

PR SB401

ITEM NO:77500256

PR SB401-R 1/10 Electric 4wd Off Road Buggy Kit Lightweight Edition
(Slipper Clutch Version)

PR RACING
TYPE R



PR racing have been hard at work developing the next generation of the successful SB401 platform and have made the SB401-R faster, quieter and easier to maintain and tune. A number of key components have been totally redesigned to produce a better handling and more forgiving car to drive. The main focus has been on the all new narrow 2mm 7075-T6 chassis and plastic side-pods, which utilizes a carbon fibre re-enforced spine to control torsional and longitudinal flex. The additional flex has proved to increase grip, and make the car feel more balanced and easier to drive leading to faster, more consistent laps.



HEALTH WARNING

This model is a high-performance radio controlled racing product that is designed for use on R/C car race tracks. If it is misused it could cause injury to the operator or others. Many of the items in this kit are small enough to be accidentally swallowed; therefore, it is not suitable for young children. All items, inclusive of liquids, contained in this kit are not intended for human consumption. Rotating parts of the car may cause injury if not handled with care.

Name: PR SB401-R 1/10 Electric 4wd Off Road Buggy Kit

PR racing have been hard at work developing the next generation of the successful SB401 platform and have made the SB401-R faster, quieter and easier to maintain and tune.

A number of key components have been totally redesigned to produce a better handling and more forgiving car to drive. The main focus has been on the all new narrow 2mm 7075-T6 chassis and plastic side-pods, which utilizes a carbon fibre re-enforced spine to control torsional and longitudinal flex. The additional flex has proved to increase grip, and make the car feel more balanced and easier to drive leading to faster, more consistent laps.

Chassis

- Hard anodised 2mm 7075-T6 Narrow chassis with side-pods
- Plastic/carbon chassis spine with CNC alloy bulkheads
- Alloy/Carbon floating servo mount
- Improved weight distribution with motor and slipper 10mm forward
- Type R ultra-low CofG Body

Transmission

- New stronger/quieter pinions and ring gears
- New vented slipper assembly with ultra-hard shafts and cups for long life
- Top loading slipper/centre diff mount for easy access
- Longer diff cups to allow for more droop

Suspension and Steering

- 12.75mm Type R shocks
- Lower towers for ultra-low CofG
- Suspension hangers with inserts for toe and anti-squat adjustment
- Revised Ackerman geometry for improved steering feel
- New shock seal caps and seals for ultra-smooth operation
- 11 Degree CNC caster blocks
- CNC alloy rear hubs
- Gullwing rear wishbones
- Hard front wishbones
- New shorter grey ball-cups
- New high tensile steel turnbuckles

Specifications

Type: 1/10th 4wd Off-Road

Power Source: Electric

Wheelbase:287mm(variable)

Width:245mm-248mm

Gear Ratio: 2.6:1

Weight 1720g race ready (varies)

Hardware: Full metric

Bearings: Sealed Metal Ball Bearings

Wheels: 12mm hex

Kit: Assembly required

Items Required to Complete

2 Channel surface frequency radio system

2S LiPo battery & compatible lipo charger

1/10 ESC, motor & pinion gear

High-Speed Servo

1/10 tyres and inserts

Tools, paint for polycarbonate body, tyre

glue, threadlock

Silicon diff and shock oil

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BEFORE INSTALLATION

- 1 Read through the instruction manual before installation in order to have an overview of what to do.
- 2 Check if there is any missing bags or defective parts, if there is, please contact our local dealer or our PR Distributor.
- 3 Symbols used throughout the instruction manual, comprises of:



Part bags used.



Assemble as many times as specified (here: twice).



Tighten securely.



Note the direction.



True-to-scale diagram.



Do not over tighten.



Must be purchased separately.



Apply threadlocker (screw cement)



Ensure smooth non-binding movement while assembling.



Assemble in the specified order.



Apply grease.



Cut off shaded portion.



Assemble left and right sides the same way.



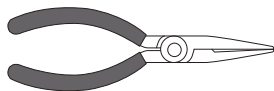
Apply oil.

- 4 This kit contains screws and hardware in diifferent metric sizes and shapes. Before using them, check the screws on the true-to-scale diagrams on the left side in each assembly step. Some screw are extras.

TOOLS REQUIRED

CAUTION: Handle tools carefully!

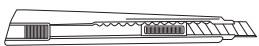
- Needle Nose Pliers



- Awl



- Sharp Hobby Knife



- Grease



- Wire Cutters



- SP Knife Edge Reamer

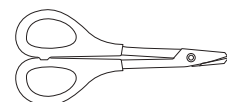


Do not pre-drill as precise drilling of 1mm to 15mm holes can be performed after body shell painted.

- Screw Cement

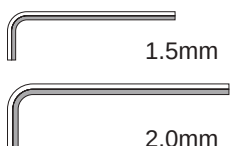


- Round Cutter & Sander



For trimming bodies Cutting along curved lines was never so easy!

- Hex Wrench



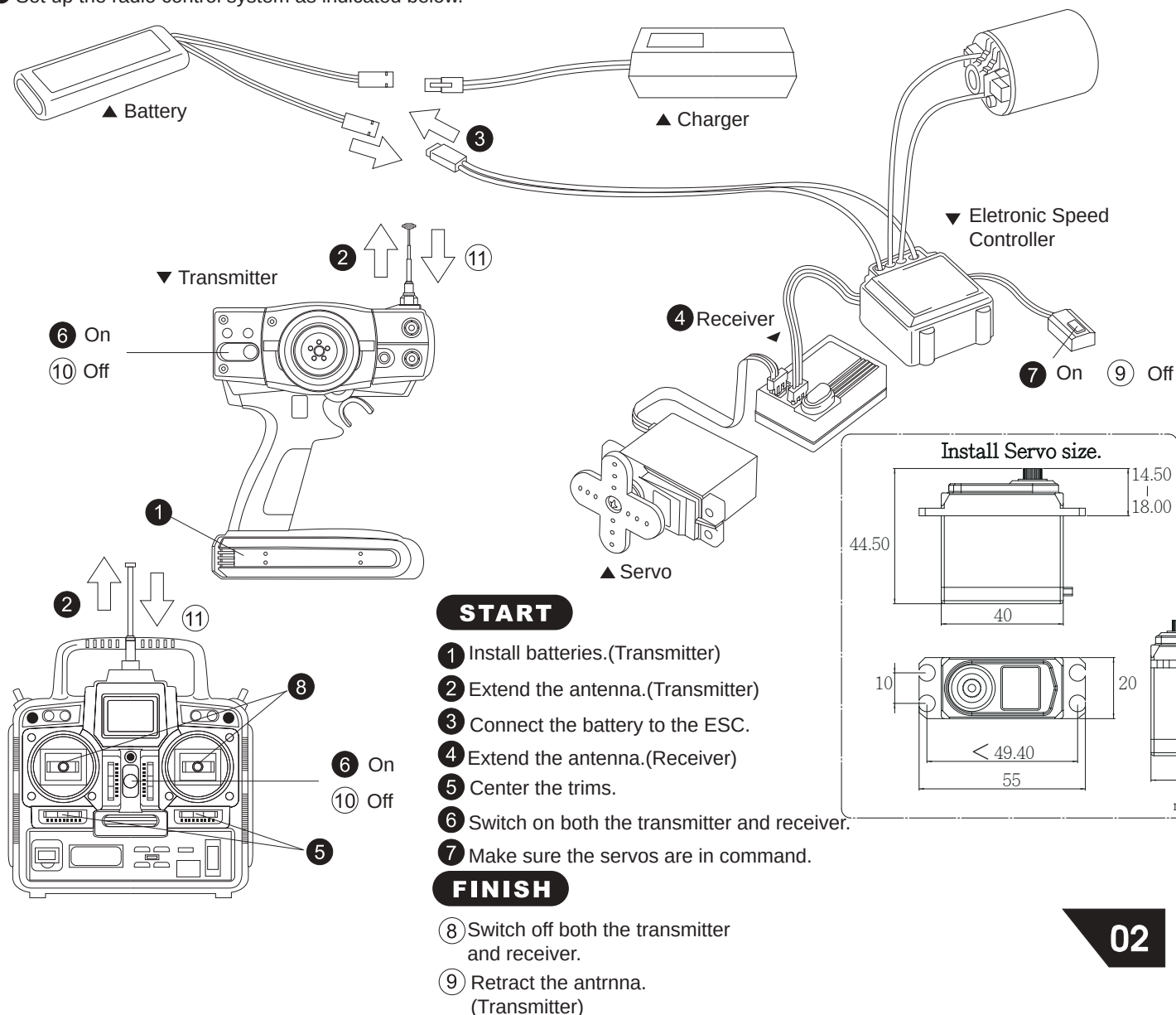
- Ball Differential Grease



RADIO PREPARATION

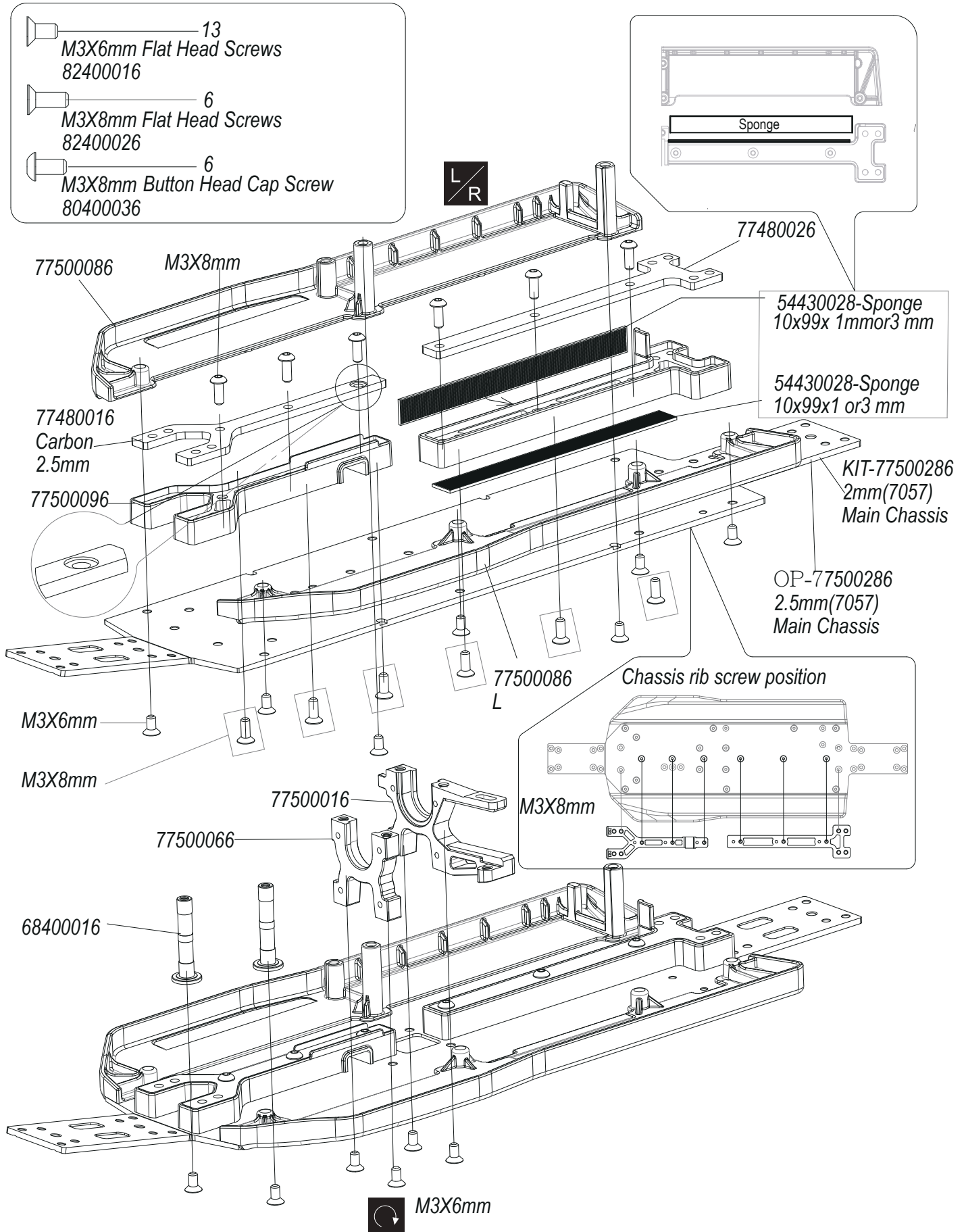
- A new battery must be charged before it is used. Refer to the charger instruction manual for charging.

- Set up the radio control system as indicated below.





A1 Chassis Brace Installation Main Chassis Assembly





A2 Gear Diff Assembly

8
M2.6X8mm Flat Head Screw
82400066

4
5X8x0.8mm Shim
85440170

8
4X10x0.15mm Shim
85440160

4
3.5mm
85400016

66480336
14T

85400016

(5x8x0.8)washer
85440170

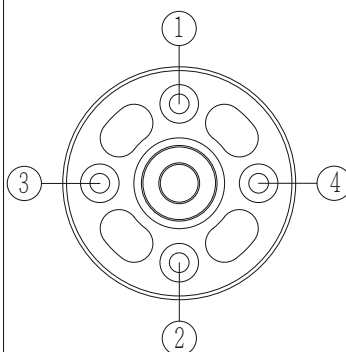
31450016
O-ring

68480596

66481366
+1.6mm

請照順序對角鎖緊差速上蓋螺絲

① → ② → ③ → ④



Tighten equally in the order of

① → ② then ③ → ④

x2

66480336
9T
85440160
4X10X0.15
Shim

According to the different
track, you can choose to use
2 gears or 4 gears

Assemble 1 front and 1 rear

66481366
+1.6mm
82400166
M2.6x10mm
77500246(39T) R

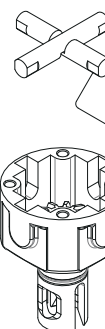
31450016-O-ring-5x1.5mm

85440170-5x8x0.8washer

85400016

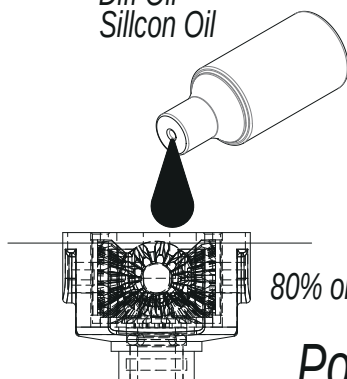
77500226

66480336



66480336
9T
85440160
66480356

Diff Oil
Silicon Oil



80% oil max

After first drive
adjust
for track conditions

SILICON DIFF OIL

7000 F

7000 R

*Pour in the oil until the gears are
just submerged in oil.*



Part Bags used.



