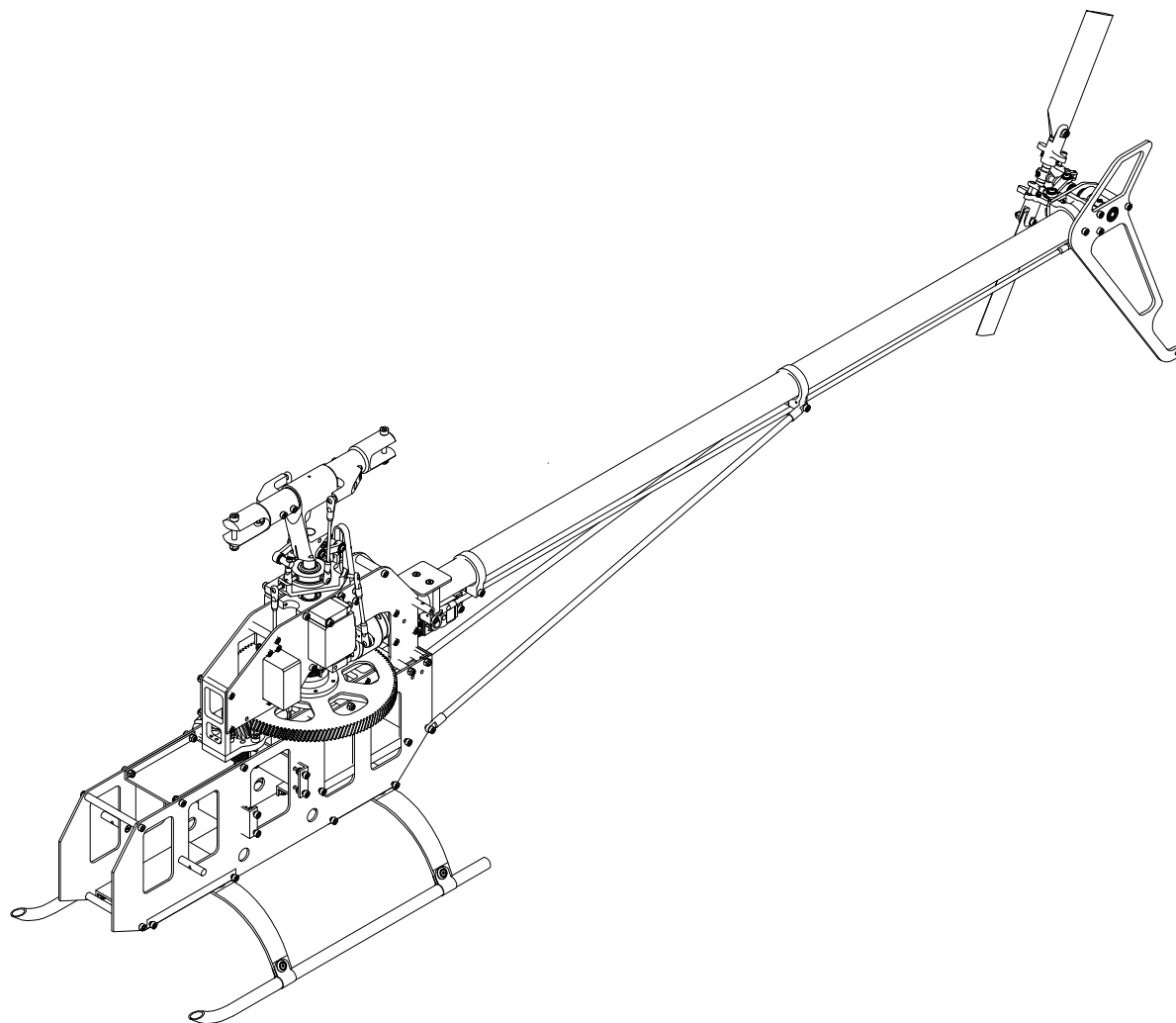


Joker 3 DDS

2850



minicopter

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Version 1

03.05.2009

Safety rules:

Radio controlled helicopters are **not toys**. A wrong use of such models can cause accidents with heavy injuries.

Therefore please bear following rules in your mind:

- For engine running tests on your workbench remove the complete mainrotor including all rods and the tailrotor blades. Consider that nothing can come in the tailrotor.
- You can't assess by an electric helicopter the danger of a suddenly starting engine. So remove the dangerous areas of main- and tailrotor after connecting the battery packs.
- Don't switch the controller suddenly off and on by running up. Wait some seconds if retrying.
- In hovering flight please keep a distance of at least 5 metres to the helicopter.
- Don't aim in flight persons or other creatures and keep a security distance of at least 20 metres.
- Don't fly your battery in forward flight empty, if you can't autorotate in all situations. For landing calculate a security reserve of at least 30 seconds or better one minute. Empty the battery while hovering. For safety rules for Lipo batteries please follow the rules added to the packs.
- If using Lipos add the Lipo battery just before the flight and remove it just after the flight to contain the battery always in a special metal case.
- Don't empty the battery with the last force in hovering, otherwise the battery can be damaged.
- For the first flight a partner should say you the flown time in intervals of 30 seconds so that you get a feeling for electric flight. After some time you feel an empty battery by giving full pitch for a moment. When the rotorspeed shuts down then you should search the ground for landing.
- Train autorotations with running engine as soon as possible.
- When you see that a crash is unavoidable try to stop the engine before having ground contact.

Liability exclusion:

We can't observe a correct mounting, justation, maintenance and usage.
So **no guarantee is possible**.

Vellmar, in april 2009
Minicopter

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Congratulations on the purchase of your *Joker 3DD* - helicopter.

The successor of our popular Joker-series has got some new features to increase its span of usage. From beginners training over usage in scale bodies, as photo helicopter or for extreme 3D and speed flight is everything possible without modifications.

New items are a torque tube shaft drive alternatively to the toothed belt tailrotor drive, a servo linkage optimized for flybarless electronics and a simpler and more efficient construction. Our classic MFS rotorhead can be choosed as well as a flybarless head and also the quality of all parts and the long life expectancy of the model. So flying and servicing will give you a great deal of fun for a long time.

The manual contains many detailed graphics so that you should have no problems when building the helicopter. Please take a little time to study the manual before beginning. Then you get an overview of the building process.

The kit contains some hexagon wrenches. Additionally you need the following tools:

Tools:

Thin walled socket wrenches to fit 5,5 and 7 mm nuts.

Open wrench 4,5/5,5 mm

Hexagon wrenches for 2/2,5/3 mm bolts

Hexagon wrench 4 mm a.f. (2 required for the feathering spindle)

Sharp tongs with 45° cranked head

Phillips screwdriver small

Screwdriver flat

Screw lock Loctite 243 blue

Special Tools:

Special open wrench 5,5mm for restricted access to the nuts Ord.-No. 707

Ball joint tongs e.g. Robbe S 1360

Pitch gauge e.g. Robbe S1366

Paddle gauge e.g. Robbe S1368

Lubricants:

Axial bearings: normal machine lubricant (from tool suppliers)

Autorotation coupling: grease or synthetic motor oil

The gear wheels and the belt drives don't use lubricant.

Recommended RC-equipment:

Receiver: 2.4 GHz

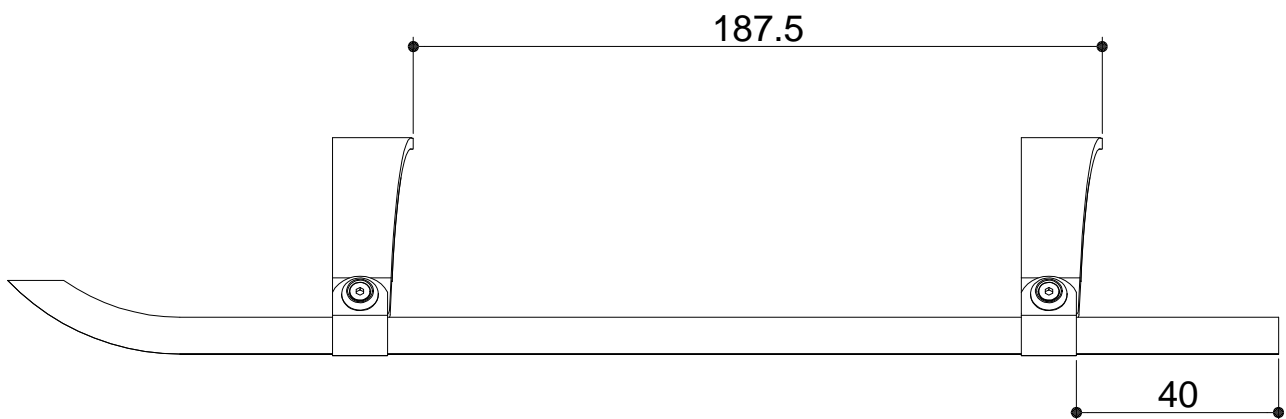
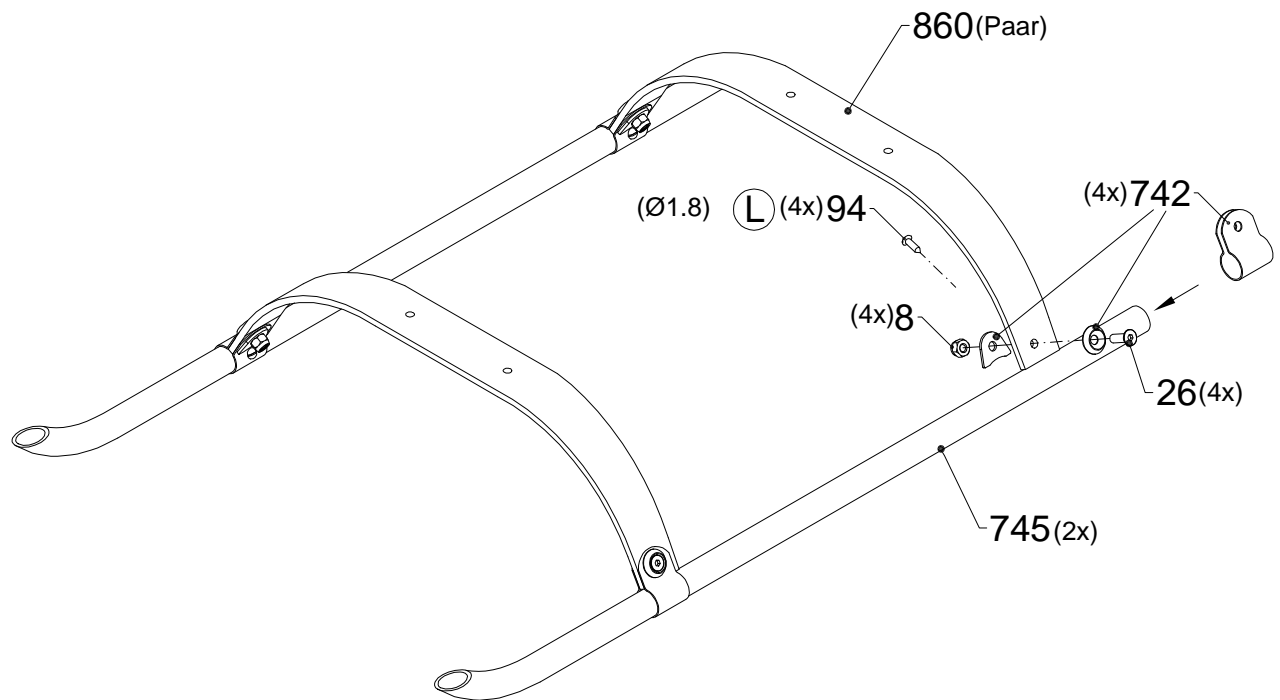
RC-battery: Jive BEC or 4 cells 2-2.4Ah NiCd/NiMH battery

Swash-plate servos: Futaba S9252, BLS451 or similar

Gyro: Futaba GY 520 with servo BLS 251 or flybarless system like V-Stabi

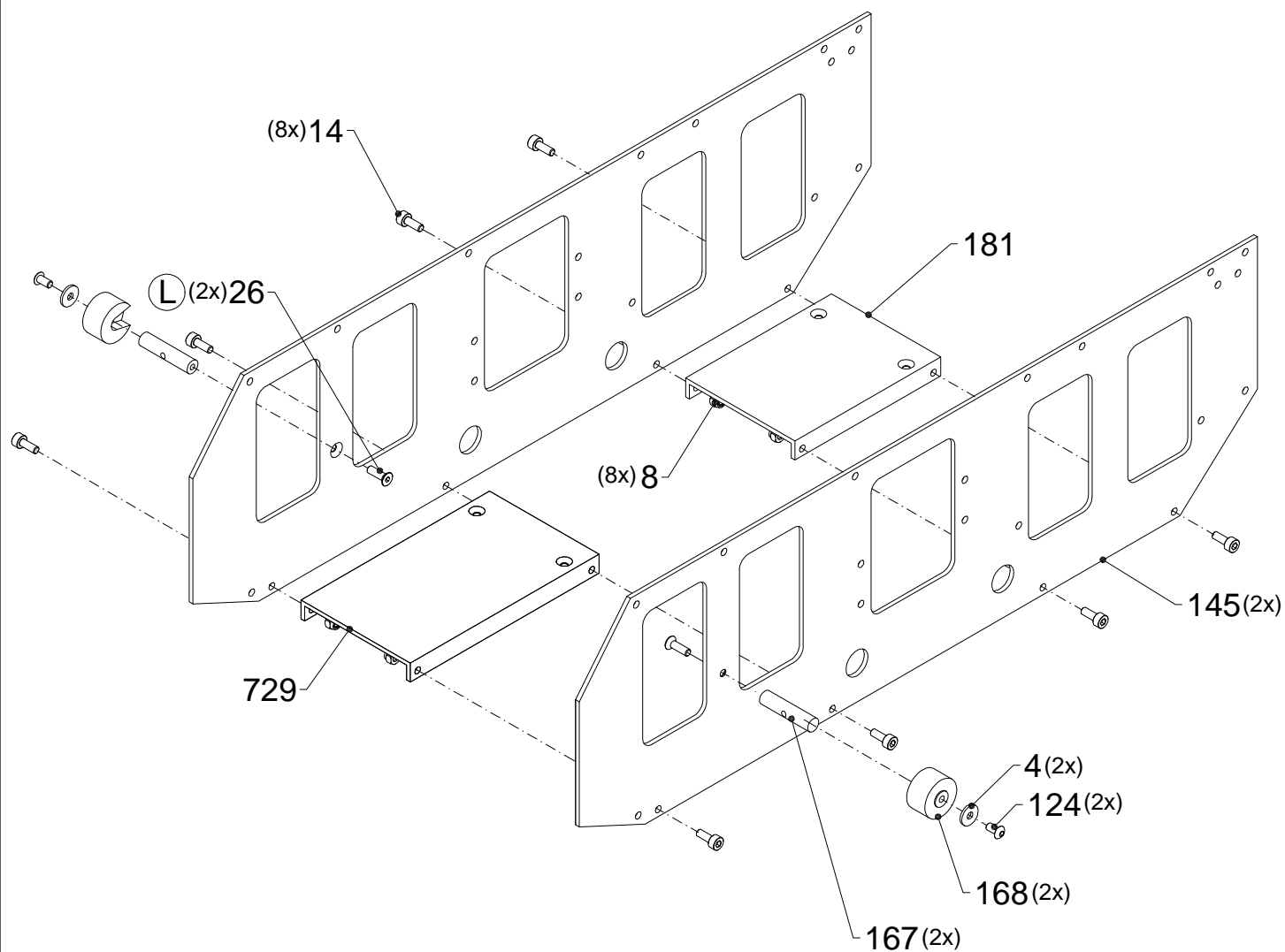
If you have problems when building your model please contact us. We will help you!

