

RADIO CONTROLLED ELECTRIC POWERED SPECIAL RACING BUGGY

4WD OFF-ROAD RACER

LAZER

ZX-



- THE HIGHEST-PERFORMANCE BUGGY EVER OFFERED BY KYOSHO!
A FUTURE CHAMPIONSHIP WINNER.
- KIT INCLUDES TOP-QUALITY OPTIONS AS STANDARD EQUIPMENT.
- HIGH-PERFORMANCE FOUR-WHEEL DRIVE SYSTEM WITH TOOTHED BELTS AND TWIN BALL DIFFERENTIALS.
- ALL-INDEPENDENT WISHBONE/ARM SUSPENSION WITH TOP-QUALITY OIL-FILLED PRESSURE TYPE SHOCK ABSORBERS.
- COMPLETE KIT WITH 14 HIGH-QUALITY BALL BEARINGS.
- STRONG, RIGID FRP DOUBLE-DECK CHASSIS.
- A PERFECT MATCH FOR TOP-PERFORMANCE MOTORS AND BATTERIES.
- BATTERY: 7.2V-1200/1700mAh (NOT INCLUDED)
RADIO: TWO-CHANNEL W/ELECTRONIC SPEED CONTROLLER (NOT INCLUDED)
MOTOR: HIGH-PERFORMANCE 240 TYPE (NOT INCLUDED)

1:10 SCALE



KYOSHO[®]
THE FINEST RADIO CONTROL MODELS
KIT NO.3147

BELT DRIVE
4WD

FOR THE SERIOUS RACER

BEFORE ASSEMBLY

○ Read the instruction carefully.

You can assemble the kit more easily if you have gapsed the general idea of steps and structure beforehand by reading it through to the end.

○ Check the parts in the kit.

Check to see if all the parts are correctly bagged as they are listed in the "Bagged Parts List".

Your thorough understanding of the assembly will enable you to build the kit without any difficulty. Check the components in the kit prior to your startings of the assembly.

Any claims for replacements or refunds for the model in the process of assembly will not be accepted.

○ Learn the marks described in the instruction.

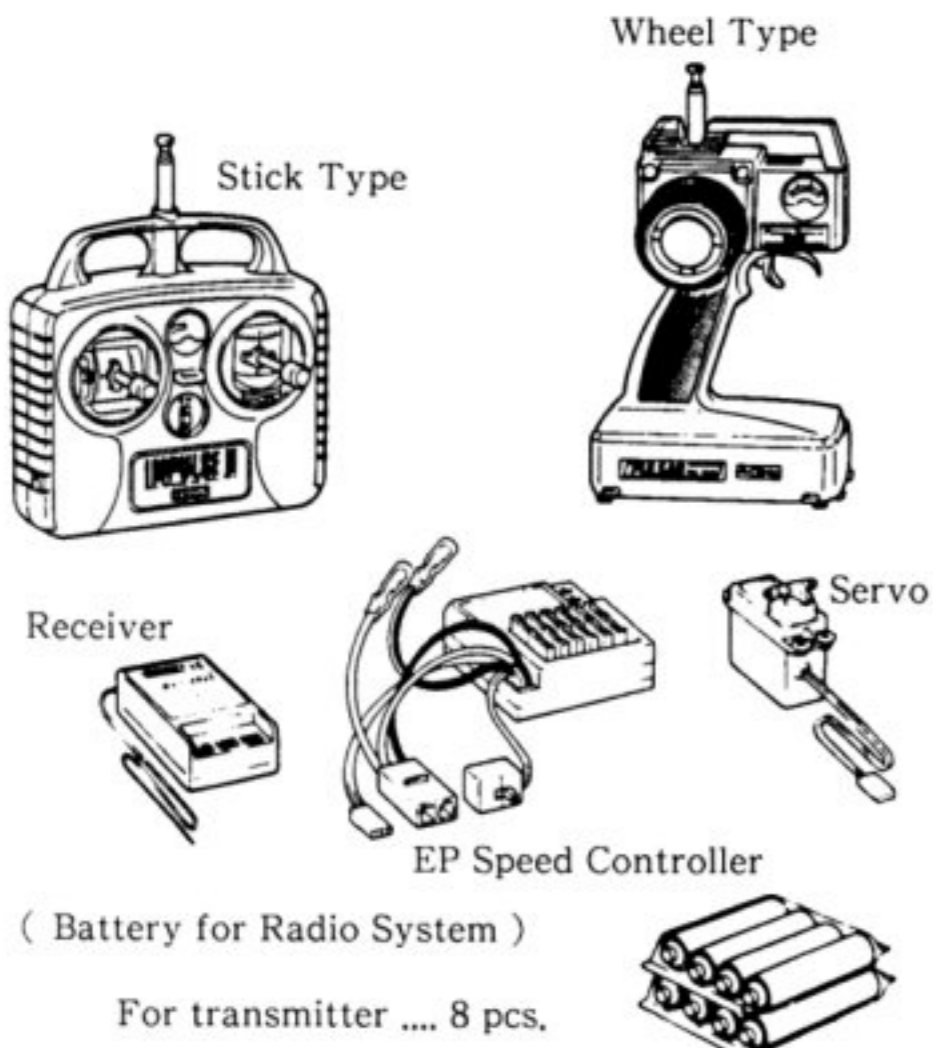
— SW CEMENT ... Place to put some locktite.

(It will prevent the screws and nuts get loosen by vibration while running.)

— GREASE ... Point where grease should applied.

(It will reduce friction and assure smooth movement.)

Steps where your particular attention is required.



(Ni-Cad Battery)

This model is designed to use a rechargeable 7.2V sepelate type or stick type battery.

Sepelate Type

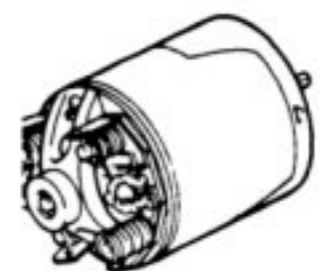
Stick Type



(Motor)

A Le mans series type motor is recommended for top performance.

No.2481 Le mans Pro High Speed
No.2483 Le mans Pro High Torque



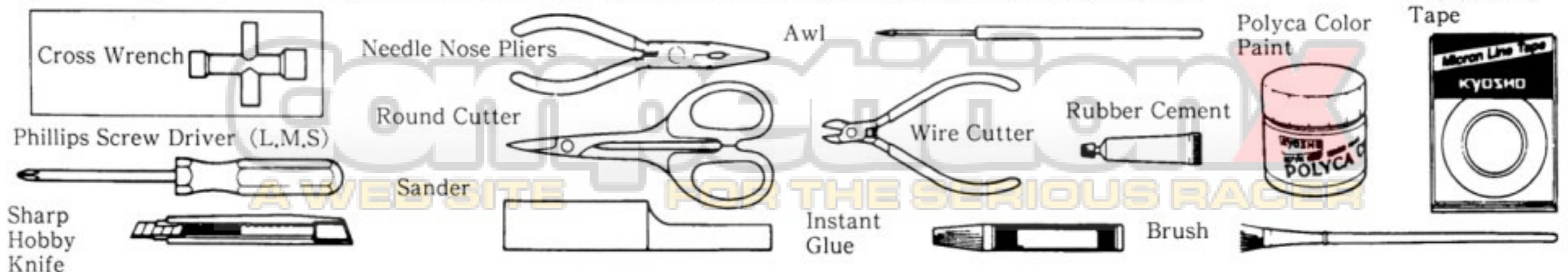
(Charger for Ni-Cad Battery)

The Kyosho's Ni-Cad battery is of high performance. If it is charged correctly, it will operate for a considerable period of time.

* Use one of the chargers listed below which suits your need.

No.	Name	Time	Rate	Features
2326	7.2V Power Charger	15 min.	70%	For bigginers Built-in timer
1849	Multi Charger II	20 min.	100%	Timer, Ammeter built-in
2246	FET Auto Charger	20 min.	100%	Trickle charging Automatic Cut off at peak of charge

《 Tools Required 》 A Hex Key, Cross Wrench, Grease, and Screw Locking Compound are included in the kit.



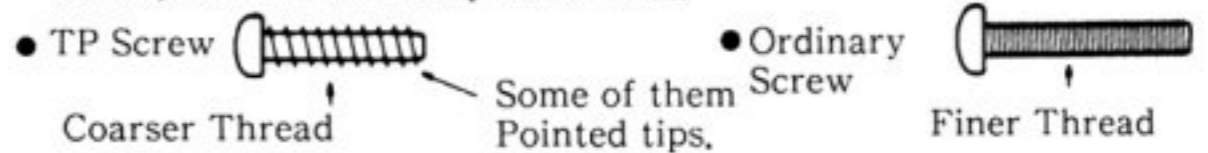
Instruction



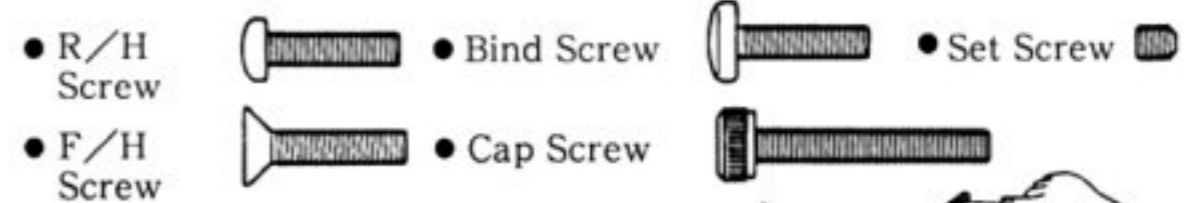
Bagged Parts List

○ Be well aware of the different types of screws.

1) The difference between the TP Screw (short form of self-tapping screw) and the ordinary screw is ...



2) The kinds of screws which will be used in the instruction.



There are two kinds of thread, finer and coarser ones.

○ Pick up the correct parts and screws.

Compare the shape and size of small parts, such as screws, nuts, and washers with the actual size drawing of each step.

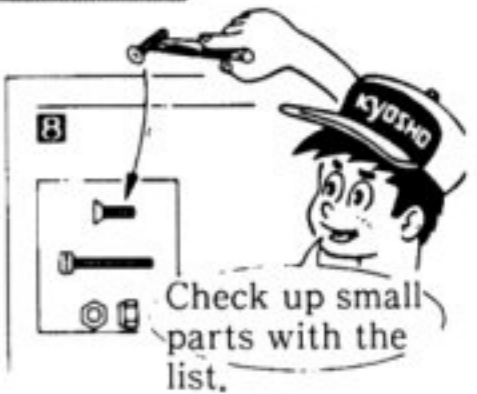
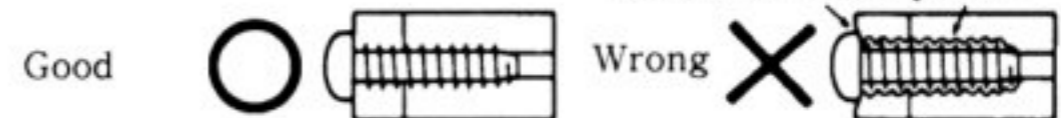
○ Be sure about the location and direction of parts to install.

Double-check the location and orientation of parts with the illustration before installation. When necessary, assemble the parts themselves tentatively before proceeding to the next step.

○ Do not tighten the TP Screw too tight.

Do not use excessive force when tightening the TP Screws, or you may strip the thread in the plastic. It is recommended to stop tightening it when the thread parts on the screw goes into the plastic part and you feel some resistance from the tightening.

Over tightening may strip the thread in the plastic.



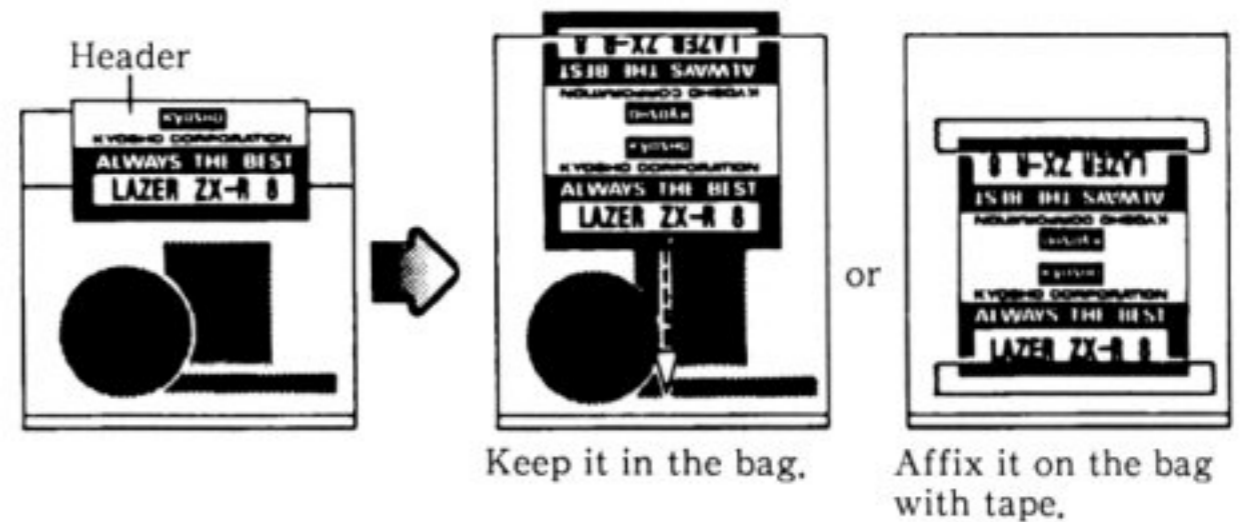
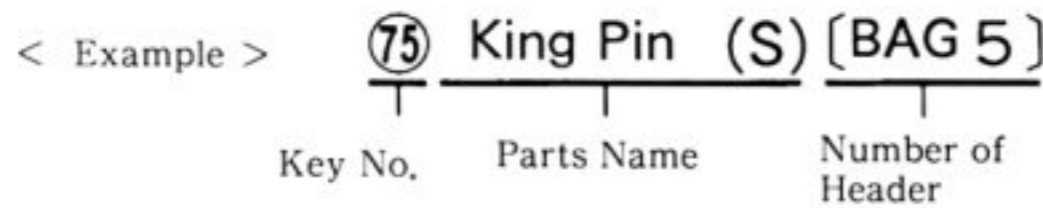
Check up small parts with the list.



BAGGED PARTS LIST (1) The key number with ★ indicated plastic parts on a runner. See page 5 for the layout drawing.

《 Do not throw away a bag header 》

- The header is the only thing to rely upon when looking for a part. Do not discard it until you finish the assembly.
- The header is indicated like this in the instruction.



Bag No.	Key #	Parts Name	Q'ty	Step	
LAZER ZX-R-1	● 1	Front Shock Case	2	● marked parts are assembled	
	● 2	Rear	2		
	● 3	Front Shock Shaft	2		
	● 4	Rear	2		
	● 5	Front Shock Spring	2		
	● 6	Rear	2		
	● 7	Spring Holder	4		
	● 8	Shock Cap	4		
	● 9	Spring Stopper	4		
	● 10	Shock End	4		
	● 11	Shock Piston	4		1
	● 12	Shock Collar (White)	4		
	● 13	(Black)	4		
	● 14	O Ring	8		
	● 15	C Ring	4		
	● 16	E Ring (E2,5)	8		
	●	M2,6x10 TP R/H Screw	4		
		17	Shock Oil		1
	18	Pressure Top	4	1	
		M3x18 Cap Screw	4	12 16	
LAZER ZX-R-3	★ 19	5.8 φ Ball End	12	2	
	20	5.8 φ Ball (Silver)	10	1 2	
	21	(Black)	8	2	
	22	3 φ x32 Adjust Rod	3	2	
	23	3 φ x40	4	2	
	24	Servo Saver Spring	1	2	
	25	Upper Deck Post	1	9	
	26	Steering Pin	2	4	
	27	Servo Saver Shaft	2	9	
	28	Servo Mount Plate	1	23	
	29	3 φ x6 Flange Bushing	2	4	
	30	Steering Plate	1	4	
	31	5 φ x8 Bushing	4	4	
	LAZER ZX-R-4	32	Limiter Collar	2	7 8
33		Slipper Plate	2	7	
34		Guide Plate	1	7	
35		Front Axle Box (A)	1	12	
36		(B)	1	10	
37		Rear Axle Box (A)	1	7	
38		(B)	1	8	
39		(C)	1	8	
40		(D)	1	8	
41		Drive Pulley	2	7 8	
42		Pulley Flange (S)	2	7 8	
43		Motor Plate (L)	1	3 7	


Bag No.	Key #	Parts Name	Q'ty	Step	
LAZER ZX-R-4	44	Main Shaft	1	7	
	45	Front Drive Hub	1	8	
	46	Side Plate (L)	1	8	
	47	Motor Plate (S)	1	7	
	48	Gear Cover	1	3	
	49	M3x25 Shaft	1	8	
	50	Limiter Nut	1	8	
	51	Spur Gear	1	7	
	52	Rear Drive Hub	1	7	
	53	4 φ x8 Collar	1	7	
	54	Sponge Cap	2	5	
	◎ 55	8 φ x14 Ball Bearing	6	7 8 4 pcs. assembled	
	◎ 56	Differential	2	◎ marked parts are assembled	
	◎ 57	Diff. Shaft (A)	2		
	◎ 58	(B)	2		
	◎ 59	Plate Holder	4		
	◎ 60	Pressure Plate	4		
	◎ 61	Torque Keeper M2,6x15 Cap Screw	2		
	◎ 62	Tapered Washer	8		5
	◎ 63	Diff. Ball	20		
	◎ 64	Thrust Ball	16		
	◎ 65	Thrust Washer	4		
	◎ 66	8 φ x10 Collar	2		
	67	Pulley Flange (L)	2	6	
	68	Front Drive Belt	1	8	
	69	Rear	1	8	
70	Needle Rollar	2	8		
71	Needle Rollar Shaft	1	8		
72	4 φ x8 Bushing	1	7		
LAZER ZX-R-5	73	Rear Wheel Shaft	2	17	
	74	Drive Washer	4	31	
	75	King Pin (S)	2	13	
	76	(L)	2	13	
	77	Swing Shaft	2	13	
	78	3 φ x50 Shaft	2	14	
	79	3 φ x55 Shaft	2	13	
	80	Hub Pin	4	14 18	
	81	Rear Shock Stay	1	16	
	82	Front Shock Stay	1	12	
	★ 83	Knuckle Arm (R)	1	13	
	★ 84	(L)	1	13	
	85	Universal Swing Shaft	2	13	
	86	5 φ x10 Ball Bearing	8	13 17	

BAGGED PARTS LIST (2)

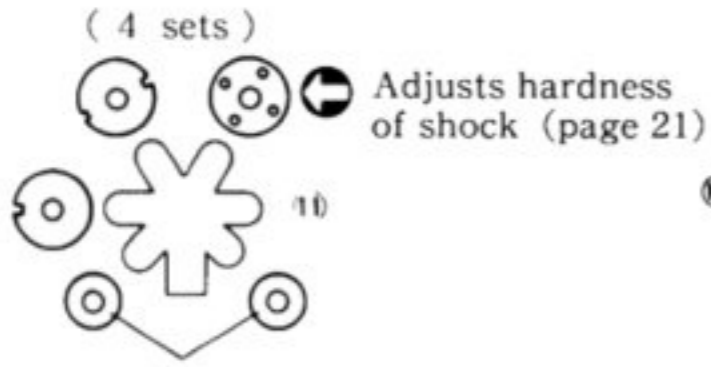
Bag No.	Key #	Parts Name	Q'ty	Step
LAZER ZX-R-6 PLASTIC PARTS	★ 87	Uni Crank (A)	1	4
	★ 88	• (B)	1	4
	★ 89	• (C)	1	4
	★ 90	Uni Crank Collar (A)	2	11
	★ 91	Servo Saver	1	22
	★ 92	Saver Ring	1	22
	★ 93	Saver Horn (SL)	1	22
	★ 94	• (SS)	1	22
	★ 95	• (F)	1	22
	★ 96	Saver Washer	1	23
	★ 97	Wing Stay (A)	2	16
	★ 98	• (B)	2	16
	★ 99	• (C)	2	16
	★100	Wing Washer	4	36 sparex2
	★101	Stopper Post	4	11
	★102	Stopper Washer	4	11
	103	Bumper	1	15
	★104	Rear Hub (R)	1	17
	★105	• (L)	1	17
	★106	Front Hub	2	13
	★107	Front Arm Bracket (A)	1	14
	★108	• (B)	1	11
	★109	Rear Arm Bracket (A)	1	9
	★110	• (B)	1	Page 21
★111	• (C)	1	18	
★112	Antenna Post	1	9	
★113	Servo Stay (S)	2	23	
★114	• (L)	2	24	
★115	Shock Collar	4	29	
★116	Upper Rod End	2	2	
★117	Uni Crank Collar (B)	2	11	
★118	Front Sus. Arm	2	14	
★119	Rear Sus. Arm	2	18	
★120	Rear Bulk Head	1	8	
★121	Upper Deck Mount (A)	1	9	
★122	• (B)	1	9	
★123	Mount Collar (A)	1	9	
★124	• (B)	1	Page 20	
LAZER ZX-R-7	125	Front Wheel (56 size)	2	30
	126	Rear Wheel (56 size)	2	30
LAZER ZX-R-8	127	Double Sided Tape	1	25 27 36
	128	Velcro	1set	35
	129	Double Sided Seal	1	34
	130	Stopper Plate (L)	1	28
	131	• (S)	2	28
	132	Upper Deck	1	26
	133	Pinion Gear (22T)	1	20
	134	Strap (S)	2	25 27
	135	NiCad Strap	2	28
	136	Antenna Pipe	1	27
	137	Screw Locking Compound	1	
	138	Hobby Grease	1	

Bag No.	Key #	Parts Name	Q'ty	Step	
BOX	139	Main Chassis	1	9	
	140	Front Tire	2	30	
	141	Rear Tire	2	30	
	142	Body	1	32	
	143	Under Cowl	1	32	
	144	Wing	1	32	
	145	Side Wing	1	32	
	146	Decal (Lazer ZX-R)	1	34	
	147	Cross Wrench	1	7	
			Instruction Manual	1	
	LAZER ZX-R-2 SCREWS NUTS WASHERS	16	E Ring (E2,5)	4	14 18
		148	• (E3)	1	7
		149	Hook Pin	3	36
		150	Hex Wrench (1,5)	1	7 8 20
		151	• (2)	1	5
		152	• (2,5)	1	12 16
		153	Wave Washer	4	7
154		4 φ x6 Shim	1	8	
155		5 φ x 8,5 Shim	6	13 17	
156		8 φ x12 Shim	1	8	
		R/H Screw	M3 X 4	4	
		Bind Screw	M3 X 6	5	
		•	M3 X 12	4	
		•	M3 X 30	1	
		•	M3 X 35	1	
		•	M3 X 45	2	
		•	M4 X 8	5	
		F/H Screw	M2.6 X 12	8	
		•	M3 X 6	4	
		•	M3 X 12	6	
		TP R/H Screw	M3 X 18	2	
		TP Bind Screw	M2.6 X 12	5	
		•	M3 X 8	10	
		•	M3 X 10	9	
		•	M3 X 12	2	
		TP F/H Screw	M3 X 10	19	
		•	M3 X 12	4	
		•	M3 X 15	6	
		Nut	M2.6	12 (3 kinds)	
		•	M3	6	
		Nylon Nut	M2.6	2	
		•	M3	5	
	•	M4	4 (Flanged)		
	Set Screw	M3 X 3	3		
	Washer	M2.6	2		
	•	M3	4 (Black)		

LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

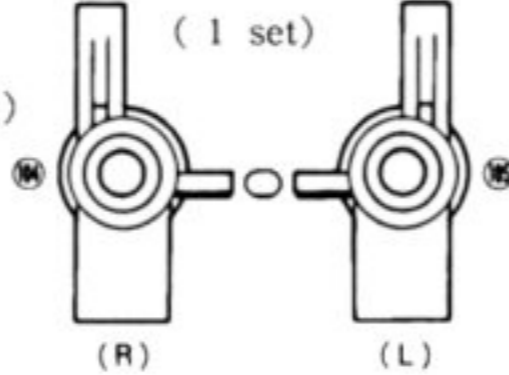
 These shaded parts are not used.

SHOCK PISTON & COLLAR

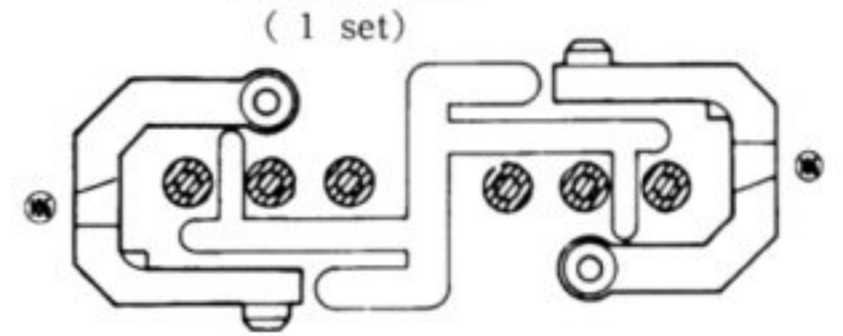


Use in step 11 and 29.

REAR HUB

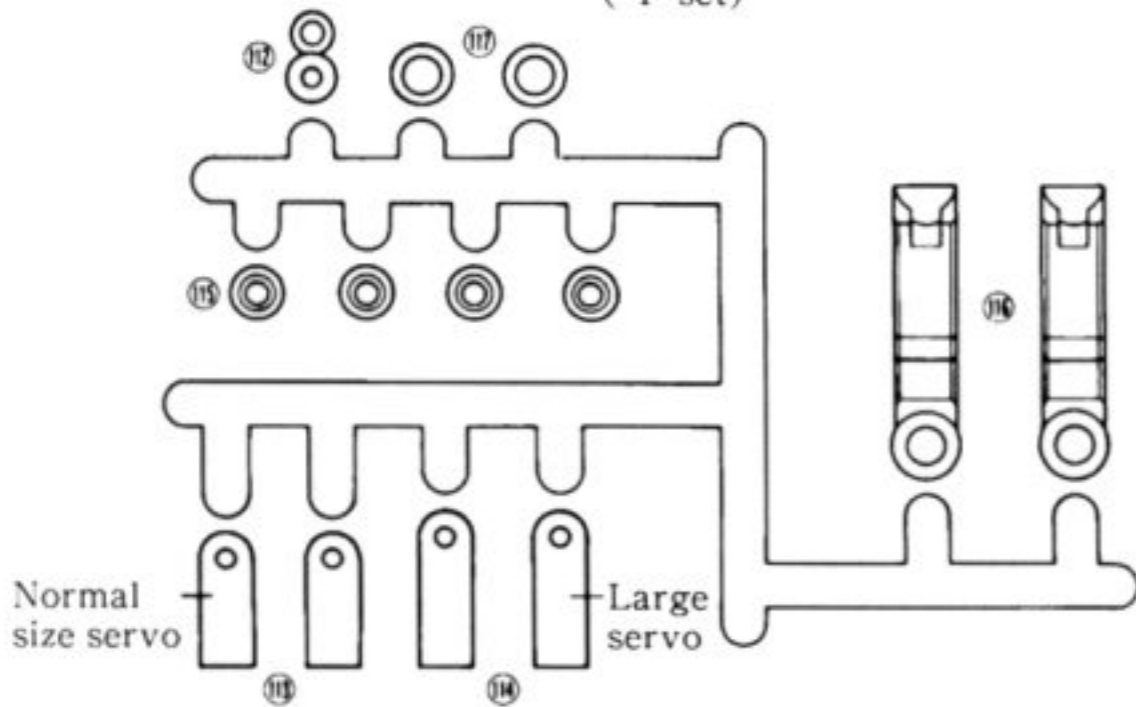


FRONT HUB



UPPER ROD END PARTS

(1 set)



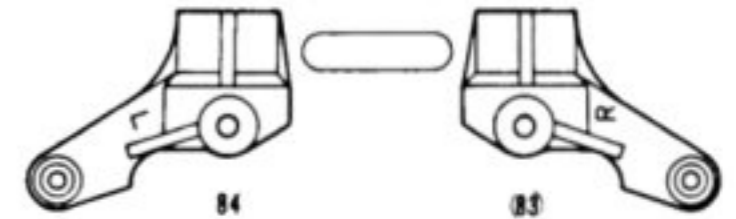
5.8 φ BALL END

(3 sets)

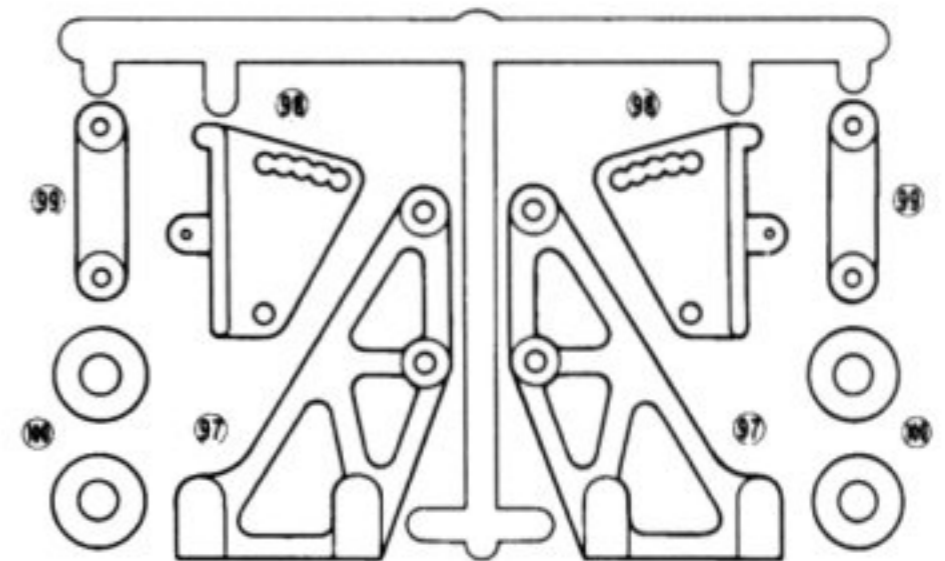


KNUCKLE ARM

(1 set)

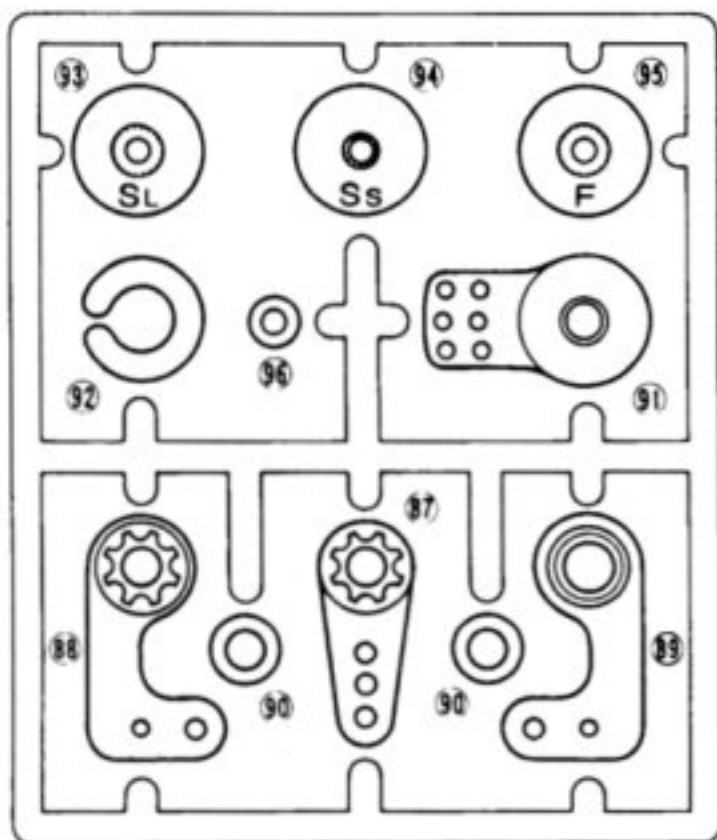


WING STAY PARTS



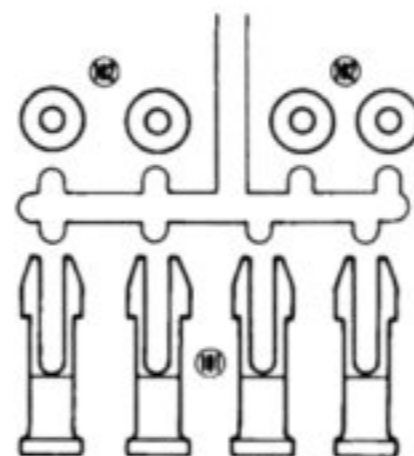
SERVO SAVER & UNI CRANK PARTS

(1 set)



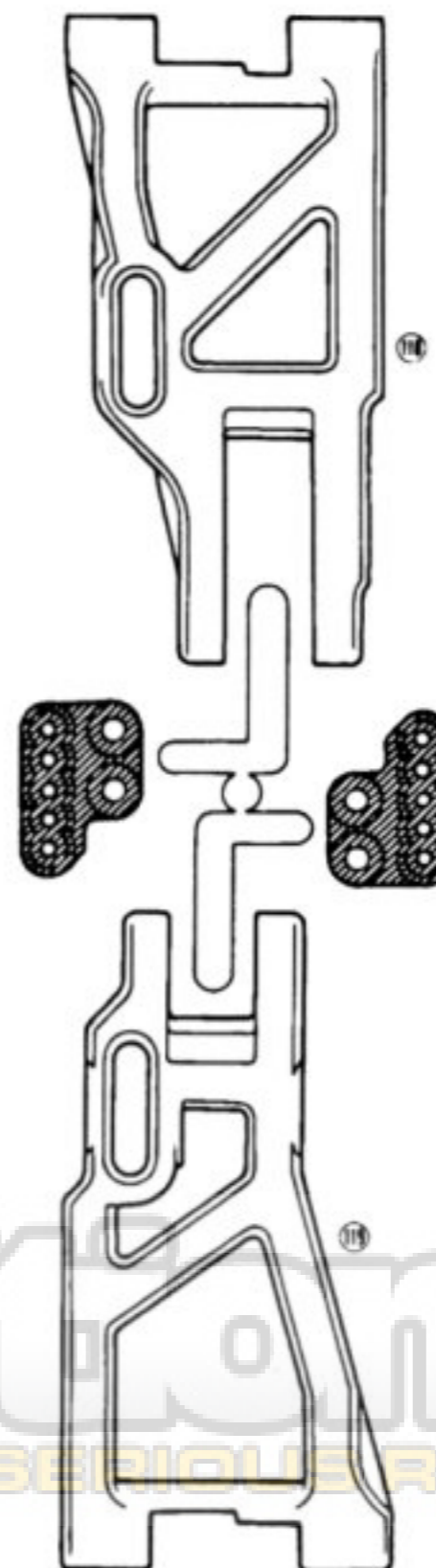
BATTERY STOPPER PARTS

(1 set)



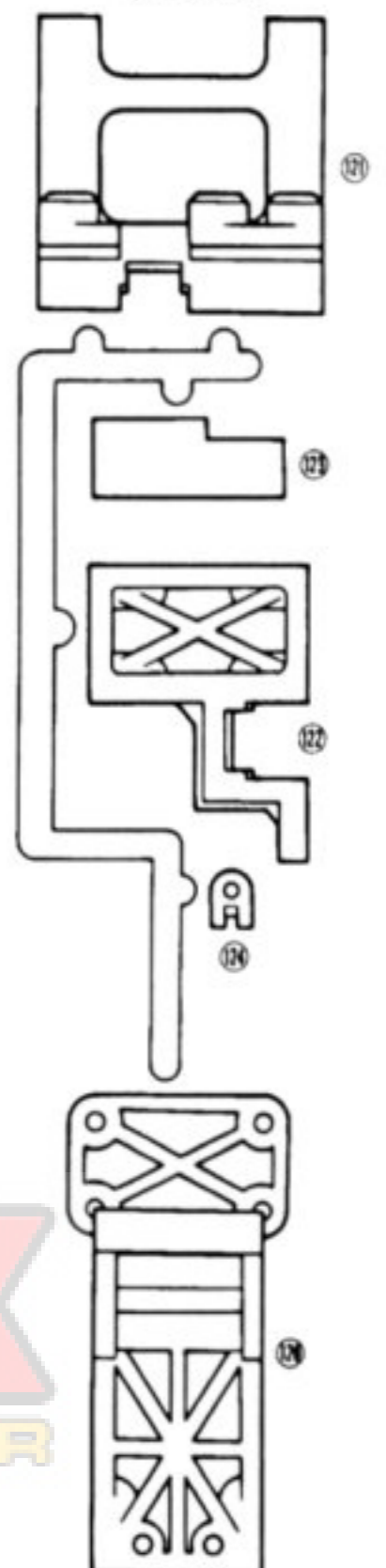
SUS. ARM PARTS

(2 sets)



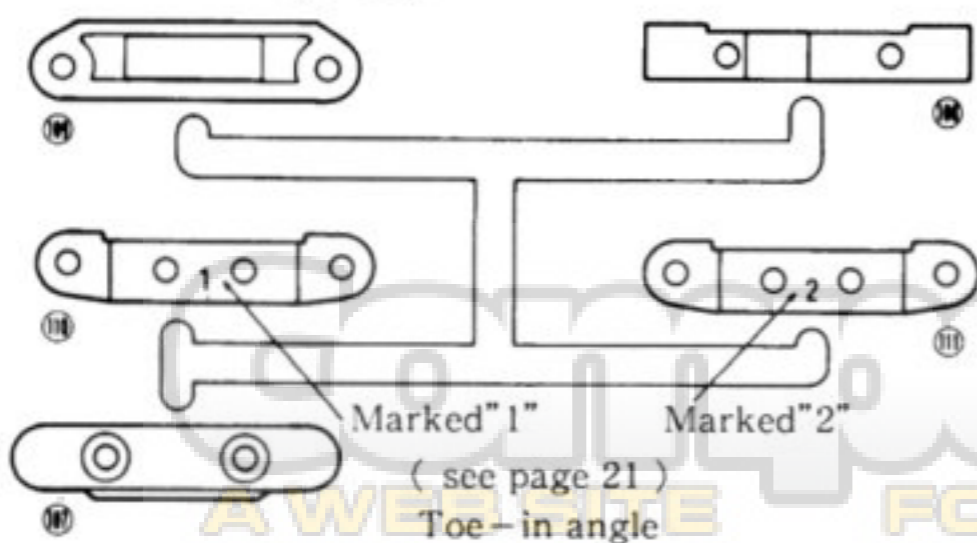
UPPER DECK & MOUNT PARTS

(1 set)



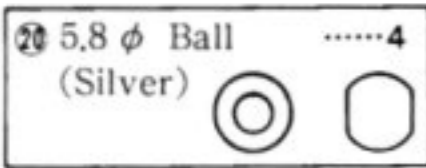
ARM BRACKET PARTS

(1 set)



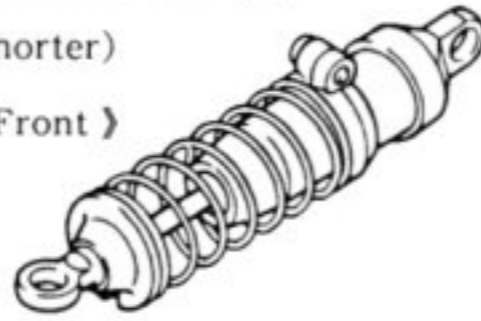
1 FILLING THE SHOCK OIL

At each assembly stage, a drawing shows screws and other fasteners used in the actual size. Identify those required in each stage.

