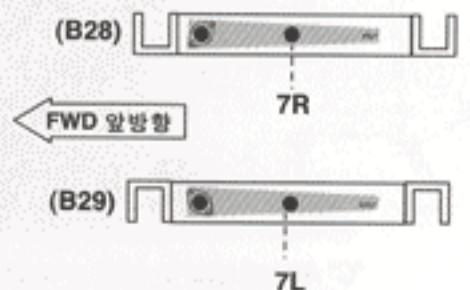
<Front View 앞모습>

★ Drill hole for Armor Protector.
 (Refer to Parts D8 and D9) Refer to Step #8
 그림과 같이 B-28, B-29 부속의 측면에 D8, D9 부속을 끼우기 위한 구멍을 뚫어준다. (과정 #8참조)



<Top View 윗모습>

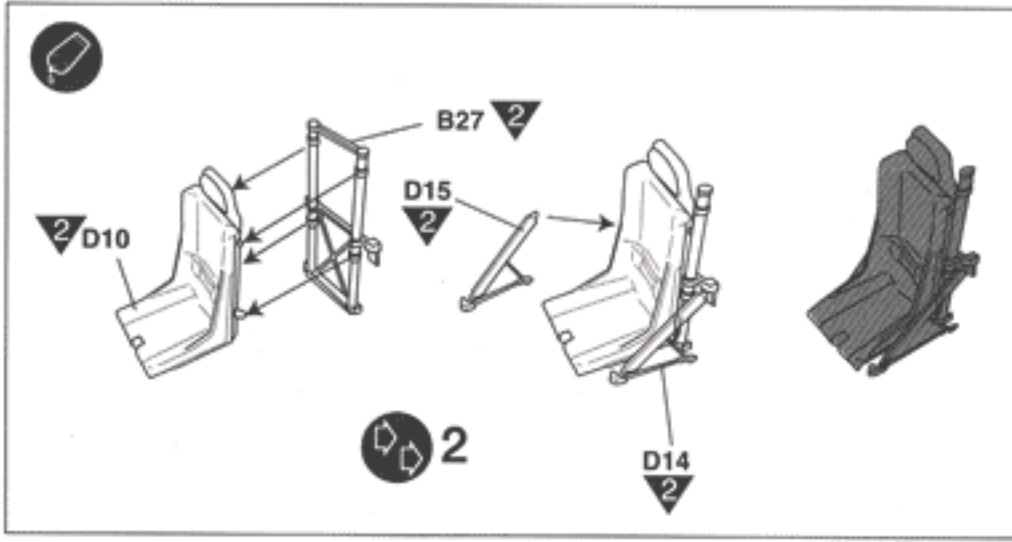
★ •Decal Placement/전사지위치



Step#6

Pilot Seat Assembly

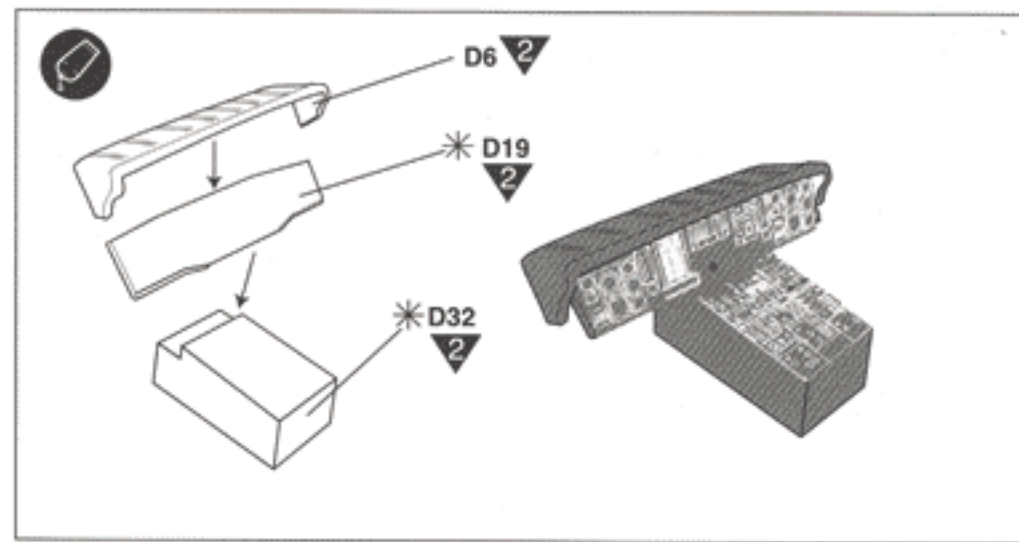
파일럿좌석의 조립



Step #7

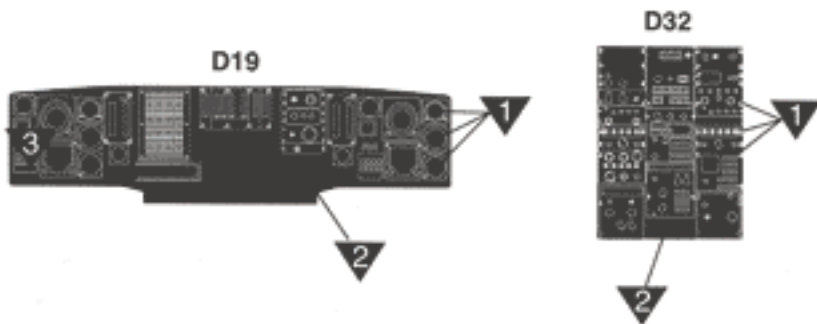
Instrument Panel Assembly

계기판의 조립



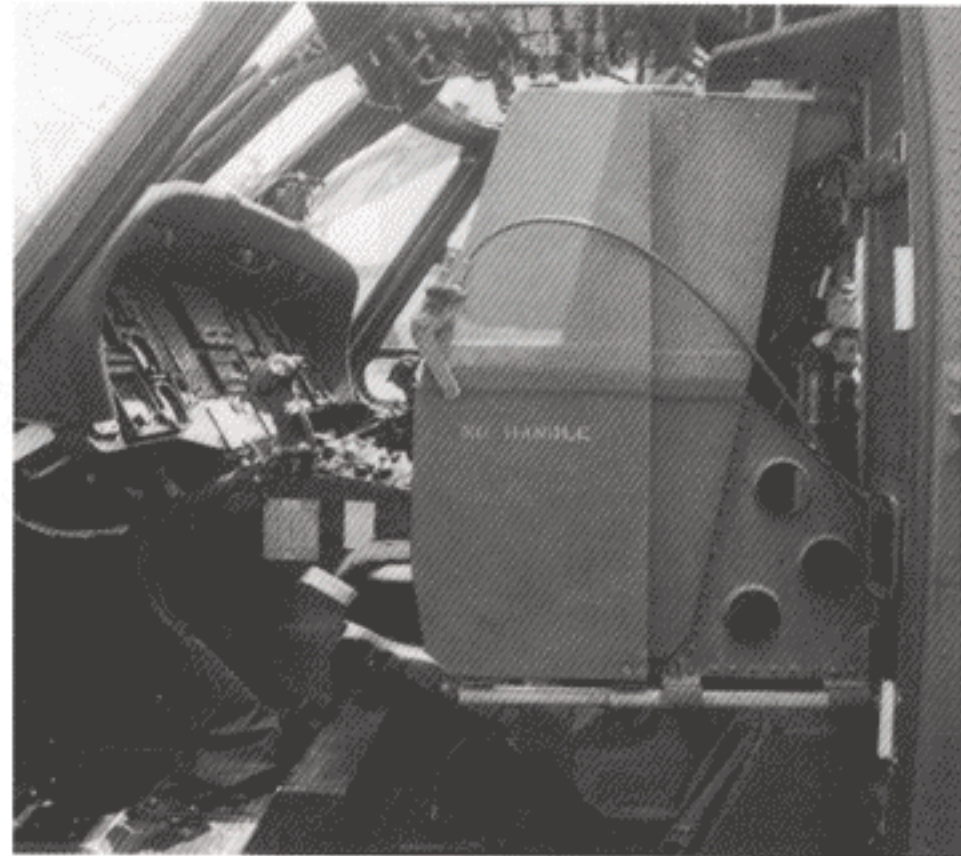
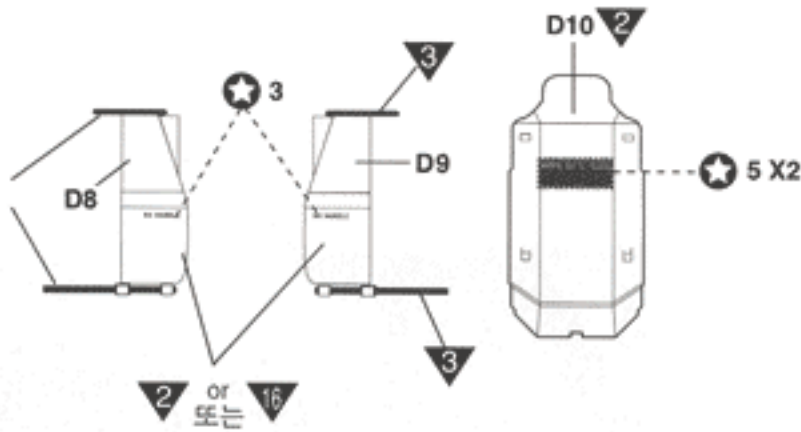
*•Painting Guide/색칠가이드

Flat Black FS 37038/ White FS 17925 details
기본색: 무광검정색/계기류: 유광흰색

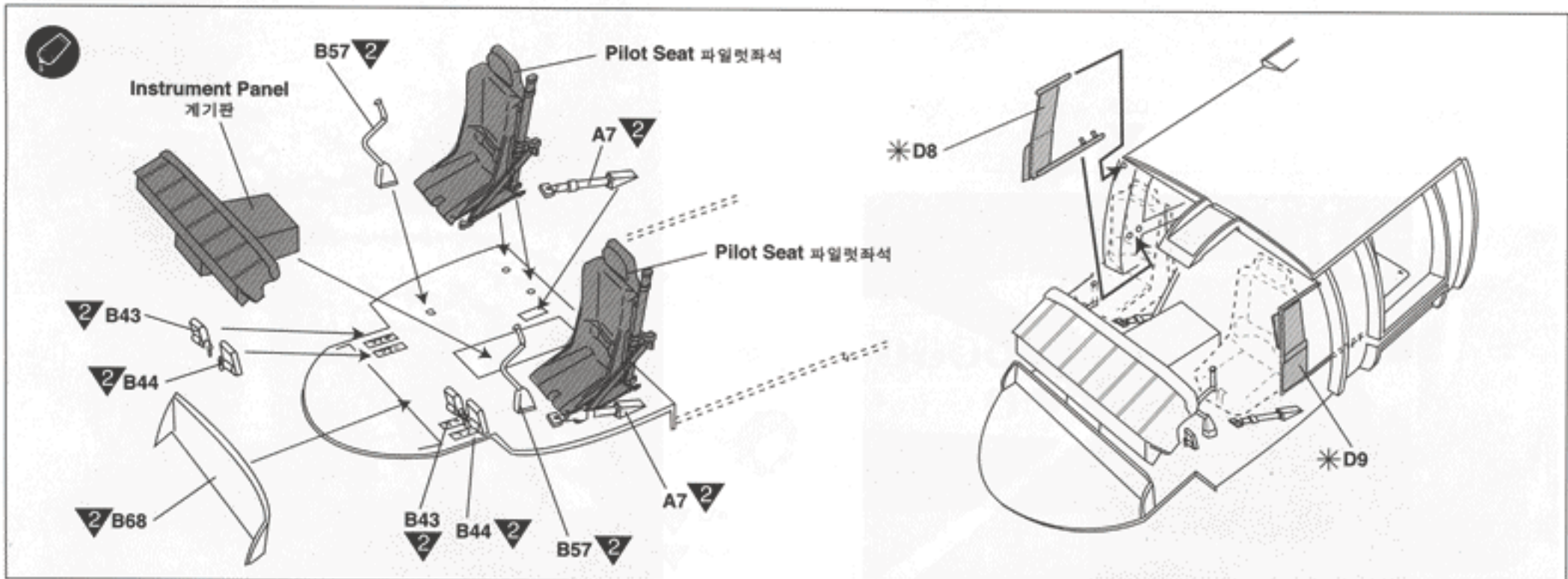


*•Painting Guide/ Decal Placement

색칠가이드/전사지위치

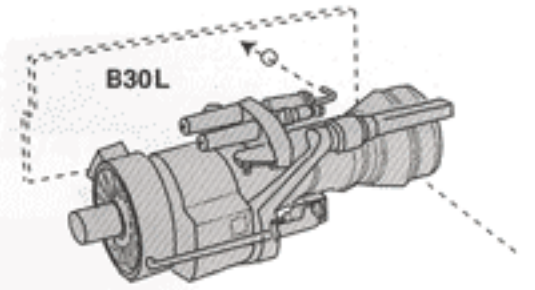
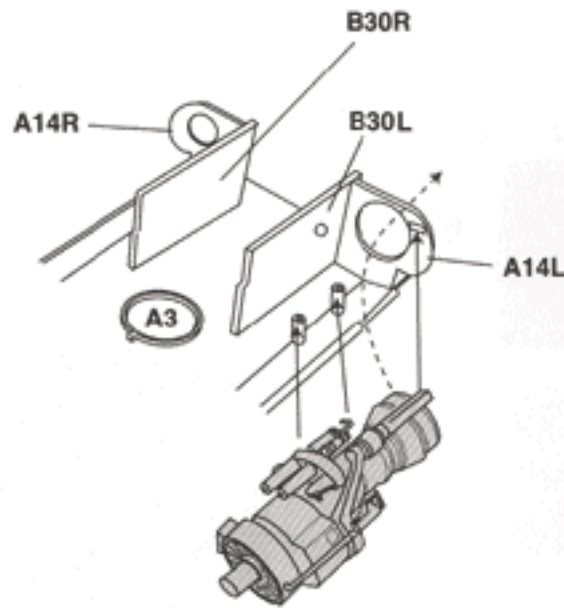
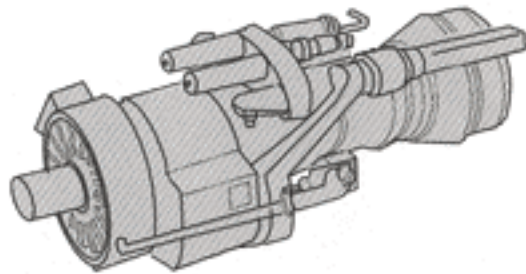
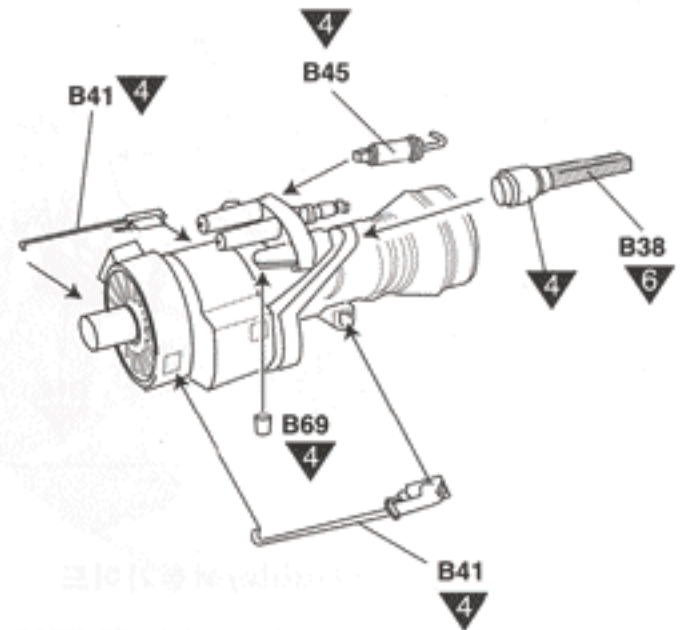
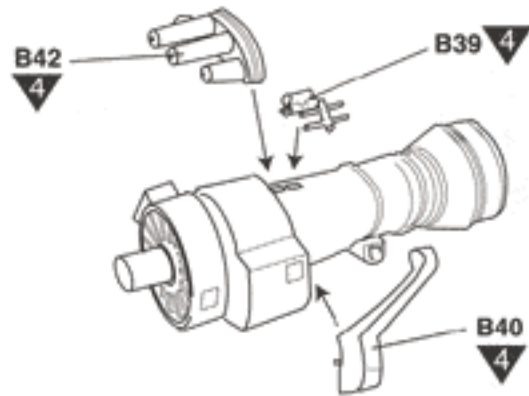
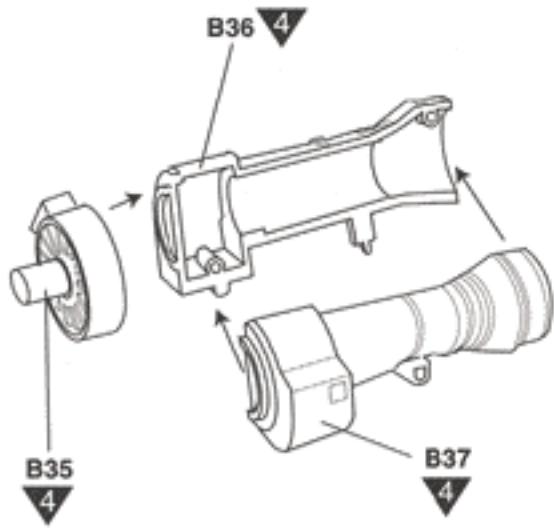


