

Instruction Manual

1/8 SCALE ELECTRIC RACING CAR



SHEPHERD

MICRO RACING TEAM

VELOX
E9

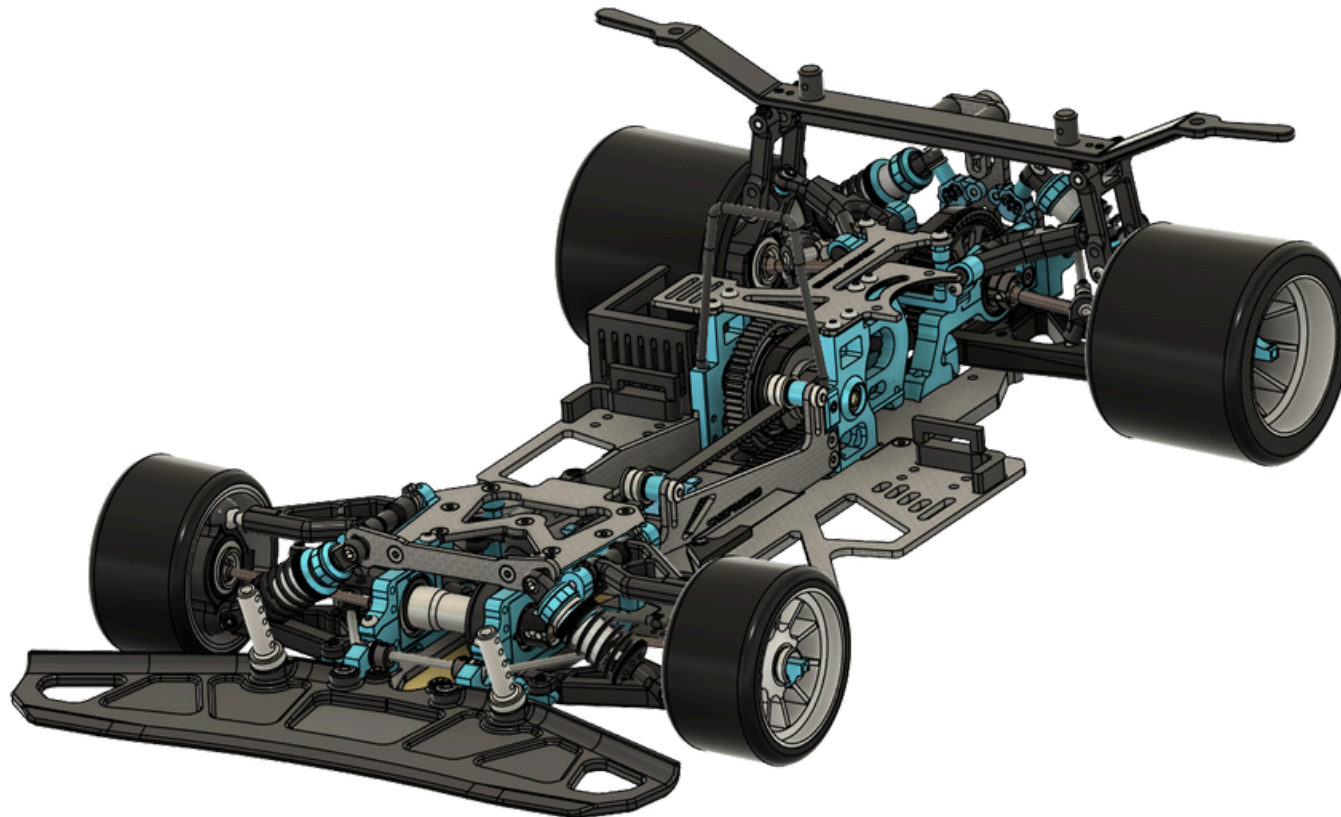
Thank you for purchasing a Shepherd product. With our extensive history of National, European and World Championship success we welcome you to Team Shepherd.

Our philosophy is to produce RC race cars that can be used and enjoyed regardless of if you are beginner or an experienced racer. From the club racing to competing in World Championships, Shepherd has been at the forefront of developing RC racing cars to be easy to use and maintain and be fast.

Our cars continually evolve and with our approach to evolution of the platforms, we strive to have a clear upgrade path from one release to the next to protect the investment our customers make in the Shepherd brand.

We wish you every success with your new car, enjoy the process of building and driving the car.

Race On!



EQUIPMENT REQUIRED



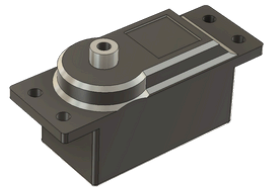
THIS IS THE EQUIPMENT REQUIRED TO USE YOUR RC ELECTRIC CAR. WHICH IS **NOT INCLUDED** IN THE KIT



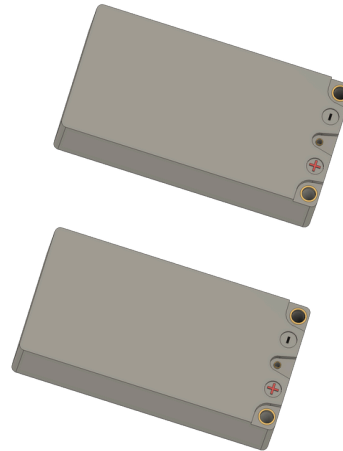
TRANSMITTER



RECIEVER



STEERING SERVO



SHORTY

HARDCASE LIPO BATTERIES

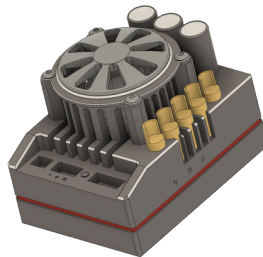
OR



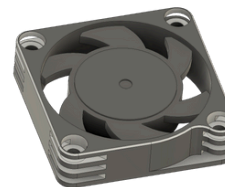
STICK



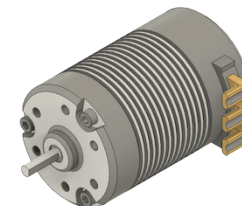
WHEELS & TYRES



ESC



MOTOR COOLING FAN



MOTOR



PINION

SYMBOL INDEX



BAG 1

STEP 1

On each page you will see these symbols. BAG and STEP in each BAG you will find parts to complete this STEP

1 2 3 4

Assemble the parts in this order

4x

60 62 13

Part Number

Quantity used in STEP

In these boxes you will find build tips

LIQUIDS Required

NOT INCLUDED

When these symbols appear use where directed



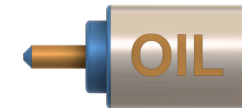
CA GLUE



THREADLOCK



GREASE

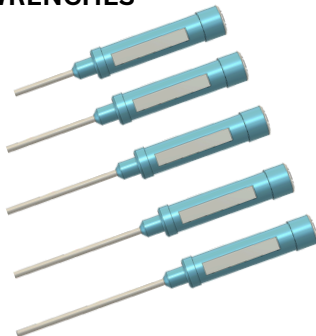


OIL

TOOLS Required

METRIC ALLEN WRENCHES

1.5
2.0
2.5
3.0
5.0

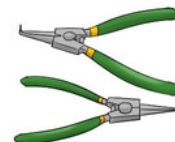


METRIC SOCKET WRENCHES

5.5
7.0



PLIARS

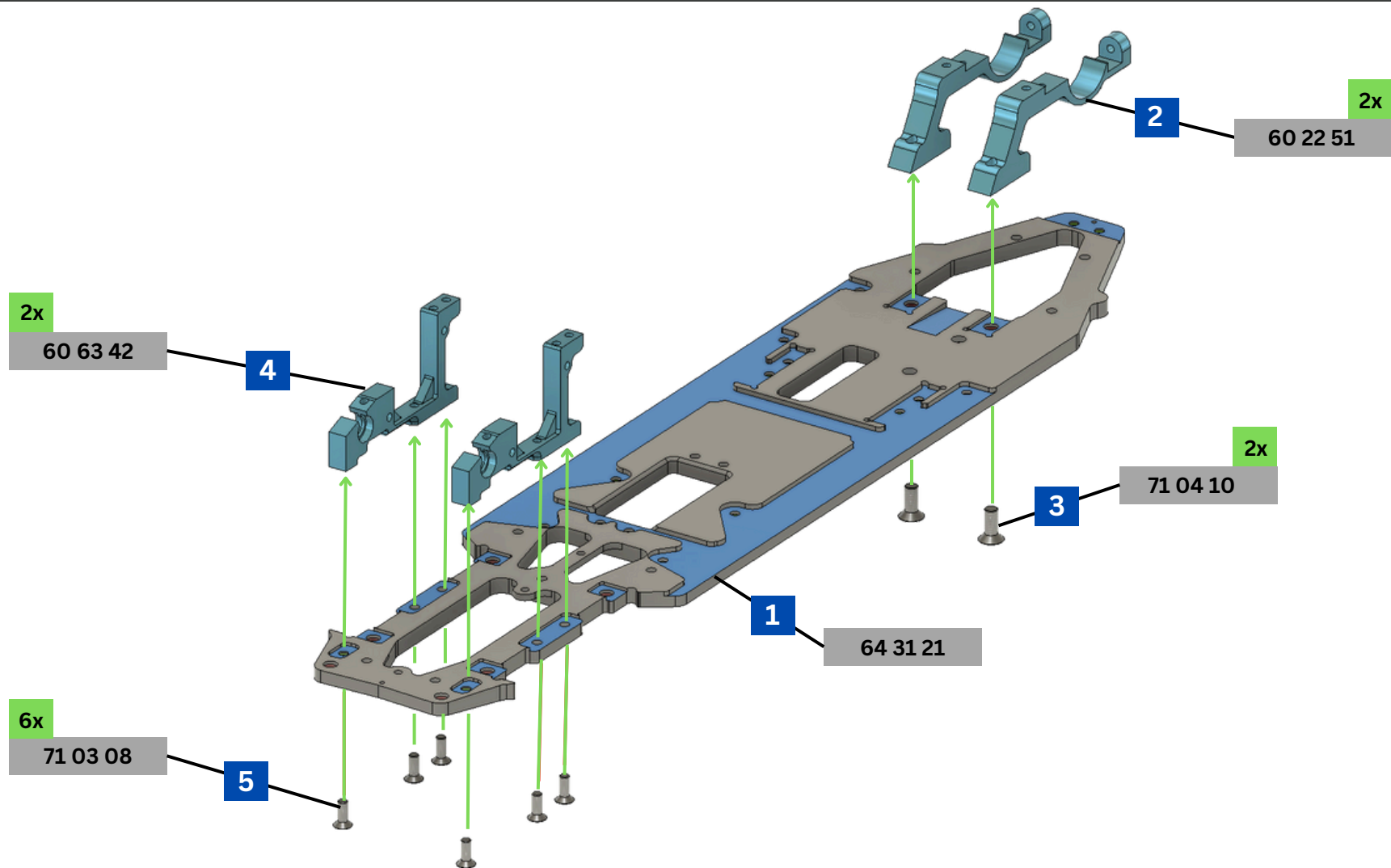


HOBBY KNIFE



CALIPERS





Part Number

Description

Amount

Optional Part Number

Description

64 31 21

VE9 chassis 5mm

60 63 42

Front Lower Bulkheads

60 22 51

Rear Lower Bulkheads

71 04 10

Hex Countersunk screw M4x10

71 03 08

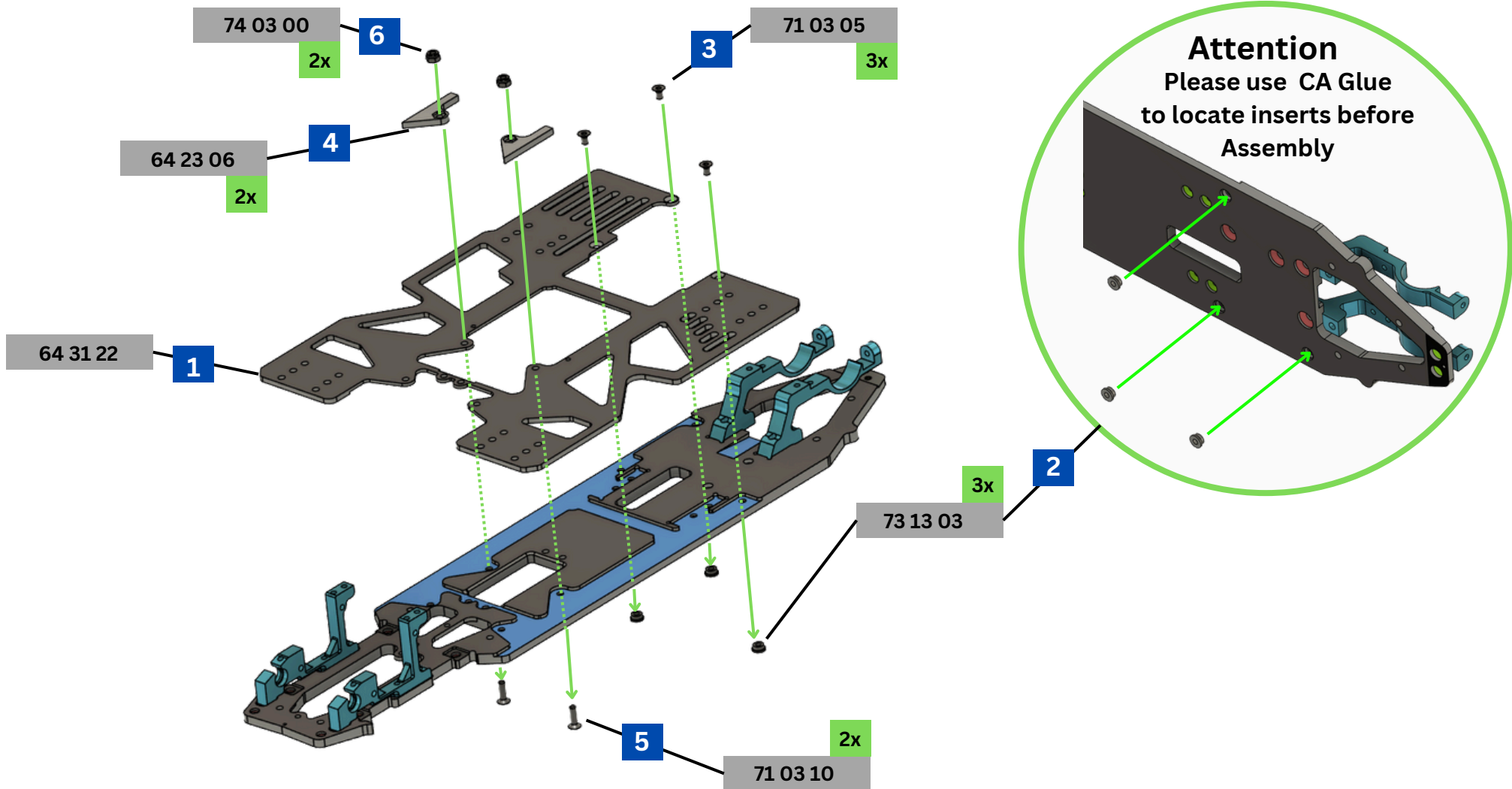
Hex Countersunk screw M3x8

Battery Tray



BAG 1

STEP 2



Part Number

Description

Amount

Optional Part Number

Description

64 31 22

VE9 Battery Plate

1

64 23 06

Center Battery Stays

2

73 13 03

M3 Inserts

3

71 03 05

Hex Countersink M3x5

3

71 03 10

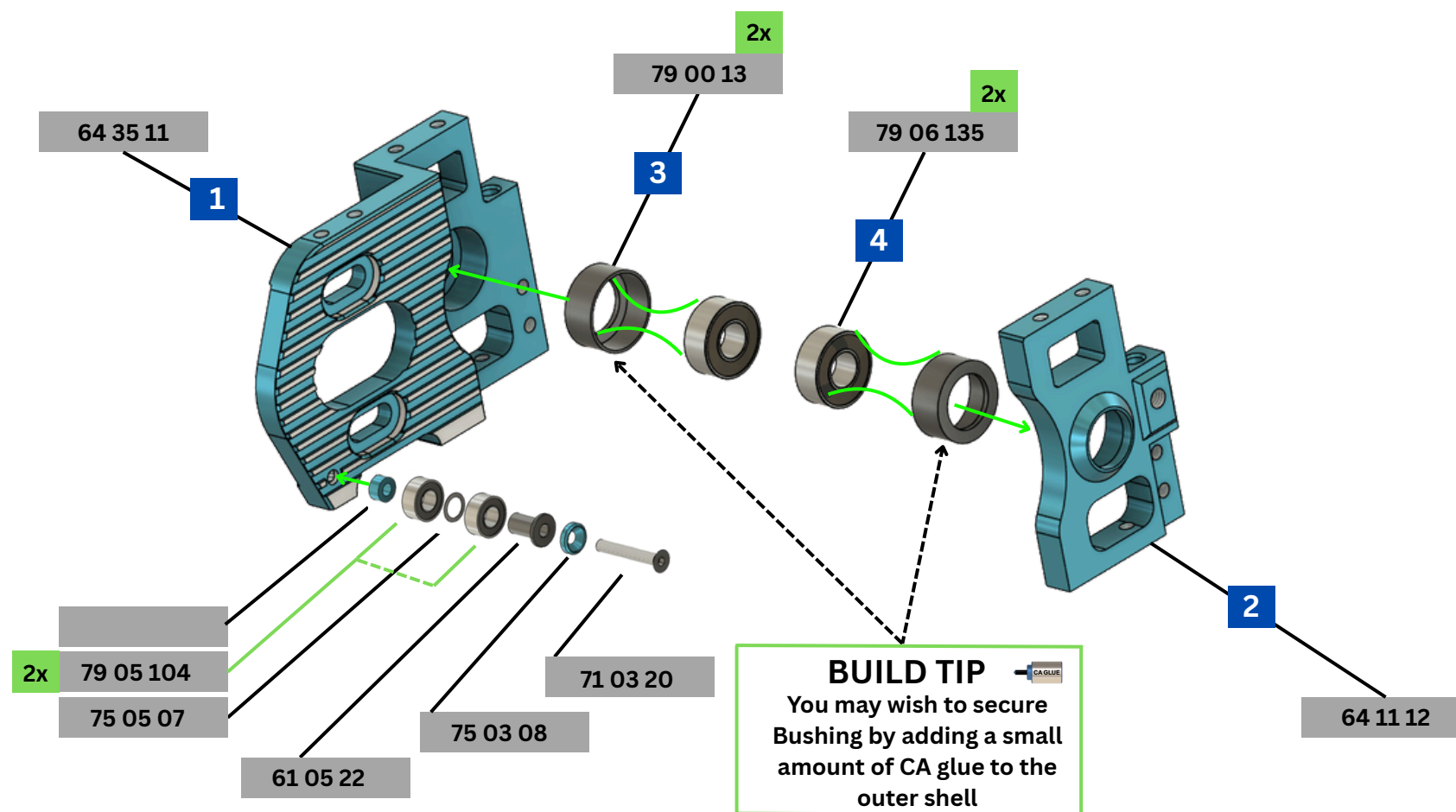
Hex Countersink M3x10

2

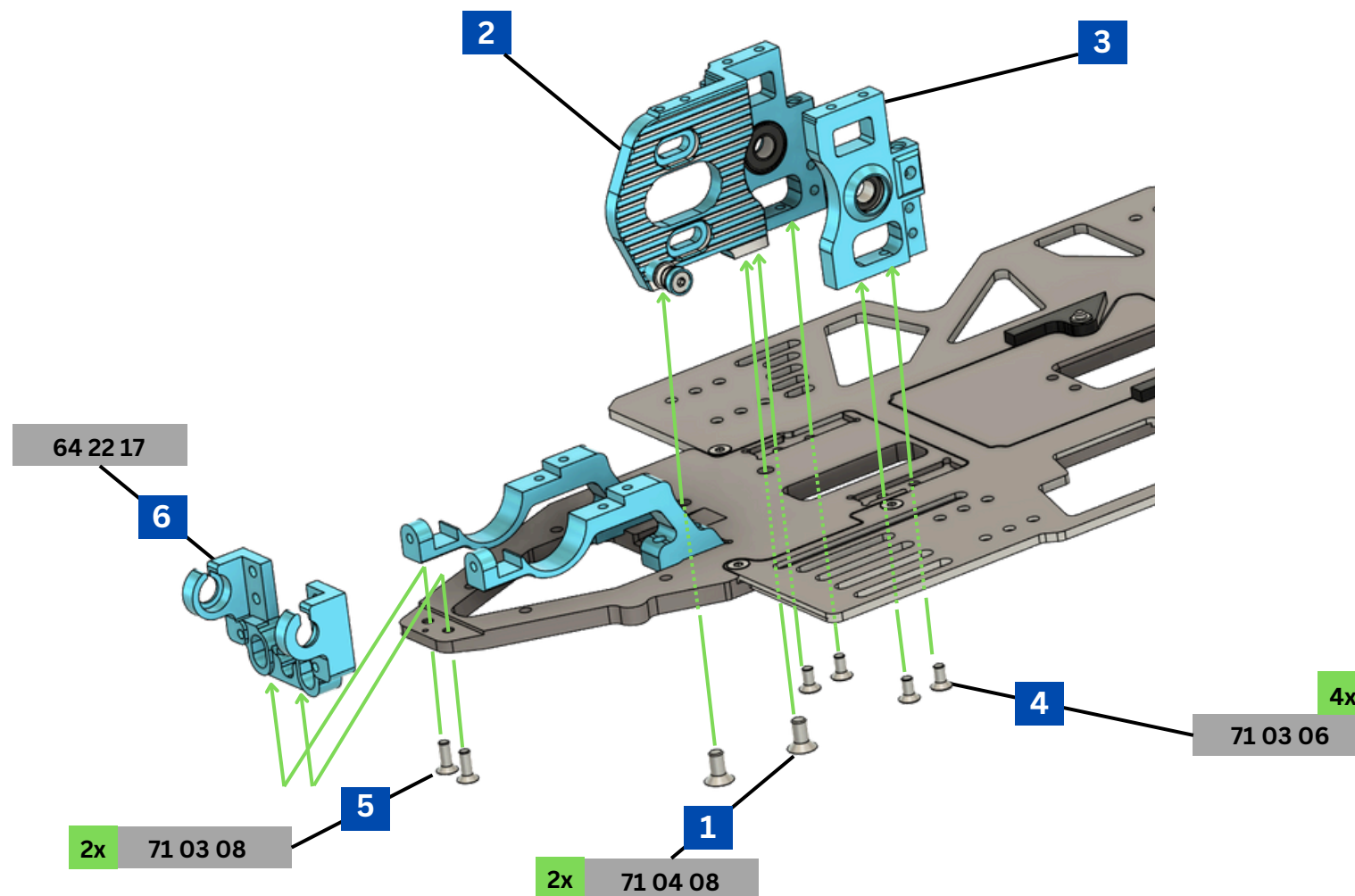
74 03 00

Self Locking Nut M3

2



Part Number	Description	Amount	Optional Part Number	Description
64 35 11	Motor Bulkhead	1		
64 11 12	Layshaft Bulkhead	1		
79 00 13	Bushing 13mm	2		
79 06 135	Bearing 6x13x5	2		
TBA	M3 Spacer	1		
79 05 104	Bearing 5x10x4	2		
75 05 07	0.5mm shim	1		
61 05 22	Bearing support	1		
75 03 08	M3 Countersink washer	1		
71 03 20	Hex countersink screw M3x20	1		