And now: Much fun by building your *Joker 3DD* !



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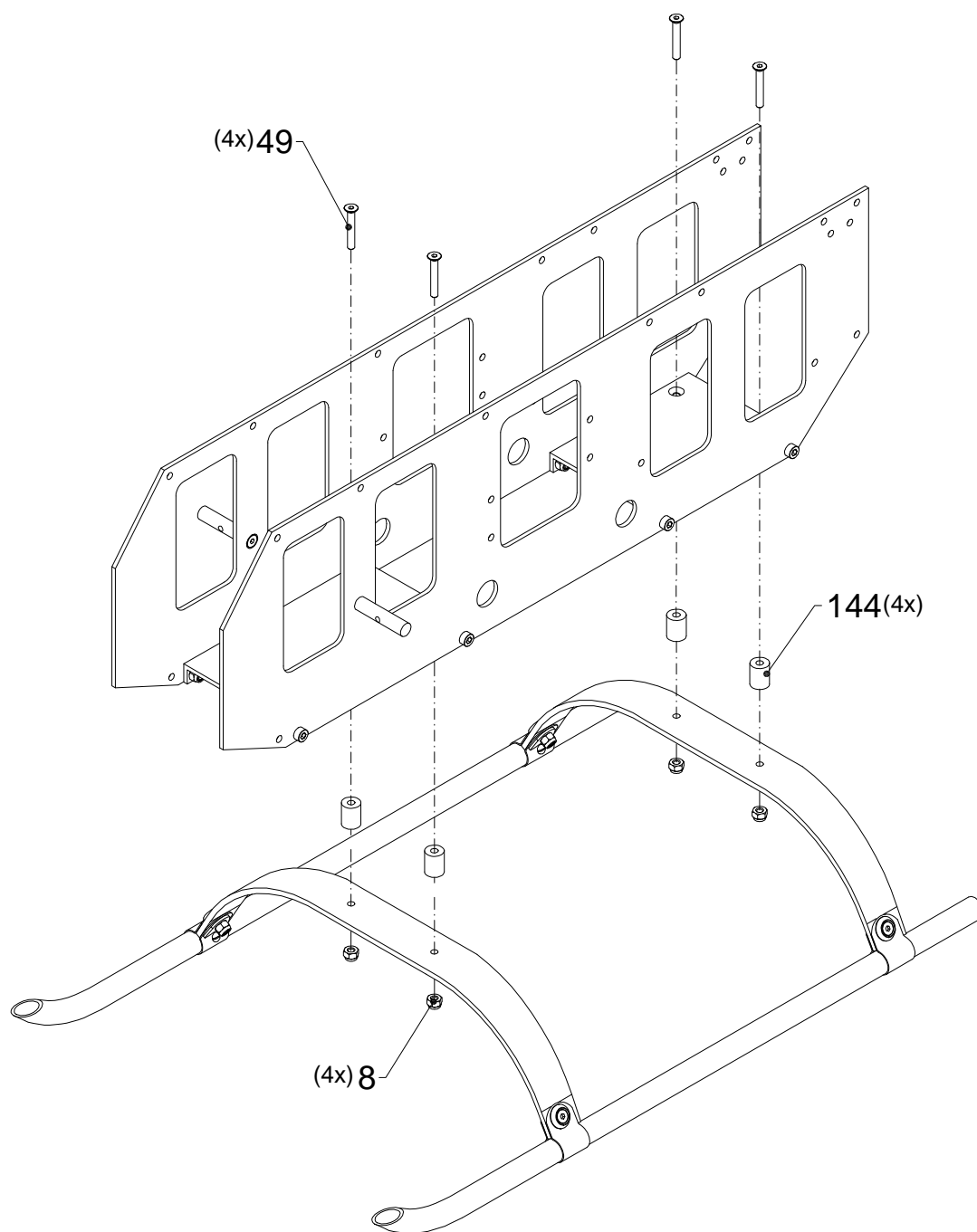


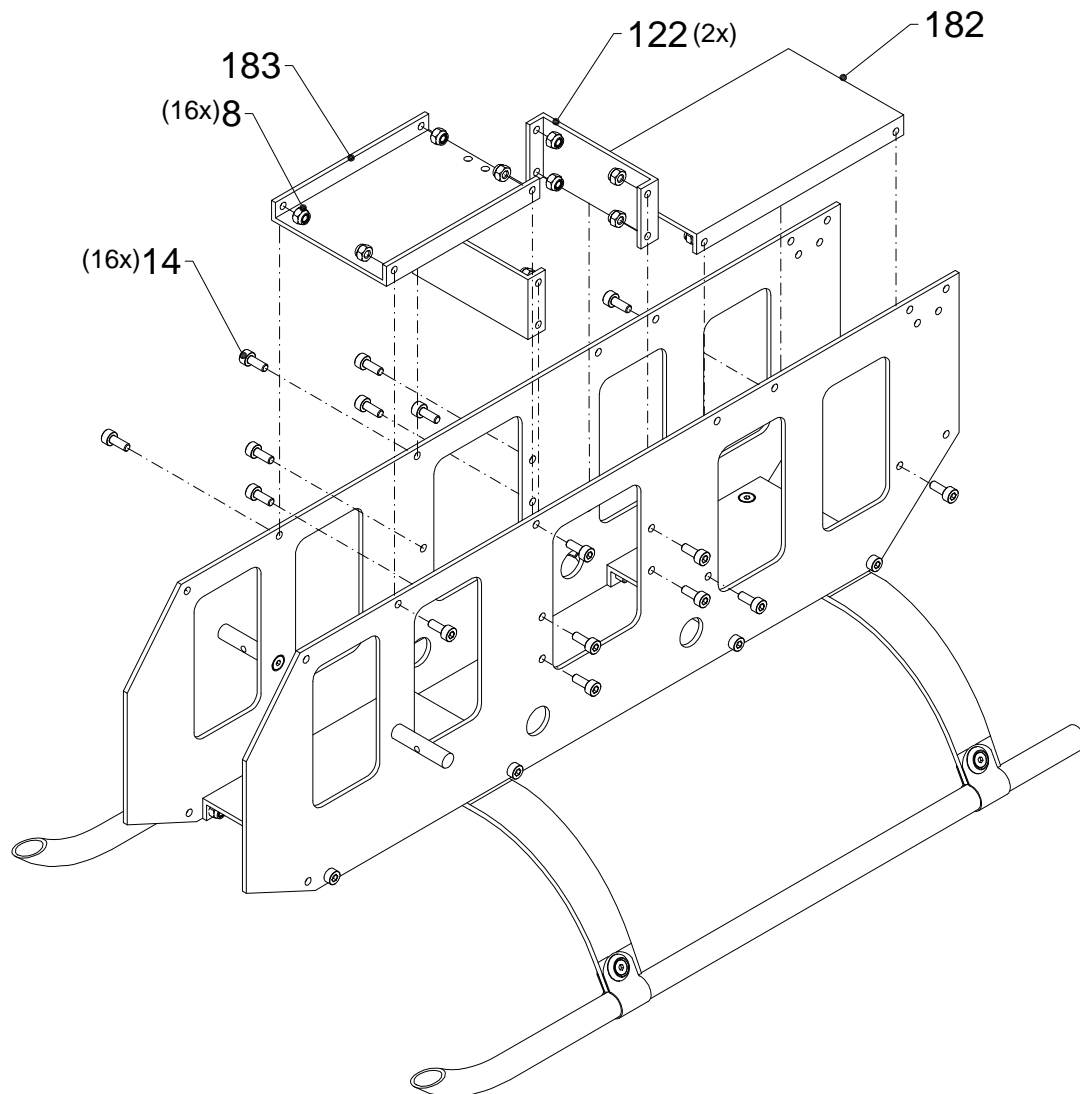
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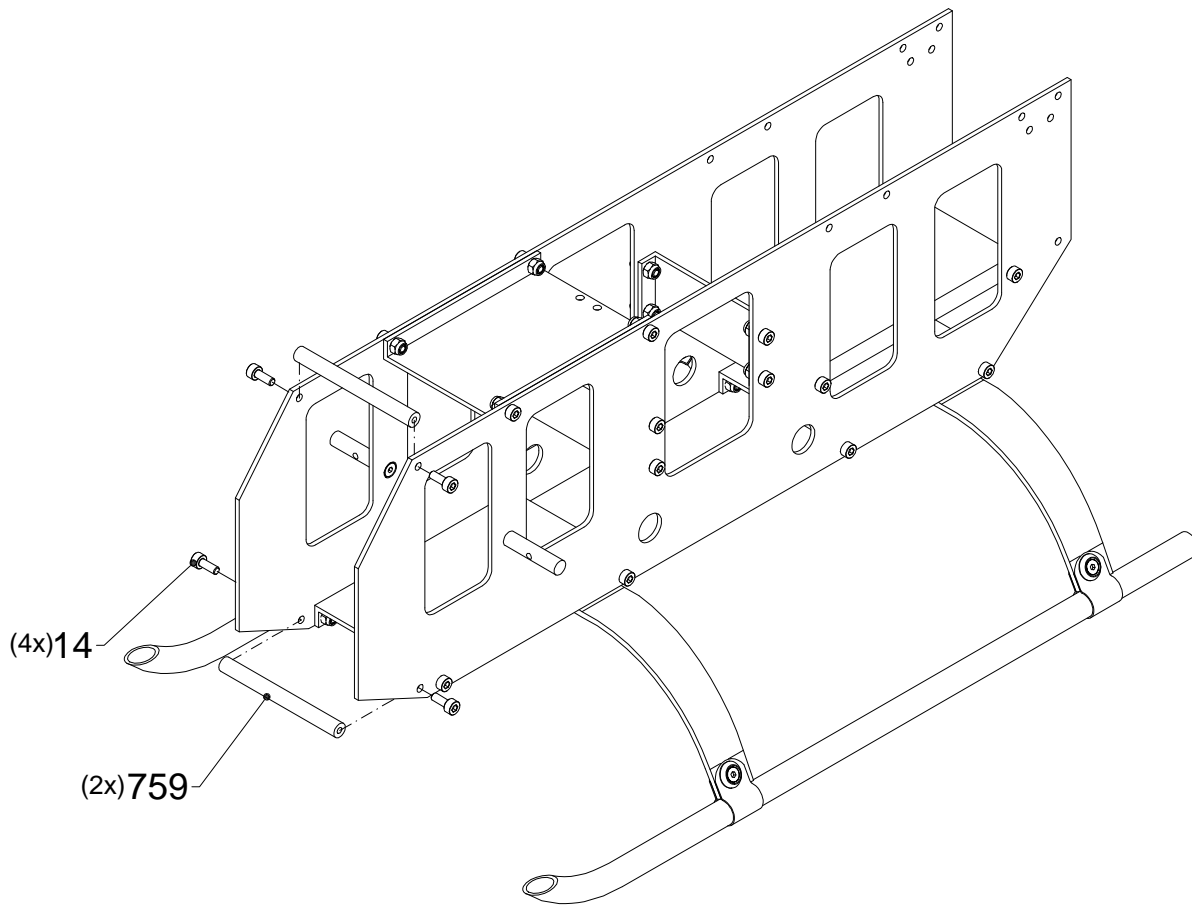
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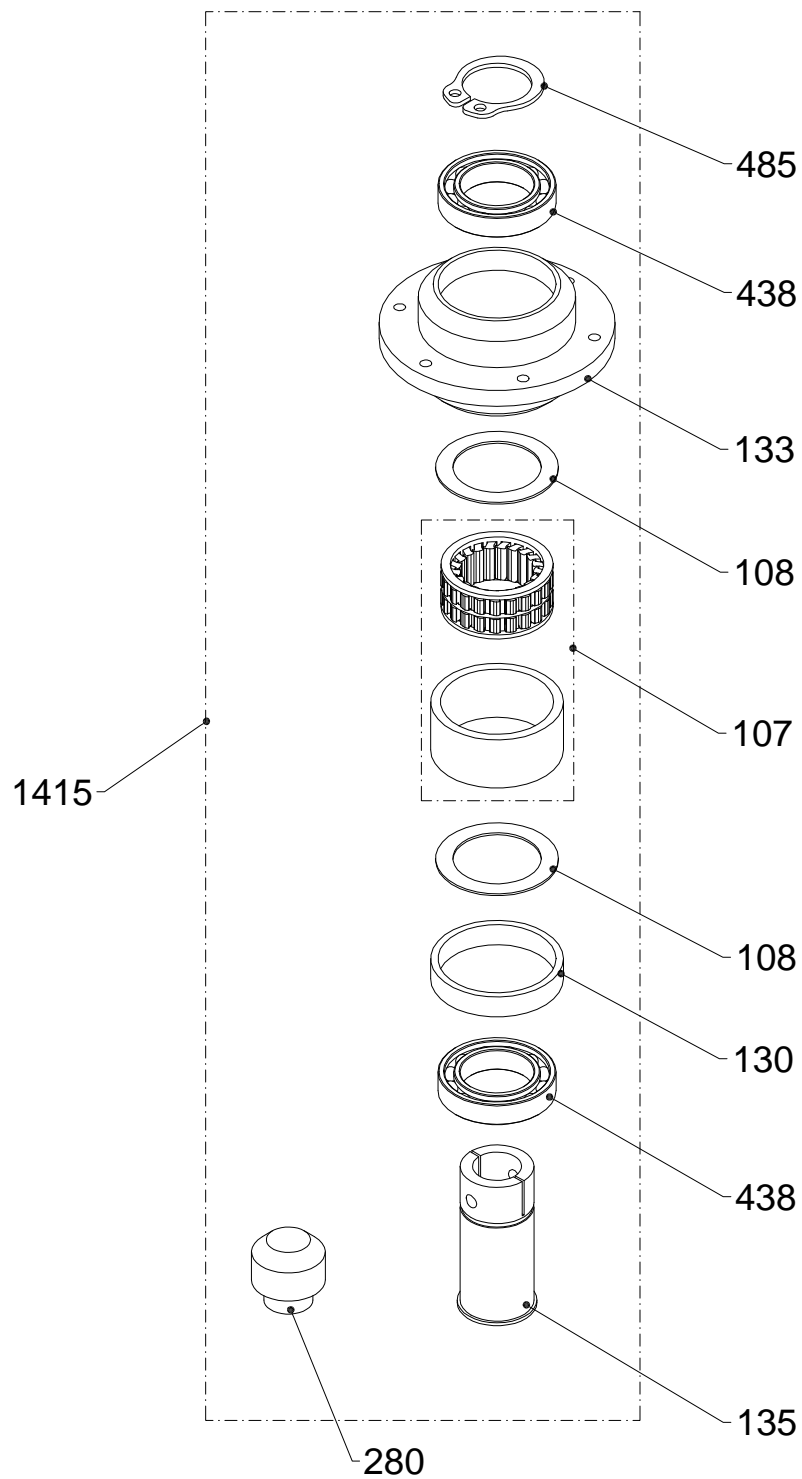
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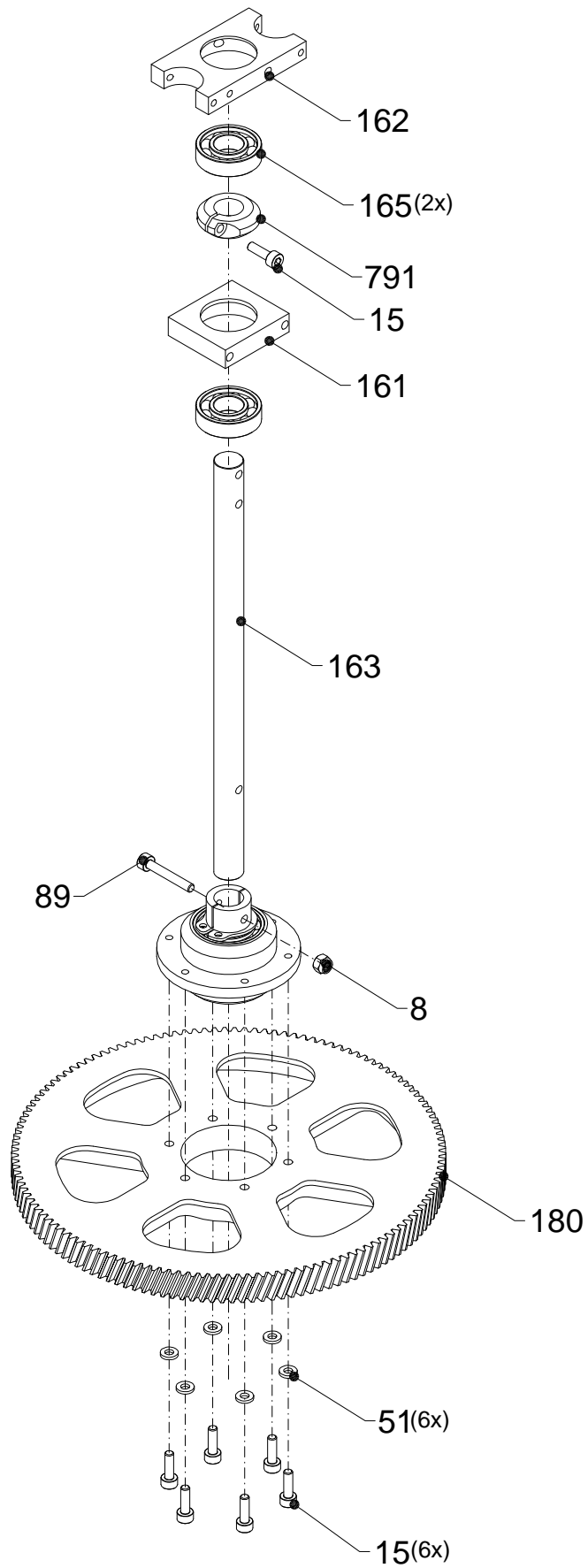
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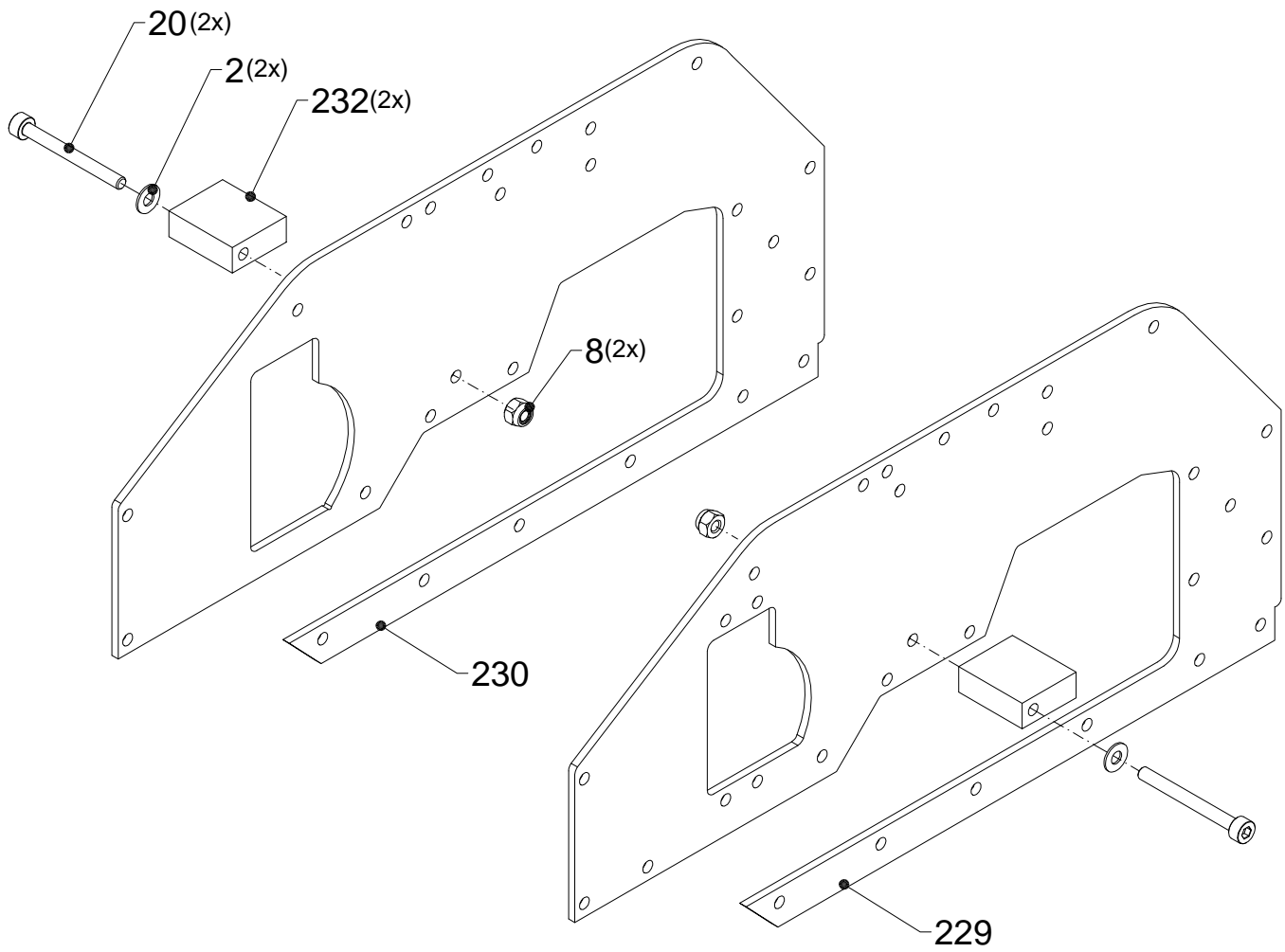


