

CAUTION



To prevent serious personal injury and/or property damage, operate all remotely controlled models in a responsible manner as outlined herein.

● **Safety Precautions**

- 1.1 This radio-controlled model is not a toy, it is designed for persons 14 years of age or older.
- 1.2 Do not operate your vehicle on unsafe terrain; always pay attention to your surroundings.
- 1.3 Never operate your vehicle on public roadways, around moving people, animals, or operating machinery.
- 1.4 Keep clear of power lines and high-powered radio equipment to minimize radio frequency interference.
- 1.5 Since this vehicle contains small components, it may be a choking hazard for small children. Keep the vehicle and any spare parts out of reach of small children.

● **Inspect your radio-controlled model before operation**

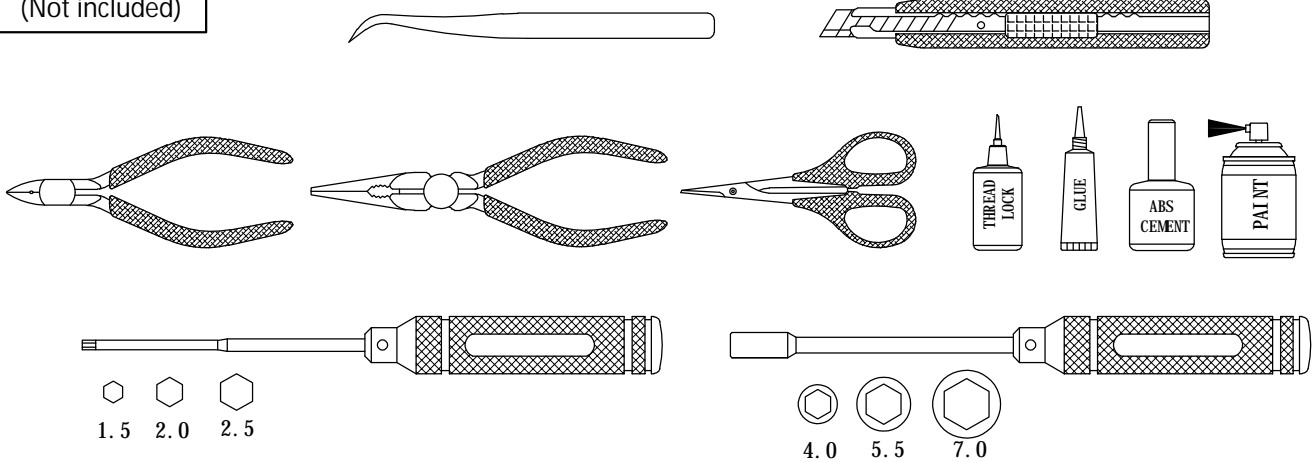
- 2.1 Ensure that all screws are properly tightened. Use thread-lock to secure any metal to metal contacts- especially for components designed to withstand torque (servo mounts, motor mount, drive shaft grub screws etc.).
- 2.2 Always check the battery voltage for both the transmitter and vehicle prior to operating your vehicle. Keep the batteries fresh in the transmitter and always begin your vehicle runs with a fully charged battery pack.
- 2.3 Always check that the motor and servo are operating smoothly and in the right direction prior to operation. If binding between components is observed, replace parts as necessary to reduce possibility of component or servo damage.
- 2.4 To turn on your vehicle, always power on your transmitter first, then power on your receiver.

● **After operating your radio-controlled model**

- 3.1 To turn off the vehicle, always power off your receiver prior to powering off your transmitter.
- 3.2 Use caution when handling the vehicle- components, especially the ESC and motor which will be hot after operation.
- 3.3 Never use battery packs which are dented or otherwise damaged. Ensure that the wire insulation is intact and that connectors are properly soldered. Lithium batteries can become fire hazards if mishandled.

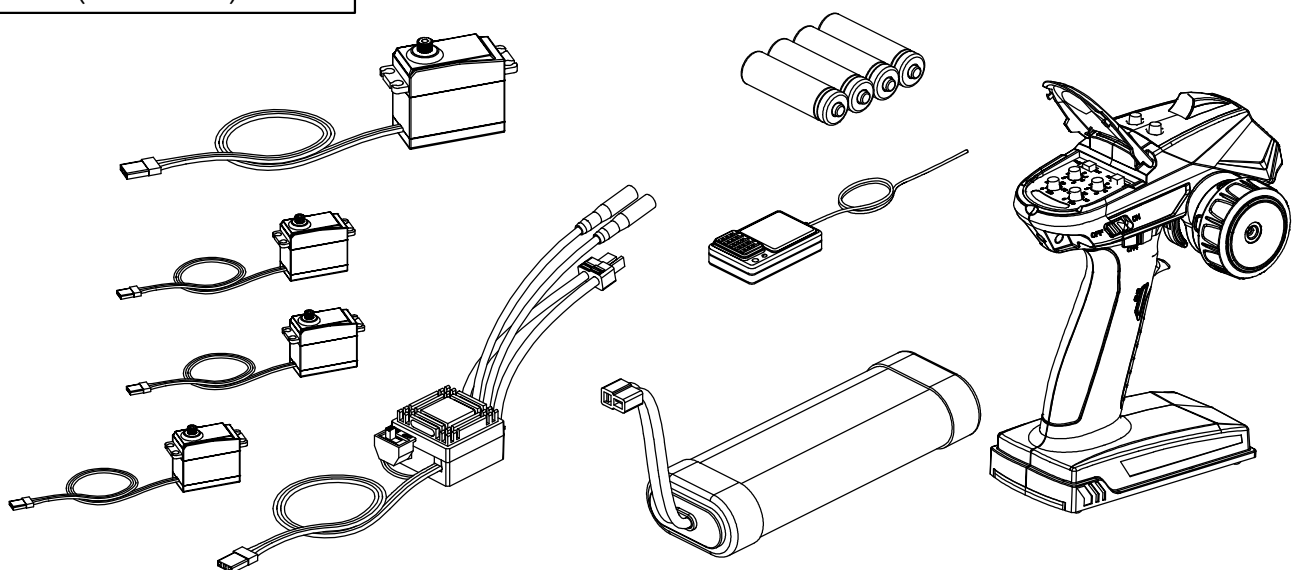
TOOLS

(Not included)



Electronic equipment

(Not included)



EMO X2 Assembly Remind

1. The spraying and bonding process to body shall be carried out in a ventilated place, and safety masks shall be worn.
2. Please conduct simulated assembly to determine the sequence of component before bonding or spraying.
3. For the wiring diagram of electronic equipment, please refer to the description on page 40 of the manual; Please conduct power commissioning when the wheels are suspended.
4. This product is a high-precision model. Please read this manual carefully before assembly and assemble in strict accordance with this manual.
5. Screw thread sealant shall be used during assembly. Please noted that the screw thread sealant shall not have any contact with the shell parts. The screw thread sealant and ABS materials will produce chemical reaction, which will embrittle and crack the shell.
6. It is recommended to use professional tools for installation. Please pay attention to the safety when use tools.

Requirements and recommendations for electronic equipment:

Name	Specifications	Remarks
Remotes controller	6 channels or Up	Waterproof connector is recommended
Servo	Steering servo $\geq 25\text{KG}$	High pressure standard Servo in waterproof
	Shift servo $\geq 3\text{KG} \times 3$	For the size of medium Servo, please refer to the configuration drawing below
ESC	Continuous current $\geq 80\text{A}$	ESC BEC $> 3\text{A}$
Brush motor	Brush motor 560 25T or Up	The Max. Size: $\varnothing 39\text{mm} \times 80\text{mm}$ Installation hole spacing: 25mm
Brushless motor	$\leq 2200\text{KV}$	
Motor gear	M=0.8 Z=16T~20T	M=0.8#32P

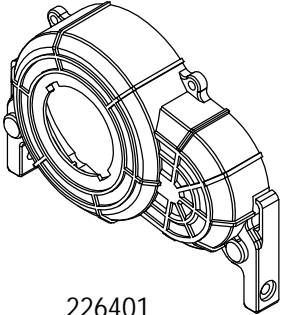
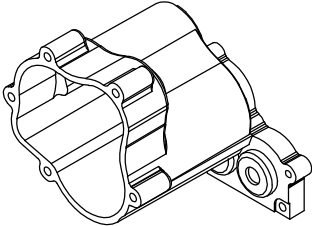


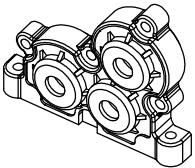
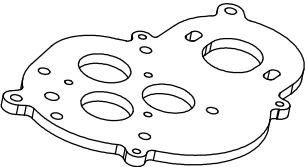
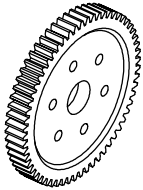



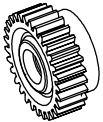
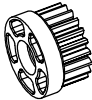

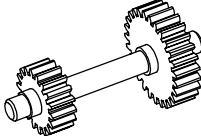
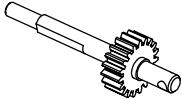
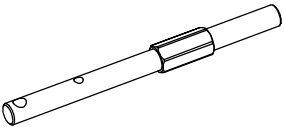
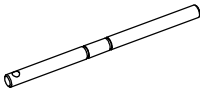









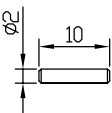







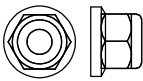




Battery box size	Motor gear	Total reduction ratio	Environment		
135*50*40	20T	High speed 1:17.8 Low speed 1:38.9	Suitable for crossing and climbing		
Gear reduction ratio range reference					
	16T	17T	18T	19T	20T
High speed	1:22.1	1:20.8	1:19.6	1:18.6	1:17.8
Low speed	1:48.3	1:45.4	1:42.9	1:40.6	1:38.9




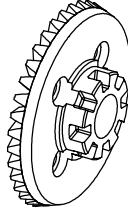

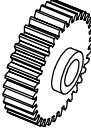




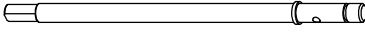


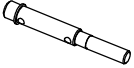
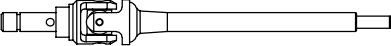
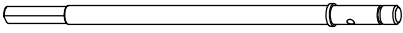



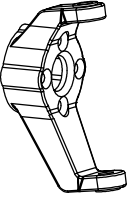
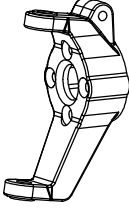
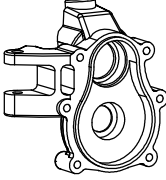
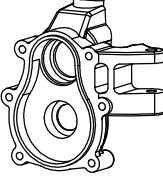
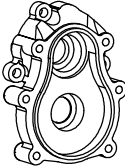
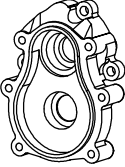
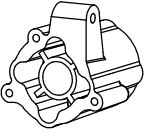
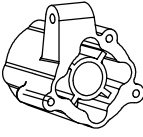
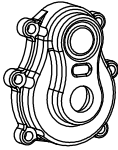


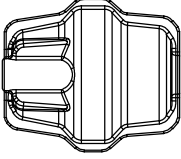
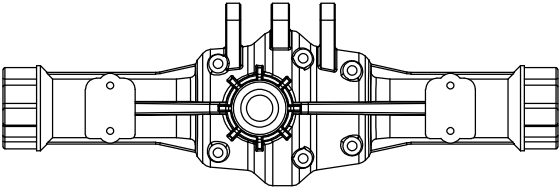
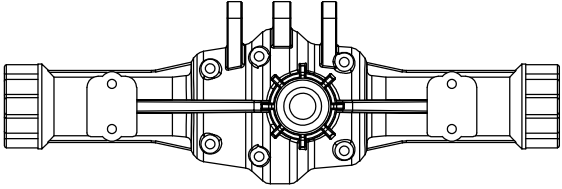
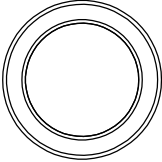
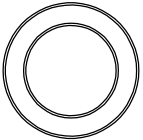


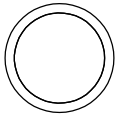





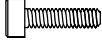


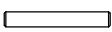

<p>71290 X1</p> <p>71291 X1</p>	<p>SHOCK OIL</p> <p>GREASE</p> <p>91006 X1 91007 X1</p>
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<p>BAG(A)</p>		<p>EMOX2</p>
<p>227004 X4</p> <p>227001 X4</p>	<p>42329 X4</p> <p>227002 X4</p>	<p>50056 X4</p> <p>227003 X4</p>

<p>11108 M3x12 X24</p>	<p>11412 M3x3 X4</p>	<p>41209 $\varnothing 2 \times 10 \times 4$</p>	<p> 44091 X4</p>	<p>12203 M3 X24</p>	<p>12304 M4 X4</p>
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<p>BAG(B)</p>		<p>EMOX2</p>
91128 X4 41841 X4 44221 X4 <p>11102 X4 M2x6</p>	91129 X4 226901 X4 44218 X4 <p>14109 X4 $\varnothing 4 \times \varnothing 2 \times 0.5$</p>	215401 X4 50021 X12 44217 X4 <p>44220 X4 </p> 17001 X4 11133 M2x12 X4 13003 $\varnothing 2.5 \times \varnothing 6 \times 0.4 \times 8$

BAG(C)				EMOX2		
						
226401	226404	226402	226403	226405		
						
45123	226501(60T)	41768(20T)	41750	41749X2		
						
36207	36206	33903	41748		41747	
						
42234	42235	44212	44213	44214	74016	
						
13001	42236	42203	72007	14102	$\frac{0.02}{10}$ 41209X1	
$\varnothing 3 \times \varnothing 7.8 \times 0.5 \times 2$	$\varnothing 5.1 \times \varnothing 7.5 \times 2.5 \times 1$	$\varnothing 5.1 \times \varnothing 8 \times 1.5 \times 2$	$\varnothing 5 \times \varnothing 8 \times 0.3 \times 11$	$\varnothing 3 \times \varnothing 7 \times 0.5 \times 2$		
						
11217	11216	11205	11207	11107	11401	11315
M2.5x10 X6	M2.5x6 X3	M3x6 X6	M3x10 X7	M3x10 X2	M3x4 X1	M2.5x6 X3
						
12304	41834 X1	41307 X1	15012		15014	
M4 X1			$\varnothing 5 \times \varnothing 10 \times 4 \times 11$		$\varnothing 5 \times \varnothing 8 \times 2.5 \times 4$	

BAG(D)						EMOX2		
								
33906 X4	33907 X8	36201 X2	36202 X2	36203 X4	36204 X4	36205 X2	44215 X2	41838 X2
								
95091	42241							
								
95092	42242			42243 X2	42223 X4	42237 X4		
								
226701	226702	226703	226704	226705	226706			
								
226707	226708	226709 X4	226710 X4	226711 X2	226602 X2			
								
226601			226603					
								
15015	15016	15018	15012	75026	72007	13002		
$\phi 15 \times \phi 21 \times 4 \times 2$	$\phi 12 \times \phi 18 \times 4 \times 2$	$\phi 8 \times \phi 12 \times 3.5 \times 2$	$\phi 5 \times \phi 10 \times 4 \times 18$	$\phi 12 \times \phi 15 \times 0.2 \times 2$	$\phi 5 \times \phi 8 \times 0.3 \times 2$	$\phi 3.8 \times \phi 9.2 \times 0.6 \times 6$		
								
M3x4 X4	M2.5x8 X8	M2.5x10 X18	M2.5x10 X38	M2.5x20 X12	M3x10 X4	$\phi 2 \times 14 \times 2$	$\phi 2 \times 7.5 \times 8$	

BAG(E)

295 94086
220 94084
190 94087
130 94085

BAG(F)

110 41696 X3
76 41698
62.5 41697
69 42244 X2
67 42248 X2
113.5 41695 X4
137 41694

BAG(G)

41753 X24
226803
226801
226802
226804
226804

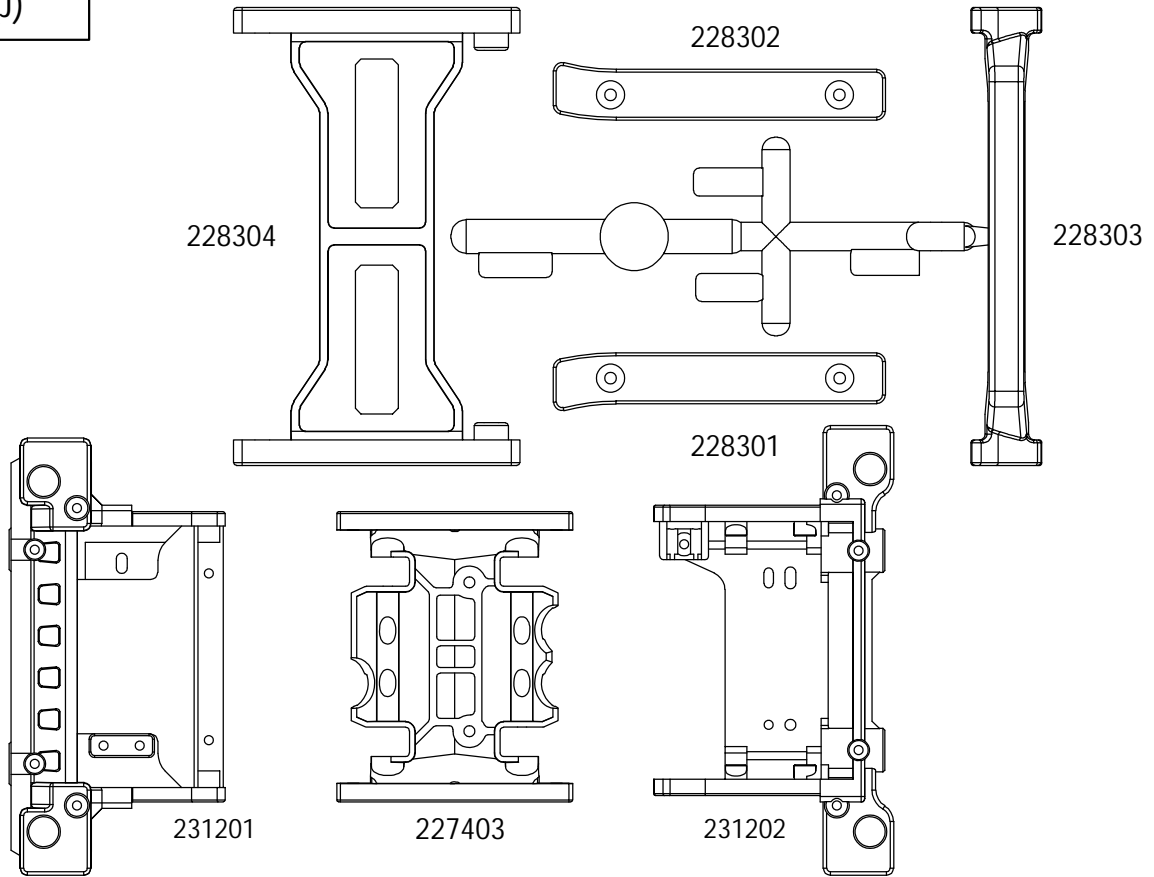
BAG(H)

95094 X2

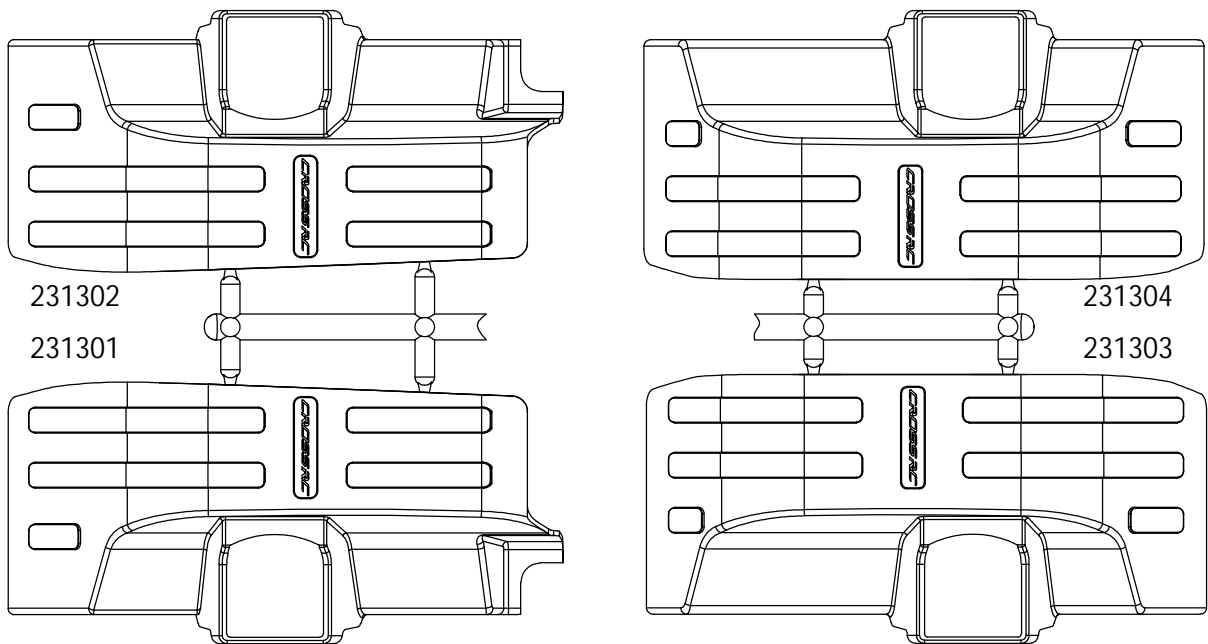
BAG(I)

73102
73103
42330
94015 X8
44249

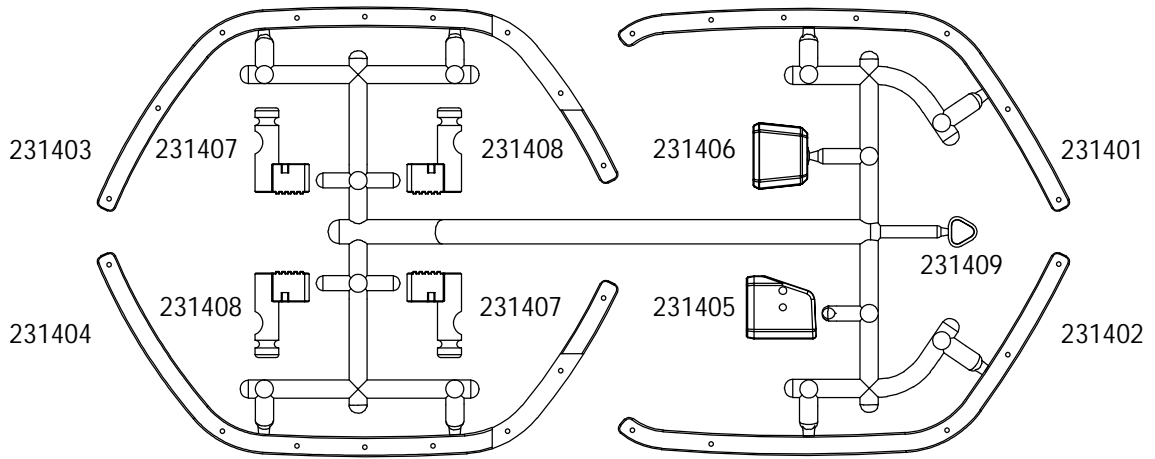
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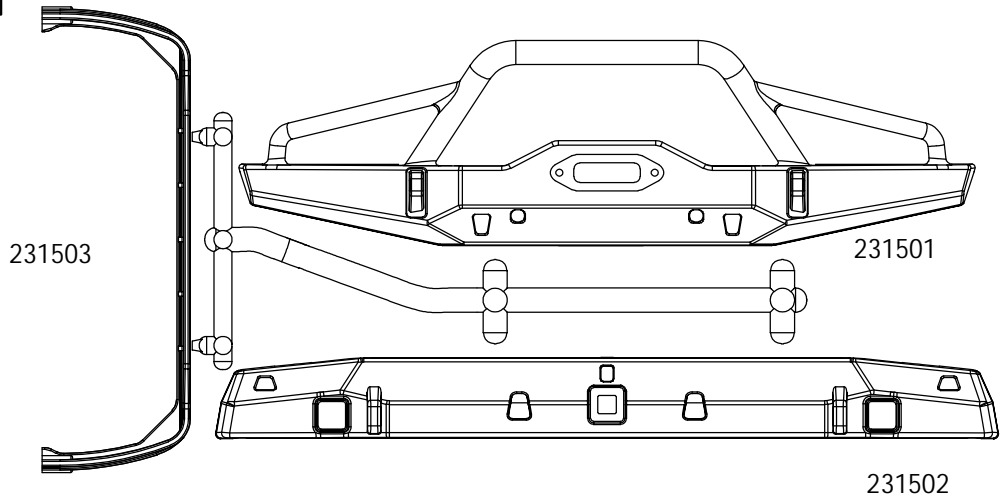
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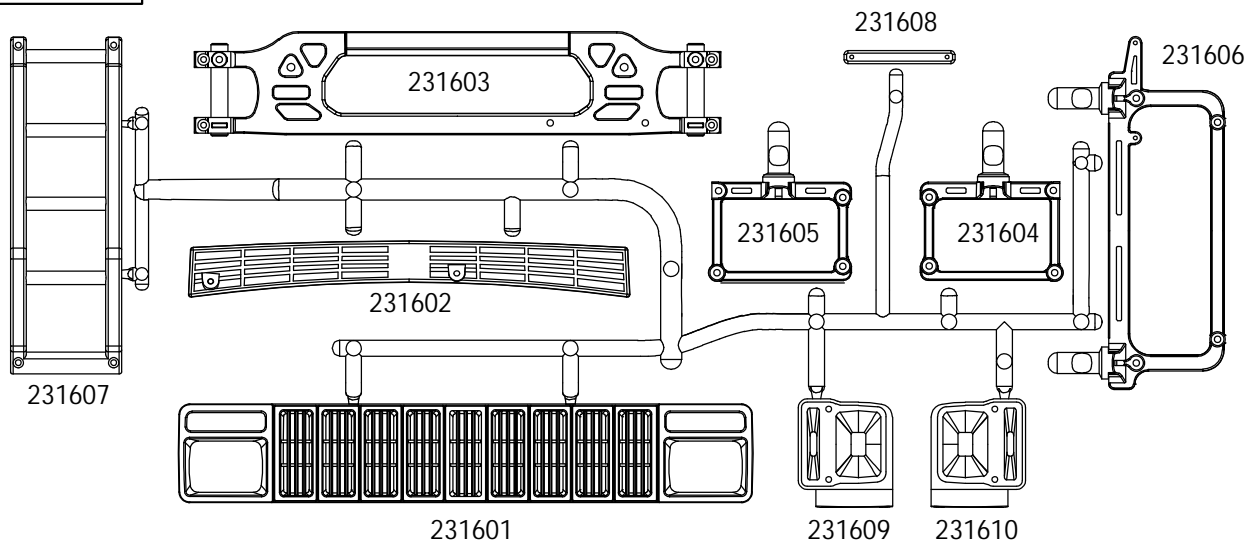
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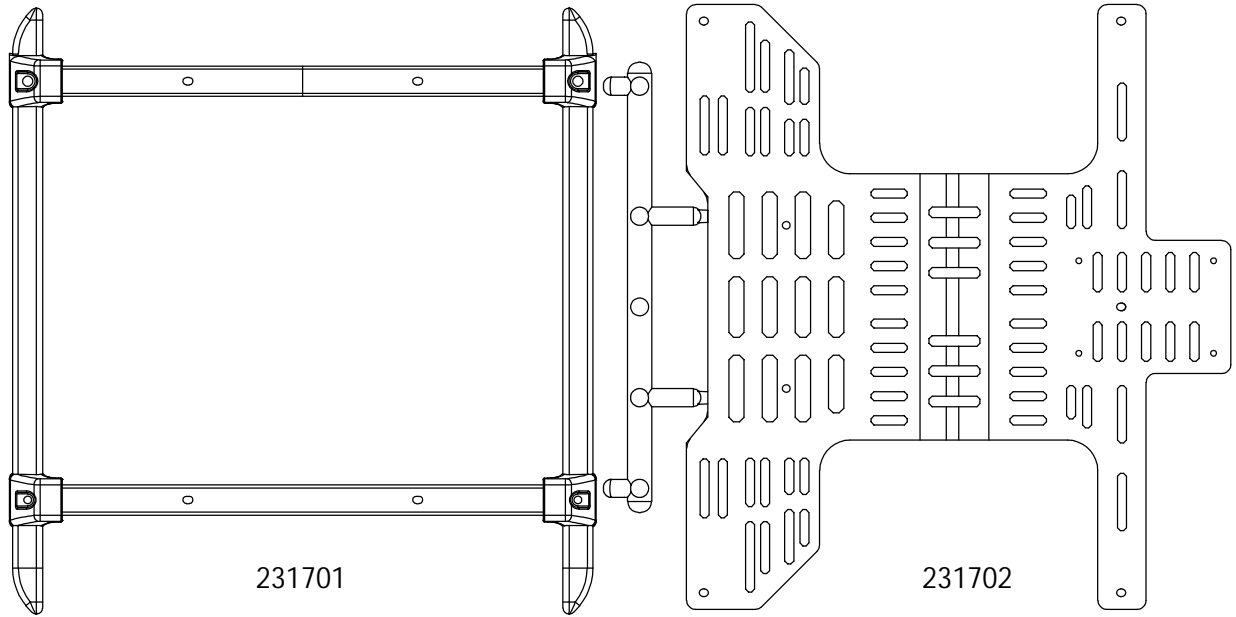
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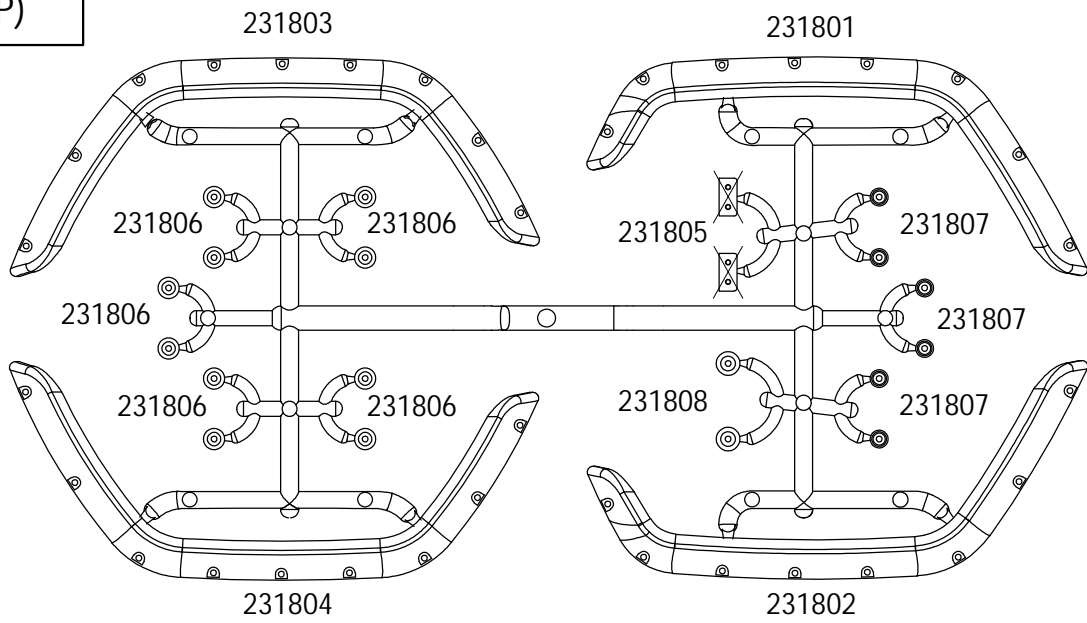
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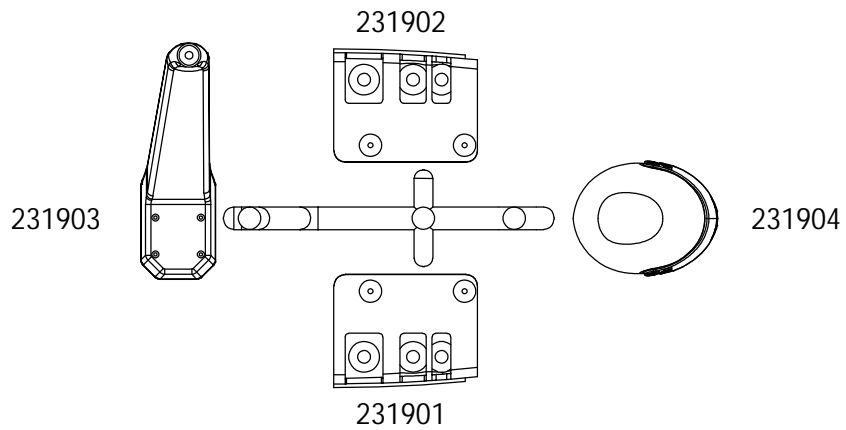
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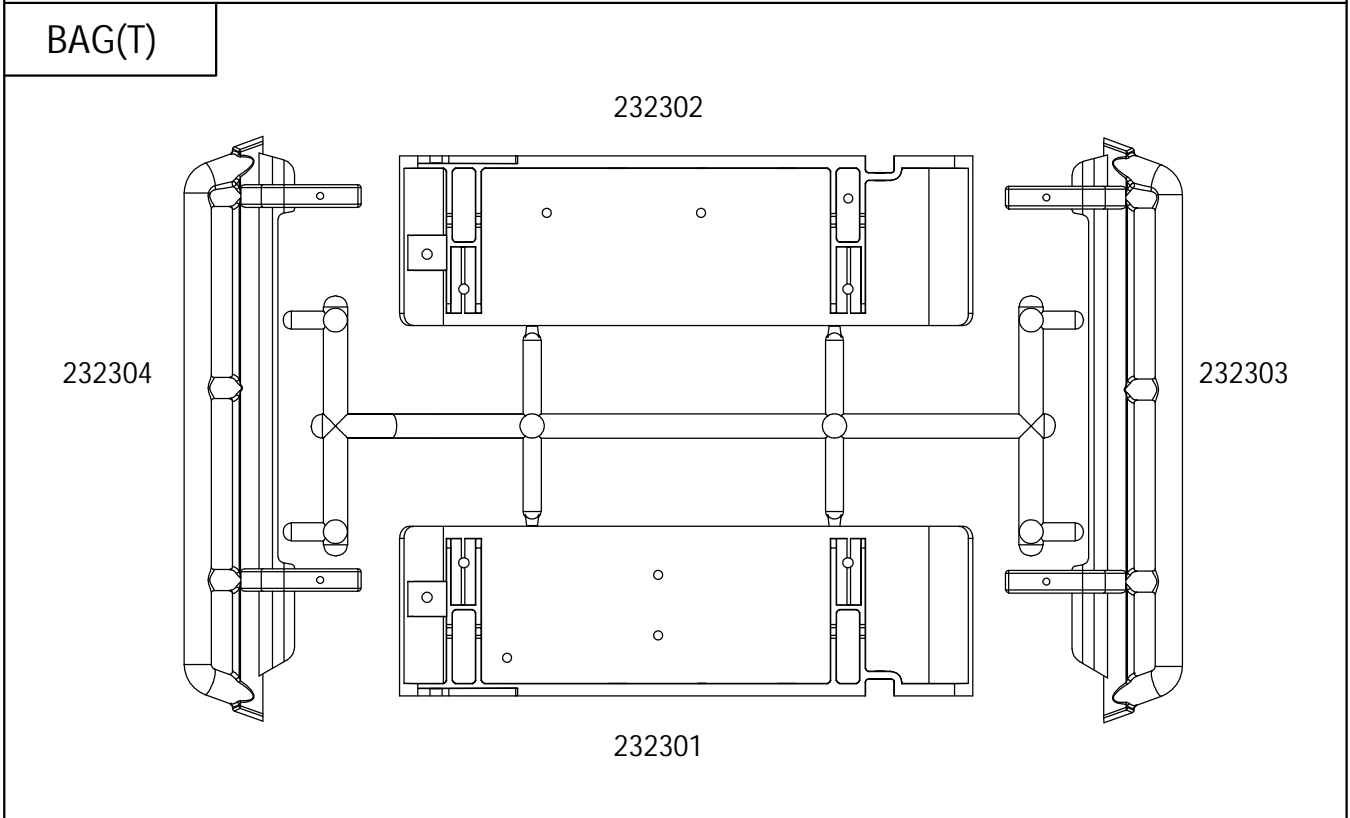
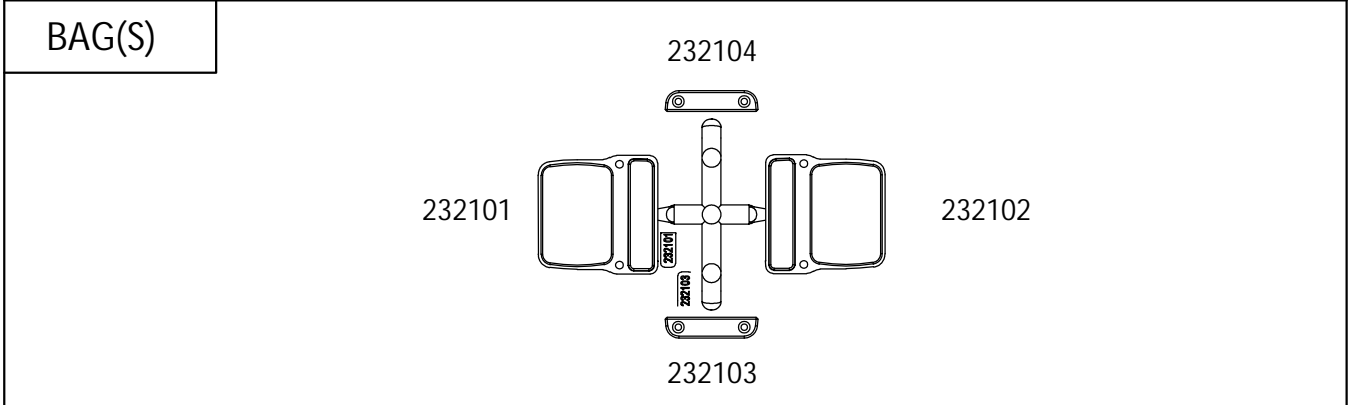
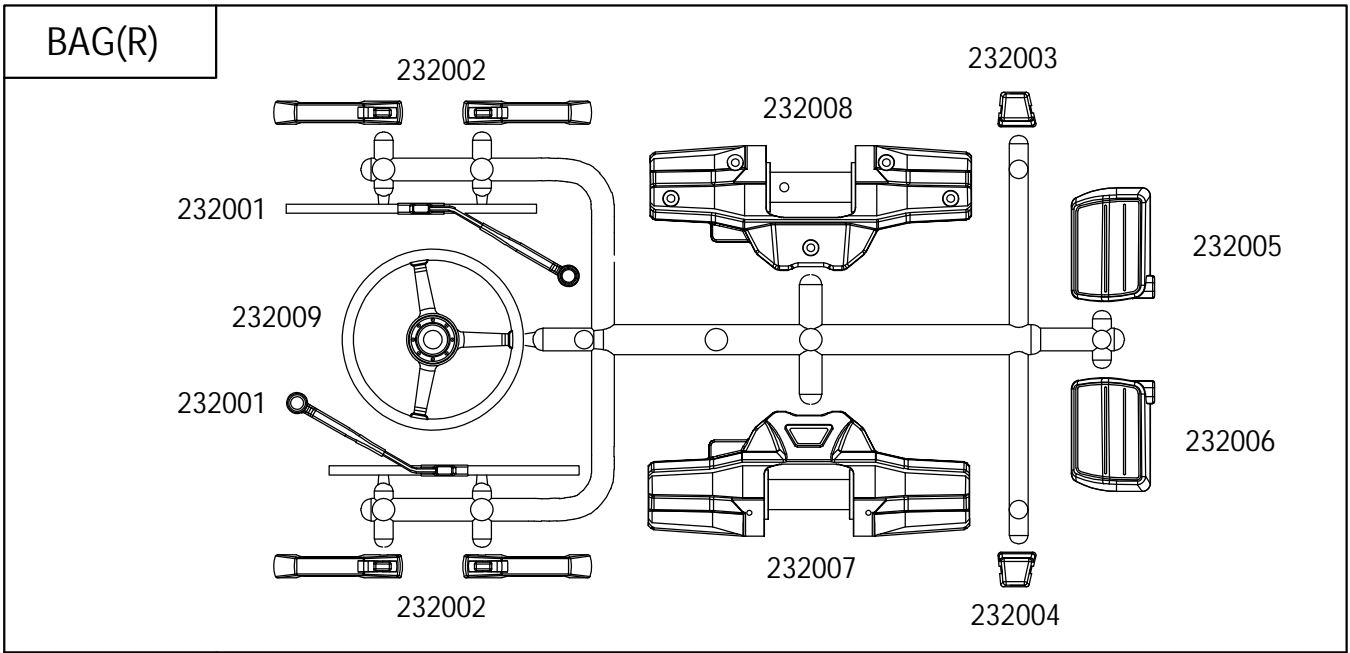


