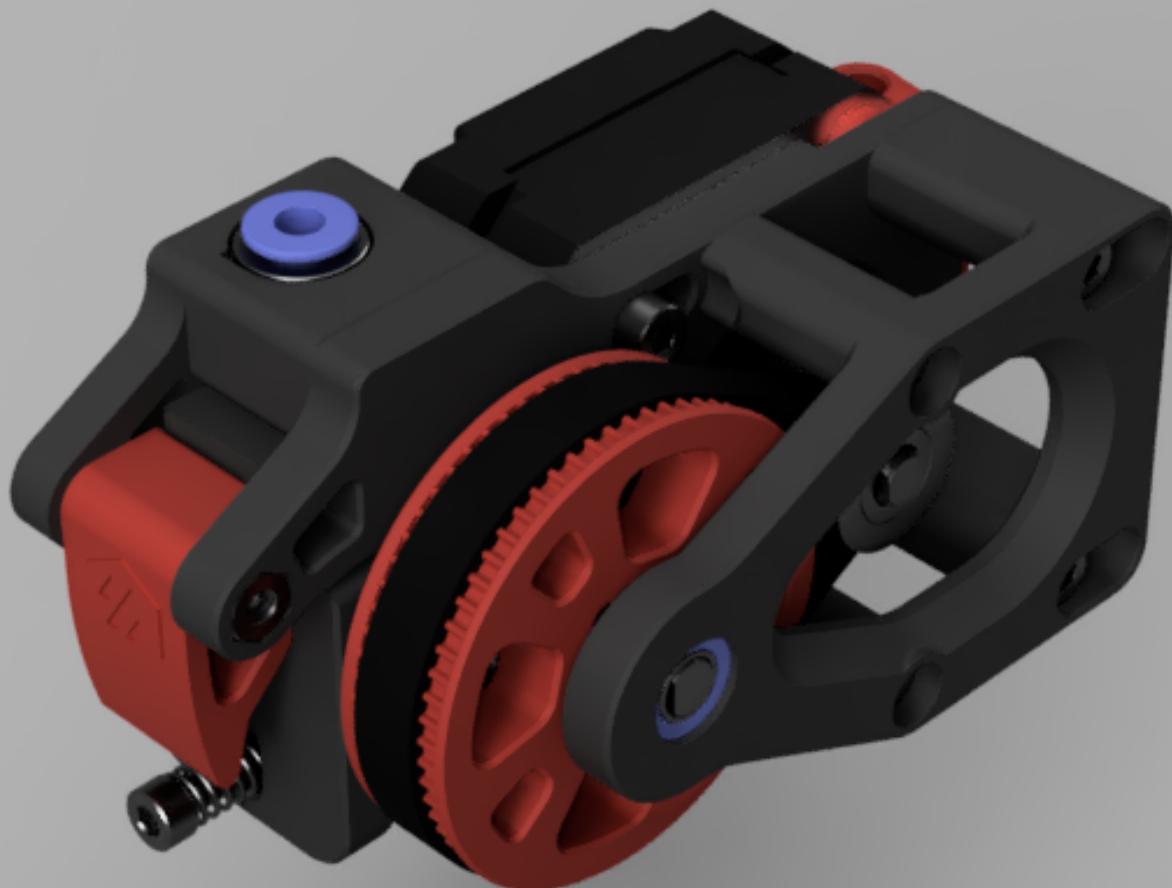


VORON JP1

EXTRUDER Thing Assembly Manual



File Key / Part Printing Guidelines and Standards

File Key	
Primary Color	nothing at start of file name
Accent Color	_ at start of file name
Quantity Required	_x# near end of file name

Part Printing Guidelines and Standards	
Approved FDM Materials	ABS or ABS+ Only
Layer Height	0.2mm
Extrusion Width	Forced 0.4mm
Infill Percentage	40% minimum
Infill Type	Grid, Gyroid, Honeycomb, Triangle or Cubic
Wall Count	4 minimum
Solid Top/Bottom Layers	5 minimum

Callout	Definition
BHCS	Button Head Cap Screw (ISO 7380-1)
SHCS	Socket Head Cap Screw (ISO 4762/DIN 912)
Plastite	Self-Tapping Screw for Plastics
Nut	DIN934 or equivalent
Lock Nut	DIN985 or equivalent
Low Strength Thread Locker	Loctite 222 (aka "Purple")
Shaft Retaining Compound	Loctite 641 ("Yellow") or 609 ("Light Green")