Apply oil.



Assemble as many times as
specified (here:twice).



Assemble in the
specified order.

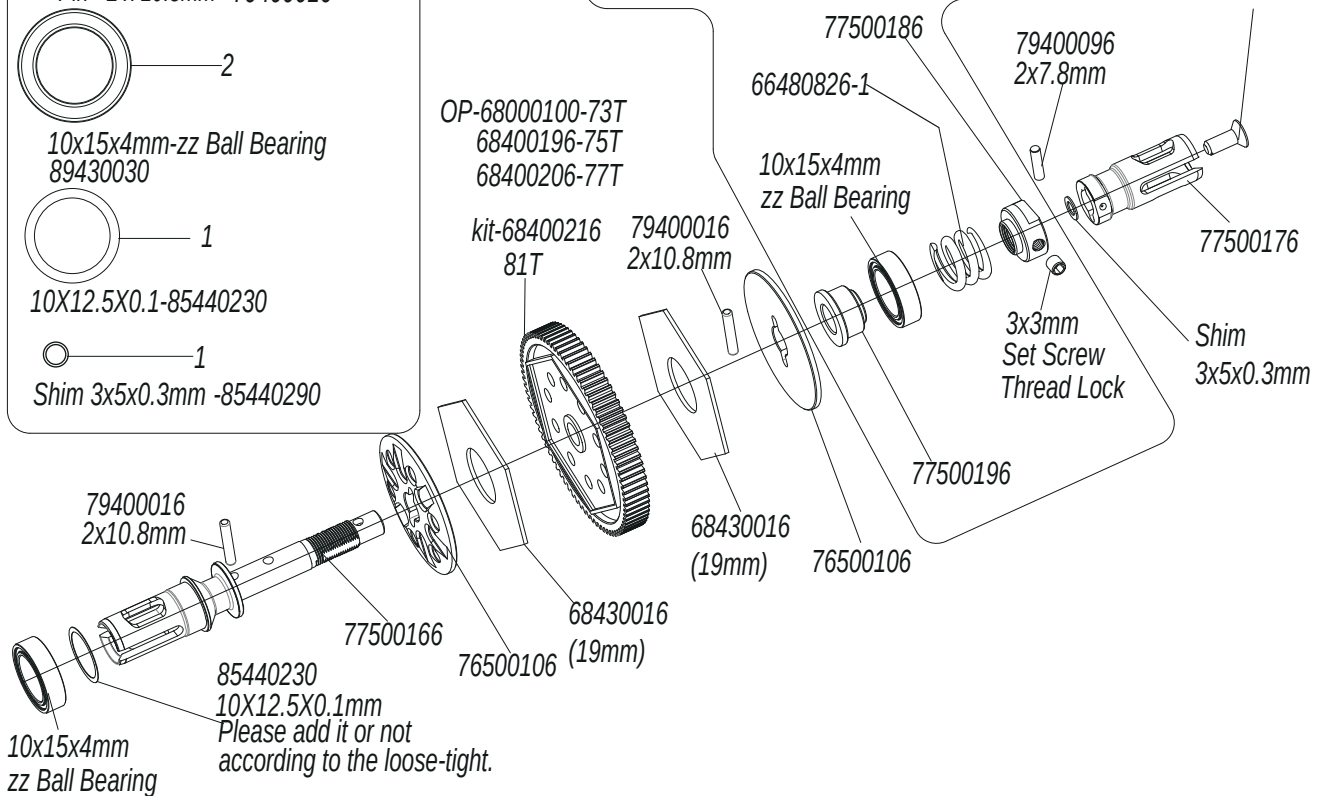
A3 Slipper Assmely

ITEM NO:77500256

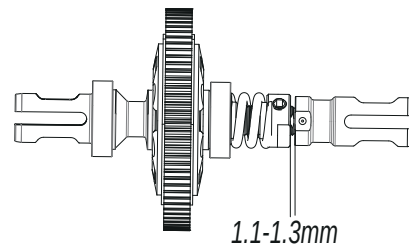
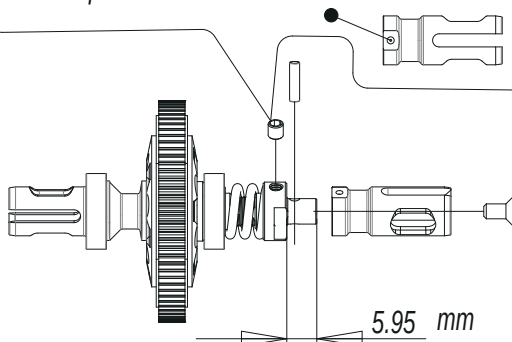
PR SB401-R 1/10 Electric 4wd Off Road Buggy Kit Lightweight Edition (Slipper Clutch Version)

- 1 M3X3mm Set Screw 87400016
- 1 M3X6mm Flat Head Screw 82400016
- 1 Pin - 2 x 7.8mm -79400096
- 2 Pin - 2 x 10.8mm -79400016
- 2 10x15x4mm-zz Ball Bearing 89430030
- 1 10X12.5X0.1-85440230
- 1 Shim 3x5x0.3mm -85440290

Tighten the slipper nut until the spring is completely compressed, to break it in first. Then adjust the slipper.



The set screw used to secure the slipper nut is tightened onto the flat area of the slipper shaft *Do not tighten onto the threaded area. Please tighten the area on the marked point



Adjust the slipper so that when the car accelerates from a dead stop, there is a small amount of slip.

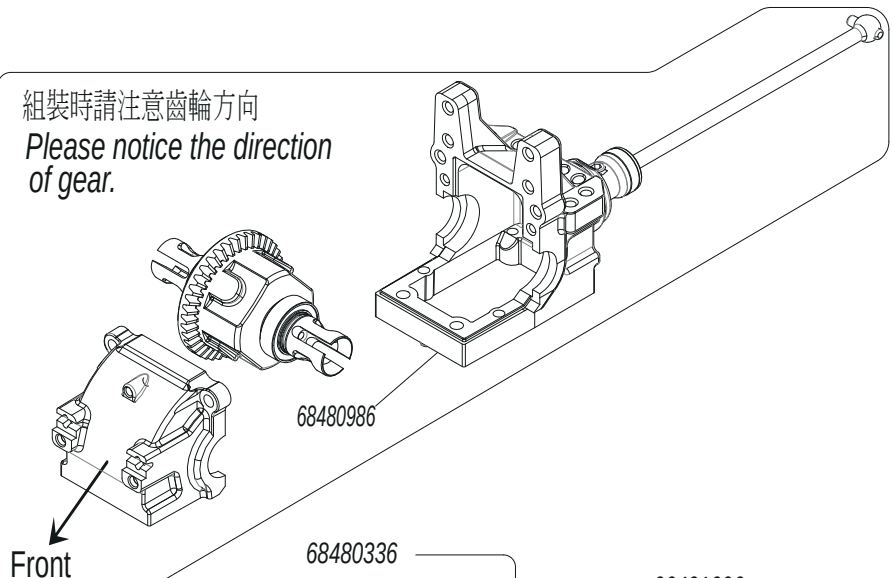


A4 Gear Box Assembly Front Front Shock Tower nstallation

Front

- 2
4.8x8mm Ball Studs-68430046
- 2
M3 Lock Nut -83400106
- 6
M3X10mm Button Head Cap Screw 80400046
- 1
M4X3mm Set Screw-78400016
- 2
5x8x0.1mm-Shim-85440090
- 3
10x12.5X0.1-Shim-85440230
- 2
5x10x4mm zz Ball Bearing-89430010
- 2
10x15x4mm zz Ball Bearing-89430030
- 1
79400086(2x9.8mm)

組裝時請注意齒輪方向
Please notice the direction of gear.



5x10x4mm zz Ball Bearing

68480336
(2x9.8mm)

M4X3mm Set Screw

Tighten securely.

66401096

66402626-CVD(3x68mm)

68480326

Shim
5x8x0.1mm

68480986

Shim
5x8x0.1mm

10x12.5X0.1Shim

10x15x4mm zz Ball Bearing

77500236 R-15T

Shim10x12.5X0.1

10x15x4mm zz Ball Bearing

68480986

M3X10mm

68530016
Front Shock Tower

M3X10mm

M3 Lock Nut

4.8x8mm
Ball Studs



Part Bags used.



Apply grease.



Apply threadlocker (screw cement)

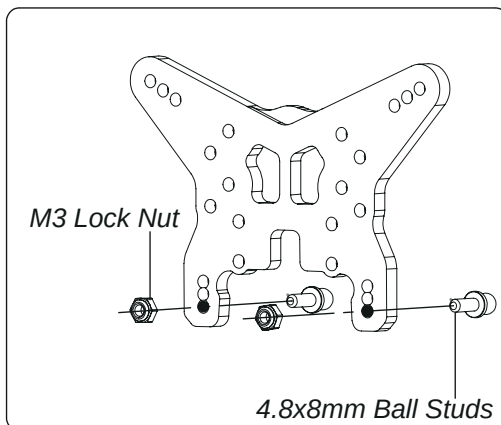
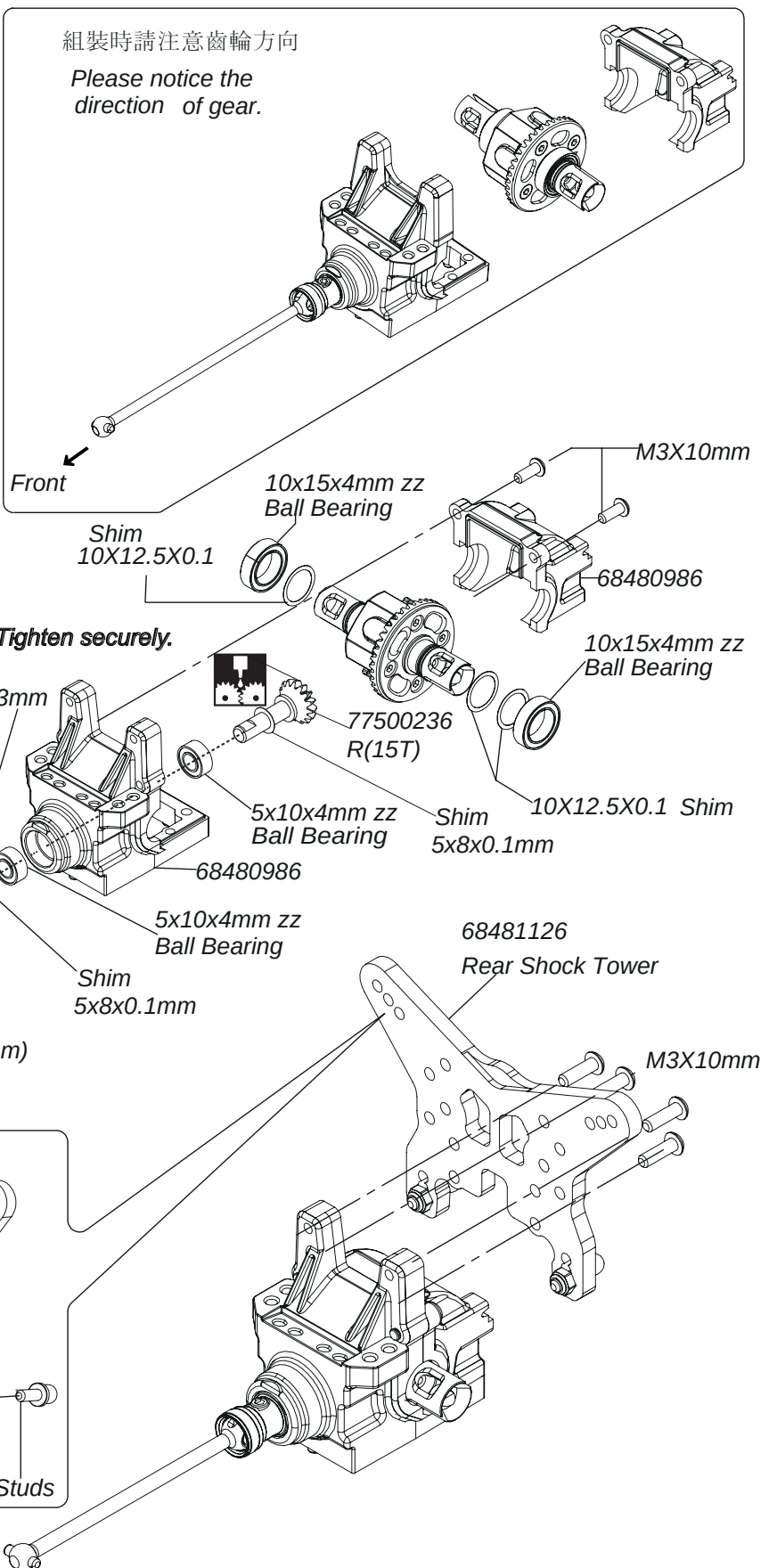


Tighten securely.

- 2
4.8x8mm Ball Studs-68430046
- 2
M3 Lock Nut -83400106
- 6
M3X10mm Button Head Cap Screw
80400046
- 1
M4X3mm Set Screw-78400016
- 2
5x8x0.1mm-85440090
Shim
- 3
10X12.5X0.1-85440230
Shim
- 2
5x10x4mm
Ball Bearing
89430010
- 2
10x15x4mm
Ball Bearing
89430030
- 1
(2x9.8mm)-79400086

組裝時請注意齒輪方向

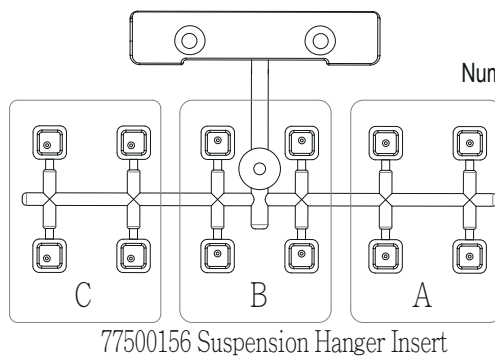
Please notice the
direction of gear.