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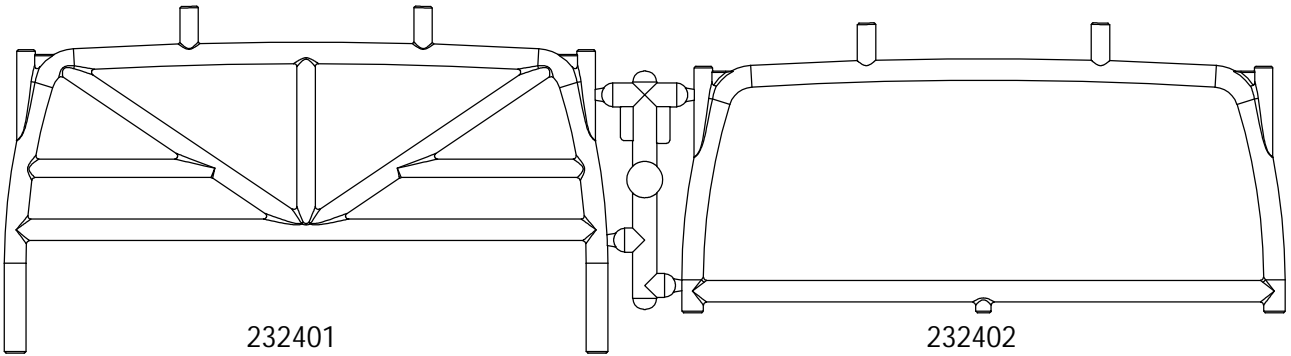


BAG(Q)

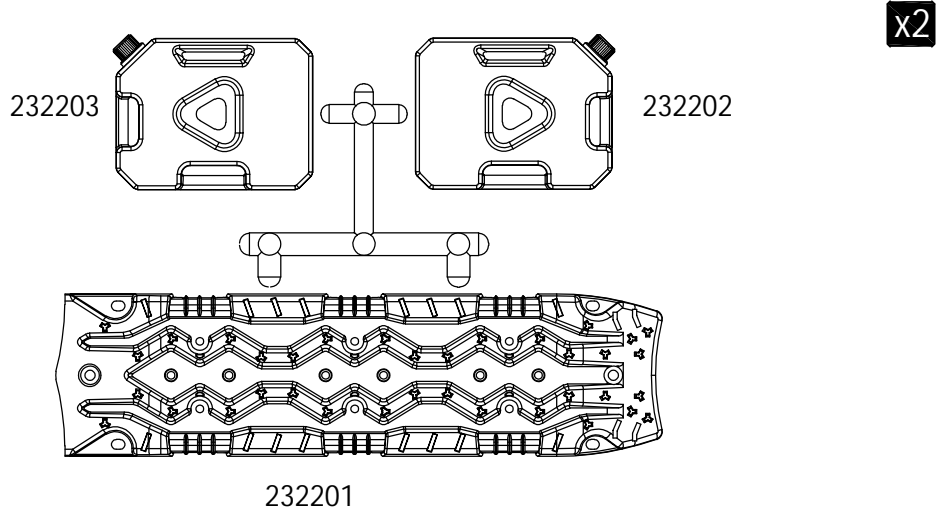




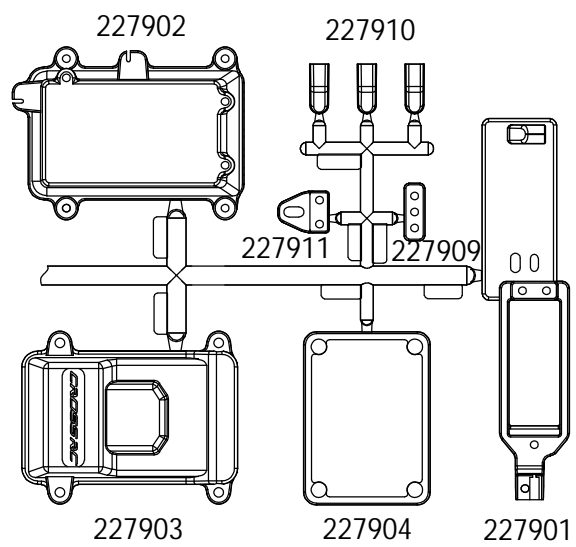
BAG(U)

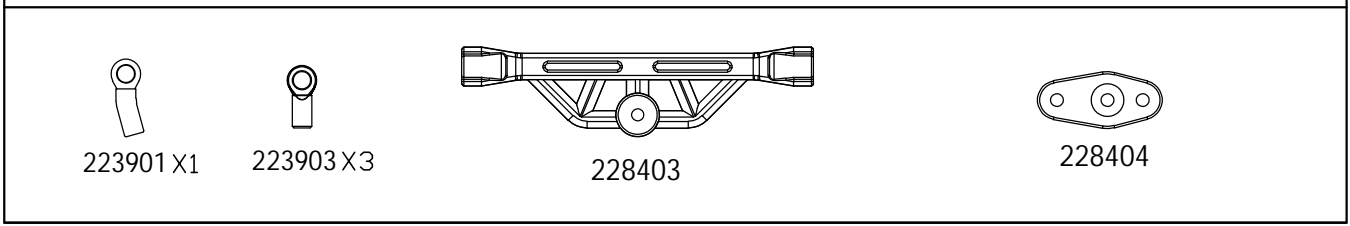
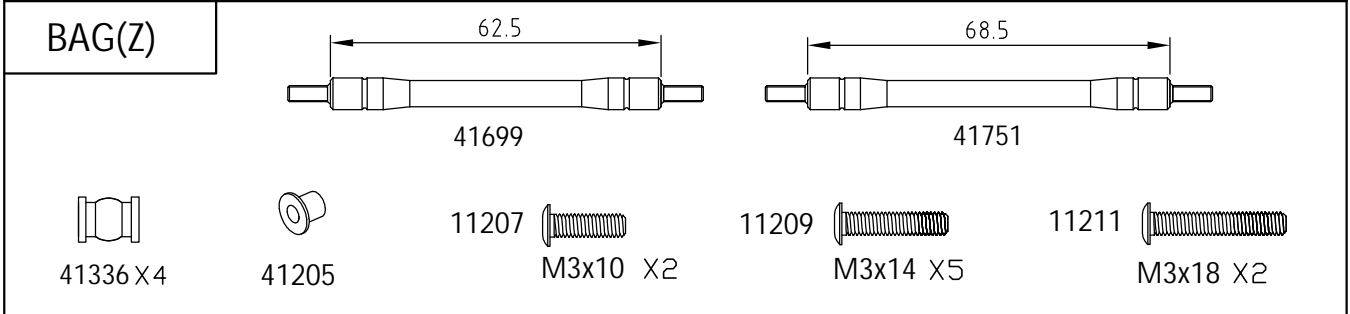
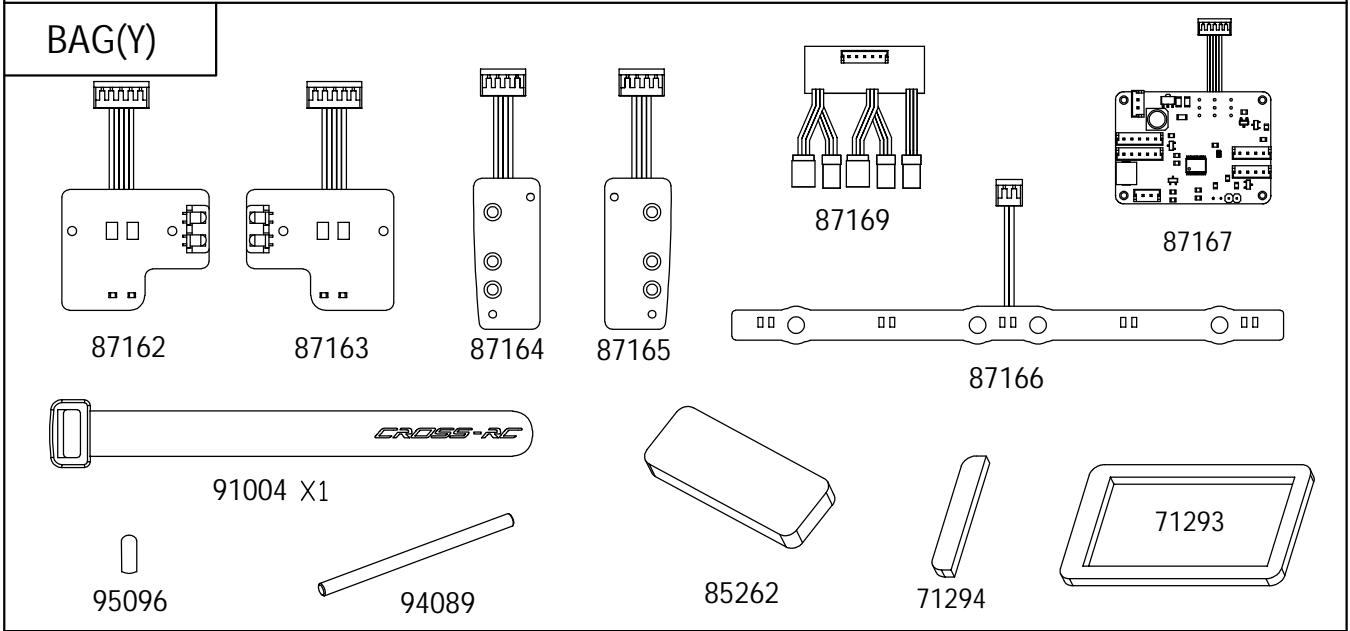
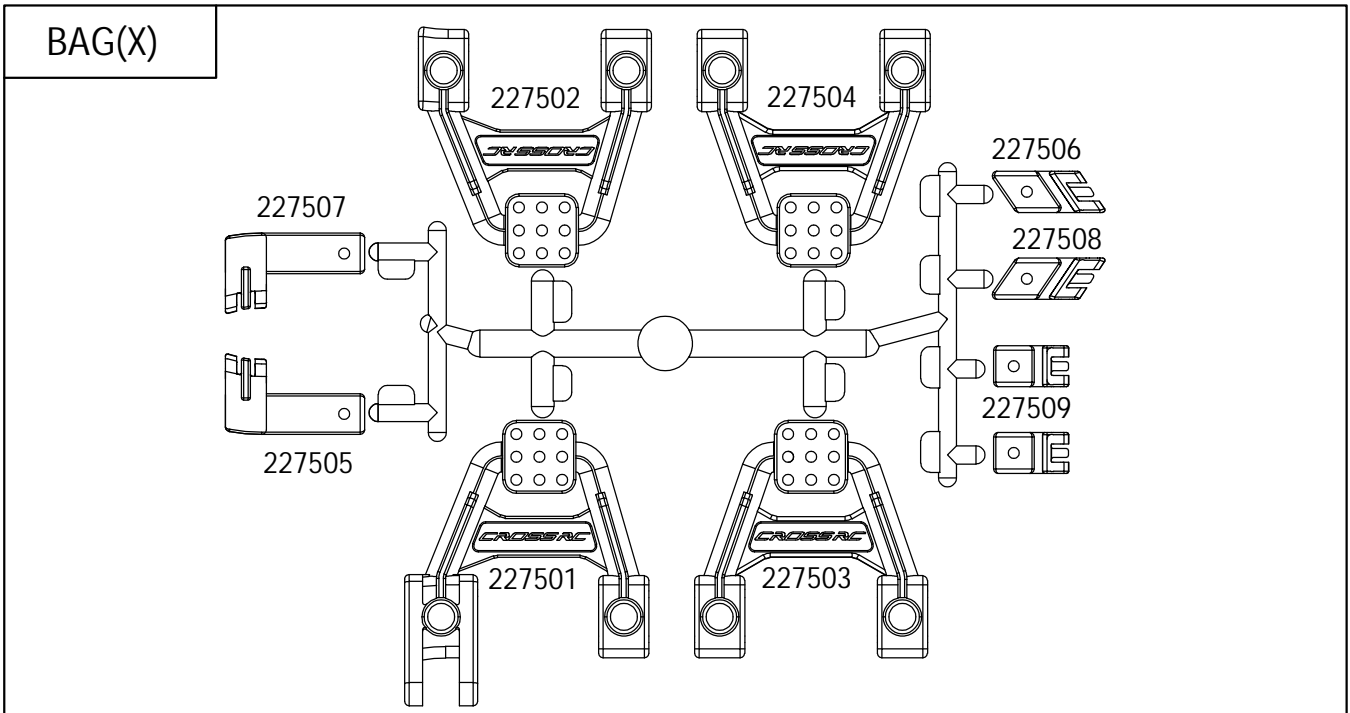


BAG(V)

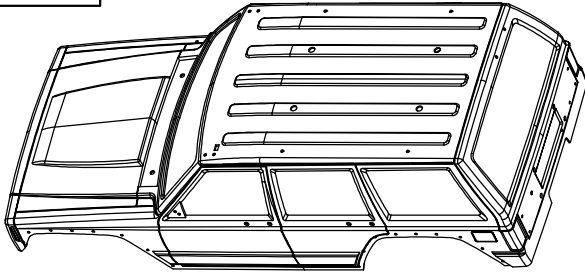


BAG(W)

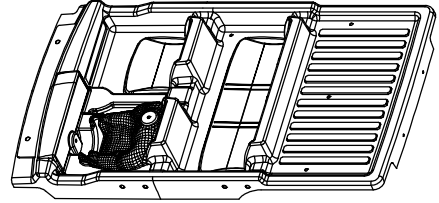




BAG(AA)





231001





231101


BAG(BB)


11149  M1.6x6 X4

11205  M3x6 X6

11227  M2.5x8 X3


12203  M3 X4


11102  M2x6 X38

11206  M3x8 X23


11211  M3x18 X1


11303  M3x8 X14


11103  M2x8 X36

11207  M3x10 X30


11212  M3x20 X7


11401  M3x4 X2

11133  M2x12 X10


11208  M3x12 X2


11214  M3x25 X5


11407  M3x16 X4

11126  M2x14 X2


11209  M3x14 X6


11215  M3x28 X4


11413  M4x12 X8


11127  M2.5x7 X4


11210  M3x16 X2

11223  M3x30 X2

14102  $\varnothing 3 \times \varnothing 7 \times 0.5 \times 18$

11125  M2.5x10 X5

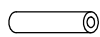
11119  M2.5x16 X8

11106  M3x8 X1

42209 X4

11238  M3x8*10 X1

BAG(CC)



11227

12206

11401

91176 X2

42231 X2



M2.5x8 X3

M2 X3

M3x4 X3



44172 X1



91175 X3



41819 X2





94056 X1


3

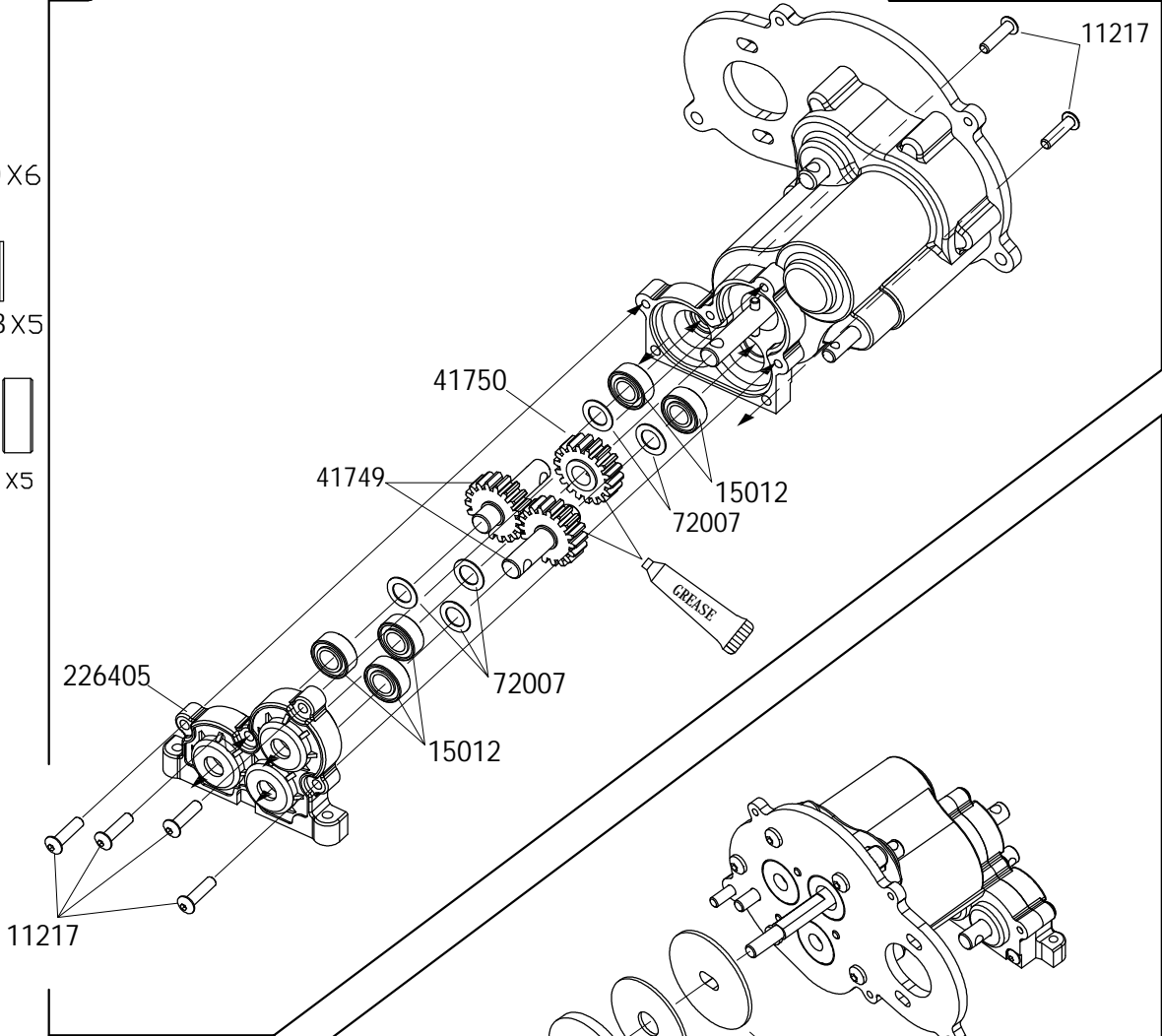
EMOX2


BAG(C)


11217 
M2.5x10 X6


72007 
φ5xφ8x0.3 X5

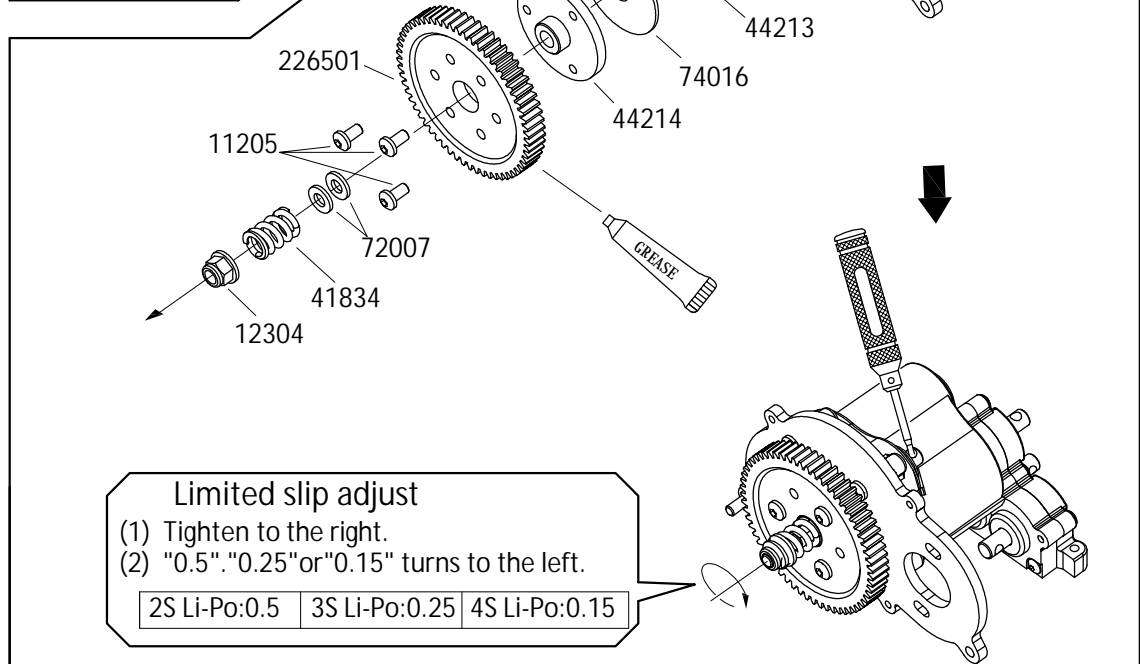
15012 
φ5xφ10x4 X5



12304 
M4 X1


72007 
φ5xφ8x0.3 X2


11205 
M3x6 X3




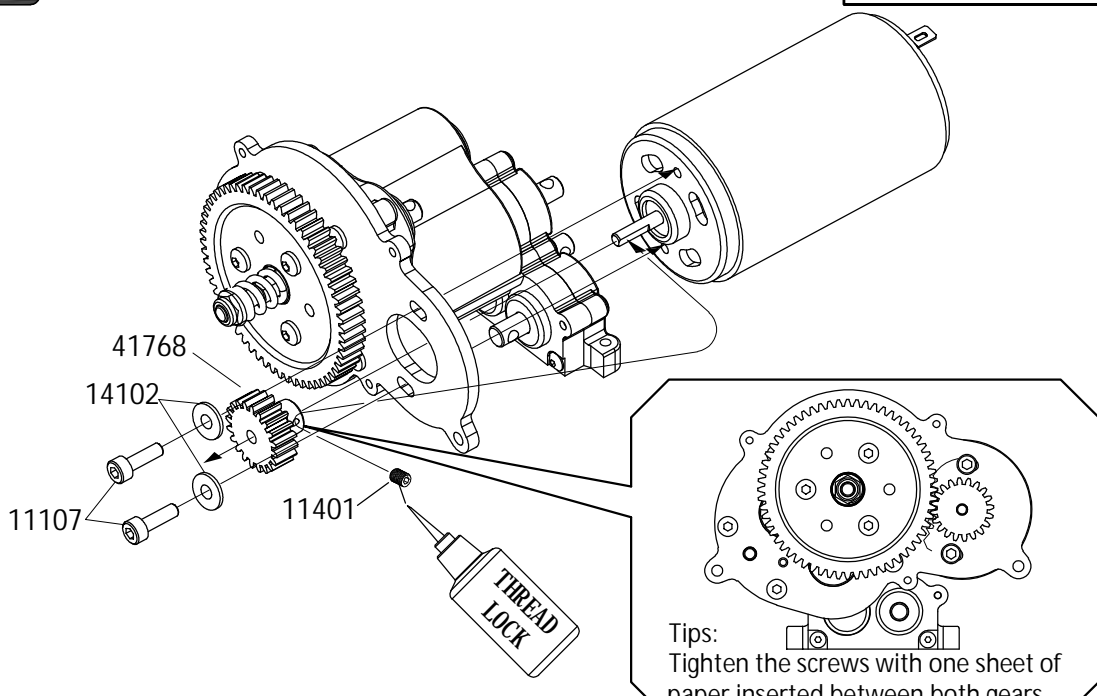
Limited slip adjust
 (1) Tighten to the right.
 (2) "0.5"."0.25" or "0.15" turns to the left.
 2S Li-Po:0.5 | 3S Li-Po:0.25 | 4S Li-Po:0.15

4
EMOX2

11401 
M3x4 X1

14102 
∅3x∅7x0.5 X2


11107 
M3x10 X2




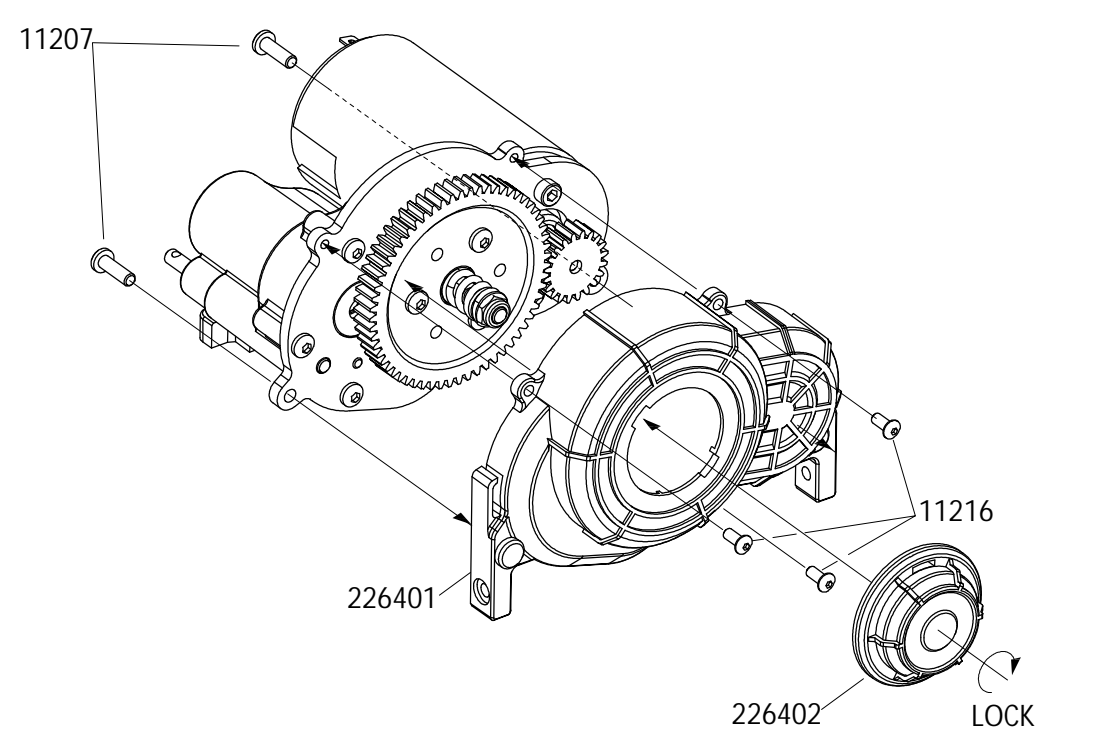
Final reduction ratio

Motor gear	16T	17T	18T	19T	20T
Fast	22.1	20.8	19.6	18.6	17.8
Slow	48.3	45.4	42.9	40.6	38.9

5
EMOX2

11207 
M3x10 X2

11216 
M2.5x6 X3




6 **EMOX2**

Tips:
 Test the gear mesh by connecting the ESC to the motor/gearbox assembly. If the gearbox is not operating smoothly or is creating excess noise, check the gear mesh prior to proceeding to the next step.