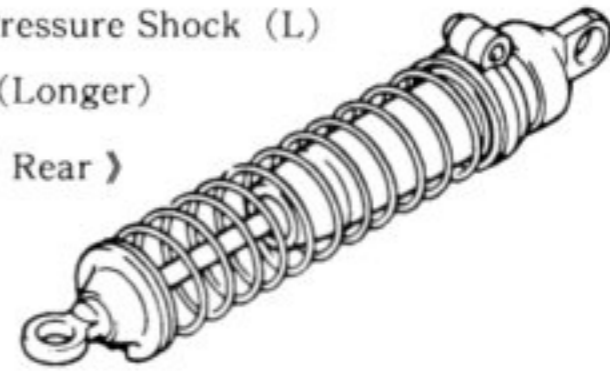


Pressure shocks are in [Bag 1] (Assembly) . Remove the shock spring and shock cap to fill the shock oil.

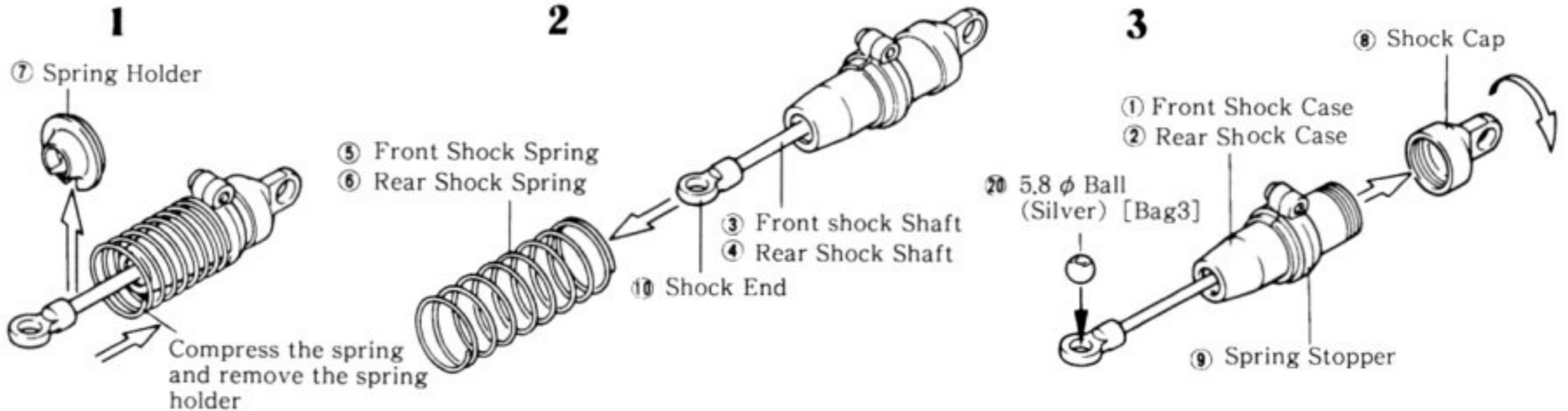
Pressure Shock (M)
(Shorter)
< Front >



Pressure Shock (L)
(Longer)
< Rear >

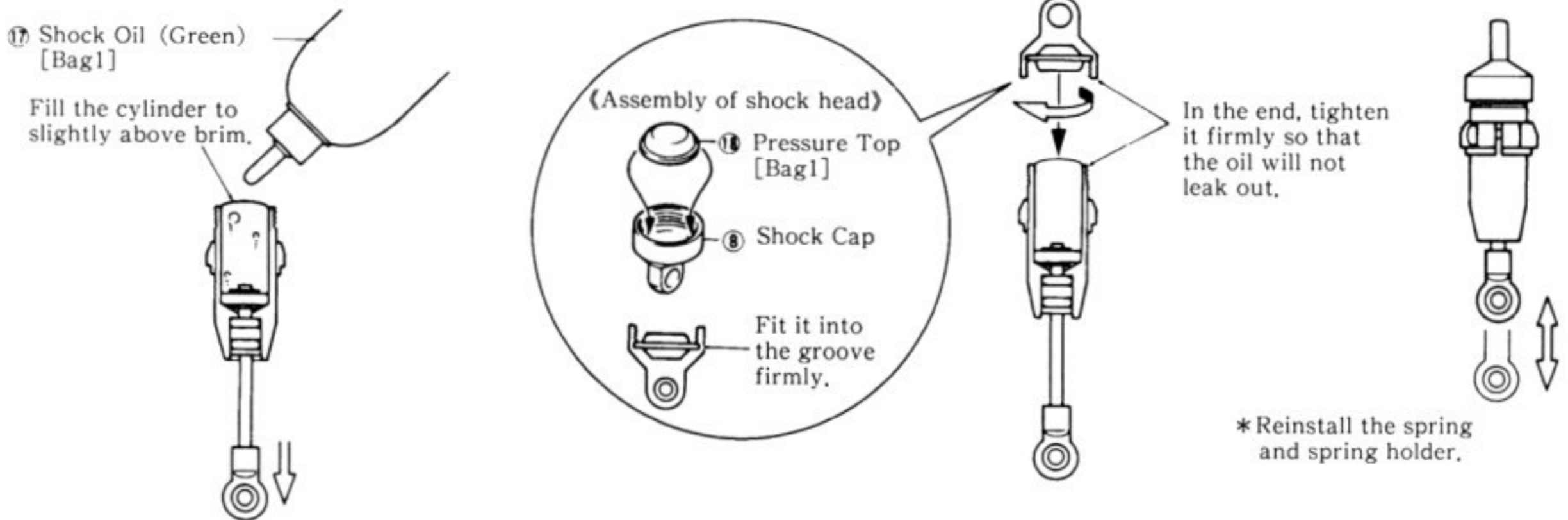


REMOVE SPRING & CAP

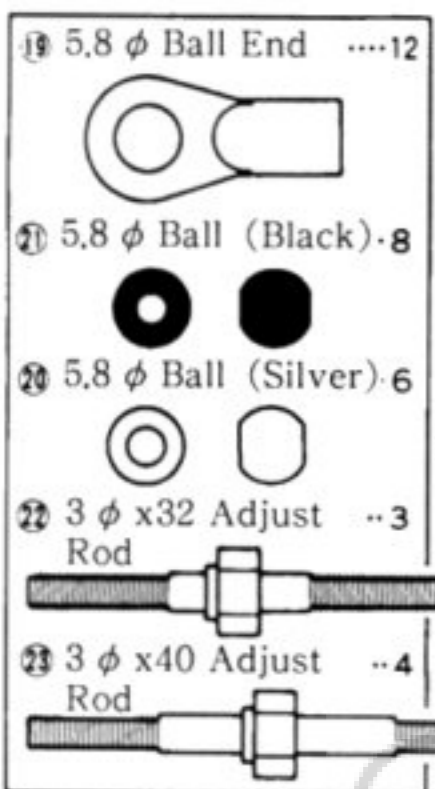


FILLING THE SHOCK OIL

- 1 Pull down the piston to the bottom and pour oil slowly. Then move the piston up and down gently to get rid of air bubbles.
- 2 Keep the piston in the lowest position and tighten the cap gradually, then excessive oil will run over.
- 3 Confirm that it will work smoothly by moving the piston up and down.

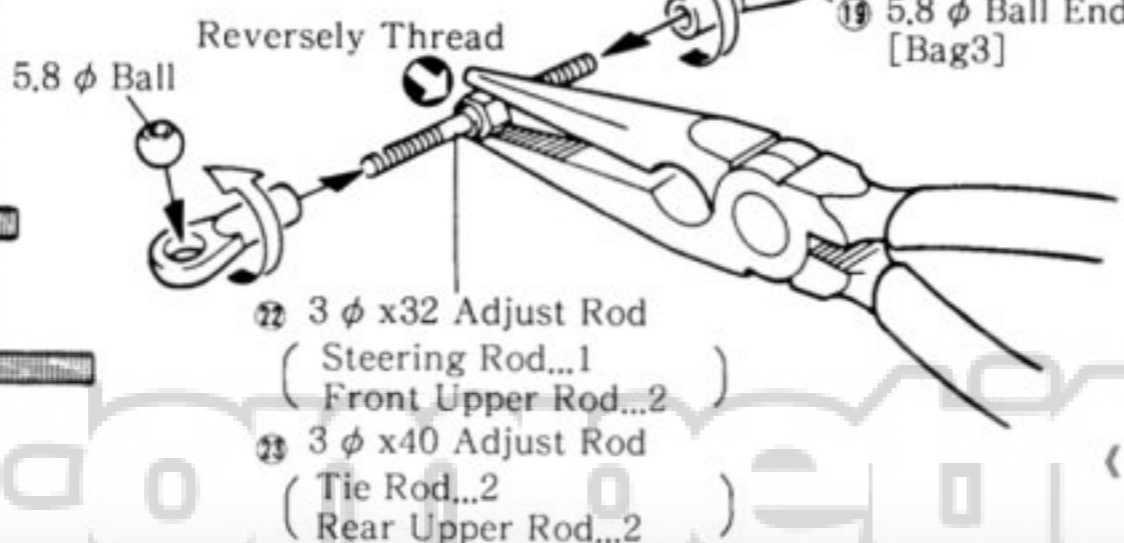


2 ASSEMBLY OF CONTROL ROD



Screw in the ball ends, identifying the length with the actual size drawing.

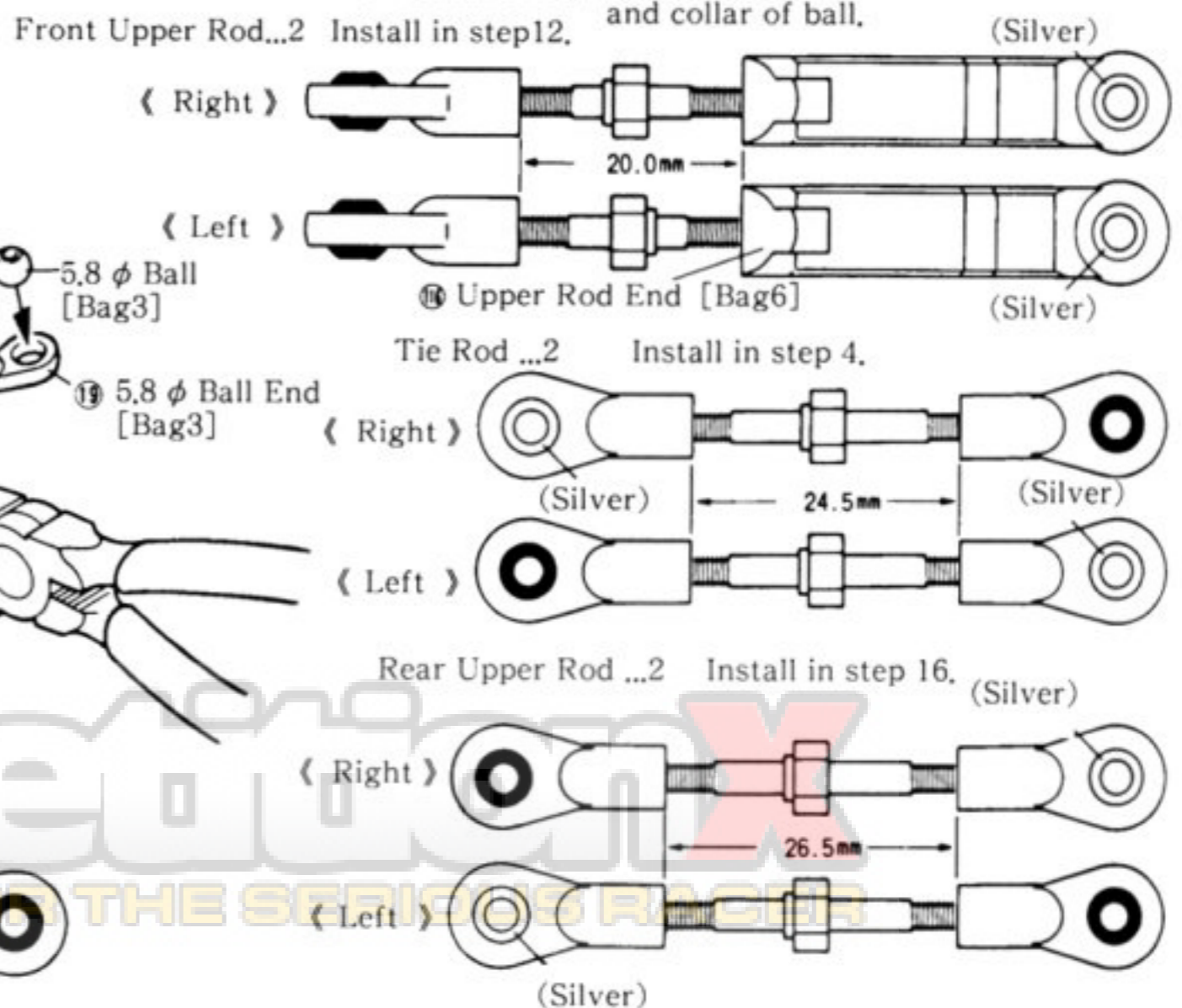
The reversely threaded side has a step as shown.



Steering Rod 1
Install in step 4.

* Adjust the length in step 23.

< Actual Size > Be careful about the direction of rod and collar of ball.

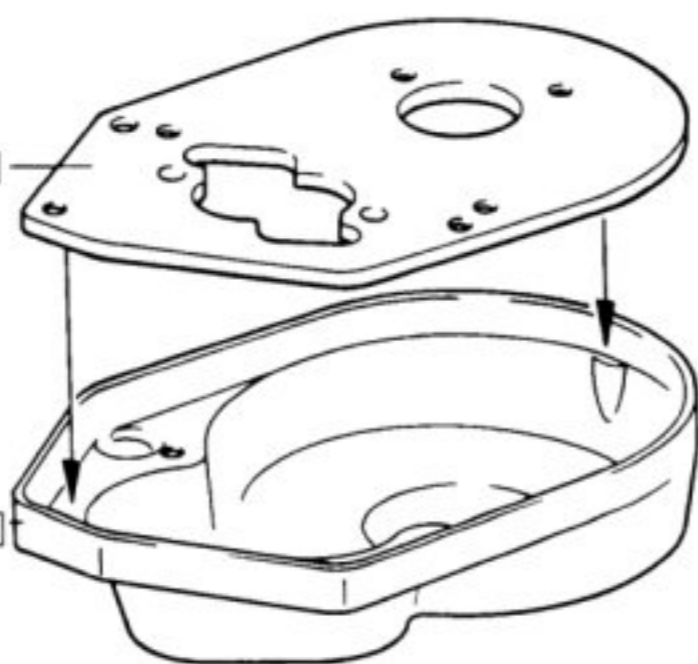


3 CUTTING GEAR COVER

1 Place the plate into the cover.

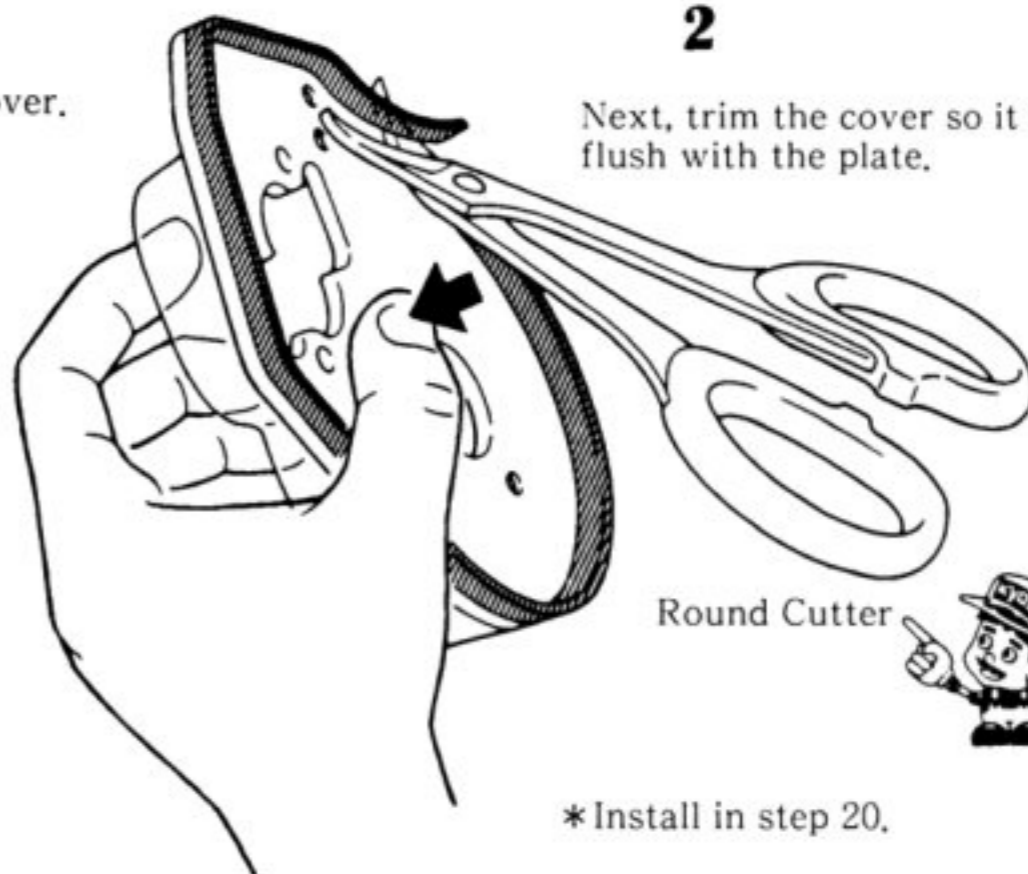
43 Motor Plate (L) [Bag4]

44 Gear Cover [Bag4]



2

Next, trim the cover so it is flush with the plate.



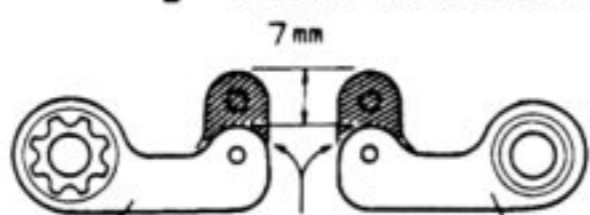
Round Cutter



* Install in step 20.

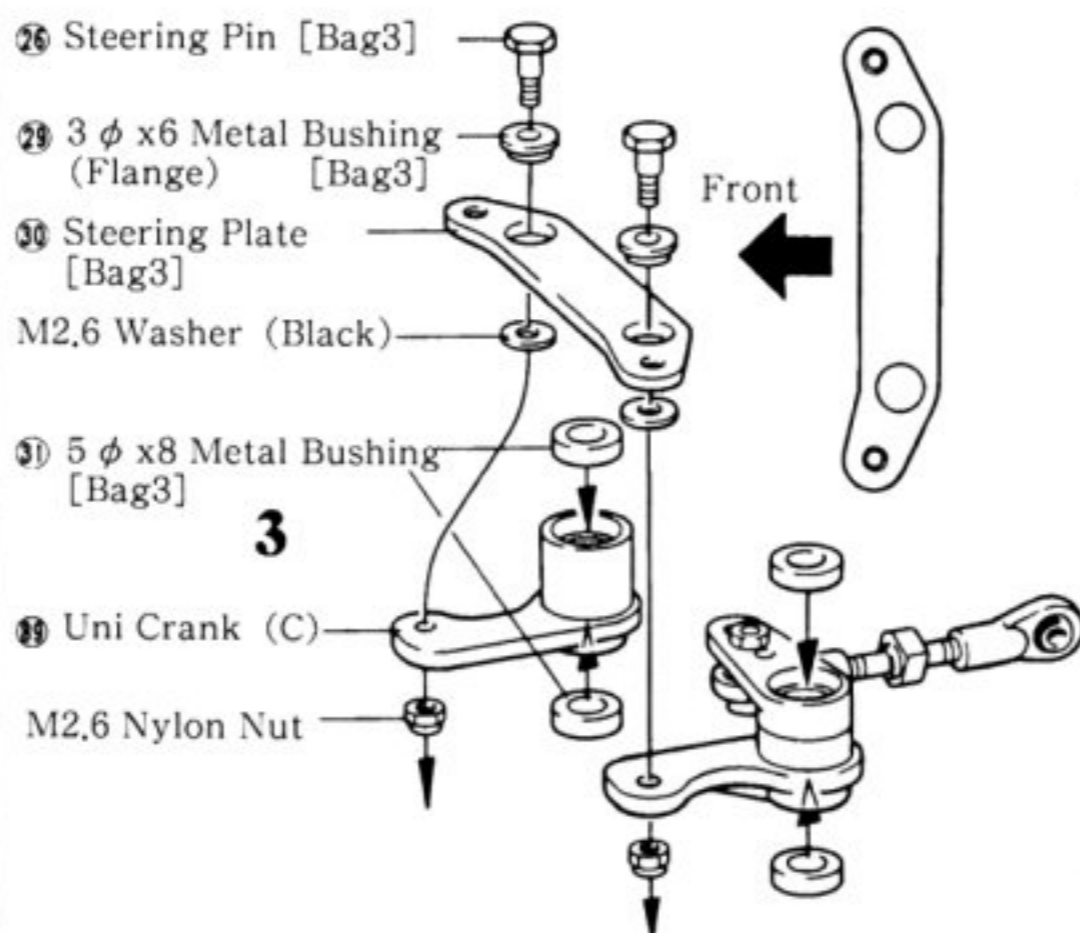
4 ASSEMBLY OF UNI CRANK

1 Cut off the shaded area.



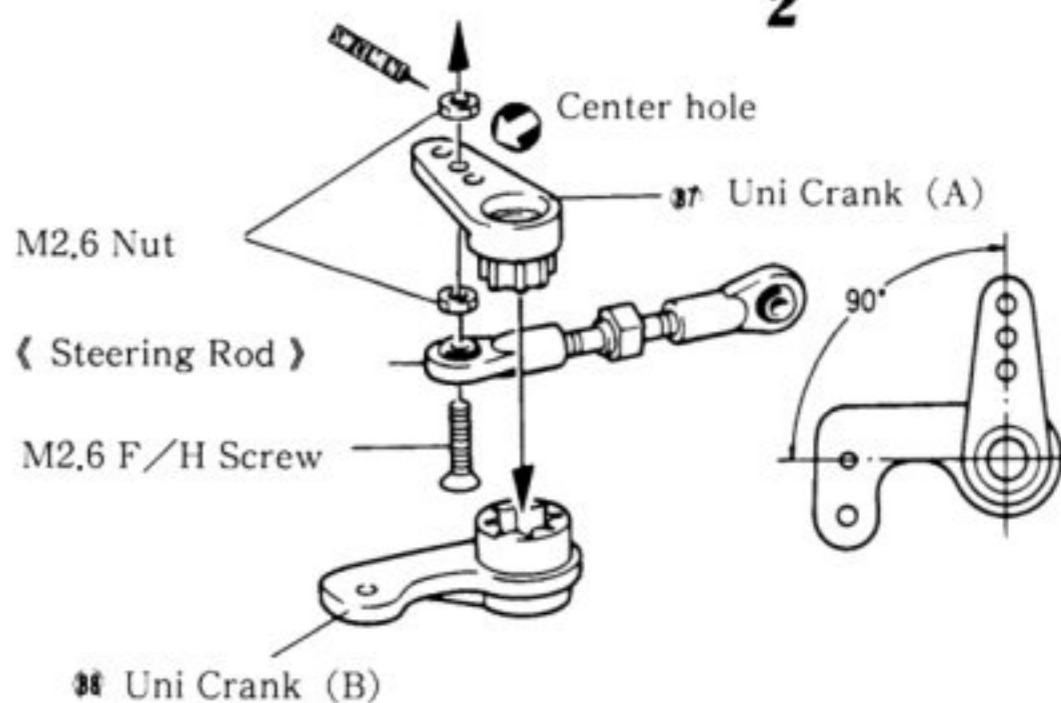
48 Uni Crank (B) [Bag6] Make round the corner. 49 Uni Crank (C) [Bag6]

- M2,6x12 F/H Screw 1
- M3x12 F/H Screw 2
- M2,6 Nut 2
- M3 Nut 2
- M2,6 Nylon Nut 2
- M2,6 Washer (Black) 2
- 26 Steering Pin 2
- 29 3 φ x6 Metal Bushing (Flange) 2
- 31 5 φ x8 Metal Bushing 4



3

2



M2,6 Nut

Steering Rod

M2,6 F/H Screw

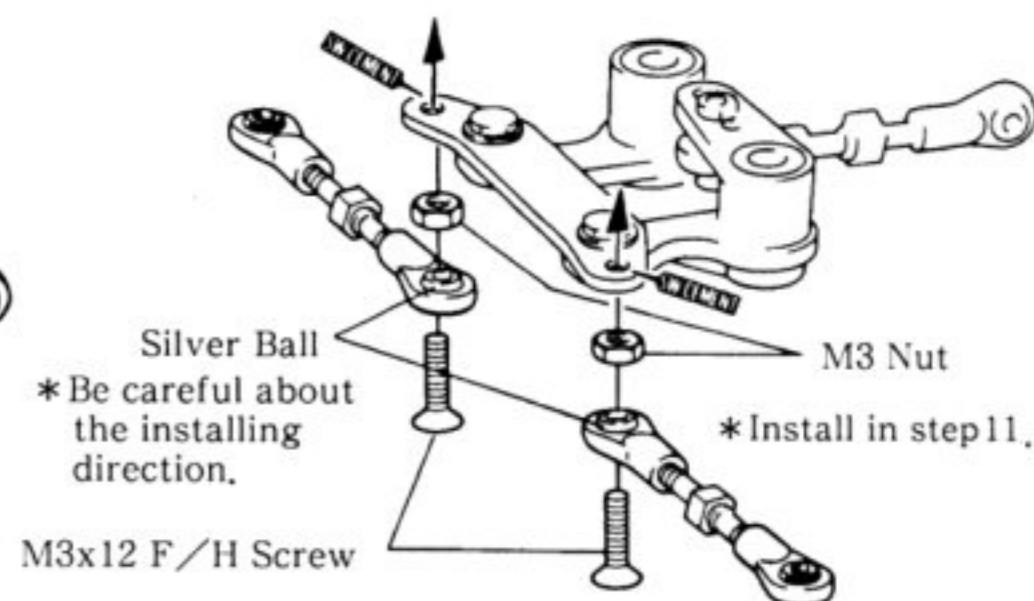
48 Uni Crank (B)

Center hole

47 Uni Crank (A)

90°

4



Silver Ball
* Be careful about the installing direction.

M3 Nut

* Install in step 11.

M3x12 F/H Screw

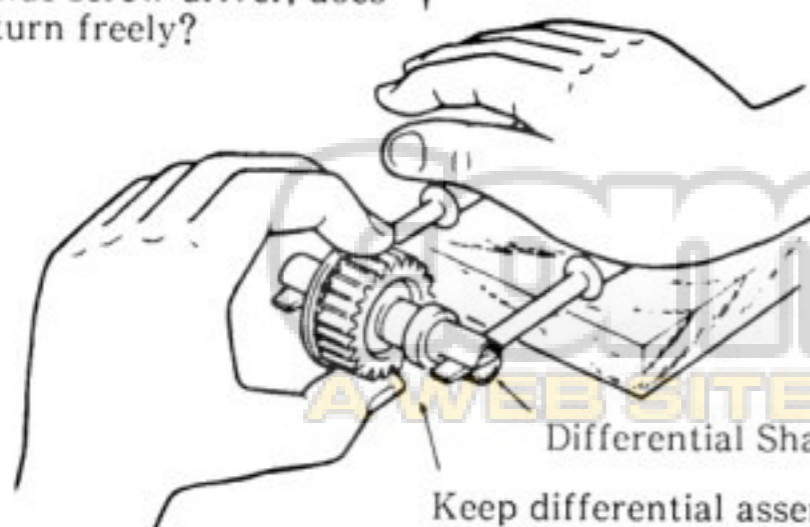
5 CHECKING BALL DIFFERENTIAL

Ball Differential is already assembled and is included in [Bag4]. Check 1 and 2 before assembling it into the gear box.

1 Differential itself should not turn freely.

When the differential itself is turned with your hand with both end of the shaft is stabilized with a minus screw driver, does it turn freely?

If it is turning freely, make adjustment as shown in the right diagrams.

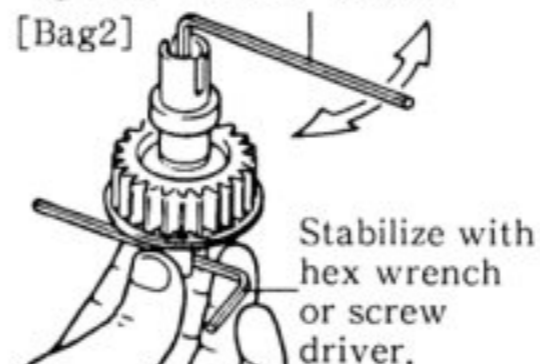


Differential Shaft

Keep differential assembly free.

The point of adjustment is how tight the cap screw is tightened. Adjust and readjust 1 and 2 are OK.

48 Hex Wrench (2mm) [Bag2]



Stabilize with hex wrench or screw driver.

If the screw is over tightened or use with the differential turning freely, it will result to damaging the ball and plates.



44 Sponge Cap [Bag4]

Screw side

Push in

2 Differential must be effective.

By holding the differential itself and by turning the differential shaft, does the opposite side shaft lightly turn in the opposite direction? (This is called the differential effectiveness.)

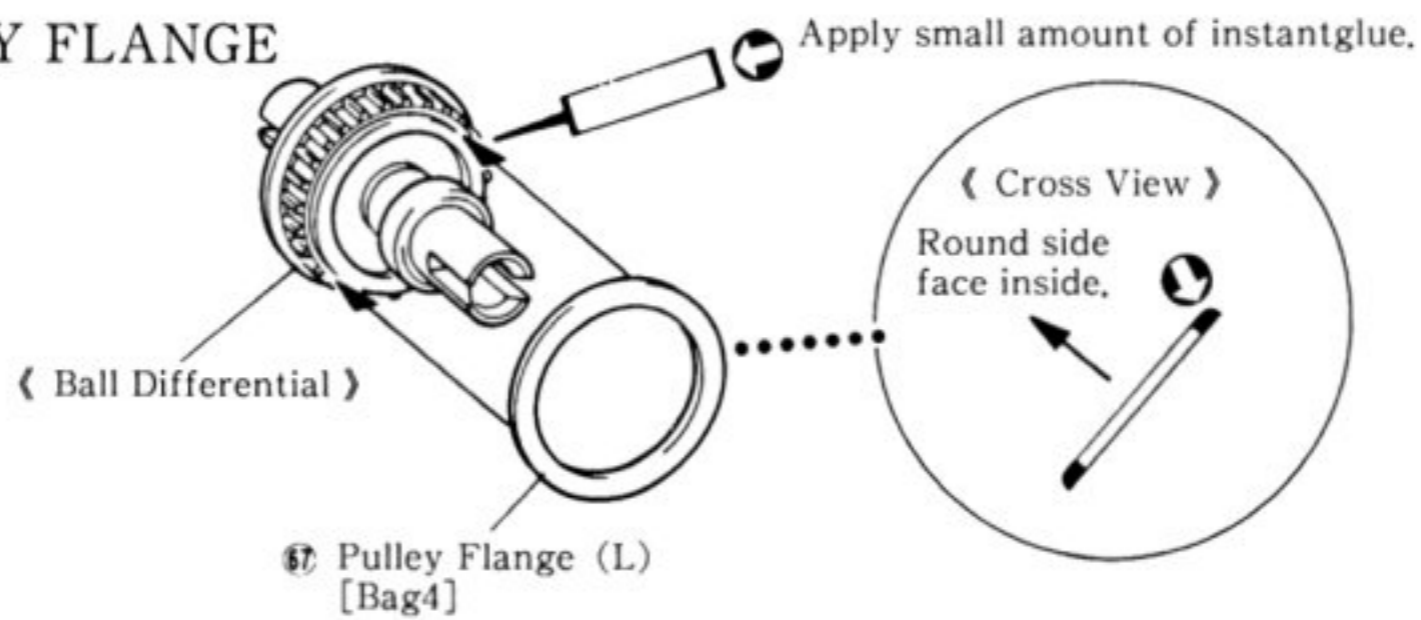


The more you tighten the cap screw, the cap differential effect is lost.

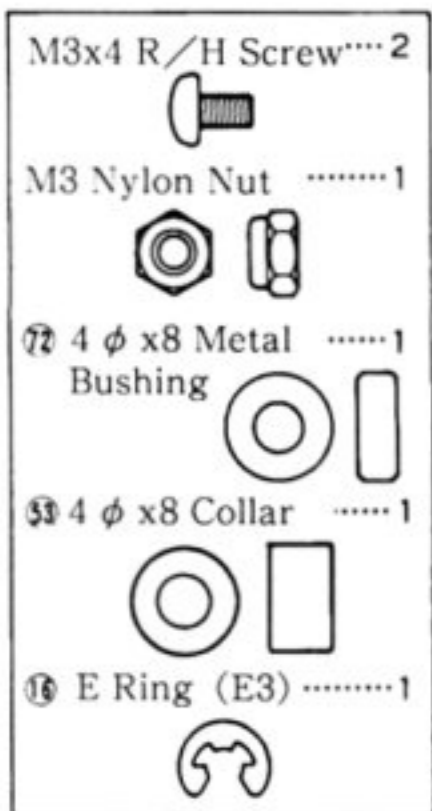
6 CEMENT THE PULLEY FLANGE

* Assemble 2 sets.

* See page 21 for ball differential adjustment.



7 ASSEMBLY OF MAIN SHAFT

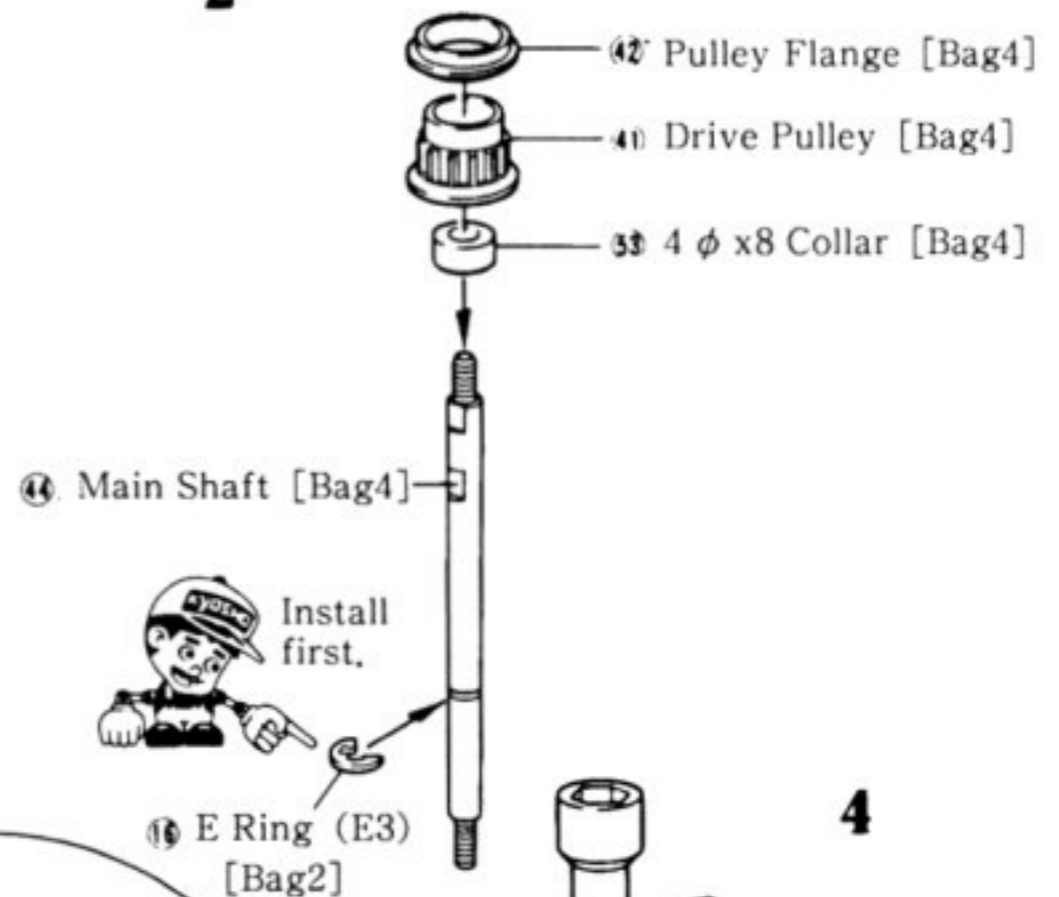


1

Cut off these tree points.

