



# Eurocopter SA330 J „PUMA“ Bundespolizei

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## Eurocopter SA330 J „PUMA“ Bundespolizei

Die zunehmenden begrenzten, bewaffneten Konflikte der 50er und 60er Jahre durch die Kolonialmächte führten sehr schnell zu einem besonderen Interesse an der weiteren Entwicklung der Hubschrauber für einen taktischen Einsatz beim Transport von Menschen und Material. Die französische Armée de Terre beauftragte 1962 nach den Erfahrungen in Algerien und Indochina die Firma Sud Aviation (später umbenannt in Aerospatiale) mit der Entwicklung eines mittleren Transporthubschraubers, der von zwei Wellenturbinen angetrieben werden sollte. Der Rumpf war in Ganzmetallbauweise ausgelegt und der mit einem Durchmesser von 15 Meter sehr große Vierblatt-Hauptrotor konnte manuell zusammengeklappt werden. Zusammen mit einem fünfblättrigen Heckrotor und einem einziehbaren Fahrwerk ergab dies eine für damalige Verhältnisse ungewöhnliche Konfiguration. Die Zuladung von 2500 kg Intern, oder bis zu 3200 kg als Außenlast, erweckten aber auch schnell das zivile Interesse. Im Katastrophenfall konnte die zivile Version SA 330 Puma bis zu sechs verletzte auf Tragen und weitere 6 leichtere Verletzte oder zusätzliches Personal befördern. Die für den zivilen Einsatz gebaute SA 330F war für den deutschen Bundesgrenzschutz, der neben der Überwachung der deutsch-deutschen Grenze auch für den Katastropheneinsatz verantwortlich war, das am besten geeignete Fluggerät. Für den Hilfs- und Rettungseinsatz in der Bergrettung oder bei der Waldbrandbekämpfung konnten Außenlasten an einem Frachthaken unter dem Rumpf befördert werden. Für die Personenbergung stand eine an der Seite - wahlweise - angebrachte Winde zur Verfügung und für die Seenotrettung konnte die Puma mit aufblasbaren Schwimmern an den beiden seitlichen Pontons, sowie am Bug, sehr schnell ausgerüstet werden. Die ersten drei SA 330 wurde 1973 an das BGS ausgeliefert und entstammten der Baureihe F. Die 1974 folgenden vier Maschinen waren aus der zivilen Baureihe SA 330G und hatten als eine Besonderheit bereits Rotorblätter aus Verbundwerkstoffen die leichter, und weniger anfällig gegen Korrosion waren. Statt des bisher verwendeten Triebwerks Turbomeca-Turmo-11C-4 mit 990 kw kam nun die Turbomeca-1VC-Wellenturbine mit 1175 kw zum Einsatz. Mit dem Kauf weiterer 16 Maschinen des Typs SA330J erhielt der Bundesgrenzschutz 1977 den ersten westlichen Hubschrauber mit einer Allwetter-Zulassung und Wetterradar, der durch seine Enteisungsanlage für Haupt- und Heckrotorblätter selbst noch unter eisigen Bedingungen geflogen werden darf. Zur Vereinfachung der Flotte für Einsatz und Wartung wurden die sechs Maschinen des Typs F und G auf den Standard SA 330J nachgerüstet. Im Juli 2005 kam es im Zuge einer Neuordnung der Polizeidienste in Deutschland zur Bildung der Bundespolizei, die in ihren Fliegerstaffeln neben der neuen SA 320 Super Puma auch weiterhin die SA 330J Puma einsetzte. Im August 2008 kam das endgültige Aus. In einer Zeremonie in Hangelar-SanktAugustin verabschiedete die Bundespolizei ihre letzte SA330J. Die meisten der 22 deutschen Maschinen waren inzwischen an die deutsche HELOG verkauft worden, die nun die Puma in Afrika und im nahen Osten bei den verschiedensten Einsätzen fliegt. Die anderen Puma wurden in die USA verkauft und von dem neuen Eigner, Evergreen, an die US Navy zur Versorgung schwimmender Einheiten verchartert.

### SA 330J Puma Technische Daten:

Rumpflänge	14,06 m
Länge über alles	18,15 m
Höhe über alles	5,14 m
Hauptrotor Durchmesser	15,00 m
Heckrotor Durchmesser	3,05 m
Triebwerke	2 x Turbomeca 1VC
Startleistung	2 x 1 175 kW
Startgewicht max.	7 400 kg
Leergewicht	3 766 kg
Reisegeschwindigkeit	258 km/h
Höchstgeschwindigkeit	310 km/h
Steigrate	552 m/min
Dienstgipfelhöhe	4 800 m
Reichweite	500 km
Besatzung	2 Piloten 1 Bordtechniker
Passagiere max.	16 - 20
Produktion	697 Maschinen gesamt

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The increasing number of limited armed conflicts attributable to the Colonial Powers during the 50s and 60s quickly led to increasing interest being directed towards further development of the Tactical Transport Helicopter to move men and materials. In 1962 following their experiences in Algeria and Indochina, the French „Armée de Terre“ commissioned Sud Aviation (later renamed Aerospatiale) to develop a medium transport helicopter powered by two turbo-shaft engines. The fuselage was constructed completely of metal and the large four-blade main rotor with a diameter of 15 meters could be folded manually. A five-blade tail rotor and retractable landing gear resulted in an unusual configuration for the period. The 2500 kg (5512 lbs) internal or up to 3200 kg (7171lbs) external payload quickly aroused civilian interest in the machine. In the case of a disaster the civilian version of SA 330 Puma was able to carry up to six wounded on stretchers and a further 6 lightly injured or additional personnel. Built for civilian use the SA 330F was the most suitable aircraft for the Federal German Border Police (BGS) who, in addition to monitoring the Inner-German Border were also responsible for disaster relief. During rescue and relief operations in support of mountain rescue or helping to fight forest fire's external loads could be carried on a cargo hook under the fuselage. An optional winch - mounted on either side of the fuselage - was available for rescuing personnel. For maritime rescue the Puma could be very quickly fitted with inflatable floatation gear on the two side sponsons and around the nose. The first three SA 330 were delivered to the BGS in 1973 and came from the F Series. The following four helicopters, delivered in 1974 were from the civilian SA 330G range and had been specially fitted rotor blades made from composite materials which were lighter and less prone to corrosion. A Turbomeca 1VC shaft turbine producing 1175 kW was now installed instead of the previously used Turbomeca Turmo-11C-4 engine producing only 990 kW. With the purchase of a further 16 SA 330J models in 1977 the Federal Border Police (BGS) received the first western helicopter with weather radar and an all weather type rating which, due to its de-icing system for main and tail rotor blades allowed it to fly in icing conditions. In order to standardize the fleet and for ease of maintenance the six F and G version machines were modified to the SA 330J standard. A reorganization of the German Police Forces in July 2005 resulted in the formation of the German Federal Police, which in addition to the new SA 320 Super Puma continued use the SA 330J within its flying squadrons. The final curtain fell in August 2008 when in a ceremony in St. Augustin-Hangelar near Bonn, the Federal Police said goodbye to their last SA330J. Most of the 22 German Police Police helicopters had by then been sold to the German HELOG company, which now uses the Cougar on a variety of tasks in Africa and the Middle East. The remaining Puma's were sold in the United States and are operated by their new owner Evergreen under charter to the US Navy to resupply units at sea.

### Technical Data SA 330J Puma:

Length of Fuselage:	14.06 m (47ft 10ins)
Overall Length:	18.15 m (59ft 6ins)
Overall Height:	5.14 m (16ft 10ins)
Main Rotor Diameter:	15.00m (49ft 2ins)
Tail Rotor Diameter:	3.05 m (10ft 0ins)
Engines:	2 x Turbomeca 1VC
Take-off Power:	2 x 1 175 kW
Max Take-off Weight:	7400 kg (16320 lbs)
Empty Weight:	3766 kg (8305 lbs)
Cruising Speed:	258 km / h (160 mph)
Maximum Speed:	310 km / h (192 mph)
Rate of Climb:	552 m / min(1810 ft/min)
Service Ceiling:	4800 m (15750 ft)
Range:	500 km (310 miles)
Crew:	2 pilots 1 Technician
Passengers:	max. 16-20
Total Production:	697 machines

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# Benötigte Farben / Used Colors

Benötigte Farben  
Required colours

Peintures nécessaires  
Benodigde kleuren

Pinturas necesarias  
Tintas necessárias

Colori necessari  
Använda färger

Tarvittavat värit  
Du trenger følgende farger

Nødvendige farger  
Необходимые краски

Potrzebne kolory  
Απαιτούμενα χρώματα

Gerekli renkler  
Potřebné barvy

Szükséges színek  
Potrebne barve

## A

**mausgrau, matt 47**  
mouse grey, matt  
gris souris, mat  
mysgrå, mat  
gris ratón, mate  
cinzento pardo, fosco  
grigio topo, opaco  
musgrå, matt  
hiirenharmaa, himmeä  
musegrå, mat  
musegrå, matt  
мышинно-серый, матовый  
myszaty, matowy  
γκρι ποντικιού, ματ  
fare grisi, mat  
mysi šedá, matná  
egérszürke, matt  
mijsje siva, mat

## B

**lichtblau, glänzend 50**  
light blue, gloss  
bleu clair, brillant  
lichtblauw, glansend  
azul celeste, brillante  
azul celeste, brilhante  
blu celeste, lucente  
ljusblå, blank  
vaaleansininen, kiiltävä  
lysende blå, skinnende  
lysgrå, blank  
голубой, блестящий  
jasnoniebieski, błyszczący  
μπλε φωτός, γυαλιστερό  
isik mavisi, parlak  
svetlemodrá, lesklá  
világító kék, fényes  
svetlo plava, bleskajoča

## C

**hellgrau, seidenmatt 371**  
light grey, silky-matt  
gris clair, satiné mat  
lichtgrå, zijdemat  
gris claro, mate seda  
cinzento claro, fosco sedoso  
grigio chiaro, opaco seta  
ljusgrå, sidenmatt  
vaaleanharmaa, silkinhimmeä  
lysegrå, silkematt  
lysgrå, silkematt  
светло-серый, шелковисто-матовый  
jasnoszary, jedwabisto-matowy  
ανοιχτό γκρι, μεταξωτό ματ  
açık gri, ipek mat  
světleshedá, hedvábné matná  
világosszürke, selyemmatt  
svetlo siva, svila mat

## D

**helloliv, matt 45**  
light olive, matt  
olive clair, mat  
olijf-licht, mat  
aceituna, mate  
oliva claro, fosco  
oliva chiaro, opaco  
ljusoliv, matt  
vaalean olivi, himmeä  
lysoliv, mat  
lys oliven, matt  
светло-оливковый, матовый  
jasnooliwk, matowy  
ανοιχτό χακί, ματ  
açık zeytuni, mat  
světleoolivová, matná  
világos oliv, matt  
svetlo oliva, mat

## E

**granitgrau, matt 69**  
granite grey, matt  
gris granit, mat  
granitgrå, mat  
gris granito, mate  
cinzento granito, fosco  
grigio granito, opaco  
granitgrå, mat  
granitinharmaa, himmeä  
granitgrå, mat  
granitgrå, matt  
серый гранит, матовый  
granitowoszary, matowy  
γκρι γρανίτη, ματ  
granit grisi, mat  
žulové šedá, matná  
gránitszürke, matt  
granito siva, mat

## F

**aluminium, metallic 99**  
aluminium, metallic  
aluminium, métallique  
aluminium, metalico  
aluminio, metalizado  
aluminio, metalico  
aluminio, metalico  
aluminium, metallic  
aluminium, metallak  
aluminium, metalik  
aluminium, metallic  
алюминиевый, металлический  
granitowoszary, matowy  
ολουμίνιου, μεταλλικό  
aluminium, metalik  
aluminium, metall  
aluminium, metalik

## 95 %

## G

**moosgrün, glänzend 62**  
mossy green, gloss  
vert mousse, brillant  
mossgroen, glansend  
verde musgo, brillante  
verde musgo, brilhante  
verde musco, lucente  
moosgrün, blank  
sammeleenvihreä, kiiltävä  
mosegrön, skinnende  
mosegrön, blank  
мышто-зеленый, блестящий  
zielony mech, błyszczący  
πράσινο βρύου, γυαλιστερό  
yusun yeşili, parlak  
mechově zelená  
mohazöld, fényes  
mah zelena, bleskajoča

## 5 %

**schwarz, glänzend 7**  
black, gloss  
noir, brillant  
zwart, glansend  
negro, brillante  
preto, brilhante  
nero, lucente  
svart, blank  
musta, kiiltävä  
sort, skinnende  
mosegrön, blank  
черный, блестящий  
czarny, błyszczący  
μαύρο, γυαλιστερό  
siyah, parlak  
fekete, fényes  
črna, bleskajoča

## H

**olivgrün, seidenmatt 361**  
olive green, silky-matt  
vert olive, satiné mat  
olijfgroen, zijdemat  
verde aceituna, mate seda  
verde aceituna, fosco sedoso  
verde oliva, opaco seta  
olivgrön, sidenmatt  
olivivihreä, silkinhimmeä  
olivgrön, silkematt  
olivengrön, silkematt  
зеленый оливковый, шелк.-матовый  
oliwkowy, jedwabisto-matowy  
πράσινο ελιάς, μεταξωτό ματ  
zeytin yeşili, ipek mat  
olivové zelená, hedvábné matná  
olívzöld, selyemmatt  
oliva zelena, svila mat

## I

**grau, seidenmatt 374**  
grey, silky-matt  
gris, satiné mat  
grå, zijdemat  
gris, mate seda  
cinzento, fosco sedoso  
grigio, opaco seta  
grå, sidenmatt  
harmaa, silkinhimmeä  
grå, silkematt  
grå, silkematt  
серый, шелковисто-матовый  
szary, jedwabisto-matowy  
γκρι, μεταξωτό ματ  
gri, ipek mat  
šedá, hedvábné matná  
szürke, selyemmatt  
siva, svila mat

## J

**weiß, glänzend 4**  
white, gloss  
blanc, brillant  
wit, glansend  
blanco, brillante  
branco, brilhante  
bianco, lucente  
vit, blank  
valkoinen, kiiltävä  
hvid, skinnende  
hvit, blank  
белый, блестящий  
biały, błyszczący  
λευκό, γυαλιστερό  
beyaz, parlak  
biła, lesklá  
fehér, fényes  
bela, bleskajoča

## 80 %

## K

**beige, seidenmatt 314**  
beige, silky-matt  
beige, satiné mat  
beige, zijdemat  
beige, mate seda  
beige, fosco sedoso  
beige, opaco seta  
beige, sidenmatt  
beige, silkinhimmeä  
beige, silkematt  
beige, silkematt  
бежевый, шелковисто-матовый  
beżowy, jedwabisto-matowy  
μπεζ, μεταξωτό ματ  
bej, ipek mat  
béžová, hedvábné matná  
bézs, selyemmatt  
slonova kost, svila mat

## 20 %

**weiß, seidenmatt 301**  
white, silky-matt  
blanc, satiné mat  
wit, zijdemat  
blanco, mate seda  
branco, fosco sedoso  
bianco, opaco seta  
vit, sidenmatt  
valkoinen, silkinhimmeä  
hvid, silkematt  
hvit, silkematt  
белый, шелковисто-матовый  
biały, jedwabisto-matowy  
λευκό, μεταξωτό ματ  
beyaz, ipek mat  
biła, hedvábné matná  
fehér, selyemmatt  
bela, svila mat

## L

**eisen, metallic 91**  
steel, metallic  
coloris fer, métallique  
ijzerkleurig, metallic  
ferroso, metalizado  
ferro, metalico  
ferro, metalico  
järnfärg, metallic  
teräksenvärinen, metallikiitto  
jern, metallak  
jern, metalik  
stalnoy, metalnik  
żelazo, metaliczny  
σίδηρου, μεταλλικό  
demir, metalik  
železná, metaliza  
vas, metal  
železna, metalik

## M

**schwarz, matt 8**  
black, matt  
noir, mat  
zwart, mat  
negro, mate  
preto, fosco  
nero, opaco  
svart, matt  
musta, himmeä  
sort, mat  
sort, matt  
черный, матовый  
czarny, matowy  
μαύρο, ματ  
siyah, mat  
černá, matná  
fekete, matt  
črna, mat

## N

**feuerrot, seidenmatt 330**  
fiery red, silky-matt  
rouge feu, satiné mat  
rood helder, zijdemat  
rojo fuego, mate seda  
vermelho vivo, fosco sedoso  
rosso fuoco, opaco seta  
eldröd, sidenmatt  
tulipunainen, silkinhimmeä  
idróð, silkematt  
idróð, silkematt  
огненно-красный, шелк.-матовый  
czerwony ognisty, jedwabisto-mat.  
κόκκινο φωτιάς, μεταξωτό ματ  
ates kırmızı, ipek mat  
ohnivě červená, hedvábné matná  
tűzpiros, selyemmatt  
ogenj rdeča, svila mat

## O

**laubgrün, seidenmatt 364**  
leaf green, silky-matt  
vert feuille, satiné mat  
bladgroen, zijdemat  
verde follaje, mate seda  
verde gaio, fosco sedoso  
verde foglia, opaco seta  
lövgrön, sidenmatt  
lehdenvihreä, silkinhimmeä  
lövgrön, silkematt  
lövgrön, silkematt  
лиственно-зеленый, шелк.-матовый  
zielony liściasty, jedwabisto-matowy  
πράσινο φυλλομπίτων, μεταξ, ματ  
yaprak yeşili, ipek mat  
zelená jako listi, hedvábné matná  
lombzöld, selyemmatt  
list zelena, svila mat

## P

**gelb, matt 15**  
yellow, matt  
jaune, mat  
geel, mat  
amarillo, mate  
amarelo, fosco  
giallo, opaco  
gul, matt  
keltainen, himmeä  
gul, mat  
gul, mat  
желтый, матовый  
żółty, matowy  
κίτρινο, ματ  
sarı, mat  
žlutá, matná  
sárga, matt  
rumena, mat

## Q

**beige, seidenmatt 314**  
beige, silky-matt  
beige, satiné mat  
beige, zijdemat  
beige, mate seda  
beige, fosco sedoso  
beige, opaco seta  
beige, sidenmatt  
beige, silkinhimmeä  
beige, silkematt  
beige, silkematt  
бежевый, шелковисто-матовый  
beżowy, jedwabisto-matowy  
μπεζ, μεταξωτό ματ  
bej, ipek mat  
béžová, hedvábné matná  
bézs, selyemmatt  
slonova kost, svila mat