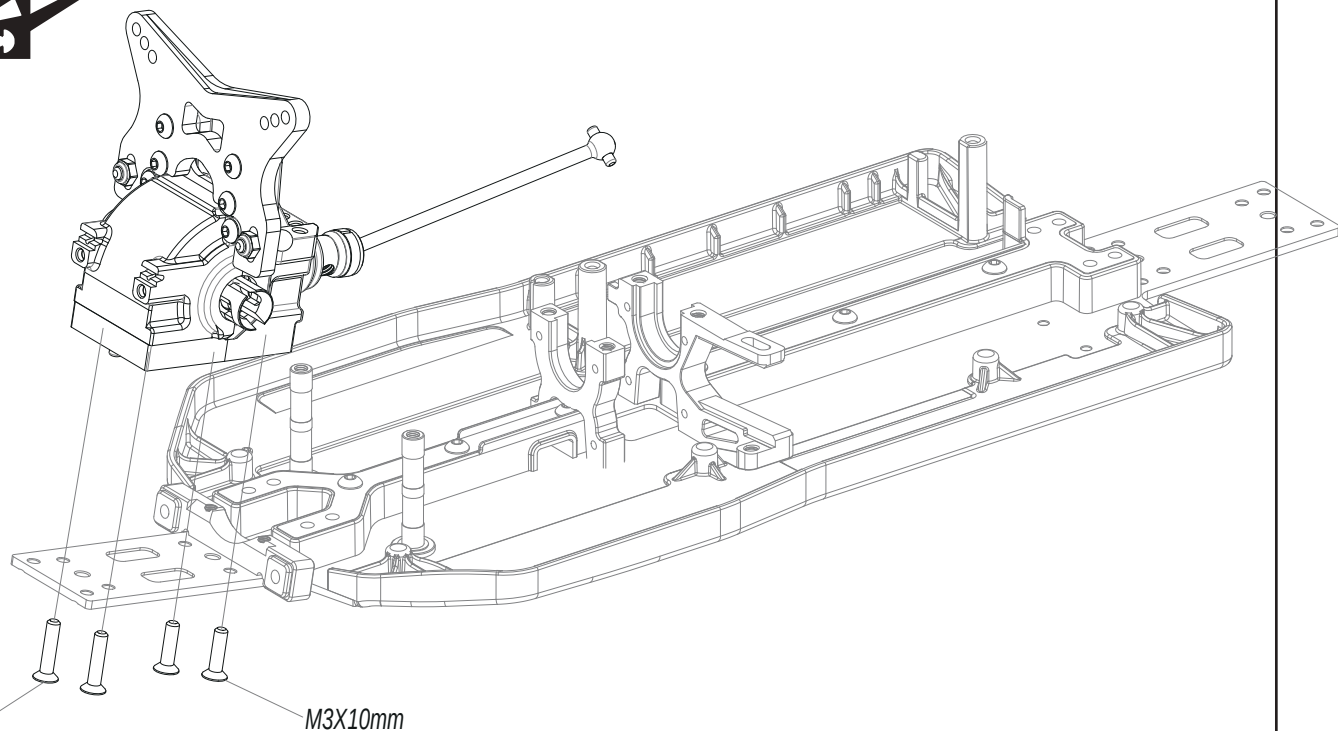
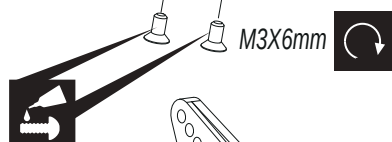
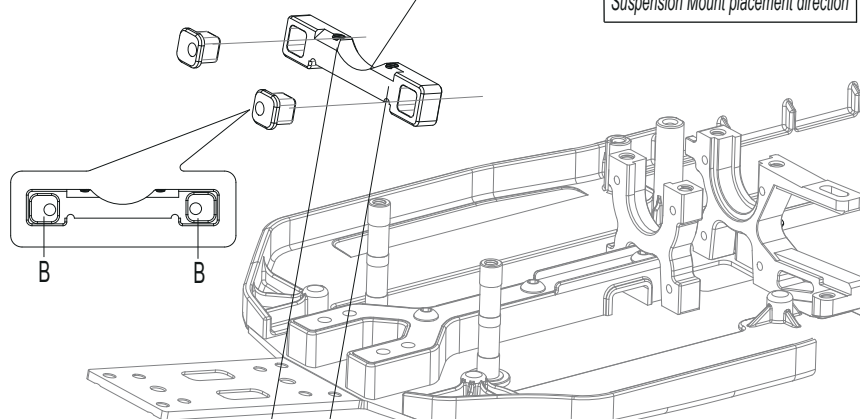
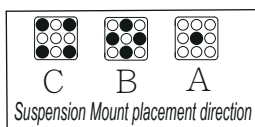


B1 Suspension Mount Installation

- 2
M3X6mm Flat Head Screw
82400016
- 2
M3X10mm Flat Head Screw
82400106
- 2
M3X15mm Flat Head Screw
82400176



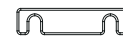
77500116
FR Suspension Mount



FRONT HANGER INSERTS

Numbering	FF	FR	TOE	SQUAT
F-1	0	0	0	0
F-2	0	0	0	+0.7
F-3	0	0	0	+1.4
F-4	0	0	0	-0.7
F-5	0	0	0	0
F-6	0	0	0	+0.7
F-7	0	0	0	-1.4
F-8	0	0	0	-0.7
F-9	0	0	0	0
F-10	0	0	0	0
F-11	0	0	-0.9	0
F-12	0	0	-1.7	0
F-13	0	0	+0.9	0
F-14	0	0	0	0
F-15	0	0	-0.9	0
F-16	0	0	+1.7	0
F-17	0	0	+0.9	0
F-18	0	0	0	0
R-19	0	0	+3.5	+2

Note:



(1) SB401 Plastic Antisquat
Shims=1mm=1Degree.



Part Bags used.



Tighten securely.

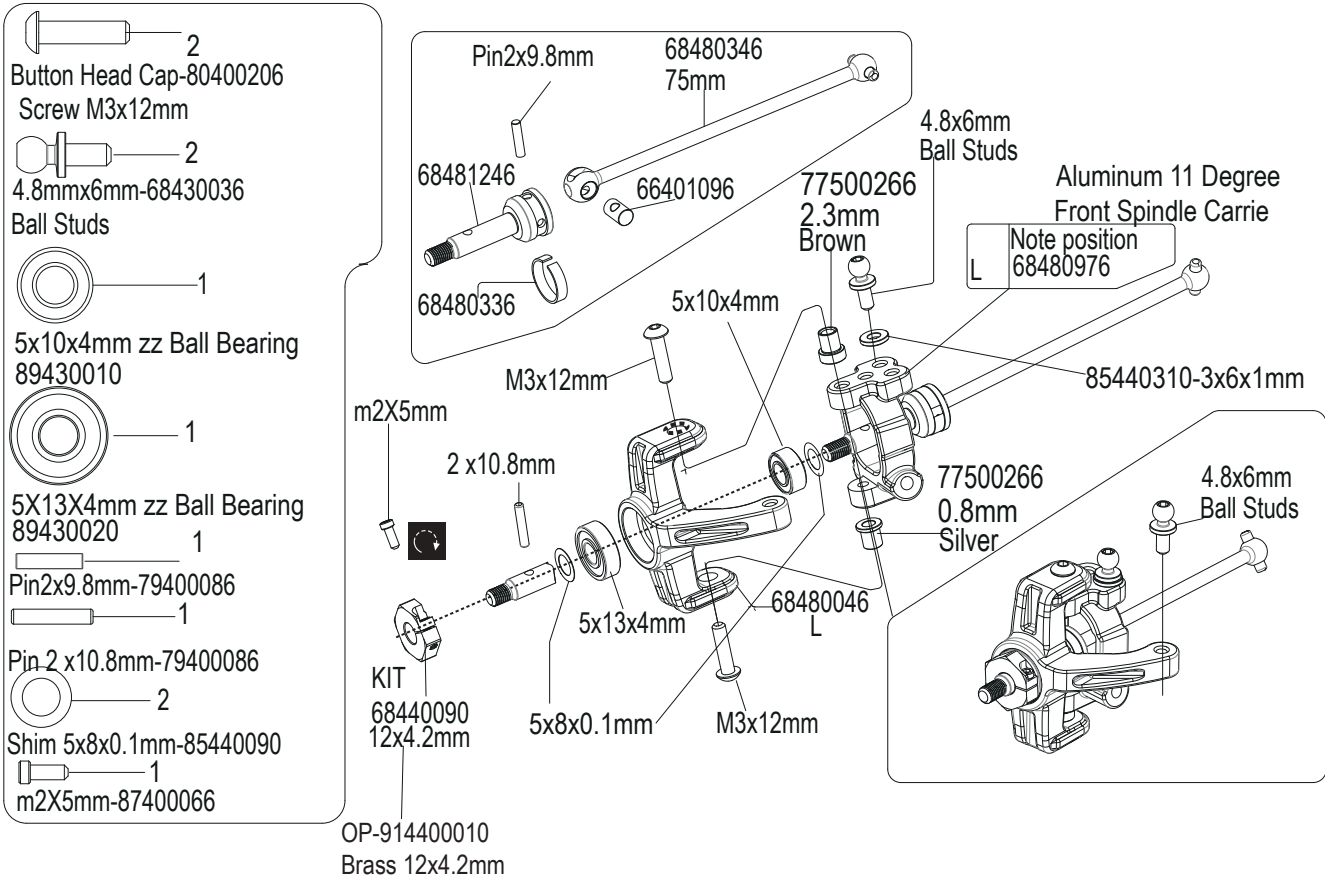


Apply threadlocker (screw cement)



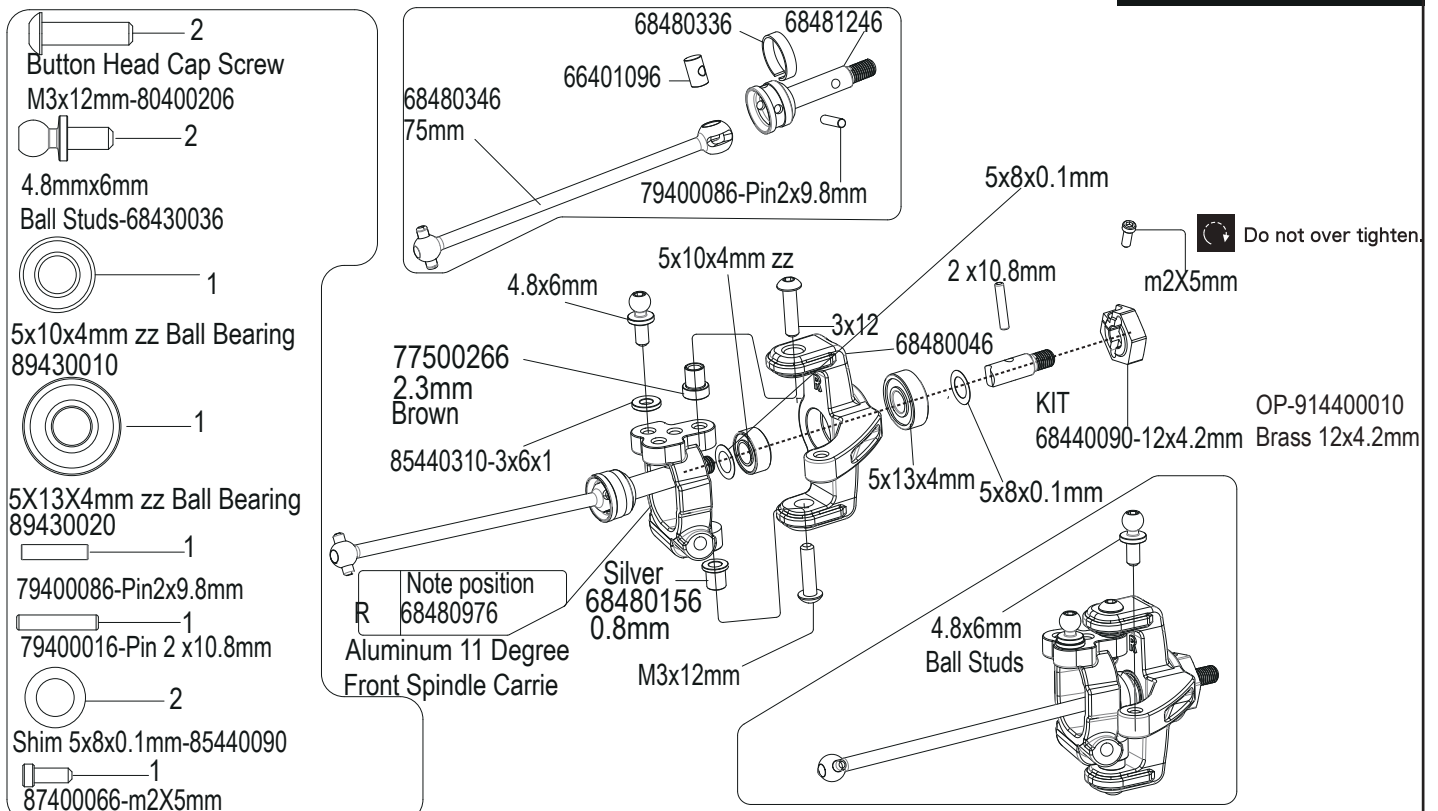
B2 Front Hub Carrier Assembly (Left Side)

