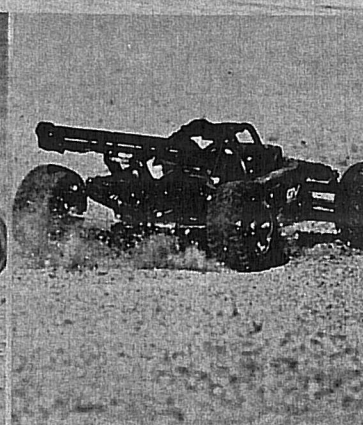
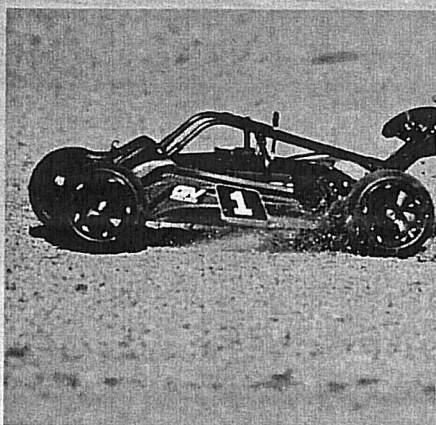


GV RACING **CAGE X**

1/10th SCALE 4WD BUGGY

*Available in brushless
or brushed electric*

**READY TO RUN with
2.4GHz radio installed**



Specifications*

Suits 7.2V NiMH or 2-cell 7.4V LiPo batteries

Wheel base: 275mm

Length: 400mm

Ground clearance: 30mm

Weight: 1500 grams (without battery)

Items required for Cage X:

- 7.2V NiMH or 2-cell 7.4V LiPo battery
- Charger to suit rechargeable battery
- 8 x AA dry cell batteries

GV
MODEL
G.V.MODELS®

GV
RACING

GV
®

GREAT VIGOR MODELS CO.,LTD

NO.523-1, SEC.3, SONGJHU ROAD,
TAICHUNG CITY 406, TAIWAN (R.O.C.)
TEL:886-4-22910686 FAX:886-4-22932755
Http://www.gv-hobby.com.tw
e-mail:great.vigor@msa.hinet.net

INTRODUCTION

Thank you for selecting this Great Vigor Product.

Please read all instructions and familiarize yourself with the products and controls before operation. To prevent serious personal injury and/or property damage, operate all controlled models in a responsible manner as outlined herein. If you come across any problems and need some help, you can contact us on the internet at www.gv-hobby.com.tw.

We hope you to enjoy our product.

- This product is not a toy. It is a high performance model product. It is important to familiarize yourself with the model, its manual, and its construction before assembly or operation. A child operating under the supervision of the adults is necessary.
- Always keep this instruction manual ready at your hand for your assembling and operating reference, even after completing the assembly.

CAUTION

CHOOSE THE RIGHT PLACE TO OPERATE YOUR R/C MODEL.

- Do not operate model products in rain, on public roads, near crowds, near airport, or near areas with restricted radio operation. This could cause serious accidents, personal injuries, and/or property damage.
- Do not run where loud noises can disturb others, such as hospitals and residential areas.
- Never run R/C models near people or animals.
- Never run indoors. There is a high risk of fire and/or damage.
- To avoid injury, do not run in confined spaces.

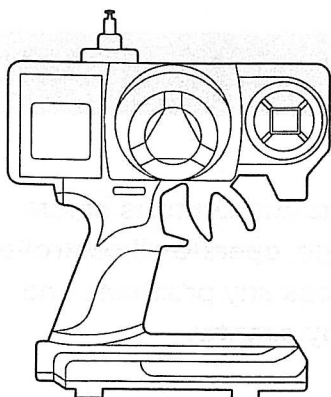
INSPECT YOUR MODEL BEFORE OPERATION.

- For the best performance, it is important to make sure all the moveable parts work free without binding.
- Always use fresh batteries for your transmitter and for your receiver to avoid losing control of the model.
- Check the radio system and range before every driving session. To properly check the range, have a friend hold the car with the engine off and walk to the farthest distance that you plan to operate your model. Operate the controls to make sure the model responds correctly. Do not operate the model if there is any problem with the radio system.
- Never share frequency with somebody else at the same time. Radio signals will be mixed and you will lose control of your model. This may lead to accidents.
- Make sure that all screws and nuts are properly tightened. It is also a good idea to use removable thread lock wherever metal screws go into metal.
- Always test the brakes and throttle before starting your engine to avoid losing control of the model.
- As the front end of the antenna may be dangerous, do not aim it toward faces.
- Never reverse connection/disassemble the battery. This may lead to damage and leakage.
- As the product includes small and sharp parts, assemble and store this product only in places out of the reach of children.

AFTER OPERATION OF YOUR R/C MODEL

- Turn off receiver first, then turn off transmitter, this will prevent runaways.
- Be sure to keep your R/C model clean and free of excess dirt and grease, this will increase the life.
- Be careful when handling batteries, they will be hot after running.
- When the model is not in use, always turn off the receiver and transmitter. Furthermore, disconnect the batteries and remove them from the model and the transmitter. This may be dangerous such as overheat and leakage.
- Replace any batteries, they have been dented or have frayed wires, short circuits can cause fire.
- Do not store this model in a high-temperature/humidity area or in direct sunlight.

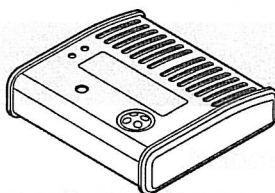
ADDITIONAL ITEMS NEEDED FOR OPERATION



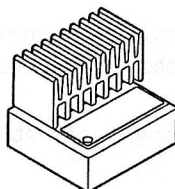
▪ **2 Channel Radio Set**
(Included with RTR version)



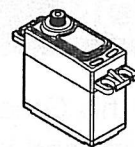
▪ **Um-3 Battery (8 Pcs)**
(Purchase separately)



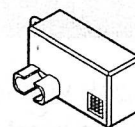
▪ **AC/DC Charger & Discharger**
(Purchase separately)



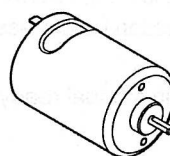
▪ **Electronic Speed Control**
(Included with RTR version)



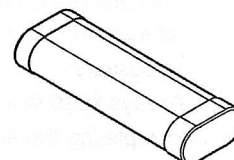
▪ **Steering Servo**
(Included with RTR version)



▪ **Receiver**
(Included with RTR version)



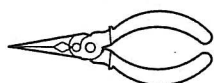
▪ **Motor**
(Included with RTR version)



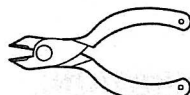
▪ **Battery**
(Purchase separately)

EXTRA STUFF NEEDED

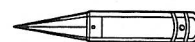
(Purchase separately)



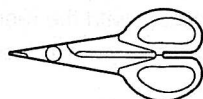
▪ **Needlenose Pliers**



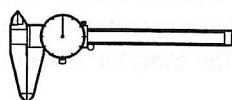
▪ **Cutting Pliers**



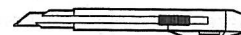
▪ **Body Reamer**



▪ **Body Scissors**



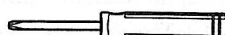
▪ **Caliper**



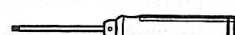
▪ **Knife**



▪ **Screwdriver (-)**



▪ **Screwdriver (+)**



▪ **Hex Wrench**
(1.5, 2.0, 2.5, 3.0mm)



▪ **Tyre Glue**



▪ **Shock Oil**



▪ **Differential Silicone oil**

Step 1 Front and Rear Differentials

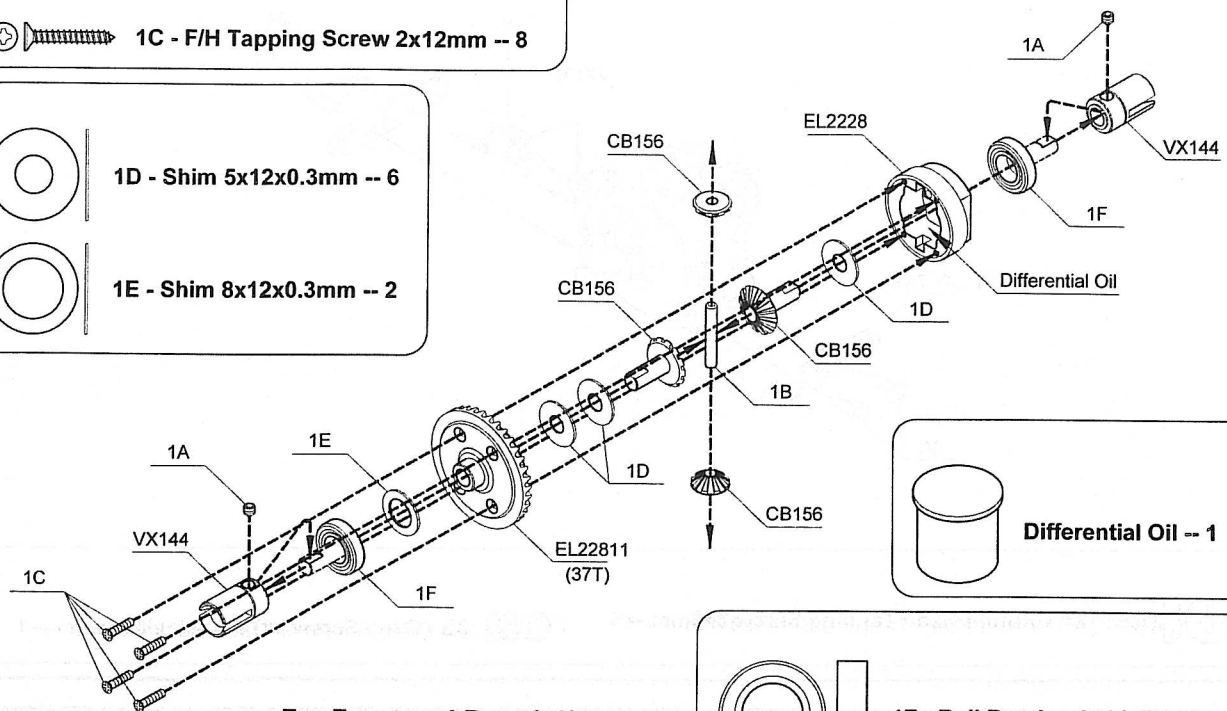
 1A - Grub Screw w/Threadlock 4x4mm -- 4

 1B - Pin 3x19.8mm -- 2

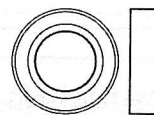
 1C - F/H Tapping Screw 2x12mm -- 8

 1D - Shim 5x12x0.3mm -- 6

 1E - Shim 8x12x0.3mm -- 2

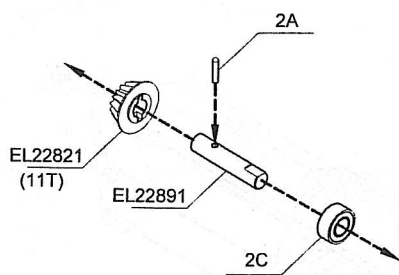


For Front and Rear (x2)

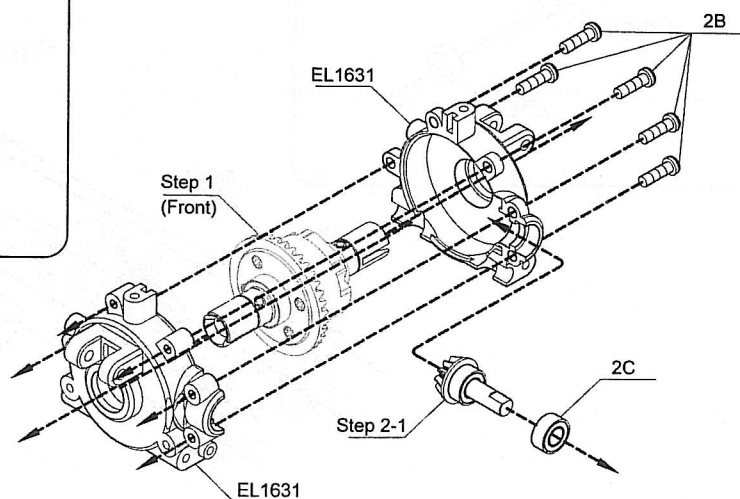


1F - Ball Bearing 8x14x4mm -- 4


Step 2 Front Differential Housing



<2-1>



 2A - Pin 1.5x7.8mm -- 1

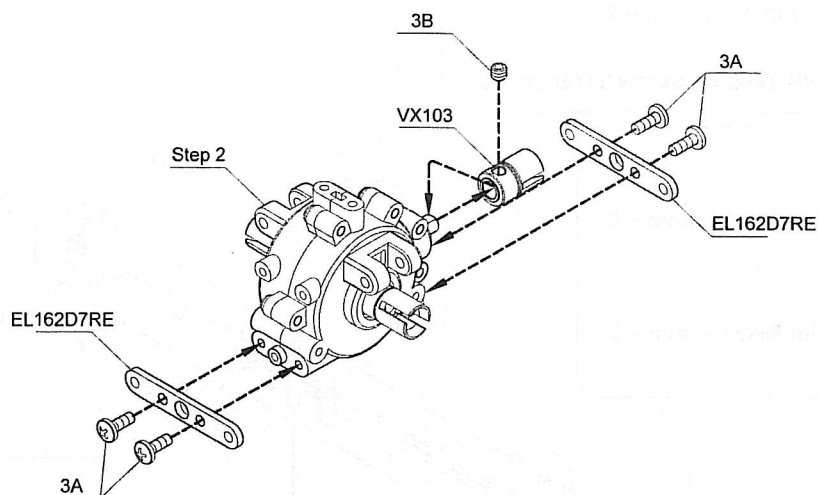
 2B - Round Head Tapping Screw 3x10 mm -- 5



2C - Ball Bearing 5x10x4mm -- 2

Step 3

Front Differential Housing



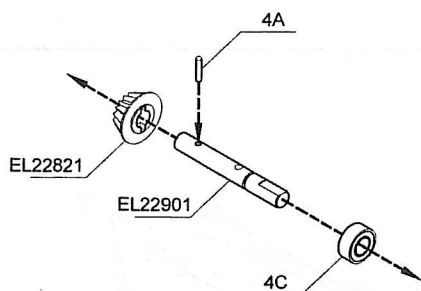
3A - Button Head Tapping Screw 3x8mm -- 4