Step #8- Cockpit Assembly 조종석내부의 조립



Step#9

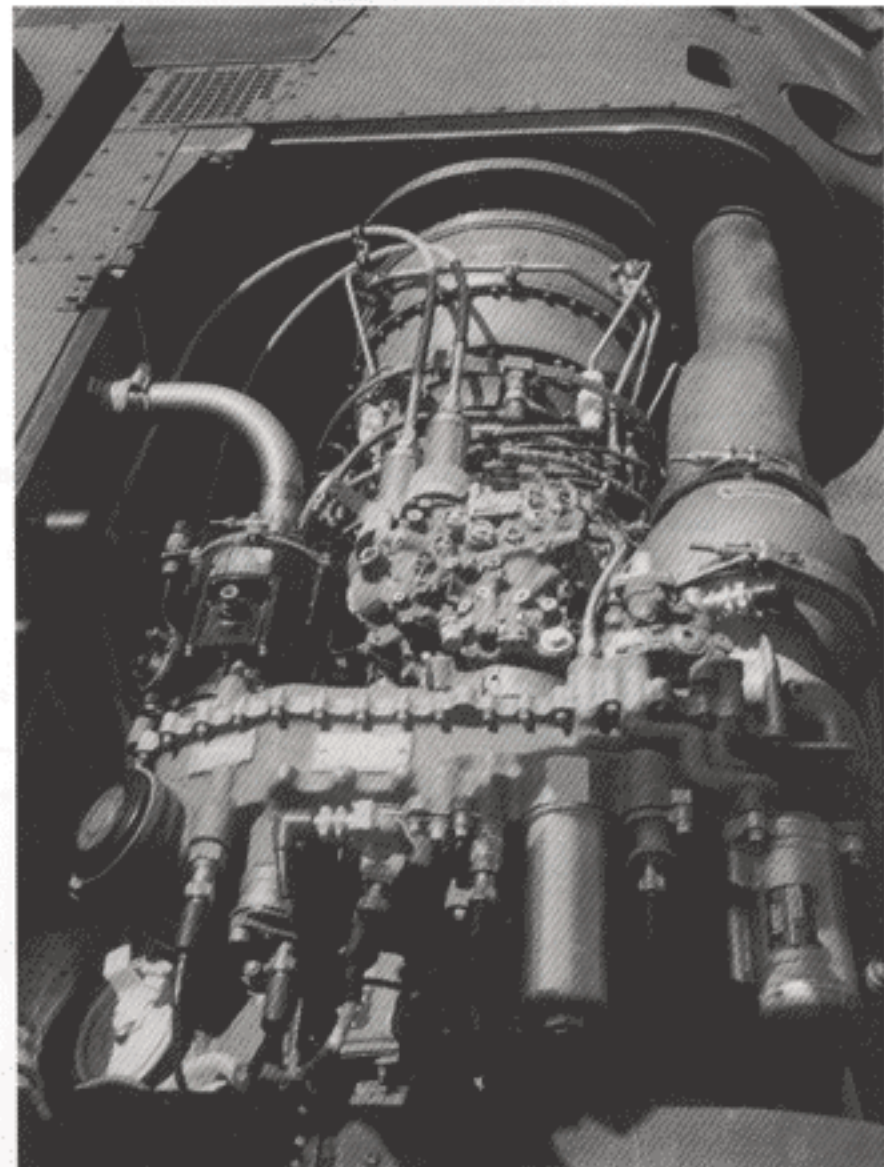
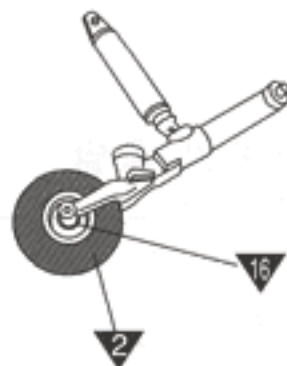
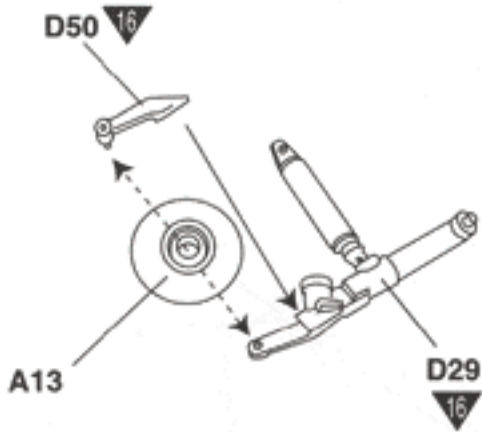
Engine/Engine Compartment Assembly 엔진 및 엔진수납부의 조립



This diagram shows the underside of part A3.
이 그림은 A3(천정판부속)의 엔진고정부를 나타낸 것임.

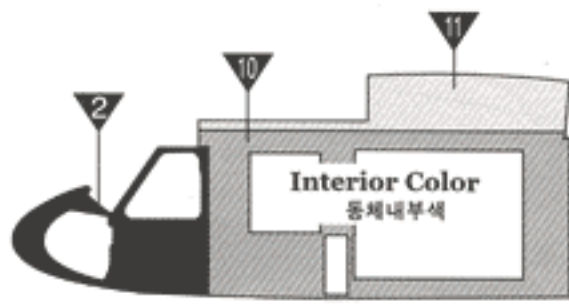
Step#10

Tail Wheel Assembly 꼬리바퀴의 조립

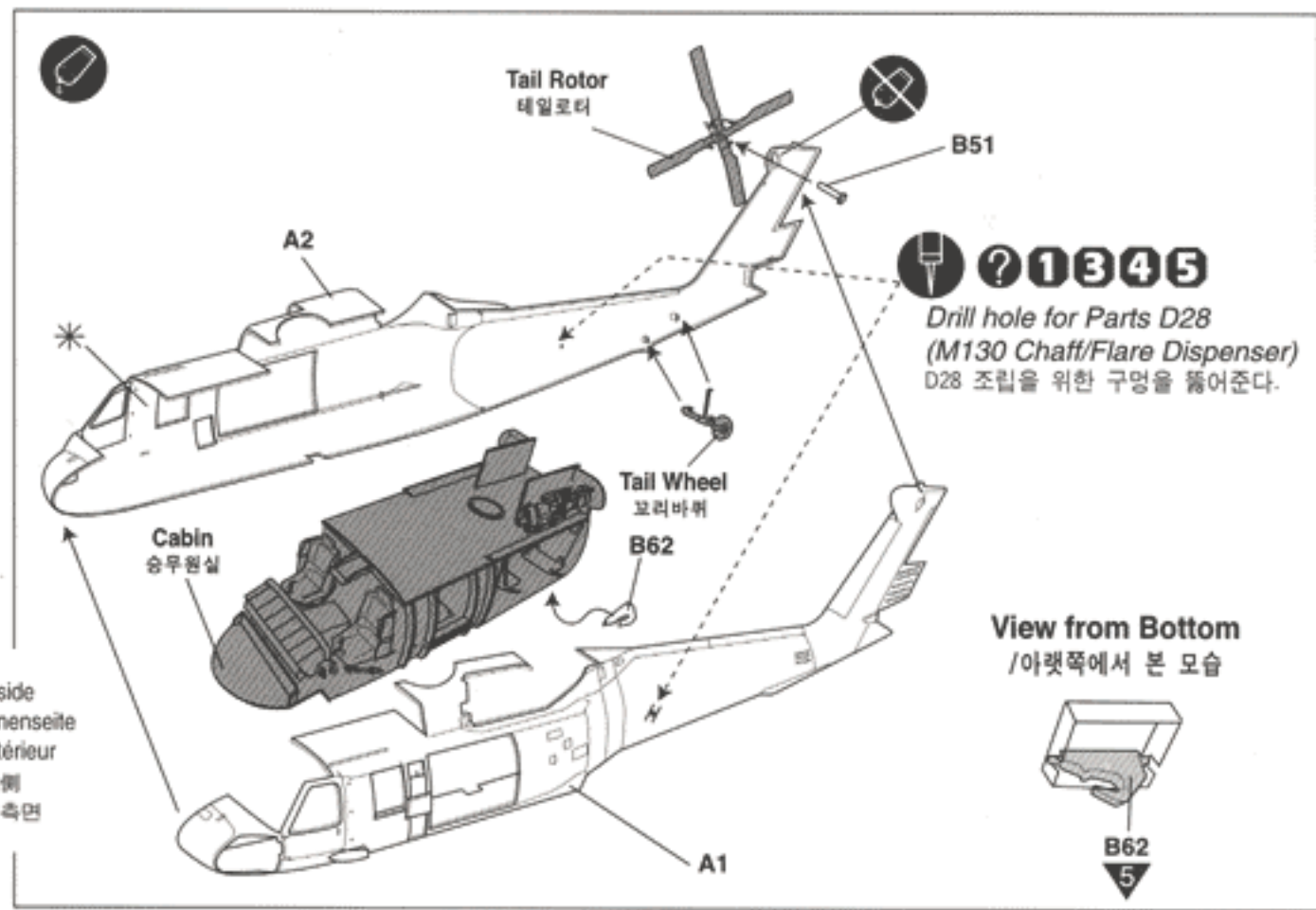
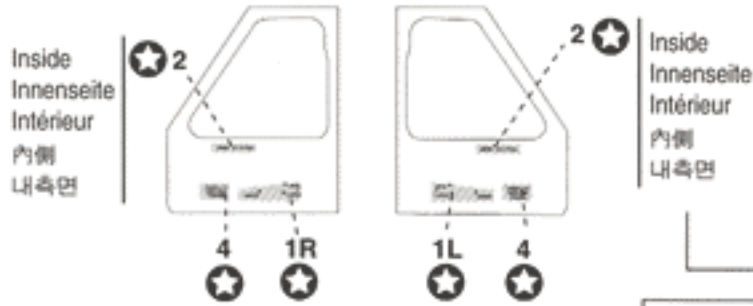


Step #11 Fuselage Assembly 동체의 조립

* • Painting Guide/색칠가이드

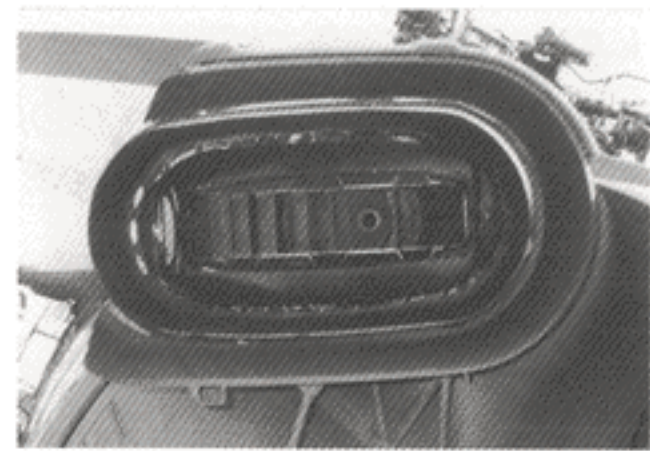
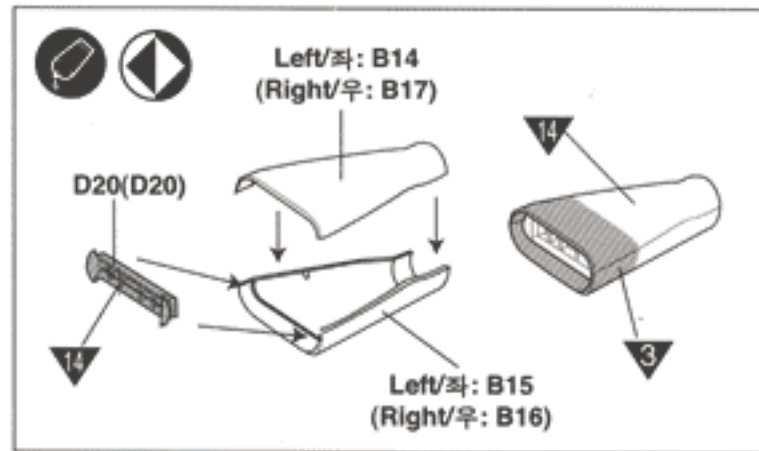


* • Decal Placement/전사지위치

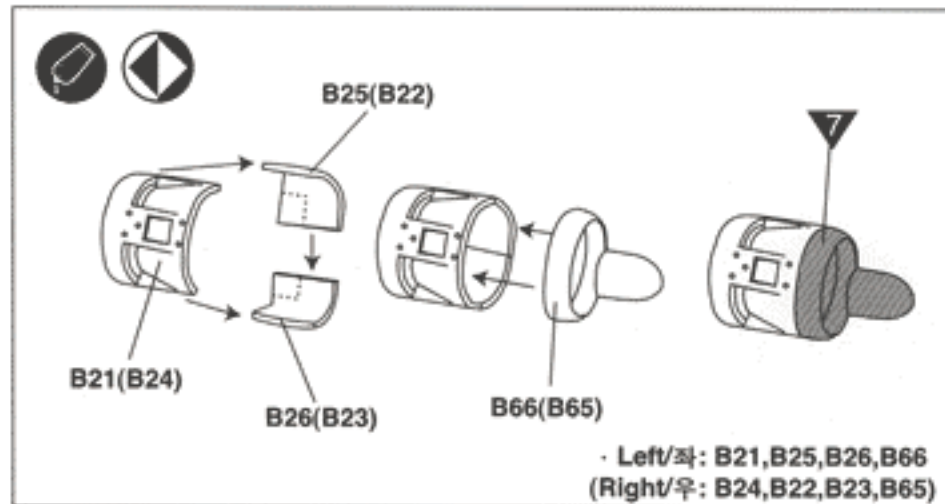


Step #12 HIRSS Assembly(I) HIRSS의 조립(I)