Left Side



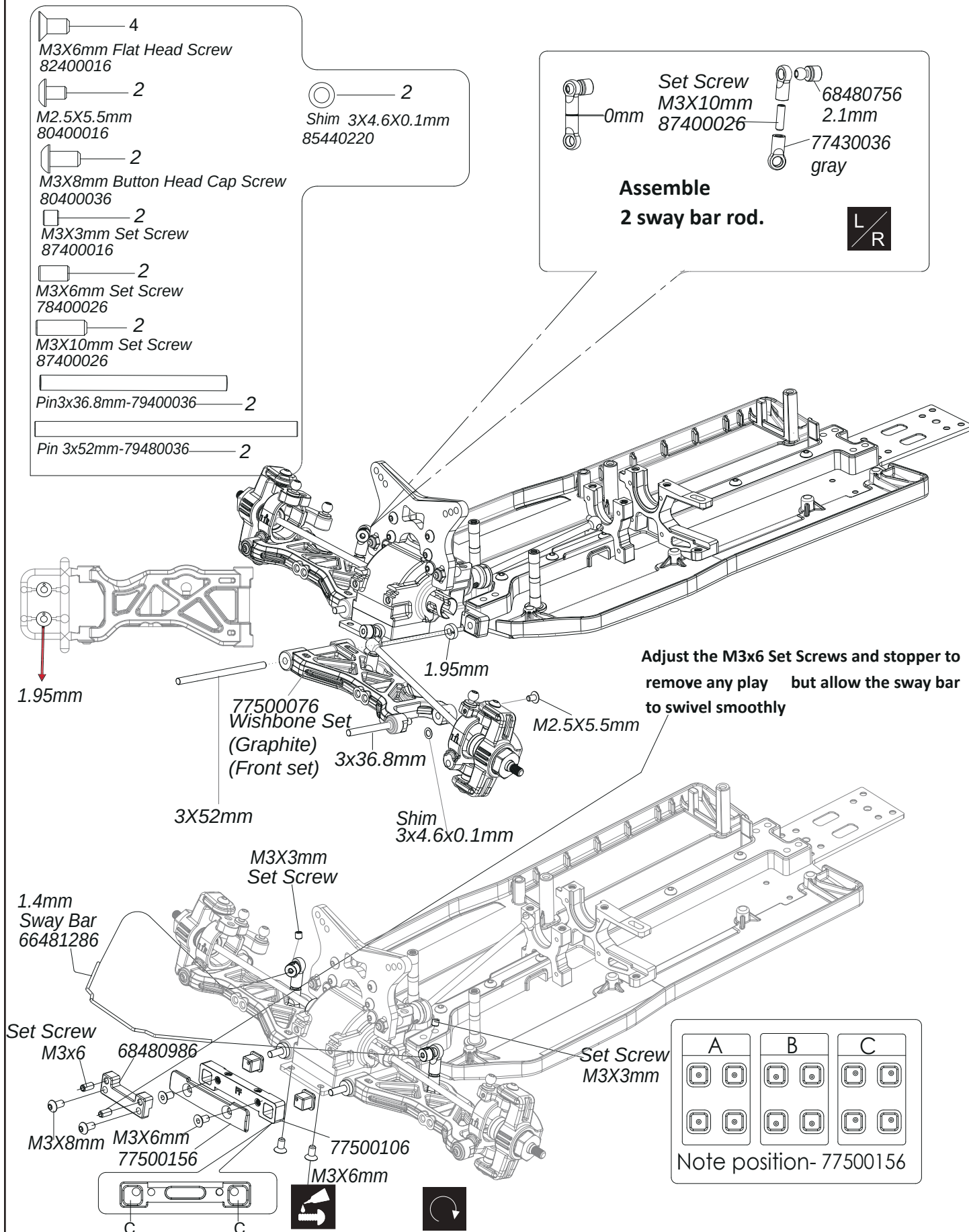
B2 Front Hub Carrier Assembly (Right Side)

Right Side





B3 Suspension Mount Installation- Sway Bar Installation



Part Bags used.

Assemble left and right
sides the same way.

Tighten securely.

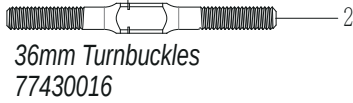


Apply threadlocker (screw cement)

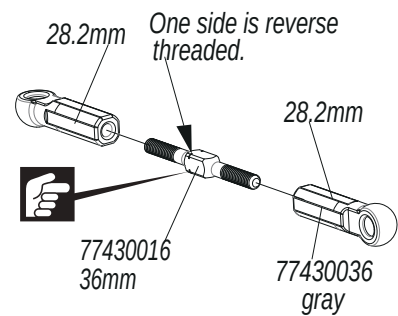
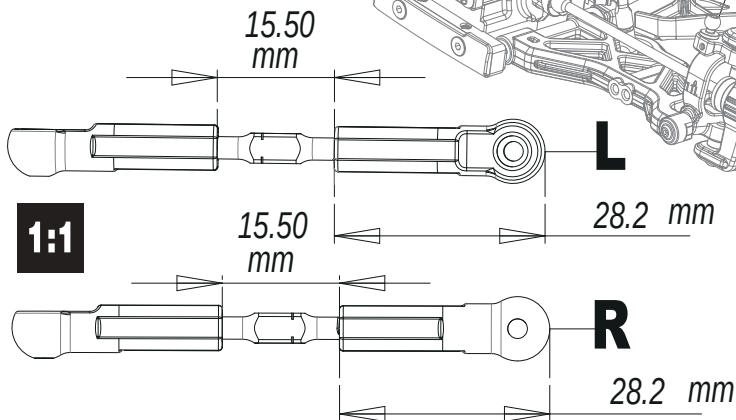


B4 Front Upper Turnbuckle Assembly

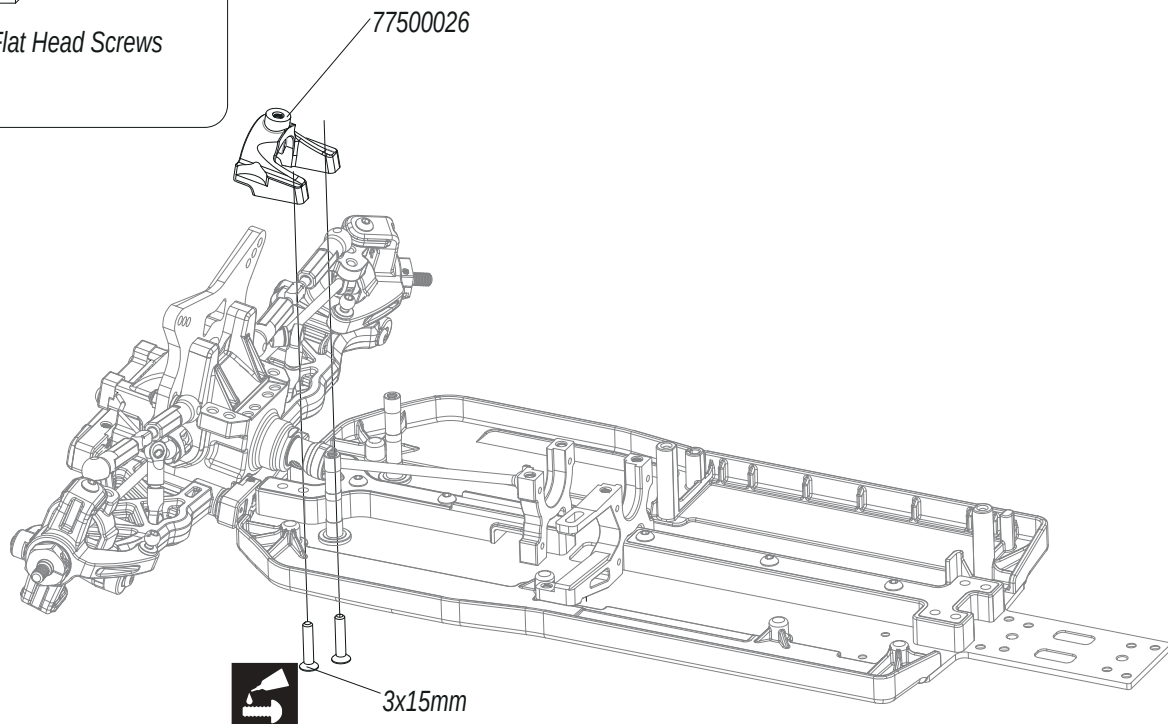
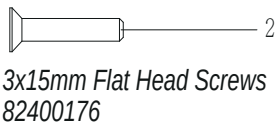
One side is reverse threaded.



"Assemble 2 front links
and 2 steering rod links"



B5 Gearbox-Reinforcement - Front





C1 RF Suspension Mount

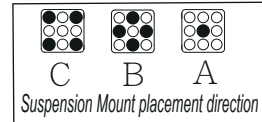
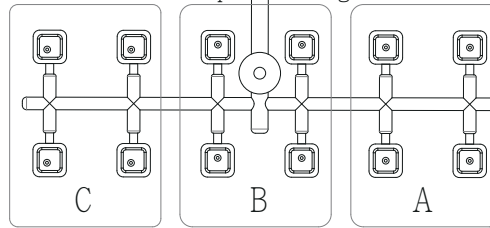
4
M3X10mm Button Head Cap Screw
80400046

2
M3X6mm Flat Head Screw
82400016

2
M3X10mm Flat Head Screw
82400106

2
M3X15mm Flat Head Screw
82400176

77500156 Suspension Hanger Insert



68480106
Wing Mount

77500036
Gearbox Reinforcement Block - Rear
place onto Gearbox before
locking in place.

M3x10mm

Suspension
Bushing
77500156

77500126

RF

C

77500156-C

68480036
1pcs=1°

M3x15mm

M3x10mm

M3X6-8mm

REAR HANGER INSERTS

Numbering	RF	RR	TOE	SQUAT
R-1			+1.6	0
R-2			+1.6	+0.7
R-3			+1.6	+1.4
R-4			+1.6	-0.7
R-5			+1.6	0
R-6			+1.6	+0.7
R-7			+1.6	-1.4
R-8			+1.6	-0.7
R-9			+1.6	0
R-10			+1.6	0
R-11			+0.8	0
R-12			0	0
R-13			+2.5	0
R-14			+1.6	0
R-15			+0.8	0
R-16			+3.0	0
R-17			+2.5	0
R-18			+1.5	0
R-19			+3.5	+2

Note:



(1) SB401 Plastic Antisquat
Shims=1mm=1Degree.



Part Bags used.



Tighten securely.



Apply threadlocker (screw cement)

C2 Rear Left Hub Carrier Assmely

Assemble the right left side in the same manner.

2
m3x6mm Flat Head Screws
82400016

4
M2.5X4mm Button Head Screw
80400016

2
10x15x4mm zz Ball Bearing
89430030

2
5x13x4mm zz Ball Bearing
89430020

4
Shim 5x8x0.1mm
85440090

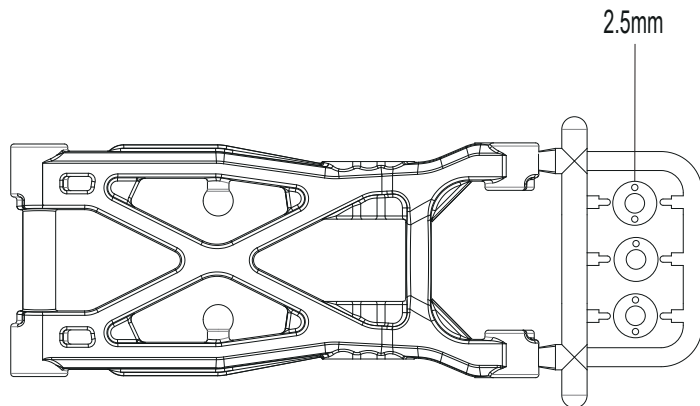
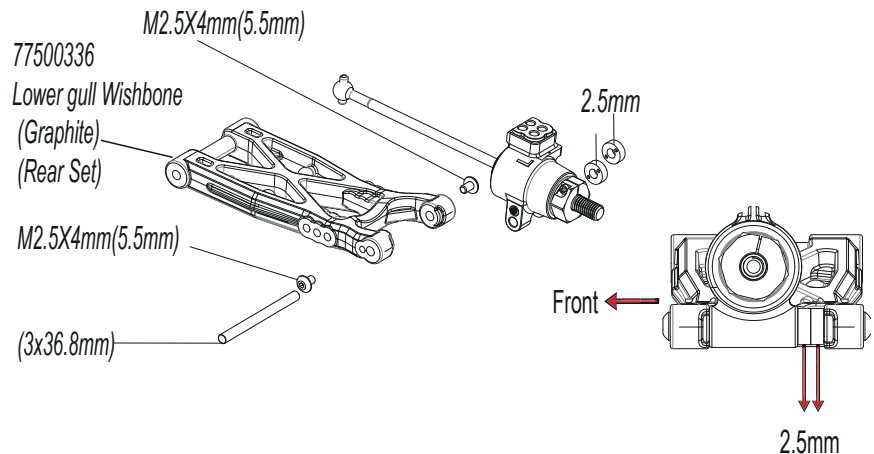
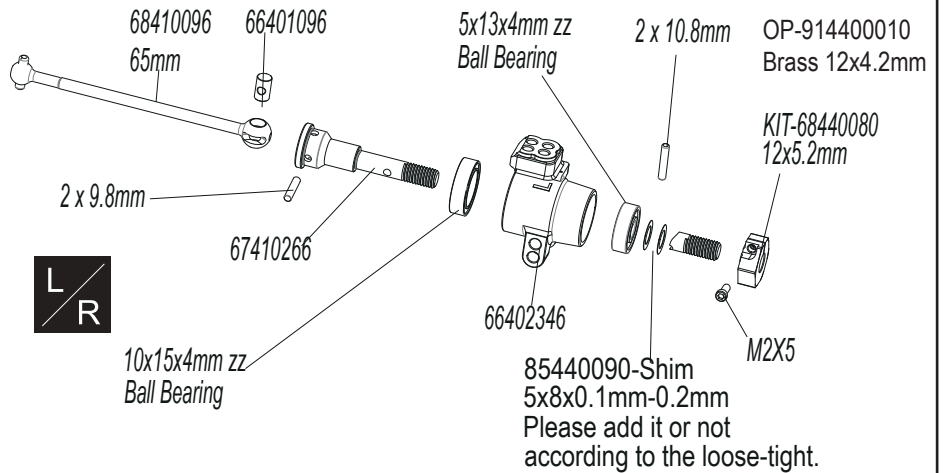
2
PIN(3x52mm)79480036