The diagram illustrates the electrical setup for testing the gear mesh. It shows an ESC (Electronic Speed Controller) connected to an ON/OFF Switch. The ESC is also connected to a motor/gearbox assembly and a battery. The battery is labeled as 'Battery (Not included)'. The ESC has several wires connected to it, including a power wire and a signal wire.

BAG(BB):

11205 
 M3x6 X4

7 **EMOX2**



95094 **x2**

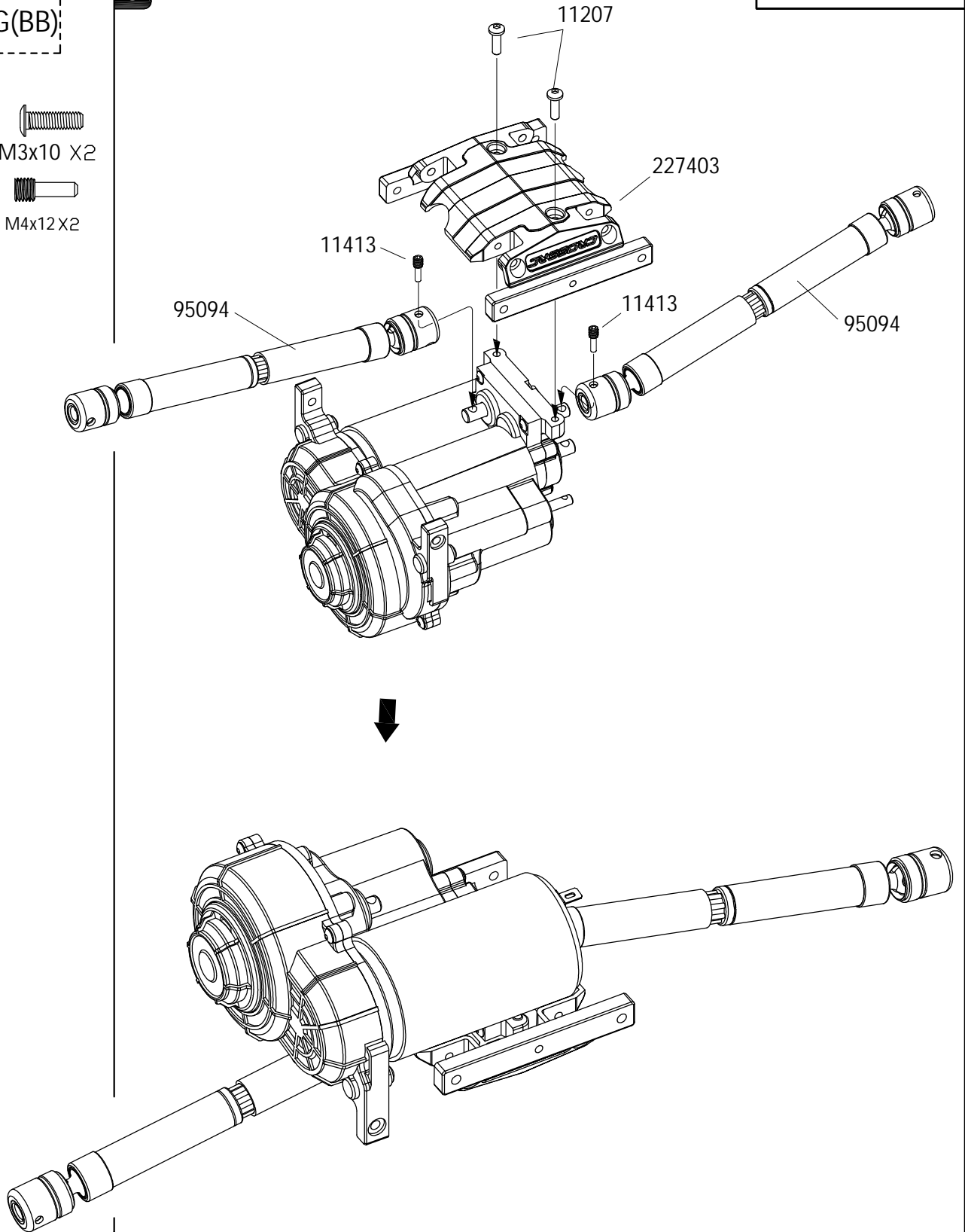
The diagram shows an exploded view of the motor/gearbox assembly. The parts are labeled with their respective part numbers: 11205, 227801, 41524, 41298, 41523, 227803, 41297, 58, 227802, 41298, 41523, 41297, 227801, and 11205. A 'THREAD LOCK' is applied to the screws (11205) that hold the motor housing together. The dimension '58' is indicated for the length of the gear shaft.

8

EMOX2

BAG(BB):




- 11207  M3x10 X2
- 11413  M4x12X2

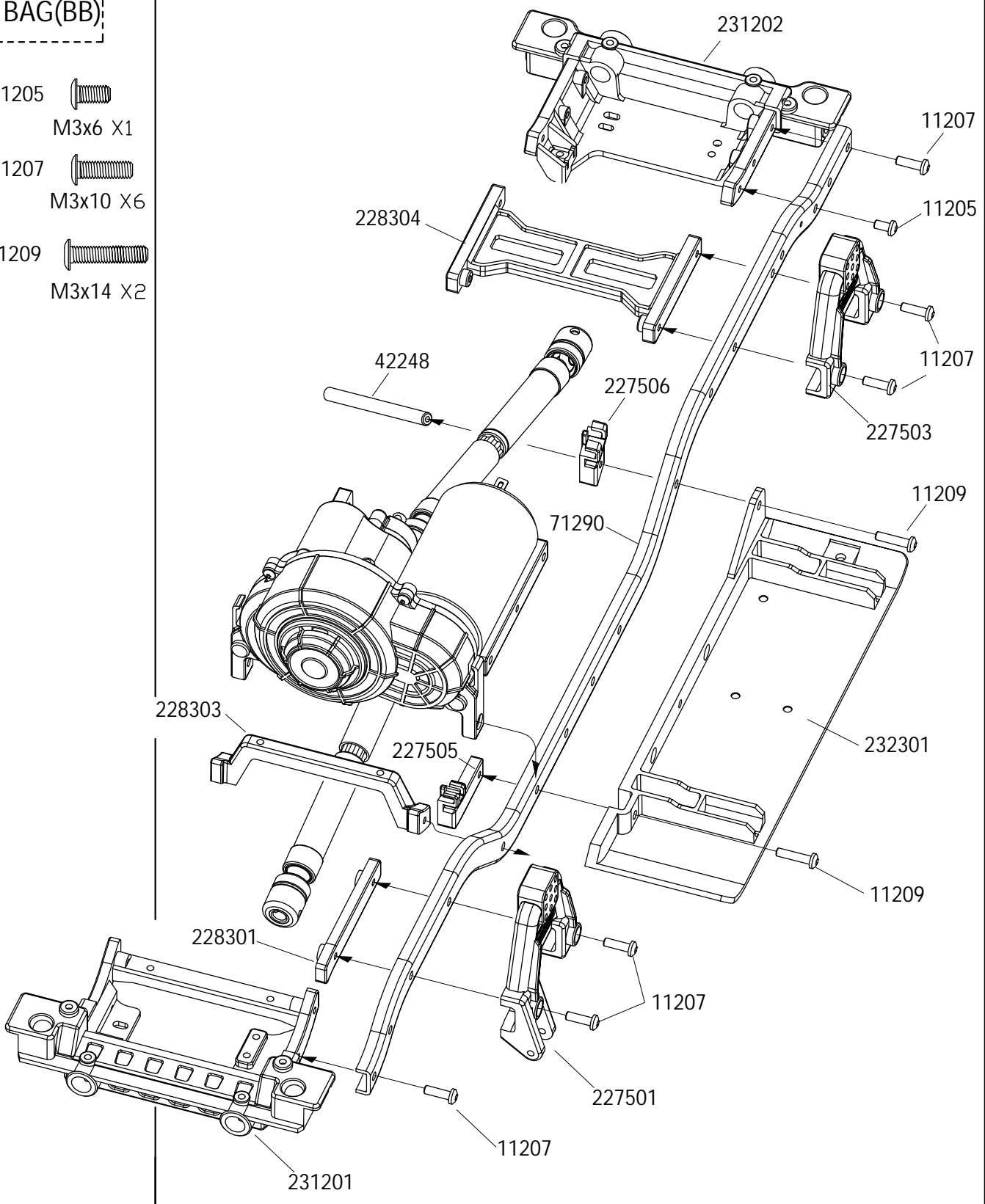


9

EMOX2

BAG(BB):


- 11205  M3x6 X1
- 11207  M3x10 X6
- 11209  M3x14 X2




10

EMOX2

BAG(BB):

11205 
M3x6 X1

11207 
M3x10 X6

11207
11205
11207

227504

71291


227508

11209

232302

227507

228302

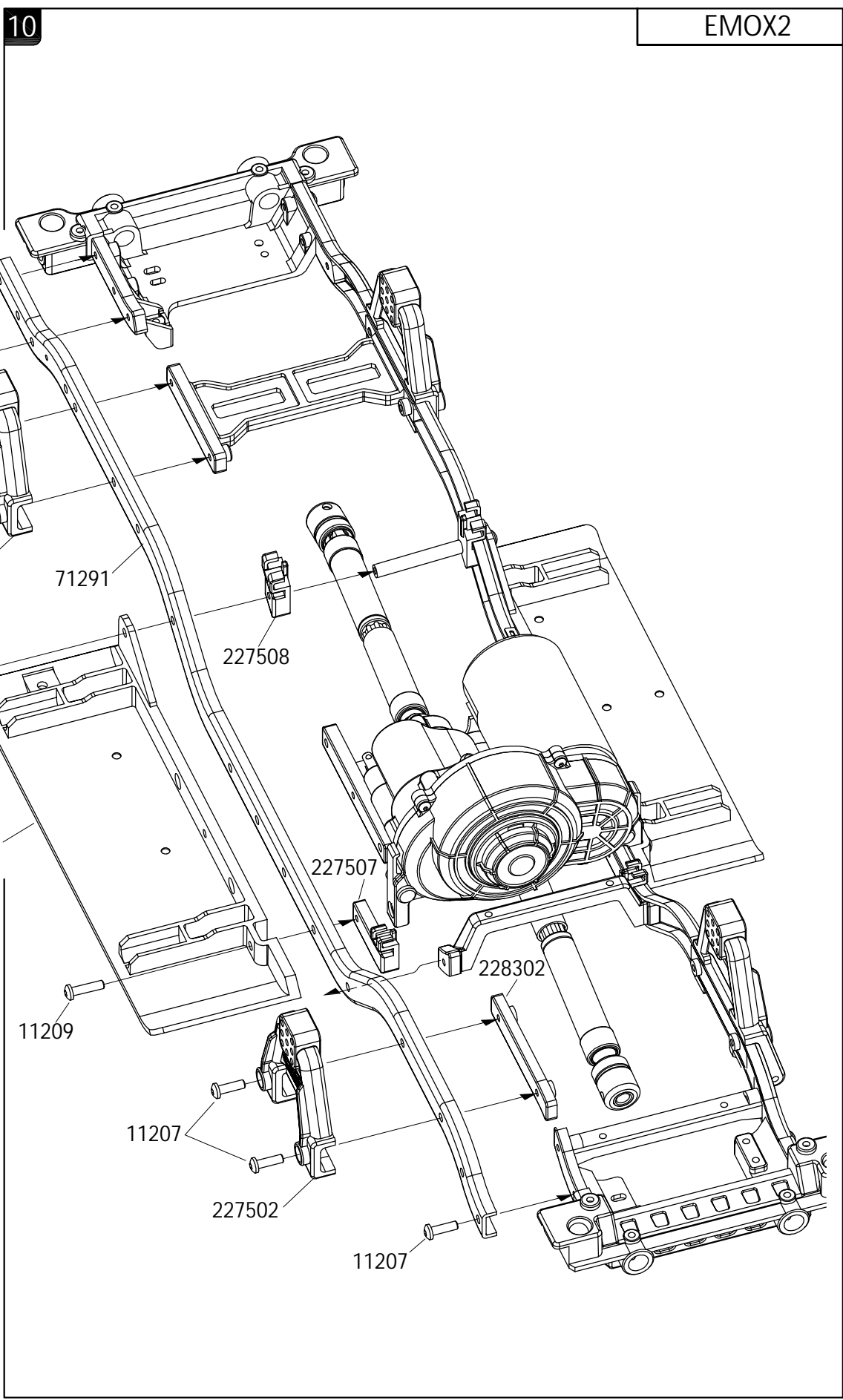
11209 
M3x14 X2

11209


11207

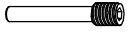
227502

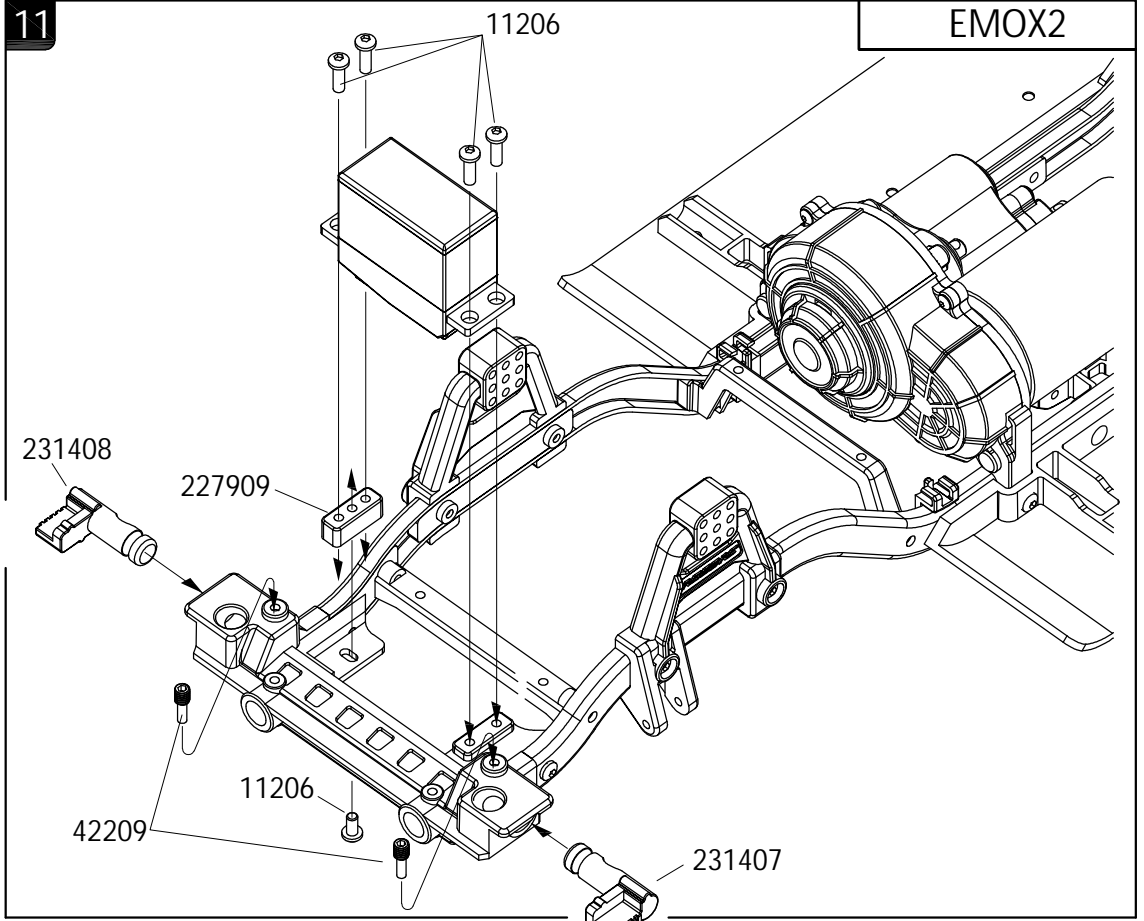
11207




BAG(BB)


11206  M3x8 X5

 42209 X2



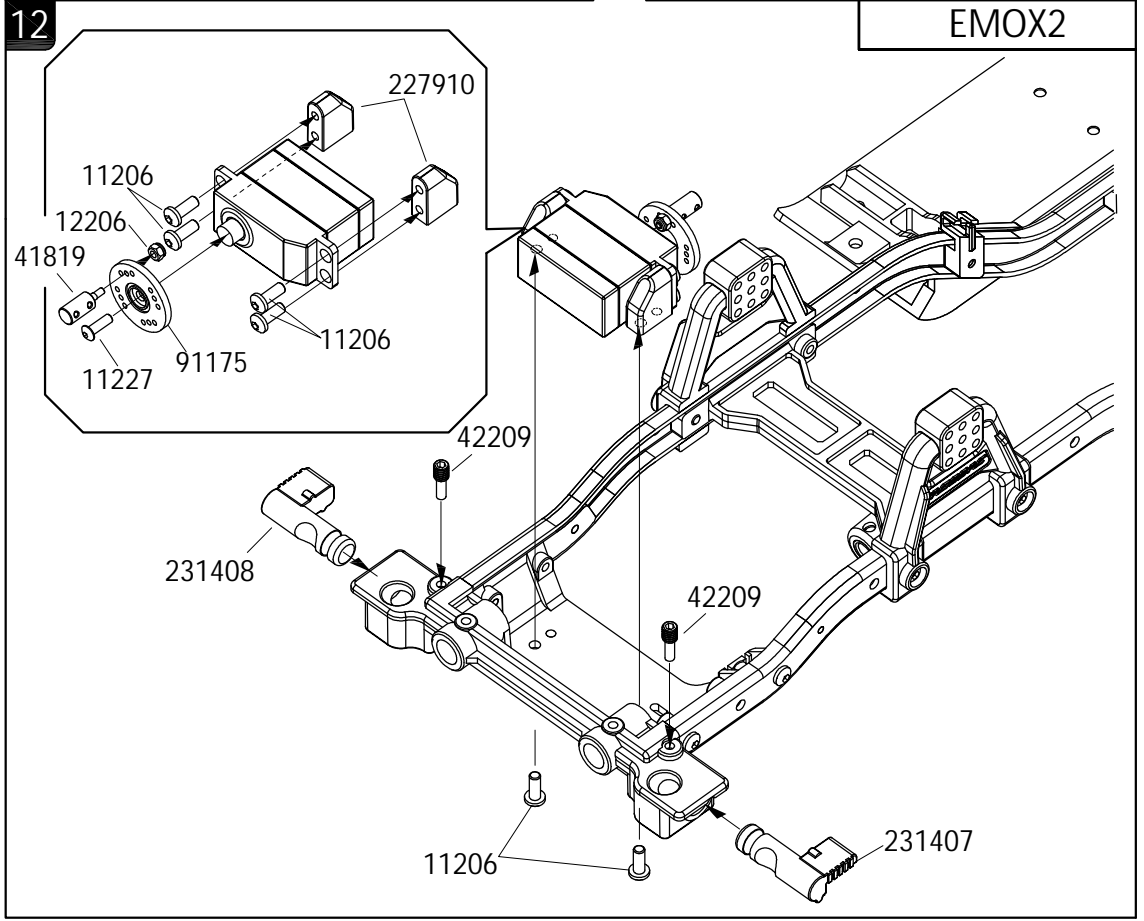
42209 X2
11206  M3x8 X6

BAG(CC)

11227  M2.5x8 X1

12206  M2 X1


 41819 X1




EMOX2


13

BAG(B)


13003  |
 $\phi 2.5 \times \phi 6 \times 0.4 \times 8$


$\phi 7 \times \phi 3.5 \times \phi 2$


50021 X12

$\phi 8 \times \phi 6 \times \phi 1$



17001 X4

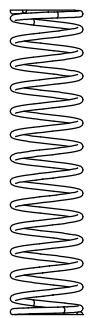
11133 
 M2x12 X4

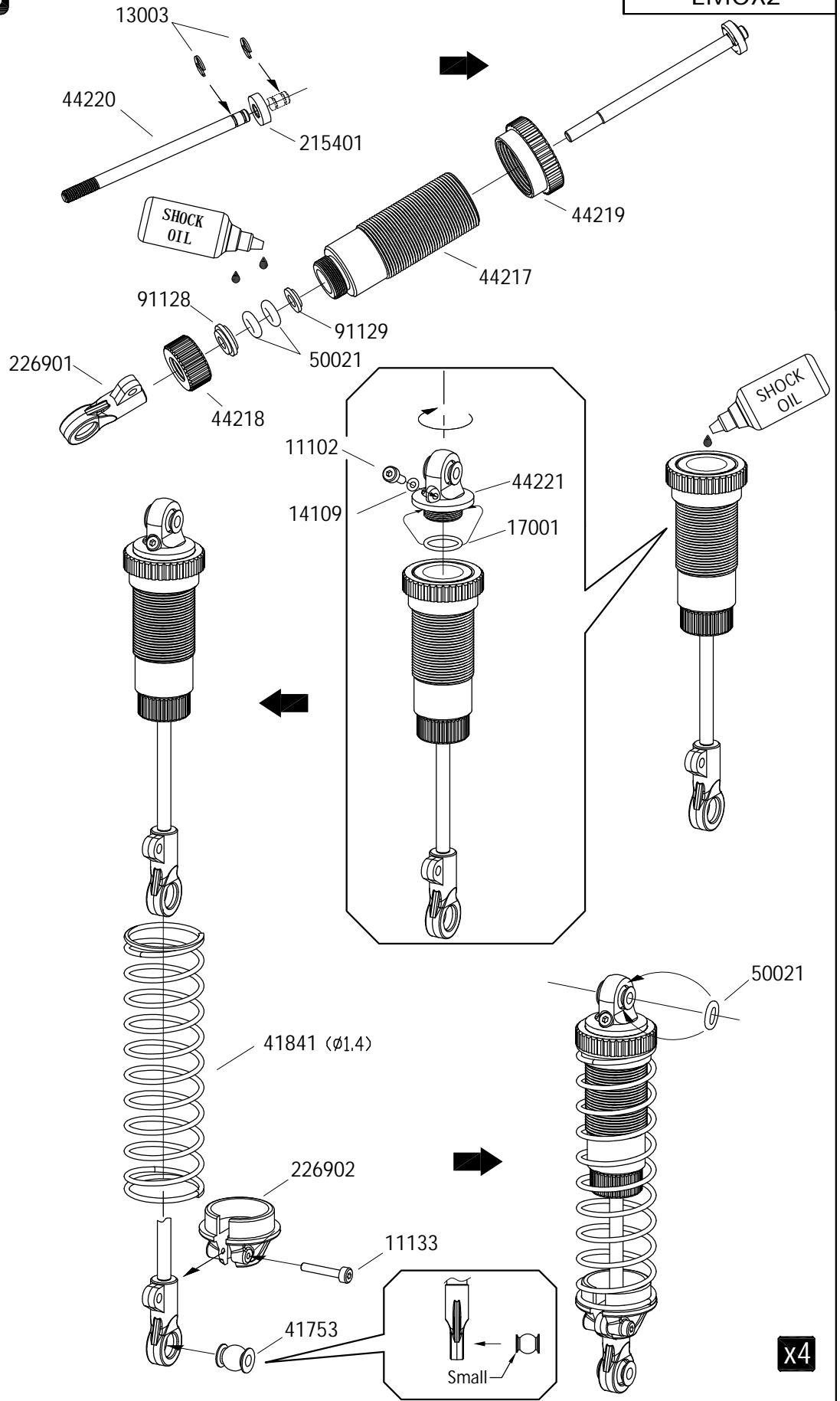
11102 
 M2x6 X4

$\phi 4 \times \phi 2 \times 0.5 \times 4$

 14109



 41753 X4



 41841 X4($\phi 1.4$)

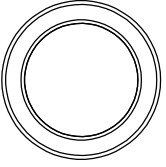


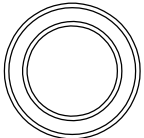
X4

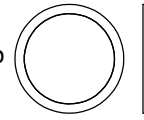
BAG(D)

11316  M2.5x10 X2


11227  M2.5x8 X8

15015  $\phi 15 \times \phi 21 \times 4$ X2


15016  $\phi 12 \times \phi 18 \times 4$ X2


75026  $\phi 12 \times \phi 15 \times 0.2$ X2

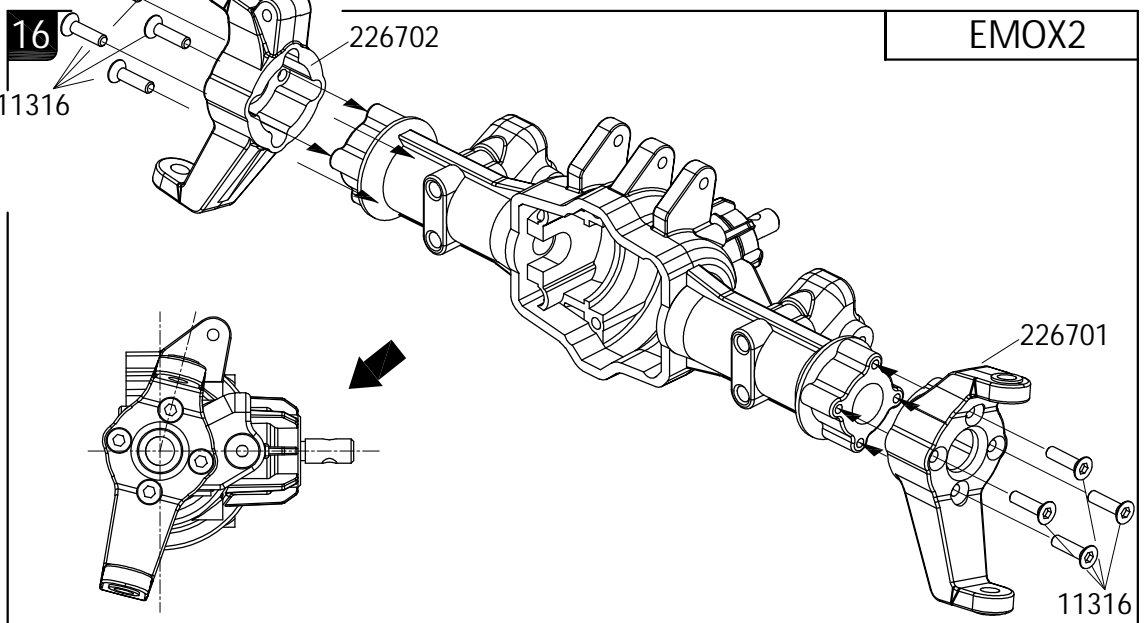
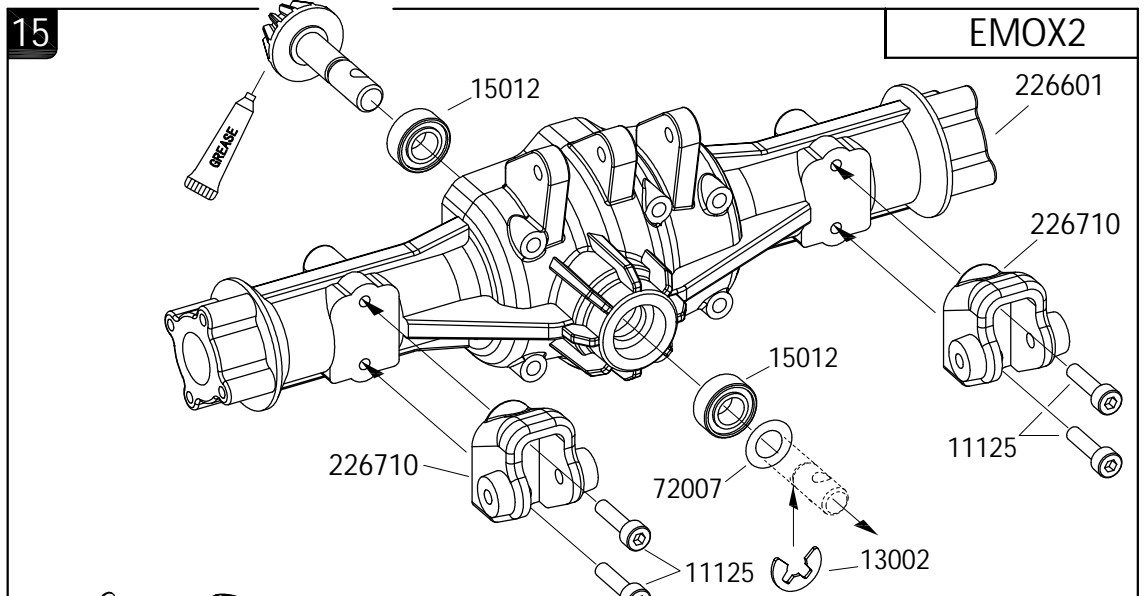
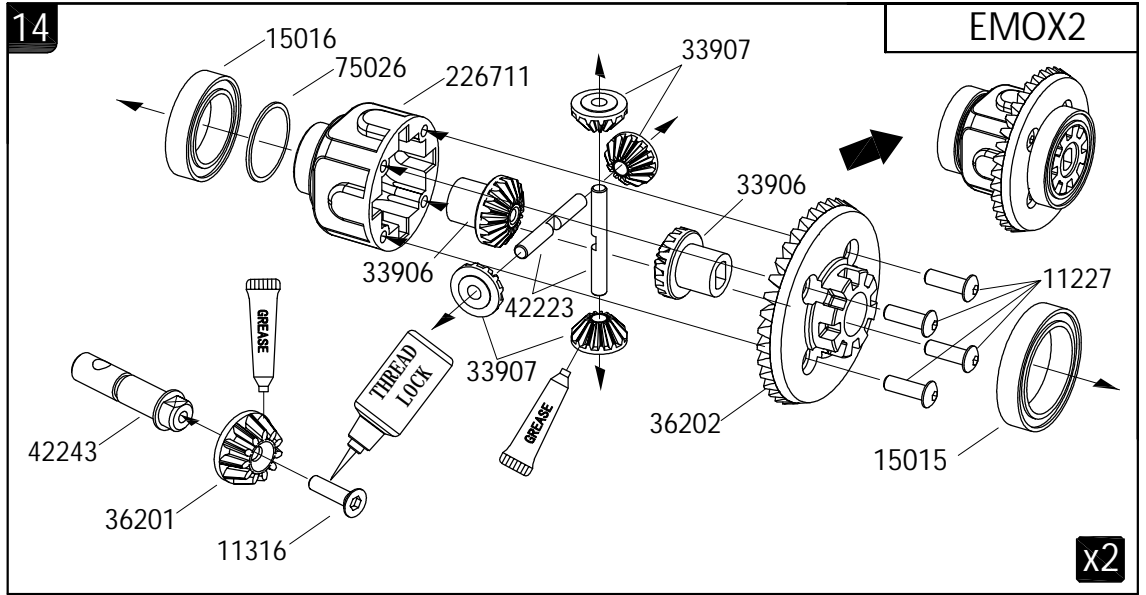
15012  $\phi 5 \times \phi 10 \times 4$ X2

