

EC145 XL



M 1:4

Sehr geehrter Kunde,
der von Ihnen erworbene Bausatz enthält entsprechende Teile zur Erstellung eines funktionsfähigen Flugmodells.
Auf Zusammenbau, Einstellungen und Inbetriebnahme haben wir keinen Einfluß und weisen daher noch ausdrücklich darauf hin, daß Ihre individuelle Vorgehensweise einzig und allein auf Ihrem Kenntnisstand und Beurteilungsvermögen beruht.
Die Bauplanmappe dient dabei als entsprechende Orientierung, jedoch nicht als maßgeblicher Weg:
Unterschiedliche Vorgehensweisen können zum Ziel führen.
Prüfen Sie vor jedem Bauabschnitt sorgfältig Ihr Vorhaben und entscheiden Sie eigenverantwortlich über Ihren persönlichen Weg.

Dear customer,
The kit you have purchased contains the components required to build a model aircraft which is capable of flying.
We have no influence over the methods you use to assemble, set up and operate the model, and for this reason we are obliged expressly to point out to you that the methods you use rely solely on your own knowledge, experience and analytical ability.
The Plan Folder is designed to help you in this undertaking, but it does not represent a unique way of proceeding:
There are more ways than one to reach a particular destination. Before you start each stage of construction, check carefully what you intend to do, and accept the responsibility to decide on your own personal method.

Spettabile cliente,
la scatola di montaggio da voi acquistata contiene le parti necessarie per la costruzione di un modello funzionante, in grado di volare.
Per quanto riguarda i metodi per il montaggio, la messa a punto e la messa in funzione noi non abbiamo nessuna influenza e vogliamo sottolineare esplicitamente che il vostro modo d'agire dipende soltanto dal vostro livello di conoscenza e dalla vostra capacità di valutazione. Le istruzioni di montaggio servono solo per un migliore orientamento e non rappresentano l'unico modo di procedere: diversi sono i modi di procedere che possono dare l'effetto desiderato.
Prima di realizzare ogni fase di lavoro verificate attentamente il vostro progetto e scegliete in maniera responsabile il vostro obiettivo.

Cher Client,
La boîte de construction que vous avez acquise, comprend tous les composants nécessaires pour la réalisation d'un modèle d'hélicoptère fonctionnel.
Nous n'avons pas d'influence sur la manière dont vous assemblez, ajustez, et mettez en service ces composants. Nous vous informons donc expressément que votre façon de procéder dépend uniquement et exclusivement de vos connaissances, compétences et jugements. Le cahier de plans sert de guide d'orientation, mais ne trace pas un chemin exclusif: Différentes méthodes d'opération peuvent mener au même résultat. Vérifiez avant chaque stade de construction le but à atteindre et choisissez le chemin qui vous semble le plus approprié.

Geachte klant,
De door uw gekochte bouwdoos bevat alle onderdelen om een functionerend vliegmodel te maken. Op het bouwen, afstellen en het in gebruik nemen van uw model hebben wij geen invloed, en wij wijzen er nadrukkelijk op, dat uw individuele zienswijze alleen op uw kennis en beoordelingsvermogen berust.
De bouwtekening dient daarbij alleen als een oriëntering, echter niet als een dwingend advies. Verschillende bouwconstructies kunnen tot hetzelfde doel leiden.
Test elke bouwfase zorgvuldig, en beslis over uw eigen verantwoordelijkheid m.b.t. het in gebruik nemen van uw model.



Ord.No. 11/31
Schneidezange für
Stahldraht
Wire cutters for steel
wire



Ord.No. 11/26
Scheibenschere
Glazing panel shears



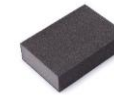
Ord.No. 11/59
Schneidewerkzeug
Skalpell & Stahllineal
Cutting tool set
(scalpel + ruler)
Ord.No. 11/58
Skalpell
Scalpel



Ord.No. 90/10
Feilen-Set mit Griff
6-teilig
File set with handle, six-
part



Ord.No. 11/28
Schmiergelfeile 25cm, gerade
Glasspaper file, flat



Ord.No. 10/77
Schleifschwamm
Sanding sponge



Ord.No. 90/53
Schleifklotz angeschrägt
Wedge Sanding Block



Ord.No. 11/29
Widia Trennscheibe
Widia disc cutter



Ord.No. 11/36
Trennscheiben-Satz
5 Stück
Disc cutter set, 5 pcs



PERMA-GRIT
Ord.No. 90/54
Schleifstift Ø 4mm fein
Rotary File 4 mm Rod,
Fine
Ord.No. 90/55
Schleifstift Dom Ø
7mm
Rotary File, dome head,
7 mm, fine



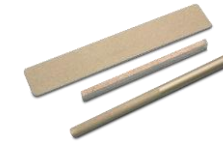
Ord.No. 90/40
Nadelfeilen-Set, bestehend aus:
Needle file set consisting of:
Ord.No. 90/46 Handgriff
File Handle
Ord.No. 90/41 Feile dreikant
Needle file, triangular
Ord.No. 90/42 Feile flach
Needle file, flat
Ord.No. 90/43 Feile rund
Needle file, round
Ord.No. 90/44 Feile Halbround
Needle file, half round
Ord.No. 90/45 Feile viereckig
Needle file square



PERMA-GRIT
Ord.No. 90/57
Trennscheibe Ø 13mm
Cutting Disc 19 mm
with arbour
Ord.No. 90/56
Trennscheibe Ø 32mm
Jeweils inkl.
Aufspanndorn
Cutting Disc 32 mm
with arbour



Ord.No. 90/51
Handfeile viereckig 6mm
hand file 6mm square
Ord.No. 90/49
Handfeile rund Ø 6mm
Round File Ø 6mm, Fine
Ord.No. 90/50
Handfeile halbrund
Half Round File



Ord.No. 90/47
Handfeile flach
Flat File, Fine
Ord.No. 90/52
Handfeile viereckig
Slot File, 6mm, Fine
Ord.No. 90/48
Handfeile rund Ø 12mm
Round File 12mm Fine



Ord.No. 11/91
Maulschlüssel 4 / 5mm
Open-end spanner, size 4
and 5

Ord.No. 11/92
Maulschlüssel 4,5 / 5,5mm
Open-end spanner, size
4.5 and 5.5

Ord.No. 11/94
Maulschlüssel 7 / 8mm
Open-end spanner, size 7
and 8



Ord.No. 111/20
Innensechskant-Satz
Allen key set

Ord.No. 111/11
Griff für Klingen Sechskant Ø
6mm
Handle for socket spanners
Ø 6mm



Ord.No. 11/18
Steckschlüssel M3, SW 5,5mm
Socket spanner M 3 nut



Ord.No. 11/64
Lochfräser bis Ø 16mm
Hole cutter up to Ø 16
mm



Ord.No. 11/43
Schälbohrer mit Handgriff
bis Ø 14mm
Hole-cutter, 3 to 14 mm
diameter, with handle



Ord.No. 11/96
Spiralbohrer Ø 1,2mm
Twist drill 1.2 mm
Ord.No. 11/98
Spiralbohrer Ø 3mm
Twist drill 3.0 mm



Ord.No. 10/360
Vario Extrem-Fett
Vario Extreme
Grease

Ord.No. 10/131
Klebeset, bestehend aus:
Glue kit consisting of:



Hochleistungs-Expoydharz,
200g + Härter, 80 g
High power epoxi resin
200g + 80g hardener

Speedy Combine-Pulver
Speedy Combine Powder

Für glasklare Verklebungen
Superglue for bonding crystal
clear, no mist

Poxan 30, 10g

Sekundenkleber dickflüssig
Cyano glue, high viscosity

Sekundenkleber dünnflüssig
Cyano glue, low viscosity

Aktivatorspray
Activator spray

Ord.No. 10/123

Ord.No. 10/124

Ord.No. 623

Ord.No. 10/125

Ord.No. 10/127

Ord.No. 10/29

Weitere Klebstoffe
More adhesives

Sekundenkleber, schwarz, 20 ml
Super glue (Cyno), Black

Sekundenkleber, 20 ml für glasklare
Verklebungen
Superglue for bonding crystal
clear, no mist

UHU plus endfest 300, 33 ml
UHU plus endfest 300, 33 g

UHU plus endfest 300, 53 ml
UHU plus endfest 300, 54.4 g

Mischdüsen, 5 Stück
Mixer nozzles for 10/1 dispenser

Dosierpistole
Dispenser for UHU plus
endfest 300

Ord. No.10/126

Ord. No.10/128

Ord. No.10/27

Ord. No.10/3

Ord. No.10/5

Ord. No.10/1

Benötigtes Zubehör Required Accessories

Ord.No. 1490

Zubehör ist nicht im Bausatz enthalten und muss zusätzlich erworben werden!

Accessories are not included with the kit and must be purchased additionally!

Mechanik / Mechanics

Ord.No.

- | | | | |
|----|--|-----------|--|
| 1x | Elektro-Mechanik XL
<i>Electric mechanics XL</i> | 1002/1200 |  |
| 1x | Elektro-Antriebsset für EC/H145 1:4
<i>Electric motor set for EC/H145 1:4</i> | 3325 |  |
| 1x | Heckabtriebsset für XL-Mechanik
<i>Tail drive system for XL mechanics</i> | 512/101 |  |
| 1x | Hauptrotorwelle 15 x 265 mm
<i>Rotor shaft 15 x 265 mm</i> | 149/35 |  |
| 1x | Taumelscheibenmitnehmer für 15 mm Rotorwelle
<i>Swashplate driver for 15 mm rotor shaft</i> | 268/55 |  |

Rotorkopf / Rotor Head

Ord.No.

- | | | | |
|----|--|---------|---|
| 1x | 4-Blatt-Rotorkopf 15 mm
<i>4-blade rotor head 15 mm</i> | 704/39 |  |
| 1x | Gestänge 3,0 x 83 mm
<i>Pushrod 3.0 x 83 mm</i> | 70/83-4 |  |
| 1x | Kugelgelenke für 3,0 mm Gestänge
<i>Ball-links 3.0 mm</i> | 107/15 |  |

Heckrotor / Tail Rotor

Ord.No.

- | | | | |
|----|--|---------|---|
| 1x | 2-Blatt-Alu-Heckrotor mit ø 6 mm
<i>2-blade tail rotor ø 6 mm aluminium</i> | 1003/80 |  |
|----|--|---------|---|

Elektronik / Electronics

Ord.No.

- | | | | |
|----|--|---------|--|
| 1x | Regler Kontronik COOL KOSMIK 170 HV-I
<i>Controller Kontronik KOLIBRI 140 HV-I</i> | 3308/16 |  |
| 1x | 3SX - Flugstabilisierungs-Elektronik von Bavarian Demon
<i>3SX FBL system by Bavarian Demon</i> | 3273 |  |
| 5x | Servo Vario Scale Control | 5157 |  |

Rotorblätter/ Rotor-Blades

Ord.No.

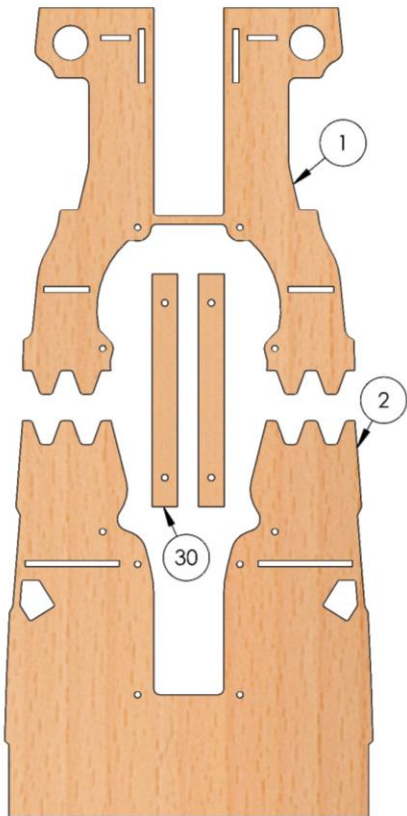
- | | | | |
|----|---|-------|---|
| 1x | 4-Blatt-Satz 2300 mm 1L linksdrehend
<i>4-blade-set 2300 mm L.h.r.</i> | 412/4 |  |
| 1x | Heckrotorblätter 180mm, grau
<i>Tail rotor blades 180mm, grey</i> | 34/36 |  |

Akku / Battery

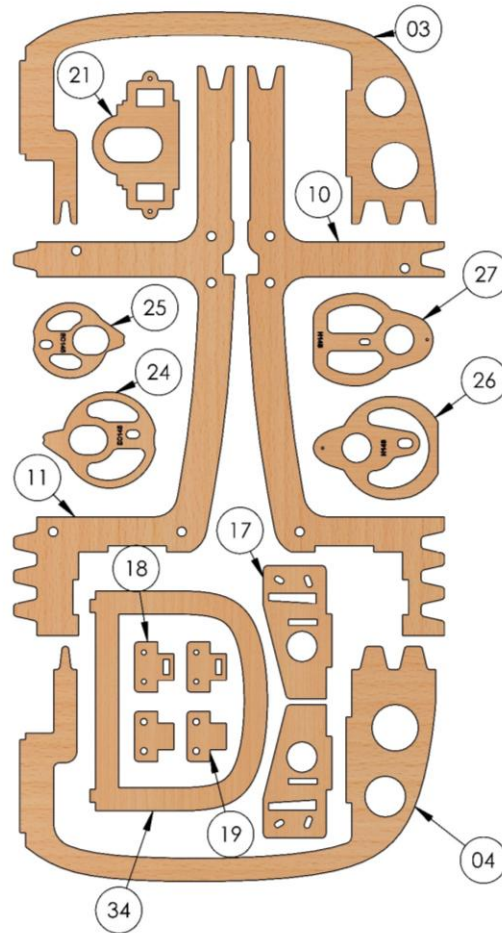
Ord.No.

- | | | | |
|----|----------------|--|--|
| 1x | 12S 10.000 mAh | | |
|----|----------------|--|--|

Platte 1
Sheet 1



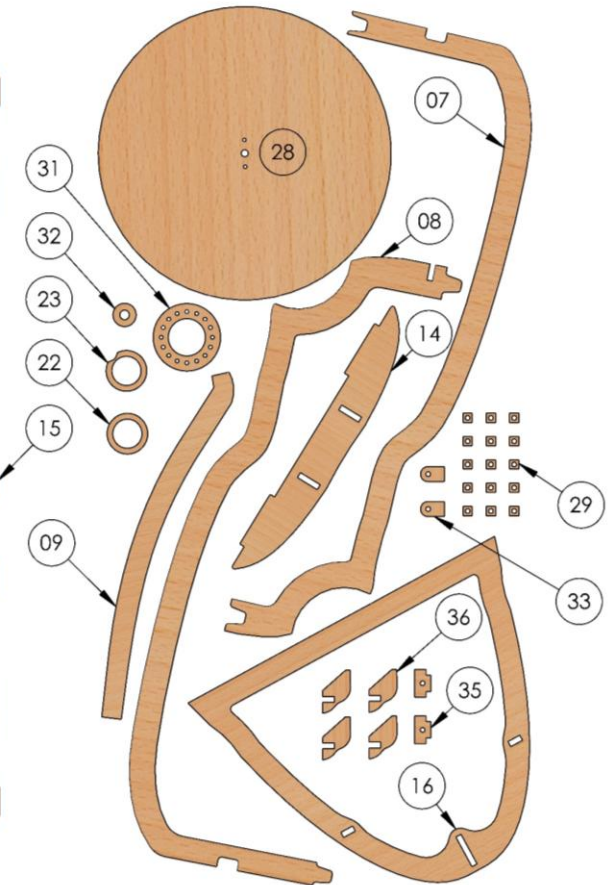
Platte 2
Sheet 2



Platte 3
Sheet 3

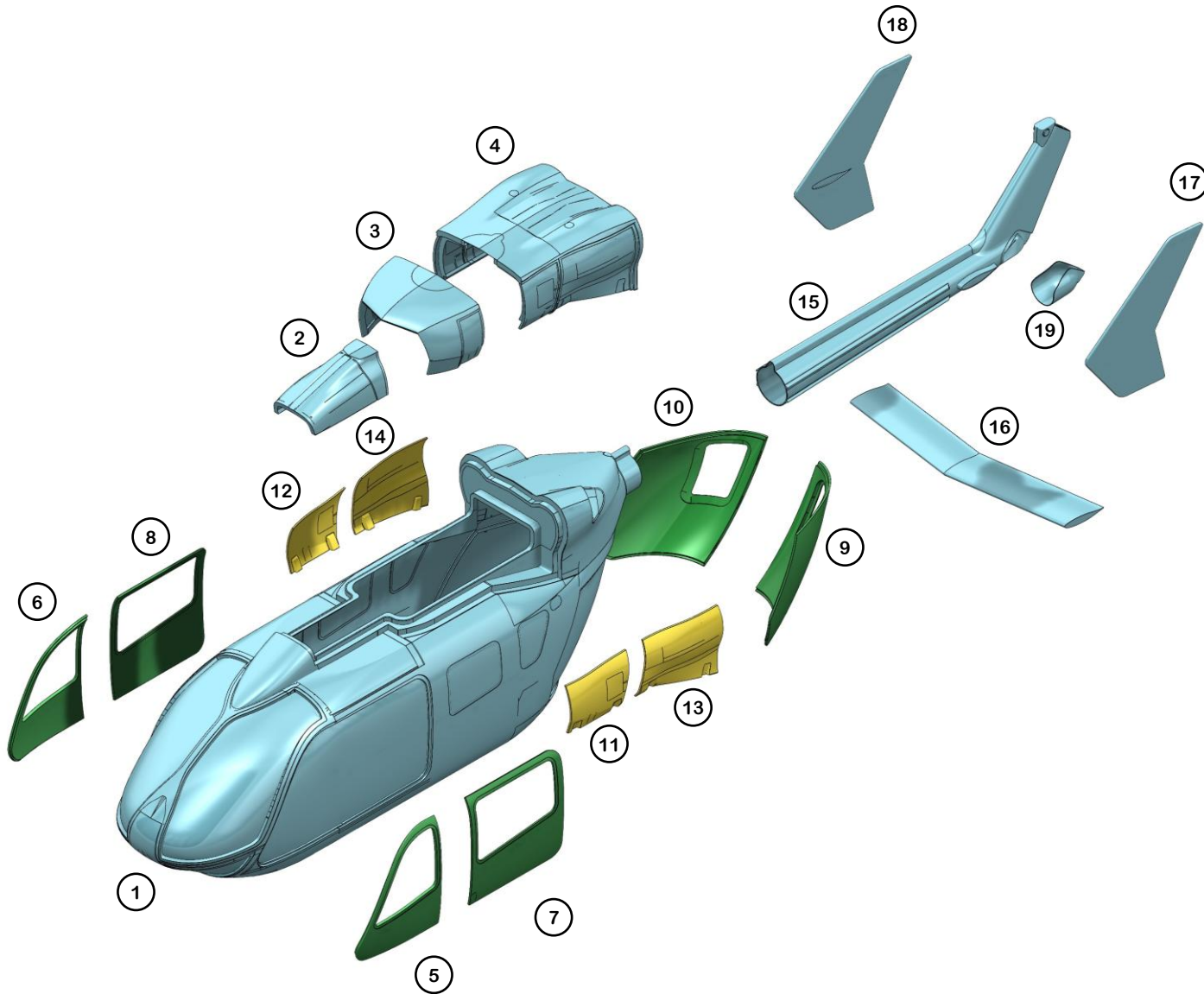


Platte 4
Sheet 4



Rumpfteile Parts Fuselage

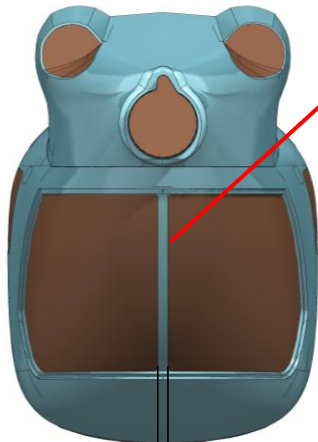
Ord.No. 1490



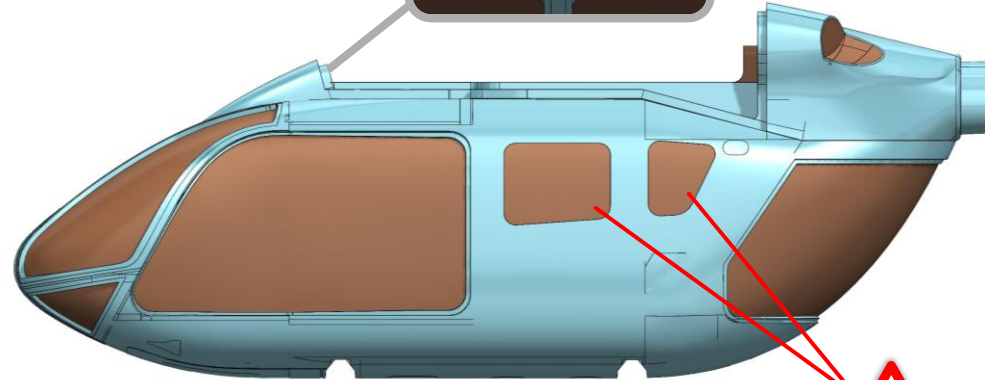
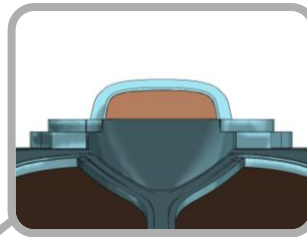
1	Rumpf	fuselage
2	Domhaube vorne	dome cover front
3	Domhaube mitte	dome cover center
4	Domhaube hinten	dome cover rear
5	Vordertür links	front door left
6	Vordertür rechts	front door right
7	Schiebetür links	slide door left
8	Schiebetür rechts	slide door right
9	Heckklappe links	rear door left
10	Heckklappe rechts	rear door right
11	Domklappe vorne links	dome hatch front left
12	Domklappe vorne rechts	dome hatch front right
13	Domklappe hinten links	dome hatch rear left
14	Domklappe hinten rechts	dome hatch rear right
15	Heckausleger EC145	tail boom EC145
16	Höhenleitwerk	horizontal stabilizer
17	Seitenleitwerk links	vertical stabilizer left
18	Seitenleitwerk rechts	vertical stabilizer right
19	Getriebeabdeckung	gear cover



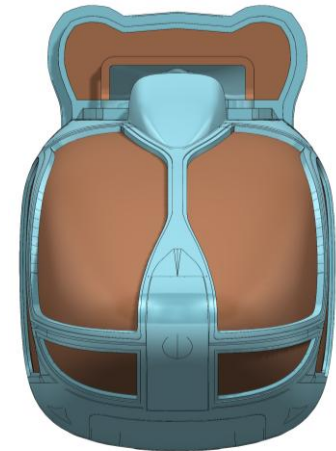
Verstärkung für Heckabstützung.
Reinforcement for boom support.



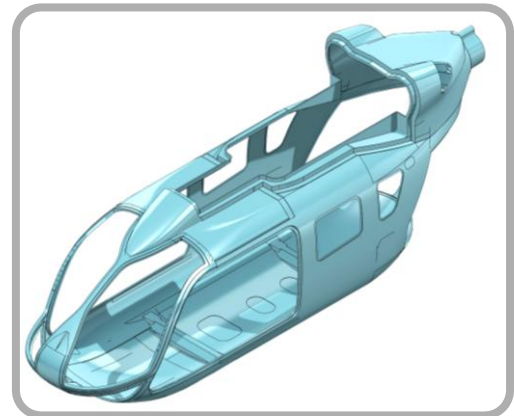
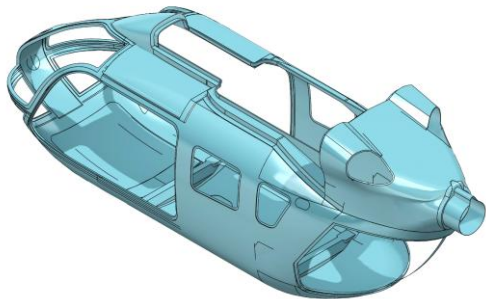
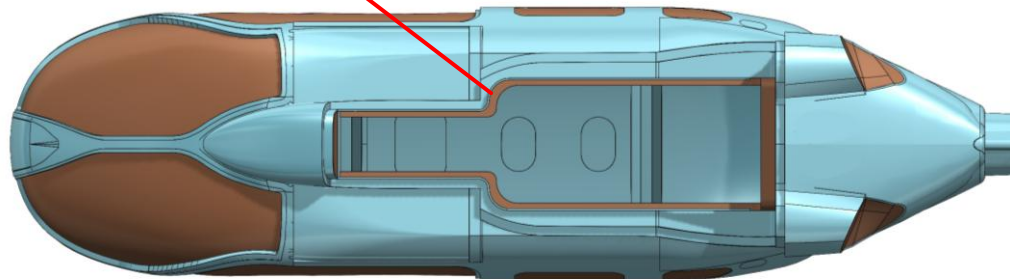
ca.10 mm

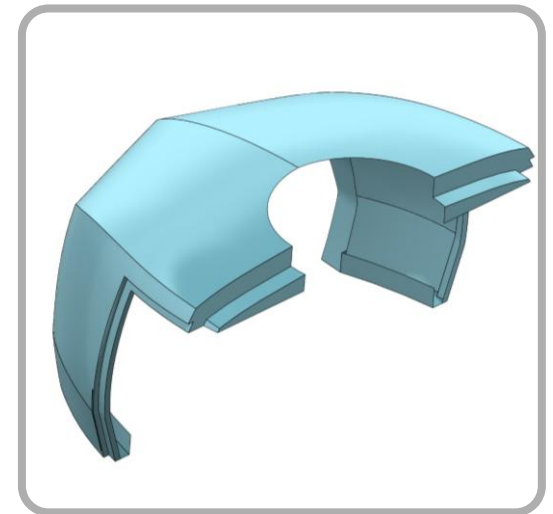
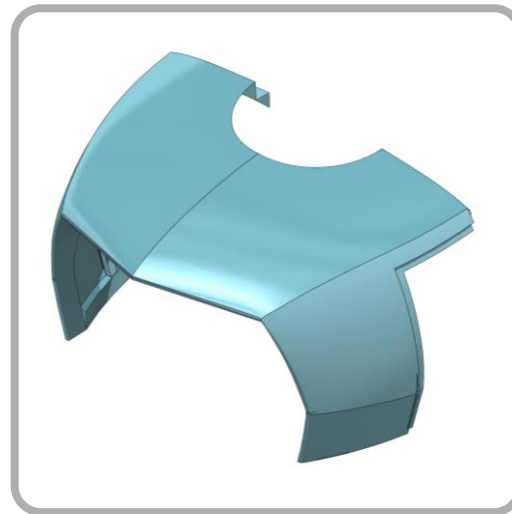
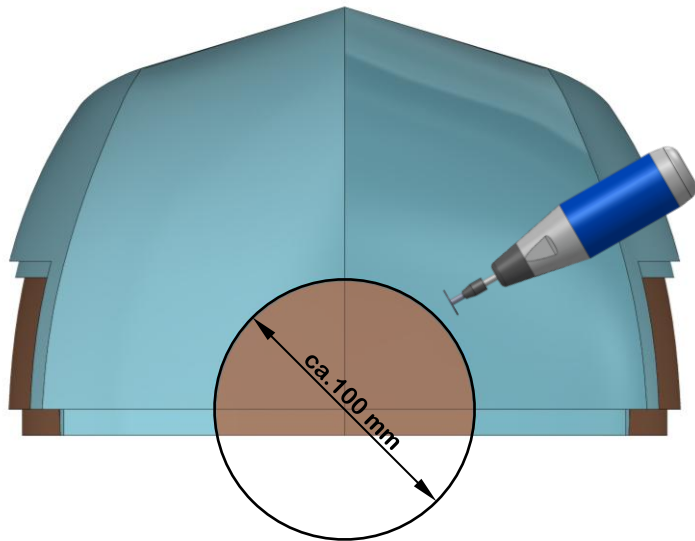
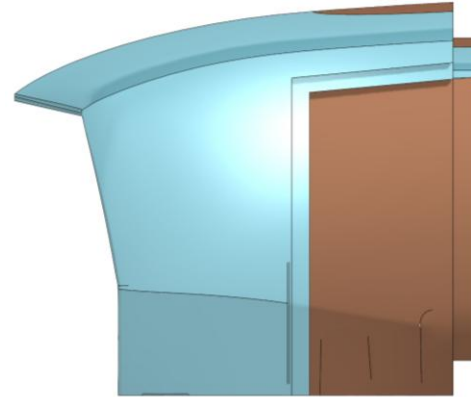
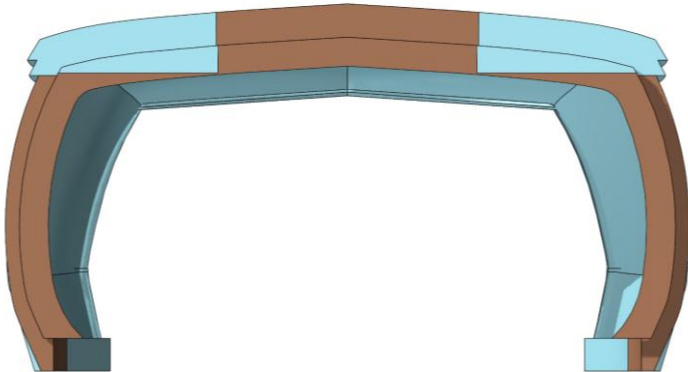