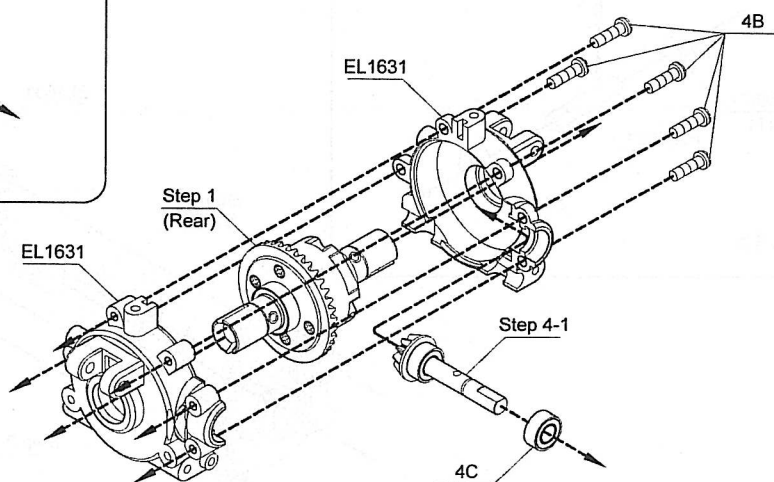
3B - Grub Screw w/Threadlock 4x4mm -- 1

Step 4

Rear Differential Housing



<4-1>



4A - Pin 1.5x7.8mm -- 1



4B - Round Head Tapping Screw 3x8mm -- 5



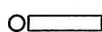
4C - Ball Bearing 5x10x4mm -- 2

Step 5

Main Gear and Main Gear Mounting



5A - E-Ring 4mm -- 1



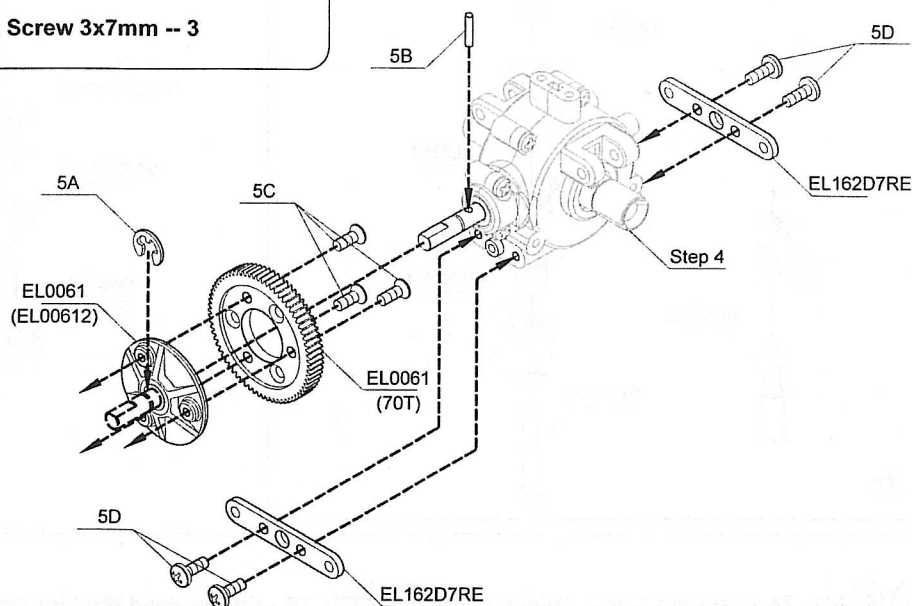
5B - Pin 2x9.8mm -- 1



5C - F/H Tapping Screw 3x7mm -- 3



5D - Button Head Tapping Screw 3x8mm -- 4



Step 6

Motor



6A - Grub Screw w/Threadlock 3x3mm -- 1

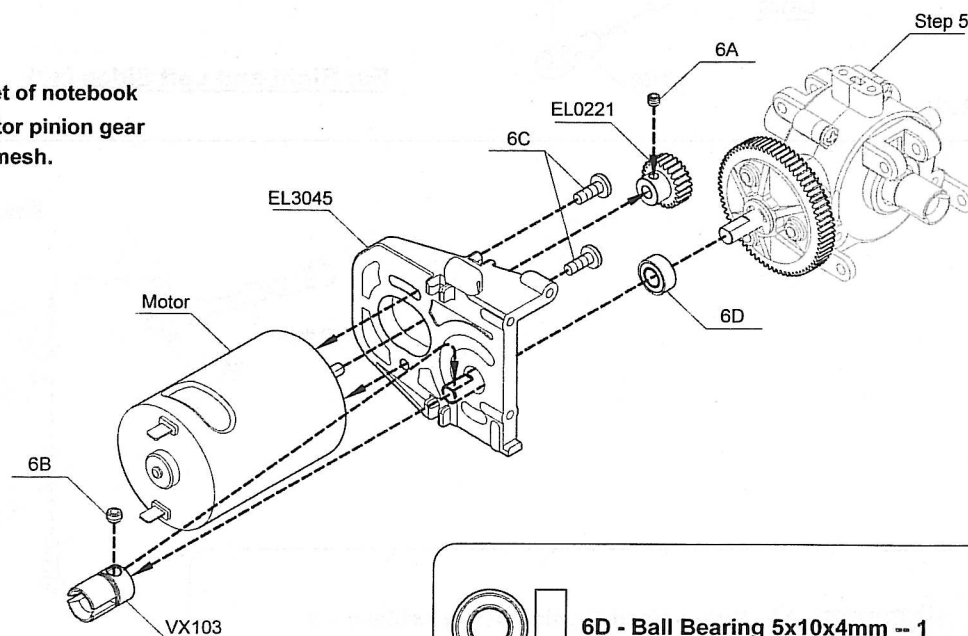


6B - Grub Screw w/Threadlock 4x3mm -- 1



6C - Button Head Screw w/Threadlock 3x8mm -- 2

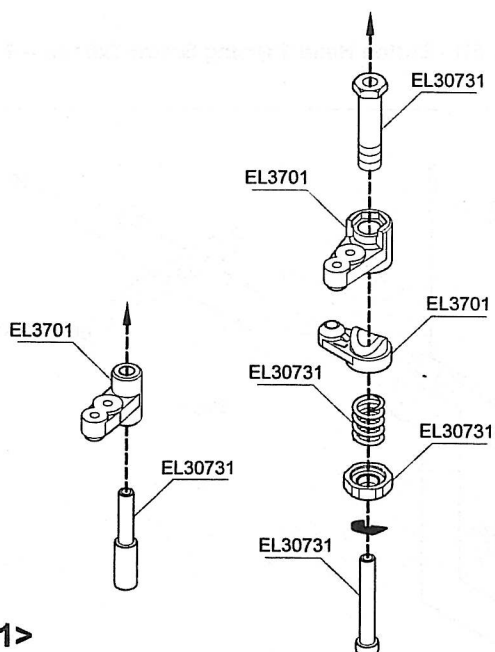
! Please Insert a sheet of notebook paper to set the motor pinion gear with the main gear mesh.



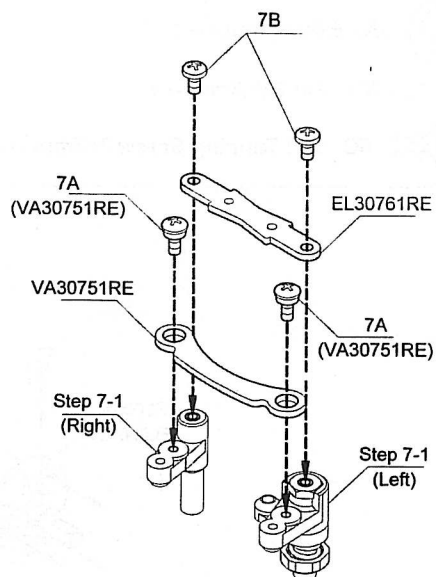
6D - Ball Bearing 5x10x4mm -- 1

Step 7

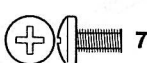
Servo Saver



<7-1>



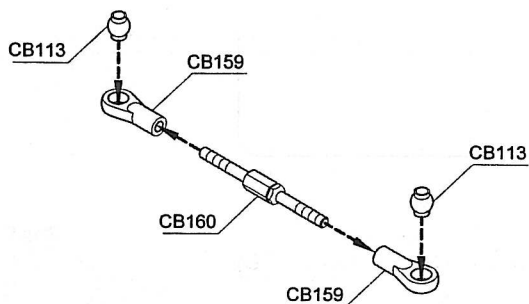
7A - Tapping Screw 3x6mm -- 2



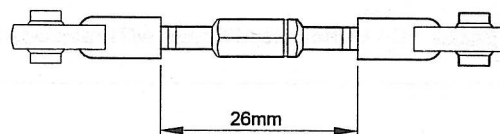
7B - Button Head Machine Screw w/Threadlock 3x6mm -- 2

Step 8

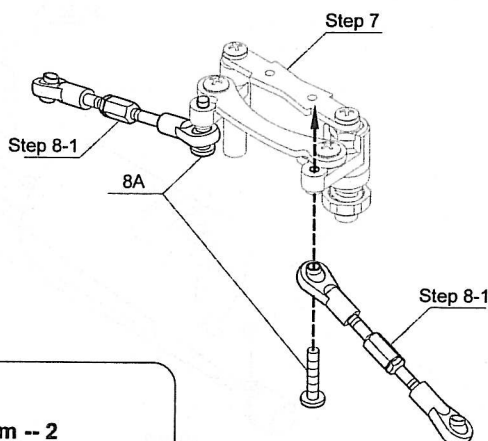
Steering Tie-Rods



<8-1>



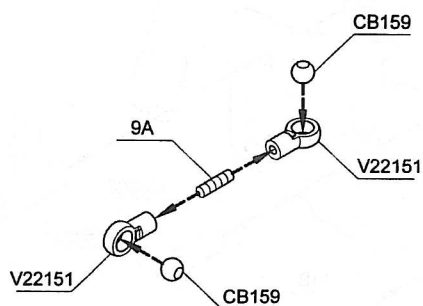
For Right and Left Sides (x2)



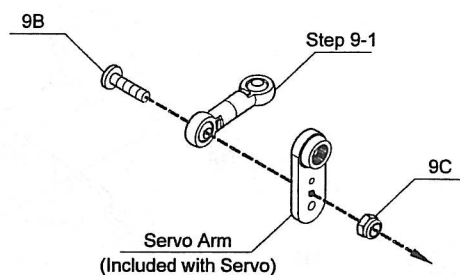
8A - Button Head Tapping Screw 3x15mm -- 2