Part Number

Description

Amount

Optional Part Number

Description

64 22 17

Rear Panel

1

71 04 08

Hex Countersink M4x8

2

71 03 06

Hex Countersink M3x6

4

71 03 08

Hex Countersink M3x8

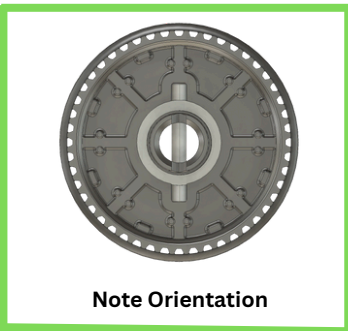
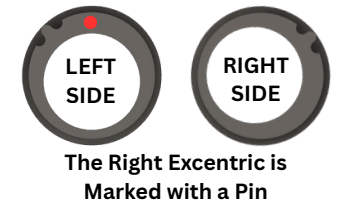
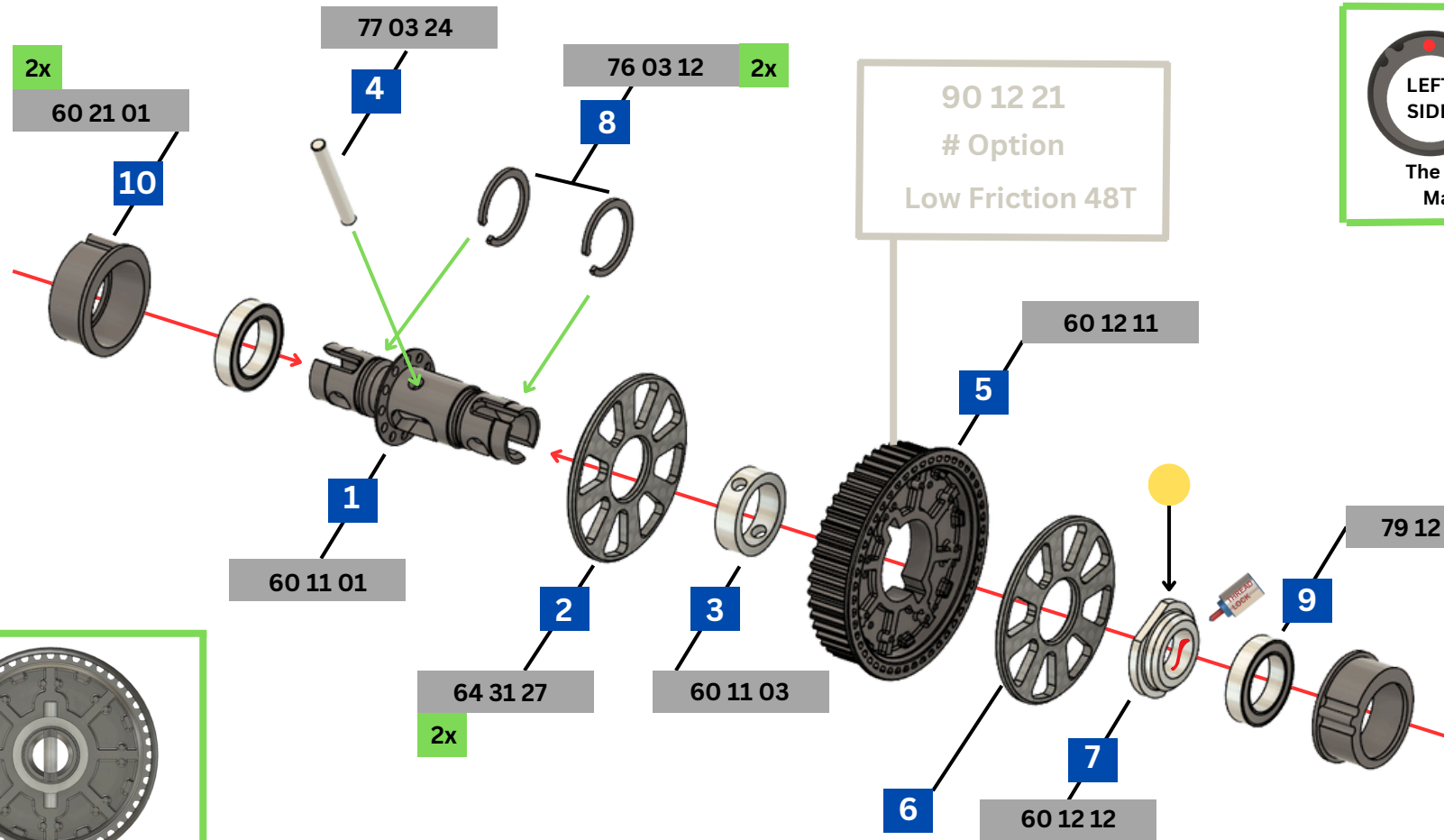
2

Rear Solid Axle



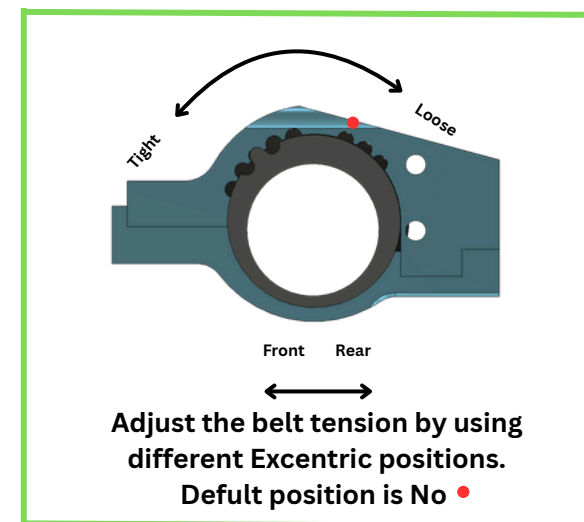
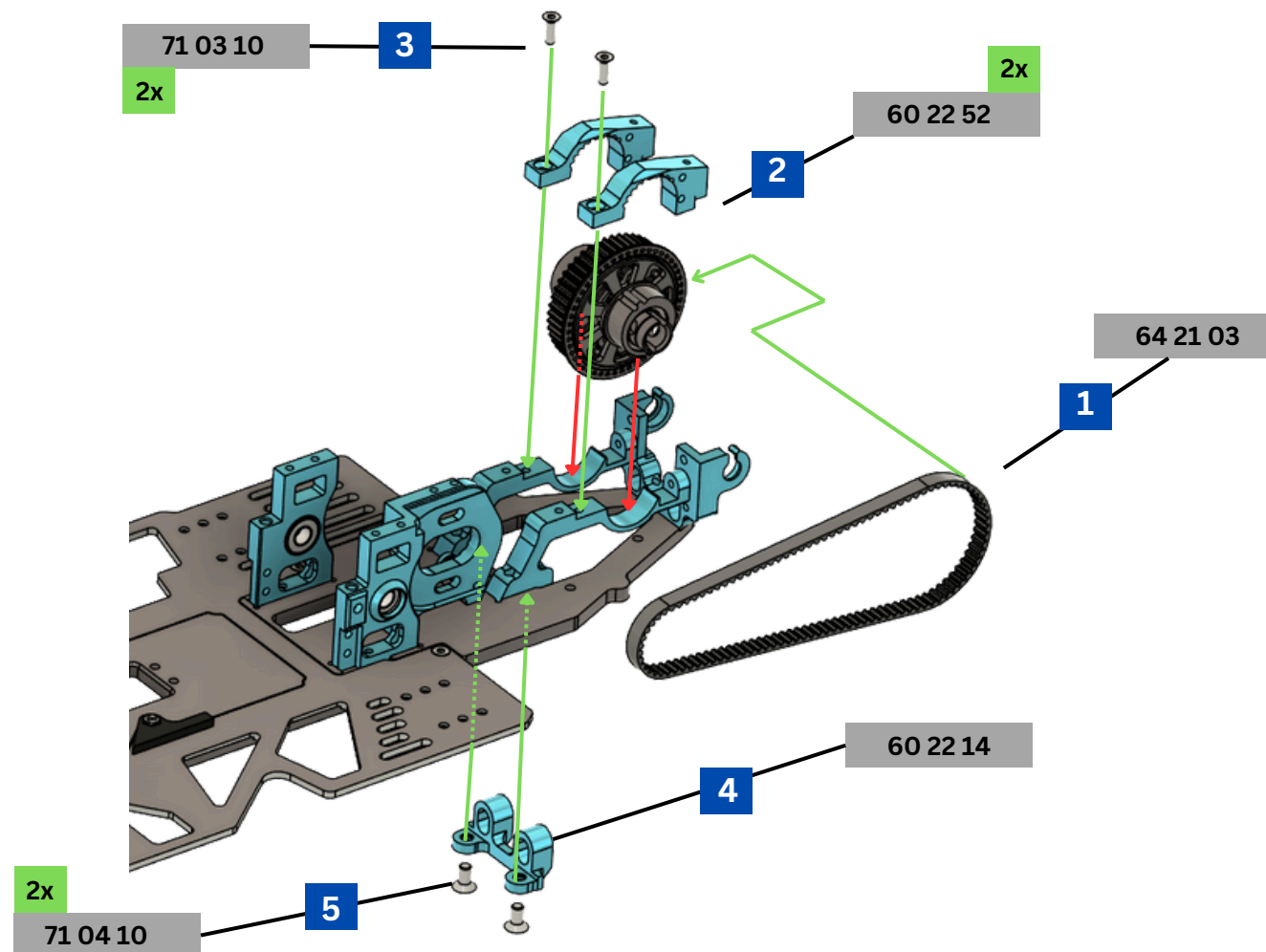
BAG 2

STEP 3

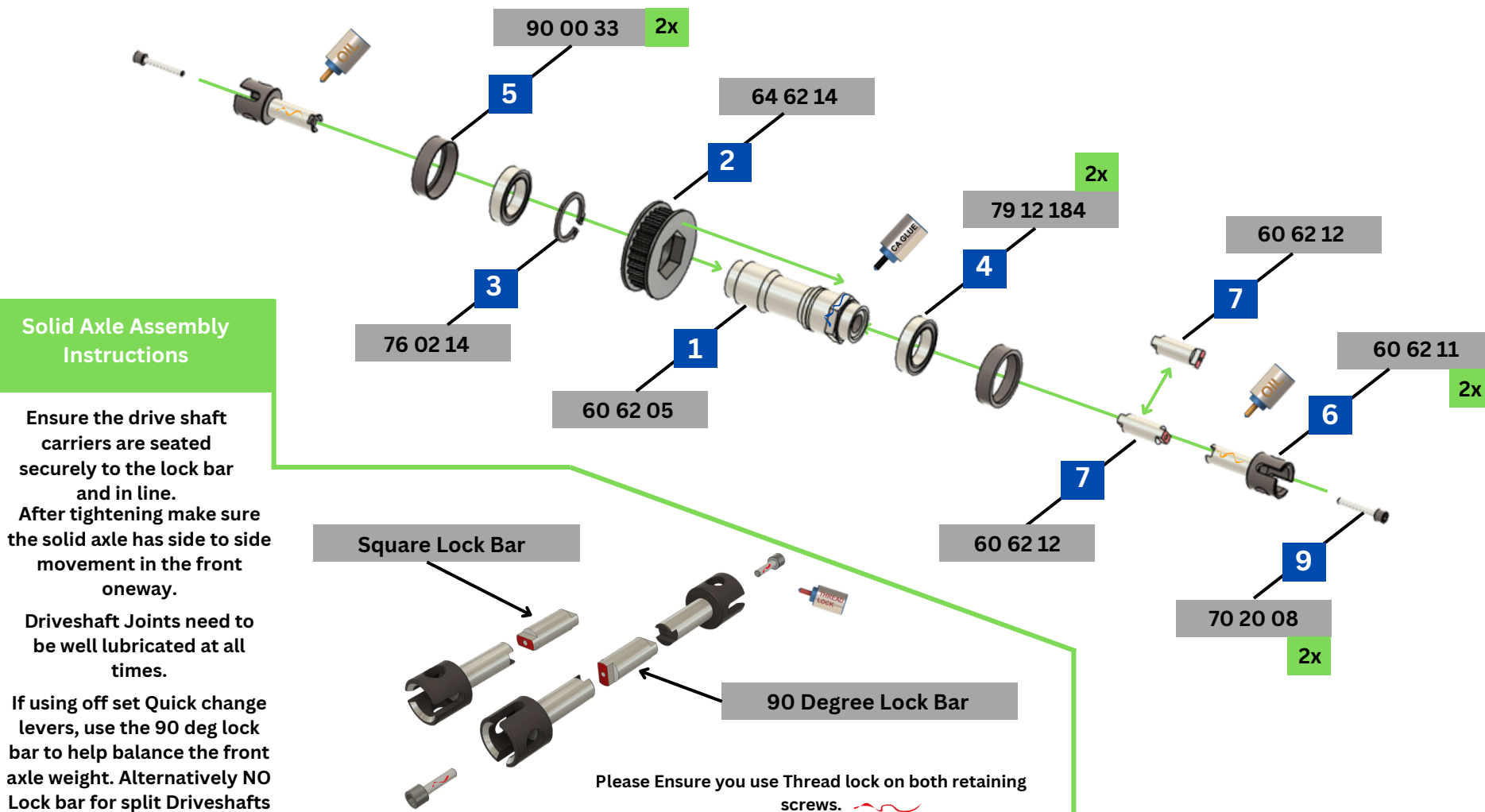


Note Left Hand Thread

Part Number	Description	Amount	Optional Part Number	Description
60 11 01	Rear Solid Axle	1		
64 31 27	Carbon Disc	2		
60 11 03	Carbon Disc Clamping Ring	1		
60 12 11	Rear Pulley 48T	1	90 12 21	Low Friction Rear Pulley 48T
60 12 12	Locknut	1		
77 03 24	Location Pin 3x24mm	1		
76 03 12	Bearing Retaining Clips	2		
79 12 184	Bearing 12x18x4	2		
60 21 01	Eccentric Bearing Holder	2		



Part Number	Description	Amount	Optional Part Number	Description
64 21 03	Rear Belt 321mm	1		
60 22 52	Rear Top Bulkhead	2		
71 03 10	Hex Countersink M3x10	2		
60 22 14	Lower Rear Hinge Pin Bracket	1		
71 04 10	Hex Countersink M4x10	2		



Part Number

Description

Amount

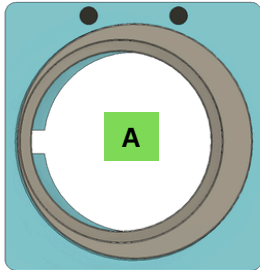
Optional Part Number

Description

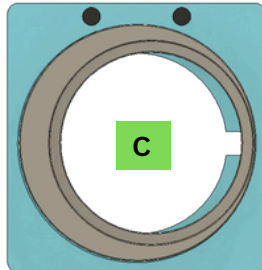
60 62 11	Driveshaft carrier	2		
60 62 05	Oneway Front	1		
60 62 14	Pulley 28T	1		
76 02 14	Retaining Ring 14mm	1		
90 00 33	Bearing Inserts 18mm	2		
79 12 184	Bearing 12x18x4	2		
60 62 12	Centre Lock bars	1+1		
70 20 08	Retaining screw	2		

FRONT

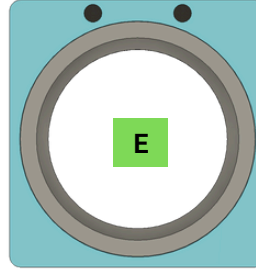
LOW and FORWARD



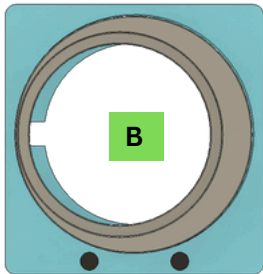
LOW and REAR



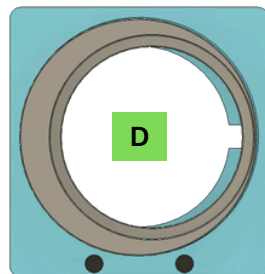
LOW and CENTRAL



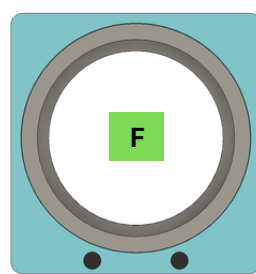
HIGH and FORWARD



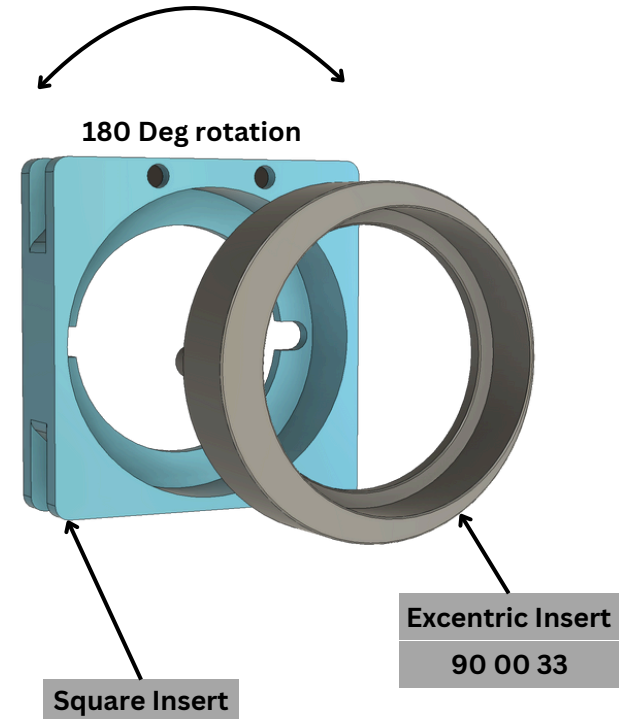
HIGH and REAR



HIGH and CENTRAL



REAR



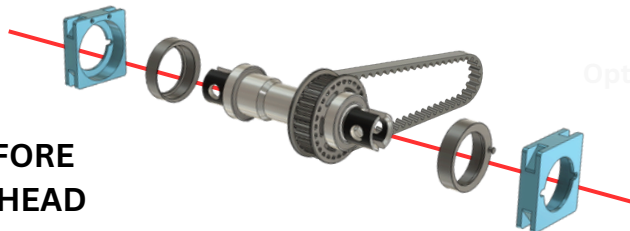
NOTE:

The Square Inserts set the Axle Height.
The dots can only be fitted either High or Low.

Move the plastic insert Left or Right to move the Axle Forwards or Backwards Or use Zero offset insert for a central position High and Low.

