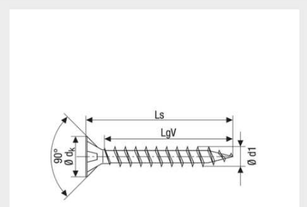
SPAX wood screw dimensions:



Universal screw, 2,5 x 10 mm, 100 pieces, full thread, flat countersunk head, cross recess Z1, S point, YELLOX - 4081020250102

2,5 x 10 mm | 100 ps.

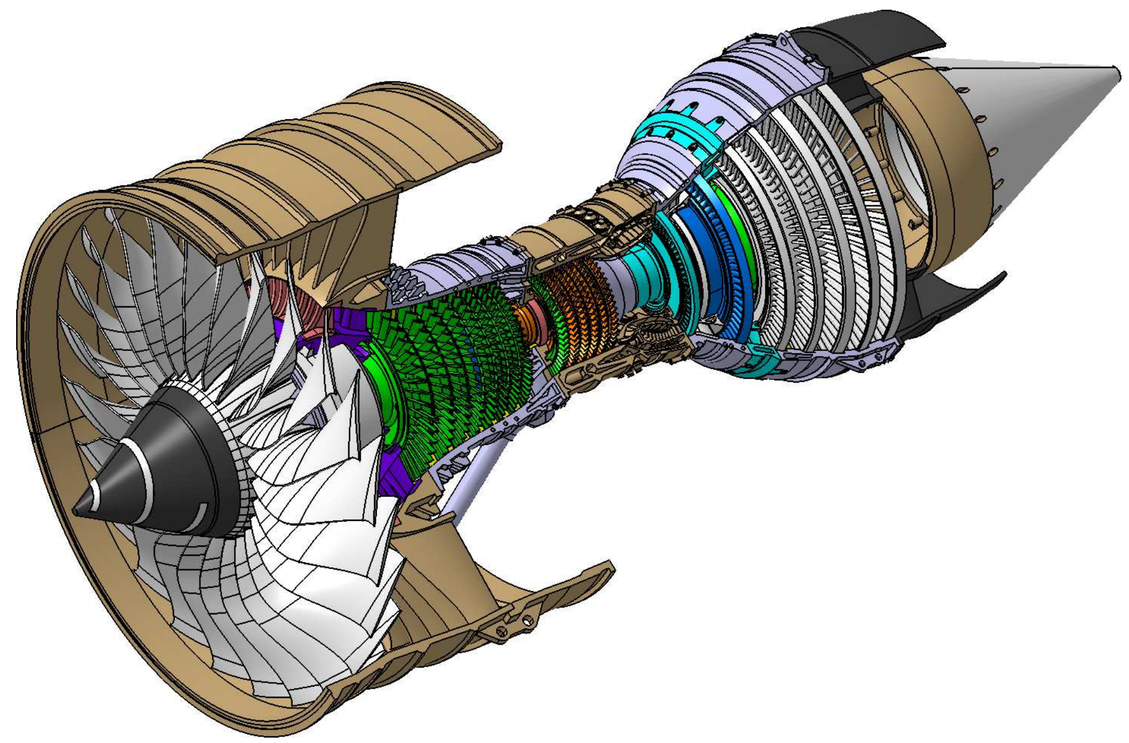
- Application: Universal usage
- Quick and safe fastening with reduced driving in torque (more screwed connections per battery charge)
- Multifunctional applications indoors

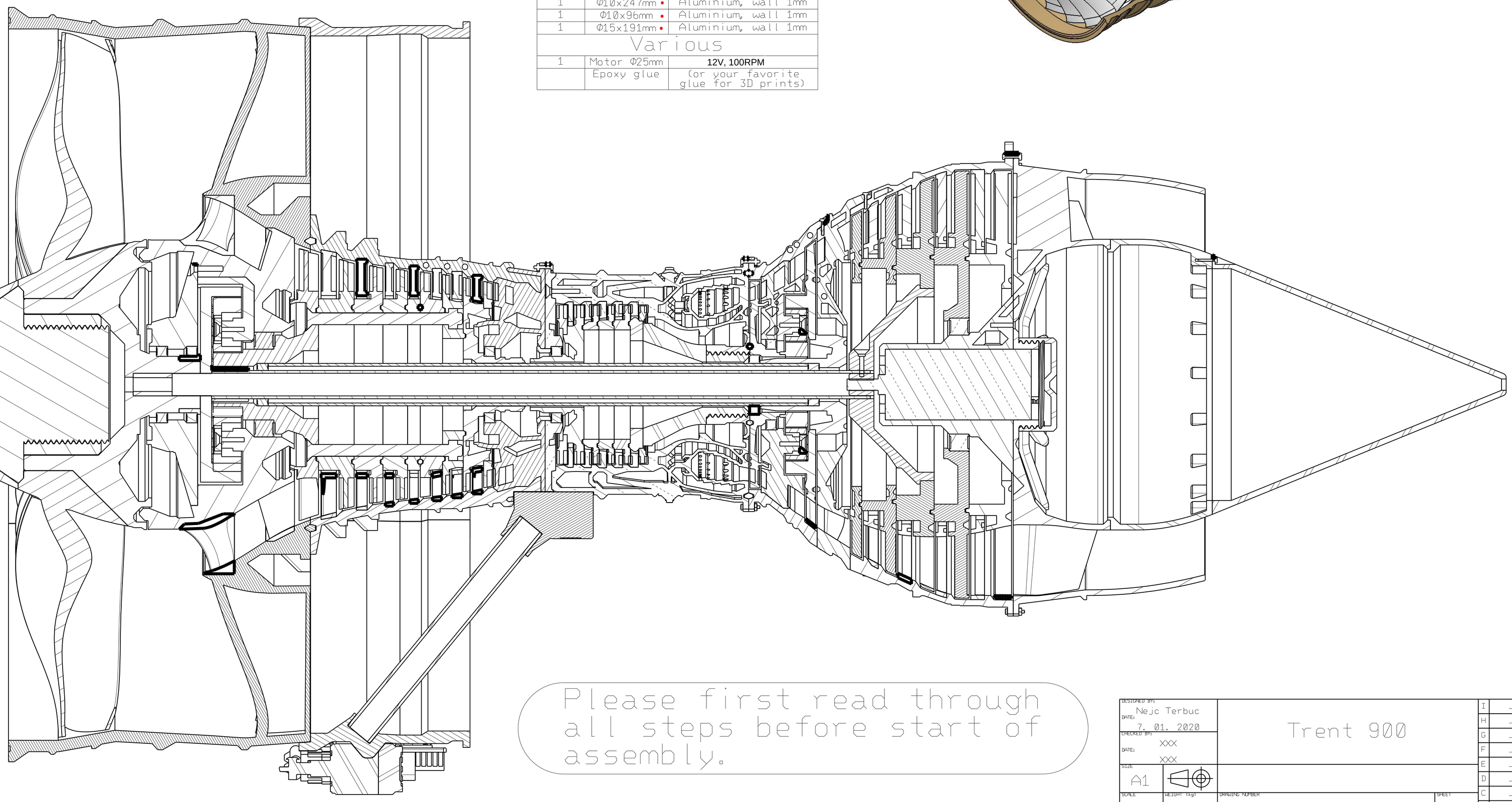
Technical details

EAN	4003590024313
SPAX-No.	4081020250102
Thread diameter d1	2,5 mm
Length total Ls	10 mm
Head diameter dk	5,1 mm
Partial thread length LgT	8 mm
BIT size Z	1

BOM

QTY	Name	Comment
	Bearings	• Not necessary
4	6704ZZ •	2x Fan, 1x IPC, 1x HPC
4	MR126ZZ	Fan planetary gear
1	6805ZZ	1x Fan
2	6700ZZ •	1x IPC, 1x Turbine
4	MR85ZZ	Turbine planetary gear
1	6807ZZ •	Turbine Motor
1	6702ZZ •	Combustion
1	6705ZZ •	Turbine Inlet
	Screws	Glue can be used in place of all screws
70	M1x6mm	
34	M1x4mm	
31	2,5x10mm	SPAX or similar — Highly recommended
2	M3x4	For fixing the motor
1	M6x15	DIN 7985
4	M4x55	DIN965
	Nuts	
53	M1	
4	M4	
	Rods	• Prints available
1	Φ10x247mm •	Aluminium, wall 1mm
1	Φ10x96mm •	Aluminium, wall 1mm
1	Φ15x191mm •	Aluminium, wall 1mm
	Various	
1	Motor Φ25mm	12V, 100RPM
	Epoxy glue	(or your favorite glue for 3D prints)





Please first read through all steps before start of assembly.

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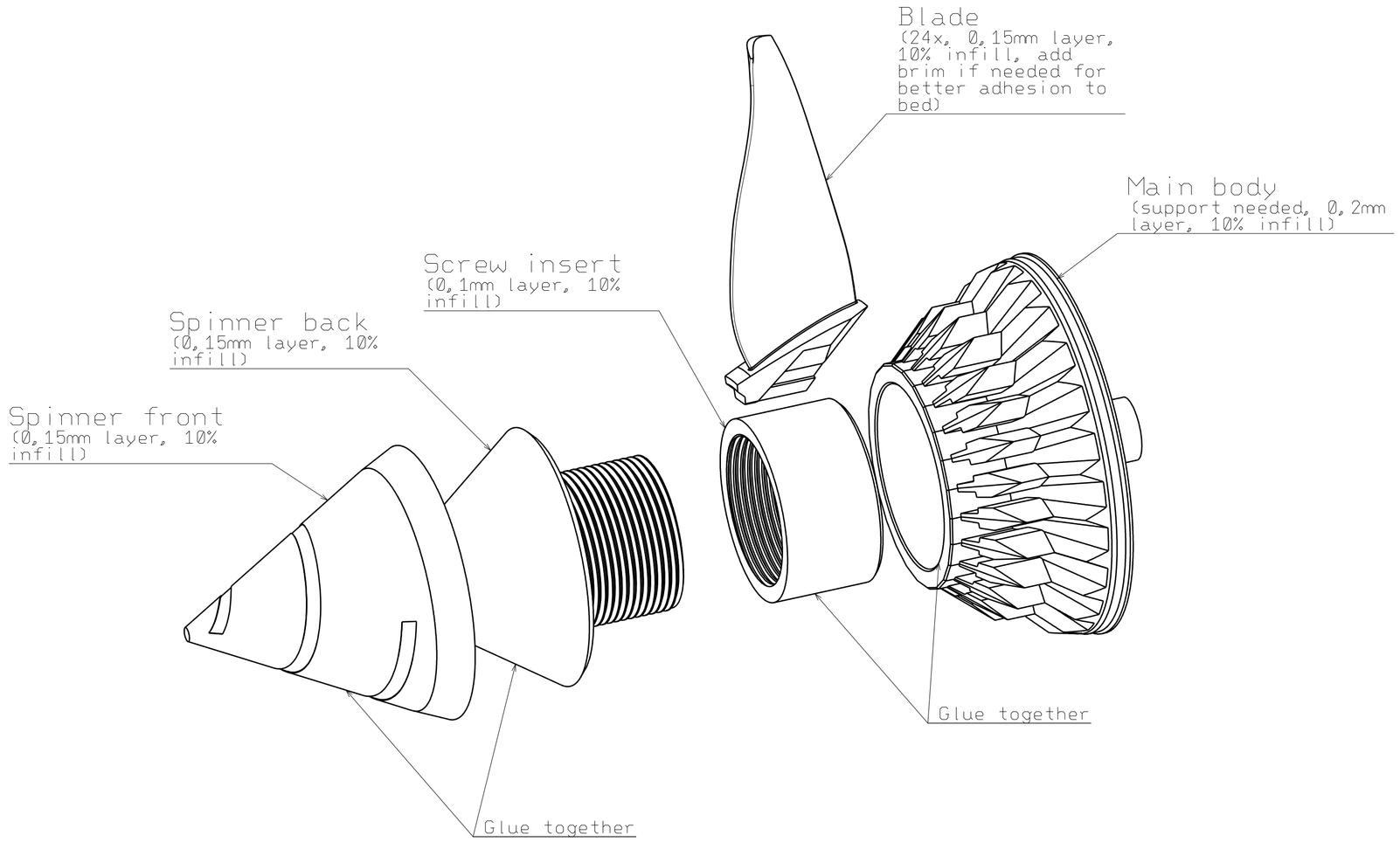
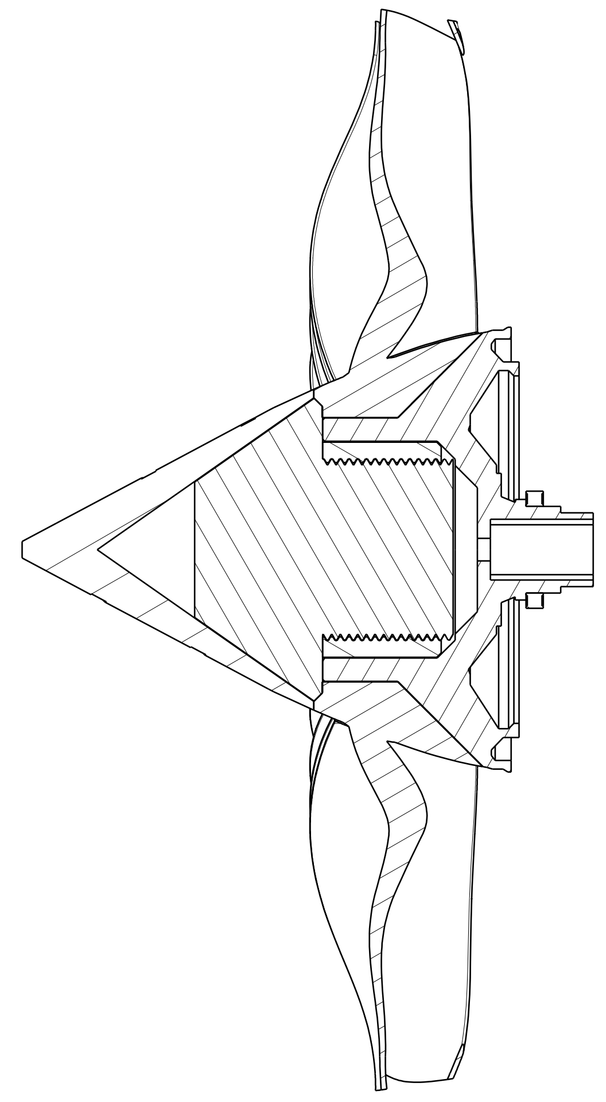
DATE: 7. 01. 2020			
CHECKED BY: XXX			
DATE: XXX			
SIZE: A1			
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 1/11