2
PIN(3x36.8mm)79400036

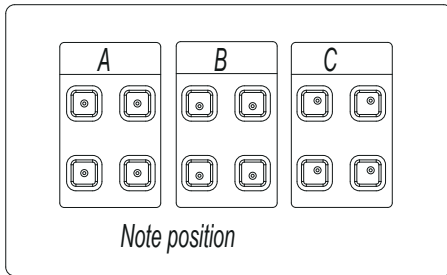
2
PIN(2 x 10.8mm)79400016

2
PIN(2 x 9.8mm)79400086

1
m2X5mm-87400066

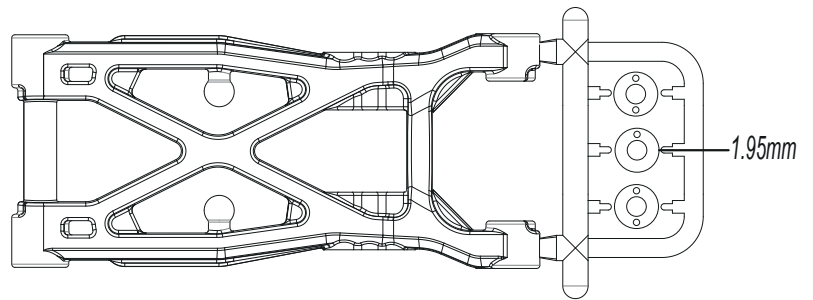
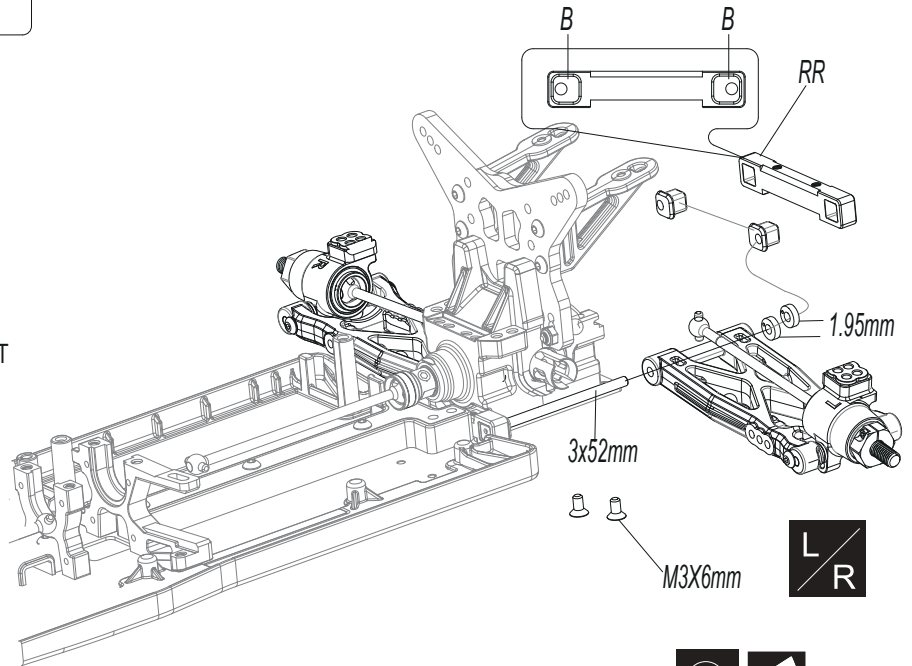


C3 Rear Left Hub Carrier Assmebly



REAR HANGER INSERTS

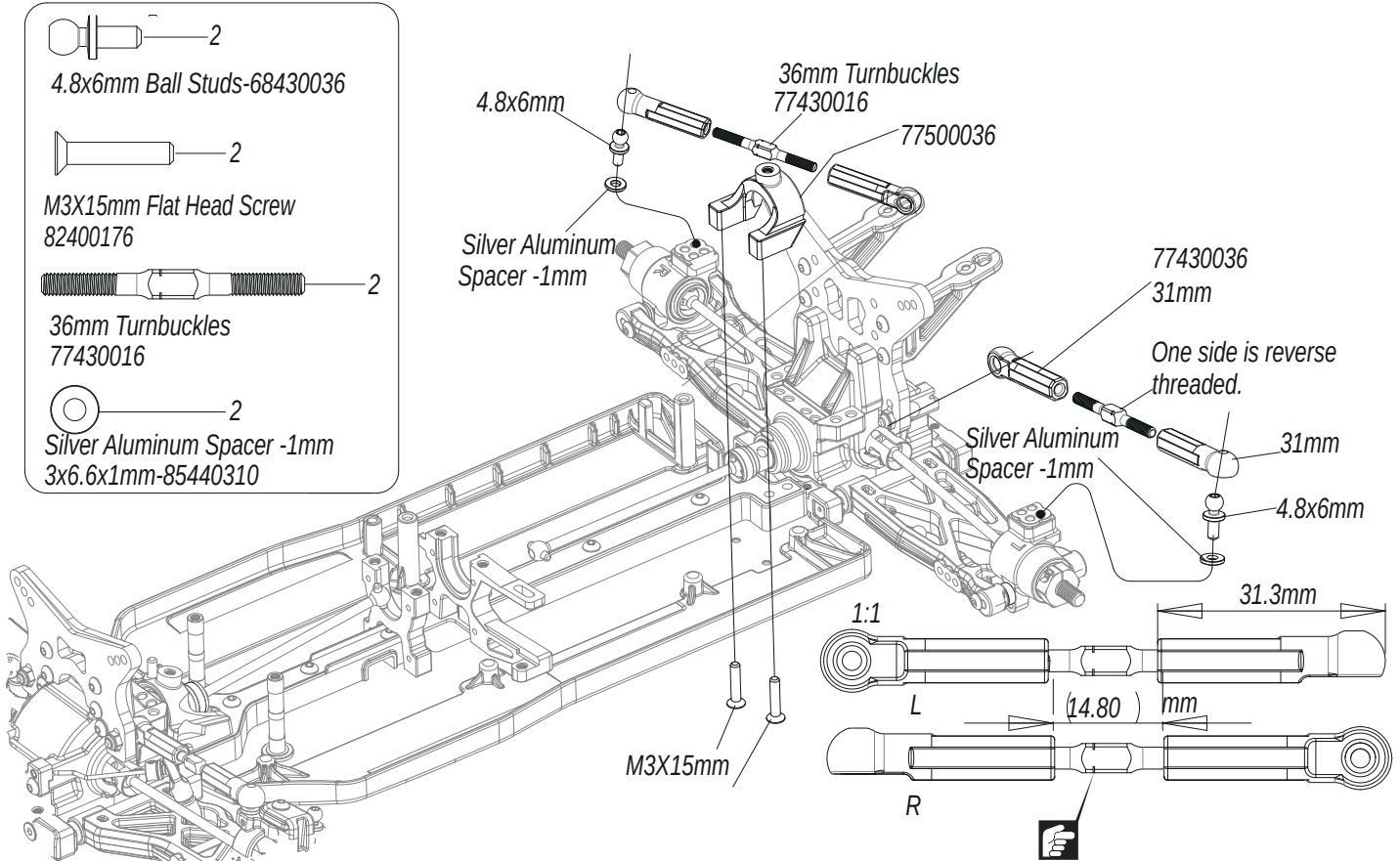
Numbering	RF	RR	TOE	SQUAT
R-1			+1.6	0
R-2			+1.6	+0.7
R-3			+1.6	+1.4
R-4			+1.6	-0.7
R-5			+1.6	0
R-6			+1.6	+0.7
R-7			+1.6	-1.4
R-8			+1.6	-0.7
R-9			+1.6	0
R-10			+1.6	0
R-11			+0.8	0
R-12			0	0
R-13			+2.5	0
R-14			+1.6	0
R-15			+0.8	0
R-16			+3.0	0
R-17			+2.5	0
R-18			+1.5	0
R-19			+3.5	+2



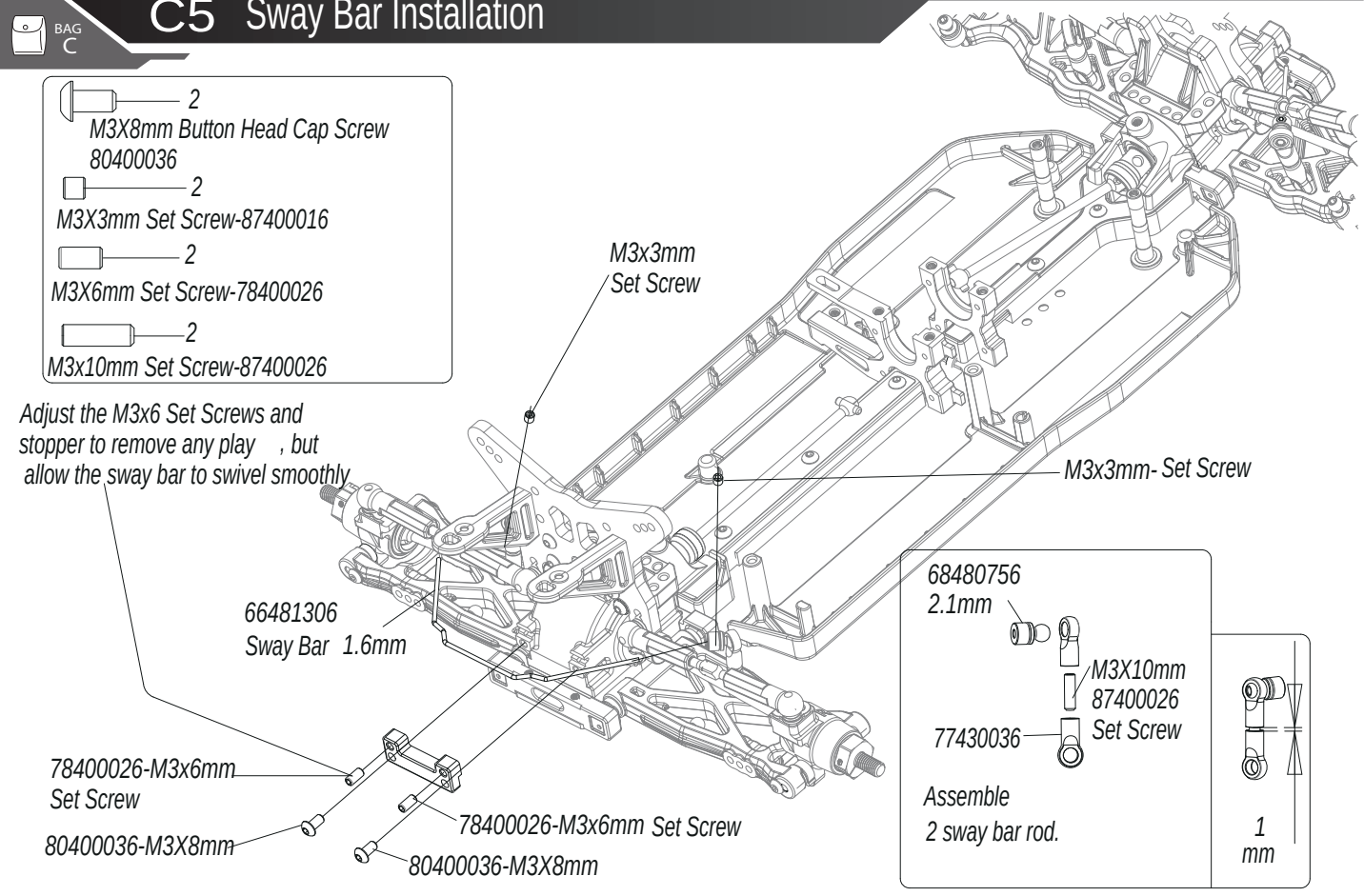
Note: (1) SB401 Plastic Antisquat
Shims=1mm=1Degree.