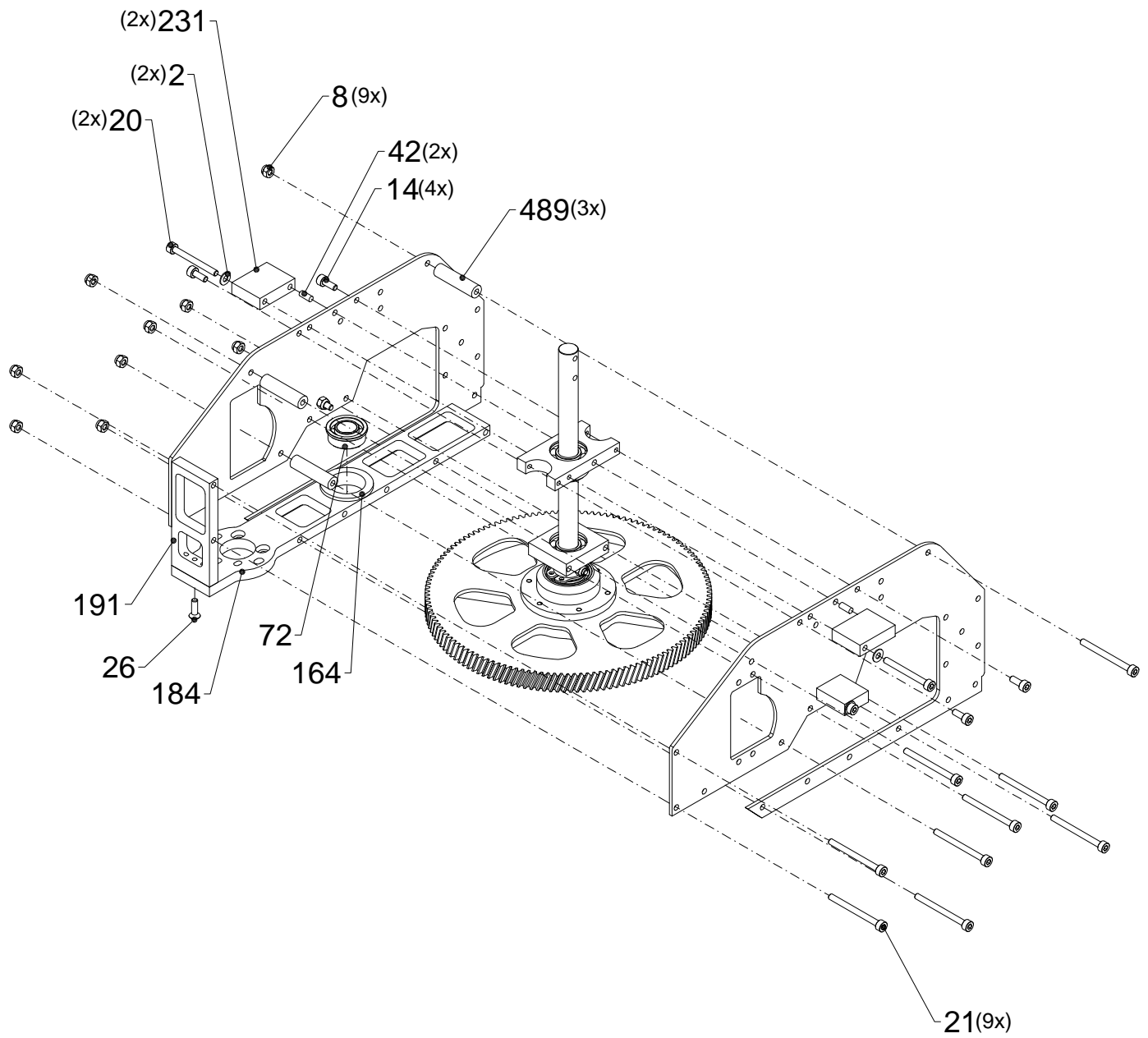




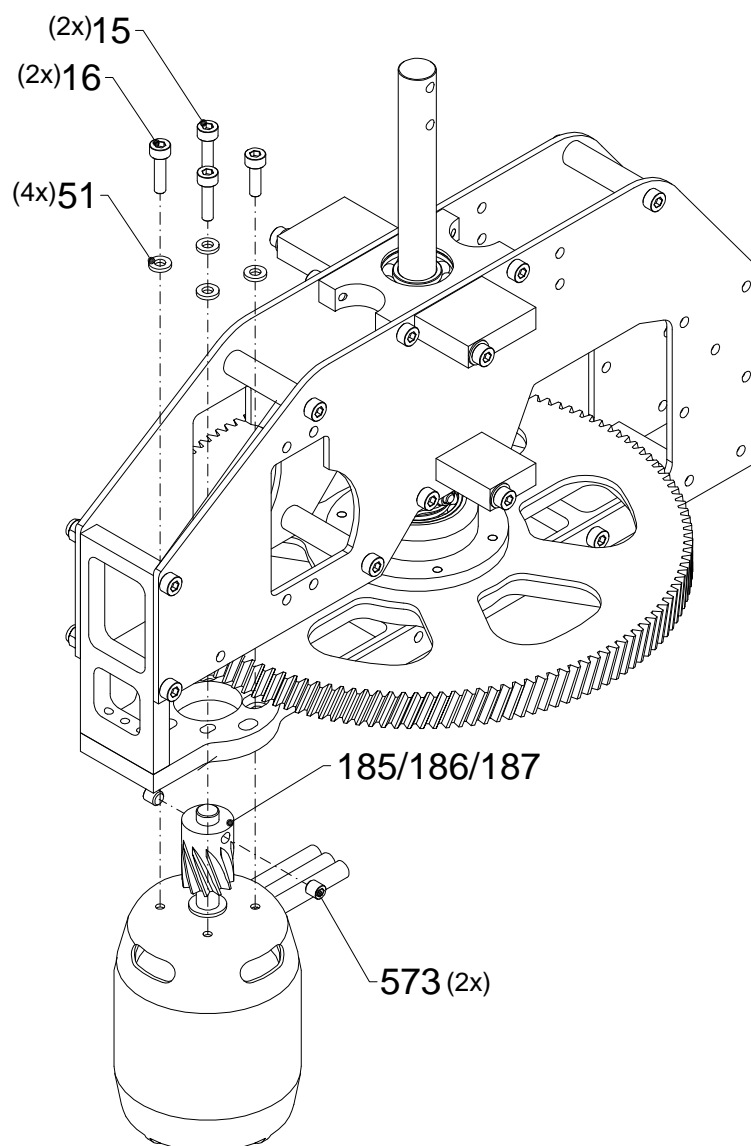




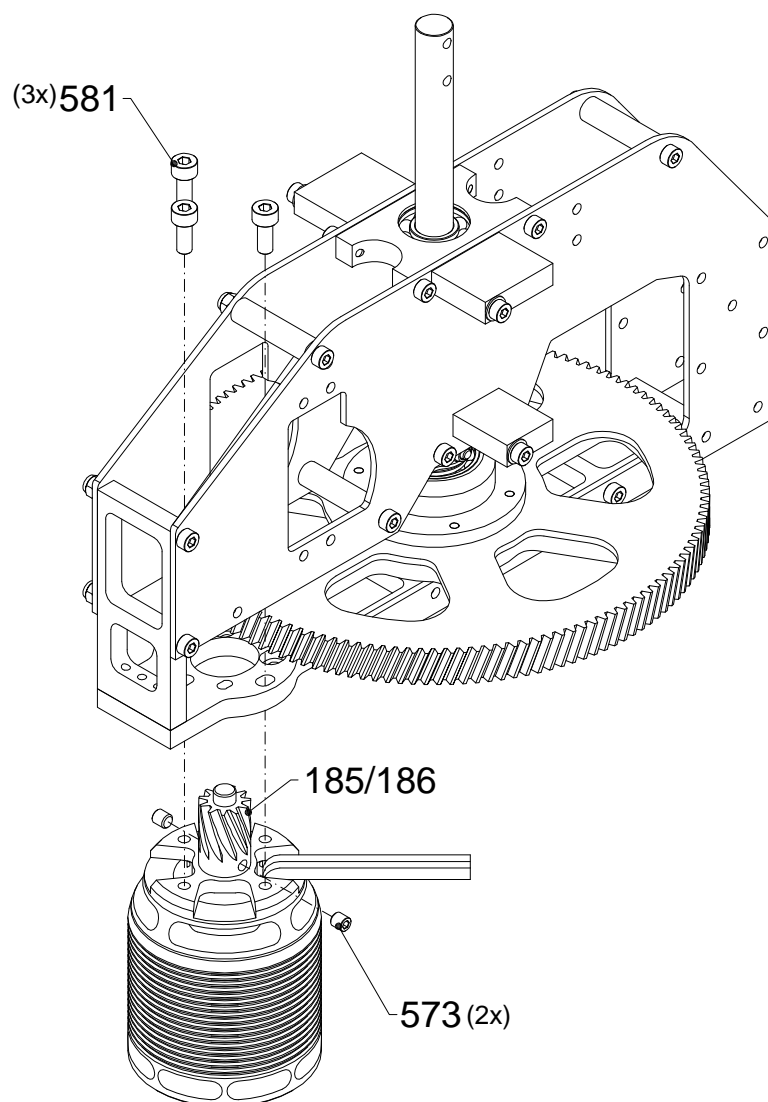


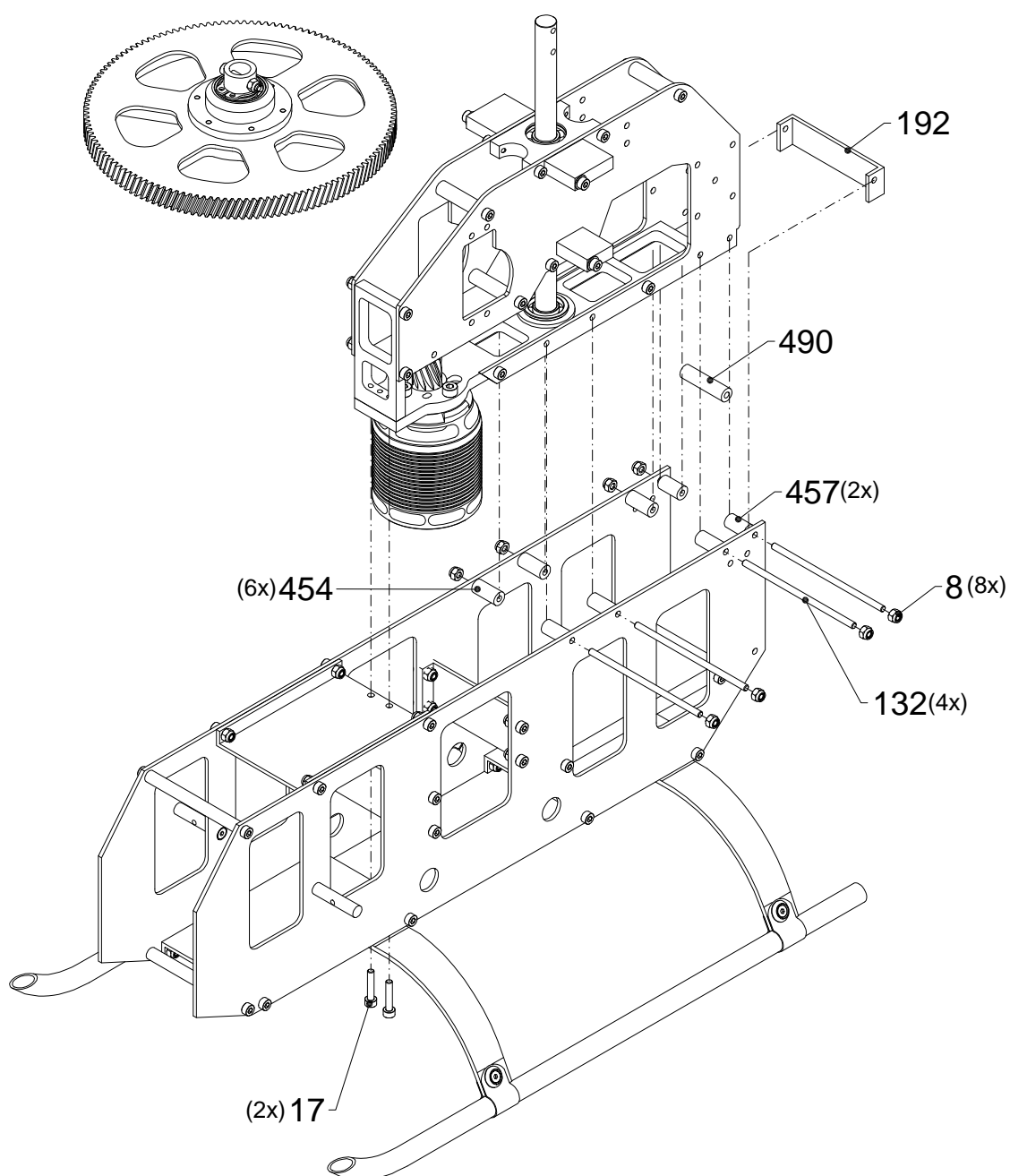


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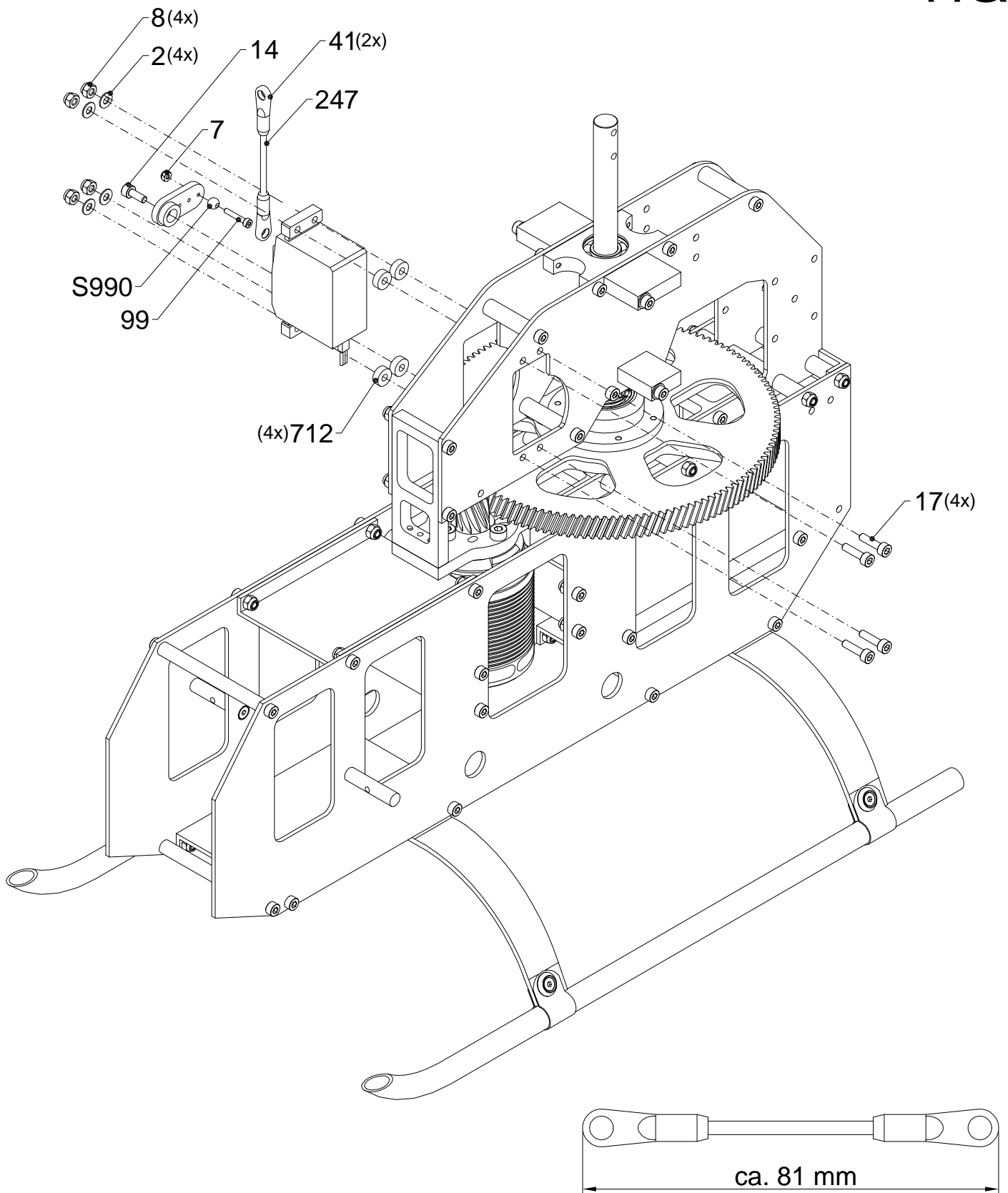


