



Junkers Ju 88A-4 with bombs

Die Ju 88 wurde 1936 als Schnellbomber entwickelt. Sie diente als Sturzkampfbomber und für den Bombeneinsatz aus größeren Höhen, sie war als Jagdflugzeug in der Nachkriegszeit ebenso erfolgreich wie als Torpedobomber gegen Schiffsziele. Sie konnte als Jäger gegen Panzer und zur Eisenbahnbahn eingesetzt werden, sie war Minenleger und Aufklärer. Und in ihren letzten Tagen war sie im Mitleidsgeschpann der Bombenträger unter der Bf 109 oder Fw 190. Als der 2. Weltkrieg endete stand die Ju 88 noch immer in voller Produktion und bis zu diesem Zeitpunkt waren mehr Ju 88 gebaut worden als alle anderen Bomber der Luftwaffe zusammen genommen - über 15 000 Maschinen.

Geplant und gebaut als Schnellbomber stellte die Ju 88 bereits im März 1938 mit 517 km/h den ersten Weltrekord über die 1000km-Strecke auf - eine Geschwindigkeit die selbst von den damaligen Jagdflugzeugen nicht erreicht wurde. Die erste Serienversion, Ju 88A-1, wurde beim KG 25 - später umbenannt in KG 30 - „Adlergeschwader“ in Dienst gestellt, hatte aber am 1. 9. 1939 Maschinen um sich an den Kriegshandlungen zu beteiligen. Erst im März 1940 war das KG 30 als erster Einsatzverband vollständig mit Ju 88 ausgerüstet. Gleichzeitig begannen bei Junkers die Arbeiten an einer neuen Tragfläche, die neben einer größeren Spannweite auch einen Tragflächen-Randbogen erhielt. Dieser lagte Tragfläche und Querruder der Ju 88A-1 an ihren Enden völlig offen. Diese neue Tragfläche wurde bereits in die laufende Produktion eingeführt und auch bei den noch vorhandenen Maschinen nachgerüstet. Die erste wirkliche Bewährungsprobe für die Junkers Ju 88 war die „Battle of Britain“ die am 8. August 1940 mit dem „Adlertag“ begann. Neben dem KG 30 war zu diesem Zeitpunkt nur ein Teil des KG 51 mit Ju 88 ausgerüstet. Die Erfahrungen führten zu einer stärkeren Abwehrbewaffnung. Statt den bisher verwendeten vier MG 15 kam nun das modernere MG 81 - meist in Zwilling-Lafettierung - MG 81Z - zum Einsatz. Gleichzeitig wurde ein stärkere Panzerung zum Schutz der Besatzung eingeführt. Mit der nun greifbaren Serienproduktion (2208 Maschinen im Jahr 1940) konnten auch weitere Geschwader vollständig auf Ju 88 umgerüstet werden, darunter auch das Lehrgeschwader 1 (LG 1). Damit wurde die Ju 88 zum Standardbomber der Luftwaffe und trug die Hauptlast der Angriffe gegen Boden- und Schiffsziele auf allen Kriegsschauplätzen von Norwegen bis Afrika. Besondere Erfolge konnte die Ju 88 dabei gegen Schiffsziele erringen, da sie auch als Sturzkampfbomber mit Bombenträgern unter der Tragfläche eingesetzt werden konnte - ein besonderer Vorteil bei Angriffen gegen Punktziele. Die Senkrechtung der Ju 88 wurde erst gegen Ende 1944 eingestellt. Insgesamt wurden 5501 Maschinen der Serie A-4 gebaut.

Technische Daten:

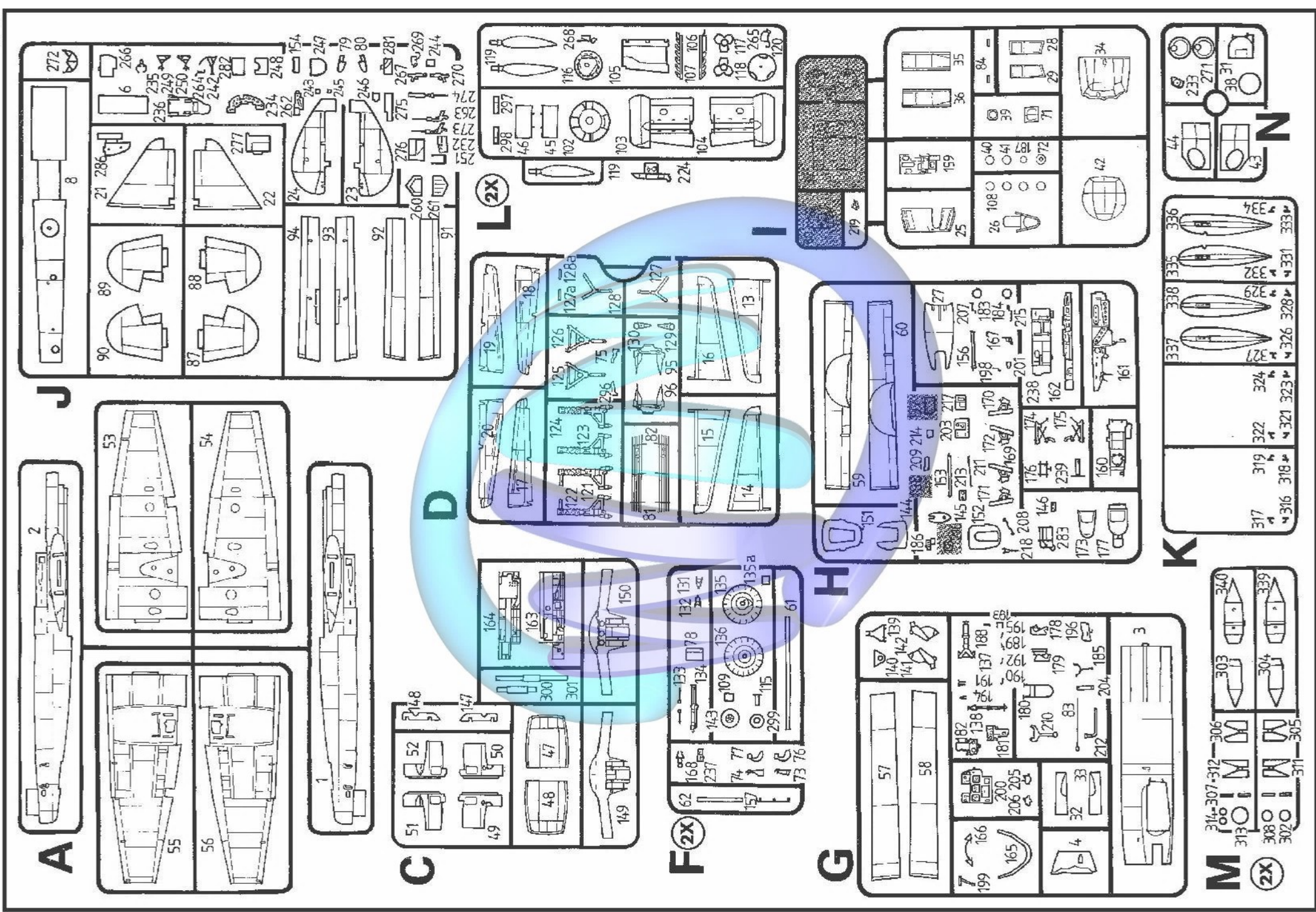
Spannweite	20,08 m
Länge	14,36 m
Höhe	5,07 m
Triebwerke	2x Junkers Jumo 211 J
Leistung	1 410 PS
Leergewicht	8 050 kg
Startgewicht max.	12 460 kg
Höchstgeschwindigkeit	445 km/h
Kreuzgeschwindigkeit	385 km/h
Landegeschwindigkeit	140 km/h
Reichweite normal	2 520 km
Dienstflughöhe	8 500 m
Bewaffnung	5x MG 81, Bomben/Abwurfaffen 3600 kg
Besatzung	4

Junkers Ju 88A-4 with bombs

The Ju 88 was initially designed in 1936 as a fast bomber. They also however served as dive bombers, as high level bombers and was just as successful as torpedo bomber against surface shipping or as a night-fighters. They could be used as a tank-busters and train hunters, as mine-layers and reconnaissance aircraft. In their last days they also carried the Bf 109 or Fw 190 as part of the Mistel-type bomb carrier duo. The Ju 88 was still in full production at the end of the Second World War and up to this point in time more Ju 88s had been built than all the other Luftwaffe bombers put together - over 15000 aircraft. Designed and built as a fast bomber, the Ju-88 soon set the World's first Speed record over a 1000 km (621 mile) course. In March 1938 it reached a speed of 517km/h (321mph) - a speed that fighter aircraft of the period could not achieve. The first production version the Ju 88A-1, entered service with Combat Wing 25 - later renamed Combat Wing 30 „Eagle Wing“ which on the 1st September had 1939 aircraft able to take part in the hostilities. Only in March 1940 did Combat Wing 30 become the first operational unit to be fully equipped with the Ju 88. At the same time Junkers began work on a new wing, which as well as larger wingspan also received a rounded wing-tip. Up to this point the wing tips and ailerons of the Ju 88A-1 completely open at their extremities. This new wing was immediately incorporated into the production line and fitted retrospectively to aircraft which had the old wing. The „Battle of Britain“, which began on 8th August 1940 with „Adlertag“ (Day of the Eagle) was the first real test for the Ju 88. As well as KG 30 only part of KG 51 was then equipped with the Ju 88. Combat experience led to the fitting of a stronger defensive armament. Instead of the current four MG 15's the more modern MG 81 was used - mostly fitted in the twin MG 81Z mount. At the same time stronger armour was fitted to protect the crew. With mass production at full pace (in 1940 - 2208 aircraft), more „Wings“ could be completely converted to the Ju 88, including Training Wing No1. The Ju 88 was now the Luftwaffe's „Standard Bomber“ and carried the brunt of the attacks against enemy ground and maritime targets in all Theatre's of War from Norway to Africa. The Ju 88 was able to notch up exceptional successes against marine shipping. With the addition of bomb-racks under the wings it was able to take on the role of a dive-bomber, a distinct advantage when attacking pin-point targets. Mass production of the Ju 88 did not cease until the end of 1944. In all, a total of 5501 A-4 versions were built.

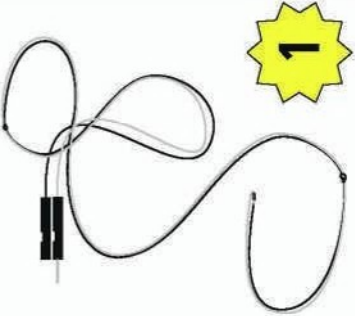
Technical Data:

Wingspan:	20.08 m (65ft 10ins)
Length:	14.36 m (47ft 1ins)
Height:	5.07 m (16ft 7ins)
Engines:	2x Junkers Jumo 211J
Power:	1410 bhp
Empty Weight:	8050 kg (17750lbs)
Max. Take-off Weight:	12460 kg (27474 lbs)
Maximum Speed:	445 km/h (276 mph)
Cruising Speed:	385 km/h (239 mph)
Landing Speed:	140 km/h (75 mph)
Normal Range:	2520 km (1565 miles)
Service Ceiling:	8500 m (27880 ft)
Armament:	5x MG 81 Bombs/Free Fall Weapons 3600 kg (7938 lbs)
Crew:	4



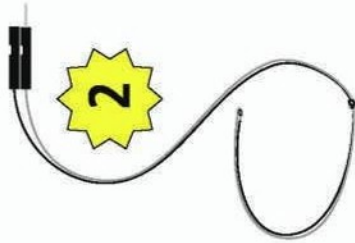
Landing Light *

Connect to **Orange**



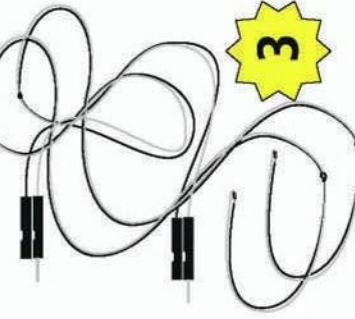
Cabin Light *

Connect to **White**



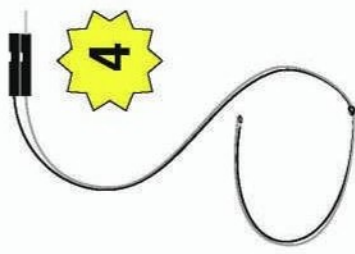
Wing navigation lights *

Connect to **Blue**



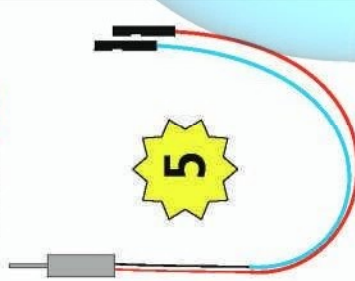
Tail Navigation Light *

Connect to **Yellow**



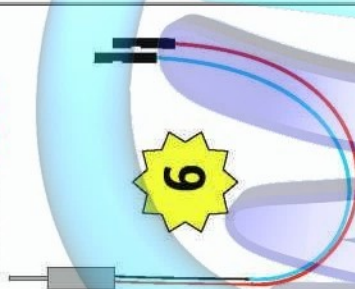
Left Engine *

Connect to **Red**

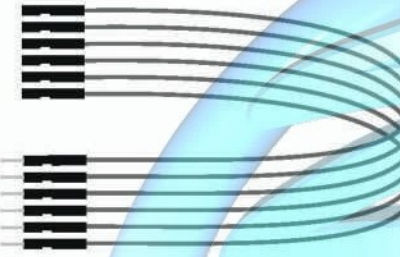


Right Engine *

Connect to **Green**



Extension cables *



0,8 mm drills



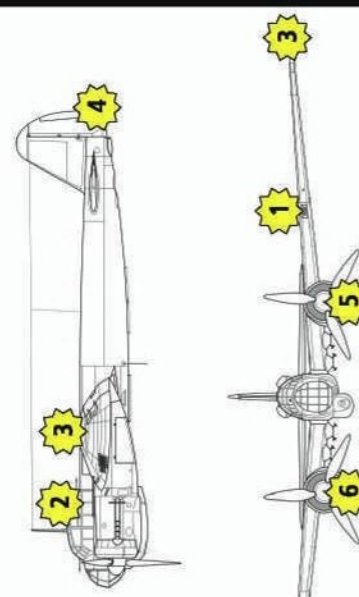
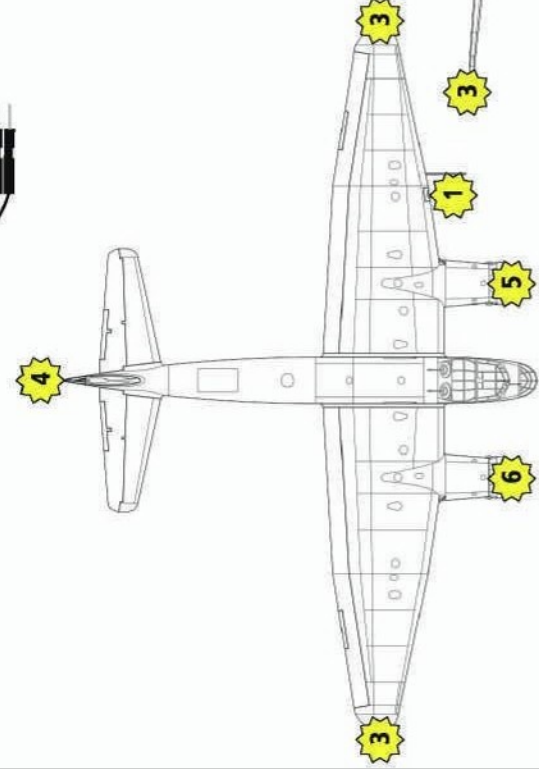
**IT
Circuit Board**