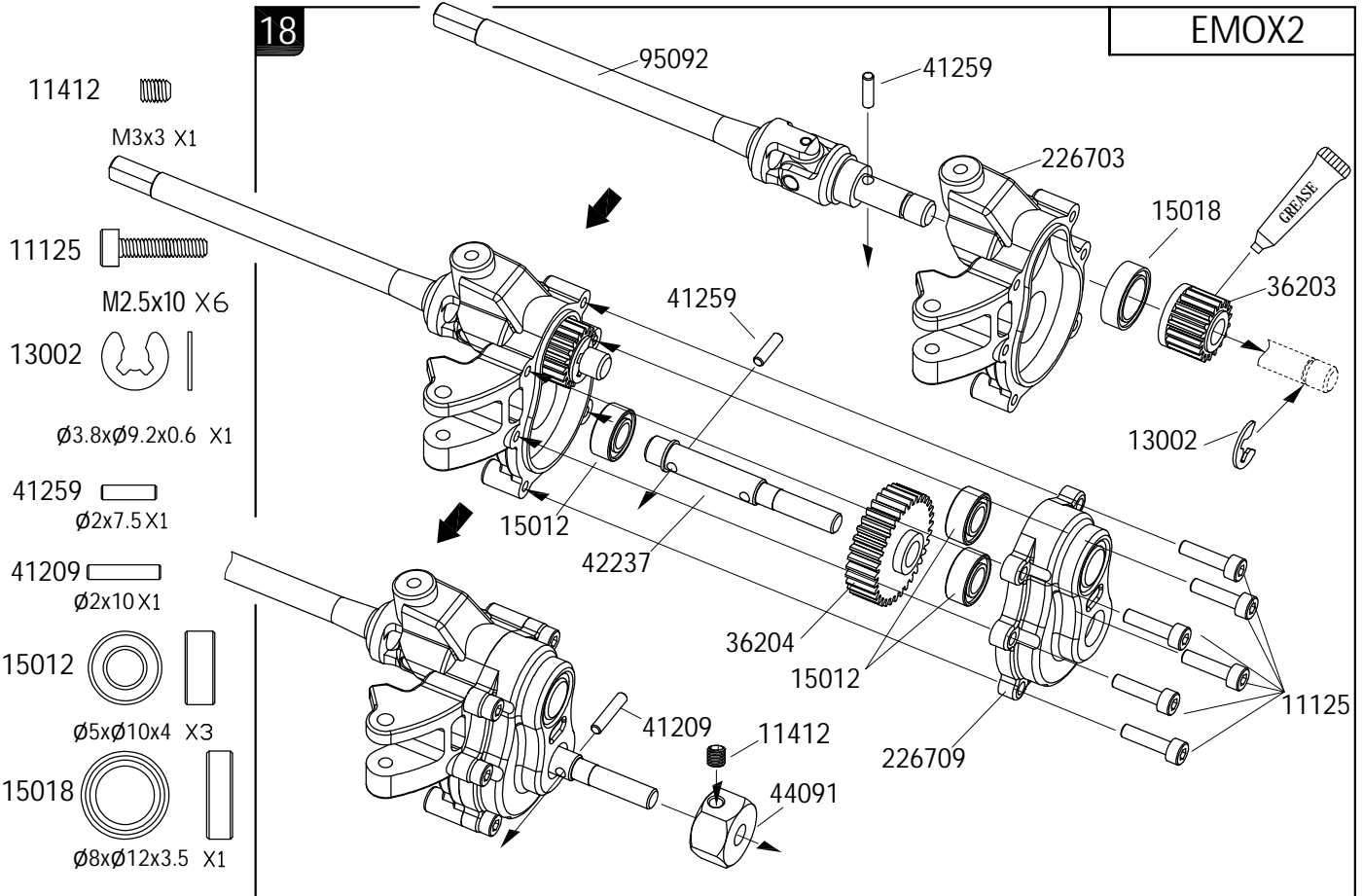
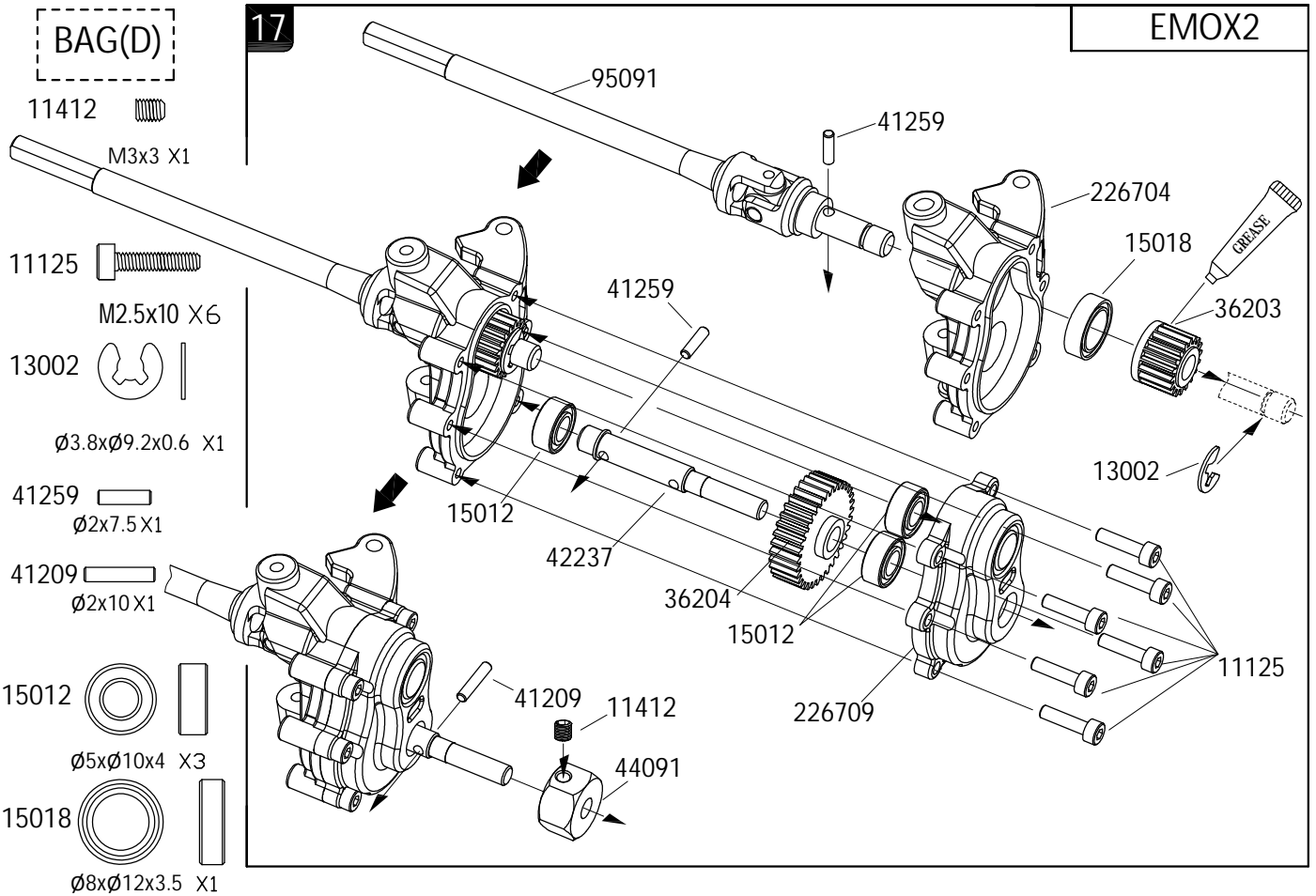
13002  $\phi 3.8 \times \phi 9.2 \times 0.6$ X1

72007  $\phi 5 \times \phi 8 \times 0.3$ X1

11125  M2.5x10 X4

11316  M2.5x10 X8




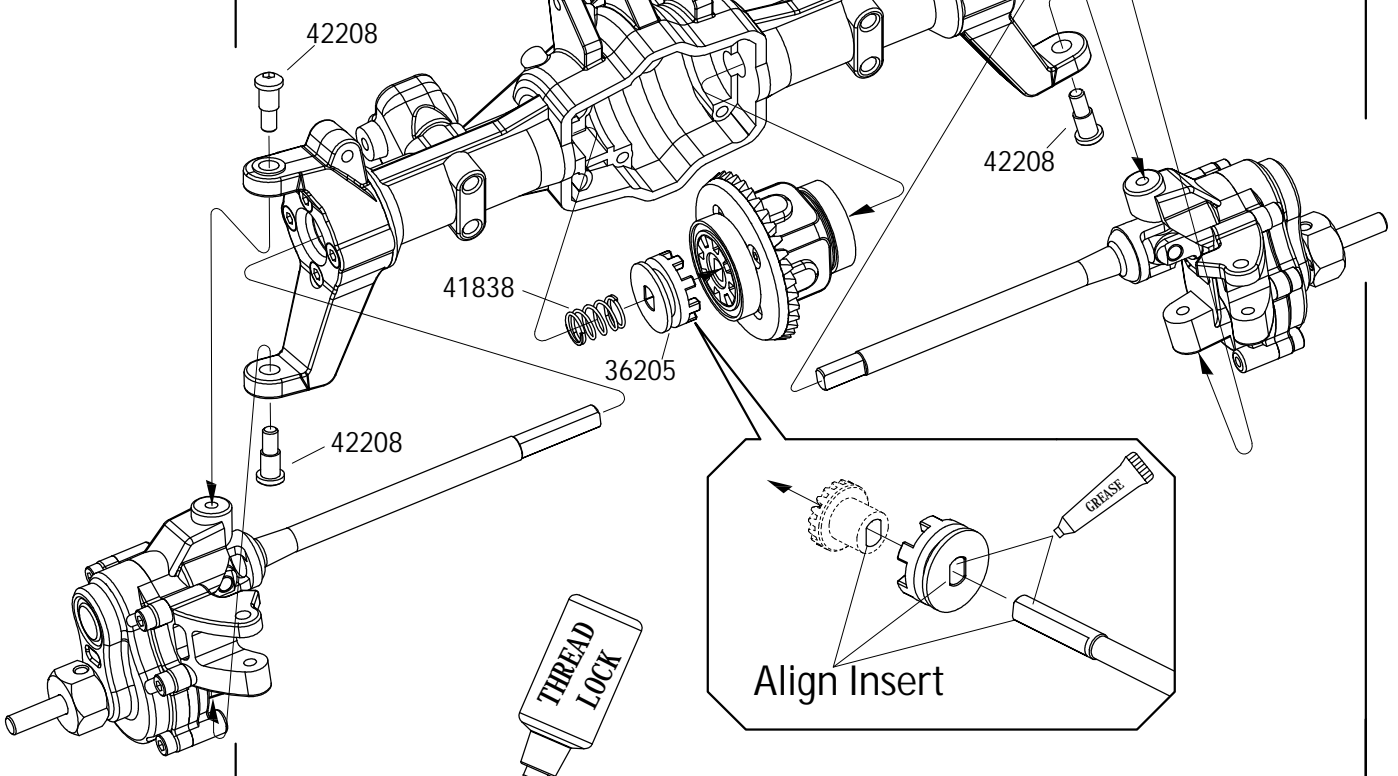


EMOX2

19


BAG(D)

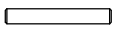
42208 
M3x10 X4




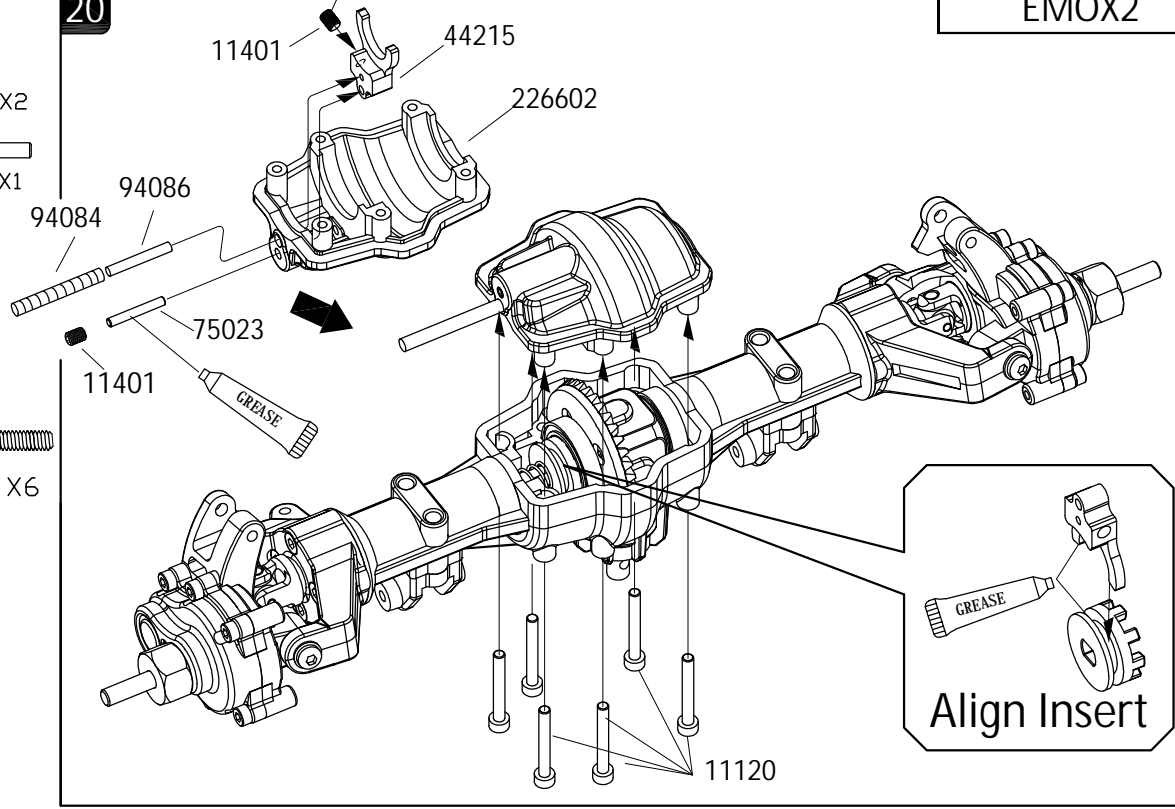
20

EMOX2

11401 
M3x4 X2

75023 
Ø2x14 X1








11120 
M2.5x20 X6

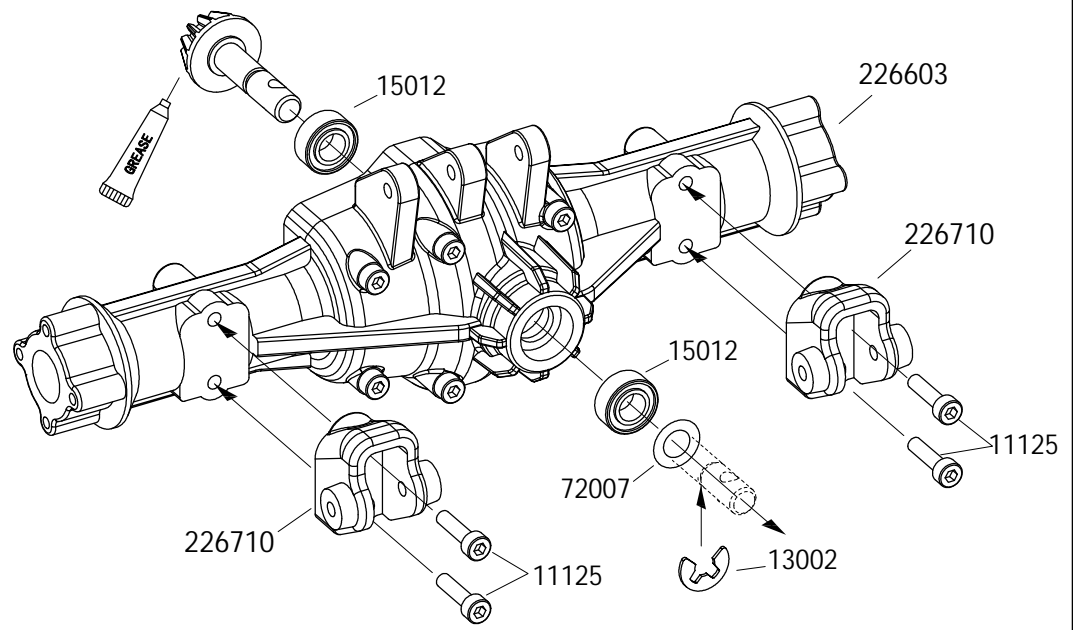


EMOX2

21

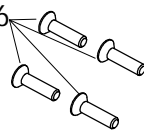

BAG(D)

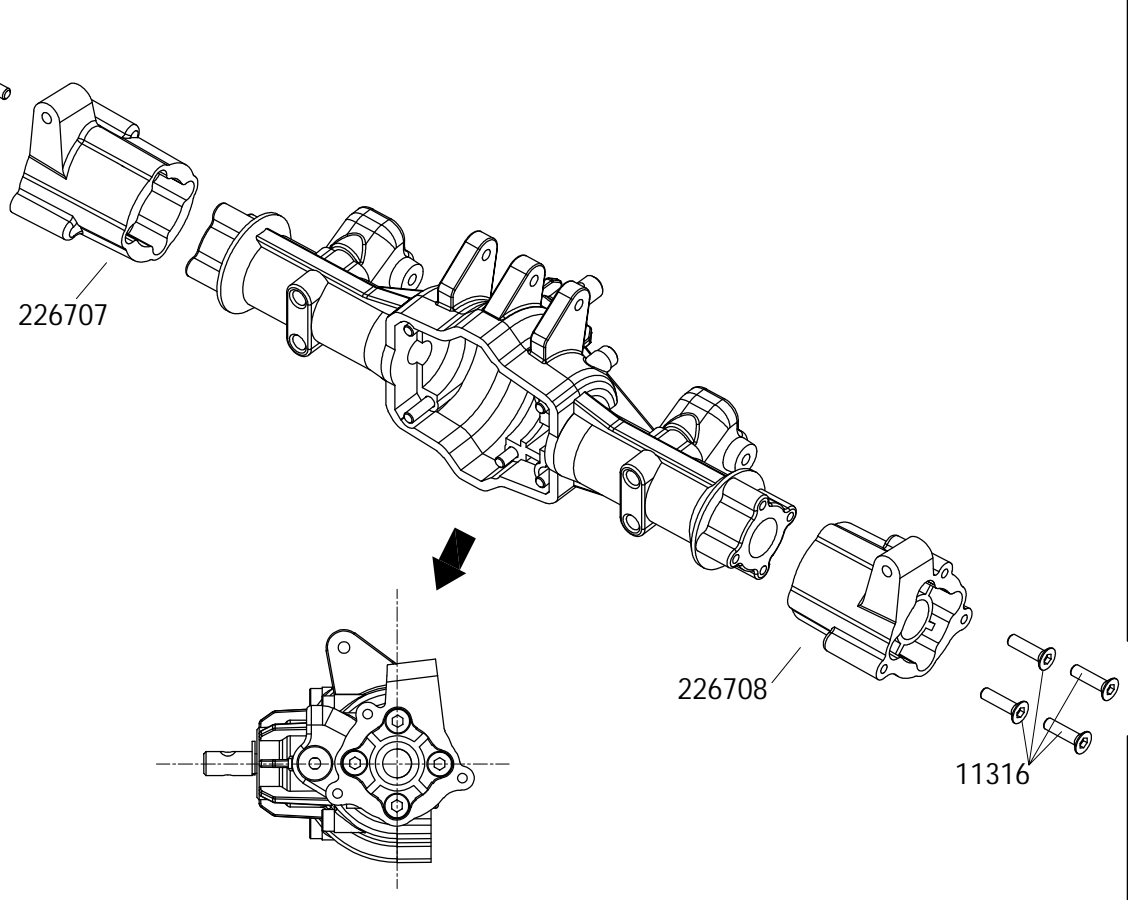
- 15012  
 $\varnothing 5 \times \varnothing 10 \times 4$ X2
- 13002  
 $\varnothing 3.8 \times \varnothing 9.2 \times 0.6$ X1
- 72007  
 $\varnothing 5 \times \varnothing 8 \times 0.3$ X1
- 11125 
M2.5x10 X4



22

EMOX2







- 11316 
- 11316 
M2.5x10 X8

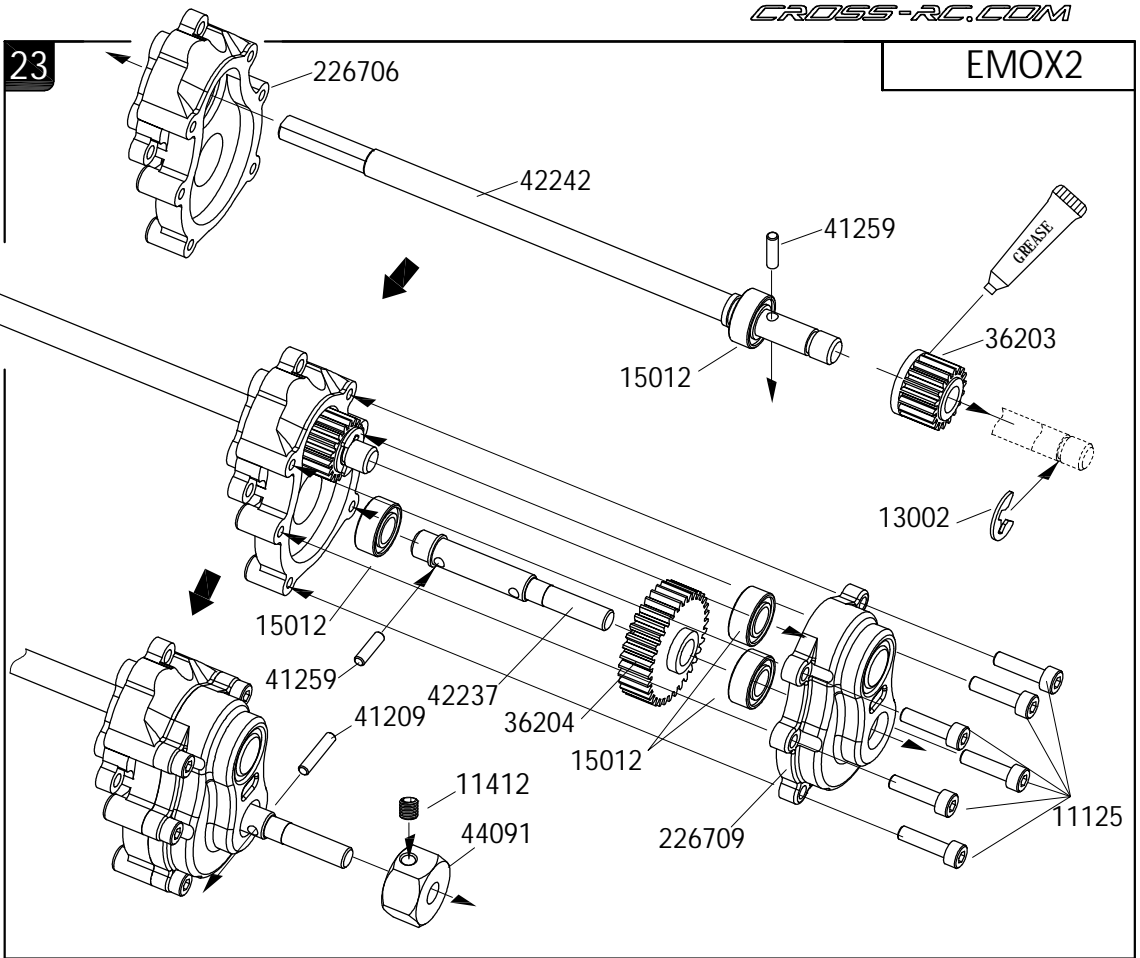


EMOX2

23







BAG(D)

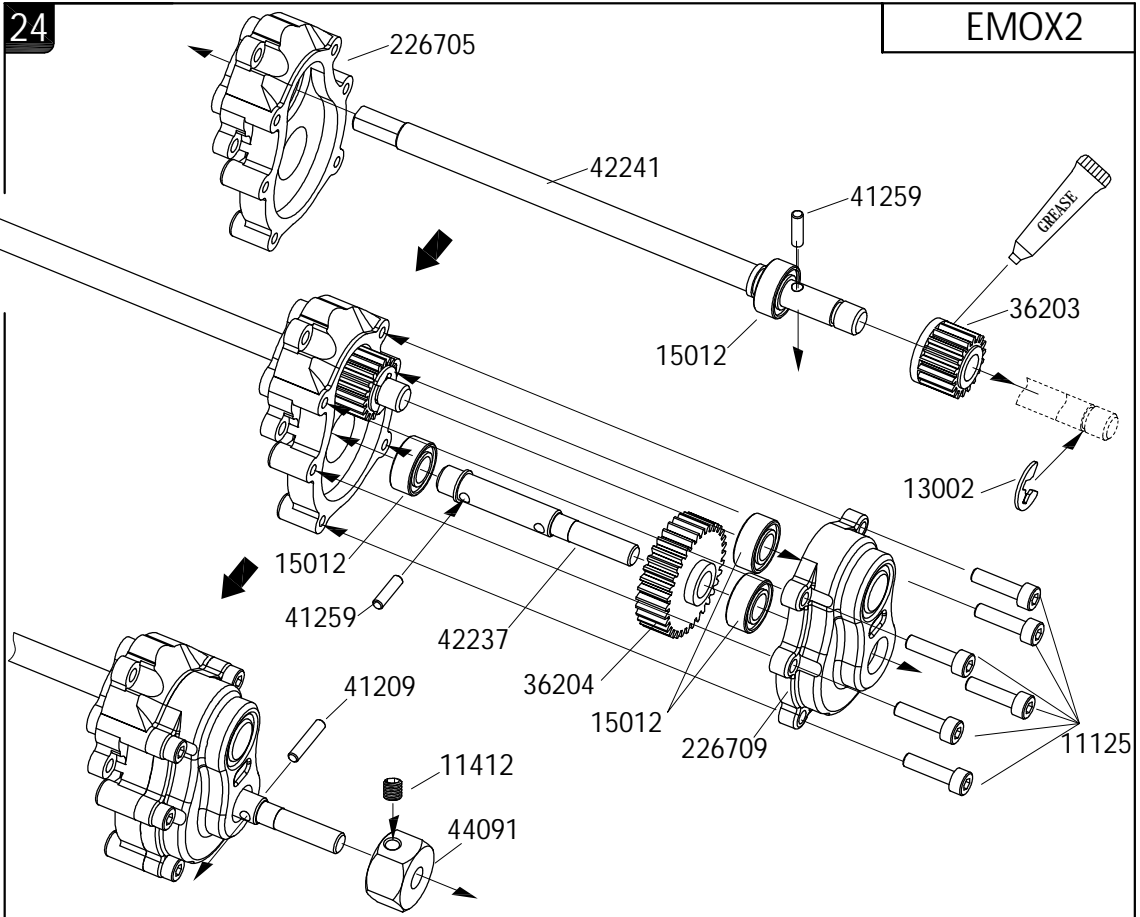
- 11412  M3x3 X1
- 15012  $\emptyset 5 \times \emptyset 10 \times 4$ X4
- 11125  M2.5x10 X6
- 13002  $\emptyset 3.8 \times \emptyset 9.2 \times 0.6$ X1
- 41259  $\emptyset 2 \times 7.5$ X1
- 41209  $\emptyset 2 \times 10$ X1



24

EMOX2


- 11412  M3x3 X1
- 15012  $\emptyset 5 \times \emptyset 10 \times 4$ X4
- 11125  M2.5x10 X6
- 13002  $\emptyset 3.8 \times \emptyset 9.2 \times 0.6$ X1
- 41259  $\emptyset 2 \times 7.5$ X1
- 41209  $\emptyset 2 \times 10$ X1



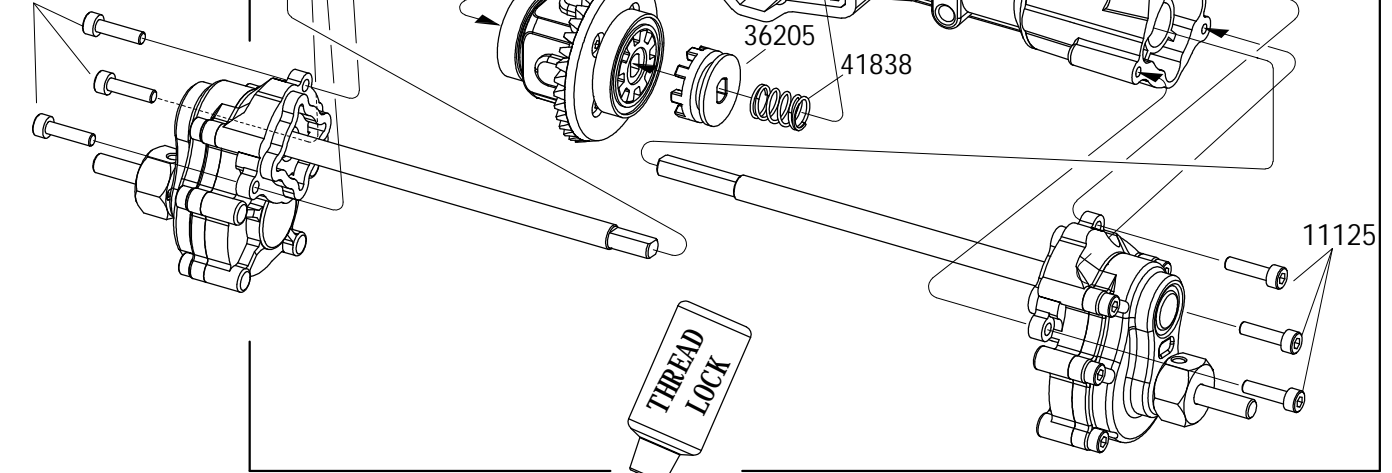
EMOX2

25

BAG(D)