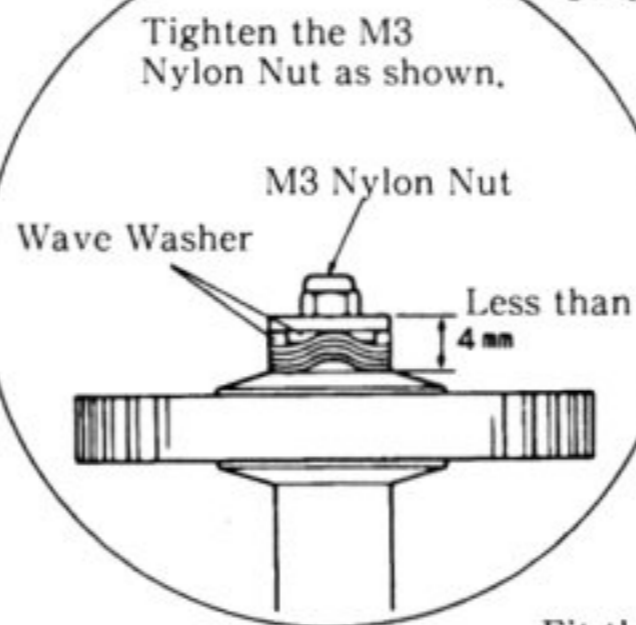
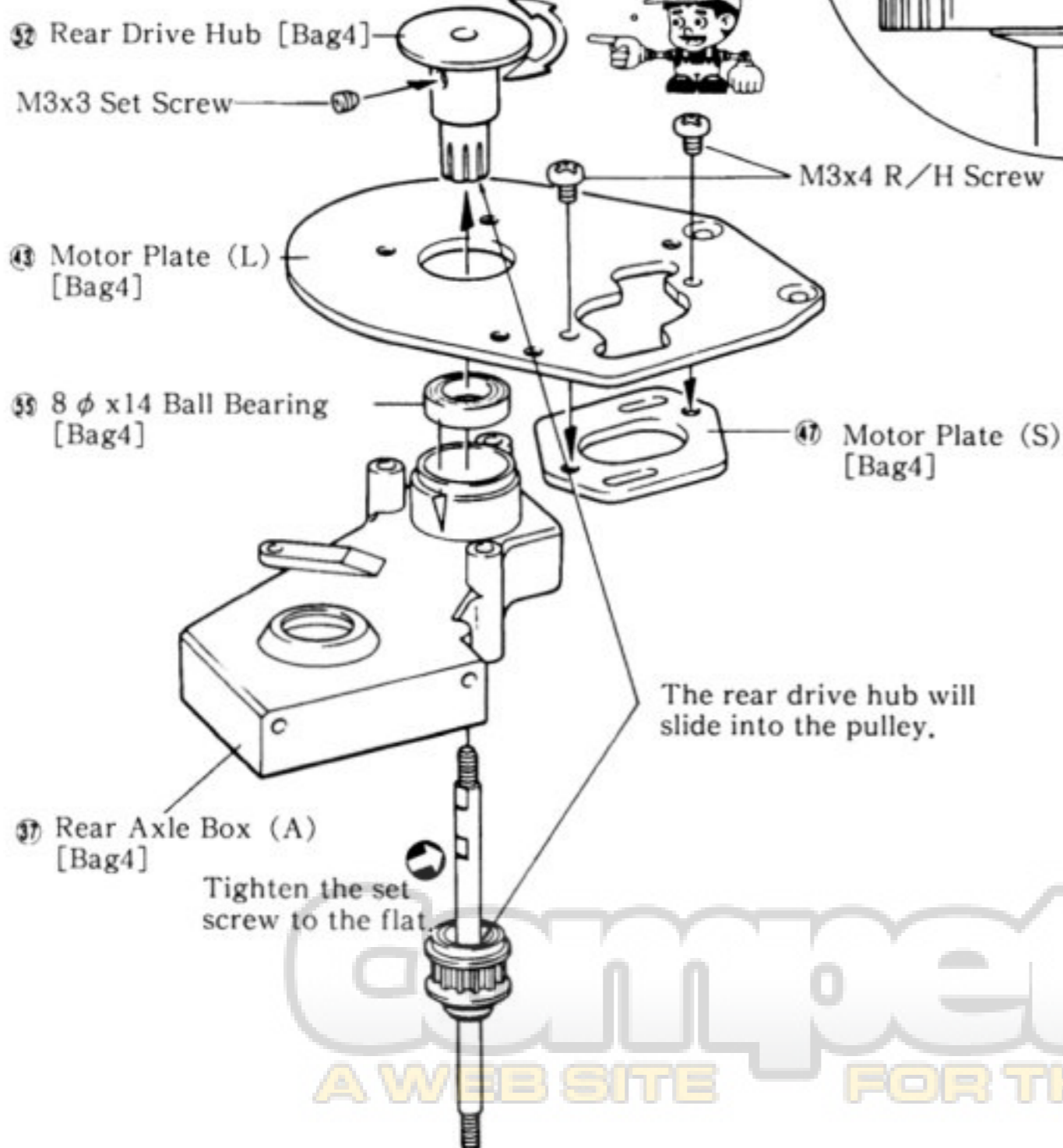


2

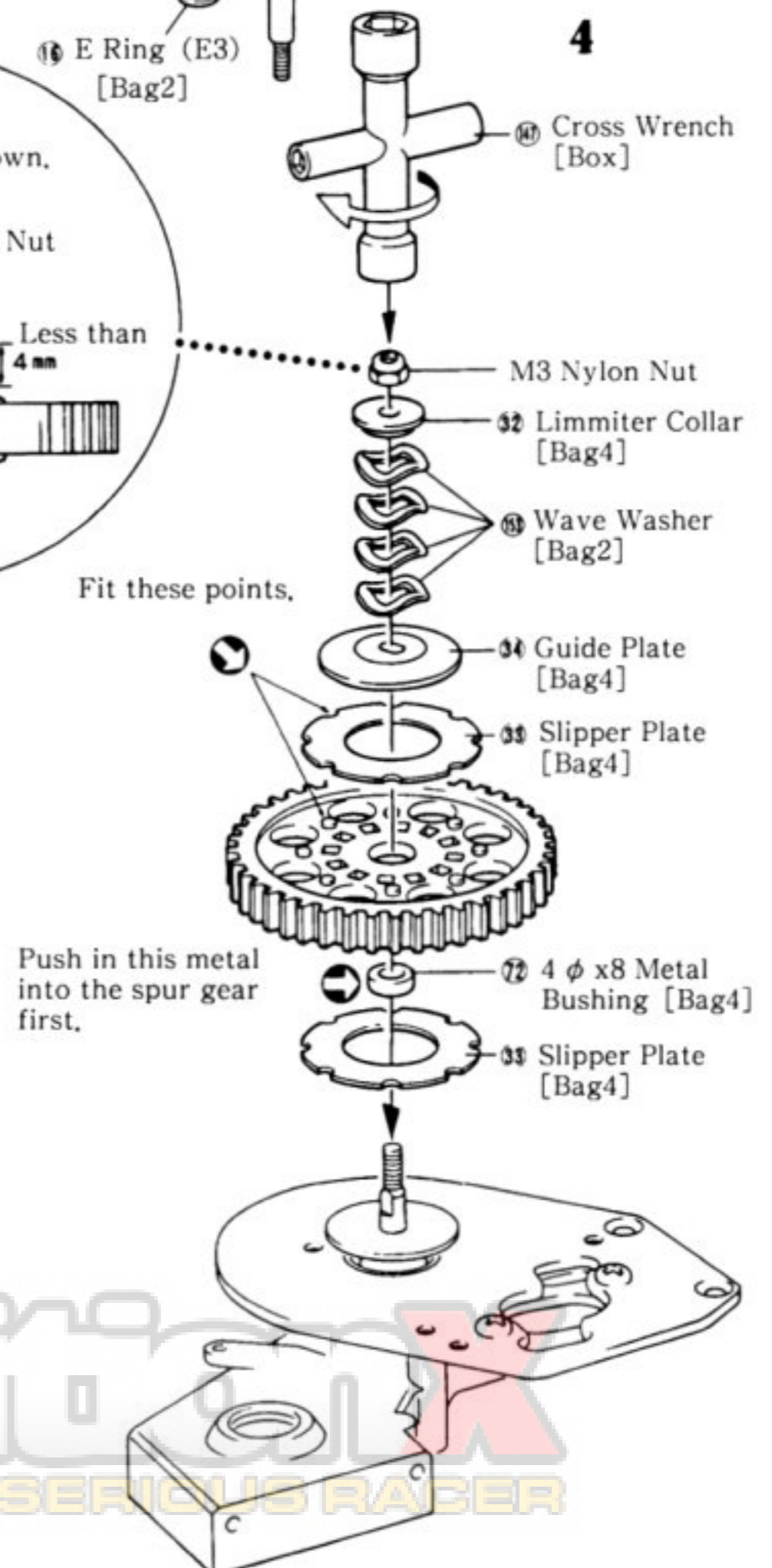


3

Make sure the rear drive hub turns free once installed.



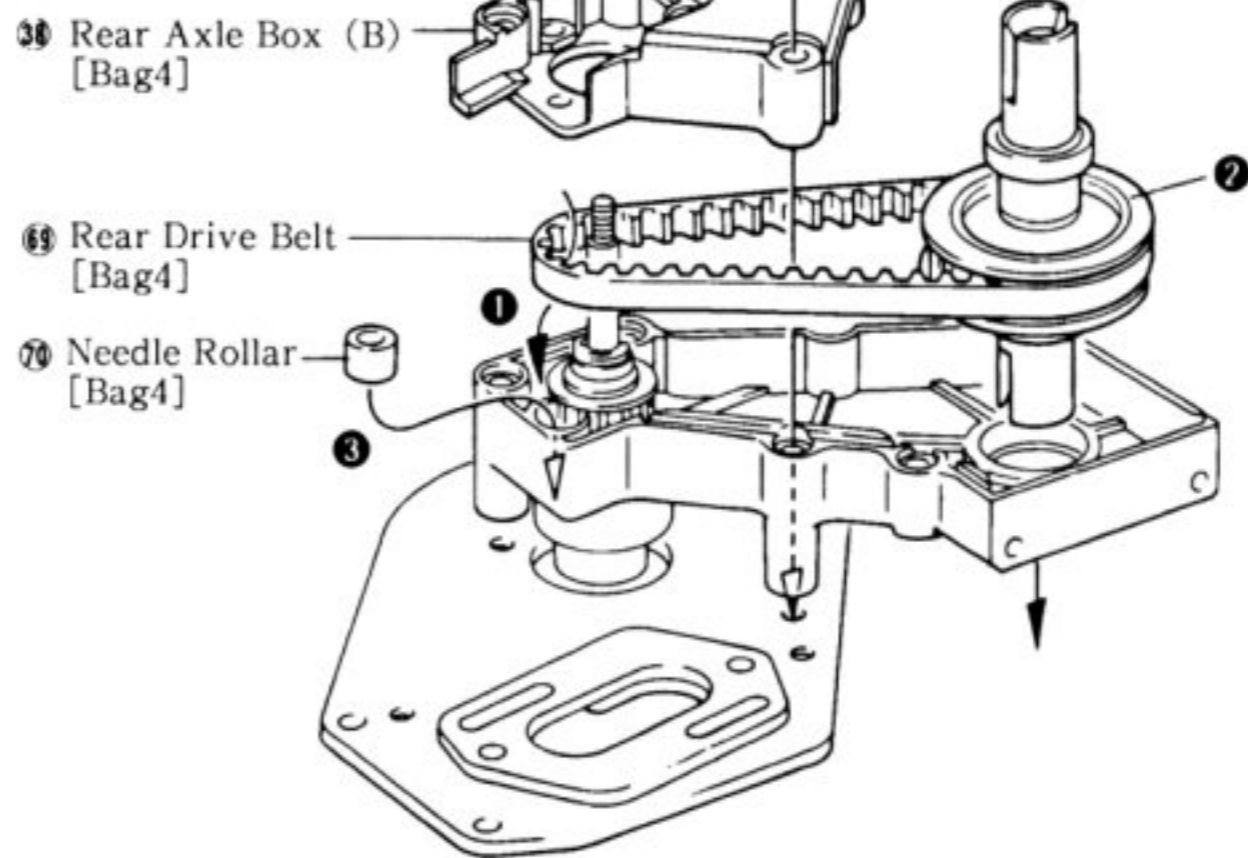
4



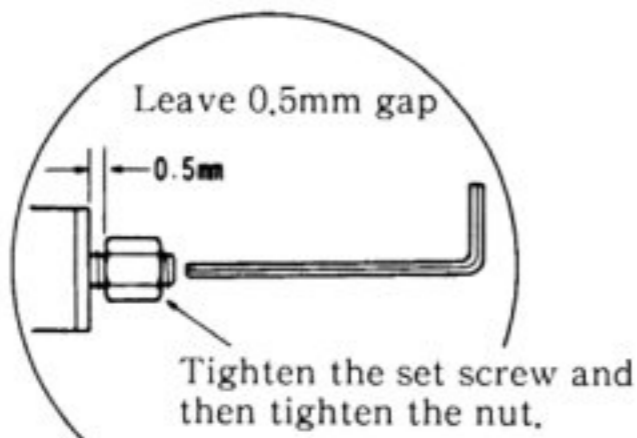
8 ASSEMBLY OF REAR AXLE BOX

- | | |
|------------------------------|------------------------|
| M3x10 TP Bind Screw ... 1 | M3x45 Bind Screw ... 2 |
| M3x18 TP R/H ... 2 | M3x35 Bind Screw ... 1 |
| M3x30 Bind Screw ... 1 | M3x3 Set Screw ... 1 |
| 71 Needle Rollar Shaft ... 1 | 84 4 φ x6 Shim ... 1 |
| 70 Needle Rollar ... 2 | 85 8 φ x12 Shim ... 1 |
| 50 Limiter Nut ... 1 | |

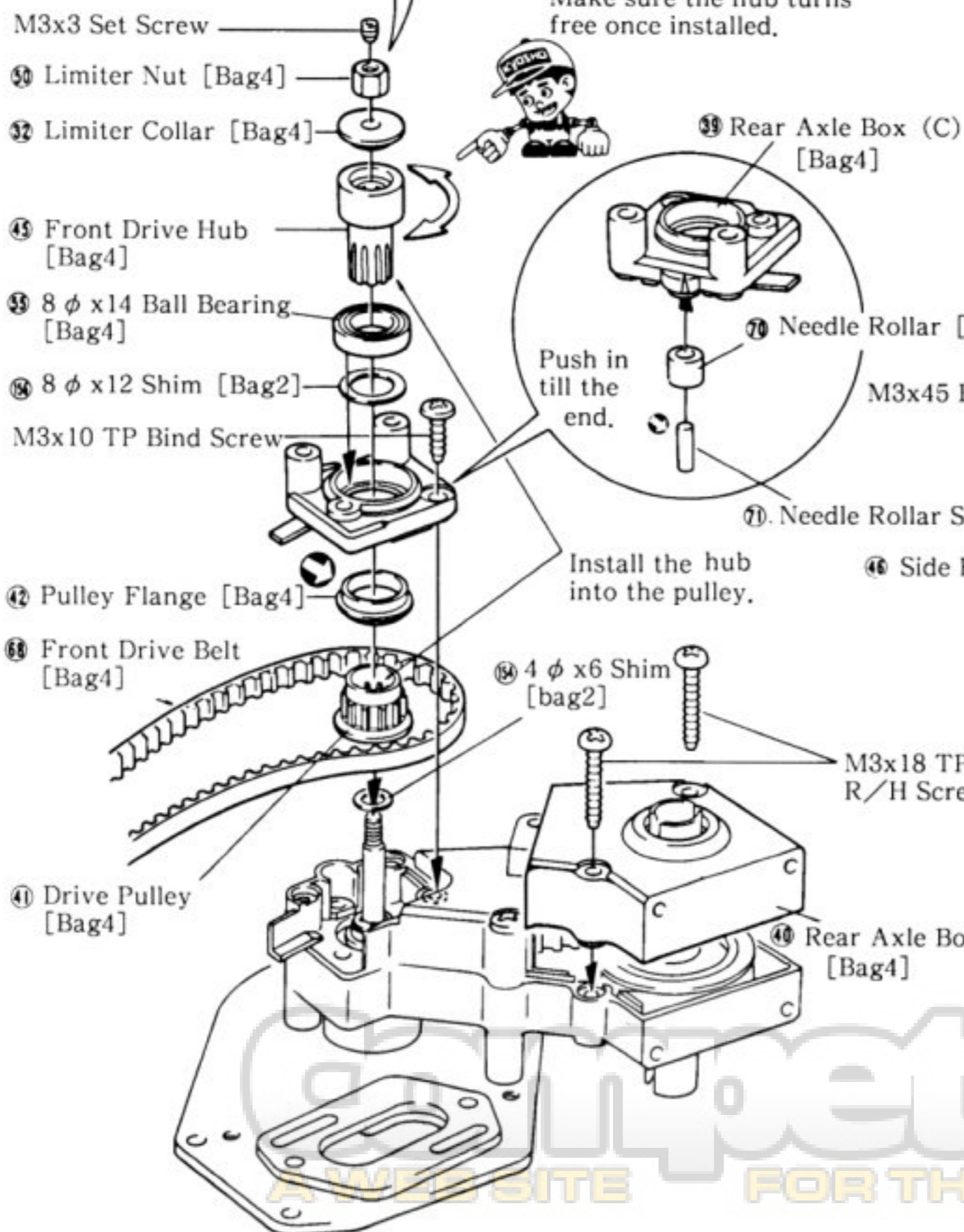
1
* Assemble in order 1 to 4 .
M3x35 Bind Screw



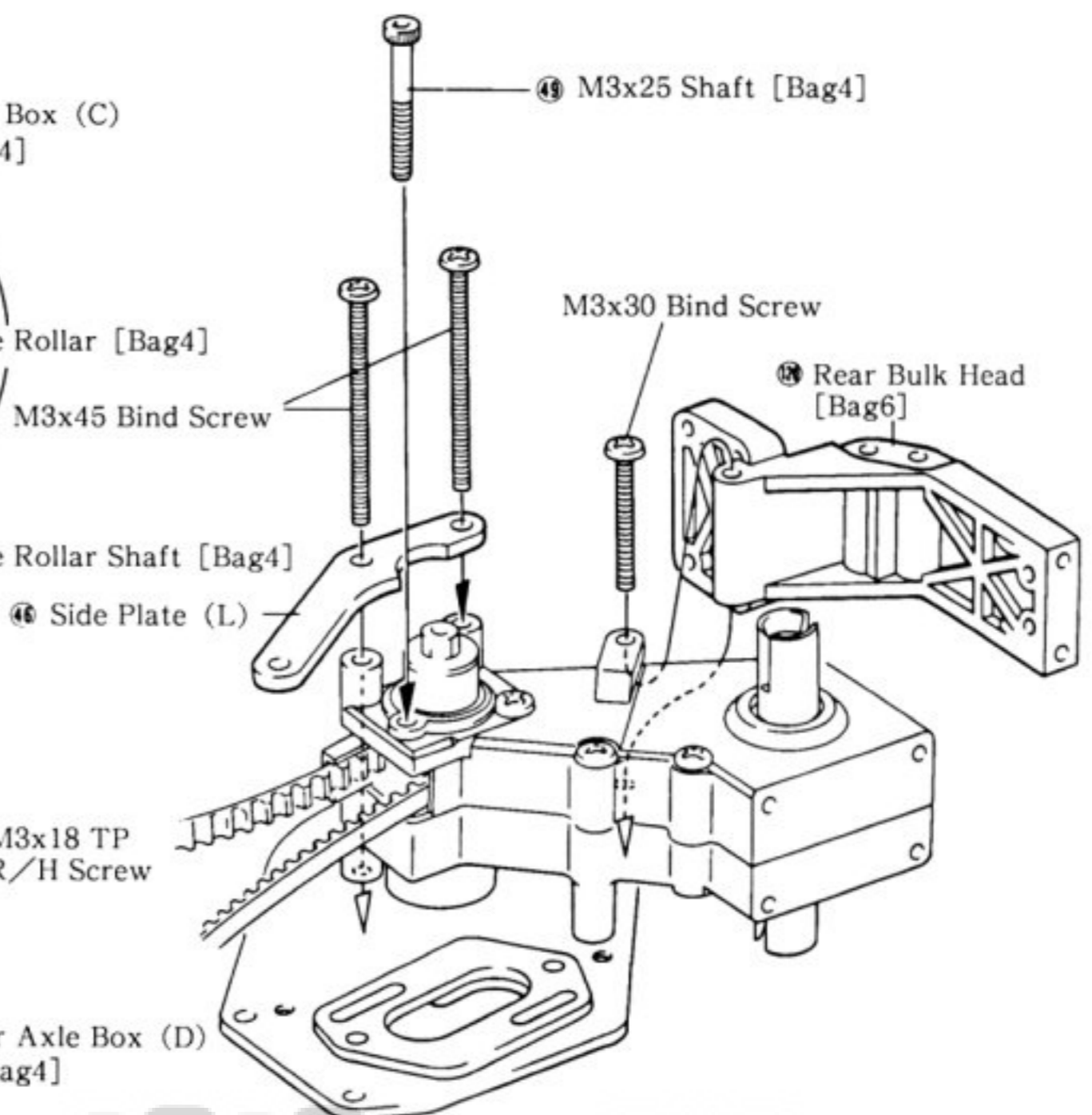
2



Make sure the hub turns free once installed.

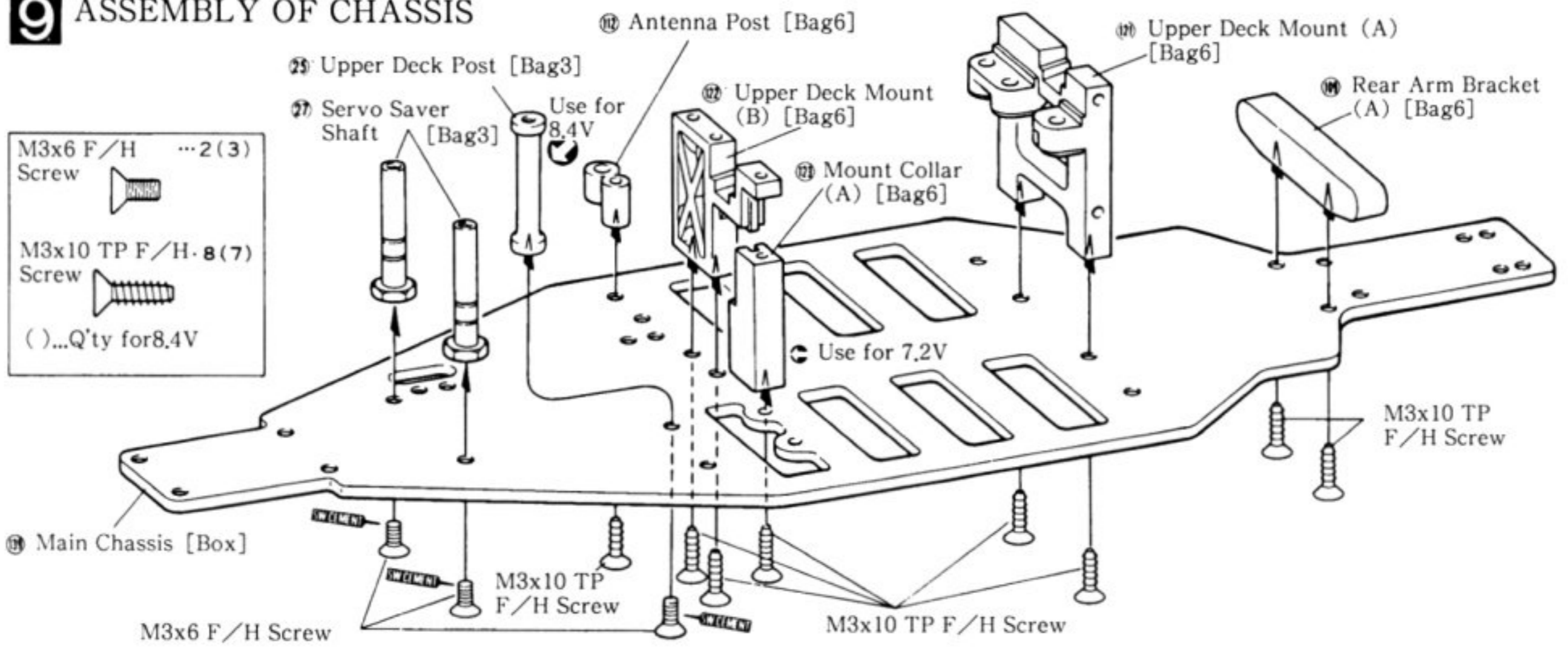


3

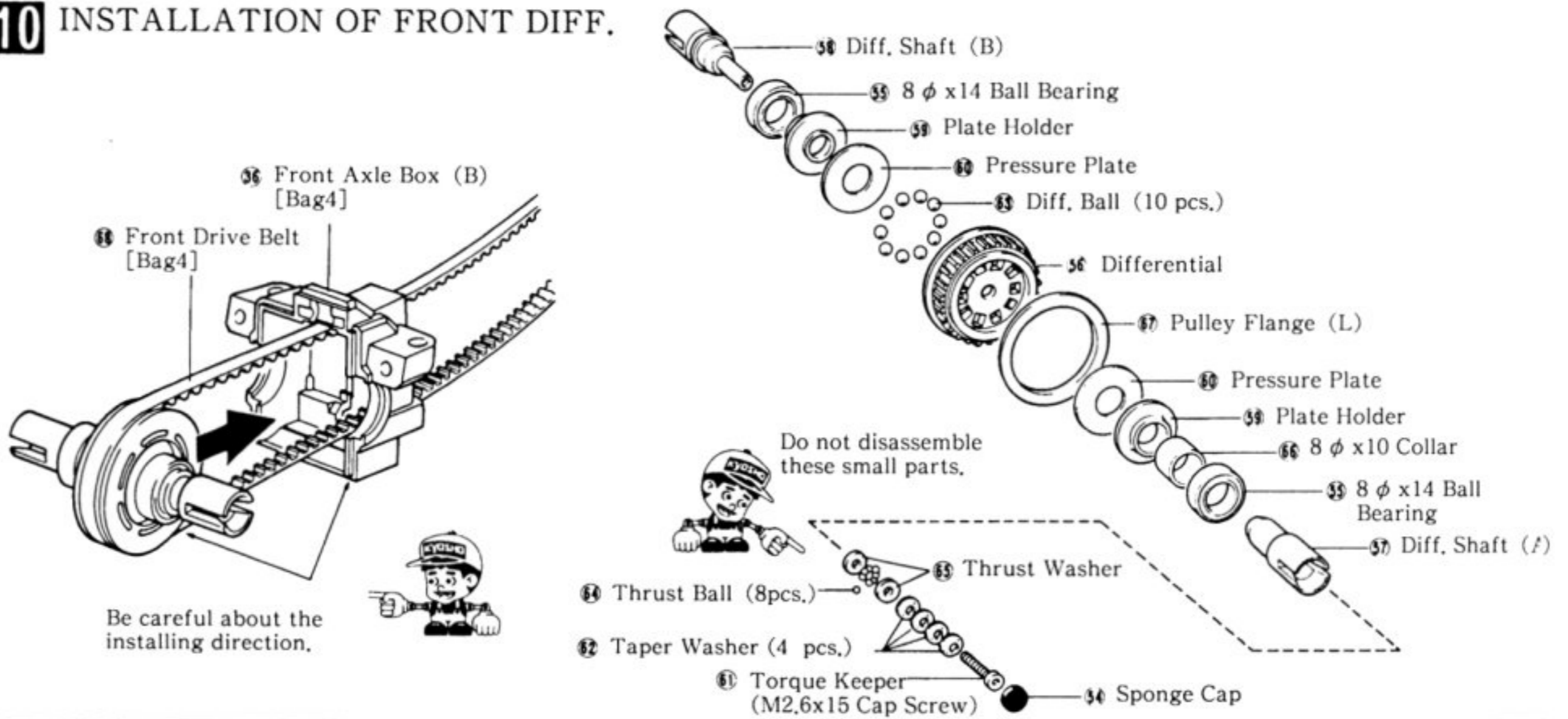


TRIPLEX
A WEBSITE FOR THE SERIOUS RACER

9 ASSEMBLY OF CHASSIS

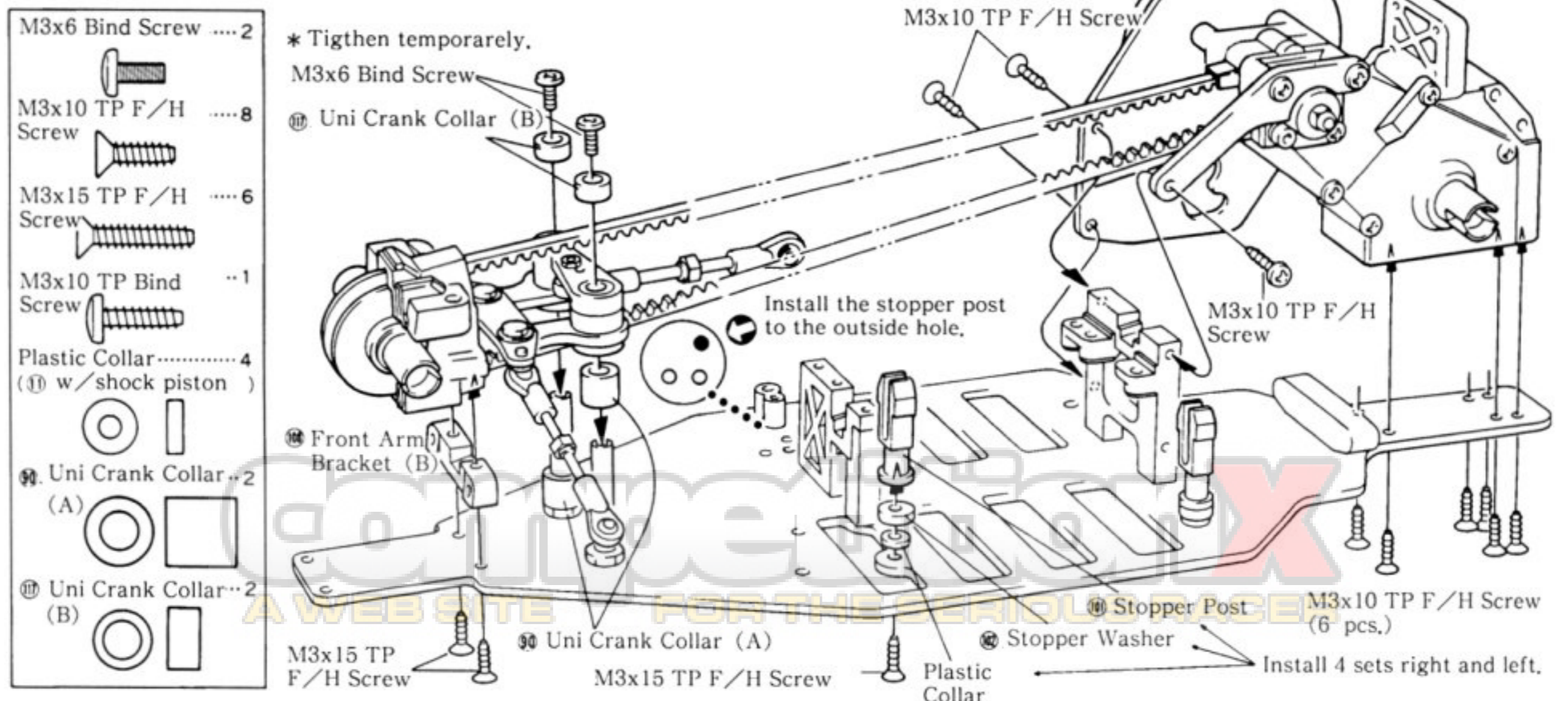


10 INSTALLATION OF FRONT DIFF.



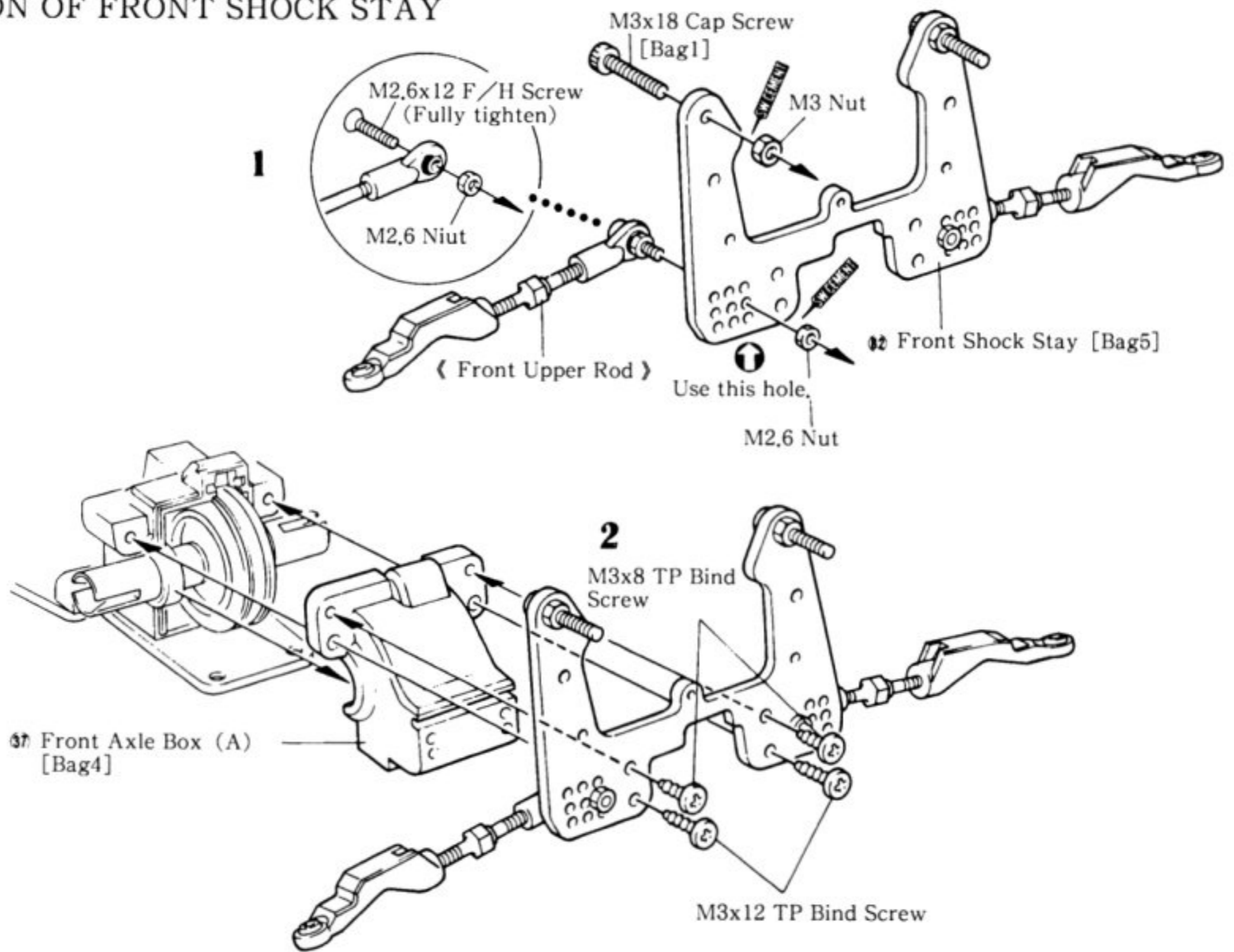
11 INSTALLATION OF UNI CRANK AND AXLE BOX

These parts used in this step are in [Bag6]. Screws are in [Bag2].



12 INSTALLATION OF FRONT SHOCK STAY

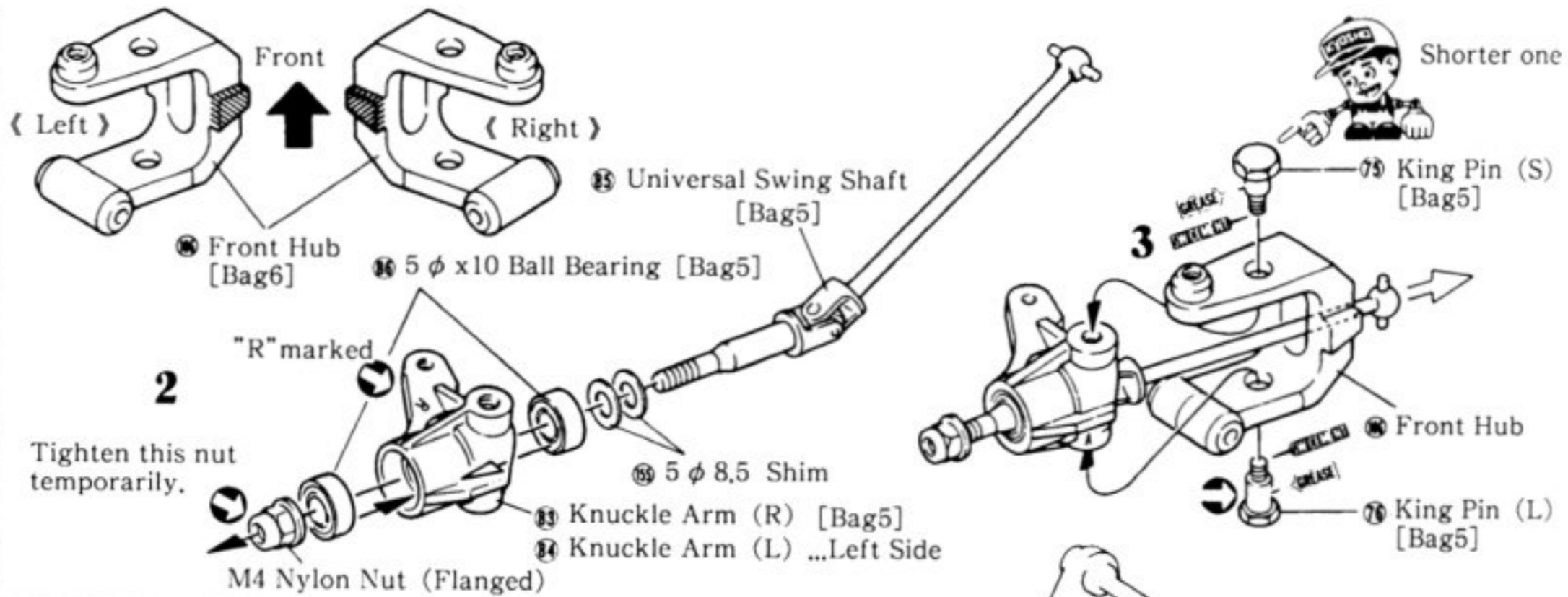
M2,6x12 F/H Screw	2
M3x8 TP Bind Screw	2
M3x12 TP Bind Screw	2
M3x18 Cap Screw	2
M2,6 Nut	4
M3 Nut	2



13 ASSEMBLY OF KNUCKLE ARM

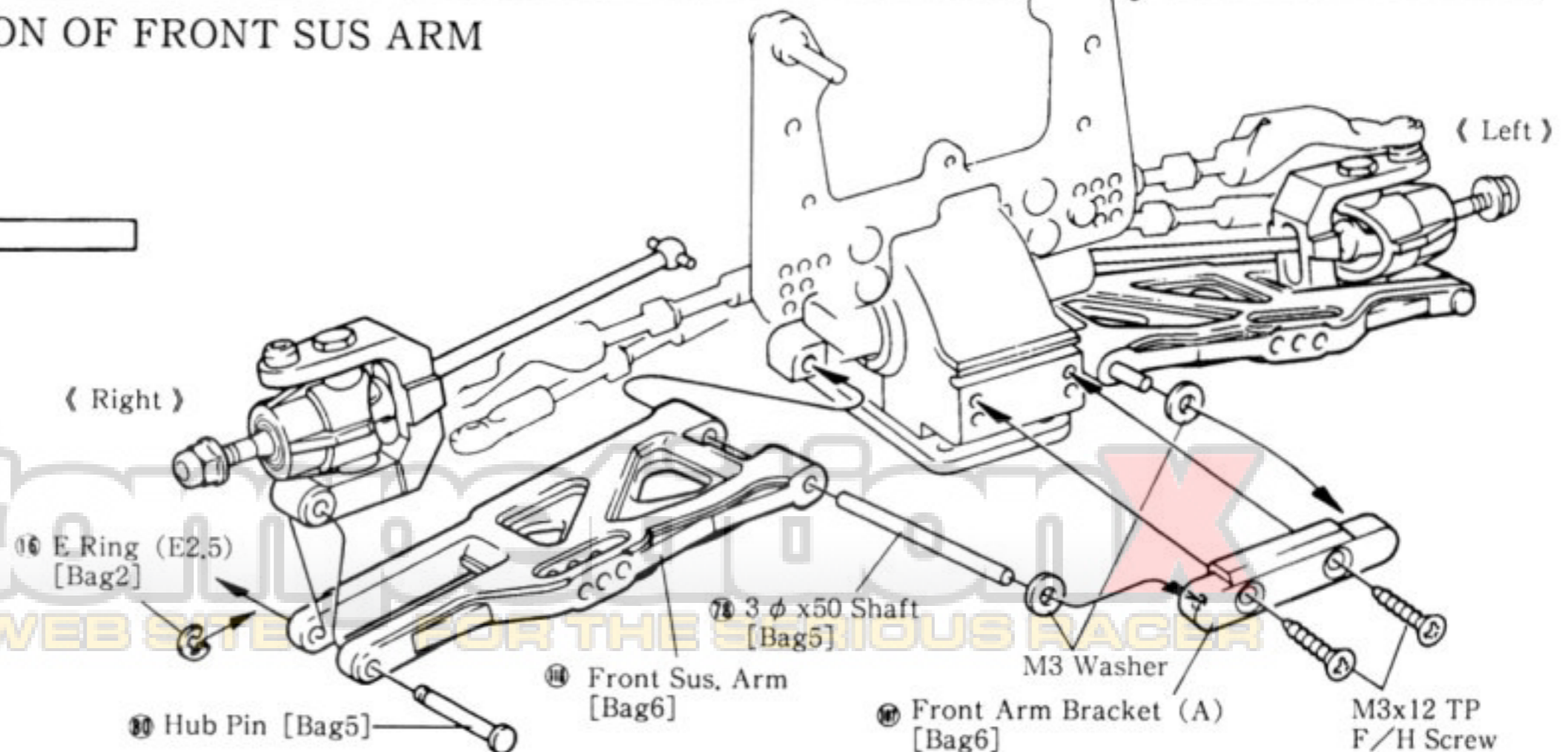
1 Cut off the shaded area.