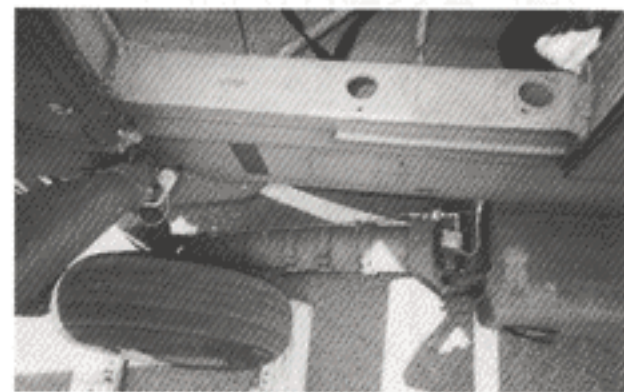
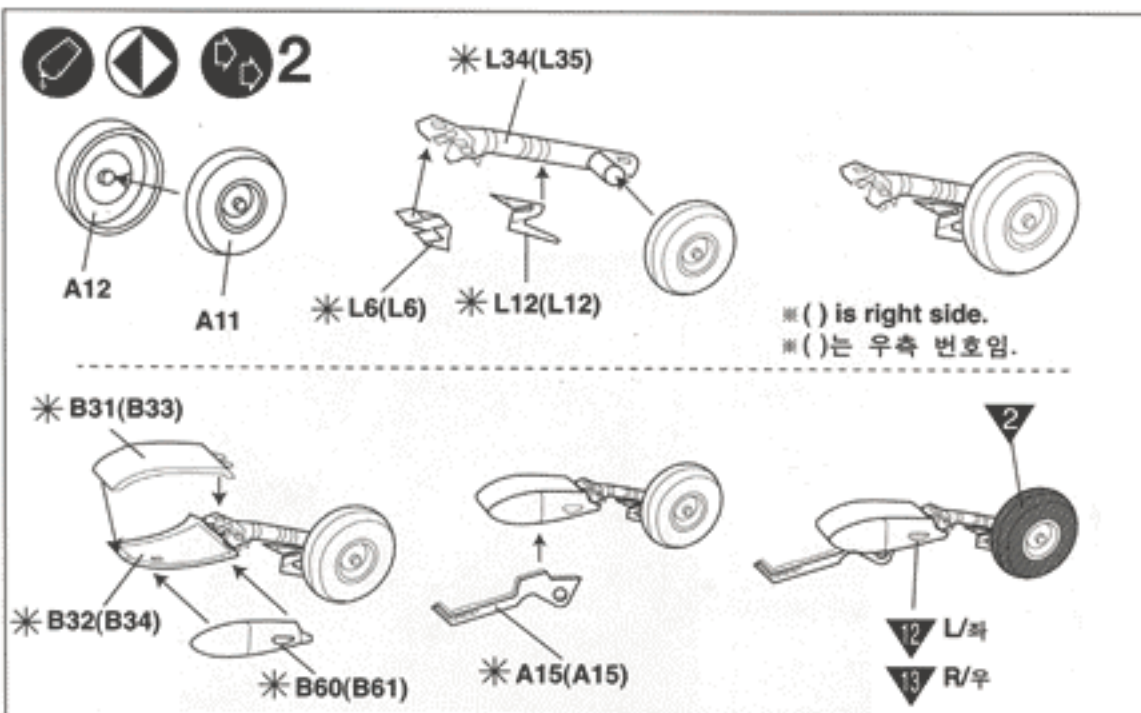
HIRSS; Hover Infrared Suppressor System
※ 잔류 적외선억제장치



Step #13 Air Intake Assembly(I) 공기흡입구의 조립(I)

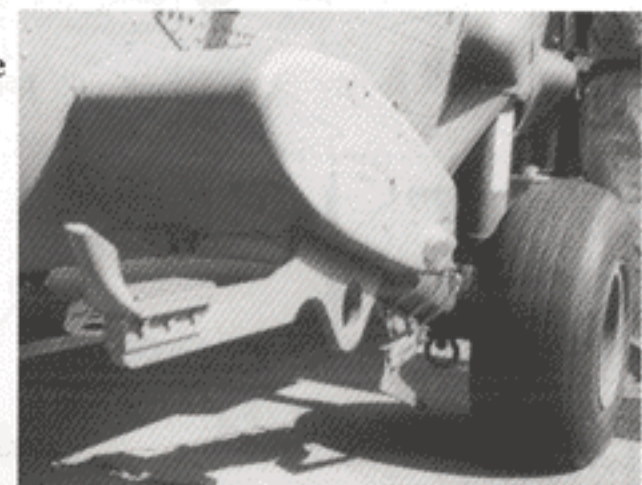


Step #14 Landing Gear Assembly 랜딩기어의 조립

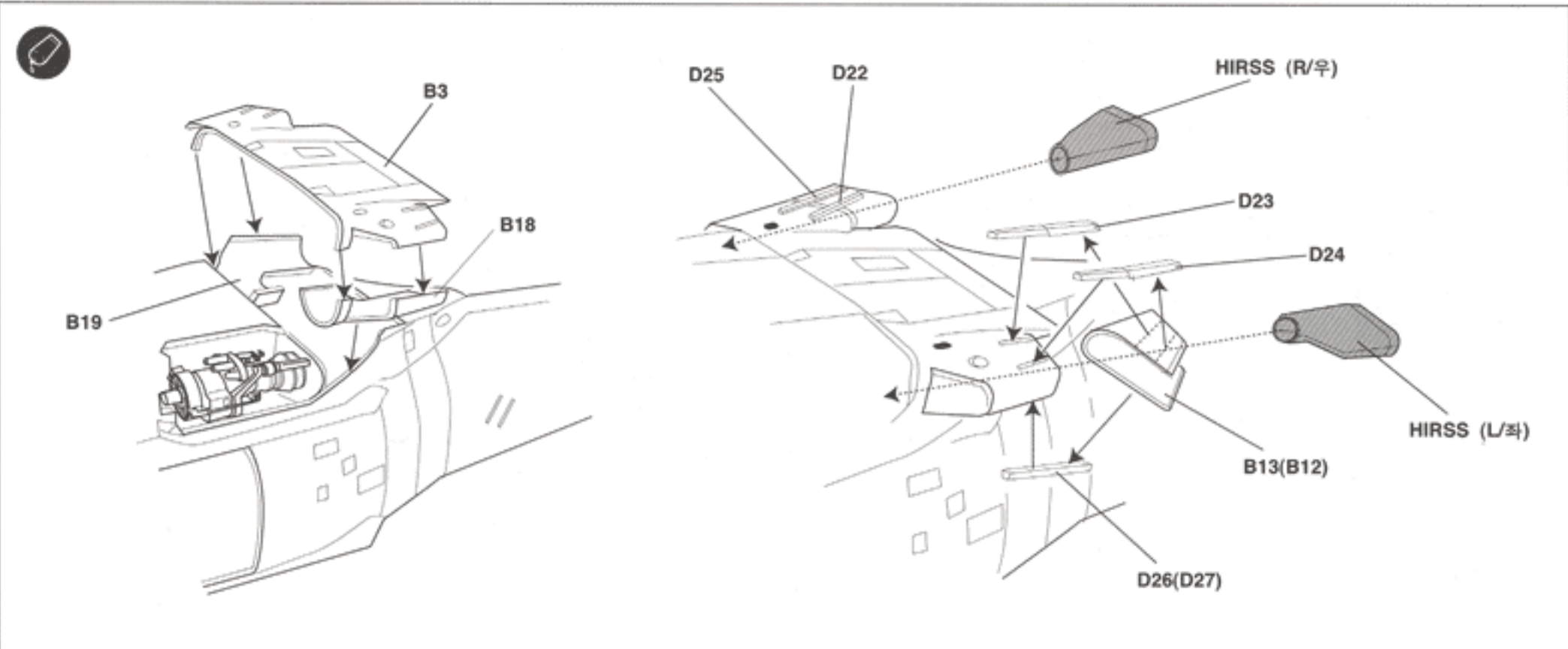


* • Painting Guide
/색칠가이드

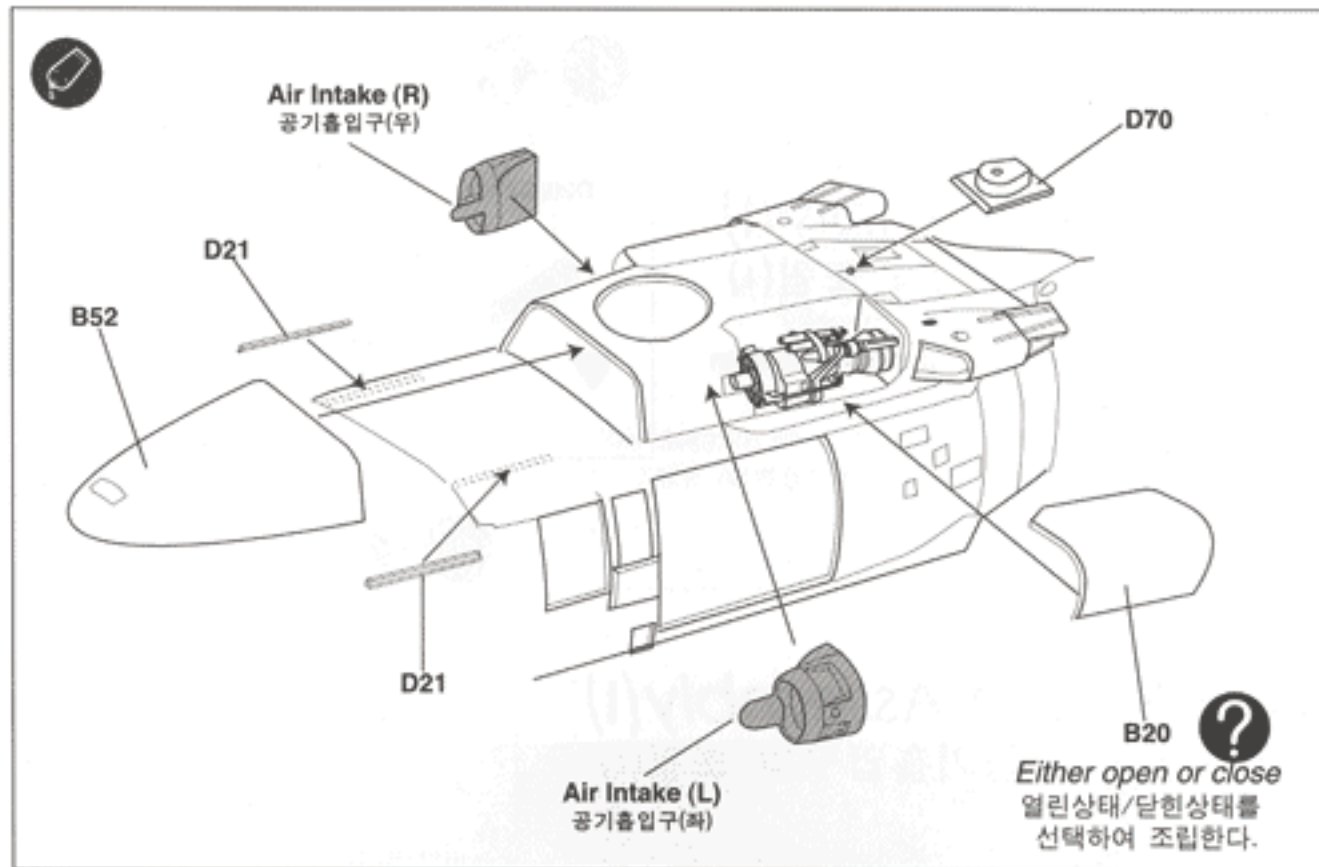
1 2 3 4 : 16
5 : 15



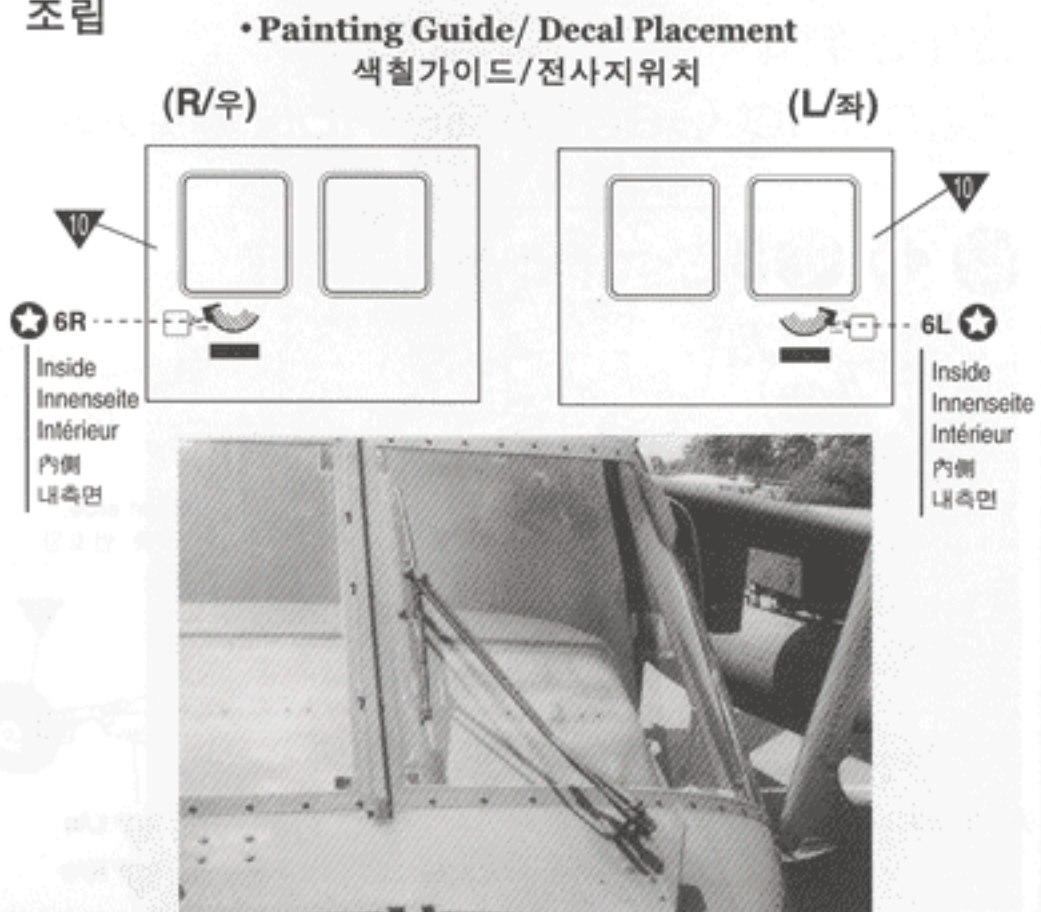
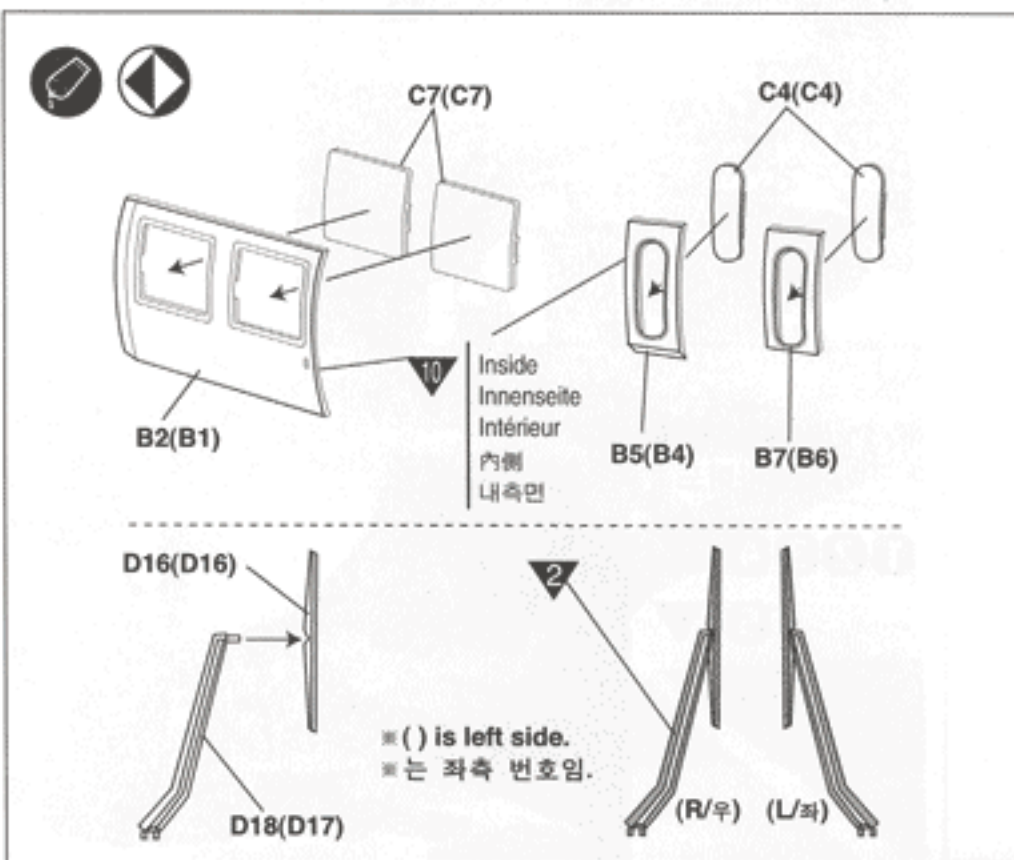
Step#15- HIRSS Assembly(II) HIRSS의 조립(II)