11125 
M2.5x10 X6

11125



EMOX2

26

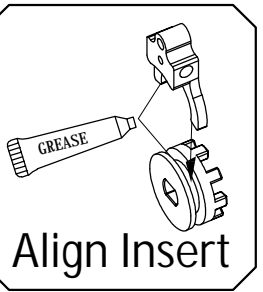
11401 44215


226602

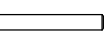
94084 94086


11401 75023

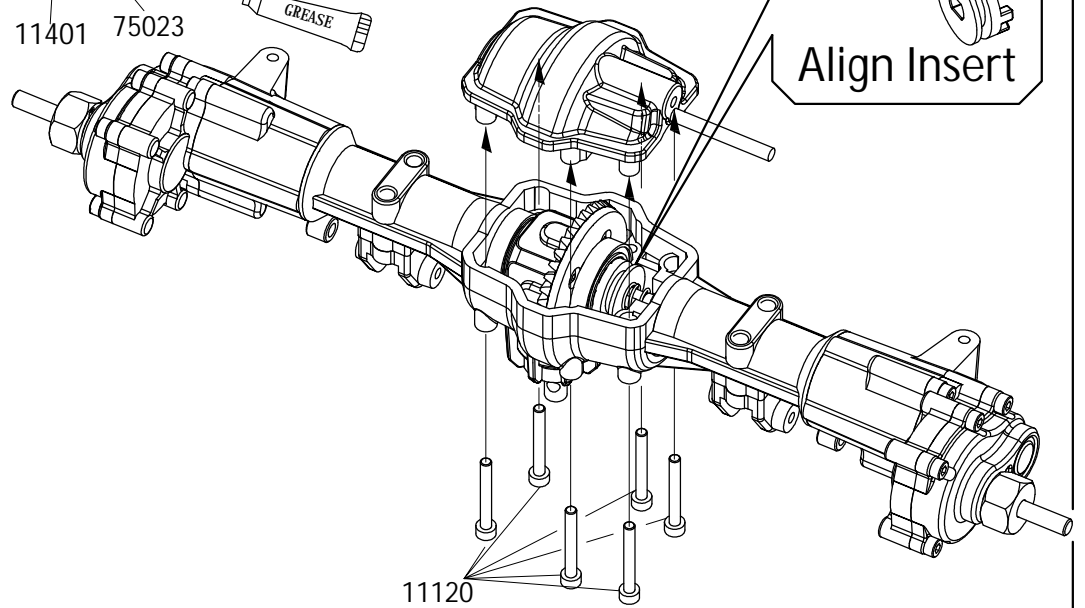
GREASE



11401 
M3x4 X2

75023 
Ø2x14 X1

11120 
M2.5x20 X6

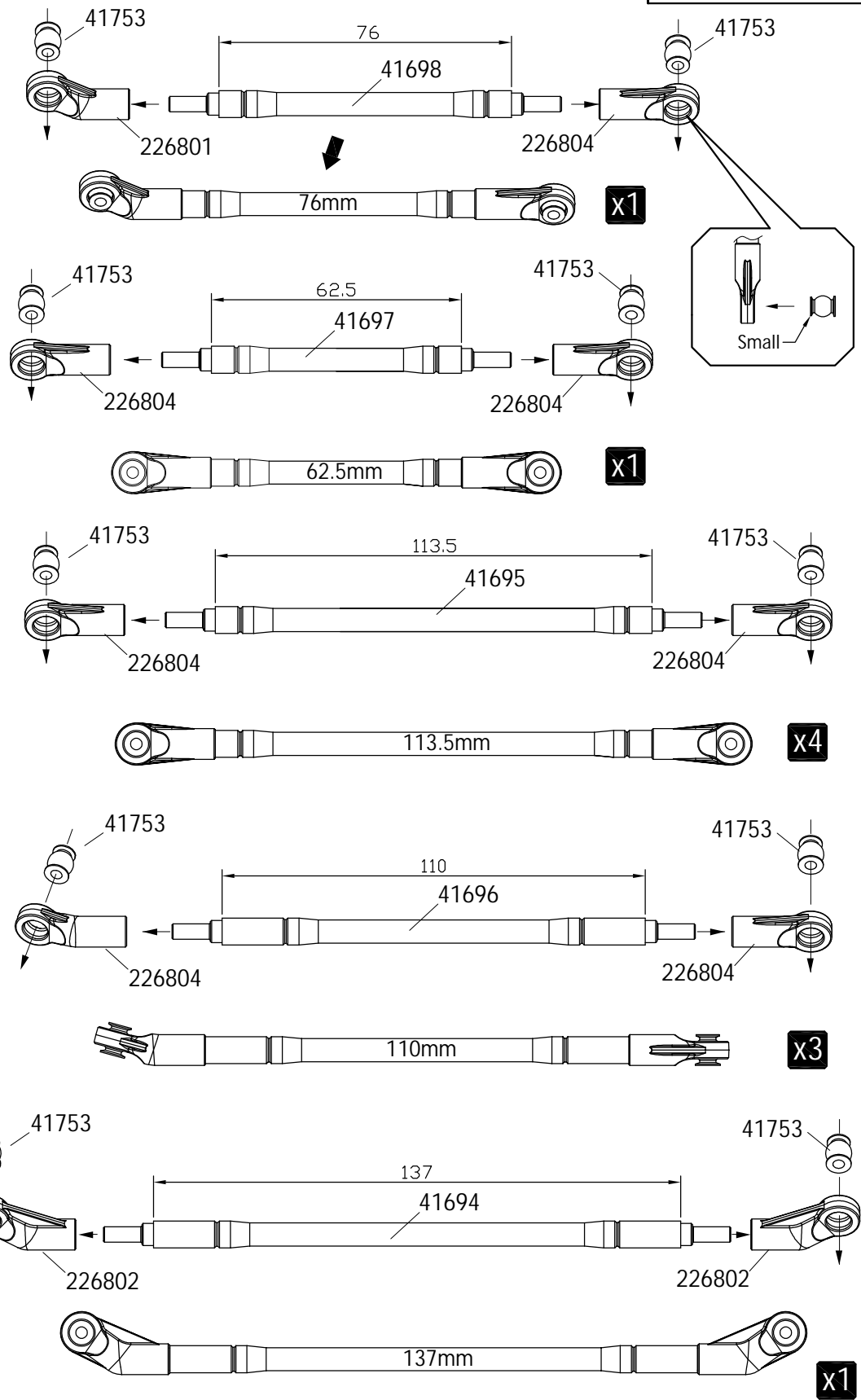


27

EMOX2

BAG(F)
BAG(G)



41753 X20

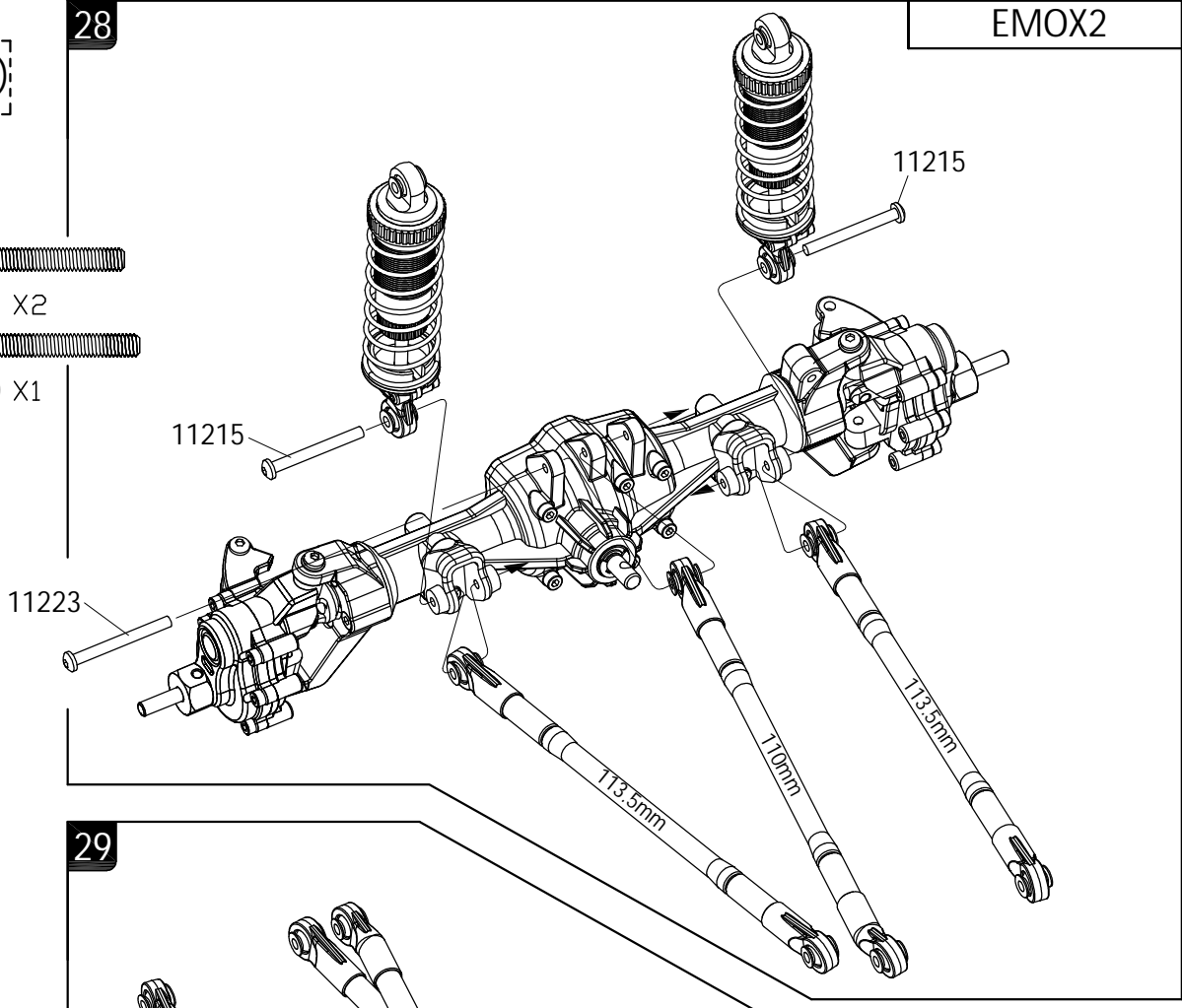


BAG(BB)

28



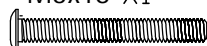
EMOX2

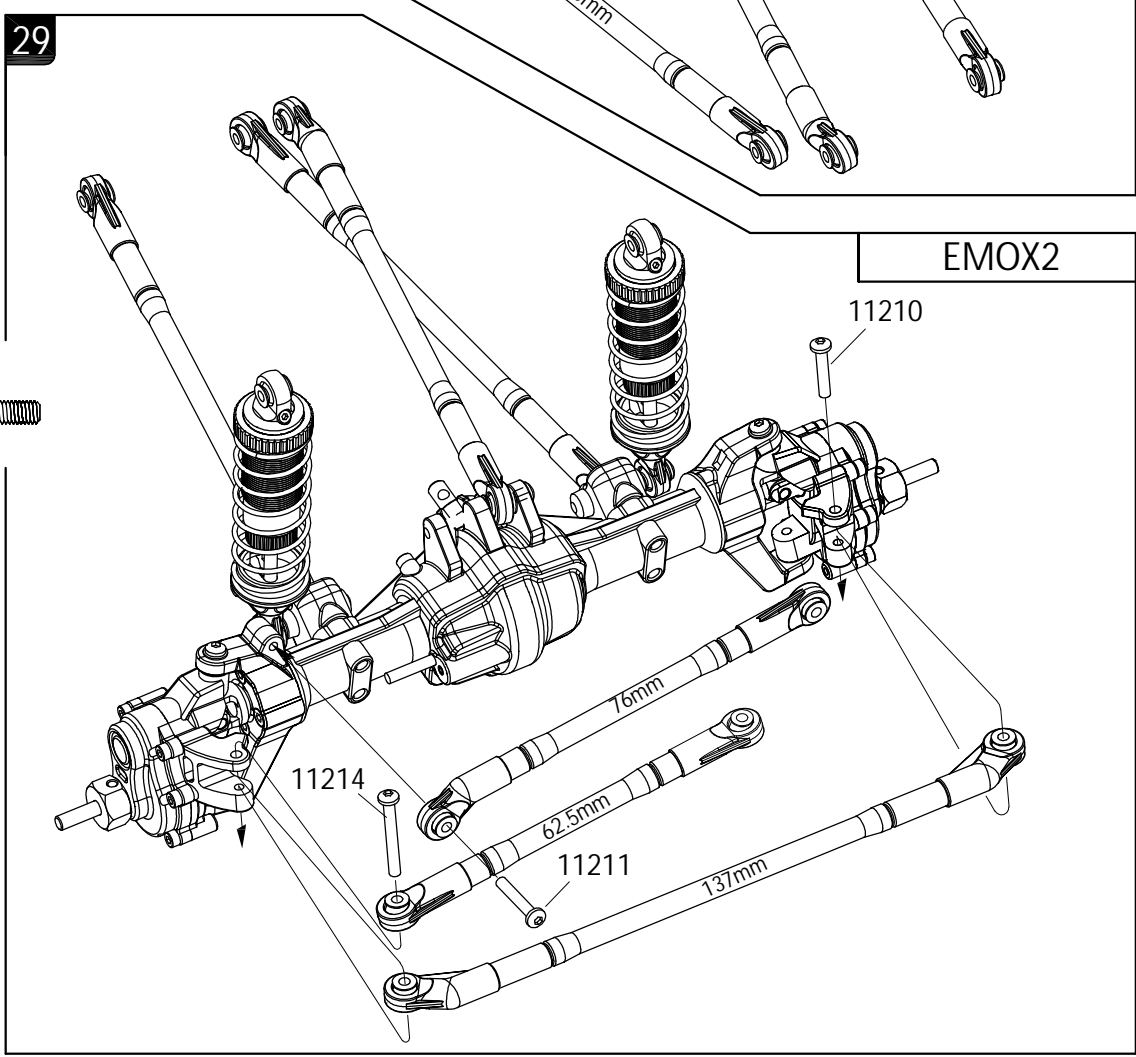
- 11215  M3x28 X2
- 11223  M3x30 X1



29

EMOX2

- 11210  M3x16 X1
- 11211  M3x18 X1
- 11214  M3x25 X1

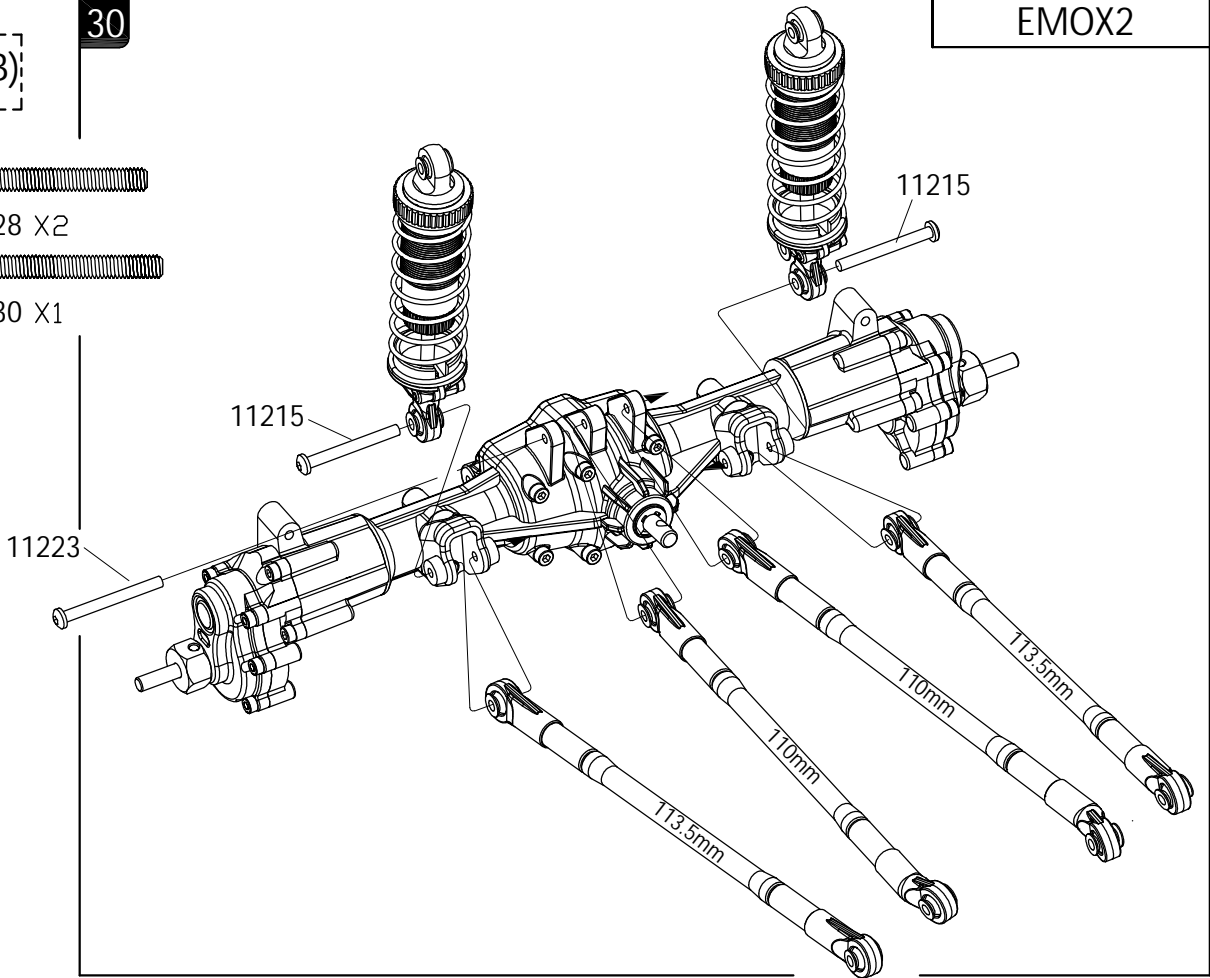


30

EMOX2

BAG(BB)

- 11215 M3x28 X2
- 11223 M3x30 X1

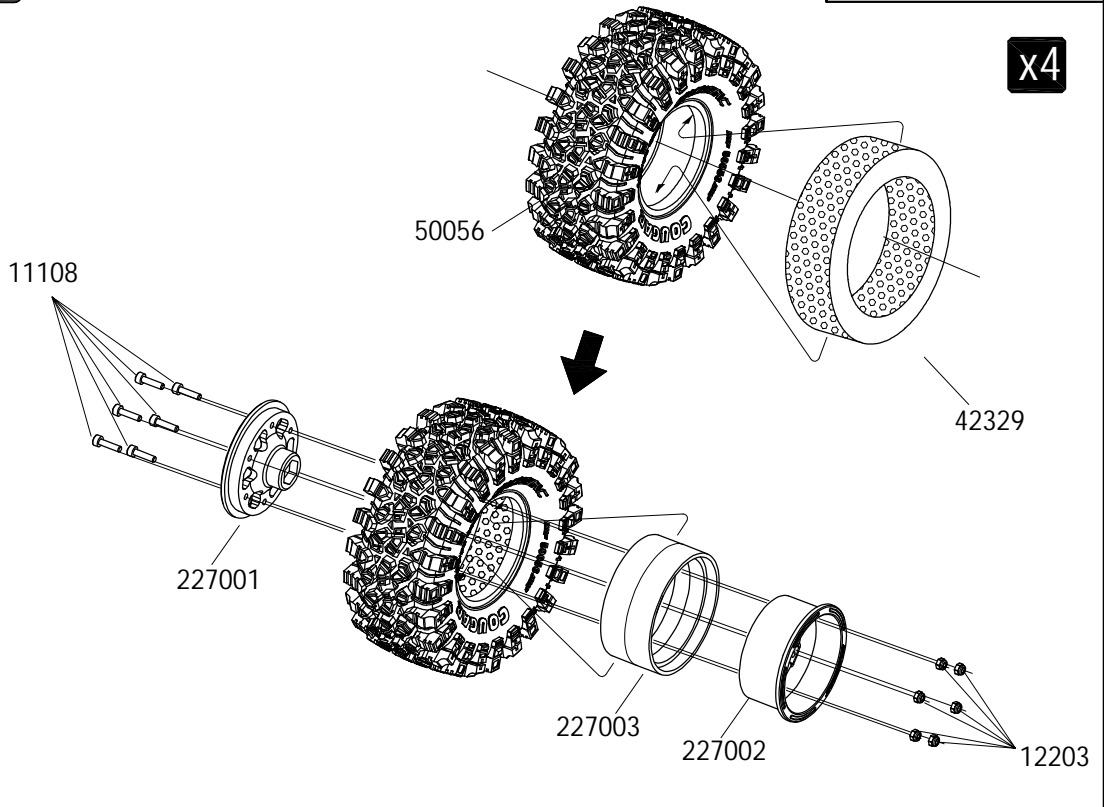


31








EMOX2

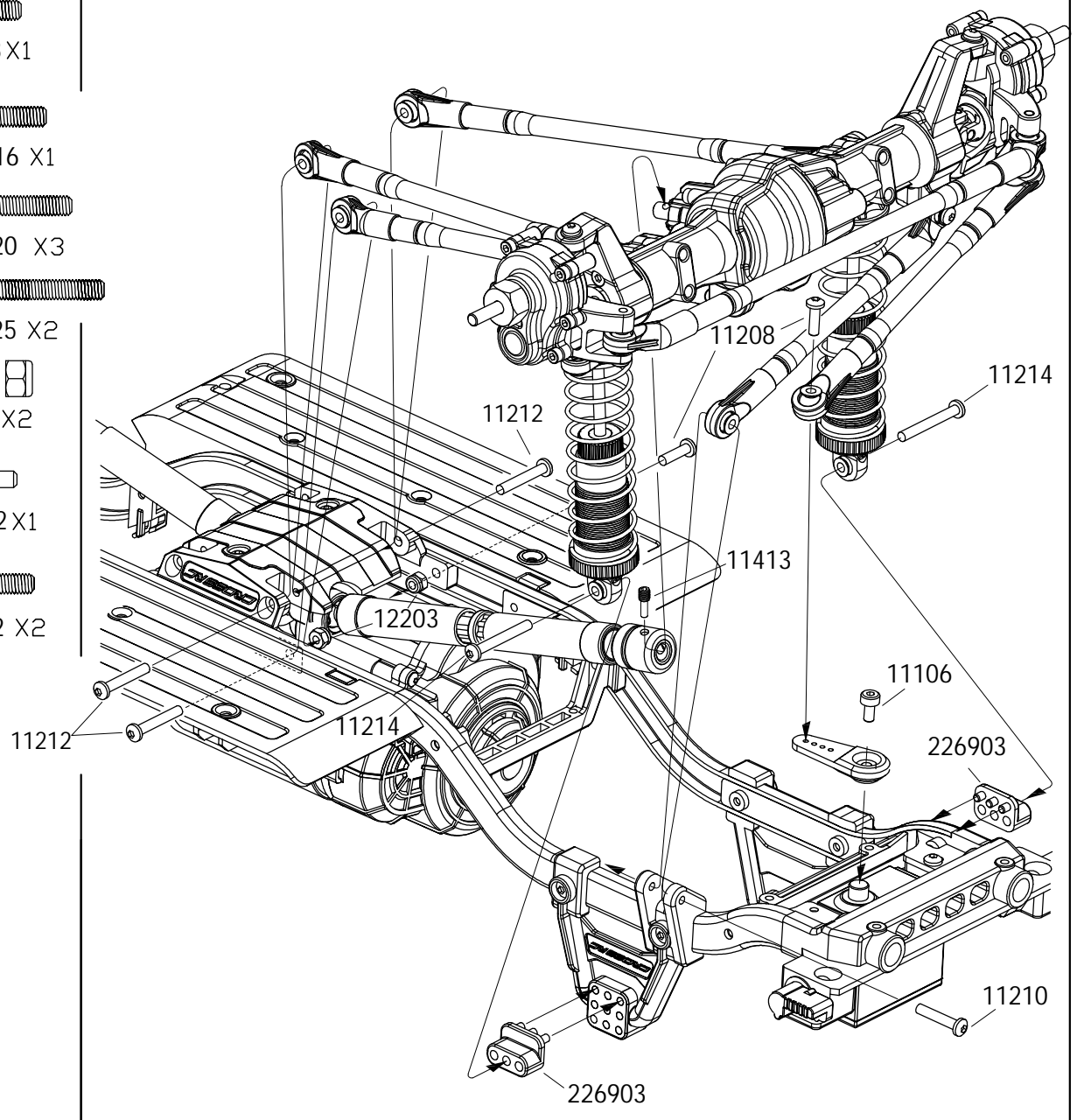
BAG(A)

- 11108 M3x12 X24
- 12203 M3 X24





BAG(BB)


- 11106  M3x8 X1
- 11210  M3x16 X1
- 11212  M3x20 X3
- 11214  M3x25 X2
- 12203  M3 X2
- 11413  M4x12 X1
- 11208  M3x12 X2




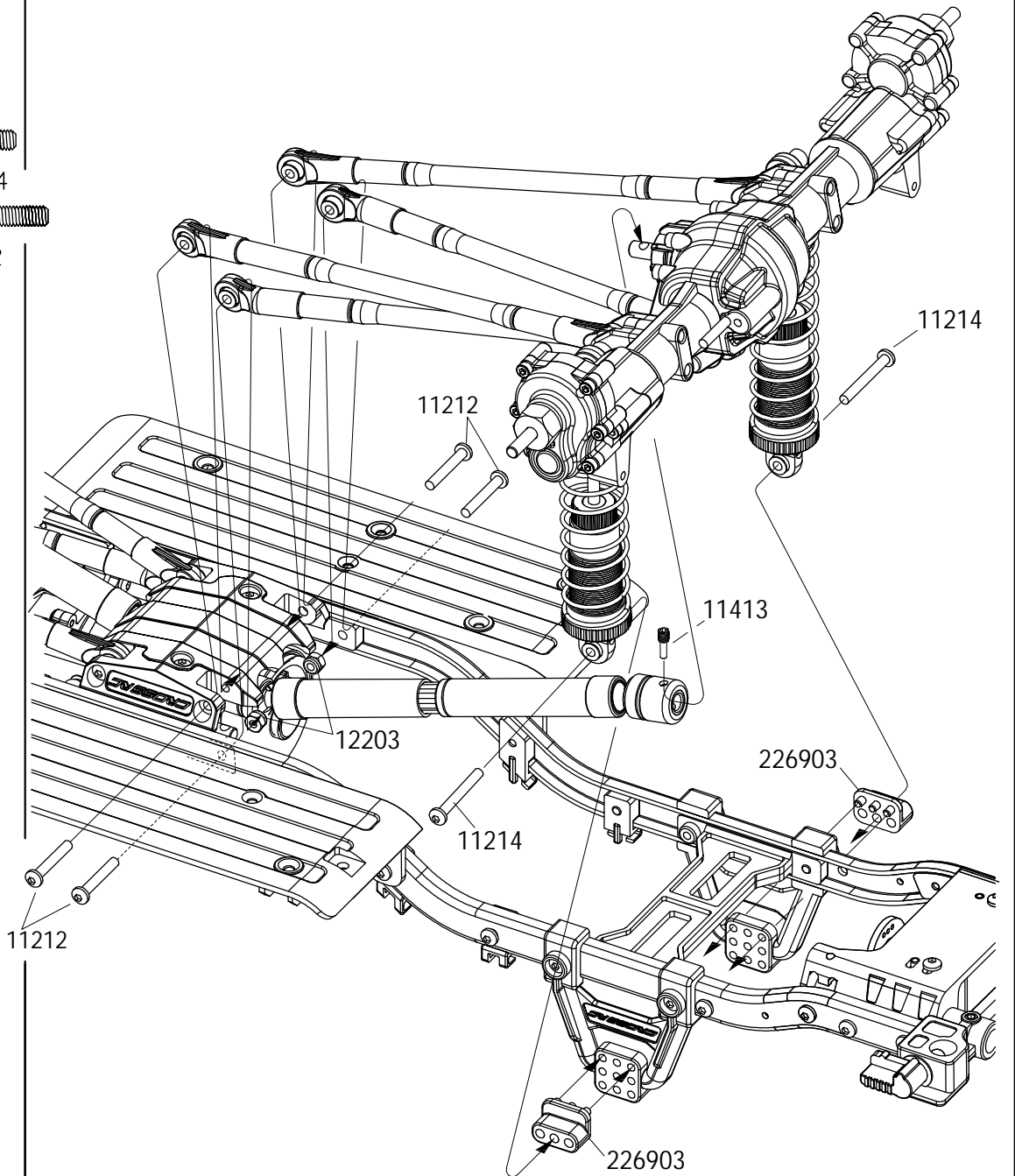
BAG(BB)