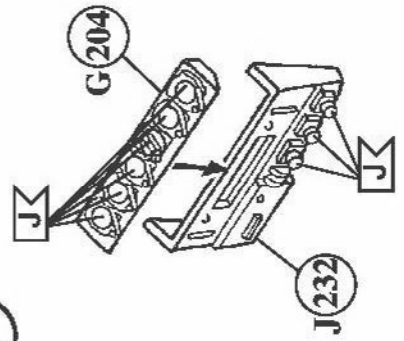
* Connect each black wire
to any black wire on the
IT Circuit



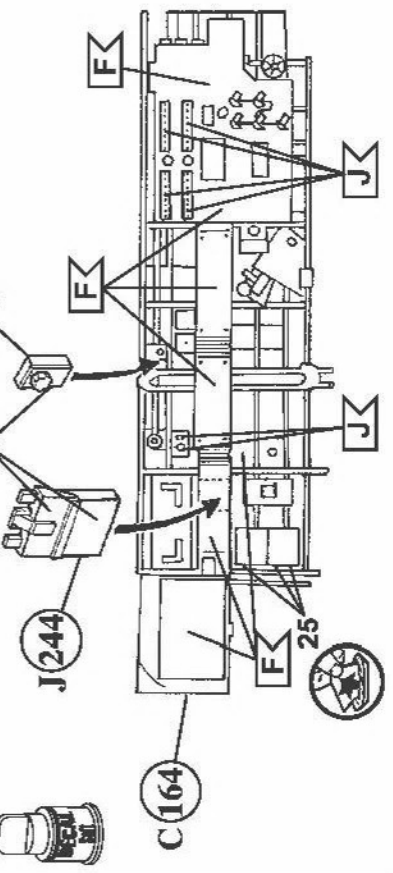
Power Supply



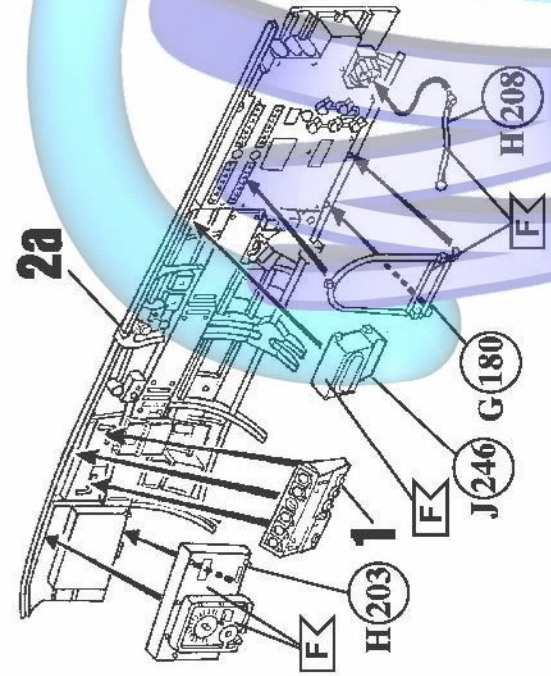
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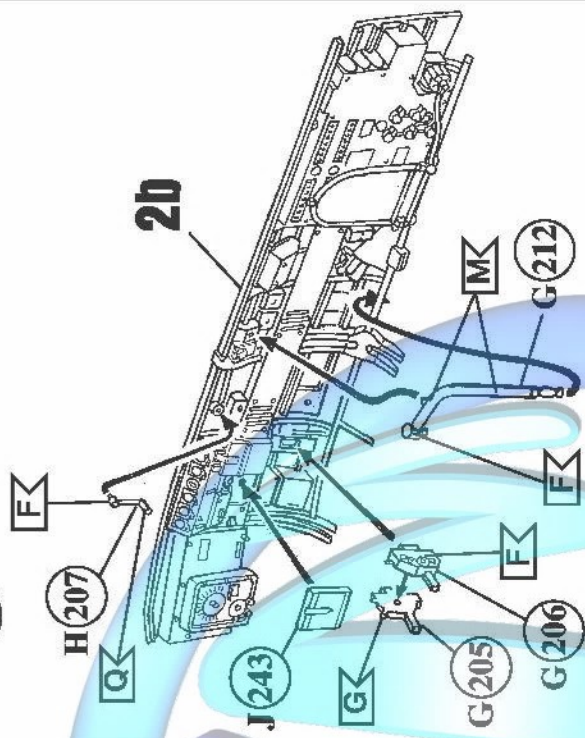
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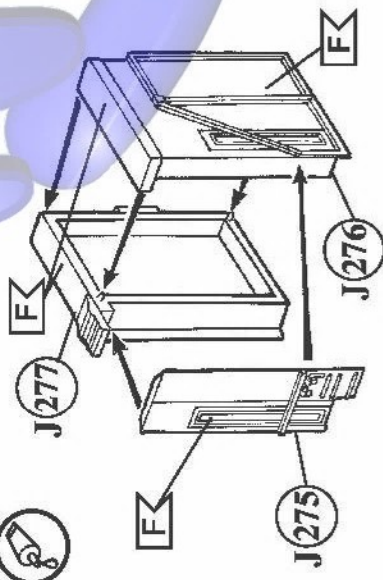
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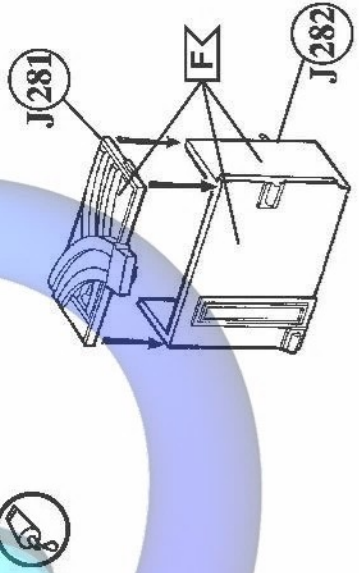
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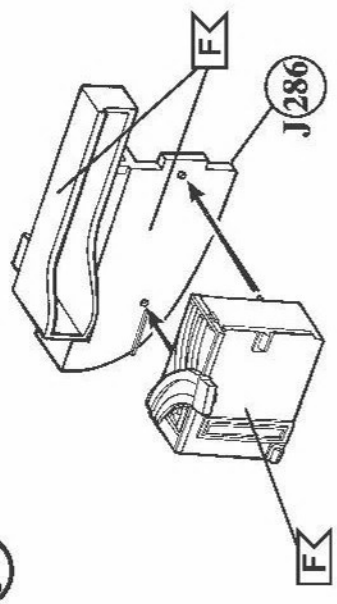
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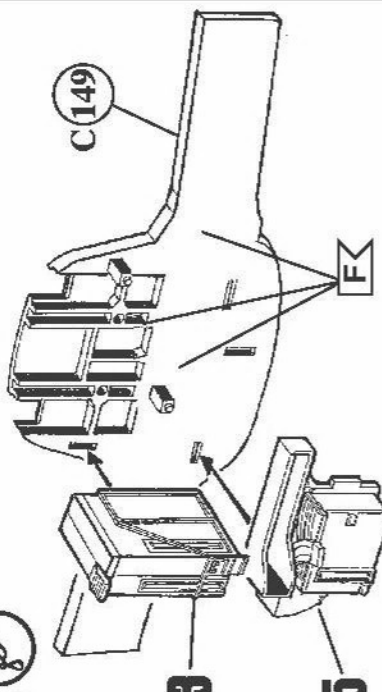
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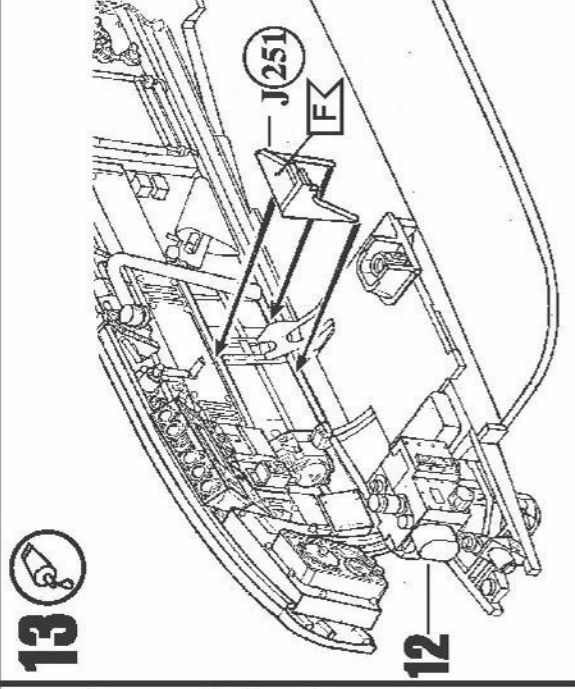
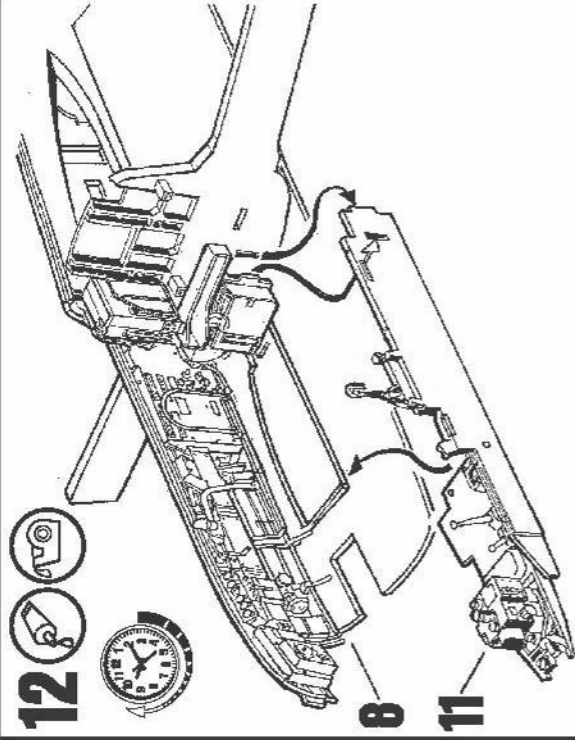
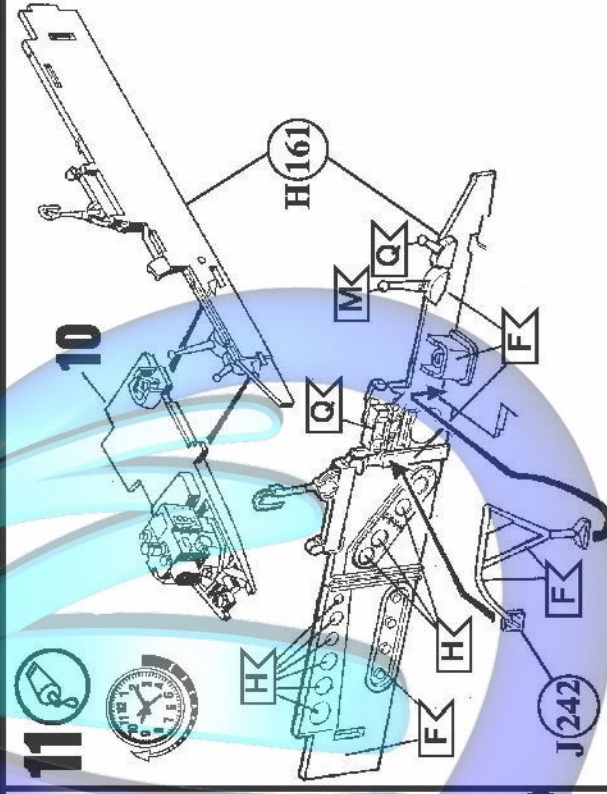
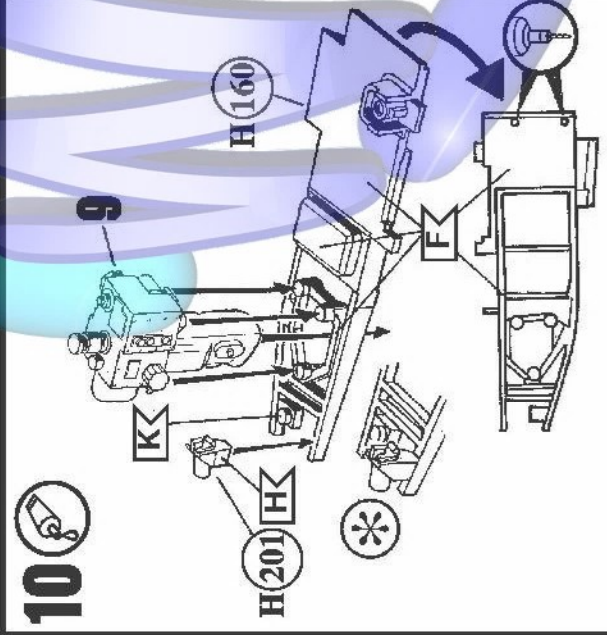
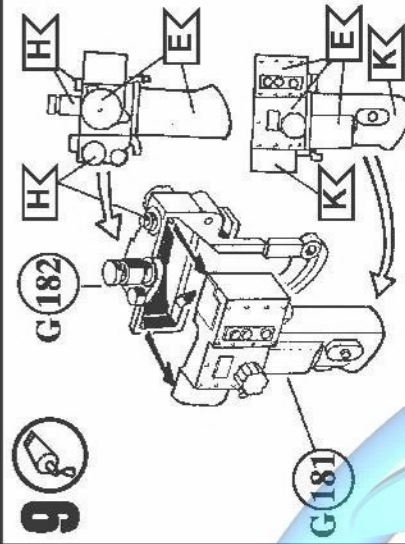
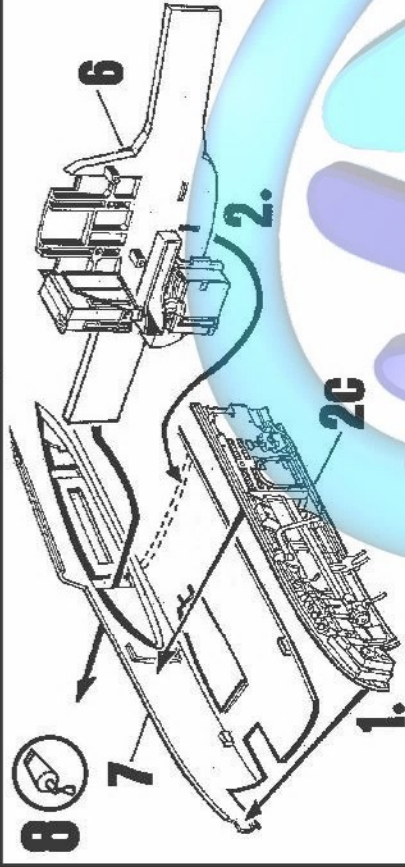
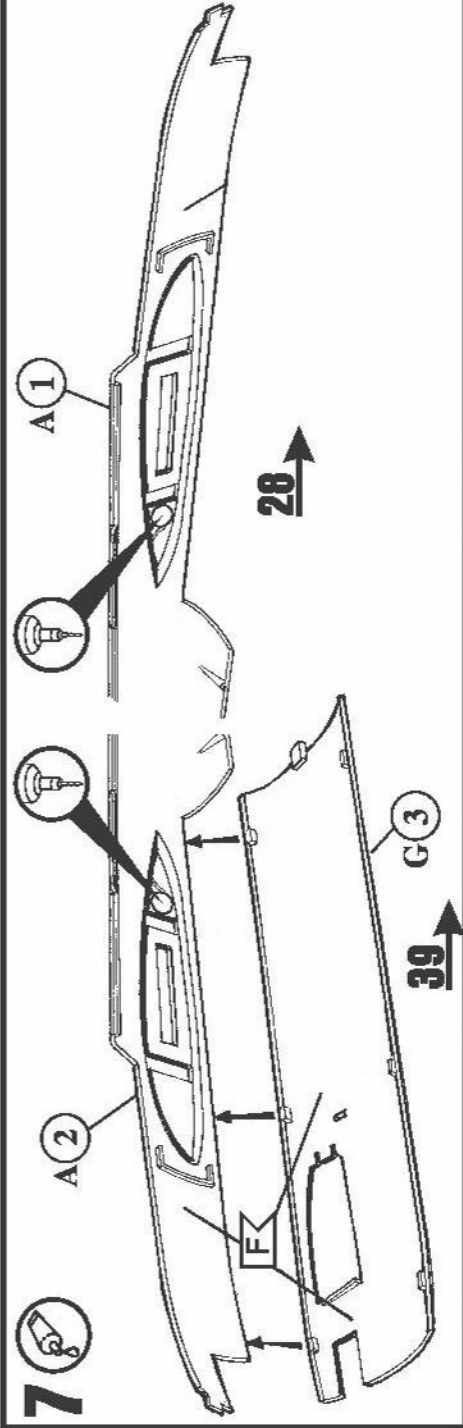