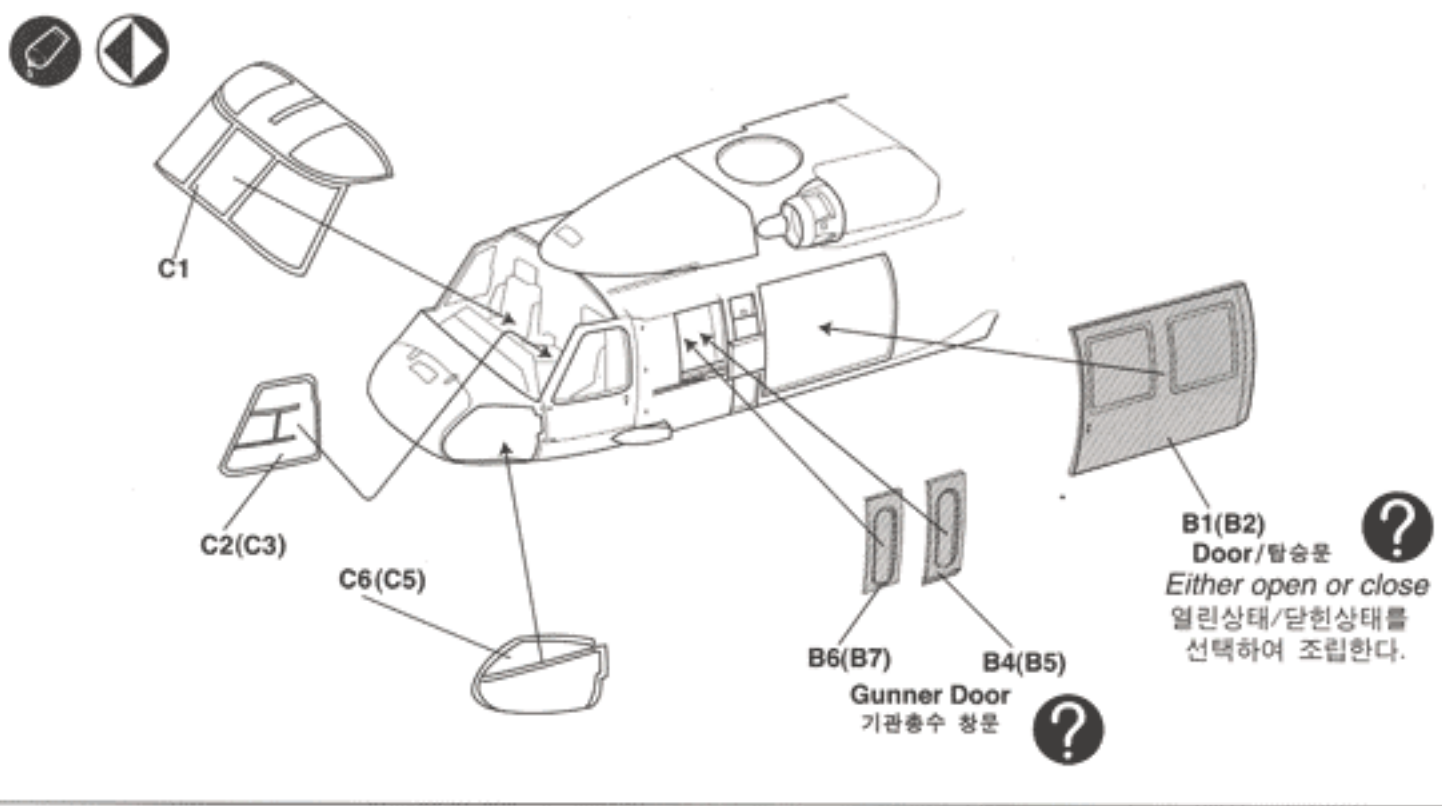
Step#16 Air Intake Assembly(II) 공기흡입구의 조립(II)



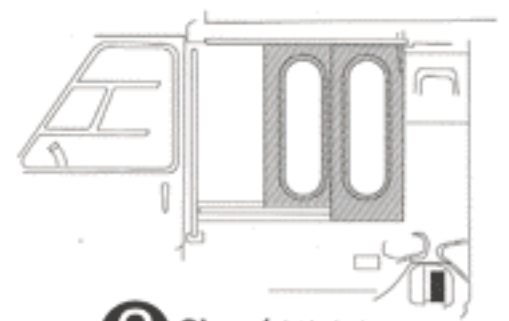
Step#17 Door/Wiper Assembly 문과 와이퍼의 조립



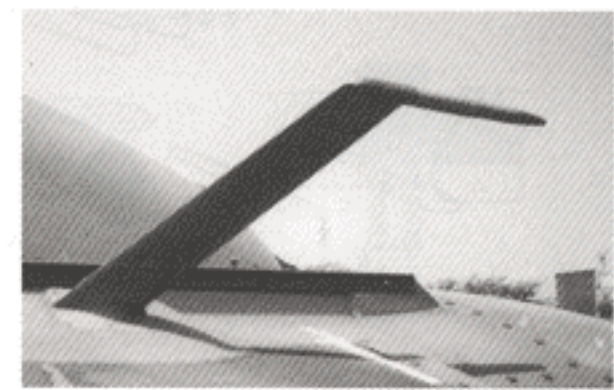
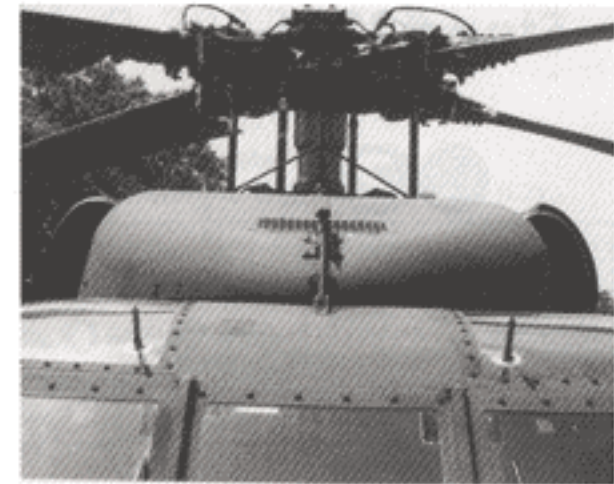
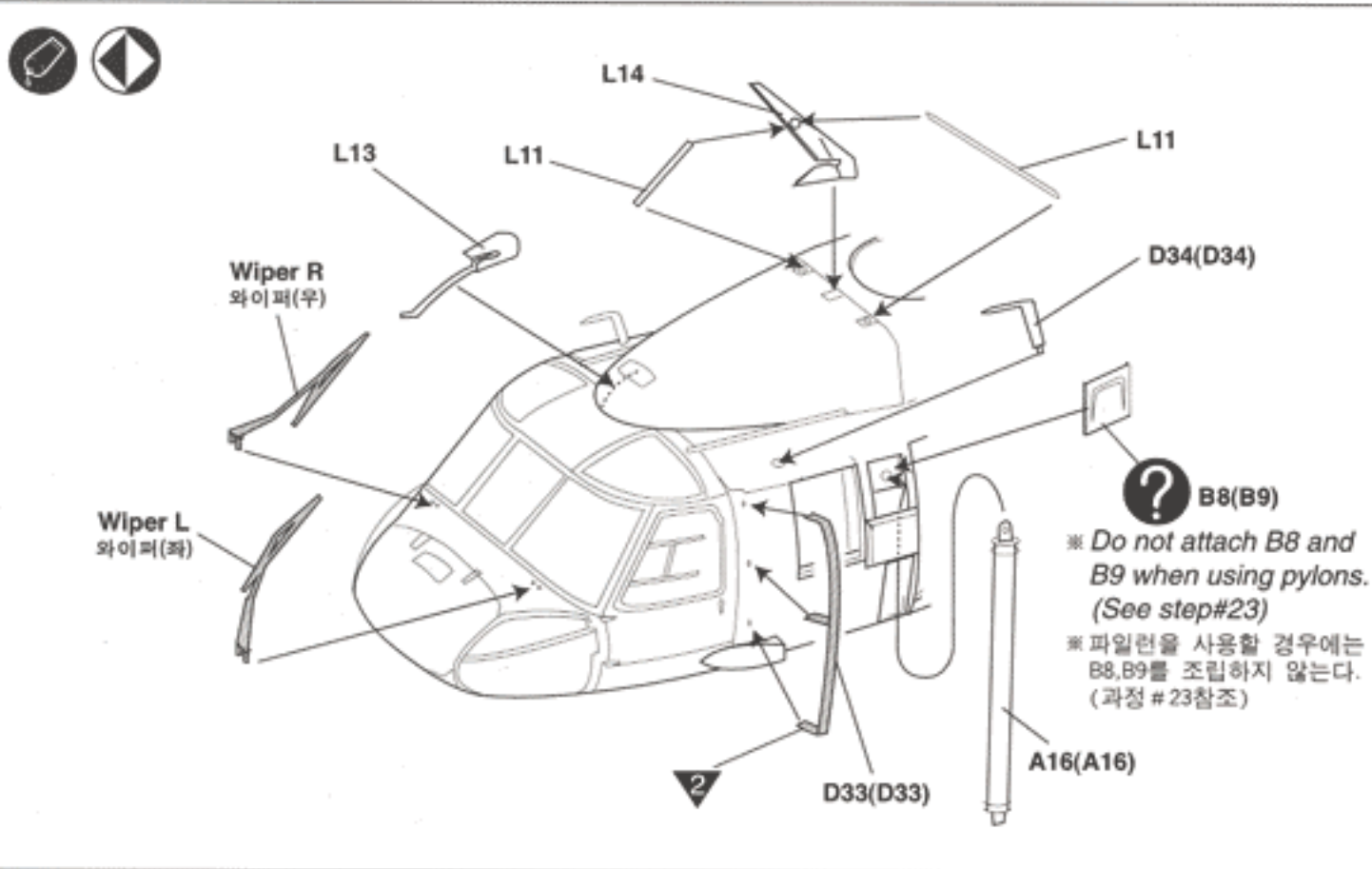
Step#18- Window/Door Assembly 창문/탑승문의 장착



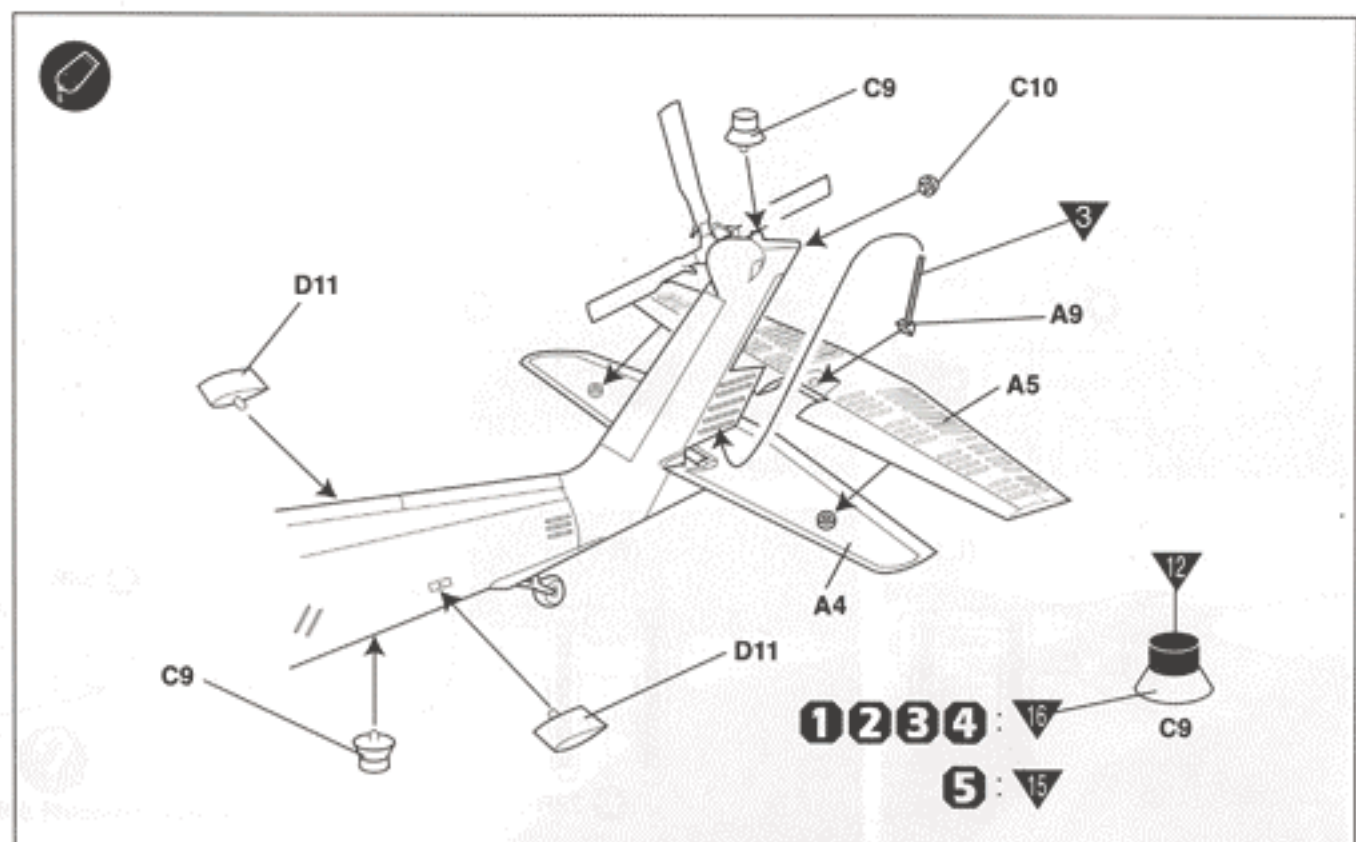
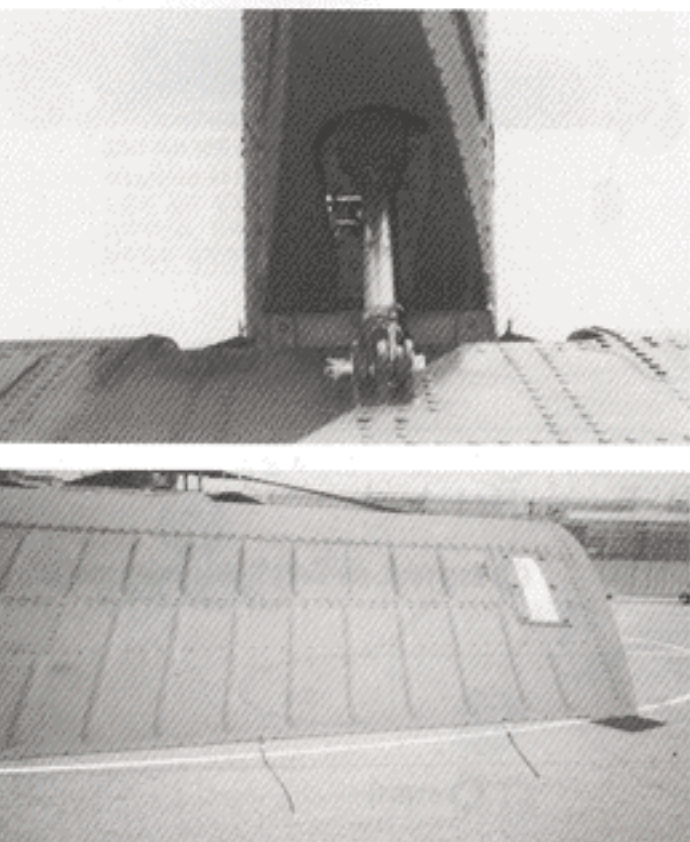
Side View 옆모습