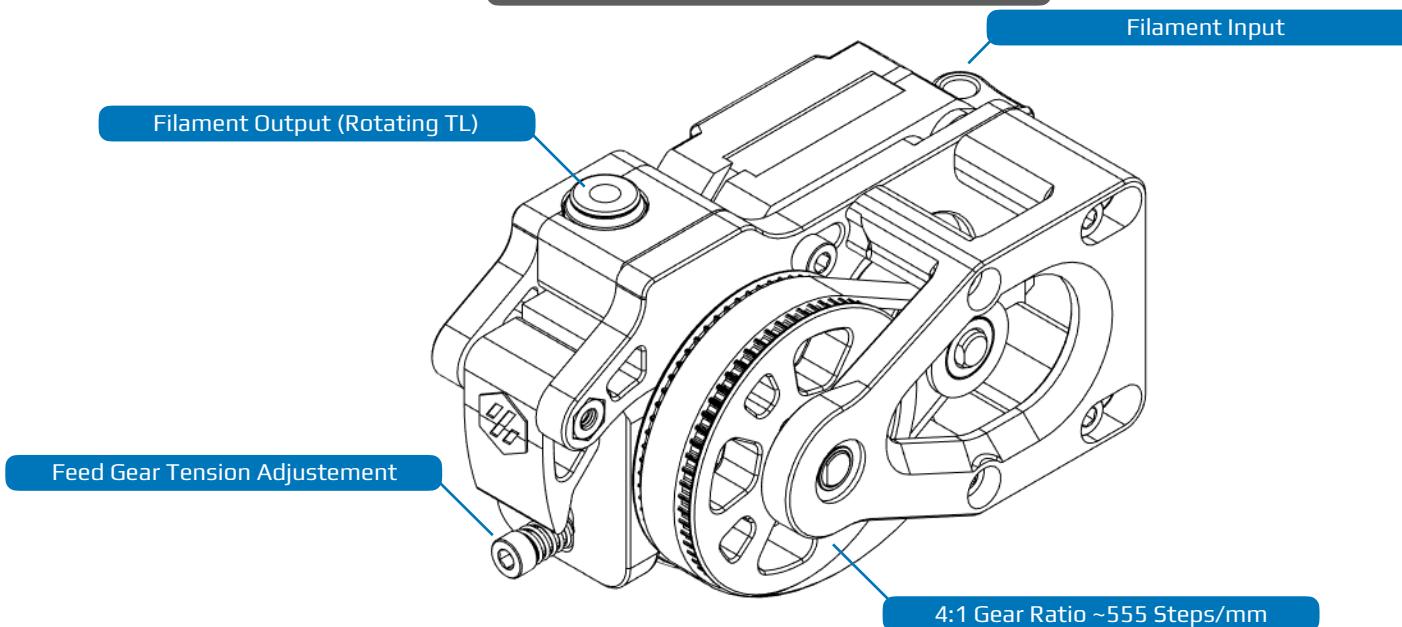
Very Important Steps

Fastener Size/Type Part

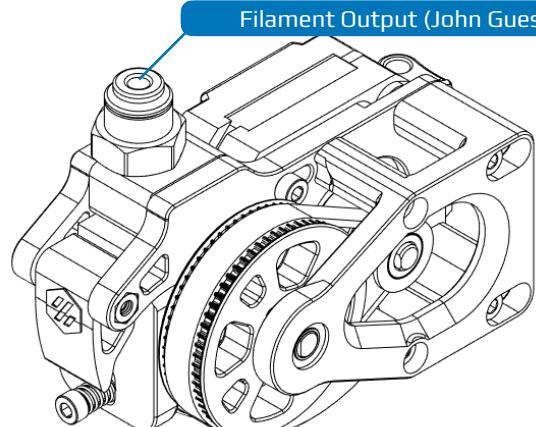
Notes and Tips

Overview

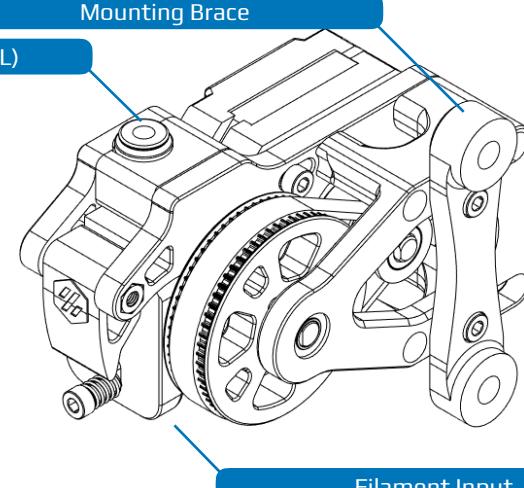
Standard Variant



John Guest Variant



Standalone Variant



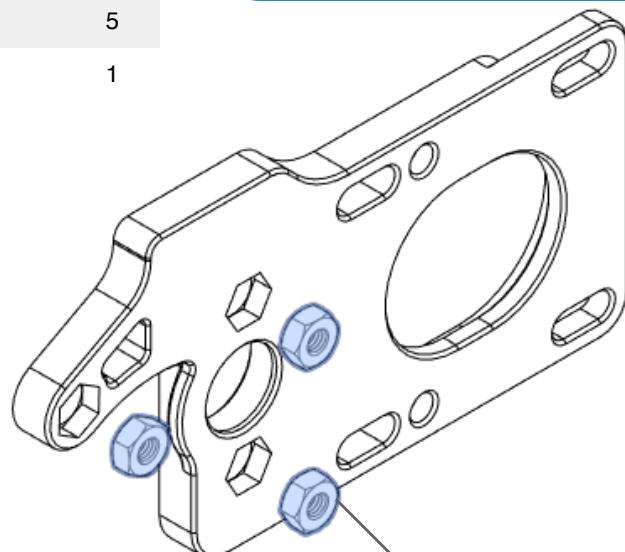
Appendix C

Appendix B

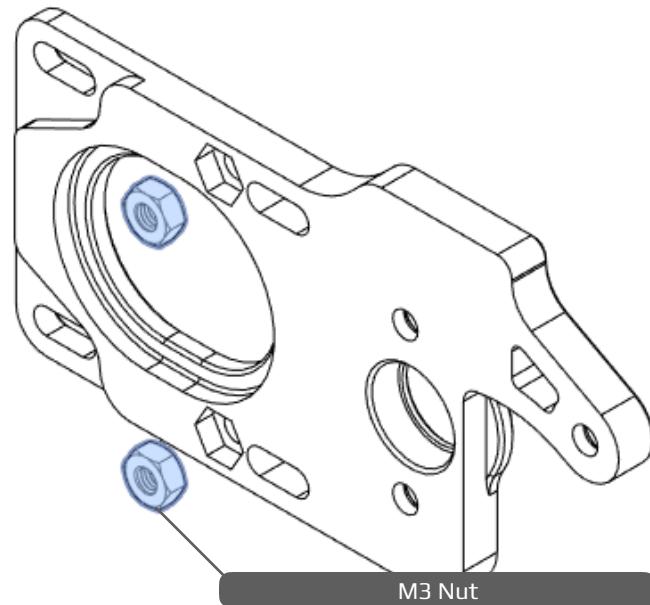
Motor Plate

Part	Qty
M3 Nut	5
MR115	1

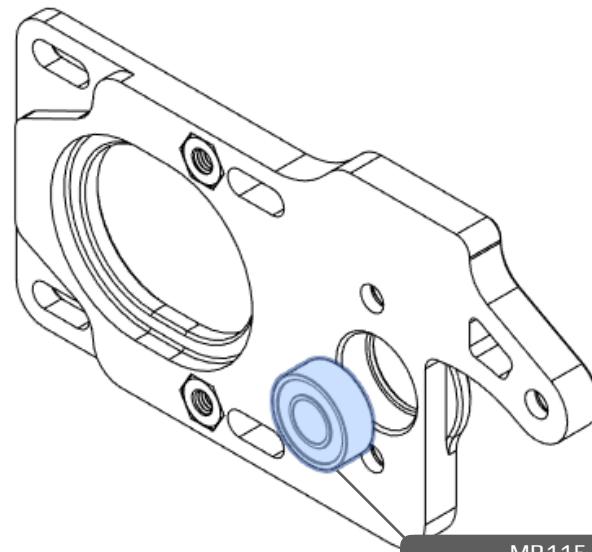
Optional: See Appendix B for Alternative



M3 Nut



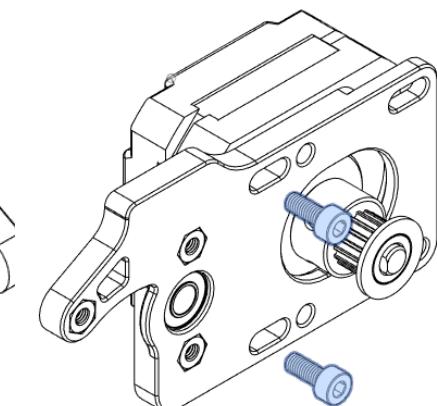
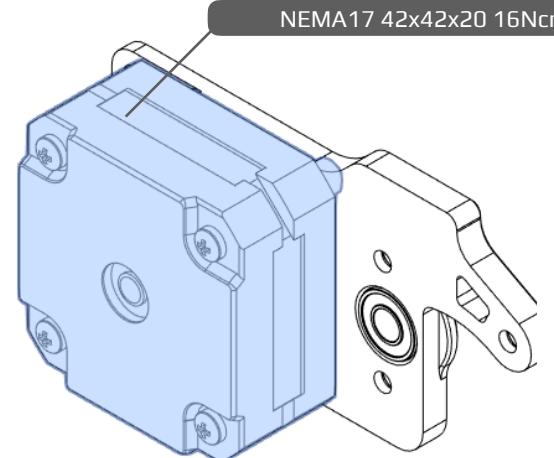
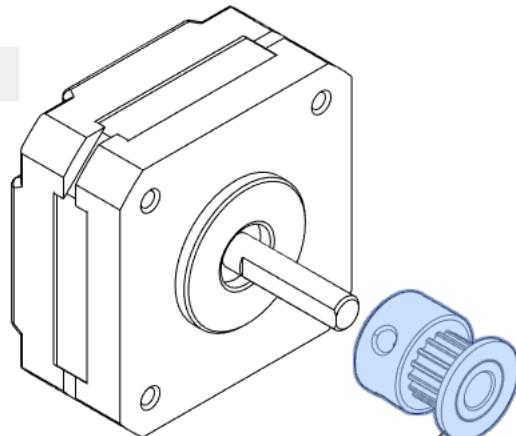
M3 Nut