11212  M3x20 X4



11214  M3x25 X2

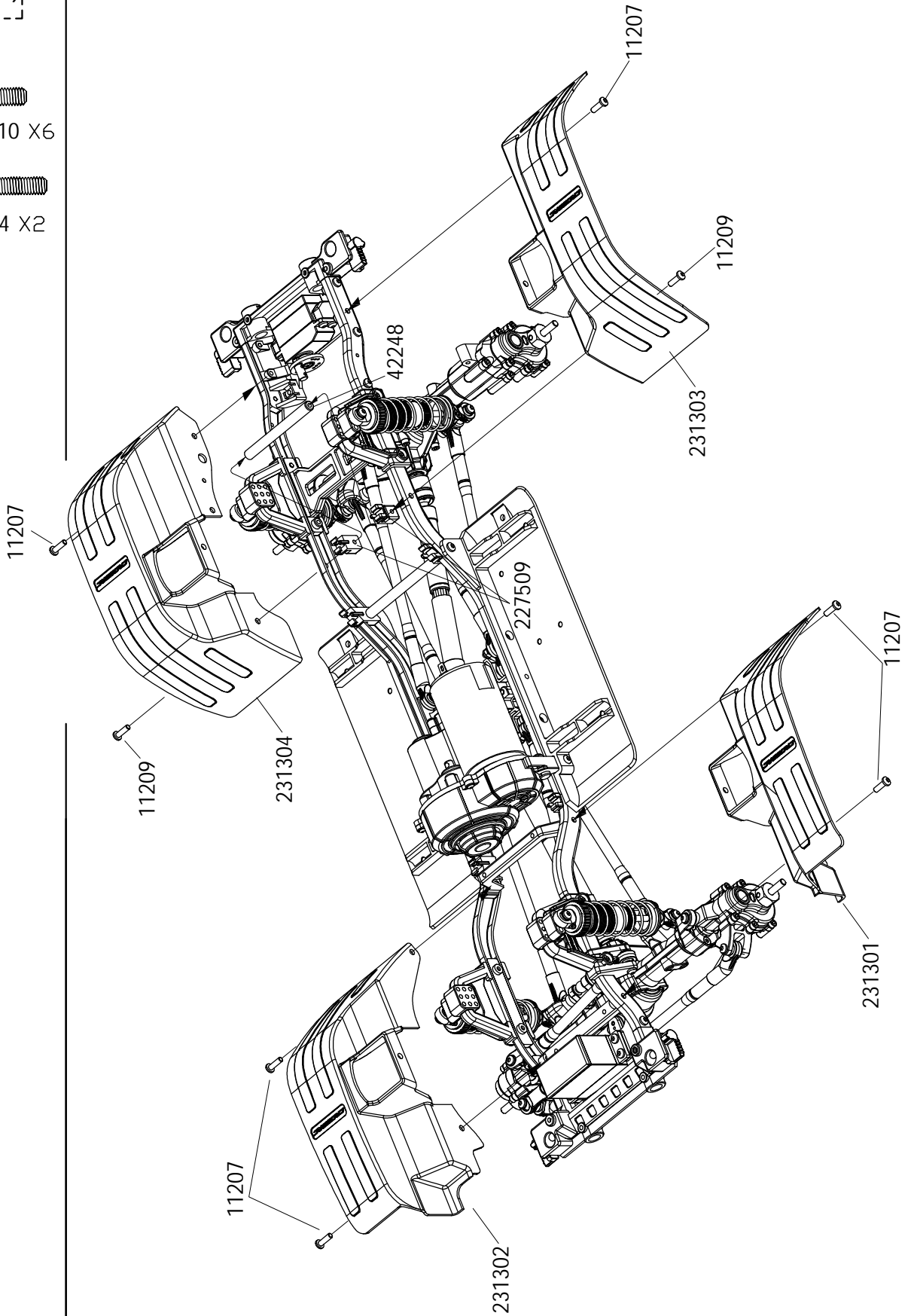
12203  M3 X2

11413  M4x12 X1







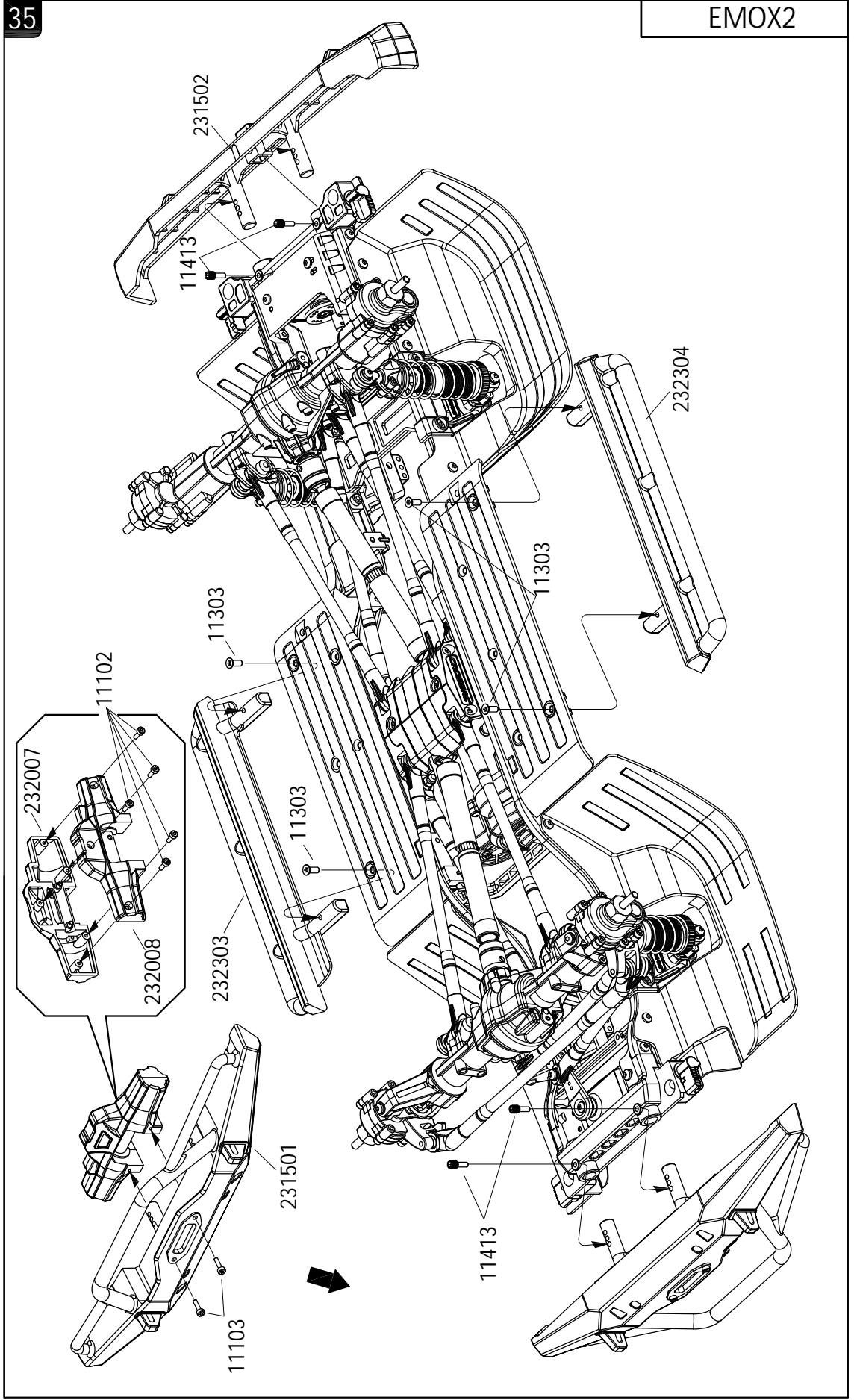
BAG(BB)

- 11207 
M3x10 X6
- 11209 
M3x14 X2



BAG(BB)


- 11303  M3x8 X4
- 11413  M4x12X4
- 11102  M2x6 X4
- 11103  M2x8 X2




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EMOX2


BAG(BB)

11206 
M3x8 X10

BAG(CC)


11227 
M2.5x8 X2

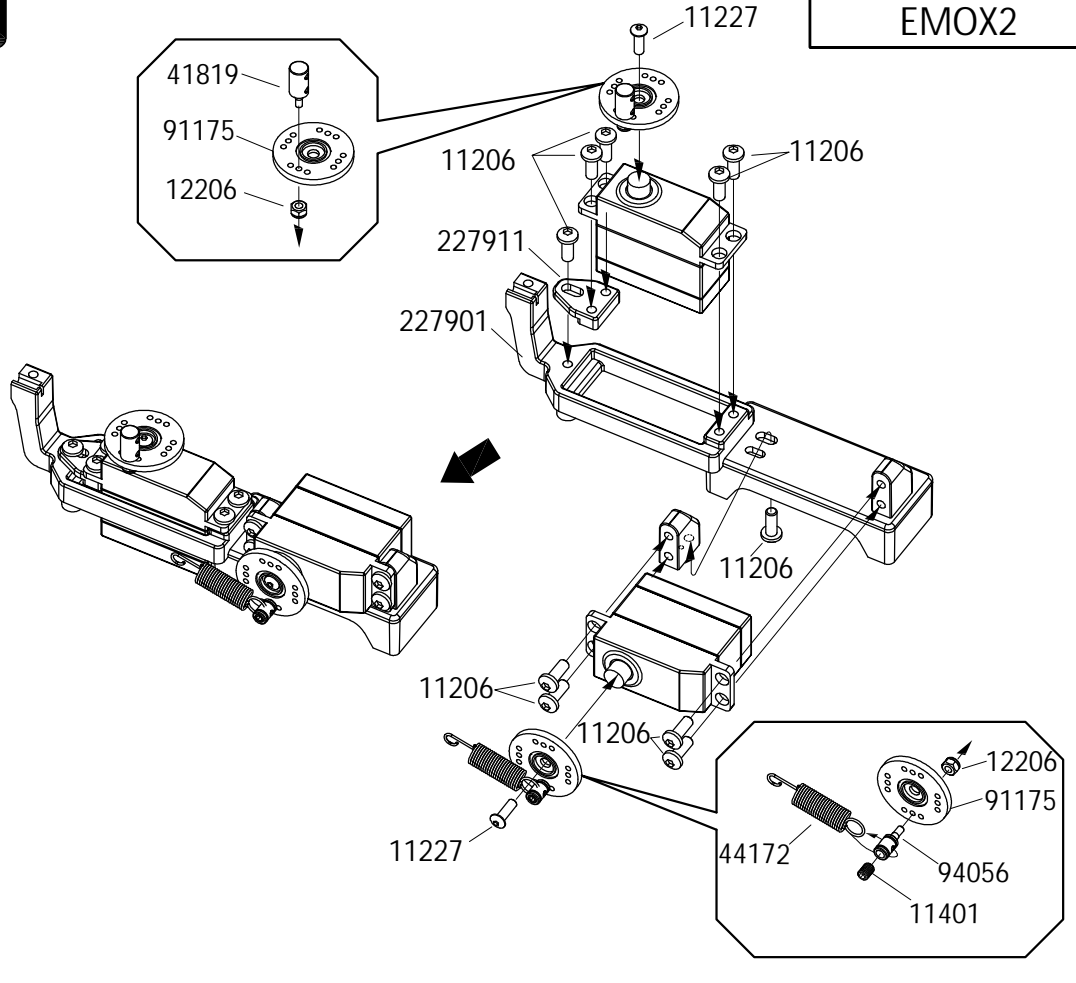
12206 
M2 X2

11401 
M3x4 X1


44172 X1


41819 X1


94056 X1




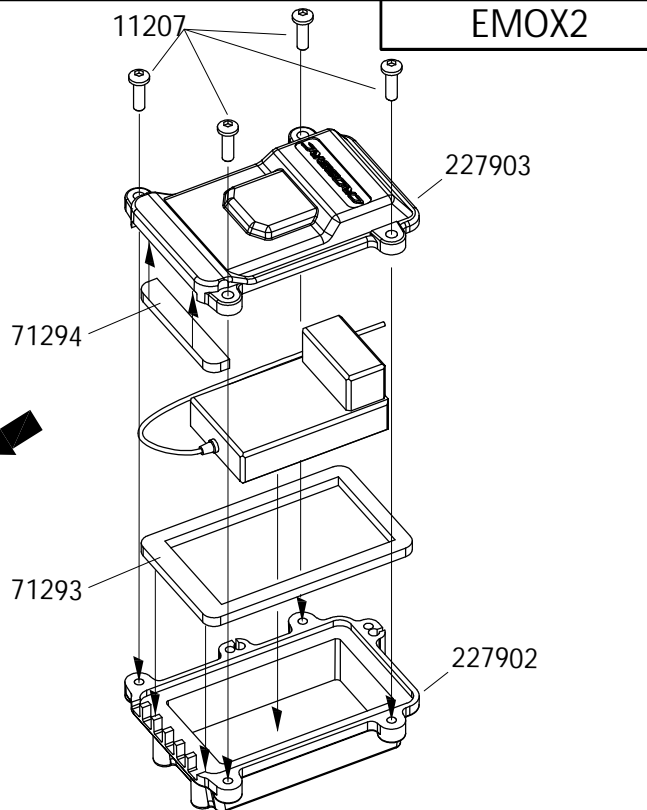
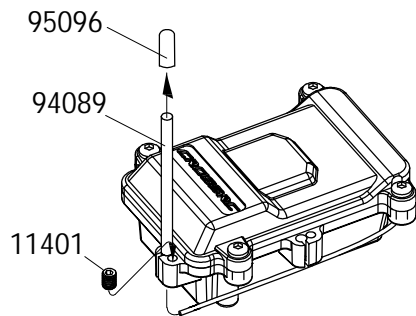
37

EMOX2


BAG(BB)

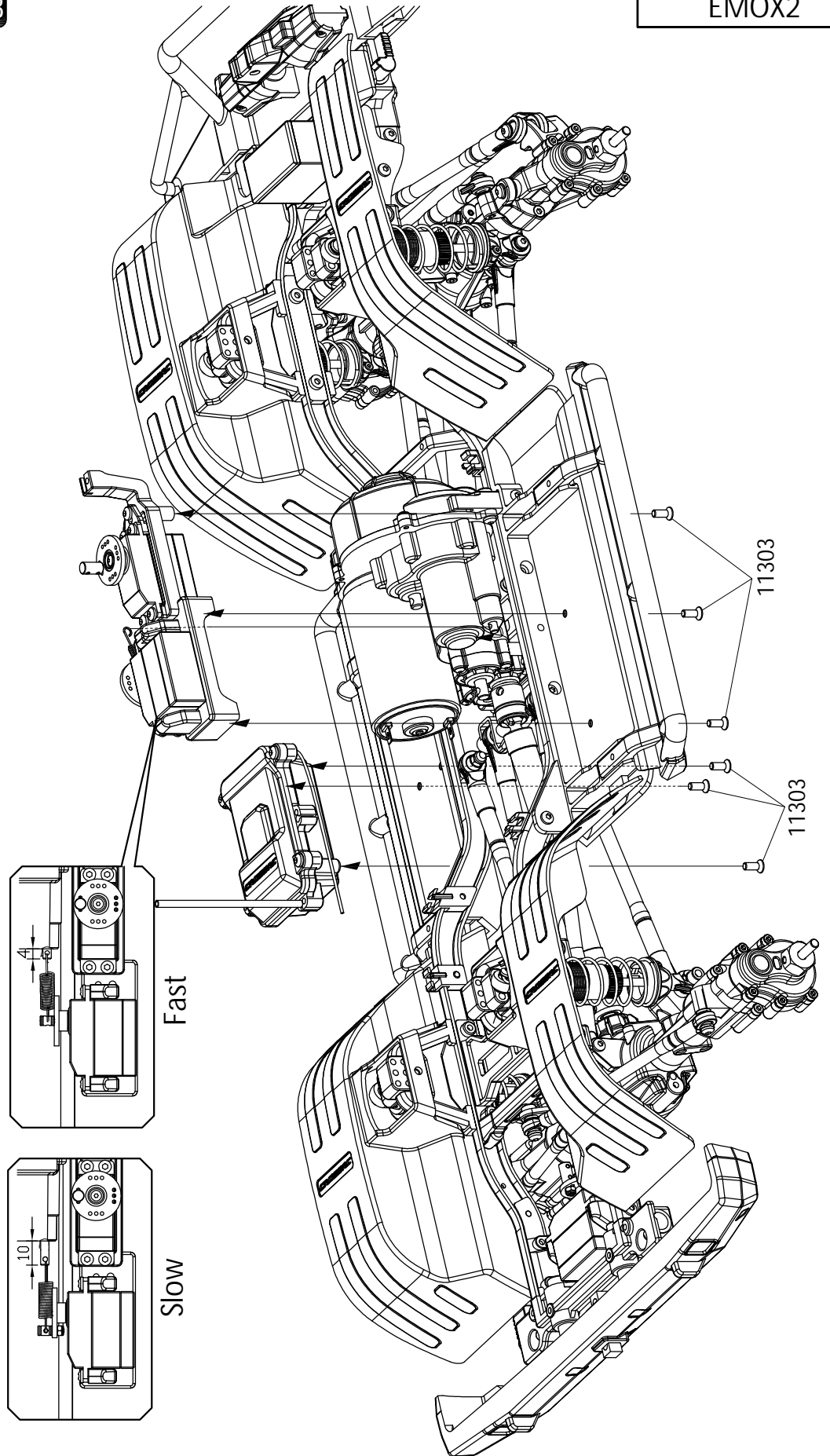
11401 
M3x4 X1

11207 
M3x10 X4





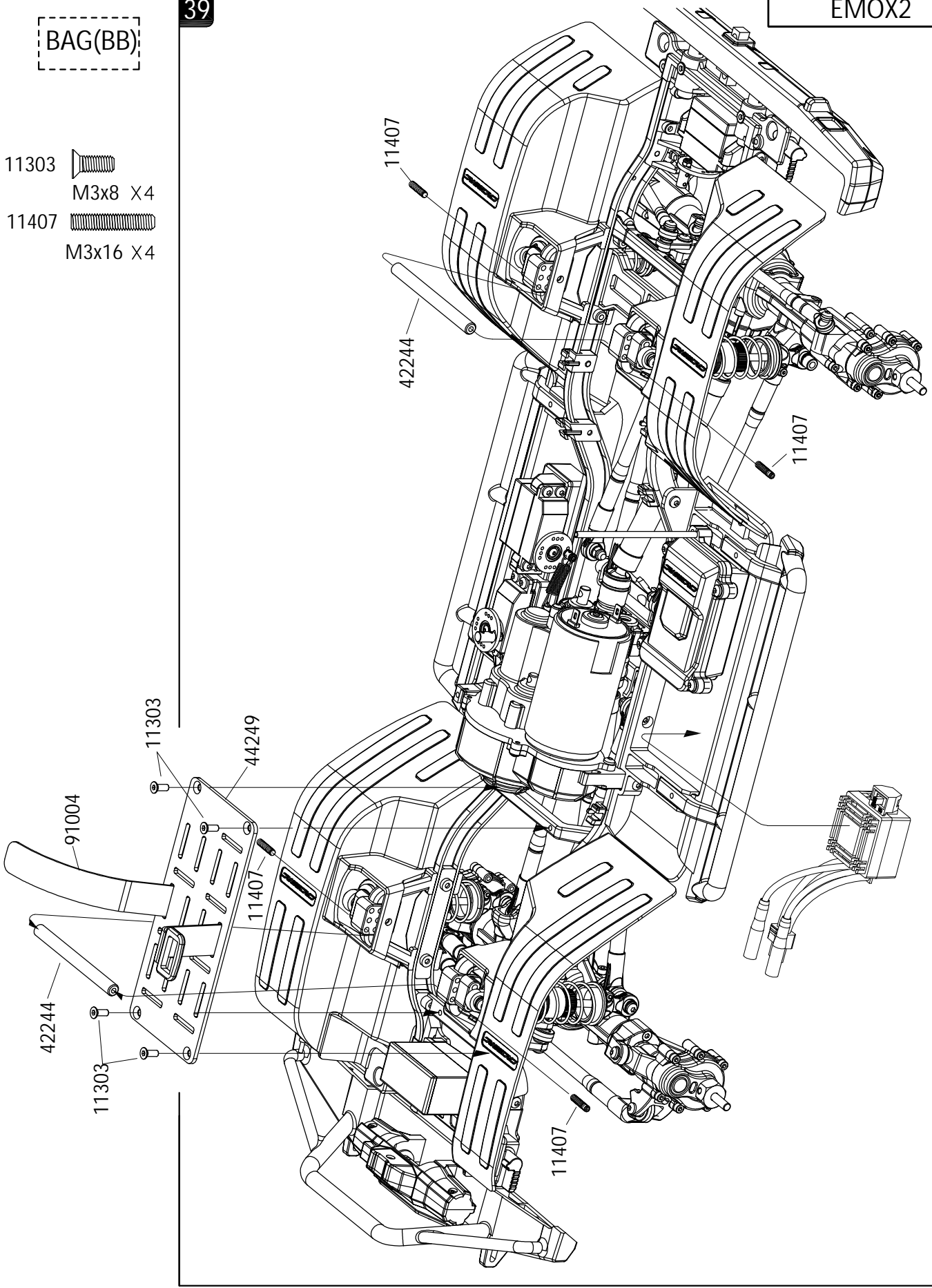
BAG(BB)

11303 
M3x8 X6



BAG(BB)


- 11303  M3x8 X4
- 11407  M3x16 X4





40

EMOX2


BAG(BB)

11206  M3x8 X2

14102  Ø3xØ7x0.5 X2

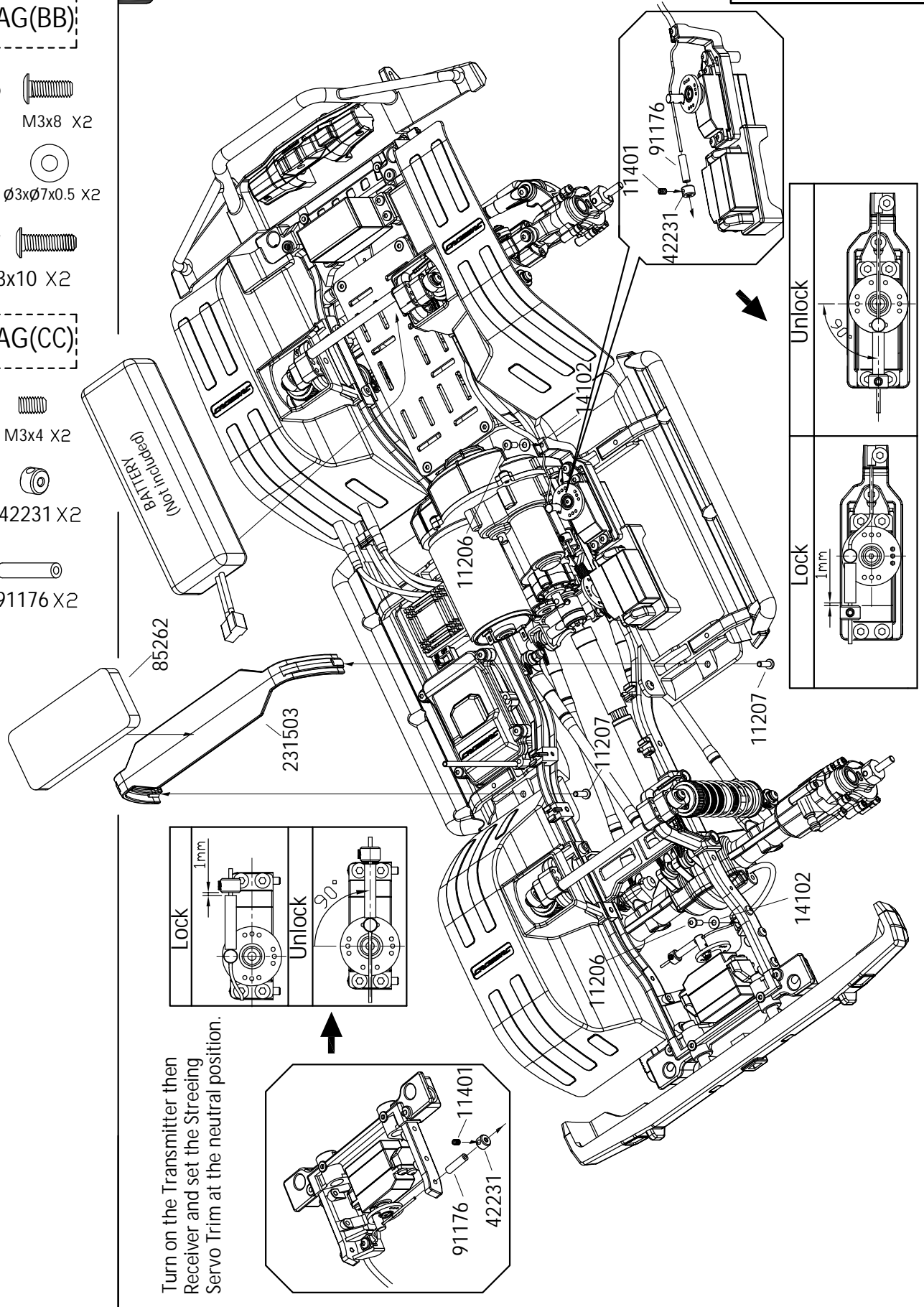
11207  M3x10 X2

BAG(CC)

11401  M3x4 X2

42231 X2

91176 X2

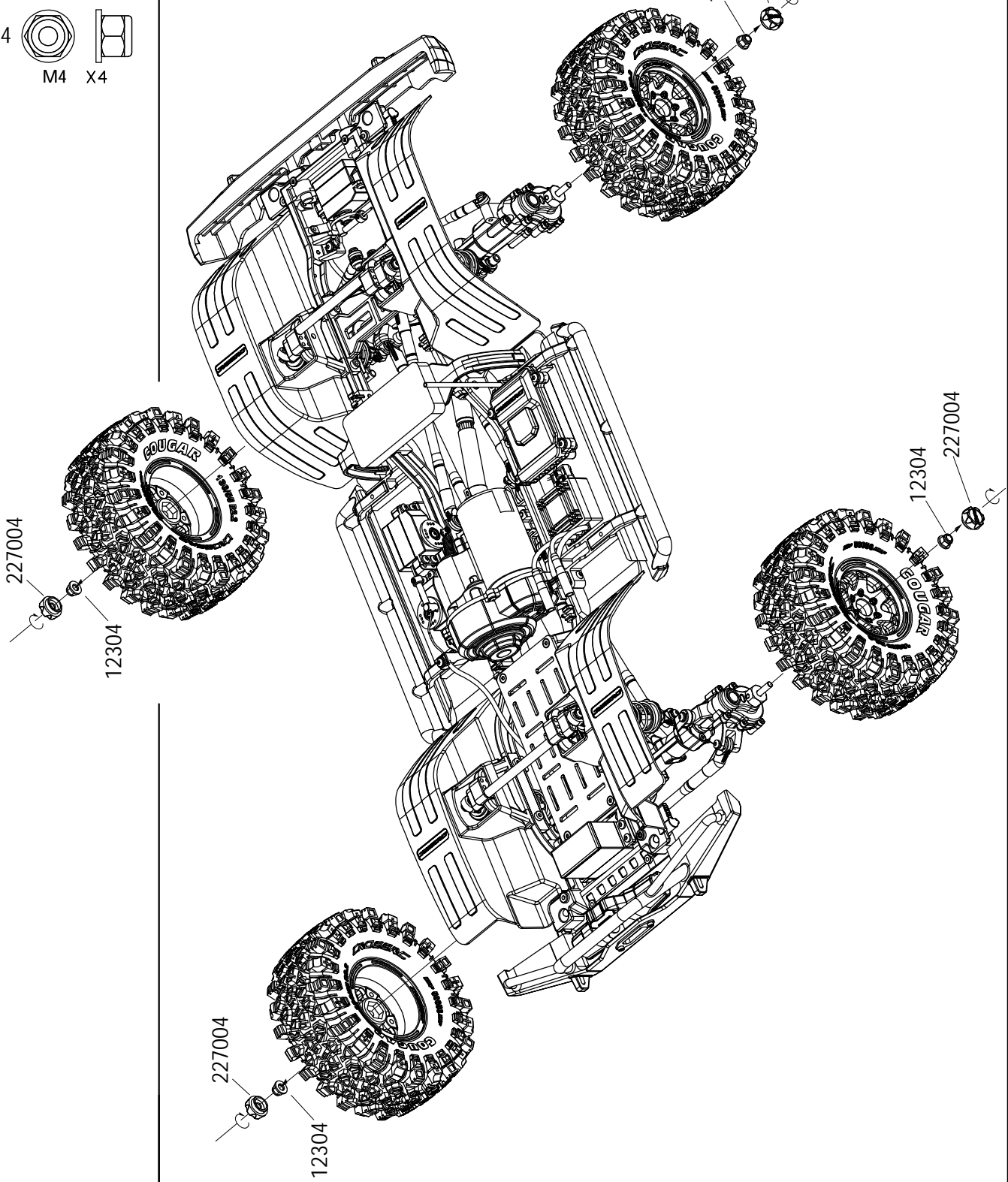
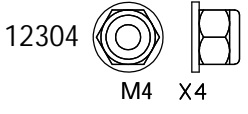


Turn on the Transmitter then Receiver and set the Steering Servo Trim at the neutral position.

41

EMOX2

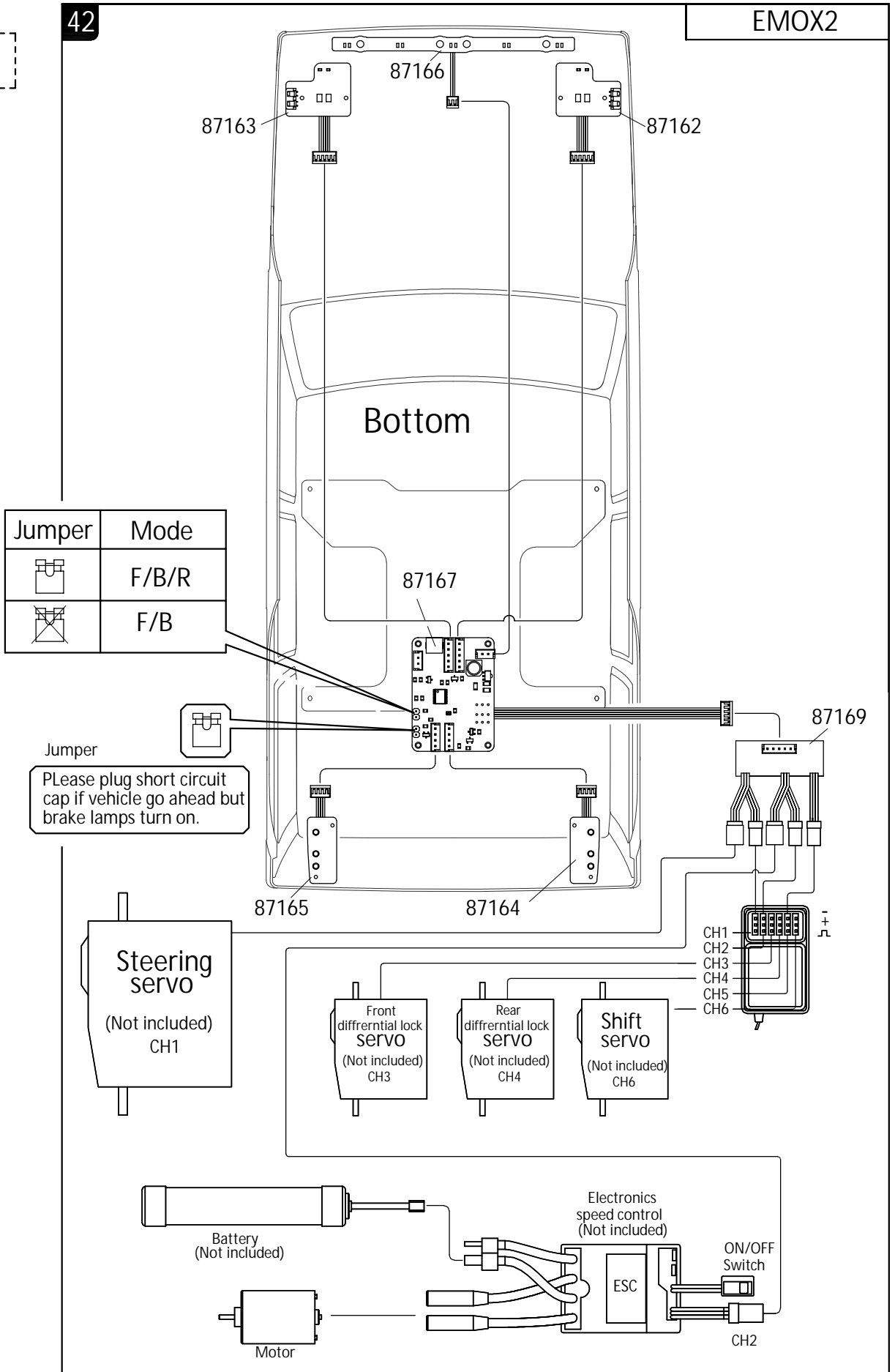
BAG(A)



42

EMOX2

BAG(Y)

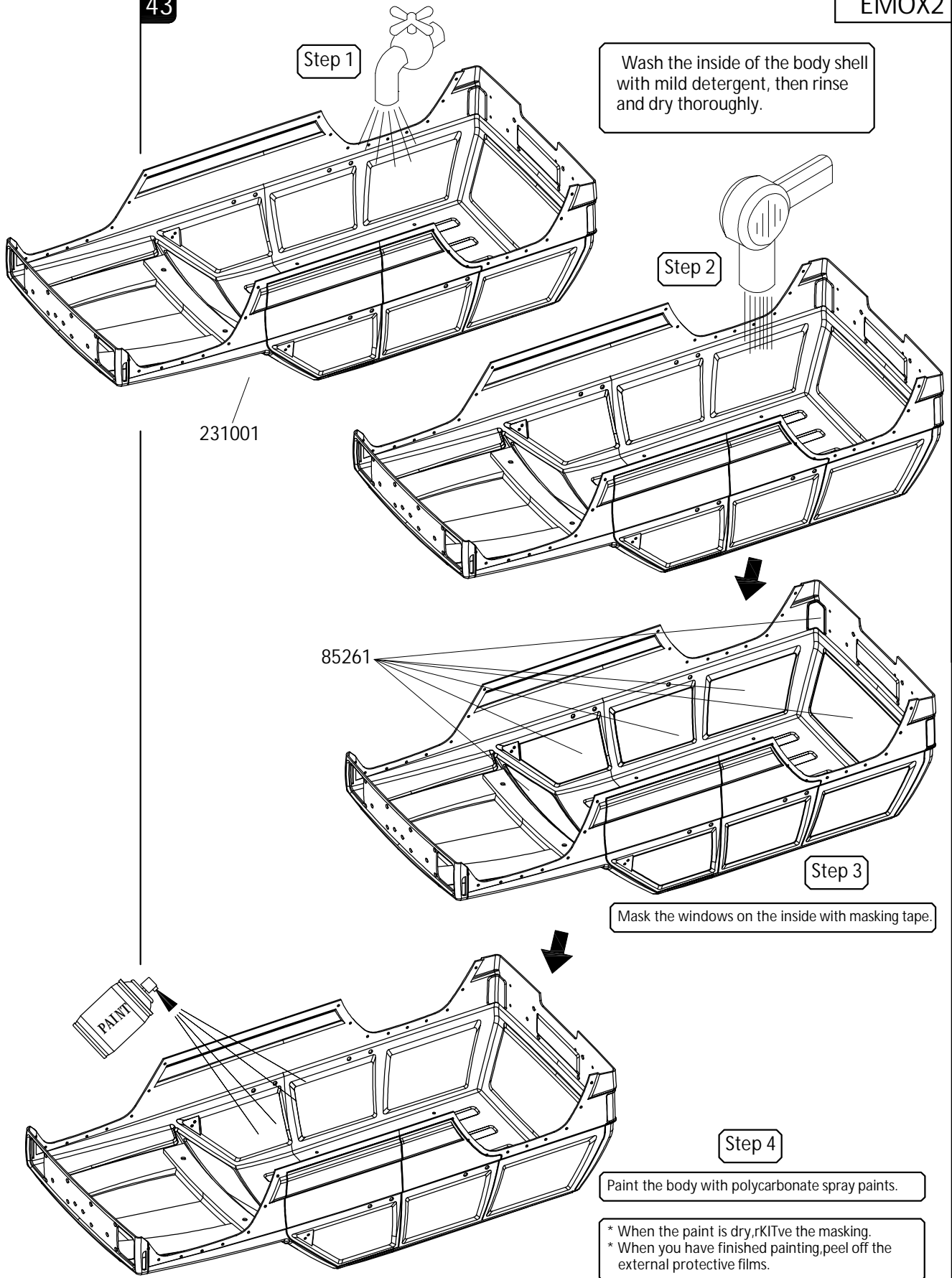


Jumper	Mode
	F/B/R
	F/B

Jumper
Please plug short circuit cap if vehicle go ahead but brake lamps turn on.