Step#19- Adding Fuselage Details 동체부속의 조립

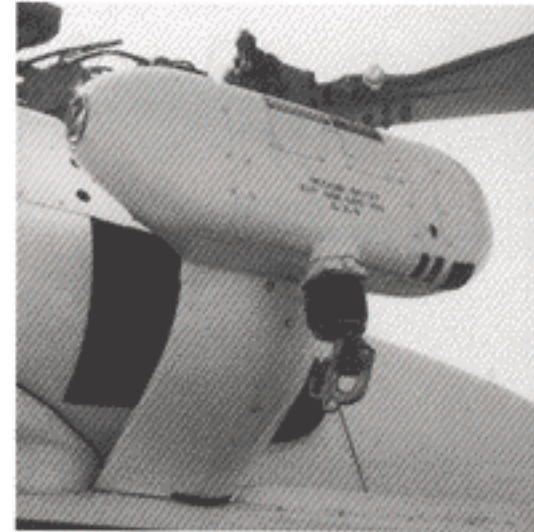
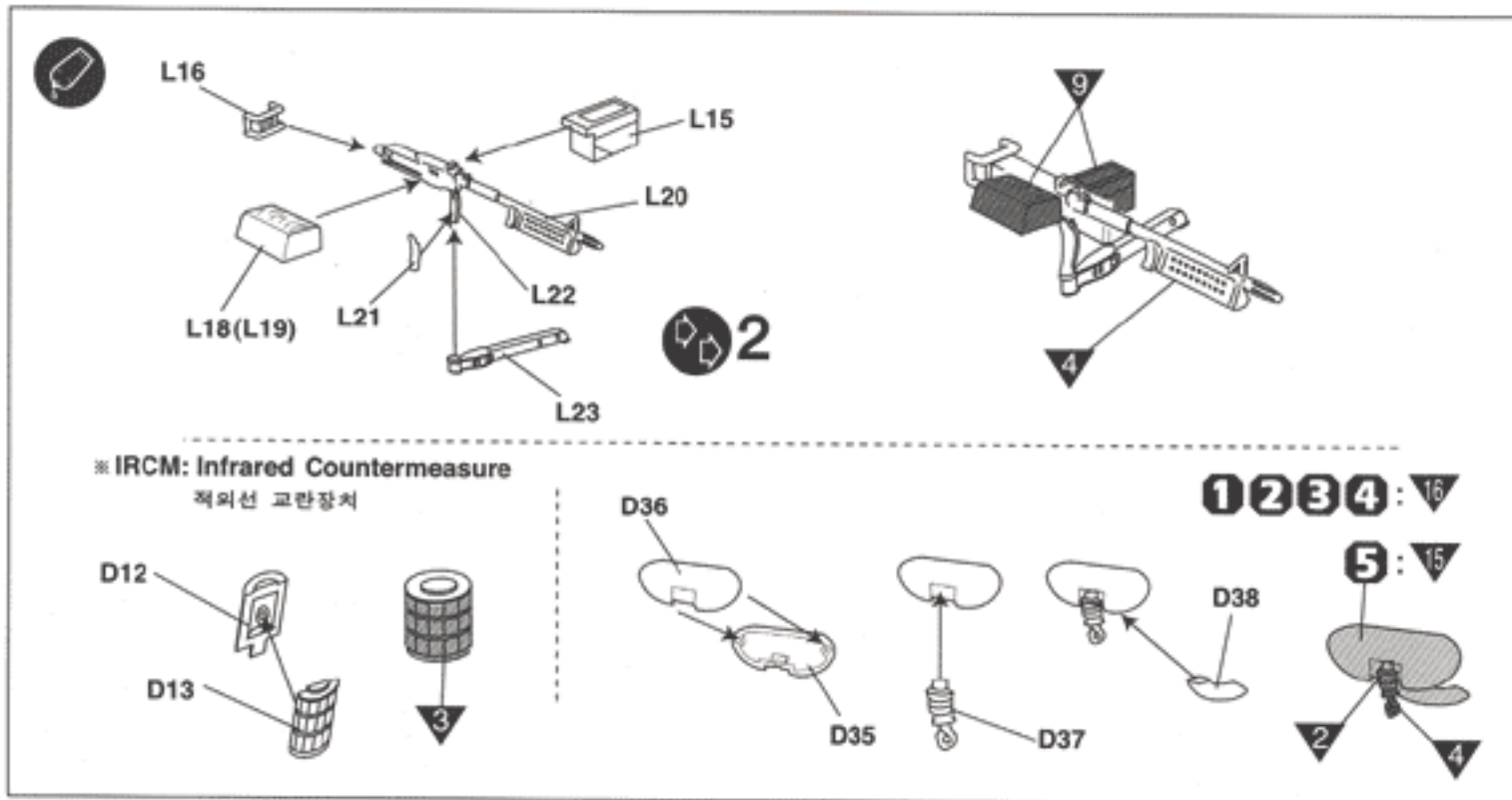


Step#20- Adding Tail Details 꼬리부속의 조립



Step#21- M60 Machine Gun/IRCM/Hoist Assembly

M60기관총/IRCM/견인장치의 조립

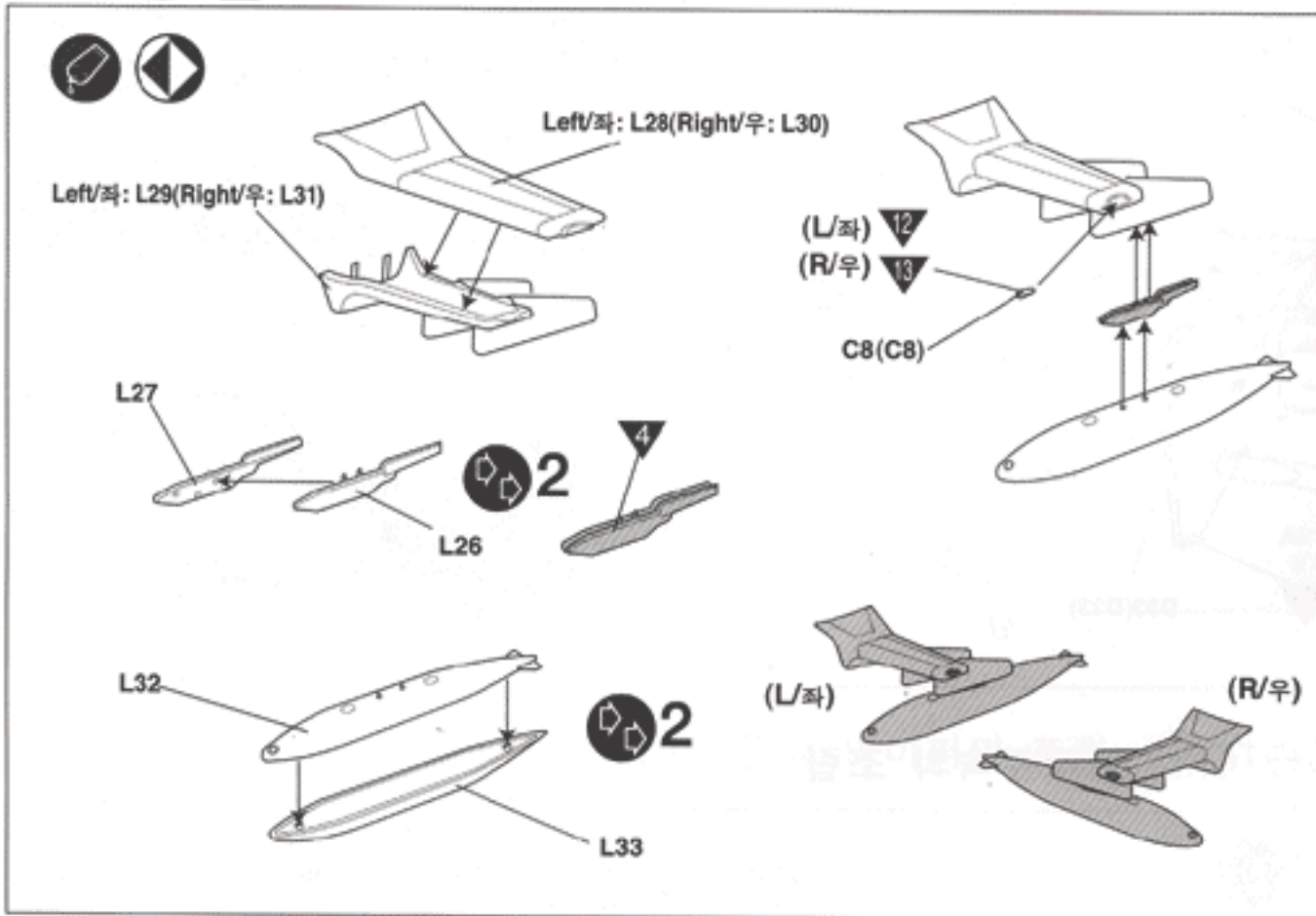


Step#22- ESSS Pylon/230 Gal Aux Tank Assembly

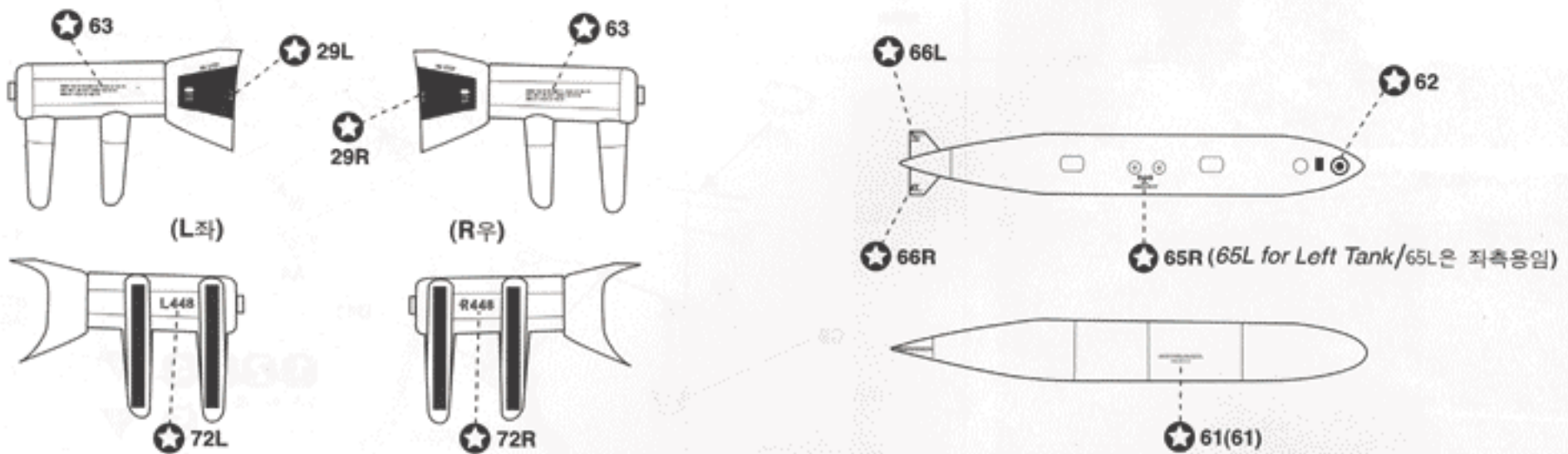
ESSS파일런/230갤런보조연료탱크의 조립



Refer to Decal Placement at end of instructions
설명서 마지막의 색칠 및 전사지 위치 페이지를 참조하여 선택하십시오.

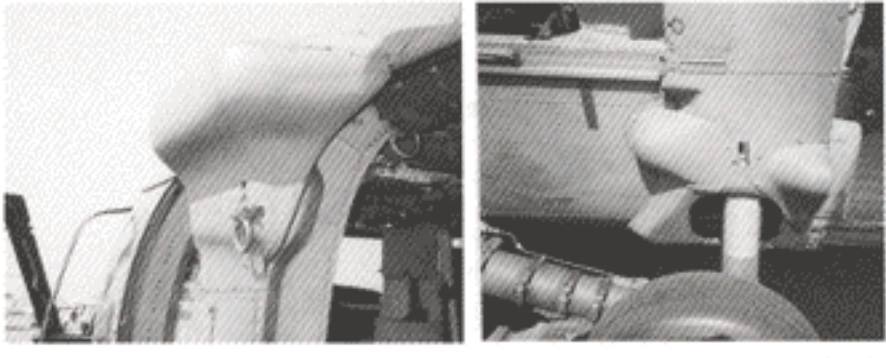
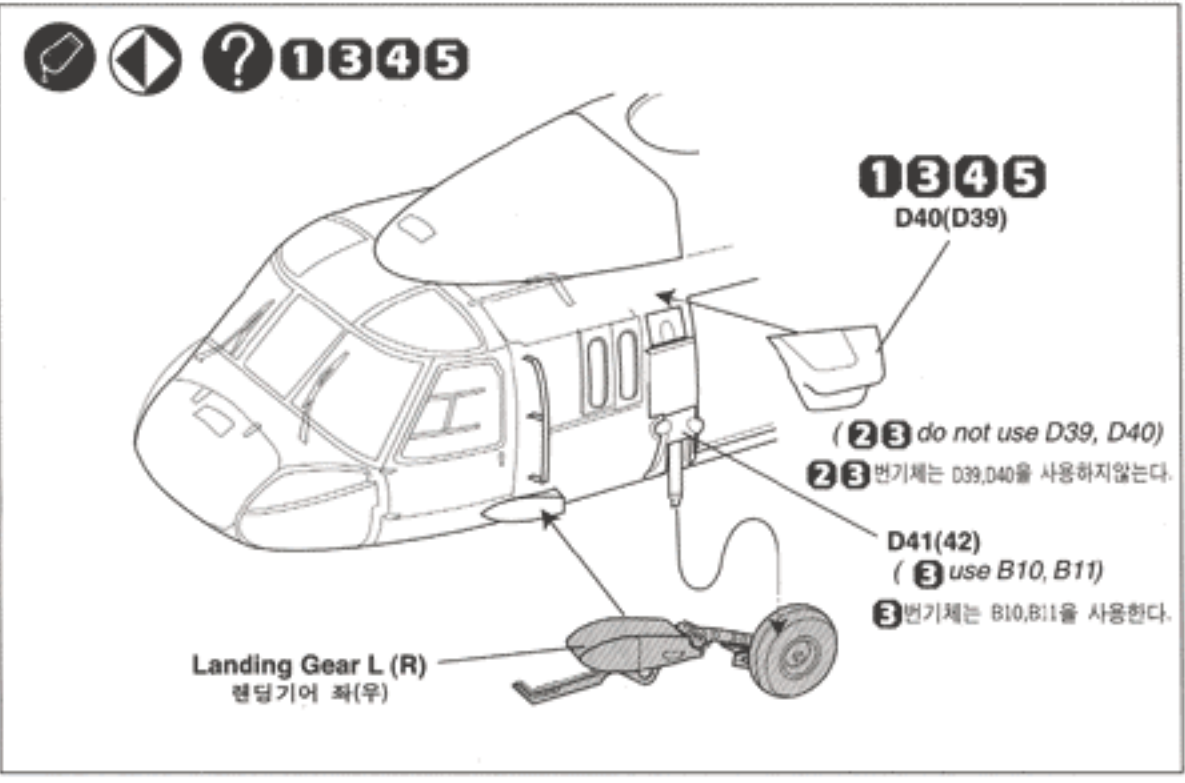