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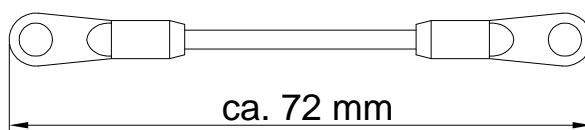
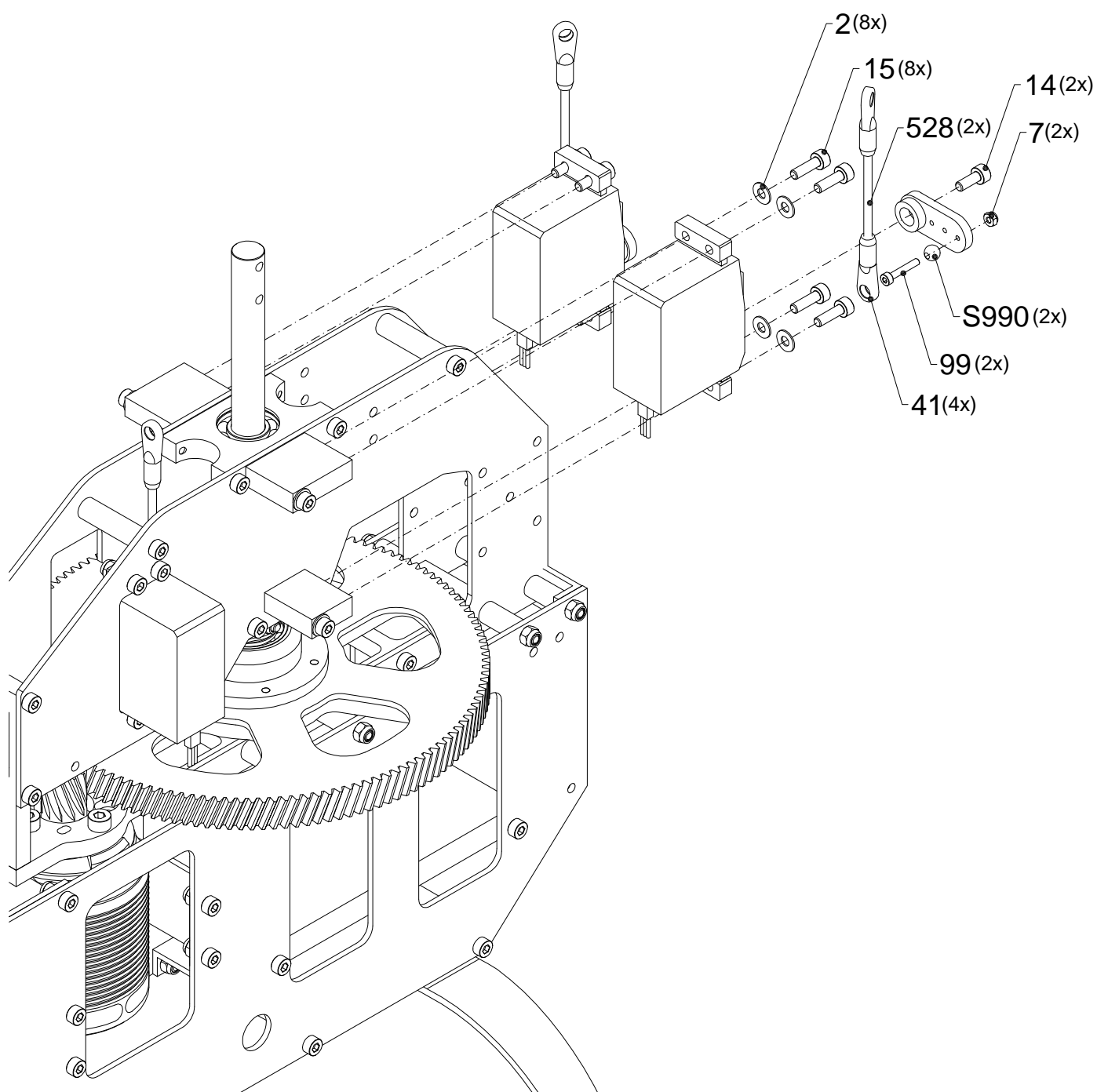
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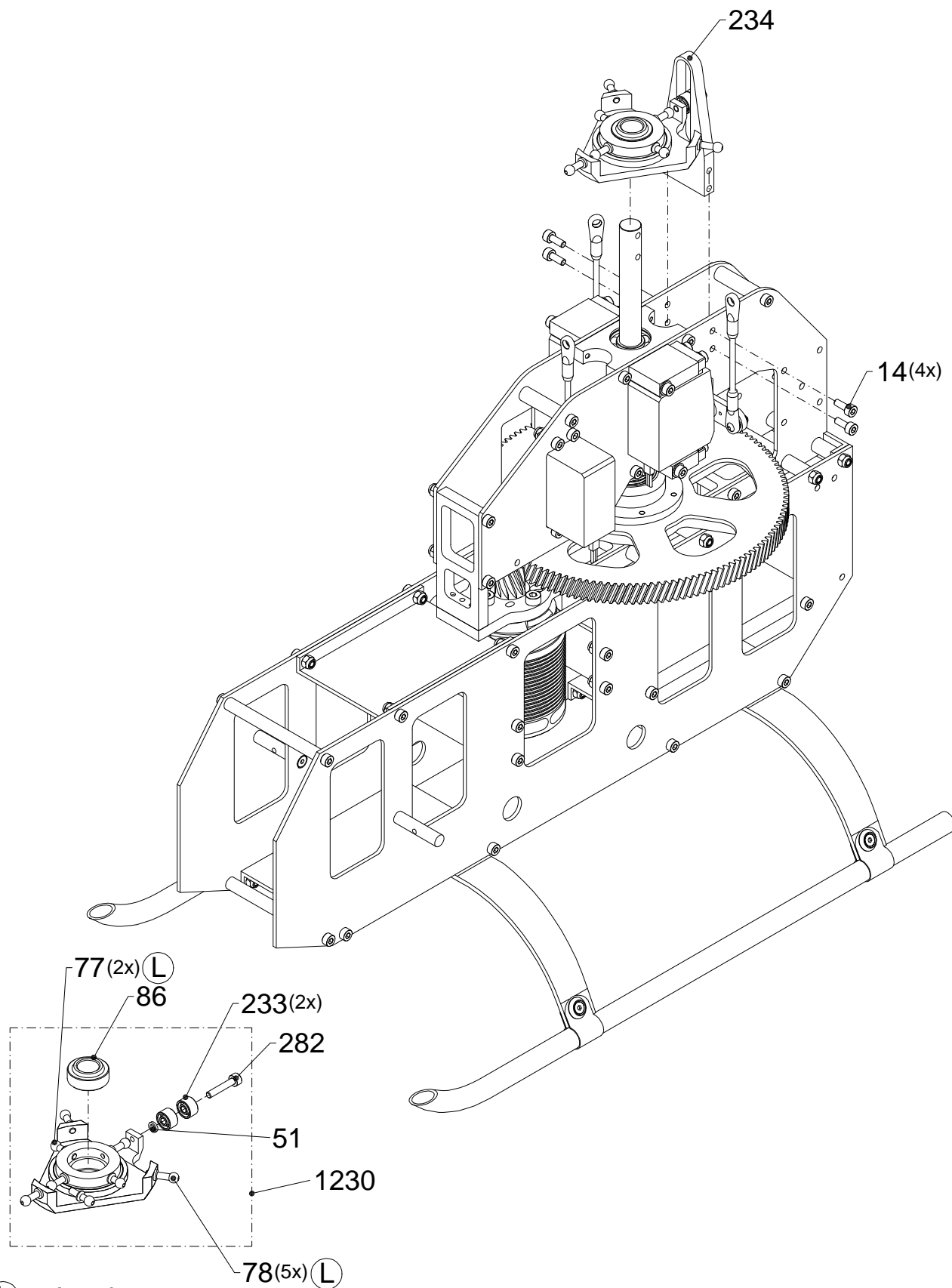
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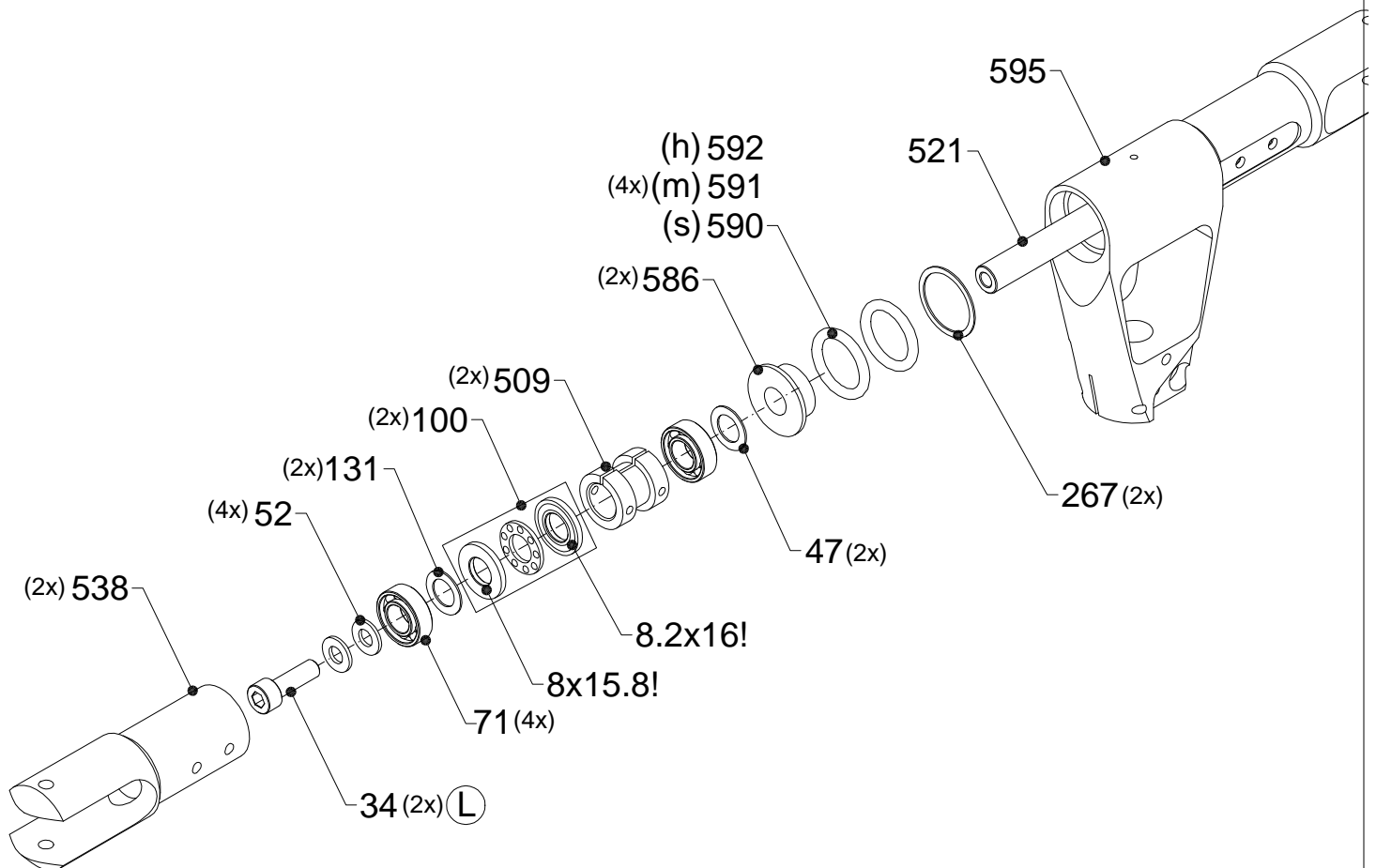


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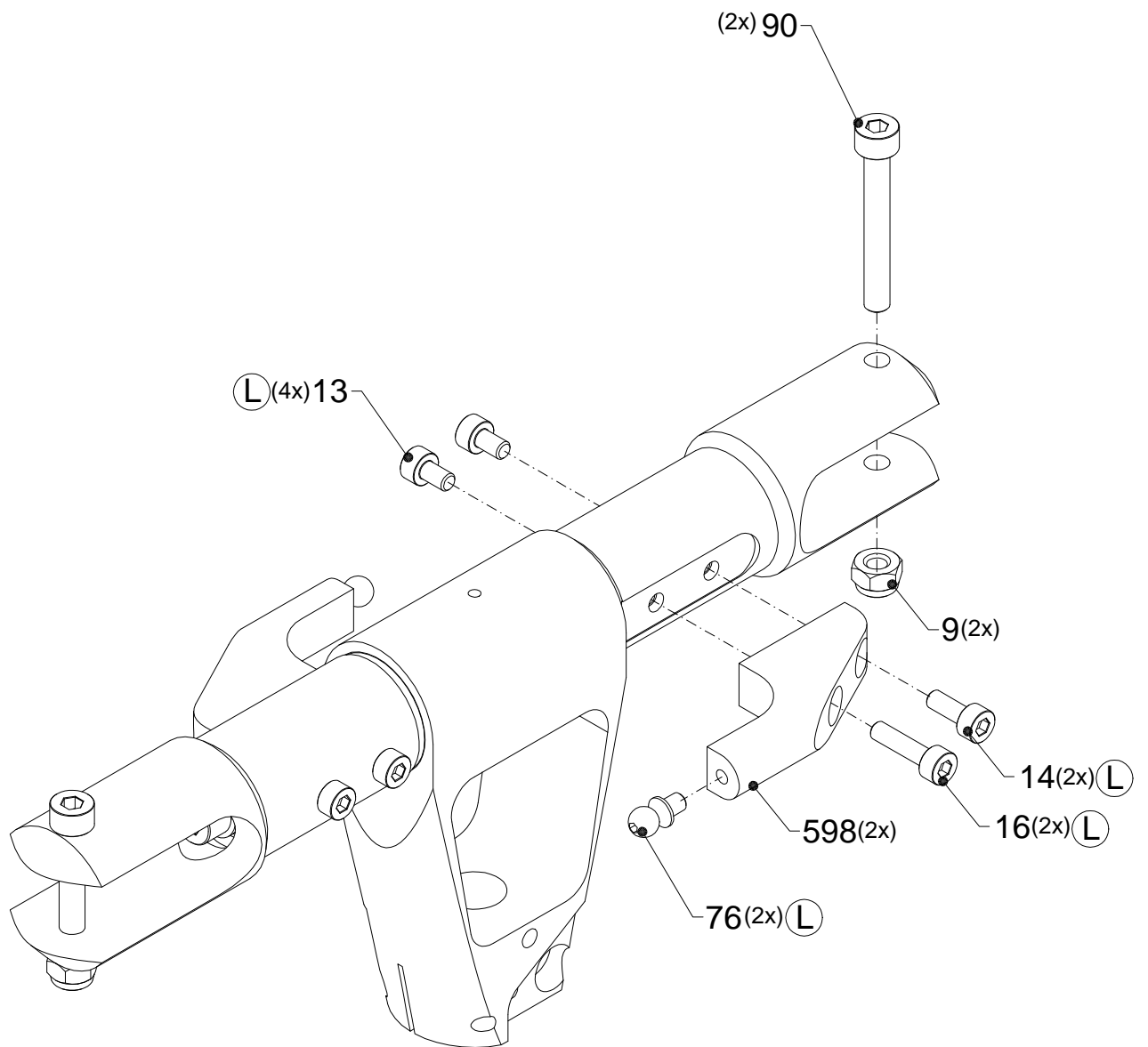
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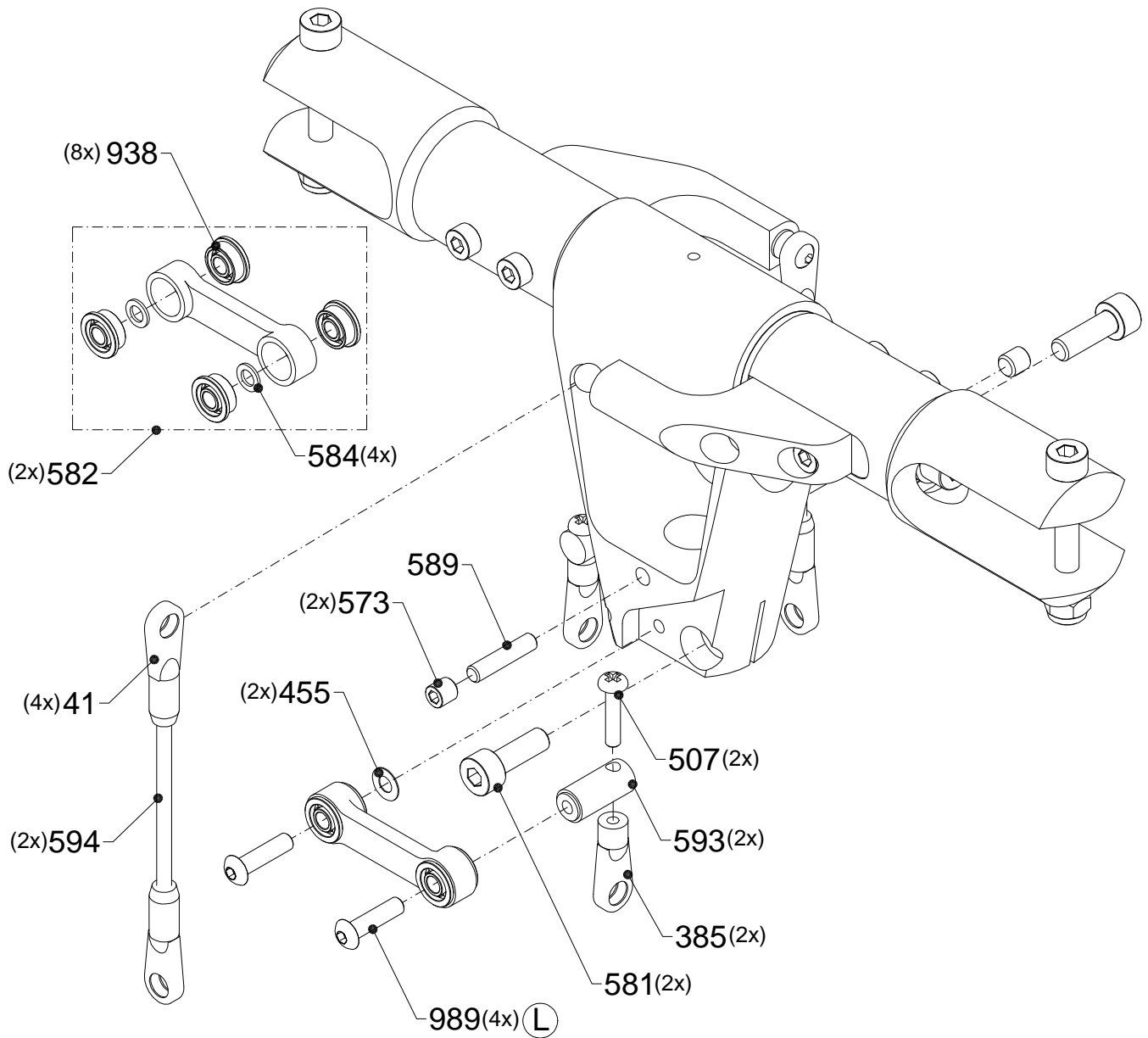
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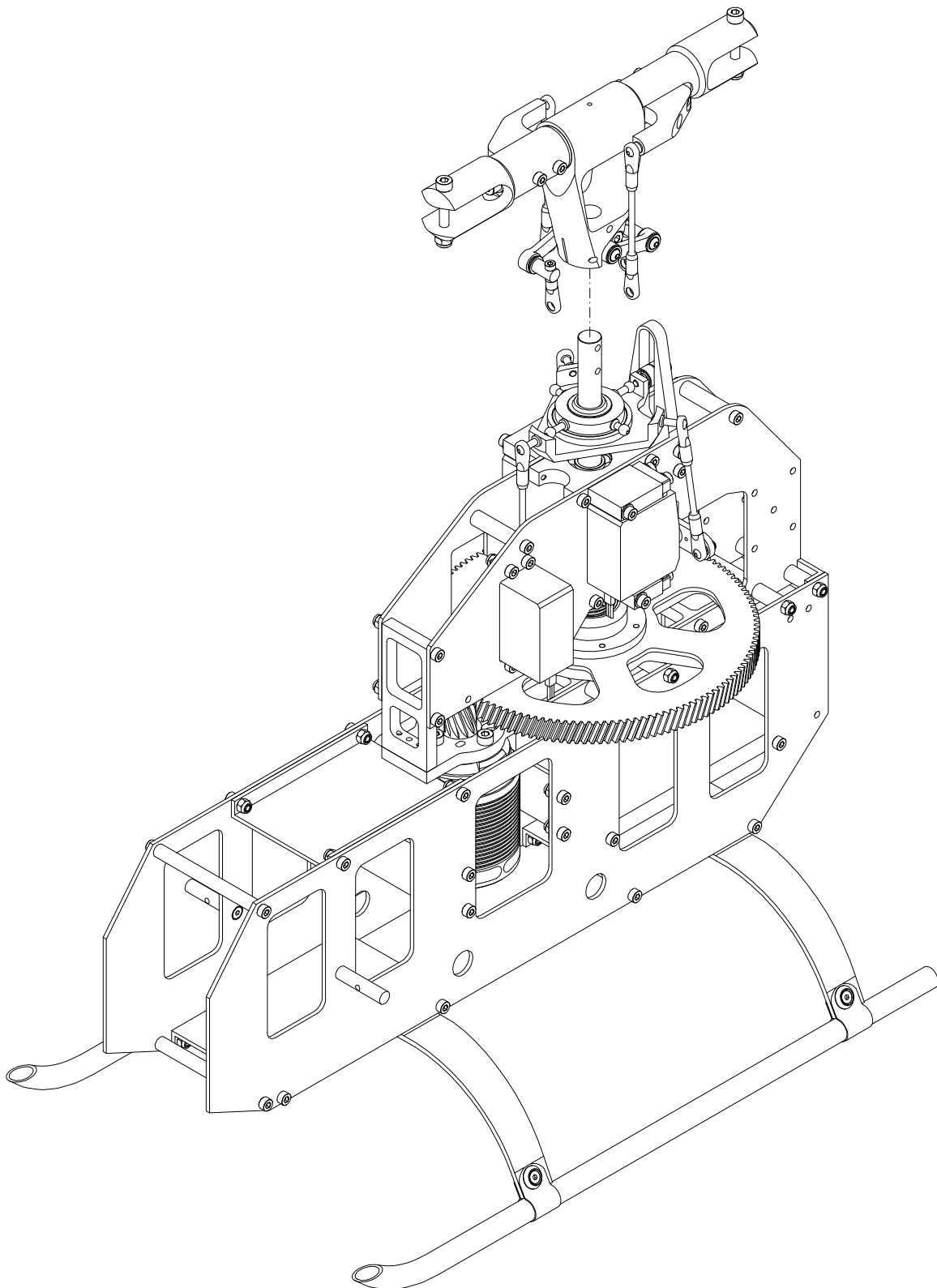