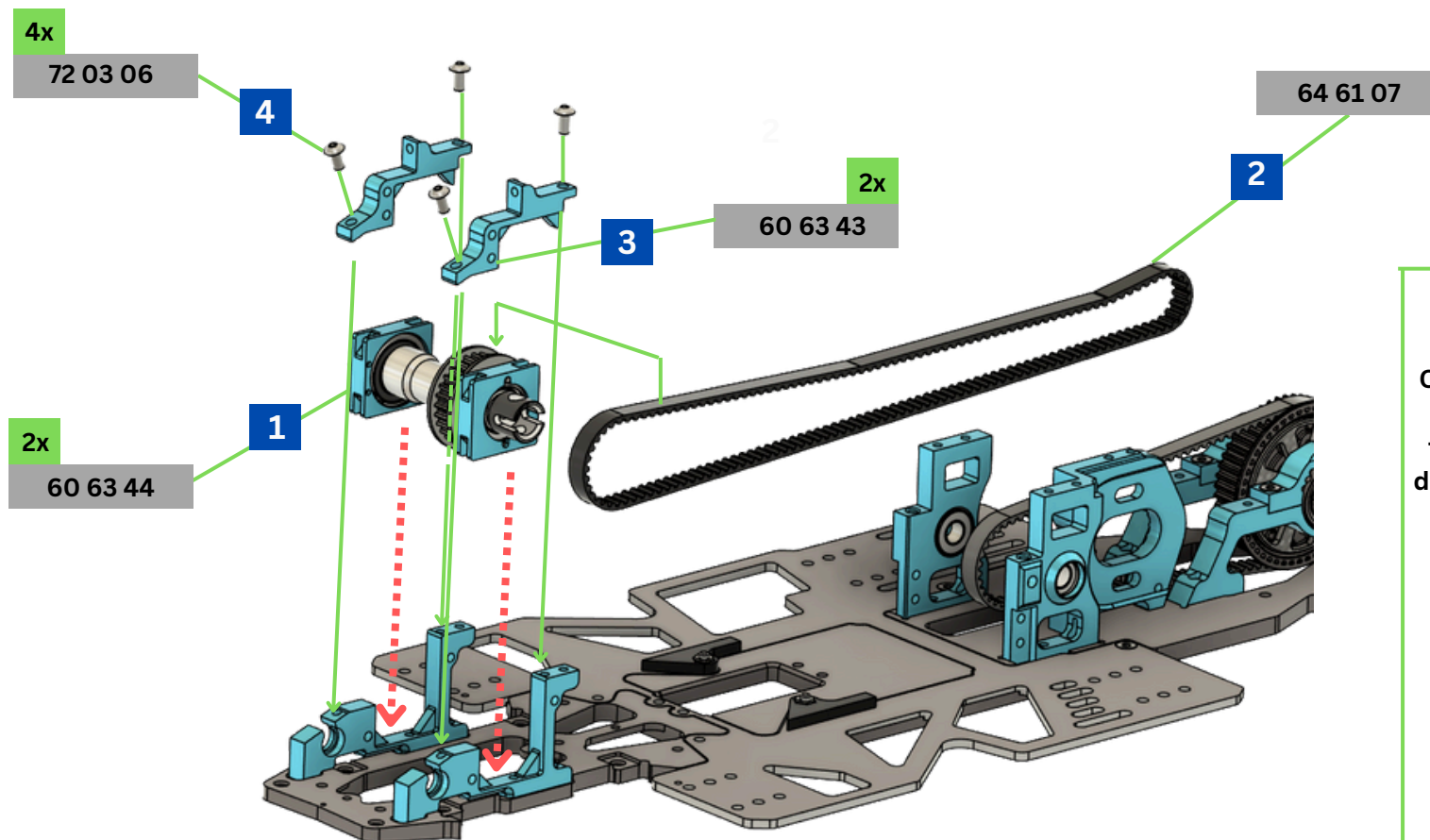
IMPORTANT

PLEASE ASSEMBLE ALL PARTS BEFORE
SLOTING UNIT INTO FRONT BULKHEAD



INSERT POSITIONS

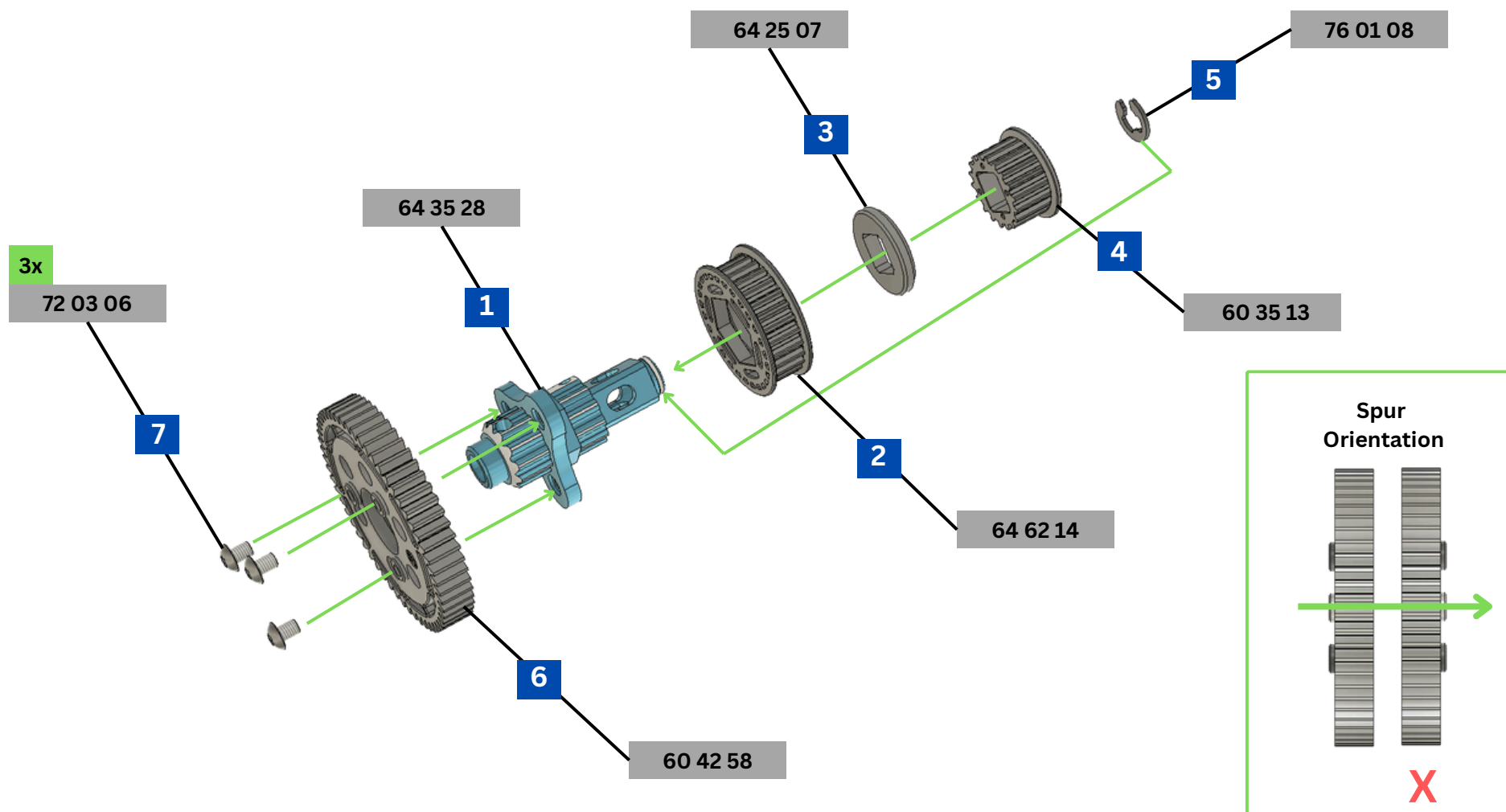
Optional Part Number
DEFAULT Position (Start) is E using Non-Excentric insets

**IMPORTANT**

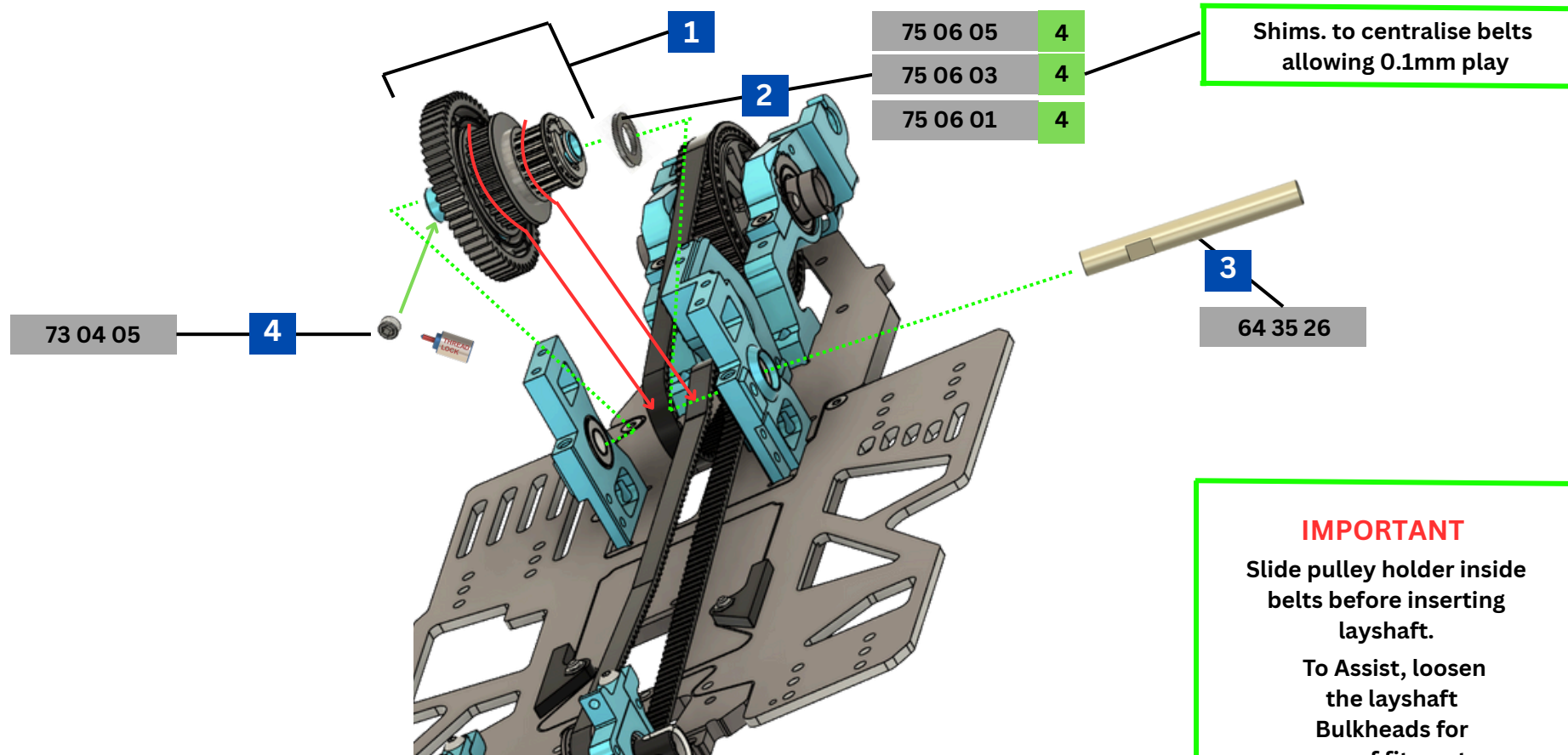
ONLY slot front axle and squares into Lower Bulkhead retaining triangles remembering to keep dots at Top or Bottom identically for both sides.

The front Belt tension is adjustable by moving the side tensioners shown on Page 17
We recommend you fix in the central position when using the zero off set inserts as Default.

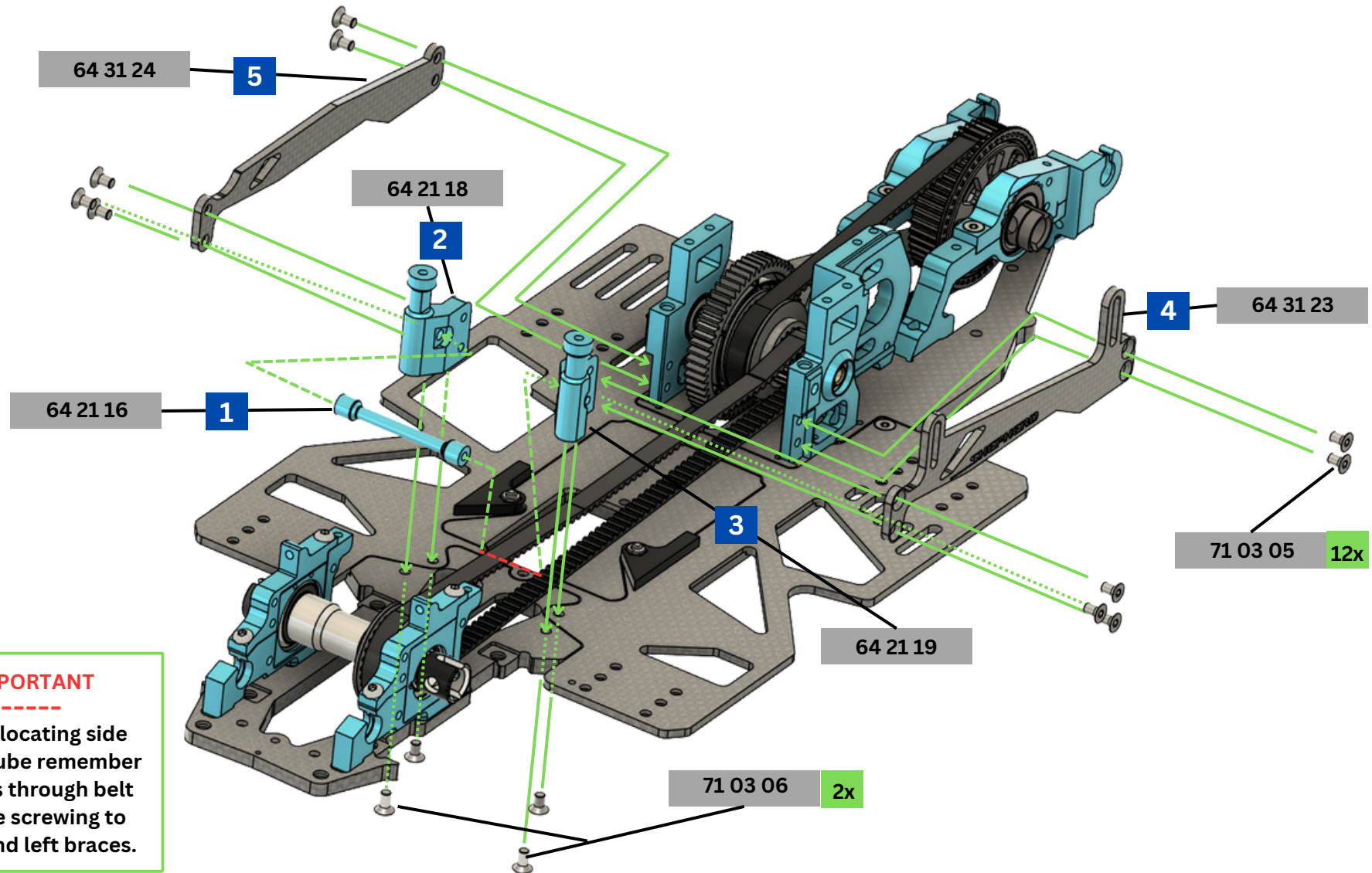
Part Number	Description	Amount	Optional Part Number	Description
60 63 44	Front Square Bearing Holder	2		
64 61 07	Front Belt 465mm	1		
60 63 43	Top Front Bulkhead	2		
72 03 06	Hex Buttonhead screw M3x6	4		



Part Number	Description	Amount	Optional Part Number	Description
64 35 28	Main Layshaft Pulley Adapter	1		
64 62 14	Pulley 28T	1		
64 25 07	Pulley Spacer	1		
60 35 13	Pulley 18T	1		
76 01 08	E-Clip	1		
60 42 58	Spur Gear 58T	1		
72 03 06	Hex Buttonhead M3x6	3		

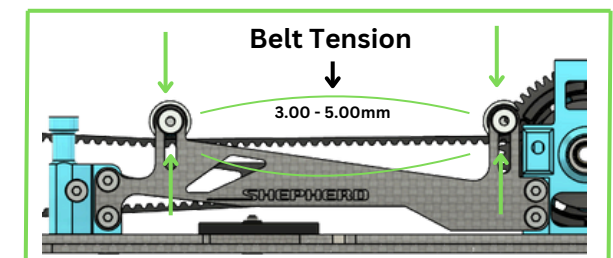
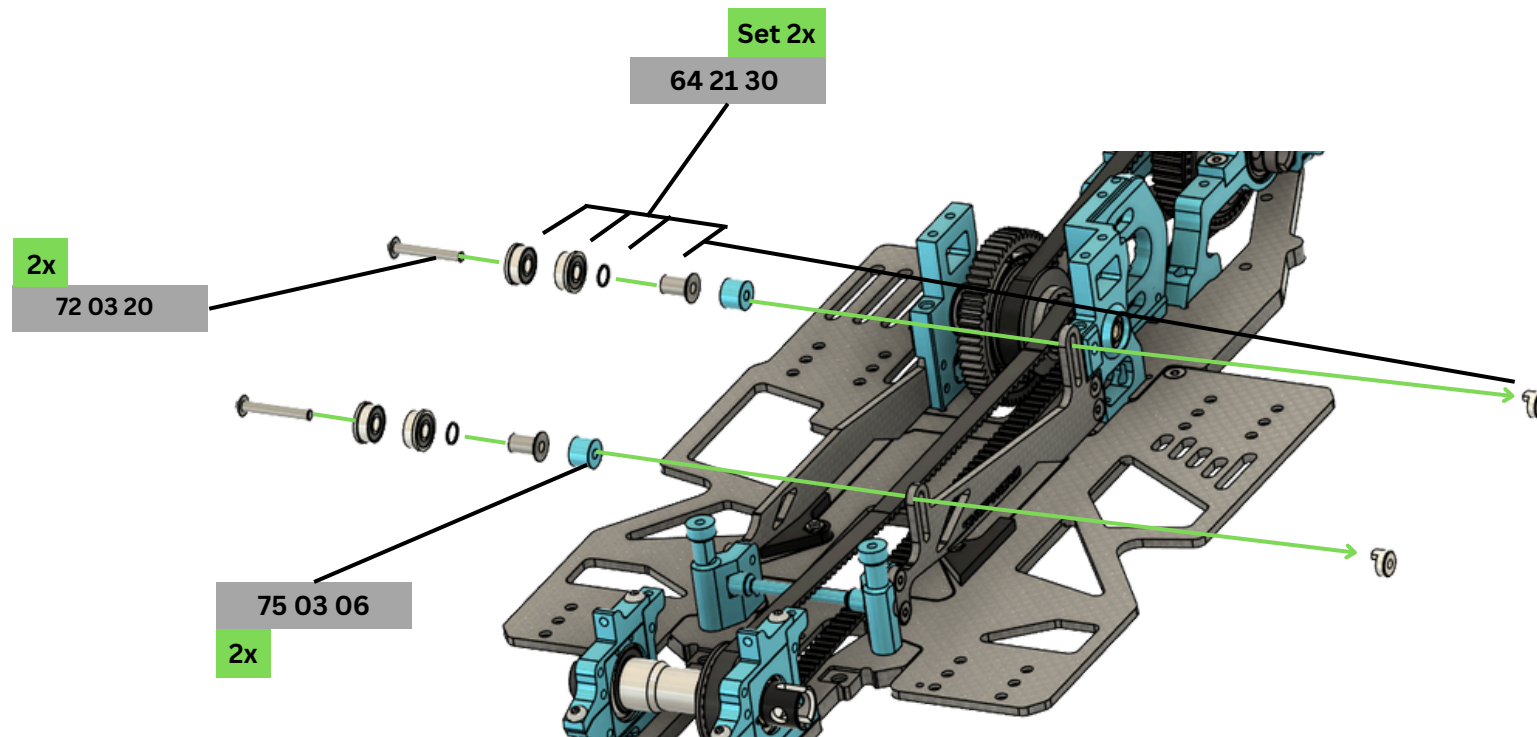


Part Number	Description	Amount	Optional Part Number	Description
64 35 26	Main Layshaft	1		
75 06 05	Shims 0.5	4		
75 06 03	Shims 0.3	4		
75 06 01	Shims 0.1	4		
73 04 05	M4x5mm set screw	1		

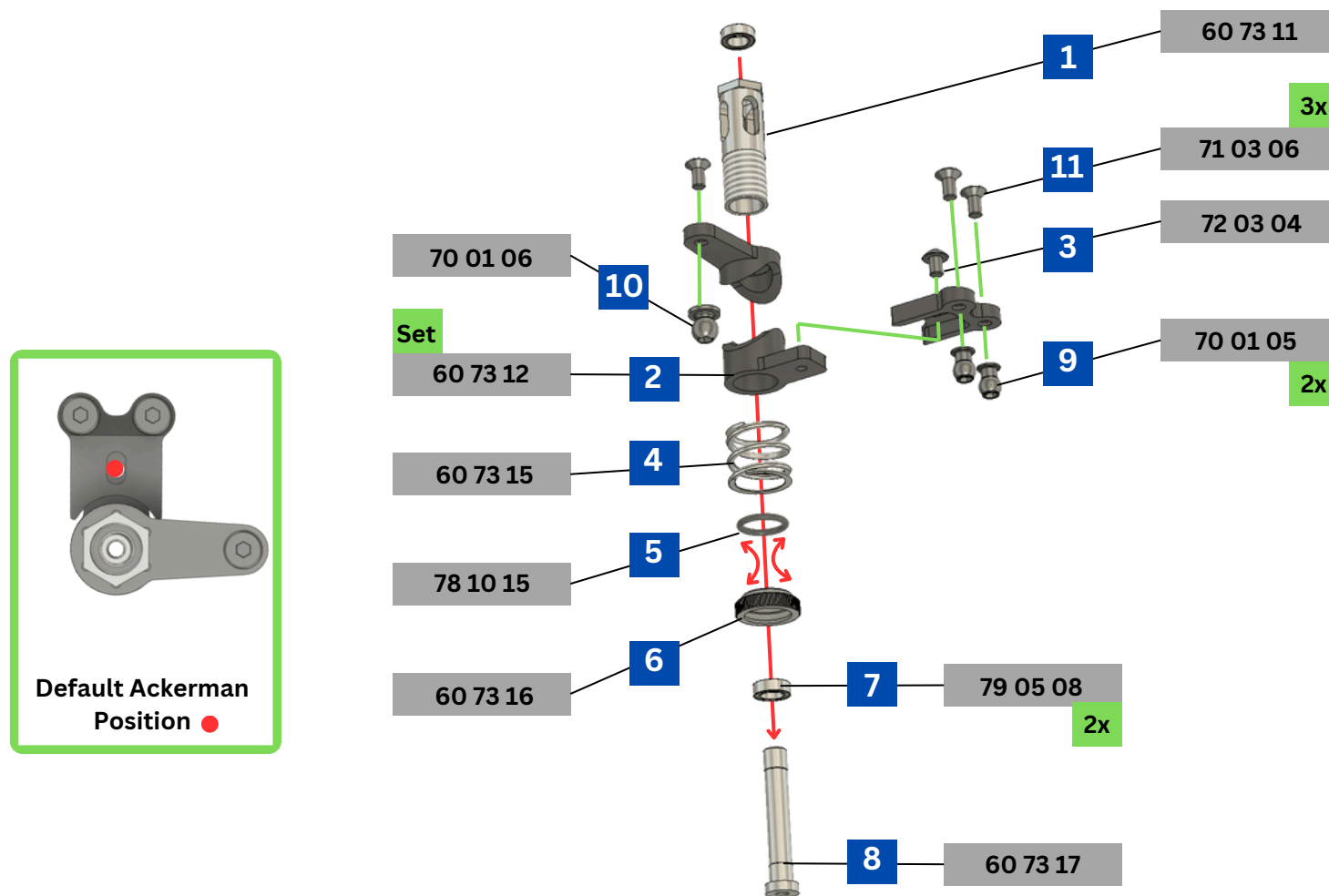
**IMPORTANT**

When locating side brace tube remember to pass through belt before screwing to right and left braces.