• Decal Placement/전사지 위치

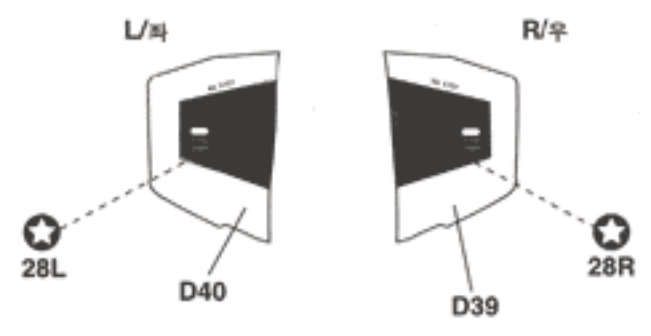


Step#23

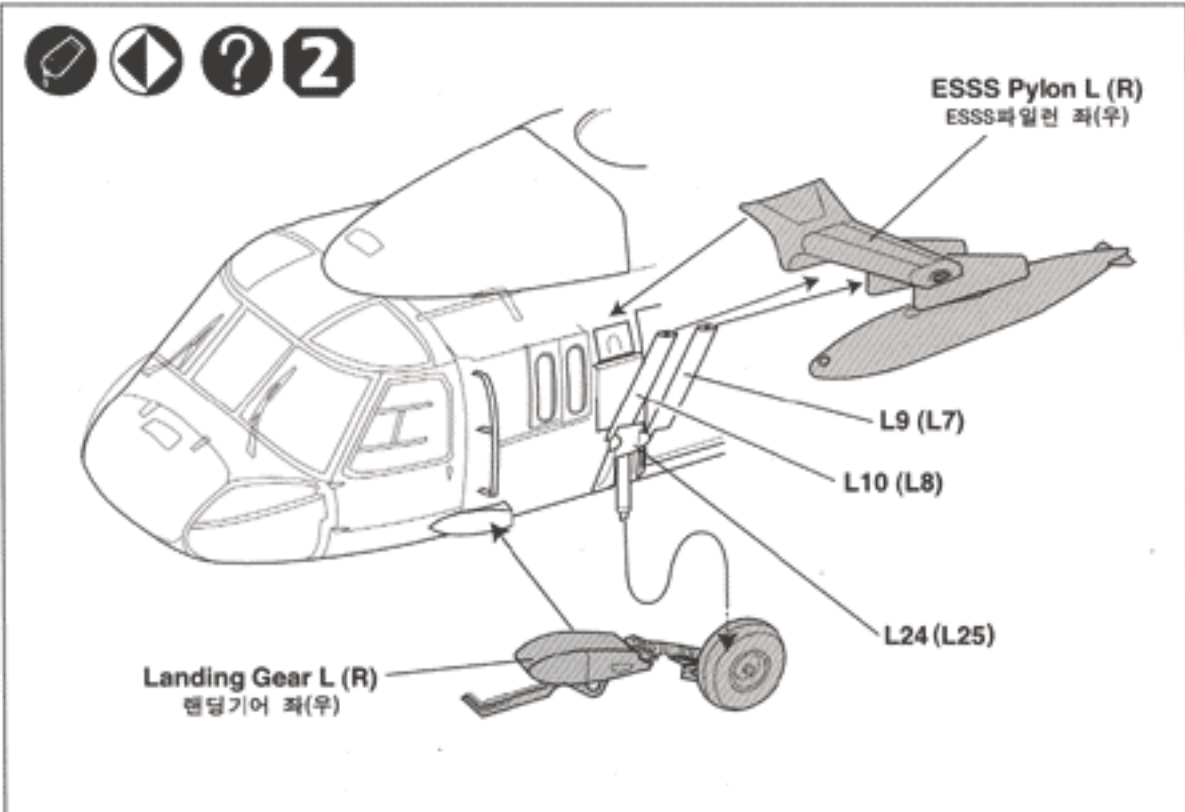
Landing Gear Assembly(I) 랜딩기어의 조립(I)



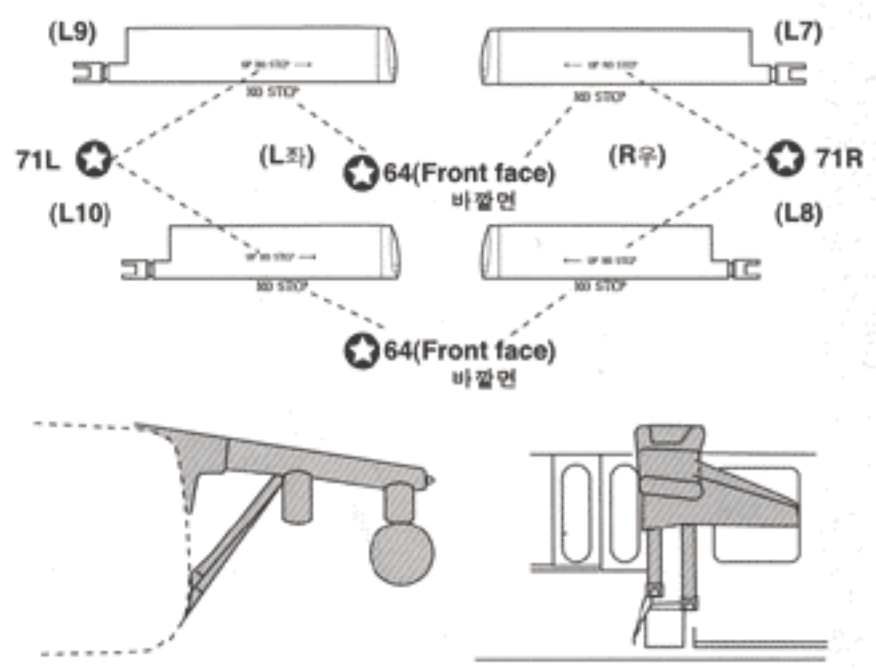
• Decal Placement/전사지위치



Landing Gear (ESSS) Assembly(II) 랜딩기어(ESSS)의 조립(II)

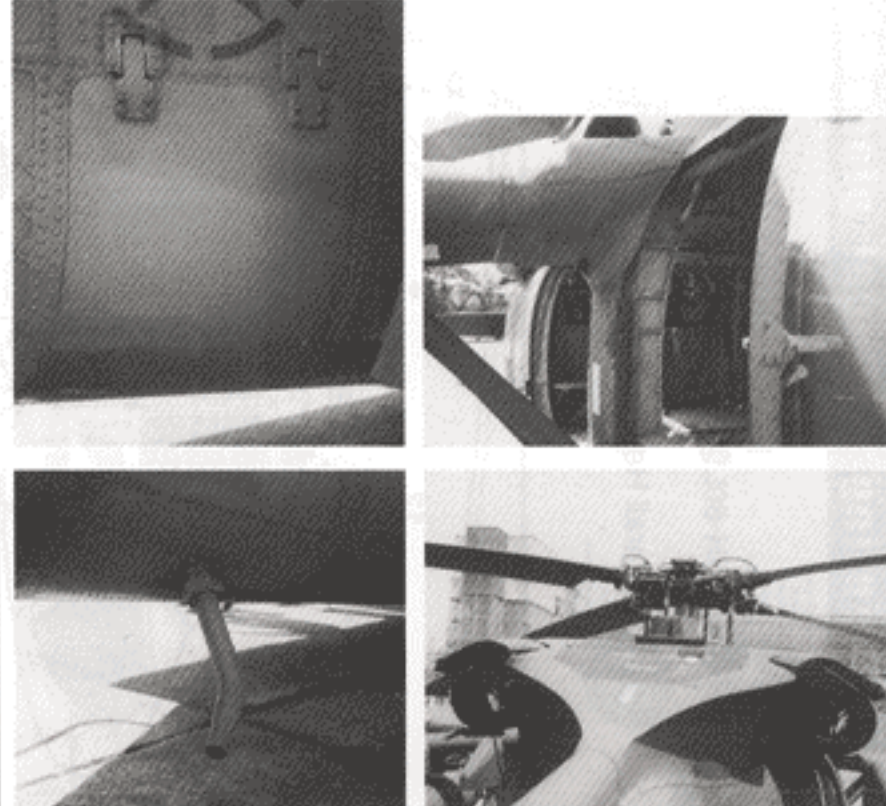
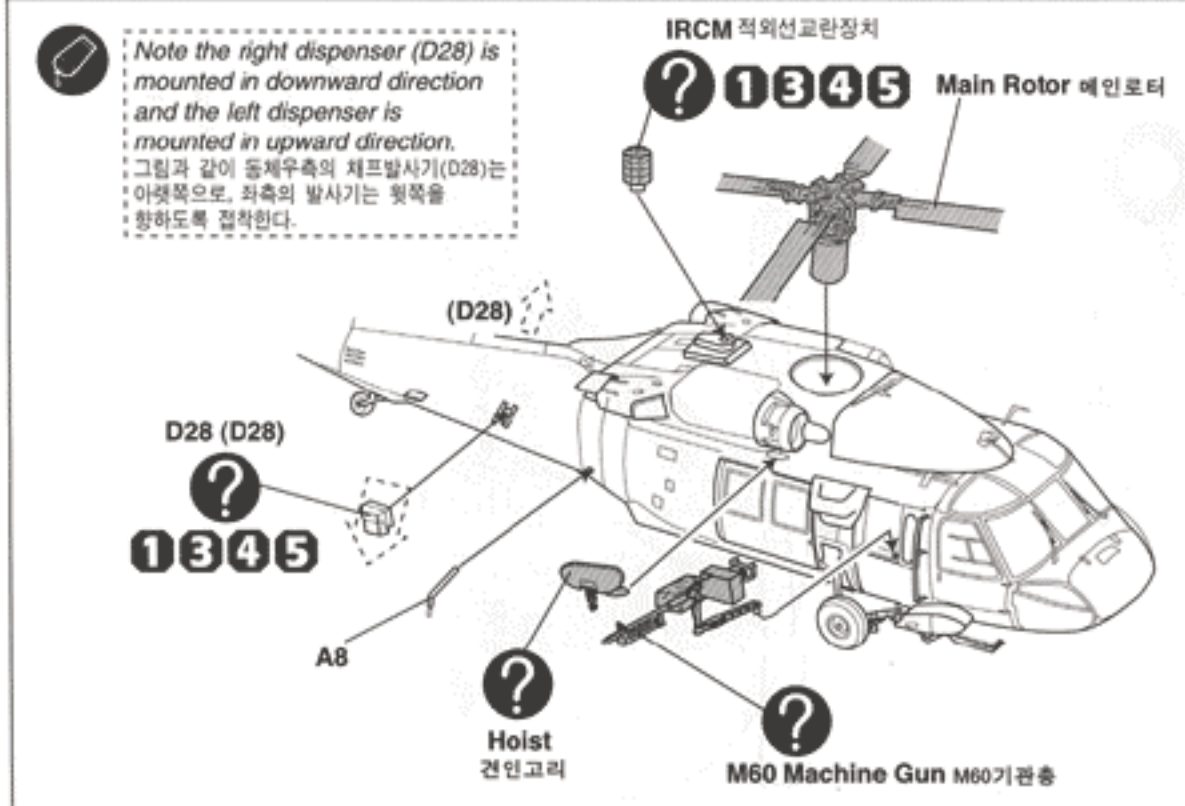


• Decal Placement/전사지위치



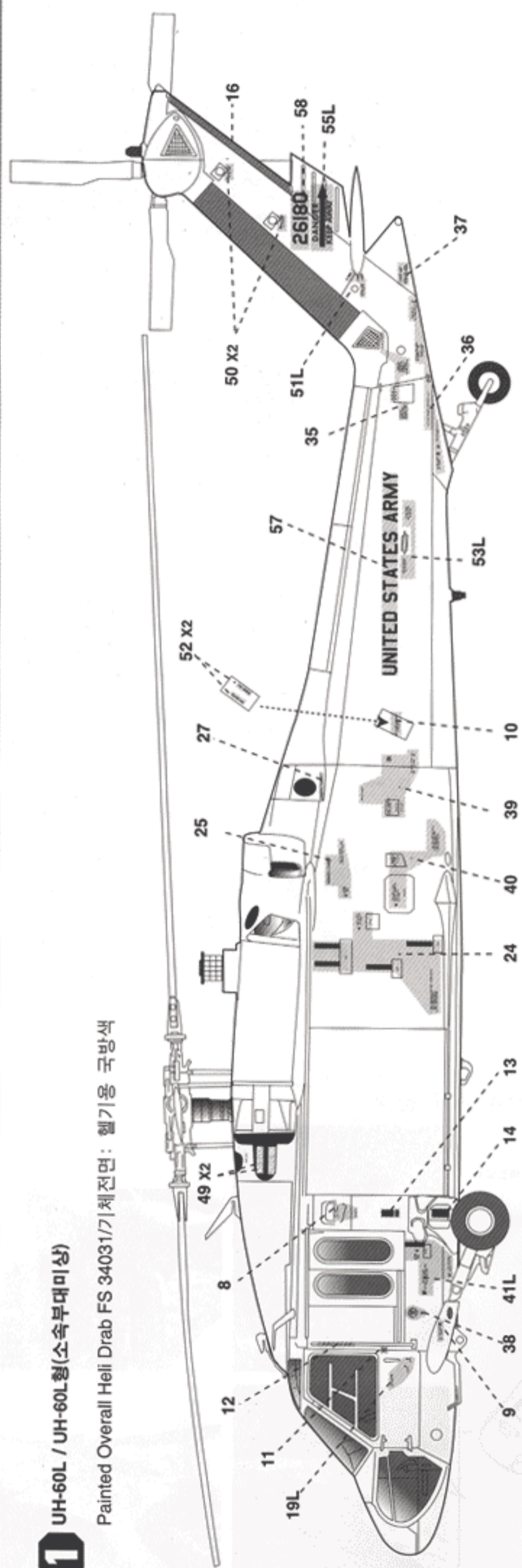
Step#24

Adding the Main Rotor 메인로터 및 장비류의 장착



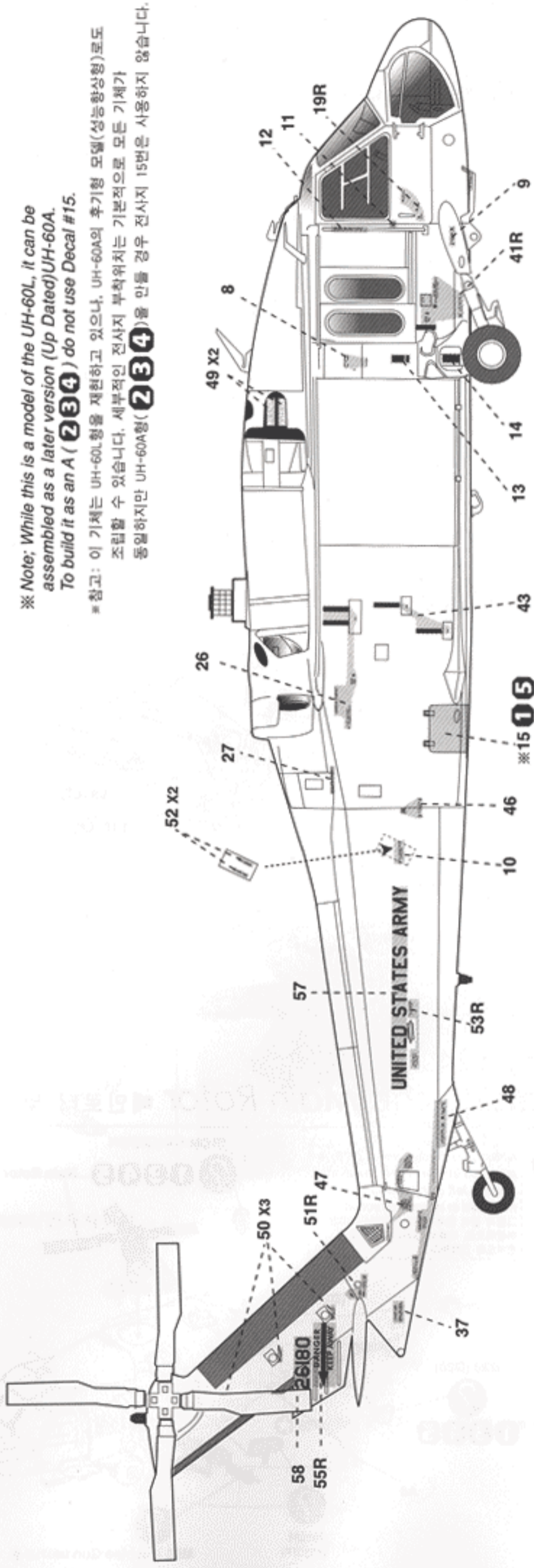
1 UH-60L / UH-60L형(소속부대미상)