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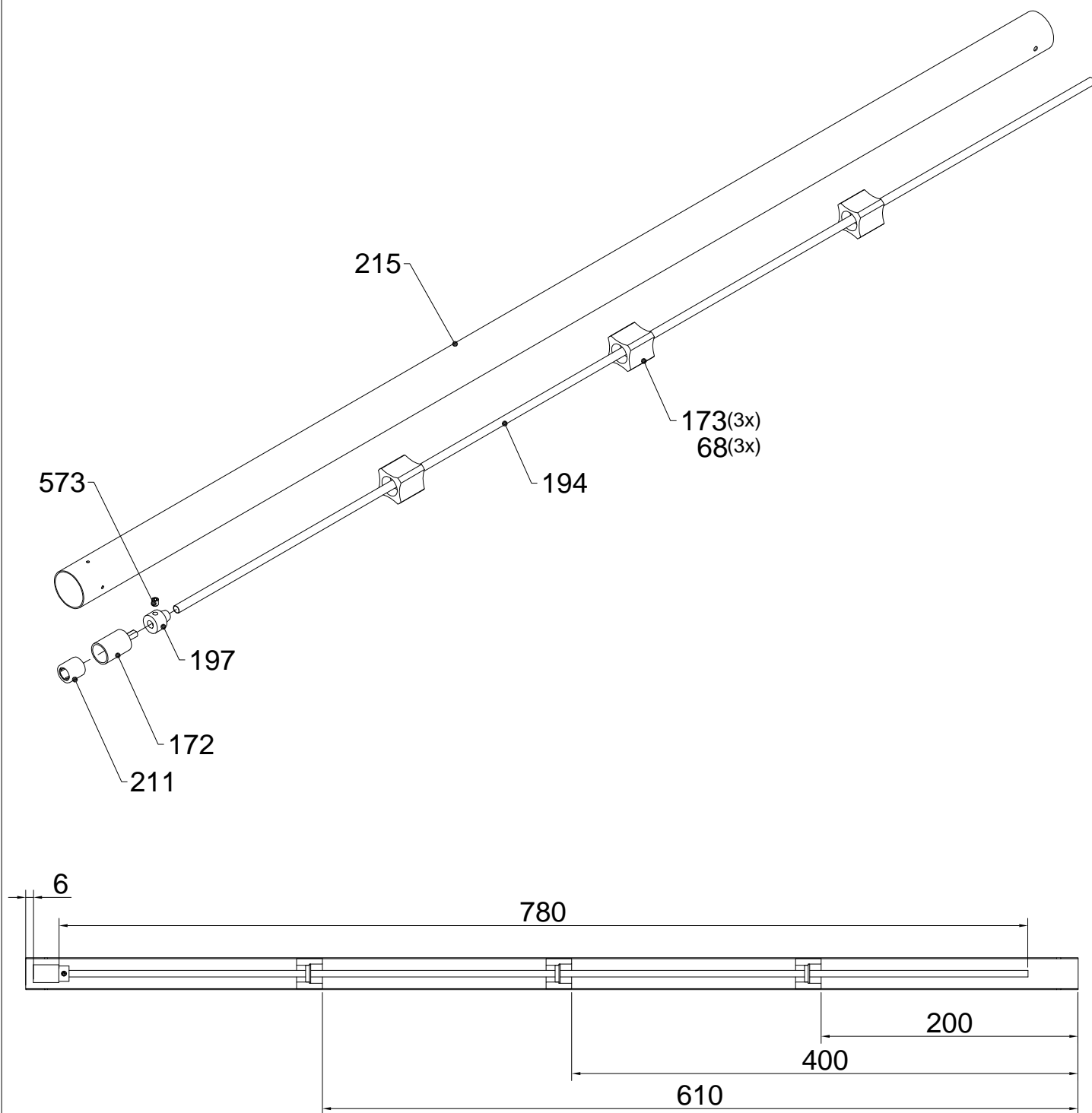
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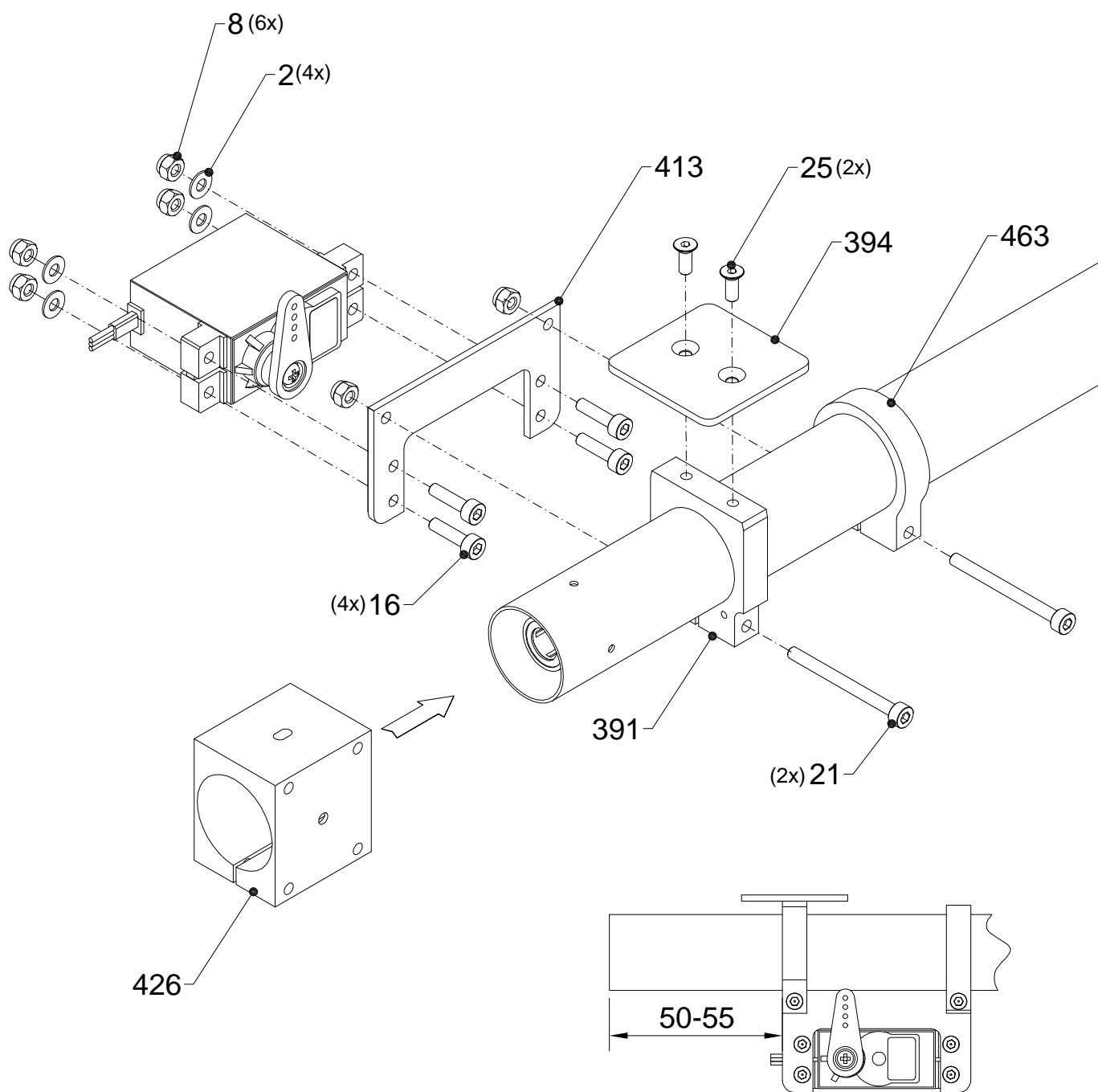
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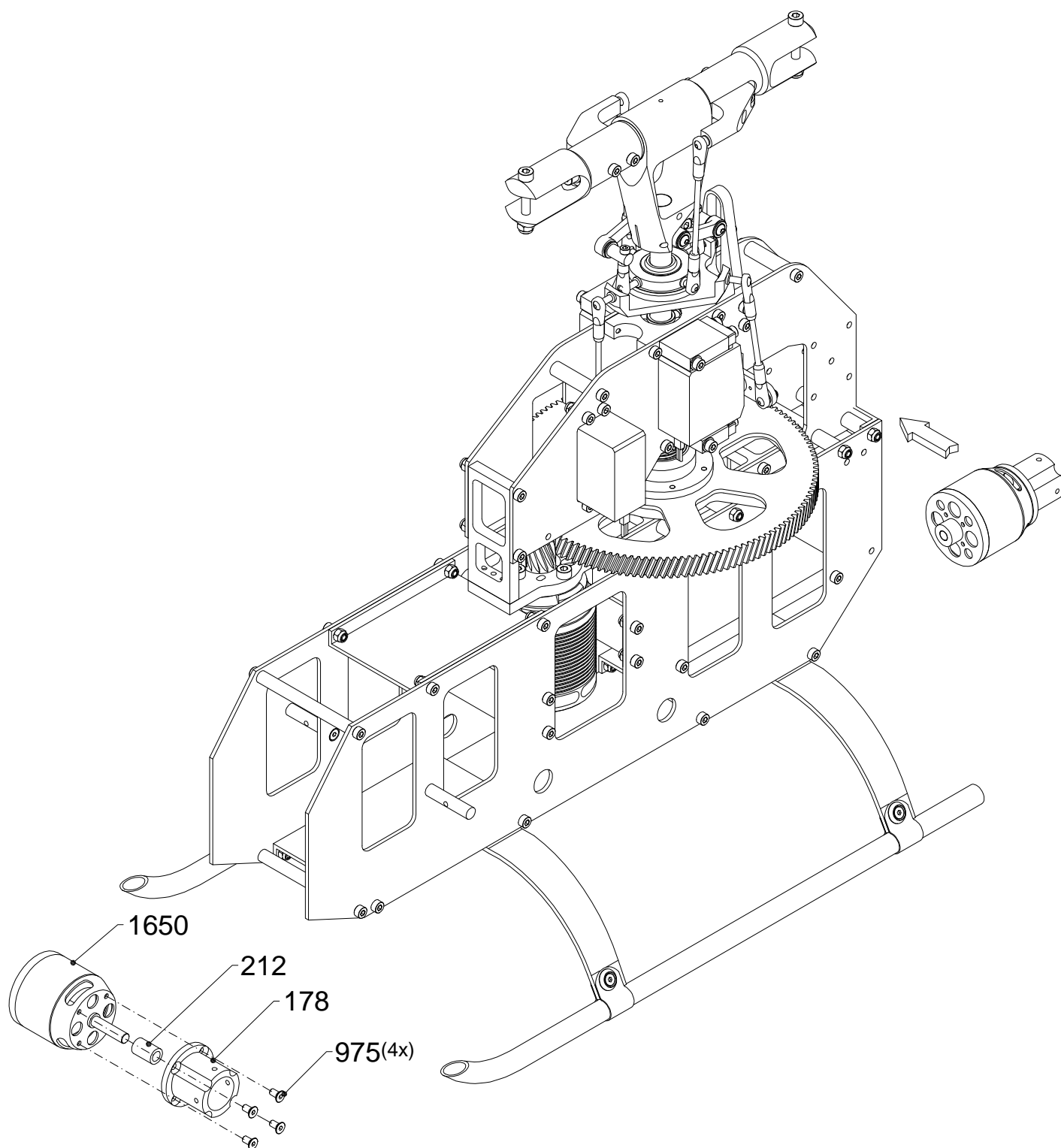
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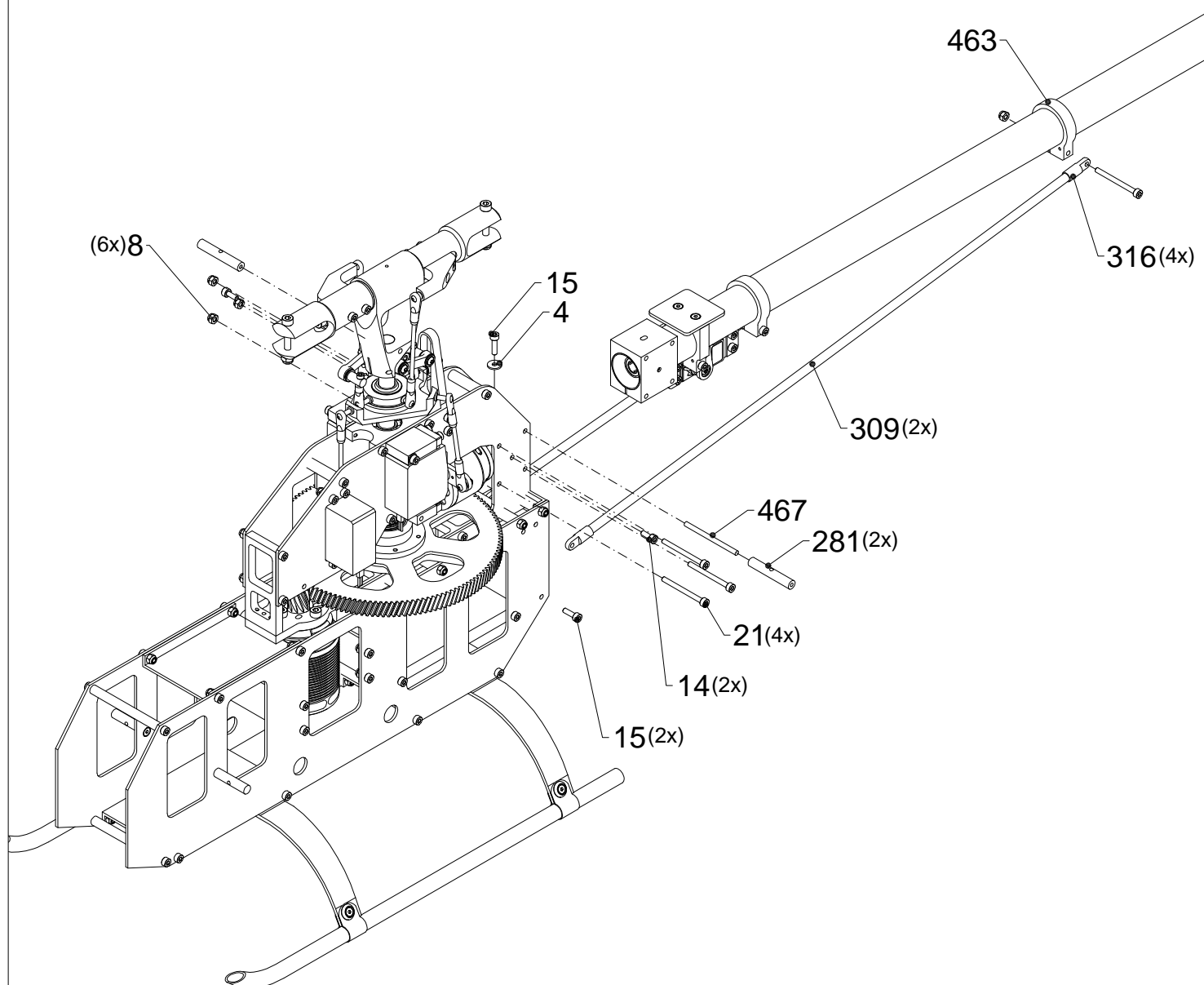