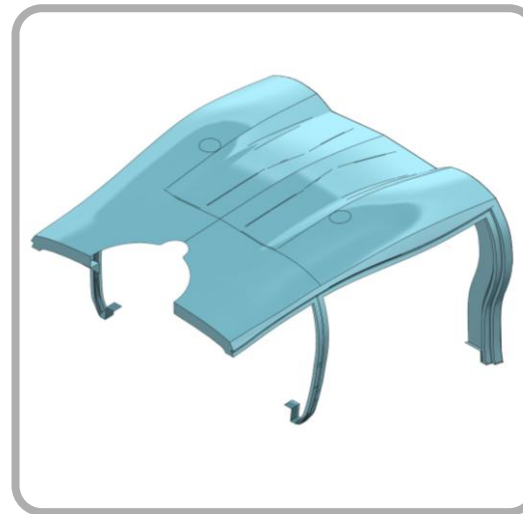
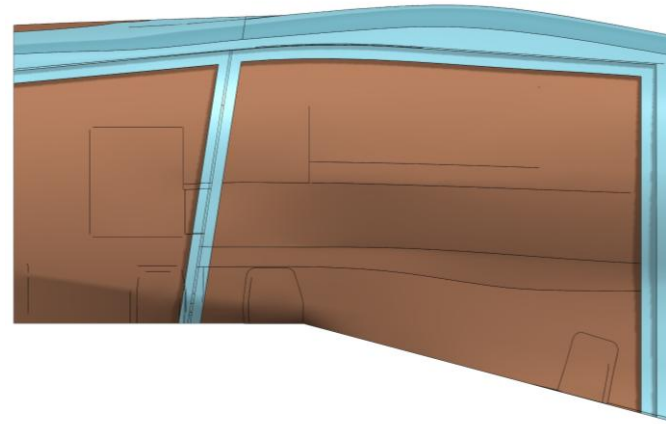
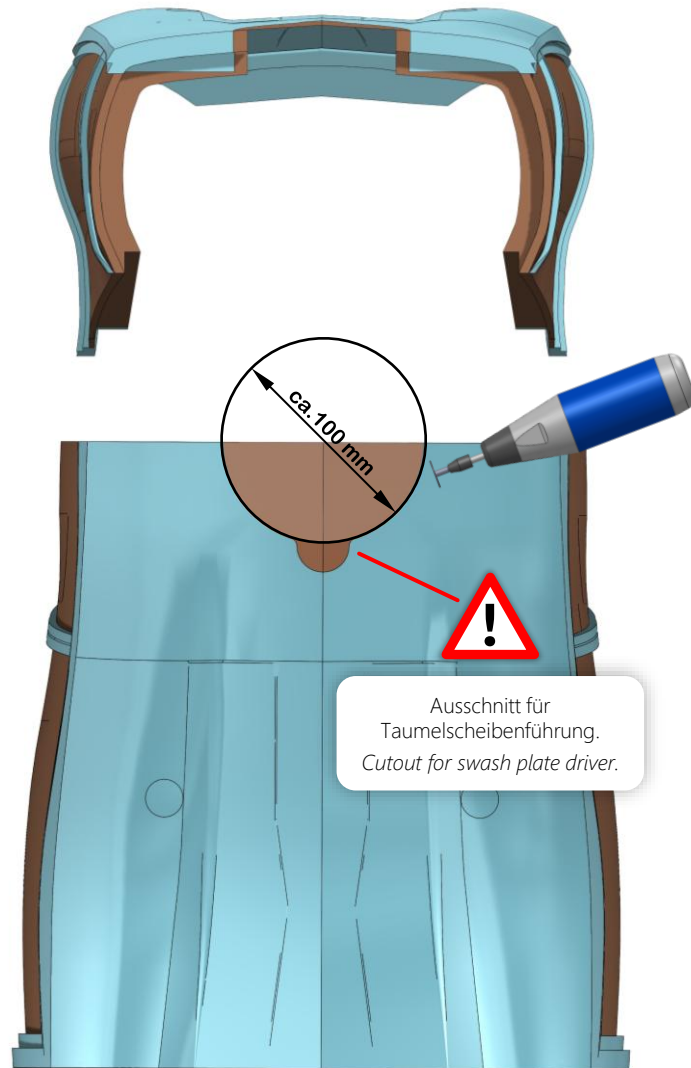
Rand (ca. 5mm) vom Scheibenrahmen stehen lassen.
Keep an edge (aprox. 5mm) of the window frame..

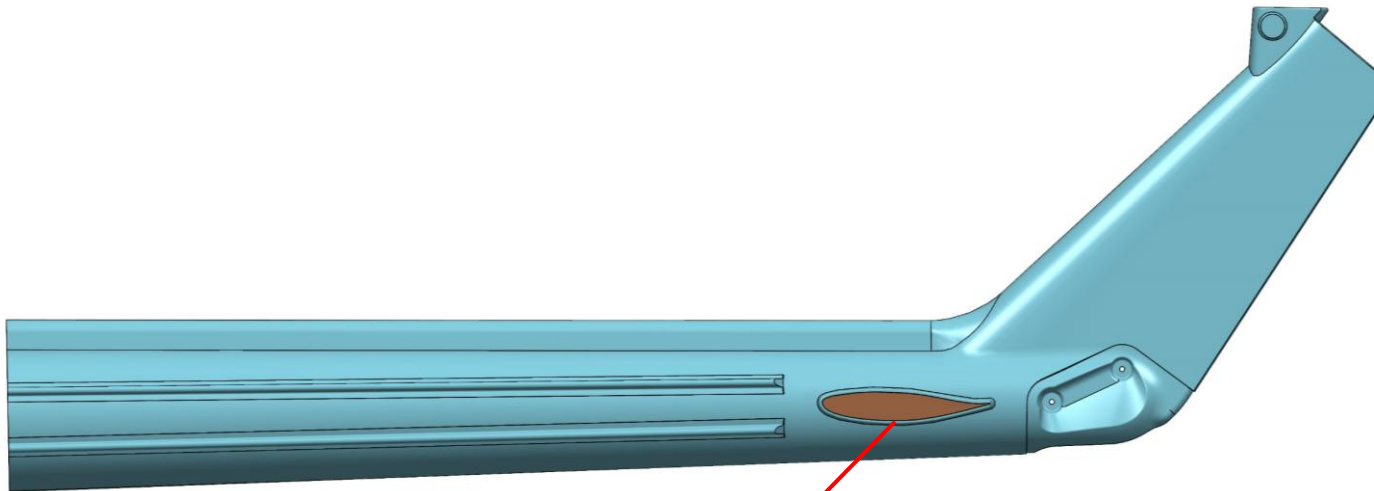


Überstehende Kanten wegtrimmen.
Trim overhanging edges.

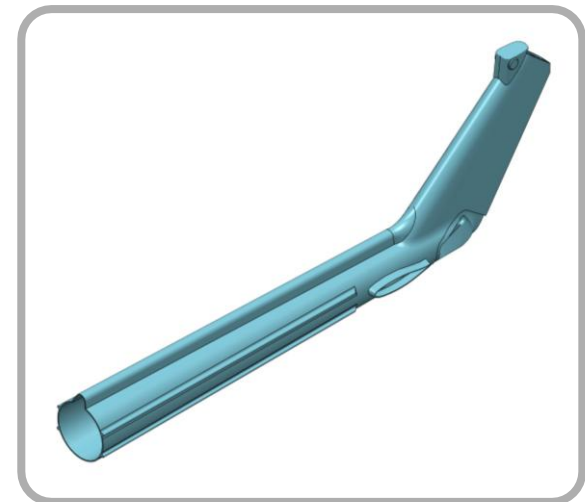








Kanten stehen lassen.
Keep the edges..

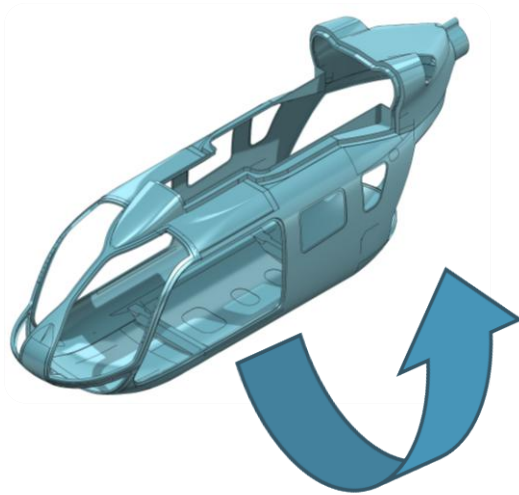




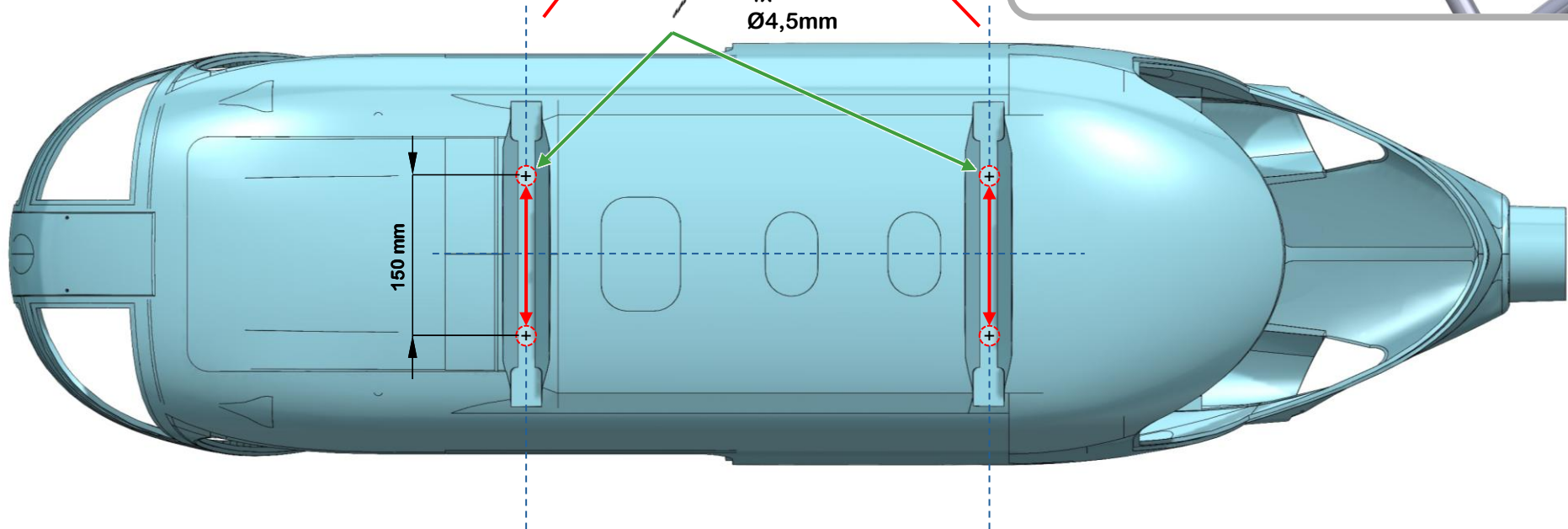
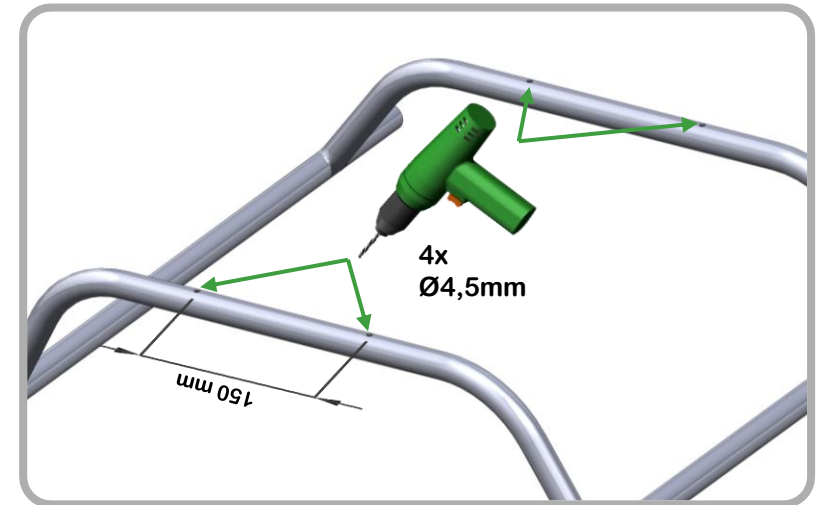
Befestigung Kufenlandegestell Fitting the Landing Skids

Ord.No. 1490

1



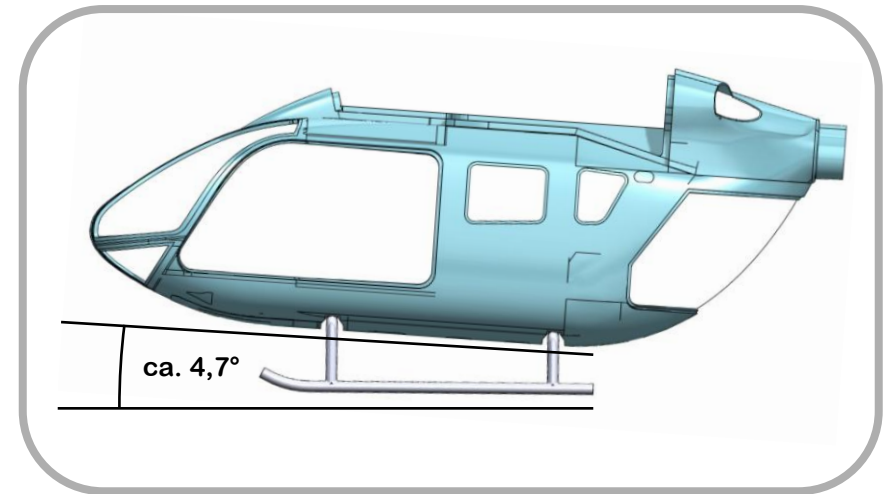
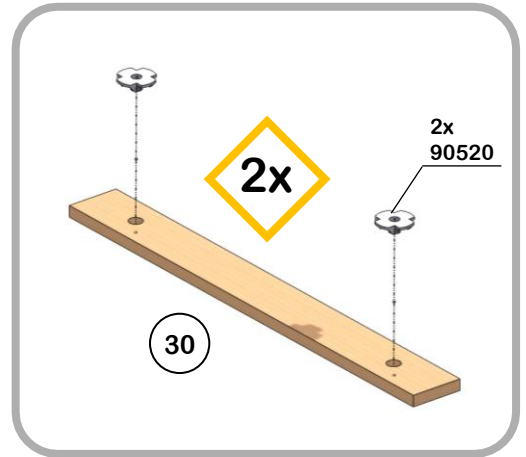
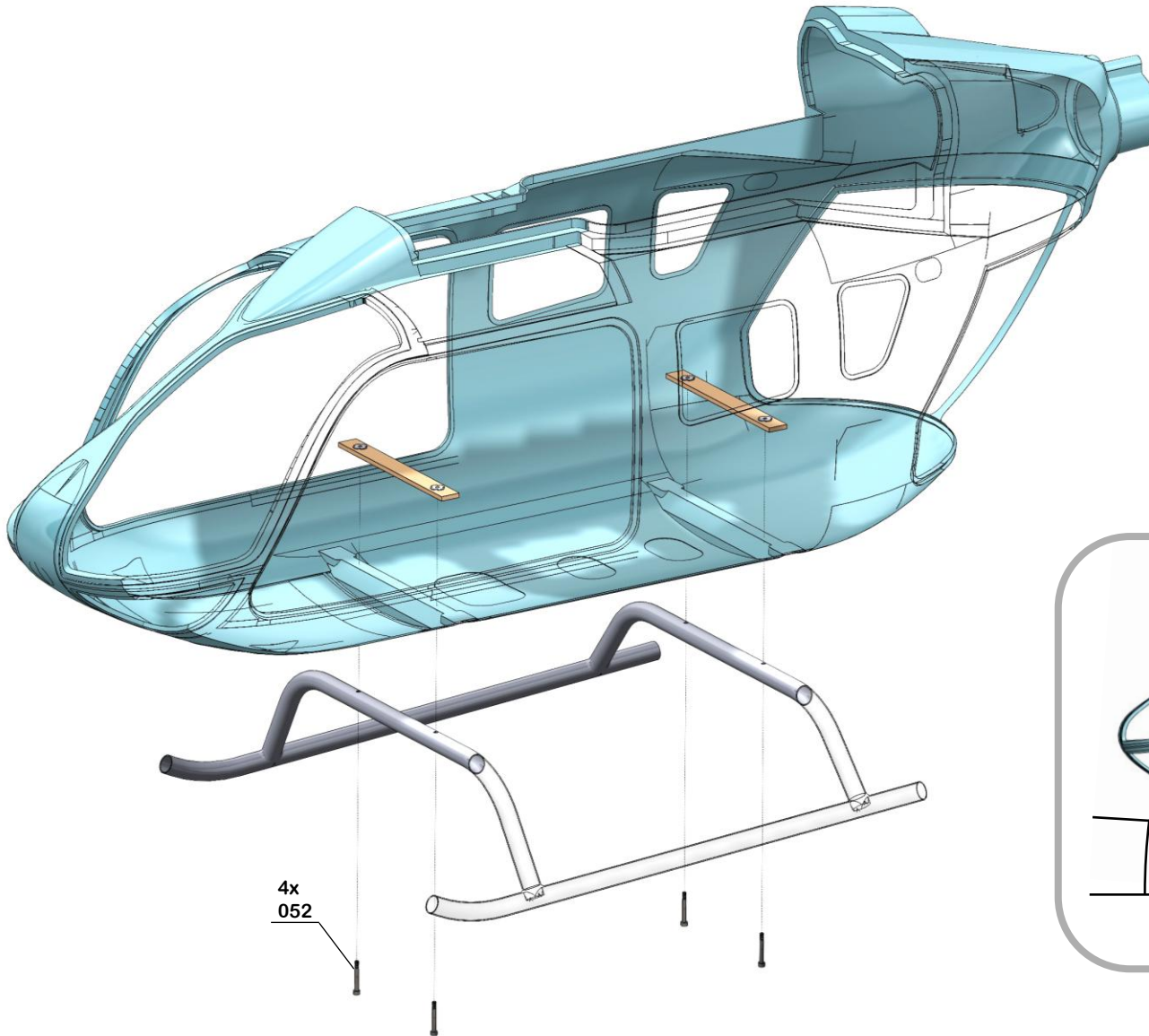
Löcher mittig von der Aussparung bohren
Drill holes in the center of the recess.

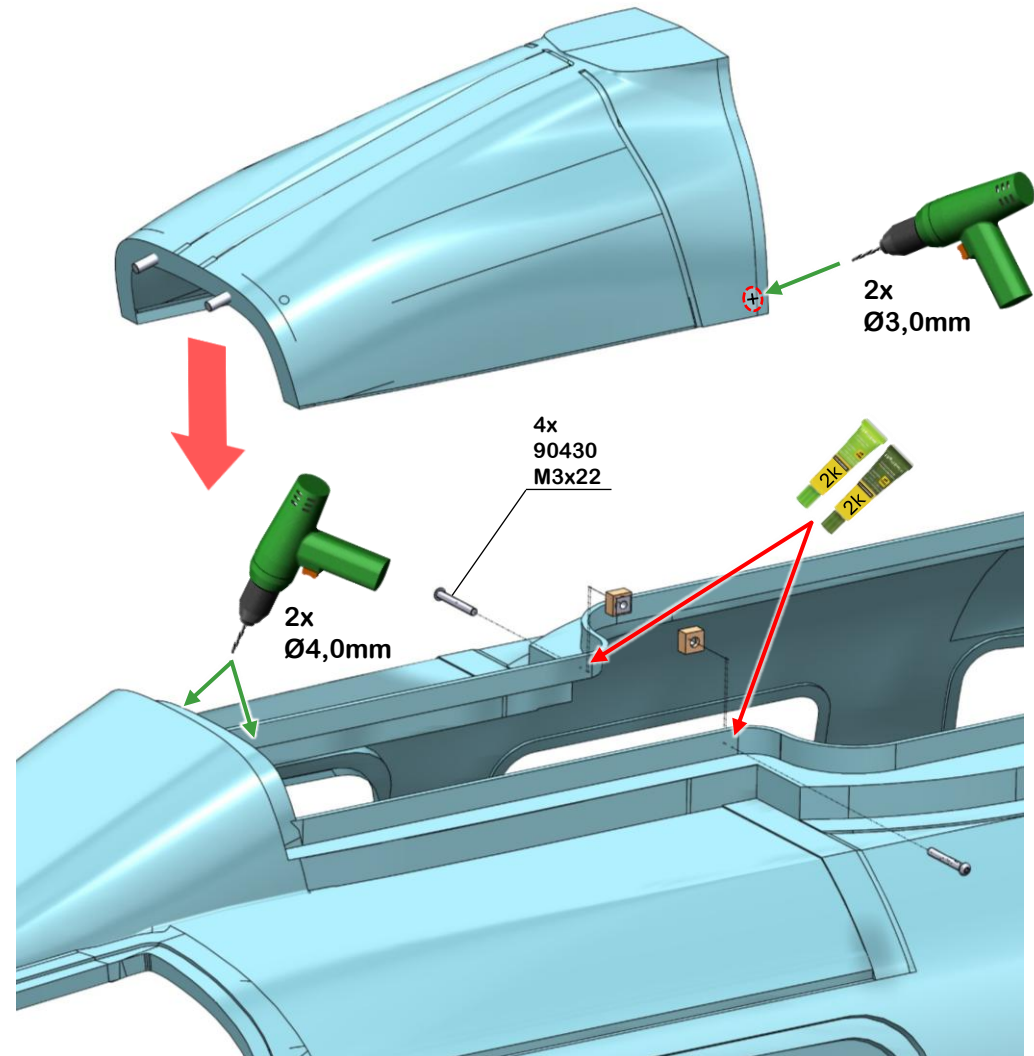
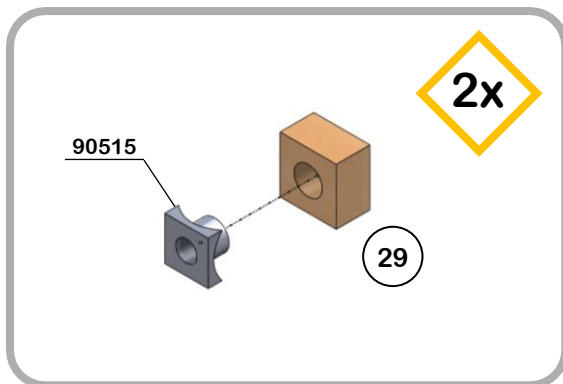
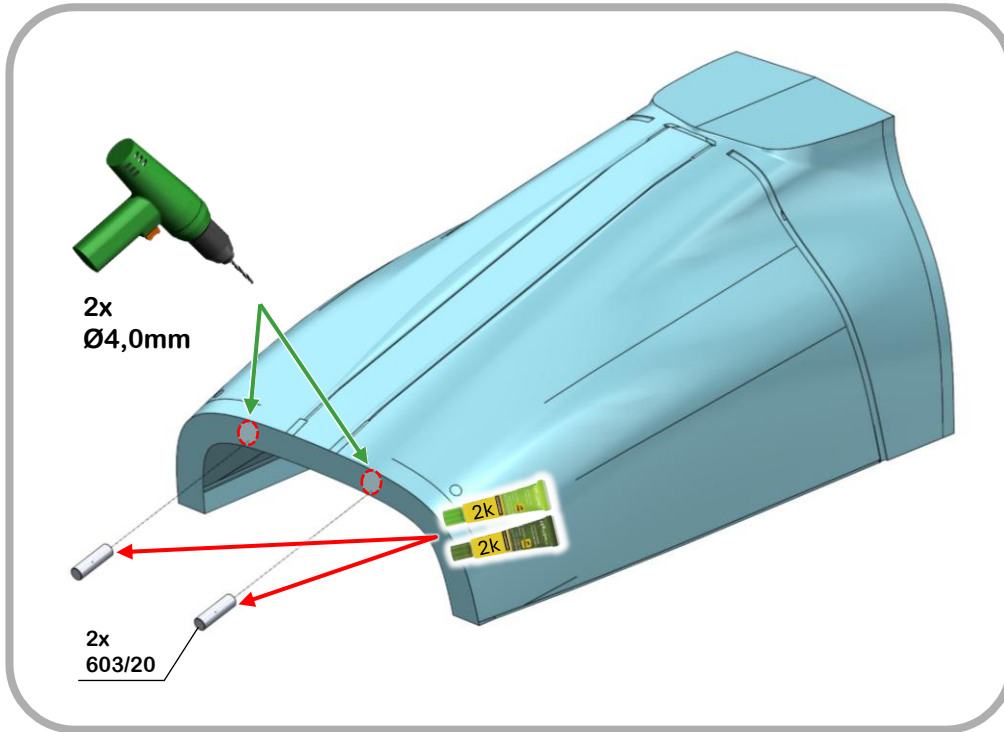