Step 9

Steering Servo Tie-Rods



<9-1>



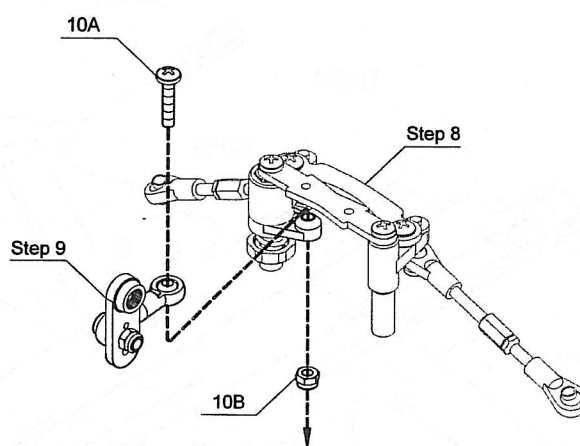
 9A - Grub Screw 3x12mm -- 1

 9B - Button Head Machine Screw 3x12mm -- 1

 9C - Lock Nut 3mm -- 1

Step 10

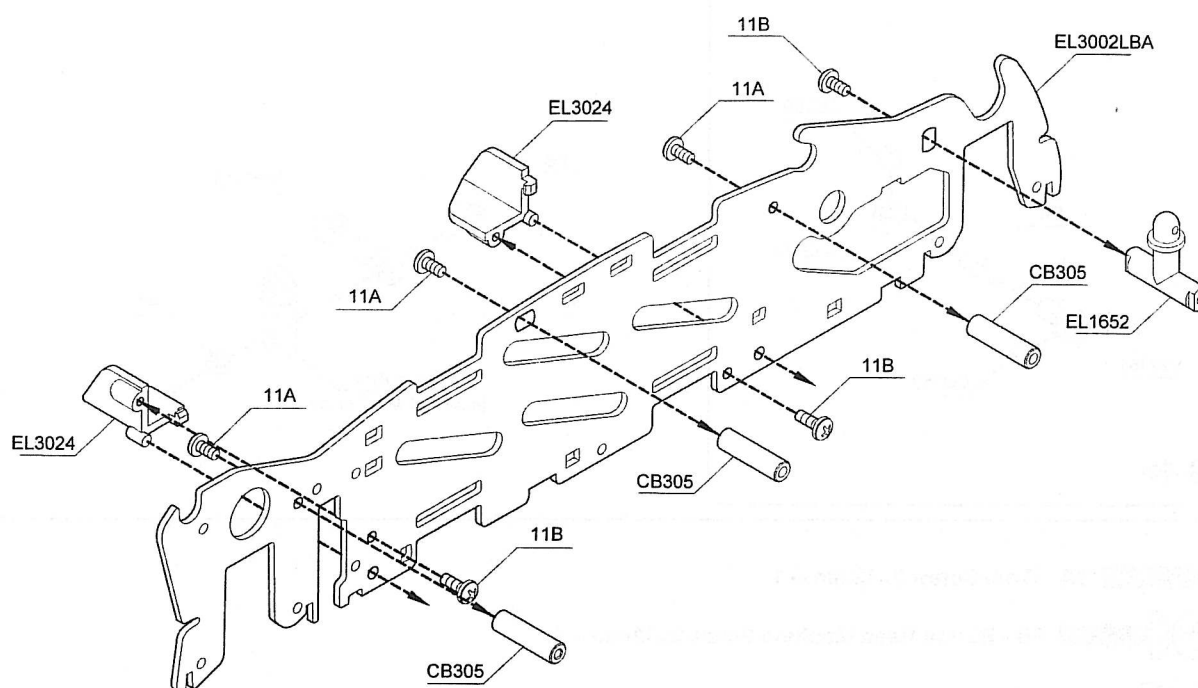
Servo Saver



 10A - Button Head Machine Screw 3x15mm -- 1

 10B - Lock Nut 3mm -- 1

Step 11 The Left Side Body

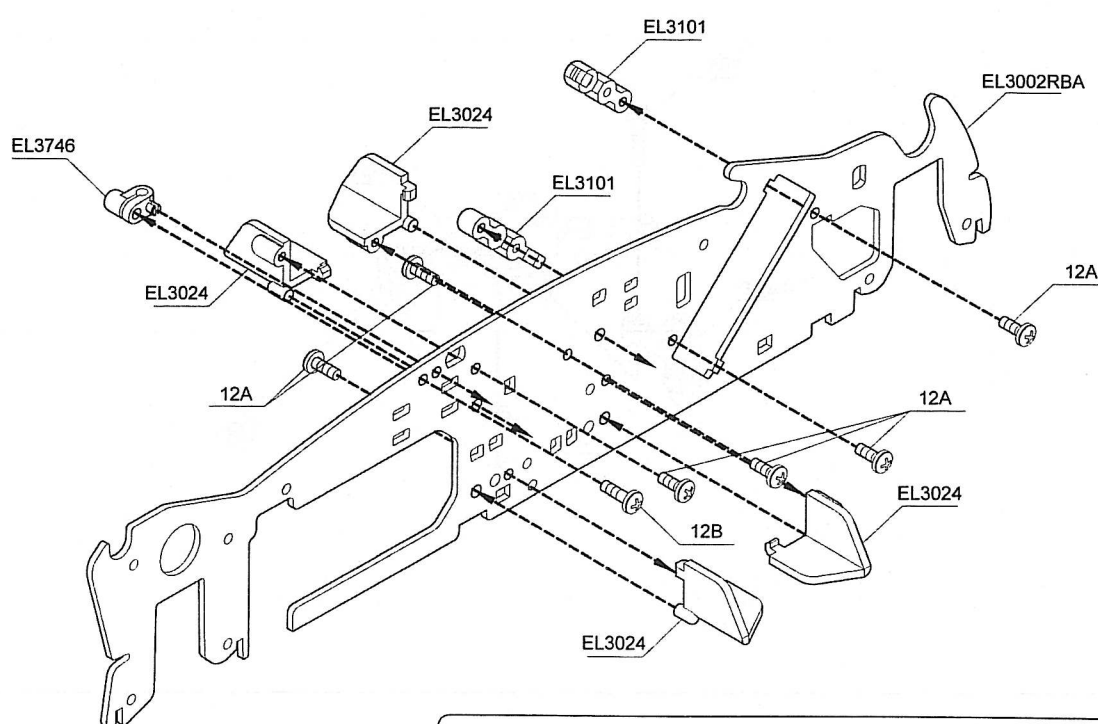


11B - Button Head Tapping Screw 3x8mm -- 3



11A - Button Head Machine Screw w/Threadlock 3x6mm -- 3

Step 12 The Right Side Body



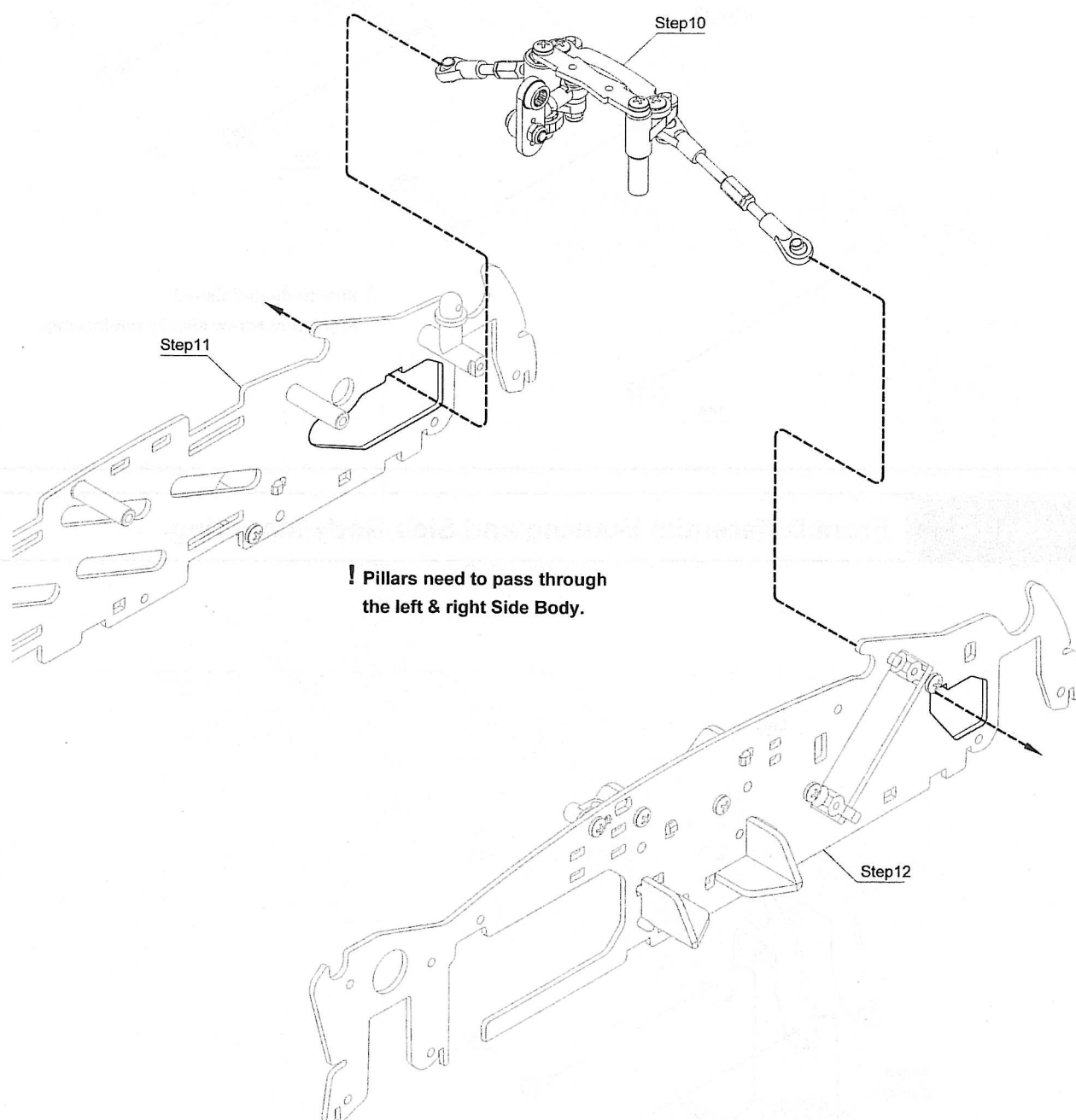
12B - Button Head Tapping Screw 3x10mm -- 1



12A - Button Head Tapping Screw 3x8mm -- 6

Step 13

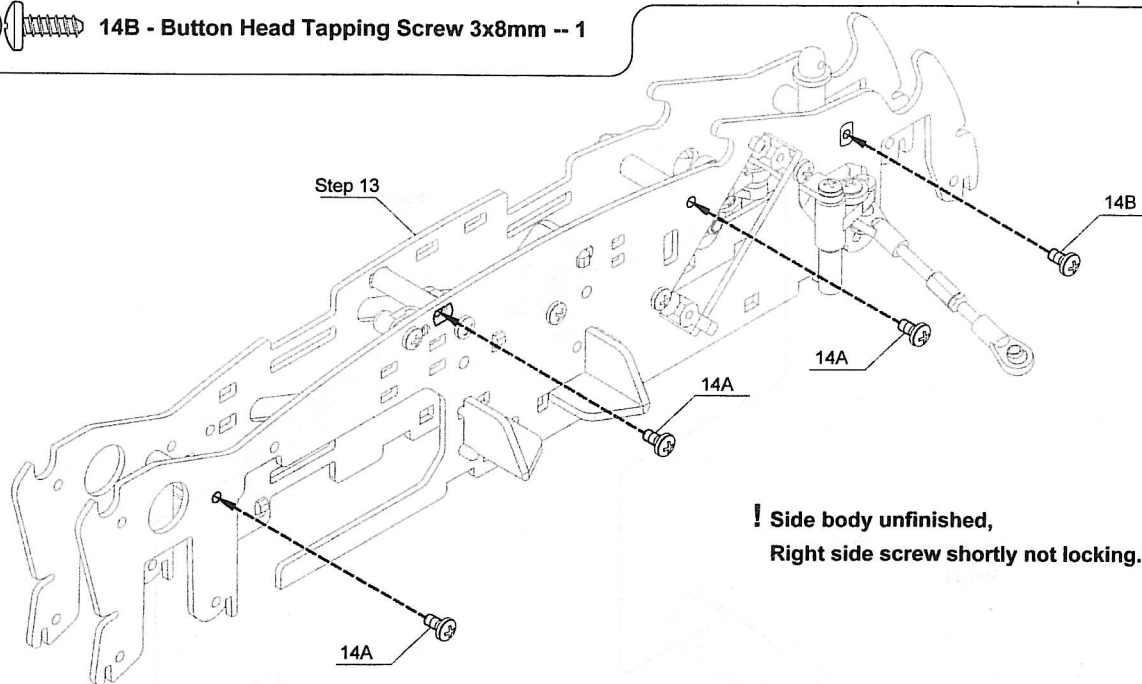
Servo Saver and Side Body Mounting



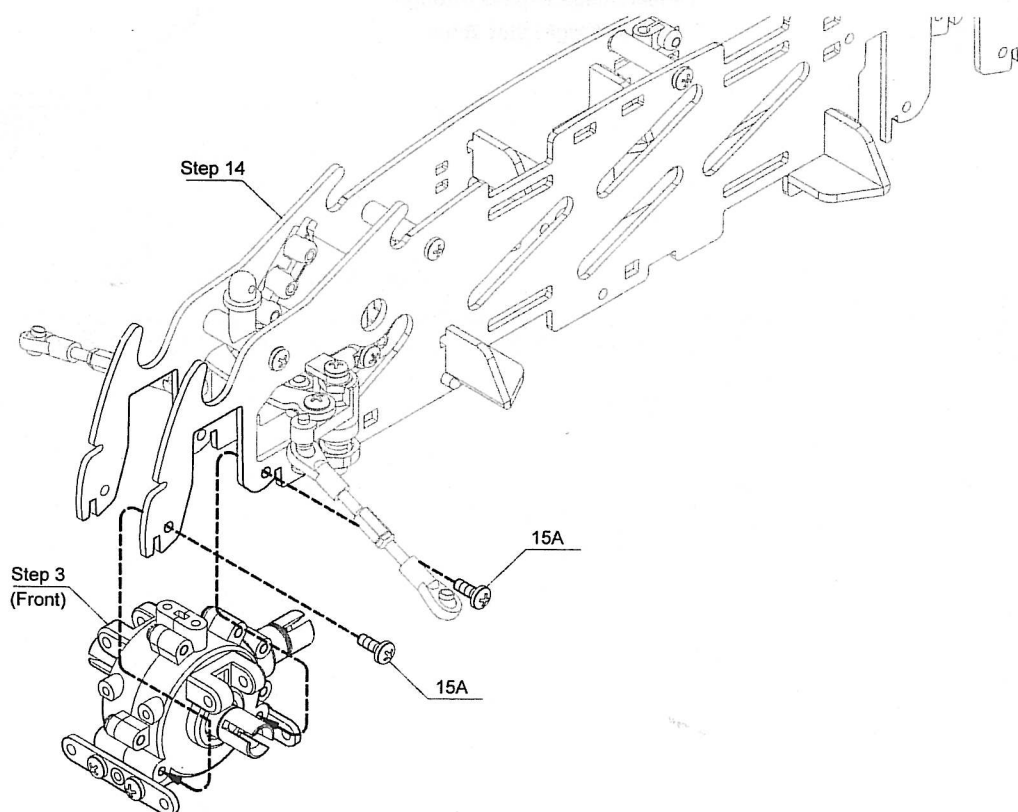
Step 14 The Left & Right Side Body Mounting

 14A - Button Head Machine Screw w/Threadlock 3x6mm -- 3

 14B - Button Head Tapping Screw 3x8mm -- 1



Step 15 Front Differential Housing and Side Body Mounting

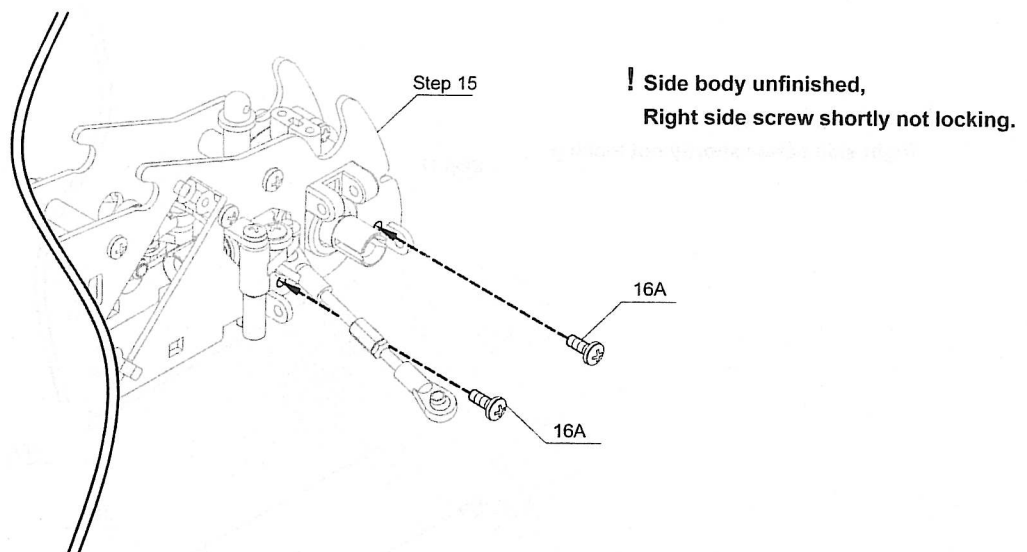


 15A - Button Head Tapping Screw 3x8mm -- 2

Step 16

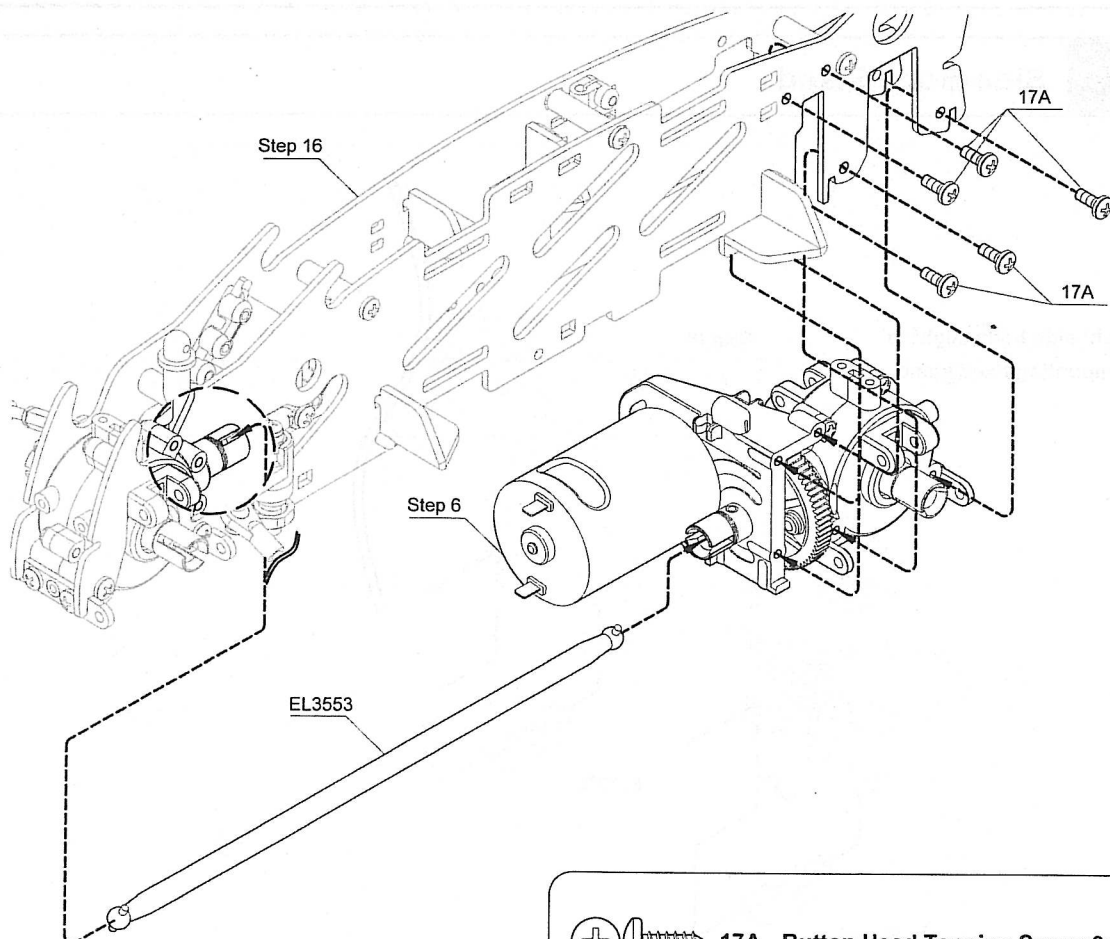
Front Differential Housing and Side Body Mounting

 16A - Button Head Tapping Screw 3x8mm -- 2



Step 17

Rear Differential Housing and Side Body Mounting



 17A - Button Head Tapping Screw 3x8mm -- 5

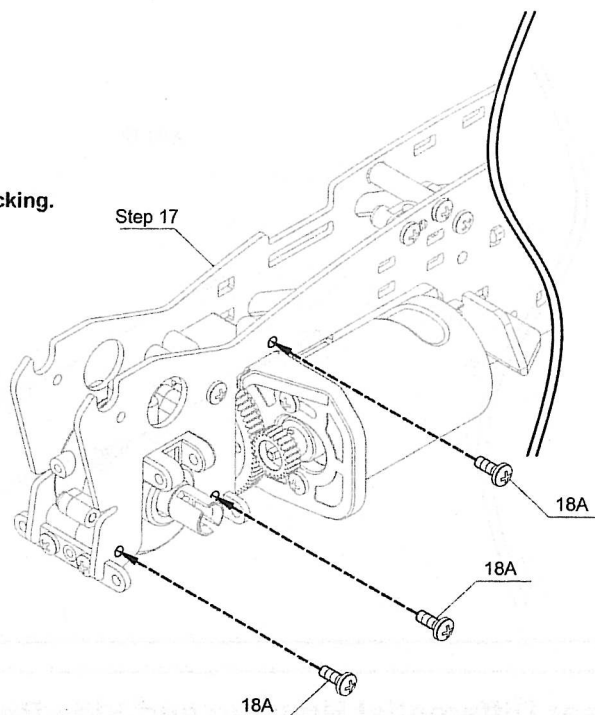
Step 18

Rear Differential Housing and Side Body Mounting



18A - Button Head Tapping Screw 3x8mm -- 3

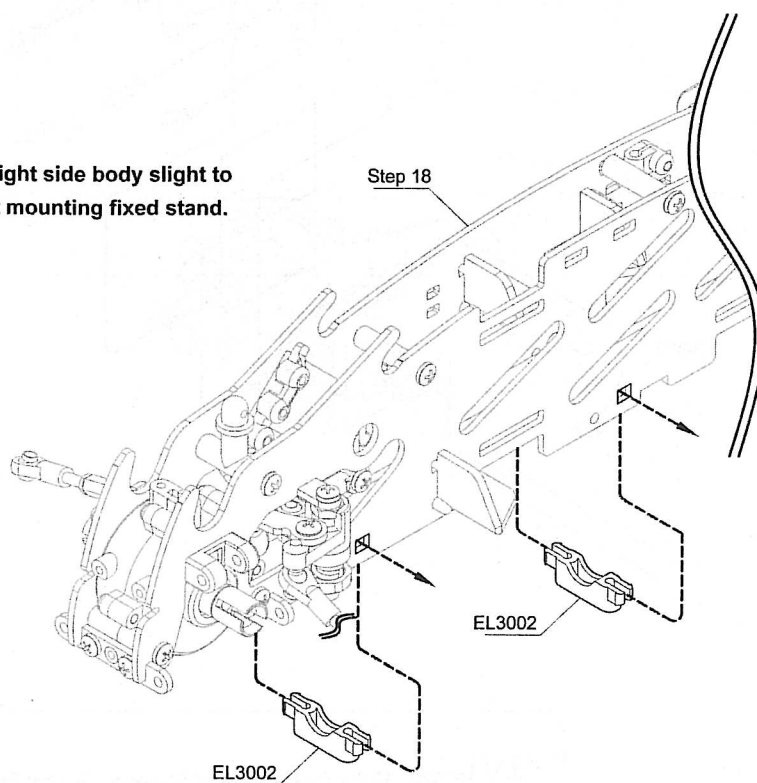
! Side body unfinished,
Right side screw shortly not locking.