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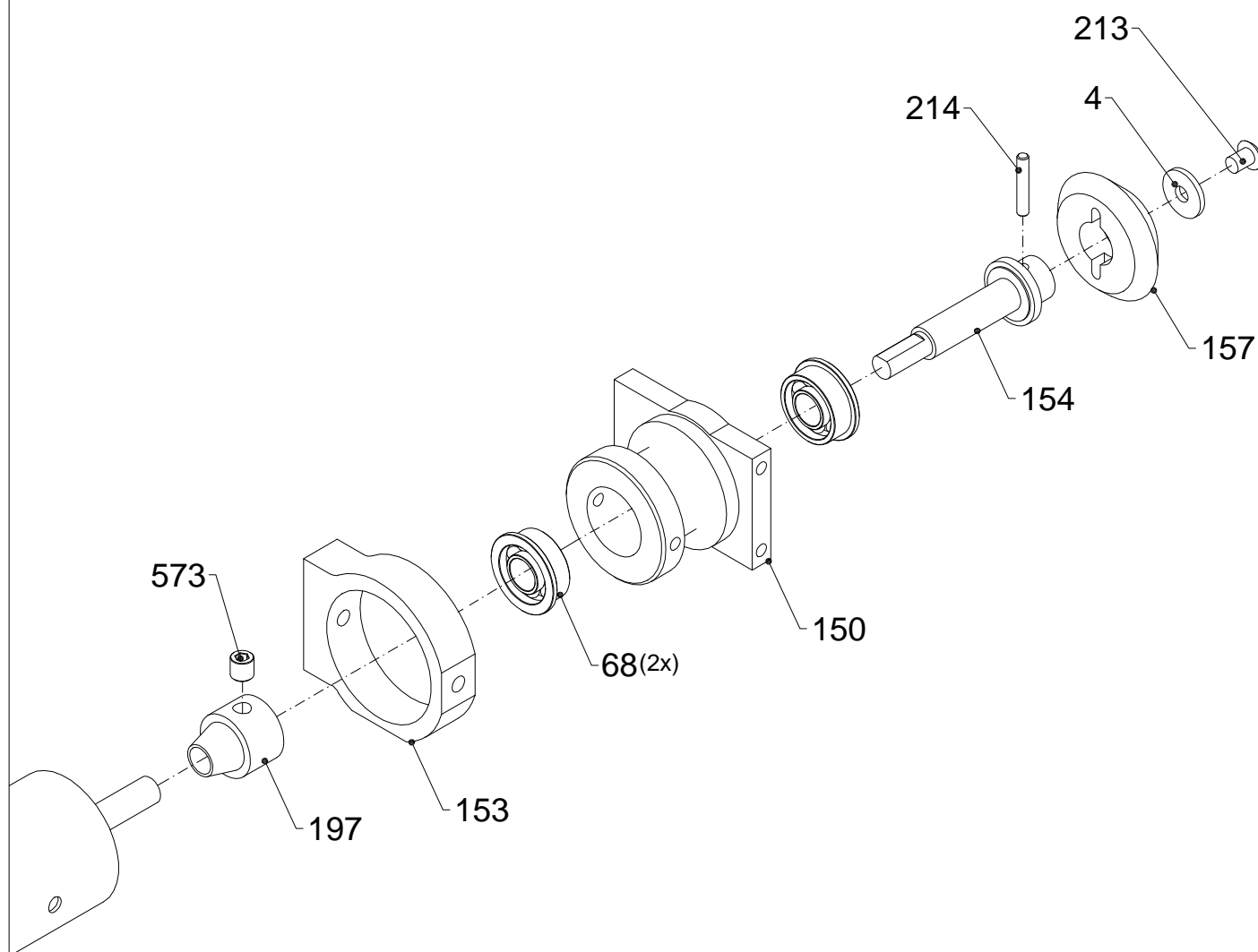
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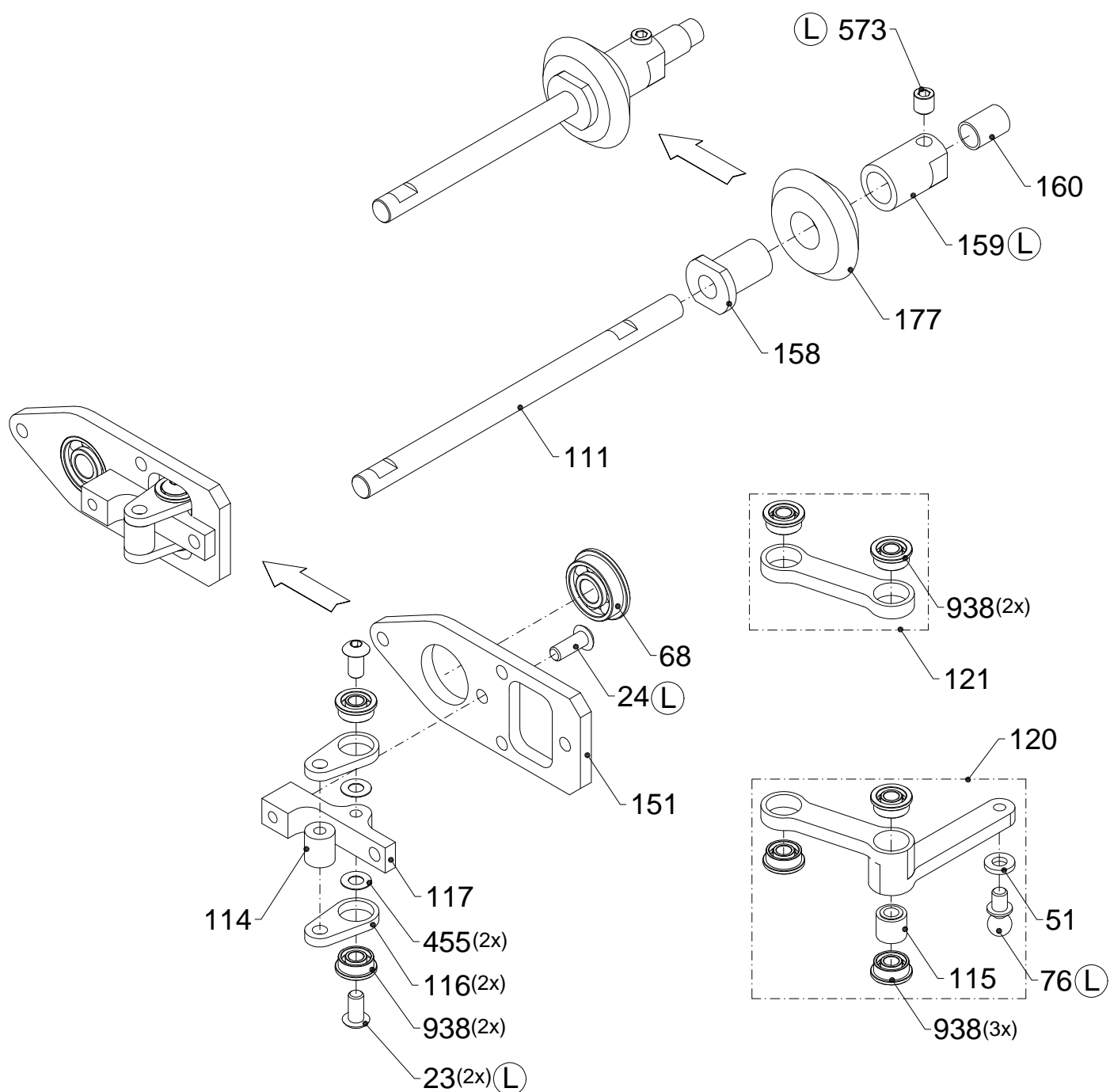
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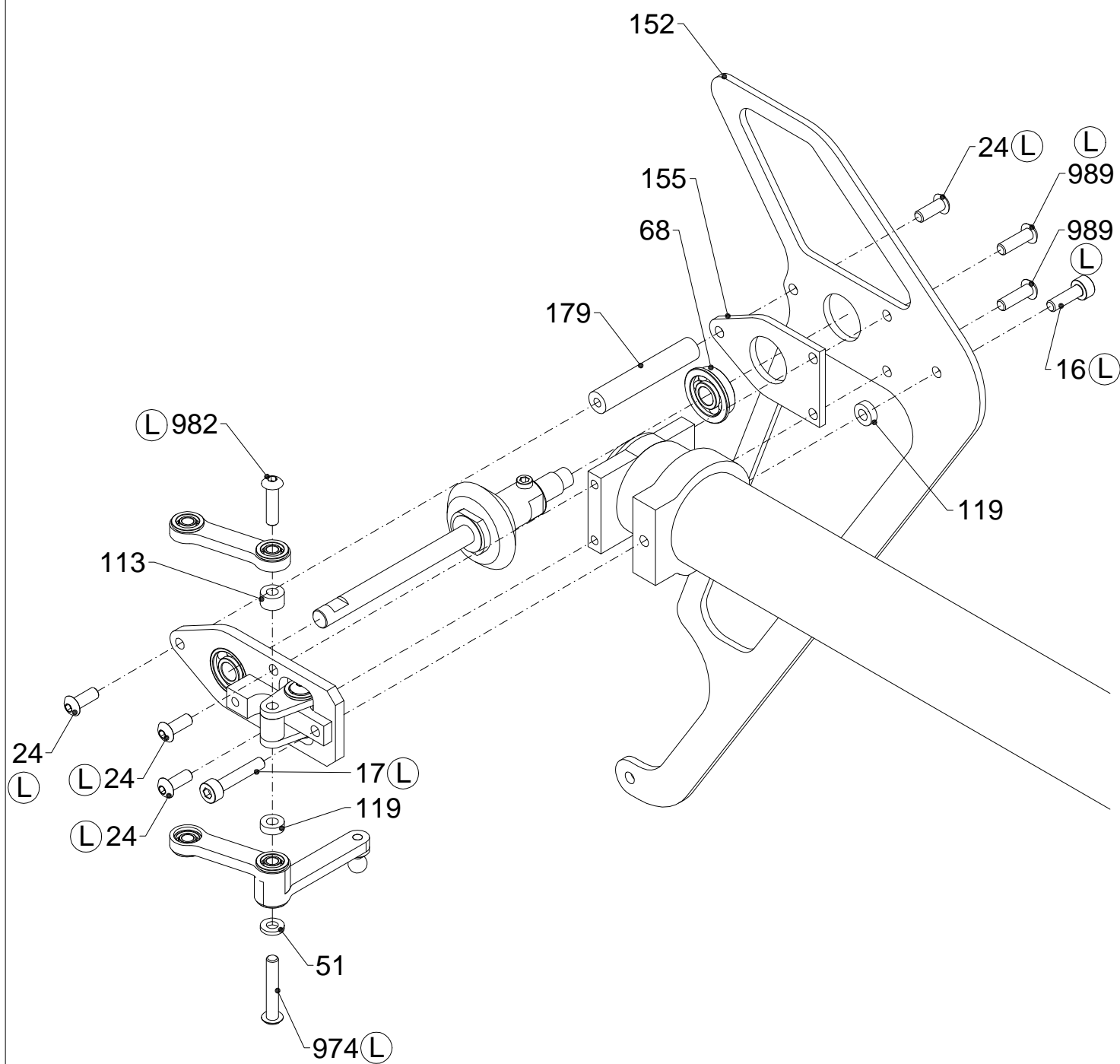