STEP 1: Fan assembly



Assembled section view



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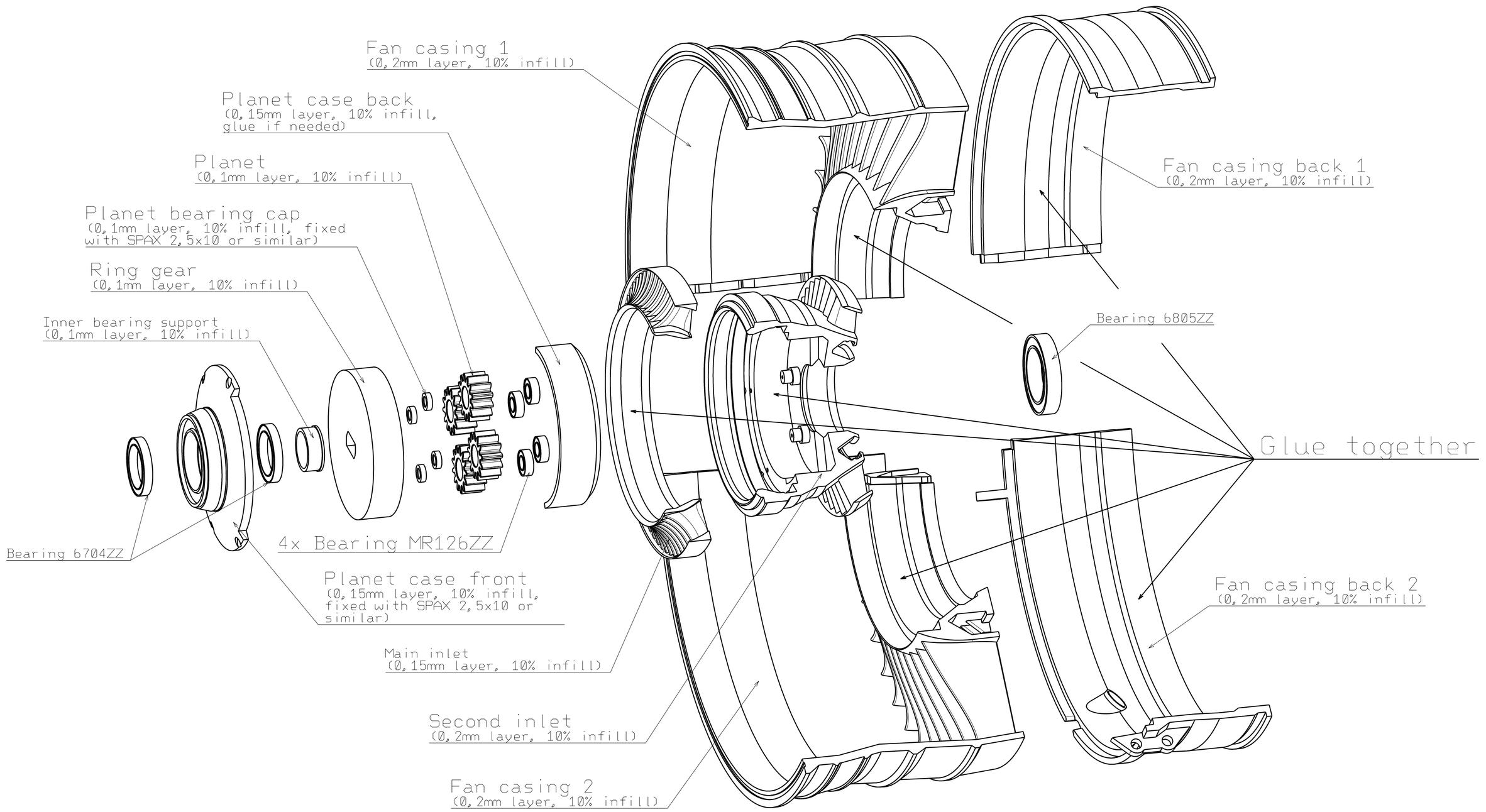
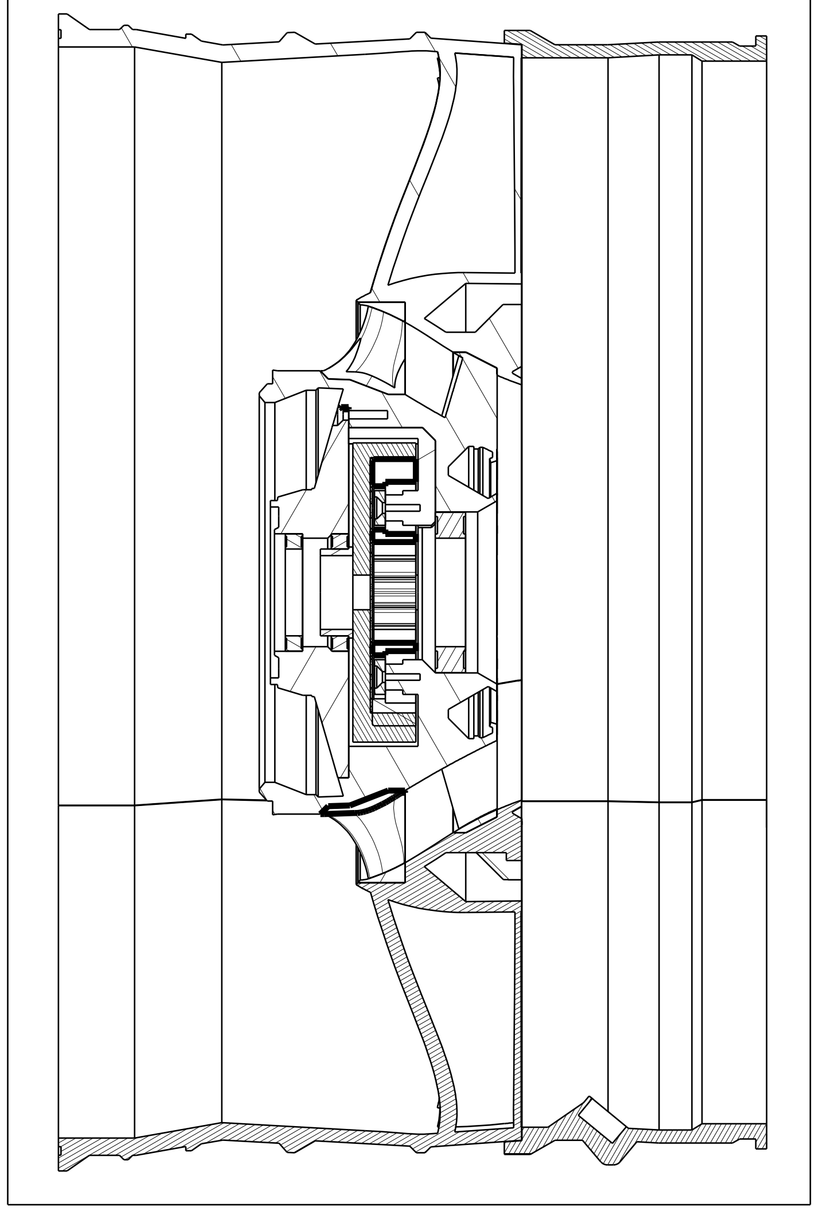
DATE: XXX			F –
SIZE: A1			E –
			D –
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	C –
		SHEET: 2/11	B –
			A –