## R

**braun, seidenmatt 381**  
brown, silky-matt  
brun, satiné mat  
bruin, zijdemat  
marbrön, mate seda  
castanho, fosco sedoso  
marrone, opaco seta  
brun, sidenmatt  
ruskea, silkinhimmeä  
brun, silkematt  
brun, silkematt  
коричневый, шелковисто-матовый  
brązowy, jedwabisto-matowy  
καφέ, μεταξωτό ματ  
kahverengi, ipek mat  
hnědá, hedvábné matná  
barna, selyemmatt  
řjava, svila mat

## S

**silber, metallic 90**  
silver, metallic  
argent, métallique  
zilver, metallic  
plata, metalizado  
prata, metalico  
argento, metalico  
silver, metallic  
hopea, metallikiitto  
solv, metallak  
solv, metalik  
серебристый, металлический  
srebro, metaliczny  
ασμύ, μεταλλικό  
gümüş, metalik  
stříbrná, metaliza  
ezüst, metalik  
srebrna, metalik

## T

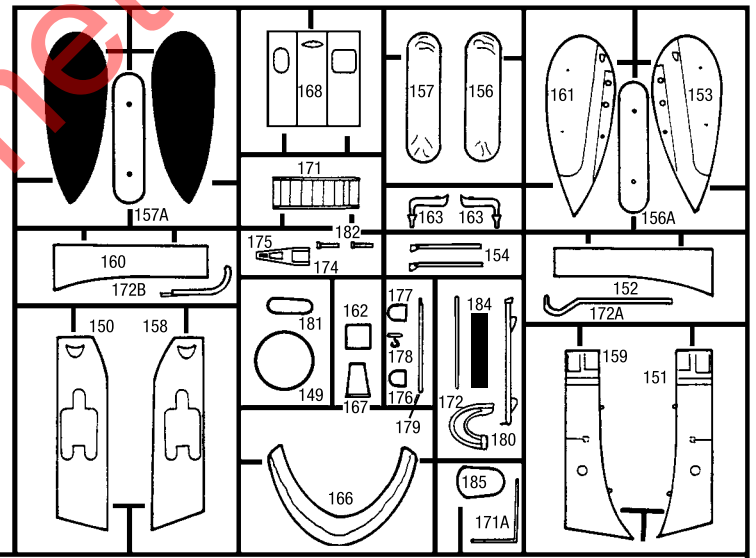
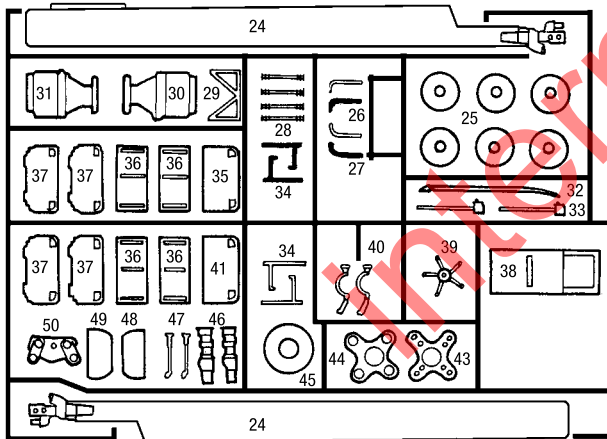
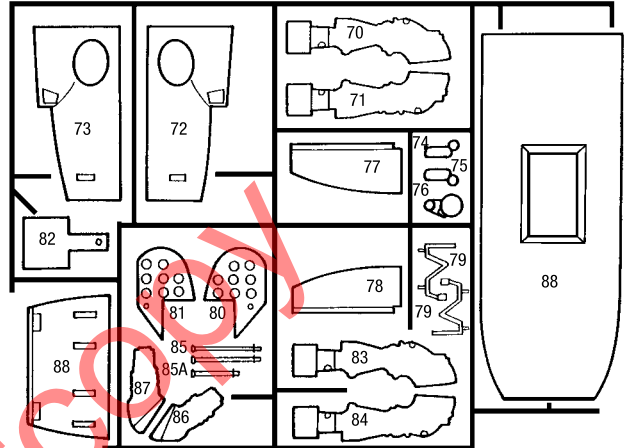
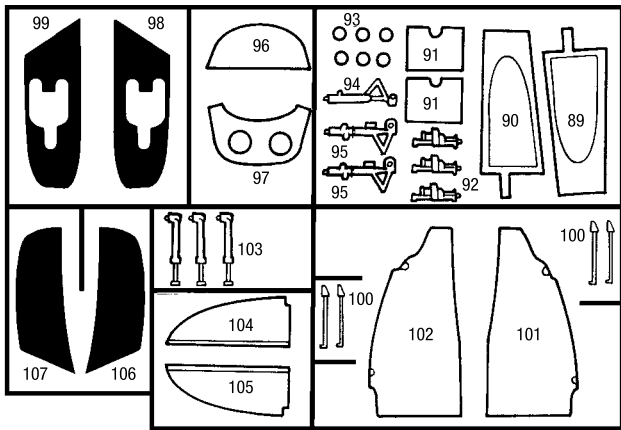
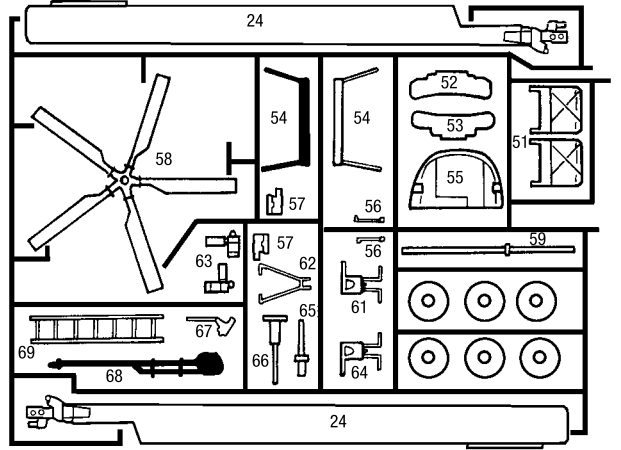
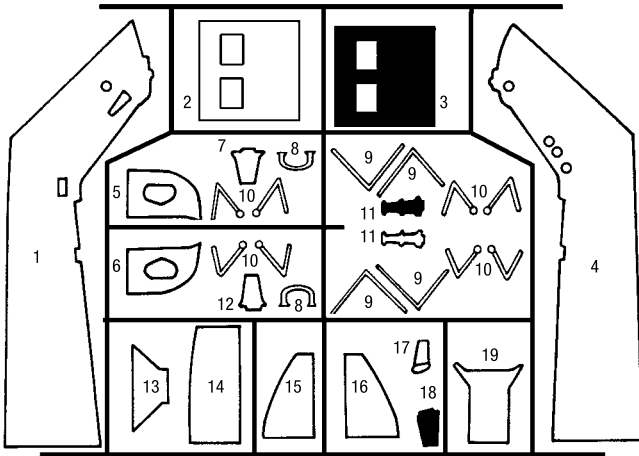
**Hellblau, matt 49**  
Light blue, matt  
Bleu clair, mat  
Lichtblauw, mat  
Azul claro, mate  
Azul-claro, mate  
Blu chiaro, opaco  
Ljusblå, matt  
Vaaleansininen, matta  
Lysblå, mat  
Lysblå, matt  
Светло-синий, матовый  
Jasnoniebieski, matowy  
Μπλε ανοιχτό, ματ  
Açık mavi, mat  
hnědá, hedvábné matná  
Světlo modrá, matná  
Svetlomodra, brez leska



Nicht benötigte Teile  
Parts not used  
Pièces non utilisées  
Niet benodigde onderdelen  
Piezas no necesarias  
Peças não utilizadas  
Parti non usate  
Inte använda delar  
Tarpeettomat osat  
Ikke nødvendige dele  
Deler som ikke er nødvendige  
Неиспользованные детали  
Elementy niepotrzebne  
μη χρειαζόμενα εξαρτήματα  
Gereksiz parçalar  
Nepotřebné díly  
fel nem használt alkatrészek  
Nepotrebni deli



Loch bohren  
Make a hole  
Faire un trou  
Maak een gat  
Practicar un taladro  
Perfurar  
Fare un foro  
Borra hål  
Poraa reikä  
Der bores et hul  
Bor hull  
Просверлить отверстие  
wyywiercić otwór  
ανοίξτε τρύπα  
Delik açın  
Vyvrtat díru  
lyukat fúrni  
Narediti lukinjo

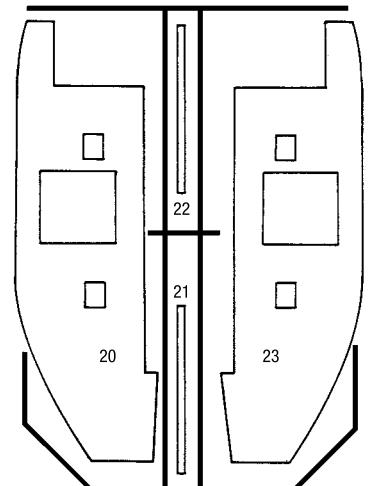
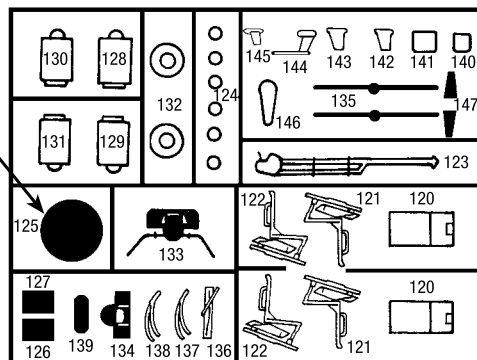
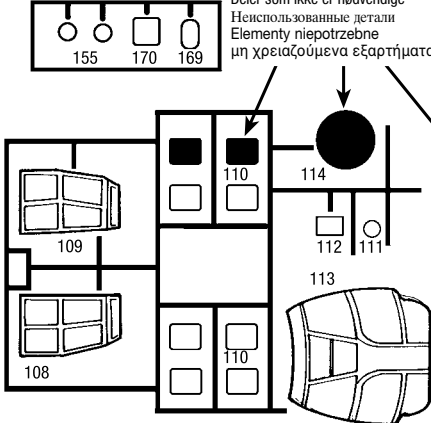


■ Nicht benötigte Teile  
 Parts not used  
 Pièces non utilisées  
 Niet benodigde onderdelen  
 Piezas no necesarias

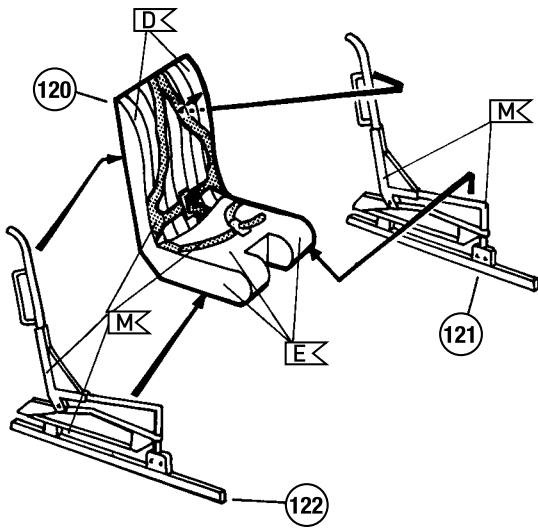
Peças não utilizadas  
 Partii non usate  
 Inte använda delar  
 Tarpeettomat osat  
 Ikke nødvendige dele

Gereksiz parçalar  
 Nepotrebné diely  
 fel nem használt alkatrészek  
 Nepotrebni deli

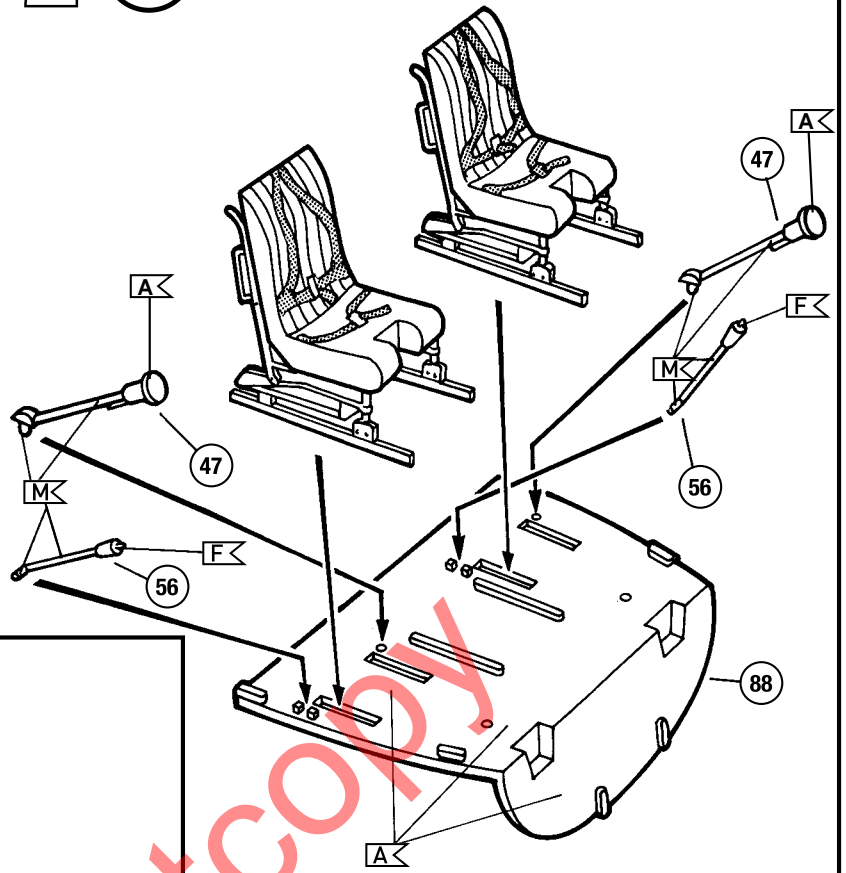
155 170 169  
 Deler som ikke er nødvendige  
 Неиспользованные детали  
 Elementy niepotrzebne  
 μη χρειάζομενα εξαρτήματα