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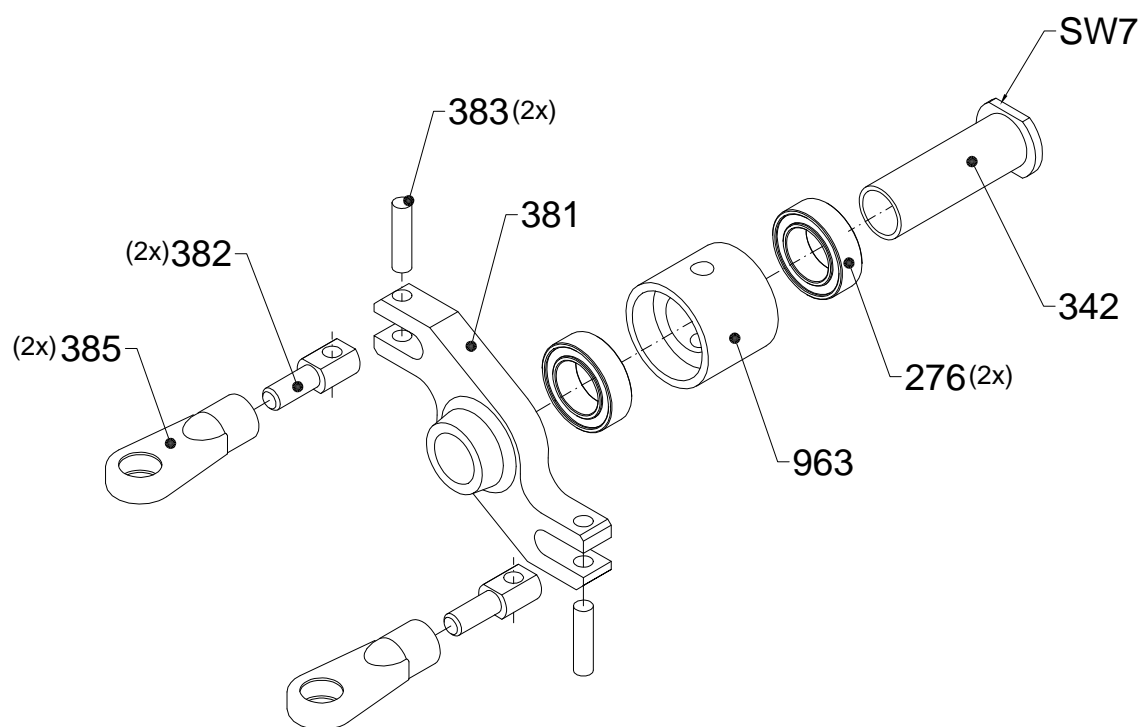
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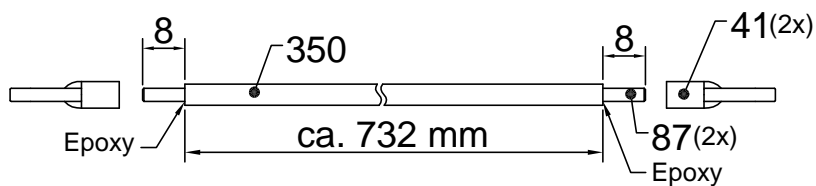
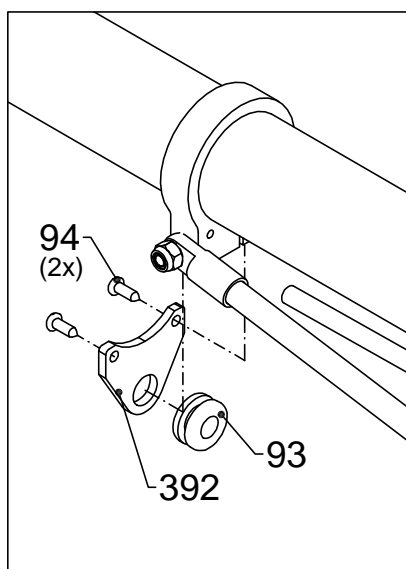
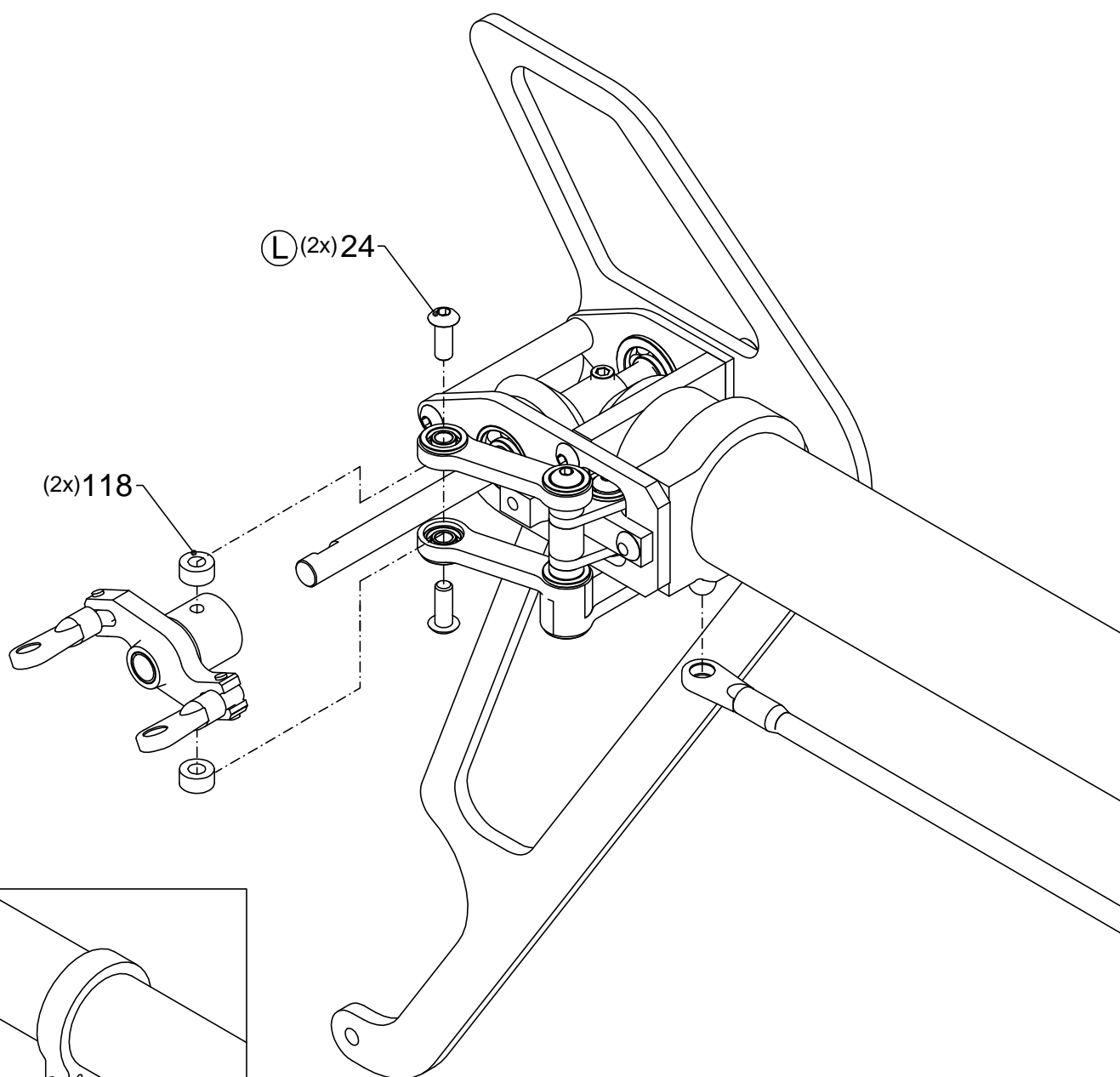