Painted Overall Heli Drab FS 34031/기체전면: 헬기용 국방색

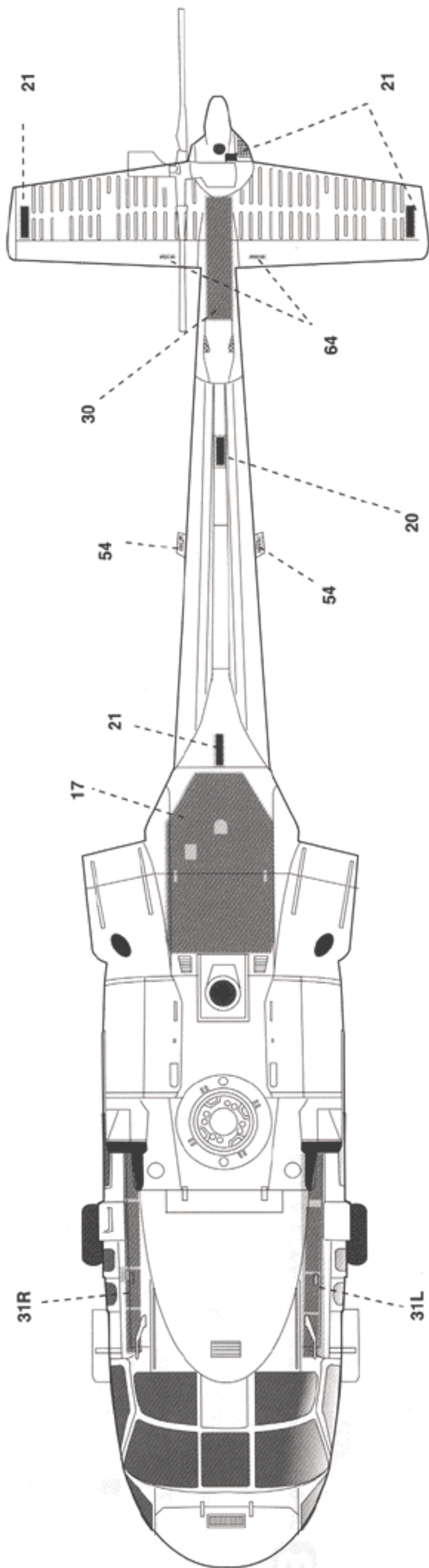


※ Note: While this is a model of the UH-60L, it can be assembled as a later version (Up Dated)UH-60A. To build it as an A (234) do not use Decal #15.

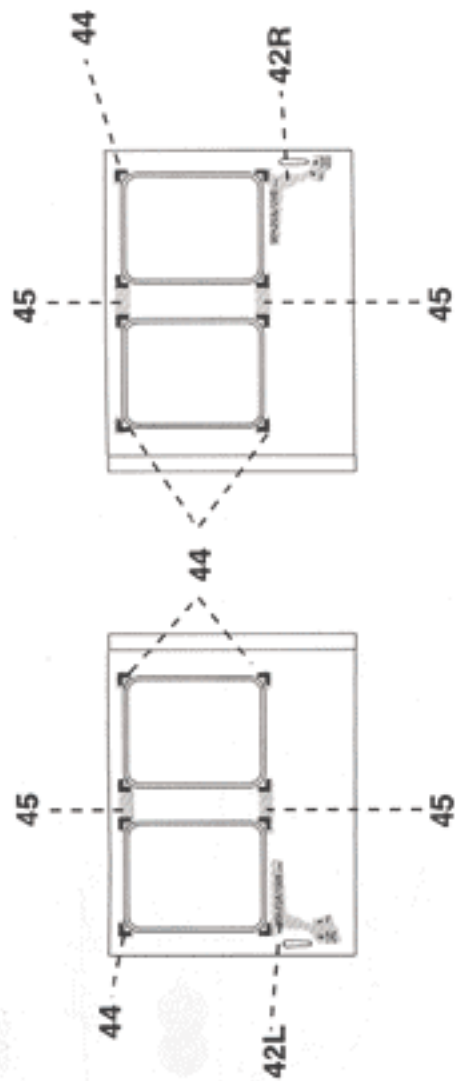
※참고: 이 기체는 UH-60L형을 재현하고 있으나, UH-60A의 후기형 모델(성능향상형)로도 조립할 수 있습니다. 세부적인 전사지 부착위치는 기본적으로 모든 기체가 동일하지만 UH-60A형(234)을 만들 경우 전사지 15번은 사용하지 않습니다.



※ 전사지 15번은 1 및 5 번기체에만 사용한다.



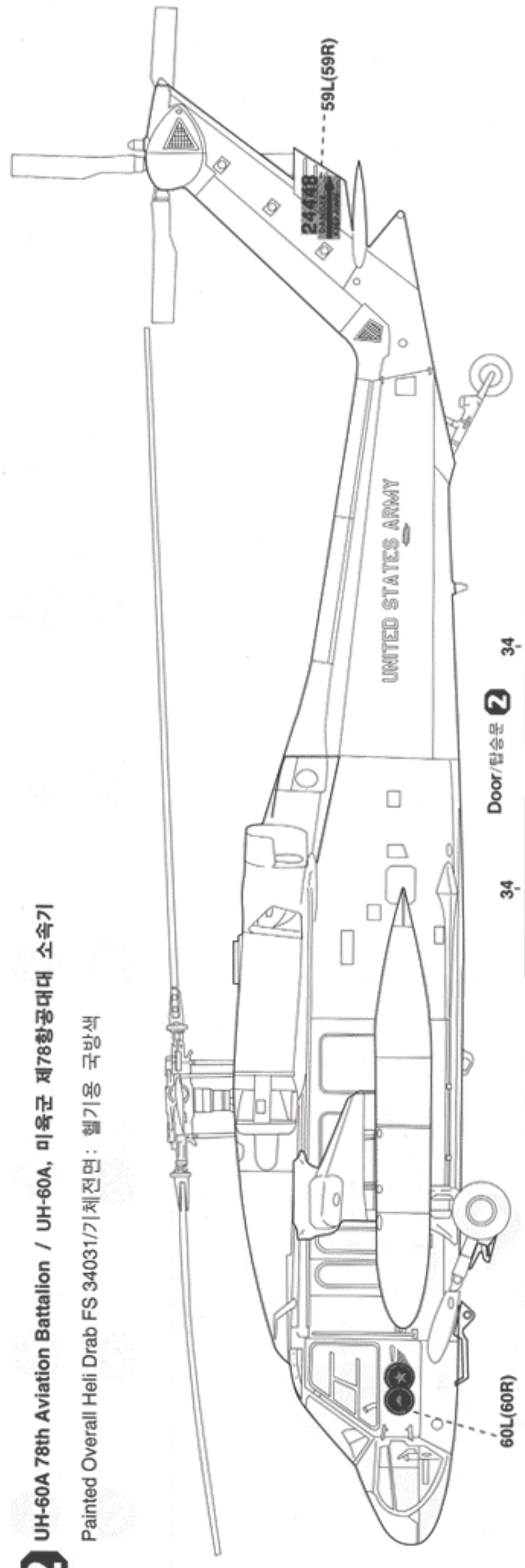
Door/탑승문 1345



	중요! Glue stick Kleber Colle Kleber Kleber		중요! Glue brush Kleberbürste Colle Kleberbürste Kleberbürste		중요! Masking tape Masking tape Masque Masking tape Masking tape		중요! Masking brush Masking brush Masqueur Masking brush Masking brush		중요! Paintbrush Paintbrush Pinceau Paintbrush Paintbrush		중요! Paint can Paint can Peinture Paint can Paint can		중요! Painting scheme number Painting scheme number Numéro de la base de peinture Lacknummer
	중요! Star Star Étoile Star Star		중요! Arrow Arrow Flèche Arrow Arrow		중요! Warning Warning Attention Warning Warning		중요! Add weight Add weight Ajouter Add weight Add weight		중요! Be careful! Be careful! Faire attention Be careful! Be careful!		중요! Repeat operation Repeat operation Répéter l'opération Repeat operation Repeat operation		중요! Repeat for opposite side Repeat for opposite side Répéter de l'autre côté Repeat for opposite side Repeat for opposite side
	중요! Do not use Do not use Ne pas utiliser Do not use Do not use		중요! Optional parts Optional parts Accessoires Optional parts Optional parts		중요! Make hole Make hole Faire un trou Make hole Make hole		중요! Do not use Do not use Ne pas utiliser Do not use Do not use		중요! Do not use Do not use Ne pas utiliser Do not use Do not use		중요! Repeat operation Repeat operation Répéter l'opération Repeat operation Repeat operation		중요! Repeat for opposite side Repeat for opposite side Répéter de l'autre côté Repeat for opposite side Repeat for opposite side

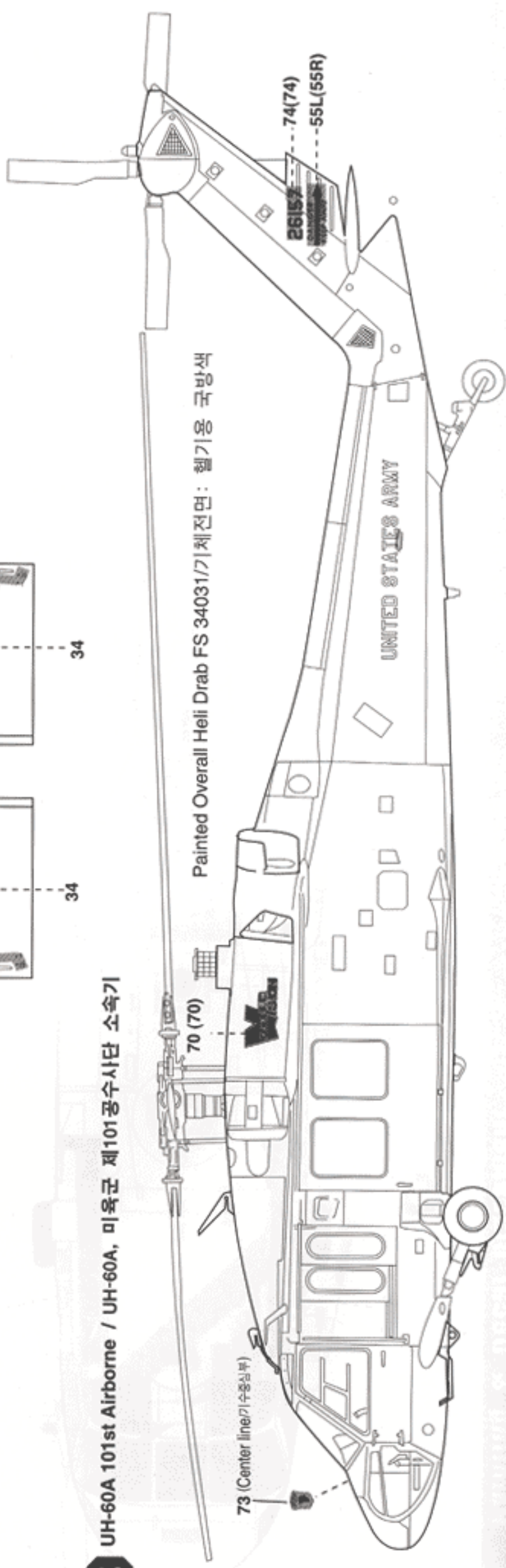
2 UH-60A 78th Aviation Battalion / UH-60A, 미육군 제78항공대대 소속기

Painted Overall Heli Drab FS 34031/기체전면: 헬기용 국방색



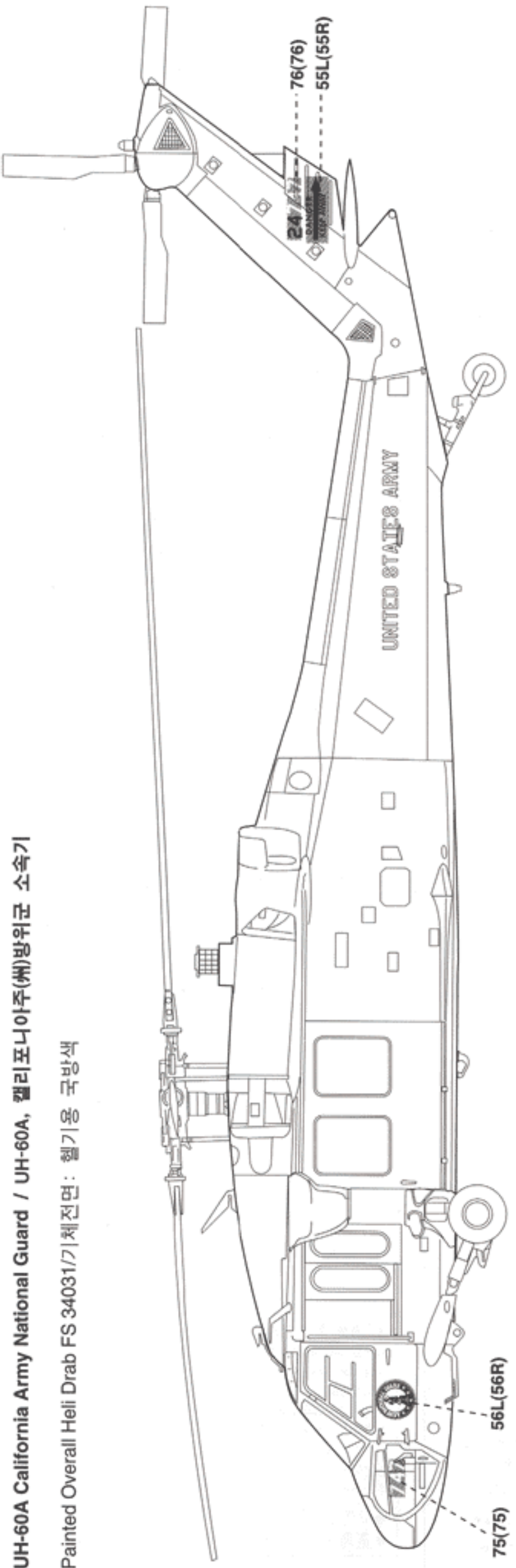
3 UH-60A 101st Airborne / UH-60A, 미육군 제101공수사단 소속기

Painted Overall Heli Drab FS 34031/기체전면: 헬기용 국방색



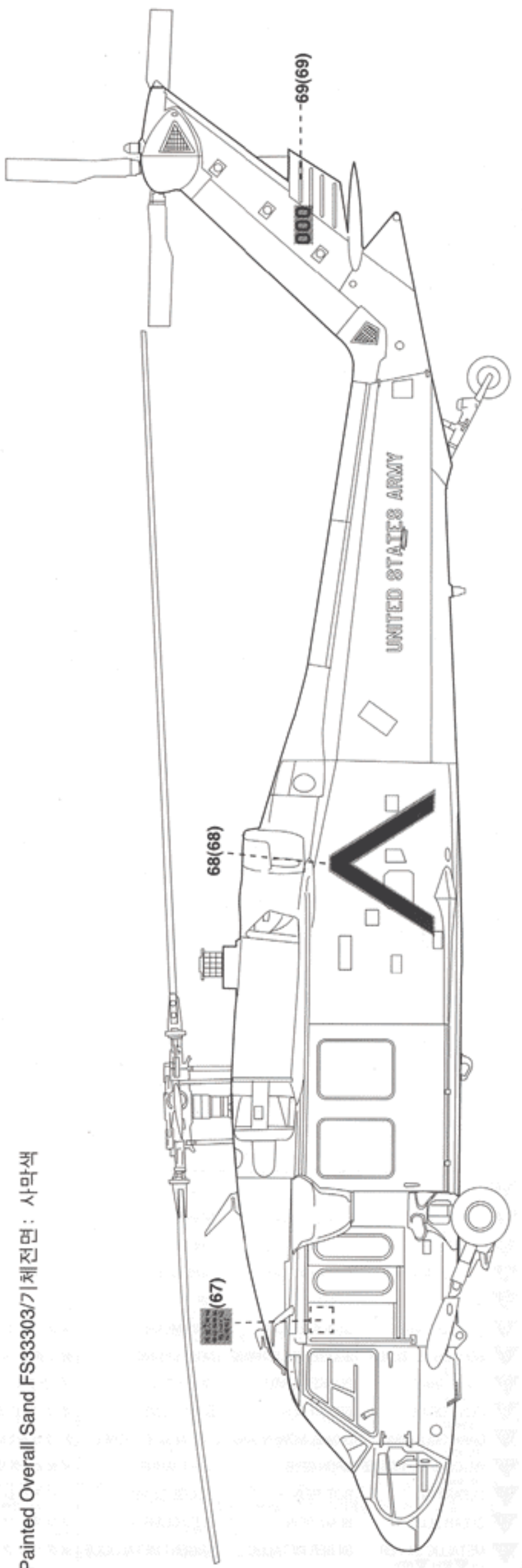
4 UH-60A California Army National Guard / UH-60A, 캘리포니아주(州)방위군 소속기