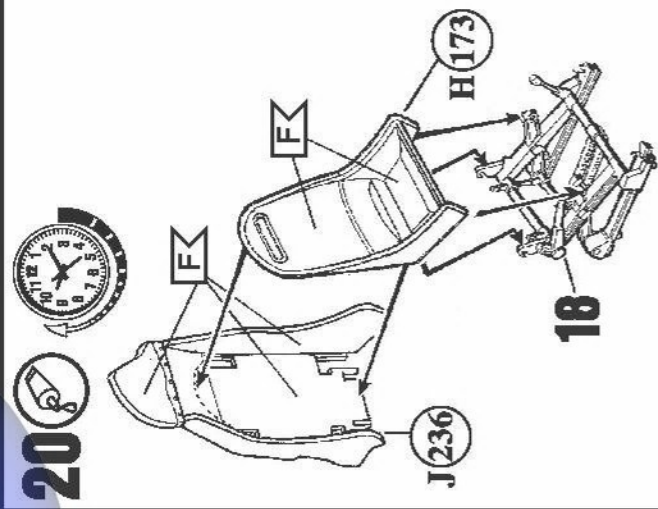
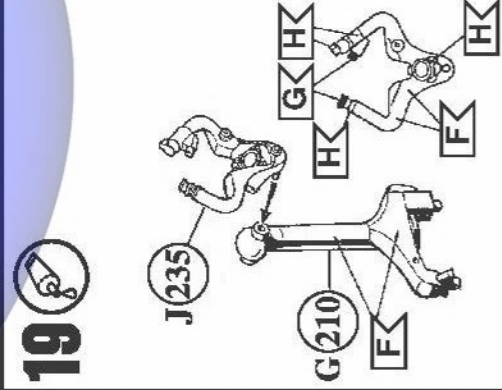
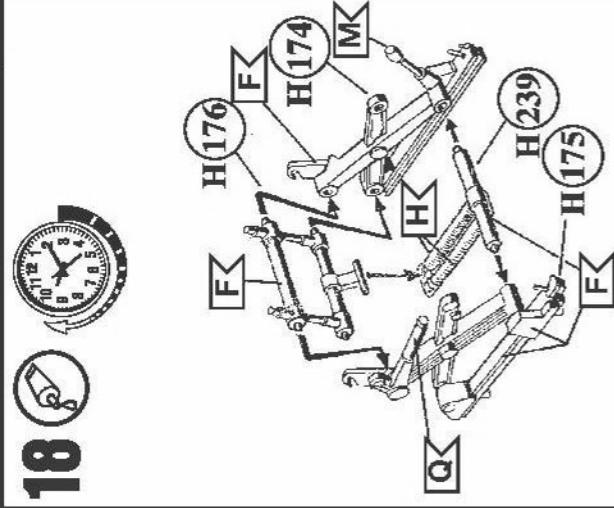
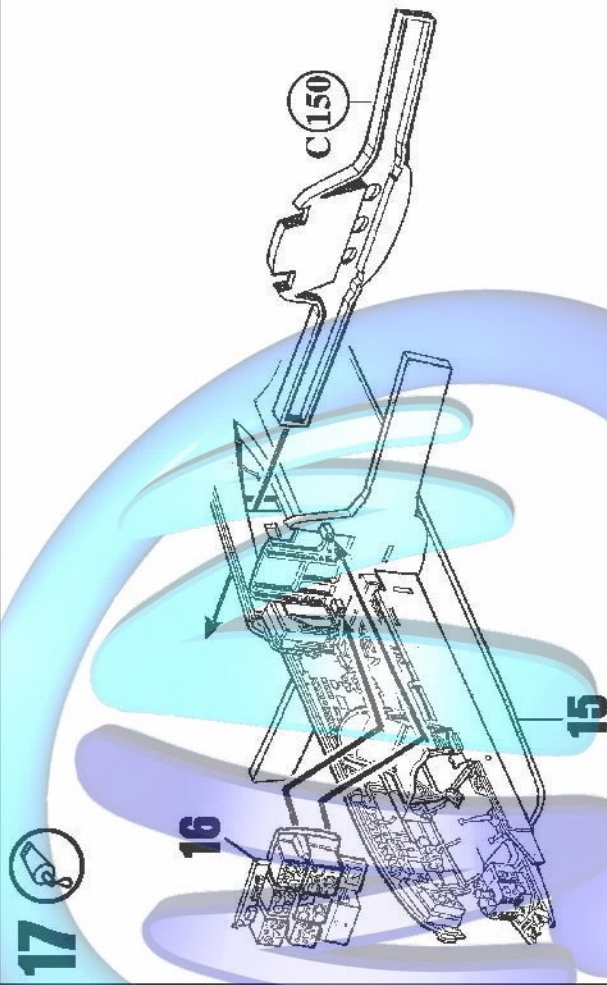
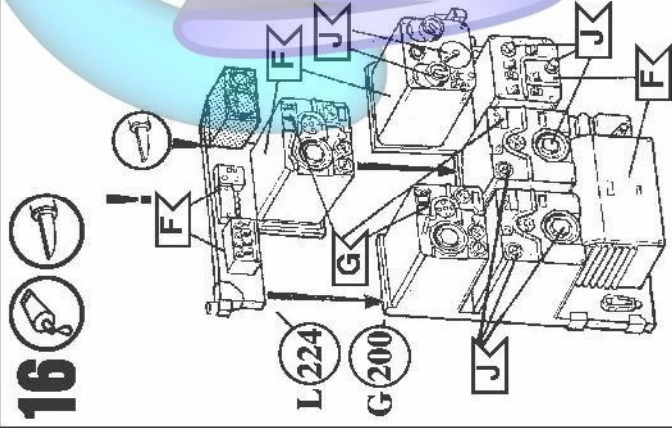
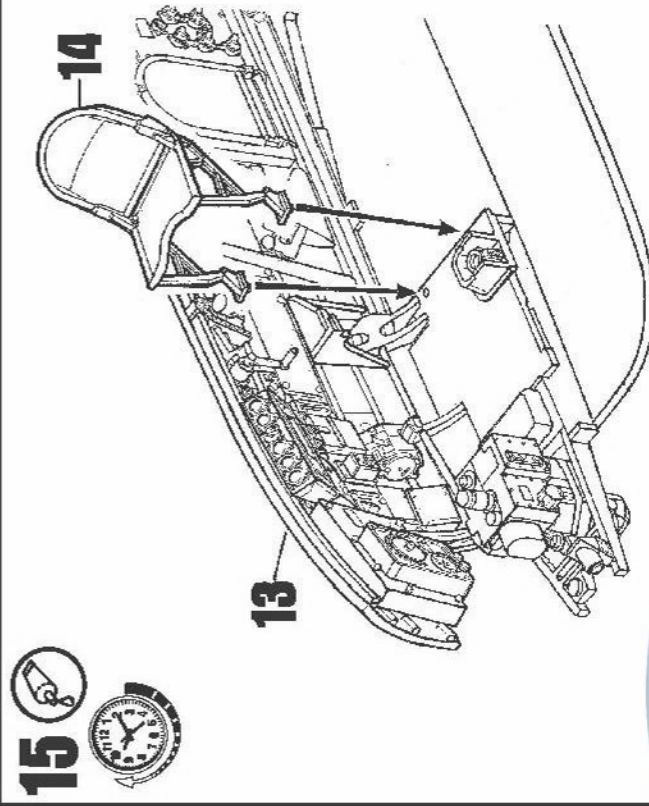
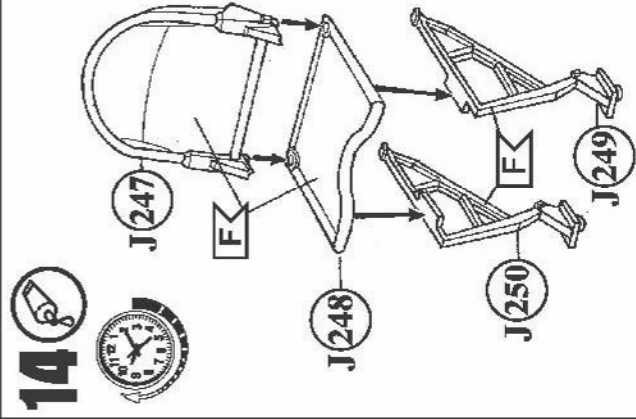
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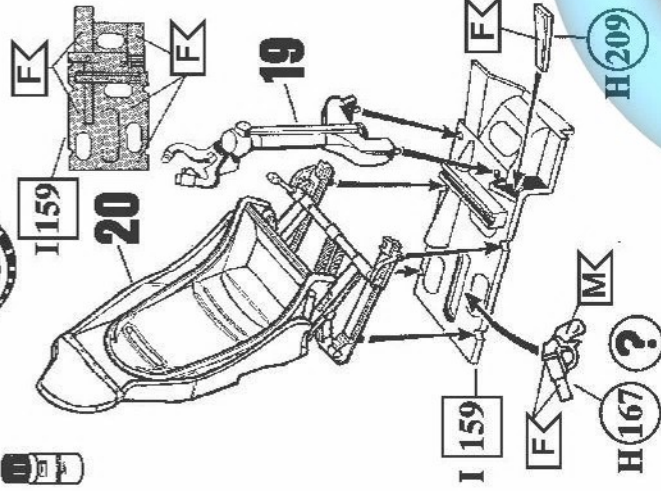
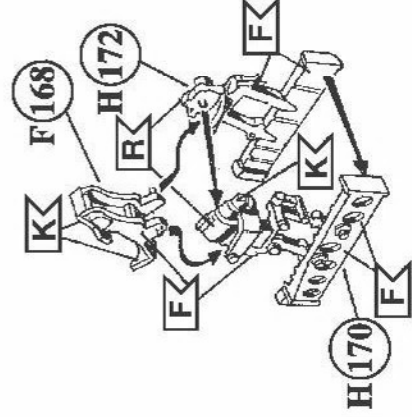
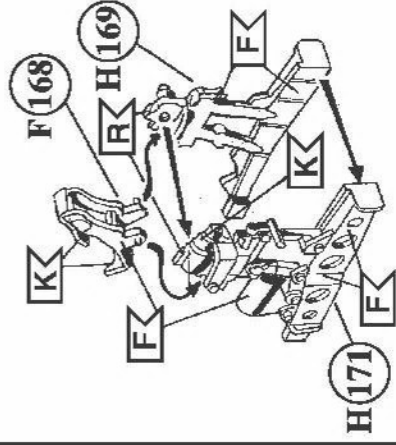
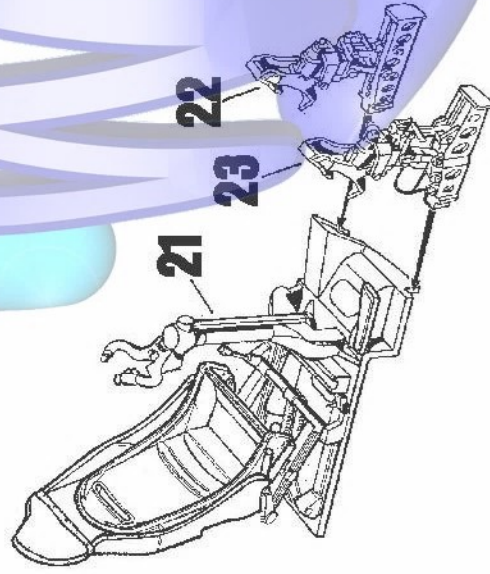
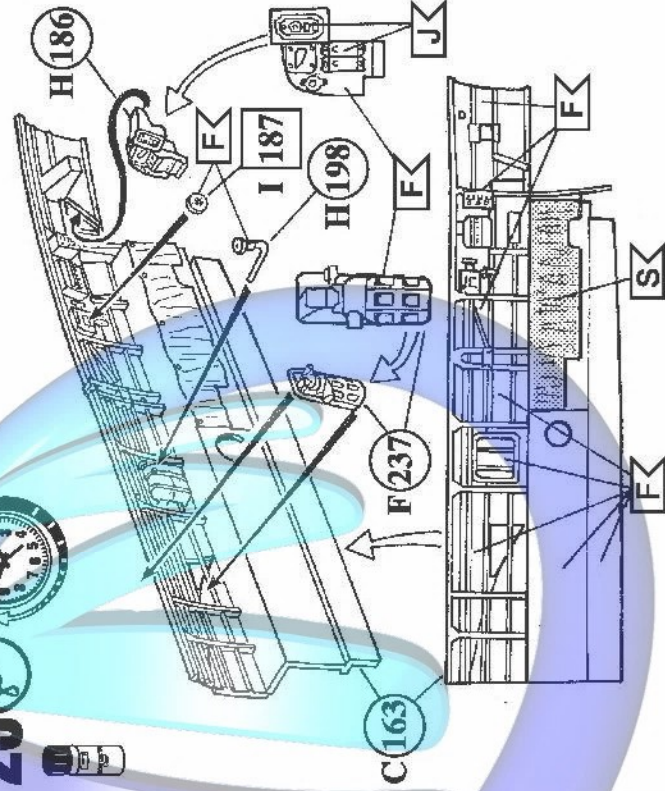
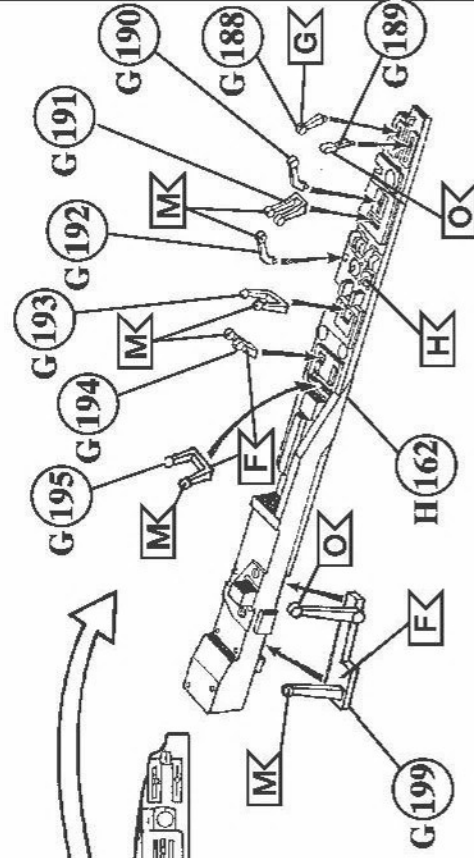
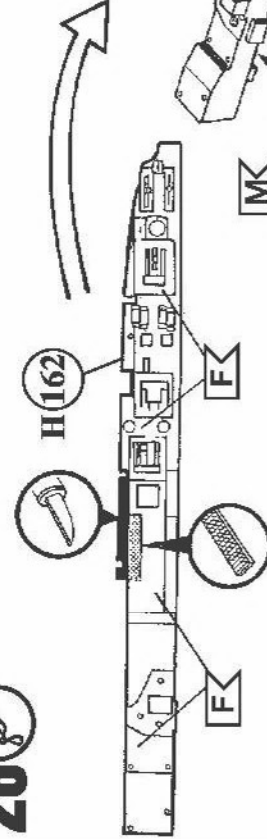