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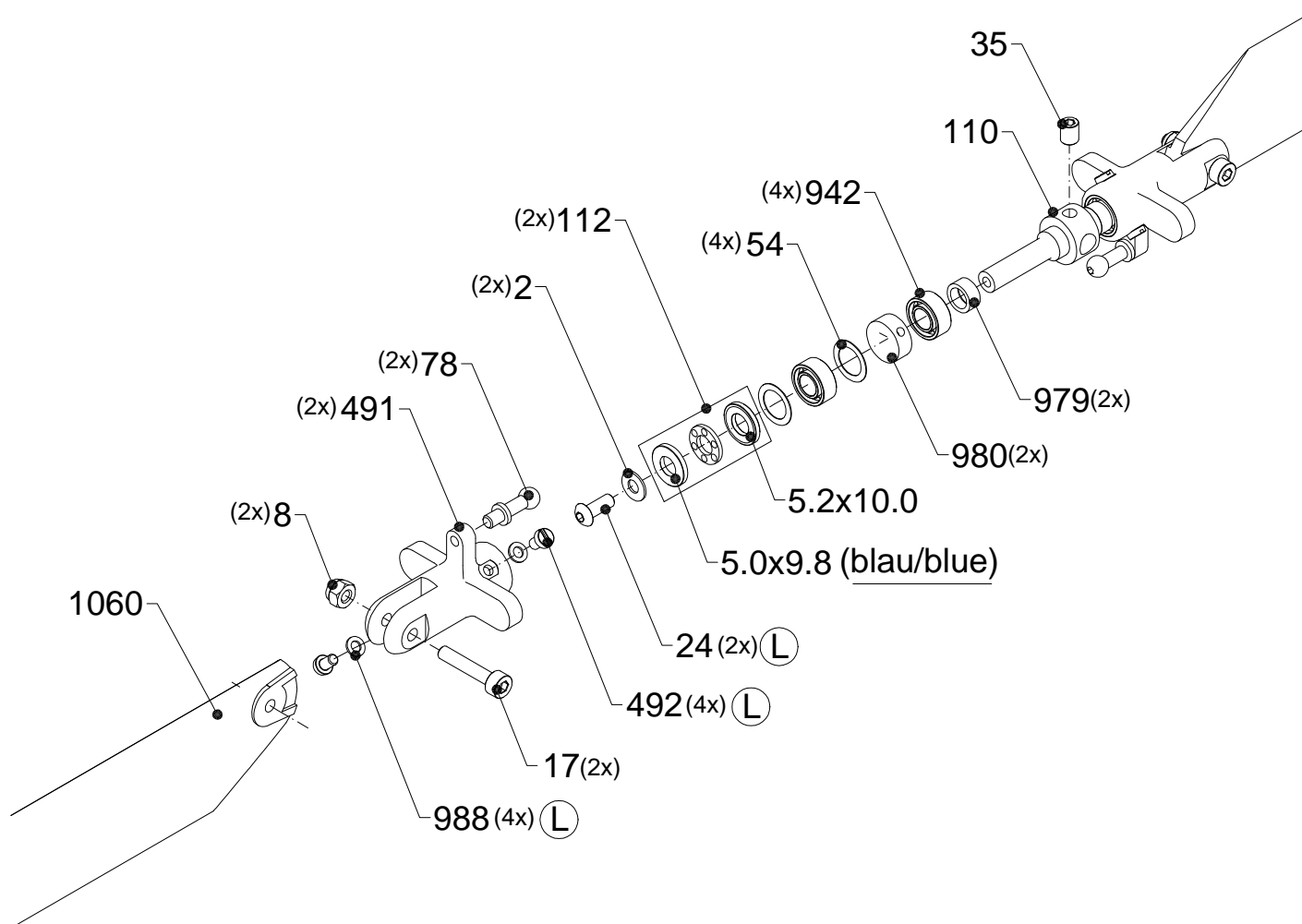
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