MR115-2RS Bearing

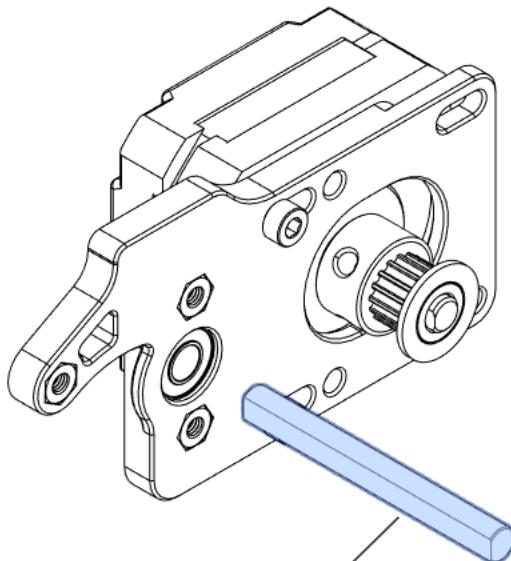
Motor Plate

Part	Qty
M3x8 SHCS	2
5x45 Shaft	1
GT2 16T	1
NEMA17 42x42x20	1

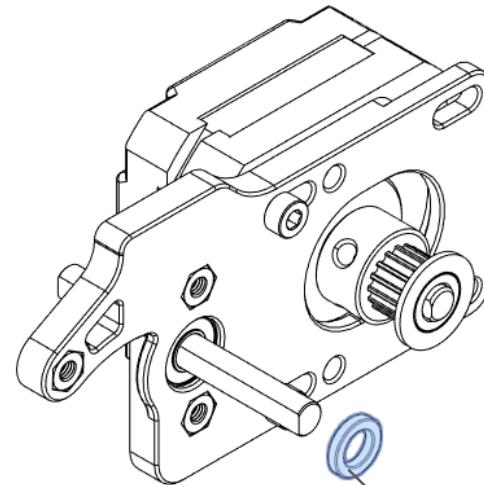


GT2 16T Pulley

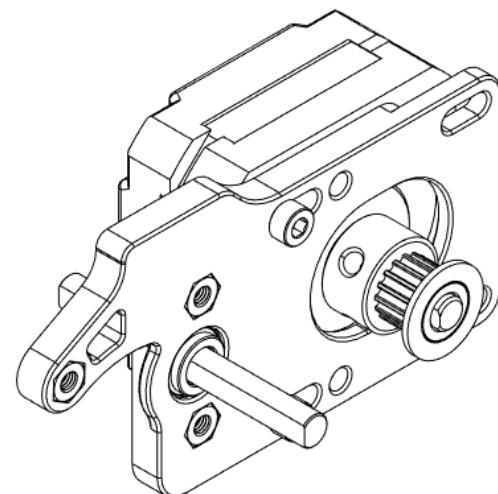
M3x8 SHCS



5x45 Shaft w/ Flat

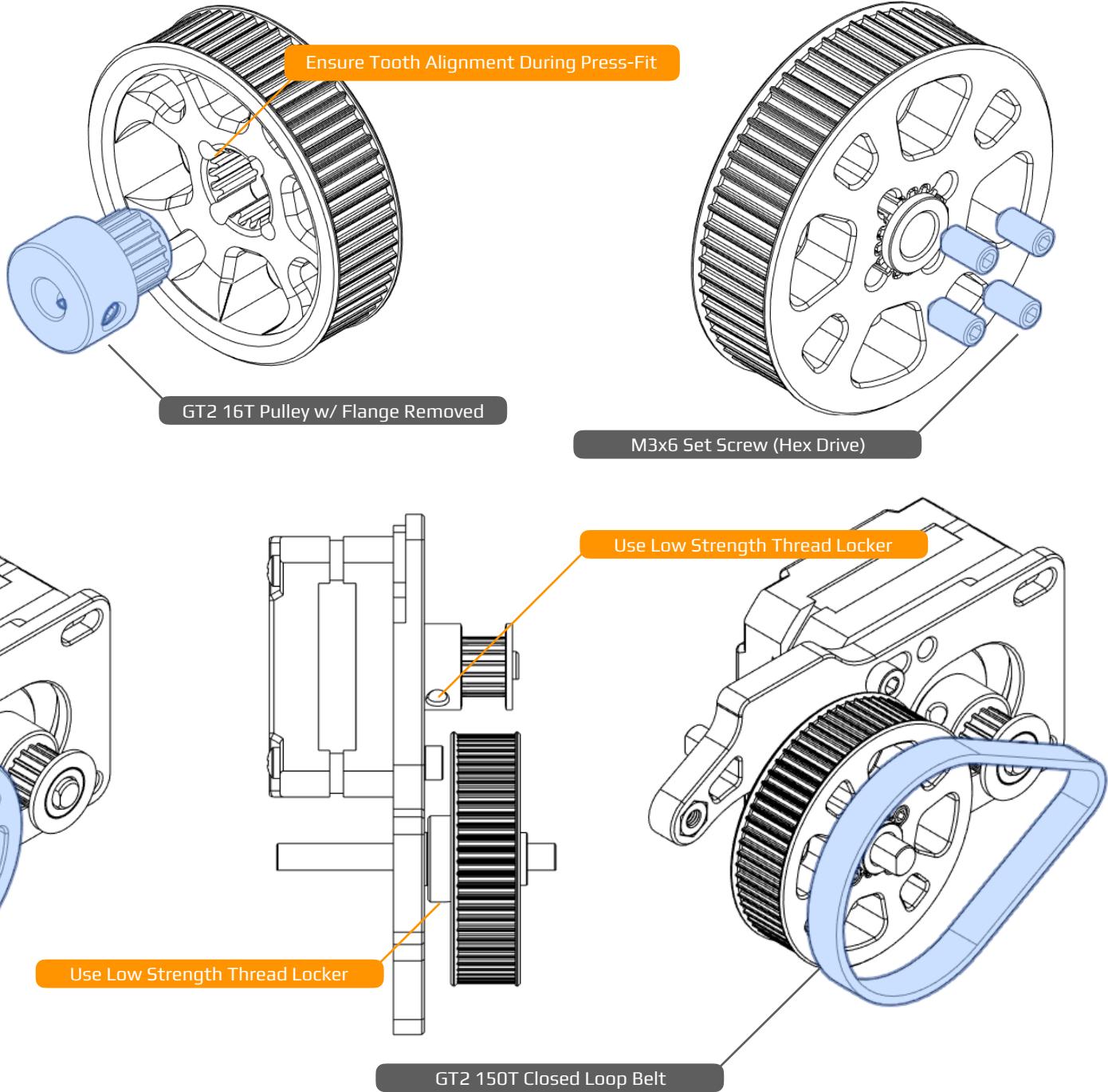


Printed Part: Drive Pulley Spacer 5x8x1.6



Drive

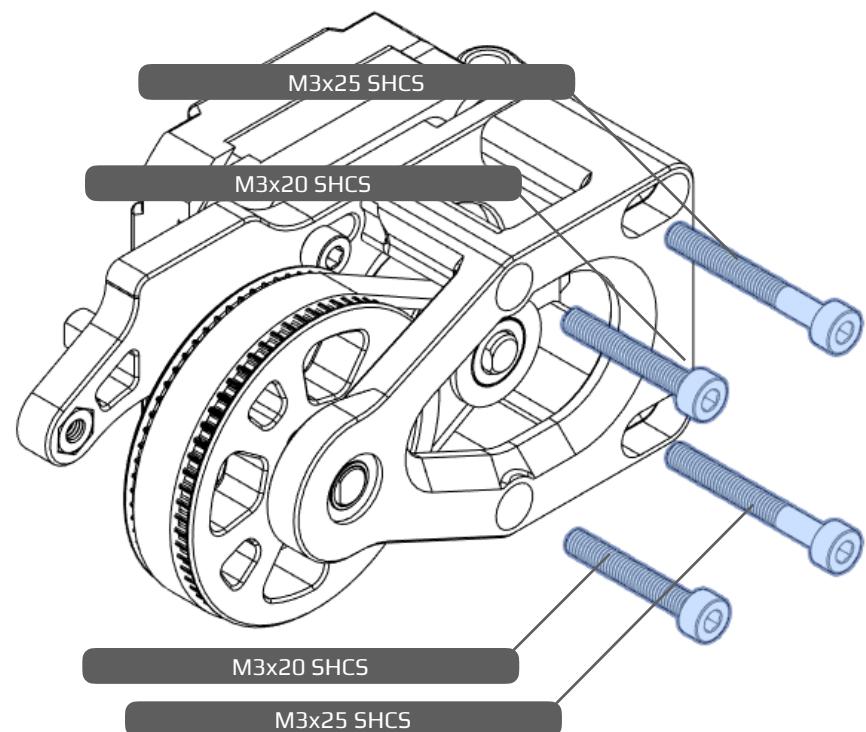
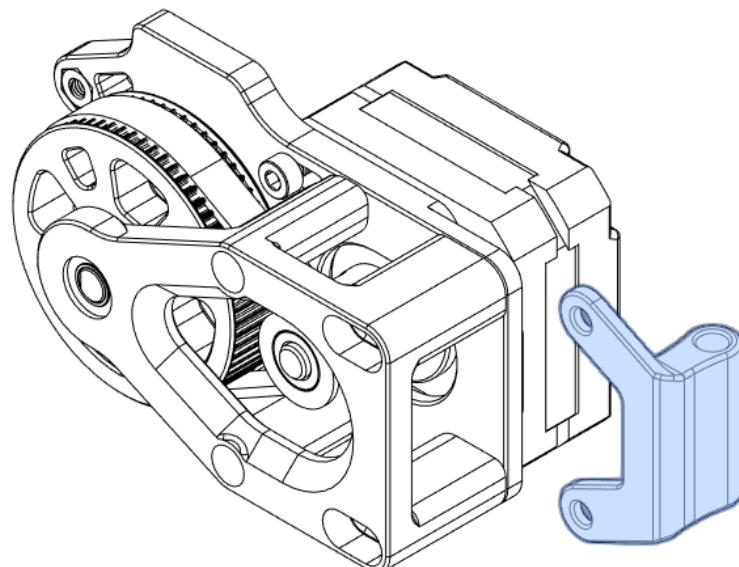
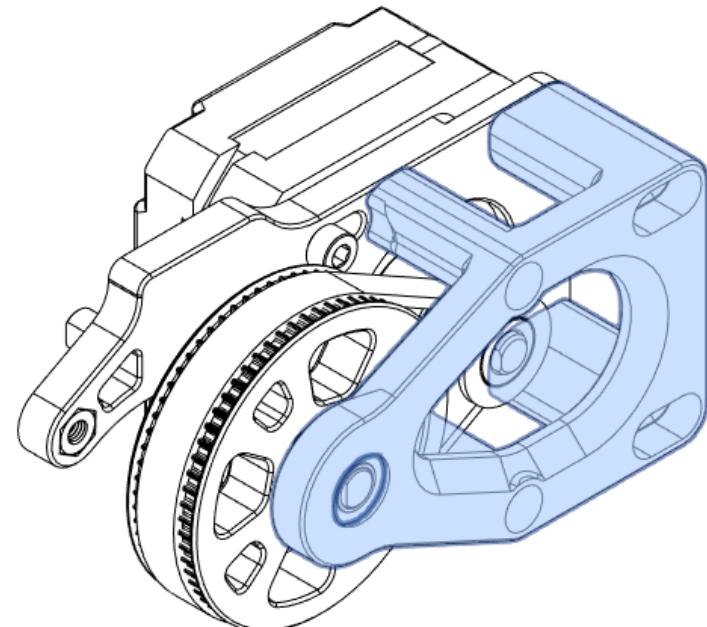
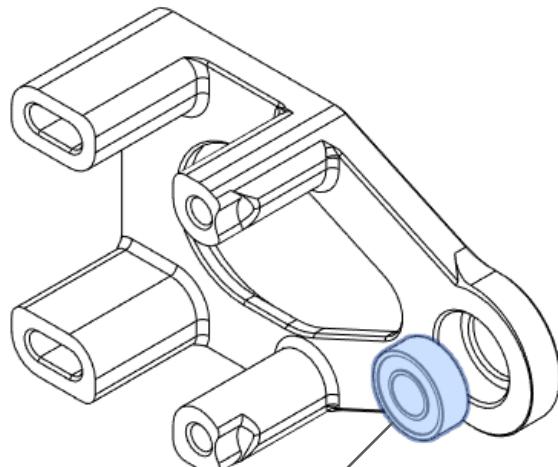
Part	Qty
M3x6 Set Screw	4
GT2 16T	1
GT2 150T Loop	1