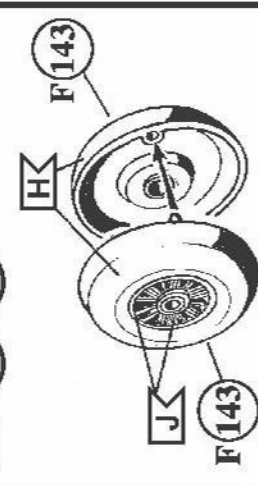
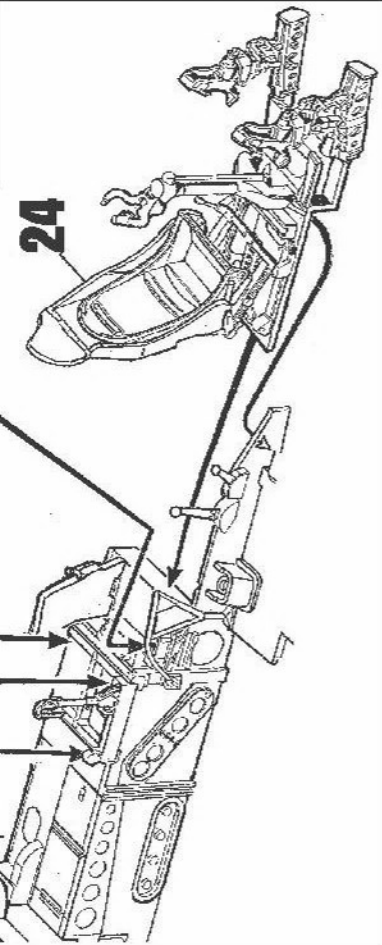
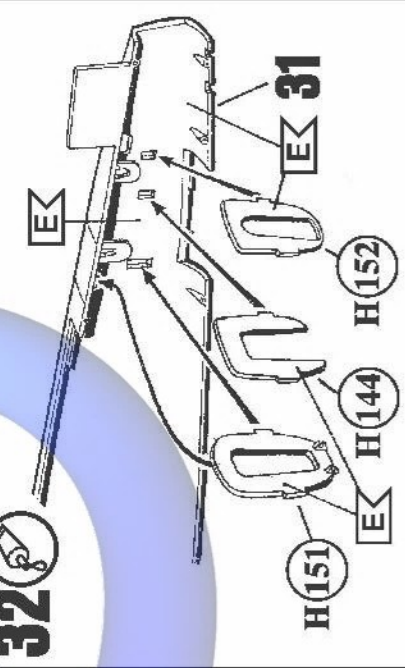
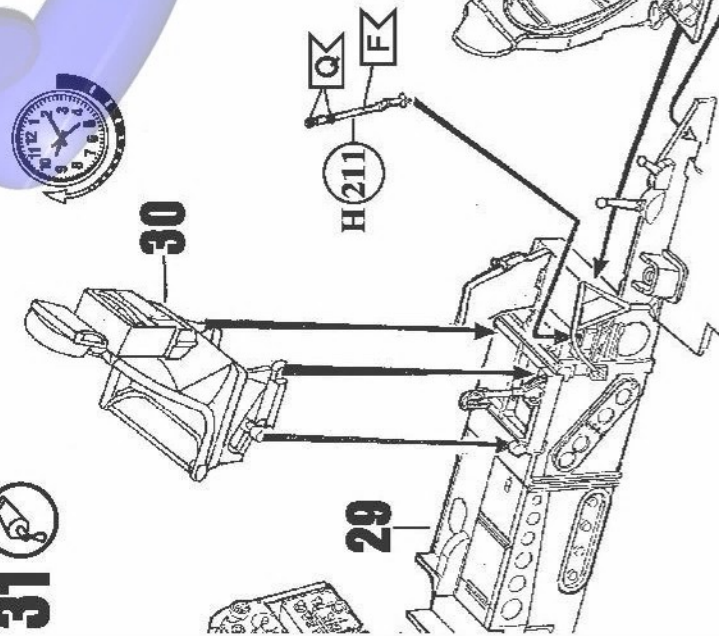
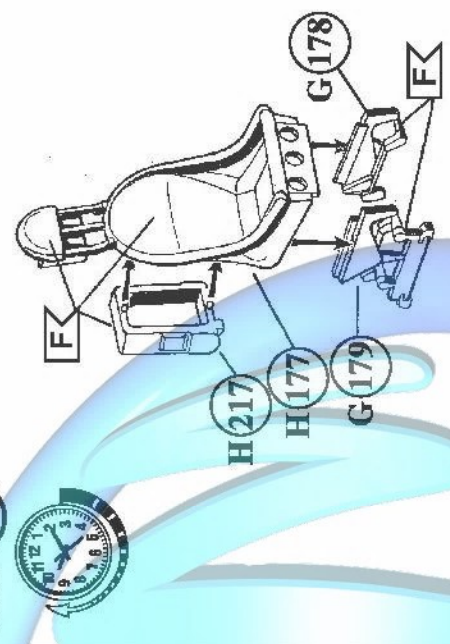
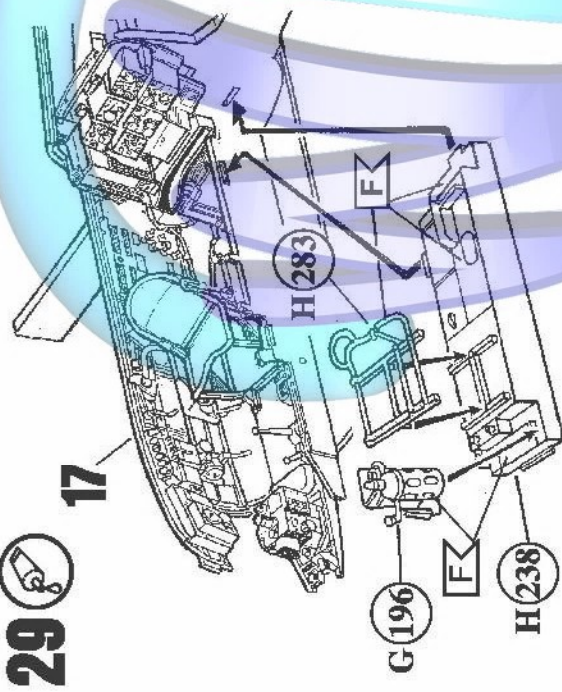
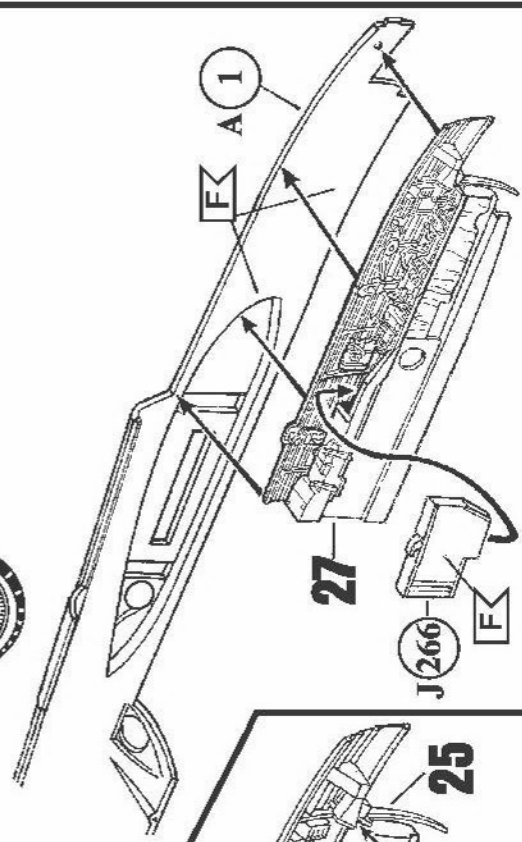
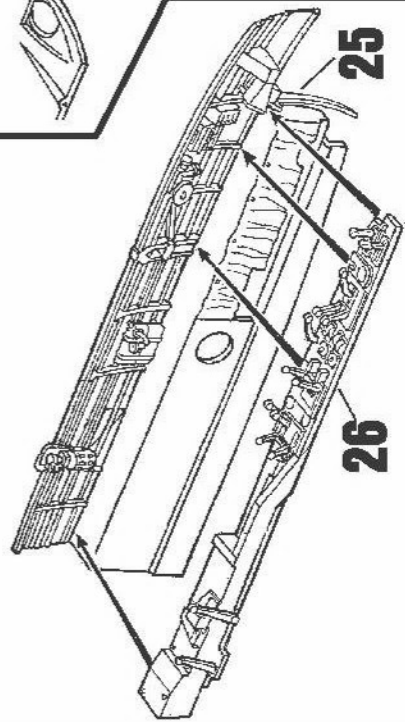
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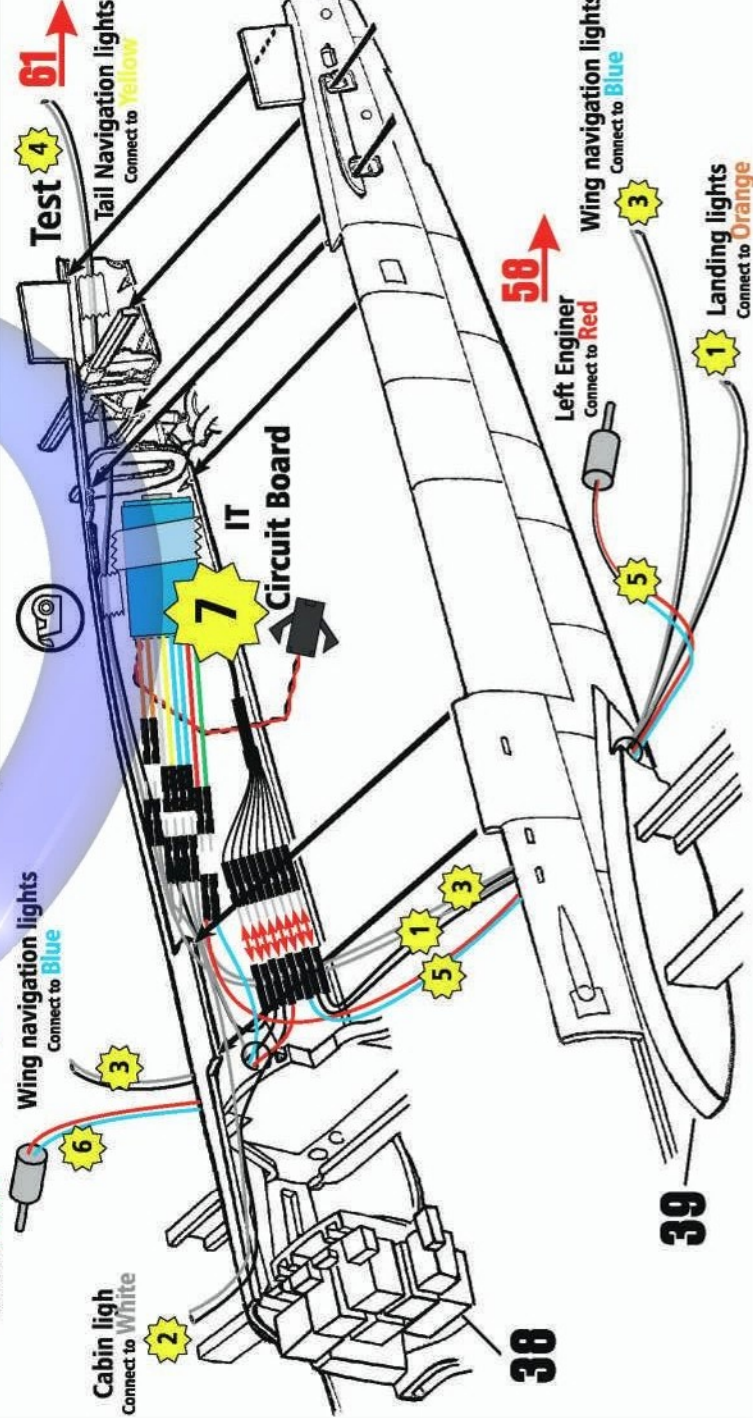
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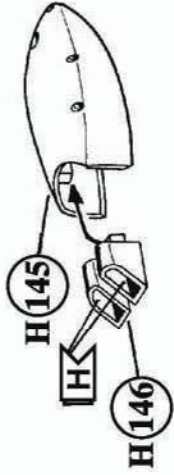


Right Engineer
Connect to **Green**

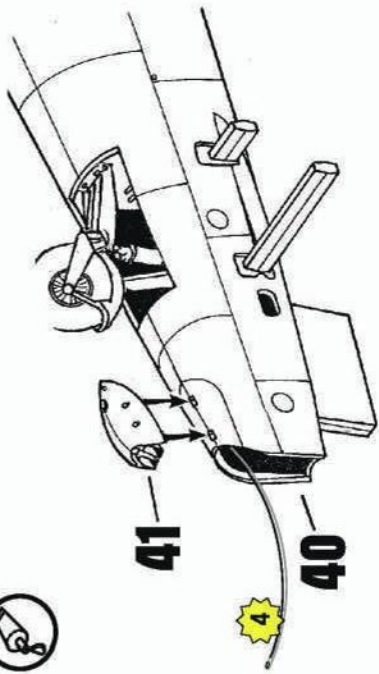
Wing navigation lights
Connect to **Blue**