Step 19

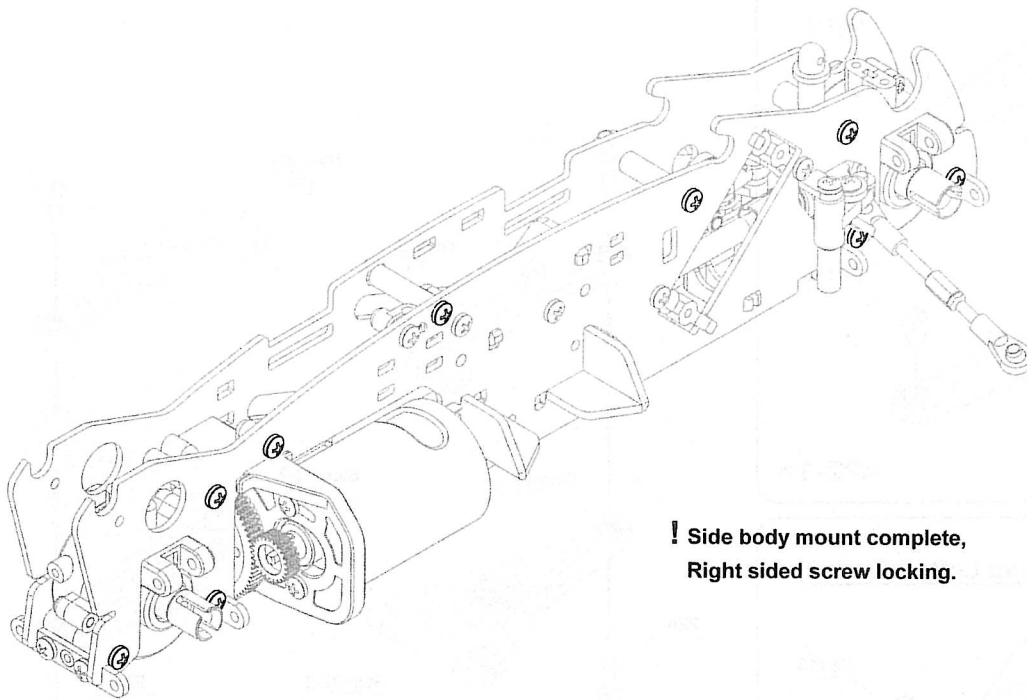
Side Body Fixed

! Left & right side body slight to
pull out mounting fixed stand.



Step 20


The Right Side Body Mounting




**! Side body mount complete,
Right sided screw locking.**

Step 21

Front CVD and Steering Knuckles

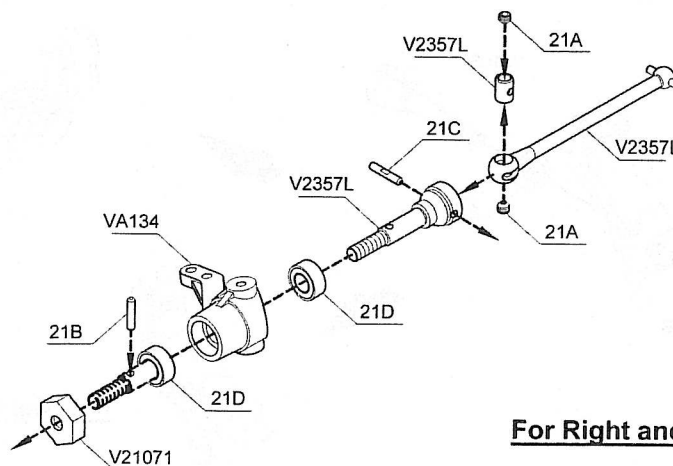
 **21A - Grub Screw w/Glue 3x2.6mm -- 4**

 **21B - Pin 2x9.8mm -- 2**

 **21C - Pin 2x11mm -- 2**



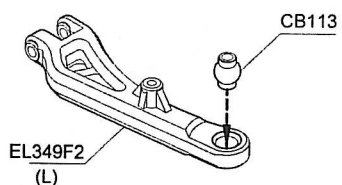
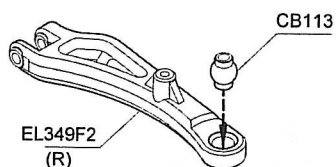
21D - Ball Bearing 5x10x4mm -- 4



For Right and Left Sides (x2)

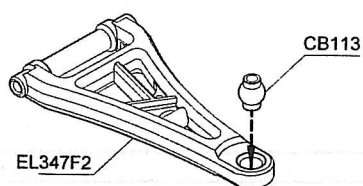
Step 22

Front Upper, Lower Suspension Arms and CVD

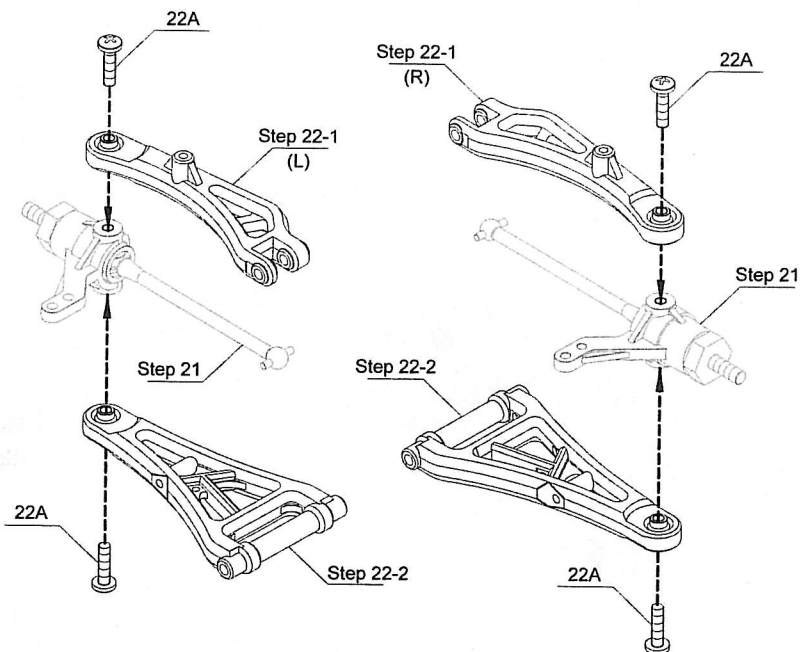


<22-1>

For Right and Left Sides (x2)



<22-2>



22A - Button Head Machine Screw w/Threadlock 3x12mm -- 4

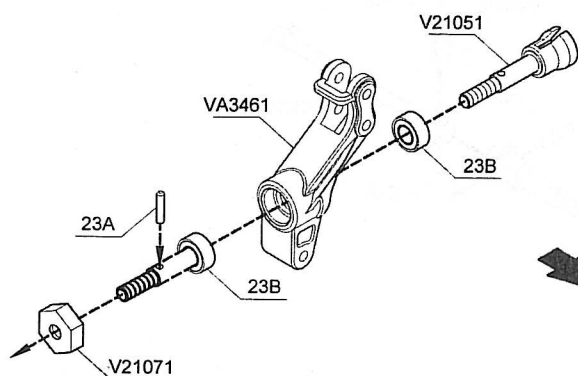
Step 23

Rear Hubs

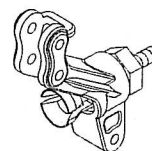
23A - Pin 2x9.8mm -- 2



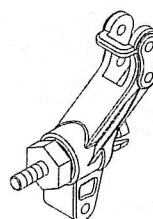
23B - Ball Bearing 5x10x4mm -- 4



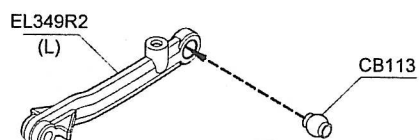
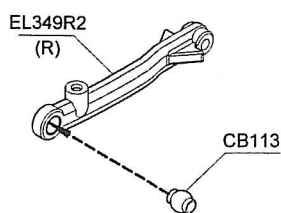
For Left Side



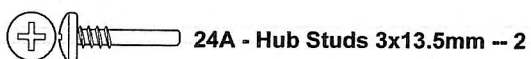
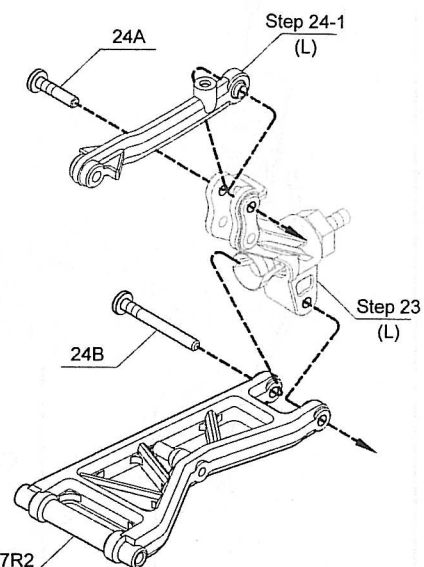
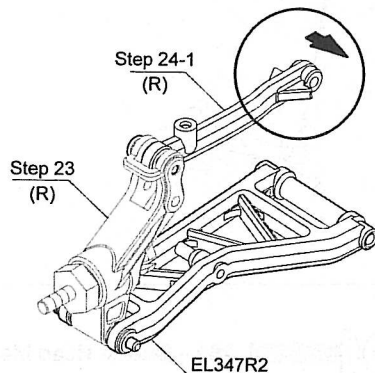
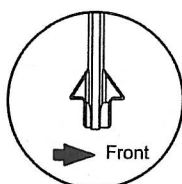
For Right Side



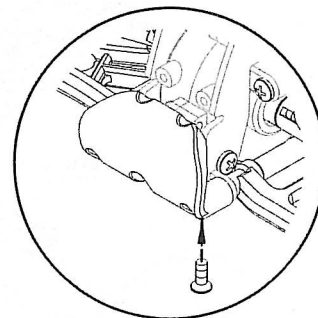
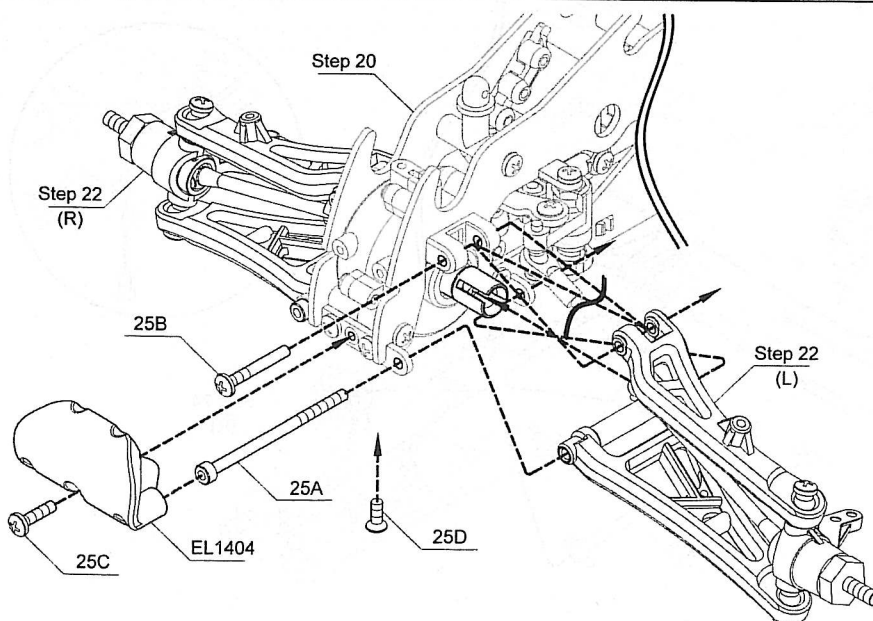
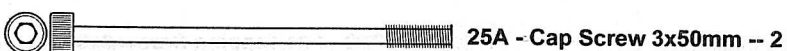
Step 24 Rear Upper, Lower Suspension Arms and Hubs