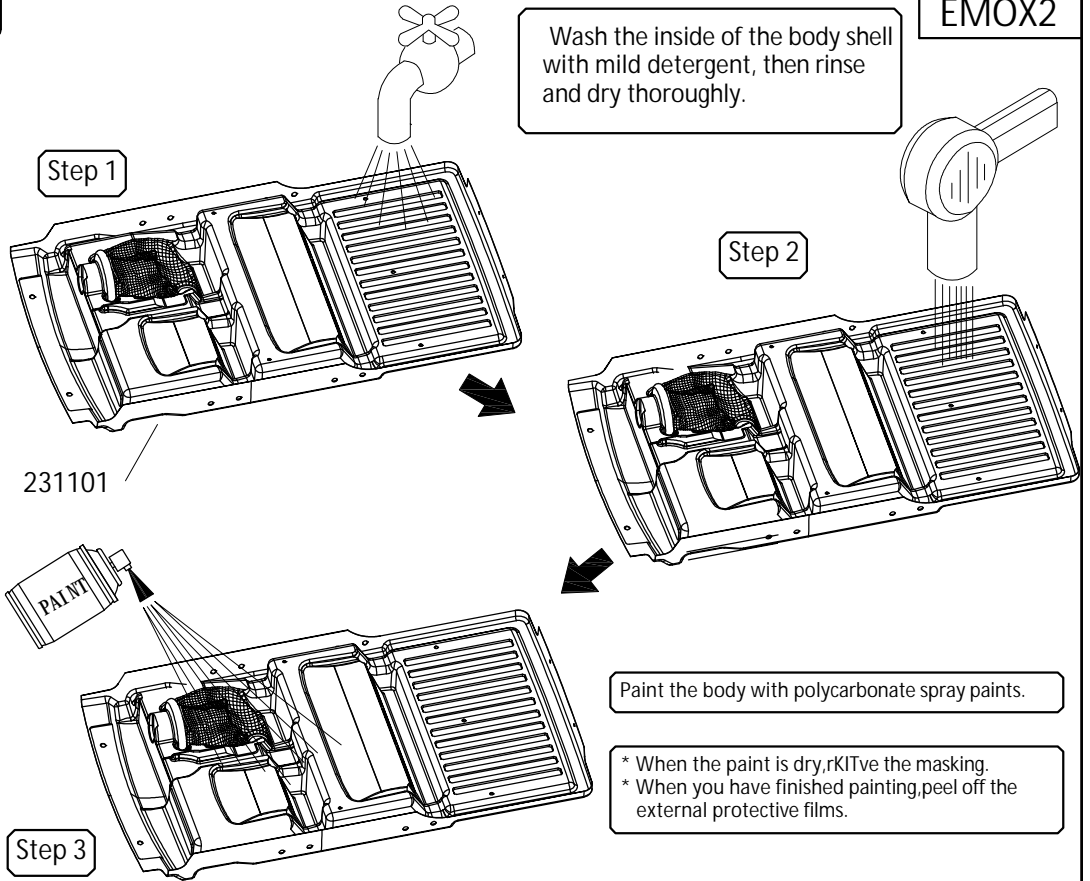
43

EMOX2



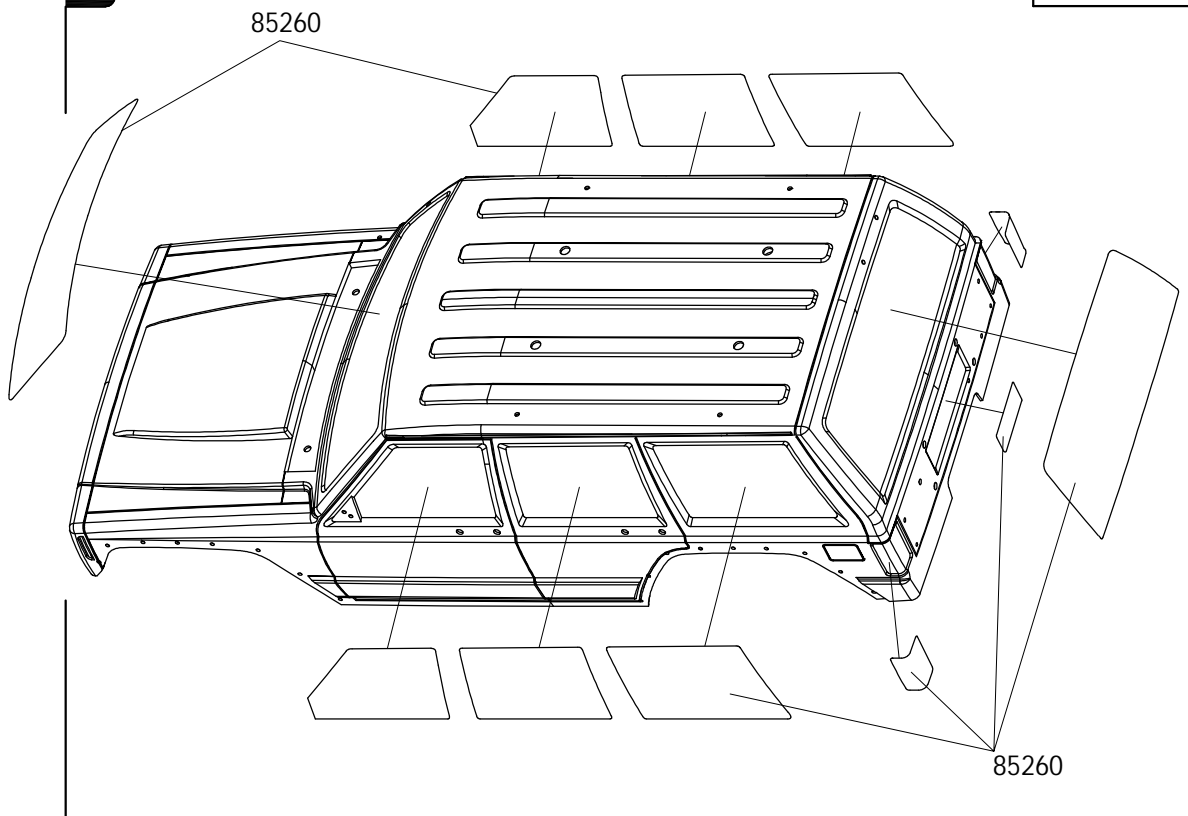
44

EMOX2

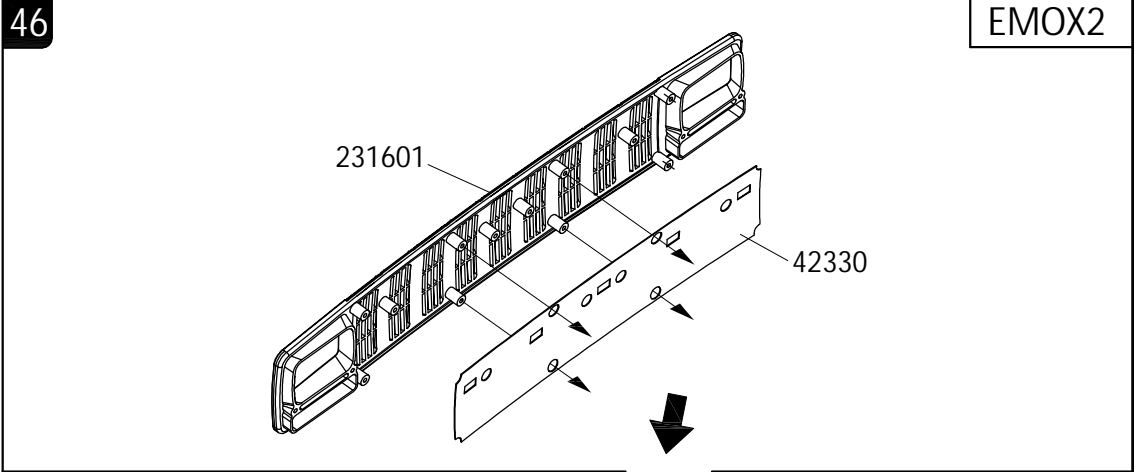



45

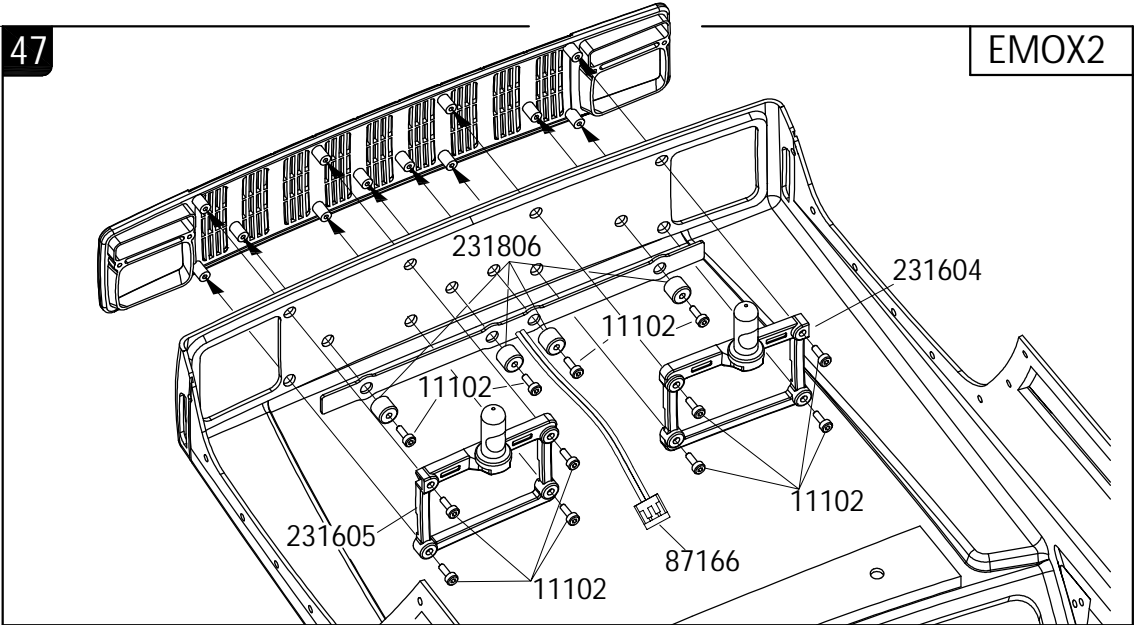
EMOX2





BAG(BB)

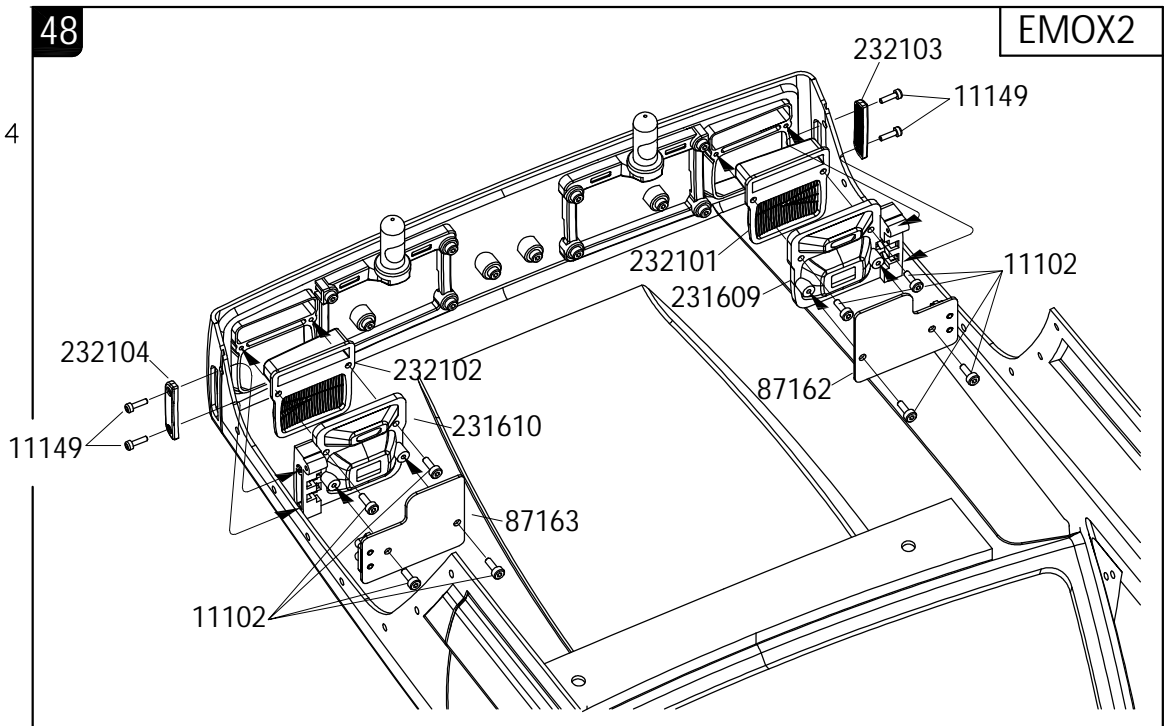


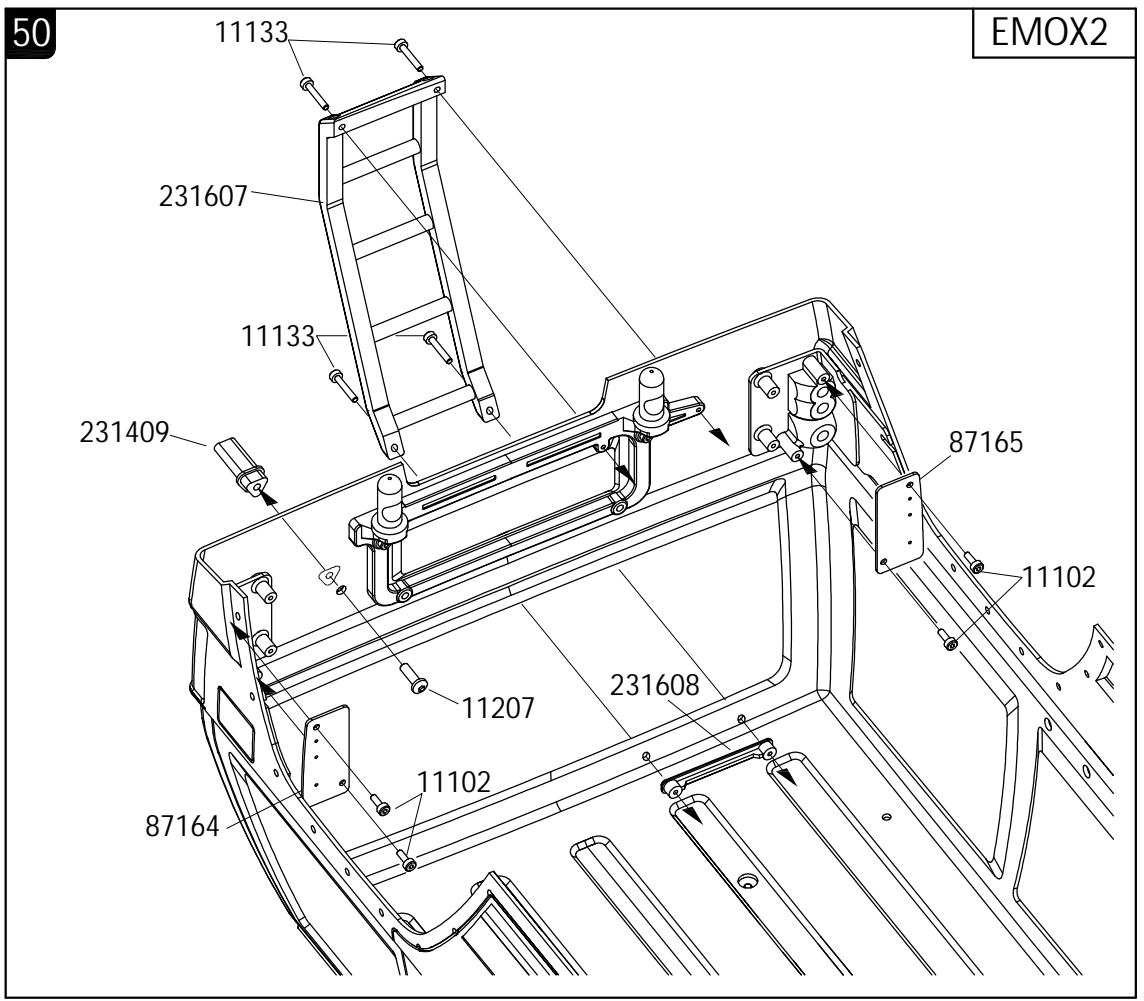
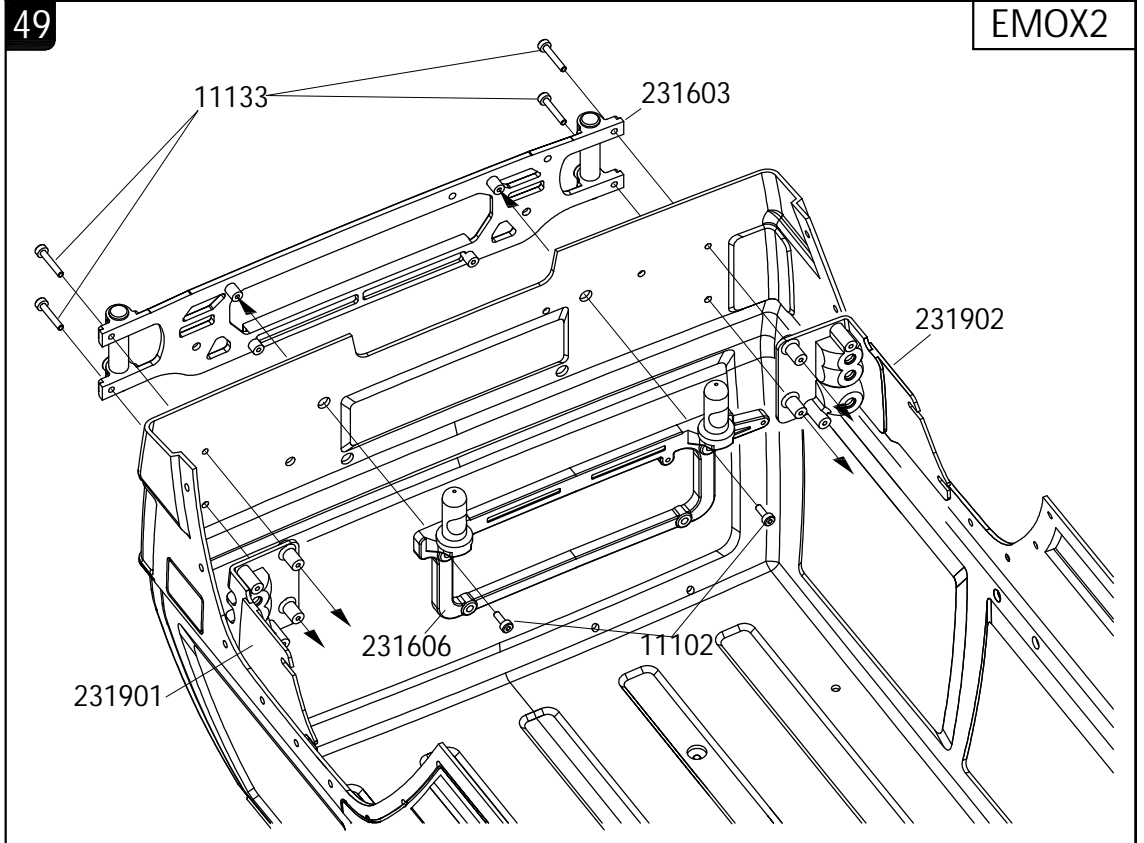
11102 
M2x6 X12



11149 
M1.6x6 X4

11102 
M2x6 X8




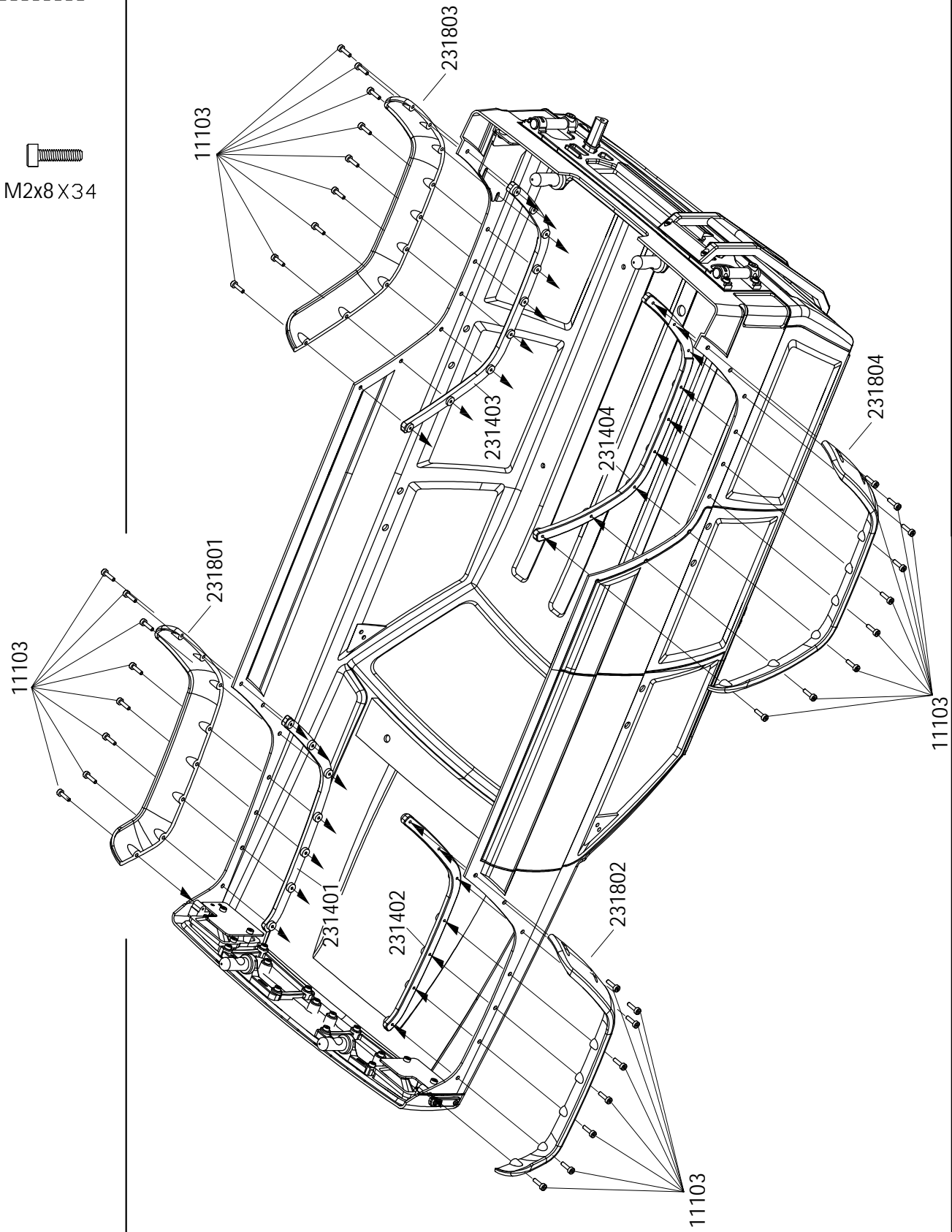


BAG(BB)

51

EMOX2



11103 
M2x8x34

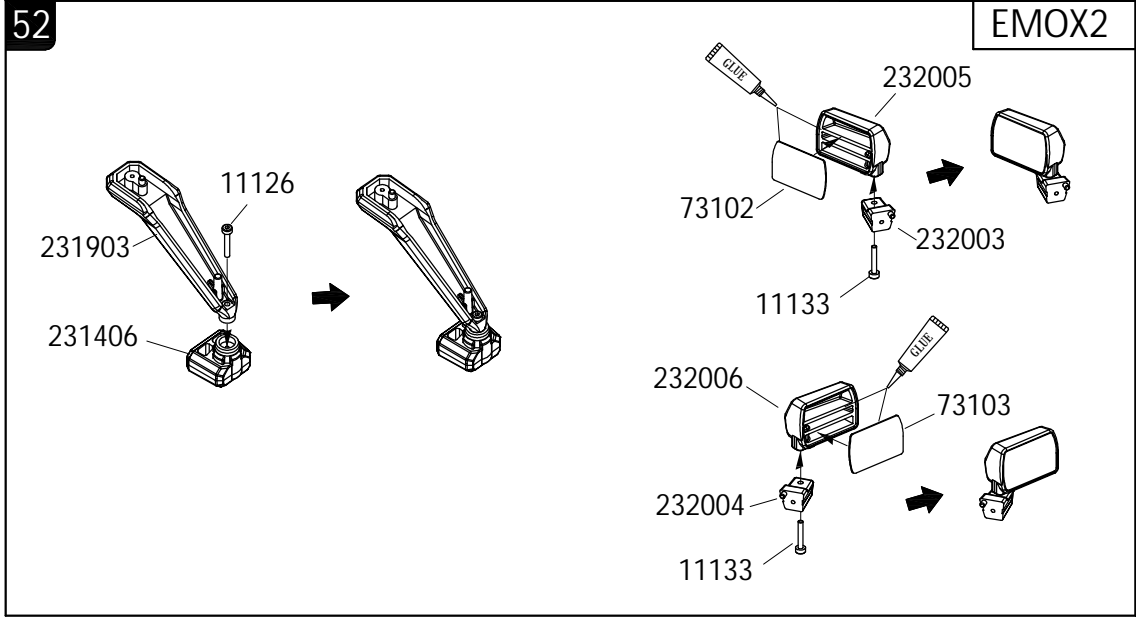


BAG(BB)