M4 Nylon Nut (Flanged)	2
5 φ x10 Ball Bearing	4
King Pin (S)	2
King Pin (L)	2
5 φ x8,5 Shim	4

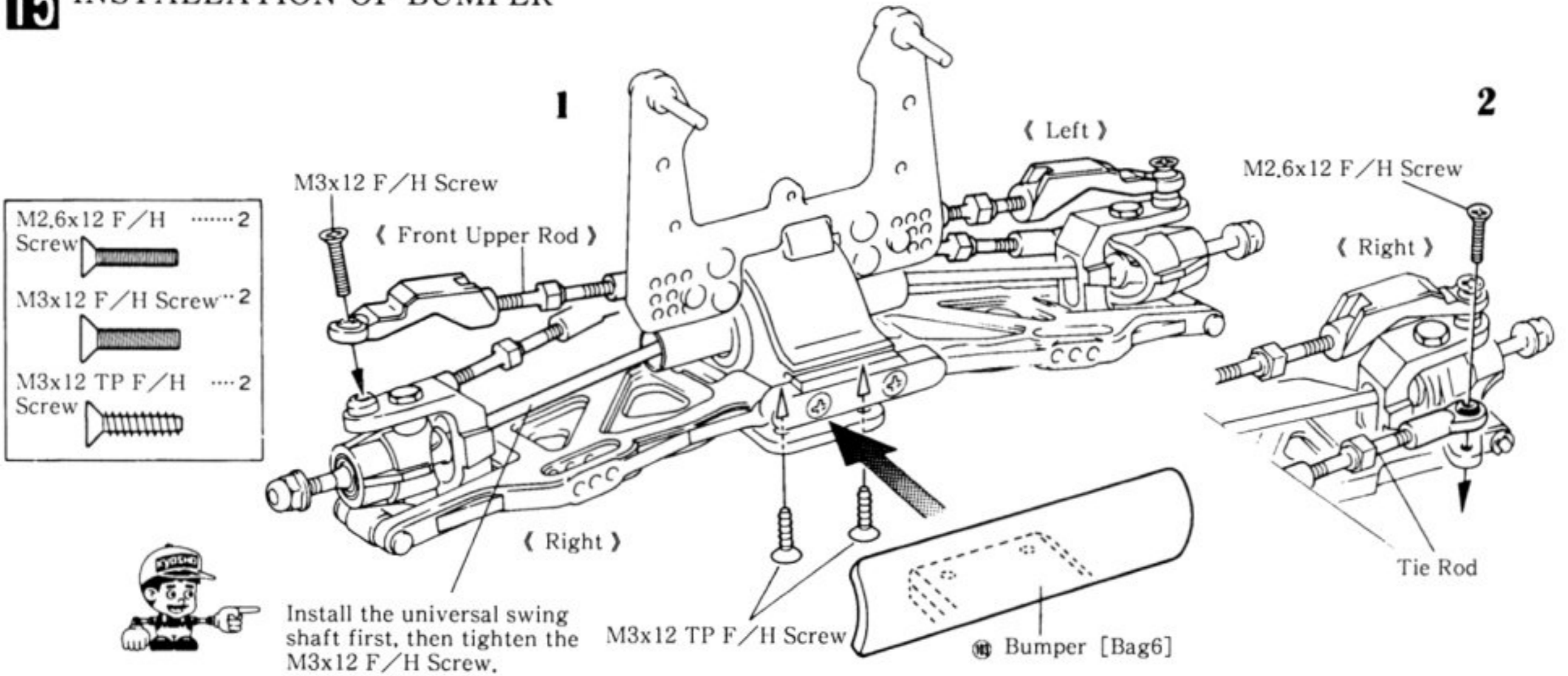


14 INSTALLATION OF FRONT SUS ARM

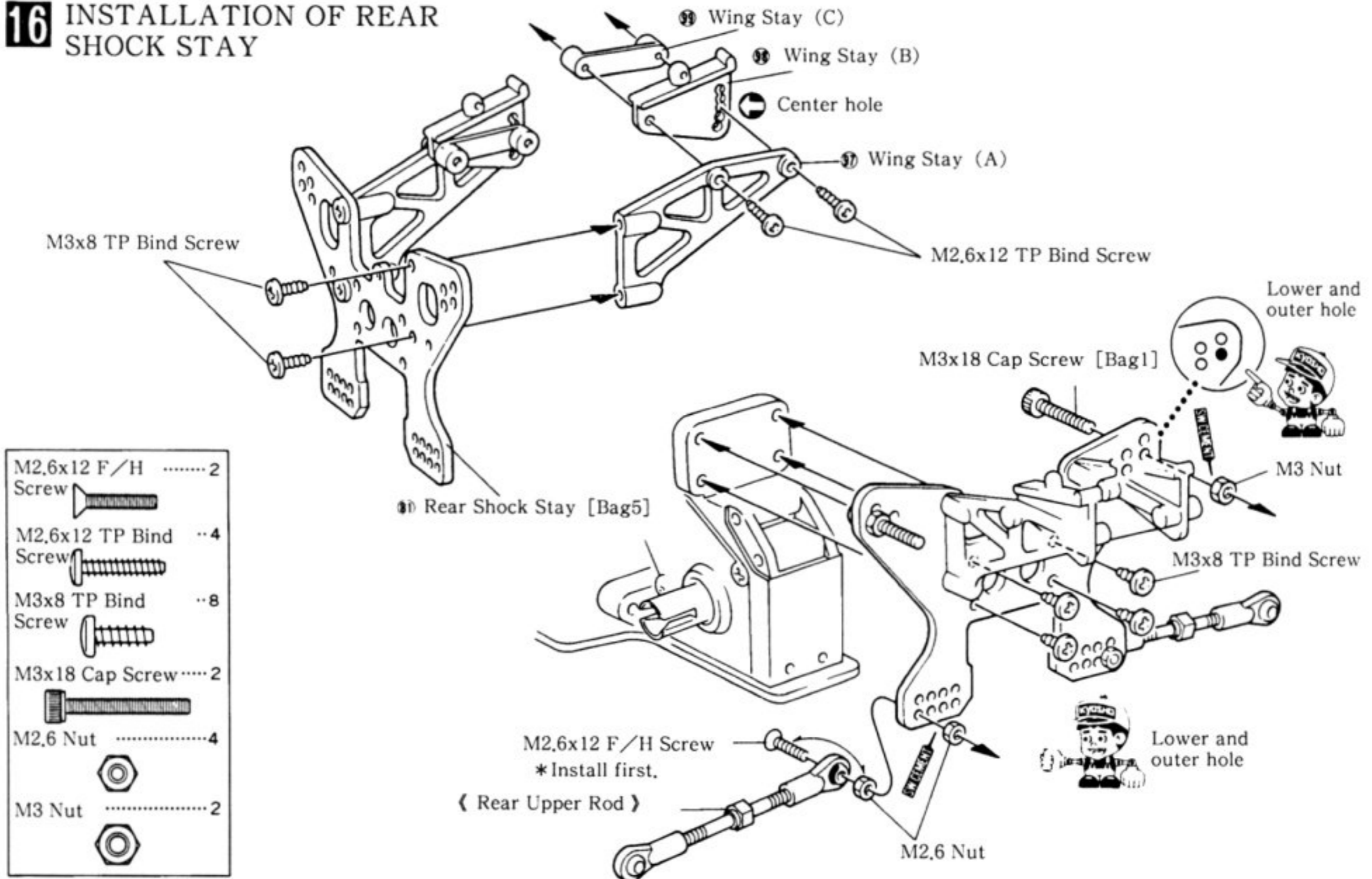
3 φ x50 Shaft	2
M3x12 TP F/H Screw	2
M3 Washer	2
Hub Pin	2
E Ring (E2,5)	2



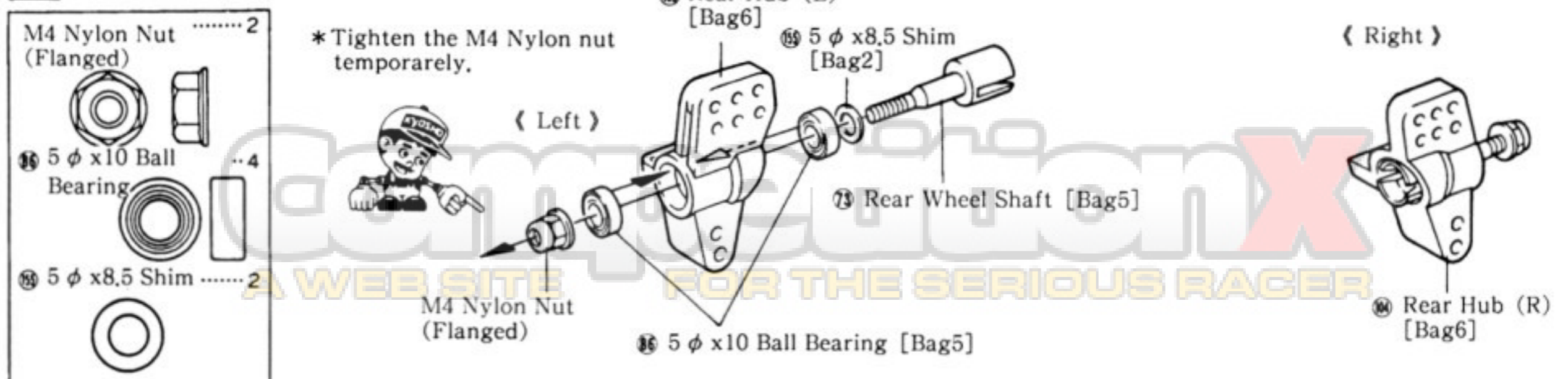
15 INSTALLATION OF BUMPER



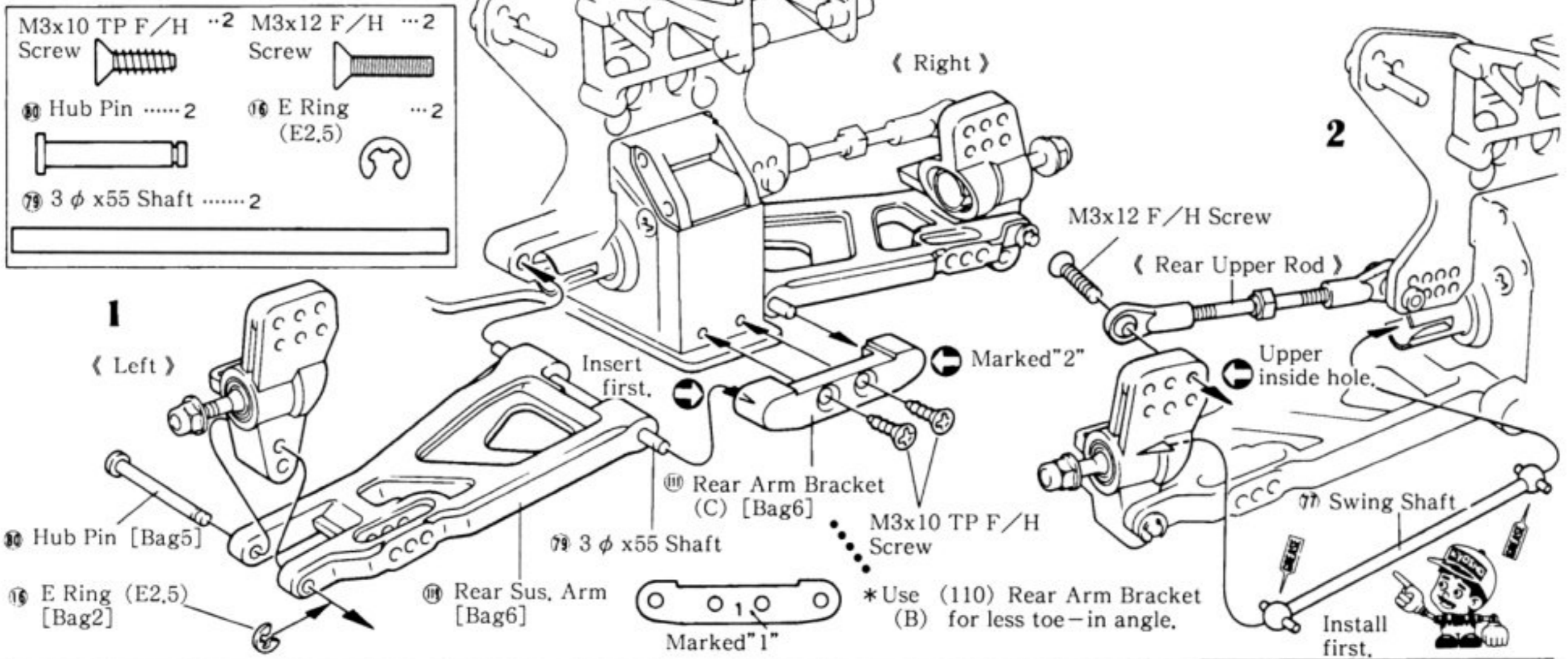
16 INSTALLATION OF REAR SHOCK STAY



17 ASSEMBLY OF REAR HUB



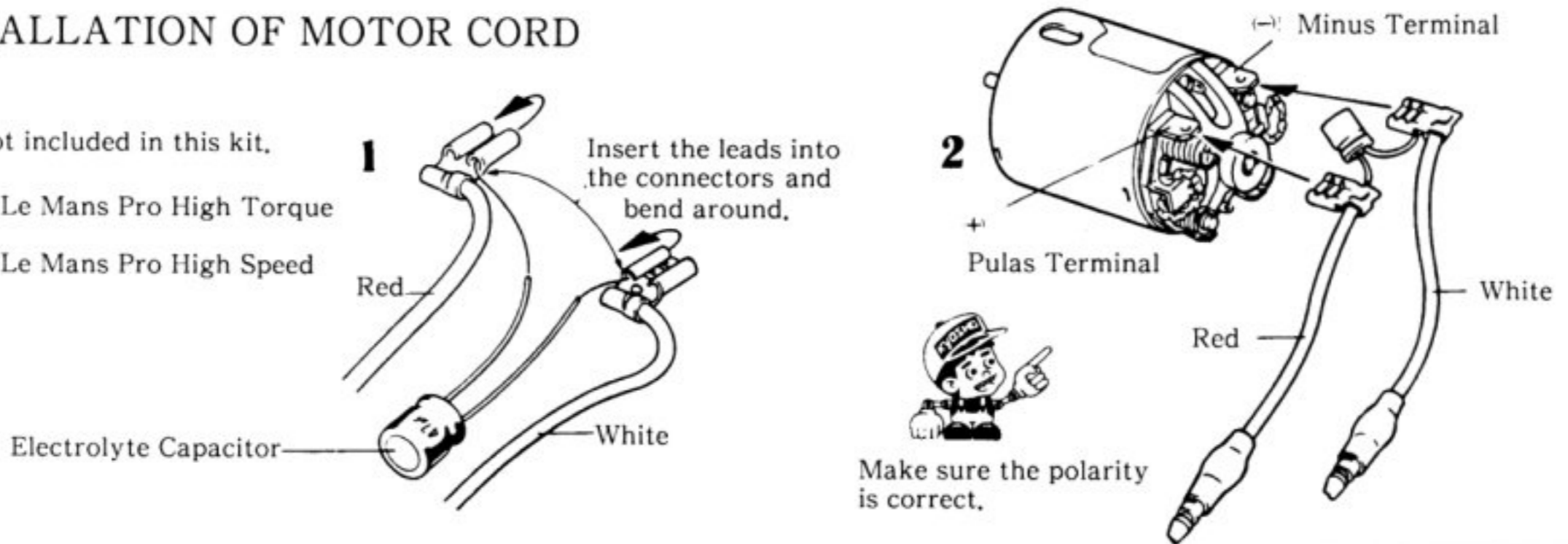
18 INSTALLATION OF REAR HUB AND REAR SUS ARM



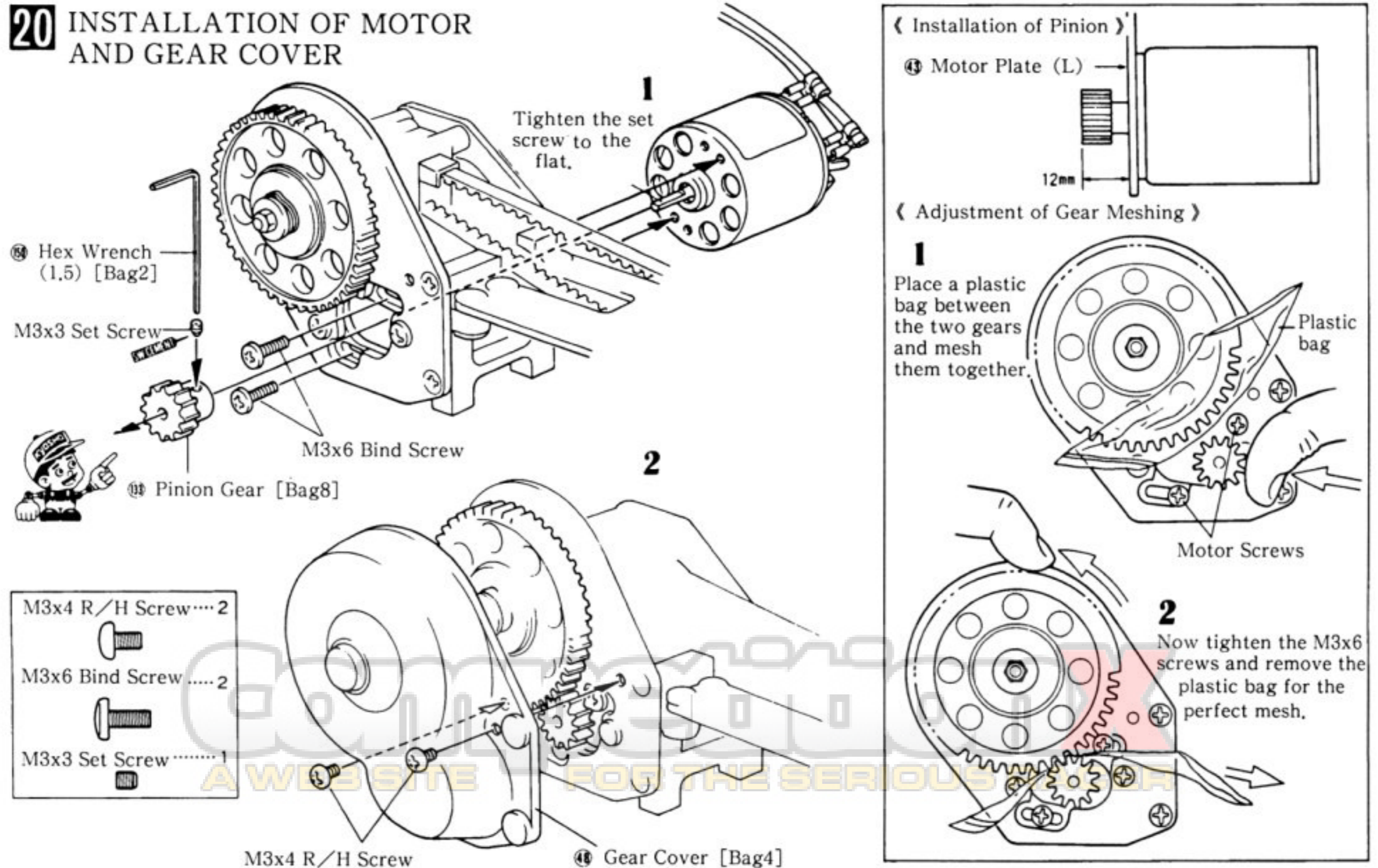
19 INSTALLATION OF MOTOR CORD

* Motor is not included in this kit.

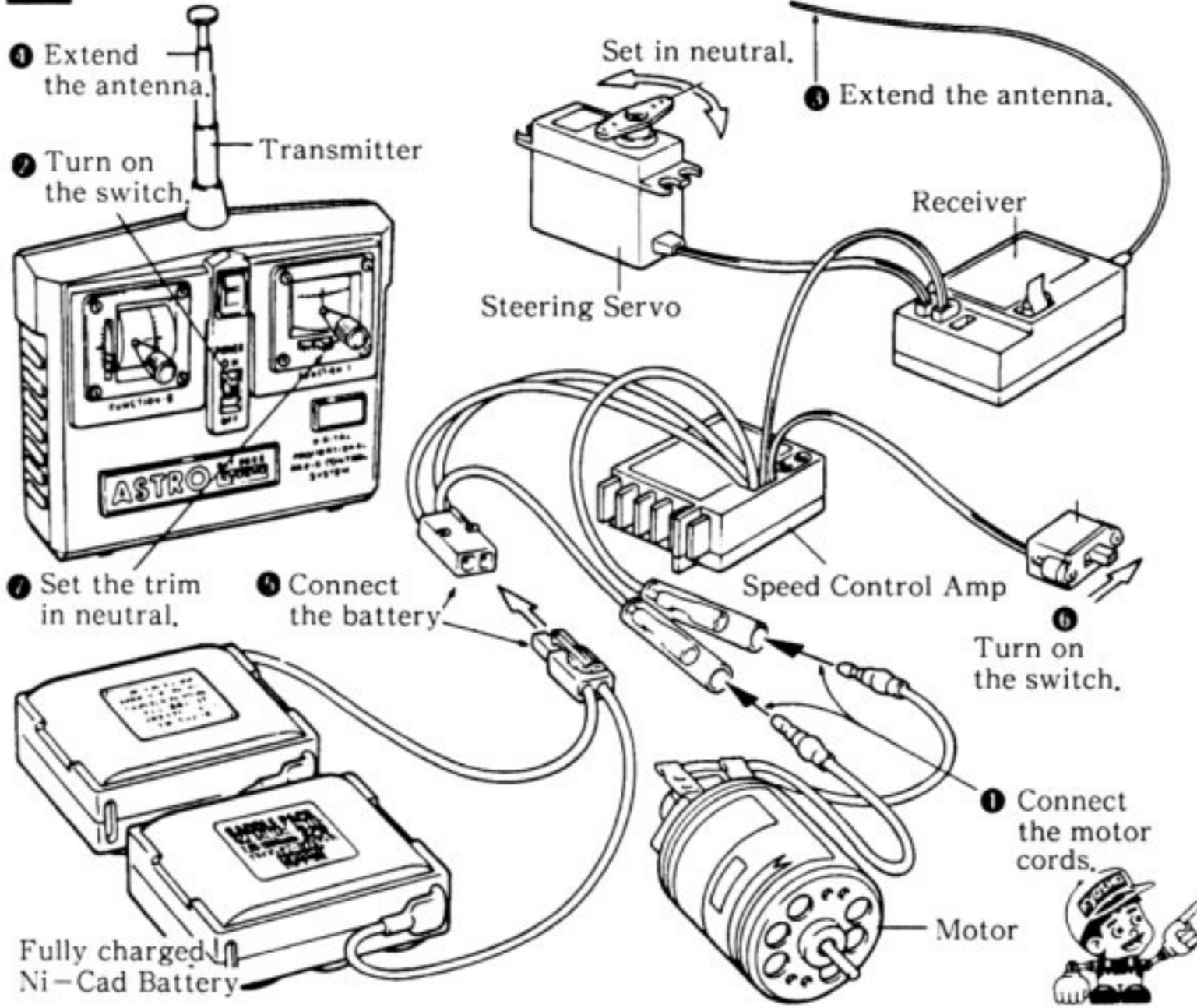
- No.2481 Le Mans Pro High Torque
- No.2483 Le Mans Pro High Speed



20 INSTALLATION OF MOTOR AND GEAR COVER



21 HOW TO CHECK RADIO SYSTEM



*Operate the radio system in order from 1 to 7.

It is important to always switch the transmitter on first then the receiver. When turning off the system, turn off the receiver first and then the transmitter.

Install the batteries into both the transmitter and receiver. If your radio is a rechargeable system, charge it as outlined in the manual that came with your set.

Unwind the receiver antenna and plug the servo and battery connectors into the receiver.

Extend the transmitter antenna.

Turn on the power switch of the transmitter.

Turn on the power switch of the receiver.

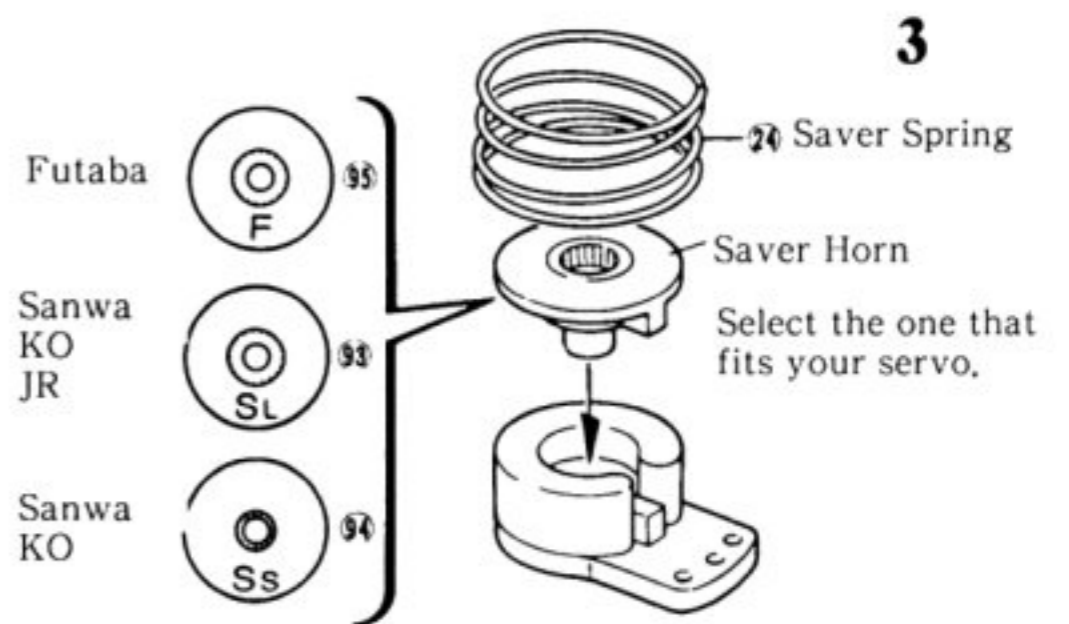
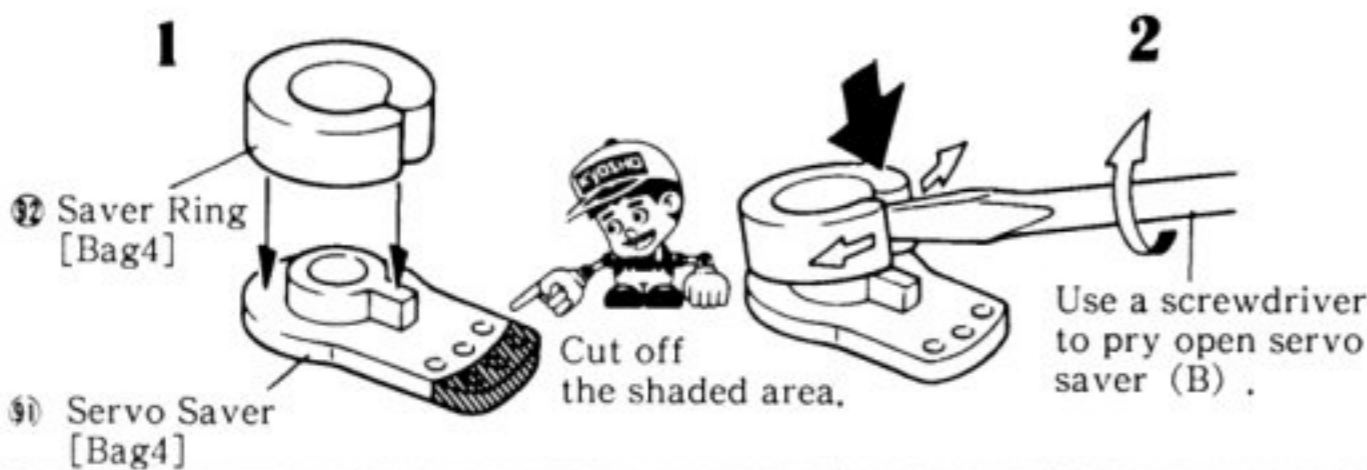
Set the small trim levers to the center position and make sure that both main control sticks are also centered.

Move both main control sticks slowly through their full travel. The servo horns should move in proportion to the movement of your sticks.

When trim levers and stick are at their neutral positions, the servo horns should be centered. You may now turn off the receiver, then the transmitter and unplug the servos and battery from the speed control amp.

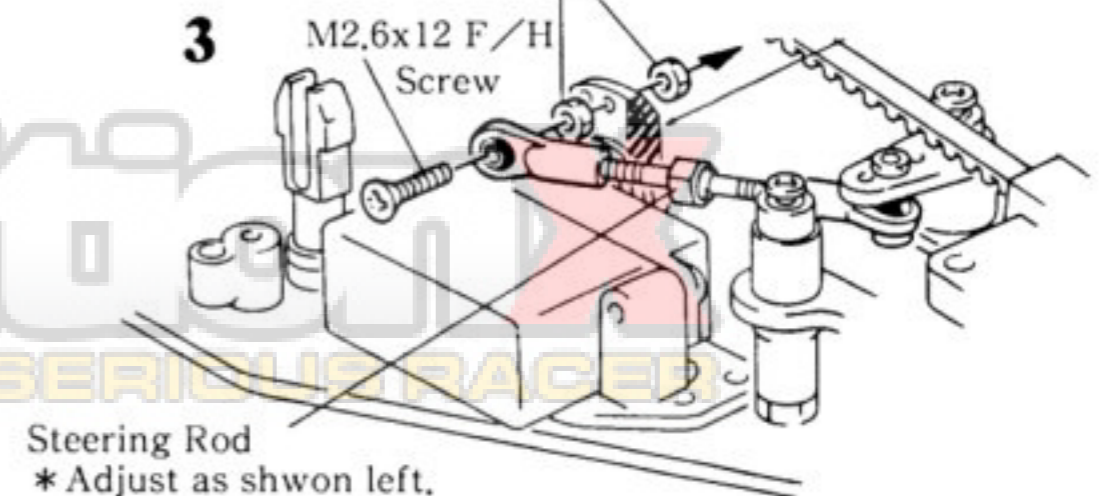
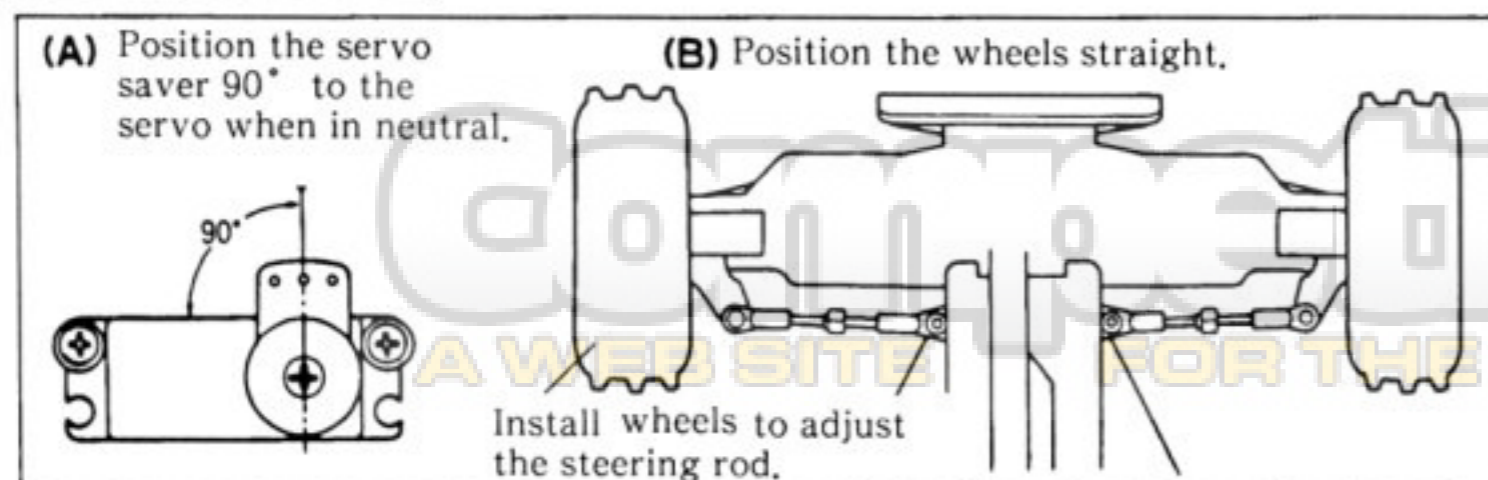
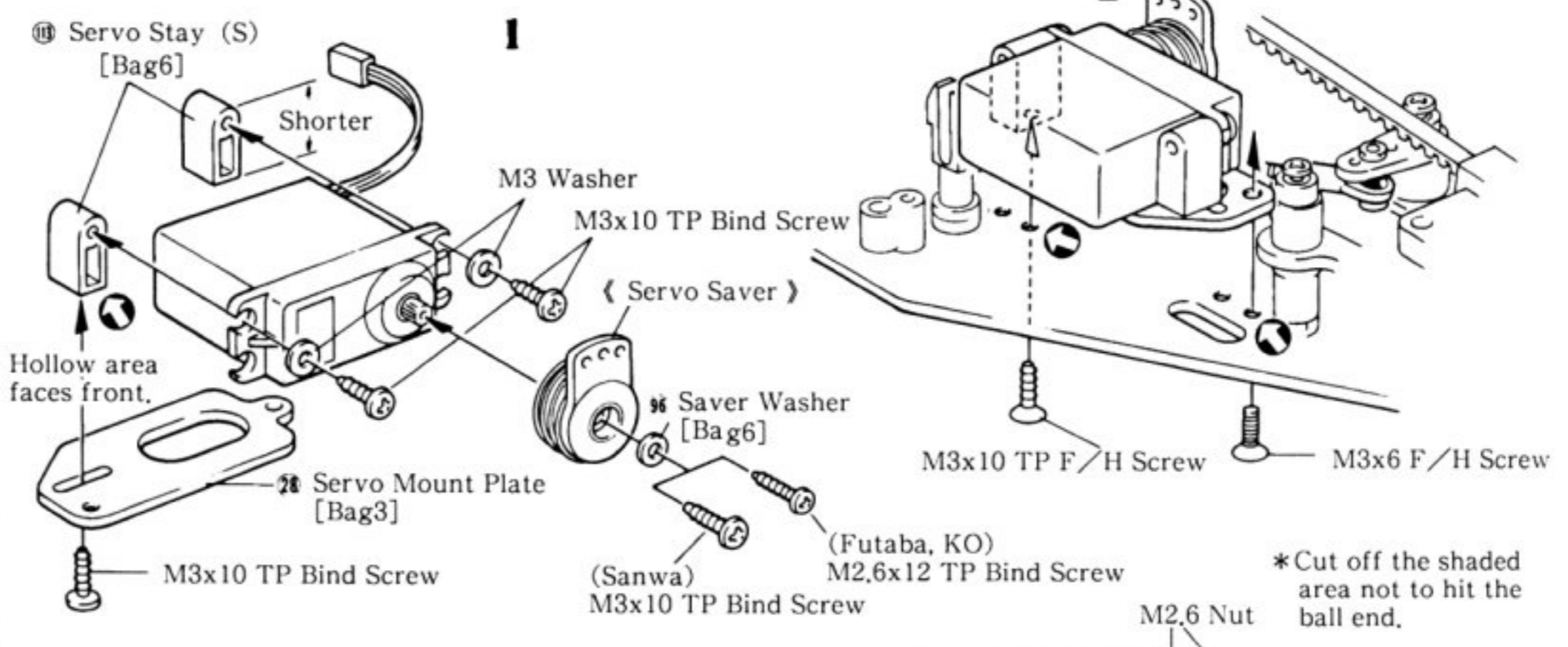
22 ASSEMBLY OF SERVO SAVER

*These parts used in this step are in [Bag6].