STEP 2: Front casing assembly

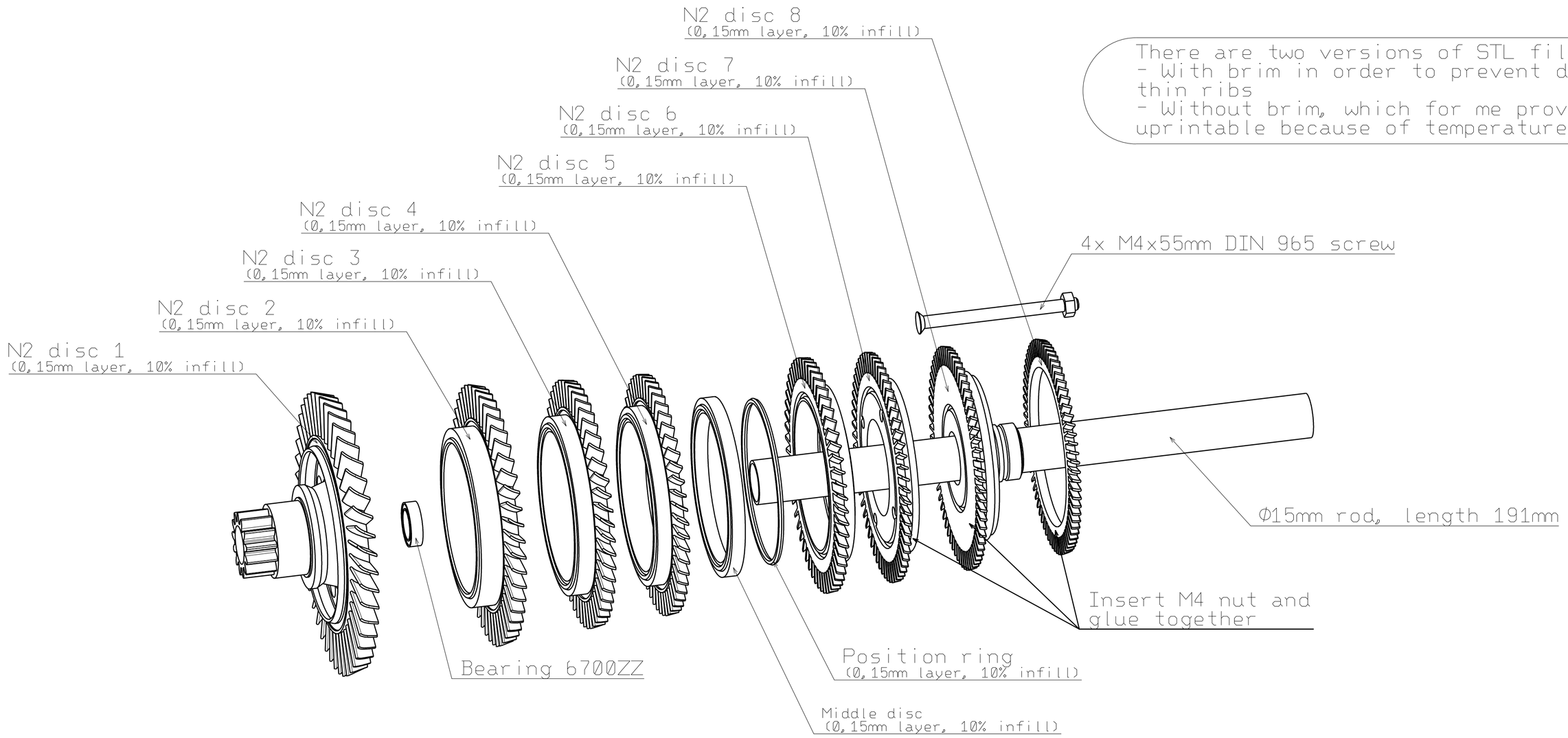


Assembled section view



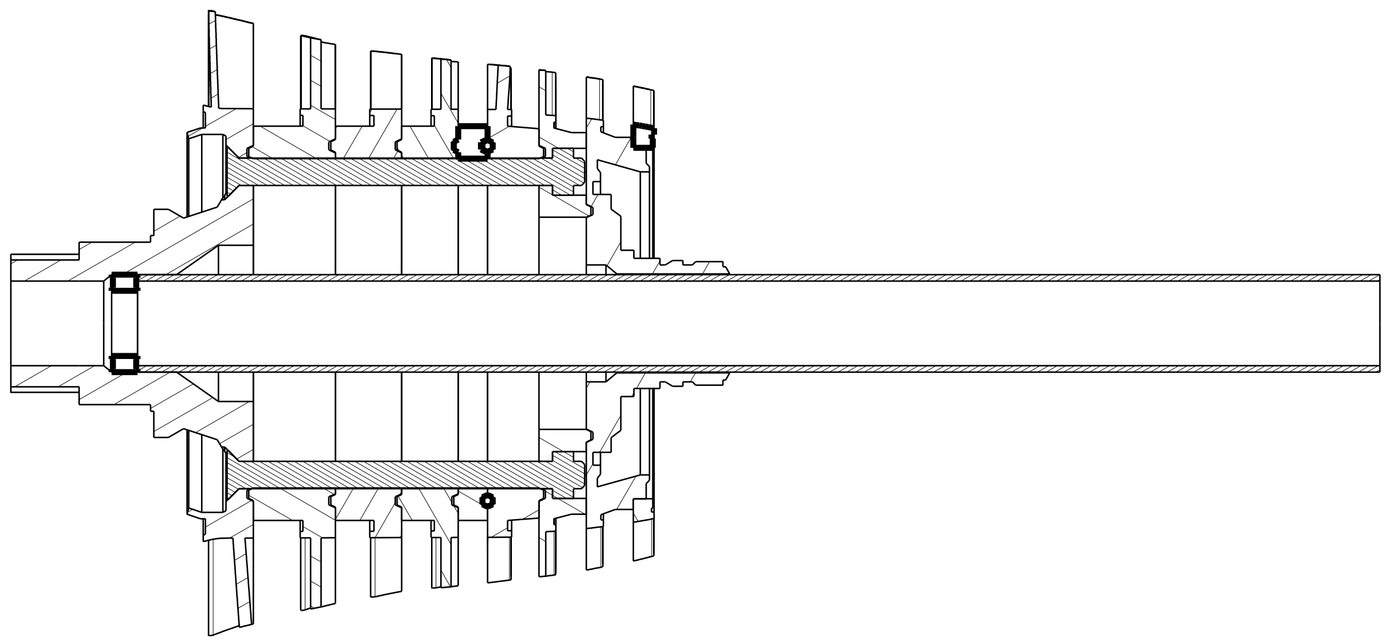
DESIGNED BY: Nejc Terbuc		Trent 900	
DATE: 7. 01. 2020			
CHECKED BY: XXX			
DATE: XXX			
SIZE: A1			
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 3/11

STEP 3: N2 compressor assembly



There are two versions of STL files for discs:
- With brim in order to prevent deformation of thin ribs
- Without brim, which for me proved to be uprintable because of temperature warping

Assembled section view



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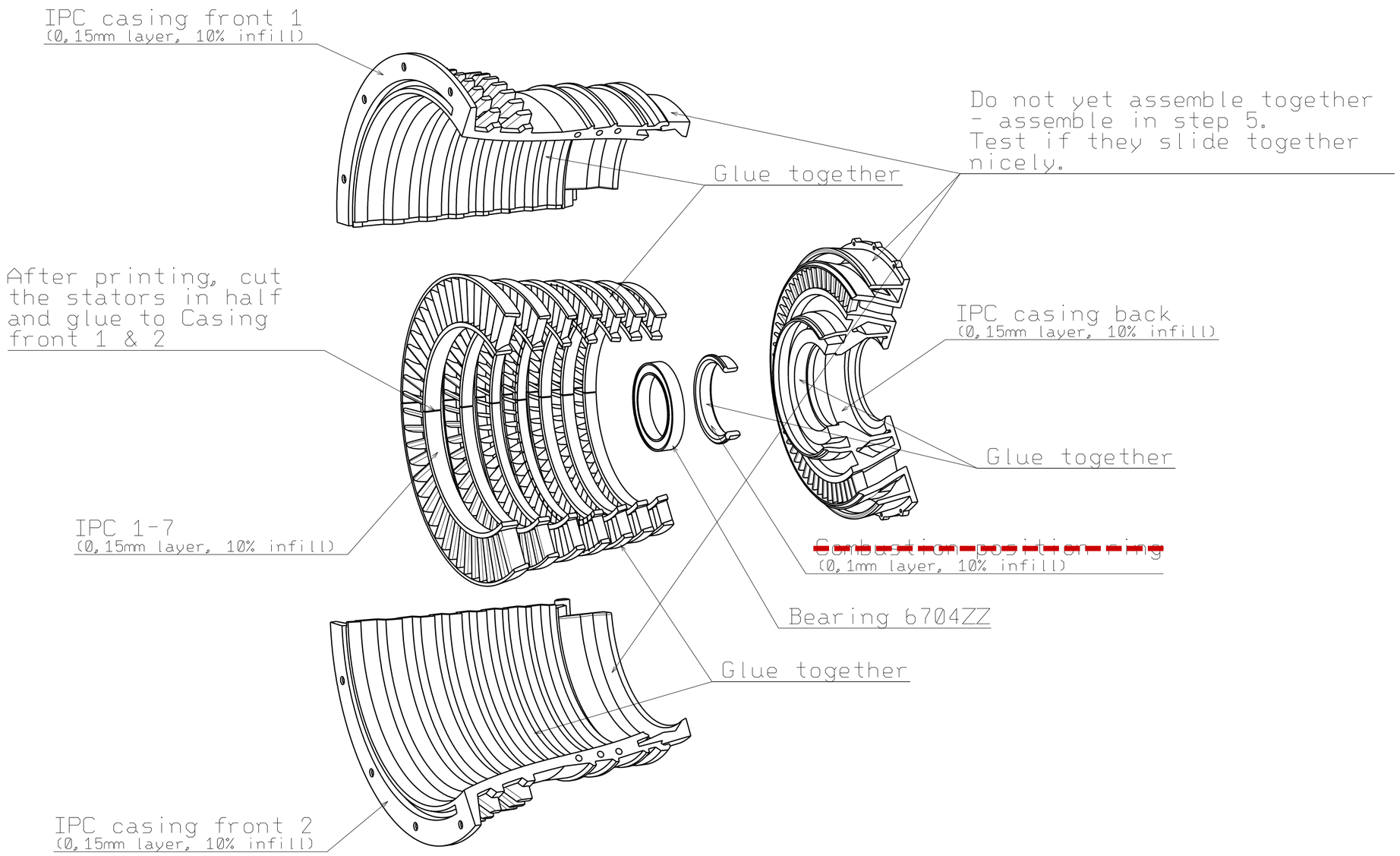
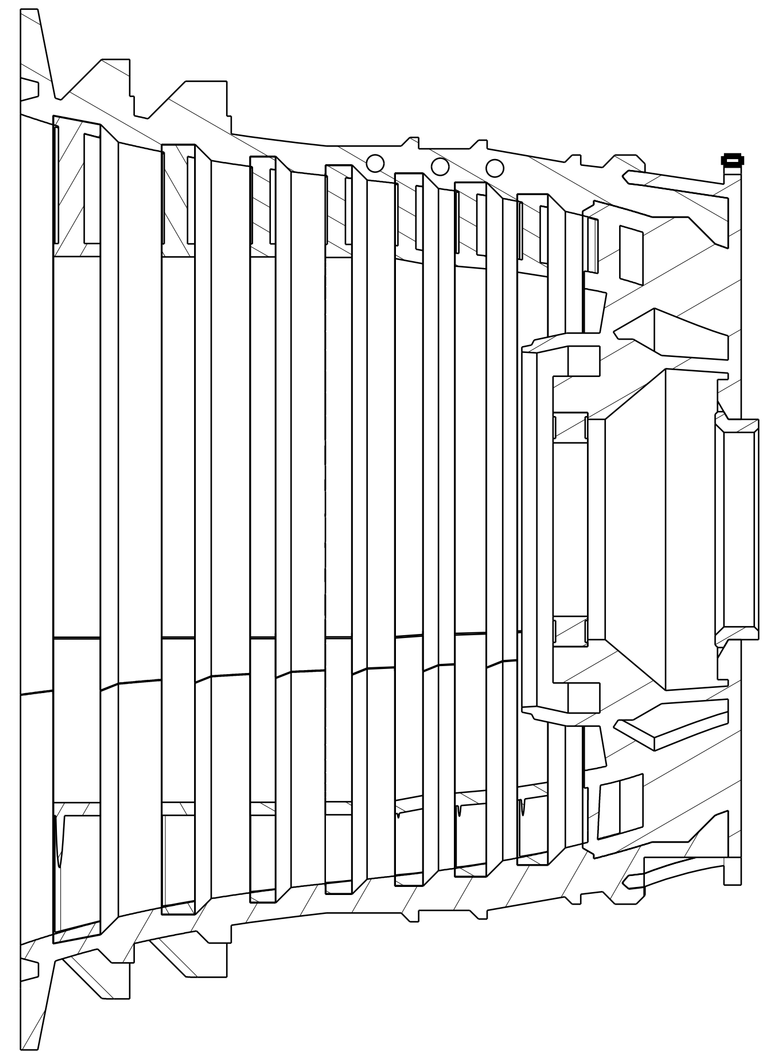
DATE: 7. 01. 2020			
CHECKED BY: XXX			
DATE: XXX			
SIZE: A1			
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 4/11