Drive Assembly & Bowden Retainer

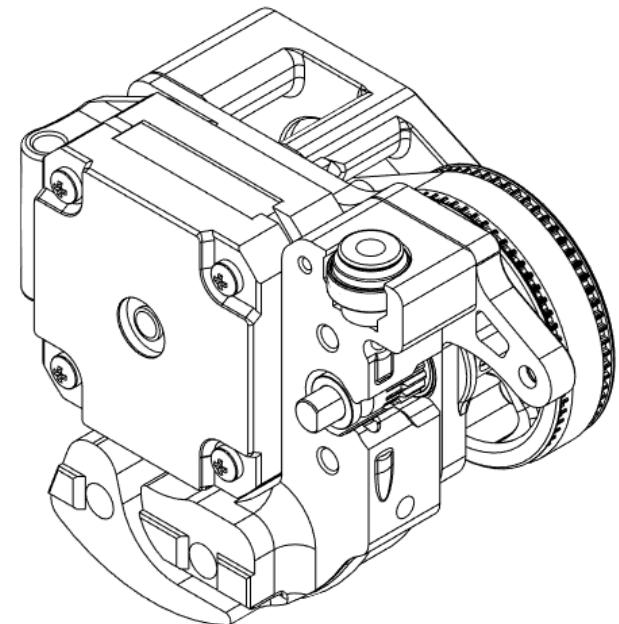
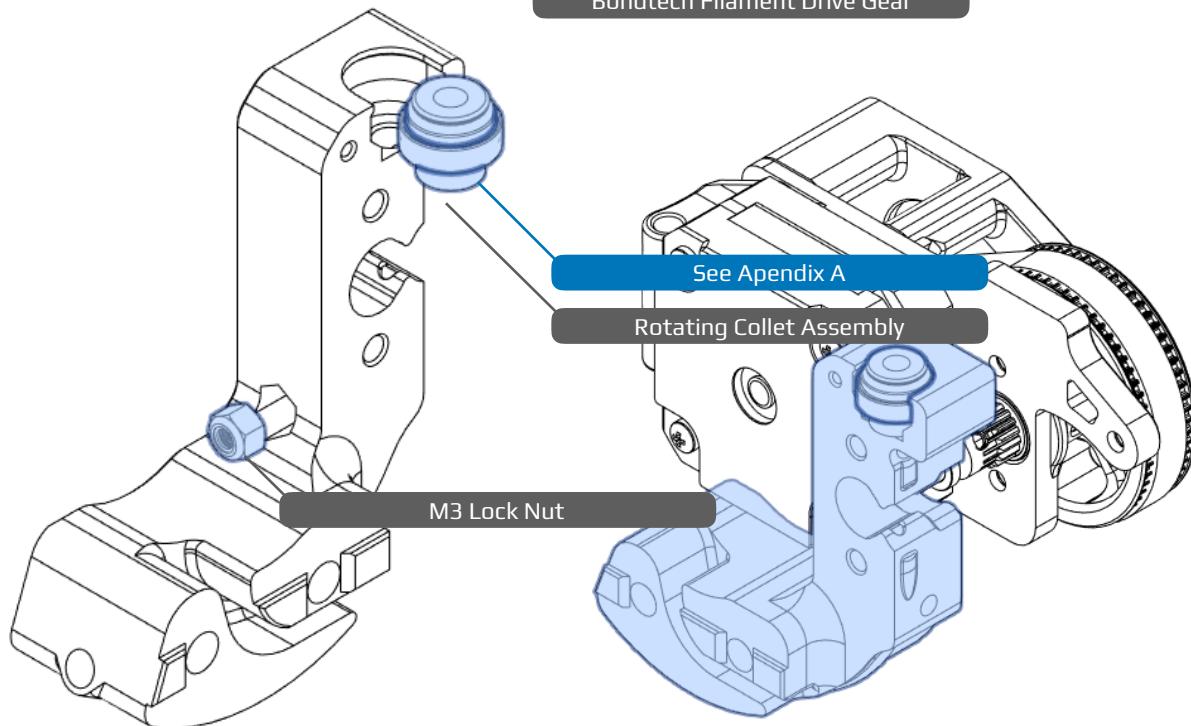
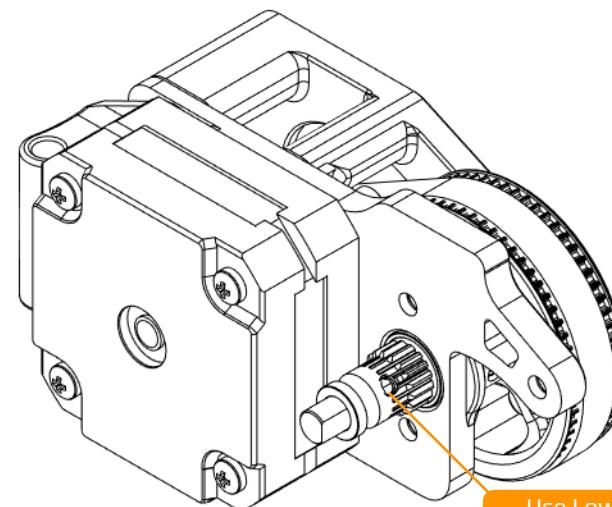
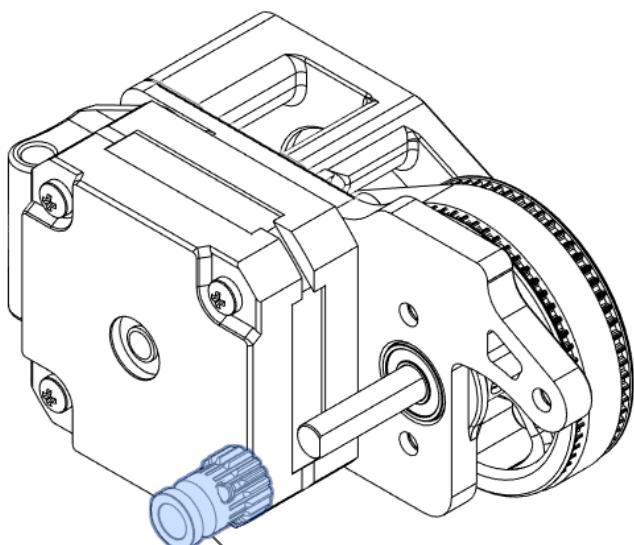
Part	Qty
M3x20 SHCS	2
M3x25 SHCS	2
MR115	1

Optional: See Appendix B for Alternative



Filament Drive Gear & Main Body

Part	Qty
M3 Lock Nut	1
Bondtech Drive Gear	1
Collet Assembly	1

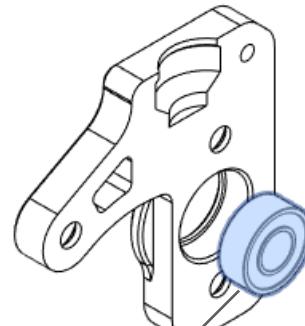


Optional: See Appendix B for Alternative

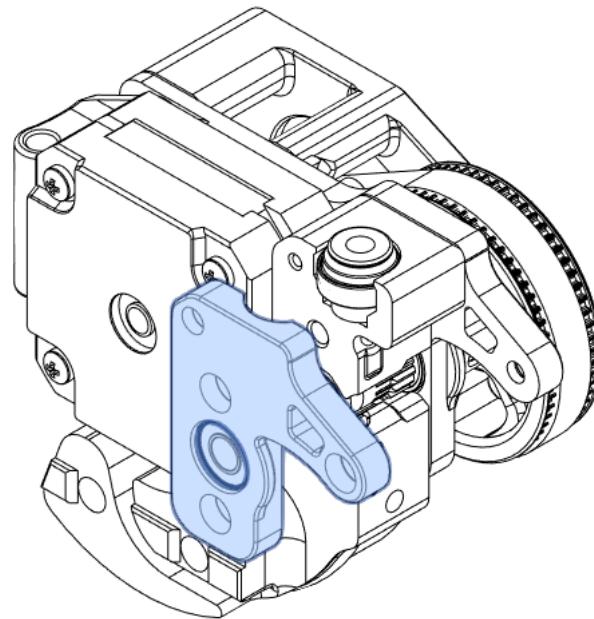
Optional: See Appendix C for Alternative

Front Plate

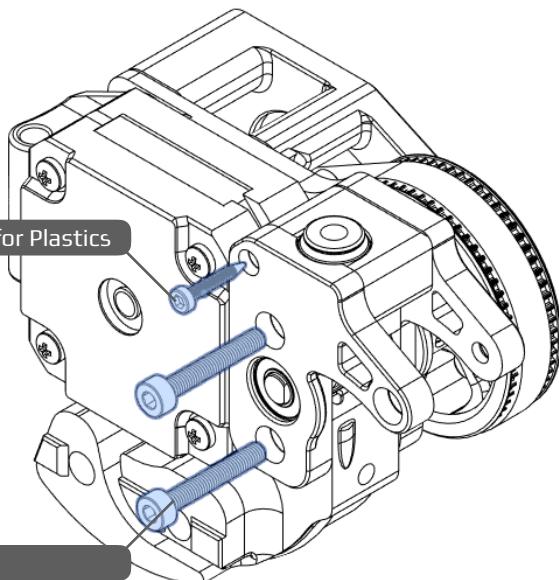
Part	Qty
M3x20 SHCS	2
M2x8 Self Tapping	1
MR115	1