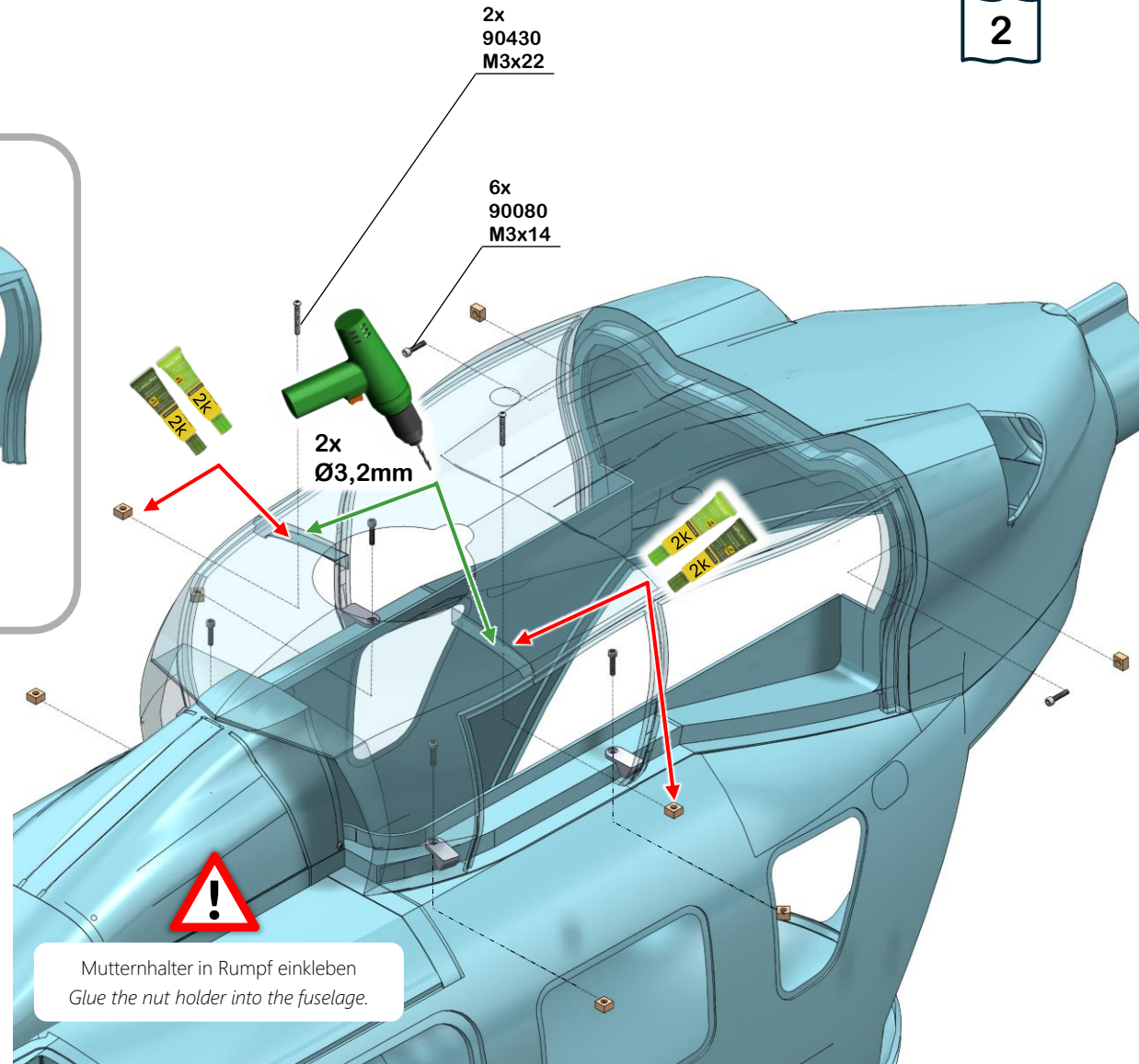
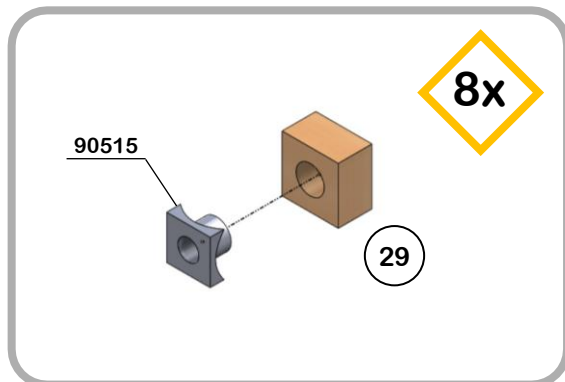
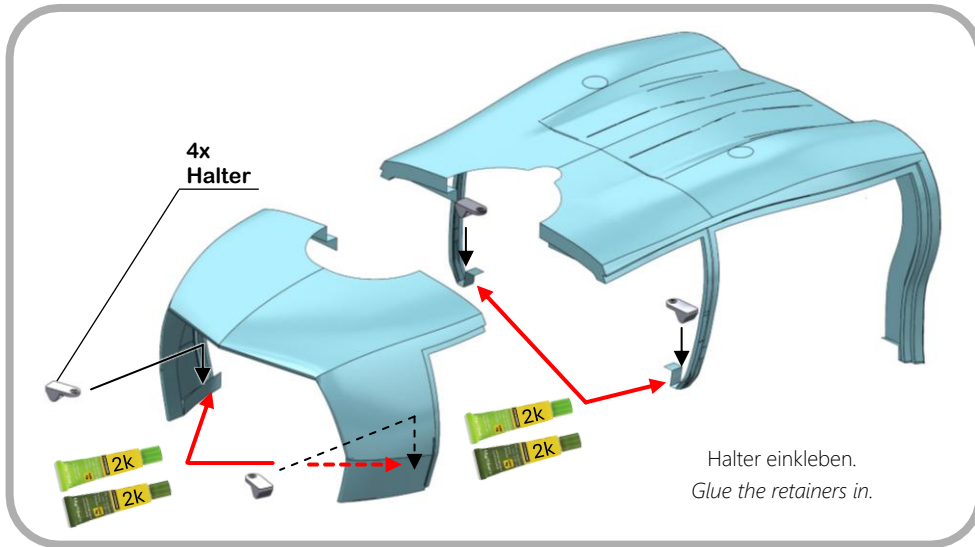
Befestigung Kufenlandegestell Fitting the Landing Skids

Ord.No. 1490

1

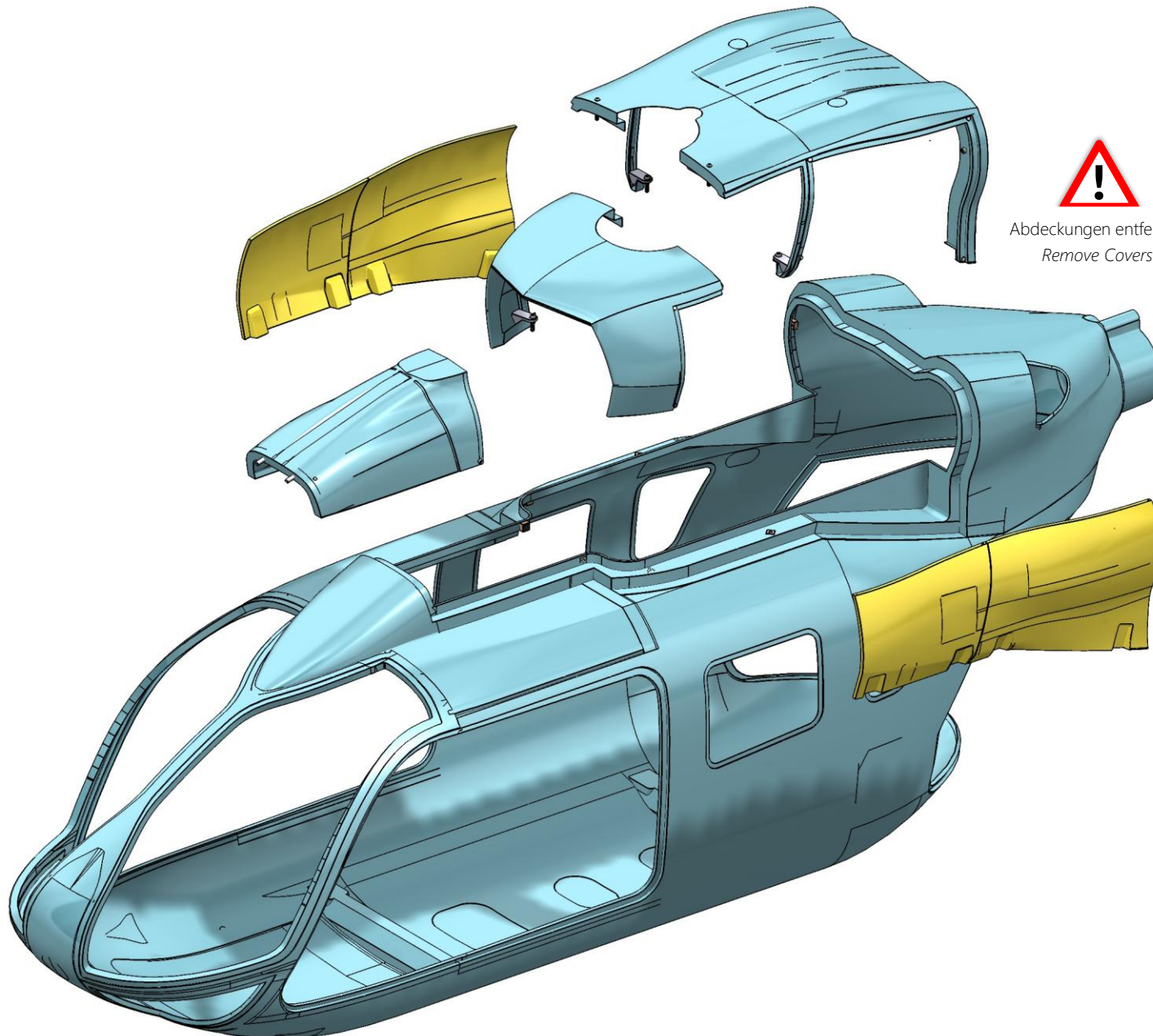




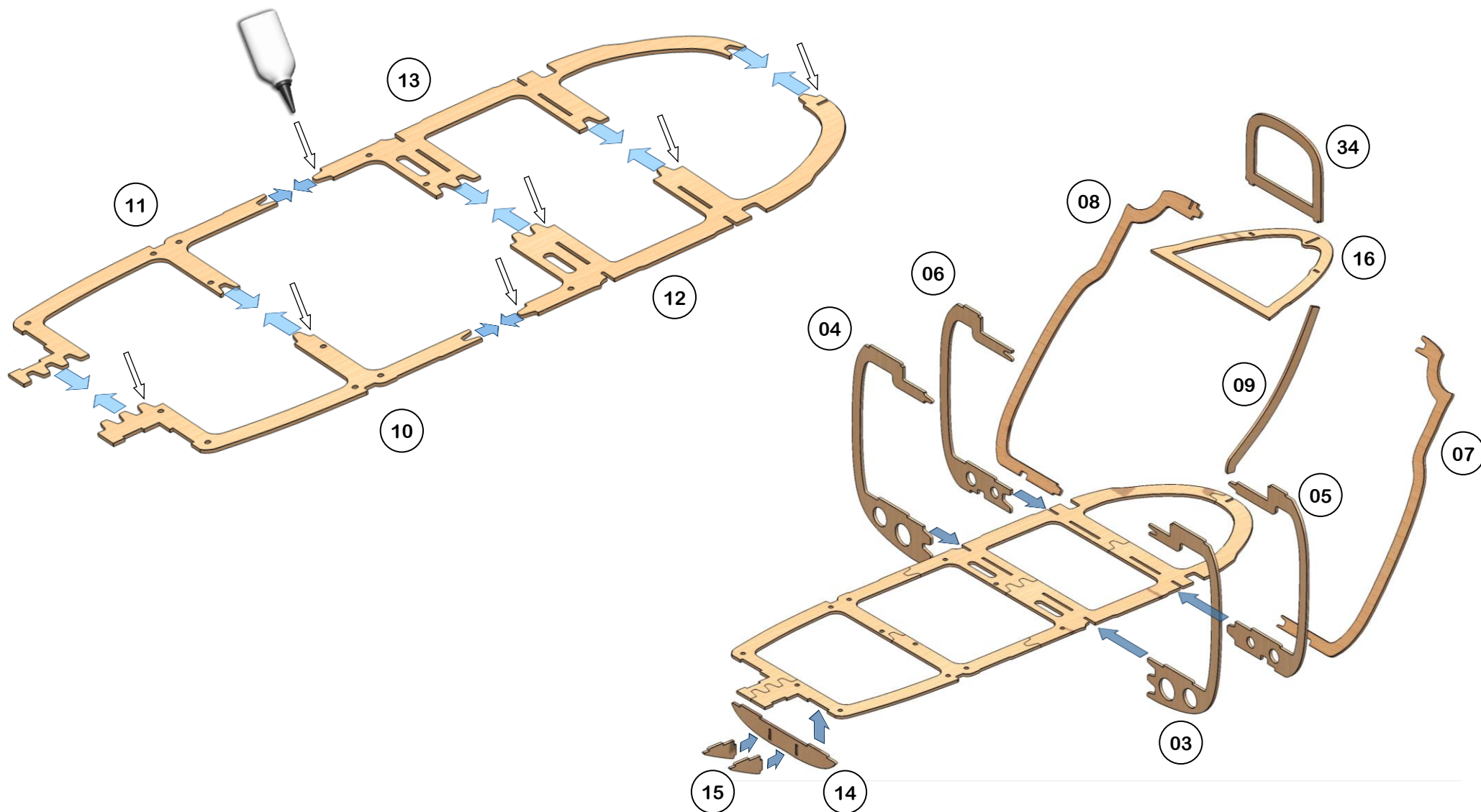


Befestigung Domhauben Fitting Dome Covers

Ord.No. 1490

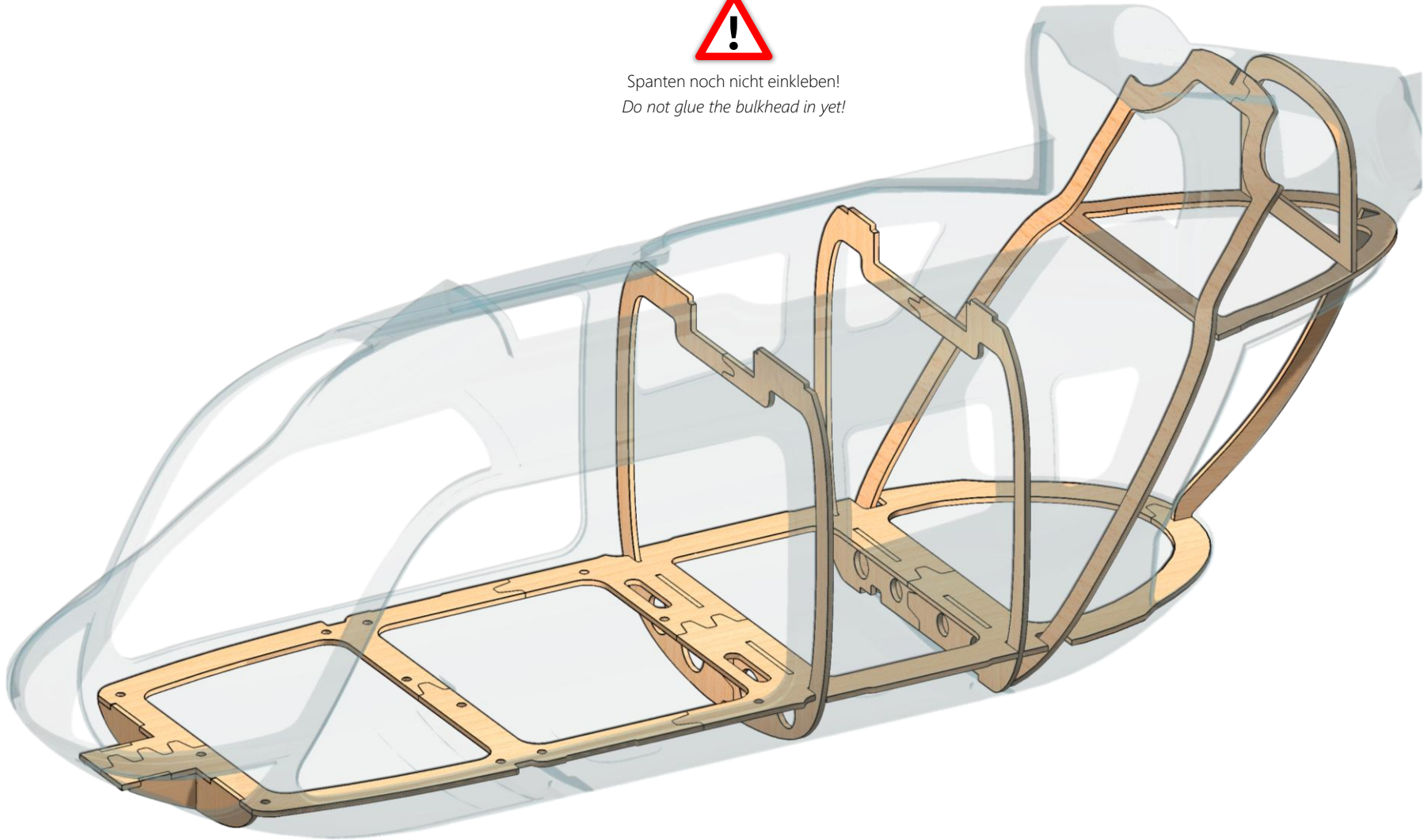


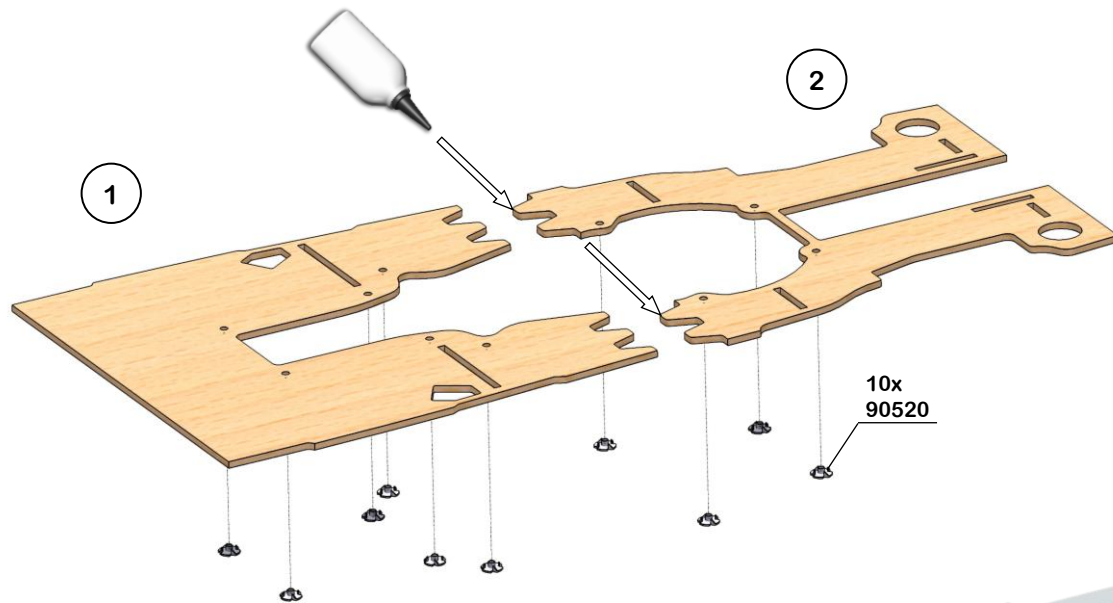
Abdeckungen entfernen.
Remove Covers.



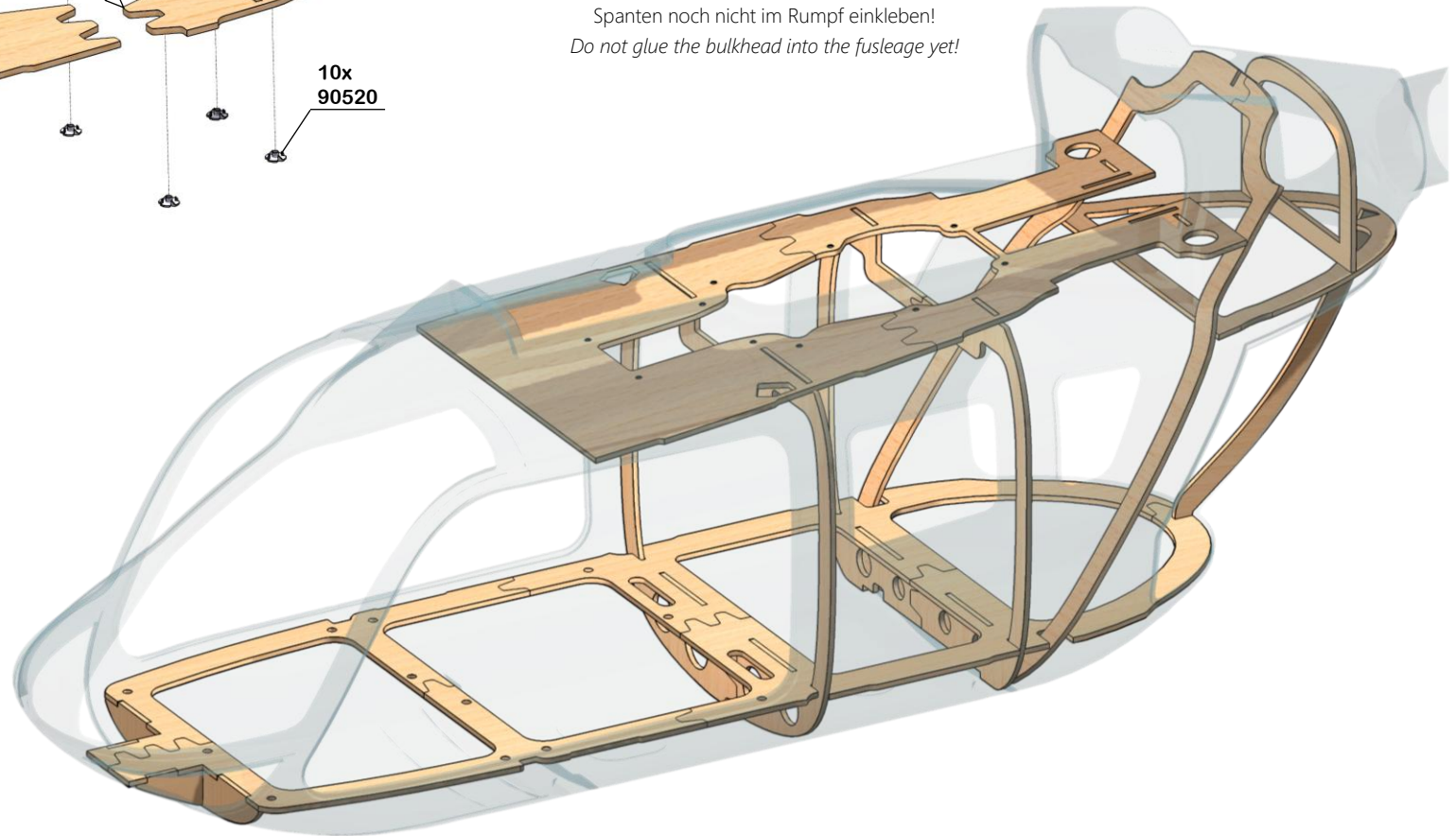


Spanten noch nicht einkleben!
Do not glue the bulkhead in yet!

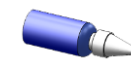
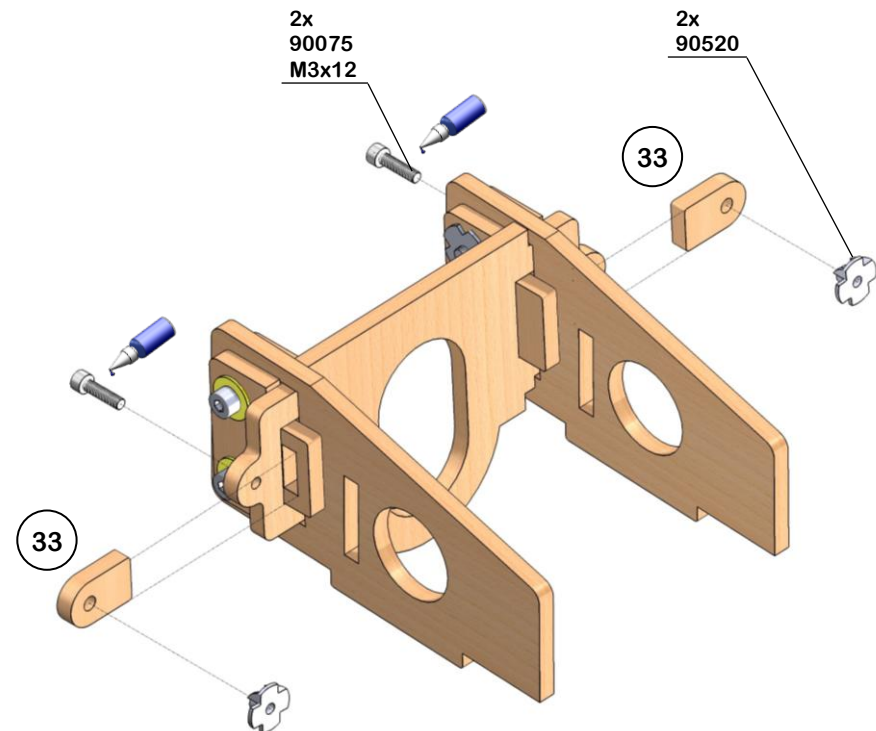
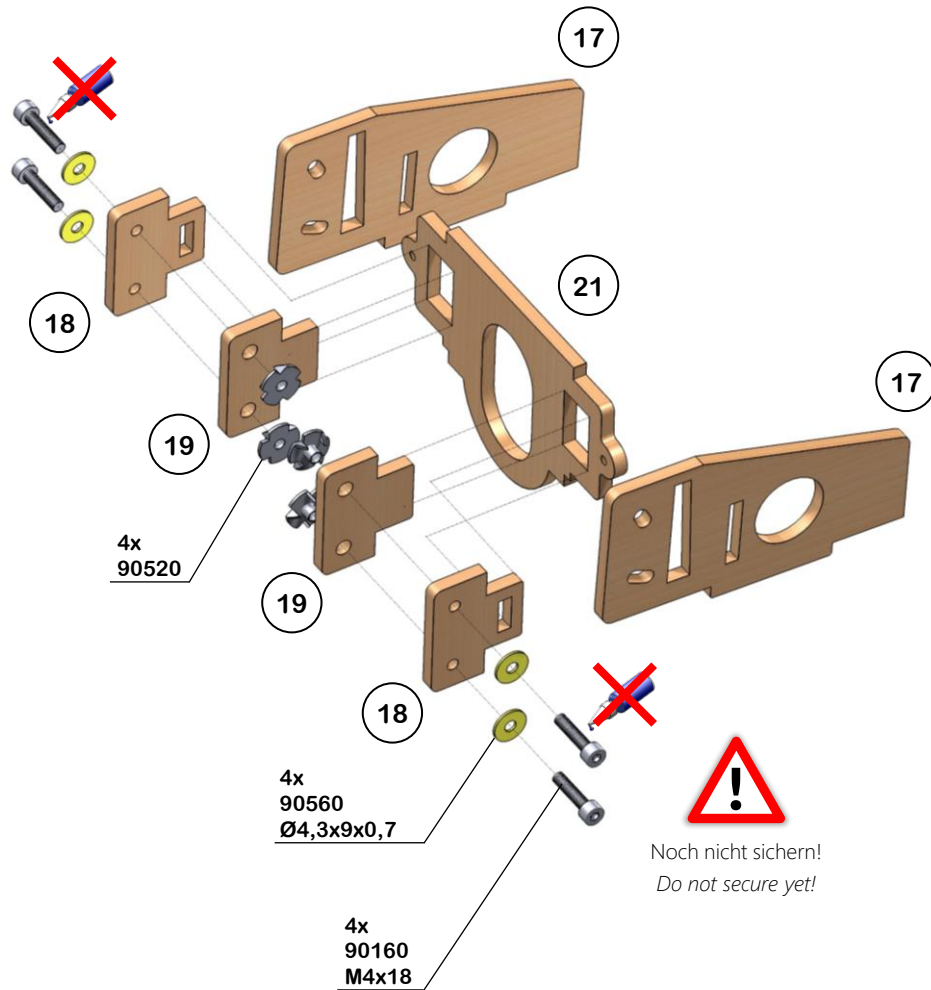