STEP 4: N2 compressor casing assembly

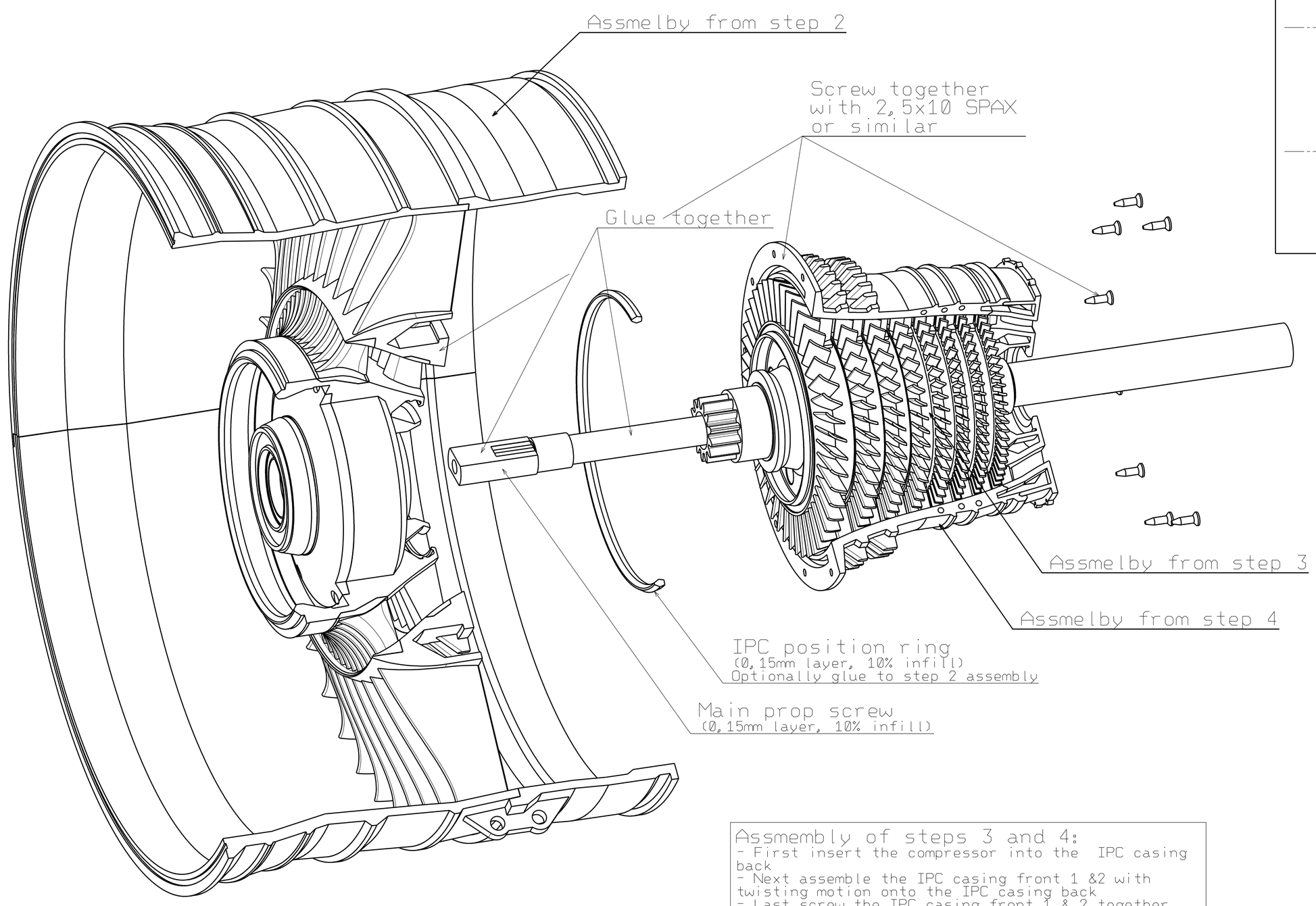


Assembled section view

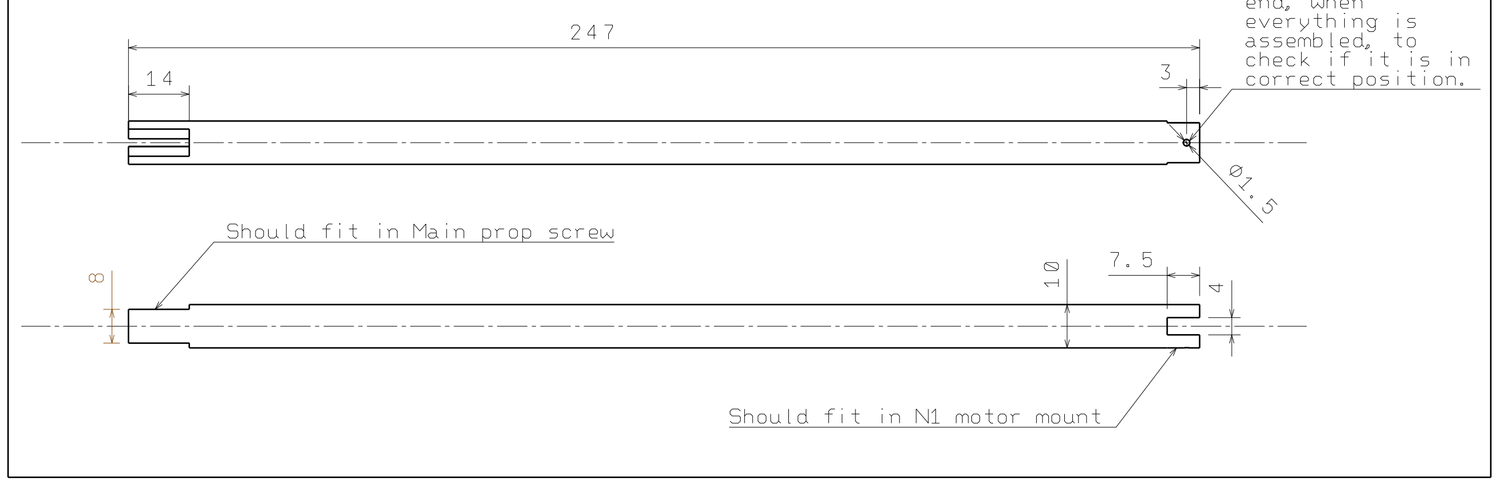


DESIGNED BY: Nejc Terbuc		Trent 900	I –
DATE: 7. 01. 2020			H –
CHECKED BY: XXX			G –
DATE: XXX			F –
SIZE: A1			E –
			D –
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 5/11 C – B – A –

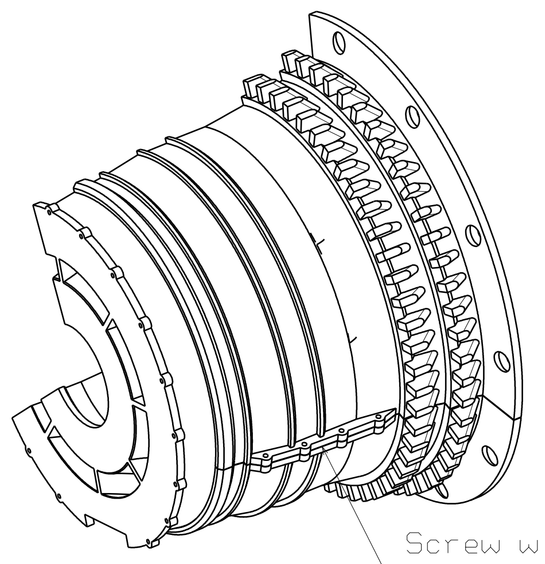
STEP 5: Front casing assembly



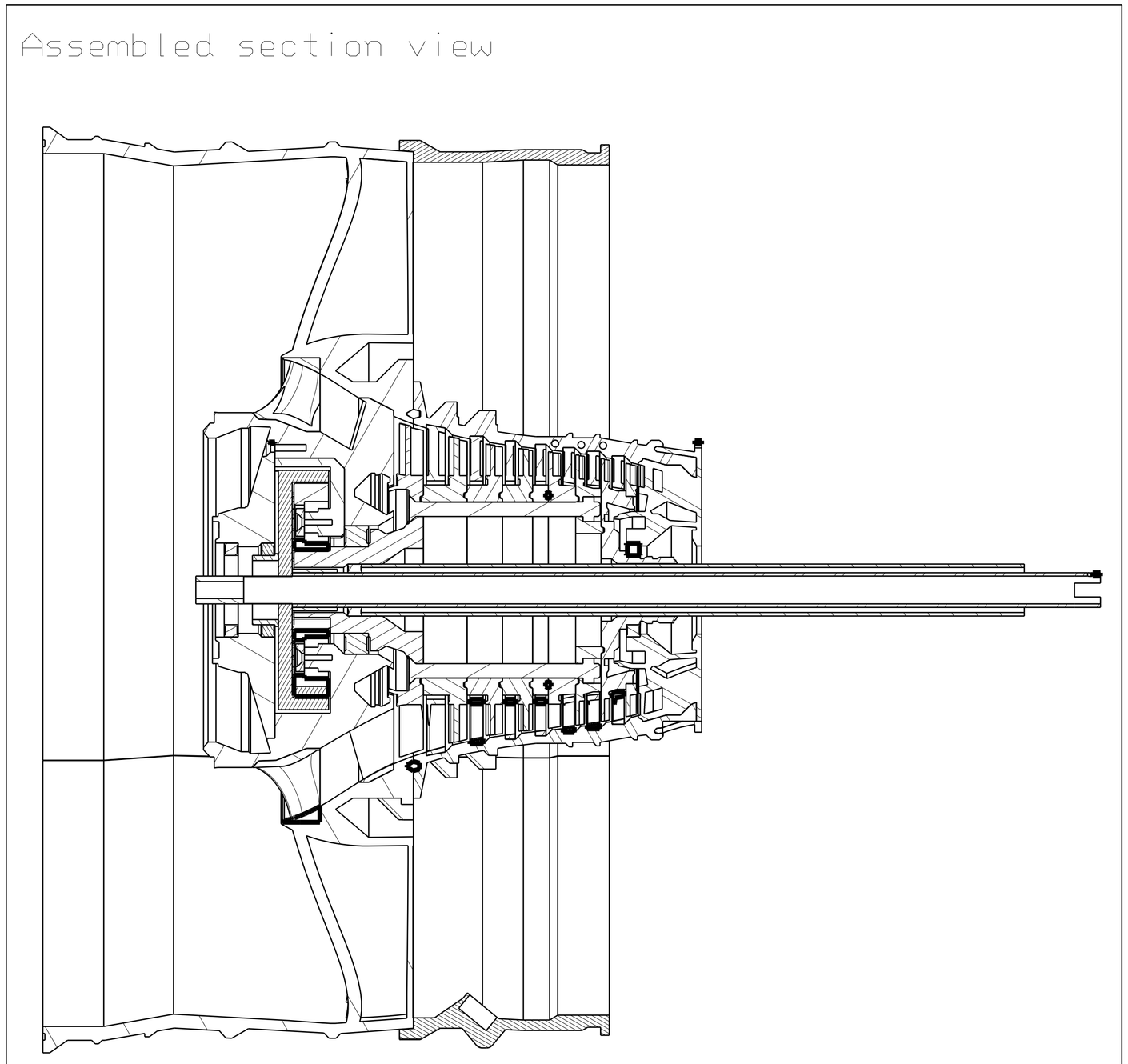
Aluminium rod Φ10x247mm



Assmembly of steps 3 and 4:
- First insert the compressor into the IPC casing back
- Next assemble the IPC casing front 1 &2 with twisting motion onto the IPC casing back
- Last screw the IPC casing front 1 & 2 together with M1 screws and nuts