Part Number	Description	Amount	Optional Part Number	Description
64 21 16	Side Brace Tube	1		
64 21 18	Front Right Bulkhead Brace	1		
64 21 19	Front Left Bulkhead Brace	1		
64 31 23	Side Brace+ Tensioner Mount	1		
64 31 24	Side Brace Right	1		
71 03 05	Hex Countersink M3x5	12		
71 03 06	Hex Countersink M3x6	2		



Part Number	Description	Amount	Optional Part Number	Description
64 21 30	Belt tensioner set	Set x 2		
75 03 06	M3x6mm spacer	2		
72 03 20	M3x20mm buttonhead screw	2		

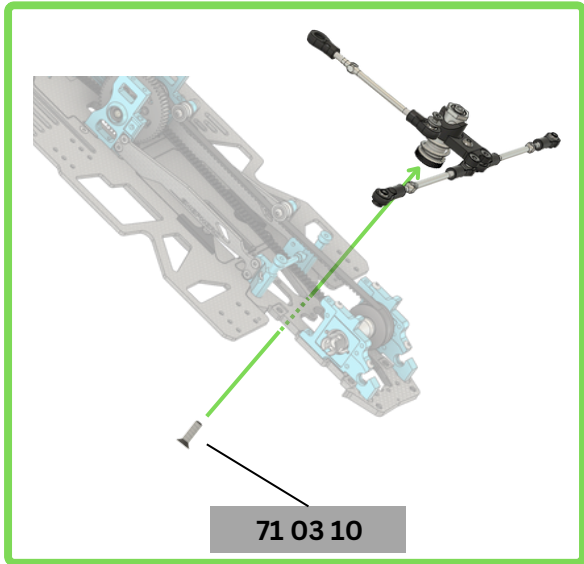


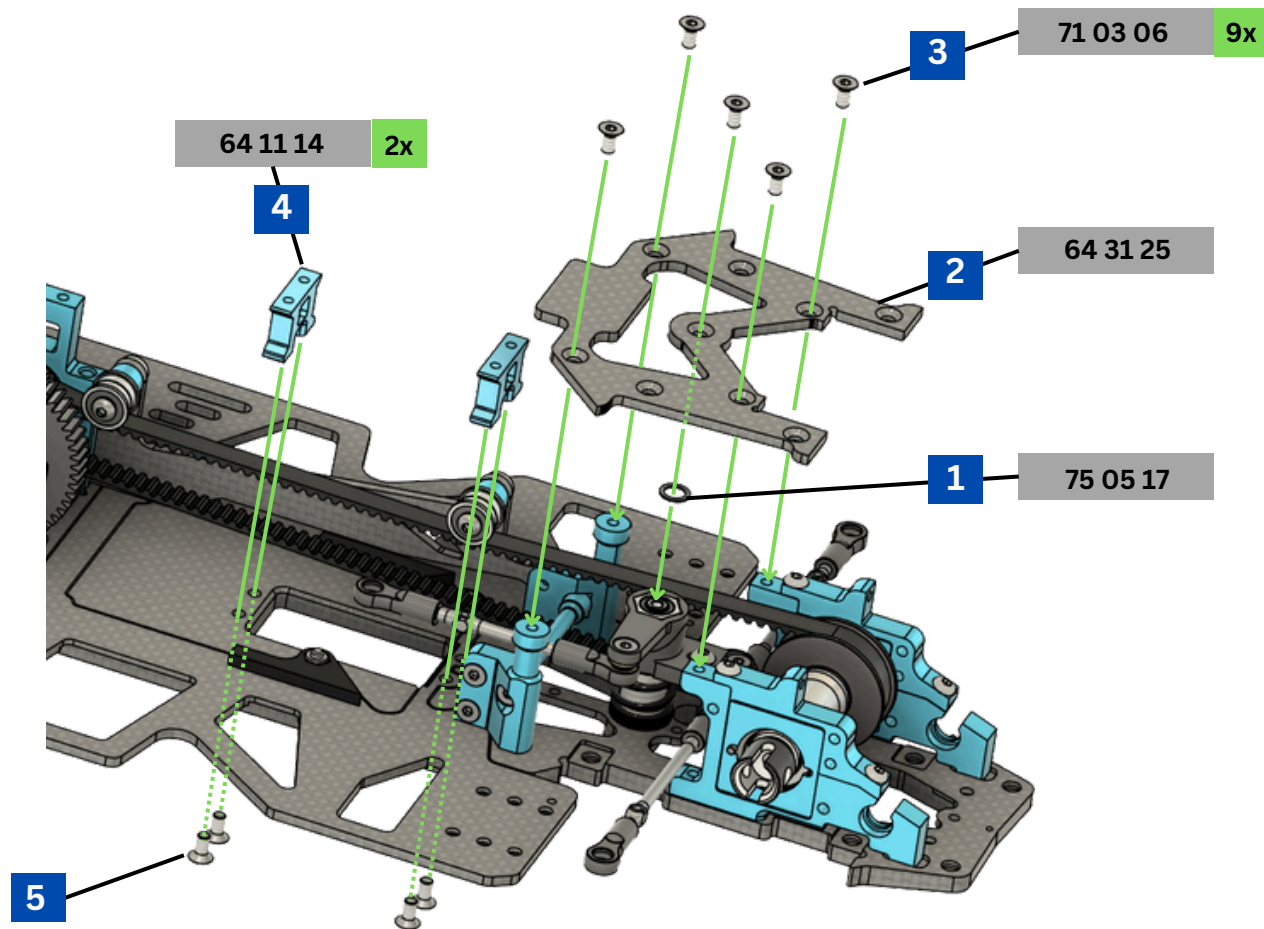
Default Ackerman
Position ●

Preload

Part Number	Description	Amount	Optional Part Number	Description
60 73 11	Servo saver tube	1		
60 73 12	Servo saver Upper, lower and Adjuster	1+1+1	90 73 14/15	9 or 10 mm Ackerman plates
60 73 15	Preload spring	1		
60 73 16	Preload nut	1		
60 73 17	Servo safer mounting Shaft	1		
70 01 05	Pivotball 4.9mm	2		
70 01 06	Pivotball 6mm	1		
71 03 06	Hex Countertsunk screw M3x6	3		
72 03 04	Hex Buttonhead screw M3x4	1		
78 10 15	O-ring 10x1.5	1		
79 05 08	Bearing 5x8x2.5	2		

STEP 2

19



Part Number

Description

Amount

Optional Part Number

Description

75 05 17

Adjustment Shim 5x7x0.5

1

64 31 25

Front Top Plate

1

71 03 06

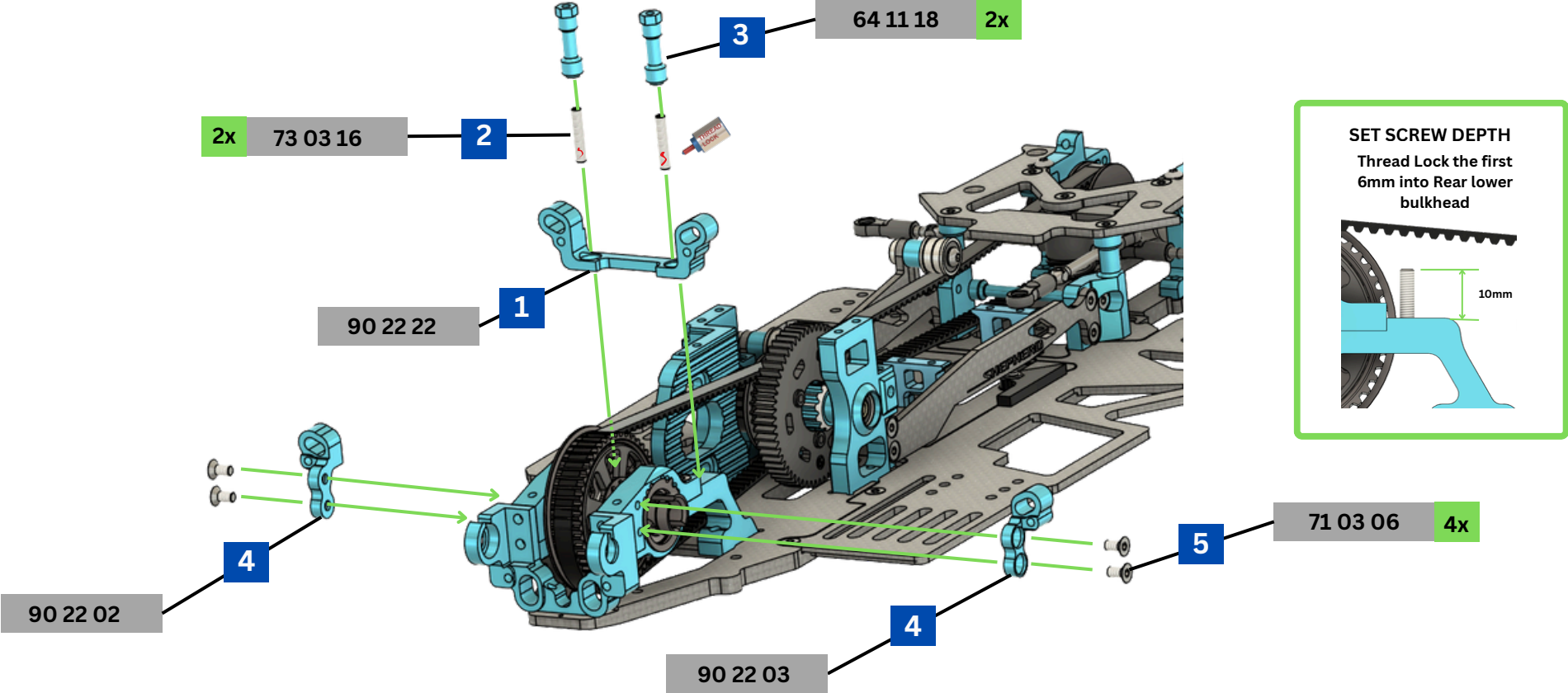
Hex Countersink M3x6

9

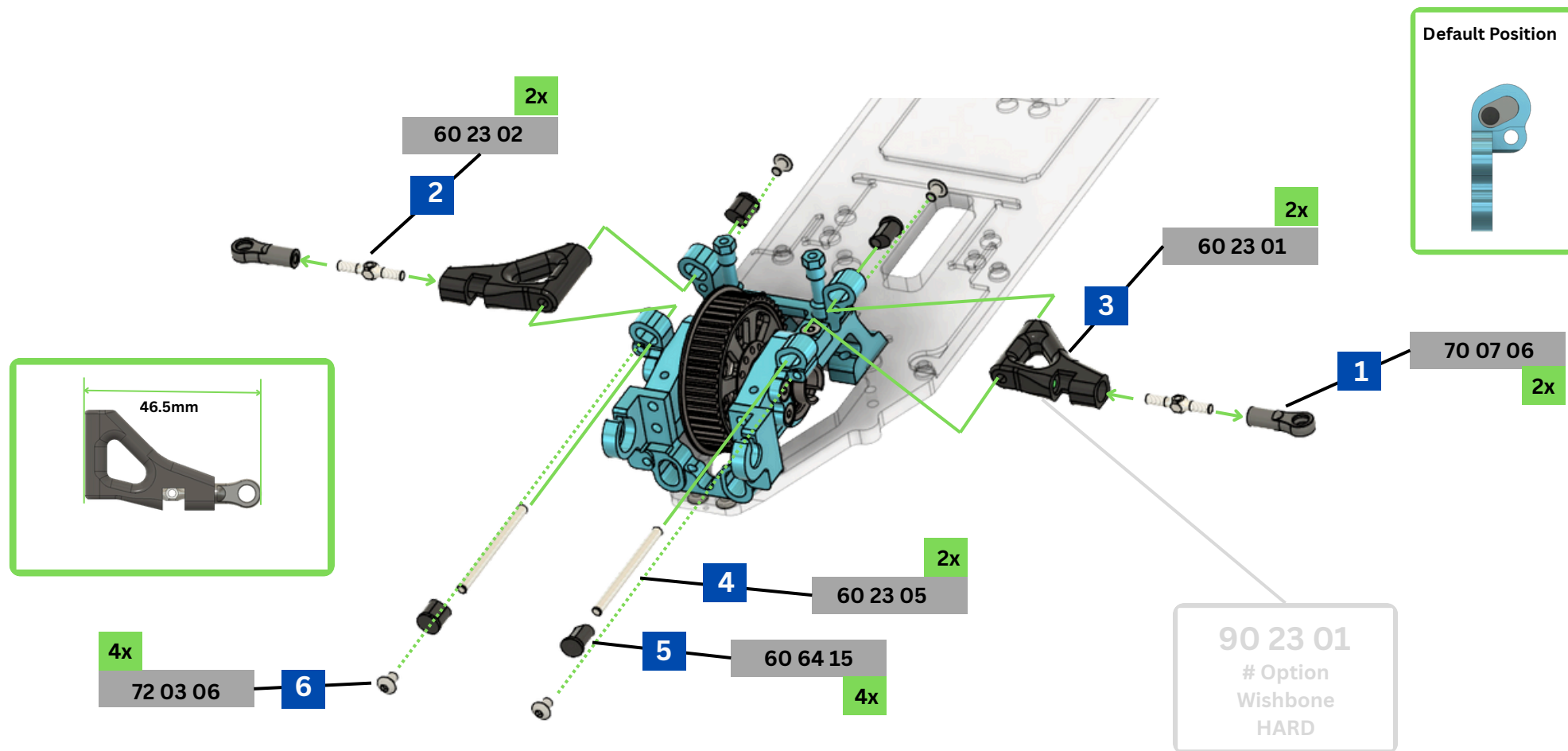
64 11 14

Servo Mount

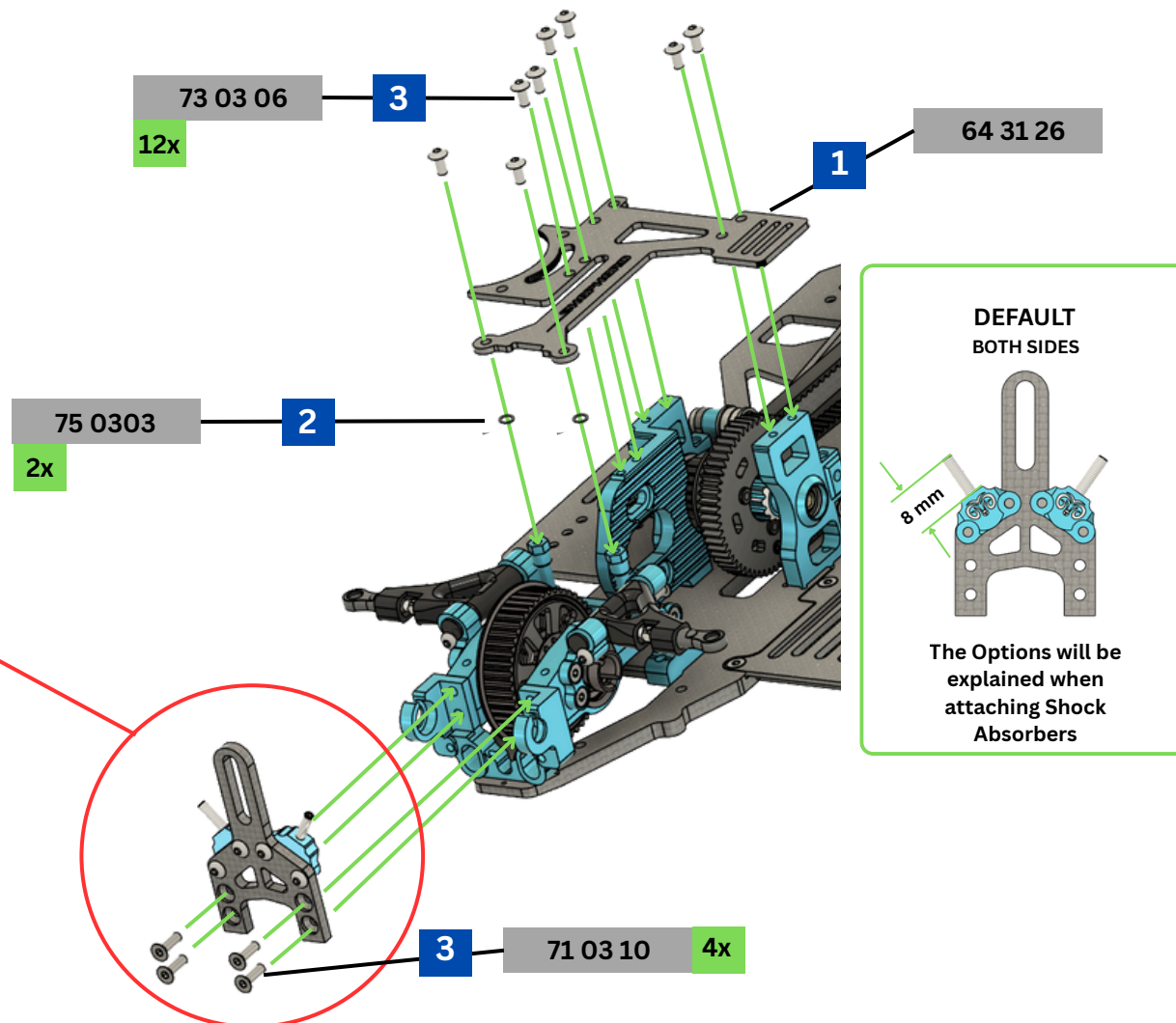
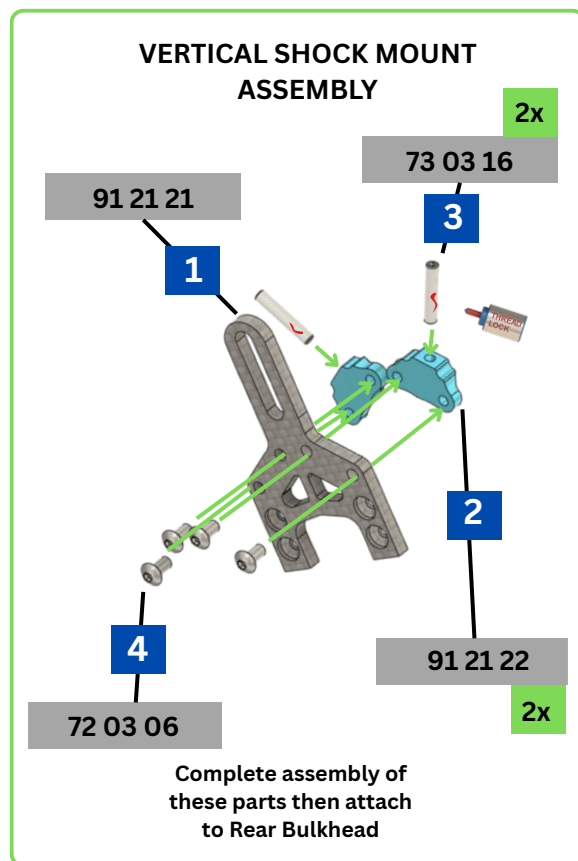
2



Part Number	Description	Amount	Optional Part Number	Description
90 22 22	Rear Hinge Pin Bracket upper	1		
73 03 16	Set Screw M3x16	2		
64 11 18	Rear Post	2		
90 22 02	Rear Hinge Pin Bracket Upper Left	1		
90 22 03	Rear Hinge Pin Bracket Upper Right	1		
71 03 06	Hex Countersink Screw M3x6	4		



Part Number	Description	Amount	Optional Part Number	Description
60 23 01	Rear Upper Wishbone	2	90 23 01	Rear Upper Wishbone HARD
60 23 02	R & L Turnbuckle	2		
60 23 05	Hinge Pin Upper Rear	2	BR600001T	Titanium Hinge Pin Upper Rear
70 07 06	Ball Joint 4.9mm	2		
60 64 15	Excentric Insert	4		
72 03 06	Hex Buttonhead Screw M3x6	4		



Part Number

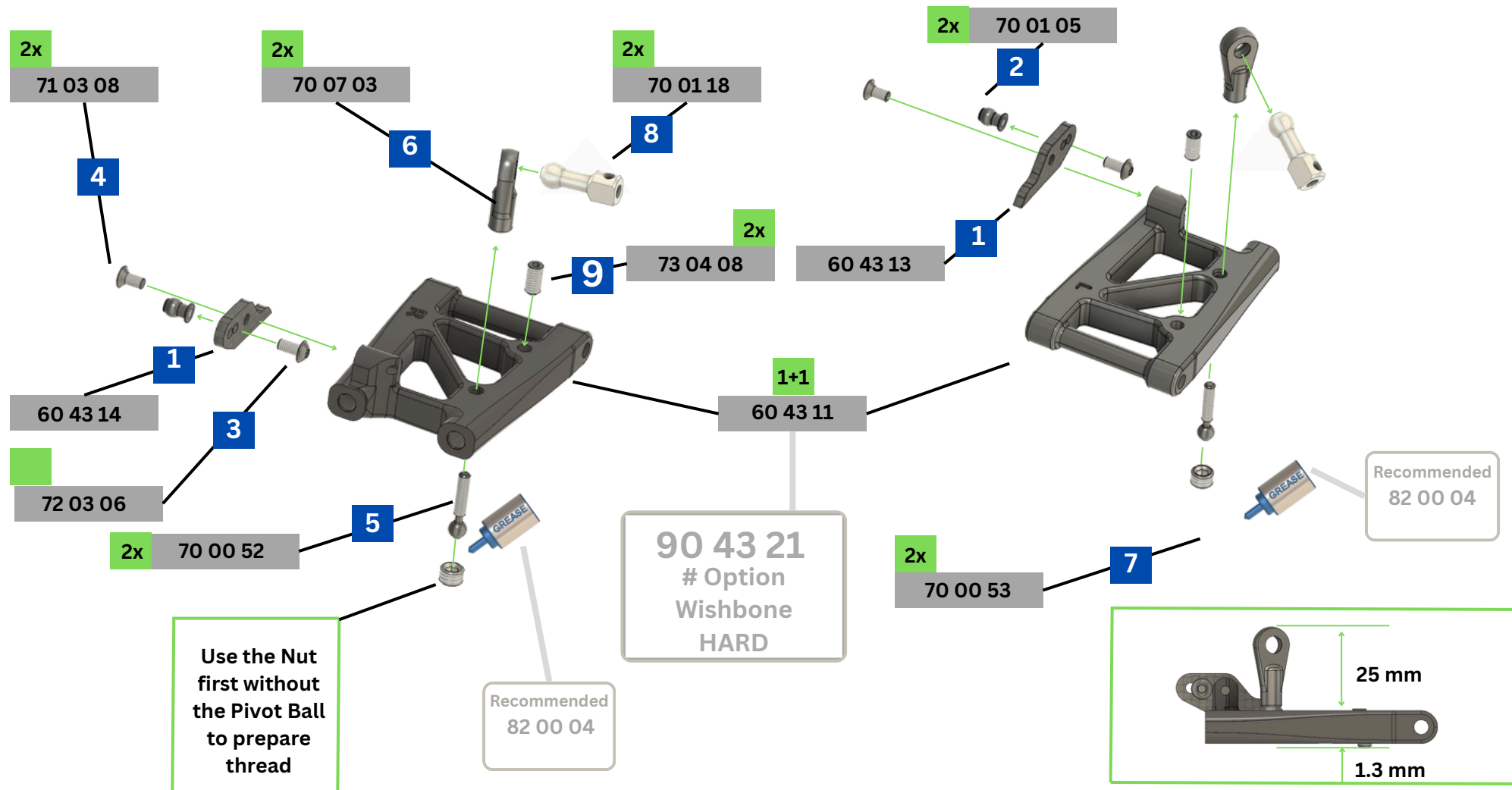
Description

Amount

Optional Part Number

Description

91 21 21	Rear Vertical Carbon Tower	1		
91 21 22	Rear Vertical Shock Mount	2		
73 03 16	M3x16 Set Screw	2		
72 03 06	Hex Buttonhead screw M3x6	12		
64 31 26	Carbon 40mm Fan Mount	1		
71 03 10	Hex Countersink screw M3x10	4		
75 03 03	M3x0.5 Shim	2		