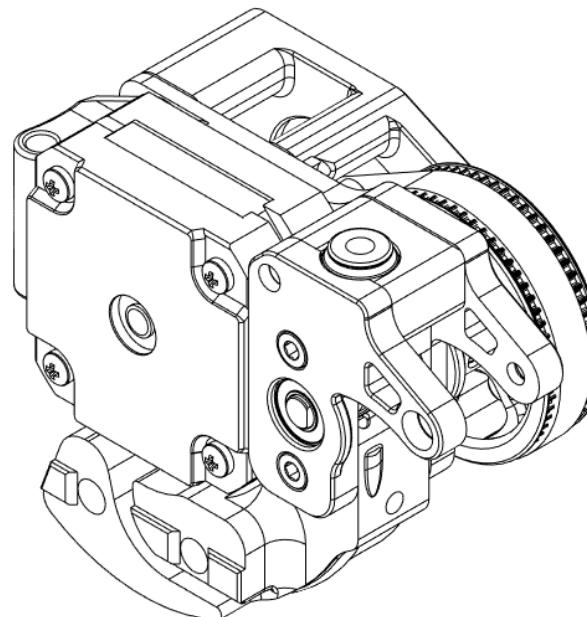
MR115-2RS Bearing



M2x8 Self Tapping Screw for Plastics

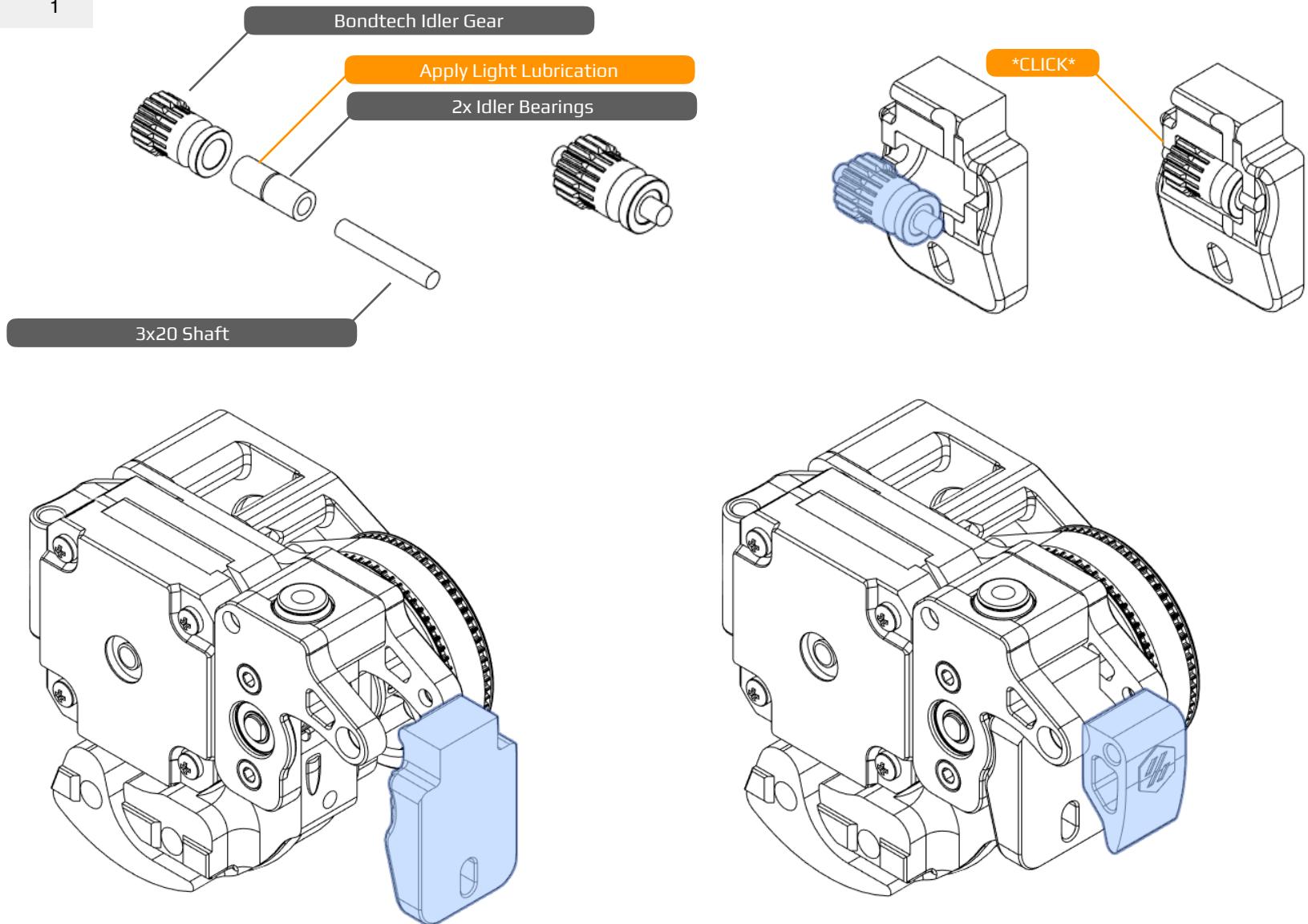


M3x20 SHCS



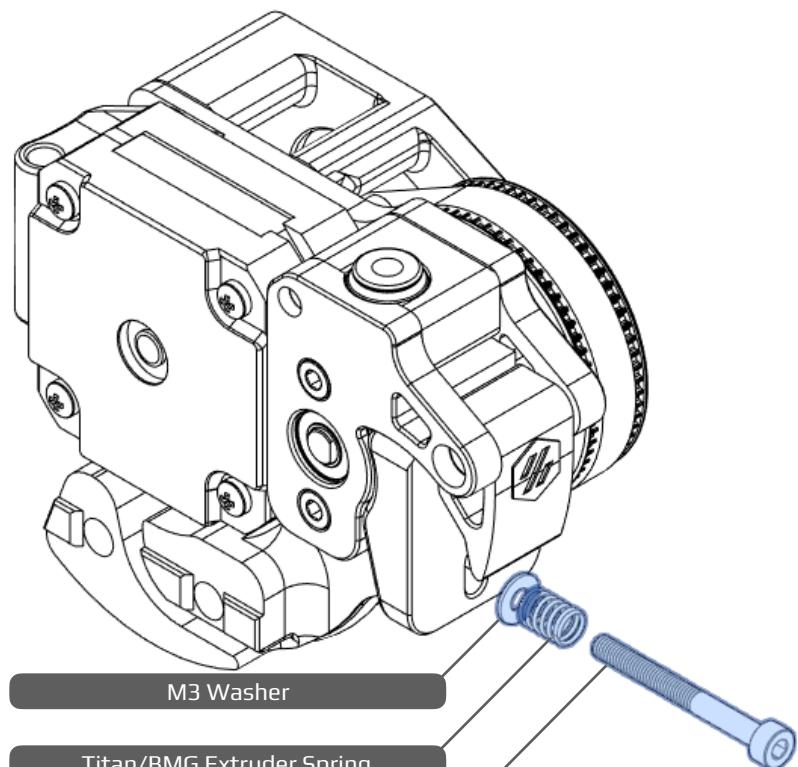
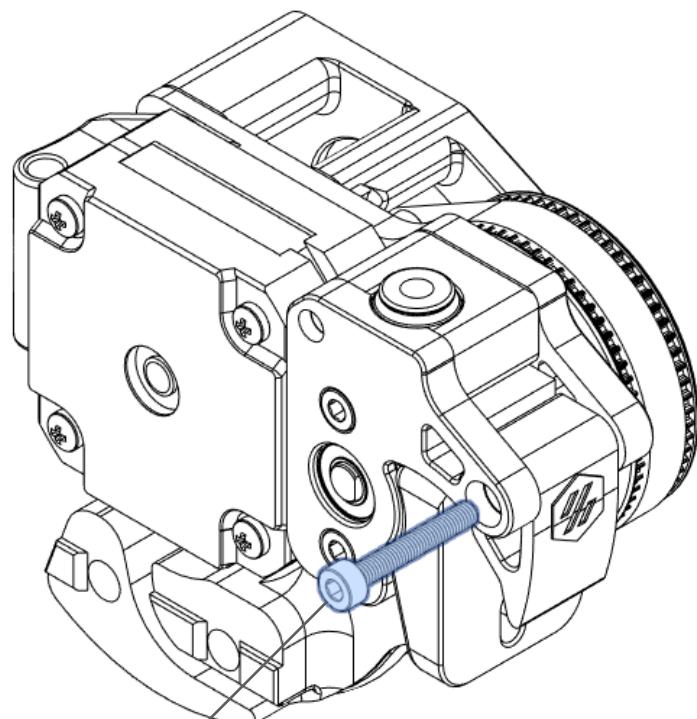
Filament Idler