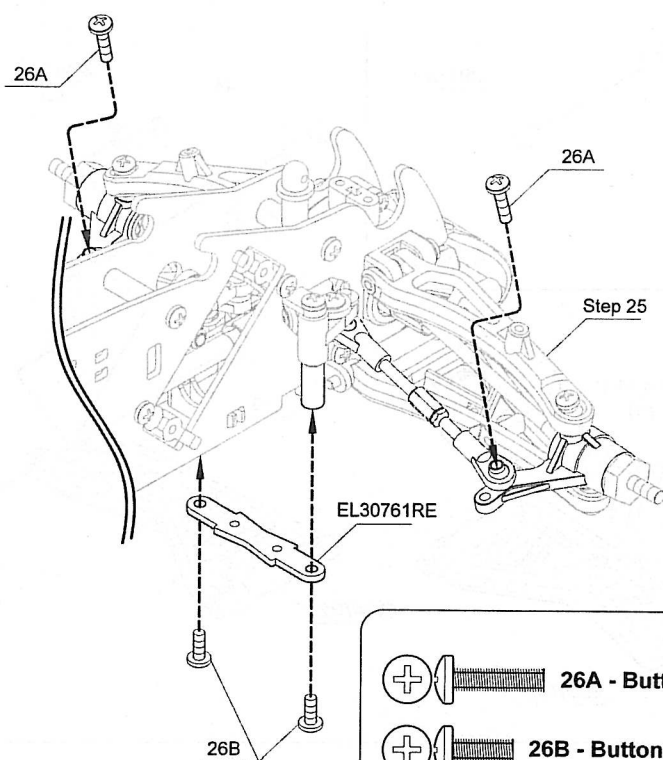
<24-1>





Step 25 Front Suspension and Bumper Mounting







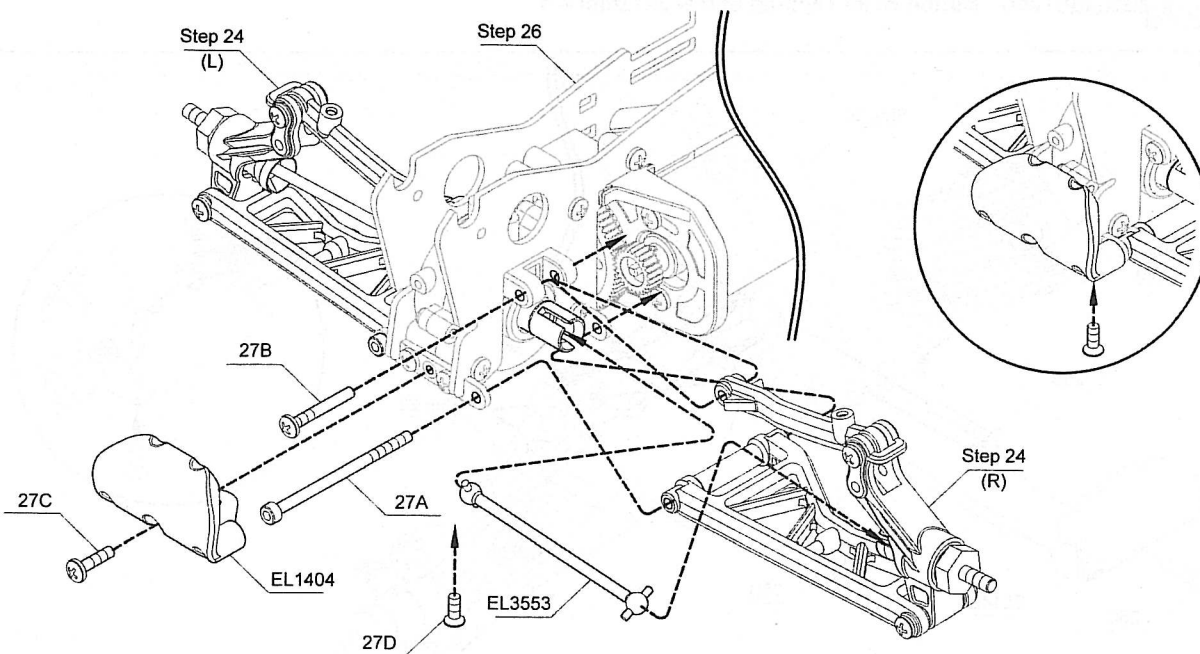
Step 26 Steering Tie-Rods Mounting






-  **26A - Button Head Machine Screw w/Threadlock 3x12mm -- 2**
-  **26B - Button Head Machine Screw w/Threadlock 3x8mm -- 2**

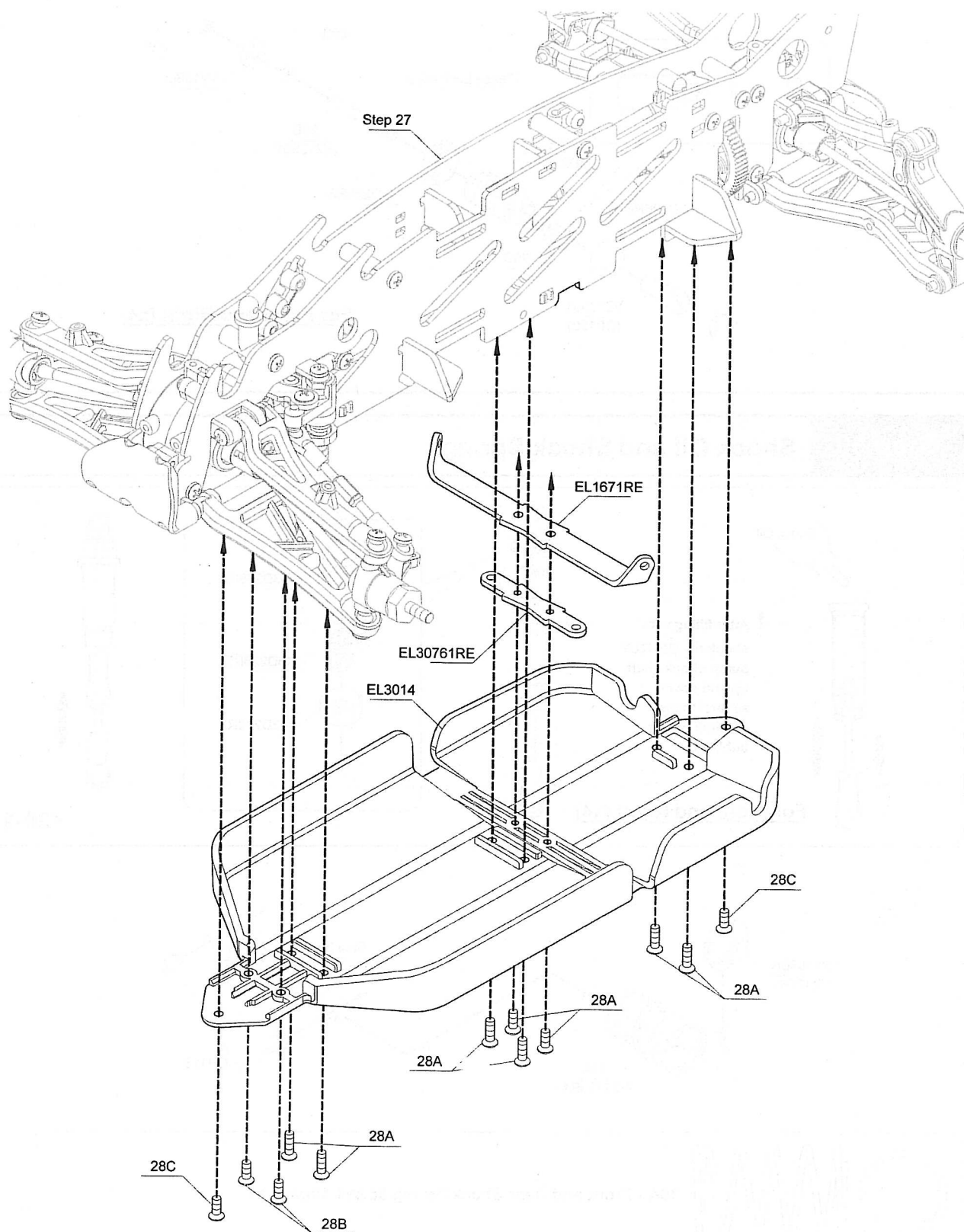
Step 27 Rear Suspension and Bumper Mounting

-  **27A - Cap Screw 3x50mm -- 2**
-  **27B - Hub Studs 3x27mm -- 2**
-  **27D - F/H Tapping Screw 3x8mm -- 1**
-  **27C - Button Head Tapping Screw 3x12mm -- 1**




Chassis and Support Fixed Plate Mounting

-  **28A - F/H Tapping Screw 3x10mm -- 8**
-  **28B - F/H Machine Screw w/Threadlock 3x8mm -- 2**
-  **28C - F/H Tapping Screw 3x8mm -- 2**




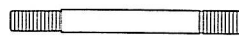
Step 29

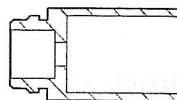
Shock Bodies and Shock Shafts

 29A - Lock Nut 2.6mm -- 4

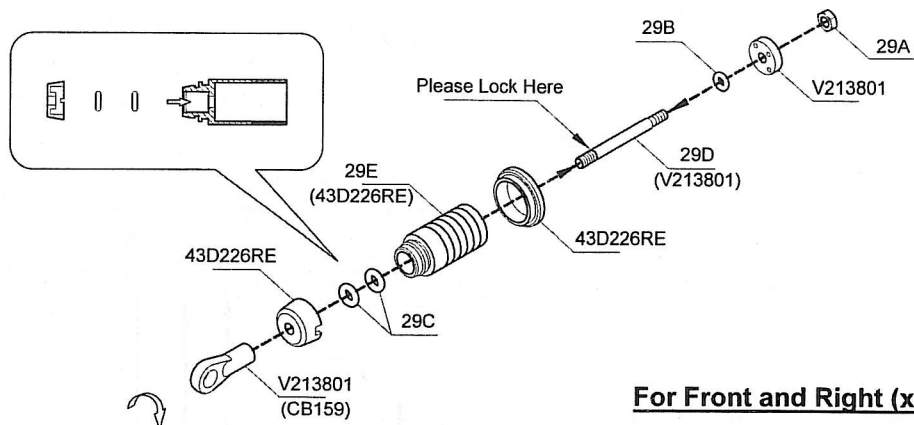
 29B - O-Ring 2.5x1mm -- 4

 29C - O-Ring 3mm -- 8

 29D - Shock Shaft 3x47mm -- 4



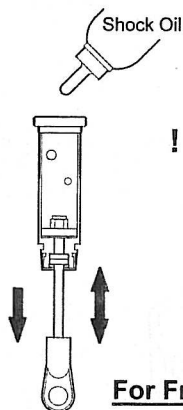
29E - Shock Body 12x22.6mm -- 4



For Front and Right (x4)

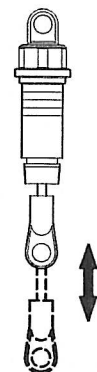
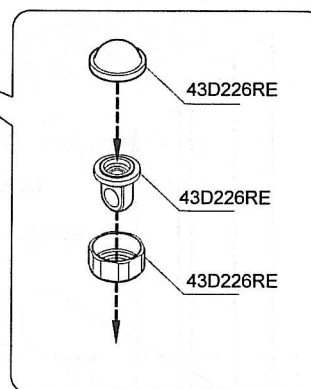
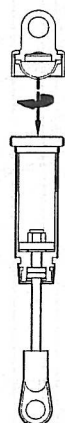
Step 30

Shock Oil and Shock Springs

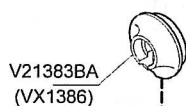


! After filling with shock oil, GENTLY pump shock shaft up and down several times to eliminate air bubbles.

For Front and Right (x4)



<30-1>



30A - Front and Rear Shock Spring 35.5x1.1mm -- 4

Step 30-1

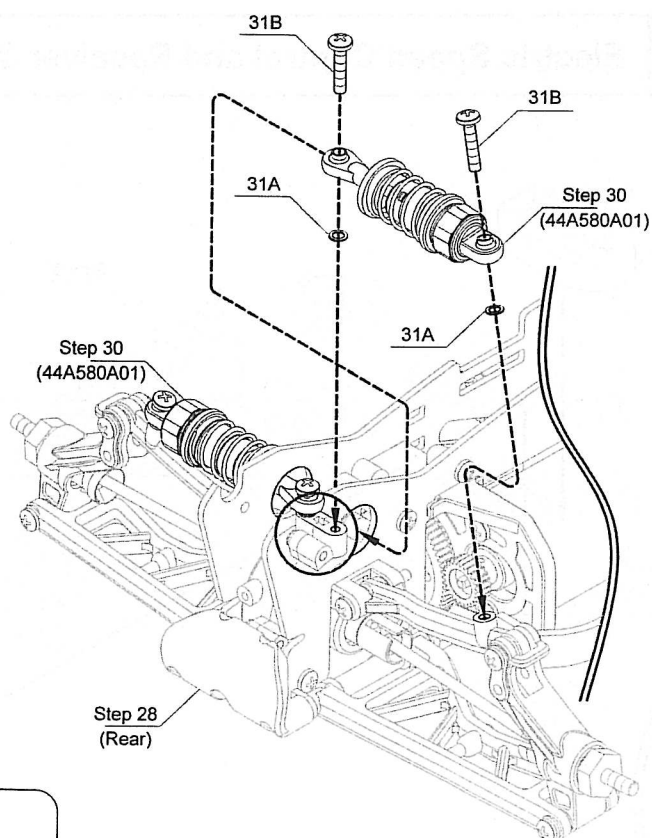
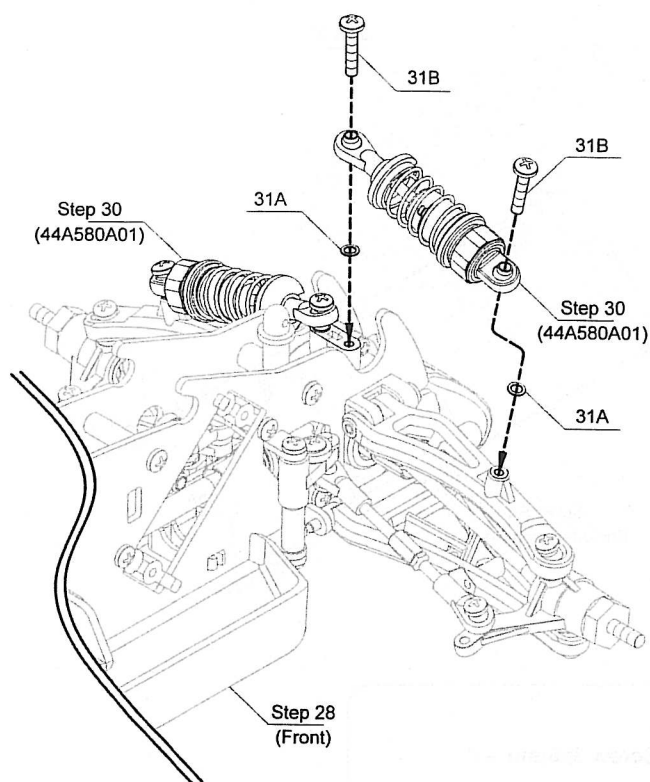
CB113