C4 Rear Upper Rod -Turnbuckle Assembly



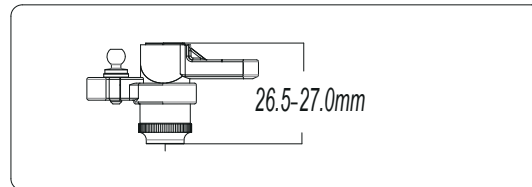
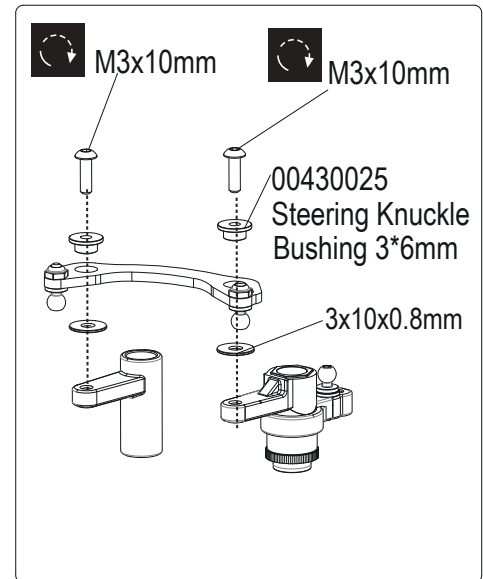
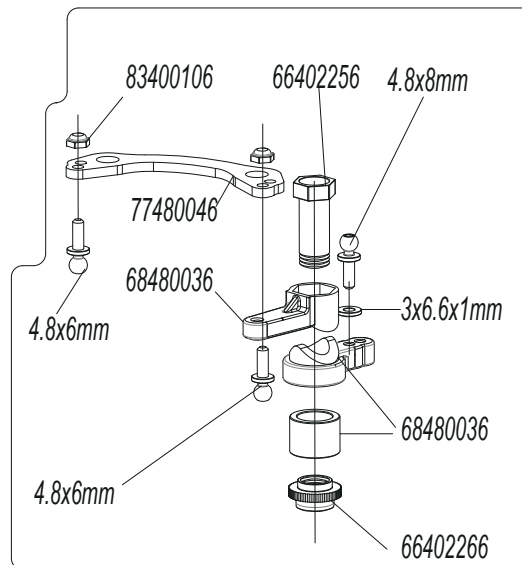
C5 Sway Bar Installation





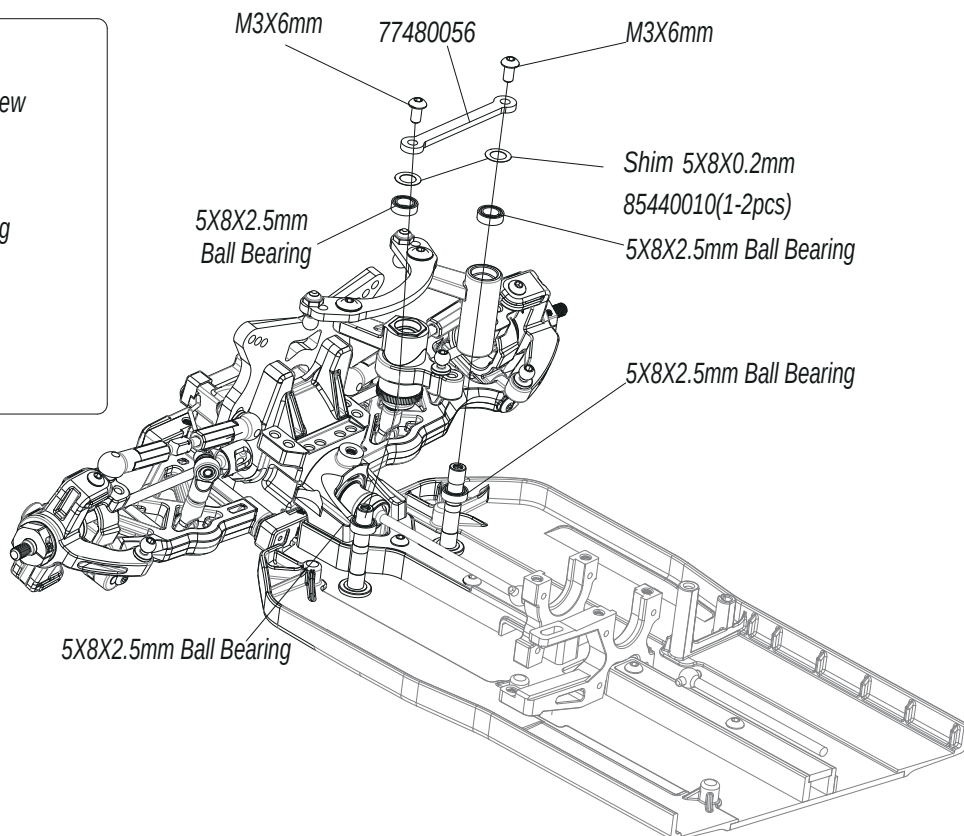
D1 Bell Crank Installation

- 3
4.8x6mm Ball Studs
68430036
- 1
4.8x8mm Ball Studs
68430046
- 2
M3 Lock Nut-83400106
- 2
shim-3x10x0.8mm-85440026
- 1
Silver Aluminum Spacer
3x6.6x1mm-85440310
- 2
M3x10mm-80400046
Button Head Cap Screw



D2 Steering

- 2
M3X6mm Button Head Screw
80400026
- 4
5x8x2.5mm zz Ball Bearing
66400756
- 2
Shim 5x8x0.2mm
85440010



Part Bags used.



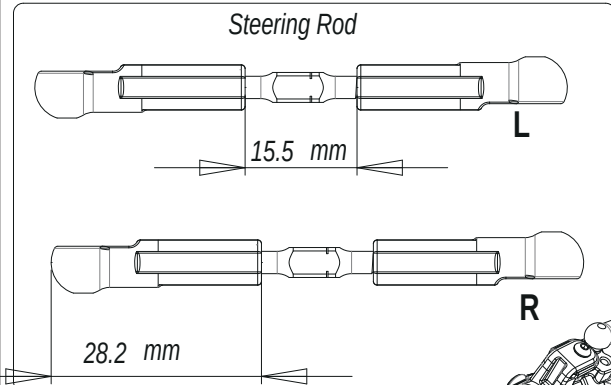
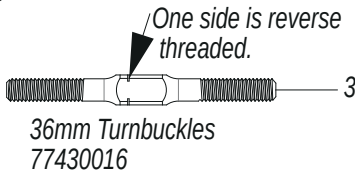
Do not over tighten.



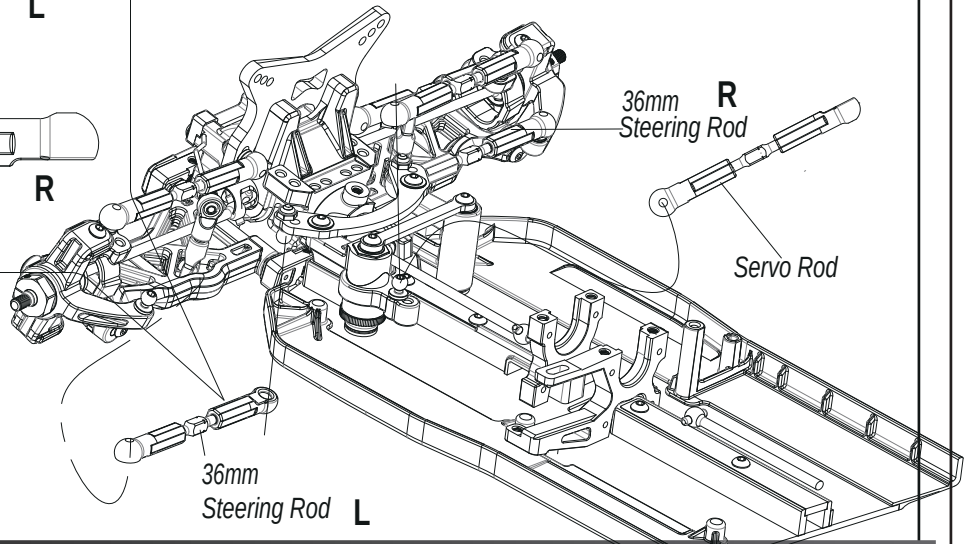
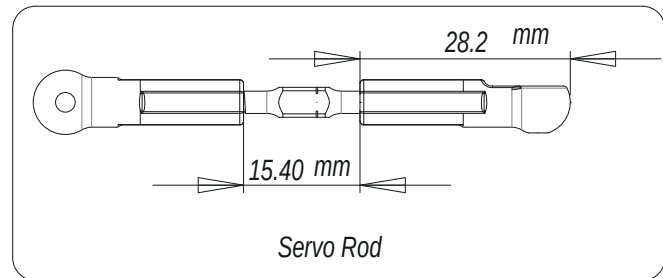
Apply threadlocker (screw cement)



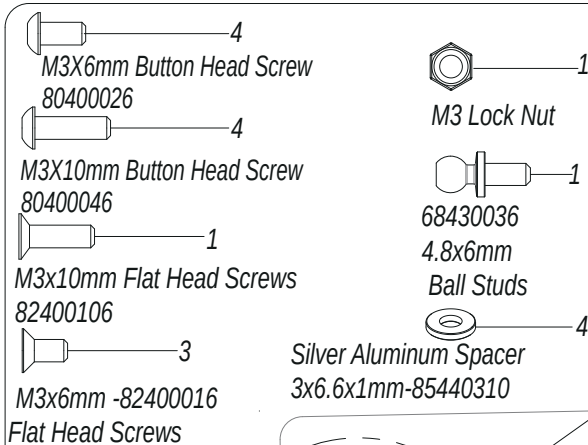
D3 Turnbuckle Assembly-Steering Rod -Servo Rod



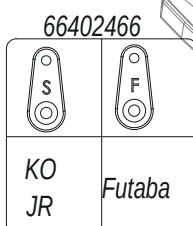
Assemble 2 front
and
2 sway bar rod



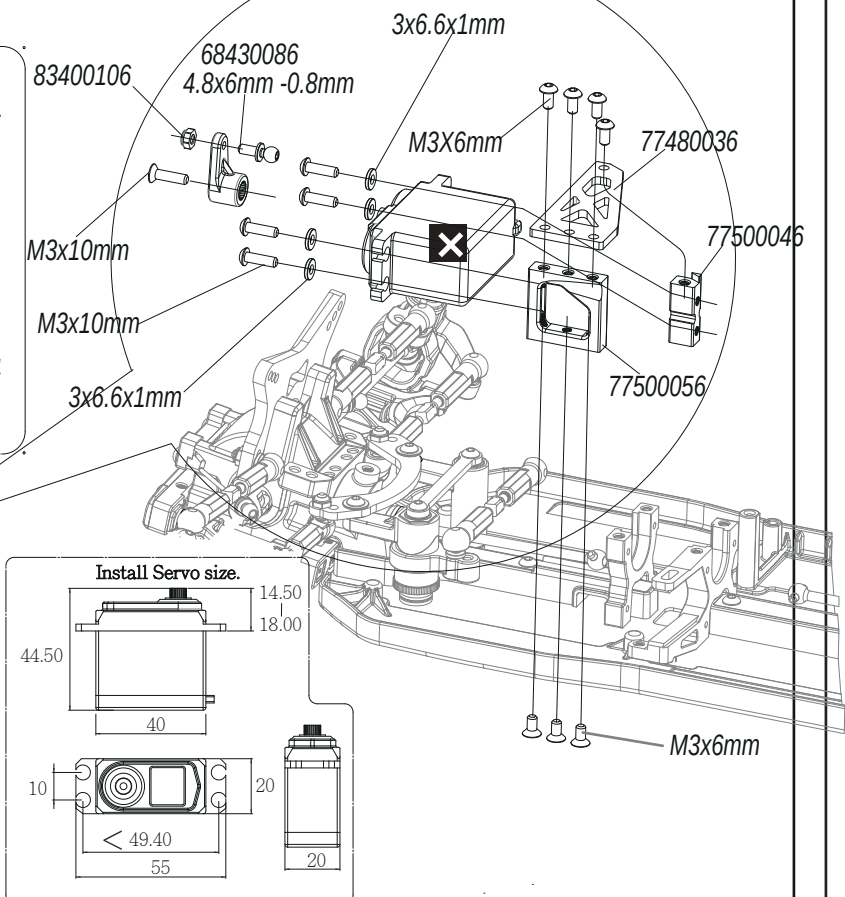
D4 Steering Servo



Servo Installation



Make sure that the servo is centered before attaching the servo saver horn.
(Refer to your radio manual for more information)
Select the servo saver adapter matching the servo being used.