Assembled section view



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DATE: 7. 01. 2020			H –
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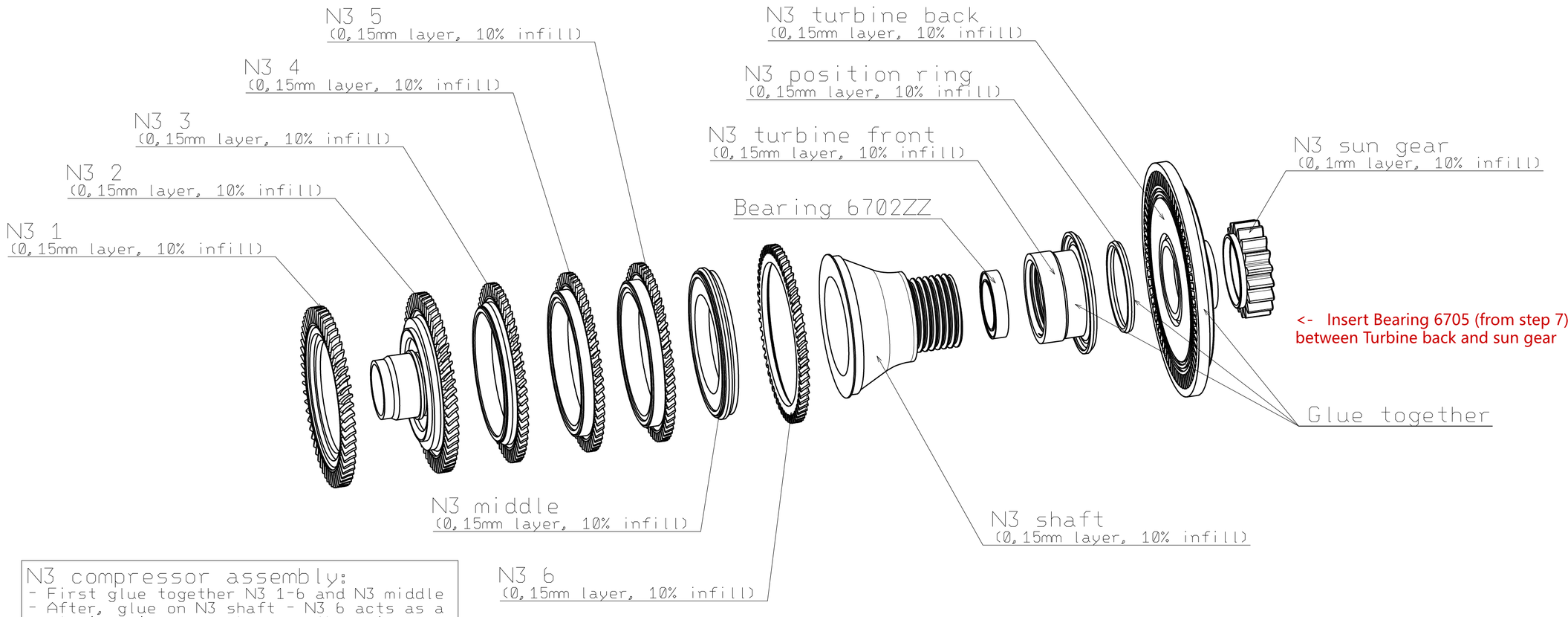
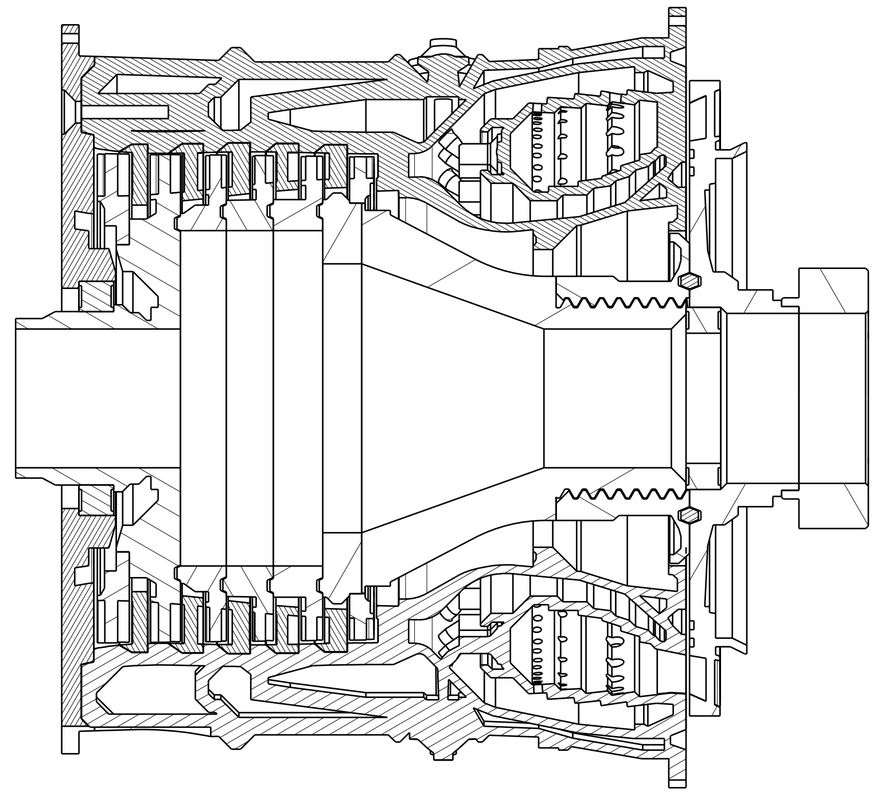
DATE: XXX			F –
SIZE: A1			E –
			D –
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	C –
		SHEET: 6/11	B –
			A –

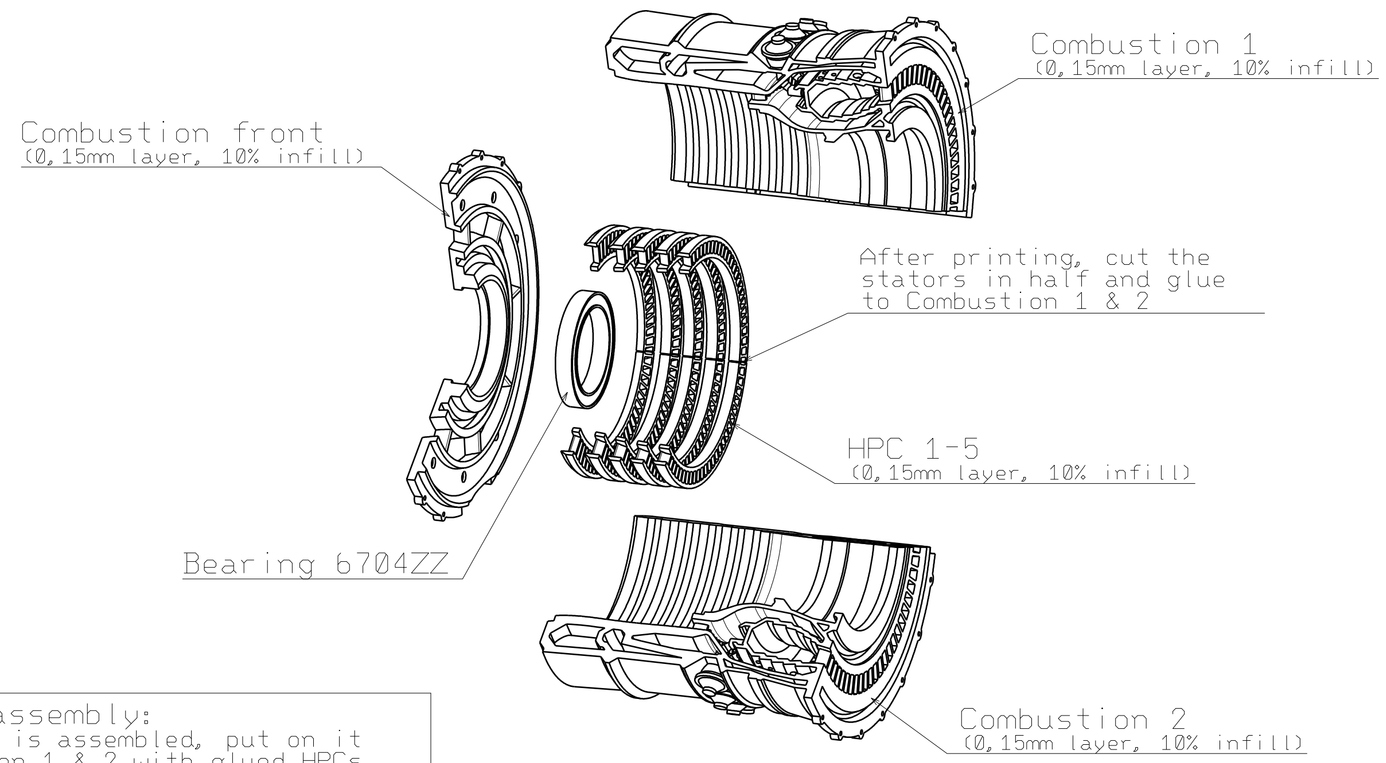
STEP 6: N3 and combustion assembly



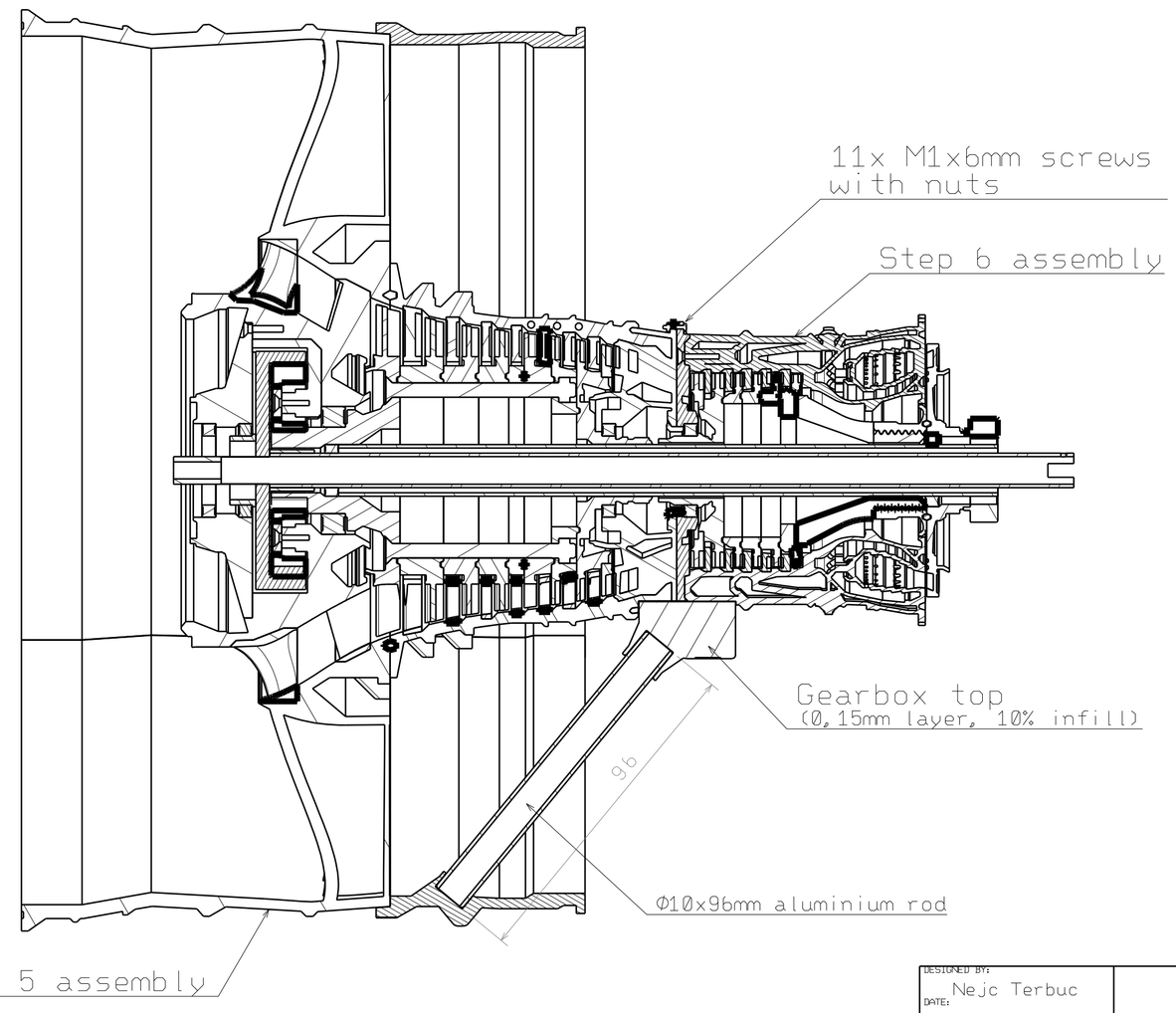
N3 compressor assembly:
- First glue together N3 1-6 and N3 middle
- After, glue on N3 shaft - N3 6 acts as a centering ring, so make sure there is no overflown glue left over after gluing N3 6 and N3 middle