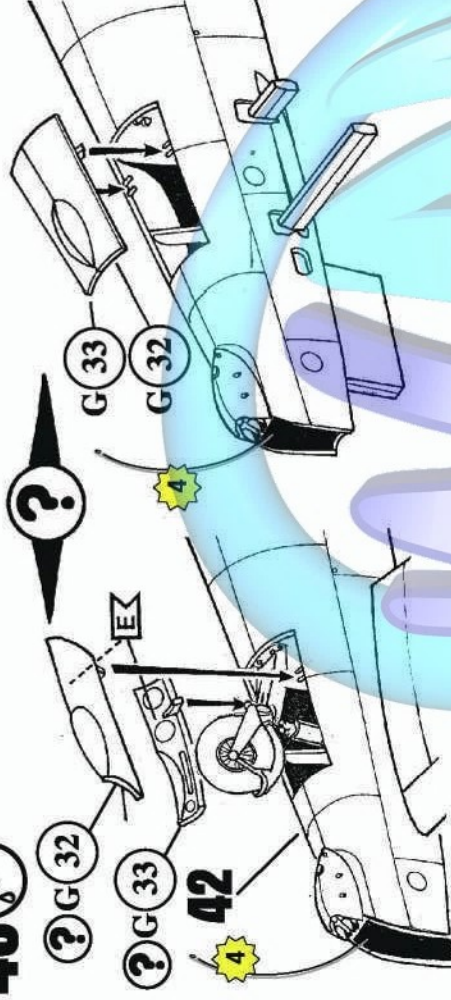
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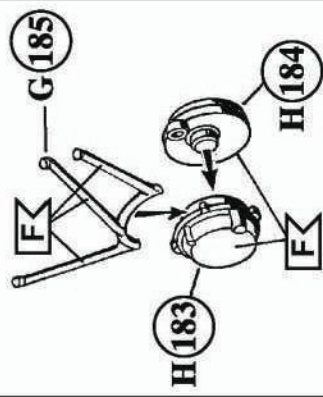
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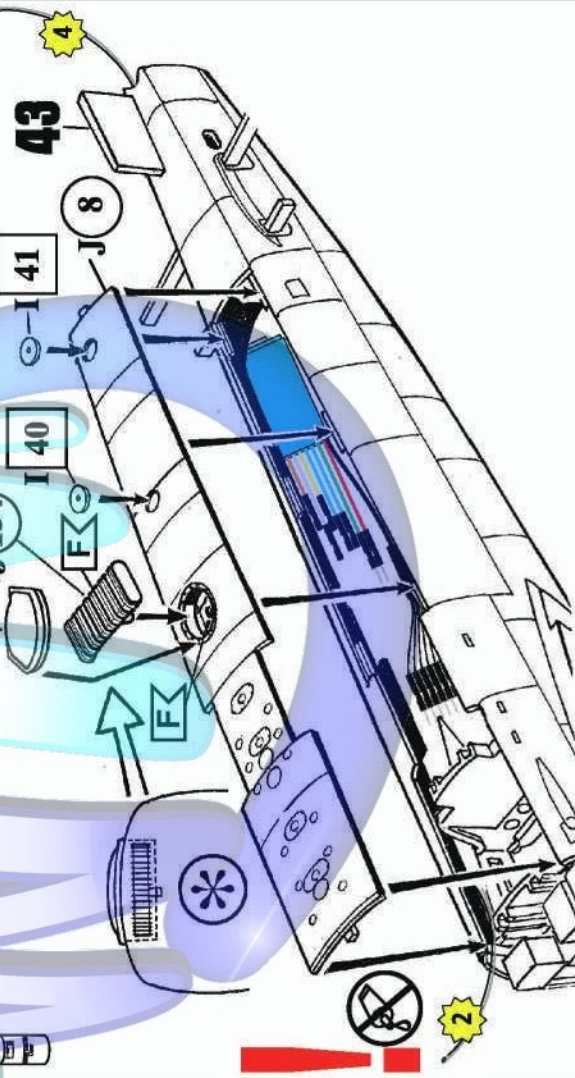
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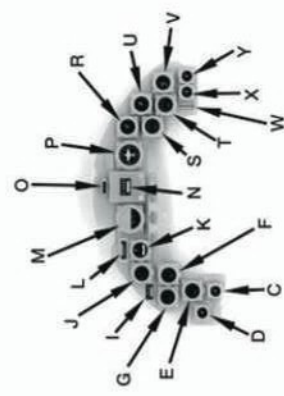
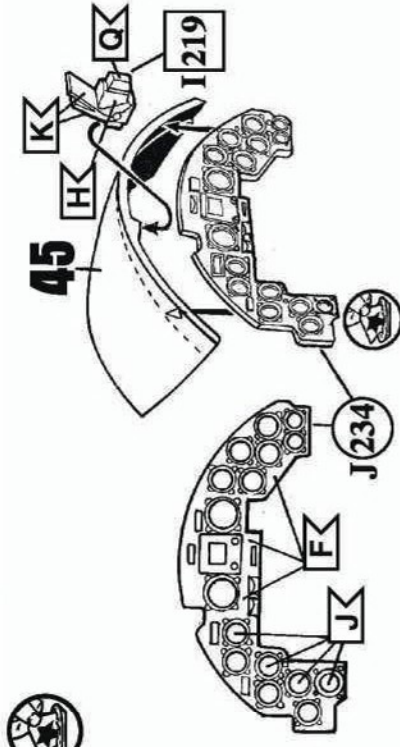
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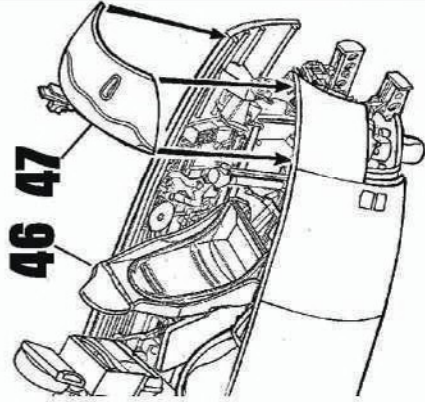
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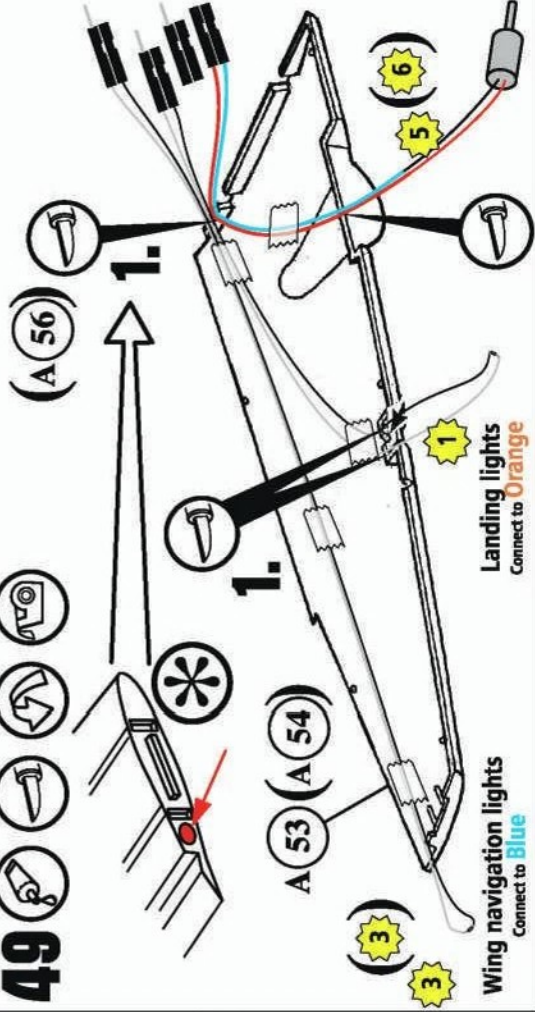
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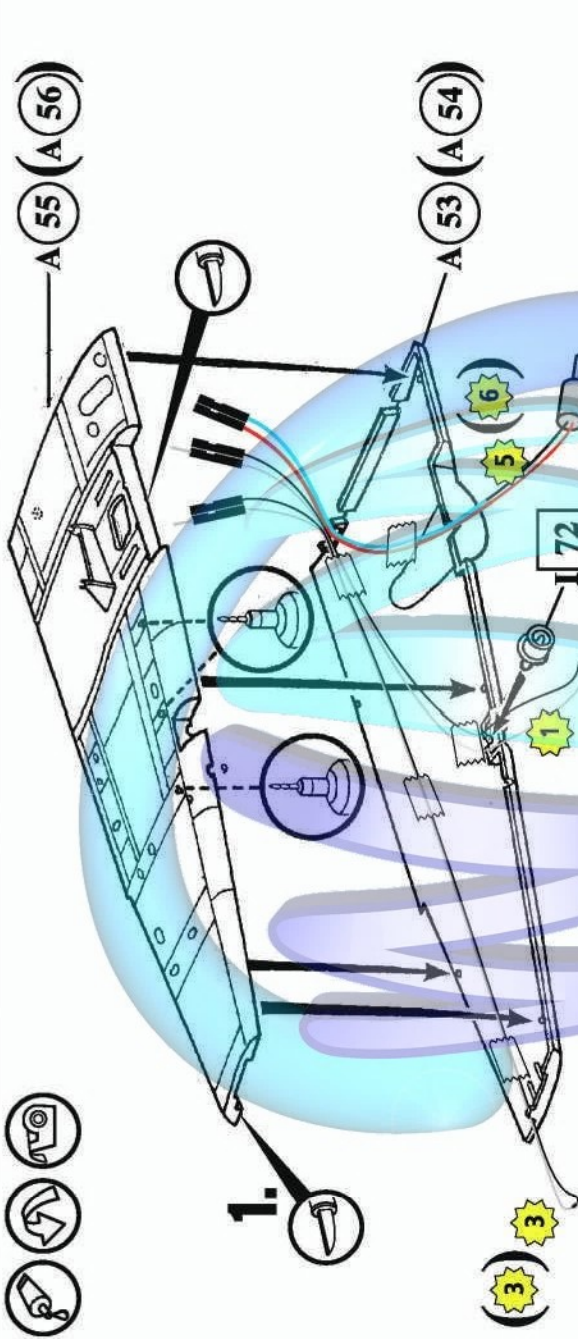
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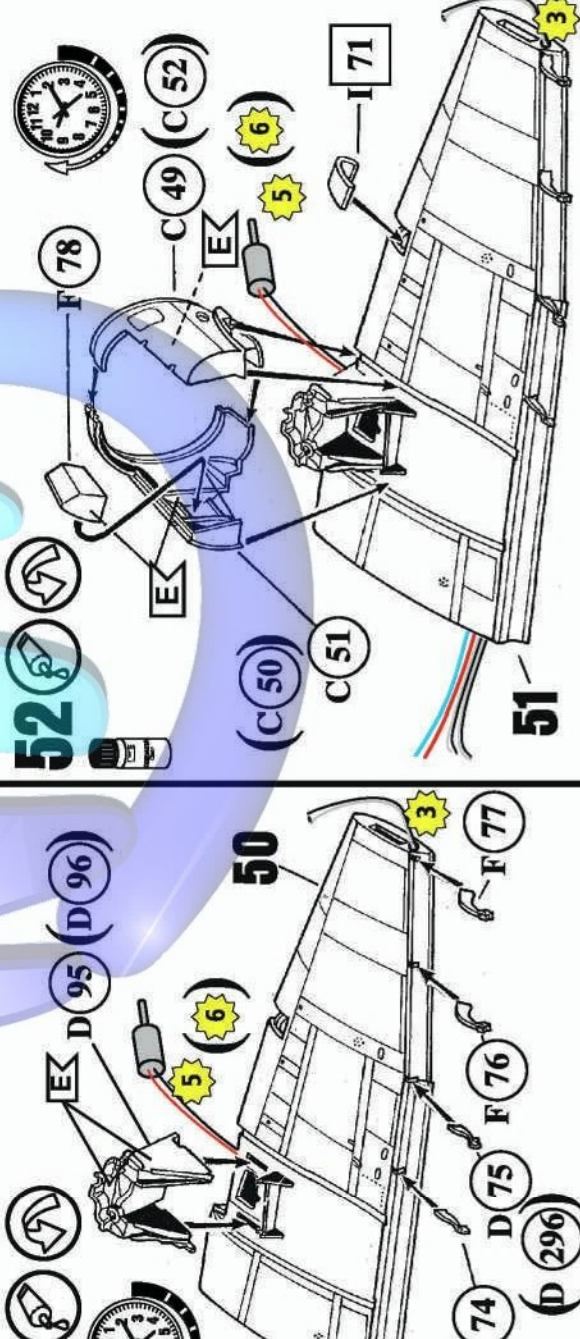
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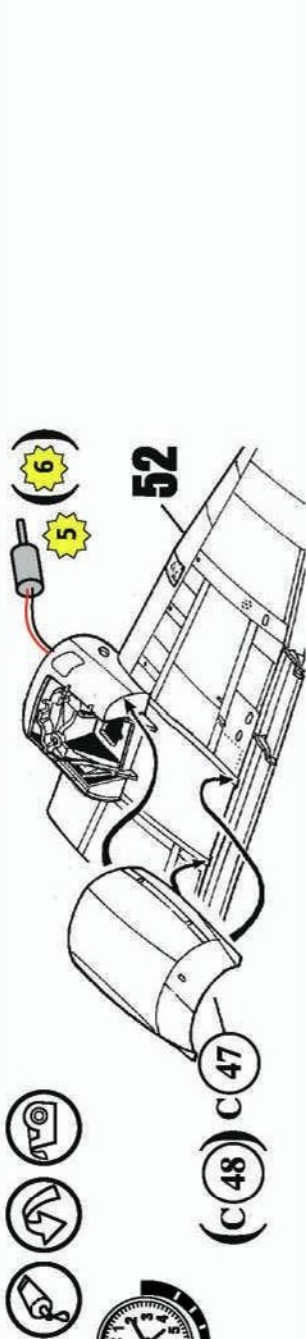
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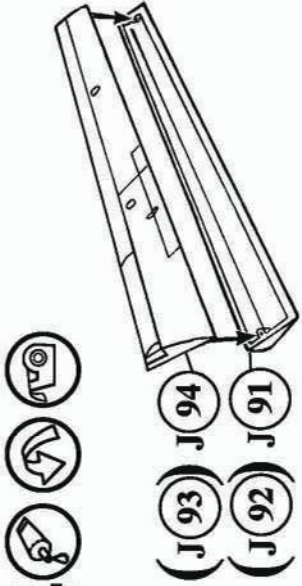
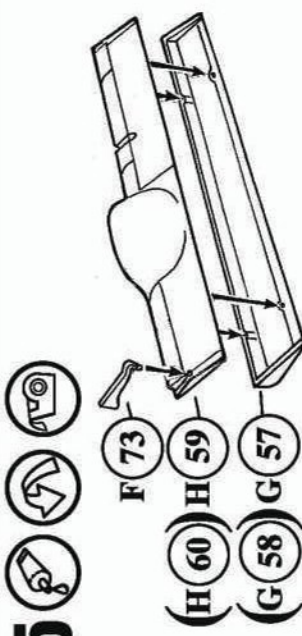
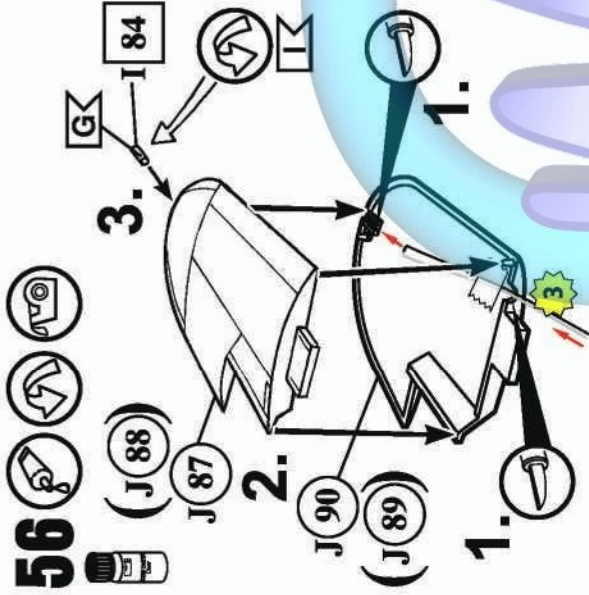
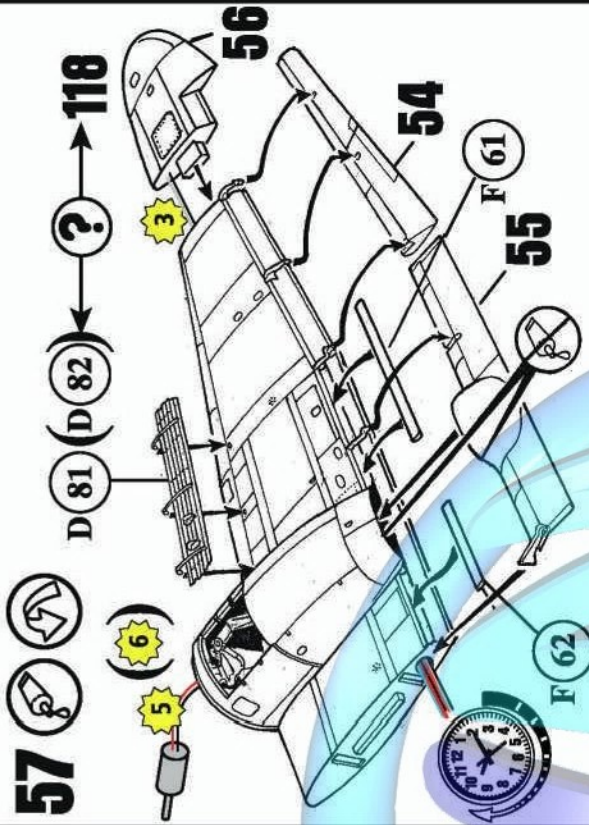
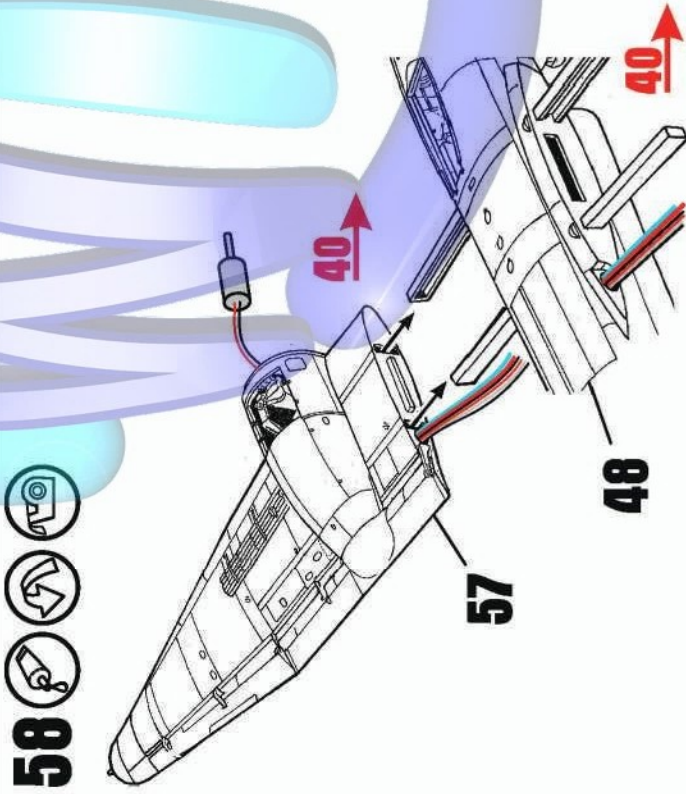
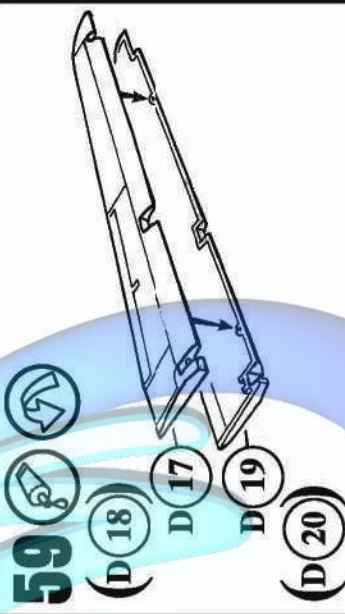
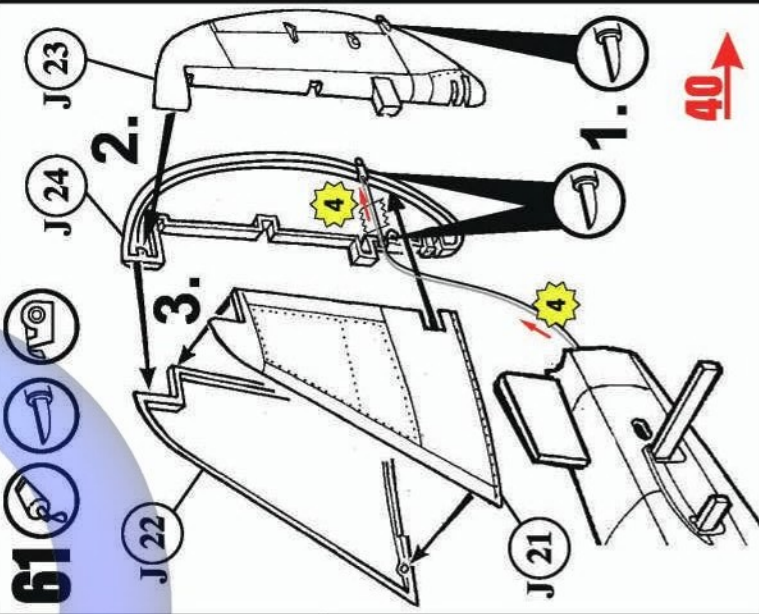
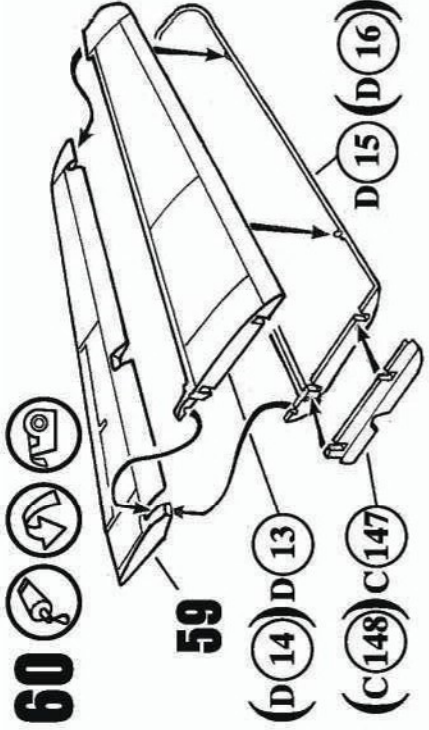