23 INSTALLATION OF STEERING SERVO (Normal size servo)

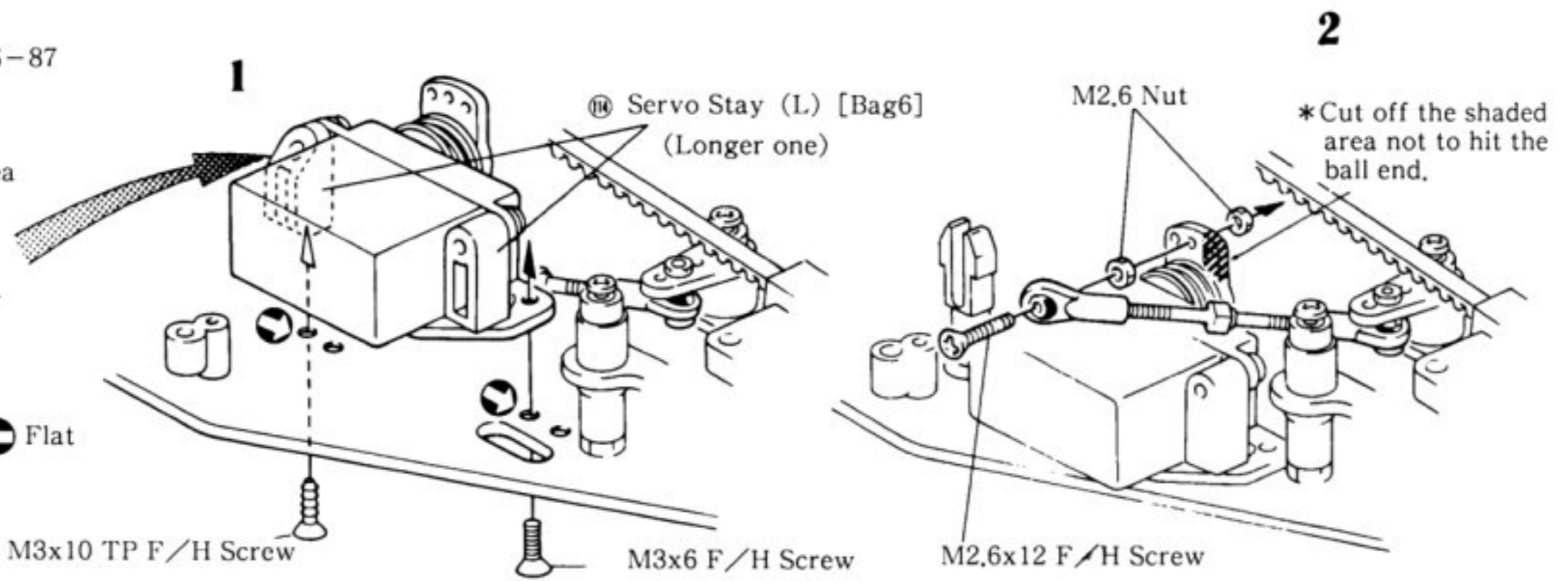
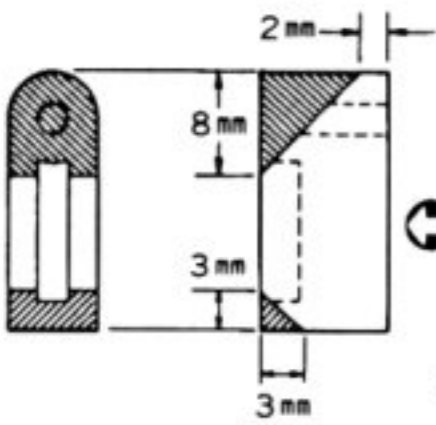
- M2.6x12 F/H Screw 1
- M3x6 F/H Screw 1
- M3x10 TP F/H Screw 1
- M2.6x12 TP Bind Screw (Futaba, KO) 1
- M3x10 TP Bind Screw (Sanwa) 3
- M2.6 Nut 2
- M3 Washer 2



24 INSTALLATION OF STEERING SERVO

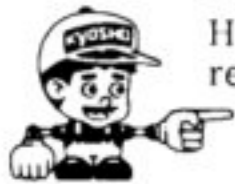
(Large size servo)
 KO...FET Servo PS-87
 Futaba...S-131H

*Cut off the shaded area not hit the body.

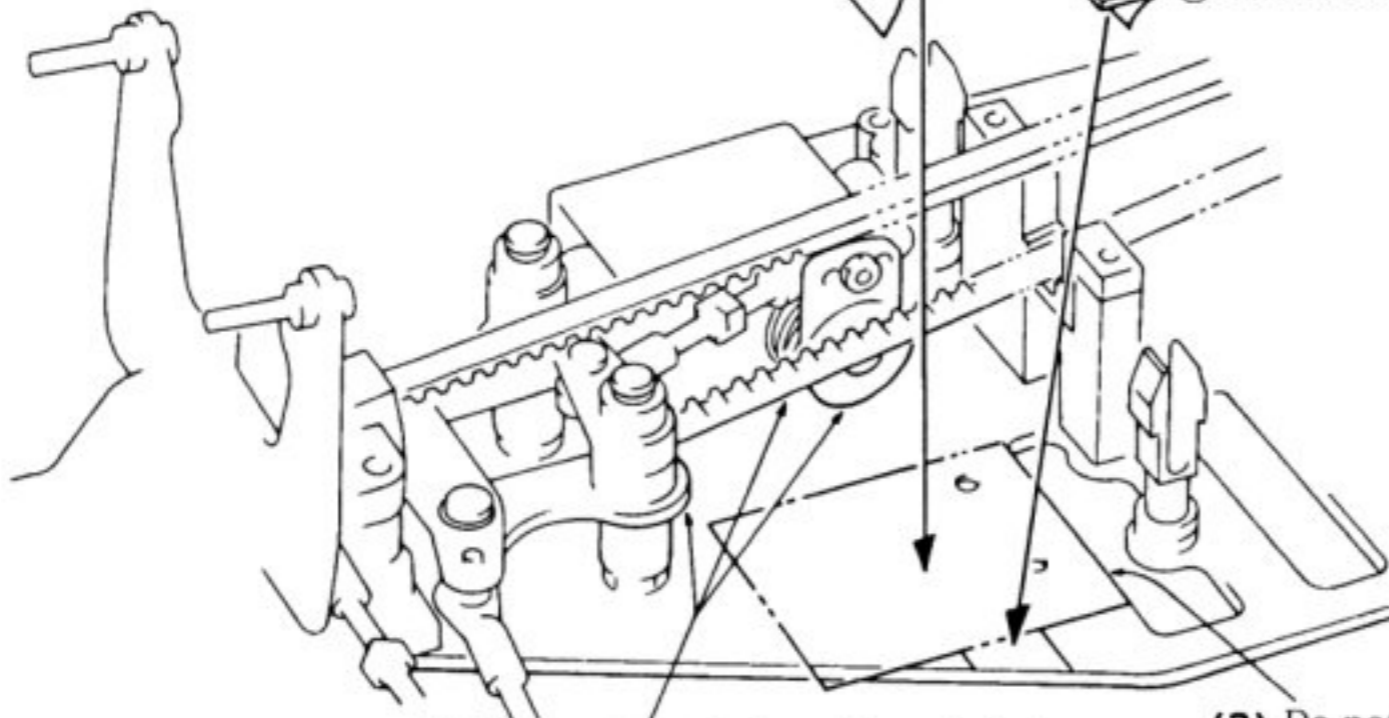


25 INSTALLATION OF SPEED CONTROL AMP

Cut the double sided tape to the length of speed control amp.
 Have fingers points and oil removed and cleaned.

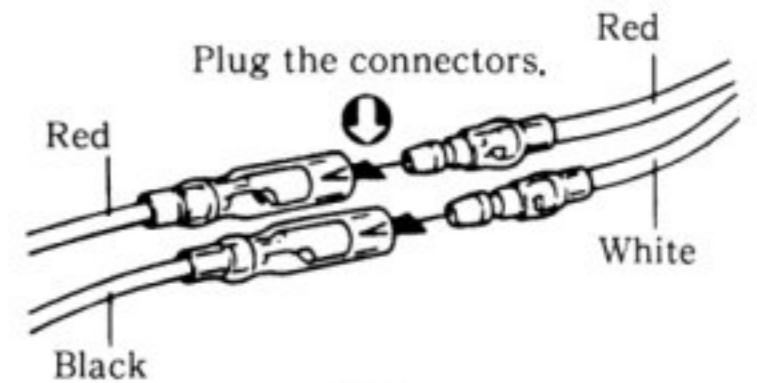


Double Sided Tape

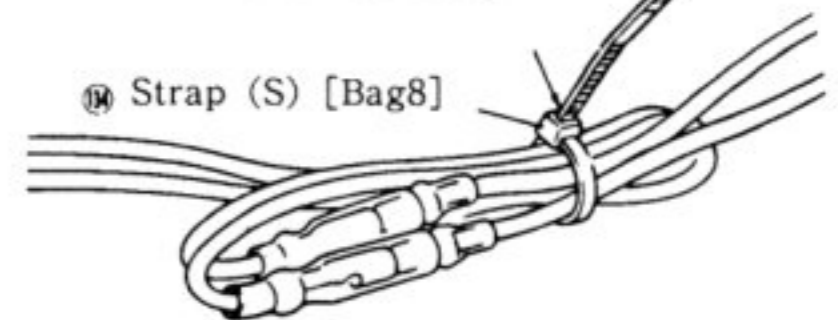


(1) Do not touch the uni crank, belt and servo saver,

(2) Do not cover the slot.



Secure the wires with a strap. Then remove the excess.



26 INSTALLATION OF UPPER DECK

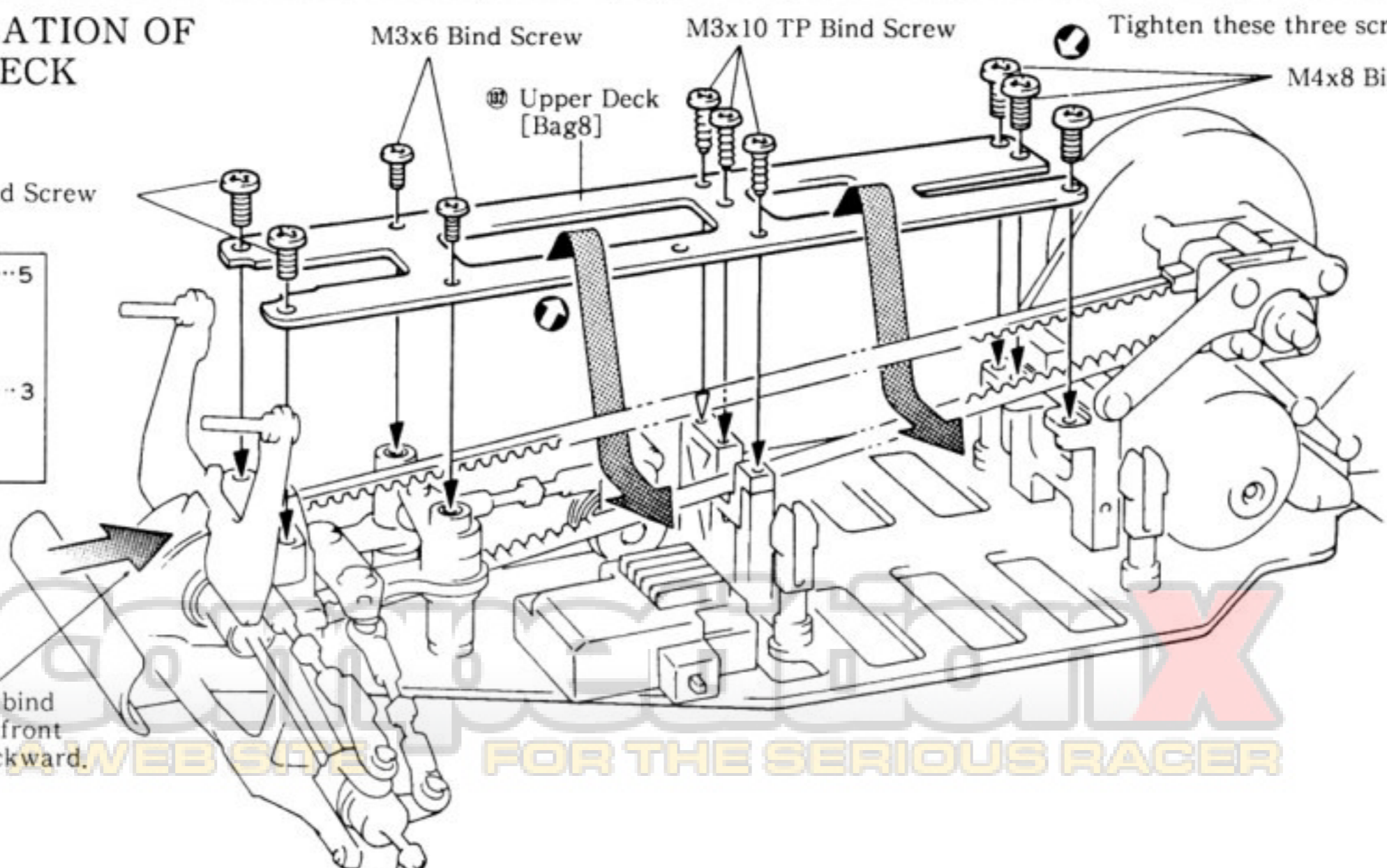
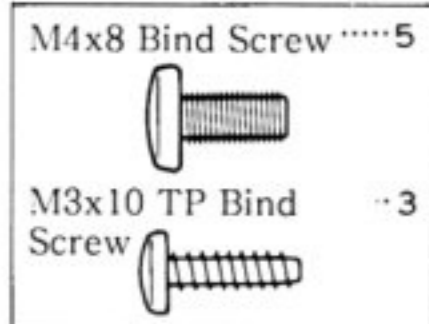
M3x6 Bind Screw M3x10 TP Bind Screw

Tighten these three screws first.

Upper Deck [Bag8]

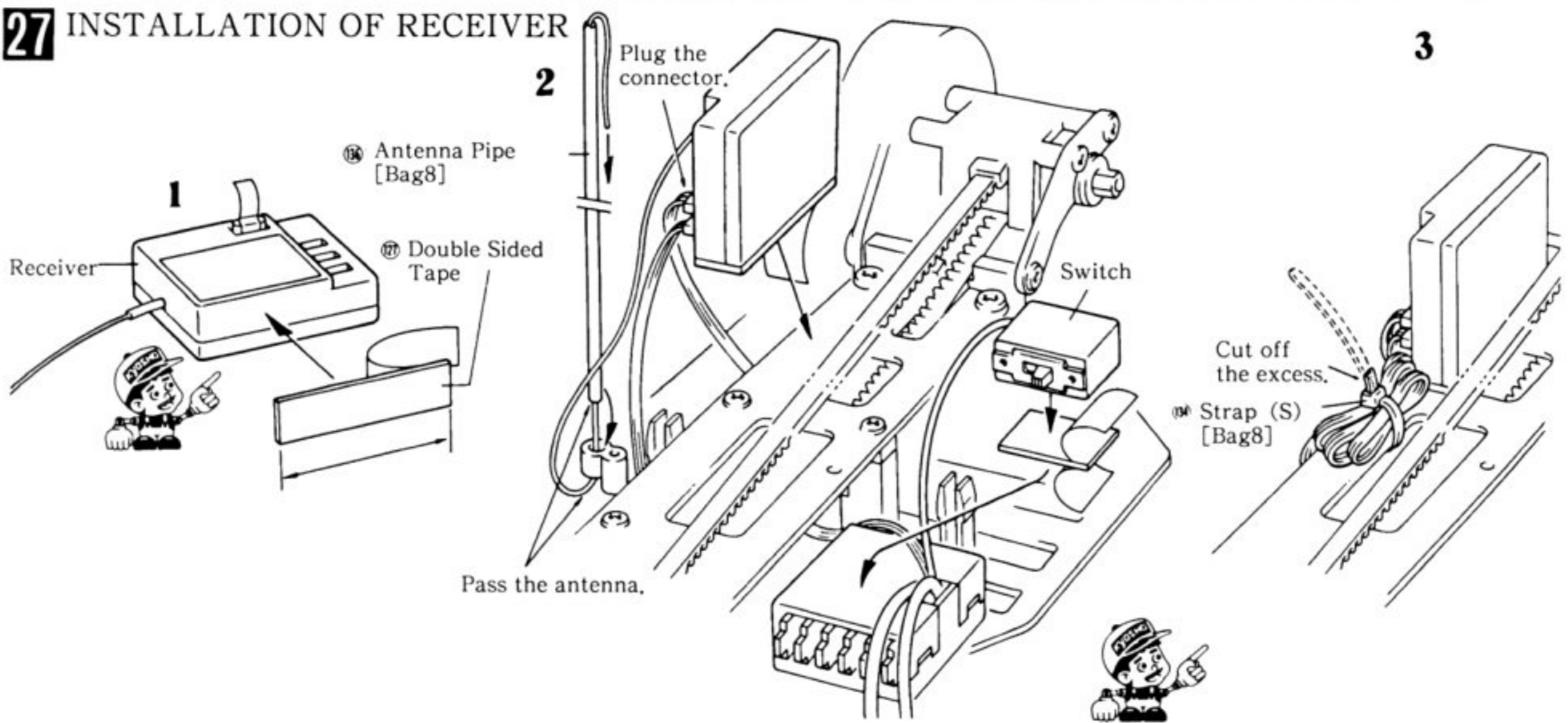
M4x8 Bind Screw

M4x8 Bind Screw

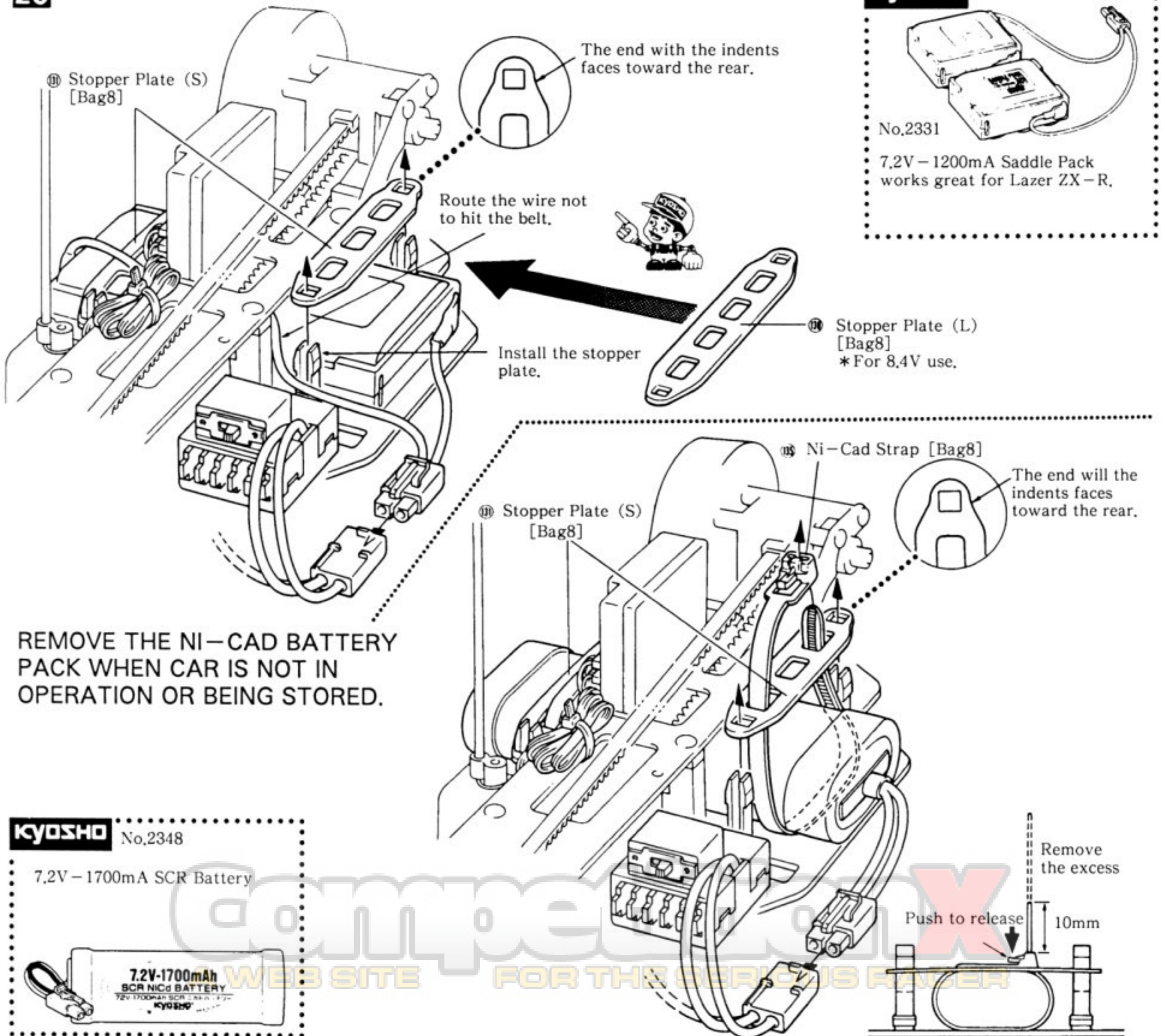


Tighten two M4x8 bind screws by pushing front gear box to the backward.

27 INSTALLATION OF RECEIVER

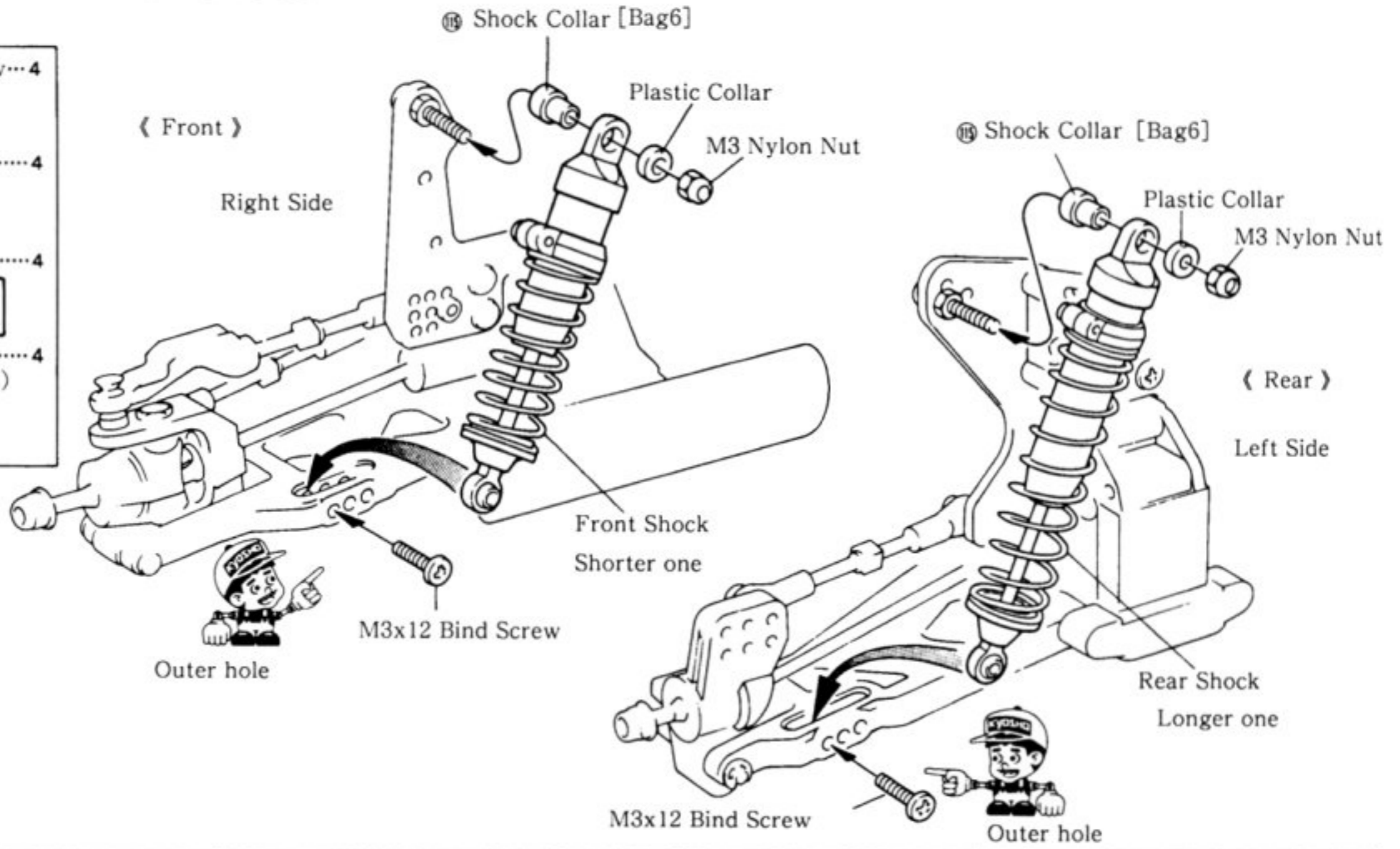


28 INSTALLATION OF BATTERY

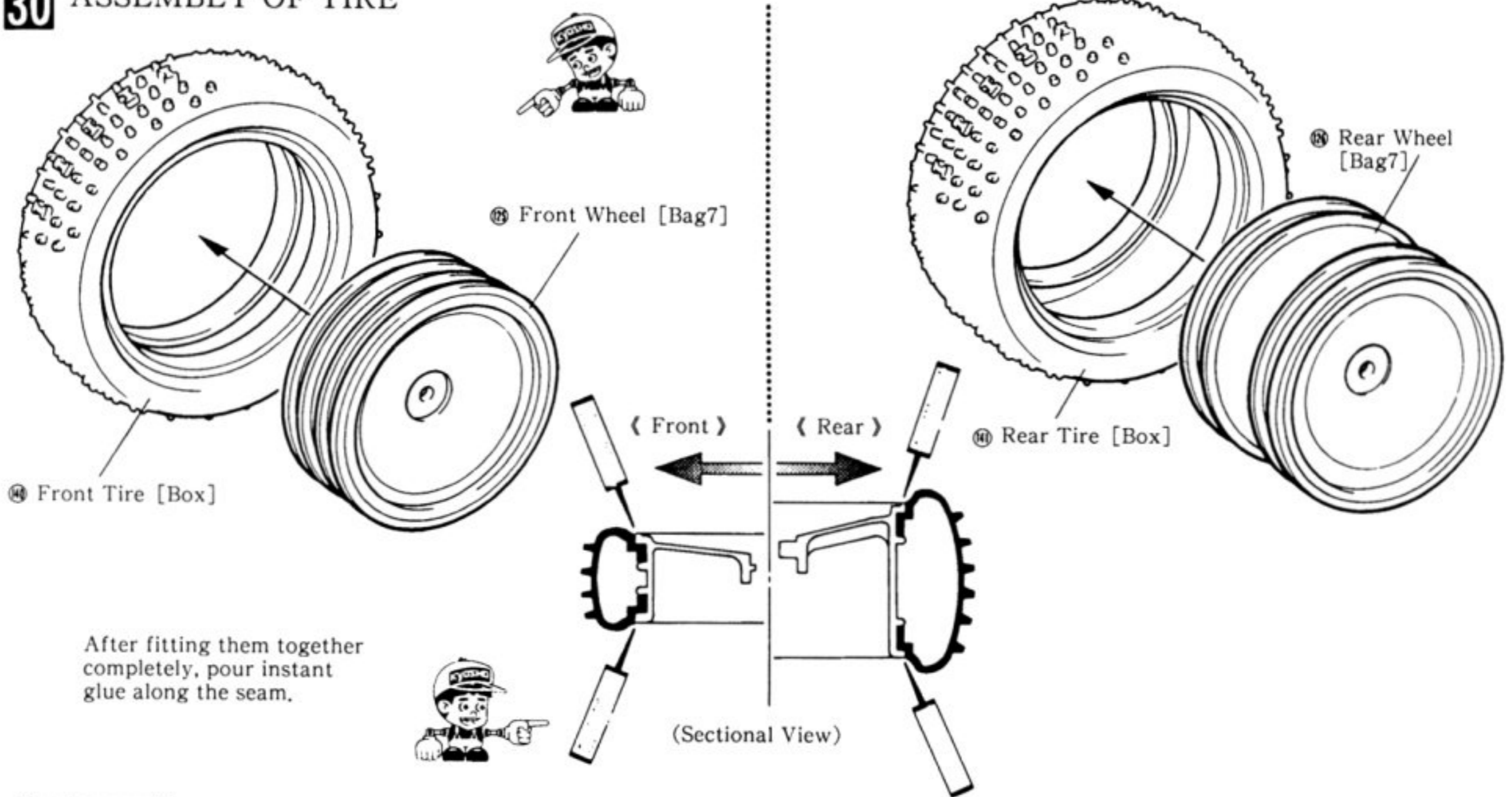


29 INSTALLATION OF SHOCK

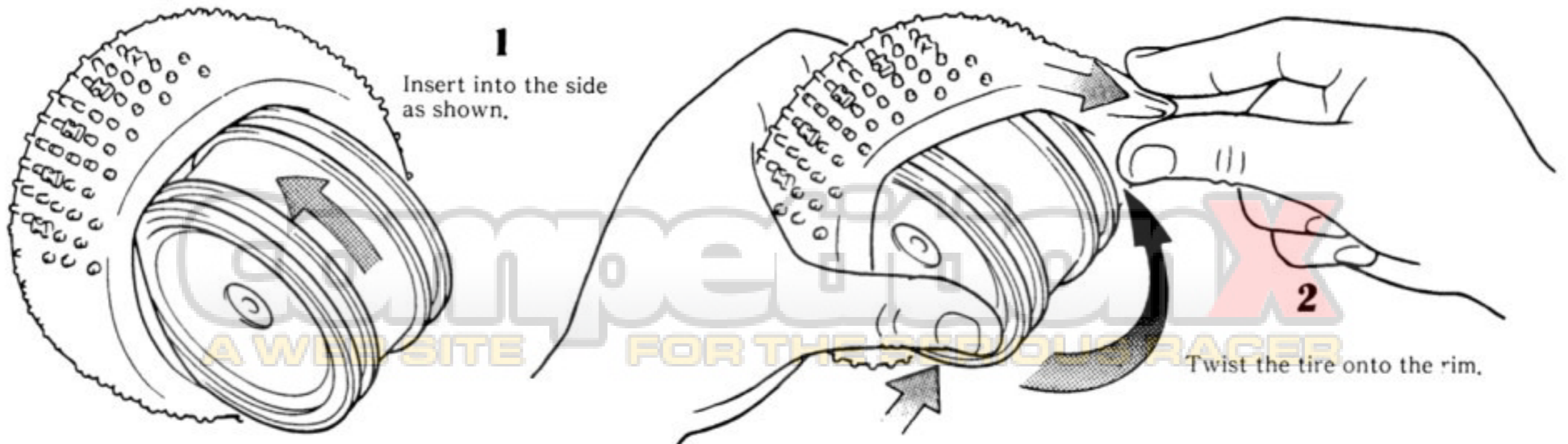
- M3x12 Bind Screw... 4
- M3 Nylon Nut 4
- Shock Collar 4
- Plastic Collar 4 (w/shock piston)



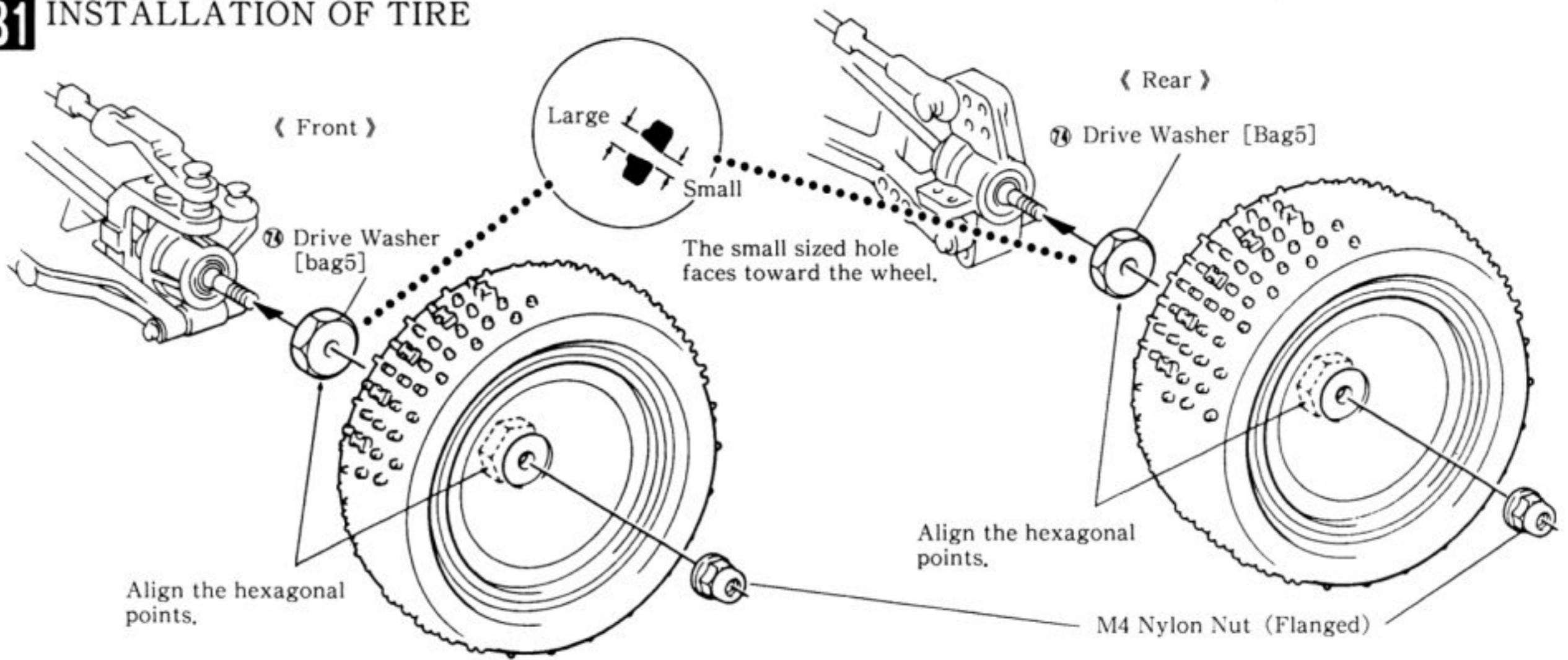
30 ASSEMBLY OF TIRE



How to assemble..



31 INSTALLATION OF TIRE

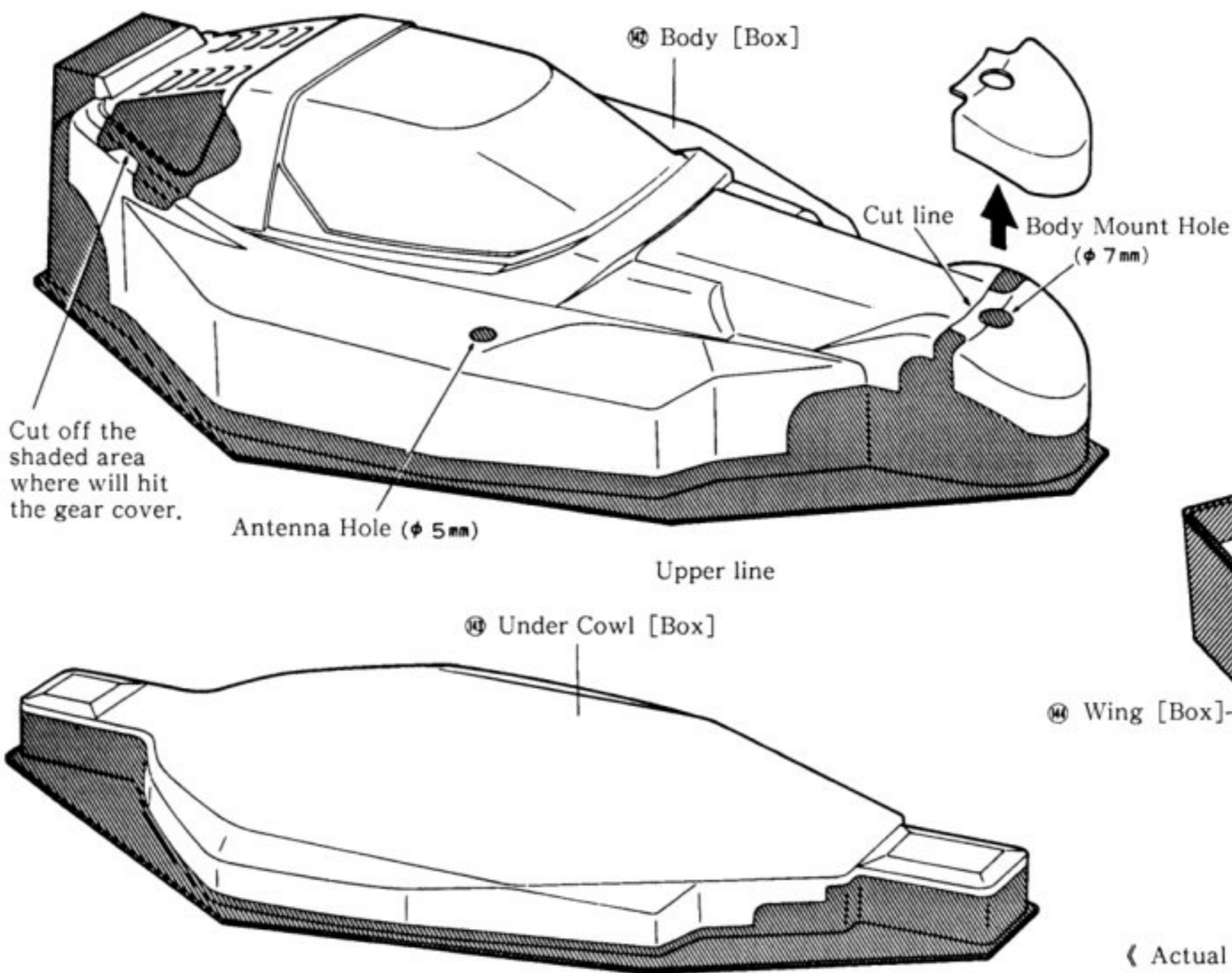


● CUTTING AND INSTALLATION OF BODY

32 ~ 36

32 CUTTING BODY, UNDER COWL AND WING

Cut off the shaded portions along the cut out line.