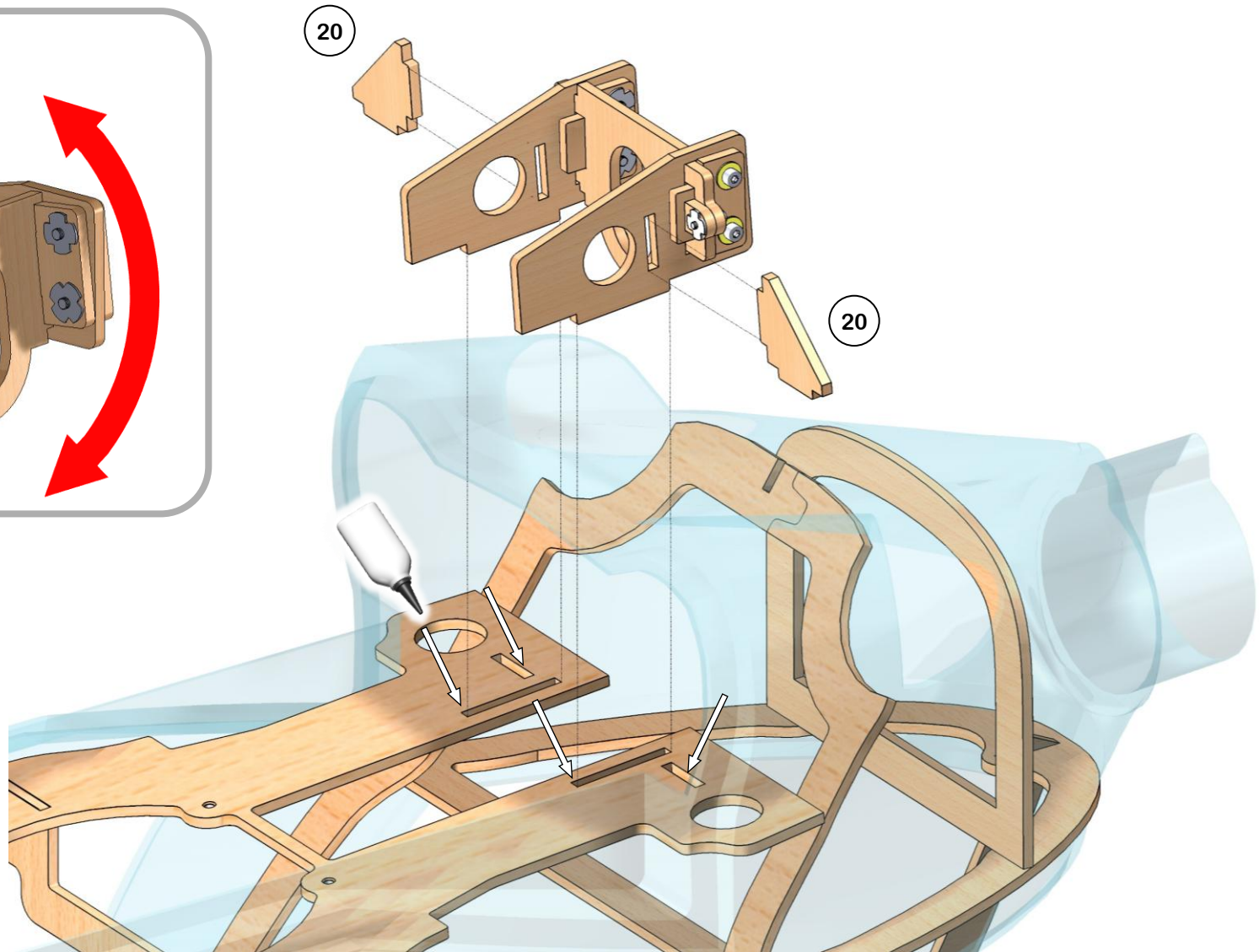
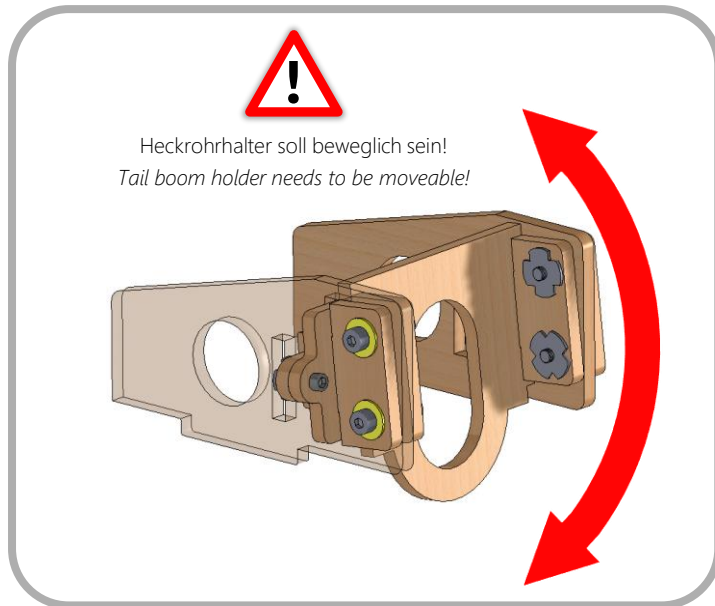


Spanten noch nicht im Rumpf einkleben!
Do not glue the bulkhead into the fuselage yet!



**Holzleim
wood glue**





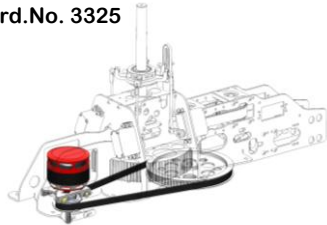
Ord.No. 1002/1200



Elektro-Mechanik, Rotorwelle, Servos,
Antirebsset und Heckabtriebsset nicht
enthalten!

*Electric-Mechanics, rotor shaft, servos,
propulsion kit and tail rotor propulsion
kit are not included with the kit!*

Ord.No. 3325

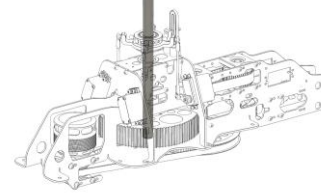


10x
90147
M4x12

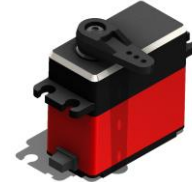
6x
90560
Ø4,3x9x0,7

x10

Ord.No. 149/35

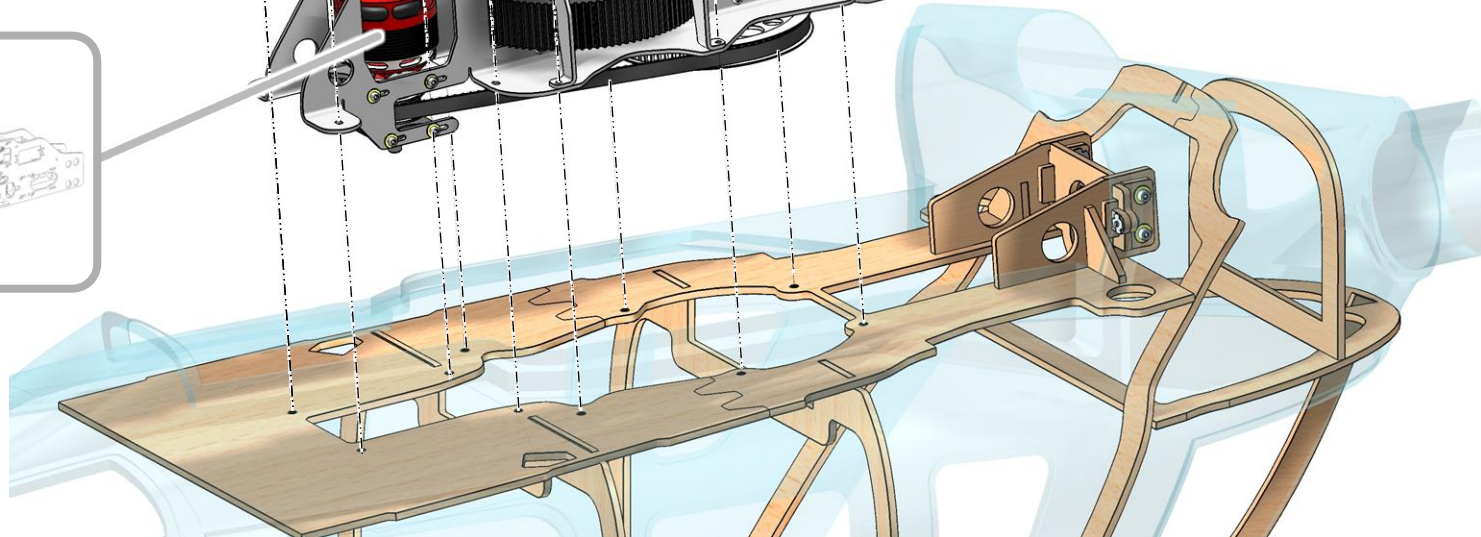
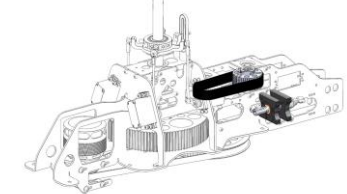


Ord.No. 5157

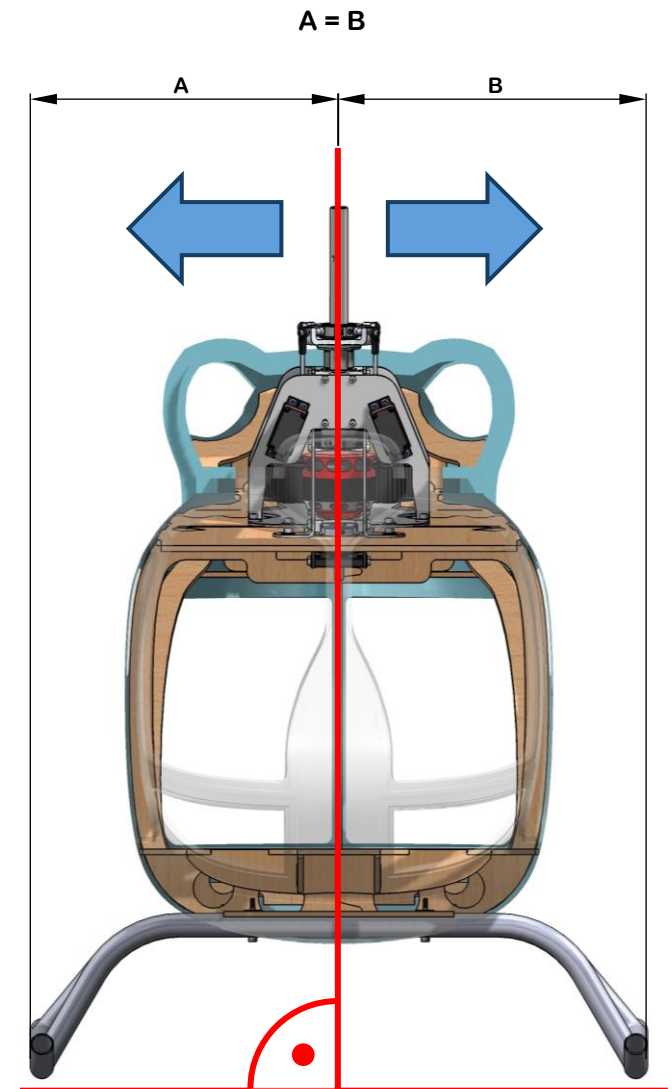
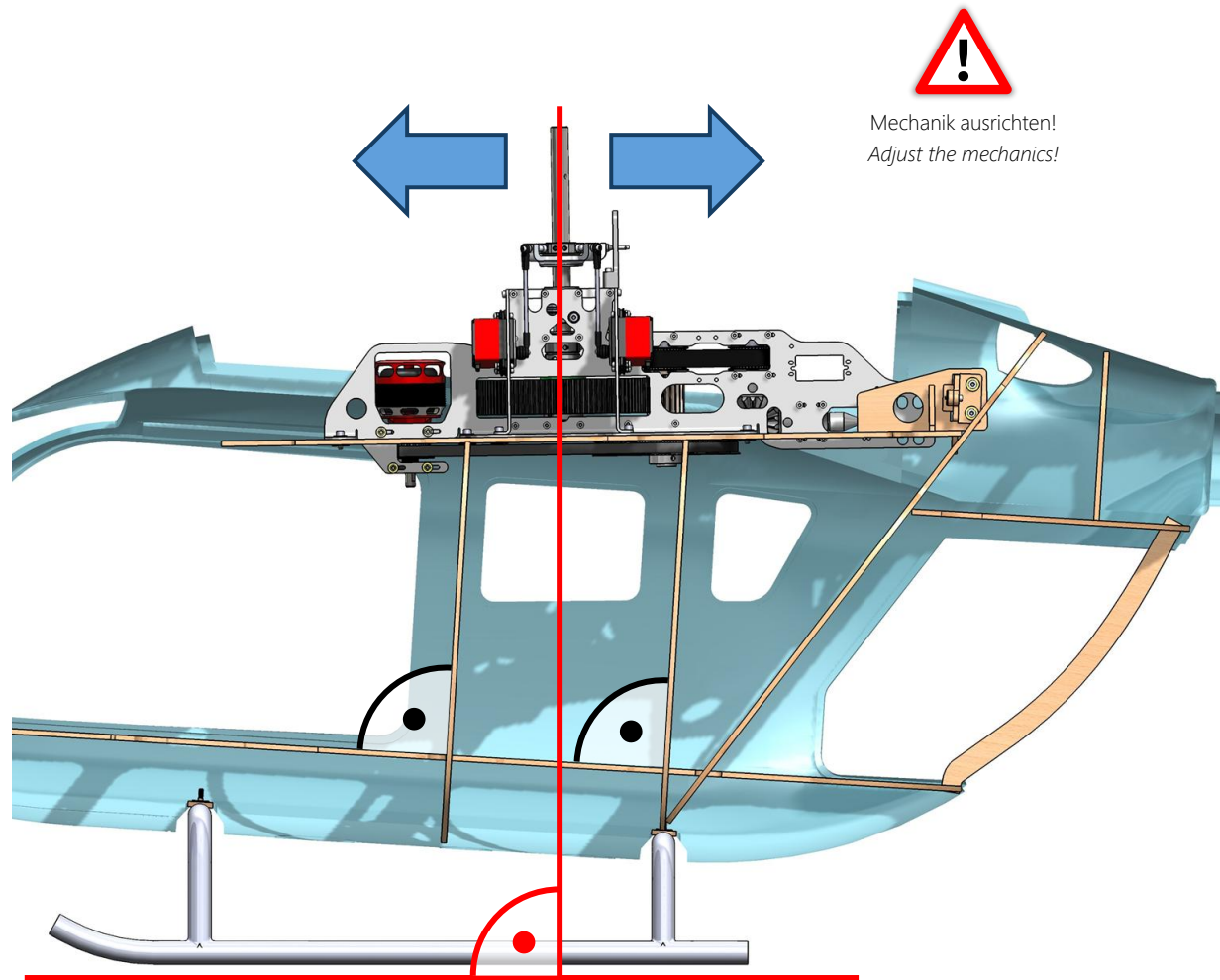