Part Number

Description

Amount

Optional Part Number

Description

60 43 11	Rear Lower Wishbone	1+1		
60 43 13	Shock Mount Narrow Left	1		
60 43 14	Shock Mount Narrow Right	1		
70 00 52	Pivot Ball Anti-roll Bar Long	2		
70 00 53	Adjustable Nut Pivot Ball M3	2		
70 01 05	Pivot Ball 4.9mm	2		
70 01 18	Anti-Roll Bar Long Pivot Ball	2		
70 07 03	BallJoint 6mm	2		
71 03 08	Hex Contersunk Screw M3x8	2		
72 03 06	Hex Buttonhead Screw M3x6	2		
73 04 08	Set Screw M4x8	2		

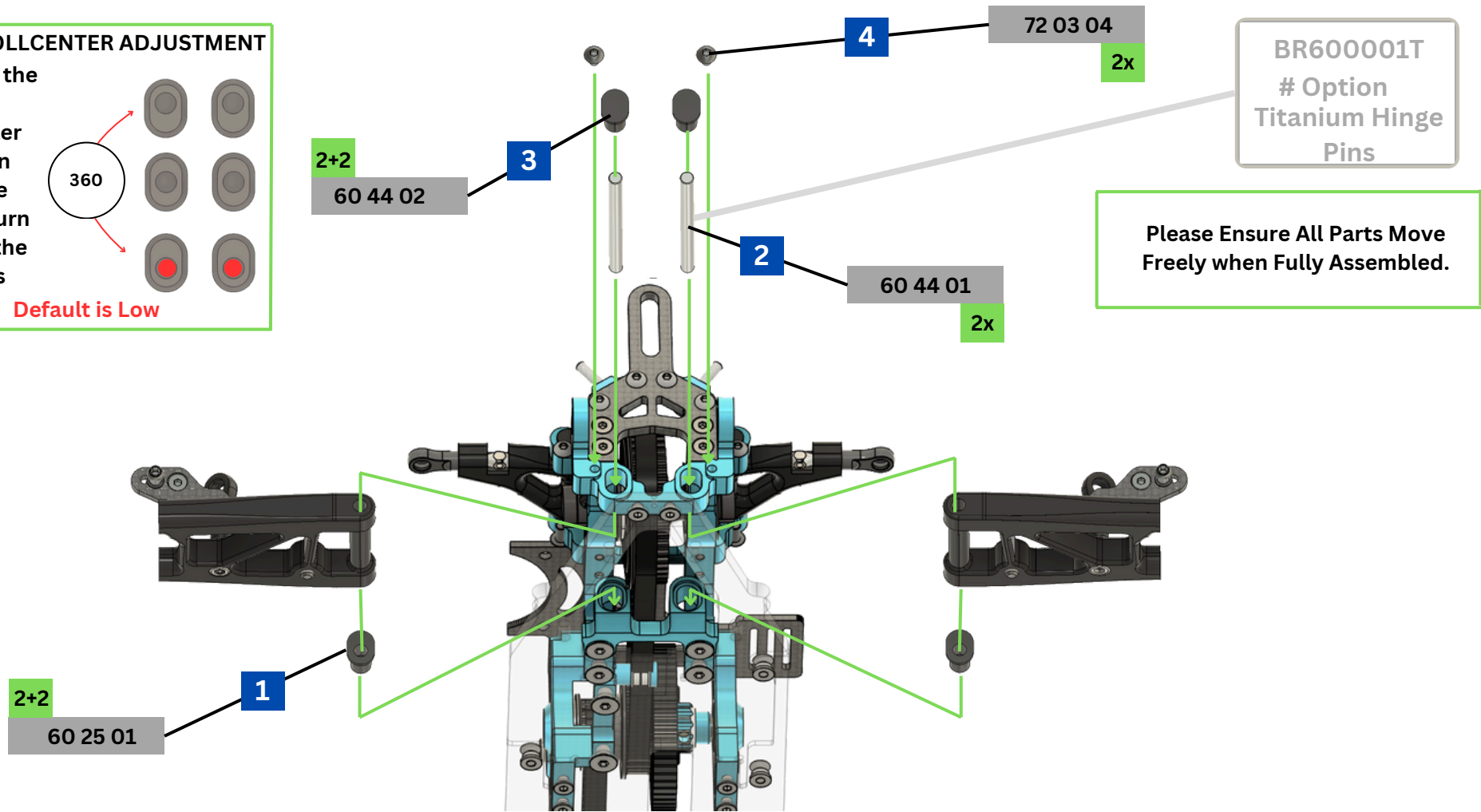
90 43 21

Rear Lower Wishbone HARD

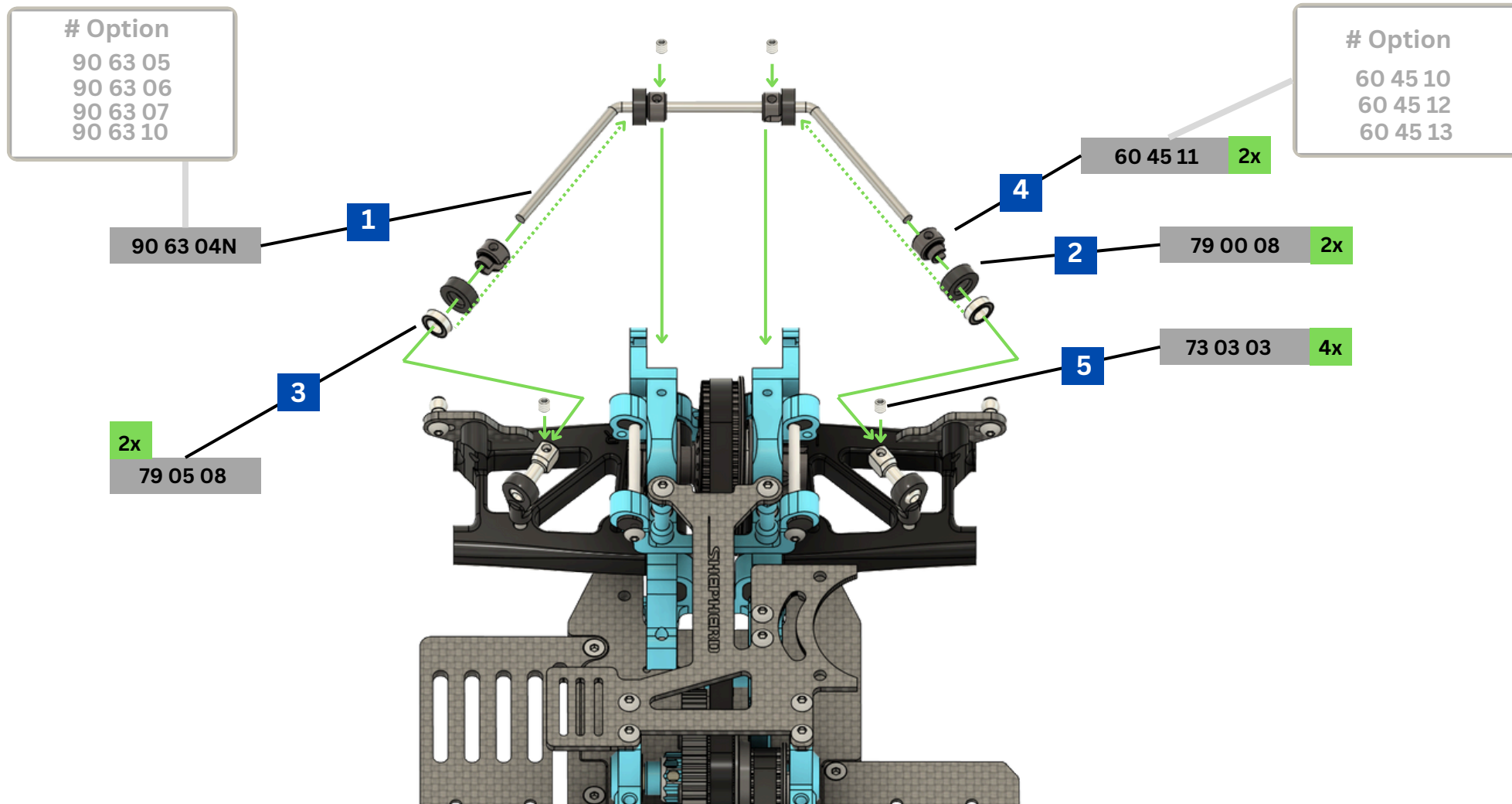
LOWER ROLLCENTER ADJUSTMENT

To adjust the rear rollcenter you can change and/or turn around the inserts

Default is Low



Part Number	Description	Amount	Optional Part Number	Description
60 25 01	Excentric Insert Set	2+2		
60 44 01	Rear Lower Hinge Pins	2	BR600001T	Titanium Hinge Pins
60 44 02	Excentric Insert Set	2+2		
72 03 04	Hex Buttonhead Screw M3x4	2		



Part Number

Description

Amount

Optional Part Number

Description

60 45 11

Rear Anti-roll Bar Bushing 2.6mm

60 45 10/12/13

Rear Anti-roll Bar Bushing

90 63 04N

Rear Anti-roll Bar 2.6mm Narrow

90 63 05/6/7/10 (N)

Rear Anti-roll bars 2.7/2.8/2.9/3mm

73 03 03

Set Screw M3x3

79 00 08

Bearing Insert 8mm

79 05 08

Bearing 5x8x2.5

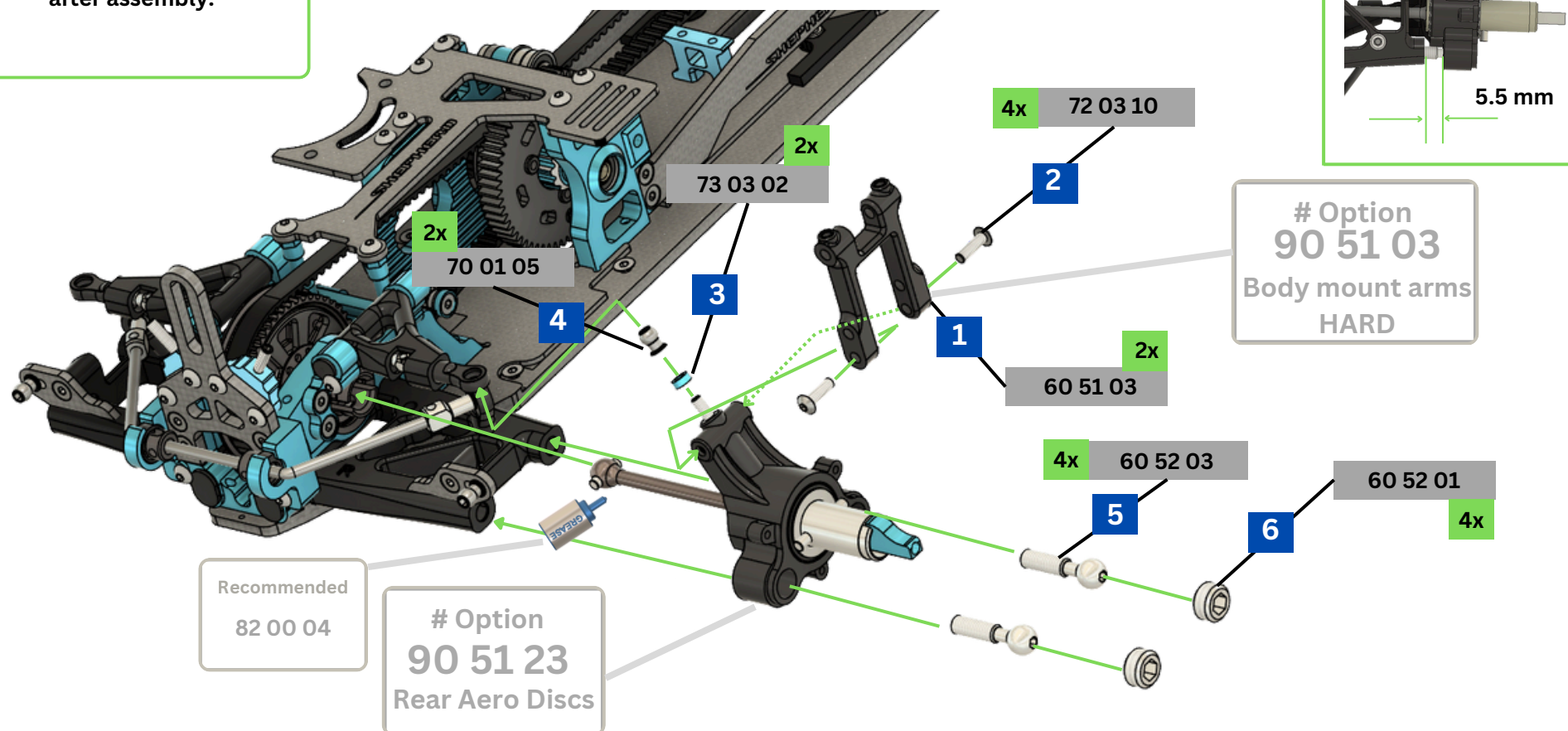
Rear Uprights

VELOX E9

BAG 8

STEP 2

Assemble these parts **TWICE**.
One for the Left and one for
the Right.
All parts must be free moving
after assembly.