Part	Qty
BondTech Idler Bits	1



Fidget Toy

Part	Qty
M3x20 SHCS	1
M3x30 SHCS	1
M3 Washer	1
Spring	1



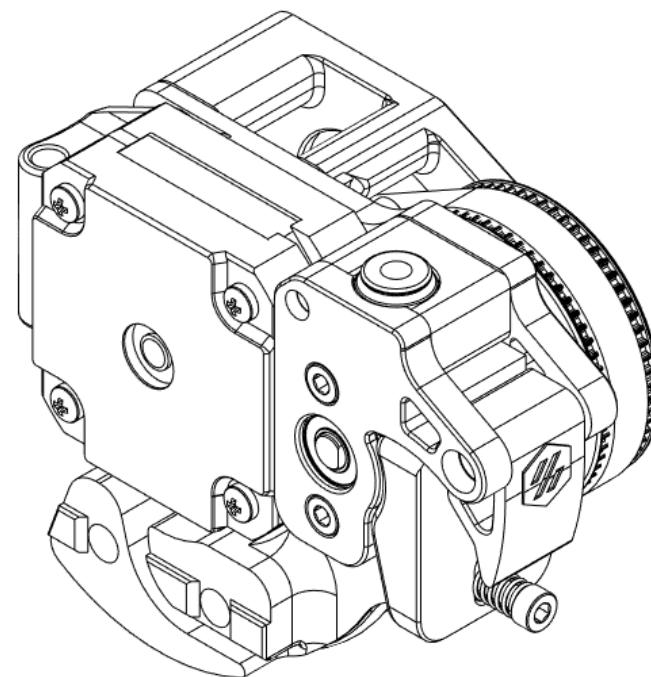
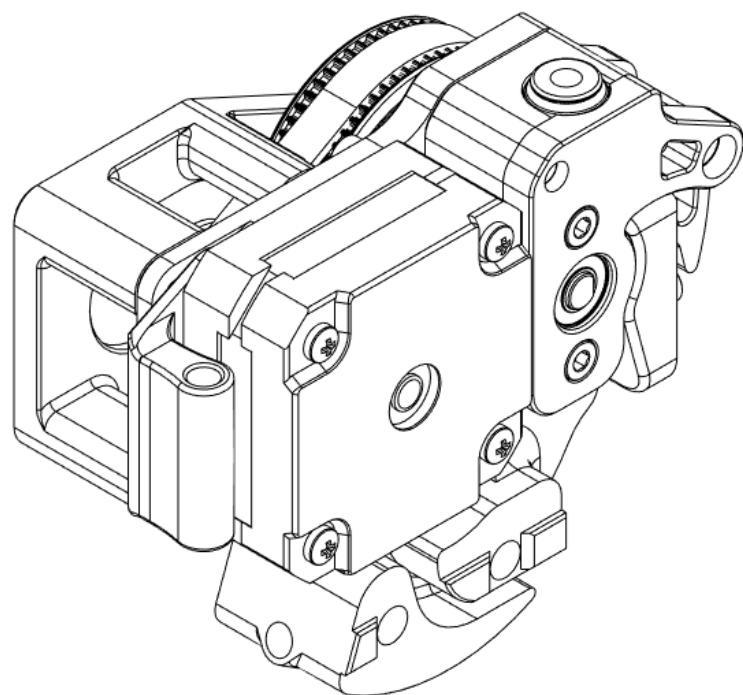
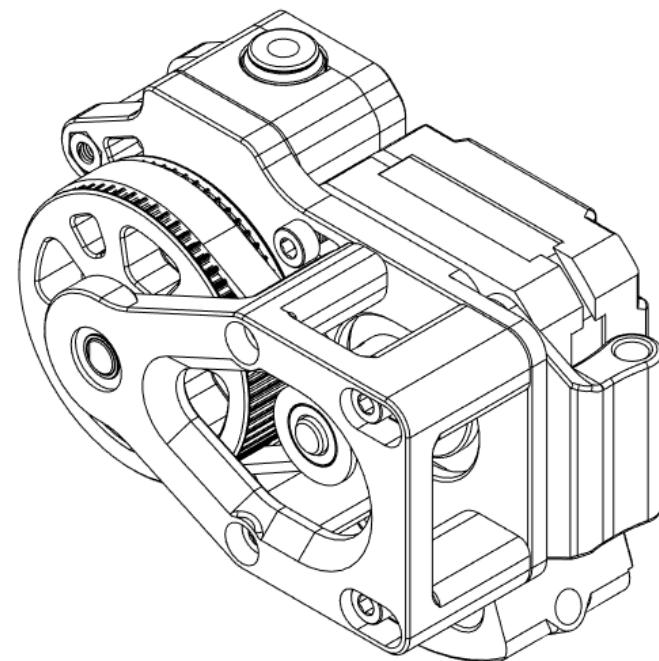
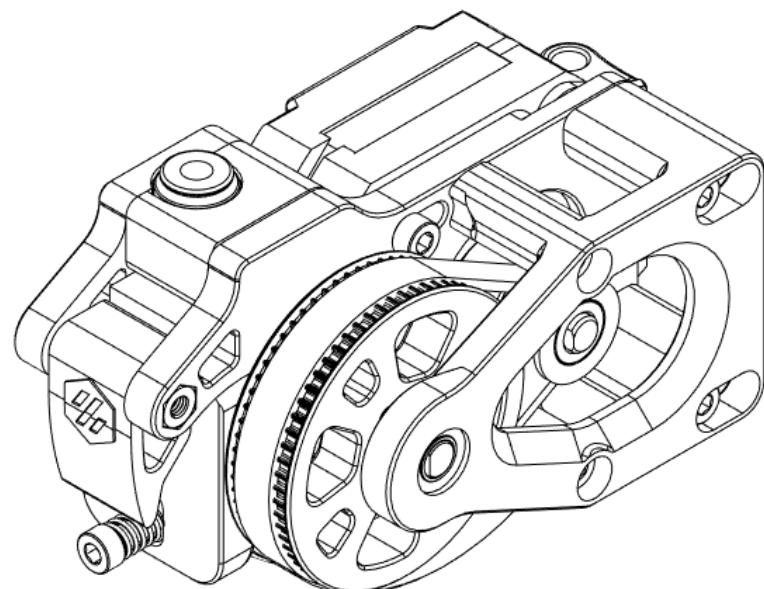
M3x20 SHCS

M3 Washer

Titan/BMG Extruder Spring

M3x30 SHCS

Assembly Completed



Additional Info

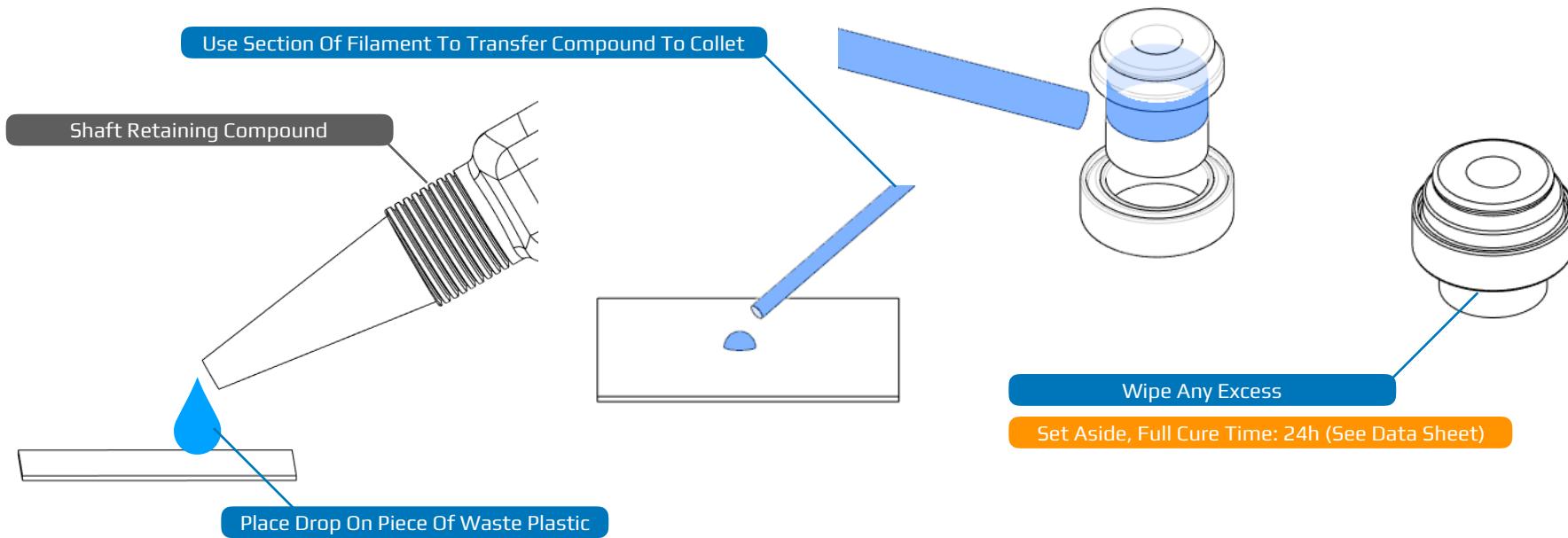
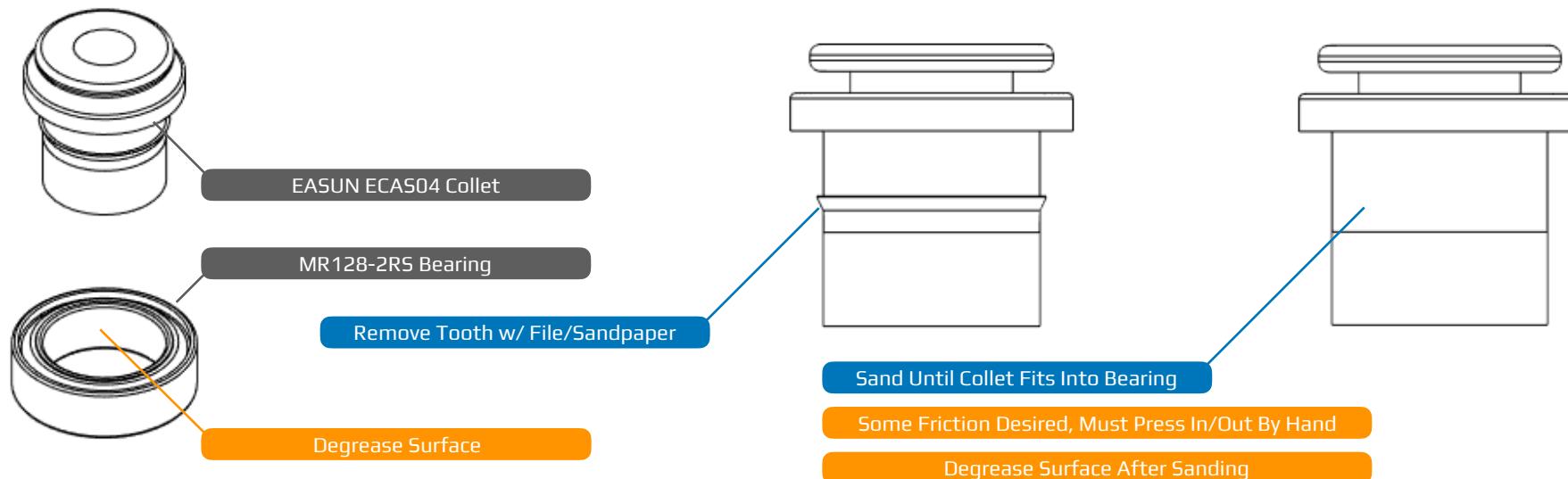
Hardware	
Bowden Tube (To Extruder)	PTFE 4mm OD 3mm ID
Bowden Tube (To Hotend)	PTFE 4mm OD 2mm ID (or 1.9mm ID)
Bowden Tube Length	150mm ... 400mm depending on printer