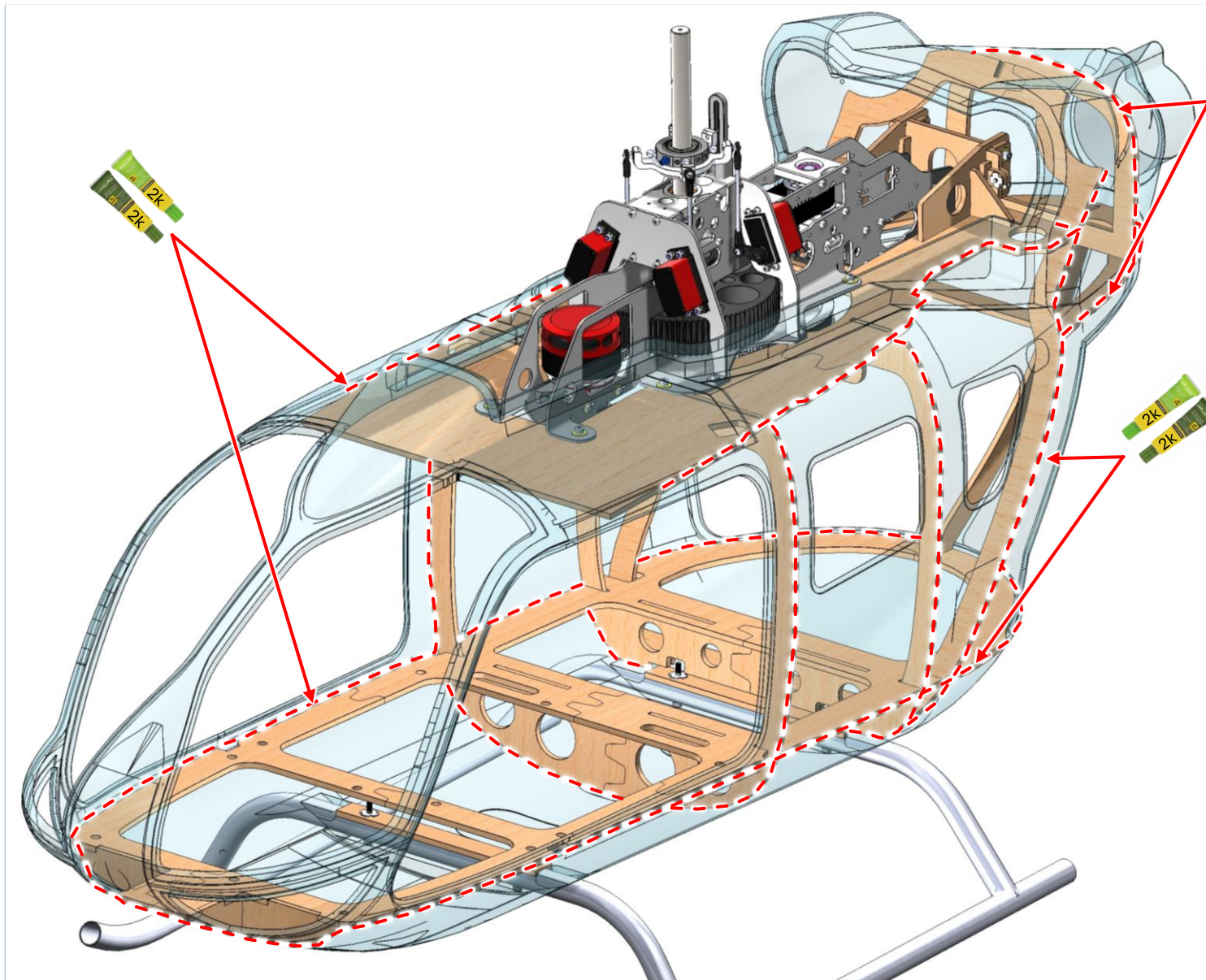
4x

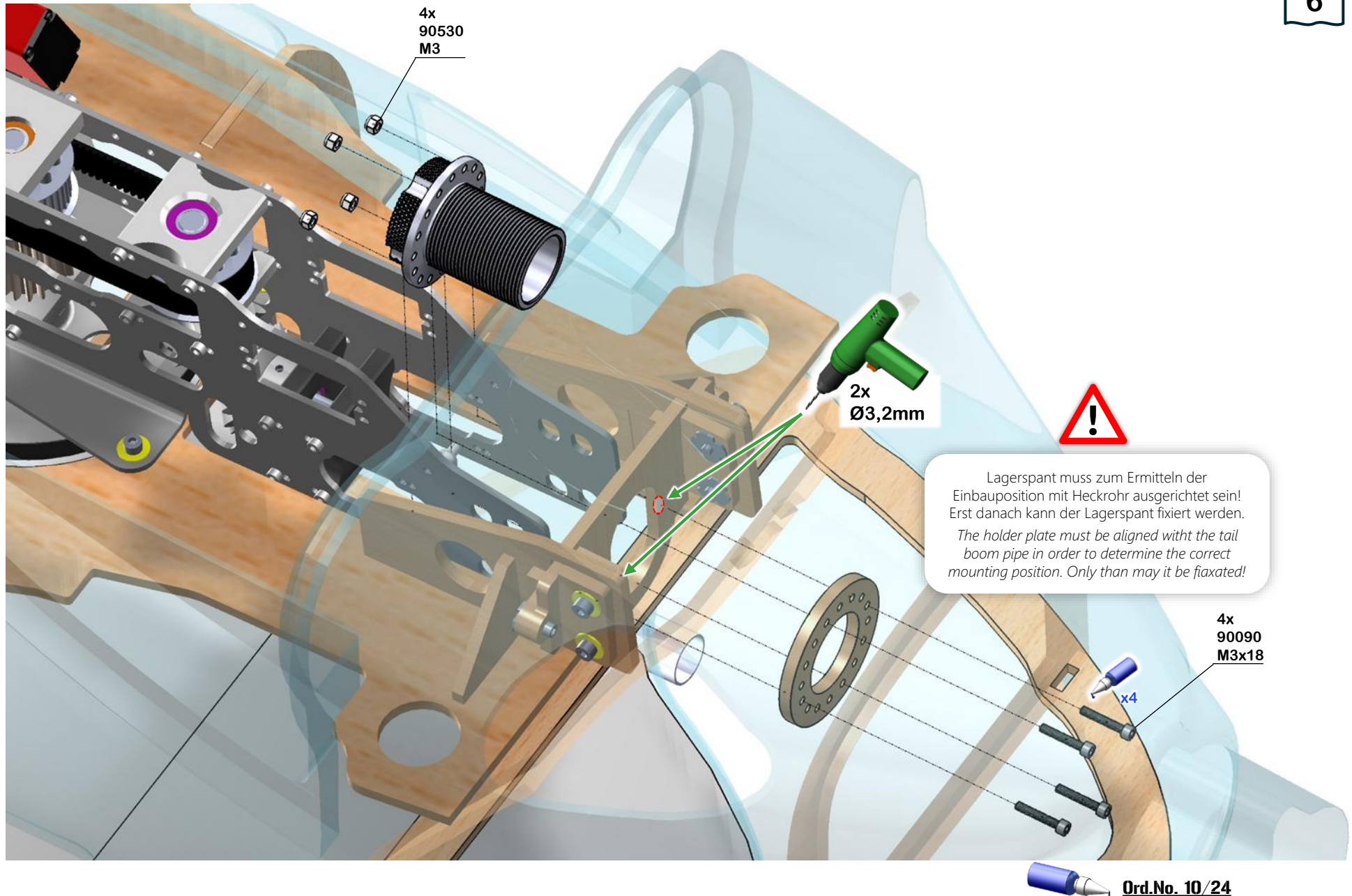
Ord.No. 512/101

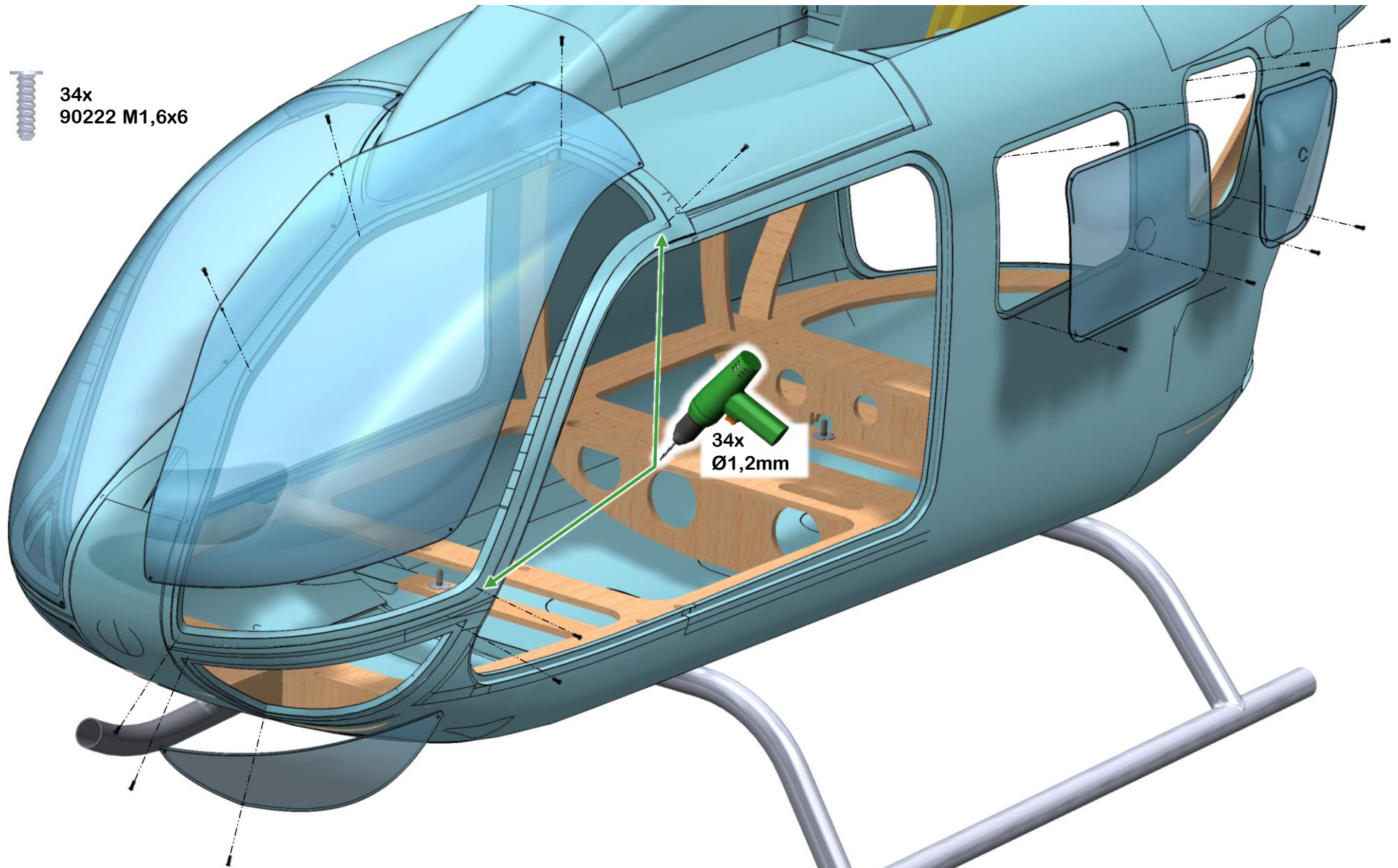


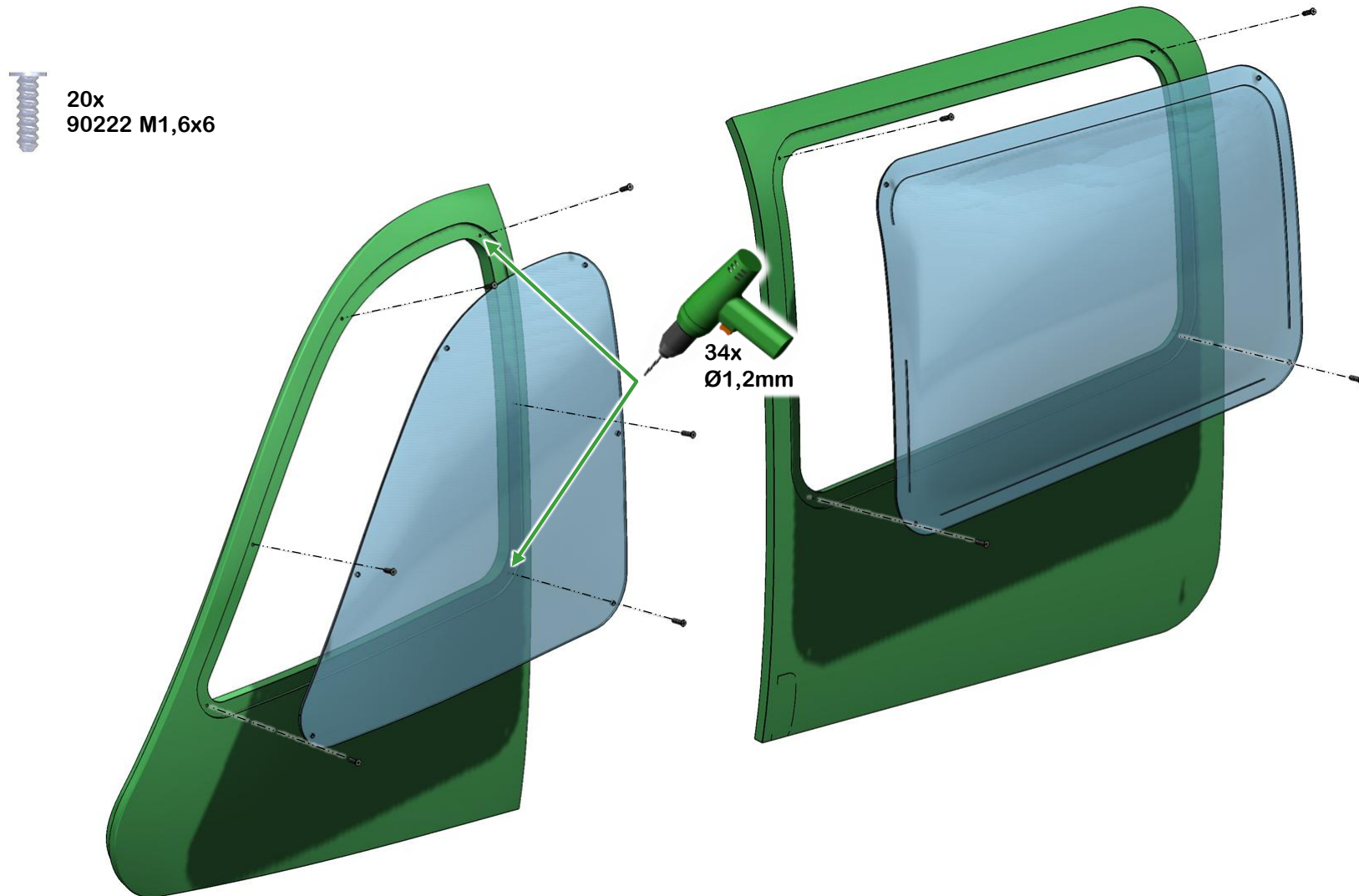
Ord.No. 10/24









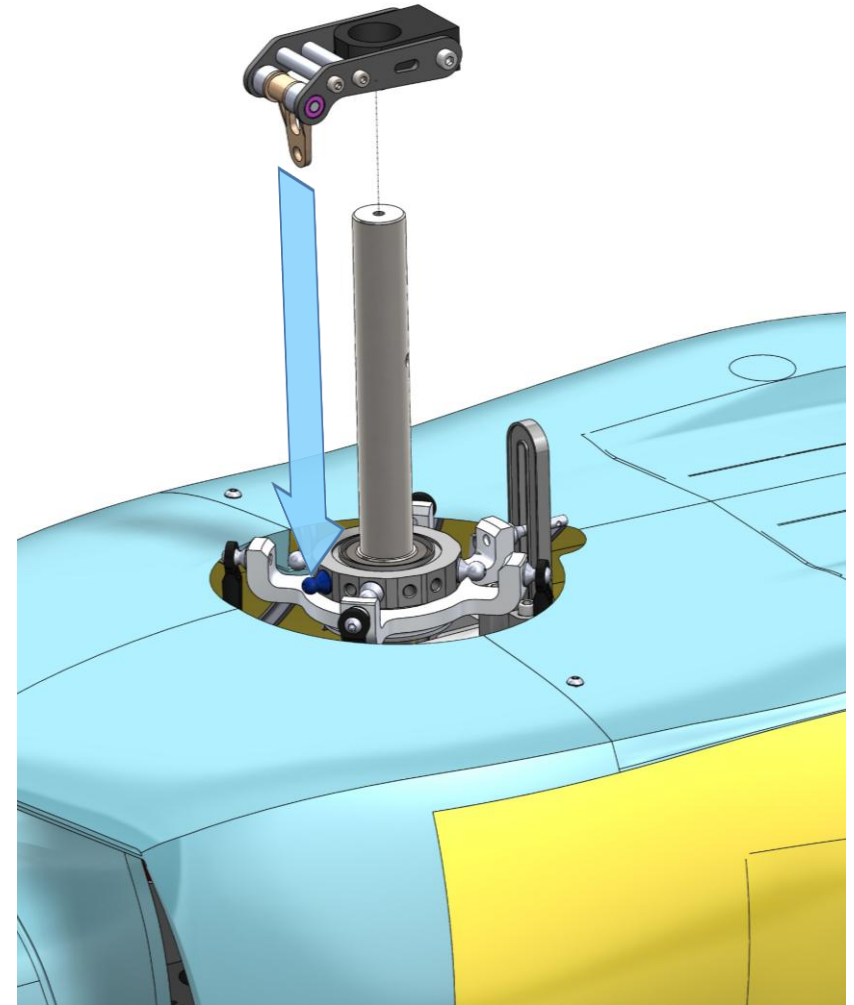
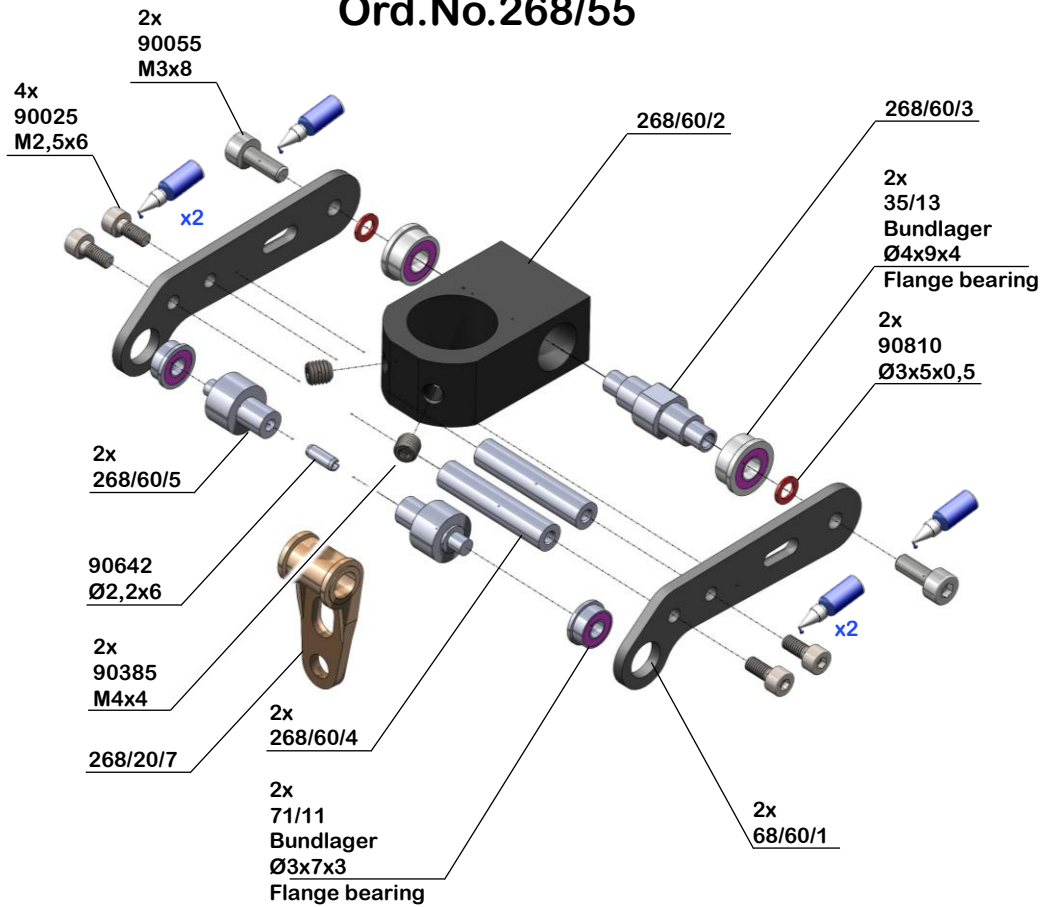


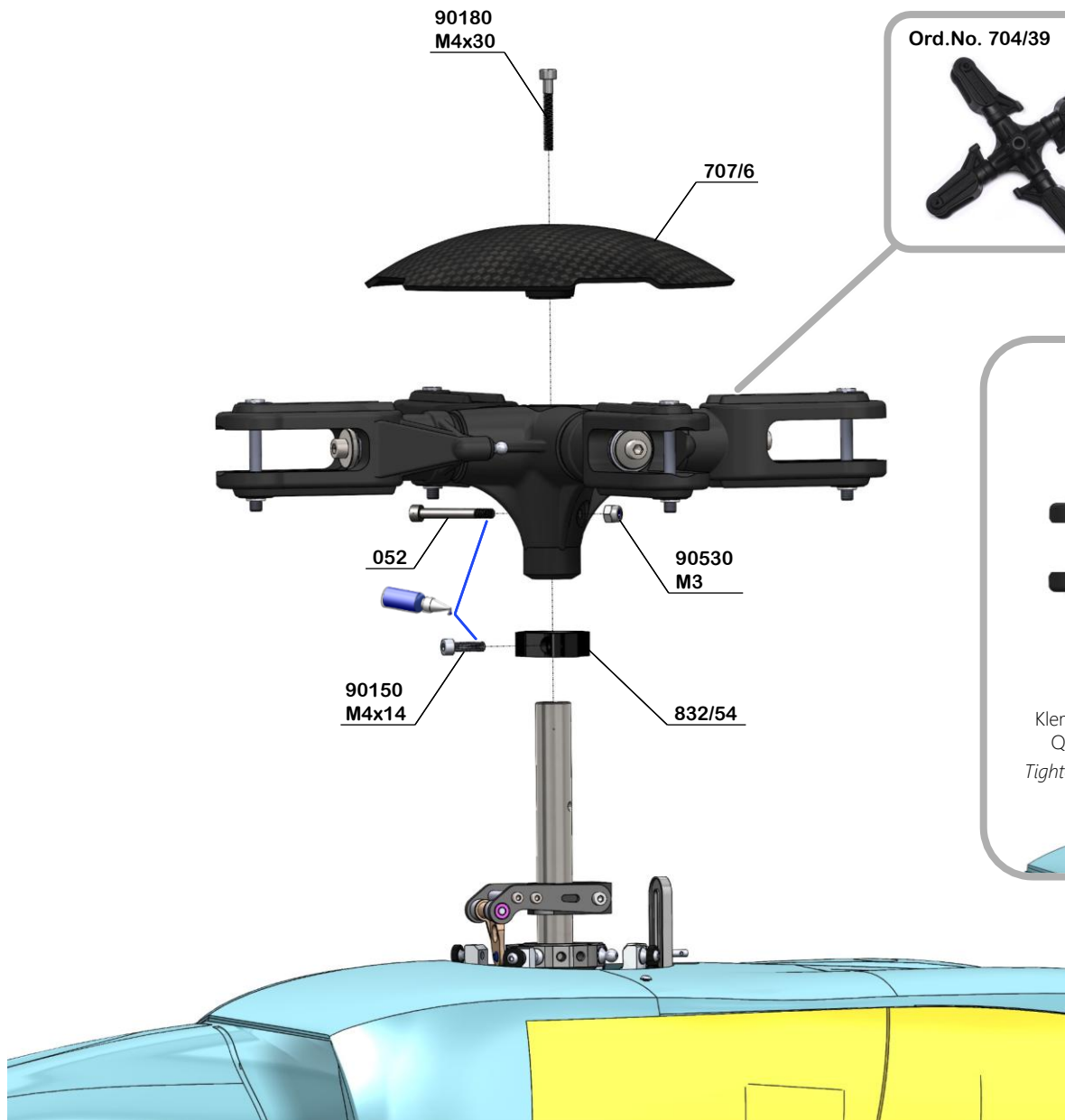




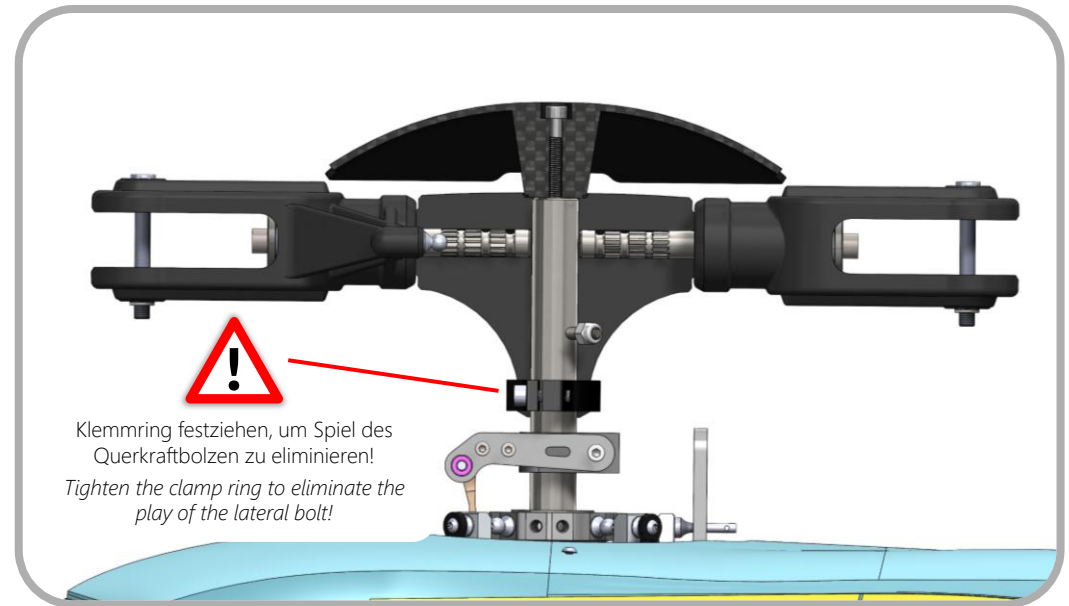
Nicht im Rumpfbausatz enthalten.
Not included with the kit!

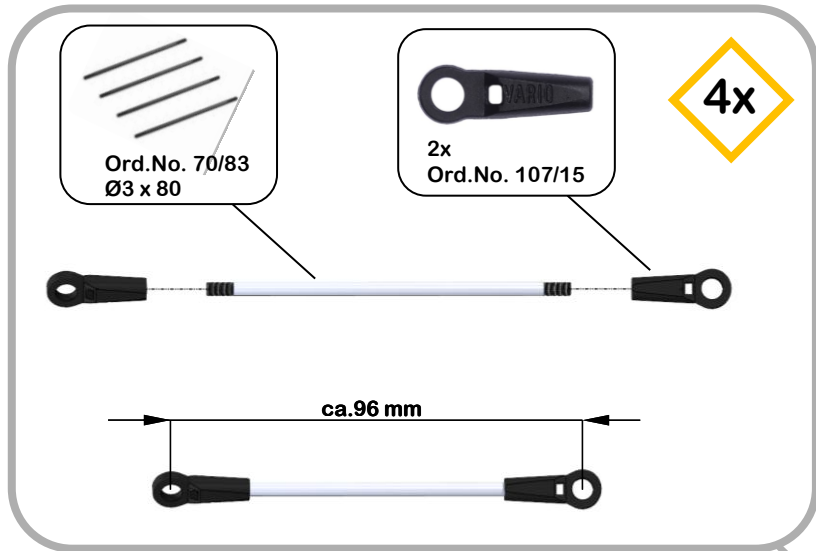
Ord.No.268/55



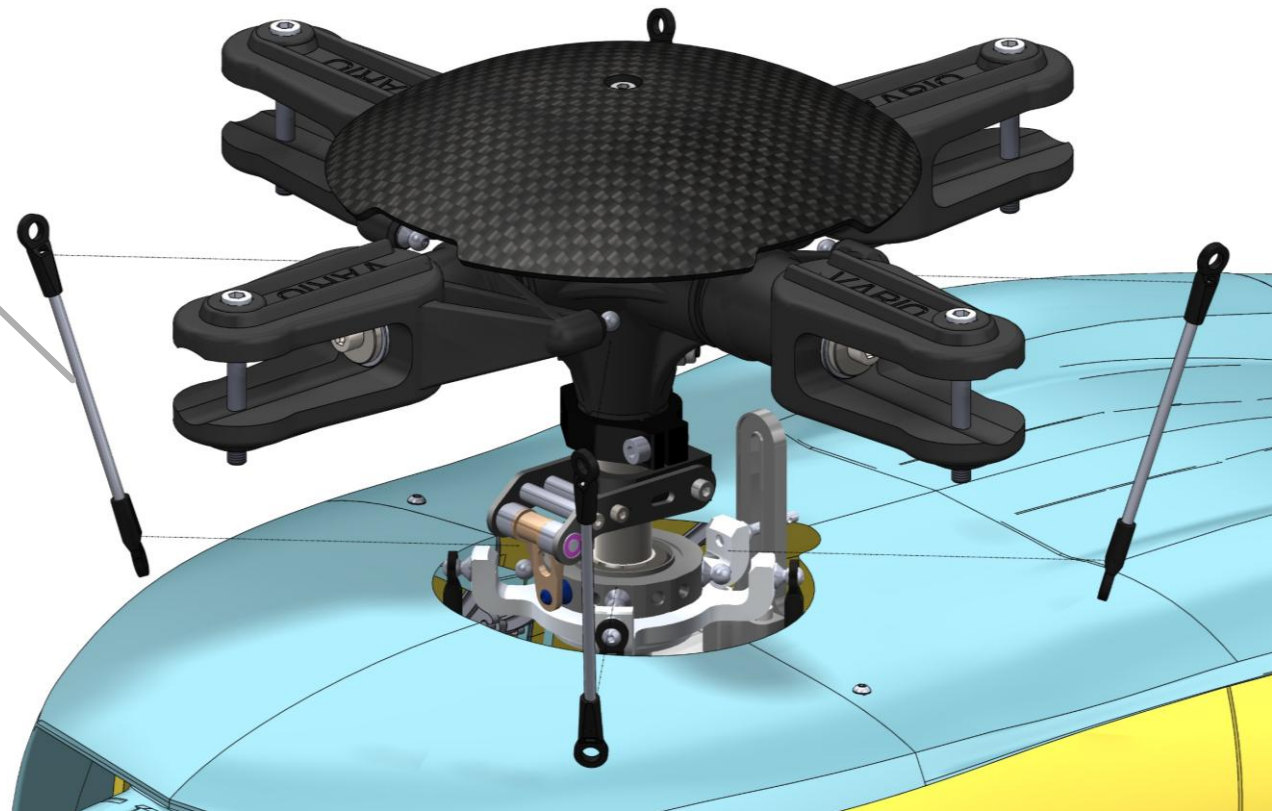
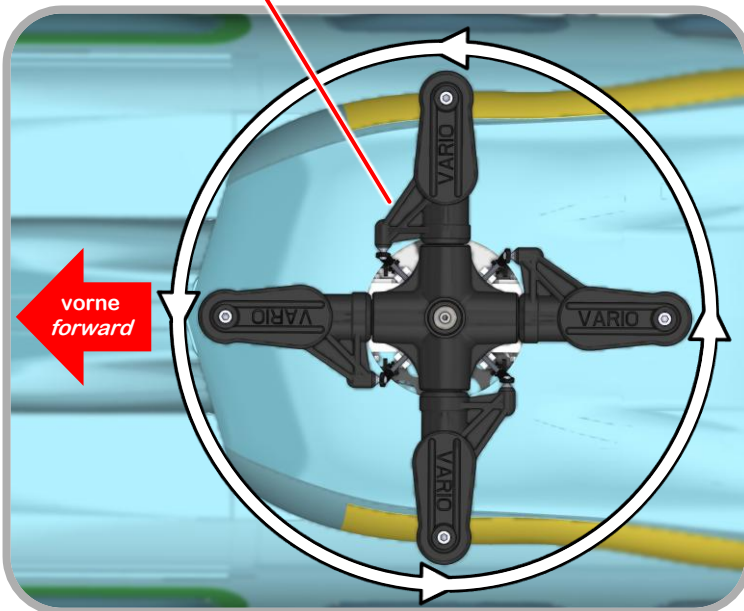


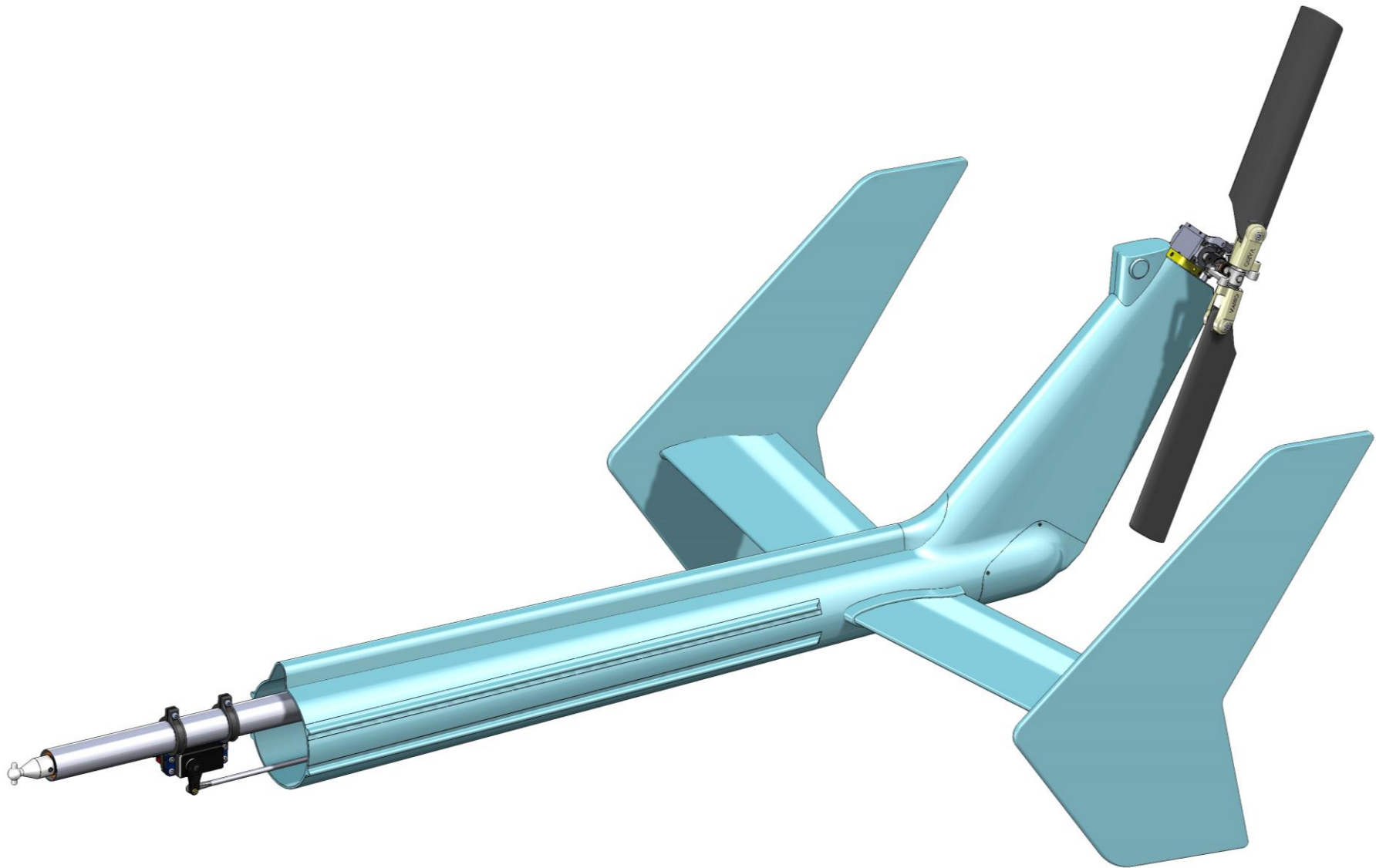
Ord.No. 704/39

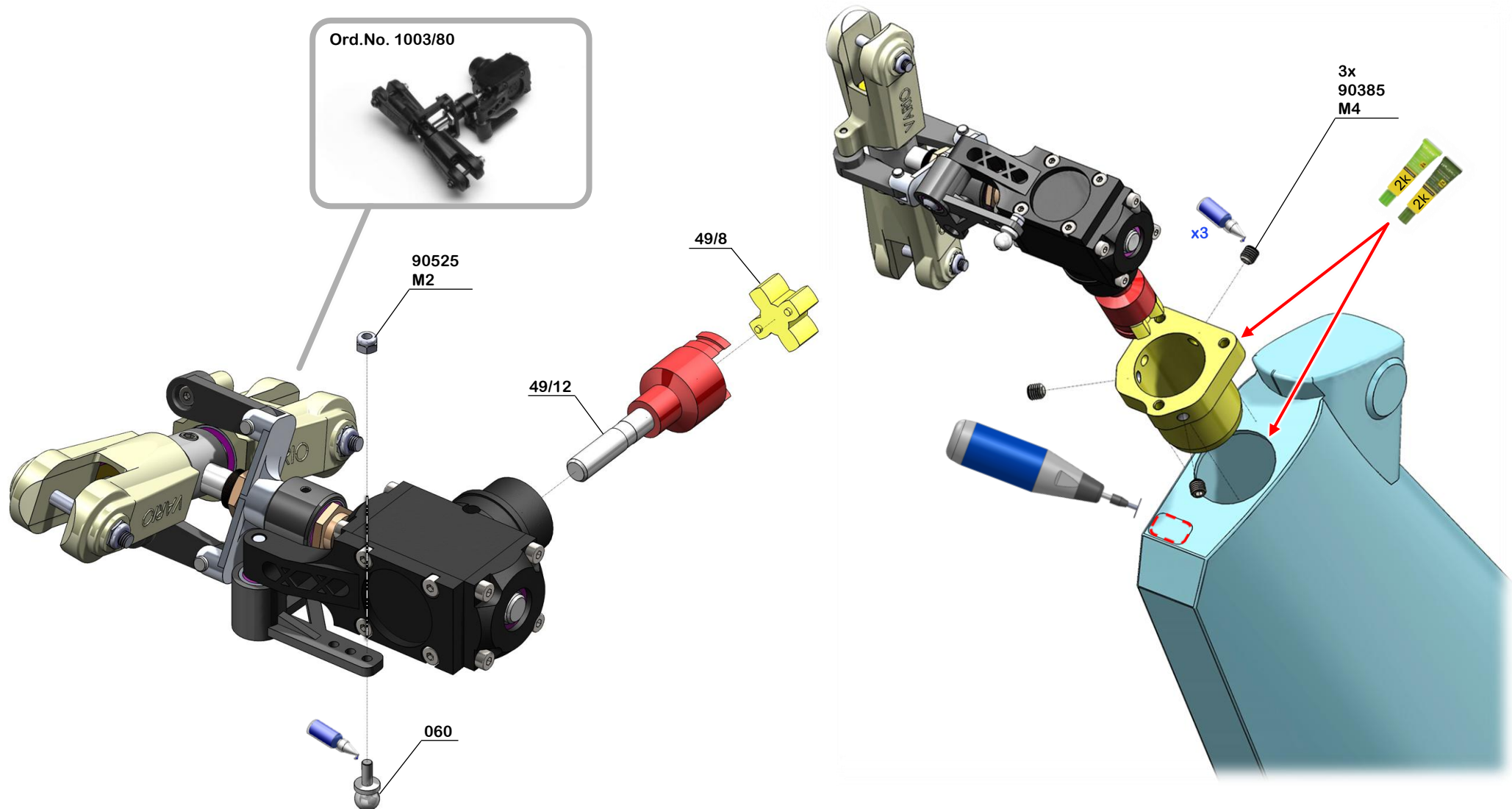




Ausrichtung beachten!
Mind the orientation!