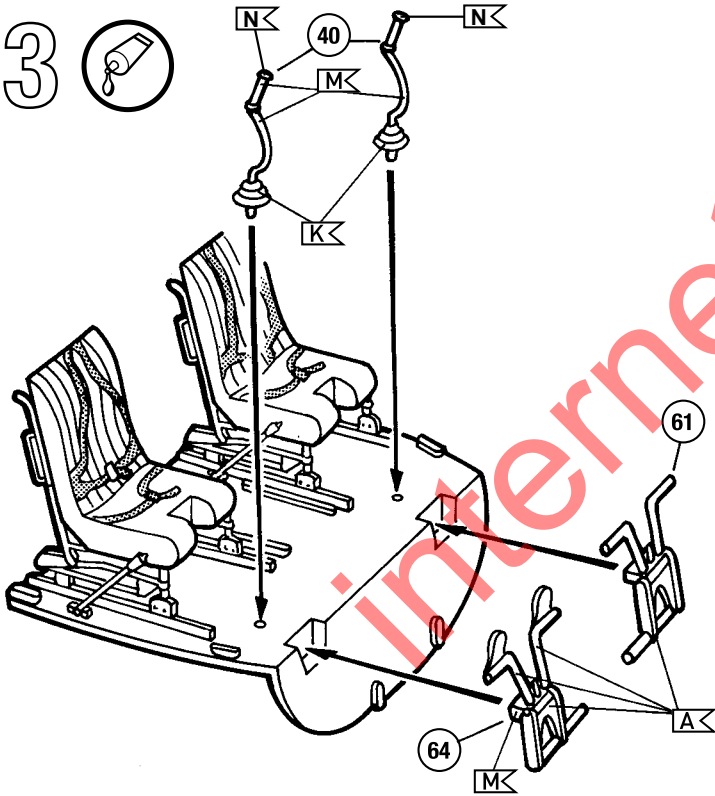
# 1 2X



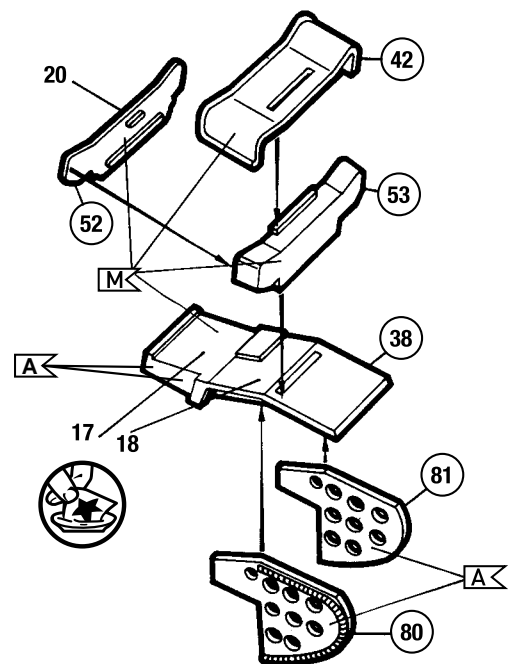
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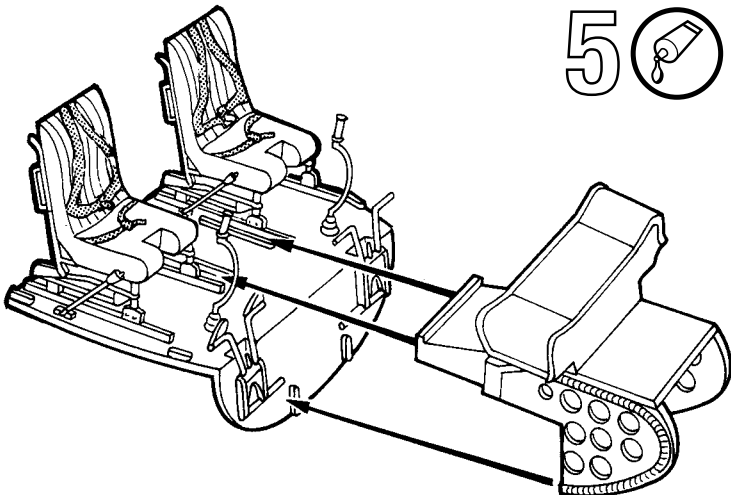
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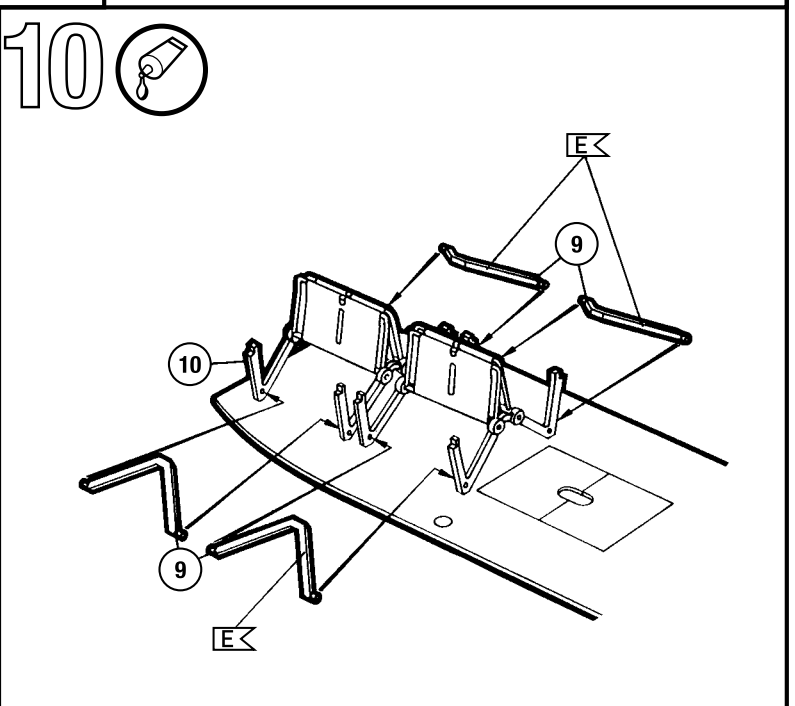
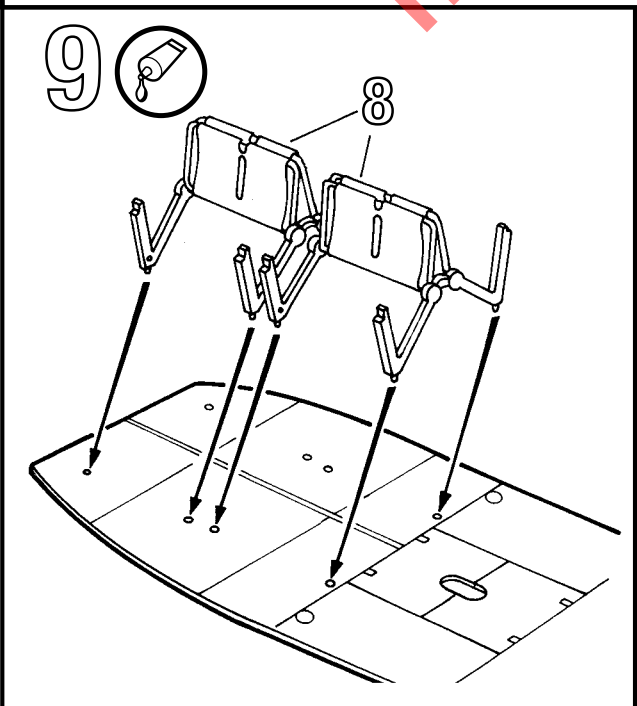
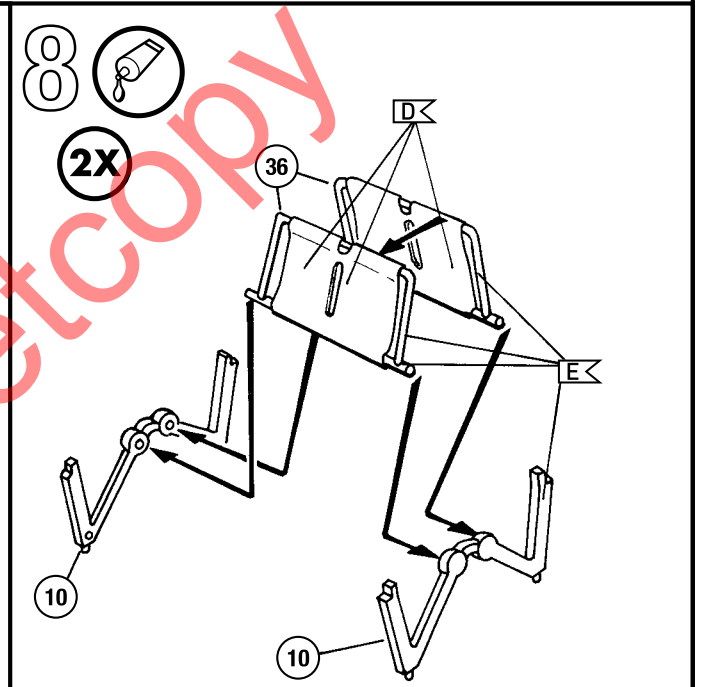
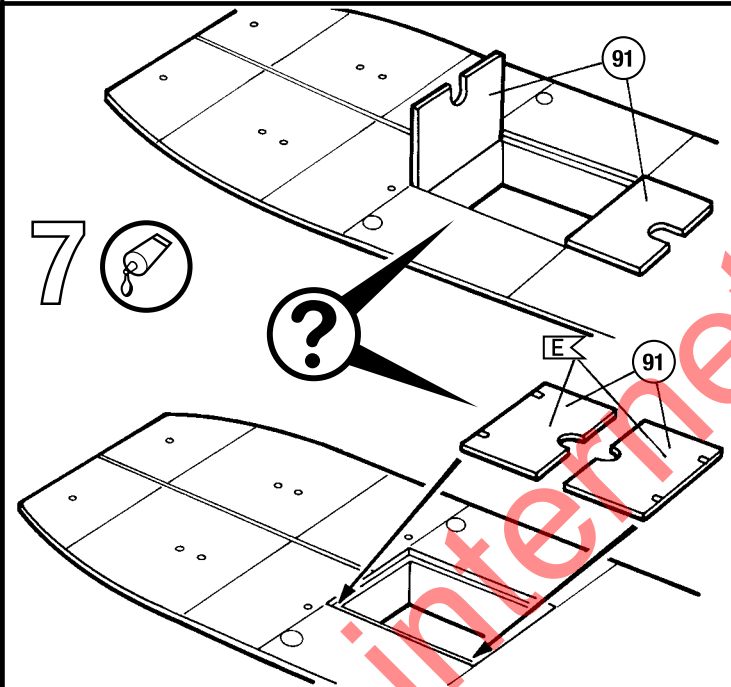
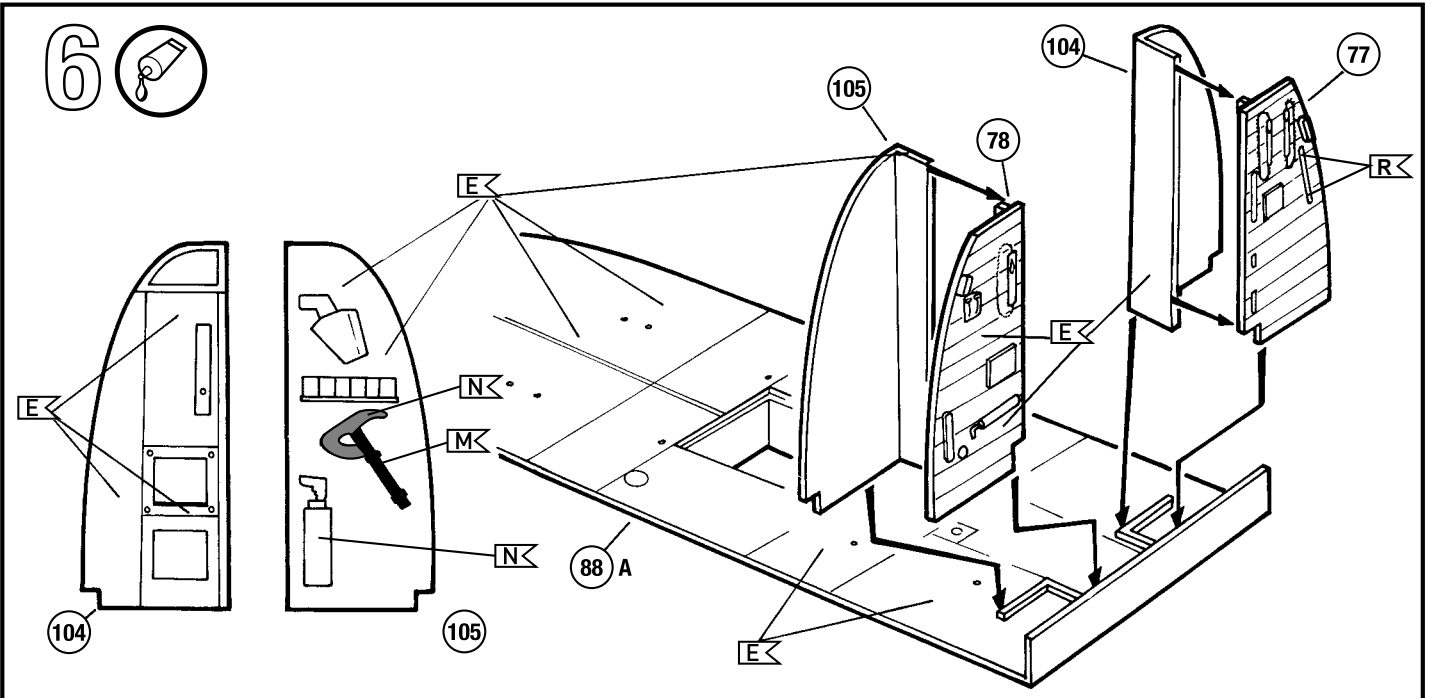


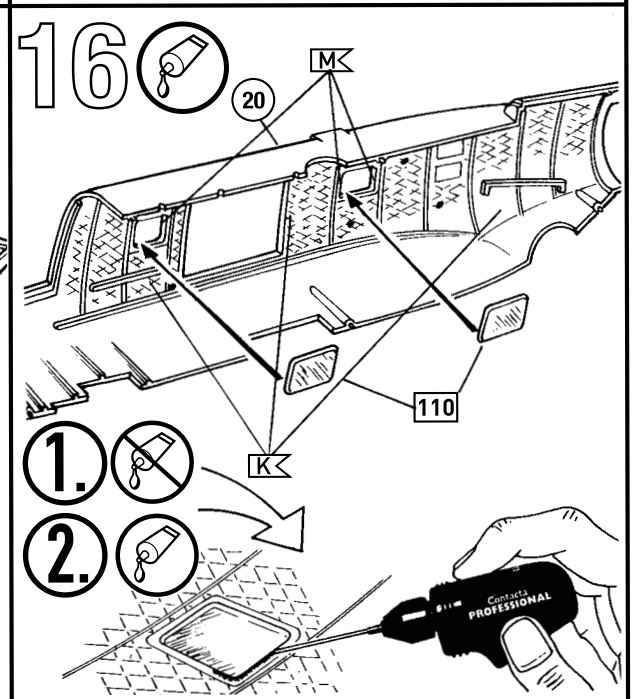
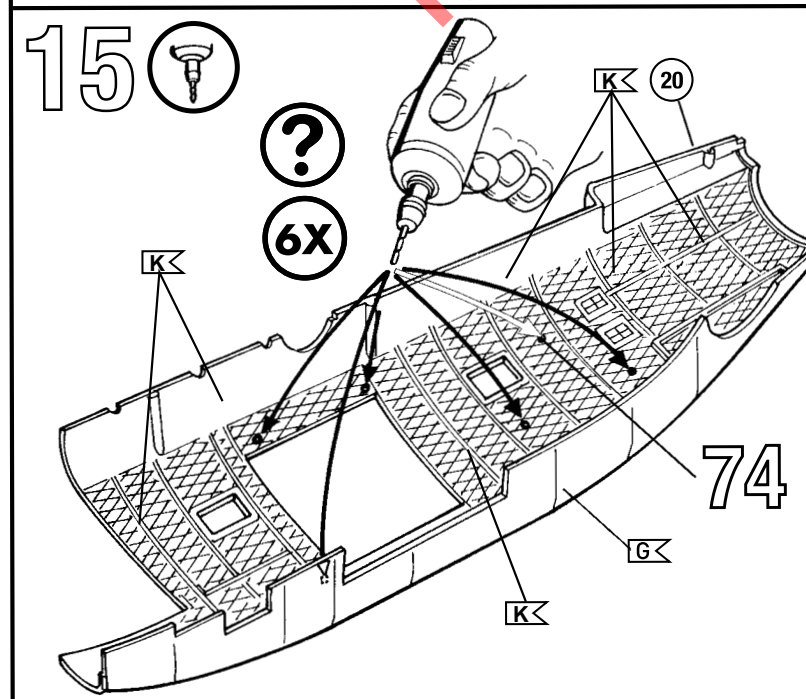
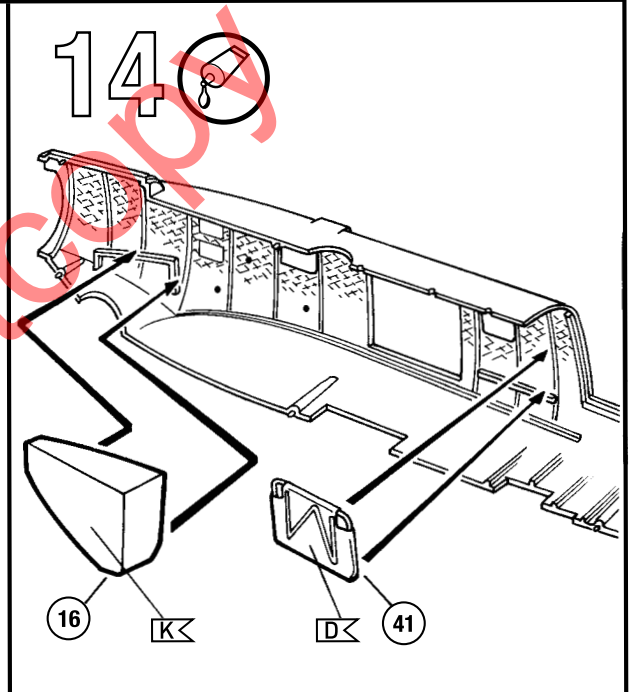
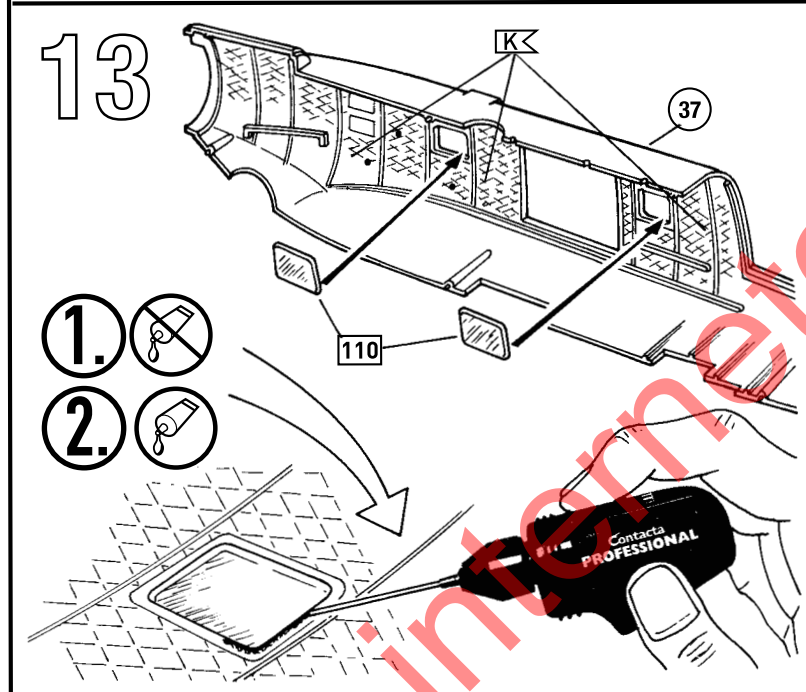
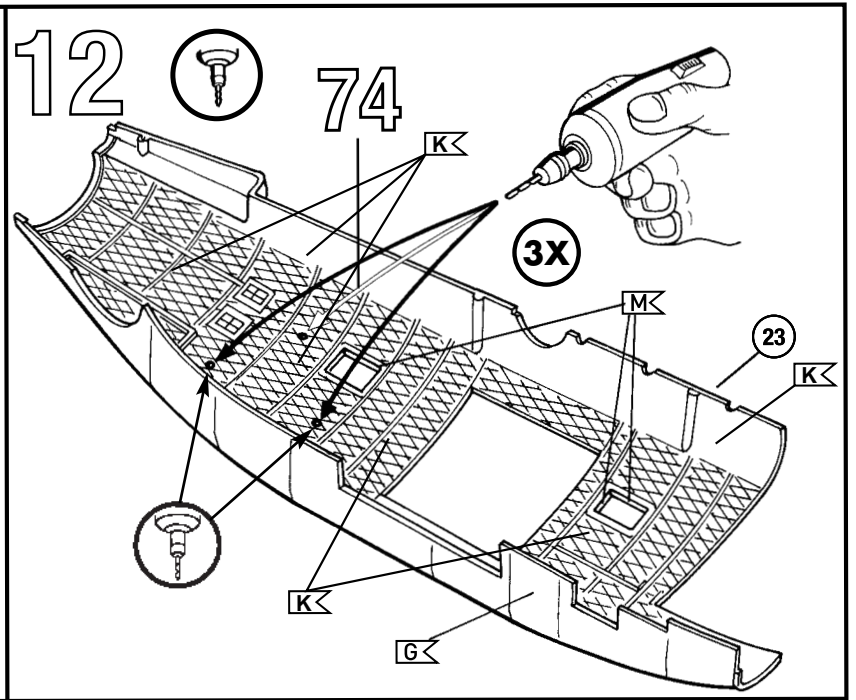
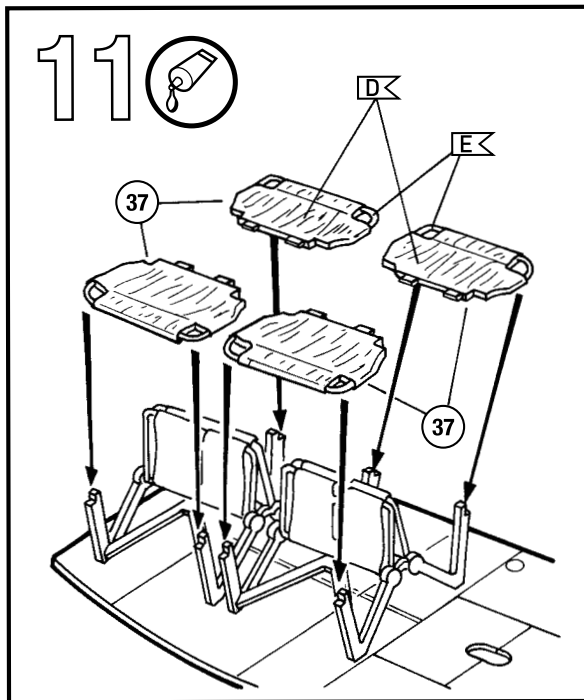
# 4