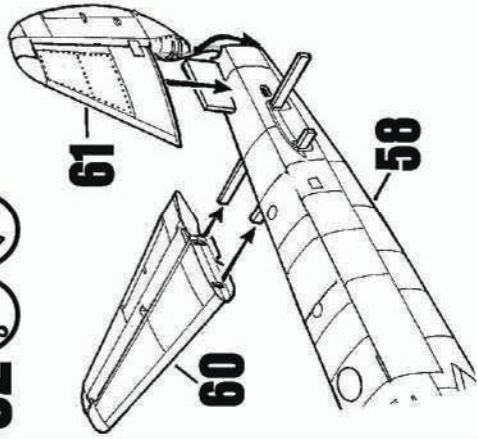
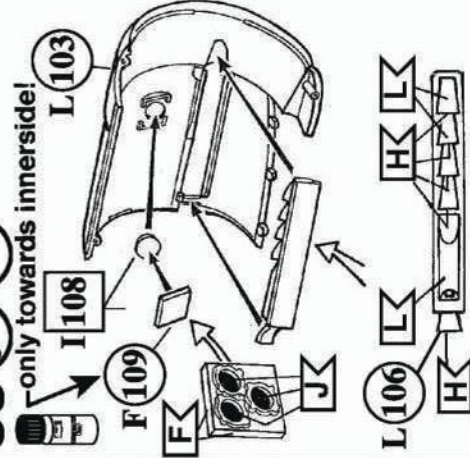
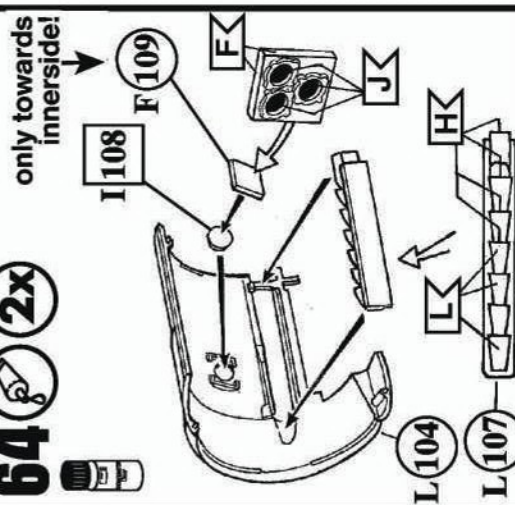
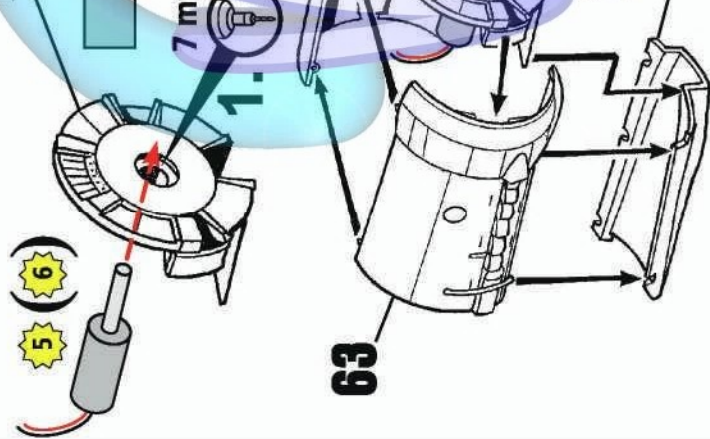
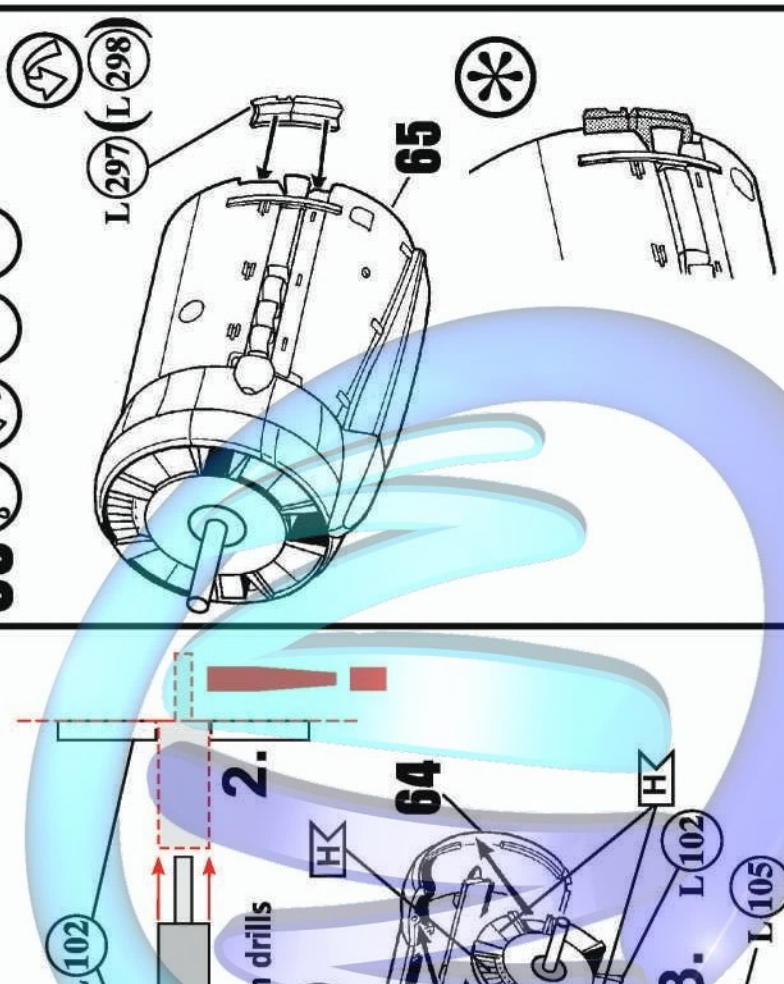
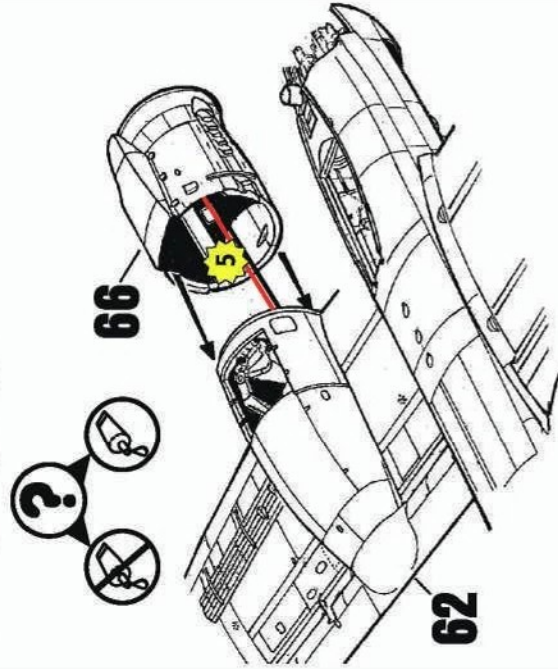
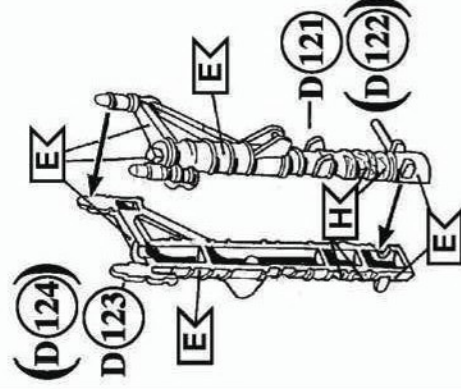
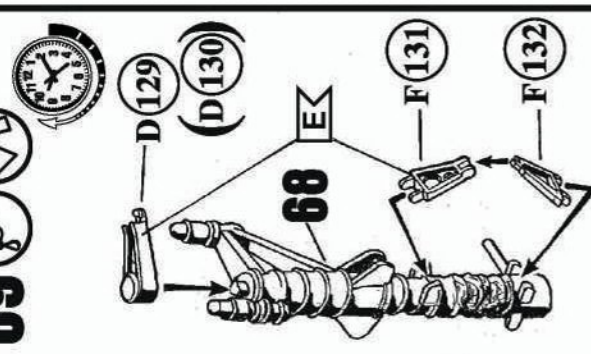
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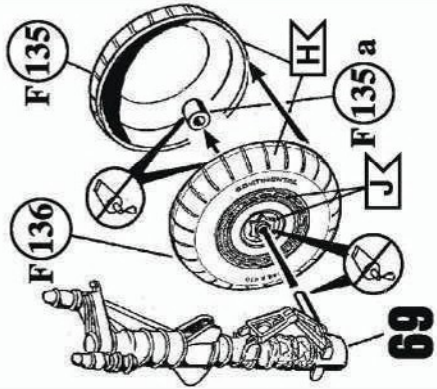
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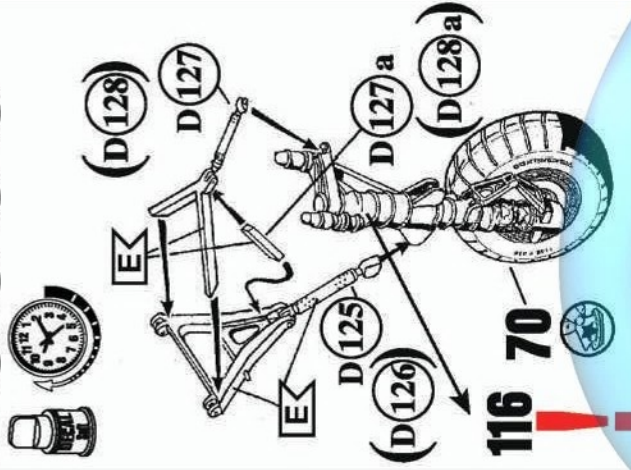
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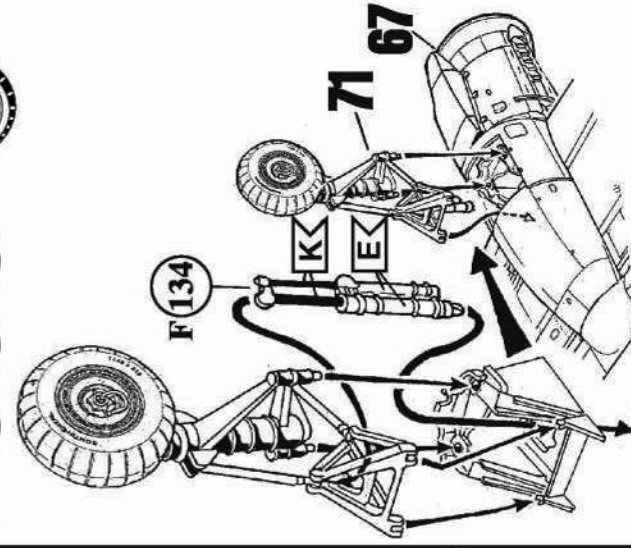
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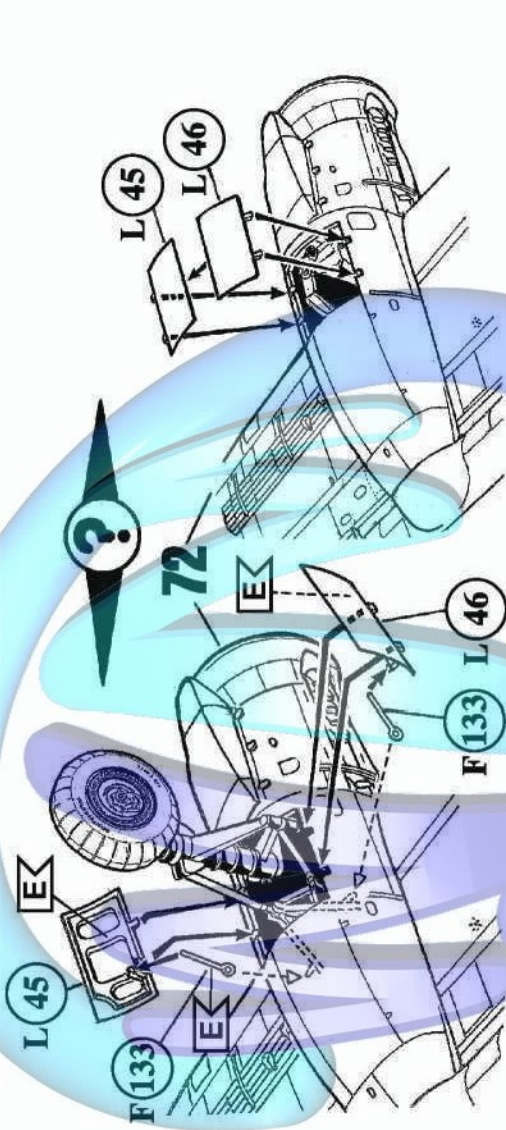
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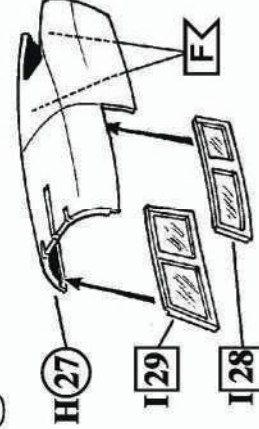
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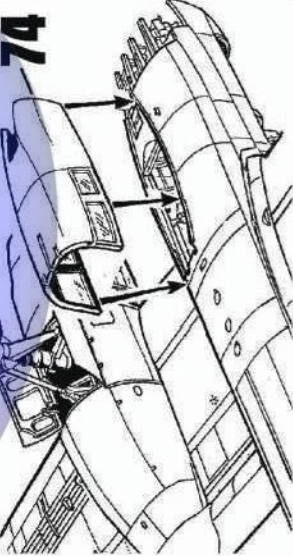
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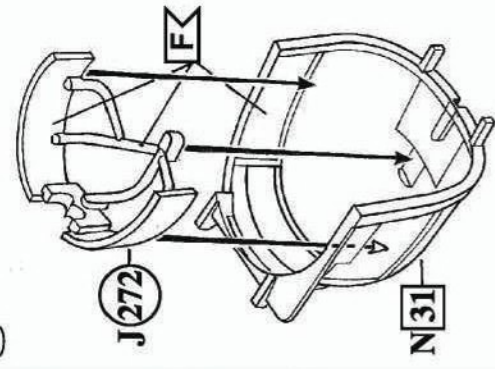
74 ? ? ? ? ?