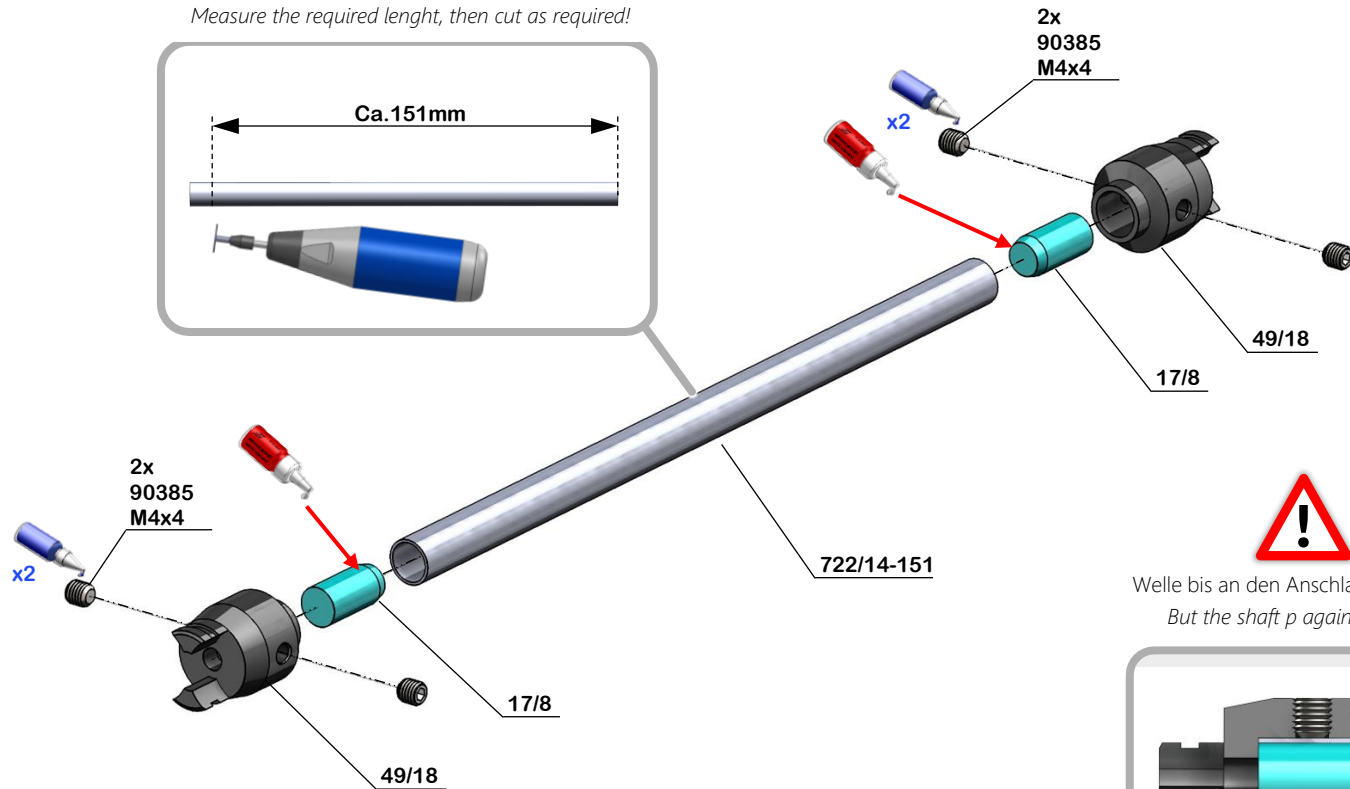
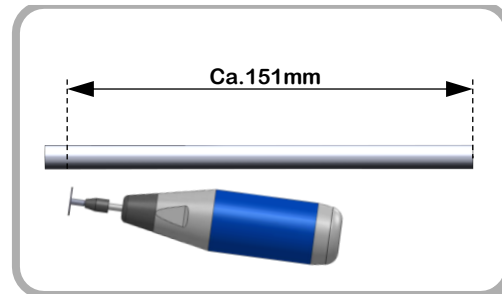




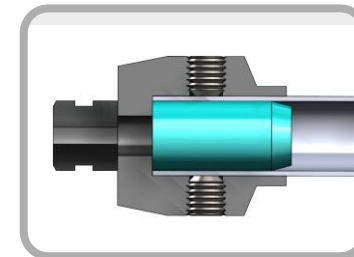




Benötigte Länge ausmessen, dann ggf. zuschneiden!
Measure the required length, then cut as required!



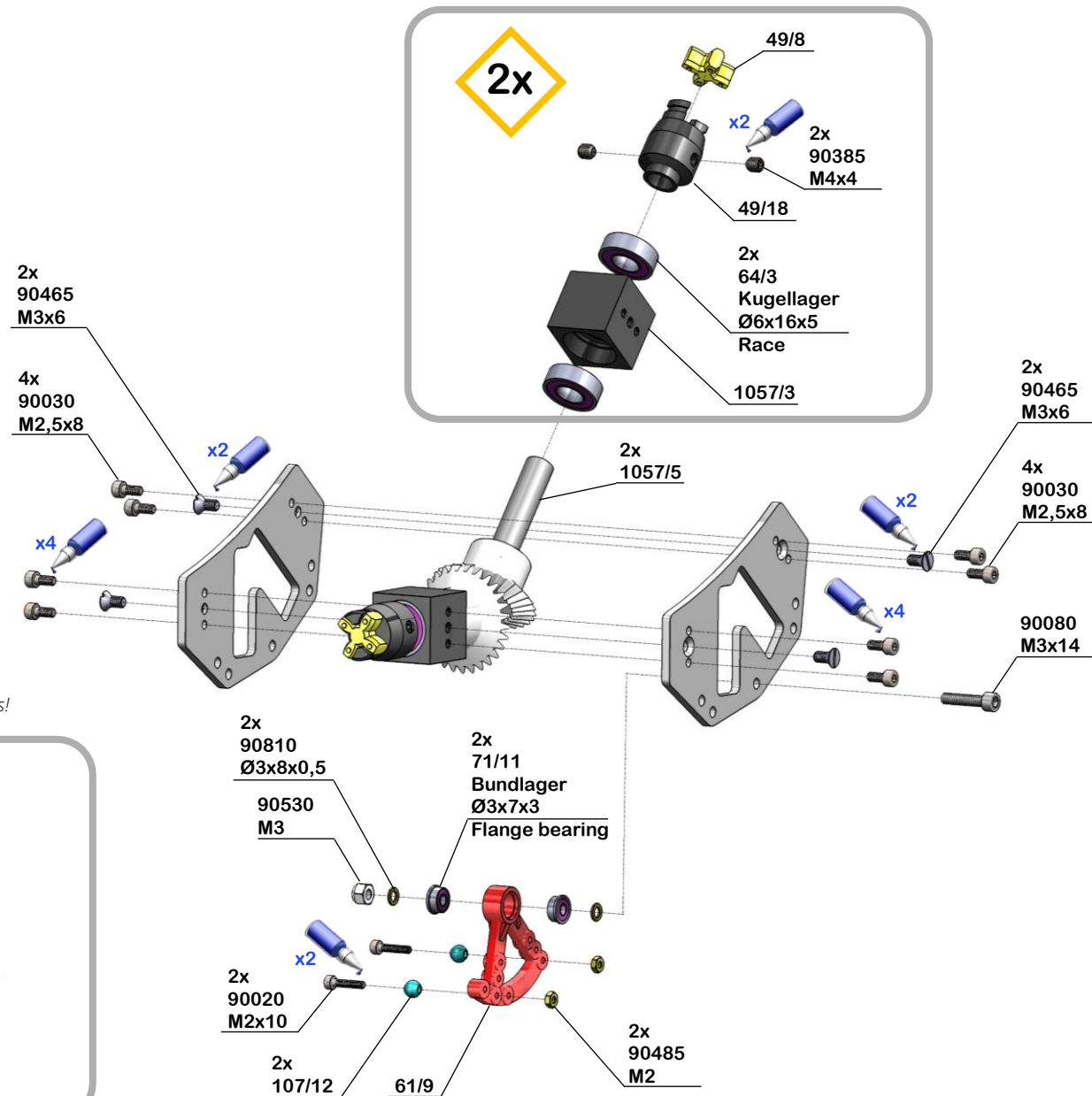
Welle bis an den Anschlag einschieben!
But the shaft p against the stop!



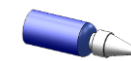
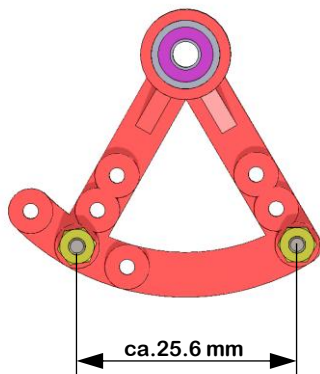
Befestigung Heckgetriebe Fitting Tail Rotor Gear

Ord.No. 1490

3



Lochabstände beachten!
Mind the distance between the holes!

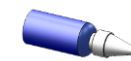
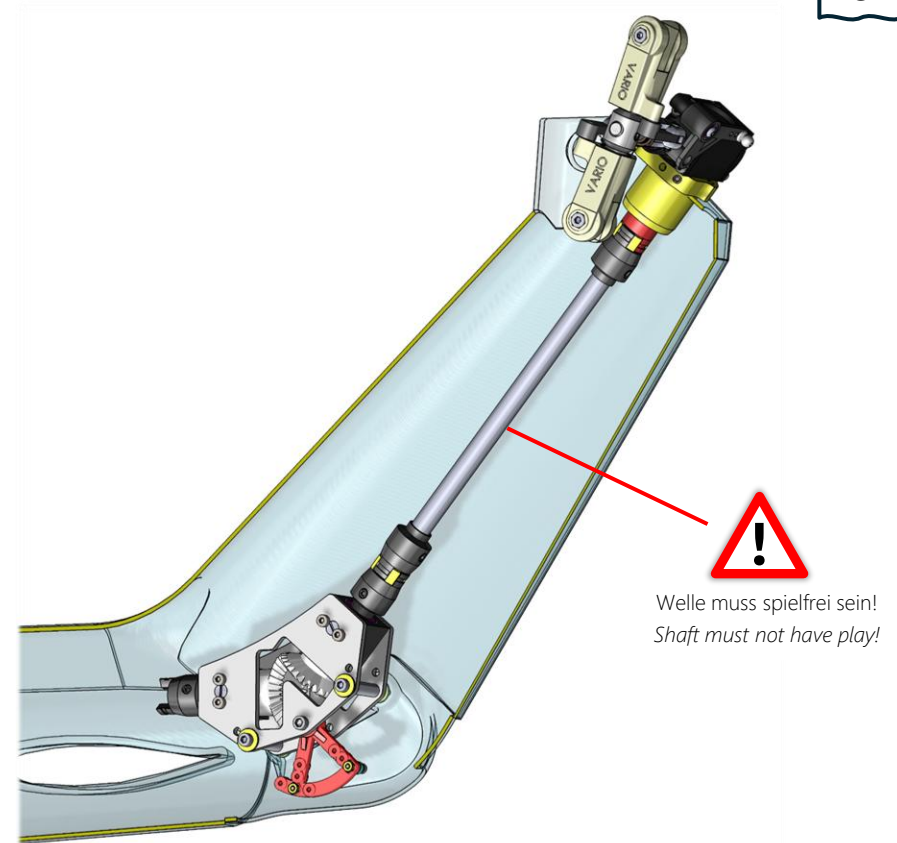
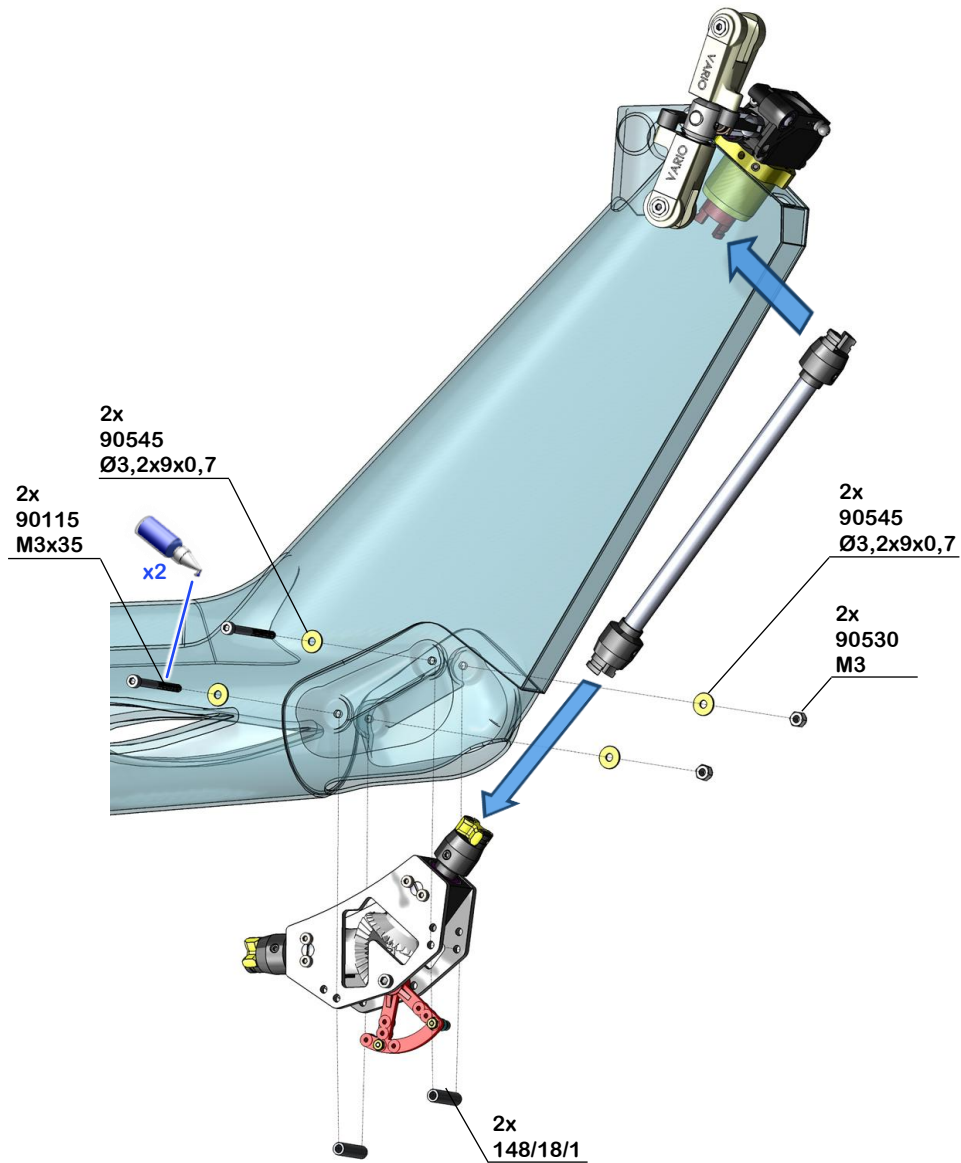


Ord.No. 10/24

Befestigung Heckgetriebe Fitting Tail Rotor Gear

Ord.No. 1490

3

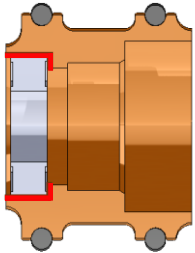


Befestigung Heckgetriebe Fitting Tail Rotor Gear

Ord.No. 1490

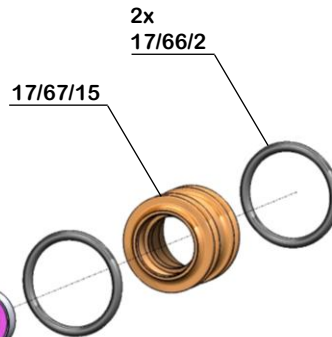


Ausrichtung beachten!
Mind orientation!



3x

64/3
Kugellager
Ø6x16x5
Race

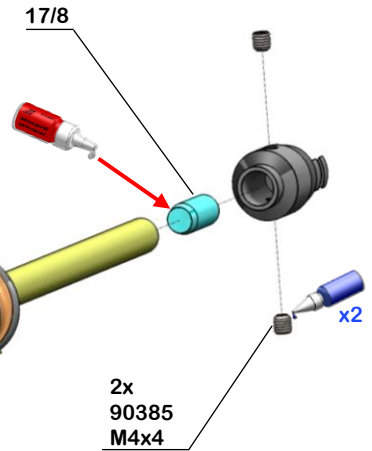
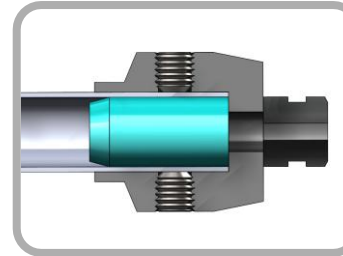


2x
17/66/2

17/67/15



Welle bis an den Anschlag einschieben!
But the shaft p against the stop!

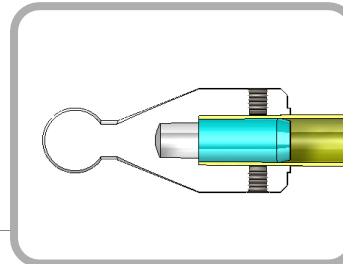


722/14/810

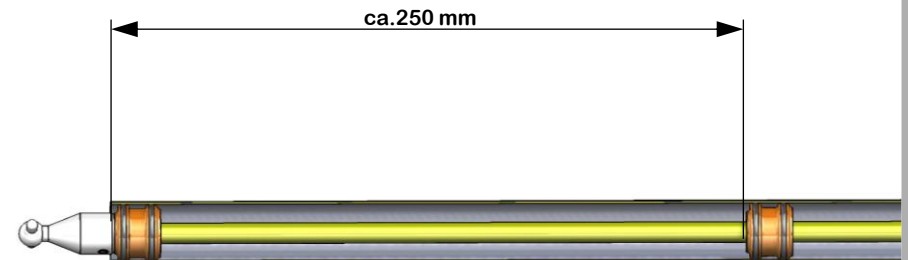
149/13

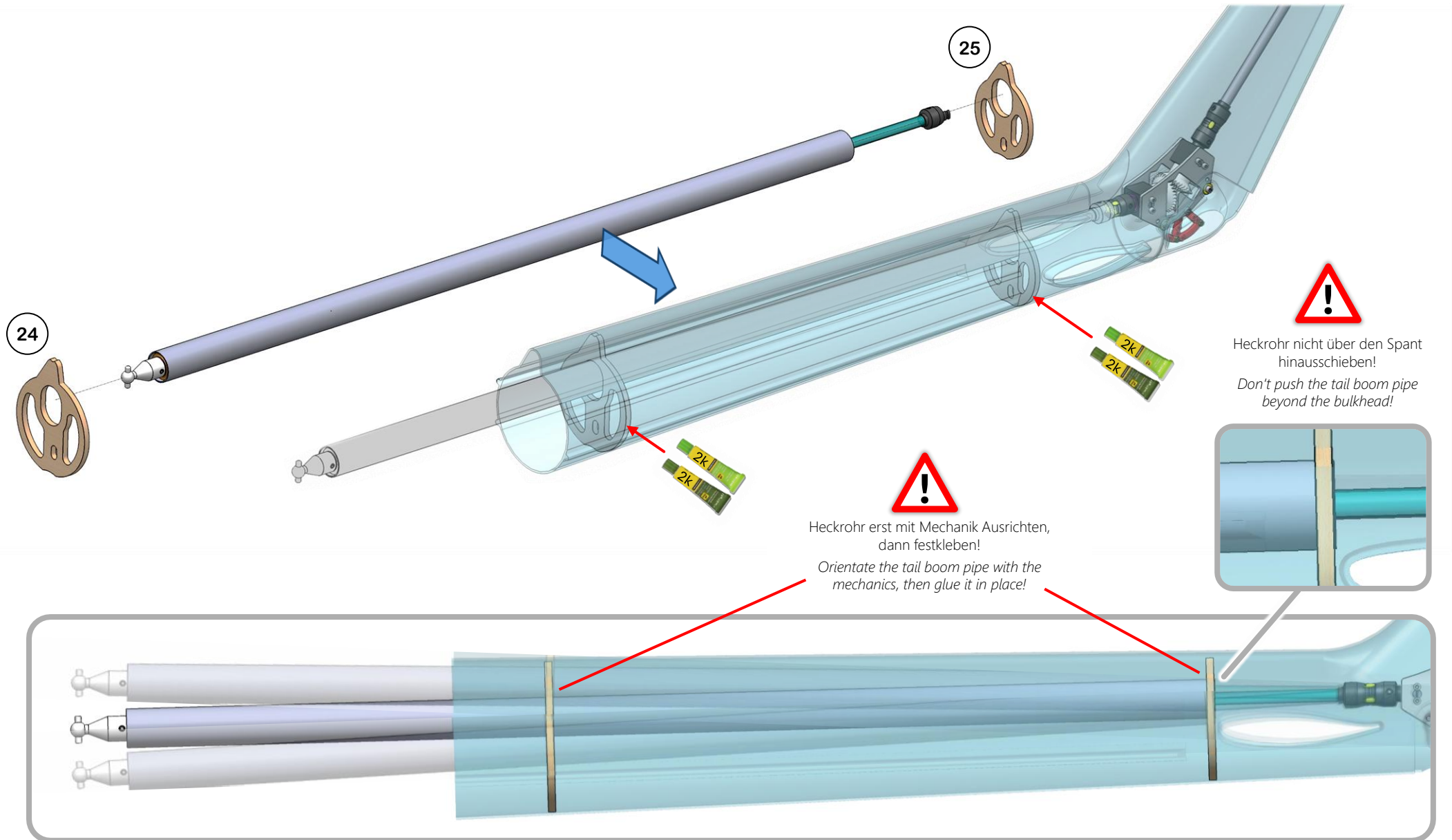


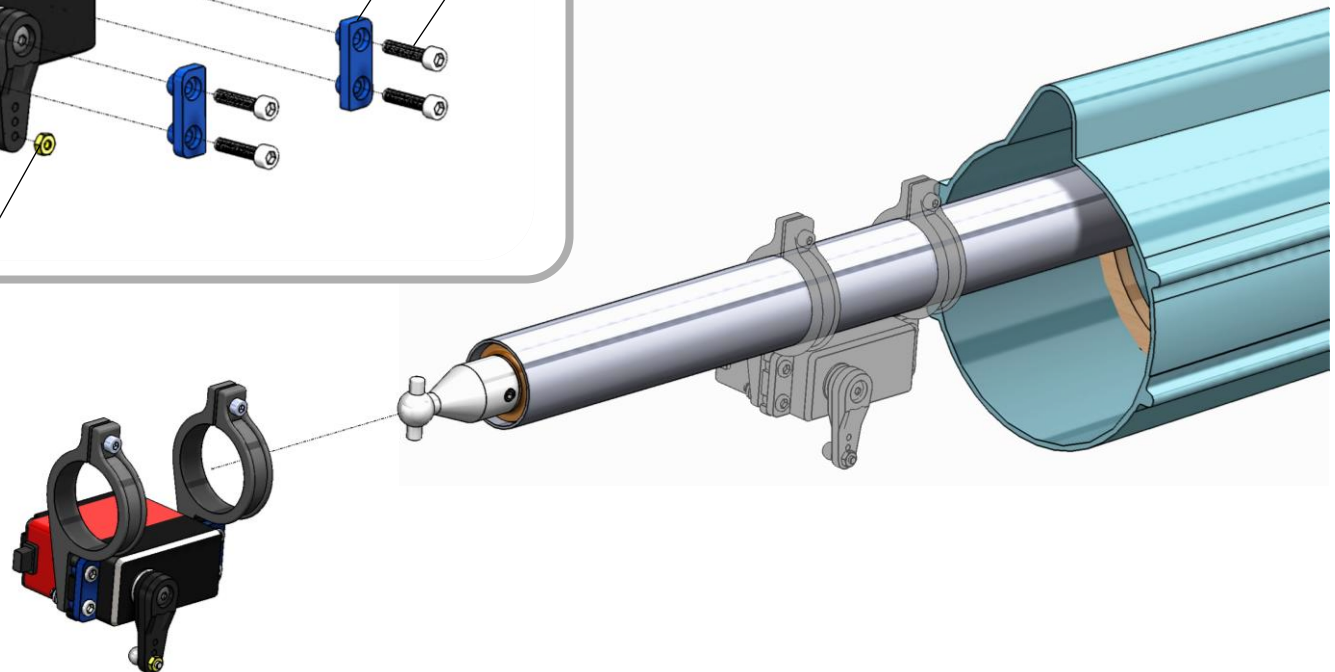
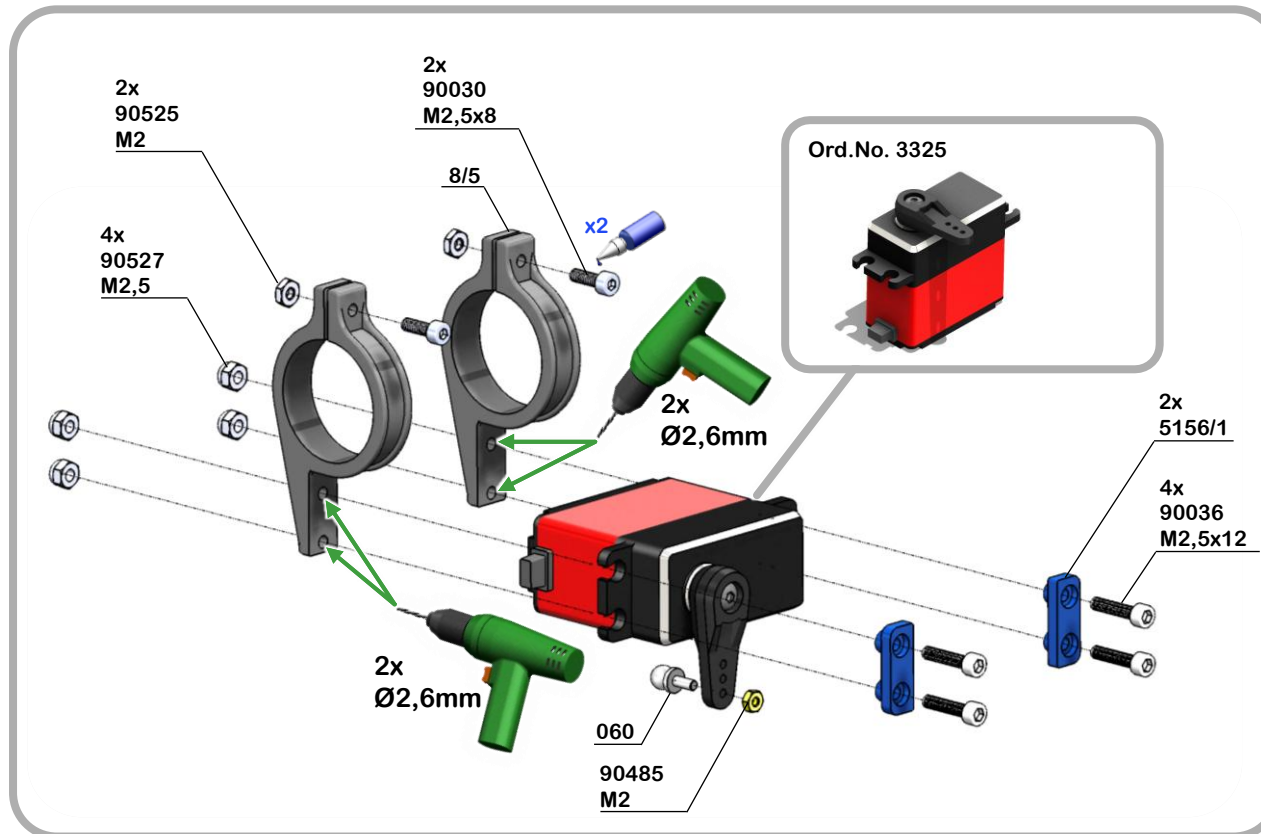
Welle bis an den Anschlag einschieben!
But the shaft up against the stop!