30A - Front and Rear Shock Spring 35.5x1.1mm -- 4

Step 31

Front and Rear Shock Mounting

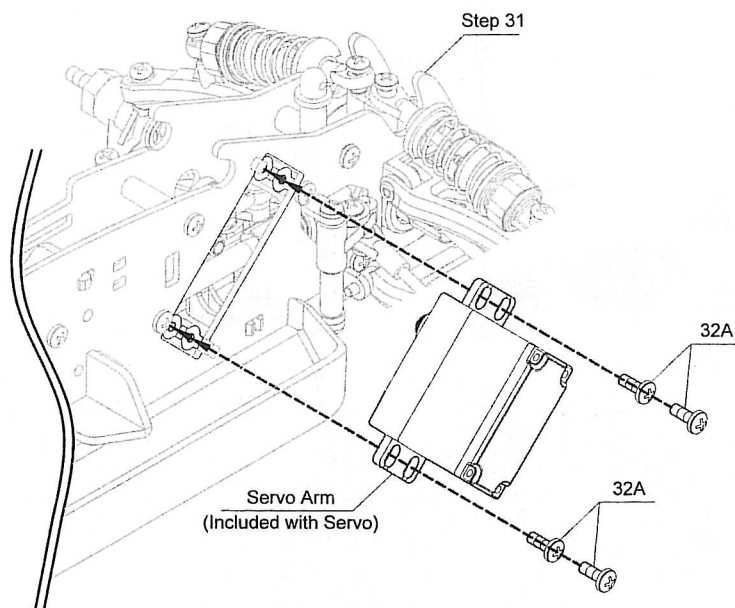


 31A - Shim 3.2x4.8x0.4mm -- 8

 31B - Button Head Tapping Screw 3x15mm -- 8

Step 32

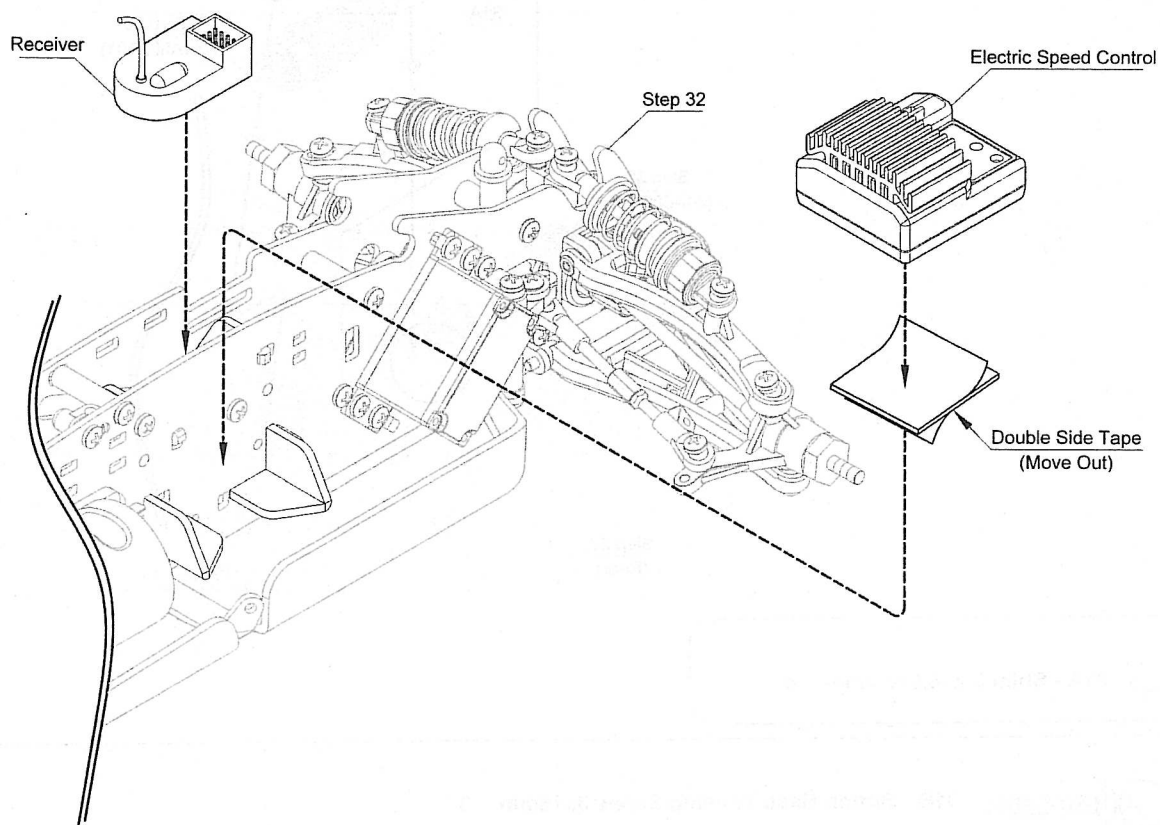
Steering Servo Mounting



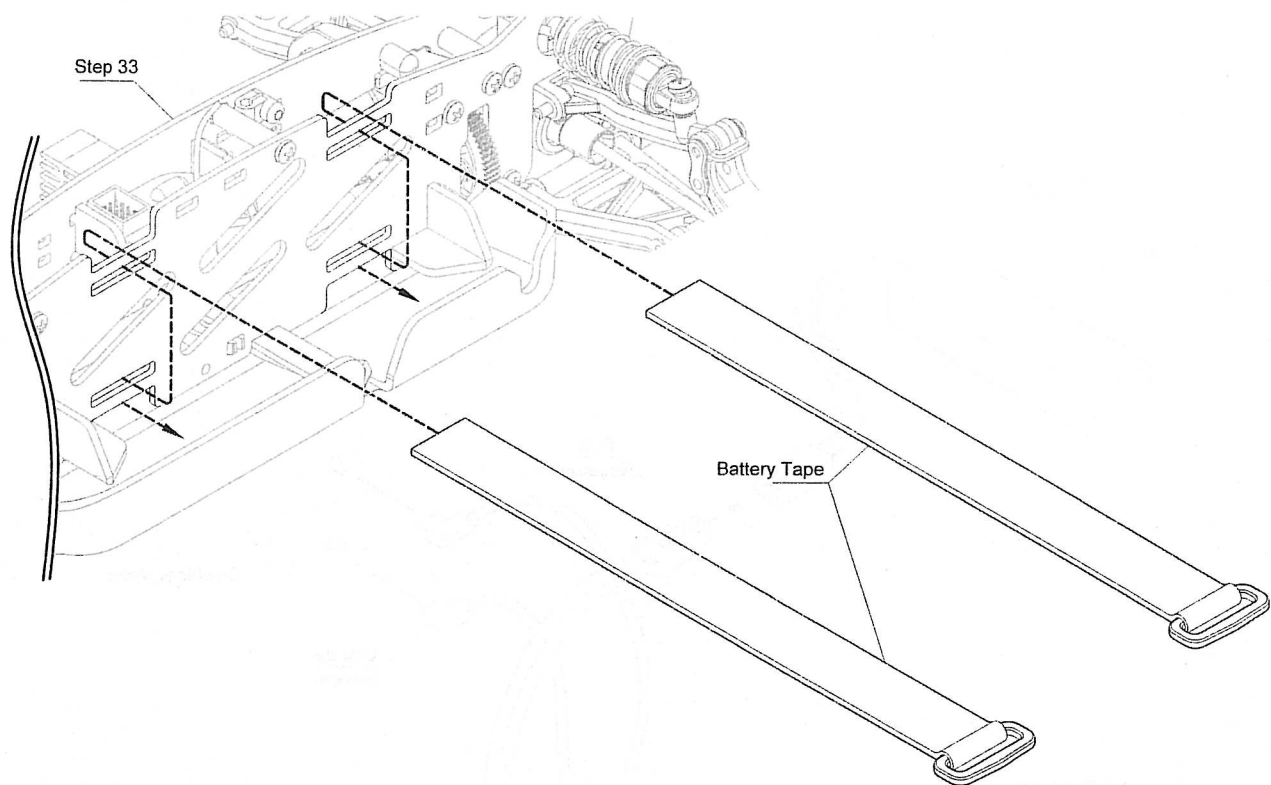
32A - Button Head Tapping Screw 3x8mm -- 4

Step 33

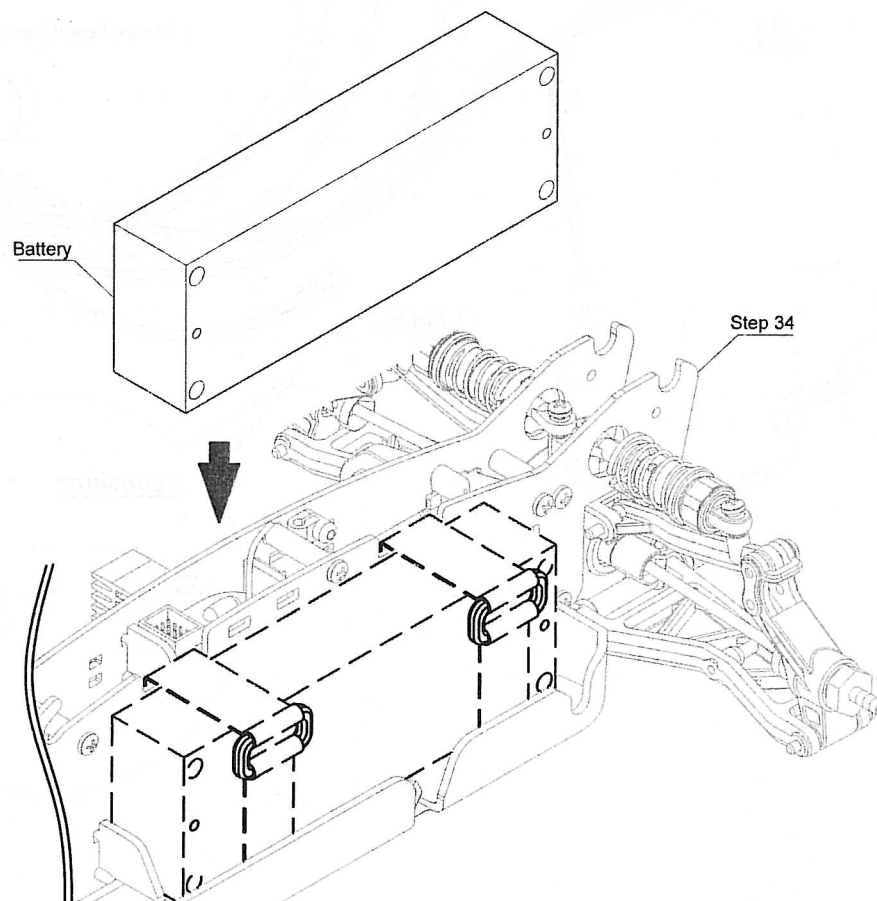
Electric Speed Control and Receiver Mounting



Step 34 Battery Tape Mounting

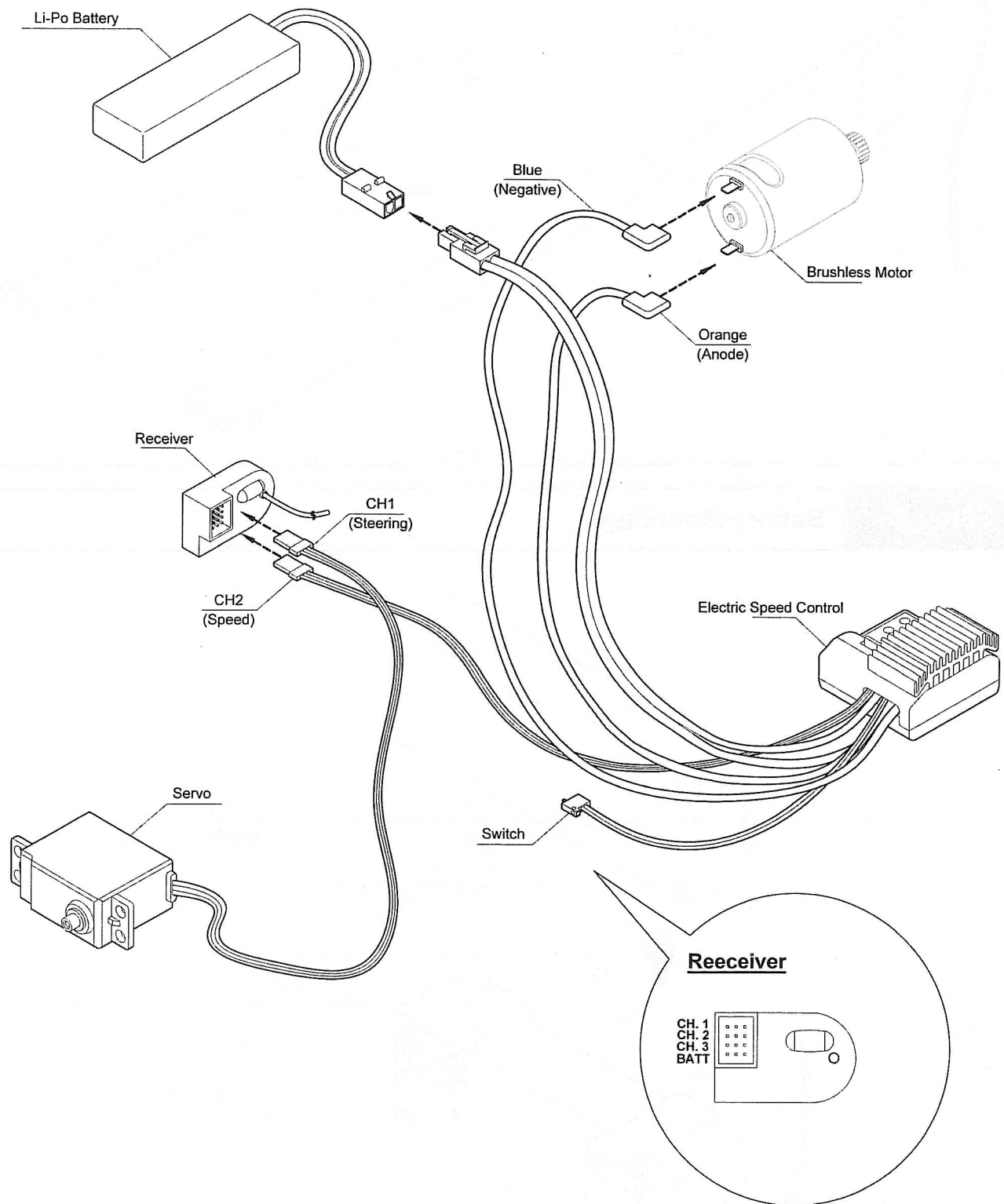


Step 35 Battery Mounting

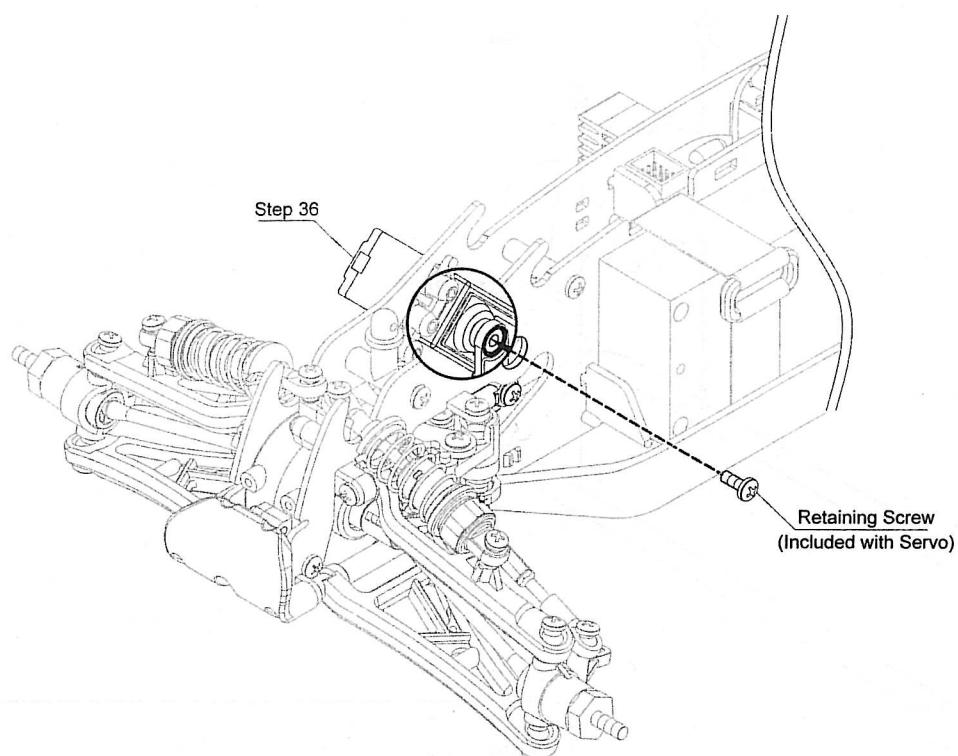


Step 36

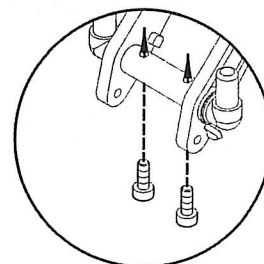
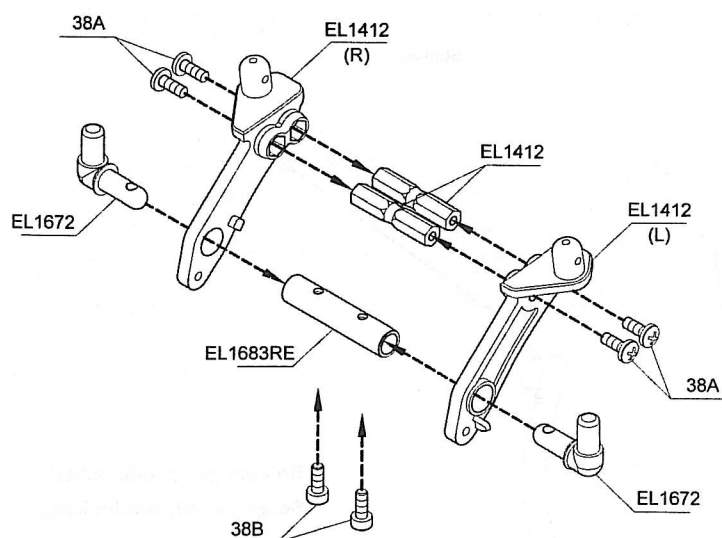
Electric Speed Control Install Diagram