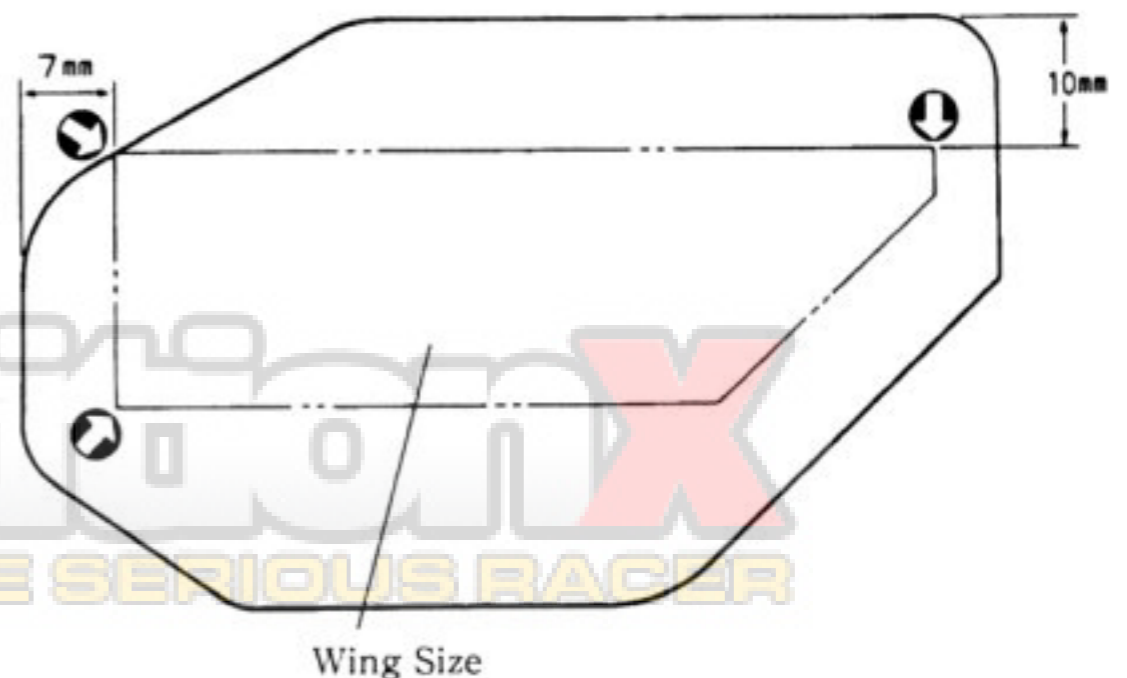
KYOSHO No.1829
 Round Cutter & Sander
 These special Lexan Scissors make trimming bodies a breeze and the sander comes in handy for finishing the rough edges.

Round Cutter
 Sander

< Actual Size Drawing of Side Wing >

⑰ Side Wing [Box]

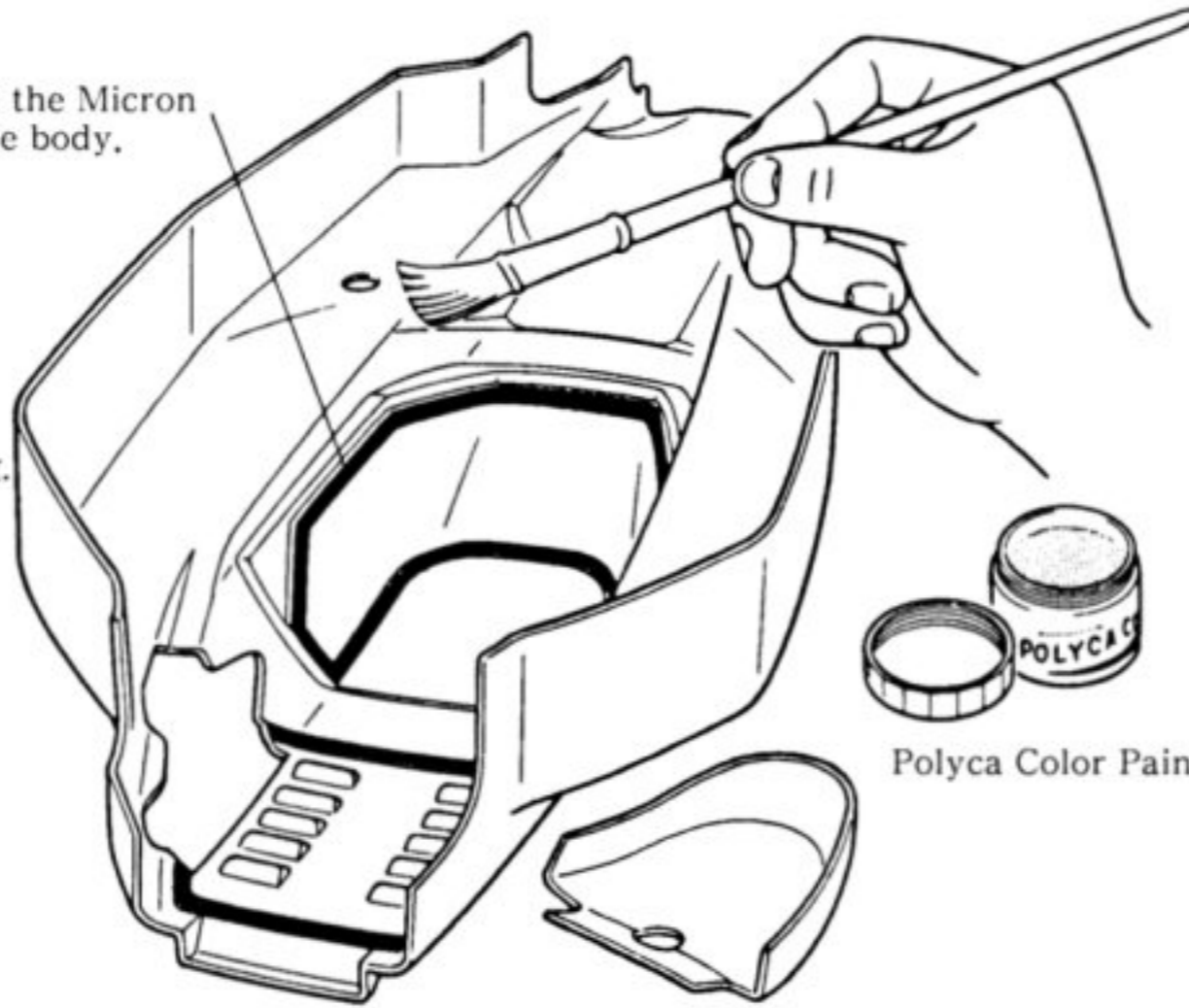
Cut out as shown right actual side drawing.



33 PAINTING

Mask the window with the Micron Line Tape and paint the body.

First wash the body to remove any oil or dirt. Rinse thoroughly. Paint the inside of body. You can obtain a color scheme by masking a portion with tape then removing the tape and painting. Paint the darkest colors first.



Micron Line Tape

KYOSHO

- No.1841...1mm
- No.1842...1.5mm
- No.1843...2.5mm

- Color
- White, Red, Yellow
- Green, Blue, Black



Polyca Color Paint

KYOSHO

No.2230

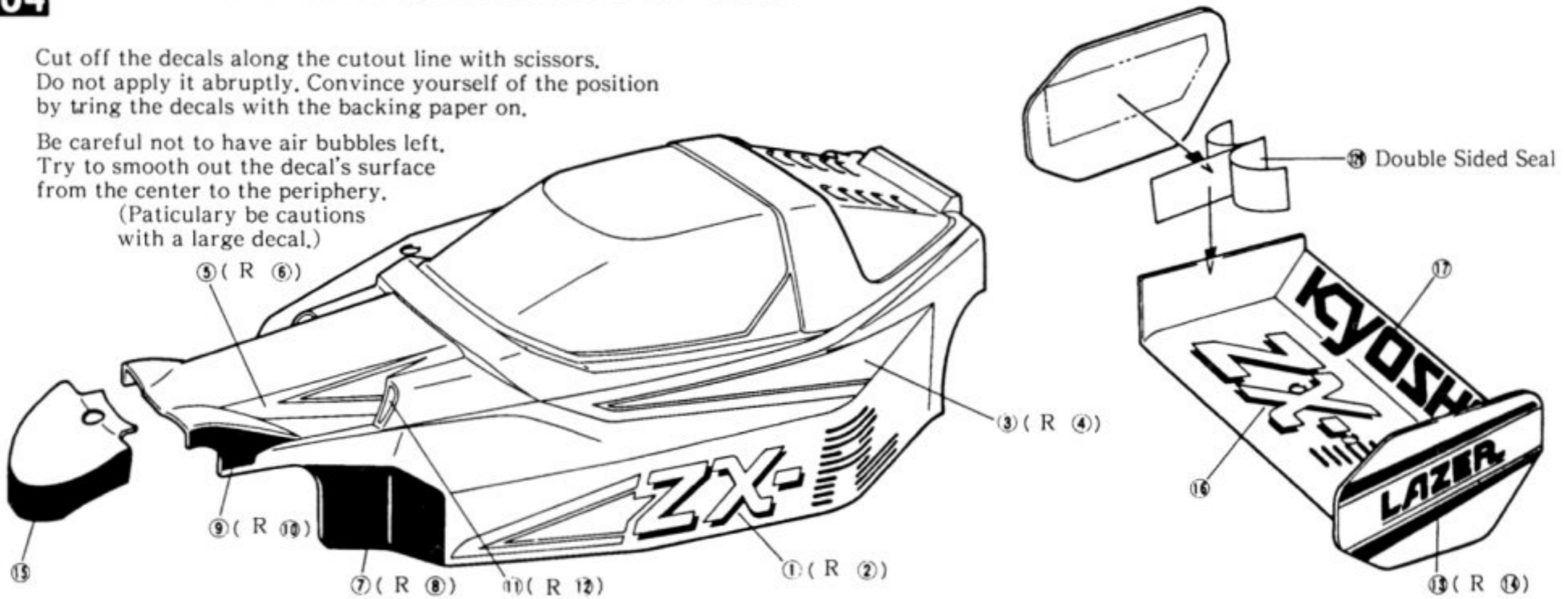
- Color
- White, Red, Yellow
- Green, Blue, Sky Blue
- Grange, Black, Violet
- F.Pink, F. Orange
- Yellow Green



34 APPLYING DECALS & ASSEMBLY OF WING

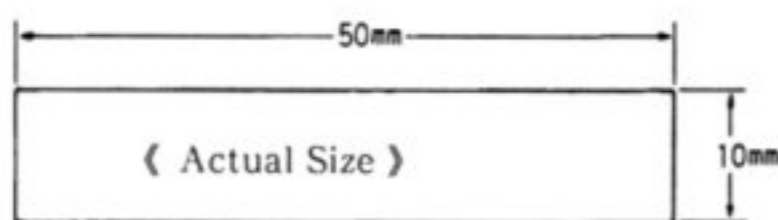
Cut off the decals along the cutout line with scissors. Do not apply it abruptly. Convince yourself of the position by trying the decals with the backing paper on.

Be careful not to have air bubbles left. Try to smooth out the decal's surface from the center to the periphery. (Particular be cautions with a large decal.)



35 APPLYING VELCRO

1 Cut the velcro strips into four sets of the dimensions below.



Ⓜ Velcro [Bag8] ...1 set



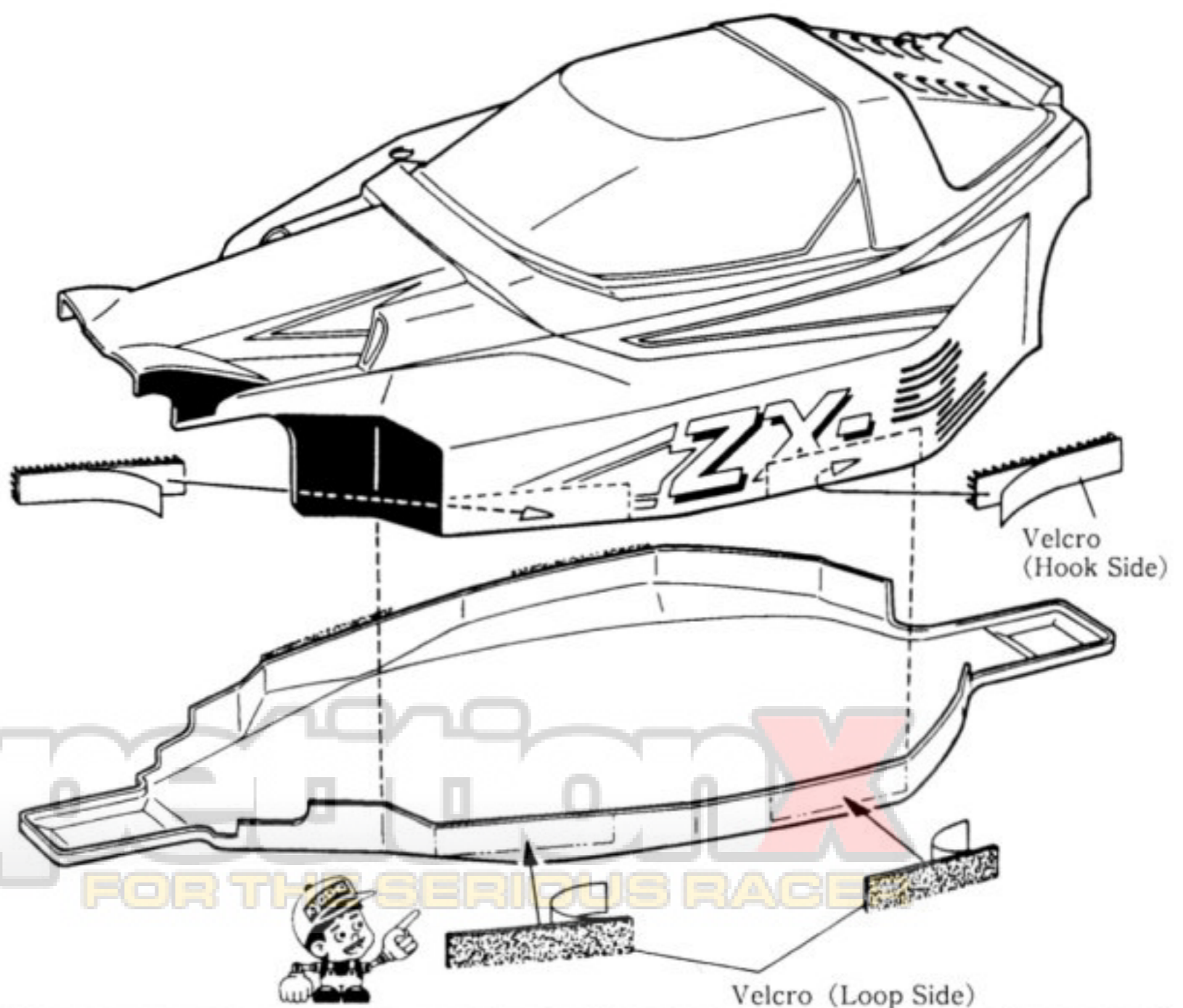
Hook Side
(Body)



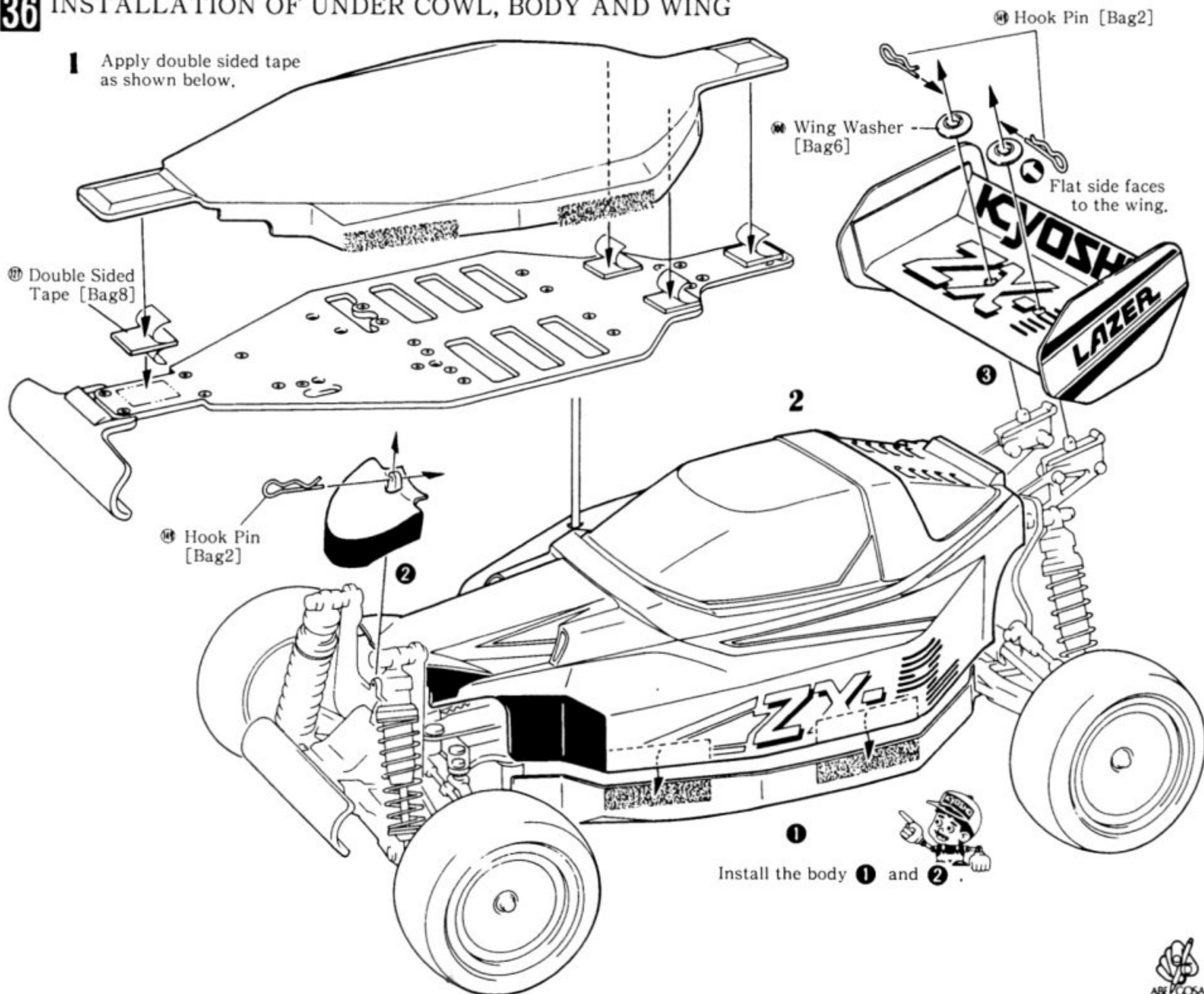
Loop Side
(Under Cowl)

2 Attach the loop side to the under cowl.

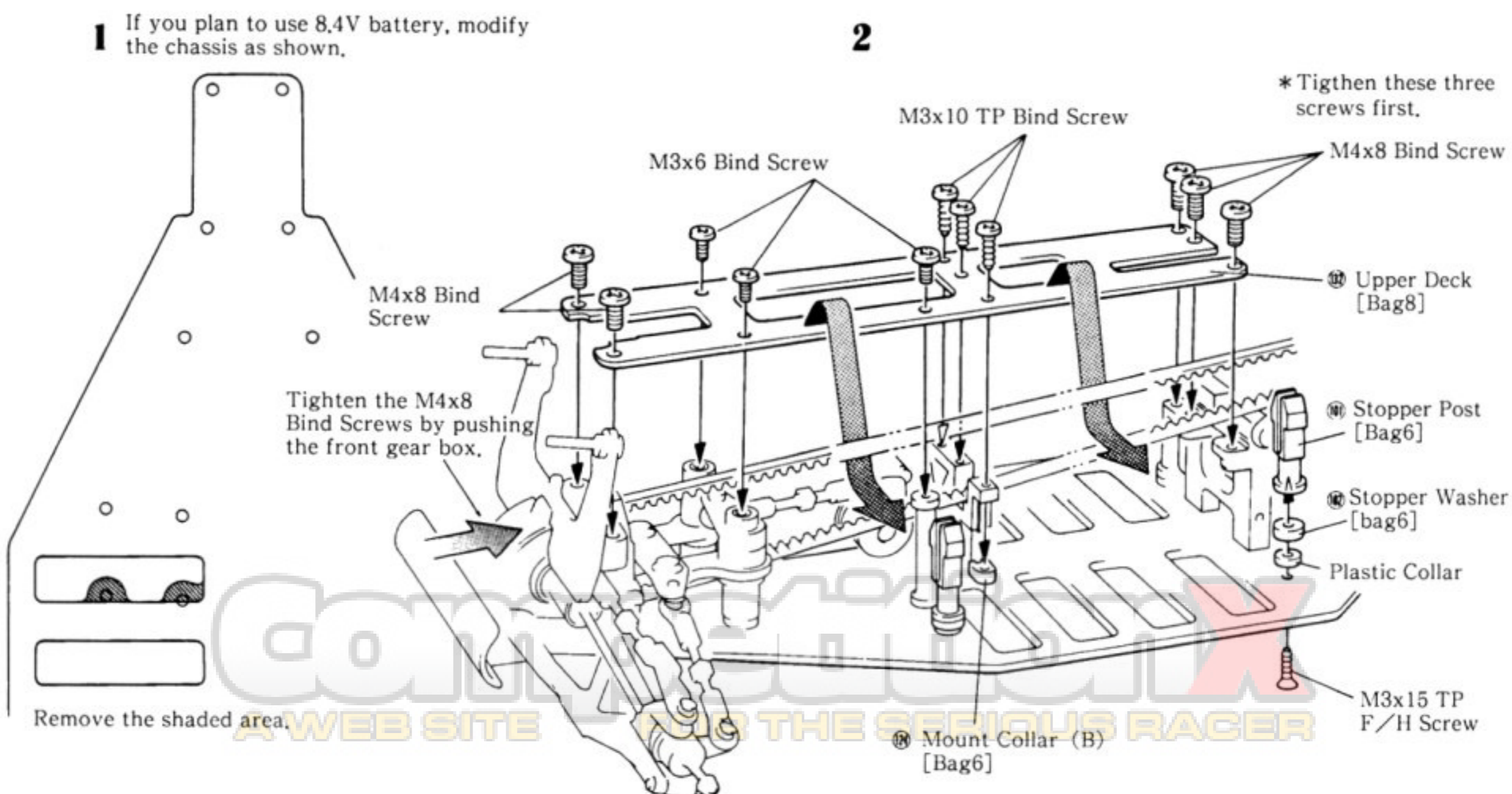
3 Attach the hook side to the inside of the body.



36 INSTALLATION OF UNDER COWL, BODY AND WING



INSTALLATION OF UPPER DECK AND BATTERY HOLDER (8.4V)



LAZER ZX-R ADJUSTMENT GUIDE (1)

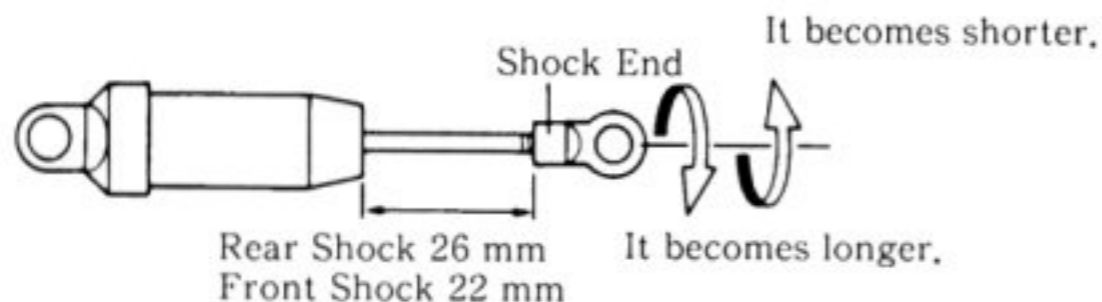
《 Adjustment of Limiter Nut 》

Steering response can be adjusted by the limiter nut tightening in or out.

Tighten...Slow Steering Response
Remove...Sharp Steering Response

《 Adjustment of Shock 》

Turn the shock end in or out for the adjustment.

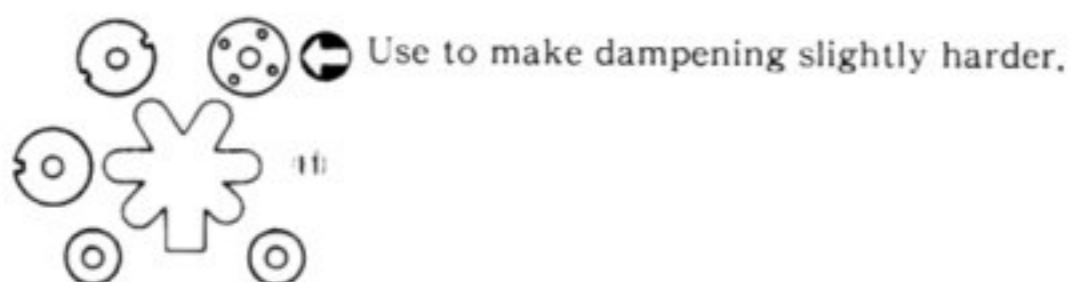


《 Dampening Hardness 》

By using different shock oils and pistons, the dampening can be adjusted to different track conditions.

Hardness	← Harder ————— Softer →			
	Yellow	Green	Red	
No 1951 Shock Oil (S·M·H)				
No 1953 Silicone Oil (S)			200 S C	100 S C
No 1954 Silicone Oil (M)		400 S C	300 S C	
No 1955 Silicone Oil (H)	600 S C	500 S C		

Shock Piston



*It is recommended to exchange the oil and shock parts to new ones when the shocks work not well.

W-5017 Pressure Top Set

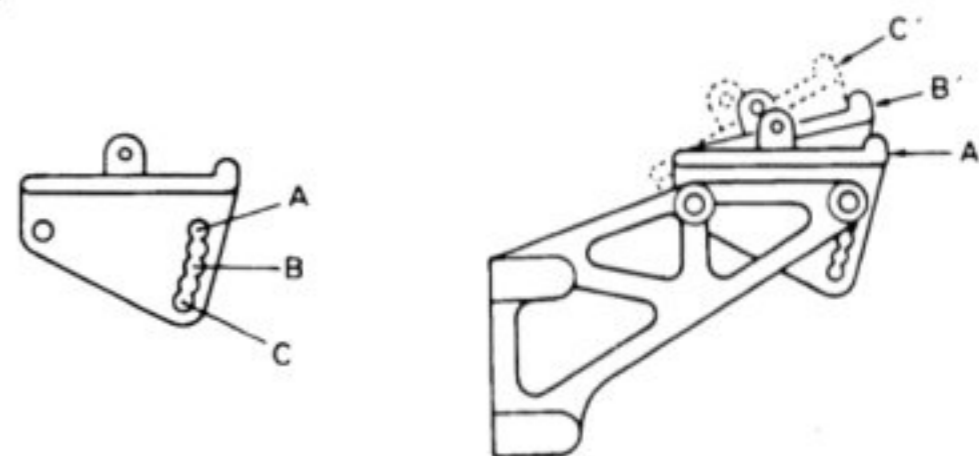
W-5018 O Ring Set

《 Suspension Travel Adjustment 》

Adjust the ground clearance by changing the hardness of shock spring.
By moving the spring stopper and adjust the spring tension.

《 Installing Angle of Wing 》

The installing angle becomes bigger in order from A to C.
(5 steps)



《 Gear Ratios 》

Pinion Gear	15 T	16 T	17 T	18 T	19 T	20 T	21 T
Spur Gear Ratio (48 pitch)	—	—	13.03	12.30	11.65	11.07	10.54
Spur Gear Ratio (0.6m)	12.99	12.18	11.46	10.83	10.26	9.74	9.28

Pinion Gear	22 T	23 T	24 T	25 T
Spur Gear Ratio (48 pitch)	10.06	9.63	9.23	8.86
Spur Gear Ratio (0.6m)	8.86	8.47	8.12	7.79

There are two types of spur gear and pinion gear.
Use them as a set.

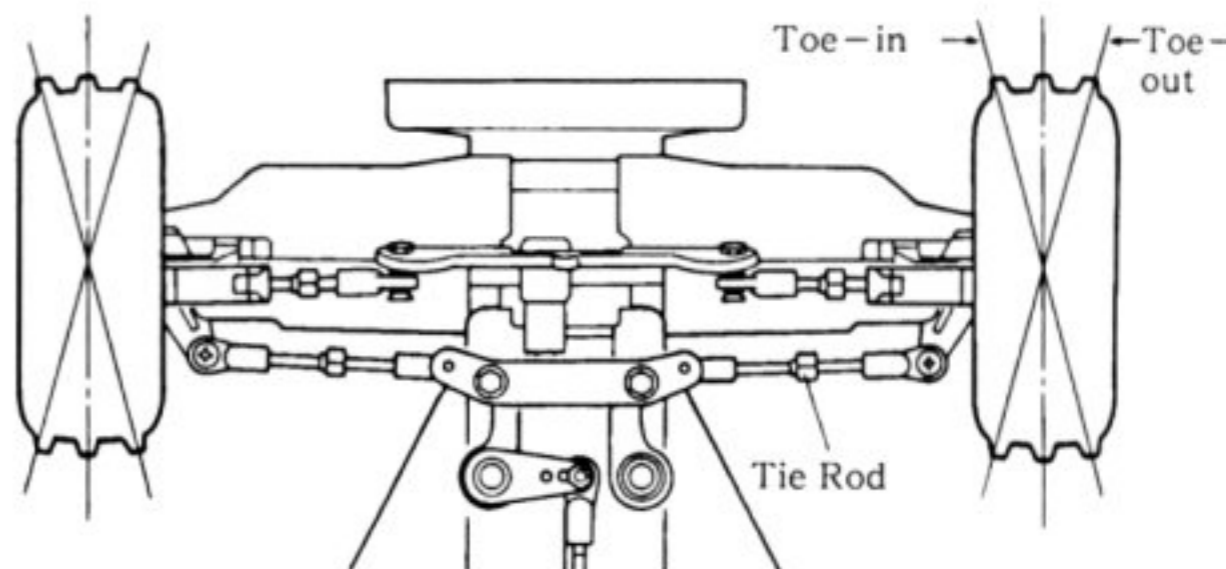
TM-7 Spur Gear (100 T-48 P) → W-0117 ~ W-0125
(17 T-48 P ~ 25 T-48 P)

LA-2 Spur Gear (0.6m) → W-5085 ~ W-5095
(15 T ~ 25 T)

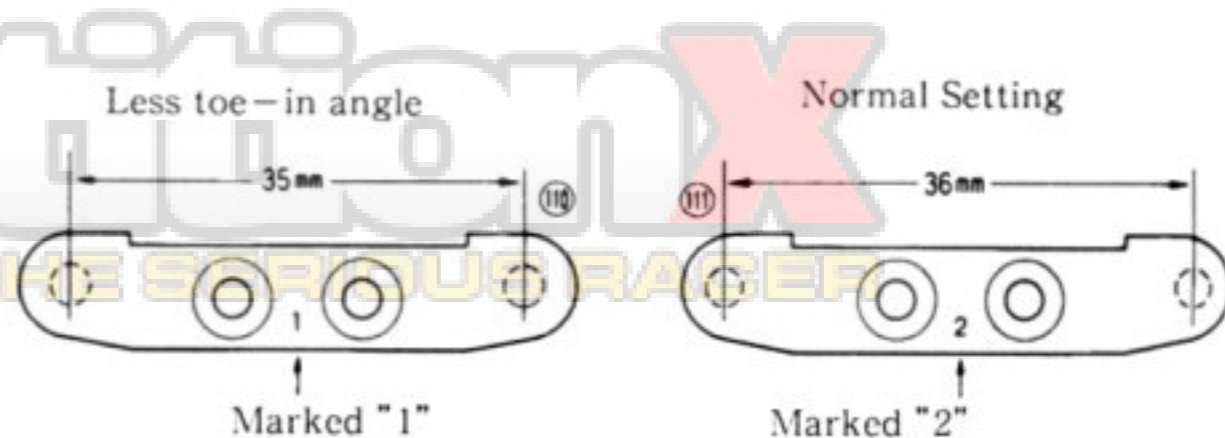
《 Toe Adjustment 》

Adjust the tie rods for a slight inward angle.

For good straight away handling allow for a slight toe-in adjustment.



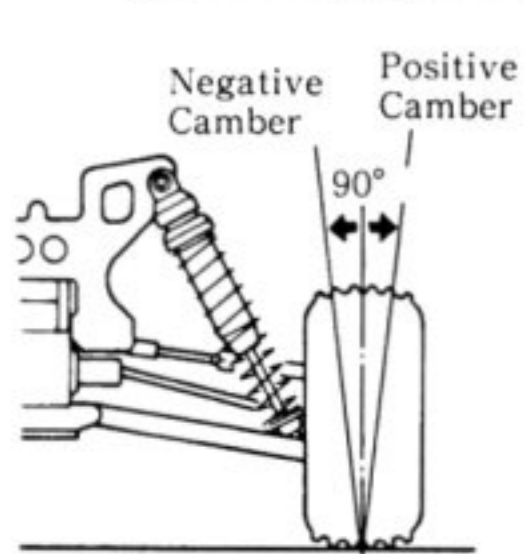
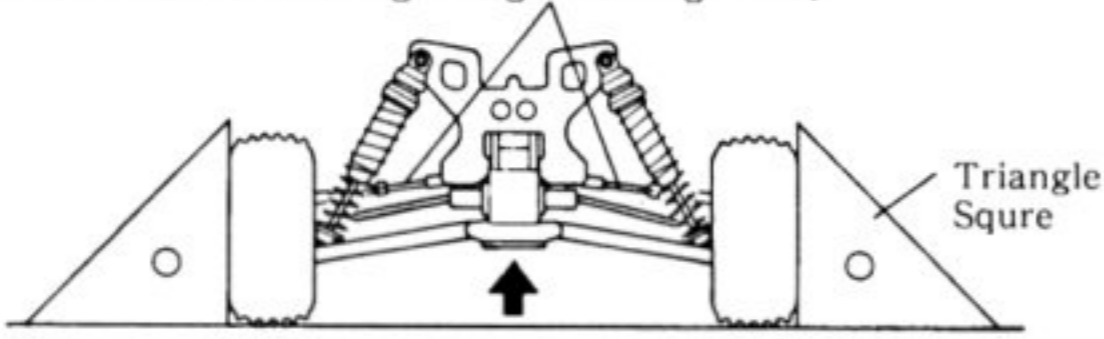
The Lazer ZX-R comes with two different rear arm brackets which allows for different toe angles at the rear.



LAZER ZX-R ADJUSTMENT GUIDE (2)

《 Camber Angle Adjustment 》

Place the model on a flat surface, and keep the car with the maximum body clearance, and adjust length of the front and rear upper rods so that the wheels stand at a right angle to the ground.

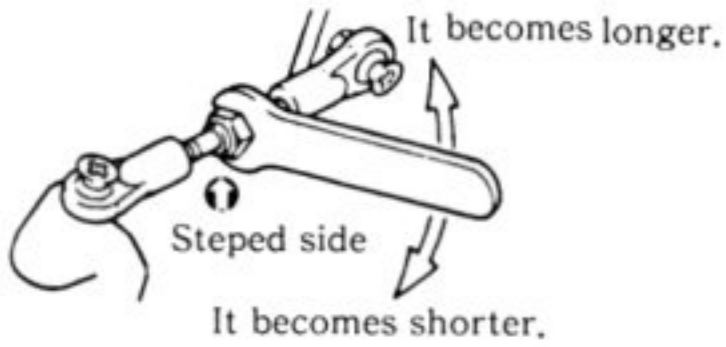


By adjusting the upper rod shorter, you will have a trait of negative camber. With negative camber adjustment on the front wheels, you will have sharper steering tendency, while on the rear wheel, the gripping power becomes higher.

By lengthening the upper rod, positive camber adjustment it gained. With positive camber on the front wheels, you will have a trail of under steering, while on the rear wheel you will have the car with over steering traits.

《 Upper Rod Adjustment 》

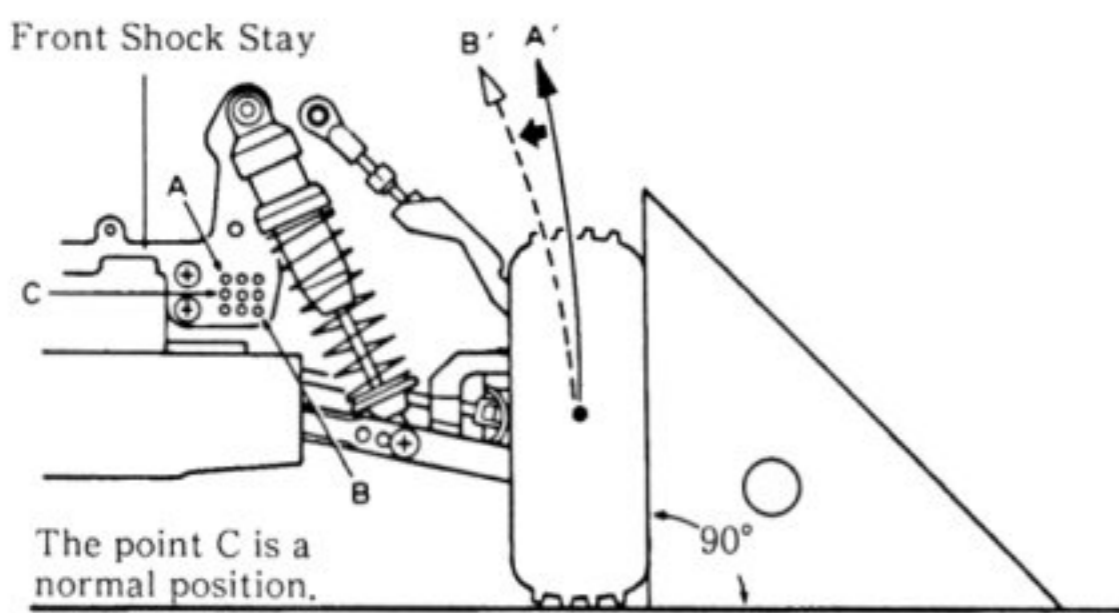
As same as tie rod, it can be adjusted in the way as shown below.



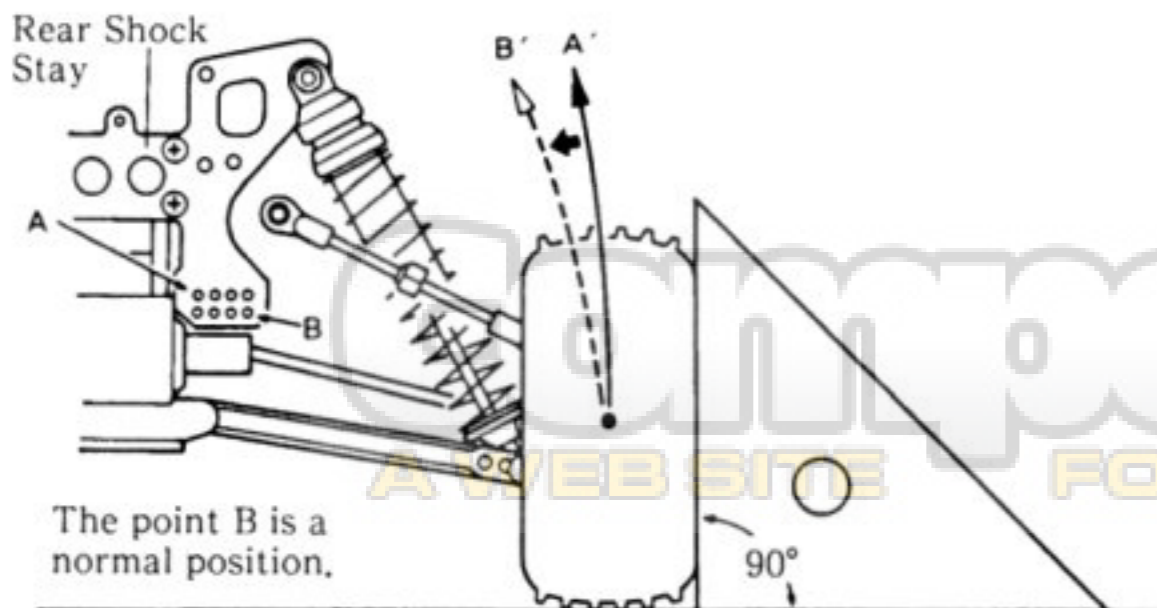
《 Correlation between installing position of Upper Rod & Camber Angle 》

The installing points A,B on the shock stay for the upper rod correspond to A',B' which are the maximum camber angle when the suspension arm swing down to the lowest position. Adjust the length of the upper rod depending upon the installing point.