Assembled section view





Final assembly:
After N3 is assembled, put on it Combustion 1 & 2 with glued HPCs and at the end screw on Combustion front with inserted bearing. Use 2,5x10 SPAX screws or similar.



Gearbox assembly:
Insert aluminium rod into Gearbox top and into the hole in Fan casing back 2. If everything fits nicely, glue Gearbox top to Combustion 2. Make sure no glue touches Combustion front as it will prevent the disassembly.

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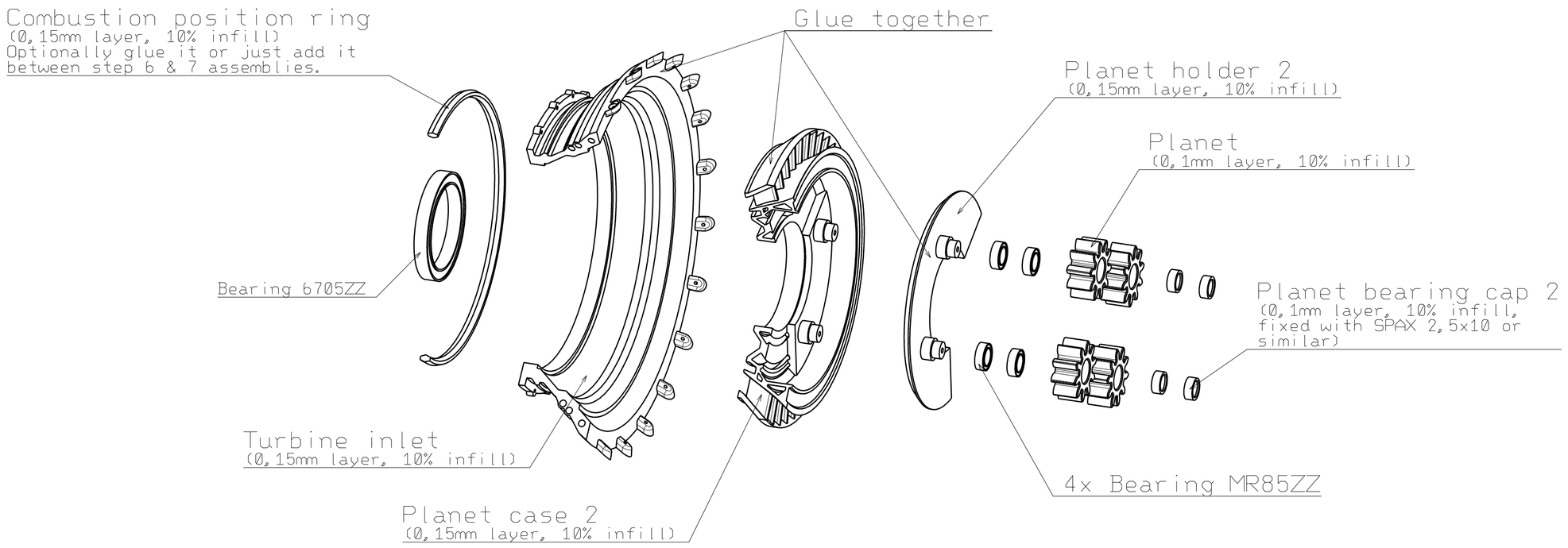
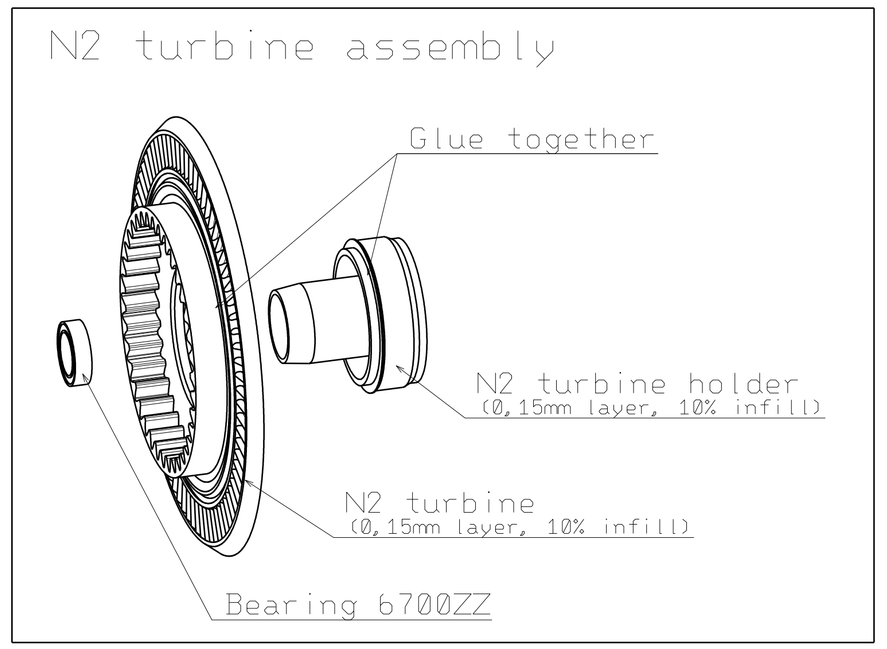
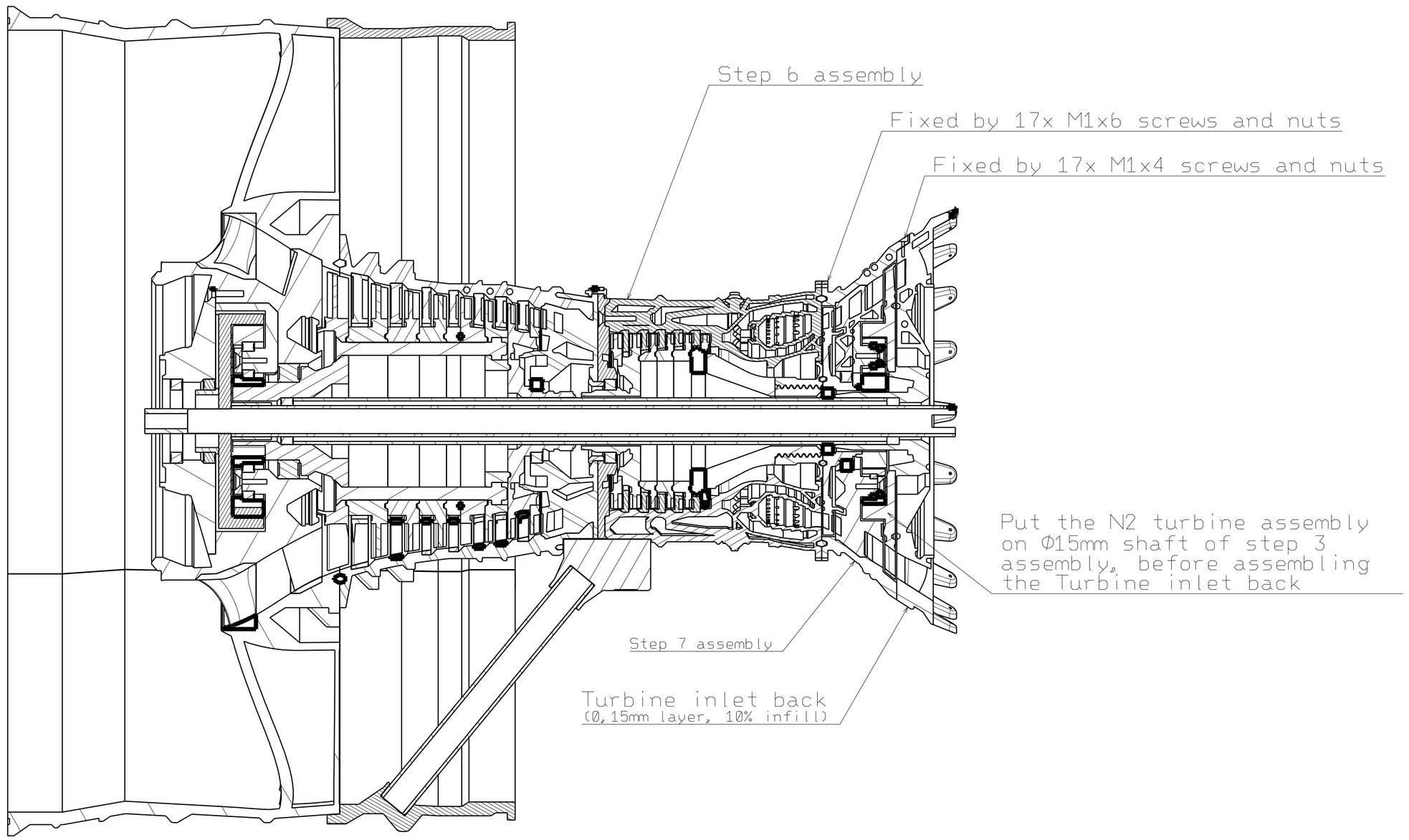
CHECKED BY: XXX			
DATE: XXX			
SIZE: A1			
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 7/11

STEP 7: Turbine inlet assembly







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DATE: 7. 01. 2020			H –
CHECKED BY: XXX			G –
DATE: XXX			F –
SIZE: A1			E –
			D –
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 8/11 C –
			B –
			A –

STEP 8: Turbine casing and nozzle assembly

Do not yet screw together Turbine casing and Nozzle

Turbine casing 1
(0,15mm layer, 10% infill)

Motor holder
(0,15mm layer, 10% infill)
Fix to nozzle with SPAX 2,5x10 or similar

Glue after soldering!
Otherwise, attach with Bluetac for easier removal of motor
Glue together

Nozzle back inner
(0,2mm layer, 10% infill)

Motor Φ25x52mm
Fix into motor holder, after it is assembled to nozzle with M3x4mm screws.