# 5

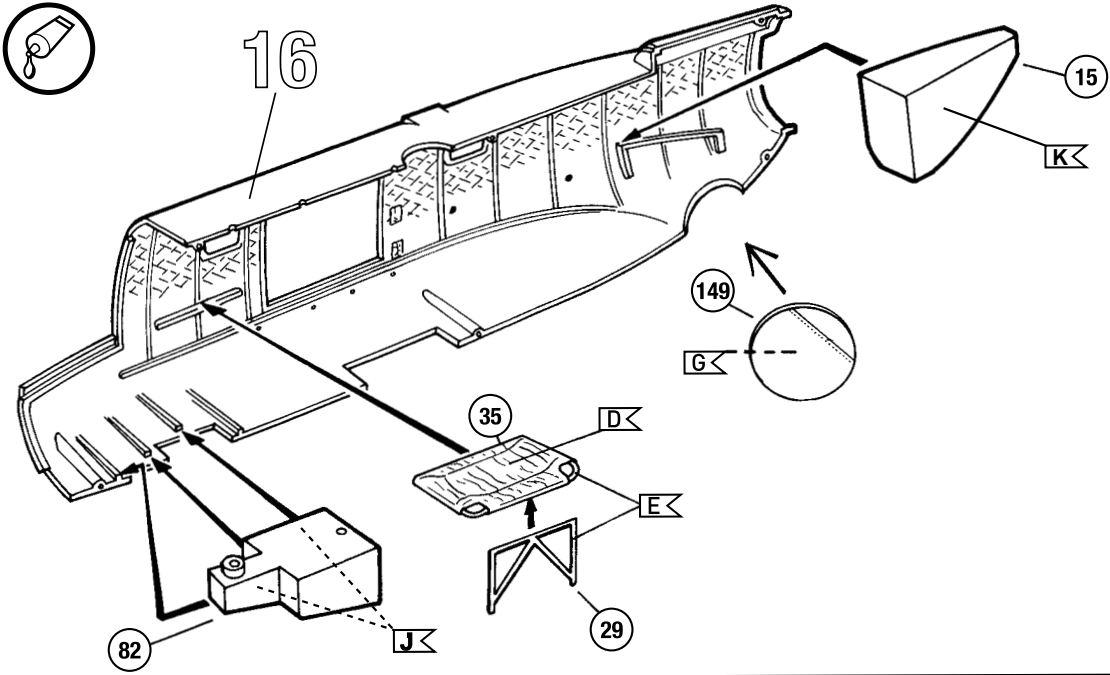




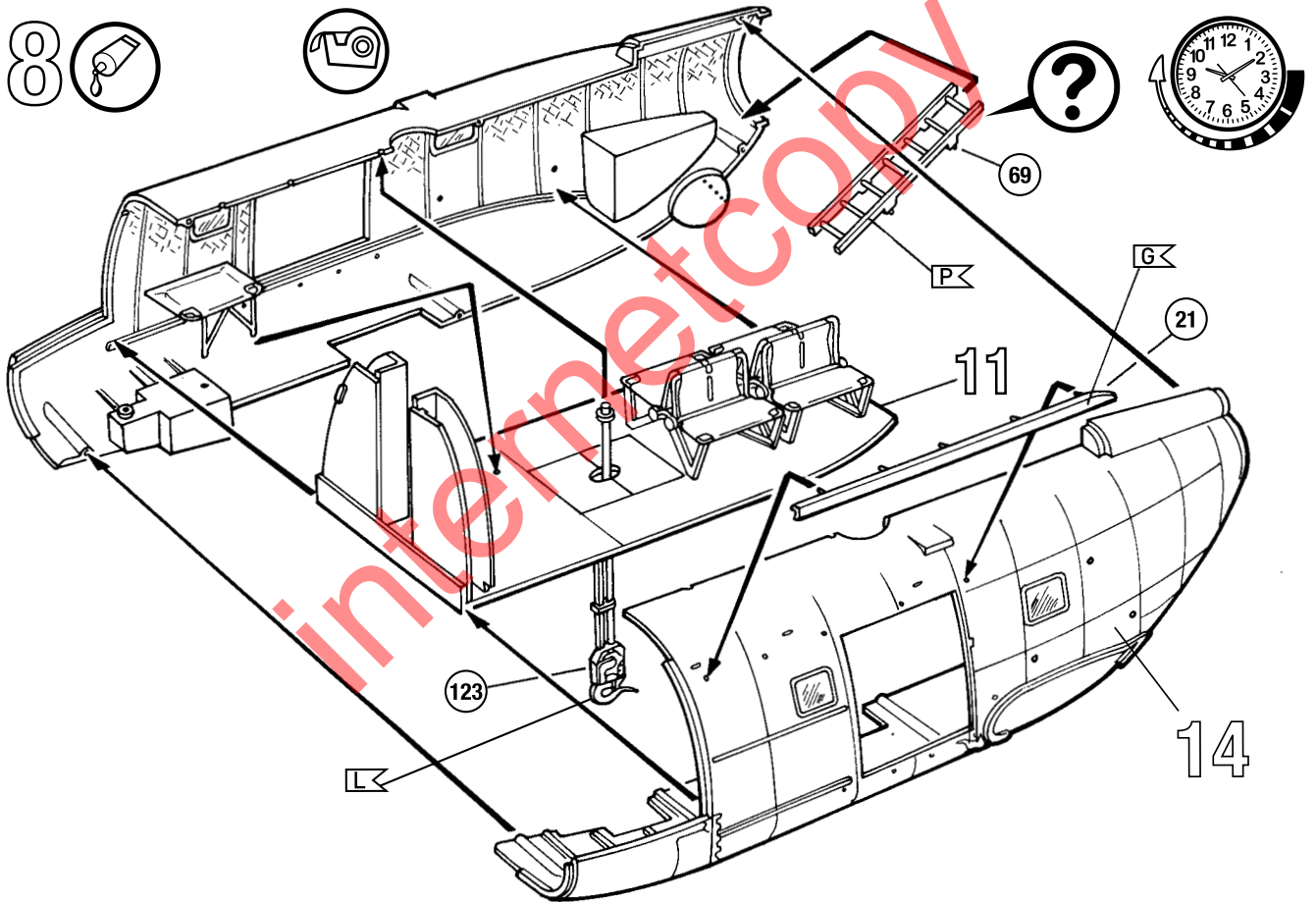




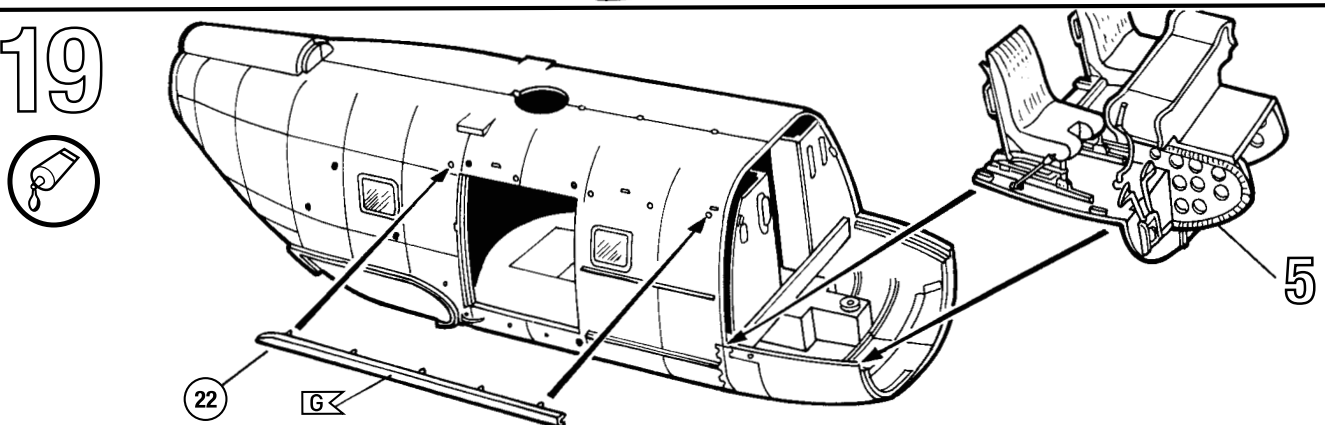
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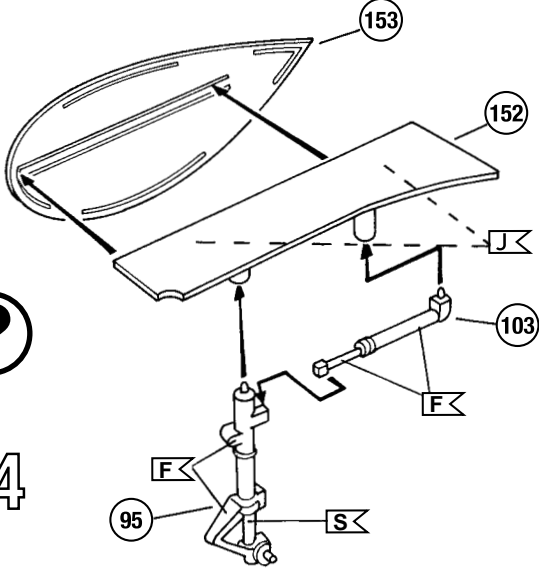
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19

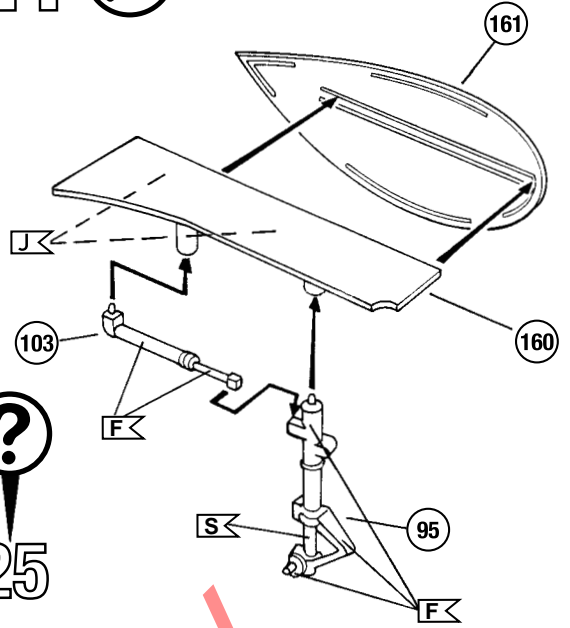


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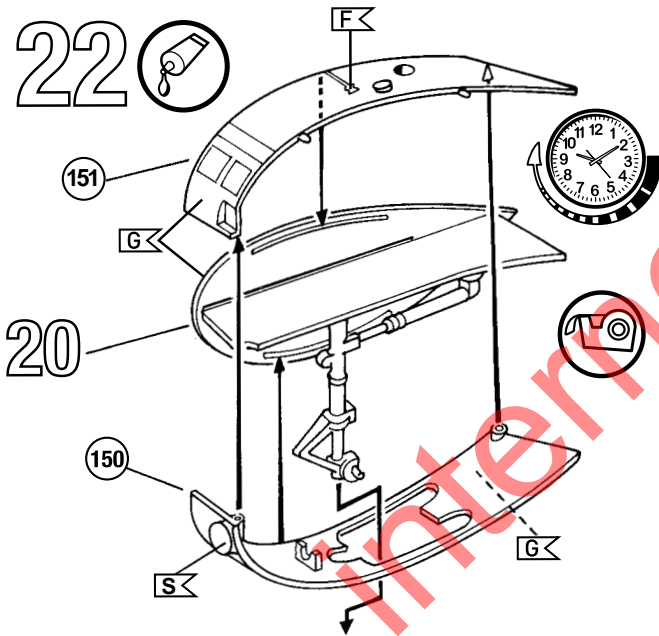
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24

21 

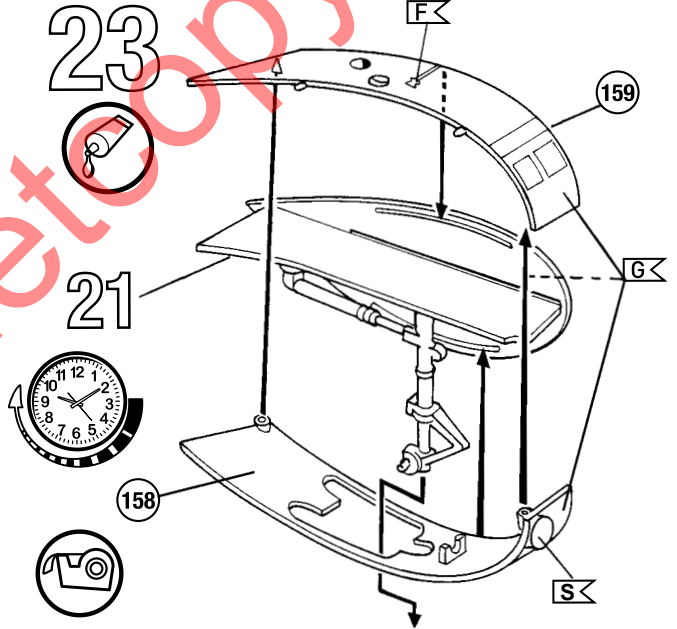


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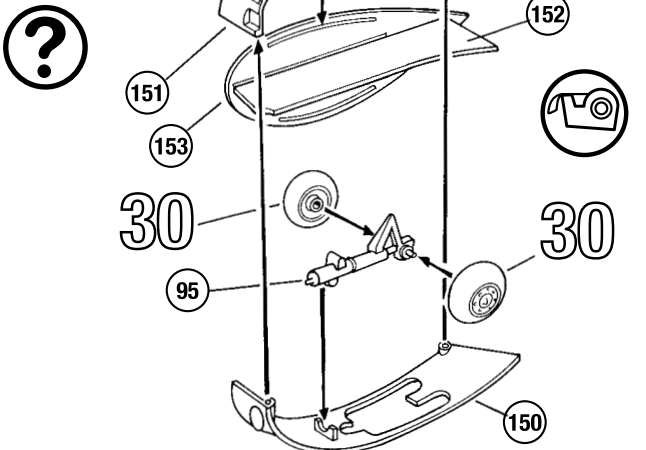
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23 