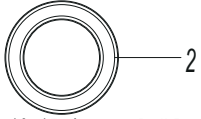




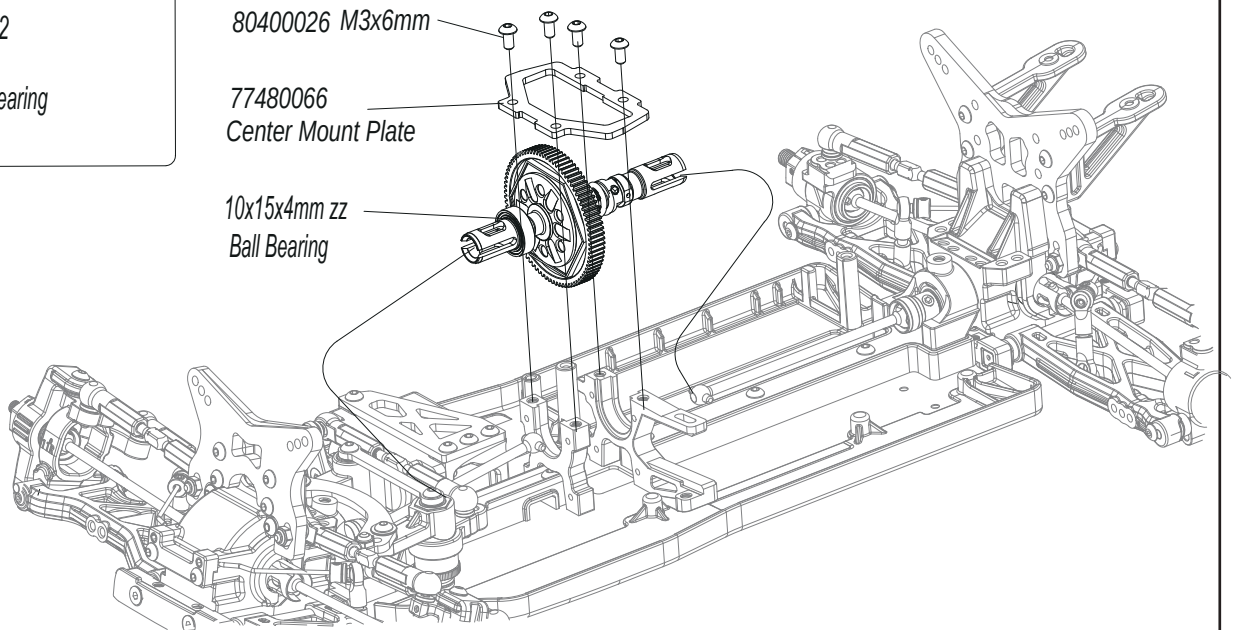
D5 Center Mount Plate



4
M3 x6mm-80400026
Button Head Cap Screw



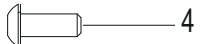
2
10x15x4mm zz Ball Bearing
89430030



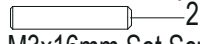
D6 Battery Plate Installation



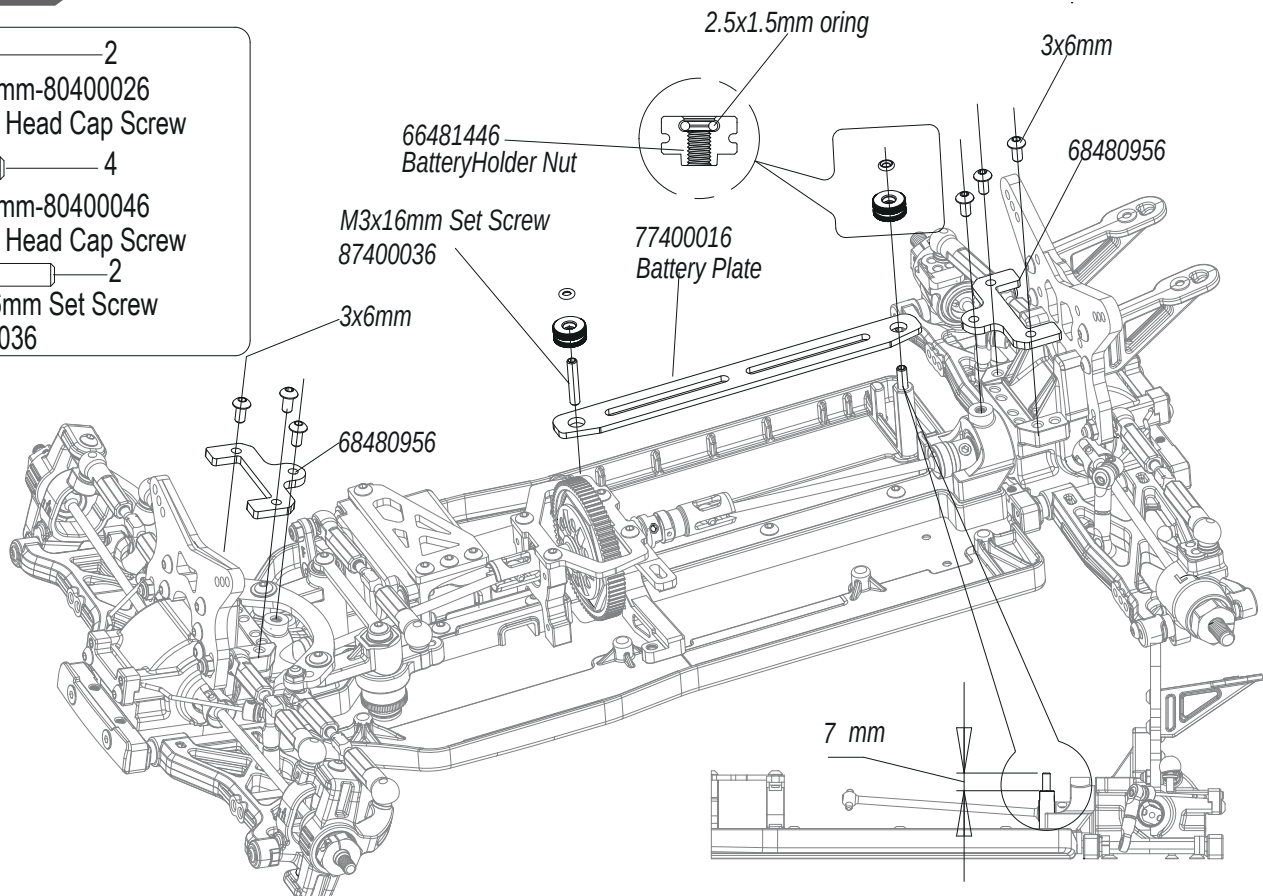
2
M3 x6mm-80400026
Button Head Cap Screw



4
M3 x8mm-80400046
Button Head Cap Screw



2
M3x16mm Set Screw
87400036



Part Bags used.



Must be purchased separately.

E1 Front & Rear Shock Assembly-R

BAG E

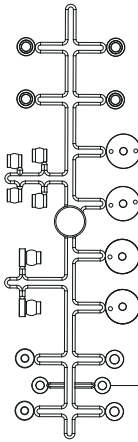
X
INCORRECT

EXTREMELY IMPORTANT

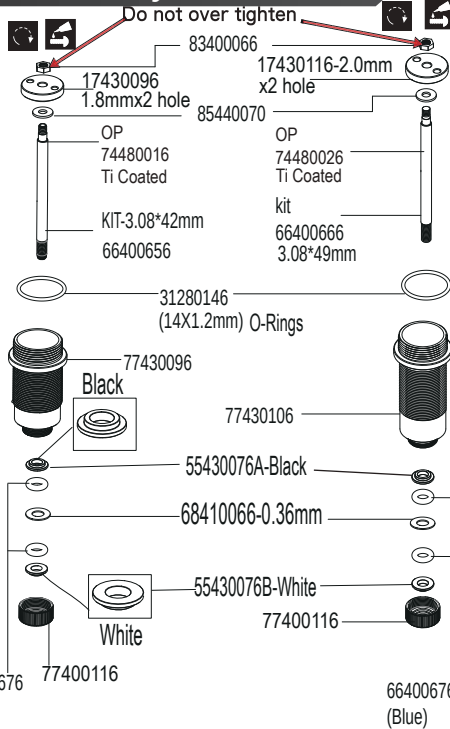
Do not push the shock rod straight through the lower shock body assembly; O-ring damage may result.

✓
CORRECT

Twist the shock rod through the lower shock body assembly.

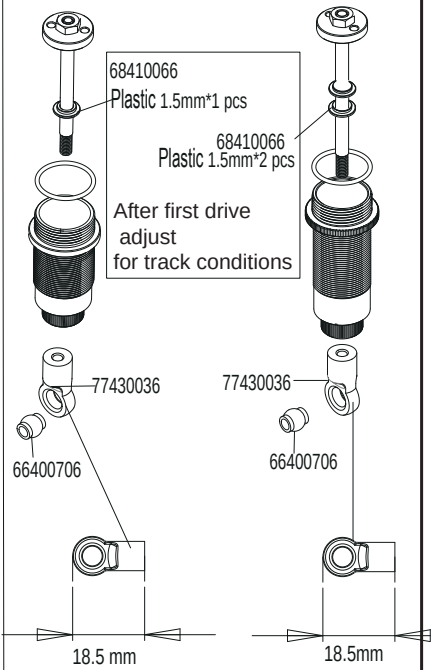


0.36mm



Front Buildx2

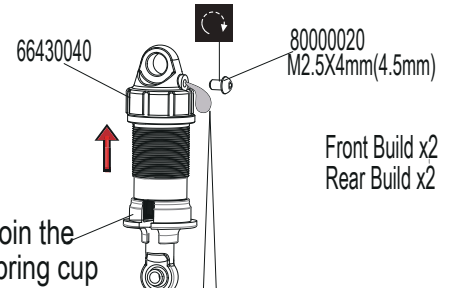
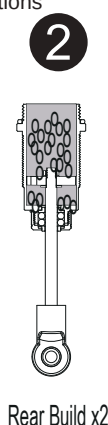
Rear Buildx2



BAG D



After first drive adjust for track conditions



Front Build x2
Rear Build x2

3
Slowly push the shock shaft all the way up, wipe away any excess oil that has seeped out, and screw in the bleeder screw.

OP Shock Pistons

- 66480206-Machined Shock Pistons -1.3mm x 4 Hole (4pcs)
- 17430056-Machined Shock Pistons -1.4mm x 3 Hole (4pcs)
- 66400646-Machined Shock Pistons -1.4mm x 4 Hole (4pcs)
- 17430066-Machined Shock Pistons -1.6mm x 3 Hole (4pcs)
- 66480706-Machined Shock Pistons -1.6mm x 2 Hole (4pcs)
- 66480716-Machined Shock Pistons -1.7mm x 2 Hole (4pcs)
- 17430086-Machined Competition Shock Piston 0 Hole(4pcs)
- 17430046-Machined Shock Pistons -1.5mm x 3 Hole (4pcs)
- 17430076-Machined Shock Pistons -1.7mm x 3 Hole (4pcs)

PR RACING

2019 PR 1/10 Type R Shock Spring

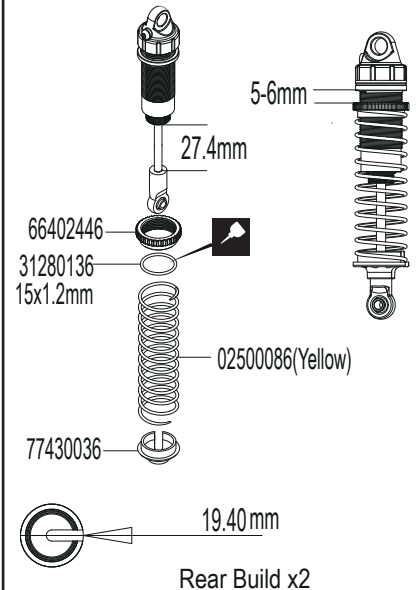
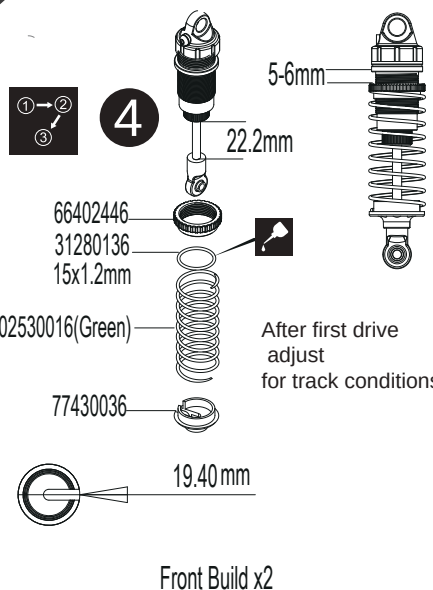
71530016-Type R Front Shock Spring Set (Not included-02530016)

PART NO.	Color	kg/mm	lbs/in
02500096	Transparent	0.053	2.97
02500106	Blue	0.058	3.25
02500146	White	0.061	3.42
02500116	Red	0.063	3.53
02500126	Yellow	0.068	3.81
02530016	Green	0.075	4.20
02530026	Black	0.080	4.48
02530036	Blue Red	0.085	4.76
02530046	White Yellow	0.090	5.04
02530116	Green Black	0.098 (RT)	5.88 (RT)

71530026-Type R Rear Shock Spring Set (Not included-02530126)

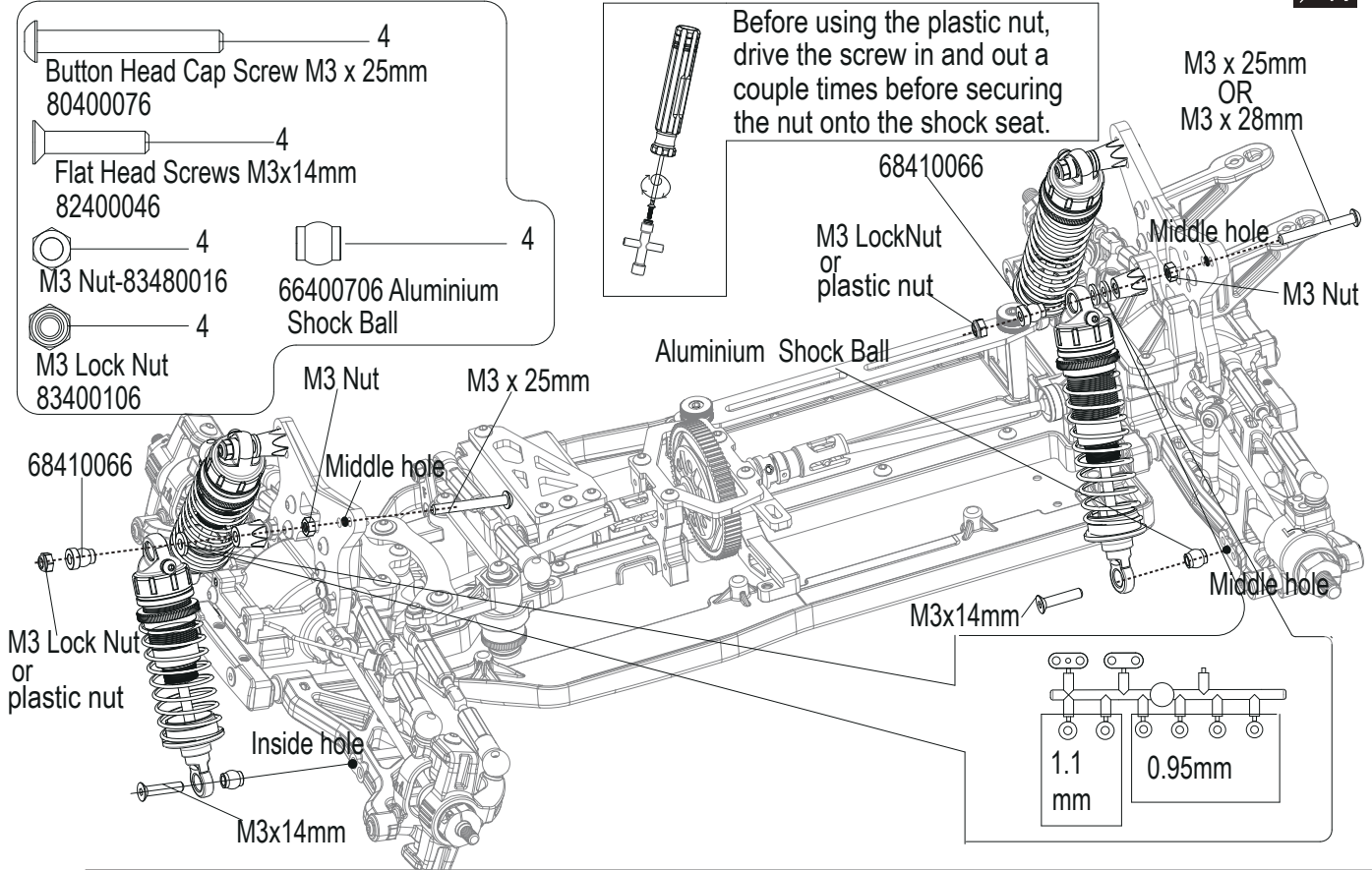
02500056	Transparent	0.030	1.80
02500066	Blue	0.035	2.10
02500136	White	0.037	2.22
02500076	Red	0.040	2.40
02500086	Yellow	0.045	2.70
02530056	Green	0.050	3.00
02530066	Black	0.055	3.30
02530076	Blue Red	0.060	3.60
02530086	White Yellow	0.065	3.90
02530126	Green Black	0.073 (RT)	4.50 (RT)