Step 37 Steering Linkage Mounting



Step 38 Wing Stay

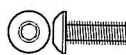
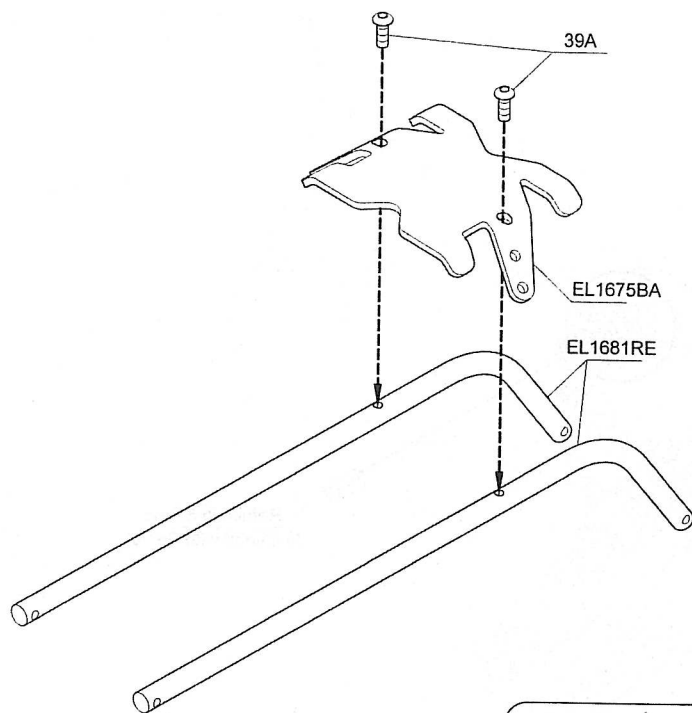


 38A - Button Head Machine Screw w/Threadlock 3x8mm -- 4

 38B - Cap Screw 3x8mm -- 2

Step 39

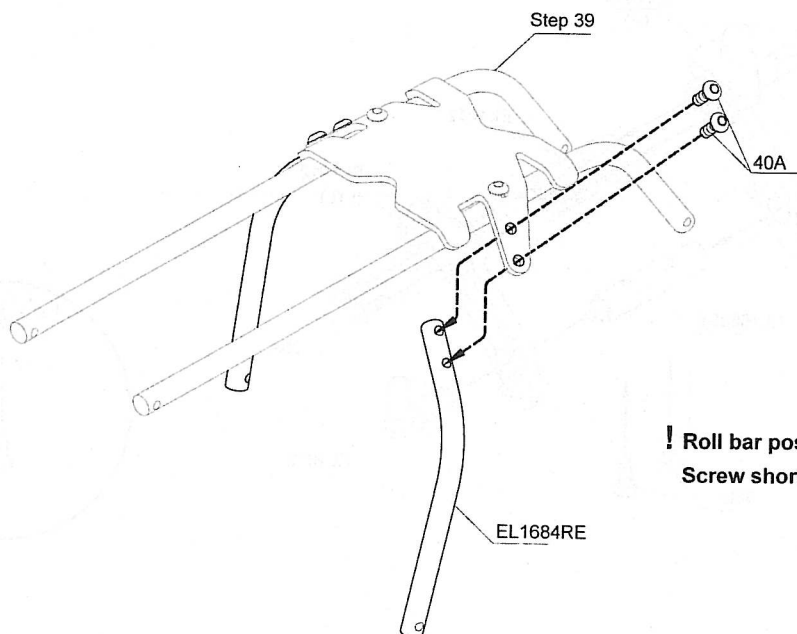
Roof Plate Mounting



39A - Button Head Machine Screw 3x8mm -- 2

Step 40

Roll Bar Posts

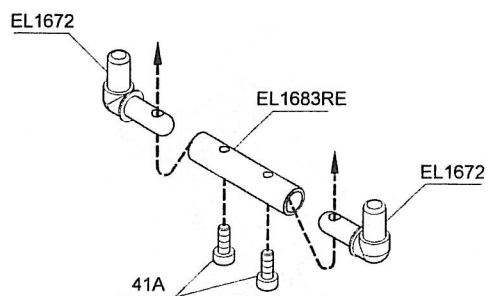


! Roll bar posts unfinished,
Screw shortly not locking.

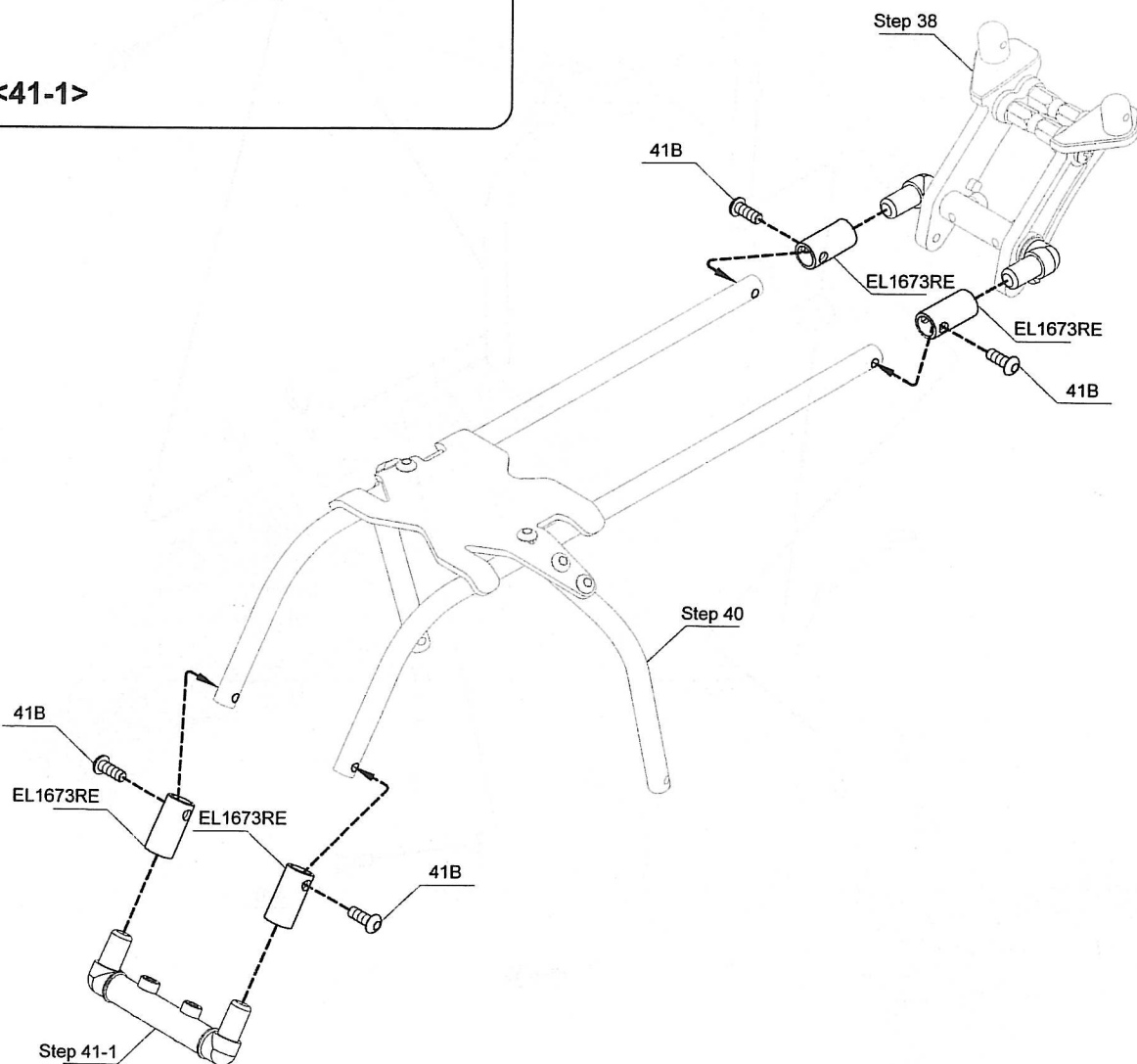


40A - Button Head Machine Screw 3x8mm -- 4

Step 41 Front & Rear Center Roll Bar



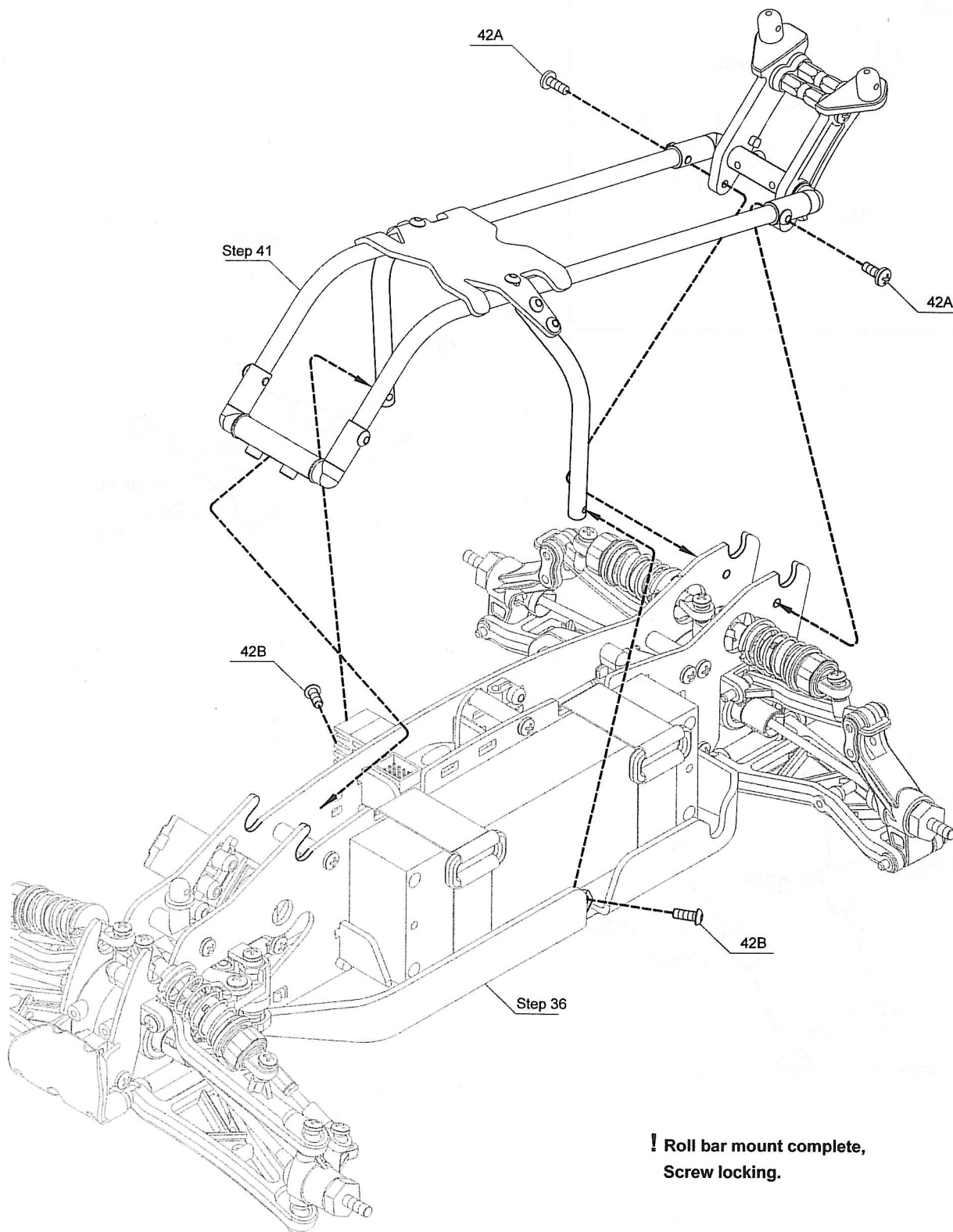
<41-1>



 41A - Cap Screw 3x8mm -- 2

 41B - Button Head Machine Screw 3x8mm -- 4

Step 42 Roll Bar Mounting



 42A - Button Head Tapping Screw 3x8mm -- 2

 42B - Button Head Machine Screw 3x8mm -- 2

Step 43

Tires and Wheels and Wheel Rings



43A - Button Head Machine Screw 3x6mm -- 20

D10B05SBA06RE

For Right and Left Sides (x4)

D10B05SBA06RE

For Left Side (x2)

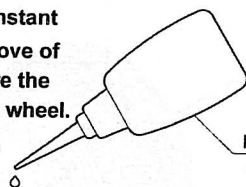
For Right Side (x2)

D10B05SBA06RE

D10B05SBA06RE

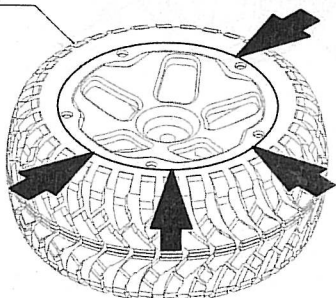
<43-1>

- ! Please glue both sides.
- ! Use small amount instant cement into the groove of the wheel. Make sure the tire is secure on the wheel.



Instant Cement
(Not Included)

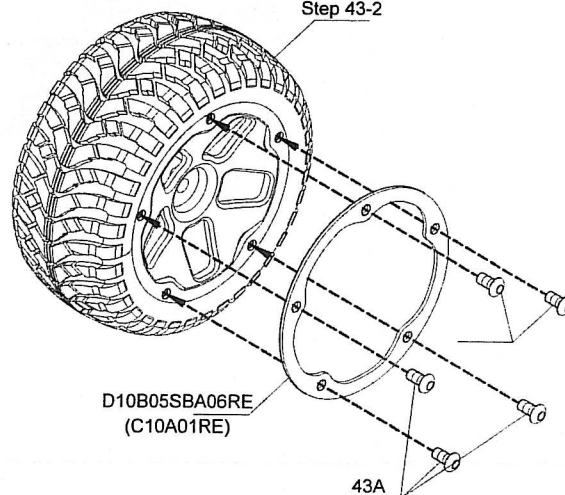
Step 43-1



<43-2>

For Right and Left Sides (x4)