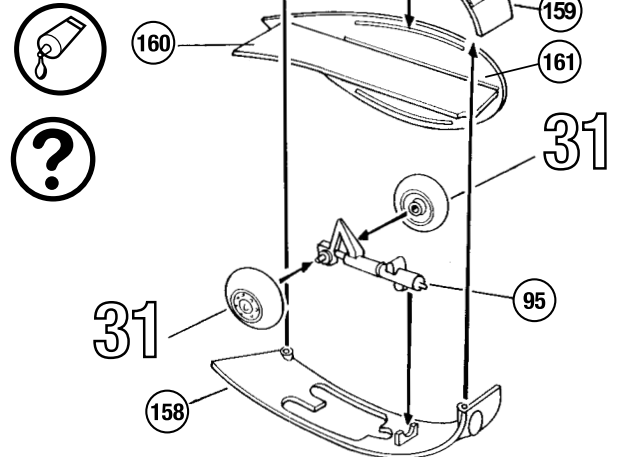


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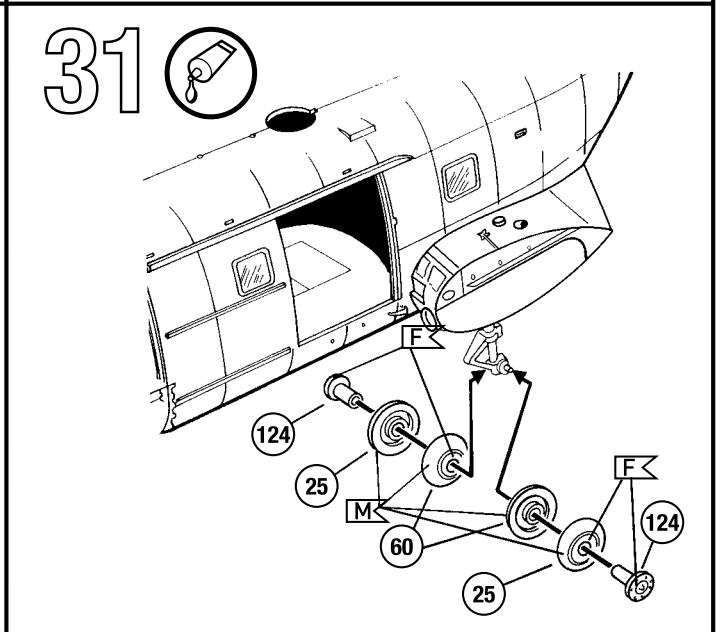
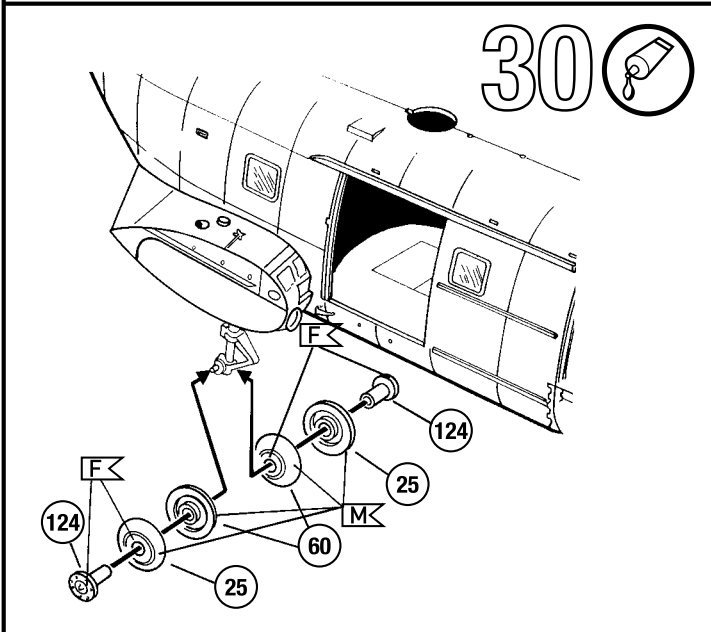
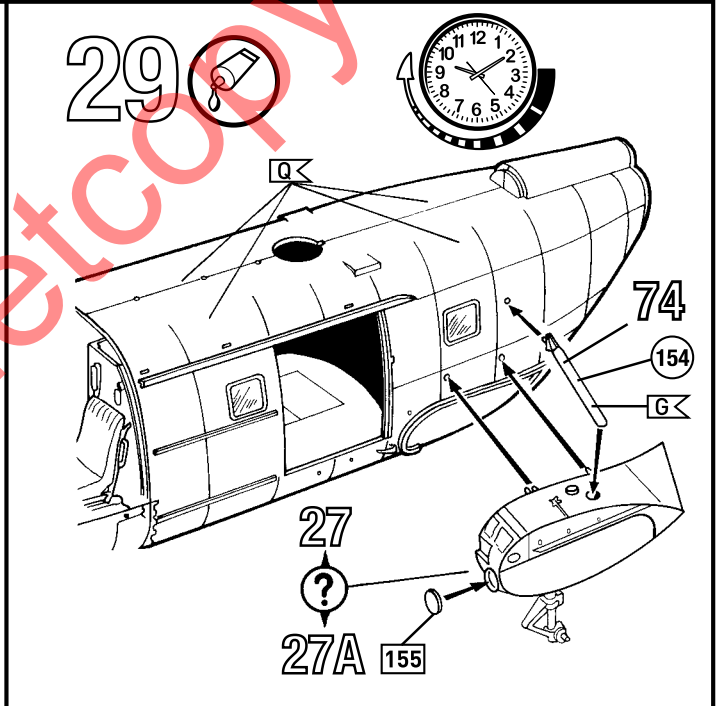
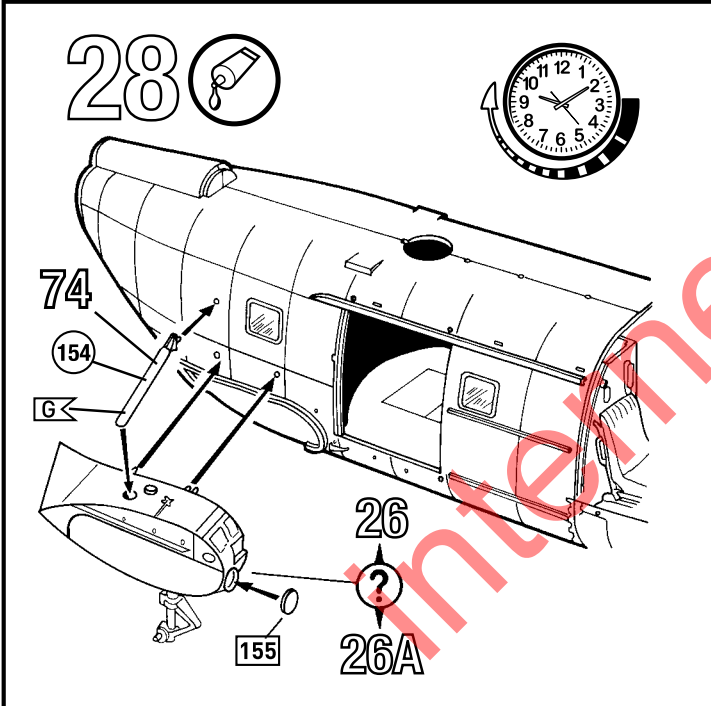
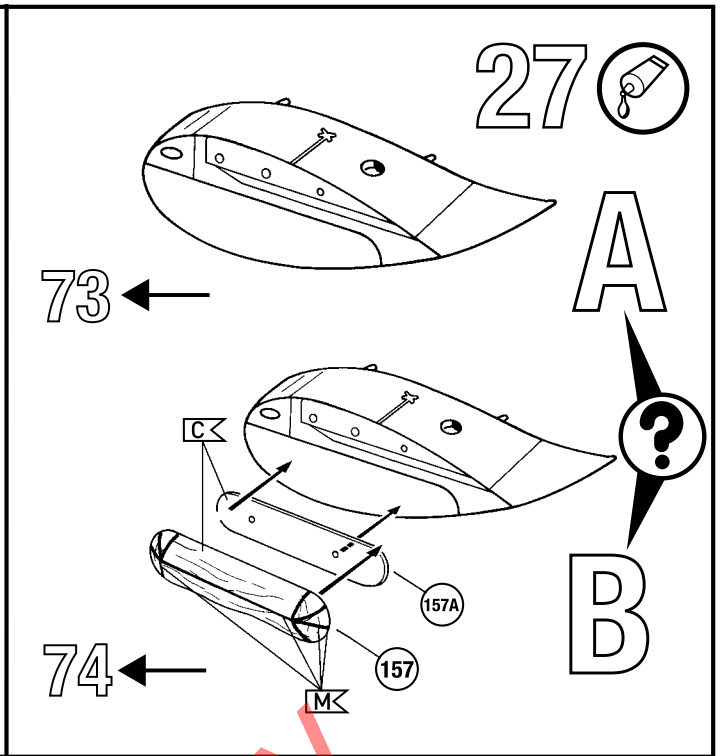
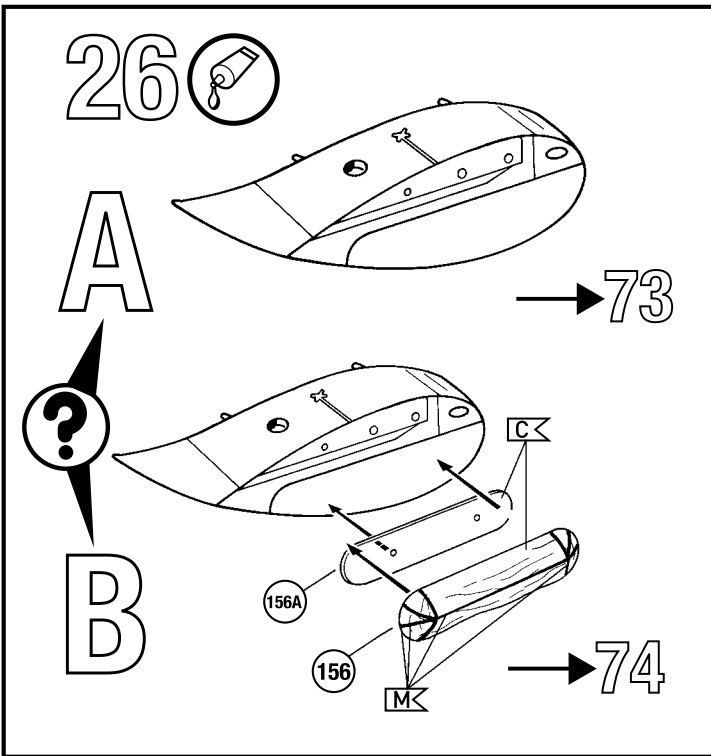


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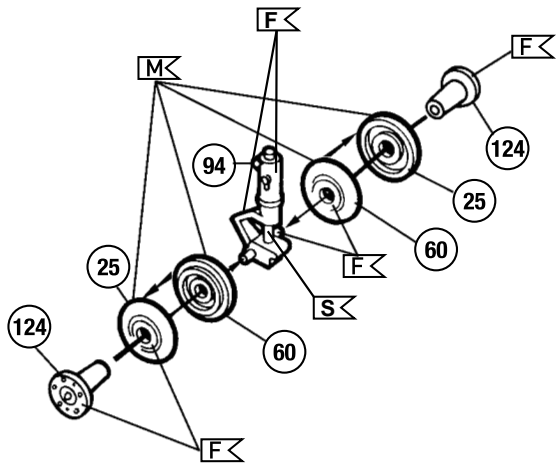
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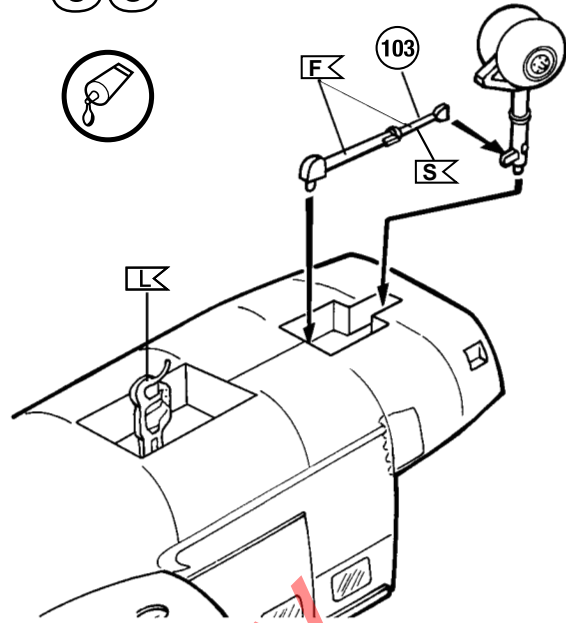
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31



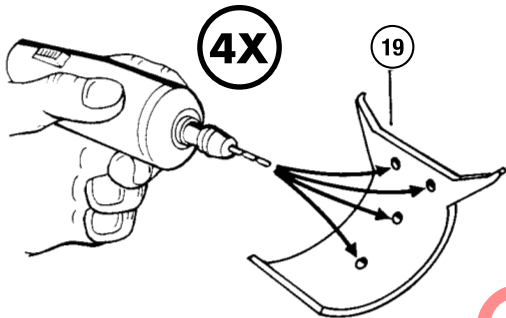
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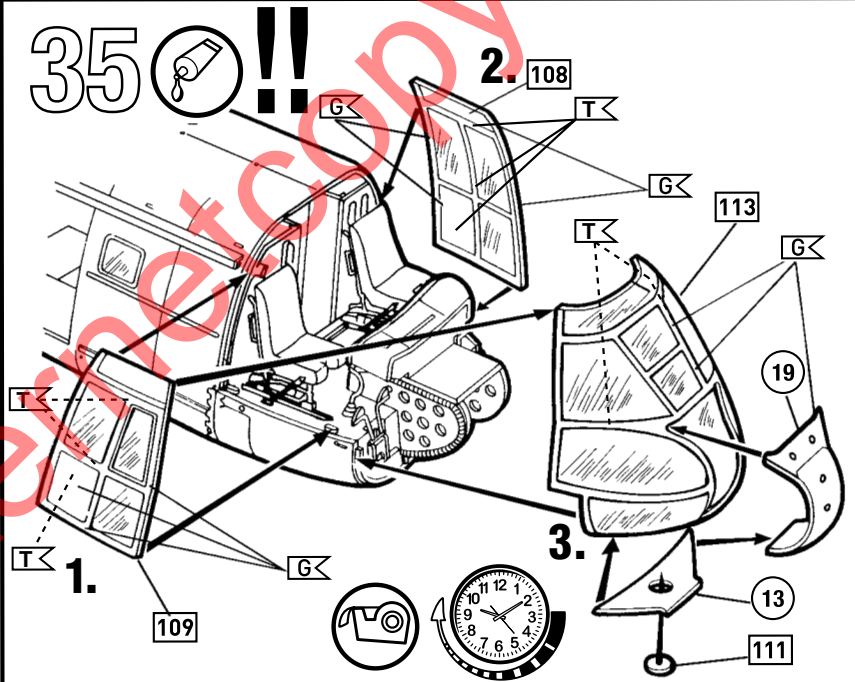
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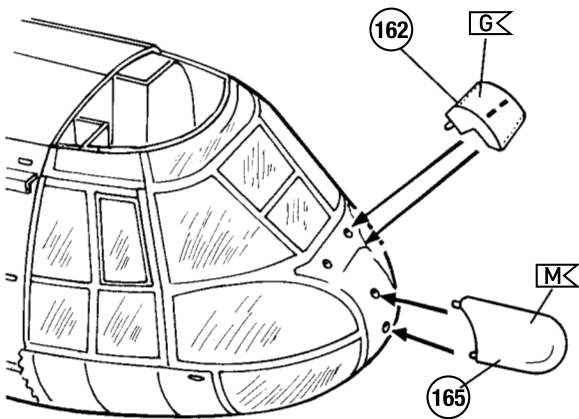
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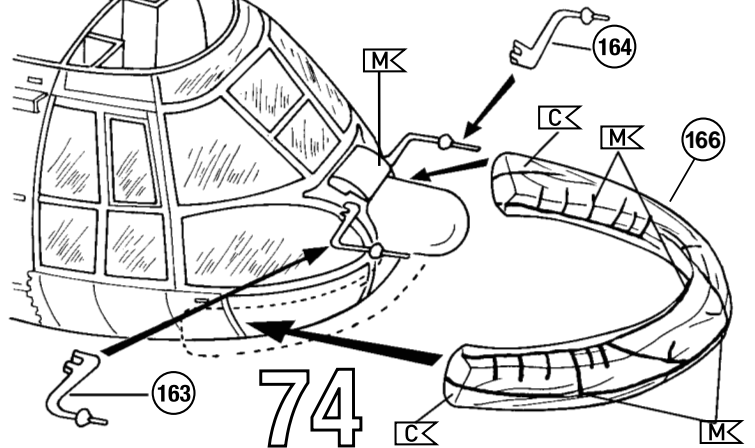
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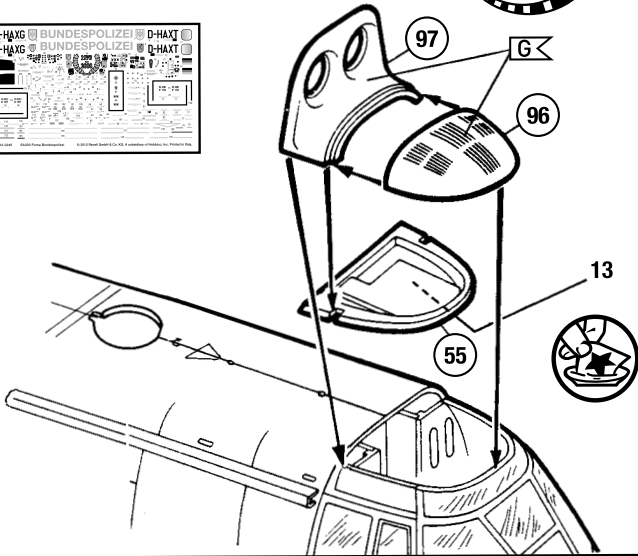
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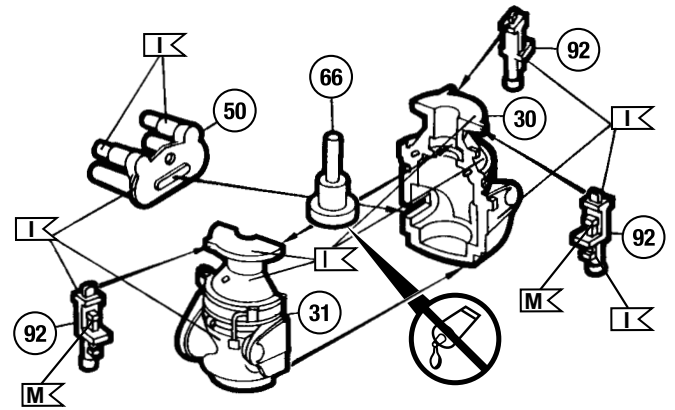
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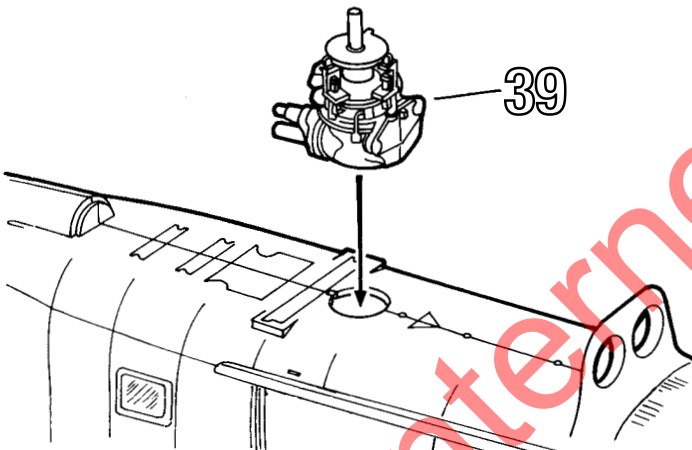
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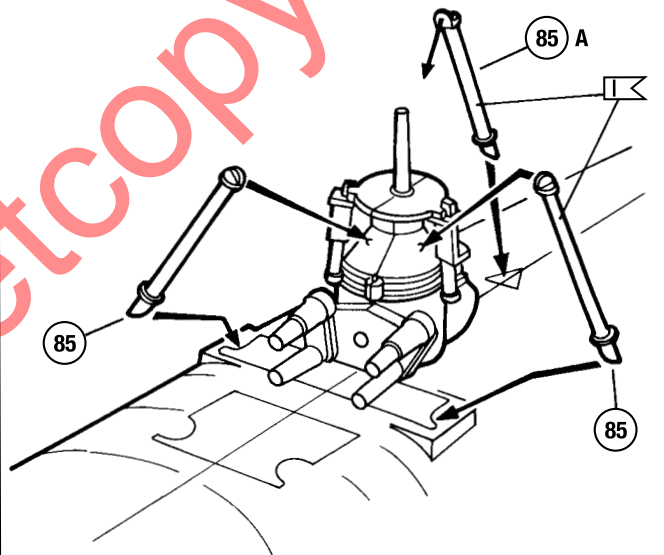
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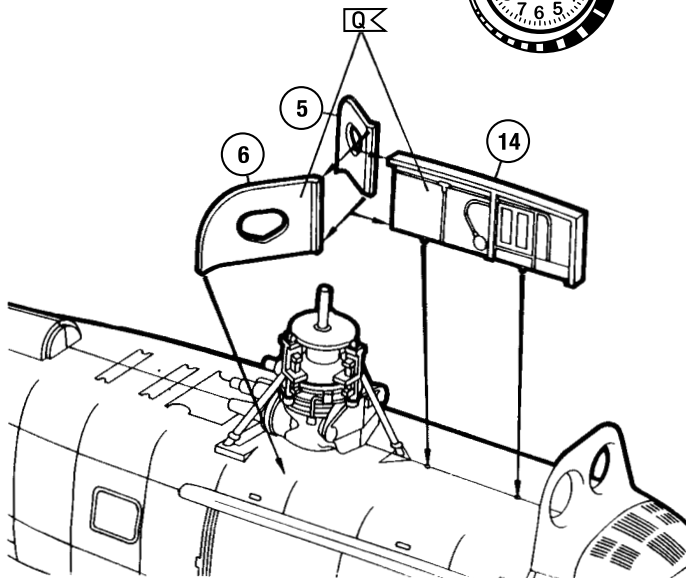
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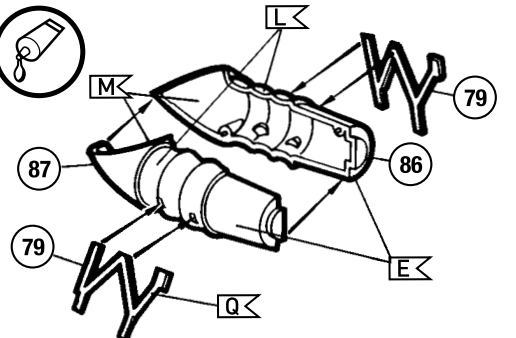
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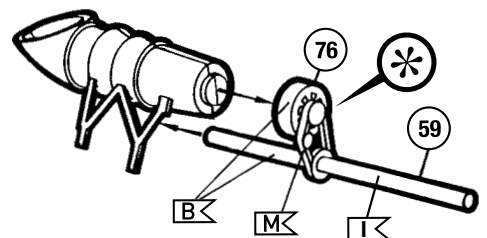
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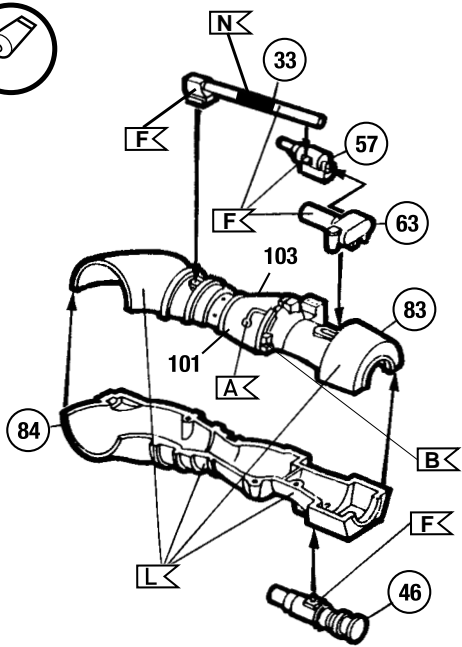
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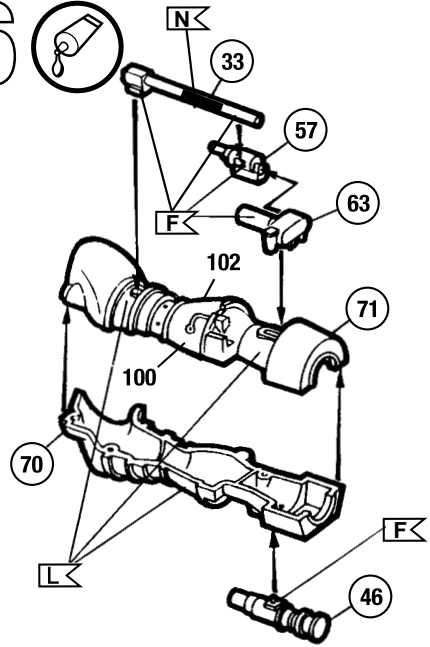
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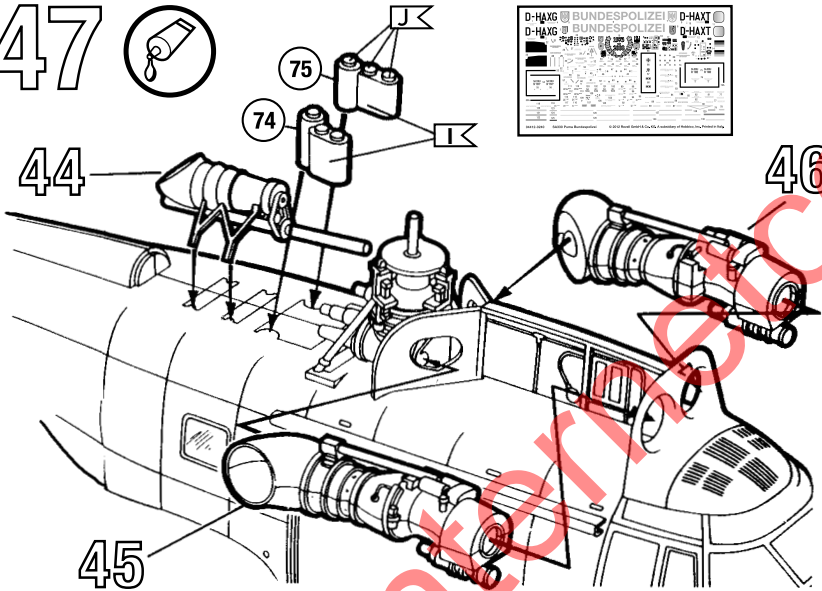
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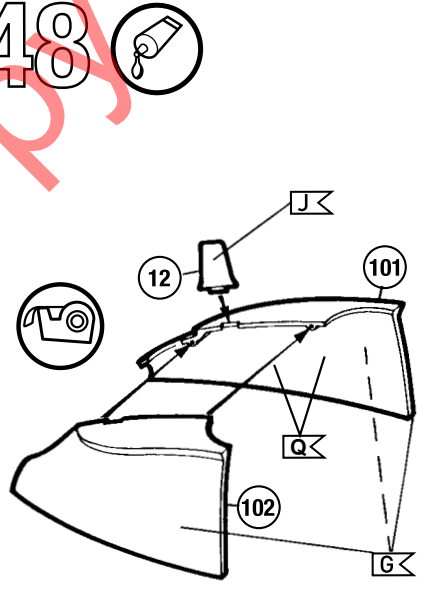
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47