Part Number

Description

Amount

Optional Part Number

Description

60 51 03

Rear Body mount arms

2

90 51 03

Rear Body mount arms HARD

60 52 01

Adjustable pivotball nut

4

60 52 03

Pivotball

4

BR1009

Long ally pivotball

70 01 05

Pivotball 4.9mm

2

73 03 10

Hex Buttonhead screw M3x10

4

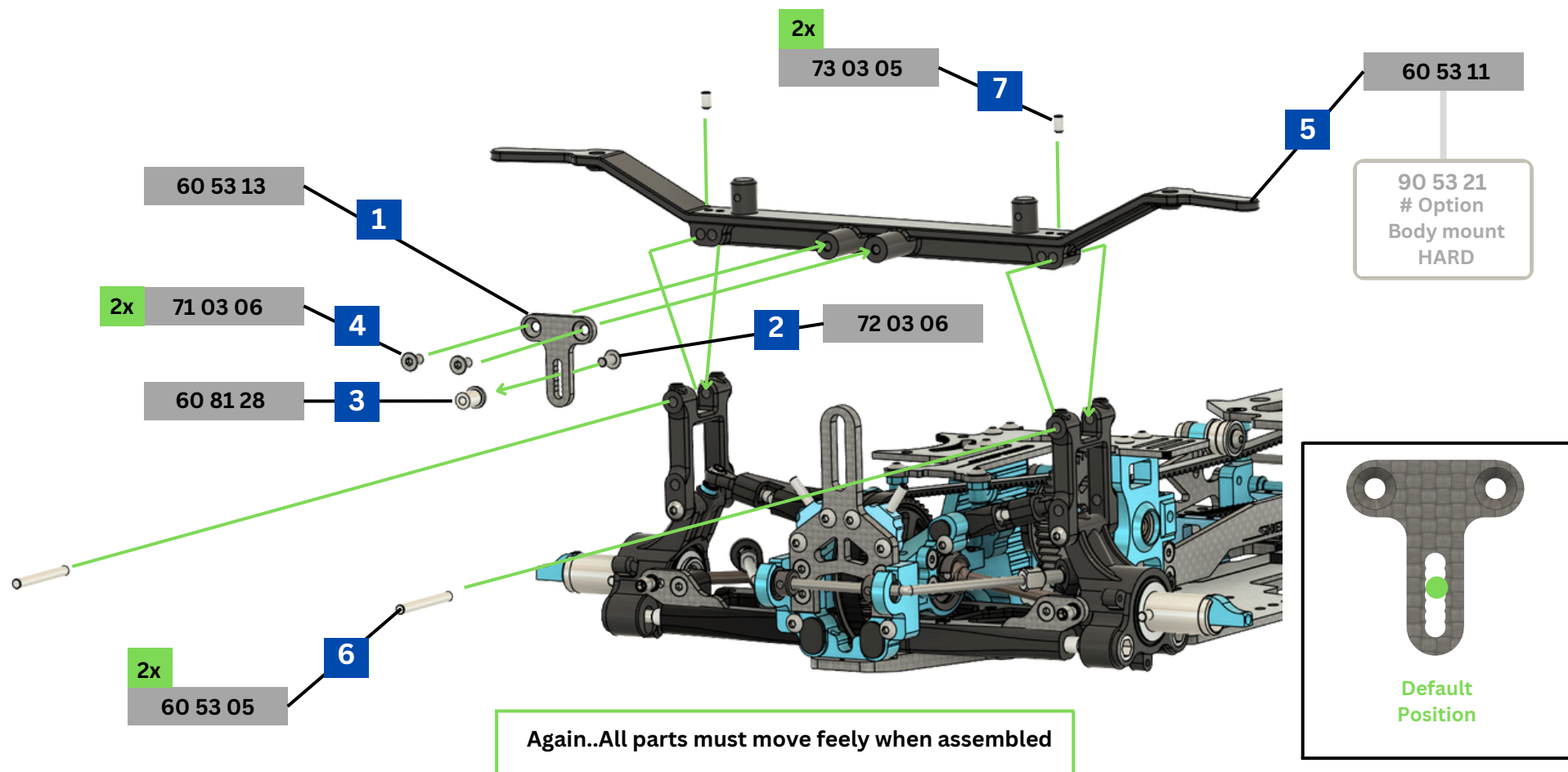
73 03 02

Spacer M3x2

2

90 51 23

Rear Aero discs



Part Number

Description

Amount

Optional Part Number

Description

60 81 28

Throttle lever bush

1

60 53 05

Body mount hinge pin

2

60 53 11

Body mount

1

60 53 13

Centering carbon plate

1

71 03 06

Hex Countersunk screw M3x6

2

72 03 06

Hex Buttonhead screw M3x6

1

73 03 05

Set screw M3x5

2

BR600001T
90 53 21Titanium Hinge pin
Body mount HARD

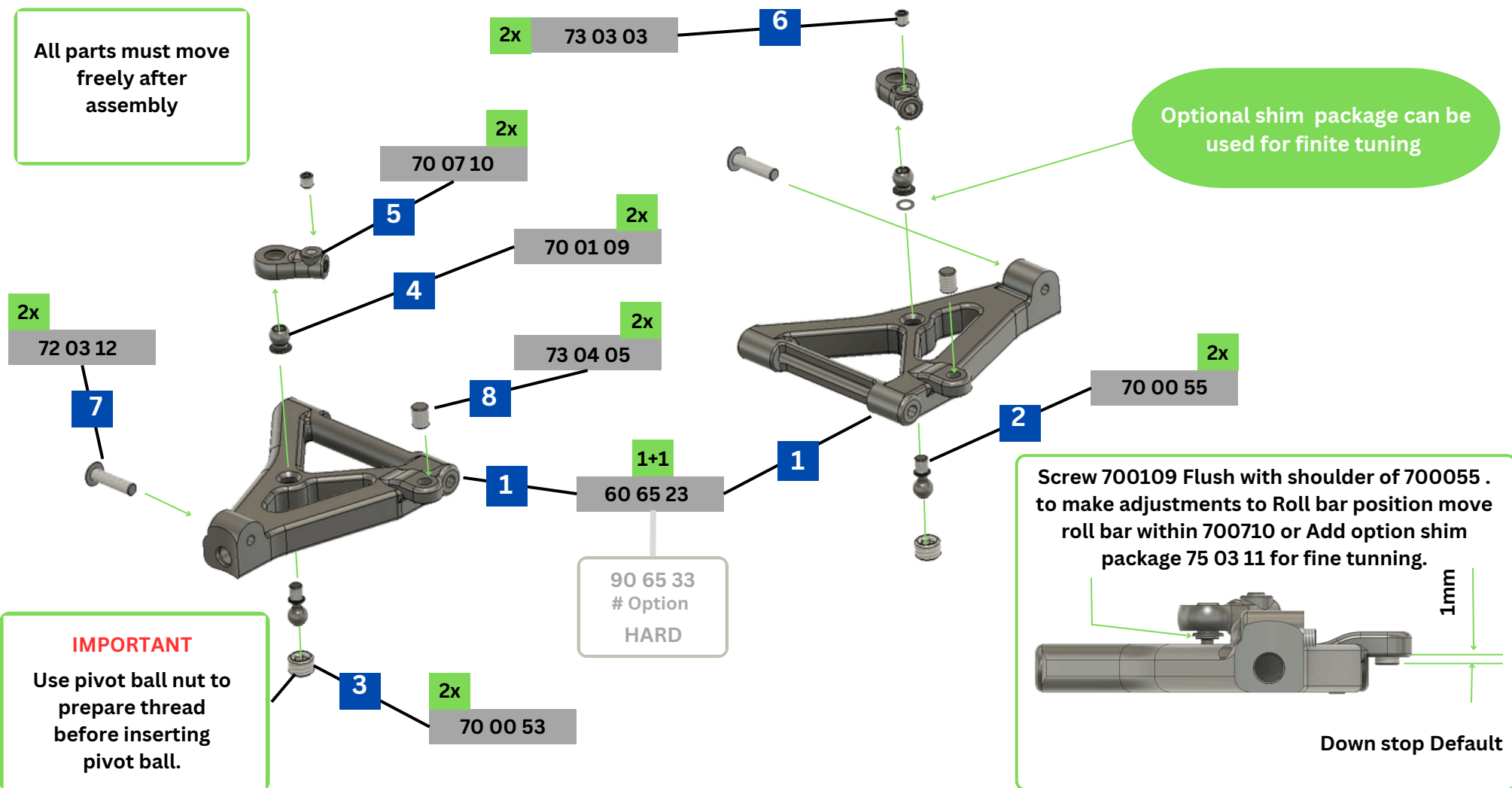
Front Lower Wishbones



BAG 9

STEP 1

All parts must move freely after assembly



Part Number

Description

Amount

Optional Part Number

Description

60 65 23

Front lower wishbone

1+1

90 65 23

Front lower wishbone HARD

70 00 55

Anti-roll bar Pivotball

2

70 00 53

Pivotball Adjustment nut M6

2

70 07 10

Ball joint

2

72 03 12

Hex Buttonhead screw M3x12

2

73 04 05

Set screw M4x5

2

73 03 03

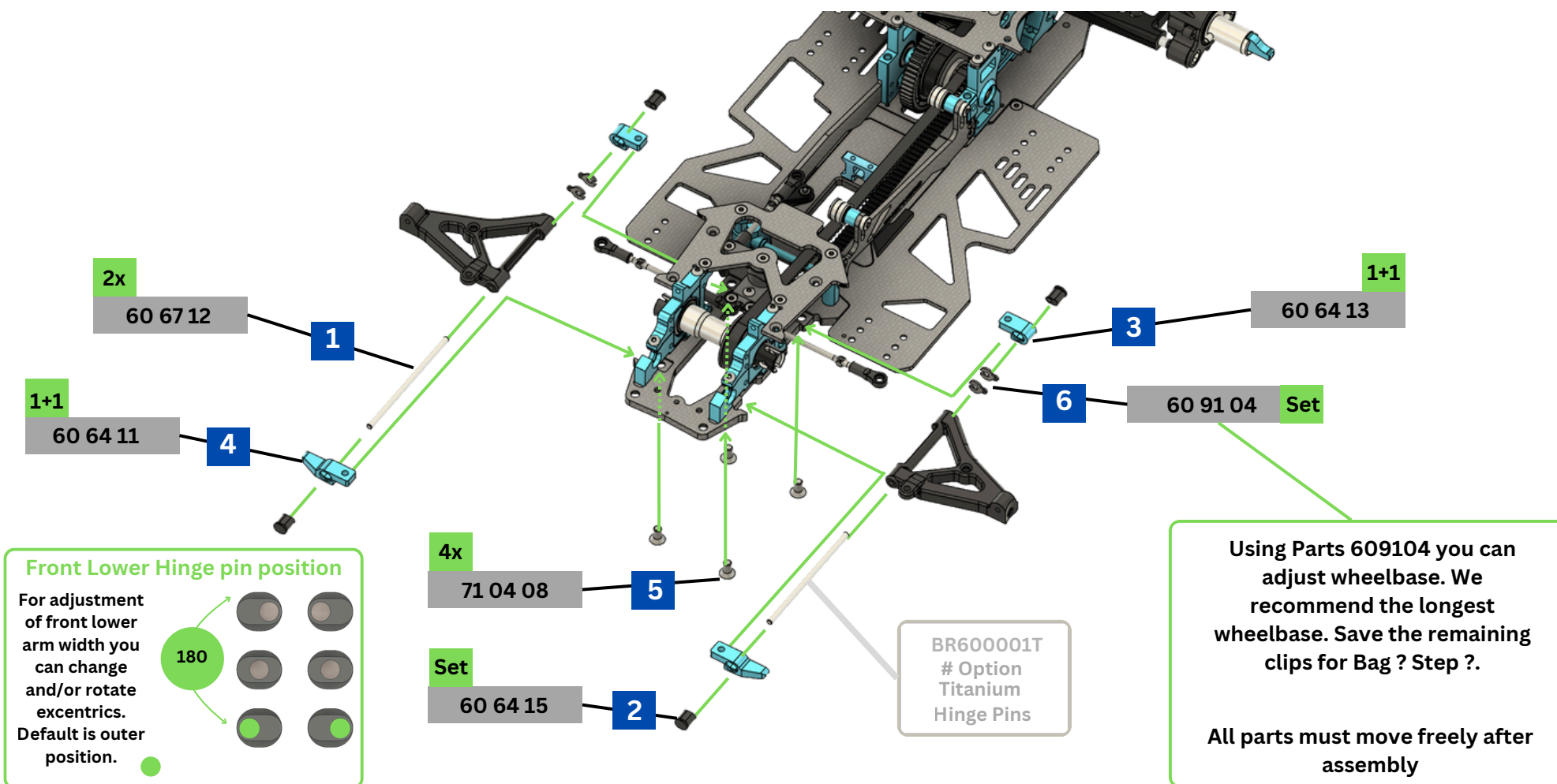
Set screw M3x3

2

30

75 03 11

Shim's 4 x 0.5



Part Number

Description

Amount

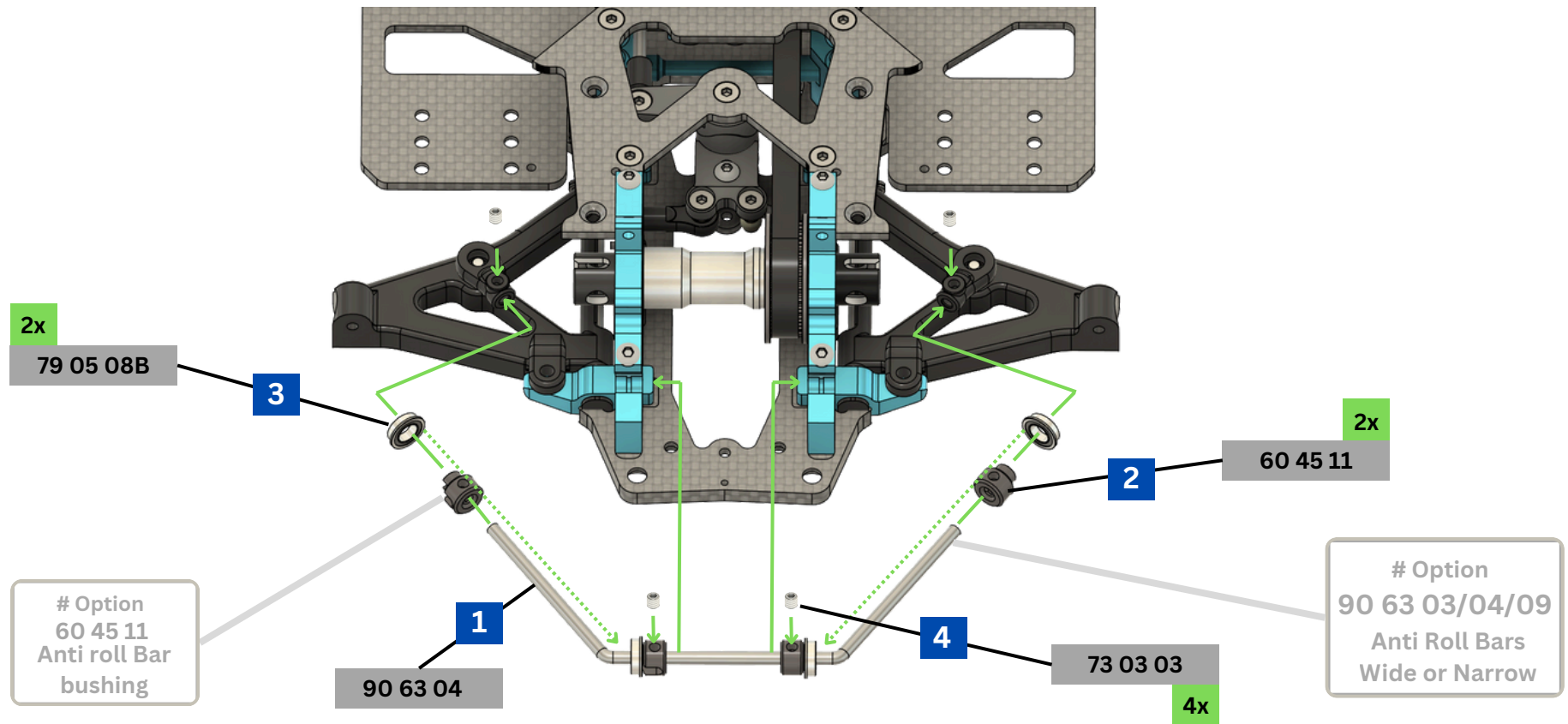
Optional Part Number

Description

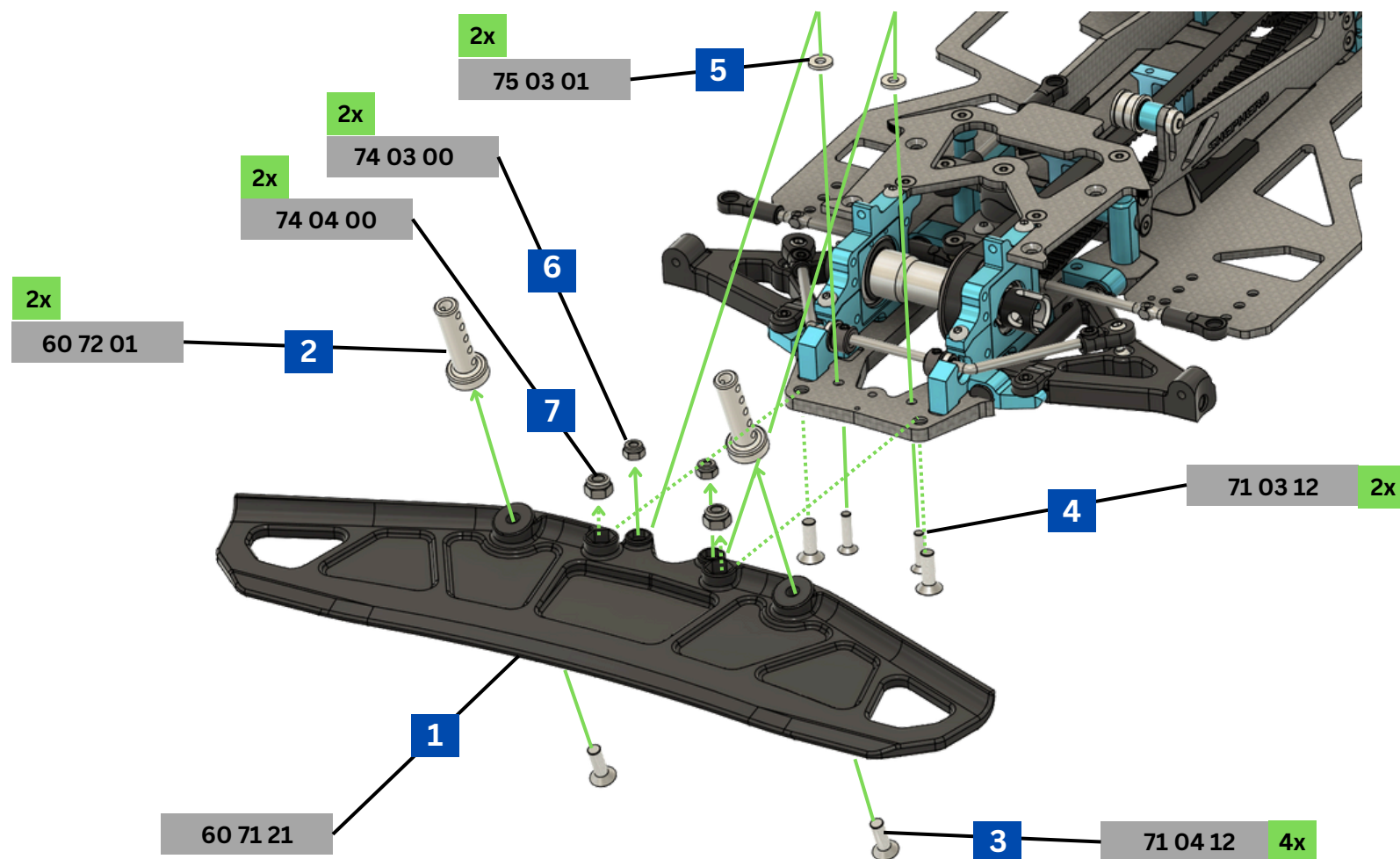
60 64 11	Downstop Arm Mount R&L	1+1		
60 64 13	Hinge Pin Bracket R&L	1+1		
60 64 15	Lower Excentric Inserts	Set		
60 67 12	Lower Front Hinge Pins	2		
60 91 04	Wheelbase spacer set	Set		
71 04 08	Hex Countersunk screw M4x8	4		

BR600001T

Titanium Hinge Pins



Part Number	Description	Amount	Optional Part Number	Description
60 45 11	Anti-roll bar bushing	2		
90 63 06W	Front Anti-roll bar 2.4mm Wide	1	90 63 03/04/09W	Front Anti-roll bars Wide 2.2 /2.6 /2.3
73 03 03	Set screw M3x3	4	90 63 03/04/09N	Front Anti-roll bars Narrow 2.2 /2.6 /2.3
79 05 08B	Bearing 5x8x2.5 Flanged	2		



Part Number

Description

Amount

Optional Part Number

Description

60 71 21

Front Bumper

1

90 72 22

Front Bumper Stiffner

60 72 01

Front Body mounts

2

71 03 12

Hex Countersunk screw M3x12

2

71 04 12

Hex Countersunk screw M4x12

4

74 03 00

Self locking nut M3

2

74 04 00

Self locking nut M4

2

75 03 01

Shims M3x1

2

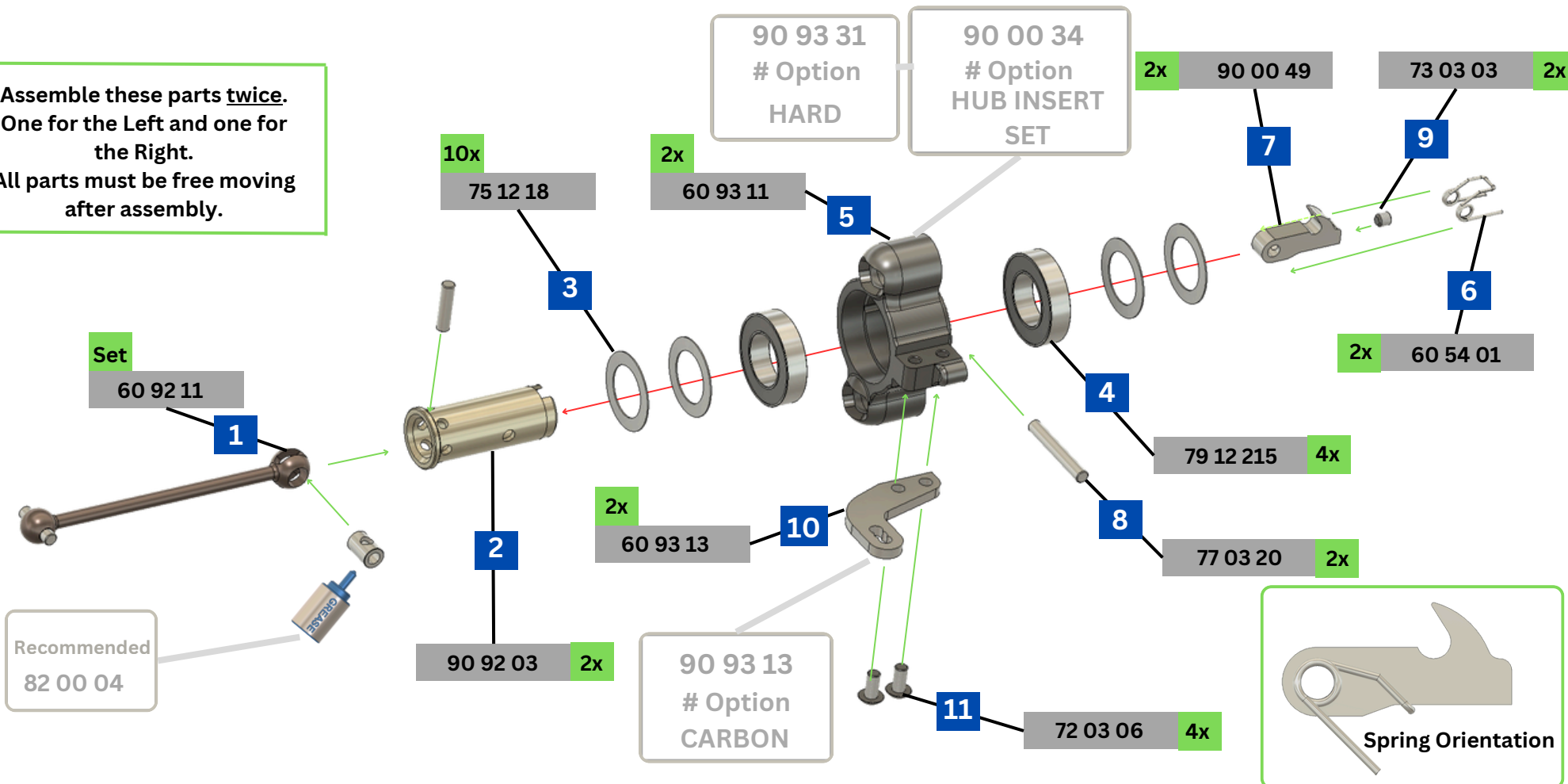
Front Hubs

VELOX E9

BAG 11

STEP 2

Assemble these parts twice.
One for the Left and one for the Right.
All parts must be free moving after assembly.



Part Number

Description

Amount

Optional Part Number

Description

60 54 01 Quick change lever springs
60 92 11 Front driveshaft complete
90 00 49 Front Quick change lever
60 93 11 Front Upright
60 93 13 Steering Arm
90 92 03 Front Wheel axle
72 03 06 Hex Buttonhead screw M3x6
73 03 03 Set screw M3x3
75 12 18 Adjustment shims 12x18x0.3
77 03 20 Pin 3x20mm
79 12 215 Bearing 12x21x5

2
2+2+2
2
2
2
2
2
2
10
2
4

90 93 31
90 93 13

90 00 34

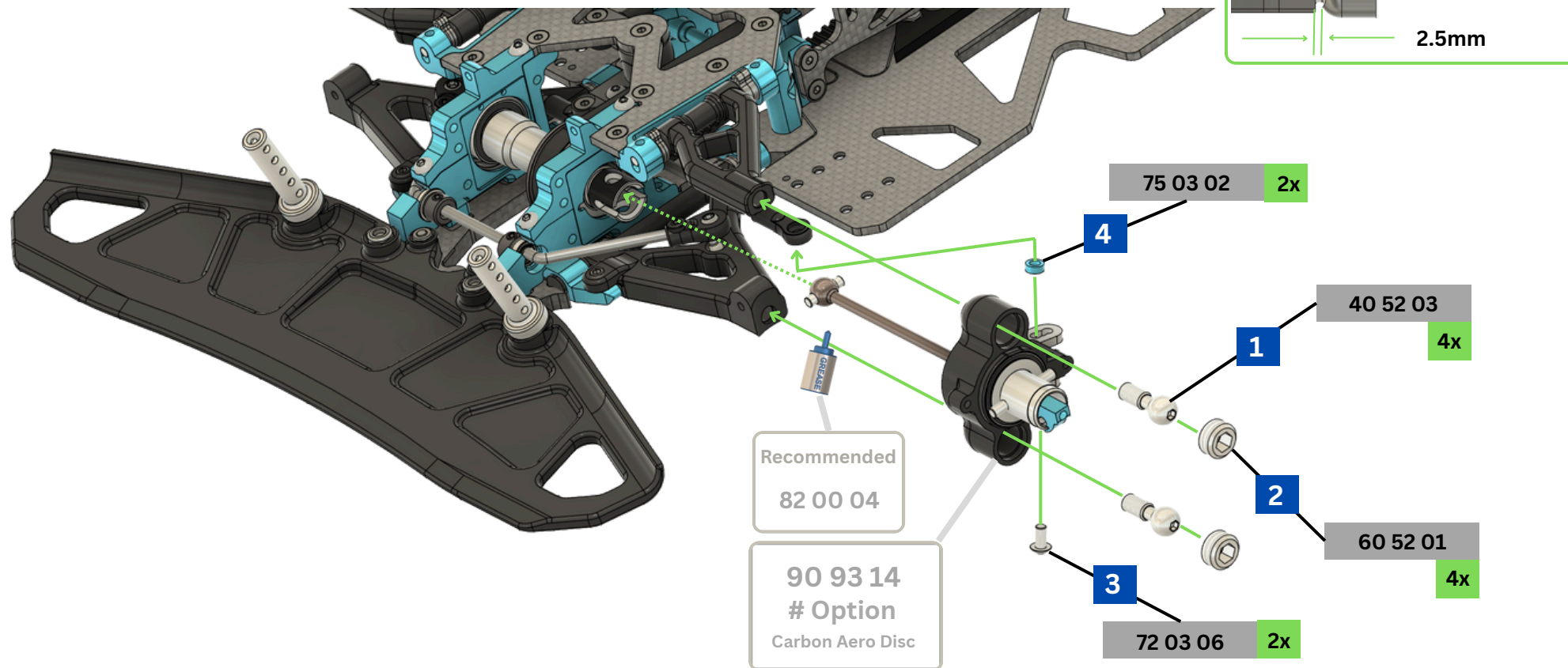
Front Upright Hard
Steering Arm Carbon

Upright insert set

35

REMEMBER

Assemble these parts twice. One for the Left and one for the Right.
All parts must be free moving after assembly.