Slicer/Print Settings Baseline (adjust as required)	
Retraction Length	~1.6mm

Firmware Settings Baseline (adjust as required)	
Driver Current	0.4 ... 0.6 A
Step Distance	0.001801
PA (Klipper SmoothPA Branch)	~ 0.2 .. 0.4s

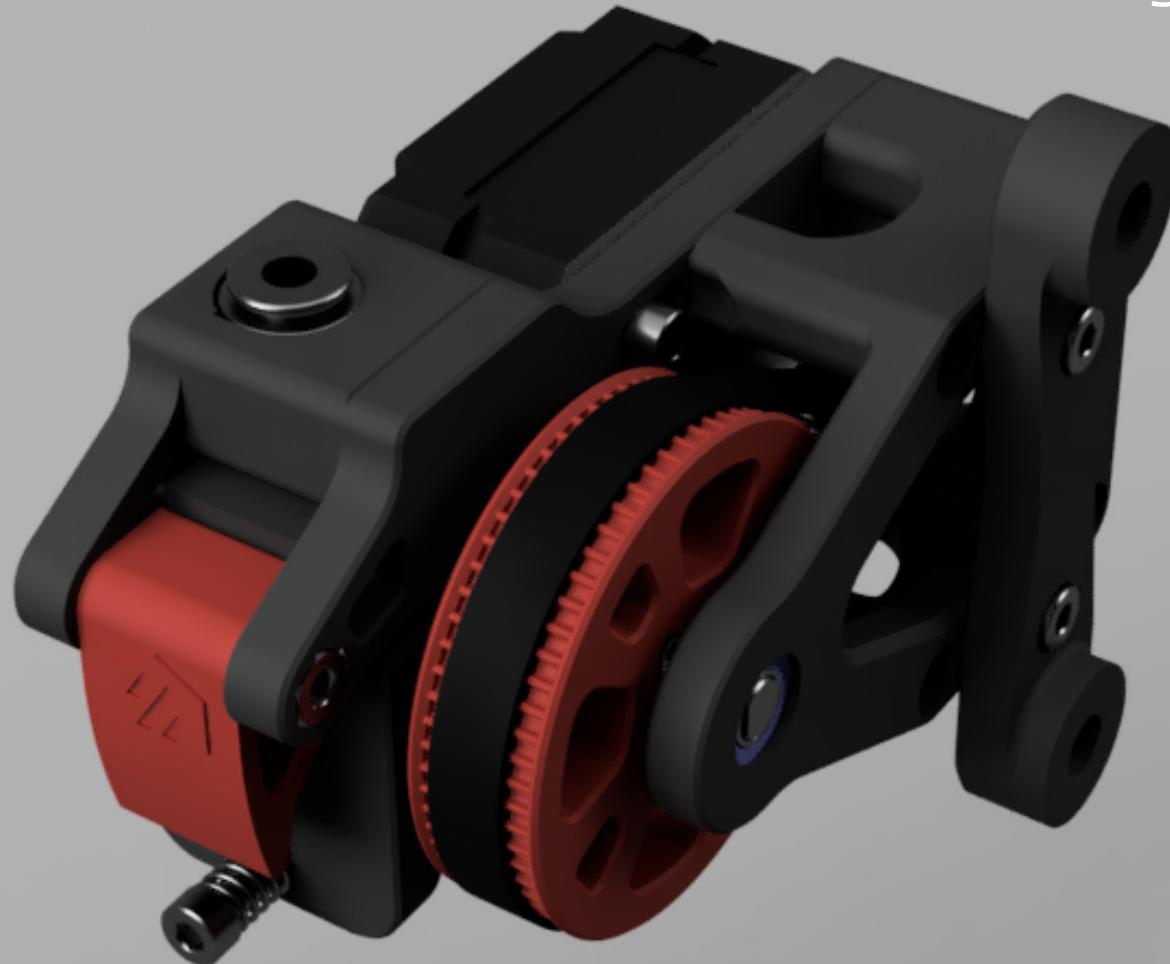
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Appendix A - Rotating Collet Assembly



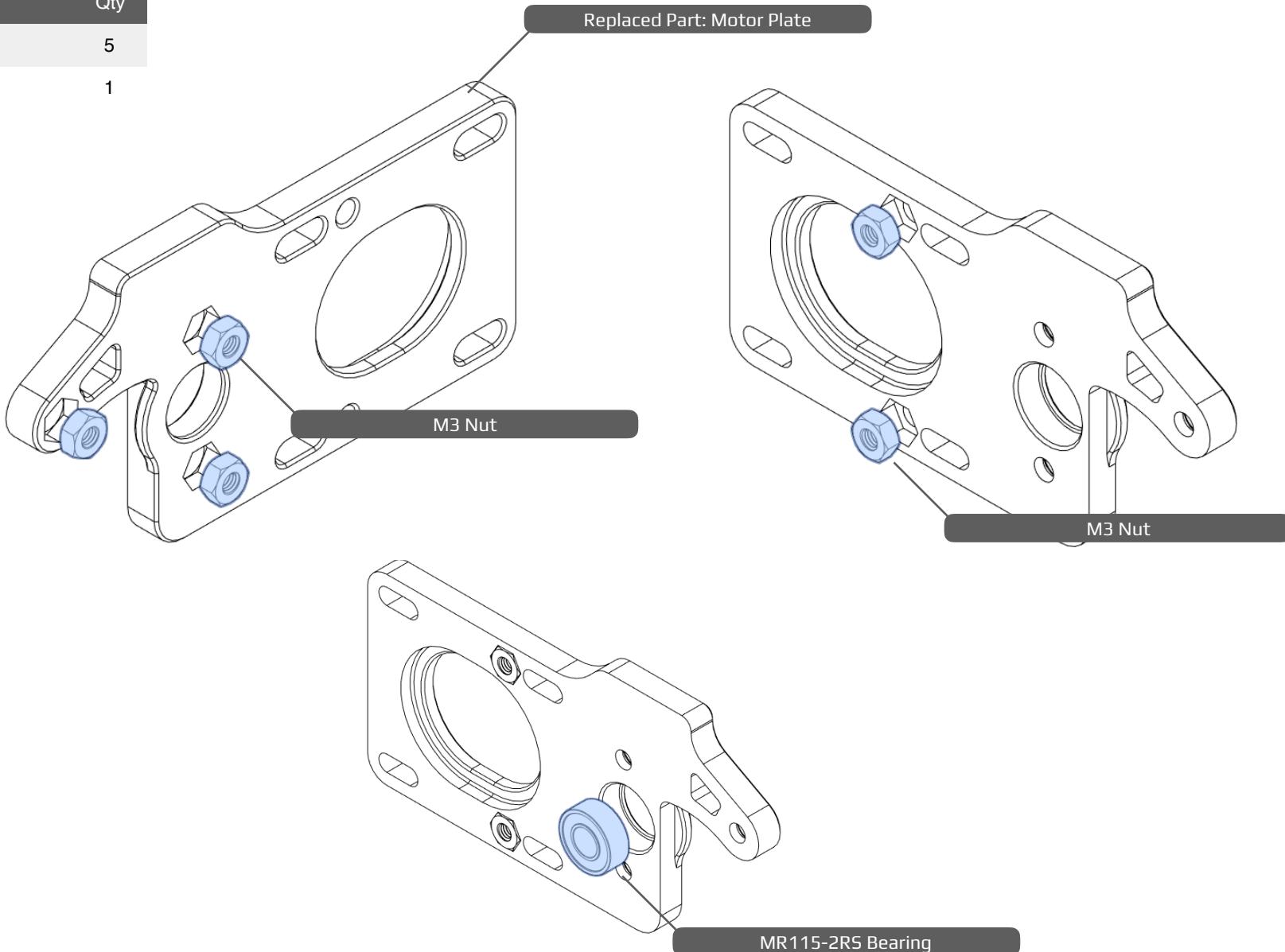
VORON JP1

EXTRUDER Thing
Standalone Variant



Appendix B - Standalone Variant - Replacement for "Motor Plate"