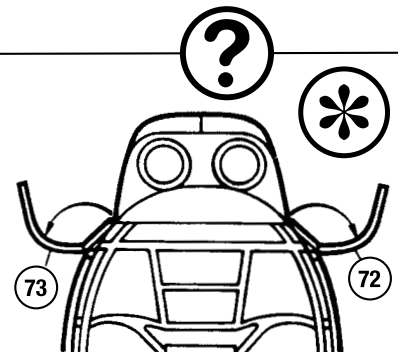
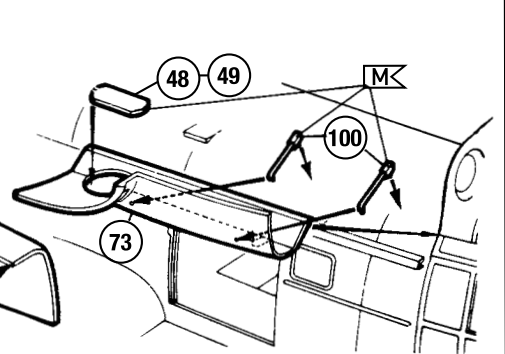
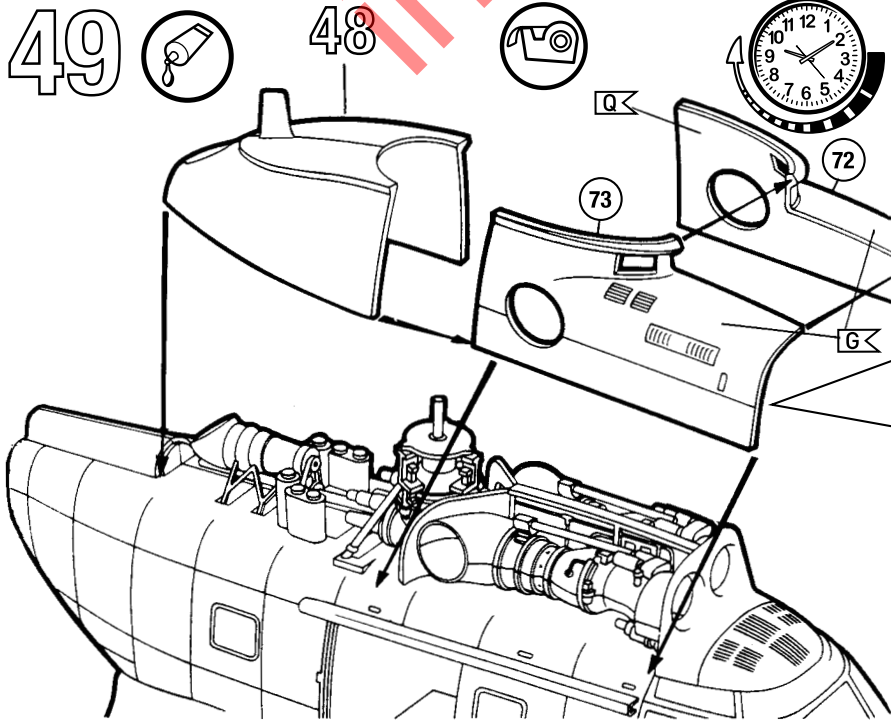
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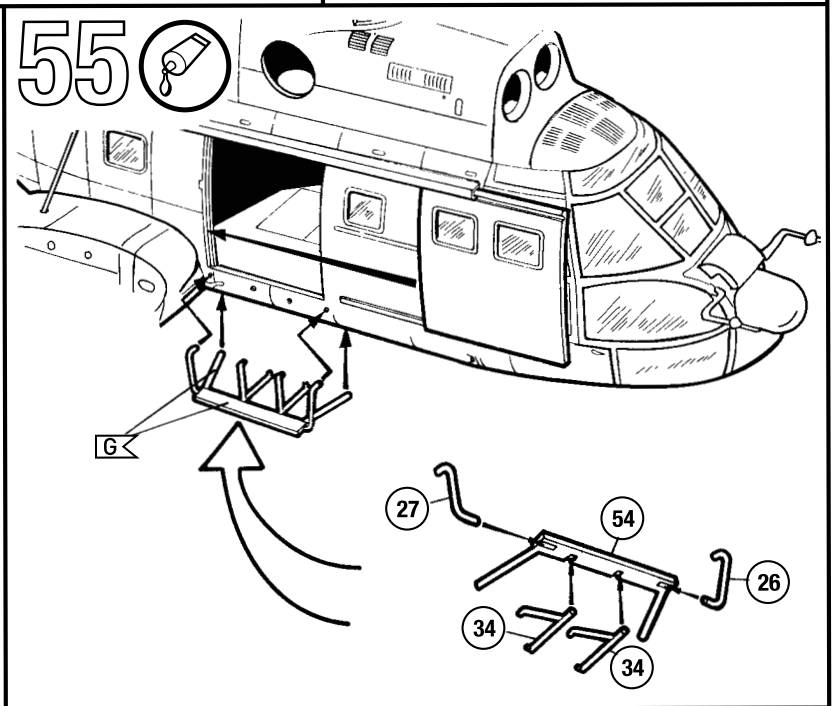
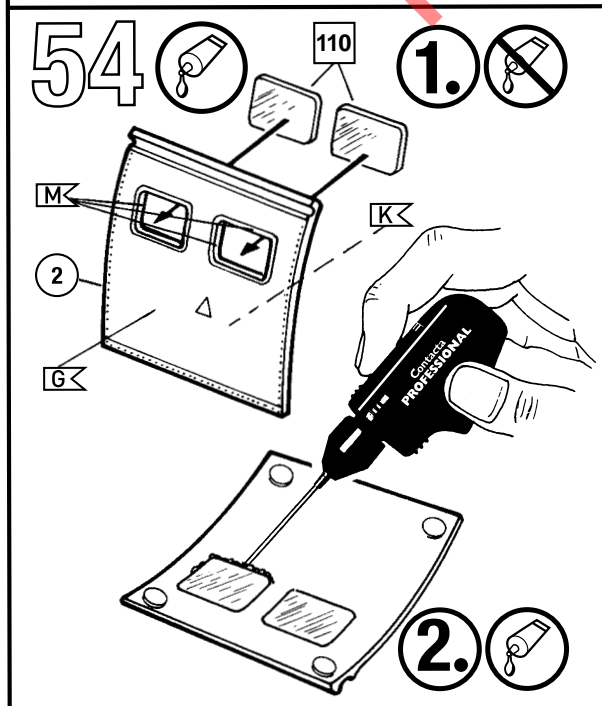
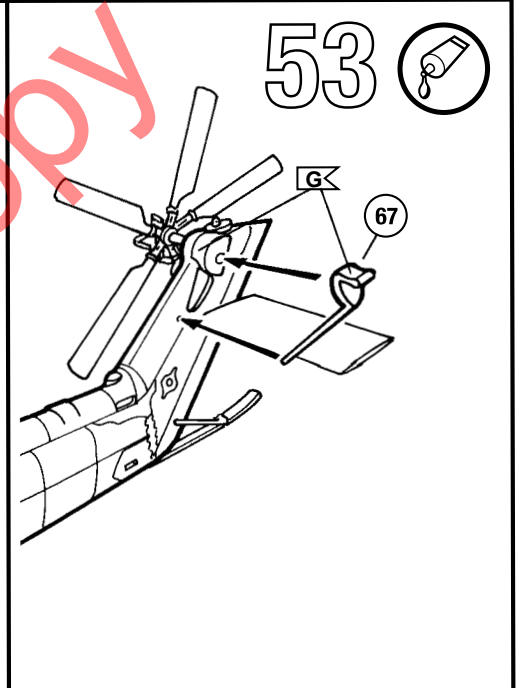
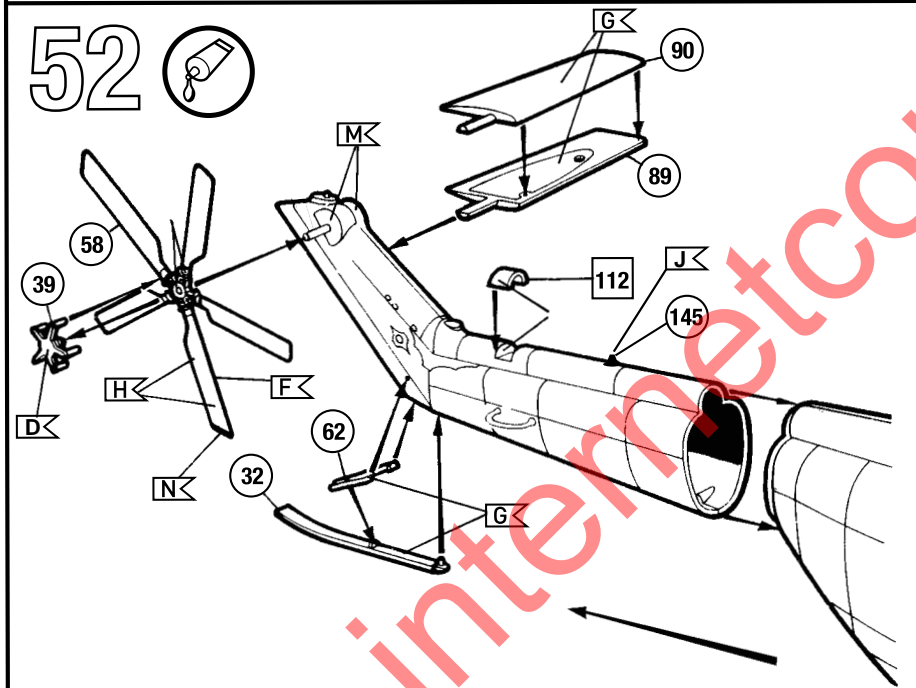
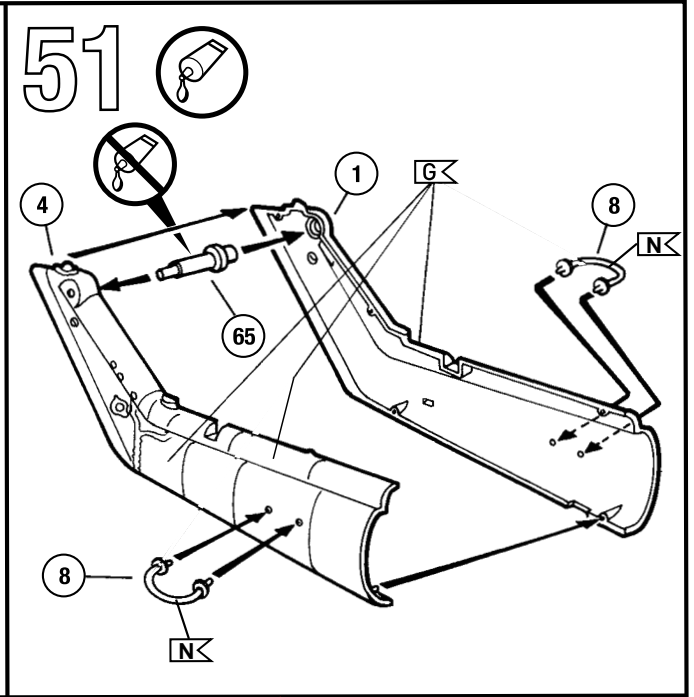
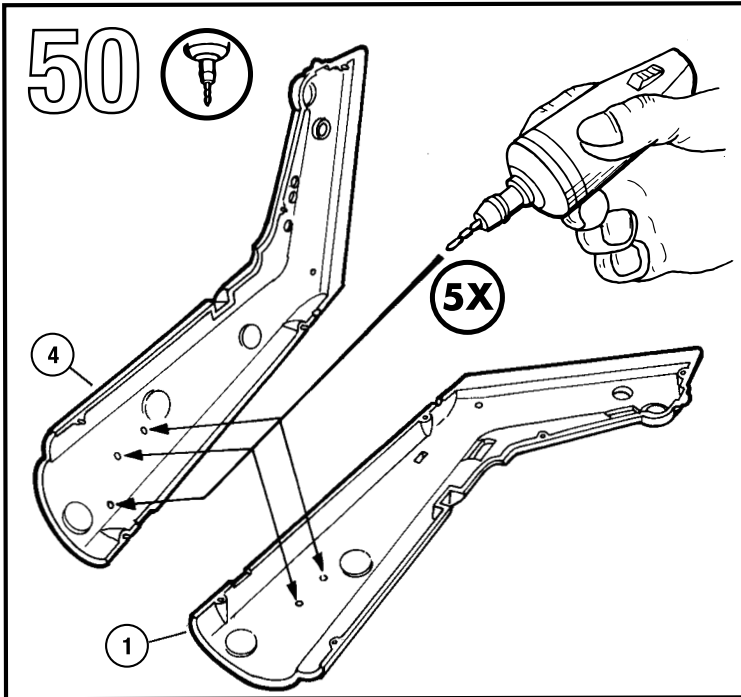