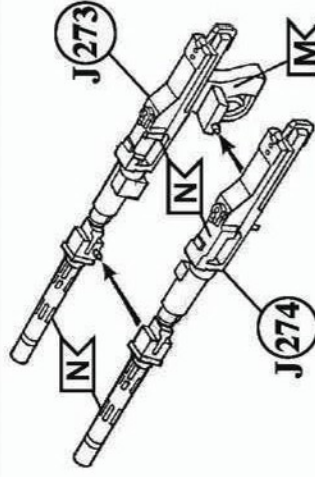
75 ? ? ? ? ?



76 ? ? ? ? ?

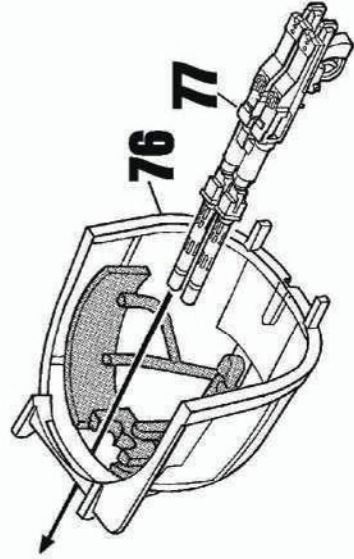


77 ? ? ? ? ?