(Front Upper Rod)



(Rear Upper Rod)



《 Setting of Tire 》

Any of the tires listed below can be used, choose the one most suitable for the road condition.

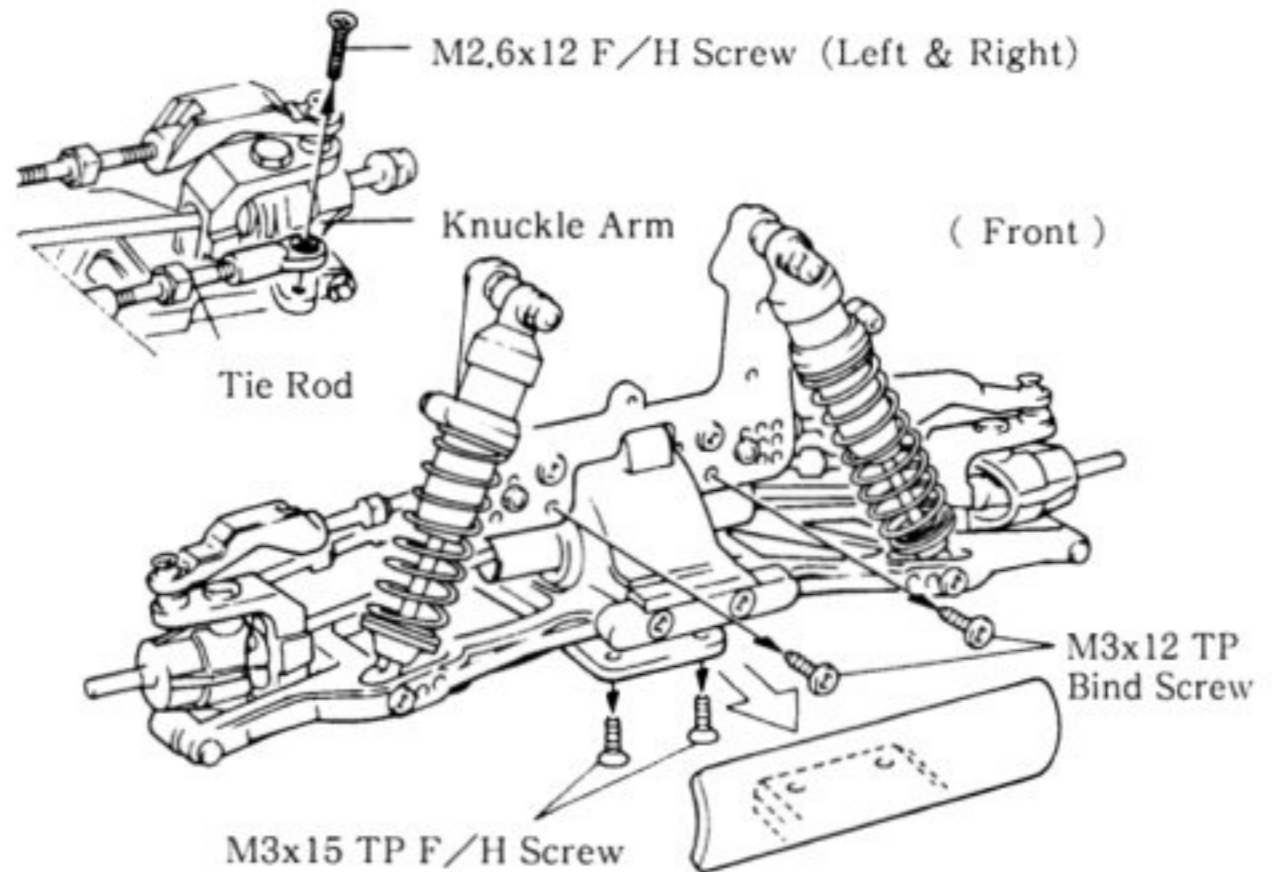
Normal Road			
Soft Surface		Hard Surface	
WET	DRY	WET	DRY
W-5641 S	W-5641M	W-5642 S	W-5642M
W-5631 S	W-5631M	W-5632 S	W-5632M
H Pin S	H Pin M	Micro Block S	Micro Block M

..... Sandy surface

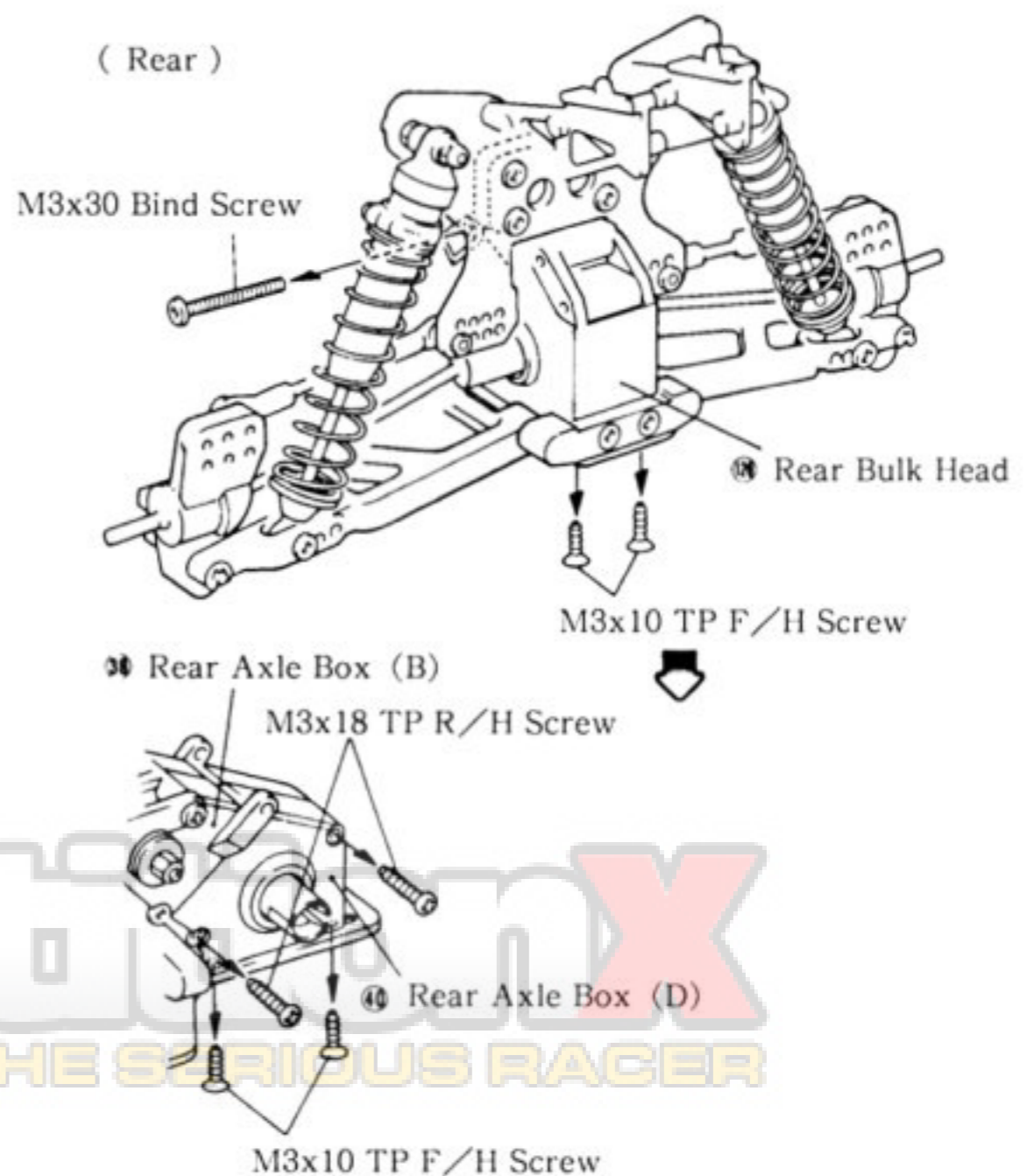
Asphalt, turf surface

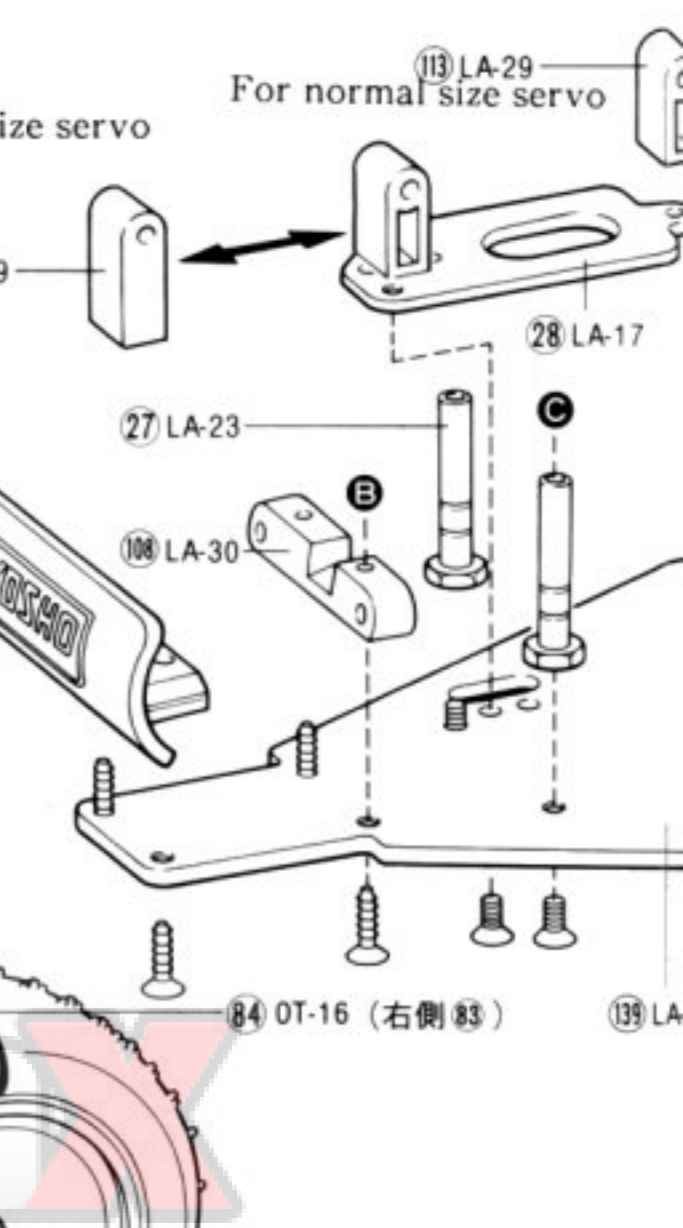
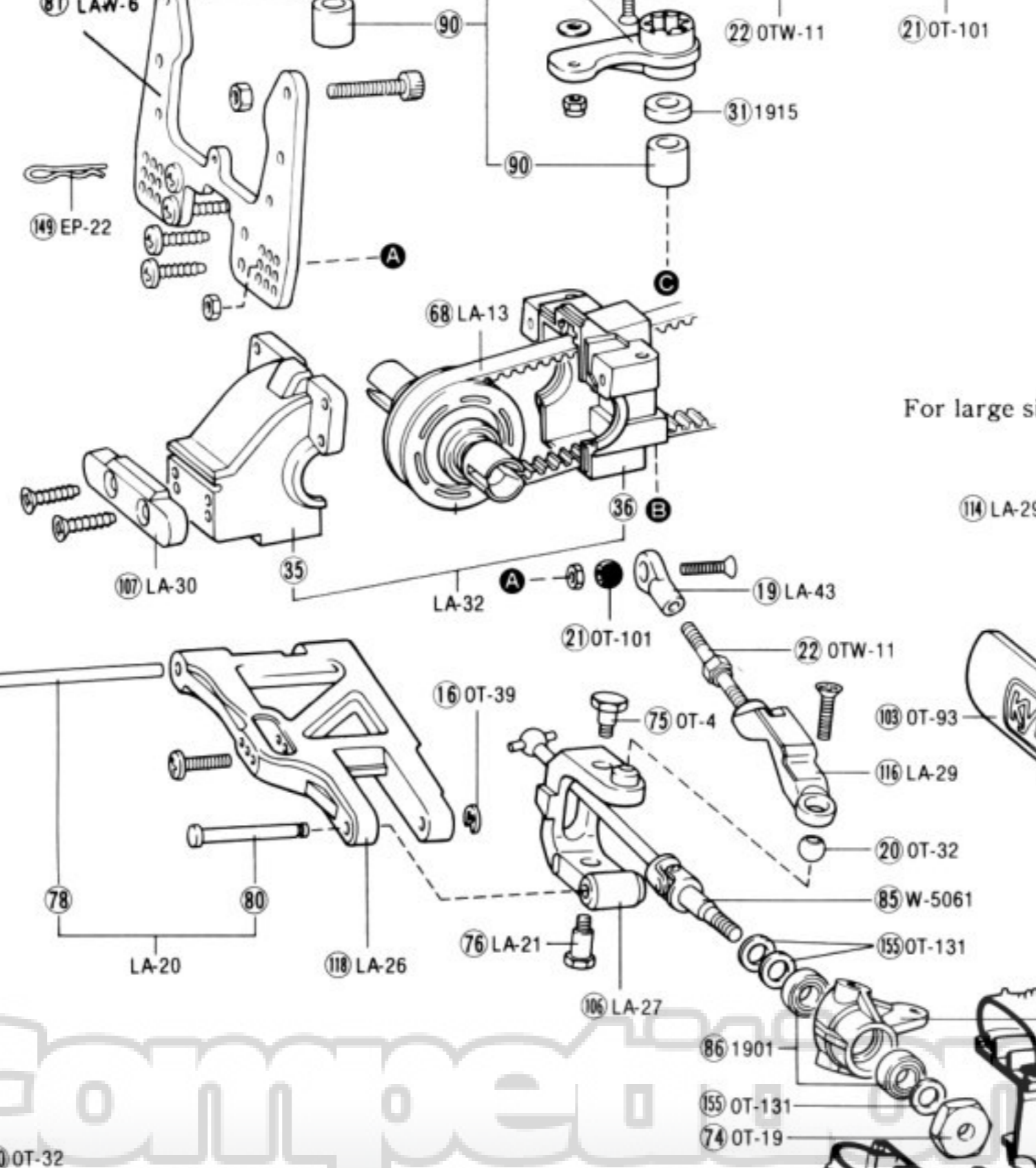
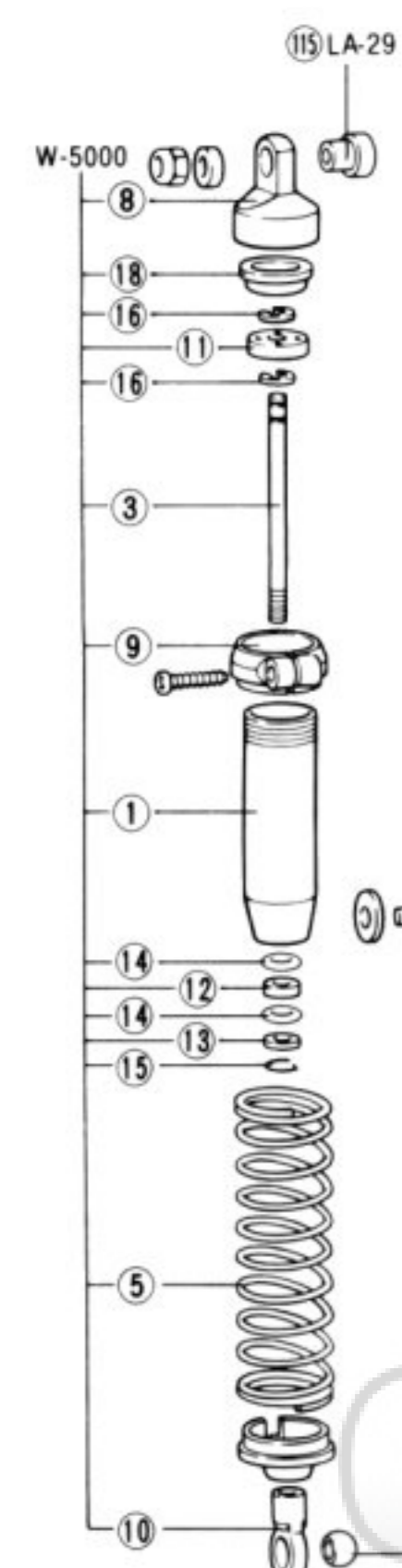
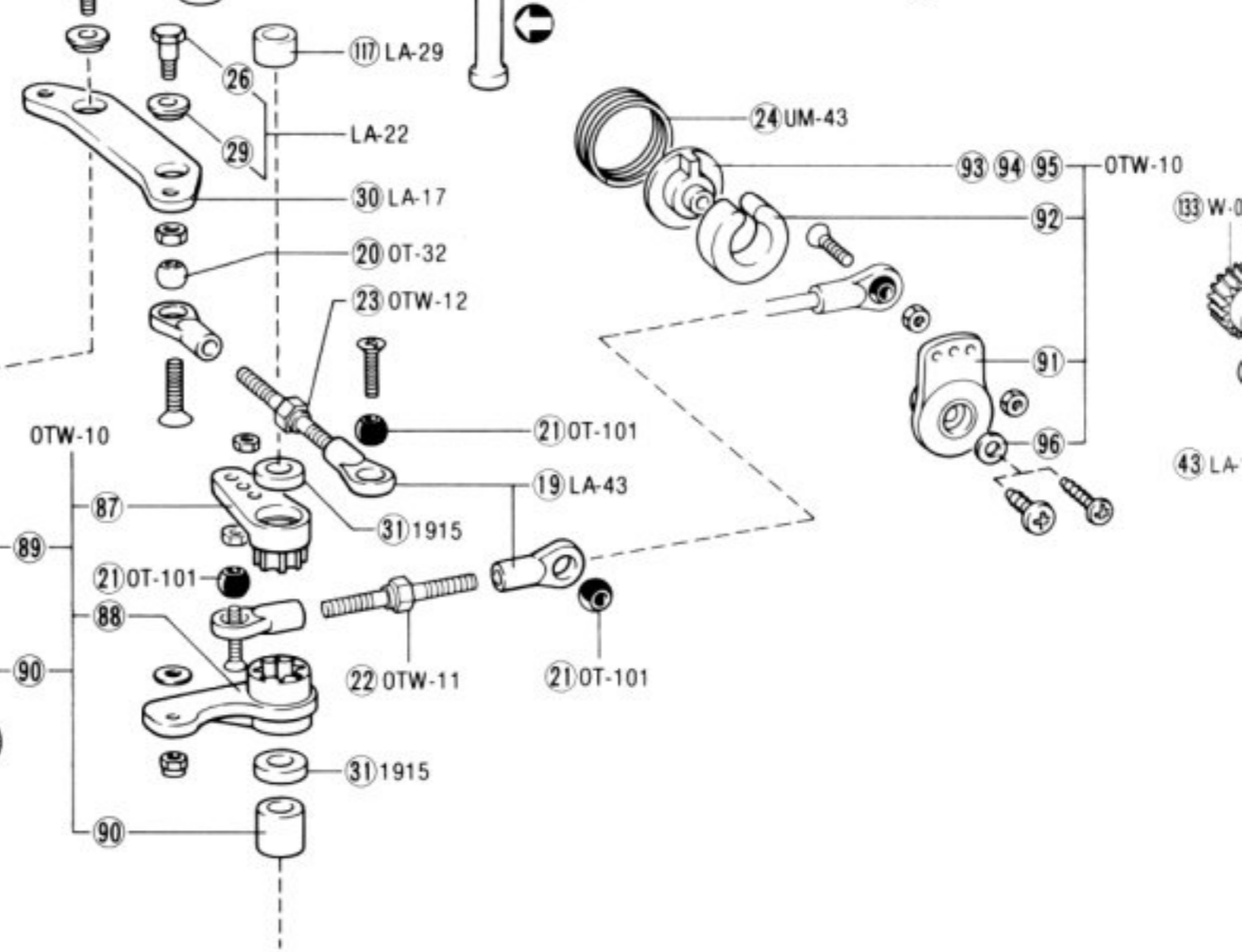
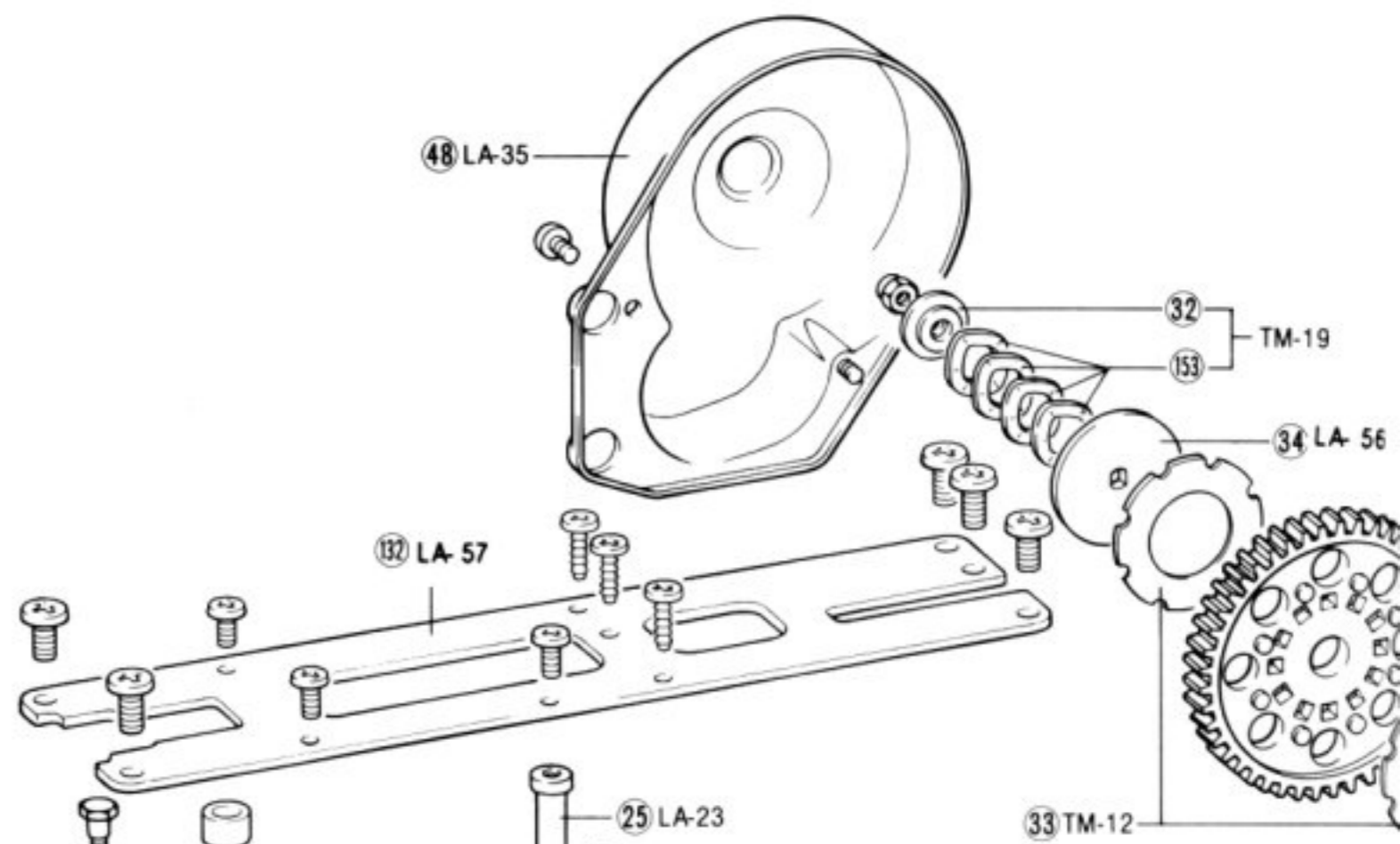
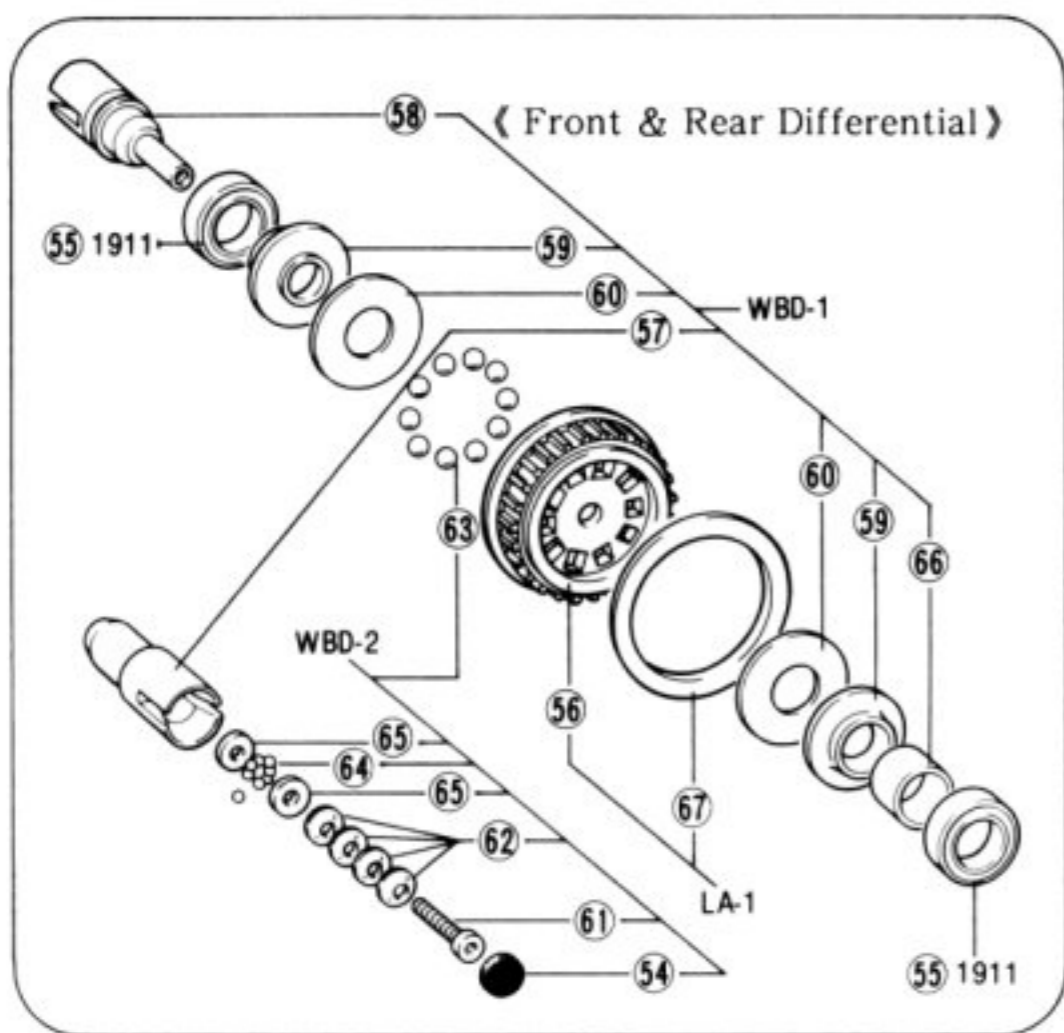
《 Maintenance 》

The front and rear hulk head can easily beremoved as shown below.



(Rear)





COMPETITION

A WEB SITE FOR THE SERIOUS RACER

PURCHASABLE PARTS FOR YOUR KIT

You can purchase replacement and optional parts for your kit. All of the parts identified by key number are usually not available singularly, but we offer these parts in convenient parts "packs" which can be purchased separately. To figure out which parts pack you need, find the key number for the part within the manual.

Then consult out part pack guide below. When referring to the parts you need, always use the Part Pack Number. For example, if you need a King Pin (L) (Key No.76) ask your dealer for Kyosho Part Pack LA-21 (King Pin L).

No.	Parts Name	Key No. & Q'ty
LA-1	Diff. Case	56 67 X 1
LA-5	Guide Plate	59 X 1 62 X 2
LA-7	Front Drive Hub W/One Way Clutch	63 X 1
LA-10	Belt Rollar Set	68 71 X 1 70 X 2
LA-11	Drive Pulley Set	61 62 X 2
LA-12	Rear Drive Belt	68 X 1
LA-13	Front Drive Belt	68 X 1
LA-16	Main Chassis	68 X 1
LA-17	Plate Set	78 80 46 X 1
LA-18	Motor Plate	43 X 1
LA-19	Mount Plate	47 X 1
LA-20	Sus. Shaft Set	78 79 X 2 80 X 4
LA-21	King Pin (L)	76 X 4
LA-22	Steering Pin	26 29 X 2
LA-23	Saver Shaft Set	25 X 1 27 X 2
LA-25	Stopper Plate Set	88 X 1 89 X 2
LA-26	Sus. Arm Set	88 89 X 2
LA-27	Front Hub Carrier	88 X 2
LA-28	Rear Hub Carrier	88 89 X 1
LA-29	Upper Rod End Set	87 X 1 88 89 90 91 X 2 92 X 4
LA-30	Arm Bracket Set	87 88 89 90 91 X 1
LA-31	Upper Deck Mount	88 89 90 91 92 X 1
LA-32	Front Axle Box	93 94 X 1
LA-33	Rear Axle Box	97 98 99 40 X 1
LA-35	Gear Cover	46 X 1
LA-39	4 φ Shim Set	88 X 20
LA-40	8 φ Shim Set	88 X 20
LA-41	Velcro	88 X 2
LA-43	5.8 φ Ball End	19 X 12
LA-55	Main Shaft	44 53 64 X 1
LA-56	Drive Hub Set	55 52 X 1
LA-57	Upper Deck	88 X 1
LAW-6	Front Shock Stay	82 X 1
LAW-7	Rear Shock Stay	81 X 1
LA-52	Body Lazer ZX-R	88 X 1
LA-53	Under Cowl ZX-R	88 X 1
LA-54	Decal ZX-R	88 X 1
LA-58	Screw ZX-R	Screws, Nuts and Wrenches
TM-4	Battery Holder Set	88 89 X 4
TM-7	Spur Gear	91 X 1 (100T-48P)
TM-12	Slipper Plate	33 X 2
TM-19	Wave Washer Set	92 X 1 89 X 10
TM-28	Wing	88 89 X 1
TM-30	Tape Set	88 X 1
OT-4	King Pin	73 X 4
OT-6	Swing Shaft	77 X 2
OT-16	Knuckle Arm	83 84 X 1
OT-18	Rear Shaft	73 X 2
OT-19	Drive Washer	73 X 4
OT-32	5.8 φ Ball	20 X 10
OT-39	E Ring (E2.5)	16 X 10
OT-93	Bumper	88 X 1
OT-101	5.8 φ Ball	21 X 10 (2.6 φ Black)
OT-131	5 φ Shim Set	88 X 20
OTW-10	Uni Crank Servo Saver	97 98 99 01 92 93 94 95 96 X 1 90 X 2
OTW-11	Adjust Rod (S)	22 X 2
OTW-12	• (M)	23 X 2
UM-43	Servo Saver Ring	23 X 1
UMW-1	Wing Stay Set	97 98 99 X 2 88 X 4
1840	Double Sided Tape	88 X 1
1878	Screw Locking Compound	88 X 2

No.	Parts Name	Key No. & Q'ty
1901	5 φ x10 Ball Bearing	88 X 2
1911	8 φ x14 Ball Bearing	93 X 2
1914	4 φ x8 Metal Bushing	72 X 10
1915	5 φ x8 Metal Bushing	91 X 10
1943	Cross Wrench	88 X 1
W-5000	Pressure Shock (M)	① ③ ⑤ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ X 2 ⑮ ⑯ ⑰ X 4
W-5002	• (L)	② ④ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ X 2 ⑮ ⑯ ⑰ X 4
W-5026	Narrow Wheel 56	88 X 2
W-5027	Wheel (•)	88 X 2
W-5061	Universal Swing Shaft	88 X 2
W-5631M	Narrow Tire 56 size Medium H Pin	88 X 2
W-5641M	Tire 56 size Medium H Pin	88 X 2
WBD-1	Ball Diff. Shaft Plate Set	97 98 99 X 1 90 91 X 2
WBD-2	Ball Diff. Ball Set	92 91 X 1 93 X 2 92 X 10 93 94 X 12
EF-37	Strap (S)	88 X 6
EF-39	Ni-Cad Strap	88 X 6
EP-22	Hook Pin	88 X 5
SD-79	Antenna Pipe	88 X 5
Optional Parts		
LAW-2	Stabilizer Set	
LAW-3	Carbon Main Chassis	
W-0117	Hard Pinion Gear	Hard
W-0125	(17T-48P ~ 25T-48P)	
WBD-4	Pressure Plate	88 X 2
1877	Ball Diff. Grease	
1883	Frontier Hobby Oil	30 cc
1902	5 φ x8 Ball Bearing	Replace (31)
1903	4 φ x8 Ball Bearing	Replace (72)
1951	Shock Oil (S,M,H)	Soft, Medium, Hard Set
1953	Silicone Oil (S)	Soft
1954	• (M)	Medium
1955	• (H)	Hard
W-5016	Plastic Parts Set for Pressure Shock	⑦ ⑨ ⑩ ⑪ X 2
W-5017	Pressure Top Set for Pressure Shock	16 X 10
W-5018	O Ring Set for Pressure Shock	12 13 X 2 14 15 X 4
W-5036	Inner Sponge	2 pcs.
W-5631S	Narrow Tire 56 size H Pin Soft	
W-5632S	Narrow Tire 56 size Micro Block Soft	
W-5632M	Narrow Tire 56 size Micro Block Medium	
W-5641S	Tire 56 size H Pin Soft	
W-5642S	Tire 56 size Micro Block Soft	
W-5642M	Tire 56 size Micro Block Medium	
LA-2	Spur Gear	
W-5085	Hard Pinion Gear	Use as a set
W-5095	(15T ~ 25T)	

The Super Hobby



This products is not to be sold in the United States. If you have purchased this product in the United States, please contact Kyosho U.S.A. phone number (217) 398-3630.

PRINTED IN JAPAN

ACF 4T

CompetitionX
A WEB SITE FOR THE SERIOUS RACER

**SUPPLEMENTARY INSTRUCTIONS
FOR NO.3147 LAZER ZX-R**

PLEASE USE THIS SUPPLEMENTARY INSTRUCTION MANUAL
CONJUNCTION WITH THE MANUAL WITH YOUR KIT.

Page 3,4 BAGGED PARTS LIST (1) (2)

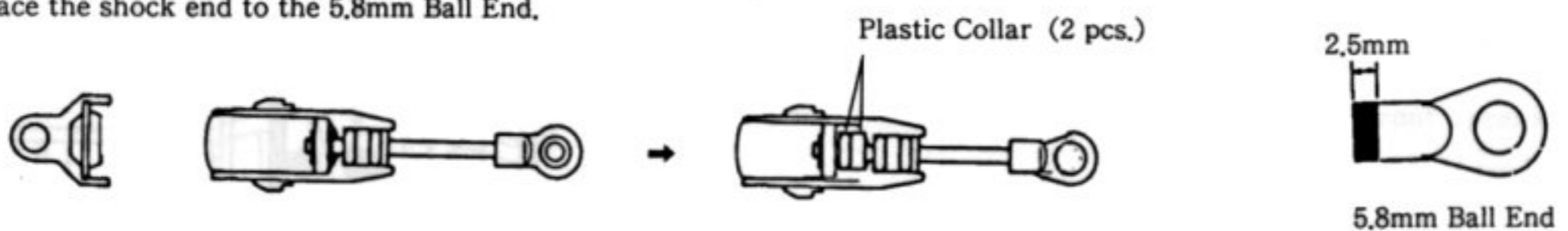
Correct the bagged parts list as shown below.

Bag No.	Key#	Parts Name	Q'ty	
ZXR-2	149	Hook Pin	3	Q'ty 3 → 7
	153	Wave Washer	4	Q'ty 4 → 0 (Not using)
ZXR-3	19	5,8mm Ball End	12	Q'ty 12 → 16
	22	3x32 Adjust Rod	3	Q'ty 3 → 1
	25	Upper Deck Post	1	Q'ty 1 → 0 (Not using)
	157	3x50 Adjust Rod	2	Additional Parts
	158	M3 Tapered Washer	4	Additional Parts
ZXR-4	32	Limiter Collar	2	Q'ty 2 → 1
	47	Motor Plate (S)	1	Q'ty 1 → 0 (Not using)
	47	Plate Collar	1	Additional Parts
	159	Slipper Adjust Spring	1	Additional Parts
ZXR-6	160	Rear Hub Plate (R)	1	Additional Parts
	161	Rear Hub Plate (L)	1	Additional Parts
ZXR-8	130	Stopper Plate (L)	1	Q'ty 1 → 0 (Not using)
	153	Motor Spacer	1	Additional Parts

1 FILLING THE SHOCK OIL

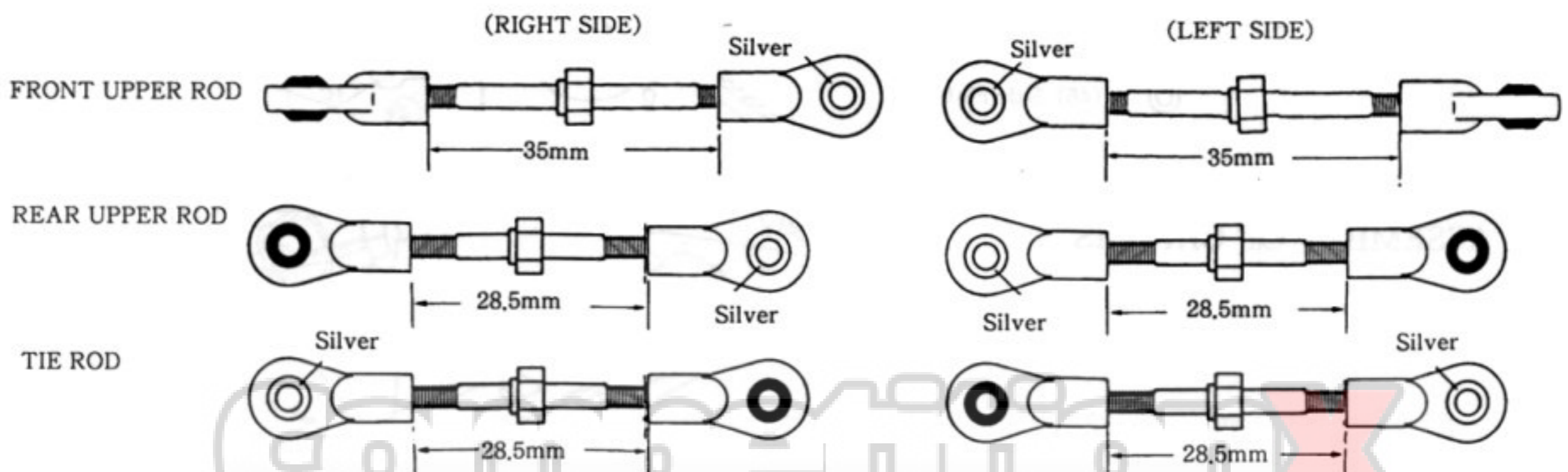
Before filling the shock oil, remove the shock end and the shock shaft.
Install 2 pcs. of plastic collar (with shock piston) as shown below.
Then replace the shock end to the 5,8mm Ball End.