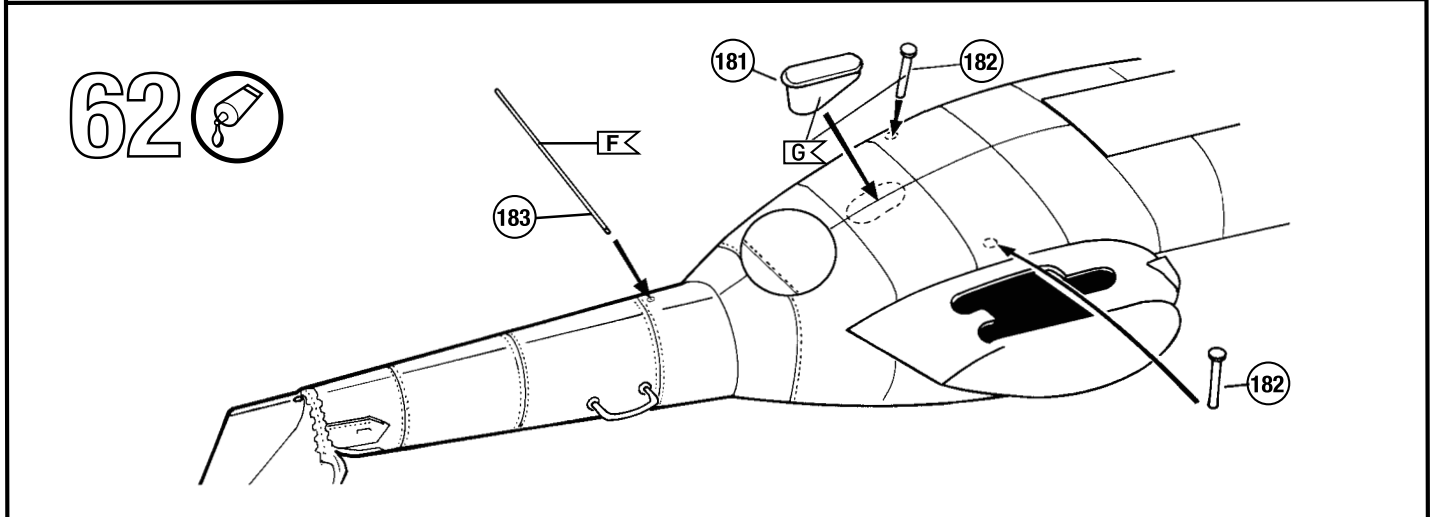
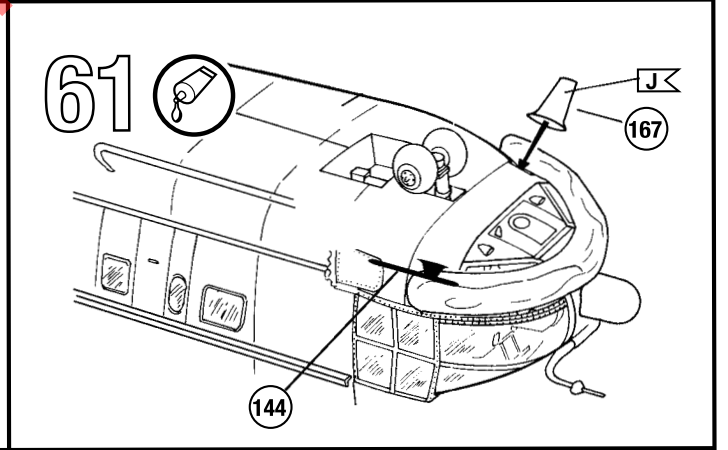
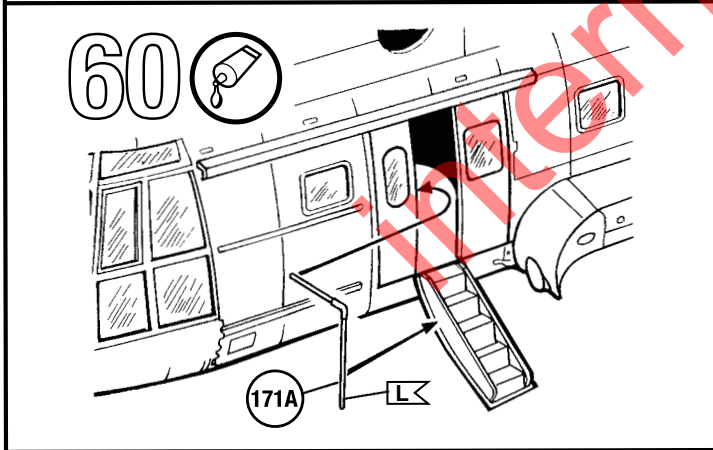
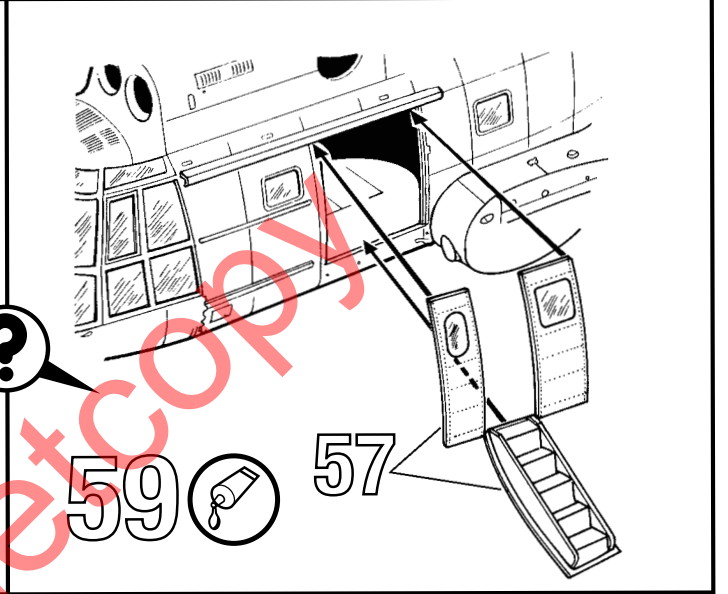
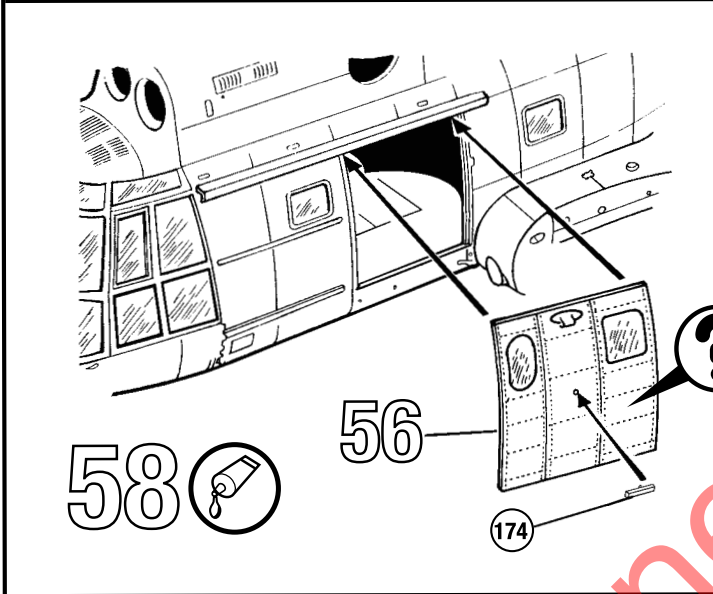
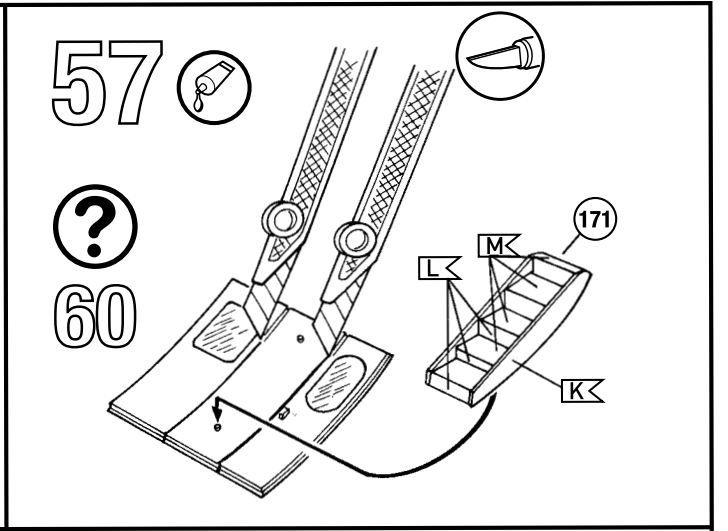
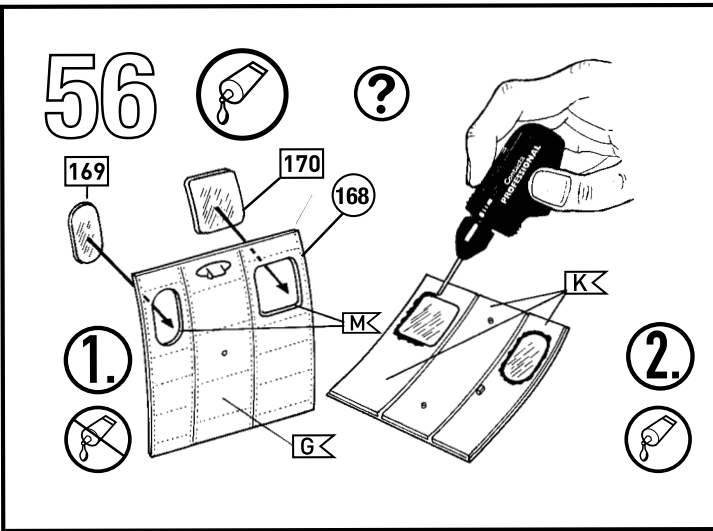
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48

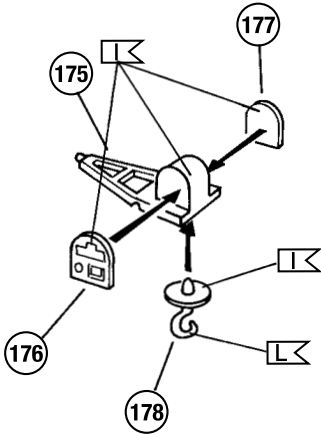




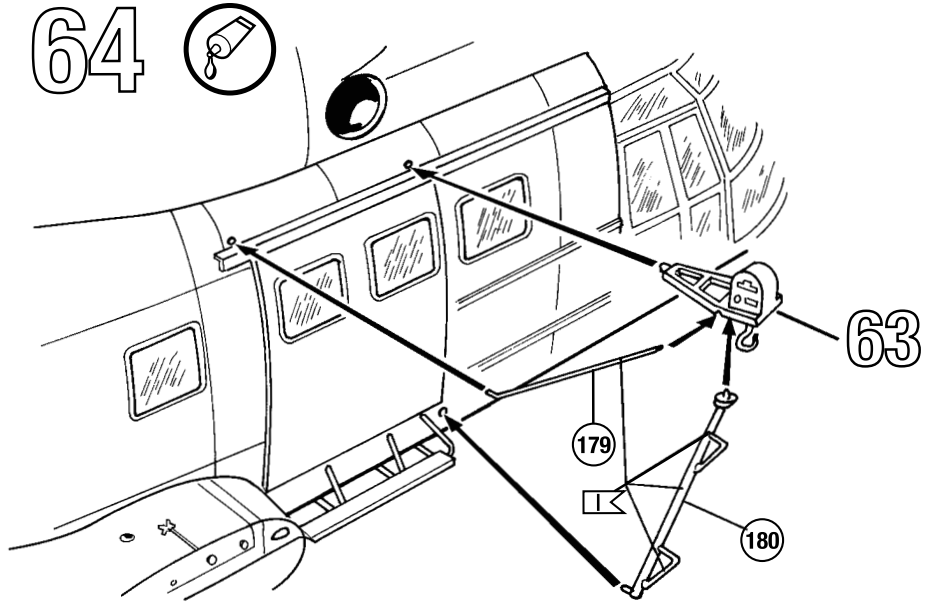




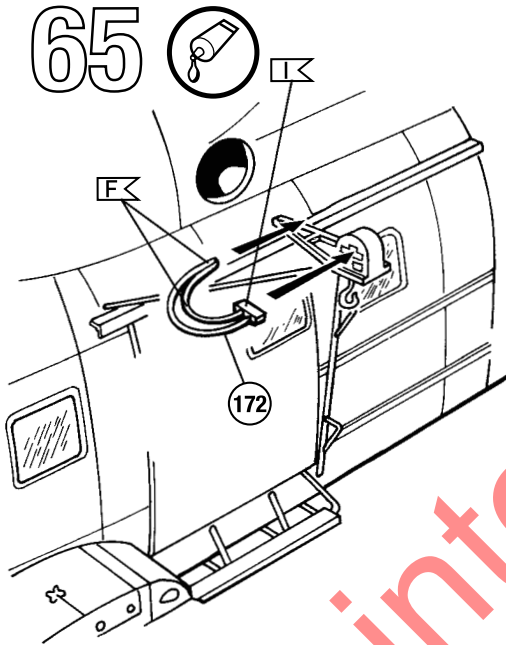
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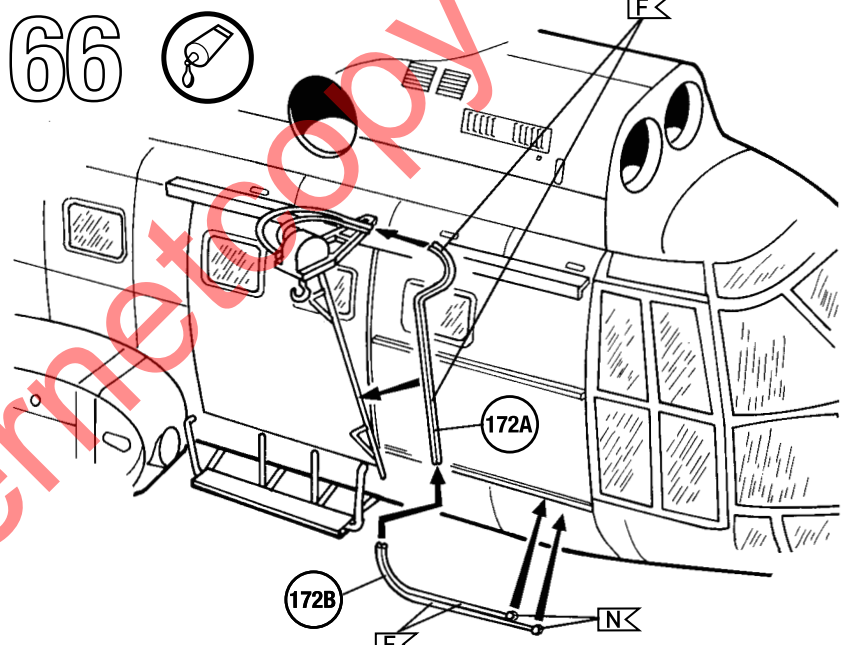
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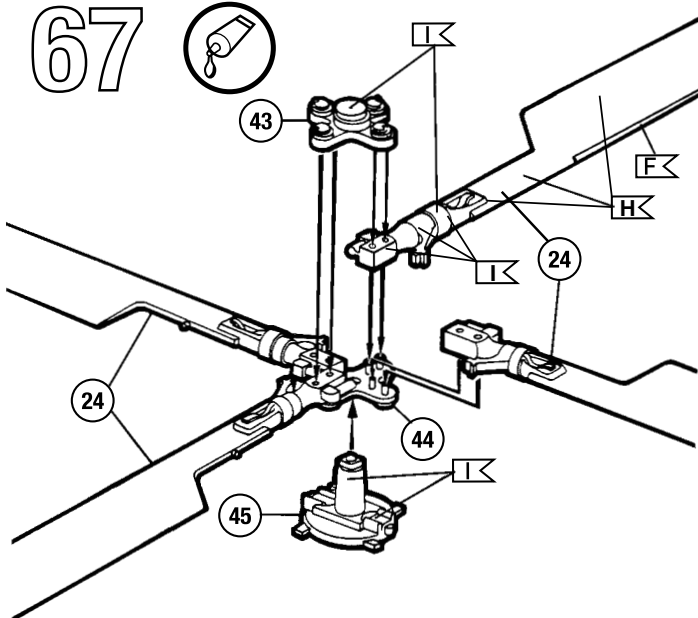
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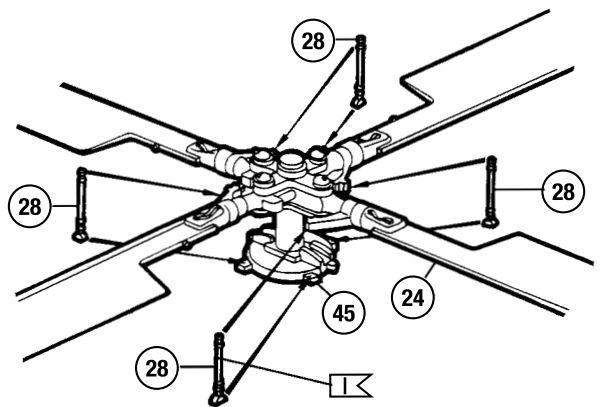
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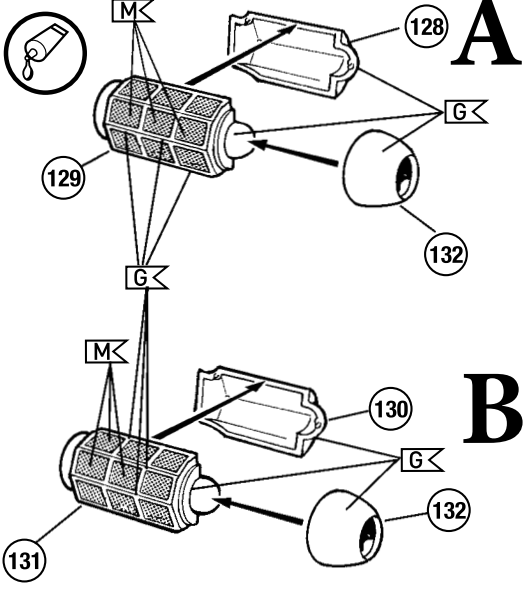
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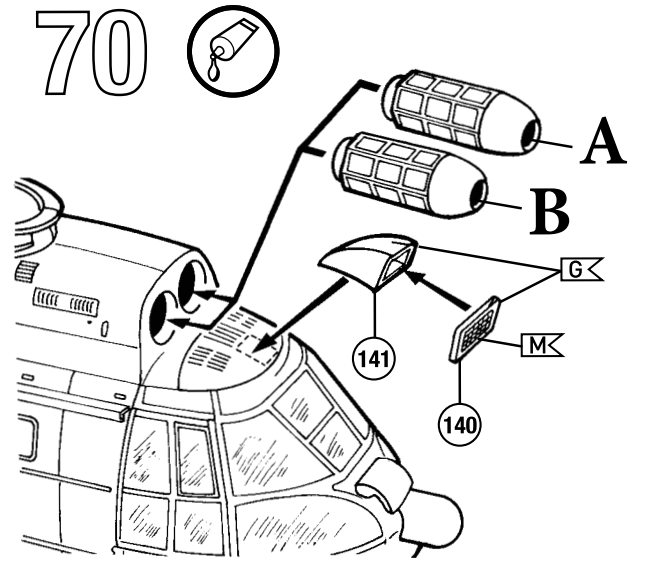
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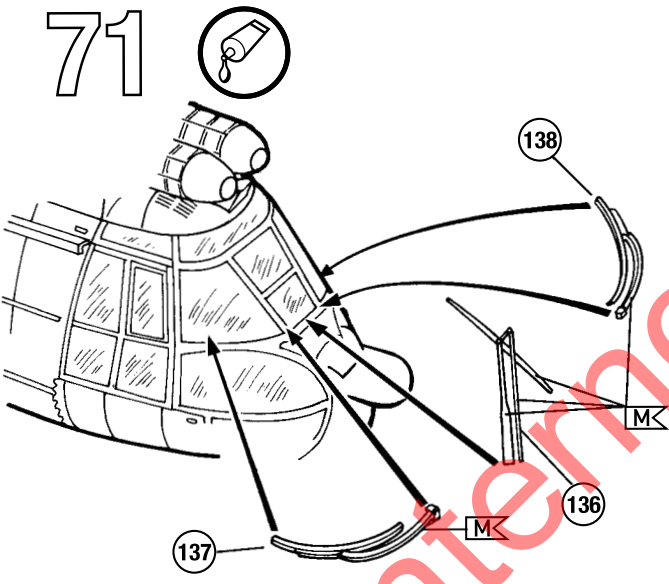
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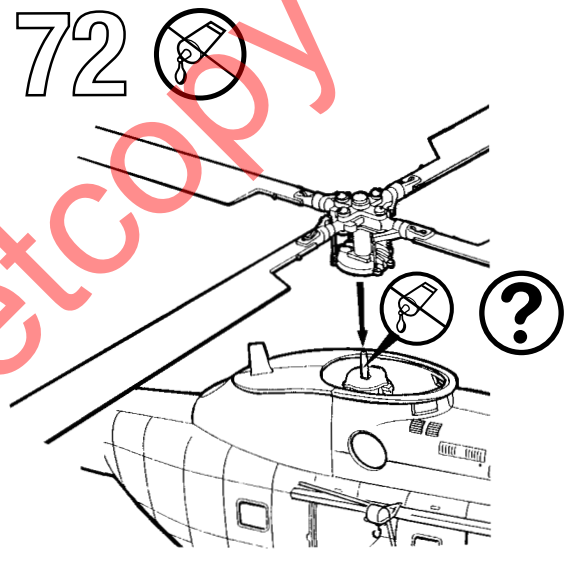
70