Part Number

Description

Amount

Optional Part Number

Description

40 52 03

Pivotball

4

BR1008

Ally Pivotball

60 52 01

Pivotball adjustment nut

4

72 03 06

Hex Buttonhead screw M3x6

2

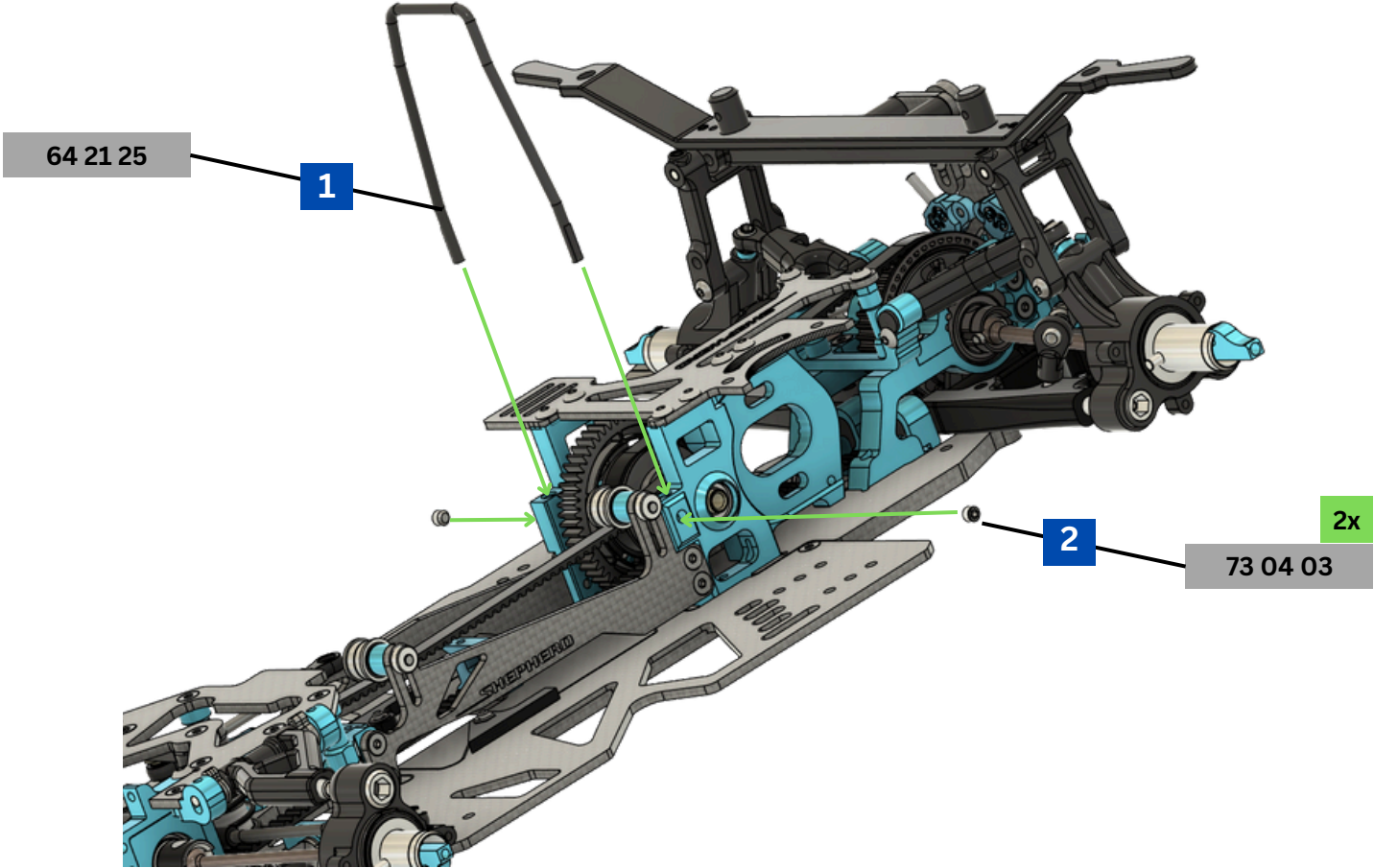
75 03 02

Shim M3x2

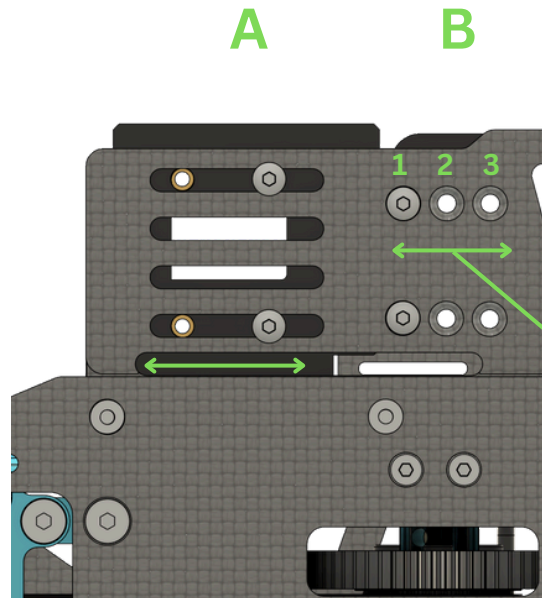
2

90 93 14

Front Carbon Aero Discs

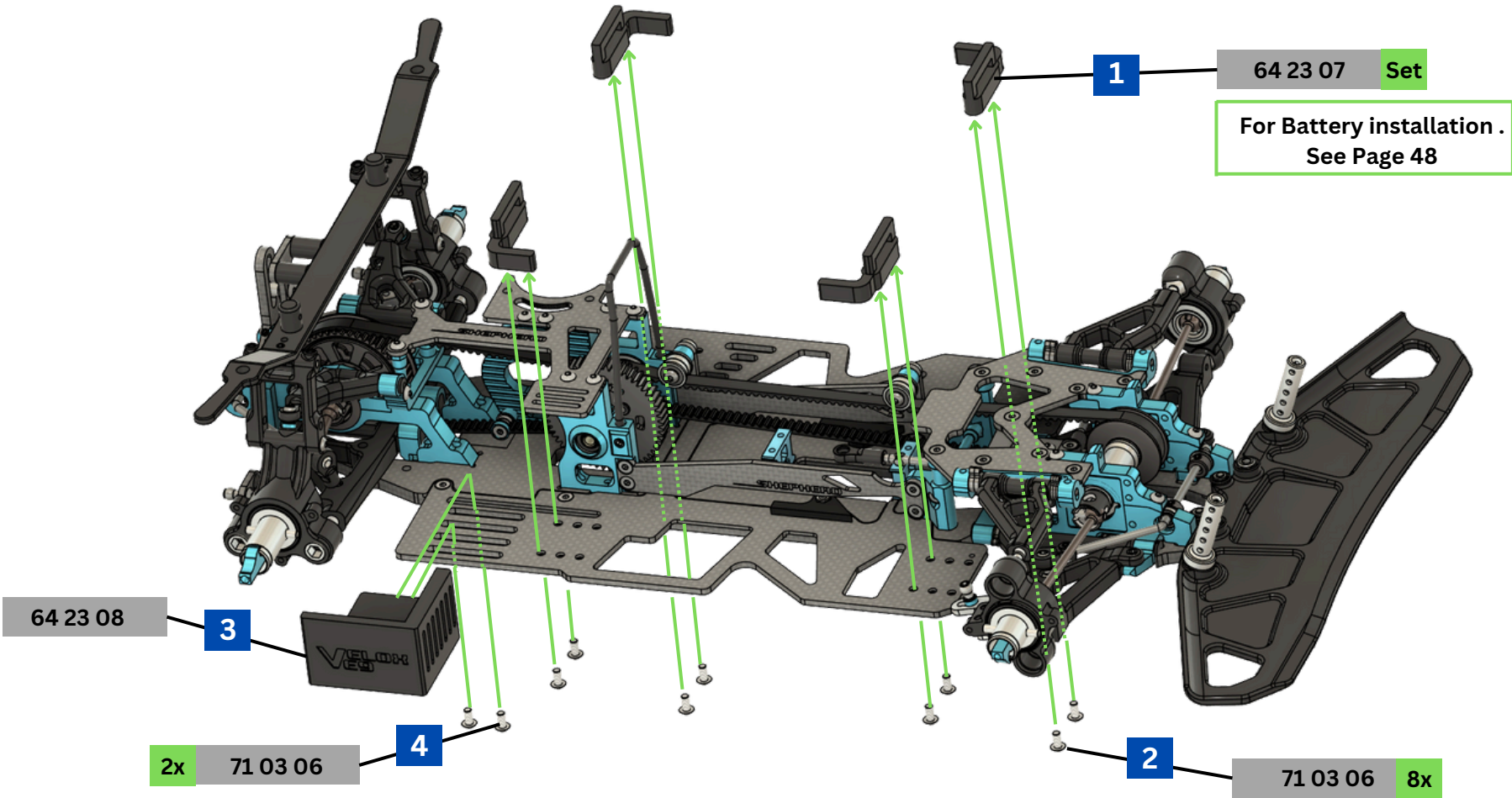


Part Number	Description	Amount	Optional Part Number	Description
64 21 25	Pick Up Bar	1		
73 04 03	Set Screw M4x3	2		

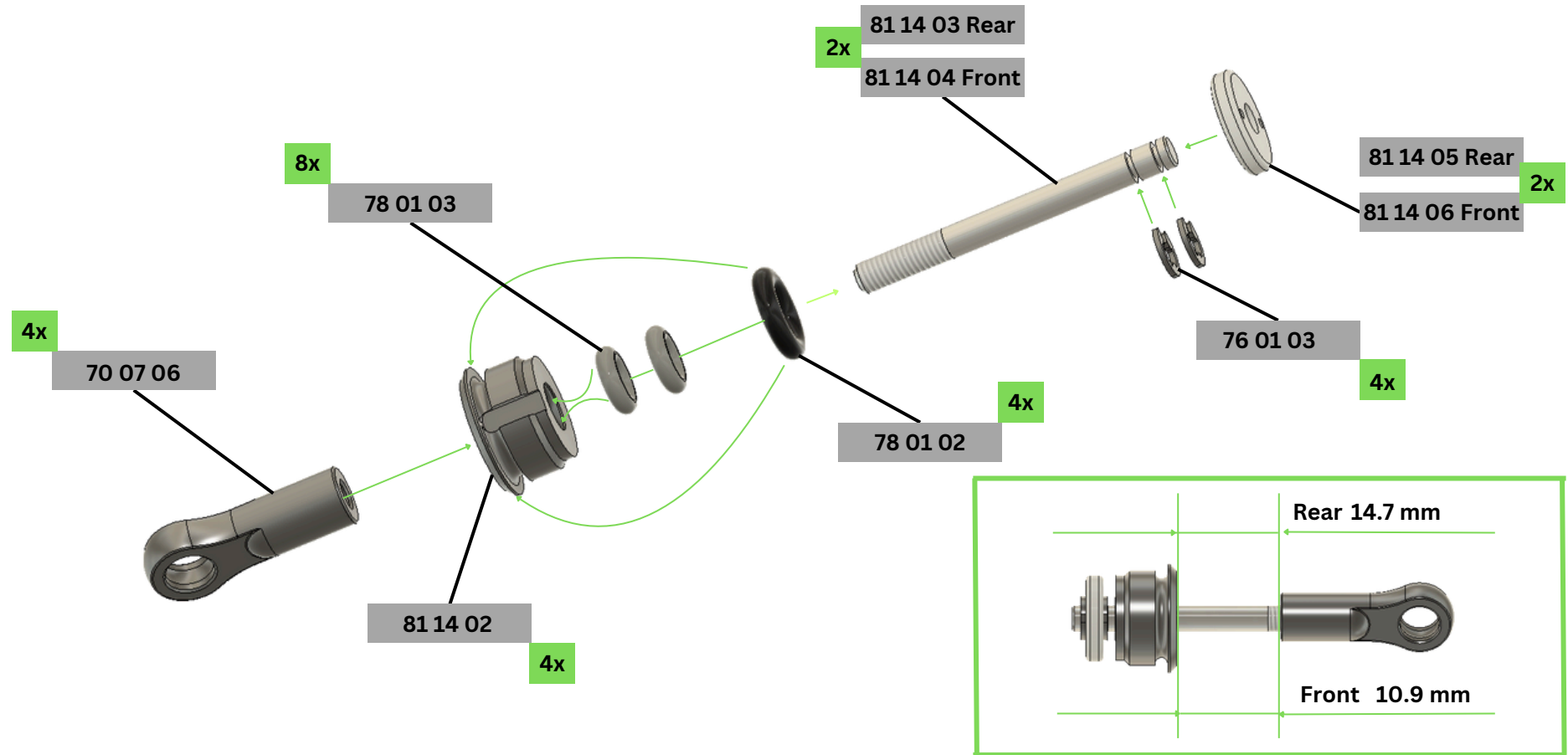


Battery Position 1 is DEFAULT

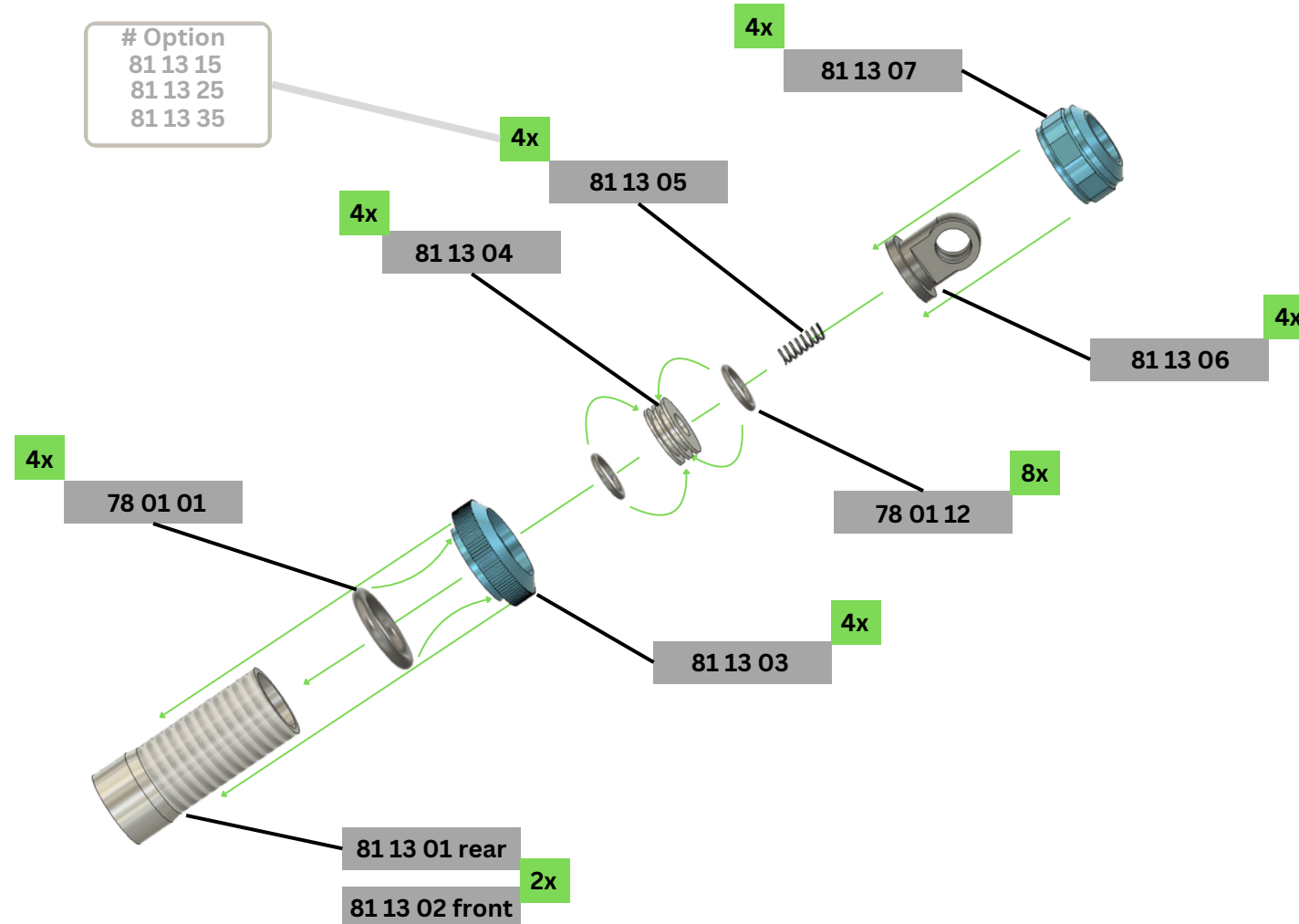
Depending on the Battery Location
Rear 1, Middle 2 or Forward 3.
You will need to move A position.



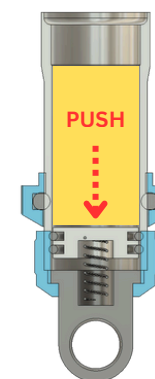
Part Number	Description	Amount	Optional Part Number	Description
64 23 07	Battery mounts	Set		
71 03 06	Hex Countersink M3x6	8		
64 23 08	ESC Box	1		
71 03 06	Hex Countersink M3x6	2		



Part Number	Description	Amount	Optional Part Number	Description
70 07 06	Balljoint 4.9 mm Long	4		
76 01 03	Circlip 3 mm	8		
78 01 02	O-Ring Floating Piston	4		
78 01 03	O-Ring Piston Rod	8		
81 14 02	Shock Bottom Screw	4		
81 14 03	Piston Rod Long	2		
81 14 04	Piston Rod Short	2		
81 14 05	Piston 2-Hole 1 mm	2	81 14 07	Piston 3-Hole 1.0 mm
81 14 06	Piston 1-Hole 1 mm	2	81 14 15	Piston 2-Hole 1.2 mm
			81 14 16	Piston 1-Hole 1.2 mm

**DEFAULT**

OIL 650 cSt



Push the floating piston down to ensure correct position. Then fill shocks with shock oil up to the bottom of the thread and allow ALL air bubbles to dissipate.

Part Number

Description

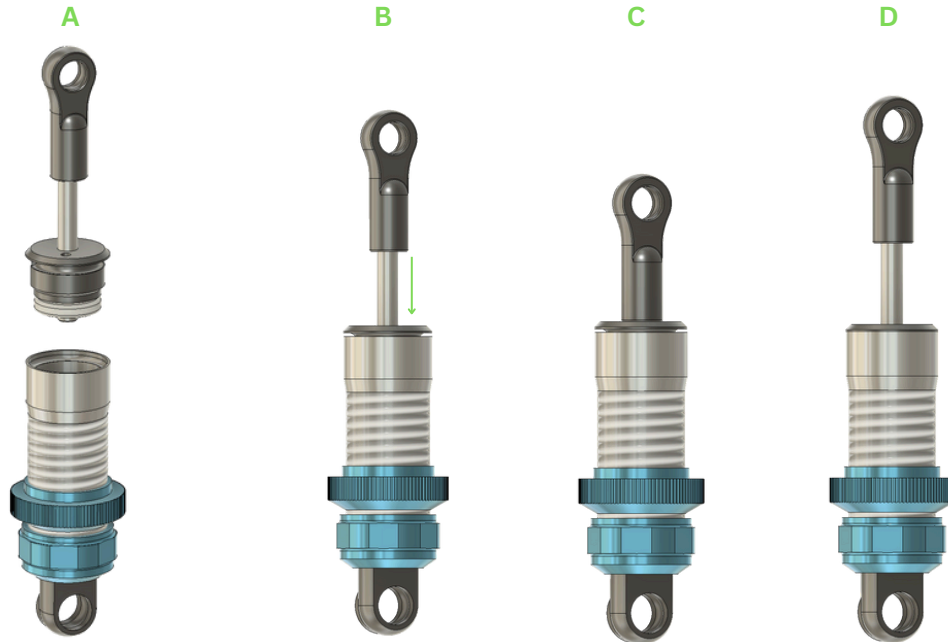
Amount

Optional Part Number

Description

81 13 01 rear	Shock absorber body, Long	2
81 13 02 front	Shock absorber body, Short	2
81 13 03	Preload adjustment nut	4
81 13 04	Floating piston	4
81 13 05	Floating piston spring FPS	4
81 13 06	Shock Absorber Ball cap	4
81 13 07	Shock Absorber End cap	4
78 01 01	Preload Nut O-ring	4
78 01 12	Floating piston O-ring	8

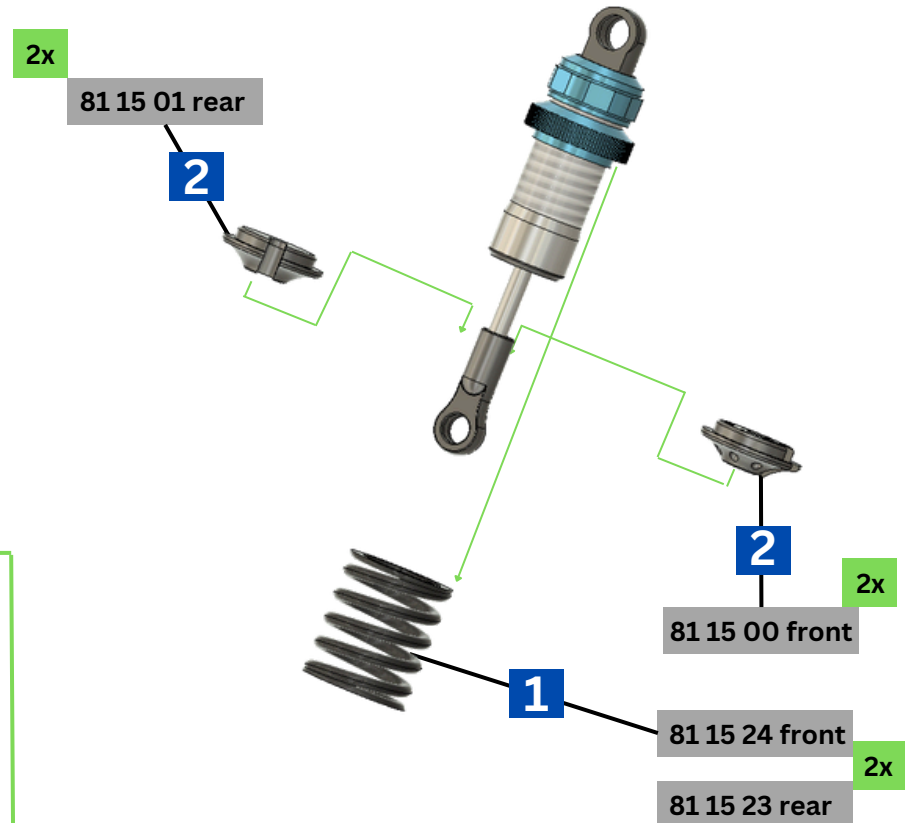
81 13 15 81 13 25 81 13 35 SOFT, EXTRA SOFT, SUPER SOFT



A
Mount these two parts, do not fully tighten shock bottom. Allow excess fluid to be released

B & C
Push the piston slowly into shock body allowing excess Oil to bleed through channels.

D
Tighten Shock bottom until the O-ring seals the Shock body.