After printing, cut the stators in half and glue to Turbine casing 1 & 2

Nozzle cone
(0,2mm layer, 10% infill)

Screw together with 17x M1x6mm screws

Bearing 6807ZZ

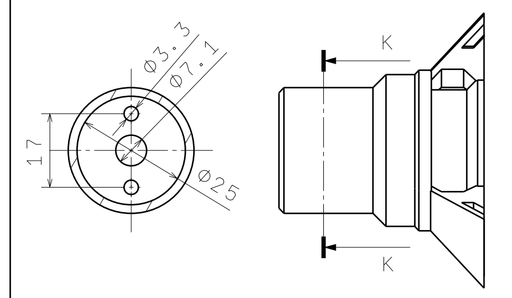
Motor cap
(0,1mm layer, 10% infill)

Nozzle
(0,15mm layer, 10% infill)

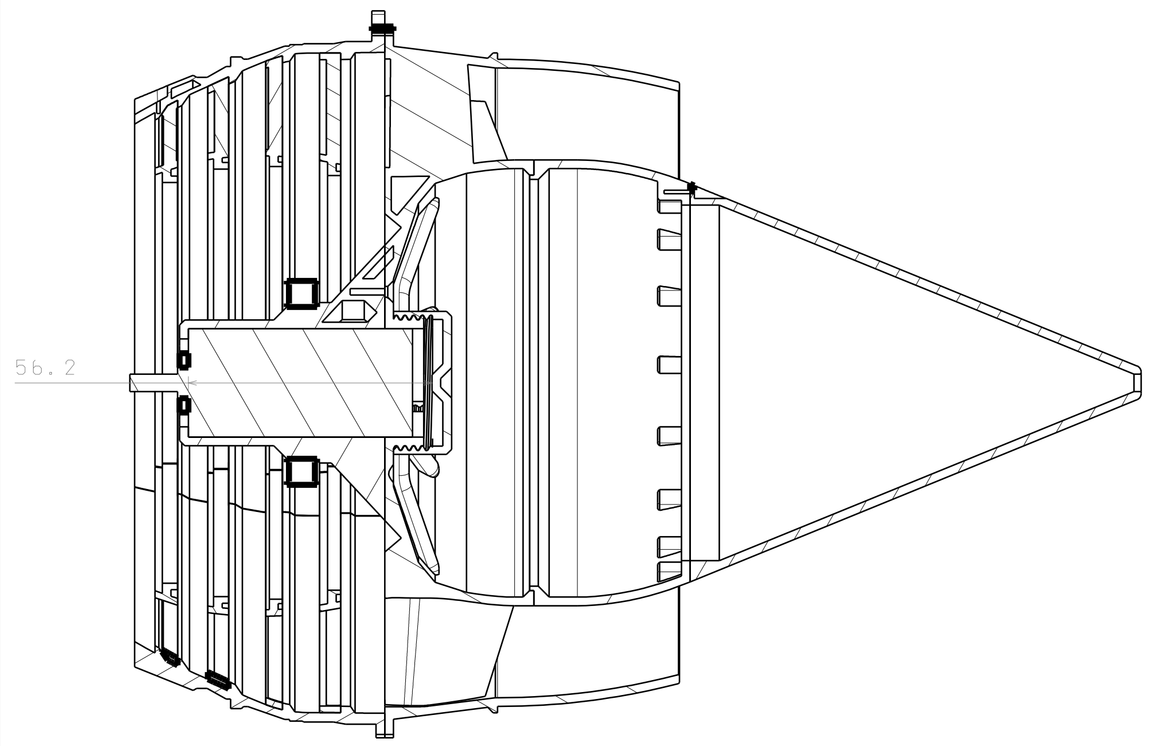
Turbine stator 1-4
(0,15mm layer, 10% infill)

Turbine casing 2
(0,15mm layer, 10% infill)

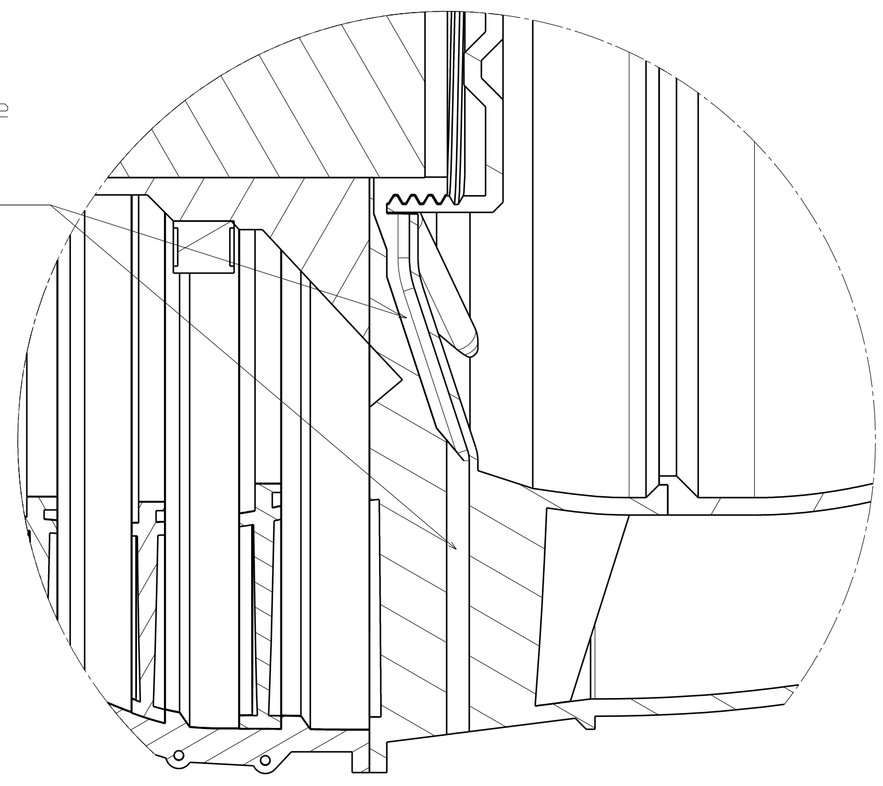
Motor mount dimensions



Assembled section view



Before insterting the motor guide the wire through the channel in the Nozzle. If already assembled use the wire with connector from the stand. For wire dimensions see Stand drawing.



View of the motor and wire from the back.

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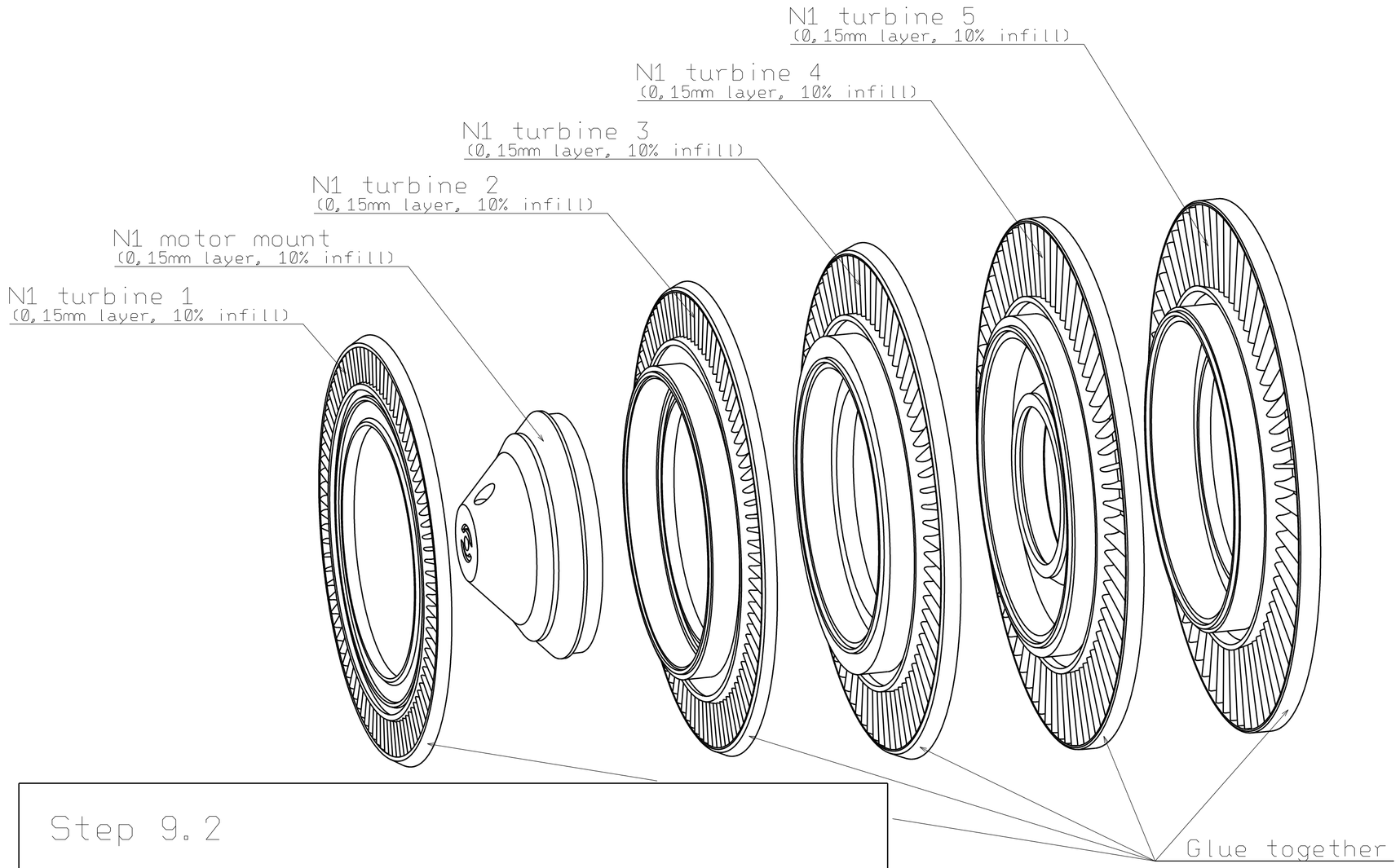
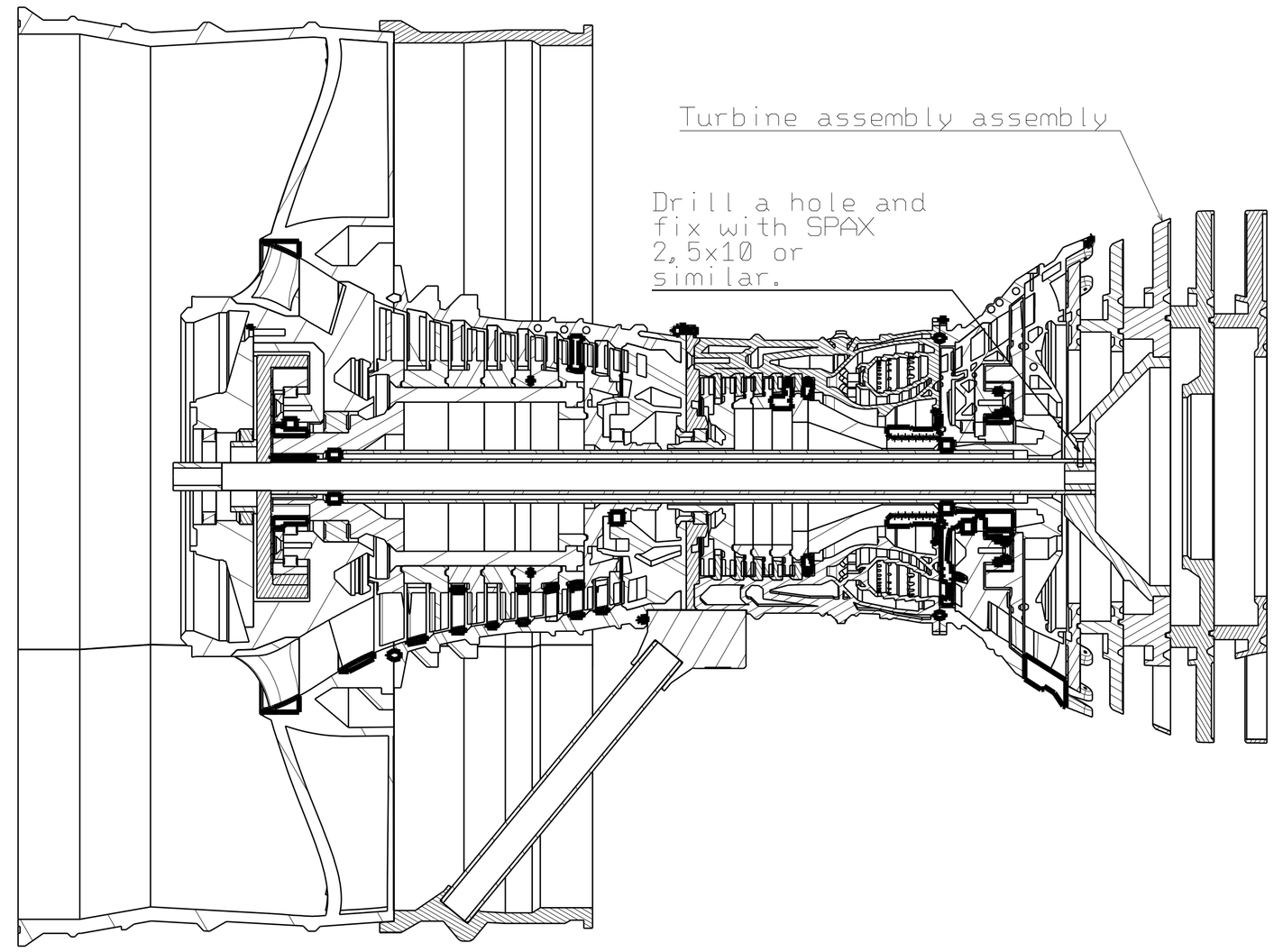
DATE: 7. 01. 2020			
CHECKED BY: XXX			
DATE: XXX			
SIZE: A1			
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 9/11