71



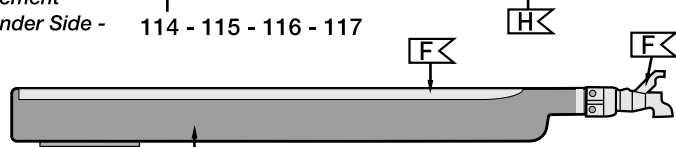
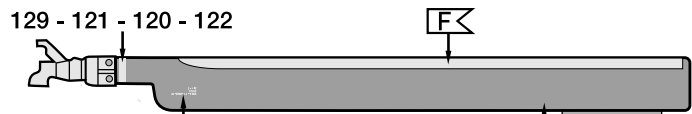
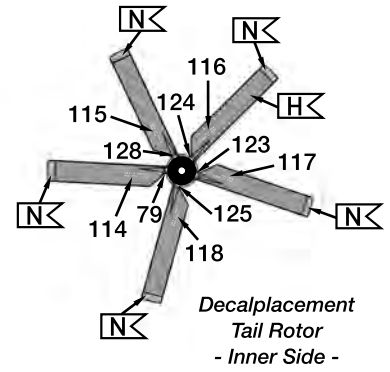
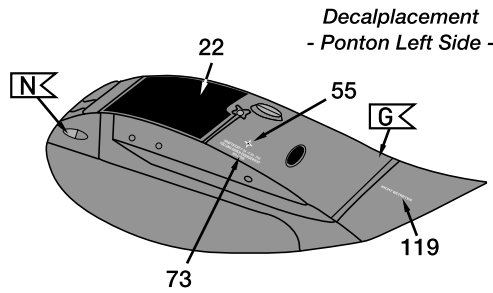
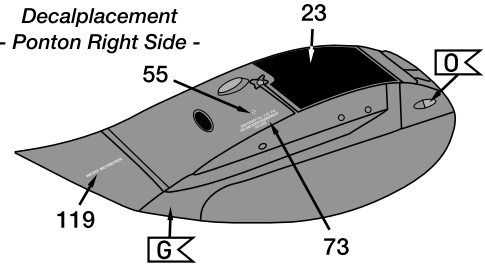
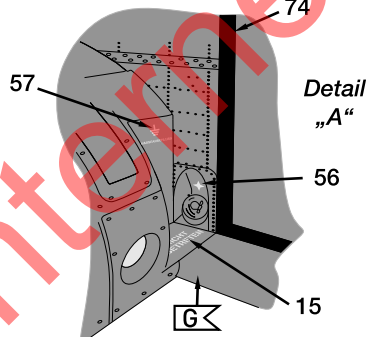
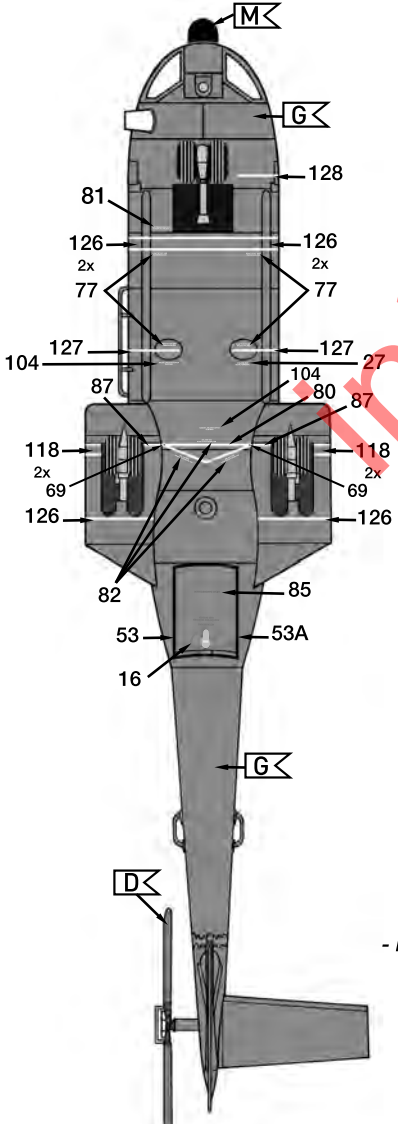
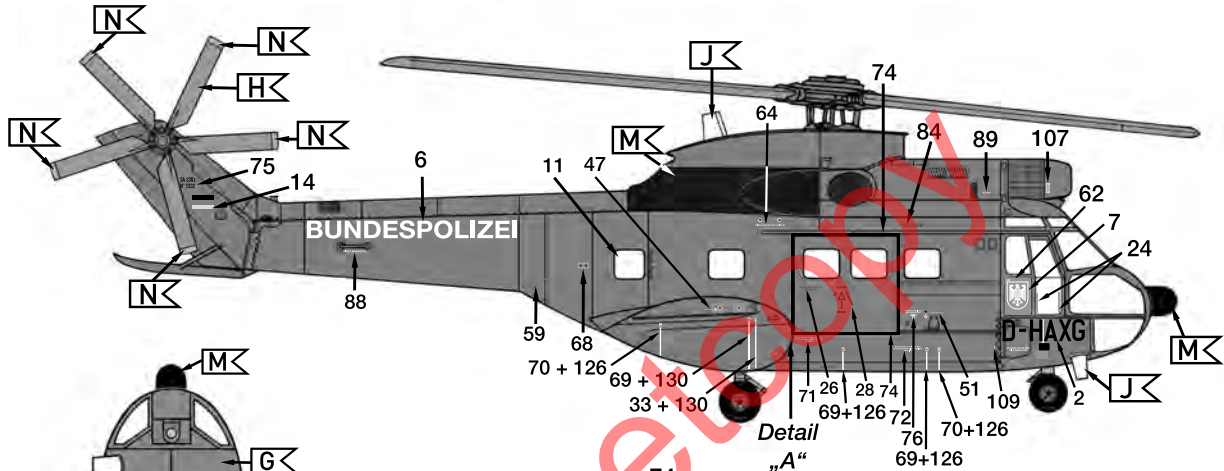
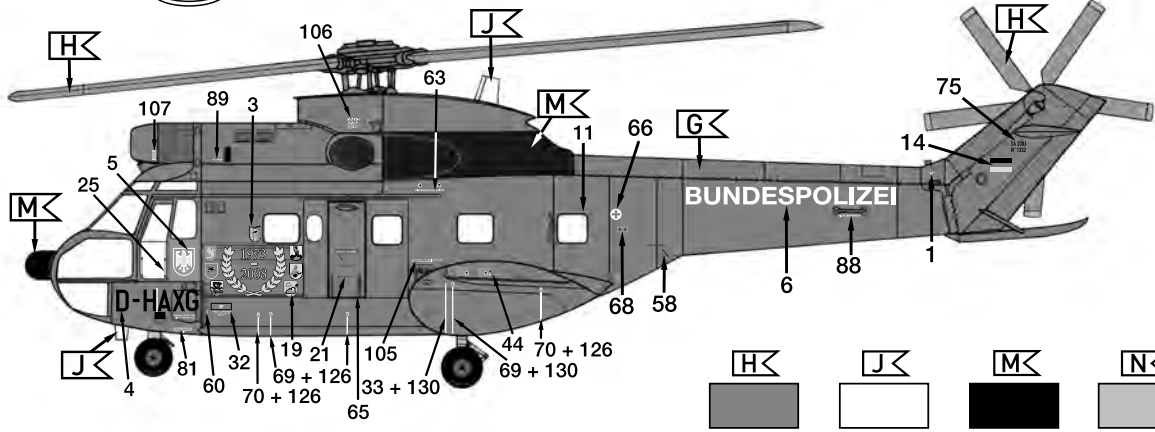
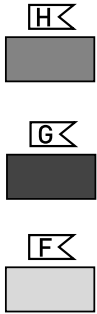
72



73



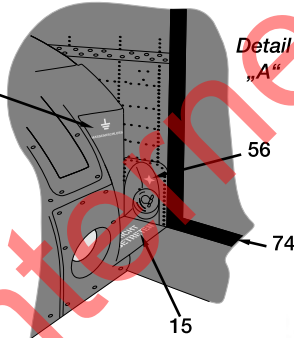
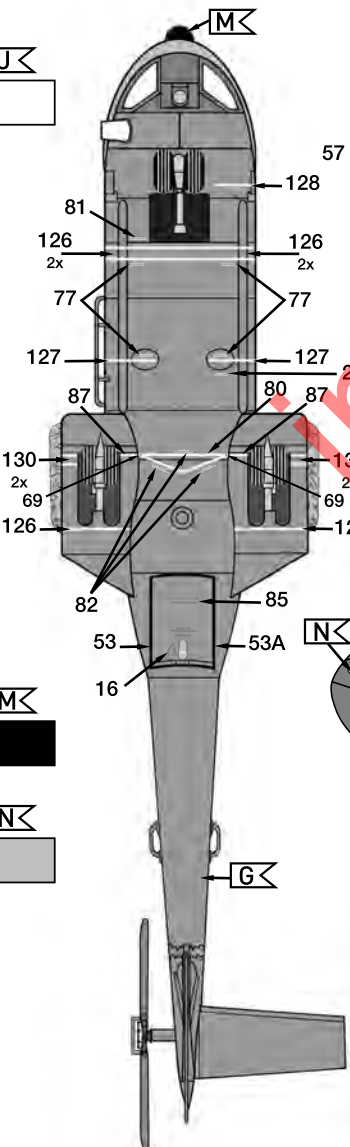
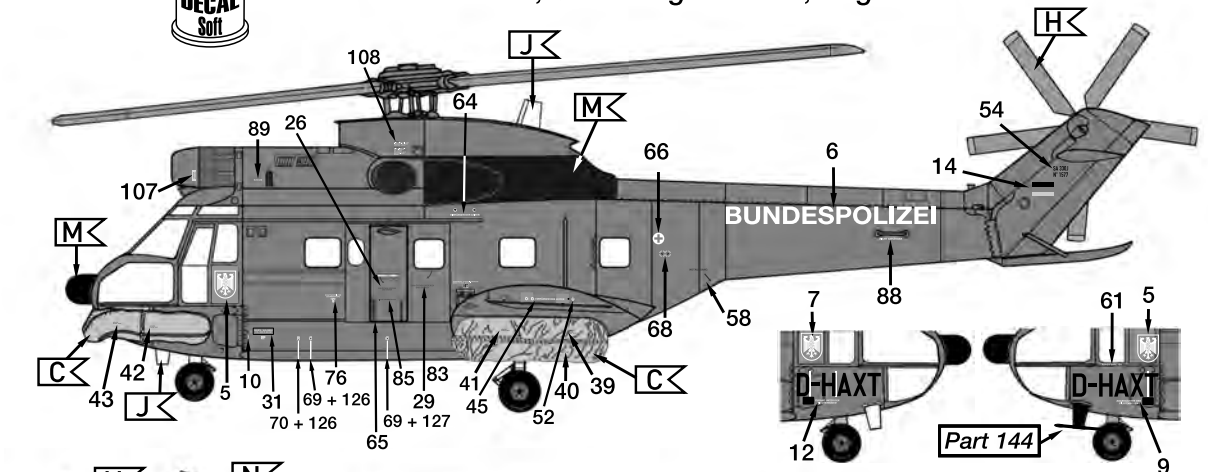
Aerospatale SA 330J Puma of Bundespolizei-Fliegergruppe; SanktAugustin, Germany „Farewell Ceremony“ of the Last Puma, 2008



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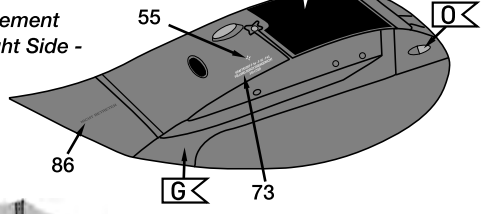


*Aerospatiale SA 330J Puma of Bundespolizei  
Fliegerstaffel Nord Fuhlendorf,  
Bad Bramstedt; Schleswig-Holstein; August 2005*

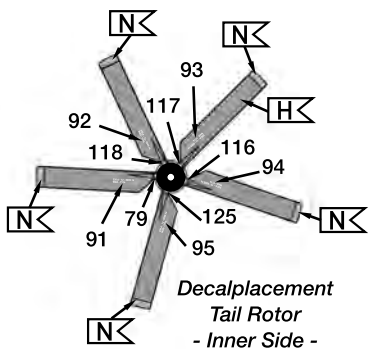
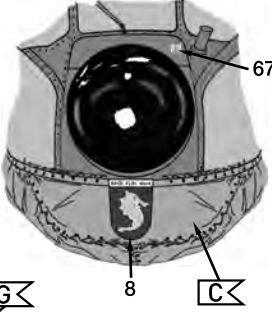


*Detail  
"A"*  
Decalplacement  
- Refuelling Station -

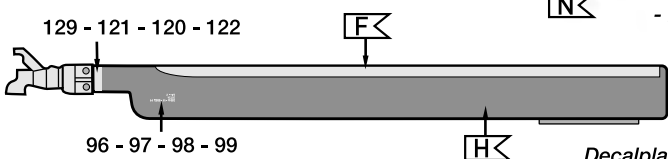
Decalplacement  
- Ponton Right Side -



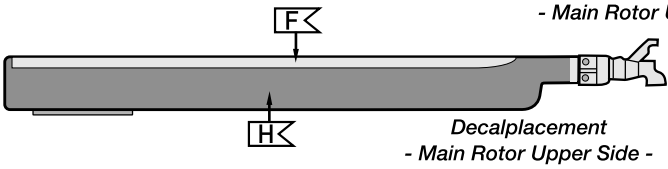
Decalplacement  
- Front-  
Navalised Version only



Decalplacement  
Tail Rotor  
- Inner Side -



Decalplacement  
- Main Rotor Under Side -



Decalplacement  
- Main Rotor Upper Side -