Part Number

Description

Amount

Optional Part Number

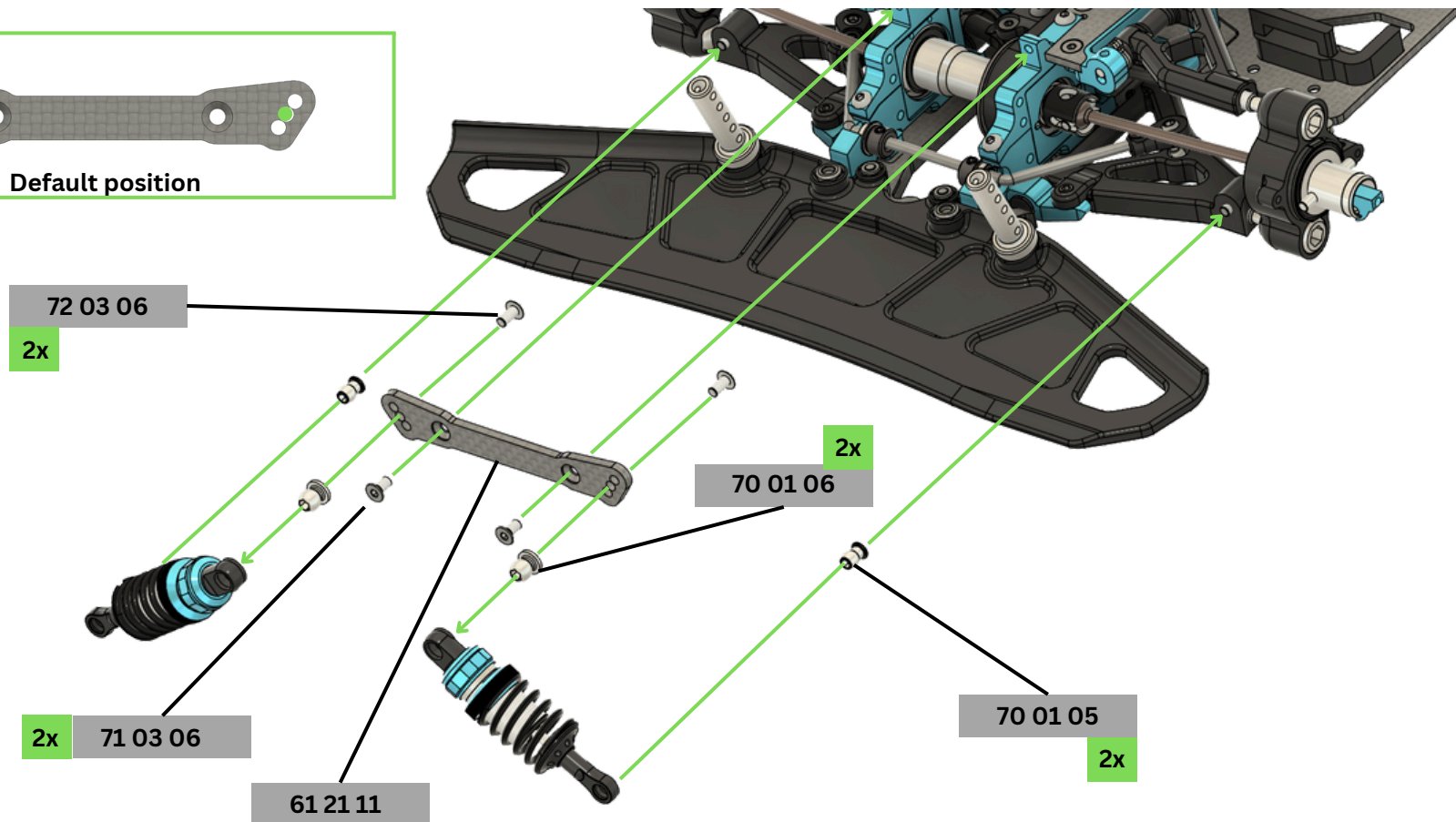
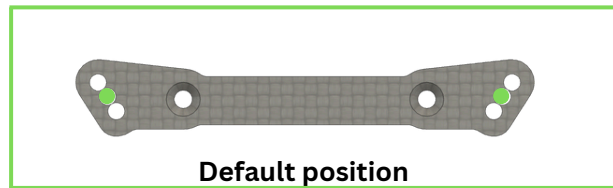
Description

81 15 00
81 15 01
81 15 23
81 15 24
82 01 65

Front Shock Absorber Spring plate
Rear Shock Absorber Spring plate
Rear Shock Spring
Front Shock Spring
650 cSt Silicone Oil

2
2
2
2
1

82 01 20/35/50/80 plus 82 02 01 200/350/500/800/1000 cSt Silicone Oil
92 50 04
Shepherd Shock Tool



Part Number

Description

Amount

Optional Part Number

Description

61 21 11

Shock Tower front

1

91 21 11

Narrow Shock Tower front

70 01 05

Pivot ball 4.9mm

2

70 01 06

Pivot ball 6mm

2

71 03 06

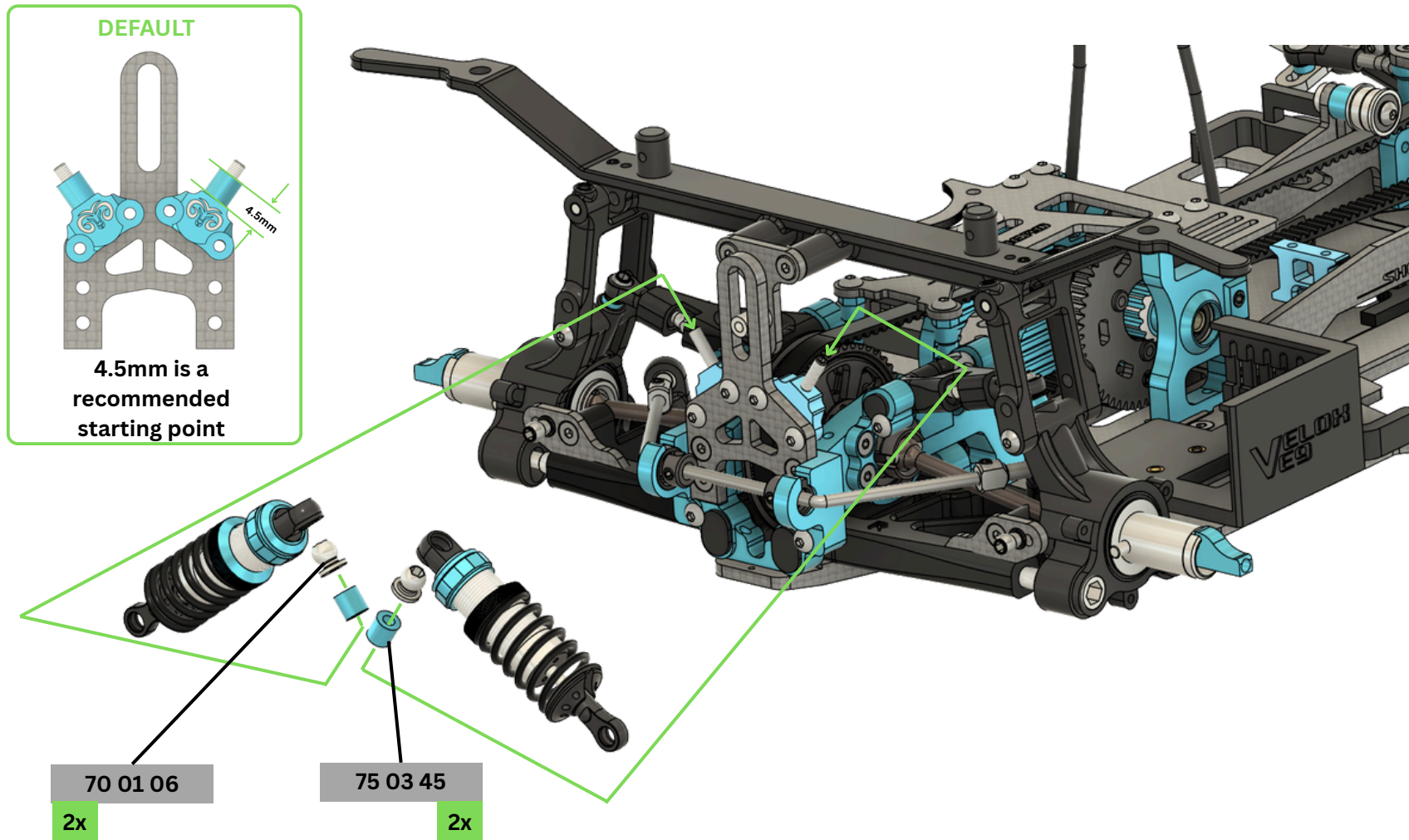
Countersunk screw M3x6

2

72 03 06

Hex Buttonhead screw M3x6

2



Part Number

Description

Amount

Optional Part Number

Description

70 01 06

Pivot ball 6mm

2

75 03 45

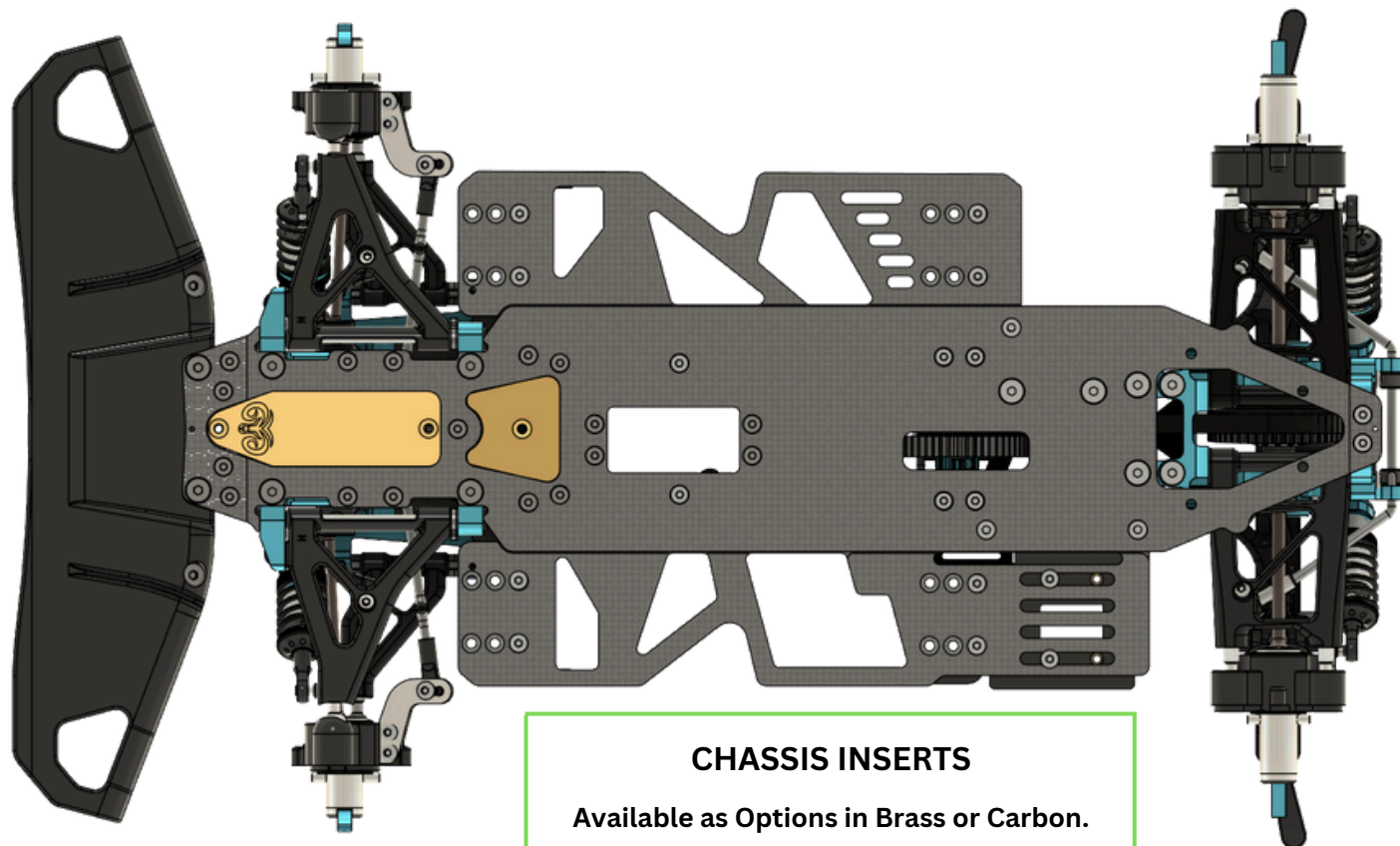
Spacer 4.5mm

2

70 05 01

Body Clips

4

**CHASSIS INSERTS**

Available as Options in Brass or Carbon.

Part Number

Description

Amount

Optional Part Number

Description

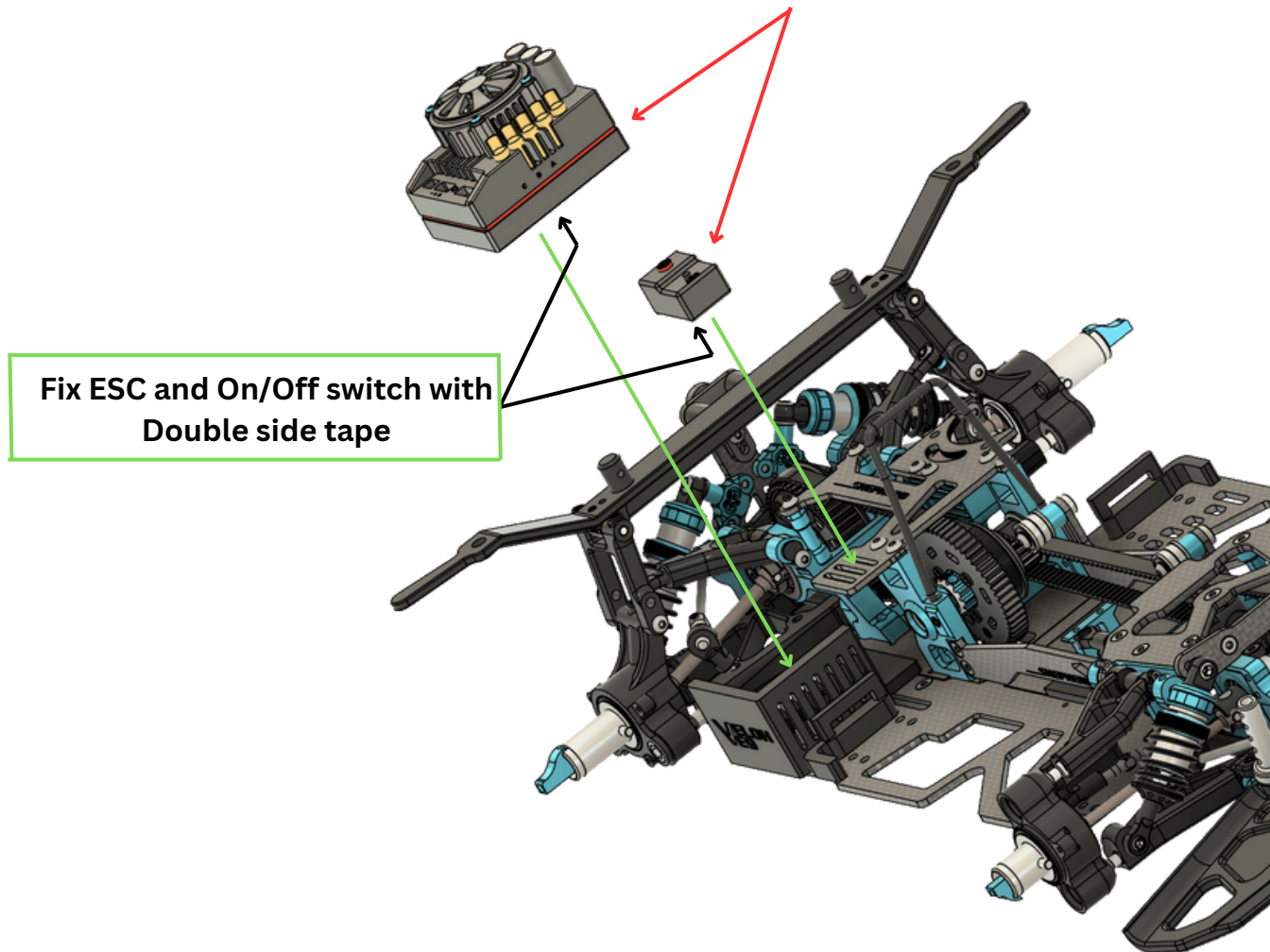
91 23 27

Brass Front Inserts

90 31 13

Carbon Front Inserts

THESE PARTS ARE NOT INCLUDE

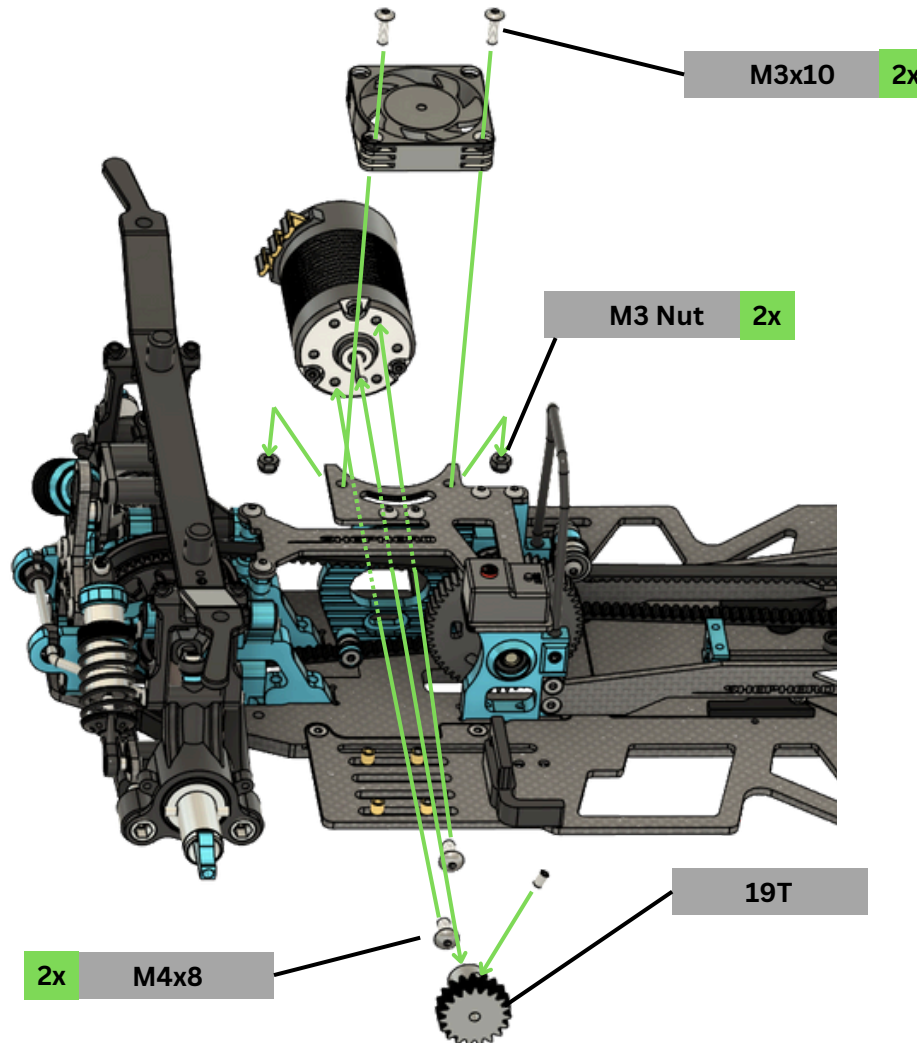


Optional Part Number

**These Pictures are representative of a typical ESC
No Manufacturer is recommended**

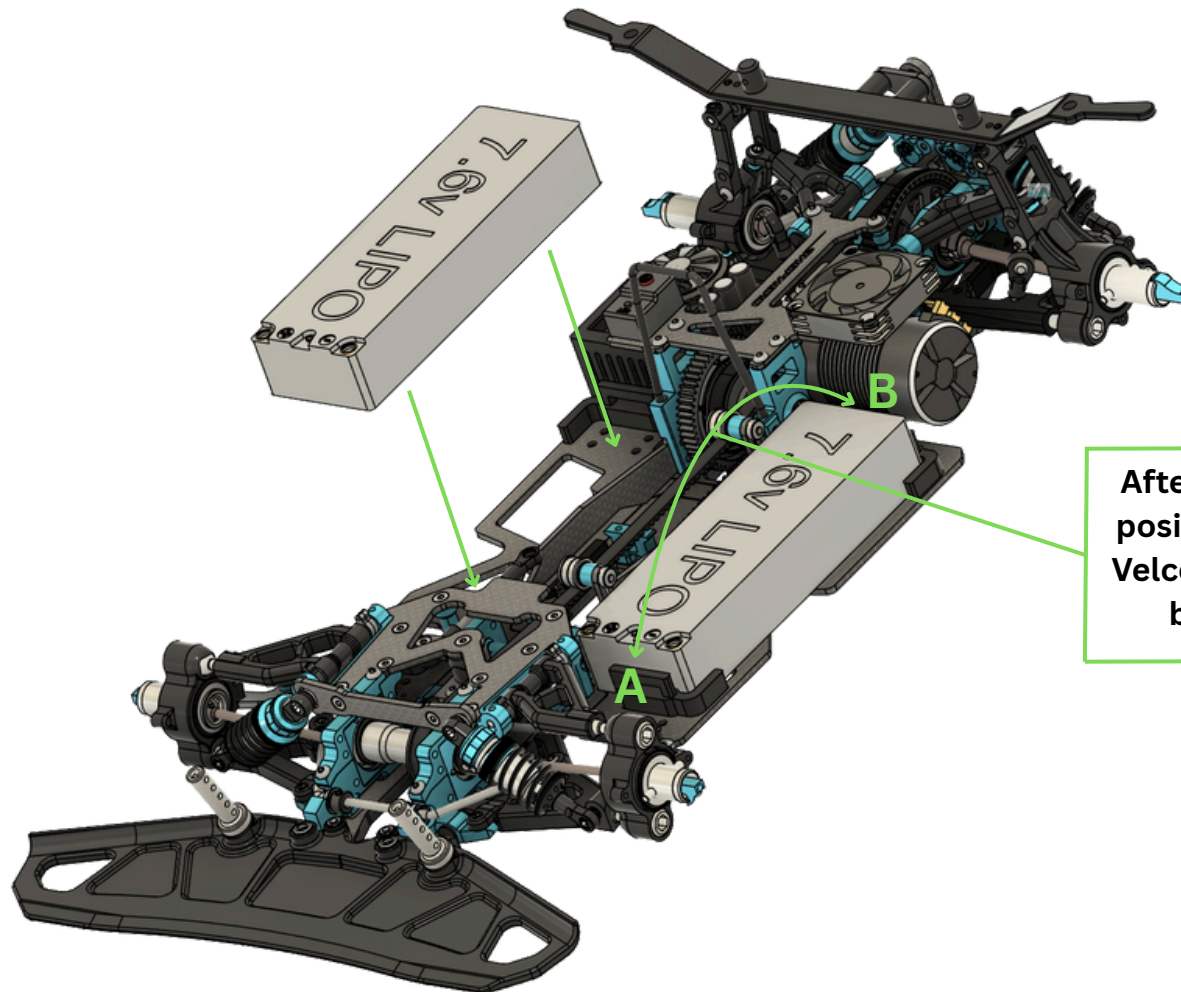
THESE PARTS ARE NOT INCLUDE

NOTE
ESC Box is removeable
allowing Easier change
of Pinion



**These Pictures are representative of a typical Motor and Fan
No Manufacturer is recommended**

THESE PARTS ARE NOT INCLUDE



After locating Lipo's in Required position, Fix with Battery tape or Velco Tape through the mounting brackets between A and B

Optional Part Number

By re-locating Battery brackets in the alternative positions you are able to use Shorty Lipo set

THESE PARTS ARE NOT INCLUDE