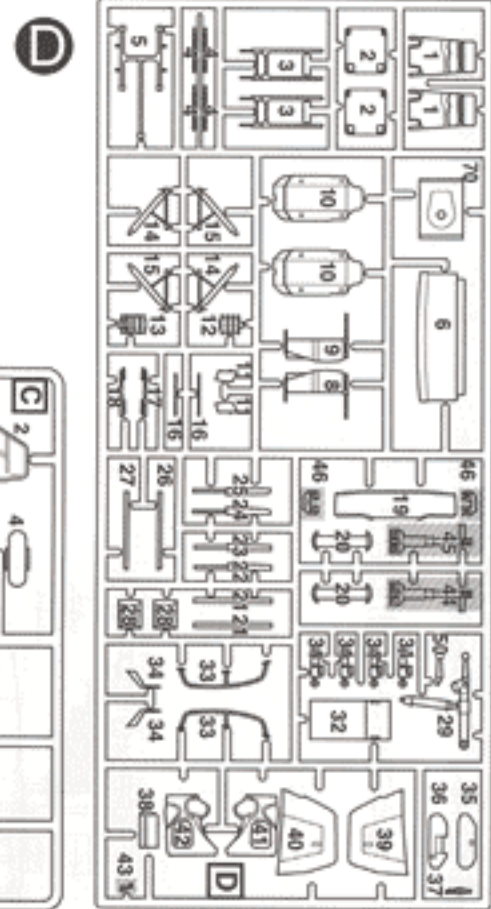
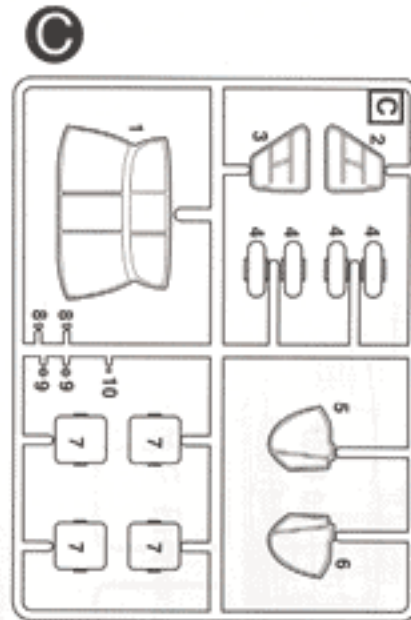
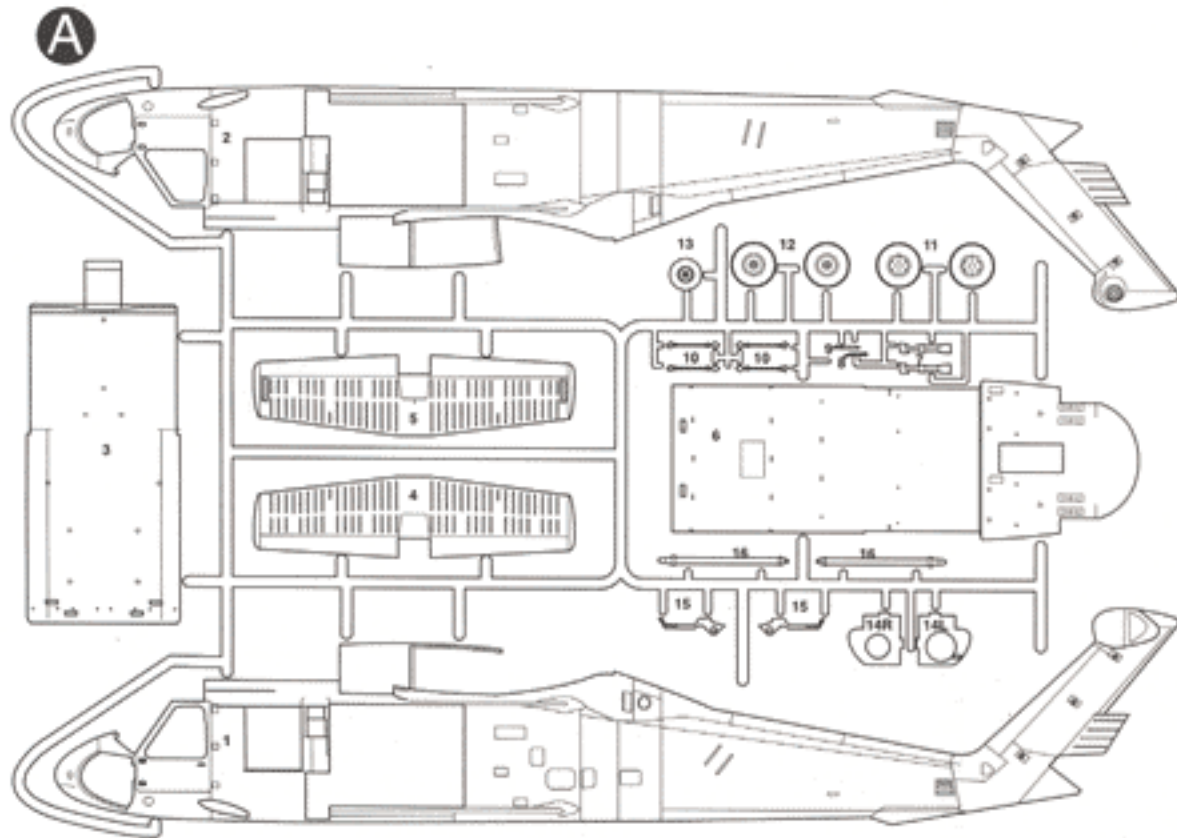
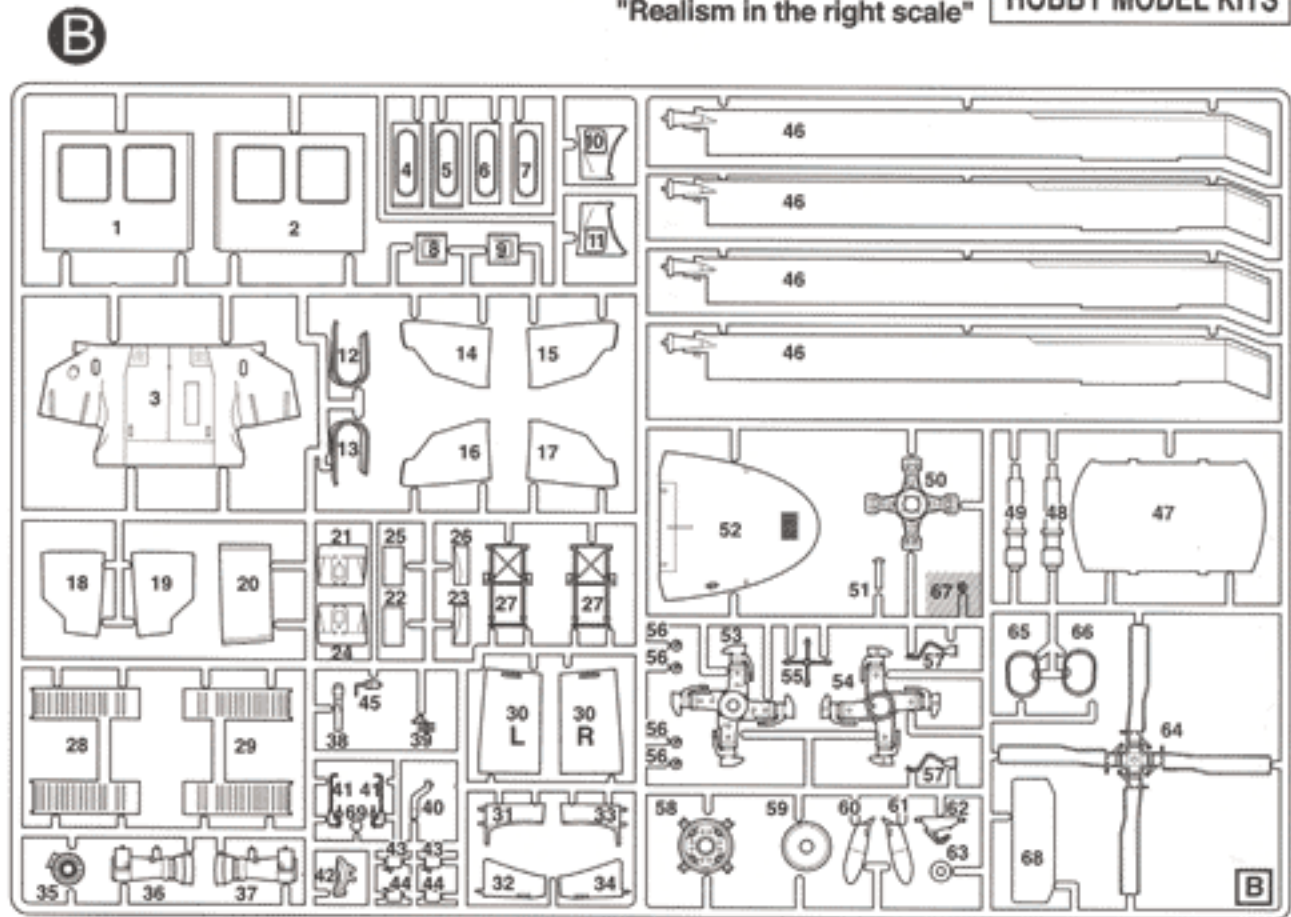
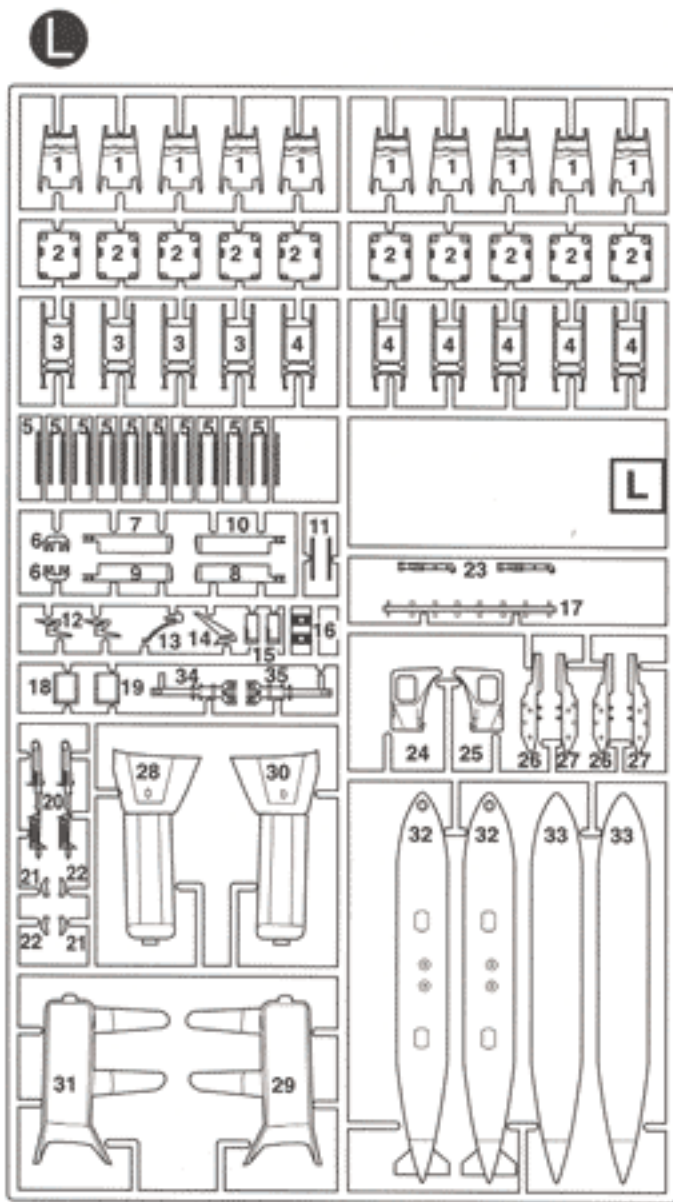
Painted Overall Heli Drab FS 34031/기체전면: 헬기용 국방색



5 UH-60L Unit Unknown During "OPERATION DESERT STORM" / UH-60L, "사막의 폭풍"작전 참가기체(소속부대미상)

Painted Overall Sand FS33303/기체전면: 사막색





1 WHITE FS 17925	WEISS	BLANC	ホワイト	유광흰색
2 FLAT BLACK FS 37038	MATTSCHWARZ	NOIR MAT	つや消しブラック	무광검정색
3 SILVER	SILBER	ARGENT	シルバー	은색
4 GUN METAL	METALL-GRAU	GRIS ACIER	ガンメタル	건메탈
5 GOLD	GOLD	OR	ゴールド	금색
6 METALLIC GRAY	GRAUMETALLIC	GRIS MÉTAL	メタリックグレイ	흑철색
7 SEMI GLOSS BLACK FS 27038	SEIDENGLANZ SCHWARZ	NOIR SATINÉ	セミグロスブラック	반광검정색
8 DARK GRAY FS 36118	DUNKEL GRAU	GRIS FONCÉ	ダークグレイ	다크그레이
9 OLIVE DRAB FS 34087	BRAUN OLIV	BRUN OLIVE	オリブドラブ	국방색
10 DARK GULL GRAY FS 36231	DUNKEL-MÖWENGRAU	GRIS MOUETTE FONCÉ	ダークガルグレイ	다크 걸그레이
11 YELLOW ZINC CHROMATE FS 33481	GRÜN GELB	VERT JAUNE	イエロ-グリーン	옐로우그린
12 CLEAR RED	ROT, REIN	ROUGE CLAIR	クリアーレッド	클리어 레드
13 CLEAR BLUE	BLAU, REIN	BLEU CLAIR	クリアー블루	클리어 블루
14 METALLIC SILVER (= 40%+ 60%)	SILBER METALLIC	ARGENT METALLIQUE	メタリックシルバー	메탈릭실버
15 SAND FS 33003	SAND	SABLE	サンド	사막색
16 HELI DRAB FS 34031 (= 60%+ 40%)	HELI DRAB	HELI DRAB	ヘリドラブ	헬기용 국방색

■ Unused parts : B67, D43, D44, D45, D46 × 2
 Nicht verwenden
 Pièces non utilisées
 不要部品
 불필요 부품

■ 직매점 겸 A/S센터
 방배동: 552-9293, 삼성교: 742-9293, 양재동: 575-9997,
 응산: 796-1214, 아셈: 6002-6293
 ■ A/S센터
 본사: 908-7000 (교한 147), 동대문: 745-9293, 천호동: 473-9293
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 강남아카데미: 485-6884, 경기아카데미: (031)458-5591,
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 ♣ 고객상담문의: 080-969-7000
 ■ 홈페이지 <http://www.academyhobby.com>