ca.250 mm



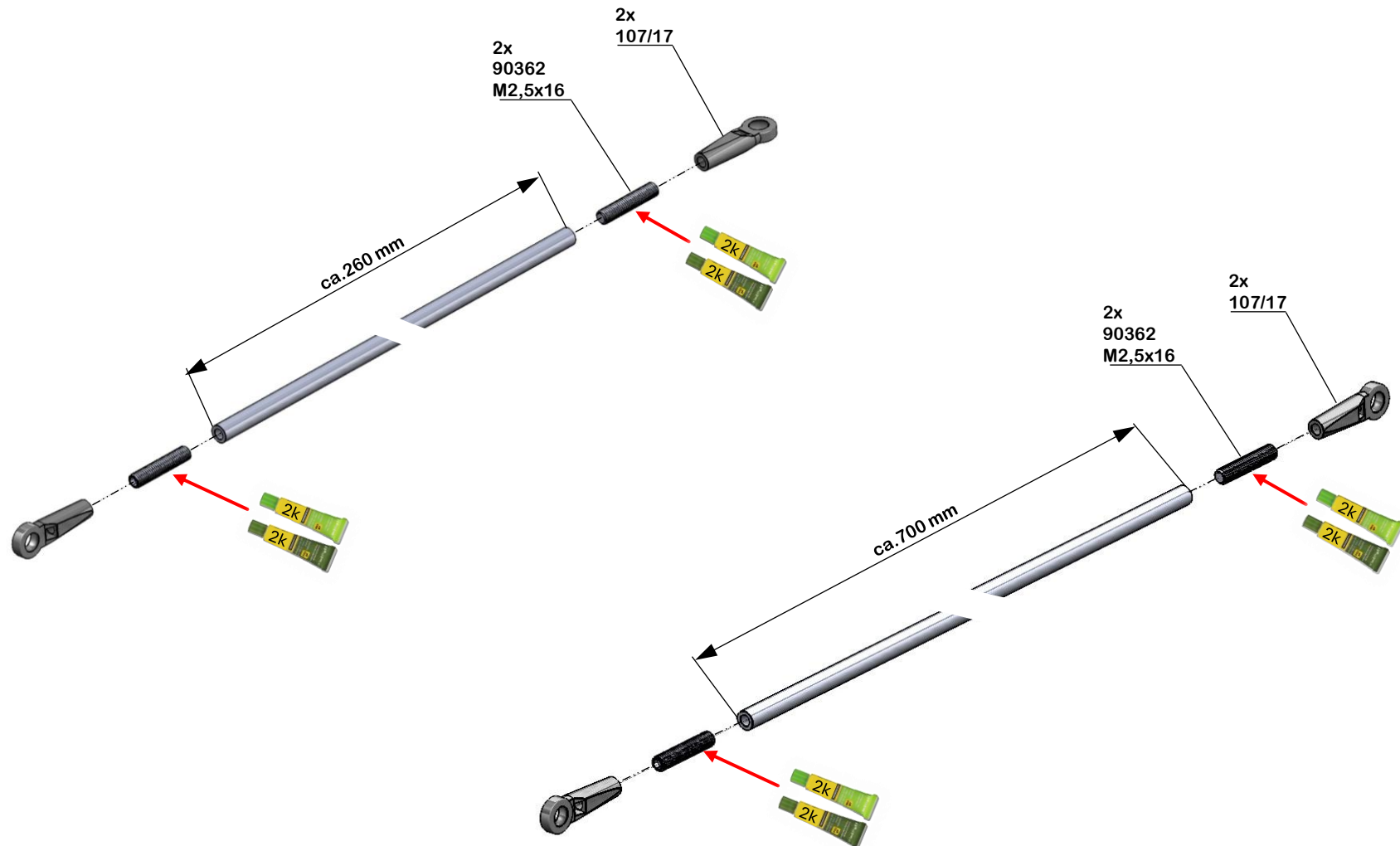


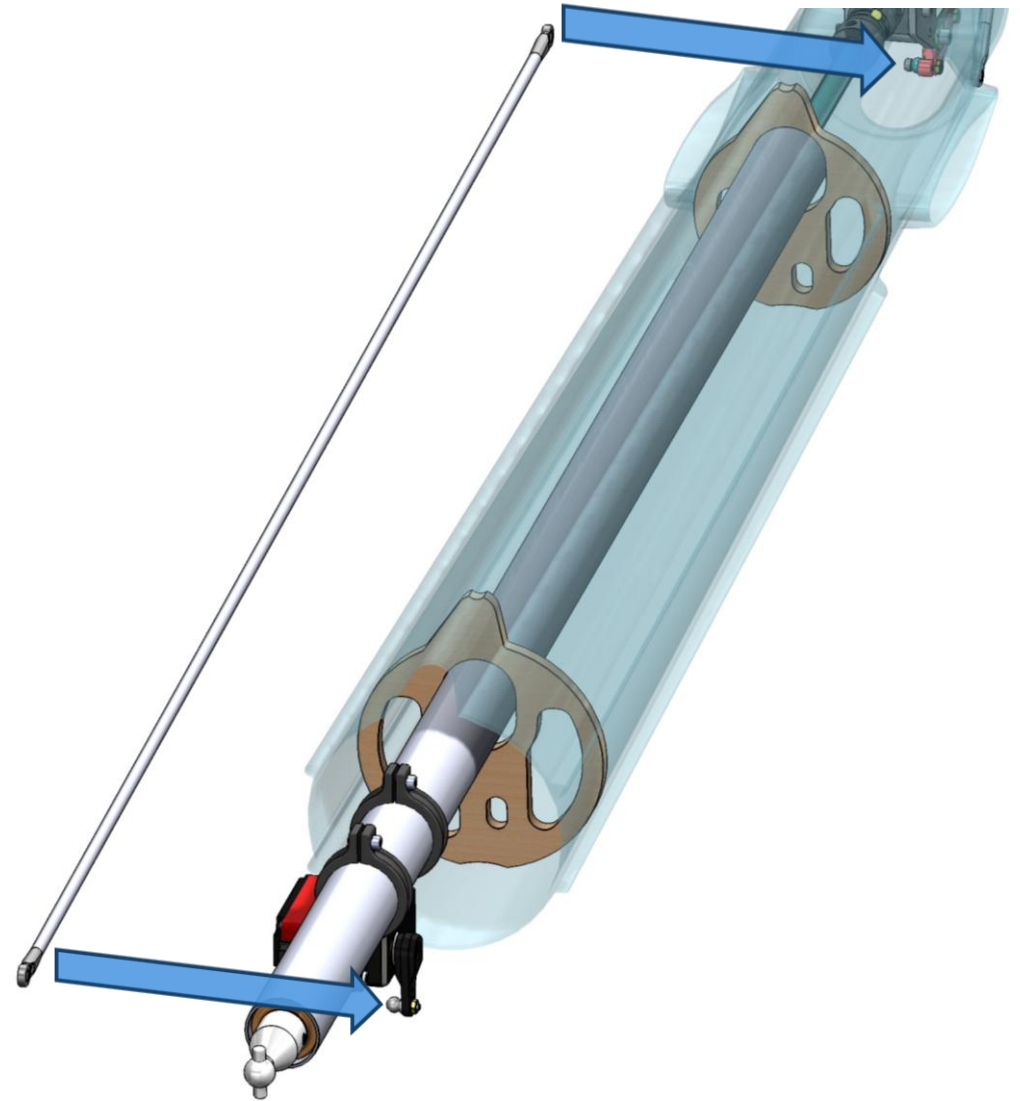
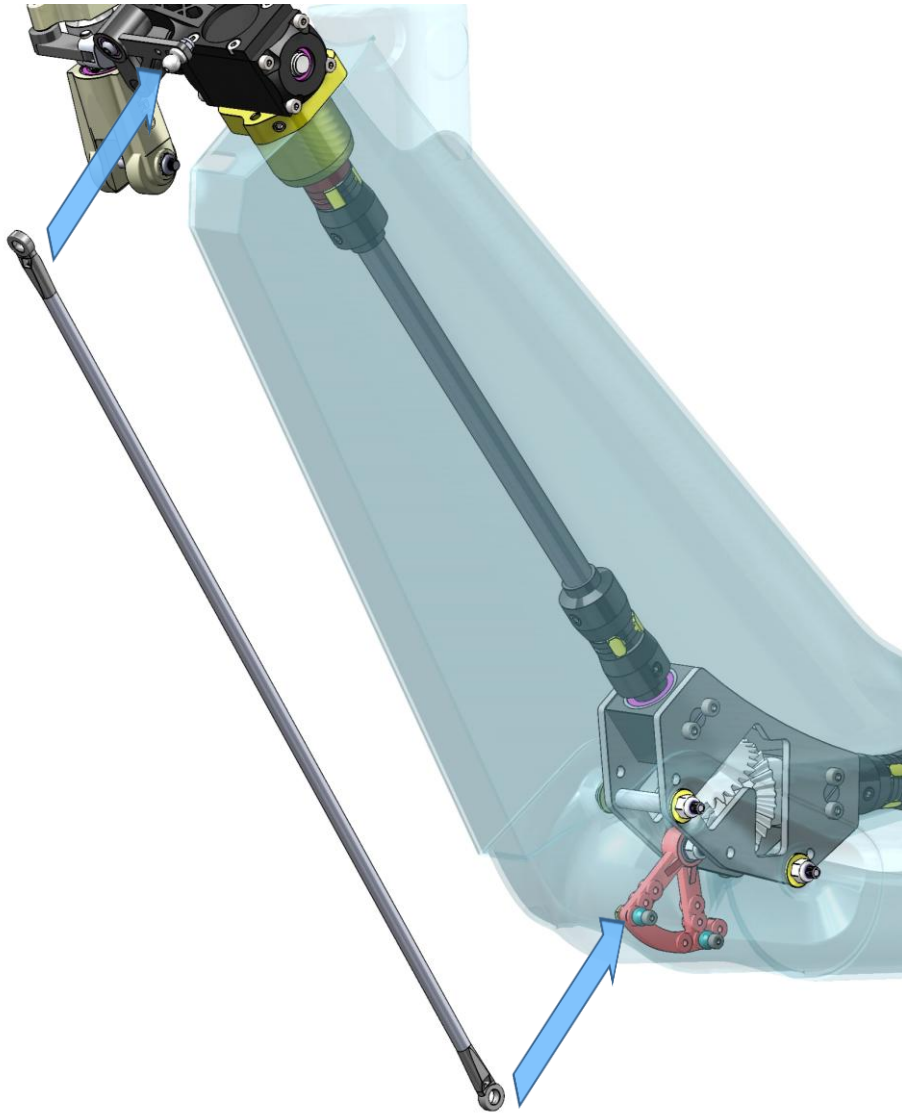


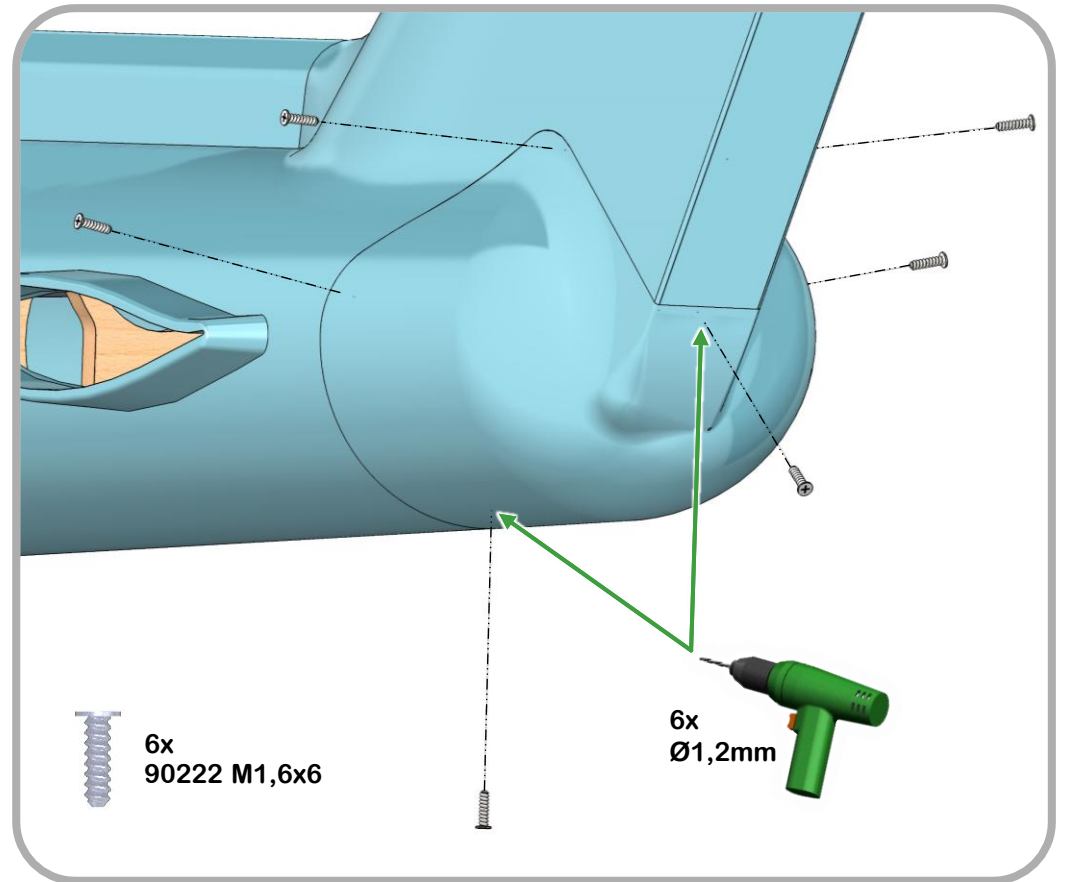
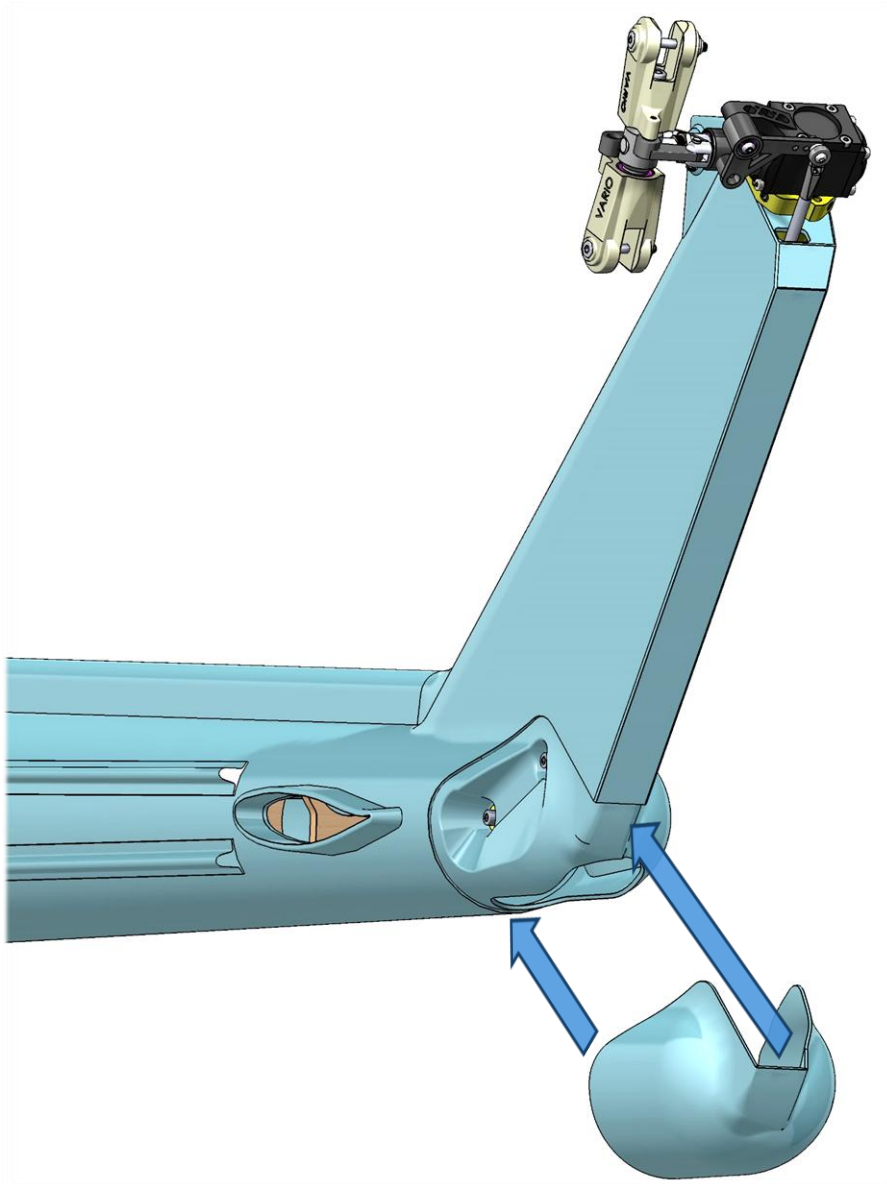
Befestigung Heckgetriebe Fitting Tail Rotor Gear

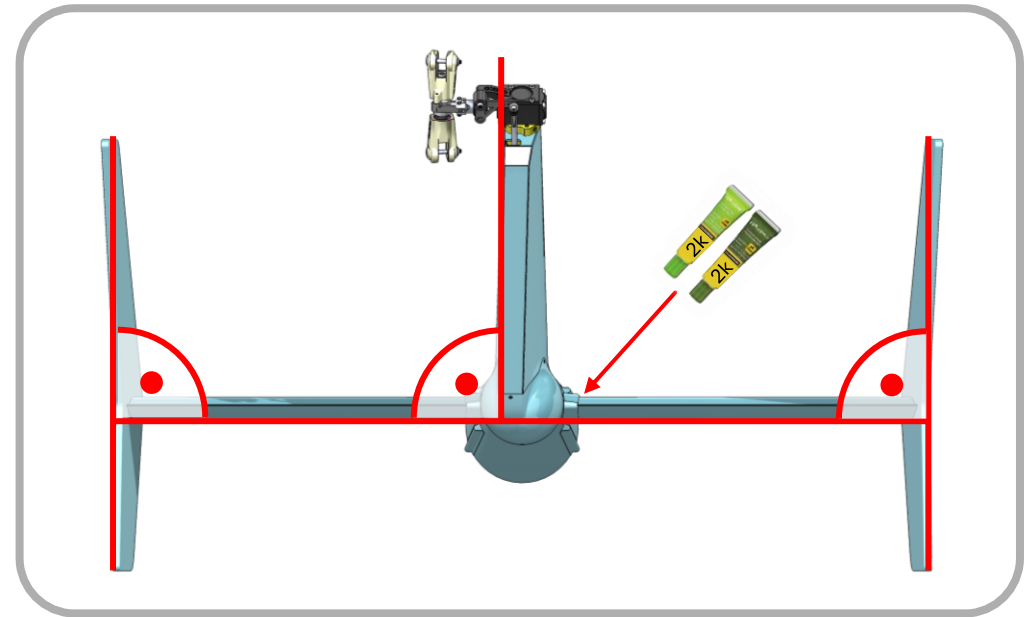
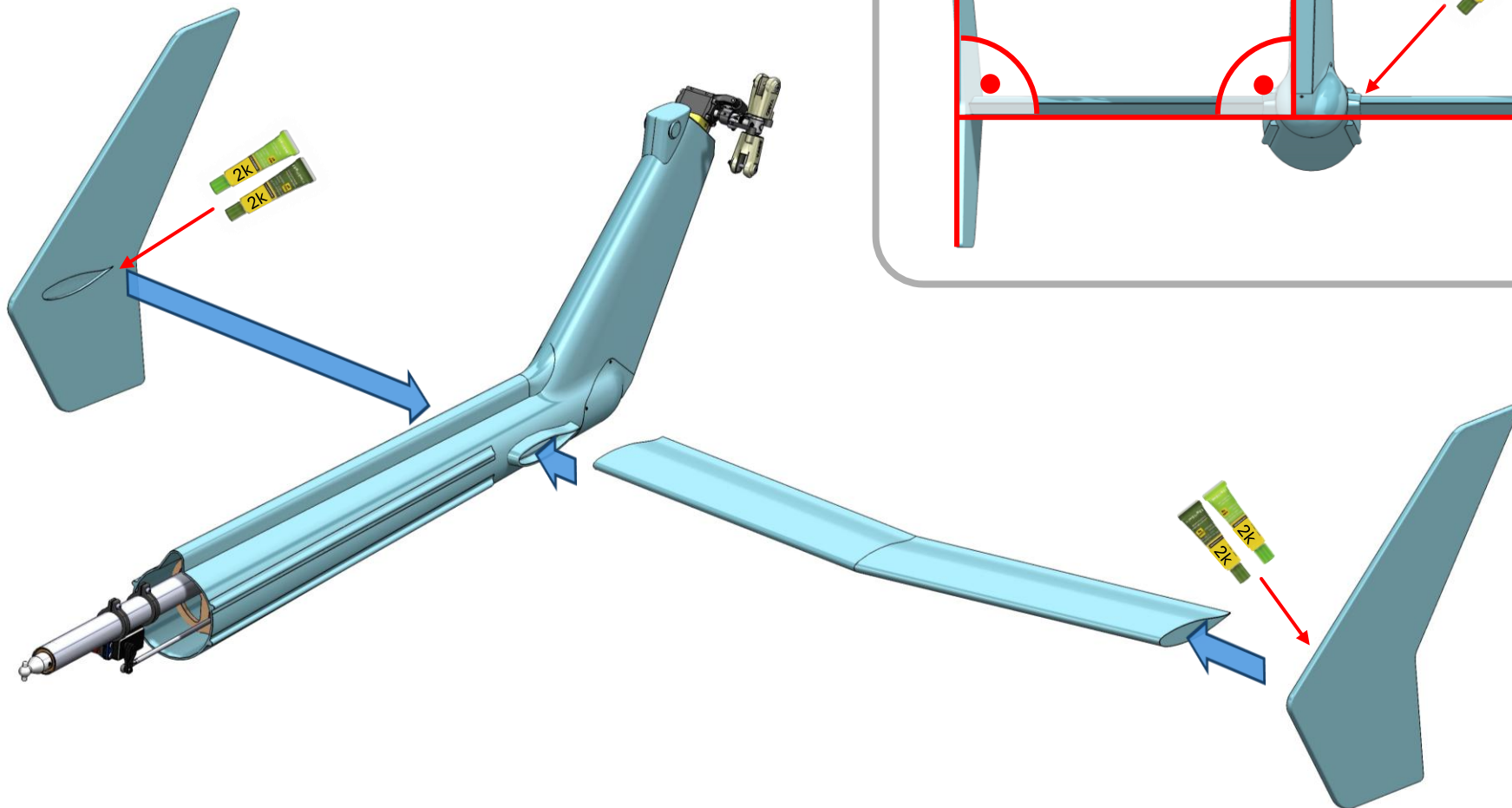
Ord.No. 1490

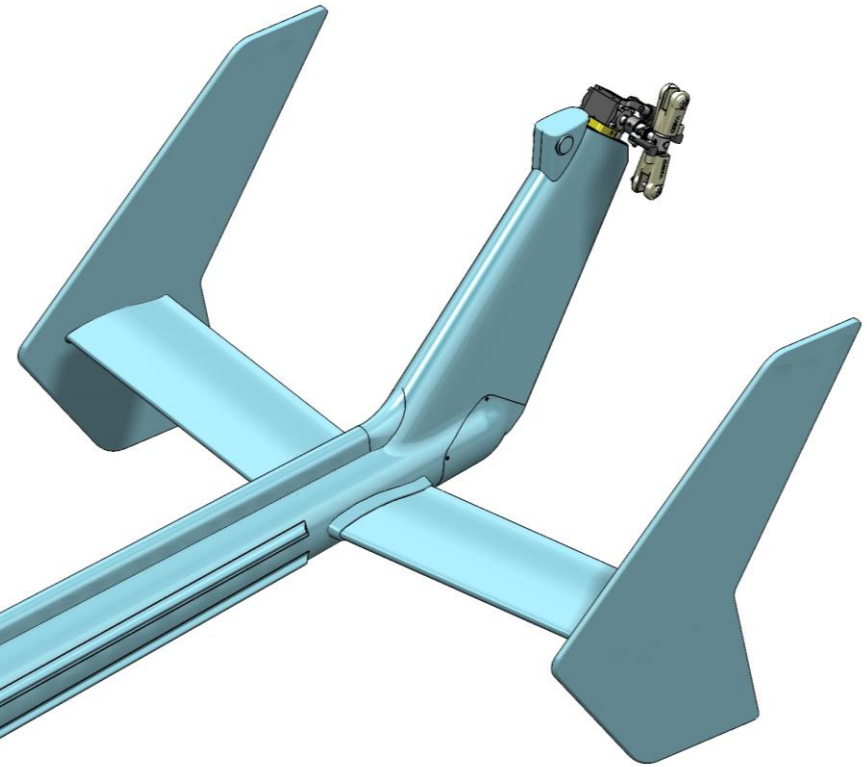
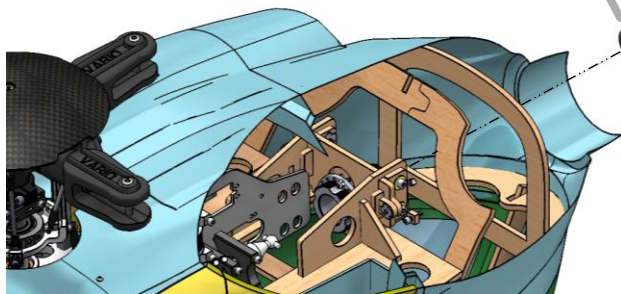
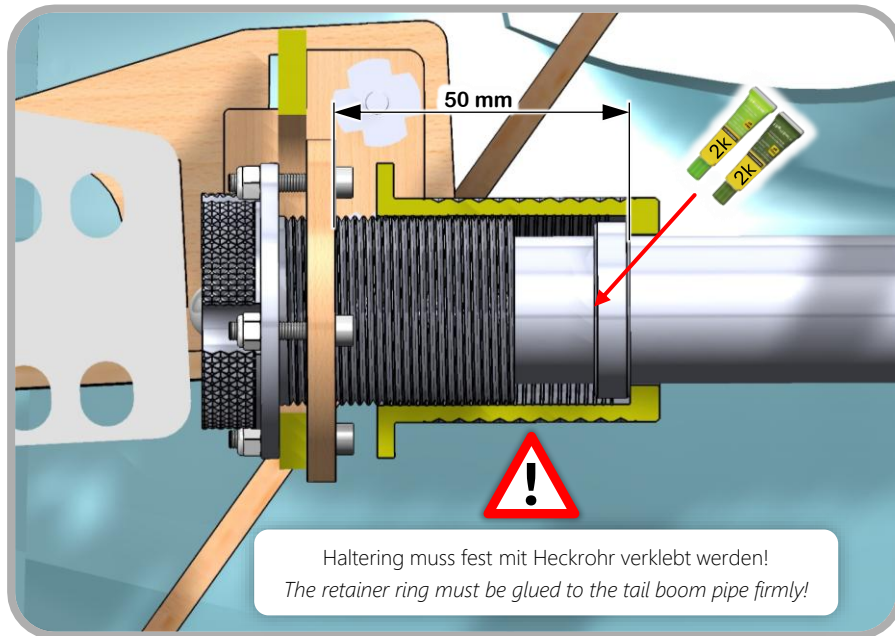
6