52



EMOX2

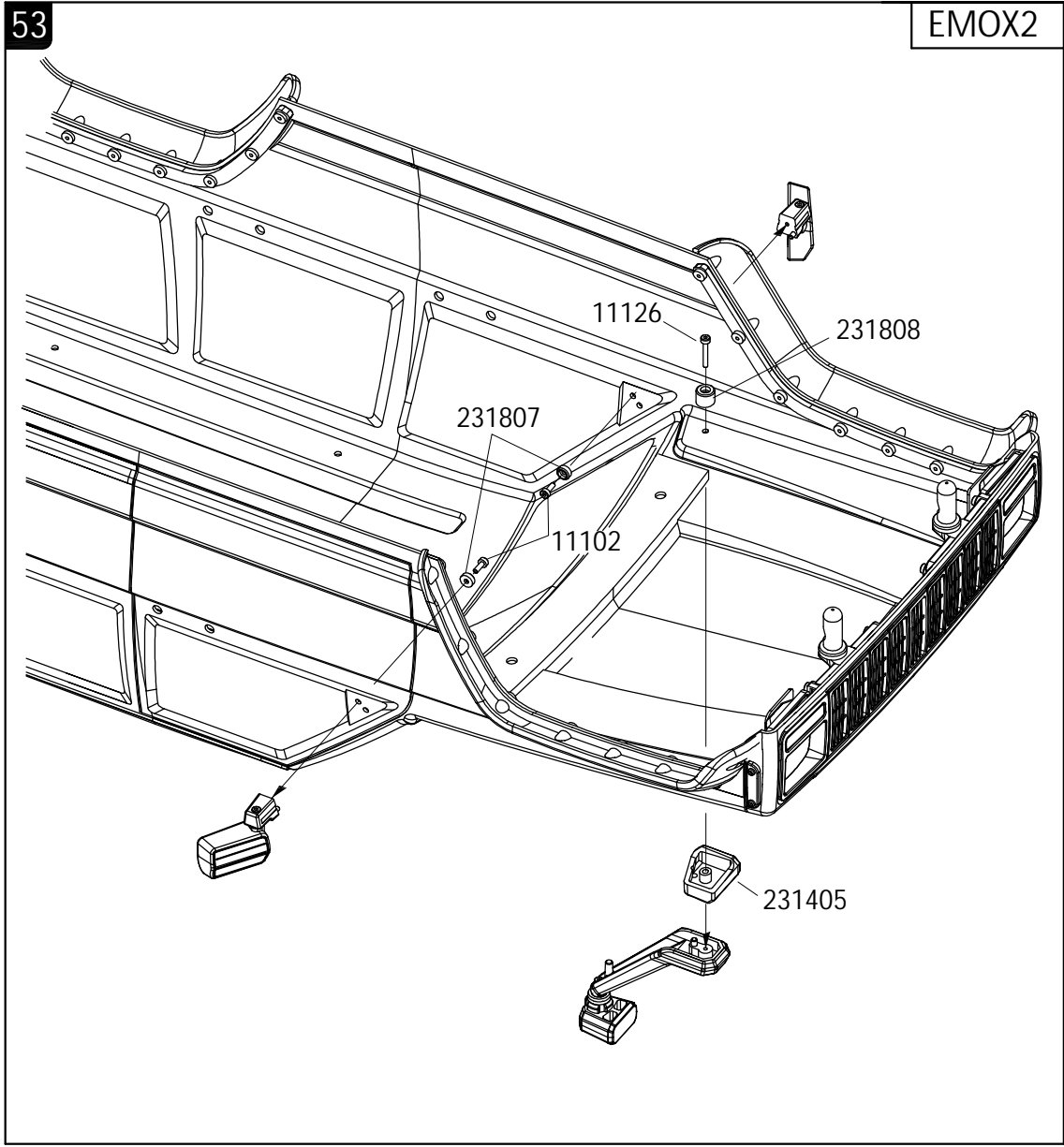
- 11126  M2x14 X1
- 11133  M2x12 X2



53

EMOX2


- 11102  M2x6 X2
- 11126  M2x14 X1

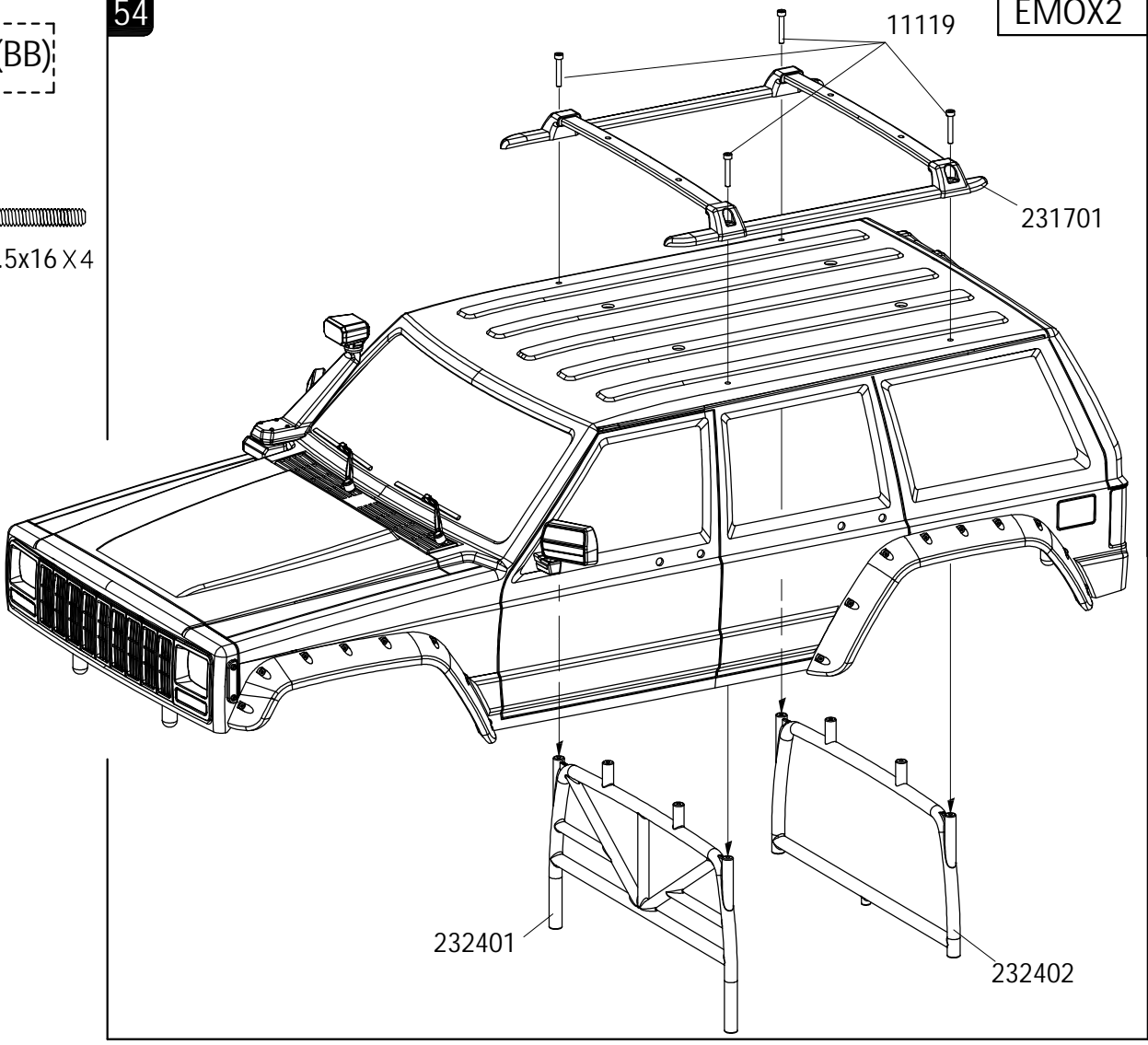


54

EMOX2


BAG(BB)

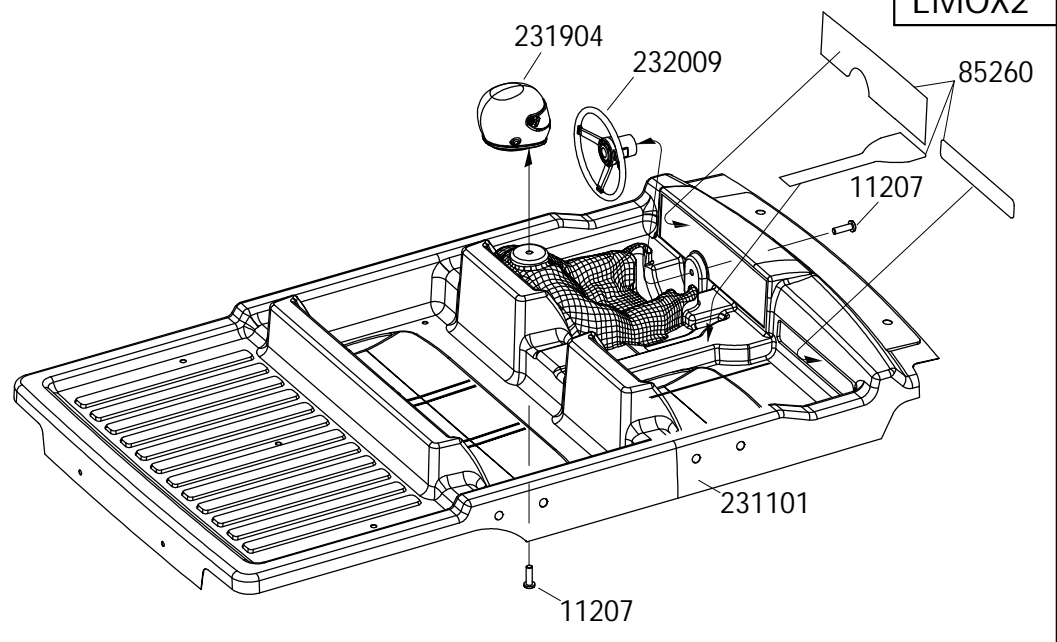
11119 
M2.5x16 X4



55

EMOX2

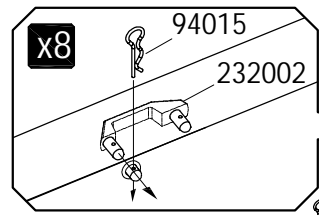
11207 
M3x10 X2




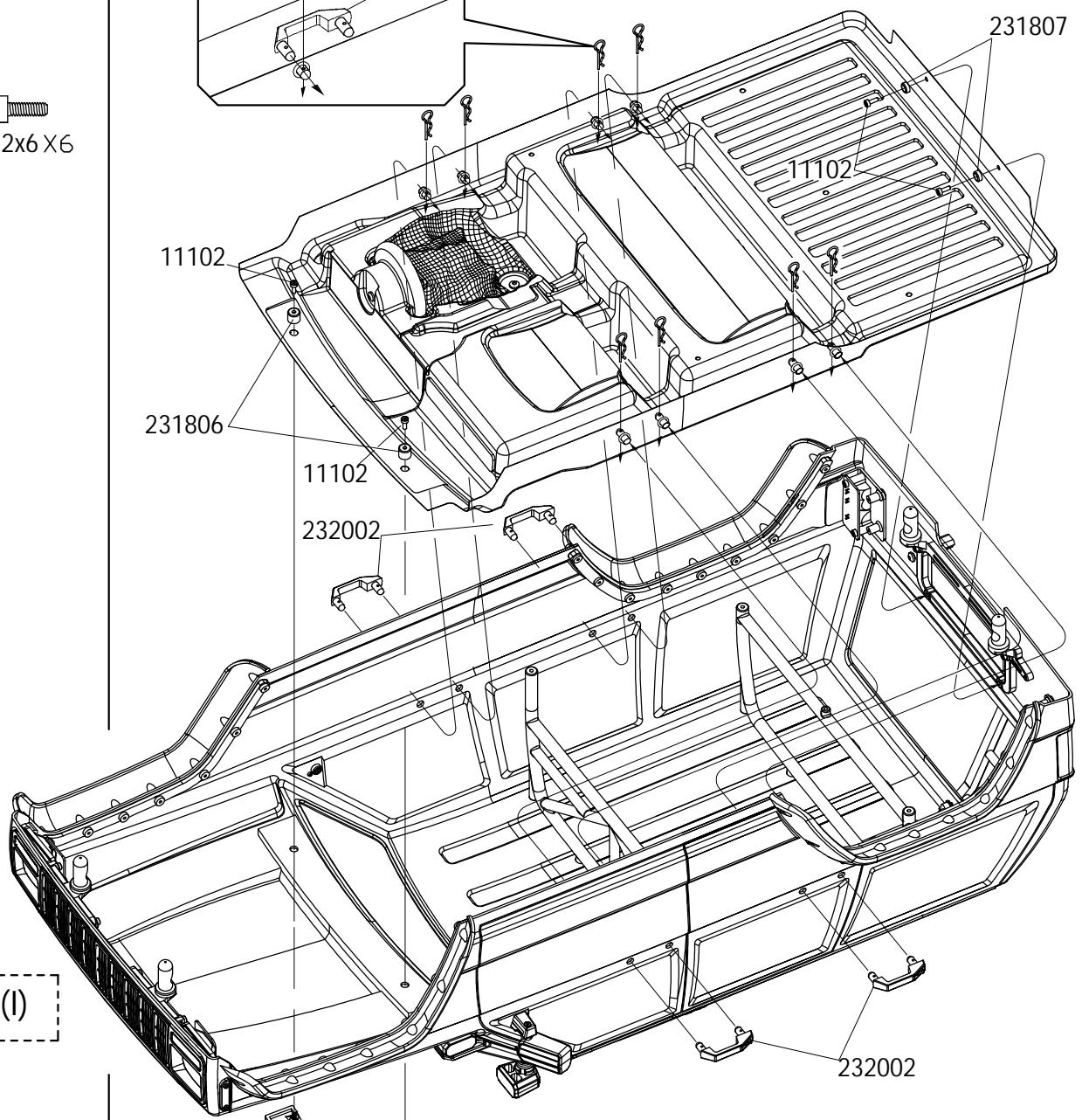
56

EMOX2

BAG(BB)

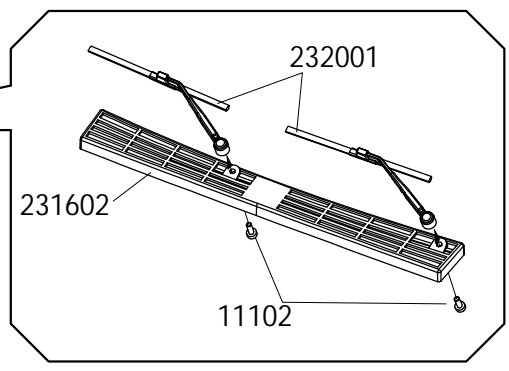


11102 
M2x6 X6


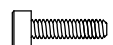


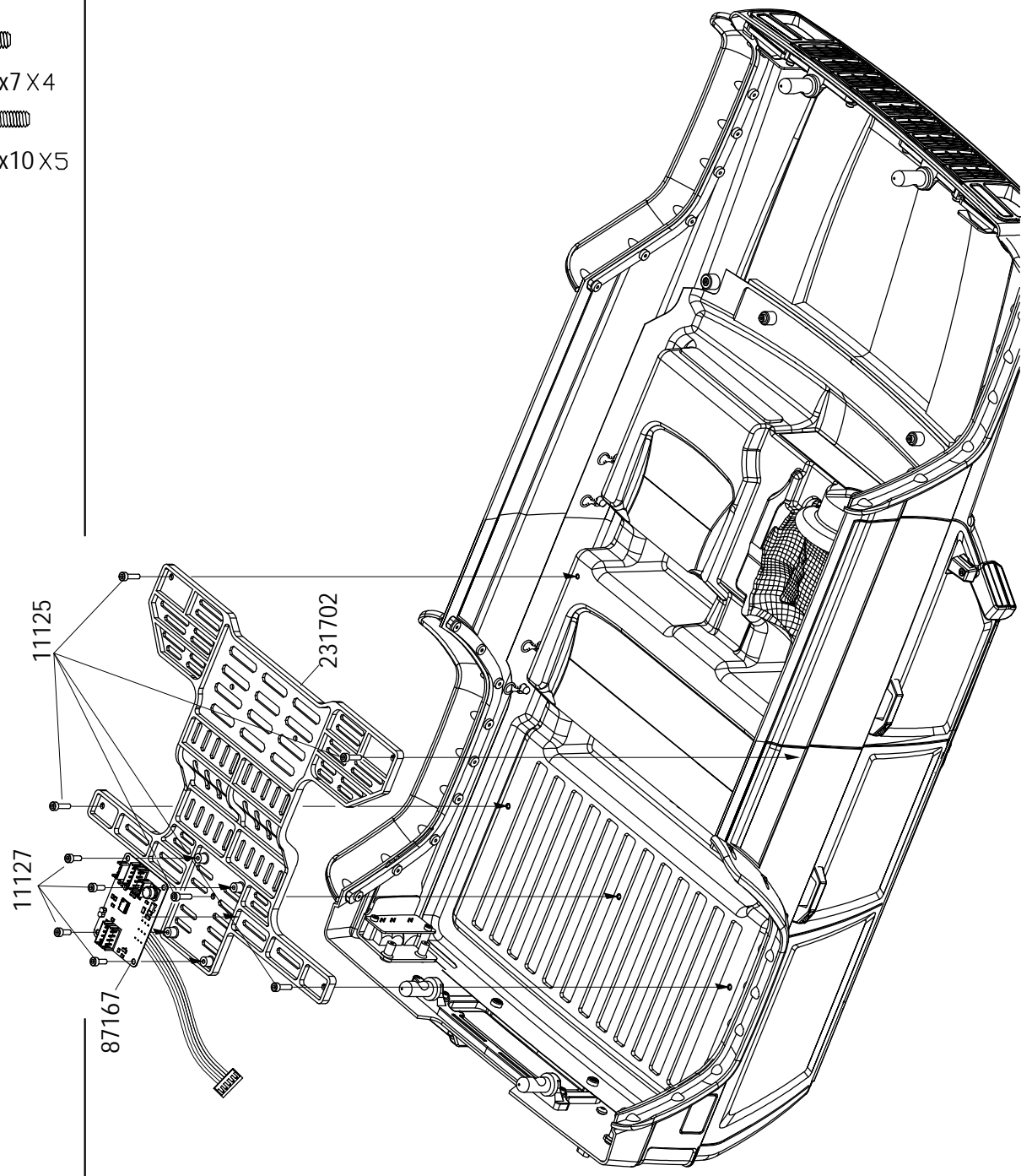
BAG(I)


94015 X8





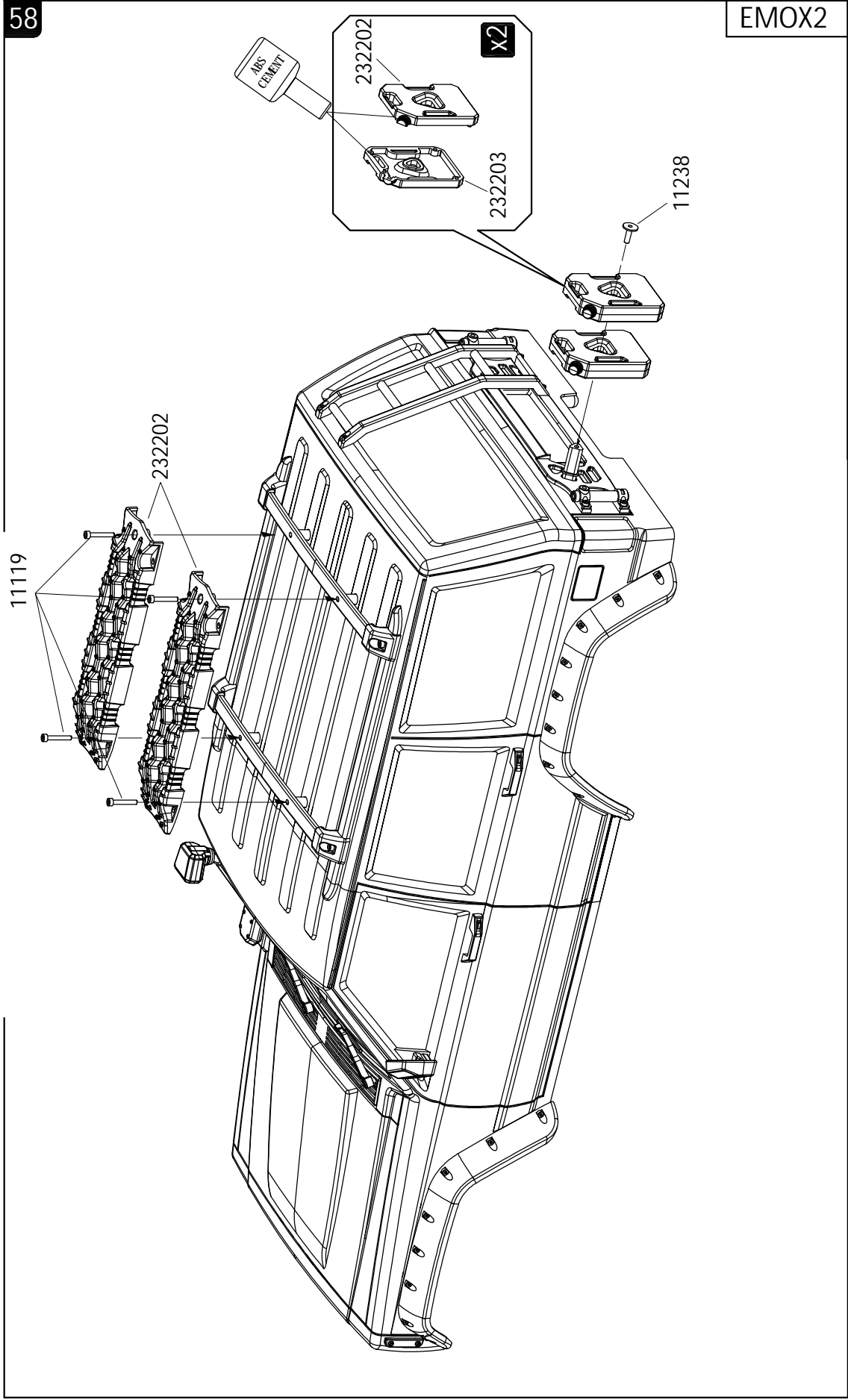
BAG(BB)

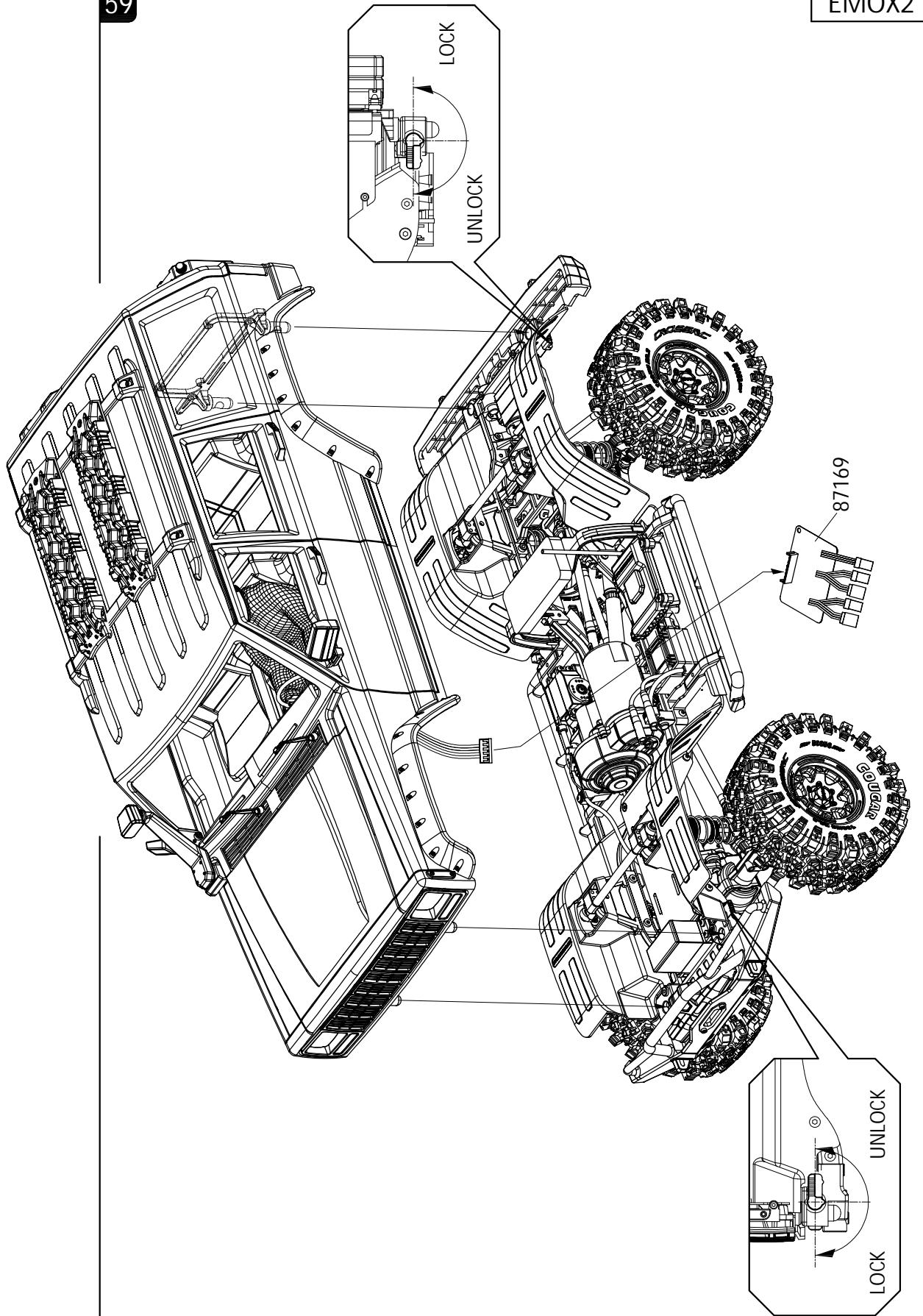
- 11127 
M2.5x7 X4
- 11125 
M2.5x10 X5

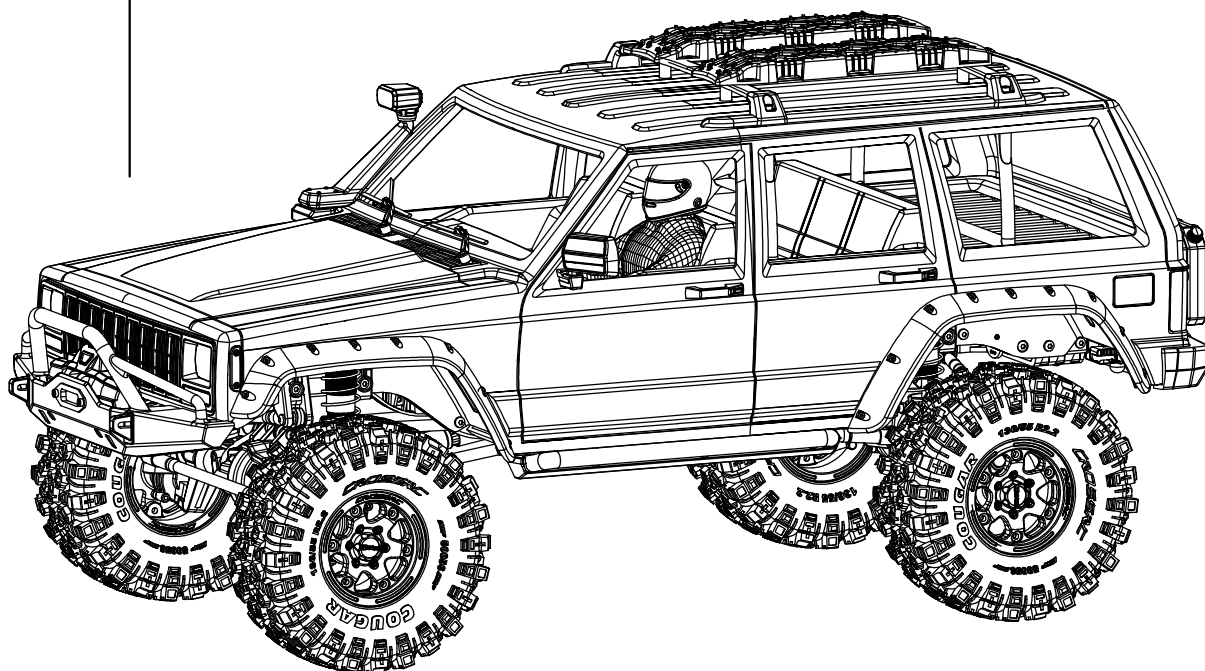


BAG(BB)

- 11119  M2.5x16 X4
- 11238  M3x8*10 X1



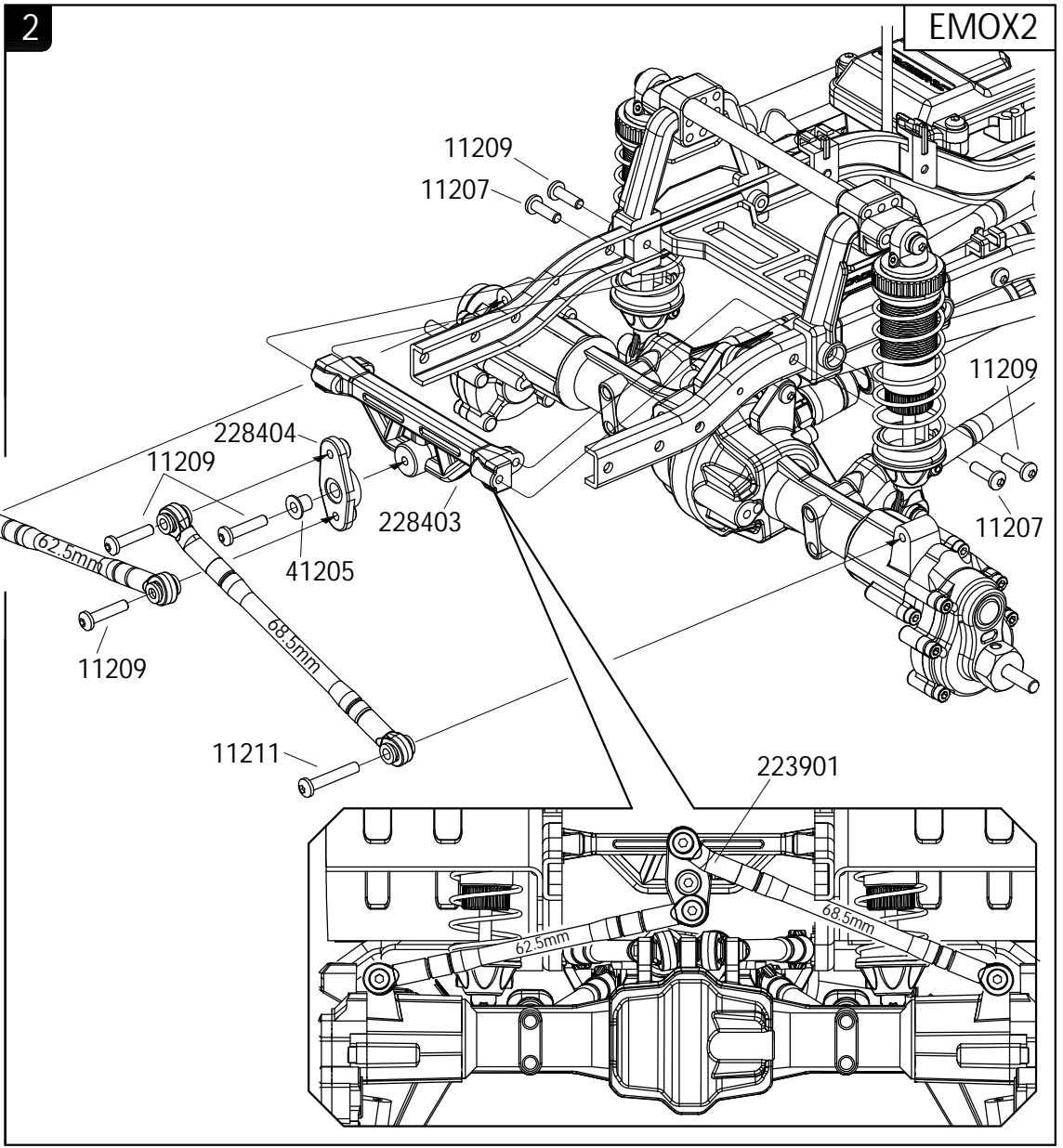
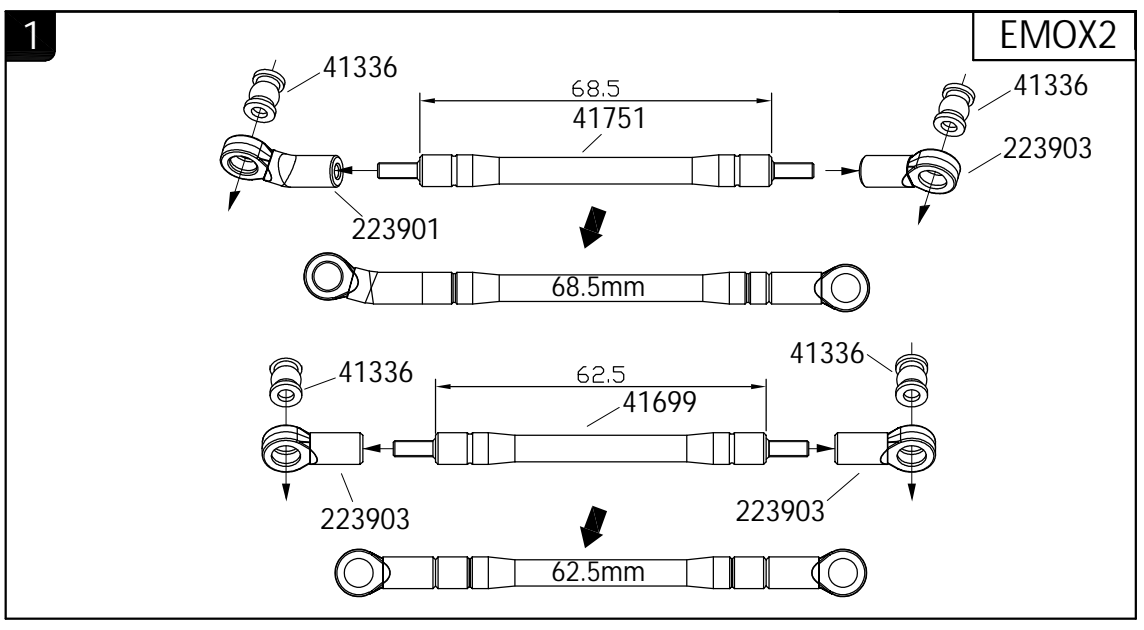




BAG(Z)



41336 X4



- 11207 M3x10 X2
- 11209 M3x14 X5
- 11211 M3x18 X2



41205