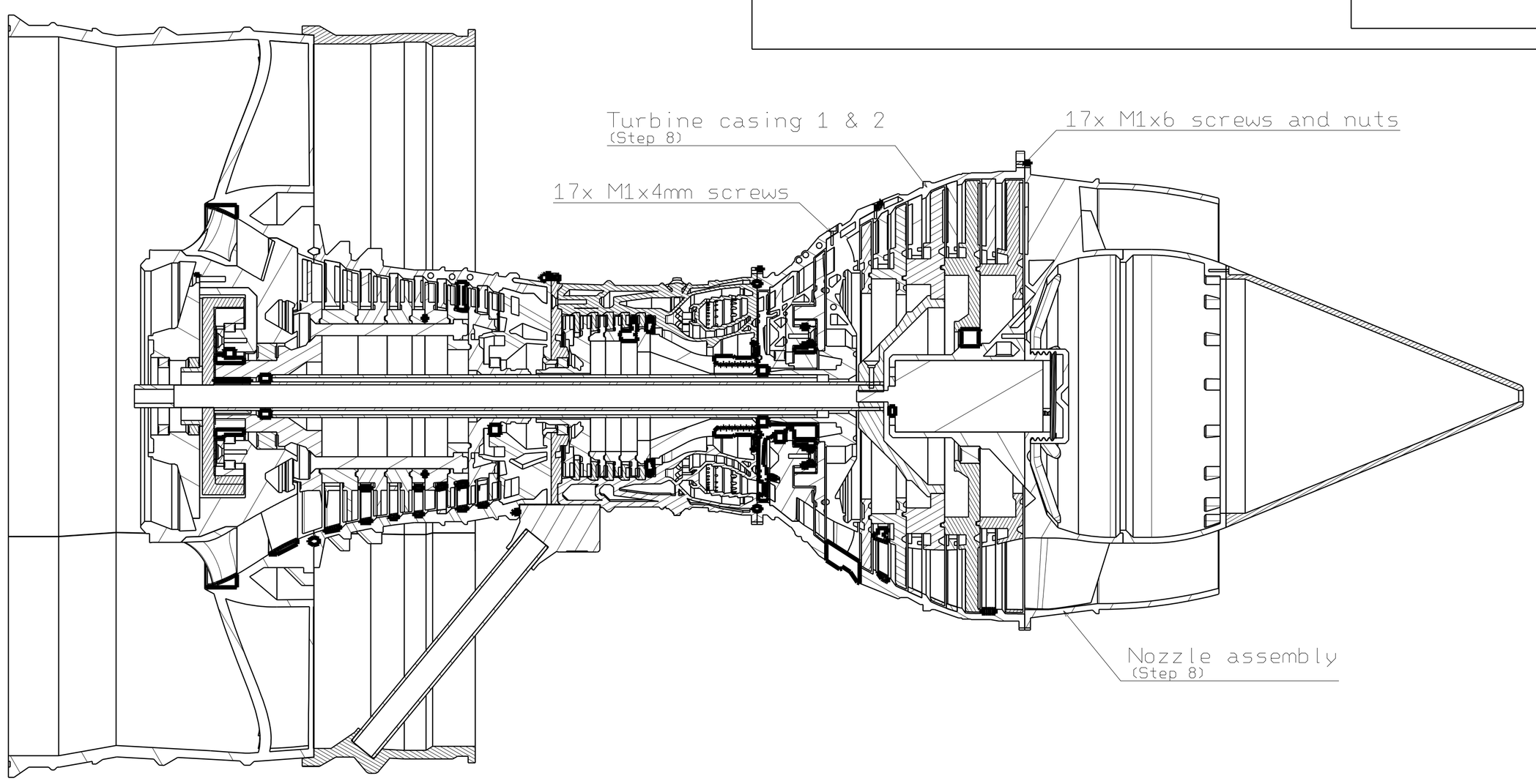
STEP 9: Turbine assembly



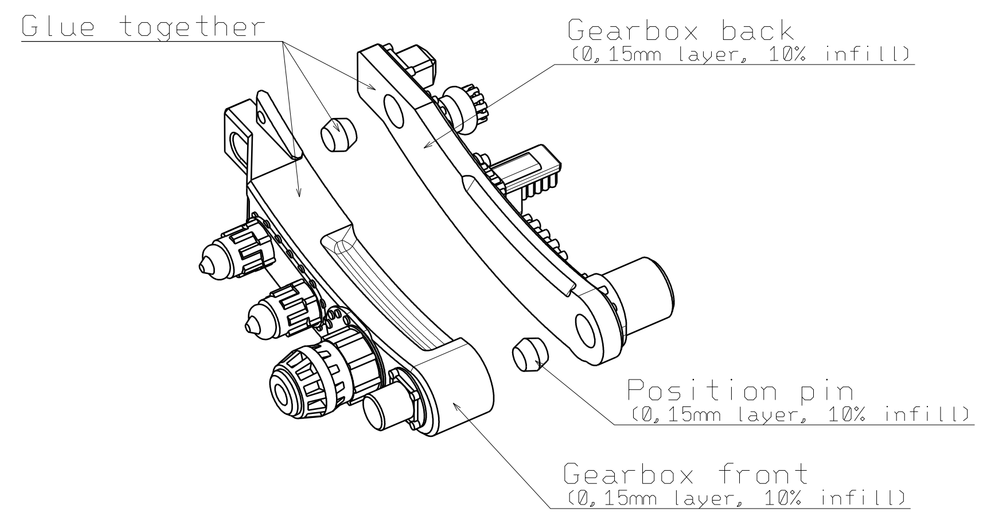
Step 9.1



Step 9.2



Gearbox assembly



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DATE: 7. 01. 2020	
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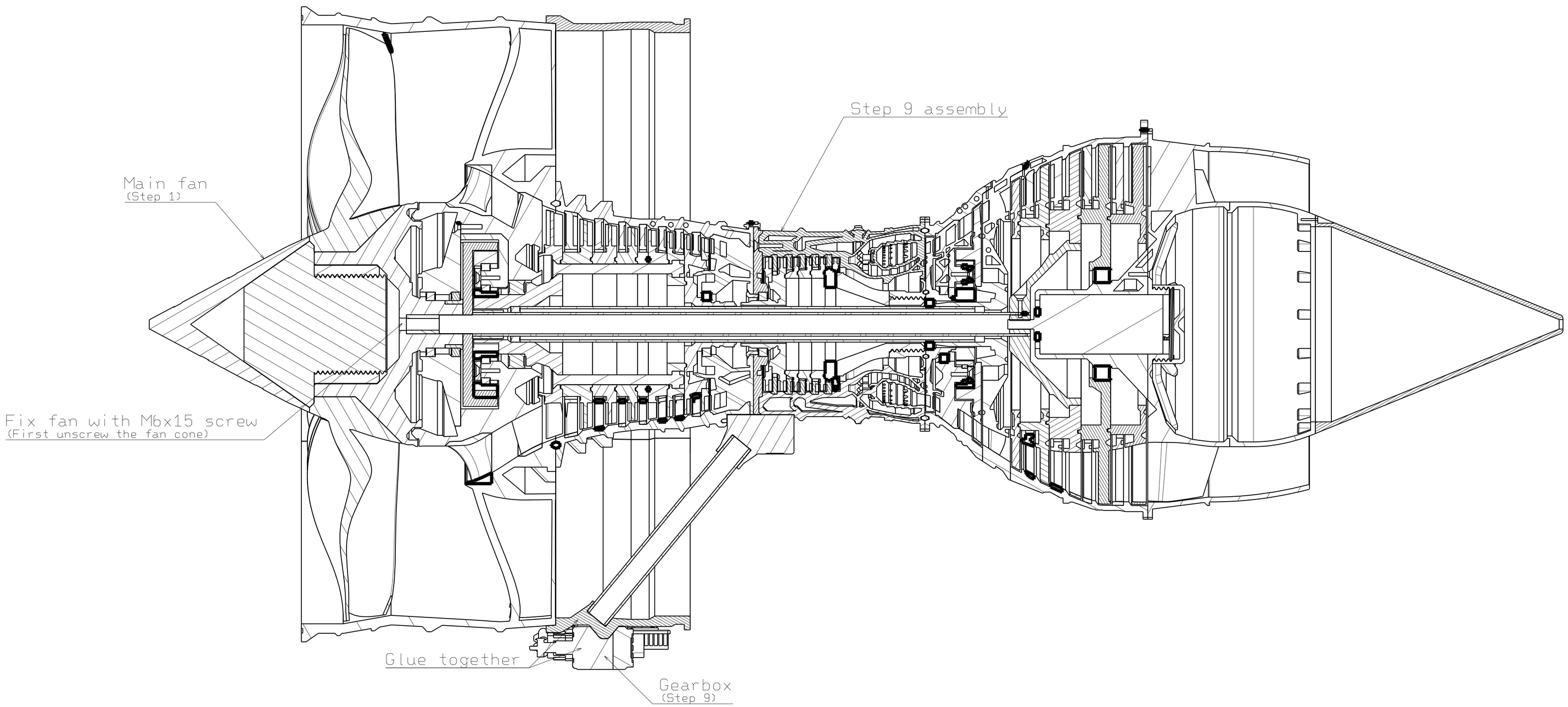
DATE: XXX	
SIZE: A1	
SCALE: 1:1	WEIGHT (kg): XXX
DRAWING NUMBER: XXX	SHEET: 10/11

STEP 10: Final assembly



Congratulations!
Now you have your own Trent 900 replica.

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DATE: 7. 01. 2020			H –
CHECKED BY: XXX			G –
DATE: XXX			F –
SIZE: A1			E –
			D –
SCALE: 1:1	WEIGHT (kg): XXX	DRAWING NUMBER: XXX	SHEET: 11/11 C –
			B –
			A –