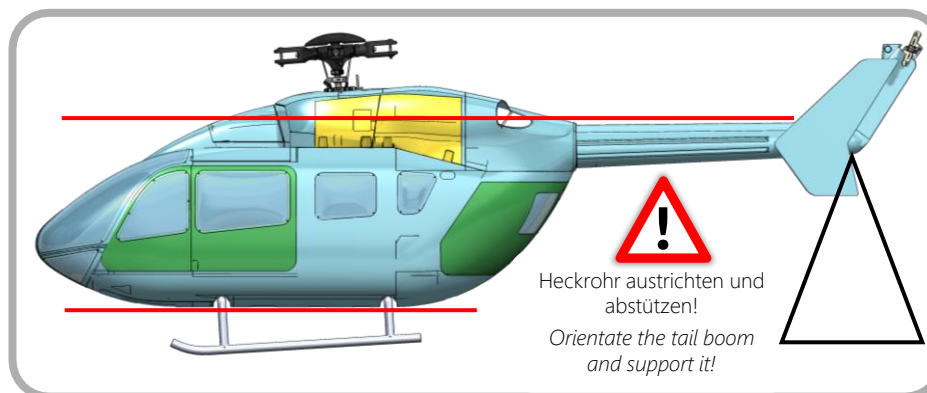






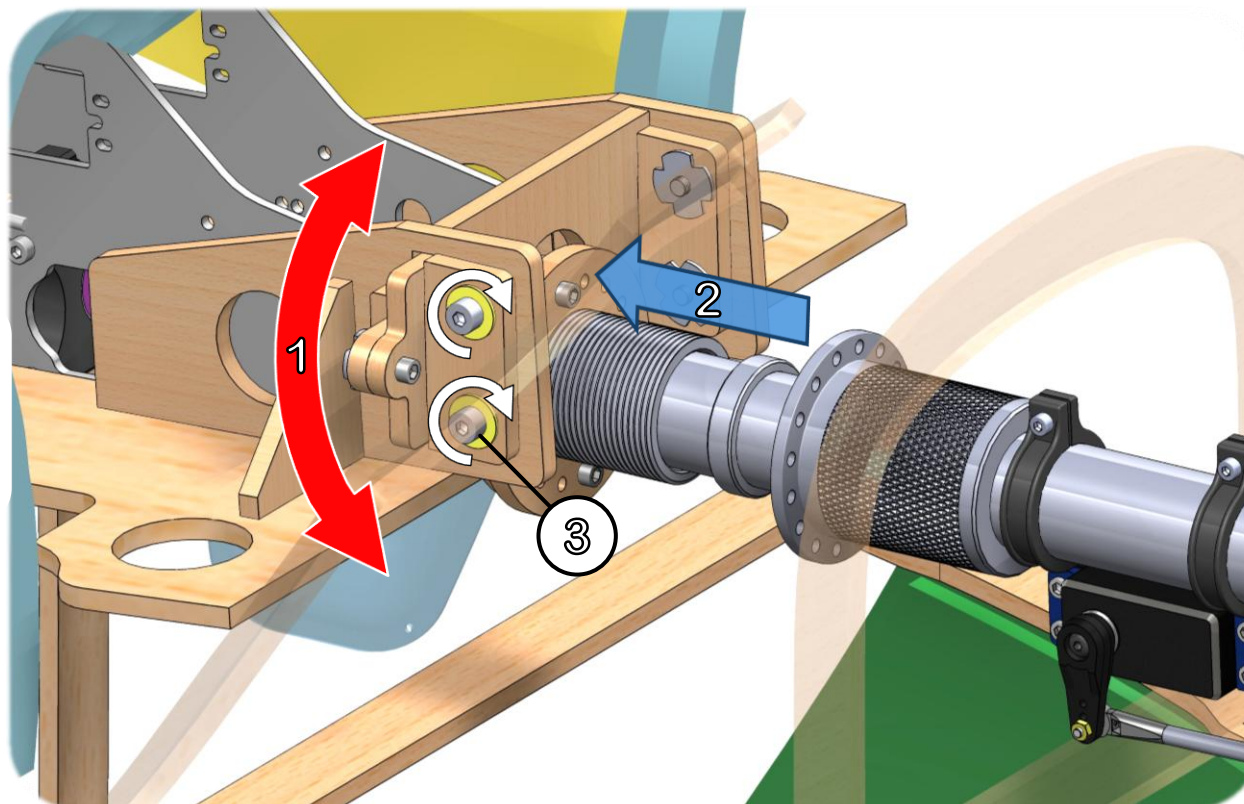
Befestigung Heckgetriebe Fitting Tail Rotor Gear

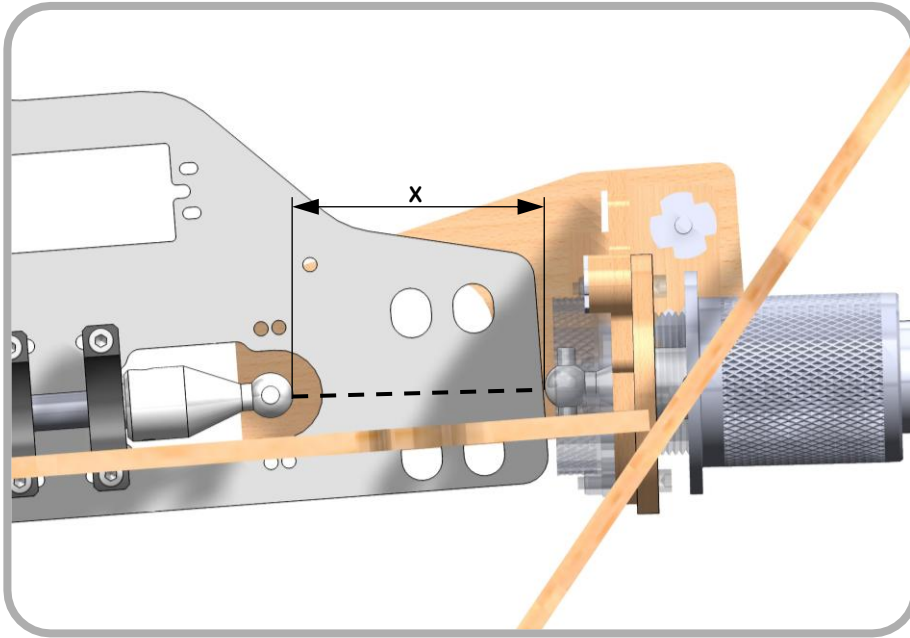
Ord.No. 1490



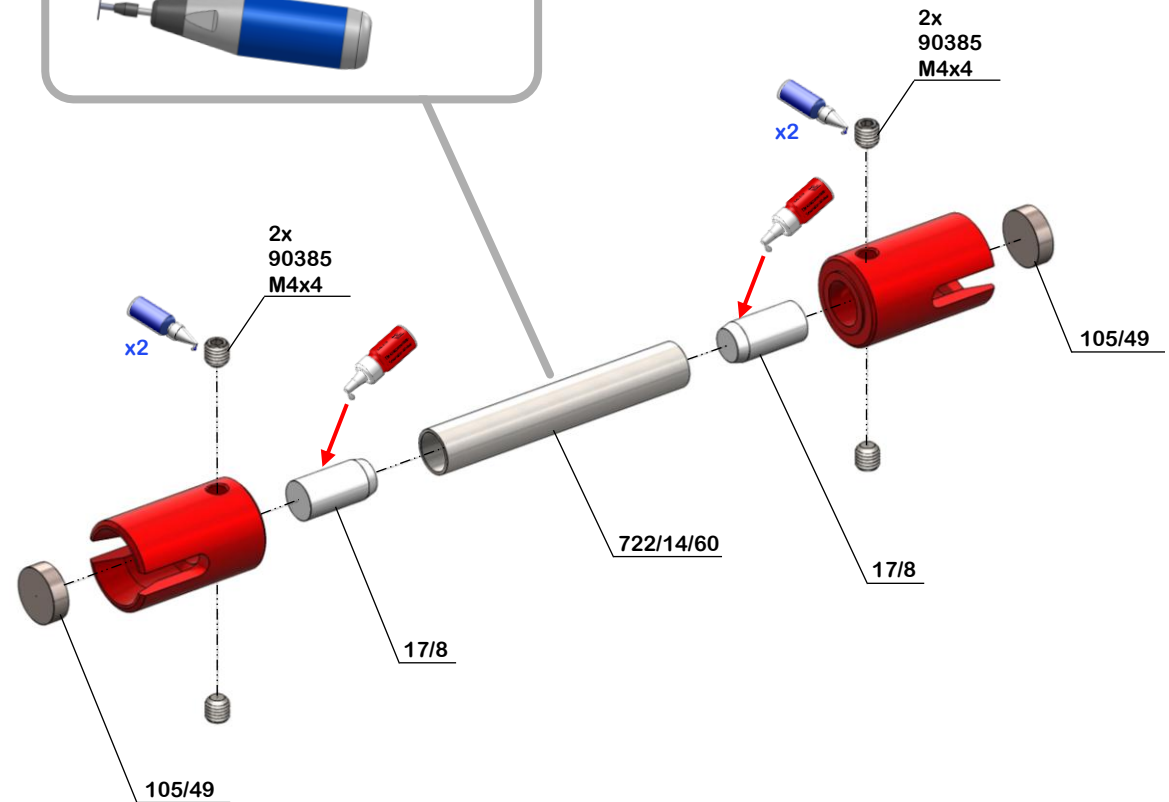
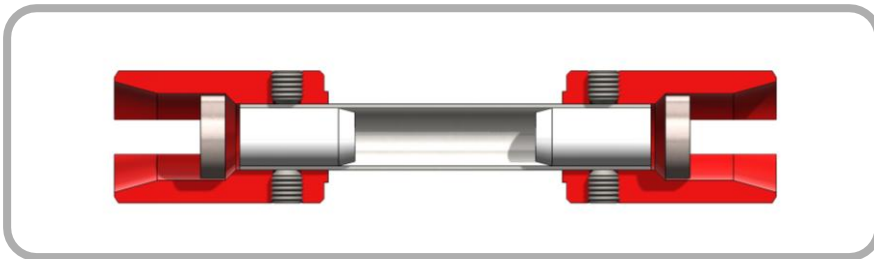
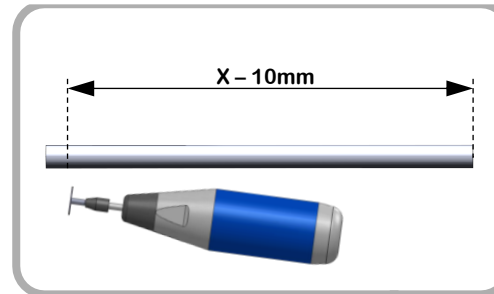
1. Heckrohrhalter ausrichten
2. Überwurfmutter fest anziehen
3. Klemmspanschrauben festziehen und sichern

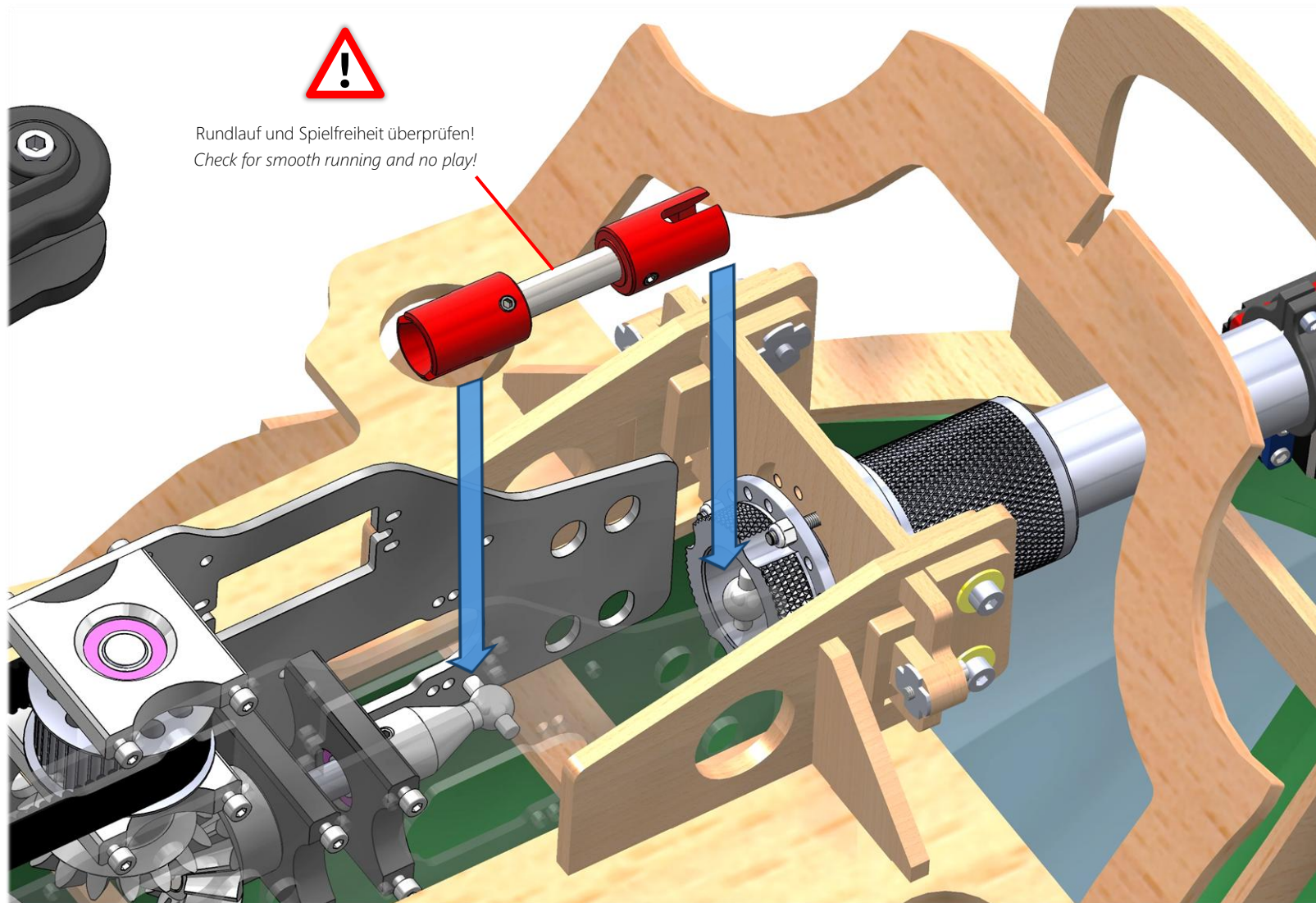
1. Orientate the tail boom holder
2. Tighten the union nut
3. Tighten and secure the jam plate bolts

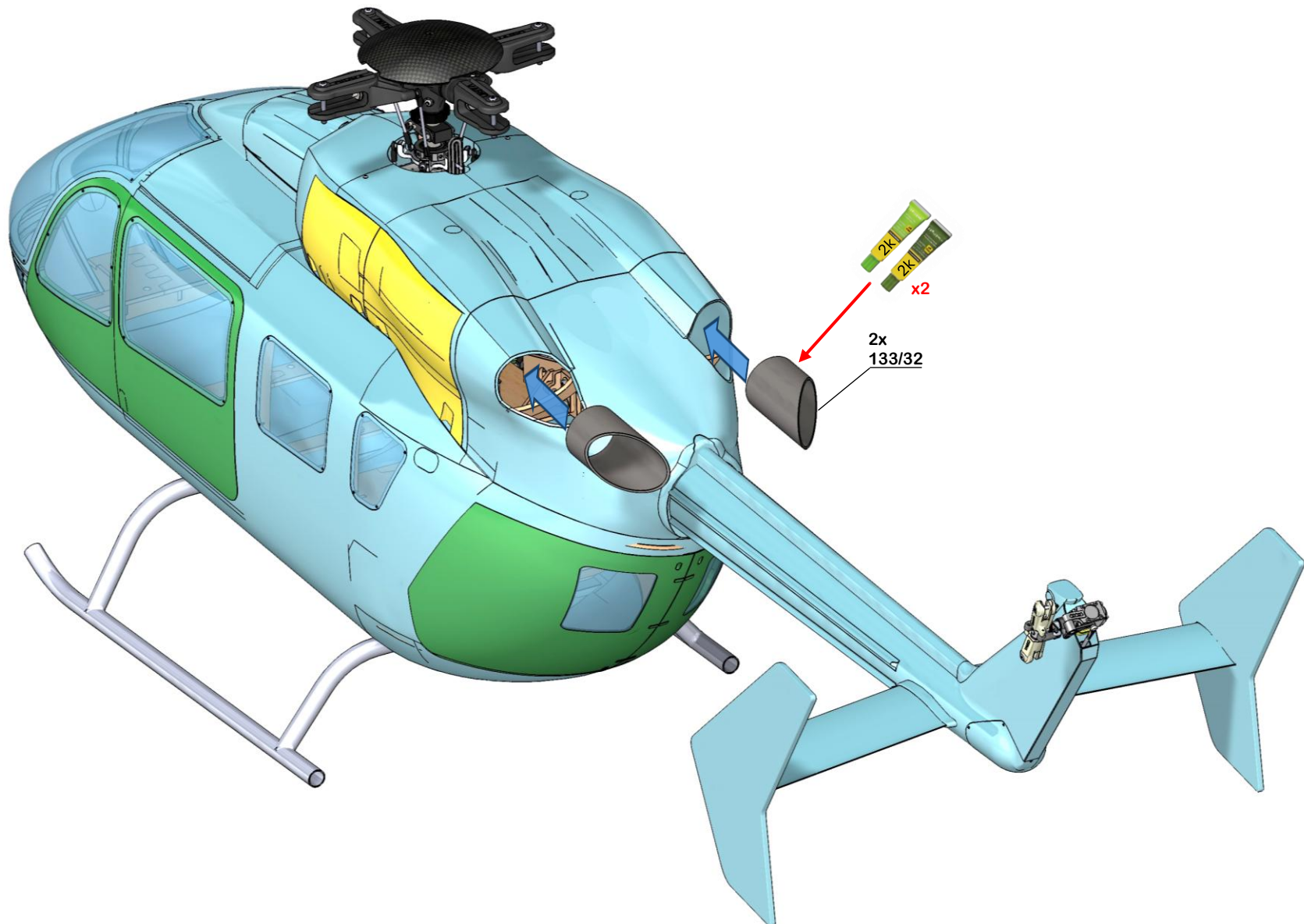




Benötigte Länge ausmessen, dann ggf. zuschneiden!
Measure the required length, then cut as required!







Modelldaten Model Specifications

Ord.No. 1490



ca. 790 mm

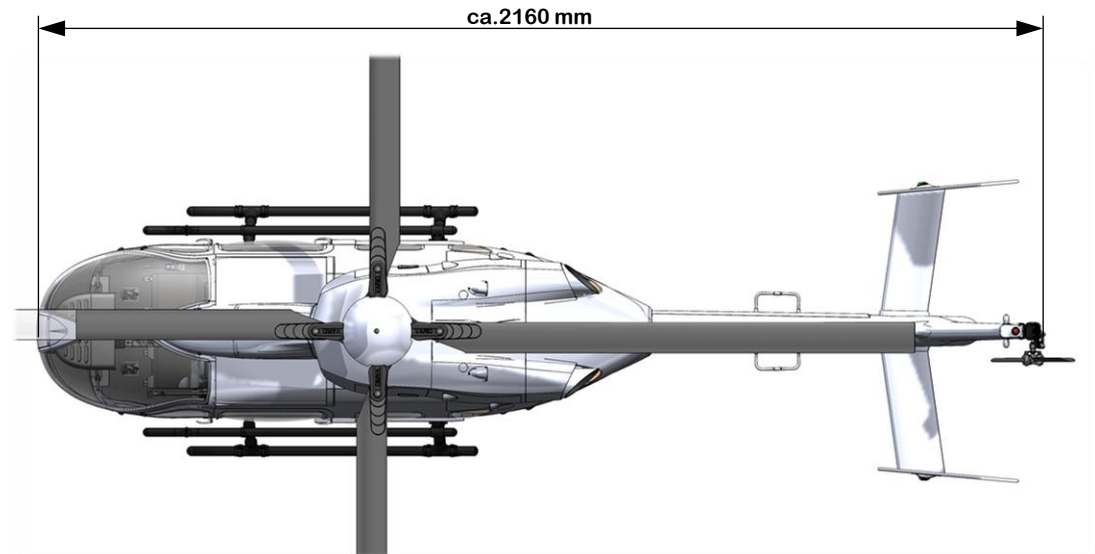


Abbildungen enthalten Zubehör, das nicht Bestandteil des Rumpfbausatzes ist!
Images contain addons which are not part of the fuselage kit!

Modelldaten | Stats

Länge / Length	2160 mm
Breite / Width	650 mm
Höhe / Height	790 mm
Rotorkreis / Rotor diameter	2300 mm
Heckrotorkreis / Tail Rotor diameter	420 mm
Abfluggewicht* / TO Weight*	? kg
Antrieb / Motor	Pyro 800-40L
Leistung / Power	5 kW
Übersetzung Rotor/ Gear ratio Rotor	1:5
Übersetzung Rotor-Heck/ Gear ratio Rotor-Rear	1:4,2
Rotordrehzahl / Rotor Revolutions	850 U/min
Heckrotordrehzahl / Tail Rotor Revolutions	3500 U/min
Regleröffnung / Controller Output (12S System)	84 %

*je nach Zubehör und Akkusystem sind Abweichungen möglich
depending on addons and battery system deviations are possible



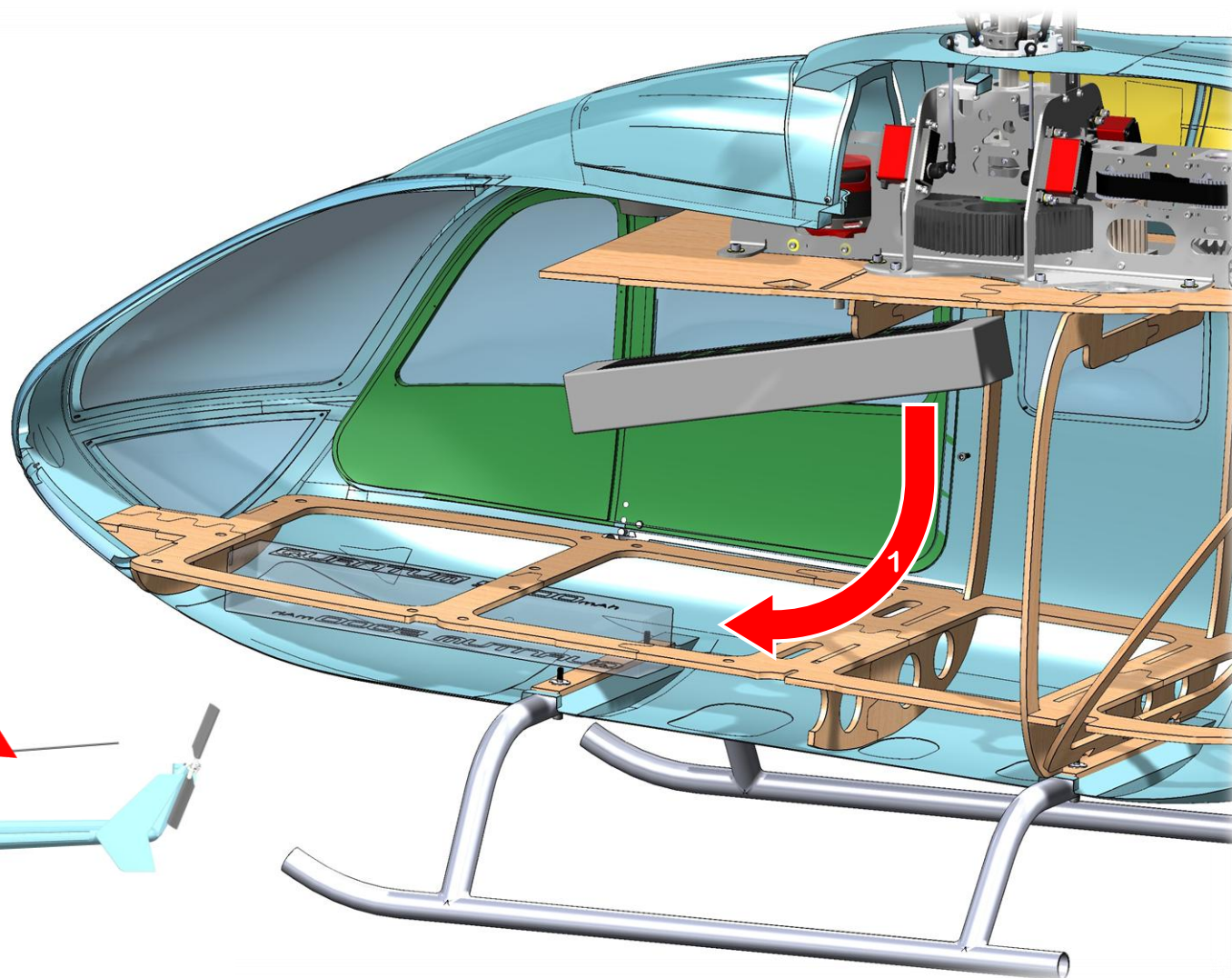
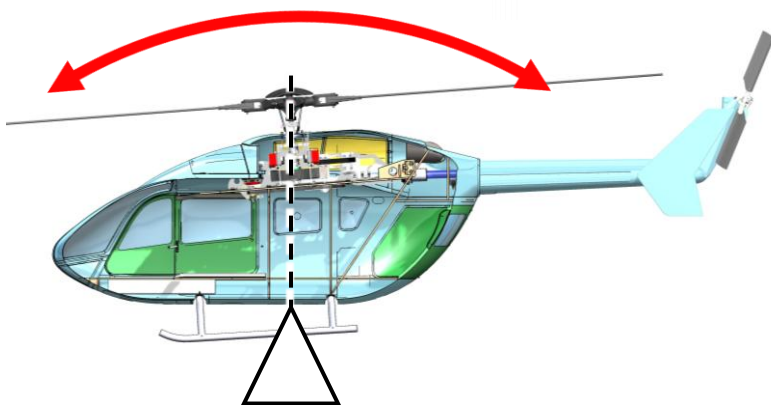
Empfohlene Akkugrößen /
Recommended Battery sizes

- ① 1x 12S 10000mAh
- ② 2x 6S 5000mAh



Die optimale Position des Akkus muss anhand des gewünschten Schwerpunkts ermittelt werden.

The ideal placement of the battery must be determined based on the desired center of mass.





149/129
Cockpit

Inkl. Kabinenböden
Incl. cabin floors



134/408
Pedale
Pedals

2 Stck. / 2 pcs.



149/402
Steuerknüppel
Cyclics

2 Stck. / 2 pcs.



149/439
Pitchhebel
Pitch lever

2 Stck. / 2 pcs.



134/452
Hebel Rotorbremse
Rotor Brake Stick



149/28
Pilotensitze
Pilot Seats

2 Stck. / 2 pcs.