Part	Qty
M3 Nut	5
MR115	1

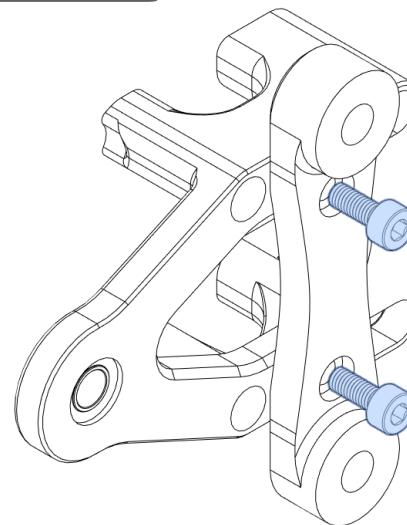
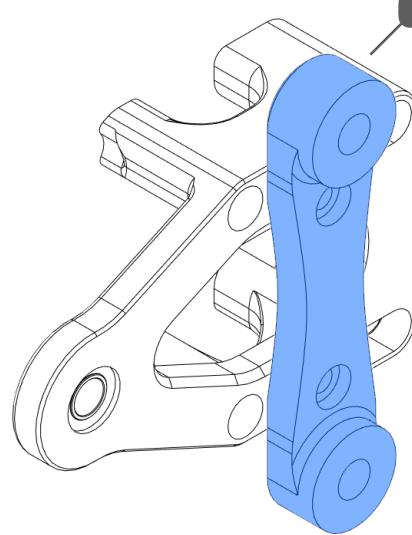
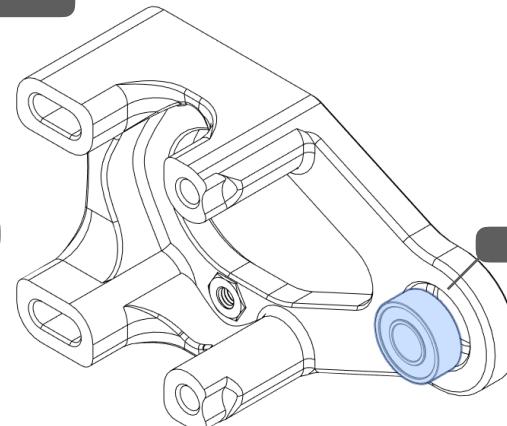
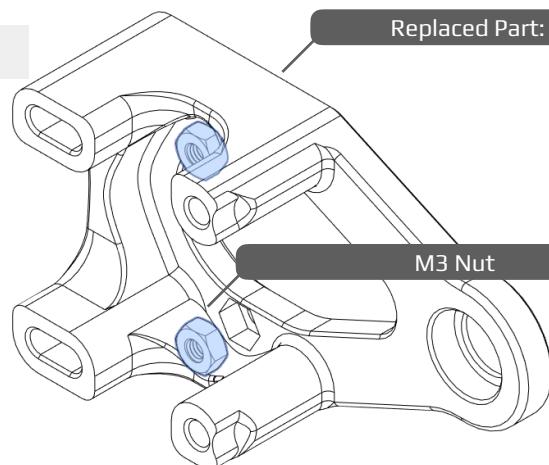


[Continue with Assembly](#)

Appendix B - Standalone Variant - Replacement for "Motor Brace"

Part	Qty
M3x8 SHCS	2
M3 Nut	2
MR115	1

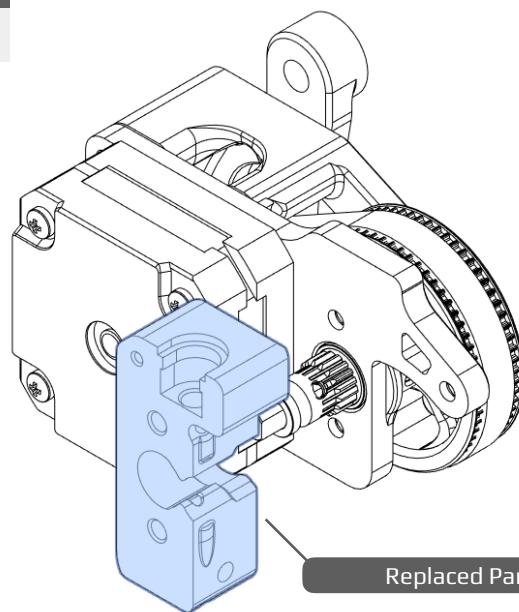
Replacement for "Motor Brace" Part



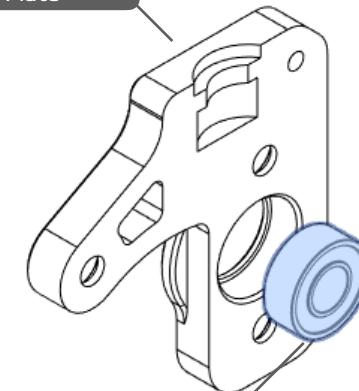
Continue with Assembly

Appendix B - Standalone Variant - Replacement for "Main Body"

Part	Qty
EASUN ECAS04	1
MR115	1

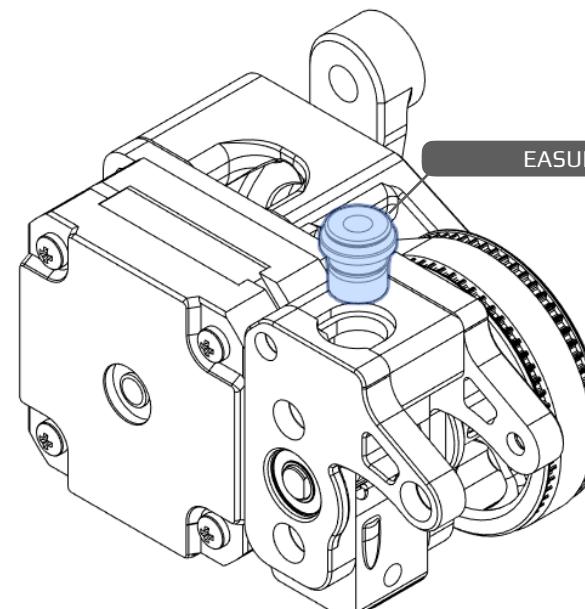
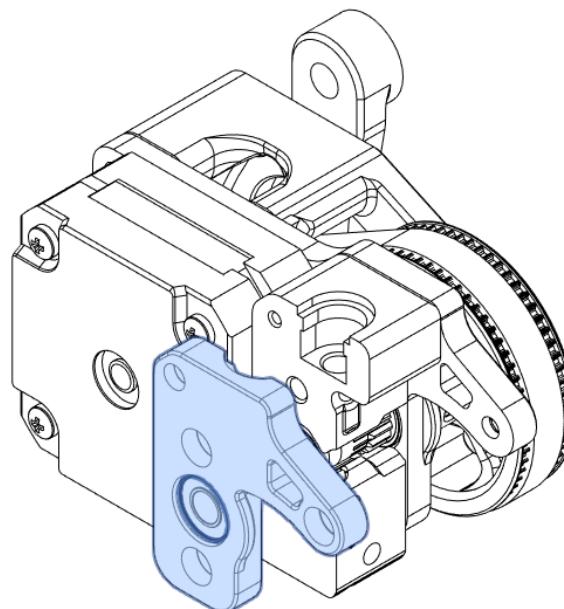


Replaced Part: Front Plate



Replaced Part: Main Body

MR115-2RS Bearing

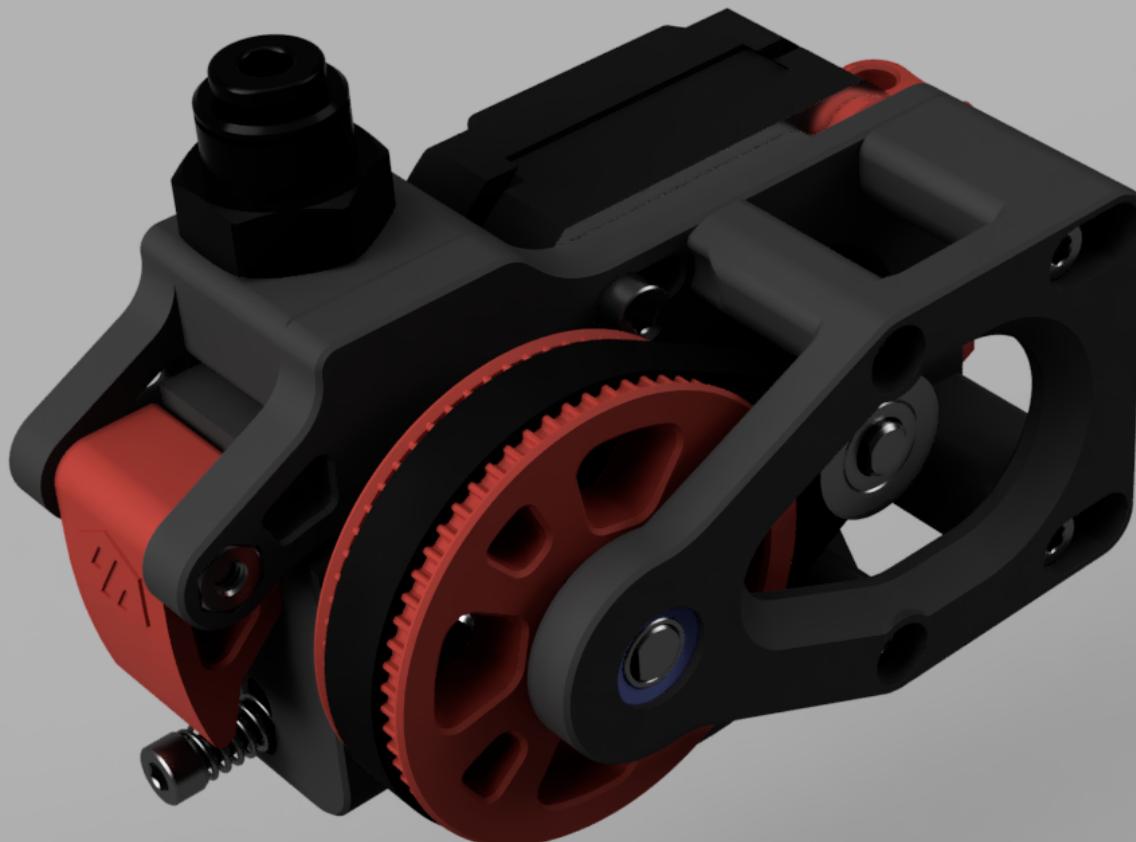


EASUN ECAS04 Collet

[Continue with Assembly](#)

VORON JP1

EXTRUDER Thing
John Guest Variant



Appendix C - John Guest Variant - Replacement for "Main Body"