OP



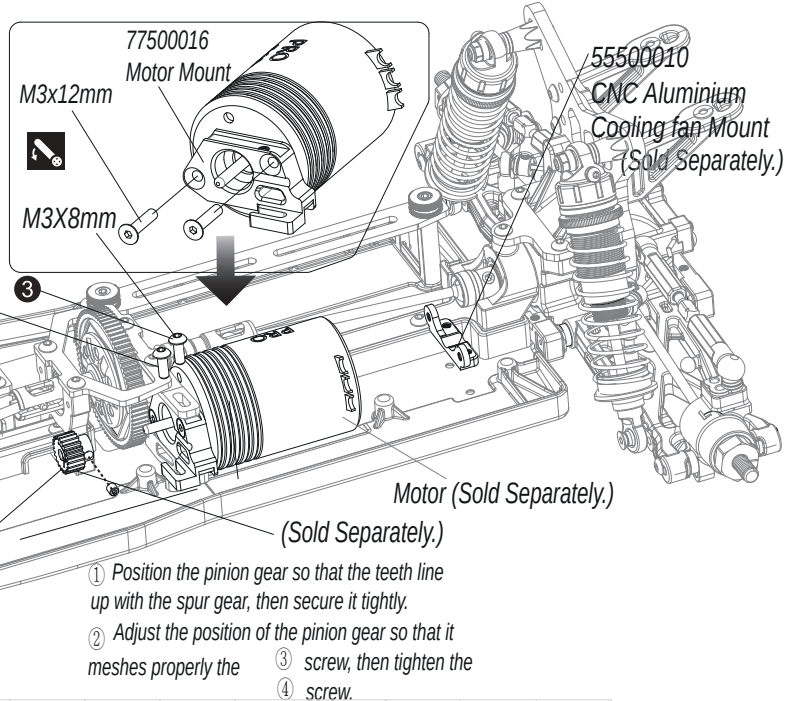


E2 Front & Rear Shock Installation



E3 Motor Installation

- 2
M3 x 8mm Button Head Cap Screw
80400036
- 2
M3x12mm Flat Head Screws
82400036



Pinion gears that will fit.

Pinion	17T	18T	19T	20T	21T	22T	23T	24T	25T	26T	27T	28T	29T	30T
73T(Standard)					9.04	8.63	8.25	7.91	7.59	7.30	7.03	6.78	6.54	6.33
75T(Standard)				9.75	9.29	8.86	8.48	8.13	7.80	7.50	7.22	6.96	6.72	
77T(Standard)			10.54	10.01	9.53	9.10	8.70	8.34	8.01	7.70	7.41	7.15		
80T(Standard)		11.56	10.95	10.40	9.90	9.45	9.04	8.67	8.32	8.00	7.70			
81T(Standard)	12.39	11.70	11.08	10.53	10.03	9.57	9.16	8.78	8.42	8.10				

E5 Mounting Tires Wheel Installation

2
M3x8mm Flat Head Screws
82400026

2
M4 Serrated flange nut
7mm Hex-83400076

2
M5 Aluminum Nut 7mm Hex
83000020

- Place the tire insert into the tire and tire onto the wheel.
- Tire and insert (Sold separately)
CA(Cyanoacrylate) glue sold separately.

- Pull the sidewall of the tire slightly away from the rim and apply CA(Cyanoacrylate) glue in between the tire bead and rim

● Body and Wing Cutting

- Wash the inside of the body with luke warm water and a mild soap or detergent (such as liquid dishwashing soap) prior to painting. Oil residue or dust will prevent the paint from adhering to the painting surface, and possibly cause the paint to peel later on. After washing, thoroughly dry the body to allow the paint to adhere properly.

OP-68481226
Lightweight Body

kit-68481076
Bodyshell and Sticker Set

77500276
Battery separator

Down Cut 3mm-5mm

M3x8mm

68480036

68400316
Rear Wheel

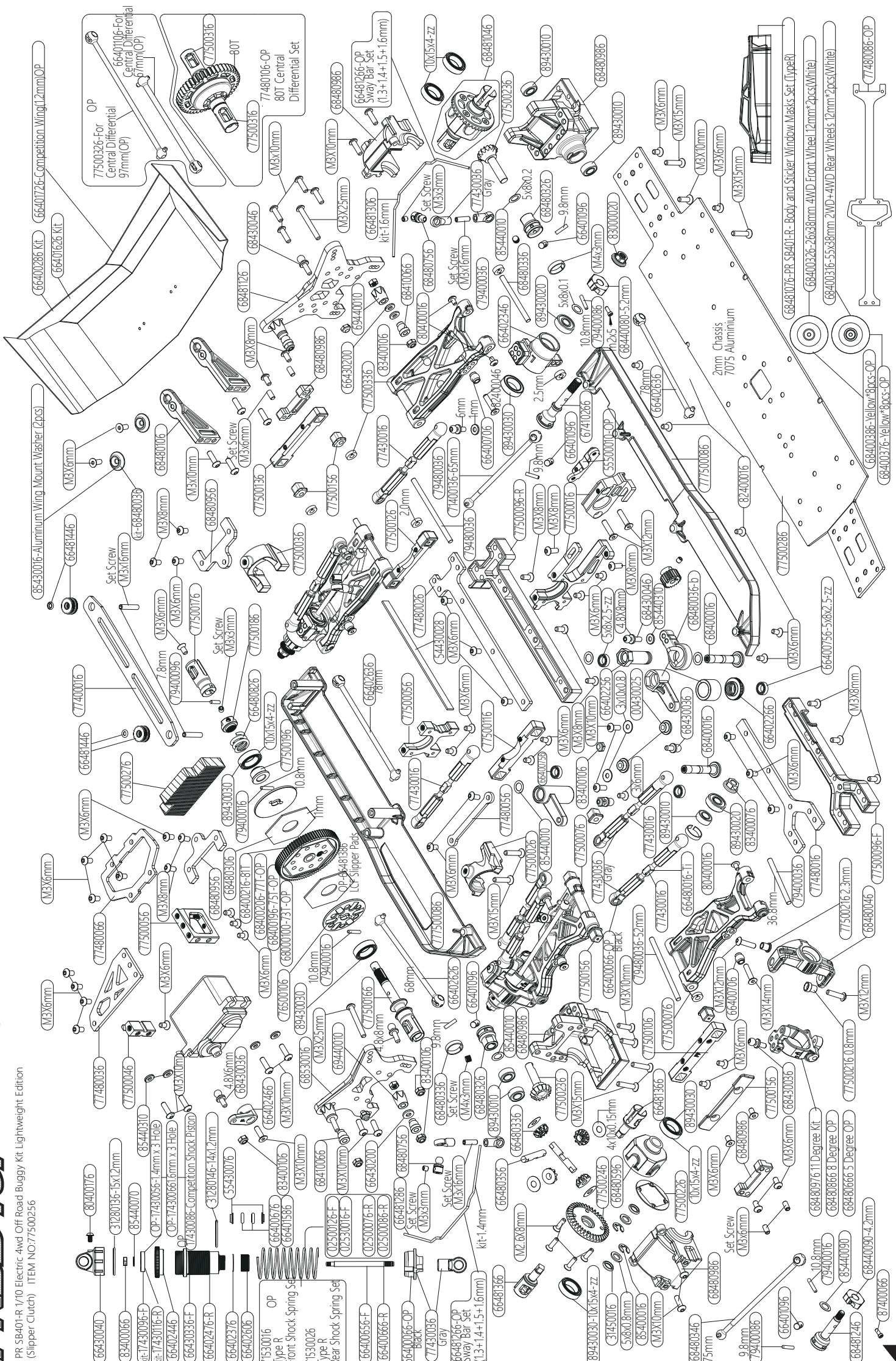
68400326
Front Wheel

M4 Serrated flange nut
7mm Hex (Steel)

M5 Nut 7mm Hex
(Aluminum)

99400056-Velcro Tape

L
R



FRONT

CAMBER

TOE IN OUT

RIDE HEIGHT

mm

mm

0.8mm

2.3mm

Silver 4.2 mm

Black 5.2 mm

Brass ____ mm

0.8mm

2.3mm

mm

5°

8°

11°

OIL #

mm

mm

0.36mm Pom Shim

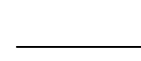
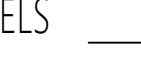
mm

mm

O-Rings(Red)

O-Rings(Blue)

Type R Shock Spring

TIRE	
FRONT	
TIRE _____	
INSERTS _____	
WHEELS _____	
REAR	
TIRE _____	
INSERTS _____	
WHEELS _____	
OTHER	

☐ INDOOR ☐ OUTDOOR ☐ DIRT ☐ ASTROTURF ☐ CARPET
☐ GLASS ☐ WOOD ☐ WET ☐ DRY ☐ DUSTY ☐ SMOOTH
☐ BUMPY ☐ HARD PACKED ☐ CLAY ☐ BLUE GROOVE
☐ LOW TRACTION ☐ MED TRACTION ☐ HIGH TRACTION

REAR

mm

mm

RF

RR

- ☐ Silver 4.2 mm
- ☐ Black 5.2 mm
- ☐ Brass _____mm

OIL

_____mm

_____mm

0.36mm
Pom Shim

mm

Camber _____mm

Ride Height _____mm

☐ O-Rings(Red)

☐ O-Rings(Blue)

Type R Shock Spring _____

Battery Spacer

FRONT

REAR

Adjusting slippers

mm

mm

mm

mm

FRONT OIL#

REAR OIL#

Central Differential

OIL#

23

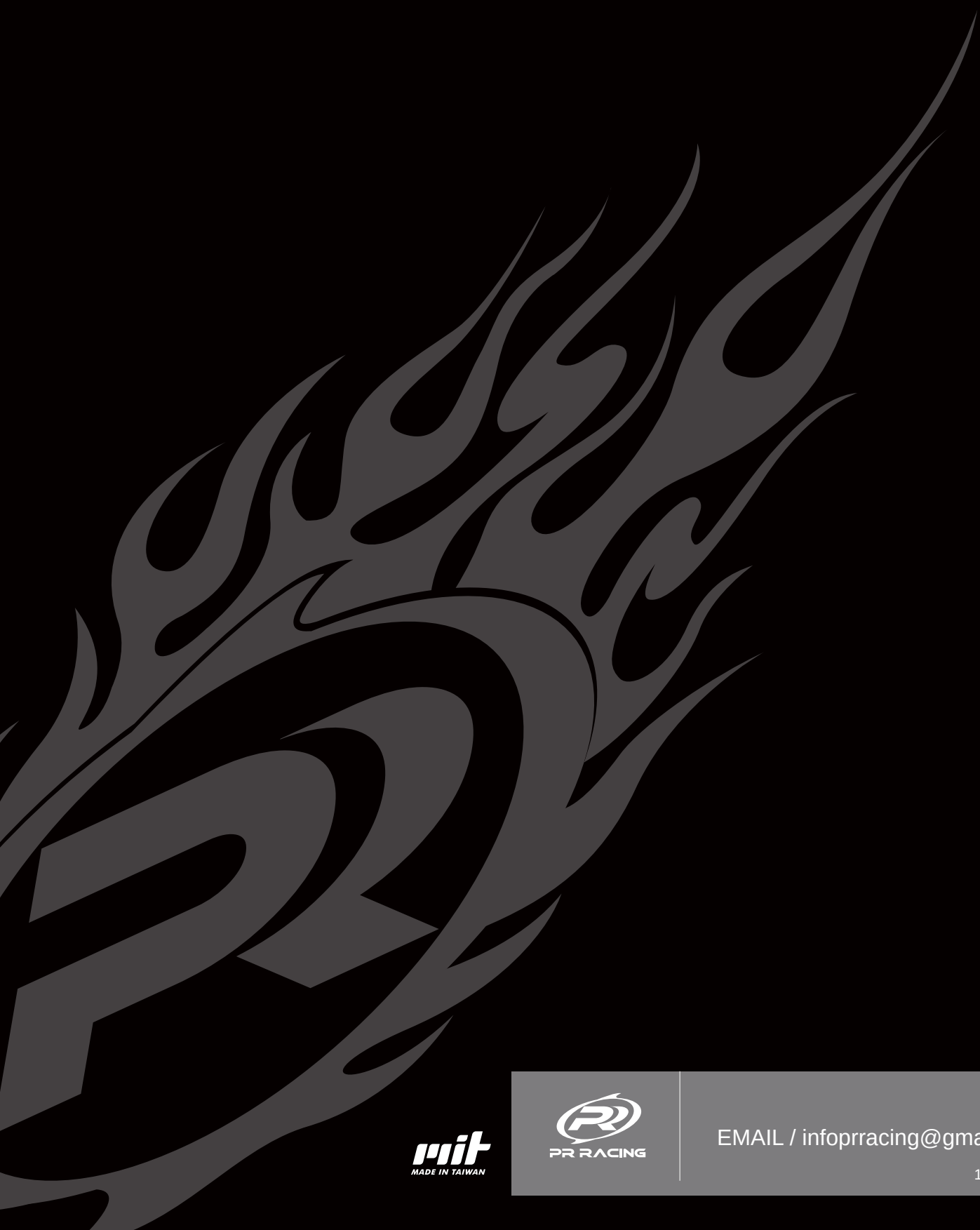
68000100	73T Spur Gear (For SB401)*1pcs
68400196	75T Spur Gear (For SB401)*1pcs
68400206	77T Spur Gear (For SB401)*1pcs
68400216	81T Spur Gear (For SB401)*1pcs

This image shows a full page of white paper with ten sets of horizontal dashed lines, typical of primary school handwriting practice paper. Each set consists of three parallel lines spaced evenly down the page. There are no margins, text, or other markings on the paper.

PR SB401

PR RACING
TYPE **R**

PR SB401-R 1/10 Electric 4wd Off Road Buggy Kit Lightweight Edition
(Slipper Clutch Version)



mit
MADE IN TAIWAN



EMAIL / info@pr-racing.com

1.7.1Version