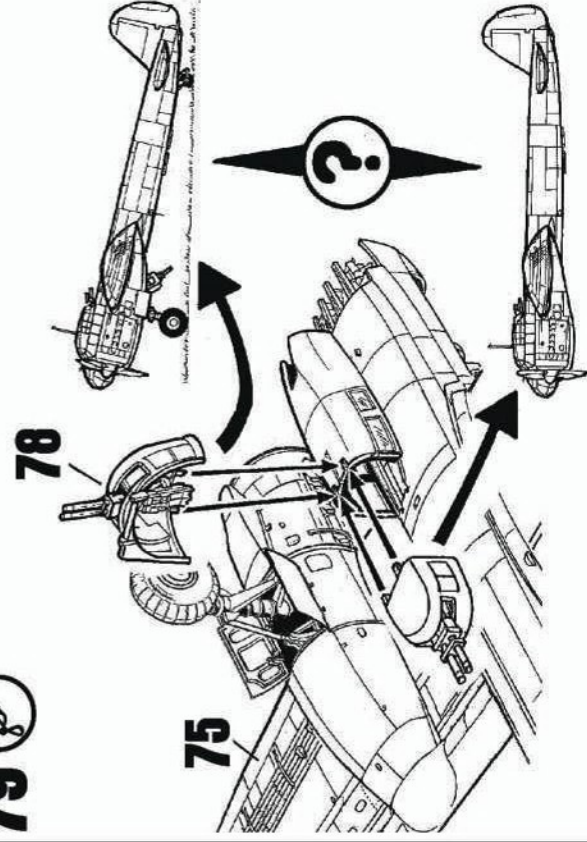




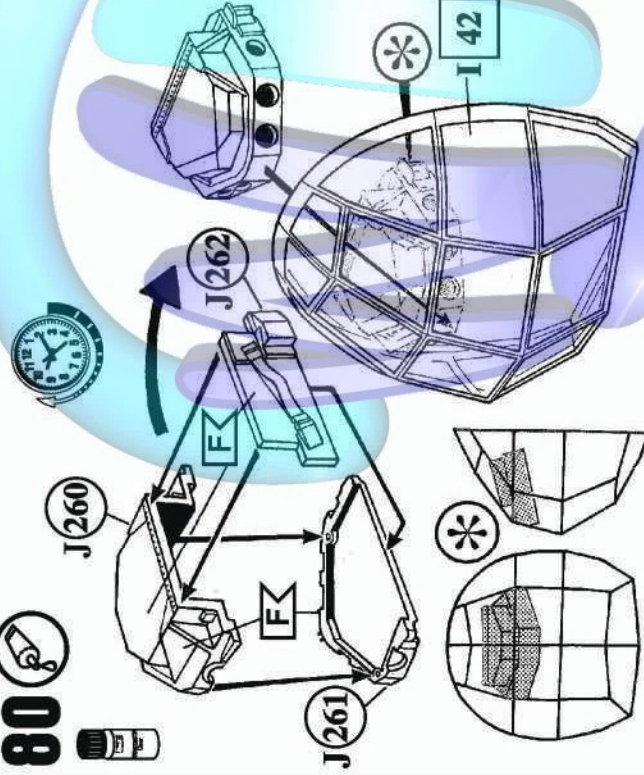
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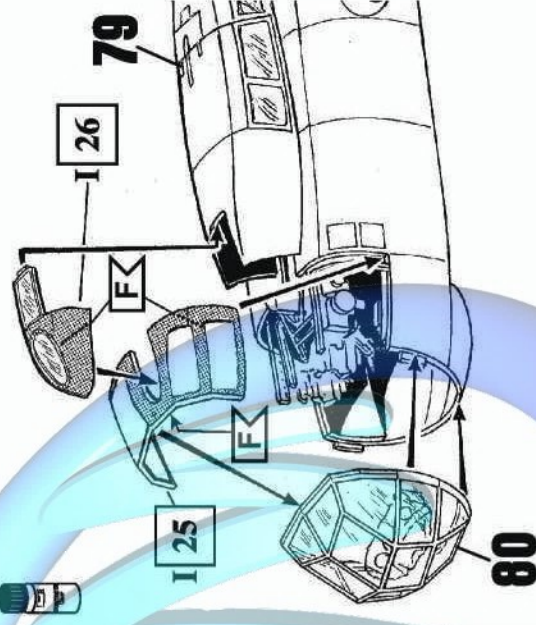
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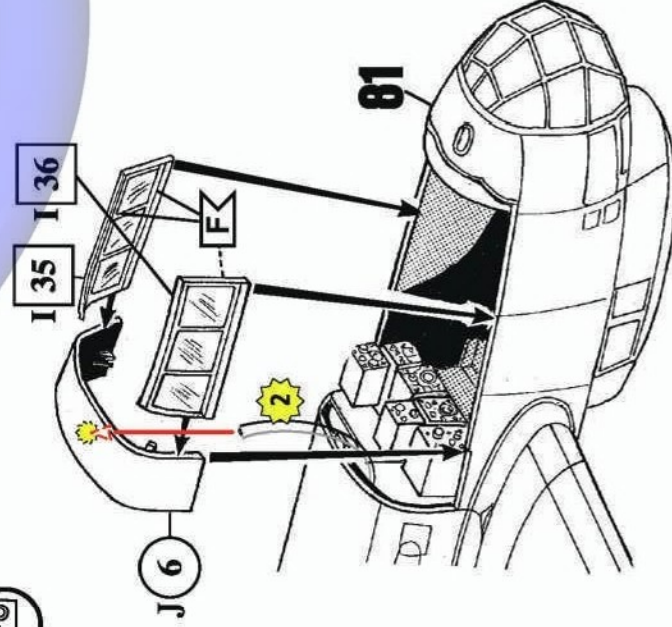
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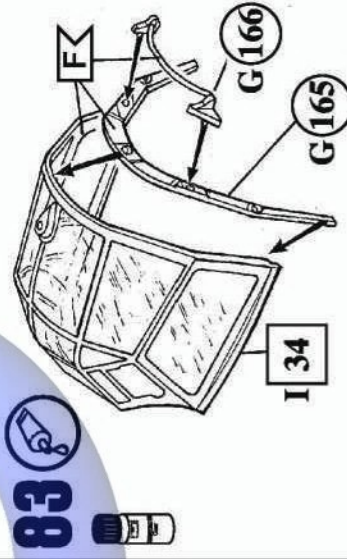
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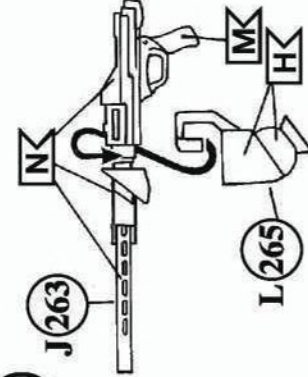
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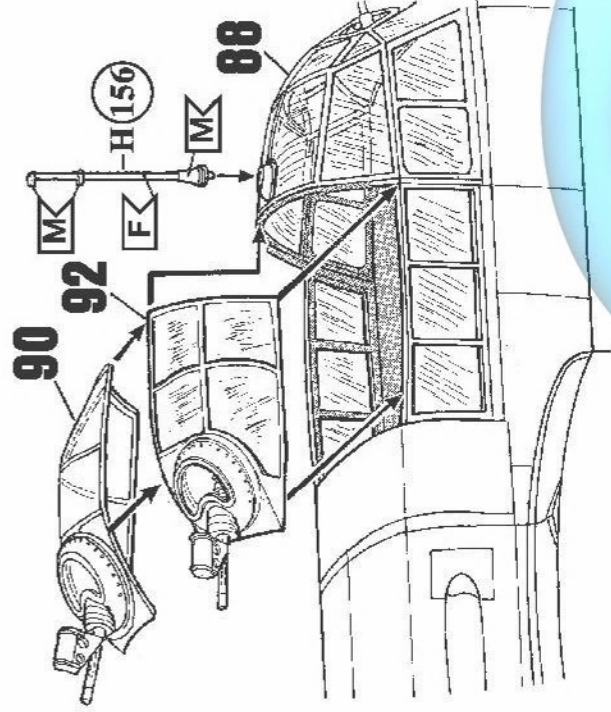
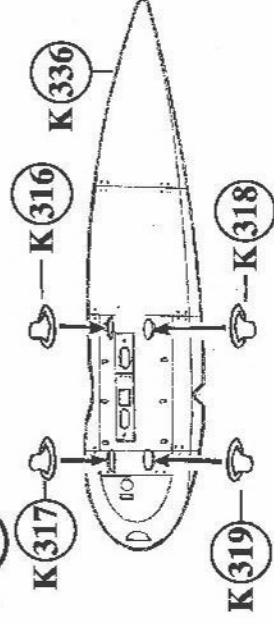
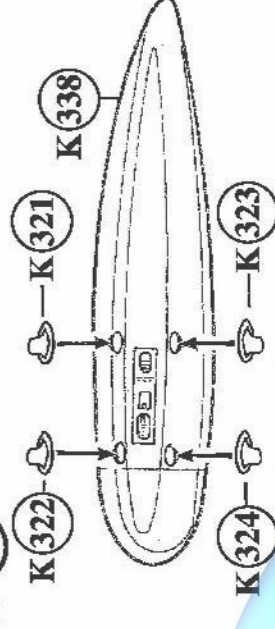
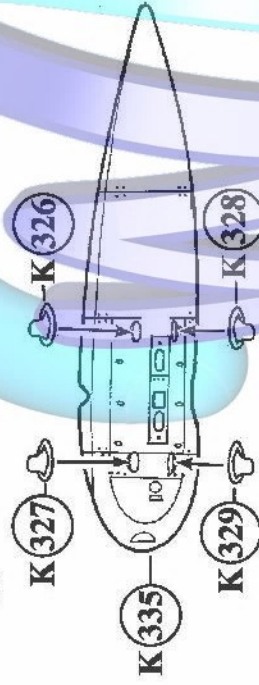
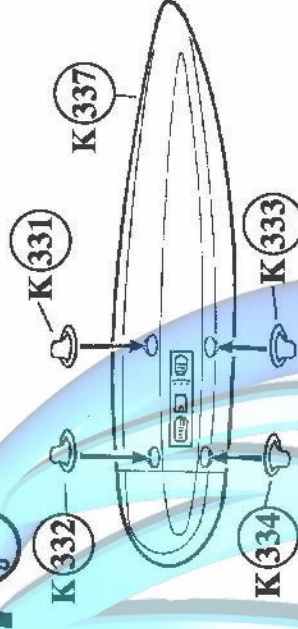
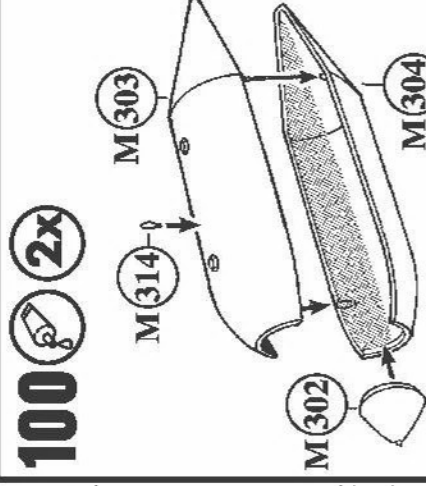
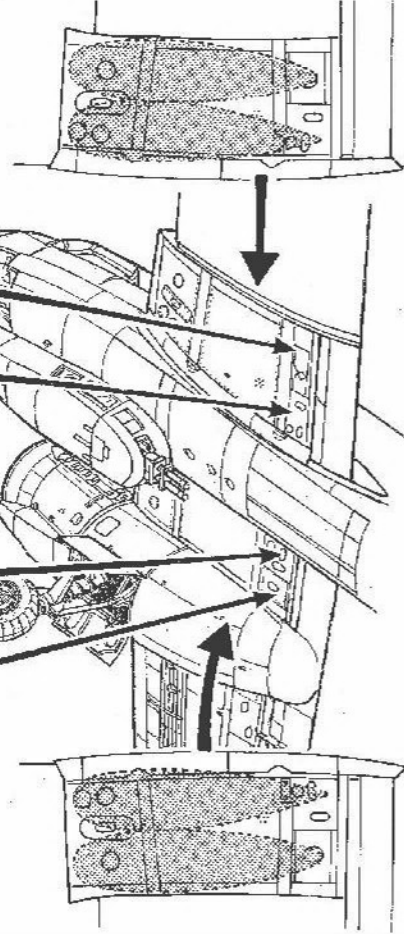
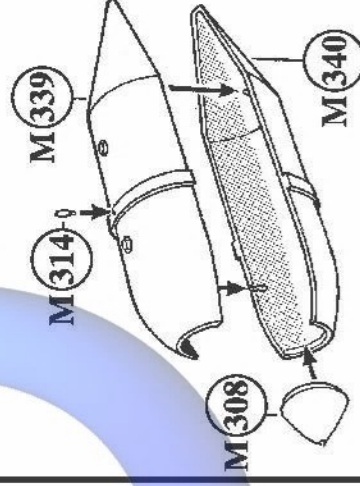
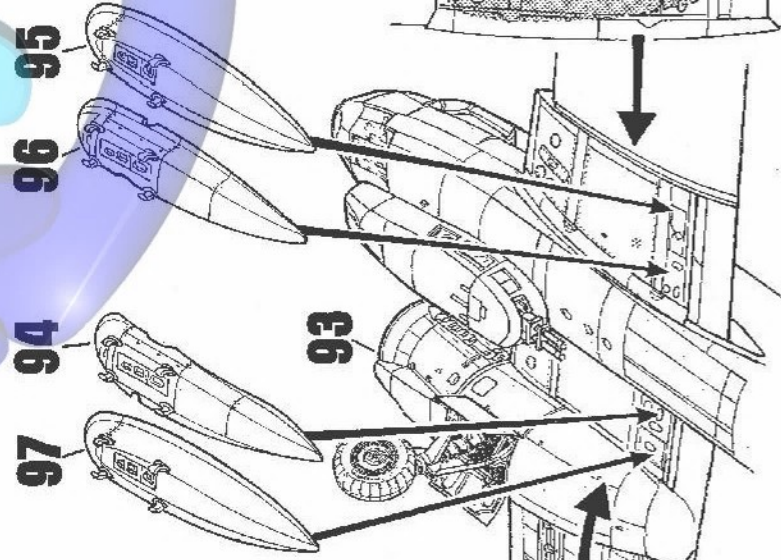


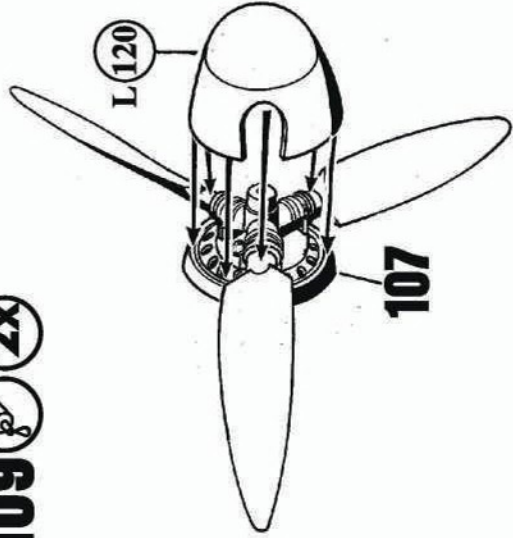
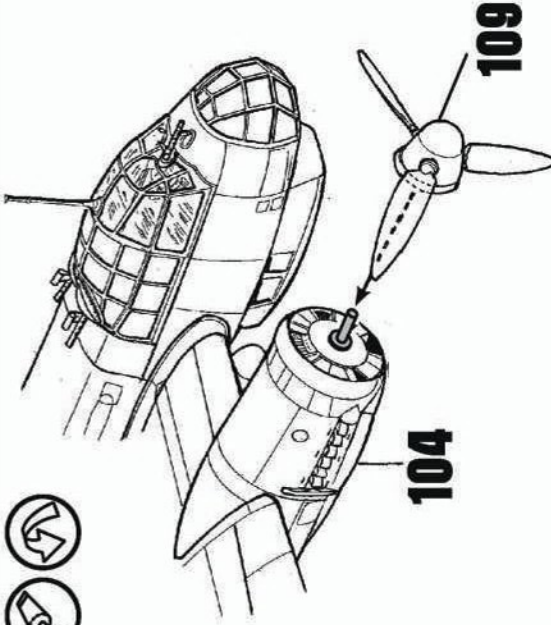
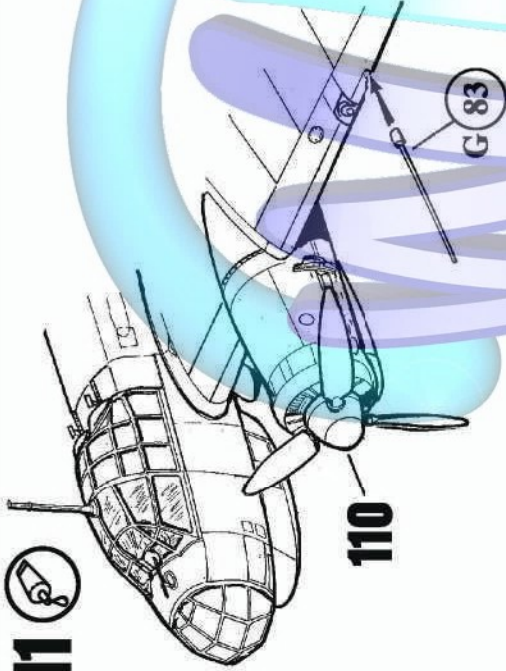
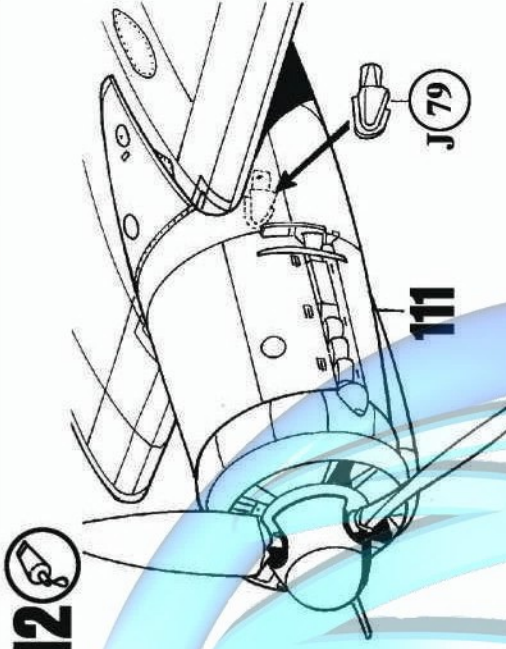
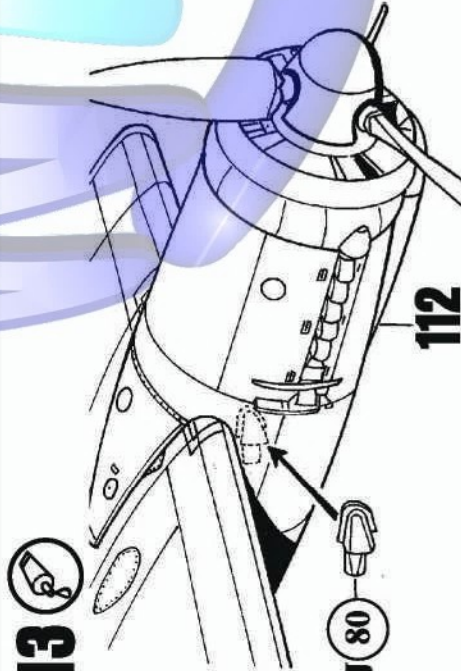
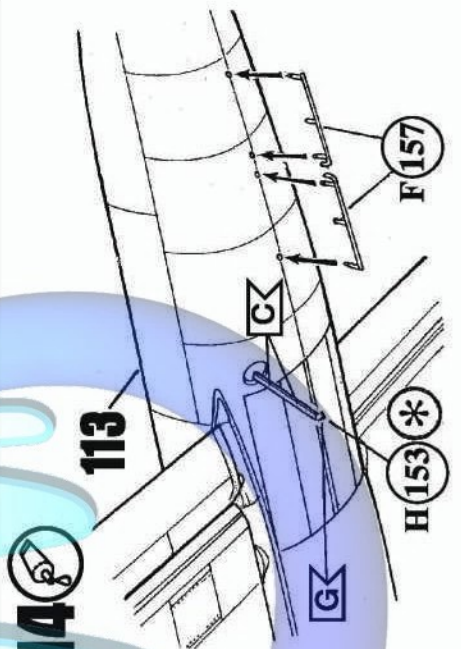
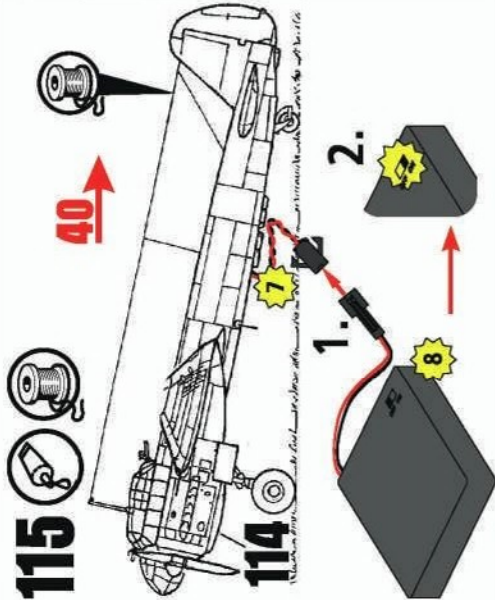
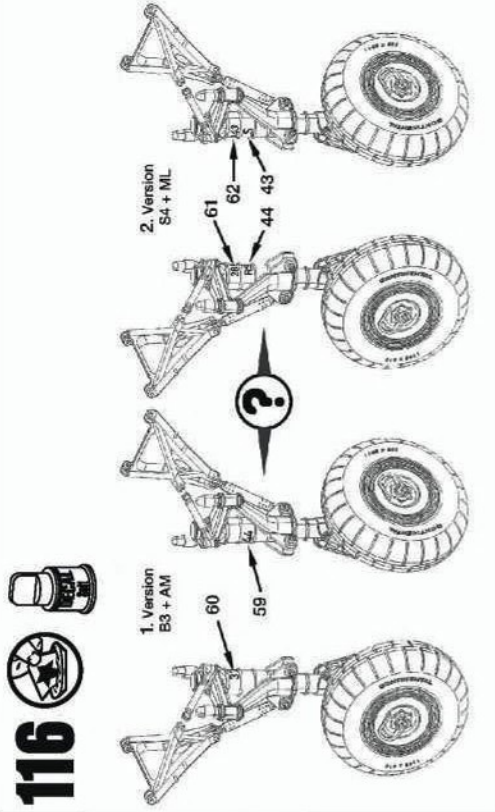
83



84



**93****94****95****96****97****98****99****100****2x**

109  **110**  **111** **112** **113** **114** **115**  **116**  

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Leeuwarden, Netherlands; April 1942