Step 43-2

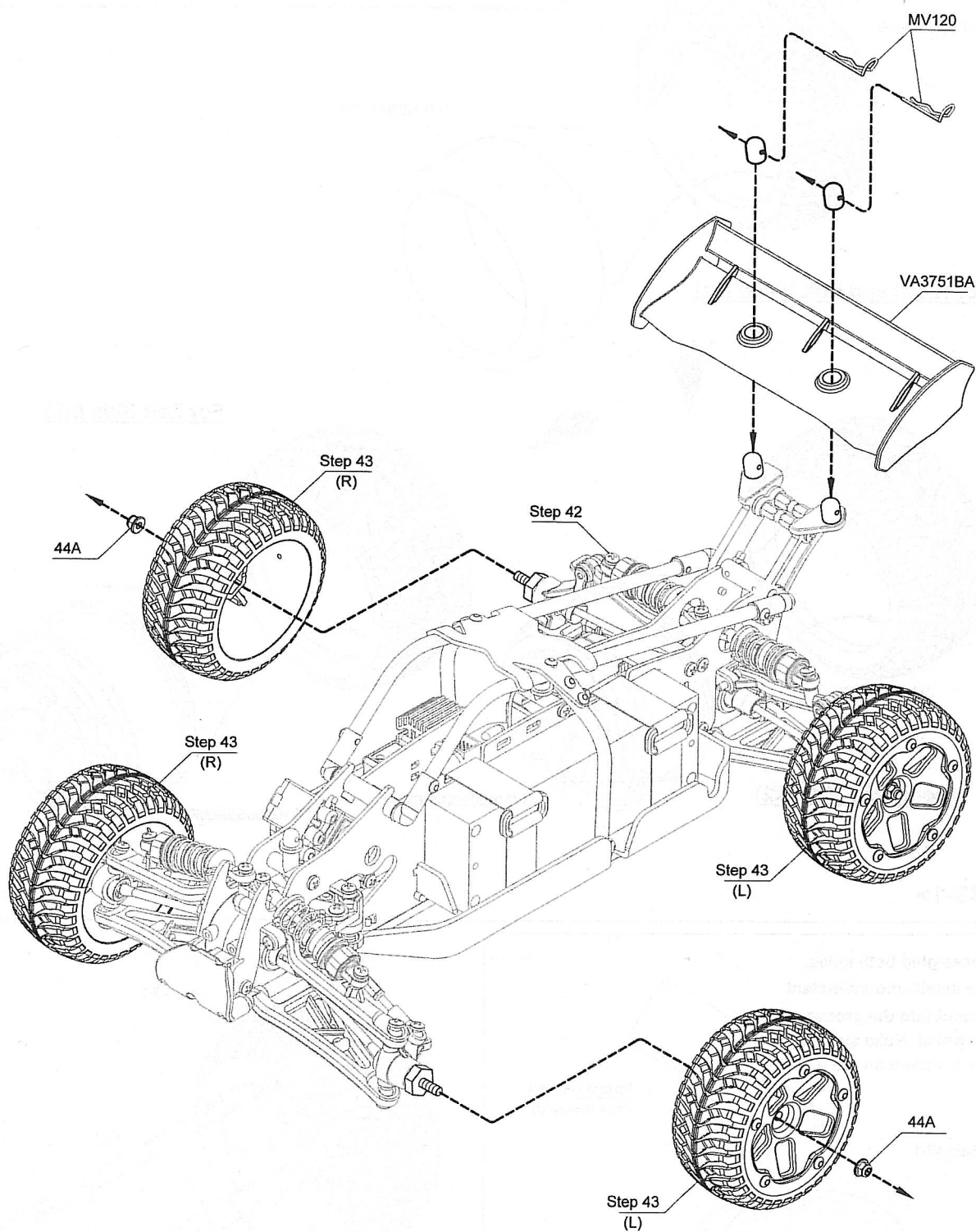


D10B05SBA06RE
(C10A01RE)

43A


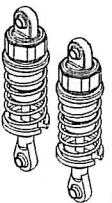


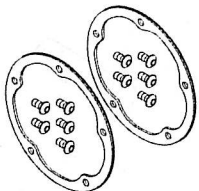

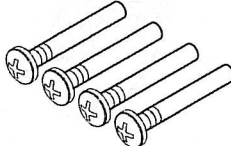
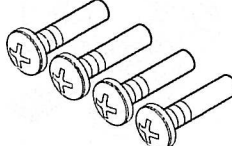

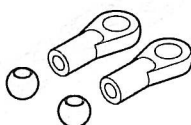
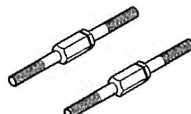
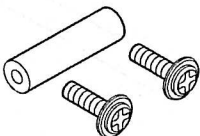
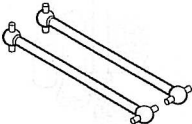
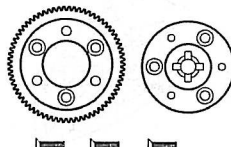
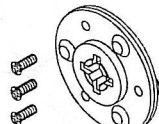
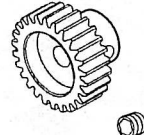
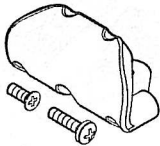
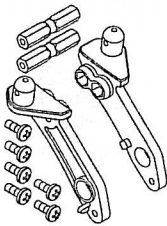
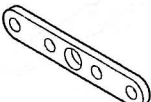
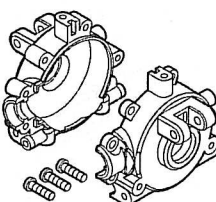
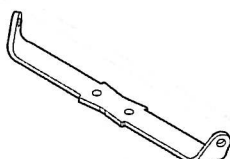



For Right and Left Sides (x4)

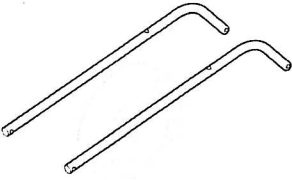

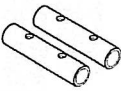
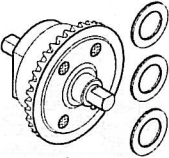
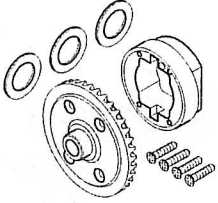
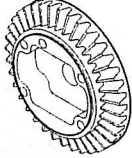

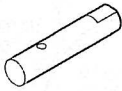
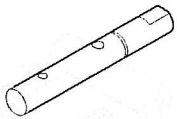
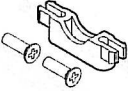
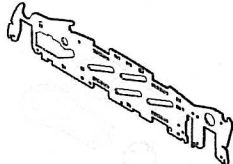
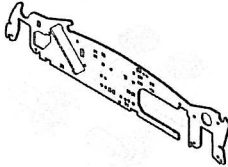
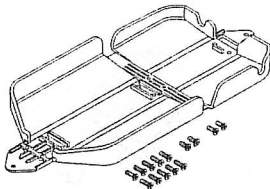
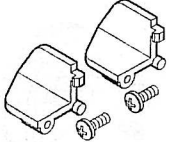
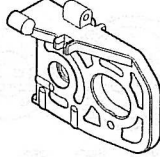
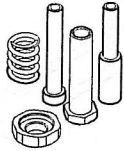
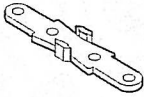
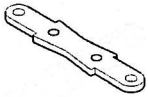
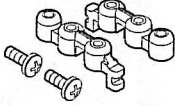
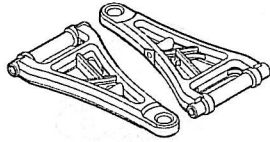
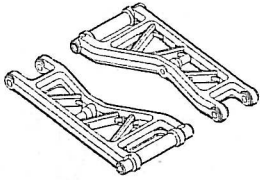
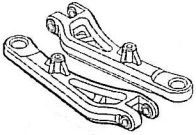
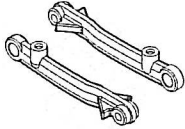
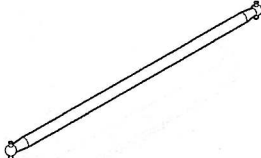
Step 44 Wheels and Wing Mounting


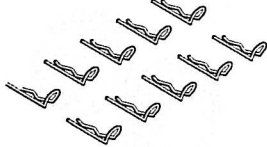
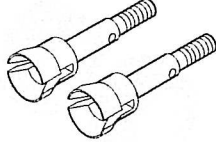
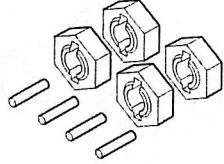
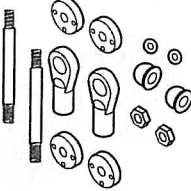


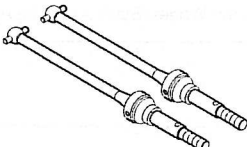
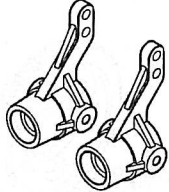
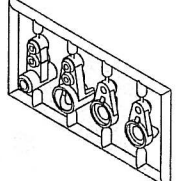
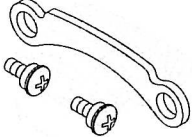
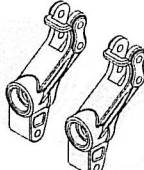
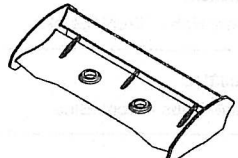
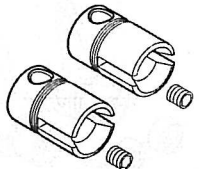

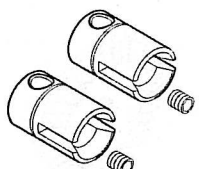
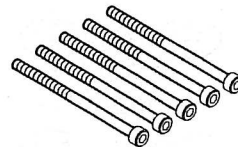

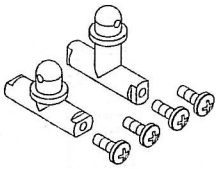


44A - Flanged Lock Nut 4mm -- 4

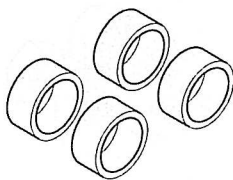
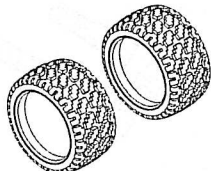
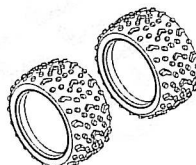
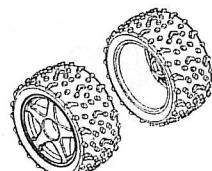
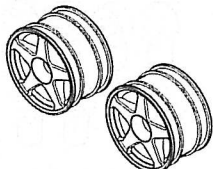
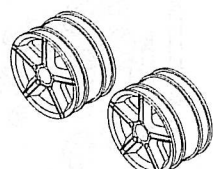
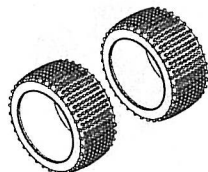
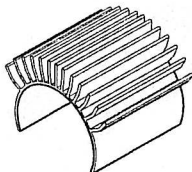
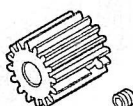
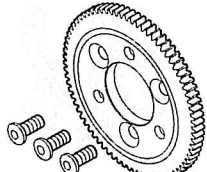
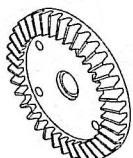
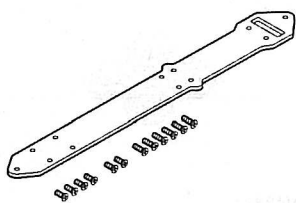
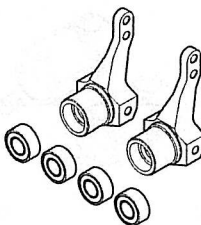



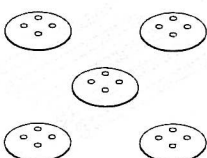
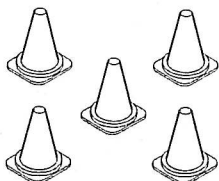



1-10 CAGE REPLACEMENT PARTS LIST

			
43D226RE L=22.6mm	44A580A01 L=68mm	BB051004	BB081404
F&R Shock Body Set 3mm - Red	Shock Set w/Black Springs - F&R	Ball Bearing 5x10x4mm	Ball Bearings 8x14x4mm
			
C10A01RE	CB113	CB150A L=22.5mm	CB150S L=13.5mm
Wheel Plate - Red	Balls - Copper 7x3mm	Hub Studs - Down	Hub Studs - Up
			
CB156	CB159	CB160 L=46mm	CB305 L=22mm
Differential Gear Set	Ball Ends w/Balls	Turnbuckles 5mm	Rod - Aluminum
			
CB355 L=68mm	EL0061	EL00612	EL0221
Rear Dog Bones	Main Gear 70T & Main Gear Mount	Main Gear Mount	Motor Pinion Gear 22T
			
EL1404	EL1412	EL162D7RE	EL1631
Bumper - Black	Wing Mount	Suspension Plate - Red	Gearbox Halves - Front & Rear
			
EL1671RE	EL1672	EL1673RE L=16mm	EL1675BA
Support Fixed Plate - 2mm, Red	Connecting Joint - L Type	Connecting Sleeve - Red	Roof Plate - Black

			
EL1681RE L=220.5mm	EL1684RE L=89.8mm	EL1683RE L=36mm	EL2227
Main Roll Bars - Red	Side Roll Bars - Red	Connecting Sleeve - Red	Differential Set
			
EL2228	EL22811	EL22821	EL22891 L=21.8mm
Differential Case w/Gear	Bevel Gear 37T	Pinion Gear 11T	Pinion Gear Shaft - Front
			
EL22901 L=35.6mm	EL3002	EL3002LBA	EL3002RBA
Pinion Gear Shaft - Rear	Side Fixed Stand	Side Plate Left - 2mm, Black	Side Plate Right - 2mm, Black
			
EL3014	EL3024	EL3045	EL30731
Chassis - Plastic	L Type Fixed Stand	Motor Mount	Servo Saver Metal Set
			
EL30761	EL30761RE	EL3101	EL347F2
Serve Saver Plate - Plastic	Servo Saver Plate - 2mm, Red	Servo Stand	Suspension Arm Lower - Front
			
EL347R2	EL349F2	EL349R2	EL3553 L=189mm
Suspension Arm Lower - Rear	Suspension Arm Upper - Front Left & Right	Suspension Arm Upper - Rear Left & Right	Swing Shaft

			
EL3746	MV120 L=27mm	V21051 L=36.9mm	V21071 L=5mm
Antenna Stand	Body Clips - Type "R"	Servo Saver - Plastic	Driver Washer Hex
			
V213801 L=30.5mm	V21383BA L=35mm	V22151	V2357L L=100mm
Front Shock Shaft Set 3mm	Front&Rear Shock Springs - 1.1mm Black	Ball Ends	CVD Universal Joint 5mm
			
VA134	VA3071	VA30751RE	VA3461
Wheel Hub - Front Alu	Servo Saver Plastic Parts	Servo Saver Steering Plate 3mm - Red	Rear Hubs - Left/Rear
			
VA3751BA	VX103 L=16mm	XV1386	VX144 L=17mm
Wing - Black	Pinion Output Joints	Shock Spring Mount	Pinion Output Joints
			
WCAP3X50H L=50mm	D10B05SBA06RE	EL1652	
Cap Screw 3mm	Desert Tire+Wheel-Black+Insert+ Wheel Plate-Red w/Glued	Body Support	

1-10 CAGE OPTION PARTS LIST

			
CB214	CB36901	CB3691	CB3691BB1
Insert	Rally Tires	Buggy Tires	Buggy+Wheel "Star"-Black+Insert
CB3691BW1 Buggy+Wheel "Star"-White+Insert		CB370B Wheels "Star" - Black	
		CB370G Wheels "Star" - Gold	
		CB370S Wheels "Star" - Silver	
		CB370W Wheels "Star" - White	
	CB370 Wheels "Star" - Alu		CB3701W Wheels - White
			
CB3771	EL00703RE L=48mm	EL0161S	EL0761S
Arrow Tires	Motor Heat Sink - Red	Motor Pinion Gear 16T - Steel	Main Gear 76T - Steel
			SE033BL Wheel Hubs - Front, Black
			SE033BU Wheel Hubs - Front, Blue
EL2281	EL3013BA	SE033	
Bevel Gear 44T	Chassis - 3mm,Black	Wheel Hubs - Front, Alu	
			
SE110	SE111	SE112	SE93010Y
Silicone Shock Oil - 40Wt	Silicone Shock Oil - 100Wt	Silicone Shock Oil - 200Wt	Micro Corner Markers - Yellow
			
SE93020R	SEG030	SEG050	SEG070
Racing Cones for Micros - Red	Silicone Differential Oil - 10k Wt	Silicone Differential Oil - 30k Wt	Silicone Differential Oil - 50k Wt



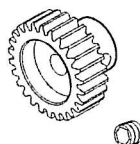
SEG100

Silicone Differential Oil - 100k Wt



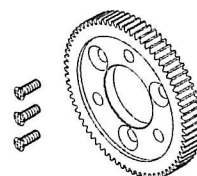
SEG200

Silicone Differential Oil - 200k Wt



EL0221S

Motor Pinion Gear 22T - Steel



EL0701S1

Main Gear 70T - Steel, Thick



101.10.09

101.10.09

101.10.09

101.10.09