Cut off the shaded area.



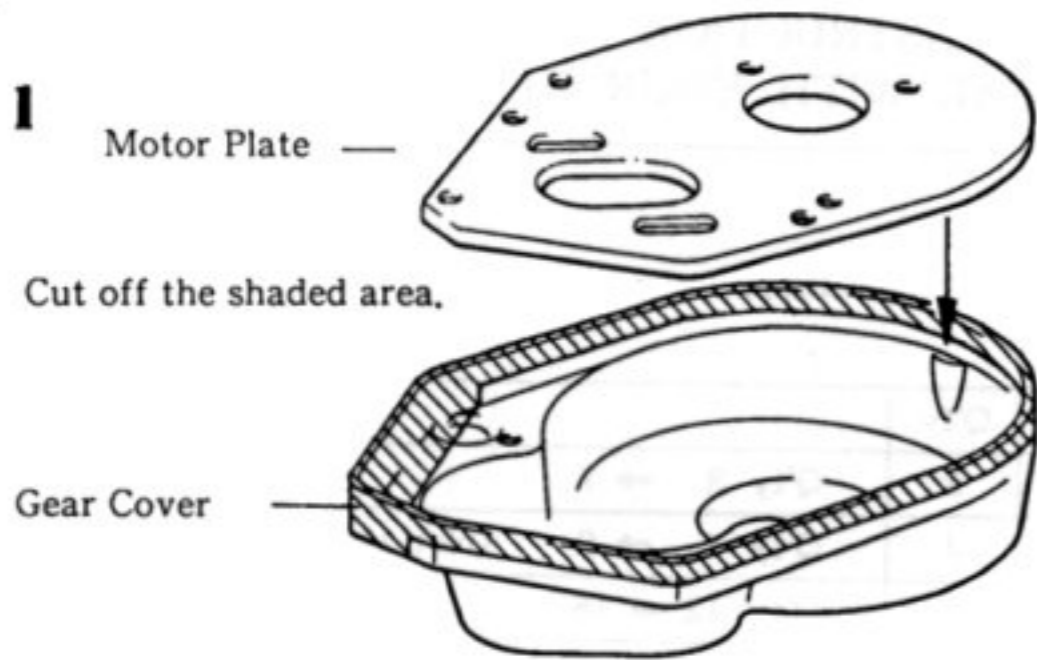
2 ASSEMBLY OF CONTROL ROD

Assemble the control rods as shown below.

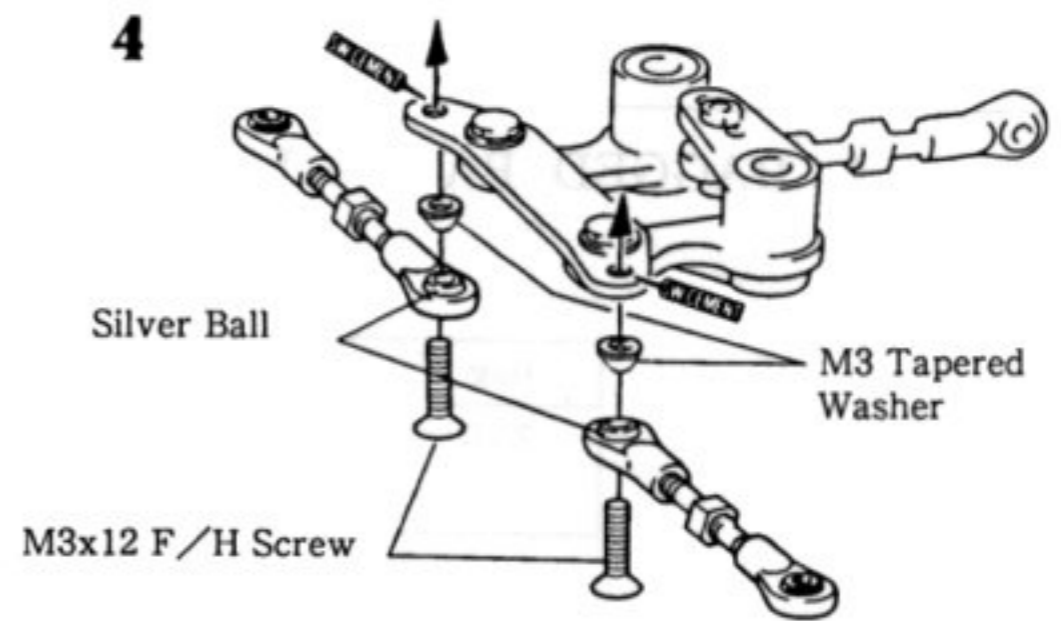


A WEB SITE FOR THE SERIOUS RACER

3 CUTTING GEAR COVER

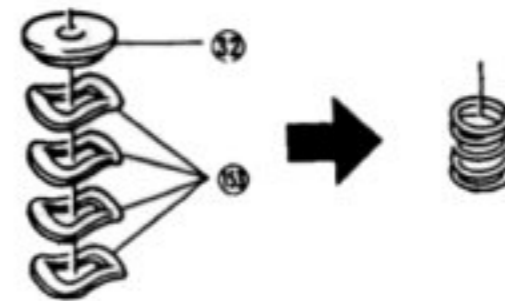


4 ASSEMBLY OF UNI CRANK



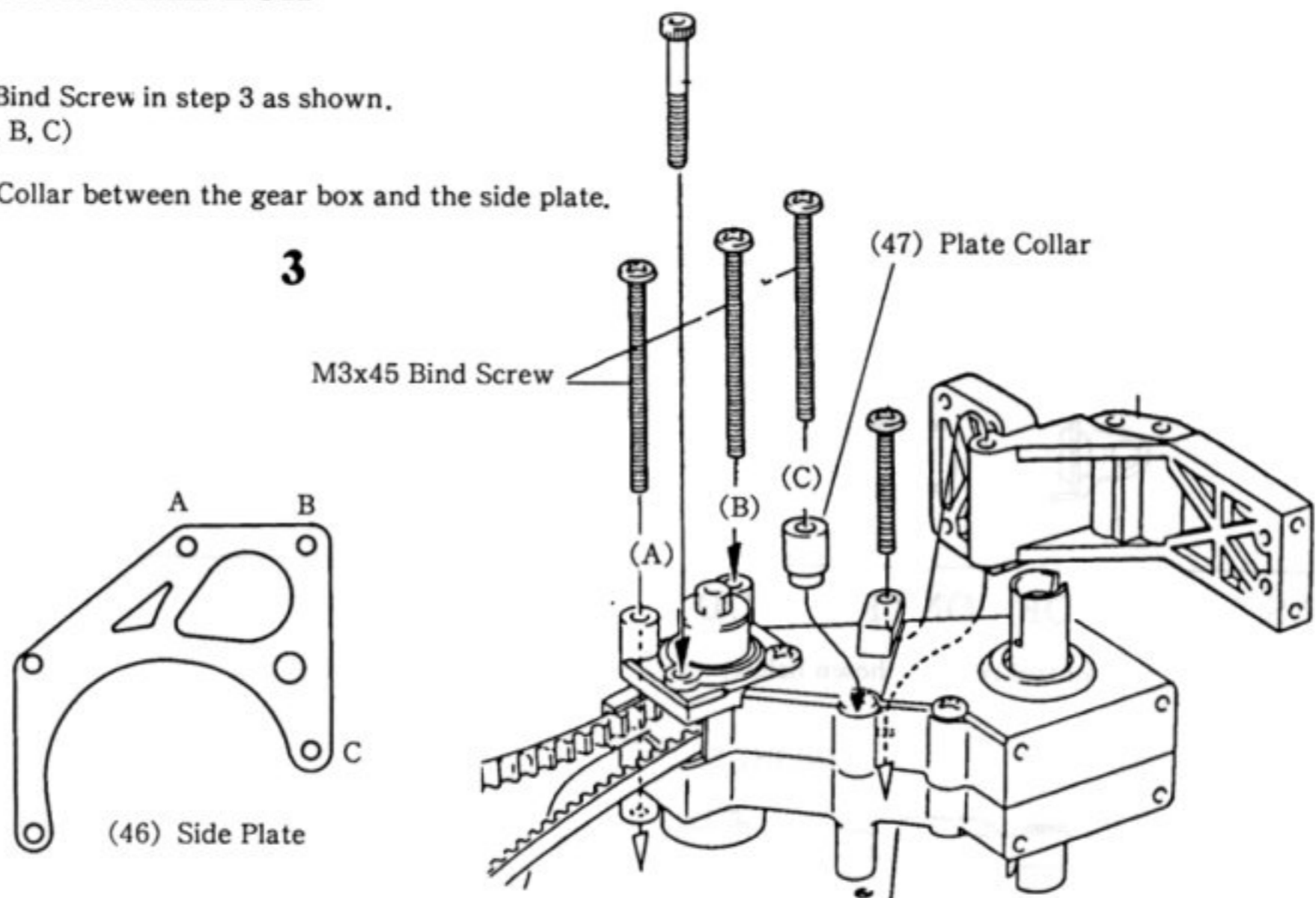
7 ASSEMBLY OF MAIN SHAFT

- (3) The motor plate (key no.47) is not used.
- (4) Install key no.159 Slipper Adjust Spring insted of the Limmiter Collar and the Wave Washers.



8 ASSEMBLY OF REAR ALXE BOX

- (1) Install the M3x45 Bind Screw in step 3 as shown. (Installing holes A, B, C)
- (2) Install (47) Plate Collar between the gear box and the side plate.

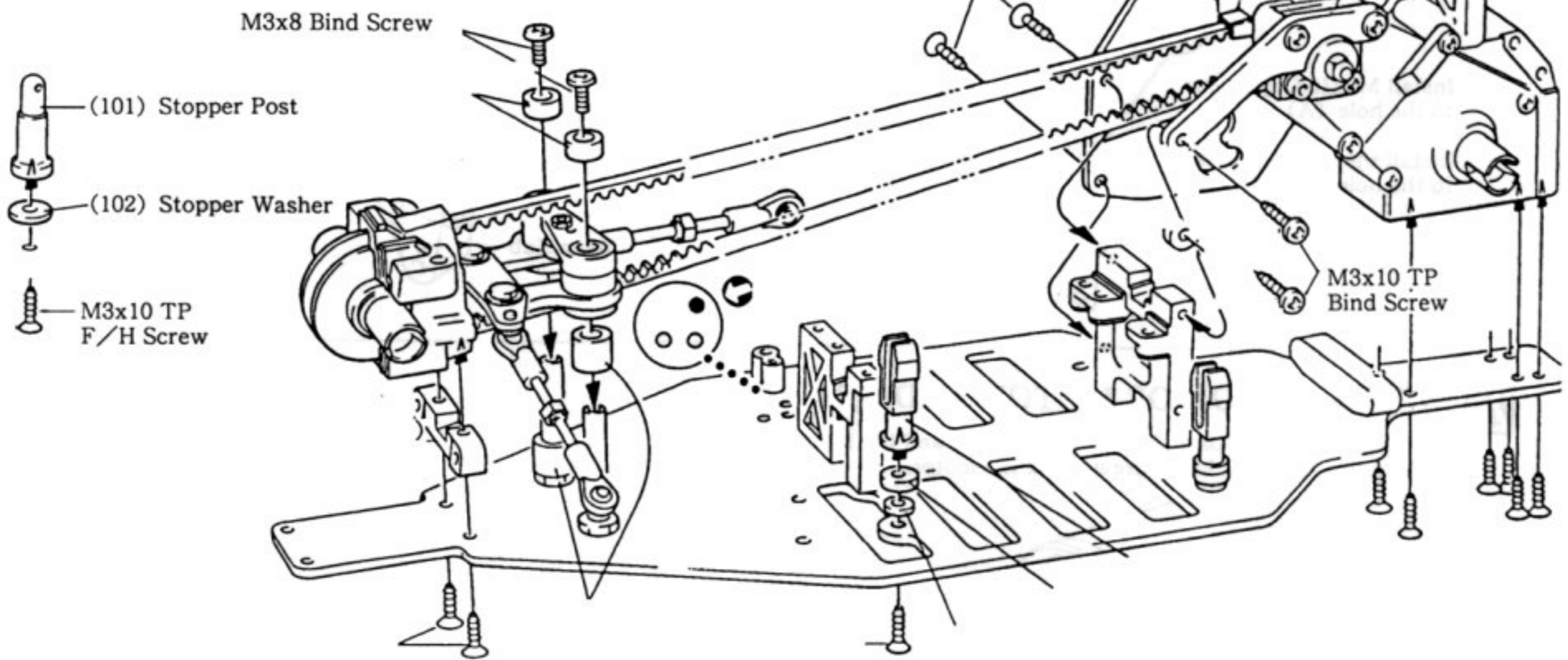


9 ASSEMBLY OF CHASSIS

- The chassis is designed to use 7.2V Ni-Cad Battery.
- The Upper Deck Post is not used.

11 INSTALLATION OF UNI CRANK AND AXLE BOX

The shape of the Stopper Post is changed as shown below.

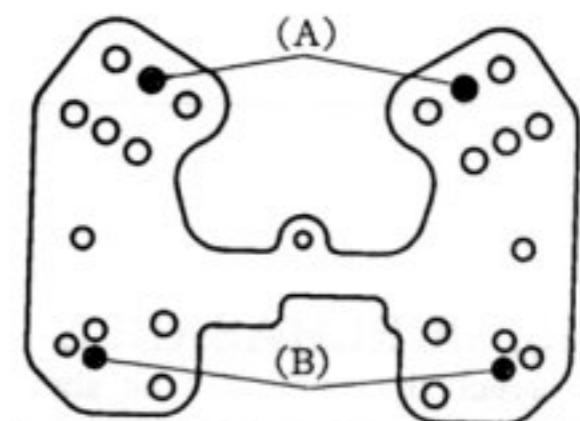


12 INSTALLATION OF FRONT SHOCK STAY

The shape of the Front Shock Stay is changed as shown.

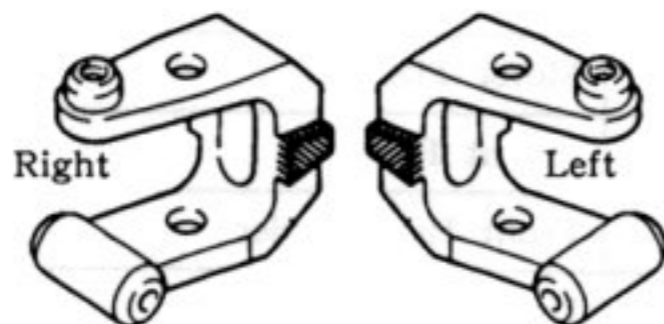
Install the M3x18 Cap Screws to the holes (A) .

Install the Front Upper Rods to the holes (B) .

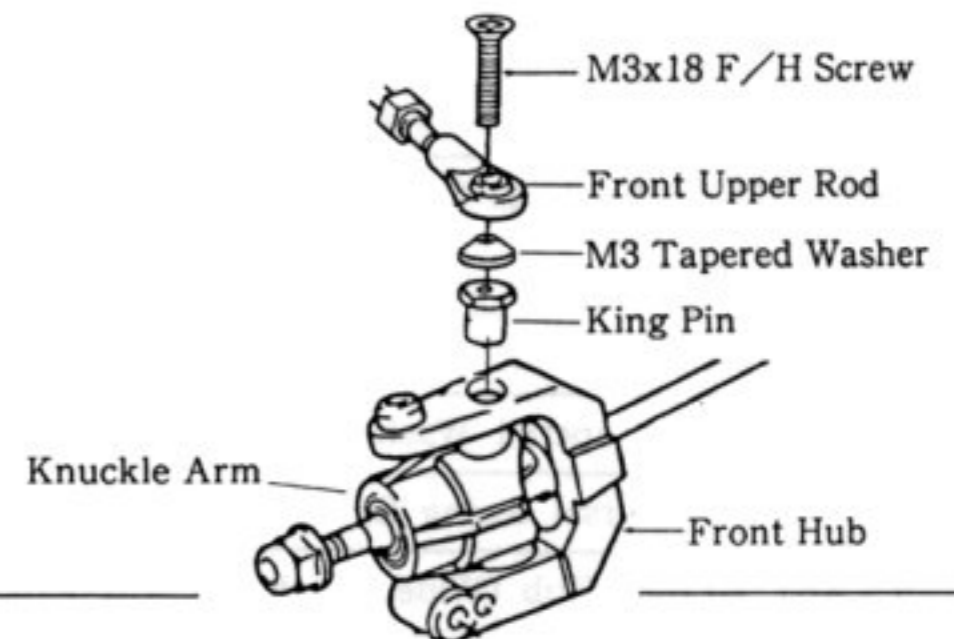


13 ASSEMBLY OF KNUCKLE ARM

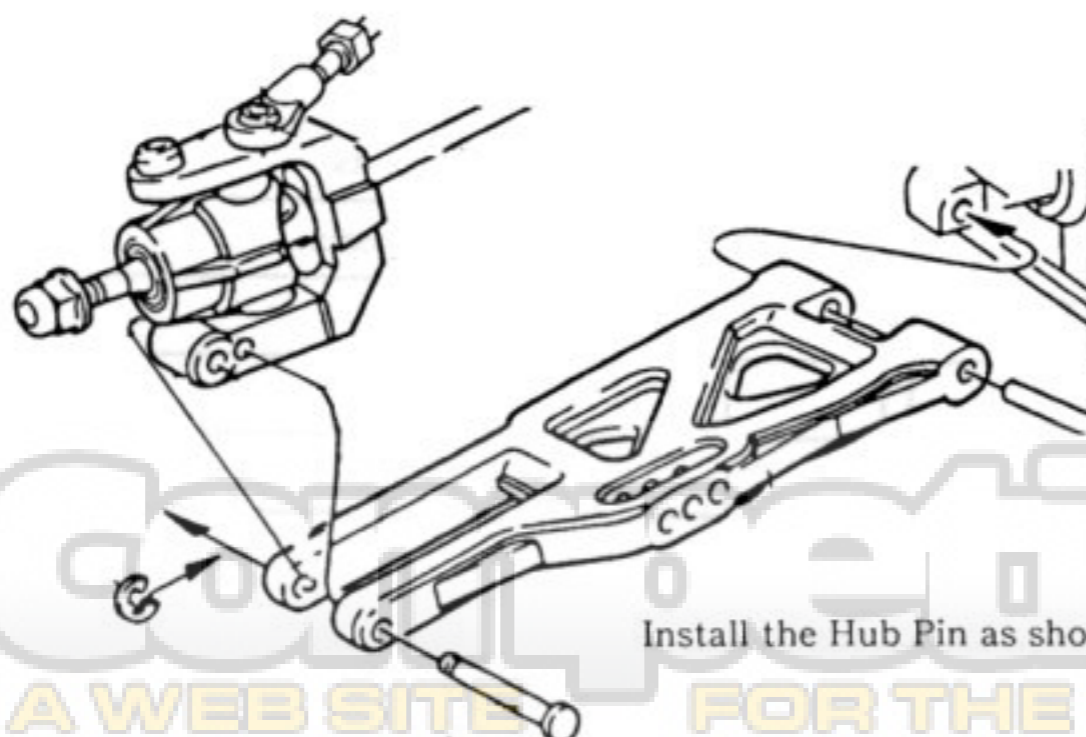
(1) Not need to cut off the shaded areas of the Front Hubs.



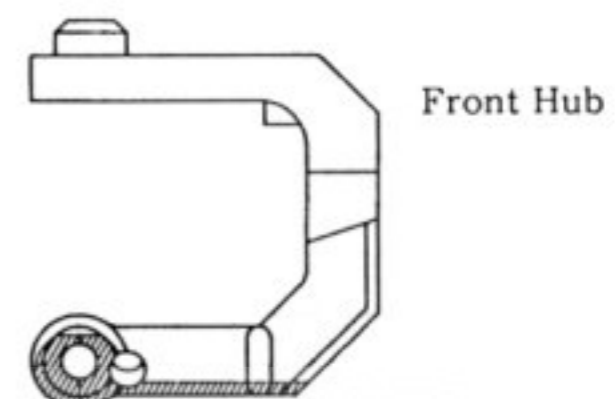
(2) Be careful about the location of the knuckle arms.



14 INSTALLATION OF FRONT SUS ARM



Install the Hub Pin as shown.



Cut the shaded area where to hit the Sus.Arm.

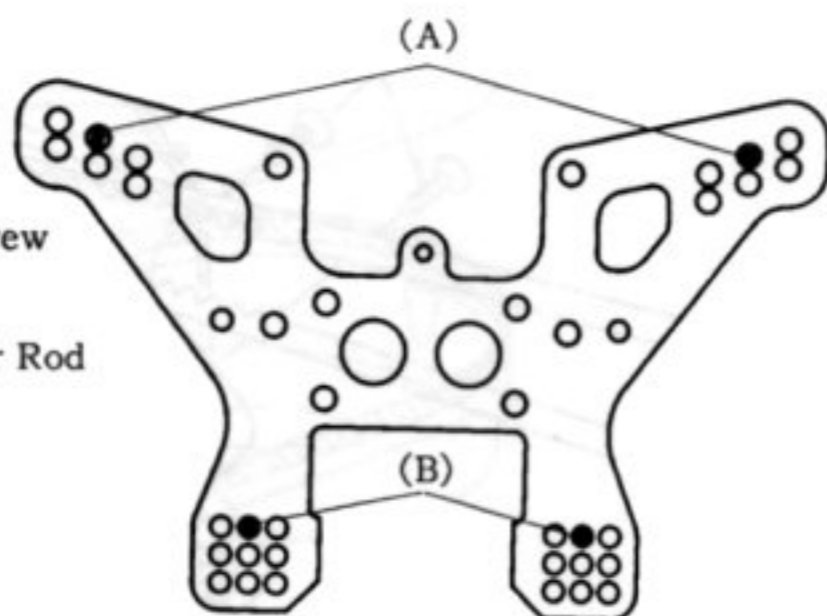
A WEB SITE FOR THE SERIOUS RACER

16 INSTALLATION OF REAR SHOCK STAY

The shape of the Rear Shock Stay is changed as shown below.

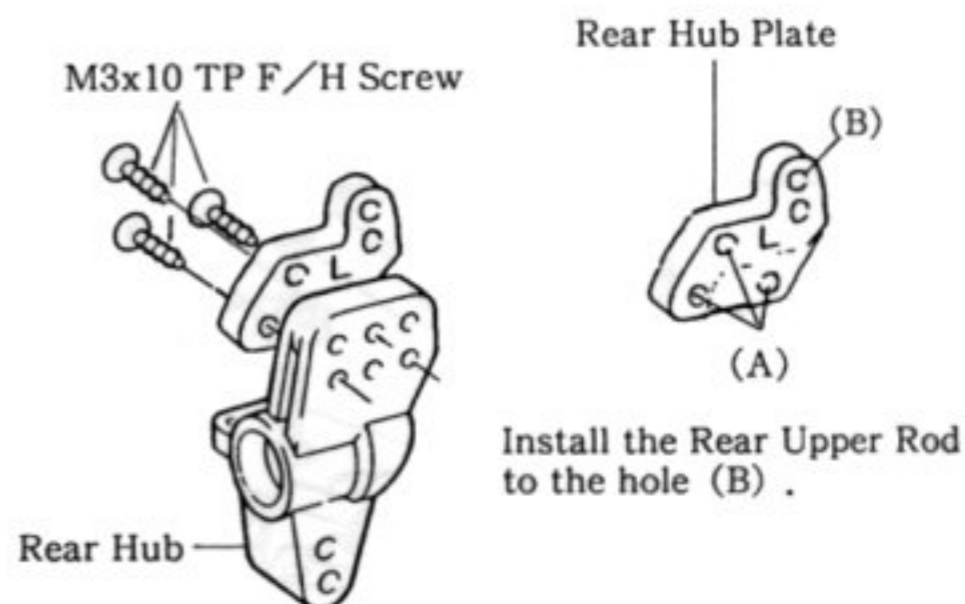
Install M3x18 Cap Screw to the hole (A) .

Install the Rear Upper Rod to the hole (B) .



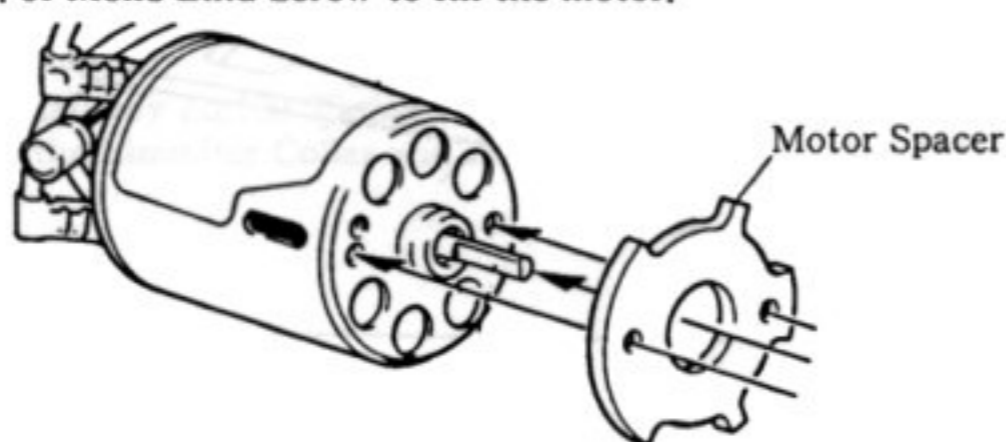
17 ASSEMBLY OF REAR HUB

Install the Rear Hub Plate to the Rear Hub.



20 INSTALLATION OF MOTOR AND GEAR COVER

Install the Motor Spacer between the Motor and the Motor Plate.
Use 2 pcs. of M3x8 Bind Screw to fix the motor.



Page 25, PURCHASABLE PARTS FOR YOUR KIT

Correct the parts list as shown below.

(Additional Parts List)

No.	Parts Name	Key No. & Q'ty
OT73	Motor Cleaner Set	153x1
OTW9	Plastic Parts Set	101, 102x4
OTW13	Adjsut Rod (L)	157x2
TM32	Slipper Adjust Spring	159x1
W0141	M3 Tapered Washer	158x10
W5063	Universal Swing Shaft (3L)	85x2
LA59	Front Hub (Wide Track 7")	106x2
LA60	Main Chassis	139x1
LA61	Upper Deck	132x1
LA62	Motor Plate Set	43, 46, 47x1 M3x30 Bind Screwx1 M3x45 Bind Screwx3
LA63	King Pin Set	75x2 M3x18 F/H Screwx2

(These parts are not used)

No.	Parts Name	Key No.& Q'ty
LA16	Main Chassis	139x1
LA18	Motor Plate	43x1
LA19	Mount Plate	47x1
LA27	Front Hub Carrier	106x2
LA57	Upper Deck	132x1
TM4	Battery Holder Set	101, 102x4
TM19	Wave Washer Set	32x1, 153x10
OT4	King Pin	75x4
W5061	Universal Swing Shaft	85x2
	Optional Parts	
LAW3	Carbon Main Chassis	

EP



PLEASE FOLLOW THESE PRECAUTIONS.

FOR MAXIMUM ENJOYMENT AND SAFETY,
FOLLOW THESE PRECAUTIONS WHEN
OPERATING YOUR R/C MODEL.

KYOSHO
THE FINEST RADIO CONTROL MODELS

1 Operate the model in a clear area



Away from buildings.



Away from other people.



No other R/C models
on your frequency.



Away from roads and
railway tracks.



2 Check before running

Connect wires correctly.

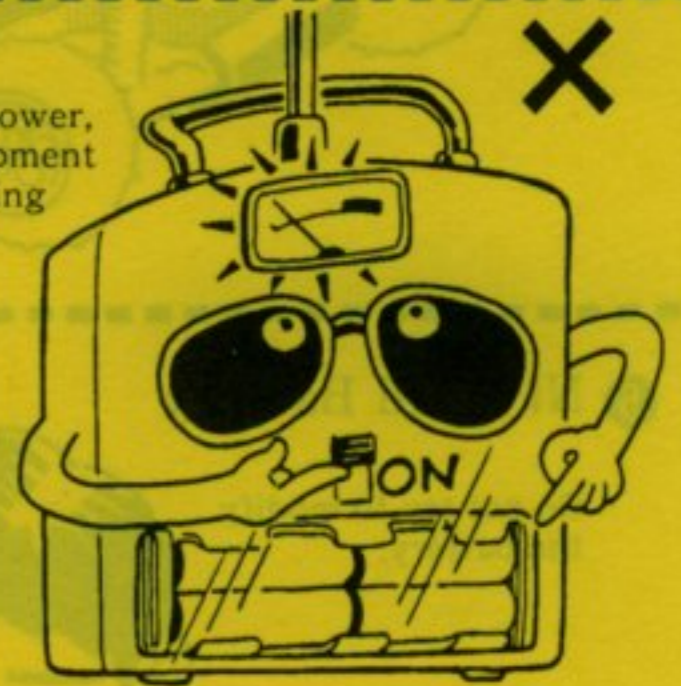


Join wires of the same color.

Charge radio batteries fully
(if rechargeable type).



To save battery power,
switch radio equipment
OFF when not being
used.



Check that all screws are tight.
Use screw locking compound.



Make sure that the model responds
correctly to the transmitter.

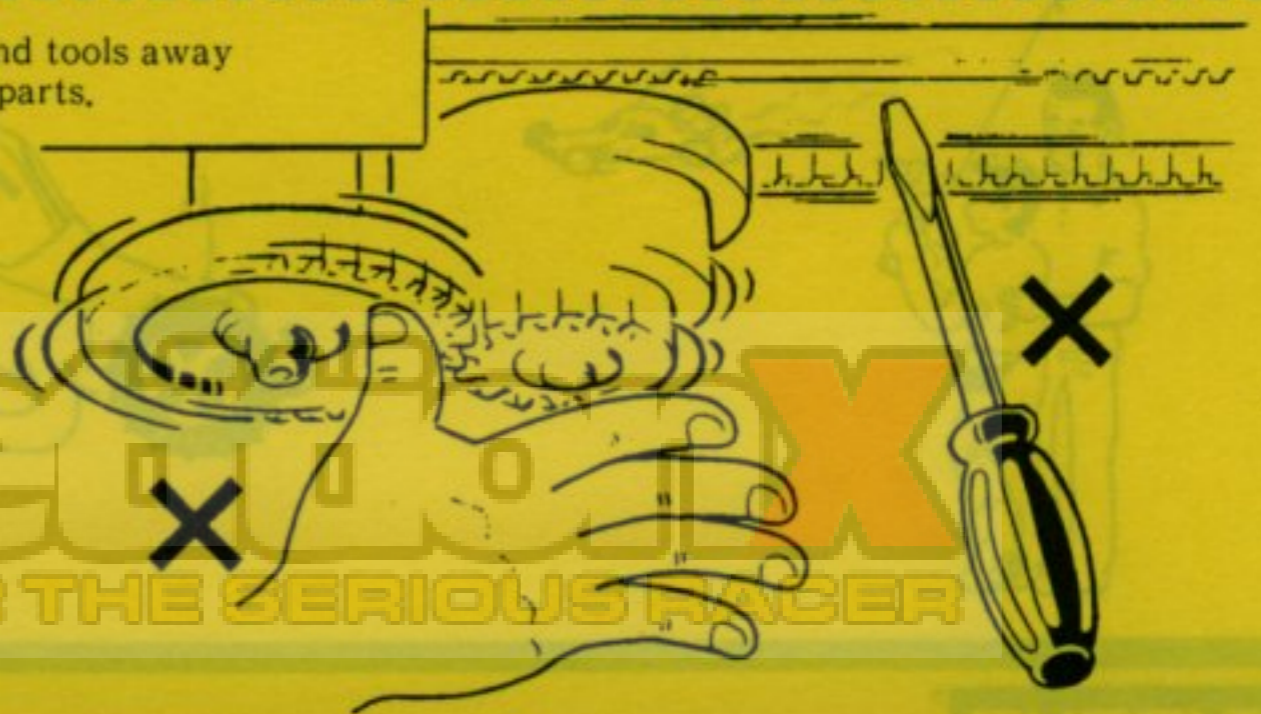


3 Running Safety

Do not treat the model roughly.
It can be damaged.

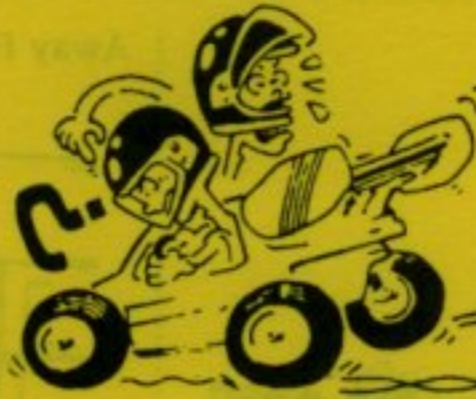


Keep hands and tools away
from moving parts.



3 Running Safety

Do not run model through water.
It may cause rust or electrical problems.

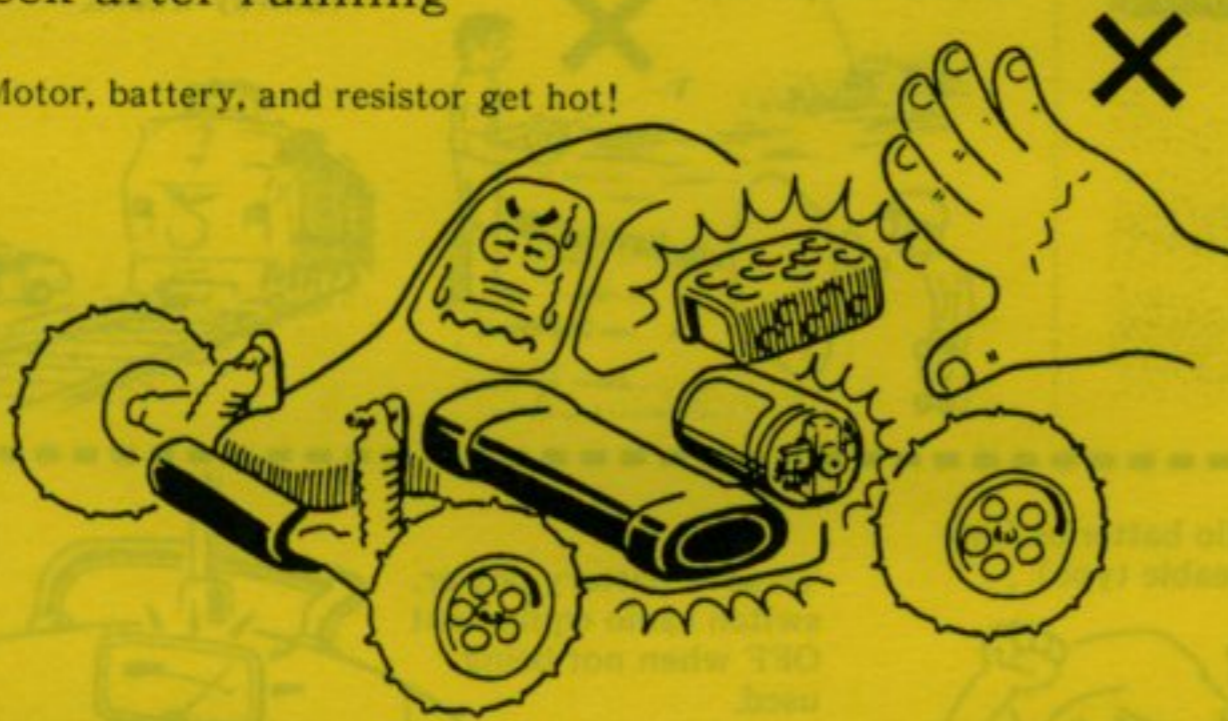


If model does not operate correctly,
stop it and find the cause.

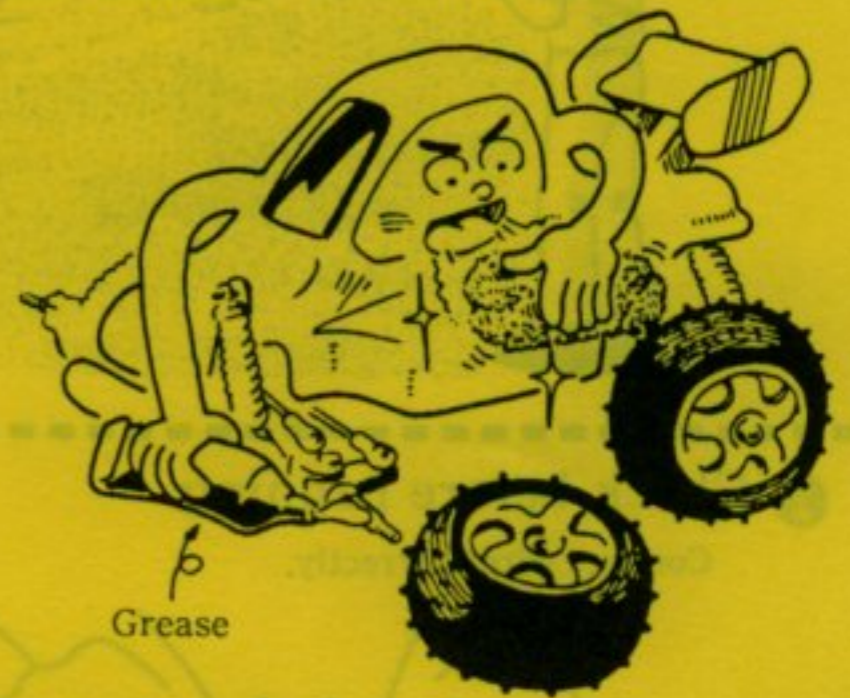


4 Check after running

Motor, battery, and resistor get hot!



Proper maintenance extends the life of the model.



5 Ni-Cad Battery

Do not try to modify
the battery.



Unplug the battery when it is not in use.



6

Get advice from experienced operators.



COMPLETION X
A WEB SITE FOR THE SERIOUS RACER

Use genuine KYosho parts.